Set No. _____

Specifications, Proposal,
and Contract Documents for:

Kirkland Neighborhood Greenway

CIP No. NMC-1130000

Job No. 30-24-PW

Fed Aid No. FA11035

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

CITY OF KIRKLAND
DEPARTMENT OF PUBLIC WORKS

Kirkland Neighborhood Greenway
CIP NO. NMC-1130000
JOB NO. 30-24-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.

10/7/2024

Dustin DeKoekkoek, P.E.

Approved for Construction:

George Minassian, P.E.
Interim Capital Projects Manager

CITY OF KIRKLAND
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City of Kirkland

INVITATION TO BID

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 December 17, 2024, for the project hereinafter referred to as:

Kirkland Neighborhood Greenway
CIP NO. NMC-1130000
PROJECT JOB NO. 30-24-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 **Kirkland Neighborhood Greenways** Specific work includes, but is not limited to pavement markings, signage, crossing treatments, traffic calming, drainage improvements, and sidewalks. The estimated cost for this project is in the range of $2,000,000 to $2,200,000 based on the base bid.

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.

The City of Kirkland in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 USC 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-Assisted Programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises as defined at 49 CFR Part 26 will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, or sex in consideration for an award.

Questions regarding this project shall be submitted in writing to Scott Gonsar, PE, via fax (425) 587-3830. Questions via phone or email will not be accepted. Bidders shall submit questions no later than 4:00 P.M. on December 11, 2024.

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 – November 19, 2024: November 26, 2024
Seattle Times – November 19, 2024: November 26, 2024

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 for HVAC, plumbing, and electrical subcontractors 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.

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

Kirkland Neighborhood Greenway
CIP NO. NMC-1130000
JOB NO. 30-24-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 **Kirkland Neighborhood Greenway, Job #30-24-PW** for the following:

Total Computed Price *(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
_____	_____
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 **Kirkland Neighborhood Greenway, JOB NO. 30-24-PW.**

CITY OF KIRKLAND
BID SCHEDULE

Kirkland Neighborhood Greenway
JOB NO. 30-24-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	MINOR CHANGE	1-04	1	CALC	$25,000	$25,000
2	CONSTRUCTION SURVEYING	1-05 (SP)	1	LS		
3	RECORD DRAWINGS (MINIMUM BID $1,500)	1-05 (SP)	1	LS		
4	SPCC PLAN	1-07 (S)	1	LS		
5	MOBILIZATION	1-09	1	LS		
6	PEDESTRIAN TRAFFIC CONTROL	1-10	1	LS		
7	WORK ZONE SAFETY CONTINGENCY	1-10	1	CALC	$10,000	$10,000
8	TRAFFIC CONTROL SUPERVISOR	1-10	1	LS		
9	FLAGGERS	1-10	900	HR		
10	OTHER TRAFFIC CONTROL LABOR	1-10	200	HR		
11	POTHOLING	1-17 (SP)	50	EA		
12	CLEARING AND GRUBBING	2-01 (SP)	1	LS		
13	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	2-02	1	LS		
14	PROPERTY RESTORATION	2-02 (SP)	1	LS		
15	COMMON BORROW INCL. HAUL	2-03	450	CY		
16	ROADWAY EXCAVATION INCL. HAUL	2-09	720	CY		
17	SHORING AND TRENCH SAFETY	2-09 (SP)	1	LS		
18	CRUSHED SURFACING BASE COURSE	4-04	800	TN		
19	HMA CL. 1/2 IN, PG 58H-22	5-04	320	TN		
20	ADJUST VALVE BOX	5-04	26	EA		
21	SLOTTED SPEED HUMP	5-04 (SP)	16	EA		
22	CEMENT CONC. PAVEMENT	5-05 (SP)	20	CY		
23	STAMPED CEMENT CONC. TREATMENT	5-05 (SP)	240	SY		
24	ADJUST CATCH BASIN	7-04	16	EA		

25	SOLID WALL PVC STORM SEWER PIPE 12 IN. DIAM.	7-04	240	LF		
26	SOLID WALL PVC STORM SEWER PIPE 18 IN. DIAM.	7-04	6	LF		
27	DUCTILE IRON PIPE 6 IN. DIAM.	7-04	15	LF		
28	DUCTILE IRON SEWER PIPE 12 IN. DIAM.	7-04	460	LF		
29	DUCTILE IRON SEWER PIPE 18 IN. DIAM.	7-04	320	LF		
30	CATCH BASIN, TYPE 1	7-05	15	EA		
31	CATCH BASIN, TYPE 2	7-05	5	EA		
32	HYDRANT ASSEMBLY	7-14	2	EA		
33	RELOCATE WATER METER	7-15	4	EA		
34	SILT FENCE	8-01	2800	LF		
35	INLET PROTECTION	8-01	34	EA		
36	EROSION AND WATER POLLUTION PREVENTION CONTROL	8-01	1	LS		
37	PSIPE, 2 IN. CAL. TREE	8-02	6	EA		
38	PSIPE, #1 CONT.	8-02	920	EA		
39	PSIPE, BULB	8-02	1092	EA		
40	WOOD CHIP MULCH	8-02 (SP)	20	CY		
41	TOPSOIL TYPE A	8-02 (SP)	160	CY		
42	SEEDED LAWN INSTALLATION	8-02 (SP)	320	SY		
43	TREE ROOT BARRIER	8-02 (SP)	90	LF		
44	SLOW RELEASE WATERING BAG	8-02 (SP)	12	EA		
45	LANDSCAPE RESTORATION	8-02 (SP)	1	FA		
46	CEMENT CONC. PEDESTRIAN CURB	8-04	620	LF		
47	ROUNDABOUT TRUCK APRON CEM. CONC. CURB AND GUTTER	8-04	240	LF		
48	MEDIAN CURB	8-04	170	LF		
49	EXTRUDED CURB	8-04	70	LF		
50	CEMENT CONC. TRAFFIC CURB AND GUTTER	8-04 (SP)	3000	LF		
51	CEMENT CONC. DRIVEWAY ENTRANCE TYPE 1	8-06	120	SY		
52	CEMENT CONC. DRIVEWAY ENTRANCE TYPE 2	8-06	30	SY		
53	RAISED PAVEMENT MARKERS TYPE 2	8-09	90	EA		

54	FLEXIBLE POST WITH CURB	8-10 (SP)	20	EA		
55	6-FOOT CHAIN LINK FENCE TREE PROTECTION	8-12 (SP)	240	LF		
56	ADJUST MONUMENT CASE AND COVER	8-13	3	EA		
57	DETECTABLE WARNING SURFACE	8-14	80	SF		
58	CEMENT CONC. SIDEWALK	8-14	1800	SY		
59	CEMENT CONC. CURB RAMP TYPE PERPENDICULAR A	8-14	17	EA		
60	CEMENT CONC. CURB RAMP TYPE PERPENDICULAR B	8-14	4	EA		
61	CEMENT CONC. CURB RAMP TYPE PARALLEL	8-14	8	EA		
62	SIDEWALK THICKENED EDGE	8-14 (SP)	120	LF		
63	TACTILE DIRECTIONAL INDICATOR, CAST-IN-PLACE	8-14(SP)	20	LF		
64	MAILBOX RELOCATION	8-18	2	EA		
65	ADJUST JUNCTION BOX	8-20	2	EA		
66	RRFB SYSTEM, COMPLETE	8-20	1	LS		
67	RELOCATE RRFB ASSEMBLY	8-20 (SP)	1	LS		
68	RELOCATE SIGN POLE	8-21	16	EA		
69	SIGN, TRAFFIC, POST MOUNTED	8-21	227	EA		
70	POST, 2 IN SCHEDULE 40 GALV. PIPE	8-21	85	EA		
71	REMOVE POST, TRAFFIC SIGN	8-21	4	EA		
72	REMOVE SIGN, TRAFFIC	8-21	33	EA		
73	PAINT LINE	8-22	17500	LF		
74	PLASTIC CROSSWALK LINE	8-22	2020	SF		
75	PLASTIC STOP LINE	8-22	590	LF		
76	PLASTIC BICYCLE LANE SYMBOL	8-22	18	EA		
77	PLASTIC BI-DIRECTIONAL BIKE SHARROW SYMBOL	8-22	10	EA		
78	PLASTIC RAISED INTERSECTION CHEVRON PAVEMENT MARKING	8-22	2	EA		
79	PLASTIC SLOTTED SPEED HUMP MARKING	8-22	64	EA		
80	BIKE DOT	8-22	11	EA		
81	PLASTIC BIKE SHARROW SYMBOL	8-22	125	EA		
82	GREEN CONFLICT MARKINGS	8-22 (SP)	39	EA		

TOTAL COMPUTED BASE BID 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.

CITY OF KIRKLAND
NONCOLLUSION AFFIDAVIT
Kirkland Neighborhood Greenway
CIP NO. NMC-1130000
JOB NO. 30-24-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.

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. 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: _____

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.

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: _____

_____

_____

_____

- 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 for HVAC, plumbing, and electrical subcontractors if the estimate amount exceeds $1,000,000.)
10. Bid proposal to be submitted in a sealed envelope marked "Bid Enclosed" for: Kirkland Neighborhood Greenway, JOB NO. 30-24-PW.

CONTRACT

INFORMATION ONLY

The following forms must be executed and submitted by the successful bidder within ten (10) calendar days following Notice of Award.

City of Kirkland

CITY OF KIRKLAND

TABLE OF CONTENTS – CONTRACT DOCUMENTS

CITY OF KIRKLAND
PUBLIC WORKS AGREEMENT

Version:063020

Kirkland Neighborhood Greenway
JOB NO. 30-24-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: "Kirkland Neighborhood Greenways, Job No. 30-24-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: _____
Julie Underwood, 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 **Kirkland Neighborhood Greenway**, **Job No 30-24-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 **Kirkland Neighborhood Greenway, Job No 30-24-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
Kirkland Neighborhood Greenway
JOB NO. 30-24-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	_____
Contract Number	_____
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
Kirkland Neighborhood Greenway
JOB NO. 30-24-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)

Local Agency Certification for Federal-Aid Contracts

The prospective participant certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.

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

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such subrecipients shall certify and disclose accordingly.

Washington State
Department of Transportation

Bidder Questionnaire

Agency Name	Federal Aid Number
Prime Contractor Name	Contract Number
Contract Name	

Firm/ Subcontractor Name	Address (incl. Zipcode)	DBE Status	Race	Gender	NAICS Codes	Scope of Work	Firm Age	Firm Gross Receipts

If you have additional Firms or Subcontractors that submitted Bids, please complete additional forms.

Prime Contractor Signature _____ Title _____ Date _____

DOT Form 272-022 Revised 08/2024
● **Previous Versions Obsolete** ●

Form Instructions

The following information on each firm that submitted a bid is required as part of part of 49 CFR 26.11(c)(2):

Firm/Subcontractor Name: Enter the name of each firm or subcontractor who submitted a quote or a bid on the contract.

Address: Enter the date the main address of the firm/subcontractor. Include the zip code.

DBE Status: Enter the DBE status. *Options are DBE and Non-DBE.*

Race: Enter the race of the majority DBE Owner. *Options are "Black American", "Hispanic American", "Native American", "Asian-Pacific American", "Subcontinent Asian American", and "White".*

Gender: Enter the gender of the majority DBE Owner. *Options are "Female" and "Male".*

NAICS Codes: Enter the appropriate NAICS Codes for the work the bid was submitted.

Scope of Work: Enter the scope of the work the bid was submitted for.

Firm Age: Enter the age of the Firm.

Firm Gross Receipts: Enter the annual gross receipts. *Options are "Less than $1 million", "$1-$3 million", "$3-$6 million", "$6-$10 million", "$10-$20 million ", "$20-$30.72 million ", "Greater than $30.72 million ".*

Washington State Department of Transportation

Disadvantaged Business Enterprise Utilization Certification

To be eligible for Award of this Contract the Bidder shall fill out and submit, as a supplement to its sealed Bid Proposal, a Disadvantaged Business Enterprise (DBE) Utilization Certification. The Contracting Agency shall consider as non-responsive and shall reject any Bid Proposal that does not contain a DBE Utilization Certification which properly demonstrates that the Bidder will meet the DBE participation requirements in one of the manners provided for in the proposed Contract. **Refer to the instructions on Page 2 when filling out this form or the Bid may be rejected. An example form has been provided on Page 3.** The successful Bidder's DBE Utilization Certification shall be deemed a part of the resulting Contract.

Box 1: _____ certifies that the DBE firms listed below have been contacted regarding participation on this project. If this Bidder is successful on this project and is awarded the Contract, it shall assure that subcontracts or supply agreements are executed with named DBEs. (If necessary, use additional sheets.)

Box 2: _____

Column 1 **Name of DBE** (See instructions)	Column 2 **Project Role** (See instructions)	Column 3 **Description of Work** (See instructions)	Column 4 **Dollar Amount Subcontracted to DBE** (See instructions)	Column 5 **Dollar Amount to be Applied Towards Goal** (See instructions)

Disadvantaged Business Enterprise Condition of Award Contract Goal _____ Box 3

Total DBE Commitment Dollar Amount _____ Box 4

5 ☐ By checking Box 5 the Bidder is stating that their attempts to solicit sufficient DBE participation to meet the COA Contract goal has been unsuccessful and good faith effort will be submitted in accordance with Section 1-02.9 of the Contract

Instructions for Disadvantaged Business Enterprise Utilization Certification Form

Box 1: Name of Bidder (Proposal holder) submitting Bid.

Box 2: Name of the Project.

Column 1: Name of the Disadvantaged Business Enterprise (DBE). DBE firms can be found using the Diversity Management and Compliance System web page: https://wsdot.diversitycompliance.com. Repeat the name of the DBE for each Project Role that will be performed.

Column 2: The Project Role that the DBE will be performing as follows;

- Prime Contractor
- Subcontractor
- Subcontractor (Force Account)
  - Work sublet as Force Account must be listed separately.
- Manufacturer
- Regular Dealer
  - Work sublet to a Regular Dealer must be listed separately.
  - Regular Dealer status must be approved prior to Bid submittal by the Office of Equal Opportunity, Washington State Department of Transportation, on each Contract.
- Broker
  - Work sublet to a Broker must be listed separately.

List each project role to be performed by a single DBE individually on a separate row. The role is used to determine what portion of the amount to be subcontracted (Column 4) may be applied toward meeting the goal (column 5).

Column 3: Provide a description of work to be performed by the DBE. The work to be performed must be consistent with the Certified Business Description of the DBE provided at the Diversity Management and Compliance System web page https://wsdot.diversitycompliance.com

- A Bidder subletting a portion of a bid item shall state **"Partial"** and describe the Work that is included.
  - For example; "Electrical (Partial) – Trenching".
- "Mobilization" will not be accepted as a description of Work.

Column 4: List the total amount to be subcontracted to each DBE for each Project Role they are performing.

Column 5: This is the dollar amount for each line listed in the certification that the prime intends to apply towards meeting the COA Contract goal. It may be that only a portion of the amount subcontracted to a DBE in Column 4 is eligible to be credited toward meeting the goal **See Note 1, Note 2, Note 3.** The Contracting Agency will utilize the sum of this column (Box 4) to determine whether or not the bidder has met the goal. In the event of an arithmetic error in summing column 5 or an error in making appropriate reductions in the amounts in column four, **See Note 1, Note 2, Note 3**, then the mathematics will be corrected and the total (Box 4) will be revised accordingly.

Note 1: For Work sublet as Force Account the bidder **may only claim 50%** of the amount subcontracted (Column 4) towards meeting the goal (Column 5). This information will be used to demonstrate that the DBE contract goal is met at the time that the bidder submits their bid. For example; amount sublet as force account = $100,000 (Column 4) equates to ($100,000 X 50%) = $50,000 (Column 5) to be applied towards the goal.

Note 2: For Work sublet to a Regular Dealer the bidder **may only claim 60%** of the cost of the materials or supplies (Column 4) towards meeting the goal (Column 5). For example; Material cost = $100,000 (Column 4) equates to ($100,000 X 60%) = $60,000 (Column 5) to be applied towards the goal

Note 3: For Work sublet to a Broker the bidder **may only claim the fees** paid to a Broker towards meeting the goal (Column 4). For example; amount sublet to a broker = $100,000 (Column 4) equates to ($100,000 X reasonable fee %) = $ (Column 5) to be applied towards the goal.

Box 3: Box 3 is the COA Contract goal which is the minimum required DBE participation. The goal stated in the Contract will be in terms of a dollar amount or a percentage in the Contract. When expressed as a percentage you must multiply the percentage times the sum total of all bid items as submitted in the Bidder's Proposal to determine the dollar goal and write it in Box 3. In the event of an error in this box, the Contracting Agency will revise the amount accordingly.

Box 4: Box 4 is the sum of the values in column 5. **This value must equal or exceed the COA Contract goal amount written in Box 3 or;**

Box 5: Check Box 5 if insufficient DBE Participation has been achieved and a good faith effort is required. Refer to the subsection titled, *Selection of Successful Bidder/Good Faith Efforts (GFE)* in the Contract.

See the *Disadvantaged Business Enterprise Participation* specification in the Contract for more information.

Washington State Department of Transportation

Disadvantaged Business Enterprise Utilization Certification

To be eligible for Award of this Contract the Bidder shall fill out and submit, as a supplement to its sealed Bid Proposal, a Disadvantaged Business Enterprise (DBE) Utilization Certification. The Contracting Agency shall consider as non-responsive and shall reject any Bid Proposal that does not contain a DBE Utilization Certification which properly demonstrates that the Bidder will meet the DBE participation requirements in one of the manners provided for in the proposed Contract. **Refer to the instructions on Page 2 when filling out this form or the Bid may be rejected. An example form has been provided on Page 3.** The successful Bidder's DBE Utilization Certification shall be deemed a part of the resulting Contract.

Box 1: A Plus Construction Company certifies that the DBE firms listed below have been contacted regarding participation on this project. If this Bidder is successful on this project and is awarded the Contract, it shall assure that subcontracts or supply agreements are executed with named DBEs. (If necessary, use additional sheets.)

Box 2: US 395, Spokane City Limits to Stevens County Line - Paving and Safety

Column 1 **Name of DBE** See instructions)	Column 2 **Project Role** See instructions)	Column 3 **Description of Work** See instructions)	Column 4 **Dollar Amount Subcontracted to DBE** See instructions)	Column 5 **Dollar Amount to be Applied Towards Goal** See instructions)
A Plus Construction Company	Prime	Asphalt and concrete paving, asphalt milling, preleveling and pavement repair	N/A	900,000
In the Line Services, Inc.	Subcontractor (Force Account)	Crack sealing	20,000	10,000
In the Line Services, Inc.	Subcontractor	Guideposts, joint seal, pavement markers, temporary signage, construction sign installation	200,000	200,000
The Everything Guys, LLC	Regular Dealer	Rental and sales of highway construction and related equipment and materials	100,000	60,000
Optimus Prime Trucking, Inc.	Subcontractor	Dump Trucking	50,000	50,000
Metalheads, Inc.	Manufacturer	Dowel Bars	75,000	75,000
Erosion Under Control Co.	Broker	Erosion control blankets, straw bales and wattles, sand bags	15,000	250

Disadvantaged Business Enterprise Condition of Award Contract Goal 356,968.16 (Box 3)

Total DBE Commitment Dollar Amount 1,295,250 (Box 4)

5 ☐ By checking Box 5 the Bidder is stating that their attempts to solicit sufficient DBE participation to meet the COA Contract goal has been unsuccessful and good faith effort will be submitted in accordance with Section 1-02.9 of the Contract

Washington State Department of Transportation

Disadvantaged Business Enterprise (DBE) Written Confirmation Document

See Contract Provisions: *DBE Document Submittal Requirements*
Disadvantaged Business Enterprise Participation

THIS FORM SHALL ONLY BE SUBMITTED TO A DBE THAT IS LISTED ON THE CONTRACTOR'S DISADVANTAGED BUSINESS ENTERPRISE UTILIZATION CERTIFICATION.

THE CONTRACTOR SHALL COMPLETE PART A PRIOR TO SENDING TO THE DBE.

PART A: To be completed by the bidder

The entries below shall be consistent with what is shown on the Bidder's Disadvantaged Business Enterprise Utilization Certification. Failure to do so will result in Bid rejection.

Contract Title: _____

Bidder's Business Name: _____

DBE's Business Name: _____

Description of DBE's Work: _____

Dollar Amount to be Applied Towards DBE Goal: _____

Dollar Amount to be Subcontracted to DBE*: _____
*Optional Field

PART B: To be completed by the Disadvantaged Business Enterprise

As an authorized representative of the Disadvantaged Business Enterprise, I confirm that we have been contacted by the Bidder with regard to the referenced project for the purpose of performing the Work described above. If the Bidder is awarded the Contract, we will enter into an agreement with the Bidder to participate in the project consistent with the information provided in Part A of this form.

Name (printed): _____

Signature: _____

Title: _____

Address: _____ Date: _____

_____

Washington State Department of Transportation

Disadvantaged Business Enterprise (DBE) Bid Item Breakdown Form

1. Contract Number	2. Contract Name

3. Prime Contractor	4. Prime Contractor Representative Name

5. Prime Contractor Representative Phone Number	6. Prime Contractor Representative Email

Column 1 **Name of UDBE** (See Instructions)	Column 2 **Bid Item #** (See Instructions)	Column 3 **Full/Partial** (See Instructions)	Column 4 **Quantity** (See Instructions)	Column 5 **Description** (See Instructions)	Column 6 **Unit Price** (See Instructions)	Column 7 **Total Unit Cost** (See Instructions)	Column 8 **Dollar Amount to be Applied Towards Goal** (See Instructions)
					Subtotal:	$ 0.00	$ 0.00
Name of UDBE	**Bid Item #**	**Full/Partial**	**Quantity**	**Description**	**Unit Price**	**Total Unit Cost**	**Dollar Amount to be Applied Towards Goal**
					Subtotal:	$ 0.00	$ 0.00
Name of UDBE	**Bid Item #**	**Full/Partial**	**Quantity**	**Description**	**Unit Price**	**Total Unit Cost**	**Dollar Amount to be Applied Towards Goal**
					Subtotal:	$ 0.00	$ 0.00
Name of UDBE	**Bid Item #**	**Full/Partial**	**Quantity**	**Description**	**Unit Price**	**Total Unit Cost**	**Dollar Amount to be Applied Towards Goal**
					Subtotal:	$ 0.00	$ 0.00
					TOTAL UDBE Dollar Amount:	$ 0.00	$ 0.00

Instructions for Disadvantaged Business Enterprise (DBE) Bid Item Breakdown Form

Box 1: Provide the Contract Number as stated in the project information webpage.

Box 2: Provide the Name of the project as stated in the project information webpage.

Box 3: Provide the Name of the bidder (Proposal holder) submitting Bid.

Box 4: Provide the name of the prime contractor's representative available to contact regarding this form.

Box 5: Provide the phone number of the prime contractor's representative available to contact regarding this form.

Box 6: Provide the email of the prime contractor's representative available to contact regarding this form.

Column 1: Provide the Name of the Disadvantaged Business Enterprise (DBE) Firm. DBE Firms can be found using the search tools under the Firm Certification section of the Diversity Management and Compliance System (DMCS) webpage https://wsdot.diversitycompliance.com.

Column 2: Provide the Bid Item Number (as it appears in the engineer's estimate bid check report) available on the project information webpage.

Column 3: If the DBE is performing only part of the bid item, mark "Partial". If the DBE is performing the entire bid item, mark "Complete".

Column 4: Provide the estimated quantity for the specific bid item. For trucking firms, use hour or another unit of measure.

Column 5: Provide a description of the work to be performed by the DBE.

Column 6: Provide the price per unit and specify the type of unit used. For trucking firms, use hour or another unit of measure.

Column 7: Provide the estimated total unit cost amount per bid item.

Column 8: Provide the amount of the bid item being used to fulfil the DBE goal. The work to be performed must be consistent with the Certified Business Description of the DBE provided in the DMCS webpage https://wsdot.diversitycompliance.com. Mobilization up to 10% is acceptable. If mobilization is more than 10% additional information and/or justification may be requested. The total amount shown for each DBE shall match the amount shown on the DBE Utilization Certification Form.

Use Additional Sheets if necessary.

Washington State Department of Transportation

Disadvantaged Business Enterprise (DBE)Trucking Credit Form

PART A: TO BE COMPLETED BY THE BIDDER

This form is in support of the trucking commitment identified on the DBE Utilization Certification Form submitted with the proposal. Please note that DBE's must be certified prior to time of submittal.

Federal Aid #	Contract #	Project Name

If listing items by hours, or by lump sum amounts, please provide calculations to substantiate the quantities listed.

Bid Item	Item Description

Use additional sheets as necessary.

Bidder		Name/Title (please print)
Phone	Fax	Signature I certify that the above information is complete and accurate.
Address		
Email		Date

PART B: TO BE COMPLETED BY THE DBE TRUCKING FIRM

Note: DBE trucking firm participation may only be credited as DBE participation for the value of the hauling services, not for the materials being hauled unless the trucking firm is also recognized as a supplier of the materials used on the project and approved for this project as a regular dealer.

1. Type of Material expected to be hauled? _____
2. Number of fully operational trucks expected to be used on this project? _____ Tractor/trailers: _____ Dump trucks: _____
3. Number of trucks and trailers owned by the DBE that will be used on this project? _____ Tractor/trailers: _____ Dump trucks: _____
4. Number of trucks and trailers leased by the DBE that will be used on this project? _____ Tractor/trailers: _____ Dump trucks: _____

DBE Firm Name		Name/Title (please print)
Certification Number		
Phone	Fax	Signature I certify that the above information is complete and accurate.
Address		
Email		Date

Submit this form to in accordance with section 1-02.9 of the Contract.

Instruction to Bidder: The Bidder shall complete and submit the Disadvantaged Business Enterprise (DBE) Trucking Credit Form in accordance with Section 1-02.9 of the Contract.

INSTRUCTIONS

Please note – All Fields are required

PART A: TO BE COMPLETED BY THE BIDDER

Federal Aid: Include the project federal-aid number.

County: Specify the County where the project will take place.

Contract #: Specify the Project Contract Number which can be found in the Engineer's estimate bid check report.

Bid Item: Provide the Bid Item Number (as it appears in the engineer's estimate bid check report) for which trucking services will be utilized.

Item Description: Provide description of the bid item (as it appears in the engineer's estimate bid check report) for which trucking will be utilized.

Bidder: In this section, provide the bidder's legal name, title, Business address, Phone and email.

The bidder's representative signature is required in addition to the date the form was signed.

PART B: TO BE COMPLETED BY THE DBE TRUCKING FIRM

Question 1: Specify type of material that will be hauled (i.e. Sand, HMA, gravel)

Question 2: Specify the total number of operational trucks that will be used on the project.

Question 3: Specify the total number of operational trucks and trailers owned by the DBE that will be used on the project.

Question 4: Specify the total number of operational trucks and trailers leased by the DBE that will be used on the project.

DBE Firm: In this section, provide the DBE Firm's legal name, DBE Firm's representative legal name and title, certification Number (Found in the firm's OMWBE Profile page in the OMWBE directory), Business address, Phone, fax and email.

The DBE Firm's representative signature is required in addition to the date the form was signed.

Washington State
Department of Transportation

Contractor Certification
Wage Law Compliance - Responsibility Criteria
Washington State Public Works Contracts

FAILURE TO RETURN THIS CERTIFICATION AS PART OF THE BID PROPOSAL PACKAGE WILL MAKE THIS BID NONRESPONSIVE AND INELIGIBLE FOR AWARD

I hereby certify, under penalty of perjury under the laws of the State of Washington, on behalf of the firm identified below that, to the best of my knowledge and belief, this firm has NOT been determined by a final and binding citation and notice of assessment issued by the Washington State 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 RCW chapters 49.46, 49.48, or 49.52 within three (3) years prior to the date of the Call for Bids.

Bidder Name: _____
Name of Contractor/Bidder - Print full legal entity name of firm

By: _____ _____
Signature of authorized person — Print Name of person making certifications for firm

Title: _____ **Place:** _____
Title of person signing certificate — Print city and state where signed

Date: _____

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (*see* 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

> "It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:
(1) Withholding monthly progress payments;
(2) Assessing sanctions;
(3) Liquidated damages; and/or
(4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than $10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided,* That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH–1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to *DBAconformance@dol.gov*. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to *DBAconformance@dol.gov*, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. *Fringe benefits not expressed as an hourly rate.* Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided,* That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements* (1) *Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements* (1) *Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (*e.g.,* the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH–347 or in any other format desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division website at *https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347/.pdf* or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3; and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) *Use of Optional Form WH–347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices* (1) *Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or 29 CFR part 1 or 3; or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or 29 CFR part 1 or 3.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* $31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of $150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

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

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B) This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

SPECIAL PROVISIONS

City of Kirkland

INTRODUCTION TO THE SPECIAL PROVISIONS

(January 4, 2024 APWA GSP, Option A)

The work on this project shall be accomplished in accordance with the *Standard Specifications for Road, Bridge and Municipal Construction*, 2024 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 are made up of both General Special Provisions (GSPs) from various sources, which may have project-specific fill-ins; and project-specific Special Provisions. Each Provision either supplements, modifies, or replaces the comparable Standard Specification, or is a new Provision. The deletion, amendment, alteration, or addition to any subsection or portion of the Standard Specifications is meant to pertain only to that particular portion of the section, and in no way should it be interpreted that the balance of the section does not apply.

The GSPs are labeled under the headers of each GSP, with the effective date of the GSP and its source. For example:

(March 8, 2013 APWA GSP)
(April 1, 2013 WSDOTGSP)
(May 3, 2023 COK GSP)

Project specific special provisions are labeled without a date as such:
(*****)

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 Manual M21-01, current edition
- *City of Kirkland Public Works Department Pre-Approved Plans and Policies, current year edition*

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

DIVISION 1 GENERAL REQUIREMENTS

DESCRIPTION OF WORK

(March 13, 1995, WSDOT GSP)

This Contract provides for the improvement of a new neighborhood greenway between Totem Lake and downtown Kirkland. The work to be performed includes but is not limited to: roadway excavation, clearing and grubbing, signing, traffic control, drainage, curb ramps, crosswalk striping, landscaping, sidewalks and other work, all in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications.

1-01 DEFINITIONS AND TERMS

1-01.3 Definitions

(January 19, 2022 APWA GSP)

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

Dates

Bid Opening Date

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

Award Date

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

Contract Execution Date

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

Notice to Proceed Date

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

Substantial Completion Date

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

Physical Completion Date

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

Completion Date

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

Final Acceptance Date

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

Supplement this Section with the following:

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

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

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

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

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

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

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

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

Contract Documents
See definition for "Contract".

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

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

Notice to Proceed

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

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

1-02 BID PROCEDURES AND CONDITIONS

1-02.1 Prequalification of Bidders

Delete this section and replace it with the following:

1-02.1 Qualifications of Bidder

(January 24, 2011 APWA GSP)

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

1-02.2 Plans and Specifications

(June 27, 2011 APWA GSP)

Delete this section and replace it with the following:

Information as to where Bid Documents can be obtained or reviewed can be found in the Call for Bids (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")	4	Furnished automatically upon award.
Contract 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.

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

1-02.4(1) General

(December 30, 2022 APWA GSP Option B)

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 3 business days preceding the bid opening to allow a written reply to reach all prospective Bidders before the submission of their Bids.

1-02.5 Proposal Forms

(July 31, 2017 APWA GSP)

Delete this section and replace it with the following:

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

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

1-02.6 Preparation of Proposal

(September 3, 2024 WSDOTGSP)

The Bidder shall submit the following supplemental documents with the Bid in accordance with Section 1-02.9:

1. Disadvantaged Business Enterprise Utilization Certification (WSDOT Form 272-056).

2. DBE Written Confirmation Form (WSDOT Form 422-031) - For each and every DBE firm listed on the Bidder's completed Disadvantaged Business Enterprise Utilization Certification, the Bidder shall submit written confirmation from that DBE firm that the DBE is in agreement with the DBE participation commitment that the Bidder has made in the Bidder's completed Disadvantaged Business Enterprise Utilization Certification.

3. Good Faith Effort Documentation - Bidder must submit good faith effort documentation with the Disadvantaged Business Enterprise Utilization Certification only in the event the Bidder's efforts to solicit sufficient DBE participation have been unsuccessful.

4. DBE Item Breakdown (WSDOT Form 272-054) The Bidder shall submit a DBE Item Breakdown form defining the scope of work to be performed by each DBE listed on the DBE Utilization Certification.

(September 3, 2024 WSDOTGSP)

Bidder Questionnaire

The Bidder shall submit with their Bid a completed Bidder Questionnaire form (WSDOT Form #272-022). This shall be filled out for each firm who submitted a bid or quote in attempt to

participate in the project whether they were successful or not and include the following information:

1. Firm name;

2. Firm address including ZIP code;

3. Firm's status as a DBE or non-DBE;

4. Race and gender information for the firm's majority owner;

5. NAICS code applicable to each scope of work the firm sought to perform in its bid;

6. Age of the firm; and

7. The annual gross receipts of the firm. The Bidder may obtain this information by asking each firm to indicate into what gross receipts bracket they fit (less than $1 million; $1-3 million; $3-6 million; $6-10 million; etc.) rather than requesting an exact figure from the firm.

Failure to return this completed form as part of the Bid Proposal package will cause this Bid to be considered irregular in accordance with Section 1-02.13. A copy of this form is included in the Proposal Forms.

(January 4, 2024 APWA GSP 1-02.6, Option B)

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.

(September 3, 2024 APWA GSP 1-02.6, Option A)

The fourth paragraph of Section 1-02.6 is revised to read:

The Bidder shall submit with the Bid the completed Subcontractor List included in the Contracting Agency Proposal Package. If a Subcontractor List Form is not included in the package, use DOT Form 271-015A. The Form shall contain the following:

1. Subcontractors who will perform the work of structural steel installation, rebar installation, heating, ventilation, air conditioning, and plumbing as described in RCW 18.106 and electrical as described in RCW 19.28,
2. The Work those subcontractors will perform on the Contract as described in RCW 39.30.060; and
3. No more than one subcontractor for each category of work identified, except, when subcontractors vary with Bid alternates, in which case the Bidder shall identify which subcontractor will be used for which alternate.

1-02.7 Bid Deposit

(March 8, 2013 APWA GSP)

Supplement this section with the following:

Bid bonds shall contain the following:

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

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

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

1-02.8 Noncollusion Declaration and Lobbying Certification

(January 1, 2016 COK GSP)

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.

1-02.9 Delivery of Proposal

1-02.9 Delivery of Proposal

(July 8, 2024 APWA GSP, Option A)

Delete this section and replace it with the following:

DBE Document submittal requirements

General

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

To be considered responsive on a FHWA-funded project, the Bidder may be required to submit the following items, as required by Section 1-02.6:

- DBE Utilization Certification (WSDOT 272-056)
- DBE Written Confirmation Document (WSDOT 422-031) from each DBE firm listed on the Bidder's completed DBE Utilization Certification
- Good Faith Effort (GFE) Documentation (if applicable)
- DBE Bid Item Breakdown (WSDOT 272-054)

Proposals that are received as required will be publicly opened and read as specified in Section 1-02.12. The Contracting Agency will not open or consider any Bid Proposal that is received after the time specified in the Call for Bids for receipt of Bid Proposals or received in a location other than that specified in the Call for Bids. The Contracting Agency will not open or consider any "Supplemental Information" (Written Confirmations Documents, or GFE Documentation) that is received after the time specified, or received in a location other than that specified in the Call for Bids.

If an emergency or unanticipated event interrupts normal work processes of the Contracting Agency so that Proposals cannot be received at the office designated for receipt of bids as specified in Section 1-02.12 the time specified for receipt of the Proposal will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which the normal work processes of the Contracting Agency resume.

Supplemental bid information submitted after the Proposal submittal but within 48 hours of the time specified for receipt of Proposals, shall be submitted in a sealed envelope labeled the same as for the Proposal, with "Supplemental Information" added.

DBE Utilization Certification (WSDOT Form 272-056)

The DBE Utilization Certification shall be received at the same location and no later than the time required for delivery of the Proposal. The Contracting Agency will not open or consider any Proposal when the DBE Utilization Certification is received after the time specified for receipt of Proposals or received in a location other than that specified for receipt of

Proposals. The DBE Utilization Certification may be submitted in the same envelope as the Bid deposit.

DBE Written Confirmation Document (WSDOT Form 422-031) and/or GFE Documentation, (if applicable)

The DBE Written Confirmation Documents and/or GFE Documentation are not required to be submitted with the Proposal. The DBE Written Confirmation Document(s) and/or GFE Documentation (if applicable) shall be received either with the Bid Proposal or as a Supplement to the Bid. Written Confirmation and/or GFE Documentation shall be received no later than 48 hours (not including Saturdays, Sundays and Holidays) after the time for delivery of the Proposal. To be considered responsive, Bidders shall submit a Written Confirmation Document from each DBE firm listed on the Bidder's completed DBE Utilization Certification and/or the GFE Documentation as required by Section 1-02.6.

DBE Bid Item Breakdown Form (WSDOT Form 2720-54)

The DBE Bid Item Breakdown shall be received either with the Bid Proposal or as a Supplement to the Bid. The documents shall be received no later than 48 hours (not including Saturdays, Sundays and Holidays) after the time for delivery of the Proposal. To be considered responsive, Bidders shall submit a completed DBE Bid Item Breakdown, however, the Contractor may correct minor errors to the DBE Bid Item Breakdown for a period up to five calendar days after bid opening (not including Saturdays, Sundays and Holidays). DBE Bid Item Breakdowns that are still incorrect after the correction period will be determined to be non-responsive.

The DBE Bid Item Breakdown will not be included as part of the executed Contract.

1-02.10 Withdrawing, Revising, or Supplementing Proposal

(July 23, 2015 APWA GSP)

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

(September 3, 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 Bidder fails to submit the Bidder Questionnaire (DOT Form 272-022), if applicable as required by Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions; or
   k. 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.

1-02.14 Disqualification of Bidders

(May 17, 2018 APWA GSP, Option B)

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

1-02.15 Pre Award Information

(December 30, 2022 APWA GSP)

Revise this section to read:

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

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

1-03 AWARD AND EXECUTION OF CONTRACT

1-03.1 Consideration of Bids

(December 30, 2022 APWA GSP)

Revise the first paragraph to read:

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

1-03.3 Execution of Contract

(July 8, 2024 APWA GSP Option A)

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 20 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 2 additional calendar days for return of the documents, provided the Contracting Agency deems the circumstances warrant it.

1-03.3 Execution of Contract

(July 8, 2024 APWA GSP Option B)

This section is supplemented with the following:

No later than 5 calendar days after the Award date (not including Saturdays, Sundays and Holidays), the successful Bidder shall provide DBE Trucking Credit Form(s) (WSDOT Form 272-058) when trucking appears on the DBE Utilization Certificate (WSDOT Form 272-056). The DBE Trucking Credit Form shall document how the DBE Trucking firm will be able to perform the scope of work subcontracted to them.

Trucking forms will be returned for correction. Trucking Credit Form(s) will not be included as part of the executed Contract.

DBE Trucking Credit Forms shall be submitted in one of the following ways:

1) By E-mail $sgonsar@kirklandwa.gov$

1-03.4 Contract Bond

(July 23, 2015 APWA GSP)

Delete the first paragraph and replace it with the following:

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

1. Be on Contracting Agency-furnished form(s);
2. Be signed by an approved surety (or sureties) that:
   a. Is registered with the Washington State Insurance Commissioner, and
   b. Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner,
3. Guarantee that the Contractor will perform and comply with all obligations, duties, and conditions under the Contract, including but not limited to the duty and obligation to indemnify, defend, and protect the Contracting Agency against all losses and claims related directly or indirectly from any failure:
   a. Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform and comply with all contract obligations, conditions, and duties, or
   b. Of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay all laborers, mechanics, subcontractors, lower tier subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work;
4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the project under titles 50, 51, and 82 RCW; and
5. Be accompanied by a power of attorney for the Surety's officer empowered to sign the bond; and

6. Be signed by an officer of the Contractor empowered to sign official statements (sole proprietor or partner). If the Contractor is a corporation, the bond(s) must be signed by the president or vice president, unless accompanied by written proof of the authority of the individual signing the bond(s) to bind the corporation (i.e., corporate resolution, power of attorney, or a letter to such effect signed by the president or vice president).

1-03.7 Judicial Review

(December 30, 2022 APWA GSP)

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 WORK

1-04.1 Intent of the Contract

(January 1, 2016 COK GSP)

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.

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

(December 30, 2022 APWA GSP)

Revise the second paragraph to read:

Any inconsistency in the parts of the contract shall be resolved by following this order of precedence (e.g., 1 presiding over 2, 2 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.

1-04.4 Changes

(January 19, 2022 APWA GSP)

The first two sentences of the last paragraph of Section 1-04.4 are deleted.

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

Delete the first paragraph and replace it with the following:

Payments or credits for changes amounting to $25,000 or less may be made under the Bid item "Minor Change". At the discretion of the Contracting Agency, this procedure for Minor Changes may be used in lieu of the more formal procedure as outlined in Section 1-04.4, Changes. All "Minor Change" work will be within the scope of the Contract Work and will not change Contract Time.

1-04.11 Final Cleanup
(January 1, 2016 COK GSP)

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 1, 2016 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

1-05.1 Authority of the Engineer

(January 27, 2021 COK GSP)

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

1-05.4 Conformity With and Deviations from Plans and Stakes

(*****)

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.

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.

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.

Payment

Payment will be made for the following bid item when included in the proposal:

"Construction Surveying", lump sum.

The lump sum contract price for "Construction Surveying" shall be full pay for all labor, equipment, materials, and supervision utilized to perform the Work specified, including any resurveying, checking, correction of errors, replacement of missing or damaged stakes, and coordination efforts.

1-05.7 Removal of Defective and Unauthorized Work

(October 1, 2005 APWA GSP)

Supplement this section with the following:

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

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

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

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

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

1-05.9 Equipment

(January 1, 2016 COK GSP)

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.

1-05.11 Final Inspection

Delete this section and replace it with the following:

1-05.11 Final Inspections and Operational Testing

(October 1, 2005 APWA GSP)

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.

1-05.13 Superintendents, Labor and Equipment of Contractor

(August 14, 2013 APWA GSP)

Delete the sixth and seventh paragraph of this section.

1-05.15 Method of Serving Notices

(January 4, 2024 APWA GSP)

Section 1-05.14 is supplemented with the following:

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.

Add the following new section:

1-05.18 Record Drawings

(March 8, 2013 APWA GSP)

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 $ 1,00.00)**	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.

1-06 CONTROL OF MATERIAL

Section 1-06 is supplemented with the following:

Build America/Buy America

(December 20, 2023 WSDOTGSP)

General Requirements

In accordance with Buy America Preferences for Infrastructure Projects requirements contained in 2 CFR 184 and Division G, Title IX - Build America, Buy America Act (BABA), of Public Law 117-58 (Infrastructure Investment and Jobs Act), the following materials must be American-made:

1. All steel and iron used in the project are produced in the United States. This means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

2. All manufactured products used in the project are produced in the United States. This means the manufactured product was manufactured in the United States, and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation.

3. All construction materials are manufactured in the United States. This means that all manufacturing processes for the construction material occurred in the United States.

An article, material, or supply will be classified in one of three categories: 1) Steel and Iron, 2) Manufactured Product or 3) Construction Material. Only a single category will apply to an item and be subject to the requirements of the BABA requirements of that category. Some contract items are composed of multiple parts that may fall into different categories. Individual components will be categorized as a construction material, manufactured product, or steel and iron based on their composition when they arrive at the staging area or work site. When steel or iron are a component of a manufactured product or construction material, the steel and iron components will be subject to “Steel and Iron Requirements” of this Specification.

Definitions

1. Construction Material: Defined as any article, material, or supply brought to the construction site for incorporation into the final product. Construction materials include an article, material, or supply that is or consists primarily of:

    a. Non-ferrous metals including all manufacturing processes, from initial smelting or melting through final shaping, coating, and assembly;

b. Plastic and polymer-based products including all manufacturing processes, from initial combination of constituent plastic or polymer-based inputs, or, where applicable, constituent composite materials, until the item is in its final form);

c. Glass including all manufacturing processes, from initial batching and melting of raw materials through annealing, cooling, and cutting);

d. Fiber optic cable (includes drop cable) including all manufacturing processes, from initial ribboning (if applicable), through buffering, fiber stranding and jacketing, (fiber optic cable also includes the standards for glass and optical fiber);

e. Optical fiber including all manufacturing processes, from the initial preform fabrication stage, though the completion of the draw;

f. Lumber including all manufacturing processes, from initial debarking through treatment and planing;

g. Drywall including all manufacturing processes, from initial blending of mined or synthetic gypsum plaster and additives through cutting and drying of sandwiched panels; or

h. Engineered wood including all manufacturing processes from the initial combination of constituent materials until the wood product is in its final form.

Construction Materials do not include items of primarily iron or steel; manufactured products; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives.

If a Construction Material is not manufactured in the United States it shall be considered a Foreign Construction Material.

2. Manufactured Product: A Manufactured product includes any item produced as a result of the manufacturing process. Items that consist of two or more of the listed construction materials that have been combined together through a manufacturing process, and items that include at least one of the listed materials combined with a material that is not listed through a manufacturing process, should be treated as manufactured products, rather than as construction materials.

3. Manufactured in the United States: A construction material will be considered as manufactured in the United States if all manufacturing processes have occurred in the United States.

4. Structural Steel: Defined as all structural steel products included in the project.

5. United States: To further define the coverage, a domestic product is a manufactured steel construction material that was produced in one of the 50 states, the District of Columbia, Puerto Rico, or in the territories and possessions of the United States.

Steel and Iron Requirements

Major quantities of steel and iron construction materials that are permanently incorporated into the project shall consist of American-made materials only. BABA requirements do not

apply to temporary steel or iron items, e.g., temporary sheet piling, temporary bridges, steel scaffolding and falsework.

Minor amounts of foreign steel and iron may be utilized in this project provided the cost of the foreign material used does not exceed one-tenth of one percent of the total contract cost or $2,500.00, whichever is greater.

American-made material is defined as material having all manufacturing processes occurring domestically.

If domestically produced steel billets or iron ingots are exported outside of the area of coverage, as defined above, for any manufacturing process then the resulting product does not conform to the BABA requirements. Additionally, products manufactured domestically from foreign source steel billets or iron ingots do not conform to the BABA requirements because the initial melting and mixing of alloys to create the material occurred in a foreign country.

Manufacturing begins with the initial melting and mixing and continues through the coating stage. Any process which modifies the chemical content, the physical size or shape, or the final finish is considered a manufacturing process. The processes include rolling, extruding, machining, bending, grinding, drilling, welding, and coating. The action of applying a coating to steel or iron is deemed a manufacturing process. Coating includes epoxy coating, galvanizing, aluminizing, painting, and any other coating that protects or enhances the value of steel or iron. Any process from the original reduction from ore to the finished product constitutes a manufacturing process for iron.

Due to a nationwide waiver, BABA requirements do not apply to raw materials (iron ore and alloys), scrap (recycled steel or iron), and pig iron ore processed, pelletized, and reduced iron ore.

The following are considered to be steel manufacturing processes:

1. Production of steel by any of the following processes:

    a. Open hearth furnace.

    b. Basic oxygen.

    c. Electric furnace.

    d. Direct reduction.

2. Rolling, heat treating, and any other similar processing.

3. Fabrication of the products:

    a. Spinning wire into cable or strand.

    b. Corrugating and rolling into culverts.

    c. Shop fabrication.

A certification of materials origin will be required for all items comprised of, or containing, steel or iron construction materials prior to such items being incorporated into the permanent work. The Contractor will not receive payment until the certification is received by the Engineer. The certification shall be on WSDOT Form 350-109 provided by the Engineer, or such other form the Contractor chooses, provided it contains the same information as WSDOT Form 350-109.

Manufactured Products

Due to a nationwide waiver, BABA requirements do not apply to manufactured products. Manufactured products that contain steel and iron, regardless of a nationwide waiver, will follow "Steel and Iron Requirements" of this Specification.

Construction Material Requirements

A Contractor provided certification of materials origin will be required before each progress estimate or payment. The Contractor will not receive payment until the certification is received by the Engineer. The Contractor shall certify that all construction materials installed during the current progress estimate period meets the Build America, Buy America Act. The certification shall be on WSDOT Form 350-111 provided by the Engineer, or such other form the Contractor chooses, provided it contains the same information as WSDOT Form 350-111.

Waiver for De Minimis Costs

Minor amounts of Foreign Construction Materials may be utilized in this project, provided that the total cost of the Foreign Construction Materials does not exceed $1,000,000 and does not exceed 5 percent of the total applicable material costs calculated as follows:

$$\frac{Total\ cost\ of\ Foreign\ Construction\ Materials}{Total\ applicable\ material\ costs} < 0.05$$

The total applicable material costs shall be the sum of the costs all Construction Materials, all Steel and Iron, and all Manufactured Products. Total applicable material costs does not include the cost of cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives.

Steel and iron materials shall follow the "Steel and Iron Requirements" of this Specification.

1-06.1 Approval of Materials Prior to Use

(January 1, 2016 COK GSP)

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.

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

(February 17, 2022 COK GSP)

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.

1-06.1(4) Fabrication Inspection Expense

(June 27, 2011 AWPA GSP)

Delete this section in its entirety.

1-06.2 Acceptance of Materials

1-06.2(2) Statistical Evaluation of Materials for Acceptance

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.

1-06.6 Recycled Materials

(January 4, 2016 APWA GSP)

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

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

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

1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

1-07.1 Laws to be Observed

(October 1, 2005 APWA GSP)

Supplement this section with the following:

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

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

The Contractor shall maintain at the project site office, or other well known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a

hospital, or doctor's care, persons, including employees, who may have been injured on the project site. Employees should not be permitted to work on the project site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor's care.

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

(January 1, 2021 COK GSP)

Supplement this section 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.

(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.

(April 3, 2006 WSDOTGSP)

Confined Space

Confined spaces are known to exist at the following locations:

Various manhole and vault locations

The Contractor shall be fully responsible for the safety and health of all on-site workers and compliant with Washington Administrative Code (WAC 296-809).

The Contractor shall prepare and implement a confined space program for each of the confined spaces identified above. The Contractors Confined Space program shall be sent to the Contracting Agency at least 30 days prior to the Contractor beginning work in or adjacent to the confined space. No work shall be performed in or adjacent to the confined space until the plan is submitted to the Engineer as required. The Contractor shall communicate with the Engineer to ensure a coordinated effort for providing and maintaining a safe worksite for both the Contracting Agency's and Contractor's workers when working in or near a confined space.

All costs to prepare and implement the confined space program shall be included in the bid prices for the various items associated with the confined space work.

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

(June 27, 2011 APWA GSP)

The Washington State Department of Revenue has issued special rules on the State sales tax. Sections 1-07.2(1) through 1-07.2(3) are meant to clarify those rules. The Contractor should contact the Washington State Department of Revenue for answers to questions in this

area. The Contracting Agency will not adjust its payment if the Contractor bases a bid on a misunderstood tax liability.

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

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

1-07.2(1) State Sales Tax — Rule 171

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

1-07.2(2) State Sales Tax — Rule 170

WAC 458-20-170, and its related rules, apply to the constructing and repairing of new or existing buildings, or other structures, upon real property. This includes, but is not limited to, the construction of streets, roads, highways, etc., owned by the state of Washington; water mains and their appurtenances; sanitary sewers and sewage disposal systems unless such sewers and disposal systems are within, and a part of, a street or road drainage system; telephone, telegraph, electrical power distribution lines, or other conduits or lines in or above streets or roads, unless such power lines become a part of a street or road lighting system; and installing or attaching of any article of tangible personal property in or to real property, whether or not such personal property becomes a part of the realty by virtue of installation.
For work performed in such cases, the Contractor shall collect from the Contracting Agency, retail sales tax on the full contract price. The Contracting Agency will automatically add this sales tax to each payment to the Contractor. For this reason, the Contractor shall not include the retail sales tax in the unit bid item prices, or in any other contract amount subject to Rule 170, with the following exception.

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

1-07.2(3) Services

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

1-07.5 Environmental Regulations

1-07.5(3) State Department of Ecology

(January 1, 2021 COK GSP)

Section 1-07-5(3) is supplemented 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): $$TBD$$

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.

1-07.6 Permits and Licenses

(January 2, 2021 COK GSP)

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)).

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

(January 1, 2021 COK GSP)
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.

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

(January 1, 2021 COK GSP)
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.

1-07.9 Wages

1-07.9(1) General

Section 1-07.9(1) is supplemented with the following:

(January 10, 2024)

The Federal wage rates incorporated in this contract have been established by the Secretary of Labor under United States Department of Labor General Decision No. WA20240001. The State rates incorporated in this contract are applicable to all construction activities associated with this contract.

1-07.9(5)A Required Documents

(July 8, 2024 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. When apprenticeship is a requirement of the contract, include in PWIA all apprentices.

1-07.11 Requirements for Nondiscrimination

Section 1-07.11 is supplemented with the following:

(October 3, 2022)

Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)

1. The Contractor's attention is called to the Equal Opportunity Clause and the Standard Federal Equal Employment Opportunity Construction Contract Specifications set forth herein.

2. The goals and timetables for minority and female participation set by the Office of Federal Contract Compliance Programs, expressed in percentage terms for the Contractor's aggregate work force in each construction craft and in each trade on all construction work in the covered area, are as follows:

Women - Statewide

Timetable	Goal
Until further notice	6.9%

Minorities - by Standard Metropolitan Statistical Area (SMSA)

Spokane, WA:
SMSA Counties:
Spokane, WA 2.8
WA Spokane.
Non-SMSA Counties 3.0
WA Adams; WA Asotin; WA Columbia; WA Ferry; WA Garfield; WA Lincoln, WA Pend Oreille; WA Stevens; WA Whitman.

Richland, WA
SMSA Counties:
Richland Kennewick, WA 5.4
WA Benton; WA Franklin.
Non-SMSA Counties 3.6
WA Walla Walla.

Yakima, WA:
SMSA Counties:
Yakima, WA 9.7
WA Yakima.
Non-SMSA Counties 7.2
WA Chelan; WA Douglas; WA Grant; WA Kittitas; WA Okanogan.

Seattle, WA:
SMSA Counties:
Seattle Everett, WA 7.2
WA King; WA Snohomish.
Tacoma, WA 6.2
WA Pierce.
Non-SMSA Counties 6.1
WA Clallam; WA Grays Harbor; WA Island; WA Jefferson; WA Kitsap; WA Lewis; WA Mason; WA Pacific; WA San Juan; WA Skagit; WA Thurston; WA Whatcom.

Portland, OR:
SMSA Counties:
Portland, OR-WA 4.5
WA Clark.
Non-SMSA Counties 3.8
WA Cowlitz; WA Klickitat; WA Skamania; WA Wahkiakum.

These goals are applicable to each nonexempt Contractor's total on-site construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, or federally assisted project, contract, or subcontract until further notice. Compliance with these goals and time tables is enforced by the Office of Federal Contract compliance Programs.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, in each construction craft and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goal shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Office of Federal Contract Compliance Programs (OFCCP) within 10 working days of award of any construction subcontract in excess of $10,000 or more that are Federally funded, at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed. The notification shall be sent to:

   U.S. Department of Labor
   Office of Federal Contract Compliance Programs Pacific Region
   Attn: Regional Director
   San Francisco Federal Building
   90 – 7th Street, Suite 18-300
   San Francisco, CA 94103(415) 625-7800 Phone
   (415) 625-7799 Fax

4. As used in this Notice, and in the contract resulting from this solicitation, the Covered Area is as designated herein.

<u>Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)</u>

1. As used in these specifications:

a. Covered Area means the geographical area described in the solicitation from which this contract resulted;

b. Director means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

c. Employer Identification Number means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U. S. Treasury Department Form 941;

d. Minority includes:

(1) Black, a person having origins in any of the Black Racial Groups of Africa.

(2) Hispanic, a fluent Spanish speaking, Spanish surnamed person of Mexican, Puerto Rican, Cuban, Central American, South American, or other Spanish origin.

(3) Asian or Pacific Islander, a person having origins in any of the original peoples of the Pacific rim or the Pacific Islands, the Hawaiian Islands and Samoa.

(4) American Indian or Alaskan Native, a person having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.

2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or subcontractor's failure to take good faith effort to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of this Special Provision. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should

reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its action. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

    a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

    b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

    c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

    d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not

referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunity and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the U.S. Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through 7p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of the obligations under 7a through 7p of this Special Provision provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensure that the concrete benefits of the program are reflected in the Contractor's minority and female work-force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrate the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspensions, terminations and cancellations of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of this Special Provision, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the government and to keep records. Records shall at least include, for each employee, their name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, the Contractors will not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

16. Additional assistance for Federal Construction Contractors on contracts administered by Washington State Department of Transportation or by Local Agencies may be found at:

    Washington State Dept. of Transportation
    Office of Equity and Civil Rights
    PO Box 47314
    310 Maple Park Ave. SE
    Olympia WA
    98504-7314
    Ph: 360-705-7090
    Fax: 360-705-6801
    http://www.wsdot.wa.gov/equalopportunity/default.htm

(September 3, 2024, APWA GSP Option B)

Section 1-07.11 is supplemented with the following:

Disadvantaged Business Enterprise Participation

General

The Disadvantaged Business Enterprise (DBE) requirements of 49 CFR Part 26 and USDOT's official interpretations (i.e., Questions & Answers) apply to this Contract. Demonstrating compliance with these Specifications is a Condition of Award (COA) of this Contract. Failure to comply with the requirements of this Specification may result in your Bid being found to be irregular in accordance with Section 1-02.13 resulting in rejection or other sanctions as provided by the Contract.

DBE Abbreviations and Definitions

Certified Business Description – The approved business description that supplements the North American Industry Classification System (NAICS) code listed in OMWBE's directory of certified firms.

Certified Business Directory – A database of all Minority, Women, and Disadvantaged Business Enterprises currently certified by Washington State. The on-line Directory is available to Bidders for their use in identifying and soliciting interest from DBE firms. The database is located under the Firm Certification section of the Diversity Management and Compliance System web page at: https://omwbe.diversitycompliance.com.

Commercially Useful Function (CUF) –
A firm performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by performing, managing, and supervising the work involved as defined in 49 CFR 26.55(c)(1). To perform a commercially useful function, the firm must also be responsible, with respect to materials and supplies used on the contract, for ordering, negotiating price, paying for, determining quality and quantity, and installing (where applicable) for the material itself.

The DBE firm does not perform a CUF if its role is limited to that of an extra participant in a transaction, contract, or Project through which the funds are passed to obtain the appearance of DBE participation.

Consultant, DBE – An individual, partnership, firm, or corporation who meet the definition of a DBE which has been retained under a contract to provide technical or professional services.

DBE Commitment – The dollar amount and scope of work the Bidder indicates on each line of their DBE Utilization Certification (DOT Form 272-056) for each DBE firm. These Commitments will be incorporated into the Contract and shall be considered Contract requirements.

DBE Condition of Award (COA) Goal – An assigned numerical amount specified as a percentage of the Contract. At Bid, this is the minimum amount that the Bidder must commit to by submission of the DBE Utilization Certification form and, if necessary, by GFE Documentation.

Disadvantaged Business Enterprise (DBE) – A business that is owned and operated independently from other businesses and is certified by the Washington State Office of

Minority and Women's Business Enterprises, as meeting the criteria outlined in 49 CFR 26 regarding DBE certification.

Force Account Work – Work measured and paid in accordance with Section 1-09.6.

Good Faith Efforts (GFE)– Efforts to achieve the DBE COA Goal or other requirements of this Provision which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement.

Good Faith Efforts (GFE) Documentation - The documentation of the Good Faith Effort. GFE Documentation is only required in the event that the Contractor is unable to fulfill the program requirements and shall follow the guidance of 49 CFR Part 26 Appendix A.

Subcontractor, DBE – An individual, partnership, firm, corporation, or joint venture who meet the definition of a DBE and who is sublet part of the Contract.

Supplier, DBE – A Manufacturer, Regular Dealer, Distributor, or Transaction Facilitator who provides supplies or materials for the Contract. The role a Supplier performs is determined on a contract-by contact basis.

Manufacturer, DBE – A DBE firm that operates or maintains a factory or establishment that produces on the premises the materials, supplies, articles, or equipment required under the Contract. A DBE Manufacturer shall produce finished goods or products from raw or unfinished material or purchase and substantially alters goods and materials to make them suitable for construction use before reselling them.

Regular Dealer, DBE – A DBE firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of a Contract are bought, kept in stock, and regularly sold to the public in the usual course of business. To be a Regular Dealer, the DBE firm must be an established regular business that engages in as its principal business and in its own name the purchase and sale of the products in question. A Regular Dealer in such items as steel, cement, gravel, stone, and petroleum products need not own, operate or maintain a place of business if it both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by long-term formal lease agreements and not on an ad-hoc basis. Brokers, packagers, manufacturers' representatives, or other persons who arrange or expedite transactions shall not be regarded as Regular Dealers within the meaning of this definition.

Distributor, DBE –An established DBE firm that engages in the regular sale or lease of the items specified by the contract. A DBE Distributor assumes responsibility for the items it purchases once they leave the point of origin, making it liable for any loss or damage not covered by the carrier's insurance. The Distributor must demonstrate ownership of the items in question and assure all risk for loss or damage during transportation, evidenced by the terms of the purchase order or bill of lading from a third party, indicating Free on Board (FOB) at the point of origin or similar terms that transfer responsibility of the items in question to the DBE distributors.

Transaction Facilitator, DBE – A DBE firm (packagers, brokers, manufacturer's representatives, etc.) who provides a bona fide service arranging, facilitating, or expediting transactions but does not qualify as a Manufacturer, a Regular Dealer, or a Distributor

DBE COA Goal

The Contracting Agency has established a DBE COA Goal for this Contract in the amount of: *** 16% *** which applies to the final Contract amount.

If the Contractor cannot meet the DBE COA Goal, GFE Documentation is required.

Demonstrating compliance with the DBE COA Goal is a Condition of Award of this Contract.

Procedures Prior to Award

Approval of Regular Dealer and Distributors

DBE firms proposed to be used as either a Regular Dealer or a Distributor must be approved before being listed as a COA/used on a project. The Approved Regular Dealer list published on WSDOT's Office of Equity and Civil Rights (OECR) web site must include the specific project for which approval is being requested. For purposes of the DBE COA Goal participation, the Regular Dealer/Distributor must submit the DBE Regular Dealer/Distributor Affirmation Form (USDOT OMB Control 508v3)a minimum of five calendar days prior to bid opening. The DBE Regular Dealer/Distributor Affirmation Form is located at:
https://www.transportation.gov/mission/civil-rights/dbe-regular-dealer-distributor-affirmation

Requests to be listed as a Regular Dealer/Distributor will only be processed if the requesting firm is a material supplier certified by the Office of Minority and Women's Business Enterprises in a NAICS code that falls within the 42XXXX NAICS Wholesale code section.

Disadvantaged Business Enterprise Utilization

To be eligible for award of the Contract, the Bidder shall properly complete and submit a Disadvantaged Business Enterprise (DBE) Utilization Certification with the Bidder's sealed Bid Proposal, as specified in Section 1-02.9 Delivery of Proposal. The Bidder's DBE Utilization Certification must clearly demonstrate how the Bidder intends to meet the DBE COA Goal. A DBE Utilization Certification (WSDOT Form 272-056) is included in the Proposal package for this purpose as well as instructions on how to properly fill out the form.

The Bidder is advised that the items listed below when listed in the Utilization Certification must have their amounts reduced to the percentages shown and those reduced amounts will be the amount applied towards meeting the DBE COA Goal.

1. Force account at 50% of the total amount to be subcontracted
2. Regular dealer at 60% of the cost of the materials or supplies
3. Distributor at 40% of the cost of the materials or supplies
4. Transaction Facilitator not more than 5% of the goods or services

In the event of arithmetic errors in completing the DBE Utilization Certification, the amount listed to be applied towards the DBE COA Goal for each DBE shall govern and the DBE total amount shall be adjusted accordingly.

Bid Proposals submitted that do not contain a DBE Utilization Certification Form that demonstrates how the Bidder intends to meet the DBE COA Goal will be considered irregular in accordance with Section make the Proposal considered to be irregular in accordance with Section 1-02.13 and will be rejected.

Disadvantaged Business Enterprise Written Confirmation Document(s)

The Bidder shall submit a Disadvantaged Business Enterprise (DBE) Written Confirmation Document (completed and signed by the DBE) for each DBE firm listed in the Bidder's completed DBE Utilization Certification. Failure to do so will result in the associated participation being disallowed, which will cause the Bid to be considered irregular in accordance with Section 1-02.13 and will be rejected.

The Confirmation Documents provide confirmation from the DBEs that they are participating in the Contract as provided in the Bidder's Commitment. The Confirmation Documents must be consistent with the Utilization Certification.

A DBE Written Confirmation Document (WSDOT Form 422-031) is included in the Proposal package for this purpose. The form(s) shall be received as specified in the special provisions for Section 1-02.9 Delivery of Proposal.

It is prohibited for the Bidder to require a DBE to submit a Written Confirmation Document with any part of the form left blank. Should the Contracting Agency determine that an incomplete Written Confirmation Document was signed by a DBE, the associated DBE participation may not be allowed.

DBE Bid Item Breakdown

The Bidder shall submit a DBE Bid Item Breakdown Form (DOT Form 272-054) as specified in the Special Provisions for Section 1-02.9, Delivery of Proposal.

Selection of Successful Bidder/Good Faith Efforts (GFE)

The successful Bidder shall be selected on the basis of having submitted the lowest responsive Bid, which demonstrates a good faith effort to achieve the DBE COA Goal. The Contracting Agency, at any time during the selection process, may request a breakdown of the bid items and amounts that are counted towards the overall contract goal for any of the DBEs listed on the DBE Utilization Certification.

GFE to achieve the DBE COA Goal may be accomplished in one of two ways:

1. By meeting the DBE COA Goal
   Submission of the DBE Utilization Certification, supporting DBE Written Confirmation Document(s) showing the Bidder has obtained enough DBE participation to meet or exceed the DBE COA Goal and the DBE Bid Item Breakdown

2. By documentation that the Bidder made adequate GFE to meet the DBE COA Goal

The Bidder may demonstrate a GFE in whole or part through GFE Documentation only in the event a Bidder's efforts to solicit sufficient DBE participation have been unsuccessful. The Bidder must supply GFE Documentation in addition to the DBE Utilization Certification, supporting DBE Written Confirmation Document(s) and the DBE Bid Item Breakdown form.

In the case where a Bidder is awarded the contract based on demonstrating adequate GFE Documentation, the advertised DBE COA Goal will not be reduced. The Bidder shall demonstrate a GFE during the life of the Contract to attain the advertised DBE COA Goal.

The Contracting Agency will review the GFE Documentation and will determine if the Bidder made an adequate good faith effort.

Procedures between Award and Execution

DBE Trucking Credit Form

The successful Bidder shall submit a DBE Trucking Credit Form (WSDOT Form 272-058), as specified in the Special Provisions for Section 1-03.3, Execution of Contract.

The DBE Trucking Credit Form is required for all DBE Firms performing as a subcontractor for "Trucking" or "Hauling" and are performing a part of a bid item. For example, if the item of Work is Structure Excavation including Haul, and another firm is doing the excavation and the DBE Trucking firm is doing the haul, the form is required. For a DBE subcontractor that is responsible for an entire item of work that may require some use of trucks, the form is not required.

Procedures after Execution

Commercially Useful Function (CUF)

The Contractor may only take credit for the payments made for Work performed by a DBE that is determined to be performing a CUF. Payment must be commensurate with the work actually performed by the DBE. This applies to all DBEs performing Work on a project, whether or not the DBEs are COA, if the Contractor wants to receive credit for their participation. The Engineer will conduct CUF reviews to ascertain whether DBEs are performing a CUF. A DBE performs a CUF when it is carrying out its responsibilities of its contract by actually performing, managing, and supervising the Work involved. The DBE must be responsible for negotiating price; determining quality and quantity; ordering the material, installing (where applicable); and paying for the material itself. If a DBE does not perform "all" of these functions on a furnish-and-install contract, it has not performed a CUF and the cost of materials cannot be counted toward DBE COA Goal. Leasing of equipment from a leasing company is allowed. However, leasing/purchasing equipment from the Contractor is not allowed. Lease agreements shall be provided prior to the subcontractor beginning Work. Any use of the Contractor's equipment by a DBE will not be credited as countable participation.

The DBE does not perform a CUF if its role is limited to that of an extra participant in a transaction, contract, or project through which the funds are passed in order to obtain the appearance of DBE participation.

In order for a DBE traffic control company to be considered to be performing a CUF, the DBE must be in control of its work inclusive of supervision. The DBE shall employ a

Traffic Control Supervisor who is directly involved in the management and supervision of the traffic control employees and services.

The following are some of the factors that the Engineer will use in determining whether a DBE trucking company is performing a CUF:

1. The DBE shall be responsible for the management and supervision of the entire trucking operation for which it is responsible on the contract. The owner demonstrates business related knowledge, shows up on site and is determined to be actively running the business.

2. The DBE itself shall own and operate at least one fully licensed, insured, and operational truck used on the Contract. The drivers of the trucks owned and leased by the DBE must be exclusively employed by the DBE and reflected on the DBE's payroll.

3. Lease agreements for trucks shall indicate that the DBE has exclusive use of and control over the truck(s). This does not preclude the leased truck from working for others provided it is with the consent of the DBE and the lease provides the DBE absolute priority for use of the leased truck.

4. Leased trucks shall display the name and identification number of the DBE.

Truck Unit Listing Log

In addition to the subcontracting requirements of Section 1-08.1, each DBE trucking firm shall submit supplemental information consisting of a completed primary DBE/FSBE Truck Unit Listing Log (DOT Form 350-077) and all Rental/Lease agreements (if applicable). The supplemental information shall be submitted in an electronic format to the Engineer prior to any trucking services being performed for DBE credit. Incomplete or incorrect supplemental information will be returned for correction. The corrected Primary Truck Unit Listing Log and any Updated Primary Truck Unit Listing Logs shall be submitted and accepted by the Engineer no later than ten calendar days of utilizing applicable trucks. Failure to submit or update the DBE Truck Unit Listing Log may result in trucks not being credited as DBE participation.

Each DBE trucking firm shall complete a daily DBE/FSBE Truck Unit Listing Log (DOT Form 350-077) for each day that the DBE performs trucking services for DBE credit. The Daily Truck Unit Listing Log forms shall be submitted by Friday of the week after the Work was performed by email to the following email addresses.

WSDOT Northwest Region – NWRegionOEO@wsdot.wa.gov
sgonsar@kirklandwa.gov
Scott Gonsar
City of Kirkland Public Works Department
125 5th Avenue, Kirkland, Washington 98033

Joint Checking

A joint check is a check between a subcontractor and the Contractor to the supplier of materials/supplies. The check is issued by the Contractor as payer to the subcontractor and the material supplier jointly for items to be incorporated into the project. The DBE must release the check to the supplier, while the Contractor acts solely as the guarantor.

A joint check agreement must be approved by the Engineer and requested by the DBE involved using the DBE Joint Check Request Form (WSDOT Form 272-053) prior to its use. The form must accompany the DBE Joint Check Agreement between the parties involved, including the conditions of the arrangement and expected use of the joint checks.

The approval to use joint checks and the use will be closely monitored by the Engineer. To receive DBE credit for performing a CUF with respect to obtaining materials and supplies, a DBE must "be responsible for negotiating price, determining quality and quantity, ordering the material, installing and paying for the material itself." The Contractor shall submit DBE Joint Check Request Form to the Engineer and be in receipt of written approval prior to using a joint check.

Material costs paid by the Contractor directly to the material supplier are not allowed. If proper procedures are not followed or the Engineer determines that the arrangement results in lack of independence for the DBE involved, no DBE credit will be given for the DBE's participation as it relates to the material cost.

Prompt Payment

Prompt payment to all subcontractors shall be in accordance with Section 1-08.1. Prompt payment requirements apply to progress payments as well as return of retainage.

Reporting

The Contractor and all subcontractors of any tier, suppliers, service providers, and professional services that utilize DBEs to perform work on the project, shall maintain appropriate records that will enable the Engineer to verify DBE participation throughout the life of the project.

Refer to Section 1-08.1 for additional reporting requirements associated with this Contract.

Crediting DBE Participation

General

Subcontractors proposed as COA must be certified prior to the due date for bids on the Contract. All non-COA DBE subcontractors shall be certified before the subcontract on which they are participating is executed.

DBE participation is only credited upon payment to the DBE.

DBE Prime Contractor and Subcontractor Participation

Only take credit for the Work that the DBE contractor performs with its own forces and is certified to perform.

If the Prime Contractor, subcontractor, or lower tier subcontractor DBE subcontracts a portion of the Work of its contract to another firm, the value of the subcontracted Work may be counted toward the DBE Commitments only if the lower-tier subcontractor is also a DBE.

Work subcontracted to a lower-tier subcontractor that is a DBE may be counted toward the DBE Commitments only if the lower-tier subcontractor self performs a minimum of 30 percent of the Work subcontracted to them.

Work subcontracted by a DBE contractor to a non-DBE does not count towards the DBE COA Goal.

DBE Subcontract and Lower Tier Subcontract Documents

DBE Consultants

A DBE firm providing a bona fide service, such as professional, technical, or managerial services, specifically required for the performance of the contract will be credited as DBE participation

Force Account Work

When the Bidder elects to utilize force account Work to meet the DBE COA Goal, as demonstrated by listing this force account Work on the DBE Utilization Certification form, for the purposes of meeting DBE COA Goal, only 50% of the Proposal amount shall be credited toward the Bidder's Commitment to meet the DBE COA Goal.

One hundred percent of the actual amounts paid to the DBE for the force account Work shall be credited towards the DBE COA Goal or DBE participation.

Temporary Traffic Control Participation

If the DBE firm only provides "Flagging", the DBE firm must provide a traffic control supervisor (TCS) and flagger(s), which are under the direct control of the DBE. The DBE firm shall also provide all flagging equipment for its employees (e.g., paddles, hard hats, and vests).

If the DBE firm provides "Traffic Control Services", the DBE firm must provide a TCS, flaggers, and traffic control items (e.g., cones, barrels, signs, etc.) and be in total control of all items in implementing the traffic control for the project.

Trucking Participation

DBE trucking firm participation may only be credited as DBE participation for the value of the hauling services, not for the materials being hauled unless the trucking firm is also certified as a supplier of those materials. In situations where the DBE's work is priced per ton, the value of the hauling service must be calculated separately from the value of the materials in order to determine DBE credit for hauling

The DBE trucking firm must own and operate at least one licensed, insured and operational truck on the contract. The truck must be of the type that is necessary to perform the hauling duties required under the contract. The DBE receives credit for the value of the transportation services it provides on the Contract using trucks it owns or leases, licenses, insures, and operates with drivers it employs.

The DBE may lease additional trucks from another DBE firm. The DBE who leases additional trucks from another DBE firm receives credit for the value of the transportation services the lessee DBE provides on the Contract.

The trucking Work subcontracted to any non-DBE trucking firm will not receive credit for Work done on the project.

The DBE may lease trucks from a truck leasing company (recognized truck rental center) but can only receive credit towards DBE participation if the DBE uses its own employees as drivers.

DBE Supplier

The credit of a DBE Supplier is decided on a contract-by-contract basis based on what the role the proposed DBE Supplier will be performing. OECR will make determinations on whether a Supplier qualifies as a Regular Dealer, Distributor, or Transaction Facilitator based on their role for the Contract.

Manufacturer - One hundred percent (100%) of the cost of the manufactured product obtained from a DBE manufacturer may count towards the DBE COA Goal.

Regular Dealer - Sixty percent (60%) of the cost of materials or supplies purchased from a DBE Regular Dealer may be credited toward the DBE Goal.
Distributor – Forty percent (40%) of the cost of materials or supplies purchased from a DBE Distributor may be credited toward the DBE Goal.

Transaction Facilitator - only the fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on the job site, may toward the DBE COA Goal provided the fees are not excessive as compared with fees customarily allowed for similar services. The reasonable fee shall not exceed 5 percent of the total cost of the goods or services. Documentation will be required to support the fee/commission charged by the DBE. The cost of the materials and supplies themselves cannot be counted toward the DBE Goal.

Changes in COA Work Committed to DBE

The Contractor shall utilize the COA DBEs to perform the work and supply the materials for which each is committed unless prior written approval by the Engineer has been received by the Contractor. The Contractor shall not be entitled to any payment for work or material completed by the Contractor or subcontractors that was committed to be completed by the COA DBEs in the DBE Utilization Certification form.

Changes

In the event a change results in a reduction to Work committed to a COA DBE, the Contractor shall substitute other remaining Work to that COA DBE if possible, to avoid a change to the total dollar amount to be applied towards the goal committed to that COA DBE. If there is a reduction to the total dollar amount to be applied towards the goal for a COA DBE Commitment, regardless of the reason, it shall be viewed as DBE termination, and subject to the termination procedures below. A notification to the DBE shall occur as soon as possible but no later than two weeks after the Contractor is aware of the upcoming change.

Original Quantity Underruns

In the event that Work committed to a DBE firm as part of the COA underruns the original planned quantities the Contractor may be required to substitute other remaining Work to another DBE.

Contractor Proposed DBE Substitutions

Requests to substitute a COA DBE must be for good cause (see DBE termination process below) and requires prior written approval of the Engineer. After receiving a termination with good cause approval, the Contractor may only replace a DBE with another certified DBE. When changes between Contract Award and Execution result in a substitution of COA DBE, the substitute DBE shall be certified prior to the bid opening on the Contract.

DBE Termination

Termination of a COA DBE (or an approved substitute DBE) is only allowed in whole or in part for good cause and with prior written approval of the Contracting Agency. If the Contractor terminates a COA DBE without the prior written approval of the Contracting Agency, the Contractor shall not be entitled to payment for work or material committed to, but not performed/supplied by the COA DBE. In addition, sanctions may apply as described elsewhere in this specification.

Prior to requesting approval to terminate a COA DBE, the Contractor shall give notice in writing to the DBE with a copy to the Engineer of its intent to request to terminate DBE Work and the reasons for doing so. The DBE shall have five days to respond to the Contractor's notice. The DBE's response shall either support the termination or advise the Engineer and the Contractor of the reasons it objects to the termination of its subcontract.

If the request for termination is approved, the Contractor is required to substitute with another DBE to perform at least the same amount of work as the DBE that was terminated (or provide GFE Documentation). A plan to replace the COA DBE Commitment amount shall be submitted to the Engineer within 2 days of the approval of termination. The plan to replace the Commitment shall provide the same detail as that required in the DBE Utilization Certification.

As mentioned above, the Contractor must have good cause to terminate a COA DBE.

Good cause typically includes situations where the DBE subcontractor is unable or unwilling to perform the work of its subcontract. Good cause may exist if:

1. The DBE fails or refuses to execute a written contract.

2. The DBE fails or refuses to perform the Work of its subcontract in a way consistent with normal industry standards.

3. The DBE fails or refuses to meet the Contractor's reasonable nondiscriminatory bond requirements.

4. The DBE becomes bankrupt, insolvent, or exhibits credit unworthiness.

5. The DBE is ineligible to work on public works projects because of suspension and debarment proceedings pursuant to federal law or applicable State law.

6. The DBE is ineligible to receive DBE credit for the type of work involved.

7. The DBE voluntarily withdraws from the project and provides written notice of its withdrawal.

8. The DBE's work is deemed unsatisfactory by the Engineer and not in compliance with the Contract.

9. The DBE's owner dies or becomes disabled with the result that the DBE is unable to complete its Work on the Contract.

Good cause does not exist if:

1. The Contractor seeks to terminate a COA DBE so that the Contractor can self-perform the Work.

2. The Contractor seeks to terminate a COA DBE so the Contractor can substitute another DBE contractor or non-DBE contractor after Contract Award.

3. The failure or refusal of the COA DBE to perform its Work on the subcontract results from the bad faith or discriminatory action of the Contractor (e.g., the failure of the Contractor to make timely payments or the unnecessary placing of obstacles in the path of the DBE's Work).

Decertification
When a DBE is "decertified" from the DBE program during the course of the Contract, the participation of that DBE shall continue to count as DBE participation as long as the subcontract with the DBE was executed prior to the decertification notice. The Contractor is obligated to substitute when a DBE does not have an executed subcontract agreement at the time of decertification.

Good Faith Effort (GFE) Documentation

GFE Documentation is required and will be evaluated whenever the Contractor is unable to fulfill the program requirement. This evaluation may need to be repeated when:

1. Determining award of a Contract that has COA goal,

2. When a COA DBE is terminated and substitution is required, and

3. Prior to Physical Completion when determining whether the Contractor has satisfied its DBE commitments.

49 CFR Part 26, Appendix A is intended as general guidance and does not, in itself, demonstrate adequate good faith efforts. The following is a list of types of actions, which would be considered as part of the Bidder's GFE Documentation to achieve DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

1. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the Work of the Contract. The Bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The

Bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

2. Selecting portions of the Work to be performed by DBEs in order to increase the likelihood that the DBE COA Goal will be achieved. This includes, where appropriate, breaking out contract Work items into economically feasible units to facilitate DBE participation, even when the Bidder might otherwise prefer to perform these Work items with its own forces.

3. Providing interested DBEs with adequate information about the Plans, Specifications, and requirements of the Contract in a timely manner to assist them in responding to a solicitation.

    a. Negotiating in good faith with interested DBEs. It is the Bidder's responsibility to make a portion of the Work available to DBE subcontractors and suppliers and to select those portions of the Work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the Plans and Specifications for the Work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the Work.

    b. A Bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as the DBE COA Goal into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a Bidder's failure to meet the DBE COA Goal, as long as such costs are reasonable. Also, the ability or desire of a Bidder to perform the Work of a Contract with its own organization does not relieve the Bidder of the responsibility to make Good Faith Efforts. Bidders are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

4. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The Bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the Bidder's efforts to meet the DBE COA Goal.

5. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or Bidder.

6. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

7. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, State, and Federal minority/women business assistance offices; and other organizations as allowed on

a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

8. GFE Documentation must include copies of each DBE and non-DBE subcontractor quotes submitted to the Bidder when a non-DBE subcontractor is selected over a DBE for Work on the Contract. (ref. updated DBE regulations – 26.53(b)(2)(vi) & App. A)

Administrative Reconsideration of GFE Documentation

A Bidder has the right to request reconsideration if the GFE Documentation submitted with their Bid was determined to be inadequate or without merit. If, during the life of the Contract, the Contractor submits an additional GFE Documentation and the Contracting Agency's GFE Documentation review determines a GFE Documentation is inadequate or has no merit, the Contractor has the right to request reconsideration of the Contracting Agency's determination.

1. The Bidder must request reconsideration within 48 hours of notification of GFE Documentation being inadequate or without merit, or the Bidder forfeits the right to reconsideration.

2 The reconsideration decision on the adequacy or merit of the Bidder's GFE Documentation shall be made by an official who did not take part in the original determination.

3 Only original GFE Documentation submitted as a supplement to the Bid will be considered. The Bidder shall not introduce new documentation at the reconsideration hearing.

4 The Bidder shall have the opportunity to meet in person with the official for the purpose of setting forth the Bidder's position as to why the GFE Documentation demonstrates a sufficient effort.

5 The reconsideration official shall provide the Bidder with a written decision on reconsideration within five working days of the hearing explaining the basis for their finding.

Consequences of Non-Compliance

Breach of Contract

Each contract with a Contractor (and each subcontract the Contractor signs with a subcontractor) must include the following assurance clause:

The Contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

(1) Withholding monthly progress payments;

(2) Assessing sanctions;

(3) Liquidated damages; and/or

(4) Disqualifying the Contractor from future bidding as non-responsible.

If the Contractor or any subcontractor of any tier, supplier, service providers, or professional services is deemed to be in non-compliance, the Contractor will be informed in writing by the Engineer that sanctions will be imposed for failure to meet the DBE COA Commitment and/or submit documentation of good faith efforts. The notice will state the specific sanctions to be imposed which may include impacting a Contractor or other entity's ability to participate in future contracts.

Sanctions
If it is determined that the Contractor's failure to meet all or part of the DBE COA Commitment is due to the Contractor's inadequate good faith efforts throughout the life of the Contract, including failure to submit timely, required Good Faith Efforts information and documentation, the Contractor may be required to pay DBE penalty equal to the amount of the unmet Commitment, in addition to the sanctions outlined in Section 1-07.11(5).

Payment

Compensation for all costs involved with complying with the conditions of this Specification and any other associated DBE requirements is included in payment for the associated Contract items of Work, except otherwise provided in the Specifications.

1-07.12 Federal Agency Inspection

Section 1-07.12 is supplemented with the following:

(October 3, 2023)

Required Federal Aid Provisions

The Required Contract Provisions Federal Aid Construction Contracts (FHWA 1273) Revised October 23, 2023 and the amendments thereto supersede any conflicting provisions of the Standard Specifications and are made a part of this Contract; provided, however, that if any of the provisions of FHWA 1273, as amended, are less restrictive than Washington State Law, then the Washington State Law shall prevail.

The provisions of FHWA 1273, as amended, included in this Contract require that the Contractor insert the FHWA 1273 and amendments thereto in each subcontract, together with the wage rates which are part of the FHWA 1273, as amended. Also, a clause shall be included in each subcontract requiring the subcontractors to insert the FHWA 1273 and amendments thereto in any lower tier subcontracts, together with the wage rates. The Contractor shall also ensure that this section, REQUIRED FEDERAL AID PROVISIONS, is inserted in each subcontract for subcontractors and lower tier subcontractors. For this purpose, upon request to the Engineer, the Contractor will be provided with extra copies of the FHWA 1273, the amendments thereto, the applicable wage rates, and this Special Provision.

1-07.15 Temporary Water Pollution/Erosion Control

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

(January 10, 2019 COK GSP)

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

The City of Kirkland SPCC Plan Template has been included for Contractor use in the appendices. 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."

Revise the Payment section to read as follows:
Payment will be made for the following Bid item when it is included in the Proposal:

"SPCC Plan", lump sum.

The means of measurement for the lump sum Bid price for "SPCC Plan shall be allocated as 30 percent for preparation, ready for approval by the Engineer, of the SPCC, 50 percent pro-rated for completing and providing the required SPCC updates in response to site conditions, and 20 percent when the Engineer accepts the end of project SPCC. The portion for updates will be paid based on a pro-rated allocation over the working days of the executed Contract upon the contractor providing the updated SPCC documents at the weekly coordination meetings. The Engineer shall review the SPCC and any updates at each weekly meeting. If the SPCC has not been updated as deemed appropriate by 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 updates.

The SPCC plan must be produced at each weekly Coordination Meeting for the Contractor to receive full pro-rated monthly payment. If the SPCC has not been updated to the satisfaction of the Engineer upon one or more review each month, and thus rejected, the work for this item shall not be paid for

that month and the overall payment shall be reduced by that amount.

The lump sum payment for the “SPCC Plan” shall be full pay for all costs associated with creating and updating the accepted SPCC Plan, and all costs associated with the set up of prevention measures and for implementing the current SPCC Plan as required by this Section 1-07.15(1) of these Specifications.

(******)

1-07.16 Protection and Restoration of Property

1-07.16(2) Vegetation Protection and Restoration

(August 2, 2010 WSDOT GSP)

Section 1-07.16(2) is supplemented with the following:

Vegetation and soil protection zones for trees shall extend out from the trunk to a distance of 1 foot radius for each inch of trunk diameter at breast height. Vegetation and soil protection zones for shrubs shall extend out from the stems at ground level to twice the radius of the shrub.

Vegetation and soil protection zones for herbaceous vegetation shall extend to encompass the diameter of the plant as measured from the outer edge of the plant.

1-07.16(3) Fences, Mailboxes, Incidentals

(January 1, 2016 COK GSP)

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.

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:

1. Water, sewer, storm, streets – minimum two working days in advance
2. Power (Electric and Natural Gas) – minimum 48 hours in advance
3. Telephone – minimum 30 days in advance
4. Natural Gas – minimum 48 hours in advance
5. Cable Television – minimum 48 hours in advance
6. 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	Kiara Skye	(425) 213-9205

Electric	Puget Sound Energy	35131 SE Center St Snoqualmie, WA 98065	Kiara Skye	(425) 213-9205
Telephone/ FIOS	Ziply Fiber	P.O. Box 1127 Everett, WA 98206	Cheryl Schneider	(425) 949-0230
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	Chris Combs	(425) 273-7832
Network	Verizon/MCI	11311 NE 120th St Kirkland, WA 98034	Brad Landis Scott Christenson	(425) 201-0901 (425) 471-1079
School District Transportation	Lake Washington School District	15212 NE 95th St Redmond, WA 98052	Laura DeGooyer	(425) 936-1133
Transit	King County METRO	MS SVQ-TR-0100 1270 6th Ave S Seattle, WA 98134	David Freeman	(206) 477-1140 (206) 477-0438
Water (Northeast area of Kirkland)	Woodinville Water District	17238 NE Woodinville Duvall Road, Woodinville, WA 98072	Ken McDowell	(425) 487-4104
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.

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.

Potholing has been included in the Proposal for the use in the determination of the location of existing utilities in advance of the Contractor's operations. The Engineer shall approve all potholing requests from the Contractor prior to potholing. Additionally, the Contractor shall provide potholes at Engineer's request. The Contractor shall review the utility markings in the field after construction staking has been provided but prior to starting of installation of and utilities. When potholing is performed the Contractor shall:

1. Receive prior approval from the Engineer for the location of the proposed pothole.
2. Contact on-call utility services prior to performing potholes.
3. Excavate down to the existing utility.
4. Record the horizontal (station and offset) and vertical location (elevation) of the found utility.
5. Provide the Engineer information showing the location of the existing utility and location of the proposed utility. Survey information to be obtained shall include station and offset to center of utility and elevation at top of utility. Stations, offsets and elevations shall be to the nearest 0.1 foot unless greater accuracy is required.
6. Potholes shall be backfilled with CSBC compacted to 95% of max dry density. In areas subject to public traffic, the HMA patch shall match the depth of the surrounding pavement. Should a conflict exist, the Contractor shall notify the Engineer in as soon as possible. The Engineer will provide a revised design within seven (7) working days upon the receipt of the written notification of a utility conflict.

It is the Contractor’s responsibility to complete pot holing in advance to avoid an impact to the contractor’s schedule.

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

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:

$2,000,000	Each Occurrence
$3,000,000	General Aggregate
$3,000,000	Products & Completed Operations Aggregate

$2,000,000 Personal & Advertising Injury each offence
$2,000,000 Stop Gap / Employers' Liability each accident

1-07.18(5)B Automobile Liability

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

Such policy must provide the following minimum limit:

$1,000,000 Combined single limit each accident

1-07.18(5)C Workers' Compensation

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

1-07.18(5)D Excess or Umbrella Liability

(January 4, 2016 APWA GSP)

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.

1-07.23 Public Convenience and Safety

1-07.23(1) Construction Under Traffic

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

1-07.23(1).OPT5.FR1

(February 6, 2023)

Lane, ramp, shoulder, and roadway closures are subject to the following restrictions:

None, except for below

If the Engineer determines the permitted closure hours adversely affect traffic, the Engineer may adjust the hours accordingly. The Engineer will notify the Contractor in writing of any change in the closure hours. Exceptions to these restrictions are listed below and when applicable take precedence over closures listed above. The Engineer may also consider on a case-by-case basis additional exceptions following a written request by the Contractor.

Lane, ramp, shoulder, and roadway closures are not allowed on any of the following:

1. A holiday,

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

3. After *** 12pm *** on the day prior to a holiday or holiday weekend, and

4. Before *** 12pm *** on the day after the holiday or holiday weekend.

Traffic Delays

When Automated Flagger Assistance Devices (AFADs) or flaggers are used to control traffic, traffic shall not be stopped for more than *** 5 *** minutes at any time. All traffic congestion shall be allowed to clear before traffic is delayed again the delay becomes greater than *** 5 *** minutes, the Contractor shall immediately begin to take action to cease the operations that are causing the delays. If the *** 5 *** minute delay limit has been exceeded, as determined by the Engineer, the Contractor shall provide to the Engineer, a written proposal to revise his work operations to meet the

*** 5 *** minute limit. This proposal shall be accepted by the Engineer prior to resuming any work requiring traffic control.

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

General Restrictions

Construction vehicles using a closed traffic lane shall travel only in the normal direction of traffic flow unless expressly allowed in an accepted traffic control plan. Construction vehicles shall be equipped with flashing or rotating amber lights.

No two consecutive on-ramps, off-ramps, or intersections shall be closed at the same time and only one ramp at an interchange shall be closed, unless specifically shown in the Plans.

Roads or ramps that are designated as part of a detour shall not be closed or restricted during the implementation of that detour, unless specifically shown in the Plans.

Controlled Access

No special access or egress shall be allowed by the Contractor other than normal legal movements or as shown in the Plans.

Contractor's vehicles of 10,000 GVW or greater shall not exit or enter a lane open to public traffic except as follows:

Egress and ingress shall only occur during the hours of allowable lane closures, and:

1. For exiting an open lane of traffic, by decelerating in a lane that is closed during the allowable hours for lane closures.

2. For entering an open lane of traffic, by accelerating in a closed lane during the allowable hours for lane closures.

Traffic control vehicles are excluded from the gross vehicle weight requirement. If placing construction signs will restrict traveled lanes, then the work will be permitted during the hours of allowable lane closures.

Advance Notification

The Contractor shall notify the Engineer in writing of any traffic impacts related to lane closure, shoulder closure, sidewalk closure, or any combination for the week by 12:00 p.m. (noon) Wednesday the week prior to the stated impacts.

The Contractor shall notify the Engineer in writing ten working days in advance of any traffic impacts related to full roadway closure, ramp closure, or both notify the Engineer in writing of any changes to the stated traffic impacts a minimum of 48 hours prior to the traffic impacts.

(January 1, 2016 COK GSP)

Section 1-07.23 is supplemented with the following:

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.

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

Delete this section and replace it with the following:

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

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

Whenever any of the work is accomplished on or through property other than public Right of Way, the Contractor shall meet and fulfill all covenants and stipulations of any easement agreement obtained by the Contracting Agency from the owner of the private property.

Copies of the easement agreements may be included in the Contract Provisions or made available to the Contractor as soon as practical after they have been obtained by the Engineer.

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

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

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

(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: _____

Add the following new Sections:

(*****)

1-07.29 MEASUREMENT

"Potholing" will be measured per each.

Should the Contractor perform a "Pothole" in a location not approved by the Engineer, no measurement for payment will be made. Instead, it will be considered for the sole convenience and benefit of the Contractor. Should a conflict, as determined by the Engineer, be found it will be measured and paid for under this item.

Potholing will only be measured for payment when all of the items described in Special Provision 1-07.17, above, have been completed.

1-07.30 PAYMENT

"Potholing", per each.

The unit Contract price for "Potholing" per each shall be full compensation for all equipment, tools, labor, and materials required to complete the potholing including, but not limited to, review of the site, recording horizontal and vertical locations of existing utilities in relationship to the proposed utilities, excavation, trench backfill and compaction, and temporary restoration of the excavated area. This unit price shall also include the cost for rescheduling work as

required to allow the Engineer up the seven (7) working days to issue any design modifications that may be necessary.

1-08. PROSECUTION AND PROGRESS

Add the following new section:

1-08.0 Preliminary Matters

(May 25, 2006 APWA GSP)

Add the following new section:

1-08.0(1) Preconstruction Conference

(July 8, 2024 APWA GSP)

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

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 review DBE Requirements, Training Plans, and Apprenticeship Plans, when applicable.
5. To establish normal working hours for the work;
6. To review safety standards and traffic control; and
7. 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.

Add the following new section:

1-08.0(2) Hours of Work

(December 8, 2014 APWA GSP)

Except in the case of emergency or unless otherwise approved by the Engineer, the normal working hours for the Contract shall be any consecutive 5 to 8-hour period between 7:00 a.m. and 7:00 p.m. Monday through Friday, exclusive of a lunch break. If the Contractor desires different than the normal working hours stated above, the request must be submitted in writing prior to the preconstruction conference, subject to the provisions below. The working hours for the Contract shall be established at or prior to the preconstruction conference.

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

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

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

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

1-08.1 Subcontracting

(December 30, 2022 APWA GSP, Option A)

Section 1-08.1 is supplemented with the following:

Prior to any subcontractor or lower tier subcontractor beginning work, the Contractor shall submit to the Engineer a certification (WSDOT Form 420-004) that a written agreement between the Contractor and the subcontractor or between the subcontractor and any lower tier subcontractor has been executed. This certification shall also guarantee that these subcontract agreements include all the documents required by the Special Provision Federal Agency Inspection.

A subcontractor or lower tier 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 (WSDOT Form 421-012), and

2. Contractor and Subcontractor or Lower Tier Subcontractor Certification for Federal-aid Projects (WSDOT Form 420-004).

The Contractor shall submit to the Engineer a completed Monthly Retainage Report (WSDOT Form 272-065) within 15 calendar days after receipt of every monthly progress payment until every subcontractor and lower tier subcontractor's retainage has been released.

The Contractor's records pertaining to the requirements of this Special Provision shall be open to inspection or audit by representatives of the Contracting Agency 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 lower tier subcontractors shall be available and open to similar inspection or audit for the same time period.

(September 3, 2024 APWA GSP, Option A)

Section 1-08.1(9) is supplemented with the following:

Submittal of Executed DBE Subcontracts
Prior to a DBE performing Work on the Contract, an executed subcontract between the DBE and the Contractor shall be submitted to the Engineer. The executed subcontracts shall be submitted by email to the following email address for the region administering the Contract:

sgonsar@kirklandwa.gov
NWRegionOEO@wsdot.wa.gov

1-08.1(7) *Payments to Subcontractors and Lower-Tier Subcontractors*

1-08.1(7)A Payment Reporting

(January 4, 2024 APWA GSP)

Revise this section to read: "Vacant".

1-08.1(7)C Subcontractor Retainage

(The first sentence in the last paragraph of Section 1-08.1(7)C is revised to read)

(February 13, 2024)

If the Contractor fails to comply with the requirements of this Section and the first-tier subcontractor's retainage or retainage bond is wrongfully withheld, the Contractor will be subject to the actions described in Section 1-08.1(10)

1-08.3 Progress Schedule

(January 1, 2016 COK GSP)

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.

1-08.3(2) Progress Schedule Types

1-08.3(2)A Type A Progress Schedule

(December 30, 2022 APWA GSP)

Revise this section to read:

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

1-08.4 Prosecution of Work

Delete this section and replace it with the following:

1-08.4 Notice to Proceed and Prosecution of Work

(July 23, 2015 APWA GSP)

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

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

1-08.5 Time for Completion

(March 13, 1995)

This project shall be physically completed within *** 75 *** working days.

(December 30, 2022 APWA GSP, Option A)

Revise the third and fourth paragraphs to read:

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

Each working day shall be charged to the contract as it occurs, until the contract work is physically complete. If substantial completion has been granted and all the authorized working days have been used, charging of working days will cease. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the contract the week before; (2) specified for the physical completion of the contract; and (3) remaining for the physical completion of the contract. The statement will also show the nonworking days and 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. Monthly Reports of Amounts Credited as DBE Participation, as required by the Contract Provisions.
   d. Final Contract Voucher Certification
   e. Copies of the approved "Affidavit of Prevailing Wages Paid" for the Contractor and all Subcontractors
   f. A copy of the Notice of Termination sent to the Washington State Department of Ecology (Ecology); the elapse of 30 calendar days from the date of receipt of the Notice of Termination by Ecology; and no rejection of the Notice of Termination by Ecology. This requirement will not apply if the Construction Stormwater General Permit is transferred back to the Contracting Agency in accordance with Section 8-01.3(16).

g. Property owner releases per Section 1-07.24

1-08.9 Liquidated Damages

(March 3, 2021 APWA GSP, Option A)

Replace Section 1-08.9 with the following:

Time is of the essence of the Contract. Delays inconvenience the traveling public, obstruct traffic, interfere with and delay commerce, and increase risk to Highway users. Delays also cost tax payers undue sums of money, adding time needed for administration, engineering, inspection, and supervision.

Accordingly, the Contractor agrees:

1. To pay liquidated damages in the amount of *** $2,700 *** 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 due to the Contractor.

When the Contract Work has progressed to Substantial Completion as defined in the Contract, the Engineer may determine the Contract Work is Substantially Complete. The Engineer will notify the Contractor in writing of the Substantial Completion Date. For overruns in Contract time occurring after the date so established, liquidated damages identified above will not apply. For overruns in Contract time occurring after the Substantial Completion Date, liquidated damages shall be assessed on the basis of direct engineering and related costs assignable to the project until the actual Physical Completion Date of all the Contract Work. The Contractor shall complete the remaining Work as promptly as possible. Upon request by the Project Engineer, the Contractor shall furnish a written schedule for completing the physical Work on the Contract.

Liquidated damages will not be assessed for any days for which an extension of time is granted. No deduction or payment of liquidated damages will, in any degree, release the Contractor from further obligations and liabilities to complete the entire Contract.

1-09 MEASUREMENT AND PAYMENT

1-09.2 Weighing Equipment

1-09.2(1) General Requirements for Weighing Equipment

(January 4, 2024 APWA GSP, Option B)

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 422-027A, 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.

1-09.2(5) Measurement

(December 30, 2022 APWA GSP)

Revise the first paragraph to read:

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

1-09.6 Force Account

(December 30, 2022 APWA GSP)

Supplement this section with the following:

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

1-09.9 Payments

(July 8, 2024, APWA GSP, Option B)

Delete the fourth paragraph and replace it with the following:

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

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

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

1. Unit Price Items in the Bid Form — the approximate quantity of acceptable units of work completed multiplied by the unit price.
2. Lump Sum Items in the Bid Form — based on the approved Contractor's lump sum breakdown for that item, or absent such a breakdown, based on the Engineer's determination.

3. Materials on Hand — 100 percent of invoiced cost of material delivered to Job site or other storage area approved by the Engineer.
4. Change Orders — entitlement for approved extra cost or completed extra work as determined by the Engineer.

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

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

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

(July 8, 2024 APWA GSP, Option A)

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.

(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.

1-09.9(1) Retainage

Section 1-09.9(1) content and title is deleted and replaced with the following:

(June 27, 2011)
Vacant

1-09.11 Disputes and Claims

1-09.11(3) Time Limitation and Jurisdiction

(December 30, 2022 APWA GSP)

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.

1-09.13 Claims Resolution

1-09.13(3)A Administration of Arbitration

(January 19, 2022 APWA GSP)

Revise the third paragraph to read:

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

1-09.13 (4) Venue for Litigation

(December 30, 2022 APWA GSP)

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

1-10.2 Traffic Control Management

Section 1-10.2 is supplemented with the following:

1-10.2.OPT1.GR1

(November 2, 2022)

Work Zone Safety Contingency

Enhancements to improve the effectiveness of the accepted traffic control plans to increase the safety of the work zones shall be discussed on a weekly basis between the Contractor and the Contracting Agency. Enhancements shall be mutually agreed upon by the Contractor and Engineer prior to performing any Work to implement the enhancement.

Enhancements do not include the use of Uniformed Police Officers or WSP, address changes to the allowed work hour restrictions, or changes to the staging plans in the Contract (if applicable). If allowed by the Engineer, these items will be addressed in accordance with Section 1-04.4.

The Contractor shall be solely responsible for submitting any traffic control plan revision to implement the enhancement in accordance with Section 1-10.2(2).

1-10.2(1)
General

Section 1-10.2(1) is supplemented with the following:

1-10.2(1).OPT1.GR1

(January 10, 2022)
The Traffic Control Supervisor shall be certified by one of the following:

The Northwest Laborers-Employers Training Trust
27055 Ohio Ave.
Kingston, WA 98346
(360) 297-3035
https://www.nwlett.edu

Evergreen Safety Council
12545 135th Ave. NE
Kirkland, WA 98034-8709
1-800-521-0778
https://www.esc.org

The American Traffic Safety Services Association
15 Riverside Parkway, Suite 100
Fredericksburg, Virginia 22406-1022
Training Dept. Toll Free (877) 642-4637
Phone: (540) 368-1701
https://altssa.com/training

Integrity Safety
13912 NE 20th Ave.
Vancouver, WA 98686
(360) 574-6071
https://www.integritysafety.com

US Safety Alliance
(904) 705-5660
https://www.ussafetyalliance.com

K&D Services Inc.
2719 Rockefeller Ave.
Everett, WA 98201
(800) 343-4049
https://www.kndservices.nethttps://www.ussafetyalliance.com/

1-10.2(2) Traffic Control Plans

(******)

Supplement this section with the following:

School pick-up and drop-off traffic patterns must be maintained throughout the duration of construction and driveway disruptions shall follow 1-07.23. Revisions to the traffic control plans detailing alternate methods of providing driveway access and school pick-up and drop-off may be submitted in accordance with 1-10.2(2).

Road closures, limited to one block at a time, shall be allowed subject to review by the City and provided that the closure and associated detour(s) are shown on an approved traffic control plan.

1-10.4 Measurement

1-10.4(2) Item Bid With Lump Sum for Incidentals

Section 1-10.4(2) is supplemented with the following:

(August 2, 2004)
The bid proposal does not contain the item “Project Temporary Traffic Control,” lump sum. The provisions of Section 1-10.4(2) shall apply.

1-10.5 Payment

1-10.5(2) Item Bid With Lump Sum for Incidentals

Section 1-10.5(2) is supplemented with the following:

Section 1-10.5(2).OPT7.GR1

(November 2, 2022)
“Work Zone Safety Contingency”, by force account.

All costs as authorized by the Engineer will be paid for by force account as specified in Section 1-09.6.

For purpose of providing a common proposal for all bidders, the Contracting Agency has entered an amount for the item “Work Zone Safety Contingency” in the Proposal

to become a part of the Contractor's total bid.

DIVISION 2
Earthwork

2-01 CLEARING, GRUBBING, AND ROADSIDE CLEANUP

2-01.1 Description

(******)

Any tree roots encountered during construction shall be pruned per Section 1-07.16(2).

Contractor shall hold a pre-construction meeting and schedule a walk through a minimum of 5 working days before Work begins to review protected trees and address project requirements for tree trimming and removal. Attendees will include Engineer(s), Contractor, Contractor's Arborist, Subcontractor(s), and Contracting Agency's Arborist. Failure to comply will result in a Stop Work Order.

2-01.3 CONSTRUCTION REQUIREMENTS

2-01.3(1) Clearing

Section 2-01.3(1) is supplemented with the following:

(******)

An ISA Certified Arborist shall trim trees, shrubs and hedges to provide sight lines and clearance at existing and proposed street signs, flashing pedestrian beacons, crosswalks and street lights. Coordinate with City and utility provider for clearance requirements to street lights. All trees within the work area shall be trimmed for street and sidewalk clearances such that lower tree branches provide 14-feet of clearance over the roadway and 8-feet of clearance over the sidewalk.

(February 17, 2022 COK GSP)

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 6 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.

2-01.5 PAYMENT

Section 2-01.5 is supplemented with the following:

(******)

"Clearing and Grubbing", by lump sum.

2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

2-02.1 DESCRIPTION

(******)

This section is supplemented with the following:

This work shall consist of removing all materials noted in this section of the Special Provisions as well as any other materials designated for removal on the Plans or necessary for the construction of this project.

In general, the Contractor shall remove/dispose, remove/replace, relocate, or abandon existing items which are in conflict with the new improvements. This includes but is not limited to fencing, rock landscaping, and mailboxes. Where not in conflict, or where not specified for demolition or removal, Contractor shall protect all private and public improvements including trees not called to be removed.

2-02.3 CONSTRUCTION REQUIREMENTS

Section 2-02.3 is supplemented with the following:

(February 17, 1998)
Removal of Obstructions

*** The following items shall be removed and disposed of by the Contractor under the lump sum pay item "Removal of Structures and Obstructions":

1. Remove and dispose of existing drainage pipes and structures.

2. Remove and dispose of existing signs and sign foundations at the locations as shown on the Plans.

(January 1, 2020 COK GSP)

Section 2-02.3 is supplemented with the following:

Additional Construction Requirements at Locations Near Trees

At locations where the contractor will be working and exposing tree roots, the Contractor shall exercise extreme caution. The contractor shall notify the Inspector a minimum of 2 working days prior to removal of the existing sidewalk panels. Concrete panels in these areas shall be removed by breaking the existing concrete with a jackhammer or other means. Backhoes or other mechanical excavating equipment shall not be used to remove existing concrete in these areas. Care shall be taken during the sidewalk removal in order to not damage the tree roots. Hand tools (shovels, trowels, etc.) shall be used when working around the roots. If root trimming in these areas is unavoidable, it shall be performed per Section 8-02 of these specifications. The City Inspector shall be on-site at all times during the concrete removal, excavation and base preparation and shall identify the extent of root trimming that is required.

(******)

Supplement this section with the following:

The Contractor shall coordinate with the Engineer the proposed location of all features to be relocated or realigned and mark the location in the field.

The Contractor shall remove fire hydrants as identified on the Plans and backfill the voids. If deemed usable by the Owner, castings shall be salvaged and returned to the Owner. The Contractor shall dispose of other structures. Existing water main valve boxes shall be totally removed, the holes backfilled and the existing surface restored in-kind after the old water main is abandoned. All portions of abandoned utility systems that are in conflict with the proposed improvements shall be removed and disposed of. All existing water main to be abandoned shall have a ductile iron cap or concrete plug installed, as directed by the Engineer. The minimum length of the concrete plug shall be twice the pipe diameter.

All existing water services to be abandoned shall be cut and capped at the main unless the water main is being abandoned also. A brass plug shall be installed on the existing corporation stop. If the existing corporation stop is a “Hays” or “Mueller B Machine”, the corporation stop shall be removed from the main and a repair band shall be installed.

Voids left by the removal of items shall be backfilled with CSBC and compacted to 95 percent of maximum density as specified in Section 2-03.3(14)D of the Standard Specifications. In locations where construction activity has the potential of exposing nearby roots of trees not noted for removal, the Contractor shall notify the City Inspector prior to proceeding and shall exercise extreme caution. All demolition, trenching, and restoration activity in these areas shall be observed by the Inspector. Demolition activities shall be performed by means not involving large equipment such as backhoes or excavators that have the potential to damage roots. Shovels and other hand tools or a vactor truck shall be used to work around exposed roots. If root trimming is necessary, it shall be performed according to Section 8-01 of these Specifications and to the extent specified by the Inspector.

All material removed for the construction of the project which are not intended for reuse shall be hauled off-site to a legal disposal site by the Contractor, with the exception of materials specifically noted for salvage. The Contractor shall determine the requirements of his or her selected disposal site related to accepting the material to be deposited on the site. Testing of the material by the disposal site or refusal of the site to accept the material shall not be the basis for additional payment or for an extension of the Contract time. The cost of all such requirements shall be included in the various Bid prices in the Proposal.

Care shall be taken to prevent damage to the existing storm sewer system during construction. Any damaged caused to the existing storm structure or storm pipe as a result of the Contractor’s operations shall be replaced at no cost to the City. Damaged storm pipe shall be replaced in its entirety from structure to structure per City standards.

Removal and Disposal of Asbestos Material

Prior to performance of any contract work, the Contractor shall obtain all permits from and provide notification to, the Washington State Department of Labor and Industries, the Washington State Department of Ecology, the local clean air agency, and other permitting and regulatory agencies with jurisdiction over the work involving asbestos as the laws, rules, and regulations require. Prior to commencing asbestos related work, the Contractor shall submit

as a Type 1 Working Drawing any and all written verification of approvals and notifications that have been given and/or obtained from the required jurisdictional agencies. The Contractor shall include a schedule of activities for all work involving asbestos removal as part of the Type 1 Working Drawing. Asbestos related work shall also be shown on the Contractor's project progress schedule.

The Contractor shall designate a Washington State Certified Asbestos Supervisor (CAS), certified in accordance with WAC 295-65-012, to supervise the asbestos removal and to ensure that the handling and removal of asbestos is accomplished by certified asbestos workers, pursuant to Washington State Department of Labor and Industries standards. The Contractor shall ensure that the removal and disposal of asbestos meets the requirements of EPA regulation 40 CFR Part 61, local health department regulations, and all other applicable regulations.

The Contractor shall ensure the safety of all workers, visitors to the site, and the public in accordance with all applicable laws, rules, and regulations.

(******)

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

Supplement this section with the following:

The Contractor shall preserve and protect existing curb and gutter not required to be removed for installation of water service lines, hydrant runs and air-vac runs. Existing curb and gutter that is not required to be removed and that is damaged shall be removed and replaced at the Contractor's expense. Any void under the curb and gutter shall be backfilled with pea gravel or the curb and gutter shall be removed and replaced, as directed by the City Inspector. Pea gravel backfill will be considered incidental to the associated work and shall not be measured for separate payment. Water services, hydrant runs, and air-vac runs shall be excavated and Contractor shall remove and replace existing curb and gutter to the nearest expansion joint only as required for excavation. Curb and Curb and gutter replacement associated with water service, hydrant, and air-vac excavation will be paid under the "Cement Concrete Curb and Gutter" bid item.

Existing asphalt concrete pavement, sidewalk, driveway, or curbs shall be sawcut before commencing removal. These items shall be removed as required for construction, and to the limits approved by the Engineer. Pavement, sidewalk, and curb and gutter thickness, type, and extent may vary.

Removal shall be accomplished by making a neat longitudinal vertical cut along the boundaries of the area to be removed. All cuts shall be continuous, and shall be made with saws specifically equipped for this purpose. No skip cutting will be allowed. Existing sidewalk or curb and gutter shall be removed in full panel sections and removed or sawcut at expansion/contraction joints only unless noted otherwise on the Plans.

Any pavement, sidewalk, driveway, or curb and gutter that is damaged as a result of the Work, and not designated for removal as shown on the Plans or preapproved by the Owner, shall be repaired or replaced entirely at the Contractor's expense. The length and location of cuts shall be preapproved by the Engineer before cutting of pavement, sidewalk, or curb and gutter.

Wheel cutting or jack hammering will not be considered an acceptable means of pavement, sidewalk, driveway, or curb and gutter "cutting," and will not be measured for payment.

(******)

Add the following new section:

2-02.3(4) Salvage

All salvageable materials not named in the Special Provisions, identified on the Plans, or otherwise identified by the Contracting Agency as City property shall become the property of the Contractor. Salvage items shall be stockpiled and/or delivered to the Public Works Yard at no additional cost to the Contracting Agency.

(******)

Add the following new section:

2-02.3(5) Adjust Utility to Finished Grade

Existing utilities shall be adjusted to finished grade as noted in the Plans. The Contractor shall, prior to the beginning of any work, familiarize himself with the existing utility locations. Final adjustment shall be smooth and flush with finished grade. The Contractor shall mark the location of all utilities prior to paving the new surface. Structures and appurtenances shall be adjusted to grade per City of Kirkland Standard Plans.

(******)

Add the following new section:

2-02.3(6) Sawcutting

All pavements, curbs, gutters, sidewalks, and other surfacing materials to be removed shall be sawcut unless noted otherwise on the Plans.

The Contractor shall be responsible for ensuring that special precautions are undertaken so that no concrete or concrete by-products, or products and by-products used in the sawcut of asphalt or concrete, are discharged into any storm drain or surface water system. In accordance with the Department of Ecology guidelines, wastewater from Portland cement concrete, masonry, and asphalt concrete cutting operations shall not be discharged to storm drainage systems or surface waters. Cutting operations increase the pH of wastewater, therefore, filtering prior to discharge is NOT acceptable.

All wastewater shall be collected using a wet-dry vacuum or pumped into drums for disposal. Disposal of the waste liquid may be to soil or other porous surfaces away from storm drains and surface water, only if the Contractor collects and disposes of remaining sediment after water has filtered into soil or evaporated. Impervious surfaces contaminated with sediment and grit from cutting operations shall be cleaned by sweepers to prevent contaminants from entering the storm drainage system or surface waters when it rains.

Thoroughly clean sawcuts where necessary by the use of high pressure water (1,400 psi or greater). Collection and disposal of wastewater shall be considered incidental to and included in the various bid items involved with the operation.

2-02.4 MEASUREMENT

(******)

Supplement this Section with the following:

Providing, placing, and compacting CSBC to fill voids when items are removed will be measured per Ton and paid per the Bid item “Crushed Surfacing Base Course”.

Sawcutting will not be measured for payment and shall be considered incidental to the various bid items included in the proposal.

No specific unit of measure will apply to the lump sum item for “Removal of Structures and Obstructions”.

2-02.5 PAYMENT

(******)

Replace the last sentence of this section with the following:

The lump sum Contract price for “Removal of Structures and Obstructions” shall be full compensation for all labor, materials, tools, and equipment as described in the Special Provisions, that is not included in the other contract items noted in these Specifications. It shall include all tools, labor, waste haul and disposal, and equipment necessary to remove any objects necessary to complete work as shown on the plans. This includes but is not limited to removal and disposal of stairs, storm drainage structures or portions thereof, culverts, bollards, boulders and their supporting subgrade materials to the grades necessary for the proposed improvements as shown in the contract plans. Items incidental to this work shall include all sawcutting efforts as well as the haul and disposal of materials to an approved off-site location.

Payment for this item will be made as a percentage of the contract working days that have been counted at the time of payment. Payment shall not exceed the lump sum priced included in the contract

2-04 HAUL

(******)

Add the following new section:

2-04.2 HAULING ON OTHER THAN STATE HIGHWAYS

If the sources of materials provided by the Contractor necessitate hauling over roads other than City streets, the Contractor shall, at the Contractor’s expense, make all arrangements for the use and cleaning, if necessary, of the haul routes.

2-04.5 PAYMENT

(******)

Supplement this section with the following:

All costs associated with hauling materials of any description to, from, and within the project site shall be considered incidental and shall be included in the appropriate unit Bid prices in the Proposal and no further compensation will be paid.

2-06 SUBGRADE PREPARATION

2-06.3 CONSTRUCTION REQUIREMENTS

(******)

Supplement this Section with the following:

The subgrade must be suitable, as determined by the Engineer, prior to placement of crushed rock. All costs for protection of the subgrade, including replacing all material that becomes unsuitable while the subgrade is exposed, shall be incidental to the Contract and no additional compensation shall be made.

Preparation and compaction of the subgrade shall be considered incidental to the construction and all costs thereof shall be included by the Contractor in other pay items of the Contract. The subgrade shall be shaped and maintained to drain at all times during construction, including temporary ditches and modifications to drainage structures necessary to eliminate standing water on the subgrade.

2-06.5 MEASUREMENT AND PAYMENT

(******)

Supplement this Section with the following:

Subgrade preparation, maintenance, and protection will not be measured specifically for payment, but shall be considered incidental to other Bid items in the Contract.

2-07 WATERING

(******)

2-07.3 CONSTRUCTION REQUIREMENTS

Supplement this Section with the following:

The hauling and applying water for constructing subgrade, placing of crushed surfacing, dust control, and as the Engineer requires will be incidental to the various bid items and no additional compensation shall be considered.

Water for this project may be obtained from the City at the Public Works Yard, depending on availability and demand, at no cost to the Contractor. The City retains the exclusive right to operate all hydrants and valves; and if conditions warrant, the City can and may elect to restrict the use, amount, time, and location of the water source to best comply with the City's own needs. The Contractor shall provide backflow devices and a meter as required by the City. All costs for the equipment used shall be at the Contractor's expense. The Contractor shall apply at the City Public Works Department for a permit to use the City's fire hydrants prior to using any water for dust control or street cleaning. Water placement includes that required for dust control while excavating for the street or the installation of the utilities, for processing and compacting the subgrade, and for dust control between the time of subgrade preparation and the placing of ATB/asphalt.

2-09 STRUCTURE EXCAVATION

2-09.3 CONSTRUCTION REQUIREMENTS

2-09.3(1) General Requirements

2-09.3(1)D Disposal of Excavated Material

(******)

Delete Section 2-09.3(1)D and replace with the following:

All material removed as excavation shall be disposed of off-site at a legal disposal site. No material shall be re-used on the project site without prior written approval by the Engineer. All costs associated with hauling and disposing of excavated material shall be considered incidental to the various Bid items and no additional compensation shall be considered.

(******)

Add the following new Section:

2-09.3(1)G Trench Dewatering

All "normal trench dewatering" work associated with maintaining a trench suitable for structure installation and pipeline construction will be incidental and included in the other items of work. "Normal trench dewatering" is defined as dewatering methods occurring in or directly adjacent to the trench, including trash pumps, sump pumps, or other methods in the excavated areas. Normal trench dewatering does not include a dewatering system such as well points, well screens, or deep wells.

2-09.3(3)D Shoring and Cofferdams

(******)

Supplement this Section with the following:

The Contractor shall have the option of using a "slip box" in lieu of shoring. Use of the "slip box" does not constitute an endorsement of safety by the City or the Engineer. The Contractor shall be solely responsible for the safety of all construction operations.

2-09.3(4) Construction Requirements, Structure Excavation, Class B

(******)

Supplement this section with the following:

Where excavation equals or exceeds a depth of 4 feet, the Contractor shall provide, construct, maintain, and remove as required, safety systems that meet the requirements of the Washington Industrial Safety and Health Act, RCW 49.17, including WAC 296-155. The trench safety systems shall be designed by a qualified person and meet accepted engineering requirements (see WAC 296- 155-660).

The Contractor shall furnish, install, and operate all necessary equipment to keep excavations above the foundation level free from water during construction and shall dewater and dispose of the water so as not to cause injury to public or private property, damage to the storm system, or nuisance to the public. Sufficient pumping equipment in good working condition shall be available at all times for all emergencies, including power outage, and the Contractor shall have available at all times competent workmen for the operation of the pumping equipment.

2-09.4 MEASUREMENT

(******)

Supplement this section with the following:

No measurement will be made for any class of structure excavation. Structure excavation shall be considered incidental to the improvement being installed.

No specific unit of measurement shall apply to the lump sum item of "Shoring and Trench Safety".

2-09.5 PAYMENT

(******)

Supplement this section with the following:

"Shoring and Trench Safety", lump sum.

The lump sum Contract price for "Shoring and Trench Safety" shall be full compensation for all labor, tools, equipment, and materials necessary or incidental to designing, furnishing, installing, and removing shoring systems. When extra excavation is used in lieu of constructing shoring, cofferdam, sheet piles, or caisson, the lump sum contract price shall be full pay for all excavation, backfill, compaction, and other work required for Extra Excavation Class B.

Payment for this item will be made as a percentage of the pipe included in the bid that has been installed. No payment shall be made if shoring or equivalent safety measures are not used when required.

2-11 TRIMMING AND CLEANUP

2-11.1 DESCRIPTION

(******)

Supplement this section with the following:

During construction, and upon completion of the work, the Contractor shall thoroughly comb and search the surrounding area and remove any construction material thrown or discarded amongst the trees, bushes, ditches, etc., such as paint cans, cartons, broken pipe, pavement pieces, paper, bottles, etc., and shall tidy up the surrounding general area to make it neat in appearance, including removal of debris that may or may not have been deposited by Contractor's operation.

Paved surfaces, existing and new, shall be thoroughly cleaned (i.e. by vacuum street sweeper) upon completion of work within the area, and shall require daily cleaning if dust or mud exists. Prior to job acceptance, all streets shall be clean.

2-11.3 CONSTRUCTION REQUIREMENTS

(******)

Add the following new subsection:

2-11.3(1) Routine Cleaning

General

1. Retain all stored materials and equipment in an orderly fashion allowing maximum access, not impeding drainage or traffic, and providing protection.

2. Do not allow the accumulation of scrap, debris, waste material, and other items not required for this work.

3. At least once a week, and more often if necessary or as directed by the Construction Inspector, the Contractor shall completely remove all scrap, debris, and waste material from the project site.

4. Provide adequate storage for all materials awaiting removal from the project site, observing all requirements for fire protection and protection of the environment.

Site

1. Daily and more often if necessary or as directed, inspect the site and pick up all scrap, debris, and waste material. Remove all such items to the place designated for their storage until it can be disposed of.

2. Weekly, and more often if necessary or directed, inspect all arrangements of materials stored on the site, restack, tidy, or otherwise service all arrangements to meet the requirements above.

3. Maintain the site in a neat and orderly condition at all times so as to meet the approval of the Owner.

(******)

Add the following new subsection:

2-11.3(2) Final Cleaning

Prior to final inspection, remove from the job site all tools, surplus materials, equipment, scrap, debris, and waste.

(******)

2-11.4 MEASUREMENT

Delete this section and replace with the following:

Trimming and cleanup shall be considered incidental to the lump sum Contract price for "Mobilization" and will not be measured for separate payment.

DIVISION 5
Surface Treatments and Pavements

5-04 HOT MIX ASPHALT

(July 18, 2018 APWA GSP)

Delete Section 5-04 and amendments, Hot Mix Asphalt and replace it with the following:

5-04.1 DESCRIPTION

This 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.

HMA shall be 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

Materials shall meet the requirements of the following sections:

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

The Contract documents may establish that the various mineral materials required for the manufacture of HMA will be furnished in whole or in part by the Contracting Agency. If the documents do not establish the furnishing of any of these mineral materials by the Contracting Agency, the Contractor shall be required to furnish such materials in the amounts required for the designated mix. Mineral materials include coarse and fine aggregates, and mineral filler.

The Contractor may choose to utilize recycled asphalt pavement (RAP) in the production of HMA. The RAP may be from pavements removed under the Contract, if any, or pavement material from an existing stockpile.

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

The grade of asphalt binder shall be 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. The Contractor shall submit to the Engineer for approval the process that is proposed and how it will be used in the manufacture of HMA.

Production of aggregates shall comply with the requirements of Section 3-01. Preparation of stockpile site, the stockpiling of aggregates, and the removal of aggregates from stockpiles shall 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

No paving shall begin 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, ditches, slopes, paths, trails, gores, prelevel, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Project Engineer. 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. Fifteen days prior to the first day of paving the contractor shall provide one of the following mix design verification certifications for Contracting Agency review;

- The WSDOT Mix Design Evaluation Report from the current WSDOT QPL, or one of the mix design verification certifications listed below.
- The proposed HMA mix design on WSDOT Form 350-042 with the seal and certification (stamp & sig-nature) of a valid licensed Washington State Professional Engineer.
- 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;

- 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).
- 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, agencies 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 Contracting Agency for mix design approval is not required.

For the Bid Item Commercial HMA, the Contractor shall 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 Processes

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:

- Do not use additives that reduce the mixing temperature more than allowed in Section 5-04.3(6) in the production of mixtures.

- 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 below, or when weather conditions otherwise prevent the proper handling or finishing of the HMA.

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

When the Roadway being paved is open to traffic, the requirements of this Section shall apply.

The Contractor shall 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, advance warning signs shall be placed and signs shall also be placed marking the detour or alternate route.

During paving operations, temporary pavement markings shall be maintained throughout the project. Temporary pavement markings shall be installed on the Roadway prior to opening to traffic. Temporary pavement markings shall be in accordance with Section 8-23.

All costs in connection with performing the Work in accordance with these requirements, except the cost of temporary pavement markings, shall be included 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

Plants used for the preparation of HMA shall conform to the following requirements:

1. **Equipment for Preparation of Asphalt Binder** – Tanks for the storage of asphalt binder shall be equipped to heat and hold the material at the required temperatures. The heating shall be accomplished by steam coils, electricity, or other approved means so that no flame shall be in contact with the storage tank. The circulating system for the asphalt binder shall be designed to ensure proper and continuous circulation during the operating period. A valve for the purpose of sampling the asphalt binder shall be placed in either the storage tank or in the supply line to the mixer.
2. **Thermometric Equipment** – An armored thermometer, capable of detecting temperature ranges expected in the HMA mix, shall be fixed in the asphalt binder feed line at a location near the charging valve at the mixer unit. The thermometer location shall be convenient and safe for access by Inspectors. The plant shall also be 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. This device shall be in full view of the plant operator.
3. **Heating of Asphalt Binder** – The temperature of the asphalt binder shall not exceed the maximum recommended by the asphalt binder manufacturer nor shall it be below the minimum temperature required to maintain the asphalt binder in a homogeneous state. The asphalt binder shall be heated in a manner that will avoid local variations in heating. The heating method shall 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.
4. **Sampling and Testing of Mineral Materials** – The HMA plant shall be equipped with a mechanical sampler for the sampling of the mineral materials. The mechanical sampler shall meet the requirements of Section 1-05.6 for the crushing and screening operation. The Contractor shall provide for the setup and operation of the field testing facilities of the Contracting Agency as provided for in Section 3-01.2(2).
5. **Sampling HMA** – The HMA plant shall provide for sampling HMA by one of the following methods:
    a. A mechanical sampling device attached to the HMA plant.
    b. Platforms or devices to enable sampling from the hauling vehicle without entering the hauling vehicle.

5-04.3(3)B Hauling Equipment

Trucks used for hauling HMA shall have tight, clean, smooth metal beds and shall have a cover of canvas or other suitable material of sufficient size to protect the mixture from adverse weather. 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, the cover shall be securely attached to protect the HMA.

The contractor shall provide an environmentally benign means to prevent the HMA mixture from adhering to the hauling equipment. Excess release agent shall be drained prior to filling hauling equipment with HMA. Petroleum derivatives or other coating material that contaminate or alter the characteristics of the HMA shall not be used. For live bed trucks, the conveyer shall be in operation during the process of applying the release agent.

5-04.3(3)C Pavers

HMA pavers shall be self-contained, power-propelled units, provided 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.

The HMA paver shall be in good condition and shall 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. The equipment certification shall list the make, model, and year of the paver and any equipment that has been retrofitted.

The screed shall be operated in accordance with the manufacturer's recommendations and shall effectively produce a finished surface of the required evenness and texture without tearing, shoving, segregating, or gouging the mixture. A copy of the manufacturer's recommendations shall be provided upon request by the Contracting Agency. Extensions will be allowed provided they produce the same results, including ride, density, and surface texture as obtained by the primary screed. Extensions without augers and an internally heated vibratory screed shall not be used in the Traveled Way.

When specified in the Contract, reference lines for vertical control will be required. Lines shall be placed on both outer edges of the Traveled Way of each Roadway. Horizontal control utilizing the reference line will be permitted. The grade and slope for intermediate lanes shall be controlled 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.

The Contractor shall 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. Any cleaning or solvent type liquids spilled on the pavement shall be thoroughly removed before paving proceeds.

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

A Material Transfer Device/Vehicle (MTD/V) shall only be used with the Engineer's approval, unless other-wise required by the contract.

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

When used, the MTD/V shall mix the HMA after delivery by the hauling equipment and prior to laydown by the paving machine. Mixing of the HMA shall be sufficient to obtain a uniform temperature throughout the mixture. If a windrow elevator is used, the length of the windrow may be limited in urban areas or through intersections, at the discretion of the Engineer.

To be approved for use, an MTV:

1. Shall be self-propelled vehicle, separate from the hauling vehicle or paver.
2. Shall not be connected to the hauling vehicle or paver.
3. May accept HMA directly from the haul vehicle or pick up HMA from a windrow.
4. Shall mix the HMA after delivery by the hauling equipment and prior to placement into the paving machine.
5. Shall mix the HMA sufficiently to obtain a uniform temperature throughout the mixture.

To be approved for use, an MTD:

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

5-04.3(3)E Rollers

Rollers shall be of the steel wheel, vibratory, oscillatory, or pneumatic tire type, in good condition and capable of reversing without backlash. Operation of the roller shall be in

accordance with the manufacturer's recommendations. When ordered by the Engineer for any roller planned for use on the project, the Contractor shall provide a copy of the manufacturer's recommendation for the use of that roller for compaction of HMA. The number and weight of rollers shall be sufficient 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 shall not be used.

5-04.3(4) Preparation of Existing Paved Surfaces

When the surface of the existing pavement or old base is irregular, the Contractor shall bring it to a uniform grade and cross-section as shown on the Plans or approved by the Engineer.

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

Compaction of preleveling HMA shall be 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. Equipment used for the compaction of preleveling HMA shall be approved by the Engineer.

Before construction of HMA on an existing paved surface, the entire surface of the pavement shall be clean. All fatty asphalt patches, grease drippings, and other objectionable matter shall be entirely removed from the existing pavement. All pavements or bituminous surfaces shall be thoroughly cleaned of dust, soil, pavement grindings, and other foreign matter. All holes and small depressions shall be filled with an appropriate class of HMA. The surface of the patched area shall be leveled and compacted thoroughly. Prior to the application of tack coat, or paving, the condition of the surface shall be approved by the Engineer.

A tack coat of asphalt shall be applied to all paved surfaces on which any course of HMA is to be placed or abutted; except that tack coat may be omitted from clean, newly paved surfaces at the discretion of the Engineer. Tack coat shall be uniformly applied 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. The rate of application shall be approved by the Engineer. A heavy application of tack coat shall be applied to all joints. For Roadways open to traffic, the application of tack coat shall be limited to surfaces that will be paved during the same working shift. The spreading equipment shall be equipped with a thermometer to indicate the temperature of the tack coat material.

Equipment shall not operate on tacked surfaces until the tack has broken and cured. If the Contractor's operation damages the tack coat it shall be repaired prior to placement of the HMA.

The tack coat shall be 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. The tack coat shall have sufficient temperature such that it may be applied uniformly at the specified rate of application and shall not exceed the maximum temperature recommended by the emulsified asphalt manufacturer.

5-04.3(4)A Crack Sealing

5-04.3(4)A1 General

When the Proposal includes a pay item for crack sealing, seal all cracks ¼ inch in width and greater.

Cleaning: Ensure that cracks are thoroughly clean, dry and free of all loose and foreign material when filling with crack sealant material. Use a hot compressed air lance to dry and warm the pavement surfaces within the crack immediately prior to filling a crack with the sealant material. Do not overheat pavement. Do not use direct flame dryers. Routing cracks is not required.

Sand Slurry: For cracks that are to be filled with sand slurry, thoroughly mix the components and pour the mixture into the cracks until full. Add additional CSS-1 cationic emulsified asphalt to the sand slurry as needed for workability to ensure the mixture will completely fill the cracks. Strike off the sand slurry flush with the existing pavement surface and allow the mixture to cure. Top off cracks that were not completely filled with additional sand slurry. Do not place the HMA overlay until the slurry has fully cured.

The sand slurry shall consist of approximately 20 percent CSS-1 emulsified asphalt, approximately 2 percent portland cement, water (if required), and the remainder clean Class 1 or 2 fine aggregate per section 9-03.1(2). The components shall be thoroughly mixed and then poured into the cracks and joints until full. The following day, any cracks or joints that are not completely filled shall be topped off with additional sand slurry. After the sand slurry is placed, the filler shall be struck off flush with the existing pavement surface and allowed to cure. The HMA overlay shall not be placed until the slurry has fully cured. The requirements of Section 1-06 will not apply to the portland cement and sand used in the sand slurry.

In areas where HMA will be placed, use sand slurry to fill the cracks.

In areas where HMA will not be placed, fill the cracks as follows:

1. Cracks ¼ inch to 1 inch in width - fill with hot poured sealant.
2. Cracks greater than 1 inch in width – fill with sand slurry.

Hot Poured Sealant: For cracks that are to be filled with hot poured sealant, apply the material in accordance with these requirements and the manufacturer's recommendations. Furnish a Type 1 Working Drawing of the manufacturer's product

information and recommendations to the Engineer prior to the start of work, including the manufacturer's recommended heating time and temperatures, allowable storage time and temperatures after initial heating, allowable reheating criteria, and application temperature range. Confine hot poured sealant material within the crack. Clean any overflow of sealant from the pavement surface. If, in the opinion of the Engineer, the Contractor's method of sealing the cracks with hot poured sealant results in an excessive amount of material on the pavement surface, stop and correct the operation to eliminate the excess material.

5-04.3(4)A2 Crack Sealing Areas Prior to Paving

In areas where HMA will be placed, use sand slurry to fill the cracks.

5-04.3(4)A3 Crack Sealing Areas Not to be Paved

In areas where HMA will not be placed, fill the cracks as follows:

A. Cracks ¼ inch to 1 inch in width - fill with hot poured sealant.
B. Cracks greater than 1 inch in width – fill with sand slurry.

5-04.3(4)B Vacant

5-04.3(4)C Pavement Repair

The Contractor shall excavate pavement repair areas and shall backfill these with HMA in accordance with the details shown in the Plans and as marked in the field. The Contractor shall conduct the excavation operations in a manner that will protect the pavement that is to remain. Pavement not designated to be removed that is damaged as a result of the Contractor's operations shall be repaired by the Contractor to the satisfaction of the Engineer at no cost to the Contracting Agency. The Contractor shall excavate only within one lane at a time unless approved otherwise by the Engineer. The Contractor shall not excavate more area than can be completely finished during the same shift, unless approved by the Engineer.

Unless otherwise shown in the Plans or determined by the Engineer, excavate to a depth of 1.0 feet. The Engineer will make the final determination of the excavation depth required. The minimum width of any pavement repair area shall be 40 inches unless shown otherwise in the Plans. Before any excavation, the existing pavement shall be sawcut or shall be removed by a pavement grinder. Excavated materials will become the property of the Contractor and shall be disposed of in a Contractor-provided site off the Right of Way or used in accordance with Sections 2-02.3(3) or 9-03.21.

Asphalt for tack coat shall be required as specified in Section 5-04.3(4). A heavy application of tack coat shall be applied to all surfaces of existing pavement in the pavement repair area.

Placement of the HMA backfill shall be accomplished in lifts not to exceed 0.35-foot compacted depth. Lifts that exceed 0.35-foot of compacted depth may be accomplished

with the approval of the Engineer. Each lift shall be thoroughly compacted by a mechanical tamper or a roller.

5-04.3(5) Producing/Stockpiling Aggregates and RAP

Aggregates and RAP shall be stockpiled according to the requirements of Section 3-02. Sufficient storage space shall be provided for each size of aggregate and RAP. Materials shall be removed from stockpile(s) in a manner to ensure minimal segregation when being moved to the HMA plant for processing into the final mixture. Different aggregate sizes shall be kept separated until they have been delivered to the HMA plant.

5-04.3(5)A Vacant

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 the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials is ensured.

When discharged, the temperature of the HMA shall 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, the discharge temperature of the HMA shall 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, the moisture content shall be reduced as directed by the Engineer.

Storing or holding of the HMA in approved storage facilities will be permitted with approval of the Engineer, but in no event shall the HMA be held for more than 24 hours. HMA held for more than 24 hours after mixing shall be rejected. Rejected HMA shall be disposed of by the Contractor at no expense to the Contracting Agency. The storage facility shall have an accessible device located at the top of the cone or about the third point. The device shall indicate the amount of material in storage. No HMA shall be accepted 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.

Recycled asphalt pavement (RAP) utilized in the production of HMA shall be sized prior to entering the mixer so that a uniform and thoroughly mixed HMA is produced. If there is evidence of the recycled asphalt pavement not breaking down during the heating and mixing of the HMA, the Contractor shall immediately suspend the use of the RAP until changes have been approved by the Engineer. After the required amount of mineral materials, RAP, new asphalt binder and asphalt rejuvenator have been introduced into the mixer the HMA shall be mixed 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

The mixture shall be laid upon an approved surface, spread, and struck off to the grade and elevation established. HMA pavers complying with Section 5-04.3(3) shall be used to distribute the mixture. Unless otherwise directed by the Engineer, the nominal compacted depth of any layer of any course shall not exceed the following:

HMA Class 1”		0.35 feet
HMA Class ¾” and HMA Class ½”		
	wearing course	0.30 feet
	other courses	0.35 feet
HMA Class ⅜”		0.15 feet

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, the material produced for each JMF shall be placed by separate spreading and compacting equipment. The intermingling of HMA produced from more than one JMF is prohibited. Each strip of HMA placed during a work shift shall conform 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 option of the Engineer.

5-04.3(9) HMA Mixture Acceptance

Acceptance of HMA shall be as provided under nonstatistical, or commercial evaluation.

Nonstatistical evaluation will be used for the acceptance of HMA unless Commercial Evaluation is specified.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, temporary pavement, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Engineer.

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 approval of the Engineer and may be made in accordance with this section.

HMA Tolerances and Adjustments

1. **Job Mix Formula Tolerances** – The constituents of the mixture at the time of acceptance shall be within tolerance. The tolerance limits will be established as follows:

   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 approval of the Engineer. 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. The adjusted JMF shall be 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 shall be 0.3 percent

5-04.3(9)A Vacant

5-04.3(9)B Vacant

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

HMA mixture which is accepted by Nonstatistical Evaluation will be evaluated by the Contracting Agency 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 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 shall be equal to one day's production or 800 tons, whichever is less except that the final sublot will be a minimum of 400 tons and may be increased to 1200 tons.

All of the test results obtained from the acceptance samples from a given lot shall be evaluated collectively. 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.

Sampling and testing for evaluation shall be performed on the frequency of one sample per sublot.

5-04.3(9)C2 Mixture Nonstatistical Evaluation Sampling

Samples for acceptance testing shall be obtained by the Contractor when ordered by the Engineer. The Contractor shall sample the HMA mixture in the presence of the Engineer and in accordance with AASH-TO T 168. A minimum of three samples should be taken for each class of HMA placed on a project. If used in a structural application, at least one of the three samples shall to be tested.

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

For HMA used in a structural application and with a total project quantity less than 800 tons but more than 400 tons, a minimum of one acceptance test shall be performed. In all cases, a minimum of 3 samples will be obtained at the point of acceptance, a minimum of one of the three samples will be tested 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.
- If test results are found not to be within specification requirements, additional testing of the remaining samples to determine a Composite Pay Factor (CPF) shall be performed.

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

Testing of HMA for compliance of V_a will at the option of the Contracting Agency. If tested, compliance of V_a 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(9)C4 Mixture Nonstatistical Evaluation – Pay Factors

For each lot of material falling outside the tolerance limits in 5-04.3(9), the Contracting Agency will determine a Composite Pay Factor (CPF) using the following price adjustment factors:

Table of Price Adjustment Factors	
Constituent	**Factor "f"**
All aggregate passing: 1½″, 1″, ¾″, ½″, ⅜″ and No.4 sieves	2
All aggregate passing No. 8 sieve	15
All aggregate passing No. 200 sieve	20
Asphalt binder	40
Air Voids (Va) (where applicable)	20

Each lot of HMA produced under Nonstatistical Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the nonstatistical tolerance limits in the Job Mix Formula shown in Table of Price Adjustment Factors, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The nonstatistical tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the Roadway shall be tested to provide a minimum of three sets of results for evaluation.

5-04.3(9)C5 Vacant

5-04.3(9)C6 Mixture Nonstatistical Evaluation – Price Adjustments

For each lot of HMA mix produced under Nonstatistical Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The total job mix compliance price adjustment will be calculated as the product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.

If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the Composite Pay Factor (CPF).

5-04.3(9)C7 Mixture Nonstatistical Evaluation - Retests

The Contractor may request a sublot be retested. To request a retest, the Contractor shall submit a written request within 7 calendar days after the specific test results have been received. A split of the original acceptance sample will be retested. The split of the sample will not be tested with the same tester that ran the original acceptance test. The sample will be tested for a complete gradation analysis, asphalt binder content, and, at the option of the agency, V_a. The results of the retest will be used for the acceptance of the HMA in place of the original sublot sample test results. The cost of testing will be deducted from any monies due or that may come due the Contractor under the Contract at the rate of $500 per sample.

5-04.3 (9)D Mixture Acceptance – Commercial Evaluation

If sampled and tested, HMA produced under Commercial Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the commercial tolerance limits in the Job Mix Formula shown in 5-04.3(9), the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The commercial tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the street shall be tested to provide a minimum of three sets of results for evaluation.

For each lot of HMA mix produced and tested under Commercial Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The Job Mix Compliance Price Adjustment will be calculated as the product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.

If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the Composite Pay Factor (CPF).

5-04.3(10) HMA Compaction Acceptance

HMA mixture accepted by nonstatistical evaluation that is 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, shall be compacted 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). The maximum density shall be determined by WSDOT FOP for AASHTO T 729. The specified level of density attained will be determined by the evaluation of the density of the pavement. The density of the pavement shall be determined in accordance with WSDOT FOP for WAQTC TM 8, except that gauge correlation will be at the discretion of

the Engineer, when 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 Contracting Agency uses a nuclear density gauge to determine density the test procedures FOP for WAQTC TM 8 and WSDOT SOP T 729 will be used on the day the mix is placed and prior to opening to traffic.

Roadway cores for density may be obtained by either the Contracting Agency or the Contractor in accordance with WSDOT SOP 734. The core diameter shall be 4-inches minimum, unless otherwise approved by the Engineer. Roadway cores will be tested by the Contracting Agency in accordance with WSDOT FOP for AASHTO T 166.

If the Contract includes the Bid item “Roadway Core” the cores shall be obtained by the Contractor in the presence of the Engineer on the same day the mix is placed and at locations designated by the Engineer. If the Contract does not include the Bid item “Roadway Core” the Contracting Agency 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.

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

HMA for preleveling shall be thoroughly compacted. HMA that is used for preleveling wheel rutting shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

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 cores are taken by the Contracting Agency at the request of the Contractor, they shall be requested by noon of the next workday after the test results for the sublot have been provided or made available to the Contractor. Core locations shall be outside of wheel paths and as determined by the Engineer. Traffic control shall be provided by the Contractor as requested by the Engineer. Failure by the Contractor to provide the requested traffic control will result in forfeiture of the request for cores. When the CPF for the lot based on the results of the HMA cores is less than 1.00, the cost for the coring will be deducted from any monies due or that may become due the Contractor under the Contract at the rate of $200 per core and the Contractor shall pay for the cost of the traffic control.

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

Compaction shall take place when the mixture is in the proper condition so that no undue displacement, cracking, or shoving occurs. Areas inaccessible to large compaction equipment shall be compacted by other mechanical means. Any HMA that becomes loose, broken, contaminated, shows an excess or deficiency of asphalt, or is in any way defective, shall be removed and replaced with new hot mix that shall be immediately compacted to conform to the surrounding area.

The type of rollers to be used and their relative position in the compaction sequence shall generally be the Contractor's option, provided the specified densities are attained. Unless the Engineer has approved otherwise, rollers shall only be operated in the static mode when the internal temperature of the mix is less than 175°F. Regardless of mix temperature, a roller shall not be operated in a mode that results in checking or cracking of the mat. Rollers shall only be operated in static mode on bridge decks.

5-04.3(10)B 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)C Vacant

5-04.3(10)D HMA Nonstatistical Compaction

5-04.3(10)D1 HMA Nonstatistical Compaction – Lots and Sublots

HMA compaction which is accepted by nonstatistical evaluation will be based on acceptance testing performed by the Contracting Agency 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 shall be

equal to one day's production or 400 tons, whichever is less except that 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.

The sublot locations within each density lot will be determined by the Engineer. 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.

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

HMA for preleveling shall be thoroughly compacted. HMA that is used to prelevel wheel ruts shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

5-04.3(10)D2 HMA Compaction Nonstatistical Evaluation – Acceptance Testing

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

5-04.3(10)D3 HMA Nonstatistical Compaction – Price Adjustments

For each compaction lot with one or two sublots, having all sublots attain a relative density that is 92 percent of the reference maximum density the HMA shall be accepted at the unit Contract price with no further evaluation. When a sublot does not attain a relative density that is 92 percent of the reference maximum density, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The maximum CPF shall be 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

Work that is defective or does not conform to Contract requirements shall be rejected. The Contractor may propose, in writing, alternatives to removal and replacement of rejected material. Acceptability of such alternative proposals will be determined at the sole discretion of the Engineer. HMA that has been rejected is subject to the requirements in Section 1-06.2(2) and this specification, and the Contractor shall submit a corrective action proposal to the Engineer for approval.

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. Material rejected before placement shall not be incorporated into the pavement. Any rejected section of Roadway shall be removed.

No payment will be made for the rejected materials or the removal of the materials unless the Contractor requests that the rejected material be tested. If the Contractor elects to have the rejected material tested, a minimum of three representative samples will be obtained and tested. 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; in addition, the cost of sampling and testing shall be borne by the Contractor. If the CPF is greater than or equal to 0.75, the cost of sampling and testing will be borne by the Contracting Agency. 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. A minimum of three random samples of the suspect material will be obtained and tested. 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

An entire sublot that is suspected of being defective may be rejected. When a sublot is rejected a minimum of two additional random samples from this sublot will be obtained. These additional samples and the original sublot will be evaluated as an independent lot in accordance with Section 1-06.2(2).

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

The Contractor shall shut down operations and shall not resume HMA placement until such time as the Engineer is satisfied that material conforming to the Specifications can be produced:

1. When the Composite Pay Factor (CPF) of a lot in progress drops below 1.00 and the Contractor is taking no corrective action, or
2. 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
3. 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)

An entire lot with a CPF of less than 0.75 will be rejected.

5-04.3(12) Joints

5-04.3(12)A HMA Joints

5-04.3(12)A1 Transverse Joints

The Contractor shall 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 the Work is resumed, the previously compacted mixture shall be cut back to produce a slightly beveled edge for the full thickness of the course.

A temporary wedge of HMA constructed on a 20H:1V shall be constructed where a transverse joint as a result of paving or planing is open to traffic. The HMA in the temporary wedge shall be separated from the permanent HMA by strips of heavy wrapping paper or other methods approved by the Engineer. The wrapping paper shall be removed and the joint trimmed to a slightly beveled edge for the full thickness of the course prior to resumption of paving.

The material that is cut away shall be wasted and new mix shall be laid against the cut. Rollers or tamping irons shall be used to seal the joint.

5-04.3(12)A2 Longitudinal Joints

The longitudinal joint in any one course shall be offset from the course immediately below by not more than 6 inches nor less than 2 inches. All longitudinal joints constructed in the wearing course shall be located at a lane line or an edge line of the Traveled Way. A notched wedge joint shall be constructed along all longitudinal joints in the wearing surface of new HMA unless otherwise approved by the Engineer. The notched wedge joint shall have a vertical edge of not less than the maximum aggregate size or more than ½ of the compacted lift thickness and then taper down on a slope not

steeper than 4H:1V. The sloped portion of the HMA notched wedge joint shall be uniformly compacted.

5-04.3(12)B Bridge Paving Joint Seals

5-04.3(12)B1 HMA Sawcut and Seal

Prior to placing HMA on the bridge deck, establish sawcut alignment points at both ends of the bridge paving joint seals to be placed at the bridge ends, and at interior joints within the bridge deck when and where shown in the Plans. Establish the sawcut alignment points in a manner that they remain functional for use in aligning the sawcut after placing the overlay.

Submit a Type 1 Working Drawing consisting of the sealant manufacturer's application procedure.

Construct the bridge paving joint seal as specified ion the Plans and in accordance with the detail shown in the Standard Plans. Construct the sawcut in accordance with the detail shown in the Standard Plan. Construct the sawcut in accordance with Section 5-05.3(8)B and the manufacturer's application procedure.

5-04.3(12)B2 Paved Panel Joint Seal

Construct the paved panel joint seal in accordance with the requirements specified in section 5-04.3(12)B1 and the following requirement:

1. Clean and seal the existing joint between concrete panels in accordance with Section 5-01.3(8) and the details shown in the Standard Plans.

5-04.3(13) Surface Smoothness

The completed surface of all courses shall be of uniform texture, smooth, uniform as to crown and grade, and free from defects of all kinds. The completed surface of the wearing course shall not vary more than ⅛ inch from the lower edge of a 10-foot straightedge placed on the surface parallel to the centerline. The transverse slope of the completed surface of the wearing course shall vary not more than ¼ 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, the pavement surface shall be corrected by one of the following methods:

1. Removal of material from high places by grinding with an approved grinding machine, or
2. Removal and replacement of the wearing course of HMA, or
3. By other method approved by the Engineer.

Correction of defects shall be carried out until there are no deviations anywhere greater than the allowable tolerances.

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 will be accepted with a price adjustment. The Engineer shall 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, the utility appurtenances shall be adjusted to the finished grade prior to paving. This requirement may be waived when requested by the Contractor, at the discretion of the Engineer or when the adjustment details provided in the project plan or specifications call for utility appurtenance adjustments after the completion of paving.

Utility appurtenance adjustment discussions will be included 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(14) Planing (Milling) Bituminous Pavement

The planning plan must be approved by the Engineer and a pre planning meeting must be held prior to the start of any planing. See Section 5-04.3(14)B2 for information on planning submittals.

Locations of existing surfacing to be planed are as shown in the Drawings.

Where planing an existing pavement is specified in the Contract, the Contractor must remove existing surfacing material and to reshape the surface to remove irregularities. The finished product must be a prepared surface acceptable for receiving an HMA overlay.

Use the cold milling method for planing unless otherwise specified in the Contract. Do not use the planer on the final wearing course of new HMA.

Conduct planing operations in a manner that does not tear, break, burn, or otherwise damage the surface which is to remain. The finished planed surface must be slightly grooved or roughened and must be free from gouges, deep grooves, ridges, or other imperfections. The Contractor must repair any damage to the surface by the Contractor’s planing equipment, using an Engineer approved method.

Repair or replace any metal castings and other surface improvements damaged by planing, as determined by the Engineer.

A tapered wedge cut must be planed longitudinally along curb lines sufficient to provide a minimum of 4 inches of curb reveal after placement and compaction of the final wearing course. The dimensions of the wedge must be as shown on the Drawings or as specified by the Engineer.

A tapered wedge cut must also be made at transitions to adjoining pavement surfaces (meet lines) where butt joints are shown on the Drawings. Cut butt joints in a straight line with vertical faces 2 inches or more in height, producing a smooth transition to the existing adjoining pavement.

After planing is complete, planed surfaces must be swept, cleaned, and if required by the Contract, patched and preleveled.

The Engineer may direct additional depth planing. Before performing this additional depth planing, the Contractor must conduct a hidden metal in pavement detection survey as specified in Section 5-04.3(14)A.

5-04.3(14)A Pre-Planing Metal Detection Check

Before starting planing of pavements, and before any additional depth planing required by the Engineer, the Contractor must conduct a physical survey of existing pavement to be planed with equipment that can identify hidden metal objects.

Should such metal be identified, promptly notify the Engineer.

See Section 1-07.16(1) regarding the protection of survey monumentation that may be hidden in pavement.

The Contractor is solely responsible for any damage to equipment resulting from the Contractor's failure to conduct a pre-planing metal detection survey, or from the Contractor's failure to notify the Engineer of any hidden metal that is detected.

5-04.3(14)B Paving and Planing Under Traffic

5-04.3(14)B1 General

In addition the requirements of Section 1-07.23 and the traffic controls required in Section 1-10, and unless the Contract specifies otherwise or the Engineer approves, the Contractor must comply with the following:

1. Intersections:

    a. Keep intersections open to traffic at all times, except when paving or planing operations through an intersection requires closure. Such closure must be kept to the minimum time required to place and compact the HMA mixture, or plane as appropriate. For paving, schedule such closure to individual lanes or portions thereof that allows the traffic volumes and schedule of traffic volumes required in the approved traffic control plan. Schedule work so that adjacent intersections

are not impacted at the same time and comply with the traffic control restrictions required by the Traffic Engineer. Each individual intersection closure or partial closure, must be addressed in the traffic control plan, which must be submitted to and accepted by the Engineer, see Section 1-10.2(2).

b. When planing or paving and related construction must occur in an intersection, consider scheduling and sequencing such work into quarters of the intersection, or half or more of an intersection with side street detours. Be prepared to sequence the work to individual lanes or portions thereof.

c. Should closure of the intersection in its entirety be necessary, and no trolley service is impacted, keep such closure to the minimum time required to place and compact the HMA mixture, plane, remove asphalt, tack coat, and as needed.

d. Any work in an intersection requires advance warning in both signage and a number of Working Days advance notice as determined by the Engineer, to alert traffic and emergency services of the intersection closure or partial closure.

e. Allow new compacted HMA asphalt to cool to ambient temperature before any traffic is allowed on it. Traffic is not allowed on newly placed asphalt until approval has been obtained from the Engineer.

2. Temporary centerline marking, post-paving temporary marking, temporary stop bars, and maintaining temporary pavement marking must comply with Section 8-23.

3. Permanent pavement marking must comply with Section 8-22.

5-04.3(14)B2 Submittals – Planing Plan and HMA Paving Plan

The Contractor must submit a separate planing plan and a separate paving plan to the Engineer at least 5 Working Days in advance of each operation's activity start date. These plans must show how the moving operation and traffic control are coordinated, as they will be discussed at the pre-planing briefing and pre-paving briefing. When requested by the Engineer, the Contractor must provide each operation's traffic control plan on 24 x 36 inch or larger size Shop Drawings with a scale showing both the area of operation and sufficient detail of traffic beyond the area of operation where detour traffic may be required. The scale on the Shop Drawings is 1 inch = 20 feet, which may be changed if the Engineer agrees sufficient detail is shown.

The planing operation and the paving operation include, but are not limited to, metal detection, removal of asphalt and temporary asphalt of any kind, tack coat and drying, staging of supply trucks, paving trains, rolling, scheduling, and as may be discussed at the briefing.

When intersections will be partially or totally blocked, provide adequately sized and noticeable signage alerting traffic of closures to come, a minimum 2 Working Days in advance. The traffic control plan must show where police officers will be stationed when signalization is or may be, countermanded, and show areas where flaggers are proposed.

At a minimum, the planing and the paving plan must include:

1. A copy of the accepted traffic control plan, see Section 1-10.2(2), detailing each day's traffic control as it relates to the specific requirements of that day's planing and paving. Briefly describe the sequencing of traffic control consistent with the proposed planing and paving sequence, and scheduling of placement of temporary pavement markings and channelizing devices after each day's planing, and paving.
2. A copy of each intersection's traffic control plan.
3. Haul routes from Supplier facilities, and locations of temporary parking and staging areas, including return routes. Describe the complete round trip as it relates to the sequencing of paving operations.
4. Names and locations of HMA Supplier facilities to be used.
5. List of all equipment to be used for paving.
6. List of personnel and associated job classification assigned to each piece of paving equipment.
7. Description (geometric or narrative) of the scheduled sequence of planing and of paving, and intended area of planing and of paving for each day's work, must include the directions of proposed planing and of proposed paving, sequence of adjacent lane paving, sequence of skipped lane paving, intersection planing and paving scheduling and sequencing, and proposed notifications and coordinations to be timely made. The plan must show HMA joints relative to the final pavement marking lane lines.
8. Names, job titles, and contact information for field, office, and plant supervisory personnel.
9. A copy of the approved Mix Designs.
10. Tonnage of HMA to be placed each day.
11. Approximate times and days for starting and ending daily operations.

5-04.3(14)B3 Pre-Paving and Pre-Planing Briefing

At least 2 Working Days before the first paving operation and the first planing operation, or as scheduled by the Engineer for future paving and planing operations to ensure the Contractor has adequately prepared for notifying and coordinating as required in the Contract, the Contractor must be prepared to discuss that day's operations as they relate to other entities and to public safety and convenience, including driveway and business access, garbage truck operations, Metro transit operations and working around energized overhead wires, school and nursing home and hospital and other accesses, other contractors who may be operating in the area, pedestrian and bicycle traffic, and emergency services. The Contractor, and Subcontractors that may be part of that day's operations, must meet with the Engineer and discuss the proposed operation as it relates to the submitted planing plan and paving plan, approved traffic control plan, and public convenience and safety. Such discussion includes, but is not limited to:

1. General for both Paving Plan and for Planing Plan:
   a. The actual times of starting and ending daily operations.
   b. In intersections, how to break up the intersection, and address traffic control and signalization for that operation, including use of peace officers.

c. The sequencing and scheduling of paving operations and of planing operations, as applicable, as it relates to traffic control, to public convenience and safety, and to other con-tractors who may operate in the Project Site.

d. Notifications required of Contractor activities, and coordinating with other entities and the public as necessary.

e. Description of the sequencing of installation and types of temporary pavement markings as it relates to planning and to paving.

f. Description of the sequencing of installation of, and the removal of, temporary pavement patch material around exposed castings and as may be needed

g. Description of procedures and equipment to identify hidden metal in the pavement, such as survey monumentation, monitoring wells, street car rail, and castings, before planning, see Section 5-04.3(14)B2.

h. Description of how flaggers will be coordinated with the planing, paving, and related operations.

i. Description of sequencing of traffic controls for the process of rigid pavement base repairs.

j. Other items the Engineer deems necessary to address.

2. Paving – additional topics:

a. When to start applying tack and coordinating with paving.

b. Types of equipment and numbers of each type equipment to be used. If more pieces of equipment than personnel are proposed, describe the sequencing of the personnel operating the types of equipment. Discuss the continuance of operator personnel for each type equipment as it relates to meeting Specification requirements.

c. Number of JMFs to be placed, and if more than one JMF how the Contractor will ensure different JMFs are distinguished, how pavers and MTVs are distinguished if more than one JMF is being placed at the time, and how pavers and MTVs are cleaned so that one JMF does not adversely influence the other JMF.

d. Description of contingency plans for that day's operations such as equipment breakdown, rain out, and Supplier shutdown of operations.

e. Number of sublots to be placed, sequencing of density testing, and other sampling and testing.

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. Unless otherwise approved by the Engineer, apply the fog seal prior to opening to traffic.

5-04.3(16) HMA Road Approaches

HMA approaches shall be constructed at the locations shown in the Plans or where staked by the Engineer. The Work shall be performed in accordance with Section 5-04.

5-04.4 MEASUREMENT

HMA Cl. ___ PG ___, HMA for ___ Cl. ___ PG ___, and Commercial HMA 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.

Roadway cores will be measured per each for the number of cores taken.

Preparation of untreated roadway will be measured by the mile once along the centerline of the main line Roadway. No additional measurement will be made for ramps, Auxiliary Lanes, service roads, Frontage Roads, or Shoulders. Measurement will be to the nearest 0.01 mile.

Soil residual herbicide will be measured by the mile for the stated width to the nearest 0.01 mile or by the square yard, whichever is designated in the Proposal.

Pavement repair excavation will be measured by the square yard of surface marked prior to excavation.

Asphalt for prime coat will be measured by the ton in accordance with Section 1-09.2.

Prime coat aggregate will be measured by the cubic yard, truck measure, or by the ton, whichever is designated in the Proposal.

Asphalt for fog seal will be measured by the ton, as provided in Section 5-02.4.

Longitudinal joint seals between the HMA and cement concrete pavement will be measured by the linear foot along the line and slope of the completed joint seal.

Planing bituminous pavement will be measured by the square yard.

Temporary pavement marking will be measured by the linear foot as provided in Section 8-23.4.

Water will be measured by the M gallon as provided in Section 2-07.4.

5-04.5 PAYMENT

Payment will be made for each of the following Bid items that are included in the Proposal:

"HMA Cl. ___ PG ___", per ton.

"HMA for Approach Cl. ___ PG ___", per ton.

"HMA for Preleveling Cl. ___ PG ___", per ton.

"HMA for Pavement Repair Cl. ___ PG ___", per ton.

"Commercial HMA", per ton.

The unit Contract price per ton for "HMA Cl. ___ PG ___", "HMA for Approach Cl. ___ PG ___", "HMA for Preleveling Cl. ___ PG ___", "HMA for Pavement Repair Cl. ___ PG ___", and "Commercial HMA" shall be full compensation for all costs, including anti-stripping additive, incurred to carry out the requirements of Section 5-04 except for those costs included in other items which are included in this Subsection and which are included in the Proposal.

"Preparation of Untreated Roadway", per mile.

The unit Contract price per mile for "Preparation of Untreated Roadway" shall be full pay for all Work described under 5-04.3(4) , with the exception, however, that all costs involved in patching the Roadway prior to placement of HMA shall be included in the unit Contract price per ton for "HMA Cl. ___ PG ___" which was used for patching. If the Proposal does not include a Bid item for "Preparation of Untreated Roadway", the Roadway shall be prepared as specified, but the Work shall be included in the Contract prices of the other items of Work.

"Preparation of Existing Paved Surfaces", per mile.

The unit Contract Price for "Preparation of Existing Paved Surfaces" shall be full pay for all Work described under Section 5-04.3(4) with the exception, however, that all costs involved in patching the Roadway prior to placement of HMA shall be included in the unit Contract price per ton for "HMA Cl. ___ PG ___" which was used for patching. If the Proposal does not include a Bid item for "Preparation of Untreated Roadway", the Roadway shall be prepared as specified, but the Work shall be included in the Contract prices of the other items of Work.

"Crack Sealing", by force account.

"Crack Sealing" will be paid for by force account as specified in Section 1-09.6. For the purpose of providing a common Proposal for all Bidders, the Contracting Agency has entered an amount in the Proposal to become a part of the total Bid by the Contractor.

"Pavement Repair Excavation Incl. Haul", per square yard.

The unit Contract price per square yard for “Pavement Repair Excavation Incl. Haul” shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(4) with the exception, however, that all costs involved in the placement of HMA shall be included in the unit Contract price per ton for “HMA for Pavement Repair Cl. ___ PG ___”, per ton.

“Asphalt for Prime Coat”, per ton.

The unit Contract price per ton for “Asphalt for Prime Coat” shall be full payment for all costs incurred to obtain, provide and install the material in accordance with Section 5-04.3(4).

“Prime Coat Agg.”, per cubic yard, or per ton.

The unit Contract price per cubic yard or per ton for “Prime Coat Agg.” shall be full pay for furnishing, loading, and hauling aggregate to the place of deposit and spreading the aggregate in the quantities required by the Engineer.

“Asphalt for Fog Seal”, per ton.

Payment for “Asphalt for Fog Seal” is described in Section 5-02.5.

“Longitudinal Joint Seal”, per linear foot.

The unit Contract price per linear foot for “Longitudinal Joint Seal” shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(12).

“Planing Bituminous Pavement”, per square yard.

The unit Contract price per square yard for “Planing Bituminous Pavement” shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(14).

“Temporary Pavement Marking”, per linear foot.

Payment for “Temporary Pavement Marking” is described in Section 8-23.5.

“Water”, per M gallon.

Payment for “Water” is described in Section 2-07.5.

“Job Mix Compliance Price Adjustment”, by calculation.

"Job Mix Compliance Price Adjustment" will be calculated and paid for as described in Section 5-04.3(9)C6.

"Compaction Price Adjustment", by calculation.

"Compaction Price Adjustment" will be calculated and paid for as described in Section 5-04..3(10)D3.

"Roadway Core", per each.

The Contractor's costs for all other Work associated with the coring (e.g., traffic control) shall be incidental and included within the unit Bid price per each and no additional payments will be made.

"Cyclic Density Price Adjustment", by calculation.

"Cyclic Density Price Adjustment" will be calculated and paid for as described in Section 5-04.3(10)B.

5-05 CEMENT CONCRETE PAVEMENT

5-05.1 DESCRIPTION

Section 5-05.1 is supplemented with the following:

This work shall include constructing Stamped Cement Concrete Pavement within the medians, as shown on the Plans, in conformity with the lines, grades, thicknesses, and typical cross-section as detailed on the Plans.

5-05.2 MATERIALS

Section 5-05.2 is supplemented with the following:

Stamped cement concrete pavement shall be constructed with a Class 4000 Po1tland Cement Concrete mix conforming to the requirements of Section 6-02.

5-05.3 CONSTRUCTION REQUIREMENTS

Supplement this section with the following:

Contraction/control joints shall be constructed with 12-foot max spacing or as approved by the Streets & Grounds Manager.

Stamped Cement Concrete Pavement shall be installed flush with adjacent cement concrete curb.

Stamping and texturing tools for Stamped Cement Concrete Pavement will require four (4) weeks lead time per stamping tool.

Antique release and sealer shall be applied evenly to the surface of fresh concrete according to the manufacturer's specifications.

Qualifications

Qualified and competent workman shall have a minimum five (5) years of work experience for same paving type installation of stamped concrete.

Stamped Cement Concrete Pavement Installer's Additional Qualifications: Installer shall provide a list of five (5) successfully installed projects that include stamped concrete work within the Western United States. Include the following information: Address/ name of project; square footage; date of installation; contact name and phone number; up to two (2) photos of each project.

Submittals

Catalog product cut sheets for stamping tools, antique release and sealer shall be submitted to Streets & Grounds Manager for approval prior to providing mock-up samples.

Contractor to provide pavement and joint layout for Streets & Grounds Manager's approval prior to installation. shall be detennined in field and approved by Streets & Grounds Manager.

Mock-Up Sample(s)

Prior to the start of concrete pavement work, the Contractor shall provide a minimum (4) four feet by (4) four feet (16 square feet) mock-up sample of Stamped Cement Concrete Pavement showing stamped pattern, release agent and sealer per these special provisions and design plans.

Completed work not meeting the visual quality of the approved sample shall be removed and replaced by the Contractor at no additional cost to the Owner.

The final approved sample shall be the standard for the balance of the rest of the 'Stamped Cement Concrete Pavement' work installed in the median and shall be protected from damage until final acceptance and approval. Mock-up sample(s) provided for approval by Streets & Grounds Manager shall be incidental to and included in the unit bid price for "Stamped Cement Concrete Pavement" per these Special Provisions.

No additional concrete shall be placed prior to the test panel being approved by the Streets & Grounds Manager.

5-05.3(11) Finishing

Supplement this section with the following:

Stamped Cement Concrete Pavement noted in the Plans within the median shall receive stamp pattern and finish.

Finish of Stamped Cement Concrete Pavement shall be achieved using 'Cobblestone' pattern -BST5000textured mats and Chiseled Slate - BST7618 touch-up skins as well as Chiseled Slate -BSTR0976 touch-up roller sleeve available from Butterfield Color, phone 1-800-282-3388, or approved equal. Cobblestone pattern surface texture shall be achieved using imprinting texture, stencils, detailing tools to create a running bond pattern of square and rectangular shapes with grout lines. Edges, comers and texture shall be as shown on the Plans.

Stamped Cement Concrete Pavement shall receive antiquing release agent and sealer (including additive) application, as follows:

•Butterfield Color® #PT12 Penna-Tique Antiquing Agent- Storm Gray

•Butterfield Color® Clear-Guard™ Cure & Seal

5-05.4 MEASUREMENT

Section 5-05.4 is supplemented with the following:

Cement concrete pavement will be measured by the square yard for the completed pavement.

Slotted Speed Hump shall be measured per each set of three speed humps.

"Stamped Cement Cone. Pavement" will be measured per square yard of completed stamped cement concrete pavement surface.

5-05.5 PAYMENT

Section 5-05.5 is supplemented with the following:

The Bid Item price for “Cement Conc. Pavement” per cubic yard shall also include all costs to furnish and install dowel bars and tie bars with drill holes.

The Bid Item price for “Slotted Speed Hump” per each shall also include all costs to prepare surface and install HMA speed humps per each set of three.

"Stamped Cement Cone. Treatment" per square yard.
The unit Contract price for "Stamped Cement Cone. Pavement" shall be full compensation for all costs necessary and incidental to installing stamped cement concrete pavement, including but not limited to excavation; procuring, placing and compacting crushed surfacing top course; forming, procuring and placing concrete, joint materials, stamping, curing and sealing. The stamping tools shall become the property of the City at the end of the project, and the contractor shall clean, maintain, and deliver all tools to the City Maintenance Yard. Failure to adequately maintain and deliver the stamping tools to the City Maintenance Yard after project completion shall be deemed reasonable grounds for the Streets & Grounds Manager to adjust the payment made under this bid item. Said adjustment shall be determined solely by the Streets & Grounds Manager and is not negotiable except at the Streets & Grounds Manager's discretion.

5-04.3 CONSTRUCTION REQUIREMENTS

(April 20, 2012 COK GSP)

Supplement this section as follows:

5-04.3(13) Surface Smoothness

The completed surface of all courses shall be of uniform texture, smooth, uniform as to crown and grade, and free from defects of all kinds. The completed surface of the wearing course shall not vary more than 1/8 inch from the lower edge of a 10-foot straightedge placed on the surface parallel to the centerline. The transverse slope of the completed surface of the wearing course shall vary not more than ¼ 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, the pavement surface shall be corrected by one of the following methods:

1. Removal of material from high places by grinding with an approved grinding machine, or
2. Removal and replacement of the wearing course of HMA, or
3. By other method approved by the Project Engineer.

Correction of defects shall be carried out until there are no deviations anywhere greater than the allowable tolerances.

Deviations in excess of the above tolerances that result in a low place in the HMA and deviations resulting from a high place where corrective action, in the opinion of the Project Engineer, will not produce satisfactory results will be removed and replaced at the contractor's expense.

When Portland cement concrete pavement is to be placed on HMA, the surface tolerance of the HMA shall be such that no surface elevation lies above the plan grade minus the specified plan depth of Portland cement concrete pavement. Prior to placing the Portland cement concrete pavement, any such irregularities shall be brought to the required tolerance by grinding or other means approved by the Project Engineer.

When utility appurtenances such as manhole covers and valve boxes are located in the traveled way, the roadway shall be paved before the utility appurtenances are adjusted to the finished grade.

DIVISION 7
Drainage Structures, Storm Sewers, Water Mains, and Conduits

7-04 STORM SEWERS

7-04.2 MATERIALS

Section 7-04.2 is supplemented with the following:

The materials list in Section 7-04.2 is modified as follows:

Acceptable pipe materials within City of Kirkland right of way are:

Solid Wall PVC Storm Sewer Pipe	9-05.12(1)
PVC Pressure Pipe	9-30.1(5)
Ductile Iron Pipe	9-30.1

Shallow Bury Installation (18" or less of cover)

Ductile Iron Pipe (nonrestrained joint)	9-30.1(1)

7-04.3 CONSTRUCTION REQUIREMENTS

Section 7-04.3 is supplemented with the following:

The minimum cover over the storm sewer pipe from outside top of pipe to finished grade is 18 inches, except ductile iron pipe is 12 inches. Maximum cover for PVC pipe is 15 feet.

Add the following new Sub-Sections:

7-04.3(2) Existing Utilities

Existing utilities of record are shown on the Plans. These are shown for convenience only, and the Engineer assumes no responsibility for improper locations or failure to show utility locations on the Plans. When utility services occupy the same space as the new storm sewer main, the Contractor shall complete necessary excavation to fully expose such services. The Contractor shall protect said services, and work around them during excavating and pipe laying operations. Any damages to services resulting from the Contractor's operation shall be reported to the appropriate utility. Such damage shall be repaired at the Contractor's expense.

The Contractor shall anticipate the potential for crossing over or under an occasional shallow existing side sewers and roof drains that are not part of the one-call utility locate. If such a side sewer or drain is encountered, the Contractor shall immediately notify the Owner's on-site representative and then take the necessary steps to determine whether or not the side sewer is active. If a side sewer is damaged by construction activity, the Contractor is responsible for repairing the side sewer. All costs associated with determining the viability and repair of the existing side sewer shall be considered incidental to the cost of the storm sewer pipe and no additional payment will be made.

7-04.3(2)A Potholing

The Contractor shall pothole to determine the exact horizontal and vertical location of existing utilities and determine if a conflict exists. If a conflict should exist, the Engineer shall be notified prior to any change in storm sewer line grade. All costs associated with adjustments in depth to avoid conflicts with existing utilities shall be considered incidental to the cost of the storm sewer pipe and no additional payment will be made.

The Engineer shall approve the potholing prior to the Contractor performing the potholing. Potholing done without prior to approval from the Engineer will not be paid. See Section 8-05 herein for potholing measurement and payment.

7-04.5 PAYMENT

Section 7-04.5 is supplemented with the following:

The unit Contract price per linear foot of storm sewer pipe of the type and size specified shall be full pay for furnishing all labor, material, tools, and equipment necessary to satisfactorily complete the work in this Section including but not limited to saw cutting, trench excavation, haul and disposal of excavated materials, dewatering, temporary flow bypass, pipe zone bedding, import backfilling materials, compaction, connection to new and existing structures, cleaning and testing.

All connections to existing structures shall be considered incidental to the cost of the pipe. Pipe bedding shall be considered incidental to the pipe.

7-05 MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS

7-05.3 CONNECTIONS TO EXISTING MANHOLES

7-05.3(1) Adjusting Manholes and Catch Basins to Grade

Section 7-05.3(1) is supplemented with the following:

(******)

Adjusting catch basins and manholes to grade shall be per the requirements of City of Kirkland Standard Plan CK-D.11. In addition, intermediate adjustment due to waeather or paving limitations shall be performed by the Contractor as directed by the Engineer.

Section 7-05.3(3) is revised with the following:

Replace “manhole” with “manhole or catch basin” in each instance.

The following section is added:

Connection to Existing Pipe

The contractor shall connect (or reconnect) existing pipes to the new manholes or catch basins without obstructing flow from upstream locations. Where new pipe is connected to existing pipe, the Contractor shall verify the type of existing pipe and join the pipes with a pipe adapter specifically manufactured for joining the pipes involved or as directed by the Engineer. The connection shall be made by carefully cutting or removing the existing pipe and installing a

new section of pipe from the existing pipe into the new catch basin. Care shall be taken in cutting the existing pipe. The new section of pipe shall be the same size and material as the existing pipe, or an approved substitution. Connections, grouting, backfilling, and all other work necessary to make the connection shall conform to appropriate provisions of Section 7-05.3.

All costs associated with this work shall be included in the unit contract price for the related item of work (new manhole or catch basin). No extra compensation will be made for removal of existing pipe damaged by Contractor negligence.

7-05.5 PAYMENT

Section 7-05.5 is supplemented with the following:

The unit contract price per each for “Adjust Catch Basin” shall be full pay for furnishing all labor, tools, equipment, and materials necessary to complete each unit according to the Plans and Specifications. This includes all pavement removal and disposal, bedding material, backfilling, backfill material, compaction, surface restoration, and furnishing and placing of all accessories such as concrete risers, frames, grates, rings, temporary patching hot mix to allow for the passage of traffic, and other items as applicable.

The unit contract price per each for “Catch Basin Type 2 __ In. Diam.” and “Catch Basin Type 1” shall be full pay for furnishing all labor, tools, equipment, and materials necessary to complete each unit according to the Plans and Specifications. This includes all pavement removal and disposal, dewatering (if required), temporary flow bypass, connections to existing and new pipe, foundation material, bedding material, backfilling, backfill material, compaction, surface restoration, testing, and furnishing and placing of all accessories such as frames, grates, combination inlets, rings, traps, steps or ladders, temporary patching hot mix to allow for the passage of traffic, and other items as applicable.

7-08 GENERAL PIPE INSTALLATION REQUIREMENTS

7-08.5 PAYMENT

Add the following:

Structure Excavation Class B Incl. Haul shall be included in the unit Contract price for the type and size of pipe installed.

All costs for furnishing and installing Bank Run Gravel for Trench Backfill above the pipe zone is included in the unit Contract price for the type and size of pipe installed.

“Removal and Replacement of Unsuitable Material”, per cubic yard.

The depth of Removal and Replacement of Unsuitable Material shall be the actual depth removed below the bottom of the pipe zone as directed by the Engineer.

7-12 VALVES FOR WATER MAINS

7-12.4 MEASUREMENT

Add the following:

Adjustment of valves will be per each

7-12.5 PAYMENT

Add the following:

The unit Contract price per each for “Adjust Water Valve” shall be full pay for all costs necessary to make the adjustment including restoration of adjacent areas in a manner acceptable to the Engineer.

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:

Commercial construction entrances per CK-E.02.

- Quarry Spall outfall pads for temporary erosion control
- Rock, Wattle, Compost sock check dams
- Straw mulch, netting and tackifier
- Concrete wash
- Baker tanks and/or Settling ponds
- Stabilized construction entrance / exit
- 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".

8-01.3 CONSTRUCTION REQUIREMENTS

Section 8-01.3 is supplemented with the following:

(June 20, 2017 COK GSP)
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.

8-01.3(1) General

(June 20, 2017 COK GSP)

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 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.

8-02 ROADSIDE RESTORATION

8-02.3 CONSTRUCTON REQUIREMENTS

8-02.3(4)A TOPSOIL TYPE A

Supplement this Section with the following:

Prior to planting and application of mulch, add soil in locations where soil settling has occurred.

8-02.3(5)B LAWN AREA PREPARATION

Replace the second paragraph with the following:

2. Subgrade must be established at level specified on plan. Before placement of specified topsoil or amendment, subgrade must be thoroughly scarified a minimum of 4 inches deep; by ripping, rototilling, plowing or discing. Finished subgrade must be cleaned of all debris including concrete, stumps, sticks, roots and rocks or lumps larger than 3 inches; and inspected and approved by the Engineer before soil mix is placed.

Replace the fifth paragraph with the following:

4. Rake to a smooth even grade without low areas that trap water, and compact with a 50-pound roller. The finished grade of the soil shall be 1 inch below the top of all curbs, junction and valve boxes, walks, driveways, and other Structures.

8-02.3(5)C PLANTING AREA PREPARATION

Replace the second and third paragraphs with the following:

2. Subgrade must be established at level specified on plan. Before placement of specified topsoil or amendment, subgrade must be thoroughly scarified a minimum of 4 inches deep; by ripping, rototilling, plowing or discing. Finished subgrade must be cleaned of all debris including concrete, stumps, sticks, roots and rocks or lumps larger than 3 inches; and inspected and approved by the Engineer before soil mix is placed.

(******)

8-02.3(8)E SLOW RELEASE WATERING BAGS

Install two slow release watering bags at each tree as shown on the Drawings. Tree watering bags to remain on the trees and become the property of the City of Kirkland following the landscape establishment period.

(******)

8-02.3(8)F TREE ROOT BARRIERS

Vertical Tree Root Barriers must be installed as shown on the Drawings and per manufacturer's recommendations. Panels must be installed flush with the finished grade unless the root barrier is covered by mulch, or out of pedestrian circulation routes, then the top barrier must be installed 1/2 inch above finished grade. Panels must be joined with locking strips or integral male/female sliding locks. Locking mechanism must have a close tolerance to restrict slippage between panels. Barriers must be installed with root deflectors facing inward.

Roots encountered during tree root barrier installation shall be pruned per Section 1-07.16(2).

8-02.3(9)B SEEDING AND FERTILIZING

Replace the first paragraph with the following:

The Contractor shall prepare the seeding area in accordance with Section 8-02.3(5)A and apply seed at the rate and mix specified on the Drawings. The Contractor shall notify the Engineer within 5 days in advance of any seeding operation and shall not begin the Work until areas prepared or designated for seeding have been accepted. Following the Engineer's acceptance, seeding of the accepted ground surfaces shall begin immediately.

(******)

8-02.3(17)C LANDSCAPE RESTORATION

The Contractor must blend the new construction into private property adjacent to the project using similar materials to those existing, (e.g. seeding must be used to match into lawn areas, bark mulch must be used to match into planting areas, planting soil must be used to match into garden areas, etc.)

If the items used for the restoration have pay items in the Contract, they will be paid under those items.

If restoration of adjacent property requires use of materials that have no pay items, payment will be by force account under the item "Landscape Restoration." The Contractor must repair and restore any existing irrigation system damaged by construction, as directed by Engineer. The Contractor must verify, in the presence of the adjacent property owner and Engineer, operation, location, and existing water pressure capabilities and continuity of the existing private irrigation system prior to excavation and removal. Property restoration shall consist of

restoring existing landscape areas, walkways, retaining and fence support walls of various types, concrete stair connections and miscellaneous construction associated with adjacent private property restoration, including irrigation systems and roof downspout drains and outfalls, to their original condition, as directed by the Engineer.

8-02.3(9) PRUNING, STAKING, GUYING AND WRAPPING
(November 3, 2010 COK GSP)

Section 8-02.3(9) is supplemented with the following:

If removal of canopy material is necessary to allow access for equipment, a Certified Arborist shall be consulted to ensure that proper pruning techniques are used.

All costs associated with pruning and staking trees shall be considered incidental and included in the contract price for cement concrete sidewalk construction.

8-02.4 MEASUREMENT
(****)

Replace the first paragraph with the following:

Topsoil, bark or wood chip mulch and soil amendments will be measured by the cubic yard.

This section is supplemented with the following:

Measurement for “Tree Root Barrier,” will be per linear foot of the length of panels installed in the field, measured parallel to the ground surface.

Measurement for “Slow Release Watering Bag” will be per each.

8-02.5 PAYMENT
(****)

“Wood Chip Mulch”, per cubic yard.

The unit Contract price per cubic yard for “Wood Chip Mulch” shall be full pay for furnishing and spreading the mulch onto the existing soil.

“Topsoil Type ____”, per acre or cubic yard.

The unit Contract price per cubic yard for “Topsoil Type ____” shall be full pay for all costs for the specified Work.

This Section is supplemented with the following:

“Tree Root Barrier”, per linear foot.

The unit Contract price per linear foot for “Tree Root Barrier” shall Include full payment for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved in installing root barriers, complete in place, as shown on the Plans and Drawings, as specified in these Special Provisions, at locations determined by the Engineer.

“Slow Release Watering Bag”, per each.

The unit Contract price for “Slow Release Watering Bags” must include all costs for the work required to furnish and install the Slow Release Watering Bags.

“Landscape Restoration”, by force account.

Payment for “Landscape Restoration” shall be by force account as described in Section 1-09.6 of the Standard Specifications and no other compensation will be allowed.

8-04 CURBS, GUTTERS, AND SPILLWAYS

8-04.3 CONSTRUCTION REQUIREMENTS

8-04.3(1) Cement Concrete Curbs, Gutter, and Spillways

Section 8-.4.3(1) is supplemented with the following:

(******)

Cement concrete traffic curb and traffic curb and gutter shall be constructed in accordance with City of Kirkland Standard Plan CK-R.17.

8-04.5 PAYMENT

Section 8-04.5 is supplemented with the following:

(******)

“Cement Conc. Vertical Curb and Gutter”, per linear foot.

“Cement Conc. Mountable Curb”, per linear foot.

“CEMENT CONC. DOWELED CURB”, PER LINEAR FOOT.

8-05 VACANT

Relace this Section with the following:

8-05 ART INSTALLATION

8-05.1 ART INSTALLATION

The contractor shall install ten (10) individual art pieces, provided by City, to sign poles. Location to be determined in field during construction. The Contractor will mount each art piece to a 2” OD Dia SCH 40 galvanized sign post, per CK-D-43, and a 2” OD to 1” OD coupler. Then mount the 1” OD Dia SCH 80 art piece to the coupling.

8-05.2 MEASUREMENT

No specific unit of measurement shall apply to the lump sum item of “Art Installation”.

8-05.3 PAYMENT

“Art Installation”, lump sum.

The lump sum Contract price for “Art Installation” shall be full compensation for all labor, tools, equipment, and materials necessary or incidental to furnishing and installing.

Payment for this item will be made as a percentage of art piece installation included in the bid item.

8-10 GUIDE POSTS AND BARRIER DELINEATORS

8-10.3 CONSTRUCTION REQUIREMENTS

8-10.3(1) Flexible Guide Posts

Section 8-10.3(1) is supplemented with the following:

(******)

Where noted on the plans flexible guide posts shall be installed with plastic curb.

8-10.5 PAYMENT

Section 8-10.5 is supplemented with the following:

(******)

“Flexible Post With Curb”, per each.

8-12 CHAIN LINK FENCE AN WIRE FENCE

8-12.5 PAYMENT

Section 8-10.5 is supplemented with the following:

(******)

“6-Foot Chain Link Fence Tree Protection”, per linear foot.

8-14 CEMENT CONCRETE SIDEWALKS

8-14.1 DESCRIPTION

(April 3, 2017 APWA GSP)

Section 8-14.1 is revised to read:

This work consists of constructing cement concrete sidewalks, curb ramps, bus stop shelter foundations, masonry sidewalks, and ramp grinding in accordance with details

shown in the Plans, Standard Plans, these Specifications, and in conformity to the lines and grades shown in the Plans, Standard Plans, and as established by the Engineer.

8-14.3 CONSTRUCTION REQUIREMENTS

(April 3, 2017 APWA GSP)

Section 8-14.3 is supplemented with the following:

The Contractor shall request a pre-construction meeting with the Engineer to be held 2 to 5 working days before any work can start on cement concrete sidewalks, curb ramps or other pedestrian access routes to discuss construction requirements. Those attending shall include:

1. The Contractor and Subcontractor in charge of constructing forms, and placing, and finishing the cement concrete.

2. Engineer (or representative) and Project Inspectors for the cement concrete sidewalk, curb ramp or pedestrian access route Work.

Items to be discussed in this meeting shall include, at a minimum, the following:

1. Slopes shown on the Plans.

2. Inspection

3. Traffic control

4. Pedestrian control, access routes and delineation

5. Accommodating utilities

6. Form work

7. Installation of detectable warning surfaces

8. Contractor ADA survey and ADA Feature as-built requirements

9. Cold Weather Protection

Section 8-14.3 is supplemented with the following:

(******)

Cement concrete sidewalk and curb ramps shall be constructed with Class 4000 Portland Cement Concrete per City of Kirkland Plan No. CK-R.23 for sidewalk construction details.

(April 3, 2017 APWA GSP)

Timing Restrictions

Within an intersection, the crossing of one leg of the intersection shall be constructed at a time and shall be completed and open to traffic within five calendar days before

construction can begin on another of the intersection unless otherwise allowed by the Engineer.

Unless otherwise allowed by the Engineer, the five calendar day time restriction begins when an existing curb ramp for the quadrant or traffic island/median is closed to pedestrian use and ends when the quadrant or traffic island/median is fully functional and open for pedestrian access.

(April 3, 2017 APWA GSP)

Layout and Conformance to Grades

The Contractor shall meet the requirements depicted in the Contract documents. Using the information provided in the Contract documents, the Contractor shall lay out, grade, and form each new curb ramp, sidewalk, and curb and gutter.

8-14.3(3) Placing and Finishing Concrete

Section 8-14.3(3) is supplemented with the following:

(******)

The Contractor shall submit a detailed Jointing Plan to the Engineer for review and approval. The Jointing Plan shall include jointing around Structures and other surface features. The Jointing Plan shall identify all types of joints.

Sidewalk and curb and gutter cannot be poured monolithically. An expansion joint will be required when concrete sidewalk is surrounded by other hard surfaces (for example driveways) or as directed by the Engineer.

Sidewalk shall not be poured in the rain, in accordance with City of Kirkland Policy R-8, placing concrete or asphalt in adverse weather conditions.

8-14.3(6) Documentation

Section 8-14.3(6) is added as follows:

The Contractor shall perform as-constructed ADA compliance field checks for all new sidewalk and curb ramps constructed on the project and provide documentation to the Engineer for approval, certifying that all slopes along sidewalks and ramps meet the slope criteria set forth in the Plans and the 2005 PROWAG. The Contractor shall verify the as-constructed slopes of the sidewalks and curb ramps with readings of a 4-foot long “smart level” placed along all fall lines of sidewalks and curb ramps, and include the readings in the provided documentation.

8-14.4 MEASUREMENT

Section 8-10.4 is supplemented with the following:

(******)

Where a thickened edge sidewalk is used, the surface area of the sidewalk, exclusive of the curb and back of walk, shall be paid for as Cement Concrete Sidewalk.

Sidewalk thickened edge shall be measured by the linear foot along the back of the sidewalk thickened edge.

8-14.5 PAYMENT

Section 8-10.5 is supplemented with the following:

(******)

"Tactile Directional Indicator, Cast-in-Place", per linear foot.

"Sidewalk Thickened Edge", per linear foot.

The unit Contract price per each for "Sidewalk Thickened Edge" shall be full pay for construction of the sidewalk thickened edge, as shown in the plans including concrete and reinforcing steel, including curb.

8-18 MAILBOX SUPPORT

8-18.3 CONSTRUCTION REQUIREMENTS

Section 8-18.3 is supplemented with the following:

(******)

Existing mailboxes shown to be relocated shall be removed from existing mailbox support and reinstalled on new Mailbox Support Type 1 per WSDOT Standard Plan H-70.10-02.

8-18.5 PAYMENT

Section 8-18.5 is supplemented with the following:

(******)

"Mailbox Relocation", per each.

8-12 CHAIN LINK FENCE AN WIRE FENCE

8-12.5 PAYMENT

Section 8-10.5 is supplemented with the following:

(******)

"6-Foot Chain Link Fence Tree Protection", per linear foot.

8-20 ILLUMINATION, TRAFFIC SIGNAL SYSTEMS, INTELLIGENT TRANSPORTATION SYSTEMS, AND ELECTRICAL

8-20.4 MEASUREMENT

Section 8-20.4 is supplemented with the following:

"RRFB System, Complete" will be measured per lump sum, and will be for the sum total of all items for a complete system to be furnished and installed.

"Relocate RRFB Assembly" will be measured per lump sum, and will be for the sum total of all items to relocate an existing RRFB assembly on a new foundation.

8-20.5 PAYMENT

Section 8-20.5 is supplemented with the following:

The lump sum contract price for "RRFB System, Complete" includes all materials, installation, testing, and other work necessary to construct a complete RRFB system per the plans, these specifications, and City of Kirkland RRFB Policy R-24, including but not limited to:

- Excavation, backfilling, concrete foundations.
- Poles, RRFB assemblies, RRFB controller, push buttons, solar panels, signs, junction boxes, conduit and light bars.
- Restoring facilities destroyed or damaged during construction.

All components of the RRFB system shall be new. No salvaged or refurbished equipment will be allowed.

Bidders are cautioned to include in the lump sum bid all costs related to protection of items to remain, removal and disposal costs of removed items, not specified to be salvaged.

"RRFB System, Complete", per lump sum

The lump sum contract price for "Relocate RRFB Assembly" includes all materials, installation, testing, and other work necessary to remove the existing RRFB assembly, construct a new foundation, extend and modify conduits and conductors as necessary, reinstall existing assembly on new foundation, and test to operating condition.

8-22 PAVEMENT MARKING

8-22.1 DESCRIPTION

Section 8-22.1 is supplemented with the following:

(******)

Crosswalk

A white thermoplastic marking conforming to City of Kirkland Standard Plan No. CK-R.28 and as shown in the Plans.

Stop Bar

A white thermoplastic marking conforming to City of Kirkland Standard Plan No. CK-R.28 and as shown in the Plans.

8-22.3 CONSTRUCTION REQUIREMENTS

Section 8-22.3 is supplemented with the following:

8-22.3(1) Preliminary Spotting

Section 8-22.3(1) is supplemented with the following:

The Contractor shall provide 48-hours advance notice to the Engineer for the Engineer's approval of the preliminary spotting layout(s).

8-22.3(6) Removal of Pavement Markings

Section 8-22.3(6) is supplemented with the following:

Existing thermoplastic pavement markings shall be removed prior to installing new thermoplastic materials. The method for removing pavement markings shall be approved by the Engineer.

8-22.4 MEASUREMENT

Section 8-22.4 is supplemented with the following:

(******)

Green Conflict Marking shall be measured per each.

The measurement for Plastic Shared Lane Marking (Sharrow) Symbol, Plastic Bi-Directional Bike Sharrow Symbol, Plastic Bike Dot, Plastic Raised Intersection Chevron Pavement Marking, and Plastic Slotted Speed Hump Marking shall be per each.

All costs associated with striping removals 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 Contracting Agency.

8-22.5 PAYMENT

Section 8-22.5 is supplemented with the following:

(******)

"Green Conflict Markings", per each.

The Bid item price for "Green Conflict Markings" must include all costs for the work to furnish and install the green pavement marking.

"Plastic Shared Lane Marking (Sharrow) Symbol", per each.
"Plastic Bi-Directional Bike Sharrow Symbol", per each.
"Plastic Bike Dot", per each.

1 “Plastic Raised Intersection Chevron Pavement Marking”, per each.
2 “Plastic Slotted Speed Hump Marking”, per each.

DIVISION 9
Materials

9-14 Erosion Control and Roadside Planting

9-14.2 TOPSOIL

9-14.2(1) TOPSOIL TYPE A

Supplement this Section with the following:

Topsoil Type A must consist of a mix of 2 to 3 parts Sandy loam soil and 1 part compost by volume. The resulting mix must contain approximately 8 to 15 percent organic matter by weight, tested by the loss on ignition method.

Sandy loam must be imported and must be as defined by the United States Department of Agriculture Classification System, and documented by a particle size analysis performed by an accredited laboratory. The sandy loam fraction of mix must be screened through a 1/2-inch mesh, to remove all rocks, plant parts, and other debris.

Compost used must be as specified in Section 9-14.5(8).

Topsoil Type A must be free from materials toxic to plant growth; visible seeds, rhizomes, or roots; and any King County listed noxious weeds or invasive root-propagating plants including horsetail, ivy, clematis, and knotweed.

Topsoil General Testing and Submittal Requirements

At least 10 Working Days prior to placement of any soils specified in Section 9-14, the Contractor must submit to the Engineer the following. All test results must be from samples collected and tested less than 90 days prior to date of submittal.

1. Aggregate and Loam Analysis. Grain size analysis results of the Mineral Aggregate or sandy loam portion of each soil mix, performed by an accredited laboratory per ASTM C 136.
2. Compost Analysis. Quality analysis results for the compost portion of each soil mix performed per STA standards, as specified in Section 9-14.5(8).
3. Mix Analysis. Test results from an accredited soil laboratory, including 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. Conductivity
    g. Calcium
    h. Sulfur
    i. Boron

4. Recommendations. Fertilizer and amendment recommendations for the specified plant type (turf, shrubs/groundcovers) and soil application depth; from the accredited laboratory, an accredited soil scientist or agronomist. The Contractor shall be responsible for whatever soil additives may be required, as recommended by the testing laboratory.
5. Mix Samples. Two 1-gallon samples of each soil mix
6. Manufacturer. The manufacturer's certificate of compliance from the Supplier of the soil mix, and (if different) the Suppliers of the compost, including their name and address.
7. Laboratory Information. Include the following information about the testing laboratories:
    a. Name of laboratory including contact person,
    b. Address,
    c. Phone contact,
    d. Email address,
    e. Qualifications of laboratory and personnel including date of current certification by STA, ASTM, AASHTO, or approved equal.
8. Acceptance of Soils Prior to Placement. The Contractor must not place any soils or soil mixes specified in Section 9-14 until the Engineer has reviewed and confirmed the following:

    Soil mix delivery tickets. Delivery tickets must show that the full delivered amount of soil matches the product type, volume and Manufacturer named in the submittals.

    Visual inspection. Delivered product will be compared to the submitted sample, to verify that it matches the submitted sample. The Engineer may inspect any loads of soil on delivery and stop placement if it is determined the delivered soil does not appear to match the submittals; and require sampling and testing of the delivered soil, before authorizing soil placement. The Contractor is responsible for all testing costs.

9-14.5(3) BARK OR WOODCHIP MULCH

Supplement this Section with the following:

Bark or Woodchip Mulch Submittal Requirements

1. Samples. Two 1-gallon samples

9-14.8 STAKES, GUYS AND WRAPPING

Replace the first two paragraphs of this Section with the following:

The tree stakes and tree ties shall be per plans.

(******)

9-14.9 SLOW RELEASE WATERING BAGS

Slow release watering bag must be UV-stabilized polyethylene bag with nylon webbing, black polypro straps, and nylon zippers. Each bag must have at least 2 water release points. Each

bag must have a water capacity of at least 15 gallons. For a double bag installation, water capacity must be at least 22.75 gallons. The fill opening must fit up to a 3-inch diameter hose.

Slow release watering bags must be Treegator Original, TreeCOVEr, Oasis Tree Watering Bags, or approved equal.

(******)

9-14.10 TREE ROOT BARRIER

Root barriers must be an injection molded or extruded modular component made of high density polypropylene or polyethylene plastic with a minimum of 30 percent recycled materials. Panels must have a minimum thickness of 0.080 inches.

Each panel must have a minimum of 4 molded vertical ribs and locking strips, integral male/female sliding locks, and an intergraded zipper joining system. Vertical root-deflecting ribs or channels must be between 1/2 inch and 0.008 inches high, perpendicular to the panel, and between 5.91 inches to 7.87 inches apart. Panels must be a minimum of 24” wide x 24” deep, or as shown on Drawings. The Contractor must submit for approval a catalogue cut for the material and installation.

9-29 ILLUMINATION, SIGNAL, ELECTRICAL

9-29.21 RECTANGULAR RAPID FLASHING BEACON

9-29.21 is replaced with the following:

General

The Rapid Rectangular Flashing Beacon (RRFB) Assembly shall consist of support pole, push button, RRFB light bar, control unit and enclosure, all associated wiring and wiring appurtenances, and all appurtenances and mounting hardware.

The RRFB Assembly shall be connected to a new or an existing service cabinet as shown in the Plans.

The RRFB Light Bar shall remain dark until initiated by activation of the pedestrian push button. Each RRFB Light Bar shall be activated by push button and relayed as a system to operate all RRFB units simultaneously when any one push button is activated. The RRFB Light Bars shall simultaneously cease operation after a predetermined time limit per the Engineer. Agency Engineer will provide assistance to the Contractor for setting the activation time duration.

RRFB Parts List

An RRFB system shall be comprised of the following items and parts:

RRFB Component List

ID #	Component	Item	# needed
FOUNDATION			
1	Bolt Cage	Pelco AP-1095-GLV	1 per pole

2	Foundation - WSDOT Plans: J-21.10-04 (non-curb mount *) J-20.11-02 (curb mount *)	Per Design	Per Design
STRUCTURE			
3	Pole Base with Collar	Pelco PB-5334 + PB-5325 (base + collar)	1 per pole
4	Pole (12' length for AC) (16' length for Solar)	Pelco - Spun Alum. Pole, Sch 40, PB-5100	1 per ea
5	J-Box w/conduits	Type 1 J-Box (Non-Skid in Sidewalk)	2 (one each for AC/ Solar unless existing box meets code.)
ID #	**Component**	**Item**	**# needed**
RRFB COMPONENTS			
6	Electronics Cabinet **	Slimline 100 Cabinet	1 per unit
7	Electronics Cabinet Mount	Eltec Pole Mount	1 per cabinet
8	Flashing Light Heads (4 lights per unit) • verification lights case by case - check with PW-Traffic Eng.	Eltec RRFB (Whelen light heads)	1 unit per pole
9	Flashing Light Heads Enclosure	Eltec RRFB Pole Mount Light Enclosure	1 unit per pole
10	Flasher	Eltec FS-3 Flasher	1 per unit
11	Photocell	Silonex TO-5 Photocell	1 per unit
12	Timer	Crouzet Timer PU2R4	1 per unit
13	Toggle Switch (for putting system into flash mode manually)	(sized for application)	1 per unit
POWER – SELECT DC (SOLAR) <u>or</u> AC (HARDWIRE)			
DC (SOLAR) POWER			
14.DC	Solar Power Panel	Kyocera Solar Panel	1 per unit
15.DC	Solar Panel Mount (Pole Top Style)	Eltec Top Pole Mount	1 per unit
16.DC	Battery	UPG - UB121000 Battery	1 per unit
17.DC	Charge Controller	ProStar Charge Controller (PSM-15 or PSM-	1 per unit

		30 depending on No. of solar panels)	
18.DC	Power cable for AC systems	Belden Part No. 601765 Cable	Varies depending on site distances
AC (HARDWIRE) POWER			
14.AC	Power Source (Determine Source for Project)	Meter head or Service cabinet (100A or 200A TBD)	1 Service
15.AC	Breaker for RRFB Cabinet (10A)	(Per Designer spec)	1 per System
16.AC	Power Supply	TDK-Lambda LS50-12	1 per System
17.AC	Surge Protector	Emerson/Edco SPA-100T	1 per System
18.AC	Power cable for AC systems	Opticon Model 138 Detector Cable	Varies depending on site
PEDESTRIAN PUSH-BUTTONS			
19	Pedestrian Push-Button Station ***	Polara Model XAVE2- LED Push Button Station	1 per unit
20	Pedestrian Push-Button Station Controller	Polara XAVCU2-DC Control Unit for XAV2E- LED Push Button Station	1 per unit

1
2

PREVAILING WAGES

City of Kirkland

PREVAILING WAGE RATES

Prevailing wage rates can be found at:
www.lni.wa.gov/tradeslicensing/prevwage/wagerates

King County

A copy of the applicable wage rates is available for viewing in our office:

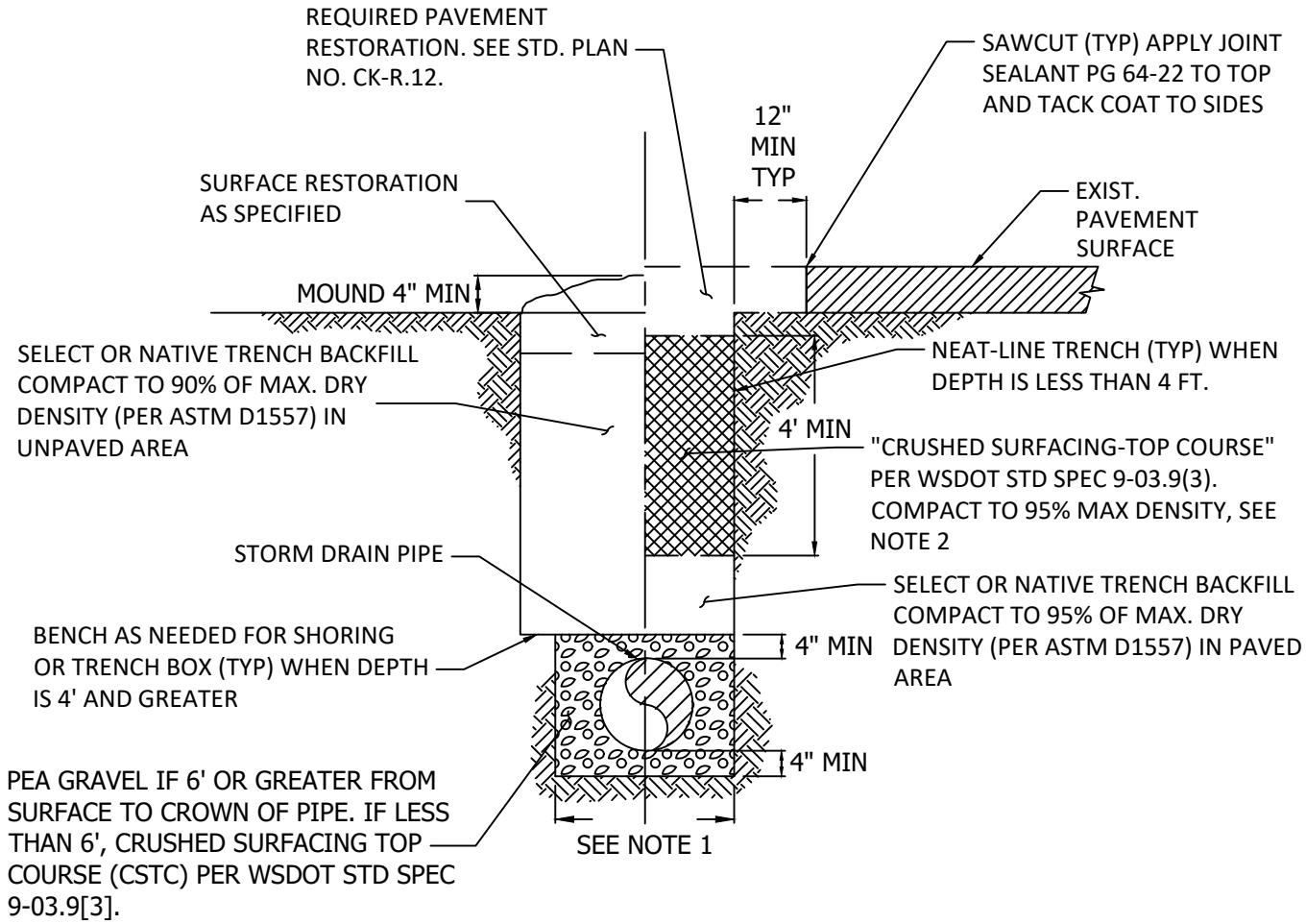
City Hall Annex
310 1st Street
Kirkland, WA 98033

The City of Kirkland will mail a hard copy of the applicable wage rates upon request.
Send your request to the Project Engineer, or jvandervaart@kirklandwa.gov.

APPENDIX B:
PRE-APPROVED PLANS

City of Kirkland

LAST REVISED: 07/2021



UNPAVED AREAS PAVED AREAS

NOTES:

1. MAXIMUM WIDTH OF TRENCH AT TOP OF PIPE
   * 30" FOR PIPE UP TO AND INCLUDING 12" NOMINAL DIAMETER.
   * OD PLUS 16" FOR PIPE LARGER THAN 12" NOMINAL DIAMETER.

2. WHERE TRENCH IS PERPENDICULAR TO TRAVELED LANES, BACKFILL FULL DEPTH WITH CRUSHED SURFACING–TOP COURSE. WHERE TRENCH IS PARALLEL TO TRAVELED LANES, BACKFILL THE TOP 4' OF TRENCH TO SUBGRADE WITH CRUSHED SURFACING–TOP COURSE. SUITABLE EXCAVATED MATERIAL MAY BE USED PROVIDED 95% MAX. COMPACTION DENSITY (ASTM D1557) CAN BE ACHIEVED.

3. SEE OVERLAY POLICY R–7.

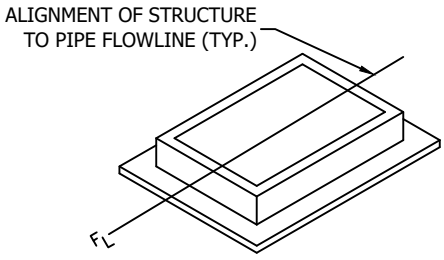
4. USE OF RECYCLED CONCRETE IS PROHIBITED, UNLESS APPROVED BY THE CITY. SEE POLICY D-16.

CITY OF KIRKLAND

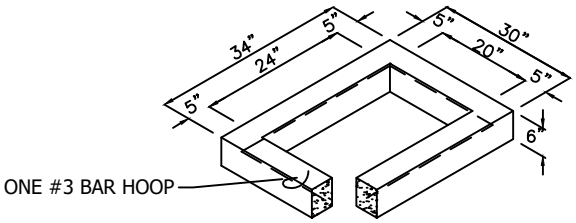
PLAN NO. CK - D.02

STORM TRENCH DETAIL

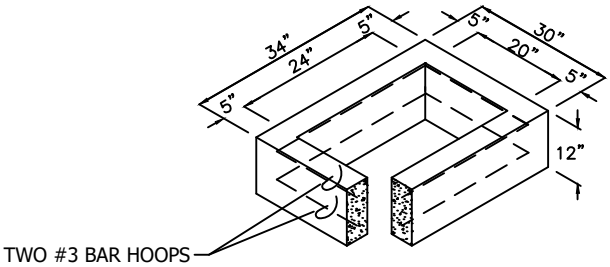
LAST REVISED: 01/2023



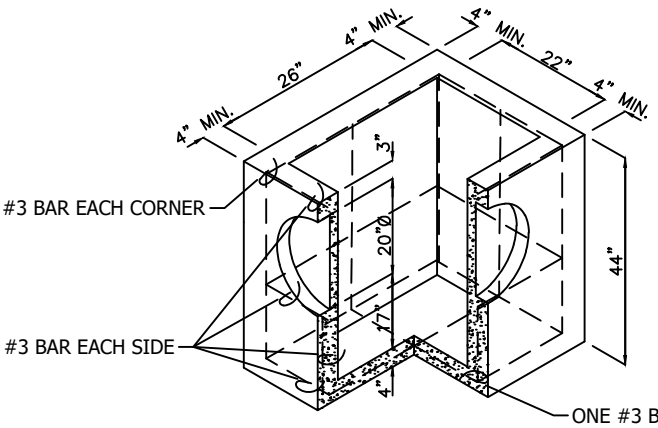
FRAME AND GRATE
(SEE STANDARD DETAILS D.11 THROUGH D.16A)



6" RISER SECTION



12" RISER SECTION



PRECAST BASE SECTION
(MEASUREMENT AT THE TOP OF THE BASE)

NOTES:

1. CATCH BASINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 (AASHTO M 199) & C890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE STANDARD SPECIFICATIONS.
2. AS AN ACCEPTABLE ALTERNATIVE TO REBAR, WELDED WIRE FABRIC HAVING A MIN. AREA OF 0.12 SQUARE INCHES PER FOOT MAY BE USED. WELDED WIRE FABRIC SHALL COMPLY TO ASTM A497 (AASHTO M 221). WIRE FABRIC SHALL NOT BE PLACED IN KNOCKOUTS.
3. ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000.
4. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MIN. ALL PIPE SHALL BE INSTALLED IN FACTORY PROVIDED KNOCKOUTS. UNUSED KNOCKOUTS NEED NOT BE GROUTED IF WALL IS LEFT INTACT.
5. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAM. PLUS CATCH BASIN WALL THICKNESS.
6. ROUND KNOCKOUTS MAY BE ON ALL 4 SIDES, WITH MAX. DIAM. OF 20". KNOCKOUTS MAY BE EITHER ROUND OR "D" SHAPE.
7. THE MAX. DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5'-0".
8. THE TAPER ON THE SIDES OF THE PRECAST BASE SECTION AND RISER SECTION SHALL NOT EXCEED 1/2" PER FOOT.
9. CATCH BASIN FRAME AND GRATE SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITION.
10. FRAME AND GRATE SHALL BE INSTALLED WITH FLANGE DOWN.
11. EDGE OF RISER OR BRICK SHALL NOT BE MORE THAN 2" FROM VERTICAL EDGE OF CATCH BASIN WALL.
12. ACCEPTABLE PIPE SIZES ARE 8", 12" OR 15". 6" PIPE IS ONLY ACCEPTABLE ON PRIVATE SYSTEMS.
13. ROUND SOLID LIDS REQUIRED WHENEVER CATCH BASIN DOES NOT COLLECT SURFACE WATER. SEE CK-D.18 AND CK-D.18A FOR REFERENCE.
14. ROUND CONCRETE RISERS ARE REQUIRED FOR ROUND SOLID LOCKING LIDS.
15. ALL NEW PVC PIPES SHALL BE INSTALLED WITH SAND COLLARS AND A NON-SHRINK GROUT. JETSET OR SPEED CRETE RED LINE GROUT NOT ALLOWED.
16. 1", 2", AND 4" RISERS ACCEPTED AS NEEDED.
17. MINIMUM 10' FROM ADJACENT TREES, UNLESS OTHERWISE APPROVED.
18. CLEAN SURFACE AND BOTTOM AREA. PROVIDE UNIFORM CONTACT. THE SURFACE AREA OF THE BASE SECTION MUST BE MORTARED TO THE BOTTOM AREA OF THE RISER SECTION.

CITY OF KIRKLAND

PLAN NO. CK - D.07

CITY OF KIRKLAND WASHINGTON

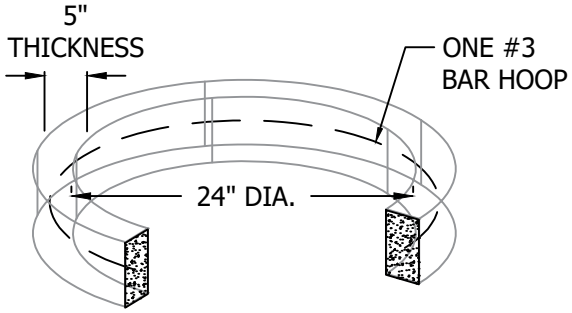
CATCH BASIN TYPE 1

LAST REVISED: 07/2021

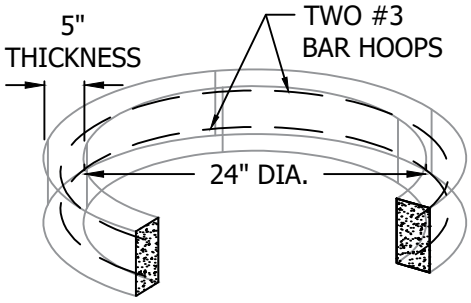
FRAME AND GRATE
(SEE STANDARD DETAILS
D.18 AND D.18A)

NOTES:

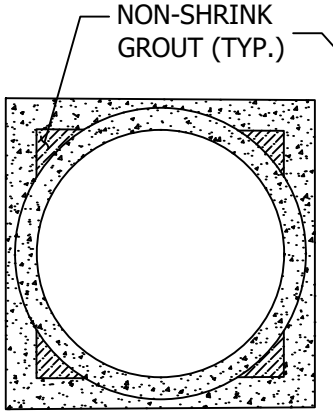
1. GROUT SHALL BE APPLIED BETWEEN ALL MATING SURFACES TO ENSURE A WATER TIGHT SEAL AND STRONG BOND.
2. COMMERCIALLY AVAILABLE CONVERTER FROM RECTANGULAR STRUCTURE TO CIRCULAR RISER MAY BE USED IF APPROVED BY PUBLIC WORKS DEPARTMENT.
3. 1", 2", AND 4" RISERS ACCEPTED AS NEEDED.



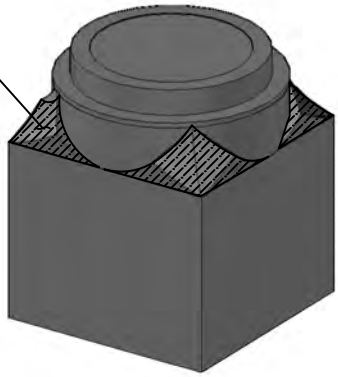
6" RISER SECTION



12" RISER SECTION



TRANSITION DETAIL
2-D PLAN VIEW



TRANSITION DETAIL
3-D CONCEPTUAL
VIEW

CITY OF KIRKLAND

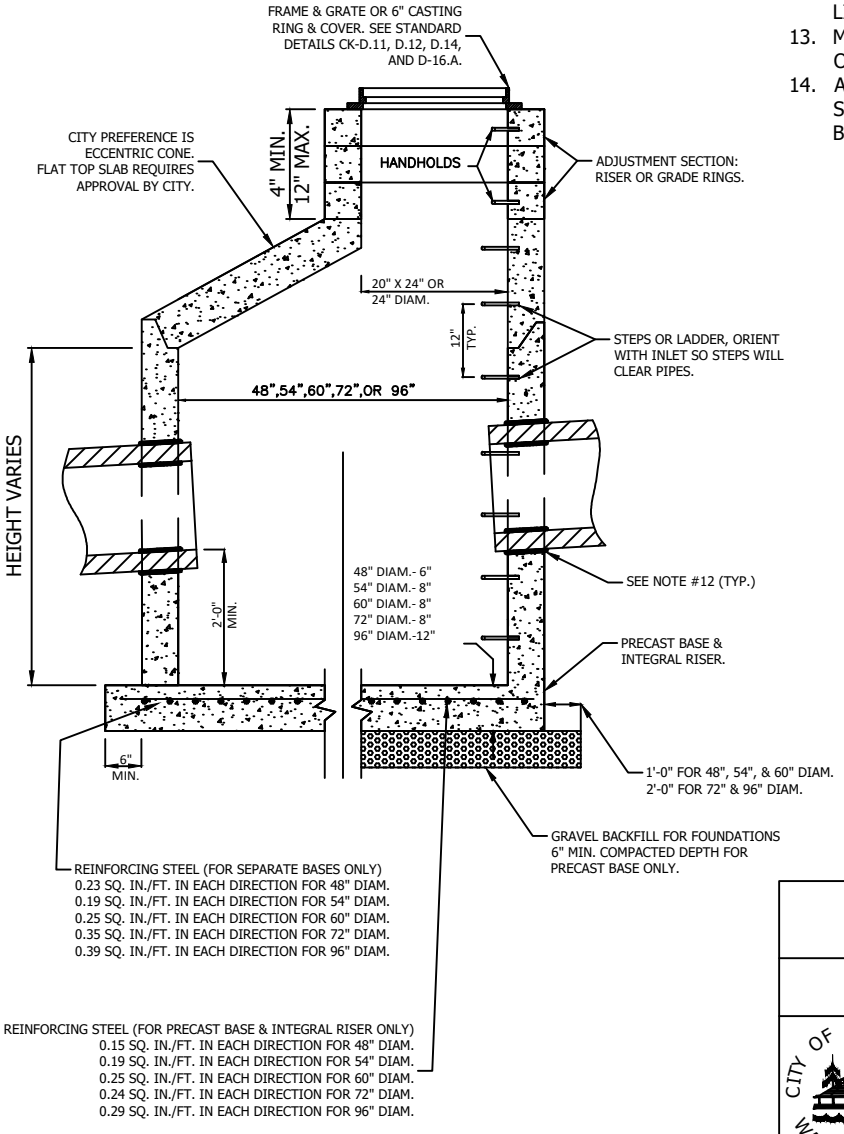
PLAN NO. CK - D.07A

CIRCULAR RISER AND TRANSITION FOR TYPE 1 AND 1-L CB

LAST REVISED: 01/2023

NOTES:

1. CATCH BASINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 (AASHTO M199) AND ASTM C890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE STANDARD SPECIFICATIONS.
2. HANDHOLDS IN ADJUSTMENT SECTION SHALL HAVE 3" MIN. CLEARANCE. STEPS IN CATCH BASIN SHALL HAVE 6" MIN. CLEARANCE. SEE STD. DTL. NO. CK-D.12, CATCH BASIN DETAILS. HANDHOLDS SHALL BE PLACED IN ALTERNATING GRADE RINGS OR LEVELING BRICK COURSE WITH A MIN. OF ONE HANDHOLD BETWEEN THE LAST STEP AND TOP OF THE FINISHED GRADE.
3. ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000. ALL PRECAST CONCRETE SHALL BE CLASS 4000.
4. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE WALL THICKNESS OF 2" MIN. UNUSED KNOCKOUTS NEED NOT BE GROUTED IF WALL IS LEFT INTACT. PIPES SHALL BE INSTALLED ONLY IN FACTORY KNOCKOUTS UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. CATCH BASIN FRAMES AND GRATES OR COVERS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITION.
6. ALL BASE REINFORCING STEEL SHALL HAVE A MIN. YIELD STRENGTH OF 60,000 PSI AND BE PLACED IN THE UPPER HALF OF THE BASE WITH 1" MIN. CLEARANCE.
7. MIN. SOIL BEARING VALUE SHALL EQUAL 3,300 POUNDS PER SQUARE FOOT.
8. FOR DETAILS SHOWING LADDER, STEPS, HANDRAILS AND TOP SLABS, SEE STD. DTLS. NO. CK-D.12 AND CK-S.14.
9. ALL MANHOLE JOINTS SHALL USE A CONFINED RUBBER GASKET AND GROUTED (INSIDE AND OUT) TO MEET ASTM C-443 SPECIFICATIONS.
10. ROUND SOLID LOCKING LIDS REQUIRED WHENEVER CATCH BASIN DOES NOT COLLECT SURFACE WATER, OR WHEN LOCATED IN SIDEWALK AND PLANTER AREAS. SEE CK-D.18, CK-D.18A, AND CK-D.18B FOR REFERENCE.
11. ROUND CONCRETE RISERS ARE REQUIRED FOR ROUND SOLID LOCKING LIDS.
12. ALL NEW PIPES SHALL BE INSTALLED WITH EITHER A KOR-N-SEAL BOOT, OR SAND COLLARS AND A NON-SHRINK GROUT. JETSET OR SPEED CRETE RED LINE GROUT NOT ALLOWED.
13. MINIMUM 10' FROM ADJACENT TREES, UNLESS OTHERWISE APPROVED.
14. ALL RISERS WILL BE WET SET IN GROUT, AND SMOOTHED INSIDE AND OUT PRIOR TO BEING BURIED.



ACCEPTABLE PIPE SIZES:

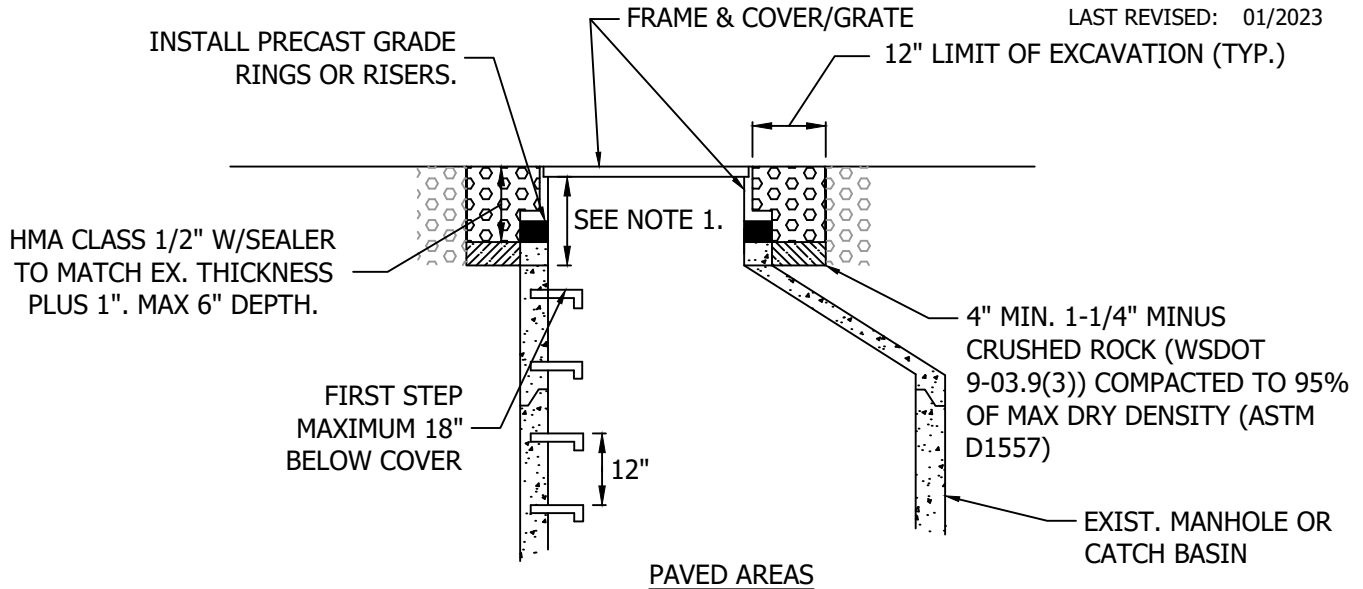
	Pipe Size								
Basin Type	6"	8"	12"	15"	18"	24"	30"	36"	48"
Type II-48" CB	X	X	X	X	X	X	X		
Type II-54" CB	X	X	X	X	X	X	X	X	
Type II-60" CB	X	X	X	X	X	X	X	X	
Type II-72" CB	X	X	X	X	X	X	X	X	X
Type II-96" CB	X	X	X	X	X	X	X	X	X

CITY OF KIRKLAND

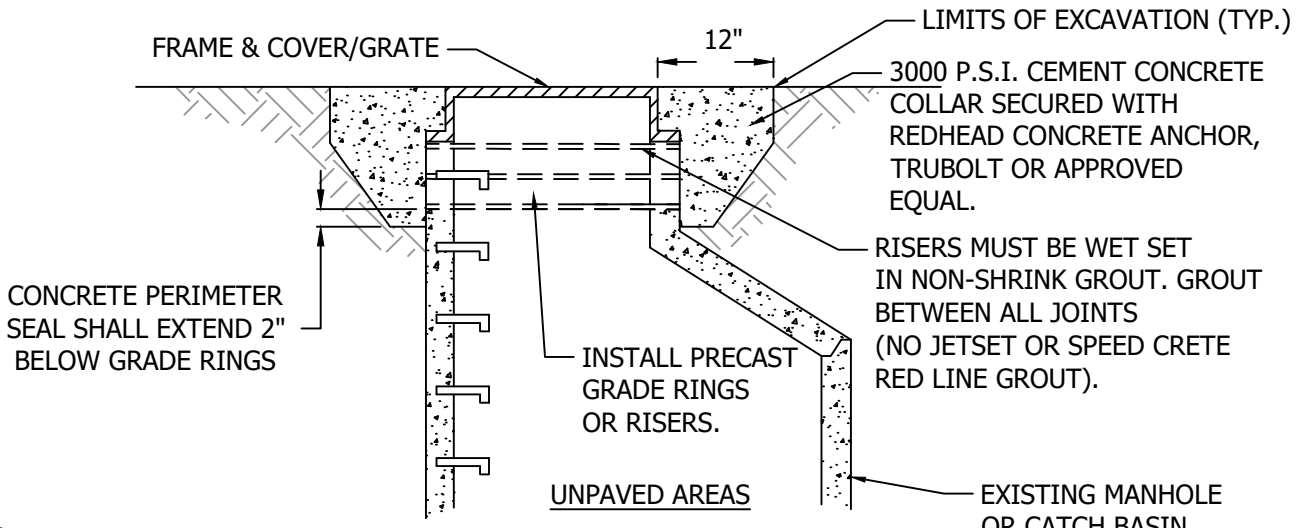
PLAN NO. CK - D.09

CATCH BASIN TYPE 2 48",54",60",72",96"

LAST REVISED: 01/2023



PAVED AREAS



UNPAVED AREAS

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.

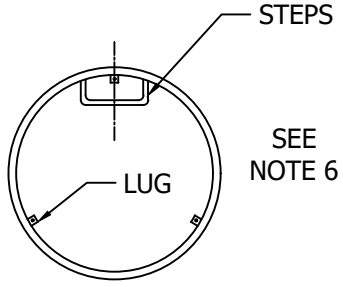
2. GRADE RINGS, RISERS AND FRAME SHALL BE SET IN 3/4" NON-SHRINK GROUT, GROUT BETWEEN ALL JOINTS. ALL SURFACES MUST BE CLEAN OF DEBRIS AND DIRT, AND WETTED PRIOR TO GROUTING. GROUT SMOOTH INSIDE AND OUTSIDE SURFACES PRIOR TO BACKFILL.

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-D.18A CASTING.



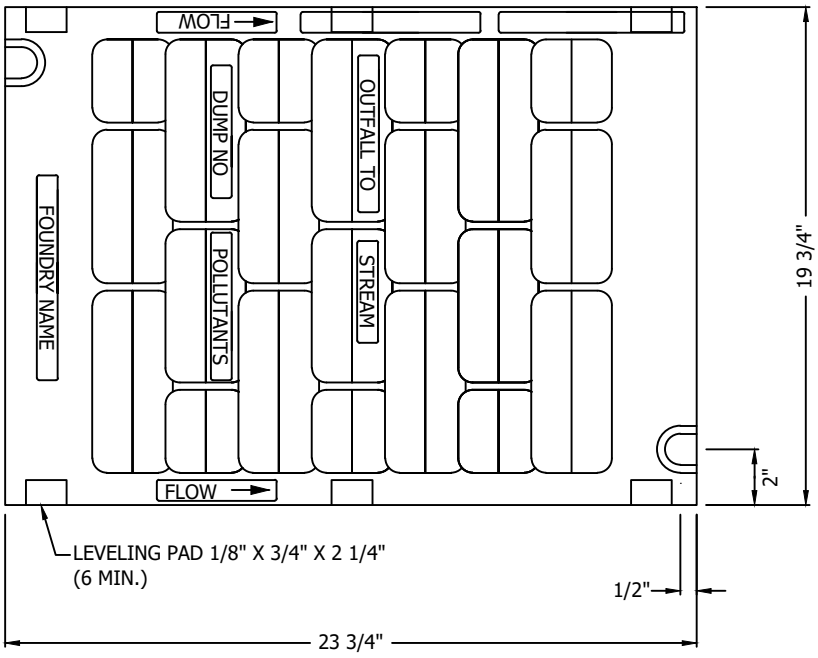
LOCKING MH FRAME
PLAN VIEW

CITY OF KIRKLAND

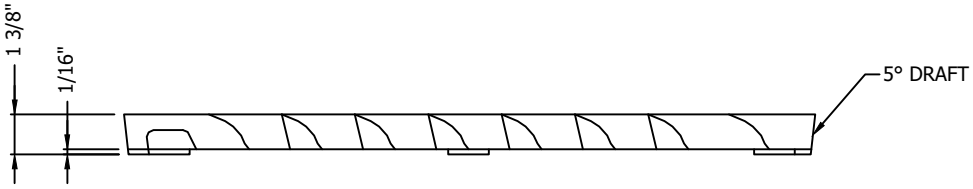
PLAN NO. CK - D.11

MANHOLE/CB
FRAME AND GRATE
ADJUSTMENT

LAST REVISED: 01/2023



PLAN



ELEVATION

NOTES:

1. USE EAST JORDAN IRON WORKS OR EQUAL TWO BOLT LOCK CAPABILITY THAT MEETS WSDOT SPEC. MANUFACTURER SUBJECT TO APPROVAL BY CITY.
2. USE WITH TWO LOCKING BOLTS 5/8"-11 NC STAINLESS TYPE 304 STEEL SOCKET HEAD (ALLEN HEAD) BOLTS, 2" LONG. FRAMES SHALL INCLUDE THREADS AS DROP-OUT REPLACEABLE NUTS.
3. MATERIAL IS DUCTILE IRON ASTM A536 GRADE 80-55-06.
4. "OUTFALL TO STREAM DUMP NO POLLUTANTS" MAY BE LOCATED ON BORDER AREA.
5. SHALL CONFORM TO SEC. 7.05 OF THE STANDARD SPECIFICATIONS.
6. WELDING IS NOT PERMITTED.
7. EDGES SHALL HAVE 0.125" RADIUS, 0.125" CHAMBER OR COMPLETE DEBURRING.
8. USE A BI-DIRECTIONAL VANED GRATE AT ANY LOW POINT OR WHEN FLOWS COME FROM MULTIPLE DIRECTIONS.
9. NO EXPANSION MATERIAL IN THE FLOW LINE, WHERE CONCRETE COMES TO FRAME.
10. FRAME AND COVER SHALL BE H-20 LOADING RATED IF INSTALLED IN ROADWAY.
11. MUST BE MADE IN USA.

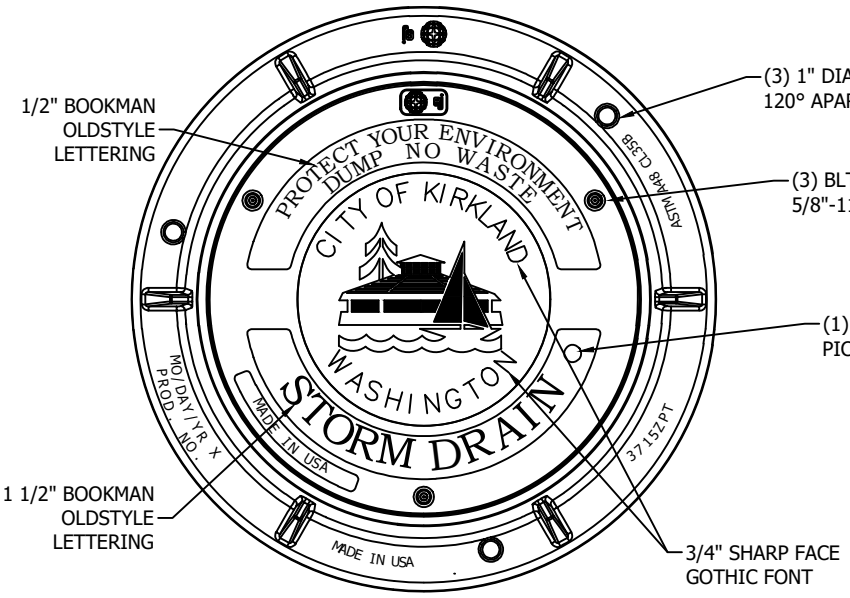
CITY OF KIRKLAND

PLAN NO. CK - D.14

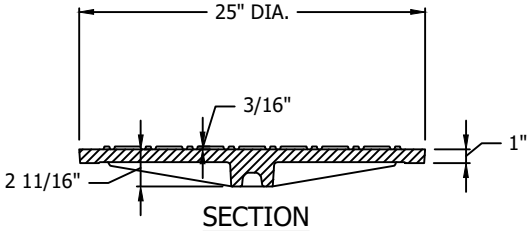
CITY OF KIRKLAND WASHINGTON

VANED GRATE FOR CATCH BASIN AND INLET

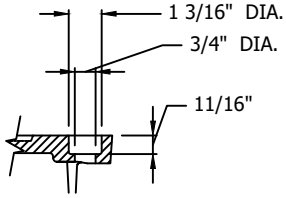
LAST REVISED: 07/2021



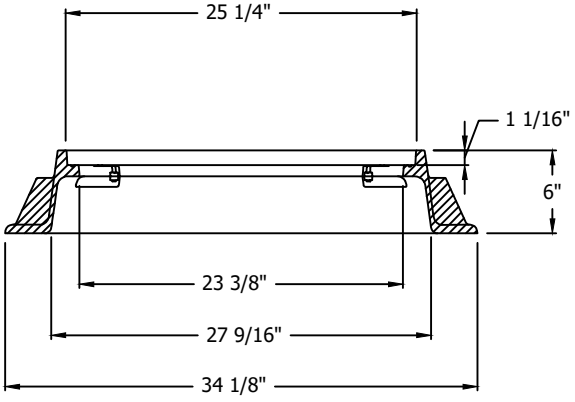
PLAN VIEW



SECTION



BOLTHOLE DETAIL



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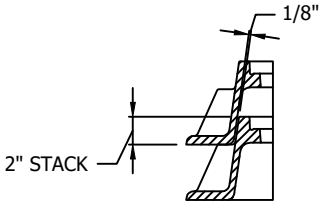


STACKING DETAIL

NOTES:

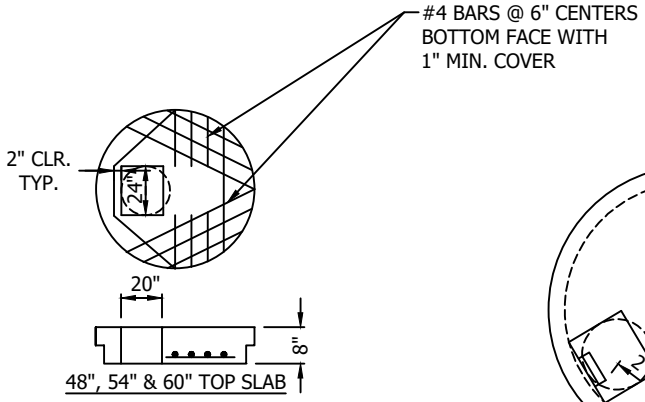
1. COVERS SHALL BE GRAY IRON, LOCKING, WITH A MINIMUM WEIGHT OF 141 LBS.
2. MINIMUM WEIGHT OF FRAME SHALL BE 134 LBS.
3. PRODUCT SUPPLIED BY EJ GROUP, INC., APPROVED EQUAL.
4. CITY OF KIRKLAND LOGO REQUIRED
5. THIS SPEC SHOULD NOT BE USED IN THE ROADWAY.
6. MUST BE MADE IN THE USA.

CITY OF KIRKLAND

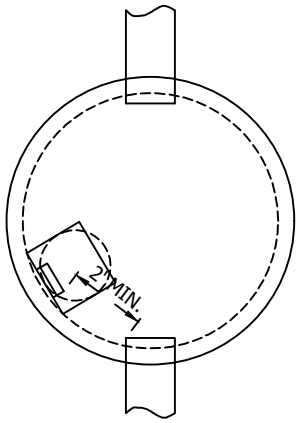
PLAN NO. CK - D.18

24" MANHOLE FRAME W/LOCKING COVER AND LOGO

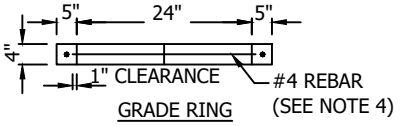
LAST REVISED: 07/2021



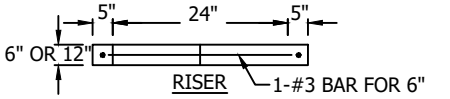
48", 54" & 60" TOP SLAB



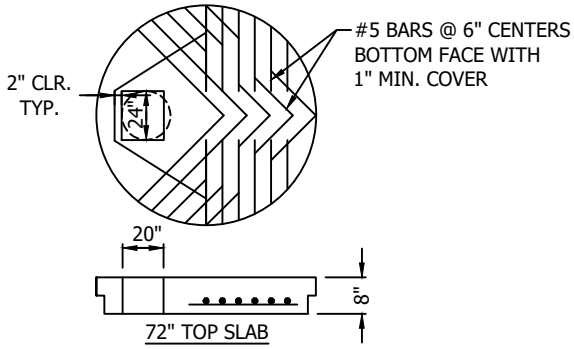
TYPICAL ORIENTATION
FOR ACCESS AND STEPS



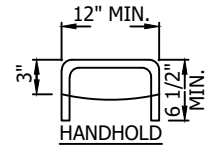
GRADE RING



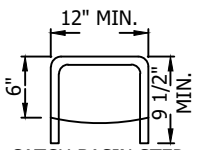
RISER



72" TOP SLAB

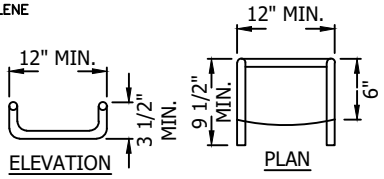


HANDHOLD

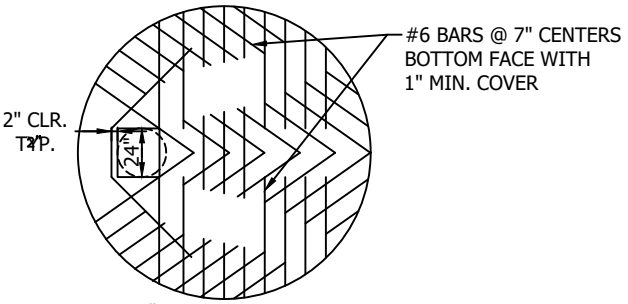


CATCH BASIN STEP

*ALL STEPS COPLOYMER PROPYLENE



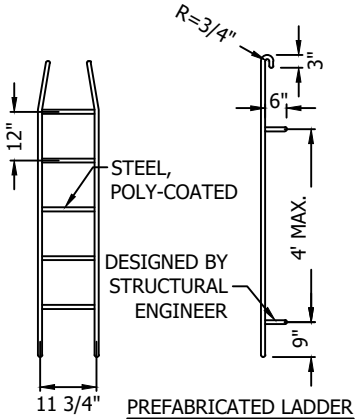
DROP RUNG
CATCH BASIN STEP



96" TOP SLAB

NOTES:

1. PROPRIETARY CATCH BASIN HANDHOLDS AND STEPS ARE ACCEPTABLE, PROVIDED THAT THEY CONFORM TO SEC. R, ASTM C478, AASHTO M-199 AND MEET ALL WISHA REQUIREMENTS. RETRO-REFLECTIVE MARKERS REQUIRED AT EACH END OF STEPS AND HAND-HOLDS.
2. CATCH BASIN STEP/HANDHOLD LEGS SHALL BE PARALLEL OR APPROXIMATELY RADIAL AT THE OPTION OF THE MANUFACTURER, EXCEPT THAT ALL STEPS IN ANY CATCH BASIN SHALL BE SIMILAR. PENETRATION OF OUTER WALL BY A LEG IS PROHIBITED.
3. HANDHOLDS AND STEPS SHALL HAVE "DROP" RUNGS AS SHOWN ON DETAIL OR PROTUBERANCES TO PREVENT SIDEWAYS SLIP.
4. SLAB OPENING MAY BE 24" X 20" RECTANGLE FOR CATCH BASIN OR 24" DIAM. CIRCLE FOR MANHOLE.
5. AS AN ACCEPTABLE ALTERNATIVE TO REBAR, WELDED WIRE FABRIC HAVING A MIN. AREA OF 0.12 SQUARE INCHES PER FOOT MAY BE USED. WELDED WIRE FABRIC SHALL COMPLY TO ASTM A497.
6. LADDERS OR STEPS SHALL EXTEND TO WITHIN 16" OF BOTTOM OF CATCH BASIN.
7. HANGING LADDERS SHALL BE PERMANENTLY FASTENED AT TOP BY HANGING ON STEP AND BY BOLTING.
8. ADDITIONAL SAFETY FEATURES MAY BE REQUIRED IN VERY DEEP OR UNUSUAL STRUCTURES.



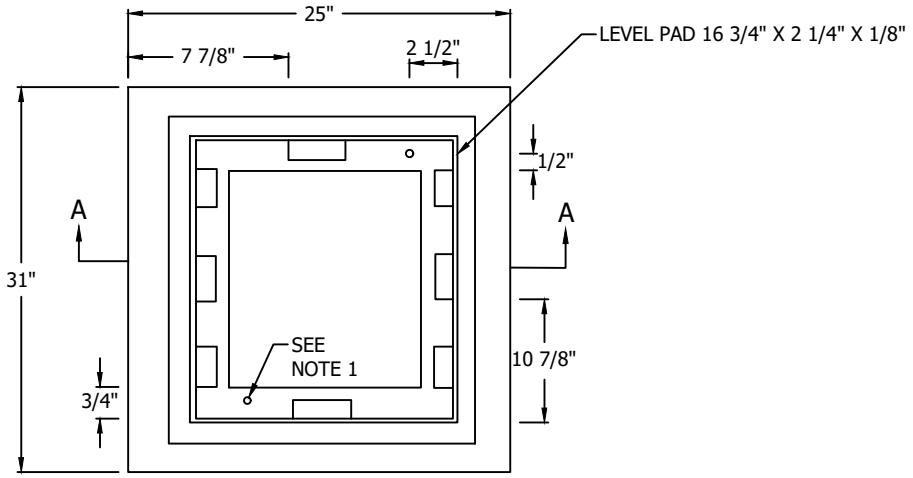
PREFABRICATED LADDER

CITY OF KIRKLAND

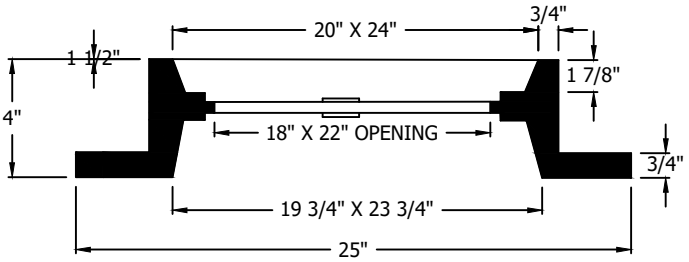
PLAN NO. CK - D.12

CATCH BASIN INLET PRECAST COVER AND EXTENSION UNITS

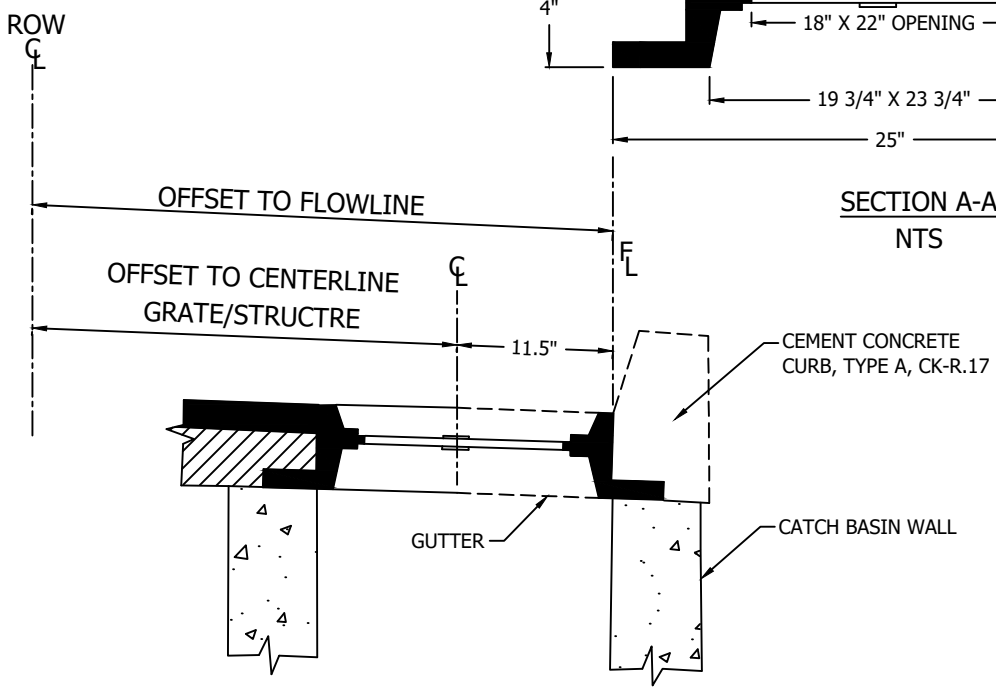
LAST REVISED: 07/2021



PLAN VIEW
NTS



SECTION A-A
NTS



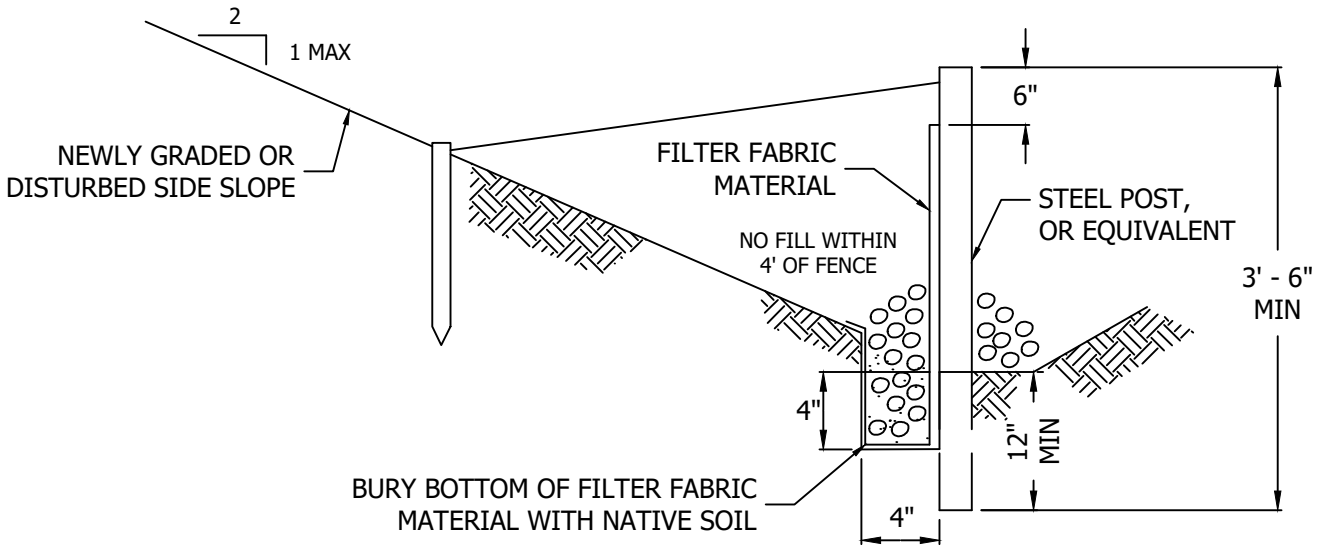
TYPE 1 CATCH BASIN ALIGNMENT CROSS SECTION
NTS

NOTE:

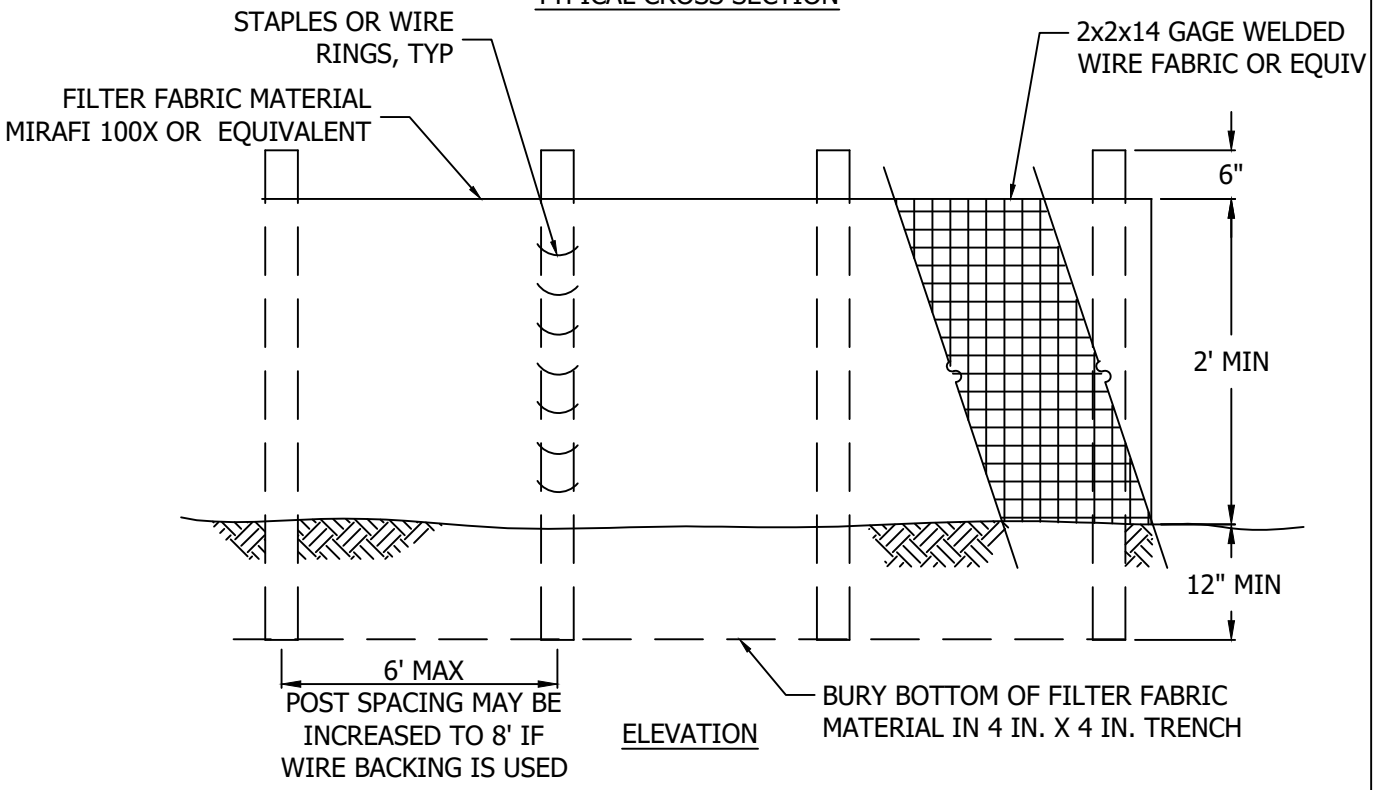
1. FRAME MATERIAL IS CAST IRON PER ASTM A48 CLASS 30.
2. SET FRAME TO GRADE AND CONSTRUCT ROAD AND GUTTER TO BE FLUSH WITH FRAME.
3. BACK OF FRAME SHALL BE IN FLOWLINE OF GUTTER.
4. MUST BE MADE IN THE USA.

CITY OF KIRKLAND	
PLAN NO. CK - D.16A	
CITY OF KIRKLAND WASHINGTON	STANDARD FRAME WITH CURB INSTALLATION

LAST REVISED: 01/2022



TYPICAL CROSS SECTION



ELEVATION

NOTES

1. PREFAB FENCE ALLOWED IF REINFORCED AND APPROVED BY CITY INSPECTOR.
2. FENCE SHALL NOT BE INSTALLED ON SLOPES STEEPER THAN 2:1.
3. JOINTS IN FILTER FABRIC SHALL BE SPLICED AT POSTS. USE STAPLES, WIRE RINGS, OR EQUIVALENT TO ATTACH FABRIC TO POSTS AND FENCE.
4. REMOVE SEDIMENT WHEN IT REACHES 1/3 FENCE HEIGHT.
5. LOCATION OF FENCING SHALL BE AS SHOWN ON APPROVED PLANS OR AS DIRECTED BY THE CITY.
6. MAXIMUM 100' SHEET OR OVERLAND FLOW PATH LENGTH TO SILT FENCE.
7. DO NOT DIRECT FLOWS GREATER THAN 0.5 CFS TO FENCE.
8. SILT FENCE SHOULD NOT BE INSTALLED IN STREAMS OR V-SHAPED DITCHES.
9. FILTER FABRIC SHOULD BE INSTALLED ALONG CONTOURS WHENEVER POSSIBLE.

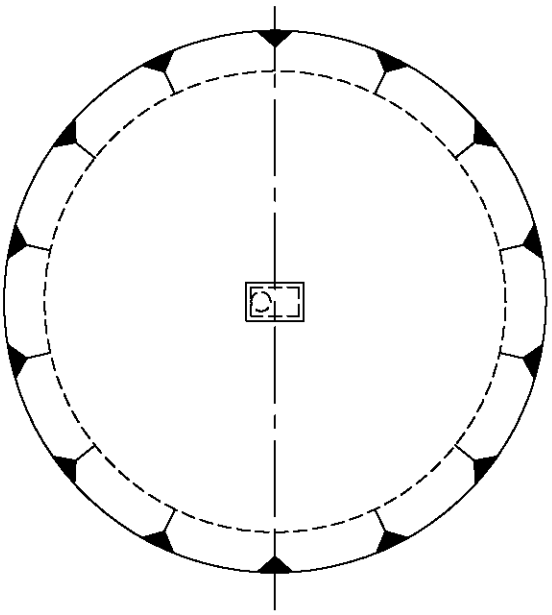
CITY OF KIRKLAND

PLAN NO. CK - E.03

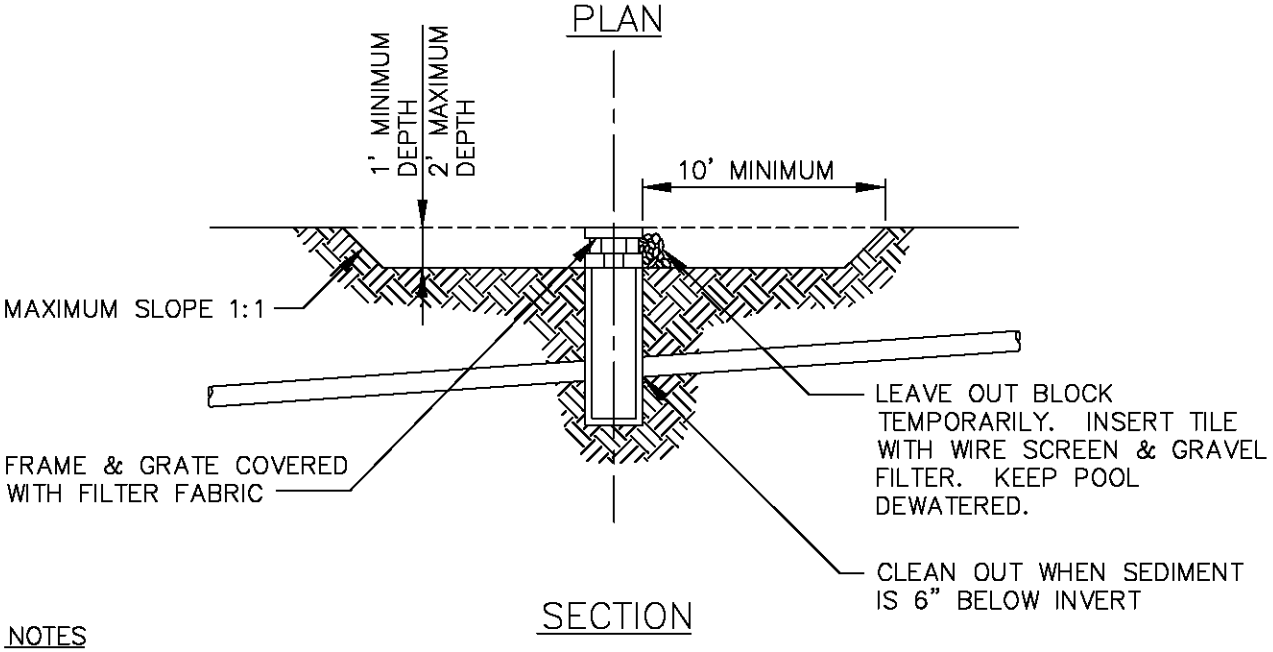
CITY OF KIRKLAND WASHINGTON

SILT FENCE

LAST REVISED:04/15/12



PLAN



SECTION

NOTES

1. PROTECT INLETS DURING CONSTRUCTION. KEEP SEDIMENT OUT OF THE STORM DRAINAGE SYSTEM. USE HALF-CIRCLE BEHIND CURB INLETS DURING STREET CONSTRUCTION. MODIFY PROTECTION AS CONSTRUCTION PROGRESSES.

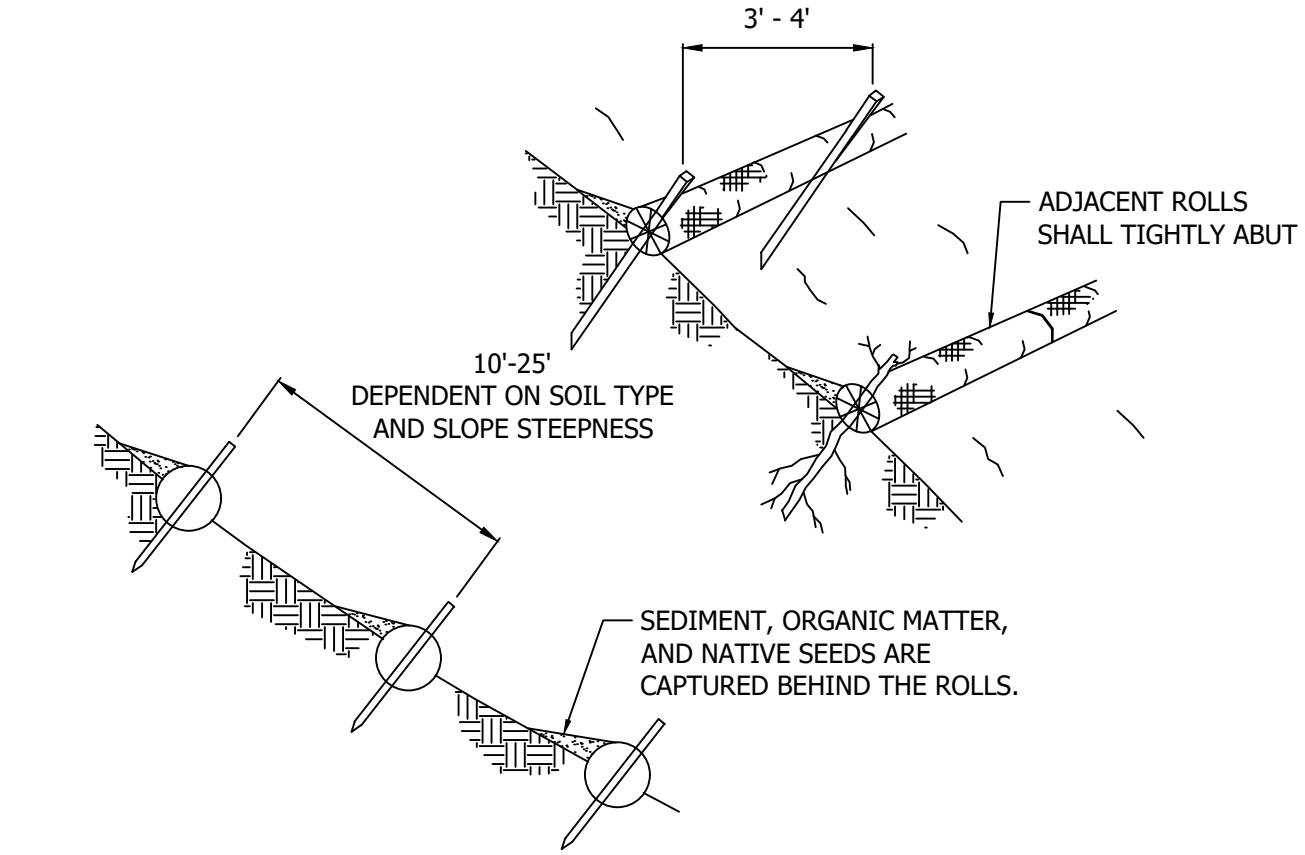
2. CIRCULAR SHAPE IS NOT ESSENTIAL; VARY SHAPE TO FIT DRAINAGE AREA AND TERRAIN. OBSERVE TO CHECK TRAP EFFICENCY AND MODIFY AS NECESSARY TO INSURE SATISFACTORY TRAPPING OF SEDIMENT. CAN BE ADAPTED TO THRU-CURB INLET.

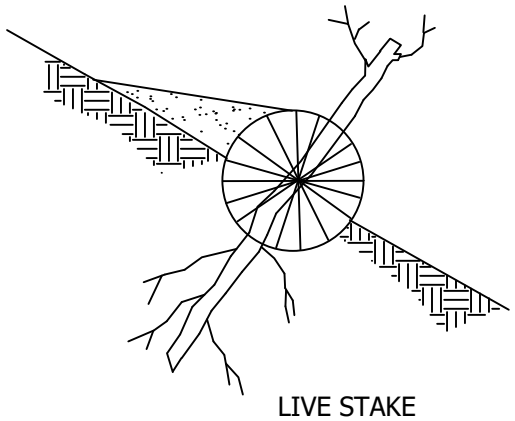
3. ALLOW 2' MINIMUM OVERHANG OR FILTER FABRIC. FILTER FABRIC OVERHANG MUST BE COVERED WITH 1-1/4" CRUSHED ROCK.

4. FILTER FENCE MAY BE REQUIRED AROUND PERIMETER OF BASIN.

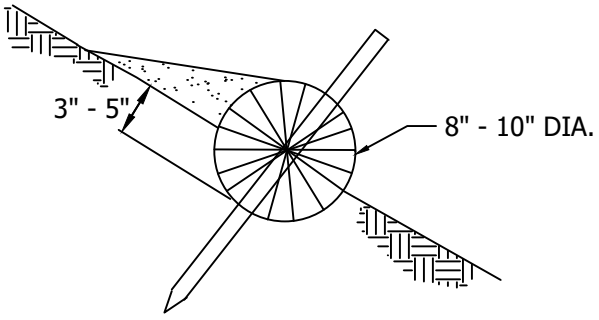
CITY OF KIRKLAND	
PLAN NO. CK-E.08	
CITY OF KIRKLAND WASHINGTON	CATCH BASIN/INLET SEDIMENTATION TRAP

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

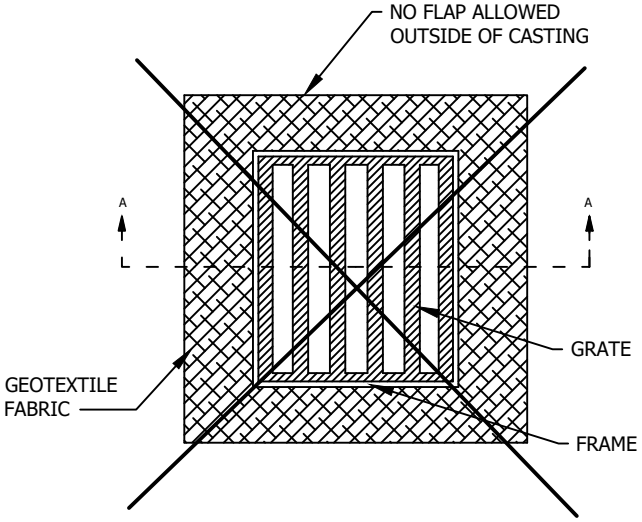
CITY OF KIRKLAND

PLAN NO. CK - E.10

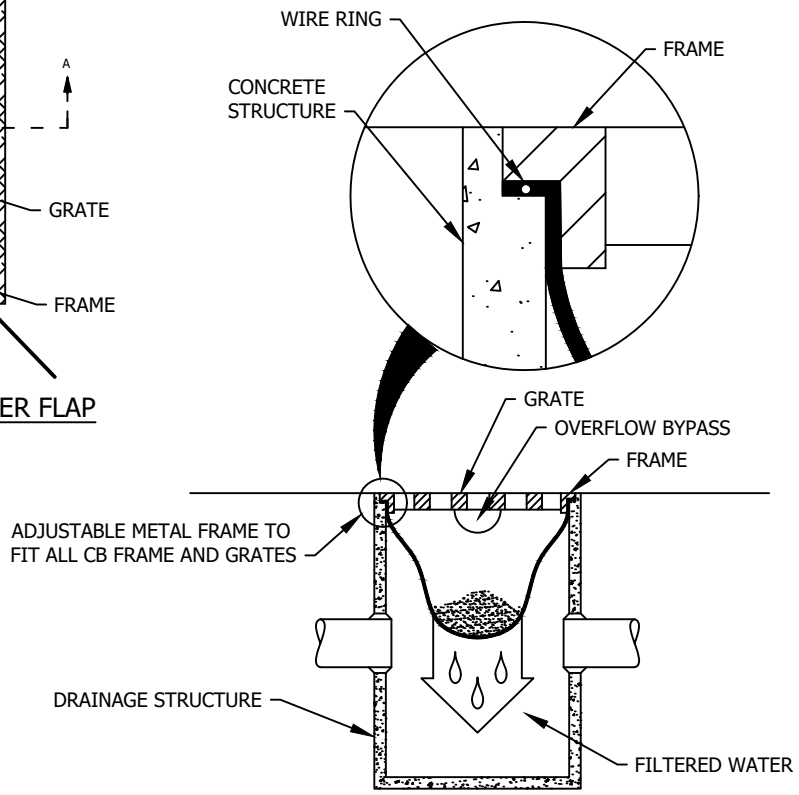
CITY OF KIRKLAND WASHINGTON

STRAW WATTLES

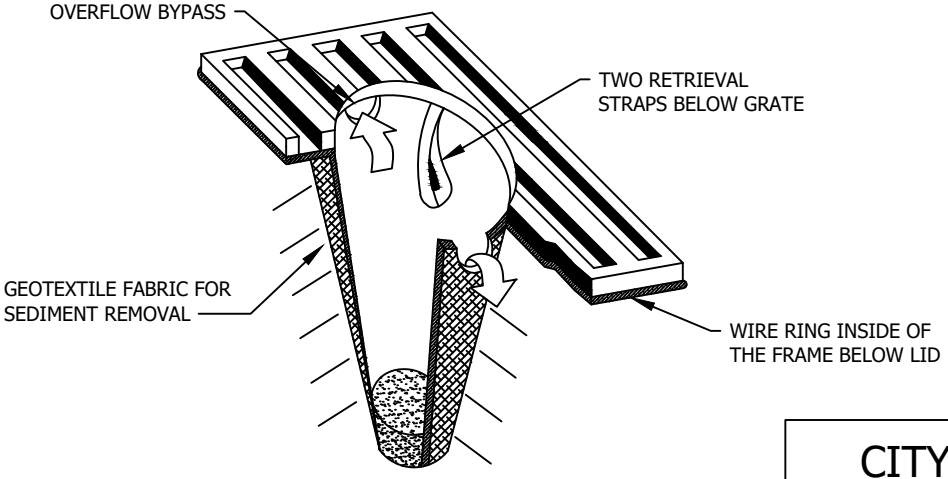
LAST REVISED: 01/2020



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

HISTORICAL SIGN BACKGROUND:

GREEN AND BROWN REFLECTIVE SHEETING
WITH 3/8" WHITE BORDER.
SHEETING SHALL MEET MUTCD
REQUIREMENTS FOR REFLECTIVITY.

SIGN:
24"x8" SHEET ALUMINUM 0.080" THICK

FONT: 4", FHWA SERIES "B" OR "C",
EXCEPT SUFFIXES AND PREFIXES 3" UC SERIES "B" OR "C"

FONT: 0.625" RALEIGH (YEAR @45°)
FONT: 1.5" RALEIGH EXTRA BOLD BT (STREET NAME)

PRIVATE ROAD BACKGROUND:

BLUE AND GREEN REFLECTIVE SHEETING
WITH 3/8" WHITE BORDER.
SHEETING SHALL MEET MUTCD
REQUIREMENTS FOR REFLECTIVITY.

SIGN:
24"x8" SHEET ALUMINUM 0.080" THICK

FONT: 4", FHWA SERIES "B" OR "C",
EXCEPT SUFFIXES AND PREFIXES 3" UC SERIES "B" OR "C"

FONT: 1", FHWA UC SERIES "F"

STANDARD STREET SIGN BACKGROUND:

GREEN REFLECTIVE SHEETING
WITH 3/8" WHITE BORDER.
SHEETING SHALL MEET MUTCD REQUIREMENTS
FOR REFLECTIVITY.

SIGN:
24"x6" SHEET ALUMINUM 0.080" THICK

FONT: 4", FHWA SERIES "B" OR "C",
EXCEPT SUFFIXES AND PREFIXES 3" UC SERIES "B" OR "C"

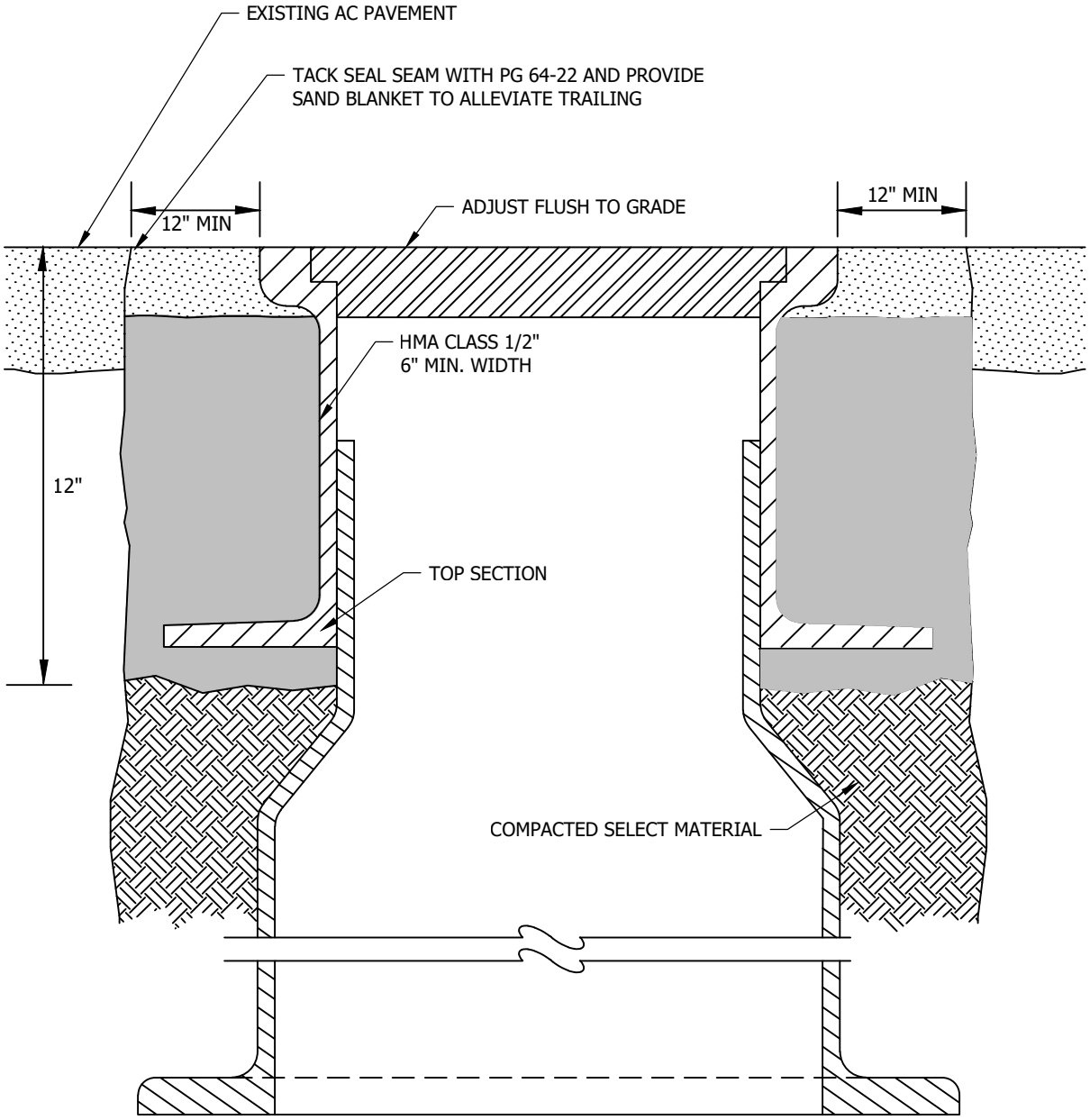
CITY OF KIRKLAND

PLAN NO. CK–R.01

CITY OF KIRKLAND WASHINGTON

STREET SIGN DESIGNATIONS

LAST REVISED: 01/2022



NOTES:

1. HMA MUST BE COMPACTED WITH PROCTOR HAMMER (PNEUMATIC BACKFILL COMPACTION TAMPER) IN 3" LIFTS.
2. LOCKING MH LIDS SHALL BE POSITIONED WITH ONE LUG CENTERED OVER STEPS.
3. SEE CK-D.18A FOR DIRECTION OF HINGED LIDS INSTALLATION.
4. WATER VALVE BOX EARS MUST POINT IN THE DIRECTION OF FLOW. CONTRACT CITY INSPECTOR IF FLOW DIRECTION CANNOT BE DETERMINED.
5. APPLY A TACK COAT TO ALL EDGES OF EXISTING ASPHALT PRIOR TO PLACEMENT OF NEW HMA. SEAL ALL JOINTS WHEN COMPLETE.

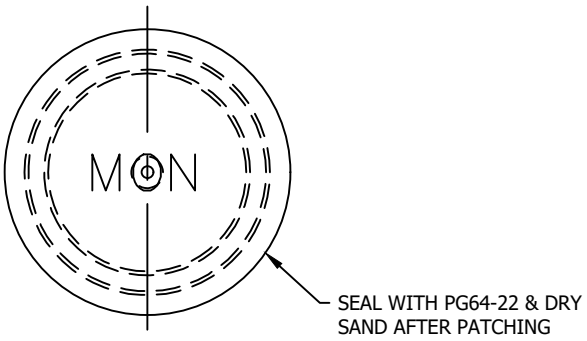
CITY OF KIRKLAND

PLAN NO. CK- R.02

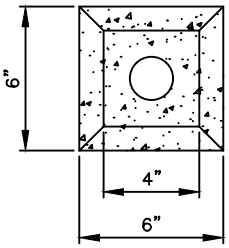
CITY OF KIRKLAND WASHINGTON

GENERAL UTILITY ADJUSTMENT H.M.A. PAVEMENT

LAST REVISED:01/2023



PLAN



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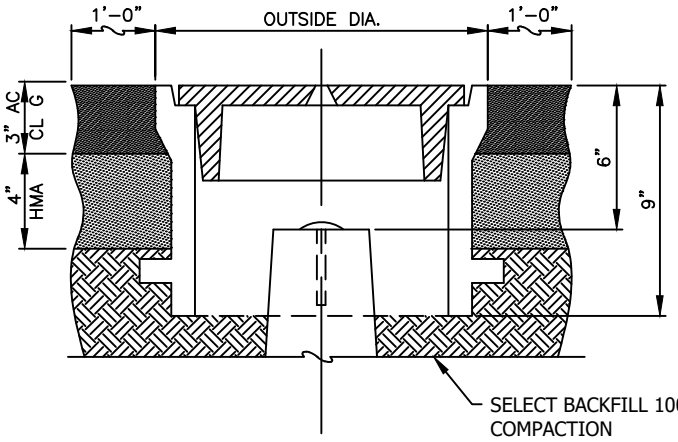
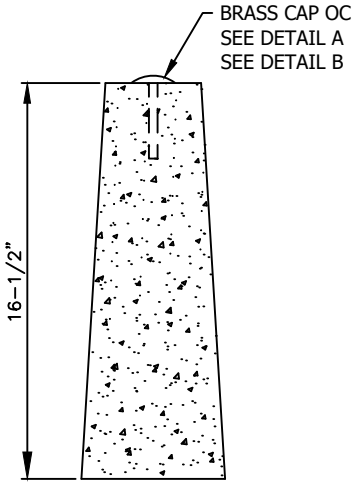


ELEVATION



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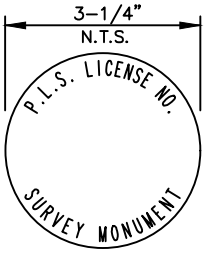


CAP DETAIL

CAP LAYOUT FOR
ALL PROJECTS

NOTES:

1. ALL JOINTS BETWEEN ASPHALT PATCH AND EXISTING PAVEMENT SHALL BE SEALED.
2. THE CASTINGS SHALL BE GREY-IRON CASTINGS, ASTM DESIGNATION A-48, CLASS 30B. THE COVER AND SEAT SHALL BE MACHINED SO AS TO HAVE PERFECT CONTACT AROUND THE ENTIRE CIRCUMFERENCE AND FULL WIDTH OF BEARING SURFACE.
3. CONCRETE COLLAR REQUIRED IF OUTSIDE OF ASPHALT AREA.
4. HMA MUST BE COMPACTED WITH PROCTOR HAMMER (PNEUMATIC BACKFILL COMPACTION TAMPER) IN 3" LIFTS

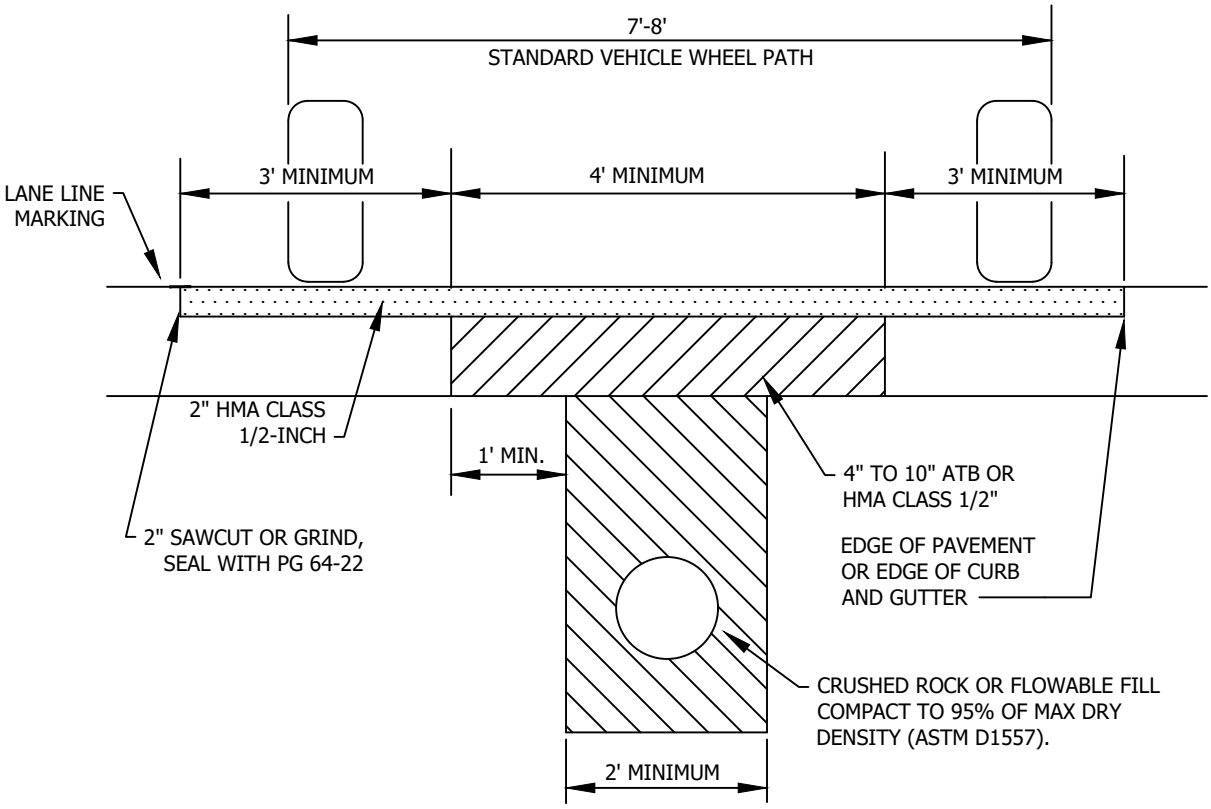
CITY OF KIRKLAND

PLAN NO. CK–R.03

CITY OF KIRKLAND WASHINGTON

MONUMENT CASE AND COVER

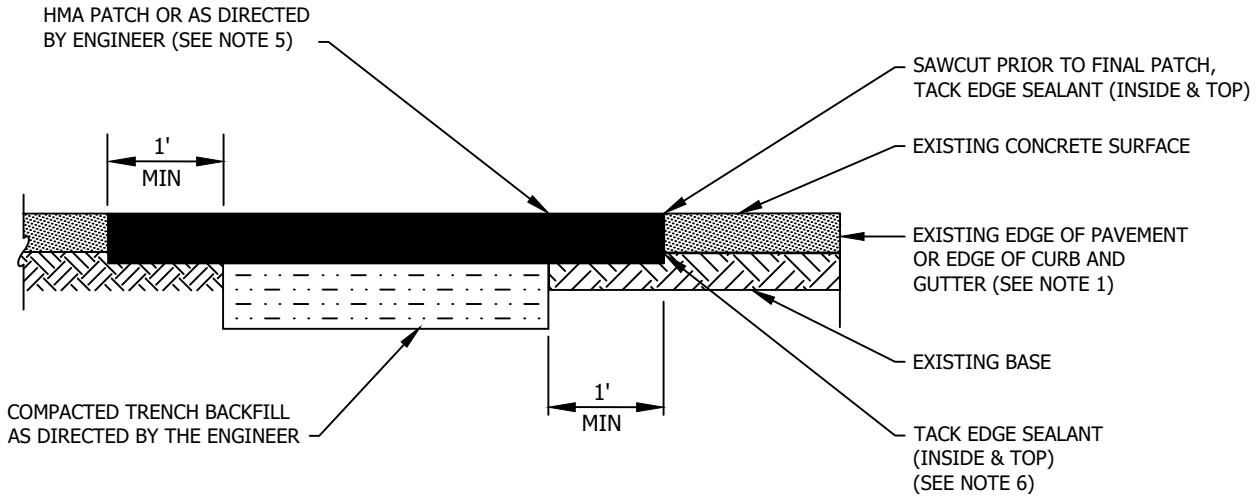
LAST REVISED: 01/2020



LESS THAN FULL WIDTH OVERLAY

CITY OF KIRKLAND	
PLAN NO. CK- R.07	
CITY OF KIRKLAND WASHINGTON	SECTION OF LONGITUDINAL OR TRANSVERSE CUT

LAST REVISED: 01/2020

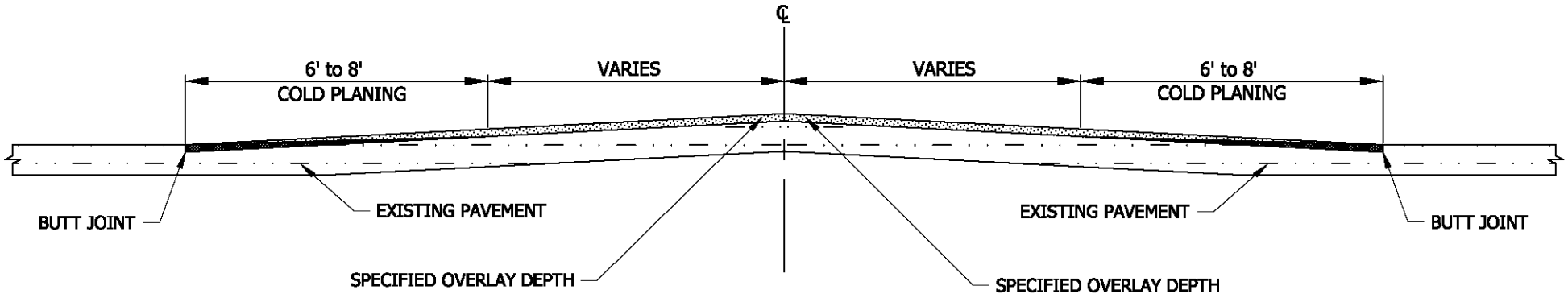


TYPICAL PATCH FOR PAVEMENT

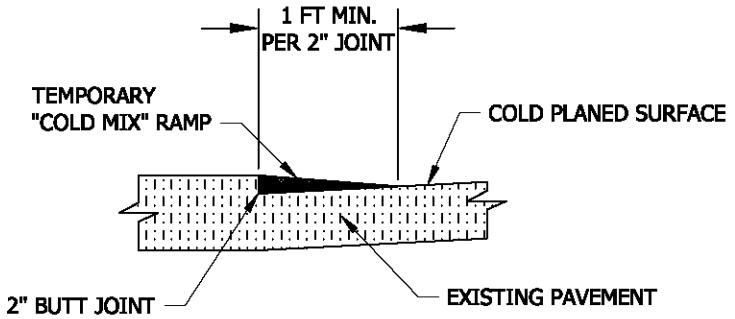
NOTES:

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.

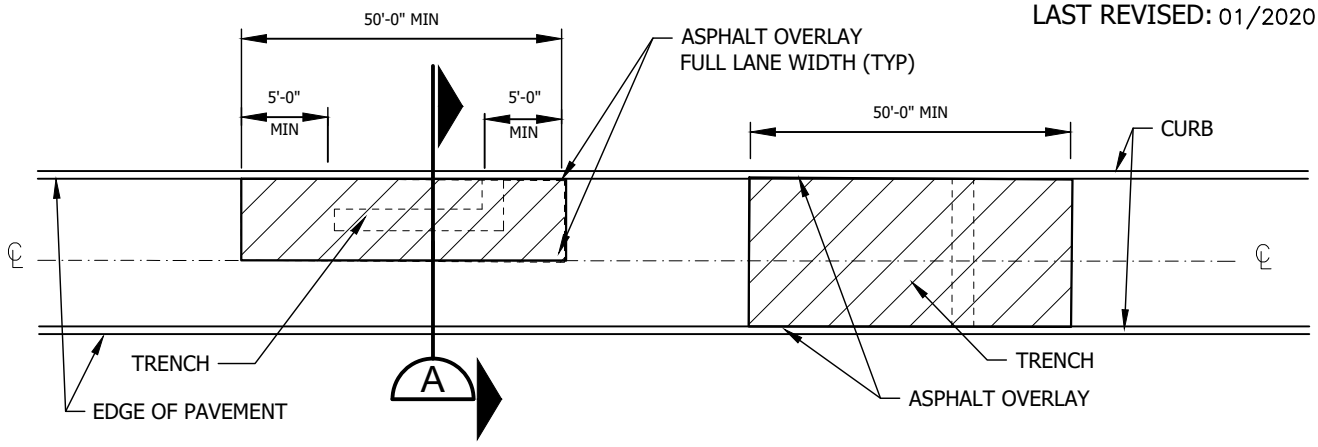
CITY OF KIRKLAND

PLAN NO. CK-R.13

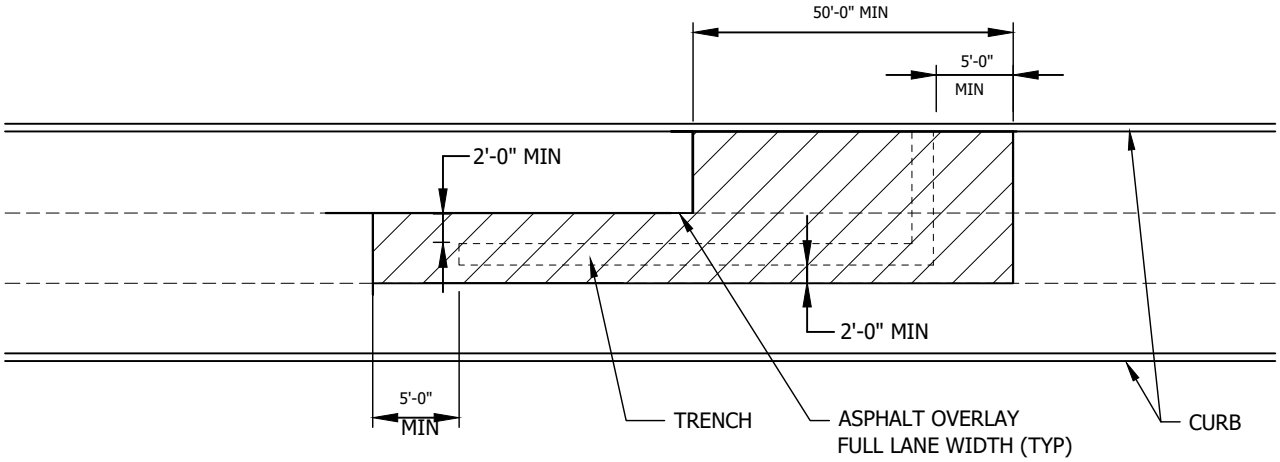
BUTT JOINT, COLD PLANING AND COLD MIX RAMP

LAST REVISED:1/2019

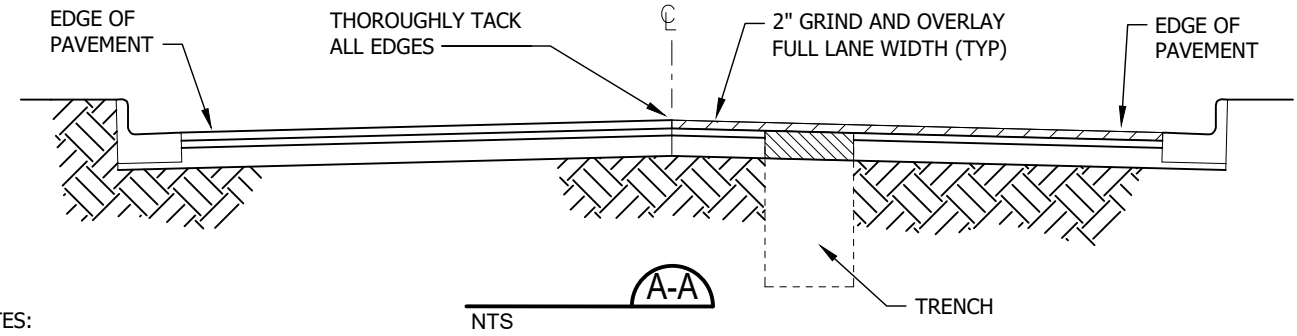
LAST REVISED: 01/2020



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.

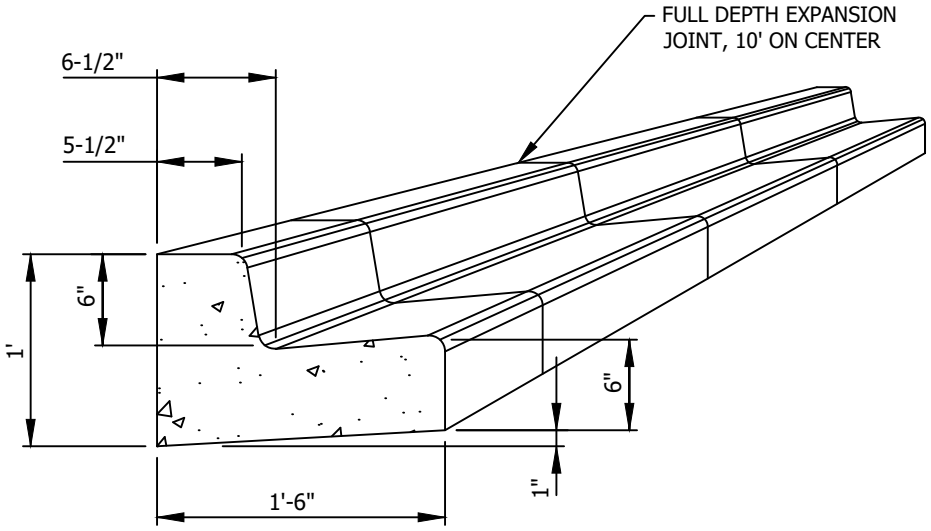
CITY OF KIRKLAND

PLAN NO. CK- R.13A

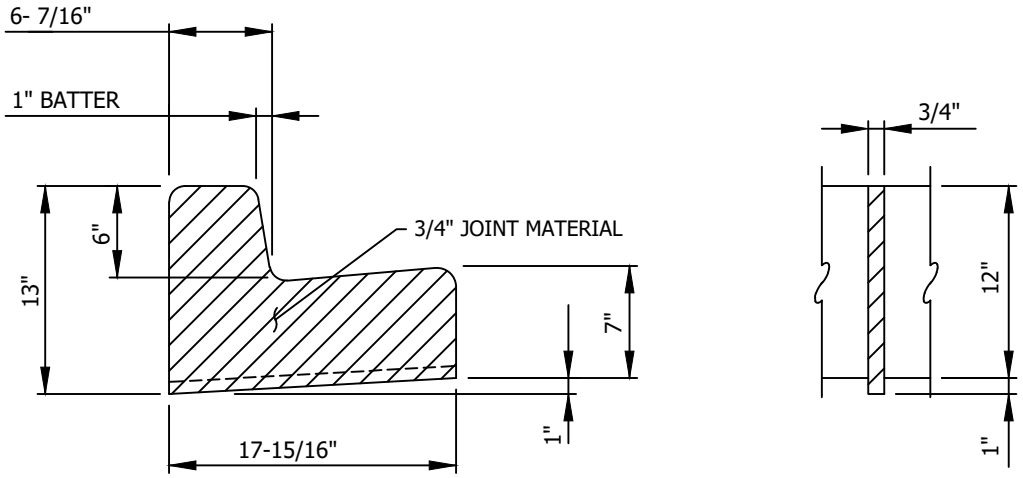
CITY OF KIRKLAND WASHINGTON

ASPHALT OVERLAY FOR ROADWAY TRENCH REPAIR

LAST REVISED:01/2023



TYPICAL SECTION FOR CURB & GUTTER, TYPE A



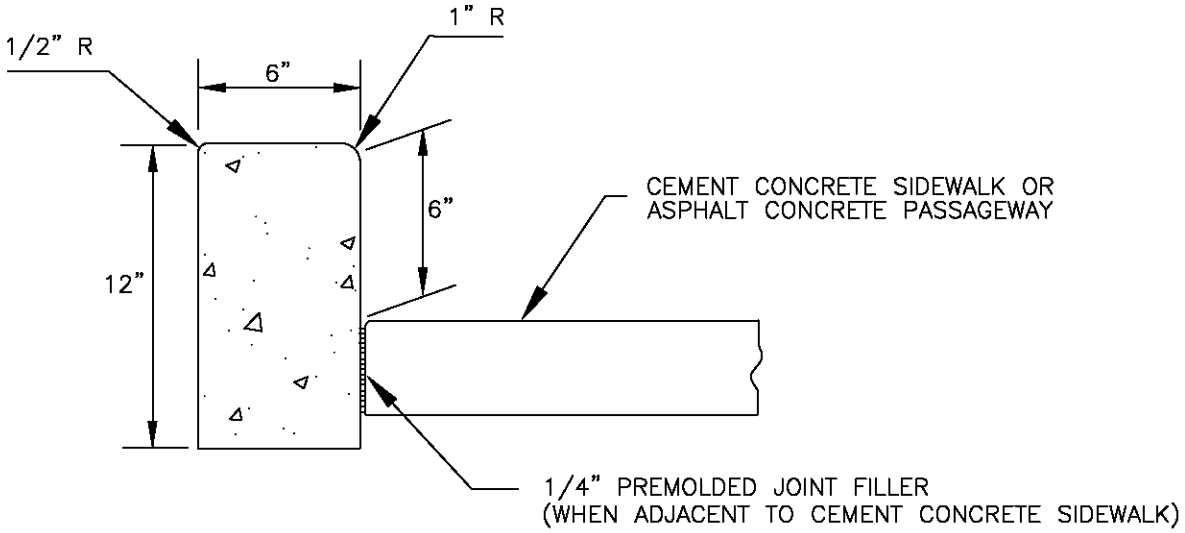
JOINT DETAIL

NOTES:

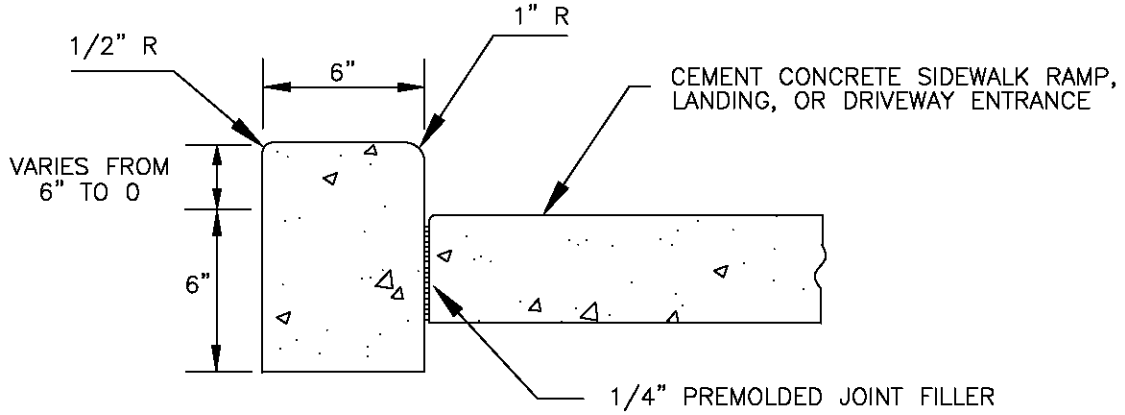
1. FORMS SHALL BE STEEL AND SET TRUE TO LINE AND GRADE (INSPECTION IS REQUIRED PRIOR TO PLACEMENT OF CONCRETE) UNLESS SPECIFIED DIFFERENTLY BY CITY PROJECT ENGINEER.
2. CONCRETE SHALL BE CEMENT CONCRETE CLASS 4000.
3. BASE COURSE SHALL BE 4" OF 5/8" MINUS CRUSHED ROCK.
4. SURVEY REQUIRED FOR CURB ALIGNMENT.

CITY OF KIRKLAND	
PLAN NO. CK–R.17	
CITY OF KIRKLAND WASHINGTON	CONCRETE CURB AND GUTTER, TYPE "A"

LAST REVISED:02/12/10



CEMENT CONCRETE PEDESTRIAN CURB



CEMENT CONCRETE PEDESTRIAN CURB

AT SIDEWALK RAMPS & LANDINGS, AND DRIVEWAY ENTRANCES

NOTES

1. FORMS SHALL BE STEEL AND SET TRUE TO LINE AND GRADE (INSPECTION REQUIRED PRIOR TO PLACEMENT OF CONCRETE).
2. CONCRETE SHALL BE CEMENT CONCRETE CLASS 4000.
3. BASE COURSE SHALL BE 4" OF 5/8" MINUS CRUSHED ROCK.
4. SEE CK-R.17 FOR CURB EXPANSION AND CONTRACTION JOINT SPACING.

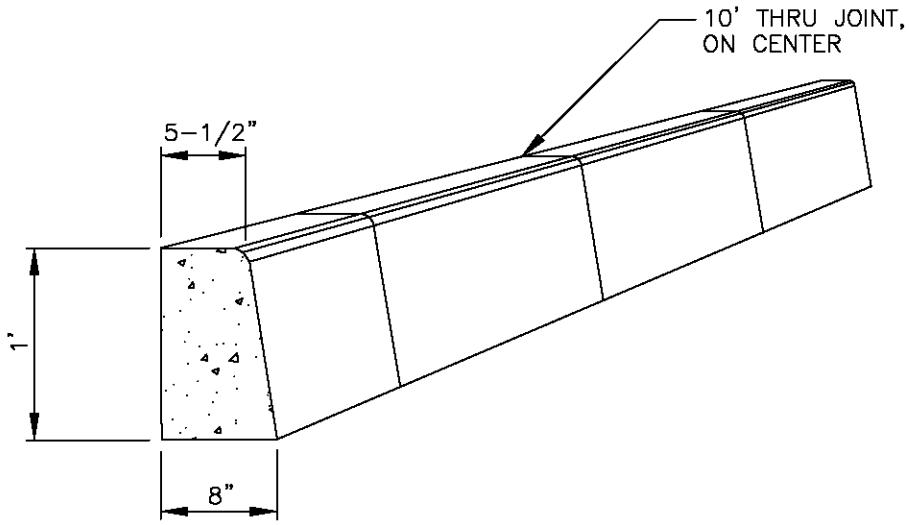
CITY OF KIRKLAND

PLAN NO. CK-R.17A

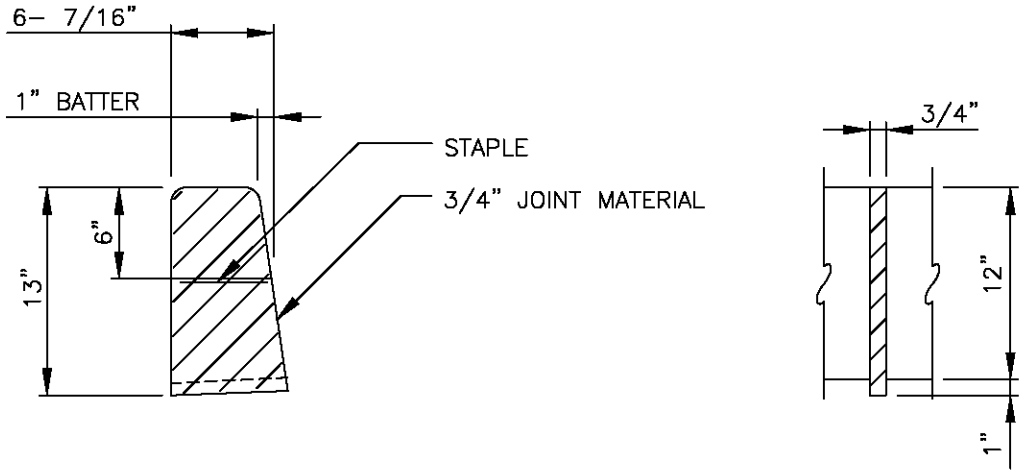
CITY OF KIRKLAND WASHINGTON

CEMENT CONCRETE PEDESTRIAN CURB

LAST REVISED:01/10/2011



TYPICAL SECTION FOR VERTICAL CURB



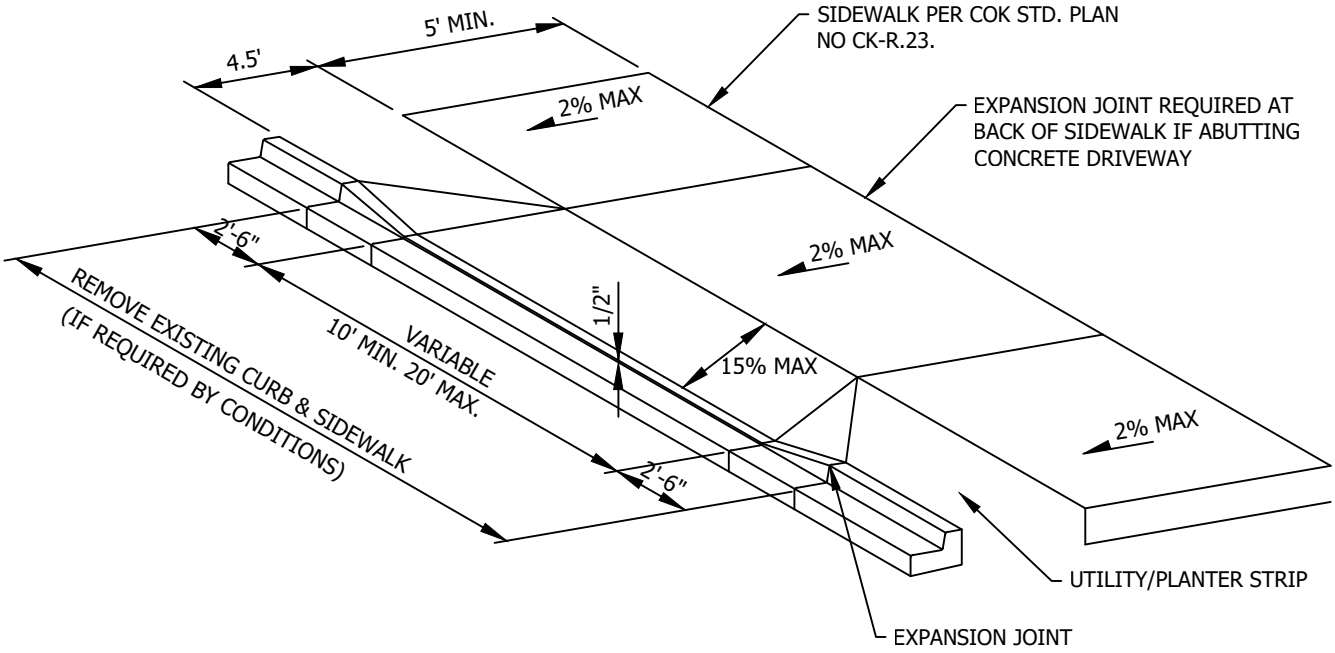
JOINT DETAIL

NOTES

1. FORMS SHALL BE STEEL AND SET TRUE TO LINE AND GRADE (INSPECTION IS REQUIRED PRIOR TO PLACEMENT OF CONCRETE).
2. CONCRETE SHALL BE CEMENT CONCRETE CLASS 4000.
3. BASE COURSE SHALL BE 4" OF 5/8" MINUS CRUSHED ROCK.
4. INSTALLATION OF THIS TYPE OF CURB MUST HAVE PRIOR APPROVAL.

CITY OF KIRKLAND	
PLAN NO. CK-R.17C	
CITY OF KIRKLAND WASHINGTON	CONCRETE VERTICAL CURB

LAST REVISED:01/2022



SINGLE FAMILY DRIVEWAY WITH PLANTER STRIP

NOTES:

1. ALL DRIVEWAYS AND WHEEL CHAIR RAMPS MUST BE DESIGNED TO MEET ADA STANDARDS. USE WSDOT STANDARD PLANS FOR LAYOUTS NOT SHOWN ON THIS PLAN WITH CLASS 4,000PSI CONCRETE FOR ALL STANDARD PLANS.

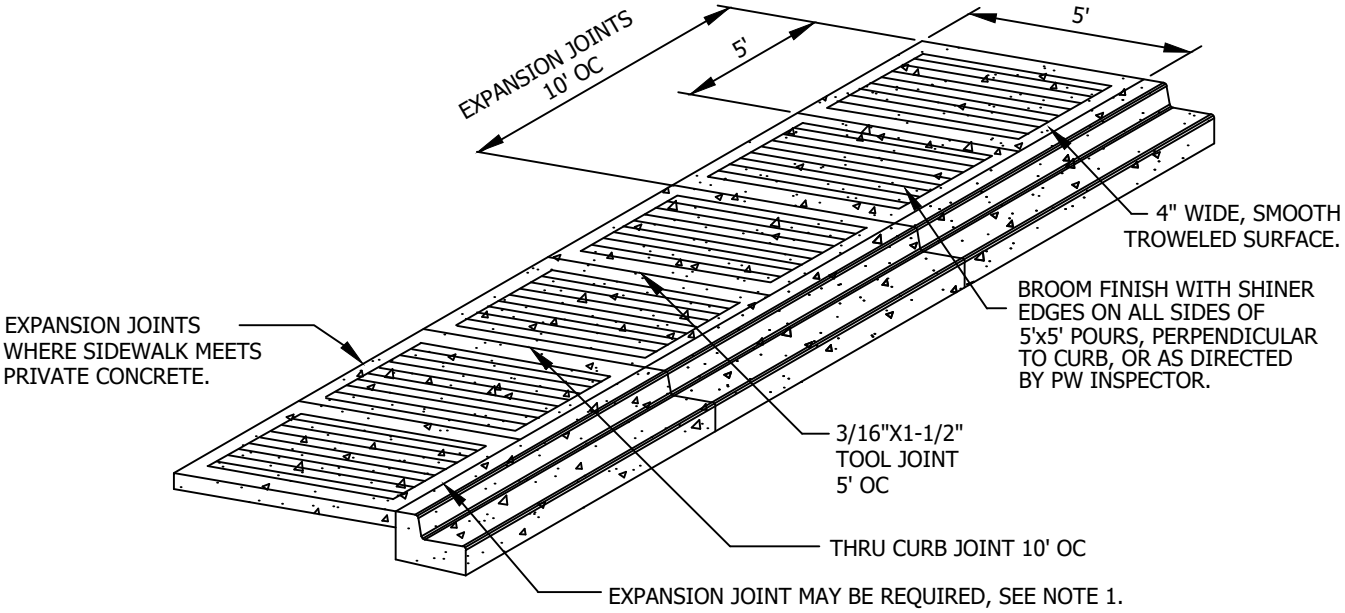
   WWW.WSDOT.WA.GOV/DESIGN/STANDARDS/PLANS.HTM

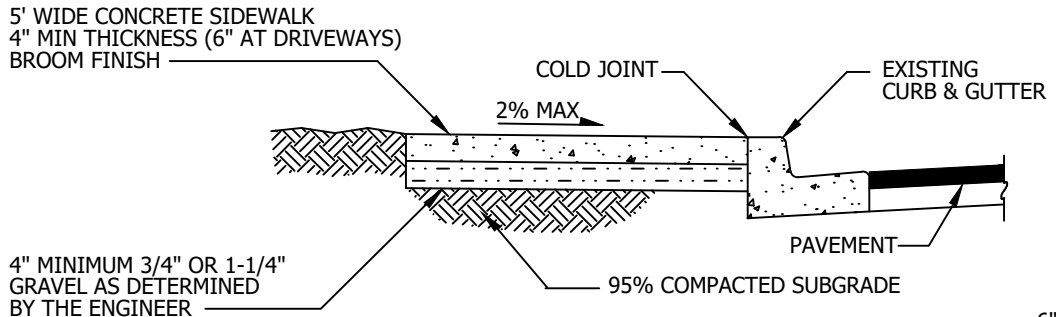
2. LANDING SHALL BE A MINIMUM OF 5' BY 5'.

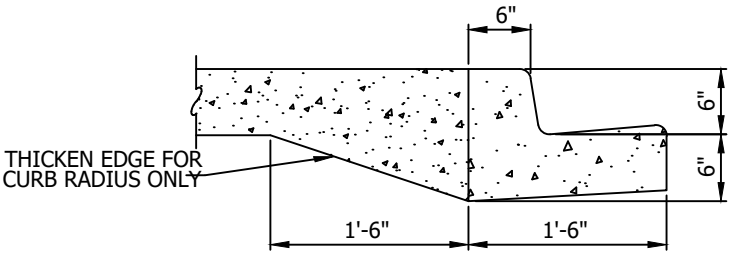
3. EXPANSION JOINT SPACING NOT TO EXCEED 10'.

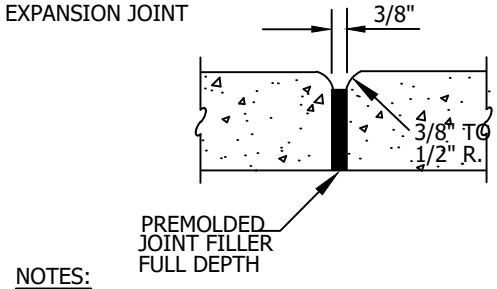
CITY OF KIRKLAND	
PLAN NO. CK–R.21	
CITY OF KIRKLAND WASHINGTON	DRIVEWAYS AND WHEEL CHAIR RAMPS

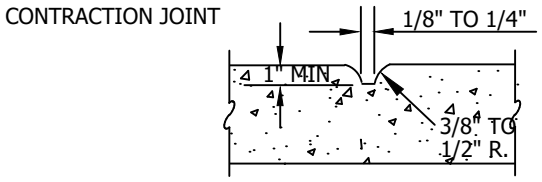
LAST REVISED: 1/1/18











NOTES:

1. SIDEWALK AND CURB & GUTTER CANNOT BE POURED MONOLITHICALLY. EXPANSION JOINT WILL BE REQUIRED WHEN CONCRETE SIDEWALK IS SURROUNDED BY OTHER HARD SURFACES (E.G., DRIVEWAY); OR AS DIRECTED BY PW INSPECTOR.
2. CONCRETE SHALL BE CEMENT CONCRETE CLASS 4000 PSI MINIMUM, WITH AIR ENTRAINMENT. NO COLOR OR TINT SHALL BE ADDED.
3. FORMS SHALL BE SET TRUE TO LINE AND GRADE AND SHALL BE STEEL UNLESS OTHERWISE APPROVED BY INSPECTOR.
4. SIDEWALK SHALL NOT BE POURED IN THE RAIN. SEE POLICY R-8, PLACING CONCRETE OR ASPHALT IN ADVERSE WEATHER CONDITIONS.

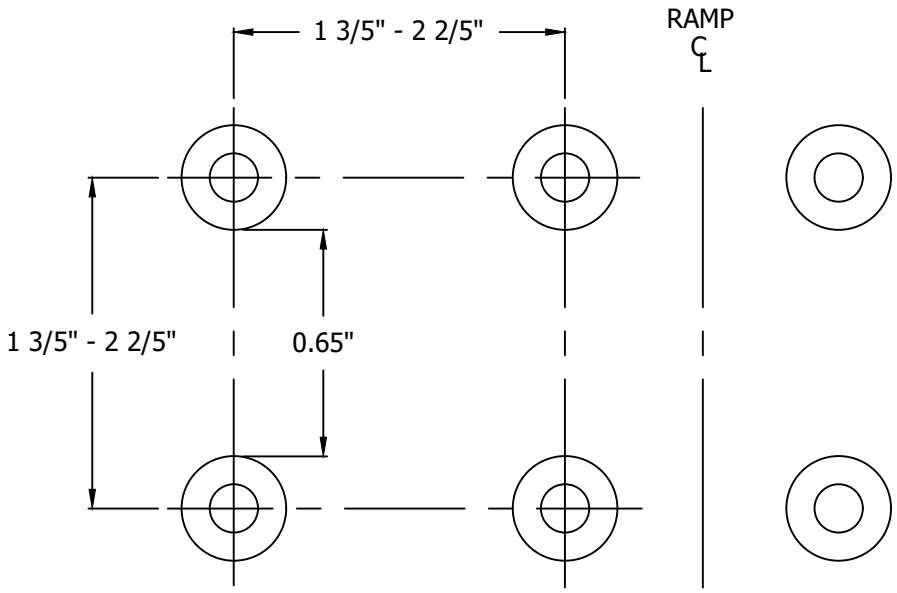
CITY OF KIRKLAND

PLAN NO. CK- R.23

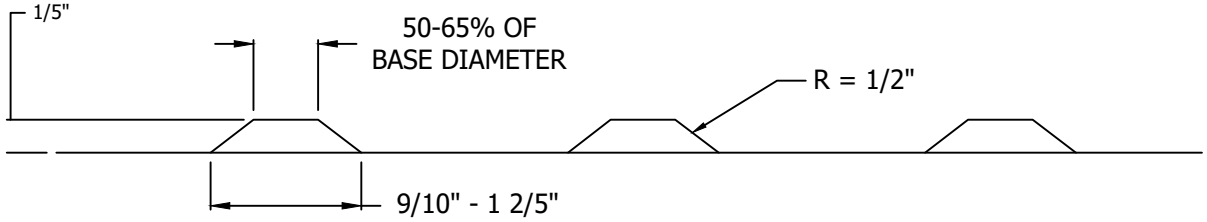
CITY OF KIRKLAND WASHINGTON

SIDEWALK SECTION

LAST REVISED: 01/2021



PLAN



ELEVATION

NOTE:

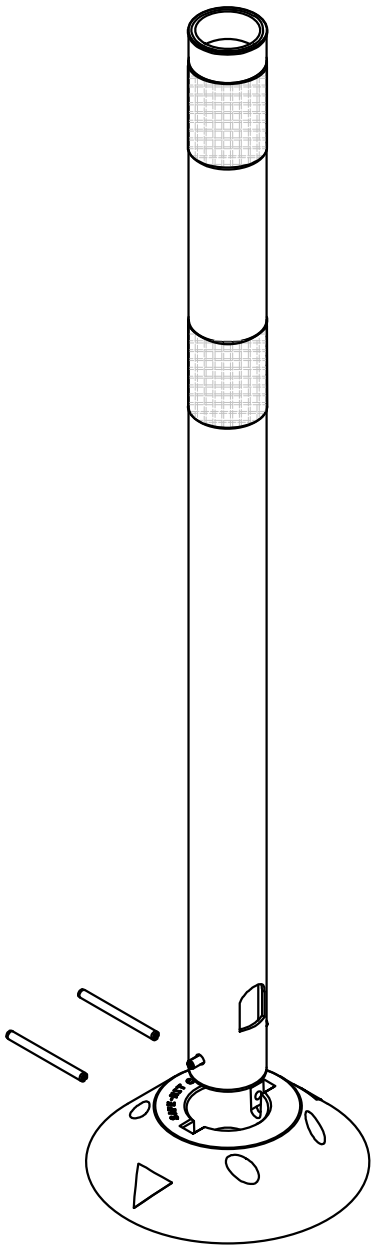
1. THE DETECTABLE WARNING PATTERN SHALL BE FORMED BY ADDING A MANUFACTURED MATERIAL BEFORE THE CONCRETE HAS CURED.
2. THE TWO-FOOT WIDE DETECTABLE WARNING PATTERN AREA ON THE RAMP SHALL BE YELLOW AND SHALL MATCH THE COLOR OF "STANDARD INTERSTATE YELLOW" PAINT AS SPECIFIED IN FORMULA K-2-83.
3. EMBOSSING THE WET CONCRETE OR INSTALLING MASONRY OF CERAMIC TILES MUST BE APPROVED BY CITY ENGINEER.

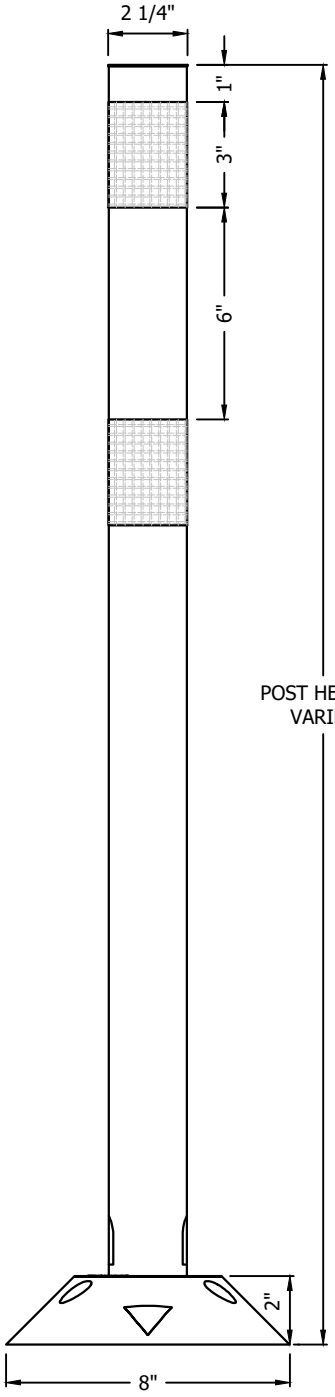
CITY OF KIRKLAND

PLAN NO. CK - R.25B

TRUNCATED DOME TEXTILE WARNING SURFACE

LAST REVISED: 07/2021





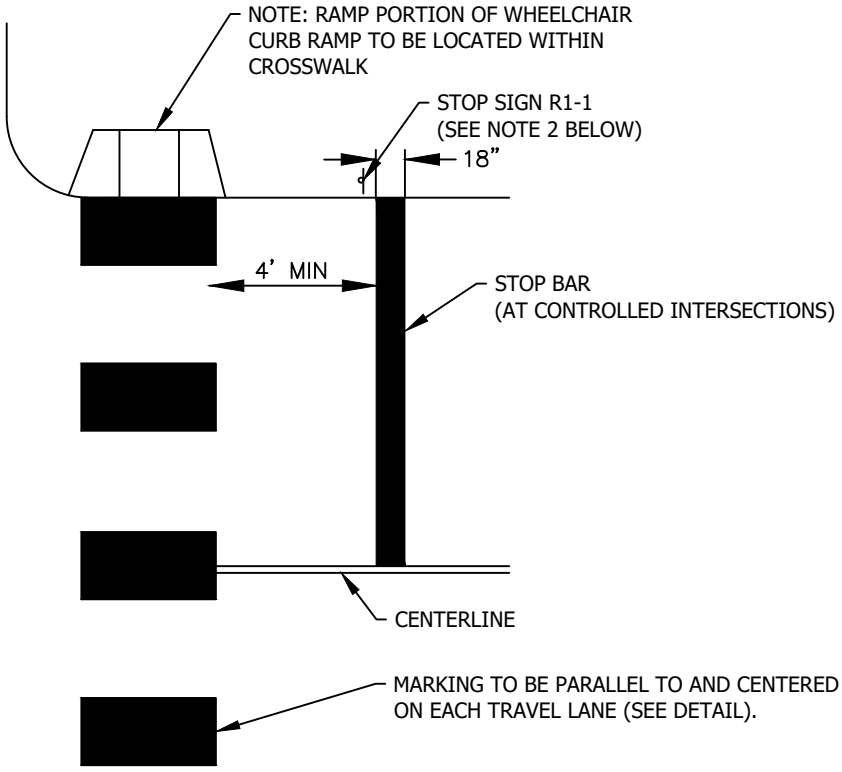
POST HEIGHT VARIES WITH TWO 3-INCH WIDE SILVER HIGH INTENSITY FLEXIBLE PRISMATIC REFLECTIVE BANDS, WITH BLACK PIN-LOCK SURFACE MOUNT BASE

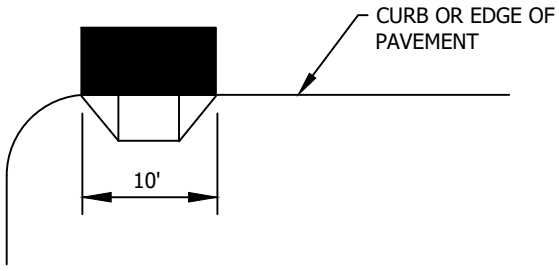
NOTES:

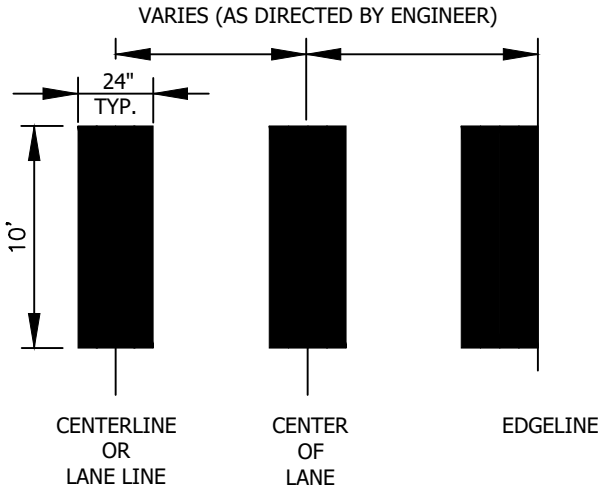
1. INSTALL ACCORDING TO MANUFACTURER'S SPECIFICATION.
2. USE ADHESIVE ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
3. COLOR AND HEIGHT ACCORDING TO ENGINEER'S SPECIFICATION

CITY OF KIRKLAND	
PLAN NO. CK - R.26	
CITY OF KIRKLAND WASHINGTON	TYPE 5 FLEXIBLE DELINEATOR SURFACE MOUNT

LAST REVISED:01/2020







DETAIL

NOTES:

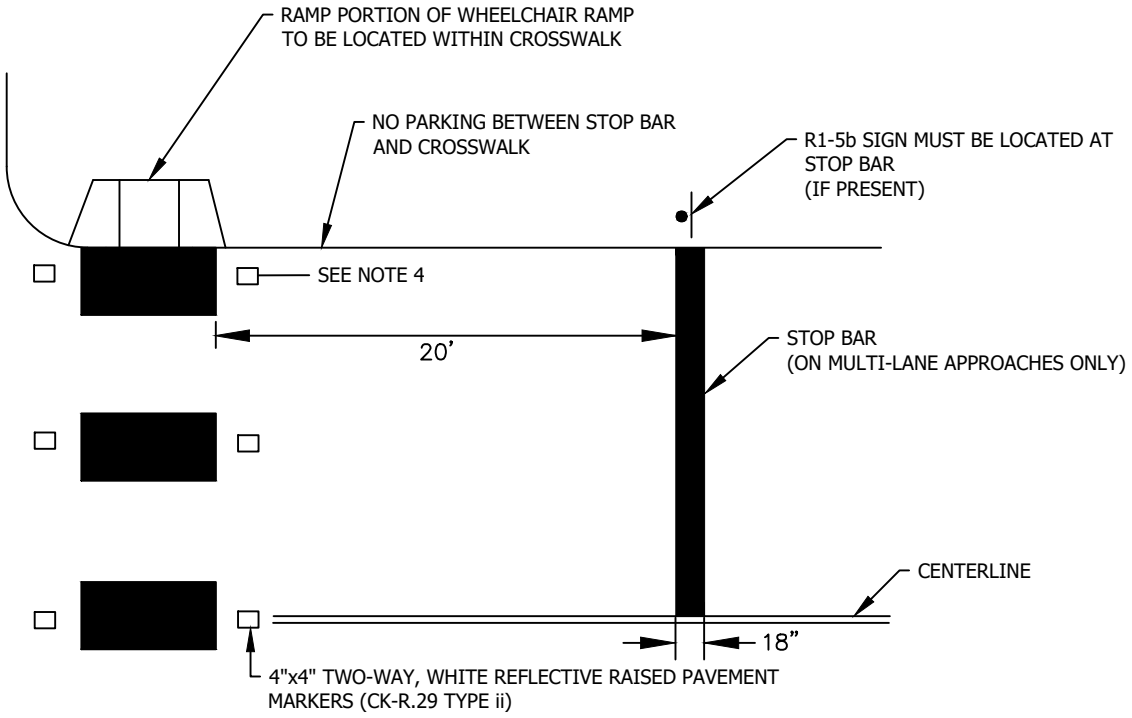
1. MARKINGS SHALL BE THERMOPLASTIC.
2. STOP SIGN LOCATION ADJACENT TO STOP BAR, OR AS DIRECTED BY ENGINEER

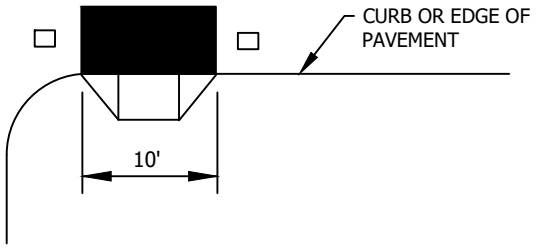
CITY OF KIRKLAND

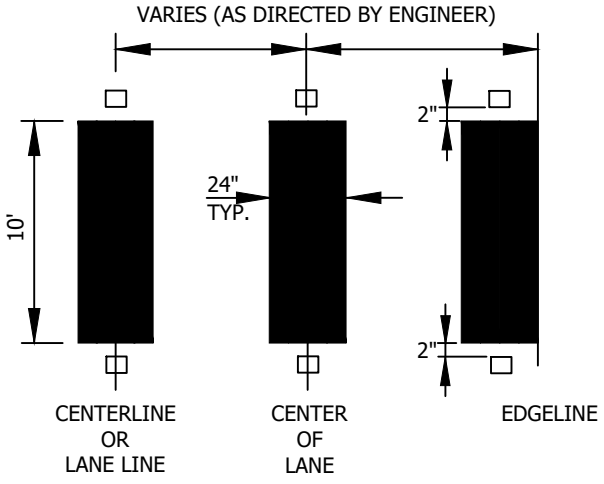
PLAN NO. CK–R.28

CROSSWALK AND STOP BAR DETAIL

LAST REVISED:01/2020







DETAIL

NOTES:

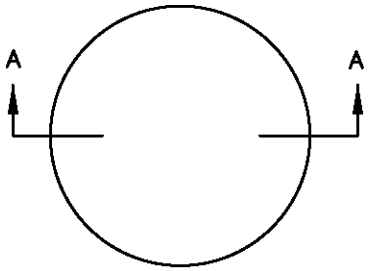
1. MARKINGS SHALL BE THERMOPLASTIC.
2. FOR TWO-WAY REFLECTIVE RAISED PAVEMENT MARKERS, SEE PLAN NO. CK-R.29 TYPE 2.
3. DO NOT PLACE RPM IN BIKE LANE OR ON EDGE LINES.

CITY OF KIRKLAND

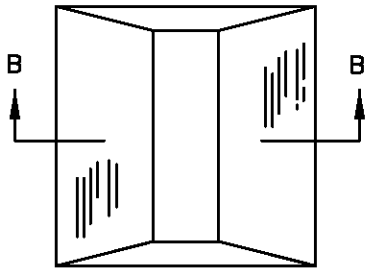
PLAN NO. CK–R.28A

CROSSWALK AND STOP BAR DETAIL FOR UNCONTROLLED APPROACHES

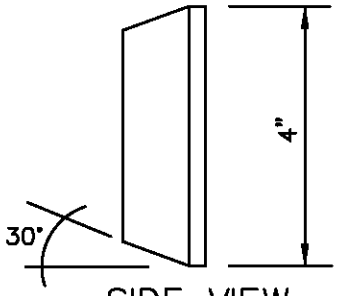
LAST REVISED: 11/30/99



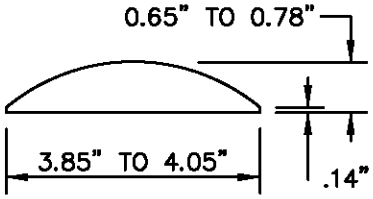
PLAN



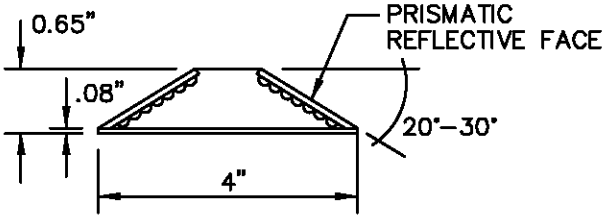
PLAN
DIRECTION OF TRAFFIC



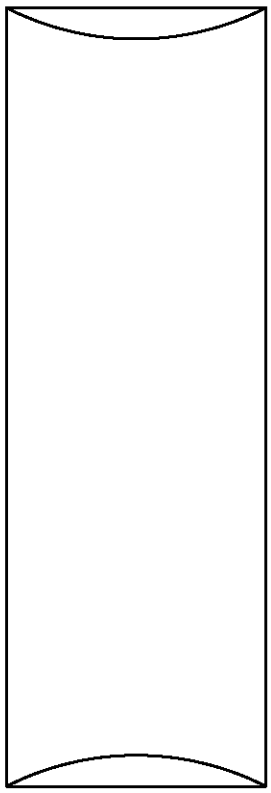
SIDE VIEW



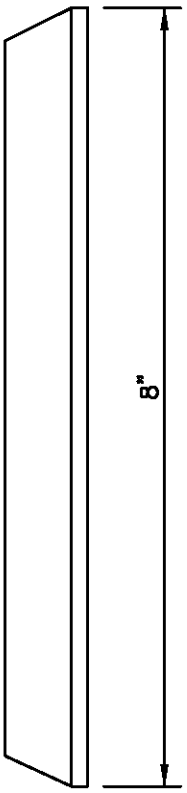
TYPE 1
SECTION A–A



TYPE 2
SECTION B–B



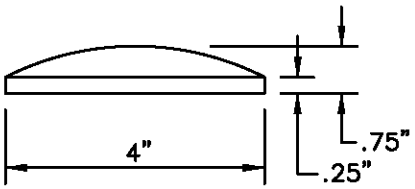
PLAN



SIDE VIEW

NOTES

1. TYPE C PAVEMENT MARKERS TO BE USED ONLY UPON APPROVAL BY TRAFFIC ENGINEER.
2. NOT TO BE USED ON EDGELINES.



TYPE C

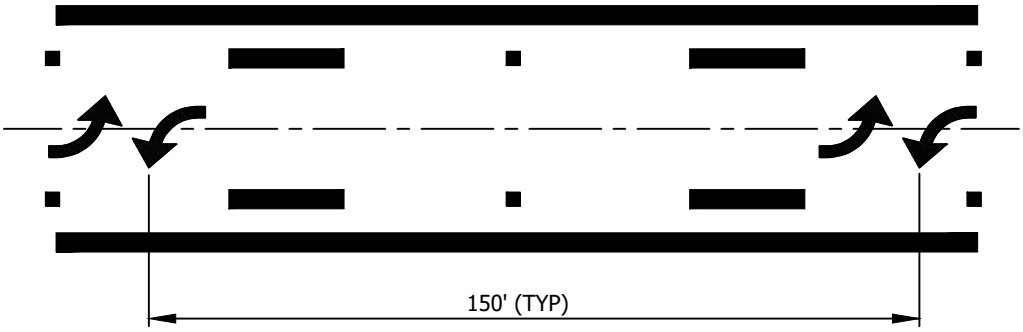
CITY OF KIRKLAND

PLAN NO. CK–R.29

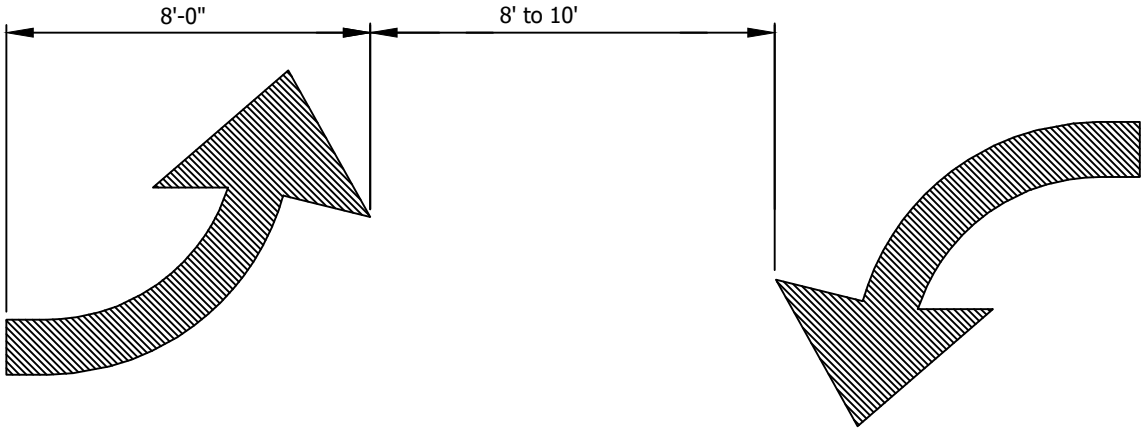
CITY OF KIRKLAND WASHINGTON

LANE MARKERS
(DIMENSIONS)

LAST REVISED: 1/1/18



TWO-WAY LEFT TURN MARKERS



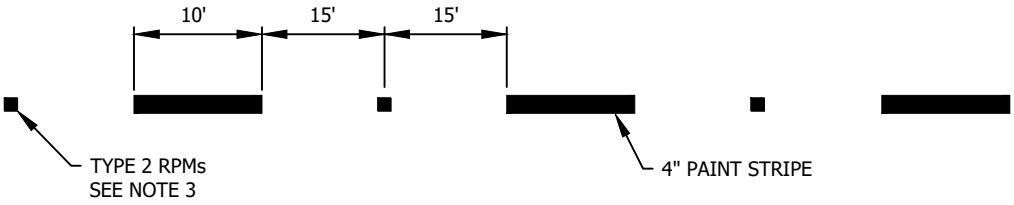
TYPICAL ARROW

NOTES

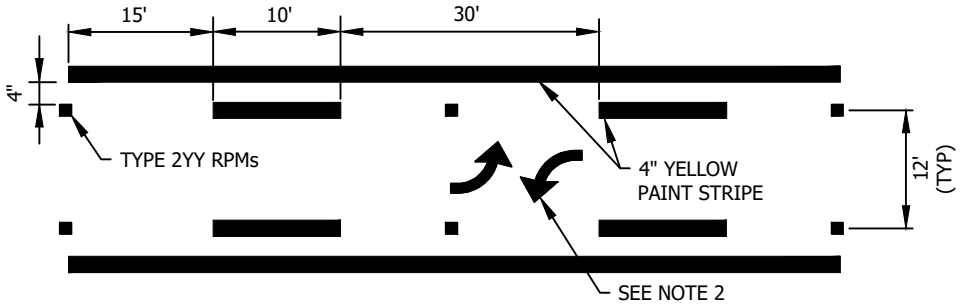
1. THERMOPLASTIC REQUIRED

CITY OF KIRKLAND	
PLAN NO. CK- R.30	
CITY OF KIRKLAND WASHINGTON	TWO-WAY LEFT TURN LANE AND TYPICAL ARROW

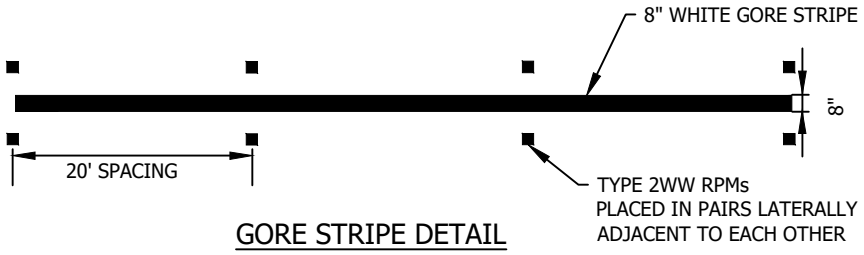
LAST REVISED:01/2023



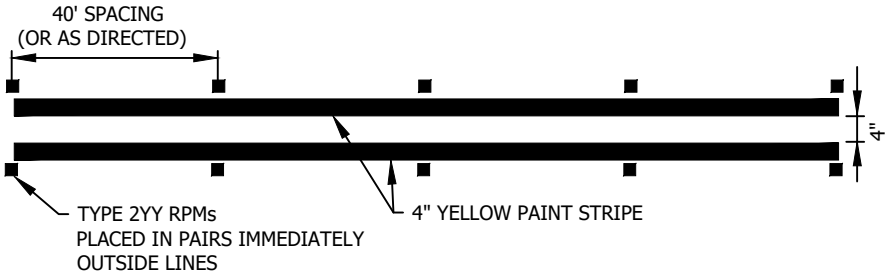
SKIP CENTER & LANE STRIPE DETAIL



TWO-WAY LEFT TURN DETAIL



GORE STRIPE DETAIL



DOUBLE YELLOW CENTER DETAIL

NOTES:

1. MATCH EXISTING PAVEMENT MARKING DIMENSIONS.
2. SEE CK-R.30 FOR TWO-WAY LEFT TURN ARROW PLACEMENT.
3. RAISED PAVEMENT MARKER BODY AND LENS COLOR SHALL CONFORM TO THE COLOR OF THE MARKING FOR WHICH THEY SUPPLEMENT, SUBSTITUTE FOR, OR SERVE AS A POSITIONING GUIDE FOR.

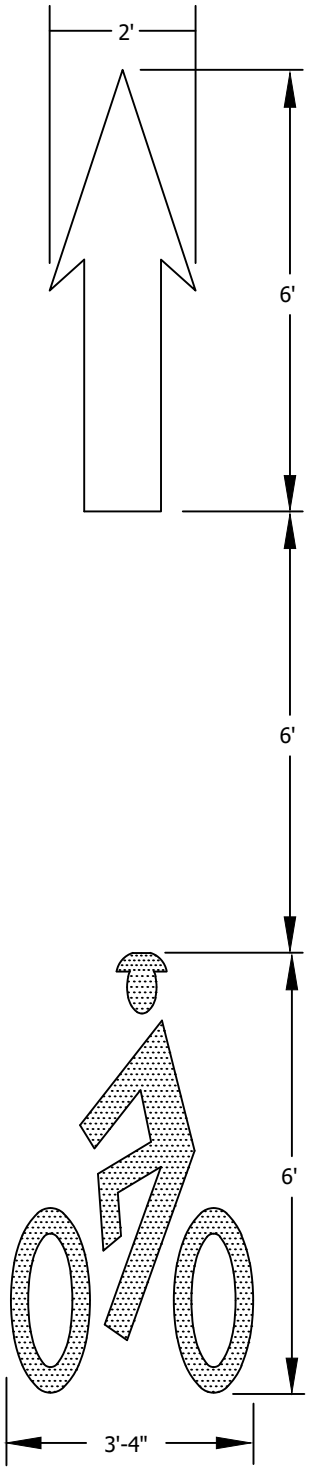
CITY OF KIRKLAND

PLAN NO. CK–R.31

CITY OF KIRKLAND WASHINGTON

PAVEMENT MARKING DETAIL

LAST REVISED: 2/3/2017



NOTES:

1. BIKE LANE SYMBOLS AND ARROW MATERIAL SHALL BE 90 MILL, PREFORMED, SKID RESISTANT THERMOPLASTIC.
2. BICYCLE SYMBOL FACES ROADWAY CENTERLINE.

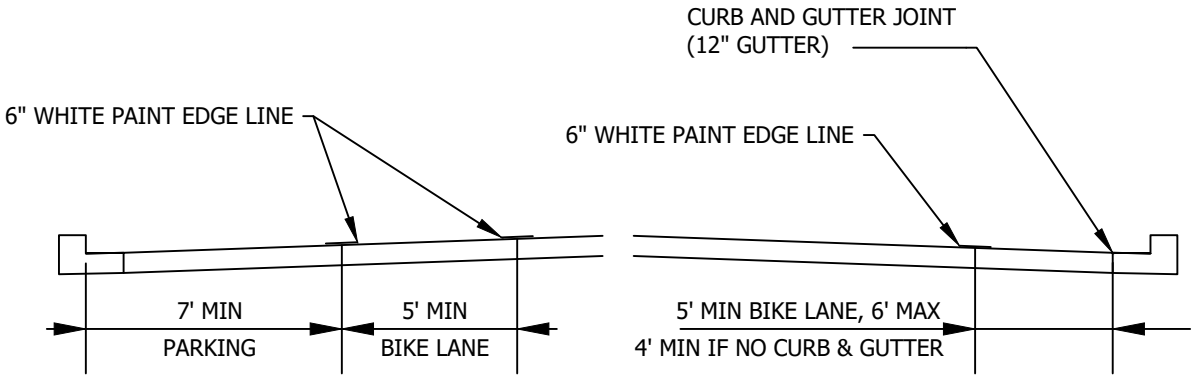
CITY OF KIRKLAND

PLAN NO. CK–R.34

CITY OF KIRKLAND WASHINGTON

BICYCLE LANE MARKINGS

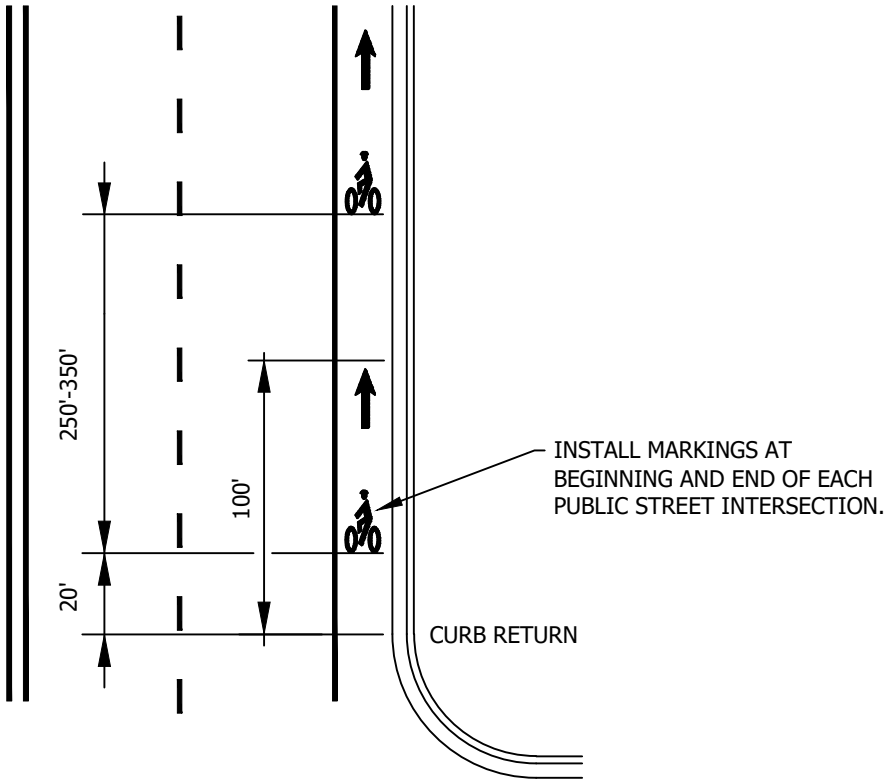
LAST REVISED: 1/2023



(MEASURED TO EDGE OF GUTTER OR CENTER OF PAINT STRIPE)

BICYCLE LANE WITH PARKING

BICYCLE LANE WITHOUT PARKING



NOTES:

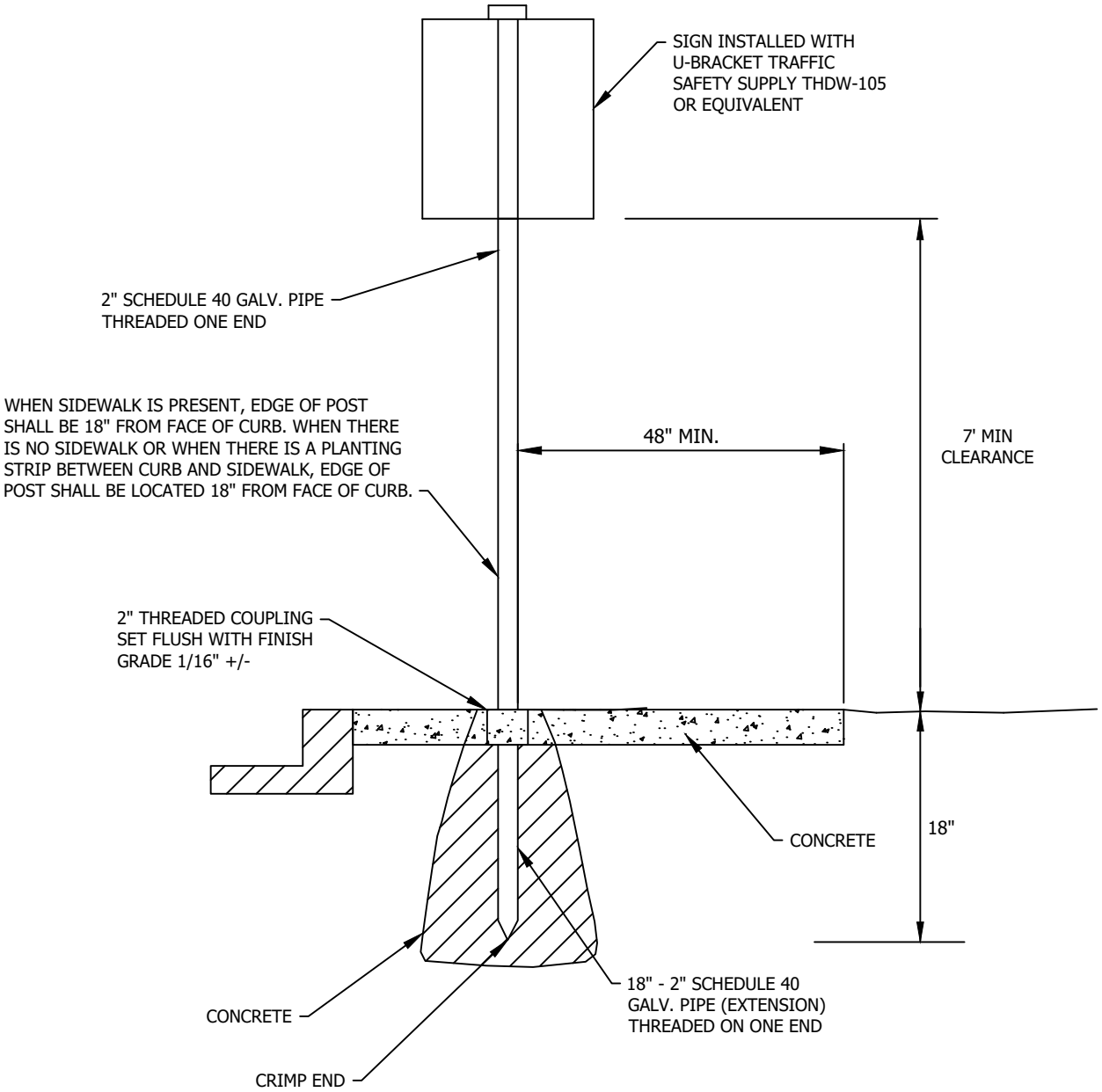
1. SEE MUTCD FOR MORE INFORMATION AND SPECIFICATIONS.
2. PER SEC. 9B.04 2009 MUTCD, DO NOT USE R3-17 SIGNS.
3. BICYCLIST AND PEDESTRIAN SYMBOLS PER CK-R.34B
4. 4' BIKE LANE WIDTH MAY BE CONSIDERED IN CONSTRAINED LOCATIONS.

CITY OF KIRKLAND

PLAN NO. CK- R.35

TYPICAL BICYCLE LANE - WIDTH, SIGNING & MARKING

LAST REVISED:01/2024



NOTES:

1. IF SIGN MUST BE PLACED IN EXISTING CONCRETE, CORE HOLE SHALL BE 8" DIAMETER.
2. S1-1 SIGNS SHALL BE BLACK ON FLUORESCENT GREEN.
3. W11-2 SIGNS SHALL BE BLACK ON YELLOW.
4. ALL SIGNS SHALL HAVE ANTI-GRAFFITI COATING. SEE CONTACT SPECIAL PROVISIONS FOR MORE INFORMATION.

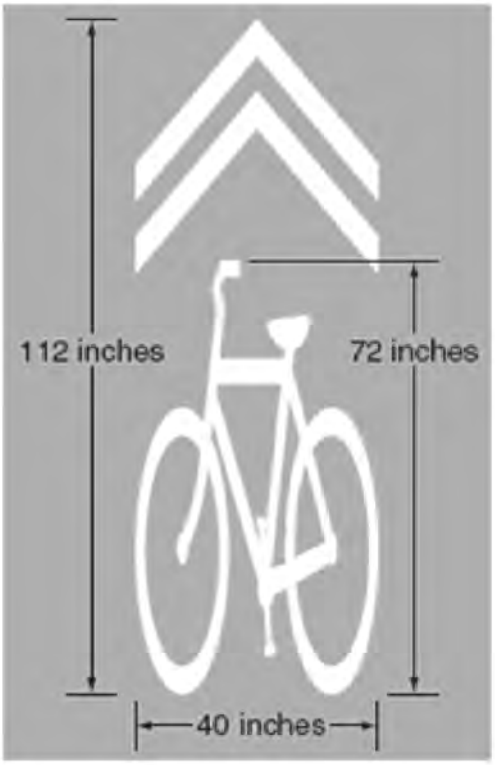
CITY OF KIRKLAND

PLAN NO. CK–R.43

CITY OF KIRKLAND WASHINGTON

STANDARD SIGN INSTALLATION

LAST REVISED: 01/18/2018



SHARED LANE MARKING DETAIL

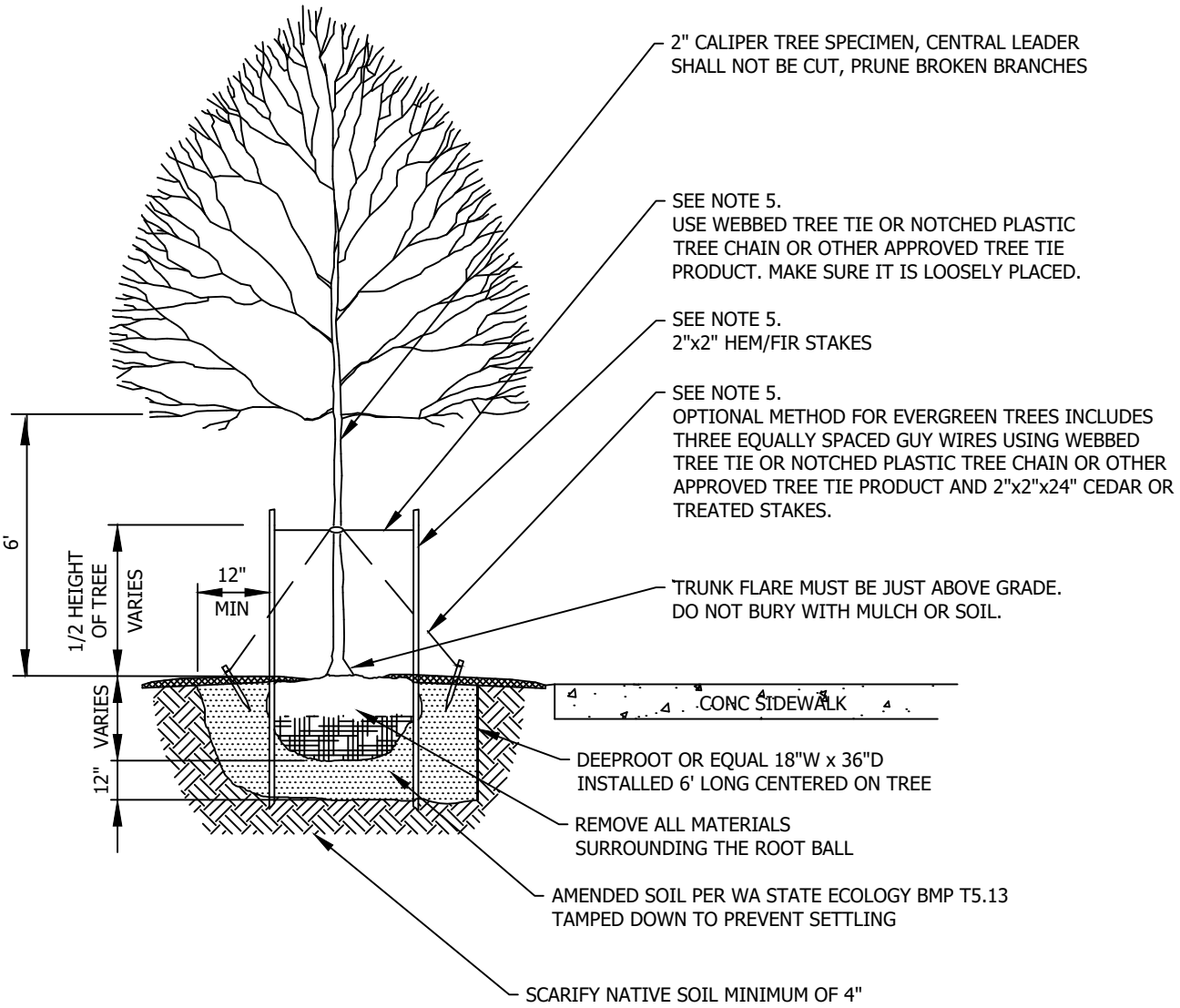
NOT TO SCALE

NOTES:

1. PLACE MARKING IN CENTER OF TRAVELED WAY, EVERY 250'-350'.
2. SEE SECTION 9C.07, 2009 MUTCD FOR MORE GUIDANCE.
3. SHARED LANE MARKING MATERIAL SHALL BE 90 MILL, PREFORMED, SKID RESISTANT THERMOPLASTIC.

CITY OF KIRKLAND	
PLAN NO. CK- R.46	
CITY OF KIRKLAND WASHINGTON	SHARED LANE MARKING

LAST REVISED: 01/2020



NOTES:

1. SIZE OF PLANTING PIT SHALL BE 4' BY 6' BY 3' DEEP.
2. FOR DECIDUOUS TREES, 2" CALIPER MINIMUM AND BRANCHING STARTS 5' ABOVE GRADE (UNLESS OTHER APPROVED BY CITY.)
3. FOR PLANTING DISTANCES NEAR INTERSECTIONS AND DRIVEWAYS, REFER TO PRE-APPROVED PLANS NOTEBOOK.
4. TREES SHALL NOT BE PLANTED WITHIN 10' OF ANY UG UTILITY ACCESS WHICH MAY BE LOCATED IN THE PLANTER STRIP OR ADJACENT SIDEWALK.
5. STAKE ONLY WHEN NECESSARY OR IF REQUIRED BY THE CITY AND INCLUDE TIMELINE FOR REMOVAL OF STAKES AND TIES.
6. ROOT BARRIER TO BE DEEPROOT (OR APPROVED EQUAL 18" BY 36" BY 6' LONG INSTALLED ON BOTH CURB AND SIDEWALK SIDE.

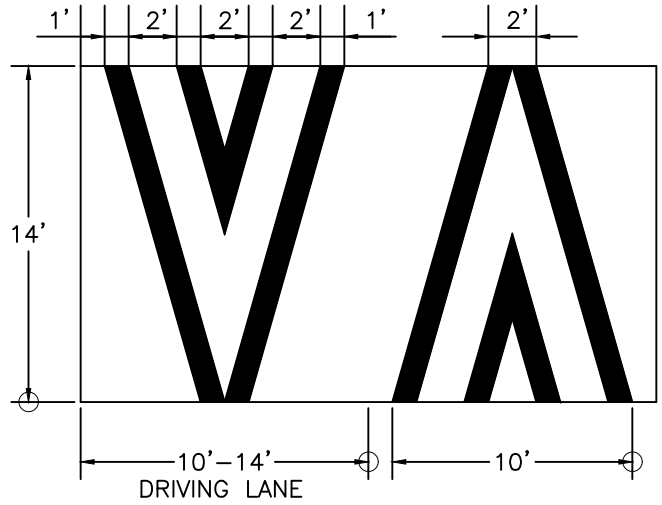
CITY OF KIRKLAND

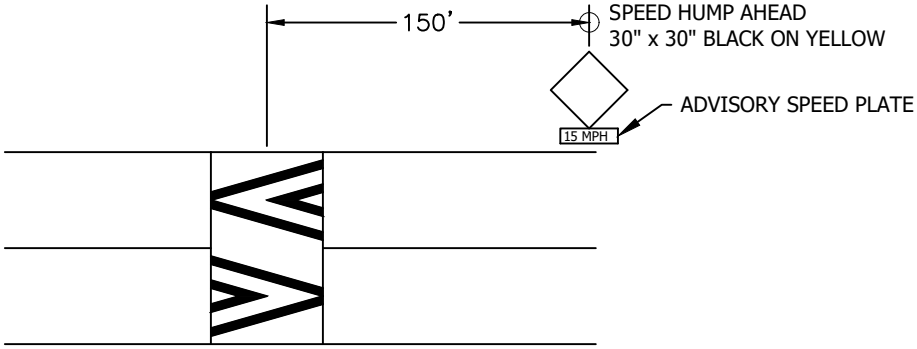
PLAN NO. CK–R.48

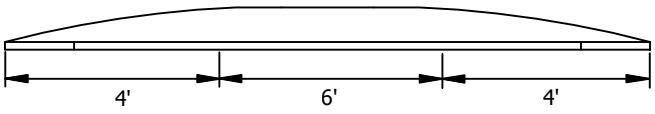
CITY OF KIRKLAND WASHINGTON

TREE PLANTING DETAIL

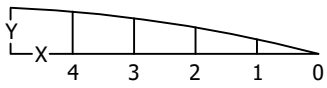
LAST REVISED:01/2022







SLOTTED SPEED HUMP SECTION
NO SCALE



X (ft)	Y (in)
0	0.00
1	1.50
2	2.25
3	2.75
4	3.00

VERTICAL DIMENSION CHART
NO SCALE

NOTES:

1. CHEVRON MARKINGS TO BE WHITE 3M PREFORMED COLD PLASTIC.
2. SIGN LOCATION SHALL BE VERIFIED BY THE PROJECT ENGINEER PRIOR TO INSTALLATION.

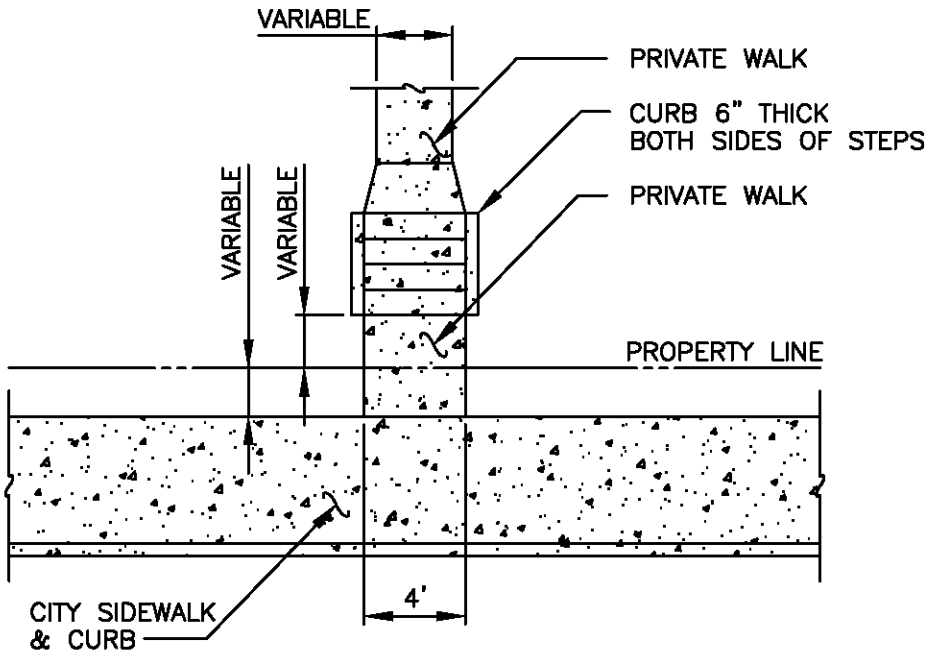
CITY OF KIRKLAND

PLAN NO. CK–R.67

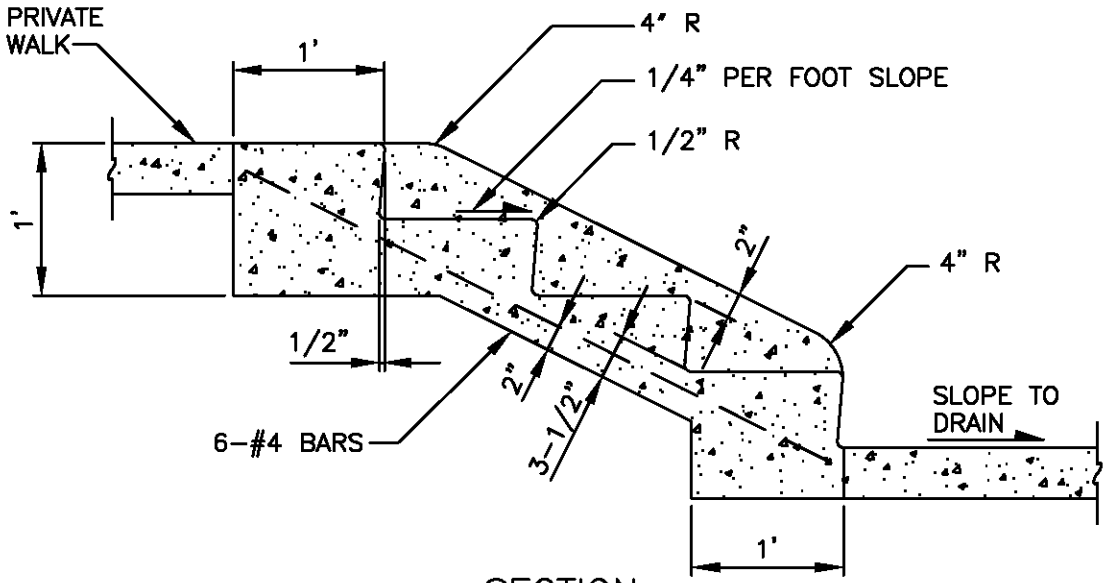
CITY OF KIRKLAND WASHINGTON

SPEED HUMP MARKING AND SIGNAGE

LAST REVISED: 11/30/99



PLAN



SECTION

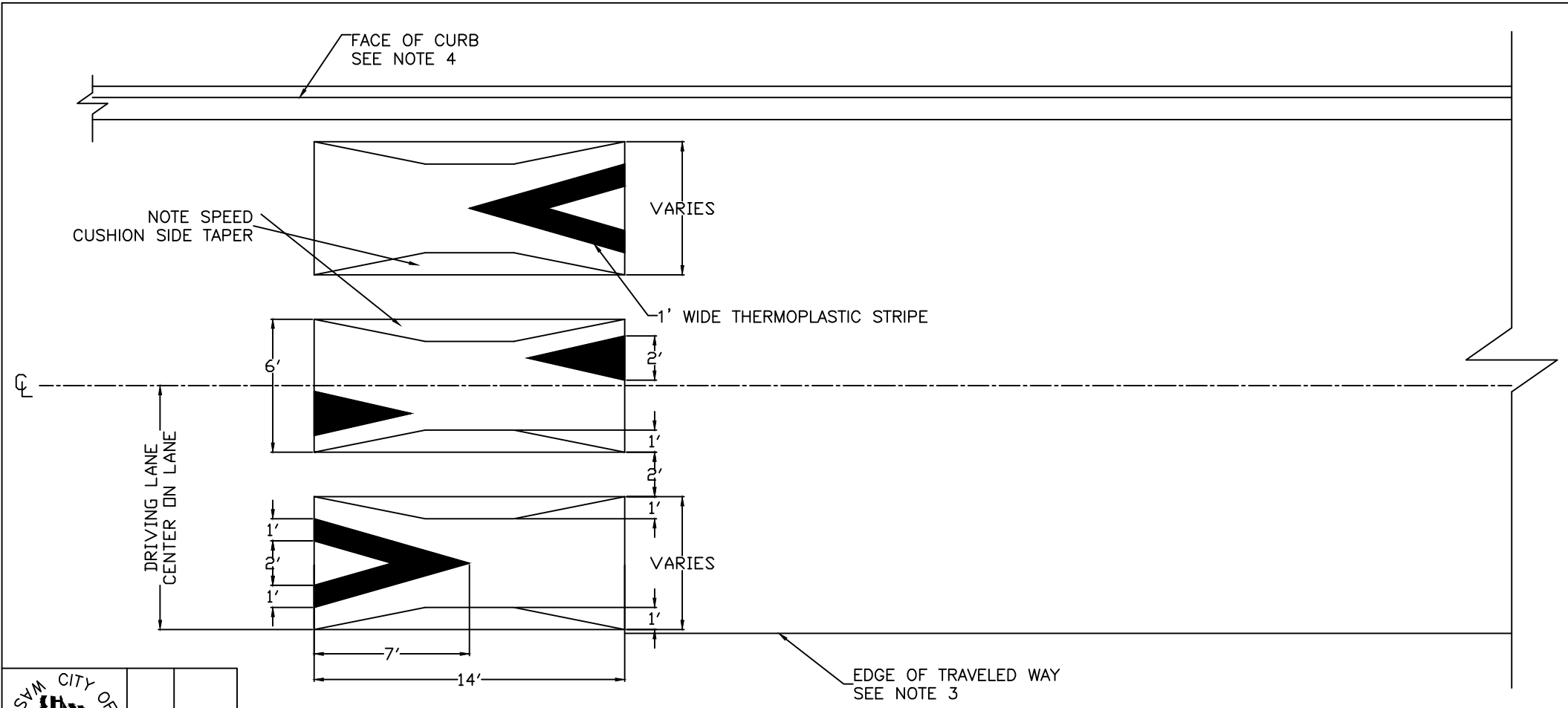
NOTES

1. STEPS SHALL BE 4'-0" WIDE, CURB TO CURB, PLUS 6" CURBS ON EACH SIDE.
2. CEMENT CONCRETE SHALL BE CLASS 4000 TROWEL FINISH.
3. NUMBER OF STEPS SHALL SUIT INDIVIDUAL CONDITIONS, WITH TREAD AND RISER DIMENSIONS TO SUIT THE GRADE.
4. RISERS SHALL BE 5" MINIMUM, 7" MAXIMUM: TREAD SHALL BE 11" MINIMUM, 12" MAXIMUM.
5. HANDRAIL REQUIRED ON BOTH SIDES PER BUILDING CODE STANDARDS.

CITY OF KIRKLAND

PLAN NO. CK-R.57

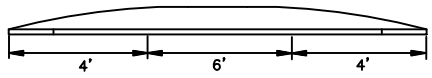
CEMENT CONCRETE STEPS



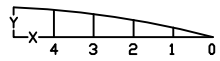
SPEED CUSHION

NO SCALE

MARKING, LAYOUT, AND EDGE DETAIL



SPEED CUSHION SECTION
NO SCALE



X (ft)	Y (in)
0	0.00
1	1.50
2	2.25
3	2.75
4	3.00

VERTICAL DIMENSION CHART
NO SCALE

NOTES:

1. PAVEMENT MARKINGS TYPICAL IN BOTH DIRECTIONS OF TRAVEL
2. ALL SPEED CUSHION MARKINGS SHALL BE PLASTIC
3. WHEN PLACED ON ROADWAY WITH NO CURB AND GUTTER, EDGE OF SPEED CUSHION EXTENDS TO EDGE OF TRAVEL WAY
4. WHEN PLACED ON ROADWAY WITH CURB AND GUTTER, EDGE OF SPEED CUSHION TO BE PLACED 2' FROM FACE OF CURB.
5. NOTE SIDE TAPER ON SPEED CUSHION.

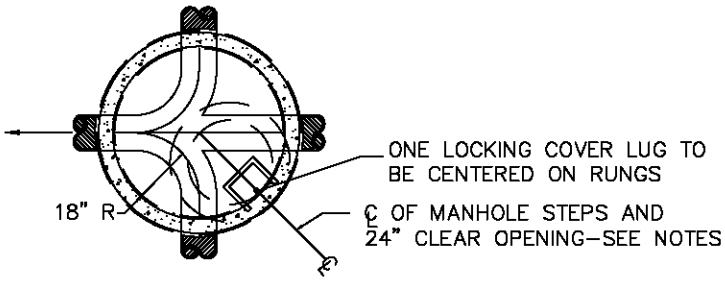
CITY OF KIRKLAND

PLAN NO. CK-R.67B

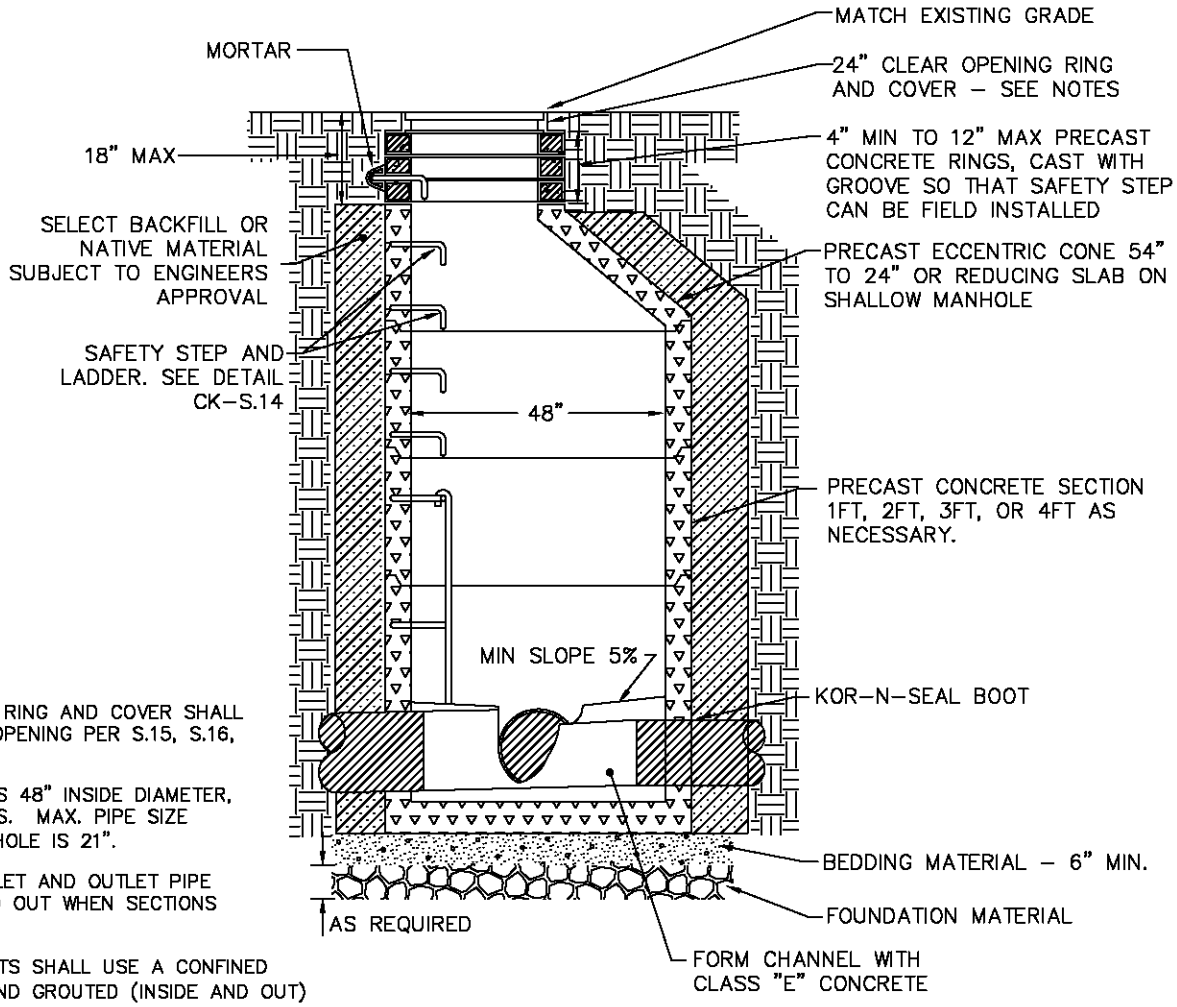
SPEED CUSHION MARKING AND SIGNAGE

LAST REVISED:01/2024

LAST REVISED:01/24/2013



PLAN VIEW



NOTES:

1. LOCKING MANHOLE RING AND COVER SHALL HAVE 24" CLEAR OPENING PER S.15, S.16, S.16A.
2. MANHOLE SHOWN IS 48" INSIDE DIAMETER, 5" WALL THICKNESS. MAX. PIPE SIZE FOR THE 48" MANHOLE IS 21".
3. ALL HOLES FOR INLET AND OUTLET PIPE SHALL BE BLOCKED OUT WHEN SECTIONS ARE CAST.
4. ALL MANHOLE JOINTS SHALL USE A CONFINED RUBBER GASKET AND GROUTED (INSIDE AND OUT) TO MEET ASTM C–443 SPECIFICATIONS.
5. ALL PIPE THROUGH MANHOLE WALL SHALL HAVE A "KOR–N–SEAL" BOOT OR EQUAL.
6. MANHOLE STEPS SHALL BE 1/2" DIA. DEFORMED REINFORCING BARS
7. BEDDING AND FOUNDATION MATERIAL REQUIRED AS SHOWN ON DETAL AND AS NOTED IN THE SPECIFICATIONS. NATIVE MATERIAL MAY BE USED IF APPROVED BY ENGINEER.
8. LOCATION OF MANHOLE STEPS SHALL NOT BE OVER FLOW LINES AND SHALL BE APPROVED BY THE ENGINEER
9. 54" MANHOLE 27" MAX. PIPE
   72" MANHOLE 36" MAX. PIPE
   96" MANHOLE 48" MAX. PIPE

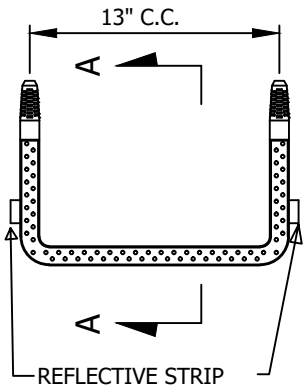
CITY OF KIRKLAND

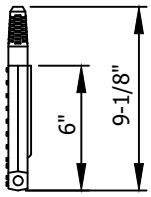
PLAN NO. CK–S.09

CITY OF KIRKLAND WASHINGTON

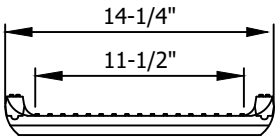
STANDARD 48" SANITARY SEWER MANHOLE

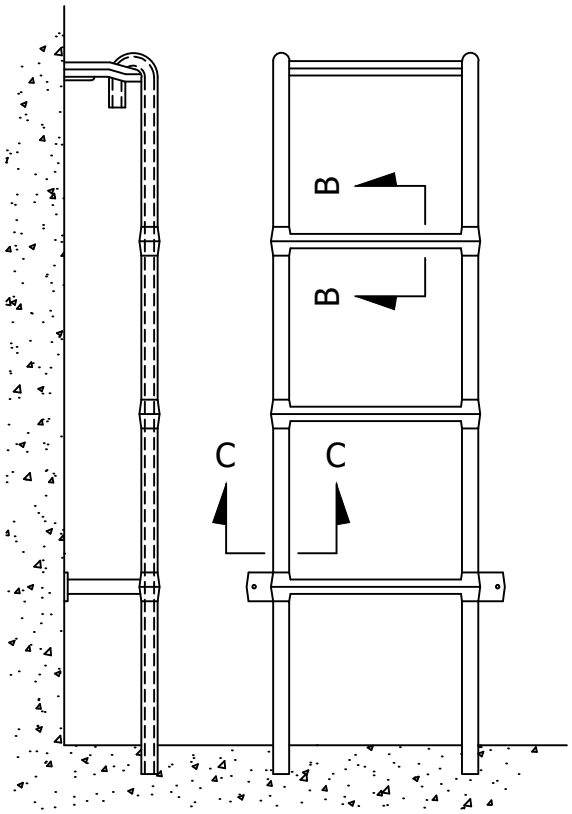
LAST REVISED: 01/1/2018





SECTION A-A





P-14938

POLYPROPYLENE STEP

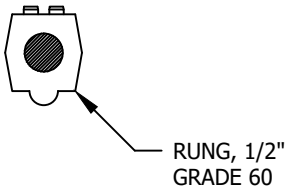
SPECIFICATIONS:

1. ALL STEPS SHALL MEET THE REQUIREMENTS OF ASTM C-478, AASHTO M-199, WISHA AND ALL ASHA SPECIFICATION.

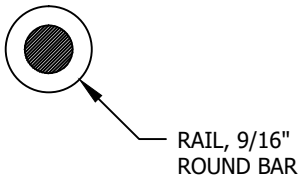
2. THE POLYPROPYLENE SHALL CONFORM TO ASTM D-4101. ASTM D-4101.

3. THE 1/2" GRADE 60 DEFORMED REINFORCING BAR SHALL MEET ASTM A-615.

4. STEP REFLECTORS OR BRIGHT COLORED STEPS REQUIRED.



SECTION B-B



SECTION C-C

INSTALLATION:

1. THE STEP CAN BE CAST IN PLACE.

2. DRIVEN INTO PREFORMED HOLES WITH CONCRETE CURED TO 3,000 PSI MINIMUM.

3. DRIVEN INTO 2 PARALLEL 1" DIAMETER HOLES DRILLED 13" OR 10" ON CENTER, 3-1/2" DEEP.

4. DRILL 2 1-1/8" OR 1-1/4" HOLES, 3-1/2" DEEP, APPLY CURRENT WSDOT EPOXY SPECIFICATION IN THE HOLE AND AROUND THE BARBS OF THE STEP. PUSH THE STEP INTO THE HOLES ALLOWING THE EPOXY TO FLOW OUT TO THE SQUARE SHOULDER OF THE STEP.

ANY OF THE ABOVE METHODS WILL RESIST A PULLOUT FORCE OF OVER 1,500 LBS.

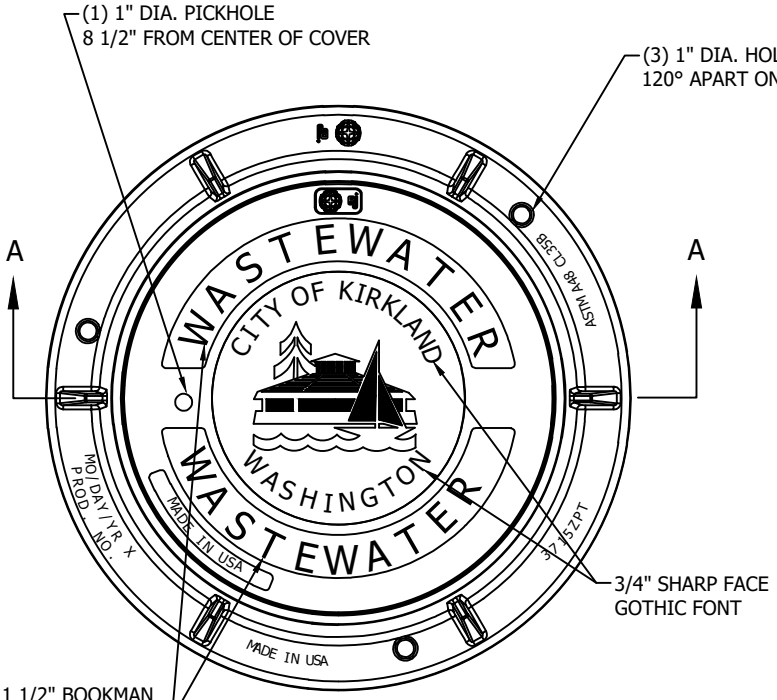
CITY OF KIRKLAND

PLAN NO. CK-S.14

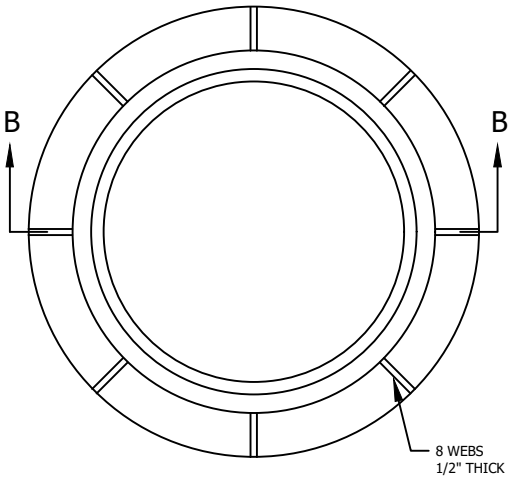
CITY OF KIRKLAND WASHINGTON

LADDER AND MANHOLE STEPS

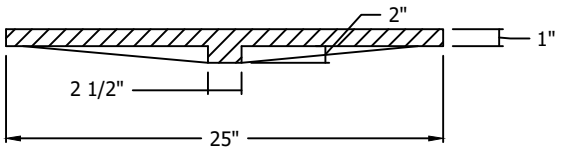
LAST REVISED: 01/2021



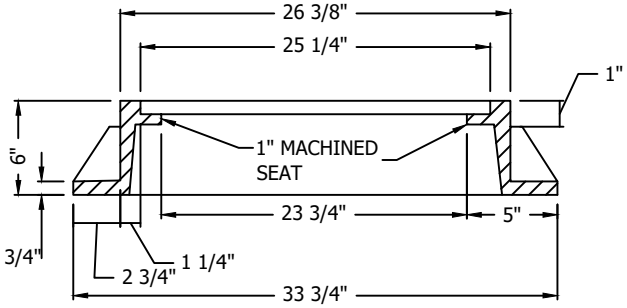
PLAN VIEW



RING PLAN



COVER SECTION A-A



FRAME SECTION B-B

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.
9. DRILL AND TAP THREE 5/8"-11 NC HOLES THROUGH RING AT 120° AND 23-1/16" DIA. B.C.
10. COVER MATERIAL IS DUCTILE IRON ASTM A 48 CL35B, WITH A MINIMUM WEIGHT OF 141 LBS.
11. FRAME MATERIAL IS DUCTILE IRON ASTM A48 CL35B, WITH A MINIMUM WEIGHT OF 134 LBS.
12. PRODUCT SUPPLIED BY EJ, OR APPROVED EQUAL.
13. FRAME AND COVER SHALL BE H-20 LOADING RATED IF INSTALLED IN ROADWAY.

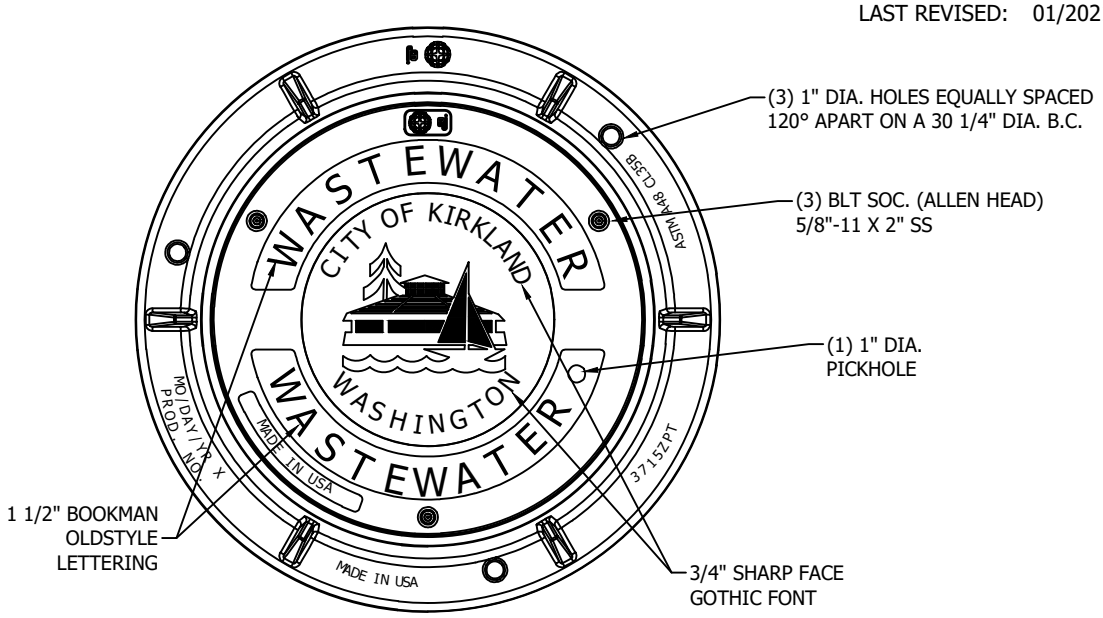
CITY OF KIRKLAND

PLAN NO. CK - S.15

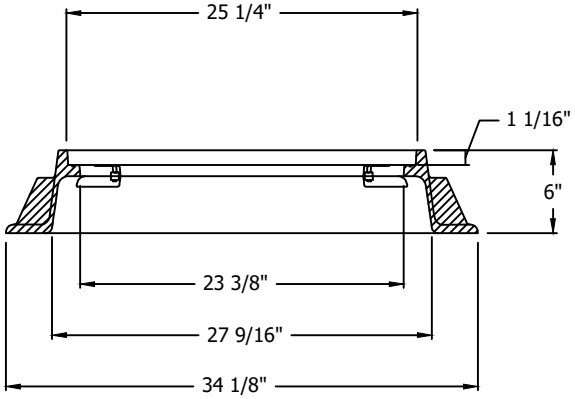
CITY OF KIRKLAND WASHINGTON

24" MANHOLE RING AND COVER

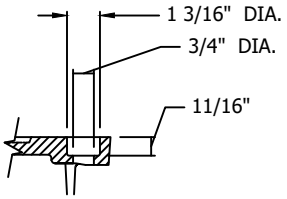
LAST REVISED: 01/2021



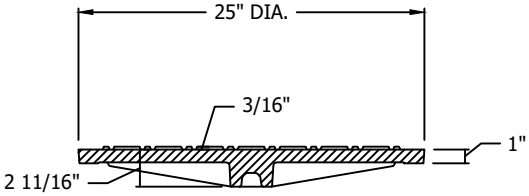
PLAN VIEW



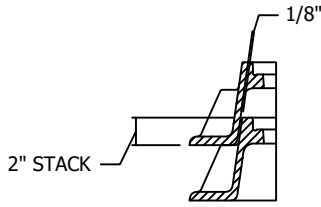
FRAME SECTION



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.

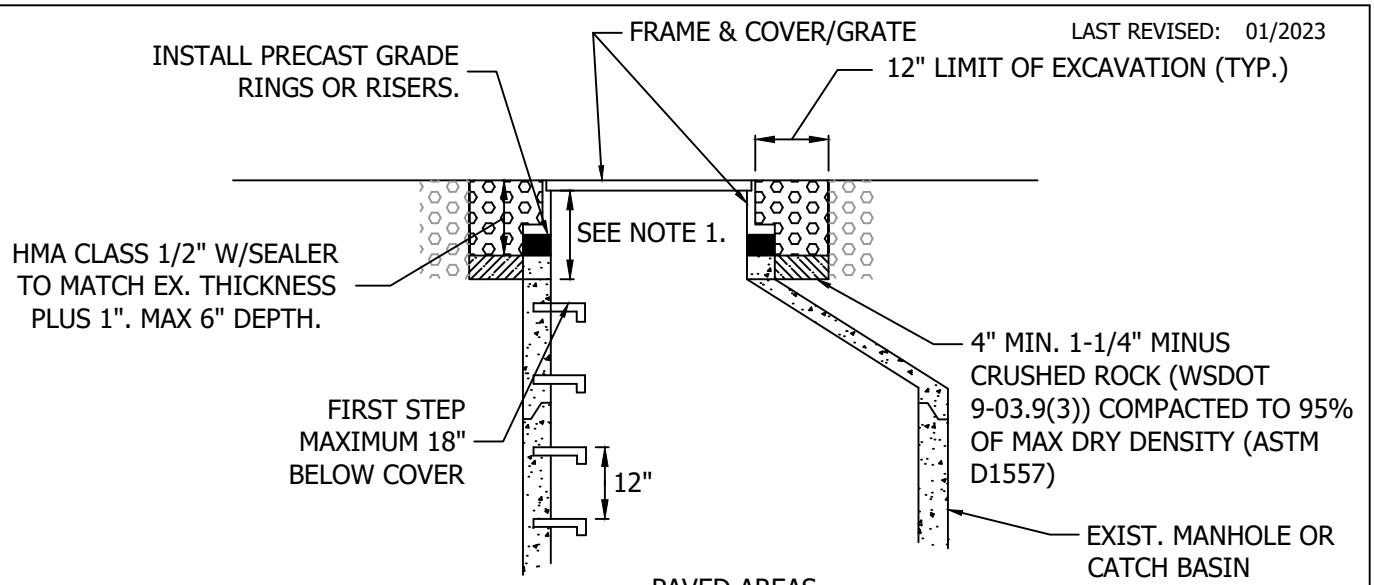
CITY OF KIRKLAND

PLAN NO. CK - S.16

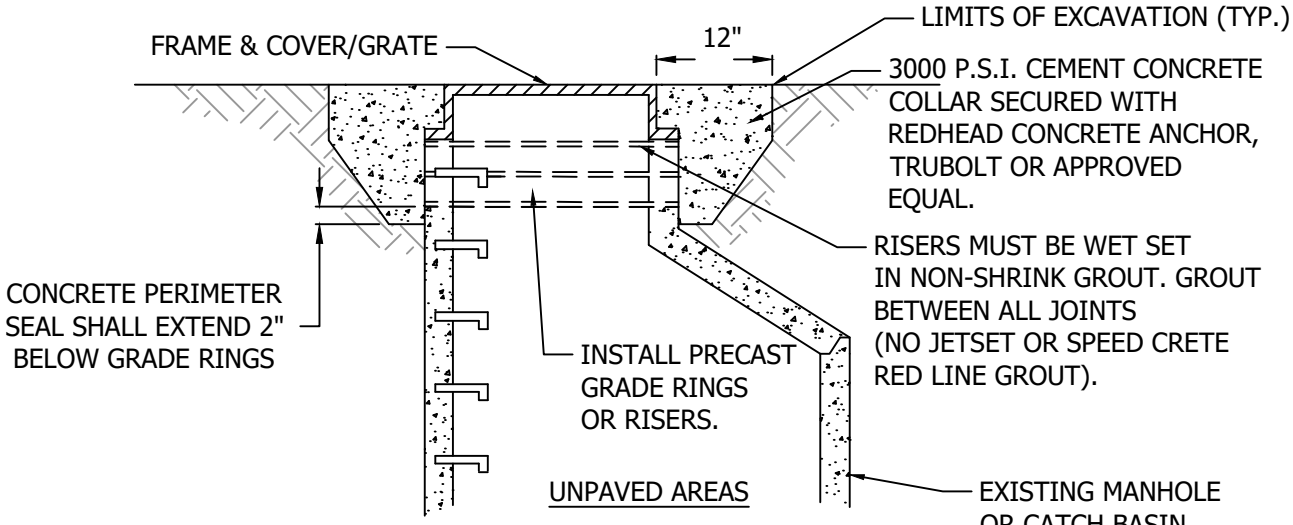
CITY OF KIRKLAND WASHINGTON

24" MANHOLE FRAME W/LOCKING COVER AND LOGO

LAST REVISED: 01/2023



PAVED AREAS



UNPAVED AREAS

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.

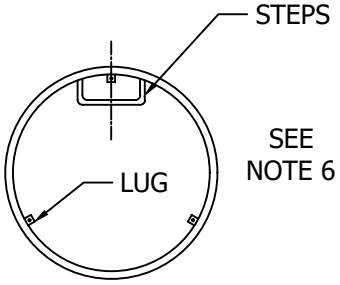
2. GRADE RINGS, RISERS AND FRAME SHALL BE SET IN 3/4" NON-SHRINK GROUT, GROUT BETWEEN ALL JOINTS. ALL SURFACES MUST BE CLEAN OF DEBRIS AND DIRT, AND WETTED PRIOR TO GROUTING. GROUT SMOOTH INSIDE AND OUTSIDE SURFACES PRIOR TO BACKFILL.

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.



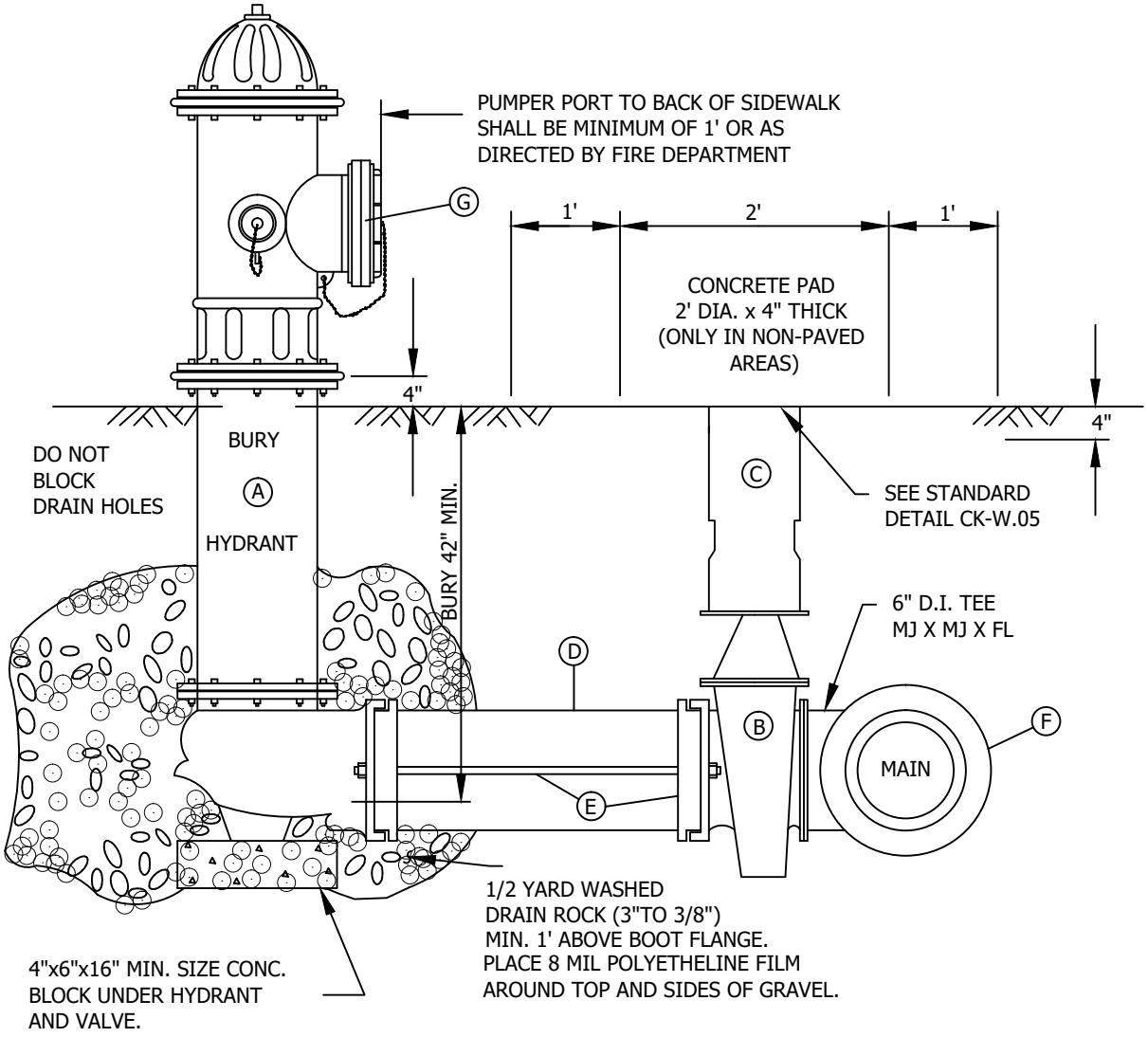
LOCKING MH FRAME
PLAN VIEW

CITY OF KIRKLAND

PLAN NO. CK - S.26

MANHOLE FRAME AND GRATE ADJUSTMENT

LAST REVISED: 01/1/18



A. 1-5 1/4" M.V.O. HYDRANT WITH 2-2 1/2" N.S.T. AND 1-4" PUMPER, SEATTLE STANDARD. THREAD-M.J. INLET, WITH LUGS, BRASS TO BRASS SUB-SEAT.

B. 1-AUXILIARY GATE VALVE: 6" AWWA C509 OR C515, RESILIENT SEAT, "O" RING STEM SEAL, M.J.xFL. WITH LUGS.

C. 1-TWO-PIECE CAST IRON VALVE BOX WITH LOCKING BOLTS EQUAL TO RICH SEATTLE TYPE #940.

D. 1-6" DUCTILE IRON CLASS 52 CEMENT-LINED PIPE, LENGTH TO FIT.

E. 2 - 3/4" GALVANIZED STEEL SHACKLE RODS, TAR SEALED AFTER ASSEMBLY.

F. 1/4 CY - 1:3:6: CONCRETE MIX, POUR IN PLACE TO BLOCK. MAINTAIN CLEARANCE FOR BOLTS.

G. 5" X 4" FEMALE SEATTLE STANDARD THREAD RIGID 5" STORZ ADAPTOR WITH ALL CAPS AND CHAINS OR CABLES. ADAPTOR MATERIAL TO BE ANODIZED ALUMINUM.

NOTES:

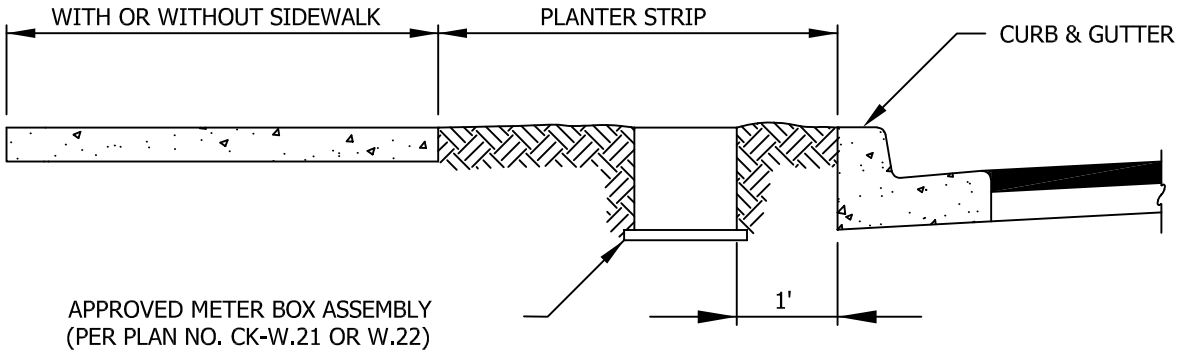
1. FIRE HYDRANT EXTENSION, IF REQUIRED.
2. FIRE HYDRANT TO BE PAINTED WITH TWO COATS OF HIGH GLOSS OSHA SAFETY YELLOW ENAMEL PAINT.
3. INSTALL BLUE - TYPE 2 R.P.M. ON STREET SURFACE ADJACENT TO MAIN PORT.

CITY OF KIRKLAND

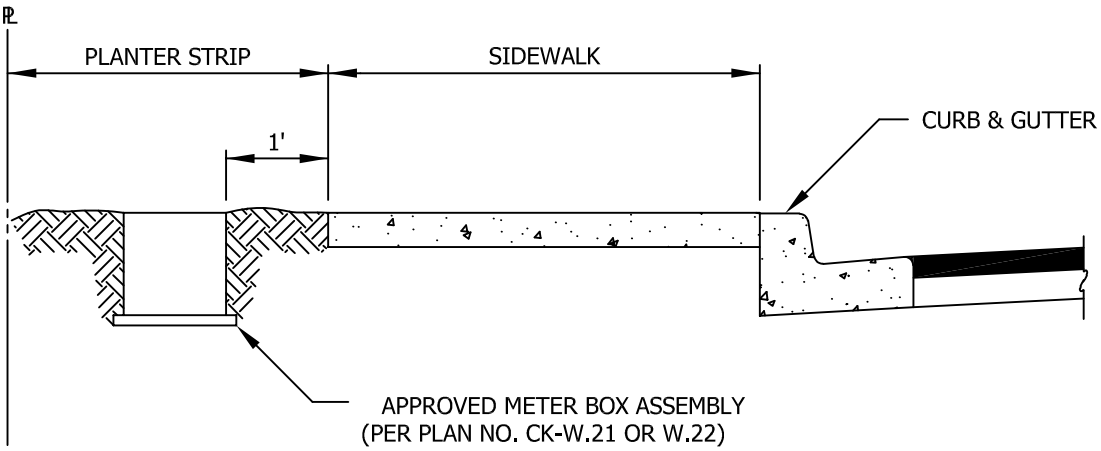
PLAN NO. CK-W.14

FIRE HYDRANT ASSEMBLY

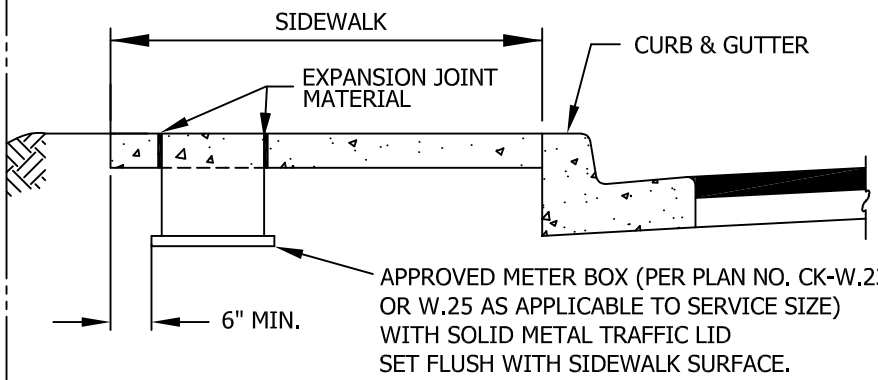
LAST REVISED: 1/2023



INSTALLATION IN PLANTER STRIP 3' OR WIDER



INSTALLATION BEHIND SIDEWALK



METER BOX TO BE INSTALLED IN SIDEWALK COMPLETELY 6" FROM EDGE

INSTALLATION IN SIDEWALK

NOTES:

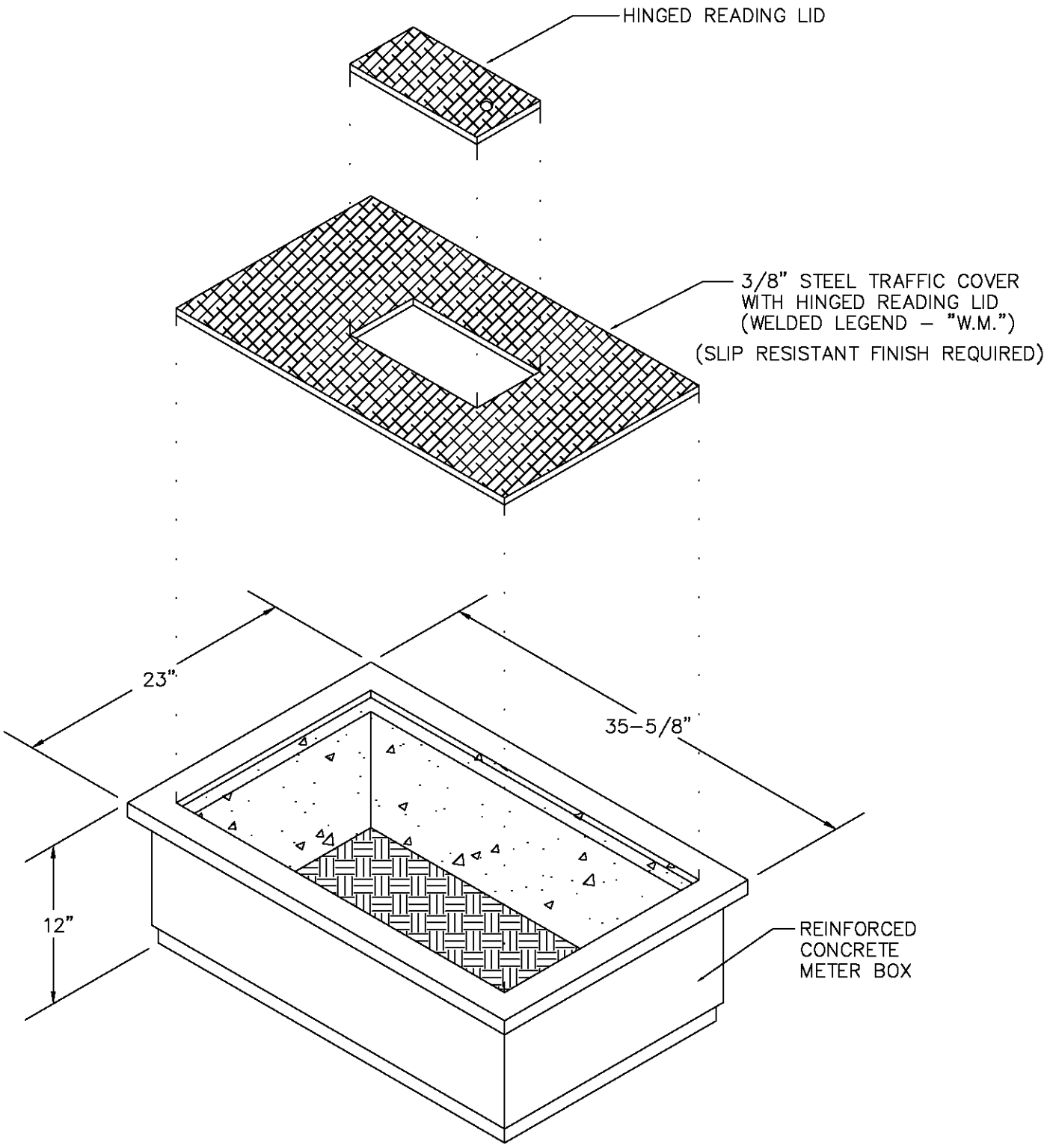
WATER METERS MUST BE LOCATED ALONG THE FRONTAGE THAT THE PROPERTY IS ADDRESSED FROM UNLESS OTHERWISE APPROVED BY THE PUBLIC WORKS DEPARTMENT.

CITY OF KIRKLAND

PLAN NO. CK-W.17

WATER METER PLACEMENT DETAILS

LAST REVISED: 1/31/12



NOTE:

1. USE – FOG TITE #2 OR EQUAL

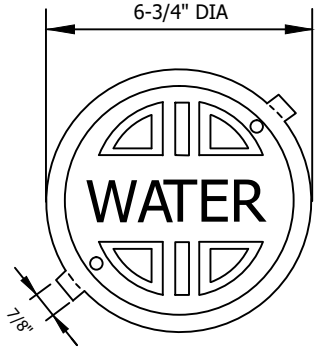
CITY OF KIRKLAND

PLAN NO. CK– W.25

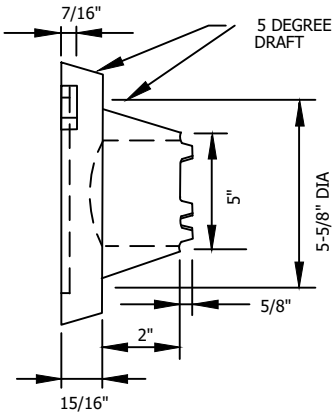
CITY OF KIRKLAND WASHINGTON

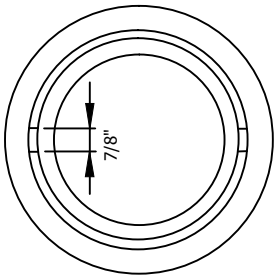
1–1/2" OR 2" WATER METER TRAVEL BOX

LAST REVISED: 1/1/2018

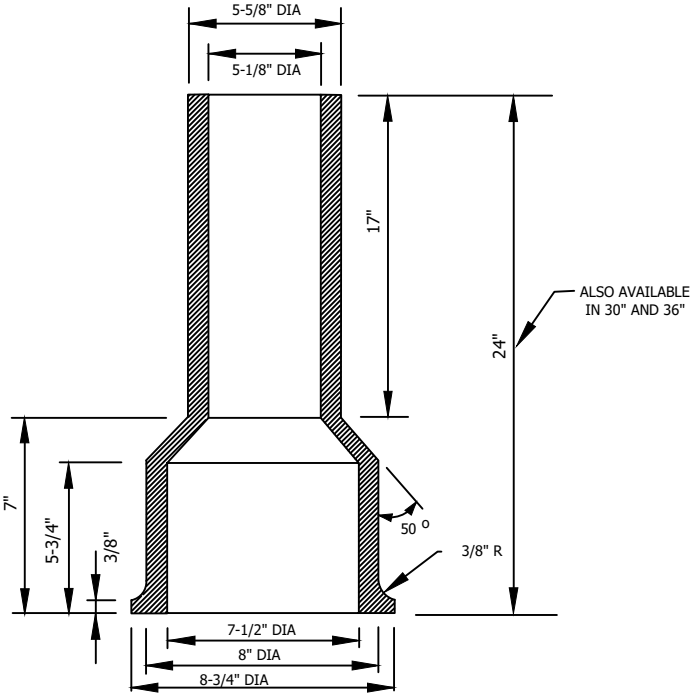


TOP VIEW



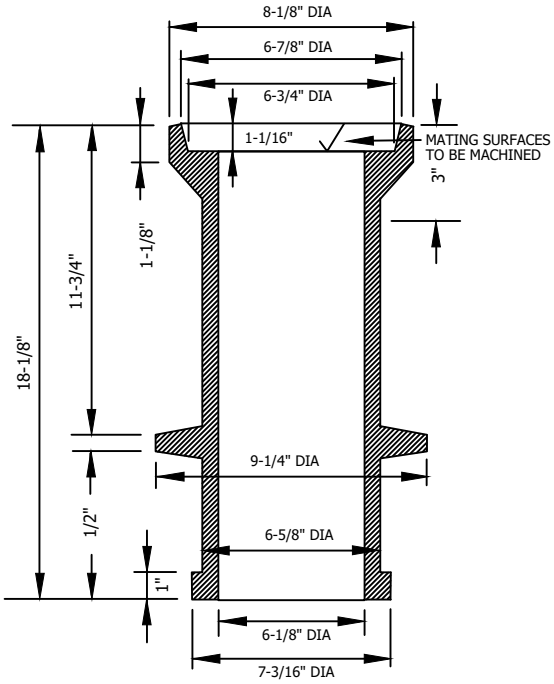


TOP VIEW



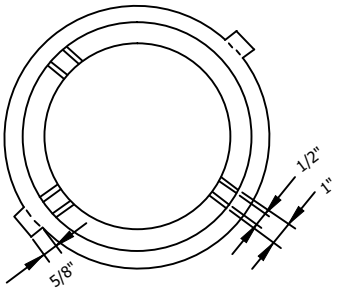
24", 30", 36" VALVE BOX BASE

NOT TO SCALE



18" VALVE BOX TOP

NOT TO SCALE



BOTTOM VIEW

NOTES:

1. IF NEEDED, USE MULTIPLE BASE SECTIONS STARTING WITH 36" BASE. "SOIL PIPE" WILL NOT BE ACCEPTED.
2. MATERIAL SHALL BE CAST IRON ASTM A48, CL30.
3. OLYMPIC FOUNDRY PRODUCT OR EQUIVALENT.
4. PAINT VALVE LID WITH KELLY MOORE 5880 DTM GLOSS ENAMEL- SAFETY BLUE OR EQUAL.
5. ALL VALVE CAN LIDS SHALL BE 940-B "LOCKING" STYLE.

CITY OF KIRKLAND

PLAN NO. CK-W.35

CITY OF KIRKLAND WASHINGTON

WATER VALVE BOX

APPENDIX C: PERMITS

- **C1 – NEPA Permit**
- **C2 – LSM Permit**
- **C4 – SEPA Permit**
- **C5 – Property Release**

City of Kirkland

Washington State Department of Transportation

NEPA Categorical Exclusion Documentation Form

Federal Aid Project Number: STIP ID: KIRK-50	NEPA Start Date: 5/22/24	Intent of Submittal: ☐ Preliminary ☒ Final ☐ Re-Evaluate
Agency: City of Kirkland	Project Title: Kirkland Neighborhood Greenway: Stores to Shores	
County: King County		
Beginning terminus: NE 116th Street and 124th Avenue NE Ending terminus: Heritage Park at Waverly Way Miles: 3.230 miles	Township(s): 25 North Range(s): 5 East Section(s): 5 and 6	

Part 1 - Project Description (Attach Vicinity Map)

Construct a neighborhood greenway between Totem Lake and downtown Kirkland using treatments that may include items such as pavement marking, signage, lighting, crossing treatments (which may include signing, islands, beacons, improvements to or new traffic signals), traffic calming, drainage improvements, sidewalks, or other walkway improvements (See attached vicinity map).

Part 2 – Categorical Exclusion & STIP

- Identify one CE from 23 CFR 771.117 (CE Guidebook - Appendix A) that fits the entire project

CE exemption #3: Construction of bicycle and pedestrian lanes, paths, and facilities.

- Per 23 CFR Part 452(l) identify the subsequent project phase identified on the STIP? ☐ ROW ☒ Construction
- Attach a copy of the STIP page to the CE documentation form. See attached STIP page.

NEPA Approval Signatures

_____	_____	_____	_____
Local Agency Approving Authority	Date	Local Programs Environmental Engineer	Date
_____	_____	_____	_____
Regional Local Programs Engineer	Date	Federal Highway Administration	Date

Completed by (Print Official's Name):	Telephone (include area code):	E-mail address:

Part 3 - Permits, Approvals & Right of Way (ROW)

Yes	No	Permit or Approval
☐	☒	Corps of Engineers ☐ Sec. 10 ☐ Sec. 404
		☐ Nationwide Type _____
		☐ Individual Permit No. _____
☐	☒	Coastal Zone Management Certification
☒	☐	Critical Areas Ordinance (CAO) Permit
☐	☒	Forest Practices Act Permit
☐	☒	Hydraulic Project Approval
☐	☒	Local Building or Site Development Permits
☒	☐	Local Clearing and Grading Permit
☐	☒	National Pollutant Discharge Elimination System (NPDES) Baseline General for Construction
☐	☒	Shoreline Permit
☐	☒	State Waste Discharge Permit
☐	☒	Water Rights Permit

Yes	No	Permit or Approval
☐	☒	Water Quality Certification – Section 401 Issued by _____
☐	☒	Tribal Permit(s) (if any) _____
☐	☒	Other Permits (List) _____
☐	☒	Is permanent ROW acquisition needed? If yes, amount needed: _____ (acres/sq. ft.).
☐	☒	Is any temporary ROW needed?
☐	☒	Is relocation required?
☐	☒	Has ROW (property and/or property interests) been acquired for this project prior to the NEPA start date? If yes, documentation demonstrating compliance with 23 CFR 710.501 may be required.
☐	☒	Is a detour required? If yes, please attach detour information.

U.S. Coast Guard Permitting

a. Does the project propose any new or modify ***any*** existing bridges or culverts crossing a waterway? ☐ Yes ☒ No

b. If Yes, attach a copy of the jurisdictional determination email or letter from the U.S. Coast Guard.

Other Federal Agencies - Does the project involve any federal properties, approvals, or funding from other/additional federal agencies? ☐ Yes ☒ No If Yes, please describe.

Part 4 - Environmental Considerations

Will the project involve work in or affect any of the following? Identify proposed mitigation. Attach additional pages or supplemental information if necessary.

1. Air Quality - Identify any anticipated air quality issues.

Is the project exempt from Air Quality conformity requirements? ☒ Yes ☐ No

a. If Yes, identify exemption – please refer to Appendix G in the CE Guidebook for a list of exemptions.
Air Quality Exemption: Bicycle and Pedestrian Facilities.

b. Is the project located in an Air Quality Non-Attainment Area or Maintenance Area for carbon monoxide, ozone or PM 10 or PM 2.5? ☒ Yes ☐ No

2. Critical and Sensitive Areas

a. Is this project within a sole source aquifer ☐ Yes ☒ No
If located within a sole source aquifer, is the project exempt from EPA approval?
If Yes, please list exemption: _____
If No, date of EPA approval: _____

b. Will this project impact Species/Habitat other than ESA listed species? ☐ Yes ☒ No Explain your answer.
The project is located in an urban area and mostly occurs within paved surfaces. Project work outside the paved area are located in the shoulders and there is no habitat available for any listed species in the vicinity of the project.

c. Is this project within one mile of a Bald Eagle nesting territory, winter concentration area or communal roost?
☐ Yes ☒ No If Yes, the local agency must go to the US Fish & Website (https://www.fws.gov/story/do-i-need-eagle-take-permit) and review the information under *When is a permit recommended?*. **Please explain why a permit is or is not needed:**
It is not anticipated that the project will result in any disturbance to eagles, since the project only requires minimal construction activities and these are of short duration.
Please attach a copy of the permit if needed.

Part 4 - Environmental Considerations (continued)

d. Are wetlands present within the project area? ☒ Yes ☐ No If Yes, estimate the impact in acres: 0 acres
Please attach a copy of the proposed mitigation plan.
There are wetlands near the project alignment (next to Slater Avenue); however, the project will not impact any wetlands. However, the project will impact approximately 276 square feet of wetland buffer associated with a tributary to Forbes Creek (see Critical Areas Report). Buffer mitigation will be provided through the City of Kirkland's Advanced Mitigation Program.

3. Cultural Resources/Historic Structures – Identify any historic, archaeological, or cultural resources present within the project's Area of Potential Effects.

Does the project fit into any of the exempt types of projects listed in Appendix J of the CE Guidebook?
☒ Yes ☐ No If Yes, note exemptions below.
Exemption # A-20: Installation, maintenance, repair, or rehabilitation of bicycle and pedestrian lanes, paths, and related facilities within the demonstrated vertical and horizontal limits of previous construction or disturbance.

If No: Date of DAHP concurrence: _____
Date of Tribal consultation(s) (if applicable): _____
Adverse effects on cultural/historic resources? ☐ Yes ☐ No
If Yes, date of approved Section 106 MOA: _____

4. Floodplains and Floodways

a. Is the project located in a 100-year floodplain? ☐ Yes ☒ No
b. If Yes, is the project located within a 100-year floodway? ☐ Yes ☒ No
c. Will the project impact a 100-year floodplain? ☐ Yes ☒ No If Yes, describe impacts.

5. Hazardous and Problem Waste – Identify potential sources and type(s).

a. Does the project require excavation below the existing ground surface? ☒ Yes ☐ No
b. Will groundwater be encountered? ☐ Yes ☒ No
c. Will any properties be acquired as part of this project? ☐ Yes ☒ No
d. Is this site located in an undeveloped area (*i.e.* no buildings, parking, storage areas)? ☐ Yes ☒ No
e. Is the project located within a one-mile radius of a known Superfund Site? ☐ Yes ☒ No
f. Is this project located within a ½-mile radius of a site or sites listed on any of the following Department of Ecology databases? ☒ Yes ☐ No If Yes, check the appropriate boxes below.

☐ Voluntary Cleanup Program (VCP), State Cleanup Site (SCS), or Independent Cleanup Program (ICP)

☒ Underground Storage Tank (UST):

There was one UST site identified near 2nd Street West and Market Street (status – cleanup started). This site is downslope of the project thus won't be affected by the project activities.

☐ Leaking Underground Storage Tank (LUST)

☐ Confirmed and Suspected Contaminated Sites List (CSCSL)

g. Has site reconnaissance (windshield survey) been performed? ☒ Yes ☐ No (Please identify any properties not identified in the Ecology or ERS database search as an attachment -- name, address, and property use).
None noted.

h. Based on the information above and project specific activities, is there a potential for the project to generate, acquire or encounter contaminated soils, groundwater, or surface water? ☐ Yes ☒ No

Please explain:

If you responded **Yes** to any of these questions above (5A – 5F or 5H), contact your Region LPE for assistance as a "Right-Sized" HazMat Analysis Report/Memorandum most likely will be required.

Part 4 - Environmental Considerations (continued)

6. Noise

a. Does the project involve constructing a new roadway? ☐ Yes ☒ No

b. Is there a change in the vertical or horizontal alignment of the existing roadway? ☐ Yes ☒ No

c. Does the project increase the number of through traffic lanes on an existing roadway? ☐ Yes ☒ No

d. Is there a change in the topography? ☐ Yes ☒ No

e. Are there auxiliary lanes extending 1-½ miles or longer being constructed as part of this project? ☐ Yes ☒ No

f. If you answered Yes to any of the preceding questions, identify and describe any potential noise receptors within the project area and subsequent impacts to those noise receptors. Please attach a copy of the noise analysis if required.

If impacts are identified, describe proposed mitigation measures.

7. 4(f)/6(f) Resources: parks, recreation areas, wildlife refuges, historic properties, wild & scenic rivers, scenic byways

a. Please identify any 4(f) properties within the project limits and the areas of impacts.

The project occurs in the vicinity of several parks/recreation areas including Heritage Park, Van Aalst Park, Spinney Homestead Park, and the Cross Kirkland Corridor Trail. There would be no impacts to the parks. There would be some minor work at the intersection of the Cross Kirkland Corridor where it crosses 87th Avenue NE. The work includes extending curbs and sidewalks and adding catch basins and storm pipes requiring 100 yds^3 of excavation. See attached Section 4(f) Temporary Occupancy Approval.

b. Please identify any properties within the project limits that used funds from the Land & Water Conservation Fund Act.

There are no properties within the project limits that used funds from the Land & Water Conservation Fund Act.

c. Please list any Wild and Scenic Rivers and Scenic Byways within the project limits.

There are no Wild and Scenic Rivers or Scenic Byways within the project limits.

8. Agricultural Lands –

a. Are there agricultural lands within 300 feet of the project limits? ☐ Yes ☒ No If Yes, describe impacts:

b. Are impacted lands considered to be unique and prime farmland? ☐ Yes ☒ No
If Yes, date of project review by Natural Resource Conservation Service (NRCS): _____

9. Rivers, Streams (continuous or intermittent) or Tidal Waters

a. Identify all waterbodies within 300 feet of the project limits or that will otherwise be impacted.

Forbes Creek crosses Slater Avenue; however, the creek will not be impacted by the project as no work will occur near that crossing. There is also a tributary to Forbes Creek (identified as Stream S1 in the Critical Areas Report). The wetland buffer associated with Stream S1 will be impacted (see Section 2 above).

b. Identify stream crossing structures by type.

Forbes Creek and Stream S1 are conveyed under Slater Avenue via a culvert.

Part 4 - Environmental Considerations (continued)

10. Tribal Lands – Identify whether the project will occur within any Tribal lands, including reservation, trust and fee lands. Please do not list usual and accustomed area.

There are no tribal lands within the project limits.

11. Water Quality/Stormwater

a. Will this project's proposed stormwater treatment facility be consistent with the guidelines provided by either WSDOT's HRM, DOE's stormwater management manual for eastern/western Washington or a local agency equivalent manual? ☒ Yes ☐ No

Explain proposed water quality/quantity treatment for the new and any existing pollution generating impervious surface associated with the proposed project.

Stormwater would be collected in catch basins and conveyed into the City's storm drainage system.

b. Amount of existing pollution generating impervious surface within the project limits:

A gross estimate was used based on the average width of the road corridor (12 feet) times the length of the project (17,424 feet) resulted in approximately 209,088 ft^2 of pollution generating surface (PGIS).

c. Net new pollution generating impervious surface to be created as a result of this project:

The project would add 744 ft^2 of untreated PGIS at one location. At 6 other locations in the project there would be a decrease of 10,300 ft^2 of PGIS due to the existing roadway being converted to non-pollution generating impervious surface.

d. Amount of proposed post-project untreated pollution generating impervious surface:

As stated above there would be an overall reduction in PGIS as a result of the project's stormwater improvements.

12. Previous Environmental Commitments

Describe previous environmental commitments that may affect or be affected by the project – if any.

N/A.

13. Environmental Justice - Does the project meet any of the exemptions noted in Appendix L of the CE Documentation Guidebook?
If Yes, please note the exemption and appropriate justification in the space below.
Exemptions #1, 2, 4 and 7: Roadway pavement marking; installation of lighting, signs and signals; repair or replacement of curb, gutter, sidewalks and catch basins, and installation of bicycle and pedestrian lanes, paths and facilities – within existing right-of-way limits that do not require detours.

If No, attach Appendix M and supporting documentation as required per the decision matrix. This will include at least two demographic information sources and possibly a description of anticipated project impacts.

Please refer to the CE Guidebook for more information.

Part 5 - Biological Assessments and EFH Evaluations

1. **Do any listed species potentially occur in the project's action area and/or is any designated critical habitat present within the project's action area?** ☐ Yes ☒ No Attach species listings.

Affected ESA Listed Species	2. Will any construction work occur within 0.25 mile of any of the following?	3. Does the project involve blasting, pile driving, concrete sawing, rock-drilling, or rock-scaling activity within one mile of any of the following?
Oregon Spotted Frog proposed critical habitat or suitable habitat?	☐ Yes ☒ No	☐ Yes ☒ No
Yellow-billed Cuckoo suitable habitat?	☐ Yes ☒ No	☐ Yes ☒ No
Spotted Owl management areas, designated critical habitat or suitable habitat?	☐ Yes ☒ No	☐ Yes ☒ No
Marbled Murrelet nest or occupied stand, designated critical habitat or suitable habitat?	☐ Yes ☒ No	☐ Yes ☒ No
Western Snowy Plover designated critical habitat?	☐ Yes ☒ No	☐ Yes ☒ No
Is the project within 0.25 mile of marine waters? If Yes explain potential effects on Killer Whales and on Marbled Murrelet foraging areas.	☐ Yes ☒ No	☐ Yes ☒ No
Killer Whale designated critical habitat?	☐ Yes ☒ No	☐ Yes ☒ No
Grizzly Bear suitable habitat?	☐ Yes ☒ No	☐ Yes ☒ No
Gray Wolf suitable habitat?	☐ Yes ☒ No	☐ Yes ☒ No
Canada Lynx habitat?	☐ Yes ☒ No	☐ Yes ☒ No
Columbia White-tailed Deer suitable habitat?	☐ Yes ☒ No	☐ Yes ☒ No
Woodland Caribou habitat?	☐ Yes ☒ No	☐ Yes ☒ No
Streaked Horned Lark designated critical habitat or suitable habitat?	☐ Yes ☒ No	☐ Yes ☒ No

Taylor's Checkerspot designated critical habitat or suitable habitat?	☐ Yes ☒ No	☐ Yes ☒ No
Mazama Pocket Gopher designated critical habitat or suitable habitat?	☐ Yes ☒ No	☐ Yes ☒ No
Eulachon designated critical habitat or suitable habitat?	☐ Yes ☒ No	☐ Yes ☒ No
Rockfish proposed critical habitat or suitable habitat?	☐ Yes ☒ No	☐ Yes ☒ No
A mature coniferous or mixed forest stand?	☐ Yes ☒ No	☐ Yes ☒ No

4. Will the project involve any in-water work? ☐ Yes ☒ No
5. Will any construction work occur within 300 feet of any perennial or intermittent waterbody that either supports or drains to waterbody supporting listed fish? ☒ Yes ☐ No
6. Will any construction work occur within 300 feet of any wetland, pond, or lake that is connected to any permanent or intermittent waterbody? ☒ Yes ☐ No
7. Does the action have the potential to directly or indirectly impact designated critical habitat for salmonids (including adjacent riparian zones)? ☐ Yes ☒ No

Part 5 - Biological Assessments and EFH Evaluations (continued)

8. Will the project discharge treated or untreated stormwater runoff or utilize water from a waterbody that supports or drains into a listed-fish supporting waterbody? ☐ Yes ☒ No
9. Will construction occur outside the existing pavement? If Yes go to 9a. ☒ Yes ☐ No
   9a. Will construction activities occurring outside the existing pavement involve clearing, grading, filling or modification of vegetation or tree-cutting? ☒ Yes ☐ No
10. Are there any Federally listed Threatened or Endangered plant species located within the project limits? If Yes, please attach a list of these plant species within the action area. ☐ Yes ☒ No
11. Does a mature coniferous or mixed forest stand occur within 200' of the project site? ☐ Yes ☒ No

Analysis for No Effects Determination – If there are any Yes answers to questions in Part 5, additional analysis is required. Attach additional sheets if needed.

N/A. No work is proposed in Forbes Creek and no aspects of the project will affect any T&E species. All of the work is within the road right-of-ways and most of the work occurs within the paved surfaces.

Analysis for RRMP ESA 4(d) determination for NMFS – A local agency must be certified by the Regional Road Maintenance Forum to utilize 4(d)**.**

Maintenance Category (check all that apply)

☐ 1. Roadway Surface	☐ 6 Stream Crossings	☐ 11. Emergency Slide/Washout Repair
☐ 2. Enclosed Drainage Systems	☐ 7. Gravel Shoulders	☐ 12. Concrete
☐ 3. Cleaning Enclosed Drainage Systems	☐ 8. Street Surface Cleaning	☐ 13. Sewer Systems
☐ 4. Open Drainage Systems	☐ 9. Bridge Maintenance	☐ 14. Water Systems
☐ 5. Watercourses and Streams	☐ 10. Snow and Ice Control	☐ 15. Vegetation

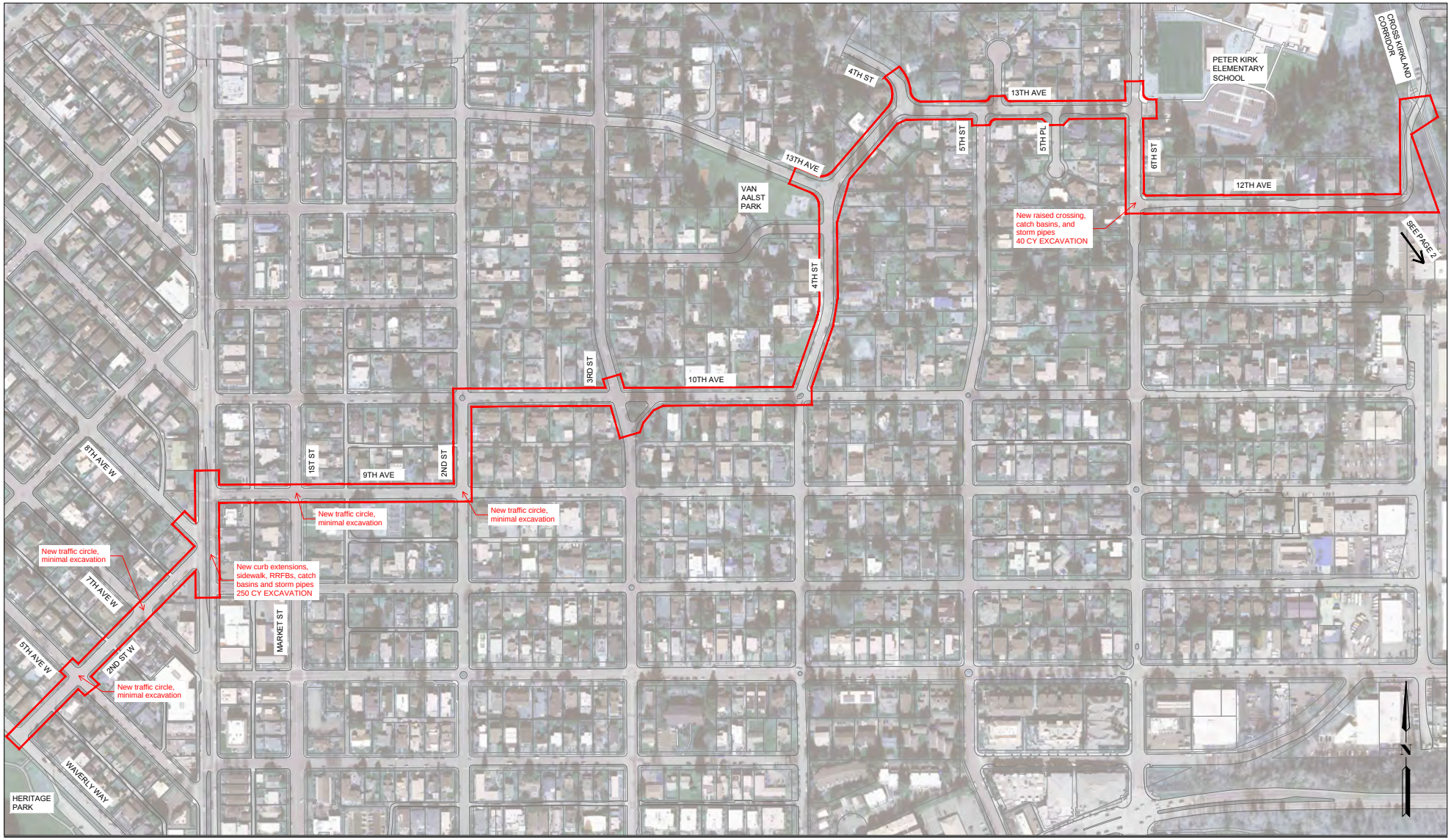
Describe how the project fits in the RRMP 4(d) Program:

Effect Determinations for ESA and EFH

If each of the questions in the preceding section resulted in a "No" response or if any of the questions were checked "Yes," but adequate justification can be provided to support a "no effect" determination, then check "No Effect" below. If this checklist cannot be used for Section 7 compliance (i.e., adequate justification cannot be provided or a "may effect" determination is anticipated), a separate biological assessment document is required.

	NMFS	USFWS	EFH Determination
☒ No Effect	_____	_____	☐ No Adverse Effect
☐ NLTAA - Date of Concurrence	_____	_____	☐ Adverse Effect – Date of NMFS
☐ LTAA – Date BO Issued	_____	_____	concurrence _____
☐ RRMP 4(d)	_____		☐ Not Applicable

Part 6 - FHWA Comments



NOT FOR CONSTRUCTION

TOOLE DESIGN

0 100' 200' 300'
SCALE IN FEET

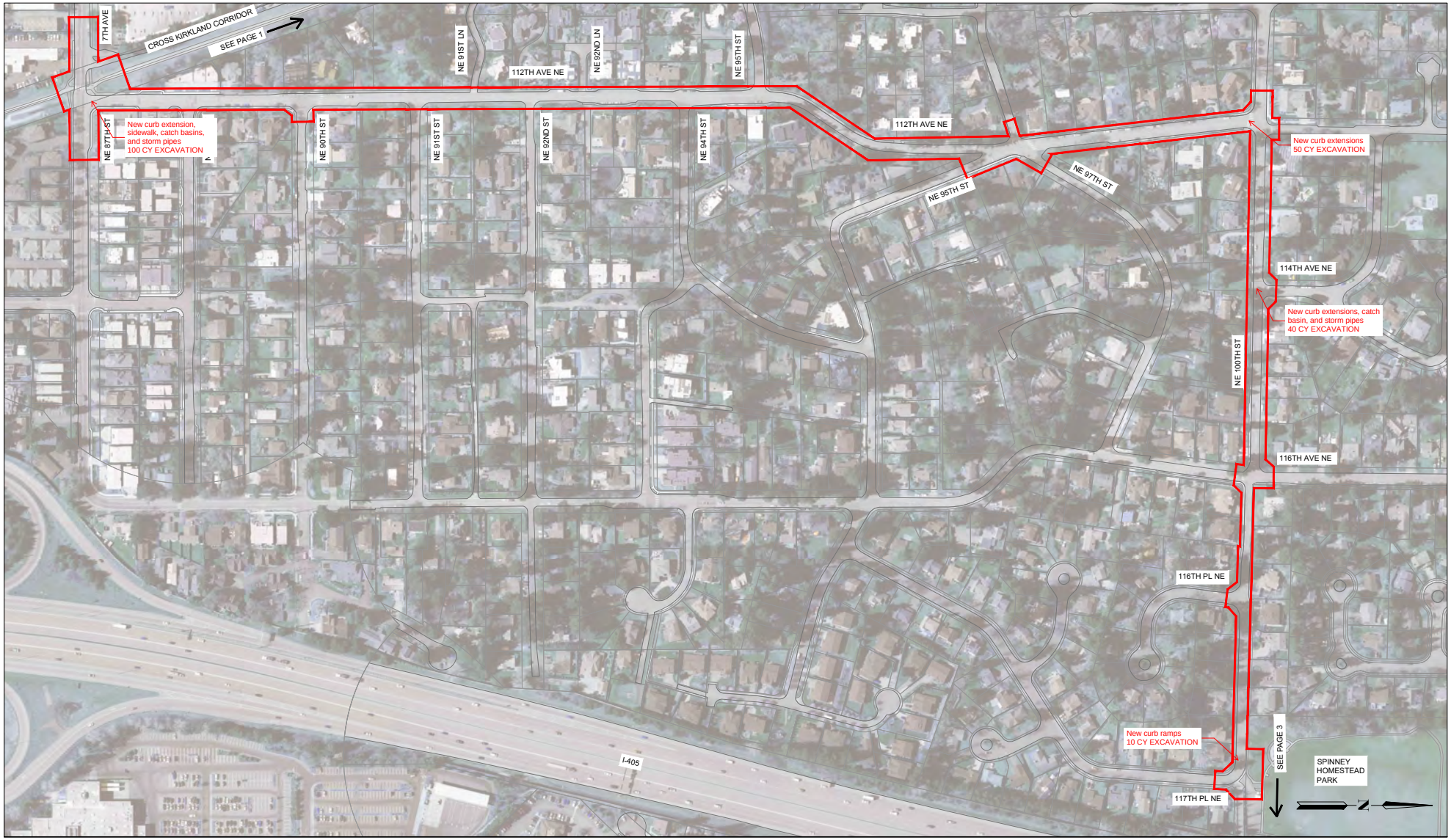
KIRKLAND STORES TO SHORES GREENWAY

NORKIRK NEIGHBORHOOD (PAGE 1 OF 3)

DECEMBER 13TH, 2023

NOT FOR CONSTRUCTION

VICINITY MAP/EXCAVATION AREAS



NOT FOR CONSTRUCTION

TOOLE DESIGN

0 100' 200' 300'
SCALE IN FEET

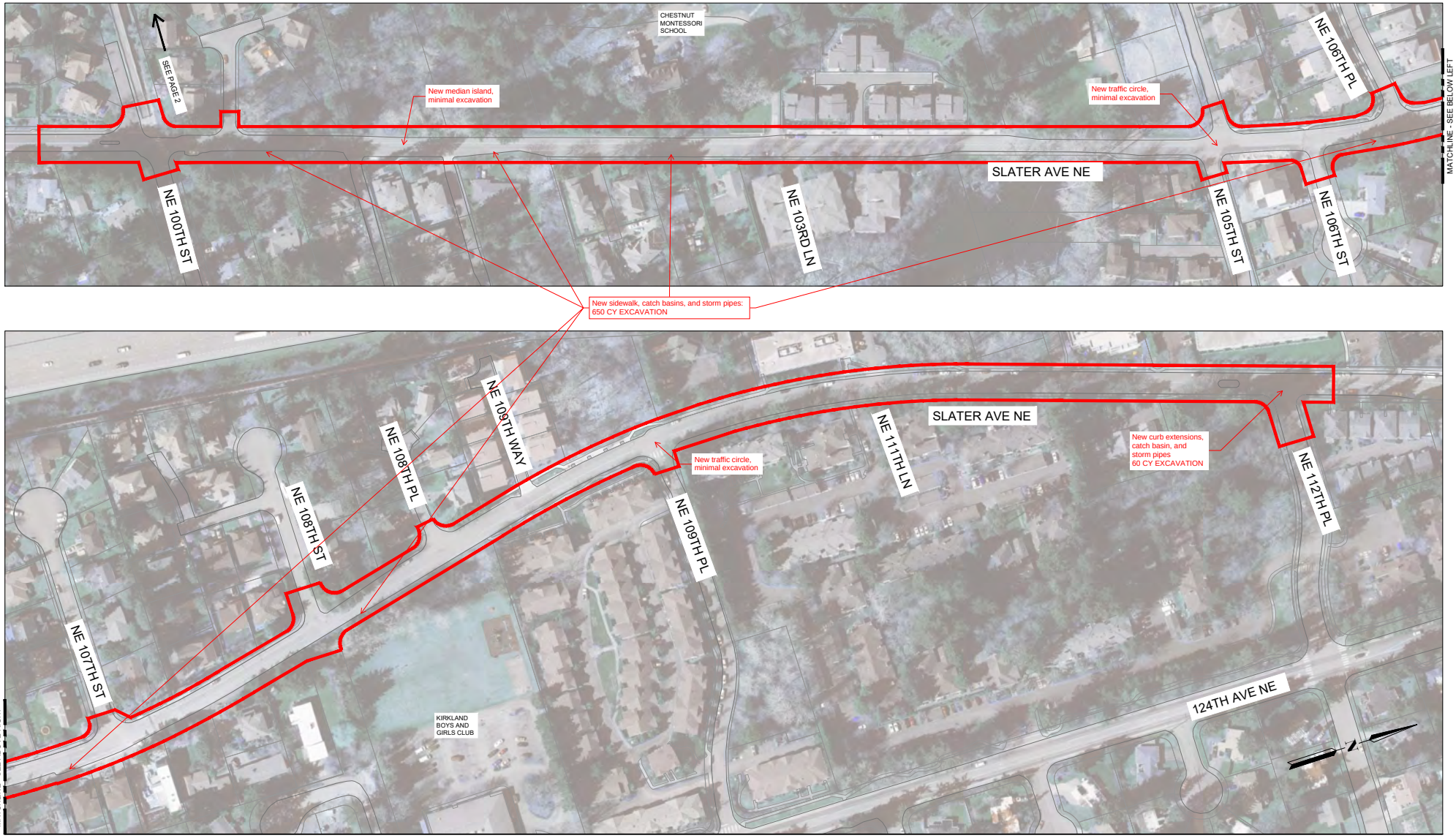
KIRKLAND STORES TO SHORES GREENWAY

HIGHLANDS NEIGHBORHOOD (PAGE 2 OF 3)

DECEMBER 13TH, 2023

NOT FOR CONSTRUCTION

VICINITY MAP/EXCAVATION AREAS



NOT FOR CONSTRUCTION

0 100' 200' 300'

SCALE IN FEET

TOOLE DESIGN

KIRKLAND STORES TO SHORES GREENWAY

NORTH ROSE HILL NEIGHBORHOOD (PAGE 3 OF 3)

DECEMBER 13TH, 2023

NOT FOR CONSTRUCTION

VICINITY MAP/EXCAVATION AREAS

Section 4(f) Temporary Occupancy Approval (per 23 CFR 774.13(d))

Summary Table

Date:	3/19/2024
WSDOT Region:	Northwest Region
Project:	Stores to Shores Greenway
Project Description:	The project is to construct a 3.3-mile neighborhood greenway between Totem Lake and downtown Kirkland using right-or-way treatments that may include items such as pavement marking, signage, lighting, crossing treatments (e.g., signing, islands, beacons, improvements to or new traffic signals), traffic calming, drainage improvements, sidewalks, or other walkway improvements, which are located within the existing right-of-way.
Section 4(f) Resource:	Cross Kirkland Corridor Trail (CKC)
Type of 4(f) Resource:	Public Recreation Area (Trail)
Impact on 4(f) Resource:	There would be some minor work at the intersection of the Cross Kirkland Corridor where it intersects 7th Avenue/NE 87th Street. See item 2 below.
Official with Jurisdiction:	City of Kirkland

Describe how the conditions for Temporary Occupancy are met:

1. **Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land.**

   Project work in this area is anticipated to take less than 30 calendar days and there would be no change in ownership (the trail is owned by the City of Kirkland).

2. **Scope of the work must be minor, i.e., both the nature and the magnitude of the changes of the Section 4 (f) property are minimal.**

   Work at the Cross Kirkland Corridor (CKC) is limited to constructing new sidewalk and curb ramps on the north side of 7th Avenue at the intersection of the CKC and 7th Avenue/NE 87th Street. The work on the north side of 7th Avenue will involve repaving a short portion of the CKC asphalt trail to match into the new sidewalk, and replacing the existing asphalt walkways, gravel,

and sections of lawn at the intersection with new sidewalk and curb ramps. This project will require resetting the Rectangular Rapid Flashing Beacon post and foundation on the north side of 7th Avenue to match the new sidewalk grade. There is expected to be approximately 100 yds^3 of excavation.

3. **There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis.**

   Once construction is complete there would be no permanent adverse impacts and the trail would be available for use during and after the construction period. The trail itself is not being damaged, but rather improved as part of the Greenway project.

4. **The land being used must be fully restores, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project.**

   The grass area and the asphalt trail disturbed during construction would be replaced in kind and improved with curb ramps and new sidewalks.

5. **There must be documented agreement of the official(s) with jurisdiction over the section 4(f) resource regarding the above conditions.**

Concurrence

The City of Kirkland hereby concurs that the proposed project as described and show in the attached exhibits would not adversely affect the activities, features, and attributes that qualify the Cross Kirkland Connector for protection under Section 4(f) of the Transportation Act on either a temporary or permanent basis.

Truc Dever
Public Works Director

3/19/2024
Date

Request for Approval

Based upon this analysis we request FHWA concurrence that this project's temporary occupancy of the section 4(f) resource described above satisfies the conditions set forth in 23 CFR 771.13(d) and is so minimal as to not constitute a use within the meaning of Section 4(f).

Digitally signed by Melanie Vance
Date: 2024.04.04 14:43:44 -07'00'

WSDOT Environmental Manager **Date**

FHWA Approval

LINDSEY L HANDEL Digitally signed by LINDSEY L HANDEL
Date: 2024.04.11 09:01:29 -07'00'

FHWA Washington Division
Urban Area Engineer

NOT FOR CONSTRUCTION

TOOLE DESIGN

SECTION 4(F) TEMPORARY OCCUPANCY WITHIN THE AREA OF POTENTIAL EFFECTS

0 100' 200' 300'
SCALE IN FEET

KIRKLAND STORES TO SHORES GREENWAY

HIGHLANDS NEIGHBORHOOD (PAGE 2 OF 3)

DECEMBER 13TH, 2023

NOT FOR CONSTRUCTION

Washington State S. T. I. P.

2024 to 2027

(Project Funds to Nearest Dollar)

MPO/RTPO: PSRC Y Inside N Outside **May 15, 2024**

County: King

Agency: Kirkland

Func Cls	Project Number	PIN	STIP ID	Imp Type	Total Project Length	Environmental Type	RW Required	Begin Termini	End Termini	Total Est. Cost of Project	STIP Amend. No.
00			KIRK-50	28	3.230	CE	No	NE 116th St and 124th Ave NE	Heritige Park at Waverly Way	2,400,000	2404 AdMod

Kirkland Neighborhood Greenway: Stores to Shores

Construct a neighborhood greenway between Totem Lake and downtown Kirkland using treatments that may include items such as pavement marking, signage, lighting, crossing treatments (which may include signing, islands, beacons, improvements to or new traffic signals), traffic calming, drainage improvements, sidewalks or other walkway improvements.

Funding

Phase	Start Date	Federal Fund Code	Federal Funds	State Fund Code	State Funds	Local Funds	Total
CN	2024	CMAQ	1,608,900		0	251,100	1,860,000
		Project Totals	**1,608,900**		**0**	**251,100**	**1,860,000**

Expenditure Schedule

Phase	1st	2nd	3rd	4th	5th & 6th
ALL	1,860,000	0	0	0	0
Totals	**1,860,000**	**0**	**0**	**0**	**0**

DOT Fo
Revisec

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: _____

APPENDIX D:
STORMWATER TIR

City of Kirkland

Storm Drainage Technical Information Report

Final

Kirkland Neighborhood Greenway
Kirkland, Washington

TDGI0000-0003

October 2024

DAVID EVANS
AND ASSOCIATES INC.

Storm Drainage Technical Information Report

Final

Kirkland Neighborhood Greenway
Kirkland, Washington

Prepared for:

City of Kirkland
123 Fifth Avenue
Kirkland, WA 98033

Prepared by:

DAVID EVANS AND ASSOCIATES, INC.
14432 SE Eastgate Way, Suite 400
Bellevue, WA 98007

TDGI0000-0003

October 2024

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Appendices

Acronyms and Abbreviations

BMPs	Best Management Practice(s)
BP	Basin Plan
CESCL	Certified Erosion and Sediment Control Lead
CSWPPP	Construction Stormwater Pollution Prevention Plan
FHRP	Flood Hazard Reduction Plan
KCRTS	King County Runoff Time Series
KCSWDM	King County Surface Water Design Manual
LID	Low Impact Development
LMP	Lake Management Plan
MDP	Master Drainage Plan
NRCS	National Resource Conservation Service
SCP	Salmon Conservation Plan
SFDP	Shared Facility Drainage Plan
SWCP	Stormwater Compliance Plan
TDA	Threshold Discharge Area
TESC	Temporary Erosion and Sediment Control
TIR	Technical Information Report

1 Project Overview

1.1 Background

The City of Kirkland's Transportation Master Plan identifies the need for a network of greenways. Greenways are bicycle and pedestrian facilities located on roadways that have lower motor vehicle speeds and volumes, and include special signing and markings and traffic calming features where merited. This project represents the continuation of the greenways network, building off the first set locations recently constructed in the City of Kirkland. The Kirkland Neighborhood Greenway project will connect the North Rose Hill neighborhood with the Highlands, Norkirk, and downtown neighborhoods.

1.2 Project Location

The Kirkland Neighborhood Greenway Project is approximately 3 miles in length located in Sections 4, 5, and 6 of Township 25 North, Range 5 East as well as Sections 32 and 33 of Township 26 North, Range 5 East within King County, Washington. The southwesterly project limits begin near the intersection of Waverly Way and 2nd Street W. The greenway project extends northeasterly to the intersection of Slater Avenue NE and NE 112th Place. The project corridor spans four surface water drainage basins: Kirkland Slope, Moss Bay and two Forbes Creek drainage basins.

Along the project's corridor there are seven locations which involve stormwater analysis based on the extent of work being performed. Improvements at these locations primarily involve providing pedestrian bulb outs and new sidewalks along the adjacent roadway.

Location 1 is located along Market Street between 2nd Street and 9th Avenue.

Location 2 is located at the intersection of 6th Street and 12th Avenue.

Location 3 is located at the intersection of 112th Avenue NE and 7th Avenue/ NE 87th Street.

Location 4 is located along NE 100th Street at the intersections with 112th Avenue NE and 114th Avenue NE.

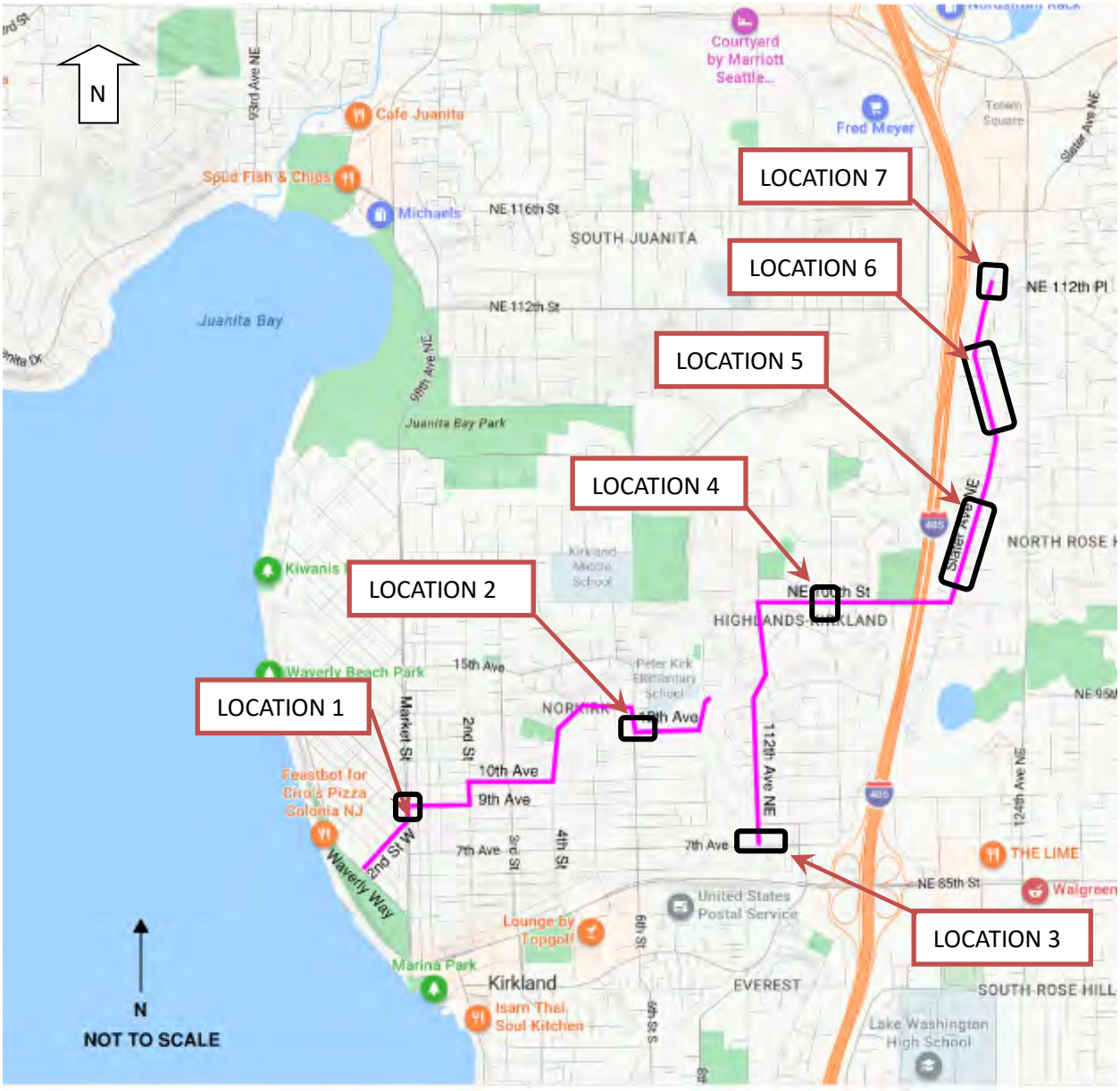
Location 5 is located along Slater Avenue NE. The southern limits begin at the intersection with NE 100th Street and extends approximately 1,000 feet northerly along Slater Avenue NE

Location 6 is located along Slater Avenue NE between NE 106th Street and NE 108th Place.

Location 7 is located at the intersection of Slater Avenue NE and NE 112th Place.

Figure 1 illustrates the location of the seven locations relative to the surrounding area. In general, all seven locations are in developed areas. The sites are either surrounded by businesses or residential units.

Figure 1. Vicinity Map



The purpose of this Technical Information Report (TIR) is to evaluate stormwater requirements based on drainage impacts resulting from the project improvements, the addition of structures, and changes to land cover characteristics. This evaluation complies with the 2021 King County Surface Water Design Manual (KCSWDM) and the City of Kirkland Addendum to the 2021 King County Surface Water Design Manual. The following drainage review flowchart (**Figure 2)** shows that the projects will require a full drainage review. The TIR Worksheet in **Figure 3** is shown to provide an overview of each of the project locations.

Figure 2. Drainage Review Flow Chart

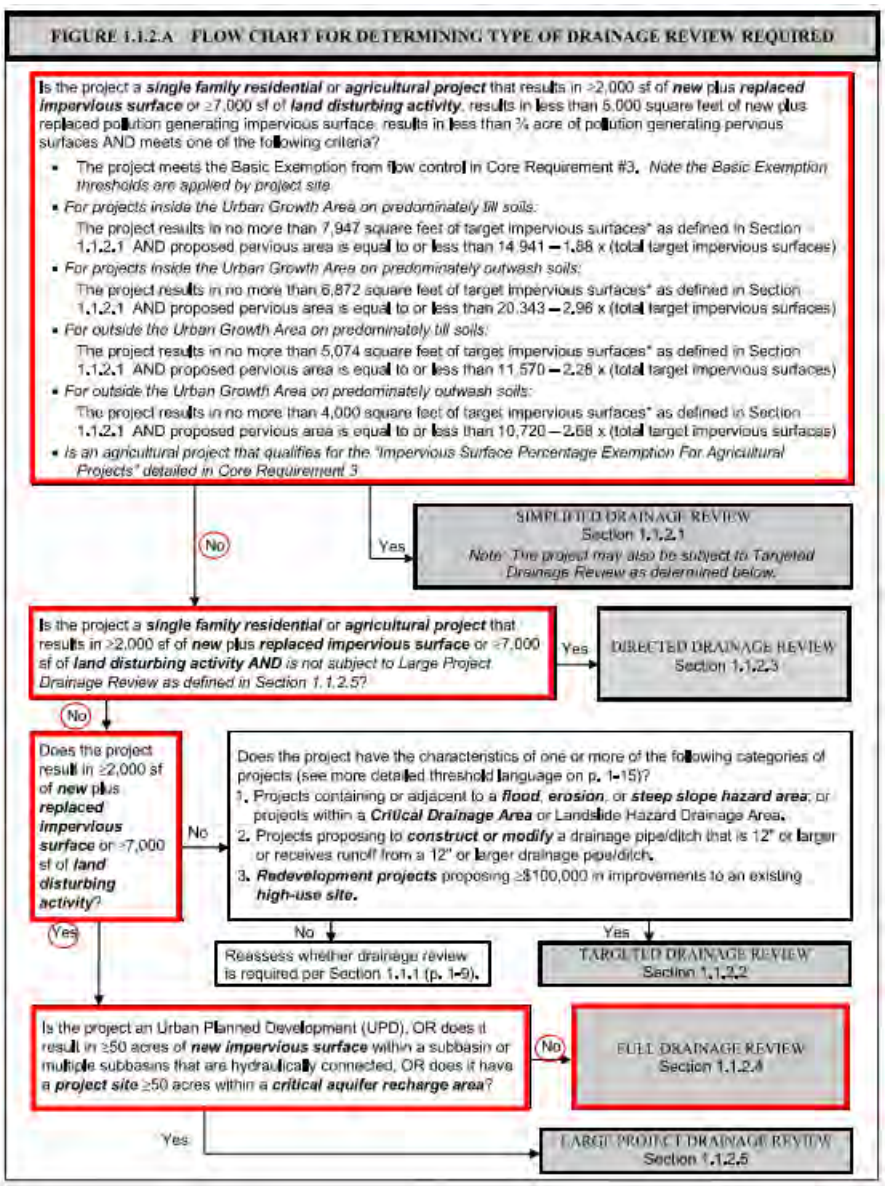


Figure 3. Technical Information Report Worksheet

Part 1 PROJECT OWNER AND PROJECT ENGINEER

Project Owner City of Kirkland

Phone (425) 587-3000

Address 123 Fifth Avenue
Kirkland, WA 98033

Project Engineer Nathan Wong, P.E.

Company David Evans and Associates, Inc.

Phone (425) 519-6500

Part 2 PROJECT LOCATION AND DESCRIPTION

Project Name Kirkland Neighborhood Greenway

DDES Permit # _____

Location Township 25N
Range 5E
Section 4,5,6
Township 26N
Range 5E
Section 32,33

Site Address: See Vicinity Map

Part 3 TYPE OF PERMIT APPLICATION

☐ Landuse Services
Subdivision / Short Subd. / UPD

☐ Building Services
M/F / Commercial / SFR

☒ Clearing and Grading

☐ Right-of-Way Use

☐ Other _____

Part 4 OTHER REVIEWS AND PERMITS

☐ DFW HPA ☐ Shoreline Management

☐ COE 404 ☐ Structural

☐ DOE Dam Safety Rockery/Vault/_____

☐ FEMA Floodplain ☐ ESA Section 7

☐ COE Wetlands

☐ Other: _____

Part 5 PLAN AND REPORT INFORMATION

Technical Information Report		**Site Improvement Plan (Engr. Plans)**	
Type of Drainage Review (circle):	Full / Targeted / Large Site	Type (circle one):	Full / Modified / Small Site
Date (include revision dates):	January 2024 July 2024	Date (include revision dates):	January 2024 July 2024
Date of Final:	October 2024	Date of Final:	October 2024

Part 6 ADJUSTMENT APPROVALS

Type (circle one): Standard / Complex / Preapplication / Experimental / Blanket

Description: (include conditions in TIR Section 2)

Date of Approval: _____

Part 7 MONITORING REQUIREMENTS

Monitoring Required: Yes / (No)

Start Date: _____

Completion Date: _____

Describe: _____

Part 8 SITE COMMUNITY AND DRAINAGE BASIN

Community Plan: _____

Special District Overlays: _____

Drainage Basin: Locations 1 through 4: Moss Bay, Locations 5 – 7: Forbes Creek

Stormwater Requirements: _____

Part 9 ONSITE AND ADJACENT SENSITIVE AREAS

- ☒ River/Stream Forbes Creek
- ☐ Lake _____
- ☒ Wetlands Location #5–Slater Avenue NE
- ☐ Closed Depression _____
- ☐ Floodplain _____
- ☐ Other _____
- ☐ Steep Slope _____
- ☐ Erosion Hazard _____
- ☐ Landslide Hazard _____
- ☐ Coal Mine Hazard _____
- ☐ Seismic Hazard _____
- ☐ Habitat Protection _____
- ☐ _____

Part 10 SOILS

Soil Type	Slopes	Erosion Potential
Arents, Alderwood	6% to 15%	Low
Alderwood	8% to 15%	Low

Indianola, Loamy Sand	5% to 15%	Low

☐ High Groundwater Table (within 5 feet) ☐ Sole Source Aquifer

☐ Other ☐ Seeps/Springs

☐ Additional Sheets Attached

Part 11 DRAINAGE DESIGN LIMITATIONS

REFERENCE	LIMITATION / SITE CONSTRAINT
☐ Core 2 – Off-site Analysis	
☐ Sensitive/Critical Areas	
☒ SEPA	
☐ Other	
☐	

☐ Additional Sheets Attached

Part 12 TIR SUMMARY SHEET **(provide one TIR Summary Sheet per Threshold Discharge Area)**

Threshold Discharge Area: TDA #1: Location 1 – Market between 2nd Street and 9th Avenue
(name or description)

Code Requirements (all 8 apply)	
Discharge at Natural Location	Number of Natural Discharge Locations: 1
Off-site Analysis	Level (1) / 2 / 3 dated: January 2024
Flow Control (incl. facility summary sheet)	Level 1 / 2 / 3 or Exemption Number Surface Area Small Site BMPs
Conveyance System	Spill containment located at: N/A
Erosion and Sediment Control	ESC Site Supervisor: TBD Contact Phone: After Hours Phone:
Maintenance and Operation	Responsibility: Private / (Public) If Private, Maintenance Log Required: Yes / No
Financial Guarantees and Liability	Provided: Yes / (No)
Water Quality (include facility summary sheet)	Type: Basic / Sens. Lake / Enhanced Basic / Bog or Exemption No. Surface Area

	Landscape Management Plan: Yes / (No)
Special Requirements (as applicable)	
Area Specific Drainage Requirements	Type: CDA / SDO / MDP / BP / LMP / Shared Fac. / (None) Name:
Floodplain/Floodway Delineation	Type: Major / Minor / Exemption / (None) 100-year Base Flood Elevation (or range): Datum:
Flood Protection Facilities	Describe:
Source Control (comm./industrial land use)	Describe land use: Public Roadway Describe any structural controls:
Oil Control	High-use Site: Yes / (No) Treatment BMP: Maintenance Agreement: Yes / (No) With Whom?
Other Drainage Structures	
Describe:	

Part 12 TIR SUMMARY SHEET	**(provide one TIR Summary Sheet per Threshold Discharge Area)**
Threshold Discharge Area: TDA #2: Location 2 – 6th Street and 12th Avenue (name or description)	
Code Requirements (all 8 apply)	
Discharge at Natural Location	Number of Natural Discharge Locations: 1
Off-site Analysis	Level (1) / 2 / 3 dated: January 2024
Flow Control (incl. facility summary sheet)	Level 1 / 2 / 3 or Exemption Number Surface Area Small Site BMPs
Conveyance System	Spill containment located at: N/A
Erosion and Sediment Control	ESC Site Supervisor: TBD Contact Phone: After Hours Phone:
Maintenance and Operation	Responsibility: Private / (Public) If Private, Maintenance Log Required: Yes / No
Financial Guarantees and Liability	Provided: Yes / (No)
Water Quality (include facility summary sheet)	Type: Basic / Sens. Lake / Enhanced Basic / Bog or Exemption No. Surface Area

	Landscape Management Plan: Yes / (No)
Special Requirements (as applicable)	
Area Specific Drainage Requirements	Type: CDA / SDO / MDP / BP / LMP / Shared Fac. / (None) Name:
Floodplain/Floodway Delineation	Type: Major / Minor / Exemption / (None) 100-year Base Flood Elevation (or range): Datum:
Flood Protection Facilities	Describe:
Source Control (comm./industrial land use)	Describe land use: Public Roadway Describe any structural controls:
Oil Control	High-use Site: Yes / (No) Treatment BMP: Maintenance Agreement: Yes / (No) With Whom?
Other Drainage Structures	
Describe:	

Part 12 TIR SUMMARY SHEET	**(provide one TIR Summary Sheet per Threshold Discharge Area)**
Threshold Discharge Area: TDA #3: Location 3 – 112th Ave NE and 7th Ave/ NE 87th Street Location 4 – 112th Avenue NE and NE 100th Street/114th Avenue NE and NE 100th Street (name or description)	
Code Requirements (all 8 apply)	
Discharge at Natural Location	Number of Natural Discharge Locations: 1
Off-site Analysis	Level (1) / 2 / 3 dated: January 2024
Flow Control (incl. facility summary sheet)	Level 1 / 2 / 3 or Exemption Number Surface Area Small Site BMPs
Conveyance System	Spill containment located at: N/A
Erosion and Sediment Control	ESC Site Supervisor: TBD Contact Phone: After Hours Phone:
Maintenance and Operation	Responsibility: Private / (Public) If Private, Maintenance Log Required: Yes / No
Financial Guarantees and Liability	Provided: Yes / (No)
Water Quality (include facility summary sheet)	Type: Basic / Sens. Lake / Enhanced Basic / Bog or Exemption No. Surface Area

	Landscape Management Plan: Yes / (No)
Special Requirements (as applicable)	
Area Specific Drainage Requirements	Type: CDA / SDO / MDP / BP / LMP / Shared Fac. / (None) Name:
Floodplain/Floodway Delineation	Type: Major / Minor / Exemption / (None) 100-year Base Flood Elevation (or range): Datum:
Flood Protection Facilities	Describe:
Source Control (comm./industrial land use)	Describe land use: Public Roadway Describe any structural controls:
Oil Control	High-use Site: Yes / (No) Treatment BMP: Maintenance Agreement: Yes / (No) With Whom?
Other Drainage Structures	
Describe:	

Part 12 TIR SUMMARY SHEET	**(provide one TIR Summary Sheet per Threshold Discharge Area)**
Threshold Discharge Area: TDA #4: Location 5 – Along Slater Avenue NE near NE 100th Street intersection (extends approximately 1,000 feet north of intersection) (name or description)	
Code Requirements (all 8 apply)	
Discharge at Natural Location	Number of Natural Discharge Locations: 1
Off-site Analysis	Level (1) / 2 / 3 dated: January 2024
Flow Control (incl. facility summary sheet)	Level 1 / 2 / 3 or Exemption Number Surface Area Small Site BMPs
Conveyance System	Spill containment located at: N/A
Erosion and Sediment Control	ESC Site Supervisor: TBD Contact Phone: After Hours Phone:
Maintenance and Operation	Responsibility: Private / (Public) If Private, Maintenance Log Required: Yes / No
Financial Guarantees and Liability	Provided: Yes / (No)
Water Quality (include facility summary sheet)	Type: Basic / Sens. Lake / Enhanced Basic / Bog or Exemption No. Surface Area

	Landscape Management Plan: Yes / (No)
Special Requirements (as applicable)	
Area Specific Drainage Requirements	Type: CDA / SDO / MDP / BP / LMP / Shared Fac. / (None) Name:
Floodplain/Floodway Delineation	Type: Major / Minor / Exemption / (None) 100-year Base Flood Elevation (or range): Datum:
Flood Protection Facilities	Describe:
Source Control (comm./industrial land use)	Describe land use: Public Roadway Describe any structural controls:
Oil Control	High-use Site: Yes / (No) Treatment BMP: Maintenance Agreement: Yes / (No) With Whom?
Other Drainage Structures	
Describe:	

Part 12 TIR SUMMARY SHEET	**(provide one TIR Summary Sheet per Threshold Discharge Area)**
Threshold Discharge Area: TDA #5: Location 6 – Slater Avenue NE between NE 106th Street and NE 108th Place (name or description)	
Code Requirements (all 8 apply)	
Discharge at Natural Location	Number of Natural Discharge Locations: 1
Off-site Analysis	Level (1) / 2 / 3 dated: January 2024
Flow Control (incl. facility summary sheet)	Level 1 / 2 / 3 or Exemption Number Surface Area Small Site BMPs
Conveyance System	Spill containment located at: N/A
Erosion and Sediment Control	ESC Site Supervisor: TBD Contact Phone: After Hours Phone:
Maintenance and Operation	Responsibility: Private / (Public) If Private, Maintenance Log Required: Yes / No
Financial Guarantees and Liability	Provided: Yes / (No)
Water Quality (include facility summary sheet)	Type: Basic / Sens. Lake / Enhanced Basic / Bog or Exemption No. Surface Area

	Landscape Management Plan: Yes / (No)
Special Requirements (as applicable)	
Area Specific Drainage Requirements	Type: CDA / SDO / MDP / BP / LMP / Shared Fac. / (None) Name:
Floodplain/Floodway Delineation	Type: Major / Minor / Exemption / (None) 100-year Base Flood Elevation (or range): Datum:
Flood Protection Facilities	Describe:
Source Control (comm./industrial land use)	Describe land use: Public Roadway Describe any structural controls:
Oil Control	High-use Site: Yes / (No) Treatment BMP: Maintenance Agreement: Yes / (No) With Whom?
Other Drainage Structures	
Describe:	

Part 12 TIR SUMMARY SHEET	**(provide one TIR Summary Sheet per Threshold Discharge Area)**
Threshold Discharge Area: TDA #6: Location 7 – 112th Avenue NE and NE 87th Street (name or description)	
Code Requirements (all 8 apply)	
Discharge at Natural Location	Number of Natural Discharge Locations: 1
Off-site Analysis	Level (1) / 2 / 3 dated: January 2024
Flow Control (incl. facility summary sheet)	Level 1 / 2 / 3 or Exemption Number Surface Area Small Site BMPs
Conveyance System	Spill containment located at: N/A
Erosion and Sediment Control	ESC Site Supervisor: TBD Contact Phone: After Hours Phone:
Maintenance and Operation	Responsibility: Private / (Public) If Private, Maintenance Log Required: Yes / No
Financial Guarantees and Liability	Provided: Yes / (No)
Water Quality (include facility summary sheet)	Type: Basic / Sens. Lake / Enhanced Basic / Bog or Exemption No. Surface Area Landscape Management Plan: Yes / (No)

Special Requirements (as applicable)	
Area Specific Drainage Requirements	Type: CDA / SDO / MDP / BP / LMP / Shared Fac. / (None) Name: _____
Floodplain/Floodway Delineation	Type: Major / Minor / Exemption / (None) 100-year Base Flood Elevation (or range): _____ Datum:
Flood Protection Facilities	Describe:
Source Control (comm./industrial land use)	Describe land use: Public Roadway Describe any structural controls:
Oil Control	High-use Site: Yes / (No) Treatment BMP: _____ Maintenance Agreement: Yes / (No) With Whom? _____
Other Drainage Structures	
Describe:	

Part 13 EROSION AND SEDIMENT CONTROL REQUIREMENTS

MINIMUM ESC REQUIREMENTS DURING CONSTRUCTION	MINIMUM ESC REQUIREMENTS AFTER CONSTRUCTION
☒ Clearing Limits	☒ Stabilize Exposed Surfaces
☒ Cover Measures	☒ Remove and Restore Temporary ESC Facilities
☒ Perimeter Protection	☒ Clean and Remove All Silt and Debris, Ensure Operation of Permanent Facilities
☒ Traffic Area Stabilization	☒ Flag Limits of SAO and open space preservation areas
☒ Sediment Retention	☐ Other: _____
☒ Surface Water Collection	
☒ Dewatering Control	
☒ Dust Control	
☒ Flow Control	

Part 14 STORMWATER FACILITY DESCRIPTIONS (Note: Include Facility Summary and Sketch)

Flow Control	Type/Description	Water Quality	Type/Description

☐ Detention		☐ Biofiltration	
☐ Infiltration		☐ Wetpool	
☐ Regional Facility		☐ Media Filtration	
☐ Shared Facility		☐ Oil Control	
☐ Flow Control BMPs		☐ Spill Control	
☐ Other		☐ Flow Control BMPs	
		☐ Other	

Part 15 EASEMENTS/TRACTS

- ☐ Drainage Easement
- ☐ Covenant
- ☐ Native Growth Protection Easement
- ☐ Tract
- ☐ Other

Part 16 STRUCTURAL ANALYSIS

- ☐ Cast in Place Vault
- ☐ Retaining Wall
- ☐ Rockery > 4' High
- ☐ Structural on Steep Slope
- ☐ Other

Part 17 SIGNATURE OF PROFESSIONAL ENGINEER

I, or a civil engineer under my supervision, have visited the site. Actual site conditions as observed were incorporated into this worksheet and the attached Technical Information Report. To the best of my knowledge the information provided here is accurate.

Nathan K Wang 10/9/24

Signed/Date

1.3 Existing Conditions

In general, each of the seven project sites are in developed areas surrounded by either businesses or housing units. All seven locations are each comprised of a single TDA. The following is brief description of each of the existing sites:

Location 1 – Along Market Street between 2nd Street W and 9th Avenue

The project site is located within the Moss Bay basin. Market Street is a crowned road where the west and east portion of the road sheet flow to the adjacent curb and gutters along the respective shoulders. Storm drainage is collected by a network of catch basins located on both sides. Storm drainage systems from 9th Avenue and 8th Avenue W connect into the Market Street system. The Market Street system conveys stormwater southerly towards the intersection with Central Way/Lake Avenue W and directly discharges to Lake Washington.

Location 2 – Intersection of 6th Street and 12th Avenue

The project site is located within the Moss Bay basin. 6th Street is a crowned road where the west and east portion of the road sheet flow to the adjacent curb and gutters along the respective shoulders. Storm drainage is collected by a network of catch basins located on both sides. The storm drainage system from 12th Avenue connects into the 6th Street system. The 6th Street system conveys runoff southerly meandering in the southwesterly direction along 9th Avenue, 5th Street and Central Way and discharges to Lake Washington.

Location 3 – Intersection of 112th Avenue NE and 7th Avenue/ NE 87th Street

The project site is located within the Moss Bay basin. 7th Avenue/ NE 87th Street is a crowned road where the north and south portion of the road sheet flow to the adjacent curb and gutters along the respective shoulders. Storm drainage is collected by a network of catch basins located on both sides. The storm drainage system along 7th Avenue eventually connects to the same Central Way storm drain system as Location 2.

Location 4 – 112th Avenue NE and NE 100th Street/ 114th Avenue NE and NE 100th Street

The project site is located within the Moss Bay basin. NE 100th Street is a crowned road where the north and south portion of the road sheet flow to the adjacent curb and gutters along the respective shoulders. Storm drainage is collected by a network of catch basins located on both sides. The storm drainage system along NE 100th Street conveys stormwater westerly towards the Cross Kirkland Corridor, where open ditches convey stormwater southerly to 8th Street which then converges to the NE 87th Street system (Location 3).

Location 5 – Along Slater Avenue at NE 100th Street (extends approximately 1,000 feet north of intersection)

The project site is located within the Forbes Creek basin. Slater Avenue is a crowned road where the west and east portion of the road sheet flow to the adjacent curb and gutters along the respective shoulders. Storm drainage is collected by a network of catch basins located on the west side, and a combination of ditches and pipes along the east side. There are two culvert crossings which both convey runoff from the east shoulder of Slater Avenue to the west shoulder. The downstream path of these culverts converges within a 1/4 mile from each other within an open ditch to a single outfall. The ditch continues to convey runoff northwesterly towards I-405.

Location 6 – Along Slater Avenue NE between 106th Street and 108th Place

The project is located within the Forbes Creek basin. Slater Avenue is a super elevated road where the east portion of the road sheet flows to the west. Storm drainage is collected by a network of catch basins located on the west side. The east shoulder has a combination of ditches and pipes. The storm drain system along the west shoulder connects to the open ditches along the east. The combined storm drain system along the east conveys stormwater northerly to an open ditch which then conveys runoff westerly under I-405.

Location 7 – Intersection of Slater Avenue NE and NE 112th Place

The project is located within the Forbes Creek basin. Slater Avenue is a crowned road where the west and east portion of the road sheet flow to the adjacent curb and gutters along the respective shoulders. The storm drain system from the intersection conveys stormwater southwesterly towards I-405. The system crosses under I-405 which then eventually connects to the same system as Location 6.

The downstream analysis is located in **Section 3**.

1.4 Proposed Conditions

Location 1 – Along Market Street between 2nd Street W and 9th Avenue

This project site adds curb bulb-outs along the southbound shoulder of Market Street between 9th Avenue and 2nd Street W. Additional bulb outs are being placed at the northeast and southeast corner of the intersection with 9th Avenue. The intersections will require modifications to the existing storm drain system at the intersections of 8th Avenue W and 9th Avenue with Market Street due to the shift in curb and gutter.

Location 2 – Intersection of 6th Street and 12th Avenue

The project site adds curb bulb-outs at the northwest and northeast quadrants of the intersection. Due to the shift in the curb and gutter, a new catch basin will be required.

Location 3 – Intersection of 112th Avenue NE and 7th Avenue/ NE 87th Street

The project site adds curb bulb-outs at the northwest and northeast quadrants of the intersection. Due to the shift in the curb and gutter, a new catch basin will be required.

Location 4 –112th Avenue NE and NE 100th Street/ 114th Avenue NE and NE 100th Street

The project site adds a curb bulb-out along the eastbound corners of the 112th Avenue intersection and the shoulder at the 114th Avenue NE intersection. Due to the shift in curb and gutter, a new catch basin will be required.

Location 5 – Along Slater Avenue at NE 100th Street (extends approximately 1,000 feet north of intersection)

This project site adds a sidewalk along the east side of Slater Avenue NE. Two small conveyance systems will be required due to the new curb and gutter along Slater Avenue NE. The systems will connect to the culverts crossing Slater Avenue NE.

Location 6 – Along Slater Avenue NE between 106th Street and 108th Place

This project site adds a sidewalk along the east side of Slater Avenue NE. A closed conveyance system will be required since the improvements will cover most of the existing ditch.

Location 7 – Intersection of Slater Avenue NE and NE 112th Place

This project site adds curb bulb-outs along the southbound shoulder of Slater Avenue NE as well as the northeast and southeast corners of the intersection with NE 112th Place.

2 Conditions and Requirements Summary

The drainage design is in accordance with the applicable requirements of the 2021 King County Surface Water Design Manual (KCSWDM) and the City of Kirkland Addendum to the 2021 King County Surface Water Design Manual for a full drainage review. This project is considered a transportation redevelopment project where the projects propose to add, replace, or modify impervious surface, for purposes other than maintenance, within a length of dedicated public or private right-of-way that has an existing impervious surface coverage of thirty-five percent or more.

2.1 Surface Water Design Manual Core Requirements

Core Requirement #1:

Discharge at the Natural Location: The project will collect the developed site's stormwater flows and direct these flows to existing discharge locations.

Core Requirement #2:

Off-site Analysis: A downstream analysis was completed by conducting a site visit and examining county maps, GIS and project survey information, and King County iMAP services. The downstream analysis is described in **Section 3**.

Core Requirement #3:

Flow Control: Based on the amount of new impervious areas at each project location, the sites are exempt from flow control based on the increase in impervious surface area exemption being under 5,000 square feet.

In some locations there is a decrease in impervious surface since the existing roadway is being converted to new landscaped areas.

Core Requirement #4:

Conveyance System: The project's conveyance system will be in accordance with the 2021 KCSWDM, Section 1.2.4. The new conveyance system will be designed with sufficient capacity to convey and contain (at minimum) the 25-year peak flow, while also conveying as much of the 100-year storm event to preclude creating or aggravating a severe flooding or erosion problem downstream. Further discussion is included in **Section 5**.

Core Requirement #5:

Erosion and Sedimentation Control: Temporary and permanent erosion and sediment control plans will be implemented during construction. A Temporary Erosion and Sedimentation Control (TESC) Plan has been developed. The project's erosion and sedimentation controls is designed to minimize on-site erosion and sedimentation during construction and to prevent sediment transport to any downstream properties and facilities. The Contractor will be responsible for developing the Construction Stormwater Pollution Prevention Plan (SWPPP), including modifying the engineering plans and narrative as necessary, prior to any construction activity. The final Construction SWPPP shall include the 13 required elements unless site conditions render the element unnecessary. Potential pollutants to be addressed during construction would include hydrocarbons, sawcutting, concrete handling and washout areas. The Construction SWPPP shall include a spill prevention plan and emergency/incident response plan for the construction period.

Core Requirement #6:

Maintenance and Operations: The City of Kirkland will be the responsible party to ensure that adequate and routine maintenance occurs on all portions of the stormwater system. Maintenance would be required for the new catch basins and storm drain pipe installed.

Core Requirement #7:

Financial Guarantees and Liability: This is not applicable for a public works project.

Core Requirement #8:

Water Quality: The project does not add pollution generating impervious surfaces. The project meets the surface water exemption since the total new impervious within the project limits is less than 50% of the existing impervious surface and less than 5,000 square feet of new pollution generating impervious surface will be added.

In most locations there is a decrease in pollution generating impervious surface since the existing roadway is being converted to a sidewalk.

Core Requirement #9:

Flow Control Best Management Practices (BMPs): The project adds more than 2,000 square feet of new plus replaced impervious surfaces, therefore Flow Control BMPs would need to be evaluated for site suitability. The project is classified as a road improvement project where Per the City of Kirkland's Policy D-10: Addendum to the 2021 KCSWDM, all area subject to clearing and grading that have not been covered by impervious surface, incorporated into a drainage facility, or engineered as structural fill or slope shall meet soil amendment requirements per Pre-Approved Plan COK.E-12. For this project, amended soils will be used in proposed landscaped areas where feasible according to BMP T5.13 of the Department of Ecology Manual.

For impervious surfaces, when evaluating BMPs within the right of way to the maximum extent feasible, the BMPs must be evaluated in the following order for:

Sidewalk (that is a target surface):

1. Slope sidewalk (5') to landscape strip (4.5') – Limited right-of-way. No proposed landscape buffers along sidewalk limits. There are pocket landscaped areas, however they do not meet the width. The project scope does not acquire new right-of-way.
2. Bioretention – Limited right-of-way. Not feasible within project limits.
3. Pervious Concrete – Not feasible for size of project.
4. Limited Infiltration – Not feasible for size of project.

Road Widening (that is a target surface):

1. Bioretention – Not Applicable
2. Porous Concrete Parking Strip (if applicable) – Not Applicable
3. Limited Infiltration – Not Applicable

2.2 Surface Water Design Manual Special Requirements

Other Adopted Requirements: There are no known Master Drainage Plans (MDPs), Basin Plans (BPs), Salmon Conservation Plans (SCPs), Stormwater Compliance Plans (SWCPs), Lake Management Plans (LMPs), Flood Hazard Reduction Plan Updates (FHRPs), or Shared Facility Drainage Plans (SFDPs) or other requirements applicable to the project.

Flood Hazard Area Delineation: King County GIS data shows that this project is not within flood hazard areas.

Flood Protection Facilities: No flood protection facilities are required.

Source Control: The project is not a commercial development. Therefore, this special requirement is not applicable.

Oil Control: Not applicable. The project sites are not considered a high-use site

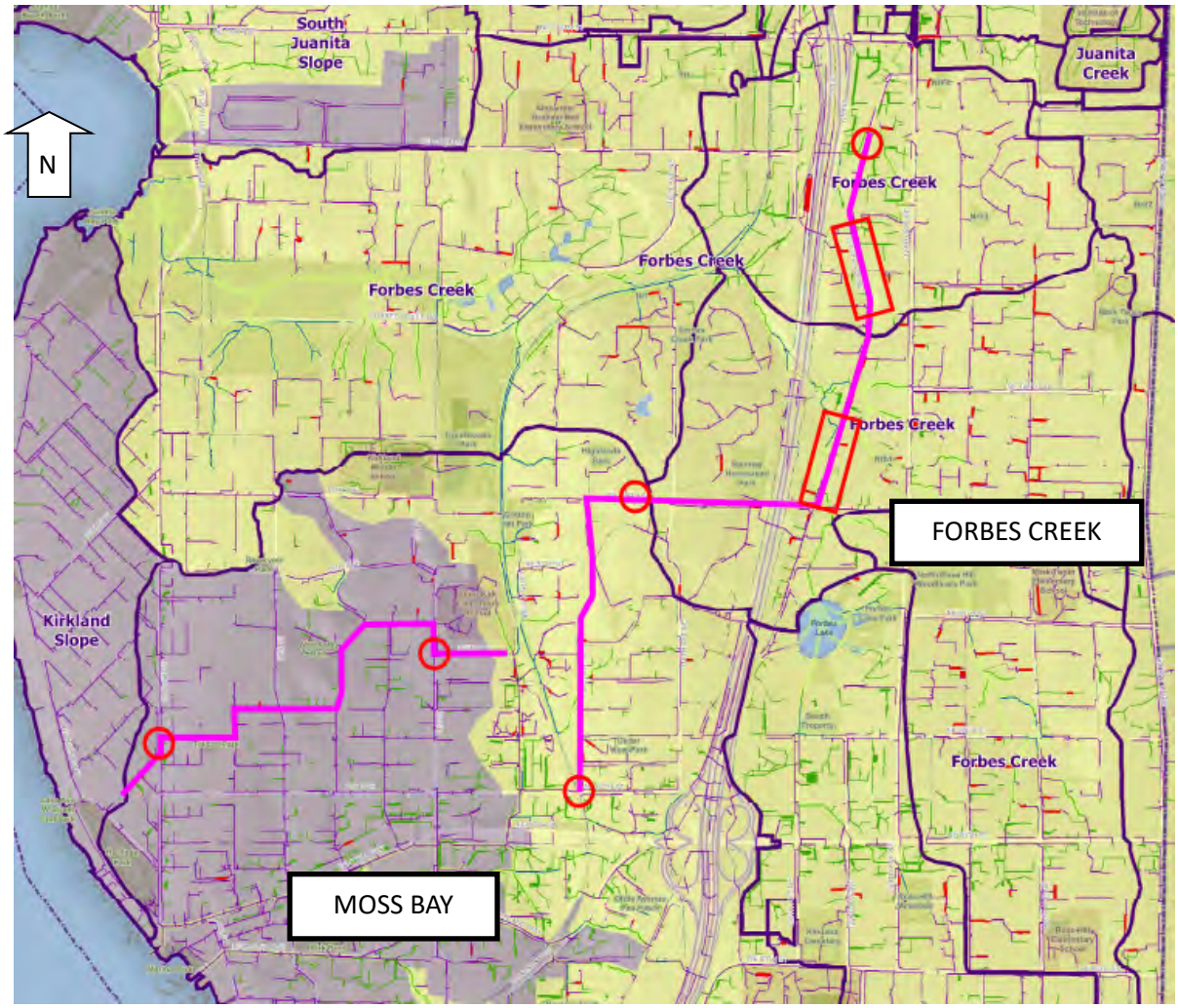
3 Off-Site Analysis

3.1 Task 1. Study Area Definition and Maps

An off-site analysis has been completed by conducting a site visit and using county maps, GIS and project survey information, and King County iMAP services. This analysis follows the proposed site discharge for approximately 1/4 mile downstream from the site locations.

The project spans two basins, both the Moss Bay and Forbes Creek basins which are shown in **Figure 4.**

Figure 4. Drainage Basin Map

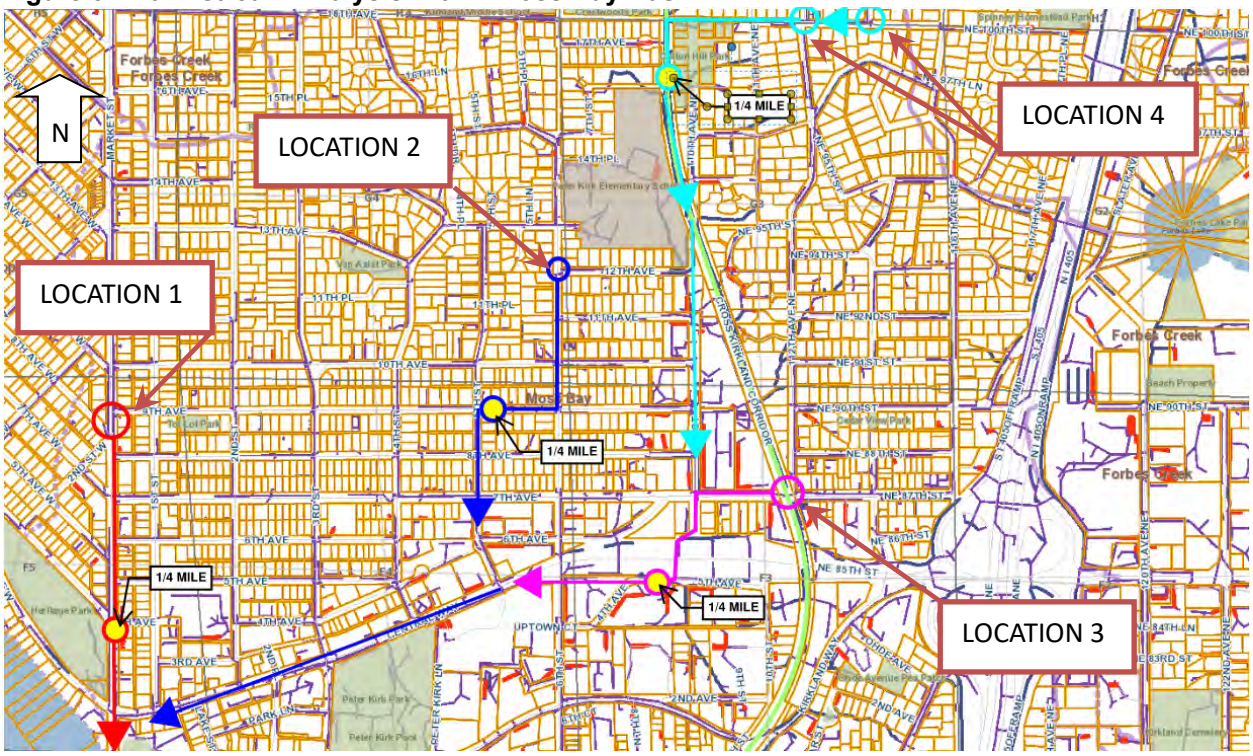


A site visit was conducted where there were no visible signs of erosion or flooding observed.

This analysis follows the proposed site discharge for approximately 1/4 mile downstream from the site location.

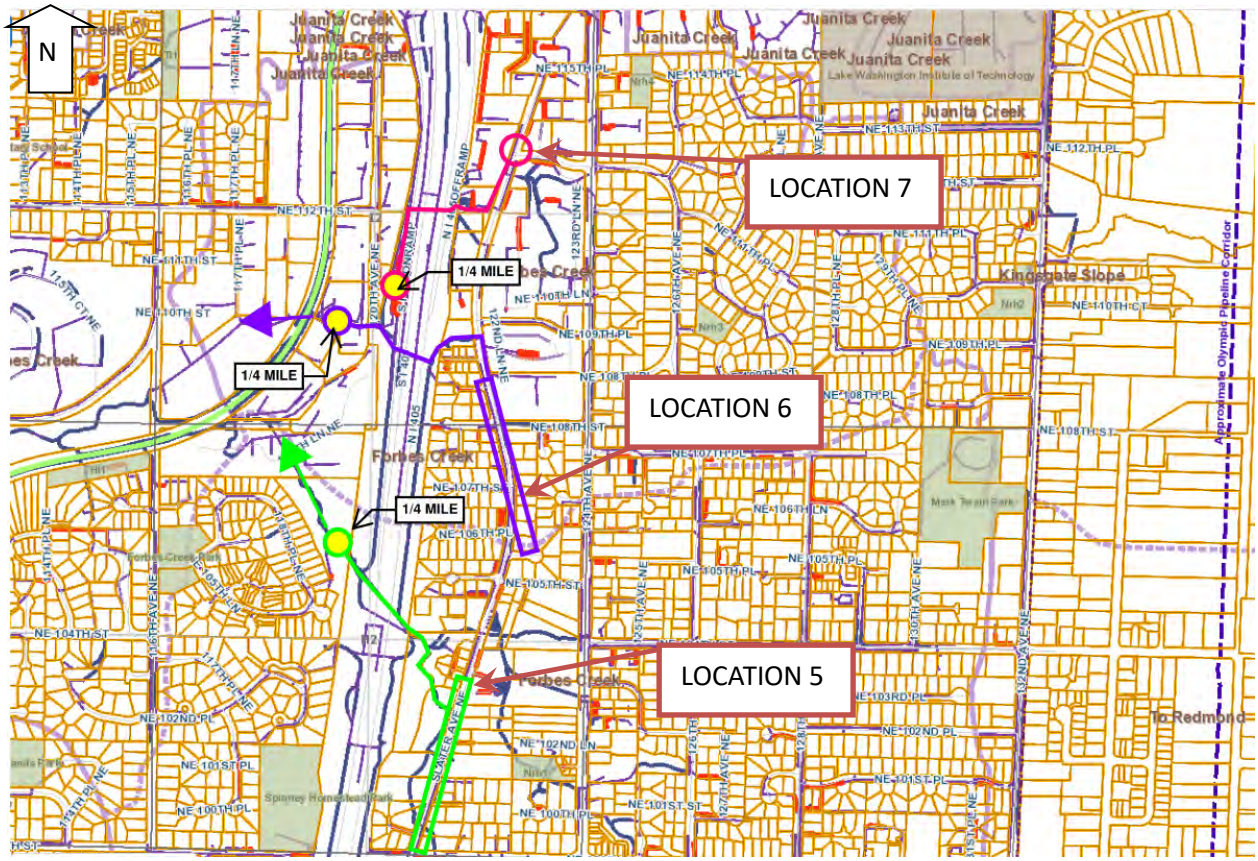
See **Figures 5 and 6** for the downstream flow path and discharge locations.

Figure 5. Downstream Analysis within Moss Bay Basin



Within Moss Bay, Locations 1 and 2 have a downstream flow path which combines beyond 1/4 mile downstream of each other, resulting in separate TDAs. Location 4 converges with Location 3, which then also converges with the same storm drain system as Location 2. Location 4 combines within Location 3's 1/4 mile path, therefore Location 3 and 4 are considered a single TDA.

Figure 6. Downstream Analysis within Forbes Creek Basin



Within the Forbes Creek Basin, Locations 6 and 7 converge to the same storm drain system, once both systems cross I-405. Both systems downstream path combines beyond 1/4 mile downstream of each site.

4 Flow Control, Low Impact Development (LID) and Water Quality Facility Analysis and Design

4.1 Part A – Existing Site Hydrology

Existing site conditions are described under **Section 1**. The downstream flow paths are described in **Section 3**.

The quantities of existing impervious and pervious surfaces are listed in **Table 1** to **Table 7**.

Table 1. Location 1 - Pre-Developed Areas

Pre-Developed Area	Square Feet	Acres
Existing Impervious Surface	31,742	0.73
Existing Pervious Surface	7,160	0.16
Total Site Area	38,902	0.89
Percent Impervious	82%	

Table 2. Locations 2 - Pre-Developed Areas

Pre-Developed Area	Square Feet	Acres
Existing Impervious Surface	5,630	0.13
Existing Pervious Surface	997	0.02
Total Site Area	6,627	0.15
Percent Impervious	85%	

Table 3. Location 3 - Pre-Developed Areas

Pre-Developed Area	Square Feet	Acres
Existing Impervious Surface	15,508	0.36
Existing Pervious Surface	4,995	0.11
Total Site Area	20,503	0.47
Percent Impervious	76%	

Table 4. Location 4 - Pre-Developed Areas

Pre-Developed Area	Square Feet	Acres
Existing Impervious Surface	11,738	0.27
Existing Pervious Surface	3,454	0.08
Total Site Area	15,192	0.35
Percent Impervious	77%	

Table 5. Location 5 - Pre-Developed Areas

Pre-Developed Area	Square Feet	Acres
Existing Impervious Surface	31,489	0.72
Existing Pervious Surface	20,775	0.48
Total Site Area	52,264	1.20
Percent Impervious	60%	

Table 6. Location 6 - Pre-Developed Areas

Pre-Developed Area	Square Feet	Acres
Existing Impervious Surface	46,363	1.06
Existing Pervious Surface	23,120	0.53
Total Site Area	69,483	1.60
Percent Impervious	67%	

Table 7. Location 7 - Pre-Developed Areas

Pre-Developed Area	Square Feet	Acres
Existing Impervious Surface	8,096	0.19
Existing Pervious Surface	2,088	0.05
Total Site Area	10,184	0.23
Percent Impervious	79%	

4.2 Part B – Developed Site Hydrology

For the seven locations which involve stormwater analysis, the total new non-pollution generating impervious surface totals 4,653 square feet. Most of the new non-pollution generating impervious is along Slater Avenue where new sidewalk is being placed over the existing pervious shoulder. The total new pollution generating impervious surface is 2,084 square feet.

A summary of the proposed surface areas for each location is shown in **Table 8** to **Table 14.**

Table 8. Location 1 - Proposed Areas

Developed Area	Square Feet	Acres
Replaced Impervious	8,598	0.20
New Non-Pollution Generating Impervious	121	0.00
New Pollution Generating Impervious	0	0.00

Table 9. Locations 2 - Proposed Areas

Developed Area	Square Feet	Acres
Replaced Impervious	1,980	0.05
New Non-Pollution Generating Impervious	156	0.00
New Pollution Generating Impervious	0	0.00

Table 10. Location 3 - Proposed Areas

Developed Area	Square Feet	Acres
Replaced Impervious	3,778	0.09
New Non-Pollution Generating Impervious	141	0.00
New Pollution Generating Impervious	0	0.00

Table 11. Location 4 - Proposed Areas

Developed Area	Square Feet	Acres
Replaced Impervious	2,712	0.06
New Non-Pollution Generating Impervious	3	0.00
New Pollution Generating Impervious	0	0.00

Table 12. Location 5 - Proposed Areas

Developed Area	Square Feet	Acres
Replaced Impervious	6,242	0.14
New Non-Pollution Generating Impervious	1,269	0.03
New Pollution Generating Impervious	0	0.00

Table 13. Location 6 - Proposed Areas

Developed Area	Square Feet	Acres
Replaced Impervious	6,254	0.14
New Non-Pollution Generating Impervious	2,889	0.07
New Pollution Generating Impervious	2,084	0.05

Table 14. Location 7 - Proposed Areas

Developed Area	Square Feet	Acres
Replaced Impervious	1,856	0.04
New Non-Pollution Generating Impervious	74	0.00
New Pollution Generating Impervious	0	0.00

Existing and proposed area exhibits are provided in **Appendix C**.

4.3 Part C – Performance Standards

Flow Control & Water Quality Performance Standards: The project is exempt from flow control and water quality.

Conveyance System Capacity Standards: The project's conveyance system is designed in accordance with the 2021 KCSWDM Section 1.2.4. The new conveyance systems are designed with sufficient capacity to convey and contain (at minimum) the 25-year peak flow, while also conveying as much of the 100-year storm event to preclude creating or aggravating a severe flooding or erosion problem downstream.

Conveyance calculations are provided in **Appendix D**.

4.4 Part D – Flow Control System

Based on the total area for each location, the sites are exempt from flow control since each project has less than 5,000 square feet of new impervious. See tables in Section 4.2.

4.5 Part E – Water Quality System

As discussed in Section 2, **Core Requirement #8**, water quality since the project meets the criteria for surface area exemption.

The surface area exemption requires the project, or TDA, meet all the following criteria:

- The total new impervious surface is less than 50% of the existing impervious surface,
- Less than 5,000 SF of new PGIS will be added, AND
- Less than 3/4 acre of new pollution generating pervious surface will be added.

Within the TDA, the total new impervious area is less than 50% of the existing impervious surface, and less than 5,000 square feet of new PGIS is added. This project meets the surface area exemption #2 from Core Requirement #8.

5 Conveyance System Analysis and Design

Conveyance System Capacity Standards: For Locations 1 through 4 and Location 7, existing catch basins at the intersections are being covered by the new bulb-out. Catch basins are being placed within the new curb line and connecting to the existing system.

Locations 5 and 6 also involve new enclosed systems mainly due to the existing roadside ditches along the corridor being filled by the new sidewalk.

Conveyance calculations for the storm drain systems are provided in **Appendix D**.

6 Special Reports and Studies

The following list identifies special studies that have been prepared for this project to date.

- Kirkland Stores to Shores Greenway Improvements Project Critical Areas Report, May 2024 – Prepared by David Evans and Associates

7 Other Permits

Permit(s) required for this project include:

- SEPA
- Construction Stormwater General Permit
- Clearing and Grading Permit

8 CSWPPP Analysis and Design

8.1 ESC Plan Analysis and Design (Part A)

Construction activities will include excavation, bridge removal and construction, clearing and grubbing, grading, paving, and landscaping. The Contractor will be responsible for developing the Construction SWPPP, including modifying the engineering plans and narrative as necessary, prior to any construction activity. The following provides a brief explanation of temporary erosion control and construction stormwater pollution prevention best management practices (BMPs) selected during the design phase. The final Construction SWPPP shall include the 13 required elements unless site conditions render the element unnecessary. The Construction SWPPP shall include a spill prevention plan and emergency/incident response plan for the construction period.

The objectives of the CSWPPP are to:

1. Implement BMPs to prevent erosion and sedimentation; and to identify, reduce, eliminate, or prevent stormwater contamination and water pollution from construction activity.
2. Prevent violations of surface water quality, ground water quality, or sediment management standards.
3. Prevent, during the construction phase, adverse water quality impacts including impacts on beneficial uses of the receiving water by controlling peak flow rates and volumes of stormwater runoff at the Permittee's outfalls and downstream of the outfalls.

The following categories of ESC measures, as listed in the KCSWDM Section 1.2.5, and their applicability to the proposed project are discussed below.

1. Clearing Limits - To protect adjacent properties and to reduce the area of soil exposed during construction, the limits of construction shall be clearly marked with high-visibility fence before land-disturbing activities begin. In general, natural vegetation and native topsoil shall be retained in an undisturbed state to the maximum extent possible.
2. Cover Measures - Temporary and permanent cover measures shall be provided to protect all disturbed areas, including the faces of cut and fill slopes. Temporary cover shall be installed if an area is to remain un-worked for more than 7 days in the dry season (May 1 to September 30) or for more than 2 consecutive working days during the wet season (October 1 to April 30). Cover measures may include erosion control nets and blankets, plastic covering, seeding, and sodding. Temporary areas may be stabilized with plastic sheeting or erosion control nets and blankets. Stockpiles, exposed soils, and aggregate piles shall be covered with plastic sheeting.

   All earth work areas not covered by quarry spalls or other measures will be stabilized with a 2" layer of straw mulch. Cut and fill slopes will be covered with erosion control blanket over a layer of compost. Surface roughening and temporary seeding will be

used to stabilize exposed soils. Wattles, straw bales, and straw mulch will be installed in the earth work area to reduce flow velocity, spread the flow width, and capture sediment.

3. Perimeter Protection – Silt fences will be installed at the toe of fill slopes within the temporary construction easements shown on the plans.
4. Traffic Area Stabilization – Construction access or activities occurring on unpaved areas shall be minimized, yet where necessary, access points shall be stabilized to minimize the tracking of sediment onto public roads. Street sweeping and street cleaning shall be employed to prevent sediment from entering state waters. There will be no washing of pavements and streets. Pavement shall be swept or vacuumed.
5. Sediment Retention – All stormwater runoff from disturbed areas shall pass through an appropriate sediment removal BMP before leaving the construction site or prior to being discharged.
6. Surface Water Collection – Surface water controls shall be constructed during the initial grading of the area and must be in place before there is any opportunity for stormwater to cause erosion. This will include perimeter silt fencing, coir logs and check dams within roadside ditches.
7. Dewatering Control – Dewatering may be necessary for this project. All dewatering from excavation zones shall be pumped to a sediment trap, or tank prior to discharge. Any dewatering water that has come into contact with concrete shall be tested for pH prior to discharge.
8. Dust Control - Preventive measures to minimize wind transport of soil shall be implemented at all times. A tank truck and water source shall be established and kept on-site at all times. At no time during construction shall excavation or other construction activities develop dust clouds. At no time shall runoff be generated from watering activities.
9. Flow Control – A combination of measures will be used for flow control ranging from various cover measures, surface water collection and sediment retention. The actual measures used will depend on the Contractor's means and methods utilized.
10. Control Pollutants – Control of pollutants will be covered in the Contractor's Stormwater Pollution Prevention and Spill Control Plan (SWPPS). See Section 8.2 for further discussion of this plan.
11. Protect Existing and Proposed Flow Control BMPs – Not applicable.
12. Maintain BMP's - All temporary and permanent erosion and sediment control BMPs shall be maintained and repaired as needed to assure continued performance of their intended function. Maintenance and repair shall be conducted in accordance with each particular BMP's specifications. Visual monitoring of the BMPs will be conducted at least once every calendar week and within 24 hours of any stormwater or non-stormwater

discharge from the site. If the site becomes inactive, and is temporarily stabilized, the inspection frequency will be reduced to once every month.

All temporary erosion and sediment control BMPs shall be removed within 30 days after the final site stabilization is achieved or after the temporary BMPs are no longer needed. Trapped sediment shall be removed or stabilized on site. Disturbed soil resulting from removal of BMPs or vegetation shall be permanently stabilized.

13. Manage the Project –

Inspection and Monitoring

All BMPs shall be inspected, maintained, and repaired as needed to assure continued performance of their intended function. Site inspections shall be conducted by a person who is knowledgeable in the principles and practices of erosion and sediment control. This person has the necessary skills to:

Assess the site conditions and construction activities that could impact the quality of stormwater, and

Assess the effectiveness of erosion and sediment control measures used to control the quality of stormwater discharges.

A Certified Erosion and Sediment Control Lead shall be onsite or on-call at all times. Whenever inspection and/or monitoring reveals that the BMPs identified in this SWPPP are inadequate, due to the actual discharge of or potential to discharge a significant amount of any pollutant, appropriate BMPs or design changes shall be implemented as soon as possible.

Maintaining an Updated Construction SWPPP

The SWPPP shall be retained onsite or within reasonable access to the site. The SWPPP shall be modified whenever there is a change in the design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to the waters of the state.

The SWPPP shall be modified if, during inspections or investigations conducted by the owner/operator, or the applicable local or state regulatory authority, it is determined that the SWPPP is ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site. The SWPPP shall be modified as necessary to include additional or modified BMPs designed to correct problems identified. Revisions to the SWPPP shall be completed within seven (7) days following the inspection.

8.2 SWPPS Plan Design (Part B)

The following Construction activities have been identified as significant erosion and sediment generating activities and specific BMPs have been identified as most appropriate for the conditions:

Construction activities that could contribute pollutants to surface stormwater are:

- Clearing and Grading
- Roadway Widening

Measures described above in Section 8.1 and on the Erosion Control Plans provide various BMPs that can be used. The Contractor is responsible for developing a more detailed SWPPS Plan based on their means and methods they plan on using to construct the project.

9 Bond Quantities, Facility Summaries, and Declaration of Covenant

Not applicable to City projects.

10 Maintenance and Operations Manual

The elements of the installed system requiring maintenance are listed below. The maintenance requirements for the proposed facilities are based on the King County Surface Water Design Manual.

- Catch Basins – Standard maintenance per current maintenance practices.
- Pipes, and Ditches – Standard maintenance per current maintenance practices.

NO. 5 – CATCH BASINS AND MANHOLES

Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Structure	Sediment	Sediment exceeds 60% of the depth from the bottom of the catch basin to the invert of the lowest pipe into or out of the catch basin or is within 6 inches of the invert of the lowest pipe into or out of the catch basin.	Sump of catch basin contains no sediment.
	Trash and debris	Trash or debris of more than ½ cubic foot which is located immediately in front of the catch basin opening or is blocking capacity of the catch basin by more than 10%.	No Trash or debris blocking or potentially blocking entrance to catch basin.
		Trash or debris in the catch basin that exceeds $^1/_3$ the depth from the bottom of basin to invert the lowest pipe into or out of the basin.	No trash or debris in the catch basin.
		Dead animals or vegetation that could generate odors that could cause complaints or dangerous gases (e.g., methane).	No dead animals or vegetation present within catch basin.
		Deposits of garbage exceeding 1 cubic foot in volume.	No condition present which would attract or support the breeding of insects or rodents.
	Damage to frame and/or top slab	Corner of frame extends more than ¾ inch past curb face into the street (If applicable).	Frame is even with curb.
		Top slab has holes larger than 2 square inches or cracks wider than ¼ inch.	Top slab is free of holes and cracks.
		Frame not sitting flush on top slab, i.e., separation of more than ¾ inch of the frame from the top slab.	Frame is sitting flush on top slab.
	Cracks in walls or bottom	Cracks wider than ½ inch and longer than 3 feet, any evidence of soil particles entering catch basin through cracks, or maintenance person judges that catch basin is unsound.	Catch basin is sealed and is structurally sound.
		Cracks wider than ½ inch and longer than 1 foot at the joint of any inlet/outlet pipe or any evidence of soil particles entering catch basin through cracks.	No cracks more than $^1/_4$ inch wide at the joint of inlet/outlet pipe.
	Settlement/ misalignment	Catch basin has settled more than 1 inch or has rotated more than 2 inches out of alignment.	Basin replaced or repaired to design standards.
	Damaged pipe joints	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering the catch basin at the joint of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of inlet/outlet pipes.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
Inlet/Outlet Pipe	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.

NO. 5 – CATCH BASINS AND MANHOLES

Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Metal Grates (Catch Basins)	Unsafe grate opening	Grate with opening wider than $^{7}/_{8}$ inch.	Grate opening meets design standards.
	Trash and debris	Trash and debris that is blocking more than 20% of grate surface.	Grate free of trash and debris. footnote to guidelines for disposal
	Damaged or missing	Grate missing or broken member(s) of the grate. **Any open structure requires urgent maintenance**.	Grate is in place and meets design standards.
Manhole Cover/Lid	Cover/lid not in place	Cover/lid is missing or only partially in place. **Any open structure requires urgent maintenance**.	Cover/lid protects opening to structure.
	Locking mechanism Not Working	Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.	Mechanism opens with proper tools.
	Cover/lid difficult to Remove	One maintenance person cannot remove cover/lid after applying 80 lbs. of lift.	Cover/lid can be removed and reinstalled by one maintenance person.

NO. 6 – CONVEYANCE PIPES AND DITCHES

Maintenance Component	Defect or Problem	Conditions When Maintenance is Needed	Results Expected When Maintenance is Performed
Pipes	Sediment & debris accumulation	Accumulated sediment or debris that exceeds 20% of the diameter of the pipe.	Water flows freely through pipes.
	Vegetation/roots	Vegetation/roots that reduce free movement of water through pipes.	Water flows freely through pipes.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Damage to protective coating or corrosion	Protective coating is damaged; rust or corrosion is weakening the structural integrity of any part of pipe.	Pipe repaired or replaced.
	Damaged	Any dent that decreases the cross section area of pipe by more than 20% or is determined to have weakened structural integrity of the pipe.	Pipe repaired or replaced.
Ditches	Trash and debris	Trash and debris exceeds 1 cubic foot per 1,000 square feet of ditch and slopes.	Trash and debris cleared from ditches.
	Sediment accumulation	Accumulated sediment that exceeds 20% of the design depth.	Ditch cleaned/flushed of all sediment and debris so that it matches design.
	Noxious weeds	Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.	Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Vegetation	Vegetation that reduces free movement of water through ditches.	Water flows freely through ditches.
	Erosion damage to slopes	Any erosion observed on a ditch slope.	Slopes are not eroding.
	Rock lining out of place or missing (If Applicable)	One layer or less of rock exists above native soil area 5 square feet or more, any exposed native soil.	Replace rocks to design standards.

11 References

City of Kirkland. 2021. *Addendum to the 2021 King County Surface Water Design Manual*

King County. 2021. *Surface Water Design Manual.*

APPENDIX A:

NRCS SOIL INFORMATION

King County Area, Washington

AgC—Alderwood gravelly sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2t626
Elevation: 50 to 800 feet
Mean annual precipitation: 20 to 60 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 160 to 240 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Alderwood and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Alderwood

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Nose slope, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Glacial drift and/or glacial outwash over dense glaciomarine deposits

Typical profile

A - 0 to 7 inches: gravelly sandy loam
Bw1 - 7 to 21 inches: very gravelly sandy loam
Bw2 - 21 to 30 inches: very gravelly sandy loam
Bg - 30 to 35 inches: very gravelly sandy loam
2Cd1 - 35 to 43 inches: very gravelly sandy loam
2Cd2 - 43 to 59 inches: very gravelly sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s

Hydrologic Soil Group: B
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Limited Depth Soils (G002XN302WA), Limited Depth Soils (G002XS301WA), Limited Depth Soils (G002XF303WA)
Other vegetative classification: Limited Depth Soils (G002XN302WA), Limited Depth Soils (G002XS301WA), Limited Depth Soils (G002XF303WA)
Hydric soil rating: No

Minor Components

Indianola
Percent of map unit: 5 percent
Landform: Terraces, kames, eskers
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Everett
Percent of map unit: 5 percent
Landform: Moraines, eskers, kames
Landform position (two-dimensional): Shoulder, footslope
Landform position (three-dimensional): Base slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Shalcar
Percent of map unit: 3 percent
Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Norma
Percent of map unit: 2 percent
Landform: Drainageways, depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: King County Area, Washington
Survey Area Data: Version 19, Aug 29, 2023

Map Scale: 1:401 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 5 10 20 30

Feet
0 15 30 60 90

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: King County Area, Washington
Survey Area Data: Version 19, Aug 29, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 31, 2022—Aug 8, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AgC	Alderwood gravelly sandy loam, 8 to 15 percent slopes	0.6	100.0%
Totals for Area of Interest		**0.6**	**100.0%**

King County Area, Washington

AgC—Alderwood gravelly sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2t626
Elevation: 50 to 800 feet
Mean annual precipitation: 20 to 60 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 160 to 240 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Alderwood and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Alderwood

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Nose slope, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Glacial drift and/or glacial outwash over dense glaciomarine deposits

Typical profile

A - 0 to 7 inches: gravelly sandy loam
Bw1 - 7 to 21 inches: very gravelly sandy loam
Bw2 - 21 to 30 inches: very gravelly sandy loam
Bg - 30 to 35 inches: very gravelly sandy loam
2Cd1 - 35 to 43 inches: very gravelly sandy loam
2Cd2 - 43 to 59 inches: very gravelly sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s

Hydrologic Soil Group: B
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Limited Depth Soils (G002XN302WA), Limited Depth Soils (G002XS301WA), Limited Depth Soils (G002XF303WA)
Other vegetative classification: Limited Depth Soils (G002XN302WA), Limited Depth Soils (G002XS301WA), Limited Depth Soils (G002XF303WA)
Hydric soil rating: No

Minor Components

Indianola
Percent of map unit: 5 percent
Landform: Terraces, kames, eskers
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Everett
Percent of map unit: 5 percent
Landform: Moraines, eskers, kames
Landform position (two-dimensional): Shoulder, footslope
Landform position (three-dimensional): Base slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Shalcar
Percent of map unit: 3 percent
Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Norma
Percent of map unit: 2 percent
Landform: Drainageways, depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: King County Area, Washington
Survey Area Data: Version 19, Aug 29, 2023

Map Scale: 1:1,060 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

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Web Soil Survey URL:
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Survey Area Data: Version 19, Aug 29, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 31, 2022—Aug 8, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AmC	Arents, Alderwood material, 6 to 15 percent slopes	5.1	100.0%
Totals for Area of Interest		**5.1**	**100.0%**

King County Area, Washington

AmC—Arents, Alderwood material, 6 to 15 percent slopes

Map Unit Setting

National map unit symbol: 1hmsq
Elevation: 50 to 660 feet
Mean annual precipitation: 35 to 60 inches
Mean annual air temperature: 50 degrees F
Frost-free period: 150 to 200 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Arents, alderwood material, and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arents, Alderwood Material

Setting

Landform: Till plains
Parent material: Basal till

Typical profile

H1 - 0 to 26 inches: gravelly sandy loam
H2 - 26 to 60 inches: very gravelly sandy loam

Properties and qualities

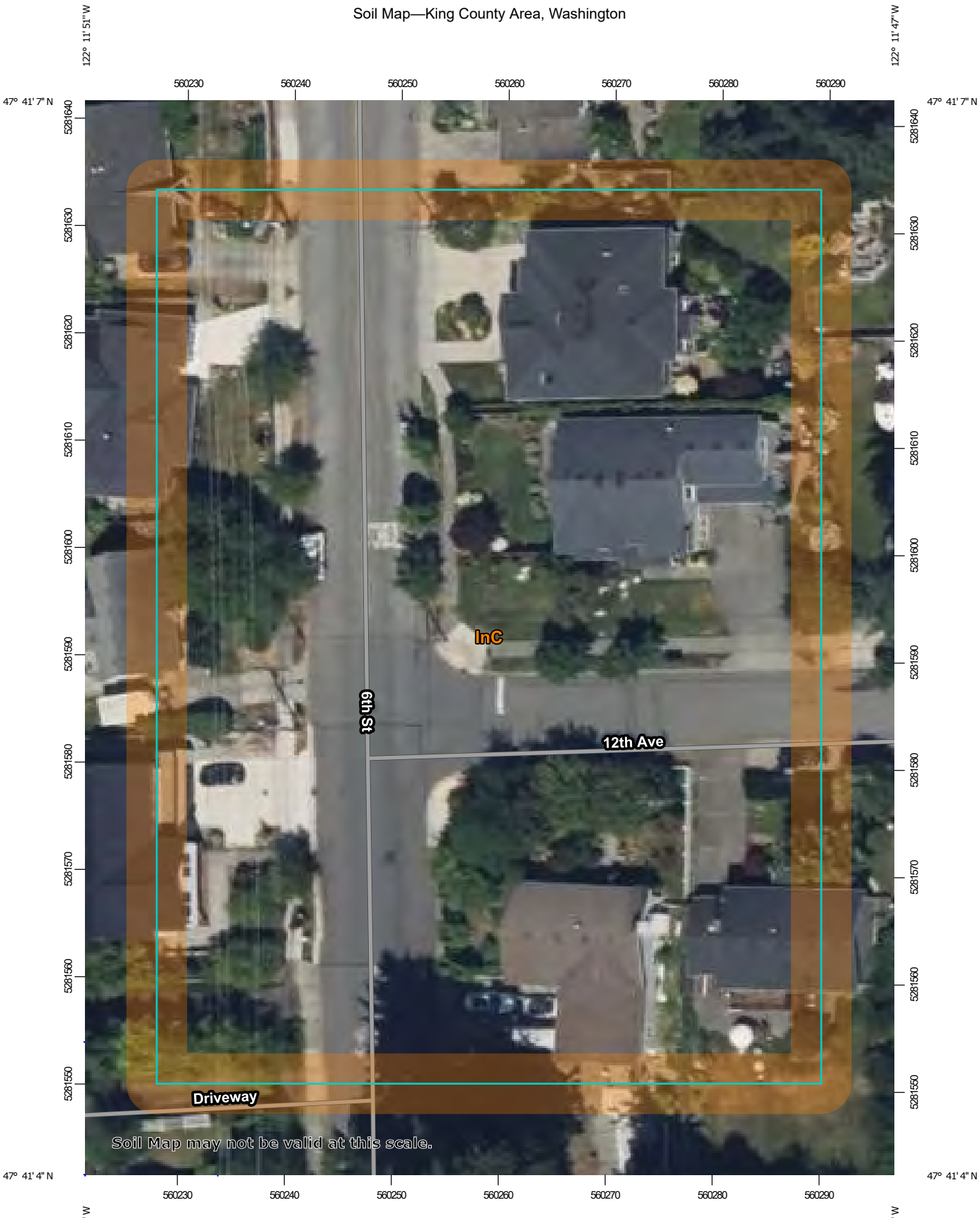
Slope: 6 to 15 percent
Depth to restrictive feature: 20 to 40 inches to densic material
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 16 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: B/D
Hydric soil rating: No

Data Source Information

Soil Survey Area: King County Area, Washington
Survey Area Data: Version 19, Aug 29, 2023



Map Scale: 1:487 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 5 10 20 30

Feet: 0 20 40 80 120

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: King County Area, Washington
Survey Area Data: Version 19, Aug 29, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 31, 2022—Aug 8, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
InC	Indianola loamy sand, 5 to 15 percent slopes	1.3	100.0%
Totals for Area of Interest		**1.3**	**100.0%**

King County Area, Washington

InC—Indianola loamy sand, 5 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2t635
Elevation: 0 to 980 feet
Mean annual precipitation: 30 to 81 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 170 to 210 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Indianola and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Indianola

Setting

Landform: Terraces, kames, eskers
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy glacial outwash

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 6 inches: loamy sand
Bw1 - 6 to 17 inches: loamy sand
Bw2 - 17 to 27 inches: sand
BC - 27 to 37 inches: sand
C - 37 to 60 inches: sand

Properties and qualities

Slope: 5 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Ecological site: F002XA004WA - Puget Lowlands Forest

Forage suitability group: Droughty Soils (G002XN402WA), Droughty Soils (G002XS401WA)
Other vegetative classification: Droughty Soils (G002XN402WA), Droughty Soils (G002XS401WA)
Hydric soil rating: No

Minor Components

Alderwood

Percent of map unit: 8 percent
Landform: Hills, ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Nose slope, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Everett

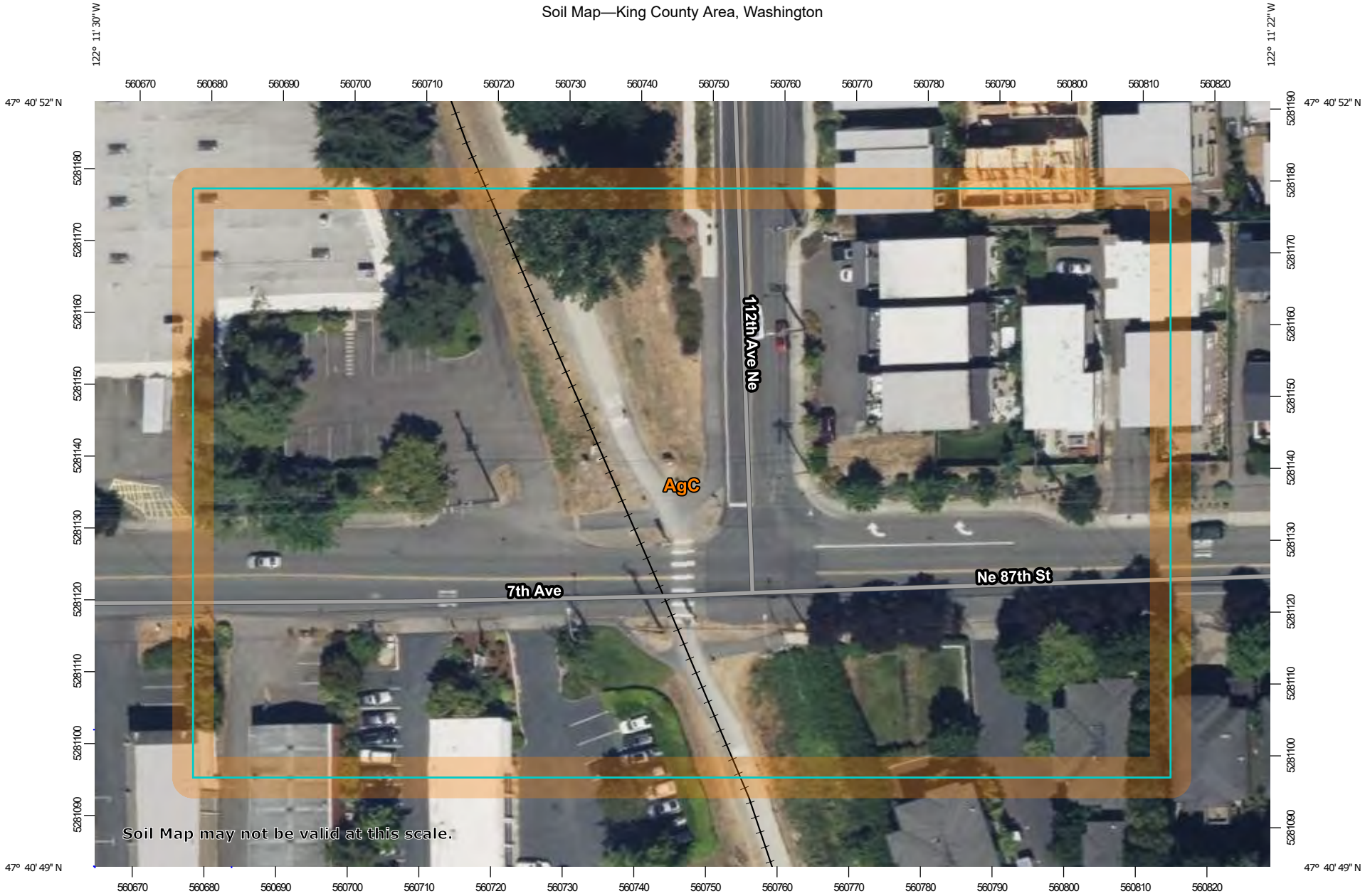
Percent of map unit: 5 percent
Landform: Moraines, eskers, kames
Landform position (two-dimensional): Shoulder, footslope
Landform position (three-dimensional): Base slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Norma

Percent of map unit: 2 percent
Landform: Drainageways, depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: King County Area, Washington
Survey Area Data: Version 19, Aug 29, 2023



Map Scale: 1:750 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 10 20 40 60

Feet
0 35 70 140 210

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: King County Area, Washington
Survey Area Data: Version 19, Aug 29, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 31, 2022—Aug 8, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AgC	Alderwood gravelly sandy loam, 8 to 15 percent slopes	2.8	100.0%
Totals for Area of Interest		**2.8**	**100.0%**

King County Area, Washington

AgC—Alderwood gravelly sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2t626
Elevation: 50 to 800 feet
Mean annual precipitation: 20 to 60 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 160 to 240 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Alderwood and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Alderwood

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Nose slope, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Glacial drift and/or glacial outwash over dense glaciomarine deposits

Typical profile

A - 0 to 7 inches: gravelly sandy loam
Bw1 - 7 to 21 inches: very gravelly sandy loam
Bw2 - 21 to 30 inches: very gravelly sandy loam
Bg - 30 to 35 inches: very gravelly sandy loam
2Cd1 - 35 to 43 inches: very gravelly sandy loam
2Cd2 - 43 to 59 inches: very gravelly sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s

Hydrologic Soil Group: B
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Limited Depth Soils (G002XN302WA), Limited Depth Soils (G002XS301WA), Limited Depth Soils (G002XF303WA)
Other vegetative classification: Limited Depth Soils (G002XN302WA), Limited Depth Soils (G002XS301WA), Limited Depth Soils (G002XF303WA)
Hydric soil rating: No

Minor Components

Indianola
Percent of map unit: 5 percent
Landform: Terraces, kames, eskers
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Everett
Percent of map unit: 5 percent
Landform: Moraines, eskers, kames
Landform position (two-dimensional): Shoulder, footslope
Landform position (three-dimensional): Base slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Shalcar
Percent of map unit: 3 percent
Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Norma
Percent of map unit: 2 percent
Landform: Drainageways, depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: King County Area, Washington
Survey Area Data: Version 19, Aug 29, 2023

Map Scale: 1:666 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 5 10 20 30

Feet
0 30 60 120 180

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: King County Area, Washington
Survey Area Data: Version 19, Aug 29, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 31, 2022—Aug 8, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
InC	Indianola loamy sand, 5 to 15 percent slopes	2.3	100.0%
Totals for Area of Interest		**2.3**	**100.0%**

King County Area, Washington

InC—Indianola loamy sand, 5 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2t635
Elevation: 0 to 980 feet
Mean annual precipitation: 30 to 81 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 170 to 210 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Indianola and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Indianola

Setting

Landform: Terraces, kames, eskers
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy glacial outwash

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 6 inches: loamy sand
Bw1 - 6 to 17 inches: loamy sand
Bw2 - 17 to 27 inches: sand
BC - 27 to 37 inches: sand
C - 37 to 60 inches: sand

Properties and qualities

Slope: 5 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Ecological site: F002XA004WA - Puget Lowlands Forest

Forage suitability group: Droughty Soils (G002XN402WA), Droughty Soils (G002XS401WA)
Other vegetative classification: Droughty Soils (G002XN402WA), Droughty Soils (G002XS401WA)
Hydric soil rating: No

Minor Components

Alderwood

Percent of map unit: 8 percent
Landform: Hills, ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Nose slope, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Everett

Percent of map unit: 5 percent
Landform: Moraines, eskers, kames
Landform position (two-dimensional): Shoulder, footslope
Landform position (three-dimensional): Base slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Norma

Percent of map unit: 2 percent
Landform: Drainageways, depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: King County Area, Washington
Survey Area Data: Version 19, Aug 29, 2023

Map Scale: 1:2,330 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AgC	Alderwood gravelly sandy loam, 8 to 15 percent slopes	2.5	100.0%
Totals for Area of Interest		**2.5**	**100.0%**

King County Area, Washington

AgC—Alderwood gravelly sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2t626
Elevation: 50 to 800 feet
Mean annual precipitation: 20 to 60 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 160 to 240 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Alderwood and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Alderwood

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Nose slope, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Glacial drift and/or glacial outwash over dense glaciomarine deposits

Typical profile

A - 0 to 7 inches: gravelly sandy loam
Bw1 - 7 to 21 inches: very gravelly sandy loam
Bw2 - 21 to 30 inches: very gravelly sandy loam
Bg - 30 to 35 inches: very gravelly sandy loam
2Cd1 - 35 to 43 inches: very gravelly sandy loam
2Cd2 - 43 to 59 inches: very gravelly sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s

Hydrologic Soil Group: B
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Limited Depth Soils (G002XN302WA), Limited Depth Soils (G002XS301WA), Limited Depth Soils (G002XF303WA)
Other vegetative classification: Limited Depth Soils (G002XN302WA), Limited Depth Soils (G002XS301WA), Limited Depth Soils (G002XF303WA)
Hydric soil rating: No

Minor Components

Indianola
Percent of map unit: 5 percent
Landform: Terraces, kames, eskers
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Everett
Percent of map unit: 5 percent
Landform: Moraines, eskers, kames
Landform position (two-dimensional): Shoulder, footslope
Landform position (three-dimensional): Base slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Shalcar
Percent of map unit: 3 percent
Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Norma
Percent of map unit: 2 percent
Landform: Drainageways, depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: King County Area, Washington
Survey Area Data: Version 19, Aug 29, 2023


122° 10' 48" W
122° 10' 33" W
47° 41' 53" N
47° 41' 39" N
561520
561570
561620
561670
561720
561770
561820
5283070
5283020
5282970
5282920
5282870
5282820
5282770
5282720
5282670
405
Slater Ave Ne
AgC
123rd Ln Ne
Ne 107th St
Ne 106th St
Soil Map may not be valid at this scale.
Map Scale: 1:2,110 if printed on A portrait (8.5" x 11") sheet.
N
Meters
0 30 60 120 180
Feet
0 100 200 400 600
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
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- Very Stony Spot
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- Major Roads
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Background

- Aerial Photography

MAP INFORMATION

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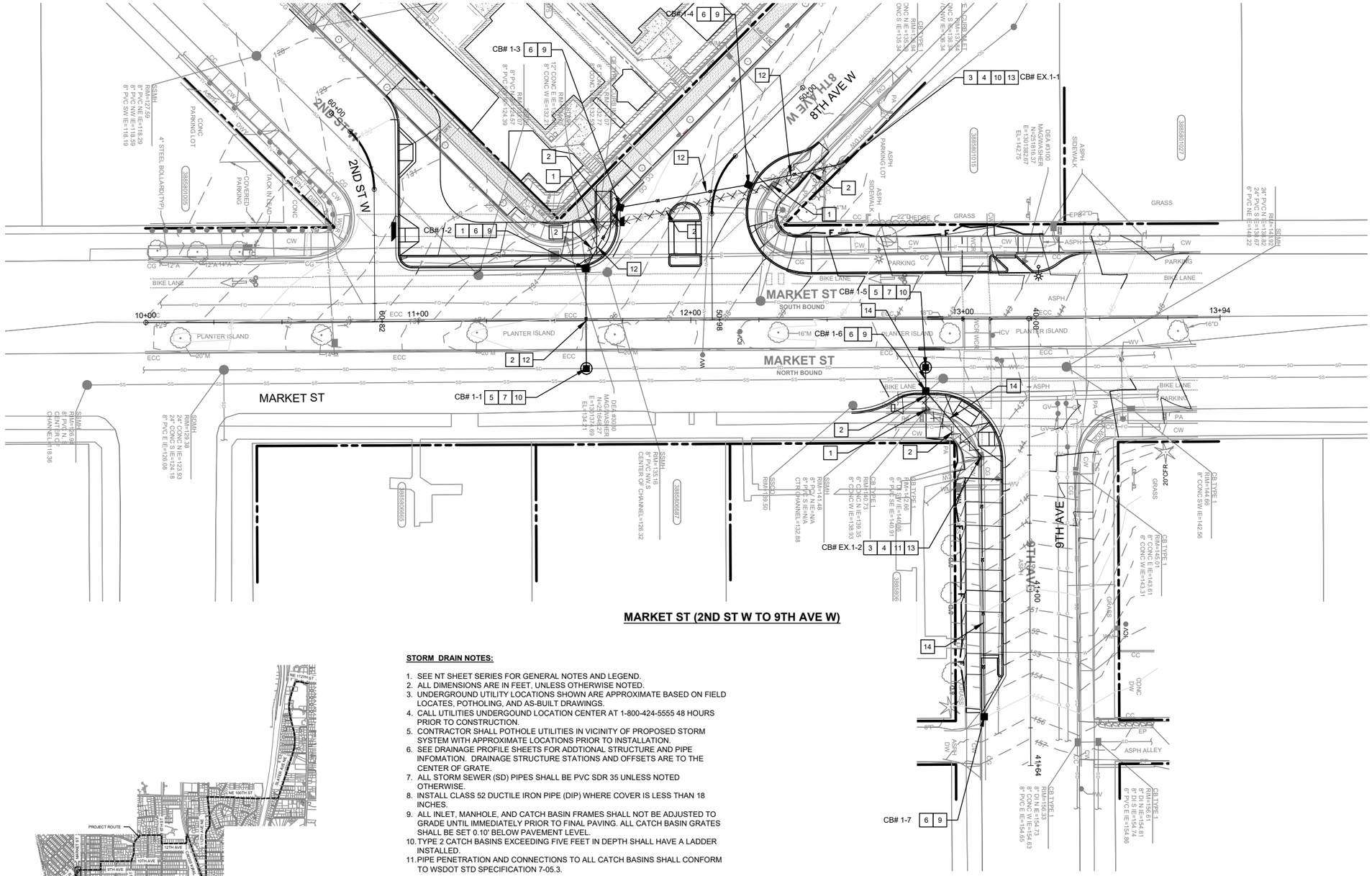
Map Unit Legend

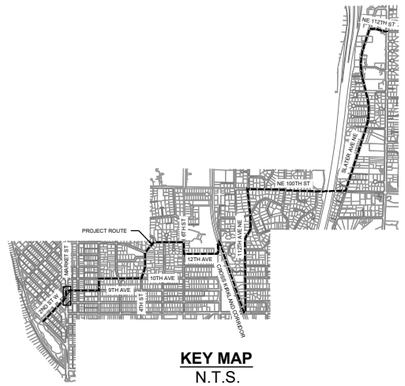
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AgC	Alderwood gravelly sandy loam, 8 to 15 percent slopes	2.4	100.0%
Totals for Area of Interest		**2.4**	**100.0%**

APPENDIX B:

DRAINAGE PLANS



MARKET ST (2ND ST W TO 9TH AVE W)



STORM DRAIN NOTES:

1. SEE NT SHEET SERIES FOR GENERAL NOTES AND LEGEND.
2. ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED.
3. UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE BASED ON FIELD LOCATES, POTHOLING, AND AS-BUILT DRAWINGS.
4. CALL UTILITIES UNDERGOUND LOCATION CENTER AT 1-800-424-5555 48 HOURS PRIOR TO CONSTRUCTION.
5. CONTRACTOR SHALL POTHOLE UTILITIES IN VICINITY OF PROPOSED STORM SYSTEM WITH APPROXIMATE LOCATIONS PRIOR TO INSTALLATION.
6. SEE DRAINAGE PROFILE SHEETS FOR ADDTIONAL STRUCTURE AND PIPE INFOMATION. DRAINAGE STRUCTURE STATIONS AND OFFSETS ARE TO THE CENTER OF GRATE.
7. ALL STORM SEWER (SD) PIPES SHALL BE PVC SDR 35 UNLESS NOTED OTHERWISE.
8. INSTALL CLASS 52 DUCTILE IRON PIPE (DIP) WHERE COVER IS LESS THAN 18 INCHES.
9. ALL INLET, MANHOLE, AND CATCH BASIN FRAMES SHALL NOT BE ADJUSTED TO GRADE UNTIL IMMEDIATELY PRIOR TO FINAL PAVING. ALL CATCH BASIN GRATES SHALL BE SET 0.10' BELOW PAVEMENT LEVEL.
10. TYPE 2 CATCH BASINS EXCEEDING FIVE FEET IN DEPTH SHALL HAVE A LADDER INSTALLED.
11. PIPE PENETRATION AND CONNECTIONS TO ALL CATCH BASINS SHALL CONFORM TO WSDOT STD SPECIFICATION 7-05.3.

STORM DRAIN CONSTRUCTION NOTES:

1. REMOVE EXISTING STRUCTURE
2. ABANDON EXISTING PIPE. SEE CITY OF KIRKLAND STD. PLANS CK-D.02 AND CK-R.12 FOR STORM TRENCH AND RESTORATION DETAILS.
3. ADJUST EXISTING DRAINAGE STRUCTURE TO FINAL GRADE. CONTRACTOR TO REMOVE ALL BRICK MATERIAL FROM STRUCTURE.
4. CONNECT PROPOSED PIPE TO EXISTING STRUCTURE.
5. CONNECT PROPOSED STRUCTURE TO EXISTING PIPE(S).
6. INSTALL CATCH BASIN TYPE 1 PER CITY OF KIRKLAND STD PLAN CK-D.07.
7. INSTALL CATCH BASIN TYPE 2 - 48" DIAM. PER CITY OF KIRKLAND STD PLAN CK-D.09.
8. INSTALL CATCH BASIN TYPE 2 - 54" DIAM. PER CITY OF KIRKLAND STD PLAN CK-D.09.
9. INSTALL BOLT-DOWN VANED GRATE PER CITY OF KIRKLAND STD PLAN CK-D.14.
10. INSTALL 24" MODIFIED MANHOLE FRAME WITH LOCKING LID AND LOGO PER CITY OF KIRKLAND STD PLAN CK-D.18A.
11. INSTALL 24" MANHOLE FRAME WITH LOCKING LID AND LOGO PER CITY OF KIRKLAND STD PLAN CK-D.18.
12. INSTALL 12-INCH DIAM. DUCTILE IRON STORM SEWER PIPE.
13. INSTALL CIRCULAR RISER AND TRANSITION FOR CATCH BASIN TYPE 1.
14. INSTALL 12-INCH DIAM. SOLID WALL PVC STORM SEWER PIPE.
15. INSTALL 18-INCH DIAM. SOLID WALL PVC STORM SEWER PIPE.
16. CONNECT PROPOSED PIPE TO EXISTING PIPE PER SPECIAL PROVISION 7-05.3
17. INSTALL 18-INCH DIAM. DUCTILE IRON STORM SEWER PIPE.

STORM DRAIN LEGEND:

- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 2
- STORM SEWER PIPE
- REMOVE EXISTING STORM DRAIN FEATURE

N

0 20' 40' 60'

SCALE IN FEET

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WASHINGTON, LICENSE NO. 45913 , EXPIRATION DATE: 3/26/2025 .

NATHAN K. WONG — STATE OF WASHINGTON — 45913 — REGISTERED PROFESSIONAL ENGINEER — 10/9/24

REUSE OF DOCUMENTS

ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.

		NO.	DATE	REVISION	BY	APVD
DSGN	N. WONG					
DR	N. WONG					
CHK	DD					
APVD	DD					

DAVID EVANS AND ASSOCIATES INC.
14432 SE Eastgate Way, Suite 400
Bellevue Washington 98007
Phone: 425.519.6500

TOOLE DESIGN
720 3RD AVENUE, SUITE 2020
SEATTLE, WA 98104
PHONE: 206.297.1601
FAX: 301.927.2800
www.tooledesign.com

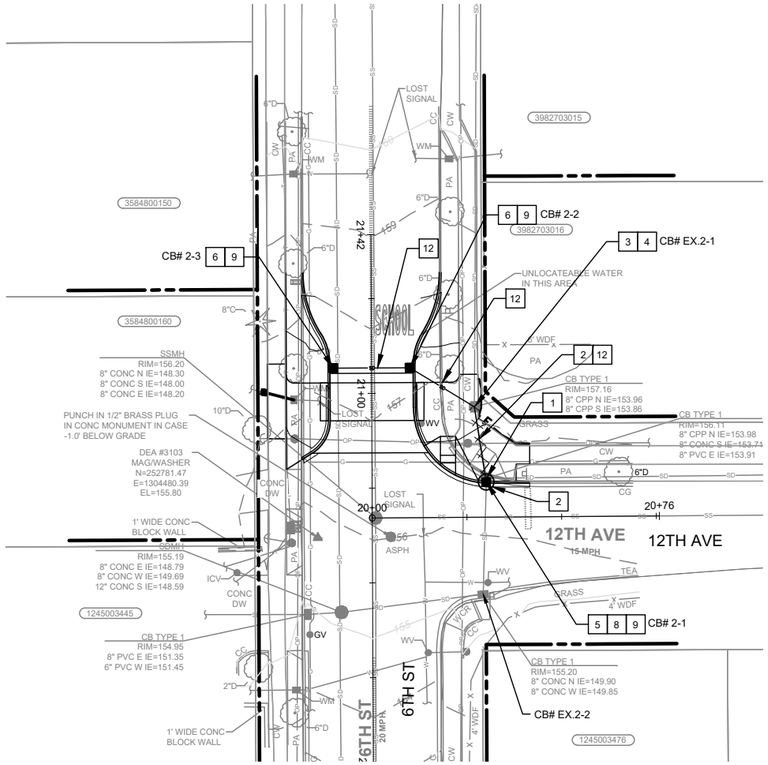
KIRKLAND NEIGHBORHOOD GREENWAY
CITY OF KIRKLAND

CIVIL

DRAINAGE PLAN

PROJECT NO. 00SEA.00114.00
DATE 8.2.2024
DRAWING NO. SD01
SHEET NO. 60 OF 109

C:\pw_work\dealpaw\dms426491900SEA.00114_SD.dwg
Monday, August 5, 2024 4:07:16 PM



6TH ST AND 12TH AVE

STORM DRAIN CONSTRUCTION NOTES:

1. REMOVE EXISTING STRUCTURE
2. ABANDON EXISTING PIPE. SEE CITY OF KIRKLAND STD. PLANS CK-D.02 AND CK-R.12 FOR STORM TRENCH AND RESTORATION DETAILS.
3. ADJUST EXISTING DRAINAGE STRUCTURE TO FINAL GRADE. CONTRACTOR TO REMOVE ALL BRICK MATERIAL FROM STRUCTURE.
4. CONNECT PROPOSED PIPE TO EXISTING STRUCTURE.
5. CONNECT PROPOSED STRUCTURE TO EXISTING PIPE(S).
6. INSTALL CATCH BASIN TYPE 1 PER CITY OF KIRKLAND STD PLAN CK-D.07.
7. INSTALL CATCH BASIN TYPE 2 - 48" DIAM. PER CITY OF KIRKLAND STD PLAN CK-D.09.
8. INSTALL CATCH BASIN TYPE 2 - 54" DIAM. PER CITY OF KIRKLAND STD PLAN CK-D.09.
9. INSTALL BOLT-DOWN VANED GRATE PER CITY OF KIRKLAND STD PLAN CK-D.14.
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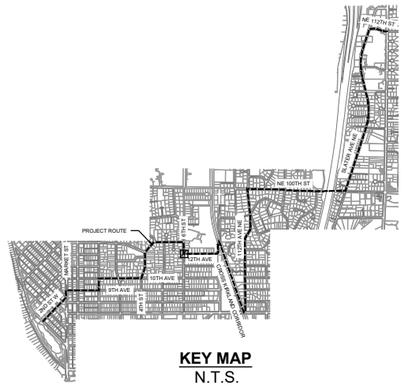
11. INSTALL 24" MANHOLE FRAME WITH LOCKING LID AND LOGO PER CITY OF KIRKLAND STD PLAN CK-D.18.
12. INSTALL 12-INCH DIAM. DUCTILE IRON STORM SEWER PIPE.
13. INSTALL CIRCULAR RISER AND TRANSITION FOR CATCH BASIN TYPE 1.
14. INSTALL 12-INCH DIAM. SOLID WALL PVC STORM SEWER PIPE.
15. INSTALL 18-INCH DIAM. SOLID WALL PVC STORM SEWER PIPE.
16. CONNECT PROPOSED PIPE TO EXISTING PIPE PER SPECIAL PROVISION 7-05.3
17. INSTALL 18-INCH DIAM. DUCTILE IRON STORM SEWER PIPE.



STORM DRAIN NOTES:

1. SEE NT SHEET SERIES FOR GENERAL NOTES AND LEGEND.
2. ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED.
3. UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE BASED ON FIELD LOCATES, POTHOLING, AND AS-BUILT DRAWINGS.
4. CALL UTILITIES UNDERGOUND LOCATION CENTER AT 1-800-424-5555 48 HOURS PRIOR TO CONSTRUCTION.
5. CONTRACTOR SHALL POTHOLE UTILITIES IN VICINITY OF PROPOSED STORM SYSTEM WITH APPROXIMATE LOCATIONS PRIOR TO INSTALLATION.
6. SEE DRAINAGE PROFILE SHEETS FOR ADDTIONAL STRUCTURE AND PIPE INFOMATION. DRAINAGE STRUCTURE STATIONS AND OFFSETS ARE TO THE CENTER OF GRATE.
7. ALL STORM SEWER (SD) PIPES SHALL BE PVC SDR 35 UNLESS NOTED OTHERWISE.
8. INSTALL CLASS 52 DUCTILE IRON PIPE (DIP) WHERE COVER IS LESS THAN 18 INCHES.
9. ALL INLET, MANHOLE, AND CATCH BASIN FRAMES SHALL NOT BE ADJUSTED TO GRADE UNTIL IMMEDIATELY PRIOR TO FINAL PAVING. ALL CATCH BASIN GRATES SHALL BE SET 0.10' BELOW PAVEMENT LEVEL.
10. TYPE 2 CATCH BASINS EXCEEDING FIVE FEET IN DEPTH SHALL HAVE A LADDER INSTALLED.
11. PIPE PENETRATION AND CONNECTIONS TO ALL CATCH BASINS SHALL CONFORM TO WSDOT STD SPECIFICATION 7-05.3.

STORM DRAIN LEGEND:

- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 2
- STORM SEWER PIPE
- REMOVE EXISTING STORM DRAIN FEATURE

N

0 20' 40' 60'

SCALE IN FEET

C:\pw_work\dea\pw\dms42649\00SEA.00114_SD.dwg
Monday, August 5, 2024 4:07:48 PM

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WASHINGTON, LICENSE NO. 45913 . EXPIRATION DATE: 3/26/2025 .

NATHAN K. WONG — STATE OF WASHINGTON — 45913 — REGISTERED PROFESSIONAL ENGINEER — 10/9/24

REUSE OF DOCUMENTS

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		NO.	DATE	REVISION	BY	APVD
DSGN	N. WONG					
DR	N. WONG					
CHK	DD					
APVD	DD					

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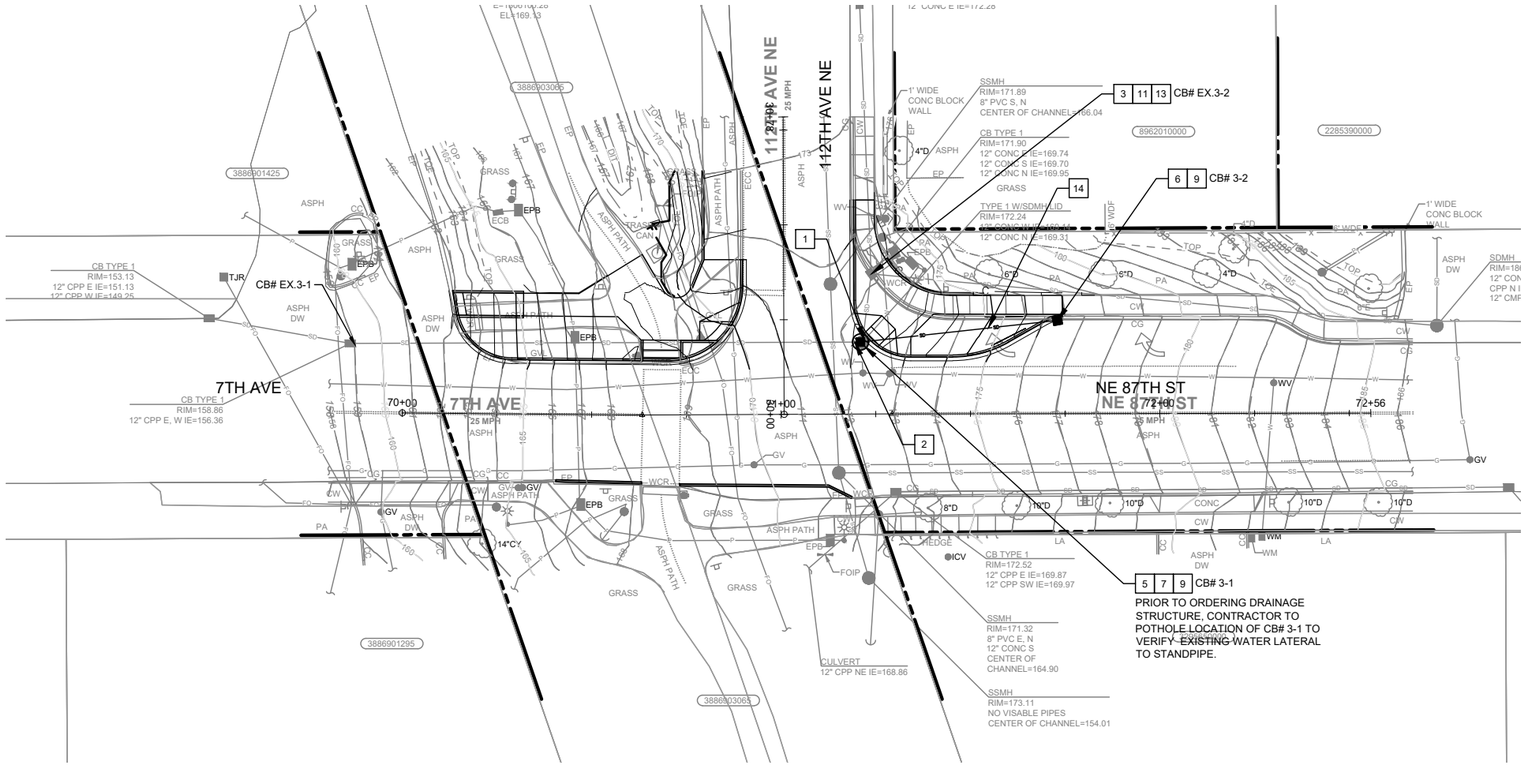
KIRKLAND NEIGHBORHOOD GREENWAY
CITY OF KIRKLAND

CIVIL

DRAINAGE PLAN

PROJECT NO. 00SEA.00114.00
DATE 8.2.2024
DRAWING NO. SD02
SHEET NO. 61 OF 109



NE 87TH ST AND 112TH AVE NE

STORM DRAIN CONSTRUCTION NOTES:

1. REMOVE EXISTING STRUCTURE
2. ABANDON EXISTING PIPE. SEE CITY OF KIRKLAND STD. PLANS CK-D.02 AND CK-R.12 FOR STORM TRENCH AND RESTORATION DETAILS.
3. ADJUST EXISTING DRAINAGE STRUCTURE TO FINAL GRADE. CONTRACTOR TO REMOVE ALL BRICK MATERIAL FROM STRUCTURE.
4. CONNECT PROPOSED PIPE TO EXISTING STRUCTURE.
5. CONNECT PROPOSED STRUCTURE TO EXISTING PIPE(S).
6. INSTALL CATCH BASIN TYPE 1 PER CITY OF KIRKLAND STD PLAN CK-D.07.
7. INSTALL CATCH BASIN TYPE 2 - 48" DIAM. PER CITY OF KIRKLAND STD PLAN CK-D.09.
8. INSTALL CATCH BASIN TYPE 2 - 54" DIAM. PER CITY OF KIRKLAND STD PLAN CK-D.09.
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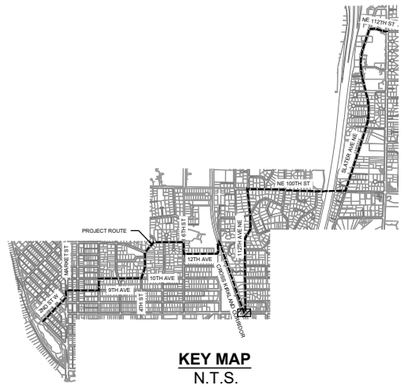
10. INSTALL 24" MODIFIED MANHOLE FRAME WITH LOCKING LID AND LOGO PER CITY OF KIRKLAND STD PLAN CK-D.18A.
11. INSTALL 24" MANHOLE FRAME WITH LOCKING LID AND LOGO PER CITY OF KIRKLAND STD PLAN CK-D.18.
12. INSTALL 12-INCH DIAM. DUCTILE IRON STORM SEWER PIPE.
13. INSTALL CIRCULAR RISER AND TRANSITION FOR CATCH BASIN TYPE 1.
14. INSTALL 12-INCH DIAM. SOLID WALL PVC STORM SEWER PIPE.
15. INSTALL 18-INCH DIAM. SOLID WALL PVC STORM SEWER PIPE.
16. CONNECT PROPOSED PIPE TO EXISTING PIPE PER SPECIAL PROVISION 7-05.3
17. INSTALL 18-INCH DIAM. DUCTILE IRON STORM SEWER PIPE.



KEY MAP
N.T.S.

STORM DRAIN NOTES:

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- STORM SEWER PIPE
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SCALE IN FEET

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CHK	DD					
APVD	DD					

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CITY OF KIRKLAND

CIVIL

DRAINAGE PLAN

PROJECT NO. 00SEA.00114.00
DATE 8.2.2024
DRAWING NO. SD03
SHEET NO. 62 OF 109

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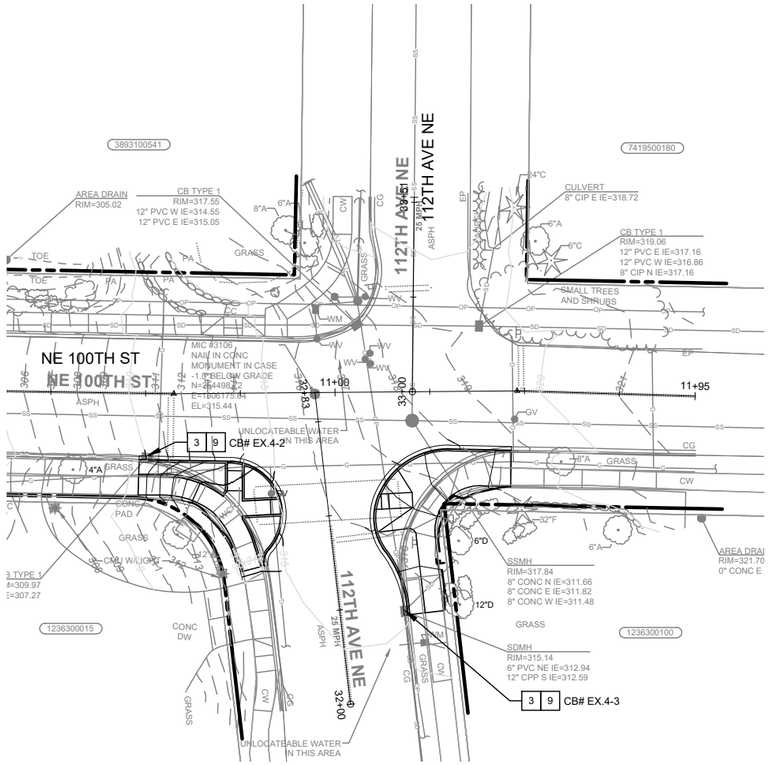
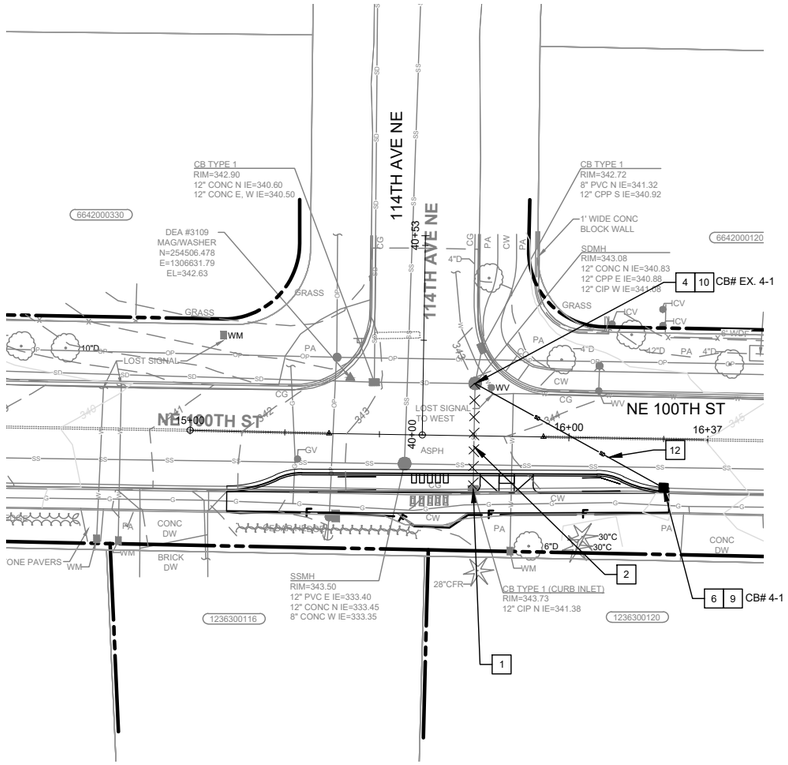


NE 100TH ST AND 112TH AVE NE



NE 100TH ST AND 114TH AVE NE

STORM DRAIN CONSTRUCTION NOTES:

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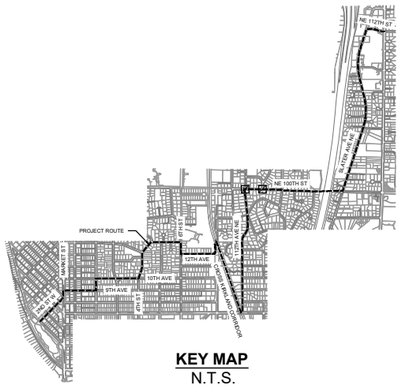

KEY MAP
N.T.S.

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STORM DRAIN LEGEND:

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- STORM SEWER PIPE
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N

0 20' 40' 60'
SCALE IN FEET

PROFESSIONAL CERTIFICATION

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NATHAN K. WONG — STATE OF WASHINGTON — 45913 — REGISTERED PROFESSIONAL ENGINEER — 10/9/24

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DR	N. WONG					
CHK	DD					
APVD	DD					

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CITY OF KIRKLAND

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DRAINAGE PLAN

PROJECT NO. 00SEA.00114.00
DATE 8.2.2024
DRAWING NO. SD04
SHEET NO. 63 OF 109

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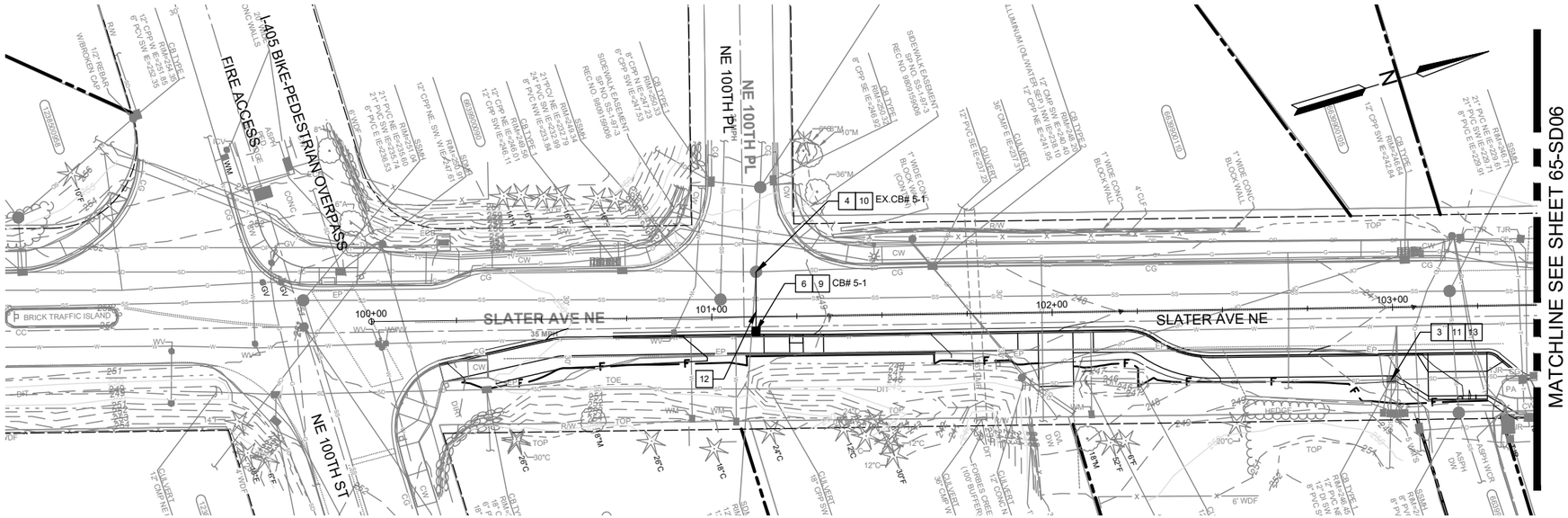

STORM DRAIN CONSTRUCTION NOTES:

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2. ABANDON EXISTING PIPE. SEE CITY OF KIRKLAND STD. PLANS CK-D.02 AND CK-R.12 FOR STORM TRENCH AND RESTORATION DETAILS.
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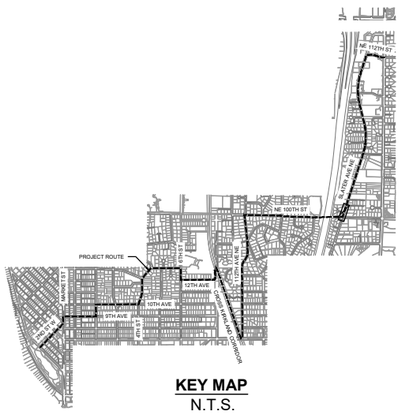

KEY MAP
N.T.S.

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STORM DRAIN LEGEND:

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NATHAN K. WONG — STATE OF WASHINGTON — 45913 — REGISTERED PROFESSIONAL ENGINEER
10/9/24

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CITY OF KIRKLAND

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DRAINAGE PLAN

PROJECT NO. 00SEA.00114.00
DATE 8.2.2024
DRAWING NO. SD05
SHEET NO. 64 OF 109

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Monday, August 5, 2024 4:09:12 PM

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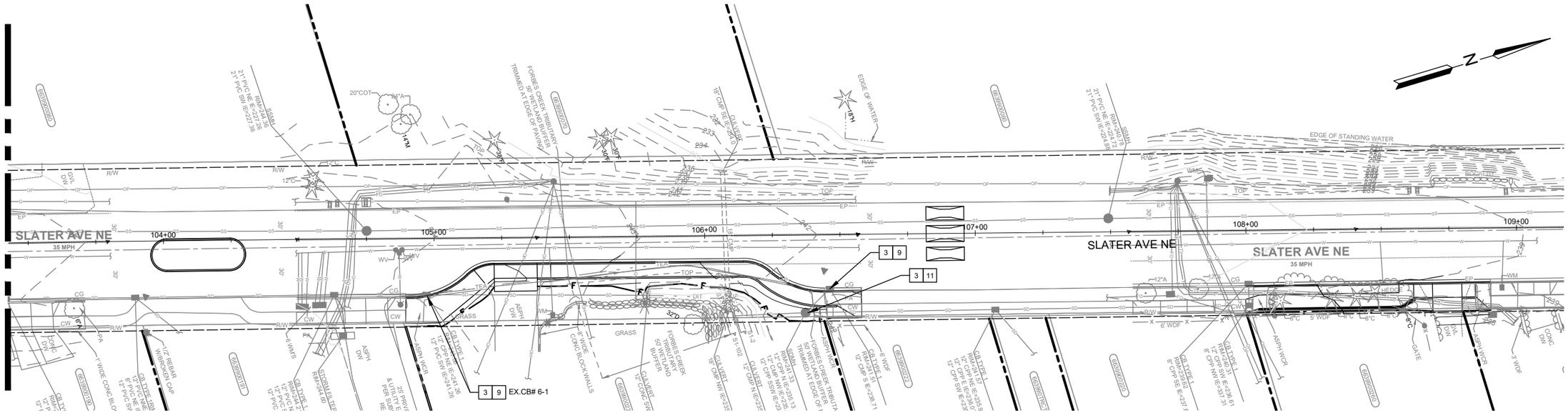

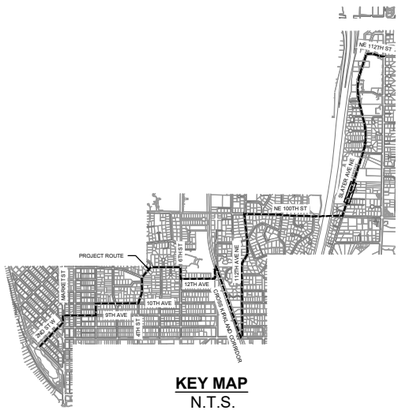

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CITY OF KIRKLAND

CIVIL

DRAINAGE PLAN

PROJECT NO. 00SEA.00114.00
DATE 8.2.2024
DRAWING NO. SD06
SHEET NO. 65 OF 109

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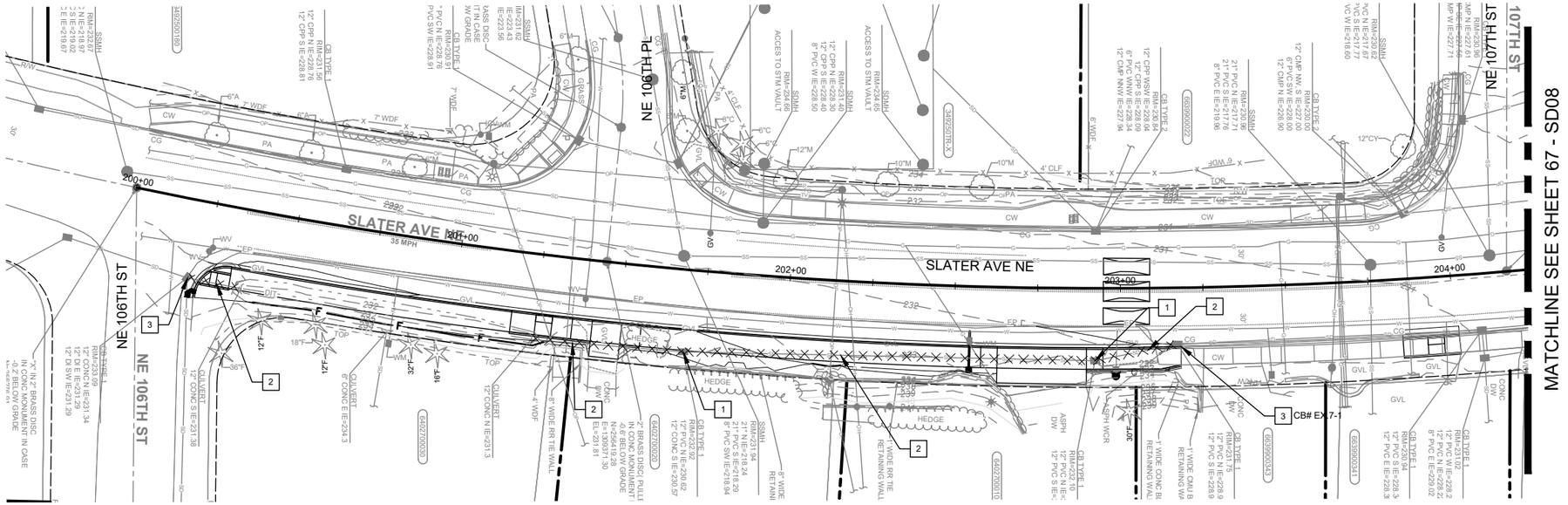
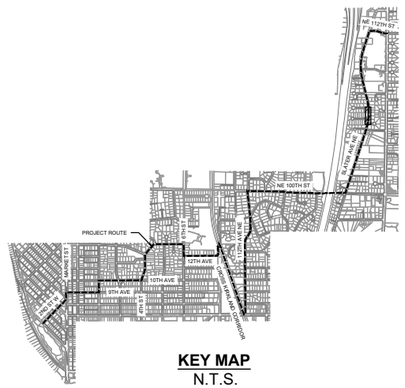
Monday, August 5, 2024 4:09:27 PM



STORM DRAIN CONSTRUCTION NOTES:

1. REMOVE EXISTING STRUCTURE
2. ABANDON EXISTING PIPE. SEE CITY OF KIRKLAND STD. PLANS CK-D.02 AND CK-R.12 FOR STORM TRENCH AND RESTORATION DETAILS.
3. ADJUST EXISTING DRAINAGE STRUCTURE TO FINAL GRADE. CONTRACTOR TO REMOVE ALL BRICK MATERIAL FROM STRUCTURE.
4. CONNECT PROPOSED PIPE TO EXISTING STRUCTURE.
5. CONNECT PROPOSED STRUCTURE TO EXISTING PIPE(S).
6. INSTALL CATCH BASIN TYPE 1 PER CITY OF KIRKLAND STD PLAN CK-D.07.
7. INSTALL CATCH BASIN TYPE 2 - 48" DIAM. PER CITY OF KIRKLAND STD PLAN CK-D.09.
8. INSTALL CATCH BASIN TYPE 2 - 54" DIAM. PER CITY OF KIRKLAND STD PLAN CK-D.09.
9. INSTALL BOLT-DOWN VANED GRATE PER CITY OF KIRKLAND STD PLAN CK-D.14.
10. INSTALL 24" MODIFIED MANHOLE FRAME WITH LOCKING LID AND LOGO PER CITY OF KIRKLAND STD PLAN CK-D.18A.
11. INSTALL 24" MANHOLE FRAME WITH LOCKING LID AND LOGO PER CITY OF KIRKLAND STD PLAN CK-D.18.
12. INSTALL 12-INCH DIAM. DUCTILE IRON STORM SEWER PIPE.
13. INSTALL CIRCULAR RISER AND TRANSITION FOR CATCH BASIN TYPE 1.
14. INSTALL 12-INCH DIAM. SOLID WALL PVC STORM SEWER PIPE.
15. INSTALL 18-INCH DIAM. SOLID WALL PVC STORM SEWER PIPE.
16. CONNECT PROPOSED PIPE TO EXISTING PIPE PER SPECIAL PROVISION 7-05.3
17. INSTALL 18-INCH DIAM. DUCTILE IRON STORM SEWER PIPE.



KEY MAP
N.T.S.

STORM DRAIN NOTES:

1. SEE NT SHEET SERIES FOR GENERAL NOTES AND LEGEND.
2. ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED.
3. UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE BASED ON FIELD LOCATES, POTHOLING, AND AS-BUILT DRAWINGS.
4. CALL UTILITIES UNDERGOUND LOCATION CENTER AT 1-800-424-5555 48 HOURS PRIOR TO CONSTRUCTION.
5. CONTRACTOR SHALL POTHOLE UTILITIES IN VICINITY OF PROPOSED STORM SYSTEM WITH APPROXIMATE LOCATIONS PRIOR TO INSTALLATION.
6. SEE DRAINAGE PROFILE SHEETS FOR ADDTIONAL STRUCTURE AND PIPE INFOMATION. DRAINAGE STRUCTURE STATIONS AND OFFSETS ARE TO THE CENTER OF GRATE.
7. ALL STORM SEWER (SD) PIPES SHALL BE PVC SDR 35 UNLESS NOTED OTHERWISE.
8. INSTALL CLASS 52 DUCTILE IRON PIPE (DIP) WHERE COVER IS LESS THAN 18 INCHES.
9. ALL INLET, MANHOLE, AND CATCH BASIN FRAMES SHALL NOT BE ADJUSTED TO GRADE UNTIL IMMEDIATELY PRIOR TO FINAL PAVING. ALL CATCH BASIN GRATES SHALL BE SET 0.10' BELOW PAVEMENT LEVEL.
10. TYPE 2 CATCH BASINS EXCEEDING FIVE FEET IN DEPTH SHALL HAVE A LADDER INSTALLED.
11. PIPE PENETRATION AND CONNECTIONS TO ALL CATCH BASINS SHALL CONFORM TO WSDOT STD SPECIFICATION 7-05.3.

STORM DRAIN LEGEND:

- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 2
- STORM SEWER PIPE
- REMOVE EXISTING STORM DRAIN FEATURE

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Monday, August 5, 2024 4:09:39 PM

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WASHINGTON, LICENSE NO. 45913, EXPIRATION DATE: 3/26/2025.

NATHAN K. WONG — STATE OF WASHINGTON — 45913 — REGISTERED PROFESSIONAL ENGINEER — 10/9/24

REUSE OF DOCUMENTS

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		NO.	DATE	REVISION	BY	APVD
DSGN	N. WONG					
DR	N. WONG					
CHK	DD					
APVD	DD					

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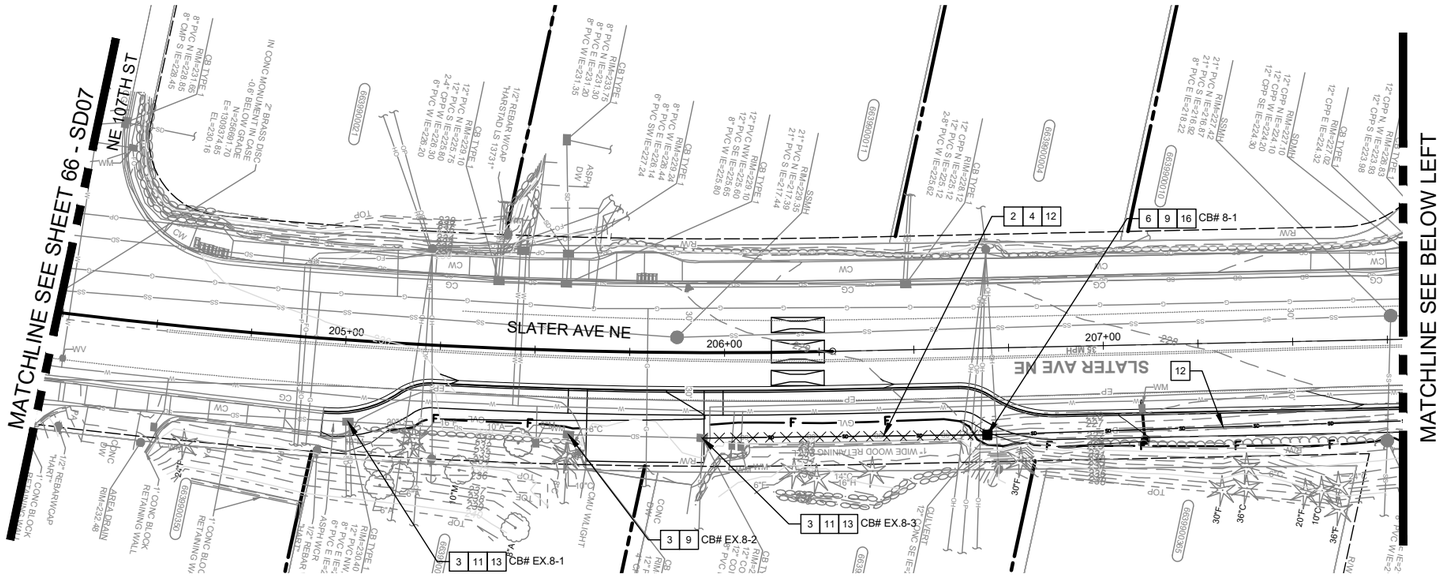
www.tooledesign.com

KIRKLAND NEIGHBORHOOD GREENWAY
CITY OF KIRKLAND

CIVIL

DRAINAGE PLAN

PROJECT NO. 00SEA.00114.00
DATE 8.2.2024
DRAWING NO. SD07
SHEET NO. 66 OF 109



STORM DRAIN LEGEND:

- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 2
- STORM SEWER PIPE
- REMOVE EXISTING STORM DRAIN FEATURE

STORM DRAIN CONSTRUCTION NOTES:

1. REMOVE EXISTING STRUCTURE
2. ABANDON EXISTING PIPE. SEE CITY OF KIRKLAND STD. PLANS CK-D.02 AND CK-R.12 FOR STORM TRENCH AND RESTORATION DETAILS.
3. ADJUST EXISTING DRAINAGE STRUCTURE TO FINAL GRADE. CONTRACTOR TO REMOVE ALL BRICK MATERIAL FROM STRUCTURE.
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13. INSTALL CIRCULAR RISER AND TRANSITION FOR CATCH BASIN TYPE 1.
14. INSTALL 12-INCH DIAM. SOLID WALL PVC STORM SEWER PIPE.
15. INSTALL 18-INCH DIAM. SOLID WALL PVC STORM SEWER PIPE.
16. CONNECT PROPOSED PIPE TO EXISTING PIPE PER SPECIAL PROVISION 7-05.3
17. INSTALL 18-INCH DIAM. DUCTILE IRON STORM SEWER PIPE.

STORM DRAIN NOTES:

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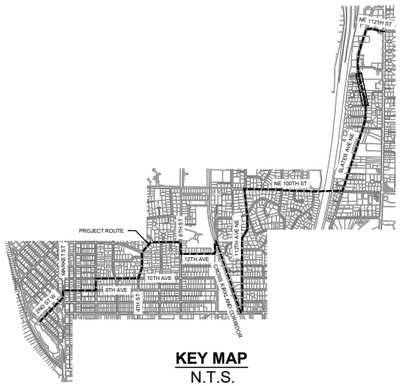
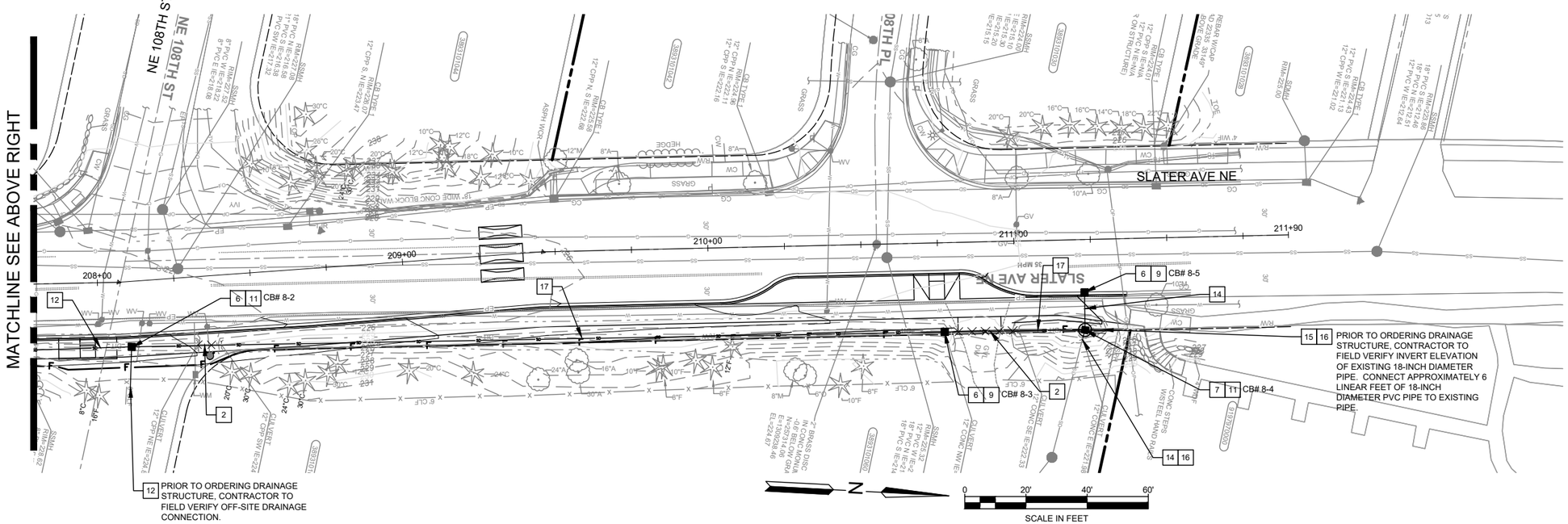
5. CONTRACTOR SHALL POTHOLE UTILITIES IN VICINITY OF PROPOSED STORM SYSTEM WITH APPROXIMATE LOCATIONS PRIOR TO INSTALLATION.
6. SEE DRAINAGE PROFILE SHEETS FOR ADDTIONAL STRUCTURE AND PIPE INFOMATION. DRAINAGE STRUCTURE STATIONS AND OFFSETS ARE TO THE CENTER OF GRATE.
7. ALL STORM SEWER (SD) PIPES SHALL BE PVC SDR 35 UNLESS NOTED OTHERWISE.
8. INSTALL CLASS 52 DUCTILE IRON PIPE (DIP) WHERE COVER IS LESS THAN 18 INCHES.
9. ALL INLET, MANHOLE, AND CATCH BASIN FRAMES SHALL NOT BE ADJUSTED TO GRADE UNTIL IMMEDIATELY PRIOR TO FINAL PAVING. ALL CATCH BASIN GRATES SHALL BE SET 0.10' BELOW PAVEMENT LEVEL.
10. TYPE 2 CATCH BASINS EXCEEDING FIVE FEET IN DEPTH SHALL HAVE A LADDER INSTALLED.
11. PIPE PENETRATION AND CONNECTIONS TO ALL CATCH BASINS SHALL CONFORM





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LICENSE NO. 45913
EXPIRATION DATE: 3/26/2025.

NATHAN K. MONG — STATE OF WASHINGTON — 45913 — REGISTERED PROFESSIONAL ENGINEER — 8/9/24

REUSE OF DOCUMENTS

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DSGN	N. WONG					
DR	N. WONG					
CHK	DD					
APVD	DD					

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CITY OF KIRKLAND

CIVIL

DRAINAGE PLAN

PROJECT NO. 00SEA.00114.00
DATE 8.2.2024
DRAWING NO. SD08
SHEET NO. 67 OF 109

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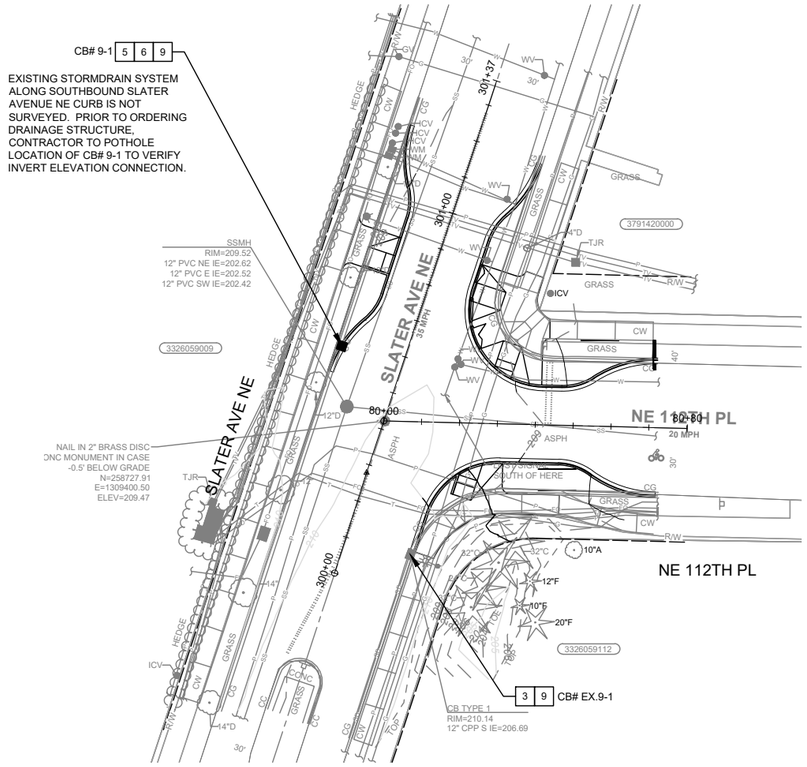

SLATER AVE NE AND NE 112TH PL

STORM DRAIN CONSTRUCTION NOTES:

1. REMOVE EXISTING STRUCTURE
2. ABANDON EXISTING PIPE. SEE CITY OF KIRKLAND STD. PLANS CK-D.02 AND CK-R.12 FOR STORM TRENCH AND RESTORATION DETAILS.
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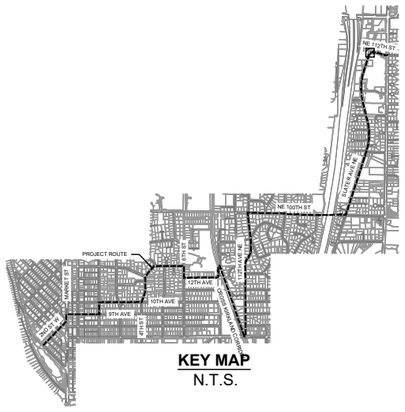

KEY MAP
N.T.S.

STORM DRAIN NOTES:

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STORM DRAIN LEGEND:

- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 2
- STORM SEWER PIPE
- REMOVE EXISTING STORM DRAIN FEATURE

N

0 20' 40' 60'

SCALE IN FEET

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Monday, August 5, 2024 4:10:20 PM

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WASHINGTON, LICENSE NO. 45913 , EXPIRATION DATE: 3/26/2025 .

NATHAN K. WONG — STATE OF WASHINGTON — 45913 — REGISTERED PROFESSIONAL ENGINEER — 8/5/24

REUSE OF DOCUMENTS

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DSGN	N. WONG					
DR	N. WONG					
CHK	DD					
APVD	DD					

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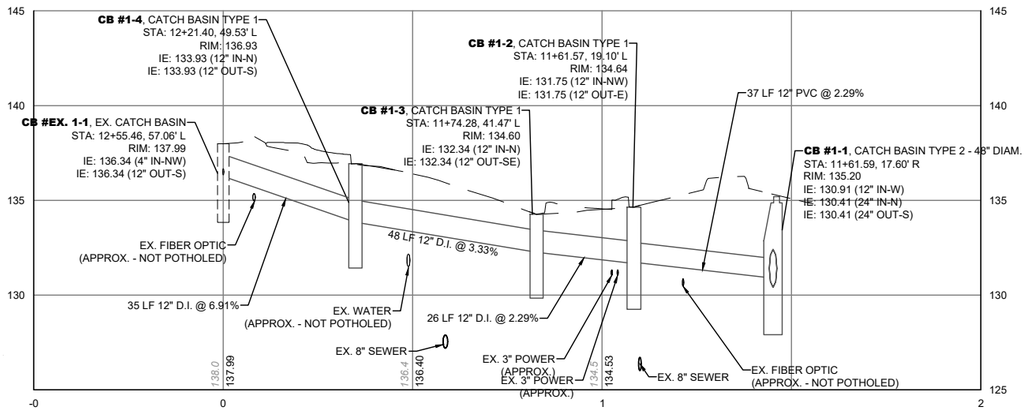
CITY OF KIRKLAND

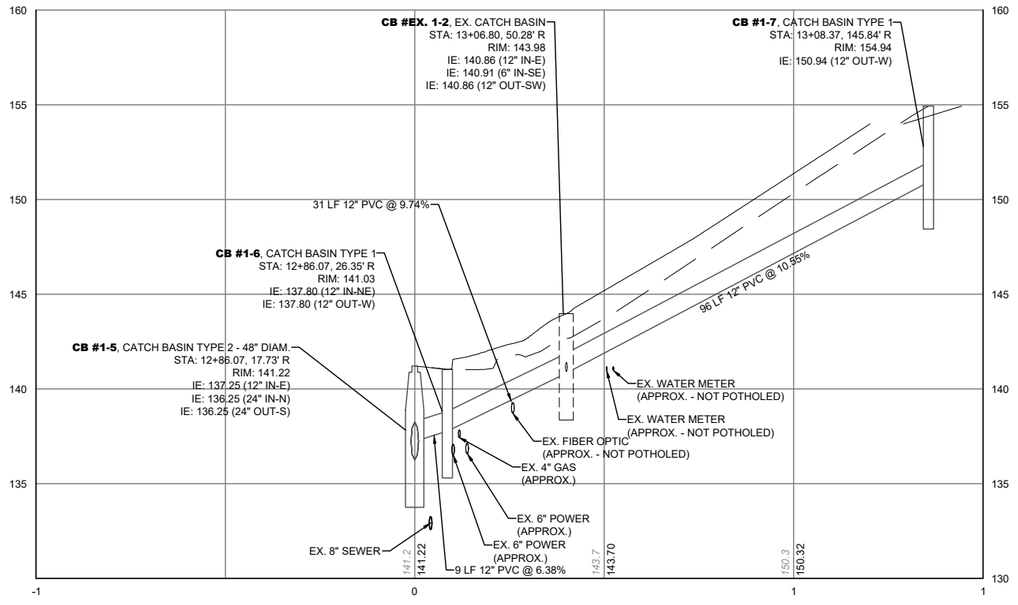
CIVIL

DRAINAGE PLAN

PROJECT NO. 00SEA.00114.00
DATE 8.2.2024
DRAWING NO. SD09
SHEET NO. 68 OF 109



MARKET ST (2ND ST W TO 9TH AVE W)
PROFILE 1



MARKET ST (2ND ST W TO 9TH AVE W)
PROFILE 2

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PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WASHINGTON,
LICENSE NO. 45913 .
EXPIRATION DATE: 3/26/2025 .

NATHAN K. WONG — STATE OF WASHINGTON — 45913 — REGISTERED PROFESSIONAL ENGINEER
10/9/24

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CHK	DD					
APVD	DD					

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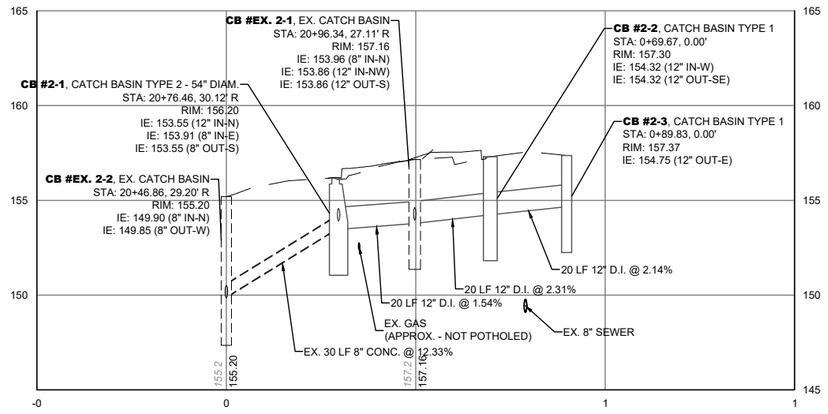
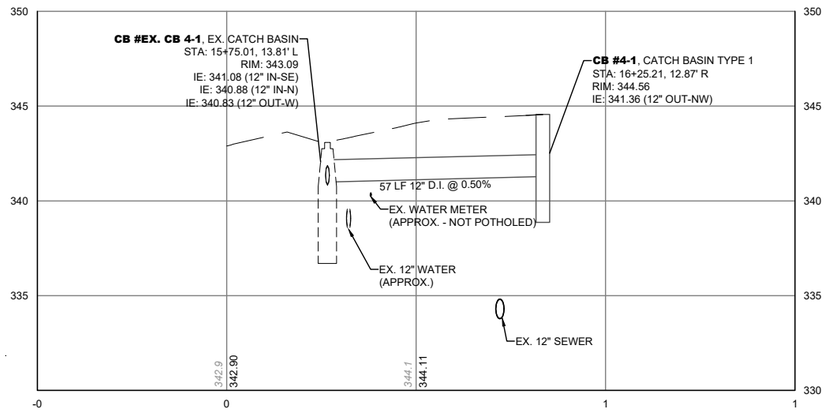
DRAINAGE PROFILE

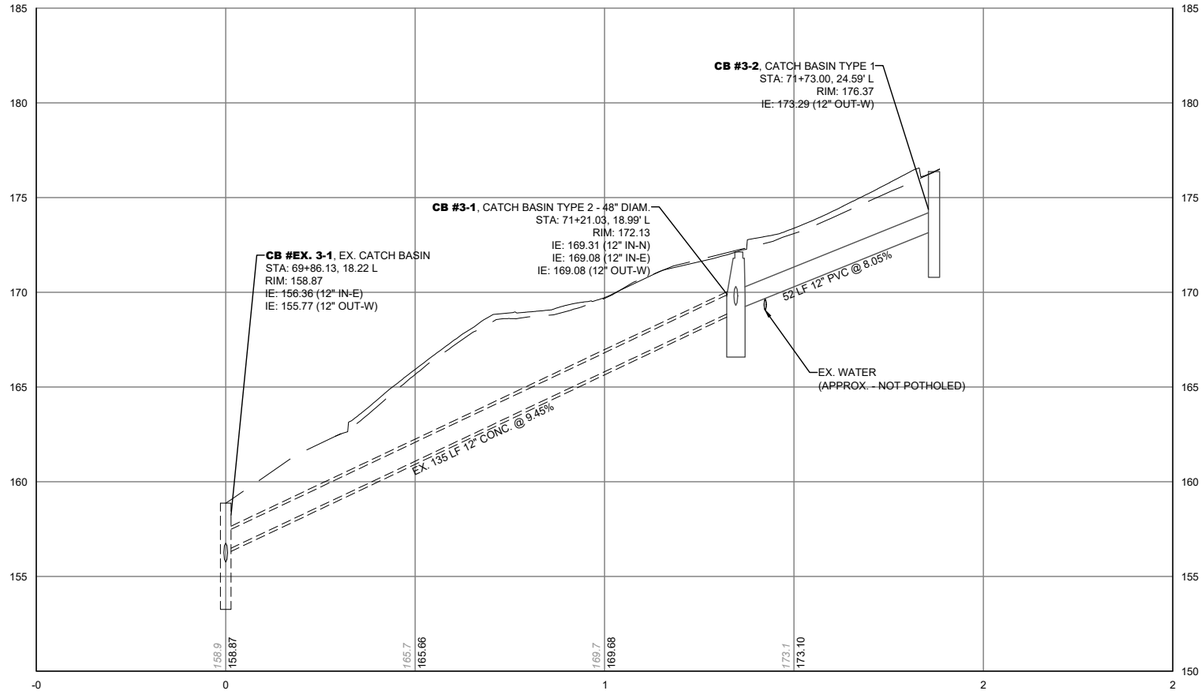
PROJECT NO. 00SEA.00114.00
DATE 8.2.2024
DRAWING NO. SDPR01
SHEET NO. 69 OF 108



6TH ST AND 12TH AVE
PROFILE 1



NE 100TH ST AND 114TH AVE NE
PROFILE 3



NE 87TH ST AND 112TH AVE NE
PROFILE 2

C:\pw_work\dealpaw\dms42649\00SEA.00114_SDPR.dwg
Monday, August 5, 2024 4:12:07 PM

PROFESSIONAL CERTIFICATION

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NATHAN K. WONG — STATE OF WASHINGTON — 45913 — REGISTERED PROFESSIONAL ENGINEER — 8/9/24

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APVD	DD					

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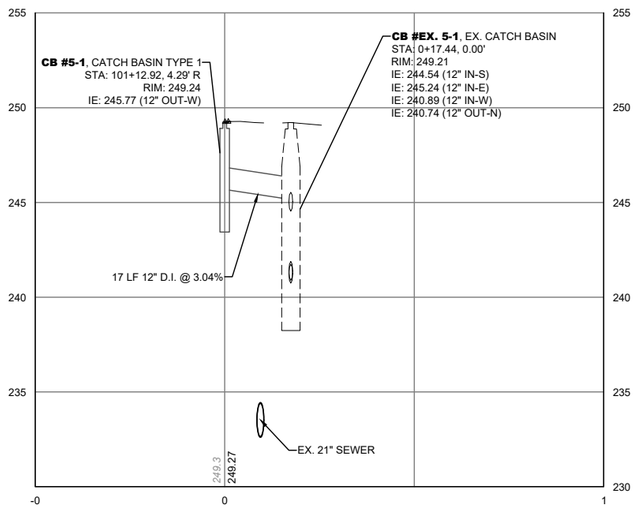
KIRKLAND NEIGHBORHOOD GREENWAY
CITY OF KIRKLAND

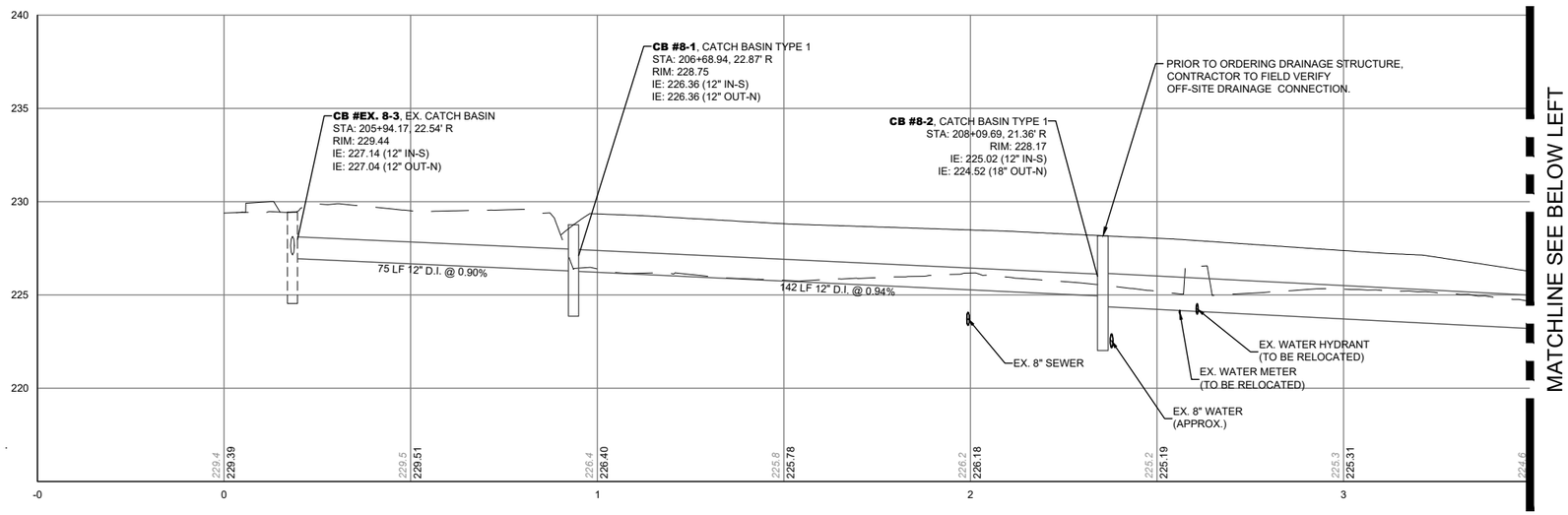
CIVIL

DRAINAGE PROFILE

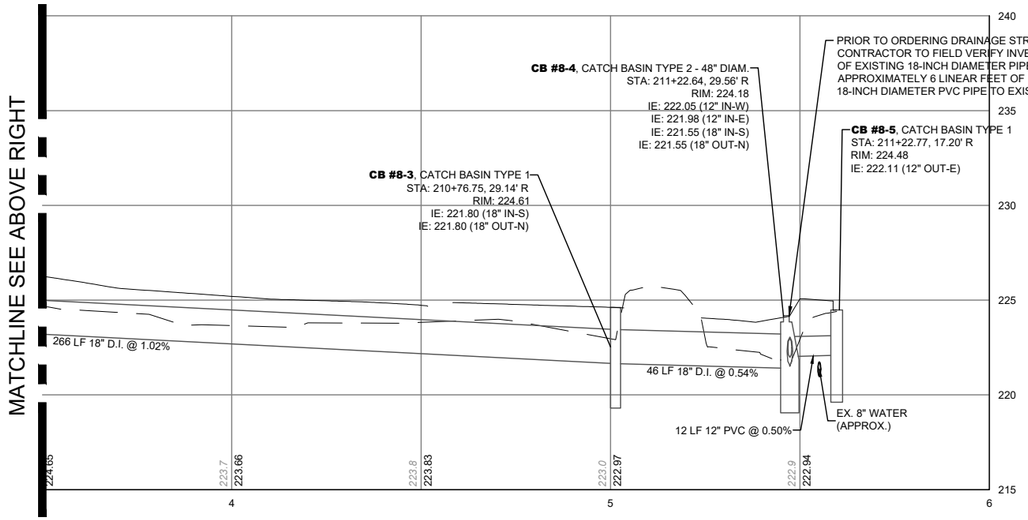
PROJECT NO. 00SEA.00114.00
DATE 8.2.2024
DRAWING NO. SDPR02
SHEET NO. 70 OF 109



SLATER AVE NE
PROFILE 1



SLATER AVE NE
PROFILE 2



SLATER AVE NE
PROFILE 3

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Monday, August 5, 2024 4:12:44 PM

PROFESSIONAL CERTIFICATION

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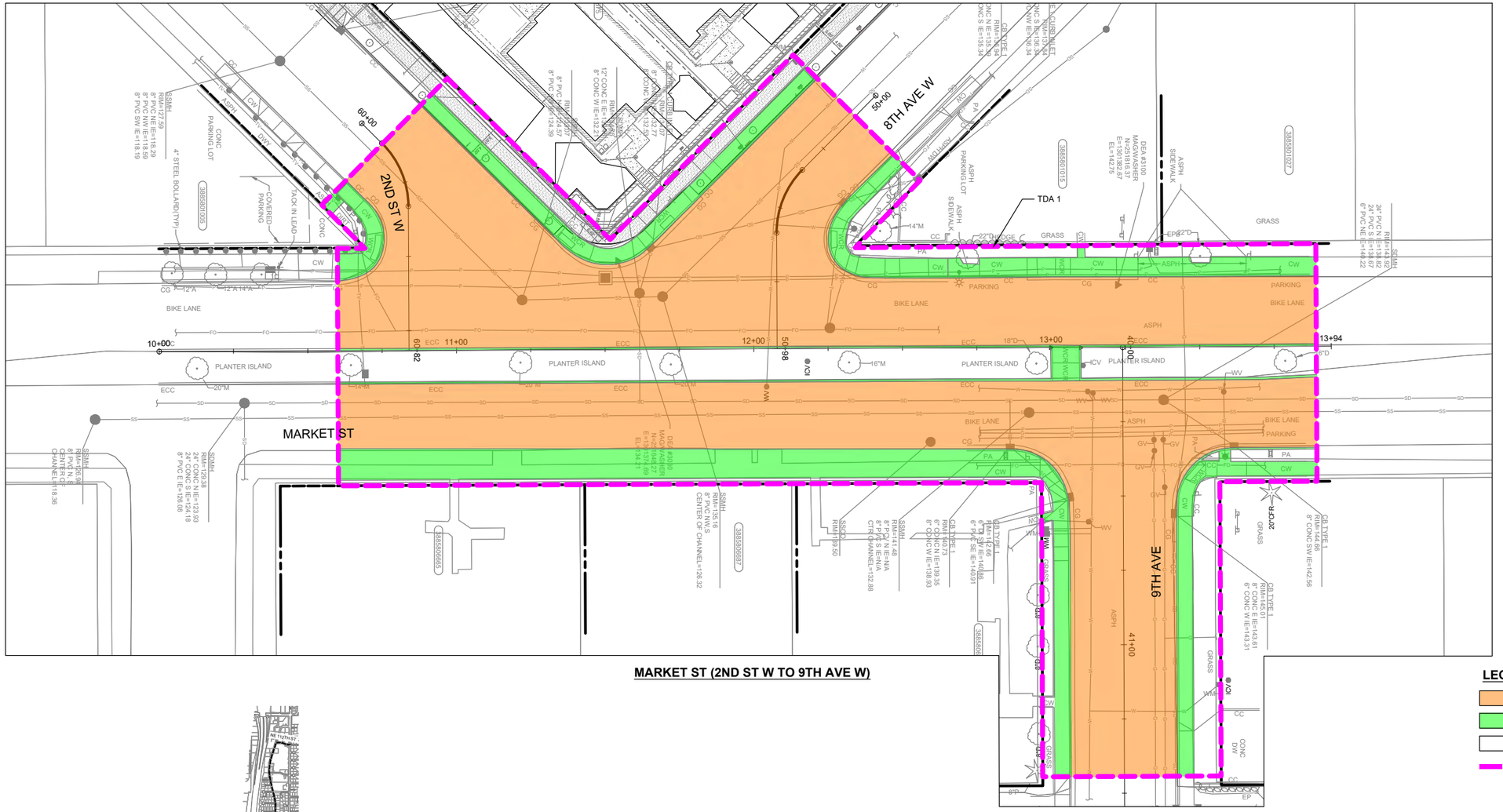
DRAINAGE PROFILE

PROJECT NO. 00SEA.00114.00
DATE 8.2.2024
DRAWING NO. SDPR03
SHEET NO. 71 OF 109

APPENDIX C:

EXISTING AND PROPOSED EXHIBITS



LEGEND:

- POLLLUTION GENERATING HARD SURFACE
- NON-POLLUTION GENERATING HARD SURFACE
- PERVIOUS SURFACE
- TDA LIMITS

N

0 20' 40' 60'

SCALE IN FEET

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF [STATE], LICENSE NO. _____. EXPIRATION DATE: _____.

NATHAN K. WONG — STATE OF WASHINGTON — 45013 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY NOT FOR CONSTRUCTION

REUSE OF DOCUMENTS

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		NO.	DATE	REVISION	BY	APVD
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DR	N. WONG					
CHK	DD					
APVD	DD					

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14432 SE Eastgate Way, Suite 400
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KIRKLAND NEIGHBORHOOD GREENWAY
CITY OF KIRKLAND

CIVIL

DRAINAGE REPORT EXISTING CONDITIONS

PROJECT NO.	00SEA.00114.00
DATE	4.16.2024
DRAWING NO.	DR-EX01
SHEET NO.	1 OF 9

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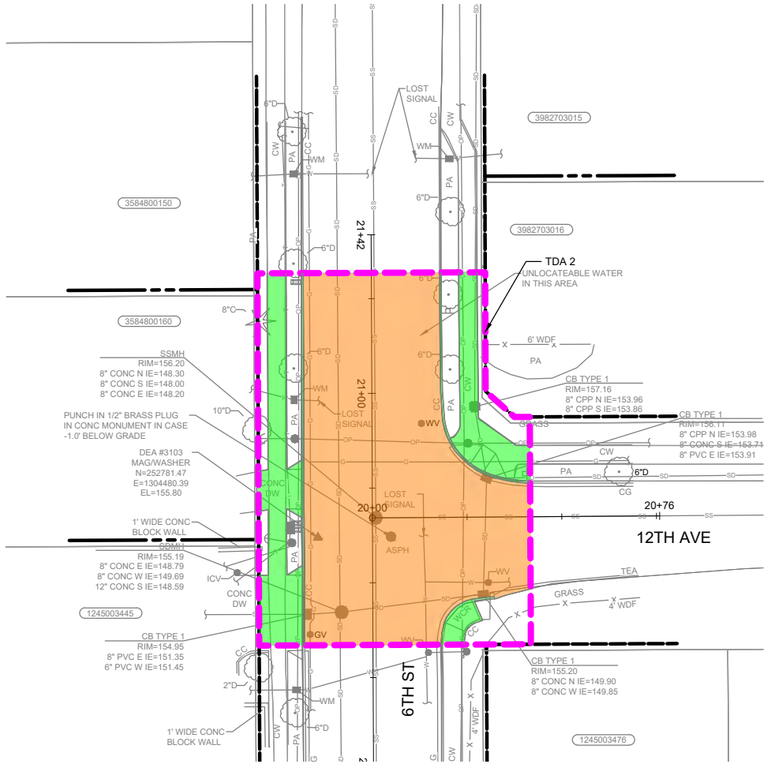
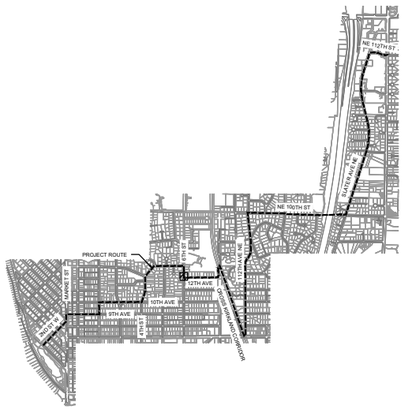


6TH ST AND 12TH AVE



KEY MAP
N.T.S.

LEGEND:

- POLLLUTION GENERATING HARD SURFACE
- NON-POLLUTION GENERATING HARD SURFACE
- PERVIOUS SURFACE
- TDA LIMITS

N

0 20' 40' 60'

SCALE IN FEET

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF [STATE], LICENSE NO. _____. EXPIRATION DATE: _____.

NATHAN K. WONG — STATE OF WASHINGTON — 45813 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY

REUSE OF DOCUMENTS

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DR	N. WONG
CHK	DD
APVD	DD

NO.	DATE	REVISION	BY	APVD

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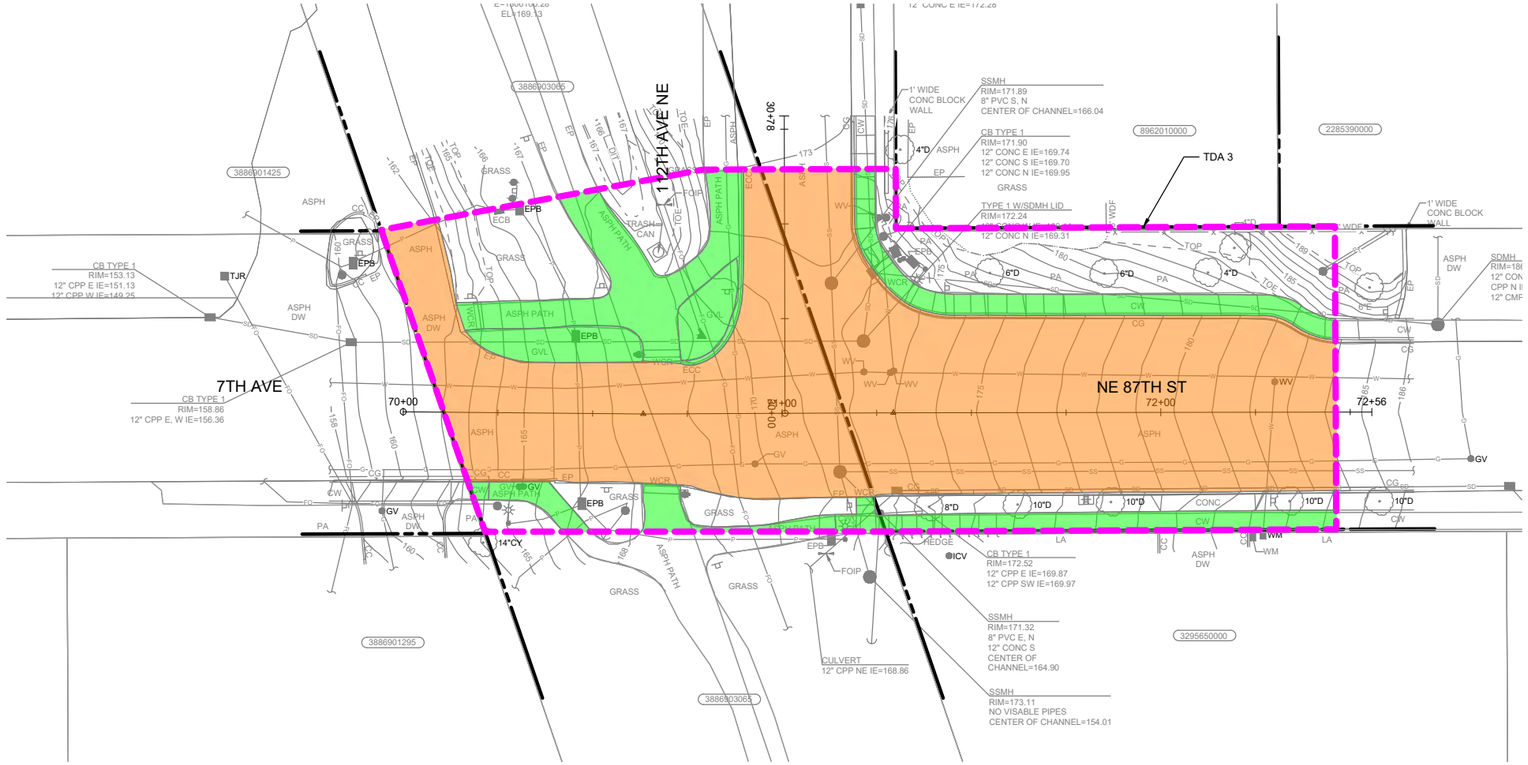
KIRKLAND NEIGHBORHOOD GREENWAY
CITY OF KIRKLAND

CIVIL

DRAINAGE REPORT EXISTING CONDITIONS

PROJECT NO.	00SEA.00114.00
DATE	4.16.2024
DRAWING NO.	DR-EX02
SHEET NO.	2 OF 9



NE 87TH ST AND 112TH AVE NE

KEY MAP
N.T.S.

LEGEND:

- POLLLUTION GENERATING HARD SURFACE
- NON-POLLUTION GENERATING HARD SURFACE
- PERVIOUS SURFACE
- TDA LIMITS

N

0 20' 40' 60'

SCALE IN FEET

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Wednesday, June 12, 2024 11:20:27 AM

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF [STATE], LICENSE NO. _____, EXPIRATION DATE: _____.

NATHAN K. WONG
STATE OF WASHINGTON
25813
REGISTERED
PROFESSIONAL ENGINEER

PRELIMINARY

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APVD	DD

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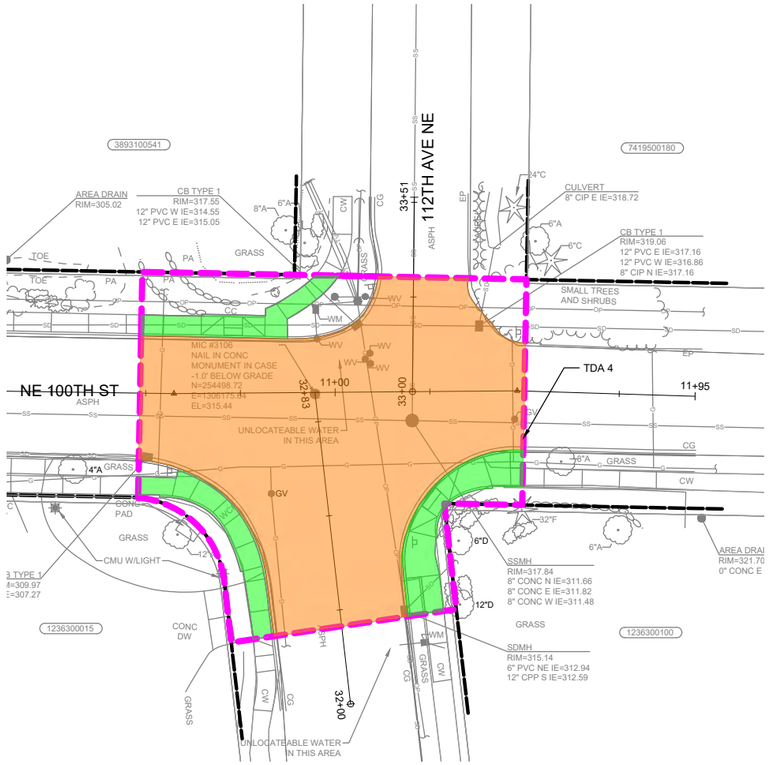
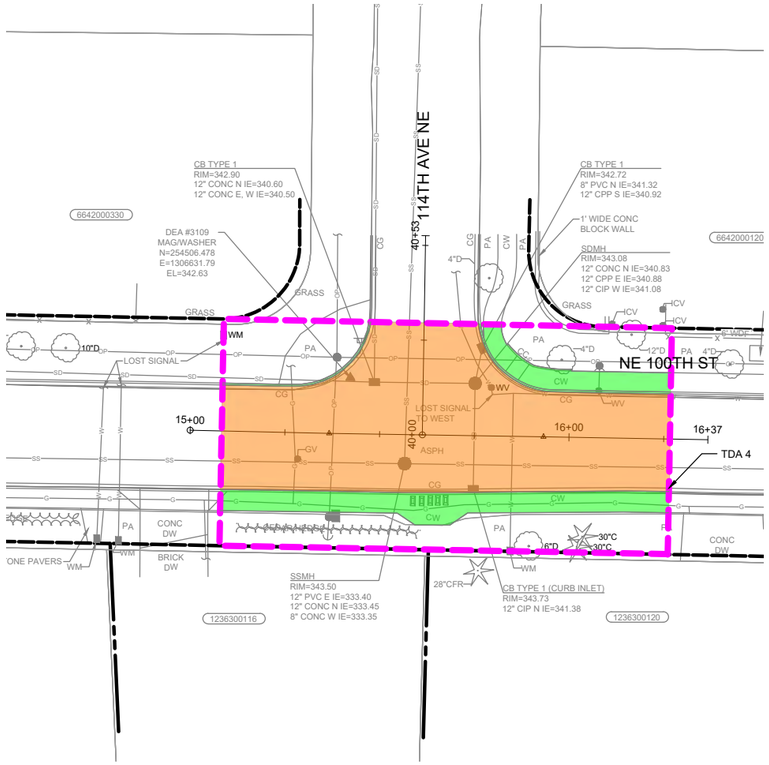
DRAINAGE REPORT EXISTING CONDITIONS

PROJECT NO. 00SEA.00114.00
DATE 4.16.2024
DRAWING NO. DR-EX03
SHEET NO. 3 OF 9



NE 100TH ST AND 112TH AVE NE

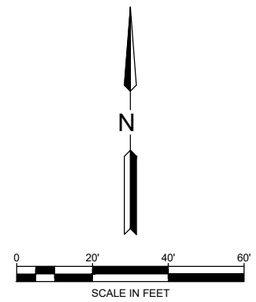


NE 100TH ST AND 114TH AVE NE

LEGEND:

- POLLLUTION GENERATING HARD SURFACE
- NON-POLLUTION GENERATING HARD SURFACE
- PERVIOUS SURFACE
- TDA LIMITS

KEY MAP
N.T.S.



PROFESSIONAL CERTIFICATION

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NATHAN K. WONG — STATE OF WASHINGTON — 45913 — REGISTERED PROFESSIONAL ENGINEER

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APVD	DD					

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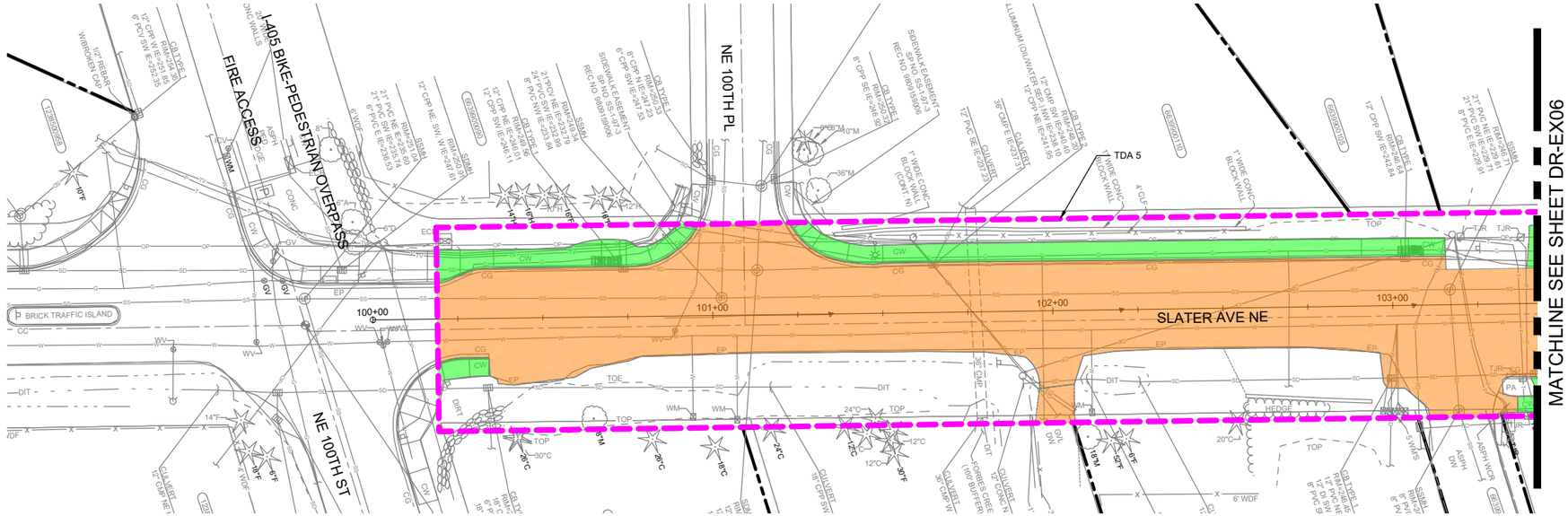
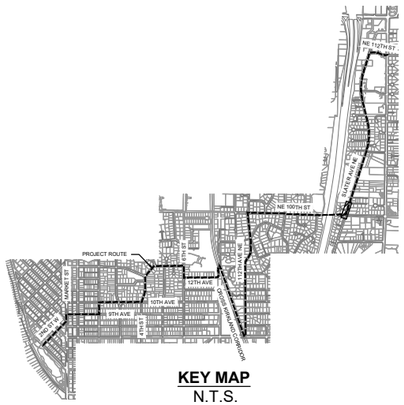
DRAINAGE REPORT EXISTING CONDITIONS

PROJECT NO.	00SEA.00114.00
DATE	4.16.2024
DRAWING NO.	DR-EX04
SHEET NO.	4 OF 9

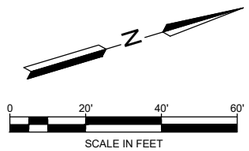


LEGEND:

- POLLLUTION GENERATING HARD SURFACE
- NON-POLLUTION GENERATING HARD SURFACE
- PERVIOUS SURFACE
- TDA LIMITS



KEY MAP
N.T.S.



SCALE IN FEET

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Wednesday, June 12, 2024 3:27:06 PM

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF [STATE], LICENSE NO. _____. EXPIRATION DATE: _____.

NATHAN K. WONG — STATE OF WASHINGTON — 25813 — REGISTERED PROFESSIONAL ENGINEER

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APVD	DD					

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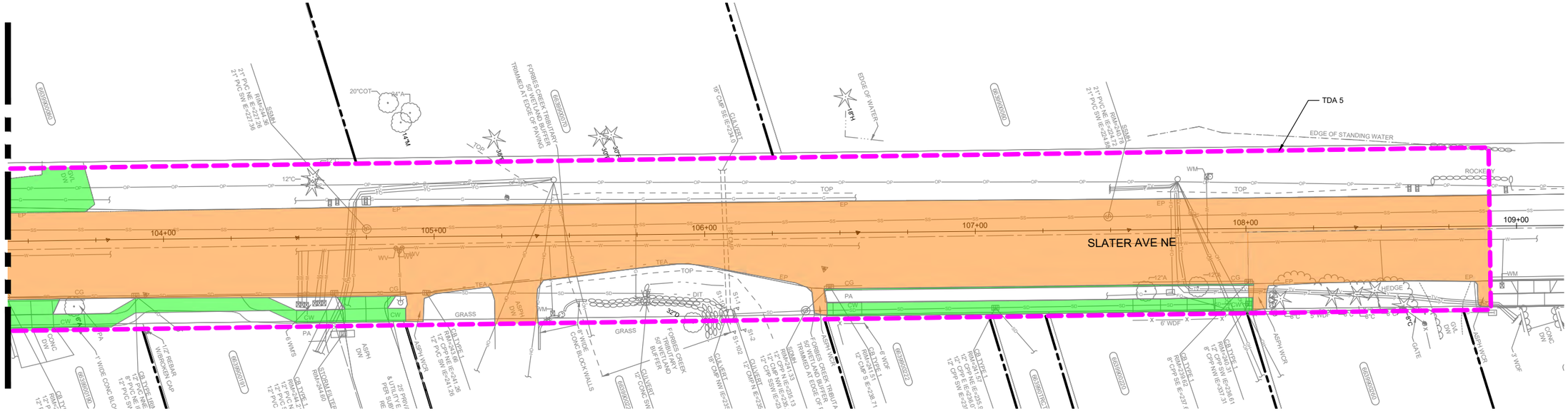
DRAINAGE REPORT EXISTING CONDITIONS

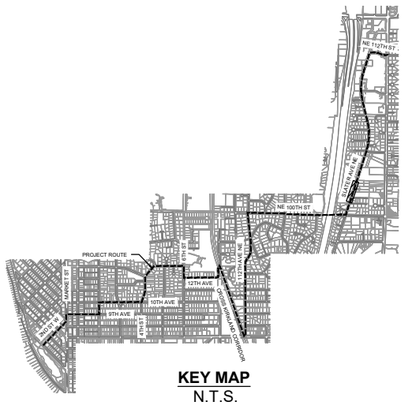
PROJECT NO.	00SEA.00114.00
DATE	4.16.2024
DRAWING NO.	DR-EX05
SHEET NO.	5 OF 9

MATCHLINE SEE SHEET DR-EX05



LEGEND:

- POLLLUTION GENERATING HARD SURFACE
- NON-POLLUTION GENERATING HARD SURFACE
- PERVIOUS SURFACE
- TDA LIMITS



KEY MAP
N.T.S.

N

0 20' 40' 60'
SCALE IN FEET

PROFESSIONAL CERTIFICATION

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NATHAN K. WONG — STATE OF WASHINGTON — 25813 — REGISTERED PROFESSIONAL ENGINEER

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CHK	DD					
APVD	DD					

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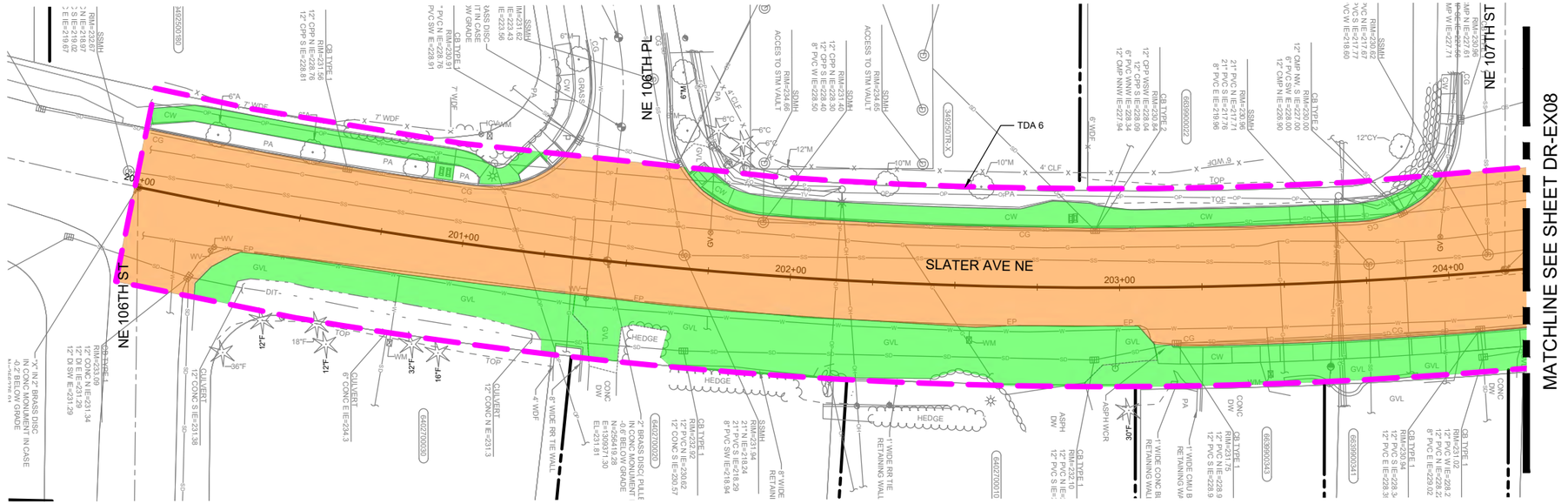
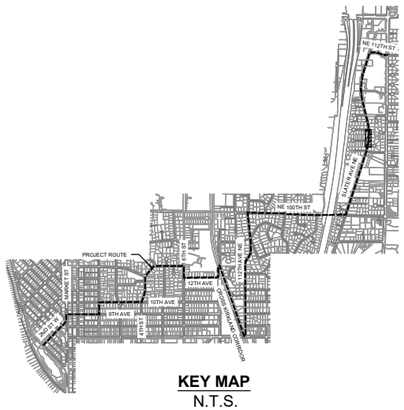
DRAINAGE REPORT EXISTING CONDITIONS

PROJECT NO.	00SEA.00114.00
DATE	4.16.2024
DRAWING NO.	DR-EX06
SHEET NO.	6 OF 9





KEY MAP
N.T.S.

LEGEND:

- POLLLUTION GENERATING HARD SURFACE
- NON-POLLUTION GENERATING HARD SURFACE
- PERVIOUS SURFACE
- TDA LIMITS

PROFESSIONAL CERTIFICATION

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NATHAN K. WONG — STATE OF WASHINGTON — 25813 — REGISTERED PROFESSIONAL ENGINEER

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DR	N. WONG					
CHK	DD					
APVD	DD					

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CITY OF KIRKLAND

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DRAINAGE REPORT EXISTING CONDITIONS

PROJECT NO. 00SEA.00114.00
DATE 4.16.2024
DRAWING NO. DR-EX07
SHEET NO. 7 OF 9

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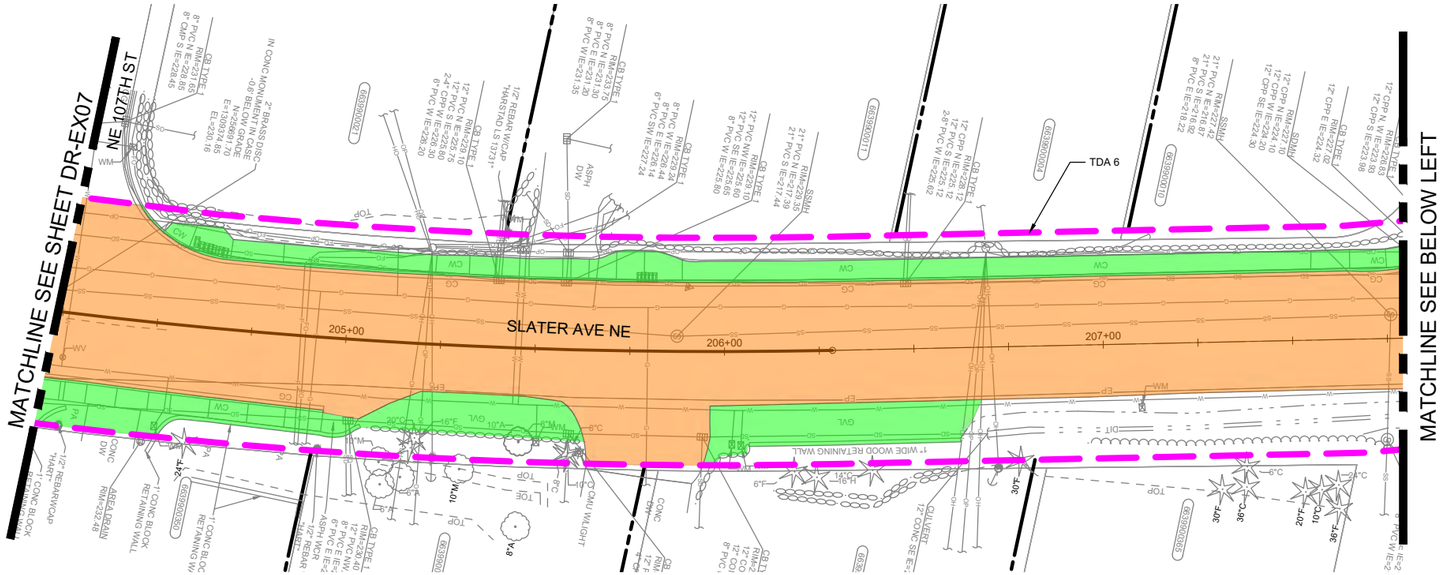

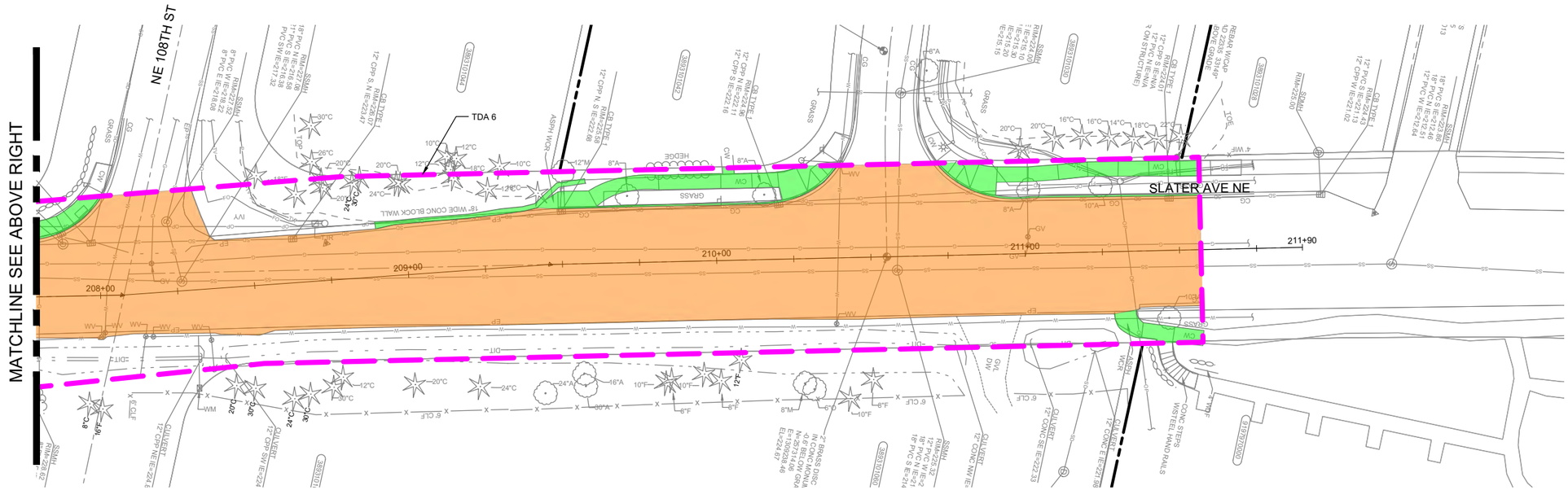

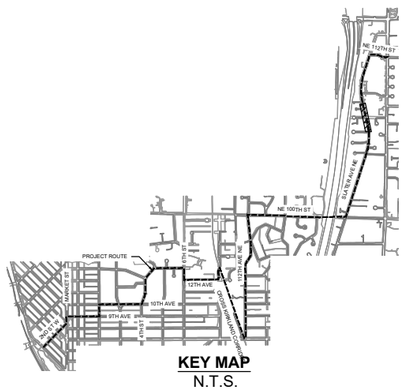

LEGEND:

- POLLLUTION GENERATING HARD SURFACE
- NON-POLLUTION GENERATING HARD SURFACE
- PERVIOUS SURFACE
- TDA LIMITS

N

0 20' 40' 60'

SCALE IN FEET

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Wednesday, June 12, 2024 11:21:39 AM

PROFESSIONAL CERTIFICATION

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NATHAN K. WONG — STATE OF WASHINGTON — 45813 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY

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DR	N. WONG
CHK	DD
APVD	DD

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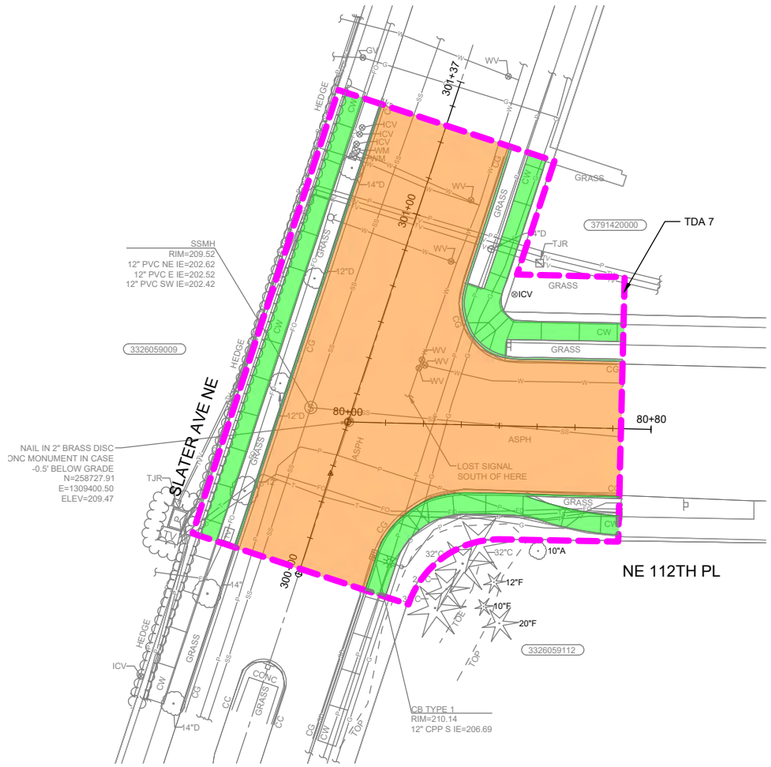
CITY OF KIRKLAND

CIVIL

DRAINAGE REPORT EXISTING CONDITIONS

PROJECT NO.	00SEA.00114.00
DATE	4.16.2024
DRAWING NO.	DR-EX08
SHEET NO.	8 OF 9



SLATER AVE NE AND NE 112TH PL

KEY MAP
N.T.S.

LEGEND:

- POLLLUTION GENERATING HARD SURFACE
- NON-POLLUTION GENERATING HARD SURFACE
- PERVIOUS SURFACE
- TDA LIMITS

N

0 20' 40' 60'

SCALE IN FEET

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Wednesday, June 12, 2024 11:21:51 AM

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF [STATE], LICENSE NO. _____. EXPIRATION DATE: _____.

NATHAN K. WONG
STATE OF WASHINGTON
45913
REGISTERED
PROFESSIONAL ENGINEER

PRELIMINARY

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CHK	DD					
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KIRKLAND NEIGHBORHOOD GREENWAY
CITY OF KIRKLAND

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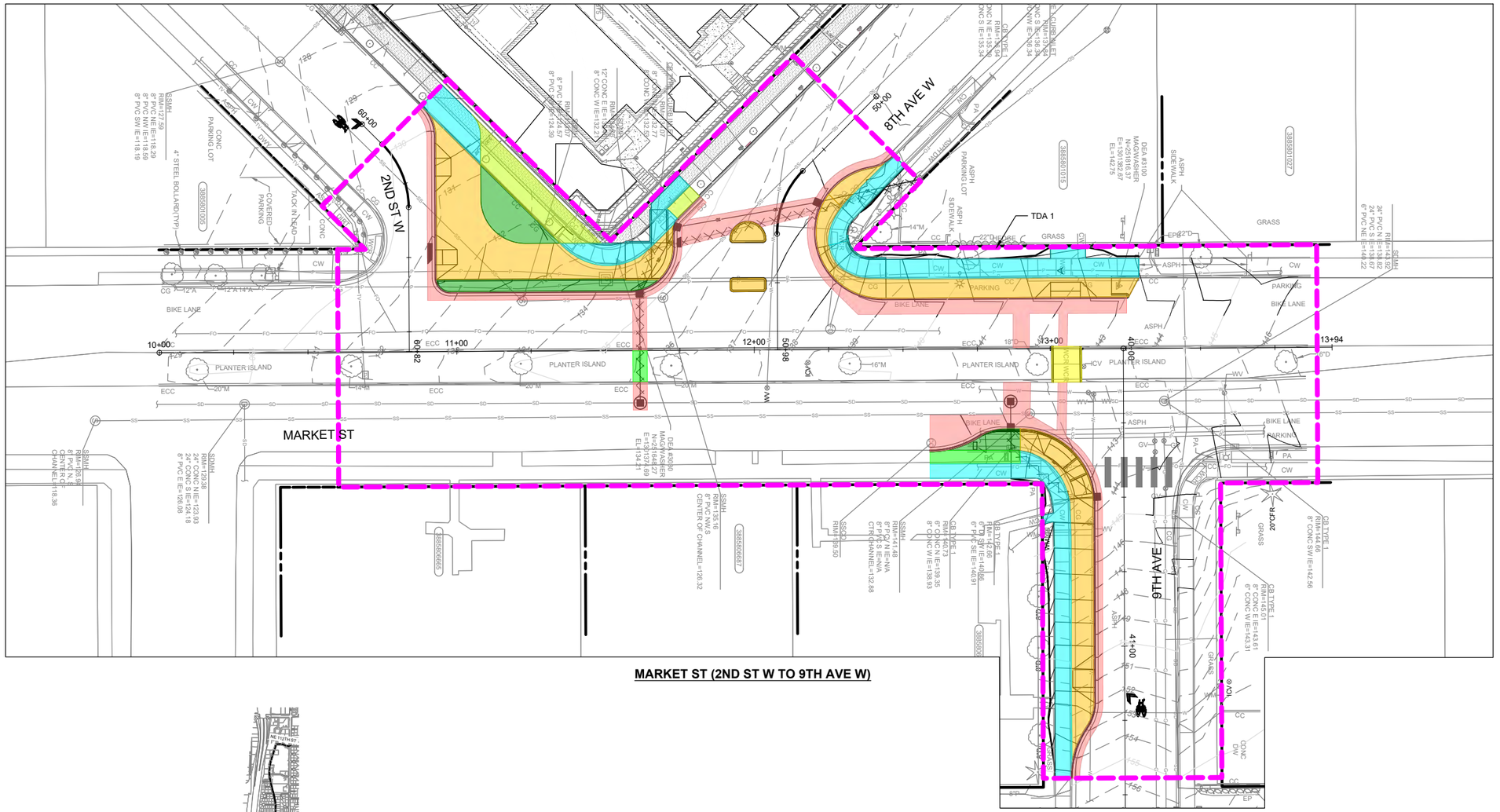
DRAINAGE REPORT
EXISTING CONDITIONS

PROJECT NO.	00SEA.00114.00
DATE	4.16.2024
DRAWING NO.	DR-EX09
SHEET NO.	9 OF 9



MARKET ST (2ND ST W TO 9TH AVE W)

KEY MAP
N.T.S.

LEGEND:

- REPLACED PGHS
- CONVERTED NPGHS TO PGHS
- CONVERTED PERVIOUS TO PGHS
- REPLACED NPGHS
- CONVERTED PGHS TO NPGHS
- CONVERTED PERVIOUS TO NPGHS
- REPLACED PERVIOUS
- CONVERTED NPGHS TO PERVIOUS
- CONVERTED PGHS TO PERVIOUS
- TDA LIMITS

STORM DRAIN LEGEND:

- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 2
- STORM SEWER PIPE
- REMOVE EXISTING STORM DRAIN FEATURE

N

0 20' 40' 60'
SCALE IN FEET

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Wednesday, June 12, 2024 12:55:27 PM

PROFESSIONAL CERTIFICATION

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NATHAN A. WONG — STATE OF WASHINGTON — 45913 — REGISTERED PROFESSIONAL ENGINEER

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CITY OF KIRKLAND

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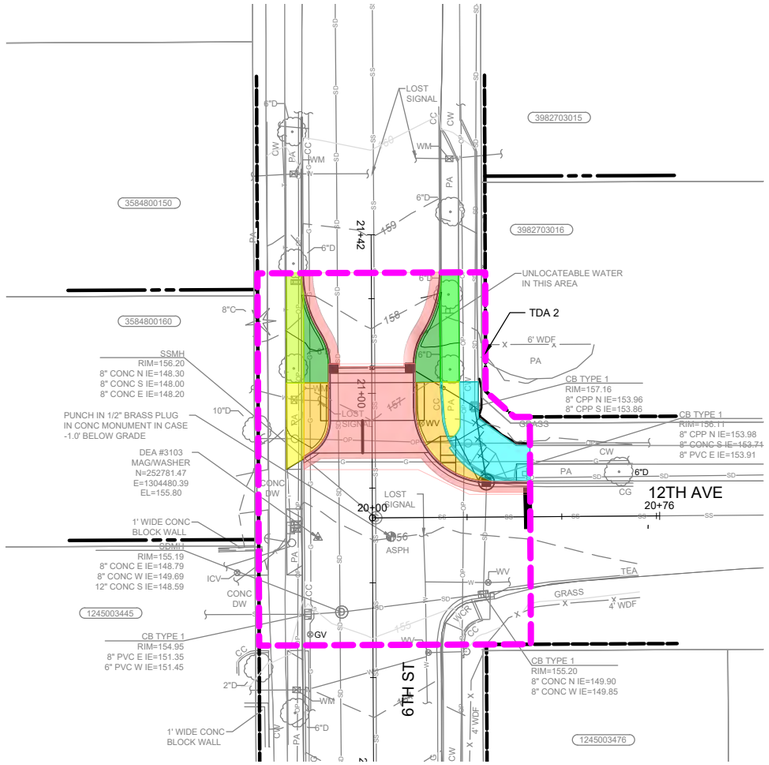
DRAINAGE REPORT PROPOSED CONDITIONS

PROJECT NO. 00SEA.00114.00
DATE 4.16.2024
DRAWING NO. DR-PR01
SHEET NO. 1 OF 9



6TH ST AND 12TH AVE

KEY MAP
N.T.S.

LEGEND:

- REPLACED PGHS
- CONVERTED NPGHS TO PGHS
- CONVERTED PERVIOUS TO PGHS
- REPLACED NPGHS
- CONVERTED PGHS TO NPGHS
- CONVERTED PERVIOUS TO NPGHS
- REPLACED PERVIOUS
- CONVERTED NPGHS TO PERVIOUS
- CONVERTED PGHS TO PERVIOUS
- TDA LIMITS

STORM DRAIN LEGEND:

- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 2
- STORM SEWER PIPE
- REMOVE EXISTING STORM DRAIN FEATURE

N

0 20' 40' 60'
SCALE IN FEET

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Wednesday, June 12, 2024 12:55:45 PM

PROFESSIONAL CERTIFICATION

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NATHAN K. WONG
STATE OF WASHINGTON
49813
REGISTERED
PROFESSIONAL ENGINEER

PRELIMINARY

REUSE OF DOCUMENTS

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DR	N. WONG					
CHK	DD					
APVD	DD					

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CITY OF KIRKLAND

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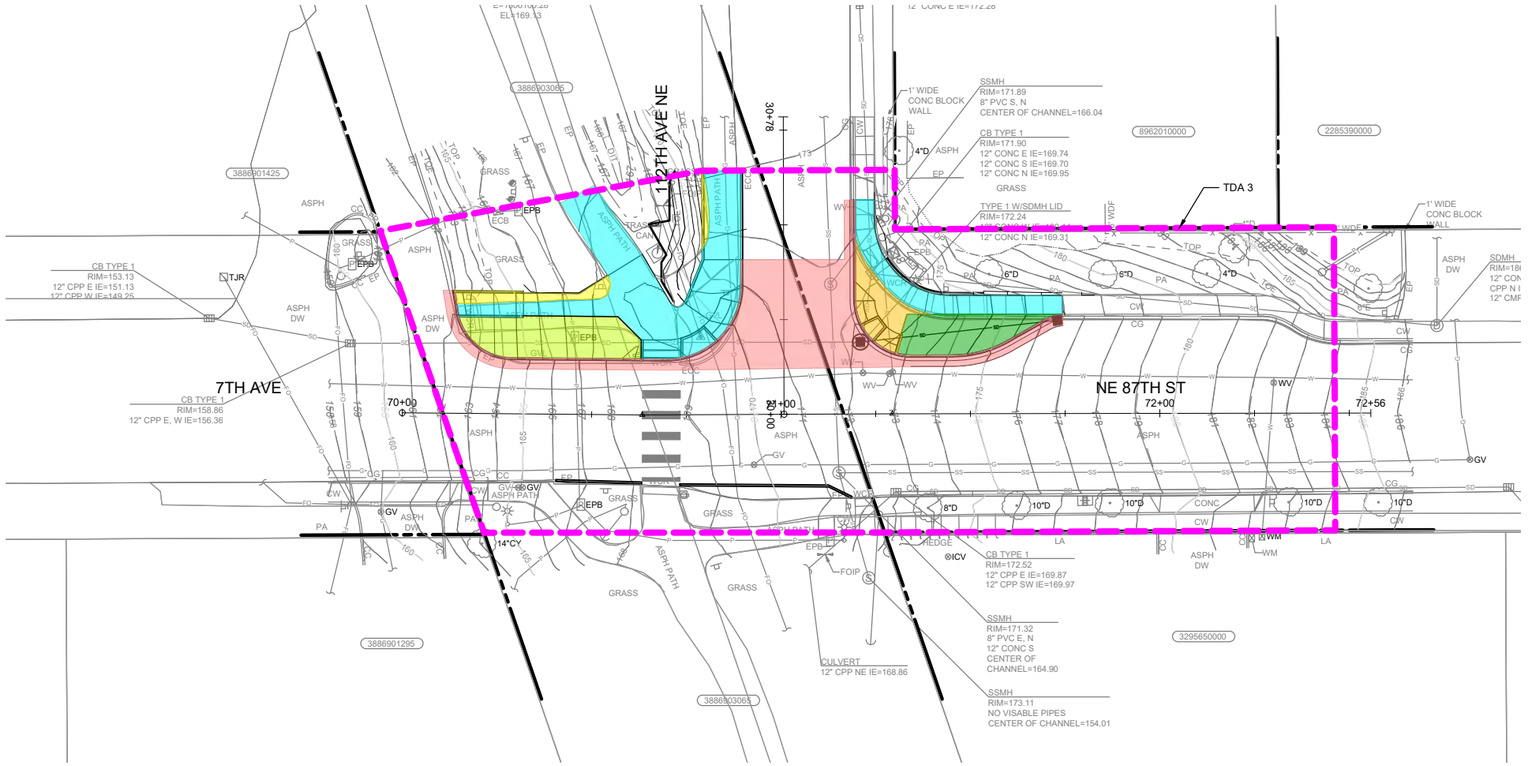
DRAINAGE REPORT
PROPOSED CONDITIONS

PROJECT NO.	00SEA.00114.00
DATE	4.16.2024
DRAWING NO.	DR-PR02
SHEET NO.	2 OF 9



NE 87TH ST AND 112TH AVE NE

KEY MAP
N.T.S.

LEGEND:

- REPLACED PGHS
- CONVERTED NPGHS TO PGHS
- CONVERTED PERVIOUS TO PGHS
- REPLACED NPGHS
- CONVERTED PGHS TO NPGHS
- CONVERTED PERVIOUS TO NPGHS
- REPLACED PERVIOUS
- CONVERTED NPGHS TO PERVIOUS
- CONVERTED PGHS TO PERVIOUS
- TDA LIMITS

STORM DRAIN LEGEND:

- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 2
- STORM SEWER PIPE
- REMOVE EXISTING STORM DRAIN FEATURE

N

0 20' 40' 60'
SCALE IN FEET

C:\pw_work\dea2\dms46345\00SEA.00114_SD_DR-PR.dwg
Wednesday, June 12, 2024 12:56:01 PM

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF [STATE], LICENSE NO. _____. EXPIRATION DATE: _____.

NATHAN K. WONG STATE OF WASHINGTON 25813 REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY

REUSE OF DOCUMENTS

		NO.	DATE	REVISION	BY	APVD
DSGN	N. WONG					
DR	N. WONG					
CHK	DD					
APVD	DD					

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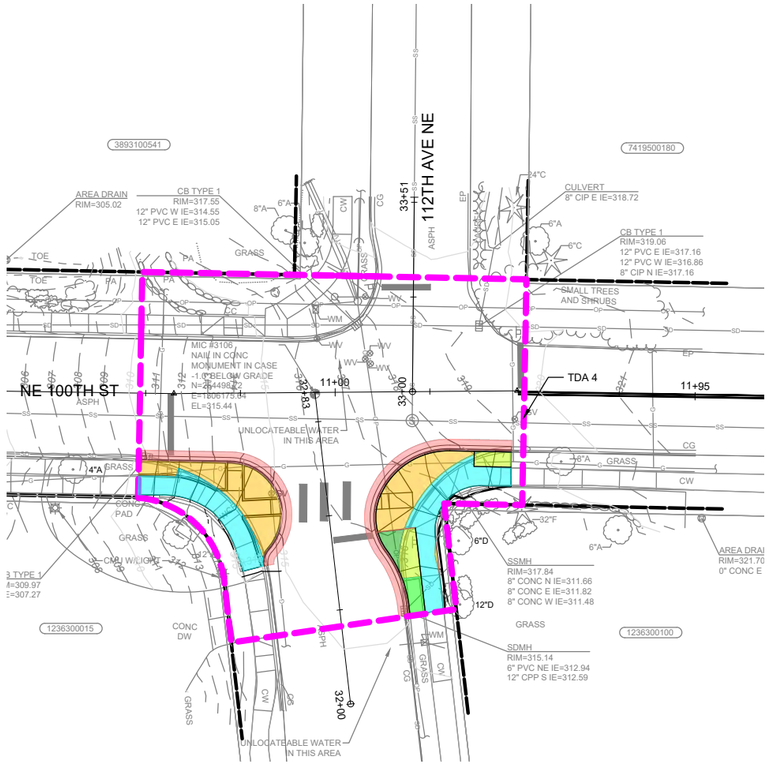
KIRKLAND NEIGHBORHOOD GREENWAY
CITY OF KIRKLAND

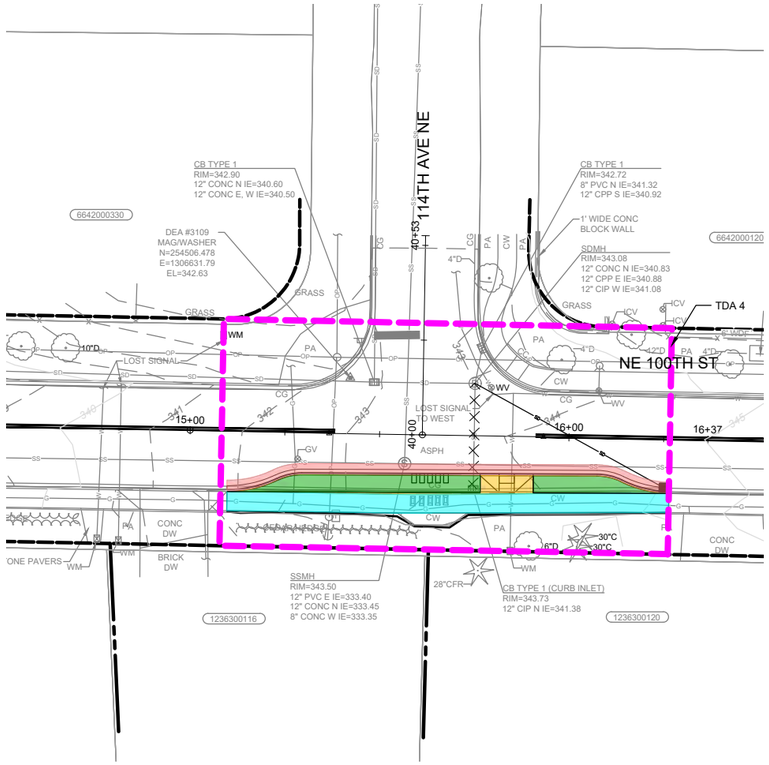
CIVIL

DRAINAGE REPORT PROPOSED CONDITIONS

PROJECT NO. 00SEA.00114.00
DATE 4.16.2024
DRAWING NO. DR-PR03
SHEET NO. 3 OF 9



NE 100TH ST AND 112TH AVE NE



NE 100TH ST AND 114TH AVE NE

KEY MAP
N.T.S.

LEGEND:

- REPLACED PGHS
- CONVERTED NPGHS TO PGHS
- CONVERTED PERVIOUS TO PGHS
- REPLACED NPGHS
- CONVERTED PGHS TO NPGHS
- CONVERTED PERVIOUS TO NPGHS
- REPLACED PERVIOUS
- CONVERTED NPGHS TO PERVIOUS
- CONVERTED PGHS TO PERVIOUS
- TDA LIMITS

STORM DRAIN LEGEND:

- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 2
- STORM SEWER PIPE
- REMOVE EXISTING STORM DRAIN FEATURE

N

0 20' 40' 60'
SCALE IN FEET

C:\pw_work\dea22\dms46345\00SEA.00114_SD_DR-PR.dwg
Wednesday, June 12, 2024 1:45:47 PM

PROFESSIONAL CERTIFICATION

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NATHAN K. WONG
STATE OF WASHINGTON
43013
REGISTERED PROFESSIONAL ENGINEER

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DR	N. WONG					
CHK	DD					
APVD	DD					

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CITY OF KIRKLAND

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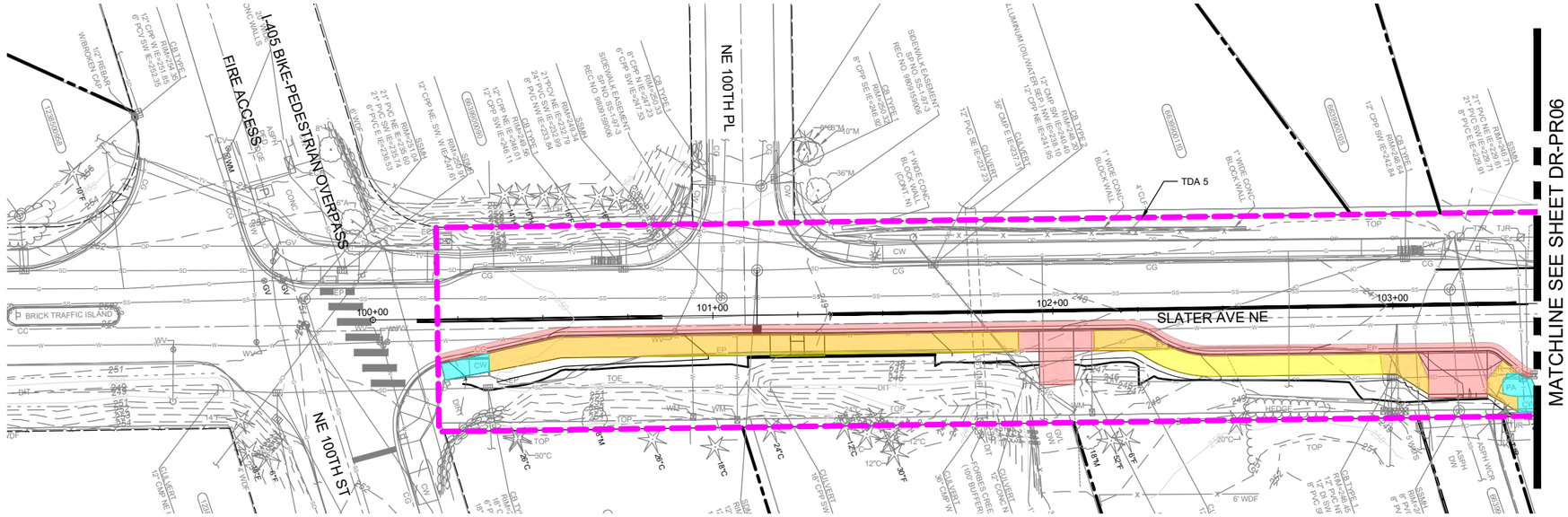
DRAINAGE REPORT
PROPOSED CONDITIONS

PROJECT NO.	00SEA.00114.00
DATE	4.16.2024
DRAWING NO.	DR-PR04
SHEET NO.	4 OF 9

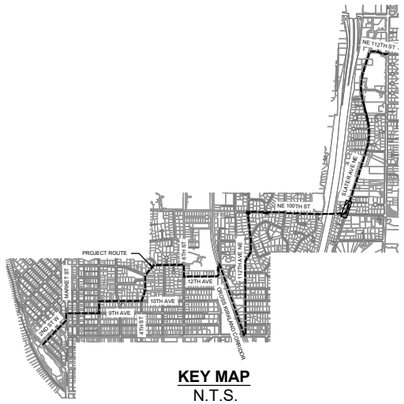


LEGEND:

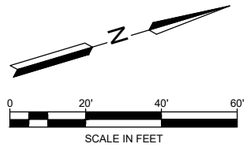
- REPLACED PGHS
- CONVERTED NPGHS TO PGHS
- CONVERTED PERVIOUS TO PGHS
- REPLACED NPGHS
- CONVERTED PGHS TO NPGHS
- CONVERTED PERVIOUS TO NPGHS
- REPLACED PERVIOUS
- CONVERTED NPGHS TO PERVIOUS
- CONVERTED PGHS TO PERVIOUS
- TDA LIMITS

STORM DRAIN LEGEND:

- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 2
- STORM SEWER PIPE
- REMOVE EXISTING STORM DRAIN FEATURE



KEY MAP
N.T.S.



SCALE IN FEET

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Wednesday, June 12, 2024 12:58:41 PM

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF [STATE], LICENSE NO. _____. EXPIRATION DATE: _____.

NATHAN K. WONG — STATE OF WASHINGTON — 49013 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY

REUSE OF DOCUMENTS

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		NO.	DATE	REVISION	BY	APVD
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DR	N. WONG					
CHK	DD					
APVD	DD					

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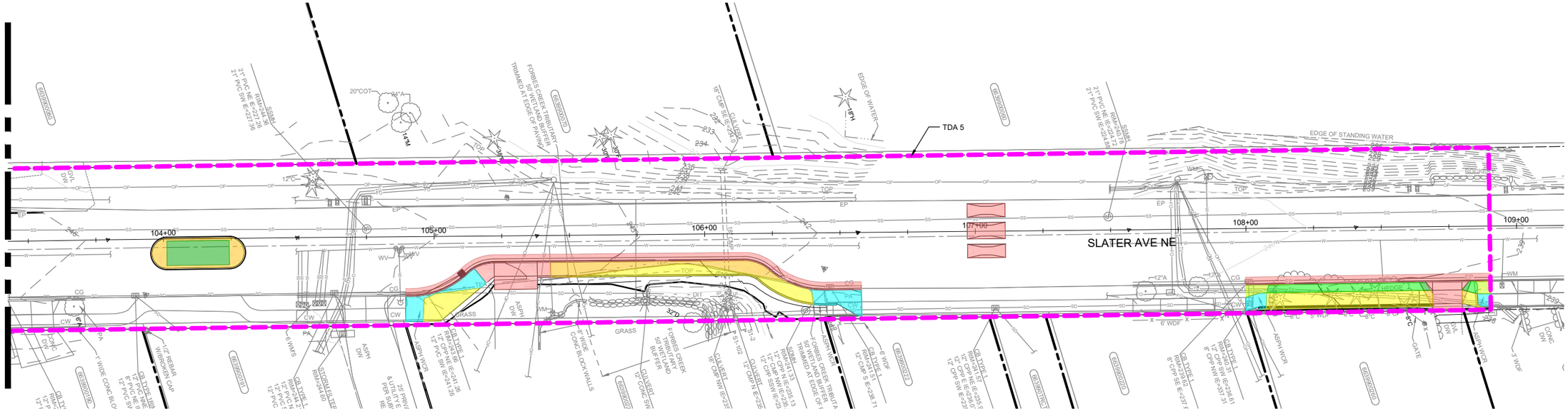
CITY OF KIRKLAND

CIVIL

DRAINAGE REPORT PROPOSED CONDITIONS

PROJECT NO.	00SEA.00114.00
DATE	4.16.2024
DRAWING NO.	DR-PR05
SHEET NO.	5 OF 9

MATCHLINE SEE SHEET DR-PR05



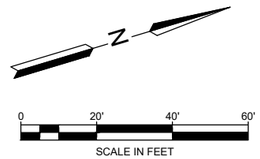
LEGEND:

- REPLACED PGHS
- CONVERTED NPGHS TO PGHS
- CONVERTED PERVIOUS TO PGHS
- REPLACED NPGHS
- CONVERTED PGHS TO NPGHS
- CONVERTED PERVIOUS TO NPGHS
- REPLACED PERVIOUS
- CONVERTED NPGHS TO PERVIOUS
- CONVERTED PGHS TO PERVIOUS
- TDA LIMITS

KEY MAP
N.T.S.

STORM DRAIN LEGEND:

- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 2
- STORM SEWER PIPE
- REMOVE EXISTING STORM DRAIN FEATURE



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Wednesday, June 12, 2024 12:56:38 PM

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF [STATE], LICENSE NO. _____. EXPIRATION DATE: _____.

NATHAN K. WONG — STATE OF WASHINGTON — 25813 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY

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DR	N. WONG					
CHK	DD					
APVD	DD					

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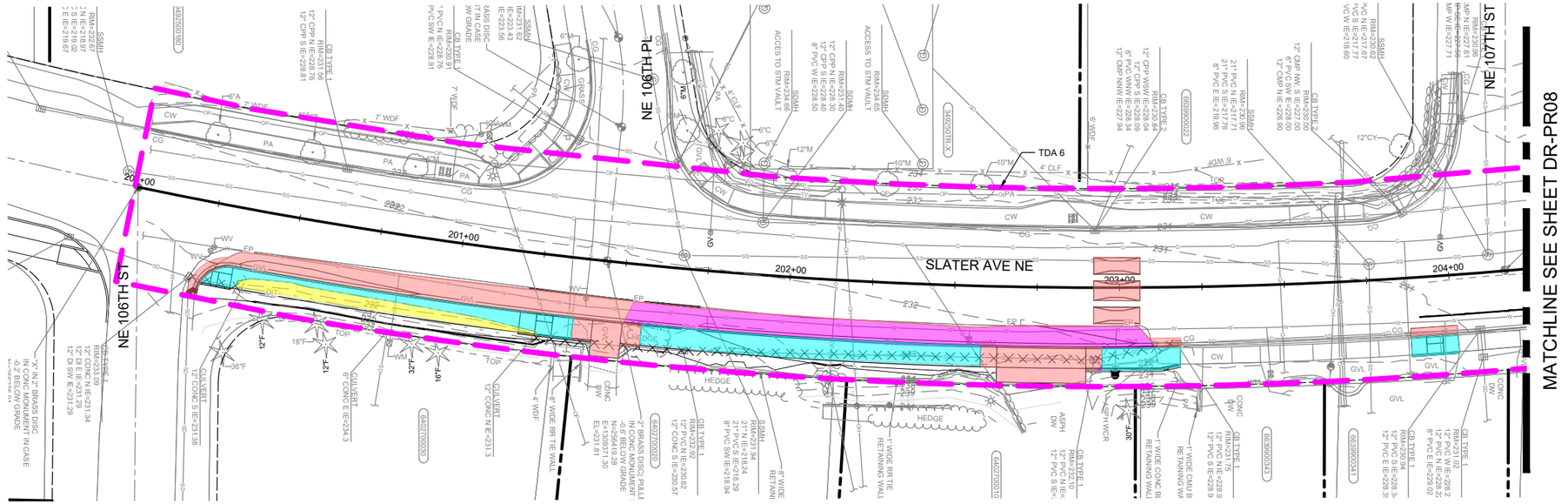
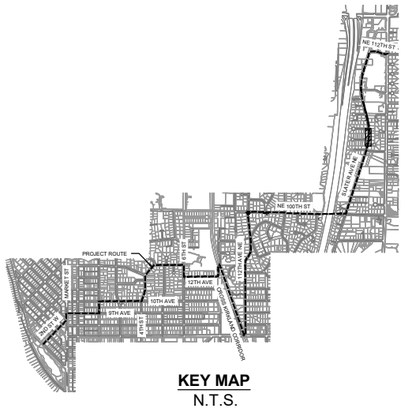
DRAINAGE REPORT PROPOSED CONDITIONS

PROJECT NO.	00SEA.00114.00
DATE	4.16.2024
DRAWING NO.	DR-PR06
SHEET NO.	6 OF 9



LEGEND:

- REPLACED PGHS
- CONVERTED NPGHS TO PGHS
- CONVERTED PERVIOUS TO PGHS
- REPLACED NPGHS
- CONVERTED PGHS TO NPGHS
- CONVERTED PERVIOUS TO NPGHS
- REPLACED PERVIOUS
- CONVERTED NPGHS TO PERVIOUS
- CONVERTED PGHS TO PERVIOUS
- TDA LIMITS



KEY MAP
N.T.S.

STORM DRAIN LEGEND:

- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 2
- STORM SEWER PIPE
- REMOVE EXISTING STORM DRAIN FEATURE

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Wednesday, June 12, 2024 12:57:16 PM

PROFESSIONAL CERTIFICATION

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NATHAN K. WONG — STATE OF WASHINGTON — 49013 — REGISTERED PROFESSIONAL ENGINEER

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DR	N. WONG					
CHK	DD					
APVD	DD					

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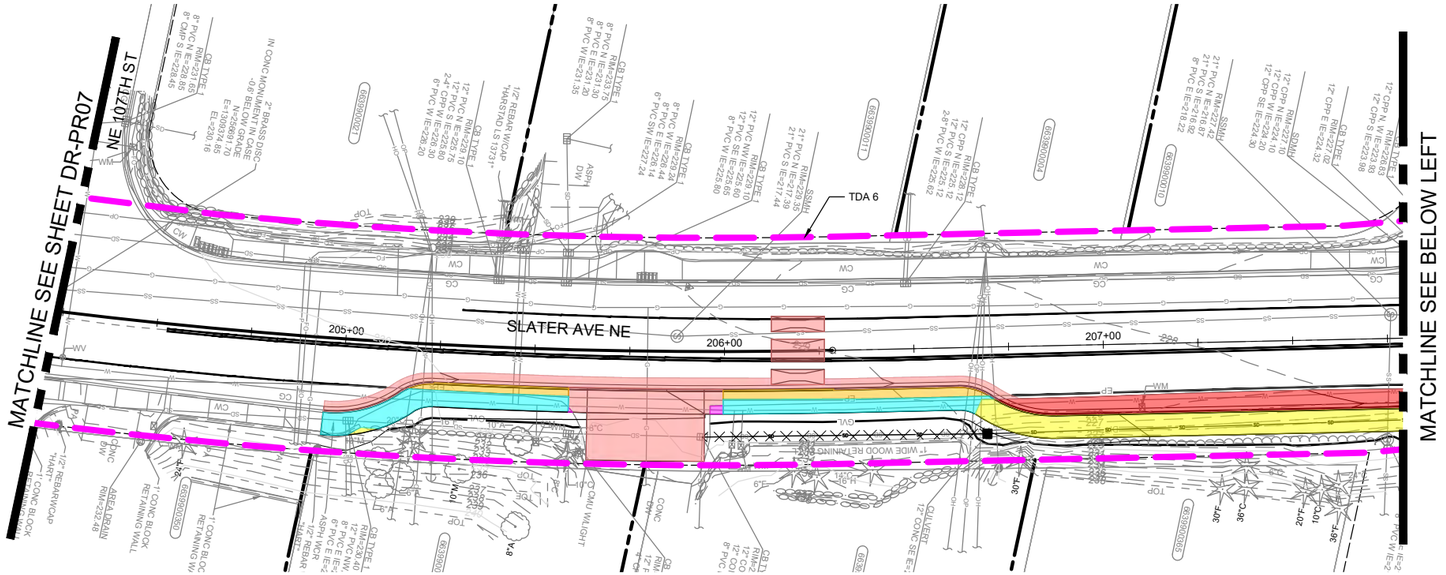
CIVIL

DRAINAGE REPORT PROPOSED CONDITIONS

PROJECT NO.	00SEA.00114.00
DATE	4.16.2024
DRAWING NO.	DR-PR07
SHEET NO.	7 OF 9

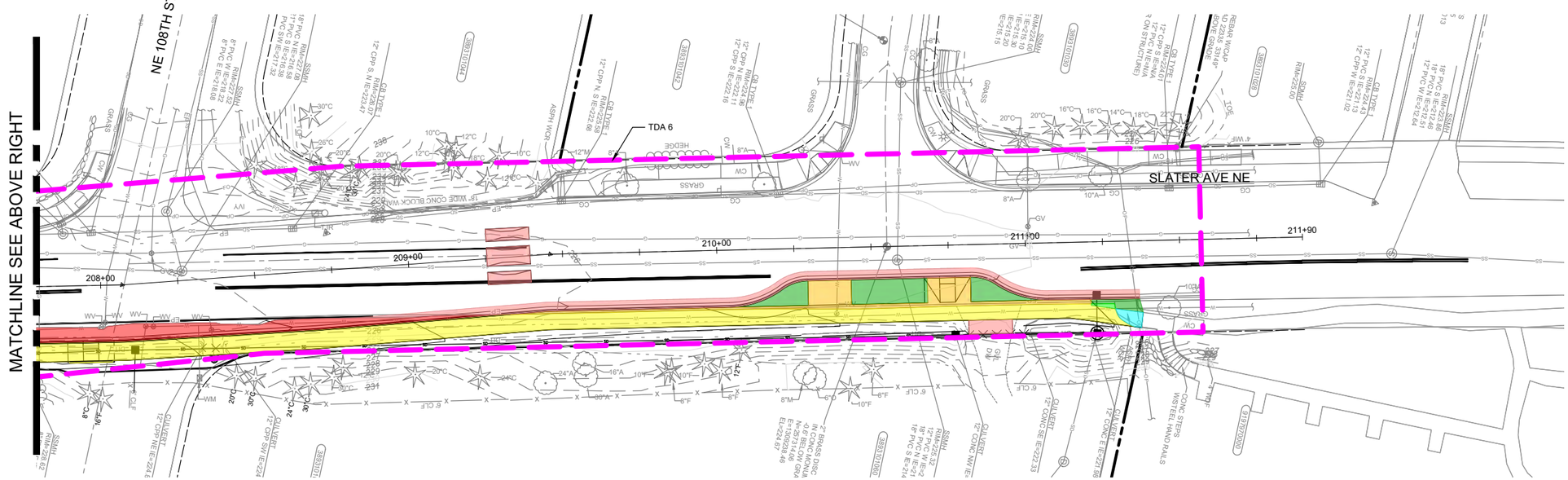


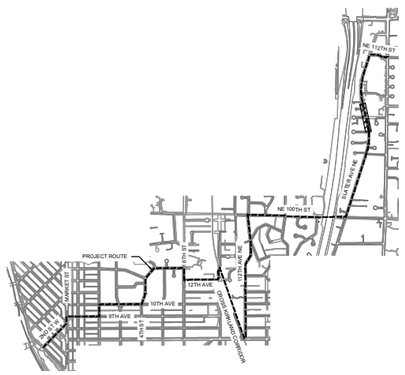
STORM DRAIN LEGEND:

- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 2
- STORM SEWER PIPE
- REMOVE EXISTING STORM DRAIN FEATURE

LEGEND:

- REPLACED PGHS
- CONVERTED NPGHS TO PGHS
- CONVERTED PERVIOUS TO PGHS
- REPLACED NPGHS
- CONVERTED PGHS TO NPGHS
- CONVERTED PERVIOUS TO NPGHS
- REPLACED PERVIOUS
- CONVERTED NPGHS TO PERVIOUS
- CONVERTED PGHS TO PERVIOUS
- TDA LIMITS





KEY MAP
N.T.S.

Z

0 20' 40' 60'
SCALE IN FEET

C:\pw_work\dea22dms\46345000SEA.00114_SD_DR-PR.dwg
Wednesday, June 12, 2024 12:57:39 PM

PROFESSIONAL CERTIFICATION

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NATHAN K. WONG
STATE OF WASHINGTON
45813
REGISTERED
PROFESSIONAL ENGINEER

PRELIMINARY

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DR	N. WONG
CHK	DD
APVD	DD

NO.	DATE	REVISION	BY	APVD

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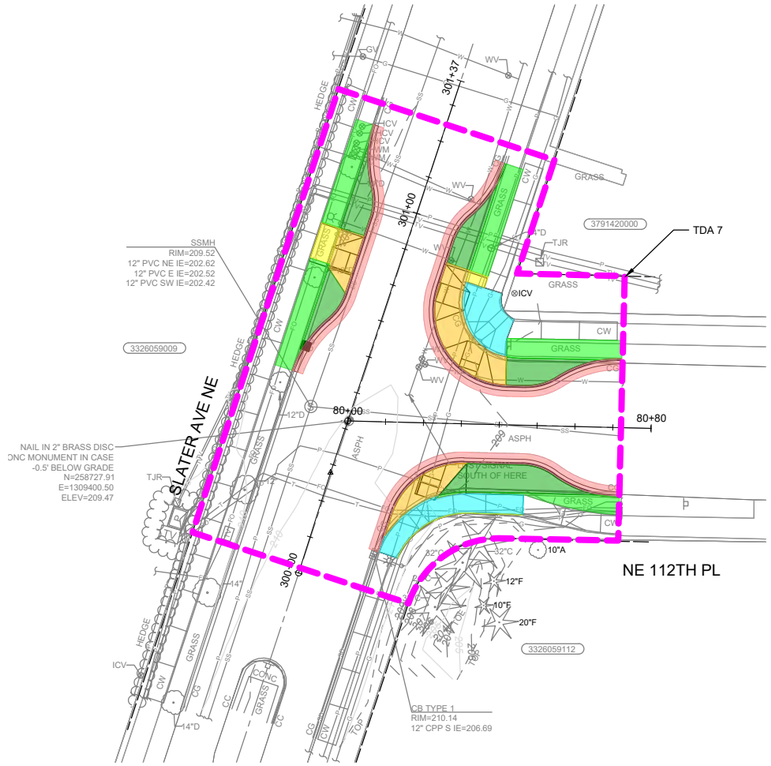
KIRKLAND NEIGHBORHOOD GREENWAY
CITY OF KIRKLAND

CIVIL

DRAINAGE REPORT PROPOSED CONDITIONS

PROJECT NO. 00SEA.00114.00
DATE 4.16.2024
DRAWING NO. DR-PR08
SHEET NO. 8 OF 9



SLATER AVE NE AND NE 112TH PL

LEGEND:

- REPLACED PGHS
- CONVERTED NPGHS TO PGHS
- CONVERTED PERVIOUS TO PGHS
- REPLACED NPGHS
- CONVERTED PGHS TO NPGHS
- CONVERTED PERVIOUS TO NPGHS
- REPLACED PERVIOUS
- CONVERTED NPGHS TO PERVIOUS
- CONVERTED PGHS TO PERVIOUS
- TDA LIMITS

KEY MAP
N.T.S.

STORM DRAIN LEGEND:

- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 2
- STORM SEWER PIPE
- REMOVE EXISTING STORM DRAIN FEATURE

N

0 20' 40' 60'
SCALE IN FEET

C:\pw_work\dea22\dms463450\00SEA.00114_SD_DR-PR.dwg
Wednesday, June 12, 2024 12:51:15 PM

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NATHAN K. WONG STATE OF WASHINGTON 45013 REGISTERED PROFESSIONAL ENGINEER

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DR	N. WONG					
CHK	DD					
APVD	DD					

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KIRKLAND NEIGHBORHOOD GREENWAY
CITY OF KIRKLAND

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DRAINAGE REPORT PROPOSED CONDITIONS

PROJECT NO. 00SEA.00114.00
DATE 4.16.2024
DRAWING NO. DR-PR09
SHEET NO. 9 OF 9

APPENDIX D:

CALCULATIONS

Conveyance System Analysis & Sizing Table Using the Rational Method
Proposed Network along Slater

Project: Kirkland Neighborhood Greenway
Job No: TDGI0000-0003
Date: 2-Aug-24
Engineer: CAJE
Checked: NKW

Design Event: 25 years
Precipitation: 3.10 inches
a 2.66
b 0.65

Location		Sub Basin	Impervious (pavement) Area			Pervious (lawn) Area			CA	Sum CA	Tc	i	I	Q_{actual}	Pipe	n	Slope	Q_{full} (capacity)	V_{full}	Q_{actual}/Q_{full}	V at Q_{actual} (look up table)	L	T_c in pipe
From	To		sf	acres	C	sf	acres	C			min			cfs	inches		%	cfs	ft/s		ft/s	ft	min
EX CB 1-1	CB 1-4	TDA 1	31011	0.71	0.9	18688	0.43	0.25	0.75	0.75	6.3	0.80	2.49	1.86	12	0.014	6.91%	8.73	11.12	0.21	8.56	35	0.07
CB 1-4	CB 1-3	TDA 1	18670	0.43	0.9	8614	0.20	0.25	0.44	1.18	6.3	0.80	2.49	2.95	12	0.014	3.33%	6.06	7.72	0.49	7.56	48	0.11
CB 1-3	CB 1-2	TDA 1	17130	0.39	0.9	0	0.00	0.25	0.35	1.54	6.3	0.80	2.49	3.83	12	0.014	2.29%	5.03	6.40	0.76	7.04	26	0.06
CB 1-2	CB 1-1	TDA 1	14756	0.34	0.9	0	0.00	0.25	0.30	1.84	6.3	0.80	2.49	4.59	12	0.013	2.29%	5.41	6.89	0.85	7.65	37	0.08
CB 1-7	EX CB 1-2	TDA 1	3664	0.08	0.9	0	0.00	0.25	0.08	0.08	6.3	0.80	2.49	0.19	12	0.013	10.55%	11.62	14.80	0.02	5.03	96	0.32
EX CB 1-2	CB 1-6	TDA 1	3479	0.08	0.9	2699	0.06	0.25	0.09	0.16	6.3	0.80	2.49	0.41	12	0.013	9.74%	11.17	14.22	0.04	6.40	31	0.08
CB 1-6	CB 1-5	TDA 1	4385	0.10	0.9	0	0.00	0.25	0.09	0.25	6.3	0.80	2.49	0.63	12	0.013	6.38%	9.04	11.51	0.07	5.98	9	0.03
CB 2-3	CB 2-2	TDA 2	6944	0.16	0.9	965	0.02	0.25	0.15	0.15	6.3	0.80	2.49	0.37	12	0.014	2.14%	4.86	6.19	0.08	3.22	20	0.10
CB 2-2	EX CB 2-1	TDA 2	3407	0.08	0.9	266	0.01	0.25	0.07	0.22	6.3	0.80	2.49	0.55	12	0.014	2.31%	5.05	6.43	0.11	4.05	20	0.08
EX CB 2-1	CB 2-1	TDA 2	12448	0.29	0.9	5388	0.12	0.25	0.29	0.51	6.3	0.80	2.49	1.27	12	0.014	1.54%	4.12	5.25	0.31	4.62	20	0.07
CB 2-1	EX CB 2-2	TDA 2	32815	0.75	0.9	25135	0.58	0.25	0.82	1.33	6.3	0.80	2.49	3.32	8	0.014	12.33%	3.96	11.34	0.84	12.58	30	0.04
CB 3-2	CB 3-1	TDA 3	4014	0.09	0.9	0	0.00	0.25	0.08	0.08	6.3	0.80	2.49	0.21	12	0.013	8.05%	10.15	12.92	0.02	5.82	52	0.15
CB 4-1	EX CB 4-1	TDA 3	6283	0.14	0.9	0	0.00	0.25	0.13	0.13	6.3	0.80	2.49	0.32	12	0.014	0.50%	2.35	2.99	0.14	2.03	57	0.47

Conveyance System Analysis & Sizing Table Using the Rational Method
Proposed Network along Slater

Project: Kirkland Neighborhood Greenway
Job No: TDGI0000-0003
Date: 2-Aug-24
Engineer: CAJE
Checked: NKW

Design Event: 100 years
Precipitation: 3.62 inches
a 2.61
b 0.63

Location		Sub Basin	Impervious (pavement) Area			Pervious (lawn) Area			CA	Sum CA	Tc	i	I	Q_{actual}	Pipe	n	Slope	Q_{full} (capacity)	V_{full}	Q_{actual}/Q_{full}	V at Q_{actual} (look up table)	L	T_c in pipe
From	To		sf	acres	C	sf	acres	C			min			cfs	inches		%	cfs	ft/s		ft/s	ft	min
EX CB 1-1	CB 1-4	TDA 1	31011	0.71	0.9	18688	0.43	0.25	0.75	0.75	6.3	0.82	2.96	2.22	12	0.014	6.91%	8.73	11.12	0.25	9.23	35	0.06
CB 1-4	CB 1-3	TDA 1	18670	0.43	0.9	8614	0.20	0.25	0.44	1.18	6.3	0.82	2.96	3.51	12	0.014	3.33%	6.06	7.72	0.58	7.87	48	0.10
CB 1-3	CB 1-2	TDA 1	17130	0.39	0.9	0	0.00	0.25	0.35	1.54	6.3	0.82	2.96	4.55	12	0.014	2.29%	5.03	6.40	0.91	7.23	26	0.06
CB 1-2	CB 1-1	TDA 1	14756	0.34	0.9	0	0.00	0.25	0.30	1.84	6.3	0.82	2.96	5.46	12	0.013	2.29%	5.41	6.89	1.01	6.89	37	0.09
CB 1-7	EX CB 1-2	TDA 1	3664	0.08	0.9	0	0.00	0.25	0.08	0.08	6.3	0.82	2.96	0.22	12	0.013	10.55%	11.62	14.80	0.02	5.03	96	0.32
EX CB 1-2	CB 1-6	TDA 1	3479	0.08	0.9	2699	0.06	0.25	0.09	0.16	6.3	0.82	2.96	0.48	12	0.013	9.74%	11.17	14.22	0.04	6.82	31	0.08
CB 1-6	CB 1-5	TDA 1	4385	0.10	0.9	0	0.00	0.25	0.09	0.25	6.3	0.82	2.96	0.75	12	0.013	6.38%	9.04	11.51	0.08	6.79	9	0.02
CB 2-3	CB 2-2	TDA 2	6944	0.16	0.9	965	0.02	0.25	0.15	0.15	6.3	0.82	2.96	0.44	12	0.014	2.14%	4.86	6.19	0.09	3.65	20	0.09
CB 2-2	EX CB 2-1	TDA 2	3407	0.08	0.9	266	0.01	0.25	0.07	0.22	6.3	0.82	2.96	0.65	12	0.014	2.31%	5.05	6.43	0.13	4.05	20	0.08
EX CB 2-1	CB 2-1	TDA 2	12448	0.29	0.9	5388	0.12	0.25	0.29	0.51	6.3	0.82	2.96	1.51	12	0.014	1.54%	4.12	5.25	0.37	4.83	20	0.07
CB 2-1	EX CB 2-2	TDA 2	32815	0.75	0.9	25135	0.58	0.25	0.82	1.33	6.3	0.82	2.96	3.94	8	0.014	12.33%	3.96	11.34	1.00	12.92	30	0.04
CB 3-2	CB 3-1	TDA 3	4014	0.09	0.9	0	0.00	0.25	0.08	0.08	6.3	0.82	2.96	0.25	12	0.013	8.05%	10.15	12.92	0.02	5.82	52	0.15
CB 4-1	EX CB 4-1	TDA 3	6283	0.14	0.9	0	0.00	0.25	0.13	0.13	6.3	0.82	2.96	0.38	12	0.014	0.50%	2.35	2.99	0.16	2.12	57	0.45

TDA 1

DAVID EVANS & ASSOCIATES, INC.
BACKWATER ANALYSIS - FULL PIPE

DESIGNER: CAJE Checked NKW
DATE: 8/2/2024 8/2/2024

PROJECT: Kirkland Neighborhood Greenway
JOB NO.: TDGI0000-0003
LOCATION: Kirkland, WA

NOTES: * SEE INLET CONTROL NOMOGRAPH **** PROVIDE CRIT DEPTH FROM NOMOGRAPH
** PROVIDE LOSS FROM BEND NOMOGRAPH
*** PROVIDE LOSS FROM JUNCTION NOMOGRAPH ANALYSIS: **TDA 1**

PIPE SEGMENT FROM	TO	(CFS)	LENGTH (FT)	PIPE SIZE (INCH)	"n"	OUTLET ELEV	INLET ELEV	CRIT. DEPTH (FT)****	PIPE AREA (SF)	VEL. (FPS)	VEL. HEAD (FT)	TW ELEV.	FRIC. LOSS (FT)	ENTR. HGL ELEV.	ENTR. HEAD LOSS	EXIT HEAD LOSS	OUTLET CONTRL ELEV.	INLET CONTR. FACTOR*	INLET CONTR ELEV.	APPR. VEL. HEAD	BEND LOSS**	JUNC. LOSS***	HW ELEV	ACTUAL RIM ELEV.	CHECK RIM ELEV.	NOTES
CB1-1	CB1-2	4.80	37	12	0.013	130.91	131.75	0.86	0.79	6.11	0.58	132.41	0.67	133.08	0.12	0.58	133.77	1.80	133.55	-0.41	0.20	0.00	**133.56**	134.64	**OK**	
CB1-2	CB1-3	4.04	26	12	0.014	131.75	132.20	0.79	0.79	5.15	0.41	133.56	0.38	133.95	0.08	0.41	134.44	1.45	133.65	-0.24	0.34	0.00	**134.54**	134.60	**OK**	
CB1-3	CB1-4	3.11	48	12	0.014	132.20	133.93	0.72	0.79	3.96	0.24	134.54	0.42	134.96	0.05	0.24	135.25	1.15	135.08	-0.09	0.02	0.00	**135.18**	136.93	**OK**	
CB1-4	EX CB 1-1	1.87	35	12	0.014	133.93	136.34	0.56	0.79	2.38	0.09	135.18	0.11	137.34	0.02	0.09	137.45	0.85	137.19	0.00	0.16	0.00	**137.61**	137.99	**OK**	

TDA 2

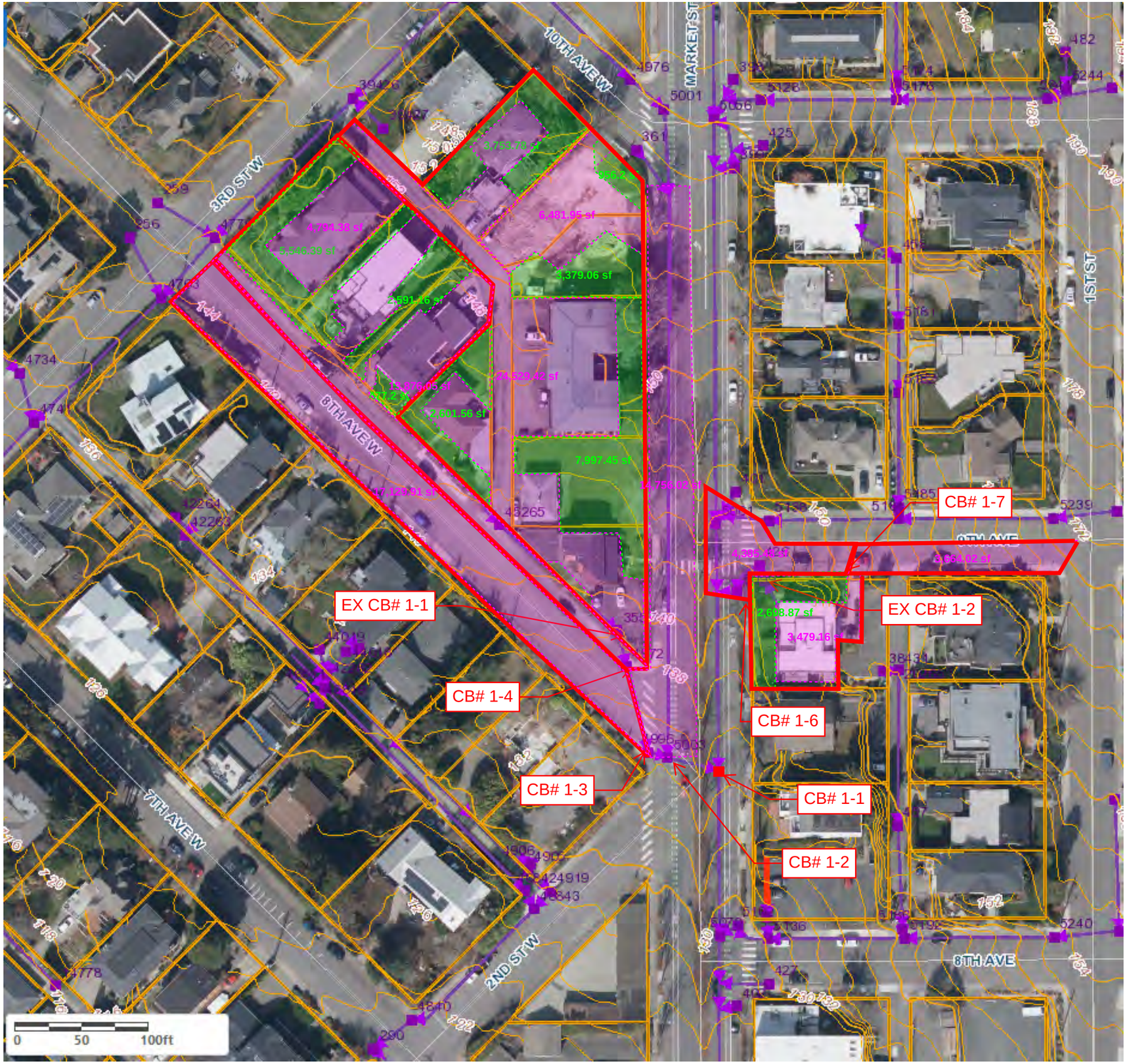
DAVID EVANS & ASSOCIATES, INC.
BACKWATER ANALYSIS - FULL PIPE

DESIGNER: CAJE Checked NKW
DATE: 8/2/2024 8/2/2024

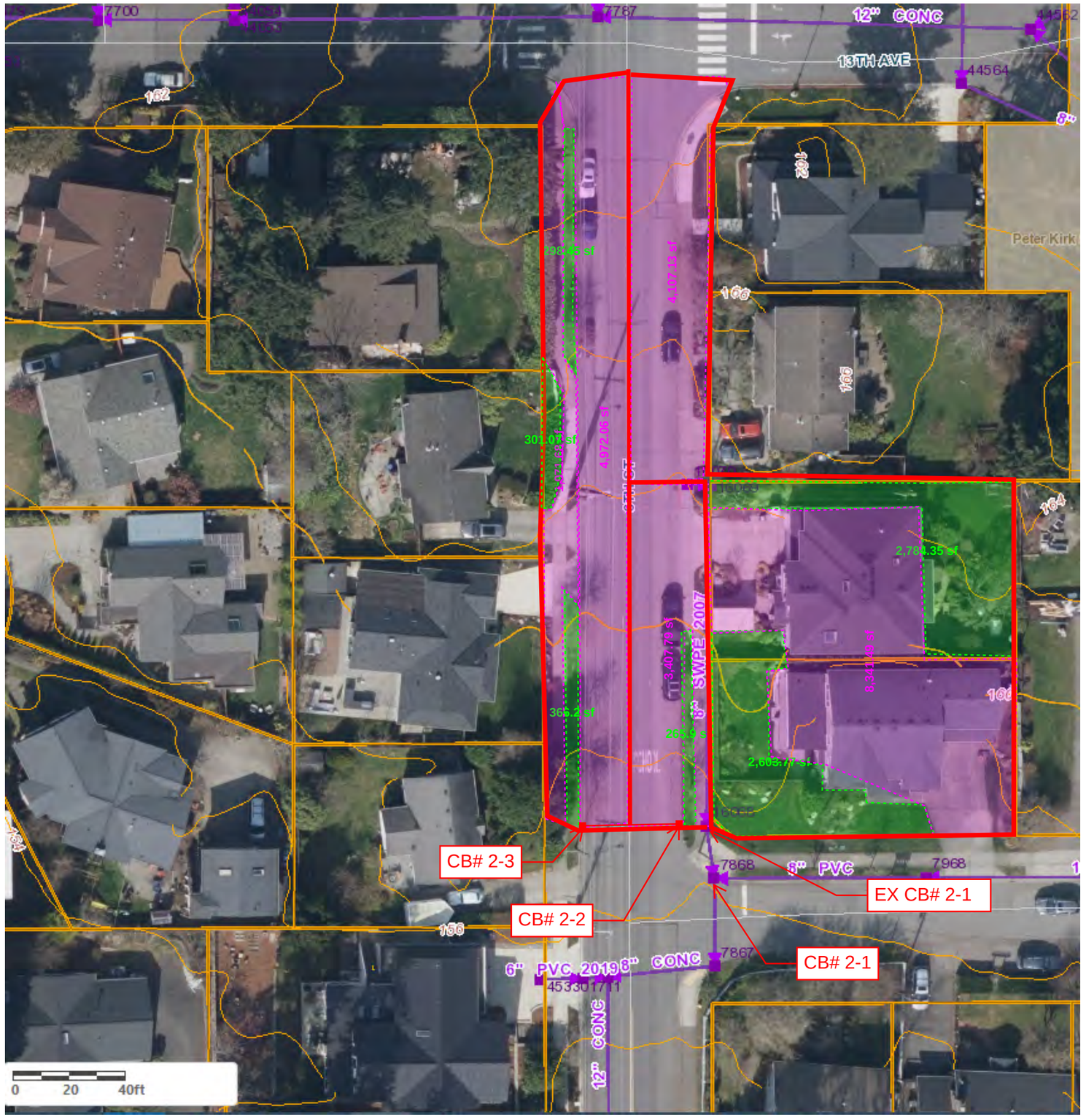
PROJECT: Kirkland Neighborhood Greenway
JOB NO.: TDGI0000-0003
LOCATION: Kirkland, WA

NOTES: * SEE INLET CONTROL NOMOGRAPH
** PROVIDE LOSS FROM BEND NOMOGRAPH
*** PROVIDE LOSS FROM JUNCTION NOMOGRAPH
**** PROVIDE CRIT DEPTH FROM NOMOGRAPH
ANALYSIS: **TDA 2**

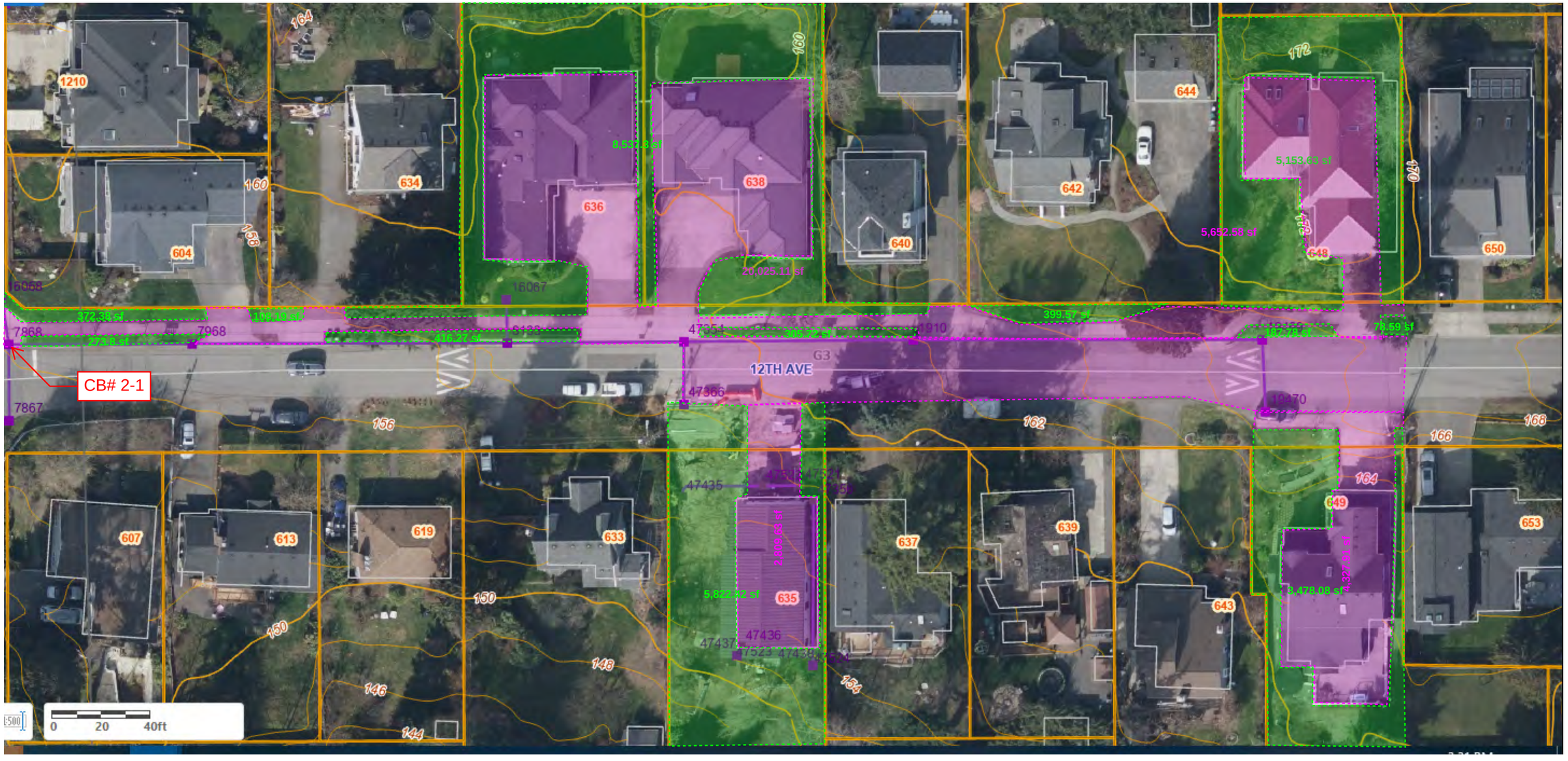
PIPE SEGMENT FROM	TO	(CFS)	LENGTH (FT)	PIPE SIZE (INCH)	"n"	OUTLET ELEV	INLET ELEV	CRIT. DEPTH (FT)****	PIPE AREA (SF)	VEL. (FPS)	VEL. HEAD (FT)	TW ELEV.	FRIC. LOSS (FT)	ENTR. HGL ELEV.	ENTR. HEAD LOSS	EXIT HEAD LOSS	OUTLET CONTRL ELEV.	INLET CONTR. FACTOR*	INLET CONTR ELEV.	APPR. VEL. HEAD	BEND LOSS**	JUNC. LOSS***	HW ELEV	ACTUAL RIM ELEV.	CHECK RIM ELEV.	NOTES
EX CB 2-2	CB 2-1	3.32	30	8	0.014	149.90	153.55	0.74	0.35	9.52	1.41	150.56	2.60	154.22	0.28	1.41	155.90	1.30	154.42	-0.04	0.06	0.00	**155.92**	156.20	**OK**	
CB 2-1	EX CB2-1	1.27	20	12	0.014	153.55	153.86	0.47	0.79	1.62	0.04	155.92	0.03	155.95	0.01	0.04	156.00	0.66	154.52	-0.01	0.48	0.18	**156.65**	157.16	**OK**	
EX CB2-1	CB2-2	0.55	20	12	0.014	153.86	154.32	0.00	0.79	0.70	0.01	156.65	0.01	156.66	0.00	0.01	156.67	0.00	154.32	0.00	0.22	0.15	**157.03**	157.30	**OK**	
CB2-2	CB2-3	0.37	20	12	0.014	154.32	154.75	0.00	0.79	0.47	0.00	157.03	0.00	157.04	0.00	0.00	157.04	0.00	154.75	0.00	0.02	0.00	**157.06**	157.37	**OK**	



TDA 1 CATCHMENT AREA



TDA 2
CATCHMENT
AREA



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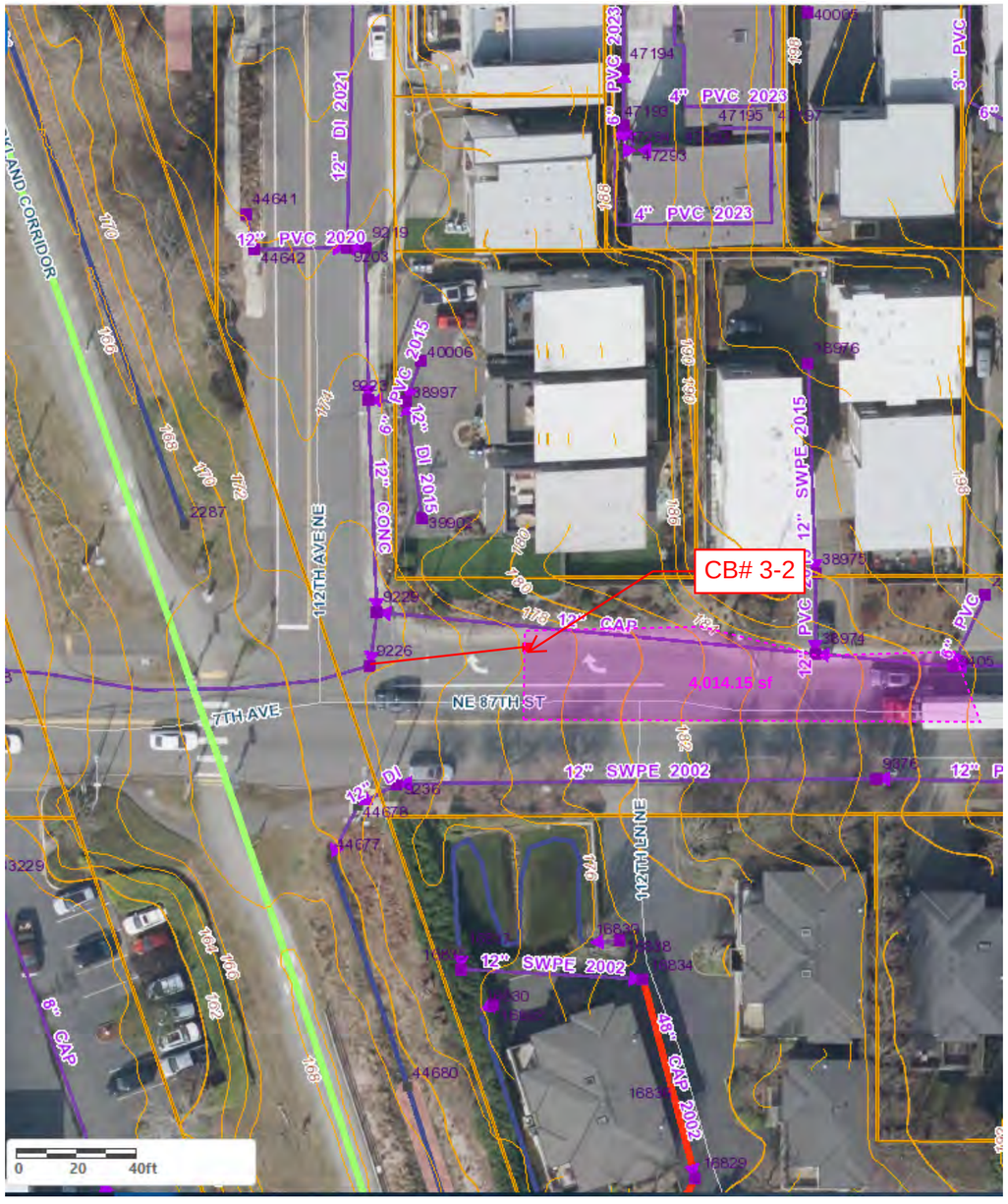
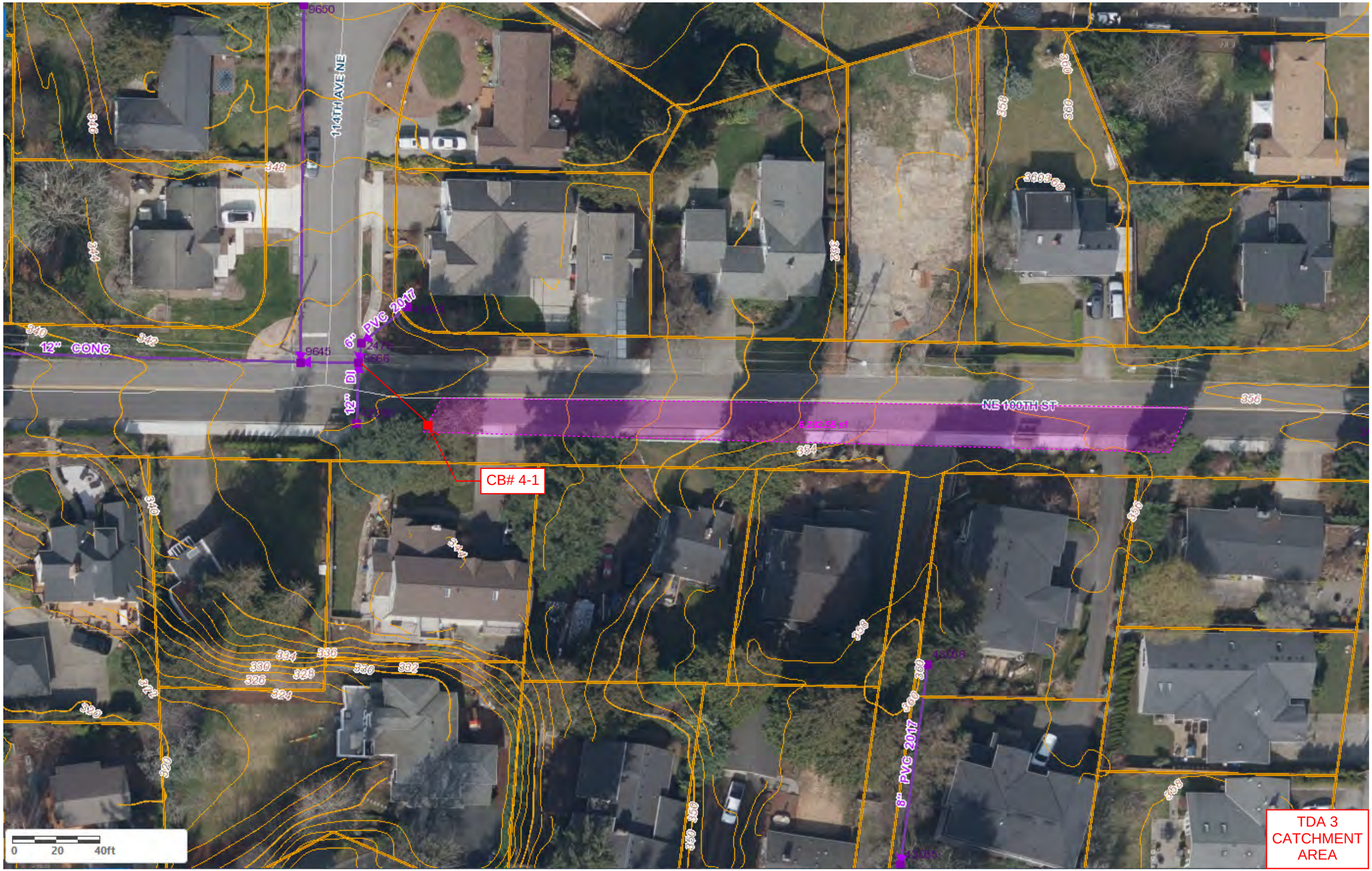
CATCHMENT
AREA



TDA 3 CATCHMENT AREA


9650
114TH AVE NE
9645
12" CONC
6" PVC 2017
12" DI
NE 100TH ST
6,482.55 sf
CB# 4-1
8" PVC 2017
TDA 3
CATCHMENT
AREA
0
20
40ft

Conveyance System Analysis & Sizing Table Using the Rational Method
Proposed Network along Slater

Project: Kirkland Neighborhood Greenway
Job No: TDGI0000-0003
Date: 2-Aug-24
Engineer: CAJE
Checked: NKW

Design Event: 25 years
Precipitation: 3.10 inches
a 2.66
b 0.65

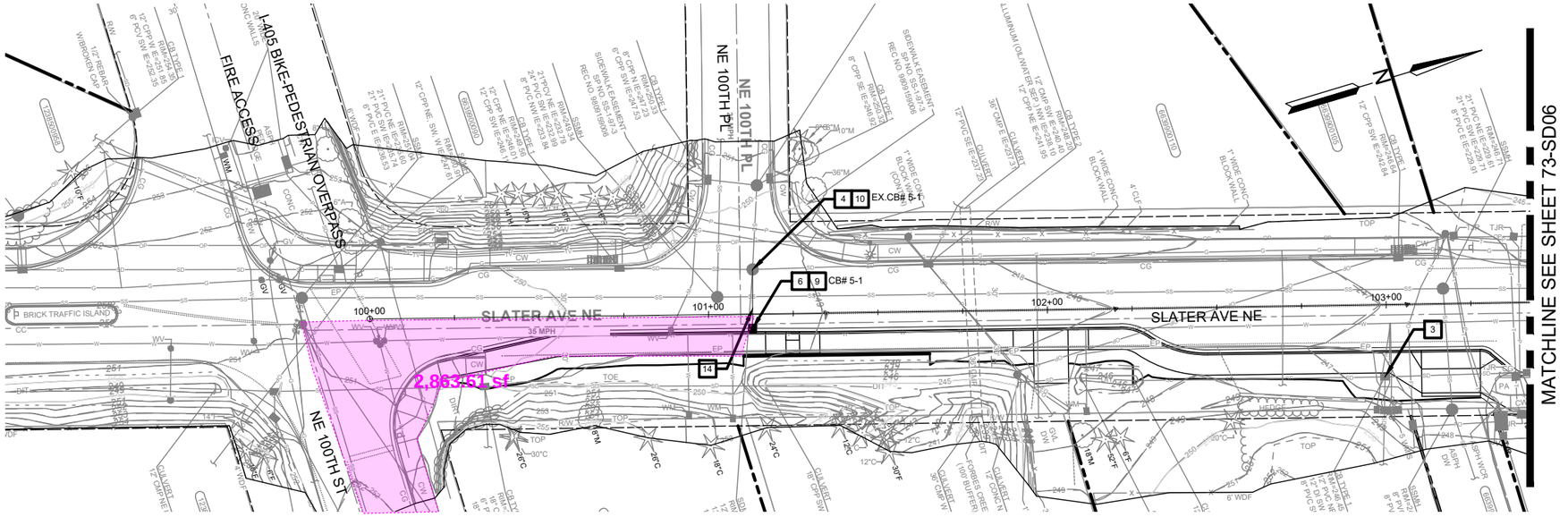
Location		Sub Basin	Impervious (pavement) Area			Pervious (lawn) Area			CA	Sum CA	Tc	i	I	Q_{actual}	Pipe	n	Slope	Q_{full} (capacity)	V_{full}	Q_{actual}/Q_{full}	V at Q_{actual} (look up table)	L	T_c in pipe
From	To		sf	acres	C	sf	acres	C			min			cfs	inches		%	cfs	ft/s		ft/s	ft	min
CB 5-1	EX CB 5-1	TDA 4	2864	0.07	0.9	0	0.00	0.25	0.06	0.06	6.3	0.80	2.49	0.15	12	0.013	3.04%	6.24	7.94	0.02	3.57	17	0.08
EX CB 7-1	EX CB 7-2	TDA 5	13115	0.30	0.9	23902	0.55	0.25	0.41	0.41	6.3	0.80	2.49	1.02	12	0.013	0.55%	2.65	3.38	0.38	3.11	92	0.49
EX CB 7-2	EX CB 7-3	TDA 5	0	0.00	0.9	0	0.00	0.25	0.00	0.41	6.3	0.80	2.49	1.02	12	0.013	0.88%	3.35	4.26	0.30	3.75	8	0.04
EX CB 7-3	EX CB 8-1	TDA 5	0	0.00	0.9	0	0.00	0.25	0.00	0.41	6.3	0.80	2.49	1.02	12	0.013	0.13%	1.29	1.64	0.79	1.81	95	0.88
EX CB 8-1	EX CB 8-2	TDA 5	6463	0.15	0.9	8352	0.19	0.25	0.18	0.59	6.3	0.80	2.49	1.47	12	0.013	0.59%	2.75	3.50	0.53	3.50	58	0.28
EX CB 8-2	EX CB 8-3	TDA 5	5624	0.13	0.9	4405	0.10	0.25	0.14	0.73	6.3	0.80	2.49	1.82	12	0.013	1.77%	4.76	6.06	0.38	5.58	35	0.10
EX CB 8-3	CB 8-1	TDA 5	2642	0.06	0.9	10166	0.23	0.25	0.11	0.84	6.3	0.80	2.49	2.10	12	0.014	0.90%	3.15	4.01	0.67	4.25	75	0.29
CB 8-1	CB 8-2	TDA 5	8546	0.20	0.9	7885	0.18	0.25	0.22	1.07	6.3	0.80	2.49	2.66	12	0.014	0.94%	3.22	4.10	0.82	4.55	142	0.52
CB 8-2	CB 8-3	TDA 5	36794	0.84	0.9	51337	1.18	0.25	1.05	2.12	6.3	0.80	2.49	5.29	18	0.014	1.02%	9.89	5.60	0.53	5.60	266	0.79
CB 8-3	CB 8-4	TDA 5	0	0.00	0.9	48933	1.12	0.25	0.28	2.40	6.3	0.80	2.49	5.99	18	0.014	0.54%	7.20	4.07	0.83	4.52	46	0.17
CB 8-4	EX CB	TDA 5	69746	1.60	0.9	36304	0.83	0.25	1.65	4.05	6.3	0.80	2.49	10.10	18	0.013	1.50%	12.92	7.31	0.78	8.04	175	0.36

Conveyance System Analysis & Sizing Table Using the Rational Method
Proposed Network along Slater

Project: Kirkland Neighborhood Greenway
Job No: TDGI0000-0003
Date: 2-Aug-24
Engineer: CAJE
Checked: NKW

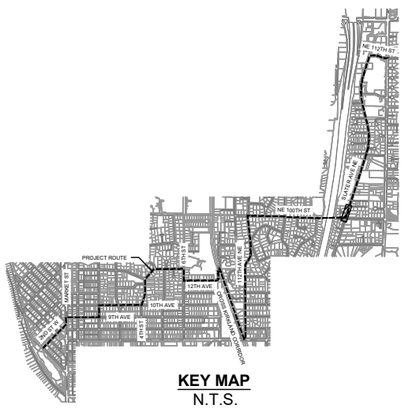
Design Event: 100 years
Precipitation: 3.62 inches
a 2.61
b 0.63

Location		Sub Basin	Impervious (pavement) Area			Pervious (lawn) Area			CA	Sum CA	Tc	i	I	Q_{actual}	Pipe	n	Slope	Q_{full} (capacity)	V_{full}	Q_{actual}/Q_{full}	V at Q_{actual} (look up table)	L	T_c in pipe
From	To		sf	acres	C	sf	acres	C			min			cfs	inches		%	cfs	ft/s		ft/s	ft	min
CB 5-1	EX CB 5-1	TDA 4	2864	0.07	0.9	0	0.00	0.25	0.06	0.06	6.3	0.82	2.96	0.18	12	0.013	3.04%	6.24	7.94	0.03	3.57	17	0.08
EX CB 7-1	EX CB 7-2	TDA 5	13115	0.30	0.9	23902	0.55	0.25	0.41	0.41	6.3	0.82	2.96	1.21	12	0.013	0.55%	2.65	3.38	0.46	3.31	92	0.46
EX CB 7-2	EX CB 7-3	TDA 5	0	0.00	0.9	0	0.00	0.25	0.00	0.41	6.3	0.82	2.96	1.21	12	0.013	0.88%	3.35	4.26	0.36	3.92	8	0.03
EX CB 7-3	EX CB 8-1	TDA 5	0	0.00	0.9	0	0.00	0.25	0.00	0.41	6.3	0.82	2.96	1.21	12	0.013	0.13%	1.29	1.64	0.94	1.86	95	0.85
EX CB 8-1	EX CB 8-2	TDA 5	6463	0.15	0.9	8352	0.19	0.25	0.18	0.59	6.3	0.82	2.96	1.75	12	0.013	0.59%	2.75	3.50	0.64	3.67	58	0.26
EX CB 8-2	EX CB 8-3	TDA 5	5624	0.13	0.9	4405	0.10	0.25	0.14	0.73	6.3	0.82	2.96	2.17	12	0.013	1.77%	4.76	6.06	0.46	5.94	35	0.10
EX CB 8-3	CB 8-1	TDA 5	2642	0.06	0.9	10166	0.23	0.25	0.11	0.84	6.3	0.82	2.96	2.50	12	0.014	0.90%	3.15	4.01	0.79	4.41	75	0.28
CB 8-1	CB 8-2	TDA 5	8546	0.20	0.9	7885	0.18	0.25	0.22	1.07	6.3	0.82	2.96	3.16	12	0.014	0.94%	3.22	4.10	0.98	4.68	142	0.51
CB 8-2	CB 8-3	TDA 5	36794	0.84	0.9	51337	1.18	0.25	1.05	2.12	6.3	0.82	2.96	6.28	18	0.014	1.02%	9.89	5.60	0.64	5.88	266	0.75
CB 8-3	CB 8-4	TDA 5	0	0.00	0.9	48933	1.12	0.25	0.28	2.40	6.3	0.82	2.96	7.12	18	0.014	0.54%	7.20	4.07	0.99	4.64	46	0.17
CB 8-4	EX CB	TDA 5	69746	1.60	0.9	36304	0.83	0.25	1.65	4.05	6.3	0.82	2.96	12.00	18	0.013	1.50%	12.92	7.31	0.93	8.26	175	0.35



STORM DRAIN CONSTRUCTION NOTES:

1. REMOVE EXISTING STRUCTURE
2. REMOVE EXISTING PIPE. SEE CITY OF KIRKLAND STD. PLANS CK-D.02 AND CK-R.12 FOR STORM TRENCH AND RESTORATION DETAILS.
3. ADJUST EXISTING DRAINAGE STRUCTURE TO FINAL GRADE. CONTRACTOR TO REMOVE ALL BRICK MATERIAL FROM STRUCTURE.
4. CONNECT PROPOSED PIPE TO EXISTING STRUCTURE.
5. CONNECT PROPOSED STRUCTURE TO EXISTING PIPE(S).
6. INSTALL CATCH BASIN TYPE 1 PER CITY OF KIRKLAND STD PLAN CK-D.07.
7. INSTALL CATCH BASIN TYPE 2 - 48" DIAM. PER CITY OF KIRKLAND STD PLAN CK-D.09.
8. INSTALL CATCH BASIN TYPE 2 - 54" DIAM. PER CITY OF KIRKLAND STD PLAN CK-D.09.
9. INSTALL BOLT-DOWN VANED GRATE PER CITY OF KIRKLAND STD PLAN CK-D.14.
10. INSTALL 24" MODIFIED MANHOLE FRAME WITH LOCKING LID AND LOGO PER CITY OF KIRKLAND STD PLAN CK-D.18A.
11. INSTALL 24" MANHOLE FRAME WITH LOCKING LID AND LOGO PER CITY OF KIRKLAND STD PLAN CK-D.18.
12. INSTALL 12-INCH DIAM. DUCTILE IRON STORM SEWER PIPE.
13. INSTALL 8-INCH DIAM. DUCTILE IRON STORM SEWER PIPE.
14. INSTALL 12-INCH DIAM. SOLID WALL PVC STORM SEWER PIPE.
15. INSTALL 18-INCH DIAM. SOLID WALL PVC STORM SEWER PIPE.
16. CONNECT PROPOSED PIPE TO EXISTING PIPE.



KEY MAP
N.T.S.

STORM DRAIN NOTES:

1. SEE NT SHEET SERIES FOR GENERAL NOTES AND LEGEND.
2. ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED.
3. UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE BASED ON FIELD LOCATES, POTHOLING, AND AS-BUILT DRAWINGS.
4. CALL UTILITIES UNDERGOUND LOCATION CENTER AT 1-800-424-5555 48 HOURS PRIOR TO CONSTRUCTION.
5. CONTRACTOR SHALL POTHOLE UTILITIES IN VICINITY OF PROPOSED STORM SYSTEM WITH APPROXIMATE LOCATIONS PRIOR TO INSTALLATION.
6. SEE DRAINAGE PROFILE SHEETS FOR ADDTIONAL STRUCTURE AND PIPE INFOMATION. DRAINAGE STRUCTURE STATIONS AND OFFSETS ARE TO THE CENTER OF GRATE.
7. ALL STORM SEWER (SD) PIPES SHALL BE PVC SDR 35 UNLESS NOTED OTHERWISE.
8. INSTALL CLASS 52 DUCTILE IRON PIPE (DIP) WHERE COVER IS LESS THAN 18 INCHES.
9. ALL INLET, MANHOLE, AND CATCH BASIN FRAMES SHALL NOT BE ADJUSTED TO GRADE UNTIL IMMEDIATELY PRIOR TO FINAL PAVING. ALL CATCH BASIN GRATES SHALL BE SET 0.10' BELOW PAVEMENT LEVEL.
10. TYPE 2 CATCH BASINS EXCEEDING FIVE FEET IN DEPTH SHALL HAVE A LADDER INSTALLED.

STORM DRAIN LEGEND:

- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 2
- STORM SEWER PIPE
- REMOVE EXISTING STORM DRAIN FEATURE

C:\pw_work\dealnate.wong\dms426490\SEA.00114_SD.dwg
Tuesday, March 26, 2024 10:19:10 AM

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF [STATE], LICENSE NO. _____. EXPIRATION DATE: _____.

		NO.	DATE	REVISION	BY	APVD
DSGN	N. WONG					
DR	N. WONG					
CHK	DD					
APVD	DD					

TOOLE DESIGN
720 3RD AVENUE, SUITE 2020,
SEATTLE, WA 98104
PHONE: 206.297.1601
FAX: 301.927.2800
www.tooledesign.com

KIRKLAND NEIGHBORHOOD GREENWAY
CITY OF KIRKLAND

TDA 4
CATCHMENT AREA

PROJECT NO.	00SEA.00114.00
DATE	1.23.2024
DRAWING NO.	SD05
SHEET NO.	72 OF 90

TDA 5 CATCHMENT AREA

APPENDIX E:
CRITICAL AREAS REPORT

City of Kirkland

CRITICAL AREAS REPORT

Kirkland Stores to Shores Greenway Improvements Project

Kirkland, Washington

Applicant:

Toole Design Group, LLC.
720 3rd Avenue, Suite 2020
Seattle, WA 98104

Prepared by:

MaKenna Lindberg
Critical Areas Biologist

David Evans And Associates, Inc.
14432 SE Eastgate Way, Suite 400
Bellevue, Washington 98007

June 2024

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EXECUTIVE SUMMARY

Toole Design Group, LLC contracted David Evans and Associates, Inc. to identify and document critical areas limited to wetlands and streams within the specified study area for the Kirkland Stores to Shores Greenways Improvements project. The critical areas study focused on sections along Slater Avenue Northeast, within Kirkland, Washington.

This report documents the presence of wetlands, streams, associated buffers, existing habitat conditions, and wildlife functions at the study property. Critical areas identified include Forbes Creek, a tributary to Forbes Creek (Stream S1), a potential wetland unit east of Stream S1, and a potential wetland along the streambank of Forbes Creek east of Slater Avenue NE. Project design has avoided all impacts to wetlands, streams, and stream buffers. Impacts to wetland buffers have been avoided and minimized to the maximum extent possible, but there are 275.87 square-feet of unavoidable impacts to associated wetland buffers at Stream S1. Mitigation will be resolved through the City of Kirkland Advanced Mitigation Program.

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LIST OF TABLES

APPENDICIES

ACRONYMS AND ABBREVIATIONS

ADA	Americans with Disabilities Act
AMP	Advanced Mitigation Program
City	City of Kirkland
CMP	corrugated metal pipe
CWA	Clean Water Act
DEA	David Evans and Associates, Inc.
DNR	Washington State Department of Natural Resources
Ecology	Washington State Department of Ecology
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
GIS	geographic information system
I-405	interstate 405
KZC	Kirkland Zoning Code
NE	Northeast
NMFS	National Marine Fisheries Service
NPGIS	non-pollutant generating impervious surfaces
NRCS	Natural Resource Conservation Service
OHWM	ordinary high water mark
PHS	priority habitat and species
project	Kirkland Stores to Shores Greenway Improvements project
ROW	right-of-way
SWS	Society of Wetland Scientists
Type F	fish bearing waterbody
Type Ns	non-fish bearing stream
U.S.	United States
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WDFW	Washington State Department of Fish and Wildlife
WOTUS	Waters of the U.S.
WRIA	Water Resource Inventory Area
WSS	Web Soil Survey

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1.0 INTRODUCTION

David Evans and Associates, Inc. (DEA) was hired by Toole Design Group, LLC to identify critical areas within the City of Kirkland right-of-way (ROW) within the project bounds for the Kirkland Stores to Shores Greenway Improvements project (project). This report describes critical areas identified on site, and potential impacts and mitigation for the proposed project. Sources of information used to prepare this report included field visits, a desktop review of critical areas maps, environmental information, and geographic information system (GIS) data from the City of Kirkland (City), King County, state and federal agencies, and other relevant resources.

The proposed project would take place in three zones within Kirkland, Washington: one zone along the east edge of Slater Avenue Northeast (NE) east of interstate 405 (I-405); one zone in the Highlands neighborhood west of I-405 and east of the Cross Kirkland Corridor; and one zone west of the Cross Kirkland Corridor down to Heritage Park above. At the direction of Toole Design Group, LLC, the critical areas study focused on sections of the zone along the east edge of Slater Avenue NE.

This project area is in Water Resource Inventory Area (WRIA) 8, Cedar-Sammamish, within Section 33 of Township 26 North Range 05 East, Willamette Meridian (Ecology 2024). Properties adjacent to the project area consist of single family and multi-family residences, as well as a Boys' and Girls' Club playfield at the northern section of Slater Avenue NE. The project vicinity is displayed in **Figure 1**.

1.1 Project Description

The City of Kirkland's Transportation Master Plan identifies the need for a network of greenways. Greenways are bicycle and pedestrian facilities located on roadways that have lower motor vehicle speeds and volumes, and include special signing and markings and traffic calming features where merited. Greenways can include trail and path connections that are not accessible by vehicles.

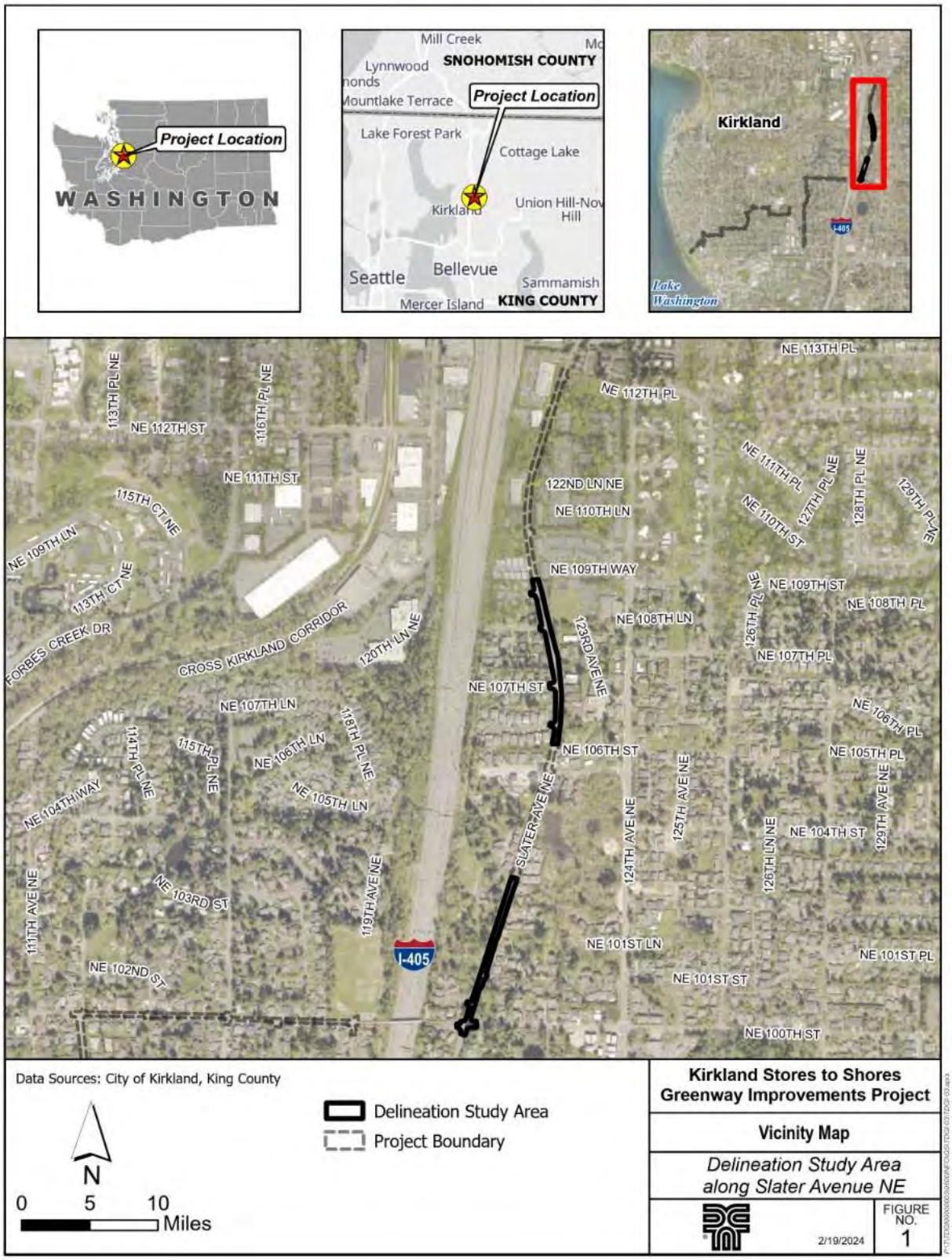
This project represents the continuation of the greenways network building from the first set recently constructed in the City of Kirkland. The Stores to Shores greenway will connect the North Rose Hill neighborhood with the Highlands, Norkirk, Totem Lake, and downtown neighborhoods. The City has already started the project by identifying project routes and needed improvements.

1.2 Report Limitations

This report is intended to meet the submittal requirements for streams and wetlands as described in existing critical area ordinances for the City. Critical areas outside of streams and wetlands are described based on readily available public domain data only, including fish and wildlife habitat conservation areas, geologic hazard areas, and frequently flooded areas; information provided does not meet critical area reporting requirements for these latter resources.

The stream and wetland boundaries described herein are the professional opinion of DEA staff based on the circumstances and site conditions at the time of this study, and best available science. Local, state, and federal jurisdictions make final determinations of jurisdictional boundaries.

Figure 1. Vicinity Map



2.0 METHODOLOGY

2.1 Preliminary Research

Wetlands, streams, and other critical areas within the study area were determined and/or delineated based on field indicators and resource data. The information reviewed included:

- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FEMA 2020);
- National Marine Fisheries Service (NMFS) Status of Endangered Species Act Listings and Critical Habitat Designations for West Coast Salmon & Steelhead (NMFS 2016);
- NMFS Essential Fish Habitat mapper (NMFS 2024);
- United States (U.S.) Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey (WSS) (USDA 2024);
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory web mapper (USFWS 2024a);
- USFWS Information for Planning and Consulting Web Tool (USFWS 2024b);
- U.S. Geological Survey (USGS) StreamStats water-resources planning/drainage analysis mapping (USGS 2024)
- Washington State Department of Ecology (Ecology) Water Quality Atlas (Ecology 2024);
- Washington State Department of Fish and Wildlife (WDFW) SalmonScape online database (WDFW 2024a);
- WDFW Priority Habitat and Species (PHS) on the Web and PHS List (WDFW 2024b, WDFW 2008);
- WDFW Washington State Fish Passage map (WDFW 2024c);
- Washington State Department of Natural Resources (DNR) Forest Practices Application Mapping Tool (DNR 2024a);
- DNR Washington Natural Heritage Program Data Explorer (DNR 2024b);
- King County iMap (King County 2024);
- City of Kirkland Sensitive Area Map (Kirkland 2020); and
- Google™ Earth Pro.

2.2 Field Investigation

DEA conducted site visits on January 11 and February 8, 2024, to delineate potential wetland boundaries, mark stream ordinary high water mark (OHWM), and document existing habitat conditions and wildlife use. This investigation included an assessment of the presence or absence of wetlands within the study area. DEA staff viewed these offsite areas to the best of their ability given legal access, visibility, and conditions at the time of the site visit. No access was granted to private property.

Wetlands were identified using the routine approach described in the Wetland Delineation Manual and the Regional Supplement to the U.S. Army Corps of Engineers (USACE) Wetland Delineation

Manual: Western Mountains, Valleys, and Coast Region (Environmental Laboratory 1987, USACE 2010). Wetlands were classified using the USFWS wetland classification system (Cowardin et al. 1979). Data plots that identify the presence/absence of wetland indicators (hydrophytic vegetation, hydric soils, and wetland hydrology) were sampled. Hydrophytic vegetation was determined to be present when dominant cover of plants observed (greater than 50 percent) had an indicator status of facultative, facultative wetland, or obligate wetland (Lichvar 2012).

Plant species were identified according to the revised National Wetland Plant List (USACE 2020), as well as A Field Guide to the Common Wetland Plants of Western Washington & Northwestern Oregon (Cooke 1997), Plants of the Pacific Northwest Coast (Pojar and MacKinnon 1994), and Flora of the Pacific Northwest (Hitchcock and Cronquist 1973). Hydric soils were determined based on field indicators such as chroma color, redoximorphic features, and organic content (USDA 2010). Evidence of wetland hydrology was based on observations of primary and secondary indicators. If the three criteria were present, a wetland determination was made. If one or more of the criteria were absent, the area was designated non-wetland unless determined to be a problem area or atypical situation according to the methodologies (USACE 2010).

Wetland boundaries, data plot, and stream OHWM locations within the ROW of the specified study area were marked with flagging, and then their locations were collected, mapped, and subsequently surveyed. All wetland boundaries, classifications, and assigned buffer widths are subject to verification by the City. Discovered wetlands would then be rated using the 2014 update to Ecology's Washington State Wetland Rating System for Western Washington (Hruby 2014). This rating system is function-based and differentiates wetlands based on their sensitivity to disturbance, their significance and rarity, the ability to replace them, and the functions they provide.

The OHWM and the mean high water level are defined by the USACE and Ecology. The USACE defines the OHWM as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." Ecology's guidance defines the OHWM for state waters similarly (Olson and Stockdale 2016). Typical physical characteristics used when making an OHWM determination, to the extent that they can be identified, and are deemed reasonably reliable are as follows (USACE 2005):

- natural line impressed on the bank;
- shelving changes in the character of soil;
- destruction of terrestrial vegetation;
- presence of litter and debris wracking;
- vegetation matted down, bent, or absent;
- sediment sorting;
- leaf litter disturbed or washed away;
- scour;
- deposition,

- multiple observed flow events;
- bed and banks;
- water staining; or
- change in plant community.

On December 30, 2022, the Environmental Protection Agency (EPA) and USACE announced the final "Revised Definition of 'Waters of the U.S." (WOTUS)" rule. On January 18, 2023, the rule was published in the *Federal Register*, and the rule took effect on March 20, 2023. The agencies developed the 2023 Rule with consideration of the relevant provisions of the Clean Water Act (CWA) and the statute as a whole, relevant Supreme Court case law, and the agencies' technical expertise after more than 45-years of implementing the longstanding pre-2015 "WOTUS" framework.

On May 25, 2023, the U.S. Supreme Court issued a decision affecting the definition of WOTUS in Sackett Et Ux. versus EPA Et Al. While USACE is in receipt of the Supreme Court decision, no formal, revised definition of WOTUS has been issued at the time of this report drafting. The proposed project therefore continues to assume that the onsite wetlands are considered WOTUS. Additionally, these critical areas are likely regulated as natural waters by Ecology under the Revised Code of Washington 90.48. If a future project required direct wetland impacts, authorization from USACE or Ecology would be required.

On August 29, 2023, the EPA and USACE announced a final rule amending the January 2023 definition of "WOTUS." The amendments conform with the U.S. Supreme Court's May 25, 2023, decision in the case of Sackett versus EPA. While EPA's and USACE's January 2023 rule defining "WOTUS" was not directly before the Supreme Court, the decision in Sackett made clear that certain aspects of the January 2023 rule are invalid. Therefore, the agencies have amended key components of the regulatory text to conform to the Supreme Court decision. The final rule provides clarity for protecting our nation's waters consistent with the Supreme Court's decision while advancing infrastructure projects, economic opportunities, and agricultural activities. As such, the agencies' amendments change the parts of the January 2023 definition of "WOTUS" that are invalid under the Sackett decision (EPA 2023).

Two of the most important things the rule did are that the rule removes the "significant nexus test" and revises the "adjacent wetlands" definition. The significant nexus test was a result of the Rapanos Supreme Court Case and allowed the EPA and USACE to evaluate waters (tributaries, ponds etc.) and wetlands, either separately or collectively, by whether they had a "material influence on the chemical, physical or biological integrity of "WOTUS". Without this test, many wetlands will likely be no longer regulated under the CWA unless they qualify as adjacent wetlands. The new adjacent wetlands definition refers to wetlands adjacent to the territorial seas, interstate waters, waters able to carry interstate commerce and their tributaries are regulated under the CWA. Adjacent wetlands must, per the Sackett decision, now have a "continuous surface connection to bodies that qualify as "WOTUS" in their own right, so that there is no clear demarcation between 'waters' and 'wetlands'." Wetlands now separated from traditionally regulated waters by berms or other obstructions (that are not themselves illegally placed) will likely no longer be regulated. These wetlands can now be considered "isolated" as they are no longer regulated by USACE (SWS 2023).

3.0 REGULATORY REQUIREMENTS

3.1 City of Kirkland Regulations

The City's critical area regulations are established in Kirkland Zoning Code (KZC) Chapter 85 and Chapter 90. The City defines critical areas as:

- wetlands,
- streams,
- minor lakes,
- fish and wildlife habitat conservation areas,
- frequently flooded areas (flood hazard area), and
- geologically hazardous areas.

Critical area report requirements are described in KZC 90.110.

3.1.1 Wetlands

KZC 5.10.985 defines wetlands as areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate conversion of wetlands.

Wetland classification and buffer standards are stipulated in KZC 90.55, wetland and buffer modifications are described in KZC 90.60, and mitigation is in KZC 90.145 and 90.150. These codes are summarized in **Appendix A**.

3.1.2 Streams

KZC 5.10.895 defines streams as areas where surface waters produce a defined channel or bed that demonstrates clear evidence of the passage of water, including but not limited to bedrock channels, gravel beds, sand and silt beds, and defined-channel swales. The channel or bed need not contain water year-round, provided there is evidence of at least intermittent flow during years of normal rainfall. Streams do not include irrigation ditches, canals, storm or surface water runoff devices, or other entirely artificial watercourses, unless they are used by salmonids or convey a naturally occurring stream that has been diverted into the artificial channel, or are created for the purposes of stream mitigation.

Stream classification and buffer standards are stipulated in KZC 90.65, stream and buffer modifications are in KZC 90.70, and mitigation is in KZC 90.145. Stream modification criteria are described in KZC 90.70. These codes are summarized in **Appendix A**.

3.1.3 Minor Lakes

KZC 5.10.530 classifies Forbes Lake and Totem Lake as the only minor lakes within City limits.

3.1.4 Fish and Wildlife Habitat Conservation Areas

KZC 5.10.321 defines Fish and Wildlife Habitat Conservation Areas as areas necessary for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created. These areas include:

1. Areas with which state or federally designated endangered, threatened, and sensitive species have a primary association;
2. Areas with which species of local importance have a primary association;
3. Naturally occurring ponds under 20-acres and their submerged aquatic beds that provide fish or wildlife habitat, including those artificial ponds intentionally created from dry areas in order to mitigate impacts to ponds;
4. Waters of the state, including lakes, rivers, ponds, streams, inland waters, underground waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Fish and Wildlife Habitat Conservation Areas are found in stream and wetland habitat areas for:

- **Federally endangered, threatened, or sensitive species** as determined by USFWS and National Oceanic and Atmospheric Administration Fisheries. These are fish and wildlife species that are in danger of extinction or threatened to become endangered.
- **State designated endangered, threatened, and sensitive species** as identified by WDFW. These are fish and wildlife species native to Washington that are in danger of extinction or threatened to become endangered, vulnerable, or declining in a significant portion of their range in the state.
- **Habitat and Species of Local Importance** as identified by a local jurisdiction or nominated by an individual or group and then accepted and adopted by that jurisdiction. These are habitat and species of importance that, due to their population status or sensitivity to habitat manipulation, need protection. These may include PHS identified for conservation and management as determined by WDFW. A priority habitat may have a unique vegetation type of dominate plant species. Fish and Wildlife Conservation Areas are regulated by KZC 90.95.

3.1.5 Frequently Flooded Areas

KZC 5.10.326 defines frequently flooded areas as all areas shown on the Kirkland critical areas maps and as noted on effective FEMA maps as being within a 100-year floodplain, as well as all areas of special flood hazard regulated by Chapter 21.56 KMC.

3.1.6 Geologically Hazardous Areas

KMZ 5.10.328 defines geologically hazardous areas as landslide hazard areas, erosion hazard areas and seismic hazard areas.

- KMZ 5.10.467 defines **landslide hazard areas** are areas at risk of mass movement due to a combination of geologic, topographic, and hydrologic factors. Includes high and moderate landslide hazard areas.
- KMZ 5.10.292 defines **erosion hazard areas** are those areas containing soils which, according to the USDA NRCS WSS, may experience severe to very severe erosion hazard. Due to potential for mapping errors and other discrepancies in the NRCS data, erosion hazard area designation should be based on actual site conditions as verified in the field by the geotechnical professional.
- KMZ 5.10.827 defines **seismic hazard areas** are those areas subject to severe risk of earthquake damage as a result of seismically induced ground shaking, slope failure, settlement or soil liquefaction, which typically occurs in areas underlain by cohesionless soils of low density, usually in association with a shallow groundwater table.

4.0 RESULTS

4.1 Wetlands

4.1.1 Background Data

The National Wetlands Inventory map, the City of Kirkland Sensitive Areas Map, and King County iMap do not depict any wetland systems within the study area (USFWS 2024a; Kirkland 2020; King County 2024).

City of Kirkland Sensitive Areas Map-recorded streams can be reviewed in **Figure 2**.

4.1.2 Soils

The study area is located within an area mapped as Quaternary (Pleistocene) continental glacial drift. This consists of till and outwash clay, silt, sand, gravel, cobbles, and boulders deposited by or originating from continental glaciers. Locally, these soils include peat, nonglacial sediments, modified land, and artificial fill (USDA 2020).

The USDA NRCS WSS maps the entirety of the study area as consisting of Alderwood gravelly sandy loam, 8 to 15-percent slopes. Alderwood gravelly sandy loam is a Group B soil group. Group B soils have a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission (USDA 2024).

Alderwood gravelly sandy loam, 8 to 15-percent slopes, is a moderately well drained soil found on ridges, hills, and shoulders. It forms from glacial drift and/or glacial outwash over dense glaciomarine deposits. It is found from 50 to 80-feet, has a mean annual precipitation of 20 to 60-inches, a mean annual temperature from 46 to 52-degrees Fahrenheit, and frost-free period from 160 to 240-days. A typical profile includes gravelly sandy loam to 7-inches and very gravelly sandy loam from 7 to 59-inches. This soil has no frequency of flooding or ponding.

4.1.3 Wetland Field Study

During field investigations, no wetlands were identified within the project area. Outside the project area at the east edge of Stream S1, where access to private property was not permitted for this study, was a potential wetland. Though the potential wetland was not within the project area, the wetland buffer would potentially overlap with the project action area. This potential wetland was in a low spot which likely receives overbank flow from Stream S1 and had unmaintained emergent vegetation. Due to not having access to the property that the potential wetland is on, data plots were not dug. Surface observations were made to delineate the wetland and to determine a rating. The potential Wetland W1 was rated by DEA as a Category III wetland with a habitat functions score of 4, which requires a 60-foot buffer per AMC 90.55. **Figure 7** exemplifies where this wetland buffer becomes interrupted at unvegetated ROW. A summary of wetland characteristics is provided in **Table 1**. Wetland rating forms are provided in **Appendix F**. Study area photographs are located in **Appendix B**.

Wetlands may potentially exist along Forbes Creek east and west of Slater Avenue NE. These critical areas and their buffers were beyond the project area where access to private property was not permitted for this study, and associated buffers would be interrupted before reaching the project action area. Any wetlands along Forbes Creek west of Slater Avenue NE will not have direct impacts, nor buffer impacts, due to all proposed project actions taking place along the east edge of Slater Avenue NE where critical area buffers would be interrupted by edge of pavement before any project action areas are reached (**Figure 8**). As per KZC 90.120, the interrupted buffer waiver applies to potential wetlands west of Slater Avenue NE due to the legally established and improved ROW.

The potential wetland east of Slater Avenue NE is referenced as Wetland W2. This potential wetland was along the left streambank of Forbes Creek, beginning at the Slater Avenue NE culvert. Wetland W2 likely receives overbank flow from Forbes Creek. The potential Wetland W2 was rated by DEA as a Category II wetland with a habitat functions score of 5, which requires a 75-foot buffer per AMC 90.55. This 75-foot buffer **Figure 8** exemplifies the interruption of potential wetland buffers at the edge of pavement along the east side of Slater Avenue NE in relation to the project area. No work is proposed outside of the paved roadway at this portion of the study area. A summary of wetland characteristics is provided in **Table 2**.

Interrupted buffers are present where conditions lack vegetation, water quality, or hydrologic functions. Any roadway dangerous to wildlife is a non-ecologically significant buffer (Ecology 2017). The road prism between the paved portion of road and a culvert face consists of compacted substrate, which is considered an impervious surface not providing hydrologic functions and therefore also does not provide ecologically significant water quality functions unless it is vegetated (Ecology 2019). The buffer for any potential wetlands surrounding the project area would be adjusted to stop abruptly at the interrupted buffer. The interrupted buffer in this study area would be the paved road, or non-vegetated road prism. Interrupted buffers are described in KZC 90.120(1)(d) (**Appendix A**).

Table 1. Wetland W1 Summary Descriptions

Wetland W1 – INFORMATION SUMMARY				
Location: Slater Avenue NE			(Latitude 47.691184° North, Longitude -122.178959° West)	
				
Standing in Stream S1 at ROW boundary looking east and upstream at Wetland W1. Image captured by DEA staff on January 11, 2024.			Standing in ROW and upgradient of right streambank of Stream S1 looking southeast and upstream at Wetland W1. Image captured by DEA staff on January 11, 2024.	
WRIA / Hydrologic Unit Code / Section Township, Range	08-Cedar-Samamish / 171100120400 Lake Washington-Sammamish Watershed (Ecology 2024)			
WA Ecology Rating	Category III			
AMC Wetland Buffer	60-feet			
Wetland Size	61 square-feet			
Cowardin Classification	PEM			
HGM Classification	Riverine			
Dominant Vegetation	creeping buttercup (*Ranunculus repens*), reed canarygrass (*Phalaris arundinacea*)			
Soils	**Soil survey data**: Alderwood gravelly sandy loam, 8 to 15-percent slopes			
Hydrology	**Assumed source**: streambank overflow, precipitation, and adjacent area runoff.			
Wetland Functions Summary				
Functions	Water Quality	Hydrologic	Habitat	
Circle the appropriate ratings				
Site Potential	H [M] L	H [M] L	H M [L]	
Landscape Potential	[H] M L	[H] M L	H M [L]	
Value	H [M] L	H [M] L	H [M] L	**TOTAL**
Score Based on Ratings	7	7	4	18
General Description and Comments				
Wetland W1 is a potential riverine wetland which exists at the start of Stream S1, a tributary of Forbes Creek. Surface observations were made to delineate the wetland and to determine a rating since private property access was not accessible at the time of this study. Wetland W1 exists on Kirkland tax parcel number 6639900225. This unit would require a 60-foot buffer per AMC 90.55. The buffer is interrupted at the edge of pavement and/or unvegetated compacted gravel within the ROW where the buffer is no longer providing water quality, hydrologic, or habitat functions. The Wetland W1 wetland buffer continues beyond the Stream S1 buffer, which stops abruptly at the culvert, until it reaches the interrupted buffer.				

Table 2. Wetland W2 Summary Descriptions

Wetland W2 – INFORMATION SUMMARY				
Location: Slater Avenue NE			(Latitude 47.689930° North, Longitude -122.179593° West)	
				
Standing on leftstream of Forbes Creek at culvert east of Slater Avenue NE, looking east and upstream at start of potential Wetland W2. Image captured by DEA staff on January 11, 2024.		Standing on east edge of Slater Avenue NE ROW looking at upstream of Forbes Creek and potential Wetland W2. Image captured by DEA staff on January 11, 2024.		
WRIA / Hydrologic Unit Code / Section Township, Range	08-Cedar-Samamish / 171100120400 Lake Washington-Sammamish Watershed (Ecology 2024)			
WA Ecology Rating	Category II			
AMC Wetland Buffer	75-feet			
Wetland Size	0.03 acre			
Cowardin Classification	PFO			
HGM Classification	Riverine			
Dominant Vegetation	western swordfern (*Polystichum munitum*), Douglas-fir (*Pseudotsuga menziesii*), western red cedar (*Thuja plicata*)			
Soils	**Soil survey data**: Alderwood gravelly sandy loam, 8 to 15-percent slopes			
Hydrology	**Assumed source**: streambank overflow			
Wetland Functions Summary				
Functions	Water Quality	Hydrologic	Habitat	
Circle the appropriate ratings				
Site Potential	H [M] L	H [M] L	H M [L]	
Landscape Potential	[H] M L	[H] M L	H M [L]	
Value	[H] M L	[H] M L	[H] M L	**TOTAL**
Score Based on Ratings	8	8	5	21
General Description and Comments				

Wetland W2 is a potential riverine wetland which exists along Forbes Creek, east of Slater Avenue NE. Surface observations were made to delineate the wetland and to determine a rating since private property access was not accessible at the time of this study. Wetland W2 exists on Kirkland tax parcel numbers 6639900151 and 6639900150. This unit would require a 75-foot buffer per AMC 90.55. The buffer is interrupted at the edge of pavement and/or unvegetated compacted gravel within the ROW and along a private driveway to the north where the buffer is no longer providing water quality, hydrologic, or habitat functions. The Wetland W2 wetland buffer continues beyond the Forbes Creek buffer, which stops abruptly at the culvert, until it reaches the interrupted buffer.

4.2 Streams

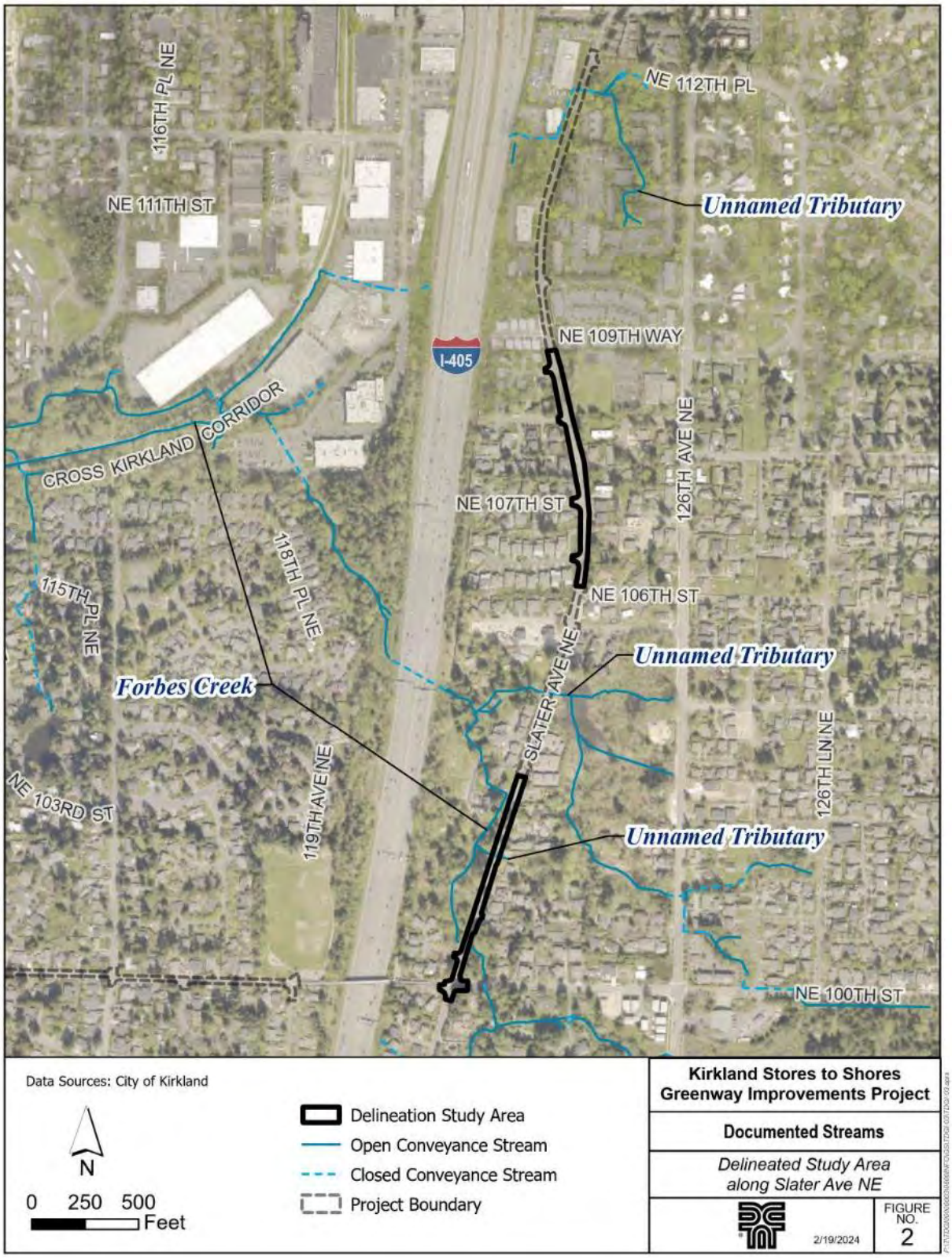
4.2.1 Background Data

The City of Kirkland Sensitive Areas Map, as well as the City's GIS, shows the mainstem of Forbes Creek and a tributary of Forbes Creek flowing east to west through culverts under Slater Avenue NE at two locations within the southern section of the study area (Kirkland 2020). King County iMap confirms the location of the Forbes Creek mainstem crossing (King County 2024). These documented streams can be seen in **Figure 2**.

In the document, A Catalog of Washington Streams and Salmon Utilization – Volume I, Puget Sound Region, Forbes Creek (stream number 08-0242) is described as a 1.8-mile-long creek originating from east of I-405. Forbes Creek drains to Lake Washington and Lake Washington drains to the Puget Sound. According to this same document, the limiting factors for north Lake Washington streams include silt deposits and compacted gravel beds, low summer flows, high water temperature, flood control measures, and many roads that cross the streams (Williams et al. 1975). The City of Kirkland Sensitive Areas map generally shows Forbes Creek as a salmon-bearing stream (Kirkland 2020).

In relation to the project area, the downstream edge of the mainstem of Forbes Creek where it crosses under Slater Avenue NE is identified as a fish passage barrier (WDFW 2024b). This culvert is a barrier identified for water surface drop (WDFW 2022). The culvert which carries the tributary of Forbes Creek is not mapped as a fish barrier. DNR does not map either stream in the Forest Practices Application Mapping Tool program, although WDFW's SalmonScape maps the mainstem of Forbes Creek as having a documented presence of resident coastal cutthroat trout (*Oncorhynchus clarkii clarkii*), and WDFW's fish passage map also documents coho salmon (*Oncorhynchus kisutch*), steelhead salmon (*Oncorhynchus mykiss*), sea-run cutthroat trout (*Oncorhynchus clarkii*) as potentially occurring in Forbes Creek at the study area (WDFW 2024a; WDFW 2024b). Forbes Creek and the tributary of Forbes Creek, which flow through the project area, are not mapped as state listed impaired and threatened waters, nor are they mapped within an area designated as a water quality improvement project (Ecology 2024).

Figure 2. Documented Streams



4.2.2 Stream Field Study

During field investigations, two streams were identified. One stream was the mainstem of Forbes Creek. Forbes Creek also flows east to west under Slater Avenue NE through a 36-inch corrugated metal pipe (CMP) culvert. At the downstream end, the culvert is perched about 2-feet off the water surface. The OHWM at the upstream end is about 6-feet wide along the edges of the culvert. The streambed material is made of cobble, gravel, and silt. The stream is significantly embedded at the upstream and downstream culvert. Forbes Creek west of Slater Avenue NE and its buffers would be well beyond the project area and action area, as they would stop abruptly at the edge of the culverts where the streams no longer daylight.

The other stream was delineated and identified as Stream S1. Stream S1 is a short stream segment east of Slater Avenue NE that flows into an 18-inch CMP culvert and outlets into a forested area on the west side of Slater Avenue NE which leads directly to the mainstem of Forbes Creek. At the upstream end, the streambed material is gravel and silt, with vegetated streambanks. The stream is significantly embedded at the upstream end. Stream S1 is likely to be seasonal. Stream S1 originates from two small black poly-vinyl chloride pipes that flow under a residential backyard, possibly from roof drains.

Stream summaries are shown in **Table 3** and **Table 4**. Another portion of mainstem Forbes Creek was observed and visually located, but since property access was not granted at the time of the study, that portion of stream was not delineated (**Figure 3**). Slater Avenue NE runs perpendicular to the crossings of Forbes Creek and Stream S1. The road prism of Slater Avenue NE extends to the culvert face for each of these streams. Buffers for both of these streams are measured starting with a line extending perpendicular to the face of the culvert. At the point where the stream flows into the culvert pipe, the stream no longer requires buffer until they daylight on the other side of Slater Avenue NE. The buffer for any streams surrounding the project area would be adjusted to stop abruptly at the culvert. These observed streams are shown in **Figure 4** and **Figure 5**. Photographs of the site can be viewed in **Appendix B**.

4.2.3 Non-Jurisdictional Ditches

The City has raised concern about four sections of ditch-line and their jurisdictional status. As stated in KZC, a stream is defined as “areas where surface waters produce a defined channel or bed that demonstrates clear evidence of the passage of water. Streams do not include irrigation ditches, canals, storm or surface water runoff devices, or other entirely artificial watercourses, unless they are used by salmonids or convey a naturally occurring stream that has been diverted into the artificial channel, or are created for the purposes of stream mitigation.” To be considered WOTUS under the jurisdiction of the USACE under Section 404 of the CWA, ditches must receive flow from naturally forming water features (i.e., streams, ponds, bioswales, and wetlands) and connect downstream to regulated waters (EPA 2007).

- **Ditch 1** is the northernmost ditch of concern along the east edge of Slater Avenue NE, west-adjacent to the Kirkland-Redmond Boys' and Girls' Club, running south to north for approximately 500 feet from just south of NE 108th Street to just north of NE 109th Way. This ditch receives flow from surface runoff, and stormwater drainage from the west and the south. Shown by City GIS and as-builts from the Kirkland-Redmond Boys' and Girls' Club, there is a constructed bioswale which flows into a constructed pond that eventually outlets into Ditch 1 from the east. Design drawings shown in **Appendix D** confirm that the pond and swale on that property was constructed for stormwater. With this information, it can be concluded that this ditch is not a stream, but instead a stormwater conveyance facility.

  This ditch is also determined not to be a wetland. Surface level characteristics were investigated in this segment of ditch which revealed wetland vegetation (such as reed canarygrass (*Phalaris arundinacea*), creeping buttercup (*Ranunculus repens*), and common rush (*Juncus effusus*)), and hydrology sources (i.e., inflowing surface waters). Soils are presumed to be similar to characteristics of the exploratory sample plots dug in Ditch 2 with no hydric soil indicators present. Due to the lack of natural water sources and presumed lack of hydric soil indicators, this ditch is determined to be non-wetland. The location of Ditch 1 can be viewed in **Figure 6**. Photographs of Ditch 2 can be viewed in **Appendix B**.
- **Ditch 2** is just south of Ditch 1 along the east edge of Slater Avenue NE, which spans north to south for approximately 100 feet from NE 106th Street and just north of NE 106th Place. This ditch is a low spot where surface water runoff and stormwater ponds. The ditch receives flow from stormwater runoff through a northern 12-inch concrete culvert and flows south into another 12-inch concrete culvert. Where this drainage ultimately goes is uncertain, but is presumably the large wetland east of Slater Avenue NE south of the study area. No naturally forming water features flow into Ditch 2, and it is clearly excavated from upland, so it does not meet the definition of a stream under City code, but instead is a stormwater conveyance facility.

  Ditch 2 shares similar characteristics to Ditch 1. There is a presence of hydric vegetation, such as reed canarygrass (*Phalaris arundinacea*) and creeping buttercup (*Ranunculus repens*), as well as a presence of hydrology indicators (i.e., 2-inch-deep surface water, and saturated soils at the surface). This ditch had shallow compacted gravel fill at approximately 6-inches below the ground surface, and no redoximorphic features. As with Ditch 1, there was no presence of hydric soil indicators which concluded that this ditch is not a wetland. Lacking natural water sources and lacking hydric soil indicators decidedly makes this ditch non-jurisdictional. The location of Ditch 2 can be viewed in **Figure 6**. Photographs of Ditch 2 can be viewed in **Appendix B**.
- **Ditch 3** is in the southern segment of the study area, along the east edge of Slater Avenue NE, just upgradient of, and south-adjacent to, Stream S1. This is an area that was excavated from upland. This ditch receives flow from surface runoff and southern stormwater utility through a 12-inch concrete culvert. This ditch does not receive flow from any naturally forming water features, therefore does not meet the definition of a stream in the City code.

Ditch 3 had a non-vegetated bottom, is built in the road prism of Slater Avenue NE, and its soils consist of fill with cobbles on the surface. Therefore, this ditch would not be considered a wetland. Due to the lack of natural water sources, lack of hydric vegetation, and lack of hydric soils, this ditch is non-jurisdictional. The location of Ditch 3 can be viewed in **Figure 5**. Photographs of Ditch 3 can be viewed in **Appendix B**.

- **Ditch 4** is in the southern segment of study area along the east edge of Slater Avenue NE, just upgradient of, and perpendicular to, the upstream culvert of the mainstem of Forbes Creek. Ditch 4 is a low spot excavated from upland for stormwater drainage use and exists within the road prism of Slater Avenue NE. This ditch receives flow from surface runoff and southern stormwater utility. This ditch does not receive flow from any naturally forming water features, therefore does not meet the definition of a stream in the City code.

  Surface level characteristics were investigated in this segment of ditch showing vegetation including field horsetail (*Equisetum arvense*), English ivy (*Hedera helix*), Robert geranium (*Geranium robertianum*), creeping buttercup (*Ranunculus repens*), Himalayan blackberry (*Rubus armeniacus*), and common dandelion (*Taraxacum officinale*). These species of vegetation have facultative upland indicator statuses which do not meet the hydric vegetation indicator. Hydric soils are not presumed to exist here. Due to the lack of natural water sources, lack of hydric vegetation, and presumed lack of hydric soils, this ditch is non-jurisdictional. The location of Ditch 4 can be viewed in **Figure 4**. Photographs of Ditch 4 can be viewed in **Appendix B**.

Table 3. Forbes Creek Summary Descriptions

Forbes Creek – INFORMATION SUMMARY	
Location: Slater Avenue NE	(Latitude 47.690220° North, Longitude -122.179667° West)
 Forbes Creek at the upstream culvert which leads flow under Slater Avenue NE, looking northwest and downstream at culvert. Image captured by DEA staff on January 11, 2024.	 Forbes Creek at the upstream culvert which leads flow under Slater Avenue NE, looking southeast and upstream. Image captured by DEA staff on January 11, 2024.
Stream Name	Forbes Creek.
WRIA / Hydrologic Unit Code	08-Cedar-Samamish / 171100120400 Lake Washington-Sammamish Watershed (Ecology 2024)
WA Stream Catalog #	08-0242
DNR Stream Type	This section of Forbes Creek is not mapped by DNR (DNR 2024a). DNR data upstream and downstream of the study area, as well as WDFW data, suggests this section of stream would be a fish bearing, perennial (**Type F**) stream.
Documented Fish Use	WDFW's SalmonScape maps the mainstem of Forbes Creek as having a documented presence of resident coastal cutthroat trout (*Oncorhynchus 18lexipp 18lexipp*), and WDFW's fish passage map also documents coho salmon (*Oncorhynchus kisutch*), steelhead salmon (*Oncorhynchus mykiss*), sea-run cutthroat trout (*Oncorhynchus clarkii*) as potentially occurring in Forbes Creek at the study area (WDFW 2024a; WDFW 2024b).
Location of Stream Relative to Study Area	Forbes Creek flows from the southeast through two connecting, undeveloped parcels, into a 36-inch CMP culvert, under Slater Avenue NE, and out on the west edge of this road. The stream will then continue north adjacent to Slater Avenue NE for approximately 800-feet before veering west away from the study area.
Connectivity (where stream flows from/to)	Forbes Creek flows originate in southern Kirkland city limits, flowing north into Forbes Lake, and continuing north and west through the project area. From there, Forbes Creek continues this path of travel, under I-405, and into Lake Washington. From Lake Washington, flow will enter Lake Union and eventually west to the Puget Sound.
Stream Channel Characteristics	At the upstream end of the culvert which carries Forbes Creek under Slater Avenue NE, the stream channel sits well below the road elevation for Slater Avenue NE and has incised stream banks. At the downstream end of this same culvert, Forbes Creek has about a 2-foot drop to the water surface elevation with incised streambanks. Streambed material at this downstream section of Forbes Creek is made of larger cobbles, gravel, and silt (WDFW 2022).

Riparian/Buffer Condition	At the upstream end of the culvert, Both streambanks had upland tree and shrub species. Streambed material consisted of cobble, gravel, and silt materials. Forbes Creek downstream of the culvert, has similar characteristics as upstream of the culvert. The road prism of Slater Avenue NE extends to the upstream culvert. The road prism at the point of the culvert consists of compacted gravel fill, which interrupts the stream buffer west of the upstream edge of the culvert, and east of the downstream edge of the culvert.
General Description and Comments	
The City of Kirkland stream buffer (KZC 90.65) for this stream would be 100-feet based on recorded fish use. The buffer is interrupted at the edge of pavement where the buffer is no longer water quality, hydrologic, or habitat functions.	

Table 4. Stream S1 Summary Descriptions

STREAM S1 – INFORMATION SUMMARY	
Location: Slater Avenue NE	(Latitude 47.691241° North, Longitude -122. 122.179165° West)
	
Standing in the channel of Stream S1 looking west and downstream at the upstream culvert which leads flow under Slater Avenue NE. Image captured by DEA staff on January 11, 2024.	Standing in the channel of Stream S1 looking east and upstream at stream on private property. Image captured by DEA staff on January 11, 2024.
Stream Name	Stream S1 is a tributary to Forbes Creek.
WRIA / Hydrologic Unit Code	08-Cedar-Samamish / 171100120400 Lake Washington-Sammamish Watershed (Ecology 2024)
WA Stream Catalog #	08-0242
DNR Stream Type	This tributary of Forbes Creek is not mapped by DNR (DNR 2024a). This stream is presumed to be a seasonal non-fish bearing stream (Type Ns).
Documented Fish Use	This tributary of Forbes Creek is not mapped by DNR or WDFW for documented fish species (DNR 2024a; WDFW 2024a).
Location of Stream Relative to Study Area	Stream S1 flows from two small, black poly-vinyl chloride pipes that flows under a residential backyard east of Slater Avenue NE on private property, into a confined channel with steep slopes at the study area, through an 18-inch CMP culvert which flows west under Slater Avenue NE, and outfalls to a confluence with Forbes Creek.

Connectivity (where stream flows from/to)	Stream S1 originates directly east adjacent to the project area, flows under Slater Avenue NE in a culvert, confluences with a forested wetland adjacent to Forbes Creek, and continuing north and west beyond the study area. From there, Forbes Creek continues this path of travel, under I-405, and into Lake Washington. From Lake Washington, flow will enter Lake Union and eventually west to the Puget Sound.
Stream Channel Characteristics	Stream S1 is a short stream segment east of Slater Avenue NE that flows into an 18-inch CMP culvert and outlets on the west side of the road into a forested wetland. At the upstream end, the streambed material is gravel and silt, with vegetated streambanks. The stream is significantly embedded at the upstream end. At the downstream end of the culvert, the stream outfalls into a forested area with an undefined stream channel which leads directly to the mainstem of Forbes Creek.
Riparian/Buffer Condition	The buffer is covered in primarily maintained herbaceous vegetation. The stream buffer includes both public ROW and private property.
General Description and Comments	
The City of Kirkland stream buffer (KZC 90.65) for this stream would be 50-feet based on the lack of recorded data and site observations. The buffer is interrupted at the edge of pavement and/or unvegetated compacted gravel within the ROW where the buffer is no longer water quality, hydrologic, or habitat functions. The Stream S1 buffer stops abruptly at the culvert.	

The 100-foot standard stream buffer for Forbes Creek and 50-foot buffer for Stream S1 are shown on the delineation map (**Figure 4** and **Figure 5**).

Figure 3. Contours Data Relative to Stream S1

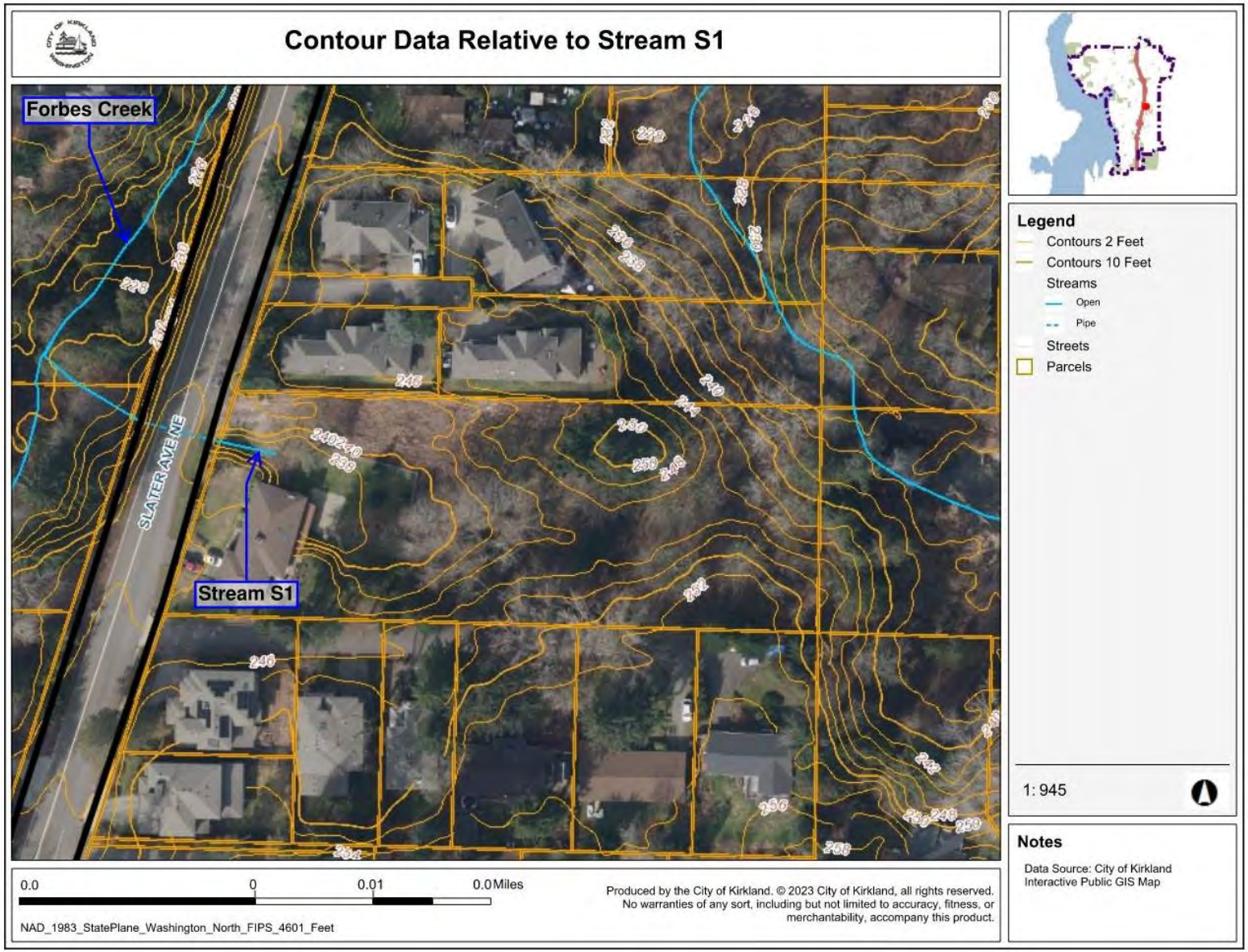


Figure 4: Delineated Features

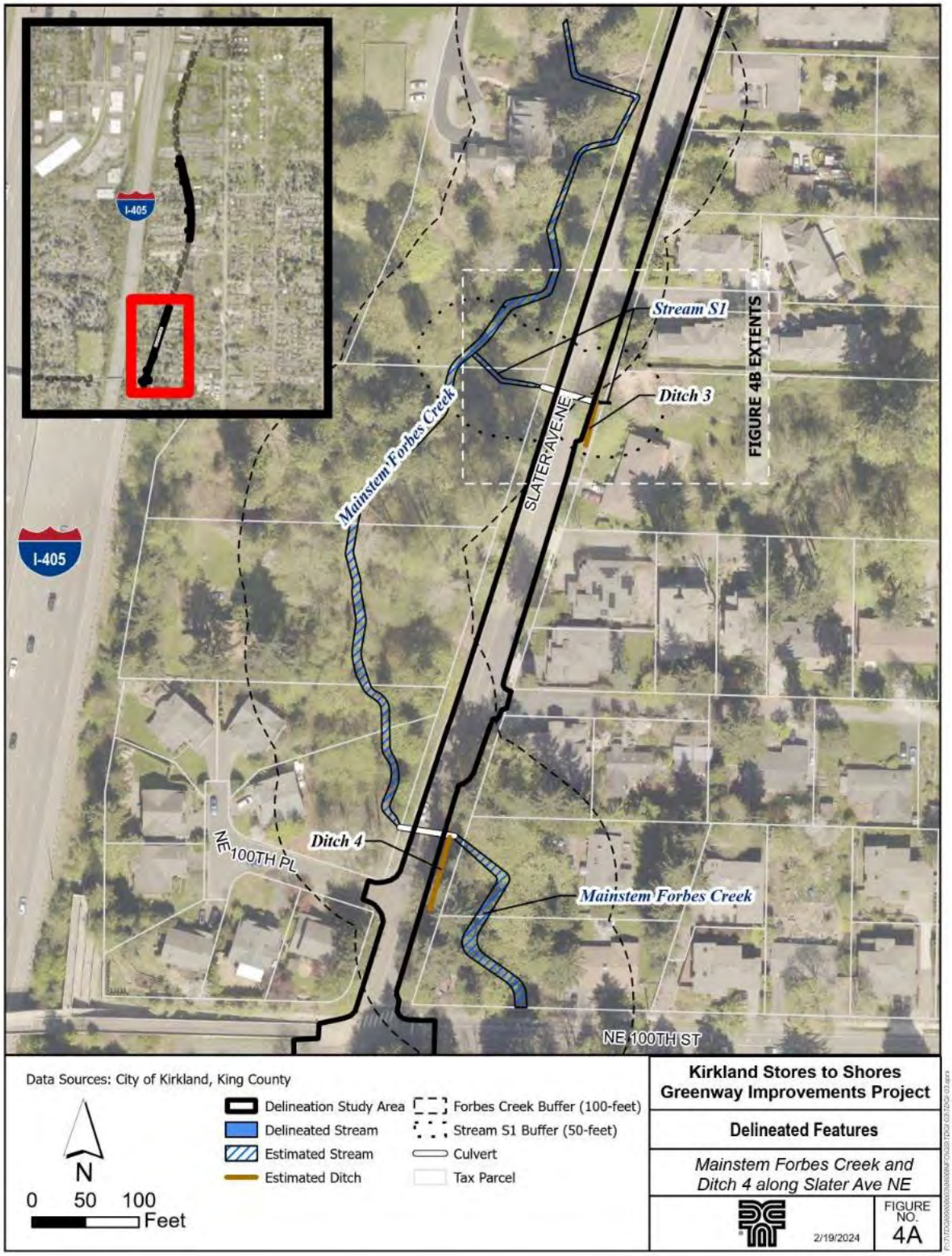


Figure 5: Delineated Features

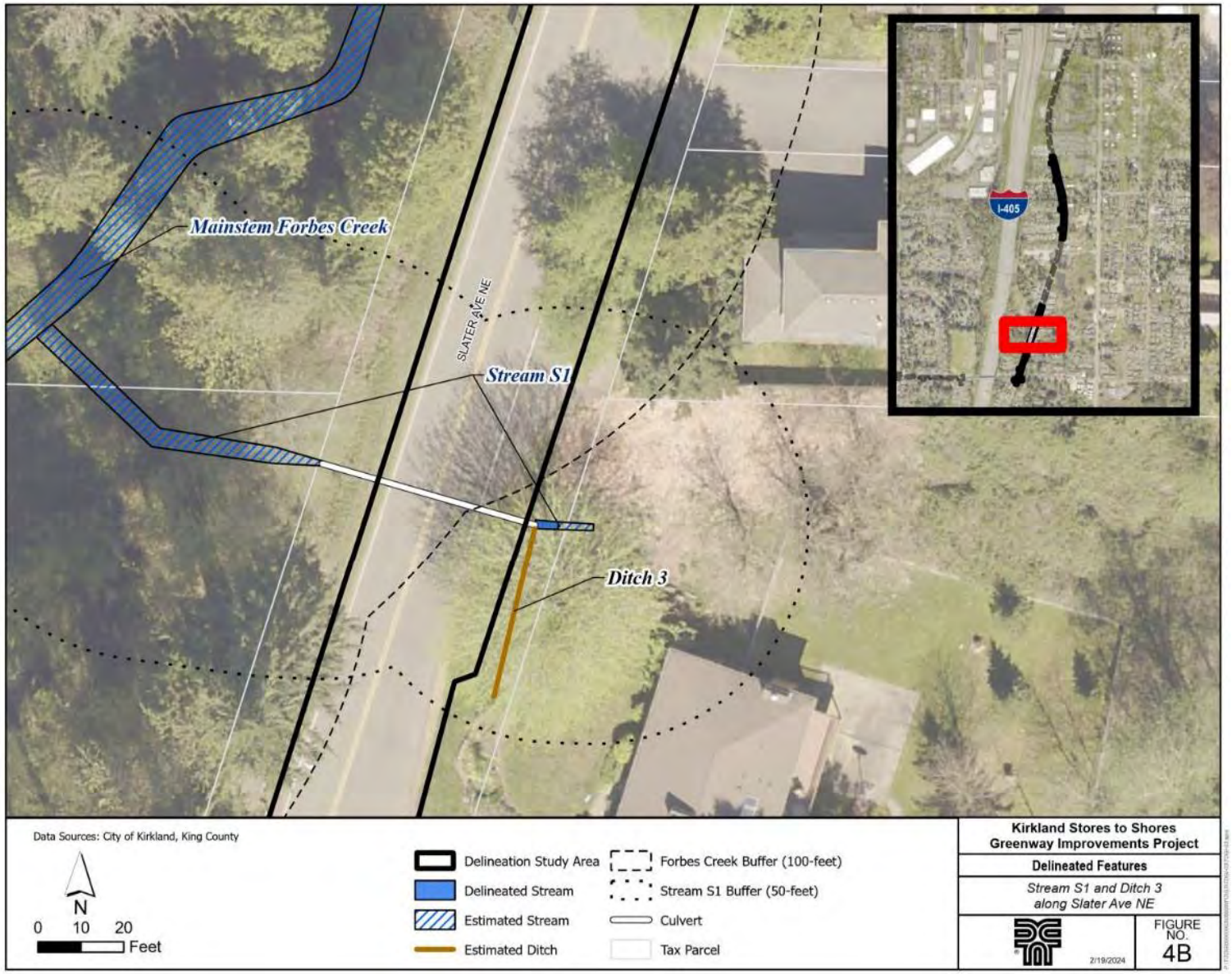
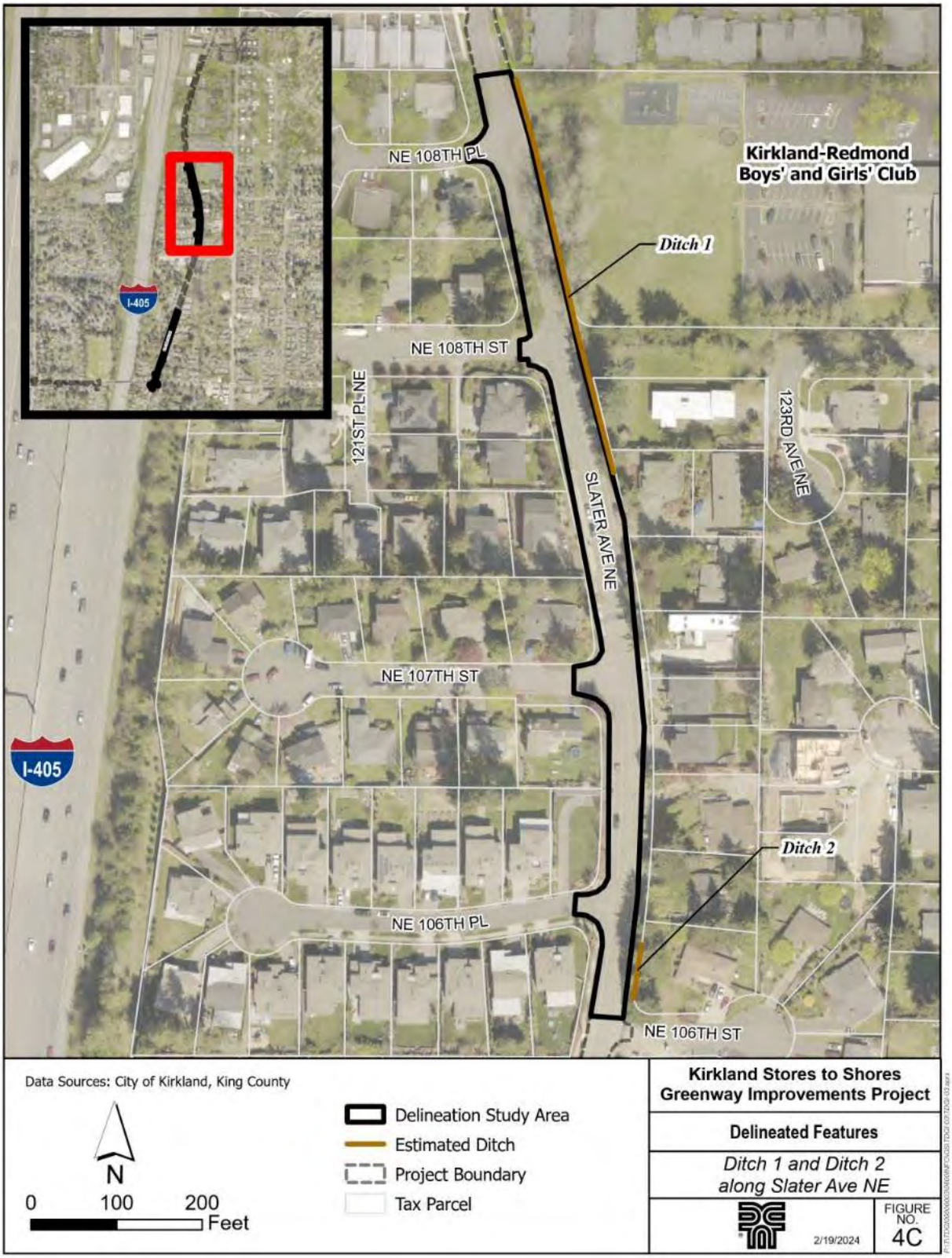


Figure 6: Delineated Features



4.3 Fish and Wildlife Habitat Conservation Areas

Wildlife use in the study area is limited by suburban development, traffic, and the I-405 corridor to the west. Within the urban environment, the Forbes Creek stream, tributaries, and wetlands upstream and downstream of the study area provide important wildlife habitat, conservation areas, and corridors for movement. Wildlife observed along the Forbes Creek corridor has included coyotes (Canis latrans), deer (Cervidae spp.), raccoons (Procyon lotor), turtles (Testudines spp.), frogs (Pseudacris spp.), and a rich variety of bird species, including bald eagles (Haliaeetus leucocephalus), hawks (Buteo spp.), great blue heron (Ardea herodias), osprey (Pandion haliaetus), marsh wren (Cistothorus palustris), ducks (Anas spp.), quail (Coturnix coturnix), and swallows (Hirundinidae spp.) (Kirkland 2009). The Forbes Creek wetland complex, upstream of the study area, also includes a documented population of beaver. Forbes Creek and wetlands are part of several natural parks and open space that are disconnected from the lower Forbes Creek corridor and Lake Washington by I-405.

Although they do not hold a federal or state listing status, Kirkland also specifically includes the following species as mapped priority species (USFWS 2024c; WDFW 2008):

- Bald eagle (*Haliaeetus leucocephalus*);
- Pileated woodpecker (*Dryocopus pileatus*);
- Great blue heron (*Ardea Herodias*);
- Purple martin (*Progne subis*); and
- Trumpeter swan (*Cygnus Buccinators*).

All of the above listed species have the potential to be in the study area. Bald eagles could roost on trees in the study area. The nearest bald eagle nest is approximately 1.5 miles west of the study area, on the eastern shore of Lake Washington (Kirkland 2020). Purple martin are not likely to occur in the study area. Trumpeter swan and great blue heron could potentially rest or feed in the pond in the study area. Pileated woodpecker could live and nest in the forest in the study area.

WDFW's PHS does not map the study area as a priority habitat, but does map the mainstem of Forbes Creek as a migration route for residential cutthroat trout (WDFW 2024b). The study area is located within the Lake Washington watershed, which is essential fish habitat for coho salmon (Oncorhynchus kisutch), which is neither a federal or state listed species, and Chinook salmon (Oncorhynchus tshawytscha) which is federally threatened (NMFS 2016). Information from the Planning and Consulting Web Tool maps the following endangered, threatened, and candidate species with final critical habitat downstream of, but occurrences potentially within, the study area (USFWS 2024b; USFWS 2024c; WDFW 2008):

- North American wolverine (*Gulo gulo luscus*) which is federally threatened and a state candidate listing;
- marbled murrelet (*Brachyramphus marmoratus*) which is federally threatened and a state endangered listing;
- yellow-billed cuckoo (*Coccyzus americanus*) which is federally threatened and a state candidate listing;

- northwestern pond turtle (*Actinemys marmorata*) which is federally threatened and a state candidate listing;
- bull trout (*Salvelinus confluentus*) which is federally threatened and a state candidate listing; and
- monarch butterfly (*Danaus plexippus*) which is a federal candidate listing and a state candidate listing.

None of the above listed species have been documented in the study area, nor is there any suitable habitat present. North American wolverine populations are limited in Washington state, and they primarily live in higher elevation habitats distant from human populations, whereas the study area is in a lowland urban setting (Lukacs et al. 2020). Marbled murrelets prefer nearshore marine environments in western North America and are closely associated with old growth and mature conifer forests, neither of which is not present in the study area (Desimone 2016). Yellow-billed cuckoo is considered extirpated from Washington, with no documented breeding populations (Wiles et al. 2017). The northwestern pond turtle is a very rare species unlikely to occur in the study area. There are only approximately 800 turtles remaining in Washington with populations at six locations including three sites in Skamania County and one each in Klickitat, Mason, and Pierce counties (Hallock et al. 2017). Bull trout habitat includes deep pools in large, cold lakes and reservoirs, as well as cold rivers and large tributary streams with moderate to fast currents and relatively stable stream flow, none of which occur in the study area (WDFW 2015). During the breeding season, monarch butterflies lay their eggs on their obligate milkweed host plant (primarily *Asclepias* spp.), which is a plant species that has not been observed in the study area (WDFW 2014). Chinook salmon and steelhead salmon have the potential to occur in Forbes Creek within the study area (WDFW 2024a). However, the project does not anticipate any direct impacts to Forbes Creek or Stream S1. USFWS and NMFS species lists are in **Appendix C**.

5.0 PROJECT IMPACTS

5.1 Habitat Impacts

The proposed project will take place entirely in the existing ROW outside of all streams and wetlands.

All impacts to associated buffers at the Forbes Creek crossing with Slater Avenue NE have been avoided since all new non-pollutant generating impervious surfaces (NPGIS) are proposed outside of the interrupted buffers at this location. **Figure 8** shows the proposed project design in relation to Forbes Creek and its 100-foot stream buffer, as well as potential Wetland W2 and its 75 foot buffer. The wetland buffer at this project location would not be impacted due to the limits of the interrupted buffer with the edges of pavement.

The stream buffers for Forbes Creek and Stream S1 are stop abruptly at the face of the culverts which flow under Slater Avenue NE. The road prism of Slater Avenue NE extends to the upstream face of the culvert of both streams. No work is proposed at the culvert face of these streams and therefore there are no impacts to the streams or associated buffers.

There is 275.87 square-feet of new NPGIS is proposed in the Wetland W1 wetland buffer, which stops abruptly at the paved ROW and/or the unvegetated compacted gravel of the Slater Avenue NE road prism which provide no functions. The new NPGIS is necessary to place to continue pedestrian improvements to meet the Americans with Disabilities Act (ADA) compliancy throughout the entirety of the Slater Avenue NE section of the project. The current paved roadway width at this location does not permit for all necessary setbacks and ADA standards to meet the project specifications as per City code. The wetland buffer at the impacted location consists of compacted gravel ROW vegetated with emergent vegetation which appears to be maintained by the adjacent property owner at Kirkland tax parcel number 6639900225. **Figure 7** shows the proposed project design in relation to the delineated Stream S1, Wetland W1, and their associated buffers.

5.2 Effects to Wildlife

Based on the habitat effects discussed above, the proposed project is anticipated to have no impacts on wildlife. Wildlife species using the study area are limited to generalist species that are accustomed to a high level of human activity. No large blocks of intact wildlife habitat are present in the study area. Wildlife using these areas would be expected to move away during active construction but would return soon after construction was complete. No trees are proposed for removal within the impacted critical area buffers. The proposed project would have no detectable effects to habitat fragmentation in an area already highly fragmented. Listed species noted in **Section 4.3** and **Appendix C** are not anticipated to be present within the study area, and therefore are not anticipated to be impacted from project activities.

5.3 Operational Impacts

Planned construction activities should not have any operational impacts on critical areas, or associated buffers outside of the 275.87 square-feet of new NPGIS mentioned in **Section 5.1**. All construction equipment will access from existing ROW that consists of paved or compacted gravel material. Existing ROW material consists of compacted gravel, as well as pavement at the Stream S1 crossing with Slater Avenue NE.

ROW improvements would not increase the amount of impervious surfaces or pollution generating impervious surfaces. Driveway improvements would be limited to the existing road prisms. Paved and gravel substrate are both considered impervious surfaces in Ecology's Stormwater Management Manual for Western Washington. Temporary stormwater best management practices and temporary erosion and sediment control measures will be put in place to protect critical areas from operational impacts. The protections will follow Ecology's Stormwater Management Manual for Western Washington as well as the contractor's Stormwater Pollution Prevention Plan (Ecology 2019). No permanent stormwater treatment is proposed since there is no increased impacts to water quality as a result of the project efforts. Project design will utilize standardized and site-specific best management practices for construction of the project such as construction fencing, check dams, silt fence, minimizing removal of vegetation, and conducting work in wet areas during the driest time of year (late summer/early fall) (Ecology 2019).

Figure 7. Avoided Impacts at Stream S1 Crossing with Slater Avenue NE

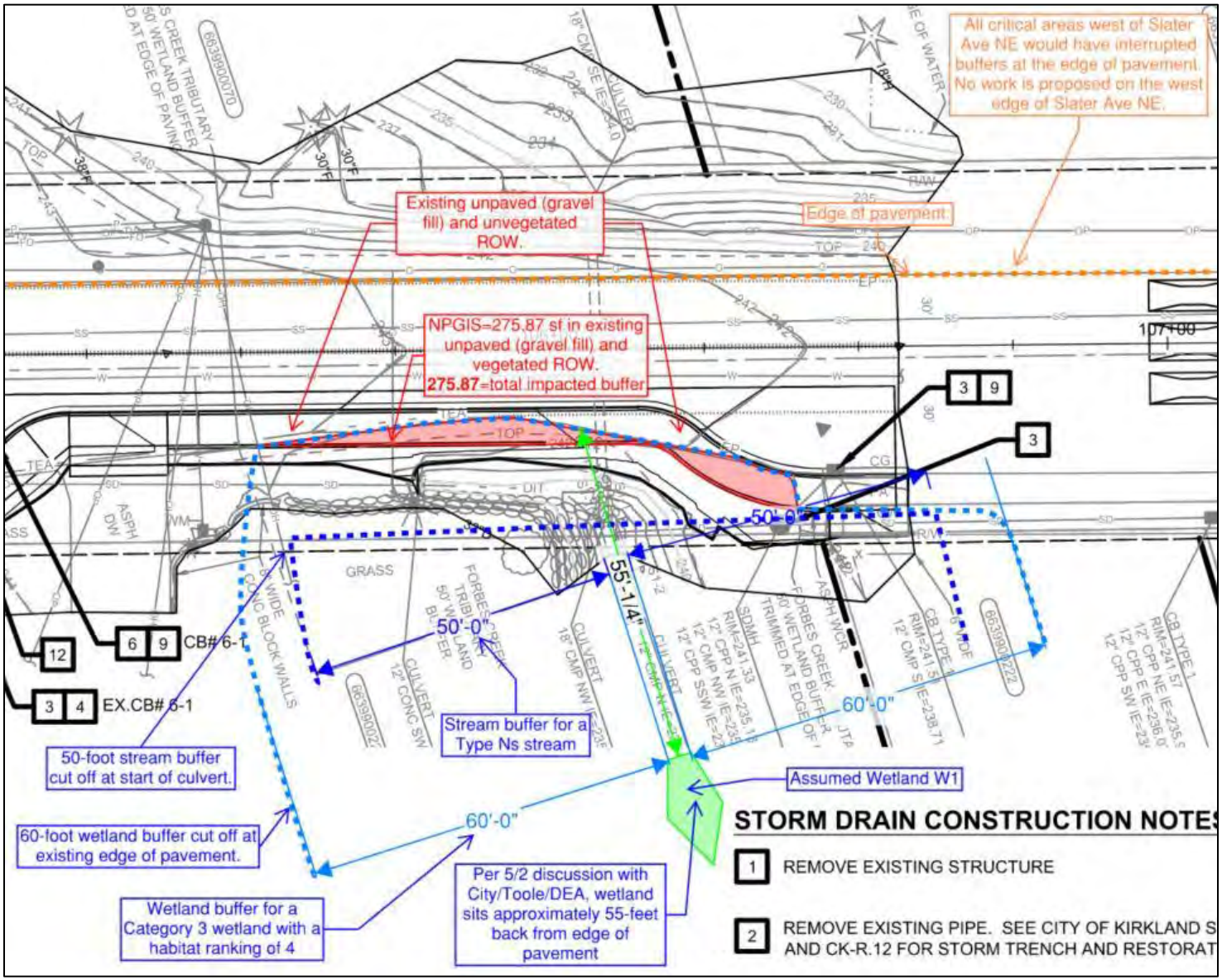
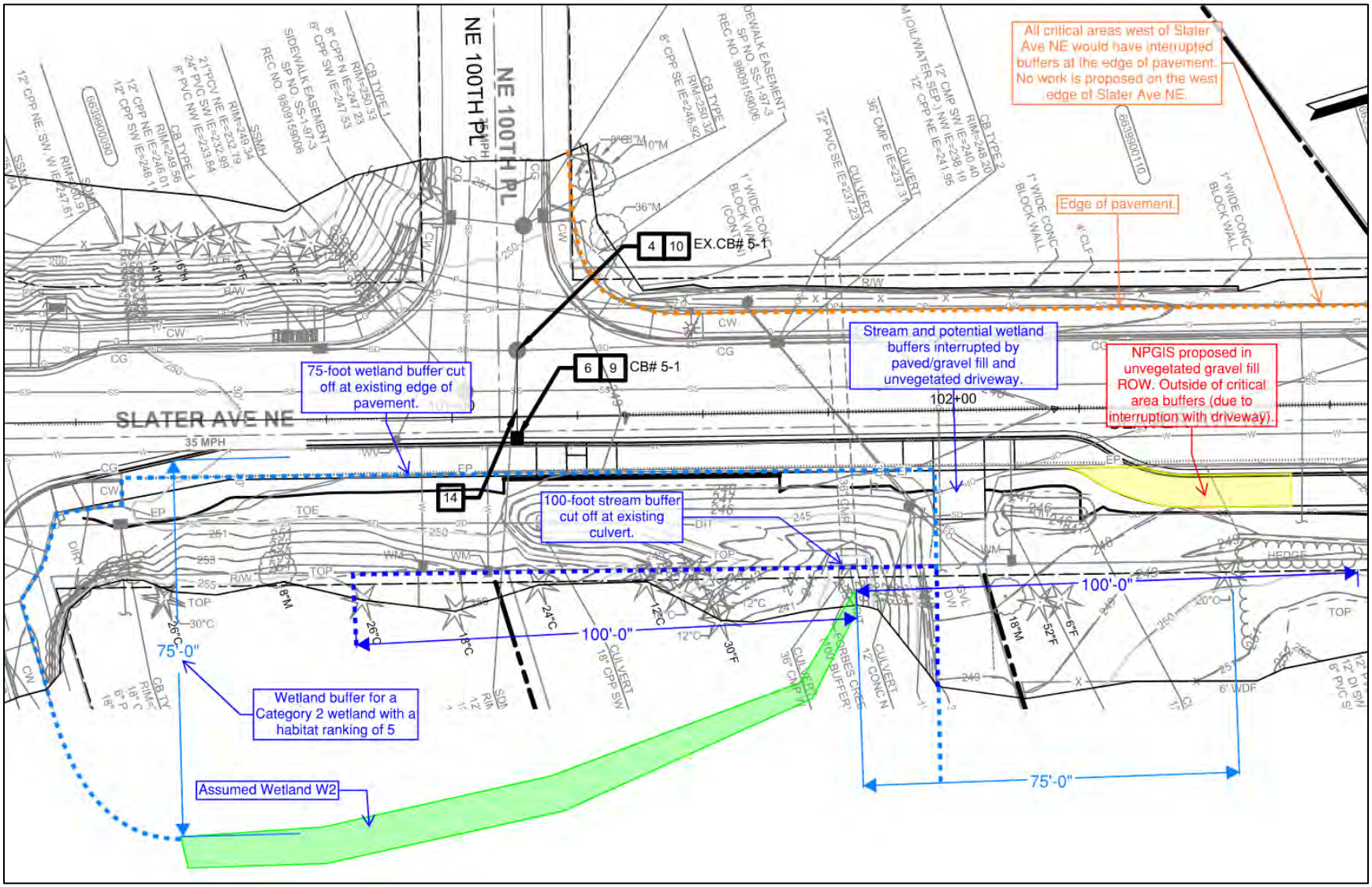


Figure 8. Avoided Impacts at Forbes Creek Crossing with Slater Avenue NE



6.0 MITIGATION

As a base for discussing mitigation for impact, the KZC 90.65 specifies that impacts to stream buffers shall be mitigated at a minimum of a 1:1 ratio. Mitigation actions typically taken by an applicant are required by KMZ 90.145 to occur in the following sequence:

- Avoiding the impact altogether by not taking a certain action or parts of actions;
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;
- Compensating for the impact by replacing or providing substitute resources or environments; and/or
- Monitoring the impacts and compensation projects and taking appropriate corrective measures.

The project followed this standard mitigation sequencing during design, to avoid, minimize, and compensate for wetland impacts. Measures include the following:

- Delineation and mapping of all streams and wetlands in the study area that could be affected, so that project design could avoid streams and wetlands where possible;
- Avoided all temporary and permanent direct impacts to wetlands, streams, and stream buffers;
- Avoided all temporary impacts to associated wetland buffers; and
- Minimized all permanent impacts to associated buffers to the maximum extent feasible.

Permanent impacts to associated buffers have been minimized to a total area of 275.87 square feet. This project would be an appropriate proponent for the City of Kirkland Advanced Mitigation Program (AMP). As per KMZ 90.145(4)(c) (**Appendix A**), the AMP involves the following:

> "…*The City does mitigation on City-owned property as mitigation credit either for City critical area projects or at the discretion of the City for other public agencies with critical area projects. The mitigation program shall be implemented pursuant to federal and state rules, and state water quality regulations.*"

The AMP allows for more seamless permitting for City infrastructure projects as restoration sites have been selected for particular restoration activities in advance to future project impacts (Watershed Company 2020). A pre-selected City-owned site will be used as mitigation for the wetland buffer impacts at Wetland W1.

7.0 REFERENCES

City of Kirkland (Kirkland). 2020. Kirkland Sensitive Areas Map, Washington Department of Fish and Wildlife data dated January 2020. City of Kirkland, Washington.

———. 2009. Forbes Lake Trail and Park Improvement Plan. City of Kirkland, Washington.

Cooke, Sarah Spear. 1997. A Field Guide to the Common Wetland Plants of Western Washington & Northwestern Oregon. Seattle Audubon Society. Seattle, Washington.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. Office of Biological Services, Fish and Wildlife Service, U.S. Department of the Interior, FWS/OBS-79/31.

Desimone, S. M. 2016. Periodic status review for the Marbled Murrelet in Washington. Washington Department of Fish and Wildlife, Olympia, Washington. 28+iii pp.

Environmental Laboratory. 1987. U.S. Army Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, Mississippi.

Environmental Protection Agency. 2023. Fact Sheet for the Final Rule: Amendments to the Revised Definition of "Waters of the United States."

———. 2007. Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States. U.S. Department of the Army.

Federal Emergency Management Agency (FEMA). 2020. FIRM Panel 53033C0358H. Panel 358 of 1725. King County, Washington and Incorporated Areas. National Flood Insurance Program.

Hallock, L. A., A. McMillan, and G. J. Wiles. 2017. Periodic status review for the Western Pond Turtle in Washington. Washington Department of Fish and Wildlife, Olympia, Washington. 19+v pp.

Hitchcock, C.L., and A. Cronquist. 1973. Flora of the Pacific Northwest. University of Washington Press, Seattle, Washington.

Hruby, T. 2014. Washington State Wetland Rating System for Western Washington: 2014 Update. Washington State Department of Ecology Publication #14-06-029. Olympia, Washington.

King County. 2024. King County iMap. Available at: https://gismaps.kingcounty.gov/iMap/. Accessed January 2024.

Lukacs, Paul M., et al. 2020. Wolverine Occupancy, Spatial Distribution, and Monitoring Design. The Journal of Wildlife Management. Research Article. Volume 1–11. DOI: 10.1002/jwmg.21856.

Lichvar, R.W. 2012. The National Wetland Plant List. ERC/CRREL TR-12-11. Hanover, New Hampshire. U.S. Army Corps of Engineers, Cold Regions Research and

Engineering Laboratory. Available at http://acwc.sdp.sirsi.net/client/search/asses:asset?t:ac=$N/1012381.

National Marine Fisheries Service (NMFS). 2024. Essential Fish Habitat mapper. National Oceanic and Atmospheric Administration. Available at https://www.habitat.noaa.gov/apps/efhmapper/?page=page_4. Accessed January 2024.

_____. 2016. Status of Endangered Species Act Listings and Critical Habitat Designations for West Coast Salmon & Steelhead. National Oceanic and Atmospheric Administration. Endangered Species Act Listings dated July 2016.

Olson, P. and E. Stockdale. 2010. Determining the Ordinary High Water Mark on Streams in Washington State. Second Review Draft. Washington State Department of Ecology, Shorelands & Environmental Assistance Program, Lacey, WA. Ecology Publication # 08-06-001.

Pojar, J., and A. MacKinnon. 1994. Plants of the Pacific Northwest Coast. B.C. Ministry of Forests and Lone Pine Publishing. Redmond, Washington.

Society of Wetland Scientists (SWS). 2023. Sackett Decision Guidance from Public Policy Section. Email correspondence. Received September 12, 2023.

U.S. Army Corps of Engineers (USACE). 2020. National Wetland Plant List, version 3.5. U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH. Available at http://wetland-plants.usace.army.mil/. Accessed January 11 and February 8, 2024.

_____. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-10-3. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center.

_____. 2005. Regulatory Guidance Letter, Ordinary High Water Mark Identification. Regulatory Guidance Letter No 05-05. Washington DC.

U.S. Department of Agriculture (USDA), Soil Conservation Service. 2024. Web Soil Survey. Available at https://websoilsurvey.nrcs.usda.gov/app/. Accessed January 2024.

———. Natural Resources Conservation Services (NRCS). 2010. Field Indicators of Hydric Soils *in* the United States, Version 7.0. L. M. Vasilas, G. W. Hurt and C. V. Noble (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils. Department of Agriculture

U.S. Geological Survey (USGS). 2024. StreamStats, GIS water-resources planning/drainage analysis data mapping. Available at http://water.usgs.gov/osw/streamstats/.

U.S. Fish and Wildlife Service (USFWS). 2024a. National Wetlands Inventory Online Mapper. U.S. Department of the Interior, Fish and Wildlife Service. Available at http://www.fws.gov/wetlands/Data/Mapper.html. Accessed January 2024.

_____. 2024b. Official Endangered Species List for Kirkland Stores To Shores. Information for Planning and Consultation. Consultation Code 2024-0048597. Generated February 13, 2024 through USFWS Information.

_____. 2024c. Environmental Conservation Online System. Conserving the Nature of America. Listed Animals. Available at: https://ecos.fws.gov/ecp0/reports/ad-hoc-species-report?kingdom=V&kingdom=I&status=E&status=T&status=EmE&status=EmT&status=EXPE&status=EXPN&status=SAE&status=SAT&mapstatus=3&fcrithab=on&fstatus=on&fspecrule=on&finvpop=on&fgroup=on&header=Listed+Animals. Accessed January 2024.

Washington State Department of Ecology (Ecology). 2024. Water Quality Atlas. Available at: https://apps.ecology.wa.gov/waterqualityatlas/wqa/map. Accessed June 2023.

_____. 2019. Stormwater Management Manual for Western Washington. Publication Number 19-10-021. Water Quality Program. Olympia, Washington.

_____. 2017. Characterizing Wetland Buffers in Washington State. Publication Number 17-06-008. Shorelands and Environmental Assistance Program. Olympia, Washington.

Washington State Department of Fish and Wildlife (WDFW). 2024a. SalmonScape Online Mapper. WDFW Olympia, Washington. Available at: http://apps.wdfw.wa.gov/salmonscape/map.html. Accessed January 2024.

———. 2024b. Priority Habitat and Species Data, PHS on the Web mapper. WDFW Olympia, Washington. Available at: https://geodataservices.wdfw.wa.gov/hp/phs/. Accessed January 2024.

———. 2024c. Fish Passage Web App, Fish passage inventory, assessment, and prioritization. WDFW Olympia, Washington. Available at: https://geodataservices.wdfw.wa.gov/hp/fishpassage/index.html. Accessed January 2024.

———. 2022. Fish Passage and Diversion Screening Inventory Database. Site Description Report. Site ID: 931806.

———. 2015. Washington's State Wildlife Action Plan: 2015 Update. Washington Department of Fish and Wildlife, Olympia, Washington.

———. 2014. Monarch butterfly (*Danaus plexippus*). Available at: https://wdfw.wa.gov/species-habitats/species/danaus-plexippus#resources. Accessed January 2024.

———. 2008. Priority Habitat and Species List. Olympia, Washington. 291pp.

Washington State Department of Natural Resources (DNR). 2024a. Forest Practices Application Review System Activity Mapping Tool. Available at: https://geologyportal.dnr.wa.gov/2d-view#coal?-13580745,-13573407,6081957,6085373?Surface_Geology,500k_Surface_Geology,Map_Units. Accessed January 2024.

———. 2024b. Rare Plant and Ecosystem Locations Washington Natural Heritage Program Data Explorer. Available at https://experience.arcgis.com/experience/174566100f2a47bebe56db3f0f78b5d9/page/Rare-Plant-and-Ecosystem-Locations/?data_id=dataSource_1-1860f1593ba-layer-47%3A2964. Accessed January 2024.

———. 2020. Geologic Information Portal. Available at: https://geologyportal.dnr.wa.gov/2d-view#wigm?-14056695,-12882622,5737586,6310558. Accessed January 2024.

Watershed Company. 2020. Advanced Mitigation for the City of Kirkland. Available at: https://www.watershedco.com/blog/gr539ii991mp96j3tl6h1ld0hjgmyv. Accessed May 10, 2024.

Wiles, G. J., and K. S. Kalasz. 2017. Status report for the Yellow-billed Cuckoo in Washington. Washington Department of Fish and Wildlife, Olympia, Washington. 32+ iv pp.

Williams, R.W., R.M. Laramie and J.J. Ames. 1975. A Catalog of Washington Streams and Salmon Utilization – Volume I, Puget Sound Region. Washington Department of Fisheries.

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APPENDICES

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APPENDIX A

Kirkland Municipal Code Excerpts

Chapter 90 – CRITICAL AREAS: WETLANDS, STREAMS, MINOR LAKES, FISH AND WILDLIFE HABITAT CONSERVATION AREAS, AND FREQUENTLY FLOODED AREAS

90.25 Regulated Activities

Regulated activities have the potential to adversely impact a critical area or its established buffer. This chapter shall regulate the following activities:

1. Removal, excavation, grading or dredging of material of any kind;

2. Dumping of, discharging of, or filling with any material;

3. Draining, flooding, or disturbing the water level or water table;

4. Driving pilings or placing obstructions;

5. Construction or reconstruction, or expansion of any structure;

6. Destruction or alteration of vegetation through clearing, pruning, topping, harvesting, shading, intentional burning, or planting of vegetation that would alter the character of a regulated critical area;

7. Activities that result in significant changes of water temperature and physical or chemical characteristics of water sources to the critical area, including quantity and pollutants;

8. Any other development activity; and

9. Application of herbicides and pesticides.

WETLANDS

90.55 WETLANDS AND ASSOCIATED BUFFER STANDARDS

Wetlands and associated buffer standards are provided in this section. The table below is a summary of the wetland regulations. More details are provided for some of the regulations elsewhere in this chapter.

Table 90.55.1 Wetlands and Associated Buffer Standards

Wetland Classification and Rating	In accordance with the 2014 Department of Ecology Washington State Wetland Rating System for Western Washington, as revised. Wetland category and rating shall be determined through a survey and field investigation by a qualified critical area professional approved by the City as part of a critical area report in KZC 90.110. Wetland rating categories shall not change due to illegal modification.
Wetland Delineation	In accordance with the approved federal delineation manual and applicable regional supplements described in WAC 173-22-035 and based on field investigation and a survey. See KZC 90.110.
Wetland Determination	Planning Official makes determination if a wetland and/or a buffer exist on the subject property, and if so, its category, rating, boundaries and buffer width based on a required critical area report pursuant to KZC 90.110. In addition, the Planning Official makes determination if the standard buffer meets the buffer vegetative standards in KZC 90.130.

<table>
<tr><td>Wetland Buffer Width Standard</td><td>Wetland Buffer Widths
<table>
<tr><th rowspan="2">Wetland Category</th><th colspan="3">Buffer Width Based on Habitat Points</th></tr>
<tr><th>3-5 habitat pts.</th><th>6-7 habitat pts.</th><th>8-9 habitat pts.</th></tr>
<tr><td>Category I: Bogs and Wetlands of High Conservation Value</td><td>190-feet</td><td>190-feet</td><td>225-feet</td></tr>
<tr><td>Category I: Others</td><td>75-feet</td><td>110-feet</td><td>225-feet</td></tr>
<tr><td>Category II</td><td>75-feet</td><td>110-feet</td><td>225-feet</td></tr>
<tr><td>Category III</td><td>60-feet</td><td>110-feet</td><td>225-feet</td></tr>
<tr><td>Category IV</td><td colspan="3">40-feet</td></tr>
<tr><td></td><td colspan="3">See KZC 90.130 for buffer vegetation requirements</td></tr>
</table></td></tr>
<tr><td>Wetland Buffer Width Alternative</td><td>Applicant can choose not to comply with the vegetative buffer standards in KZC 90.130 by complying with the following requirements: 1) Increase buffer width listed above in Wetland Buffer Widths by 33% within entire buffer. 2) Remove all structures and improvements within the buffer. 3) Discontinue any maintenance of lawn and nonnative vegetation within the buffer. 4) Cease all activities in the buffer, except those permitted under KZC 90.35(12) and (13). In no case shall a standard and an alternate buffer standard be combined for a development proposal.</td></tr>
<tr><td>Other Standards</td><td>

Buffer averaging is permitted for both the standard buffer and the alternative buffer if criteria are met. See KZC 90.115.
Increased buffer width may be required if wetland or its buffer contains or is adjacent to severe erosion area, habitat of certain species or frequently flooded area based on critical area report. See KZC 90.125.
Wetlands that are degraded must be restored if the project is subject to KZC 90.130(3)(a) for the vegetative buffer standard and/or a wetland modification is proposed. A critical area report shall address any needed restoration due to degraded vegetation, habitat, water quality and hydrologic functions.
Standard buffers must meet the vegetative buffer standards. See KZC 90.130.
Measures to minimize impact to wetlands must be implemented for standard buffers. See KZC 90.155.
For wetlands that score 6 or more points for habitat function, the following conditions must be maintained in order to use the standard buffers, as follows:

If an existing, relatively undisturbed vegetated corridor at least 100 feet wide exists between the on-site wetland and other priority habitats, as defined by the Washington State Department of Fish and Wildlife, and the off-site portion of the corridor is already protected via an existing conservation easement, critical areas regulations, or other legal requirement, the portion of the corridor on site must also be protected by a similar legal protection. All other applicable criteria found in this section must also be met. The evaluation of presence or absence of the conditions described above must be completed as part of the critical areas report.
If no such corridor is present to protect, the standard buffers alone may be used with the other applicable criteria contained in KZC 90.55. If an option for protection of a corridor, as defined in this section, exists on the parcel, but is not provided, standard buffer widths must be increased by 33%.

Fencing and signage are required along the entire upland edge of buffer both during construction and upon completion of the project. See KZC 90.190.
For voluntary restoration, see KZC 90.35 and 90.40.
For code enforcement to correct an illegal modification to a wetland or buffer, see KZC 90.205.
Wetlands and buffers shall be placed in recorded critical area easements or tracts for perpetual protection and maintenance. See KZC 90.210.
</td></tr>
<tr><td>Structure Setback from Buffer</td><td>10-foot-wide structure setback is required from upland edge of the entire buffer. Improvements listed in KZC 90.140 are permitted in the setback.</td></tr>
<tr><td>Activities, Improvements and Uses in Wetlands</td><td>Activities, improvements and uses are prohibited within wetlands and associated buffers, except those exempted or permitted subject to development standards in KZC 90.35 and 90.40, or those approved under a City review process in this chapter.</td></tr>
</table>

Modification to Wetlands, Related Impacts to Associated Buffers	• Modification to a wetland and related impacts to buffers require approval pursuant to a Process I, Chapter 145 KZC along with a critical area report, mitigation sequencing, and compensatory mitigation plan. See KZC 90.110, 90.145 and 90.150. • Buffer standard may be modified for vehicular access to a property that is both a legal building site and a buildable site pursuant to KZC 90.40 and for an interrupted buffer pursuant to KZC 90.120. Also, see nonconformances pursuant to KZC 90.185. • Isolated Category IV wetlands less than 4,000 square feet and wetlands less than 1,000 square feet pursuant to KZC 90.60 are not required to meet mitigation sequencing, but compensatory mitigation is required pursuant to KZC 90.150.

90.60 WETLAND AND WETLAND BUFFER MODIFICATION

1. Applicability – This section does not apply to wetland modifications and wetland buffer modifications that may be approved in certain circumstances under a reasonable use exception pursuant to KZC 90.180; permitted activities, improvements or uses subject to development standards pursuant to KZC 90.40; public agency and public utility exceptions pursuant to KZC 90.45; or programmatic permit, public agency and public utility pursuant to KZC 90.50.

2. Wetland Modification – Modifications to wetlands shall be prohibited except that the following limited types of wetlands are not required to meet mitigation sequencing pursuant to KZC 90.145 and may be filled if the impacts are fully mitigated. The applicant shall submit a critical area report pursuant to KZC 90.105 and 90.110 verifying that the following criteria are met.

a. Category IV isolated wetlands less than 4,000-square-feet that:

   1) Are not associated with streams or their buffers;

   2) Are not part of a wetland mosaic;

   3) Do not score six (6) or more points for habitat function; and

   4) Do not contain state or federal designated endangered, threatened or sensitive species or their habitats or state priority habitats, including species of local importance identified in KZC 90.95.

      The Planning Official may approve an application under this exception only if the applicant provides compensatory mitigation for both wetland and buffer loss pursuant to KZC 90.150. Impacts shall be mitigated through an in-lieu fee or mitigation bank program if a program is available. Otherwise, preference for mitigation location shall be pursuant to KZC 90.145.

      It is the applicant's responsibility to arrange a jurisdictional determination by the U.S. Army Corps of Engineers on whether a wetland is isolated but regulated by the Department of Ecology for filling a Category IV isolated wetland.

b. Category IV isolated wetlands less than 1,000-square-feet that meet subsection (2)(a) of this section are exempt from buffer requirements. The Planning Official may approve an application under this exception only if the applicant provides compensatory mitigation pursuant to KZC 90.150 for the wetland loss. No compensatory mitigation is required for the buffer loss.

3. Wetland Buffer Modification – A wetland buffer may not be modified or otherwise reduced, except if part of an approved wetland or buffer modification in this section.

The following wetland buffer modifications may be proposed:

a. Impacts to associated buffer as part of wetland modification;

b. Buffer averaging permitted pursuant to KZC 90.115; or

c. Interrupted buffer waiver permitted pursuant to KZC 90.120.

4. Process – Unless otherwise specified in KZC 90.40, 90.115 or 90.120, any proposal to modify a wetland and its buffer shall be reviewed and approved pursuant to Process I, described in Chapter 145 KZC.

5. Decisional Criteria – In addition to the criteria of a Process I, the Planning and Building Director shall only approve a modification to a wetland and buffer if:

a. Mitigation sequencing requirements have been met. See KZC 90.145;

b. Compensatory mitigation and mitigation plan requirements are approved. See KZC 90.150;

c. It will not adversely affect fish, wildlife, or their habitat, including habitat for endangered, threatened or sensitive species, or species of local significance. See KZC 90.95;

d. It will not adversely affect water quality;

e. It will not have an adverse effect on drainage and/or storm water detention capabilities either on-site or to the adjacent area;

f. It will not result in unstable geologic and soil conditions or create an erosion hazard;

g. It will not have fill material that contains organic or inorganic material that would be detrimental to water quality or fish and wildlife habitat; and

h. All exposed areas will be stabilized with native vegetation normally associated with wetlands and/or buffers, as appropriate.

The wetland compensatory mitigation plan, additional requirements in subsection (9) of this section and any conditions of approval for the modification shall be conditions for all related land surface modification and/or building permit approvals.

6. Wetland Modification Assessment – As part of the application for a wetland modification, the applicant shall submit a wetland modification assessment prepared by a qualified critical area professional approved by the City, and also fund the City's peer review of the assessment. The assessment shall contain:

a. The City's final critical area determination and critical area report along with the survey of the wetland and/or buffer on the subject property pursuant to KZC 90.105;

b. Description of the proposed modification to the wetland and associated impact to the buffer if applicable;

c. Analysis of mitigation sequencing for the proposal and mitigation as required in KZC 90.145. If the vegetative buffer standards are required under KZC 90.130, the required enhanced buffer may not be used towards mitigating a modified buffer;

d. Evaluation of the effects of the proposed modification on the functions and values of the wetland and the buffer. The assessment shall look at impacts to water quality, storm water detention, erosion protection, functions of the wetland and wildlife habitat and frequently flooded areas and any other potential impact determined by the Planning Official; and

e. Any other information or studies determined necessary by the Planning Official.

7. Wetland Compensatory Mitigation Plan – As part of the application for a wetland modification, the applicant shall submit a compensatory mitigation plan pursuant to KZC 90.150 that is prepared by a qualified critical area professional approved by the City. The applicant shall also fund City peer review of the plan. The plan shall include mitigation for lost or affected functions; type, location, and approach of compensation; timing of the mitigation; a monitoring and maintenance plan and financial security estimate as required in KZC 90.160 and 90.165.

8. Buffers for Mitigation Sites – A wetland that is created, restored, or enhanced as on-site or off-site compensation within Kirkland for an approved wetland modification shall have a buffer width that is applicable to the wetland category for the created, restored, or enhanced wetland.

9. Additional Requirements for Approved Wetland Modification

   a. All work shall be carried out under the direct supervision of a qualified critical area professional approved by the City and paid for by the applicant during all phases of the project;

   c. The requirements for wildlife habitat conservation areas in KZC 90.95 and frequently flooded areas in KZC 90.100 shall be met if applicable;

   d. If a proposed wetland modification will result in the creation or expansion of a wetland or its buffer on any property other than the subject property, a statement signed by the owners of all affected properties, in a form approved by the City Attorney, shall be submitted with the modification application and recorded in the King County Recorder's Office. The statement shall consent to the critical area and/or buffer creation or increase on their property; and

   e. Any required state and federal permits and authorizations shall be obtained prior to conducting site work.

STREAMS

90.65 STREAMS AND ASSOCIATED BUFFER STANDARDS

Stream and associated buffers standards are provided in this section. The table below is a summary of the stream regulations. More details are provided for some of the regulations elsewhere in this chapter.

Table 90.65.1 Streams and Associated Buffer Standards

<table>
<tr><td>Stream Classification</td><td>In accordance with WAC 222-16-030, as amended. The Planning Official makes final determination. Stream classification shall not change due to illegal modifications.</td></tr>
<tr><td>Stream Determination</td><td>Planning Official makes determination if a stream and/or a buffer exist on the subject property, and if so, a stream's classification and boundary, and width of buffer based on required critical area report pursuant to KZC 90.110. In addition, the Planning Official makes determination if the standard buffer meets the vegetative buffer standards in KZC 90.130.</td></tr>
<tr><td>Stream Buffer Width Standard</td><td>Stream Buffer Widths<table><tr><th>Stream Type</th><th>Buffer Width</th></tr><tr><td>F (Fish bearing)</td><td>100-feet</td></tr><tr><td>Np (Perennial non-fish bearing)</td><td>50-feet</td></tr><tr><td>Ns (Seasonal non-fish bearing)</td><td>50-feet</td></tr><tr><td></td><td>See KZC 90.130 for buffer vegetation requirements</td></tr></table></td></tr>
<tr><td>Stream Buffer Width Alternative</td><td>Applicant may choose not to comply with the vegetative buffer standards in KZC 90.130 by complying with the following requirements: 1) Increase buffer width listed above in stream buffer widths by 33% within entire buffer. 2) Remove all structures and improvements within the buffer. 3) Discontinue any maintenance of lawn and nonnative vegetation within the buffer. 4) Cease all activities in the buffer, except those permitted under KZC 90.35(12) and (13). In no case shall a standard and an alternate buffer standard be combined for a development proposal.</td></tr>
<tr><td>Other Standards</td><td>Buffer averaging is permitted for both the standard buffer and the alternative buffer if criteria are met. See KZC 90.115. The Planning Official makes decision.
Increased buffer width may be required if the stream or its buffer contains or is adjacent to a severe erosion area, habitat of certain species or frequently flooded area based on critical area report. See KZC 90.125.
Streams that are degraded must be restored if the project is subject to KZC 90.130(3)(a) for a vegetative buffer and/or a stream modification is proposed. A critical area report shall address any needed restoration due to degraded vegetation, habitat, water quality and hydrologic functions with specific consideration for anadromous salmon.
Standard buffers must meet vegetative buffer requirements pursuant to KZC 90.130.
Buffers shall be provided where a stream abuts an inlet and outlet of culverted streams as shown in Chapter 180 KZC, Plate 16A.
Fencing and signage are required along the entire upland edge of buffer both during construction and upon completion of a project. See KZC 90.190.
Voluntary restoration of streams and buffers or instream maintenance, see KZC 90.35 and 90.40.
For code enforcement to correct an illegal modification to a stream or buffer, see KZC 90.205.
Streams and buffers shall be placed in recorded critical area easements or tracts for perpetual protection and maintenance. See KZC 90.210.</td></tr>
<tr><td>Structure Setback from Buffer</td><td>10-foot-wide structure setback is required from upland edge of the entire buffer. Improvements listed in KZC 90.140 are permitted within the setback.</td></tr>
<tr><td>Activities, Improvements and Uses in Streams</td><td>Activities, improvements and uses shall be prohibited within streams and associated buffers, except those exempted or permitted subject to development standards in KZC 90.35 and 90.40, or those approved under another City review process in this chapter.</td></tr>
<tr><td rowspan="2">Modifications to Stream and Impacts to Associated Buffer</td><td>Buffer standards may be modified for vehicular access to a property that is both a legal building site and a buildable site pursuant to KZC 90.40, for daylighting a stream pursuant to KZC 90.75, and for limited buffer waivers pursuant to KZC 90.120. Also, see KZC 90.185, Nonconformances.
Impacts to stream buffers shall be mitigated at a minimum of a 1:1 ratio.</td></tr>
<tr><td>Daylighting of a stream is encouraged. The Planning Official makes decision unless it is part of approval pursuant to Process I, Chapter 145 KZC. See KZC 90.75.</td></tr>
</table>

90.70 STREAM MODIFICATION

1. Applicability – This section does not apply to stream modifications or stream buffer modifications that may be approved in certain circumstances under a reasonable use exception pursuant to KZC 90.180; permitted activities, improvements or uses subject to development standards pursuant to KZC 90.40; public agency and public utility exceptions pursuant to KZC 90.45; or programmatic permit – public agency and public utility pursuant to KZC 90.50.

2. Stream Modification – Modifications to streams and associated impacts to buffers are prohibited, except as approved as part of a stream modification in this section.

The following stream modifications may be considered:

a. Stream crossings for Type F streams (see KZC 90.40 for Type Np and Ns);

b. Culverts and bridges;

c. Change in meandering course of a stream;

d. Relocation of a Type Ns or Np stream. Relocation of a Type F stream is not permitted; and

e. Impacts to buffers associated with a stream modification.

3. Limited Buffer Modification – A stream buffer may only be modified or otherwise reduced as part of an approved stream or buffer modification in this section or in limited circumstances under permitted activities; improvements or uses subject to development standards pursuant to KZC 90.40; public agency and public utility exceptions pursuant to KZC 90.45; programmatic permits – public agency and public utility pursuant to KZC 90.50; or reasonable use exception pursuant to KZC 90.180.

The following stream buffer modifications may also be proposed in conjunction with the following sections:

a. Impacts to associated buffer as part of stream modification, pursuant to KZC 90.70(2);

b. Change to meandering course of a stream pursuant to KZC 90.80;

c. Daylighting of a stream pursuant to KZC 90.75;

d. Buffer averaging permitted pursuant to KZC 90.115; or

e. Limited buffer waivers permitted pursuant to KZC 90.120.

4. Process – All proposals in subsections (2) and (3)(a) of this section shall be reviewed and decided upon pursuant to Process I, described in Chapter 145 KZC. All proposals in subsections (3)(b) through (3)(e) of this section shall be decided upon by the Planning Official.

5. Decisional Criteria – For all proposals in subsections (3)(b) through (3)(e) of this section, refer to the decisional criteria in the applicable section. For proposals in subsections (2) and (3)(a) of this section, in addition to criteria of Process I, the Planning and Building Director shall only approve a modification to a stream and impact to the buffer if:

a. Mitigation sequencing requirements have been met. See KZC 90.145; and

b. The applicant has demonstrated, where applicable, based on information provided by a civil engineer and a qualified critical area professional approved by the City, that:

1) It will not be detrimental to fish habitat, including fill material that contains organic or inorganic material;

2) It will not have an adverse effect on drainage, storm water detention capabilities and base flood storage volume and function;

3) It will not have an adverse effect on water quality or frequently flooded areas;

4) It will not increase velocity upstream or downstream;

5) It will not increase sediment load upstream or downstream;

6) It will not result in unstable geologic and soil conditions and slope conditions or create an erosion hazard or contribute to scouring actions;

7) All exposed areas are stabilized with vegetation normally associated with native stream buffers, as appropriate;

8) Existing native trees and other native vegetation are retained to the maximum extent feasible given site conditions and the proposal;

9) The stream modification plan is sufficient to mitigate identified impacts;

10) For streams placed in culverts or stream crossings, fish passage will not be impaired and the Washington State Department of Fish and Wildlife's design criteria for road culverts for fish passage are met;

11) For change in meandering course for the stream, demonstrate that the change is the only feasible option to stop excessive erosion to protect legally established buildings that cannot be achieved through streambank stabilization and will improve the overall functions and value of the stream;

12) For stream crossings, demonstrate that crossings shall have no adverse impact on instream habitat and flow conveyance;

13) For relocation of a Type Ns or Np stream, demonstrate that relocation would improve stream functions; and

14) With the exception of meandering a stream, submit a statement signed by each owner of all adjacent affected properties consenting to the modification if it results in creation or expansion of a stream or stream buffer on their properties.

The stream and/or associated buffer modification plan, the additional requirements in subsection (7) of this section and any conditions of approval shall be conditions for all related land surface modification and/or building permit approvals.

6. Stream Modification Assessment – As part of the application for a modification, the applicant shall submit a stream modification assessment prepared by a qualified critical area professional approved by the City. The applicant shall also fund the City's peer review of the assessment. The assessment shall contain:

a. The City's final stream determination decision pursuant to KZC 90.105 and critical area report pursuant to KZC 90.110, including the vegetative buffer assessment, and a survey of the stream and its buffer;

b. Description of the proposed modification to the stream and impact to the associated buffer if applicable;

c. Analysis of mitigation sequencing and proposed mitigation as required in KZC 90.145. If the vegetative buffer standards are required under KZC 90.130, the enhanced buffer may not be used towards mitigating a proposed impacted buffer;

d. Modeling of impacts to stream;

e. Evaluation of the effects of the proposed modification on the functions and values of the stream and the buffer, including on water quality and fish and wildlife habitat pursuant to KZC 90.95; and

f. Any other information or studies determined necessary by the Planning Official.

7. Stream Modification Plan – As part of the application for a modification, the applicant shall submit a stream modification plan prepared by a qualified critical area professional approved by the City. Also, the applicant shall fund the City's peer review of the plan. The plan shall contain:

a. A topographic survey showing existing and proposed topography and improvements;

b. Schedule of the project for all work;

c. Written description of how the proposed modification plan will mitigate any adverse impacts identified in the stream modification assessment and any associated impact to the buffer if applicable in subsection (6) of this section;

d. Written description of how the proposed modification plan will improve water quality, conveyance, fish and wildlife habitat, wetland recharge (if hydrologically connected to a wetland), and storm water detention capabilities of the stream;

e. Detailed vegetation plan for stream channel if applicable and stream buffer vegetation meeting the vegetative buffer standard in KZC 90.130;

f. For an impacted stream buffer, propose mitigation at a minimum of 1:1 ratio depending on the location and functions of impacts and proposed mitigation, including consideration of vegetation structure, slope and flow paths;

g. Demonstrate that flow and velocity of the stream after modification shall not be increased or decreased at the points where the stream enters and leaves the subject property, unless the change has been approved by the City to improve fish and wildlife habitat or to improve storm water management;

h. Protective measures needed, such as siltation prevention measures and scheduling the construction activity to avoid interference with fisheries rearing and spawning activities;

i. Description of performance standards for post-installation, a monitoring and maintenance schedule along with a financial security estimate for the entire mitigation plan that meet the standards in KZC 90.160 and 90.165;

j. For stream channel relocation or meandered stream, a survey of the new location of the stream;

k. For stream channel relocation, meandered stream, a new or replacement stream crossing or culvert, demonstrate that the stream channel, or crossing or culvert can accommodate flow and velocity of 100-year storm events;

l. For stream channel relocation, including for a meandering stream, prior to diverting water into a new stream channel, a qualified critical area professional approved by the City shall inspect the completed new channel and issue a written report to the City stating that the new stream channel complies with the requirements of this section prior to diverting the stream. The applicant shall fund the cost of the inspection, report, and peer review by the City;

m. For stream crossings and culverts:

1) Demonstrate that there is no other feasible alternative route for the crossing with less impact on the environment;

2) Design shall meet Washington State Department of Fish and Wildlife design standards for fish passage projects;

3) For crossings over Type F streams, only bridge structures, bottomless culverts or other appropriate methods shall be used that provide fisheries protection and fish passage;

4) For crossings for all other streams, bridge or bottomless culvert is preferred over traditional pipe-style culvert. Where culverts are applicable, single barrels shall be used;

5) Roads and associated crossings shall be perpendicular to the stream to the maximum extent feasible;

n. For changing the meandering course of the stream or relocating a stream, show that the design achieves:

1) Creation of natural meander patterns;

2) Formation of gentle and stable side slopes, no steeper than two (2) feet horizontal to one (1) foot vertical, and the installation of both temporary and permanent erosion-control features that includes native vegetation on stream banks. The steepness of the slope of the stream may be modified given existing conditions;

3) Native vegetation normally associated with streams, emphasizing native plants with high food and cover value for fish and wildlife and approved by the City;

4) Restoration of water flow characteristics compatible with fish habitat areas; and

o. For changing the meandering of a stream course, see buffer reduction option in KZC 90.80.

8. Additional Requirements for Stream Modification

a. All work shall be carried out under the direct supervision of a qualified critical area professional approved by the City and paid for by the applicant during all phases of the project;

b. Work must be done during the summer low flow and timed to avoid stream disturbance during periods when use of the stream is critical to fish consistent with the Department of Fish and Wildlife construction window; if applicable;

c. For stream crossings and culverts, record a perpetual maintenance agreement on a form approved by the City for continued maintenance of the stream crossing and culvert;

d. For changing the meandering of a stream course, a survey must be provided of the new stream course;

e. If a proposed stream modification will result in the creation or expansion of a stream or its buffer on any adjacent property other than the subject property, a statement signed by the owners of all affected properties, in a form approved by the City Attorney, shall be submitted with the modification application and recorded in the King County Recorder's Office. The statement shall consent to the critical area and/or buffer creation or increase on the other property. Exempt from this provision is a meandering stream. See buffer reduction option in KZC 90.80; and

f. Any required state and federal permits and authorizations shall be obtained prior to conducting site work.

90.120 Limited Buffer Waivers

1. Interrupted Buffer Waiver

a. The Planning Official may waive the required critical area buffer in that portion of the buffer isolated from the critical area where an existing legally established and improved public right-of-way or improved easement road interrupts a portion of the critical area buffer from the portion of the buffer adjacent to the critical area. The Planning Official may require a critical area report be prepared to address the criteria in subsection (1)(d) of this section.

b. The Planning Official may waive the required critical area buffer in that portion of the buffer isolated from the critical area where an existing legally established building, detached garage, accessory dwelling unit, driveway, commercial parking area or retaining wall over six (6) feet in height divides a portion of the critical area buffer from the portion of the buffer adjacent to the critical area. For the buffer waiver to be approved, the applicant must demonstrate conclusively in a critical area report that all of the criteria in subsection (1)(d) of this section are met.

c. A waiver may not be requested for such improvements as fences, sheds, patios, decks or other minor structures and impervious surfaces.

d. The Planning Official may waive the buffer requirement if the waiver request is found to meet the following criteria (see Chapter 180 KZC, Plate 25):

1) The existing legal improvement creates a substantial barrier to the buffer function;

2) The interrupted buffer does not provide additional protection of the critical area from the proposed development; and

3) The interrupted buffer does not provide significant hydrological, water quality and wildlife buffer functions relating to the portion of the buffer adjacent to the critical area.

e. If the applicant's consultant prepares the critical area report, the applicant shall also fund peer review of the report by the City's consultant.

90.145 Mitigation – General

1. General – If a modification is proposed to a critical area or buffer, as part of the application the applicant must have the proposal evaluated using mitigation sequencing and then submit a mitigation plan that addresses the impacts to the critical area.

2. Mitigation Sequencing – The intent of mitigation sequencing is to evaluate and implement opportunities to avoid, minimize, eliminate or compensate for impacts to critical areas while still meeting the objectives of the project. When a modification to a critical area and buffer is proposed, the modification shall be avoided, minimized, or compensated for, as outlined by WAC 197-11-768, in the following order of preference:

a. Avoiding the impact altogether by not taking a certain action or parts of actions;

b. Minimizing impacts by limiting the degree or magnitude of the action and its implementation;

c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

d. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;

e. Compensating for the impact by replacing or providing substitute resources or environments; and/or

f. Monitoring the impacts and compensation projects and taking appropriate corrective measures.

3. Location of Mitigation

a. Preference – Preference shall be given to the location of the mitigation in the following order unless it can be demonstrated that off-site in-kind mitigation is ecologically preferable:

1) On-site in-kind;

2) Off-site in City in-kind;

3) Off-site in-kind within the Lake Washington/Cedar/Sammamish Watershed.

b. On-Site versus Off-Site Mitigation

1) Mitigation shall occur on-site except when the City determines that the following criteria have been met as part of a proposal under this chapter:

a) There is no opportunity for on-site mitigation or on-site opportunities do not have a high likelihood of success due to the size of the property, site constraints, or size and quality of the wetland or location and quality of the stream;

b) Off-site mitigation has a greater likelihood of providing equal or improved critical area functions than the impacted critical area;

c) Off-site locations shall be in the same Water Resource Inventory Area (WRIA) 8 Lake Washington/Cedar/Sammamish Watershed as the impacted critical area; and

d) The off-site critical area mitigation will best meet formally established watershed goals for water quality, flood or conveyance, habitat, or other wetland functions that have been established and strongly justify location of mitigation at another site.

2) When considering mitigation outside of the City, preference should be given to using mitigation banking or an in-lieu fee program pursuant to subsection (4) of this section.

4. Responsible Party for Mitigation Site – Mitigation for lost or diminished critical area functions and values for either wetlands or streams shall use the following options:

a. Applicant-Responsible Mitigation – The applicant is responsible for the implementation, monitoring and success of the mitigation pursuant to this chapter.

b. Non-Applicant Responsible Mitigation – Mitigation Bank and In-Lieu Fee Mitigation

1) Funds are collected from the applicant by the sponsoring agency, nonprofit, private party or jurisdiction. The sponsor is responsible from that point forward for the completion and success of the mitigation. The applicant's fee is based on the project impact and includes all costs for the mitigation, including design, land acquisition, materials, construction, administration, monitoring, and stewardship.

2) Credits purchased by an applicant from a mitigation bank or in-lieu program that is certified under federal and state rules may be used as a method of mitigation if approved by the City to compensate for impacts when all of the following apply:

a) The City determines as part of the critical area approval that it would provide appropriate compensation for the proposed impacts;

b) Projects shall have debits associated with the proposed impacts calculated by the applicant's qualified critical area professional using the credit assessment method or appropriate method for the impact as specified in the approved instrument for the program. The assessment shall be reviewed and approved by the City;

c) The proposed use of credits is consistent with the terms and conditions of the certified mitigation bank or in-lieu fee program instrument; and

d) The record of payment for credits shall be provided to the City in advance of the authorized impacts but no later than issuance of the building or land surface modification permit.

c. City-Responsible Mitigation – Advance Mitigation – The City does mitigation on City-owned property as mitigation credit either for City critical area projects or at the

discretion of the City for other public agencies with critical area projects. The mitigation program shall be implemented pursuant to federal and state rules, and state water quality regulations.

5. Timing of Mitigation

a. On-Site Mitigation

1) On-site mitigation shall be completed immediately before or following disturbance and prior to use or final inspection of the activity or development. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife and flora; and

2) The Planning Official may allow flexibility with respect to seasonal timing of excavation or planting for mitigation. If on-site mitigation must be completed after final inspection of a building or land surface modification permit or commencement of an activity, a performance financial security shall be required pursuant to KZC 90.165 along with a timeline commitment for completion.

b. Off-Site Mitigation

1) For in-lieu fee, mitigation bank or advance mitigation programs:

a) Mitigation shall be completed based on the program's established timeline, except advance mitigation shall be completed prior to issuance of the development permit;

b) The applicant shall provide documentation of the proof of purchase of credits for in-lieu fee and mitigation banking in advance of the authorized impacts but no later than issuance of the building or land surface modification permit. However, if the program sponsor requires proof of development permit prior to credit purchase, the documentation may be provided to the City prior to final inspection; and

c) For advanced mitigation, the applicant shall submit documentation of completion of the advance mitigation prior to issuance of a land surface modification or building permit.

2) For all other off-site mitigation:

a) Mitigation shall be completed immediately before or following disturbance and prior to use or final inspection of the activity or development. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife and flora. The Planning Official may allow flexibility with respect to seasonal timing of excavation or planting for mitigation; and

b) Documentation of the proof of purchase of off-site property shall be provided in advance of the authorized impacts but no later than issuance of the building or land surface modification permit.

6. Mitigation Plan Standards – All critical area mitigation plans, except mitigation met through mitigation bank or an in-lieu fee program, shall meet the following standards. In addition, for

wetlands the standards for wetland compensatory mitigation pursuant to KZC 90.150 shall be followed.

a. A mitigation plan shall be prepared by a qualified critical area professional, approved by the City that:

1) Addresses the impacts to a critical area and buffer based on best available science;

2) Is designed to maintain and enhance ecological functions and values, and to prevent risk from hazards posed to the critical area; and

3) Provides a description of the mitigation site, including location and vicinity map, and rationale for selection of the mitigation site.

b. The plan shall show that:

1) The vegetative buffer standards and requirements in KZC 90.130 are met. If the buffer does not currently meet the vegetative buffer standards, a detailed final revegetation plan shall be submitted including specification on size and type of each native species of plants, and number and spacing of the plants meeting the City of Kirkland's Critical Area Plant List and standards;

2) Seed source must be as local as possible, and plants must be nursery propagated unless transplanted from on-site areas approved for disturbance. These requirements must be included in the mitigation plan specifications;

3) Plant materials may be supported with material (e.g., stakes, guy wires) only when necessary. Staking and ties shall follow the International Society of Arboriculture standards. Where support is necessary, stakes, guy wires, or other measures must be removed as soon as the plant can support itself, usually after the first growing season;

4) The stream buffer mitigation area replacement at a minimum ratio of 1:1 pursuant to KZC 90.65 is met;

5) Proposed erosion control measures comply with the City's Public Works Pre-Approved Plans;

6) Mitigation is consistent with other requirements in this code, including sight distance requirements at intersections pursuant to Chapter 115 KZC; and

7) All planted areas of the mitigation project have a temporary, above ground sprinkler system set to automatic timers. Temporary sprinkler systems shall be removed in the final year of monitoring once vegetation is well established. When public or private water is not available, a plan for reliable watering by truck or hand shall be included.

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APPENDIX B

Study Area Photographs

Photo 1. Standing on the east edge of Slater Avenue NE, just upgradient of the mainstem of Forbes Creek's upstream culvert end, looking south and upstream at Ditch 4, determined to be non-jurisdictional as it is a stormwater drainage feature.
Image captured January 11, 2024, by DEA staff.

Photo 2. Standing on the east edge of Slater Avenue NE, just upgradient of the mainstem of Forbes Creek's upstream culvert end, looking north.
Image captured January 11, 2024, by DEA staff.

Photo 3. Standing on the east edge of Slater Avenue NE, just upgradient of the mainstem of Forbes Creek's upstream culvert end, looking east at upstream of Forbes Creek.
Image captured January 11, 2024, by DEA staff.

Photo 4. Standing at the upstream culvert end of the mainstem of Forbes Creek which leads under Slater Avenue NE, looking east and at upstream of Forbes Creek.
Image captured January 11, 2024, by DEA staff.

Photo 5. Standing at the upstream culvert end of the mainstem of Forbes Creek, looking northwest and downstream of Forbes Creek at culvert which leads under Slater Avenue NE. Image captured January 11, 2024, by DEA staff.

Photo 6. Standing on the west edge of Slater Avenue NE, just upgradient of the mainstem of Forbes Creek, just south of NE 103rd Lane, looking west at downstream of Forbes Creek. Image captured January 11, 2024, by DEA staff.

Photo 7. Standing on the west edge of Slater Avenue NE, just upgradient of Stream S1, looking northwest. Image captured January 11, 2024, by DEA staff.

Photo 8. Standing on the west edge of Slater Avenue NE, just upgradient of Stream S1, looking southwest. Image captured January 11, 2024, by DEA staff.

Photo 9. Standing on the east edge of Slater Avenue NE, just upgradient of the upstream culvert of Stream S1, looking southeast at Stream S1 and Ditch 3.
Image captured January 11, 2024, by DEA staff.

Photo 10. Standing on the east edge of Slater Avenue NE, just upgradient of the upstream culvert of Stream S1, looking south and upstream of Ditch 3, determined to be non-jurisdictional as it is a stormwater drainage feature. Image captured January 11, 2024, by DEA staff.

Photo 11. Standing in the channel of Stream S1 which leads under Slater Avenue NE, looking east and upstream of Stream S1. Image captured January 11, 2024, by DEA staff.

Photo 12. Standing in the channel of Stream S1 which leads under Slater Avenue NE, looking east and upstream of Stream S1. Image captured January 11, 2024, by DEA staff.

Photo 13. Standing in the channel of Stream S1, looking west and downstream of Stream S1 at culvert which leads under Slater Avenue NE, and where Ditch 3 enters Stream S1 from the southwest.
Image captured January 11, 2024, by DEA staff.

Photo 14. Standing in the channel of Stream S1, looking west and downstream of Stream S1 at culvert which leads under Slater Avenue NE, and at stormwater pipe which enters Stream S1 from the north.
Image captured January 11, 2024, by DEA staff.

Photo 15. Standing on the east edge of Slater Avenue NE, just upgradient of the upstream culvert of Stream S1, looking northeast at stream buffer. Image captured January 11, 2024, by DEA staff.

Photo 16. Standing on the east edge of Slater Avenue NE, just south of NE 103rd Lane, looking north at aerial area of concern determined to be upland. Image captured January 11, 2024, by DEA staff.

Photo 17. Standing on the east edge of Slater Avenue NE, just south of NE 103rd Lane, looking north at aerial area of concern determined to be upland. Image captured January 11, 2024, by DEA staff.

Photo 18. Standing on the east edge of Slater Avenue NE, just south of NE 103rd Lane, looking south at aerial area of concern determined to be upland. Image captured January 11, 2024, by DEA staff.

Photo 19. Standing on the east edge of Slater Avenue NE, just north of NE 106th Street, looking north and upstream of Ditch 2, determined to be non-jurisdictional as it is a stormwater drainage feature.
Image captured February 8, 2024, by DEA staff.

Photo 20. Standing on the east edge of Slater Avenue NE, just north of NE 106th Street, looking south and downstream of Ditch 2, determined to be non-jurisdictional as it is a stormwater drainage feature. Image captured February 8, 2024, by DEA staff.

Photo 21. Standing on the east edge of Slater Avenue NE, just south of NE 108th Street, looking south and upstream of Ditch 1, determined to be non-jurisdictional as it is a stormwater drainage feature. Image captured February 8, 2024, by DEA staff.

Photo 22. Standing on the east edge of Slater Avenue NE, just south of NE 108th Place, looking south and upstream of Ditch 1, determined to be non-jurisdictional as it is a stormwater drainage feature. Image captured February 8, 2024, by DEA staff.

Photo 23. Standing on the east edge of Slater Avenue NE, just south of NE 108th Street, looking north and downstream of Ditch 1, determined to be non-jurisdictional as it is a stormwater drainage feature. Image captured February 8, 2024, by DEA staff.

Photo 24. Standing on the east edge of Slater Avenue NE, just north of NE 108th Street, looking north and downstream of Ditch 1, determined to be non-jurisdictional as it is a stormwater drainage feature. Image captured February 8, 2024, by DEA staff.

Photo 25. Standing on the east edge of Slater Avenue NE, at NE 108th Place, looking east at water flowing into Ditch 1 from Boys' and Girls' property.
Image captured February 8, 2024, by DEA staff.

Photo 26. Standing on the east edge of Slater Avenue NE, at NE 108th Place, looking east at water flowing into Ditch 1 from Boys' and Girls' property.
Image captured February 8, 2024, by DEA staff.

Photo 27. Standing on the east edge of Slater Avenue NE, at NE 108th Place, looking southeast at bioswale which sources the water flowing into Ditch 1 from Boys' and Girls' property. Image captured February 8, 2024, by DEA staff.

Photo 28. Standing on the east edge of Slater Avenue NE, at NE 108th Place, looking at downstream driveway culvert of Ditch 1, determined to be non-jurisdictional as it is a stormwater drainage feature. Image captured February 8, 2024, by DEA staff.

Photo 29. Standing on the east edge of Slater Avenue NE, at NE 108th Place, looking north at end of downstream of Ditch 1, just before it crosses under Slater Avenue NE. Ditch 1 was determined to be non-jurisdictional as it is a stormwater drainage feature.
Image captured February 8, 2024, by DEA staff.

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APPENDIX C

USFWS and NMFS Species Lists

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Washington Fish And Wildlife Office
510 Desmond Drive Se, Suite 102
Lacey, WA 98503-1263
Phone: (360) 753-9440 Fax: (360) 753-9405

In Reply Refer To:
Project Code: 2024-0048597
Project Name: Kirkland Stores To Shores

February 13, 2024

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Washington Fish And Wildlife Office
510 Desmond Drive Se, Suite 102
Lacey, WA 98503-1263
(360) 753-9440

PROJECT SUMMARY

Project Code: 2024-0048597

Project Name: Kirkland Stores To Shores

Project Type: Road/Hwy - Maintenance/Modification

Project Description: The City of Kirkland's Transportation Master Plan identifies the need for a network of greenways. Greenways are bicycle and pedestrian facilities located on roadways that have lower motor vehicle speeds and volumes, and include special signing and markings and traffic calming features where merited. Greenways can include trail and path connections that are not accessible by vehicles. The Greenways Task Force is creating the first version of the greenways guidelines, a living document that will be revisited with every greenway project.

This project represents the continuation of the greenways network building off the first set recently constructed in the City of Kirkland. The Stores to Shores greenway will connect the North Rose Hill neighborhood with the Highlands, Norkirk, and downtown neighborhoods. The City has already started the project by identifying project routes and needed improvements.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@47.69553725,-122.1776506109212,14z

Counties: King County, Washington

ENDANGERED SPECIES ACT SPECIES

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
North American Wolverine *Gulo gulo luscus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5123	Threatened

BIRDS

NAME	STATUS
Marbled Murrelet *Brachyramphus marmoratus* Population: U.S.A. (CA, OR, WA) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4467	Threatened
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

REPTILES

NAME	STATUS
Northwestern Pond Turtle *Actinemys marmorata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

FISHES

NAME	STATUS
Bull Trout *Salvelinus confluentus*	Threatened

Population: U.S.A., coterminous, lower 48 states
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/8212

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

CRITICAL HABITATS

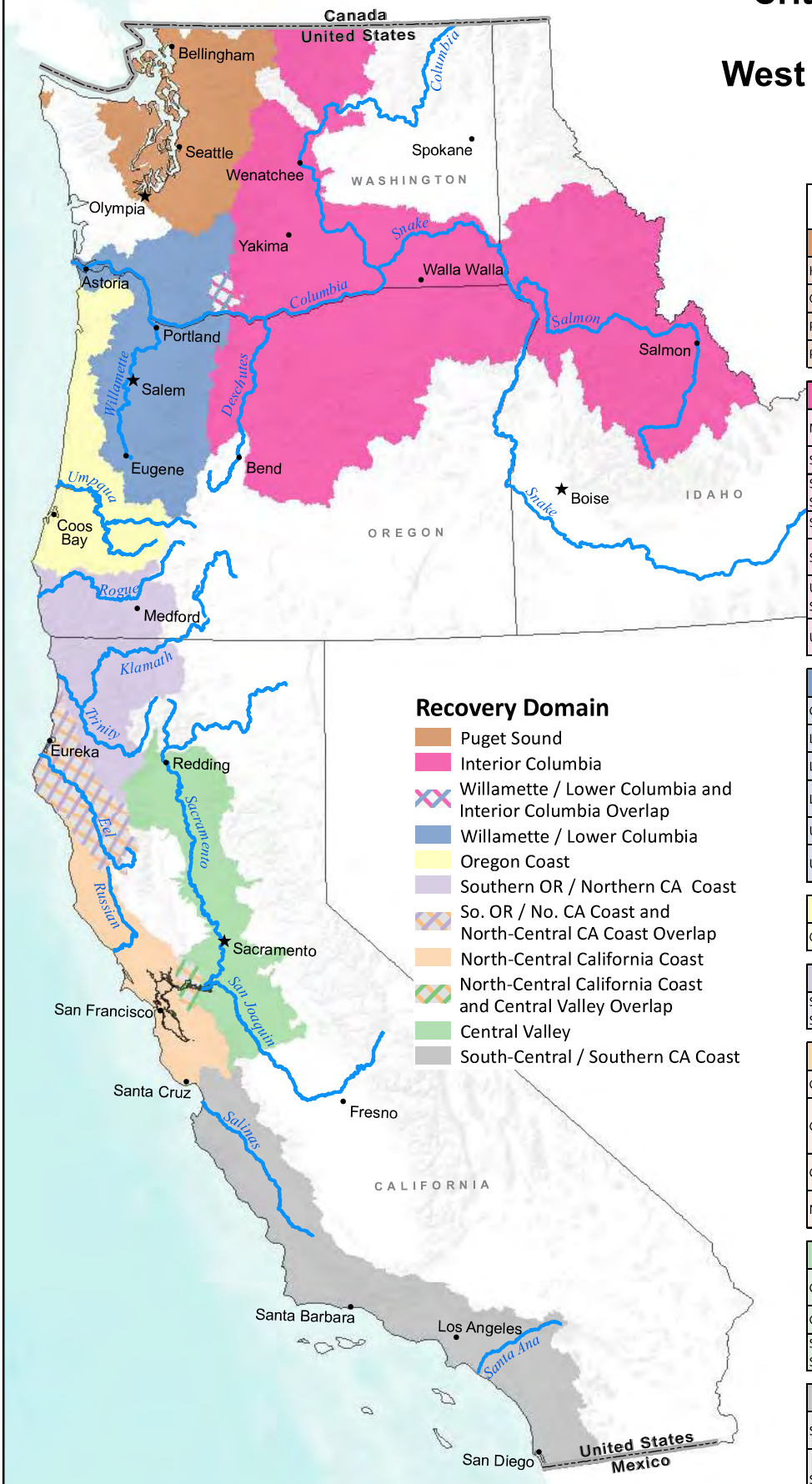
THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: MaKenna Lindberg
Address: 14432 SE Eastgate Way Suite #400
City: Bellevue
State: WA
Zip: 98007
Email makenna.lindberg@deainc.com
Phone: 4255869798

Status of ESA Listings & Critical Habitat Designations for West Coast Salmon & Steelhead



Updated July 2016

Evolutionarily Significant Unit / Distinct Population Segment	ESA Status	Date of ESA Listing	Date of CH Designation
Puget Sound Recovery Domain			
Hood Canal Summer-run Chum Salmon	T	3/25/1999	9/2/2005
Ozette Lake Sockeye Salmon	T	3/25/1999	9/2/2005
Puget Sound Chinook Salmon	T	3/24/1999	9/2/2005
Puget Sound Steelhead	T	5/11/2007	2/24/2016
Interior Columbia Recovery Domain			
Middle Columbia River Steelhead	T	3/25/1999 1/5/2006	9/2/2005
Snake River Fall-run Chinook Salmon	T	4/22/1992	12/28/1993
Snake River Spring / Summer-run Chinook Salmon	T	4/22/1992	10/25/1999
Sockeye Salmon	E	11/20/1991	12/28/1993
Snake River Steelhead	T	8/18/1997 1/5/2006	9/2/2005
Upper Columbia River Spring-run Chinook Salmon	E	3/24/1999	9/2/2005
Upper Columbia River Steelhead	T	8/18/1997 1/5/2006	9/2/2005
Willamette / Lower Columbia Recovery Domain			
Columbia River Chum Salmon	T	3/25/1999	9/2/2005
Lower Columbia River Chinook Salmon	T	3/24/1999	9/2/2005
Lower Columbia River Coho Salmon	T	6/28/2005	2/24/2016
Lower Columbia River Steelhead	T	3/19/1998 1/5/2006	9/2/2005
Upper Willamette River Chinook Salmon	T	3/24/1999	9/2/2005
Upper Willamette River Steelhead	T	3/25/1999 1/5/2006	9/2/2005
Oregon Coast Recovery Domain			
Oregon Coast Coho Salmon	T	2/11/2008	2/11/2008
Southern Oregon / Northern California Coast Recovery Domain			
Southern OR / Northern CA Coasts Coho Salmon	T	5/6/1997	5/5/1999
North-Central California Coast Recovery Domain			
California Coastal Chinook Salmon	T	9/16/1999	9/2/2005
Central California Coast Coho Salmon	E	10/31/1996 (T) 6/28/2005 (E) 4/2/2012 (RE)	5/5/1999
Central California Coast Steelhead	T	8/18/1997 1/5/2006	9/2/2005
Northern California Steelhead	T	6/7/2000 1/5/2006	9/2/2005
Central Valley Recovery Domain			
California Central Valley Steelhead	T	3/19/1998 1/5/2006	9/2/2005
Central Valley Spring-run Chinook Salmon	T	9/16/1999	9/2/2005
Sacramento River Winter-run Chinook Salmon	E	11/5/1990 (T) 1/4/1994 (E)	6/16/1993
South-Central / Southern California Coast Recovery Domain			
South-Central California Coast Steelhead	T	8/18/1997 1/5/2006	9/2/2005
Southern California Steelhead	E	8/18/1997 5/1/2002 (RE) 1/5/2006	9/2/2005

ESA = Endangered Species Act, CH = Critical Habitat, RE = Range Extension
E = Endangered, T = Threatened,

Critical Habitat Rules Cited

- 2/24/2016 (81 FR 9252) Final Critical Habitat Designation for Puget Sound Steelhead and Lower Columbia River Coho Salmon
- 2/11/2008 (73 FR 7816) Final Critical Habitat Designation for Oregon Coast Coho Salmon
- 9/2/2005 (70 FR 52630) Final Critical Habitat Designation for 12 ESU's of Salmon and Steelhead in WA, OR, and ID
- 9/2/2005 (70 FR 52488) Final Critical Habitat Designation for 7 ESU's of Salmon and Steelhead in CA
- 10/25/1999 (64 FR 57399) Revised Critical Habitat Designation for Snake River Spring/Summer-run Chinook Salmon
- 5/5/1999 (64 FR 24049) Final Critical Habitat Designation for Central CA Coast and Southern OR/Northern CA Coast Coho Salmon
- 12/28/1993 (58 FR 68543) Final Critical Habitat Designation for Snake River Chinook and Sockeye Salmon
- 6/16/1993 (58 FR 33212) Final Critical Habitat Designation for Sacramento River Winter-run Chinook Salmon

ESA Listing Rules Cited

- 4/2/2012 (77 FR 19552) Final Range Extension for Endangered Central California Coast Coho Salmon
- 2/11/2008 (73 FR 7816) Final ESA Listing for Oregon Coast Coho Salmon
- 5/11/2007 (72 FR 26722) Final ESA Listing for Puget Sound Steelhead
- 1/5/2006 (71 FR 5248) Final Listing Determinations for 10 Distinct Population Segments of West Coast Steelhead
- 6/28/2005 (70 FR 37160) Final ESA Listing for 16 ESU's of West Coast Salmon
- 5/1/2002 (67 FR 21586) Range Extension for Endangered Steelhead in Southern California
- 6/7/2000 (65 FR 36074) Final ESA Listing for Northern California Steelhead
- 9/16/1999 (64 FR 50394) Final ESA Listing for Two Chinook Salmon ESUs in California
- 3/25/1999 (64 FR 14508) Final ESA Listing for Hood River Canal Summer-run and Columbia River Chum Salmon
- 3/25/1999 (64 FR 14517) Final ESA Listing for Middle Columbia River and Upper Willamette River Steelhead
- 3/25/1999 (64 FR 14528) Final ESA Listing for Ozette Lake Sockeye Salmon
- 3/24/1999 (64 FR 14308) Final ESA Listing for 4 ESU's of Chinook Salmon
- 3/19/1998 (63 FR 13347) Final ESA Listing for Lower Columbia River and Central Valley Steelhead
- 8/18/1997 (62 FR 43937) Final ESA Listing for 5 ESU's of Steelhead
- 5/6/1997 (62 FR 24588) Final ESA Listing for Southern Oregon / Northern California Coast Coho Salmon
- 10/31/1996 (61 FR 56138) Final ESA Listing for Central California Coast Coho Salmon
- 1/4/1994 (59 FR 222) Final ESA Listing for Sacramento River Winter-run Chinook Salmon
- 4/22/1992 (57 FR 14653) Final ESA Listing for Snake River Spring/summer-run and Snake River Fall Chinook Salmon
- 11/20/1991 (56 FR 58619) Final ESA Listing for Snake River Sockeye Salmon
- 11/5/1990 (55 FR 46515) Final ESA Listing for Sacramento River Winter-run Chinook Salmon

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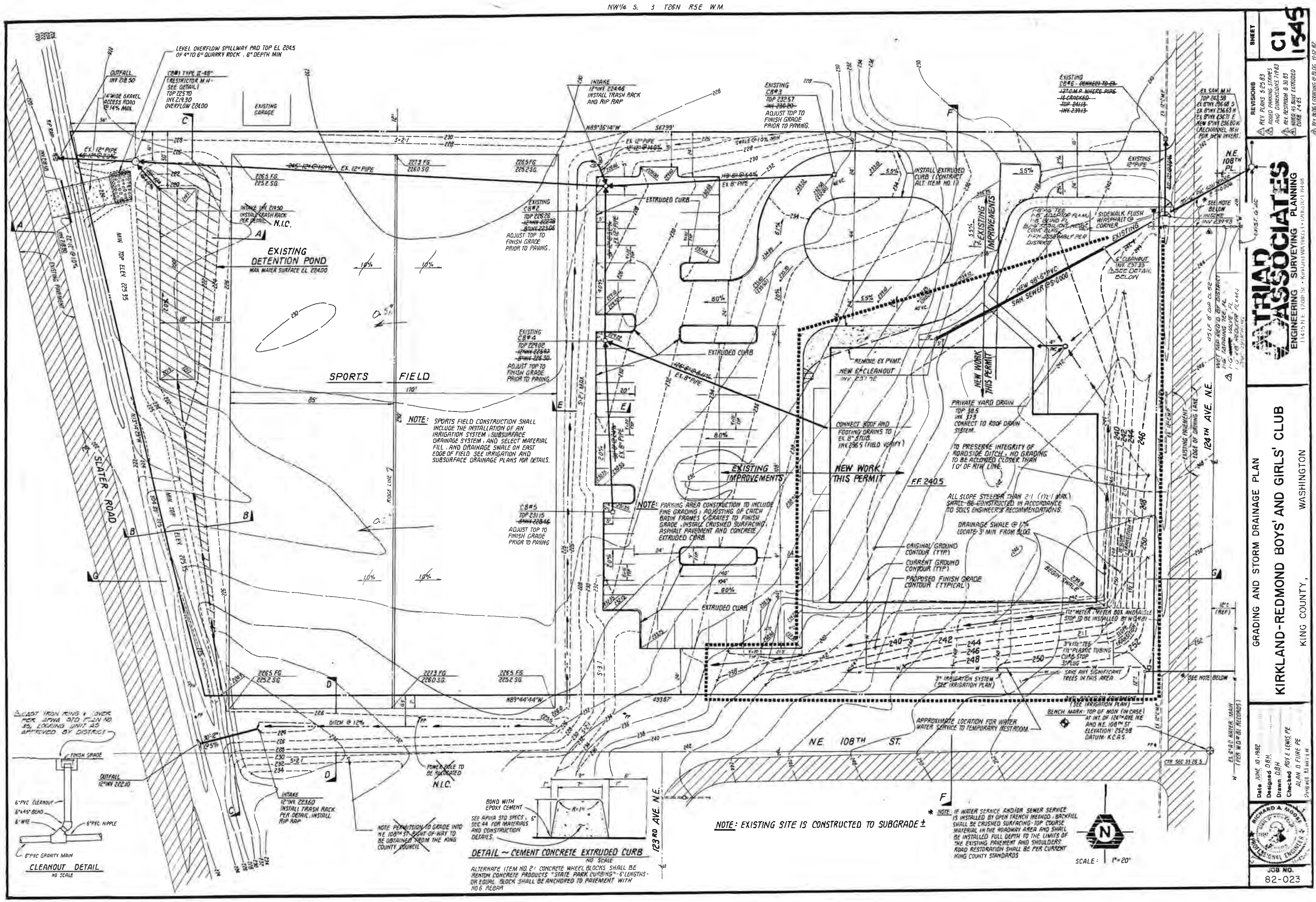
APPENDIX D

Kirkland-Redmond Boys' and Girls' Club Grading and Storm Drainage Plan

1/1

1545


NW1/4 S. 3 T26N R5E W.M.
LEVEL OVERFLOW SPILLWAY PAD TOP EL 224.5 OF 4" TO 6" QUARRY ROCK ; 6" DEPTH MIN
OUTFALL INV 218.50
14' WIDE GRAVEL ACCESS ROAD @ 14% MAX
CB#1 TYPE II-48" (RESTRICTOR M.H. - SEE DETAIL) TOP 225.70 INV 219.30 OVERFLOW 224.00
EXISTING GARAGE
INTAKE INV 219.50 INSTALL TRASH RACK PER DETAIL N.I.C.
EXISTING DETENTION POND
MAX WATER SURFACE EL 224.00
MIN TOP ELEV 225.35
EXISTING PAVEMENT
SLATER ROAD
SPORTS FIELD
NOTE: SPORTS FIELD CONSTRUCTION SHALL INCLUDE THE INSTALLATION OF AN IRRIGATION SYSTEM ; SUBSURFACE DRAINAGE SYSTEM ; AND SELECT MATERIAL FILL . AND DRAINAGE SWALE ON EAST EDGE OF FIELD. SEE IRRIGATION AND SUBSURFACE DRAINAGE PLANS FOR DETAILS.
RIDGE LINE
INTAKE 12" INV 224.46 INSTALL TRASH RACK AND RIP RAP
N89°36'14"W 567.99'
EXISTING CB#2 TOP 226.26 ADJUST TOP TO FINISH GRADE PRIOR TO PAVING.
EXISTING CB#3 TOP 232.57 ADJUST TOP TO FINISH GRADE PRIOR TO PAVING.
EXISTING CB#4 TOP 229.02 ADJUST TOP TO FINISH GRADE PRIOR TO PAVING
CB#5 TOP 231.15 ADJUST TOP TO FINISH GRADE PRIOR TO PAVING
EXTRUDED CURB
INSTALL EXTRUDED CURB (CONTRACT ALT. ITEM NO. 1)
EXISTING IMPROVEMENTS
NEW WORK THIS PERMIT
NOTE: PARKING AREA CONSTRUCTION TO INCLUDE FINE GRADING ; ADJUSTING OF CATCH BASIN FRAMES & GRATES TO FINISH GRADE , INSTALL CRUSHED SURFACING , ASPHALT PAVEMENT AND CONCRETE EXTRUDED CURB
EXISTING CB#6
SIDEWALK FLUSH W/ASPHALT @ CORNER
NEW 98'-6" PVC SAN SEWER @ S=0.006
6" CLEANOUT INV 237.33 SEE DETAIL BELOW
REMOVE EX PVMT.
NEW 6" CLEANOUT INV 237.72
PRIVATE YARD DRAIN TOP 38.5 INV 37.3 CONNECT TO ROOF DRAIN SYSTEM.
CONNECT ROOF AND FOOTING DRAINS TO EX. 8" STUB. INV 236.5 (FIELD VERIFY)
TO PRESERVE INTEGRITY OF ROADSIDE DITCH , NO GRADING TO BE ALLOWED CLOSER THAN 10' OF R/W LINE.
F.F. 240.5
ALL SLOPE STEEPER THAN 2:1 (1½:1 MAX) SHALL BE CONSTRUCTED IN ACCORDANCE TO SOILS ENGINEER'S RECOMMENDATIONS.
DRAINAGE SWALE @ 1% LOCATE 3' MIN FROM BLDG.
ORIGINAL GROUND CONTOUR (TYP)
CURRENT GROUND CONTOUR (TYP)
PROPOSED FINISH GRADE CONTOUR (TYPICAL)
BEGIN SWALE
EX. SAN. M.H. TOP 242.38
N.E. 108TH PL.
124TH AVE. N.E.
EXISTING PAVEMENT
EDGE OF DRIVING LANE
SAVE ANY SIGNIFICANT TREES IN THIS AREA
3" IRRIGATION SYSTEM (SEE IRRIGATION PLAN)
APPROXIMATE LOCATION FOR WATER WATER SERVICE TO TEMPORARY RESTROOM
BENCH MARK: TOP OF MON (IN CASE) AT INT. OF 124TH AVE N.E. AND N.E. 108TH ST ELEVATION: 252.98 DATUM: K.C.A.S.
N.E. 108TH ST.
N89°44'44"W 493.87'
DITCH @ 1.2%
POWER POLE TO BE RELOCATED N.I.C.
OUTFALL 12" INV 222.10
INTAKE 12" INV 223.60 INSTALL TRASH RACK PER DETAIL , INSTALL RIP RAP
NOTE: PERMISSION TO GRADE INTO N.E. 108TH ST RIGHT-OF-WAY TO BE OBTAINED FROM THE KING COUNTY COUNCIL
CLEANOUT DETAIL
NO SCALE
DETAIL ~ CEMENT CONCRETE EXTRUDED CURB
NO SCALE
ALTERNATE ITEM NO. 2: CONCRETE WHEEL BLOCKS SHALL BE RENTON CONCRETE PRODUCTS "STATE PARK CURBING" - 6' LENGTHS - OR EQUAL. BLOCK SHALL BE ANCHORED TO PAVEMENT WITH NO 6 REBAR
123RD AVE N.E.
NOTE: EXISTING SITE IS CONSTRUCTED TO SUBGRADE ±
* NOTE: IF WATER SERVICE AND/OR SEWER SERVICE IS INSTALLED BY OPEN TRENCH METHOD , BACKFILL SHALL BE CRUSHED SURFACING - TOP COURSE MATERIAL IN THE ROADWAY AREA AND SHALL BE INSTALLED FULL DEPTH TO THE LIMITS OF THE EXISTING PAVEMENT AND SHOULDERS. ROAD RESTORATION SHALL BE PER CURRENT KING COUNTY STANDARDS
SCALE: 1" = 20'
TRIAD ASSOCIATES
ENGINEERING SURVEYING PLANNING
GRADING AND STORM DRAINAGE PLAN
KIRKLAND-REDMOND BOYS' AND GIRLS' CLUB
KING COUNTY, WASHINGTON
REVISIONS
REV PLANS 5-25-83
ADDED PARKING STRIPES AND DIMENSIONS 7-19-83
REV. RESTROOM 8-30-83
NOTED AS BUILT EXTRUDED CURB 2-4-85
REV BLDG & GRADING @ BLDG 11-12-87
SHEET C1
1545
Date JUNE 10, 1982
Designed D.B.H.
Drawn D.B.H.
Checked ROY E LEWIS PE
ALAN D FURE PE
RICHARD A. MOOSE PROFESSIONAL ENGINEER
JOB NO. 82-023

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APPENDIX E

Kirkland Zoning Code 90.40.5. Excerpt Responses

90.40 Permitted Activities, Improvements or Uses Subject to Development Standards

5. Standards
   a. Application for permitted activities, improvements or uses identified in this section shall demonstrate that they meet the following standards except as noted in subsection (6) of this section.
      1) General mitigation requirements including mitigation sequencing pursuant to KZC 90.145;
         - As described in critical area report (CAR) **Section 6.0**, the project followed this standard mitigation sequencing during design, to avoid, minimize, and compensate for wetland impacts. Measures include the following:
            - Delineation and mapping of all streams and wetlands in the study area that could be affected, so that project design could avoid streams and wetlands where possible;
            - Avoided all temporary and permanent direct impacts to wetlands, streams;
            - Avoided all temporary impacts to associated buffers; and
            - Minimized all permanent impacts to associated buffers to the maximum extent feasible.
         - The City's Advanced Mitigation Program (AMP) will be used to mitigate for the unavoidable 275.87 square-feet of critical area buffer impacts.
      2) If located in a wetland or wetland buffer, requirements for wetland compensatory mitigation, pursuant to KZC 90.150;
         - The unavoidable 275.87 square-feet wetland buffer impacts will be mitigated for by using the City's AMP, and will be pursuant to KZC 90.150.
      3) Implement a mitigation plan pursuant to KZC 90.145 and/or KZC 90.150;
         - Not required – this project will be using the City's AMP.
      5) If located in a fish or wildlife habitat conservation area, requirements of KZC 90.95;
         - Proposed construction limits are well outside of any fish and wildlife habitat conservation area.
      5) Monitoring and maintenance requirements pursuant to KZC 90.160;
         - Not required – this project will be using the City's AMP.
      6) Financial security requirements pursuant to KZC 90.165;
         - Public project – waived per KZC 90.40.6.h.3.
      7) Critical area markers, fencing and signage requirements pursuant to KZC 90.190;
         - Public project – waived per KZC 90.40.6.h.4.

8) Dedication of critical area and buffers requirements pursuant to KZC 90.210;
   - Public project – waived per KZC 90.40.6.h.3.
9) No adverse impact on water quality or conveyance or degradation of critical area functions and values;
   - As described in CAR **Section 5.3**, ROW improvements would not increase the amount of impervious surfaces or pollution generating impervious surfaces. Driveway improvements would be limited to the existing road prisms. Paved and gravel substrate are both considered impervious surfaces in Ecology's Stormwater Management Manual for Western Washington. Temporary stormwater best management practices and temporary erosion and sediment control measures will be put in place to protect critical areas from operational impacts. The protections will follow Ecology's Stormwater Management Manual for Western Washington as well as the contractor's Stormwater Pollution Prevention Plan (Ecology 2019). No permanent stormwater treatment is proposed since there is no increased impacts to water quality as a result of the project efforts. Project design will utilize standardized and site-specific best management practices for construction of the project such as construction fencing, check dams, silt fence, minimizing removal of vegetation, and conducting work in wet areas during the driest time of year (late summer/early fall) (Ecology 2019).
10) Structures and improvements located to minimize removal of significant trees; and
   - No trees are proposed for removal in critical areas or associated buffers for this project.
   - Tree removal has been limited to a total of 5, 8-inch trees, further north along Slater Avenue NE adjacent to Kirkland tax parcel number 6639900260. The removal of these trees in unavoidable to regrade and install sidewalk improvements. The width of the roadway at the point of tree removal does not permit placing the sidewalk outside of the footprint of these trees.
11) Restoration of temporary disturbance areas associated with the work to pre-project conditions or better shown on construction drawings and expeditiously done.
   - As described in CAR **Section 5.3**, all construction equipment will access from existing ROW that consists of paved or compacted gravel material.
   - Temporary disturbance areas will be restored to pre-project conditions or better at project completion.

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APPENDIX F

Ecology Wetland Rating Forms

Wetland name or number: W-1

RATING SUMMARY - Western Washington

Name of wetland (or ID#): W-1 **Date of site visit:** 01/11/2024

Rated By: MaKenna Lindberg **Trained by Ecology? Yes** [X] **No** [ ] **Date of Training:** 12/08/2022

HGM Class used for rating: Riverine

Wetland has multiple HGM classes? Yes [ ] **No** [X]

NOTE: Form is not complete without the figures requested *(figures can be combined).*

Source of base aerial photo/map: Bing

OVERALL WETLAND CATEGORY: [**Category III**] (based on functions [X] or special characteristics [ ])

1. Category of wetland based on FUNCTIONS

[ ] **Category I** - Total score = 23 - 27

[ ] **Category II** - Total score = 20 - 22

[X] **Category III** - Total score = 16 - 19

[ ] **Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	**M**	**M**	**L**	
Landscape Potential	**H**	**H**	**L**	
Value	**M**	**M**	**M**	**Total**
Score Based on Ratings	**7**	**7**	**4**	**18**

Score for each function based on three ratings (order of ratings is not important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	
Wetland of High Conservation Value	
Bog	
Forested	
Coastal Lagoon	
Interdunal	
None of the above	**Not Applicable**

Wetland name or number: W-1

Maps and figures required to answer questions correctly for Western Washington

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	3
Hydroperiods	H 1.2	4
Ponded depressions	R 1.1	5
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	R 2.4	12
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	6
Width of unit vs. width of stream *(can be added to another figure)*	R 4.1	7
Map of the contributing basin	R 2.2, R 2.3, R 5.2	8
1km Polygon: Area that extends 1km form entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	9
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	10
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	11

Wetland name or number: W-1

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

R 1.0 Does the site have the potential to improve water quality?

R 1.1 What is the total area of surface depressions within the Riverine wetland that can trap sediments during a flooding event?

Depressions cover >75% area of wetland	points = 8	
Depressions cover >50% area of wetland	points = 4	
Depressions present but cover <50% area of wetland	points = 2	
No depressions present	points = 0	**Score: 0**

R 1.2 What is the structure of plants in the wetland?

Trees or shrubs cover >66% area of the wetland	points = 8	
Trees or shrubs cover 33% - 66% of the area of the wetland	points = 6	
Ungrazed, herbaceous plants cover (>6in high) >66% area of the wetland	points = 6	
Ungrazed, herbaceous plants cover (>6in high) 33%-66% of the area of the wetland	points = 3	
Trees, shrubs, and ungrazed herbaceous plants cover <33% area of the wetland	points = 0	**Score: 6**

Total for R 1: 6

Rating of Site Potential [ ] **12-16 = H** [X] **6-11 = M** [ ] **0-5 = L** *Record the rating on the first page*

R 2.0 Does the landscape have the potential to support the water quality function of the site?

R 2.1 Is the wetland within an incorporated city or within its UGA?

Yes	points = 2	
No	points = 0	**Score: 2**

R 2.2 Does the contributing basin to the wetland include a UGA or incorporated area?

Yes	points = 1	
No	points = 0	**Score: 1**

R 2.3 Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been clearcut within the last 5 years?

Yes	points = 1	
No	points = 0	**Score: 0**

R 2.4 Is >10% of the area within 150ft of the wetland in land uses that generate pollutants?

Yes	points = 1	
No	points = 0	**Score: 1**

R 2.5 Are there other sources of pollutants coming into the wetland that are not listed in question R 2.1-R 2.4?

Yes	points = 1	
No	points = 0	**Score: 0**

R 2.6 What are the other sources of pollutants coming into the wetland?

Total for R 2: 4

Rating of Landscape Potential [X] **3-4 = H** [ ] **1-2 = M** [ ] **0 = L** *Record the rating on the first page*

Wetland name or number: W-1

R 3.0 Is the water quality improvement provided by the site valuable to society?		
R 3.1 Is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi?		
Yes	points = 1	
No	points = 0	**Score: 1**
R 3.2 Is the wetland along a stream or river that has TMDL limits for nutrients, toxics, or pathogens?		
Yes	points = 1	
No	points = 0	**Score: 0**
R 3.3 Has the site been identified in a watershed or local plan as important for maintaining water quality?		
Yes	points = 2	
No	points = 0	**Score: 0**
	Total for R 3:	**1**

Rating of Value [ ] **2-4 = H** [X] **1 = M** [ ] **0 = L** *Record the rating on the first page*

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradtion

R 4.0 Does the site have the potential to reduce flooding and erosion?		
R 4.1 What are the characteristics of the overbank storage the wetland provides?		
If the ratio is more than 20	points = 9	
If the ratio is 10-20	points = 6	
If the ratio is 5-<10	points = 4	
If the ratio is 1-<5	points = 2	
If the ratio is < 1	points = 1	**Score: 2**
R 4.2 What are the characteristics of plants that slow down water velocities during floods?		
Forest or shrubs cover >33% of the wetland area OR emergent plants cover >66% of the wetland area	points = 7	
Forest or shrubs cover >10% of the wetland area OR emergent plants cover >33% of the wetland area	points = 4	
Plants do not meet the above criteria	points = 0	**Score: 7**
	Total for R 4:	**9**

Rating of Site Potential [ ] **12-16 = H** [X] **6-11 = M** [ ] **0-5 = L** *Record the rating on the first page*

Wetland name or number: W-1

R 5.0 Does the landscape have the potential to support the hydrologic functions of the site?		
R 5.1 Is the stream or river adjacent to the wetland downcut?		
Yes	points = 0	
No	points = 1	**Score: 1**
R 5.2 Does the up-gradient watershed include a UGA or incorporated area?		
Yes	points = 1	
No	points = 0	**Score: 1**
R 5.3 Is the up-gradient stream or river controlled by dams?		
Yes	points = 0	
No	points = 1	**Score: 1**
	Total for R 5:	**3**

Rating of Landscape Potential [X] **3 = H** [ ] **1-2 = M** [ ] **0 = L** *Record the rating on the first page*

R 6.0 Are the hydrologic functions provided by the site valuable to society?		
R 6.1 What is the distance to the nearest areas downstream that have flooding problems?		
The sub-basin immediately down-gradient of the wetland has flooding problems	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
No flooding problems anywhere downstream	points = 0	**Score: 1**
R 6.2 Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?		
Yes	points = 2	
No	points = 0	**Score: 0**
	Total for R 6:	**1**

Rating of Value [ ] **2-4 = H** [X] **1 = M** [ ] **0 = L** *Record the rating on the first page*

Wetland name or number: W-1

HABITAT FUNCTIONS

These questions apply to wetlands of all HGM classes - Indicators that the site functions to provide important habitat

H 1.0 Does the wetland have the potential to provide habitat for many species?

H 1.1 What is the structure of the plant community?

- [ ] Aquatic Bed
- [x] Emergent
- [ ] Scrub-shrub
- [ ] Forested
- [ ] Multiple strata within the Forested class (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)

4 structures or more	points = 4	
3 structures	points = 2	
2 structures	points = 1	
1 structure	points = 0	
No structures present	points = 0	**Score: 0**

H 1.2 What are the hydroperiods that meet the size thresholds in the wetland?

- [ ] Permanently flooded or inundated
- [x] Seasonally flooded or inundated
- [ ] Occasionally flooded or inundated
- [ ] Saturated only
- [ ] Permanently flowing stream or river in, or adjacent to, the wetland
- [x] Seasonally flowing stream in, or adjacent to, the wetland
- [ ] Lake Fringe wetland
- [ ] Freshwater Tidal wetland

4 or more types present	points = 3	
3 types present or Lake Fringe / Freshwater Tidal Fringe	points = 2	
2 types present	points = 1	
1 type present	points = 0	
None present	points = 0	**Score: 1**

H 1.3 What is the richness of the plant species in the wetland?

>19 species	points = 2	
5-19 species	points = 1	
<5 species	points = 0	**Score: 0**

Wetland name or number: W-1

H 1.4 What is the interspersion of habitats?

High	points = 3	
Moderate	points = 2	
Low	points = 1	
None	points = 0	**Score: 1**

H 1.5 What are the special habitat features in the wetland?

- [ ] Large, downed, woody debris within the wetland (>4in diameter and 6ft long).
- [ ] Standing snags (dbh >4in) within the wetland
- [ ] Undercut banks are present for at least 6.6ft (2m) and/or overhanging plants extend at least 3.3ft (1m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33ft (10m)
- [ ] Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed)
- [ ] At least 0.25ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians)
- [✓] Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)

6 habitats selected	points = 6	
5 habitats selected	points = 5	
4 habitats selected	points = 4	
3 habitats selected	points = 3	
2 habitats selected	points = 2	
1 habitat selected	points = 1	
No habitats selected	points = 0	**Score: 1**

Total for H 1: **3**

Rating of Site Potential [ ] **15-18 = H** [ ] **7-14 = M** [X] **0-6 = L** *Record the rating on the first page*

H 2.0 Does the landscape have the potential to support habitat functions of the site?

H 2.1 What is the percentage of accessible habitat within 1km of the wetland?

>33% of 1km Polygon	points = 3	
20-33% of 1km Polygon	points = 2	
10-19% of 1km Polygon	points = 1	
<10% of 1km Polygon	points = 0	**Score: 0**

H 2.2 What is the percentage of total habitat in a 1km polygon around the wetland?

Total habitat is >50% of the Polygon	points = 3	
Total habitat is 10-50% of the Polygon and in 1-3 patches	points = 2	
Total habitat is 10-50% of the Polygon and in >3 patches	points = 1	
Total habitat is <10% of the Polygon	points = 0	**Score: 1**

Wetland name or number: W-1

H 2.3 What is the land use intensity in the 1km polygon?

50% of the Polygon is high intensity land use	points = -2	
<50% of the Polygon is high intensity land use	points = 0	**Score: -2**
	Total for H 2:	**-1**

Rating of Landscape Potential [ ] **4-6 = H** [ ] **1-3 = M** [X] **0 = L** *Record the rating on the first page*

H 3.0 Is the habitat provided by the site valuable to society?

H 3.1 Does the site provide habitat for species valued in laws, regulations, or policies?

- [ ] Aspen Stands
- [ ] Biodiversity Areas and Corridors
- [ ] Herbaceous Balds
- [ ] Old-growth/Mature Forests
- [ ] Oregon White Oak
- [✓] Riparian
- [ ] Westside Prarie
- [ ] Fresh Deepwater
- [ ] Instream
- [ ] Nearshore (Coastal, Open Coast, Puget Sound)
- [ ] Caves
- [ ] Cliffs
- [✓] Snags and Logs
- [ ] Talus

The following criteria automatically score 2 points:

- [ ] The wetland provides habitat for Threatened or Endangered species
- [ ] The wetland is mapped as a location for an individual WDFW priority species
- [ ] The wetland is a Wetland of High Conservation Value
- [ ] The wetland has been categorized as an important habitat site in a local plan

The wetland has 3 or more WDFW priority habitats within 100m, or meets the criteria for societal value	points = 2	
The site has 1 or 2 WDFW priority habitats within 100m	points = 1	
The site does not meet any of the criteria for societal value	points = 0	**Score: 1**
	Total for H 3:	**1**

Rating of Value [ ] **2 = H** [X] **1 = M** [ ] **0 = L** *Record the rating on the first page*

Wetland name or number: W-1

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

SC 1.0 Estuarine Wetlands

SC 1.1 Does the wetland meet all of the following criteria for Estuarine wetlands?

- ☐ The dominant water regime is tidal
- ☑ The wetland is vegetated
- ☐ The water salinity is greater than 0.5 ppt

Yes - Go to SC 1.2

No - Not an Estuarine Wetland

Result: Not an Estuarine Wetland

SC 1.2 Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?

Yes - Category I Estuarine Wetland

No - Go to SC 1.3

Result:

SC 1.3 Is the wetland unit at least 1ac in size and meets at least two of the following three conditions?

- ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 10% cover of non-native plant species.
- ☐ At least 75% of the landward edge of the wetland has a 100ft buffer of shrub, forest, or un-grazed or un-mowed grassland
- ☐ The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.

Yes - Category I Estuarine Wetland

No - Category II Estuarine Wetland

Result:

SC 2.0 Wetlands of High Conservation Value

SC 2.1 Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons on the WNHP Data Explorer?

Yes - Category I Wetland of High Conservation Value

No - Go to SC 2.2

Result: Go to SC 2.2

SC 2.2 Does the wetland have a rare plant species, rare plant community, or high-quality common plant community that may qualify the site as a WHCV?

Yes - Category I Wetland of High Conservation Value

No - Not a Wetland of High Conservation Value

Result:

Wetland name or number: W-1

SC 3.0 Bogs

SC 3.1 Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16in or more of the first 32in of the soil profile?

Yes - Go to SC 3.3
No - Go to SC 3.2 **Result: Go to SC 3.2**

SC 3.2 Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?

Yes - Go to SC 3.3
No - Not a Bog Wetland **Result: Not a Bog Wetland**

SC 3.3 Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least 30% cover of plant species listed in the table provided in the instructions?

Yes - Category I Bog Wetland
No - Go to SC 3.4 **Result:**

SC 3.4 Is an area with peats or mucks forested (>30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann Spruce, or western white pine AND any of the species (or combinations of species) listed in the table found in the instructions provide more than 30% of the cover under the canopy?

Yes - Category I Bog Wetland
No - Not a Bog Wetland **Result:**

SC 4.0 Forested Wetlands

SC 4.1 Does the wetland have at least 1 contiguous acre of forest that meets one of the following criteria?

- [ ] Old-growth forests
- [ ] Mature forests

Yes - Category I Forested Wetland
No - Not a Forested Wetland **Result: Not a Forested Wetland**

Wetland name or number: W-1

SC 5.0 Wetlands in Coastal Lagoons

SC 5.1 Coastal Lagoons: Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or rocks

☐ The depression in which the wetland is located contains ponded water that is saline or brackish (>0.5 ppt) during most of the year in at least a portion of the open water area (measured near the bottom)

☐ The lagoon retains some of its surface water at low tide during spring tides

Yes - Go to SC 5.2

No - Not a Coastal Lagoon Wetland **Result: Not a Coastal Lagoon Wetland**

SC 5.2 Does the wetland meet all of the following three conditions?

☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species).

☐ At least 75% of the landward edge of the wetland has a 100ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

☐ the wetland is larger than 0.10ac (4350 sqft)

Yes - Category I Coastal Lagoon

No - Category II Coastal Lagoon **Result:**

SC 6.0 Interdunal Wetlands

SC 6.1 Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership WBUO)?

Yes - Go to SC 6.2

No - Not an Interdunal Wetland **Result: Not an Interdunal Wetland**

SC 6.2 Is the wetland 1ac or larger in size, or a mosaic that is 1ac or larger in size?

Wetland is larger than 1ac in size - Go to SC 6.3

Wetland is a mosaic larger than 1ac is size - Category II Interdunal Wetland

No - Go to SC 6.4 **Result:**

SC 6.3 Does the wetland score 8 or 9 points for the habitat functions?

Yes - Category I Interdunal Wetland

No - Category II Interdunal Wetland **Result:**

SC 6.4 Is the wetland unit between 0.1ac and 1ac, or in a mosaic of wetlands that is between 0.1ac and 1ac in size?

Yes - Category III Interdunal Wetland

No - Category IV Interdunal Wetland **Result:**

Wetland name or number: W-1

Category of wetland based on Special Characteristics	
If you answered No for all types, enter "Not Applicable" on Summary Form	**Final Category: Not Applicable**

Figure 1: Define Wetland

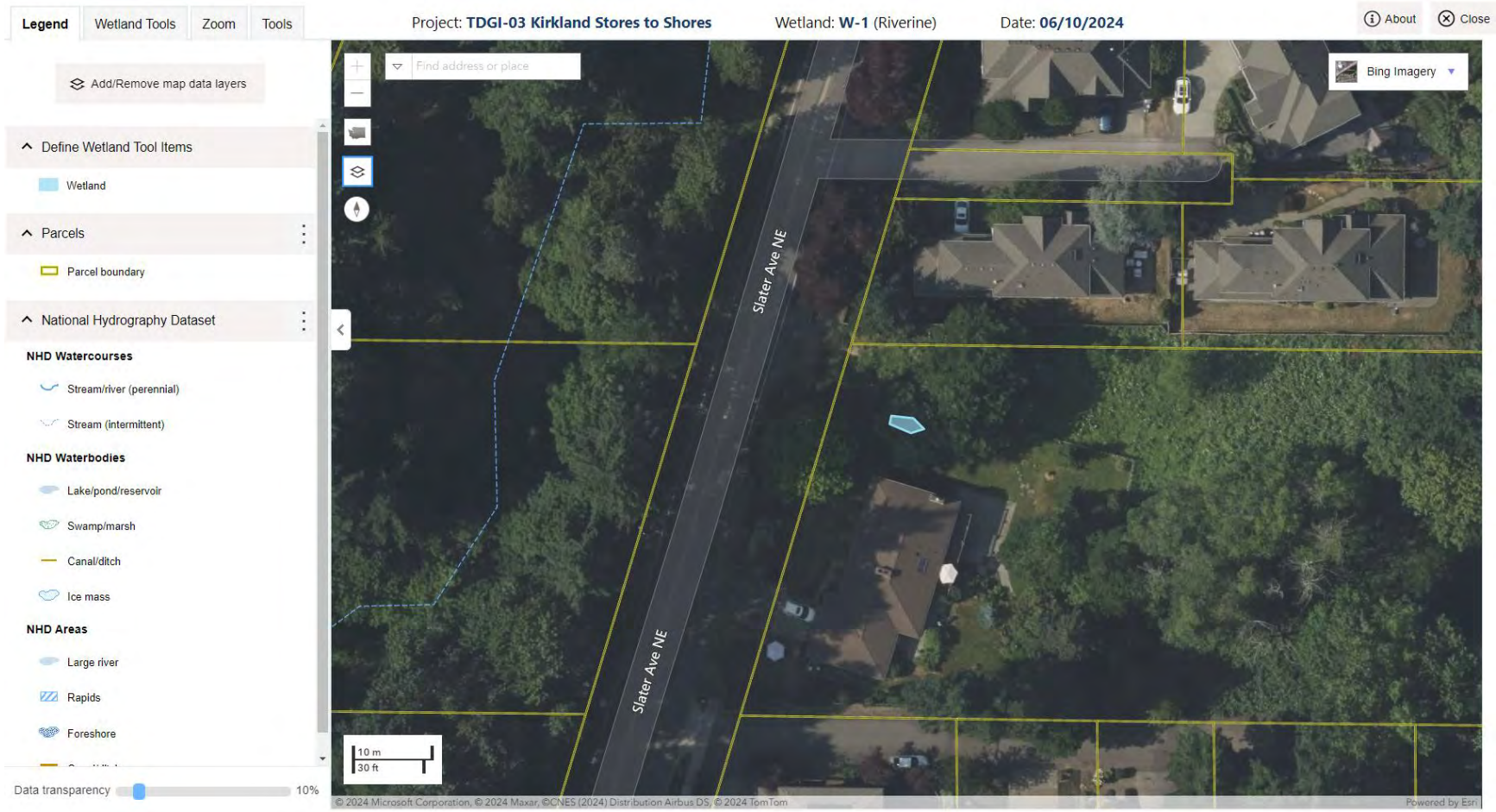


Figure 2: Project Area

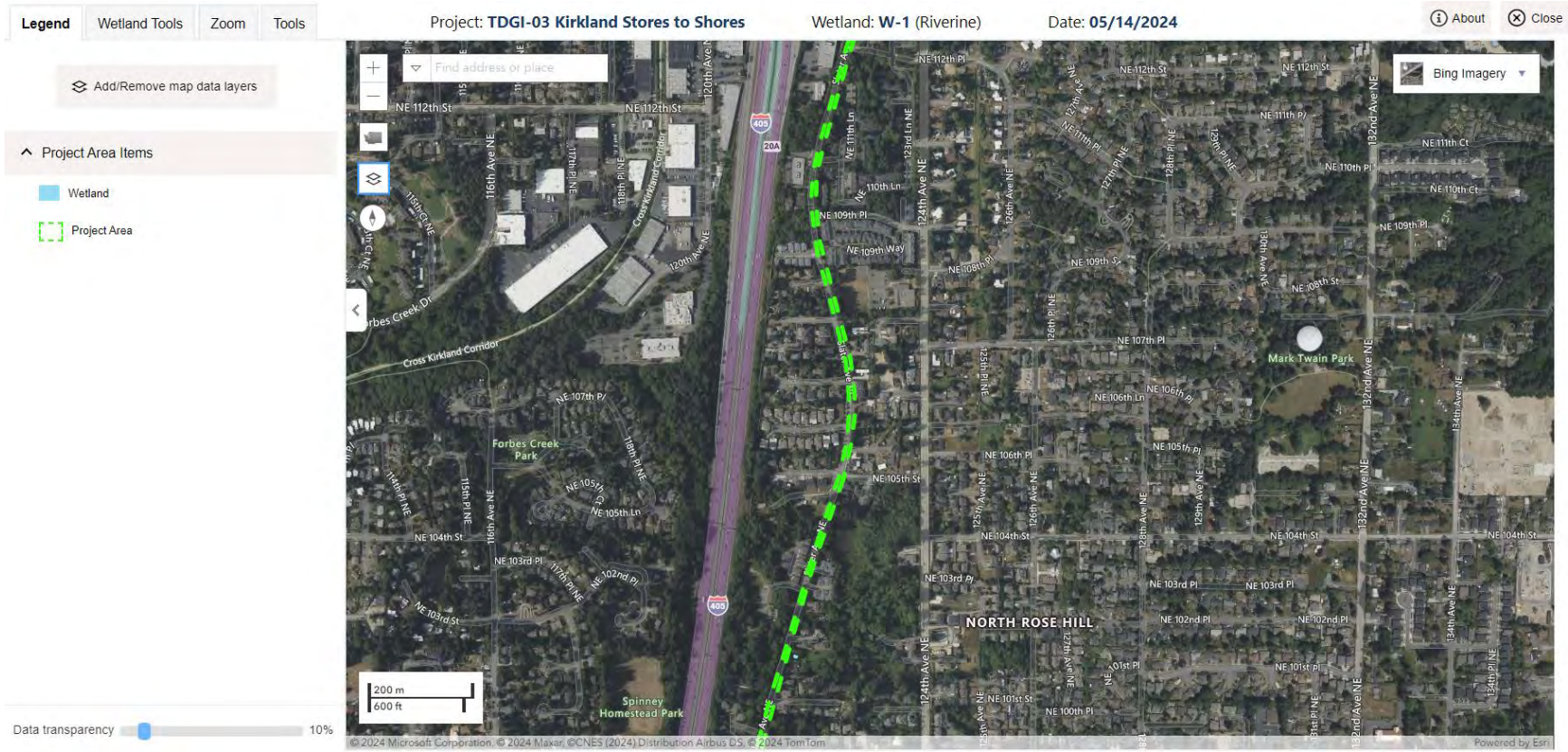


Figure 3: Cowardin Plant Classes

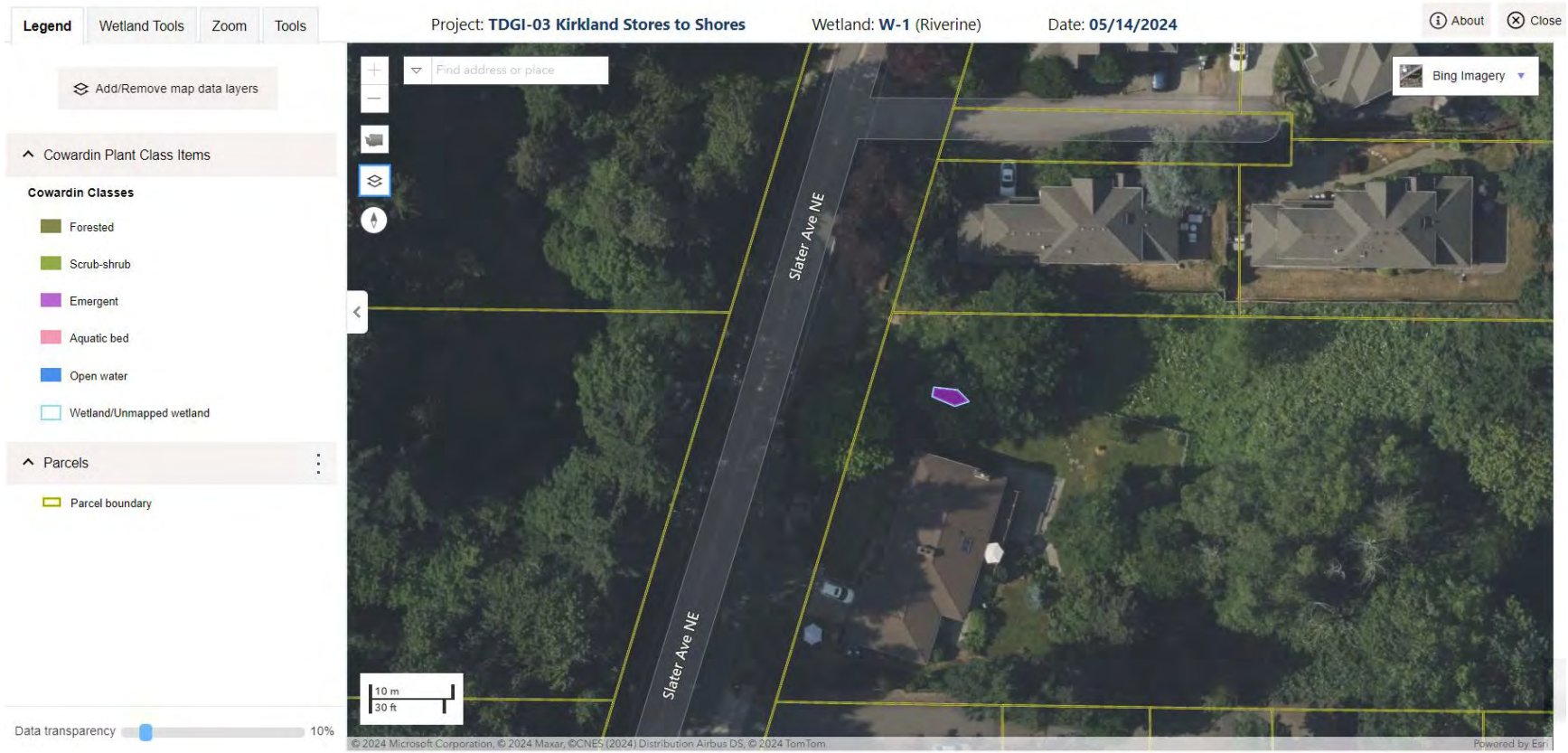


Figure 4: Hydroperiods

Figure 5: Ponded Depressions

Figure 6: Plant Cover

Figure 7: Width

Figure 8: Contributing Basin

Figure 9: Habitat

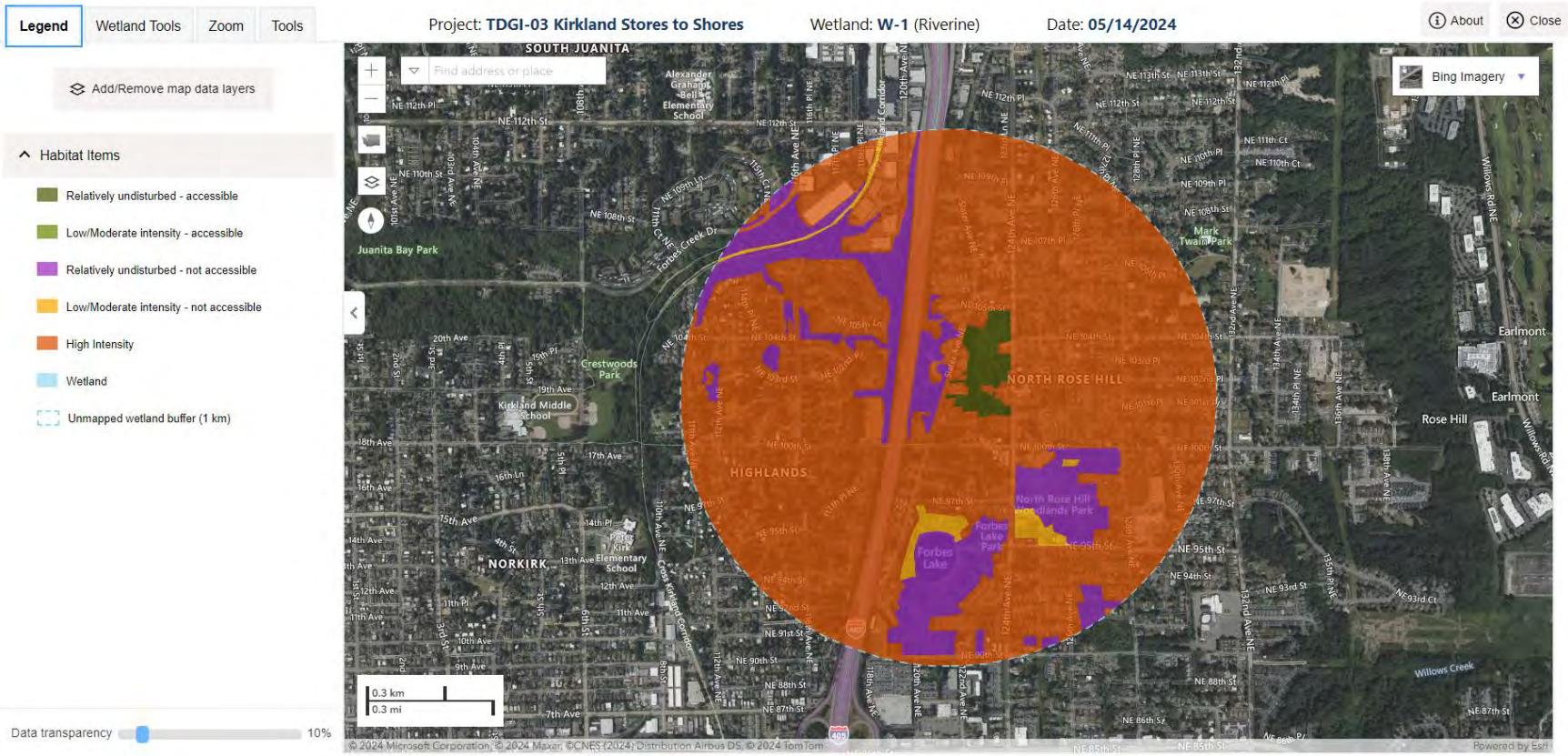


Figure 10: 303(d) Listed Waters

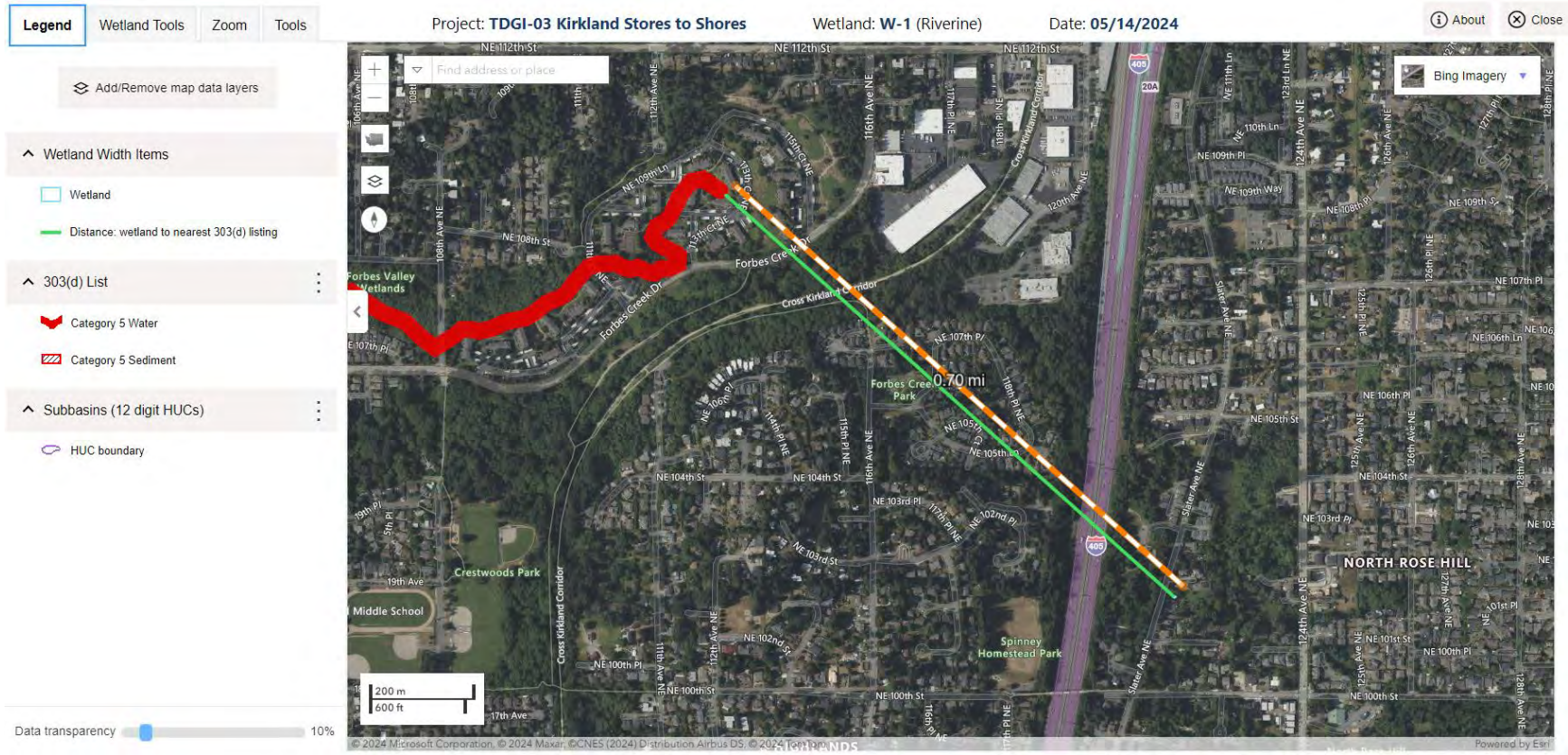


Figure 11: TMDL

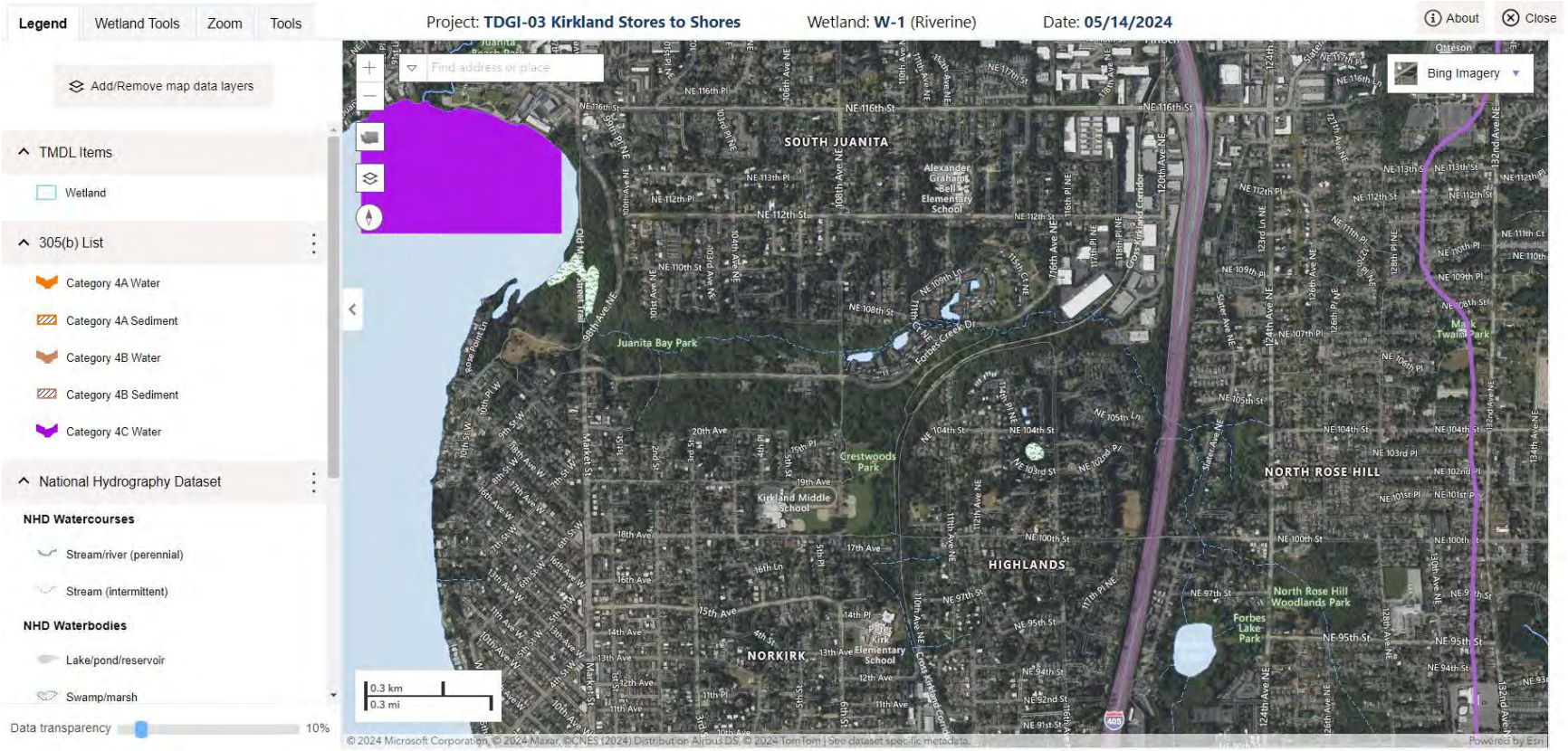


Figure 12: Land Use

Wetland name or number: W-2

RATING SUMMARY - Western Washington

Name of wetland (or ID#): W-2 **Date of site visit:** 01/11/2024

Rated By: MaKenna Lindberg **Trained by Ecology? Yes** [X] **No** [ ] **Date of Training:** 12/08/2022

HGM Class used for rating: Riverine

Wetland has multiple HGM classes? Yes [ ] **No** [X]

NOTE: Form is not complete without the figures requested *(figures can be combined).*

Source of base aerial photo/map: Bing

OVERALL WETLAND CATEGORY: [**Category II**] (based on functions [X] or special characteristics [ ])

1. Category of wetland based on FUNCTIONS

[ ] **Category I** - Total score = 23 - 27

[X] **Category II** - Total score = 20 - 22

[ ] **Category III** - Total score = 16 - 19

[ ] **Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Site Potential	**M**	**M**	**L**	
Landscape Potential	**H**	**H**	**L**	
Value	**H**	**H**	**H**	**Total**
Score Based on Ratings	**8**	**8**	**5**	**21**

Score for each function based on three ratings (order of ratings is not important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,L

4 = M,L,L

3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	
Wetland of High Conservation Value	
Bog	
Forested	
Coastal Lagoon	
Interdunal	
None of the above	**Not Applicable**

Wetland name or number: W-2

Maps and figures required to answer questions correctly for Western Washington

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	3
Hydroperiods	H 1.2	4
Ponded depressions	R 1.1	5
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	R 2.4	12
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	6
Width of unit vs. width of stream *(can be added to another figure)*	R 4.1	7
Map of the contributing basin	R 2.2, R 2.3, R 5.2	8
1km Polygon: Area that extends 1km form entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	9
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	10
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	11

Wetland name or number: W-2

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

R 1.0 Does the site have the potential to improve water quality?

R 1.1 What is the total area of surface depressions within the Riverine wetland that can trap sediments during a flooding event?

Depressions cover >75% area of wetland	points = 8	
Depressions cover >50% area of wetland	points = 4	
Depressions present but cover <50% area of wetland	points = 2	
No depressions present	points = 0	**Score: 0**

R 1.2 What is the structure of plants in the wetland?

Trees or shrubs cover >66% area of the wetland	points = 8	
Trees or shrubs cover 33% - 66% of the area of the wetland	points = 6	
Ungrazed, herbaceous plants cover (>6in high) >66% area of the wetland	points = 6	
Ungrazed, herbaceous plants cover (>6in high) 33%-66% of the area of the wetland	points = 3	
Trees, shrubs, and ungrazed herbaceous plants cover <33% area of the wetland	points = 0	**Score: 8**

Total for R 1: 8

Rating of Site Potential [ ] **12-16 = H** [X] **6-11 = M** [ ] **0-5 = L** *Record the rating on the first page*

R 2.0 Does the landscape have the potential to support the water quality function of the site?

R 2.1 Is the wetland within an incorporated city or within its UGA?

Yes	points = 2	
No	points = 0	**Score: 2**

R 2.2 Does the contributing basin to the wetland include a UGA or incorporated area?

Yes	points = 1	
No	points = 0	**Score: 1**

R 2.3 Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been clearcut within the last 5 years?

Yes	points = 1	
No	points = 0	**Score: 0**

R 2.4 Is >10% of the area within 150ft of the wetland in land uses that generate pollutants?

Yes	points = 1	
No	points = 0	**Score: 1**

R 2.5 Are there other sources of pollutants coming into the wetland that are not listed in question R 2.1-R 2.4?

Yes	points = 1	
No	points = 0	**Score: 0**

R 2.6 What are the other sources of pollutants coming into the wetland?

Total for R 2: 4

Rating of Landscape Potential [X] **3-4 = H** [ ] **1-2 = M** [ ] **0 = L** *Record the rating on the first page*

Wetland name or number: W-2

R 3.0 Is the water quality improvement provided by the site valuable to society?		
R 3.1 Is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi?		
Yes	points = 1	
No	points = 0	**Score: 1**
R 3.2 Is the wetland along a stream or river that has TMDL limits for nutrients, toxics, or pathogens?		
Yes	points = 1	
No	points = 0	**Score: 0**
R 3.3 Has the site been identified in a watershed or local plan as important for maintaining water quality?		
Yes	points = 2	
No	points = 0	**Score: 2**
	Total for R 3:	**3**

Rating of Value [X] **2-4 = H** [ ] **1 = M** [ ] **0 = L** *Record the rating on the first page*

RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradtion

R 4.0 Does the site have the potential to reduce flooding and erosion?		
R 4.1 What are the characteristics of the overbank storage the wetland provides?		
If the ratio is more than 20	points = 9	
If the ratio is 10-20	points = 6	
If the ratio is 5-<10	points = 4	
If the ratio is 1-<5	points = 2	
If the ratio is < 1	points = 1	**Score: 1**
R 4.2 What are the characteristics of plants that slow down water velocities during floods?		
Forest or shrubs cover >33% of the wetland area OR emergent plants cover >66% of the wetland area	points = 7	
Forest or shrubs cover >10% of the wetland area OR emergent plants cover >33% of the wetland area	points = 4	
Plants do not meet the above criteria	points = 0	**Score: 7**
	Total for R 4:	**8**

Rating of Site Potential [ ] **12-16 = H** [X] **6-11 = M** [ ] **0-5 = L** *Record the rating on the first page*

Wetland name or number: W-2

R 5.0 Does the landscape have the potential to support the hydrologic functions of the site?		
R 5.1 Is the stream or river adjacent to the wetland downcut?		
Yes	points = 0	
No	points = 1	**Score: 1**
R 5.2 Does the up-gradient watershed include a UGA or incorporated area?		
Yes	points = 1	
No	points = 0	**Score: 1**
R 5.3 Is the up-gradient stream or river controlled by dams?		
Yes	points = 0	
No	points = 1	**Score: 1**
	Total for R 5:	**3**

Rating of Landscape Potential [X] **3 = H** [ ] **1-2 = M** [ ] **0 = L** *Record the rating on the first page*

R 6.0 Are the hydrologic functions provided by the site valuable to society?		
R 6.1 What is the distance to the nearest areas downstream that have flooding problems?		
The sub-basin immediately down-gradient of the wetland has flooding problems	points = 2	
Surface flooding problems are in a sub-basin farther down-gradient	points = 1	
No flooding problems anywhere downstream	points = 0	**Score: 1**
R 6.2 Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?		
Yes	points = 2	
No	points = 0	**Score: 2**
	Total for R 6:	**3**

Rating of Value [X] **2-4 = H** [ ] **1 = M** [ ] **0 = L** *Record the rating on the first page*

Wetland name or number: W-2

HABITAT FUNCTIONS

These questions apply to wetlands of all HGM classes - Indicators that the site functions to provide important habitat

H 1.0 Does the wetland have the potential to provide habitat for many species?

H 1.1 What is the structure of the plant community?

- [ ] Aquatic Bed
- [ ] Emergent
- [ ] Scrub-shrub
- [x] Forested
- [x] Multiple strata within the Forested class (canopy, sub-canopy, shrubs, herbaceous, moss/ground cover)

4 structures or more	points = 4	
3 structures	points = 2	
2 structures	points = 1	
1 structure	points = 0	
No structures present	points = 0	**Score: 1**

H 1.2 What are the hydroperiods that meet the size thresholds in the wetland?

- [ ] Permanently flooded or inundated
- [x] Seasonally flooded or inundated
- [ ] Occasionally flooded or inundated
- [x] Saturated only
- [ ] Permanently flowing stream or river in, or adjacent to, the wetland
- [ ] Seasonally flowing stream in, or adjacent to, the wetland
- [ ] Lake Fringe wetland
- [ ] Freshwater Tidal wetland

4 or more types present	points = 3	
3 types present or Lake Fringe / Freshwater Tidal Fringe	points = 2	
2 types present	points = 1	
1 type present	points = 0	
None present	points = 0	**Score: 1**

H 1.3 What is the richness of the plant species in the wetland?

>19 species	points = 2	
5-19 species	points = 1	
<5 species	points = 0	**Score: 1**

Wetland name or number: W-2

H 1.4 What is the interspersion of habitats?

High	points = 3	
Moderate	points = 2	
Low	points = 1	
None	points = 0	**Score: 1**

H 1.5 What are the special habitat features in the wetland?

- [✓] Large, downed, woody debris within the wetland (>4in diameter and 6ft long).
- [✓] Standing snags (dbh >4in) within the wetland
- [ ] Undercut banks are present for at least 6.6ft (2m) and/or overhanging plants extend at least 3.3ft (1m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33ft (10m)
- [ ] Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed)
- [ ] At least 0.25ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians)
- [ ] Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)

6 habitats selected	points = 6	
5 habitats selected	points = 5	
4 habitats selected	points = 4	
3 habitats selected	points = 3	
2 habitats selected	points = 2	
1 habitat selected	points = 1	
No habitats selected	points = 0	**Score: 2**

Total for H 1: 6

Rating of Site Potential [ ] **15-18 = H** [ ] **7-14 = M** [X] **0-6 = L** *Record the rating on the first page*

H 2.0 Does the landscape have the potential to support habitat functions of the site?

H 2.1 What is the percentage of accessible habitat within 1km of the wetland?

>33% of 1km Polygon	points = 3	
20-33% of 1km Polygon	points = 2	
10-19% of 1km Polygon	points = 1	
<10% of 1km Polygon	points = 0	**Score: 0**

H 2.2 What is the percentage of total habitat in a 1km polygon around the wetland?

Total habitat is >50% of the Polygon	points = 3	
Total habitat is 10-50% of the Polygon and in 1-3 patches	points = 2	
Total habitat is 10-50% of the Polygon and in >3 patches	points = 1	
Total habitat is <10% of the Polygon	points = 0	**Score: 1**

Wetland name or number: W-2

H 2.3 What is the land use intensity in the 1km polygon?

50% of the Polygon is high intensity land use	points = -2	
<50% of the Polygon is high intensity land use	points = 0	**Score: -2**
	Total for H 2:	**-1**

Rating of Landscape Potential [ ] **4-6 = H** [ ] **1-3 = M** [X] **0 = L** *Record the rating on the first page*

H 3.0 Is the habitat provided by the site valuable to society?

H 3.1 Does the site provide habitat for species valued in laws, regulations, or policies?

- [ ] Aspen Stands
- [ ] Biodiversity Areas and Corridors
- [ ] Herbaceous Balds
- [ ] Old-growth/Mature Forests
- [ ] Oregon White Oak
- [✓] Riparian
- [ ] Westside Prarie
- [ ] Fresh Deepwater
- [ ] Instream
- [ ] Nearshore (Coastal, Open Coast, Puget Sound)
- [ ] Caves
- [ ] Cliffs
- [✓] Snags and Logs
- [ ] Talus

The following criteria automatically score 2 points:

- [✓] The wetland provides habitat for Threatened or Endangered species
- [ ] The wetland is mapped as a location for an individual WDFW priority species
- [ ] The wetland is a Wetland of High Conservation Value
- [ ] The wetland has been categorized as an important habitat site in a local plan

The wetland has 3 or more WDFW priority habitats within 100m, or meets the criteria for societal value	points = 2	
The site has 1 or 2 WDFW priority habitats within 100m	points = 1	
The site does not meet any of the criteria for societal value	points = 0	**Score: 2**
	Total for H 3:	**2**

Rating of Value [X] **2 = H** [ ] **1 = M** [ ] **0 = L** *Record the rating on the first page*

Wetland name or number: W-2

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

SC 1.0 Estuarine Wetlands

SC 1.1 Does the wetland meet all of the following criteria for Estuarine wetlands?

- ☐ The dominant water regime is tidal
- ☑ The wetland is vegetated
- ☐ The water salinity is greater than 0.5 ppt

Yes - Go to SC 1.2

No - Not an Estuarine Wetland

Result: Not an Estuarine Wetland

SC 1.2 Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?

Yes - Category I Estuarine Wetland

No - Go to SC 1.3

Result:

SC 1.3 Is the wetland unit at least 1ac in size and meets at least two of the following three conditions?

- ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 10% cover of non-native plant species.
- ☐ At least 75% of the landward edge of the wetland has a 100ft buffer of shrub, forest, or un-grazed or un-mowed grassland
- ☐ The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.

Yes - Category I Estuarine Wetland

No - Category II Estuarine Wetland

Result:

SC 2.0 Wetlands of High Conservation Value

SC 2.1 Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons on the WNHP Data Explorer?

Yes - Category I Wetland of High Conservation Value

No - Go to SC 2.2

Result: Go to SC 2.2

SC 2.2 Does the wetland have a rare plant species, rare plant community, or high-quality common plant community that may qualify the site as a WHCV?

Yes - Category I Wetland of High Conservation Value

No - Not a Wetland of High Conservation Value

Result:

Wetland name or number: W-2

SC 3.0 Bogs

SC 3.1 Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16in or more of the first 32in of the soil profile?

Yes - Go to SC 3.3
No - Go to SC 3.2 **Result: Go to SC 3.2**

SC 3.2 Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?

Yes - Go to SC 3.3

No - Not a Bog Wetland **Result: Not a Bog Wetland**

SC 3.3 Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least 30% cover of plant species listed in the table provided in the instructions?

Yes - Category I Bog Wetland
No - Go to SC 3.4 **Result:**

SC 3.4 Is an area with peats or mucks forested (>30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann Spruce, or western white pine AND any of the species (or combinations of species) listed in the table found in the instructions provide more than 30% of the cover under the canopy?

Yes - Category I Bog Wetland
No - Not a Bog Wetland **Result:**

SC 4.0 Forested Wetlands

SC 4.1 Does the wetland have at least 1 contiguous acre of forest that meets one of the following criteria?

☐ Old-growth forests
☐ Mature forests

Yes - Category I Forested Wetland

No - Not a Forested Wetland **Result: Not a Forested Wetland**

Wetland name or number: W-2

SC 5.0 Wetlands in Coastal Lagoons

SC 5.1 Coastal Lagoons: Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or rocks

☐ The depression in which the wetland is located contains ponded water that is saline or brackish (>0.5 ppt) during most of the year in at least a portion of the open water area (measured near the bottom)

☐ The lagoon retains some of its surface water at low tide during spring tides

Yes - Go to SC 5.2

No - Not a Coastal Lagoon Wetland **Result: Not a Coastal Lagoon Wetland**

SC 5.2 Does the wetland meet all of the following three conditions?

☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species).

☐ At least 75% of the landward edge of the wetland has a 100ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

☐ the wetland is larger than 0.10ac (4350 sqft)

Yes - Category I Coastal Lagoon

No - Category II Coastal Lagoon **Result:**

SC 6.0 Interdunal Wetlands

SC 6.1 Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership WBUO)?

Yes - Go to SC 6.2

No - Not an Interdunal Wetland **Result: Not an Interdunal Wetland**

SC 6.2 Is the wetland 1ac or larger in size, or a mosaic that is 1ac or larger in size?

Wetland is larger than 1ac in size - Go to SC 6.3

Wetland is a mosaic larger than 1ac is size - Category II Interdunal Wetland

No - Go to SC 6.4 **Result:**

SC 6.3 Does the wetland score 8 or 9 points for the habitat functions?

Yes - Category I Interdunal Wetland

No - Category II Interdunal Wetland **Result:**

SC 6.4 Is the wetland unit between 0.1ac and 1ac, or in a mosaic of wetlands that is between 0.1ac and 1ac in size?

Yes - Category III Interdunal Wetland

No - Category IV Interdunal Wetland **Result:**

Wetland name or number: W-2

Category of wetland based on Special Characteristics	
If you answered No for all types, enter "Not Applicable" on Summary Form	**Final Category: Not Applicable**

Figure 1: Define Wetland

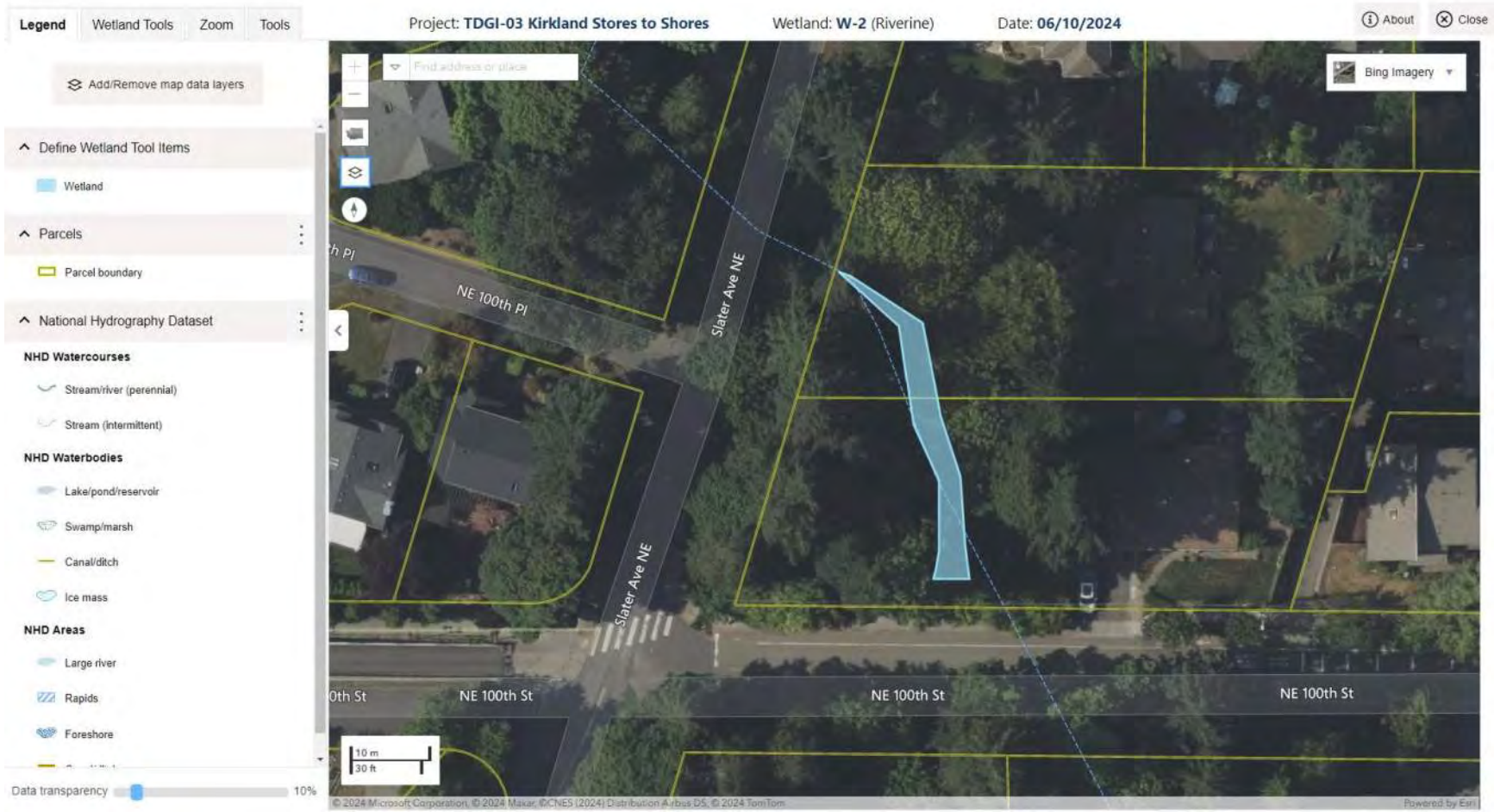


Figure 2: Project Area

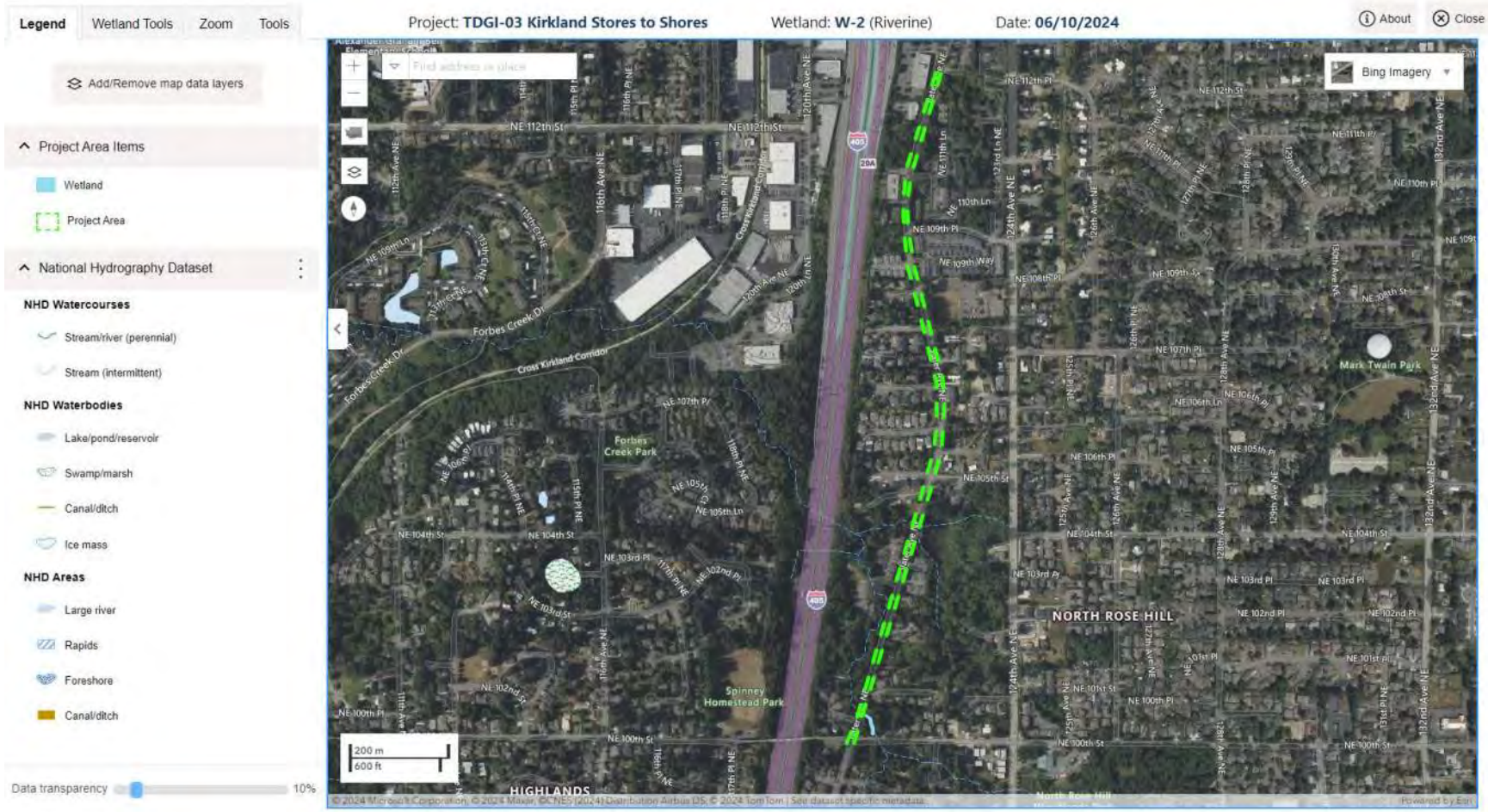


Figure 3: Cowardin Plant Classes

Figure 4: Hydroperiods

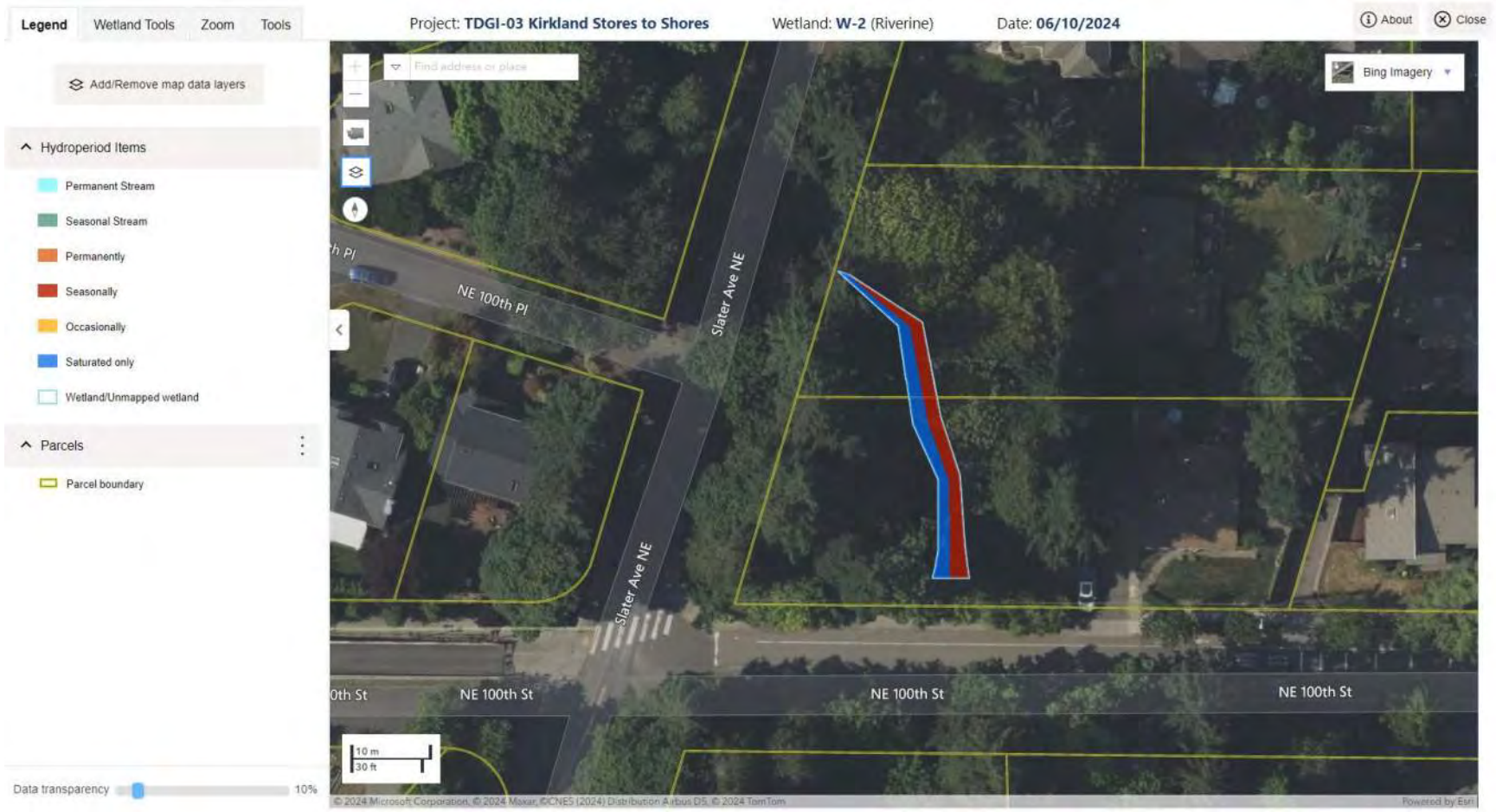


Figure 5: Ponded Depressions

Figure 6: Plant Cover

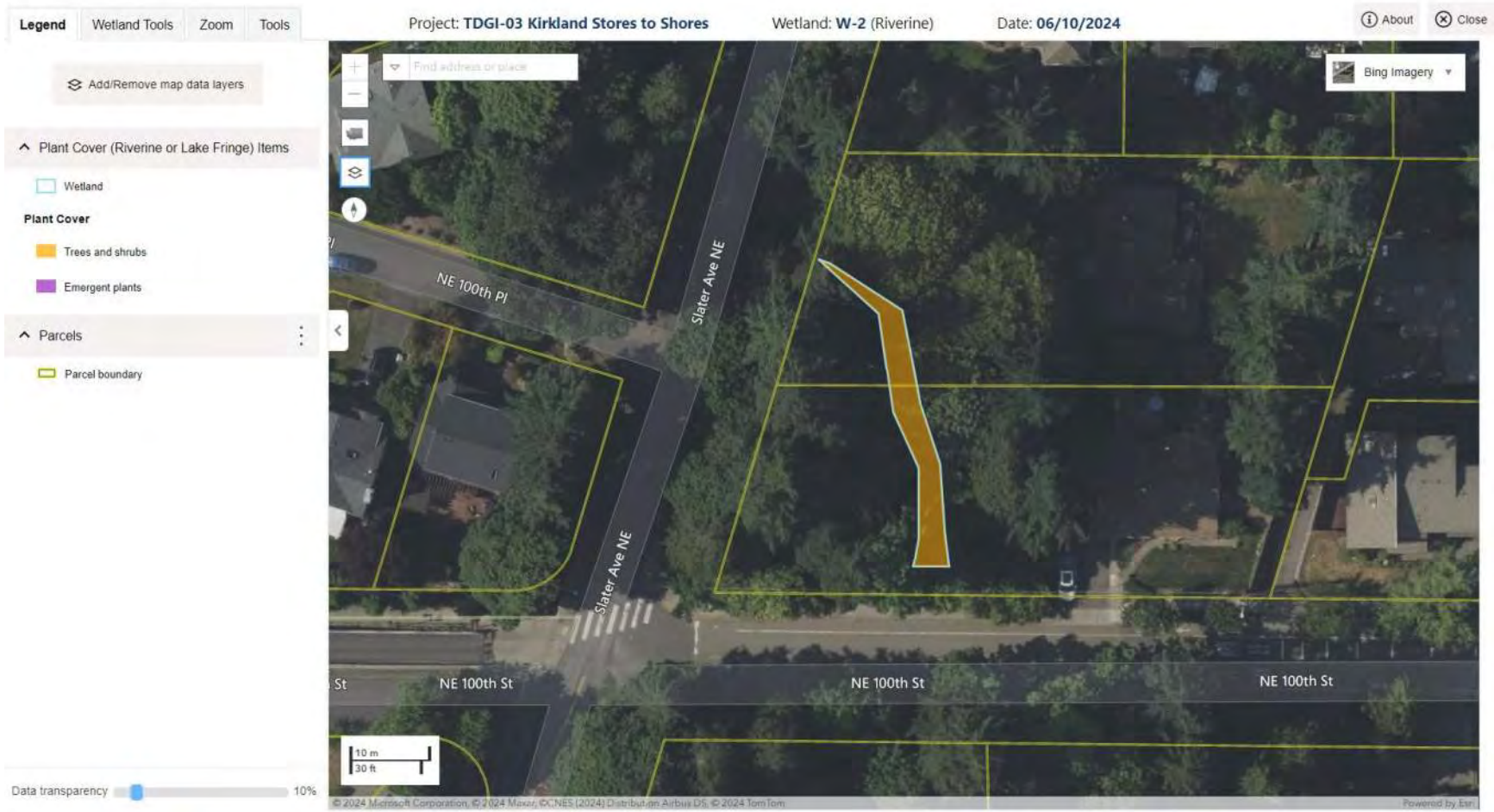


Figure 7: Width

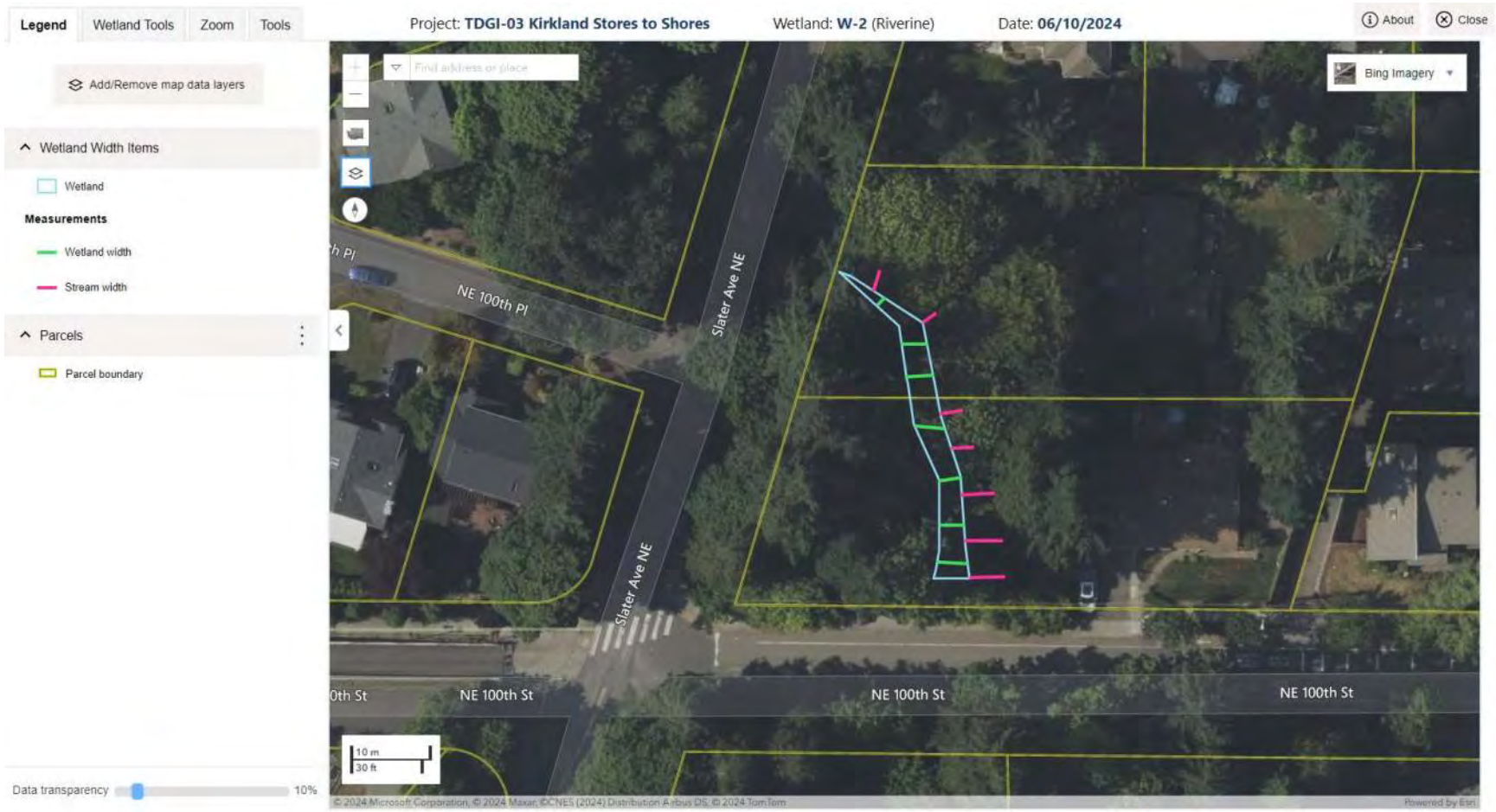


Figure 8: Contributing Basin

Figure 9: Habitat

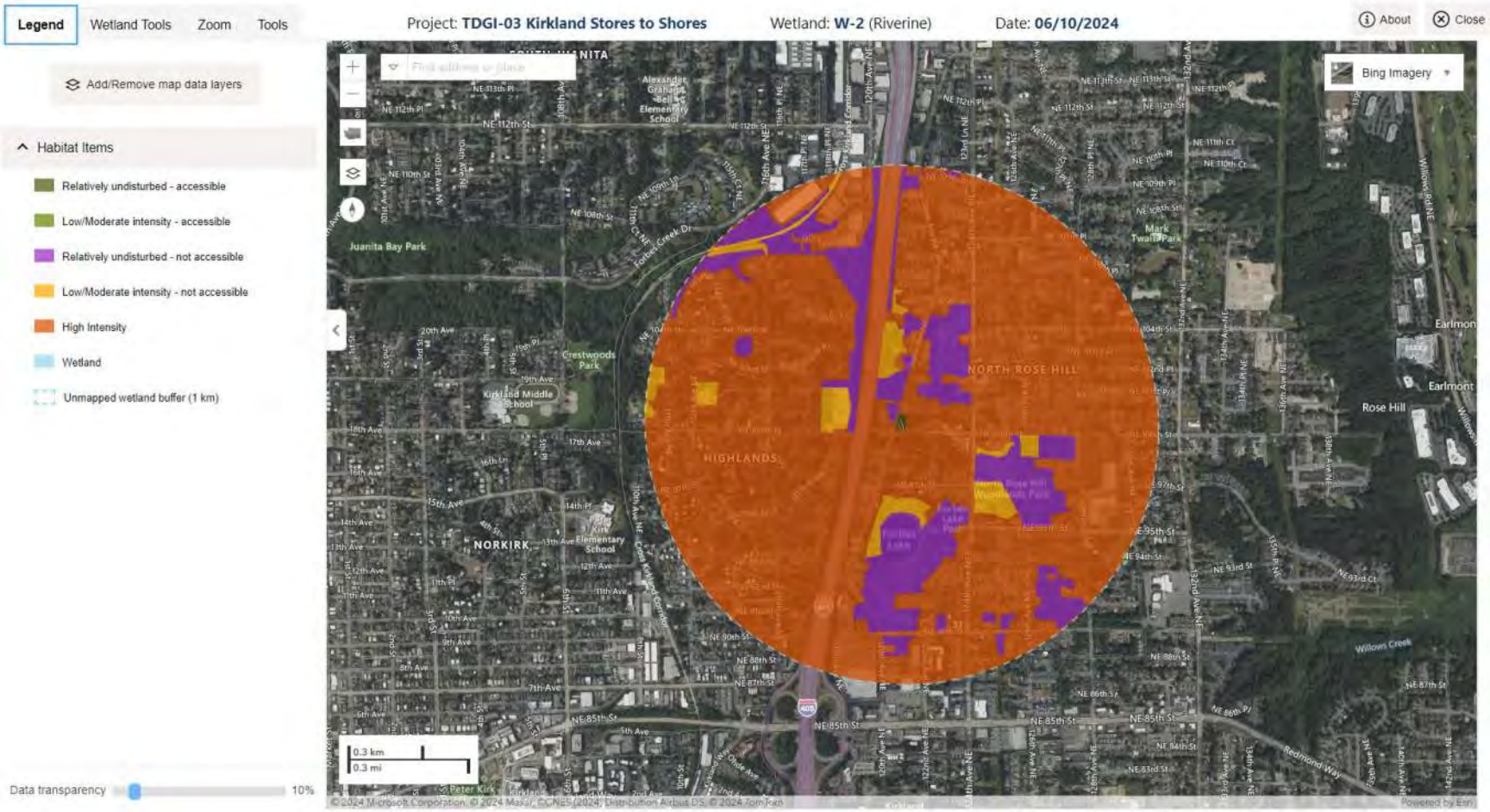


Figure 10: 303(d) Listed Waters

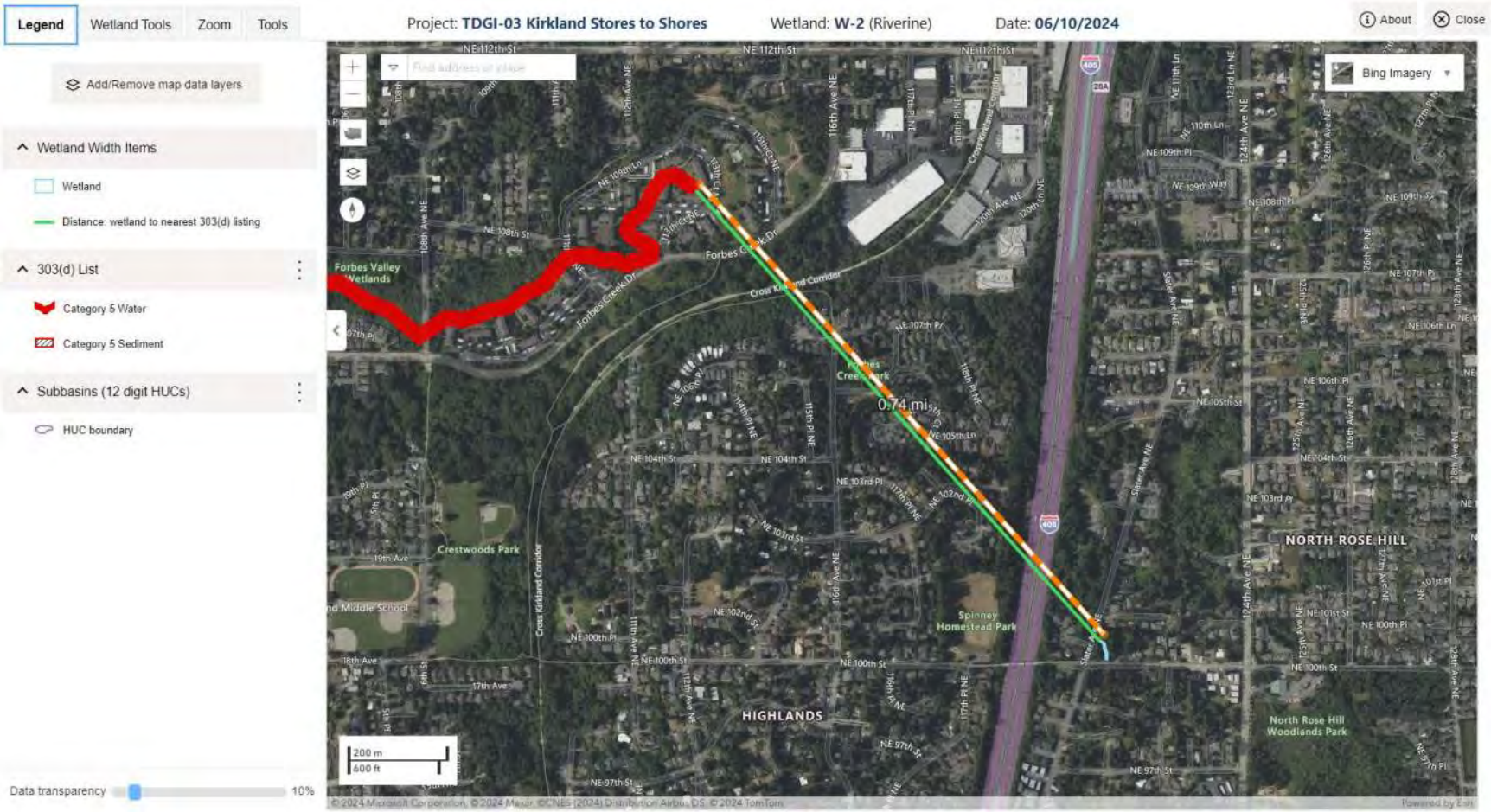


Figure 11: TMDL

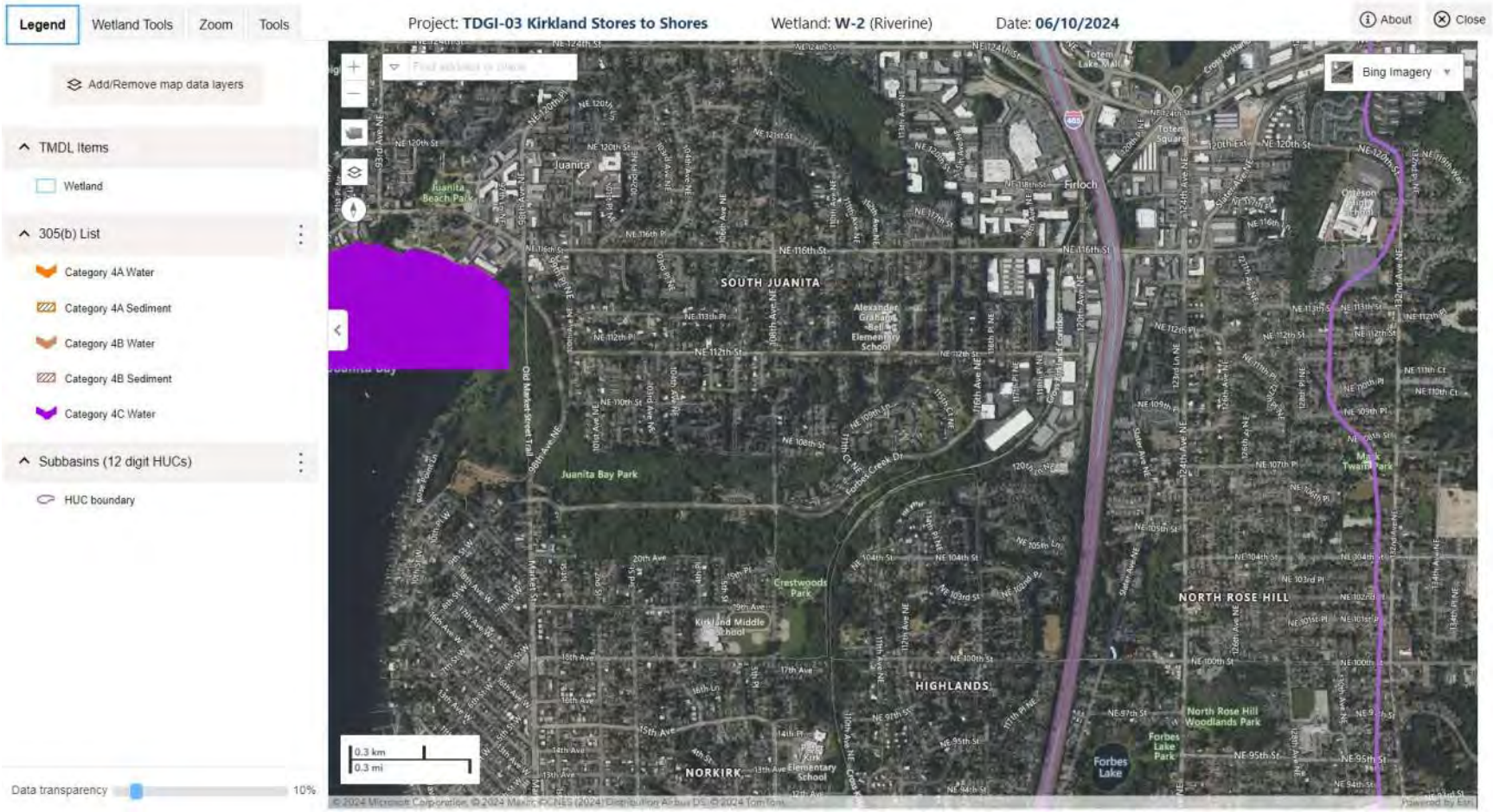
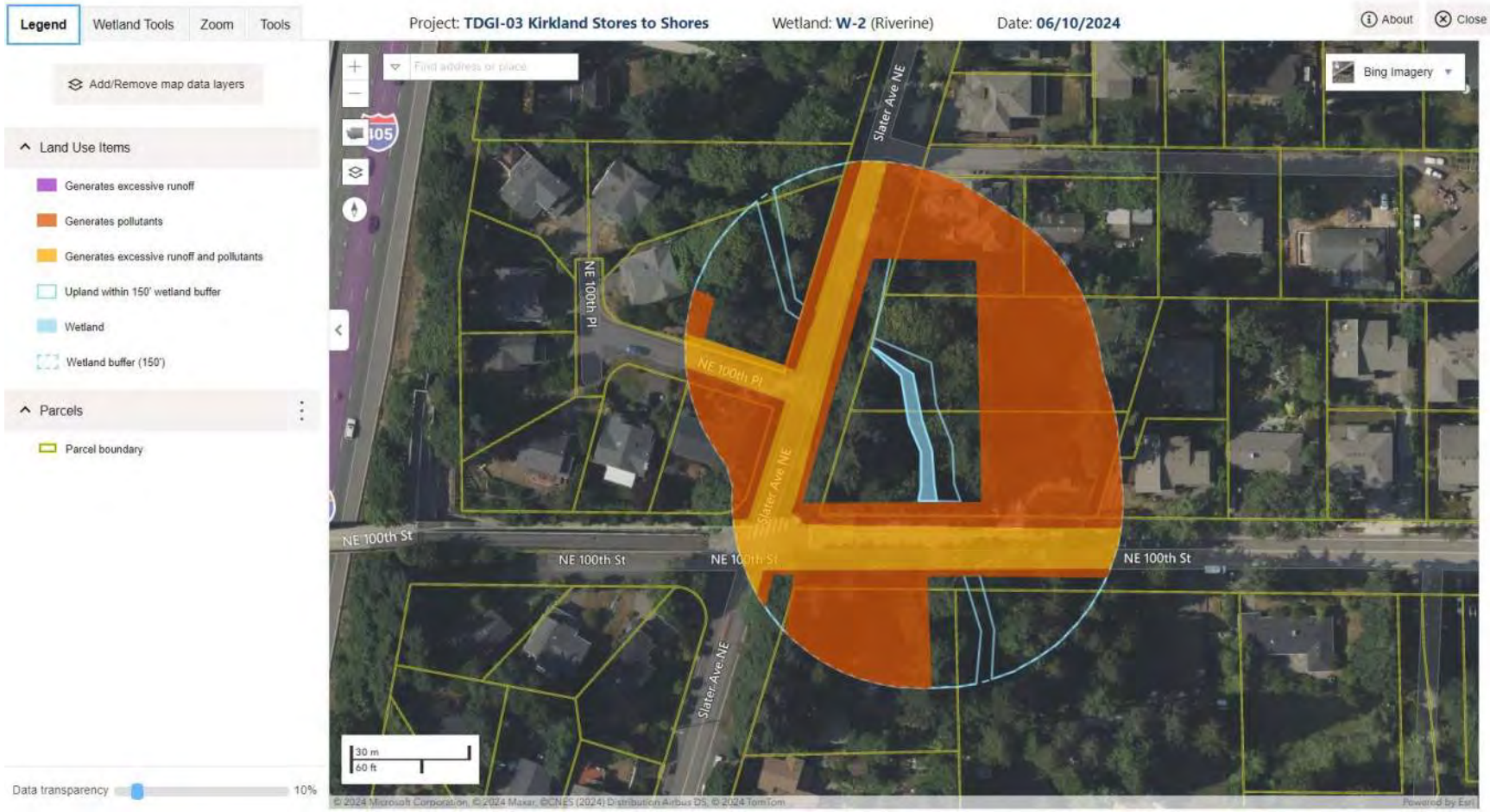


Figure 12: Land Use



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APPENDIX F:
POTHOLE DATA

City of Kirkland

POTHOLE#	1
Test Hole	28
Overlay Thickness (in) Asphalt	7
Create Date	2024-06-28
Overlay Thickness (in) Concrete	NA
Overlay Thickness (in) Brick	NA
Utility Type	Electric
Utility Size (in)	3
Utility Material	PCV
Pipe Direction	N & S
Soil Cond.	sandy and Pea Gravel
Top of Utility from Grade (in)	37
Bottom of Utility from Grade (in)	42
Pipe Condition	(3)Good-well definded/no pits
Width of Structure (in)	16
CL OFFSET 1	Approximately 23 feet west of Market ST center line curb.
CL OFFSET 2	Approximately 18 feet south of 8th Ave W center of road.
Attachments	 20240628_085751_177.jpg  20240628_093926_795.jpg  20240628_094742_364.jpg

Notes	
Created By	robw@apslocates.com
Created Date	2024-06-28 09:49
Edited By	robw@apslocates.com
Edited Date	2024-06-28 09:56
GPS Latitude	47.6815820
GPS Longitude	-122.2097857
GPS Elevation	123.14ft
GPS Uncertainty	0.69ft
GPS Time	2024-06-28 09:49:01
GPS Data	provider: $GPGGA quality: DIF satellites: 19 diffID: 0131 geoid separation: -18.334M hdop: 0.7 diffAge: 6.0sec Vertical Accuracy: 0.466m
Ftr ID	28

POTHOLE#	2
Test Hole	29
Overlay Thickness (in) Asphalt	7
Create Date	2024-06-28
Overlay Thickness (in) Concrete	NA
Overlay Thickness (in) Brick	NA
Utility Type	Electric
Utility Size (in)	6
Utility Material	PCV
Pipe Direction	N & S
Soil Cond.	wet & gravel
Top of Utility from Grade (in)	48
Bottom of Utility from Grade (in)	
Pipe Condition	(3)Good-well definded/no pits
Width of Structure (in)	24
CL OFFSET 1	Approximately 18 feet east of Market ST concrete curb center line.
CL OFFSET 2	Approximately 28 feet south of 9th Ave center of road.
Attachments	 20240628_103308_795.jpg  20240628_105729_490.jpg  20240628_110659_80.jpg  20240628_110714_722.jpg

Notes	
2024-06-28 11:10:43 robw@apslocates.com Also found a gas pipe. #2a Top:37" Bot:41" size:4" stw NS direction. Couldn't get bottom of power conduits because, ground was very wet. Ground kept filling in with water. Might be 59" but not sure.	
Created By	robw@apslocates.com
Created Date	2024-06-28 11:10
Edited By	robw@apslocates.com
Edited Date	2024-06-28 11:20
GPS Latitude	47.6819616
GPS Longitude	-122.2095762
GPS Elevation	125.19ft
GPS Uncertainty	0.82ft
GPS Time	2024-06-28 11:10:43
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Ftr ID	29

POTHOLE#	3
Test Hole	31
Overlay Thickness (in) Asphalt	9
Create Date	2024-06-28 09:46:01
Overlay Thickness (in) Concrete	NA
Overlay Thickness (in) Brick	NA
Utility Type	Water
Utility Size (in)	12
Utility Material	Ductile Iron
Pipe Direction	E & W
Soil Cond.	Sand
Top of Utility from Grade (in)	39
Bottom of Utility from Grade (in)	51
Pipe Condition	(3)Good-well definded/no pits
Width of Structure (in)	
CL OFFSET 1	11' N of approx cl of NE 100th St
CL OFFSET 2	16' E of approx cl of 114th Ave NE
Attachments	 20240628_094133_48.jpg  20240628_094154_81.jpg  20240628_095156_277.jpg

Notes	
Created By	spencera@apslocates.com
Created Date	2024-06-28 09:45
Edited By	spencera@apslocates.com
Edited Date	2024-06-28 09:46
GPS Latitude	47.6896525
GPS Longitude	-122.1885171
GPS Elevation	326.83ft
GPS Uncertainty	0.69ft
GPS Time	2024-06-28 09:45:42
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Ftr ID	31

POTHOLE#	4
Test Hole	32
Overlay Thickness (in) Asphalt	NA
Create Date	2024-06-28 11:00:26
Overlay Thickness (in) Concrete	NA
Overlay Thickness (in) Brick	NA
Utility Type	Water
Utility Size (in)	8
Utility Material	Ductile Iron
Pipe Direction	SE & NW
Soil Cond.	Sand
Top of Utility from Grade (in)	31
Bottom of Utility from Grade (in)	39
Pipe Condition	(3)Good-well definded/no pits
Width of Structure (in)	
CL OFFSET 1	8' N of approx cl of NE 108th St
CL OFFSET 2	18' E of approx cl of Slater Ave NE
Attachments	 20240628_110425_268.jpg  20240628_110453_717.jpg  20240628_114239_612.jpg

Notes	
Created By	spencera@apslocates.com
Created Date	2024-06-28 11:00
Edited By	spencera@apslocates.com
Edited Date	2024-06-28 11:01
GPS Latitude	47.6968574
GPS Longitude	-122.1779532
GPS Elevation	217.92ft
GPS Uncertainty	0.76ft
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Ftr ID	32

POTHOLE#	5
Test Hole	33
Overlay Thickness (in) Asphalt	NA
Create Date	2024-06-28 11:36:25
Overlay Thickness (in) Concrete	NA
Overlay Thickness (in) Brick	NA
Utility Type	Water
Utility Size (in)	6
Utility Material	Ductile Iron
Pipe Direction	E & W
Soil Cond.	Sand
Top of Utility from Grade (in)	35
Bottom of Utility from Grade (in)	41
Pipe Condition	(3)Good-well definded/no pits
Width of Structure (in)	
CL OFFSET 1	29' N of approx cl of NE 108th St
CL OFFSET 2	17' E of approx cl of Slater Ave NE
Attachments	 20240628_112545_138.jpg  20240628_112614_124.jpg  20240628_114603_502.jpg

Notes

Created By	spencera@apslocates.com
Created Date	2024-06-28 11:36
Edited By	spencera@apslocates.com
Edited Date	2024-06-28 11:37
GPS Latitude	47.6969230

GPS Longitude	-122.1779733
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GPS Uncertainty	0.79ft
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Ftr ID	33

POTHOLE#	6
Test Hole	30
Overlay Thickness (in) Asphalt	NA
Create Date	2024-06-28
Overlay Thickness (in) Concrete	NA
Overlay Thickness (in) Brick	NA
Utility Type	Water
Utility Size (in)	8
Utility Material	Steel
Pipe Direction	SE & NW
Soil Cond.	sandy
Top of Utility from Grade (in)	30
Bottom of Utility from Grade (in)	38
Pipe Condition	(3)Good-well definded/no pits
Width of Structure (in)	
CL OFFSET 1	Approximately 15 feet ne of slater ave ne center of road.
CL OFFSET 2	Approximately 52 feet nw of ne 108th pl center of road.
Attachments	 20240628_120136_309.jpg  20240628_121224_656.jpg  20240628_121555_458.jpg

Notes	
Created By	robw@apslocates.com
Created Date	2024-06-28 12:17
Edited By	robw@apslocates.com
Edited Date	2024-06-28 12:21
GPS Latitude	47.6976365
GPS Longitude	-122.1782370
GPS Elevation	210.66ft
GPS Uncertainty	0.62ft
GPS Time	2024-06-28 12:17:09
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Ftr ID	30

APPENDIX G:
SPCC PLAN TEMPLATE

City of Kirkland

City of Kirkland CIP SPCC Plan Template
~ Revised July 17, 2019 ~

Instructions for use:

- **The City of Kirkland Public Works Department modified this template from the WSDOT template for City of Kirkland Capital Projects contractors to use to develop Spill Prevention, Control and Countermeasures Plans (SPCC Plans) that satisfy the current WSDOT Standard Specification 1-07.15(1), applicable City of Kirkland requirements, and National Pollutant Discharge Elimination System (NPDES) requirements.**
- **Replace the blue highlighted text with project-specific information**
- **Yellow highlighted text describes or provides an example of what needs to be written. Using this text as a guide, add a description tailored to the project and then delete the yellow highlighted text.**
- **Create the table of contents (Page ii) for the completed plan by clicking anywhere within the Table of Contents, pressing F9, and selecting "Update Entire Table" and verify that the associated Plan sections/page numbers are consistent and complete.**
- **Delete this front page before printing the plan and submitting it to the City of Kirkland Project Engineer.**

Spill Prevention, Control and Countermeasures Plan
City of Kirkland Project Name
City of Kirkland Contract Number

Prepared by

COK Prime Contractor, Executive: Name

COK Prime Contractor, Project Manager: Name

COK Prime Contractor, Superintendent: Name

Address
City, Washington Zip
Phone Number

Date

Prime Contractor SHALL MAINTAIN A COMPLETE, UPDATED COPY OF THIS PLAN IN AN ACCESSIBLE LOCATION ON THE PROJECT SITE AT ALL TIMES.

City of Kirkland (COK) Project Engineer (PE): Name
COK PE Office Phone: Number

COK Project Inspector: Name
- Office Phone: Number
- Cell Phone: Number

Table of Contents

SPCC Plan Implementation Requirements

The Washington State Department of Transportation (WSDOT) Standard Specification 1-07.15(1) and City of Kirkland (COK) Project-specific special provisions (if applicable) require a Spill Prevention, Control and Countermeasures Plan (SPCC Plan or Plan) to be developed for each Public Works Capital Improvement Project. The purpose of an SPCC Plan is to protect human health and the environment from spills and releases of "hazardous materials," a generic term WSDOT uses in Chapter 447 of its Environmental Procedures Manual to mean dangerous waste, problem waste, petroleum products, and hazardous substances. The SPCC Plan shall also address conditions that may be required by Section 3406 of the current International Fire Code, or as approved by the local Fire Marshal.

COK Prime Contractor, the Prime Contractor for COK Project Name, COK Contract Number (Project), has developed this SPCC Plan to satisfy WSDOT Standard Specification 1-07.15(1) and COK Project-specific special provisions (if applicable) for the Project.

COK Prime Contractor shall update this SPCC Plan throughout the Project so that the written Plan reflects actual site conditions and practices. At a minimum, COK Prime Contractor will update this Plan annually. COK Prime Contractor shall fully implement this SPCC Plan, as accepted and updated, at all times.

No on-site Project construction activities may commence until the City of Kirkland Project Engineer (PE) reviews and accepts this Project-Specific SPCC Plan.

SPCC Plan Elements

1. Responsible Personnel

Table 1.1 identifies the name(s), title(s), and contact information for the personnel responsible for implementing and updating the SPCC Plan, and for responding to spills. If spill response Subcontractor(s) will be used for spill response (as described in Section 8, Spill Response, below), the Subcontractor(s) company name(s) and contact information are also included in Table 1.1. Complete Table 1.

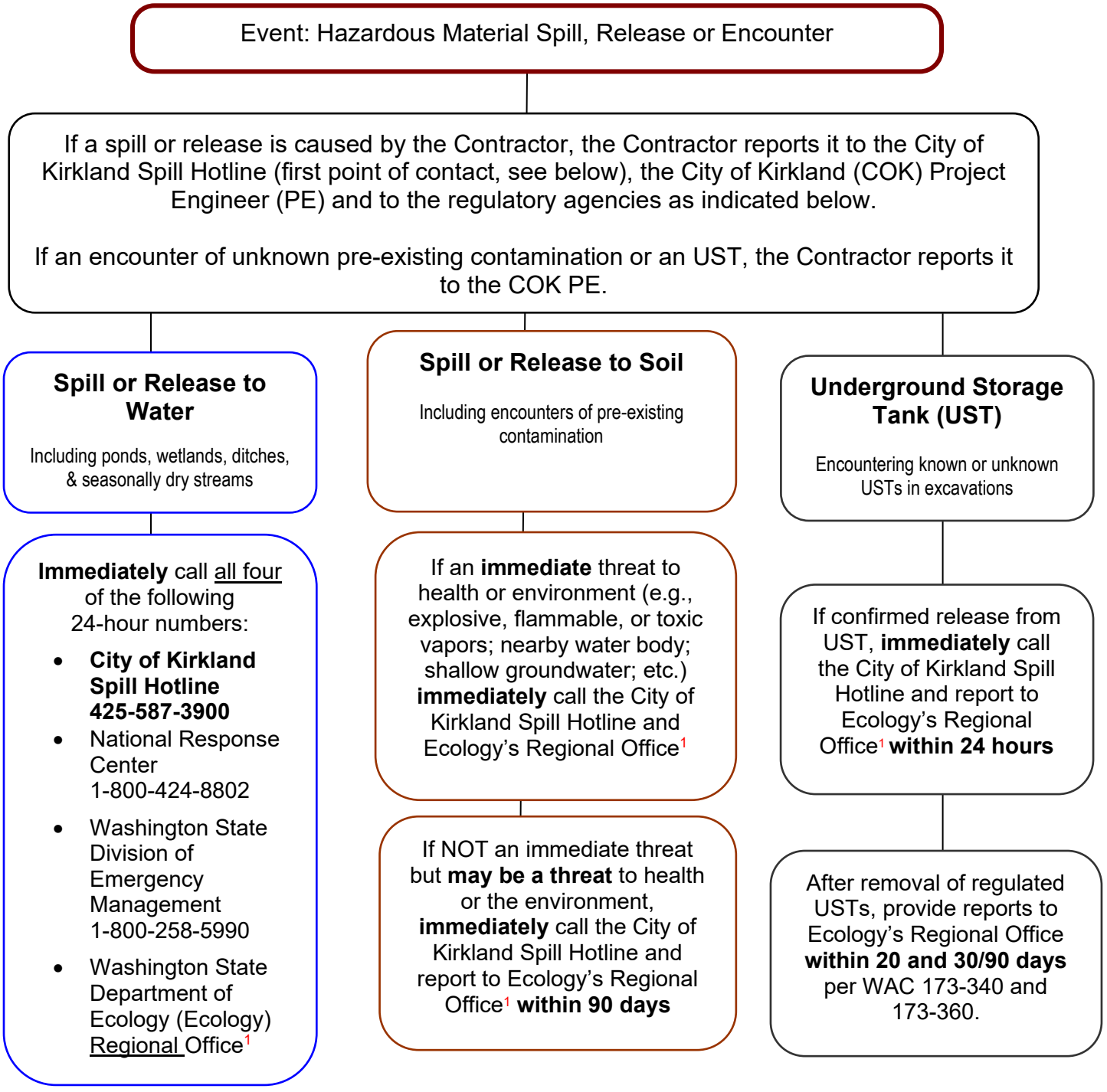
Table 1 Responsible Personnel

Responsibility	Name and Title	Contact Information
Implementing and Updating SPCC Plan (primary contact person)		Company: Office Phone: Cell Phone:
Implementing and Updating SPCC Plan (secondary contact person)		Company: Office Phone: Cell Phone:
On-Site Spill Responder		Company: Office Phone: Cell Phone:
On-Site Spill Responder		Company: Office Phone: Cell Phone:
Spill Response Subcontractor (see Section 8, below) (delete this line if not applicable; add lines if more than one Subcontractor will be used)	- - - - - - -	Company: Office Phone: Cell Phone:

2. Spill Reporting

In the event of a spill, COK Prime Contractor shall notify the COK Project Engineer and shall notify the Federal, State, and Local Agencies listed in Figure 2 and Table 2. COK Prime Contractor will also notify the COK Project Engineer and COK Project Inspector. Complete Table 2 including for each agency the agency name, the agency notification telephone number, and when the agency shall be notified. At a minimum, Table 2 must include and COK Prime Contractor must make the notifications shown in Figure 2.

Figure 2. Regulatory Reporting Requirements Flow Chart



[1] **Ecology Regional Office Numbers**

Eastern (Spokane): 509-329-3400
Central (Yakima): 509-575-2490
Northwest (Bellevue): 425-649-7000
Southwest (Lacey): 360-407-6300

Ecology regional lines and the type of information needed is provided on Ecology's spill reporting website at
http://www.ecy.wa.gov/programs/spills/other/reportaspill.htm

Table 2 Project-Specific Federal, State, and Local Agencies to be Notified in the Event of a Spill

Agency Name	Agency Notification Telephone Number	When Agency Shall be Notified	Agency Region
City of Kirkland Spill Hotline	425-587-3900	Any time there is a spill	City of Kirkland
Department of Ecology	1-425-649-7000	Spill or release to soil that is an immediate threat to human health or the environment or a spill or release to water or a confirmed release or spill from a UST	Northwest Regional Office always for the City of Kirkland
National Response Center	1-800-424-8802	Spill or release to water	Not applicable
Washington State Division of Emergency Management	1-800-258-5990	Spill or release to water	Not applicable
Department of Ecology	1-425-649-7000	Spill or release to water during over water work per Project-specific Special Provision or other permit requirement	Northwest Regional Office always for the City of Kirkland

3. Project and Site Information

Please describe the following items:

A. The Project work: (briefly describe the construction activities that will take place)
B. The site location and boundaries: (include city, county, and starting/ending mileposts – as well as Project boundaries if Project work is not exclusively on a highway corridor)
C. The drainage pathways from the site: (either provide information here or complete Table 3)
D. Nearby waterways and sensitive areas and their distances from the site: (either provide information here or complete Table 3)

Either complete Table 3, below, or provide information above for 3.C and 3.D. and delete Table 3

Table 3 Nearby Waterways[1] and Sensitive Areas[2]

Waterway[1] or Sensitive Area[2]	Distance from Project Site	Direction of Flow from Project Site	Runoff Drainage Pathway from Site
(e.g., Derby Creek)	(e.g., 35 feet east of Project Site)	(e.g., downhill towards the northeast)	(e.g., downhill to northeast from the Project staging area to the lower reach of Derby Creek)
(e.g., Milwaukee Ditch)	(e.g., 350 feet south of Project site)	(e.g., across the pavement to the east)	(e.g., across the pavement east of the roundabout, into the catch basin, and into Milwaukee Ditch)

Notes:

1 Waterways include streams, creeks, sloughs, rivers, Puget Sound, etc.

2 Sensitive areas are areas that typically contain populations that could be particularly sensitive to a hazardous materials spill or release. Such areas include wetlands, areas that provide habitat for threatened or endangered species, nursing homes, hospitals, child care centers, etc. Sensitive areas also include areas where groundwater is used for drinking water, such as wellhead protection zones and sole source aquifer recharge areas.

4. Potential Spill Sources

A description of each potential fuel, petroleum product and other hazardous material brought or generated on-site is set forth in Table 4.1. The potential fuel, petroleum product and other hazardous materials listed on Table 4.1 include materials used for operating, refueling, maintaining, and cleaning equipment - including equipment used below the ordinary high water line. Complete Table 4, listing information for EACH fuel, petroleum product and hazardous material.

Table 4 Fuel, Petroleum Product and other Hazardous Materials Brought or Generated On-Site

Hazardous Material Name	Intended Use of Material	Est. Max. Amount of Material On-Site at Any One Time	Material Staging, Use, and Storage Location(s), & Material Storage and Secondary Containment Practices and Structures, in accordance with Element 7[1]	Distance of Material Staging, Use, and Storage Locations from Nearby Waterways[2] and Sensitive Areas[3]
(e.g., gasoline, diesel, motor oil, hydraulic oil, cleaning solvent, paint)				

Notes:

1 See also Section 7 (Spill Prevention, secondary containment and structures should be described in Table 4 and under Section 7D).

2 Waterways include streams, creeks, sloughs, rivers, Puget Sound, etc.

3 Sensitive areas are areas that typically contain populations that could be particularly sensitive to a hazardous materials spill or release. Such areas include wetlands, areas that provide habitat for threatened or endangered species, nursing homes, hospitals, child care centers, etc. Sensitive areas also include areas where groundwater is used for drinking water, such as wellhead protection zones and sole source aquifer recharge areas.

5. Pre-Existing Contamination

* Describe any pre-existing contamination and contaminant sources (such as buried pipes, buried tanks, buried drums or other buried containers) in the Project area that are described in the Contract documents; and
* Identify equipment and work practices that will be used to prevent the release of contamination.

- if no pre-existing contamination or contaminant sources -
are described in the Contract documents, write "N/A"

Example: Soil contaminated with petroleum products is suspected of existing near the southeast corner of the intersection of SR 99 and Cordane Street. If soil that is suspected of being contaminated is encountered, it will be stockpiled in the vicinity of the excavation for characterization sampling and determination of disposal options. Soil that is suspected of being contaminated will be stockpiled separately from soil showing no indication of contamination. Soil that is suspected of being contaminated will be stockpiled on an impervious surface and will be set up to allow for ease of sampling and load-out once characterization is complete. Stockpiles of suspected contaminated soil will be covered with plastic sheeting when not being worked; stormwater that could run into the base of such stockpiles will be diverted from the area.

**If a Project-specific soil management plan (SMP), water management plan (WMP), temporary erosion and sediment control (TESC) plan, contaminated media management plan (CMMP) or other plan concerning contaminated materials has been prepared for known SPCC-related Project conditions, please briefly refer to them here and attach final versions to this Plan.

6. Spill Prevention and Response Training

Describe how and when all Project personnel (including refueling personnel and other subcontractors) shall be trained in spill prevention, containment, and response, and the location of spill response kits.

7. Spill Prevention

A. Spill response kit contents and location(s) (see Table 7). Appropriately stocked spill response kits shall be maintained in close proximity to hazardous materials and equipment and shall be immediately accessible to all Project personnel. **City of Kirkland requires a minimum of one (1) vehicle kit in each contractor vehicle, in addition to any other spill kits stored on-site by the Contractor.** Complete Table 7.

Table 7 Spill Response Kit Contents and Locations

Type of Spill Kit	Spill Kit Contents	Spill Kit Location(s)
(e.g. vehicle kit, drum kit, conex kit)	(e.g., air horn to get attention of those working nearby, personal protective equipment (PPE, such as safety glasses, gloves, coveralls, boot covers), spill pads, absorbent, booms, catch basin covers, anti-static shovels, garbage bags, plastic sheeting, overpack or disposal drum, complete copy of SPCC Plan, etc.)	(e.g., adjacent to in-water work, on bridge ramp, within 1,000' of active construction areas, next to Honey Buckets, on large equipment, outside main job trailer, in staging area conex, on mitigation site, below north end of bridge, etc.)

B. Security measures for potential spill sources. Describe the security measures that will be maintained to prevent accidental spills and vandalism, e.g., the staging area will be surrounded by a secured fence, hazardous materials will be stored inside a locked storage shed, equipment will be equipped with locked fuel caps, etc.

C. Methods used to prevent stormwater from contacting fuel, petroleum products and hazardous materials. Describe the methods that will be used to prevent stormwater contact with hazardous materials, e.g., contaminated soil will be placed on bermed plastic and covered.

D. Secondary containment for each potential spill source listed in Section 4, above. Describe here or in Table 4.1 the practices and structures that will be used to store and contain potential fuel, petroleum product and hazardous materials as well as the practices and structures that will be used to store and contain equipment used to transfer potential fuel, petroleum product and hazardous materials. The description must at least incorporate the following requirements:

- Secondary containment structures shall be in accordance with Section S9.D.9 (http://www.ecy.wa.gov/programs/wq/stormwater/construction/permitdocs/cswgppermit120110.pdf) of Ecology's Construction Stormwater General NPDES Permit, where secondary containment means placing tanks or containers within an impervious structure capable of containing 110% of the volume contained in the largest tank within the containment structure. This NPDES Permit does not require additional secondary containment for double-walled tanks.
- Any more stringent secondary containment requirements (including for double-walled tanks) required by a 401 Permit, Special Provision or other Permit/Contract requirement for work in or over water. Attach a copy of the 401 Permit, Special Provision or other Permit/Contract document indicating the more stringent requirement.

  Any more stringent secondary containment (including double-walled tanks) required by an IFC official (local fire marshal). Attach a copy of the IFC official documentation indicating the more stringent requirement.

- Secondary containment BMPs, as presented by Ecology (http://www.ecy.wa.gov/programs/wq/stormwater/manual.html), are required during fueling activity from fuel tanks, including double-walled tanks.

E. Best Management Practices (BMP) Methods used to prevent discharges to ground or water during mixing and transfers of hazardous materials, petroleum product and fuel. Describe here methods to control pollutants using BMPs in accordance with Ecology's Construction Stormwater General NPDES Permit. BMPs guidance is provided in Ecology's Stormwater Management Manuals, such as Volume II – Construction Stormwater Pollution Prevention, BMP C153 (Volume II Construction Stormwater Pollution Prevention) (and Volume IV Source Control BMPs (Stormwater Manual Volume IV Source Control BMPs).

F. Refueling procedures for equipment that cannot be moved from below the ordinary high water line. Describe these procedures. Write N/A if no work will be performed below the ordinary high water line.

G. Daily inspection and cleanup procedures that ensure all equipment used below the ordinary high water line is free of all external petroleum-based products. Describe these procedures. Write N/A if no work will be performed below the ordinary high water line.

H. Routine equipment, storage area, and structure inspection and maintenance practices to prevent drips, leaks or failures of hoses, valves, fittings, containers, pumps, or other systems that contain or transfer hazardous materials. Describe the equipment and structure inspection and maintenance practices.

I. Site inspection procedures and frequency. Describe the site inspection frequency and site inspection procedures.

8. Spill Response

Tables 8A and 8B, below, outline the response procedures that COK Prime Contractor shall follow for the scenarios described in the tables below, indicating that if hazardous materials are encountered or spilled to soil or water (including stormwater, as described in Section 7C) during construction, the COK Prime Contractor shall do everything possible to control and contain the material until appropriate measures can be taken. The response procedures include a description of the actions that COK Prime Contractor shall take to address each task shown in the tables as well as the specific on-site, spill response equipment that shall be used to perform each task. Complete Tables 8A and 8B.

If COK Prime Contractor will use a Subcontractor for spill response, provide contact information for the Subcontractor in Table 1 and, in the appropriate table below, identify when the Subcontractor shall be used and the actions that COK Prime Contractor shall take at the site while waiting for the Subcontractor to respond. Add Subcontractor information to Tables 8A and 8B accordingly.

If COK Prime Contractor encounters unanticipated pre-existing contamination within the Project area during Project work, COK Prime Contractor shall immediately notify the COK Project PE.

Table 8A Spill Response Procedures, Including Actions to be Taken and Equipment to be Used

Hazardous Material and Location	Spill Response Task			
	Assess the Spill	**Secure the Area**	**Contain and Eliminate the Spill Source**	**Clean Up Spilled Material Decontaminate Equipment Dispose of Spilled & Contaminated Material[1]**
(e.g., identify each fuel, petroleum product and hazardous material listed in Section 4, stormwater that has come into contact with hazardous material, pre-existing contamination or contaminant sources, and unknown pre-existing contamination or contaminant sources. Exception: complete Table 8B for spills occurring during work below the Ordinary High Water Line)	(e.g., include in this or other columns a description of the internal, emergency assistance, COK Spill Hotline notification, and agency notifications that will be made as part of the response procedures, referencing and adding to Table 2.1 as appropriate)	(e.g. identify which area will be secured and how the area will be secured)	(e.g. identify how the spill source will be contained and eliminated during spill response)	(e.g., Identify how the spill will be cleaned up whether in soil or water, including stormwater that has contacted petroleum product, fuel or a hazardous material). Explain how the spilled material and all cleanup supplies will be disposed of; describe documentation substantiating such disposal that will be provided to the COK PE and when it will be provided.

Notes:

[1] Spilled fuel, petroleum product and hazardous materials, contaminated stormwater, contaminated soil and water, and all cleanup supplies shall be transported off site for disposal at a facility approved by the Department of Ecology. No potentially hazardous materials, contaminated soil or water, or cleanup supplies may be discharged to any sanitary sewer without approval of the local sewer authority. Contaminated stormwater will not be discharged to any sanitary sewer without approval of the local sewer authority.

- Petroleum products, fuel, and hazardous material spills shall be addressed and shall be prevented from reaching storm drains or other discharge points.
- It is acceptable to combine materials covered by the same response procedures, as long each material is clearly identified.

Table 8B Spill Response Procedures for Spills Occurring During Work with Equipment Used Below the Ordinary High Water Line (Including Actions to be Taken and Equipment to be Used)

Hazardous Material and Location	Spill Response Task			
	Assess the Spill	Secure the Area	Contain and Eliminate the Spill Source	Clean Up Spilled Material Decontaminate Equipment Dispose of Spilled & Contaminated Material[1]
(e.g., identify each fuel, petroleum product and hazardous material to be used below the ordinary high water mark)	(e.g., include in this or other columns a description of the internal, emergency assistance, COK Spill Hotline notification, and agency notifications that will be made as part of the response procedures, referencing and adding to Table 2.1 as appropriate)	(e.g. identify which area will be secured and how the area will be secured)	(e.g. identify procedures on how the spill source will be contained and eliminated during spill response)	(e.g., Identify how the spill will be cleaned up whether in soil or water, including stormwater that has contacted petroleum product, fuel or a hazardous material). Explain how the spilled material and all cleanup supplies will be disposed of; describe documentation substantiating such disposal that will be provided to the COK PE and when it will be provided.

Notes:

[1] Spilled fuel, petroleum product and hazardous materials, contaminated stormwater, contaminated soil and water, and all cleanup supplies shall be transported off site for disposal at a facility approved by the Department of Ecology. No potentially hazardous materials, contaminated soil or water, or cleanup supplies may be discharged to any sanitary sewer without approval of the local sewer authority. Contaminated stormwater will not be discharged to any sanitary sewer without approval of the local sewer authority. Write N/A if no equipment will be used below the ordinary high water line and delete the following table (but not the table title, above).

9. Project Site Map

A Project site map, clearly showing each of the following required or recommended items (attach map):

A. Site location and boundaries;
B. Site access roads;
C. Drainage pathways from the site;
D. Nearby waterways and sensitive areas (Waterways include streams, creeks, sloughs, rivers, Puget Sound, etc. Sensitive areas are areas that typically contain populations that could be particularly sensitive to a hazardous materials spill or release. Such areas include wetlands, areas that provide habitat for threatened or endangered species, nursing homes, hospitals, child care centers, etc. Sensitive areas also include areas where groundwater is used for drinking water, such as wellhead protection zones and sole source aquifer recharge areas.);
E. Hazardous materials, equipment, and decontamination areas identified in Section 4 (Potential Spill Sources), above;
F. Pre-existing contamination or contaminant sources described in Section 5 (Pre-Existing Contamination), above;
G. Spill prevention and response equipment described in Section 7 (Spill Prevention) and Section 8 (Spill Response), above;
H. Recommend providing the COK Prime Contractor Executive, COK Prime Contractor Project Manager and COK Prime Contractor Superintendent initial sign-off; and
I. Recommend using Project-specific Plan Sheets or a consistent map scale with identifiable or readable map symbols for each Project SPCC Map.

10. Spill Report Form(s)

A copy of the spill report form that COK Prime Contractor shall use in the event of a release or spill is attached (attach form; an example is attached at the end of this template).

11. Plan Approval

This SPCC Plan is supported by the executives, project manager and the superintendents of COK Prime Contractor having the authority to commit the necessary resources, including labor, equipment, and materials, to expeditiously control and remove any harmful quantity of fuel, petroleum product or hazardous materials spilled or released to the waters or land of the State of Washington.

Executive Signature
COK Prime Contractor

_____ Date

_____
Name
Title
COK Prime Contractor

Project Manager Signature
COK Prime Contractor

_____ Date

_____
Name
Title
COK Prime Contractor

Superintendent Signature
COK Prime Contractor

_____ Date

_____
Name
Title
COK Prime Contractor

SPCC Plan Acknowledgement Form (to be signed by all Project personnel)

This is to certify that I have read this Project SPCC Plan and understand its contents. I have attended a Project orientation meeting discussing the elements of this SPCC Plan and the safety and health hazards associated with SPCC operations to be performed at this Project. Failure to comply with the requirements contained in this SPCC Plan may result in my removal from the Project.

PRINT NAME	SIGNATURE	DATE

APPENDIX A

EXAMPLE SPILL OR INCIDENT REPORT FORM

Instructions: Complete for any type of petroleum product or hazardous materials/waste spill or incident. Provide a copy of this report to management.

1. COK Personnel Involved in Spill Reporting:

Name, Title, and Phone Number: _____

_____

2. Contractor:

Name and Title of Person Responsible for Spill Response: _____

Phone Number:_____

3. General Spill Information:

Common Name of Spilled Substance: _____

Quantity Spilled (Estimate): _____

Describe Concentration of Material (Estimate): _____

Date of Spill: _____/_____/_____

Time Spill Started: _____ AM _____ PM Time Spill Ended: _____ AM _____ PM

4. Spill Location and Conditions:

Project Title: _____

Street Address and/or Milepost, City: _____

Weather Conditions: _____

If Spill to Water,

Name of Water Body (if ditch or culvert, identify the water body that the structure discharges to):

_____

Identify the Discharge Point: _____

Estimate the Depth and Width of the Water Body: _____

Estimate Flow Rate (i.e., slow, moderate, or fast): _____

Describe Environmental Damage (i.e., fish kill?): _____

5. Actions Taken:

Time City of Kirkland Spill Hotline Called: _____

To Contain Spill or Impact of Incident: _____

To Cleanup Spill or Recover from Incident: _____

To Remove Cleanup Material: _____

To Document Disposal: _____

To Prevent Reoccurrence: _____

6. Reporting the Spill:

Spills to water: Immediately call the City of Kirkland Spill Hotline (425-587-3900), National Response Center (1-800-424-8802), Emergency Management (1-800-258-5990), and the appropriate Ecology Regional Office.

Spills to soil that may be an immediate threat to health or the environment (i.e., explosive, flammable, toxic vapors, shallow groundwater, nearby creek, etc.)**:** Call the City of Kirkland Spill Hotline (425-587-3900) and the appropriate Ecology Regional Office immediately. If not immediately threatening, but may be a threat to human health or the environment, the City of Kirkland Spill Hotline (425-587-3900) immediately and report to the appropriate Ecology Regional Office within 90 days.

List all agencies contacted; include names, dates, and phone numbers for people you spoke with:

_____

_____

_____

Record ERTS #, if issued by Ecology: _____

7. Person Responsible for Managing Termination/Closure of Incident or Spill:

Name and Phone: _____

Address and Fax: _____

8. Additional Notes/Information (if necessary):