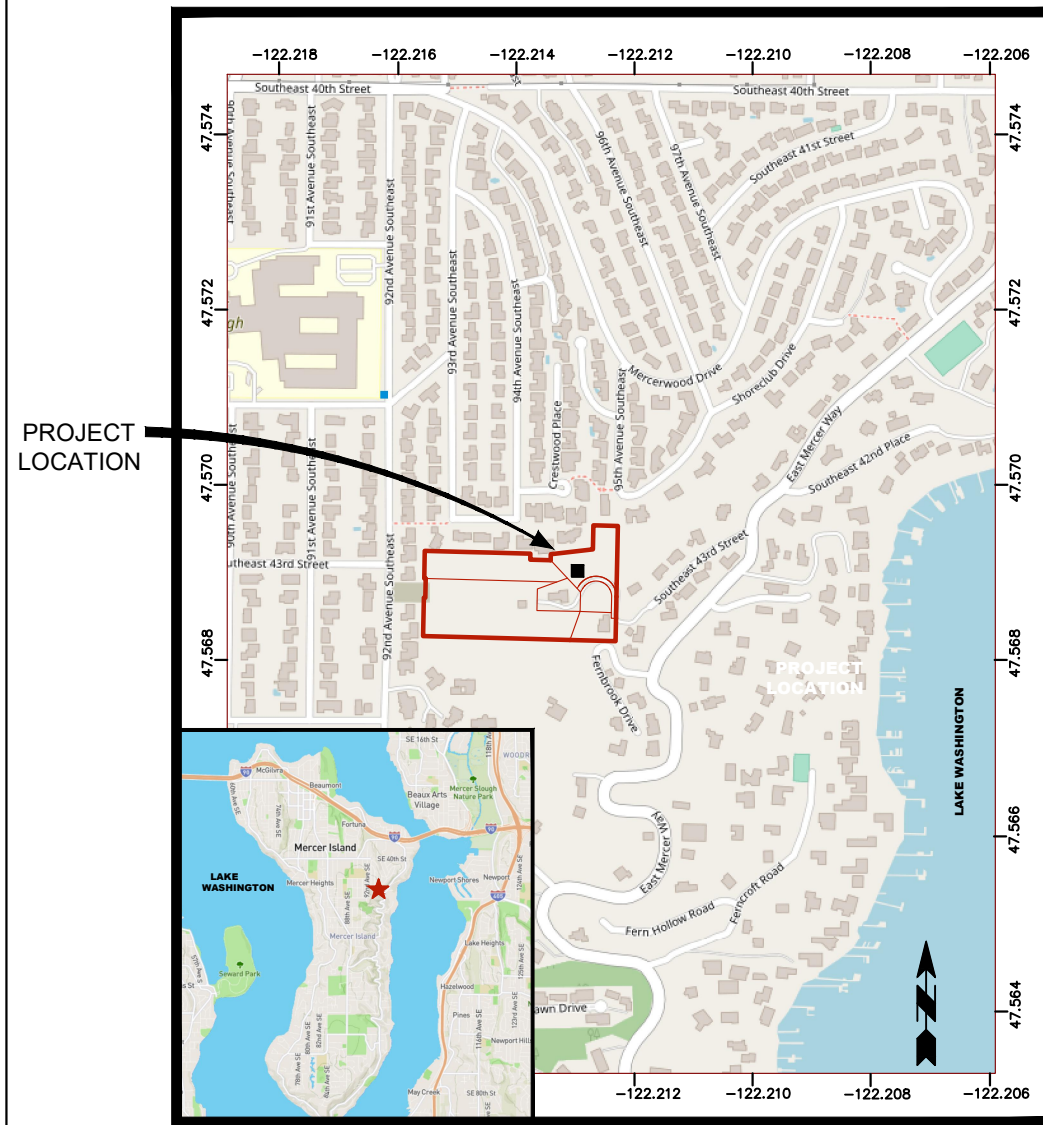


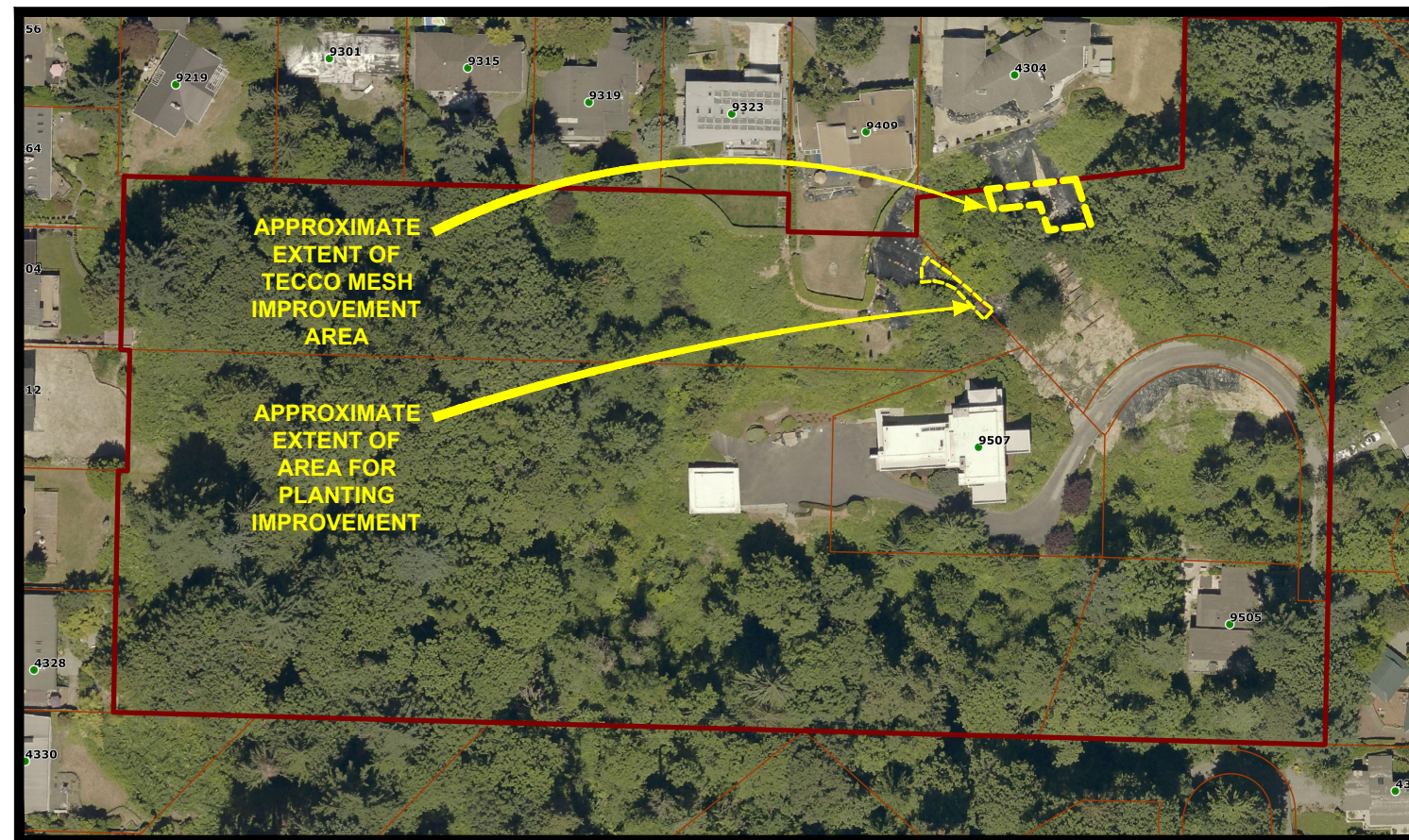
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SLOPE STABILIZATION PLAN



VICINITY MAP
NOT TO SCALE



LOCATION MAP
SCALE: 1" = 120'



SHEET INDEX

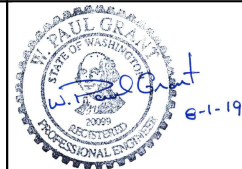
SHEET	DESCRIPTION
1	COVER AND INDEX SHEET
2	SITE PLAN - GROUND ANCHOR LAYOUT
3	NOTES & TECCO G65/3 SYSTEM DRAWING
4	WIRE ROPE ANCHOR DETAILS



Know what's below.
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3213 Eastlake Ave E Ste B
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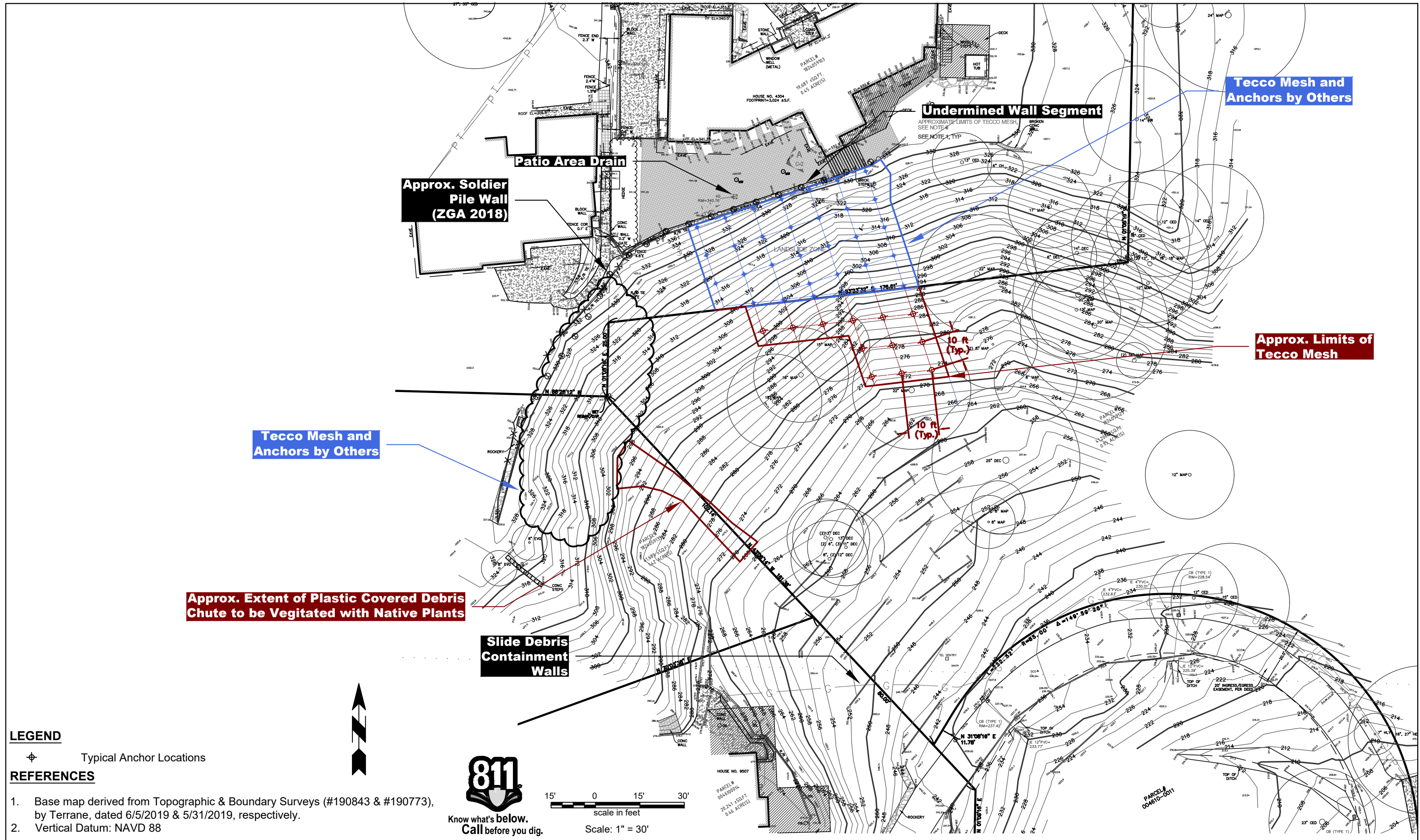
SYM	DESCRIPTION / REVISIONS	DATE	BY	APP'D

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MERCER ISLAND, WASHINGTON

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COVER AND INDEX SHEET

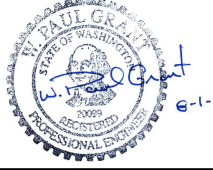
PROJECT NO.
07-073
SHEET
1 of 4



LEGEND
 ⊕ Typical Anchor Locations

- REFERENCES**
1. Base map derived from Topographic & Boundary Surveys (#190843 & #190773), by Terrane, dated 6/5/2019 & 5/31/2019, respectively.
 2. Vertical Datum: NAVD 88

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GENERAL NOTES:

1. THE CONTRACTOR SHALL MOBILIZE EQUIPMENT AND MATERIALS AS NECESSARY TO SAFELY PERFORM CONSTRUCTION OF LANDSLIDE STABILITY IMPROVEMENTS MEASURES, INSTALLATION OF GROUND ANCHORS, INSTALLATION OF PERMANENT EROSION CONTROL/TURF REINFORCEMENT MAT, AND INSTALLATION OF TECCO MESH AS ILLUSTRATED ON THE DRAWINGS.
2. THE CONTRACTOR SHALL COMPLY WITH APPLICABLE LOCAL, STATE AND FEDERAL SAFETY CODES AND REGULATIONS AND SPECIFICATIONS FOR THIS CONTRACT.
3. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION FOR CONFLICTS WITH EXISTING UTILITIES OR OTHER ITEMS THAT MIGHT IMPAIR CONSTRUCTION ACTIVITIES. INCONSISTENCIES FOUND SHALL BE REPORTED TO THE PROJECT ENGINEER.
4. THE CONTRACTOR SHALL SUBMIT AND RECEIVE THE ENGINEER'S APPROVAL OF THE CONTRACTOR'S OPERATIONS PLAN. EACH ITEM OF WORK SHALL BE DESCRIBED AND ACCOUNTED FOR IN THE WORK PLAN. SUBMITTALS SHALL INCLUDE WORK PLANS, DESIGN DRAWINGS, CALCULATIONS, PRODUCT DATA, TEST REPORTS, CERTIFICATES, AND MANUFACTURERS' INSTRUCTIONS.
5. EXCAVATED MATERIAL SHALL BE LEFT ON SITE AT A LOCATION APPROVED BY THE OWNER / ENGINEER.
6. ANY DISCREPANCIES BETWEEN THE PLANS AND PHYSICAL CONDITION SHALL BE REPORTED TO THE ENGINEER.
7. GROUND ANCHORS, SLOPE MESH, PERMANENT EROSION CONTROL/TURF REINFORCEMENT MATTING AND DRAINAGE FEATURES SHOULD BE INSTALLED IN ACCORDANCE WITH MANUFACTURE'S RECOMMENDATIONS AND THESE DRAWINGS.

14. ALL GROUND ANCHORS SHOULD BE PROOF TESTED TO 1.33 TIMES THE DESIGN LOAD (DL) ACCORDING TO THE PROOF TEST STEPS LISTED AND IN ACCORDANCE WITH PTI DC35.1-14 SECTION C8.0. PROOF TESTING SHOULD BE PERFORMED UNDER OBSERVATION OF THE ENGINEER.
15. AFTER PROOF TESTING, LOCK-OFF ANCHORS AT A LOAD OF 4.5 KIPS.
16. FOR NON-SYMMETRIC LAYOUTS, USE MINIMUM OVERLAP AT WIDEST POINT AND INCREASE OVERLAP AS REQUIRED.
17. MINIMUM OF FOUR WIRE ROPE CLIPS ARE REQUIRED FOR SPLICES ON WIRE ROPE SMALLER THAN 22 MILLIMETERS (APPROXIMATELY 7/8").
18. BOUNDARY ROPES SHALL BE STEEL WIRE ROPE WITH A MINIMUM DIAMETER OF 10MM (APPROXIMATELY 0.4-INCH). BOUNDARY ROPES TO BE INSTALLED JUST OUTSIDE OF TYPICAL GROUND ANCHORS (NOT INCLUDING BOUNDARY ROPE ANCHORS OR STAKES) SUCH THAT THE ANCHOR SPIKE PLATES HOLD THE ROPE IN PLACE. BOUNDARY ROPES SHALL BE CONNECTED TO THE MESH USING PRESS CLAW TYPE 2 CONNECTION CLIPS IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS.
19. P33 SPIKE PLATES TO BE USED WITH TECCO MESH.
20. DOMED HEX NUTS TO BE USED (DOME SIDE DOWN) WITH SPIKE PLATES TO SECURE TECCO MESH.

PROOF TEST STEPS
ALIGNMENT LOAD (AL)
0.25 DESIGN LOAD (DL)
0.50 DESIGN LOAD (DL)
0.75 DESIGN LOAD (DL)
1.00 DESIGN LOAD (DL)
1.20 DESIGN LOAD (DL)
1.33 DESIGN LOAD (DL) - MIN. 10 MINUTE HOLD
AL
ADJUST TO LOCK-OFF LOAD

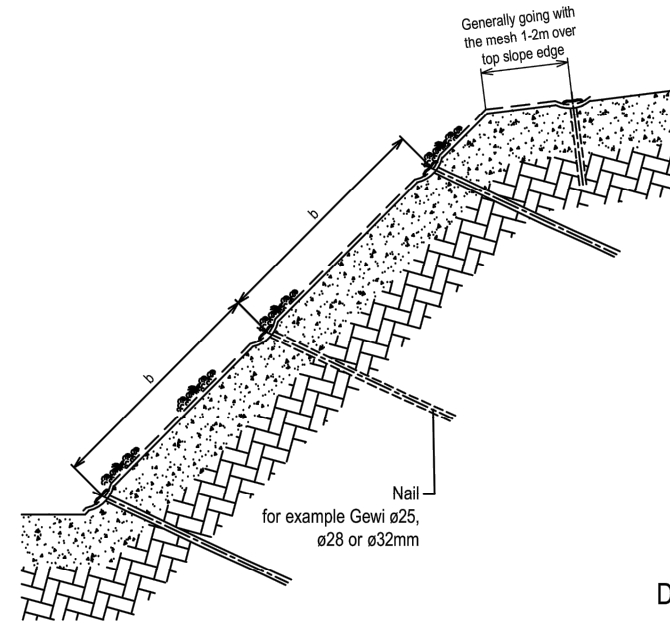
MEASUREMENT AND PAYMENT:

1. THE CONTRACTOR SHALL MAKE ALL MEASUREMENTS AND COMPUTE QUANTITIES. MEASUREMENT AND QUANTITIES ARE SUBJECT TO ENGINEER'S REVIEW AND VERIFICATION.
2. IF ACTUAL WORK REQUIRES QUANTITIES GREATER OR LESS THAN THE QUANTITIES INDICATED, THE CONTRACTOR WILL PROVIDE THE REQUIRED QUANTITIES AT THE UNITED PRICES CONTRACTED.
3. FOR EACH PAY ITEM, IT SHALL BE UNDERSTOOD THAT EACH PAY ITEM INCLUDES ALL REQUIRED LABOR, PRODUCTS, TOOLS, EQUIPMENT, MATERIALS, MACHINERY, TRANSPORTATION, SERVICES, INCIDENTALS, OVERHEAD AND PROFIT, SUPPLIES, SUPERVISION, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK DESCRIBED, UNLESS SPECIFICALLY EXCLUDED BY THE PAY ITEM DESCRIPTION.

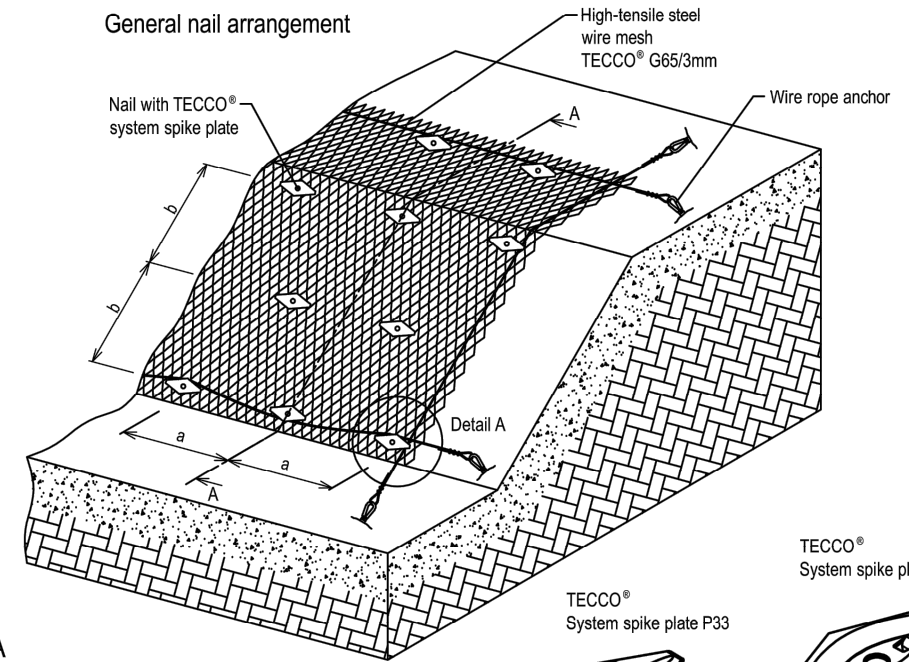
STABILIZATION IMPROVEMENT NOTES:

1. DEBRIS, LOOSE SOIL AND ANY BRUSH OR VEGETATION ON THE FACE OF THE SLOPE SHALL BE REMOVED AND THE SLOPE SHALL BE SMOOTHED TO A STABLE INCLINATION PRIOR TO MESH AND ANCHOR INSTALLATION.
2. ANY AREA ERODED BY PREVIOUS SLOPE FAILURE MAY BE FILLED WITH EXCAVATED MATERIAL TO AVOID ADDITIONAL EXCAVATION OF THE SURROUNDING SLOPE, SO LONG AS IT CAN BE DEMONSTRATED THAT THE MATERIAL WILL REMAIN IN PLACE THROUGHOUT MESH INSTALLATION.
3. SLOPE MESH SHALL BE HIGH TENSILE STRENGTH STEEL WIRE TECCO® G-65/3 MESH MANUFACTURED BY GEOBRUGG AG.
4. TECCO MESH SHALL CONFORM TO THE TOP OF FINISHED SOIL SURFACE AS CLOSELY AS POSSIBLE, PERMANENT EROSION CONTROL/TURF REINFORCEMENT MATTING SHALL BE PLACED IN BETWEEN THE SLOPE SURFACE AND TECCO MESH AND SHALL BE SECURELY ATTACHED TO THE ANCHORS AND MESH.
5. ANCHOR SPACING SHALL NOT EXCEED 10 FEET IN EITHER THE HORIZONTAL OR VERTICAL DIRECTION.
6. ANCHOR AND STAKE LOCATIONS AS WELL AS LIMITS OF TECCO MESH SHOWN ARE APPROXIMATE AND MAY BE ADJUSTED DURING CONSTRUCTION. THE ACTUAL LOCATIONS SHALL BE DETERMINED IN THE FIELD BASED ON THE PRESCRIBED PATTERN AND SITE CONDITIONS AS APPROVED BY THE ENGINEER.
7. MINIMUM TYPICAL ANCHOR LENGTHS SHALL BE 10 FEET, INSTALLED DECLINED 20 DEGREES BELOW HORIZONTAL.
8. MINIMUM BOUNDARY ROPE ANCHOR LENGTHS SHALL BE 6 FEET, INSTALLED APPROXIMATELY NORMAL TO THE GROUND SURFACE.
9. STAKES INSTALLED IN THE SLOPE ARE MEANT TO HOLD THE MESH AND MATTING IN PLACE AND MAY BE SELECTED BY THE CONTRACTOR.
10. DETAILS FOR DRILLED ANCHORS ARE FOR BIDDING PURPOSES. ALTERNATE ANCHOR TYPES MAY BE USED PROVIDED THEY HAVE A MINIMUM LENGTH OF 20 FEET; A MINIMUM PULLOUT CAPACITY (DESIGN LOAD) OF 30 KIPS AND A MINIMUM YIELD SHEAR STRENGTH OF 16 KIPS.
11. GROUDED GROUND ANCHORS, SHALL BE INSTALLED AND GROUDED DURING THE SAME SHIFT THAT THE HOLES ARE DRILLED
12. PLACE CENTRALIZERS STARTING 3 FEET FROM THE BOTTOM OF THE DRILL HOLE AND SPACE NO MORE THAN 5 FEET APART. THE CENTRALIZER CLOSEST TO THE COLLAR OF THE HOLE SHALL BE NO MORE THAN 3 FEET FROM THE STEEL BEARING PLATE.
13. THE GROUND ANCHOR TESTING ASSEMBLY IS TO BE DESIGNED BY THE CONTRACTOR, SUBJECT TO THE APPROVAL BY THE ENGINEER. TESTING ASSEMBLY SHOULD MINIMIZE THE USE OF WOOD CRIBBING.

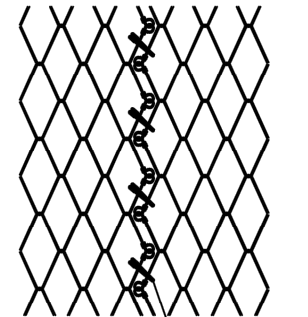
Cross section A-A



General nail arrangement

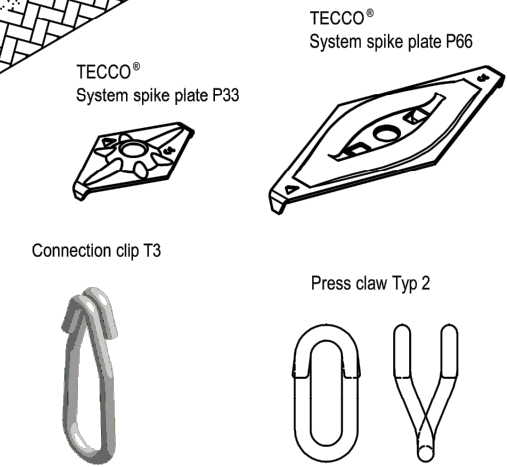
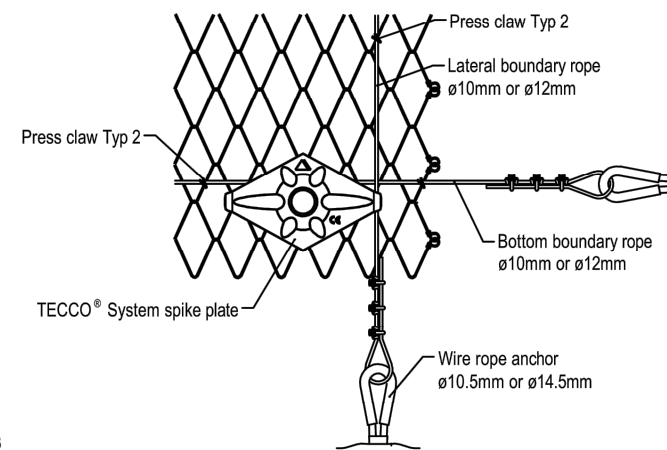


TECCO® mesh connection vertical normally without overlap



Connection clip T3 (1 Clip per mesh)

Detail A



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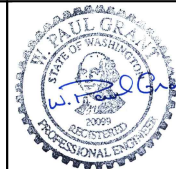
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modification:	M:%	substitute for: GE-1003e ed. 06.12.16
-		replaced by:
TECCO® G65/3 System drawing		drawn 20.06.19 BIH
		checked 20.06.19 BIH
		approved 20.06.19 ROA1
GEOBRUGG AG CH-8590 Romanshorn		GE-1003e



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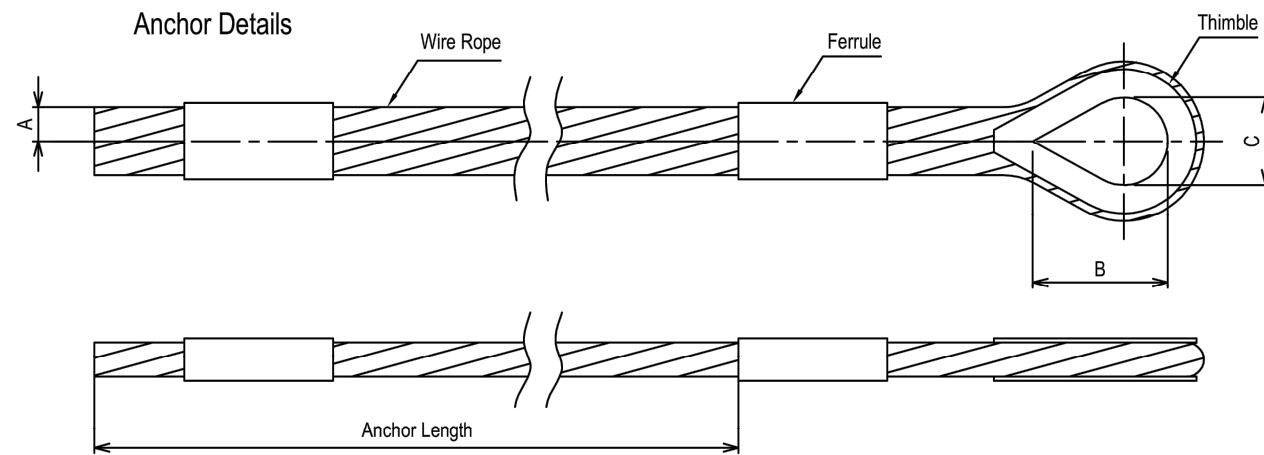
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NOTES & TECCO G65/3 SYSTEM DRAWING

PROJECT NO.	07-073
SHEET	3 of 4



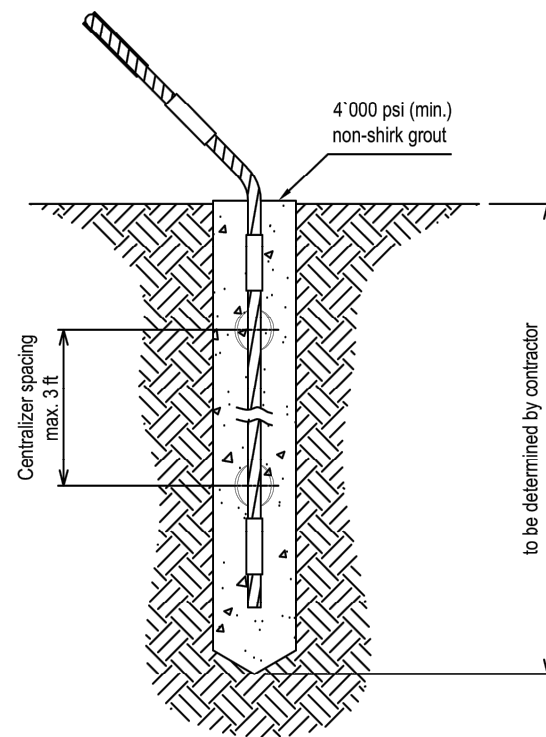
Anchor Size	A [in]	B [in]	C [in]	WL [kips]	
				Double	Single
3/4	3-3/4	2	58.8	29.4	
7/8	4-1/4	2-1/4	79.6	39.8	
1	4-1/2	2-1/2	103.4	51.7	
1-1/8	5-1/8	2-7/8	112.5	56.25	

(1 kN = 0.2248 kips)

Notes:

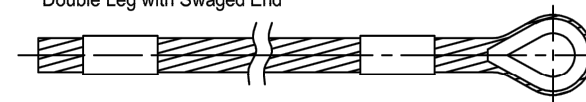
- Drill anchor holes to a diameter and depth (d) determined by the contractor to achieve required pullout strength.
- Anchor hole diameter shall be equal to the rope(s) dia plus 1" (minimum).
- Wire Rope 6x19 IWRC or equivalent, EIPS per ASTM A1023 and Federal specification RR-W-410.
- WL = working load (1/2 breaking strength of the wire rope).
- Thimbles per Federal specification FF-T-276b / ASTM A153.
- Swages Aluminum oval sleeves.

Installed Anchor

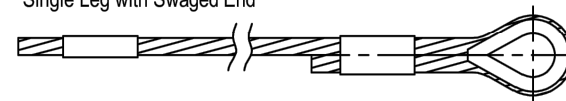


Types of Anchor

Double Leg with Swaged End



Single Leg with Swaged End



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Wire Rope Anchor Details			drawn 17.06.19 BIH
			checked 17.06.19 BIH
			edition 17.06.19 SHT
 Geobrugg North America NM-87001 Algodones			GA-9668 us

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