

# GO EAST LANDFILL CLOSURE

## LAND DISTURBANCE ACTIVITY - LDA #1

### JULY, 2020

**DEVELOPMENT DATA:**

**OWNER/APPLICANT:**

P&GE LLC  
11255 KIRKLAND WAY, SUITE 300  
KIRKLAND, WA 98033  
425.827.2014  
GARY@GARYEASTLAW.COM  
MARTYP@PACEENGRS.COM

**ENGINEER/CONTACT:**

PACE ENGINEERS, INC  
MARTY PENHALLEGON, P.E.  
11255 KIRKLAND WAY, SUITE 300  
KIRKLAND, WA 98033  
425.827.2014  
MARTYP@PACEENGRS.COM

**LANDSCAPE ARCHITECT:**

PACE ENGINEERS, INC  
V. BRIAN WAY, PLA  
11255 KIRKLAND WAY, SUITE 300  
KIRKLAND, WA 98033  
425.827.2014  
BRIANW@PACEENGRS.COM

**SENSITIVE AREAS CONSULTANT:**

WETLAND RESOURCES, INC  
SCOTT BRAINARD  
9505 19TH AVE SE  
EVERETT, WA 98208  
425.337.3174

**STRUCTURAL ENGINEER:**

TERRA ASSOCIATES, INC.  
CAROLYN S. DECKER, P.E.  
12220 113TH AVENUE NE, SUITE 130  
KIRKLAND, WASHINGTON 98034  
425.821.7777  
CDECKER@TERRA-ASSOCIATES.COM

**SITE INFORMATION:**

**ADDRESS:**

4330 108TH STREET SE  
EVERETT, WA 98208

**DATUM:**

HORIZONTAL DATUM: NAD83/91 PER W.S.D.O.T. CONTROL POINTS NO. GP31009-98, GP31005-88 AND GP31005-87 AND SNOHOMISH COUNTY CONTROL POINTS NO. 2805P09 AND 2805R11.

VERTICAL DATUM: NAVD 88 PER SNOHOMISH COUNTY AND W.S.D.O.T. CONTROL POINTS LISTED ABOVE.

**TAX PARCEL NUMBERS:**

2805210040-0200 ±1,781,717 SQUARE FEET (±40.9026 ACRES)

**ZONING:**

R-9,600

**RECORD LEGAL DESCRIPTION**

NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 21, TOWNSHIP 28 NORTH, RANGE 5 EAST, W.M., RECORDS OF SNOHOMISH COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON.

**SURVEYOR:**

PACE ENGINEERS, INC  
DAVID R. FULTON, PLS  
11255 KIRKLAND WAY, SUITE 300  
KIRKLAND, WA 98033  
425.827.2014  
DAVIDR@PACEENGRS.COM

**GEOTECHNICAL:**

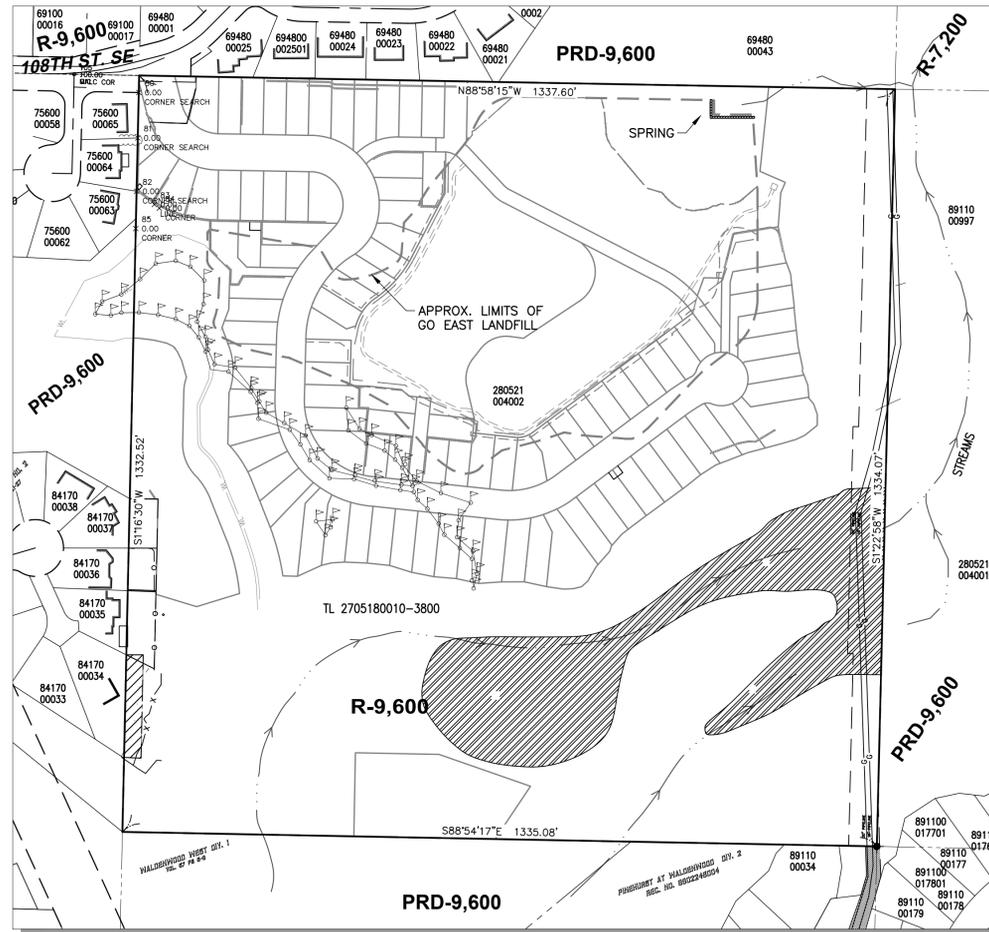
AESI  
JON SONDERGAARD  
911 5TH AVE, SUITE 100  
KIRKLAND, WA 98033  
425.827.7701

**TRAFFIC:**

GIBSON TRAFFIC CONSULTANTS, INC.  
MATT PALMER, P.E.  
2813 ROCKEFELLER AVE., SUITE B  
EVERETT, WA 98201  
425.339.8266  
MATTP@GIBSONTRAFFIC.COM

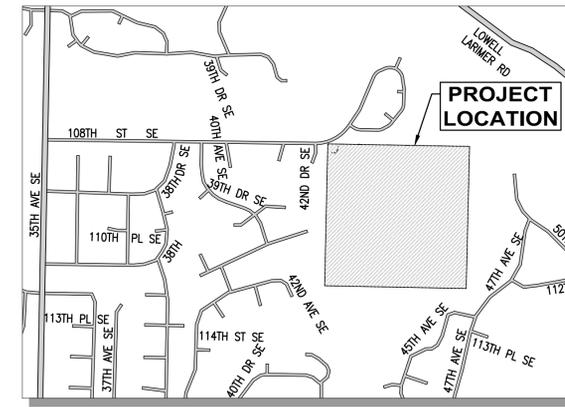
**CERTIFIED EROSION AND SEDIMENT CONTROL LEAD:**

PACE ENGINEERS, INC  
MICHAEL MARANAN, ECO-3-4241709  
11255 KIRKLAND WAY, SUITE 300  
KIRKLAND, WA 98033  
425.827.2014  
MICHAELM@PACEENGRS.COM



**SITE MAP**  
1"=150'

**NOTE:**  
PROPERTY OUTSIDE FEMA FLOOD PLAN



**VICINITY MAP**  
1"=800'

**Sheet List Table**

Sheet Number	Sheet Title
<b>Closure Plans</b>	
1	COVER SHEET
2	EXISTING CONDITIONS
3	EXISTING CONDITIONS
4	GRADING & DRAINAGE PLAN
5	GRADING MATRIX PLAN & QUANTITIES
6	CROSS SECTIONS
7	DETAILS
7A	DETAILS
8	DETAILS
8A	DETAILS
9	NOTES
10	GENERAL NOTES
11	COMPOSITE UTILITY PLAN
12	STORM DRAIN PROFILES
13	POND DETAIL SHEET
14	STORM DETAILS AND SPECIFICATIONS
15	TEMPORARY EROSION & SEDIMENT CONTROL PLAN
16	TEMPORARY EROSION & SEDIMENT CONTROL DETAILS
17	TEMPORARY EROSION & SEDIMENT CONTROL DETAILS
18	STREAM PLAN & PROFILE
19	WALL GRADING PLAN
20	WALL GRADING PLAN
21	LANDSCAPE PLAN
22	LANDSCAPE DETAILS
23	MITIGATION PLAN (WRI, SHEET 1 OF 2)
24	MITIGATION PLAN (WRI, SHEET 2 OF 2)
25	WALL DETAILS (TERRA ASSOCIATES, INC.)

**GRADING & IMPERVIOUS INFORMATION:**

TOTAL CUT: 168,000± CY\*  
TOTAL FILL: 166,000± CY\*  
\*SEE SHEET 5 FOR GRADING SEQUENCE  
NEW IMPERVIOUS: 0 SF  
NEW PLUS REPLACED IMPERVIOUS: 0 SF  
TOTAL PROPOSED IMPERVIOUS: 0 SF  
NOTE THAT THESE QUANTITIES ARE FOR PERMITTING PURPOSES ONLY. CONTRACTOR SHALL PERFORM HIS OWN TAKE-OFFS FOR PURPOSES OF BIDDING.

**CALL BEFORE YOU DIG 811**  
UNDERGROUND SERVICE (USA)

**VERIFY SCALE**  
BAR IS ONE INCH ON ORIGINAL DRAWING.  
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

**Snohomish County Planning Development Services**  
**APPROVED FOR CONSTRUCTION**  
By: \_\_\_\_\_  
R/W Permit No. \_\_\_\_\_  
Date: \_\_\_\_\_

REVISIONS TO POND COMPACTION SPECIFICATIONS	7/20/2020	DATE
REVISIONS FOR AGENCY FINAL REVIEW COMMENTS <td>4/2/2020 <td></td> </td>	4/2/2020 <td></td>	
REVISED FOR QUALITY ASSURANCE <td>10/3/2019 <td></td> </td>	10/3/2019 <td></td>	
REVISED PER COUNTY REVIEW <td>4/17/2019 <td></td> </td>	4/17/2019 <td></td>	
REVISED GRADING <td>1/26/18 <td></td> </td>	1/26/18 <td></td>	
REVISED GRADING <td>12/05/13 <td></td> </td>	12/05/13 <td></td>	
	SYM	

**PACE**  
An Engineering Services Company  
11255 Kirkland Way, Suite 300  
Kirkland, WA 98033  
p. 425.827.2014 f. 425.827.9043  
Civil | Structural | Planning | Survey  
paceengrs.com



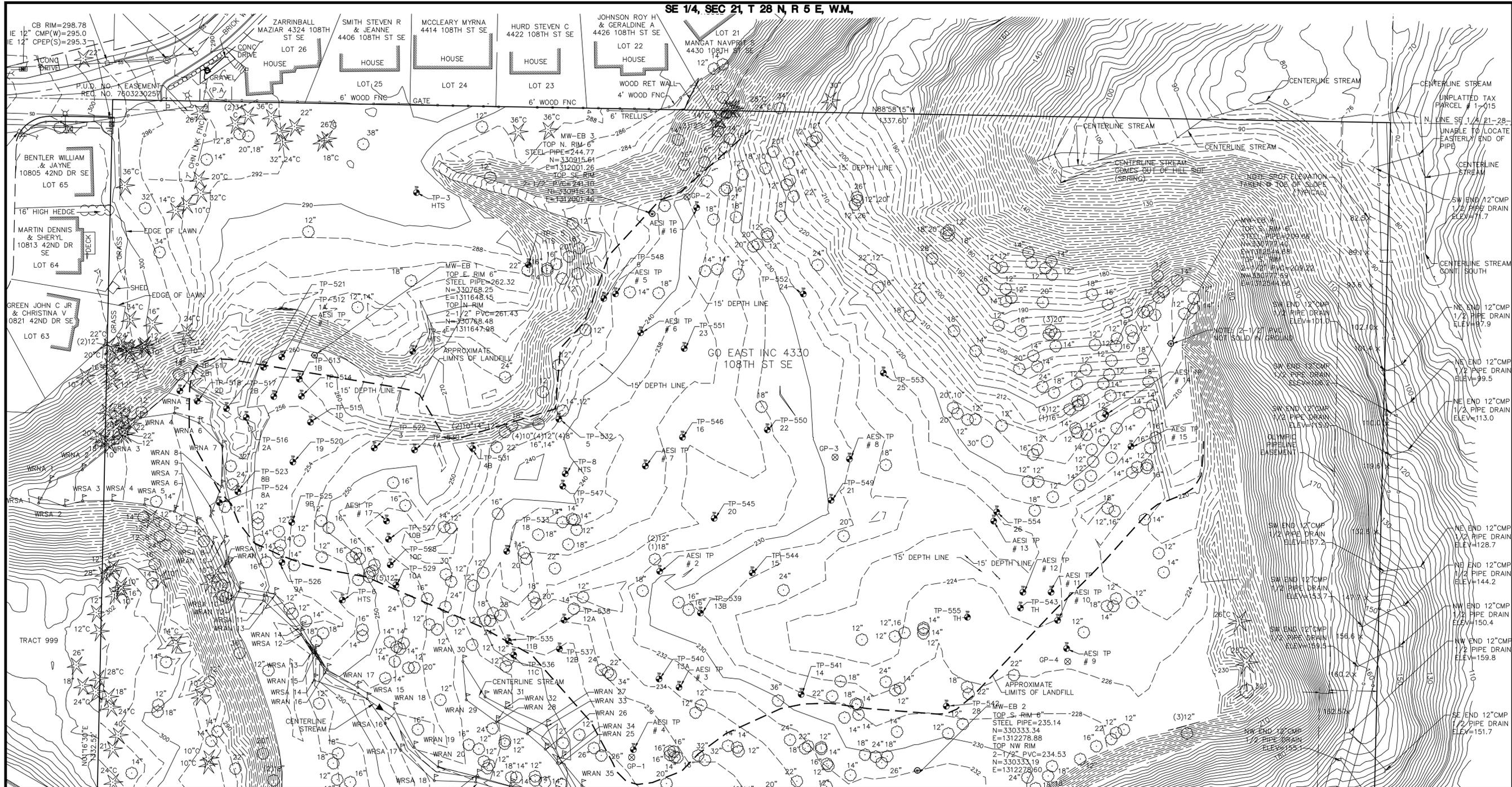
**GO EAST LANDFILL CLOSURE**

COVER SHEET

SCALE: AS NOTED DATE: 7/20/2020  
DESIGNED BY: MP CHECKED BY: MP  
JOB NUMBER: P09382.00  
DWG NAME: P09382\_CVR  
SHEET 1 OF 25

FILE NAME: P:\P09\09382.00 GO EAST\CAD\FIGURES\SHEETS\LANDFILL\_CLOSURE\2018\09382\_CVR.DWG  
SAVE TIME: 7/21/2020 4:30:35 PM  
PLOT TIME: 7/21/2020 4:52:52 PM  
XREF FILES: PACE.XXD

SE 1/4, SEC 21, T 28 N, R 5 E, W.M.

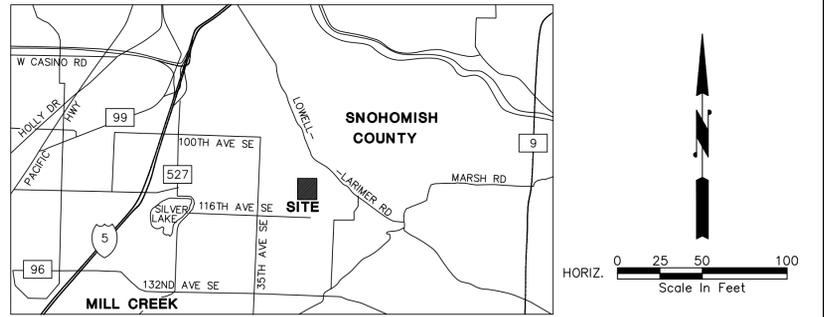


MATCHLINE, SEE SHEET 3

LEGEND	
⊕	WATER VALVE
⊕	HYDRANT
⊕	WATER METER
⊕	MANHOLES (SS/SD)
⊕	CB
⊕	POWER/UTILITY POLE
⊕	GUY ANCHOR
⊕	POWER TRANSFORMER
⊕	POWER/TELEPHONE VAULT
⊕	POWER METER
⊕	TELEPHONE/TV RISER
⊕	GAS VALVE
⊕	GAS METER
⊕	STREET LIGHT
⊕	SPOT ELEVATION
⊕	SIGN
⊕	ROCKERY
⊕	FOUND CASIED MONUMENT
⊕	TEST PIT SYMBOL
⊕	AESI TP # 5
⊕	TP-546
⊕	MCNAUGHTONS EXPLORATION PITS
⊕	CONIFEROUS TREE
⊕	ALL DECIDUOUS TREES ARE MOSTLY ALDER, MAPLE
⊕	NOTE: ALL TREE DIAMETERS MEASURED AT STANDARD HEIGHT
⊕	12\"/>
⊕	12\"/>
⊕	NOTE: ALL TREE DIAMETERS MEASURED AT STANDARD HEIGHT
⊕	WRAN ♂
⊕	WETLAND FLAG AND DESIGNATION
⊕	MONITORING WELL
⊕	GP-2 ⊕
⊕	GAS PROBE SYMBOL
---	CENTER LINES
---	PROPERTY LINES
---	RIGHT-OF-WAY LINES
---	LOT LINES
---	WATER LINE
---	SEWERY LINE
---	STORM DRAIN LINE
---	GAS LINE
---	UNDERGROUND POWER LINES
---	UNDERGROUND TELEPHONE LINES
---	UNDERGROUND CABLE TV LINES
---	OVERHEAD POWER LINES
---	OVERHEAD UTILITY LINES
---	CHAIN LINK FENCE
---	WOOD FENCE

**SURVEY NOTES:**  
 HORIZONTAL DATUM: NAD83/91 PER W.S.D.O.T. CONTROL POINTS NO. GP31009-98, GP31005-88 AND GP31005-87 AND SNOHOMISH COUNTY CONTROL POINTS NO. 2805P09 AND 2805R11.  
 BASIS OF BEARINGS: HELD BEARING OF N88°55'17\"/>

**RECORD LEGAL DESCRIPTION:**  
 NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 21, TOWNSHIP 28 NORTH, RANGE 5 EAST, W.M., RECORDS OF SNOHOMISH COUNTY, WASHINGTON.  
 SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON.  
 NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 21, TOWNSHIP 28 NORTH, RANGE 5 EAST, W.M., RECORDS OF SNOHOMISH COUNTY, WASHINGTON.  
 SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON.



**VICINITY MAP:**  
 Snohomish County Planning Development Services  
 APPROVED FOR CONSTRUCTION  
 By: \_\_\_\_\_  
 R/W Permit No. \_\_\_\_\_  
 Date: \_\_\_\_\_

THIS TOPOGRAPHIC SURVEY DRAWING ACCURATELY PRESENTS SURFACE FEATURES LOCATED DURING THE COURSE OF THIS SURVEY. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED SOLELY UPON INFORMATION PROVIDED BY OTHERS AND PACE ENGINEERS, INC. DOES NOT ACCEPT RESPONSIBILITY OR ASSUME LIABILITY FOR THEIR ACCURACY OR COMPLETENESS. CONTRACTOR/ENGINEERS SHALL VERIFY EXACT SIZE AND LOCATION PRIOR TO CONSTRUCTION.  
 CALL FOR LOCATE: UTILITY LOCATION SERVICE, 1-800-425-5555.  
 NOTE: CONTOURS BY PACE GROUND SURVEY METHODS ARE DASHED. CONTOURS FROM PUGET SOUND LIDAR CONSORTIUM ARE CONTINUOUS.

PORTION OF NW QUARTER OF THE SE QUARTER OF SECTION 21, TOWNSHIP 28 NORTH, RANGE 5 EAST, W.M.,

REVISIONS TO POND COMPACTIFICATIONS	7/20/2020
2	REVISIONS FOR AGENCY FINAL REVIEW COMMENTS
1	REVISIONS FOR QUALITY ASSURANCE
1	REVISED PER COUNTY REVIEW
1	REVISED GRADING
1	REVISED GRADING

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 11255 Kirkland Way, Suite 300  
 Kirkland, WA 98033  
 p. 425.827.2014 / f. 425.827.9043  
 Civil | Structural | Planning | Survey  
 paceengr.com

**DAVID R. FULLON**  
 STATE OF WASHINGTON  
 PROFESSIONAL LAND SURVEYOR  
 52428

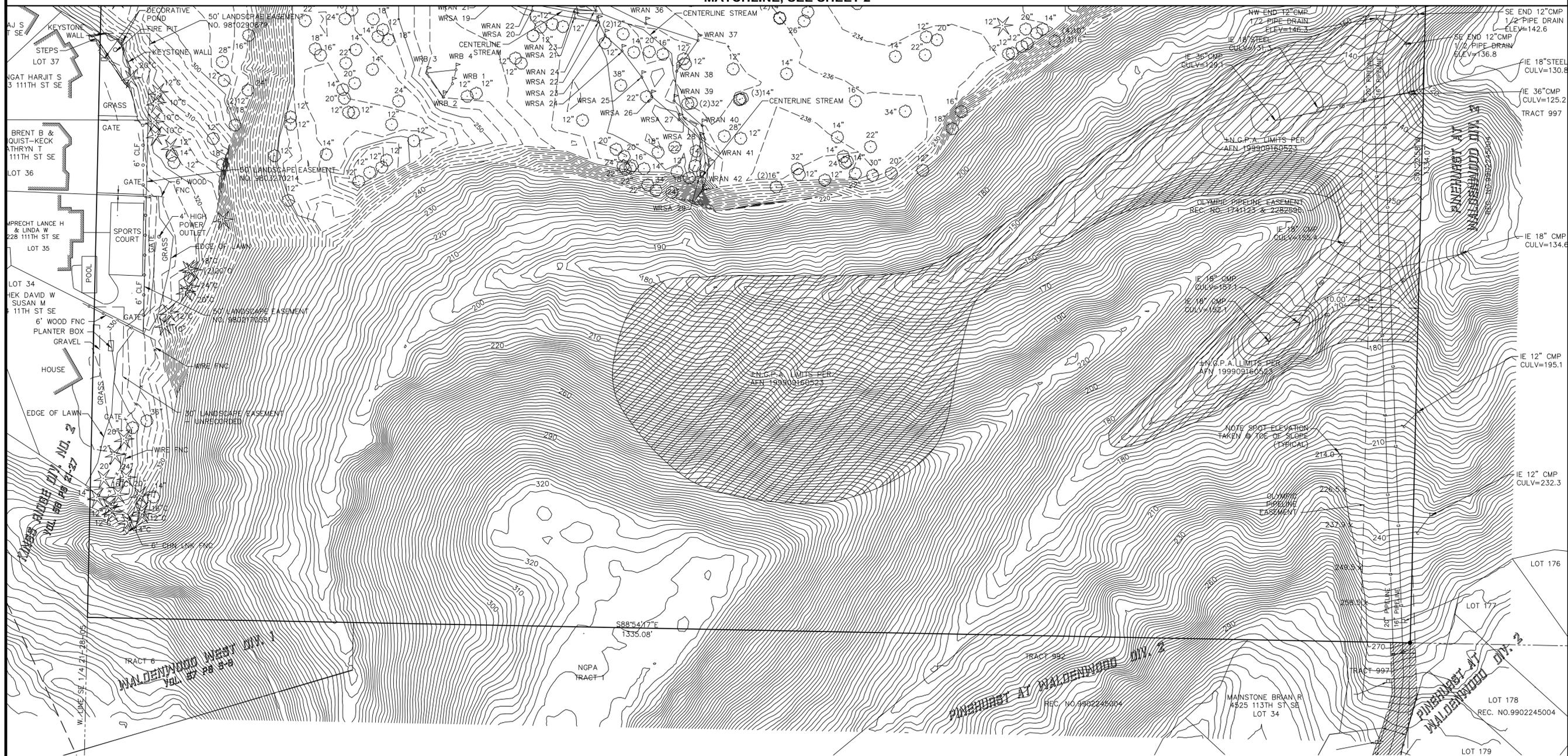
**GO EAST LANDFILL CLOSURE**  
 EXISTING CONDITIONS

SCALE: 1"=50'	DATE: 7/20/2020
DESIGNED BY: SC	CHECKED BY: MP
JOB NUMBER: P09382.00	
DWG NAME: P09382_EC	
SHEET 2 OF 25	

FILE NAME: P:\P09382.00\_GO EAST\CAD\FIGURES\SHEETS\LANDFILL\_CLOSURE\_2018\P09382\_EC.DWG  
 SAVE TIME: 7/21/2020 4:31:04 PM  
 PLOT TIME: 7/21/2020 4:53:32 PM  
 VIEW: P09382\_EC

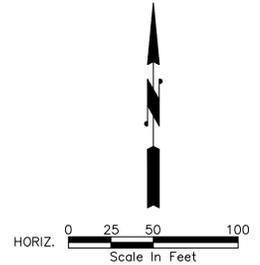
SE 1/4, SEC 21, T 28 N, R 5 E, W.M.

MATCHLINE, SEE SHEET 2



**LEGEND**

<ul style="list-style-type: none"> <li>⊕ WATER VALVE</li> <li>⊕ HYDRANT</li> <li>⊕ WATER METER</li> <li>⊕ MANHOLES (SS/SD)</li> <li>⊕ CB</li> <li>⊕ POWER/UTILITY POLE</li> <li>⊕ GUY ANCHOR</li> <li>⊕ POWER TRANSFORMER</li> <li>⊕ POWER/TELEPHONE VAULT</li> <li>⊕ POWER METER</li> <li>⊕ TELEPHONE/TV RISER</li> <li>⊕ GAS VALVE</li> <li>⊕ GAS METER</li> <li>⊕ STREET LIGHT</li> <li>⊕ SPOT ELEVATION</li> <li>⊕ SIGN</li> <li>⊕ ROCKERY</li> <li>⊕ FOUND CASIED MONUMENT</li> </ul>	<ul style="list-style-type: none"> <li>⊕ TEST PIT SYMBOL</li> <li>⊕ AESI TP # 5</li> <li>⊕ TP-548 6</li> <li>⊕ 12" CONIFEROUS TREE</li> <li>⊕ 12" ALL DECIDUOUS TREES ARE MOSTLY ALDER, MAPLE</li> <li>⊕ 12" CEDAR</li> <li>⊕ NOTE: ALL TREE DIAMETERS MEASURED AT STANDARD HEIGHT</li> <li>⊕ WRAN ♂ WETLAND FLAG AND DESIGNATION</li> <li>⊕ MONITORING WELL</li> <li>⊕ GP-2 ⊕ GAS PROBE SYMBOL</li> </ul>	<ul style="list-style-type: none"> <li>— CENTER LINES</li> <li>— PROPERTY LINES</li> <li>— RIGHT-OF-WAY LINES</li> <li>— LOT LINES</li> <li>— WATER LINE</li> <li>— SS SANITARY SEWER LINE</li> <li>— SD STORM DRAIN LINE</li> <li>— G GAS LINE</li> <li>— U-UP UNDERGROUND POWER LINES</li> <li>— U-UT UNDERGROUND TELEPHONE LINES</li> <li>— U-TV UNDERGROUND CABLE TV LINES</li> <li>— O-O OVERHEAD POWER LINES</li> <li>— O-O OVERHEAD UTILITY LINES</li> <li>— X-X CHAIN LINK FENCE</li> <li>— W-W WIRE FENCE</li> <li>— W-W WOOD FENCE</li> </ul>
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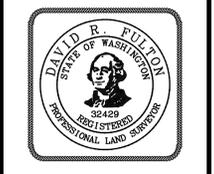


PORTION OF NW QUARTER OF THE SE QUARTER OF SECTION 21, TOWNSHIP 28 NORTH, RANGE 5 EAST, W.M.,

**Snohomish County Planning Development Services**  
**APPROVED FOR CONSTRUCTION**  
 By: \_\_\_\_\_  
 R/W Permit No. \_\_\_\_\_  
 Date: \_\_\_\_\_

NO.	REVISIONS TO POND COMPACTIFICATIONS	DATE
1 <td>REVISED GRADING</td> <td>12/05/13</td>	REVISED GRADING	12/05/13
2 <td>REVISED GRADING</td> <td>4/17/2019</td>	REVISED GRADING	4/17/2019
3 <td>REVISED GRADING</td> <td>7/20/2020</td>	REVISED GRADING	7/20/2020

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 p. 425.827.2014 | f. 425.827.5043  
 Civil | Structural | Planning | Survey  
 paceeng.com



**GO EAST**  
**LANDFILL CLOSURE**  
 EXISTING CONDITIONS

SCALE: 1"=50'	DATE: 7/20/2020
DESIGNED BY: SC	CHECKED BY: MP
JOB NUMBER: P09382.00	
DWG NAME: P09382_EC	
SHEET 3 OF 25	

FILE NAME: P:\P09382.00 GO EAST\CAD\FIGURES\SHEETS\LANDFILL\_CLOSURE\_2018\P09382\_EC.DWG  
 SAVE TIME: 7/21/2020 4:31:04 PM  
 PLOT TIME: 7/21/2020 4:53:33 PM  
 XREF FILES: PACE.XXD















**GO-EAST LANDFILL WASTE SCREENING PROGRAM**

THE FOLLOWING TABLE SHOWS HOW TO HANDLE DIFFERENT TYPES OF WASTE MATERIALS THAT MAY BE FOUND IN EXCAVATED LANDFILL MATERIAL.

ITEM	OFFSITE HAZARDOUS WASTE DISPOSAL	OFFSITE NON-HAZARDOUS WASTE DISPOSAL	ONSITE LANDFILL	ONSITE FILL OUTSIDE OF LANDFILL
CARPET, FOAM, INSULATION		X		
TIRES		X		
CONFIRMED FRIABLE ASBESTOS-CONTAINING MATERIAL		X (AUTHORIZED ASBESTOS FACILITY)		
CONFIRMED NONFRIABLE ASBESTOS-CONTAINING MATERIAL			X	
CONFIRMED LEAD-BASED PAINT THAT FAILS TCLP	X			
CONFIRMED LEAD-BASED PAINT THAT PASSES TCLP		X		
LOGGED TREES AND BRANCHES (NON-CHIPPED)		X		
CHIPPED TREE BRANCHES, LIMBS				X
CONFIRMED OTHER HAZARDOUS WASTE	X			
SEPARATED/TESTED SAND OR SOIL THAT PASSES TCLP/MTCA			X	
SEPARATED/TESTED SAND OR SOIL THAT FAILS MTCA BUT PASSES TCLP			X	
SEPARATED/TESTED SAND OR SOIL THAT FAILS TCLP	X			
EXCAVATED LANDFILL MATERIAL THAT FAILS MTCA BUT PASSES TCLP			X	
INORGANICS SUCH AS CONCRETE, BRICKS, GRAVEL, ROCKS, GLASS, ASPHALT, CINDER BLOCKS			X	
EXCAVATED WOOD, RR TIES, BURNED WOOD, LUMBER WITH NO PRESERVATIVES, CARDBOARD			X	
PLASTICS, WIRE, PVC PIPE, METAL, DEMOLITION WASTE, LINOLEUM			X	
ORGANICS, GENERAL REFUSE, FABRIC		X		

NOTES: MTCA (MODEL TOXICS CONTROL ACT) VALUES AND TCLP (TOXICITY CHARACTERISTIC LEACHING PROCEDURE) VALUES ARE SET FORTH IN TABLE G.4 - RECOMMENDED PARAMETERS AND SUGGESTED VALUES FOR DETERMINING REUSE AND DISPOSAL OPTIONS FOR LANDFILL MATERIAL. THESE CAN BE FOUND ON PAGE 29 OF 60 OF THE "GO EAST LANDFILL CLOSURE PLAN".

THE PUGEST SOUND CLEAN AIR AGENCY DEFINES "ASBESTOS-CONTAINING MATERIAL" AS ANY MATERIAL CONTAINING MORE THAN 1 PERCENT ASBESTOS, AND "FRIABLE ASBESTOS-CONTAINING MATERIAL" AS ASBESTOS-CONTAINING MATERIAL THAT, WHEN DRY, CAN BE CRUMBLED, PULVERIZED, OR REDUCED TO POWDER BY HAND PRESSURE OR BY THE FORCES EXPECTED TO ACT UPON THE MATERIAL IN THE COURSE OF DEMOLITION, RENOVATION, OR DISPOSAL.

THE U.S. ENVIRONMENTAL PROTECTION AGENCY DEFINES "LEAD-BASED PAINT" AS PAINT THAT CONTAINS AT LEAST 1 MILLIGRAM OF LEAD PER SQUARE CENTIMETER OR THAT HAS A LEAD CONCENTRATION OF AT LEAST 0.5 PERCENT.

**LOT EXPLORATION PLAN (OUTSIDE LANDFILL AREA)**

- THE FOLLOWING REPRESENTS A TEST PIT SAMPLING AND OBSERVATION PLAN INTENDED TO COMPLY WITH THE SNOHOMISH COUNTY HEARING EXAMINER'S REQUIREMENTS FOR RESIDENTIAL LOT AREAS OF THE BAKERVIEW PLAT.
- THIS PLAN AND ITS EXECUTION SHALL BE OVERSEEN AND VERIFIED BY THE FOLLOWING: PROPERTY OWNER, SNOHOMISH COUNTY HEALTH DISTRICT REPRESENTATIVE, PDS REPRESENTATIVE, AND PROJECT COA ENGINEER/PROFESSIONAL (WHO SHALL BE RESPONSIBLE TO COMPILE AND DOCUMENT EXECUTION OF THE PLAN).
- ALL LANDFILL MATERIAL LYING OUTSIDE THE RECONFIGURED LANDFILL LIMITS AND INCLUDING ANY LOT AREAS, STREET RIGHT-OF-WAYS, AND OTHER USE AREAS LIKE SEWER PUMP STATION SITE, ACCESS TO LANDFILL AREA, IS TO BE COMPLETELY REMOVED AND RELOCATED TO THE RECONFIGURED AND REDUCED LANDFILL LIMITS.
- EXCAVATED AREAS LYING OUTSIDE EXISTING LANDFILL LIMITS, SHALL HAVE ALL EXCAVATION OBSERVED BY GEOTECHNICAL ENGINEER AND IF ANY LANDFILL MATERIALS ARE FOUND (EXCAVATED), IT SHALL BE RELOCATED AS APPROPRIATE EITHER TO THE RECONFIGURED LANDFILL PROPER OR OFFSITE AS DETERMINED APPROPRIATE. THE FINISH GRADE OF ALL EXCAVATED AREAS SHALL BE WALKED AND VERIFIED THAT NO LANDFILL MATERIAL REMAINS.
- "WEDGE AREA" SHALL BE FILLED TO AT LEAST 6 FEET INSIDE OF LANDFILL BOUNDARY WITH EXCAVATED ON-SITE MATERIAL FROM OUTSIDE THE LANDFILL (MATERIAL FROM ITEM 4 ABOVE) AND COMPACTED IN CONFORMANCE TO STRUCTURAL FILL SPECIFICATIONS.
- THE REMAINING AREAS OUTSIDE THE LANDFILL AREA THAT ARE TO BE LEFT UNGRADED OR FILLED, SHALL BE SCARIFIED TO A DEPTH OF 12-INCHES TO VERIFY NO HIDDEN OR BURIED LANDFILL MATERIAL REMAIN PRIOR TO FILLING OR RECOMPACTING THE TOP 12-INCHES. ADDITIONAL POT HOLDING SHALL BE ACCOMPLISHED AS DETERMINED NECESSARY TO VERIFY NO LANDFILL MATERIAL REMAINS.
- ALL OF THE ABOVE SEQUENCE SHALL BE OBSERVED BY PARTIES DESCRIBED IN NOTE 2 ABOVE. A FORMAL REPORT SHALL BE COMPILED AND PREPARED BY THE COA ENGINEER/PROFESSIONAL AND SUBMITTED TO SHD AND PDS FOR REVIEW AND CONCURRENCE.

**LANDFILL CLOSURE PLAN (LFCP) REQUIREMENTS AND RECOMMENDATIONS  
NOTES FOR LAND DISTURBING ACTIVITY (LDA) PERMIT**

**NOTE: THESE REQUIREMENTS PERTAIN ONLY TO THE CLOSURE ACTIVITY RELATED TO THE GO-EAST LANDFILL CLOSURE AND NOT BAKERVIEW PLAT WORK.**

- PRIOR TO LANDFILL CLOSURE ACTIVITY, CONDUCT NECESSARY TESTING PER SECTION 3.6.2 OF THE LFCP. IT INCLUDES SAMPLES TAKEN FOR EVERY 500 CUBIC YARDS FOR FIRST 2500 CUBIC YARDS AND EVERY 2500 CUBIC YARDS THEREAFTER. FOR AN ESTIMATED 50,000 CUBIC YARDS OF LANDFILL MATERIAL BEING RELOCATED THIS RESULTS IN ABOUT 25 TEST SAMPLES. REFER TO TABLE G.4 OF THE LFCP FOR TESTING REQUIREMENTS. NO LANDFILL EXCAVATED MATERIAL IS TO BE PERMANENTLY LOCATED OR PLACED OUTSIDE THE CLOSED LANDFILL LIMIT.
  - HAULING AND RELATED TO THE PROJECT.
  - USING FLAGGERS AND TRAFFIC CONTROL AS REQUIRED FOR ANY HEAVY PERIODS OF TRAFFIC ON AND OFF THE SITE.
  - COMPLY WITH OTHER MITIGATION IMPOSED BY THE REQUIRED STREET USE PERMIT TO BE ISSUED FOR THE PROJECT BY THE COUNTY.
- IN CONCERT WITH ITEM 1 ABOVE CONDUCT ADDITIONAL EXPLORATIONS ALONG THE EXPECTED "CATCH POINT" (EXTENT OF EXCAVATION) FOR LANDFILL EXCAVATION TO CONFIRM DEPTH AND EXTENT OF LANDFILL RELOCATION AS DETERMINED NECESSARY. (IF SIGNIFICANTLY DIFFERENT THAN SHOWN, CONTACT ENGINEER.)
  - INSTALL TESCP FEATURES AND MAINTAIN AS REQUIRED. NOTE: THE INTENT IS TO USE THE PROJECT DETENTION POND FOR TEMPORARY EROSION AS NEEDED.
  - ON-SITE REFUELING WILL ACCOMPLISH AT ONE LOCATION ON SITE. NOTE: THAT AN EXISTING TANK AND FACILITY EXISTS ON SITE THAT NEEDS TO BE EVALUATED AND DEALT WITH AS APPROPRIATE AND REMOVED. ANY PAST LEAKAGE AROUND THE UNIT SHALL BE MITIGATED AS DIRECTED BY THE PROJECT GEOTECHNICAL ENGINEER.
- ARRANGE TO CONSTRUCT ONE FIRE HYDRANT AND A METERED HOSE BIB WITH REQUIRED BACKFLOW PREVENTION ON SITE TO BE USED FOR LANDFILL CLOSURE ACTIVITY. ARRANGE AS REQUIRED WITH SILVER LAKE WATER DISTRICT. NOTE: THIS SERVICE IS TO BE USED FOR FILLING WATER TRUCKS, DUST CONTROL AND OTHER LANDFILL CLOSURE NEEDS.
  - FOR THE AREAS OUTSIDE THE DOCUMENTED LANDFILL AREA, A "LOT EXPLORATION PLAN" HAS BEEN PREPARED TO COMPLY WITH THE REQUIREMENTS SPELLED OUT IN SECTION 3.3 OF THE LFCP. THE PURPOSE OF THIS PLAN IS TO CONFIRM THERE IS NO WASTE LYING OR BURIED WITHIN ANY LOT AREAS. (SEE PLAN DESCRIBED ON LOWER LEFT OF THIS SHEET.)
- MOVE IN AND ESTABLISH ON-SITE JOB TRAILER TO HOUSE WEEKLY COORDINATION MEETINGS WITH OWNER, CONTRACTOR, COUNTY AND SNOHOMISH HEALTH DISTRICT. MAINTAIN PERMIT DOCUMENTS, LFCP, AND MEETING MINUTES ON SITE IN JOB TRAILER.
  - ANY AREAS WITHIN THE LANDFILL AREA THAT IS NOT COVERED WITH A MINIMUM OF 6-INCH OF SAND COVER (SUBGRADE FOR THE GEOMEMBRANE) SHALL BE COVERED WITH REINFORCED PLASTIC (GRIFOLYN TX 1200 OR EQUAL) AND ANCHORED DOWN TO PREVENT WIND FROM BLOWING THE REINFORCED PLASTIC AT THE END OF EACH DAY. EXPOSED AREAS BEING WORKED EACH DAY IS LIMITED TO ONE ACRE IN SIZE. MAINTAIN THE REINFORCED PLASTIC SHEETING COVERS ON ANY AREA BEING WORKED THAT IS OVER ONE ACRE IN SIZE. SPRINKLE EXPOSED AREAS BEING WORKED WITH ON-SITE SOURCE OF WATER.
- IMPLEMENT A NOISE CONTROL PLAN (NCP) AS DESCRIBED BELOW:
  - MEASURING NOISE LEVELS AT THE PROPERTY BOUNDARY TO DETERMINE THE ACTUAL EFFECTS OF THE CONSTRUCTION EQUIPMENT AND OPERATING SCHEDULE IF COMPLAINTS ARE RECEIVED.
  - USING EQUIPMENT SUITABLE FOR THE JOB THAT ISNT OVER OR UNDER POWERED.
  - WHENEVER POSSIBLE, USING THE QUIETEST EQUIPMENT ALTERNATIVE.
  - SCHEDULING LOUDER OR IMPULSIVE NOISE SOURCES DURING MID-DAY HOURS ONLY.
  - LOCATING EQUIPMENT TO POSITION PROMINENT NOISE SOURCES AWAY FROM THE PROPERTY BOUNDARY TO THE EXTENT PRACTICAL.
  - LIMITING THE USE OF BACK UP BEEPERS THROUGH TRUCK/EQUIPMENT ROUTING OR THE USE OF FLAGMEN.
  - USING A SOUND LEVEL METER TO DETERMINE IF THE PROJECT NOISE LEVELS (FOR THE LANDFILL CLOSURE ACTIVITIES) ARE APPROACHING LIMITS, IF CONSTRUCTION ACTIVITIES NEED TO BE PERFORMED IN CLOSE PROXIMITY TO RESIDENCES.
  - USING BEST MANAGEMENT PRACTICES SUCH AS ENHANCED MUFFLER SYSTEMS AND SOUND BARRIERS TO PREVENT EXCEEDANCES IF CONSTRUCTION NOISE IS APPROACHING UNACCEPTABLE LEVELS.
- AS ADDITIONAL MITIGATION ENFORCE REDUCED VEHICLE SPEED REQUIREMENTS OF 15 MPH, AND HIGH WIND SPEED CLOSURES, REQUIREMENTS DURING HANDING AND RELOCATING THE LANDFILL MATERIALS. THE CONSTRUCTION MANAGER SHALL PROVIDE TRAINING AND REGULAR DEBRIEFINGS FROM CREWS ON THE IMPORTANCE OF IMPLEMENTING AND MAINTAINING FUGITIVE DUST CONTROL MEASURES. THIS INCLUDES THE IMPORTANCE OF ONGOING OBSERVATIONS TO DETERMINE IF CONDITIONS HAVE DETERIORATED OR A MITIGATION MEASURES IS INEFFECTIVE OR NOT BEING USED PROPERLY. ONSITE WORKERS SHOULD CONDUCT A DAILY INSPECTION TO ENSURE THAT MITIGATION MEASURES ARE REMAINING EFFECTIVE AND THAT THERE ARE NO AREAS OF INADEQUATE DUST CONTROL. MAINTAIN BEST MANAGEMENT PRACTICES RELATED DUST CONTROL. DUST CONTROL DURING THE LANDFILL CLOSURE PLAN ACTIVITY SHALL COMPLY WITH BMP'S AS CONTAINED IN 2019 STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON AND BMP S407 DUST CONTROL AT DISTURBED LAND AREAS AND UNPAVED ROADWAYS AND PARKING LOTS.
  - CONDUCT TREE REMOVAL AND CLEARING OF THE AREAS OF THE SITE BEING GRADED.
  - CONSTRUCT TESCP FACILITIES INCLUDING DITCHES AND CHECK DAMS, SILT FENCING ETC. AS NEEDED.
  - INSTALL STREAM DIVERSION PIPE AT DEPTH AND LOCATION TO PREVENT CONFLICT OR CONTAMINATION TO THE STREAM WATERS.
  - GRADE AND STOCKPILE ANY USABLE TOP SOIL AND PROTECT WITH COVERING WITH R/F PLASTIC SHEETING ANCHORED DOWN. STOCK PILE IN AREA TO NOT BE DISTURBED BY LANDFILL CLOSURE ACTIVITY.
  - REMOVE ANY LANDFILL COVER MATERIAL THAT MAY EXIST LYING BELOW THE TOP SOIL AND ABOVE THE LANDFILL MATERIAL AND STOCKPILE AND PROTECT BY COVERING. THIS MATERIAL WILL BE REUSED FOR BEDDING UNDER THE GEOMEMBRANE OR OVER THE TOP OF THE GEOMEMBRANE.
  - NOT USED.
  - CONDUCT THE REQUIRED DYNAMIC COMPACTION FOR THE AREA OF THE DETENTION POND.
  - PROOF ROLL AND CONDUCT FINAL COMPACTION OF THE DETENTION POND AND STORM LINE AND GRADE THE DETENTION POND AREA TO FINAL SUBGRADE ELEVATION.
  - PLACE 6-INCH SAND BEDDING LAYER AND COMPACT UNDER THE POND AREA AND MAKE READY FOR THE INITIAL GEOMEMBRANE FOR THE POND. PLACE THE GEOMEMBRANE AS RECOMMENDED BY GEOTECHNICAL ENGINEER AND MANUFACTURERS REQUIREMENTS.
  - PLACE/INSTALL A TEMPORARY OUTLET PIPE FROM THE POND DOWN THE NORTHEAST SLOPE TO THE TOE AND ANCHOR AS REQUIRED. PLACE OUTLET TO PREVENT EROSION AT THE TOE OF THE SLOPE.
  - PROCEED WITH RELOCATING THE LANDFILL MATERIAL IN THE "WEDGE" AREA AN NO CLOSER THAN 6 FEET TO RESIDENTIAL LOT LINE PLACING REGRADED LANDFILL MATERIAL IN COMPACTED LIFTS AS REQUIRED. PROOF ROLL ANY AREAS TO ACCEPT LANDFILL MATERIALS PRIOR TO PLACING MATERIAL OVER THEM. COMPLY WITH THE PROJECT GEOTECHNICAL ENGINEER'S DIRECTION AND PROJECT REPORT DIRECTING THIS WORK.
  - GRADE THE SITE WITH CUT/FILLS FOR THE ENTIRE AREA AS REQUIRED AND SHOWN ON THE PLANS TO ACHIEVE FINAL GRADES, COVER MATERIAL, FILL WEDGE AREA, ETC. AS REQUIRED.
  - GRADE AND ESTABLISH NEW STREAM CORRIDOR AS SHOWN ON WETLAND RESOURCES DRAWINGS AND REQUIRED BY PROJECT HPA. ONCE NEW STREAM CHANNEL IS STABILIZED, DIRECT STREAM WATER INTO NEW CHANNEL AND MAINTAIN UNTIL STABLE.
  - COMPLY WITH THE LANDFILL CLOSURE PLAN AND APPROVED PROJECT PLANS AND SPECIFICATIONS. A LIST OF APPLICABLE SPECIFICATIONS IS PROVIDED ON SHEET 14.
  - PROVIDE FINAL LANDSCAPING TO COVER ALL DISTURBED AREAS AND MAINTAIN TEMPORARY EROSION CONTROL UNTIL SUITABLE RE-VEGETATION HAS OCCURRED.
  - PREPARE FINAL GEOTECHNICAL REPORT DEMONSTRATING COMPLIANCE WITH GEOTECHNICAL ASPECTS OF THE LANDFILL CLOSURE PLAN, AND GEO-ENGINEERS' PLAN REVIEW RECOMMENDATIONS INCLUDED IN THEIR APRIL 17, 2019 LETTER.

3



**GO EAST LANDFILL CLOSURE**  
NOTES

SCALE: AS NOTED	DATE: 7/20/2020
DESIGNED BY: SC	CHECKED BY: MP
JOB NUMBER: P09382.00	
DWG NAME: P09382_GN-DET	
SHEET 9 OF 25	

**Snohomish County Planning Development Services**  
**APPROVED FOR CONSTRUCTION**  
By: \_\_\_\_\_  
R/W Permit No. \_\_\_\_\_  
Date: \_\_\_\_\_

FILE NAME: P:\P09382.00 GO EAST\LANDFILL CLOSURE\2018\P09382\_GN-DET.DWG  
SAVE TIME: 8/27/2020 7:39:00 AM  
PLOT TIME: 8/27/2020 7:39:00 AM  
VIEW: P09382





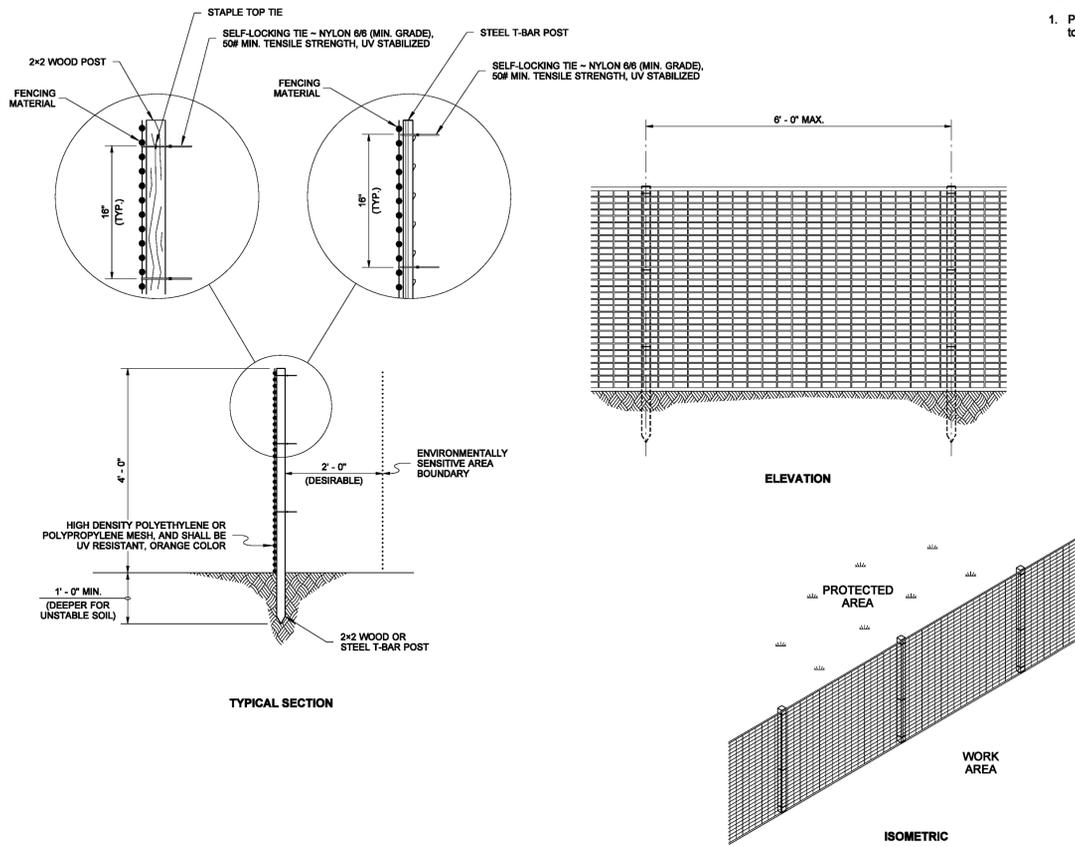








DRAWN BY: BILL BERENS



**NOTE**  
1. Post shall have sufficient strength and durability to support the fence through the life of the project.

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT  
**MARK W. MAURER**  
CERTIFICATE NO. 000698

NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT. THE ORIGINAL, SIGNED BY THE ENGINEER AND APPROVED FOR PUBLICATION, IS KEPT ON FILE AT THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION. A COPY MAY BE OBTAINED UPON REQUEST.

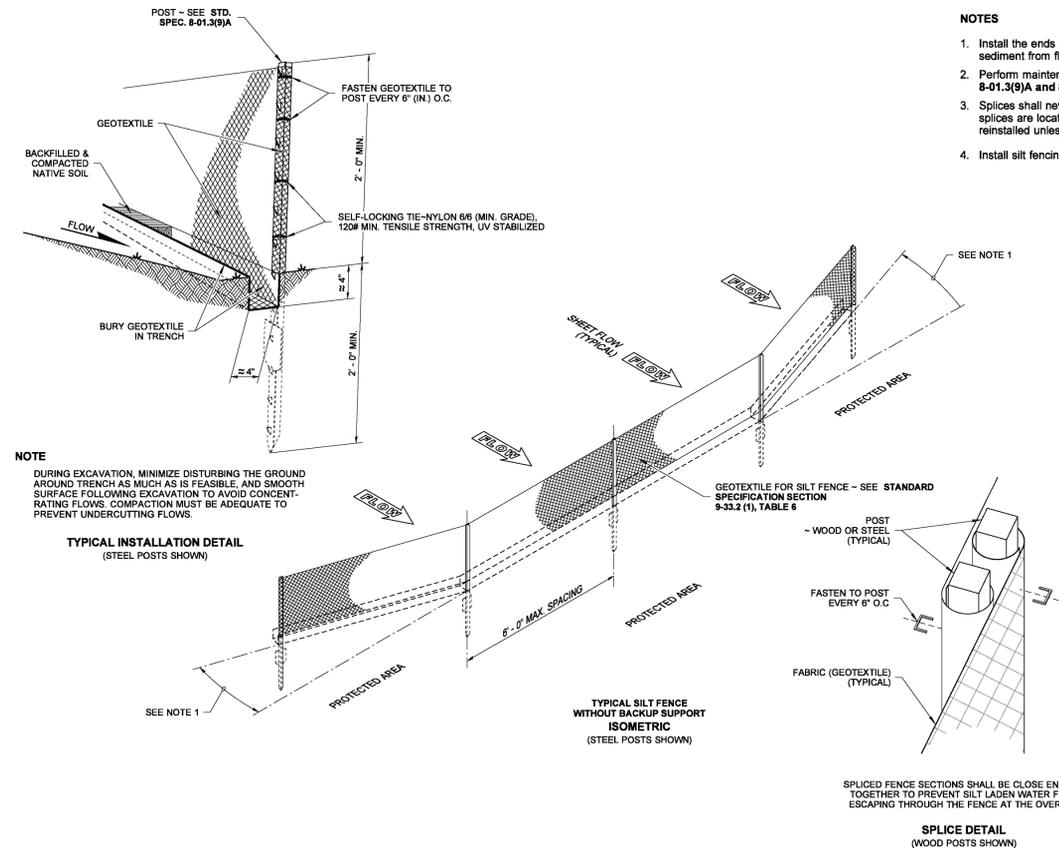
**HIGH VISIBILITY FENCE**  
**STANDARD PLAN I-10-10-01**  
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION  
**Pasco Bakotich III** 08-11-09  
STATE DESIGN ENGINEER DATE  
Washington State Department of Transportation

**HIGH VISIBILITY FENCE**  
N.T.S.

1

DRAWN BY: BILL BERENS



**NOTES**  
1. Install the ends of the silt fence to point slightly upslope to prevent sediment from flowing around the ends of the fence.  
2. Perform maintenance in accordance with **Standard Specifications 8-01.3(9A) and 8-01.3(15)**.  
3. Splices shall never be placed in low spots or sump locations. If splices are located in low or sump areas, the fence may need to be reinstalled unless the Project Engineer approves the installation.  
4. Install silt fencing parallel to mapped contour lines.

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT  
**SANDRA L. SALISBURY**  
CERTIFICATE NO. 000860

NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT. THE ORIGINAL, SIGNED BY THE ENGINEER AND APPROVED FOR PUBLICATION, IS KEPT ON FILE AT THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION. A COPY MAY BE OBTAINED UPON REQUEST.

**SILT FENCE**  
**STANDARD PLAN I-30-15-02**  
SHEET 1 OF 1 SHEET

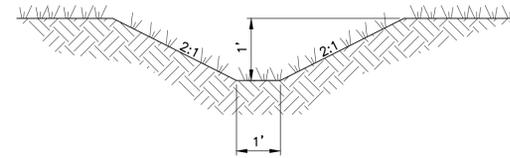
APPROVED FOR PUBLICATION  
**Pasco Bakotich III** 3/22/13  
STATE DESIGN ENGINEER DATE  
Washington State Department of Transportation

**SILT FENCE**  
N.T.S.

3

**TESC CONSTRUCTION SEQUENCE**

- SCHEDULE AND ATTEND PRECONSTRUCTION CONFERENCE WITH SNOHOMISH COUNTY EDDS.
- INSTALL FENCE TO MARK THE CLEARING LIMITS.
- INSTALL HIGH VISIBILITY STORM DRAIN INLET PROTECTION AT EXISTING CATCH BASINS.
- INSTALL TEMPORARY CONSTRUCTION ENTRANCE.
- INSTALL POND. THE POND SHALL BE USED AS A TEMPORARY SEDIMENT POND DURING CONSTRUCTION. AFTER THE SITE IS STABILIZED SEDIMENT IN THE BOTTOM OF THE POND SHALL BE VACTORED OUT TO NOT DISTURB GEOMEMBRANE LAYER.
- COMMENCING WITH THE FILLING AND GRADING OF THE SITE, AND THE CONSTRUCTION OF THE SITE UTILITIES AS ALLOWED BY THE LDA FOR THE LANDFILL CLOSURE PLAN. CONTRACTOR MAY ADJUST LOCATION OF TEMPORARY FACILITIES AS NEEDED TO FACILITATE CONSTRUCTION.
- INSTALL BYPASS STORM DRAIN LINE BEFORE REMOVING EXISTING STORM DRAINAGE ON SITE.
- FOR AREAS OUTSIDE THE LANDFILL AREA, 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.
- FOR ALL AREAS INSIDE THE LANDFILL LIMITS, MAXIMUM SIZE OF AREA BEING WORKED AT ANY ONE TIME IS LIMITED TO 1 ACRE IN SIZE. THIS AREA IS TO BE COVERED AT NIGHT WITH PLASTIC SHEETING AND ANCHORED DOWN. MAINTAIN ADEQUATE COVER FOR ALL OTHER AREAS NOT BEING WORKED ON.
- PROVIDE STREET SWEEPING AS NECESSARY TO KEEP PUBLIC ROADWAYS FREE OF SEDIMENT.
- UPON COMPLETION OF THE PROJECT, STABILIZE ALL DISTURBED AREAS AND REMOVE BMPs AS APPROPRIATE.



**TRAPEZOIDAL INTERCEPTOR SWALE**  
N.T.S.

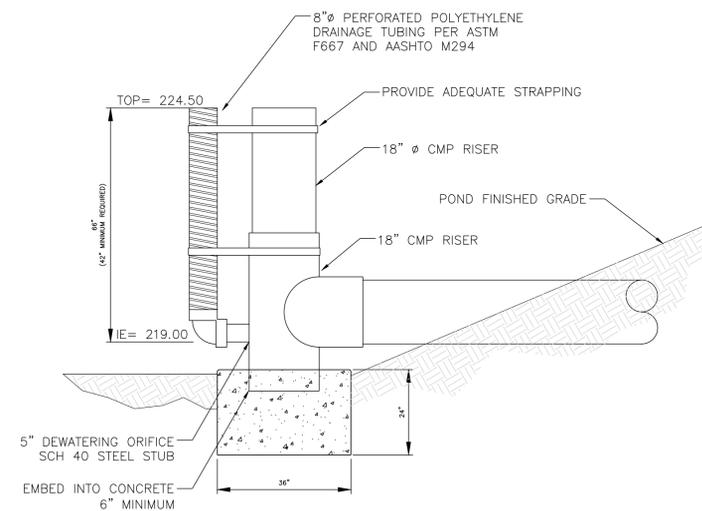
2

**EROSION AND SEDIMENT CONTROL NOTES**

- 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.).
- 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.
- THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY SURVEY TAPE OR FENCING PRIOR TO CONSTRUCTION. 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.
- 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, FLOW CONTROL BMP LOCATIONS (EXISTING AND PROPOSED), AND ADJACENT PROPERTIES IS MINIMIZED.
- 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 SNOHOMISH COUNTY.
- 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.
- ANY AREAS OF EXPOSED SOILS 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.).
- ANY AREA NEEDING ESC MEASURES THAT DO NOT REQUIRE IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.
- THE ESC FACILITIES ON 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.
- 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.
- STABILIZED CONSTRUCTION ENTRANCE SHALL BE ESTABLISHED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT. INSTALL WHEEL WASH TO THE GRAVEL CONSTRUCTION ENTRANCE TO KEEP STREET CLEAN IF NEEDED.
- WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF 2 INCHES.
- ALL EXPOSED AND UNWORKED SOILS SHALL BE STABILIZED THROUGH THE APPLICATION OF BMPs PURSUANT TO THE 2016 SNOHOMISH COUNTY DRAINAGE MANUAL.
- PRIOR TO THE BEGINNING OF THE WET SEASON (OCT. 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON.

4

**TEMPORARY FLOW CONTROL STRUCTURE**  
N.T.S.



**CALL BEFORE YOU DIG 811**  
UNDERGROUND SERVICE (USA)

**VERIFY SCALE**  
BAR IS ONE INCH ON ORIGINAL DRAWING.  
0 1 1"  
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

**Snohomish County Planning Development Services**  
**APPROVED FOR CONSTRUCTION**

By: \_\_\_\_\_  
R/W Permit No. \_\_\_\_\_  
Date: \_\_\_\_\_

**PACE**  
An Engineering Services Company  
11255 Kirkland Way, Suite 300  
Kirkland, WA 98033  
p. 425.827.2014 | f. 425.827.9043  
Civil | Structural | Planning | Survey  
paceengr.com

STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER  
MARK W. MAURER  
CERTIFICATE NO. 000698

NO.	REVISIONS TO POND COMPACTION SPECIFICATIONS	DATE
1 <td>REVISED GRADING</td> <td>12/05/13</td>	REVISED GRADING	12/05/13
2 <td>REVISED GRADING</td> <td>12/05/13</td>	REVISED GRADING	12/05/13
3 <td>REVISED GRADING</td> <td>12/05/13</td>	REVISED GRADING	12/05/13
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19 <td>REVISED GRADING</td> <td>12/05/13</td>	REVISED GRADING	12/05/13
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21 <td>REVISED GRADING</td> <td>12/05/13</td>	REVISED GRADING	12/05/13
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24 <td>REVISED GRADING</td> <td>12/05/13</td>	REVISED GRADING	12/05/13
25 <td>REVISED GRADING</td> <td>12/05/13</td>	REVISED GRADING	12/05/13

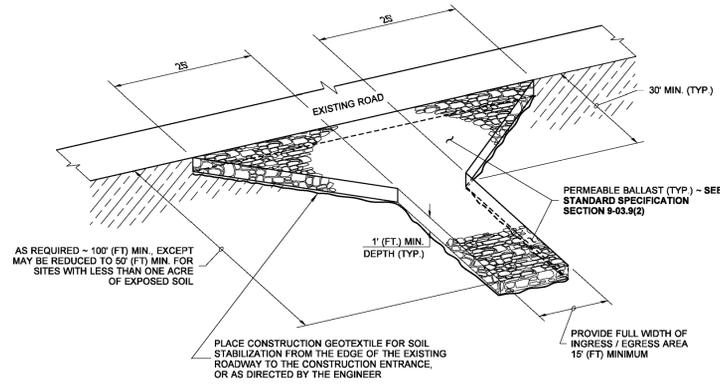
**GO EAST LANDFILL CLOSURE**

TEMPORARY EROSION & SEDIMENT CONTROL DETAILS

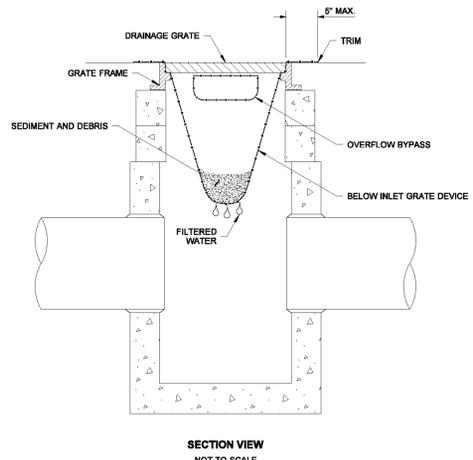
SCALE: AS NOTED DATE: 7/20/2020  
DESIGNED BY: SC CHECKED BY: MP  
JOB NUMBER: P09382.00  
DWG NAME: P09382\_TESC  
SHEET 16 OF 25

FILE NAME: P:\P09382\_00\_GO\_EAST\CAD\FIGURES\LANDFILL\_CLOSURE\2018\P09382\_TESC.DWG  
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PLOT TIME: 7/21/2020 4:57:37 PM  
XREF FILES: PACE.XXD

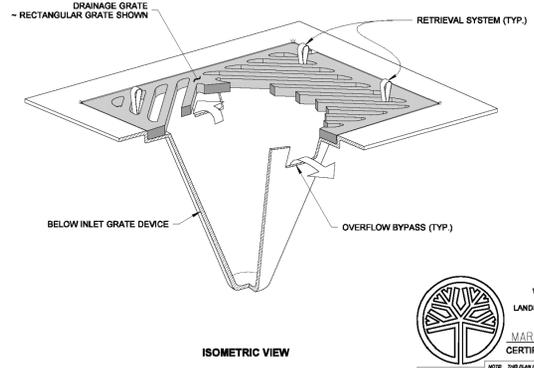
- NOTES**
1. Size the Below Inlet Gate Device (BIGD) for the storm water structure it will service.
  2. The BIGD shall have a built-in high-flow relief system (overflow bypass).
  3. The retrieval system must allow removal of the BIGD without spilling the collected material.
  4. Perform maintenance in accordance with Standard Specification 8-01.3(15).



**ISOMETRIC VIEW**  
**STABILIZED CONSTRUCTION ENTRANCE**  
STABILIZED CONSTRUCTION ENTRANCE SHALL MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 8-01.3(7).



**SECTION VIEW**  
NOT TO SCALE

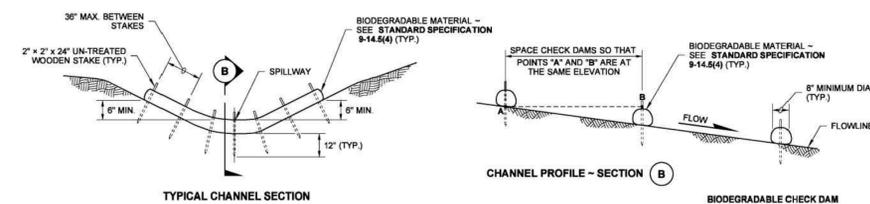


**ISOMETRIC VIEW**

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT  
**MARK W. MAJUR**  
 CERTIFICATE NO. 000596  
 11255 Kirkland Way, Suite 300  
 Kirkland, WA 98033  
 p. 425.827.2014 f. 425.827.9043  
 Civil | Structural | Planning | Survey  
 pacengrs.com

**STORM DRAIN INLET PROTECTION**  
**STANDARD PLAN 1-40.20-00**  
 SHEET 1 OF 1 SHEET  
 APPROVED FOR PUBLICATION  
**Pasco Bakotich III** 09-20-07  
 STATE DESIGN ENGINEER  
 Washington State Department of Transportation

**1 GRAVEL CONSTRUCTION ENTRANCE**  
N.T.S.

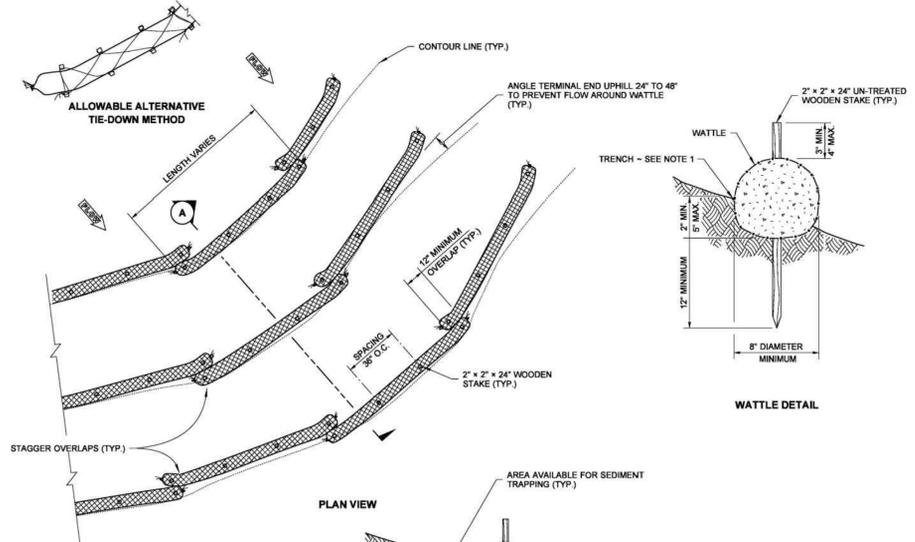


**BIODEGRADABLE CHECK DAM**

**BIODEGRADABLE CHECK DAM NOTE**  
 1. Biodegradable Check Dams may need additional or modified staking to prevent undercutting or scouring.

- GENERAL NOTES**
1. Check Dams shall meet the requirements of Standard Specifications 8-01.3(6) and 9-14.5(4).
  2. In channels, install the sloped ends of the Check Dam a minimum of 8" higher than the spillway to ensure water flows over the dam and not around it.
  3. Perform maintenance in accordance with Standard Specification 8-01.3(15).
  4. Remove Check Dams in accordance with Standard Specification 8-01.3(16).

**2 CATCH BASIN INSERT**  
N.T.S.



**PLAN VIEW**

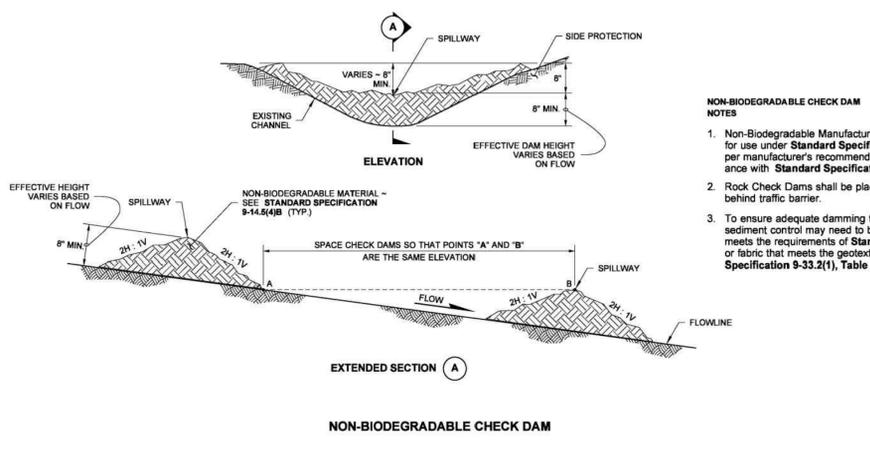
**WATTLE DETAIL**

- NOTES**
1. Wattles shall be in accordance with Standard Specification 9-14.5(5). Install Wattles along contours. Installation shall be in accordance with Standard Specification 8-01.3(10).
  2. Securely knot each end of Wattle. Overlap adjacent Wattle ends 12" behind one another and securely tie together.
  3. Compact excavated soil and trenches to prevent undercutting. Additional staking may be necessary to prevent undercutting.
  4. Install Wattle perpendicular to flow along contours.
  5. Wattles shall be inspected regularly, and immediately after a rainfall produces runoff, to ensure they remain thoroughly entrenched and in contact with the soil.
  6. Perform maintenance in accordance with Standard Specification 8-01.3(15).
  7. Refer to Standard Specification 8-01.3(16) for removal.

**8" DIAMETER WATTLE SPACING TABLE**

SLOPE	MAXIMUM SPACING
1H : 1V	10' - 0"
2H : 1V	20' - 0"
3H : 1V	30' - 0"
4H : 1V	40' - 0"

**4 WATTLE INSTALLATION ON SLOPE**  
N.T.S.



**NON-BIODEGRADABLE CHECK DAM**

- NON-BIODEGRADABLE CHECK DAM NOTES**
1. Non-Biodegradable Manufactured Check Dam devices approved for use under Standard Specification 9-14.5(4) shall be installed per manufacturer's recommendations and shall perform in accordance with Standard Specification 8-01.3(6).
  2. Rock Check Dams shall be placed outside of the clear zone or behind traffic barrier.
  3. To ensure adequate damming time, Rock Check Dams used as sediment control may need to be enhanced with plastic that meets the requirements of Standard Specification 9-14.5(3) or fabric that meets the geotextile requirements of Standard Specification 9-33.2(1), Table 6.

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT  
**Sandra L. Salsbury**  
 SANDRA L. SALSUBURY  
 LICENSE NO. 860  
 DATE: June 9, 2013

**CHECK DAMS ON CHANNELS**  
**STANDARD PLAN 1-50.20-01**  
 SHEET 1 OF 1 SHEET  
 APPROVED FOR PUBLICATION  
**Pasco Bakotich III** 6/10/13  
 STATE DESIGN ENGINEER  
 Washington State Department of Transportation

**3 CHECK DAMS ON CHANNELS**  
N.T.S.

**CALL BEFORE YOU DIG 811**  
 UNDERGROUND SERVICE (USA)

**VERIFY SCALE**  
 BAR IS ONE INCH ON ORIGINAL DRAWING.  
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

**Snohomish County Planning Development Services**  
 APPROVED FOR CONSTRUCTION  
 By: \_\_\_\_\_  
 R/W Permit No. \_\_\_\_\_  
 Date: \_\_\_\_\_

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT  
**Sandra L. Salsbury**  
 SANDRA L. SALSUBURY  
 LICENSE NO. 860  
 DATE: June 10, 2013

**WATTLE INSTALLATION ON SLOPE**  
**STANDARD PLAN 1-30.30-01**  
 SHEET 1 OF 1 SHEET  
 APPROVED FOR PUBLICATION  
**Pasco Bakotich III** 6/10/13  
 STATE DESIGN ENGINEER  
 Washington State Department of Transportation

FILE NAME: P:\P09382\00\_GO\_EAST\CAD\FIGURES\LANDFILL\_CLOSURE\2018\P09382\_TESC.DWG  
 SAVE TIME: 7/21/2020 4:44:20 PM  
 PLOT TIME: 7/21/2020 4:57:17 PM  
 XREF FILES: PACE.XXD

NO.	REVISIONS TO POND COMPACTION SPECIFICATIONS	DATE
1 <td>REVISED PER COUNTY REVIEW</td> <td>1/26/18</td>	REVISED PER COUNTY REVIEW	1/26/18
2	REVISED FOR QUALITY ASSURANCE	10/3/2019
3	REVISED FOR AGENCY FINAL REVIEW	4/2/2020
4	REVISIONS TO POND COMPACTION SPECIFICATIONS	7/20/2020

**GO EAST LANDFILL CLOSURE**

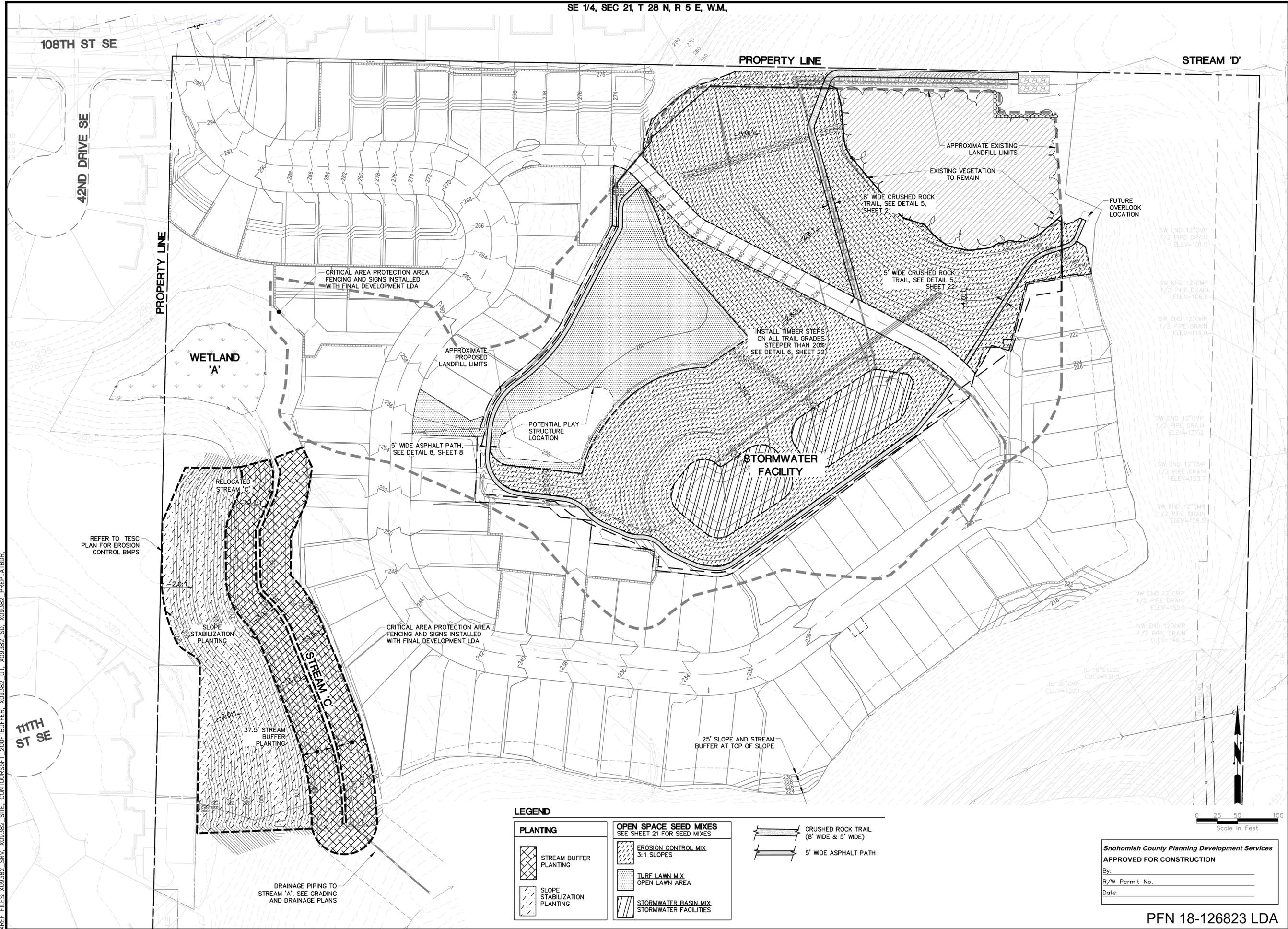
TEMPORARY EROSION & SEDIMENT CONTROL DETAILS

SCALE: AS NOTED DATE: 7/20/2020  
 DESIGNED BY: SC CHECKED BY: MP  
 JOB NUMBER: P09382.00  
 DWG NAME: P09382\_TESC  
 SHEET 17 OF 25









FILE NAME: P:\P09\09382\00\_GO EAST\CAD\FIGURES\SHEETS\LANDFILL\_CLOSURE (2018)\P09382\_LANDSCAPE.DWG  
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**LEGEND**

<p><b>PLANTING</b></p> <p>[Cross-hatch pattern] STREAM BUFFER PLANTING</p> <p>[Diagonal lines pattern] SLOPE STABILIZATION PLANTING</p>		<p><b>OPEN SPACE SEED MIXES</b> SEE SHEET 21 FOR SEED MIXES</p> <p>[Dotted pattern] EROSION CONTROL MIX 3:1 SLOPES</p> <p>[Horizontal lines pattern] TURF LAWN MIX OPEN LAWN AREA</p> <p>[Vertical lines pattern] STORMWATER BASIN MIX STORMWATER FACILITIES</p>		<p>[Hatched pattern] CRUSHED ROCK TRAIL (8' WIDE &amp; 5' WIDE)</p> <p>[Dashed line] 5' WIDE ASPHALT PATH</p>	
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**Snohomish County Planning Development Services**  
**APPROVED FOR CONSTRUCTION**

By: \_\_\_\_\_  
 R/W Permit No. \_\_\_\_\_  
 Date: \_\_\_\_\_

REVISIONS TO COMPACTIO SPECIFICATIONS	7/20/2020
REVISIONS FOR AGENCY FINAL REVIEW COMMENTS	4/2/2020
REVISED FOR QUALITY ASSURANCE	10/3/2019
REVISED PER COUNTY REVIEW	4/17/2019
REVISED GRADING	1/26/18
REVISED GRADING	12/05/13
SYM	DATE

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 11255 Kirkland Way, Suite 300  
 Kirkland, WA 98033  
 p. 425.827.2014 | f. 425.827.9043  
 Civil | Structural | Planning | Survey  
 paceengr.com

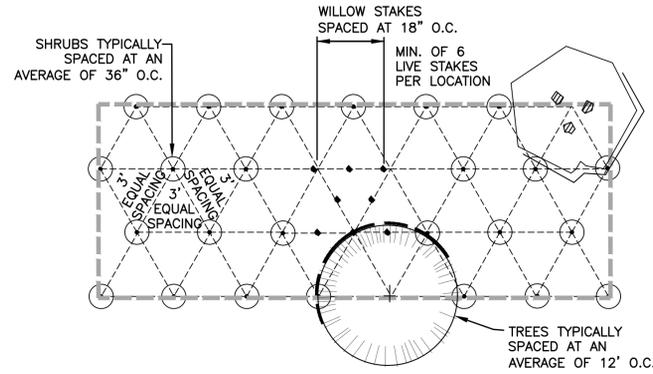
**GO EAST**  
**LANDFILL CLOSURE**  
**LANDSCAPE PLAN**

SCALE: AS SHOWN DATE: 7/20/2020  
 DESIGNED BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_

JOB NUMBER: P09382.00  
 DWG NAME: P09382\_LANDSCAPE  
 SHEET **21** OF **25**

**NATIVE PLANTING AT STREAM BUFFER (38,000 SF)**  
108 SHRUBS & 7 TREES PER 1,000 SF

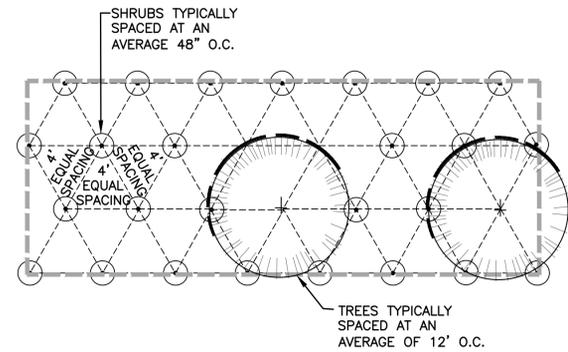
PLANT SCHEDULE				
BOTANICAL NAME / COMMON NAME	SIZE	SPACING	%	QTY
<b>TREES</b>				
ACER MACROPHYLLUM / BIG LEAF MAPLE	1 GAL.	12' O.C.	20	53
FRAXINUS LATIFOLIA / OREGON ASH	1 GAL.	12' O.C.	20	53
PSEUDOTSUGA MENZIESII / DOUG FIR	1 GAL.	12' O.C.	20	53
THUJA PLICATA / WESTERN RED CEDAR	1 GAL.	12' O.C.	20	53
SALIX LASIANDRA / PACIFIC WILLOW	1 GAL.	12' O.C.	20	54
<b>SHRUBS</b>				
CORNUS SERICEA / RED-OSIER DOGWOOD	1 GAL.	36" O.C.	15	616
HOLIDISCUS DISCOLOR / OCEANSPRAY	1 GAL.	36" O.C.	10	410
RUBUS PARVIFLORUS / THIMBLEBERRY	1 GAL.	36" O.C.	15	616
SYMPHORICARPOS ALBUS / SNOWBERRY	1 GAL.	36" O.C.	30	1231
ROSA PISOCARPA / CLUSTERED ROSE	1 GAL.	36" O.C.	30	1231
<b>TOPSOIL AND AMENDMENTS</b>				
FINE COMPOST				
BARK OR WOOD CHIP MULCH				



**1 TYPICAL LAYOUT - BUFFER PLANTING**  
NTS

**NATIVE PLANTING AT SLOPE STABILIZATION (44,500 SF)**  
67 SHRUBS & 7 TREES PER 1,000 SF

PLANT SCHEDULE				
BOTANICAL NAME / COMMON NAME	SIZE	SPACING	%	QTY
<b>TREES</b>				
ACER MACROPHYLLUM / BIG LEAF MAPLE	1 GAL.	12' O.C.	33	103
PSEUDOTSUGA MENZIESII / DOUG FIR	1 GAL.	12' O.C.	33	103
THUJA PLICATA / WESTERN RED CEDAR	1 GAL.	12' O.C.	33	104
<b>SHRUBS</b>				
RIBES SANGUINEUM / RED CURRANT	1 GAL.	48" O.C.	15	447
MYRICA CALIFORNICA / WAX MYRTLE	1 GAL.	48" O.C.	15	447
RUBUS PARVIFLORUS / THIMBLEBERRY	1 GAL.	48" O.C.	15	447
SYMPHORICARPOS ALBUS / SNOWBERRY	1 GAL.	48" O.C.	25	746
SAMBUCUS RACEMOSA / RED ELDERBERRY	1 GAL.	48" O.C.	5	150
ROSA NUTKANANA / NOOTKA ROSE	1 GAL.	48" O.C.	25	746
<b>TOPSOIL AND AMENDMENTS</b>				
FINE COMPOST				
BARK OR WOOD CHIP MULCH				



**2 TYPICAL LAYOUT - SLOPE STABILIZATION**  
NTS

**OPEN SPACE SEED MIXES**

<b>EROSION CONTROL MIX - 3:1 SLOPES</b>		% (BY WEIGHT)
AGROSTIS OREGONENSIS / OREGON BENTGRASS		40
FESTUCA RUBRA / RED FESCUE		40
TRIFOLIUM REPENS / WHITE DUTCH CLOVER		20
<b>TURF LAWN MIX - OPEN LAWN AREA</b>		% (BY WEIGHT)
FESTUCA ARUNDINACEA VAR / DWARF TALL FESCUE		45
LOLIUM PERENNE VAR. BARCLAY / DWARF PERENNIAL RYE		30
FESTUCA RUBRA / RED FESCUE		20
AGROSTIS TENUIS / COLONIAL BENTGRASS		5
<b>STORMWATER BASIN MIX - STORMWATER FACILITY</b>		% (BY WEIGHT)
FESTUCA ARUNDINACEA / TALL FESCUE		60
AGROSTIS PALUSTRIS / SEASIDE BENTGRASS		15
ALEPOCURUS PRATENSIS / MEADOW FOXTAIL		15
TRIFOLIUM HYBRIDUM / RED FESCUE		5
AGROSTIS ALBA / REDTOP BENTGRASS		5

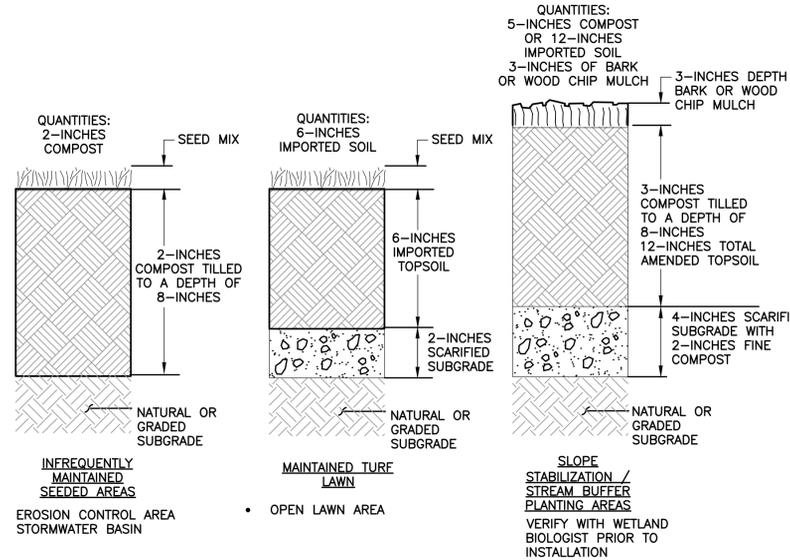
APPLICATION RATE: 120LBS / ACRE

**GENERAL PLANTING NOTES**

- NO IRRIGATION SYSTEM IS PLANNED FOR THIS PROJECT. THE CONTRACTOR WILL BE RESPONSIBLE FOR HAND WATERING PLANTING DURING PLANT ESTABLISHMENT.
- REFER TO CIVIL PLAN FOR PROTECTION AROUND EXISTING TREES TO REMAIN. NO TRENCHING SHALL BE INSTALLED WITHIN TREE PROTECTION AREA UNLESS APPROVED BY OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND HAULING ALL EXTRA DEBRIS AND EXCESS SOIL GENERATED BY THIS PROJECT.
- ALL PLANT SIZES NOTED FOR HEIGHT, SPREAD AND CALIPER ARE MINIMUM REQUIREMENTS.
- ALL PLANTS SHALL CONFORM TO AMERICAN ASSOCIATION OF NURSERYMAN (AAN) GRADES AND STANDARDS AS PUBLISHED IN THE MOST RECENT Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK" MANUAL. TREE CALIPER SHALL BE MEASURED SIX INCHES ABOVE THE ROOT FLARE.

**TOPSOIL, COMPOST AND MULCH**

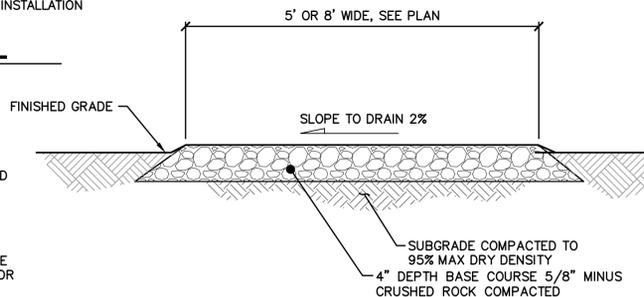
- AMENDED TOPSOIL PER ON-SITE SOIL MANAGEMENT BMP TS.13, ALL SITE SOILS ARE REQUIRED TO BE AMENDED.
- COMPOST SUPPLIED BY CEDAR GROVE, (877) 764-5748, OR APPROVED EQUAL.
- TOPSOIL SHALL BE A 3-WAY (LOAM SOIL, PEAT AND COMPOST) SUPPLIED BY CEDAR GROVE, (877) 764-5748 OR APPROVED EQUAL.
- BARK OR WOOD CHIP MULCH SHALL CONFORM TO WSDOT STD. SPECIFICATION SECTION 9-14.4(3)
- AREAS DISTURBED BY GRADING AND NOT SHOWN AS PLANTING / LAWN AREAS SHALL BE SEEDED.



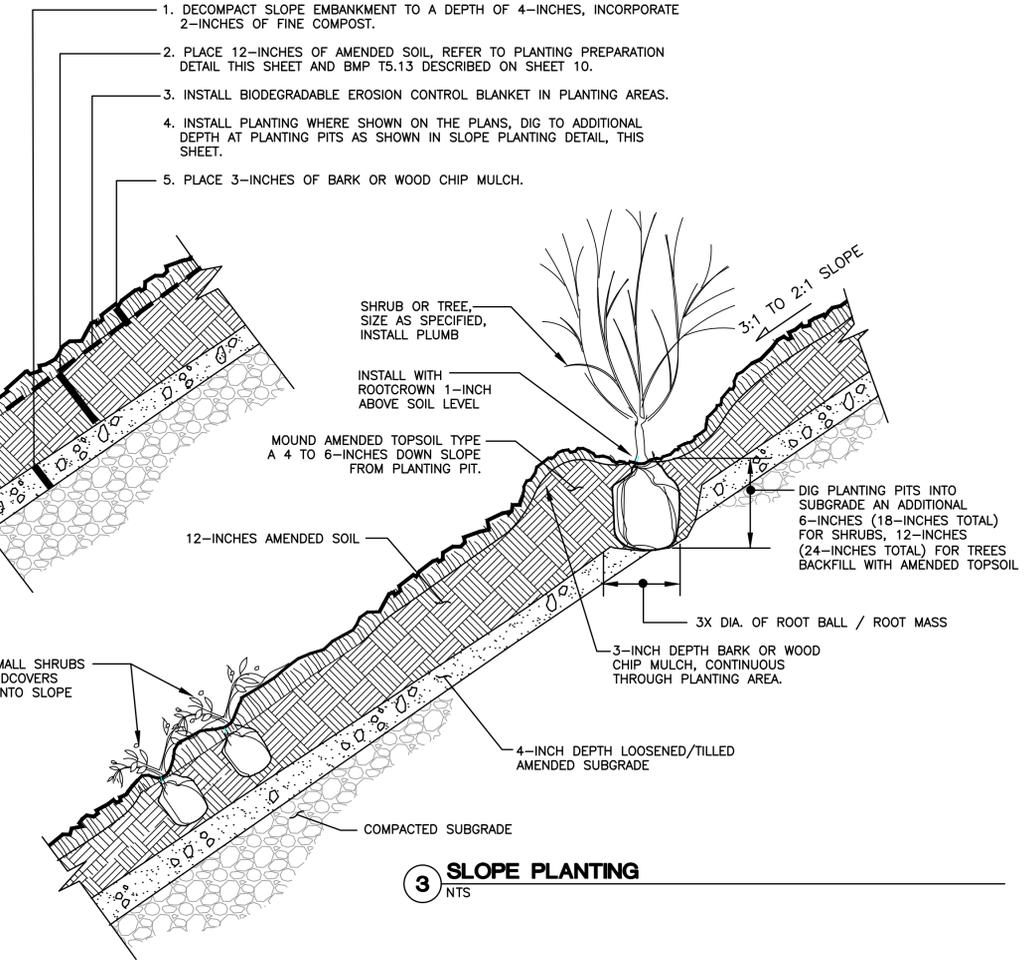
**4 PLANTING PREPARATION DETAIL**  
NTS

**PLANTING PREPARATION NOTES:**

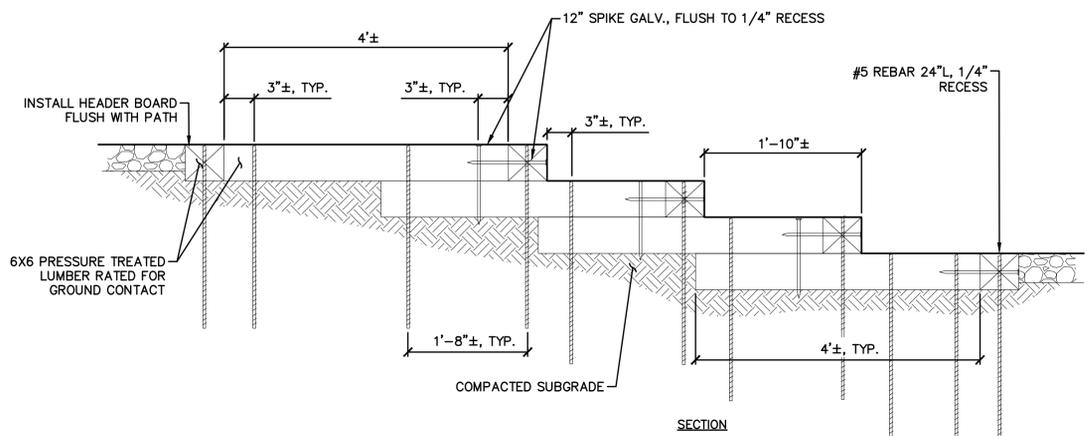
- ALL AMENDED SOIL TO MEET MINIMUM REQUIREMENTS SOIL QUALITY REQUIREMENTS NOTED IN BMP TS.13 - DESIGN REQUIREMENTS, DESCRIBED ON SHEET 10. REQUIREMENTS INCLUDE MINIMUM ORGANIC CONTENT, PH RANGE, COMPOST GUIDELINES AND PLACEMENT REQUIREMENTS. IF THE MINIMUM REQUIREMENTS CANNOT BE MET BY AMENDING EXISTING SOIL, IMPORTED SOIL SHALL BE USED.
- THESE PLANTING PREPARATION NOTES AND DETAILS DO NOT APPLY TO THE STREAM SECTION, REFER TO STREAM DETAILS AND SOIL SPECIFICATIONS FOR THAT PORTION OF WORK.



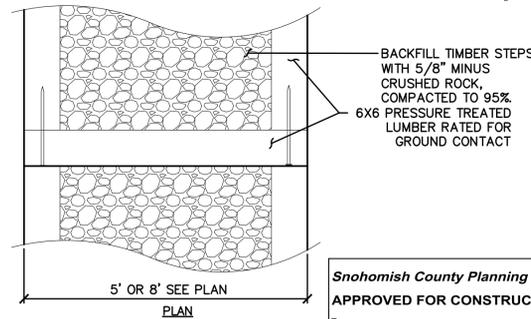
**5 CRUSHED ROCK PATH**  
NTS



**3 SLOPE PLANTING**  
NTS



**6 TIMBER STEPS**  
NTS



**Snohomish County Planning Development Services**  
APPROVED FOR CONSTRUCTION

By: \_\_\_\_\_  
R/W Permit No. \_\_\_\_\_  
Date: \_\_\_\_\_

REVISIONS TO COMPACTON SPECIFICATIONS	7/20/2020
REVISIONS FOR AGENCY FINAL REVIEW COMMENTS	4/2/2020
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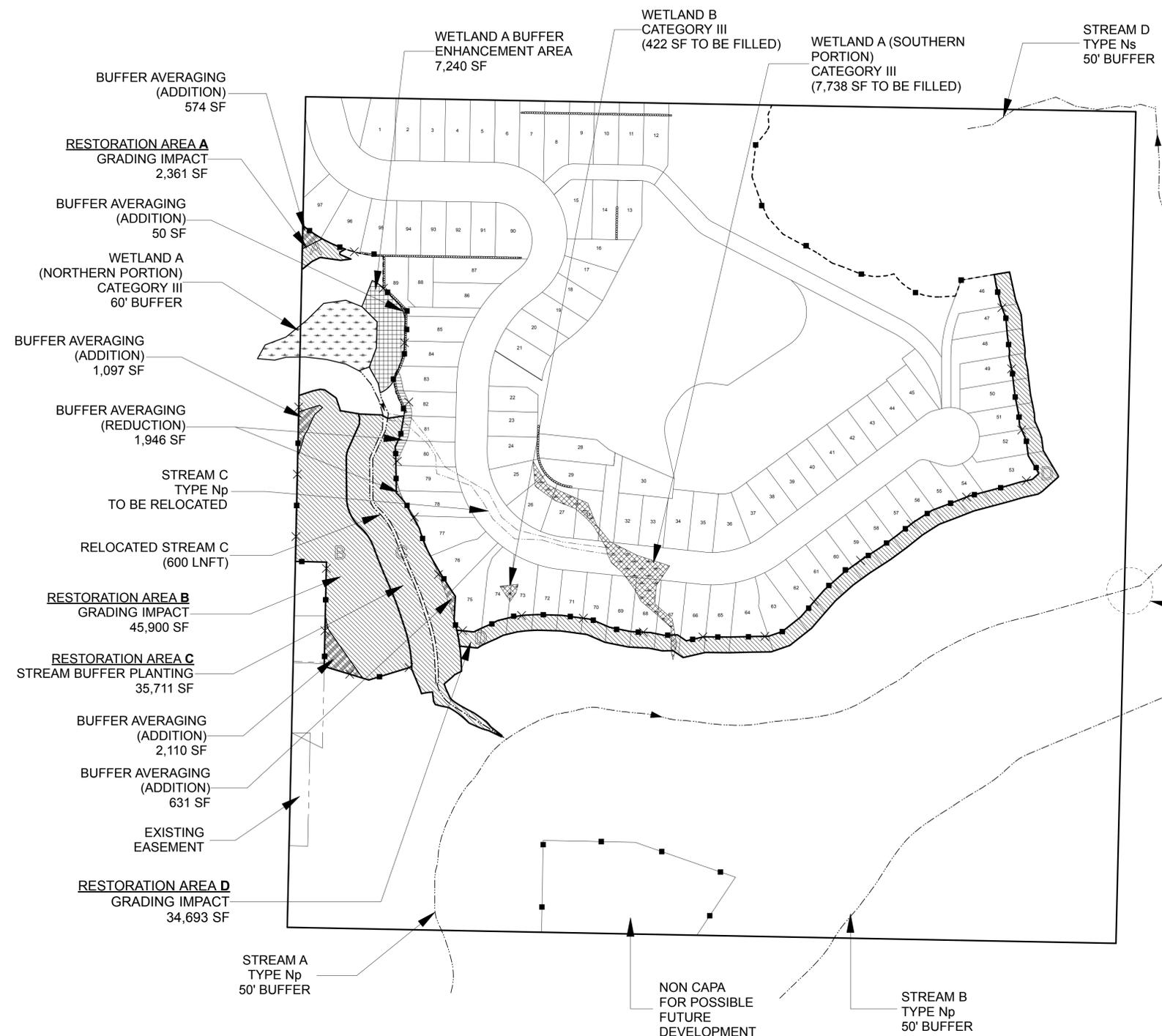


**GO EAST**  
LANDFILL CLOSURE  
LANDSCAPE DETAILS

SCALE: AS SHOWN	DATE: 7/20/2020
DESIGNED BY:	CHECKED BY:
JOB NUMBER: P09382.00	
DWG NAME: P09382_LANDSCAPE	

FILE NAME: P:\P09382.00 GO EAST\LANDFILL CLOSURE (2018)\P09382\_LANDSCAPE.DWG  
SAVE TIME: 7/21/2020 4:51:50 PM  
PLOT TIME: 7/21/2020 4:56 PM  
XREF FILES: X09382\_SIT, X09382\_SITE, CONTOURS5FT, X09382\_UT, X09382\_SD, X09382\_PRELATBDR.

# FINAL MITIGATION PLAN - BAKERVIEW PLAT PORTION OF SECTION 21, TOWNSHIP 28N, RANGE 5E, W.M.



**Introduction**

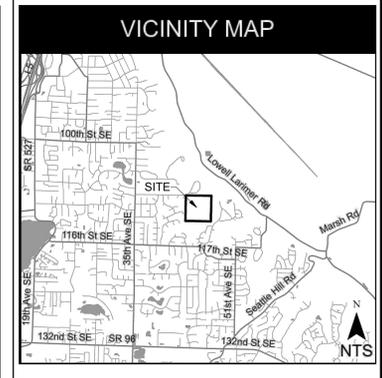
The 41-acre site located at 4330 108th Street SE in Snohomish County, Washington. The property is further located as a portion of Section 21, Township 28N, Range 5E, W.M. On-site critical areas (streams and wetlands) were delineated by Wetland Resources, Inc. on May 4, 2009.

Access to this undeveloped site is from a gravel road that enters the northwest corner via 108th Street SE. From the north this site has a general southeast aspect to a steep ravine that runs along the southern portion of the property.

From 1972 to 1983, the subject site was operated as a solid waste landfill, accepting wood, mineral, and concrete solid materials. Large concrete blocks and other evidence of this period are still visible on the site. Since 1983, the property has re-vegetated with vegetation dominated by red alder, black cottonwood, and Himalayan blackberry.

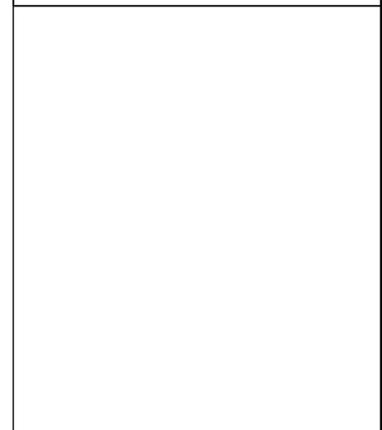
Two Category III wetlands (Wetlands A and B) and an associated Type Np stream (Stream C) are located on the western portion of the site. Stream C flows south where it drains to Stream A (Type Np) located in the ravine. Stream A flows east and is joined by Stream B (Type Np) in the southeast corner of site. From here the stream flows off-site and drains north along the eastern property line.

In Snohomish County, Category III wetlands receive standard 60-foot protective buffers, and Type Np streams receive 50-foot standard buffers.



**LEGEND**

	WETLAND
	WETLAND FILL
	BUFFER REDUCTION (AVERAGING)
	BUFFER ADDITION (AVERAGING)
	BUFFER ENHANCEMENT
	BUFFER RESTORATION AREAS
	STREAMS
	CAPA SIGN
	SPLIT RAIL FENCE
	FINAL BUFFER



9505 19TH AVE SE, SUITE 106  
EVERETT, WA 98208  
TEL: 425.337.3174  
FAX: 425.337.3045

PACE Engineers  
Attn. Marty Penhallegon  
11255 Kirkland Way  
Kirkland, WA 98033

JOB #14076

SCALE: 1" = 100'

Drawn By: N. WHITING

DATE: MARCH 7, 2017

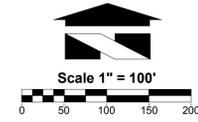
FINAL MITIGATION PLAN -  
BAKERVIEW PLAT  
SNOHOMISH COUNTY, WASHINGTON

REV	DRAWING
Sheet 23 of 25	SHEET 1/2

SNOHOMISH COUNTY  
PLANNING AND DEVELOPMENT SERVICES  
APPROVED FOR CONSTRUCTION

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
FOR RANDOLPH R. SLEIGHT, P.E., P.L.S.

R/W PERMIT NO. \_\_\_\_\_



# FINAL MITIGATION PLAN - BAKERVIEW PLAT PORTION OF SECTION 21, TOWNSHIP 28N, RANGE 5E, W.M.

## Project Description and Proposed Mitigation Measures

The applicant is proposing a 97-lot single-family residential subdivision on this site. As part of this proposal, the former construction debris landfill on the site will be closed under a separate landfill closure application. That application has already received preliminary approval from the Snohomish Health District. To close the landfill, the site will be graded as discussed in the landfill closure plan (see the project engineer's *Targeted Drainage Plan*, March 2017).

During grading for the landfill closure, Stream C (Type Np), which at some point in the past was re-routed to its current location, will be relocated away from the landfill per Health District requirements. Its new course will flow south along the western portion of the property. These grading activities will also impact the southern portion of Wetland A (7,738 SF) and all of Wetland B (422 SF).

## Stream C Restoration/Relocation

The new stream will have a sinuous channel, will contain appropriate gravel substrate, and will be sized to convey the 100-year storm flow as calculated by the site engineer. To reduce the risk of erosion that could be caused by releasing runoff directly down the steep slope, flow at the south end of the restored stream channel will be either tight-lined down slope, or will drain down a channel with a series of rock check dams as designed by the site engineer. Hydrology from the restored stream will drain to Stream A. All slopes in the stream relocation area will be slightly less than 3:1. Following grading for the relocated stream channel and side slopes, the new stream buffer area will be restored with native trees and shrubs on both sides of the stream.

All in-water work for this stream relocation will occur during the summer, low flow window as prescribed in the Hydraulic Project Approval that will be obtained from the Washington Department of Fish and Wildlife for this project.

As part of the proposed stream channel relocation project, the applicant is also proposing to reduce the standard 50-foot stream buffer by 25% (37.5-foot width) on the eastern side of the new ordinary high water mark. This reduction will be achieved under the provisions of SCC 30.62A.320.1(E), by installing a two-rail fence along the proposed buffer edge and placing the buffer and stream channel in a separate tract. As mentioned above, this buffer will be restored and planted with diverse native species.

## Wetland Mitigation Proposal

The physical constraints of the former construction debris landfill and the Health District's grading requirements will result in adverse impacts to Wetlands A and B on this site. No impacts are proposed to the northern portion of Wetland A (12,653 square feet). However, it is proposed that 7,738 square feet (0.18 acres) of the southern portion of Wetland A and 422 square feet (0.1 acres) of Wetland B be filled.

The primary source of hydrology to the southern part of Wetland A (7,738 SF) is currently from Stream C. By complying with the Health District's requirements to move Steam C, grading will remove that source of hydrology for Wetland A. Moreover, the southern portion of Wetland A is the only reasonable location for the proposed access road through the development. When considering alternatives to avoid this relatively low quality wetland, it appears that the goals for the site would be severely compromised. The impacts are therefore deemed unavoidable. Because the impacts will be permanent, compensatory mitigation shall be provided by purchasing credits at an established Mitigation Bank.

Wetland B (422 SF) is a small Category III wetland located east of the proposed Stream C relocation. It is necessary to impact this wetland to allow for grading of the new stream channel and development. Because impacts to the wetland are permanent, compensatory mitigation shall be provided by purchasing credits at an established Mitigation Bank.

Wetland creation is not proposed on the subject site due to concerns of the Snohomish Health District regarding the proximity of the created wetland (standing water) to the closed landfill. Furthermore, wetland creation on this site would be difficult due to the site topography. Rather than create wetland on the subject property, mitigation for wetland impacts is offered through the purchase of "credits" at an established wetland mitigation bank. This is the Snohomish Basin Mitigation Bank, located at the confluence of the Snoqualmie and Skykomish Rivers, within the Snohomish Basin (WRIA-7). Typically, credit ratios for on-site impacts to Category III wetlands are 1 credit per 1 acre of impacted wetlands. Please refer to the Bank Use Plan for Bakerview Plat (Appendix C) for a full description.

## Buffer Averaging Proposal

The applicant is proposing modest buffer averaging of the proposed buffer associated with Wetland A and Stream C. The total buffer reduction area amounts to approximately 1,946 SF and the total buffer addition area amounts to approximately 4,462 SF, resulting in a 2.3:1 buffer addition to reduction ratio. After buffer averaging, the buffer width will be no less than 50% of the standard width, and total area will be no less than that which would have been required if averaging did not occur. The vegetation composition within both the buffer reduction and addition areas is similar, generally consisting of red alder in the canopy with salmonberry in the understorey. Based on these anticipated conditions, this buffer averaging proposal appears to be allowed pursuant to SCC30.62A.320.1.F.

## Stream Channel Construction

Stream channel construction will follow all specifications of the approved Hydraulic Project Approval (HPA), including timing restrictions and construction methods. The sinuous design will mimic a natural stream channel and help to reduce flow velocities. Approximately 600 linear feet of new stream channel will be created as part of this restoration/relocation project.

In order to accommodate the flow, the banks of the channel will be cut back to 3:1 slopes (average). The proposed channel will be 5 feet wide between the banks, approximately 2 feet at the bottom of the channel, and approximately 1 foot deep. The width and sinuous design will slow flows that are currently conveyed by the existing stream channel, allowing for a more natural flow pattern. The exact channel location will be flagged in the field prior to grading to take advantage of micro-topographic conditions. The newly cut sides of the channel will be lined with jute matting to prevent erosion and increase stability in high flow periods. Jute matting will biodegrade after the restoration area has stabilized.

## Permanent Protection

In Snohomish County, regulated streams, wetlands, and their buffers are designated collectively as Critical Area Protection Areas (CAPAs). Critical Area Protection Areas are subject to the following conditions:

*"Critical Area Protection Area (CAPA) means an area which is to be left permanently undisturbed in a substantially natural state and in which no clearing, grading, filling, building construction or placement, or road construction of any kind is allowed except the following:*

*Crossings for underground utility lines and drainage discharge swales which utilize the shortest alignment possible and for which no alignment that would avoid such a crossing is feasible; Removal of hazardous trees by the property owner; Fences, only if the critical area and its buffer are not detrimentally affected; Other uses and development activity as allowed by chapter 30.62 SCC; and In rural cluster subdivisions approved pursuant to chapter 30.41C SCC, buffer plantings as required by SCC 30.41C.200 and passive recreational uses limited to non-motorized trails, exercise pathways, and wildlife viewing areas."*

## Stream Channel Construction

Stream channel construction will follow all specifications of the approved Hydraulic Project Approval (HPA), including timing restrictions and construction methods. The sinuous design will mimic a natural stream channel and help to reduce flow velocities. Approximately 600 linear feet of new stream channel will be created as part of this restoration/relocation project.

In order to accommodate the flow, the banks of the channel will be cut back to 3:1 slopes (average). The proposed channel will be 5 feet wide between the banks, approximately 2 feet at the bottom of the channel, and approximately 1 foot deep. The width and sinuous design will slow flows that are currently conveyed by the existing stream channel, allowing for a more natural flow pattern. The exact channel location will be flagged in the field prior to grading to take advantage of micro-topographic conditions. The newly cut sides of the channel will be lined with jute matting to prevent erosion and increase stability in high flow periods. Jute matting will biodegrade after the restoration area has stabilized.

This relocation will increase the length and habitat quality of the stream corridor. The goal of this plan is to create a viable stream channel capable of sustaining the existing flow and to enhance the biotic functions and values associated with the stream.

Generally, construction of the stream will proceed as follows: Following proper installation and approval of erosion control measures, a track hoe or other appropriate piece of equipment shall be used to grade the channel as described in this plan.

A minimum of six (6) inches of clean, rounded, uniformly-graded gravel with the following size composition shall be placed throughout the entire length of the created stream channel:

- 15 percent of 4.0 to 3.0 inches
- 40 percent of 3.0 to 1.5 inches
- 45 percent of 1.5 to 0.25 inches
- Fines less than 0.25 inches shall not exceed 3.0% of the total volume of the gravel

## Construction Channel Cross-Section Data

### Side Slopes Bottom Width (ft.) Depth (ft.)

3:1 5' 1'

Finally, the new stream buffer shall be restored with the plant species listed in this plan and the CAPA fence and signs shall be installed.

This plan will be submitted to Washington Department of Fish & Wildlife for HPA review. All requirements of the HPA will be followed.

## Clearing/Grading, Timing & TESC

Please refer to the project engineer's plans for detailed information on clearing and grading on this site.

Construction activities within and adjacent to the wetland areas shall be done during the dry season, from approximately June to late September.

Prior to beginning any development or mitigation activities, construction or siltation fencing shall be installed as described in the grading plan construction drawings. A pre-construction meeting between Snohomish County, the consulting wetland professional, contractor and equipment operator(s) will be held prior to any mitigation activities to inspect the location of siltation fencing.

All sedimentation control facilities shall be kept in place and functioning until vegetation is firmly established. Refer to site engineer's TESC plan for all erosion and sedimentation control details.

## Post Mitigation Functions and Values

The project will relocate and restore Stream C so that it no longer flows into the landfill site. The result will be an enhanced stream corridor and improved water quality functions for this stream and downstream systems.

Through proper installation, the proposed restoration plan will convert these pasture and blackberry-dominated areas to a diverse native plant community. Over time, planted and pioneer trees will increase in size to create complex forest community with multiple understorey strata.

The selected trees and shrubs will grow and mature under developed conditions to create valuable habitat for a variety of birds and small mammals that may utilize the area. Native trees provide shade, protection, food, nesting and a variety of other opportunities for wildlife species.

Once established, the native vegetation will have the ability to take in excess hydrology and nutrients from runoff, thereby benefiting hydrologic control and water quality improvement functions on-site and in downstream systems. These are important functions to protect and improve in this developed setting.

Direct loss of wetlands on this site will be mitigated through the purchase of mitigation bank credits. This approach ensures immediate replacement of lost functions, as well as guarantees mitigation success. Please refer to the Bank Use Plan (*Biological Evaluation*, Appendix C) for additional information and justification for mitigation banking.

Through proper implementation, the proposed mitigation measures are expected to adequately replace and improve the critical area functions offered on this site. Overall, the proposed mitigation plan appears to meet the goals and objectives of SCC 30.62A.

## Buffer Restoration Planting Plan

Four separate restoration areas (A, B, C, & D) were created as mitigation for impacts to critical areas and buffers. These steep slope and buffer areas will be impacted by site grading, and will be planted with a diverse mix of native trees, shrubs, and ground cover.

After plant installation, mulch will be applied to all woody plant bases to a depth of 3 inches (see Planting Notes for more detail). Any bareground areas left in the restoration areas will be sown with grass seed as specified below.

## Buffer Restoration Seed Mix

Common Name	Latin Name	lbs/1,000 s.f.
Tall fescue	<i>Festuca arundinacea</i>	0.4
Colonial bentgrass	<i>Agrostis tenuis</i>	0.4
Annual ryegrass	<i>Lolium perenne</i> var. <i>multiflorum</i>	0.5
Red clover	<i>Trifolium repens</i>	0.2

## Restoration Area A

Restoration Area A is located directly north of Wetland A, and is composed of steep slope area to be graded (1,787 SF), and a small portion of buffer addition area (574 SF). Prior to planting, the grading work and soils will be inspected by a consulting biologist to determine correct grading and suitability of the soils for planting. If deemed necessary, a high-nutrient/compost mix will be applied to the restoration area prior to planting.

### Restoration Area A—2,361 SF

Common Name	Latin Name	Size	Spacing	Quantity
Douglas-fir	<i>Pseudotsuga menziesii</i>	1 gallon	10'	10
Big-leaf maple	<i>Acer macrophyllum</i>	1 gallon	10'	15
Snowberry	<i>Symphoricarpos albus</i>	1 gallon	4'	40
Salmonberry	<i>Rubus spectabilis</i>	1 gallon	4'	40
Ocean spray	<i>Holodiscus discolor</i>	1 gallon	4'	40

## Restoration Area B

Restoration Area B is located along the western boundary of the site, along a steep slope area to be graded (42,693 SF), and includes buffer addition areas (3,207 SF). Prior to planting, the grading work and soils will be inspected by a consulting biologist to determine correct grading and suitability of the soils for planting. If deemed necessary, a high-nutrient/compost mix will be applied to the restoration area prior to planting.

### Restoration Area B—45,900 SF

Common Name	Latin Name	Size	Spacing	Quantity
Grand fir	<i>Abies grandis</i>	1 gallon	10'	50
Western red cedar	<i>Thuja plicata</i>	1 gallon	10'	50
Douglas-fir	<i>Pseudotsuga menziesii</i>	1 gallon	10'	100
Big-leaf maple	<i>Acer macrophyllum</i>	1 gallon	10'	100
Shore pine	<i>Pinus contorta</i>	1 gallon	10'	50
Bitter cherry	<i>Prunus emarginata</i>	1 gallon	10'	50
Hazelnut	<i>Corylus cornuta</i>	1 gallon	10'	100
Snowberry	<i>Symphoricarpos albus</i>	1 gallon	4'	400
Wood rose	<i>Rosa Gymnocarpa</i>	1 gallon	4'	400
Salmonberry	<i>Rubus spectabilis</i>	1 gallon	4'	400
Thimbleberry	<i>Rubus parviflorus</i>	1 gallon	4'	400
Red elderberry	<i>Sambucus racemosa</i>	1 gallon	4'	200
Ocean spray	<i>Holodiscus discolor</i>	1 gallon	4'	400
Dwarf Oregon grape	<i>Mahonia nervosa</i>	1 gallon	4'	100

## Restoration Area C

Following the grading work of the channel and side slopes adjacent to Stream C, the disturbed ground will be restored with a diversity of native trees, shrubs and ground cover. The total area to be planted will amount to 35,711 square feet. Prior to planting, the grading work and soils will be inspected by a consulting biologist to determine correct grading of the stream and the suitability of the soils for planting. If deemed necessary, a high-nutrient/compost mix will be applied to the restoration area prior to planting.

### Restoration Area C—35,711 SF

Common Name	Latin Name	Size	Spacing	Quantity
Grand fir	<i>Abies grandis</i>	1 gallon	10'	50
Western red cedar	<i>Thuja plicata</i>	1 gallon	10'	50
Douglas-fir	<i>Pseudotsuga menziesii</i>	1 gallon	10'	100
Big-leaf maple	<i>Acer macrophyllum</i>	1 gallon	10'	100
Cascara	<i>Rhamnus purshiana</i>	1 gallon	10'	50
Hazelnut	<i>Corylus cornuta</i>	1 gallon	10'	100
Snowberry	<i>Symphoricarpos albus</i>	1 gallon	4'	300
Nootka rose	<i>Rosa Nutkana</i>	1 gallon	4'	300
Ocean spray	<i>Holodiscus discolor</i>	1 gallon	4'	200
Salmonberry	<i>Rubus spectabilis</i>	1 gallon	4'	350
Thimbleberry	<i>Rubus parviflorus</i>	1 gallon	4'	100
Red elderberry	<i>Sambucus racemosa</i>	1 gallon	4'	150
Salal	<i>Gaultheria shallon</i>	1 gallon	4'	200
Dwarf Oregon grape	<i>Mahonia nervosa</i>	1 gallon	4'	200

## Restoration Area D

Restoration Area D is located within a 25-foot steep slope setback area, along the southern and eastern boundary of the proposed lots. Prior to planting, the grading work and soils will be inspected by a consulting biologist to determine correct grading and suitability of the soils for planting. If deemed necessary, a high-nutrient/compost mix will be applied to the restoration area prior to planting.

### Restoration Area D—34,693 SF

Common Name	Latin Name	Size	Spacing	Quantity
Grand fir	<i>Abies grandis</i>	1 gallon	10'	50
Douglas-fir	<i>Pseudotsuga menziesii</i>	1 gallon	10'	100
Big-leaf maple	<i>Acer macrophyllum</i>	1 gallon	10'	50
Shore pine	<i>Pinus contorta</i>	1 gallon	10'	50
Bitter cherry	<i>Prunus emarginata</i>	1 gallon	10'	50
Hazelnut	<i>Corylus cornuta</i>	1 gallon	10'	100
Snowberry	<i>Symphoricarpos albus</i>	1 gallon	4'	300
Wood rose	<i>Rosa Gymnocarpa</i>	1 gallon	4'	300
Salmonberry	<i>Rubus spectabilis</i>	1 gallon	4'	300
Thimbleberry	<i>Rubus parviflorus</i>	1 gallon	4'	200
Red elderberry	<i>Sambucus racemosa</i>	1 gallon	4'	200
Ocean spray	<i>Holodiscus discolor</i>	1 gallon	4'	200
Dwarf Oregon grape	<i>Mahonia nervosa</i>	1 gallon	4'	200

## Planting Notes

**Timing:** Plant in the early spring or late fall. Order plants from a reputable nursery. Care and handling of plant materials is extremely important to the overall success of the project. All plant materials recommended in this plan should be available from local and regional sources, depending on seasonal demand. Some limited species substitution may be allowed, only with the agreement of the consulting wetland professional.

**Plant Distribution:** The plants shall be arranged in a pattern with the appropriate numbers, sizes, species, and distribution to achieve the desired vegetation coverage. The actual placement of individual plants shall mimic natural, asymmetric vegetation patterns found on similar undisturbed sites in the area. Spacing of the plantings may be adjusted to maintain existing vegetation with approval from the consulting wetland professional. In the wetland creation area, plant trees and shrubs that have a lower tolerance for water in areas of slightly higher elevation.

**Mulch:** Woodchip mulch shall be placed in 2-foot rings around all installed shrubs and trees. Mulch shall be kept at least 2-inches away from plant stems and trunks.

**Seeding:** After woody plant installation and mulching is complete, bare ground areas within the restoration area will be sowed with grass seed as specified in the planting plan.

**Inspections:** A certified wetland professional shall inspect the plantings described in this plan. Due to the physical condition of the site, unusual or hidden site situations, minor adjustments to the original designs may be required prior to and during planting. These decisions will be made on-site by the County representative and/or the consulting wetland professional.

## Plant Marking:

Lath staking or other marking device, such as brightly colored surveying ribbon, shall be placed on or near each installed tree and shrub to assist in locating the plants during maintenance and monitoring.

## Project Goals, Objectives, and Performance Standards

The following goal, objectives and performance standards will be evaluated to ensure success of the mitigation project.

### Goal:

The goal of this project is to replace and improve functions and values on this site through stream channel relocation and restoration. This will be achieved if the performance standards listed below are achieved.

### Performance Standards:

- 1) The planted areas shall support a minimum 80 percent survival rate of planted species by the end of five years.
- 2) The mitigation areas shall support a minimum 70 percent aerial cover by native woody species by the end of five years.
- 3) The mitigation areas shall contain no more than 10 percent aerial cover of Himalayan blackberry or Scot's broom by the end of five years.

## Pre-Construction Meeting

A pre-installation site meeting shall occur between the consulting biologist, the contractor, and the landscaper prior to construction. Details of, excavating the wetland areas, stock piling the excess gravel road materials, planting the mitigation areas, etc. shall be discussed during this pre-installation site meeting.

## Project Monitoring Program

### Requirements for monitoring project

Annual reports including final report (one report submitted in the fall of each monitored year)

### Purpose for Monitoring

The purpose for monitoring this mitigation project shall be to evaluate its success. Success will be determined if monitoring shows at the end of 5 years that the goals and performance standards stated above are being met. If the project does not meet the definition of success, the County may extend the bonding period. The property owner shall grant access to the mitigation area for inspection and maintenance to the contracted landscaper or wetland specialist and the County biologist during the period of the bond or until the project is evaluated as successful.

## Vegetation and Methodology

During the each inspection, the planted vegetation will be monitored within each mitigation area. Monitoring vegetation involves measuring plant species establishment, survival, vigor, and vitality. The percentages of spatial cover of the dominant species for each of the three plant community layers are estimated in each planting area. Wildlife monitoring is limited to species heard or observed during the site visits. Monitoring of vegetation shall be done annually between August 1 and October 30 (prior to leaf drop), unless otherwise specified.

The following data shall be recorded for each data site:

- Species present
- Aerial cover by native and non-native species
- Quantity of dead plants
- General observations

## Photo points

Permanent photo points will be established within the mitigation areas. Photographs will be taken from these points to visually record condition of the mitigation area. Photos shall be taken annually between August 1 and October 30 (prior to leaf drop), unless otherwise specified.

## Maintenance Measures

The planting areas may require periodic maintenance during the monitoring period. Maintenance may include, but will not be limited to: removal of competing grasses and invasive vegetation (by hand if necessary), irrigation, replacement of plant mortality and/or the replacement of mulch. Aggressive control of invasive grasses may be required in the restoration areas. Chemical control, if necessary, shall be applied by a licensed applicator following all label instructions.

## Performance Bonding

A performance bond shall be provided to Snohomish County for the period of five years from the completion of the project, in the amount of 55% of the estimated cost for plant material and labor. Annual monitoring reports and seasonal maintenance will be required to assure the success of this enhancement plan. Snohomish County shall release this bond at the end of five years, only upon successful determination for all portions of this mitigation project. The following is an estimate of plant materials and labor only. This does not represent a bid to install:

TOTAL QUANTITY OF 1 GALLON PLANTS (at \$12.00) plant	7,295
ESTIMATED COST OF PLANT MATERIAL AND LABOR	\$87,540.00
<b>TOTAL ESTIMATED BOND AMOUNT</b>	<b>\$48,147.00</b>
(55% of Material, Labor, Monitoring, & Maintenance)	

## Use Of This Report

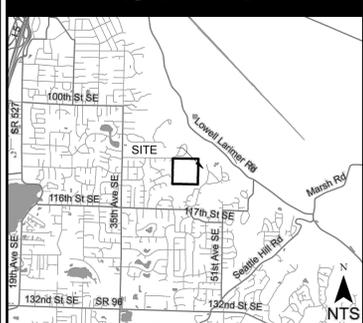
This Final Mitigation Plan is supplied to PACE, LLC, as required by Snohomish County during the permitting process. This report is based largely on readily observable conditions and, to a lesser extent, on readily ascertainable conditions. No attempt has been made to determine hidden or concealed conditions.

The laws applicable to wetlands are subject to varying interpretations and may be changed at any time by the courts or legislative bodies. This report is intended to provide information deemed relevant in the applicant's attempt to comply with the laws now in effect.

The work for this report has conformed to the standard of care employed by wetland ecologists. No other representation or warranty is made concerning the work or this report and any implied representation or warranty is disclaimed.

SNOHOMISH COUNTY PLANNING AND DEVELOPMENT SERVICES APPROVED FOR CONSTRUCTION	
BY: _____	DATE: _____
FOR RANDOLPH R. SLEIGHT, P.E., P.L.S.	
R/W PERMIT NO. _____	

## VICINITY MAP



PACE Engineers  
Attn. Marty Penhalegon  
11255 Kirkland Way  
Kirkland, WA 98033

JOB #14076

SCALE: 1" = 100'

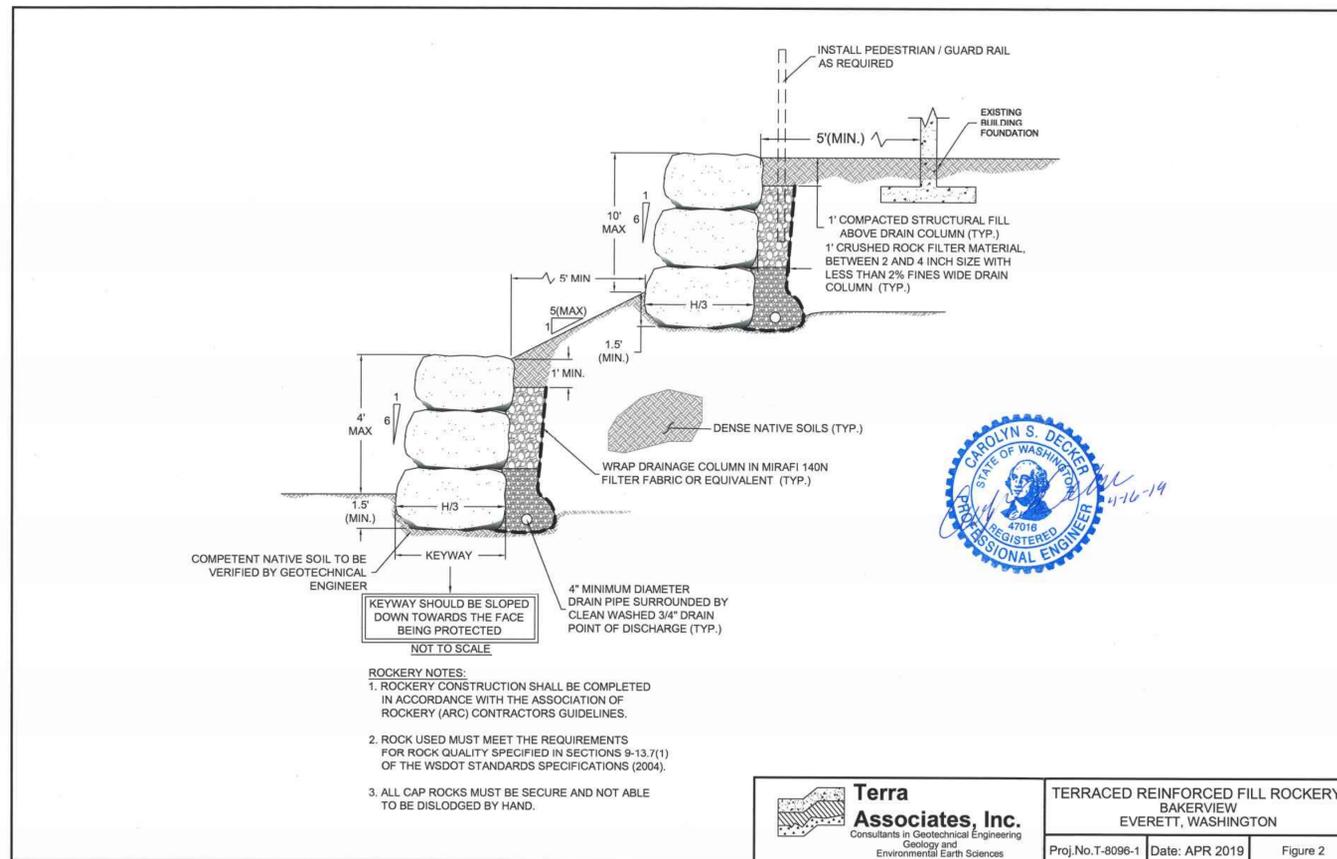
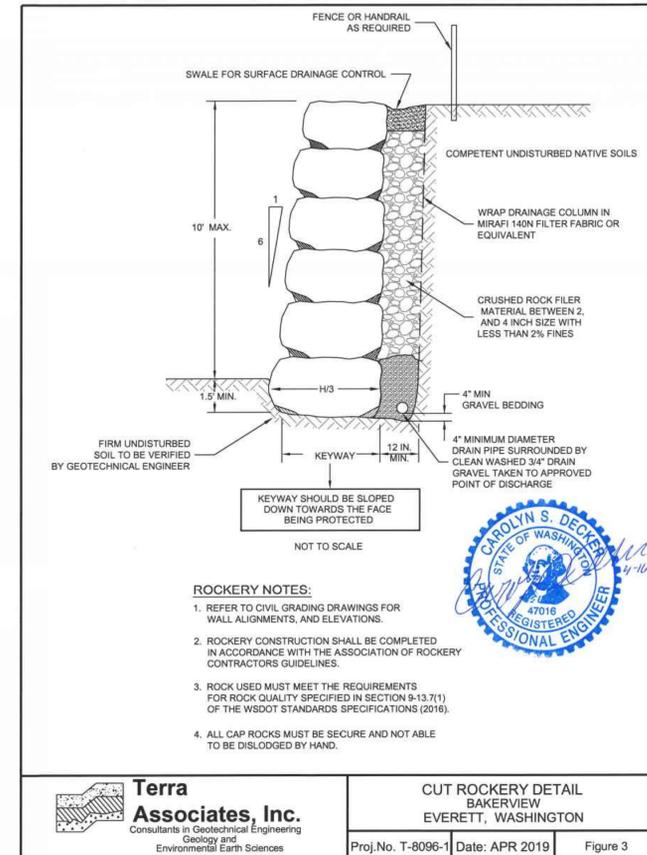
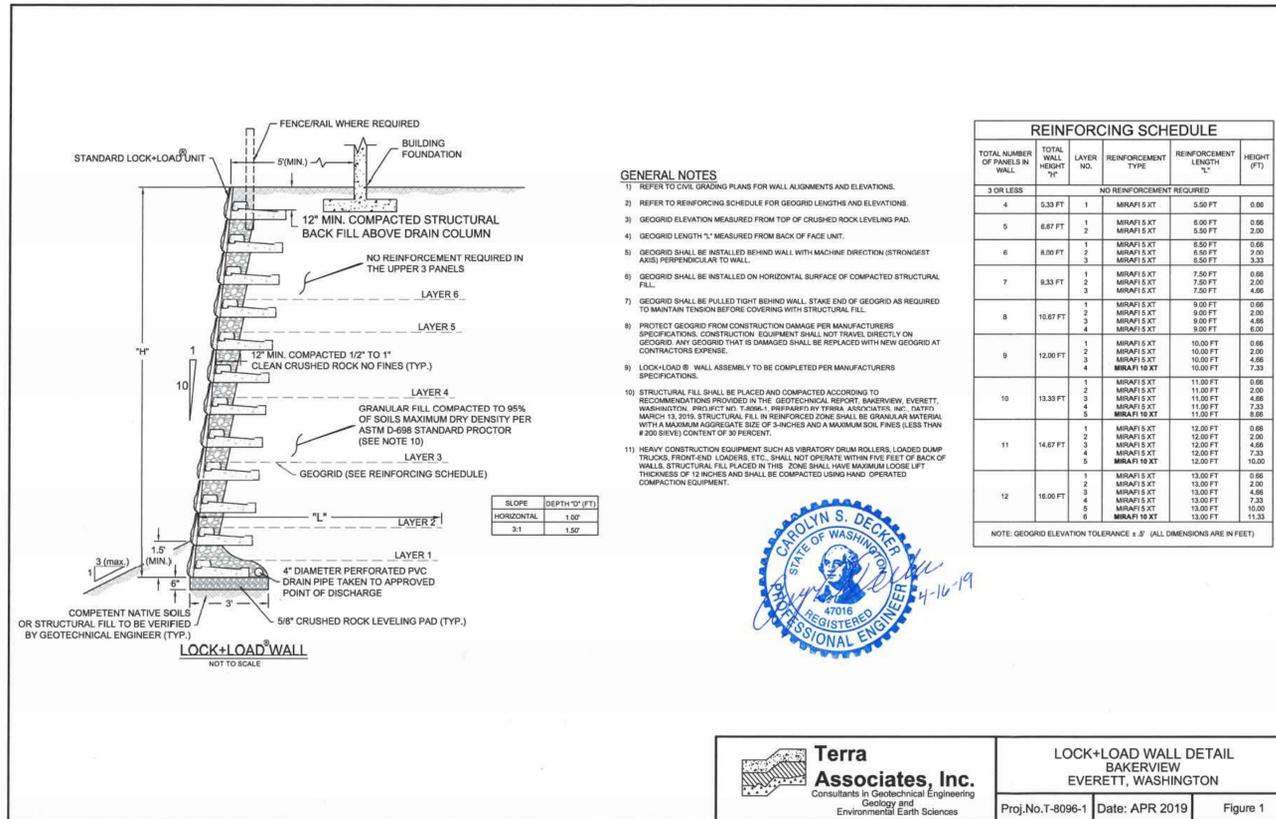
Drawn By: N. WHITING

DATE: MARCH 7, 2017

FINAL MITIGATION PLAN -  
BAKERVIEW PLAT  
SNOHOMISH COUNTY, WASHINGTON

REV DRAWING

Sheet 24 of 25 SHEET 2/2



REVISION	DATE	BY	REVISION
1	12/05/13	SYM	REVISED GRADING
2	10/17/2019		REVISED GRADING
3	7/20/2020		REVISED GRADING
4	4/2/2020		REVISED GRADING
5	4/17/2019		REVISED GRADING
6	1/26/18		REVISED GRADING
7	12/05/13		REVISED GRADING

**PACE**  
An Engineering Services Company  
11255 Kirkland Way, Suite 300  
Kirkland, WA 98033  
p. 425.827.2014 | f. 425.827.9043  
Civil | Structural | Planning | Survey  
paceengr.com

**Carolyn S. Decker**  
STATE OF WASHINGTON  
47016  
REGISTERED PROFESSIONAL ENGINEER  
4-16-19

**Terra Associates, Inc.**  
Consultants in Geotechnical Engineering  
Geology and Environmental Earth Sciences  
Proj.No. T-8096-1 Date: APR 2019 Figure 1

**Terra Associates, Inc.**  
Consultants in Geotechnical Engineering  
Geology and Environmental Earth Sciences  
Proj.No. T-8096-1 Date: APR 2019 Figure 3

**Terra Associates, Inc.**  
Consultants in Geotechnical Engineering  
Geology and Environmental Earth Sciences  
Proj.No. T-8096-1 Date: APR 2019 Figure 2

**Snohomish County Planning Development Services**  
APPROVED FOR CONSTRUCTION  
By: \_\_\_\_\_  
R/W Permit No. \_\_\_\_\_  
Date: \_\_\_\_\_

SCALE: AS NOTED DATE: 7/20/2020  
DESIGNED BY: CSD CHECKED BY: CSD  
JOB NUMBER: P09382.00  
DWG NAME: P09382\_TERRA-WALLS  
SHEET 25 OF 25

**GO EAST LANDFILL CLOSURE**  
WALL DETAILS (TERRA ASSOCIATES, INC.)

FILE NAME: P:\P09382\_00\_GO EAST\2018\CAD\ENGINEERING\SHEETS\LDA2\P09382\_TERRA-WALLS.DWG  
SAVE TIME: 7/21/2020 4:52:03 PM  
PLOT TIME: 7/21/2020 4:56:56 PM  
XREF FILES: PACE382