



# King County

## Department of Local Services

### Permitting Division

## TESC PLAN

## RECOMMENDED CONSTRUCTION SEQUENCE

1. Hold the pre-construction meeting, if required
2. Post sign with name and phone number of TESC supervisor (may be consolidated with the required notice of construction sign).
3. Flag or fence clearing limits.
4. Install catch basin protection, if required.
5. Grade and install construction entrance(s)
6. Install perimeter protection (silt fence, brush barrier, etc.).
7. Construct sediment pond and traps, if required.
8. Grade and stabilize construction roads.
9. Construct surface water controls (interceptor dikes, pipe slope drains, etc.) simultaneously with clearing and grading for project development.
10. Mainatain erosion control measures in accordance with King County standards and manufacture's recommendations.
11. Relocate erosion control measure, or install new measures so that as site conditions change, the erosion and sediment control is always in accordance with the King County Erosion and Sedimentation Control Standards.
12. Cover all areas that will be unworked for more than seven days during the dry season or two days during the wet season with straw, wood fiber mulch, compost, plastic sheeting, or equivalent.
13. Stabilize all areas within seven days of reaching final grade.
14. Seed, sod, stabilize, or cover any areas to remain unworked for more than 30 days.
15. Upon completion of the project, stabilize all disturbed areas and remove BMP's if apprriate.

## Engineering / Drainage Approval

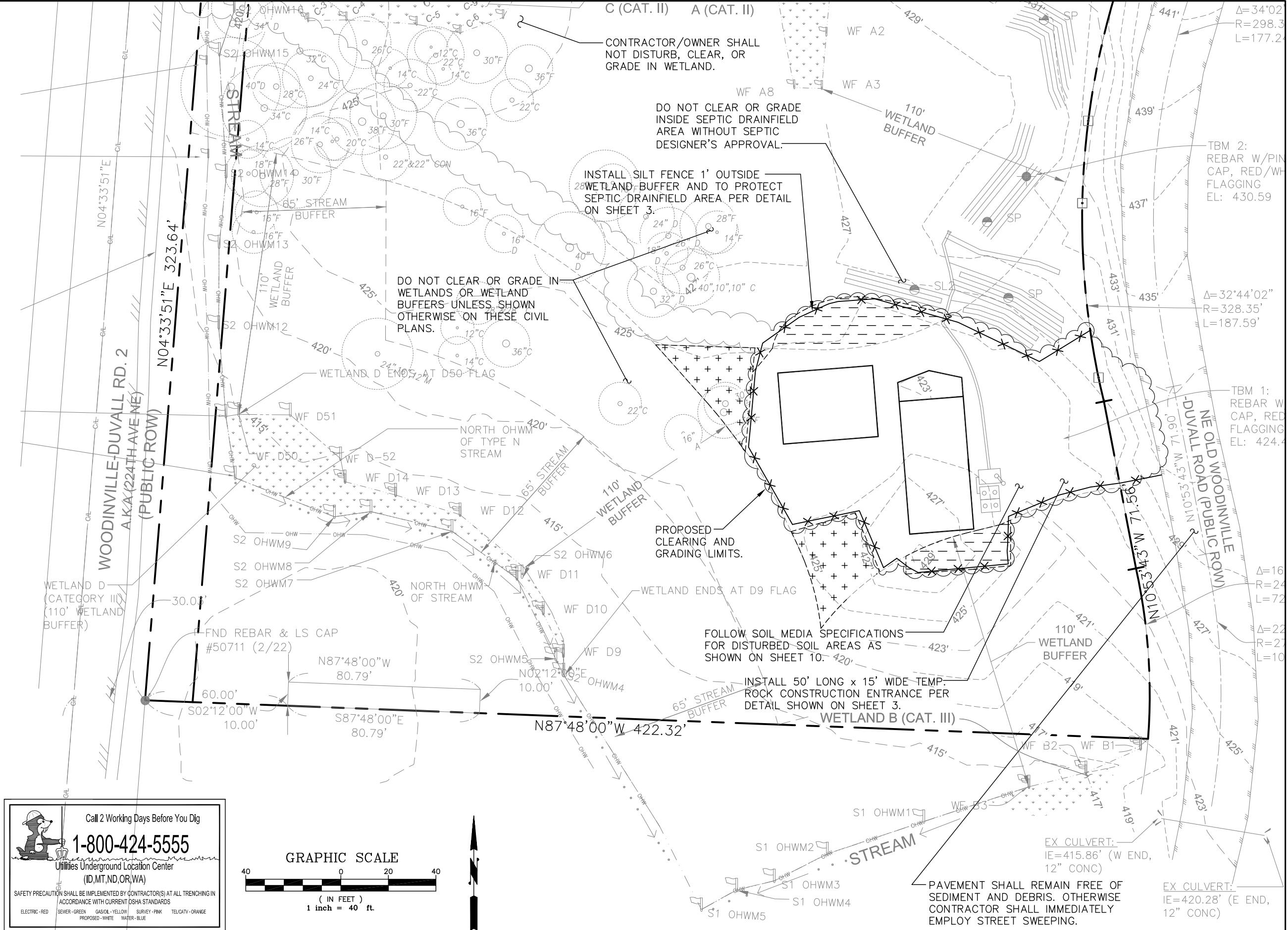
Signature: \_\_\_\_\_

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

## Clearing / Grading Approval

Signature: \_\_\_\_\_

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





**King County**  
Department of Local Services  
Permitting Division

**TESC NOTES AND DETAILS**

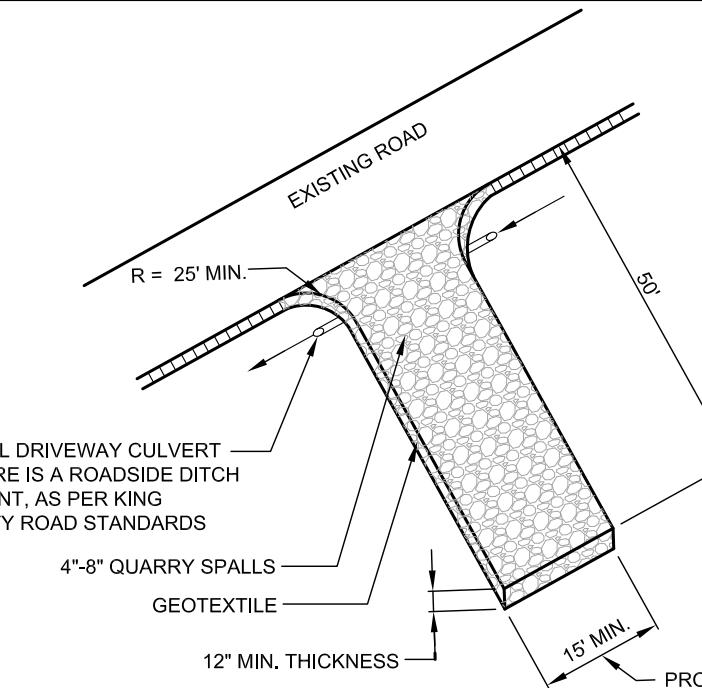
**STANDARD ESC PLAN NOTES**

THE STANDARD ESC PLAN NOTES MUST BE INCLUDED ON ALL ESC PLANS. AT THE APPLICANT'S DISCRETION, NOTES THAT IN NO WAY APPLY TO THE PROJECT MAY BE OMITTED; HOWEVER, THE REMAINING NOTES MUST NOT BE RENUMBERED. FOR EXAMPLE, IF ESC NOTE #3 WERE OMITTED, THE REMAINING NOTES SHOULD BE NUMBERED 11,2,4,5,6 ETC.

1. APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY SURVEY TAPE (OR FENCING, IF REQUIRED) PRIOR TO CONSTRUCTION (SWDM APPENDIX .). DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.
4. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS CONSTRUCTED WHEEL WASH SYSTEMS OR WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN AND TRACK OUT TO ROAD RIGHT OF WAY DOES NOT OCCUR FOR THE DURATION OF THE PROJECT.
5. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.
6. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL COVER MEASURES, ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION ETC.) AS DIRECTED BY KING COUNTY.
7. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES.
8. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO CONSECUTIVE DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
9. ANY AREAS NEEDING ESC MEASURES THAT DO NOT REQUIRE IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.
10. THE ESC FACILITIES ON THE INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH DURING THE DRY SEASON, BI-MONTHLY DURING THE WET SEASON, OR WITHIN TWENTY FOUR (24) HOURS FOLLOWING A STORM EVENT.
11. AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
12. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION SYSTEM, THE TEMPORARY FACILITY MUST BE ROUGH GRADED SO THAT THE BOTTOM AND SIDES ARE AT LEAST THREE FEET ABOVE THE FINAL GRADE OF THE PERMANENT FACILITY.
13. COVER MEASURES WILL BE APPLIED IN CONFORMANCE WITH APPENDIX D OF THE SURFACE WATER DESIGN MANUAL.

**LEGEND**

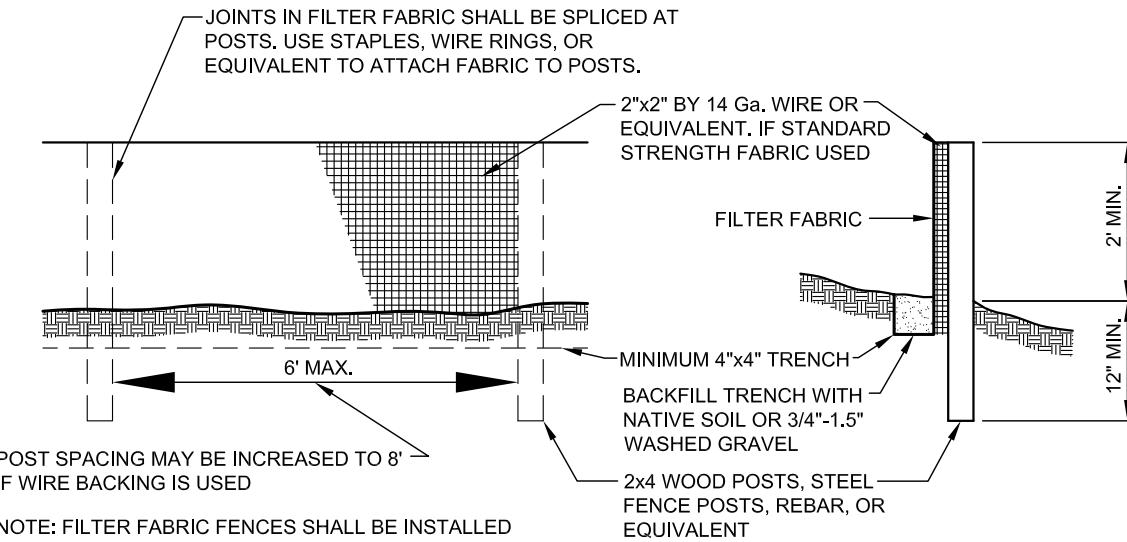
●	FOUND 1/2" IRON ROD W/CAP, LS 7874	WF #	WETLAND FLAG
○	FOUND 1/2" IRON ROD	NVFS	NATIVE VEGETATED FLOWPATH SEGMENT
●	SET 5/8" IRON ROD W/CAP, LS 52843	570	PROPOSED TOPO CONTOUR
□	COMMUNICATION RISER	570	EXISTING TOPO CONTOUR
△	ELECTRICAL JUNCTION BOX	○	STORM DRAIN CLEANOUT
○	TREE	●	YARD DRAIN
○	ESTIMATED TREE DRIPLINE	TP#	TAX PARCEL NUMBER
F	FIR TREE	NTS	NOT TO SCALE
D	DECIDUOUS TREE	NRGA	NATIVE GROWTH RETENTION AREA
G	CEDAR TREE	DS	DOWSPOUT
CON	COTTONWOOD TREE	FF	FINISH FLOOR ELEVATION
14"	TREE DBH	GS	GARAGE SLAB ELEVATION
DBH	DIAMETER AT BREAST HEIGHT	HMA	HOT MIX ASPHALT
—	UNDERGROUND COMMUNICATION LOCATE	BSBL	BUILDING SETBACK LINE
—	UNDERGROUND ELECTRICAL LOCATE	RIM	RIM ELEVATION
—x—x—	WOVEN WIRE FENCE	SF	SQUARE FEET
—W—	WATER LINE	CB	CATCH BASIN
○	SOIL LOG	ISA	IMPERVIOUS SURFACE AREA
	EX. PAVEMENT EDGE	IE	INVERT ELEVATION
H: V	= HORIZONTAL/VERTICAL	PGIS	POLLUTION GENERATING IMPERVIOUS SURFACE
△	= FIRE HYDRANT	LF	LINEAL FEET
□	= EX. WATER METER BOX	SDCO	STORM DRAINAGE CLEANOUT
S1	= STREAM 1	CPEP	CORRUGATED POLYETHYLENE PIPE
S2	= STREAM 2	TR	TOP OF ROCKERY
████████	= EX. GRAVEL SURFACE	C/L	CENTERLINE (OF ROAD)
████████	= WETLAND	OHWM	ORDINARY HIGH WATER MARK
████████	= PROPOSED NRGA	EX.	EXISTING
—○—	= PROPOSED SPLIT RAIL FENCE	MUTCD	MANUAL UNIFORM TRAFFIC CONTROL DEVICES
LP	= LOW POINT (ELE.)	—	PROPOSED GRAVEL
TG	= TOP OF GRAVEL (ELE.)	—	PROPOSED HMA SURFACE
ROW	= RIGHT-OF-WAY		
CAT.	= CATEGORY		
WF	= WETLAND FLAG		



AS PER KING COUNTY ROAD STANDARDS, DRIVEWAYS SHALL BE PAVED TO THE EDGE OF R-O-W PRIOR TO INSTALLATION OF THE CONSTRUCTION ENTRANCE TO AVOID DAMAGING OF THE ROADWAY

IT IS RECOMMENDED THAT THE ENTRANCE BE CROWNED SO THAT RUNOFF DRAINS OFF THE PAD

**FIGURE D.3.4.A STABILIZED CONSTRUCTION ENTRANCE DETAIL**  
NTS



**MAINTENANCE STANDARDS**

1. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.
2. IF CONCENTRATED FLOWS ARE EVIDENT UPHILL OF THE FENCE, THEY MUST BE INTERCEPTED AND CONVEYED TO A SEDIMENT TRAP OR POND.
3. IT IS IMPORTANT TO CHECK THE UPHILL SIDE OF THE FENCE FOR SIGNS OF THE FENCE CLOGGING AND ACTING AS A BARRIER TO FLOW AND THEN CAUSING CHANNELIZATION OF FLOWS PARALLEL TO THE FENCE. IF THIS OCCURS, REPLACE THE FENCE OR REMOVE THE TRAPPED SEDIMENT.
4. SEDIMENT MUST BE REMOVED WHEN THE SEDIMENT IS 6 INCHES HIGH.
5. IF THE FILTER FABRIC (GEOTEXTILE) HAS DETERIORATED DUE TO ULTRAVIOLET BREAKDOWN, IT SHALL BE REPLACED.

**FIGURE D.3.3.A SILT FENCE DETAIL**  
NTS

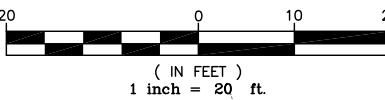


**King County**  
Department of Local Services  
Permitting Division

**GRADING AND STORM  
DRAINAGE PLAN NORTH**



**GRAPHIC SCALE**



1 inch = 20 ft.

IMMEDIATELY BELOW  
DISPERSION  
TRENCH, PLANT  
NATIVE SHRUBS  
AND GROUNDCOVER  
CONSISTENT WITH  
THE TABLE SHOWN  
ON SHEET 7.

SEE GRAVEL DRIVEWAY  
SPECIFICATIONS ON SHEET 7.

SEE SPECIAL  
DRAINAGE NOTE 1.

WF D12  
165' STREAM  
108'  
110' WETLAND  
BUFFER  
NVFS

**SPECIAL DRAINAGE NOTES:**

1. DOWNSPOUT CONVEYANCE PIPES SHALL BE 4-INCH DIAMETER, PVC, 1' MIN. COVER, AND SLOPED AT 1% MINIMUM.
2. NVFS CRITERIA ARE SHOWN ON SHEET 7.

WF A8

WF A3

110'  
WETLAND  
BUFFER

439'

437'

435'

431'

433'

435'

TBM 2:  
REBAR  
CAP, R  
FLAGGIN  
EL: 430

$\Delta = 32^\circ 44'$   
 $R = 328.3$   
 $L = 187.5$

PAVE  
DRIVEWAY IN  
ROW.  
PROVIDE  
TEMPORARY  
MUTCD TRAFFIC  
CONTROL  
SAFETY  
SIGNAGE, WHILE  
ROADWORK  
OCCURS.

TBM  
REB  
CAF  
FLA  
EL:

NE OLD WOODINV  
DUVALL ROAD (PUBL

CB TYPE 1  
RIM=423.6  
IE=422.0  
(SURROUND WITH  
COBBLE AND SEE  
DETAIL ON SHEET 7)

LP=424.3

IE=424.0

7LF 6" DI 1% 4"  
MIN. COVER

SP

IE=424.1

IE=424.3

INLET

IE=426.5  
WITH RIP-RAP PAD

42LF 12" CPEP 1%  
MIN.

15' RADIUS

PAVE  
DRIVEWAY IN  
ROW.  
PROVIDE  
TEMPORARY  
MUTCD TRAFFIC  
CONTROL  
SAFETY  
SIGNAGE, WHILE  
ROADWORK  
OCCURS.

SDCO  
IE=423.0

GS=425.5

SDCO  
IE=423.2

SDCO  
IE=423.0

SD



# King County

## Department of Local Services

### Permitting Division

## GRADING AND STORM DRAINAGE PLAN SOUTHEAST



Call 2 Working Days Before You Dig  
**-800-424-5555**

Utilities Underground Location Center  
(ID,MT,ND,OR,WA)

SAFETY PRECAUTION SHALL BE IMPLEMENTED BY CONTRACTOR(S) AT ALL TRENCHING IN  
ACCORDANCE WITH CURRENT OSSA STANDARDS

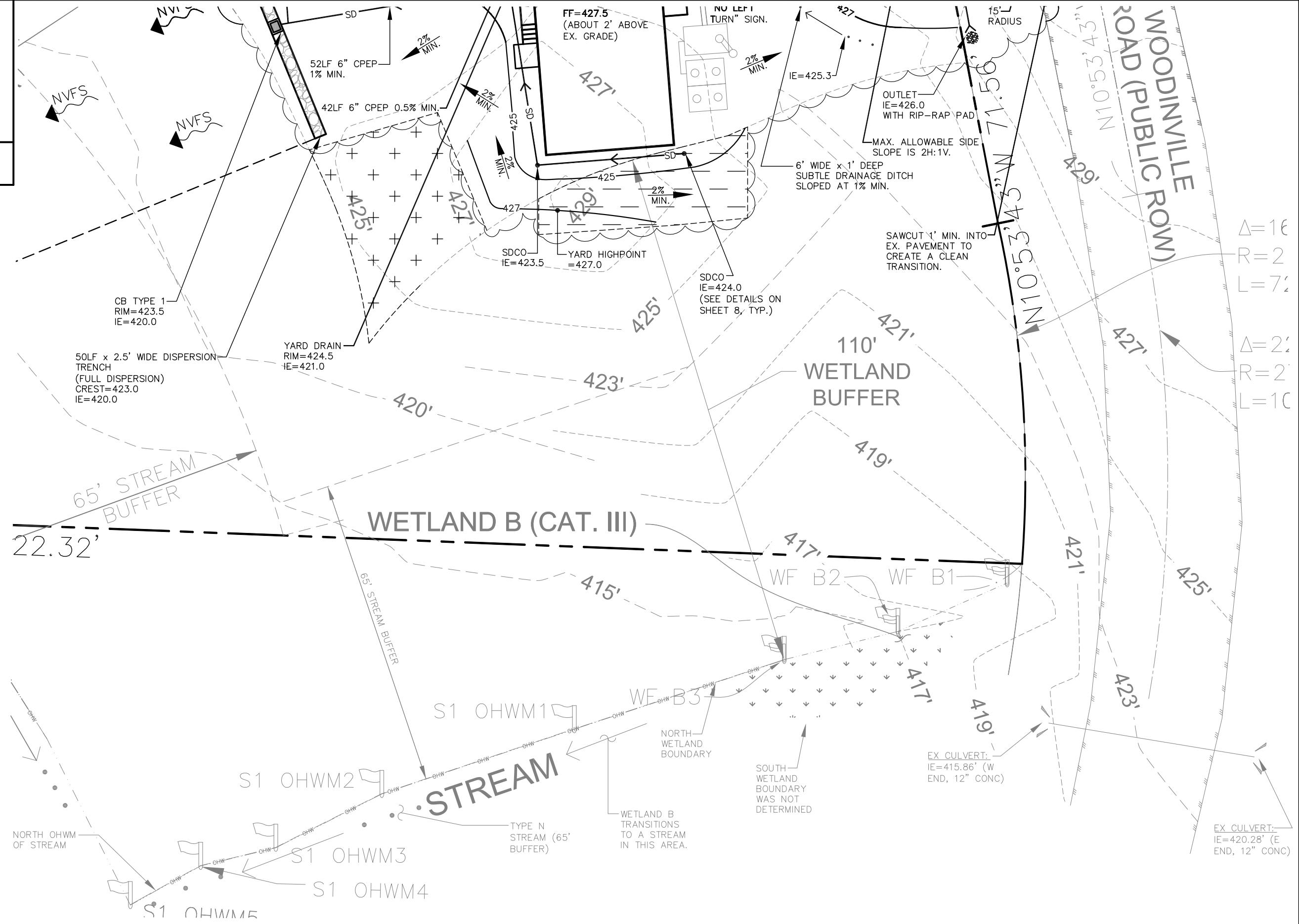
ELECTRIC - RED	SEWER - GREEN	GASOL - YELLOW	SURVEY - PINK	TEL/CATV - ORANGE
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SPECIAL DRAINAGE  
NOTES:

1. DOWNSPOUT CONVEYANCE PIPES SHALL BE 4-INCH DIAMETER, PVC, 1' MIN. COVER, AND SLOPED AT 1% MINIMUM.
2. NVFS CRITERIA ARE SHOWN ON SHEET 7.

A graphic scale with a horizontal line marked at 0, 10, and 20. Below the line, the text '(IN FEET)' is centered, and '1 inch = 5 ft' is written below it.





# King County

## Department of Local Services

### Permitting Division

## GRADING AND STORM DRAINAGE PLAN SOUTHWEST



**Utilities Underground Location Center  
(ID,MT,ND,OR,WA)**

Safety Precaution shall be implemented by Contractor(s) at all trenching in accordance with current OSHA standards

ELECTRIC - RED      SEWER - GREEN      GAS/OIL - YELLOW      SURVEY - PINK      TEL/CATV - ORANGE  
PROPOSED - WHITE      WATER - BLUE

ELLECTRIC RED SEWER GREEN CRAGGIE YELLOW CORRY TAN TEGORY CHANCE  
PROPOSED - WHITE WATER - BLUE

11. *What is the primary purpose of the following statement?*

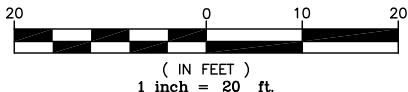
18 May 2012



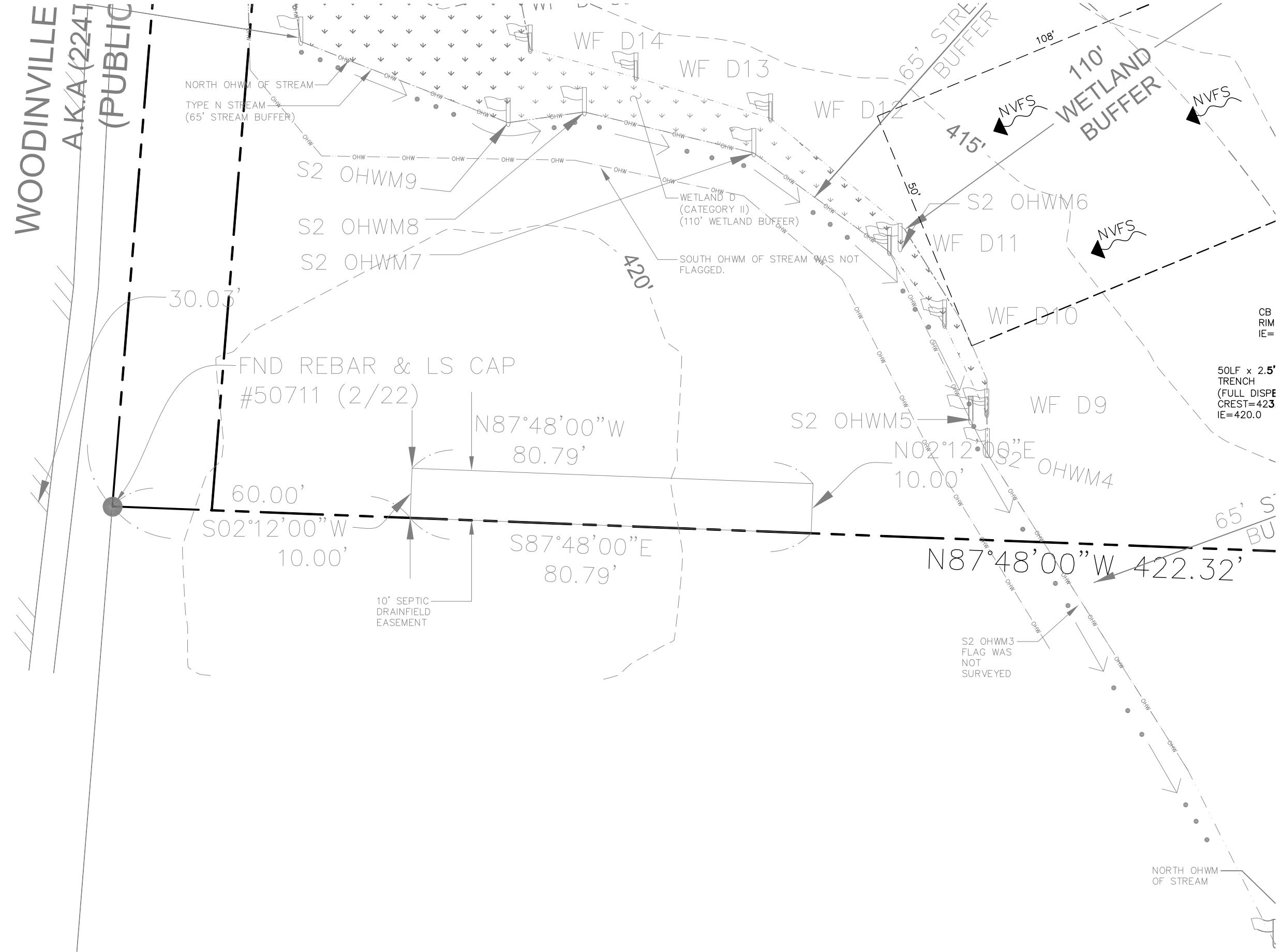
SPECIAL DRAINAGE  
NOTES:

1. DOWNSPOUT CONVEYANCE PIPES SHALL BE 4-INCH DIAMETER, PVC, 1' MIN. COVER, AND SLOPED AT 1% MINIMUM.
2. NVFS CRITERIA ARE SHOWN ON SHEET 7.

## GRAPHIC SCALE



WOODINVILLE  
A.K.A. (2241)  
(PUBLIC)





**STORM DRAINAGE NOTES  
AND DETAILS A**

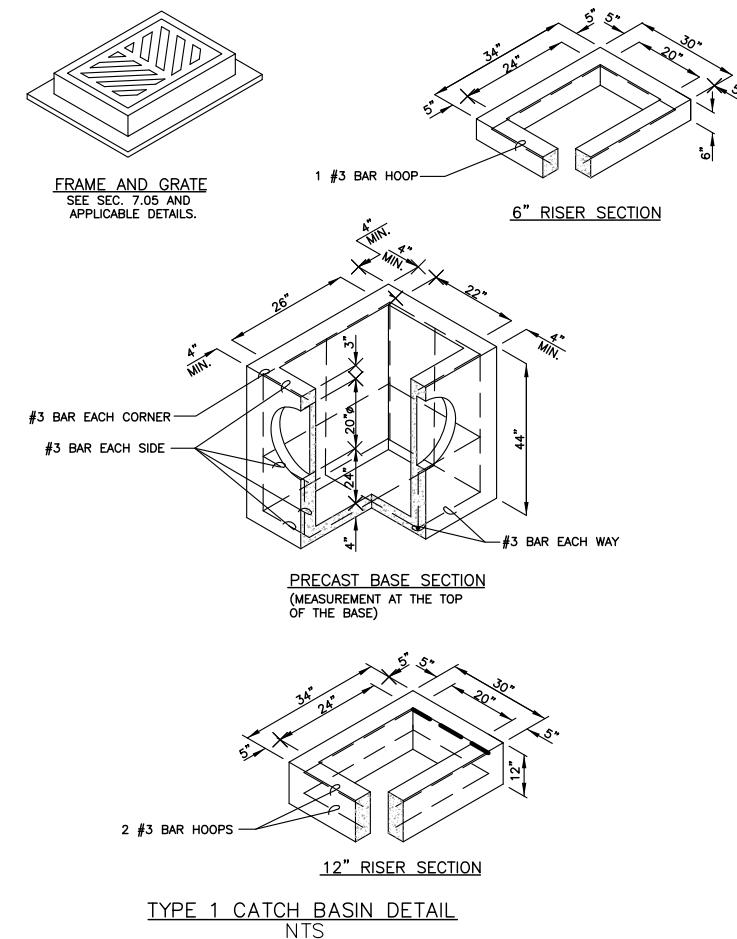
**TABLE C.2.1.B SELECTED NATIVE VEGETATION, SIZE, AND SPACING REQUIREMENTS**

Species	Type	Sun and Moisture Preferences	Planted Size	Spacing
<b>TREES</b>				
Douglas fir ( <i>Pseudotsuga menziesii</i> )	conifer	Sun, dry to moist soil	5 gallon, 6'-7' B&B	12' o.c.
Western red cedar ( <i>Thuja plicata</i> )	conifer	Sun or shade, moist to wet soil	5 gallon, 6'-7' B&B	12' o.c.
Western hemlock ( <i>Tsuga heterophylla</i> )	conifer	Sun or shade, well-drained soil	5 gallon, 6'-7' B&B	12' o.c.
Sitka spruce ( <i>Picea sitchensis</i> )	conifer	Sun or shade, moist mineral soils to wet soils	5 gallon, 6'-7' B&B	12' o.c.
Shore Pine ( <i>Pinus contorta</i> var. <i>contorta</i> )	Conifer	Sun to partial shade, dry to wet	5 gallon, 6'-7' B&B	12' o.c.
Western white pine ( <i>Pinus monticola</i> )	Conifer	Sun to part shade, dry to moist	5 gallon, 6'-7' B&B	12' o.c.
Grand fir ( <i>Abies grandis</i> )	Conifer	Sun to shade, dry to moist	5 gallon, 6'-7' B&B	12' o.c.
Red alder ( <i>Alnus rubra</i> )	tree	Sun, a Nitrogen fixer,	5 gallon, 5'-6' B&B	12' o.c.
Bigleaf maple ( <i>Acer macrophyllum</i> )	tree	Sun or shade, dry to moist soil	5 gallon, 5'-6' B&B	12' o.c.
Black cottonwood ( <i>Populus trichocarpa</i> )	tree	Sun, wet soil	5 gallon, 5'-6' B&B	12' o.c.
Cascara ( <i>Rhamnus purshiana</i> )	tree/shrub	Sun to partial shade, dry to moist soil	5 gallon, 5'-6' B&B	8' o.c.
Pacific willow ( <i>Salix lucida</i> )	tree/shrub	Sun, damp soil	1 gallon 2 gallon 5 gallon	4' o.c. 6' o.c. 8' o.c.
<b>SHRUBS</b>				
Sitka willow ( <i>Salix sitchensis</i> )	shrub	Sun or shade, dry to damp soil	1 gallon 2 gallon 5 gallon	4' o.c. 6' o.c. 8' o.c.
Vine maple ( <i>Acer circinatum</i> )	shrub	Shade, moist to damp soils	1 gallon 2 gallon 5 gallon	4' o.c. 6' o.c. 8' o.c.
Filbert (hazelnut) ( <i>Corylus cornuta</i> )	shrub	Sun to shade, dry soil	1 gallon 2 gallon 5 gallon	4' o.c. 6' o.c. 8' o.c.
Red-osier dogwood ( <i>Cornus sericea</i> )	Shrub	Sun to shade, moist to wet soil	1 gallon 2 gallon 5 gallon	4' o.c. 6' o.c. 8' o.c.
Salmonberry ( <i>Rubus spectabilis</i> )	shrub	Sun to shade, moist to wet soil	1 gallon 2 gallon 5 gallon	4' o.c. 6' o.c. 8' o.c.
Thimbleberry ( <i>Rubus parviflorus</i> )	shrub	Sun to partial shade, dry to moist soil	1 gallon 2 gallon 5 gallon	4' o.c. 6' o.c. 8' o.c.
Ocean spray ( <i>Holodiscus discolor</i> )	shrub	Sun to partial shade, dry	1 gallon 2 gallon 5 gallon	4' o.c. 6' o.c. 8' o.c.
Tall Oregon grape ( <i>Berberis aquifolium</i> )	shrub	Sun to shade, dry to moist soil	1 gallon	4' o.c.
Snowberry ( <i>Symphoricarpos albus</i> )	shrub	Sun to shade, dry to wet soil	1 gallon	4' o.c.
Service berry ( <i>Amelanchier alnifolia</i> )	shrub	Sun to shade, dry to wet soil	1 gallon	6' o.c.
Indian plum ( <i>Oemleria cerasiformis</i> )	shrub	Sun to shade, moist soil	1 gallon	4' o.c.
Twinberry ( <i>Lonicera involucrata</i> )	shrub	Sun to partial shade, moist soil	1 gallon	4' o.c.
<b>GROUND COVER</b>				
Evergreen huckleberry ( <i>Vaccinium ovatum</i> )	groundcover	Sun to partial shade, moist soil	1 gallon	2' o.c.
Kinnikinnick ( <i>Arctostaphylos uva-ursa</i> )	groundcover	Sun to partial shade, dry soil	1 gallon	2' o.c.
Salal ( <i>Gaultheria shallon</i> )	groundcover	Sun to shade, dry to moist soil	1 gallon	18" o.c.
Low Oregon grape ( <i>Mahonia repens</i> )	groundcover	Sun to partial shade, dry to moist soil	9-12"	18" o.c.
Sword fern ( <i>Polystichum munitum</i> )	groundcover	Sun to deep shade, dry to moist soil	2 gallon	3' o.c.

**NOTES:**

- CATCH BASINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 (ASTM M 199) & C890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE WSDOT/APWA STANDARD SPECIFICATIONS.
- AS AN ACCEPTABLE ALTERNATIVE TO REBAR, WELDED WIRE FABRIC HAVING A MIN. AREA OF 0.12 SQ. IN. PER FT. MAY BE USED. WELDED WIRE FABRIC SHALL COMPLY TO ASTM A497 (AASHTO M 221). WIRE FABRIC SHALL NOT BE PLACED IN KNOCKOUTS.
- ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000.
- PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2 IN. MIN. ALL PIPE SHALL BE INSTALLED IN FACTORY PROVIDED KNOCKOUTS. UNUSED KNOCKOUTS NEED NOT BE GROUTED IF WALL IS LEFT INTACT.
- KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAM. PLUS CATCH BASIN WALL THICKNESS.
- THE MAX. DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5 FT.
- THE TAPER ON THE SIDES OF THE PRECAST BASE SECTION AND RISER SECTION SHALL NOT EXCEED 1/2" PER FT.
- CATCH BASIN FRAME AND GRATE SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND MEET THE STRENGTH REQUIREMENTS OF FEDERAL SPECIFICATION RR-F-621D. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITION.
- FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.
- FOR CATCH BASINS IN PARKING LOTS REFER TO WSDOT/APWA STANDARD DWG. B1-b.
- EDGE OF RISER OR BRICK SHALL NOT BE MORE THAN 2 IN. FROM VERTICAL EDGE OF CATCH BASIN WALL.

**TYPE 1 CATCH BASIN DETAIL NOTES**



**NATIVE VEGETATED FLOWPATH SEGMENT (NVFS) CRITERIA:**

- THE FLOWPATH SEGMENT MUST BE OVER WELL-ESTABLISHED LAWN OR PASTURE, LANDSCAPING WITH WELL-ESTABLISHED GROUNDCOVER, OR NATIVE VEGETATION WITH NATURAL GROUNDCOVER. THE GROUNDCOVER MUST BE DENSE ENOUGH TO HELP DISPERSE AND INFILTRATE FLOWS AND TO PREVENT EROSION.
- THE FLOWPATH SEGMENT MUST BE ONSITE OR IN AN OFFSITE TRACT OR EASEMENT AREA RESERVED FOR SUCH DISPERSION.
- THE SLOPE OF THE FLOWPATH SEGMENT MUST BE NO STEEPER THAN 15% FOR ANY 20-FOOT REACH OF THE FLOWPATH SEGMENT.
- THE FLOWPATH SEGMENT MUST BE LOCATED BETWEEN THE DISPERSION DEVICE AND ANY DOWNSTREAM IMPERVIOUS SURFACE OR DRAINAGE FEATURE SUCH AS PIPE, DITCH, STREAM, RIVER, POND, LAKE, OR WETLAND. ALL OR A PORTION OF THE FLOWPATH SEGMENT MAY BE LOCATED WITHIN A CRITICAL AREA BUFFER.

**GRAVEL DRIVEWAY SPECIFICATIONS:**

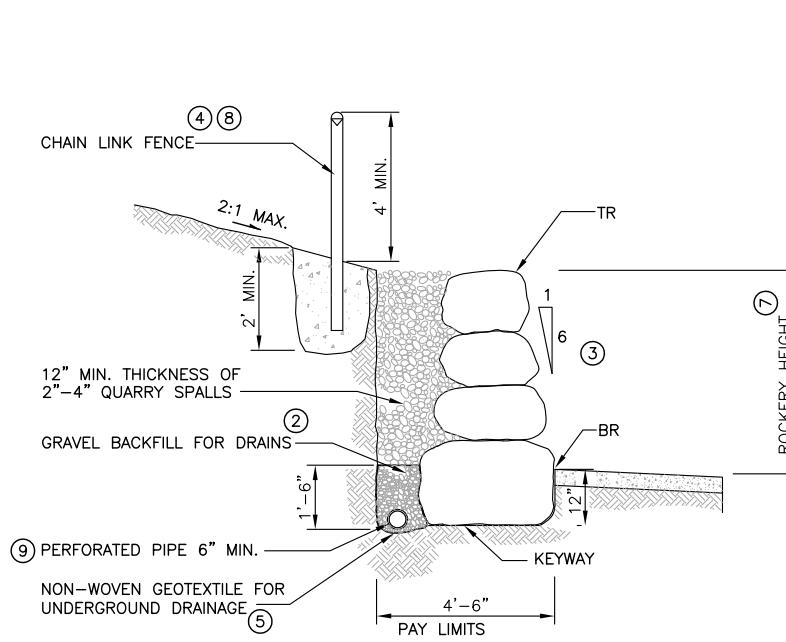
- GRAVEL SURFACE SHALL CROSS SLOPE AT 2-3% TOWARD DRAINAGE FEATURE.
- TOP COURSE SHALL BE 2-4" COMPACTED DEPTH CRUSHED SURFACING.
- BASE COURSE SHALL BE 4" COMPACTED DEPTH CRUSHED SURFACING.
- ADDITIONAL TREATMENT MAY BE REQUIRED DEPENDING ON SOIL CONDITIONS.



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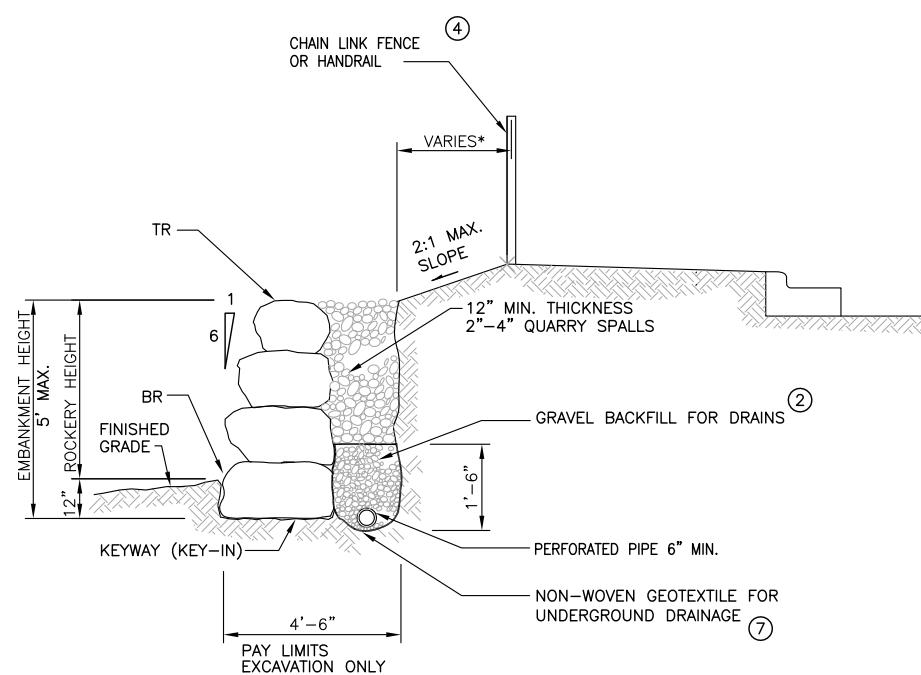
**STORM DRAINAGE NOTES  
AND DETAILS B**



**NOTES:**

- ① SEE SEC. 5.01.
- ② WSDOT/APWA 9-03.12[4]
- ③ FACE OF ROCKERY OR RETAINING WALL MUST BE A MIN. OF 10 FT. FROM TRAVELED WAY IF ROCKERY OR RETAINING WALL IS BEHIND ROLLED CURB OR ON A RURAL SECTION.
- ④ CHAIN LINK FENCE, TYPE NO. 4 OR 6 (WSDOT/APWA STANDARD) IS RECOMMENDED FOR GREATER THAN 2.5' TALL ROCKERY.
- ⑤ WSDOT/APWA STANDARD SPECIFICATION SECTION 9-33
- ⑥ THE ROCK FACING FOUNDATION AND/OR KEYWAY IS TO BE CLEARED OF ORGANIC MATTER AND DEBRIS AND THE UNDERLYING MINERAL SOIL COMPACTED TO A MINIMUM 95% OF THE MAXIMUM DRY DENSITY.
- ⑦ ROCKERY SHALL BE MAXIMUM 4 FEET IN HEIGHT. A LICENSED GEOTECHNICAL IS REQUIRED IF ROCKERY EXCEEDS 4' IN HEIGHT.
- ⑧ CYCLONE FENCE OR HANDRAIL ABOVE ROCKERY IS RECOMMENDED BUT NOT REQUIRED FOR ROCKERIES 30" OR TALLER.
- ⑨ CONNECT ROCKERY DRAIN TO ROADSIDE DRAINAGE DITCH VIA 4" NON-PERFORATED PVC PIPE OR PROVIDE SMALL DRY WELL IN SITE'S SOUTHWEST CORNER.

ROCKERY FACING CUT SECTION DETAIL  
NTS

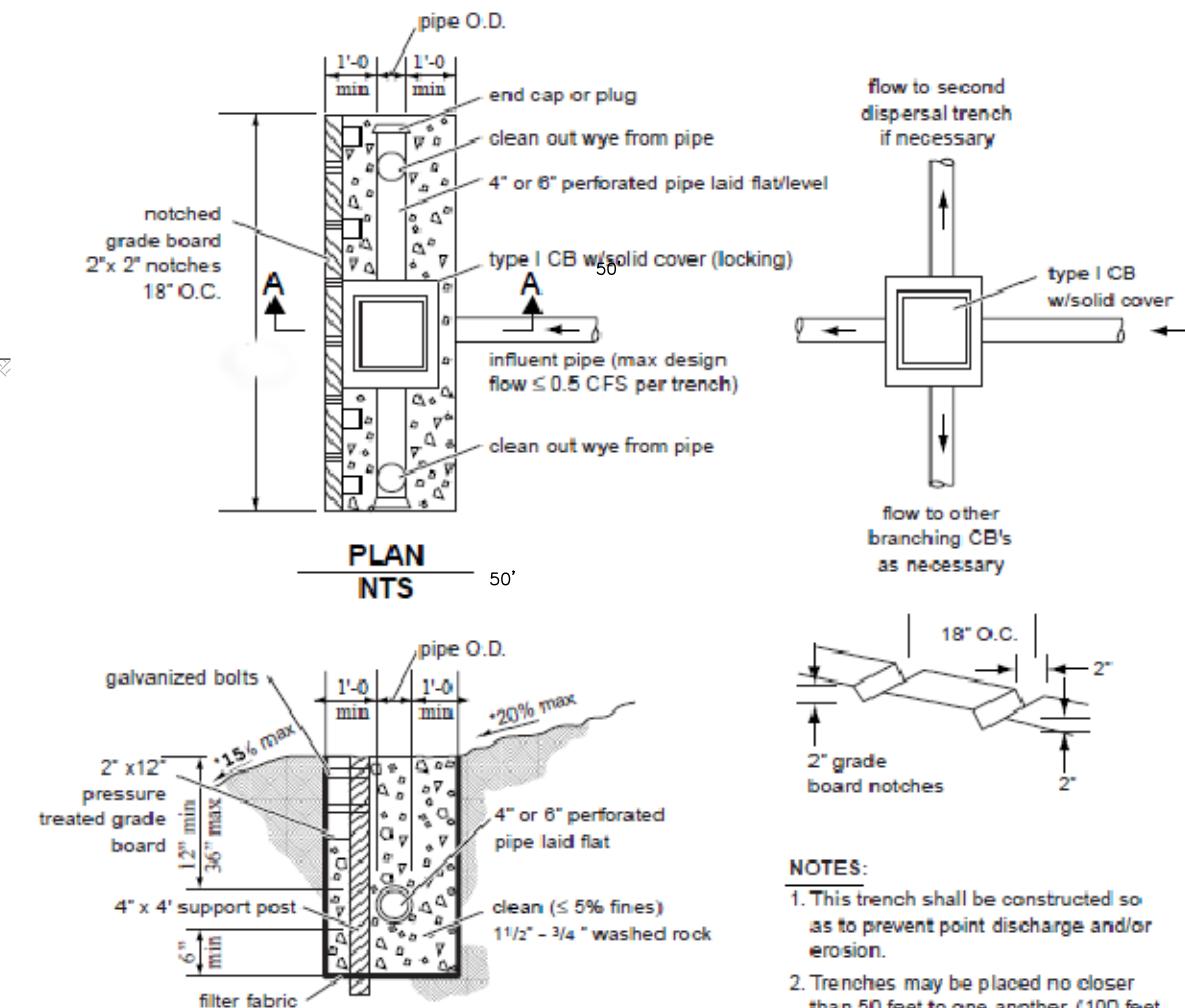


**NOTES:**

1. SEE SEC. 5.01.
2. WSDOT/APWA 9-03.12[4].
3. FLATTER SLOPE MAY BE REQUIRED IN LESS STABLE SOIL.
4. CHAIN LINK FENCE, TYPE NO. 4 (WSDOT/APWA STANDARD) OR HANDRAIL RECOMMENDED WHEN ROCKERY HEIGHT IS 18 IN. OR GREATER. SEE FIG. 5-008, NOTE 8.
5. NOT USED
6. TRAFFIC BARRIERS MAY BE REQUIRED ON ROADS WITH SPEED LIMITS OF 40 MPH OR GREATER, WHERE ROCKERY HEIGHTS EXCEED 6 FT. SEE CHAPTER 7 OF THE WSDOT DESIGN MANUAL.
7. WSDOT/APWA STANDARD SPECIFICATION SECTION 9-33
8. SEE NOTE 6 OF FIGURE 5-003

ROCKERY FACING FILL SECTION DETAIL  
NTS

**FIGURE C.2.1.D - FOOT DISPERSION TRENCH WITH NOTCHED BOARD**



**SECTION A-A**  
NTS

50-FOOT DISPERSION TRENCH WITH NOTCHED BOARD DETAIL  
NTS

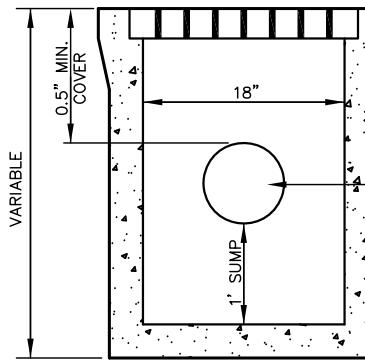
**NOTES:**

1. This trench shall be constructed so as to prevent point discharge and/or erosion.
2. Trenches may be placed no closer than 50 feet to one another. (100 feet along flowline)
3. Trench and grade board must be level. Align to follow contours of site.
4. Support post spacing as required by soil conditions to ensure grade board remains level.

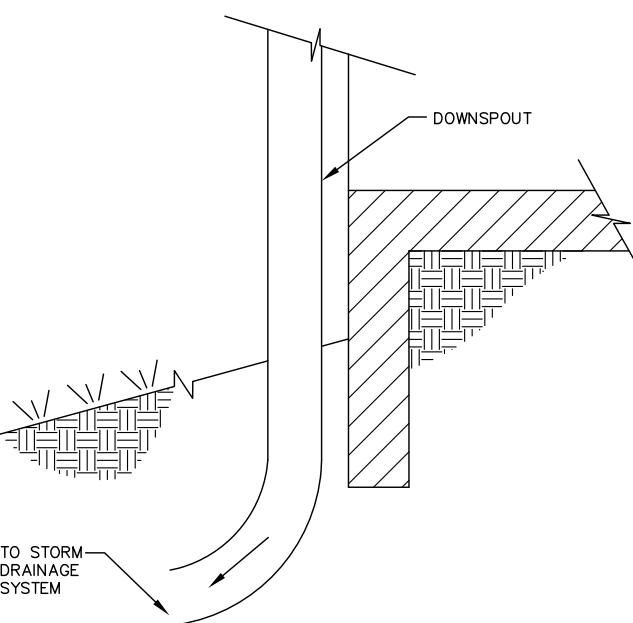


**King County**  
Department of Local Services  
Permitting Division

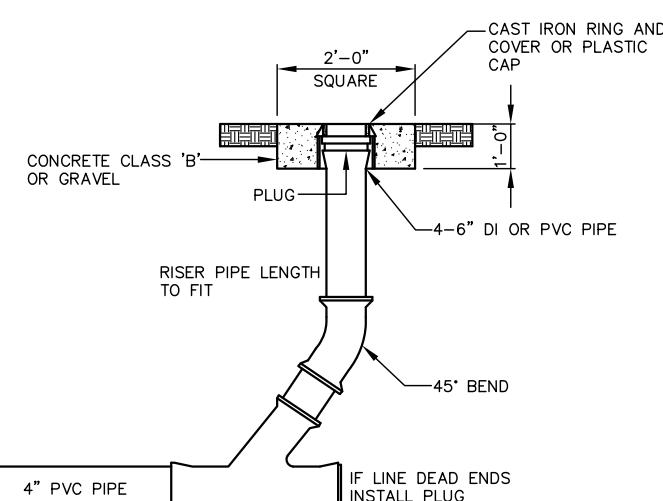
**STORM DRAINAGE NOTES  
AND DETAILS C**



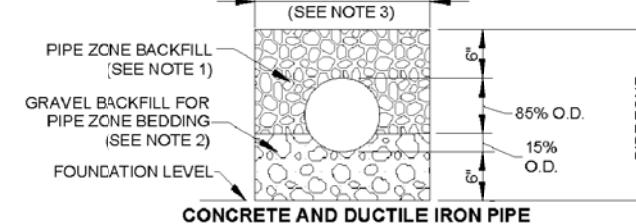
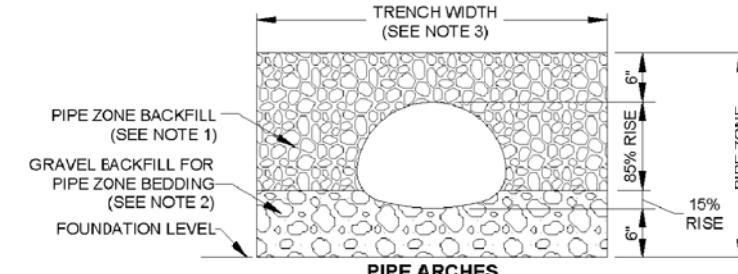
**YARD DRAIN DETAIL**  
NTS



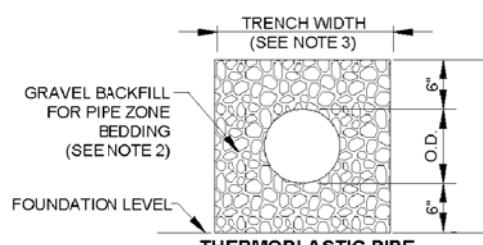
**DOWNSPOUT DETAIL**  
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**STORM DRAIN CLEANOUT (SDCO DETAIL)**  
NTS

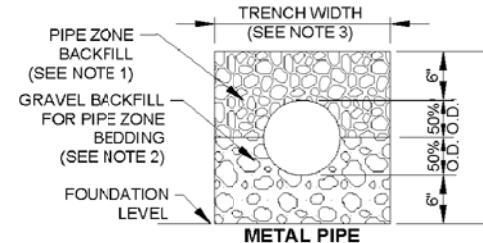


NOTE:  
ALL DETAILS  
NOT TO SCALE

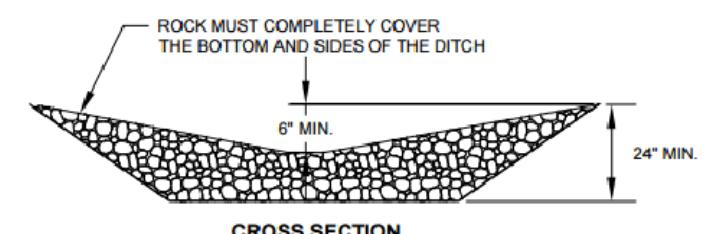


**NOTES:**

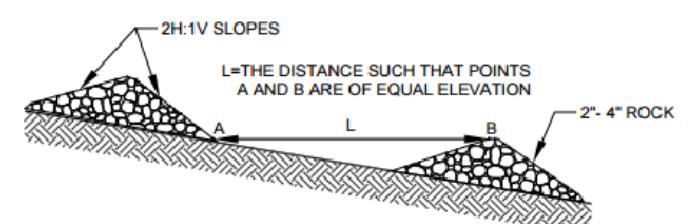
1. SEE CURRENT WSDOT STANDARD SPECIFICATIONS SECTION 7-08.3(3) FOR PIPE ZONE BACKFILL.
2. SEE CURRENT WSDOT STANDARD SPECIFICATIONS SECTION 9-03.12(3) FOR GRAVEL BACKFILL FOR PIPE ZONE BEDDING.
3. SEE CURRENT WSDOT STANDARD SPECIFICATIONS SECTION 2-09.4 FOR MEASUREMENT OF TRENCH WIDTH.
4. SEE KCSWDM 4.2.1.1 FOR CLEARANCE BETWEEN PIPES AND OTHER UTILITIES.



**PIPE BEDDING DETAIL**  
NTS



**CROSS SECTION**



**CHECK DAM SPACING**

**ROCK CHECK DAM DETAIL**  
NTS



**King County**

Department of Local Services  
Permitting Division

**SOIL MANAGEMENT  
NOTES A**

## SOIL MEDIA STANDARD SPECIFICATIONS

### 11-C.1 COMPOST

Compost products shall be the result of the biological degradation and transformation of uncontaminated biological organic materials under controlled conditions designed to promote aerobic decomposition. Compost shall be stable with regard to oxygen consumption, carbon dioxide generation, and seed germination and seedling vigor. Compost shall be mature with regard to its suitability for use in stormwater facilities and BMPs, post-construction soil amendment, general landscaping, or an erosion control BMP as defined below.

Compost shall be tested at a minimum in accordance with the U.S. Composting Council "Testing Methods for the Examination of Compost and Composting" (TMECC), as established in the Composting Council's "Seal of Testing Assurance" (STA) program. Most Washington compost facilities now use these tests. All tests must be done on compost screened to specification for its intended use.

#### 11-C.1.A SPECIFICATION 1 COMPOST

1. Compost must be produced at a facility that is permitted by the jurisdictional health authority. Permitted compost facilities in Washington are included on a list available at <http://www.ecy.wa.gov/programs/swfa/organics/soil.html>.
2. Compost must meet the definition of "composted material" in WAC 173-350-100, and must comply with testing parameters and other standards including not exceeding contaminant limits identified in Table 220-B. Testing Parameters, in WAC 173-350-220; and "Physical contaminants" (as defined in WAC 173-350-100) content less than 1% by weight (TMECC 03.08-A) total, not to exceed 0.25 percent film plastic by dry weight.
3. The compost product must originate a minimum of 65 percent by volume from recycled plant waste comprised of "yard debris," "crop residues," and "bulking agents" as those terms are defined in WAC 173-350-100. A maximum of 35 percent by volume of "post-consumer food waste" as defined in WAC 173-350-100 may be substituted for recycled plant waste. Biosolids, manure, and/or bedding straw or wood chips or shavings containing animal excreta are not allowed.
4. Wood waste from chemically treated lumber and manufactured wood products containing adhesives or any other chemical is not allowed; painted and stained wood are not allowed; and only sawdust from virgin lumber allowed. No other toxic or otherwise harmful materials are allowed.
5. For *high-density residential subdivision development, multi-family, commercial, and industrial projects, and road projects considered high ADT projects*,\* the Manufacturer or Vendor shall provide to the end buyer a list of feedstock sources by percentage by volume in the final compost product.
6. Compost shall have a moisture content that has no visible free water or dust produced when handling the material.
7. Compost shall have an organic matter content of 40 percent to 65 percent by dry weight as determined by loss of ignition test method ASTM D 2974, or by U.S. Composting Council TMECC 05.07A "Loss-On-Ignition Organic Matter Method (LOI)".
8. Compost shall have a carbon to nitrogen ratio below 25:1, although the carbon to nitrogen ratio may be as high as 35:1 for plantings composed entirely of plants native to the Puget Sound Lowlands region. The carbon to nitrogen ratio shall be calculated on a dry weight basis using TMECC 5.02A ("Carbon to Nitrogen Ratio"), which uses TMECC 04.01A, "Organic Carbon" divided by the dry weight of "Total N" (TMECC 04.02D).
9. Compost pH shall be between 6.0 and 8.5 when tested in accordance with U.S. Composting Council TMECC 04.11-A, "1:5 Slurry pH"
10. Soluble salt content shall be less than 4.0 dS/m (mmhos/cm) when tested in accordance with U.S. Composting Council TMECC 04.10 "Electrical Conductivity, 1:5 Slurry Method, Mass Basis".
11. Compost maturity indicators from a cucumber bioassay (TMECC 05.05-A "Germination Seedling Emergence and Relative Growth" must be greater than 80% for both emergence and vigor".
12. Stability shall be 7-mg CO<sub>2</sub> - C/g OM/day or below in as determined by U.S. Composting Council TMECC 05.08-B "Carbon Dioxide Evolution Rate", to establish low oxygen use and low CO<sub>2</sub> generation rates.

Compost shall be screened to the Fine Compost size gradation specification in Section 11-C.1.C of this Reference.

#### 11-C.1.C COMPOST SCREENING SIZE GRADATIONS

Where compost gradation is specified, it must meet the following size gradations when tested in accordance with the U.S. Composting Council "Test Methods for the Examination of Compost and Composting" (TMECC) Test Method 02.02-B.

**Fine Compost** shall meet the following gradation by dry weight:

Minimum percent passing 2" sieve	100%
Minimum percent passing 1" sieve	99%
Minimum percent passing 5/8" sieve	90%
Minimum percent passing 1/4" sieve	75%

**Coarse Compost** shall meet the following gradation by dry weight:

Minimum Percent passing 3" sieve	100%
Minimum Percent passing 1" sieve	90%
Minimum Percent passing 3/4" sieve	70%
Minimum Percent passing 1/4" sieve	40%

#### 11-C.1.D COMPOST ACCEPTANCE REQUIREMENTS

The Contractor shall submit the following information to the King County Department of Permitting and Environmental Review (DPER) Engineer for approval:

1. If the manufacturer is not exempt under Table 220-A, "Terms and Conditions for Solid Waste Permit Exemptions", a copy of the Solid Waste Handling Permit issued to the compost manufacturer by the Jurisdictional Health Department in accordance with WAC 173-350 (Minimum Functional Standards for Solid Waste Handling) or for biosolids composts a copy of the Coverage Under the General Permit for Biosolids Management issued to the manufacturer by the Department of Ecology in accordance with WAC 173-308 (Biosolids Management).
2. The Applicant shall provide written verification and lab analyses that the material complies with the processes, testing, and standards specified in WAC 173-350 and these Specifications. An independent Seal of Testing Assurance (STA) Program certified laboratory† or a laboratory accredited by WA Ecology‡ for the specified methods shall perform the analyses. Lab analysis shall be for the compost delivered on site for project use.
3. A copy of the STA laboratory's Seal of Testing Assurance STA certification as issued by the U.S. Composting Council, or a copy of the Ecology-certified laboratory's accreditation for the specified methods.



**King County**

Department of Local Services  
Permitting Division

**SOIL MANAGEMENT  
NOTES B**

**TABLE 11-C.2.A BIORETENTION SOIL MIX  
MINERAL AGGREGATE GRADATION**

Sieve Size	Percent Passing
3/8"	100
#4	95-100
#10	75-90
#40	25-40
#100	4-10
#200	2-4

Where existing soils meet the above aggregate gradation, those soils may be amended rather than importing mineral aggregate.

### **11-C.3 BIORETENTION MULCH**

Mulch may only be composed of either chipped wood as defined in Section 11-C.3.A, or compost as defined in Section 11-C.3.B. Mulch may not be made of synthetic materials including but not limited to recycled tire material, virgin rubber material, plastics; or pre-or post-consumer cardboard.

#### **11-C.3.A ARBORIST'S WOOD CHIP MULCH**

Arborist Wood Chip Mulch shall be coarse ground wood chips (approximately 1/2" to 6" along the longest dimension) derived from the mechanical grinding or shredding of the above-ground portions of trees. It may contain wood, wood fiber, bark, branches, and leaves, but may not contain visible amounts of soil. It shall be free of weeds and weed seeds including but not limited to plants on the King County Noxious Weed list available at: [www.kingcounty.gov/weeds](http://www.kingcounty.gov/weeds), and shall be free of invasive plant portions capable of re-sprouting, including but not limited to horsetail, ivy, clematis, knotweed, etc. It may not contain more than 0.5% by dry weight of manufactured inert material (plastic, concrete, ceramics, metal, etc.).

Arborist Wood Chip Mulch, when tested, shall meet the following loose volume gradation:

**TABLE 11-C.3.A ARBORIST WOOD MULCH  
GRADATION**

Sieve Size	Percent Passing
2"	95 - 100
1"	70 - 100
5/8	0 - 50
No. 4	0 - 30

Prior to delivery, the Applicant shall provide the following:

1. The source of the product and species of trees included in it;
2. A sieve analysis verifying the product meets the above size gradation requirement;
3. A representative sample of the product for County approval.

### **11-C.3.B COMPOST MULCH SPECIAL REQUIREMENTS**

- Compost Mulch for Bioretention must meet the **Specification 1** compost requirements of Section 11-C.1.A, except that the gradation must be **Coarse Compost** per Section 11-C.1.C
- Compost Mulch for other facilities and BMPs must meet either **Specification 1** or **Specification 2** compost of Section 11-C.1.A or 11-C.1.B respectively, except that the gradation must be **Coarse Compost** per Section 11-C.1.C.

### **11-C.2 BIORETENTION SOIL MIX SPECIFICATIONS**

Follow the specification below for the approved default bioretention soil mix. Alterations to this specification require an approved adjustment.

#### **11-C.2.A DEFAULT BIORETENTION SOIL MIX**

Bioretention Soil Mix (BSM) shall be a well-blended homogeneous mixture of Bioretention Mineral Aggregate and Bioretention Compost measured on a volume basis composed of:

- 35 to 40 percent by volume Specification 1 Compost per Section 11-C.1.A above and Section 11-C.2.B below.
- 60 to 65 percent by volume Bioretention Mineral Aggregate per Section 11-C.2.C below.

Projects which prefer to create a custom Bioretention Soil Mix rather than using the default requirement above must demonstrate compliance with criteria as described in Ecology's *Stormwater Management Manual for Western Washington (2014) Volume V – Runoff Treatment BMPs*, except that any more stringent compost criteria required by this Reference 11-C are applicable.

#### **11-C.2.B BIORETENTION COMPOST**

Bioretention Compost shall be Specification 1, Fine Compost per Sections 11-C.1.A and 11-C.1.C of this Reference. Fine Specification 1 Compost shall be used for Bioretention Soil Mix and for any compost used to amend bioretention cell soil.

#### **11-C.2.C BIORETENTION SOIL MIX AGGREGATE**

##### **Aggregate Gradation**

The following table provides a gradation guideline for the aggregate component of a Bioretention Soil Mix specification in western Washington. This sand gradation is often supplied as a well-graded utility or screened. With compost, this blend provides enough fines for adequate water retention, hydraulic conductivity within recommended range (see below), pollutant removal capability, and plant growth characteristics for meeting design guidelines and objectives.

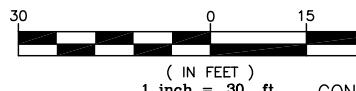


**King County**

Department of Local Services  
Permitting Division

WETLAND BUFFER RESTORATION PLAN

GRAPHIC SCALE



1 inch = 30 ft.

CONNECT 3/4" WATER SERVICE  
LINE TO EX. W.M.

WATER SERVICE LINE TO NEW HOME  
(CONTRACTOR SHALL FOLLOW  
WOODINVILLE WATER DISTRICT  
STANDARDS, SEE SHEET 15)

PERFORM STREAM CROSSING WHEN  
STREAMBED IS DRY.

MINIMIZE OR AVOID (IF POSSIBLE) CLEARING  
OF ADDITIONAL EX. TREES FOR WATER  
SERVICE PIPE.

ROADSIDE DRAINAGE DITCH

ODINVILLE-DUVALL RD. 2  
A.K.A. (224TH AVE NE)  
(PUBLIC ROW)

S2 OHWM11

S2 OHWM10

S2 OHWM9

S2 OHWM8

S2 OHWM7

S2 OHWM6

S2 OHWM5

S2 OHWM4

S2 OHWM3

S2 OHWM2

S2 OHWM1

OHWM-50

OHWM-51

OHWM-52

OHWM-53

WF D50

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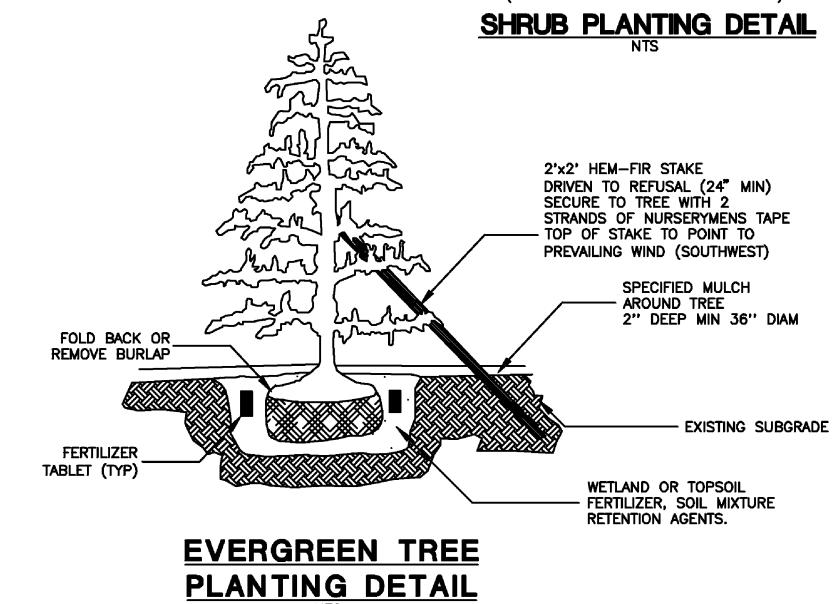
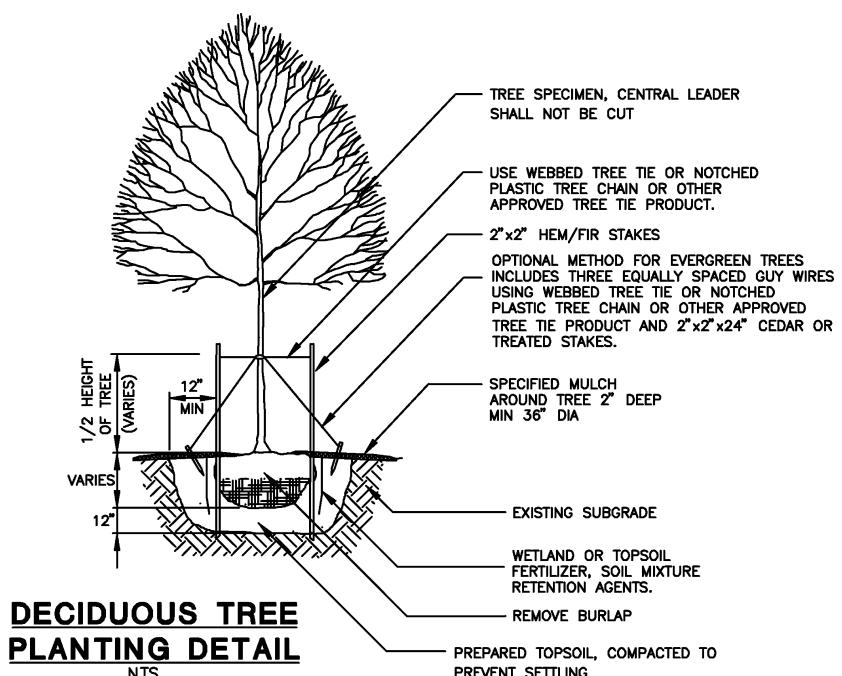
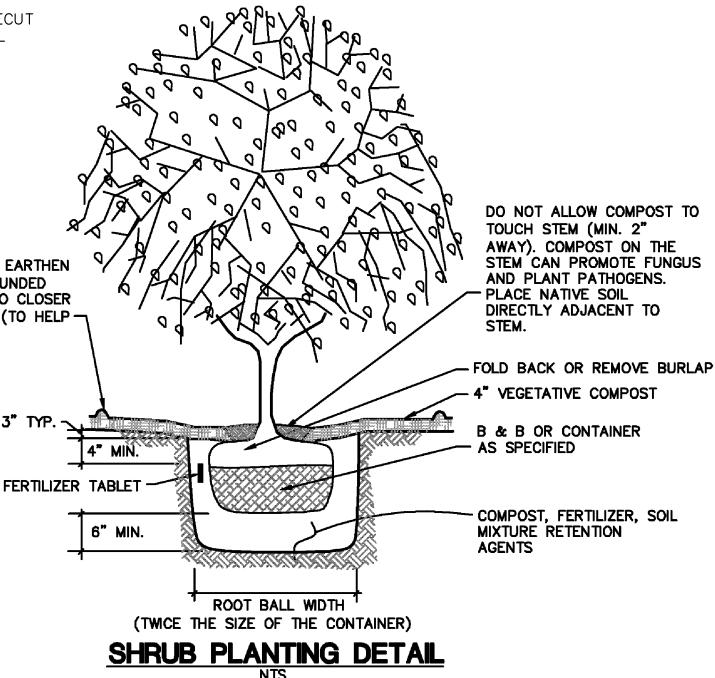
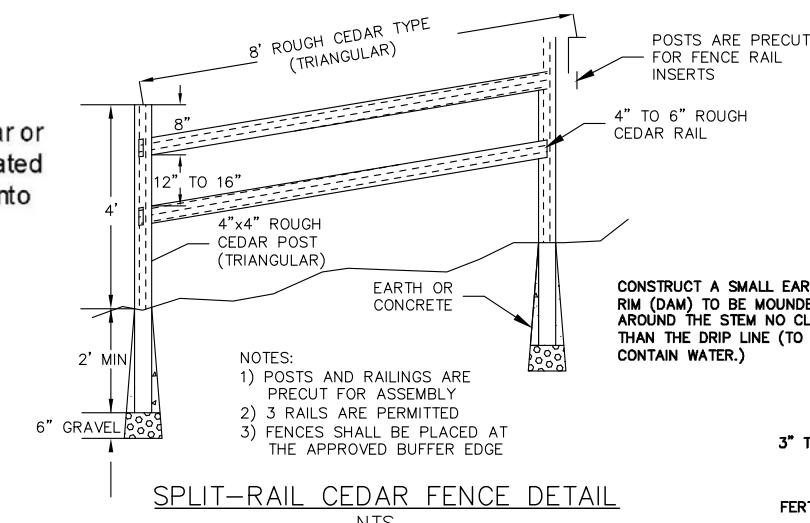
CRITICAL AREA SIGN DETAIL  
NTS

8' - 4x4 cedar or pressure-treated post set 3' into hole

APPROX. 80% OF THE AREA WILL BE RE-VEGETATED BECAUSE 20% OF THE AREA CONTAINS EXISTING TREES THAT WILL BE PRESERVED

$$\# \text{ OF TOTAL SHRUBS} = 80\%(0.028/\text{SF})(4,050 \text{ SF}) = 91$$

SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	TOTAL NUMBER	STRATUM	SPACING ON CENTER	MAX HEIGHT	SITE PLACEMENT	LIGHT NEEDS
(H)	EVERGREEN HUCKLEBERRY	VACCINIUM OVATUM	1 GAL.	18	SHRUB	4'	5'	DRIER BUFFER	SHADE TOLERANT
(G)	SHORT OREGON GRAPE	BERBERIS NERVOSA	1 GAL.	18	SHRUB	4'	4'	DRIER BUFFER	SHADE TOLERANT
(S)	WESTERN SWORD FERN	POLYSTICHUM MUNITUM	1 GAL.	18	FERN	4'	5'	DRIER BUFFER	SHADE TOLERANT
(N)	NOOTKA ROSE	ROSA NUTKANA	1 GAL.	18	SHRUB	5'	10'	WETTER BUFFER	SHADE TOLERANT
(R)	RED ELDERBERRY	SAMBUCUS RACEMOSA	1 GAL.	19	SHRUB	6'	20'	DRIER BUFFER	HIGHLY ADAPTABLE





**King County**

**Department of Local Services  
Permitting Division**

**WETLAND BUFFER RESTORATION  
NOTES AND DETAILS B**

**GENERAL NOTES:**

1. THE GOAL OF THIS MITIGATION PLAN IS TO PROVIDE EQUIVALENT OR GREATER HABITAT ASSOCIATED WITH WETLAND BUFFER RESTORATION. IT IS A 3-YEAR MONITORING PERIOD.
2. VEGETATION WILL HAVE 100% SURVIVAL RATE AFTER YEAR 1 AND 85% AFTER YEAR 2. VEGETATION WILL HAVE AN 80% SURVIVAL RATE THROUGH THE MONITORING PERIOD. THERE WILL BE LESS THAN 10% AERIAL COVER BY NON-NATIVE INVASIVE SPECIES IN THE MITIGATION AREAS DURING THE ENTIRE MONITORING PERIOD.
3. SHRUB COVER WILL BE GREATER THAN 60% AFTER YEAR 1, AND GREATER THAN 60% AFTER YEAR 2, AND GREATER THAN 85% AFTER YEAR 3.
4. NON-NATIVE INVASIVE PLANTS WILL NOT MAKE UP MORE THAN 10% OF COVER IN ANY GROWING SEASON.
5. IF ANY MONITORING REPORT OR COUNTY INSPECTION SHOWS THAT MITIGATION IS NOT MEETING THESE PERFORMANCE STANDARDS, BOND HOLDER WILL WORK WITH COUNTY TO PERFORM CORRECTIVE ACTIONS APPROPRIATE TO THE MITIGATION: E.G., FAILING PLANTS WILL BE REPLACED, OTHER PLANT SPECIES WILL BE SUBSTITUTED, NON-NATIVE INVASIVE WILL BE REMOVED BY HAND WITHOUT PESTICIDES, ETC.
6. WHEN IT IS AVAILABLE, CONTACT INFORMATION MUST BE PROVIDED TO COUNTY FROM THE APPLICANT THAT INCLUDES NAMES, ADDRESSES, AND PHONE NUMBERS OF PERSONS/FIRMS THAT WILL BE RESPONSIBLE FOR INSTALLING REQUIRED PLANTING, AND PERFORMING REQUIRED MAINTENANCE AND MONITORING.
7. FOR THE FIRST YEAR FOLLOWING INSTALLATION, WATER THE MITIGATION AREA AT A RATE OF ONE INCH PER WEEK FROM JUNE THROUGH OCTOBER, IN WEEKS WHEN THERE IS LESS THAN ONE INCH OF RAINFALL. ALSO, THE MITIGATION AREA SHALL BE WATERED AS APPROPRIATE DURING THE VARIOUS SEASONS TO ENSURE HIGH SHRUB SURVIVAL RATE.
8. IMPLEMENTATION OF THE MITIGATION PLAN MUST OCCUR DURING THE FIRST DORMANT SEASON FOLLOWING INSTALLATION. INSTALLATION MUST BE INSPECTED AND APPROVED BY COUNTY. THE INSTALLATION INSPECTION WILL VERIFY THAT SOILS HAVE BEEN DECONSOLIDATED AND AMENDED. PLANTS ARE INSTALLED ACCORDING TO DESIGN AND IN GOOD HEALTH, AREA HAS BEEN SEEDED, AND OTHER CONDITIONS HAVE BEEN MET. NURSERY INVOICES MUST BE PROVIDED TO INSPECTOR. ONCE APPROVED, MONITORING PERIOD BEGINS.
9. MONITORING PERIOD WILL BE FOR THREE YEARS, WITH RESULTS OF ANNUAL MONITORING EVENTS REPORTED TO THE COUNTY. MONITORING MAY BE EXTENDED IF FINAL INSPECTION SHOWS RESTORATION HAS NOT ACHIEVED PERFORMANCE STANDARDS, UNTIL SUCH TIME AS PERFORMANCE STANDARDS HAVE BEEN MET.
10. MONITORING MUST INCLUDE DESCRIPTION/DATA FOR:
  - PLANT SURVIVAL, VIGOR, AND ESTIMATED AERIAL COVERAGE
  - OBSERVED WILDLIFE, INCLUDING AMPHIBIANS, AVIANS, AND OTHERS
  - RECEIPTS FOR OFFSITE DISPOSAL OF ANY DUMPING, WEEDS, OR INVASIVE PLANTS
  - 4"x6" COLOR PHOTOGRAPHS FROM PERMANENT PHOTO-POINTS AS SHOWN ON REVISED MITIGATION PLANS
11. THE MITIGATION AREA/BUFFER MUST BE IDENTIFIED USING PERMANENT SENSITIVE AREA BOUNDARY SIGNS INSTALLED IN A LOCATION PER THE KING COUNTY BIOLOGIST. SIGNS ARE AVAILABLE FOR SALE AT THE KING COUNTY DPER CASHIER.
12. ANY DEFICIENCY DISCOVERED DURING ANY MONITORING OR INSPECTION VISIT MUST BE CORRECTED WITHIN 60 DAYS.
13. PRIOR TO BEGINNING ANY WORK, THE APPLICANT MUST PROVIDE A RESTORATION BOND OR ASSIGNMENT OF FUNDS PER COUNTY PROCEDURES. A BOND QUANTITY WORKSHEET WILL NEED TO BE COMPLETED BASED ON ALL ELEMENTS OF THE MITIGATION PLAN. THE TOTAL COST, PLUS CONTINGENCY FEES, WILL BE THE AMOUNT OF THE RESTORATION BOND THE APPLICANT IS REQUIRED TO PROVIDE. NOTE THAT THE APPROVED BOND WILL INCLUDE REQUIRED START DATE FOR MITIGATION CONSTRUCTION. BONDS ARE ELIGIBLE FOR REDUCTION TO MAINTENANCE STATUS AFTER SUCCESSFUL INSTALLATION INSPECTION, PROVIDED THAT IT ALSO MEETS PERFORMANCE STANDARDS ESTABLISHED IN THE MITIGATION PLAN AND KING COUNTY SENSITIVE AREA MITIGATION GUIDELINES (OCTOBER 2000).
14. STANDARDS: ALL WORK AND MATERIALS SHALL CONFORM TO KING COUNTY STANDARDS AND SPECIFICATIONS, AND TO THE SPECIFICATIONS AND DETAILS SHOWN ON THESE PLANS.
15. CONTRACTOR'S QUALIFICATIONS: ALL WORK SHALL BE PERFORMED BY A LICENSED LANDSCAPE CONTRACTOR REGISTERED IN THE STATE OF WASHINGTON. CONTRACTOR MUST BE EXPERIENCED IN MITIGATION AND RESTORATION WORK. THE CONTRACTOR SHALL PROVIDE THAT THERE IS ONE PERSON ON THE SITE AT ALL TIMES DURING WORK AND INSTALLATION WHO IS THOROUGHLY FAMILIAR WITH THE TYPE OF MATERIALS BEING INSTALLED AND THE BEST METHODS FOR THEIR INSTALLATION, AND WHO SHALL DIRECT ALL WORK BEING PERFORMED UNDER THESE SPECIFICATIONS. THIS PERSON SHALL HAVE A MINIMUM OF FIVE (5) YEARS EXPERIENCE INSTALLING NATIVE PLANT MATERIALS FOR WETLAND MITIGATION OR RESTORATION PROJECTS, UNLESS OTHERWISE ALLOWED BY THE LANDSCAPE DESIGNER, WETLAND BIOLOGIST AND/OR COUNTY ECOLOGIST.
16. SITE CONDITIONS: THE APPLICANT SHALL IMMEDIATELY NOTIFY COUNTY OF ANY DISCREPANCIES BETWEEN THESE PLANS AND THE SITE CONDITIONS. THE LOCATIONS OF PLANTS AND THE QUANTITIES OF PLANTS SHOWN MAY BE MODIFIED IN THE FIELD BY THE LANDSCAPE DESIGNER AND / OR THE WETLAND BIOLOGIST BASED ON FIELD CONDITIONS AT THE TIME OF PLANTING.
17. PLANTS: PLANTS IN NUMBER AND SIZE ARE REQUIRED IN ACCORDANCE WITH APPROVED PLANS.
- A. ORIGIN: PLANT MATERIALS SHALL BE NATIVE PLANTS, NURSERY GROWN IN THE PUGET SOUND AREA OF WASHINGTON. DUG PLANTS MAY ONLY BE USED UPON APPROVAL OF THE COUNTY.
- B. 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 AND COUNTY ECOLOGIST. 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.
- C. STORAGE: PLANTS STORED BY THE APPLICANT FOR LONGER THAN ONE MONTH PRIOR TO PLANTING SHALL BE PLANTED IN NURSERY ROWS, AND TREATED IN A MANNER SUITABLE TO THAT SPECIES HORTICULTURAL REQUIREMENTS. PLANTS MUST BE REINSPECTED BY THE WETLAND BIOLOGIST AND / OR LANDSCAPE DESIGNER PRIOR TO INSTALLATION.
- D. 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.
- E. PLANT NAMES: PLANT NAMES SHALL COMPLY WITH THOSE GENERALLY ACCEPTED IN THE NATIVE PLANT NURSERY TRADE. ANY QUESTION REGARDING PLANT SPECIES OR VARIETY SHALL BE REFERRED TO THE LANDSCAPE DESIGNER, WETLAND BIOLOGIST OR COUNTY ECOLOGIST. ALL PLANT MATERIALS SHALL BE TRUE TO SPECIES AND VARIETY AND LEGIBLY TAGGED.
- F. PLANT SUBSTITUTIONS: PLANT SUBSTITUTIONS ARE NOT PERMITTED WITHOUT THE PERMISSION OF THE LANDSCAPE DESIGNER, WETLAND BIOLOGIST AND/OR COUNTY ECOLOGIST. SAME SPECIES SUBSTITUTIONS OF LARGER SIZE DO NOT REQUIRE SPECIAL PERMISSION.
- G. 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, SCRAPPED, BRUISED, DRIED OUT, BURNED, BROKEN, OR DEFECTIVE PLANTS WILL BE REJECTED. PLANTS WITH PRUNING WOUNDS OVER 1" IN DIAMETER WILL BE REJECTED.
- H. ROOTS: ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINERIZED, UNLESS EXPLICITLY AUTHORIZED BY THE LANDSCAPE DESIGNER. ROOT BOUND PLANTS OR B&B PLANTS WITH DAMAGED, CRACKED OR LOOSE ROOTBALLS WILL BE REJECTED. BARE ROOT PLANTINGS OF WOODY MATERIAL IS ALLOWED ONLY WITH PERMISSION FROM THE LANDSCAPE DESIGNER.
- I. SIZES: PLANT SIZES SHALL BE AT LEAST THE SIZE INDICATED IN THE PLANT SCHEDULE. LARGER STOCK IS 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. MEASUREMENTS, CALIPER, BRANCHING AND BALLING AND BURLAPPING SHALL CONFORM TO THE AMERICAN STANDARD OF NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERYMEN (LATEST EDITION).
- J. 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.
- K. PLANTING: PLANTING SHALL BE DONE IN ACCORDANCE WITH ILLUSTRATED DETAILS IN THE MITIGATION PLAN SET AND ACCEPTED INDUSTRY STANDARDS.
- L. WEEDING: EXISTING AND EXOTIC VEGETATION IN THE MITIGATION AND BUFFER AREAS WILL BE HAND WEDED FROM AROUND ALL NEWLY INSTALLED PLANTS AT THE TIME OF INSTALLATION. NO CHEMICAL CONTROL OF VEGETATION ON ANY PORTION OF THE SITE IS ALLOWED WITHOUT THE WRITTEN PERMISSION OF THE COUNTY.
- M. COMPOST: ALL LANDSCAPED AREAS DENUDED OF VEGETATION AND ALL PLANTING PIT AREAS SHALL RECEIVE NO LESS THAN 2" OF COMPOST AFTER PLANTING. COMPOST SHALL BE KEPT WELL AWAY (AT LEAST 2") FROM THE TRUNKS AND STEMS OF WOODY PLANTS. COMPOST SHALL BE CEDAR GROVE PURE COMPOST OR APPROVED EQUAL. NO BARK PRODUCTS OR SAWDUST WILL BE PERMITTED. WEED-FREE STRAW MAY BE REQUIRED FOR APPLICATION OVER COMPOST FOR EROSION CONTROL (SEE EROSION CONTROL NOTES).
- N. SITE CONDITIONS: CONTRACTOR SHALL IMMEDIATELY NOTIFY THE LANDSCAPE DESIGNER AND WETLAND BIOLOGIST OF DRAINAGE OR SOIL CONDITIONS LIKELY TO BE DETERIMENTAL TO THE GROWTH OR SURVIVAL OF PLANTS. 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.
- O. PLANT LOCATIONS: LOCATIONS SHALL BE AS DEPICTED IN THE APPROVED PLAN SET. THE LANDSCAPE DESIGNER AND / OR WETLAND BIOLOGIST MAY CHANGE THE LOCATIONS OF PLANTINGS SHOWN ON PLANS BASED ON FIELD CONDITIONS.
- P. PLANTING IN PITS: PLANTING PITS SHALL BE CIRCULAR OR SQUARE WITH VERTICAL SIDES, AND SHALL BE 6" DEEPER AND 12" LARGER IN DIAMETER THAN THE ROOT BALL OF THE PLANT. BREAK UP THE SIDES OF THE PIT IN COMPAKTED SOILS. SET PLANTS UPRIGHT IN PITS, WITH CROWN OF ROOT BALL 2"-3" ABOVE FINAL GRADE. BURLAP SHALL BE REMOVED FROM THE PLANTING PIT. BACKFILL SHALL BE TAMPED DOWN FIRMLY.

Q. WATER: PLANTS SHALL BE WATERED MIDWAY THROUGH BACKFILLING, AND AGAIN UPON COMPLETION OF BACKFILLING. A RIM OF EARTH SHALL BE MOUNTED AROUND THE BASE OF THE TREE OR SHRUB NO CLOSER THAN THE DRIP LINE, EXCEPT ON STEEP SLOPES OR IN HOLLOWES. PLANTS SHALL BE WATERED A SECOND TIME WITHIN 24-48 HOURS AFTER INSTALLATION.

R. INTERMEDIATE INSPECTIONS: ALL PLANTS SHALL BE INSPECTED AND APPROVED BY THE LANDSCAPE DESIGNER AND / OR WETLAND BIOLOGIST PRIOR TO INSTALLATION. CONDITION OF ROOTS OF A RANDOM SAMPLE OF PLANTS WILL BE INSPECTED, AS WELL AS ABOVEGROUND GROWTH ON ALL PLANTS. ROOTS OF ANY BARE ROOT PLANTS, IF PERMITTED FOR USE, WILL BE INSPECTED. PLANT MATERIAL MAY BE APPROVED AT THE SOURCE, AT THE DISCRETION OF THE LANDSCAPE DESIGNER AND THE WETLAND BIOLOGIST, BUT ALL MATERIAL MUST BE RE-INSPECTED AND APPROVED ON THE SITE PRIOR TO INSTALLATION. PLANT LOCATIONS SHALL BE INSPECTED AND APPROVED PRIOR TO PLANTING.

18. HAND SEEDING: SEEDING IS REQUIRED AS DESCRIBED IN APPROVED PLANS.

A. TIMING: SEEDING SHALL NOT TAKE PLACE UNTIL MULCHING IS COMPLETE. CONTRACTOR SHALL INSURE THAT AREAS TO RECEIVE SEED ARE CLEAN OF DEBRIS AND THAT FINAL GRADES ARE CORRECT. SEEDING SHALL BE PERFORMED AFTER OTHER PLANT INSTALLATION IS COMPLETE. SEEDING IS THE FINAL STEP OF THE INITIAL INSTALLATION; SITE SHALL BE CLOSED TO ALL VEHICLES AND FOOT TRAFFIC SHALL BE MINIMIZED AFTER SEEDING IS COMPLETE. SEEDING SHALL NOT TAKE PLACE WHEN THE GROUND IS FROZEN OR IN WINDY WEATHER. SEEDS SHALL BE HAND BROADCAST OR BY MECHANICAL HAND POWERED SPREADER, WITH AS EVEN DISTRIBUTION AS FEASIBLE. AREAS WITHIN 6"-12" OF STEMS OF INSTALLED PLANTS SHALL NOT BE SEDED.

B. SEED MIX: USE WETLAND SEED MIX IN WETLAND AREA AND BUFFER SEED MIX FOR WETLAND BUFFER AREAS. THE MIX SHOULD BE COMPOSED OF WEIGHT PERCENTAGES SPECIFIED IN THE TABLE. ALL SEED MATERIALS SHALL BE FREE OF WEED SEEDS OR OTHER FOREIGN MATTER DETERIMENTAL TO PLANT GROWTH. NOTE: SEED MIX SHOULD BE ORDERED AS EARLY AS POSSIBLE TO INSURE AN ADEQUATE SUPPLY OF SPECIFIED NATIVE SEED. SEED MIX SHALL NOT INCLUDE CLOVER, PERENNIAL GRASS OR TURF GRASS.

C. POST SEEDING EROSION CONTROL: SCATTER 2" OF CERTIFIED WEED-FREE STRAW ON ALL BARE GROUND AFTER SEEDING IS COMPLETE AND INSPECTED, FOR EROSION CONTROL (SEE EROSION CONTROL NOTES).

19. MAINTENANCE: MAINTENANCE SHALL BE REQUIRED IN ACCORDANCE WITH KING COUNTY SENSITIVE AREAS MITIGATION GUIDELINES (2000) AND APPROVED PLANS.

A. SURVIVAL: THE APPLICANT SHALL BE RESPONSIBLE FOR THE HEALTH OF 100% OF ALL NEWLY INSTALLED PLANTS FOR ONE GROWING SEASON AFTER INSTALLATION HAS BEEN ACCEPTED BY COUNTY ECOLOGIST (SEE PERFORMANCE STANDARDS). A GROWING SEASON IS DEFINED AS OCCURRING FROM SPRING (MARCH 15 - MARCH 15, FOLLOWING YEAR). FOR FALL INSTALLATION, THE GROWING SEASON WILL BEGIN THE FOLLOWING SPRING. THE APPLICANT SHALL REPLACE ANY PLANTS THAT ARE FAILING, WEAK, DEFECTIVE IN MANNER OF GROWTH, OR DEAD DURING THIS GROWING SEASON, AS DIRECTED BY THE APPLICANT'S LANDSCAPE DESIGNER, WETLAND BIOLOGIST, AND/OR COUNTY ECOLOGIST.

B. INSTALLATION TIMING FOR REPLACEMENT PLANTS: THE APPLICANT'S LANDSCAPE DESIGNER, WETLAND BIOLOGIST, AND/OR COUNTY ECOLOGIST SHALL DETERMINE TIMING OF THE INSTALLATION FOR REPLACEMENT PLANTS.

C. DURATION AND EXTENT: IN ORDER TO ACHIEVE PERFORMANCE STANDARDS, THE APPLICANT SHALL HAVE THE MITIGATION AREA MAINTAINED FOR THE DURATION OF THE MONITORING PERIOD, 3 YEARS. MAINTENANCE WILL INCLUDE WATERING, WEEDING AROUND BASE OF INSTALLED PLANTS, PRUNING, FERTILIZING, REPLACEMENT, REMOVAL OF DEAD MATERIAL (OTHER THAN FALLEN LOGS, LARGE WOODY DEBRIS, ETC), RESTAKING, AND ANY OTHER MEASURES NEEDED TO INSURE PLANT SURVIVAL. ALL MAINTENANCE SHALL BE DIRECTED BY THE LANDSCAPE DESIGNER AND / OR WETLAND BIOLOGIST.

D. 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 COUNTY ECOLOGIST. REPLACEMENT PLANTS SHALL BE INSPECTED AS DESCRIBED ABOVE FOR THE ORIGINAL INSTALLATION.

E. 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 COUNTY ECOLOGIST.

20. MONITORING: MONITORING SHALL BE CONDUCTED IN ACCORDANCE WITH THE APPROVED MITIGATION / RESTORATION MONITORING PLAN.

A. VEGETATION MONITORING: SAMPLING POINTS OR TRANSECTS WILL BE ESTABLISHED FOR VEGETATION MONITORING, AND PHOTO-POINTS ESTABLISHED FROM WHICH PHOTOS WILL BE TAKEN THROUGHOUT THE MONITORING PERIOD. LINEAR TRANSECTS ARE THE PREFERRED METHOD FOR VEGETATION MONITORING FOR THIS SITE. NO LESS THAN ONE (1) - 25 METER TRANSECTS WILL BE ESTABLISHED IN THE RESTORATION AREA. PERMANENT TRANSECT LOCATION(S) MUST BE IDENTIFIED ON RESTORATION SITE PLANS IN THE FIRST MONITORING REPORT (THEY MAY BE DRAWN ON APPROVED RESTORATION PLANS BY HAND). 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.

B. PHOTOPONTS: NO LESS THAN THREE (3) PHOTOPONTS WILL BE ESTABLISHED - PHOTOGRAPHS WILL BE TAKEN FROM AT LEAST THREE (3) POINTS WITHIN THE RESTORATION AREA TO VISUALLY DEPICT THE CONDITION OF THE RESTORATION AREA.

C. REPORTS: MONITORING REPORTS SHALL BE SUBMITTED AFTER THE END OF EACH GROWING SEASON (BY NOVEMBER 15) FOR THREE (3) CONSECUTIVE YEARS FOLLOWING SUCCESSFUL INSTALLATION INSPECTION. MONITORING REPORTS MUST INCLUDE DESCRIPTION / DATA FOR:

I. PLANT SURVIVAL, VIGOR, AND AERIAL COVERAGE FROM EVERY PLANT COMMUNITY (TRANSECT DATA)

II. SITE HYDROLOGY, INCLUDING EXTENT OF INUNDATION, SATURATION, DEPTH TO GROUNDWATER, FUNCTION OF ANY HYDROLOGIC STRUCTURES, INPUTS, OUTLETS, ETC.

III. SLOPE CONDITION, SITE STABILITY, ANY STRUCTURES OR SPECIAL FEATURES

IV. BUFFER CONDITIONS, E.G. SURROUNDING LAND USE, USE BY HUMANS, WILD AND DOMESTIC CREATURES

V. OBSERVED WILDLIFE, INCLUDING AMPHIBIANS, AVIANS, AND OTHERS

VI. SOILS, INCLUDING TEXTURE, MUNSELL COLOR, ROOTING AND OXIDIZED RHIZOSPHERES

VII. RECEIPTS FOR OFF-SITE DISPOSAL OF ANY DUMPING, WEEDS, OR INVASIVE PLANTS

VIII. RECEIPTS FOR ANY STRUCTURAL REPAIR OR REPLACEMENT

IX. 4" X 6" COLOR PHOTOGRAPHS TAKEN FROM PERMANENT PHOTO-POINTS AS SHOWN ON MONITORING PLAN.

D. 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, THE COUNTY MAY EXTEND THE MONITORING PERIOD FOR THAT MITIGATION.

**PREPARATION AND PLANTING NOTES:**

1. ENSURE THAT ALL NON-NATIVE VEGETATION SUCH AS HIMALAYAN BLACKBERRY HAS BEEN REMOVED IN THE MITIGATION AREAS.

2. DECONSOLIDATE DISTURBED SOIL TO A MINIMUM DEPTH OF 12". SPREAD 2" (TWO INCHES) OF VEGETATIVE COMPOST OVER BARE SOILS WITHIN MITIGATION AREA.

3. MIX INTO SOIL TO A DEPTH OF 12" (TWELVE INCHES) USING A ROTOTILLER OR A SHOVEL.

4. PUT PLANTS IN THEIR PLACES ACCORDING TO THE APPROVED BASIC MITIGATION PLAN.

5. DIG SQUARE BOTTOMED HOLES FOR PLANTS, TWICE THE SIZE OF CONTAINER (SEE SHRUB PLANTING DETAIL).

6. SCORE EDGES OF PLANTING HOLE WITH SHOVEL, SO THAT ROOTS CAN TRAVEL OUTSIDE HOLE.

7. LOOSEN PLANT ROOTS SLIGHTLY, AND PLACE IN CENTER OF HOLE, UPRIGHT AND LEVEL WITH GROUND SURFACE.

8. AFTER ALL PLANTS HAVE BEEN PLANTED, HANDSEED OVER THE ENTIRE RESTORATION AREA. USE APPROXIMATELY 1-2 POUNDS OF GRASS SEED MIX PER 1,000 SQ. FT. OF MITIGATION AREA USING THE SEED MIXES NOTED BELOW.

9. WATER THE MITIGATION PLANTS WITH WATER RIGHT AFTER PLANTING. CONTINUE TO WATER AS NECESSARY TO ENSURE PLANT SURVIVAL.

10. PLAN SHOWS PLANTS ARRANGED IN NATURALIZED CLUSTERS. PLAN SHOWS CERTAIN PLANTS IN THE WETTER BUFFER AND DRIER BUFFER, ACCORDING TO THEIR WATER AND LIGHT NEEDS.

**INVASIVE REMOVAL NOTES:**

BEFORE INSTALLING PLANTINGS FOR RESTORATION AREAS, TAKE NOTE OF ANY INVASIVE WEED SPECIES FOUND ON-SITE. CONTROL OF THESE SPECIES IS VERY IMPORTANT IN RESTORATION AREAS IN ORDER TO ALLOW FOR THE SUCCESSFUL ESTABLISHMENT OF PLANTINGS THAT MIGHT OTHERWISE HAVE DIFFICULTY COMPETING WITH THESE AGGRESSIVE PLANTS.

WHERE ENCOUNTERED, INVASIVE WEEDS SHOULD BE REMOVED MANUALLY WITHOUT THE USE OF PESTICIDE (INCLUDES HERBICIDE), EXCEPT IN RARE CASES WHEN APPLIED BY A STATE LICENSED PESTICIDE APPLICATOR. MANUAL REMOVAL CAN BE ACCOMPLISHED BY GRUBBING OUT PLANTS AND ROOTS ENTIRELY (INCLUDING SEED PODS, FRUITS AND LEAVES) WITHOUT SIMULTANEOUS SPREADING MORE SEEDS. THE IDEAL TIME FOR REMOVAL IS PRIOR TO FLOWERING IN SPRING OR SUMMER. IF REMOVAL IS TO OCCUR AFTER FLOWERING, IT IS RECOMMENDED THAT FLOWERS BE CUT OFF AND DISPOSED OF PRIOR TO GRUBBING. GRUBBED OUT MATERIALS SHOULD BE DISPOSED OF OFF-SITE IMMEDIATELY, SINCE MANY OF THESE SPECIES ARE STILL CAPABLE OF PROPAGATING POST-REMOVAL. DO NOT USE WEED MATERIALS FOR MULCH AND DO NOT PUT INTO COMPOST OR YARD WASTE BINS.

ONCE THE INVASIVE SPECIES HAVE BEEN REMOVED, YOU CAN ASSESS SITE SOIL QUALITY. CERTAIN INVASIVE SPECIES SUCH AS SCOTCH BROOM DISPERSE THOUSANDS OF SEEDS PER PLANT. IN EXTREME CASES, TOPSOIL REMOVAL MAY BE NECESSARY TO EVACUATE THE INVASIVE SEED BANK. DENSE NATIVE PLANTING IS RECOMMENDED AND HAS PROVEN SUCCESSFUL AT PREVENTING WEEDY AND/OR INVASIVE SPECIES FROM REEMERGING.



**King County**

Department of Local Services  
Permitting Division

**WATER SERVICE DETAILS**

