THE WATERSHED COMPANY

SCIENCE & DESIGN

August 24, 2017

Allison Zike
City of Kirkland
Planning & Community Development
123 Fifth Avenue
Kirkland, WA 98033

Re: Lu Project – Revised Wetland Buffer Modification Plan Review

The Watershed Company Reference Number: 080704.6

Dear Allison:

Thank you for requesting we review the revised buffer modification plan submitted for this project. Our prior review, dated March 20, 2017, included eleven recommended revisions. Most of those revisions have been addressed in a June 22, 2017 letter from Wetlands Northwest, and as reflected in an attached revised mitigation plan set and civil engineering plans. This letter is a summary of the revised submittal review findings.

Findings

1. The civil engineering plans, prepared by Civil Engineering Solutions, have not been revised to reflect the new mitigation planting area. **Recommendation**: Since the planting plan is much more extensive than previously shown, all project plans should be consistent to avoid future confusion.

2. The Wetlands Northwest letter describes an infiltration trench at the southwest corner of the proposed residence. The letter does not describe a splash block at the northwest house corner and an unspecified outfall type at the reduced buffer edge draining via a 4" pipe from the north edge of the driveway. These elements are shown on the civil plans. KZC 90 allows stormwater outfalls within buffer setbacks only when it can be satisfactorily shown the outfalls meet certain requirements and criteria. The revision does not address these criteria. **Recommendation:** The civil plans should provide more detail on the 4-inch pipe outfalling towards the wetland buffer; specifically, how will this water be dispersed? The applicant should also provide a narrative outlining how the proposed outfalls meet the requirements and criteria found in 90.45.3

750 Sixth Street South | Kirkland, WA 98033
p 425.822.5242 | f 425.827.8136 | watershedco.com

3. The revised planting plan showing additional plantings around the house are generally acceptable with one exception. The plants do not change in the vicinity of the three proposed stormwater outfalls. **Recommendation:** Revise the planting plan to include more stormwater-tolerant species in the vicinity of stormwater dispersal areas.

Please call if you have any questions or if we can provide you with any additional information.

Sincerely,

Hugh Mortensen, PWS
President

Wetlands Northwest LLC

November 3, 2017

Allison Zike
City of Kirkland- Planning and Building Department
123 Fifth Avenue
Kirkland, Washington 98033

Re: SAR16-02993 Lu Wetland Buffer Modification

Dear Ms. Zike:

This is in response to the review letter dated August 24, 2017 by the *Watershed Company*. Each item in the review letter is addressed below:

Item 1:
The civil engineering plans, prepared by Civil Engineering Solutions, have not been revised to reflect the new mitigation planting area. Recommendation: Since the planting plan is much more extensive than previously shown, all project plans should be consistent to avoid future confusion.

Response: The engineer's civil/drainage sheet now shows the planting mitigation in the background as advised. See Attached Civil Plans.

Item 2:
The Wetlands Northwest letter describes an infiltration trench at the southwest corner of the proposed residence. The letter does not describe a splash block at the northwest house corner and an unspecified outfall type at the reduced buffer edge draining via a 4" pipe from the north edge of the driveway. These elements are shown on the civil plans. KZC 90 allows stormwater outfalls within buffer setbacks only when it can be satisfactorily shown the outfalls meet certain requirements and criteria. The revision does not address these criteria. Recommendation: The civil plans should provide more detail on the 4-inch pipe outfalling towards the wetland buffer; specifically, how will this water be dispersed? The applicant should also provide a narrative outlining how the proposed outfalls meet the requirements and criteria found in 90.45.3.

Response from Engineer: "Splashblocks inherently have no impact. I would never characterize a roof downspout to a Splashblock as an outfall. Splashblocks inherently disperse the roof water to the surrounding area. These are considered low impact and simple, low cost and elegant forms of dispersion. It's too bad we can't use them more often in the urban areas. The tributary roof area is only 0.01 acre (700 sf). Outfall should be used to characterize much larger basins with bigger diameter storm systems.

The infiltration trench located at SW corner reference is actually a dispersion trench. They look the same as infiltration and are shallow rock filled trenches but dispersion has a level spreader "header" at surface in case the trench fills with water and it will then disperse evenly across it's length. Pretty low impact bmp also."

See attached Splashblock Detail

Item 3:
The revised planting plan showing additional plantings around the house are generally acceptable with one exception. The plants do not change in the vicinity of the three proposed stormwater outfalls. Recommendation: Revise the planting plan to include more stormwater-tolerant species in the vicinity of stormwater dispersal areas.

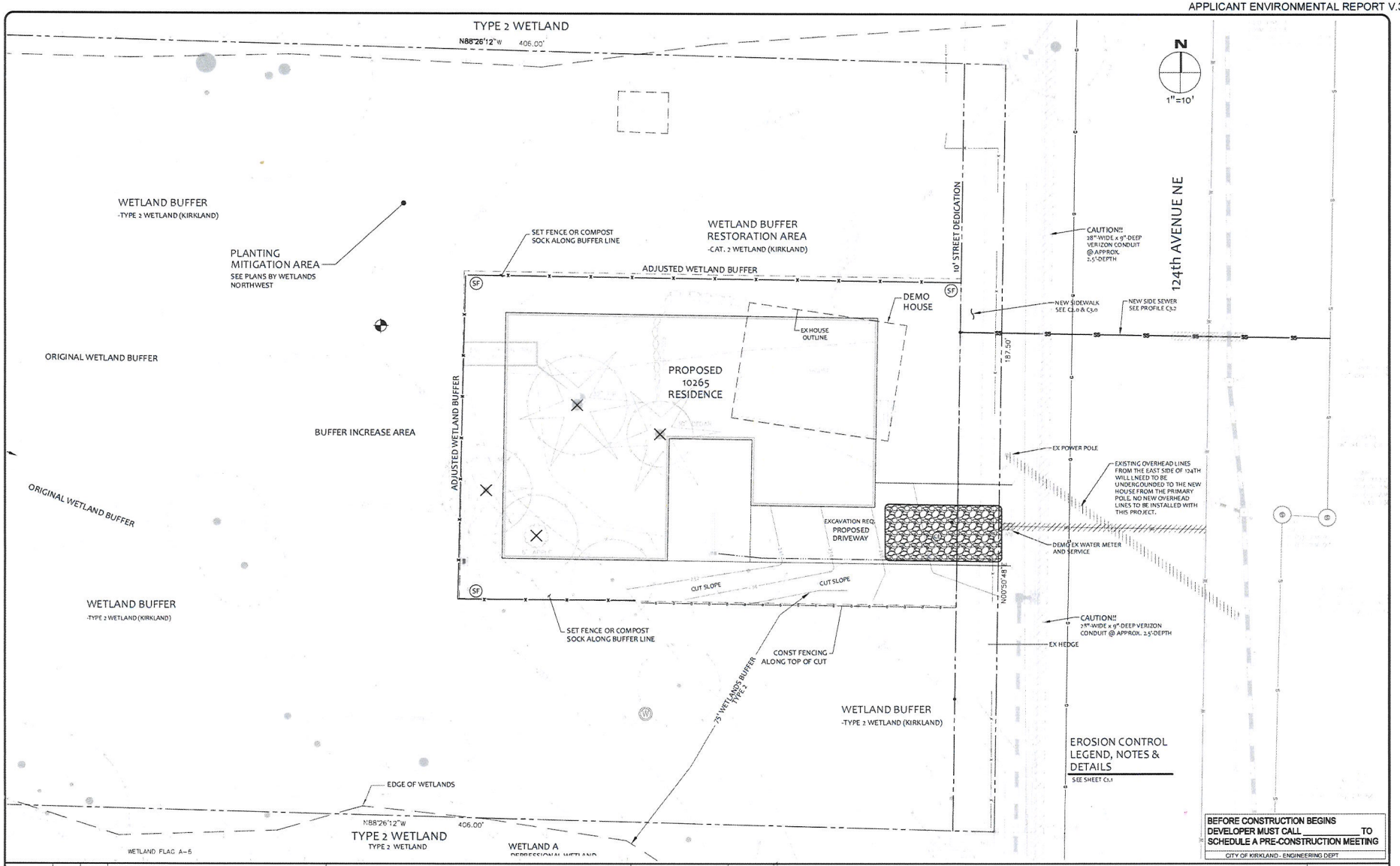
Response: See revised Buffer Mitigation plan attached with this submission dated 10/23/2017.

5218 Ivanhoe PL NE
Seattle, WA 98105
206-456-5474
www.wetlandsnw.com

If you have any further questions, feel free to contact me on my mobile phone at 206-554-1628.

Sincerely,

Robert King, PWS
Principal



BEFORE CONSTRUCTION BEGINS DEVELOPER MUST CALL _____ TO SCHEDULE A PRE-CONSTRUCTION MEETING
CITY OF KIRKLAND - ENGINEERING DEPT

NO.	DATE	BY	REVISIONS

APPLICANT KUO

811 Know what's below. Call before you dig.

CITY OF KIRKLAND WASHINGTON

THIS DEVELOPMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2017 CITY OF KIRKLAND STANDARD SPECIFICATIONS AND DETAILS.

DATE Nov 03, 2017
JOB# 1525
DRAFTED: CH DESIGN: DE
DIGITAL SIGNATURE

Nov 03, 2017

CIVIL ENGINEERING SOLUTIONS
2244 NW MARKET STREET, SUITE B SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

TEMPORARY EROSION & SEDIMENT CONTROL

PROPOSED 10265 RESIDENCE
10265 124TH AVE NE, KIRKLAND 98033

DRAWING NO: C1.0

APN 663990-0280
BSF17-01267

SANITARY SEWER IMPROVEMENTS DETAILS C3.2

(1) -SHALLOW CROSSING - 6" DI SIDE SEWER STUB @ MIN 1.0± PER KIRKLAND DETAIL CK-S.19 AND CK-S.20. INSTALL MARKER POST PER CK-S.18. (SEE FURTHER REQUIREMENTS ON PLAN ABOUT CENTERING PIPE STICK OVER EXISTING WATER.)

(2) -

(3) -

(7) -

WATER IMPROVEMENTS

(10) -1"X1" WATER SERVICE & METER PIT PER DETAIL CK-W.18.

(11) -1.5" DIA WATER SERVICE, 250 PSI HDPE WATER (ASTM D2239) FROM METER TO HOUSE. RECOMMENDED MIN DEPTH=36". COORDINATE HOUSE ENTRY WITH BUILDER/OWNER

(12) -

(13) -

(14) -

STORM DRAIN

(20) -4" STORM DRAIN (3034 PVC) @ MIN 2.0% GRADE

(21) -

(22) -

(23) -

(24) -

(25) -

STORM DRAIN STRUCTURES

(30) -

(31) -

(32) -TYPE 1 CB WITH SOLID LID. MAX 5' RIM TO INVERT DEPTH

(33) -

(34) -

(35) -

(35A) -

(35B) -

(36) -NDS DURASLOPE CHANNEL DRAIN OR EQUAL. MINIMUM 6" DEEP CHANNEL. VEHICLE-RATED GRATE.

(40) -TYPE 40 PRIVATE CATCH BASIN PER KIRKLAND DETAIL CK-D.05A. INSTALL OVERFLOW PIPE OUT TO BUFFER.

STORMWATER FLOW CONTROL BMP's DETAILS C3.5

(50) -RESTORE SOILS WITH COMPOST AMENDED SOIL PER CITY DETAIL CK-E.12 AND DOE BMP DETAIL TS-13: COORDINATE WITH LANDSCAPING CONTRACTOR.

(51) -

(52) -SPLASHBLOCK (FULL DISPERSION): MINIMUM 100' VEGETATED FLOWPATH PER 2016 KC SWDM C.2.1.3. SEE DETAIL (FIGURE C.2.1.A) ON SHEET C3.5.

(53) -24" WIDE X 18" DEEP GRAVEL FILLED DISPERSION TRENCH PER CITY DETAIL CK-D.21. SEE PLAN FOR LENGTH. SEE DETAIL SHEET C3.5.

(54) -

(55) -

(56) -

(57) -

(58) -

STREET IMPROVEMENTS DETAILS C3.4

(60) -

(61) -5'-WIDE PERVIOUS SIDEWALK PER DETAIL CK-L.06 ON SHEET C3.4.

(62) -DRIVEWAY PER DRIVEWAY DETAIL CK-R.21 ON SHEET C3.4. SEE ARCH. PLAN FOR WIDTH.

(63) -

(65) -

(67) -STREET TREE PER KIRKLAND DETAIL CK-R.48, C3.4. CENTER IN PLANTER STRIP. FOR TREE SELECTION, SEE KIRKLAND POLICY R-10.

(68) -

(70) -

(71) -3" ASPHALT OVERLAY REQUIRED WHERE 3 OR MORE UTILITY TRENCHES CROSSINGS OCCUR WITHIN 150 LF STRETCH. CONFIRM WITH INSPECTOR.

(72) -RESPONSIBILITY OF APPLICANT TO TO RELOCATE ANY ABOVE OR BELOW GROUND UTILITIES WHICH CONFLICT WITH STREET IMPROVEMENTS.

(73) -

(74) -

SURVEYOR

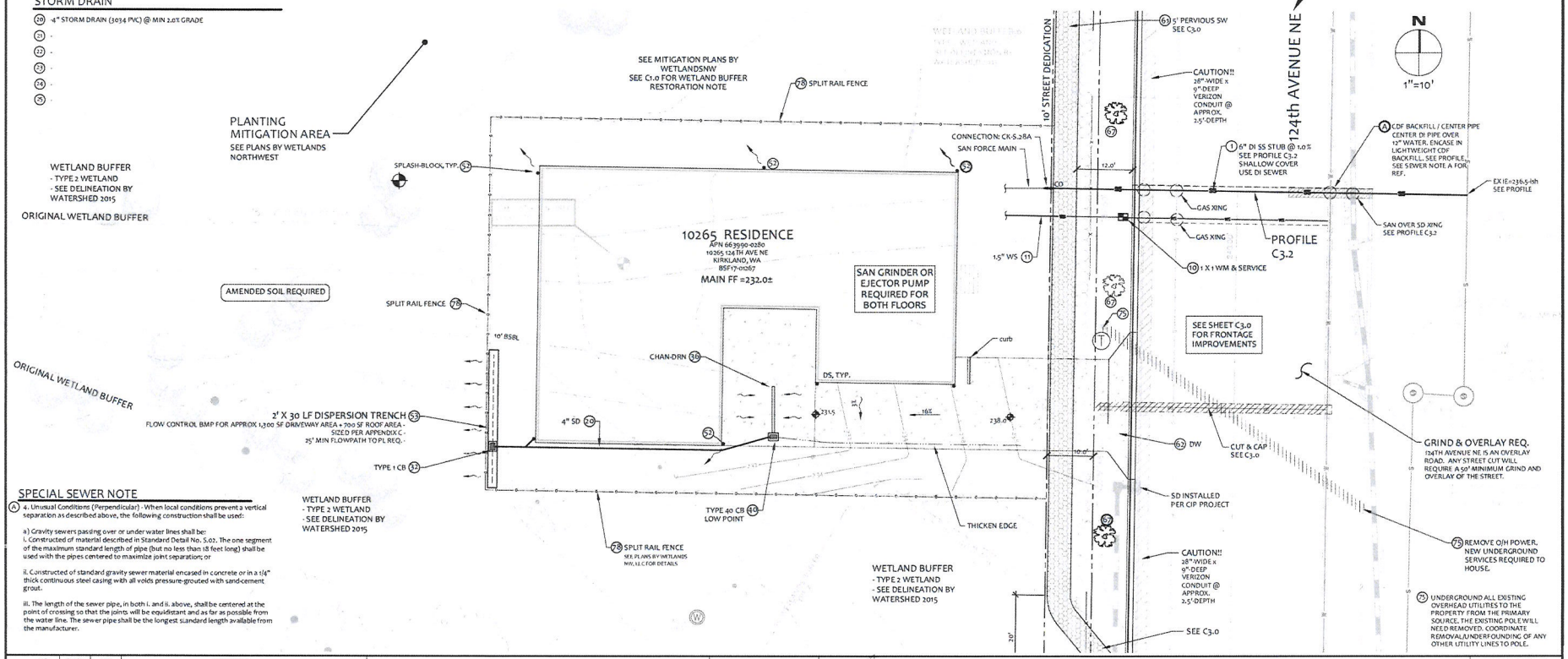
BOUNDARY & TOPOGRAPHIC SURVEY BY:
EASTSIDE CONSULTANTS, INC.
1300 SW MALL STREET, SUITE B
ISSAQUAH, WA 98027
PH (425) 392-5351

BENCHMARK

CONTACT SURVEYOR FOR BENCHMARK.

OVERLAY NOTE

124TH AVENUE NE IS AN OVERLAY STREET, ANY STREET CUT WILL REQUIRE A 50' MINIMUM GRIND AND OVERLAY OF THE STREET.



SPECIAL SEWER NOTE

(A) 4. Unusual Conditions (Perpendicular) - When local conditions prevent a vertical separation as described above, the following construction shall be used:

a) Gravity sewers passing over or under water lines shall be:
i. Constructed of material described in Standard Detail No. S.02. The one segment of the maximum standard length of pipe (but no less than 18 feet long) shall be used with the pipes centered to maximize joint separation; or

ii. Constructed of standard gravity sewer material encased in concrete or in a 1/4" thick continuous steel casing with all voids pressure-grouted with sand-cement grout.

iii. The length of the sewer pipe, in both i. and ii. above, shall be centered at the point of crossing so that the joints will be equidistant and as far as possible from the water line. The sewer pipe shall be the longest standard length available from the manufacturer.

NO	DATE	BY	REVISIONS

APPLICANT
KUO

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DATE: Nov 03, 2017
JOB# 1525
DRAFTED CH DESIGN: DE
DIGITAL SIGNATURE

Nov 03, 2017
JEFFREY R. DUFFY
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER

CIVIL ENGINEERING SOLUTIONS
2364 NW MARKET STREET, SUITE B SEATTLE, WA 98107
PHONE: 206.950.0342 DUFFY@CESOLUTIONS.US

DRAINAGE/BMP PLAN

PROPOSED 10265 RESIDENCE
10265 124TH AVE NE, KIRKLAND 98033

DRAWING NO:
C2.0

APN 663990-0280
BSF17-01267

STREET IMPROVEMENTS

DETAILS C3.4

60 -TYPE A CURB & GUTTER PER KIRKLAND DETAIL CK-R.17, C3.4. FIELD FIT LIP OF GUTTER AT 2% CROSS-SLOPE FROM EXISTING EDGE OF PAVEMENT.

61 -5' PERMEABLE SIDEWALK PER STD DETAIL CK-L.06

62 -DRIVEWAY CUT PER WSDOT DETAIL F-80.10-03. SEE PLAN FOR WIDTH. SEE C3.4 FOR WSDOT DETAIL. MAX SIDEWALK GRADE IS 8.33(12:1) TO DRIVEWAY.

63 -

64 -

65 -

66 -

67 -STREET TREES AT 30-FOOT ON CENTER PER KIRKLAND DETAIL CK-R.48, C3.4. CENTER IN PLANTER STRIP. FOR TREE SELECTION, SEE KIRKLAND POLICY R-10. TO FIND, GOOGLE" KIRKLAND PRE-APPROVED ROADWAY", LOOK FOR POLICY R-10 UNDER ROADWAY DETAILS.

68

70 -

71 -2" ASPHALT OVERLAY REQUIRED WHERE 3 OR MORE UTILITY TRENCHES CROSSINGS OCCUR WITHIN 150 LF STRETCH. CONFIRM WITH INSPECTOR.

72 -RESPONSIBILITY OF APPLICANT TO TO RELOCATE ANY ABOVE OR BELOW GROUND UTILITIES WHICH CONFLICT WITH STREET IMPROVEMENTS.

73 -

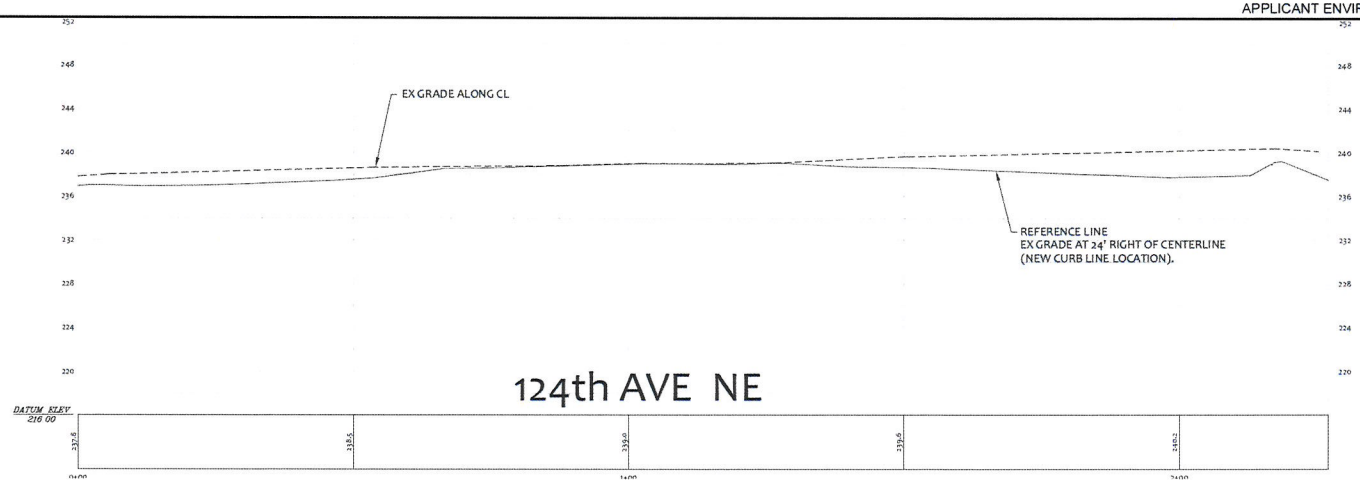
74 -PAVEMENT PATCH PER KIRKLAND DETAIL CK-R.12. USE CLASS B HMA. EXCEED EXISTING PVMT DEPTH BY 1". MAX 6" DEPTH.

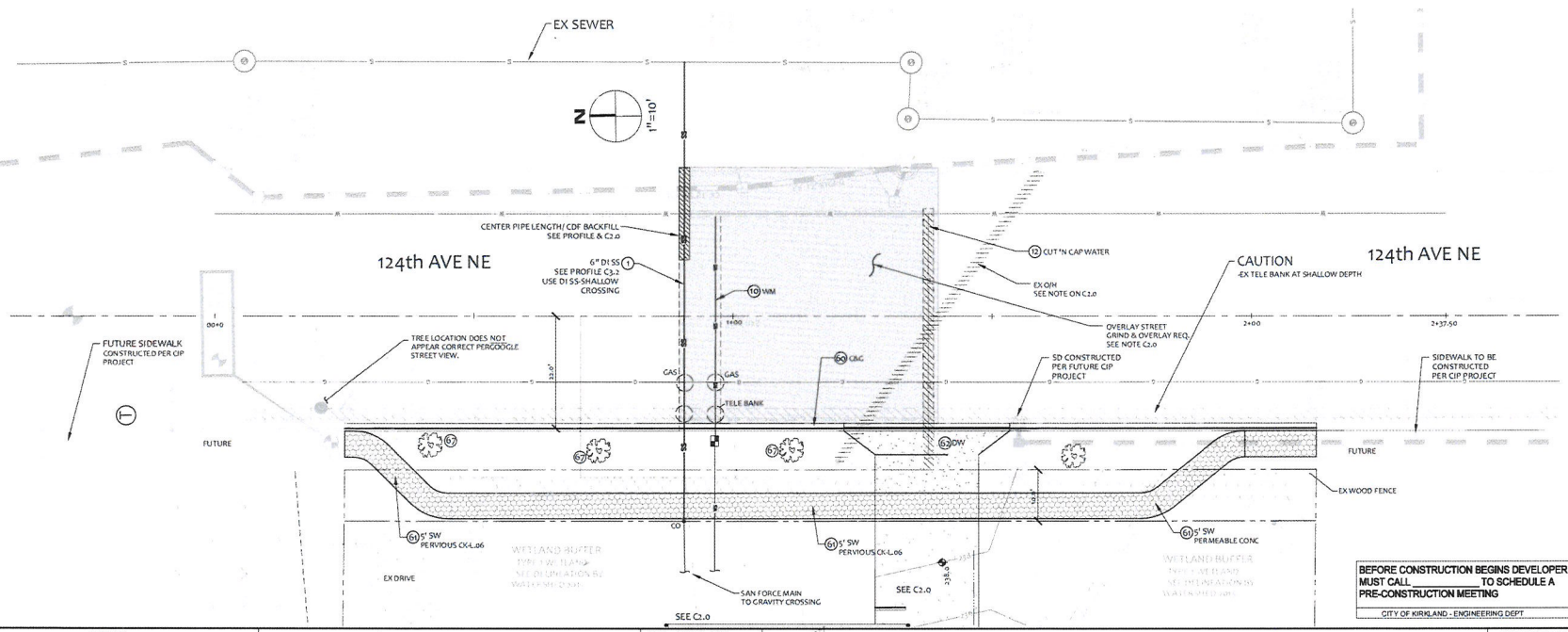
75 -

76 -

77 -

78





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DATE Nov 03, 2017
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DRAFTED: CH DESIGN: DE
DIGITAL SIGNATURE

Nov 02, 2017
DUFFY E. DEVERE
STATE OF WASHINGTON
PROFESSIONAL ENGINEER

CIVIL ENGINEERING SOLUTIONS
2244 NW MARKET STREET, SUITE B SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

124th AVE NE IMPROVEMENTS

PROPOSED 10265 RESIDENCE
10265 124TH AVE NE, KIRKLAND 98033

DRAWING NO:
C3.0

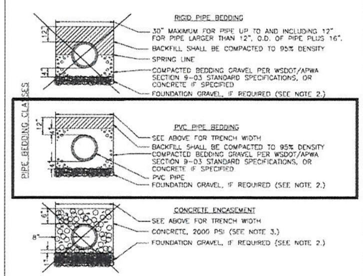
APN 663990-0280
BSF17-01267

CITY OF KIRKLAND STORM DRAINAGE PLAN NOTES

1. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
2. BEFORE ANY CONSTRUCTION MAY OCCUR, THE CONTRACTOR SHALL HAVE PLANS WHICH HAVE BEEN SIGNED AND APPROVED BY THE CITY OF KIRKLAND PUBLIC WORKS DEPARTMENT, OBTAINED ALL CITY, COUNTY, STATE, FEDERAL AND OTHER REQUIRED PERMITS, AND HAVE POSTED ALL REQUIRED BONDS.
3. ALL STORM DRAINAGE IMPROVEMENTS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF KIRKLAND PUBLIC WORKS PRE-APPROVED PLANS AND POLICIES AND THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, PREPARED BY WSDOT AND THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA).
4. ANY DEVIATION FROM THE APPROVED PLANS WILL REQUIRE WRITTEN APPROVAL, ALL CHANGES SHALL BE SUBMITTED TO THE CITY.
5. A COPY OF THE APPROVED STORM WATER PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
6. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SIMILARLY STABILIZED TO THE SATISFACTION OF THE CITY OF KIRKLAND DEPARTMENT OF PUBLIC WORKS FOR THE PREVENTION OF ON-SITE EROSION AFTER THE COMPLETION OF CONSTRUCTION.
7. MINIMUM COVER OVER STORM DRAINAGE PIPES IN ROW OR VEHICULAR PATH SHALL BE 18 INCHES, UNLESS OTHER DESIGN IS APPROVED.
8. STEEL PIPE SHALL HAVE ASPHALT TREATMENT #1 OR BETTER INSIDE AND OUTSIDE.
9. ALL CATCH BASINS SHALL BE TYPE I UNLESS OTHERWISE NOTED. CATCH BASINS WITH A DEPTH OF OVER FIVE FEET (5') TO THE PIPE INVERT SHALL BE A TYPE II CATCH BASIN. TYPE II CATCH BASINS EXCEEDING FIVE FEET (5') IN DEPTH SHALL HAVE A STANDARD LADDER INSTALLED.
10. ALL STORM DRAINAGE MAIN EXTENSIONS WITHIN THE PUBLIC RIGHT-OF-WAY OR IN EASEMENTS MUST BE STAKED FOR LINE AND GRADE PRIOR TO STARTING CONSTRUCTION.
11. ROCK FOR EROSION PROTECTION OF ROADWAY DITCHES, WHERE REQUIRED, MUST BE OF SOUND QUARRY ROCK, PLACED TO A DEPTH OF ONE FOOT (1') AND MUST MEET THE FOLLOWING SPECIFICATIONS: 4"-8" ROCK/40%-70% PASSING; 2"-4" ROCK/30%-40% PASSING; 2"-MINUS ROCK/10%-20% PASSING.
12. ALL PIPE, MANHOLES, CATCH BASINS, AND APPURTENANCES SHALL BE LAID ON A PROPERLY PREPARED FOUNDATION IN ACCORDANCE WITH THE CURRENT STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (WSDOT). THIS SHALL INCLUDE NECESSARY LEVELING OF THE TRENCH BOTTOM OR THE TOP OF THE FOUNDATION MATERIAL AS WELL AS PLACEMENT AND COMPACTION OF REQUIRED BEDDING MATERIAL TO UNIFORM GRADE SO THAT THE ENTIRE LENGTH OF THE PIPE WILL BE SUPPORTED ON A UNIFORMLY DENSE, UNYIELDING BASE. IF THE NATIVE MATERIAL IN THE BOTTOM OF THE TRENCH MEETS THE REQUIREMENTS FOR "GRAVEL BACKFILL FOR PIPE BEDDING," THE FIRST LIFT OF PIPE BEDDING MAY BE OMITTED PROVIDED THE MATERIAL IN THE BOTTOM OF THE TRENCH IS LOOSENED, REGRADED, AND COMPACTED TO FORM A DENSE UNYIELDING BASE. ALL PIPE BEDDING SHALL BE APWA CLASS B, TYPE 1, OR BETTER. PIPE SHALL NOT BE INSTALLED ON SOD, FROZEN EARTH, LARGE BOULDERS, OR ROCK. PIPE BEDDING FOR FLEXIBLE PIPES SHALL BE PEA GRAVEL TO THE SPRINGLINE OF THE PIPE.
13. CONSTRUCTION OF DEWATERING (GROUNDWATER) SYSTEMS SHALL BE IN ACCORDANCE WITH THE APWA STANDARD SPECIFICATIONS.
14. ISSUANCE OF A BUILDING OR LAND SURFACE MODIFICATION PERMIT BY THE CITY OF KIRKLAND DOES NOT RELIEVE THE OWNER OF THE CONTINUING LEGAL OBLIGATION AND/OR LIABILITY CONNECTED WITH STORM SURFACE WATER DISPOSITION. FURTHER, THE CITY OF KIRKLAND DOES NOT ACCEPT ANY OBLIGATION FOR THE PROPER FUNCTIONING AND MAINTENANCE OF THE SYSTEM DURING OR FOLLOWING CONSTRUCTION EXCEPT AS OUTLINED IN THE CITY OF KIRKLAND PUBLIC WORKS STANDARDS.
15. ALL TRENCH BACKFILL SHALL BE COMPACTED TO 95 PERCENT DENSITY IN ROADWAYS, ROADWAY SHOULDERS, ROADWAY PRISM AND DRIVEWAYS, AND 85 PERCENT DENSITY IN UNPAVED AREAS. ALL PIPE ZONE COMPACTION SHALL BE 95 PERCENT.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, CONFINED SPACE PROTECTION, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE A TRAFFIC CONTROL PLAN APPROVED BY THE CITY OF KIRKLAND. ALL SECTIONS OF THE WSDOT STANDARD SPECIFICATIONS, TRAFFIC CONTROL, AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL APPLY.
17. NO FINAL CUT OR FILL SLOPE SHALL EXCEED SLOPES OF TWO (2) HORIZONTAL TO ONE (1) VERTICAL WITHOUT STABILIZATION BY ROCKERY OR BY A STRUCTURAL RETAINING WALL.
18. ALL MANHOLE LADDERS SHALL BE FIRMLY ATTACHED AND EXTEND TO WITHIN 1' OF THE BOTTOM OF THE STRUCTURE.
19. APPROXIMATE LOCATIONS OF EXISTING UTILITIES HAVE BEEN OBTAINED FROM AVAILABLE RECORDS AND ARE SHOWN FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF EXISTING UTILITY LOCATIONS WHETHER OR NOT THESE UTILITIES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL EXERCISE ALL CARE TO AVOID DAMAGE TO ANY UTILITY. IF CONFLICTS WITH EXISTING UTILITIES ARISE DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY CONSTRUCTION INSPECTOR AND ANY CHANGES REQUIRED SHALL BE APPROVED BY THE DEVELOPMENT ENGINEER PRIOR TO COMMENCEMENT OF RELATED CONSTRUCTION ON THE PROJECT.
20. THE UNDERGROUND UTILITY LOCATION SERVICE SHALL BE CONTACTED FOR FIELD LOCATION OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. THE OWNER OR HIS REPRESENTATIVE SHALL BE CONTACTED IF A UTILITY CONFLICT EXISTS. FOR UTILITY LOCATION IN KING COUNTY, CALL 1-800-424-5555. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT UTILITY LOCATES ARE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT.
21. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, WIDTHS, THICKNESSES, AND ELEVATIONS OF ALL EXISTING PAVEMENTS AND STRUCTURES THAT ARE TO INTERFACE WITH NEW WORK. PROVIDE ALL TRIMMING, CUTTING, SAW CUTTING, GRADING, LEVELING, SLOPING, COATING, AND OTHER WORK, INCLUDING MATERIALS AS NECESSARY, TO CAUSE THE INTERFACE WITH EXISTING WORKS TO BE PROPER, ACCEPTABLE TO THE ENGINEER AND THE CITY OF KIRKLAND, COMPLETE IN PLACE AND READY TO USE.
22. ALL INLET, MANHOLE, AND CATCH BASIN FRAMES AND GRATES SHALL NOT BE ADJUSTED TO GRADE UNTIL IMMEDIATELY PRIOR TO FINAL PAVING. ALL CATCH BASIN GRATES SHALL BE SET 0.10' BELOW PAVEMENT LEVEL.
23. OPEN CUT ROAD CROSSINGS FOR UTILITY TRENCHES ON EXISTING TRAVELED ROADWAY SHALL BE BACKFILLED ONLY WITH 5/8" MINUS CRUSHED ROCK AND MECHANICALLY COMPACTED (UNLESS OTHERWISE APPROVED BY THE CITY). FOR STREETS CLASSIFIED AS ARTERIALS OR COLLECTORS, BACKFILL FOR CROSSINGS SHALL BE CDF. CUTS INTO THE EXISTING ASPHALT SHALL BE NEAT LINE CUT WITH SAW OR JACKHAMMER IN A CONTINUOUS LINE. A TEMPORARY COLD MIX PATCH MUST BE PLACED IMMEDIATELY AFTER BACKFILL AND COMPACTION. A PERMANENT HOT MIX PATCH SHALL BE PLACED WITHIN 30 DAYS AND SHALL BE A MINIMUM OF 1" THICKER THAN THE ORIGINAL ASPHALT WITH A MINIMUM THICKNESS OF 2". SEE STANDARD D.02.
24. ALL DAMAGES INCURRED TO PUBLIC AND/OR PRIVATE PROPERTY BY THE CONTRACTOR DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPAIRED TO THE SATISFACTION OF THE CITY CONSTRUCTION INSPECTOR BEFORE PROJECT APPROVAL AND/OR THE RELEASE OF THE PROJECT'S PERFORMANCE BOND.
25. GROUT ALL SEAMS AND OPENINGS IN ALL INLETS, CATCH BASINS, AND MANHOLES. JETSET GROUT IS NOT ALLOWED.
26. WHEN WIDENING AN EXISTING ROADWAY WHERE AN EXISTING TYPE I CATCH BASIN WILL REMAIN IN THE TRAVEL LANE, THE EXISTING FRAME AND COVER SHALL BE REPLACED WITH A ROUND, LOCKING FRAME AND COVER.
27. FOR OTHER THAN SINGLE-FAMILY DWELLINGS, ALL EXPOSED OR READILY EXPOSED INDOOR STORM DRAINAGE PIPING/PLUMBING SHALL BE LABELED WITH THE WORDS "STORM DRAIN" WITH MINIMUM 2 INCH HIGH LETTERS.

PIPE BEDDING IN PUBLIC RIGHT OF WAY

LAST REVISED 2/3/05



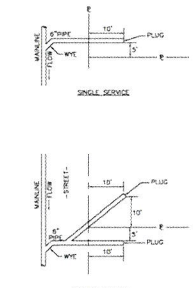
NOTES:

1. COMPACTED CRUSHED SURFACING TOP COURSE PER WSDOT/APWA SECTION 9-03.9(3) STANDARD SPECIFICATIONS CAN ALSO BE USED AS BEDDING GRAVEL.
2. EXCAVATE UNSTABLE MATERIAL DOWN TO FIRM SOIL AND REPLACE WITH FOUNDATION GRAVEL PER SECTION 9-03.9(1) OF THE STANDARD SPECIFICATIONS
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANCHORING PIPE TO PREVENT FLOTATION DURING CONCRETE PLACEMENT.

CITY OF KIRKLAND
PLAN NO. CK-S.03
PIPE BEDDING

SIDE SEWER DETAIL S.19A

LAST REVISED 11/30/99

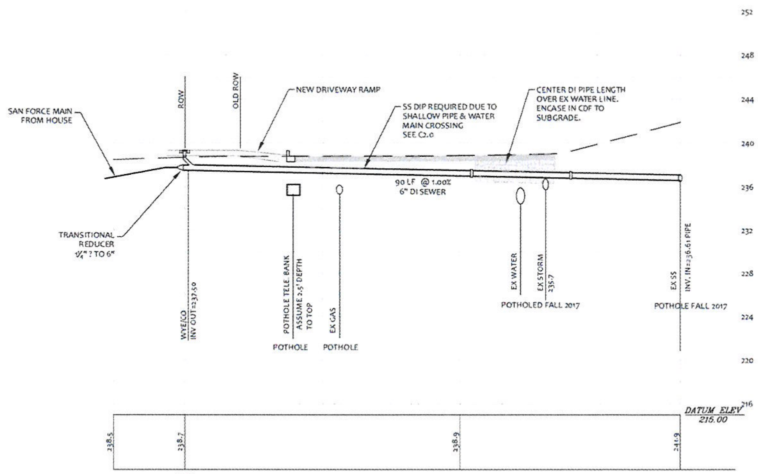


NOTES:

1. WHERE SIDE SEWER CONNECTS TO MANHOLE: INVERT OF SIDE SEWER SHALL BE EQUAL TO OR ABOVE MAIN SEWER CROWN, BUT NOT TO EXCEED 16" ABOVE INVERT OF MAIN SEWER. (FOR COMMERCIAL AND MULTIFAMILY APPLICATIONS ONLY)
2. UNLESS OTHERWISE INDICATED ON PLAN, SIDE SEWER SHALL BE MIN. OF 6' DEEP AT PROPERTY LINE, OR 5' LOWER THAN THE LOWEST ELEVATION, WHICHEVER IS LOWER
3. TRENCH BACKFILL SHALL BE PER CITY OF KIRKLAND STD. PLAN NO. CK-S.01.

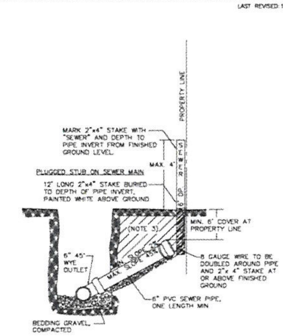
CITY OF KIRKLAND
PLAN NO. CK-S.19A
SIDE SEWER STUB "PLAN VIEW"

SIDE SEWER PROFILE



SIDE SEWER DETAIL S.19

LAST REVISED 11/30/99



NOTES:

1. WHERE SIDE SEWER CONNECTS TO MANHOLE: INVERT OF SIDE SEWER SHALL BE EQUAL TO OR ABOVE MAIN SEWER CROWN, BUT NOT TO EXCEED 18" ABOVE INVERT OF MAIN SEWER. (FOR COMMERCIAL AND MULTIFAMILY APPLICATIONS ONLY)
2. UNLESS OTHERWISE INDICATED ON PLAN, SIDE SEWER SHALL BE MIN. OF 6' DEEP AT PROPERTY LINE, OR 5' LOWER THAN THE LOWEST ELEVATION, WHICHEVER IS LOWER
3. TRENCH BACKFILL SHALL BE PER CITY OF KIRKLAND STD. PLAN NO. CK-S.01

CITY OF KIRKLAND
PLAN NO. CK-S.19
SIDE SEWER STUB "PROFILE VIEW"

NO.	DATE	BY	REVISIONS

APPLICANT
KUO

Know what's below. Call before you dig.

THIS DEVELOPMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2017 CITY OF KIRKLAND STANDARD SPECIFICATIONS AND DETAILS.

DATE Nov 03, 2017
JOB# 1525
DRAFTED: CH DESIGN: DE
DIGITAL SIGNATURE

CIVIL ENGINEERING SOLUTIONS
2244 NW MARKET STREET, SUITE B SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

STORM & SEWER DETAILS
PROPOSED 10265 RESIDENCE
10265 124TH AVE NE, KIRKLAND 98033

DRAWING NO: C3.2
APN 663990-0280
BSF17-01267

PERMITTED GROUNDCOVER IN LANDSCAPE STRIP

DEPARTMENT OF PUBLIC WORKS
PRE-APPROVED PLANS POLICY

Policy R-15: Permitted Groundcover in Public Landscape Strip

In addition to grass, the following types of groundcover can be planted in a landscape strip (the planting area between curb and sidewalk) in the public right-of-way:

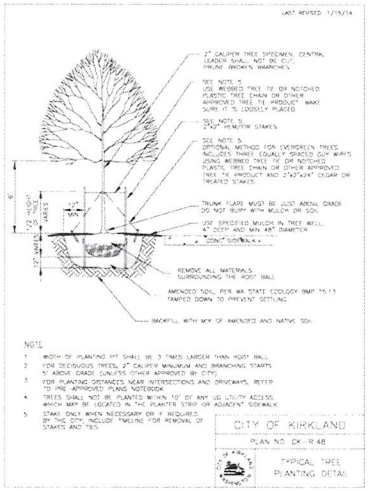
- Low/Fast Cotoneaster
- Potentilla
- Kinnikinnick
- Sedum
- Heather and Heath
- Vinca Minor (for shady areas)
- Ornamental grasses such as:
  - Blue fescue
  - Carex/sedge
  - Dwarf Lavender
  - Irises
  - Others as approved

Maintenance of the groundcover, including watering, trimming, and weeding, is the responsibility of the adjacent property owner.

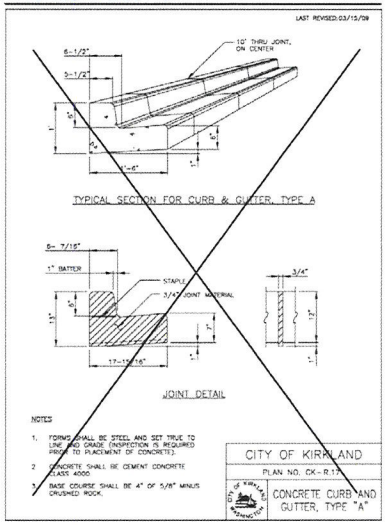
Plantings shall be as follows:

- 4" maximum pot size
- 9" minimum spacing on center
- Growth shall be no higher than 12". Adjacent property owner is responsible for keeping height below this 12" maximum
- Preferred planting dates between October and February

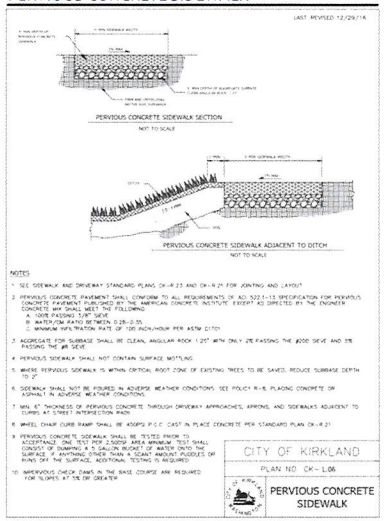
TREE PLANTING DETAIL CK-R.48



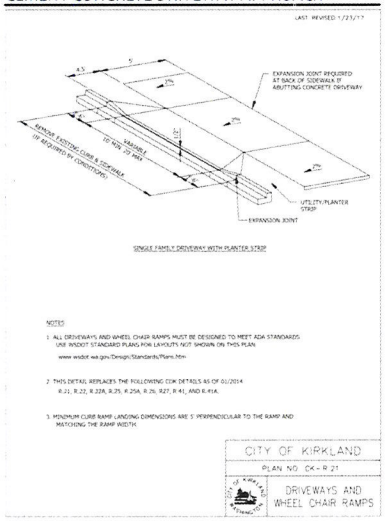
TYPE A CURB & GUTTER



PERVIOUS CONCRETE SIDEWALK



CEMENT CONCRETE DRIVEWAY APPROACH



NO.	DATE	BY	REVISIONS

APPLICANT
KUO

811 Know what's below. Call before you dig.

CITY OF KIRKLAND WASHINGTON

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DATE Nov 03, 2017
JOB# 1525
DRAFTED CH DESIGN: DE
DIGITAL SIGNATURE

Nov 03, 2017
JEFFREY P. DUFFY
STATE OF WASHINGTON
PROFESSIONAL ENGINEER

CIVIL ENGINEERING SOLUTIONS
2244 NW MARKET STREET, SUITE B SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

CITY OF KIRKLAND ROAD DETAILS

PROPOSED 10265 RESIDENCE
10265 124TH AVE NE, KIRKLAND 98033

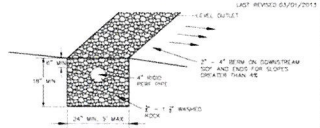
DRAWING NO:
C3.4

APN 663990-0280
BSF17-01267

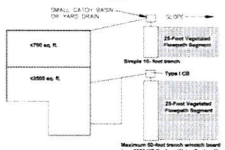
DISPERSION TRENCH

FLOW CONTROL BMP

LAST REVISED: 03/01/2016



TRENCH X-SECTION
NTS



PLAN VIEW OF ROOF
NTS

NOTES:

1. BASIC DISPERSION TRENCH MUST DISCHARGE RUNOFF SUCH THAT IT FLOWS OVER A MINIMUM 25' DISTANCE OF VEGETATED AREA (VEGETATED FLOWPATH SEGMENT).
2. THE VEGETATED FLOWPATH SEGMENT MUST BE OVER WELL-ESTABLISHED LAWN OR PASTURE, LANDSCAPING WITH WELL-ESTABLISHED GROUND COVER, OR NATIVE VEGETATION WITH NATURAL GROUNDCOVER. THE GROUNDCOVER MUST BE DENSE ENOUGH TO HELP DISPERSE & INFILTRATE FLOWS AND TO PREVENT EROSION.
3. THE VEGETATED FLOWPATH SEGMENT MUST BE ONSITE OR IN AN OFFSITE TRACT OR EASEMENT AREA RESERVED FOR SUCH DISPERSION.
4. DISPERSION DEVICES ARE NOT ALLOWED IN CRITICAL AREA BUFFERS OR ON SLOPES STEEPER THAN 20%. DISPERSION DEVICES PROPOSED ON SLOPES STEEPER THAN 15% OR WITHIN 50 FEET OF A STEEP SLOPE HAZARD OR LANDSLIDE HAZARD AREA MUST BE APPROVED BY A GEOTECHNICAL ENGINEER OR ENGINEERING GEOLOGIST UNLESS OTHERWISE APPROVED BY CITY ENGINEER.
5. FOR SITES WITH SEPTIC SYSTEMS, THE DISCHARGE OF RUNOFF FROM DISPERSION TRENCHES MUST BE LOCATED DOWN SLOPE OF THE PRIMARY AND RESERVE DRAINFIELD AREAS. CITY STAFF MAY WAIVE THIS REQUIREMENT IF SITE TOPOGRAPHY PROHIBITS DISCHARGED FLOWS FROM INTERSECTING THE DRAINFIELD.
6. THE DISPERSION OF RUNOFF MUST NOT CREATE FLOODING OR EROSION IMPACTS ON ADJACENT PROPERTIES.

CITY OF KIRKLAND
PLAN NO. CK-D.21
BASIC DISPERSION TRENCH

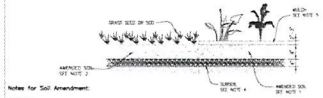
COMPOST-AMENDED SOIL

FLOW CONTROL BMP
CK-E.12 / DOE BMP T5.13

SOIL AMENDMENT NOTES FOR BMP T5.13

LAST REVISED: 04/01/2016

REFERENCE: WA STATE DEPT OF ECOLOGY'S STORMWATER MANAGEMENT MANUAL FOR W WA



Notes for Soil Amendment:

General:

1. For planting areas, the minimum acceptable organic matter content by dry weight is 10% (loss-on-ignition testing).
2. For turf areas, the minimum acceptable organic matter content by dry weight is 5% (loss-on-ignition testing).
3. A minimum organic-amended depth of 8 inches (except in tree protection areas) is required.
4. Subsoil shall be scarified 4 inches below amended layer to produce 12-inch depth of un-compacted soil.
5. Planting beds should be mulched after planting with 2 to 3 inches of organic material such as arborist wood chip mulch.
6. Soil amendment cannot be placed in overly saturated soils. It is recommended that the soil amendment be placed between May 1 and October 1, when soils are typically driest and less subject to compaction.
7. Prior to soil installation, applicant will submit soil test verification, including tests from either supplier or contractor (depending on option chosen) to verify organic matter content and that compost meets WAC specifications. Soil verification test method must meet ASTM D2974. The verification shall clearly state the following (at a minimum)test date, test method used, testing company, and loss-on-ignition (LOI) results.

For projects 4 lots or less -- you must import amended soil meeting the requirements below:

1. For planting beds, a mix by volume of 40% compost (meeting WAC 173-350-220) with 60% mineral aggregate is pre-approved to meet the organic matter content by dry weight (loss-on-ignition test).
2. For turf areas, a mix by volume of 25% compost (meeting WAC 173-350-220) with 75% mineral aggregate is pre-approved to meet the organic matter content by dry weight (loss-on-ignition test).

For projects 5 lots or greater -- you may either import amended soil meeting the requirements above or follow Option 1 or Option 2 below:

Option 1 -- Amending Existing Disturbed Topsoil:

1. For planting beds, 3 inches of compost (meeting WAC 173-350-220) incorporated into the top 8 inch depth is pre-approved to meet the organic matter content by dry weight (loss-on-ignition test).
2. For turf areas, 1.75 inches of compost (meeting WAC 173-350-220) incorporated into the top 8 inch depth is pre-approved to meet the organic matter content by dry weight (loss-on-ignition test).

Option 2 -- Amending Stockpiled Topsoil from Cleared Areas:

1. Stockpile and cover soil with 3 inches of wood chips, weed barrier, or other breathable materials that sheds moisture yet allows air transmission.
2. Test stockpile material (prior to adding compost) for organic matter content to determine whether additional compost must be tilled into the stockpiled material to meet the required organic matter content by dry weight (loss-on-ignition test).
3. After the stockpiled material has been laid, a soil sample will be taken by applicant / contractor for every 5,000 sf or every lot (whichever is less) to test that the site meets the required organic matter content by dry weight (loss-on-ignition test).

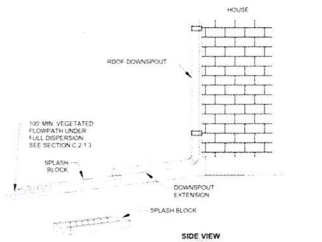
CITY OF KIRKLAND
PLAN NO. CK-E.12
SOIL AMENDMENT

SPLASH-BLOCK DISPERSION

FLOW CONTROL BMP
2016 KC SWDM C.2.1.3

C.2.1 FULL DISPERSION

FIGURE C.2.1.A TYPICAL SPLASH BLOCK



SIDE VIEW
NTS

2016 Surface Water Design Manual Appendix C 4-24-2016
C-39

NO.	DATE	BY	REVISIONS

APPLICANT
KUO

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DATE Nov 03, 2017
JOB# 1525
DRAFTED: CH DESIGN: DE
DIGITAL SIGNATURE

Nov 03, 2017
STEPHEN R. DUFFY
STATE OF WASHINGTON
PROFESSIONAL ENGINEER

CIVIL ENGINEERING SOLUTIONS
2344 NW MARKET STREET, SUITE B SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

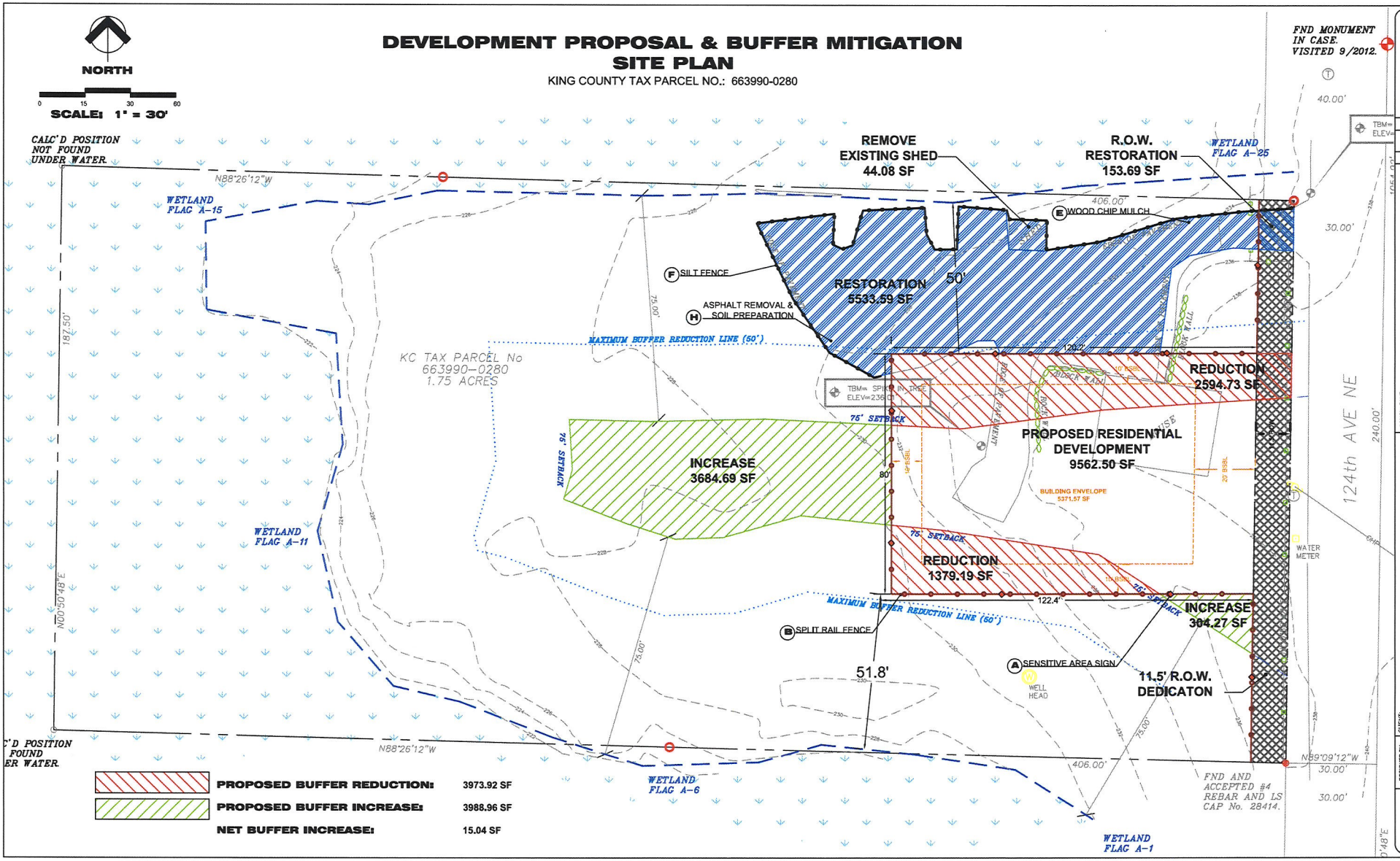
STORMWATER BMP DETAILS

PROPOSED 10265 RESIDENCE
10265 124TH AVE NE, KIRKLAND 98033

DRAWING NO:
C3.5

APN 663990-0280
BSF17-01267

DEVELOPMENT PROPOSAL & BUFFER MITIGATION
SITE PLAN
KING COUNTY TAX PARCEL NO.: 663990-0280



NO.	DATE	BY	REVISION
2	10/23/17	LRE	PLANT LOCATIONS
1	4/26/17	LRE	3/20/17 WATERSHED COMMENTS

CONSULTANT: Wetlands Northwest, LLC
5218 Ivanhoe Place Northeast
Seattle, Washington 98105
BUS: 206-456-5474 MOB: 206-554-1628
WWW.WETLANDSNW.COM

CLIENT: HSU CHIU CHIH & YEH HUA LU
10265 124TH AVENUE NE KIRKLAND, WASHINGTON 98033

PROJECT: DEVELOPMENT PROPOSAL & BUFFER MITIGATION
KING COUNTY TAX PARCEL NO.: 663990-0280

DESIGNED BY: L. Erickson
DRAWN BY: L. Erickson
CHECKED BY: R. King
APPROVED BY: R. King
DATE: 12/6/16

SCALE 1"=30'

SHEET W.1

DEVELOPMENT PROPOSAL & BUFFER MITIGATION
PLANTING PLAN
KING COUNTY TAX PARCEL NO.: 663990-0280

NORTH

0 15 30 60
SCALE: 1" = 30'

CALC'D POSITION NOT FOUND UNDER WATER.

N88°26'12"W

WETLAND FLAG A-15

182.50'

N00°50'48"E

WETLAND FLAG A-11

NOTE: PRIOR TO ENHANCEMENT AND RESTORATION PLANTING, REMOVE TRASH AND DEBRIS FROM REMAINING BUFFER AREAS OF SITE. INCLUDING BUT NOT LIMITED TO; CREOSOTE-TREATED WOOD, WIRE FENCING, TRASH AND FOREIGN DEBRIS.

KC TAX PARCEL No 663990-0280 1.75 ACRES

MAXIMUM BUFFER REDUCTION LINE (50')

75' SETBACK

NOTE: ALL TREES REMOVED FROM THE PROPOSED DEVELOPMENT AREA SHALL BE USED ON-SITE AS WOODY DEBRIS HABITAT STRUCTURES. PLACEMENT OF WOODY DEBRIS SHALL BE DIRECTED BY THE CONSULTING BIOLOGIST IN THE FIELD AT TIME OF MITIGATION ENHANCEMENT AND RESTORATION

(F) SILT FENCE

(H) ASPHALT REMOVAL & SOIL PREPARATION

(E) WOOD CHIP MULCH

406.00'

75.00'

IN TREE

EDGE OF PAVEMENT

BLOCK WALL

ROCK WALL

10' BSBL

20' BSBL

PROPOSED RESIDENTIAL DEVELOPMENT
9562.50 SF

BUILDING ENVELOPE
5371.57 SF

75' SETBACK

(B) SPLIT RAIL FENCE

(A) SENSITIVE AREA SIGN

WELL HEAD

51.8'

WATER METER

124th AVE NE

240.00'

1054.92'

30.00'

40.00'

FND MONUMENT IN CASE. VISITED 9/2012.

TBM= P
ELEV=23

WETLAND FLAG A-25

WETLAND FLAG A-6

WETLAND FLAG A-1

N89°09'12"W

FND AND ACCEPTED #4 REBAR AND LS CAP No. 28414.

D POSITION
OUND
R WATER.

NO.	DATE	BY	REVISION
2	10/23/17	LRE	PLANT LOCATIONS
1	4/25/17	LRE	3/20/17 WATERSHED COMMENTS

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Wetlands Northwest, LLC
5218 Ivanhoe Place Northeast
Seattle, Washington 98105
BUS: 206-456-5474 MOB: 206-554-1628
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10265 124TH AVENUE NE KIRKLAND, WASHINGTON 98033

PROJECT:
DEVELOPMENT PROPOSAL & BUFFER MITIGATION
KING COUNTY TAX PARCEL NO.: 663990-0280

DESIGNED BY: L. Erickson
DRAWN BY: L. Erickson
CHECKED BY: R. King
APPROVED BY: R. King
DATE: 10/9/16

SCALE 1"=30'

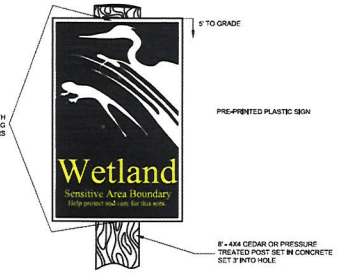
SHEET W.2

DEVELOPMENT PROPOSAL & BUFFER MITIGATION DETAILS

KING COUNTY TAX PARCEL NO.: 663990-0280

A SENSITIVE AREA SIGN

NOT TO SCALE



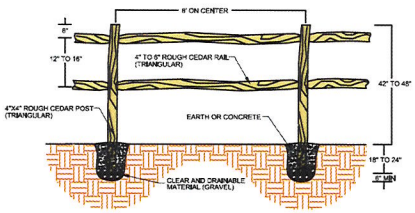
WETLAND/STREAM SIGN INSTALLATION DETAIL

THE WETLAND SIGN SHALL BE POSTED AT THE BOUNDARY BETWEEN THE SENSITIVE AREA BUFFER, SETBACK AREA OR SETBACK TRACT AND THE BUILDING SETBACK AREA.

ONE SIGN SHALL BE POSTED PER LOT FOR EVERY 100-FEET OF SENSITIVE AREA BUFFER AND SHALL BE STATIONED IN A PROMINENT LOCATION, I.E.: AT THE CLOSEST POINT TO THE PORPOSED DEVELOPMENT. SIGNS MAY ALSO BE ATTACHED TO FENCES.

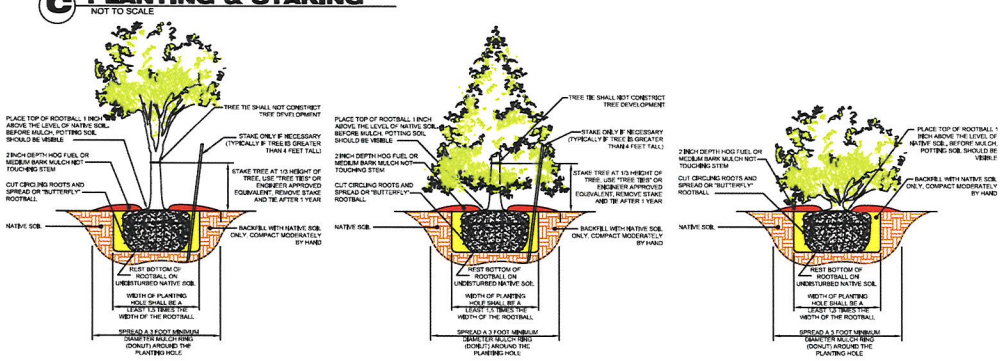
B SPLIT RAIL FENCE

NOT TO SCALE

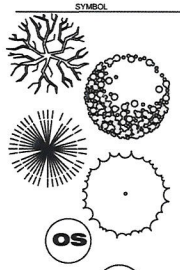


C PLANTING & STAKING

NOT TO SCALE



D PLANT SCHEDULE



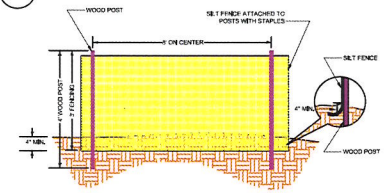
SYMBOL	COMMON NAME	SCIENTIFIC NAME	QTY.	SIZE
	BIG-LEAF MAPLE	ACER MACROPHYLLUM	30	2 GAL
	RED ALDER	ALNUS RUBRA	35	2 GAL
	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	35	5 GAL
	WESTERN RED CEDAR	THUJA PLICATA	20	2 GAL
OS	OCEANSPRAY	HOLODISCUS DISCOLOR	100	1 GAL
RC	RED-FLOWERING CURRANT	RIBES SANGUINEUM	100	1 GAL
BR	BALDHIP ROSE	ROSA GYMNOCARPA	100	1 GAL
SB	SALMONBERRY	RUBUS SPECTABILIS	100	1 GAL
SN	SNOWBERRY	SYMPHORICARPOS ALBUS	100	1 GAL

PLANTING NOTES:
TREE AND SHRUB LOCATIONS AREA APPROXIMATE AND MAYBE RELOCATED IN THE FIELD BASED ON SITE CONDITIONS AND LOCATIONS OF EXITISTING VEGETATION

E WOOD CHIP MULCH

1. APPLY WOOD CHIP MULCH TO ALL BARE SOIL AREAS FOLLOWING INSTALLATION OF ENHANCEMENT/RESTORATION PLANTINGS.
2. WOOD CHIP MULCH SHOULD BE APPLIED AT A THICKNESS OF 1-2 INCHES.

F SILT FENCE DETAIL



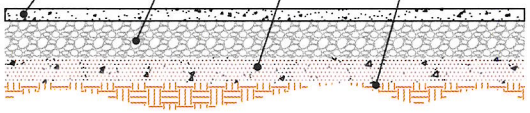
CONSTRUCTION NOTES

1. ALL STRUCTURES AND ASPHALT DRIVEWAYS ARE TO BE REMOVED FROM BUFFER PRIOR TO MITIGATION PLANTING
2. ANY COMPACTED SOILS SHALL HAVE APPRORIATE DECONSOLIDATON METHODS USED TO CREATE MORE SUITABLE SOIL CONDITIONS (SEE DETAIL H)
3. PLANT LOCATIONS ARE APPROXIMATE AND MAY NEED TO BE RELOCATED IN FIELD BASED ON SITE CONDITIONS.
4. SILT FENCE SHALL BE INSTALLED ALONG THE DOWNSLOPE SIDE OF THE CONSTRUCTION AREA PRIOR TO ANY EARTH WORK ACTIVITIES (SEE DETAIL F)

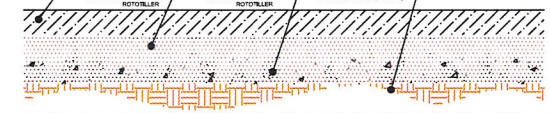
H ASPHALT REMOVAL AND SOIL PREPARATION

NOT TO SCALE TYPICAL

EXISTING ASPHALT CONDITIONS (TYPICAL)



SOIL CONDITIONING FOLLOWING ASPHALT REMOVAL (TYPICAL)



NOTES:
1. REMOVE ALL ASPHALT, GRAVEL AND COMPACTED MATERIALS FROM THE BUFFER RESTORATION AREA AND DISPOSE OF OFF-SITE IN A LEGAL MANNER.
2. DECONSOLIDATE COMPACTED NATIVE SOILS WITH ROTOTILLER PRIOR TO INSTALLATION OF TOPSOIL AND ORGANIC COMPOST
3. THOUROUGHLY MIX ORGANIC COMPOST AND TOPSOIL WITH ROTOTILLER PRIOR TO PLANT INSTALLATION
4. CONSULTING BIOLOGIST SHALL APPROVE SOIL CONDITIONS PRIOR TO MITIGATION PLANTING

NO.	DATE	BY	REVISION
2	10/23/17	LRE	PLANT LOCATIONS
1	4/25/17	LRE	3/29/17 WATERSHED COMMENTS

CONSULTANT:
Wetlands Northwest, LLC
5218 Ivanhoe Place Northeast
Seattle, Washington 98105
BUS: 206-456-5474 MOB: 206-554-1628
WWW.WETLANDSNW.COM

CLIENT:
HSU CHIU CHIH & YEH HUA LU
10265 124TH AVENUE NE KIRKLAND, WASHINGTON 98033

PROJECT:
DEVELOPMENT PROPOSAL & BUFFER MITIGATION
KING COUNTY TAX PARCEL NO.: 663990-0280

DESIGNED BY: L.E.Eckson
DRAWN BY: L.E.Eckson
CHECKED BY: R.King
APPROVED BY: R.King
DATE: 3/29/18

SCALE VARIES

SHEET W.3

DEVELOPMENT PROPOSAL & BUFFER MITIGATION
MITIGATION TEXT
KING COUNTY TAX PARCEL NO.: 663990-0280

1.0 Executive Summary
A regulated wetland is present on-site along the north, west and south portions of the property extending off-site in the same directions. Per City of Kirland the on-site wetland is required to have a 75-foot buffer. City of Kirkland allows reduction of the buffer for averaging purposes with compensatory mitigation. The applicant proposes buffer averaging, reducing the require buffer along the north and south sides of the property by 3,973.92 square feet and increasing the buffer along the western side of the property by 3,988.96 square feet. The net gain in buffer area will be 15.04 square feet following averaging. In addition, 5,509.70 square feet of existing asphalt driveway and a shed will be removed from the northern portion of the buffer. Compacted soils in this area will be deconsolidated, organic topsoil will be install and incorporated into the restoration area and native trees and shrubs will be planted as mitigation for impacts. Additionally, area immediately adjacent to the proposed western edge of the development area will be planted with native trees and shrubs to mitigate for buffer averaging impacts. Split rail fence and sensitive area signs will be installed to delineate the edge of the new wetland buffer. Native plant species will increase plant diversity, wildlife habitat and prevent the establishment of invasive species.

1.1 Goals and Objectives
The goal of mitigation is to increase the functions and values of the existing wetland buffer through enhancement. Enhancement will be through removal of impervious surfaces and installation of native trees and shrubs. In its current state, the buffer does not provide the functions necessary to adequately protect the off-site wetland. The objectives necessary to meet the above stated goal area as follows:

- Remove asphalt and shed from the buffer
- Deconsolidate compacted soils and install organic compost
- Install native vegetation within the buffer
- Maintain and monitor the enhancement area for a period of five years or until the site meets the specified performance standards
- Install split rail fence and sensitive area signs at the limit of the buffer to detour future intrusions into the sensitive area
- Record the sensitive area in a "Notice on Title"
- If the enhancement area fails to meet performance standards provide a contingency plan to rectify the situation.

2.0 Site Conditions
The Contractor shall immediately notify the Landscape Designer and/or Wetland Biologist of drainage or soil conditions likely to be deterimental to the growth or survival of plants. Locations shall be as depicted in the approved plan set. The Landscape Designer and/or Wetland Biologist may adjust the locations of plantings shown on plans based on field conditions. Planting operations shall not be conducted under the following conditions: freezing weather, when the ground is frozen, excessively wet weather, excessively windy weather, or in excessive heat. Changes should be documented and as-built drawings submitted to City of Kirkland upon request for formal construction approval.

3.0 Plants
3.1 Origin: Plant materials shall be Northwest native plants, nursery grown in the Puget Sound region of Washington.
3.2 Plant Names: Plant names shall comply with those generally accepted in the native plant nursery trade. Any questions regarding plant species or variety shall be referred to the Landscape Designer or Wetland Biologist. All plant materials shall be true to species and variety.
3.3 Plant Substitutions: Same species substitutions of larger size do not require special permission. However, small plants often experience less transplant shock and adapt more quickly to site conditions, resulting in a higher success rate. As such, smaller plants will be approved as substitutions based on certain site-specific conditions (trees not less than 1 gallon size however). All plant substitutions shall be approved by Landscape Designer and/or Wetland Biologist.
3.4 Quality and Condition: Plants shall be normal in pattern of growth, healthy, well-branched, vigorous, with well-developed root systems, and free of pests and diseases. Damaged, diseased, pest-infested, scraped, bruised, dried-out, burned, broken, or defective plants will be rejected.
3.5 Handling: Plants shall be handled so as to avoid all damage, including breaking, bruising, root damage, sunburn, drying, freezing or other injury. Plants must be covered during transport. Plants shall not be bound with wire or rope in a manner that could damage branches. Protect plant roots with shade and wet soil in the time period between delivery and installation. Do not lift container stock by trunks, stems, or tops. Do not remove from containers until ready to plant. Water all plants as necessary to keep moisture levels appropriate to the species horticultural requirements. Plants shall not be allowed to dry out. All plants shall be watered thoroughly immediately upon installation. Soak all containerized plants thoroughly prior to installation. Bare root plants are subject to the following special requirements, and shall not be used unless planted between November 1 and March 1, and only with the permission of the Landscape Designer, Wetland Biologist, and/or City of Kirkland Staff. Bare root plants must have enough fibrous root to insure plant survival. Roots must be covered at all times with mud and/or wet straw, moss, or other suitable packing material until time of installation. Plants whose roots have dried out from exposure will not be accepted at installation inspection.
3.6 Damaged Plants: Damaged, dried out, or otherwise mishandled plants will be rejected at installation inspection. All rejected plants shall be immediately removed from the site.
3.7 Roots: All plants shall be balled and burlapped or containerized, unless explicity authorized by the Landscape Designer and/or Wetland Biologist. Root bound plants or B&B plants with damaged, cracked or loose rootballs (major damage) will be rejected. Immediately before installation, plants with minor root damage (some broken and/or twisted) must be root-pruned. Matted or circling roots of containerized plantings must be pruned or straightened and the sides of the root ball must be roughened from top to bottom to a depth of approximately half and inch in two to four places. Bare root plantings of woody material is allowed only with permission from the Landscape Designer, Wetland Biologist, and/or City of Kirkland Staff.
3.8 Sizes: Plant sizes shall be the size indicated in the plant schedule. Larger stock may be acceptable provided that it has not been cut back to size specified, and that the root ball is proportionate to the size of the plant. Smaller stock may be acceptable, and under some circumstances perferable, based on site-specific conditions. Measurements, caliper, branching and balling and burlapping shall conform to the American Standard of Nursery Stock by the American Association of Nurserymen (latest edition).
3.9 Form: Evergreen trees, if used, shall have single trunks and symmetrical, well-developed form. Deciduous trees shall be single trunked unless specified as multi-stem in the plant schedule. Shrubs shall have multiple stems, and be well-branched.
3.10 Planting: Planting shall be done in accordance with illustrated details in the mitigation plan set and accepted industry standards. Plant locations shall also be inspected and approved prior to planting.
3.11. Timing of Planting: Unless otherwise approved by City of Kirkland, all planting shall occur between September 1 and March 31.
3.12 Planting in Pits: Planting pits shall be circular or square with vertical sides, and shall be 6" larger in diameter than the root ball of the plant. Break up the sides of the pit in compacted soils. Set plants upright in pits, as illustrated in planting detail. Burlap shall be removed from the planting pit. Backfill shall be worked back into holes such that air pockets are removed without adversely compacting soils.
3.13 Mulch: The soil surface surrounding all planting pit areas shall receive no less than 3"-4" of hog fuel or medium bark mulch after planting. Hog fuel or mulch shall be kept well away (at least 3") from the trunks and stems of woody plants.
3.14 Water: Plants shall be watered upon completion of backfilling. For spring plantings (if approved), a rim of earth shall be mounded around the base of the tree or shrub no closer than the drip line, or no less than 30" in diameter, except on steep slopes or in hollows. Plants shall be watered a second time within 24-48 hours after installation. The earthen rim/dam should be leveled prior to the second growing season.
3.15 Staking: Most shrubs and many trees do not require any staking. If the plant can stand alone without staking in a moderate wind, do not use a stake. If the plant needs support, then strapping or webbing should be used as low as possible on the trunk to loosely brace the tree with one stake (see Planting Detail). Do not brace the tree tightly or too high on the trunk. If the tree is unable to sway, it will further lose the ability to support itself. As soon as supporting the plant becomes unnecessary, remove the stakes. All stakes must be removed within two years of installation.
3.16 Wildlife Control: As determined by the Landscape Designer and/or Wetland Biologist, fencing or deer repellants may be needed to limit deer intrusion while installed plants are becoming established.

4.0 Maintenance
Maintenance shall be required in accordance with City of Kirkland guidelines and approved plans.
4.1 Duration and Extent: In order to achieve performance standards, the Permittee shall have the mitigation area maintained twice annually for the duration of the monitoring period, 5 years. All maintenance shall be directed by the Landscape Designer and/or Wetland Biologist.
Maintenance will include:

- watering
- weeding around base of installed plants
- pruning
- replacement
- restaking
- removal of all classes of noxious weeds (see Washington State Noxious Weeds List, WAC 16-7150-005) as well as Himalayan blackberry
- any other measures needed to insure plant survival
- general maintenance activities which include the replacement of any vandalized or damaged signs, habitat features, fences or other structural component of the mitigation site.

4.2 Survival: The Permittee shall be responsible for the health of 100% of all newly installed plants for one growing season after installation has been accepted by City of Kirkland (see Performance Standards). A growing season for these purposes is defined as occurring from March 1 to October 31. For fall installation (often required), the growing season will begin the following spring. The Permittee shall replace any plants that are failing, weak, defective in a manner of growth, or dead during this growing season, as directed by the Landscape Designer, Wetland Biologist, and/or City of Kirkland.
4.3 Installation Timing for Replacement Plants: Replacement plants shall be installed between September 1 and March 31, unless otherwise determined by the Landscape Designer, Wetland Biologist, and/or City of Kirkland.
4.4 Standards for Replacement Plants: Replacement plants shall meet the same standards for size and type as those specified for original installation unless otherwise directed by the Landscape Designer, Wetland Biologist, and/or City of Kirkland. Replacement plants shall be inspected as described above for the original installation.
4.5 Replanting: Plants that have settled in their planting pits too deep, too shallow, loose, or crooked shall be replanted as directed by the Landscape Designer, Wetland Biologist, and/or City of Kirkland.
4.6 Herbicides/Pesticides: Chemical controls shall not be used in the mitigation area, sensitive areas or their buffers. However, limited use of herbicides may be approved depending on site specific conditions, only if approved by City of Kirkland.
4.7 Irrigation/Watering: Water shall be provided during the dry season (July 1-October 15) for the first two years after installation to ensure plant survival and establishment. Water should be provided by a temporary above ground irrigation system. Water should be applied at a rate of 1" of water two times a week for Year 1 and 1" of water one time a week during Year 3.

5.0 Performance Standards - Plant Cover and Survival

- Plant survival and cover standards are established to measure mitigation success as follows:

	Year 1	Year 2	Year 3	Year 4	Year 5
Shrub and Sapling Tree Cover*	>10%	>15%	>20%	>30%	>35%
Shrub and Sapling Tree Survival	100%	>85%	>80%		

*Includes beneficial native plants in that category that are naturally recruiting volunteers

- Less than 10% invasive vegetation during any monitoring event.
- The establishment of 3 species of native trees and 4 species of native shrubs at the end the the monitoring period.
- Unplanted buffer areas are to remain free from new impacts. Prohibited activities include but are not limited to clearing, grading, excavating, filling, mowing, pruning of existing vegetation, and/or planting or seeding non-native species.

6.0 Monitoring
Monitoring shall be conducted twice annually (mid spring and fall) for 5 years in accordance with the approved mitigation monitoring plan.
6.1 Vegetation Monitoring: Sample points or transects will be established for vegetation monitoring. Linear transects are the preferred method for vegetation monitoring for this site. No less than one (1) 100-foot transect per 10,000 square feet of area will be established in the mitigation area. Permanent transect location(s) must be identified on mitigation site plans in the first monitoring report (they may be drawn on approved mitigation plans by hand). Plots located at the end of each transect shall detail herb, shrub, and tree aerial cover at radii of 1m, 5m, and 10m respectively, using the Braun-Blanquet releve method or other acceptable field method. Monitoring of vegetation transects shall occur annually between August 1 and September 30 (prior to leaf drop), unless otherwise specified.
6.2 Photopoints: No less than four (4) permanent photo points will be established within the mitigation area. Photographs will be taken from these points to visually record the condition of the mitigation area. Photos shall be taken annually between August 1 and September 30 (prior to leaf drop), unless otherwise specified.
6.3 Reports: Monitioring reports shall be submitted by December 31 of each year during the monitoring period. As applicable, monitoring reports must include description/data for:

- Site plan and location map
- Historic description of project, including date of installation, current year of monitoring, restatement of mitigation goals, and performance standards
- Plant survival, vigor, and aerial coverage from every plant community (transect data), and explanation of monitoring methodology in the context of assessing performance standards
- Slope condition, site stability, any structures or special features
- Buffer conditions, e.g. surrounding land use, use by humans, wild and domestic creatures
- Observed wildlife, including amphibians, avians and others
- Assessment of nuisance/exotic biota and recommendations for management
- Color photographs taken from permanent photo points as shown in the first as-built plan or the first monitoring report.
- Summary of maintenance and contingency measures proposed for next season and completed for past season

6.4 Deficiences: Any deficiency discovered during any monitoring or inspection visit must be corrected within 60 days of approval by City of Kirkland.
6.5 Contingency Plan: Should any monitoring report reveal the mitigation has failed in whole or in part, and should that failure be beyond the scope of routine maintenance, a Contingency Plan will be submitted. The Contingency Plan may range in complexity from a list of plants substituted, to cross-sections of proposed engineered structures. Once approved, it may be installed, and will replace the approved mitigation plan. If the failure is substantial, City of Kirklandmay extend the monitoring period for that mitigation.

7.0 Bond
Prior to beginning any work, the Permittee must provide a mitigation bond or assignment of funds per City of Kirkland. A bond quantity worksheet has been completed based on all elements of the mitigation plan. The total cost, plus contingency fees has been determined to be $ 44,813.81 , which will be the amount of the mitigation bond the Permittee is required to provide. Bonds are eligible for reduction to maintenance status upon successful installation inspection, providing that it also meets performance standards established in the mitigation plan and City of Kirkland guidelines.

NO.	DATE	BY	REVISION
2	10/23/17	LRE	PLANT LOCATIONS
1	4/28/17	LRE	3/29/17 WATERSHED COMMENTS

CONSULTANT:
Wetlands Northwest, LLC
5218 Ivanhoe Place Northeast
Seattle, Washington 98105
BUS: 206-456-5474 MOB: 206-554-1628
WWW.WETLANDSNW.COM

CLIENT:
HSU CHIU CHIH & YEH HUA LU
10265 124TH AVENUE NE KIRKLAND, WASHINGTON 98033

PROJECT:
DEVELOPMENT PROPOSAL & BUFFER MITIGATION
KING COUNTY TAX PARCEL NO.: 663990-0280

DESIGNED BY: L. Erickson
DRAWN BY: L. Erickson
CHECKED BY: R. Kong
APPROVED BY: R. Kong
DATE: 12/2/16

SCALE NONE

SHEET W.4

FIGURE C.2.1.A TYPICAL SPLASH BLOCK

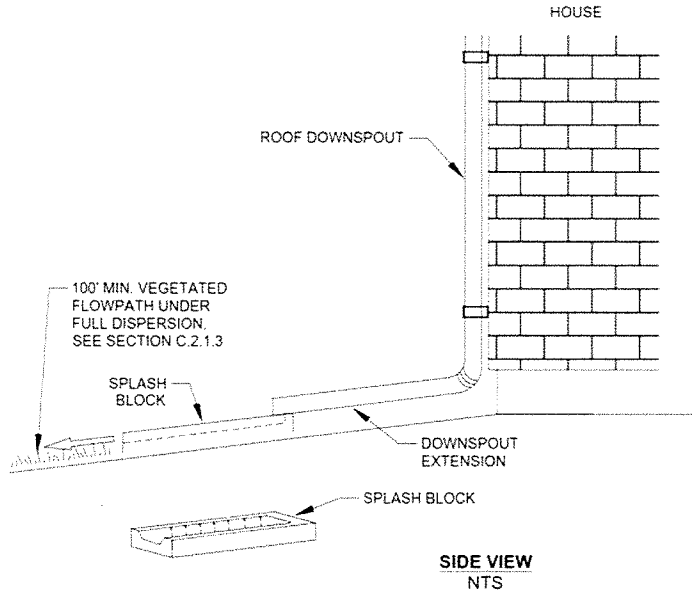
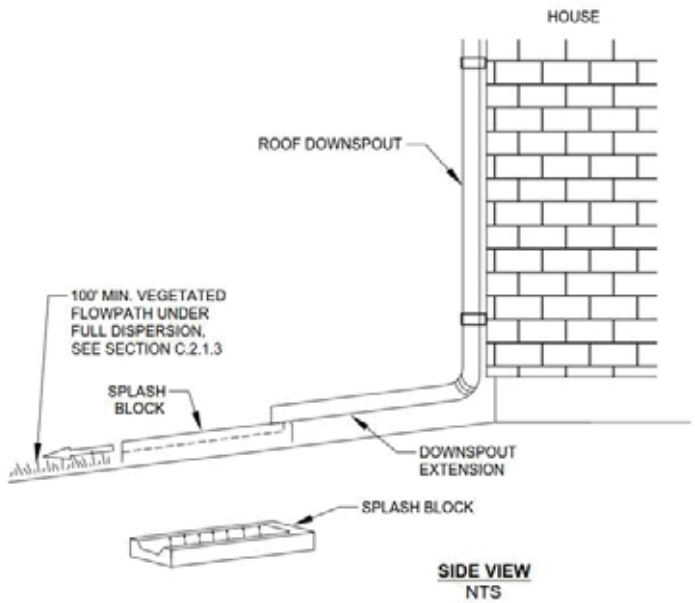


FIGURE C.2.1.A TYPICAL SPLASH BLOCK



THE WATERSHED COMPANY

SCIENCE & DESIGN

December 4, 2017

Allison Zike
City of Kirkland
Planning & Community Development
123 Fifth Avenue
Kirkland, WA 98033

Re: Lu Project – Revised Wetland Buffer Modification Plan Review
The Watershed Company Reference Number: 080704.6

Dear Allison:

Thank you for requesting we review the revised buffer modification plan submitted for this project. Our prior review, dated August 24, 2017, included three remaining recommended revisions. Recommendation 1, relating to consistency with engineering plans, has been addressed as has recommendation 3, relating to mitigation plant selection in areas of stormwater dispersion. However, recommendation 2, concerning stormwater outfalls, has not. While splash blocks are allowed since they disperse water in the form of surface discharge, the infiltration trench and level spreader is supplied by a piped system. None of the information provided in the materials I have reviewed have addressed the stormwater requirements of piped systems in a buffer setback found in 90.45.3. The engineer should review that section and prepare a report to address the necessary components for review and approval by Planning and Public Works.

Please call if you have any questions or if we can provide you with any additional information.

Sincerely,

Hugh Mortensen, PWS
President

750 Sixth Street South | Kirkland, WA 98033
p 425.822.5242 | f 425.827.8136 | watershedco.com

CIVIL ENGINEERING SOLUTIONS

Memorandum

To: Allison Zike, Planner
City of Kirkland Planning Department

From Duffy Ellis, PE

Date: Revised June 25, 2018

cc: Robert King, Wetlands NW

Re: **SAR16-02993**
10265 124th Ave NE
Buffer Modification & Piped Stormwater Outfall
Code Section KZC90.34.3

Hi Allison,

This memo has been edited in response to the Watershed Company review of my previously submitted April 6 memorandum. In the first response below I've added additional verbiage addressing the "slope stability" element and we now have a geotechnical engineer memo in support of the dispersion trench and its buffer location.

I'm the civil engineer of record for this project and have been elected to address the older code section KZC90.34.3 regarding the dispersion trench facility located in the buffer setback. See my responses below.

STORM WATER OUTFALLS – SURFACE DISCHARGE OF STORM WATER THROUGH WETLAND BUFFERS AND BUFFER SETBACKS IS REQUIRED UNLESS A PIPED SYSTEM IS APPROVED PURSUANT TO THIS SECTION. STORM WATER OUTFALLS (PIPED SYSTEMS) MAY BE LOCATED WITHIN THE BUFFER SETBACK SPECIFIED IN SUBSECTION (2) OF THIS SECTION AND WITHIN THE BUFFERS SPECIFIED IN SUBSECTION (1) OF THIS SECTION ONLY WHEN THE PUBLIC WORKS AND PLANNING OFFICIALS BOTH DETERMINE, BASED ON A REPORT PREPARED BY A QUALIFIED PROFESSIONAL UNDER CONTRACT TO THE CITY AND PAID FOR BY THE APPLICANT, THAT SURFACE DISCHARGE OF STORM WATER THROUGH THE BUFFER WOULD CLEARLY POSE A THREAT TO SLOPE STABILITY, AND IF THE STORM WATER OUTFALL WILL NOT

Response:
In response to the "threat to slope stability" requirement, this a bit of a conundrum to respond since it's not reflective to the many challenges of stormwater discharges besides slope stability including proper distances to nearby structures, erosion hazards, impacts to downstream flowpath areas and properties, etc.

First there is not a significant slope to threaten as best characterized by the geotechnical engineer for project, Julian Liu (PE, Ph.D) in his report. So the slope component is a non-issue but I would strongly advise an allowance be made for this previous bit of

CIVIL ENGINEERING SOLUTIONS

Memorandum

critical area code to allow other relevant factors that dictate where and how runoff is discharged.

In this case, the real threat if a point discharge was proposed behind the setback line is likely erosion of the upper weathered till horizon; long term scour; and possible undermining of the house foundation near the southwest corner of the new house. Hence one reason why a dispersion trench in the buffer (only place to fit it) is proposed and was signed off by Kirkland Public Works already. The geotechnical engineer also stated in the Erosion Hazard section of this report that the upper weathered till layer has low resistance against erosion. He also recommended a surface dispersion trench as a proper solution for this project.

Secondly, the King County and Kirkland Storm Manual mandate that storm BMP's (best management practices) be applied to the "maximum extent feasible". In this case, the dispersion trench located in the buffer setback is the optimal BMP to disperse runoff in the upper weathered soil horizon. Typically we rarely ever propose point discharges anymore for projects.

Thirdly, the dispersion trench discharge meets the King County Appendix C Manual (which Kirkland adopts) The dispersion length shown is not arbitrary but has a length dictated by the Kirkland Storm Code which is based on 10 LF for every 700 sf of impervious. This will evenly spread the runoff into the upper weathered till horizon.

Lastly, the geotechnical engineer for project (now retired Julian Liu, PE, Ph.D) had originally advised that surface from roofs and driveway runoff be directed to a dispersion trench.

These trenches are very common and effective BMP's and highly preferred discharge method by all stormwater designers and reviewers. They mitigate peak runoff rates and all water to mostly trickle into the upper soil horizon and can sheet flow via the level spreader if the trench ever fills up.

The following is responses to each of the criteria:

A. ADVERSELY AFFECT WATER QUALITY;

Response:
The dispersion trench in the buffer should not adversely affect the water quality. It is considered a "Best Management Practices" or BMP. Dispersion trenches are effectively shallow infiltration trenches that improve water quality due to the natural properties of the substrate including: physical filtering; sorption; chemical precipitation into the substrate, and even biotransformation to less harmful constituents. Also bear in mind that the driveway runoff receives pre-treatment by use of simple oil/water separators at the upstream catch basins.

CIVIL ENGINEERING SOLUTIONS

Memorandum

B. ADVERSELY AFFECT FISH, WILDLIFE, OR THEIR HABITAT;

Response:
One can assume this 20 foot long trench dispersing runoff into the weathered till soil will not negatively affect wildlife, fish (if they were nearby) or habitat.

C. ADVERSELY AFFECT DRAINAGE OR STORM WATER DETENTION CAPABILITIES;

Response:
In fact this Dispersion BMP is a net benefit in terms on drainage and creating a minor but very effective detention effect with therefore mitigates peak rates of runoff from this single family house project.

D. LEAD TO UNSTABLE EARTH CONDITIONS OR CREATE EROSION HAZARDS OR CONTRIBUTE TO SCOURING ACTIONS; AND

Response:
No, the dispersion trench should not cause scour or cause erosion due to the fact there is no velocity of relevance at the discharge trench in combination with shallow grade of roughly 5% topography.

E. BE MATERIALLY DETRIMENTAL TO ANY OTHER PROPERTY IN THE AREA OF THE SUBJECT PROPERTY OR TO THE CITY AS A WHOLE, INCLUDING THE LOSS OF SIGNIFICANT OPEN SPACE OR SCENIC VISTAS.

Response:
The dispersion trench in the buffer will not effect in any way the surrounding properties in terms of open space or scenic vistas.

RESPONSE TO DRAINAGE REVIEW

THE GALLI GROUP
Geotechnical Consulting

June 20, 2018
TGG Project 2012-1

Duffy Ellis
Civil Engineering Solutions
duffy@cesolutions.us

Subject: Response to City of Kirkland Drainage Review
SAR 16-02993
10265 - 124th Ave NE
Kirkland, Washington

The Galli Group reviewed the geotechnical report for the above project prepared by Liu and Associates (*Geotechnical Investigation, Lu Residence, 10265 124th Ave NE, Kirkland, WA, L&A Job No. 16-071*, dated May 24, 2016). We understand that Mr. Liu has retired and is no longer available to respond to the project review. According to the previous geotechnical report the project contains no steep slopes, is underlain by glacial till soil mantled by a thin layer of fill and possible alluvium on the west side of the parcel, and is situated within the wetland buffer. The proposed plan offered by Civil Engineering Solutions for handling stormwater runoff includes a dispersion trench that would disperse water on the gentle slope (less than 5 percent) toward the wetland area west of the proposed residence.

It does not appear that the site contains any steep slopes. We concur with the observations prepared by Duffy Ellis, of Civil Engineering Solutions, in that we don't think this will adversely impact the water quality, wildlife and habitat, drainage or detention capabilities of existing drainage systems, lead to unstable earth conditions or erosion, or be detrimental to adjacent properties. The proposed design appears to be consistent with the intent of the code (KZC 90.34.3) which is to require "surface discharge of storm water through wetland buffers and buffer setbacks." The proposed system will allow water to move laterally through an existing near surface zone of weathered soil enhancing treatment and attenuating flows, or in wet antecedent conditions possibly result in surface discharge across a vegetated portion of the lot before approaching the wetland or adjacent properties.

Sincerely,

THE GALLI GROUP

PAUL L. STOLTENBERG
STATE OF WASHINGTON
29339
REGISTERED
PROFESSIONAL ENGINEER

Paul L. Stoltenberg, P.E.
Senior Geotechnical Engineer

6-20-2018

PO Box 30759, Seattle, WA 98113 - Phone: (206) 525-5097

Allison Zike

From: Allison Zike
Sent: Tuesday, July 10, 2018 3:02 PM
To: Allison Zike
Subject: TWC #080704.6: 10265 124th Ave NE storm in buffer setback

---

From: Hugh Mortensen [mailto:HMortensen@watershedco.com]
Sent: Friday, June 29, 2018 8:52 AM
To: Allison Zike
Subject: RE: TWC #080704.6: 10265 124th Ave NE storm in buffer setback

Allison,
Thanks for the opportunity to review the stormwater memo from Mr. Ellis. The memo adequately covers the wetland buffer concerns. The stormwater system appears to be properly designed and situated in the best position to maintain buffer and wetland function. Please let me know if you need any further assistance on this project.
Thanks,

HUGH MORTENSEN, PWS
President
(425) 822-5242, Extension 108
THE WATERSHED COMPANY
watershedco.com

SAVE HARMLESS AGREEMENT - WETLAND

File No.:	
Parcel Number:	
Project Name:	
Project Address:	

The undersigned, being all of the owners of the hereinafter described real property, hereby agree to indemnify, defend, and save harmless the City of Kirkland, its officers and employees from any claim, real or imaginary, filed against the City of Kirkland, its officers, or employees, alleging damage or injury caused by fault on the part of the undersigned, their employees or agents, and/or the City of Kirkland, its officers, or employees and arising out of maintenance, flooding, damming or enlargement of the wetland existing on the hereinafter described real property; provided, however, this agreement shall not include damage resulting from the sole fault of the City of Kirkland, its officers, or employees. Fault as herein used shall have the same meaning as set forth in RCW 4.22.01. This Agreement shall also include all reasonable cost and expense, including attorney's fees, incurred by the City of Kirkland in investigation and/or defense of any such claim.

This Agreement shall be binding upon the heirs, successors, and assigns of the parties hereto and shall run with the land.

The real property subject to this Agreement is situated in Kirkland, King County, Washington, and described as follows:

DATED at Kirkland, Washington, this ____day of _____, _____.

(Sign in blue ink)

(*Individuals Only*)

OWNER(S) OF REAL PROPERTY (INCLUDING SPOUSE)

_____

_____

_____

(*Individuals Only*)

STATE OF WASHINGTON)
) SS.
County of King)

On this _____ day of _____, _____, 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 Save Harmless Agreement for a Wetland and acknowledged that _____ signed the same as _____free and voluntary act and deed, for the uses and purposes therein mentioned.
WITNESS my hand and official seal hereto affixed the day and year first above written.

_____
Notary's Signature

_____
Print Notary's Name
Notary Public in and for the State of Washington, Residing at: _____
My commission expires: _____

(*Partnerships Only*)

OWNER(S) OF REAL PROPERTY

_____
(Name of Partnership or Joint Venture)

_____
By General Partner

_____
By General Partner

_____
By General Partner

(*Partnerships Only*)

STATE OF WASHINGTON)
) SS.
County of King)

On this _____ day of _____, _____, 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 general partners of _____, the partnership that executed the Save Harmless Agreement for a Wetland and acknowledged the said instrument to be the free and voluntary act and deed of each personally and of said partnership, for the uses and purposes therein set forth, and on oath stated that they were authorized to sign said instrument.

WITNESS my hand and official seal hereto affixed the day and year first above written.

_____
Notary's Signature

_____
Print Notary's Name
Notary Public in and for the State of Washington,
Residing at: _____
My commission expires: _____

(Corporations Only)

OWNER(S) OF REAL PROPERTY

_____
(Name of Corporation)

_____
By President

_____
By Secretary

(*Corporations Only*)

STATE OF WASHINGTON)
) SS.
County of King)

On this _____ day of _____, _____, 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 President and Secretary, respectively, of _____, the corporation that executed the Save Harmless Agreement for a Wetland and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein set forth, and on oath stated that they were authorized to sign said instrument and that the seal affixed is the corporate seal of said corporation.

WITNESS my hand and official seal hereto affixed the day and year first above written.

_____
Notary's Signature

_____
Print Notary's Name
Notary Public in and for the State of Washington,
Residing at: _____
My commission expires: _____

NATURAL GREENBELT PROTECTIVE EASEMENT

Grantor: _____, owner of the hereinafter described real property, hereby grants to

Grantee: The City of Kirkland, a municipal corporation.

A natural greenbelt protective easement over and across the following described real property to wit ("Easement Area"):

No tree trimming, tree topping, tree cutting, tree removal, shrub or brush-cutting or removal of native vegetation, application of pesticides, herbicides, or fertilizers; construction; clearing; or alteration activities shall occur within the Easement Area without prior written approval from the City of Kirkland. Application for such written approval to be made to the Kirkland Department of Planning and Community Development who may require inspection of the premises before issuance of the written approval and following completion of the activities. Any person conducting or authorizing such activity in violation of this paragraph or the terms of any written approval issued pursuant hereto, shall be subject to the enforcement provisions of Chapter 170, Ordinance 3719, the Kirkland Zoning Code. In such event, the Kirkland Department of Planning and Community Development may also require within the immediate vicinity of any damaged or fallen vegetation, restoration of the affected area by planting replacement trees and other vegetation as required in applicable sections of the Kirkland Zoning Code. The Department also may require that the damaged or fallen vegetation be removed.

It is the responsibility of the property owner to maintain critical areas and their buffers by removing non-native, invasive, and noxious plants in a manner that will not harm critical areas or their buffers and in accordance with Kirkland Zoning Code requirements for trees and other vegetation within critical areas and critical area buffers.

The City shall have a license to enter the Easement Area (and the property if necessary for access to the Easement Area) for the purpose of monitoring compliance with the terms of this easement.

Development outside of this Natural Greenbelt Protective Easement may be limited by codified standards, permit conditions, or movement of the critical area.

Each of the undersigned owners agree to defend, pay, and save harmless the City of Kirkland, its officers, agents, and employees from any and all claims of every nature whatsoever, real or imaginary, which may be made against the City, its officers, agents, or employees for any damage to property or injury to any person arising out of the existence of said Natural Greenbelt Protective Easement over said owner's property or the actions of the undersigned owners in carrying out the responsibilities under this agreement, including all costs and expenses, and recover attorney's fees as may be incurred by the City of Kirkland in defense thereof; excepting therefrom only such claims as may arise solely out of the negligence of the City of Kirkland, its officers, agents, or employees.

This easement is given to satisfy a condition of the development permit approved by the City of Kirkland under Kirkland File/Permit No. _____, for construction of _____ upon the following described real property:

This easement shall be binding upon the parties hereto, their successors and assigns, and shall run with the land.

DATED at Kirkland, Washington, this _____ day of _____, _____.

(Sign in blue ink)

(*Individuals Only*)

OWNER(S) OF REAL PROPERTY (INCLUDING SPOUSE)

_____

_____

_____

(*Individuals Only*)

STATE OF WASHINGTON)
) SS.
County of King)

On this _____ day of _____, _____, 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 Natural Greenbelt Protective Easement and acknowledged that _____ signed the same as _____free and voluntary act and deed, for the uses and purposes therein mentioned.
WITNESS my hand and official seal hereto affixed the day and year first above written.

_____
Notary's Signature

_____
Print Notary's Name
Notary Public in and for the State of Washington,
Residing at: _____
My commission expires: _____

(*Partnerships Only*)

OWNER(S) OF REAL PROPERTY

_____
(Name of Partnership or Joint Venture)

_____
By General Partner

_____
By General Partner

_____
By General Partner

(*Partnerships Only*)

STATE OF WASHINGTON)
) SS.
County of King)

On this _____ day of _____, _____, 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 general partners of _____, the partnership that executed the Natural Greenbelt Protective Easement and acknowledged the said instrument to be the free and voluntary act and deed of each personally and of said partnership, for the uses and purposes therein set forth, and on oath stated that they were authorized to sign said instrument.

WITNESS my hand and official seal hereto affixed the day and year first above written.

_____
Notary's Signature

_____
Print Notary's Name
Notary Public in and for the State of Washington,
Residing at: _____
My commission expires: _____

(Corporations Only)

OWNER(S) OF REAL PROPERTY

_____
(Name of Corporation)

_____
By President

_____
By Secretary

(*Corporations Only*)

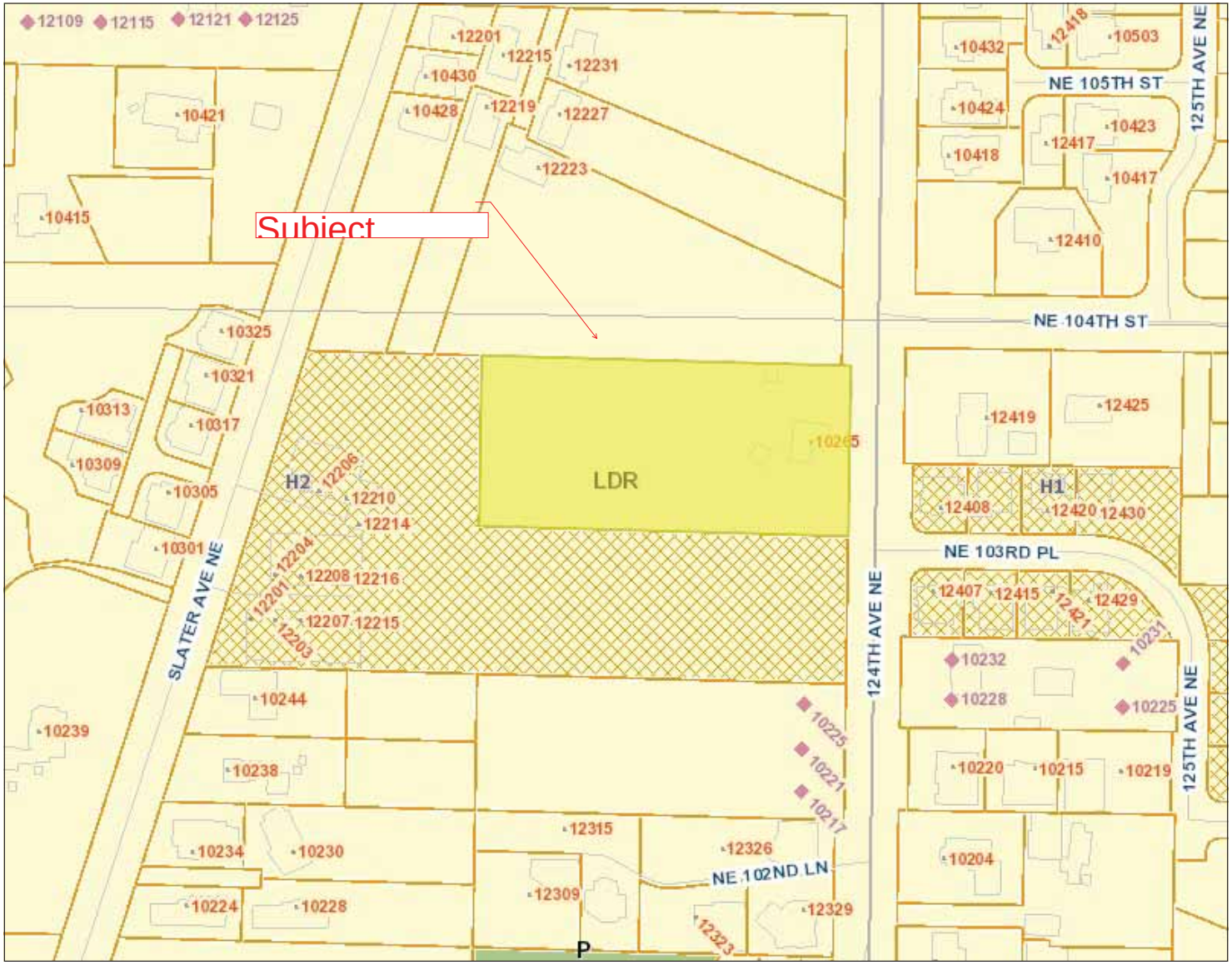
STATE OF WASHINGTON)
) SS.
County of King)

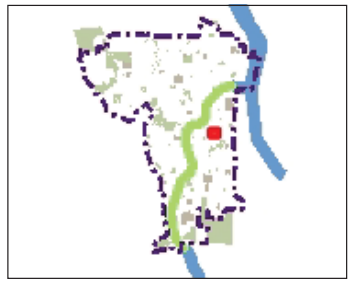
On this _____ day of _____, _____, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared _____and _____ to me, known to be the President and Secretary, respectively, of _____, the corporation that executed the Natural Greenbelt Protective Easement and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein set forth, and on oath stated that they were authorized to sign said instrument and that the seal affixed is the corporate seal of said corporation.

WITNESS my hand and official seal hereto affixed the day and year first above written.

_____
Notary's Signature

_____
Print Notary's Name
Notary Public in and for the State of Washington,
Residing at: _____
My commission expires: _____





Legend

- Address
  - Other Address
  - Current Address
  - Current ADU
  - Pending Address
- City Limits
- Grid
- QQ Grid
- Cross Kirkland Corridor
- Regional Rail Corridor
- Streets
- Parcels
- Buildings
- Lakes
- Parks
- Schools
- Overlay Zones
  - (EQ)
  - (HL)
  - (HP)
- Planned Unit Development
- Design District
- Comprehensive Plan
  - Commercial
  - Industrial

1: 1,931

Notes

0.1 0 0.03 0.1 Miles

NAD_1983_StatePlane_Washington_North_FIPS_4601_Feet

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SAR16-02993
ATTACHMENT 18
COMPREHENSIVE PLAN LAND USE