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4.	TH-1	TRAFFIC HANDLING PLAN
5.	Q-1	SUMMARY OF QUANTITIES
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GENERAL NOTES

1. 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.
2. THERE SHALL BE NO CHANGES IN THE APPROVED IMPROVEMENT PLANS WITHOUT PRIOR APPROVAL BY THE SANTA CRUZ COUNTY DEPARTMENT OF PUBLIC WORKS.
3. PLEASE CALL "UNDERGROUND SERVICE ALERT" (U.S.A.) AT 811 or 800-227-2600 BEFORE DIGGING.
4. 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.
5. 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.
6. THE CONTRACTOR SHALL POSSESS A CLASS "A" LICENSE AT THE TIME THE CONTRACT IS AWARDED.

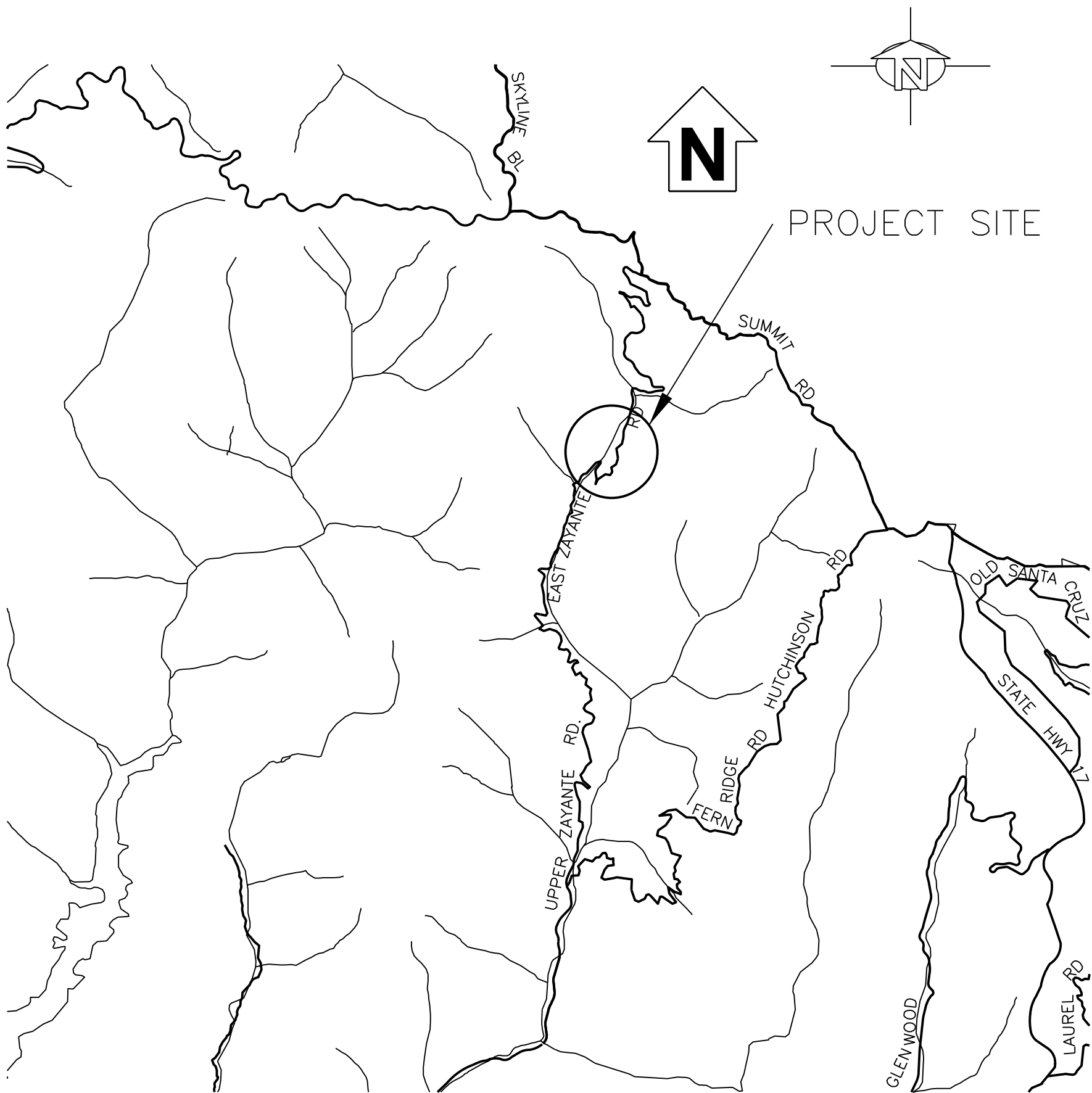
ABBREVIATIONS

AB	AGGREGATE BASE	Rd	ROAD
AP	ANGLE POINT	Ret/RET	RETAINING
BC	BEGIN CURVE	RSP	ROCK SLOPE PROTECTION
BEG/Beg	BEGIN	RT/Rt	RIGHT
BVC	BEGIN VERTICAL CURVE	R/W	RIGHT OF WAY
CL	CENTER LINE	RW	RETAINING WALL
CP	CATCH POINT	RWLOL	RETAINING WALL LAYOUT LINE
E	EAST	S	SOUTH
(E)/Exist	EXISTING	TCE	TEMPORARY CONSTRUCTION EASEMENT
EC	END CURVE	Temp	TEMPORARY
Elev	ELEVATION	Var	VARIES
EP	EDGE OF PAVEMENT	VC	VERTICAL CURVE
EVC	END VERTICAL CURVE	W	WEST
FES	FLARED END SECTION		
FL	FLOW LINE		
FT	FEET		
HMA	HOT MIX ASPHALT		
HP	HINGE POINT		
Inv	INVERT		
LT/Lt	LEFT		
LOL	LAYOUT LINE		
(MOD)	MODIFIED		
MGS	MIDWEST GUARDRAIL SYSTEM		
MSE	MECHANICALLY STABILIZED EARTH		
N	NORTH		
NAD83	NORTH AMERICAN DATUM 1983		
NAVD88	NORTH AMERICAN VERTICAL DATUM 1988		
OG	ORIGINAL GROUND		
PCC	POINT OF COMPOUNDING CURVE		
PG	PROFILE GRADE		
PI	POINT OF INTERSECTION		
P/L	PROPERTY LINE		
PRC	POINT OF REVERSING CURVE		
PT	POINT		

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS

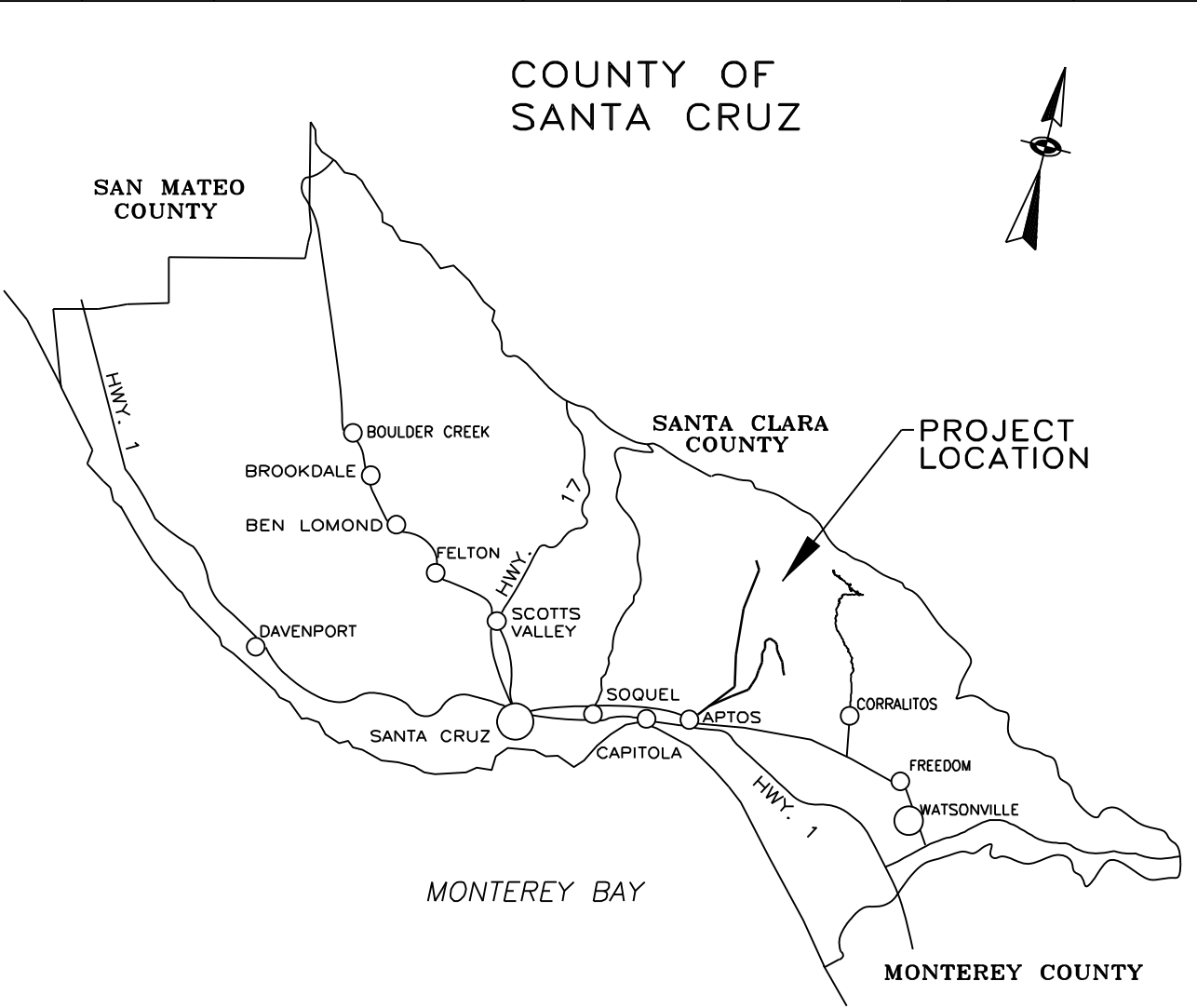
PROJECT PLANS FOR CONSTRUCTION ON
UPPER EAST ZAYANTE ROAD
PM 1.68
STORM DAMAGE REPAIR PROJECT
FEDERAL PROJECT No.
32LO(262)

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
05	SCr	UPPER EAST ZAYANTE RD	P.M. 1.68	1	9



LOCATION MAP

DOKKEN
ENGINEERING
110 BLUE RAVINE ROAD, SUITE 200
FOLSOM, CA 95630
PH: 916-858-0642 FAX: 916-858-0643

Rosall J. Griggs
Project Engineer
Rosa Griggs



Civil Engineer in Responsible Charge
Amber Myer

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

County Job No. P76515

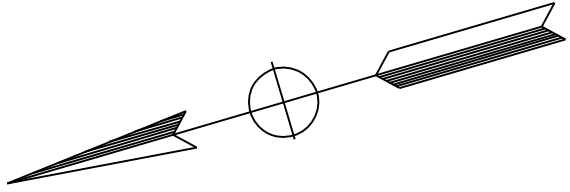
Reviewed by:		Reviewed by:		Reviewed by:	
GREG MARTIN Traffic Engineer		ALEX SANDOVAL Road Superintendent		CARISA DURAN Construction Engineer	

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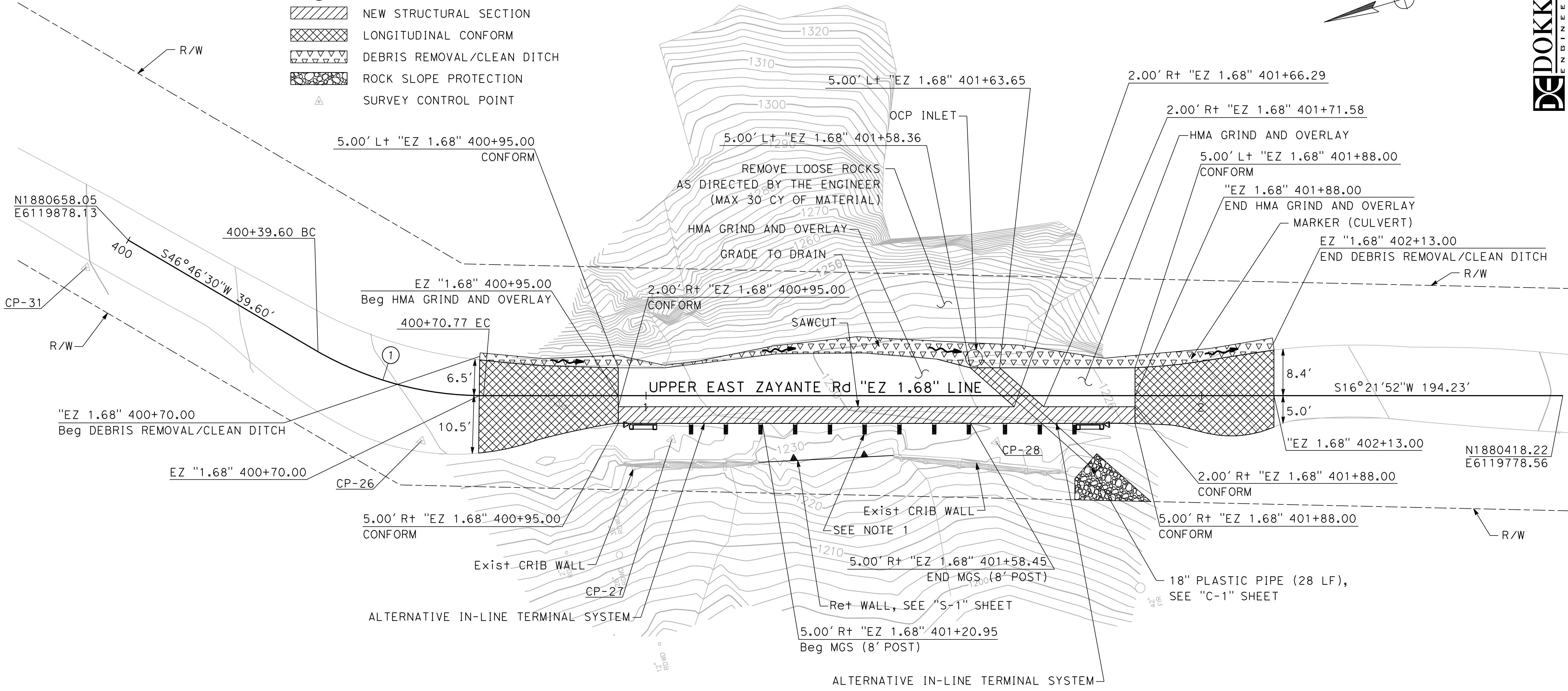
LEGEND:

- (X)

CURVE NUMBER
- NEW STRUCTURAL SECTION
- LONGITUDINAL CONFORM
- DEBRIS REMOVAL/CLEAN DITCH
- ROCK SLOPE PROTECTION
- SURVEY CONTROL POINT



DEIDOKKEN
ENGINEERING
1110 BLUE RAVINE ROAD, SUITE 200
FOLSOM, CA 95630
Ph: 916-958-0642 Fax: 916-958-0643



BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE SOUTHERN BOUNDARY OF THE NORTHWEST 1/4 OF SECTION 18, T. 9 S., R. 1 W., M.D.B.&M., AS DESCRIBED IN DOCUMENT 2015-0043982, SANTA CRUZ COUNTY RECORDS, AND FROM MONUMENTS FOUND

= S 89°35' E

BASIS OF ELEVATIONS

THE BASIS OF ELEVATIONS FOR THIS SURVEY IS ASSUMED

NOTES:

1. MGS POST PLACEMENT MAY BE SHIFTED TO AVOID MICROPILES, SEE "C-1" SHEET FOR DETAILS.

PM 1.68

CURVE DATA

No. (X)	R	Δ	T	L
1	60.00	29°45'40"	15.94	31.17'

PROJECT CONTROL

No	NORTHING	EASTING	ELEV	LINE	STATION	OFFSET	DESCRIPTION
26	1880617.62	6119828.60	1236.24	"EZ 1.68"	400+61.00	9.08' R+	SET MAG
27	1880574.31	6119816.17	1234.28	"EZ 1.68"	401+04.64	7.89' R+	SET 8.SPK
28	1880518.40	6119799.30	1229.85	"EZ 1.68"	401+63.03	8.33' R+	SET 8.SPK
31	1880666.73	6119875.55	1239.74	-	-	-	SET 8.SPK

LAYOUT

SCALE 1" = 10'

L-1

RELATIVE BORDER SCALE IS IN INCHES



\$FILEABBREV

SHEET NAME:

DRAWING NAME:

COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS

PROJECT ENGINEER

UPPER EAST ZAYANTE PM 1.68

STORM DAMAGE REPAIR PROJECT

DATE

REVISION

BY

ERIC ESPINOZA

REGISTERED PROFESSIONAL ENGINEER

NO. 1990077

EXPIRATION DATE 06/30/25

CIVIL

STATE OF CALIFORNIA

DRAWN: K. MOE

CHECKED: E. ESPINOZA

DATE: 3/14/25

SCALE: AS NOTED

JOB NO. P76515

SHEET




2

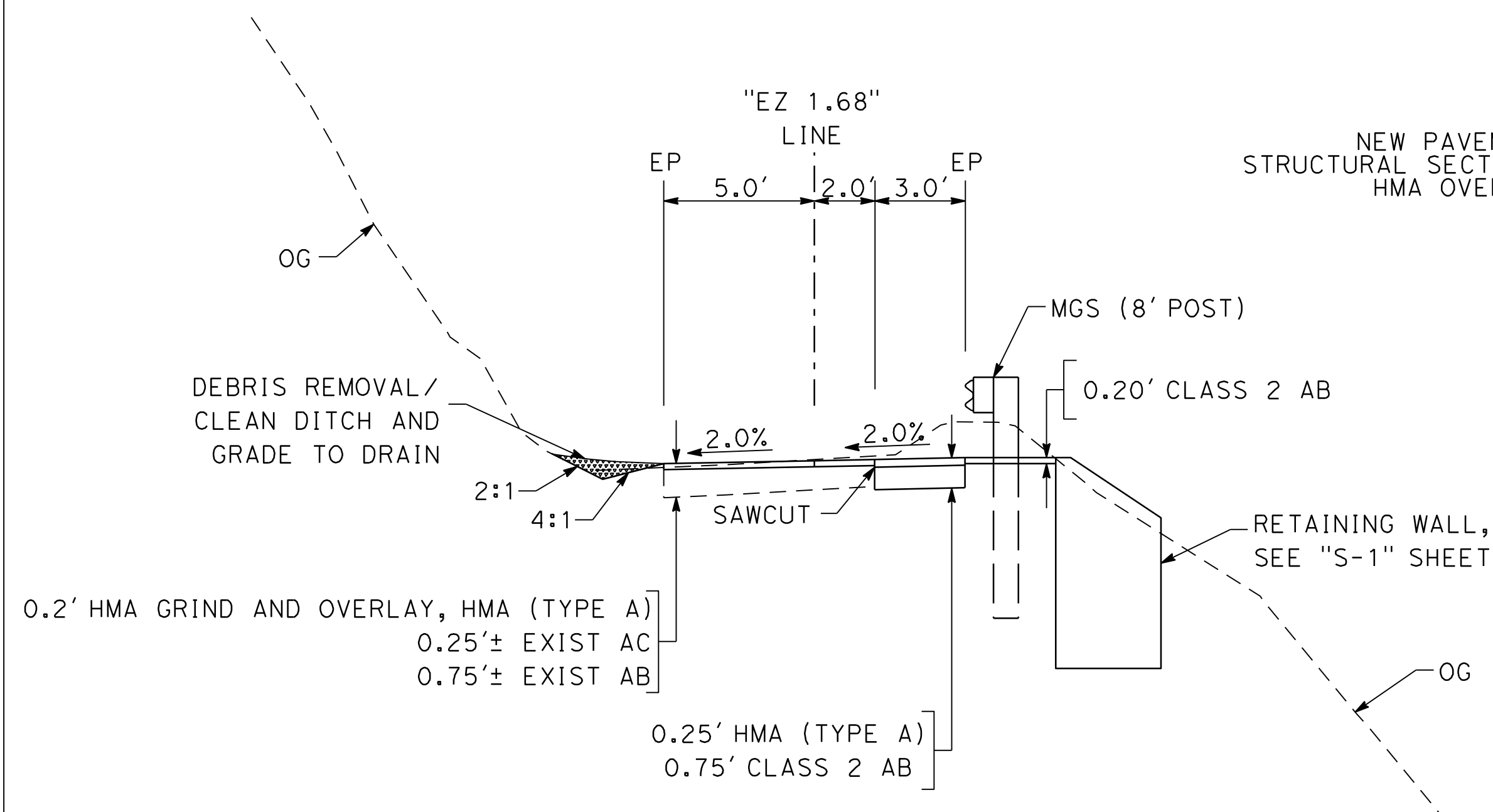
OF

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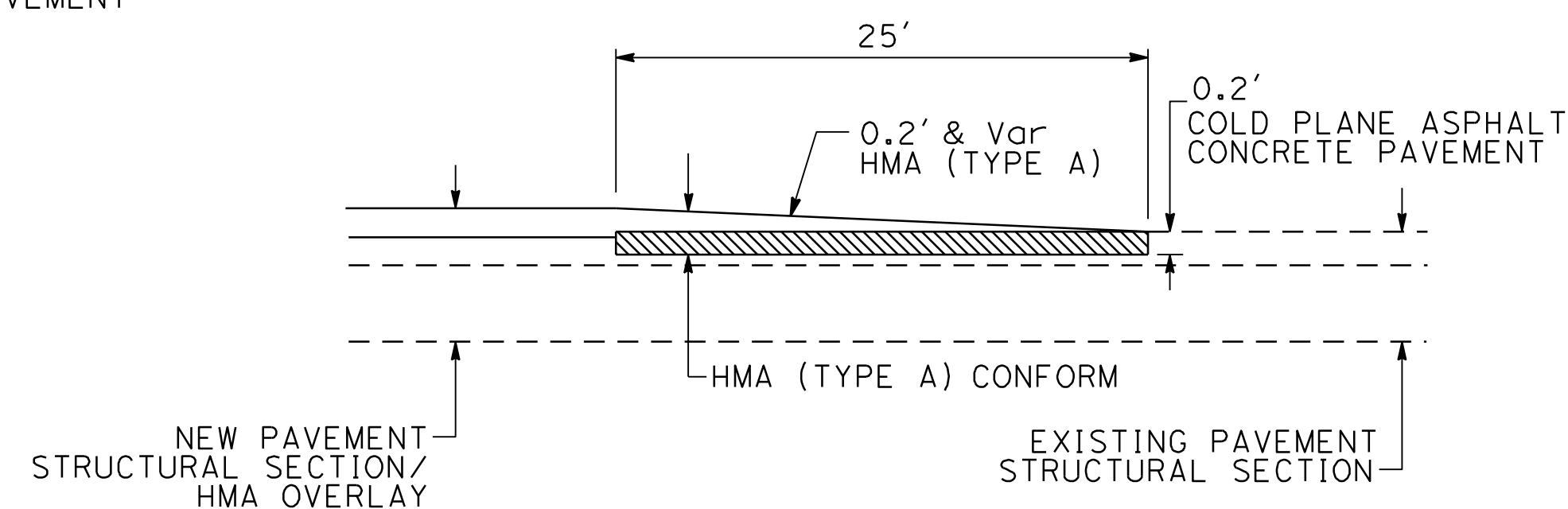
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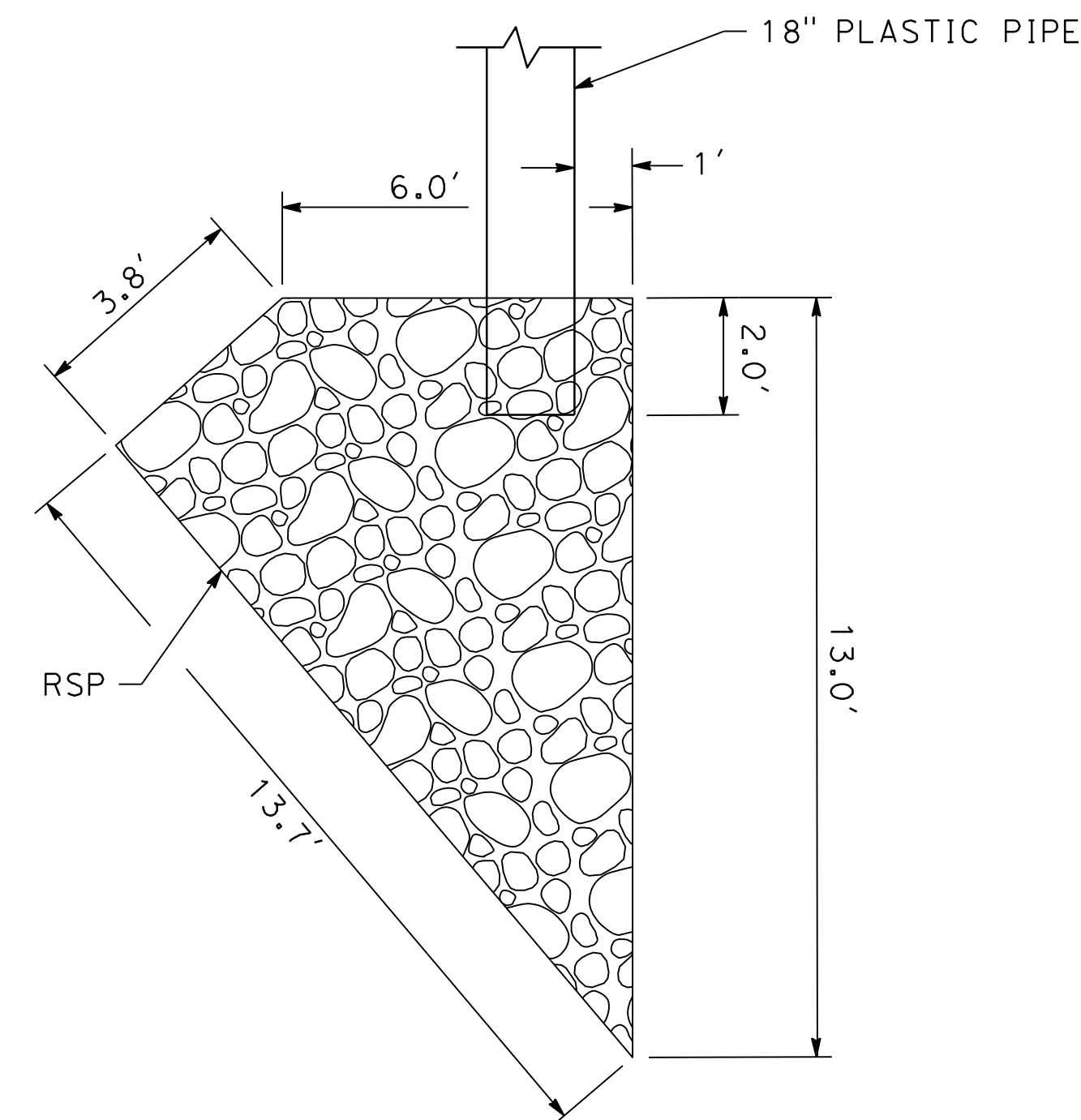
- | | |
|---|--------------------------------------|
|  | COLD PLANE ASPHALT CONCRETE PAVEMENT |
|  | DEBRIS REMOVAL/CLEAN DITCH |
|  | ROCK SLOPE PROTECTION |



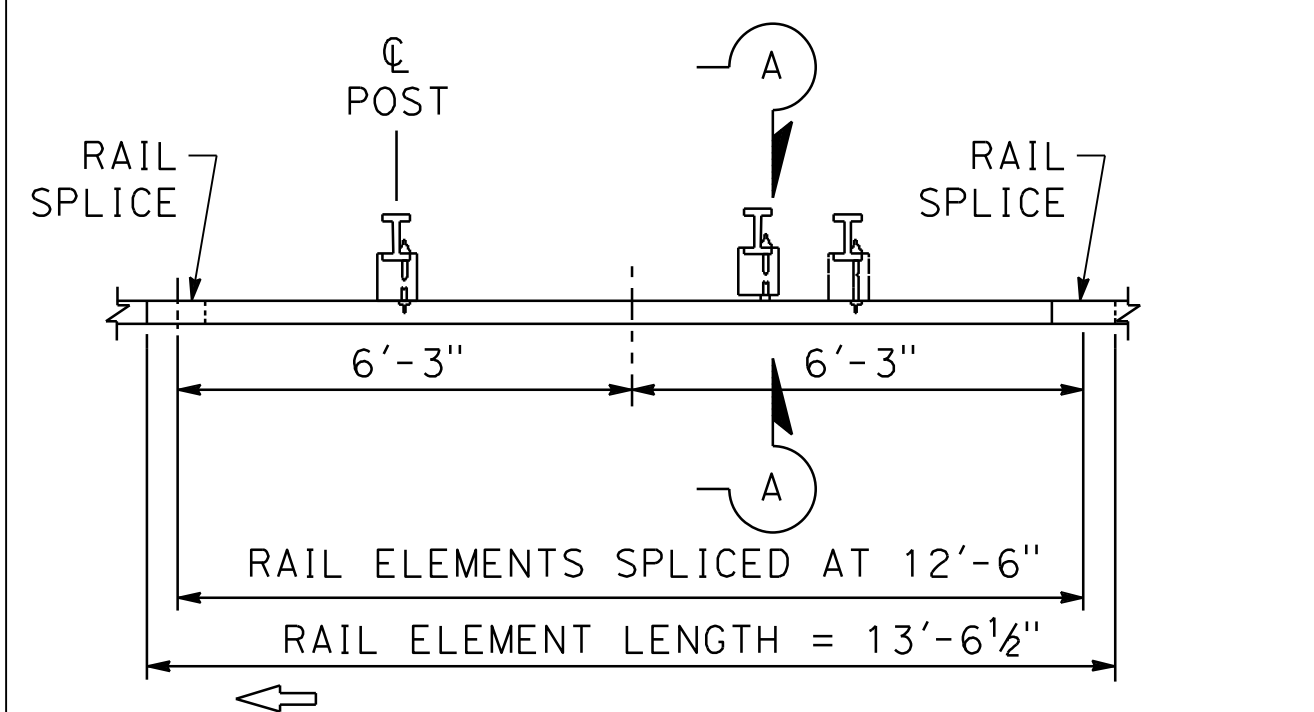
TYPICAL SECTION - PM 1.68



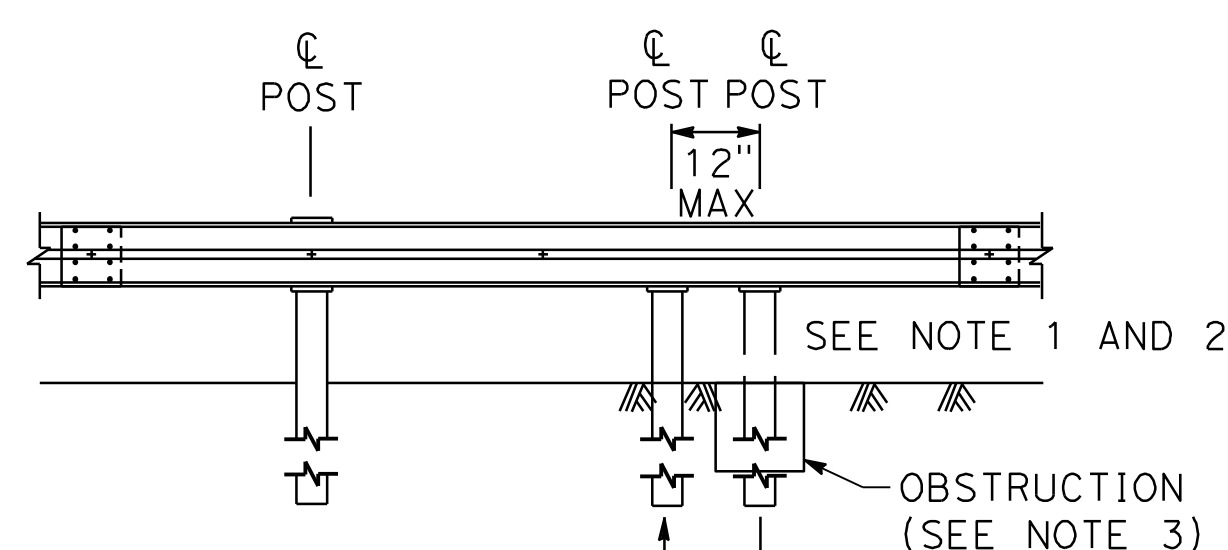
LONGITUDINAL CONFORM DETAIL



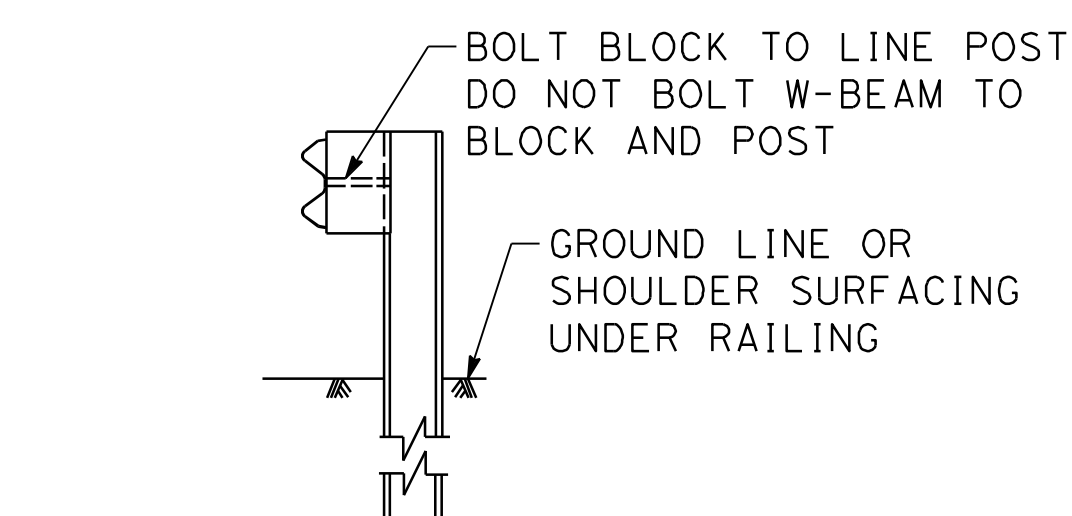
ROCK SLOPE PROTECTION



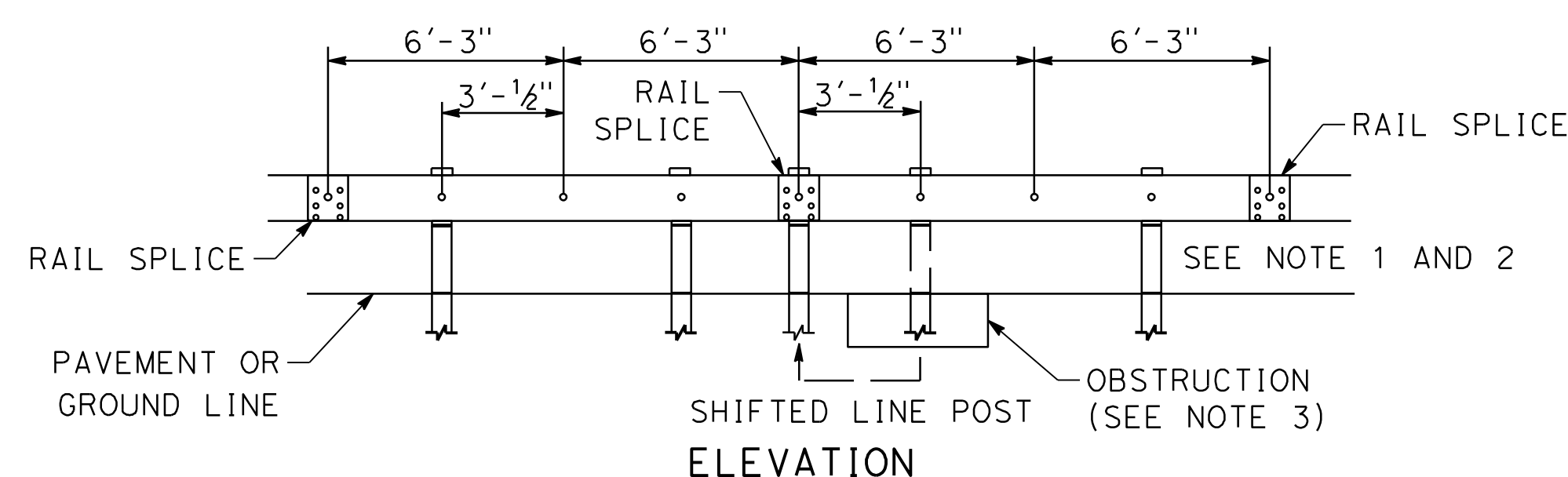
PLAN



SHIFTED LINE POST
ELEVATION



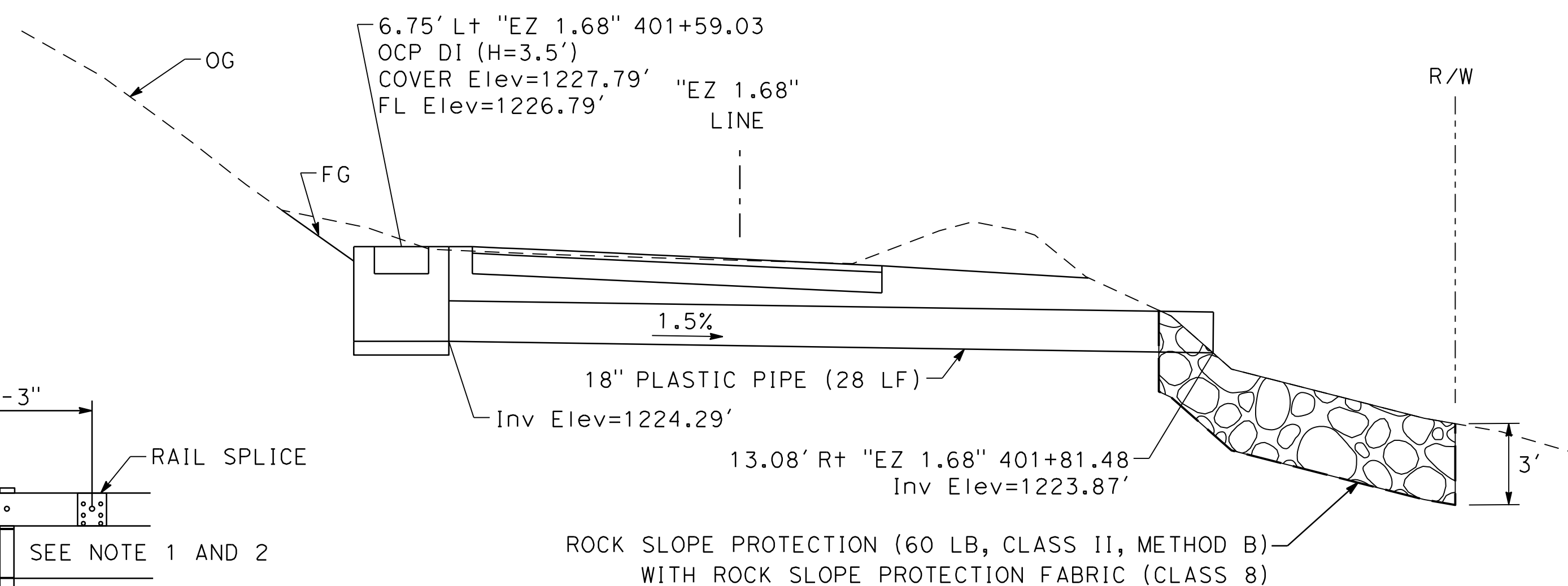
SECTION A-A
TYPICAL SHIFTED LINE POST



ELEVATION

NOTES:

1. THIS DETAIL DOES NOT APPLY TO END TERMINALS.
2. THIS DETAIL MAY BE USED WITH THRIE BEAM LINE POST.
3. MGS POST MUST HAVE A MINIMUM CLEARANCE OF 7" FROM THE FACE OF POST TO FACE OF MICROPILE.



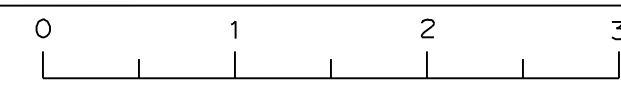
DRAINAGE SECTION - PM 1.68

CONSTRUCTION DETAILS

NO SCALE

C-1


RELATIVE BORDER SCALE
IS IN INCHES



\$FILEABBREV





SHEET NAME:

DRAWING NAME:

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS UPPER EAST ZAYANTE PM 1.68 STORM DAMAGE REPAIR PROJECT	PROJECT ENGINEER ERIC ESPINOZA		REVISION	DATE	BY
DRAWN: K. MOE CHECKED: E. ESPINOZA DATE: 3/14/25 SCALE: AS NOTED JOB NO. P76515 SHEET 3 OF 9					

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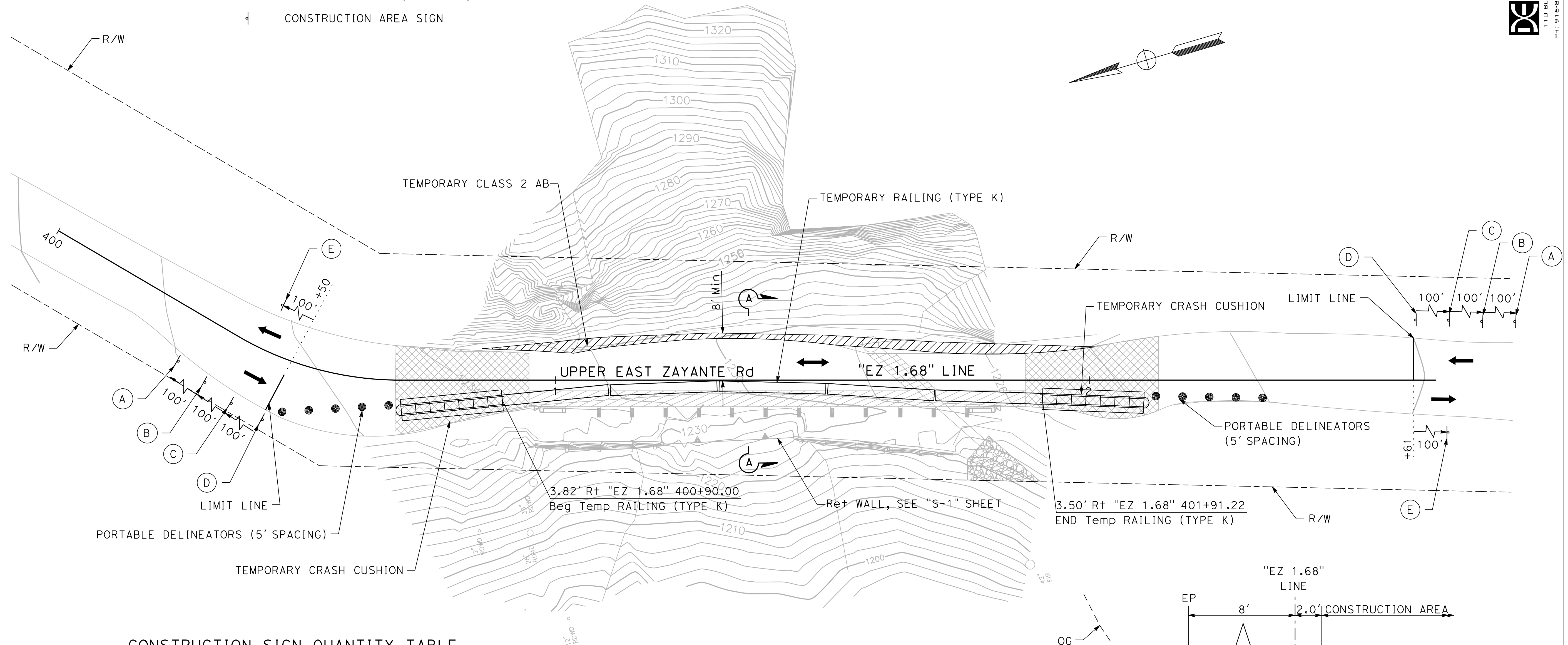
LEGEND:

- | | |
|---|--|
|  | TEMPORARY AGGREGATE BASE WIDENING (1' Min DEPTH) |
|  | DIRECTION OF TRAFFIC |
|  | TWO WAY TRAFFIC (ONE LANE) |
|  | CONSTRUCTION AREA SIGN |

NOTES:

1. EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.

DE DOKKEN
ENGINEERING
110 BLUE RAVINE ROAD, SUITE 200
FOLSOM, CA 95630
PH: 916-858-0642 FAX: 916-858-0643



CONSTRUCTION SIGN QUANTITY TABLE

SIGN	SIGN CODE	PANEL SIZE	MESSAGE	No. AND SIZE OF POSTS	(N) No. OF SIGNS
(A)	W20-1	36" X 36"	ROAD WORK AHEAD	1 - 4" x 6"	2
(B)	W20-4	36" X 36"	ONE LANE ROAD AHEAD	1 - 4" x 6"	2
(C)	W3-1	30" X 30"	STOP AHEAD	1 - 4" x 6"	2
(D)	R1-1	30" X 30"	STOP	1 - 4" x 6"	2
(E)	G20-2	36" X 18"	END ROAD WORK	1 - 4" x 6"	2

PM 1.68

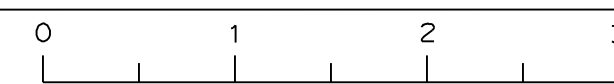
SECTION A-A
NOT TO SCALE

TRAFFIC HANDLING PLAN

SCALE 1" = 10'

TH-1

RELATIVE BORDER SCALE
IS IN INCHES



\$FILEABBREV

SHEET NAME:

DRAWING NAME:

PROJECT ENGINEER

ERIC ESPINOZA

COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS

UPPER EAST ZAYANTE PM 1.68
STORM DAMAGE REPAIR PROJECT

DRAWN:	K. MOE
CHECKED:	E. ESPINOZA
DATE:	3/14/25
SCALE:	AS NOTED
JOB NO.	P76515
	SHEET

4 OF 9

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ROADWAY ITEMS - PM 1.68

ITEM																	
	CY	TON	SQYD	CY	LF	LB	EA	LF	LF	CY	SQYD	SQYD	CY	EA	LF	SQFT	LF
	10	25	73	43	4	112	2	38	28	8	20	33	30	1	130	1000	167
	CLASS 2 AGGREGATE BASE																
	HOT MIX ASPHALT (TYPE A)																
	COLD PLANE ASPHALT CONCRETE PAVEMENT																
	ROADWAY EXCAVATION																
	36" PRECAST CONCRETE PIPE INLET																
	MISCELLANEOUS IRON AND STEEL																
	ALTERNATIVE IN-LINE TERMINAL SYSTEM																
	MIDWEST GUARDRAIL SYSTEM (8' POST)																
	18" PLASTIC PIPE																
	ROCK SLOPE PROTECTION (60 LB, CLASS II, METHOD B)																
	ROCK SLOPE PROTECTION FABRIC (CLASS 8)																
	DEBRIS REMOVAL/CLEAN DITCH																
	REMOVE LOOSE ROCK																
	MARKER (CULVERT)																
	FIBER ROLLS																
	HYDROSEED																
	TEMPORARY HIGH-VISIBILITY FENCE																

TRAFFIC CONTROL ITEMS - PM 1.68


ITEM		CLASS 2 AGGREGATE BASE	TEMPORARY CRASH CUSHION	TEMPORARY RAILING (TYPE K)	PORTABLE DELINEATOR	TEMPORARY PAVEMENT MARKING (PAINT)
		CY	EA	LF	EA	SOFT
	"EZ 1.68"	7	2	100	10	16

DE DOKKEN
ENGINEERING
110 BLUE RAVINE ROAD, SUITE 200
FOLSOM, CA 95630
PH: 916-858-0642 FAX: 916-858-0642

SUMMARY OF QUANTITIES

NO SCALE **Q-1**

RELATIVE BORDER SCALE
IS IN INCHES



A horizontal scale bar with markings at 0, 1, 2, and 3 inches. The markings are represented by vertical lines with tick marks pointing downwards. The numbers 0, 1, 2, and 3 are placed above the corresponding tick marks.

\$FILEABBREV

SHEET NAME:

DRAWING NAME:

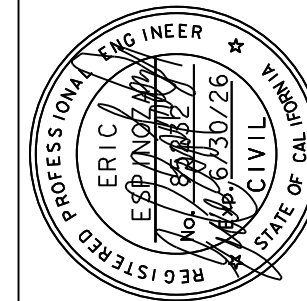
DRAWN:	K. MOE
CHECKED:	E. ESPINOZA
DATE:	3/14/25
SCALE:	AS NOTED
JOB NO.	P76515
	SHEET

PROJECT ENGINEER

ERIC ESPINOZA

COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS

UPPER EAST ZAYANTE PM 1.68
STORM DAMAGE REPAIR PROJECT

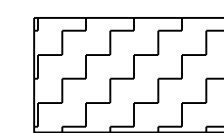


DATE	REVISION	BY
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5 OF 9

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LEGEND:



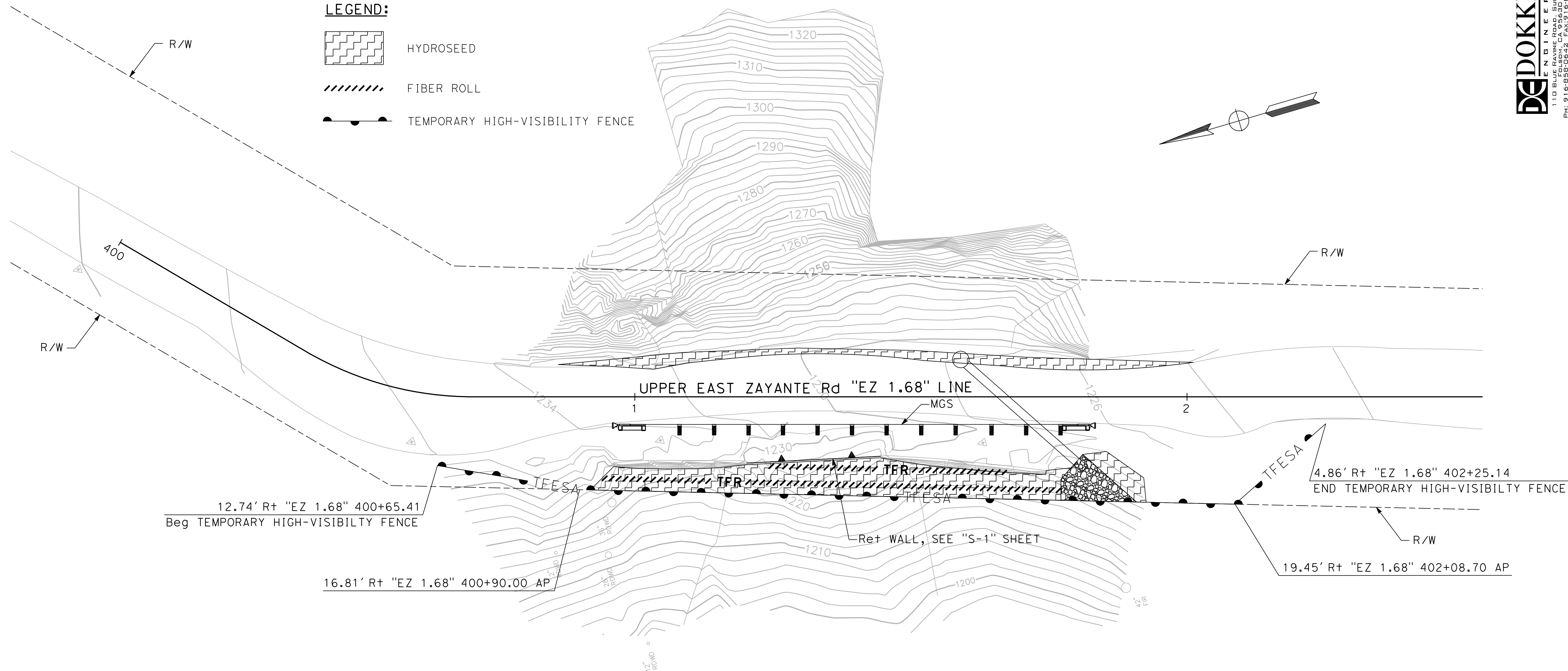
HYDROSEED



FIBER ROLL



TEMPORARY HIGH-VISIBILITY FENCE



EROSION CONTROL

ITEM	MATERIAL		APPLICATION RATE
	DESCRIPTION	TYPE	
HYDROSEED	SEED	SEED MIX	70 LB/ACRE
	FIBER	WOOD	2000 LB/ACRE
	NATURAL SLOW RELEASE FERTILIZER	GRANULAR	800 LB/ACRE
	TACKIFIER	PSYLLIUM	100 LB/ACRE

SEED MIX

BOTANICAL NAME	COMMON NAME	LB PURE LIVE SEED PER ACRE
BROMUS CARINATUS	CALIFORNIA BROME	25
ELYMUS GLAUCUS	BLUE WILDRYE	10
VULPIA MICROSTACHYS	THREE WEEKS FESCUE	6
TRIFOLIUM WILDENOVII	TOMCAT CLOVER	4
HORDEUM BRACHYANTHERUM	CALIFORNIA MEADOW BARLEY	25

PM 1.68

EROSION CONTROL PLAN

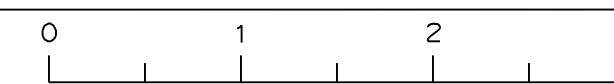
SCALE 1" = 10'

EC-1

SCALE 1" = 10'

DRAWING NAME:

RELATIVE BORDER SCALE
IS IN INCHES



\$FILEABBREV

SHEET NAME:

DRAWING NAME:

PROJECT ENGINEER

ERIC ESPINOZA

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

UPPER EAST ZAYANTE PM 1.68
STORM DAMAGE REPAIR PROJECT

DRAWN:	K. MOE
CHECKED:	E. ESPINOZA
DATE:	3/14/25
SCALE:	AS NOTED
JOB NO.	P76515
SHEET	

6 OF 9

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DEIDOKKEN
ENGINEERING
1110 BLUE RAVINE ROAD, SUITE 200
FOLESON, CA 94630
PH: 916-558-0642 FAX: 916-558-0643

GENERAL NOTES

DESIGN: AASHTO LRFD Bridge Design Specifications, 8th edition with California Amendments, Preface dated November 2019

Standard Plans and Specifications, 2024 edition with Revised Standard Plans, dated Oct 2024.

LIVE LOAD: 240 psf equivalent to 2 feet soil weight

SOIL PARAMETERS: (For determination of Design Lateral Earth Pressures)
Backfill soil weight = 110 lb/ft³
Friction Angle = 34°
At-Rest Pressure coefficient, Ka = 0.46

SEISMIC DESIGN: PGA = 0.88g
K_h = 0.20g
K_v = 0.00g
K_{ae} = 0.75

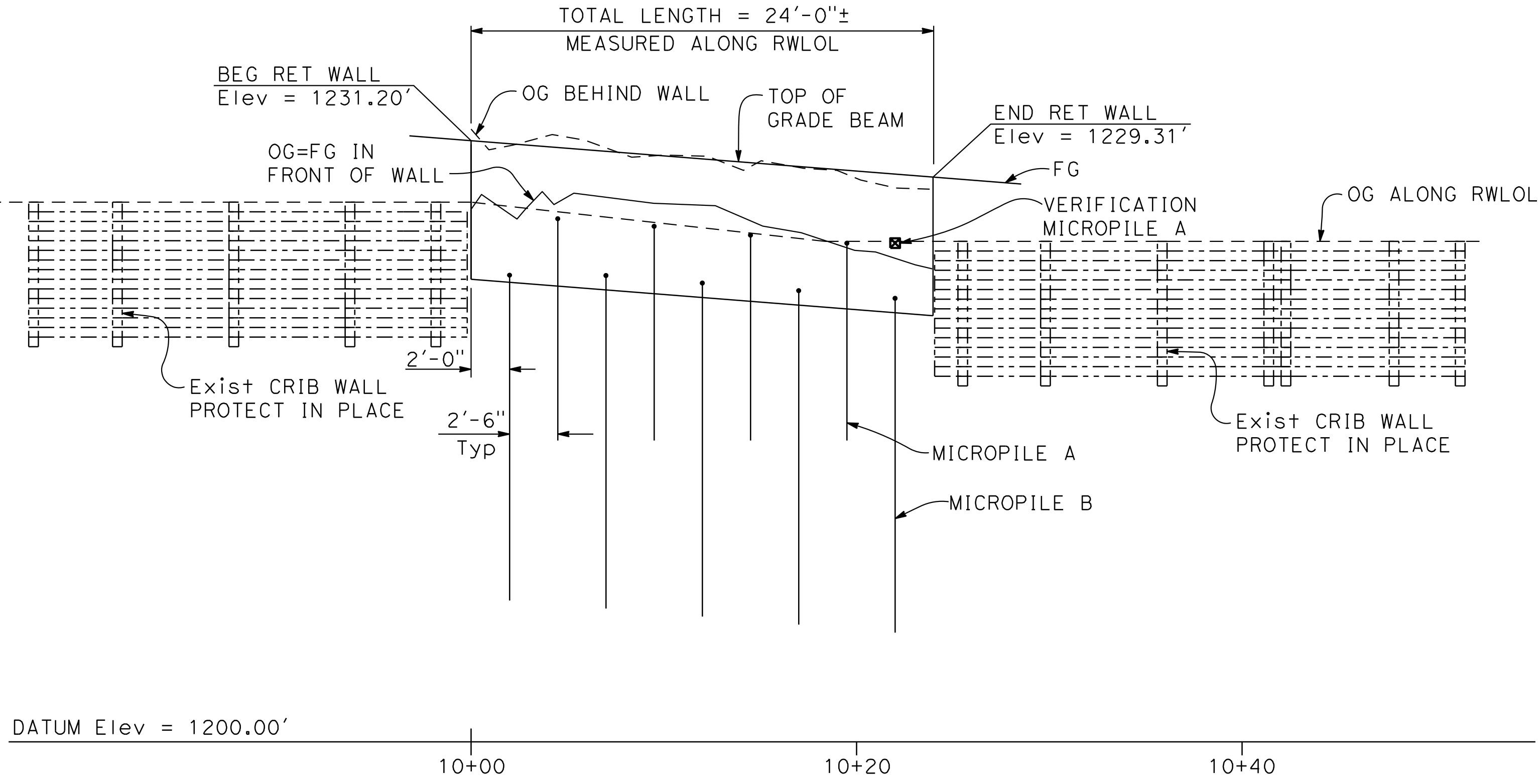
DESIGN SERVICE LIFE: 75 YEARS

REINFORCED CONCRETE: f_y = 60,000 psi
f_c = 3,600 psi
n = 8

STRUCTURAL STEEL: ASTM A36
f_y = 36 ksi

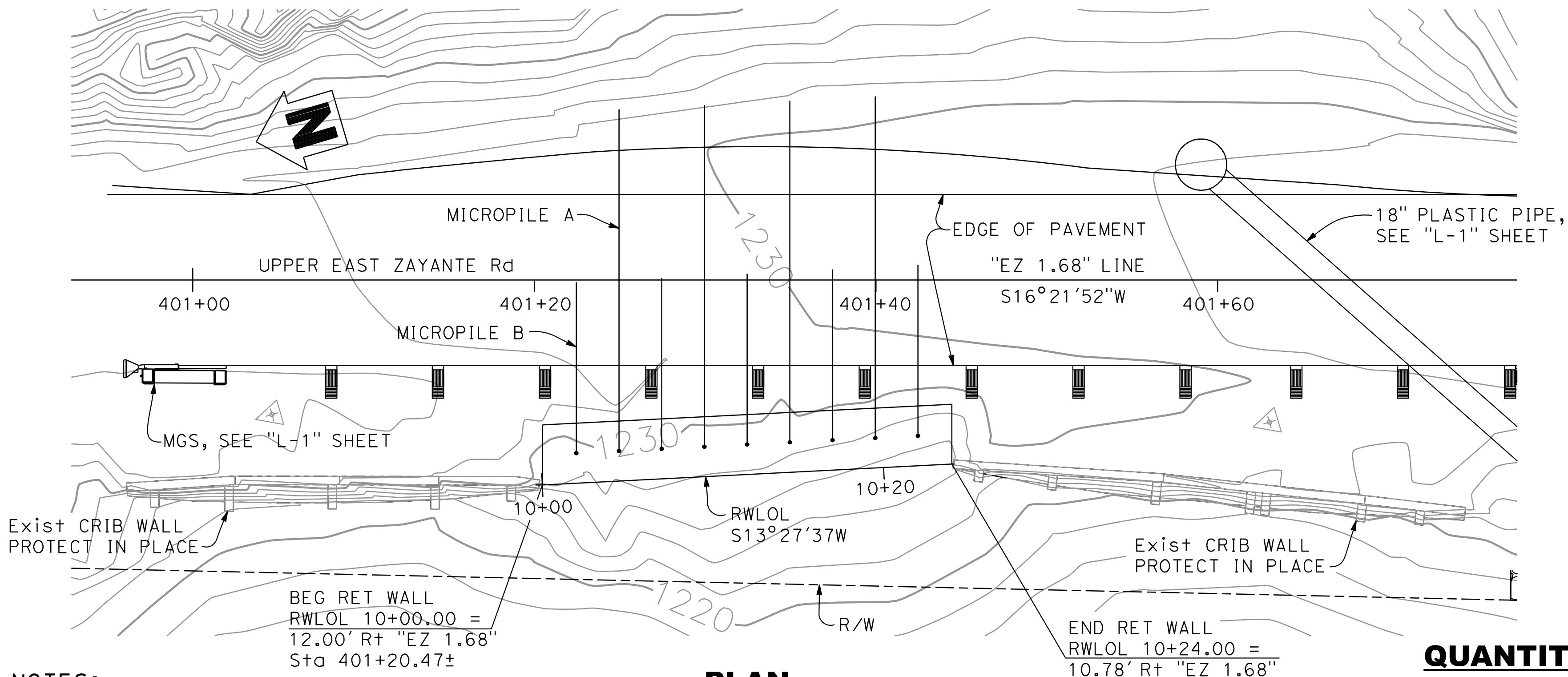
HIGH STRENGTH THREAD BAR: ASTM A722/A722M, Type II
GRADE 150

MICROPILES: Casing: API N-80, f_y = 80,000 psi
Grout: f_c = 4,000 psi
Structural Steel: f_y = 36,000 psi (other than casing)



ELEVATION

1" = 5'



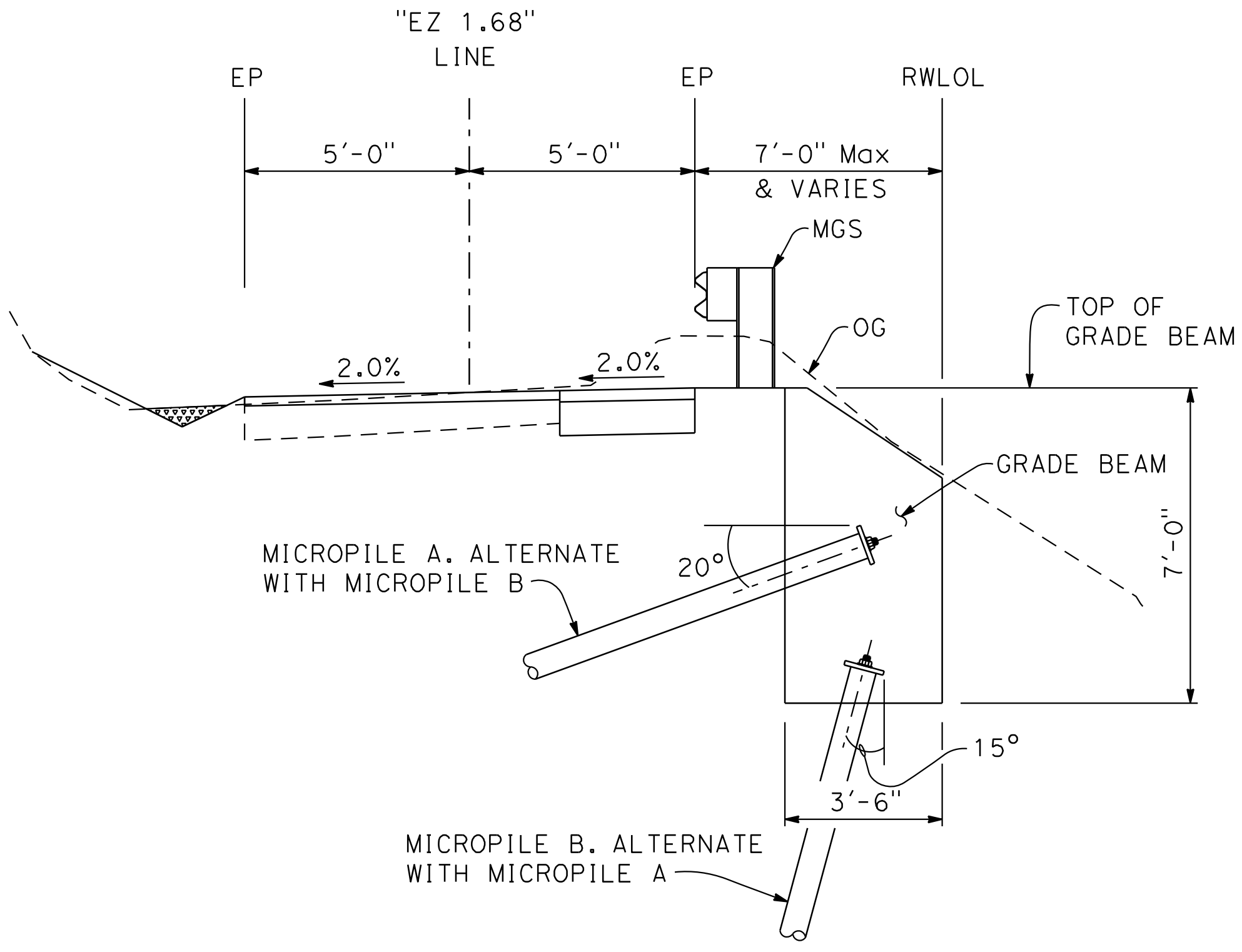
- NOTES:
- For "PILE DATA TABLE" see "MICROPILE DETAILS" sheet.
 - For "GENERAL NOTES" see "RETAINING WALL DETAILS" sheet.
 - The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.
 - Top of wall elevation is at top of grade beam.

PLAN

1" = 5'

QUANTITIES

Item	Total
STRUCTURE EXCAVATION (RETAINING WALL)	29 CY
STRUCTURE BACKFILL (RETAINING WALL)	10 CY
STRUCTURAL CONCRETE, RETAINING WALL	20 CY
BAR REINFORCING STEEL (RETAINING WALL)	1667 LB
MICROPILE	10 EA



TYPICAL SECTION

3/8" = 1'-0"

GENERAL PLAN

S-1

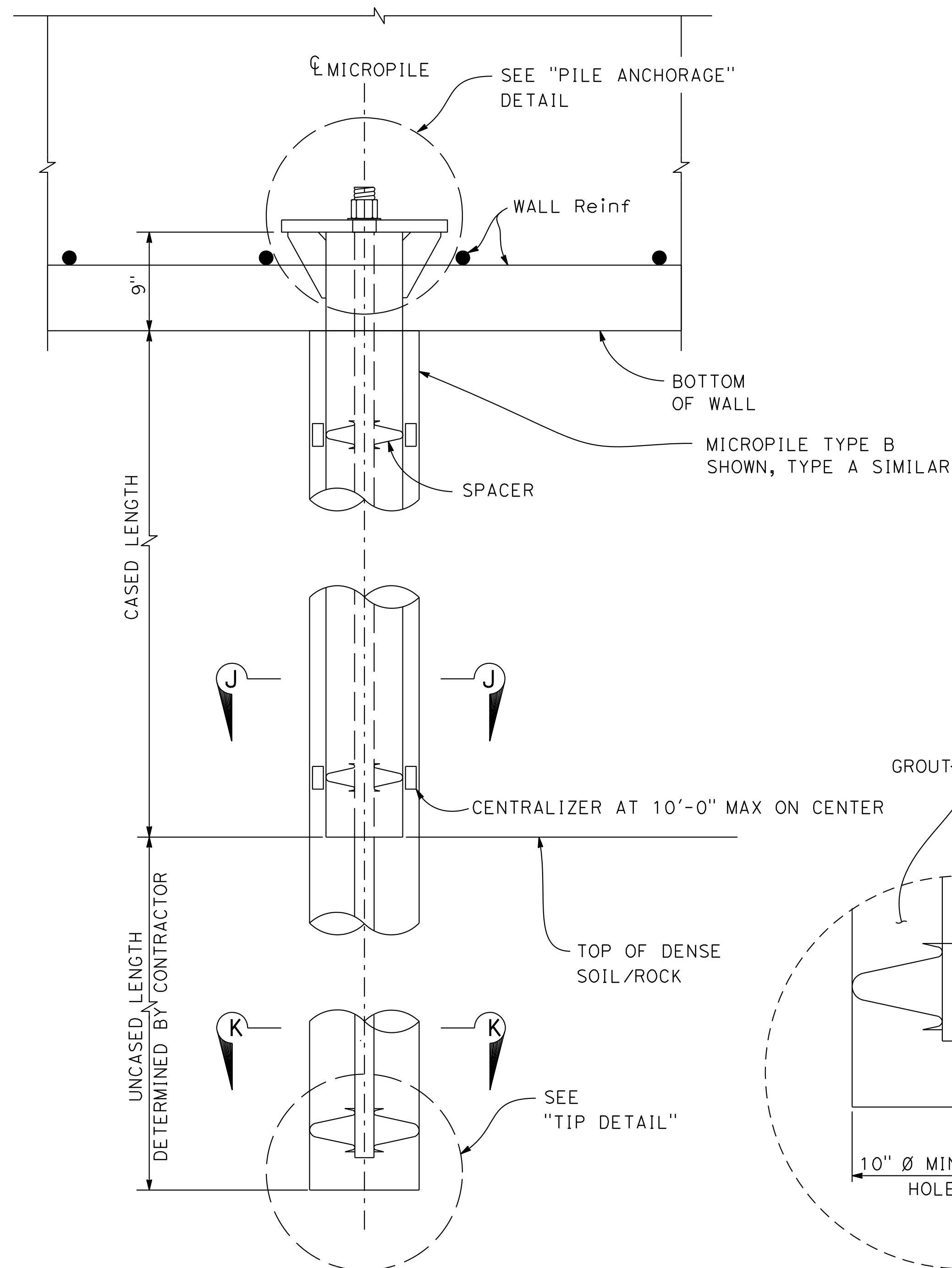
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 \$FILEABBREV

SHEET NAME: DRAWING NAME:

BY	REVISION	DATE	PROJECT ENGINEER	COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS
			ROSA GRIGGS	UPPER EAST ZAYANTE PM 1.68
				STORM DAMAGE REPAIR PROJECT
				DRAWN: A. DANG
				CHECKED: D. YANG
				DATE: 3/14/2025
				SCALE: AS NOTED
				JOB NO. P76515
				SHEET
				7 OF 9

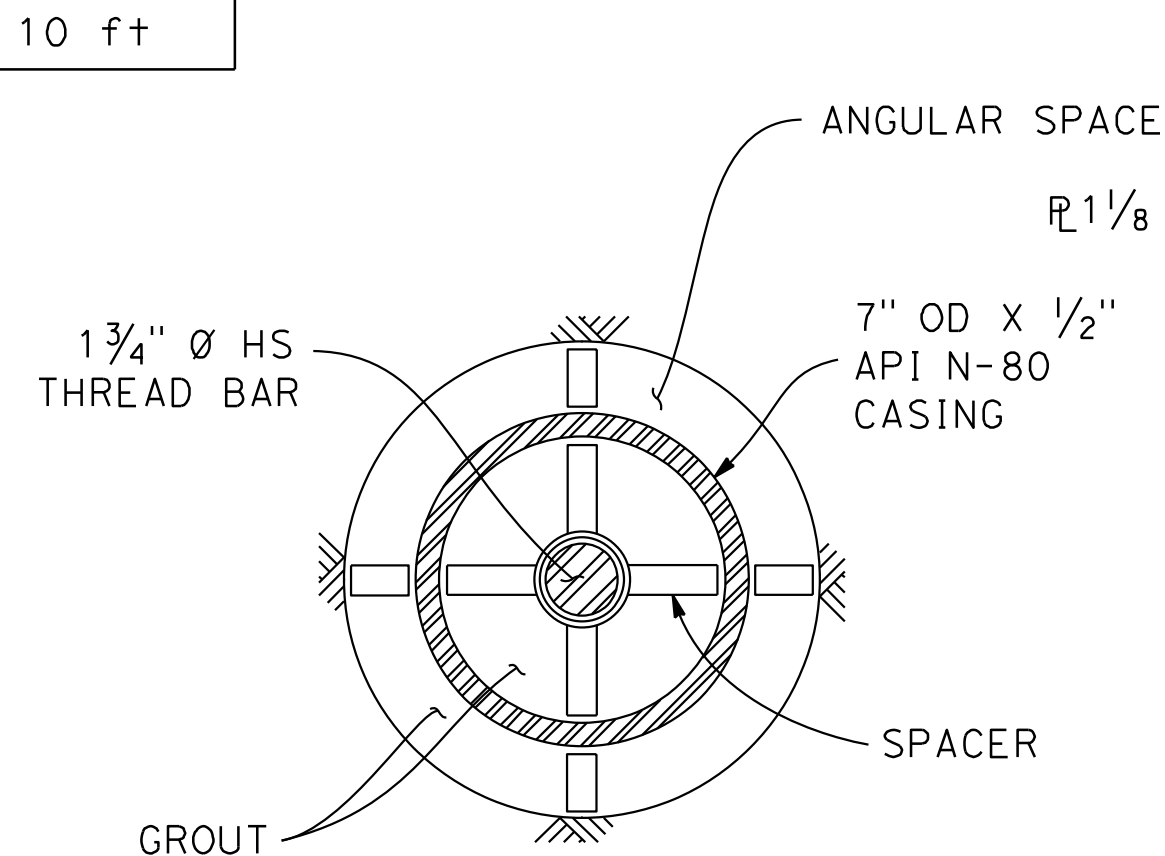
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PILE ID	Pile Type	FTL		CASED LENGTH
		Compression	Tension	
MICROPILE A	10" MICROPILE	-	35 kips	10 ft
MICROPILE B	10" MICROPILE	36 kips	-	10 ft



NOTE:
No splices allowed in Casing or
Thread Bar

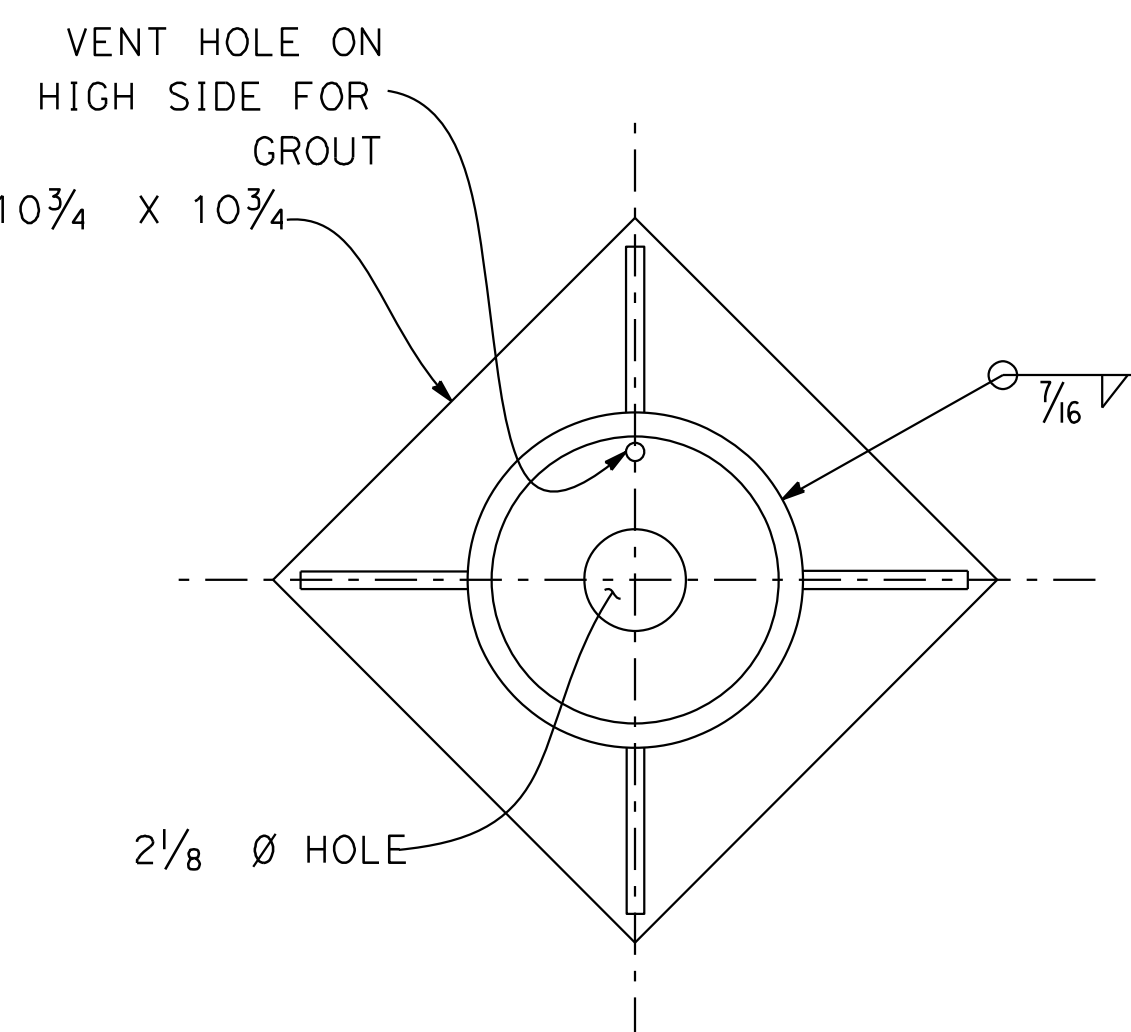
MICROPILE ELEVATION

$$3'' = 1' - 0''$$


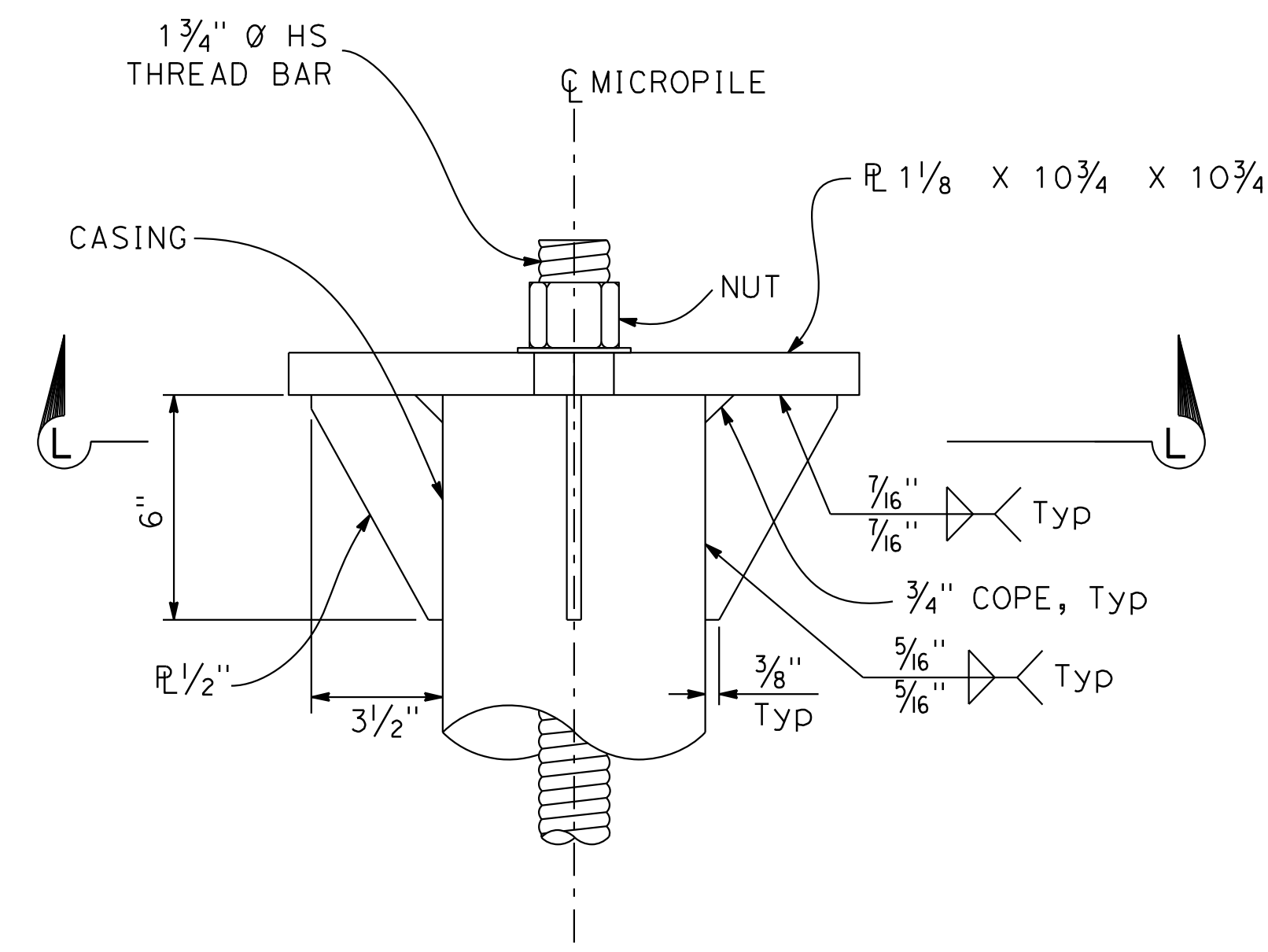
SECTION J-J

$$3'' = 1'$$

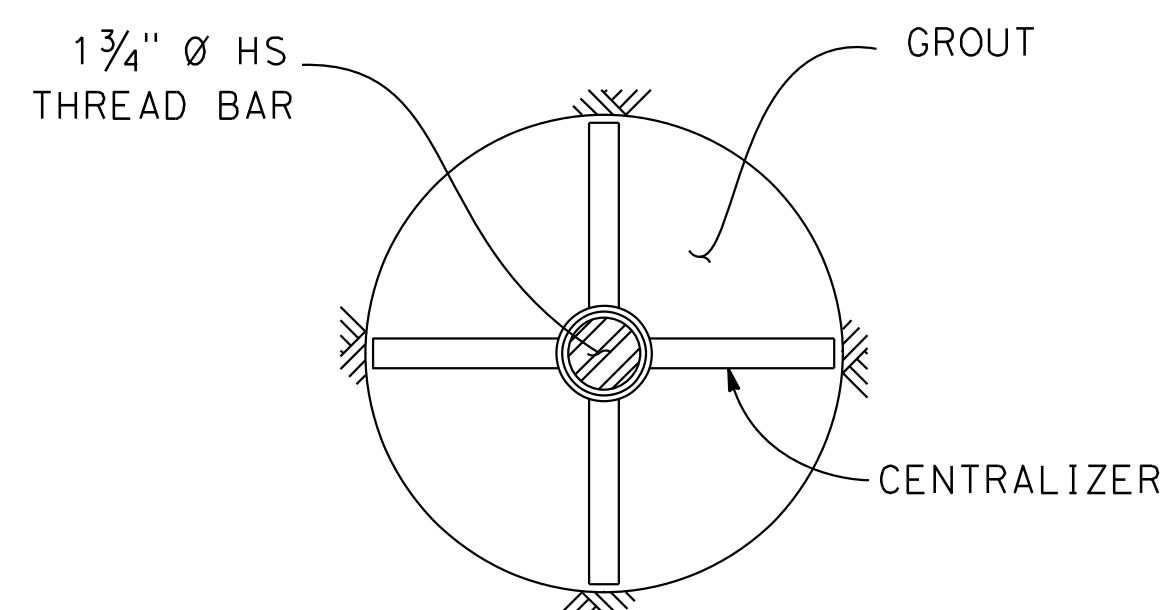
NOTE:
Casing and annular space shall be completely filled with grout



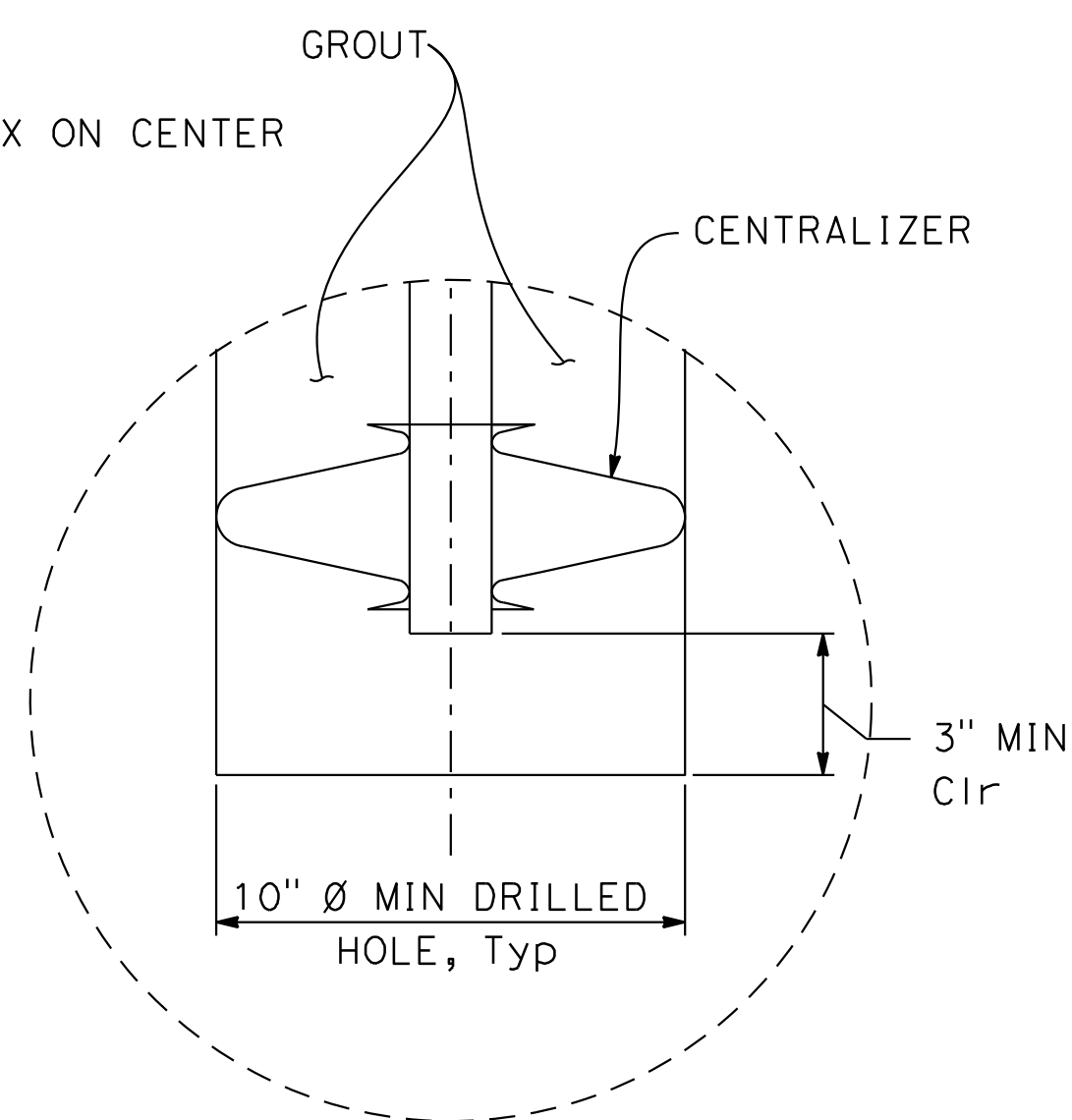
SECTION L-L

$$3'' = 1$$


PILE ANCHORAGE

$$\overline{3''} = 1$$


SECTION K-K

$$3'' = 1'$$


TIP DETAIL

$$3'' = 1'$$

NOTES:

1. The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

RELATIVE BORDER SCALE
IS IN INCHES



\$FILEABBREV

SHEET NAME:

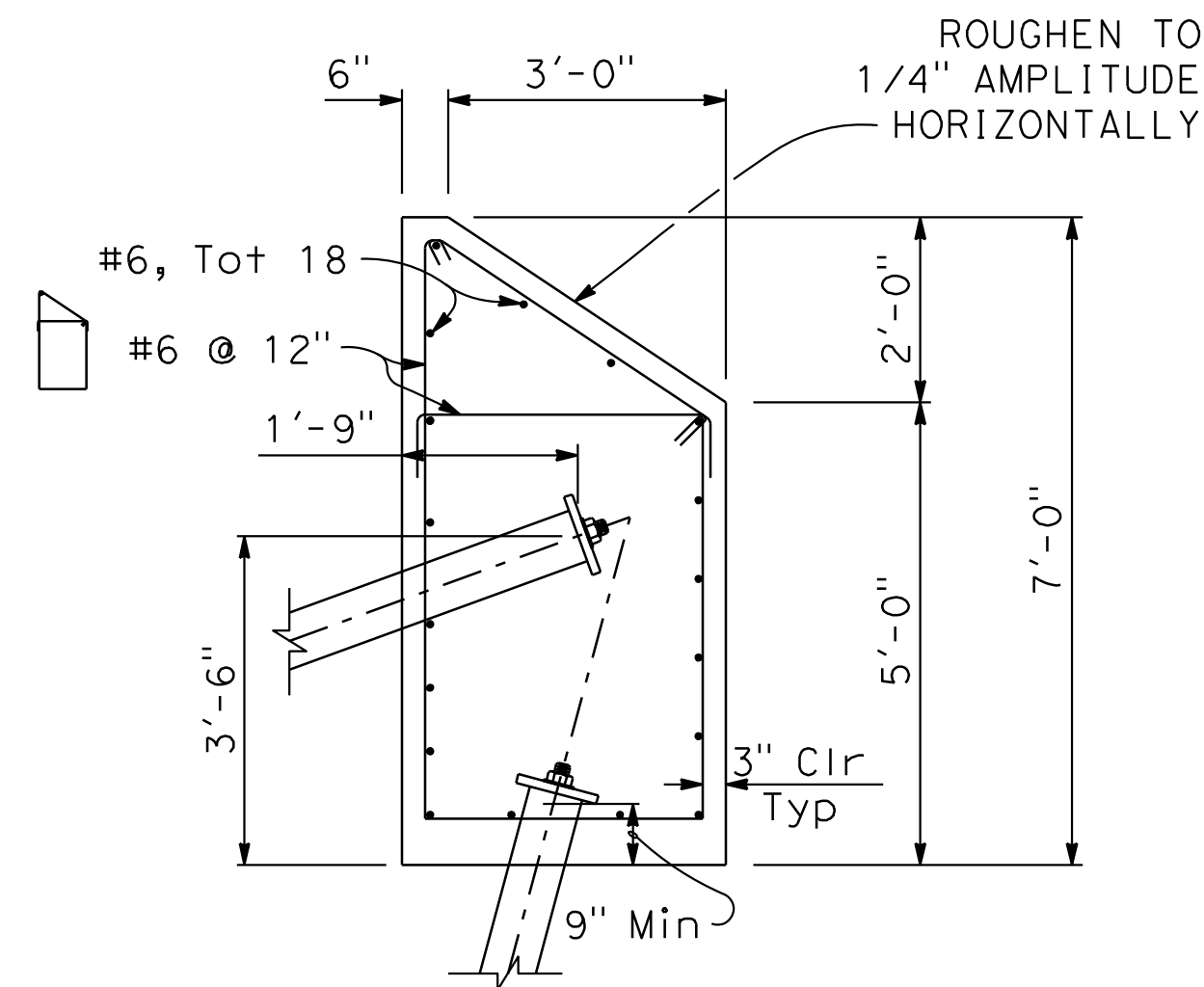
DRAWING NAME:

MICROPILE DETAILS

S-2

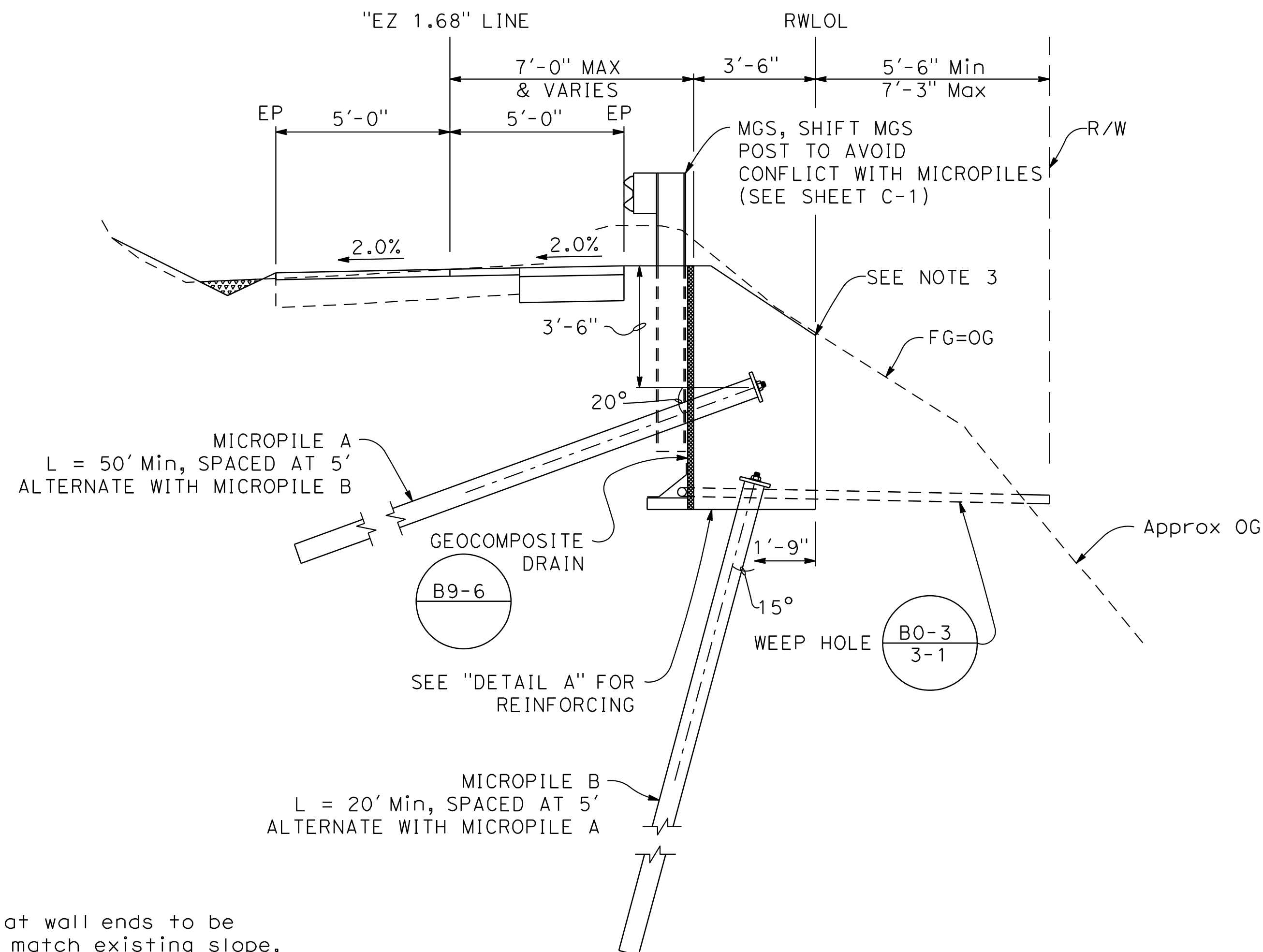
COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS UPPER EAST ZAYANTE PM 1.68 STORM DAMAGE REPAIR PROJECT	PROJECT ENGINEER ROSA GRIGGS		DATE	REVISION	BY
DRAWN: A. DANG CHECKED: D. YANG DATE: 3/14/2025 SCALE: AS NOTED JOB NO. P76515		SHEET <div style="text-align: center;"> 00 OF 09 </div>			

The County or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



DETAIL A

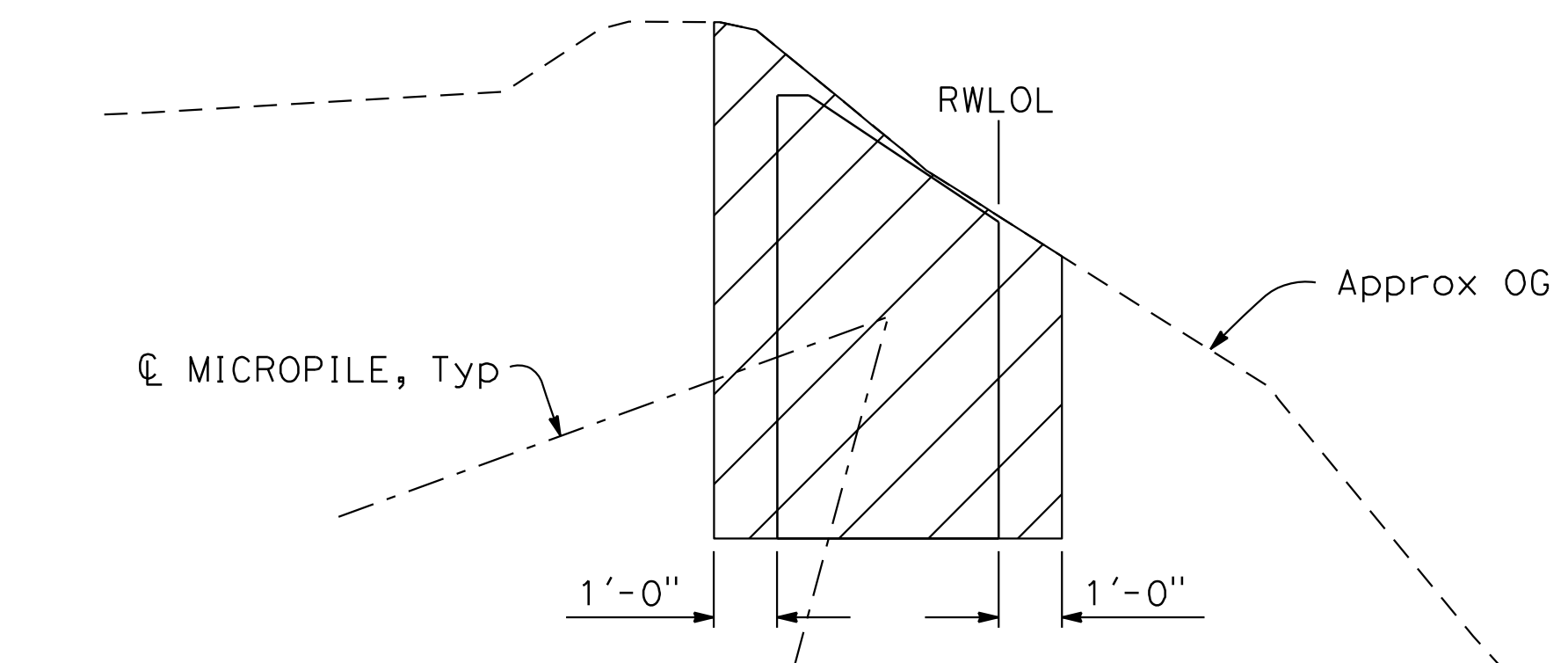
NTS



TYPICAL SECTION

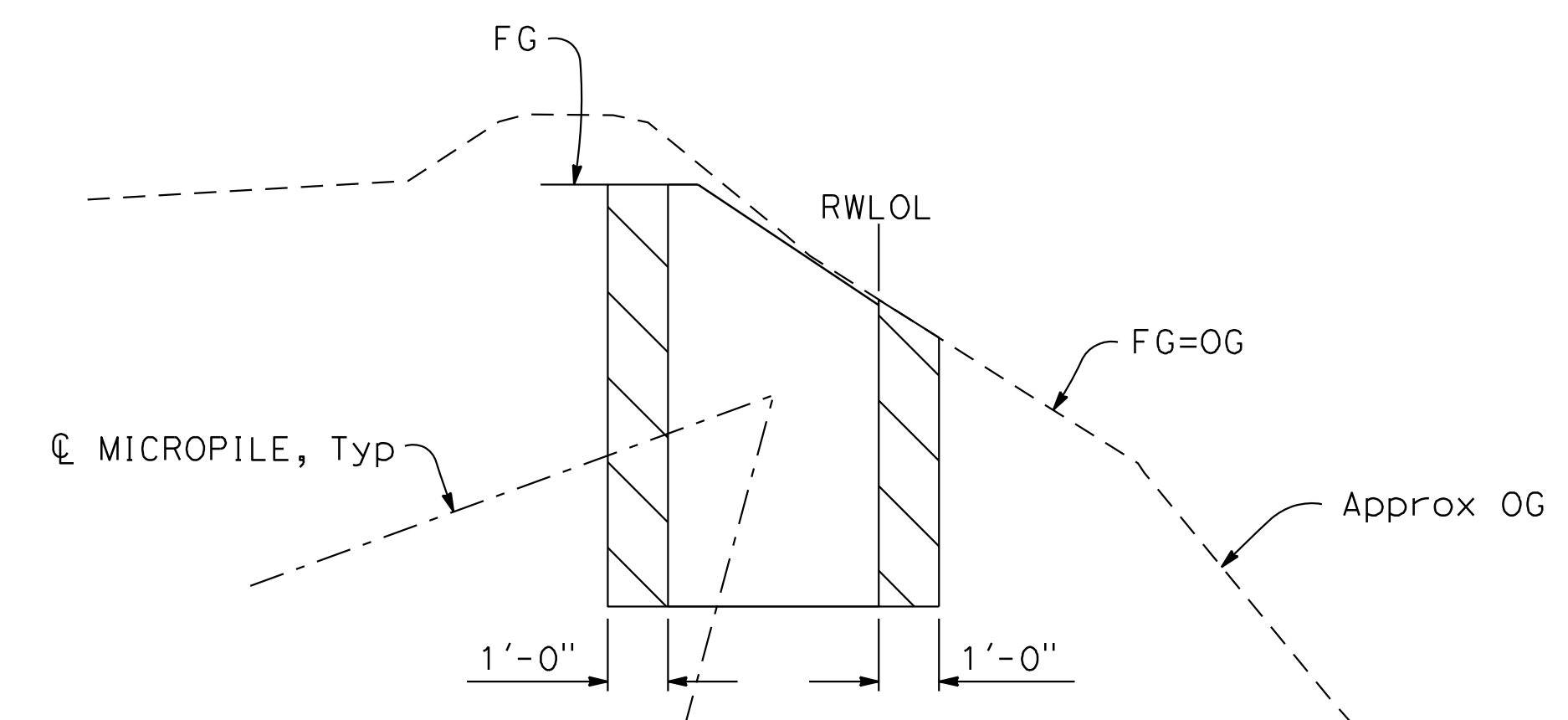
$$\frac{3}{8}'' = 1'-0''$$

- NOTES:**
1. Slopes disturbed at wall ends to be reconstructed to match existing slope.
 2. The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.
 3. Where existing original ground elevation is above top of wall at face, bench finish grade as necessary.



LIMITS OF PAYMENT FOR STRUCTURE EXCAVATION

NTS



LIMITS OF PAYMENT FOR STRUCTURE BACKFILL

NTS

RETAINING WALL DETAILS S-3

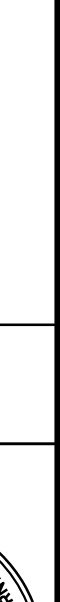
RELATIVE BORDER SCALE
IS IN INCHES



\$FILEABBREV

SHEET NAME:

DRAWING NAME:

9	OF	9	SHEET	P76515	AS NOTED	DATE: 3/14/2025	CHECKED: D. YANG	DRAWN: A. DANG	UPPER EAST ZAYANTE PM 1.68	COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS	PROJECT ENGINEER	ROSA GRIGGS	
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