

**FUNDING SOURCES**



**FEMA**



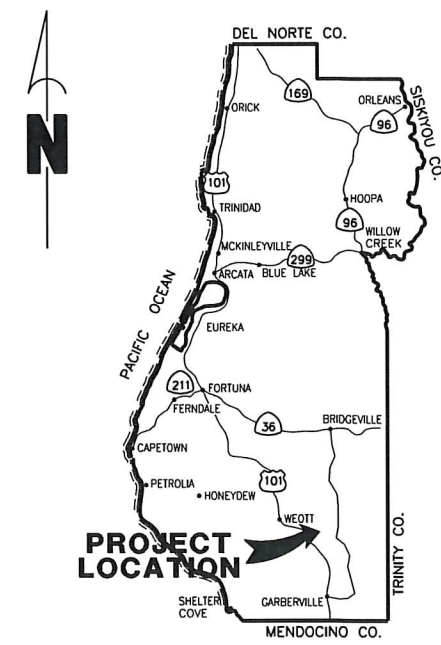
**Cal OES**  
GOVERNOR'S OFFICE  
OF EMERGENCY SERVICES

SITE	PROJECT NO.	FEMA PROJECT WORKSHEET
PM 0.50	217386	FEMA-4308-DR-CA PW#1323
PM 0.60	217369	FEMA-4308-DR-CA PW#1323
PM 1.90	217372	FEMA-4308-DR-CA PW#666

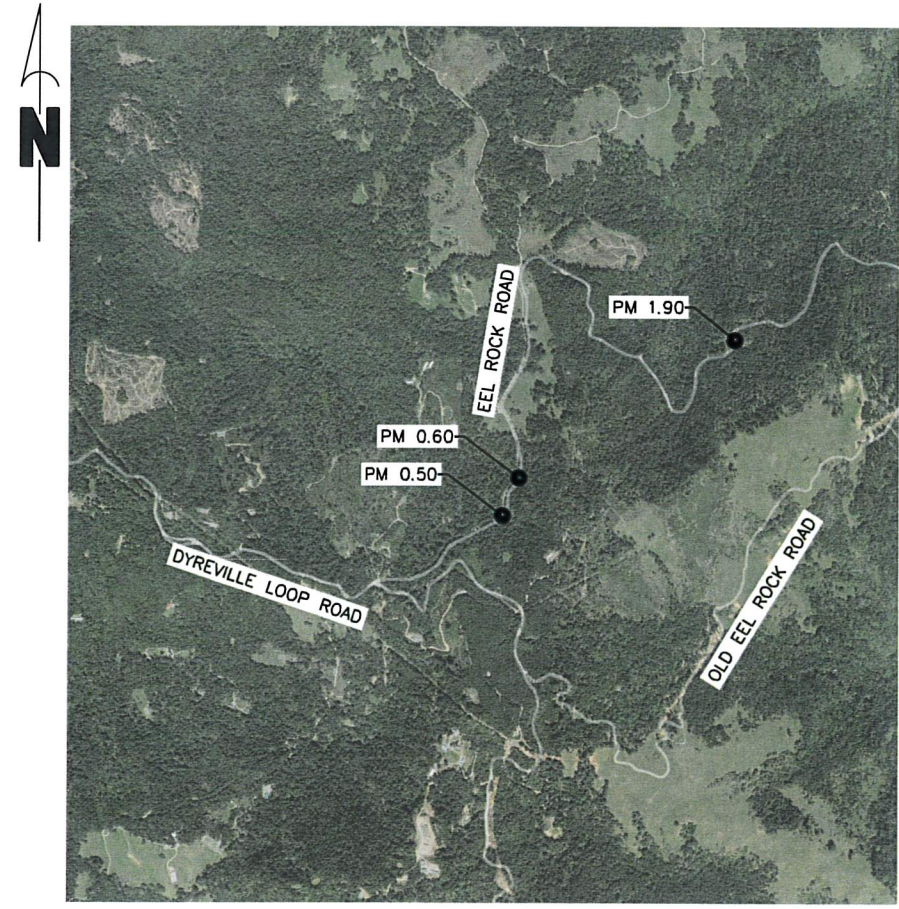
**COUNTY OF HUMBOLDT**  
**DEPARTMENT OF PUBLIC WORKS**  
**PROJECT PLANS FOR CONSTRUCTION OF**  
**STORM DAMAGE REPAIRS ON**  
**EEL ROCK ROAD [7D010]**  
**at P.M. 0.50, 0.60, 1.90**  
**FEMA-4308-DR-CA PW-666 & PW-1323**  
**CONTRACT NO. 217369, 217372, 217386**

ROAD NAME: EEL ROCK ROAD	DESIGN SECTION: ENGINEERING
ROAD NO: 7D010	MILE POST: 0.50, 0.60 & 1.90
FEMA PROJECT NO.: FEMA-4308-DR-CA PW#666 & PW#1323	DESIGNED BY: MMS
CONTRACT NO.: 217386, 217369 & 217372	DRAWN BY: MMS
DRAWING FILE NAME: 217386, 217369, 217372 Cover Sheet	REVIEWED BY: JAB
PLOT DATE: 4/29/2022	APPROVED BY: TRS

<b>COUNTY OF HUMBOLDT</b> <b>DEPARTMENT OF PUBLIC WORKS</b>	<b>SHEET 1</b> <b>OF</b> <b>18</b>
<b>EEL ROCK ROAD PM 0.50, 0.60 &amp; 1.90 STORM DAMAGE REPAIR</b>	
<b>COVER SHEET, SHEET INDEX AND MAPS</b>	



**LOCATION MAP**  
SCALE: 1"=10± MILE



**VICINITY MAP**  
N.T.S.

**INDEX OF SHEETS**

- 1 COVER SHEET, SHEET INDEX, AND MAPS
- 2 CONSTRUCTION SIGNS & QUANTITIES
- 3 PM 0.50 PLAN & TYPICAL SECTION
- 4 PM 0.60 SURVEY AND CONTROL
- 5 PM 0.60 TYPICAL SECTIONS
- 6 PM 0.60 ROAD PLAN & PROFILE
- 7 PM 0.60 EROSION CONTROL
- 8-9 PM 0.60 SECTION VIEWS
- 10 PM 1.90 SURVEY AND CONTROL
- 11 PM 1.90 TYPICAL SECTIONS
- 12 PM 1.90 DRAINAGE DETAILS
- 13 PM 1.90 DETOUR PLAN & PROFILE
- 14 PM 1.90 ROAD PLAN & PROFILE
- 15 PM 1.90 WALL ELEVATION VIEW
- 16 PM 1.90 EROSION CONTROL
- 17-18 PM 1.90 SECTION VIEWS

**NOTES**

THE CONTRACTOR SHALL HAVE A CLASS "A" LICENSE FOR THIS PROJECT.

PROJECT PLANS AND SPECIAL PROVISIONS TO BE SUPPLEMENTED BY THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS, STANDARD SPECIFICATIONS, AND THE LATEST REVISED 2018 STANDARD SPECIFICATIONS (SEE APPLICABLE STAN PLAN LIST IN SPECIAL PROVISIONS)

GEOTECHNICAL REPORT: CRAWFORD AND ASSOCIATES, APRIL 25, 2022

**RECOMMENDED**

*Jeffrey A. Ball* 5/3/2022  
 JEFFREY A. BALL DATE  
 RCE 70631, EXP. 6/30/2023



**APPROVED**

*Tony R. Seghetti* 5/3/22  
 TONY R. SEGHETTI DATE  
 RCE 63714, EXP. 9/30/2022



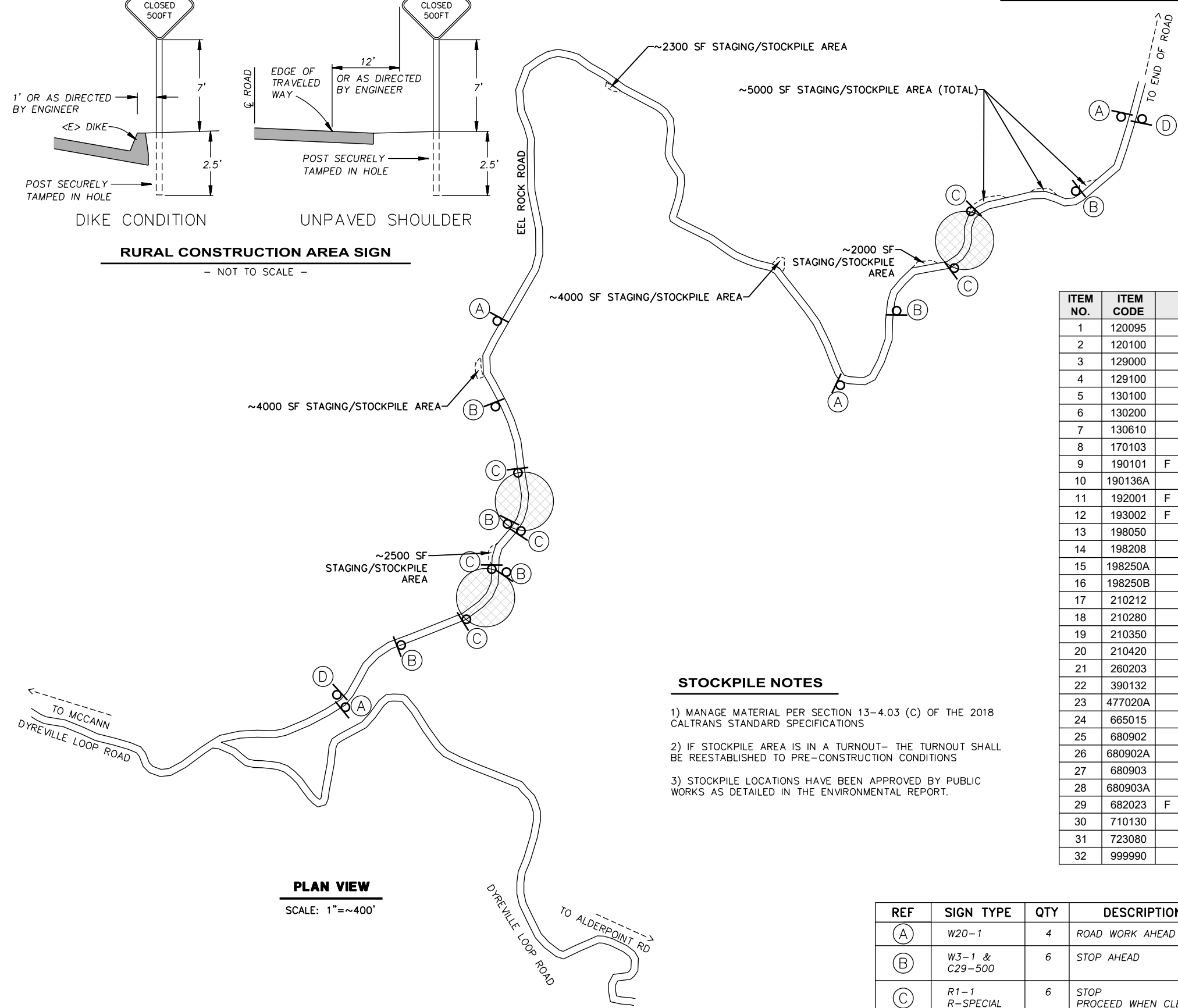
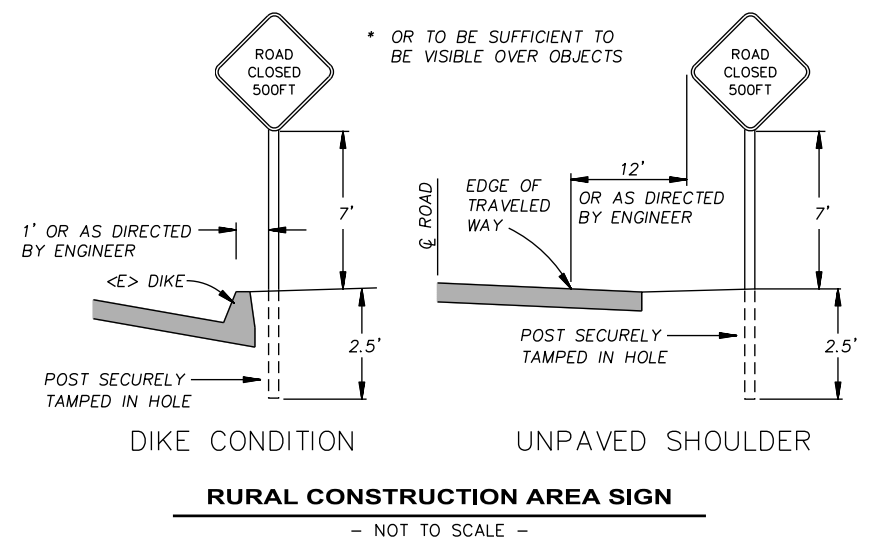
ORIGINAL LOW BID PRICE	CONSTRUCTED BY	RESIDENT ENGINEER
	PROJECT COMPLETED / /	CONSTRUCTION COST \$





BAR IS ONE INCH ON ORIGINAL DRAWING  IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: EEL ROCK ROAD	DESIGN SECTION: ENGINEERING	<b>COUNTY OF HUMBOLDT</b> <b>DEPARTMENT OF PUBLIC WORKS</b> <b>EEL ROCK ROAD PM 0.50, 0.60 &amp; 1.90 STORM DAMAGE REPAIR</b> <b>PLAN AND PROFILE VIEW</b>
	ROAD NO.: 7D010	MILE POST: 0.50, 0.60 & 1.90	
	FEMA PROJECT NO.: FEMA-4308-DR-CA PW#666 & PW#1323	DESIGNED BY: MMS	
	CONTRACT NO.: 217386, 217369 & 217372	DRAWN BY: MMS	
	DRAWING FILE NAME: 217372 Design	REVIEWED BY: JAB	
	PLOT DATE: 4/29/2022	APPROVED BY: TRS	

SHEET  
**2**  
OF  
**18**



**PLAN VIEW**  
SCALE: 1"=400'

**NOTES**

- 1) SIGNS SHALL BE PLACED AS SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER.
- 2) FINAL PLACEMENT OF SIGNS SHALL BE APPROVED BY RESIDENT ENGINEER.
- 3) ADDITIONAL PORTABLE SIGNS SHALL BE USED AS REQUIRED FOR OTHER ROADSIDE WORK.
- 4) SEE STANDARD PLAN T13 FOR TRAFFIC CONTROL SYSTEM.
- 5) IN ADDITION TO CONSTRUCTION AREA SIGNS AND WHEN DIRECTED BY THE RESIDENT ENGINEER, THE CONTRACTOR SHALL UTILIZE FLAGMEN AS NECESSARY TO DIRECT TRAFFIC.
- 6) DISTANCE TO W20-1 AND G20-2 MAY BE EXTENDED TO ENCOMPASS SITES WITHIN ONE MILE OF EACH OTHER.
- 7) KEEP A MINIMUM OF 1 TRAFFIC LANE AT LEAST 10' WIDE OPEN FOR TRAFFIC, EXCEPT THE FULL WIDTH OF THE TRAVELED WAY MUST BE OPEN WHEN CONSTRUCTION OPERATIONS ARE NOT ACTIVE OR AN APPROVED TRAFFIC CONTROL PLAN IS IN PLACE

**QUANTITIES**

ITEM NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	PM 0.50	PM 0.60	PM 1.90	Total
1	120095	Construction Area Signs	EA	5	5	8	18
2	120100	Traffic Control System	LS	0.2	0.2	0.6	1
3	129000	Temporary Railing (Type K)	LF	0	280	200	480
4	129100	Temporary Crash Cushion Module	EA	0	12	12	24
5	130100	Job Site Management	LS	0.2	0.2	0.6	1
6	130200	Prepare Water Pollution Control Program	LS	0.2	0.2	0.6	1
7	130610	Temporary Check Dam	LF	0	0	36	36
8	170103	Clearing and Grubbing	LS	0	0.2	0.8	1
9	190101	F Roadway Excavation	CY	410	450	58	918
10	190136A	Construct Detour	LS	0	0	1	1
11	192001	F Structure Excavation	CY	0	0	1,670	1,670
12	193002	F Import Structure Backfill (Wire Wall)	CY	0	0	452	452
13	198050	Embankment	CY	330	494	850	1,674
14	198208	Subgrade Enhancement Geotextile, Class B1	SQYD	0	0	131	131
15	198250A	Geosynthetic Reinforcement (Biaxial Geogrid)	SQYD	1,300	214	0	1,514
16	198250B	Geosynthetic Reinforcement (Uniaxial Geogrid)	SQYD	0	760	0	760
17	210212	Dry Seed	SQFT	0	1,800	2,820	4,620
18	210280	Rolled Erosion Control Product (Blanket)	SQFT	0	1,800	520	2,320
19	210350	Fiber Rolls	LF	0	325	227	552
20	210420	Straw	SQFT	0	0	2,300	2,300
21	260203	Class 2 Aggregate Base	CY	113	47	104	264
22	390132	Hot Mix Asphalt (Type A)	TON	93	34	83	210
23	477020A	Mechanically Stabilized Embankment (Wire Wall)	SQFT	0	0	1,584	1,584
24	665015	15" Corrugated Steel Pipe (.109" Thick)	LF	0	0	53	53
25	680902	6" Perforated Plastic Pipe Underdrain	LF	0	0	150	150
26	680902A	6" Perforated Plastic Pipe	LF	0	170	120	290
27	680903	6" Non-Perforated Plastic Pipe Underdrain	LF	0	0	53	53
28	680903A	6" Non-Perforated Plastic Pipe	LF	0	18	50	68
29	682023	F Class 1 Permeable Material (Type B, Class 1)	CY	0	41	353	394
30	710130	Remove Culvert (EA)	EA	0	0	1	1
31	723080	Rock Slope Protection (Class II, 60 lb, Method B)	CY	0	1	3	4
32	999990	Mobilization	LS	0.2	0.2	0.6	1

**STOCKPILE NOTES**

- 1) MANAGE MATERIAL PER SECTION 13-4.03 (C) OF THE 2018 CALTRANS STANDARD SPECIFICATIONS
- 2) IF STOCKPILE AREA IS IN A TURNOUT- THE TURNOUT SHALL BE REESTABLISHED TO PRE-CONSTRUCTION CONDITIONS
- 3) STOCKPILE LOCATIONS HAVE BEEN APPROVED BY PUBLIC WORKS AS DETAILED IN THE ENVIRONMENTAL REPORT.

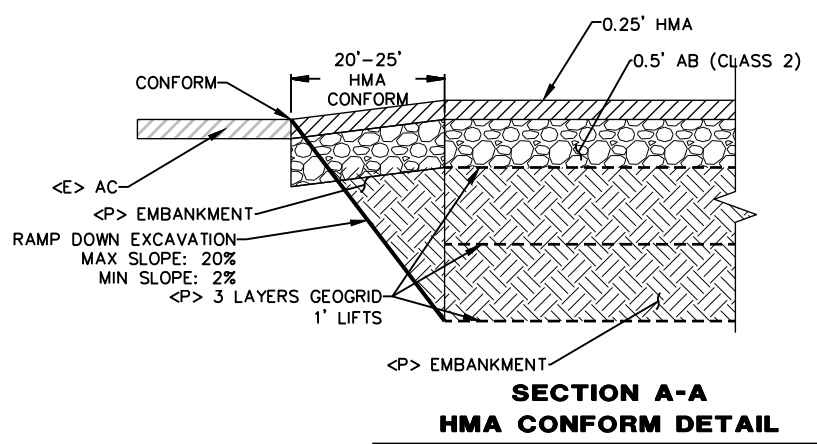
**CONSTRUCTION AREA SIGN SUMMARY**

REF	SIGN TYPE	QTY	DESCRIPTION	SIZE	REMARKS	POST SIZE	NUMBER
(A)	W20-1	4	ROAD WORK AHEAD	30" x 30"	VISIBLE AT ALL TIMES	4" x 4"	1
(B)	W3-1 & C29-500	6	STOP AHEAD	30" x 30" 20" x 7"	VISIBLE AT ALL TIMES	4 x 4	1
(C)	R1-1 R-SPECIAL	6	STOP PROCEED WHEN CLEAR	30" x 30" 30" x 15"	VISIBLE AT ALL TIMES LINE OF SIGHT	4 x 4	1
(D)	G20-2	2	END ROAD WORK	36" x 18"	VISIBLE AT ALL TIMES	4 x 4	1



BAR IS ONE INCH ON ORIGINAL DRAWING	ROAD NAME: EEL ROCK ROAD	DESIGN SECTION
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NO.: 7D010 MILE POST: 0.50	ENGINEERING
	FEMA PROJECT NO.: FEMA-4308-DR-CA PW#1323	DESIGNED BY: MMS
	CONTRACT NO.: 217386	DRAWN BY: MMS
	DRAWING FILE NAME: 217386 Design	REVIEWED BY: JAB
	PLOT DATE: 4/29/2022	APPROVED BY: TRS

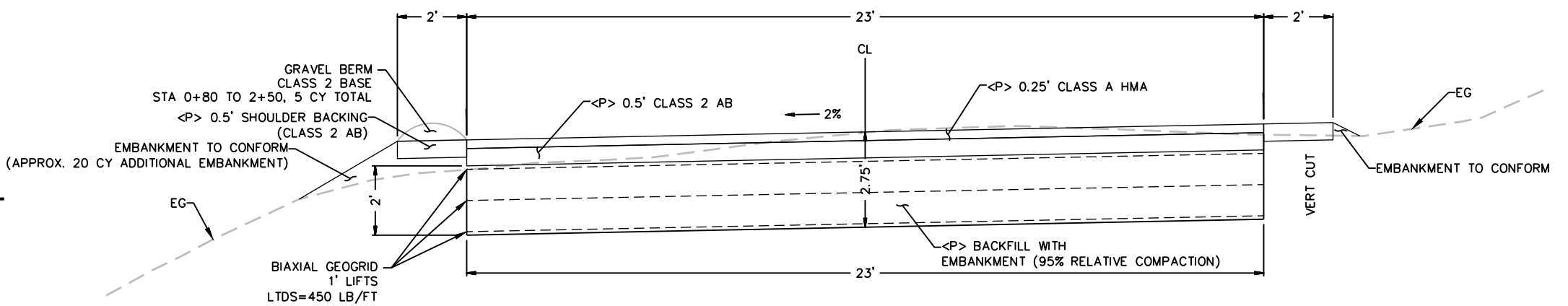
<b>COUNTY OF HUMBOLDT</b> <b>DEPARTMENT OF PUBLIC WORKS</b> <b>EEL ROCK ROAD PM 0.50 STORM DAMAGE REPAIR</b>	SHEET
	<b>3</b>
	OF
<b>PLAN AND TYPICAL SECTION</b>	<b>18</b>



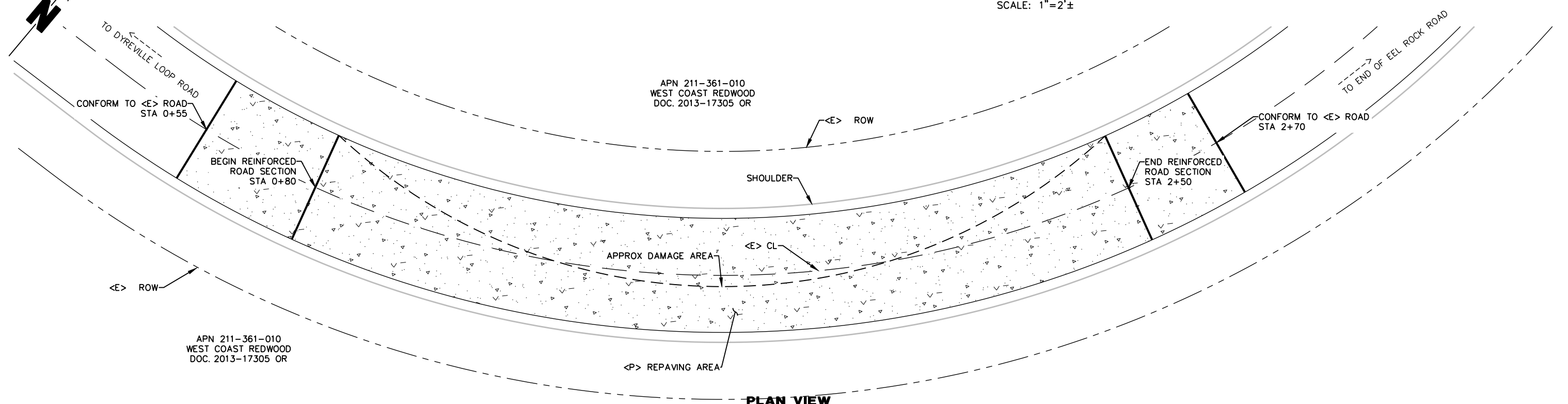
**SECTION A-A**  
**HMA CONFORM DETAIL**  
SCALE: NTS

**NOTES:**

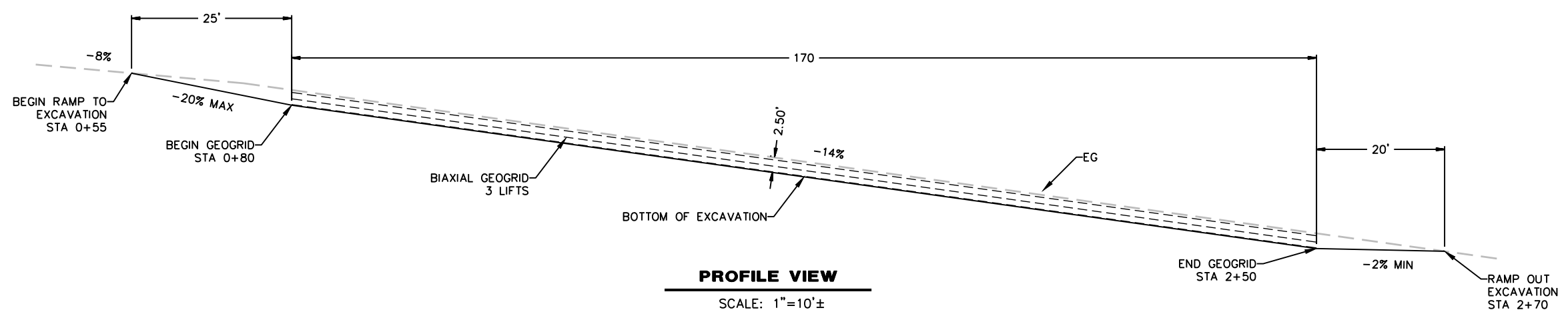
- NOT A PRODUCT OF SURVEY
- ROAD GRADES WERE ESTIMATED BASED ON LIDAR TOPOGRAPHY
- DIMENSIONS MAY VARY BASED ON FIELD CONDITIONS
- SEE ROW NOTES ON SHEETS 4 & 10



**TYPICAL SECTION**  
SCALE: 1"=2'±



**PLAN VIEW**  
SCALE: 1"=10'±



**PROFILE VIEW**  
SCALE: 1"=10'±



BAR IS ONE INCH ON ORIGINAL DRAWING  IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: EEL ROCK ROAD	DESIGN SECTION	<b>COUNTY OF HUMBOLDT</b> <b>DEPARTMENT OF PUBLIC WORKS</b> <b>EEL ROCK ROAD PM 0.60 STORM DAMAGE REPAIR</b> <b>SURVEY AND CONTROL</b>	SHEET <b>4</b> OF <b>18</b>	
	ROAD NO.: 7D010	MILE POST: 0.60			ENGINEERING
	FEMA PROJECT NO.: FEMA-4308-DR-CA PW#1323	DESIGNED BY: MMS			DRAWN BY: MMS
	CONTRACT NO.: 217369	REVIEWED BY: JAB			APPROVED BY: TRS
	DRAWING FILE NAME: 217369 Design	PLOT DATE: 4/29/2022			

**CONTROL POINTS TABLE**

Point Number	Easting	Northing	Point Elevation	Full Description
1	10122.2256'	53018.3321'	1791.94'	CP/GYNSPIKE&TAG.HUMCOSURVEY
2	17042.2028'	53458.4623'	1245.93'	CP/80D&TAGHUMCOSURVEY
3	16752.5537'	52779.4069'	1295.70'	CP/80D&TAGHUMCOSURVEY
4	10000.0000'	50000.0000'	1883.71'	CP/MAG&TAGHUMCOSURVEY
5	9964.8435'	49906.7656'	1894.87'	CP/MAG&TAGHUMCOSURVEY
6	17182.8584'	53421.5293'	1226.27'	CP/MAG60DHUMCOSURVEY
7	17262.2446'	52973.1030'	1187.25'	CP/MAG60DHUMCOSURVEY
102	10070.4059'	50078.8043'	1872.76'	CP/MAGS
103	9953.5973'	49770.5920'	1908.07'	CP/GYNSPIKE&TAGHUMCOSURVEY
104	10136.4235'	50188.9788'	1859.27'	CP/MAGS
105	10177.0210'	50294.8272'	1847.61'	CP/GYNSPIKE&TAGHUMCOSURVEY
500	16967.0023'	54025.0108'	1052.94'	FD/1/2IN IP NO ID BENT
501	17296.0447'	52975.7248'	1170.43'	FD/6
503	17306.7548'	52968.1910'	1174.21'	FD/1
504	17278.3296'	52986.5538'	1180.66'	FD/BT.NO TAG 30
505	10161.7673'	53134.7798'	1814.93'	FD/1/2IN IP NO ID FLUSH

**BASIS OF BEARINGS NOTE**

THE BEARINGS ARE BASED ON TIES BETWEEN THE MONUMENTS 505 (GEOD PT.2 PER 52RS4-6) & 1000 (GEOD PT.3 PER 52RS4-6) BEING A BEARING OF N82°32'49"E. GEODETIC COORDINATES TRANSFORMED TO LOCAL COORDINATES (N5,000, E10,000 AT CONTROL POINT #4)

**ELEVATION NOTE**

ELEVATIONS ARE NAVD88 BASED UPON GPS OBSERVATIONS, PROCESSED BY NGS OPUS WITH CORS STATIONS P165, P158, & P157, REFERENCE EPOCH 2010.00 (COMPUTED USING GEOD12B) AT CONTROL POINT #1, ELEVATION= 1791.94'.

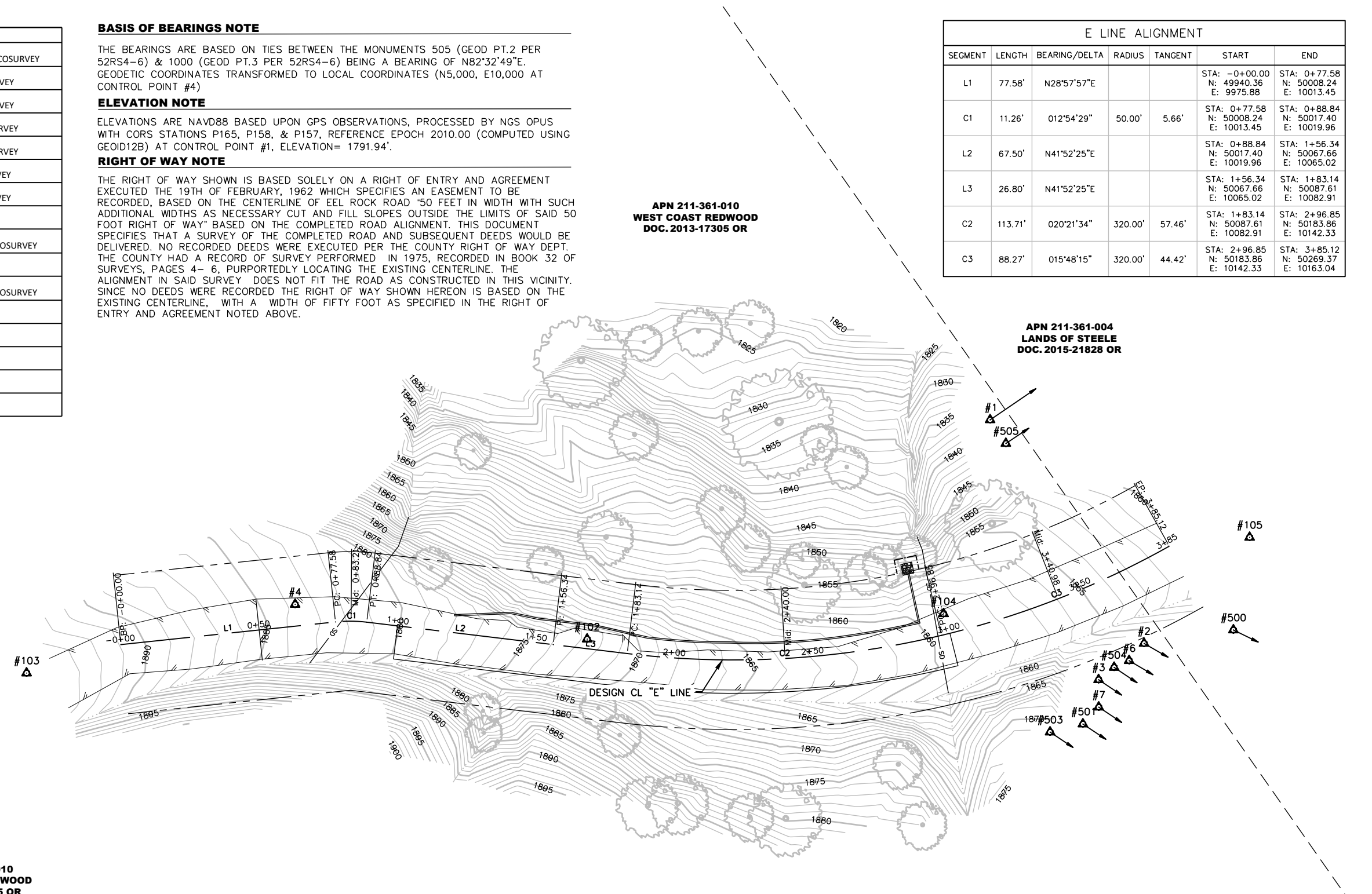
**RIGHT OF WAY NOTE**

THE RIGHT OF WAY SHOWN IS BASED SOLELY ON A RIGHT OF ENTRY AND AGREEMENT EXECUTED THE 19TH OF FEBRUARY, 1962 WHICH SPECIFIES AN EASEMENT TO BE RECORDED, BASED ON THE CENTERLINE OF EEL ROCK ROAD "50 FEET IN WIDTH WITH SUCH ADDITIONAL WIDTHS AS NECESSARY CUT AND FILL SLOPES OUTSIDE THE LIMITS OF SAID 50 FOOT RIGHT OF WAY" BASED ON THE COMPLETED ROAD ALIGNMENT. THIS DOCUMENT SPECIFIES THAT A SURVEY OF THE COMPLETED ROAD AND SUBSEQUENT DEEDS WOULD BE DELIVERED. NO RECORDED DEEDS WERE EXECUTED PER THE COUNTY RIGHT OF WAY DEPT. THE COUNTY HAD A RECORD OF SURVEY PERFORMED IN 1975, RECORDED IN BOOK 32 OF SURVEYS, PAGES 4- 6, PURPORTEDLY LOCATING THE EXISTING CENTERLINE. THE ALIGNMENT IN SAID SURVEY DOES NOT FIT THE ROAD AS CONSTRUCTED IN THIS VICINITY. SINCE NO DEEDS WERE RECORDED THE RIGHT OF WAY SHOWN HEREON IS BASED ON THE EXISTING CENTERLINE, WITH A WIDTH OF FIFTY FOOT AS SPECIFIED IN THE RIGHT OF ENTRY AND AGREEMENT NOTED ABOVE.

E LINE ALIGNMENT						
SEGMENT	LENGTH	BEARING/Delta	RADIUS	TANGENT	START	END
L1	77.58'	N28°57'57"E			STA: -0+00.00 N: 49940.36 E: 9975.88	STA: 0+77.58 N: 50008.24 E: 10013.45
C1	11.26'	012°54'29"	50.00'	5.66'	STA: 0+77.58 N: 50008.24 E: 10013.45	STA: 0+88.84 N: 50017.40 E: 10019.96
L2	67.50'	N41°52'25"E			STA: 0+88.84 N: 50017.40 E: 10019.96	STA: 1+56.34 N: 50067.66 E: 10065.02
L3	26.80'	N41°52'25"E			STA: 1+56.34 N: 50067.66 E: 10065.02	STA: 1+83.14 N: 50087.61 E: 10082.91
C2	113.71'	020°21'34"	320.00'	57.46'	STA: 1+83.14 N: 50087.61 E: 10082.91	STA: 2+96.85 N: 50183.86 E: 10142.33
C3	88.27'	015°48'15"	320.00'	44.42'	STA: 2+96.85 N: 50183.86 E: 10142.33	STA: 3+85.12 N: 50269.37 E: 10163.04

**MONUMENT PRESERVATION NOTES**

- CONTRACTOR TO USE EXTREME CAUTION WHILE WORKING IN THE VICINITY OF MONUMENTS.
- IMMEDIATELY CONTACT THE HUMBOLDT COUNTY SURVEY DIVISION (707)445-7205, IF MONUMENTS ARE DISTURBED OR WILL BE IMPACTED BY CONSTRUCTION WORK.
- HISTORICAL MONUMENTS ARE POINT #'S 500-505



#103  
 APN 211-361-010  
 WEST COAST REDWOOD  
 DOC. 2013-17305 OR

**SURVEY AND CONTROL**  
 SCALE: 1"=20'

- SURVEY NOTES**
- THE PURPOSE OF THIS SURVEY IS TO DETERMINE TOPOGRAPHY FOR STORM DAMAGE.
  - UNDERGROUND UTILITIES RESEARCH WAS NOT PERFORMED.

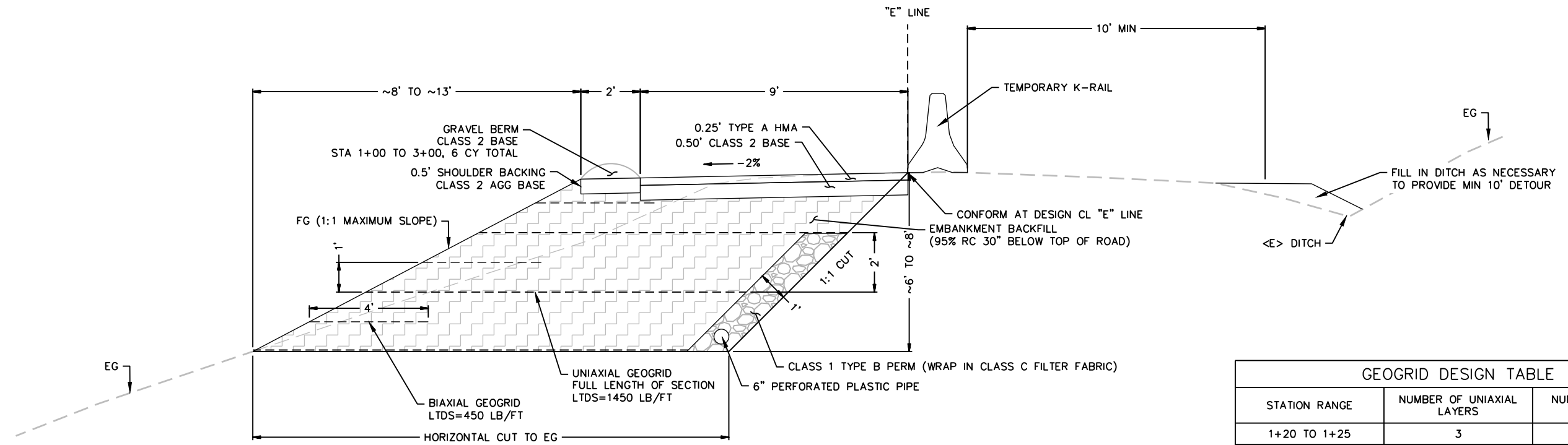


**NOTES**

1) EXCESS EXCAVATED MATERIAL FROM THE SITES AT PM 0.50 AND 1.90 CAN BE USED TO RECONSTRUCT THE EMBANKMENT AT PM 0.60

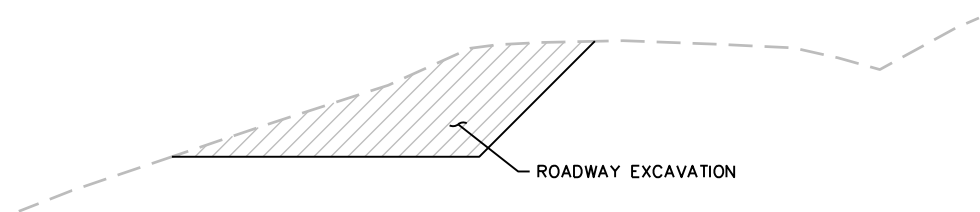


ROAD NAME: EEL ROCK ROAD	DESIGN SECTION: ENGINEERING	<b>COUNTY OF HUMBOLDT</b> <b>DEPARTMENT OF PUBLIC WORKS</b> <b>EEL ROCK ROAD PM 0.60 STORM DAMAGE REPAIR</b> <b>TYPICAL SECTIONS</b>	SHEET <b>5</b> OF <b>18</b>
ROAD NO.: 7D010	MILE POST: 0.60		
FEMA PROJECT NO.: FEMA-4308-DR-CA PW#1323	DESIGNED BY: MMS		
CONTRACT NO.: 217369	DRAWN BY: MMS		
DRAWING FILE NAME: 217369 Design	REVIEWED BY: JAB		
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	APPROVED BY: TRS		
DATE: 4/29/2022			

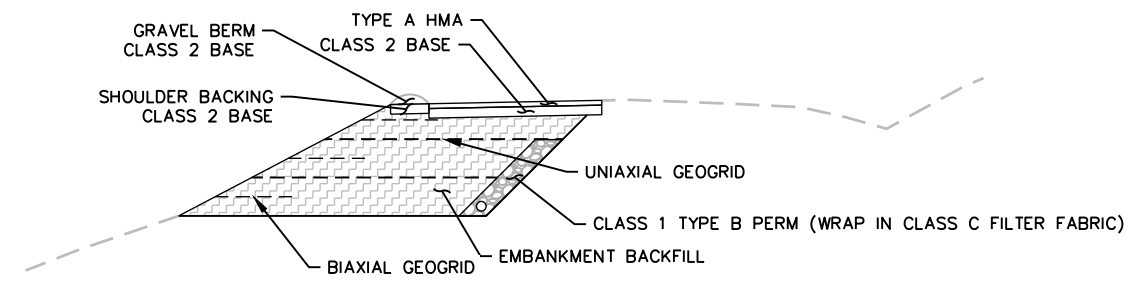


**TYPICAL SECTION**  
SCALE: 1"=2'

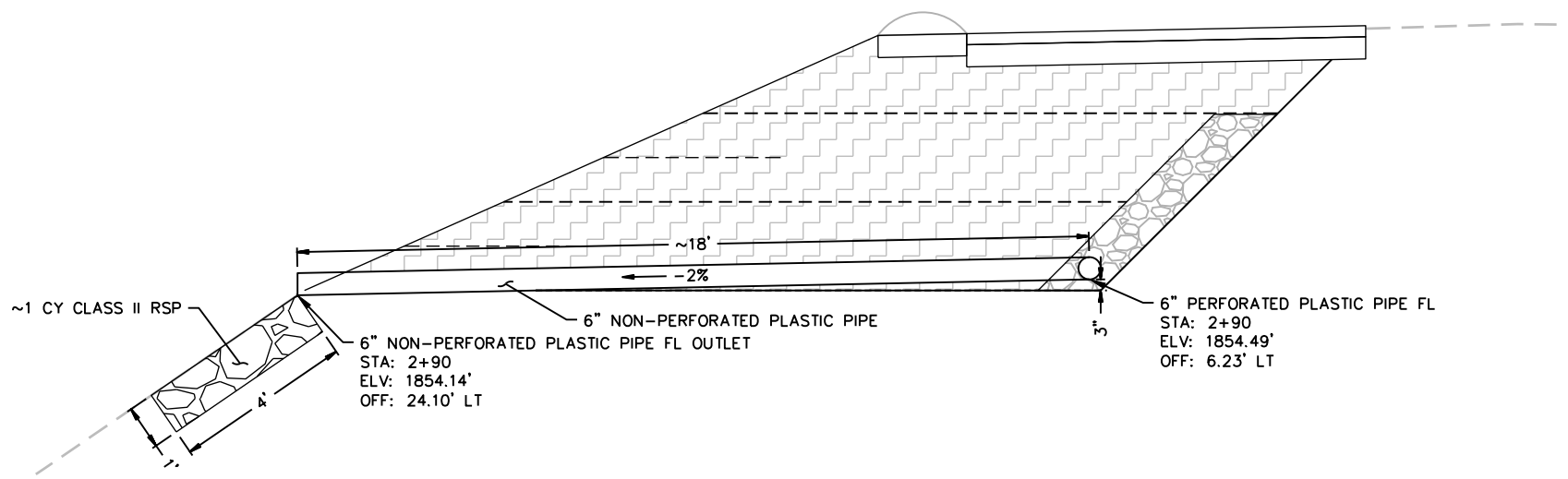
STATION RANGE	NUMBER OF UNIAXIAL LAYERS	NUMBER OF BIAXIAL LAYERS
1+20 TO 1+25	3	3
1+25 TO 1+35	4	3
1+35 TO 1+75	4	4
1+75 TO 1+80	4	3
1+80 TO 2+20	3	3
2+20 TO 2+90	3	2



**EXCAVATION TYPICAL SECTION**  
SCALE: 1"=5'



**BACKFILL TYPICAL SECTION**  
SCALE: 1"=5'



**OUTLET DRAIN SECTION VIEW (STA 2+90)**  
SCALE: 1"=2'



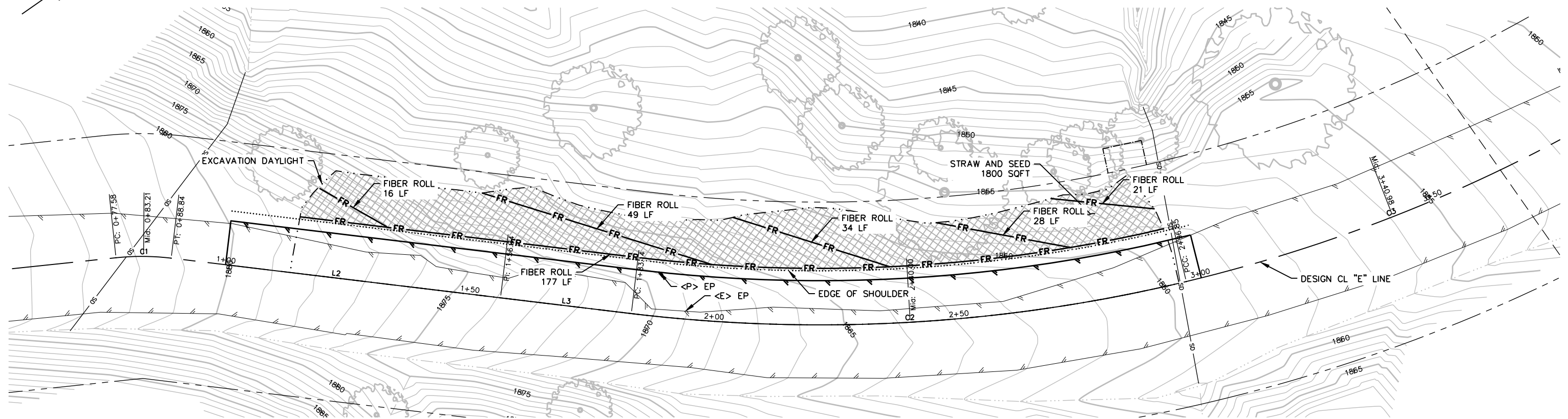
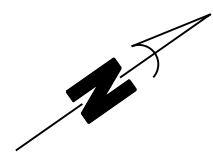




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	PLOT DATE: 4/29/2022	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
EEL ROCK ROAD PM 0.60 STORM DAMAGE REPAIR
EROSION CONTROL PLAN

SHEET  
**7**  
OF  
**18**

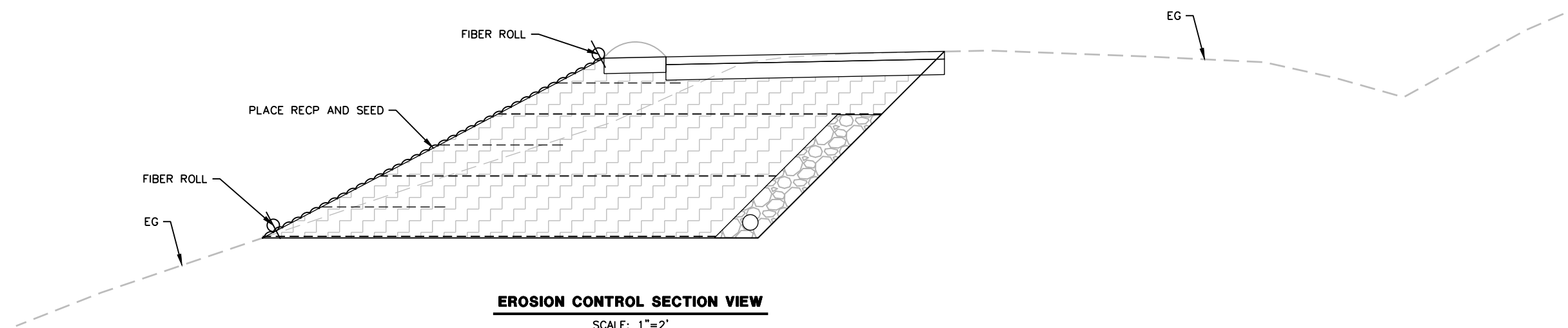


**EROSION CONTROL PLAN VIEW**

SCALE: 1"=10'

**LEGEND**

	SEED AND ROLLED EROSION CONTROL PRODUCT
	FIBER ROLL



**EROSION CONTROL SECTION VIEW**

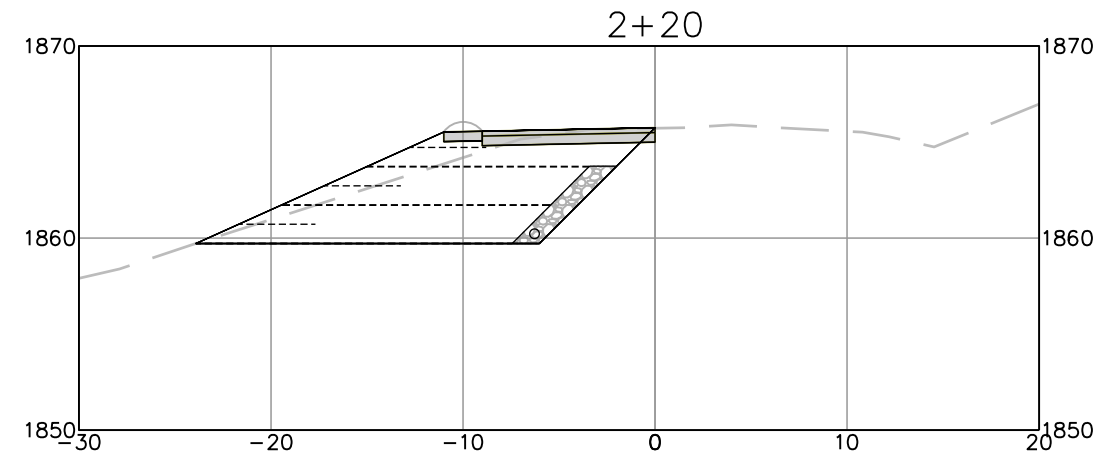
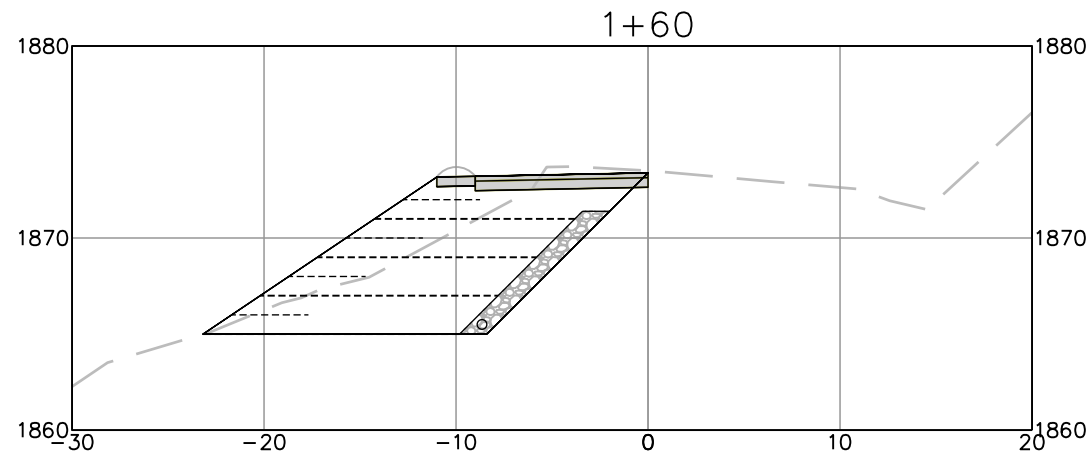
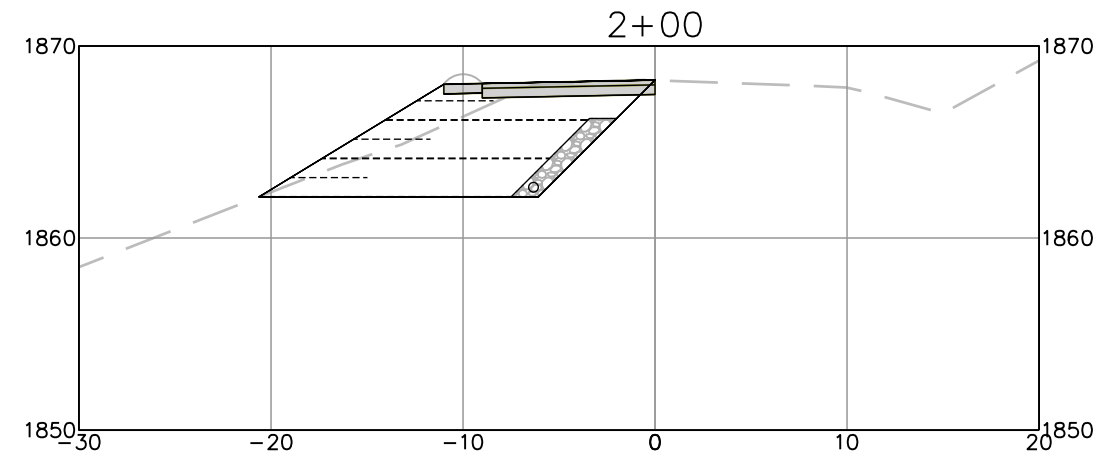
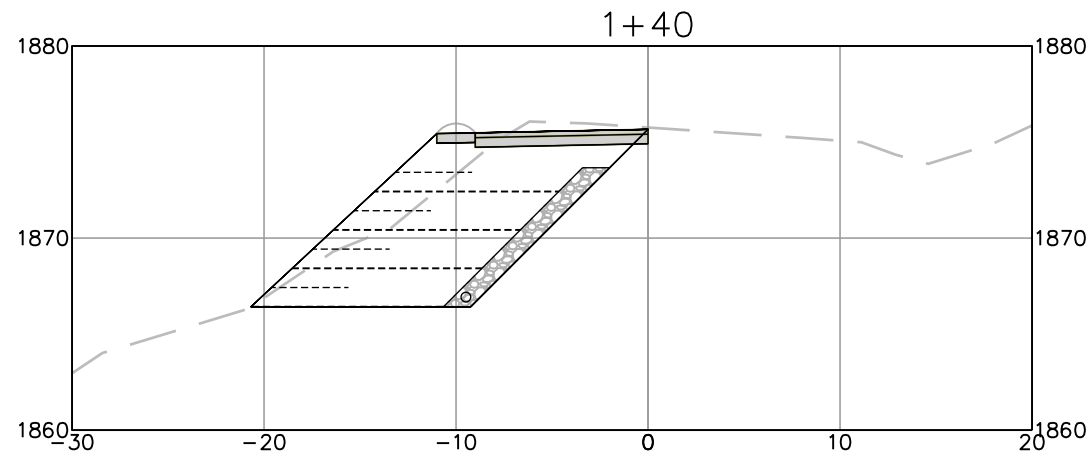
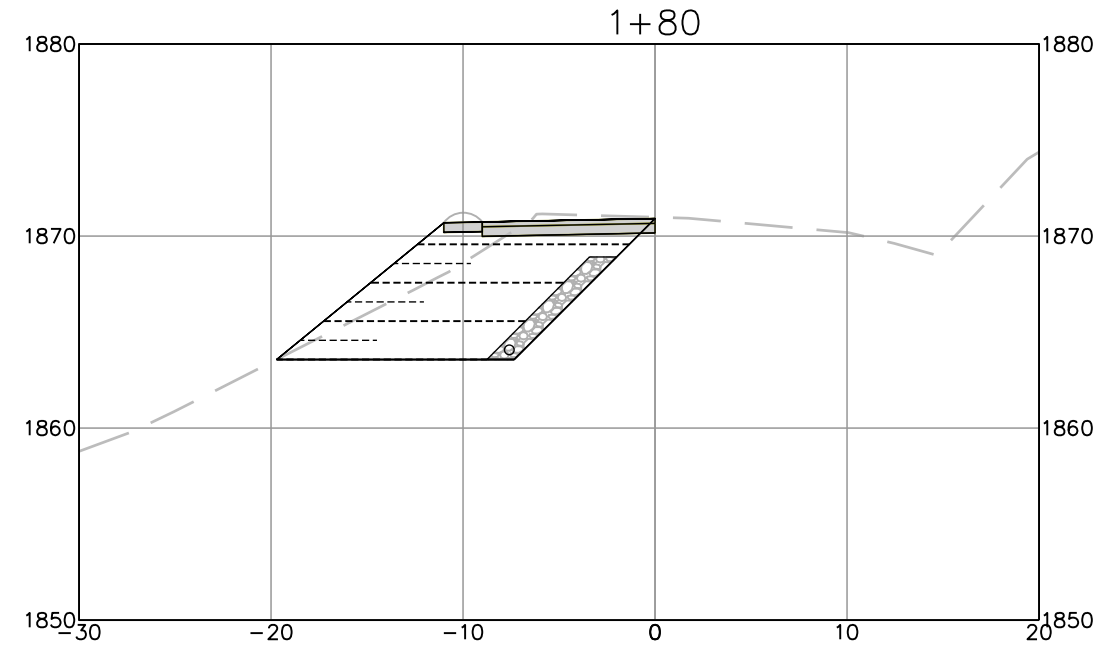
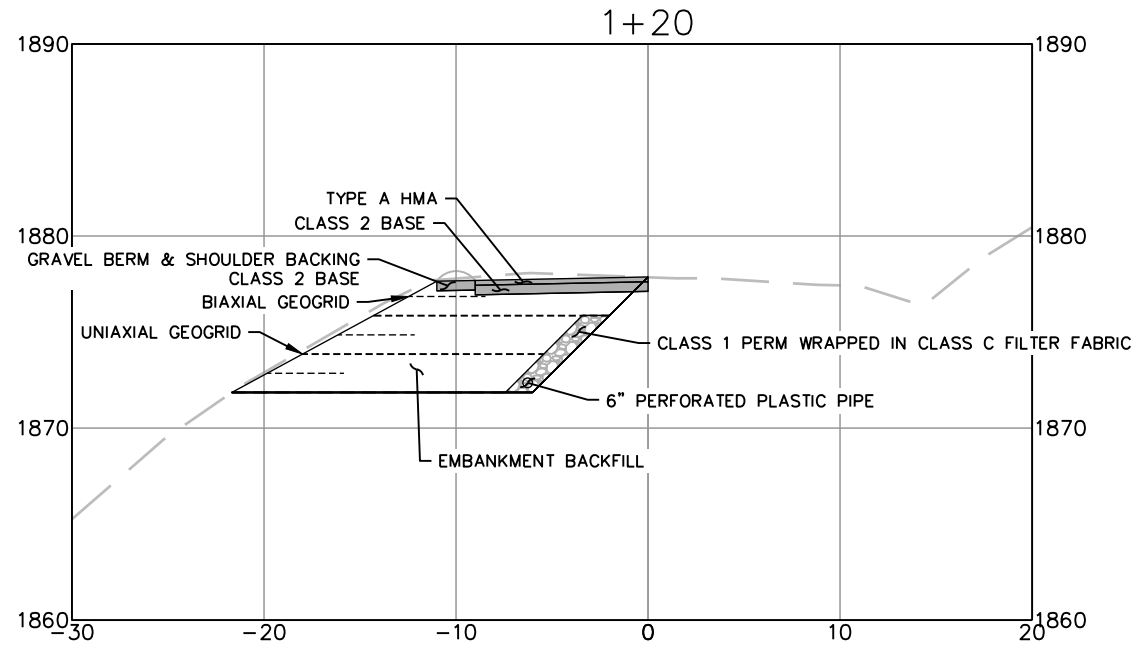
SCALE: 1"=2'



BAR IS ONE INCH ON ORIGINAL DRAWING  IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: EEL ROCK ROAD	DESIGN SECTION	<b>COUNTY OF HUMBOLDT</b> <b>DEPARTMENT OF PUBLIC WORKS</b> <b>EEL ROCK ROAD PM 0.60 STORM DAMAGE REPAIR</b> <b>SECTION VIEWS (STA 1+20 TO 2+20)</b>	SHEET <b>8</b> OF <b>18</b>	
	ROAD NO.: 7D010	MILE POST: 0.60			ENGINEERING
	FEMA PROJECT NO.: FEMA-4308-DR-CA PW#1323	DESIGNED BY: MMS			
	CONTRACT NO.: 217369	DRAWN BY: MMS			
	DRAWING FILE NAME: 217369 Design	REVIEWED BY: JAB			
	PLOT DATE: 4/29/2022	APPROVED BY: TRS			

**SECTION VIEWS (1+20 TO 2+20)**

SCALE: 1"=5'





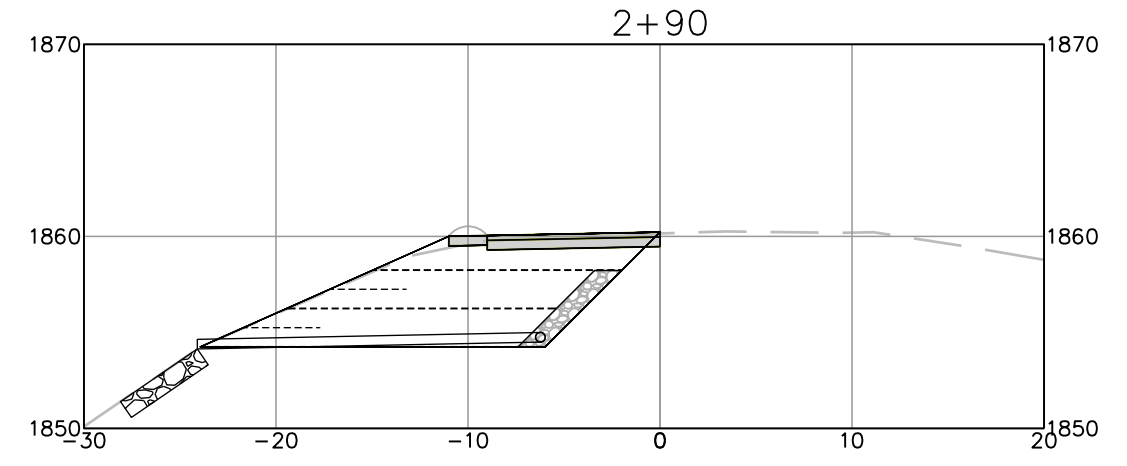
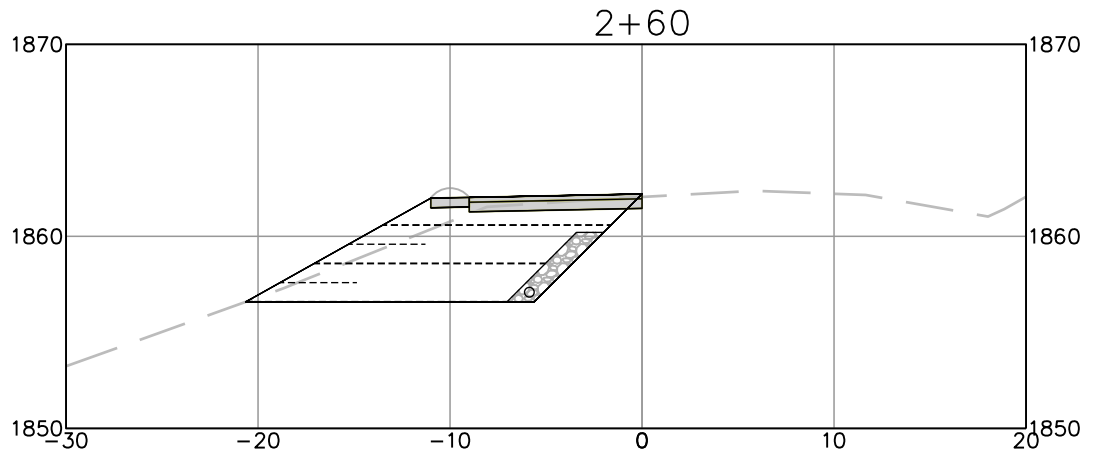
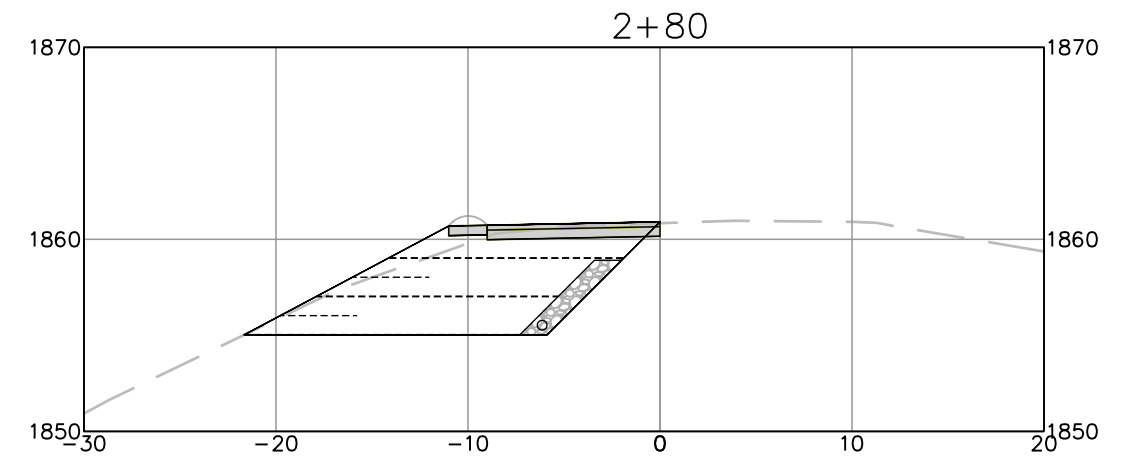
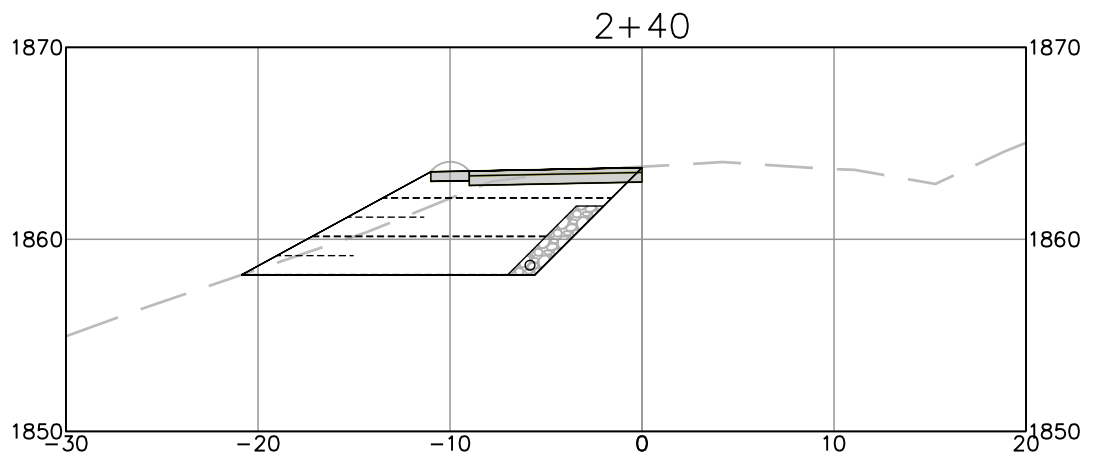


BAR IS ONE INCH ON ORIGINAL DRAWING  IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: EEL ROCK ROAD	DESIGN SECTION	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
	ROAD NO.: 7D010	ENGINEERING	
	FEMA PROJECT NO.: FEMA-4308-DR-CA PW#1323	DESIGNED BY: MMS	
	CONTRACT NO.: 217369	DRAWN BY: MMS	
	DRAWING FILE NAME: 217369 Design	REVIEWED BY: JAB	EEL ROCK ROAD PM 0.60 STORM DAMAGE REPAIR
	PLOT DATE: 4/29/2022	APPROVED BY: TRS	SECTION VIEWS (STA 2+40 TO 2+90)

SHEET  
**9**  
OF  
**18**

**SECTION VIEWS (2+40 TO 2+90)**

SCALE: 1"=5'





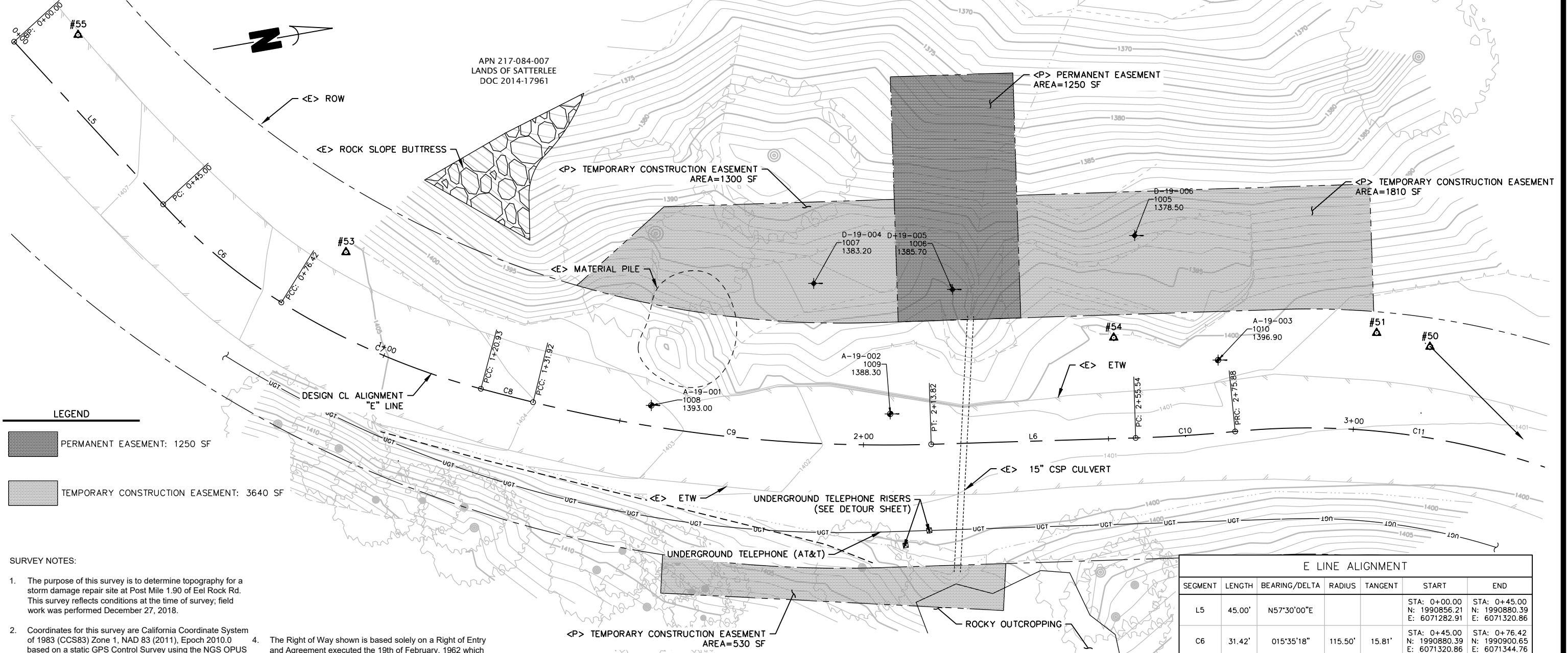
ROAD NAME: EEL ROCK ROAD	DESIGN SECTION: ENGINEERING
ROAD NO.: 7D010	MILE POST: 1.90
FEMA PROJECT NO.: FEMA-4308-DR-CA PW#666	DESIGNED BY: MMS
CONTRACT NO.: 217372	DRAWN BY: MMS
DRAWING FILE NAME: 217372 Design	REVIEWED BY: JAB
PLOT DATE: 4/29/2022	APPROVED BY: TRS

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	
EEL ROCK ROAD PM 1.90 STORM DAMAGE REPAIR	
SURVEY CONTROL AND RIGHT-OF-WAY	

SHEET  
**10**  
OF  
**18**

**SURVEY CONTROL COORDINATES PM 1.90**

Point Number	Easting	Northing	Point Elevation	Full Description	Longitude	Latitude
50	6071568.6470'	1991252.7860'	1394.72'	CP_SPK	W123° 45' 24.57"	N40° 16' 58.42"
51	6071389.6780'	1991119.5640'	1401.38'	CP_SPK	W123° 45' 26.84"	N40° 16' 57.07"
53	6071336.9445'	1990915.4112'	1405.25'	CP_SPK	W123° 45' 27.47"	N40° 16' 55.04"
54	6071381.3155'	1991066.5789'	1401.19'	CP_SPK	W123° 45' 26.93"	N40° 16' 56.54"
55	6071283.8081'	1990869.2970'	1407.27'	CP_MAG	W123° 45' 28.14"	N40° 16' 54.57"



**LEGEND**

[Hatched Box]	PERMANENT EASEMENT: 1250 SF
[Dotted Box]	TEMPORARY CONSTRUCTION EASEMENT: 3640 SF

- SURVEY NOTES:**
- The purpose of this survey is to determine topography for a storm damage repair site at Post Mile 1.90 of Eel Rock Rd. This survey reflects conditions at the time of survey; field work was performed December 27, 2018.
  - Coordinates for this survey are California Coordinate System of 1983 (CCS83) Zone 1, NAD 83 (2011), Epoch 2010.0 based on a static GPS Control Survey using the NGS OPUS Post Processing Software. The control point identified as Point 50 was held for horizontal positions shown hereon. The mapping angle is 1 degree 08 minutes 58 seconds; rotate bearings hereon counterclockwise by this angle to obtain "True" or Geodetic Bearings. Grid distances shown should be divided by the Combined Scale factor of 0.99987882 to obtain ground distances. Mapping angle and grid scale factor are taken at control point number 50, a 12 inch spike. Elevations are NAVD 88 datum based on OPUS solution utilizing the GEOID 12B model: an elevation of 1394.72 feet was measured at the aforementioned Control Point 50.
  - Contours and spot elevations were obtained by conventional survey techniques. Only trees 12 inch and bigger were located; numerous other smaller trees exist within area surveyed and are not shown. Tree locations are generally shown at breast height and are approximate due to the fact not all trees are growing vertically.

The Right of Way shown is based solely on a Right of Entry and Agreement executed the 19th of February, 1962 which specifies an easement to be recorded, based on the centerline of Eel Rock Road "50 feet in width with such additional widths as necessary cut and fill slopes outside the limits of said 50 foot right of way" based on the completed road alignment. This document specifies that a survey of the completed road and subsequent deeds would be delivered. No recorded deeds were executed per the County Right of Way Dept. The County had a Record of Survey performed in 1975, recorded in Book 32 of Surveys, pages 4-6, purportedly locating the existing centerline. The alignment in said survey does not fit the road as constructed in this vicinity. Since no deeds were recorded the right of way shown hereon is based on the existing centerline, with a width of fifty feet as specified in the Right of Entry and Agreement noted above.

Section Lines in the vicinity of this project were not determined- all surrounding property is owned by the Satterlee Trust per Document No. 2014-17961, HCR.

E LINE ALIGNMENT						
SEGMENT	LENGTH	BEARING/Delta	RADIUS	TANGENT	START	END
L5	45.00'	N57°30'00"E			STA: 0+00.00 N: 1990856.21 E: 6071282.91	STA: 0+45.00 N: 1990880.39 E: 6071320.86
C6	31.42'	015°35'18"	115.50'	15.81'	STA: 0+45.00 N: 1990880.39 E: 6071320.86	STA: 0+76.42 N: 1990900.65 E: 6071344.76
C7	44.51'	017°00'00"	150.00'	22.42'	STA: 0+76.42 N: 1990900.65 E: 6071344.76	STA: 1+20.93 N: 1990937.66 E: 6071369.17
C8	10.99'	001°03'00"	600.00'	5.50'	STA: 1+20.93 N: 1990937.66 E: 6071369.17	STA: 1+31.92 N: 1990947.68 E: 6071373.71
C9	81.89'	015°38'27"	300.00'	41.20'	STA: 1+31.92 N: 1990947.68 E: 6071373.71	STA: 2+13.82 N: 1991026.14 E: 6071396.27
L6	41.72'	N08°13'16"E			STA: 2+13.82 N: 1991026.14 E: 6071396.27	STA: 2+55.54 N: 1991067.43 E: 6071402.24
C10	20.34'	003°53'03"	300.00'	10.17'	STA: 2+55.54 N: 1991067.43 E: 6071402.24	STA: 2+75.88 N: 1991087.65 E: 6071404.46
C11	74.64'	028°30'39"	150.00'	38.11'	STA: 2+75.88 N: 1991087.65 E: 6071404.46	STA: 3+50.52 N: 1991157.66 E: 6071428.02

**SURVEY CONTROL AND RIGHT-OF-WAY**

SCALE: 1"=10'



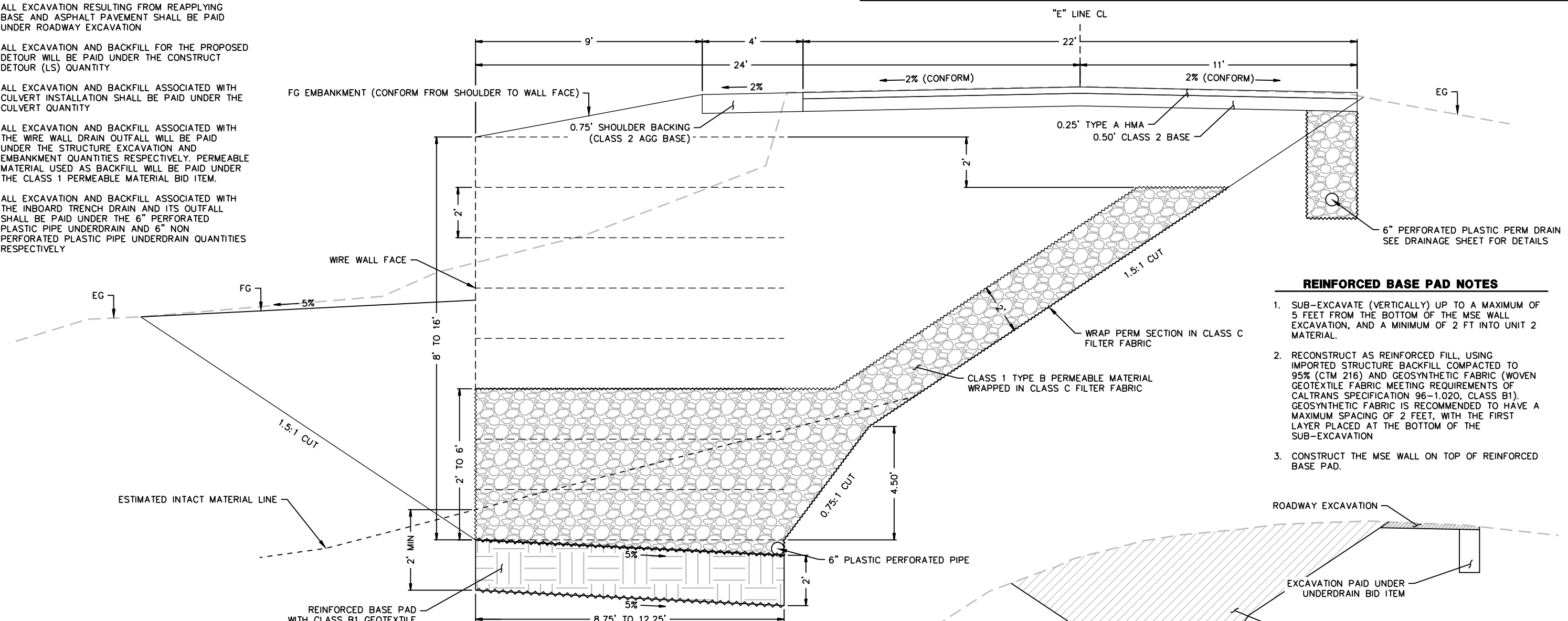
**EXCAVATION AND BACKFILL NOTES**

1. ALL EXCAVATION WITHIN THE WIRE WALL EXCAVATION FOOTPRINT SHALL BE PAID UNDER STRUCTURE EXCAVATION
2. ALL EXCAVATION RESULTING FROM REAPPLYING BASE AND ASPHALT PAVEMENT SHALL BE PAID UNDER ROADWAY EXCAVATION
3. ALL EXCAVATION AND BACKFILL FOR THE PROPOSED DETOUR WILL BE PAID UNDER THE CONSTRUCT DETOUR (LS) QUANTITY
4. ALL EXCAVATION AND BACKFILL ASSOCIATED WITH CULVERT INSTALLATION SHALL BE PAID UNDER THE CULVERT QUANTITY
5. ALL EXCAVATION AND BACKFILL ASSOCIATED WITH THE WIRE WALL DRAIN OUTFALL WILL BE PAID UNDER THE STRUCTURE EXCAVATION AND EMBANKMENT QUANTITIES RESPECTIVELY. PERMEABLE MATERIAL USED AS BACKFILL WILL BE PAID UNDER THE CLASS 1 PERMEABLE MATERIAL BID ITEM.
6. ALL EXCAVATION AND BACKFILL ASSOCIATED WITH THE INBOARD TRENCH DRAIN AND ITS OUTFALL SHALL BE PAID UNDER THE 6" PERFORATED PLASTIC PIPE UNDERDRAIN AND 6" NON PERFORATED PLASTIC PIPE UNDERDRAIN QUANTITIES RESPECTIVELY



ROAD NAME: EEL ROCK ROAD	DESIGN SECTION
ROAD NO.: 7D010	ENGINEERING
MILE POST: 1.90	DESIGNED BY: MMS
FEMA PROJECT NO.: FEMA-4308-DR-CA PW#666	DRAWN BY: MMS
CONTRACT NO.: 217372	REVIEWED BY: JAB
DRAWING FILE NAME: 217372 Design	APPROVED BY: TRS
PLOT DATE: 4/29/2022	

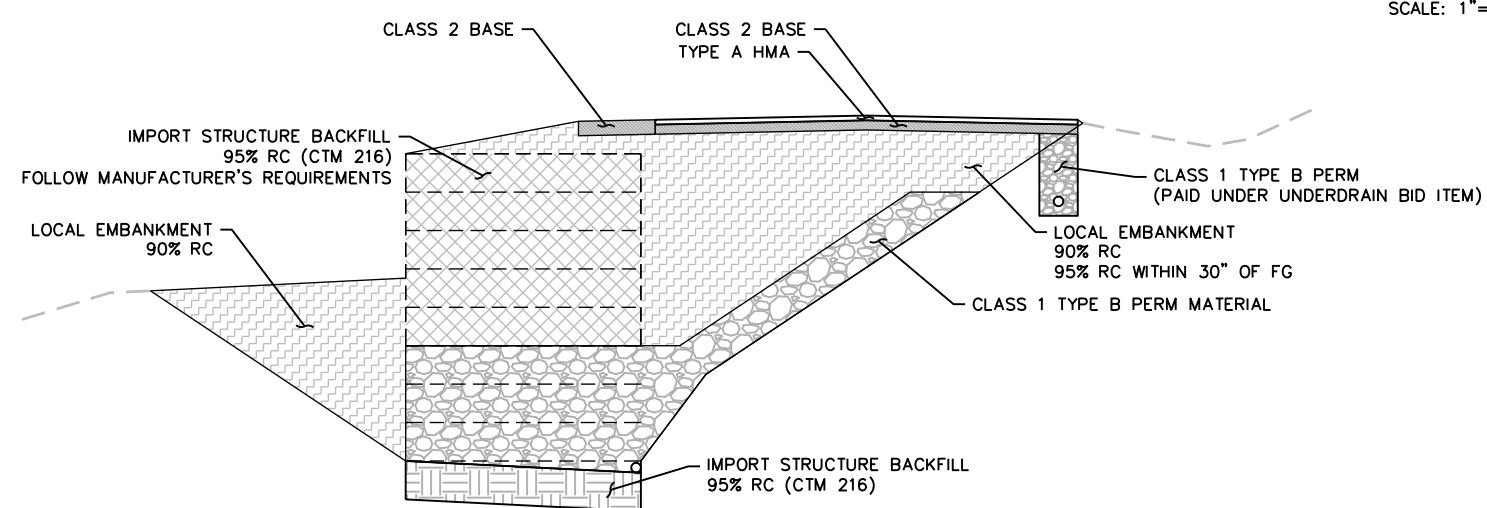
COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET
EEL ROCK ROAD PM 1.90 STORM DAMAGE REPAIR	<b>11</b>
TYPICAL SECTIONS	OF
	<b>18</b>



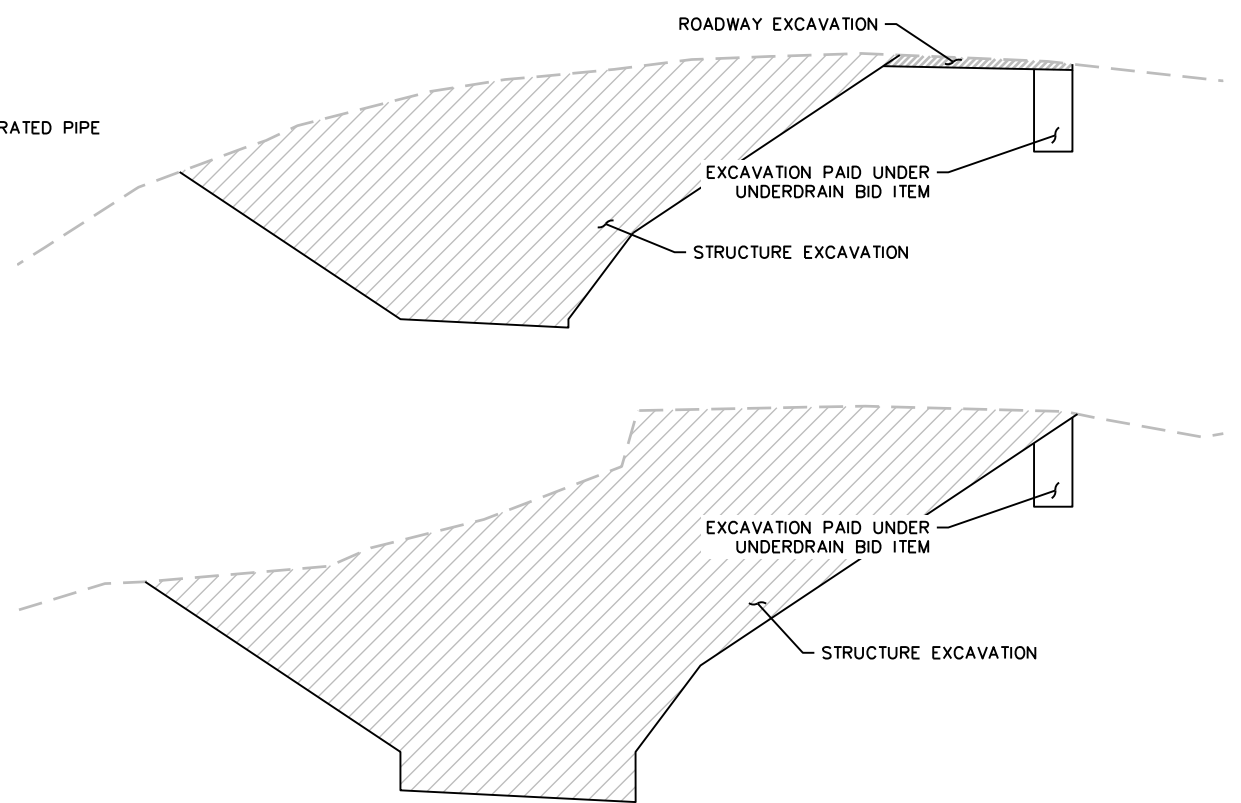
**TYPICAL WIRE WALL SECTION**  
SCALE: 1"=2'

**REINFORCED BASE PAD NOTES**

1. SUB-EXCAVATE (VERTICALLY) UP TO A MAXIMUM OF 5 FEET FROM THE BOTTOM OF THE MSE WALL EXCAVATION, AND A MINIMUM OF 2 FT INTO UNIT 2 MATERIAL.
2. RECONSTRUCT AS REINFORCED FILL, USING IMPORTED STRUCTURE BACKFILL COMPACTED TO 95% (CTM 216) AND GEOSYNTHETIC FABRIC (WOVEN GEOTEXTILE FABRIC MEETING REQUIREMENTS OF CALTRANS SPECIFICATION 96-1.020, CLASS B1). GEOSYNTHETIC FABRIC IS RECOMMENDED TO HAVE A MAXIMUM SPACING OF 2 FEET, WITH THE FIRST LAYER PLACED AT THE BOTTOM OF THE SUB-EXCAVATION
3. CONSTRUCT THE MSE WALL ON TOP OF REINFORCED BASE PAD.



**WIRE WALL BACKFILL PAY LIMITS**  
SCALE: 1"=5'



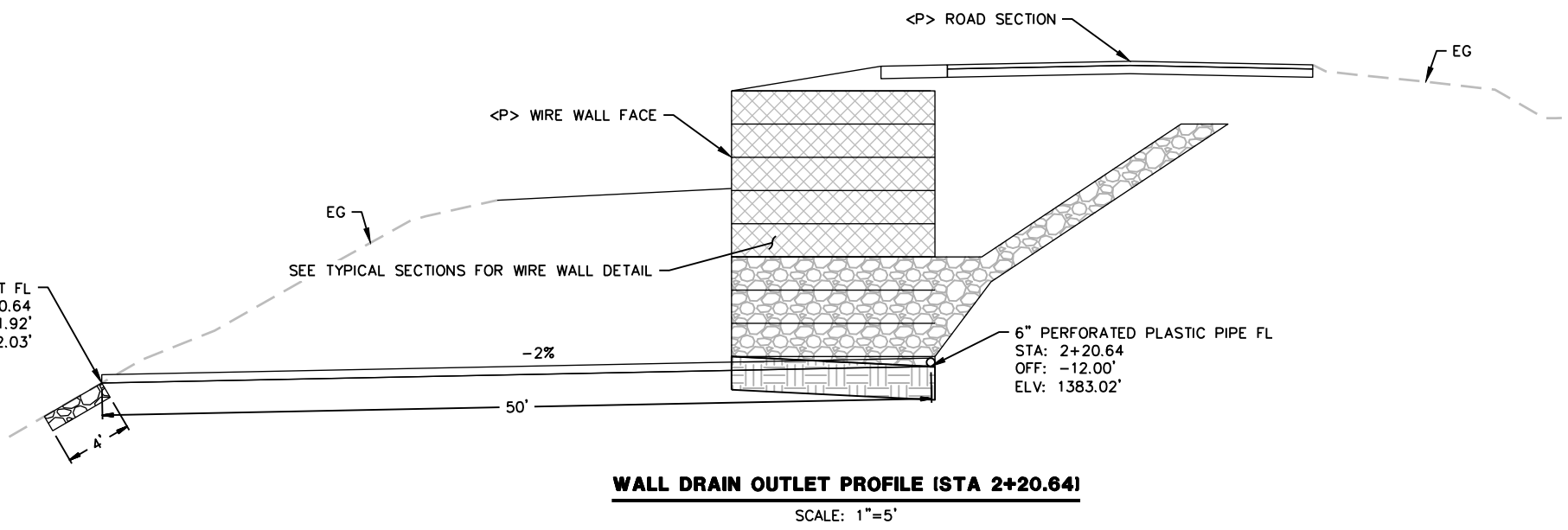
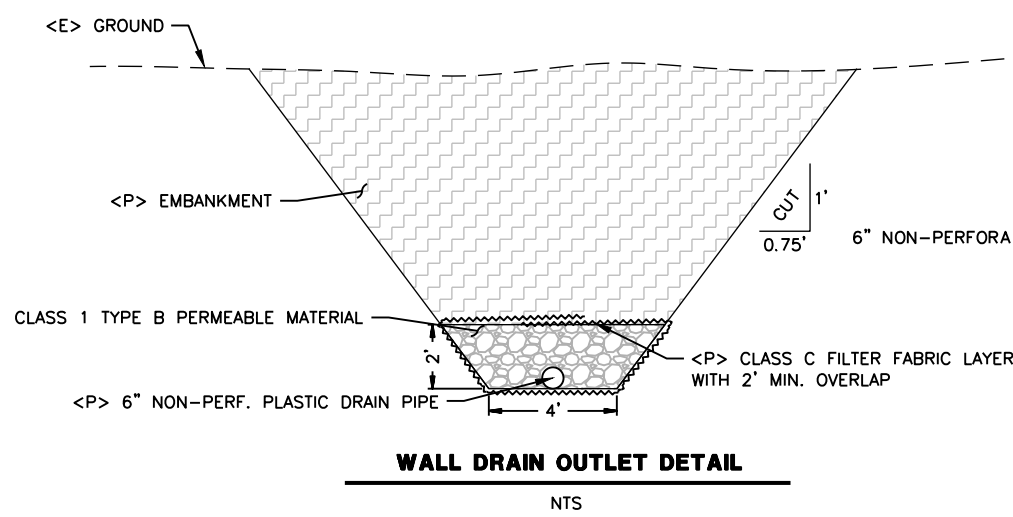
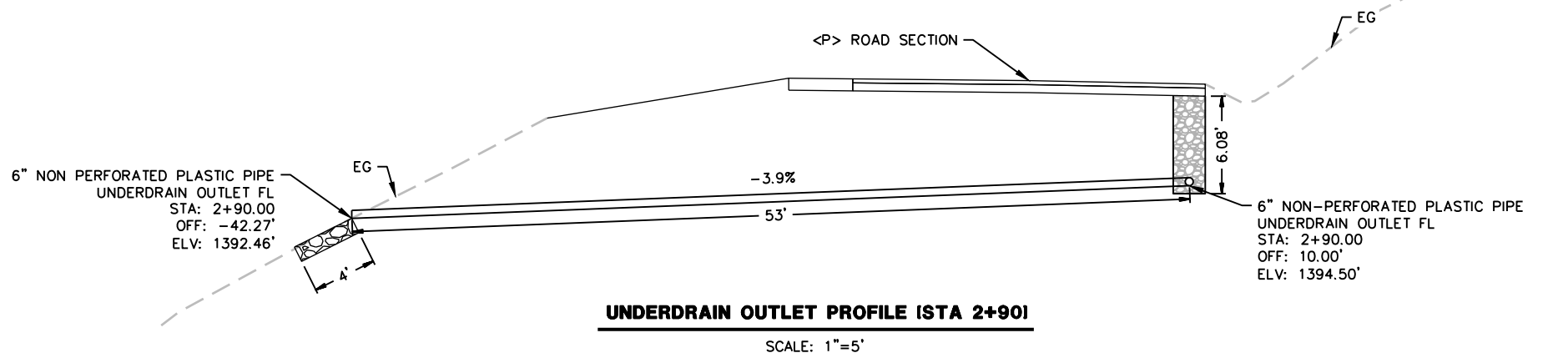
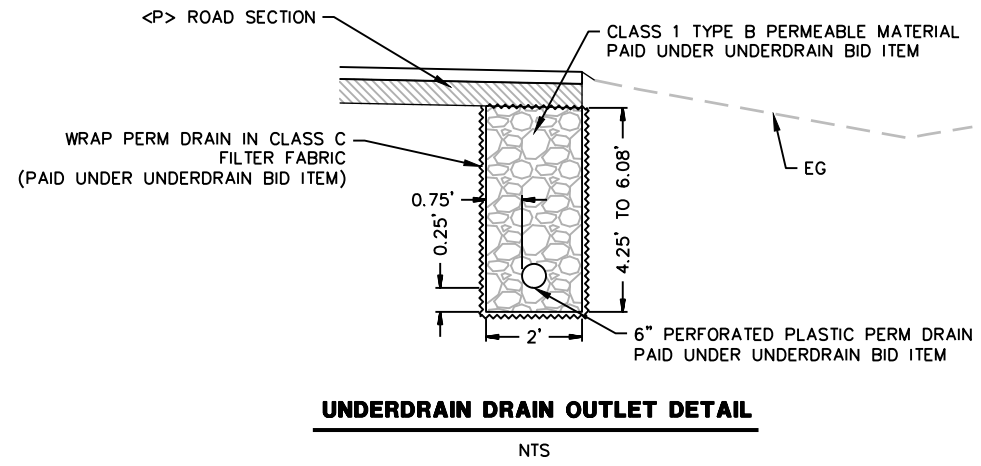
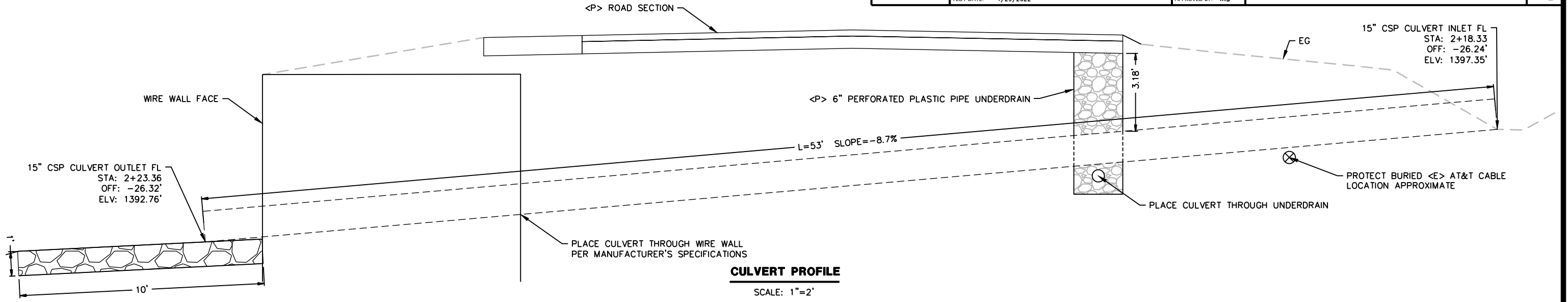
**WIRE WALL EXCAVATION PAY LIMITS**  
SCALE: 1"=5'



BAR IS ONE INCH ON ORIGINAL DRAWING	ROAD NAME: EEL ROCK ROAD	DESIGN SECTION
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NO.: 7D010	ENGINEERING
	MILE POST: 1.90	DESIGNED BY: MMS
	FEMA PROJECT NO.: FEMA-4308-DR-CA PW#666	DRAWN BY: MMS
	CONTRACT NO.: 217372	REVIEWED BY: JAB
	DRAWING FILE NAME: 217372 Design	APPROVED BY: TRS
	PLOT DATE: 4/29/2022	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
EEL ROCK ROAD PM 1.90 STORM DAMAGE REPAIR
<b>DRAINAGE PROFILES AND DETAILS</b>

SHEET  
**12**  
OF  
**18**



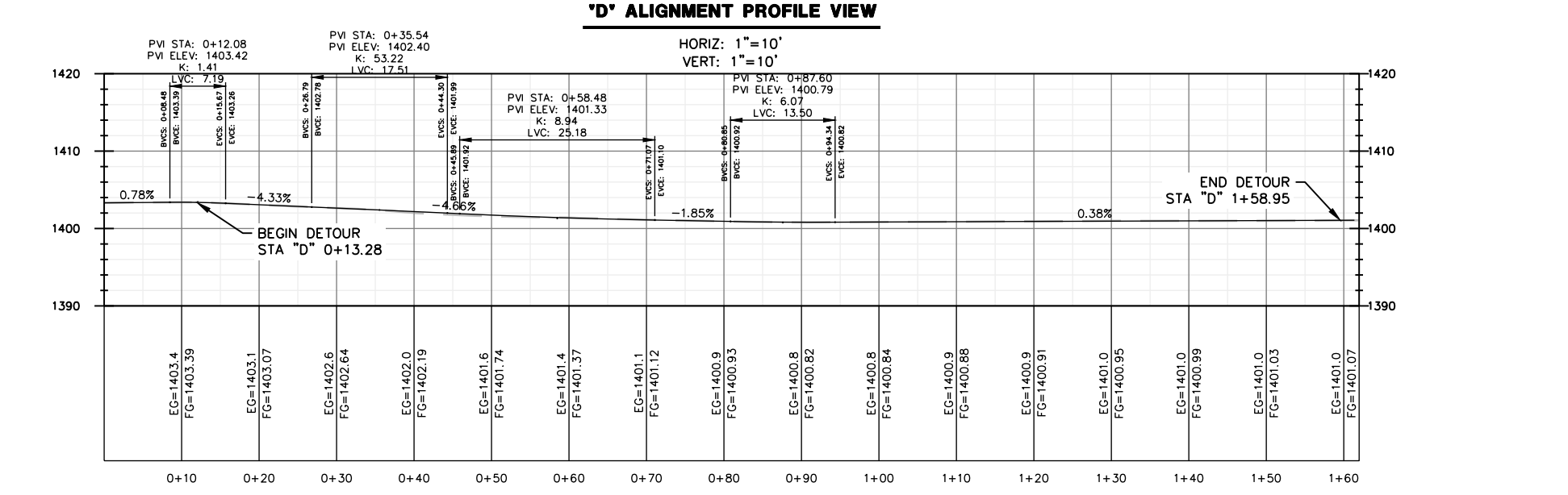
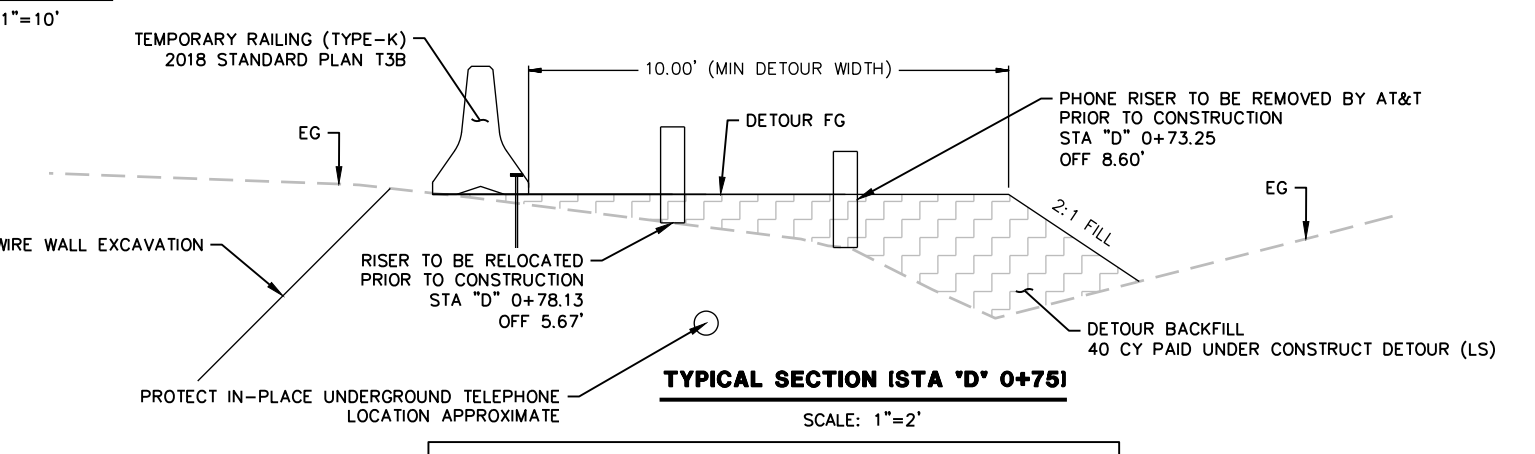
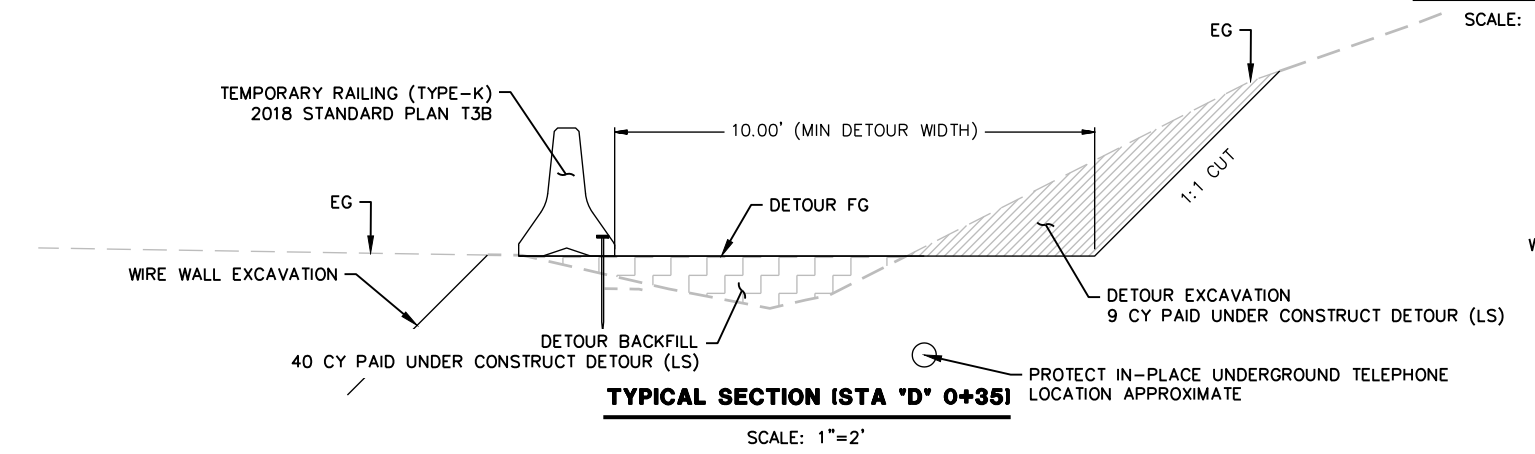
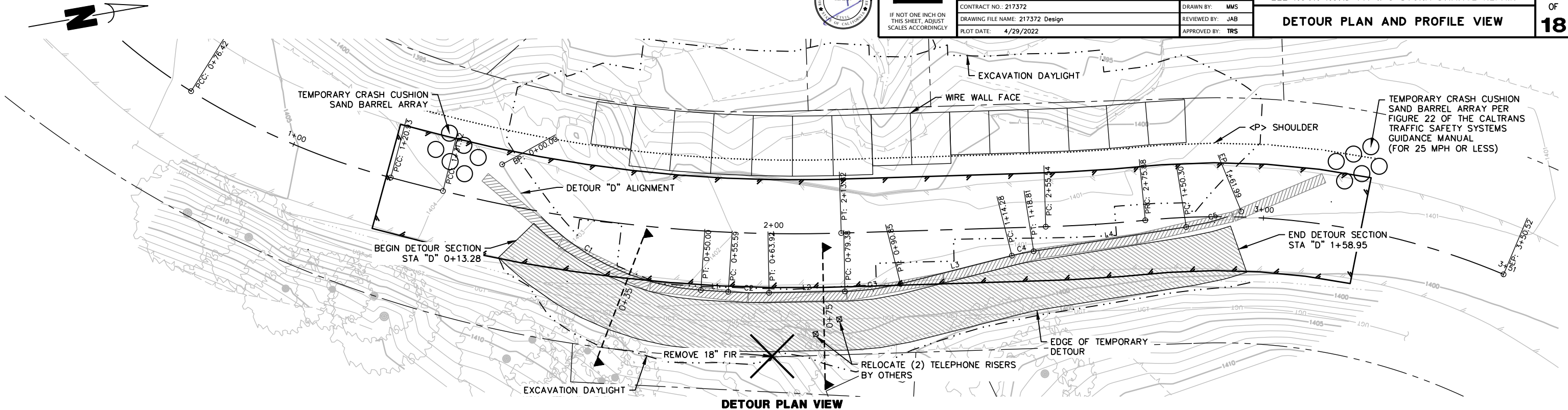




ROAD NAME: EEL ROCK ROAD  
 ROAD NO.: 7D010 MILE POST: 1.90  
 DESIGN SECTION ENGINEERING  
 DESIGNED BY: MMS  
 DRAWN BY: MMS  
 REVIEWED BY: JAB  
 APPROVED BY: TRS

COUNTY OF HUMBOLDT  
 DEPARTMENT OF PUBLIC WORKS  
 EEL ROCK ROAD PM 1.90 STORM DAMAGE REPAIR  
 DETOUR PLAN AND PROFILE VIEW

SHEET  
 13  
 OF  
 18

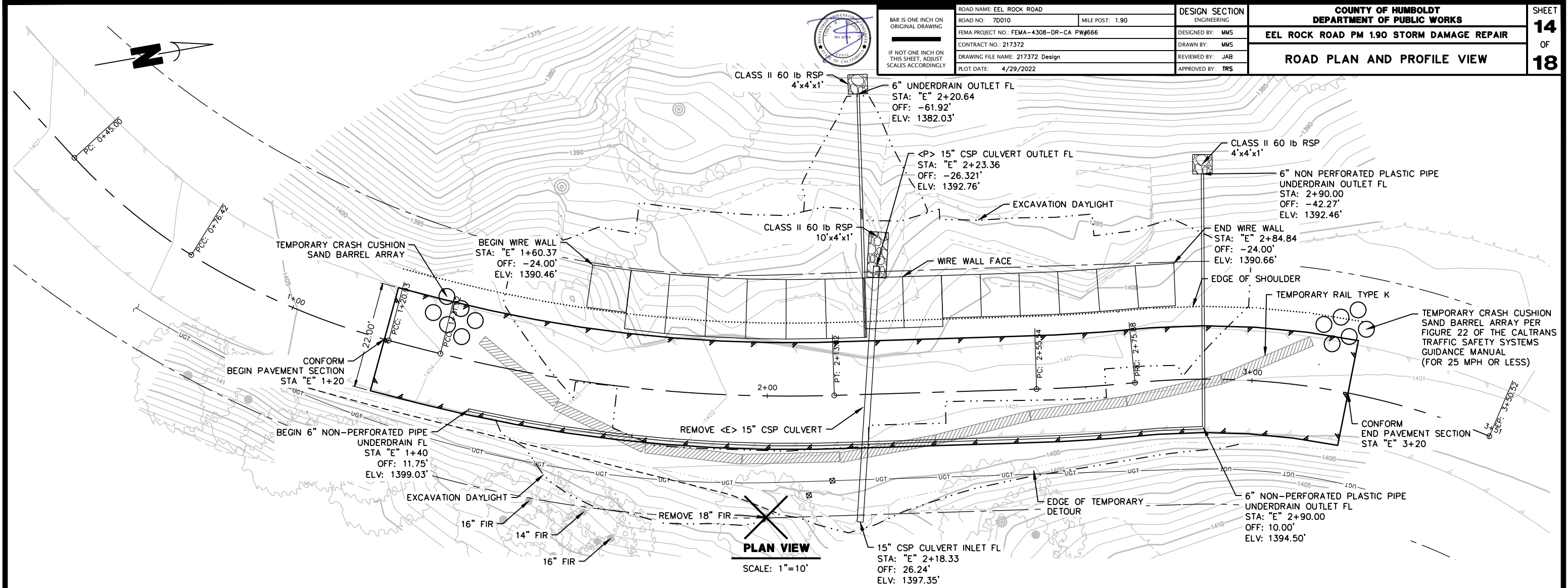


DETOUR ALIGNMENT						
SEGMENT	LENGTH	BEARING/Delta	RADIUS	TANGENT	START	END
C1	50.00'	057°17'45"	50.00'	27.32'	STA: 0+00.00 N: 1990960.51 E: 6071370.47	STA: 0+50.00 N: 1990995.94 E: 6071402.76
L1	5.59'	N13°41'31"E			STA: 0+50.00 N: 1990995.94 E: 6071402.76	STA: 0+55.59 N: 1991001.38 E: 6071404.08
C2	8.33'	004°46'15"	100.00'	4.17'	STA: 0+55.59 N: 1991001.38 E: 6071404.08	STA: 0+63.92 N: 1991009.54 E: 6071405.72
L2	15.46'	N08°55'16"E			STA: 0+63.92 N: 1991009.54 E: 6071405.72	STA: 0+79.38 N: 1991024.82 E: 6071408.11
C3	11.47'	013°08'32"	50.00'	5.76'	STA: 0+79.38 N: 1991024.82 E: 6071408.11	STA: 0+90.85 N: 1991036.25 E: 6071408.58
L3	23.43'	N04°13'17"W			STA: 0+90.85 N: 1991036.25 E: 6071408.58	STA: 1+14.28 N: 1991059.61 E: 6071406.86
C4	4.53'	005°11'34"	50.00'	2.27'	STA: 1+14.28 N: 1991059.61 E: 6071406.86	STA: 1+18.81 N: 1991064.14 E: 6071406.73
L4	31.49'	N00°58'18"E			STA: 1+18.81 N: 1991064.14 E: 6071406.73	STA: 1+50.30 N: 1991095.63 E: 6071407.26
C5	11.68'	013°23'11"	50.00'	5.87'	STA: 1+50.30 N: 1991095.63 E: 6071407.26	STA: 1+61.99 N: 1991107.23 E: 6071406.10



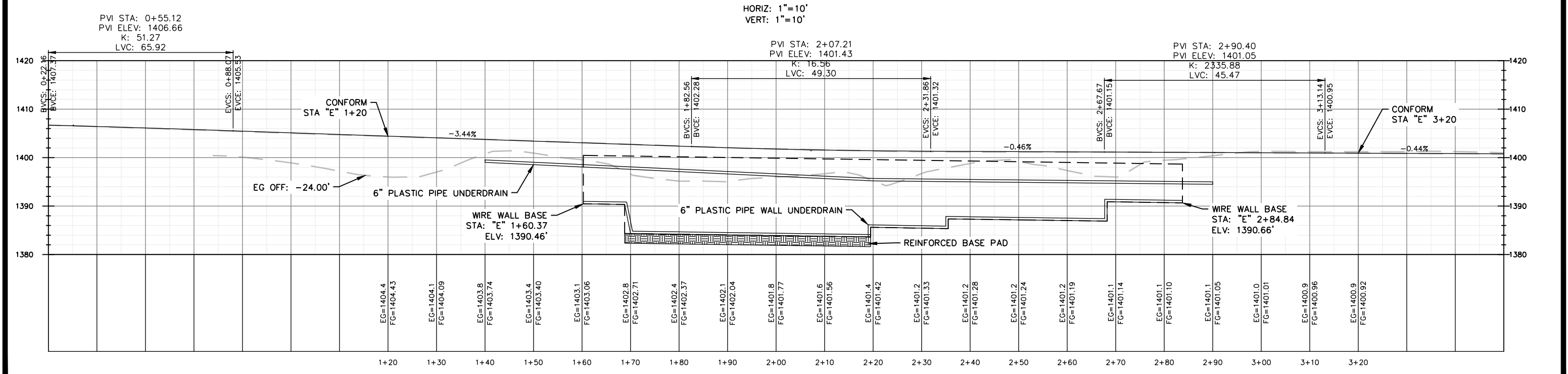
ROAD NAME: EEL ROCK ROAD	DESIGN SECTION: ENGINEERING
ROAD NO.: 7D010	MILE POST: 1.90
FEMA PROJECT NO.: FEMA-4308-DR-CA PW#666	DESIGNED BY: MMS
CONTRACT NO.: 217372	DRAWN BY: MMS
DRAWING FILE NAME: 217372 Design	REVIEWED BY: JAB
PLOT DATE: 4/29/2022	APPROVED BY: TRS

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET <b>14</b>
EEL ROCK ROAD PM 1.90 STORM DAMAGE REPAIR	OF
ROAD PLAN AND PROFILE VIEW	<b>18</b>



**PLAN VIEW**  
SCALE: 1"=10'

**'E' ALIGNMENT PROFILE VIEW**



HORIZ: 1"=10'  
VERT: 1"=10'

PVI STA: 0+55.12  
PVI ELEV: 1406.66  
K: 51.27  
LVC: 65.92

PVI STA: 2+07.21  
PVI ELEV: 1401.43  
K: 16.56  
LVC: 49.30

PVI STA: 2+90.40  
PVI ELEV: 1401.05  
K: 2335.88  
LVC: 45.47



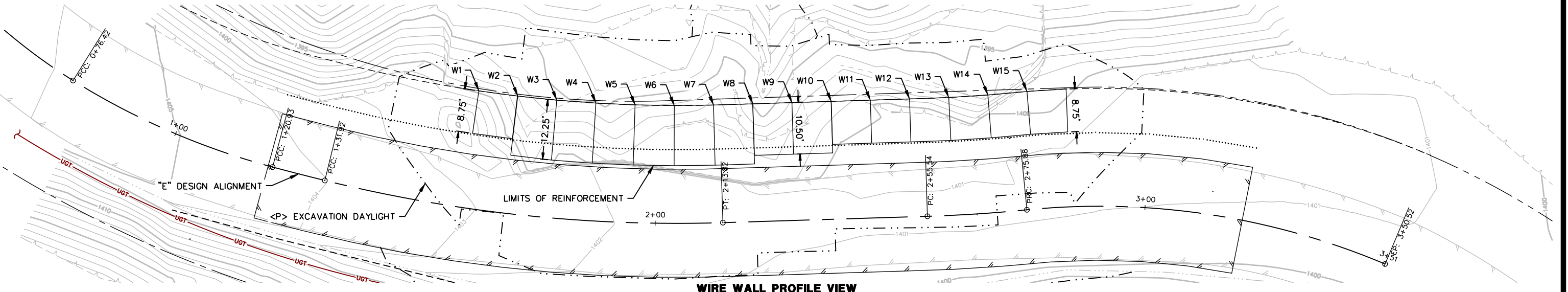


ROAD NAME: EEL ROCK ROAD  
 ROAD NO.: 7D010 MILE POST: 1.90  
 FEMA PROJECT NO.: FEMA-4308-DR-CA PW#666  
 CONTRACT NO.: 217372  
 DRAWING FILE NAME: 217372 Design  
 PLOT DATE: 4/29/2022

DESIGN SECTION  
 ENGINEERING  
 DESIGNED BY: MMS  
 DRAWN BY: MMS  
 REVIEWED BY: JAB  
 APPROVED BY: TRS

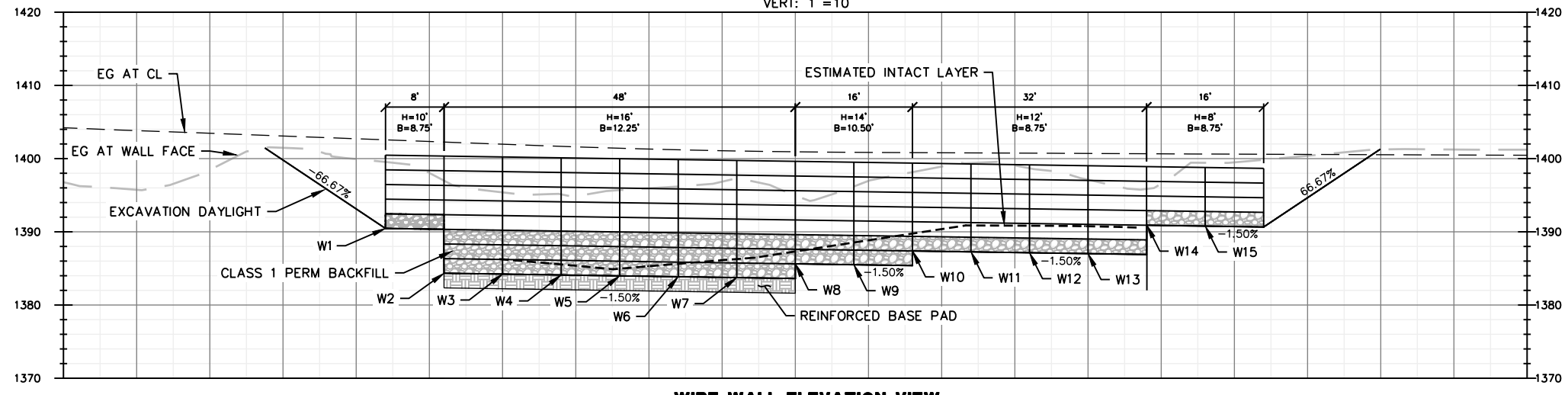
COUNTY OF HUMBOLDT  
 DEPARTMENT OF PUBLIC WORKS  
 EEL ROCK ROAD PM 1.90 STORM DAMAGE REPAIR  
**WIRE WALL ELEVATION VIEW**

SHEET  
**15**  
 OF  
**18**



**WIRE WALL PROFILE VIEW**

HORIZ: 1"=10'  
 VERT: 1"=10'



**WIRE WALL ELEVATION VIEW**

HORIZ: 1"=10'  
 VERT: 1"=10'

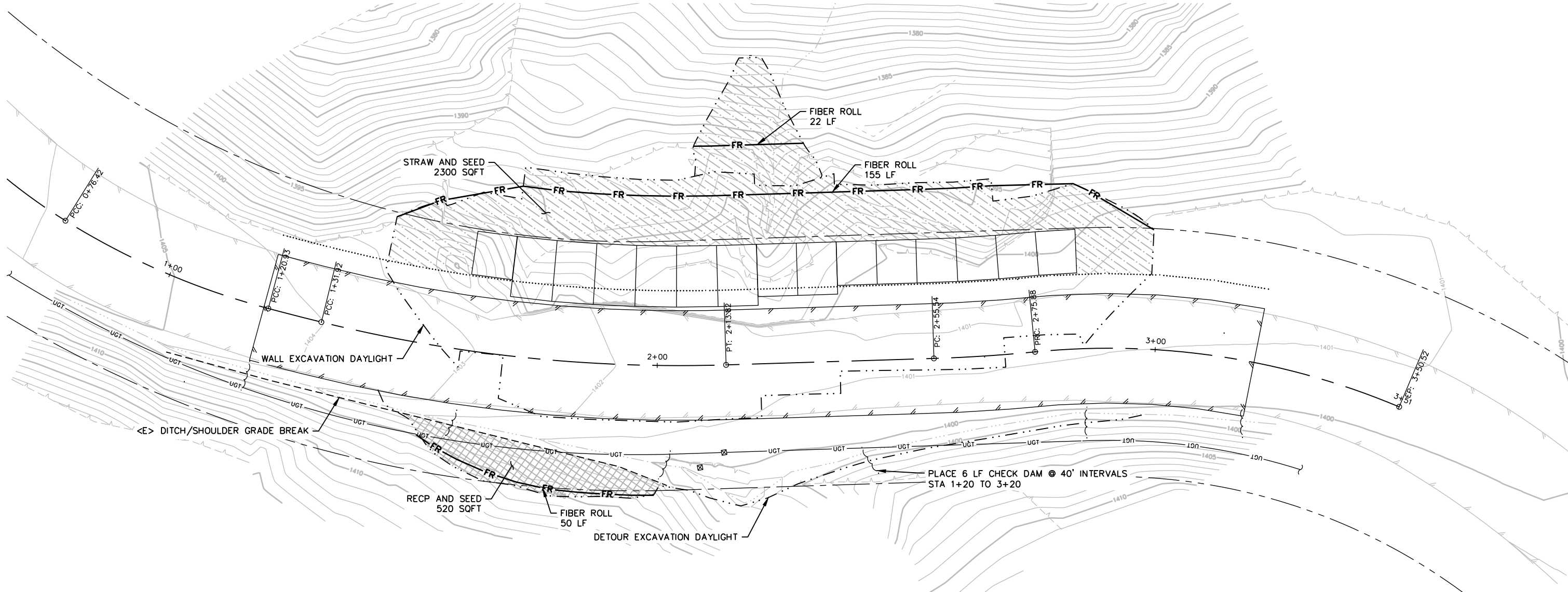
WIRE WALL DESIGN PARAMETERS				
SECTION	BEGIN STATION ("E" LINE)	BOT WALL FACE ELEVATION	HEIGHT	BASE WIDTH
W1	"E" 1+60.37	1390.46'	10'	8.75'
W2	"E" 1+69.06	1384.34'	16'	12.25'
W3	"E" 1+77.76	1384.22'	16'	12.25'
W4	"E" 1+86.45	1384.10'	16'	12.25'
W5	"E" 1+95.15	1383.98'	16'	12.25'
W6	"E" 2+03.84	1383.86'	16'	12.25'
W7	"E" 2+12.54	1383.74'	16'	12.25'
W8	"E" 2+20.66	1385.62'	14'	10.50'
W9	"E" 2+28.64	1385.50'	14'	10.50'
W10	"E" 2+36.66	1387.38'	12'	8.75'
W11	"E" 2+44.64	1387.26'	12'	8.75'
W12	"E" 2+52.64	1387.14'	12'	8.75'
W13	"E" 2+61.09	1387.02'	12'	8.75'
W14	"E" 2+69.78	1386.90'	8'	8.75'
W15	"E" 2+77.94	1390.78'	8'	8.75'



ROAD NAME: EEL ROCK ROAD	DESIGN SECTION
ROAD NO.: 7D010	ENGINEERING
MILE POST: 1.90	DESIGNED BY: MMS
FEMA PROJECT NO.: FEMA-4308-DR-CA PW#666	DRAWN BY: MMS
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PLOT DATE: 4/29/2022	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
EEL ROCK ROAD PM 1.90 STORM DAMAGE REPAIR
EROSION CONTROL PLAN

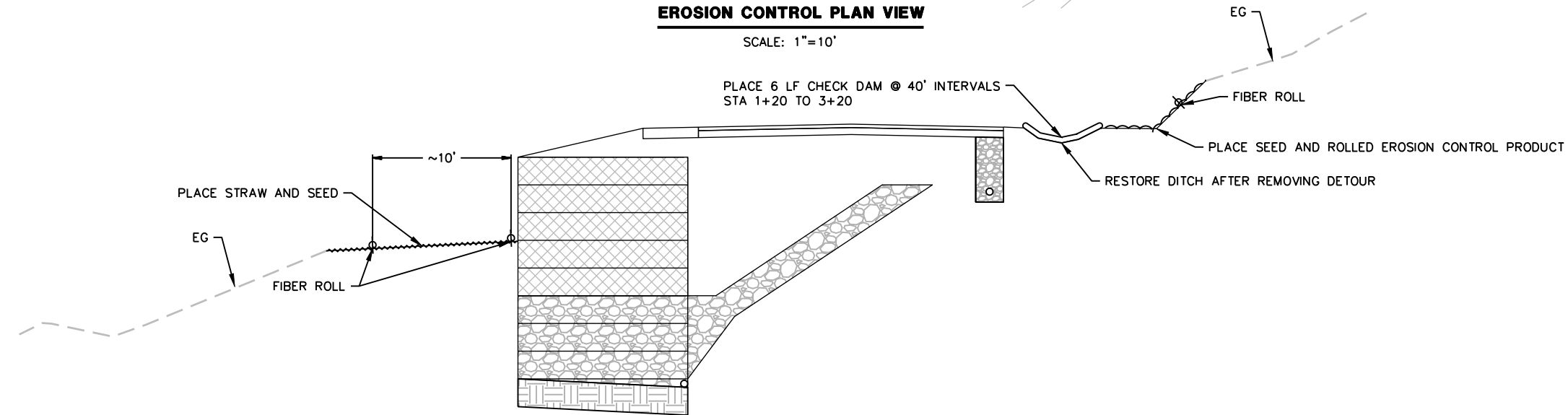
SHEET  
**16**  
OF  
**18**



**EROSION CONTROL PLAN VIEW**

SCALE: 1"=10'

PLACE 6 LF CHECK DAM @ 40' INTERVALS  
STA 1+20 TO 3+20



**EROSION CONTROL SECTION VIEW**

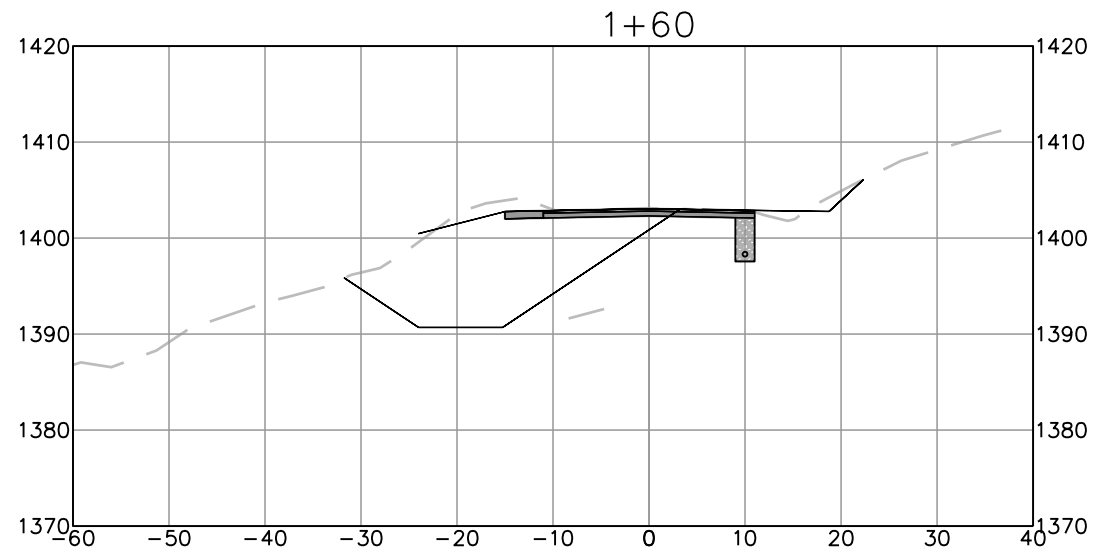
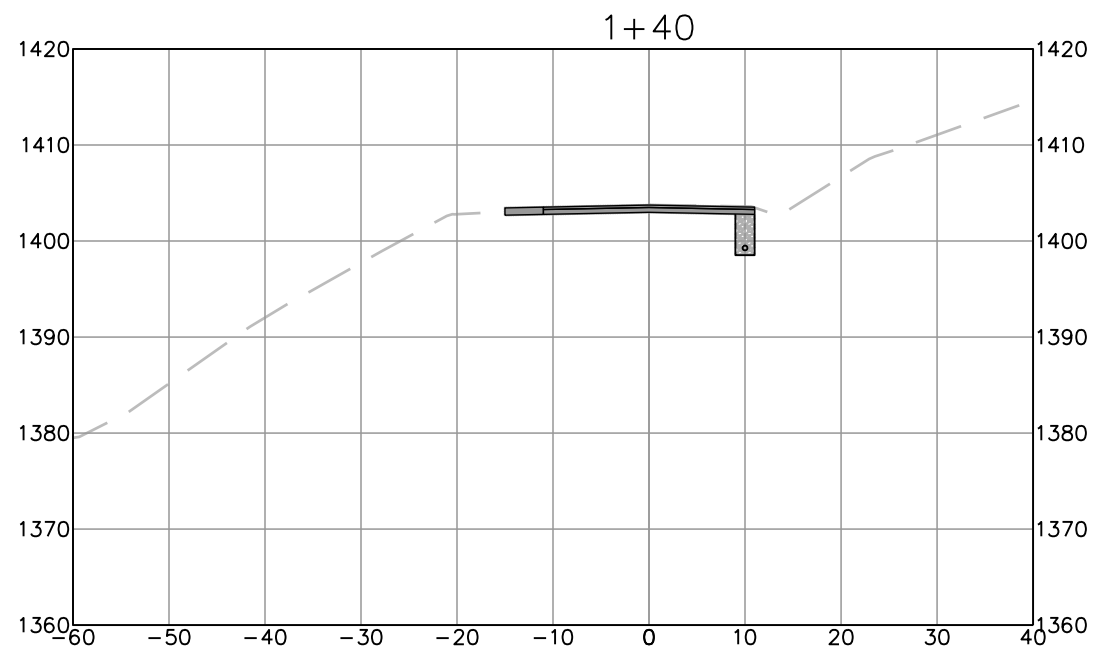
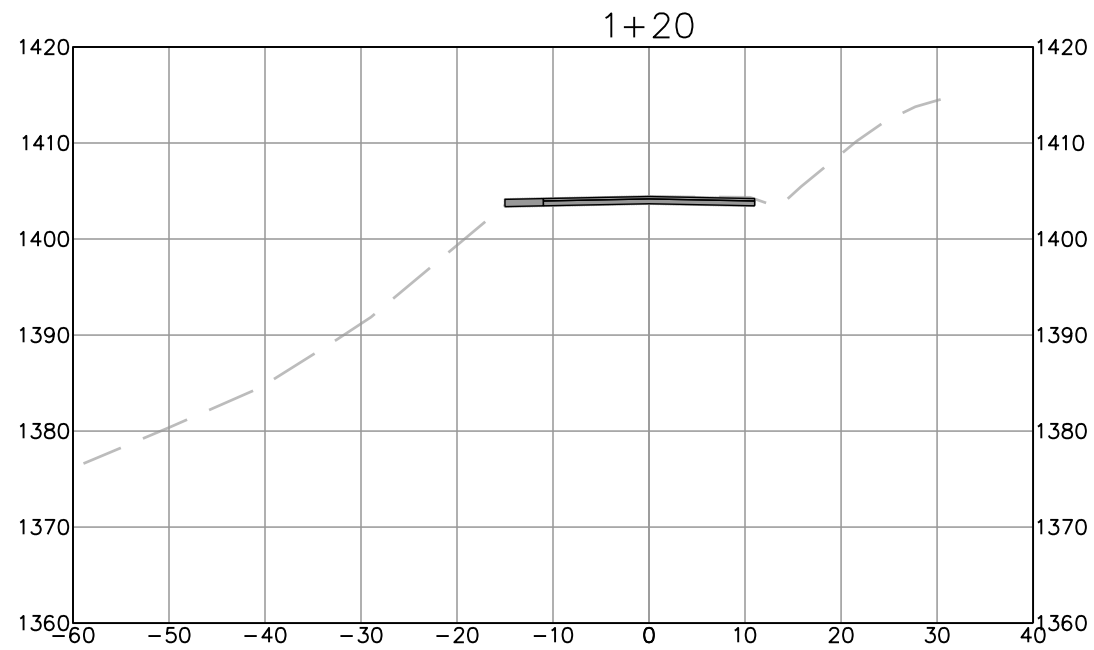
SCALE: 1"=5'

**LEGEND**

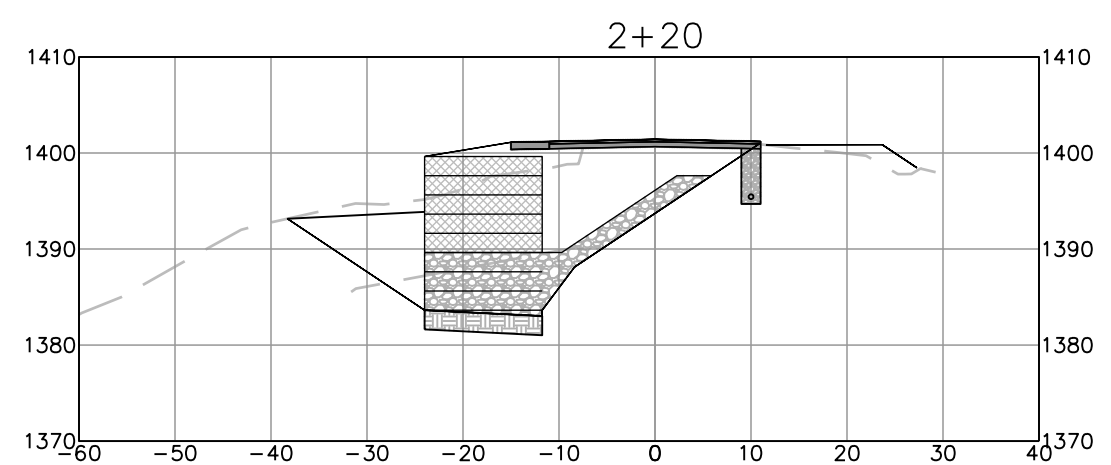
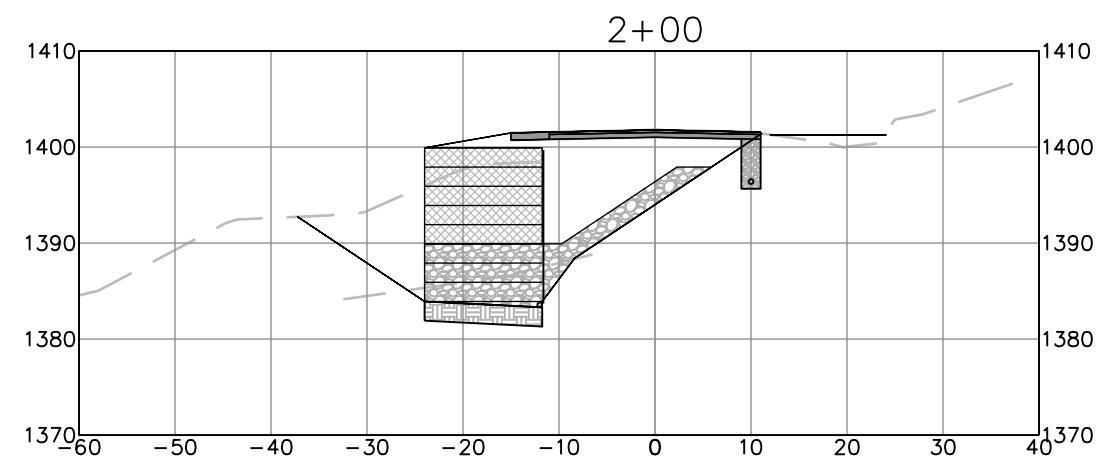
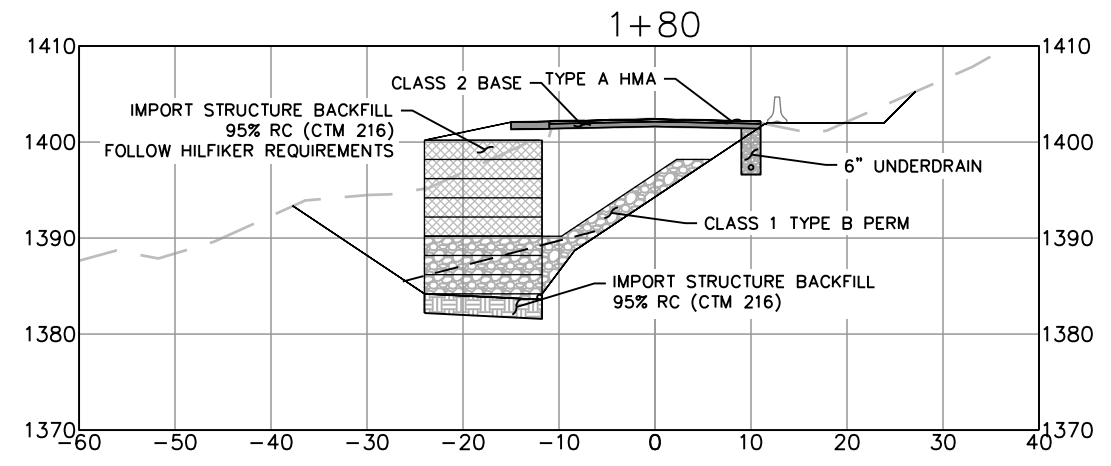
	SEED AND STRAW
	SEED AND ROLLED EROSION CONTROL PRODUCT
	FIBER ROLL
	CHECK DAM



BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: EEL ROCK ROAD	DESIGN SECTION	<b>COUNTY OF HUMBOLDT</b> <b>DEPARTMENT OF PUBLIC WORKS</b> <b>EEL ROCK ROAD PM 1.90 STORM DAMAGE REPAIR</b> <b>SECTION VIEWS (STA 1+20 TO 2+20)</b>	SHEET <b>17</b> OF <b>18</b>	
	ROAD NO.: 7D010	MILE POST: 1.90			ENGINEERING
	FEMA PROJECT NO.: FEMA-4308-DR-CA PW#666				DESIGNED BY: MMS
	CONTRACT NO.: 217372				DRAWN BY: MMS
	DRAWING FILE NAME: 217372 Design	REVIEWED BY: JAB			
	PLOT DATE: 4/29/2022	APPROVED BY: TRS			



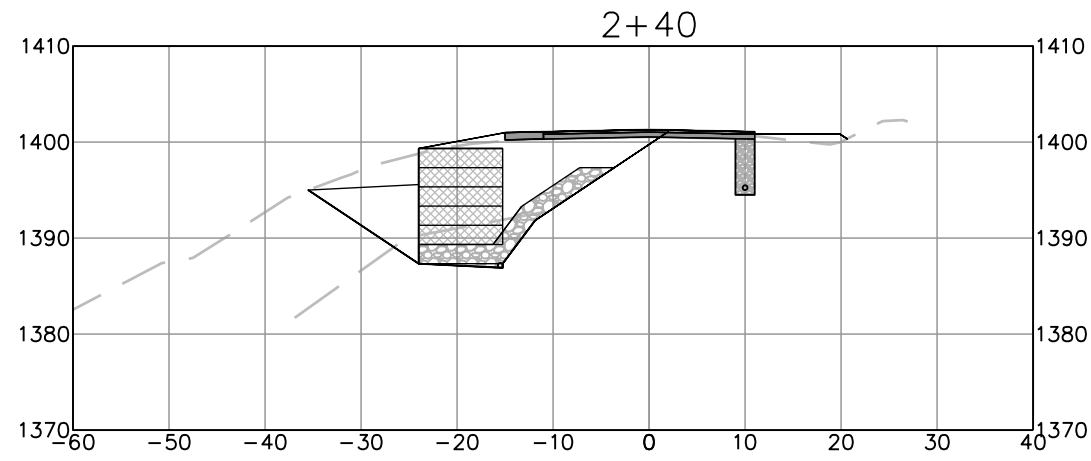
**'E' ALIGNMENT SECTION VIEWS**  
 SCALE: 1"=10'







BAR IS ONE INCH ON ORIGINAL DRAWING  IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: EEL ROCK ROAD	DESIGN SECTION	<b>COUNTY OF HUMBOLDT</b> <b>DEPARTMENT OF PUBLIC WORKS</b> <b>EEL ROCK ROAD PM 1.90 STORM DAMAGE REPAIR</b> <b>SECTION VIEWS (STA 2+40 TO 3+20)</b>	SHEET <b>18</b> OF <b>18</b>	
	ROAD NO.: 7D010	MILE POST: 1.90			ENGINEERING
	FEMA PROJECT NO.: FEMA-4308-DR-CA PW#666				DESIGNED BY: MMS
	CONTRACT NO.: 217372				DRAWN BY: MMS
	DRAWING FILE NAME: 217372 Design	REVIEWED BY: JAB			
	PLOT DATE: 4/29/2022	APPROVED BY: TRS			



**'E' ALIGNMENT SECTION VIEWS**

SCALE: 1"=10'

