

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET AND LOCATION MAP
2	TOPOGRAPHIC SURVEY MAP
3	TYPICAL CROSS SECTIONS
4	LAYOUT PLAN
5	REMOVAL PLAN
6	CONSTRUCTION DETAILS
7	PAVEMENT ELEVATION PLAN
8	EROSION CONTROL PLAN
9	DRAINAGE PLAN
10	DRAINAGE PROFILE
11	DETOUR PLAN
12	TRAFFIC HANDLING PLAN
13-19	RETAINING WALL PLANS
20	LOG OF TEST BORINGS

GENERAL NOTES

- ALL CONSTRUCTION SHALL CONFORM TO THE CONTRACT SPECIAL PROVISIONS, COUNTY OF SANTA CRUZ DESIGN CRITERIA, THE STANDARD SPECIFICATIONS AND STANDARD PLANS DATED 2018 OF THE STATE OF CALIFORNIA.
- THERE SHALL BE NO CHANGES IN THE APPROVED IMPROVEMENT PLANS WITHOUT PRIOR APPROVAL BY THE ENGINEER.
- PLEASE CALL "UNDERGROUND SERVICE ALERT" (U.S.A.) AT 811 OR 800-227-2600 AT LEAST 48 HOURS BEFORE DIGGING.
- THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE APPROVED BY THE ENGINEER.
- THE CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS CONTINUOUSLY AND NOT LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY, AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK OF THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.
- THE CONTRACTOR SHALL POSSESS A CLASS "A" LICENSE, ISSUED BY THE STATE OF CALIFORNIA, AT THE TIME THE CONTRACT IS AWARDED.
- LOCATIONS OF UTILITY FACILITIES SHOWN ON THESE PLANS ARE APPROXIMATE. THE EXACT LOCATIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

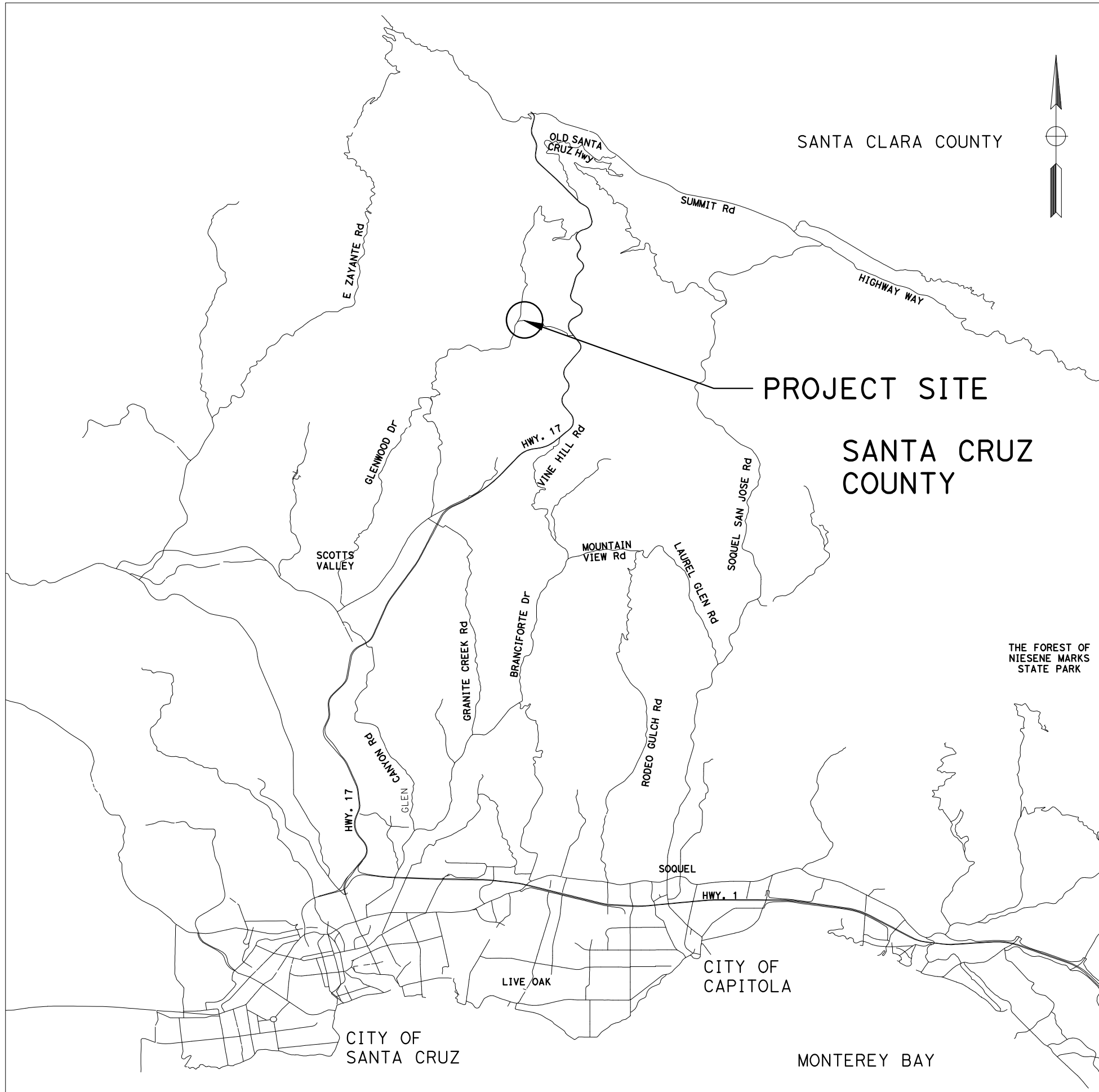
ABBREVIATIONS

ATS	ALTERNATIVE IN-LINE TERMINAL SYSTEM
CA MUTCD	CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
CL, @	CENTER LINE
EL, Elev	ELEVATION
EP	EDGE OF PAVEMENT
LB	POUND
No.	NUMBER
RWL@L	RETAINING WALL LENGTH OF LAYOUT
Std	STANDARD
TYP	TYPICAL

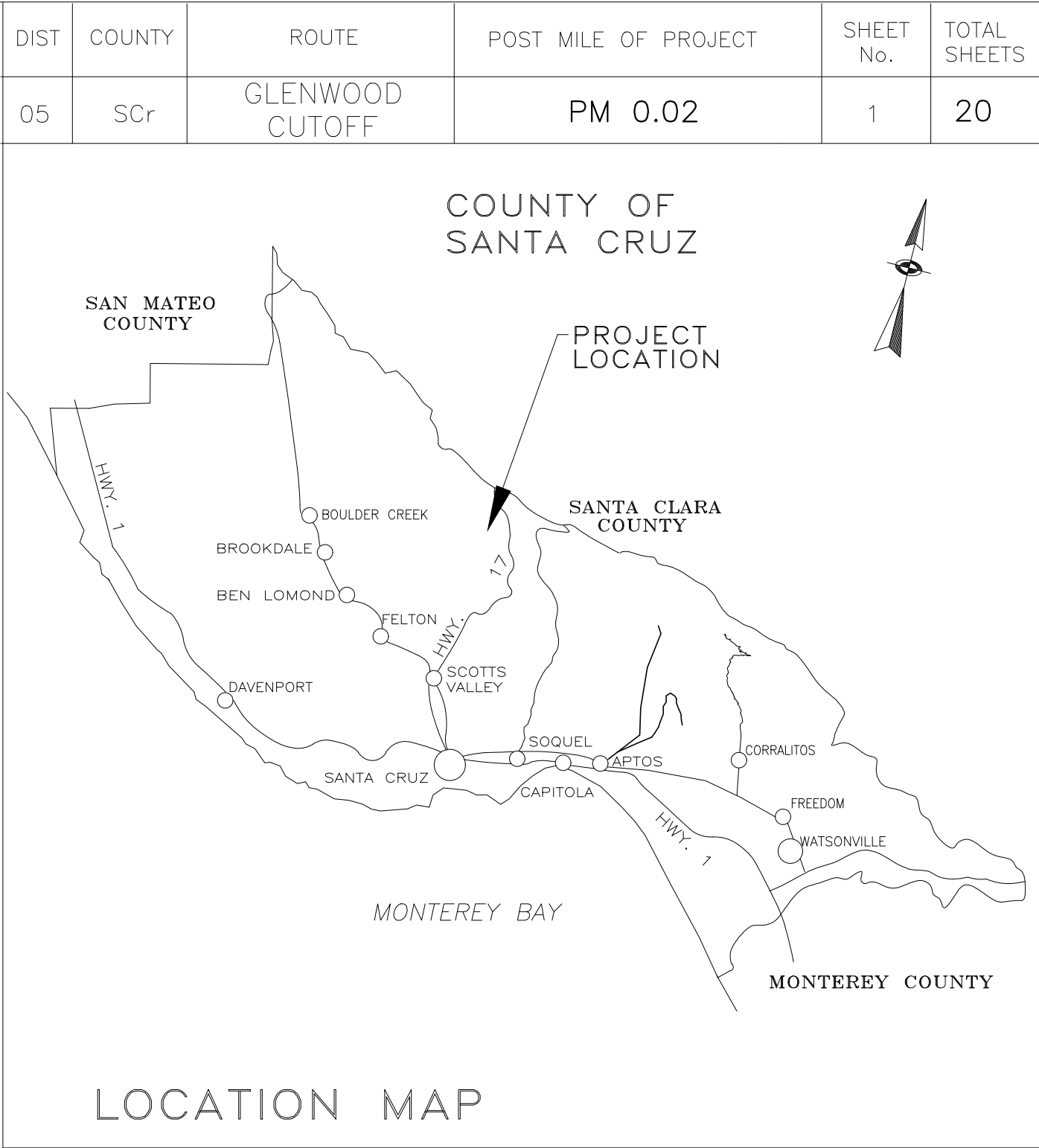
COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS

PROJECT PLANS FOR CONSTRUCTION ON
GLENWOOD CUTOFF PM 0.02
STORM DAMAGE REPAIR PROJECT
FEDERAL PROJECT ER-32LO(005)

To be supplemented by CalTrans Standard Plans dated 2018



VICINITY MAP
NOT TO SCALE



Snehalatha Pavuluri
Design Engineer
Snehalatha Pavuluri



Senior Design Engineer
Joel LaCagnina

Assistant Director of Public Works
Transportation Division
Steve Wiesner

Director of Public Works
Matthew J. Machado

Chair, Board of Supervisors

Date approved by Board of Supervisors

Reviewed by:		Reviewed by:		Reviewed by:	
GREG MARTIN Traffic Engineer		ALEX SANDOVAL Road Superintendent		KATIE BEACH Construction Engineer	

FINAL BID SET

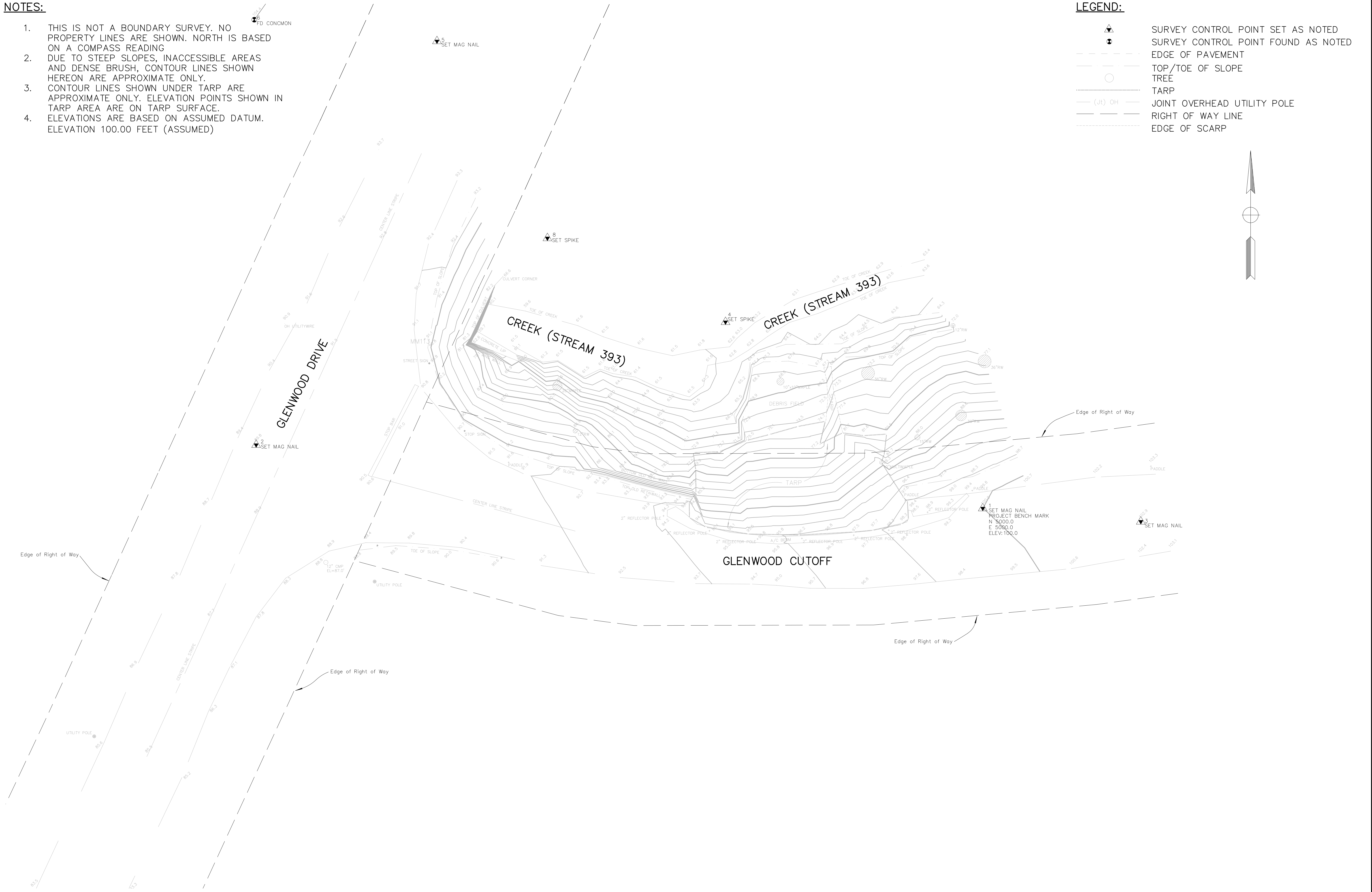
County Job No. P76554

NOTES:

1. THIS IS NOT A BOUNDARY SURVEY. NO PROPERTY LINES ARE SHOWN. NORTH IS BASED ON A COMPASS READING
2. DUE TO STEEP SLOPES, INACCESSIBLE AREAS AND DENSE BRUSH, CONTOUR LINES SHOWN HEREON ARE APPROXIMATE ONLY.
3. CONTOUR LINES SHOWN UNDER TARP ARE APPROXIMATE ONLY. ELEVATION POINTS SHOWN IN TARP AREA ARE ON TARP SURFACE.
4. ELEVATIONS ARE BASED ON ASSUMED DATUM. ELEVATION 100.00 FEET (ASSUMED)

LEGEND:

- SURVEY CONTROL POINT SET AS NOTED
- SURVEY CONTROL POINT FOUND AS NOTED
- EDGE OF PAVEMENT
- TOP/TOE OF SLOPE
- TREE
- TARP
- JOINT OVERHEAD UTILITY POLE
- RIGHT OF WAY LINE
- EDGE OF SCARP



FOR ABBREVIATIONS AND
ADDITIONAL NOTES, SEE TITLE SHEET

TOPOGRAPHIC SURVEY MAP

BY	REVISION	DATE	LAND SURVEYOR	COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS
			OLIN S. EDMUNDSON	GLENWOOD CUTOFF PM 0.02 STORM DAMAGE REPAIR PROJECT
				DRAWN: S. HUYNH
				CHECKED: S. PAWLURI
				DATE: 5/8/2025
				SCALE: 1"=10'
				JOB NO. 320163
				SHEET
				2 OF 20

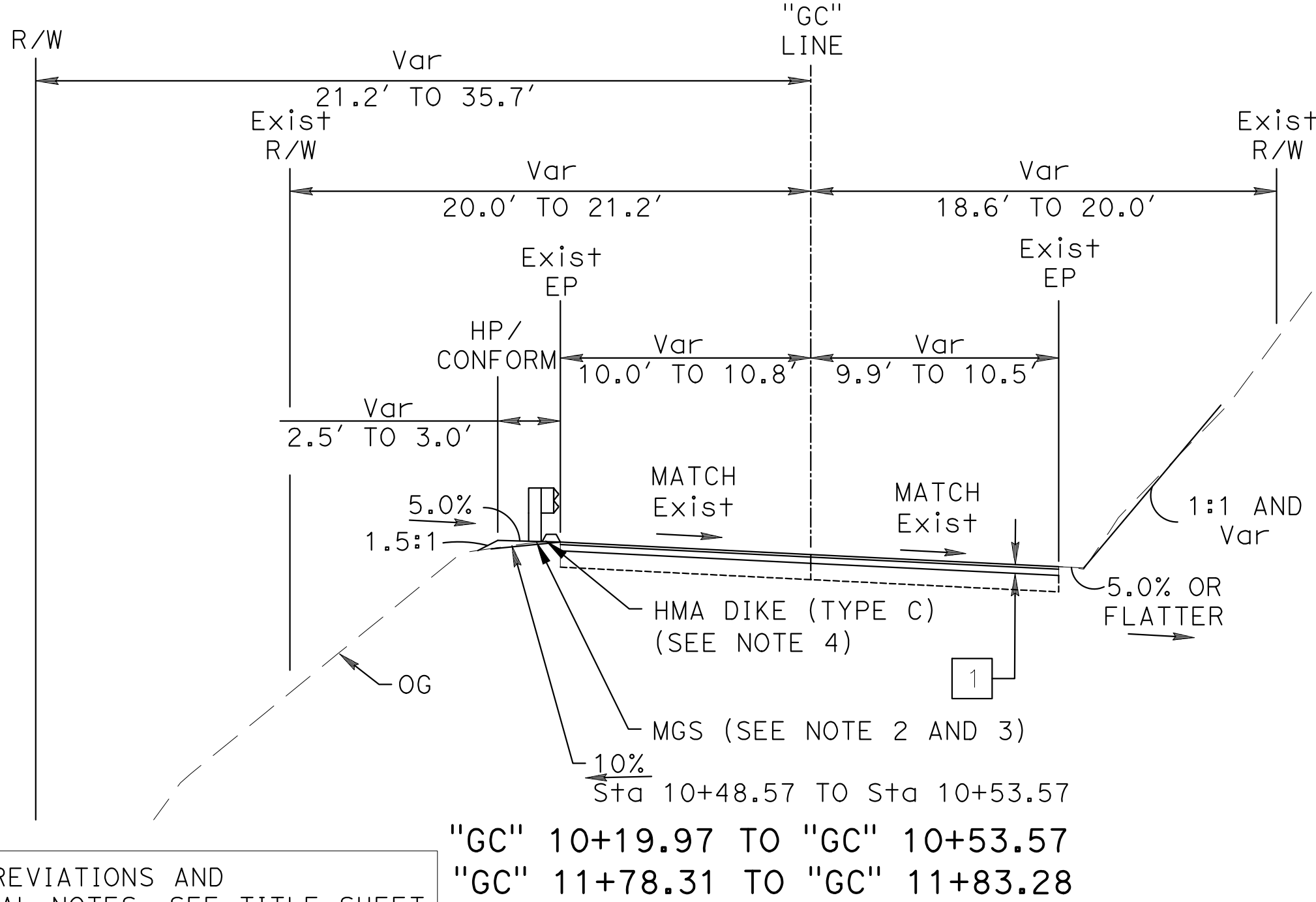
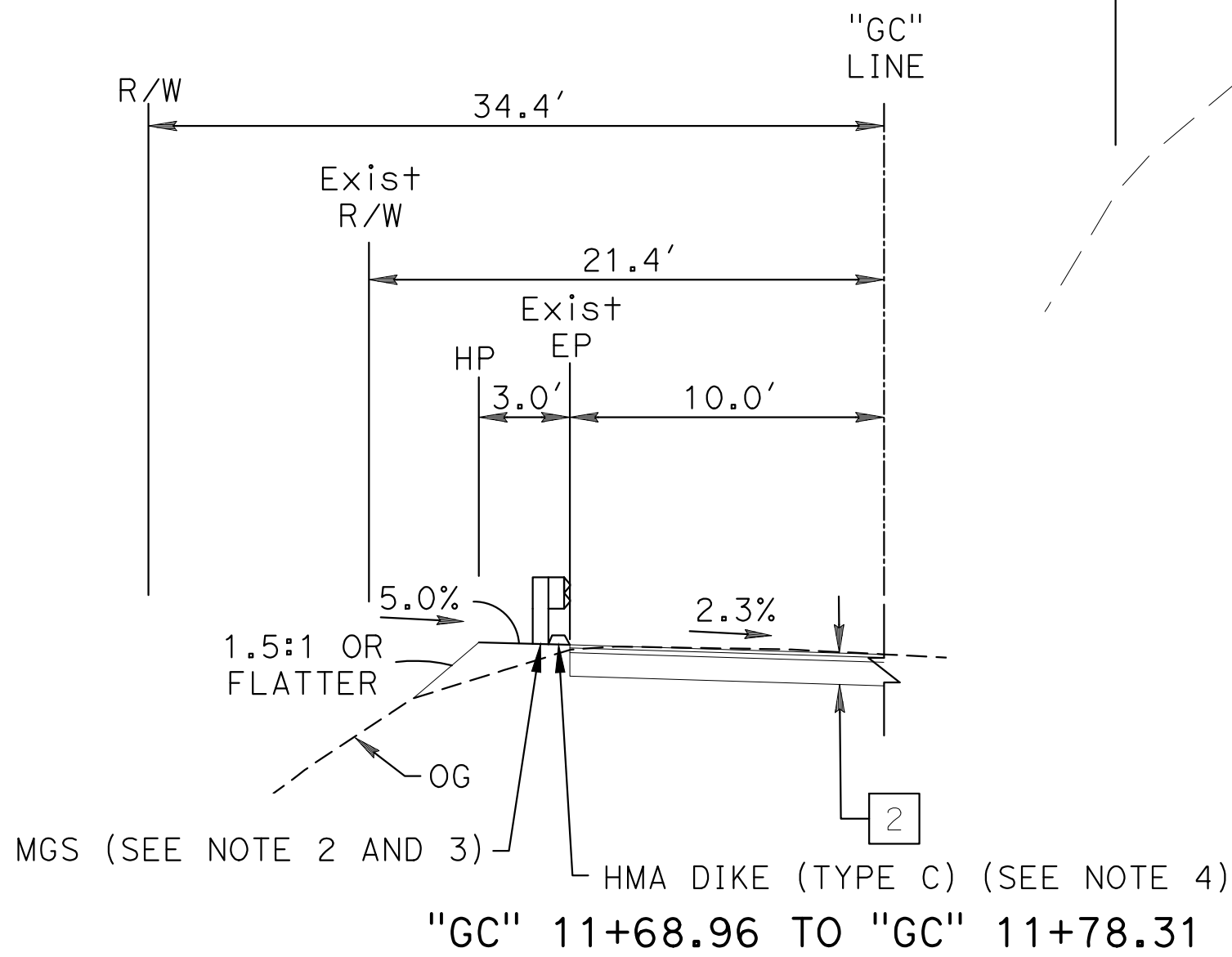
- NOTES:**
- 1. FINAL GRADES OF THE PAVEMENT (STRUCTURAL SECTIONS) ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
 - 2. FOR LIMITS OF MGS, SEE LAYOUT SHEET.
 - 3. FOR MGS INSTALLATION AT NARROW ROAD SECTIONS, SEE DETAIL B OF CALTRANS STANDARD PLAN RSP A77N3.
 - 4. FOR LIMITS OF HMA DIKE, SEE LAYOUT SHEET.
 - 5. FOR LIMITS OF FIBER OR RUBBER MAT VEGETATION CONTROL, SEE LAYOUT SHEET.

**TYPICAL PAVEMENT
STRUCTURE SECTIONS**

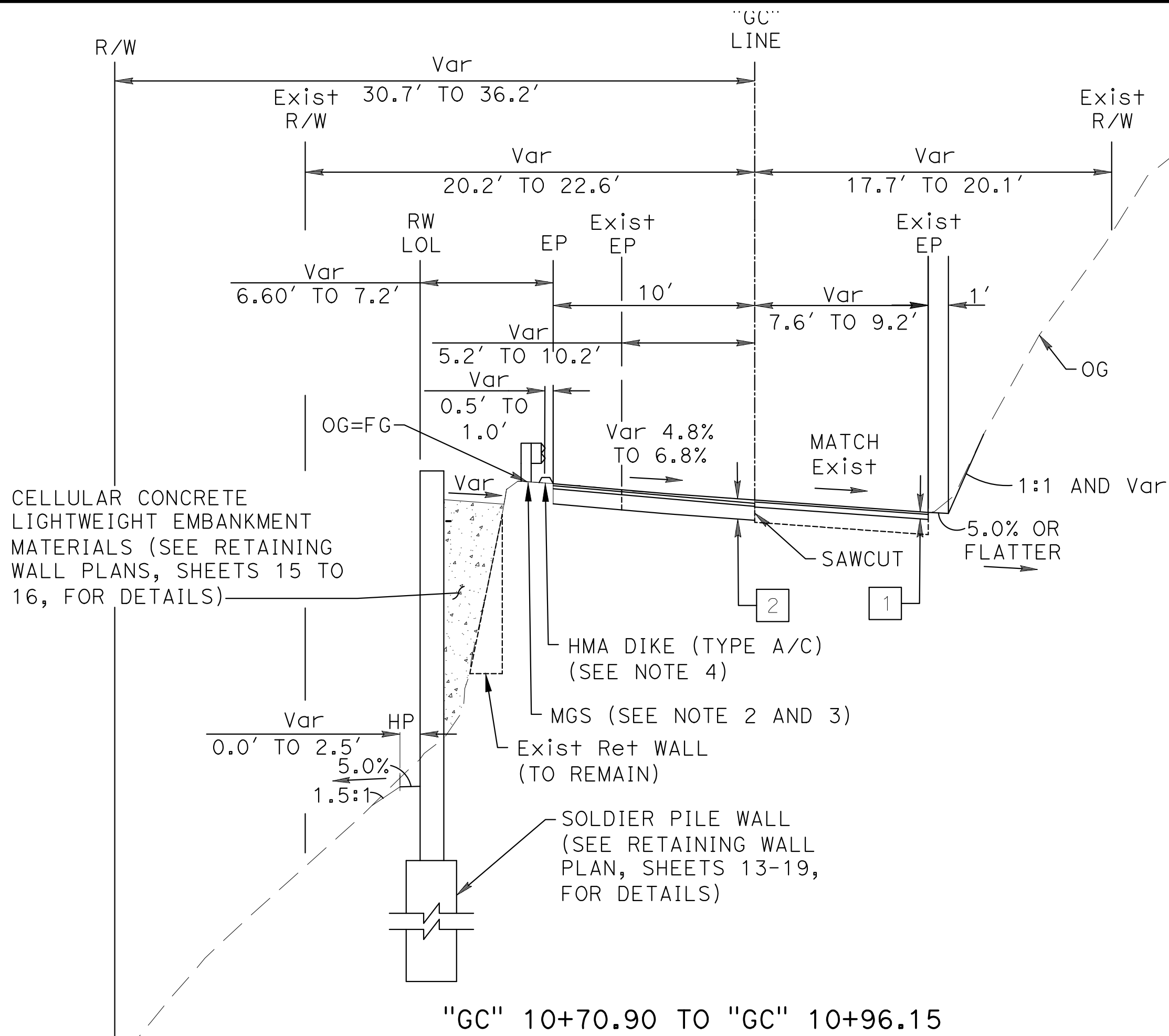
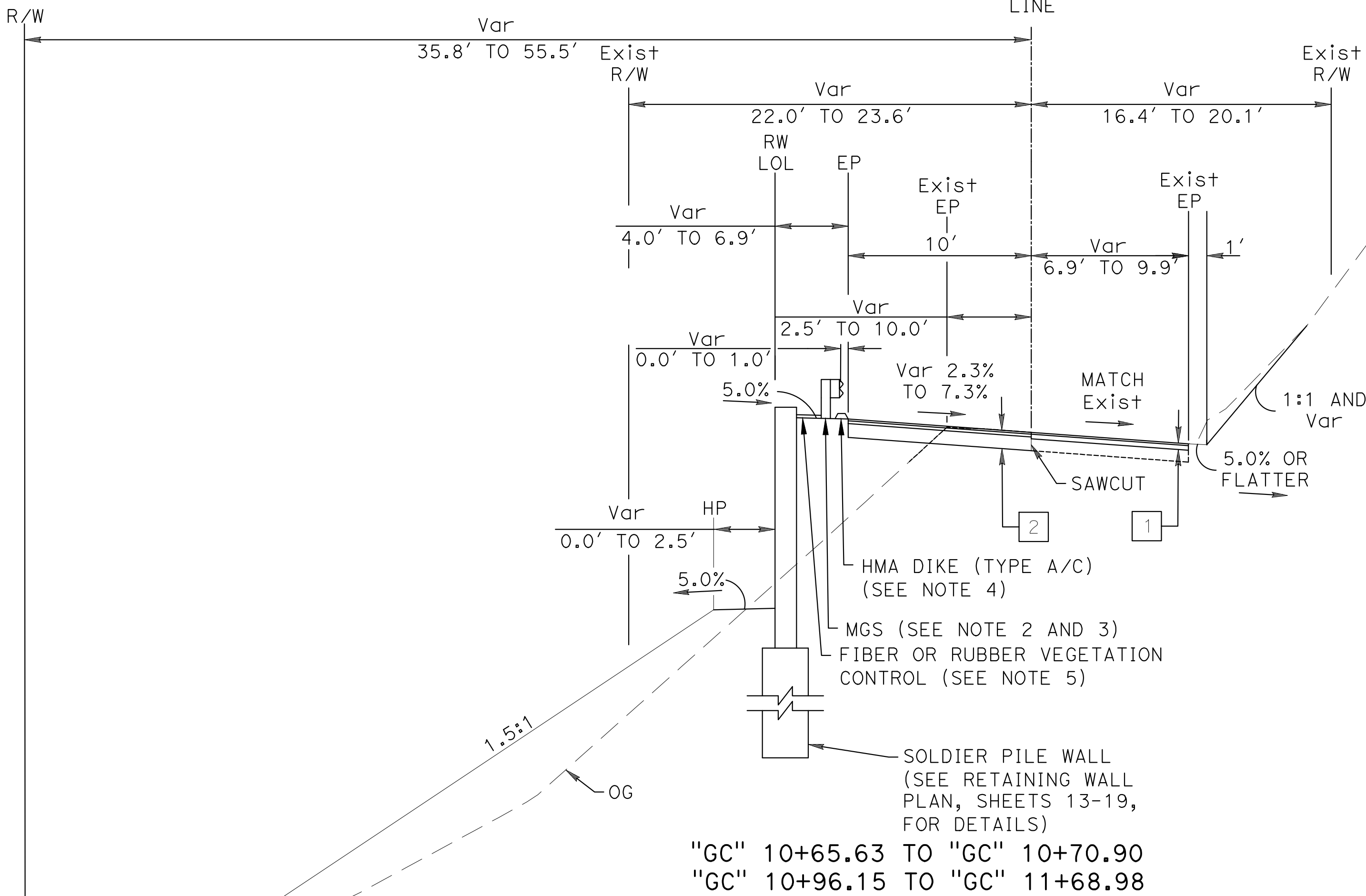
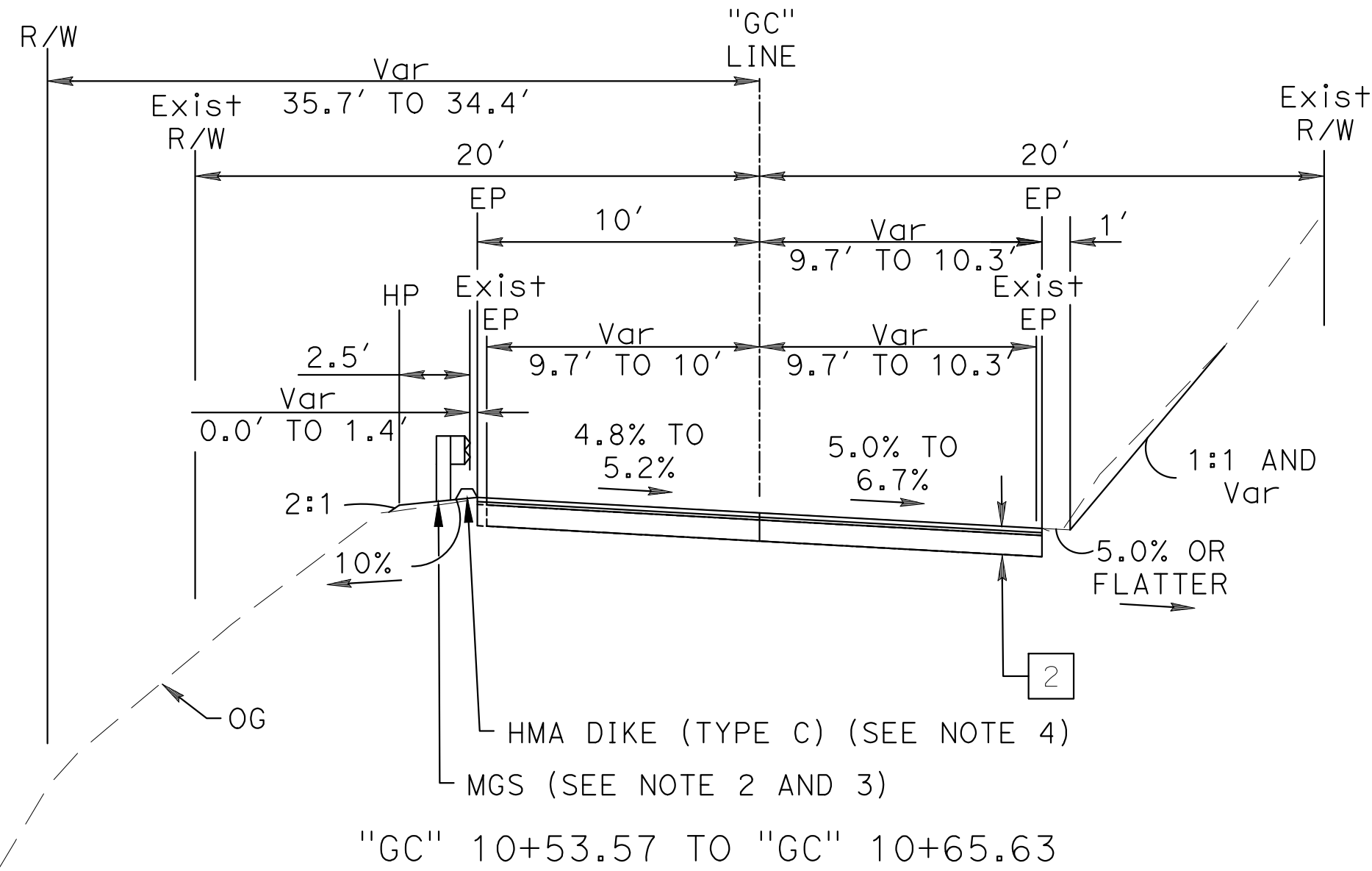
- 1

0.10' COLD PLANE AC
0.25' HMA (TYPE A)
- 2

0.10' HMA (TYPE A) TO BE PLACE CONCURRENTLY WITH 1
0.15' HMA (TYPE A)
0.75' CI 2 AB



FOR ABBREVIATIONS AND
ADDITIONAL NOTES, SEE TITLE SHEET



TYPICAL CROSS SECTIONS

BY	
REVISION	
DATE	
REGISTERED PROFESSIONAL ENGINEER SNEHALATHA PAVULURI No. 024187 Exp. 08/25 SAFE	
PROJECT ENGINEER	
SNEHALATHA PAVULURI	
COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS	
GLENWOOD CUTOFF PM 0.02	
STORM DAMAGE REPAIR PROJECT	
DRAWN: S. HUYNH	
CHECKED: S. PAVULURI	
DATE: 5/8/2025	
SCALE: NO SCALE	
JOB NO. 320163	
SHEET	
3 OF 20	

 COLD PLANE LIMIT

 PAVEMENT REMOVAL LIMIT



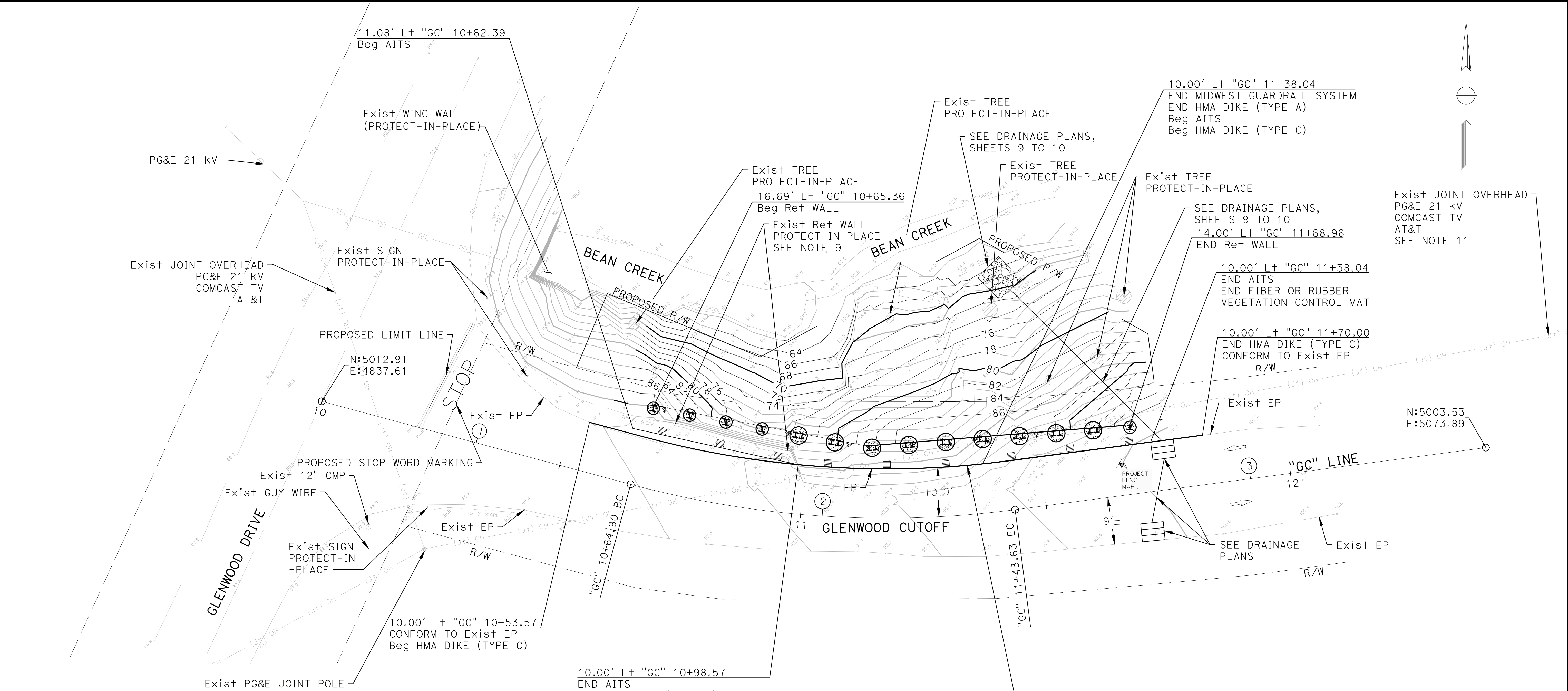
PROJECT ENGINEER

SNEHALATHA PAVULURU

COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS

**GLENWOOD CUTOFF PM 0.02
STORM DAMAGE REPAIR PROJECT**

DRAWN: S. HUYNH
CHECKED: S. PAVULURI
DATE: 5/8/2025
SCALE: 1"=10'
DB NO. 320163
SHEET
4 OF 20



GENERAL CONSTRUCTION NOTES:

1. THE WORK HEREIN SHALL BE DONE WITH THE STANDARD SPECIFICATIONS AND PLANS DATED 2018 OF THE STATE OF CALIFORNIA AS THEY APPLY TO THE PLANS AND SPECIAL PROVISIONS.
2. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE ENGINEER FOR APPROVAL AND SHALL BE RESPONSIBLE FOR PROVIDING ALL CONSTRUCTION AREA SIGNS AND TRAFFIC CONTROL DEVICES. PAYMENT FOR THIS ITEM IS INCLUDED IN CONSTRUCTION AREA SIGNS ITEM 120090 AND TRAFFIC CONTROL SYSTEM ITEM 120100.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ANY PRIVATE OR PUBLIC UNDERGROUND AND OVERHEAD UTILITIES IN GLENWOOD CUTOFF.
4. THE LOCATION OF UTILITIES AS SHOWN IN THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL OF THE UTILITIES IN THE FIELD.
5. THE CONTRACTOR SHALL PROTECT EXISTING HIGHWAY FACILITIES AND FEATURES, TREES, AND LANDSCAPING AREA UNLESS OTHERWISE NOTED.
6. MIDWEST GUARDRAIL SYSTEM DELINEATION SHALL BE PER CALTRANS S+d PLAN RSP A77N4. DELINEATORS SHALL BE INSTALLED ON EVERY THIRD STEEL POST.
7. THE MGS POST SPACING TO BE 6'-3" CENTER TO CENTER, EXCEPT AS OTHERWISE NOTED.
8. LIMITS OF MGS SYSTEM SHOWN ON PLAN SHEETS ARE APPROXIMATE AND SHOULD BE FIELD ADJUSTED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.
9. AT LOCATIONS WHERE ADDITIONAL EMBEDMENT DEPTH IS REQUIRED FOR MGS SYSTEM INSTALLATION, REMOVE TOP LAYER OF EXISTING CRIB WALL HEADERS AS NEEDED.
10. WHERE THE DISTANCE BETWEEN THE BACK OF THE POST AND THE HINGE POINT IS LESS THAN 7", THE POST LENGTH SHOULD BE 7'. SEE CALTRANS STD. PLAN RSP A77N3 DETAIL B.
11. OVERHEAD UTILITY LINES TO REMAIN IN PLACE DURING CONSTRUCTION. MAINTAIN SAFE CLEARANCE FROM THE OVERHEAD UTILITY LINES. IF NECESSARY, THE CONTRACTOR SHALL DEVELOP MEAN AND METHODS TO WORK AROUND THE EXISTING OVERHEAD UTILITY LINES, NO ADDITIONAL COMPENSATION IS DUE TO THE CONTRACTOR FOR THIS WORK.

FOR ABBREVIATIONS AND
ADDITIONAL NOTES, SEE TITLE SHEET

CONTROL LINE DATA							
CONTROL LINE SEGMENT	BEGIN Sta	END Sta	R	DELTA	L	T	BEARING
①	10+00.00	10+64.90			64.90		S74°57'30"E
②	10+64.90	11+43.63	200.00'	22°33'11"	78.73'	39.88'	
③	11+43.63	12+40.00			96.37		N82°29'19"E

LAYOUT PLAN

BY

REVISION

DATE

PROJECT ENGINEER

SNEHALATHA PAVULURI

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

GLENWOOD CUTOFF PM 0.02
STORM DAMAGE REPAIR PROJECT

DRAWN: S. HUYNH

CHECKED: S. PAVULURI

DATE: 5/8/2025

SCALE: 1"=10'

JOB NO. 320163

SHEET

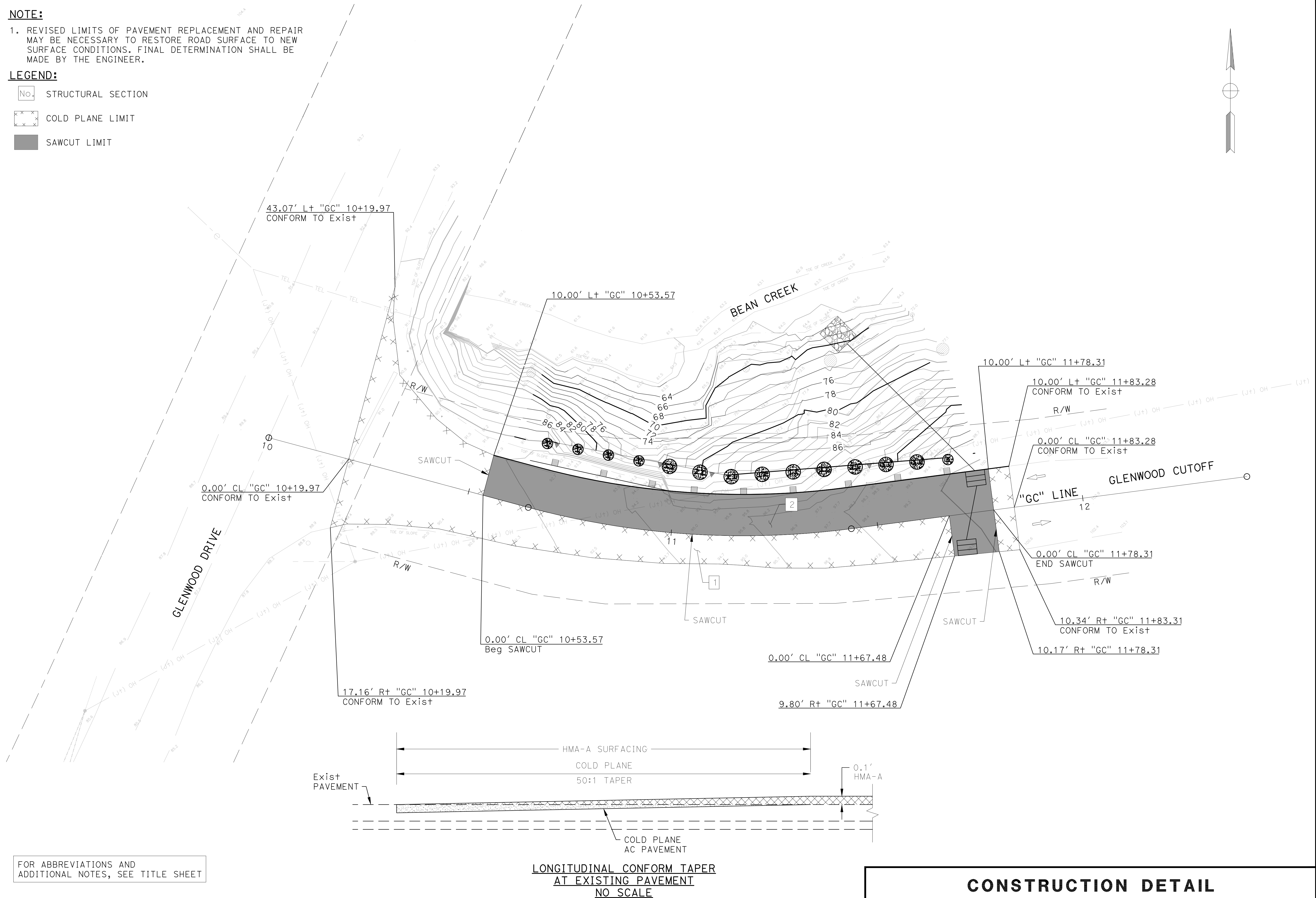
5 OF 20

1. REVISED LIMITS OF PAVEMENT REPLACEMENT AND REPAIR MAY BE NECESSARY TO RESTORE ROAD SURFACE TO NEW SURFACE CONDITIONS. FINAL DETERMINATION SHALL BE MADE BY THE ENGINEER.

No. STRUCTURAL SECTION



COLD PLANE LIMIT

 SAWCUT LIMIT

FOR ABBREVIATIONS AND
ADDITIONAL NOTES, SEE TITLE SHEET

CONSTRUCTION DETAIL

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS GLENWOOD CUTOFF PM 0.02 STORM DAMAGE REPAIR PROJECT	PROJECT ENGINEER SNEHALATHA PAVULURI		
		DATE	REVISION
DRAWN: G. SAECHAO CHECKED: S. PAVULURI DATE: 5/8/2025 SCALE: 1"=10' JOB NO. 320163 SHEET 6 OF 20			

LEGEND:

- EROSION CONTROL (TYPE 1)
- TEMPORARY IMPACT MITIGATION
(1,200 SQFT)
- PERMANENT IMPACT MITIGATION
(1,340 SQFT)

RIPARIAN SHRUB MITIGATION PLANTING PALETTE

PLANT SPECIES	PLANT SPACING RECOMMENDATIONS
COAST REDWOOD (SEQUOIA SEMPERVIRENS)	SAPLINGS 6-10 FEET ON CENTER; 15-GALLON CONTAINERS 8-12 FEET ON CENTER
PACIFIC WILLOW (SALIX LASIANDRA)	12-15 FEET ON CENTER
THIMBLEBERRY (RUBUS PARVIFLORUS)	8-10 FEET ON CENTER
COFFEEBERRY (FRANGULA CALIFORNICA)	8-10 FEET ON CENTER
WESTERN BURNING BUSH (EUONYMUS OCCIDENTALIS)	8-10 FEET ON CENTER
CALIFORNIA BLACKBERRY (RUBUS URSINUS)	8-10 FEET ON CENTER

SEED MIX

BOTANICAL NAME (COMMON NAME)	PERCENT GERMINATION (MINIMUM)	POUNDS PURE LIVE SEED PER ACRE (SLOPE MEASUREMENT)
BROMUS CARINATUS (CALIFORNIA BROME)	55	25
ELYMUS GLAUCUS (BLUE WILDRYE)	56	10
VULPIA MICROSTACHYS (THREE WEEKS FESCUE)	53	6
TRIOLIUM WILDENOVII (TOMCAT CLOVER)	53	4
HORDEUM VULGARE, STERILE (BARLEY, STERILE)	70	25

EROSION CONTROL (TYPE 1)

SEQUENCE	ITEM	MATERIAL		APPLICATION RATE	DEPTH	REMARKS
		DESCRIPTION	TYPE			
STEP 1	RECP (TRM)	TRM	CALTRANS TYPE B	-	-	-
STEP 2	FIBER ROLL	FIBER ROLL	8" TO 10" Dia.	-	-	CALTRANS TYPE 1 FIBER ROLL INSTALLATION
STEP 3	HYDROMULCH	SEED	SEE MIX	70 LB/AC	-	-
		FIBER	WOOD	1000 LB/AC	-	-
		TACKIFIER	PSYLLIUM	125 LB/AC	-	-
		FERTILIZER	-	800 LB/AC	-	-

FOR ABBREVIATIONS AND
ADDITIONAL NOTES, SEE TITLE SHEET

EROSION CONTROL PLAN

BY

REVISION

DATE

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER SEWELL
No. 64407
Exp. 6/30/25
CIVIL
STATE OF CALIF.

PROJECT ENGINEER
CHRISTOPHER SEWELL

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

GLENWOOD CUTOFF P.M. 0.02

STORM DAMAGE REPAIR PROJECT

DRAWN:A. YIM

CHECKED:C. SEWELL

DATE:05/09/2025

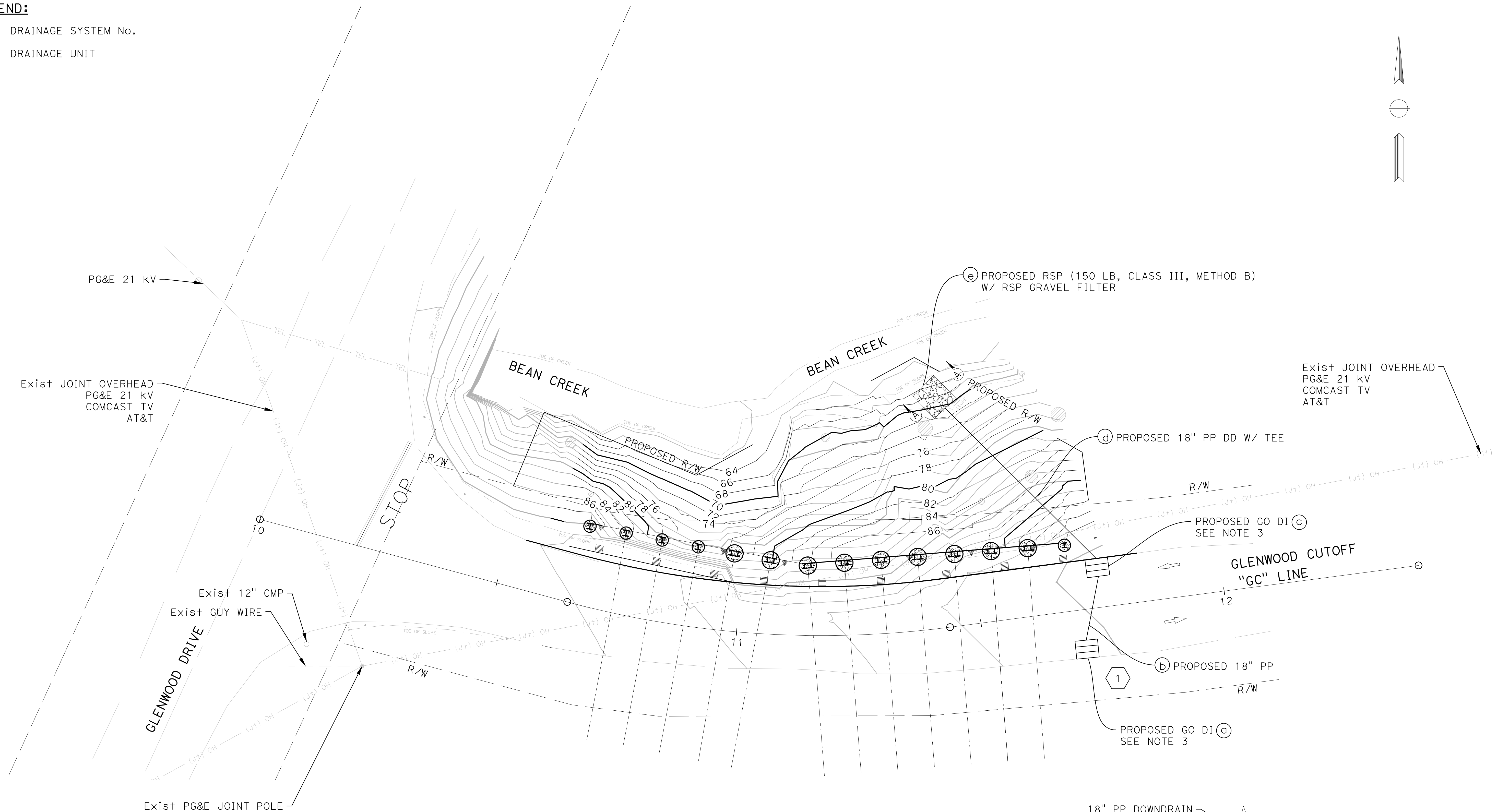
SCALE:1"=10'

JOB NO. 320163

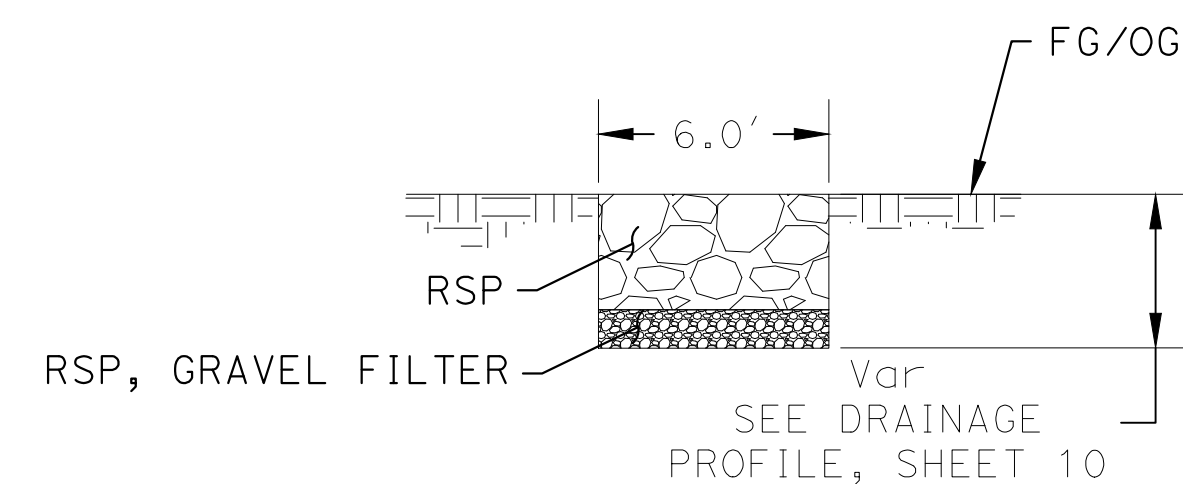
SHEET

8 OF 20

 DRAINAGE SYSTEM No.
 DRAINAGE UNIT



1. CONTRACTOR SHALL INSTALL ANCHOR ASSEMBLY PER CALTRANS Std. PLAN D87C.
2. PIPE TEE SHALL BE CUT IN THE FIELD.
3. GRATE TYPE SHALL BE 24-12X.



18" PP DOWNDRAIN

ADD ANCHOR ASSEMBLY (SEE NOTE 1)

2.0'

RSP

8.25'

4.5'

6.0'

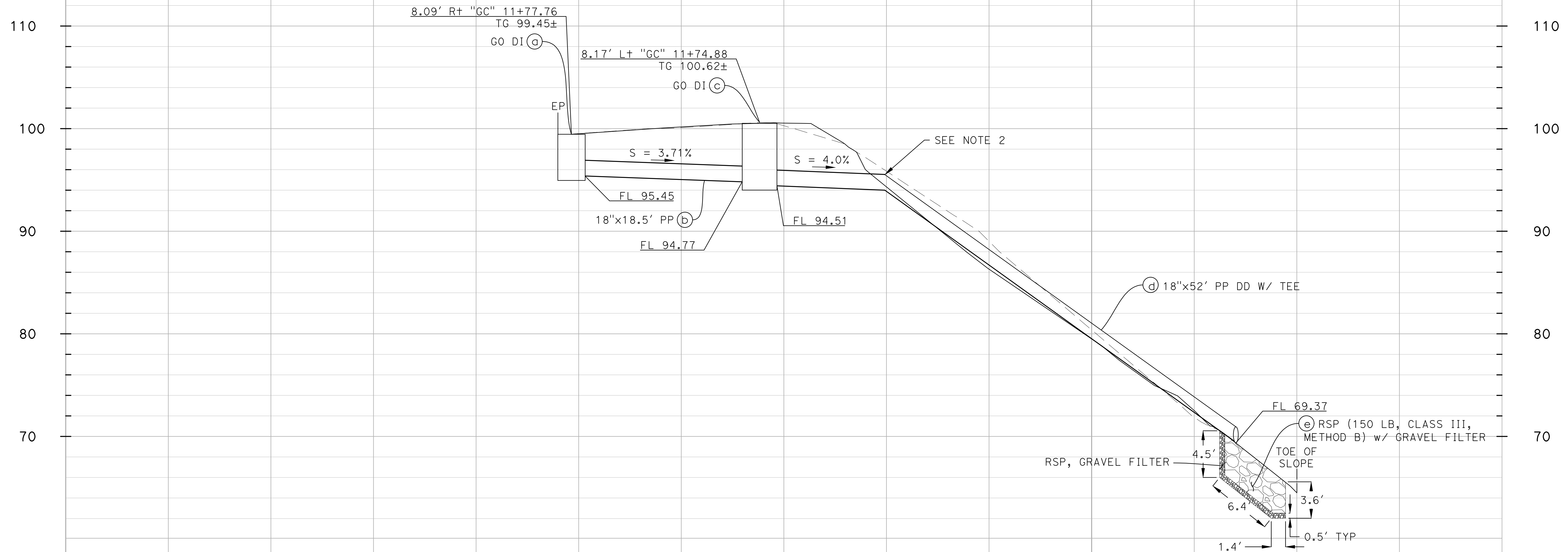
TEE (SEE NOTE 2)

PLAN VIEW OF RSP AND
ANCHOR ASSEMBLY
NTS

FOR ABBREVIATIONS AND
ADDITIONAL NOTES, SEE TITLE SHEET

		PROJECT ENGINEER	SNEHALATHA PAVULURI	COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS GLENWOOD CUTOFF PM 0.02 STORM DAMAGE REPAIR PROJECT	DATE	REVISION	BY
DRAWN: S. HUYNH CHECKED: S. PAVULURI DATE: 5/8/2025 SCALE: 1"=10' JOB NO. 320163			SHEET 9 OF 20				

1. CONTRACTOR TO VERIFY GROUND ELEVATION PRIOR TO PIPE
INSTALLATION.
2. FABRICATED ELBOW MUST BE FIELD CUT TO FIT.



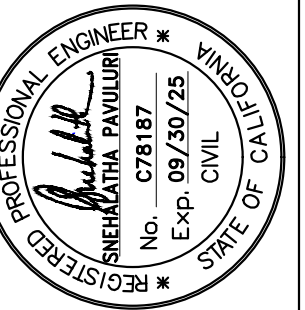
SCALE:
Horiz 1" = 5'
Vert 1" = 5'

DRAINAGE SYSTEM 1

DRAINAGE PROFILE

FOR ABBREVIATIONS AND
ADDITIONAL NOTES, SEE TITLE SHEET

DATE	REVISION	BY



PROJECT ENGINEER
SNEHALATHA PAVULURI

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS
**GLENWOOD CUTOFF PM 0.02
STORM DAMAGE REPAIR PROJECT**

DRAWN: S. HUYNH
CHECKED: S. PAVULURI
DATE: 5/8/2025
SCALE: AS SHOWN
JOB NO. 320163
SHEET

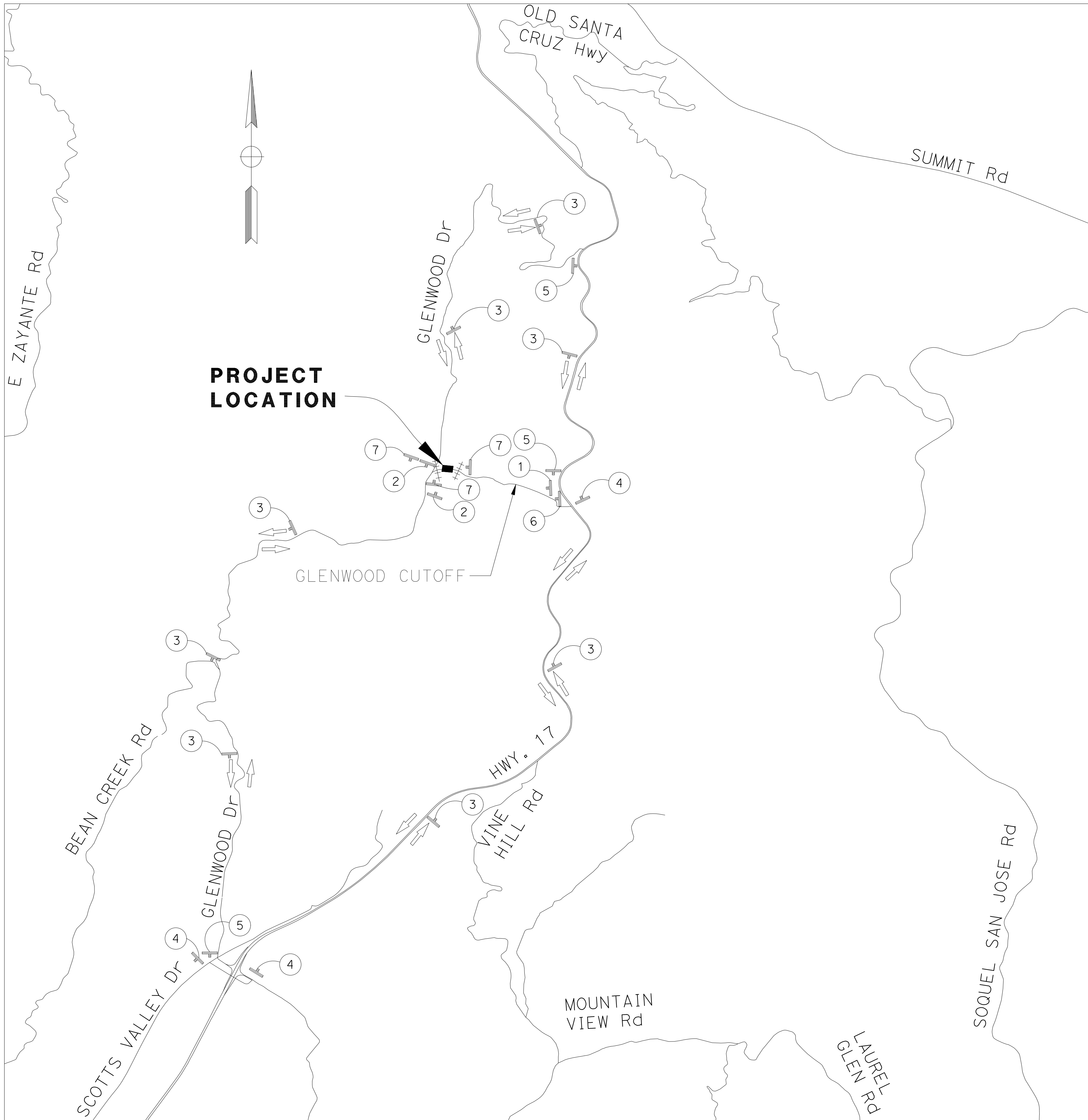
10 OF 20

NOTES:

1. THIS PLAN IS ACCURATE FOR DETOUR PLAN ONLY.
2. EXACT SIGN AND BARRICADE LOCATIONS TO BE DETERMINED BY THE ENGINEER.
3. INSTALL SIGNS TWO WEEKS BEFORE THE COMMENCEMENT OF CONSTRUCTION. DETOUR SIGNS SHALL BE COVERED TILL THE START OF CONSTRUCTION.

LEGEND:

- ➡ DIRECTION OF TRAVEL
⏏ DETOUR SIGN
⊗ SIGN NUMBER
++ TYPE III BARRICADE



STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	PANEL SIZE (INCHES)	SIGN IMAGE	SIGN MESSAGE	POST SIZE	QUANTITY
1	R11-3a	60 x 30		ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY	2-4" x 6"	1
	M4-10	48 x 18		DETOUR WITH ARROW		
	D3-1	VARIES x 12		GLENWOOD CUTOFF		
2	W20-2	36 x 36		DETOUR AHEAD	1-4" x 6"	2
	D3-1	VARIES x 12		GLENWOOD CUTOFF		
3	SC9 (CA)	36 x 36		DETOUR (UP ARROW)	1-4" x 6"	8
	D3-1	VARIES x 12		GLENWOOD CUTOFF		
4	M4-9	30 x 24		DETOUR (WITH L+ ARROW)	1-4" x 6"	3
	D3-1	VARIES x 12		GLENWOOD CUTOFF		
5	M4-9	30 x 24		DETOUR (WITH R+ ARROW)	1-4" x 6"	3
	D3-1	VARIES x 12		GLENWOOD CUTOFF		
6	M4-8a	24 x 18		END DETOUR	1-4" x 6"	1
	D3-1	VARIES x 12		GLENWOOD CUTOFF		
7	SC6-4 (CA) (MOD)	48 x 60		ROAD CLOSED XX XX XX THRU XX XX XX X AM - X PM	2-4" x 6"	3
	D3-1	VARIES x 12		GLENWOOD CUTOFF		

FOR ABBREVIATIONS AND
ADDITIONAL NOTES, SEE TITLE SHEET

DETOUR PLAN

BY

REVISION

DATE

PROJECT ENGINEER
SNEHALATHA PAVULURI

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

**GLENWOOD CUTOFF PM 0.02
STORM DAMAGE REPAIR PROJECT**

DRAWN: S. HUYNH
CHECKED: S. PAVULURI
DATE: 3/14/2025
SCALE: NO SCALE
JOB NO. 320163
SHEET

11 OF 20

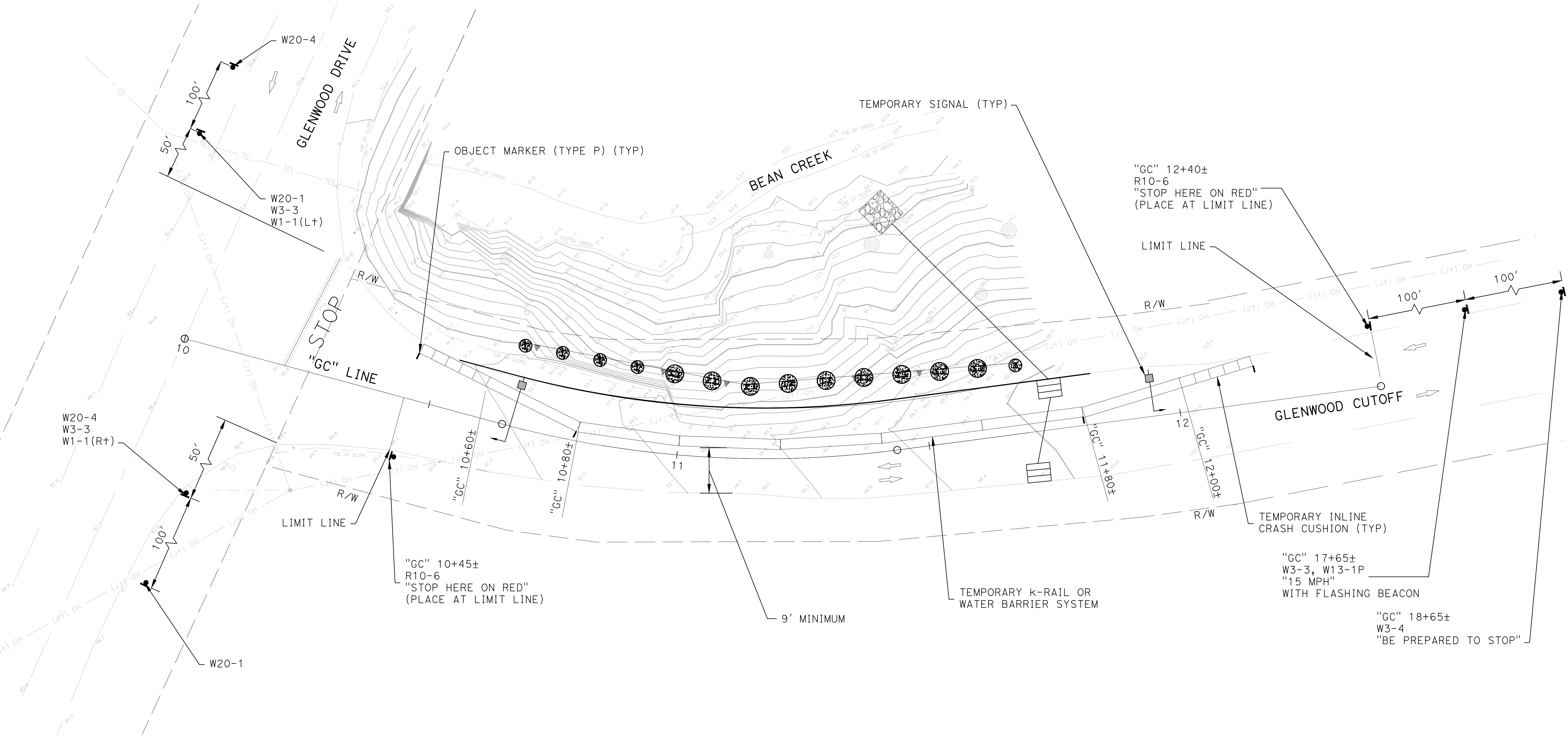
NOTES:

1. CONSTRUCTION AREA SIGNAGE PLAN SHALL BE PREPARED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. EXACT LOCATIONS OF THE SIGNS ARE TO BE DETERMINED BY THE ENGINEER. CONSTRUCTION AREA SIGNS TO INCLUDE "ROAD WORK AHEAD", "BEGIN CONSTRUCTION", "ONE LANE ROAD AHEAD", "SIGNAL AHEAD", "STOP SIGN", "END CONSTRUCTION" AND "END ROAD WORK".
2. CONSTRUCTION AREA SIGNS ARE TO REMAIN FOR THE DURATION OF THE PROJECT
3. CONSTRUCTION AREA SIGNS AND TEMPORARY TRAFFIC CONTROL MEASURES SHALL BE IN ACCORDANCE TO THE CA MUTCD.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND ENSURING TRAFFIC CONTROL MEASURES ARE OPERATIONAL AND IN CONFORMANCE WITH CA MUTCD.

5. CONTRACTOR HAS AN OPTION TO USE WATER BARRIER SYSTEM IN LIEU OF STANDARD TEMPORARY K-RAIL. WATER BARRIERS IF USED, SHALL MEET THE CRITERIA FOR MASH TEST LEVEL (TL-1).
6. TEMPORARY LIMIT LINES AND TEMPORARY PAVEMENT MARKINGS SHALL BE FULLY REMOVED AT THE END OF CONSTRUCTION.
7. RIGHT OF WAY AND ROADWAY LIMITS SHOWN BEYOND THE TOPOGRAPHIC MAP ARE APPROXIMATE.

LEGEND:

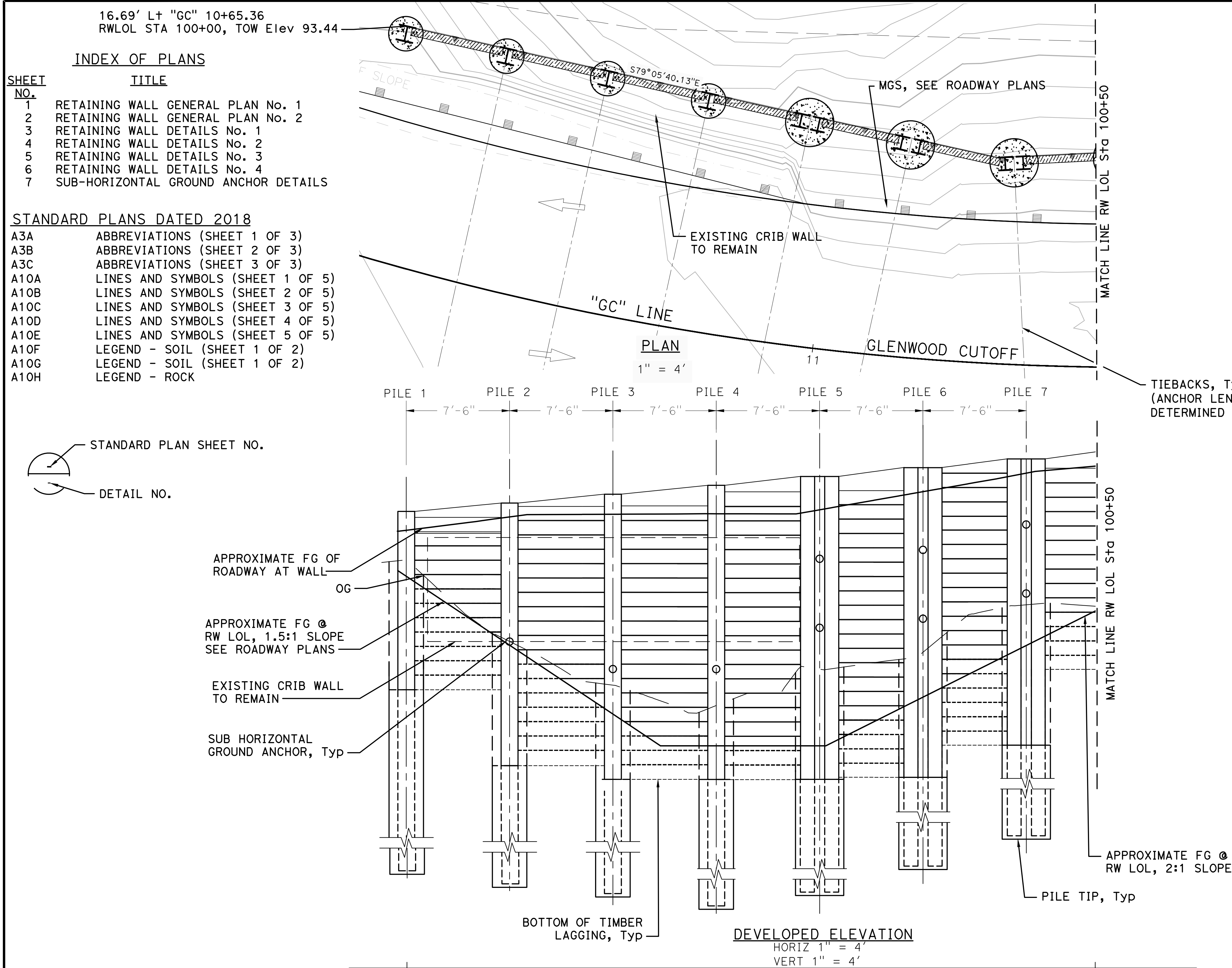
- CONSTRUCTION SIGN
- PORTABLE TEMPORARY SIGNAL



FOR ABBREVIATIONS AND
ADDITIONAL NOTES, SEE TITLE SHEET

TRAFFIC HANDLING PLAN

BY				
REVISION				
DATE				
REGISTERED PROFESSIONAL ENGINEER SNEHALATHA PAVULURI CIVIL NO. 08/20/25 STATE OF CALIFORNIA				
PROJECT ENGINEER		SNEHALATHA PAVULURI		
COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS		GLENWOOD CUTOFF PM 0.02 STORM DAMAGE REPAIR PROJECT		
DRAWN: S. HUYNH		CHECKED: S. PAVULURI		
DATE: 5/8/2025		SCALE: 1"=10'		
JOB NO. 320163		SHEET		
		12 OF 20		



RW LOL STATION	100+00	100+07.5	100+15	100+22.5	100+30	100+37.5	100+45
TOP OF WALL ELEV	93.44	94.05	94.69	95.34	95.98	96.47	97.27
ANCHOR 1 ELEVATION @ RW LOL	-	84.00	82.00	82.00	90.00	90.50	92.50
ANCHOR 2 ELEVATION @ RW LOL	-	-	-	-	85.00	85.50	87.50
TOP OF CONCRETE PILE ELEV	80.50	75.00	74.00	74.00	74.00	74.00	76.50
PILE TIP ELEVATION	58.00	53.00	51.00	48.00	49.00	52.00	55.00
PILE SECTION & NO. PILES	1-HP14X89	1-HP14X89	1-HP14X89	1-HP14X89	2-HP12X74	2-HP12X74	2-HP12X74
DRILLED HOLE DIAMETER	30"	30"	30"	30"	42"	42"	42"
ANCHOR FDL (Kips) =	-	105	135	145	95	95	85
ANCHOR FTL (Kips) =	-	105	135	145	120	125	105
ANCHOR LL (Kips) =	-	60	75	80	55	55	50

GENERAL NOTES:

DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATION, 6TH EDITION WITH CALIFORNIA AMENDMENTS, CALTRANS TRENCHING AND SHORING MANUAL, AUGUST 2011

LIVE LOAD: 250 PSF EQUIVALENT, 2 FEET SOIL WEIGHT

SOIL PARAMETERS: FOR DETERMINATION OF DESIGN LATERAL EARTH PRESSURES, BACKFILL AND RETAINED EARTH SOIL WEIGHT = 130 PCF FRICTION ANGLE = 35° ACTIVE PRESSURE COEFFICIENT $K_a = 0.271$ $K_h = 0.373$

SEISMIC PARAMETER: STEEL SOLDIER

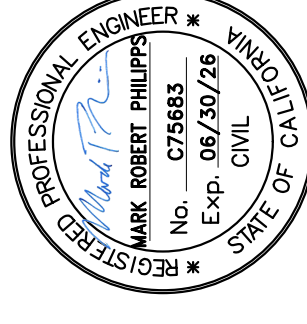
PILES AND PLATES: ASTM A572/A572M, GRADE 50MIN

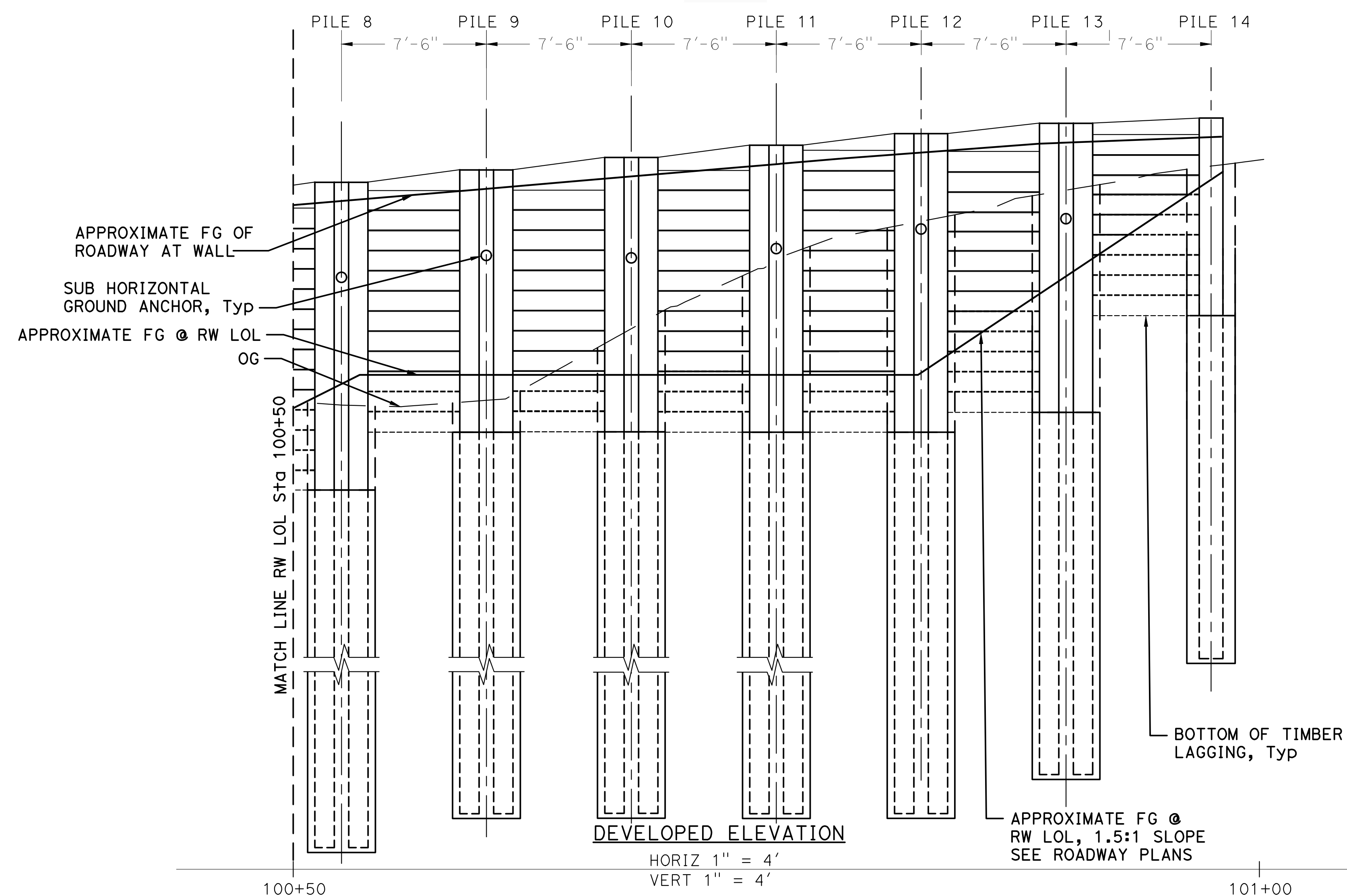
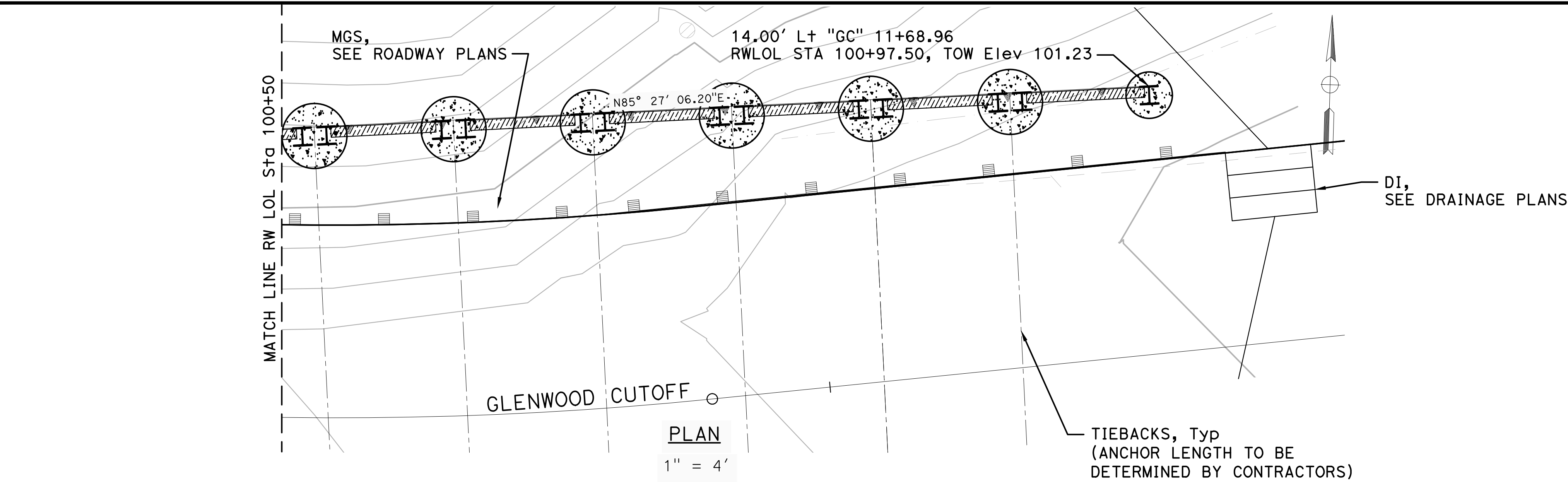
STRUCTURAL TIMBER: TREATED DOUGLAS FIR, GRADE NO. 1 OR BETTER TIMBER TO BE FULL SAWN

PRESTRESSING STEEL (GROUND ANCHORS): FDL = FACTORED DESIGN LOAD ON GROUND ANCHOR (kips) FTL = FACTORED TEST LOAD (kips) LL = LOCK-OFF LOAD (kips) f_{pu} = MINIMUM ULTIMATE TENSILE STRENGTH OF GROUND ANCHOR STEEL (ksi) A_s (Min) = MINIMUM CROSS SECTIONAL AREA OF STEEL IN GROUND ANCHOR (SQUARE INCH) STEEL = ASTM DESIGNATION: A416 (HS Strands) A_s (Min) = $\frac{1.0 FTL}{0.75 f_{pu}}$ STEEL = ASTM DESIGNATION: A722 (HS Bars) A_s (Min) = $\frac{1.0 FTL}{0.80 f_{pu}}$

QUANTITIES		
STRUCTURE EXCAVATION (SOLDIER PILE WALL)	65	CY
STRUCTURE BACKFILL (SOLDIER PILE WALL)	67	CY
CONCRETE BACKFILL (SOLDIER PILE WALL)	88	CY
LEAN CONCRETE BACKFILL (ENGMET)	37	CY
GROUND ANCHOR (SUBHORIZONTAL)	15	EA
STEEL SOLDIER PILE (HP12X53)	416	LF
STEEL SOLDIER PILE (HP12X74)	268	LF
STEEL SOLDIER PILE (HP14X89)	196	LF
30" DRILLED HOLE	155	LF
42" DRILLED HOLE	267	LF
TIMBER LAGGING	11	MFBM
CLEAN AND PAINT STEEL SOLDIER PILING	1	LUMP SUM
MINOR CONCRETE (MINOR STRUCTURE)	13	CY
CELLULAR CONCRETE LIGHTWEIGHT EMBANKMENT MATERIAL	7	CY

RETAINING WALL GENERAL PLAN No. 1

BY				
REVISION				
DATE				
				
PROJECT ENGINEER	MARK PHILIPPS			
COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS	GLENWOOD CUTOFF PM 0.02 STORM DAMAGE REPAIR PROJECT			
DRAWN: S. HUYNH				
CHECKED: M. PHILIPPS				
DATE: 5/8/2025				
SCALE: NONE				
JOB NO. 320163				
SHEET				
13 OF 20				

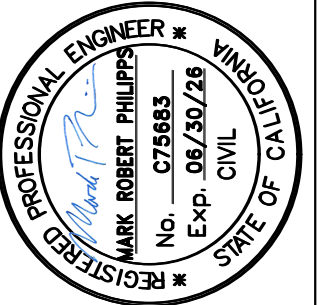


RW LOL STATION	100+52.5	100+60	100+67.5	100+75	100+82.5	100+90	100+97.5
TOP OF WALL ELEV	97.94	98.57	99.20	99.85	100.45	100.96	101.23
ANCHOR 1 ELEVATION @ RW LOL	93.00	93.50	94.00	94.50	95.50	96.00	-
ANCHOR 2 ELEVATION @ RW LOL	-	-	-	-	-	-	-
TOP OF CONCRETE PILE ELEV	82.00	85.00	85.00	85.00	85.00	86.00	91.00
PILE TIP ELEVATION	62.00	65.00	65.00	65.00	65.00	67.00	73.00
PILE SECTION & NO. PILES	2-HP12X53	2-HP12X53	2-HP12X53	2-HP12X53	2-HP12X53	2-HP12X53	1-HP14X89
DRILLED HOLE DIAMETER	42"	42"	42"	42"	42"	42"	30"
ANCHOR FDL (Kips) =	85	75	80	85	90	75	-
ANCHOR FTL (Kips) =	105	90	95	100	105	90	-
ANCHOR LL (Kips) =	50	45	45	50	50	45	-

RETAINING WALL GENERAL PLAN No. 2

RETAINING WALL PLANS SHEET 2 OF 7

DATE	REVISION	BY



PROJECT ENGINEER

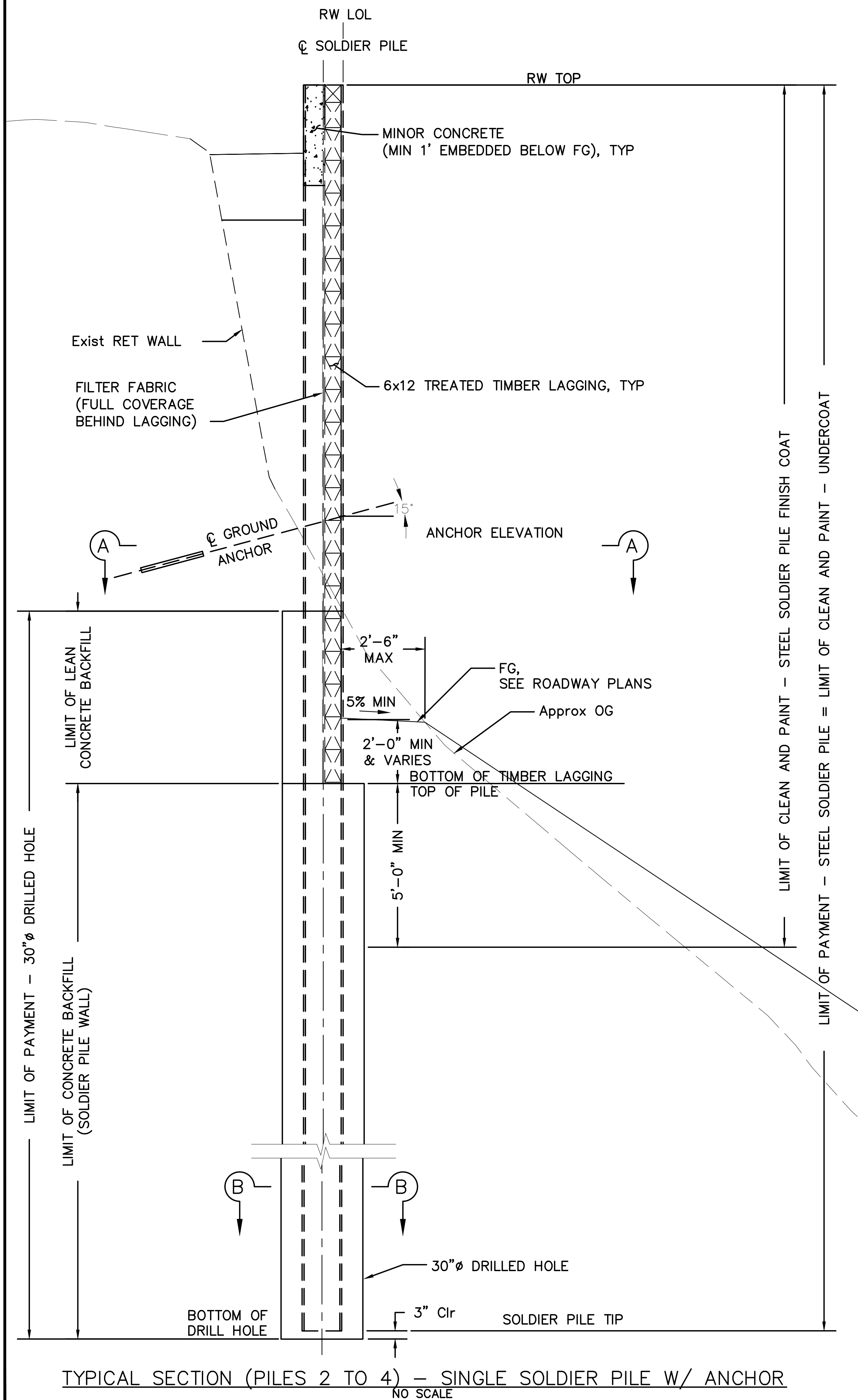
MARK PHILIPPS

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

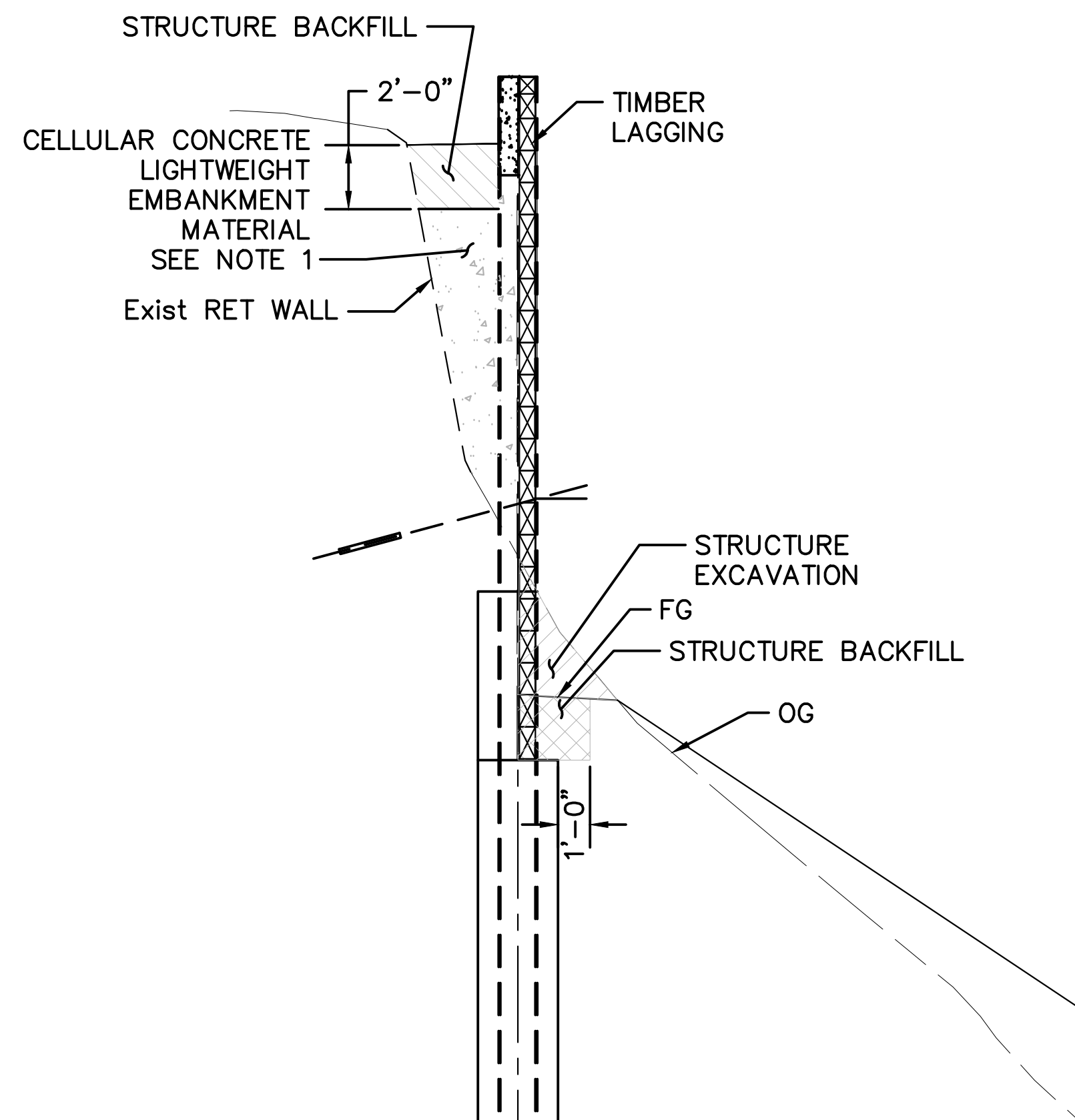
GLENWOOD CUTOFF PM 0.02 STORM DAMAGE REPAIR PROJECT

DRAWN: S. HUYNH
CHECKED: M. PHILIPPS
DATE: 5/8/2025
SCALE: NONE
JOB NO. 320163
SHEET

14 OF 20

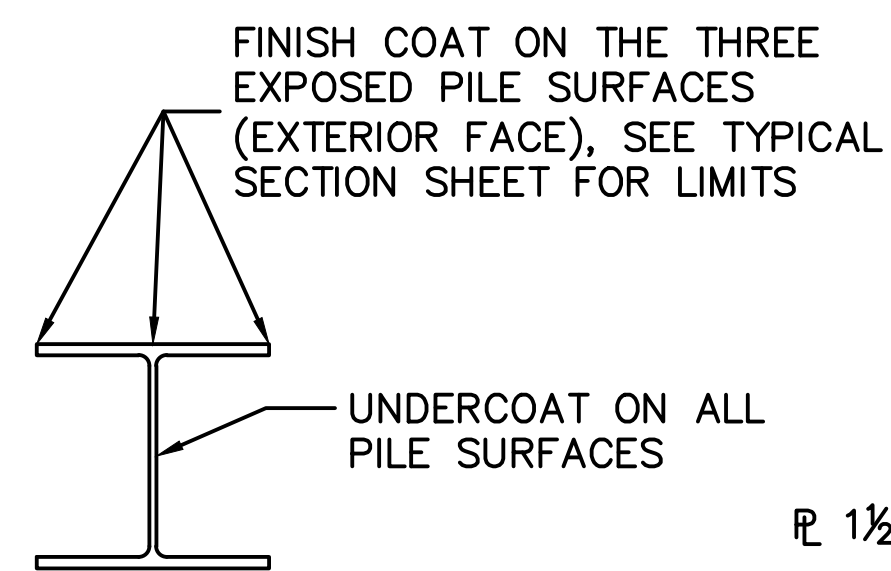


TYPICAL SECTION (PILES 2 TO 4) - SINGLE SOLDIER PILE W/ ANCHOR
NO SCALE

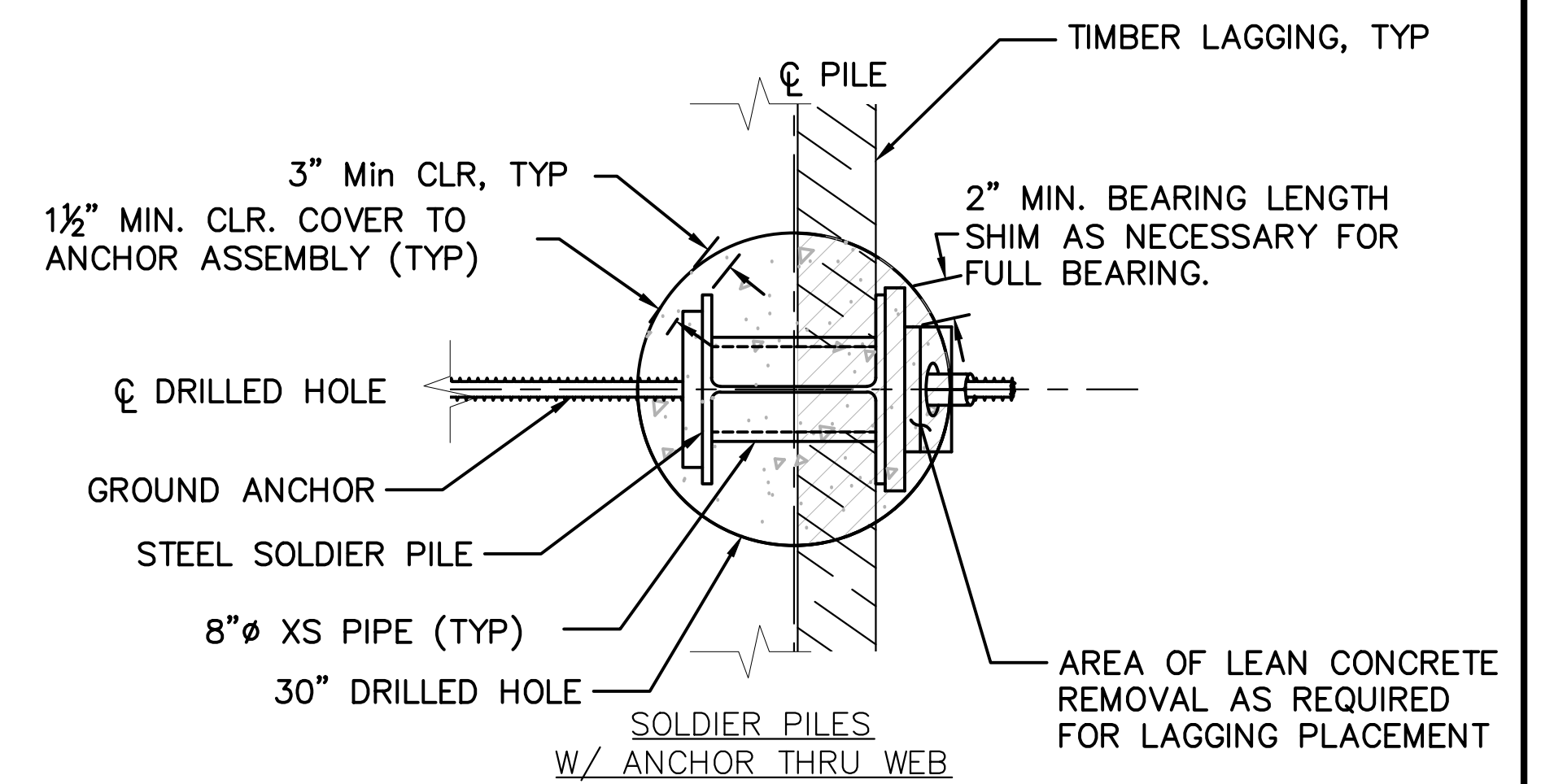


LIMITS OF EXCAVATION/BACKFILL ALONG EXISTING Ret WALL
NO SCALE

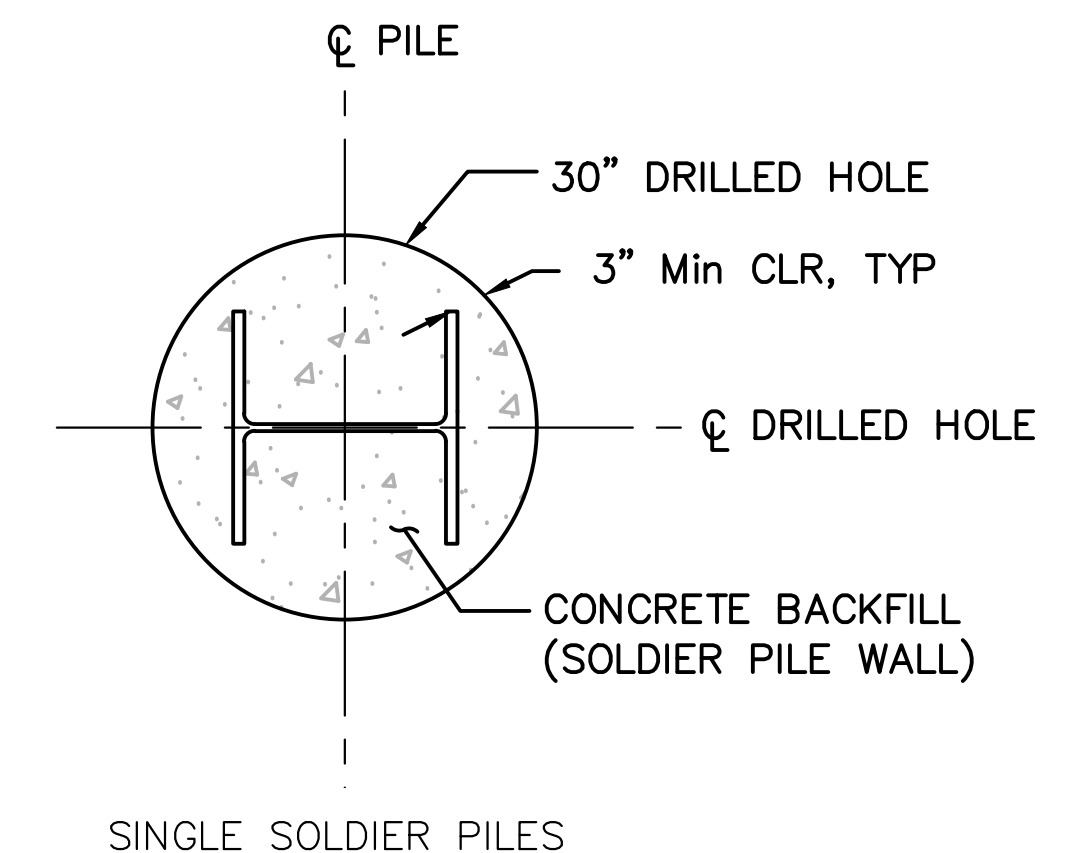
- NOTES:
1. CELLULAR CONCRETE LIGHTWEIGHT EMBANKMENT MATERIAL TO BE FORMED AND PLACED BETWEEN TIEBACK WALL AND EXISTING CRIB WALL AT LIMITS SHOWN. UNIT WEIGHT SHALL NOT EXCEED 50 PCF.
 2. DESIGN OF BEARING PLATE TO BE DETERMINED BY CONTRACTOR.



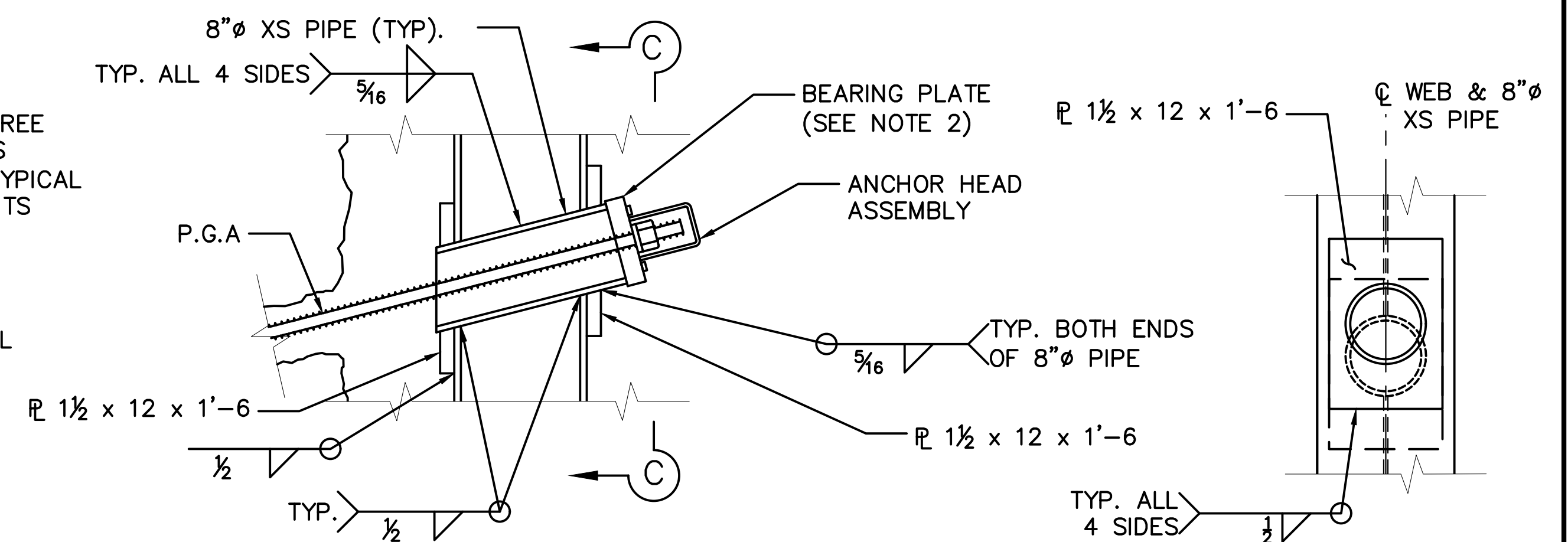
LIMITS OF CLEAN AND PAINT
STEEL SOLDIER PILES
NO SCALE



SECTION A-A
NO SCALE



SINGLE SOLDIER PILES
SECTION B-B
NO SCALE

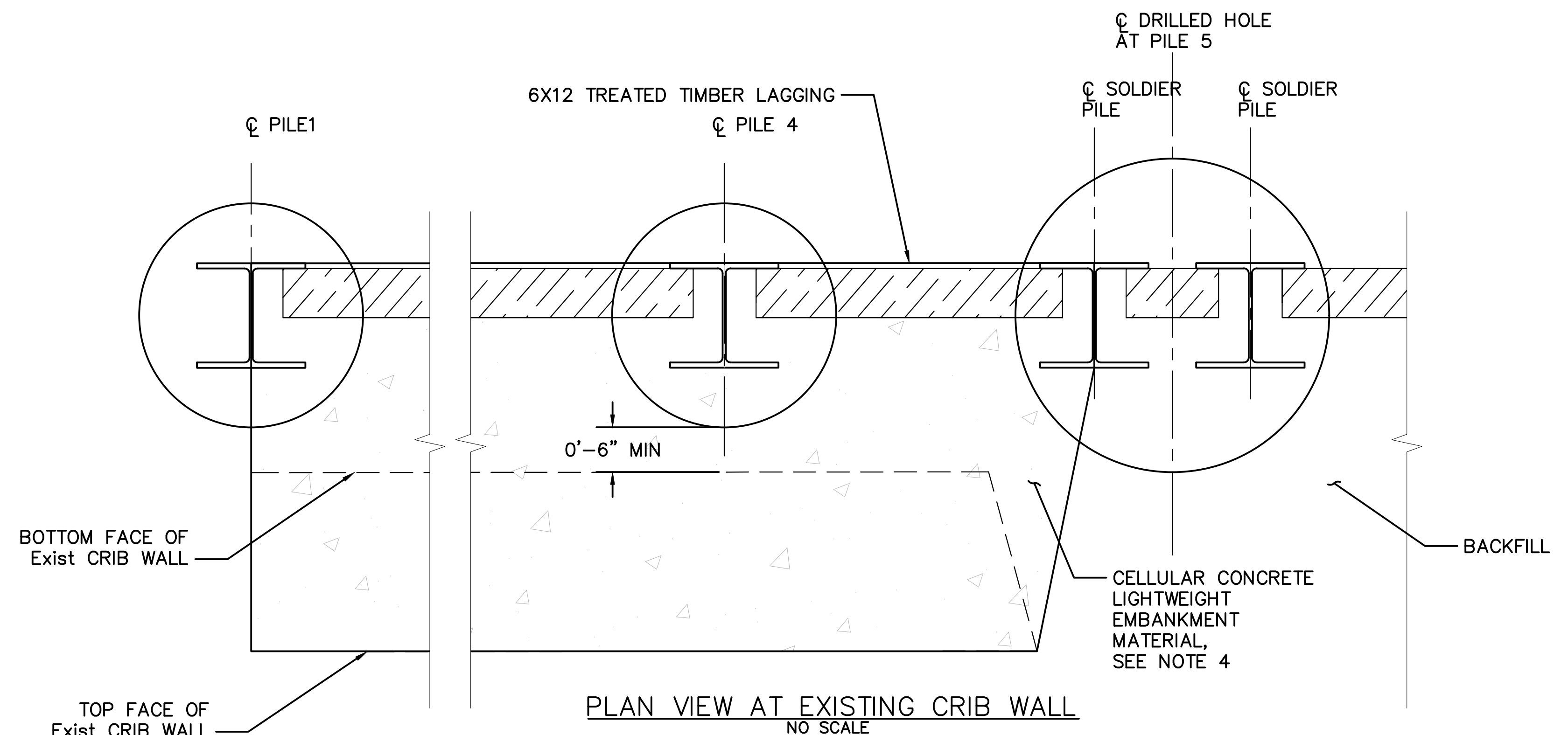
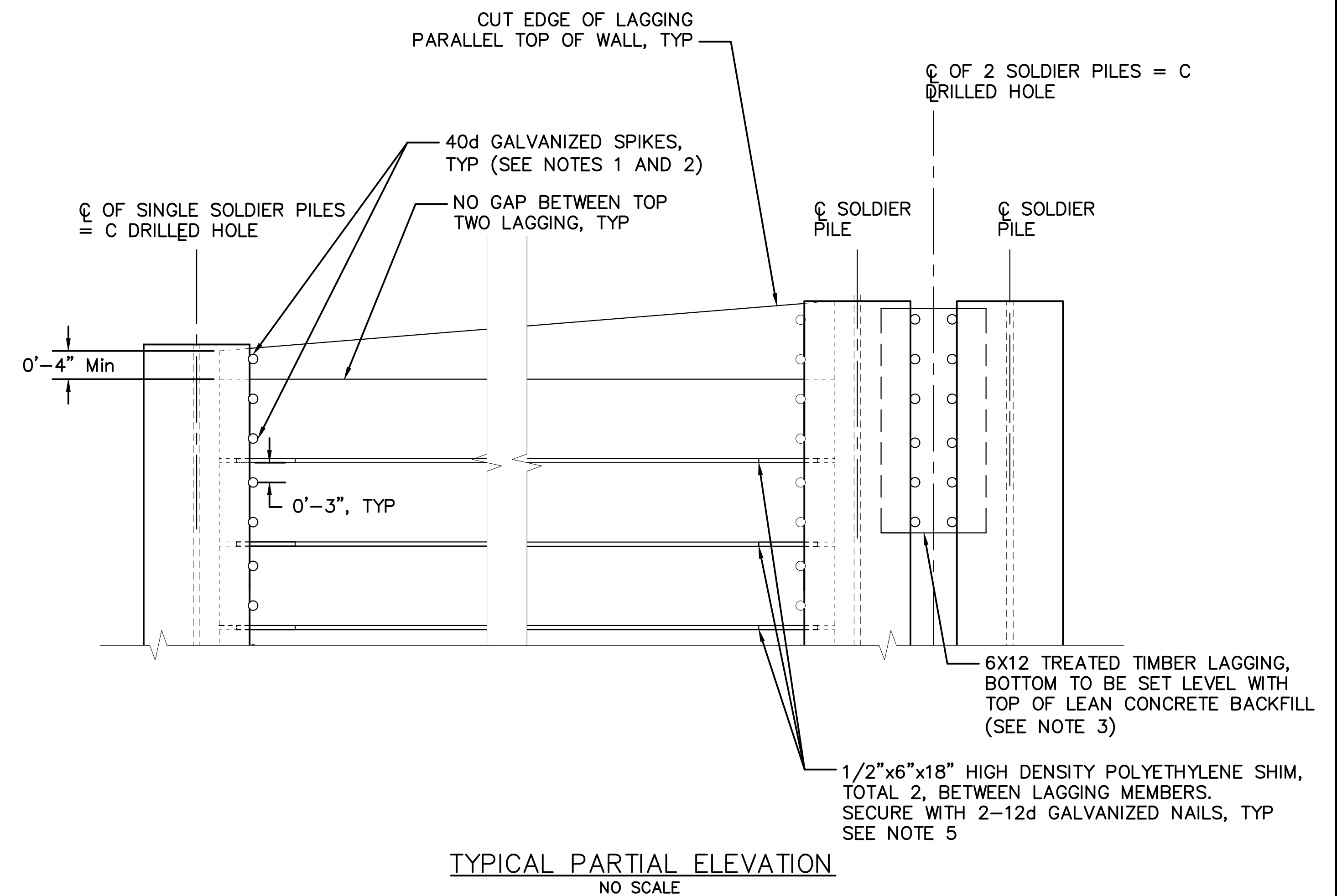
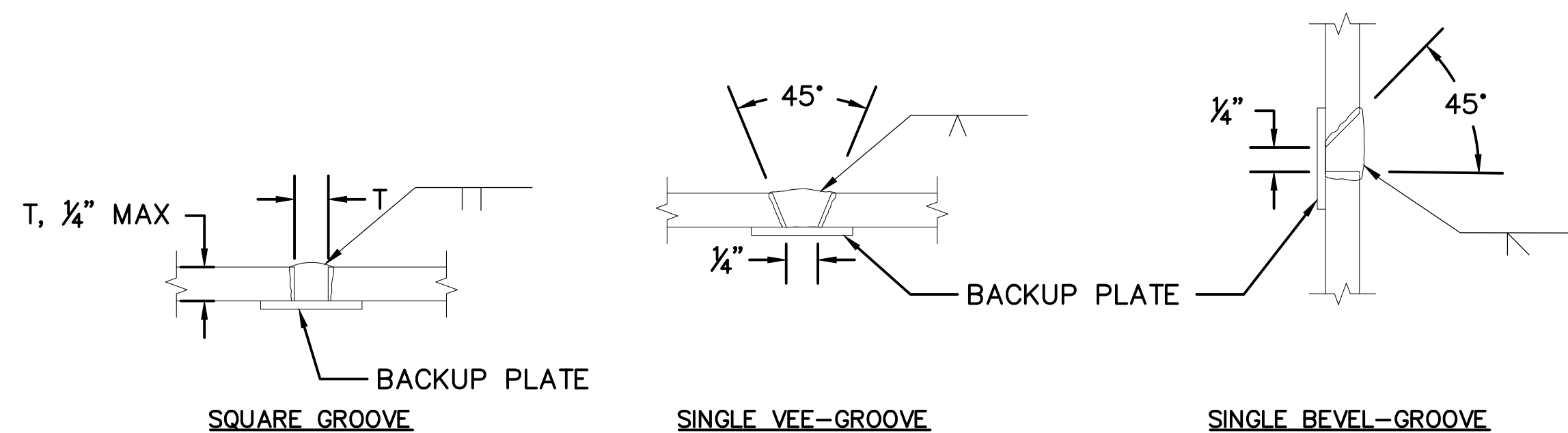
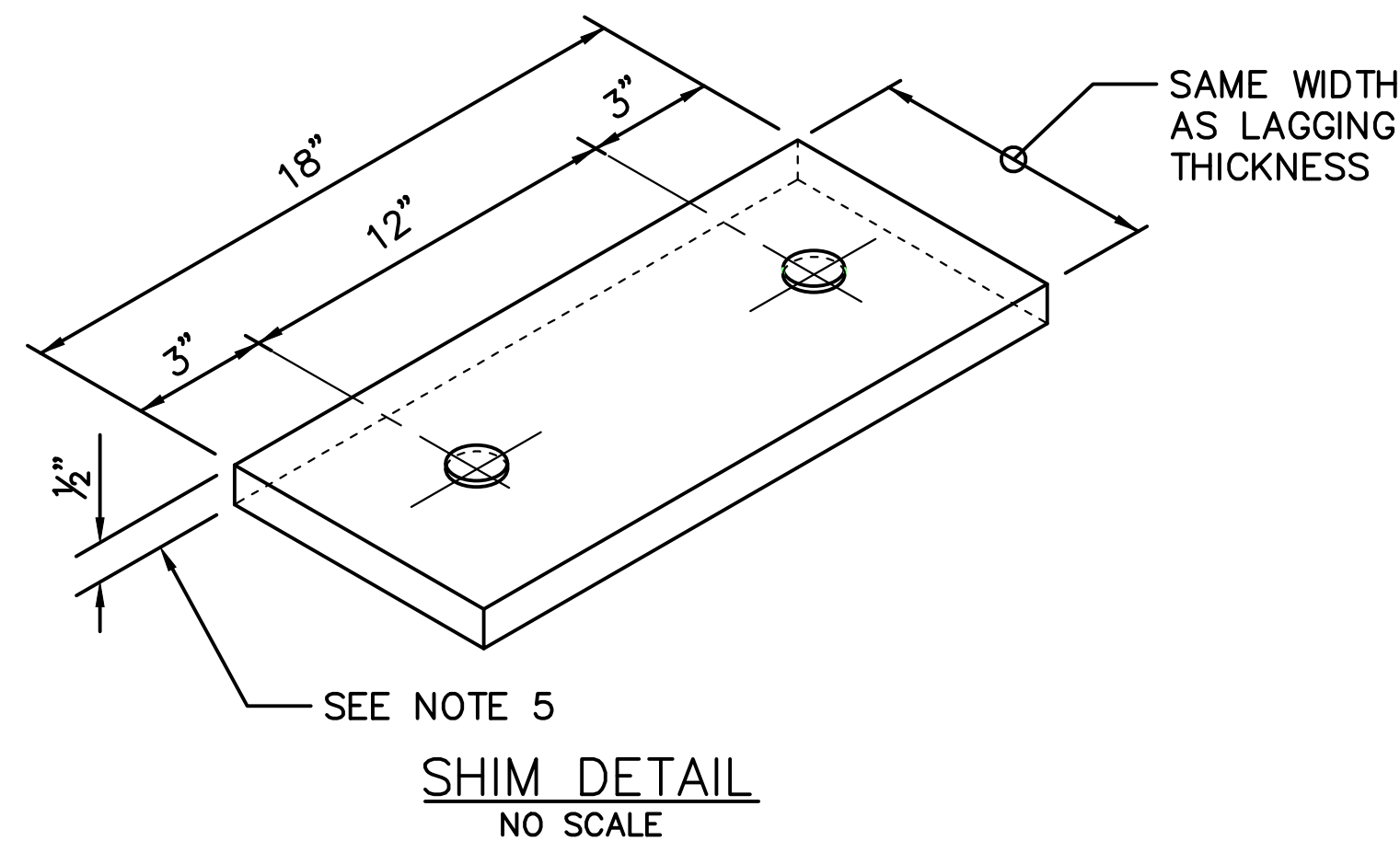


ELEVATION (PILES 2 TO 4) -
SINGLE SOLDIER PILE WITH
ANCHOR THRU WEB
NO SCALE

SECTION C-C
NO SCALE

RETAINING WALL DETAILS No. 1

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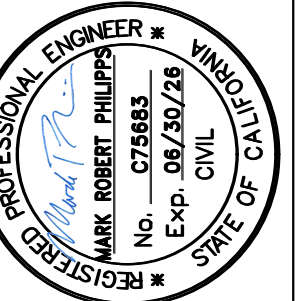
NOTES:

1. USE 40d Galv WIRE SPIKES FOR INSTALLATION OF 6X12 LAGGING, AS NEEDED. ALTERNATIVE METHODS OF LAGGING INSTALLATION PRIOR TO BACKFILL PLACEMENT MAY BE USED AS DETERMINED BY THE CONTRACTOR.
2. SPIKES MUST NOT BE BENT.
3. AS AN ALTERNATIVE, CONTRACTOR MAY FILL BETWEEN SOLDIER PILES IN A SINGLE DRILLED HOLE WITH LEAN CONCRETE BACKFILL UP TO LIMITS OF MINOR CONCRETE.
4. CELLULAR CONCRETE LIGHTWEIGHT EMBANKMENT MATERIAL TO BE FORMED AND PLACED BETWEEN TIEBACK WALL AND EXISTING CRIB WALL AT LIMITS SHOWN, UP TO 2'-0" BELOW THE TOP OF THE EXISTING CRIB WALL. UNIT WEIGHT SHALL NOT EXCEED 50 PCF.
5. SHIM THICKNESS SHALL BE DETERMINED BASED ON REQUIRED GAP PER SPECIFICATIONS FOR TIMBER LAGGING.
6. SINGLE VEE-GROOVE AND SQUARE GROOVE PERMITTED FOR ALL POSITIONS.
7. SINGLE BEVEL-GROOVE PERMITTED FOR HORIZONTAL JOINTS ONLY.

RETAINING WALL DETAILS No. 2

RETAINING WALL PLANS SHEET 4 OF 7

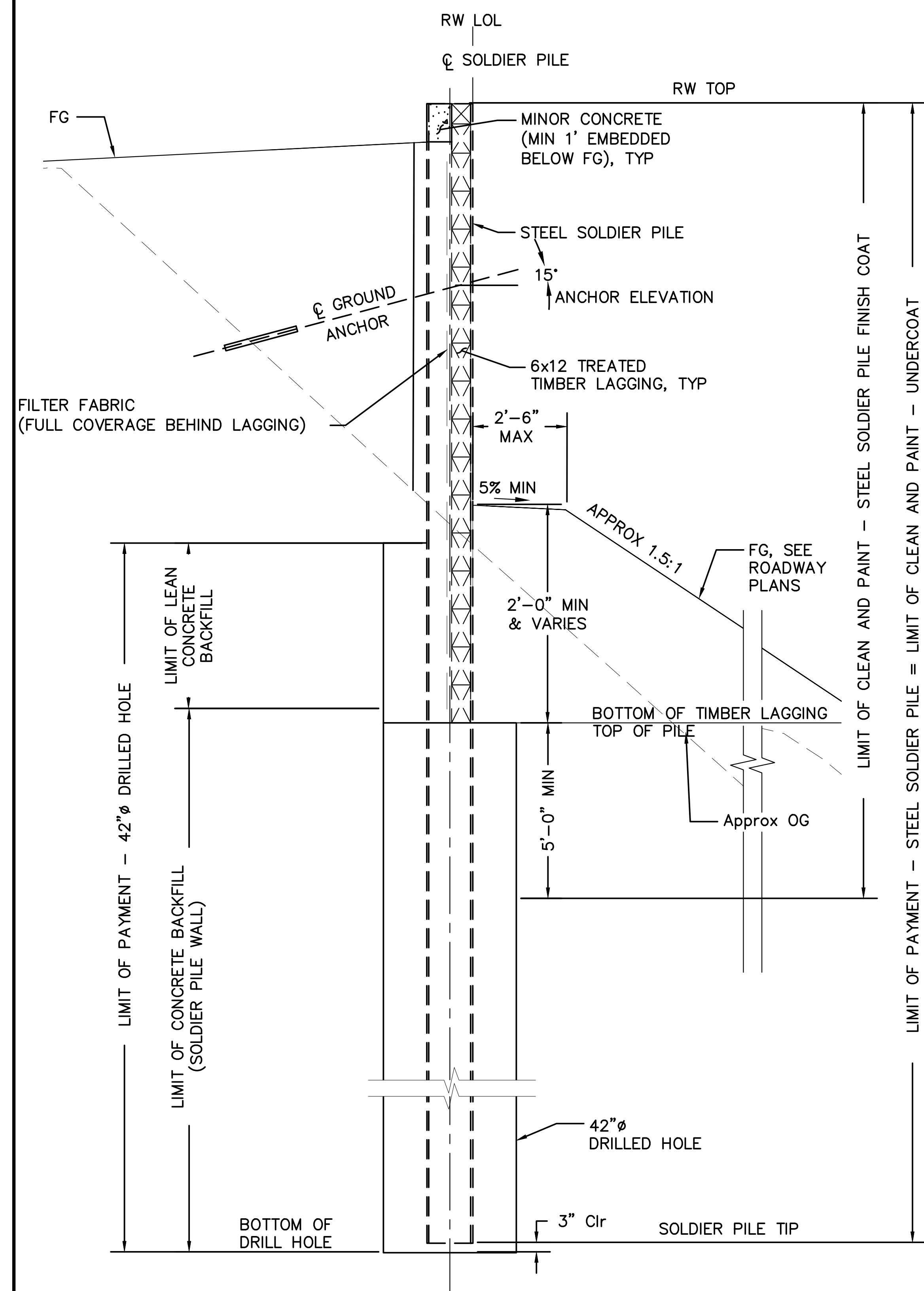
BY	REVISION	DATE



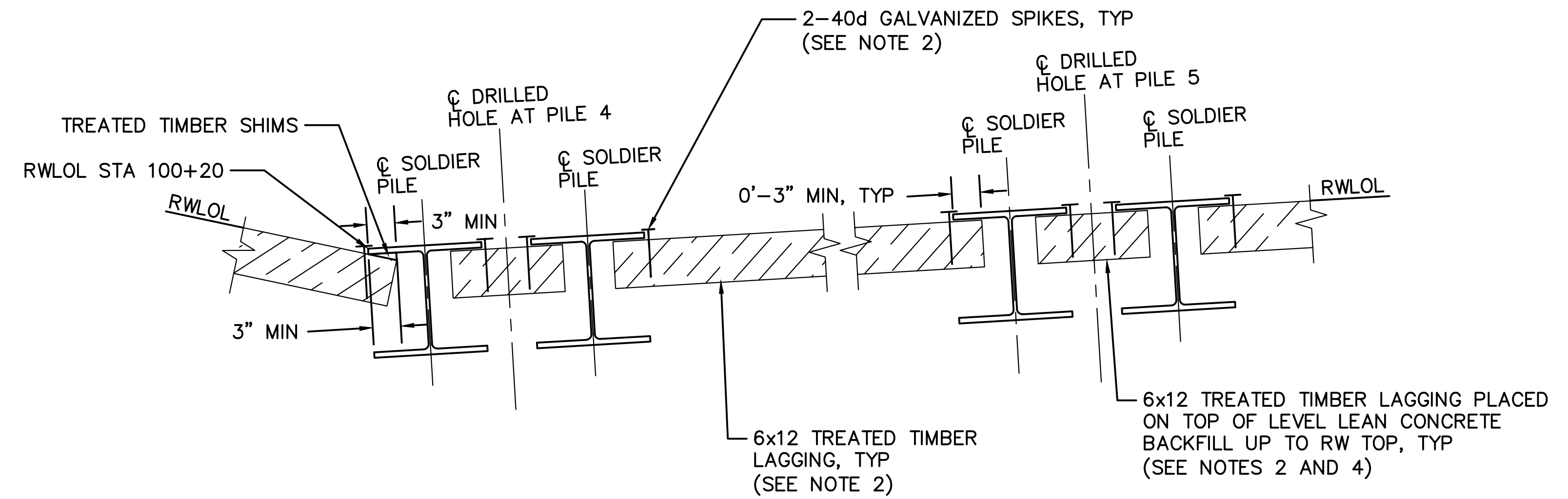
PROJECT ENGINEER
MARK PHILLIPS

COUNTY OF SANTA CRUZ — DEPARTMENT OF PUBLIC WORKS
**GLENWOOD CUTOFF PM 0.02
STORM DAMAGE REPAIR PROJECT**

DRAWN: S.HUYNH
CHECKED: M.PHILLIPS
DATE: 5/8/2025
SCALE: NONE
JOB NO. 320163
SHEET
16 OF 20



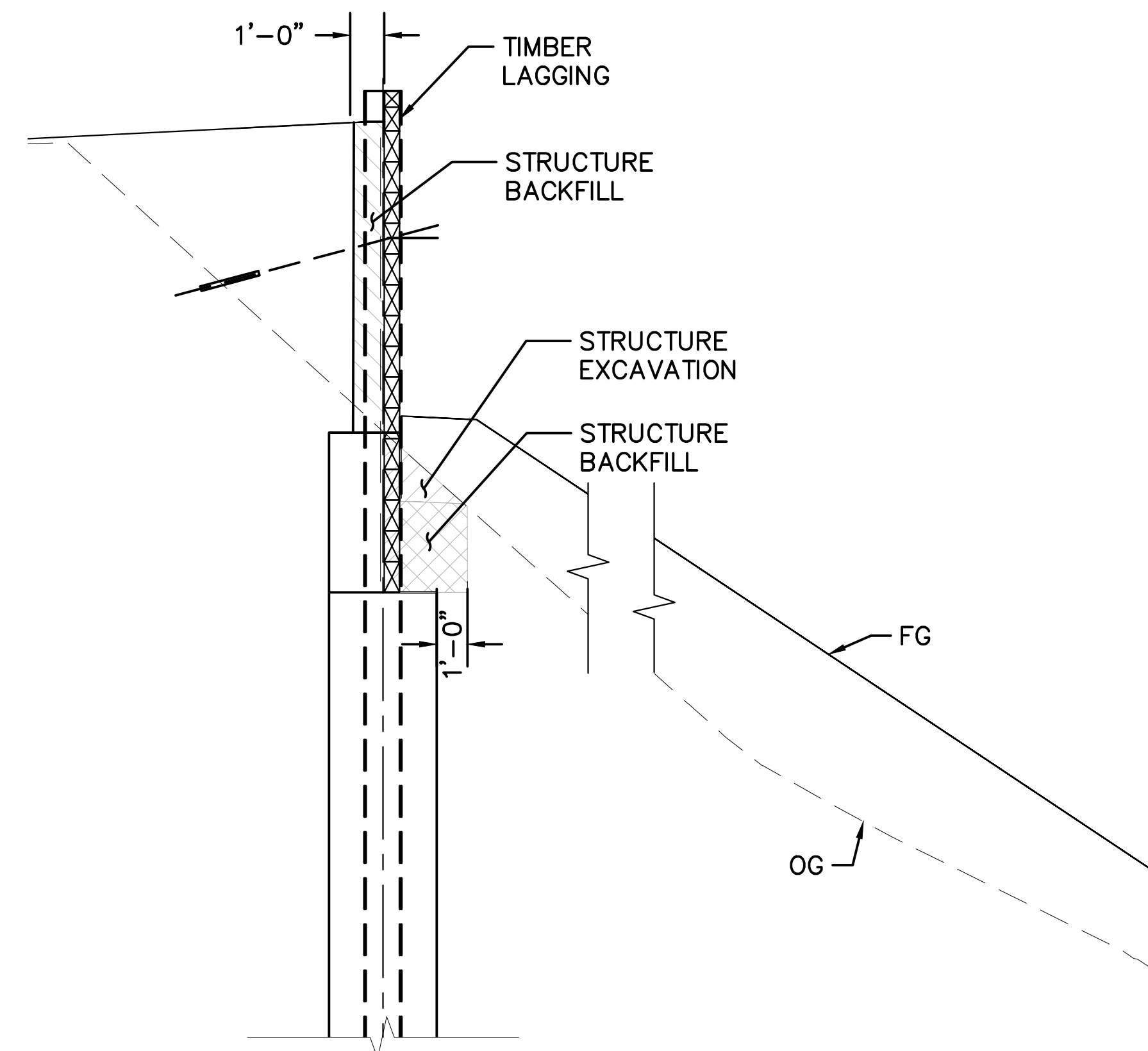
TYPICAL SECTION (PILES 5 TO 13) - DOUBLE SOLDIER PILE W/ ANCHOR
NO SCALE



PARTIAL PLAN OF TIMBER LAGGING MEMBER
NO SCALE

NOTES:

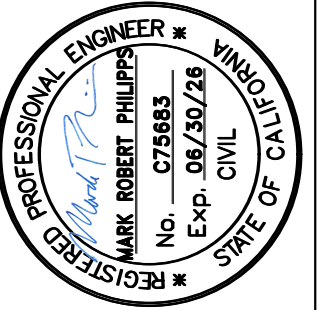
1. LAGGING CORNERS MAY BE CHAMFERED TO FACILITATE PLACEMENT. MAX 2 CORNERS PER LAGGING.
2. USE 40d Galv WIRE SPIKES FOR INSTALLATION OF 6X12 LAGGING, AS NEEDED. ALTERNATIVE METHODS OF LAGGING INSTALLATION PRIOR TO BACKFILL PLACEMENT MAY BE USED AS DETERMINED BY THE CONTRACTOR.
3. SPIKES MUST NOT BE BENT.
4. AS AN ALTERNATIVE, CONTRACTOR MAY FILL BETWEEN SOLDIER PILES IN A SINGLE DRILLED HOLE WITH LEAN CONCRETE BACKFILL UP TO LIMITS OF MINOR CONCRETE.



-  LIMITS OF STRUCTURE EXCAVATION
(SOLDIER PILE WALL)
-  LIMITS OF STRUCTURE BACKFILL
(SOLDIER PILE WALL)

LIMITS OF EXCAVATION/BACKFILL
NOT ADJACENT TO EXISTING WALL
NO SCALE

RETAINING WALL DETAILS No. 3



PROJECT ENGINEER

MARK PHILIPPS

COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS

**GLENWOOD CUTOFF PM 0.02
STORM DAMAGE REPAIR PROJECT**

DRAWN: 5/8/2025

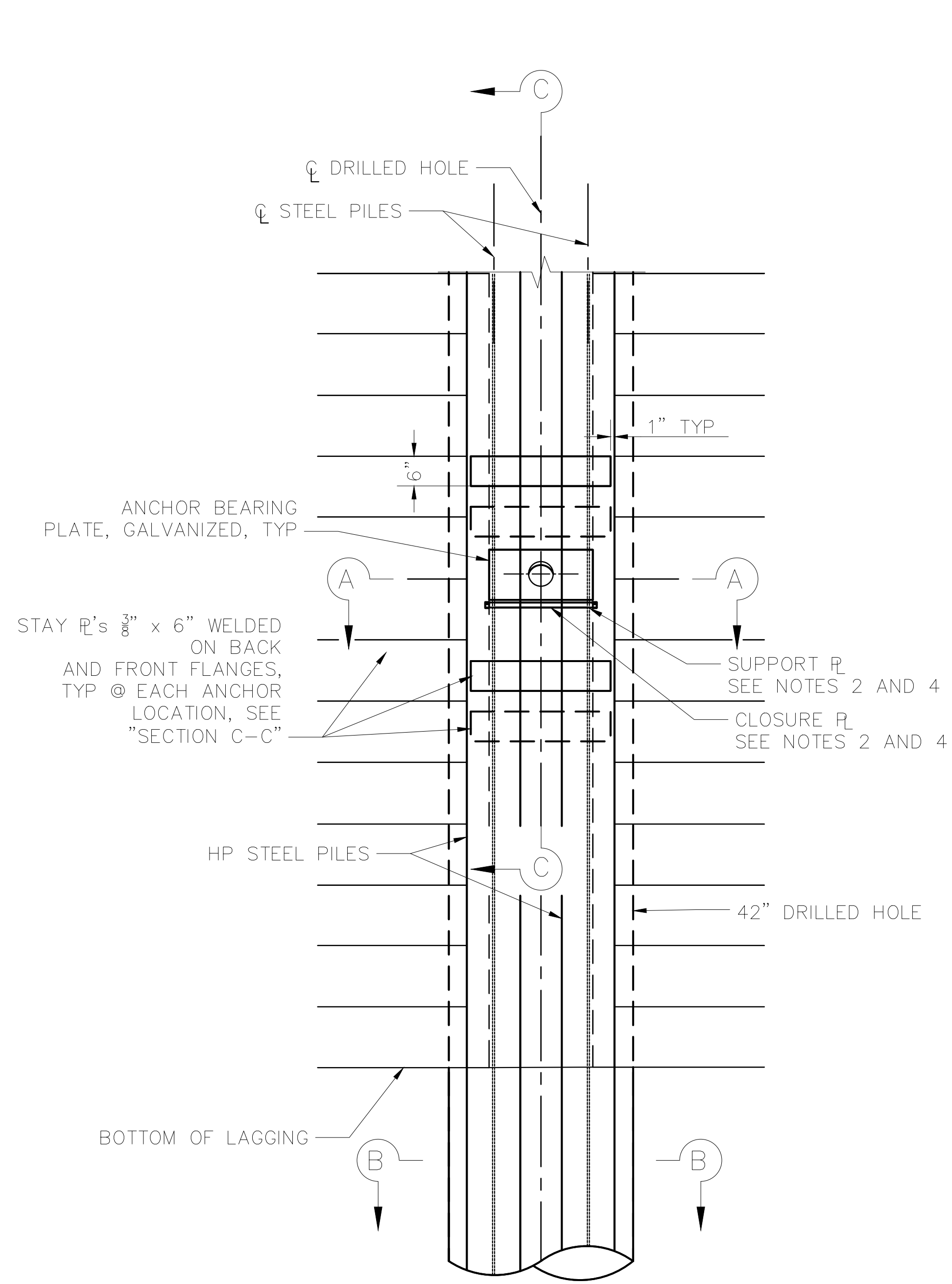
CHECKED: M.PHILIPPS

DATE: S.HUYNH

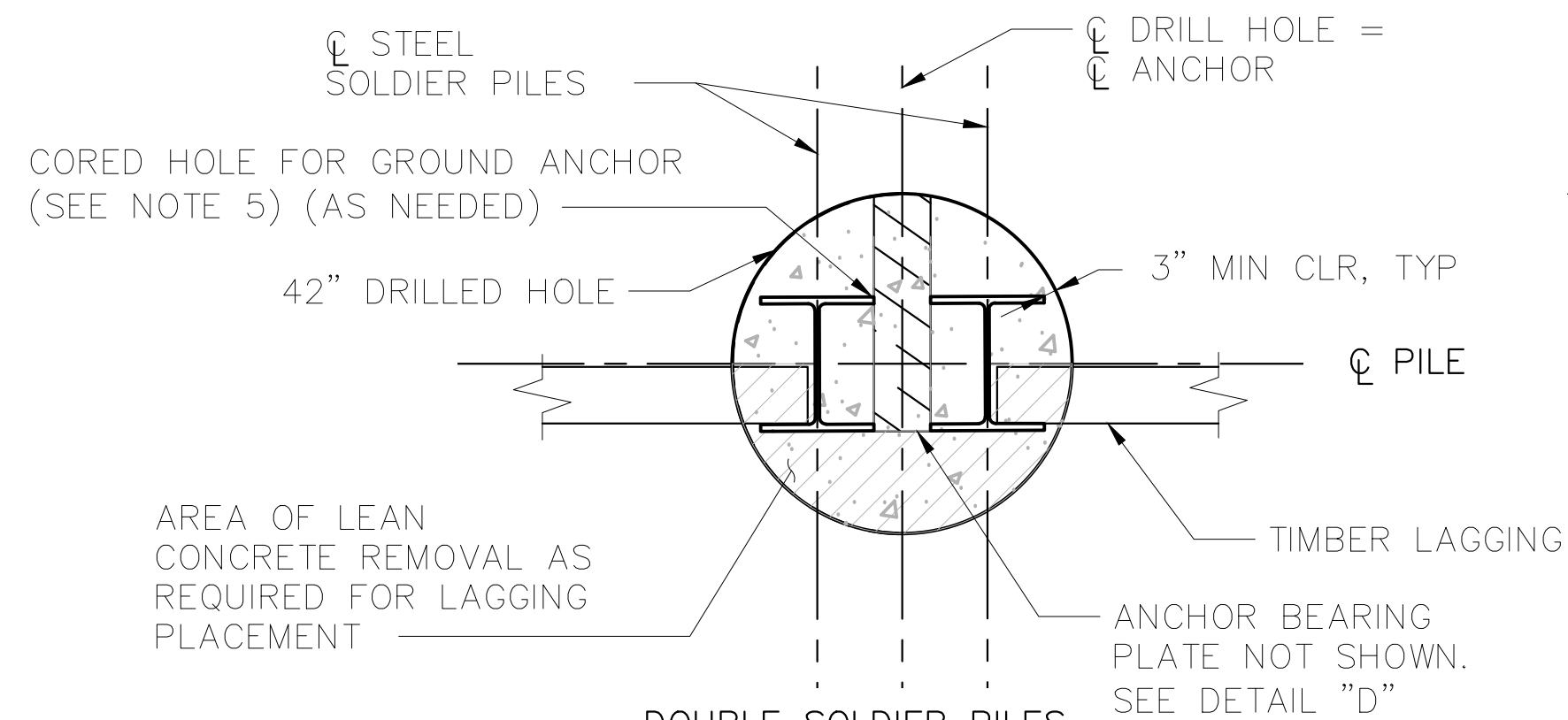
SCALE: NONE

JOB NO. 320163

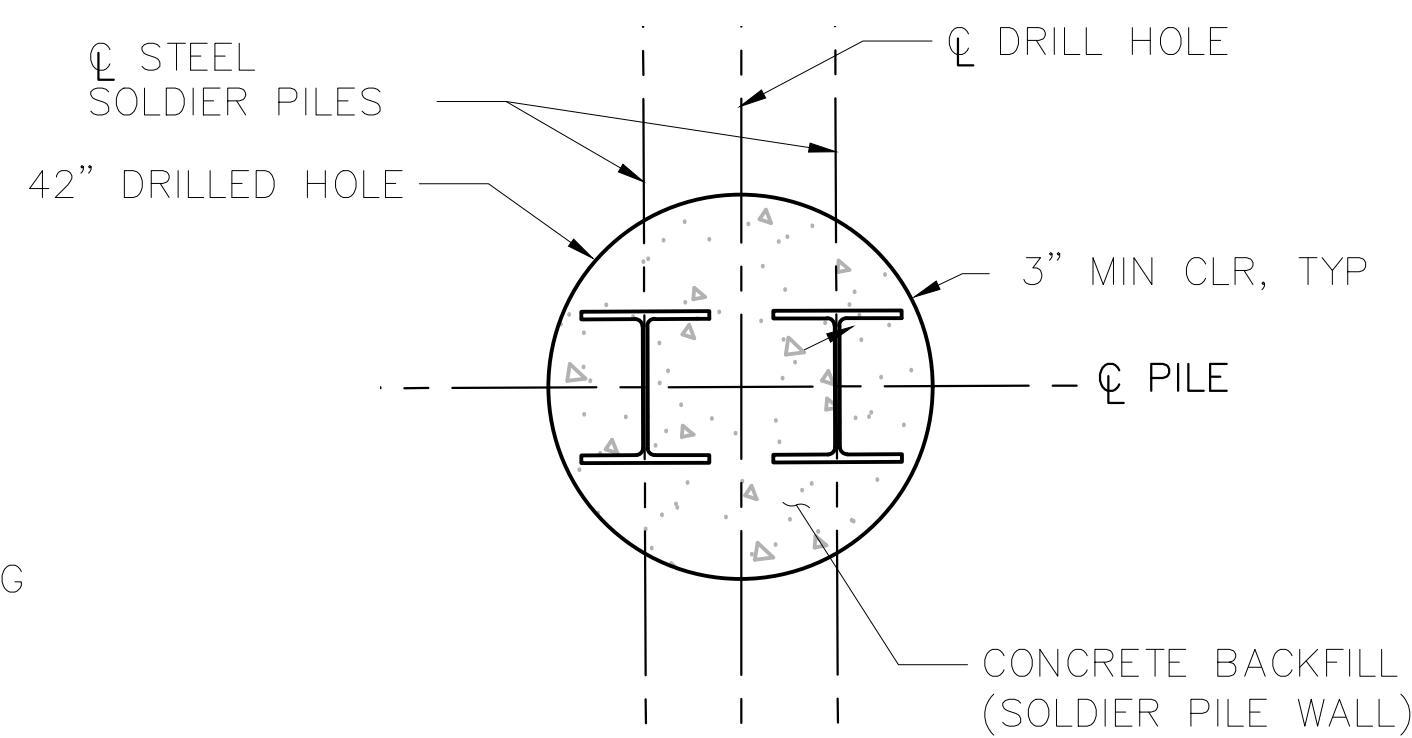
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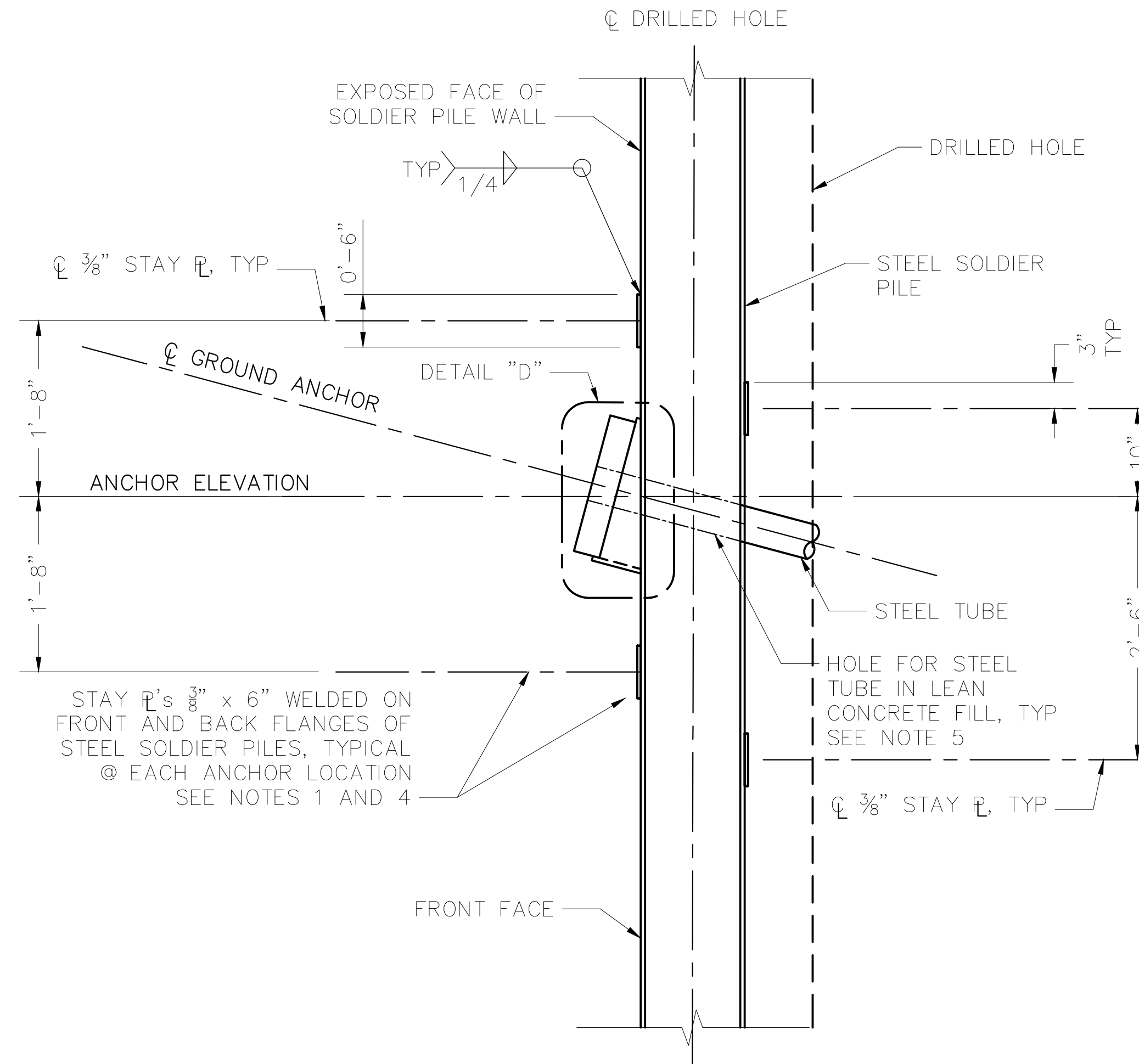
DOUBLE PILE
PART ELEVATION AT ANCHOR
NO SCALE



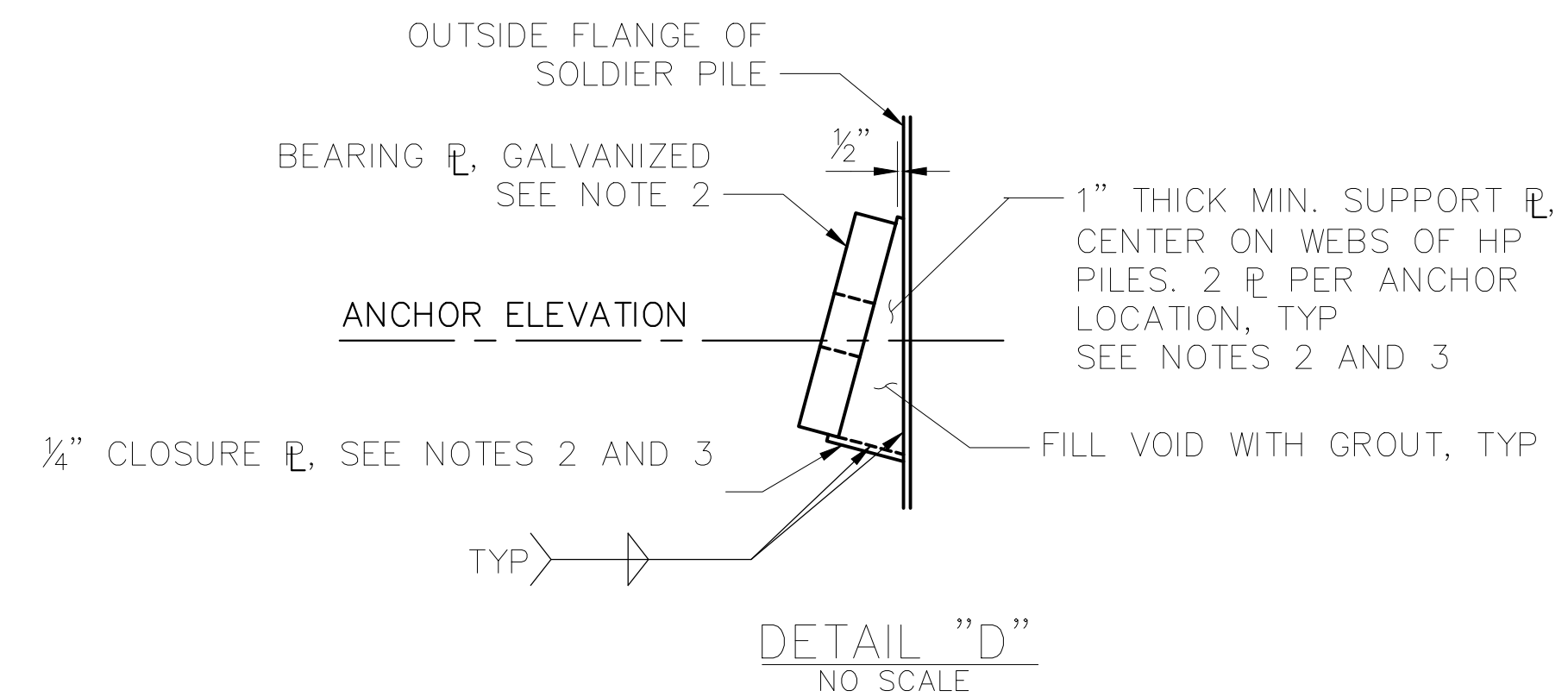
SECTION A-A
NO SCALE



SECTION B-B
NO SCALE



SECTION C-C
STAY PLATE DETAILS
NO SCALE

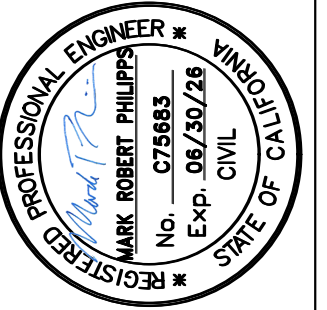


NOTES:

1. STAY PLATES SHALL BE INSTALLED PRIOR TO PLACEMENT OF STEEL SOLDIER PILES IN DRILLED HOLES.
2. DESIGN OF BEARING AND SUPPORT PLATES TO BE DETERMINED BY CONTRACTOR, AS WELL AS ANY STIFFENER PLATES BETWEEN FLANGES AS NECESSARY. CLOSURE PLATES SHALL BE WELDED TO BOTTOM OF SUPPORT PLATE, AND EXTEND 1/2" MINIMUM OR MORE AS NEEDED BELOW BEARING PLATE TO PROVIDE ADEQUATE TEMPORARY SUPPORT OF BEARING PLATE PRIOR TO STRESSING.
3. SUPPORT, CLOSURE, AND ANY STIFFENER PLATES TO RECEIVE SAME UNDERCOAT TREATMENT AS SOLDIER PILES.
4. A MINIMUM OF 4 STAY PLATE AS SHOWN IN "SECTION C-C" TO BE WELDED AT SOLDIER PILES.
5. GAP BETWEEN PILE SECTION SHALL NOT EXCEED 2" LARGER THAN THE CORED HOLE REQUIRED FOR THE STEEL TUBE OF GROUND ANCHORAGE SYSTEM.

RETAINING WALL DETAILS No. 4

REVISION	DATE	BY



PROJECT ENGINEER
MARK PHILIPPS

COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS
GLENWOOD CUTOFF PM. 0.02
STORM DAMAGE REPAIR PROJECT

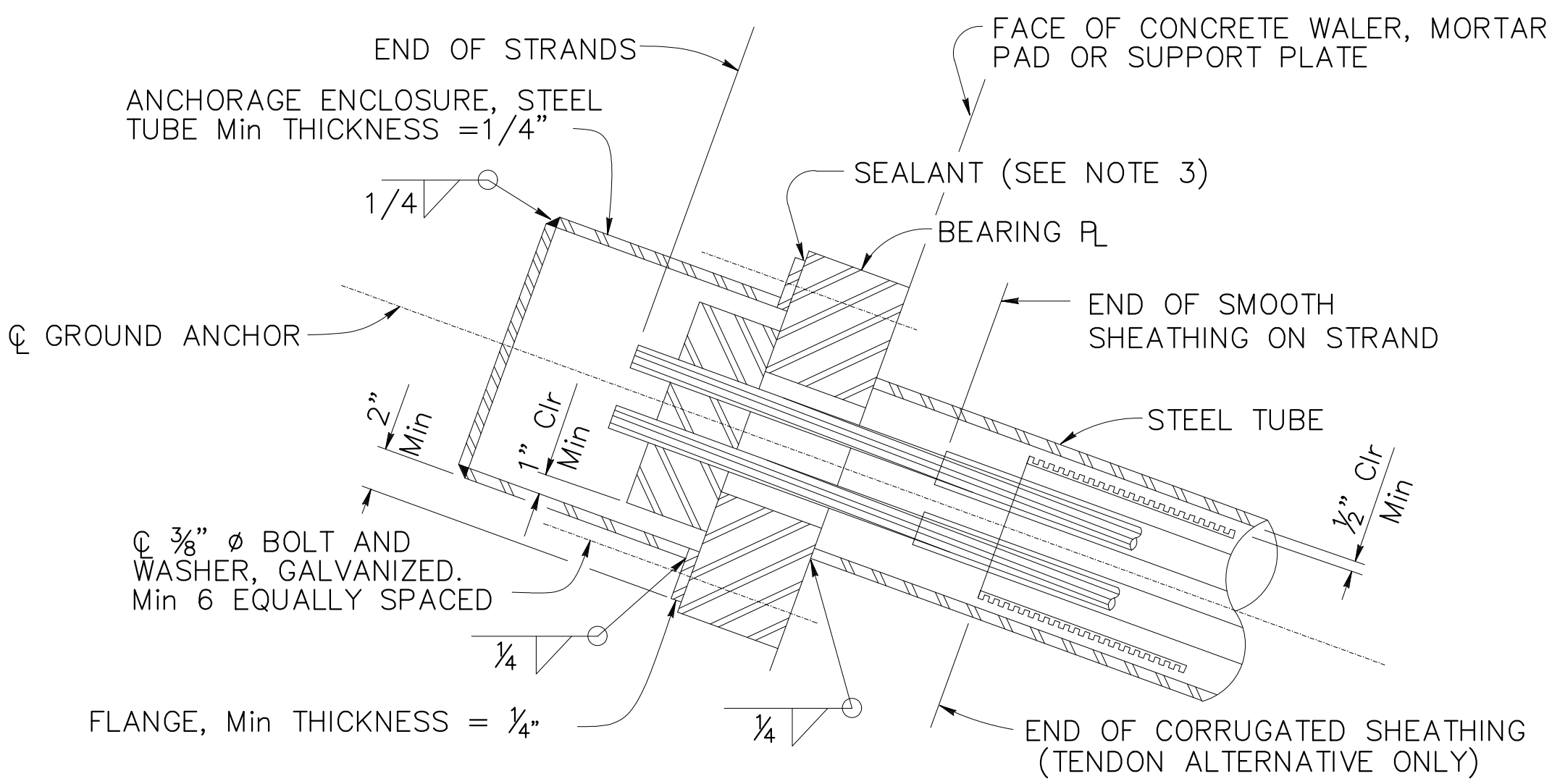
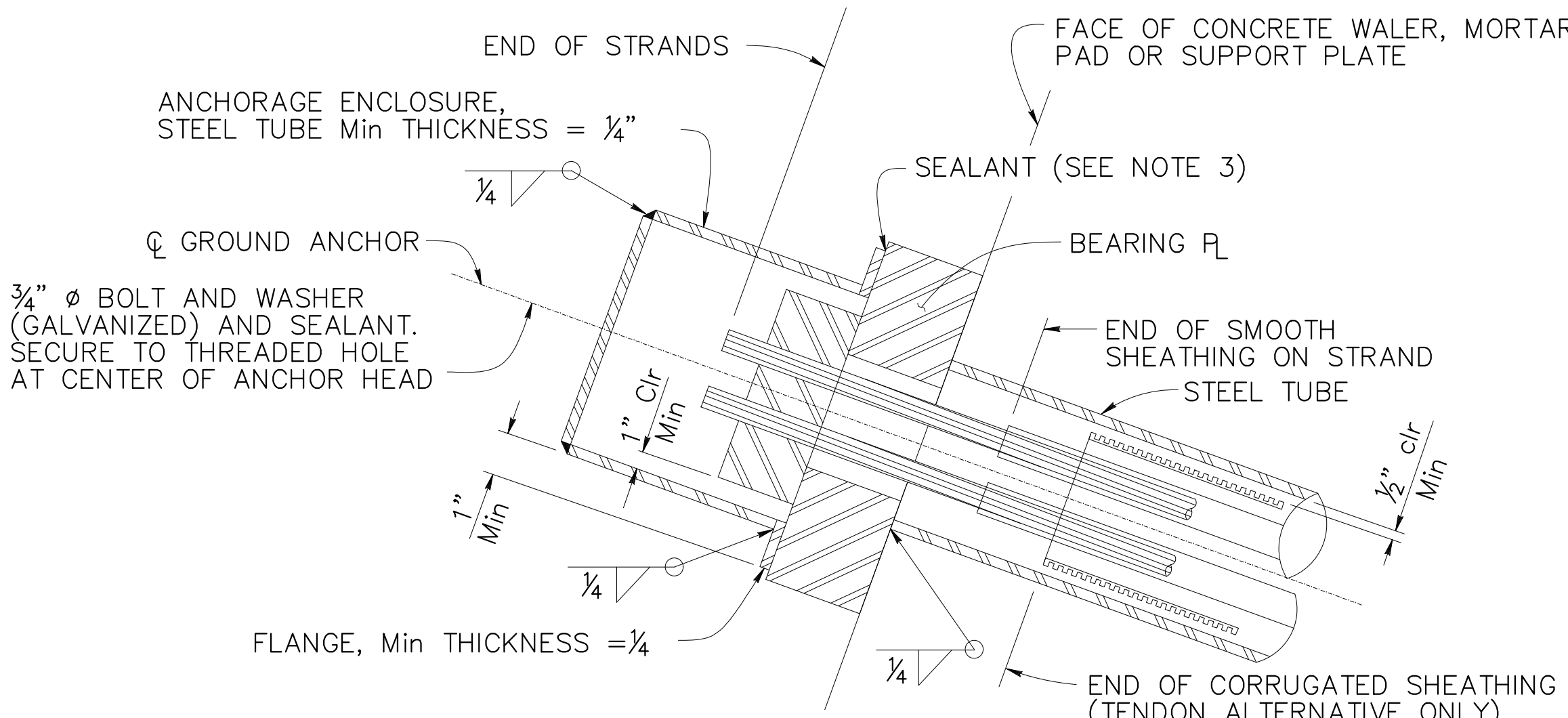
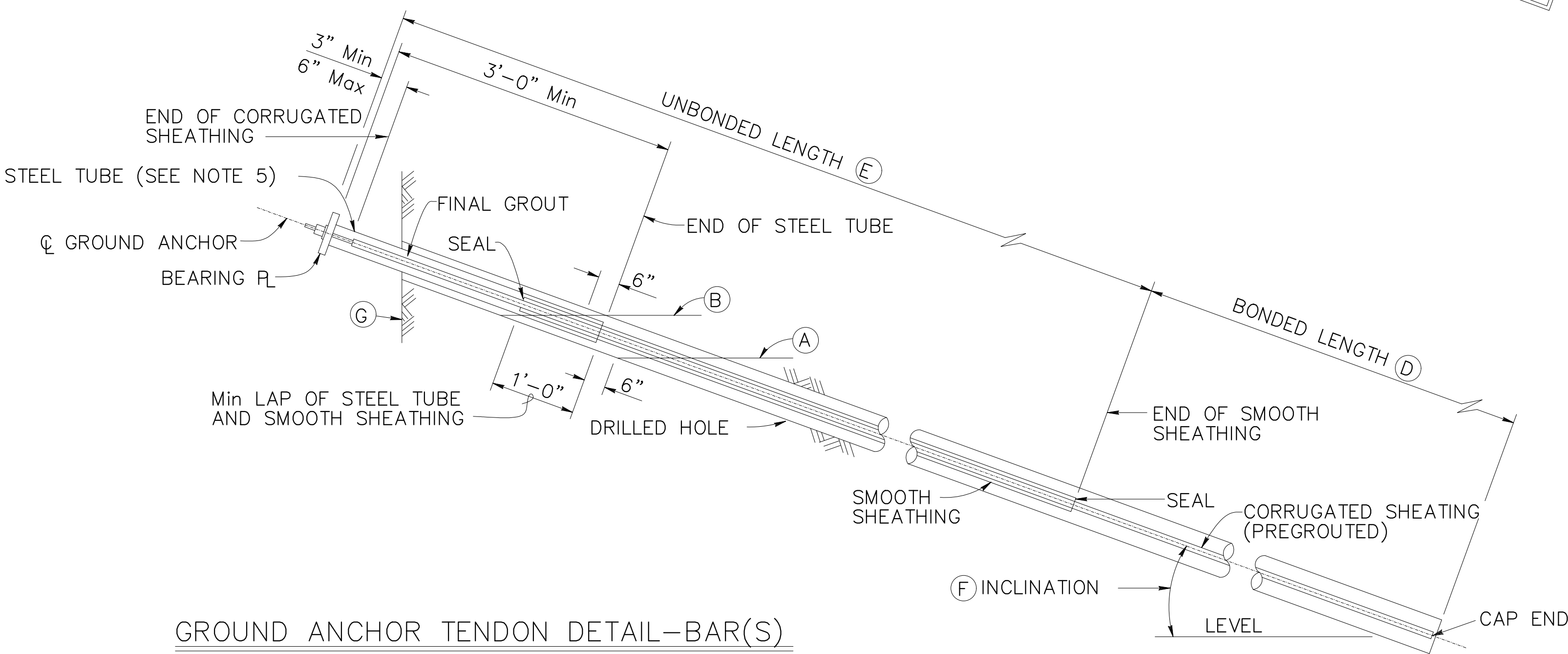
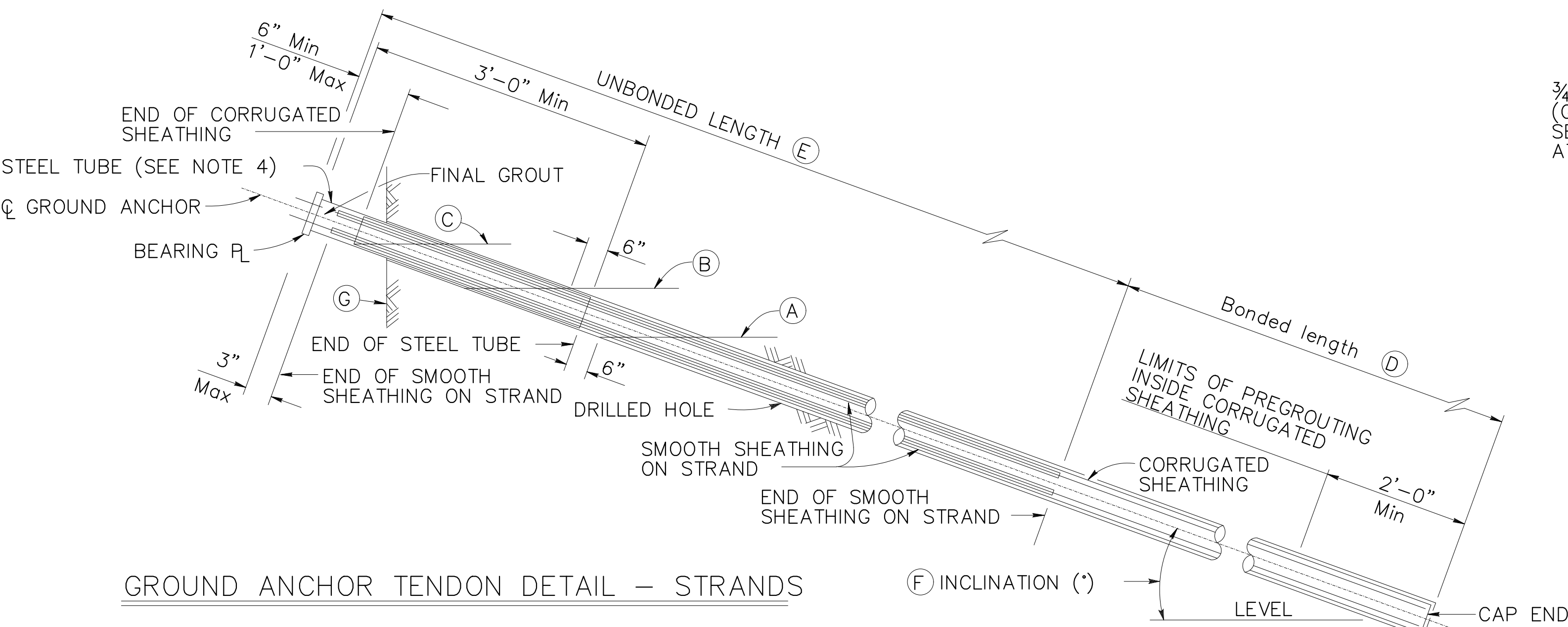
DRAWN: S.HUYNH
CHECKED: M. PHILIPPS
DATE: 5/8/2025
SCALE: NONE
JOB NO. 320163
SHEET

NOTES:

- (A) Level of initial grouting for drilled hole 6" in diameter or smaller
- (B) Level of secondary grouting
- (C) Level of initial grouting inside corrugated sheathing
- (D) Bonded length shall be determined by the contractor
- (E) For unbonded length, use 15'-0"
- (F) For inclination, see Retaining Wall Sheets
- (G) Face of Wall Excavation

NOTES:

1. Anchorage enclosure shall only be used when anchor head assembly is not enclosed in concrete.
2. Anchorage enclosure shall have provisions to allow injecting grout at low end and venting at high end. Galvanize after fabrication.
3. Silicone sealant to cover full width of flange.
4. Steel tube (Min thickness = 1/4") welded to bearing plate. Galvanize assembly after fabrication
5. Steel tube welded to bearing plate. Inside diameter of steel tube (Min thickness = 1/4") to be 1" greater than outside diameter of smooth sheathing.
6. Galvanize assembly after fabrication.
7. For other wall details, see Retaining Wall Sheets



ANCHORAGE ENCLOSURE DETAILS

NO SCALE

SUB HORIZONTAL
GROUND ANCHOR DETAILS

BY	
REVISION	
DATE	

PROJECT ENGINEER	MARK PHILIPPS
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COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS	GLENWOOD CUTOFF PM 0.02 STORM DAMAGE REPAIR PROJECT
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DRAWN: S.HUYNH
CHECKED: M.PHILIPPS
DATE: 3/14/2025
SCALE: NONE
JOB NO. 320163
SHEET
19 OF 20

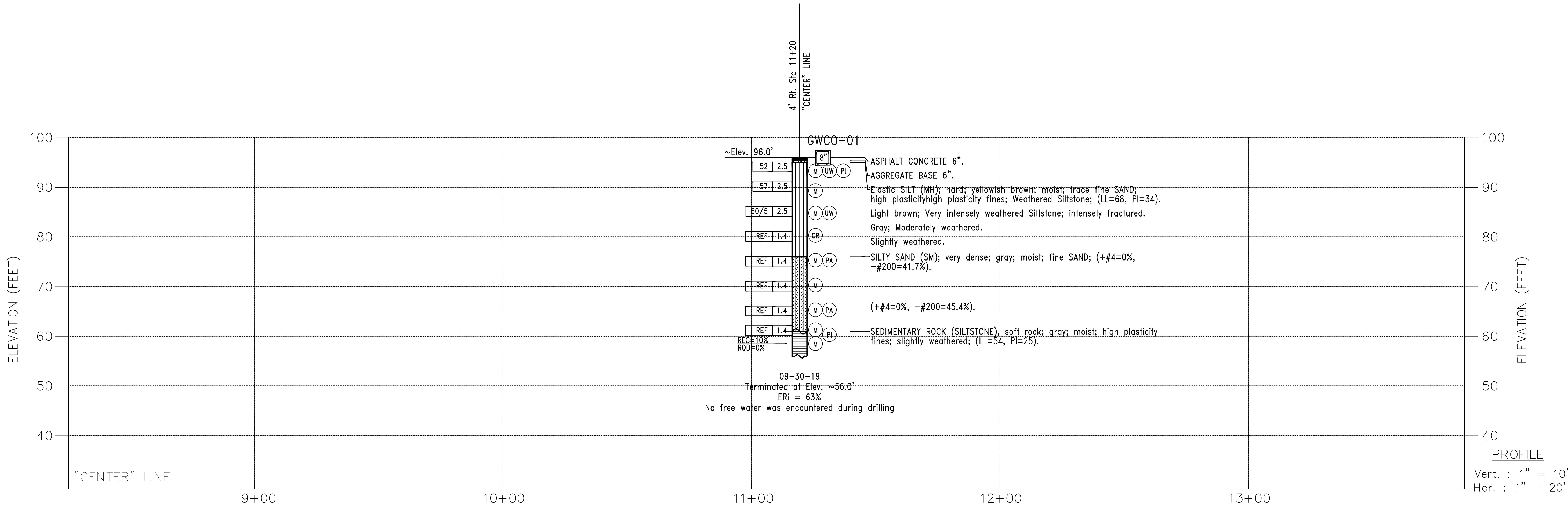
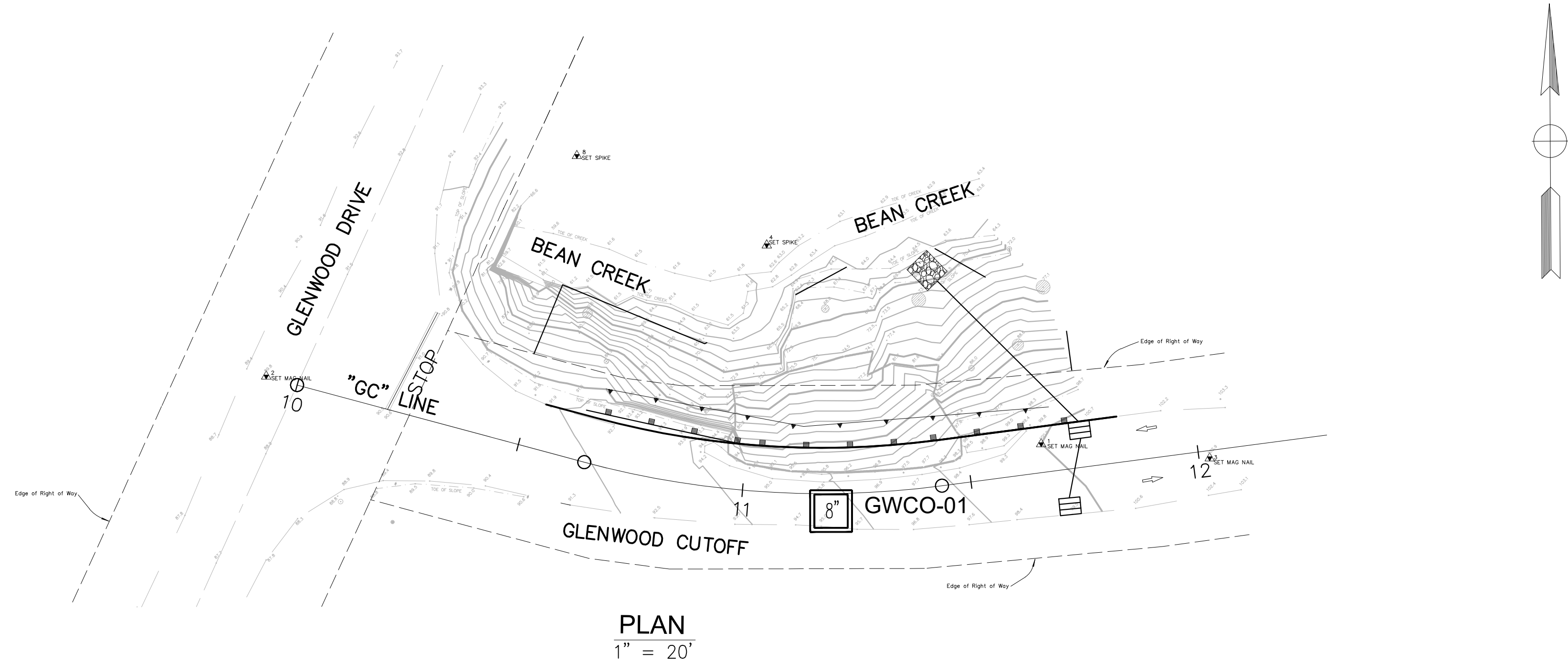
NOTES:

Standard Penetration Test Sampler: I.D. = 1.4";
O.D. = 2" Modified California Sampler: I.D. = 2.5";
O.D. = 3" Hammer Assembly: A 140 lb hammer with
a 30" drop (Automatic Hammer)

This LOTB sheet was prepared in accordance with
the Caltrans Soil & Rock, Logging, Classification,
and Presentation Manual (2010)

See Caltrans 2018 Standard Plans A10F, A10G for
Soil Legend.

All dimensions are in feet unless otherwise shown



LOG OF TEST BORINGS

BY	
REVISION	
DATE	
PROJECT ENGINEER	EMRE ORTAKCI, P.E., G.E.
COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS	GLENWOOD CUTOFF PM 0.02 STORM DAMAGE REPAIR PROJECT
DRAWN: KO	
CHECKED: EO	
DATE: 5/8/2025	
SCALE: 1"=10'	
JOB NO. 320163	
SHEET	
20	20

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	PLAN VIEW
3	WALL PROFILE
4	TYPICAL SECTION
5	DETAILS
6	EROSION CONTROL & REVEGETATION

GENERAL NOTES

- ALL CONSTRUCTION SHALL CONFORM TO THE COUNTY OF SANTA CRUZ DESIGN CRITERIA, THE STATE STANDARD PLANS AND THE APPLICABLE PROVISIONS OF THE STATE STANDARD SPECIFICATIONS.
- THERE SHALL BE NO CHANGES IN THE APPROVED IMPROVEMENT PLANS WITHOUT PRIOR APPROVAL BY THE SANTA CRUZ COUNTY DEPARTMENT OF PUBLIC WORKS.
- PLEASE CALL "UNDERGROUND SERVICE ALERT" (U.S.A.) AT 811 or 800-227-2600 BEFORE DIGGING.
- THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE APPROVED BY TRANSPORTATION ENGINEERING.
- THE CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY, AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.
- THE CONTRACTOR SHALL POSSESS A CLASS "A" LICENSE AT THE TIME THE CONTRACT IS AWARDED.

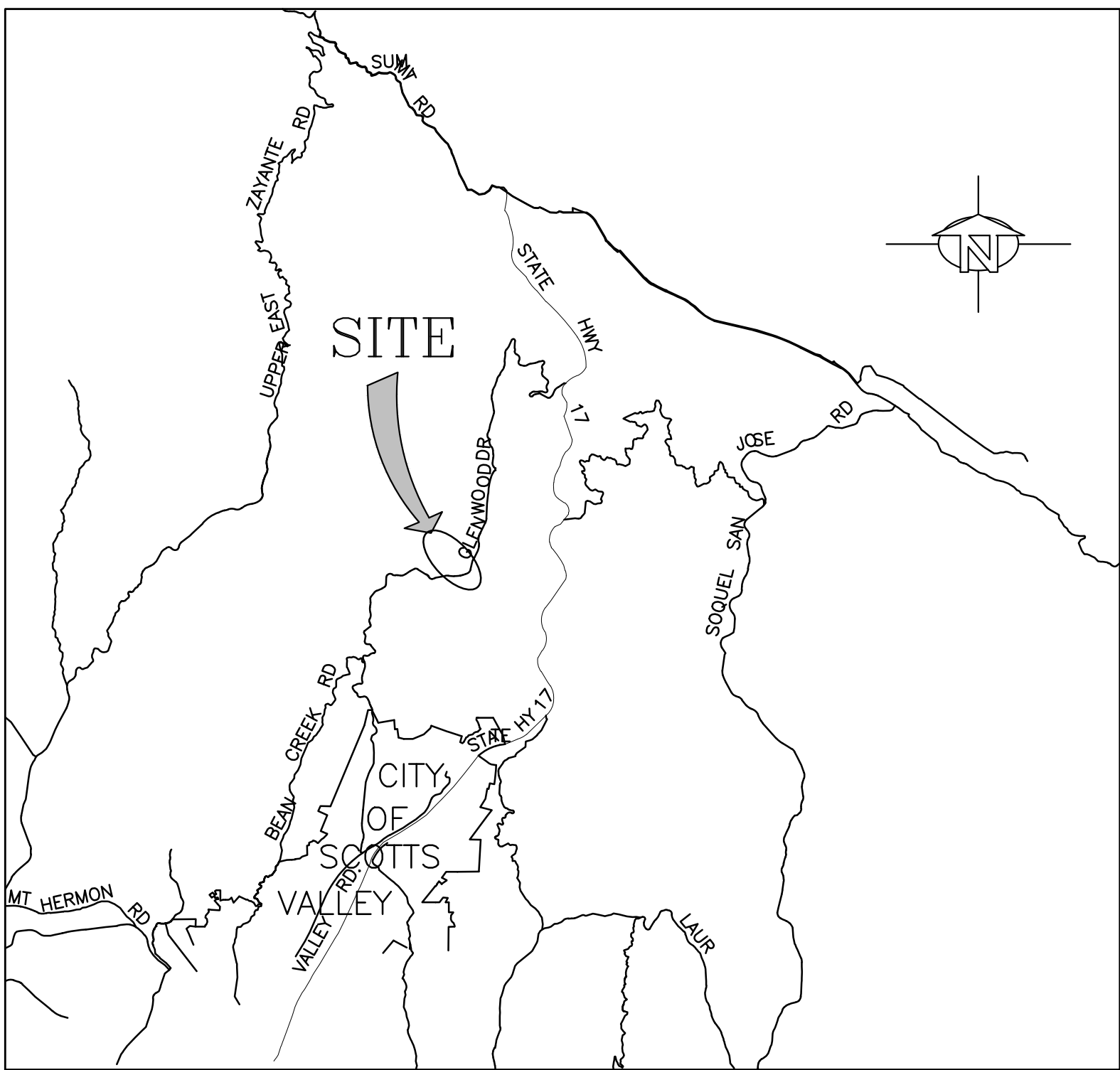
ABBREVIATIONS

A.B.	AGGREGATE BASE	KIP	1000 POUNDS FORCE
AC	ASPHALT CONCRETE	MBGR	METAL BEAM GUARD RAIL
APN	ASSESSOR'S PARCEL NUMBER	MIN	MINIMUM
APPROX	APPROXIMATE	N	NORTH
BOT	BOTTOM	(n)	NEW
BP	BOTTOM CONCRETE PIER	O.C.	ON CENTER
CL	CENTER LINE	OH	OVERHEAD
CL	CONTROL LINE	PERF	PERFORATED
CONC	CONCRETE	PG&E	PACIFIC GAS AND ELECTRIC
CONN	CONNECTION	PM	POST MILE
CONST	CONSTRUCTION	PRIN	PRINCIPAL
CP	CONTROL POINT	PT	POINT
DIA	DIAMETER	PVC	POLY VINYL CHLORIDE
E	EAST	RD	ROAD
(E), EXIST	EXISTING	REINF	REINFORCED
EA	EACH	RT	RIGHT
EL, ELEV	ELEVATION	R/W	RIGHT OF WAY
ENGR	ENGINEER	S	SOUTH
EP	EDGE OF PAVEMENT	SEC	SECTION
EST	ESTIMATE	SHT	SHEET
EXCAV	EXCAVATE, EXCAVATION	S.S.	SANDSTONE
FD	FOUND	STA	STATION
FT	FOOT, FEET	TP	TOP CONCRETE PIER
FTG	FOOTING	TYP	TYPICAL
GEN	GENERAL	U.B.	UNBONDED
GRD	GRADE	W	WEST
HDPE	HIGH DENSITY POLYETHYLENE	W/	WITH
HT	HEIGHT	&	AND
INV	INVERT	@	AT
IP	IRON PIPE	1ST	FIRST
JP	JOINT POLE	<	LESS THAN
		#	POUND

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS

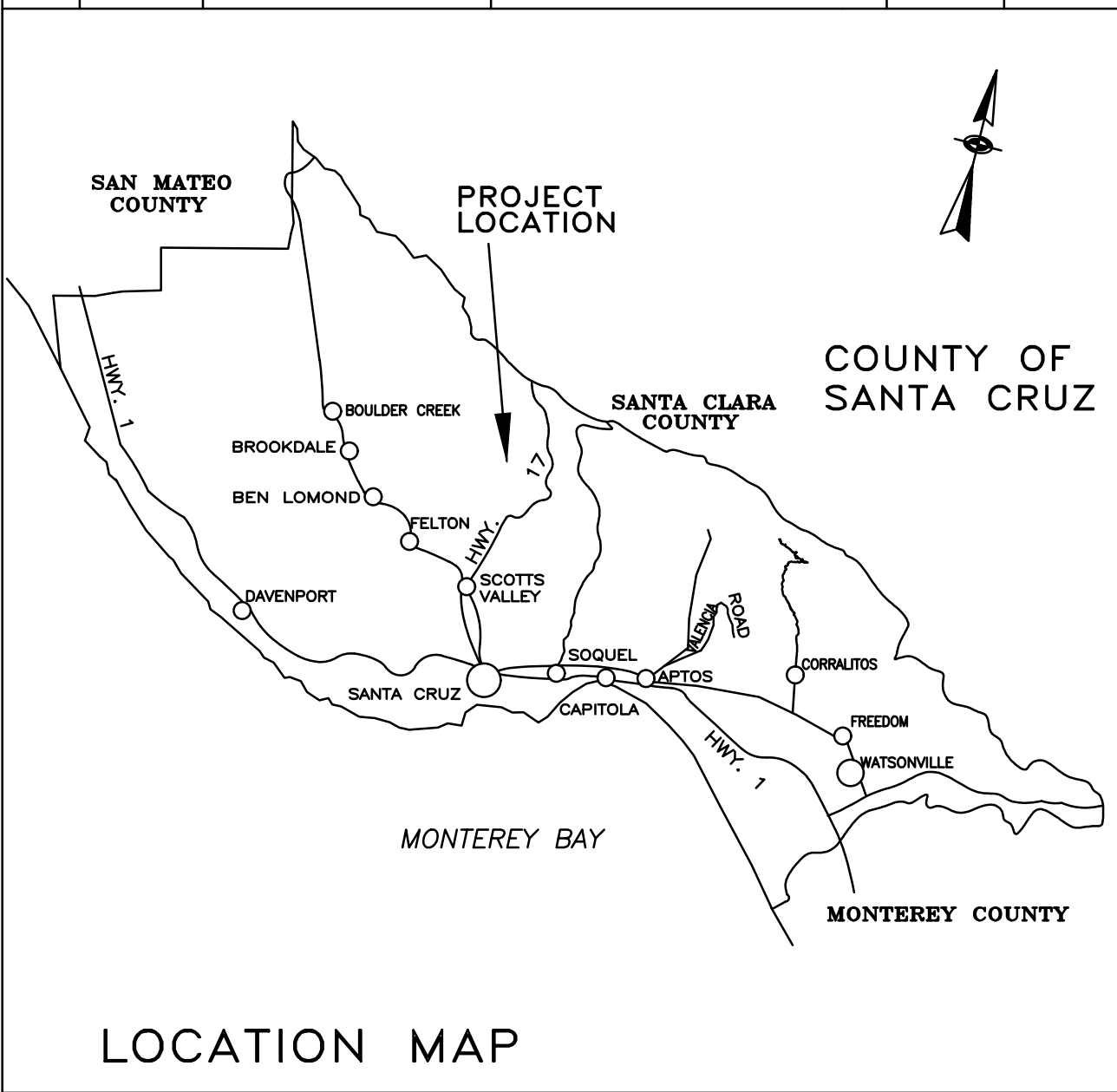
PROJECT PLANS FOR CONSTRUCTION ON
GLENWOOD DRIVE PM 2.02
STORM DAMAGE REPAIR PROJECT
DAF ER-32LO(336)
2017 STORM DAMAGE

To be supplemented by CalTrans Standard Plans dated 2024



VICINITY MAP
NOT TO SCALE

DIST	COUNTY	ROUTE	POST MILE OF PROJECT	SHEET No.	TOTAL SHEETS
5	SCr	GLENWOOD Dr	P.M. 2.02	1	4



LOCATION MAP



Design Engineer
Greg Jones

Senior Design Engineer
Joel LaCagnina

Assistant Director of Public Works
Transportation Division
Steve Wiesner

Director of Public Works
Matthew J. Machado

Chair, Board of Supervisors

Date approved by Board of Supervisors

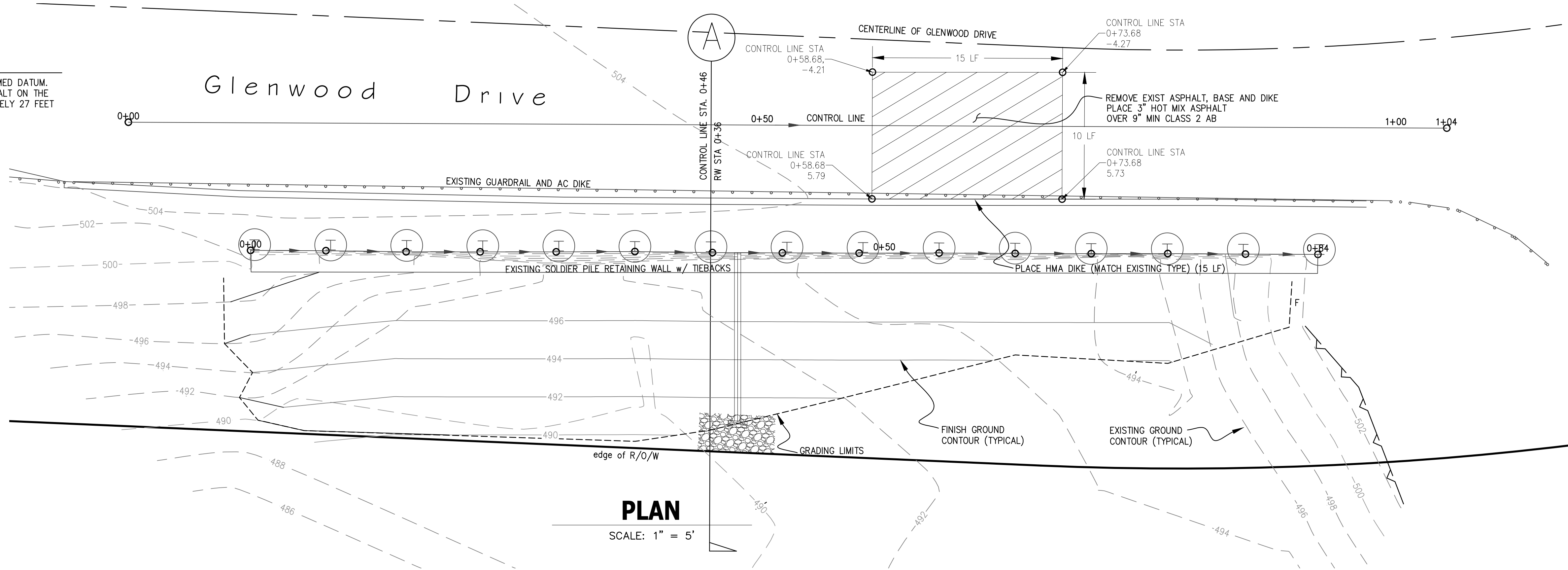
Reviewed by:		Reviewed by:		Reviewed by:	
GREG MARTIN Traffic Engineer		ALEX SANDOVAL Road Superintendent		KATIE BEACH Construction Engineer	

County Job No. P76782

BENCHMARK

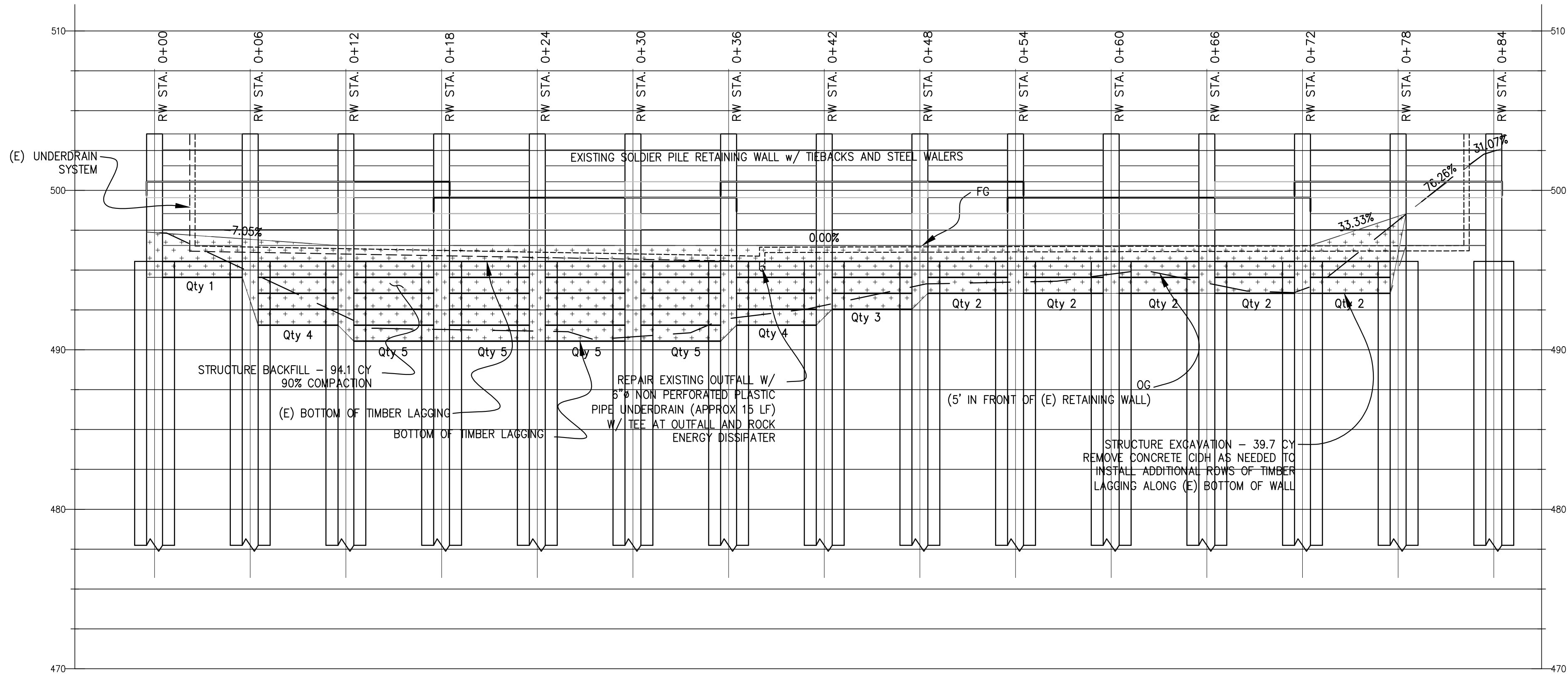
THE ELEVATIONS SHOWN ON THIS SURVEY ARE ON AN ASSUMED DATUM. THE SITE BENCHMARK IS A PK NAIL & SHINER IN THE ASPHALT ON THE SOUTHERLY SIDE OF GLENWOOD DRIVE, LOCATED APPROXIMATELY 27 FEET WESTERLY OF A CONCRETE STORM DRAIN HEADWALL.

BENCHMARK ELEVATION = 503.82; (ASSUMED DATUM)



GENERAL CONSTRUCTION NOTES:

1. THE WORK HEREIN SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS & PLANS DATED 2024 OF THE STATE OF CALIFORNIA AS THEY MAY APPLY TO THE CONTRACT PLANS AND SPECIAL PROVISIONS.
2. DIMENSIONS OF THE STRUCTURAL ITEMS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS AND THE THE MANUFACTURER(S) RECOMMENDATIONS.
3. REFER TO THE STANDARD SPECIFICATIONS & SPECIAL PROVISIONS FOR THE STRUCTURE BACKFILL REQUIREMENTS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ANY DAMAGE(S) TO PRIVATE PROPERTY & ANY UTILITIES IN GLENWOOD DRIVE. THE EXACT LOCATION OF EXISTING UNDERGROUND UTILITIES IS NOT KNOWN.
5. ALL CLEARING, GRADING, AND EROSION CONTROL MEASURES SHALL BE COMPLETED NO LATER THAN OCTOBER 15, 2025.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE TO REVIEW THE WORK AND ACCESS LIMITATIONS, VERIFY CONDITIONS, AND UNDERSTAND THE PROJECT BEFORE SUBMITTING A BID FOR THE WORK. THERE IS NO PRE-BID SITE MEETING FOR THIS PROJECT.

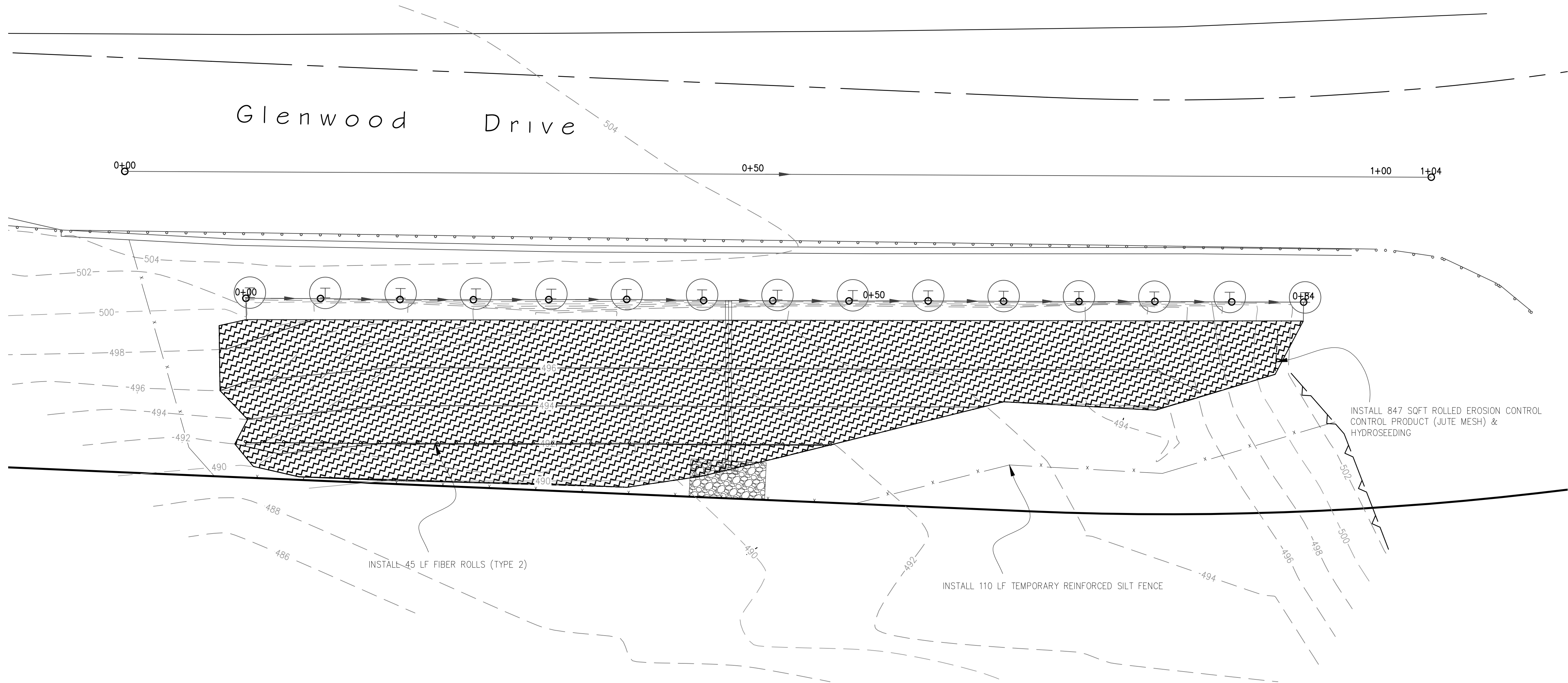


PLAN & PROFILE VIEW

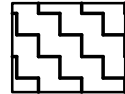
COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS		PROJECT ENGINEER		DATE	REVISION	BY
GLENWOOD DRIVE PM 2.02 STORM DAMAGE REPAIR PROJECT		GREG JONES				
DRAWN: GRJ						
CHECKED: AGM						
DATE: 12/17/24						
SCALE: 1"=5'						
JOB NO. P76782						
SHEET						
2 OF 4						

EROSION CONTROL NOTES:

1. PLACE TEMPORARY REINFORCED SILT FENCE AS DESCRIBED IN THE CONTRACT DOCUMENTS.
2. ON ALL DISTURBED SOIL AREAS, PLACE HYDROSEED, ROLLED EROSION CONTROL FABRIC (JUTE MESH) AND FIBER ROLLS AS DESCRIBED IN THE CONTRACT DOCUMENTS.
3. ALL OPERATIONS SHALL CONFORM TO REQUIREMENTS OF THE COUNTY EROSION CONTROL ORDINANCE. THE DESIRED END RESULT OF THE PROPOSED MEASURE IS TO CONTROL SITE EROSION AND TO PREVENT SEDIMENT TRANSPORT OFF THE SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ANY ADDITIONAL MEASURES TO MEET THIS GOAL ARE BEING MET. SILT FENCES AND SAND BAGS SHALL BE USED TO PREVENT SILT RUNOFF.
4. DISTURBANCE TO NATURAL VEGETATION SHALL BE MINIMIZED WITHIN AREA OF CONSTRUCTION.
5. BETWEEN OCTOBER 1 AND MAY 1, ALL DISTURBED EXPOSED SOIL SHALL BE PROTECTED FROM EROSION AT ALL TIMES. DURING CONSTRUCTION SUCH PROTECTION SHALL CONSIST OF MULCHING AND/OR PLANTING OF NATIVE VEGETATION OF ADEQUATE DENSITY. BEFORE COMPLETION OF PROJECT ANY EXPOSED SOIL ON DISTURBED SLOPES SHALL BE PERMANENTLY PROTECTED FROM EROSION.



LEGEND



HYDROSEEDING WITH FIBER ROLLS
Entire slope shall have rolled erosion control product (jute mesh) with 26.6 oz/sq-yd density and 39% open area. Remove loose material as directed by the engineer. Installation of straw rolls 10' o.c., anchored with 3' long wood stakes. Entire area to be hydroseeded and cover with native duff.

PLANT LIST		
SIZE	QUANTITY	BOTANICAL NAME - COMMON NAME / SPACING
1 Gallon	2	Acer Macrophyllum - Big Leaf Maple / 10' o.c.
1 Gallon	3	Sequoia sempervirens - Redwood / 10' o.c.
Cuttings	20	Salix Lasiolepis - Arroyo Willow / 3' o.c.
1 Gallon	5	Polystichum munitum - Western Sword Fern / 8' o.c.
1 Gallon	12	Rubus Ursinus - California Blackberry / 5' o.c.

EROSION CONTROL SEED MIXTURE
Install erosion control seed mixture as described in the contract documents.

EROSION PLAN

SCALE: 1" = 5'

EROSION CONTROL & REVEGETATION

BY	REVISION	DATE
PROJECT ENGINEER		GREG JONES
COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS		GLENWOOD DRIVE PM 2.02 STORM DAMAGE REPAIR PROJECT
DRAWN: GRJ		
CHECKED: AGM		
DATE: 12/17/24		
SCALE: 1"=5'		
JOB NO. P76725		
SHEET		
4 OF 4		