

CITY OF MERCER ISLAND

KING COUNTY



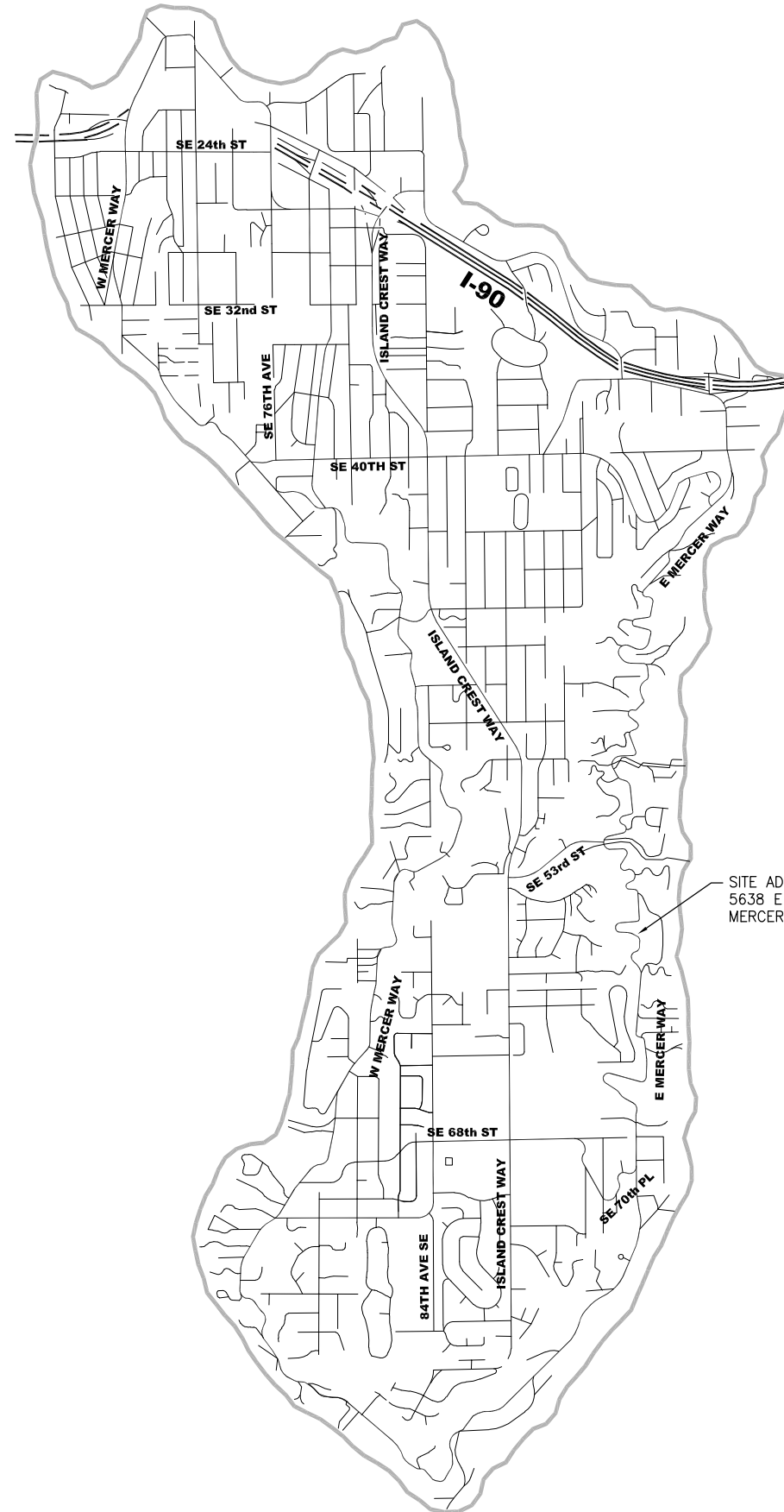
WASHINGTON

2021

EAST MERCER WAY LANDSLIDE REPAIR

5600 BLOCK

PROJECT NUMBER: 21-21



SHEET INDEX

- 1 COVER AND NOTES
- 2 ALIGNMENT AND SITE PLAN
- 3 WALL PLAN AND ELEVATION
- 4 SOLDIER PILE WALL DETAILS
- 5 SITE DETAILS
- 6-8 GUARDRAIL DETAILS

APRIL 2021

BID DOCUMENT

GENERAL NOTES

1. TRAFFIC CONTROL SIGNS SHALL CONFORM TO M.U.T.C.D.
2. UTILITIES THAT ARE NOT ABANDONED SHALL BE SUPPORTED AND MAINTAINED DURING CONSTRUCTION.
3. EXISTING UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITY ELEVATIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
4. DRIVEWAY ACCESS/EGRESS MUST BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE AGREED TO BY THE PROPERTY OWNER.
5. CALL ONE CALL 48 HOURS BEFORE YOU DIG FOR UTILITY LOCATES: 1-800-424-5555 OR 811
6. REMOVAL LIMITS ARE APPROXIMATE. LIMITS SHALL BE STAKED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. TREES WITHIN THE CLEARING LIMITS SHALL BE REMOVED AFTER APPROVAL BY THE ENGINEER.
7. PROTECT ALL PLANT MATERIAL OUTSIDE OF SURFACE REMOVAL LIMITS.

SURVEY INFORMATION

HORIZONTAL DATUM: NAD '83-'91, WASHINGTON COORDINATE SYSTEM NORTH ZONE. BASED ON RTK GPS MEASUREMENTS CONSTRAINED TO THE WASHINGTON STATE HIGH ACCURACY REFERENCE NETWORK

VERTICAL DATUM: NAVD 88 BASED ON RTK GPS MEASUREMENTS CONSTRAINED TO THE WASHINGTON STATE REFERENCE NETWORK

ALL DISTANCES SHOWN ARE GROUND DISTANCES UNLESS OTHERWISE NOTED.

THE LOCATION AND DESCRIPTION OF ALL SURVEY MARKERS SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS TAKEN ON FEBRUARY, 2021, UNLESS OTHERWISE INDICATED.

WORK PERFORMED IN CONJUNCTION WITH THIS SURVEY UTILIZED THE FOLLOWING EQUIPMENT AND PROCEDURES: (A) 2" GEODIMETER 600 SERIES ELECTRONIC TOTAL STATION, MAINTAINED TO THE MANUFACTURER'S SPECIFICATIONS PER W.A.C. 332-130-100. (B) FIELD TRAVERSE, EXCEEDING REQUIREMENTS SET FORTH IN W.A.C. 332-130-090.

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT AND DOES NOT PURPORT TO SHOW ALL EASEMENTS.

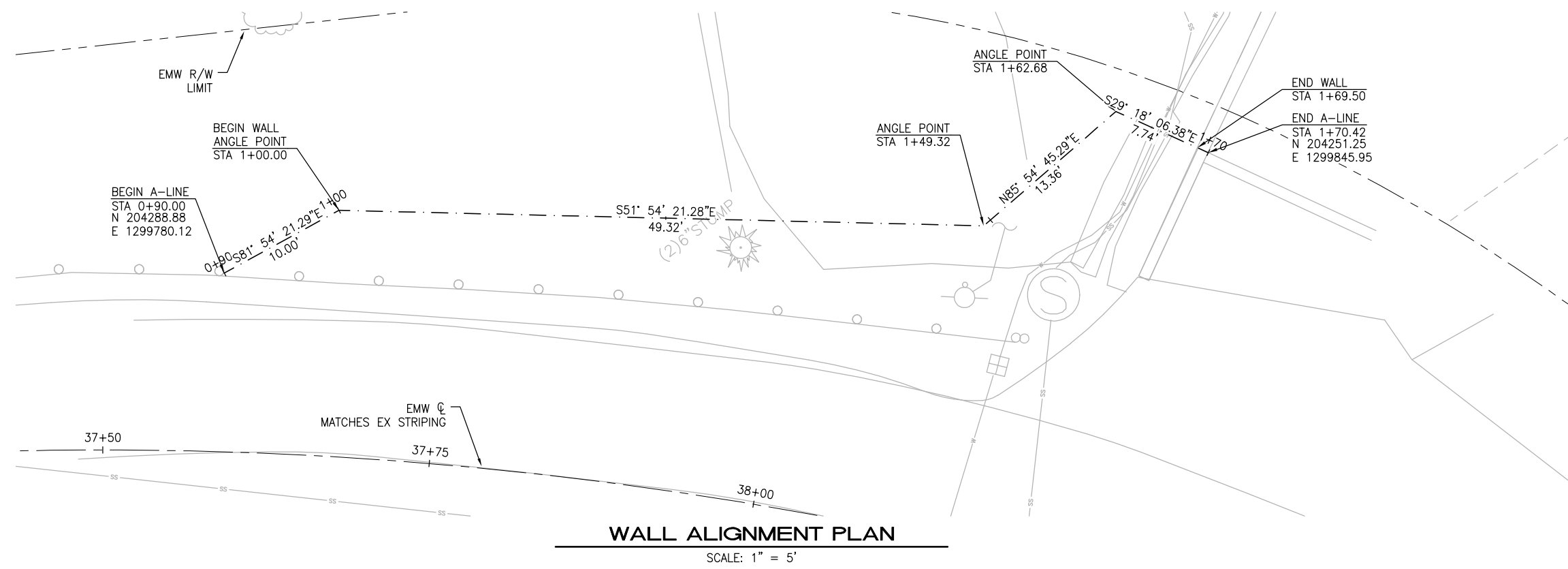
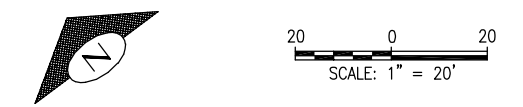
RIGHT-OF-WAY LINES AND ROADWAY CENTERLINES ARE FROM GIS DATA PROVIDED BY OTHERS.

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: 1-800-424-5555.

ALL MONUMENTS INDICATED AS FOUND WERE RECOVERED DURING THE COURSE OF THIS SURVEY AT THE DATE SHOWN IN THE SURVEYOR'S CERTIFICATE, UNLESS OTHERWISE NOTED.

GENERAL TESC NOTES

1. THE TESC 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.
2. THE TESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE TESC 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.).
3. CONTRACTOR SHALL INSTALL INLET PROTECTION PER DTL 2/15 AT ALL EXISTING AND NEW CATCH BASINS WITHIN THE PROJECT LIMITS AS WELL AS DOWNSTREAM OF THE WORK AREA, AS DIRECTED BY THE ENGINEER.



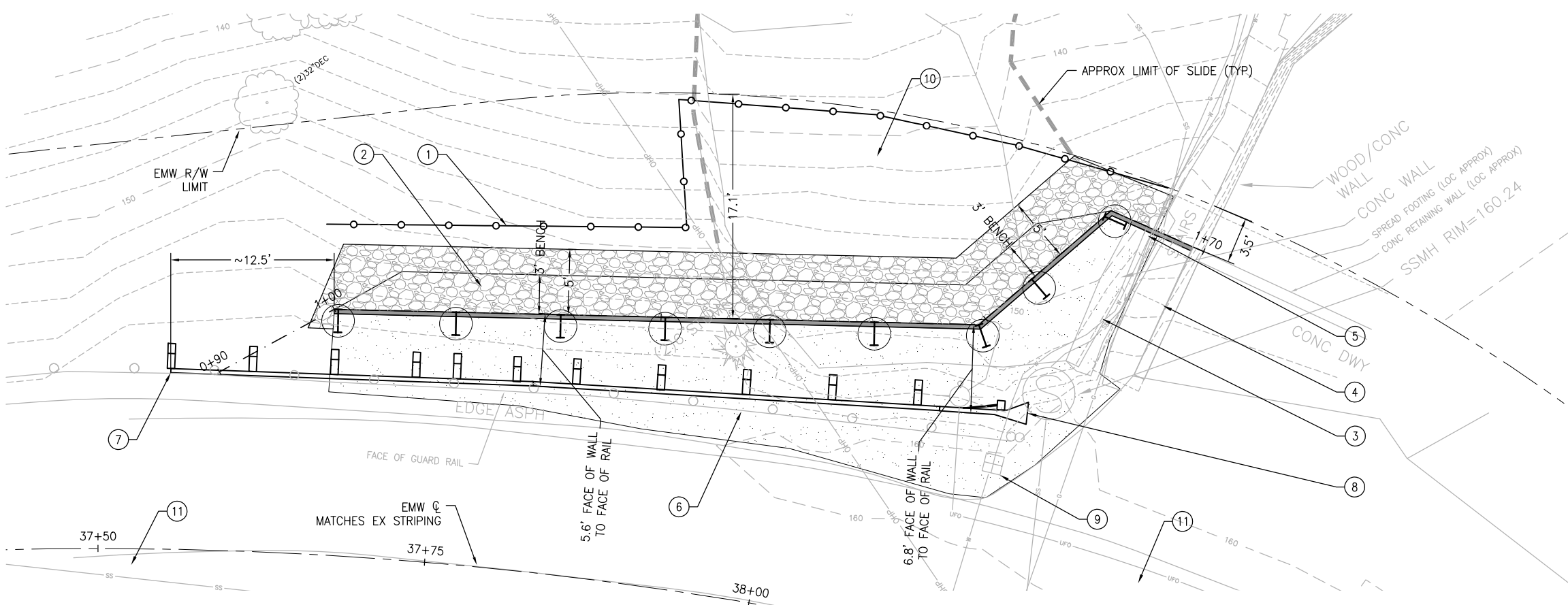
WALL ALIGNMENT PLAN
SCALE: 1" = 5'

CONSTRUCTION NOTES

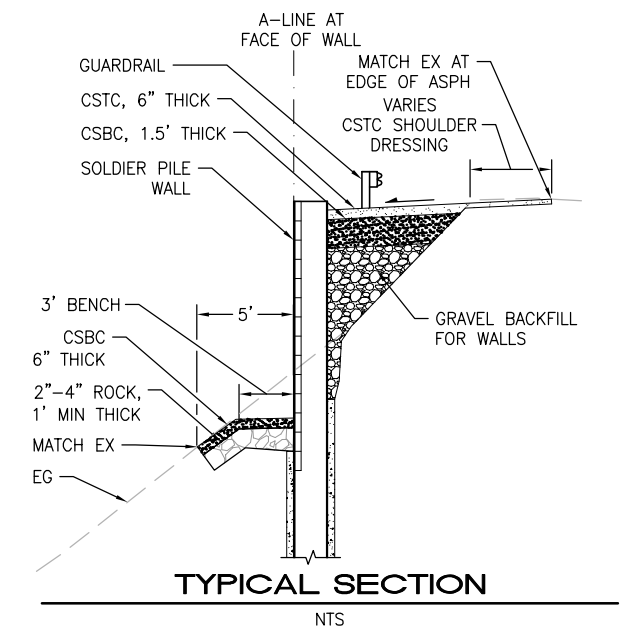
- ① INSTALL FILTER FENCE PER DTL 1/5
- ② CLEAR AND GRUB TO 5' DOWNSLOPE OF WALL
- ③ ABANDON EX MODULAR BLOCK WALL IN PLACE
- ④ EX CONC RUBBLE STAIRS TO REMAIN IN PLACE
- ⑤ EXERCISE CARE WHEN WORKING NEAR EX WET AND DRY UTILITY SERVICE LINES AND CONC WALL SPREAD FOOTING FOR HOME #5638 E MERCER WAY
- ⑥ REMOVE APPROX 65LF OF EX GUARDRAIL BEAM AND POSTS OR AS DIRECTED BY ENGINEER
- ⑦ INSTALL NEW BEAM GUARDRAIL TYPE 31 WITH WOOD POSTS PER WSDOT STD PLAN C-20.10-06/SHT 6, AND CONNECT TO EX TYPE 1 GUARDRAIL APPROX 12.5' WEST OF BEGINNING OF RETAINING WALL PER WSDOT STD PLAN C-25.80-05/SHT 8
- ⑧ INSTALL NEW TYPE MSKT-SP-MGS (TL-2) TERMINAL WITH WOOD POSTS PER WSDOT STD PLAN C-22.45-05/SHT 7
- ⑨ ADJUST WATER METER TO GRADE PER DTL 4/5
- ⑩ INSTALL JUTE MATTING AND HYDROSEED WITHIN SLIDE LIMITS OR AS DIRECTED BY ENGINEER PER DETAILS ON SHEET 3/5
- ⑪ INSTALL INLET PROTECTION ON SOUTH SIDE OF EMW PER DTL 2/5 (TYP OF 2, BEYOND PLAN VIEW)

LEGEND

- SILT FENCE
- GUARDRAIL
- 6" CSBC OVER 1" MIN 2"-4" ROCK
- 6" CSTC (OR SHOULDER DRESSING) OVER 1.5" CSBC OVER GRAVEL BACKFILL FOR WALLS



SITE PLAN
SCALE: 1" = 5'



TYPICAL SECTION
NTS

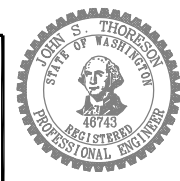
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CM DESIGN GROUP
1318 East Pike Street
Seattle, WA 98122
206-659-0612

REV. NO.	DATE	DESCRIPTION

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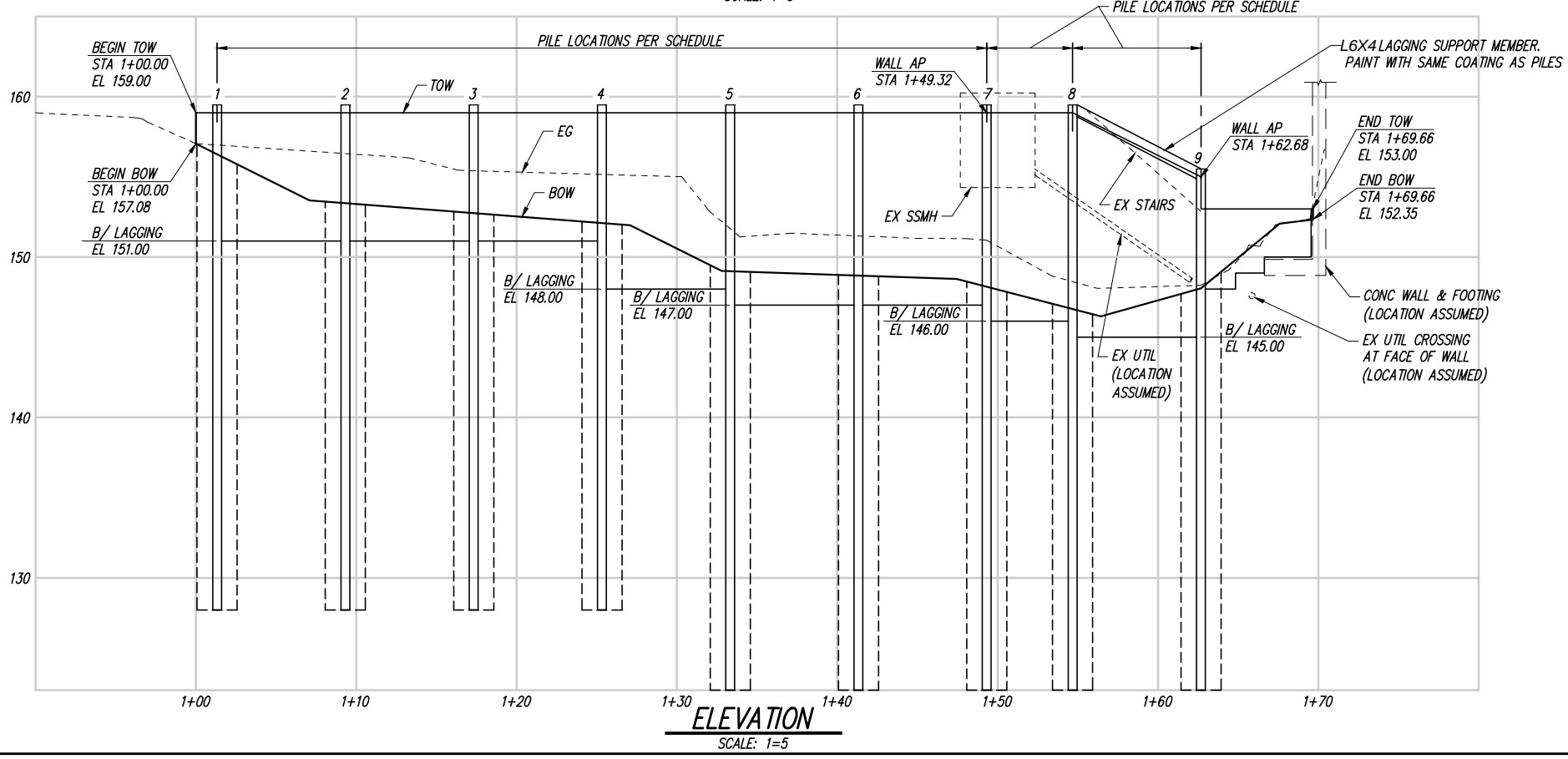
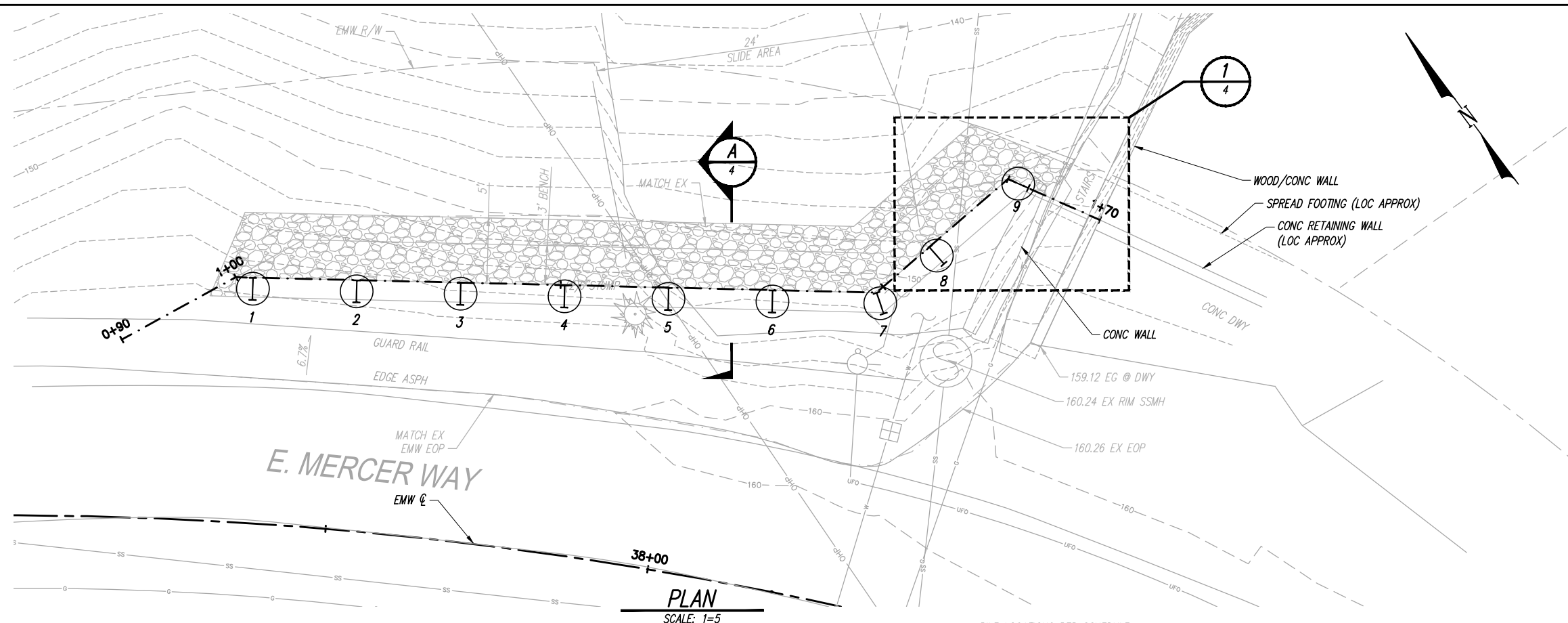


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DESIGN	4/6/21
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CHECK	JST

CITY OF MERCER ISLAND
2021 EAST MERCER WAY
LANDSLIDE REPAIR
ALIGNMENT AND SITE PLAN

PROJECT	20004
SCALE	1"=20'
SHEET	2 OF 8

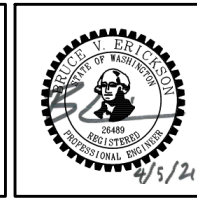
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 20004_X-TOPO-PAE
 20004_X-TOPO-CMD



PILE SCHEDULE					
PILE MARK	STATION	PILE SIZE	SHAFT DIA (IN)	TOP OF PILE ELEVATION (FT)	BOT OF PILE ELEVATION (FT)
1	1+01.32	W21x50	30	159.5	128
2	1+09.32	W21x50	30	159.5	128
3	1+17.32	W21x50	30	159.5	128
4	1+25.32	W21x50	30	159.5	128
5	1+33.32	W21x50	30	159.5	123
6	1+41.32	W21x50	30	159.5	123
7	1+49.32	W21x50	30	159.5	123
8	1+54.68	W21x50	30	159.5	123
9	1+62.68	W21x50	30	155.5	123

CAD USER: RICKT PLOT DATE: Apr 05, 2021-09:49am
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1601 5th Avenue, Suite 1600
 Seattle, WA 98101
 206.622.5822
 www.kpff.com

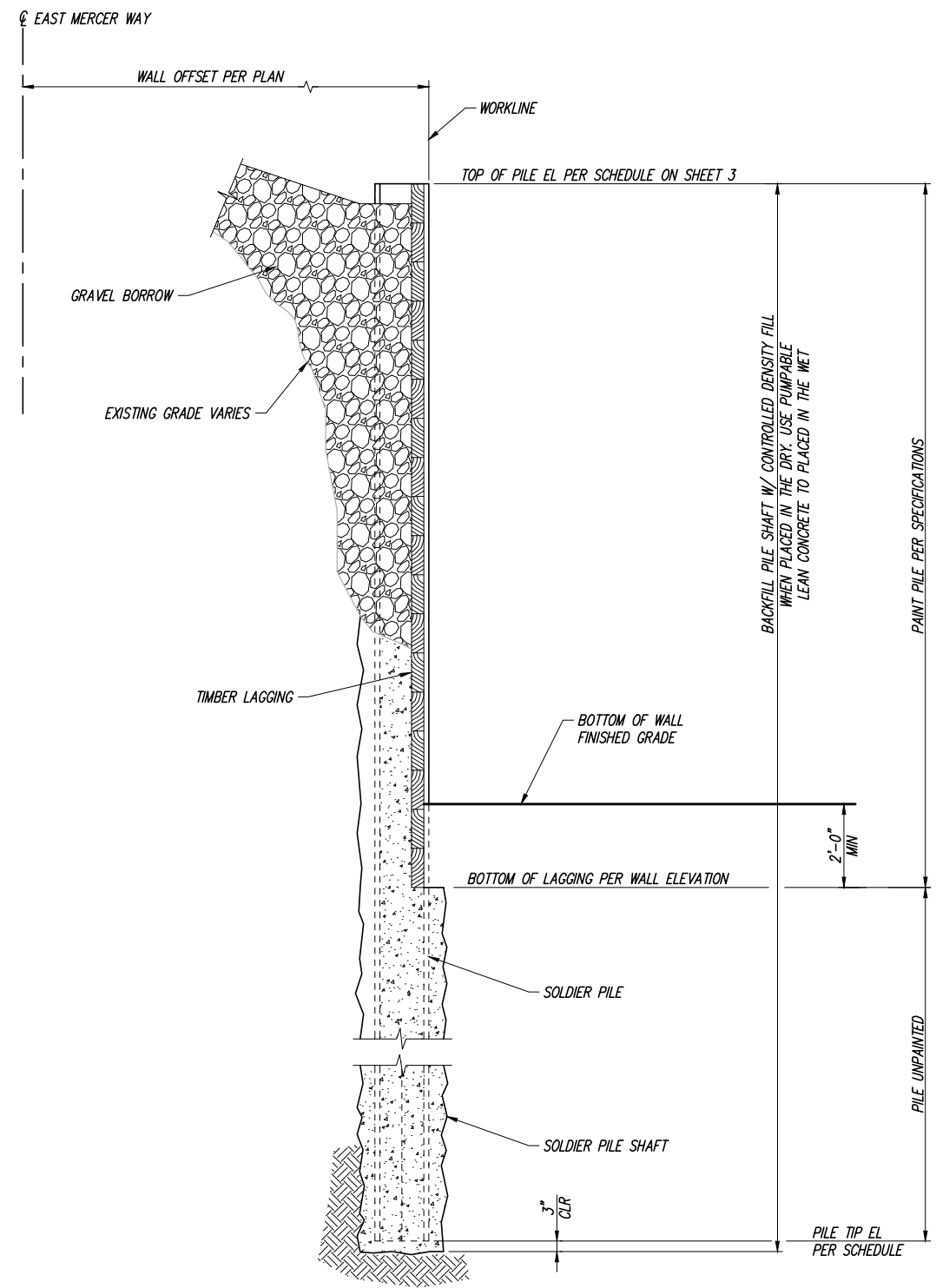


NO.	DATE	BY	REVISION

EAST MERCER WAY SLIDE WALL
 MERCER ISLAND, WA

WALL
 PLAN & ELEVATION

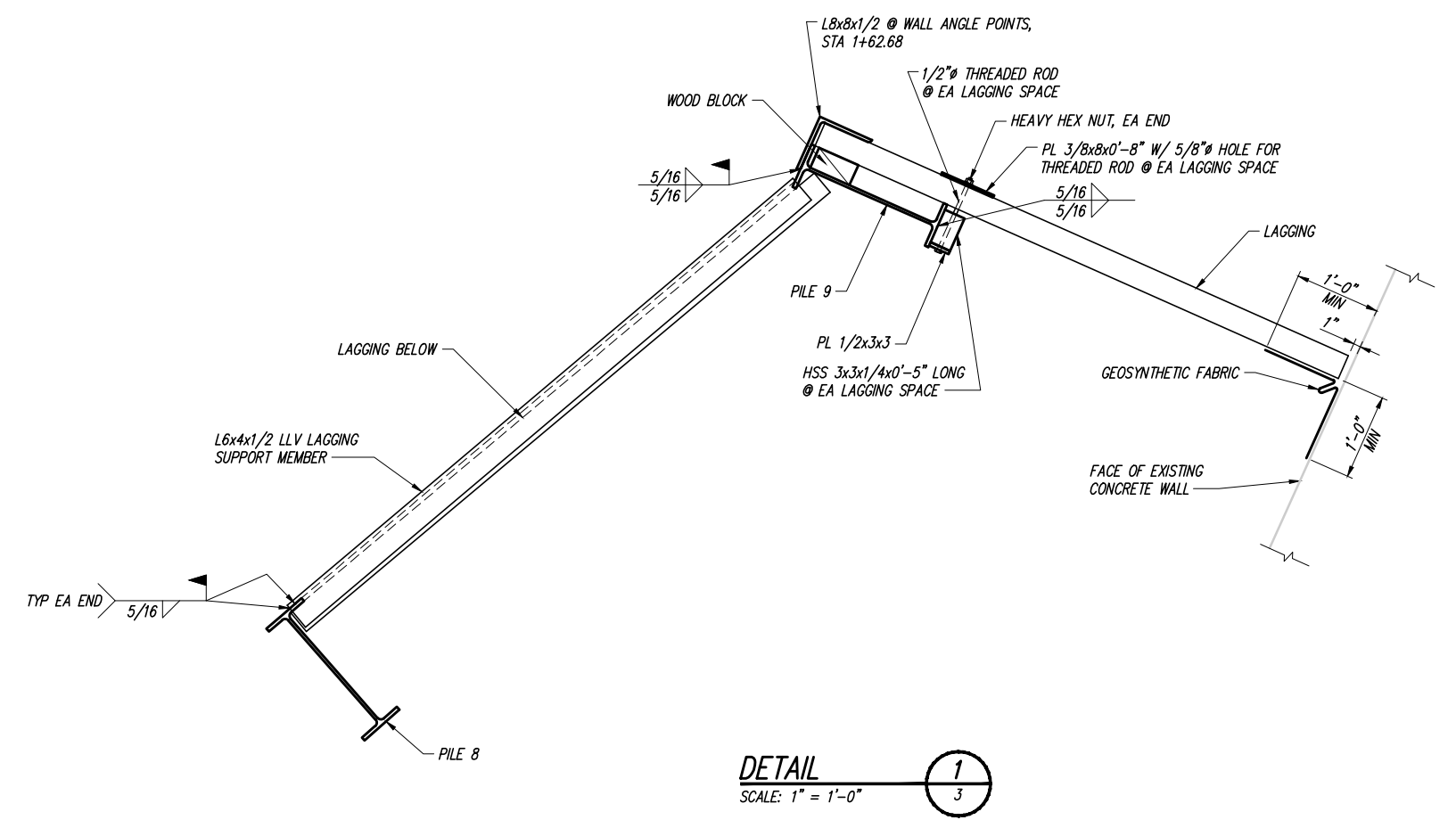
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CHECKED: BVE	DATE: 04-05-2021
DRAWING NO.	3
SHEET NO.	3 OF



TYPICAL SECTION - SOLDIER PILE WALL A
3
SCALE: 1/2" = 1'-0"

SOLDIER PILE WALL NOTES:

1. ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION - DATED 2020.
2. TIMBER LAGGING SHALL BE 3X DF #2 OR BETTER, OR HEM-FIR #1.
3. EXISTING GROUND LINE IS APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD PRIOR TO SHOP DRAWING PRODUCTION AND CONSTRUCTION.
4. STRUCTURAL STEEL FOR SOLDIER PILES SHALL CONFORM TO ASTM A992. SOLDIER PILES SHALL BE PAINTED TO THE LIMITS SHOWN IN THE PLANS IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 6-16.3(4).
5. TIMBER LAGGING SHALL BE PRESERVATIVE TREATED WITH WATERBORNE PRESERVATIVES PER APCA UC4B.



DETAIL 1
3
SCALE: 1" = 1'-0"

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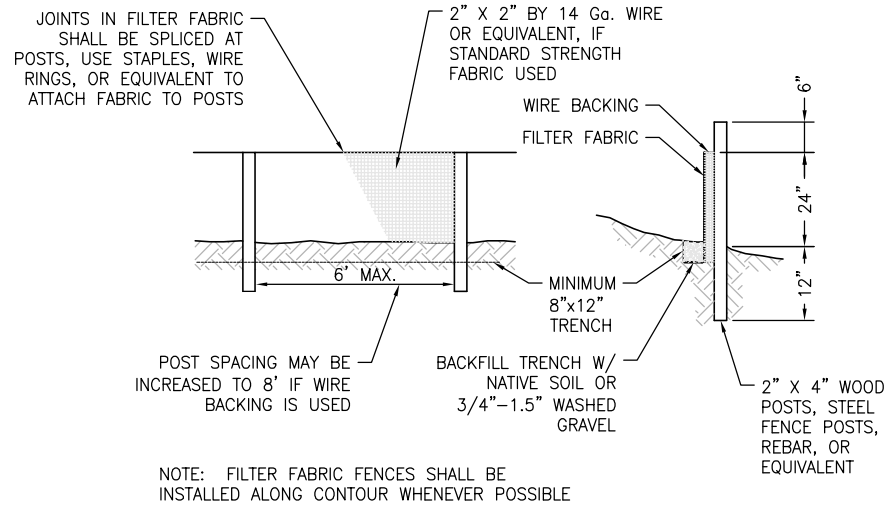


NO.	DATE	BY	REVISION

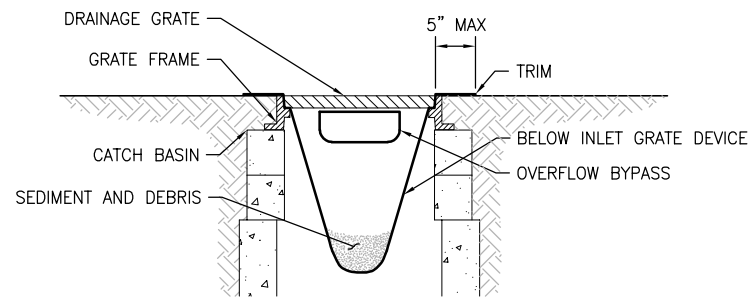
EAST MERCER WAY SLIDE WALL
MERCER ISLAND, WA

SOLDIER PILE WALL DETAILS

DRAWN: RRT	PROJECT NO.: 2100187
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CHECKED: BVE	DATE: 04-05-2021
DRAWING NO.	4
SHEET NO.	4 OF

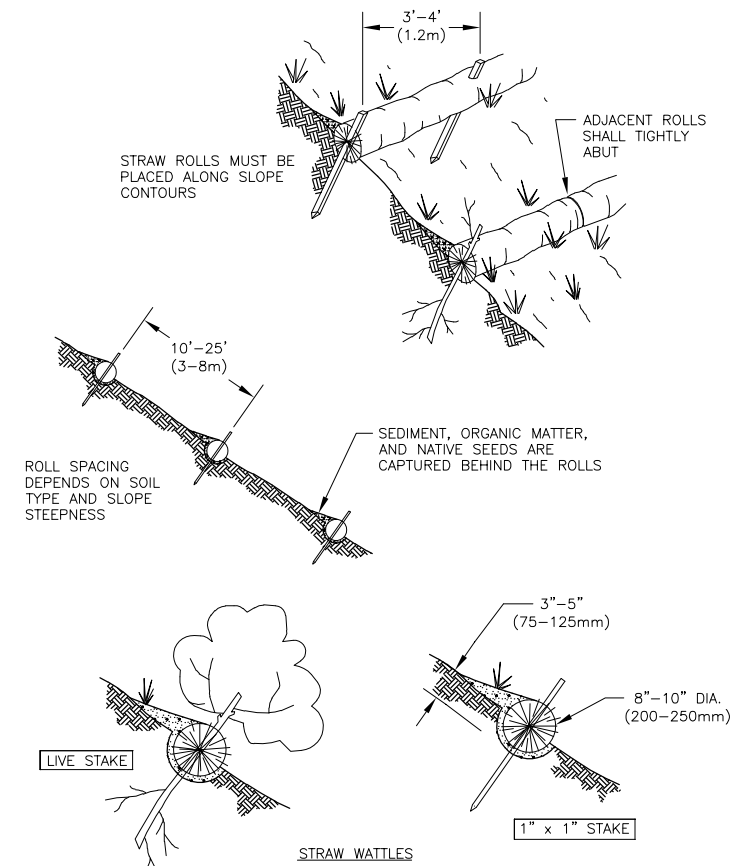


1 FILTER FABRIC FENCE
NTS



- NOTES:
1. SIZE THE BELOW INLET GRATE 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.

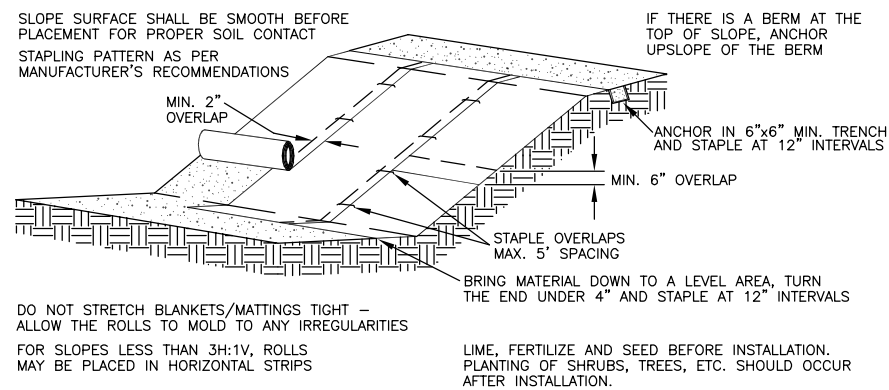
2 INLET PROTECTION
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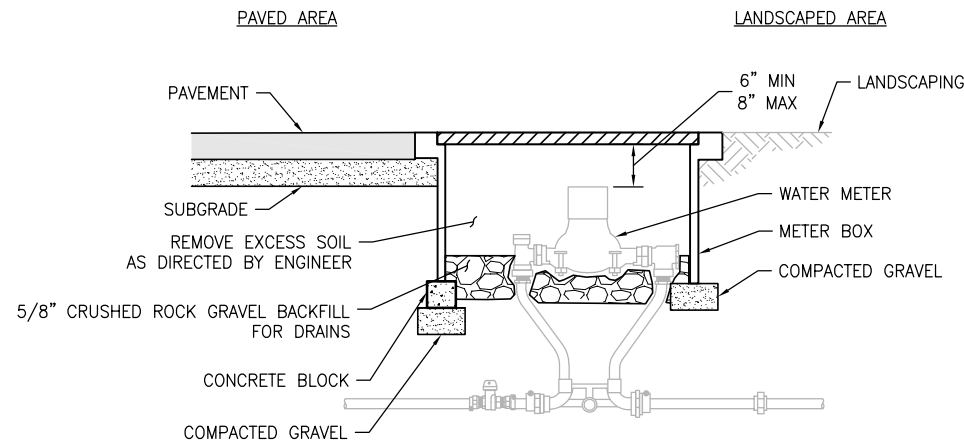
- NOTES:
1. STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3" x 5" (75-125mm) DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.

NOT CALLED OUT IN PLANS. INCLUDED FOR REFERENCE AS PART OF "EROSION/WATER POLLUTION CONTROL" AND/OR "DOWNSLOPE RESTORATION BID ITEM."

5 STRAW WATTLES
NTS



3 JUTE MATTING
NTS



- NOTE:
- METER BOX SHALL BE PROVIDED BY CITY (FOG TITE J20S STEEL BOX WITH TAR COATING OR EQUAL).

4 WATER METER ADJUSTMENT
NTS

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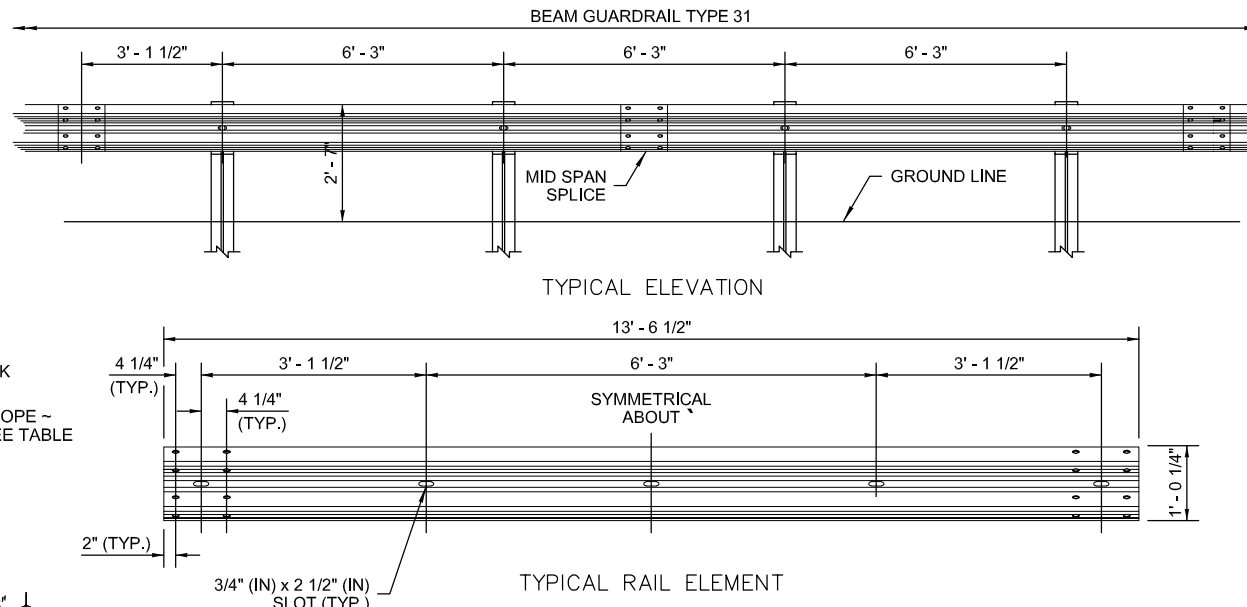
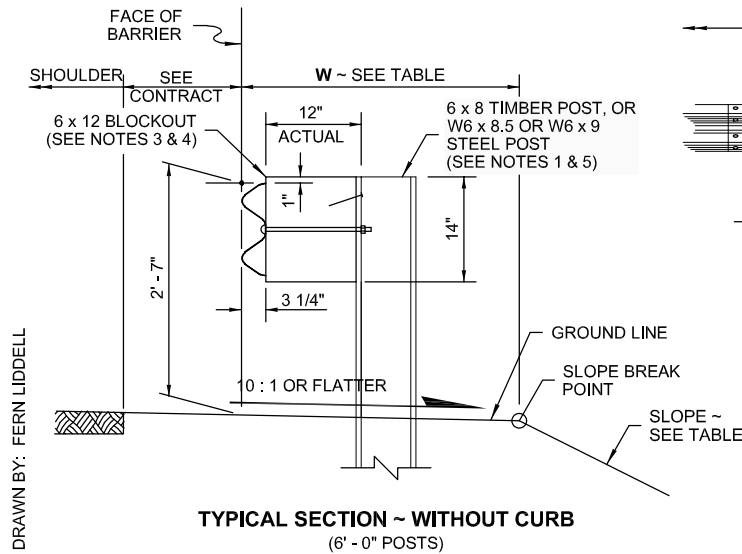
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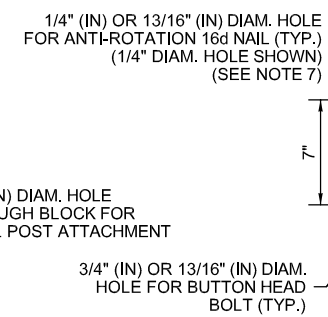
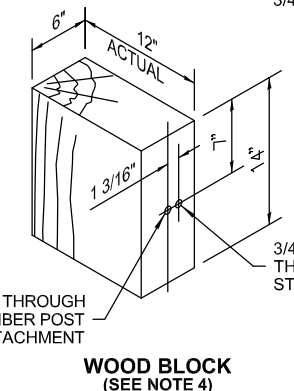
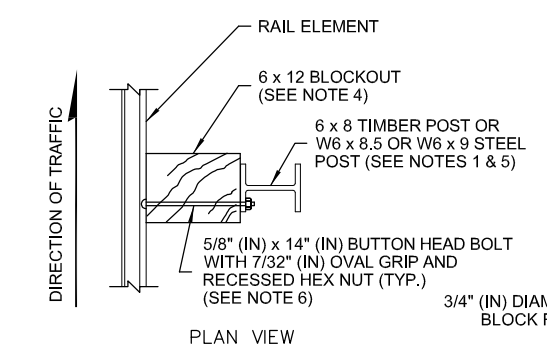
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DRAFT	JST
CHECK	JST

CITY OF MERCER ISLAND
2021 EAST MERCER WAY
LANDSLIDE REPAIR
SITE DETAILS

PROJECT	20004
SCALE	NONE
SHEET	5 OF 8

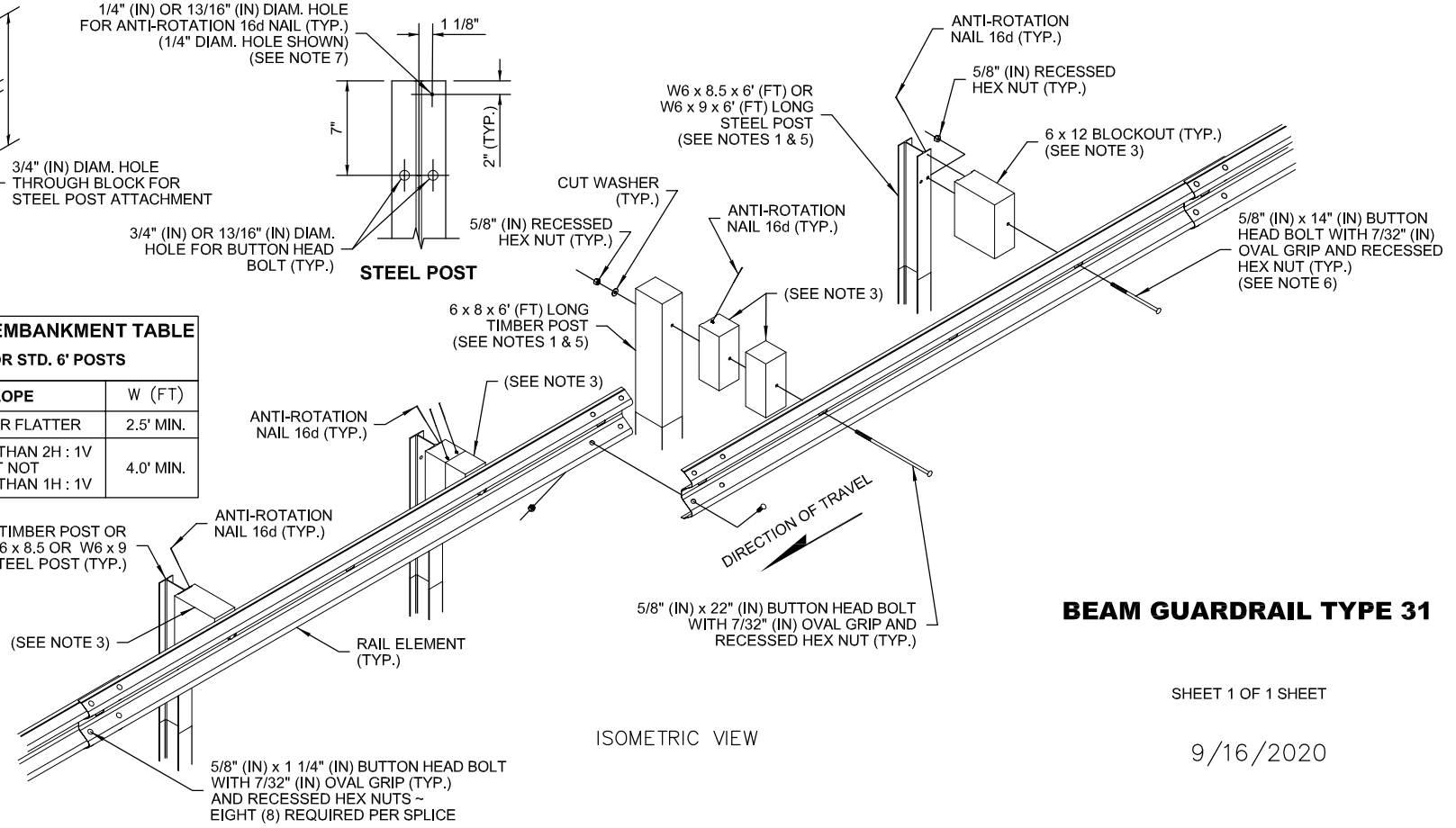
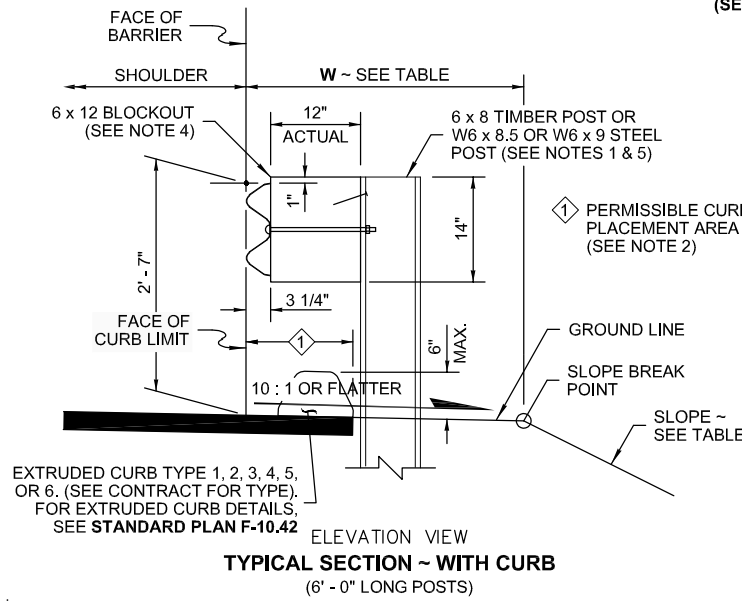


- NOTES
1. Refer to **Standard Plan C-1b** and **C-20.11** for additional details not shown on this plan.
 2. Extend shoulder pavement to provide a base for the extruded curb. See Contract Plans for exceptions to distances shown.
 3. Use a single block or combination of blocks (no more than two (2) to achieve the actual 12" (in) offset. See **Standard Specification, Section 9-16.3(2)**. Wood blocks shall be secured to the posts with anti-rotation nails. If combination blocks are used, the adjacent blocks shall be toenailed with two 16d galvanized nails to prevent block rotation.
 4. Wood blocks are shown. Blocks of an approved alternative material may be used. See **Standard Specification, Section 9-16.3(2)**.
 5. All posts for any standard barrier run shall be of the same type: timber or steel.
 6. Attach blockouts to steel posts using bolt holes on approaching traffic side of post web.
 7. Anti-rotation holes in steel posts are not required when using blocks with anti-rotation features (e.g., routed blocks).



SLOPE \ EMBANKMENT TABLE FOR STD. 6' POSTS

SLOPE	W (FT)
2H : 1V OR FLATTER	2.5' MIN.
STEEPER THAN 2H : 1V BUT NOT STEEPER THAN 1H : 1V	4.0' MIN.



BEAM GUARDRAIL TYPE 31

SHEET 1 OF 1 SHEET

9/16/2020

WSDOT STD PLAN C-20.10-06
NTS



CM DESIGN GROUP
1318 East Pike Street
Seattle, WA 98122
206-659-0612

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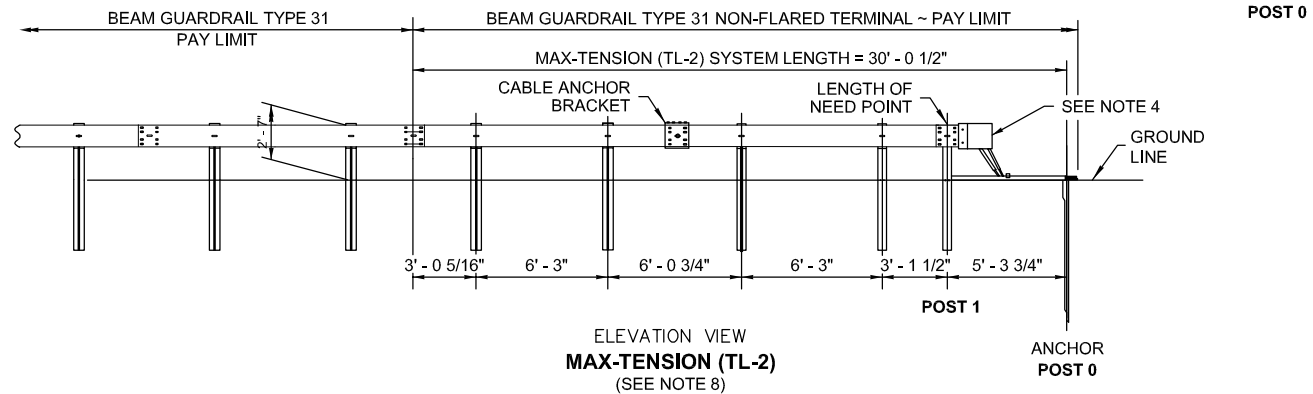
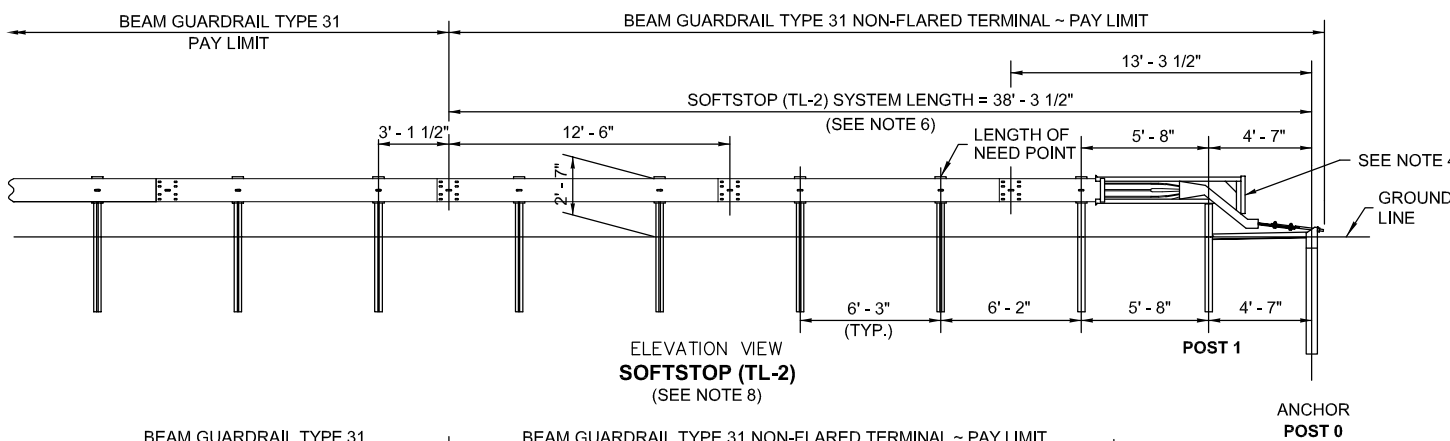
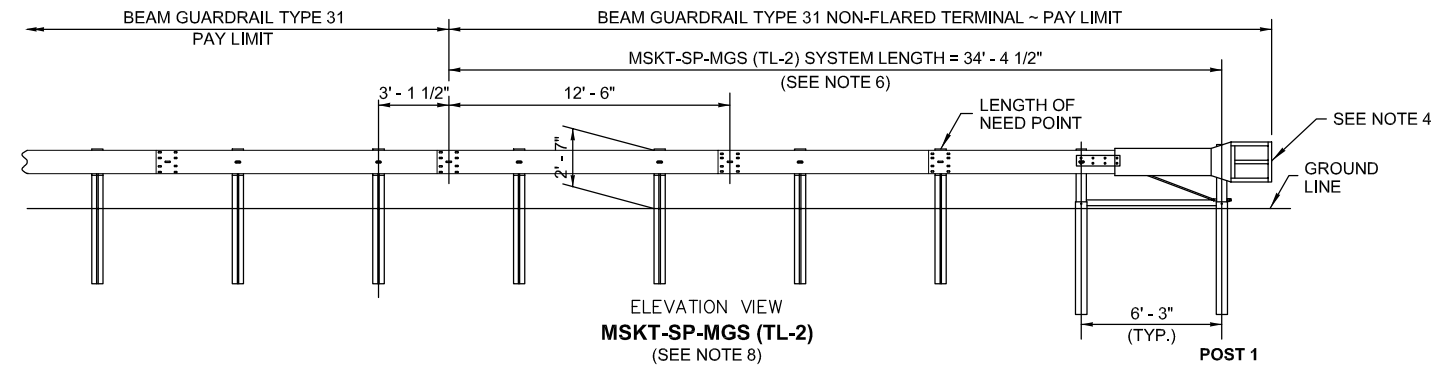
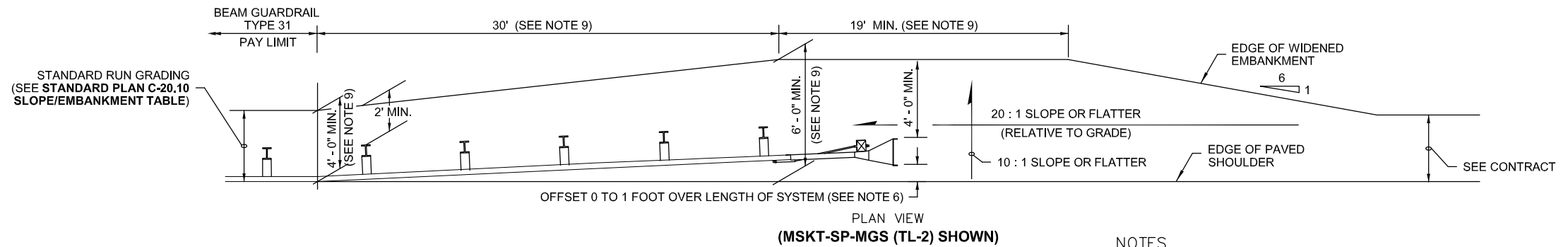


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CITY OF MERCER ISLAND
2021 EAST MERCER WAY
LANDSLIDE REPAIR
GUARDRAIL DETAILS

PROJECT	20004
SCALE	NONE
SHEET	6 OF 8

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NOTES

1. The Implementation of the Manual for Assessment of Safety Hardware (MASH) criteria may result in the acceptance of guardrail terminal systems currently not shown on this plan. Non-Flared terminals shall be selected from the WSDOT Qualified Products List (QPL) or approved through the WSDOT Request for Approval of Materials (RAM) process.
2. This terminal is MASH compliant at Test Level Two (TL-2) and may be used in applications with posted speed of 45 mph or less.
3. An MSKT-SP-MGS (TL-2) as manufactured by Road Systems, Inc, SOFTSTOP (TL-2) as manufactured by Trinity Highway Products, LLC, or MAX-TENSION (TL-2) as manufactured by Lindsay Transportation Solutions, shall be installed according to manufacturer's recommendations.
4. A reflectorized object marker shall be installed according to manufacturer's recommendations.
5. Snow load rail washers shall not be installed within the terminal limits.
6. Provide an offset between 0 to 1 foot so that the impact head does not encroach onto the paved shoulder. The offset is provided over the length of the terminal system from the center of the last post splice to either: (1) The face of the impact head at its leading edge (MSKT-SP-MGS), or (2) The center of anchor **Post 0** (Softstop or Max-Tension). Provide the maximum offset where practicable.
7. For terminal details, see WSDOT approved manufacturer's drawings.
8. These terminals are supplied with steel posts only. They can be used with beam guardrail Type 31 runs, composed of steel or wood guardrail posts.
9. The widened embankment dimensions shown on this plan will satisfy the installation requirements of all 3 guardrail terminal systems shown on this plan.

**BEAM GUARDRAIL TYPE 31
NON-FLARED TERMINAL
(POSTED SPEED
45 MPH AND BELOW)**

SHEET 1 OF 1 SHEET

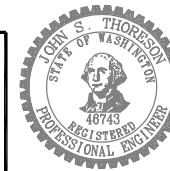
9/16/2020

WSDOT STD PLAN C-22.45-05
NTS



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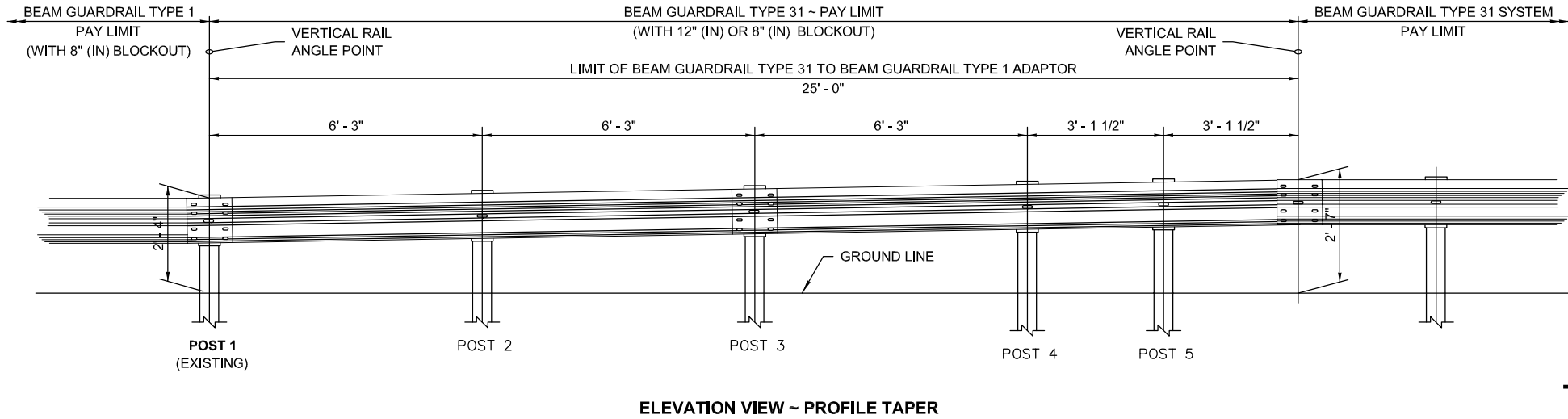
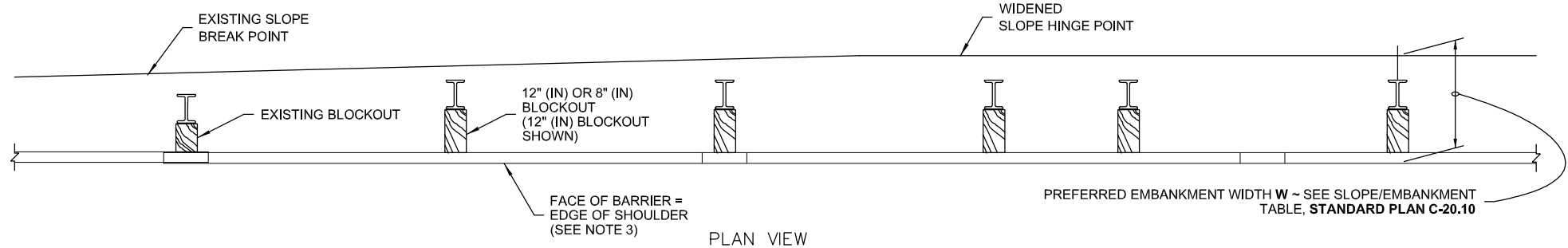
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CHECK	JST

CITY OF MERCER ISLAND
2021 EAST MERCER WAY
LANDSLIDE REPAIR
GUARDRAIL DETAILS

PROJECT	20004
SCALE	NONE
SHEET	7 OF 8

NOTES

1. Refer to **Standard Plan C-20.10** for component details for Beam Guardrail Type 31 (not shown on this plan).
2. Accommodating the wider blockout (12" (in) width) used with Type 31 guardrail will require widening the embankment.
3. Wood blockouts shown. Blockouts of alternate material may be used. See **Standard Specification, Section 9-16.3(2)**.
4. All posts for any standard barrier run shall be of the same type: timber or steel.
5. **Post 1** is an existing Type 1 post. **Post 2** through **5** are new posts with 12" (in) or 8" (in) blockouts. All blockouts shall be uniform in size. The blockout size shall match the size used on the Type 31 Guardrail run or non-flared terminal.



BEAM GUARDRAIL TYPE 31 TO BEAM GUARDRAIL TYPE 1 ADAPTOR

SHEET 1 OF 1 SHEET

08/12/19

WSDOT STD PLAN C-25.80-05
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1318 East Pike Street
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CITY OF MERCER ISLAND
2021 EAST MERCER WAY
LANDSLIDE REPAIR
GUARDRAIL DETAILS

PROJECT	20004
SCALE	NONE
SHEET	8 OF 8

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