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STRUCTURE PLANS

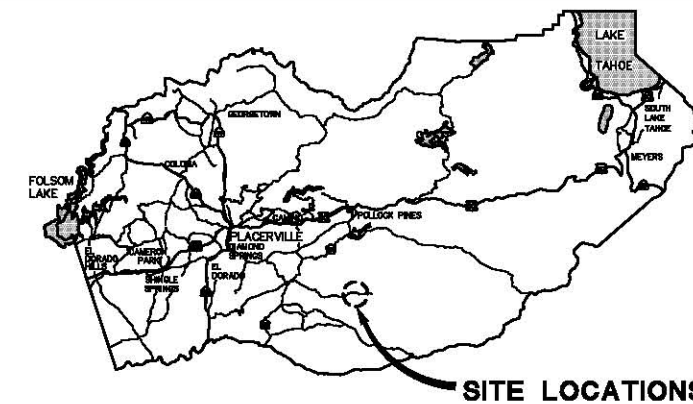
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COUNTY OF EL DORADO, CA DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR THE CONSTRUCTION OF COSUMNES MINE ROAD and BRIDGE STORM DAMAGE REPAIRS

IN THE COUNTY OF EL DORADO, DISTRICT 2

To be supplemented with Standard Plans and Specifications dated 2015, including the 2015 Revised Standard Specifications, of the California Department of Transportation, unless otherwise noted.



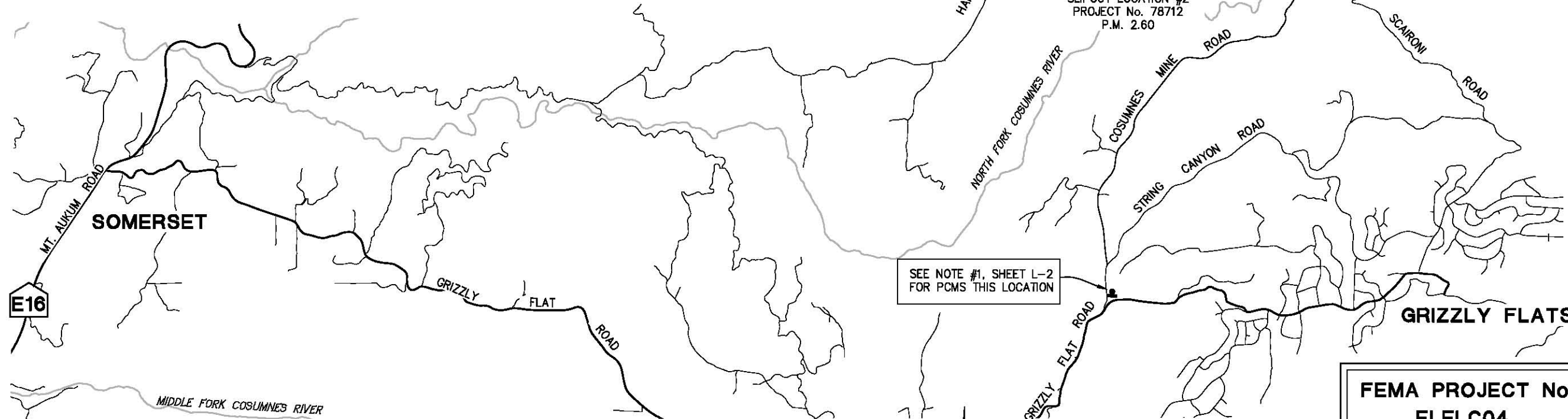
VICINITY MAP
COUNTY OF EL DORADO

BOARD OF SUPERVISORS

I	JOHN HIDAHL
II	SHIVA FRENTZEN
III	BRIAN VEERKAMP
IV	MICHAEL RANALLI
V	SUE NOVASEL

**COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION**

(530) 621-5900
2850 FAIRLANE CT
PLACERVILLE, CA 95667



LOCATION MAP
NOT TO SCALE

FEMA PROJECT No.
ELELC04
ELELC05
ELELC06

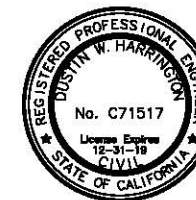
CONTRACTOR'S LICENSE CLASSIFICATION: Bidders shall be properly licensed to perform the Work pursuant to the State Contractor's License Act (Business and Professions Code section 7000 et seq.) and shall possess a CLASS A LICENSE or equivalent combination of Classes required by the categories and type of Work included in the Contract Documents and Plans. Failure of the successful Bidder to obtain proper and adequate licensing at the time bids are submitted shall constitute a failure to execute the Contract, and forfeiture as provided under that section.

REVISIONS		
MARK	DATE	BY



ABBREVIATIONS:

- CL - CENTERLINE
- EP - EDGE OF PAVEMENT
- FL - FLOWLINE
- HP - HINGE POINT
- AP - ANGLE POINT
- OG - ORIGINAL GROUND
- RSP - ROCK SLOPE PROTECTION



Dustin W. Harrington
DUSTIN HARRINGTON
CIVIL ENGINEER
STATE OF CALIFORNIA NO.71517

5/8/2018
DATE

PW NO. 18-31209 CONTRACT NO. 2719

**COSUMNES MINE ROAD
and BRIDGE
STORM DAMAGE REPAIRS**

TITLE SHEET

SHEET 1 OF 22

ADOPTED AND APPROVED BY:

MICHAEL RANALLI
CHIEF, EL DORADO COUNTY BOARD OF SUPERVISORS

APPROVED BY:

RAFAEL MARTINEZ, DIRECTOR
DEPARTMENT OF TRANSPORTATION

MATTHEW D. SNEELZER, P.E. NO. C56832
DEPUTY DIRECTOR, ENGINEERING

DATE

'CMR' LINE

NUMBER	LENGTH	RADIUS	LINE / CHORD DIRECTION & LENGTH	DELTA
L1	69.34		N 10° 23' 30" E	
C1	72.17	214.00	N 0° 43' 49" E - 71.83	19° 19' 22"
L2	38.49		N 8° 55' 51" W	

CONTROL TABLE

CONTROL NUMBER	ELEVATION	NORTHING	EASTING	DESCRIPTION
12	987.15	10461.483	50044.285	CP SPIKE
13	988.11	10363.848	50026.134	CP SPIKE

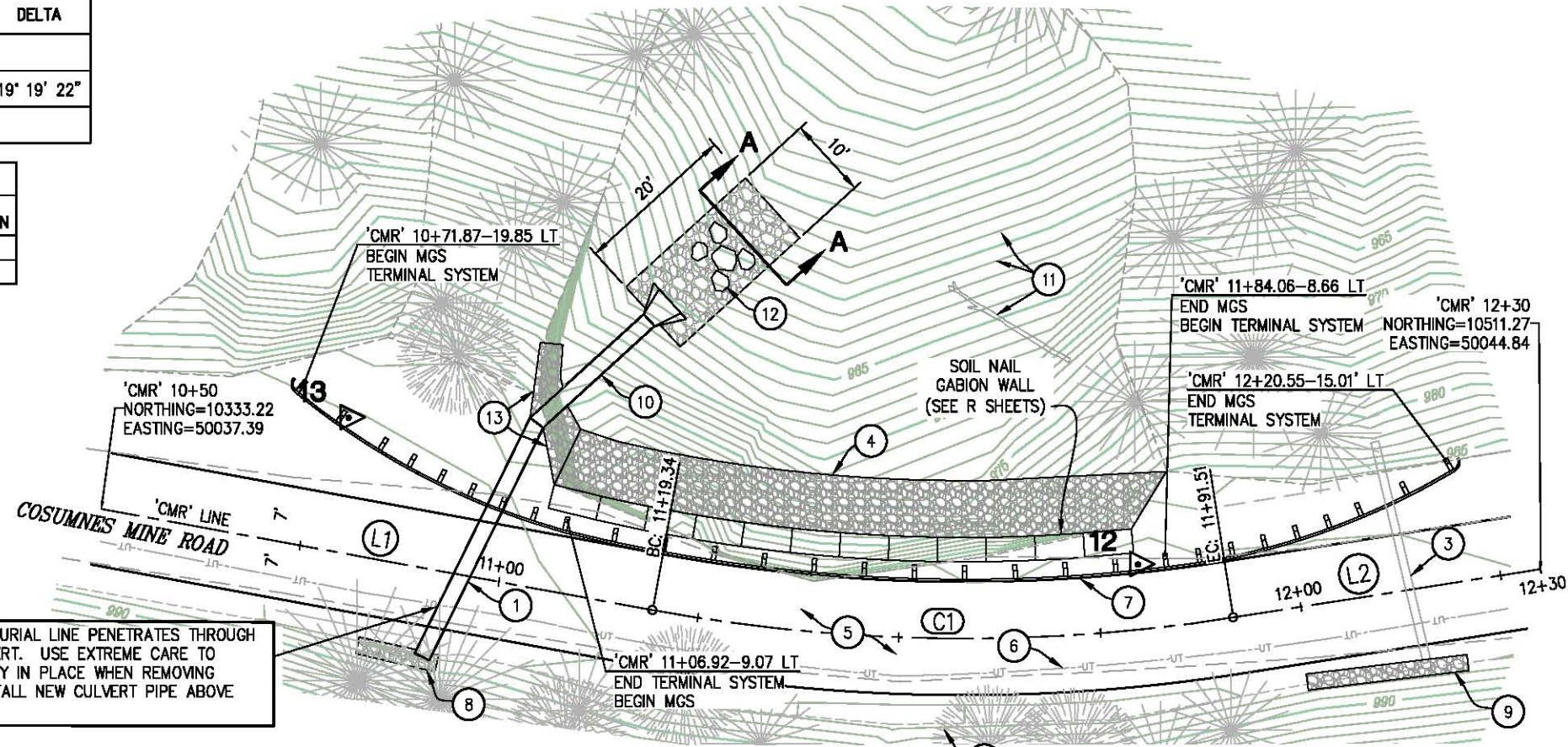
DENOTES CONTROL POINT LOCATION

NOTE: BEARINGS AND COORDINATES SHOWN HEREON ARE ON AN ASSUMED DATUM.

VERTICAL DATUM IS ASSUMED, CONTROL POINTS SHOWN HEREON ARE TBM'S

NOTE: CONTRACTOR IS RESPONSIBLE FOR REMOVING EXISTING SITE WINTERIZATION MATERIALS. BARRICADES, PLASTIC PIPE, PIPE BANDS AND GRAVEL BAGS TO BE REMOVED AND SALVAGED TO COUNTY. DELIVER TO 2441 HEADINGTON ROAD, PLACERVILLE.

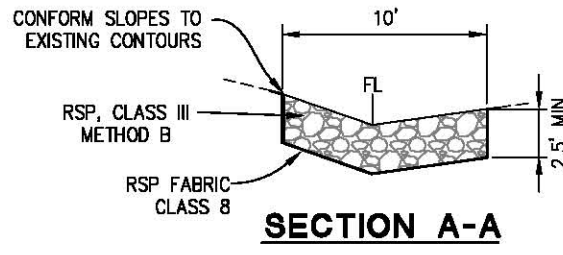
AT&T DIRECT BURIAL LINE PENETRATES THROUGH EXISTING CULVERT. USE EXTREME CARE TO PROTECT UTILITY IN PLACE WHEN REMOVING CULVERT. INSTALL NEW CULVERT PIPE ABOVE AT&T LINE.



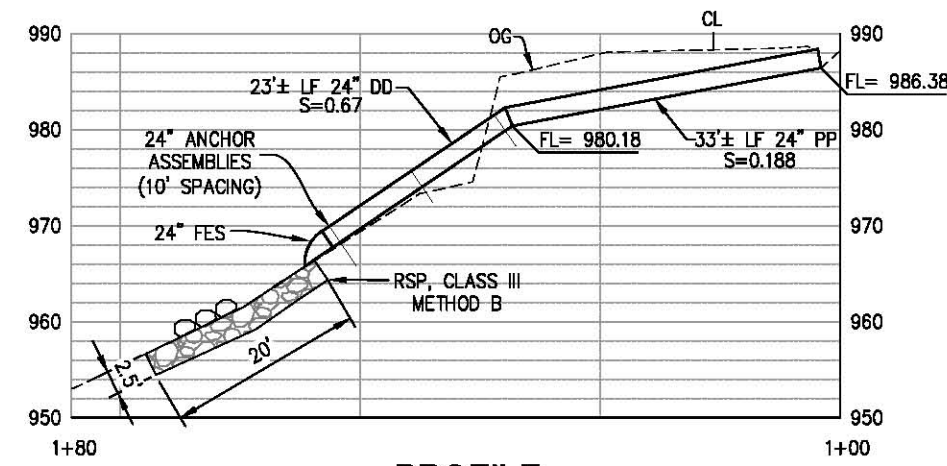
PLAN - P.M. 2.71
SCALE: 1"=10'

NOTES:
STATION/OFFSET DATA PER 'CMR' LINE
MGS CALLOUTS ARE TO THE CENTER OF THE 8"x8" WOOD POST

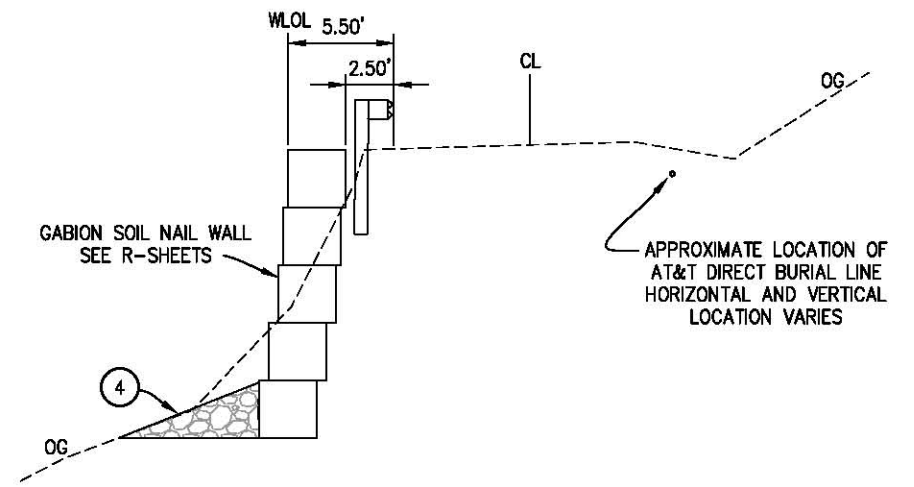
- CONSTRUCTION NOTES:**
- REMOVE 38'± LF OF EXISTING 24" CMP AND REPLACE WITH 24" PLASTIC PIPE.
 - GRADE DITCH AS NECESSARY TO DRAIN TO 12" CMP.
 - EXISTING 12" CMP, PROTECT IN PLACE.
 - RSP (CLASS III, METHOD B) MINIMUM 5' WIDE AT TOE OF WALL, SEE R-SHEETS.
 - MAINTAIN EXISTING ROADWAY GRADE AND SURFACE. PLACE 8" AB (CLASS 2) ROADWAY SECTION BEHIND RETAINING WALL TO MATCH ADJACENT ROADWAY GRADE.
 - APPROXIMATE LOCATION OF DIRECT BURIAL UNDERGROUND TELEPHONE, PROTECT IN PLACE. VARIES APPROX 18" TO 30" BELOW OG.
 - MGS (WOOD POST) WITH FLARED TERMINAL SYSTEM, EACH END.
 - PLACE RSP, (CLASS II, METHOD B) AT DITCH AND 24" CULVERT INLET (APPROX - 10' x 2 x 1.25')
 - PLACE RSP, (CLASS II, METHOD B) AT DITCH AND 12" CULVERT INLET (APPROX - 20' x 3' x 1.25')
 - 24" CSP DOWNDRAIN AND ANCHOR ASSEMBLY WITH 24" METAL FES
 - REMOVE FALLEN TREE(1) WITH ROOT BALL. OTHER FALLEN TREES TO BE REMOVED ONLY AS NECESSARY.
 - ROCK ENERGY DISSIPATER, SEE SECTION A-A. REUSE EXISTING RSP FROM TEMPORARY DOWNDRAIN AT THIS LOCATION FOR PERMANENT REPAIR. PLACE LARGER ROCKS, (CLASS IV, 300 lb), AS SHOWN 10'± BEYOND FES AS DIRECTED BY ENGINEER.
 - PLACE APPROX. 10 CY OF RSP (CLASS III, 2.5' THICK) ALONG STEEPENED SLOPES ADJACENT TO 24" CULVERT.
 - APPLY HYDROSEED TO ALL DISTURBED AREAS NOT CONTAINING ROCK SLOPE PROTECTION. (NOT DELINEATED ON PLANS)



SECTION A-A



PROFILE
24" DRAINAGE CULVERT
SCALE: 1"=10' H,V



TYPICAL SECTION AT SOIL NAIL GABION WALL
SCALE: 1"=5' H,V

5/8/2018

ORIGINAL SCALE IS IN INCHES
FOR REDUCED PLANS
Drawing Name: C:\Civil 3D Projects\78701_Cosumnes Mine Rd Slipout\CADD Files\Production Drawings\Master.dwg
Layout Tab: L-1
Apr 11, 2018 - 11:51am BRichards



PREPARED UNDER THE SUPERVISION OF:
[Signature]
REGISTERED CIVIL ENGINEER
DATE: 5/8/2018

DESIGNED: DH
DRAWN: RR
CHECKED: DH
DATE: 4/11/18
ROAD NUMBER:



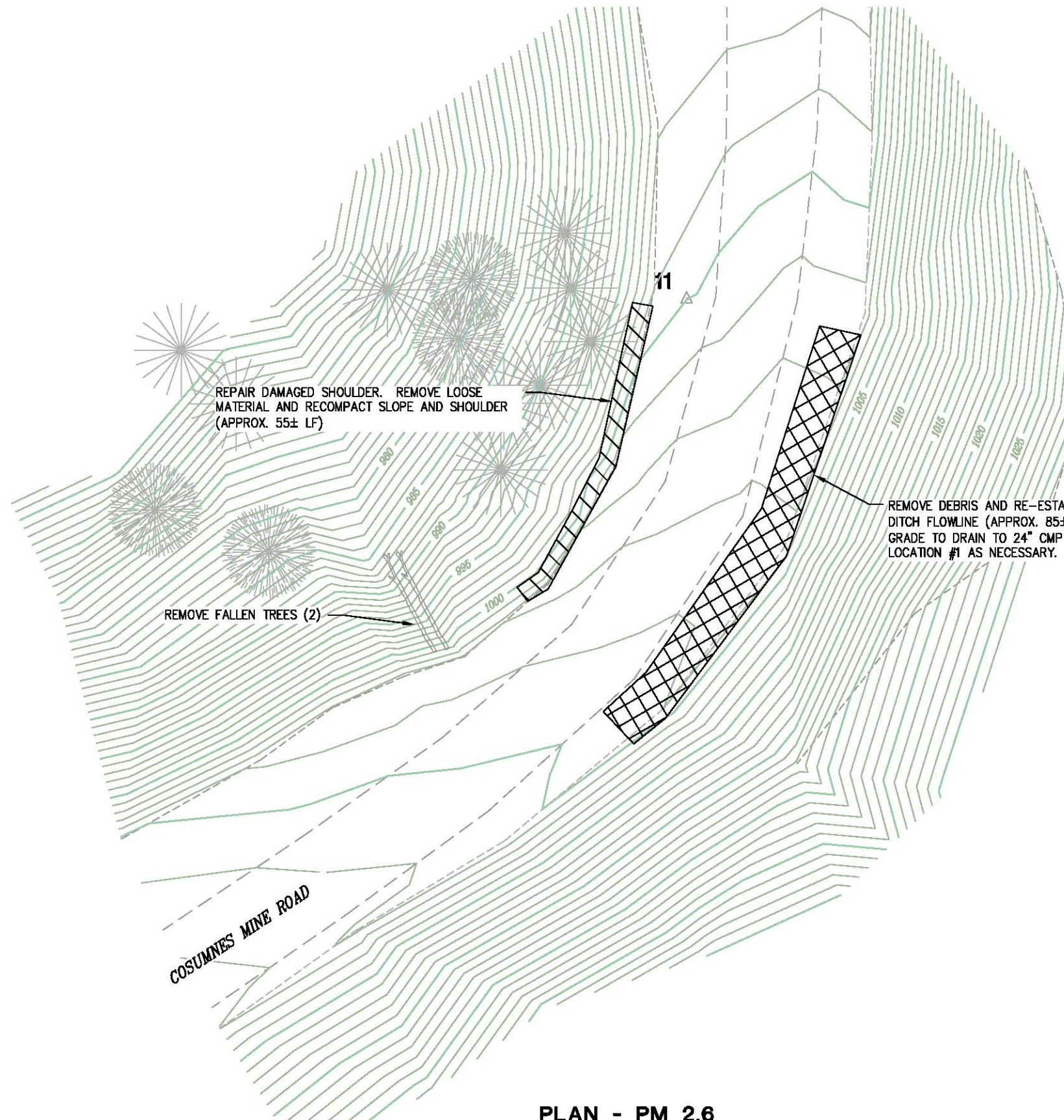
COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

COSUMNES MINE ROAD
and BRIDGE
STORM DAMAGE REPAIRS

LAYOUT
SLIPOUT LOCATION #1
SCALE : AS NOTED

SHEET
L-1
2 OF 22
W.G. No. 78701

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D Projects\78712 Cosumnes Mine Rd Slipout 2\CADD Files\Sheets\L-2.dwg Layout Tab: L-2 May 01, 2018 - 11:47am BRichards
 FOR REDUCED PLANS



NOTES:

1. PLACE (1) PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) AT THE INTERSECTION OF COSUMNES MINE ROAD AND STRING CANYON ROAD, AS SHOWN ON THE TITLE SHEET. PCMS SHALL REMAIN IN CONTINUOUS OPERATION DURING, AND ONE WEEK PRIOR TO THE CONSUMNES MINE ROAD CLOSURE.

PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) TABLE		
MESSAGE	FIRST FLASH	SECOND FLASH
(ONE WEEK PRIOR TO CLOSING)	ROAD CLOSED 1.5 MILE AHEAD	(DATES)
(DURING CLOSURE)	ROAD CLOSED 1.5 MILE AHEAD	USE SCARONI ROAD

PLAN - PM 2.6
SCALE: 1"=10'

LAYOUT
SLIPOUT LOCATION #2
SCALE : AS NOTED

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
Justin W. Harrington
 REGISTERED CIVIL ENGINEER
 DATE: 5/8/2018

DESIGNED: DH
 DRAWN: RR
 CHECKED: DH
 DATE: 4/11/18
 ROAD NUMBER: 877

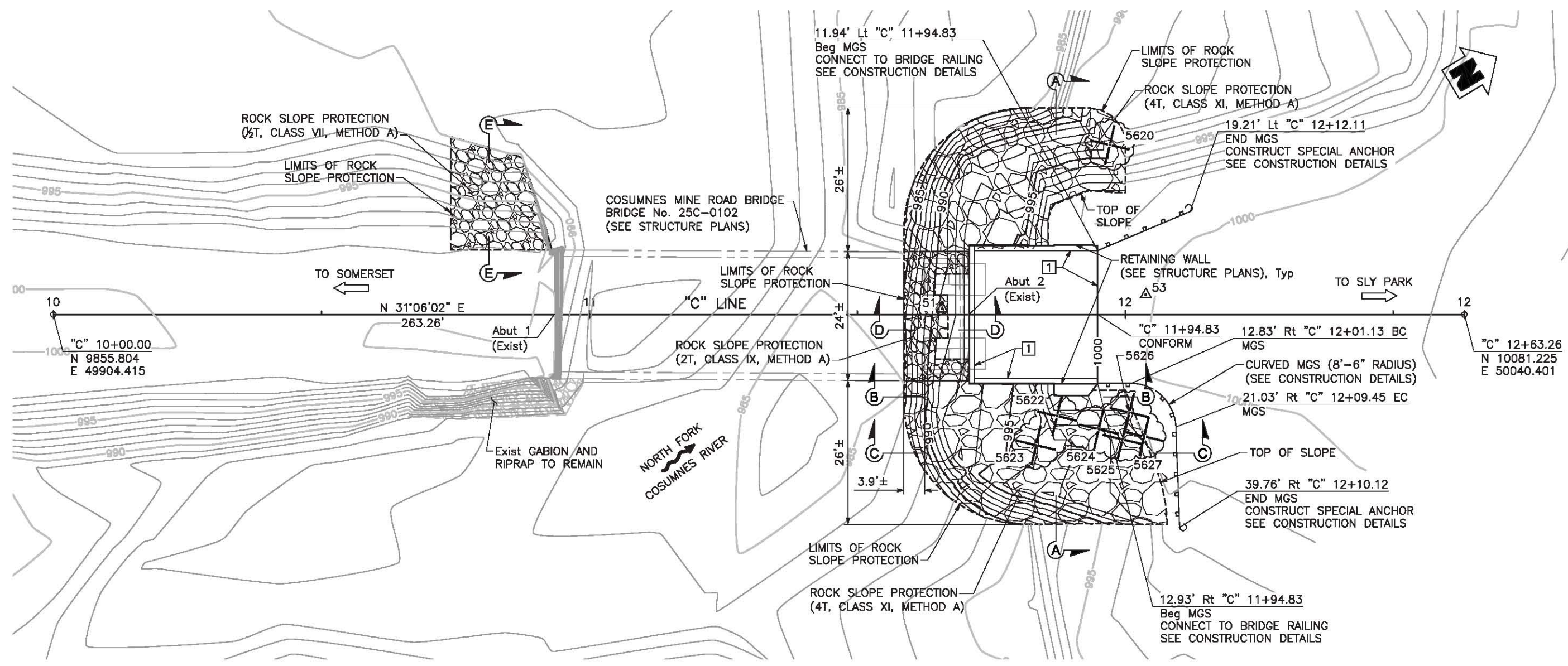


COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

COSUMNES MINE ROAD
and BRIDGE
STORM DAMAGE REPAIRS

SHEET
L-2
3 OF 22
W.O. No. **78712**

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 FOR REDUCED PLANS
 2
 1
 0



NOTE:
1. SEE SHEET C-1 FOR CROSS SECTIONS.

ROADWAY SECTION:
1 12" CTB

PLAN
1" = 10'

- LEGEND:**
- INDICATES DIRECTION OF WATER FLOW
 - INDICATES DIRECTION OF TRAFFIC
 - INDICATES EXISTING BRIDGE
 - INDICATES NEW STRUCTURE
 - INDICATES CONTROL POINT LOCATION
 - INDICATES TREE TO BE REMOVED

TREE REMOVAL TABLE

TAG NUMBER	DIAMETER AT BREAST HEIGHT	TYPE
5620	5.7"	FIR
5622	27.1"	PINE
5623	10.3"	CEDAR
5624	21.7"	CEDAR
5625	7.7"	CEDAR
5626	16.1"	CEDAR
5627	22.6"	PINE

CONTROL POINTS

CONTROL POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
51	1000.04	9998.31	49989.16	CP NAIL
53	1000.15	10032.24	50006.54	CP 60d

REVISION	NUMBER	DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL ENGINEER
 MATTHEW J. DONNELLY
 No. 64459
 Exp. 9/30/19
 CIVIL
 STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF:

 REGISTERED CIVIL ENGINEER
 DATE: 5/8/2018

DESIGNED: ND	DRAWN: FDM
CHECKED: LK	DATE: 04/09/18
ROAD NUMBER: 25C-0102	

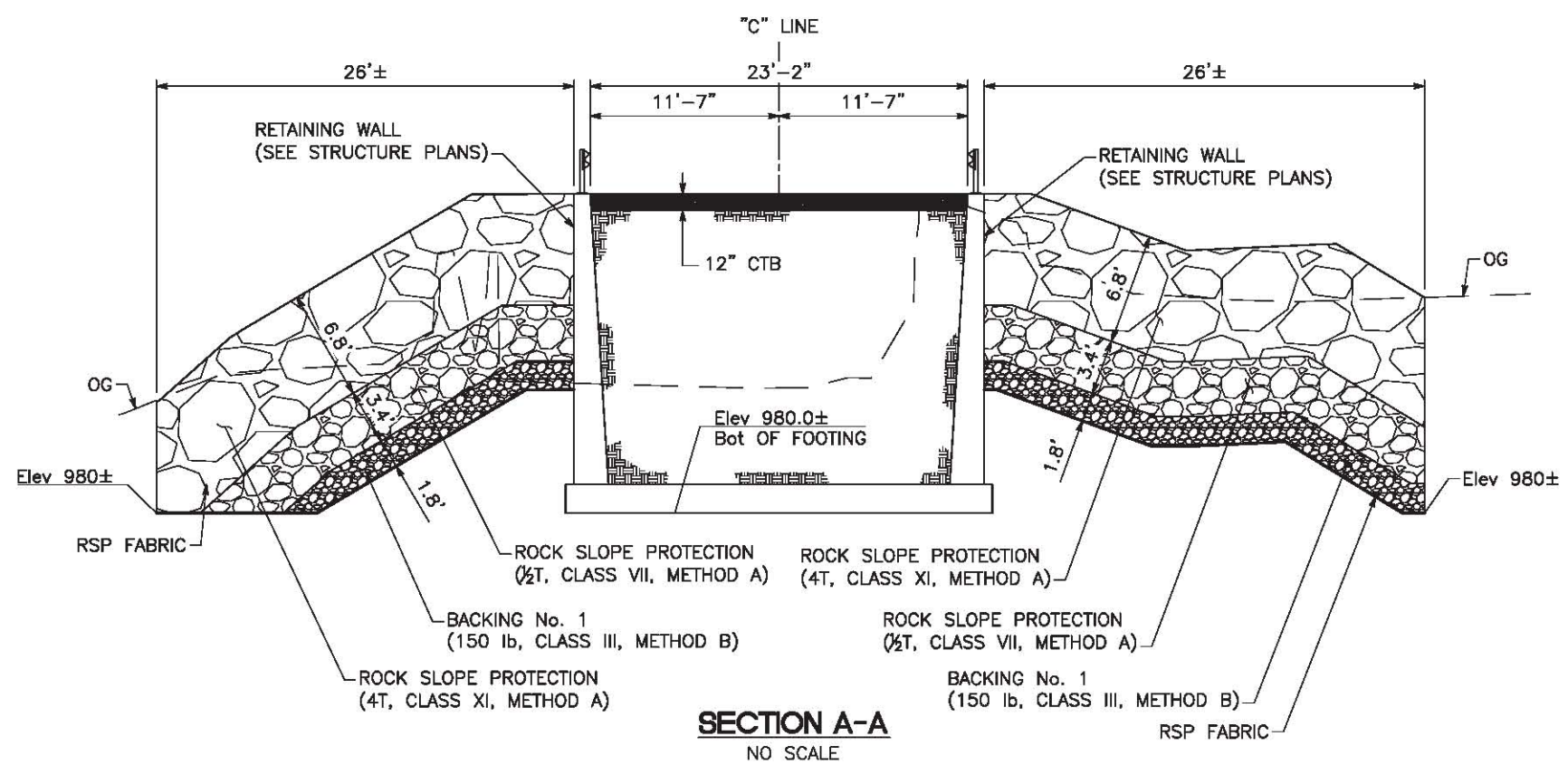


COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION

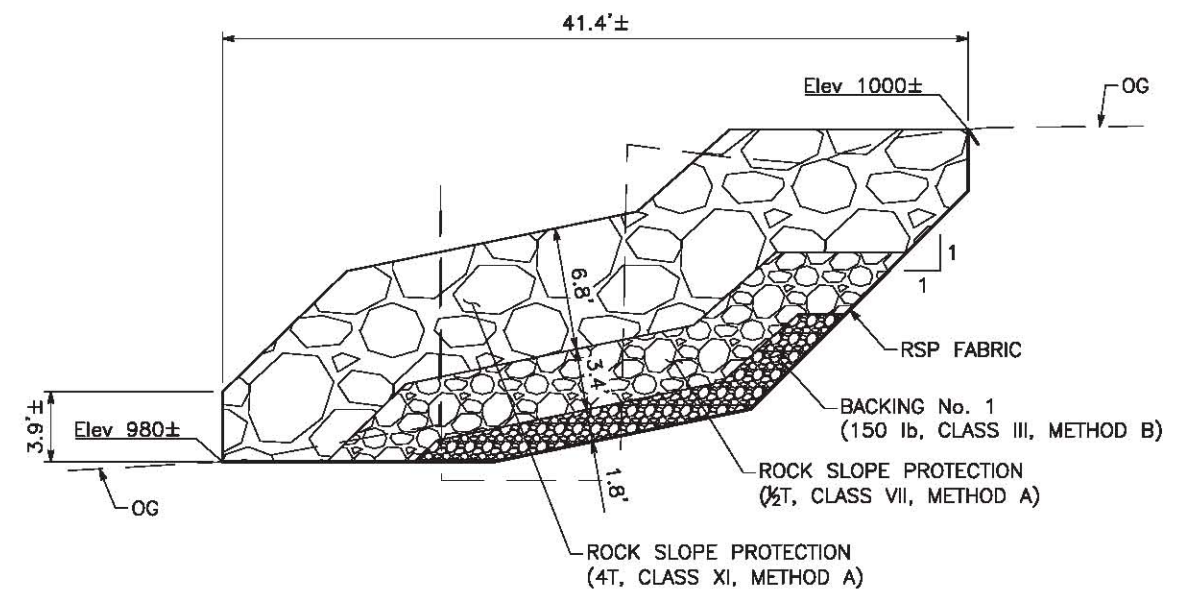
COSUMNES MINE ROAD and BRIDGE
 STORM DAMAGE REPAIRS
 LAYOUT

SCALE: 1"=10'
 SHEET
 L-3
 4 OF 22
 W.C. No. 78700

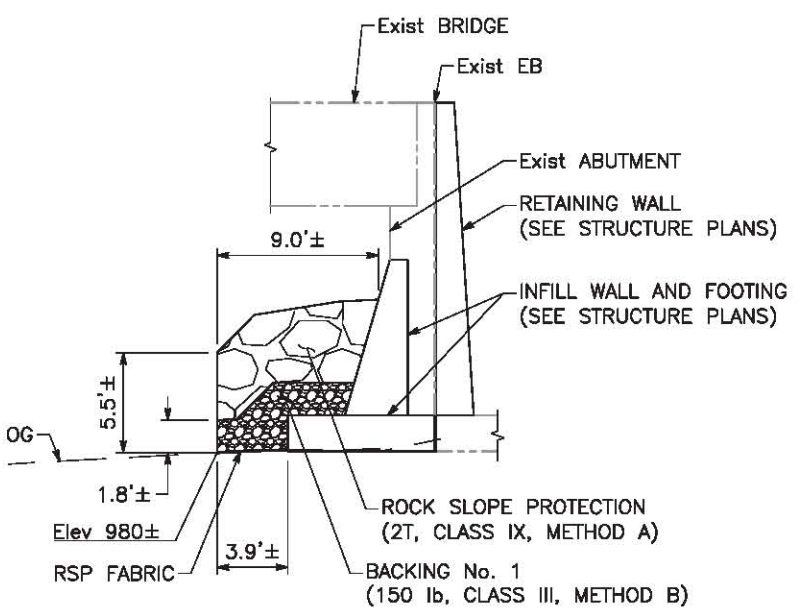
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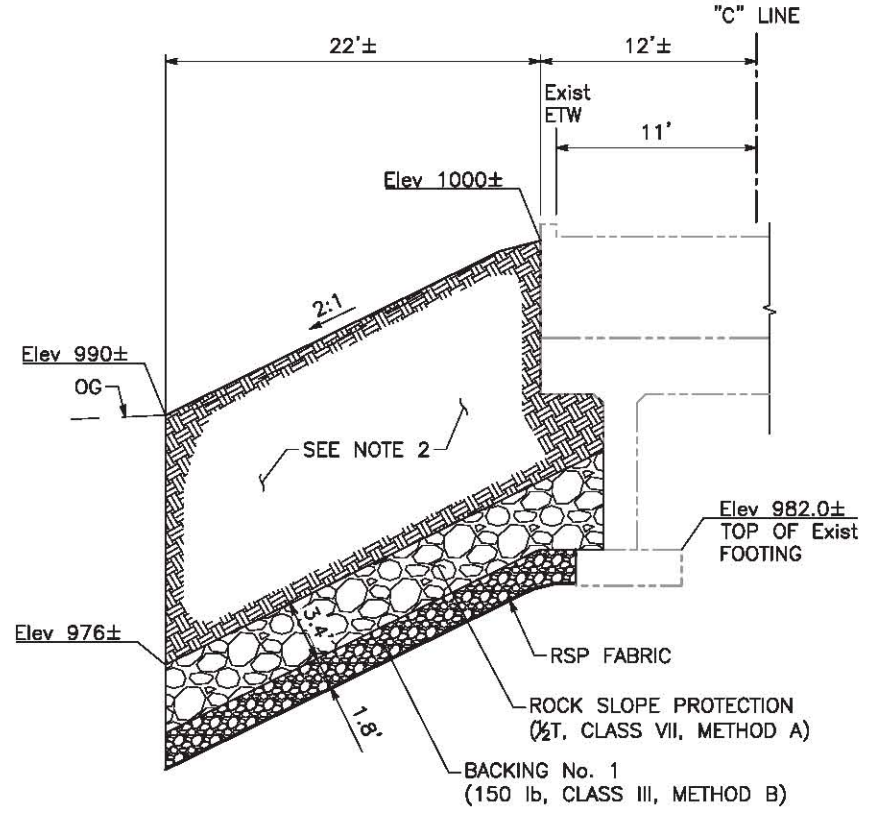
SECTION A-A
NO SCALE



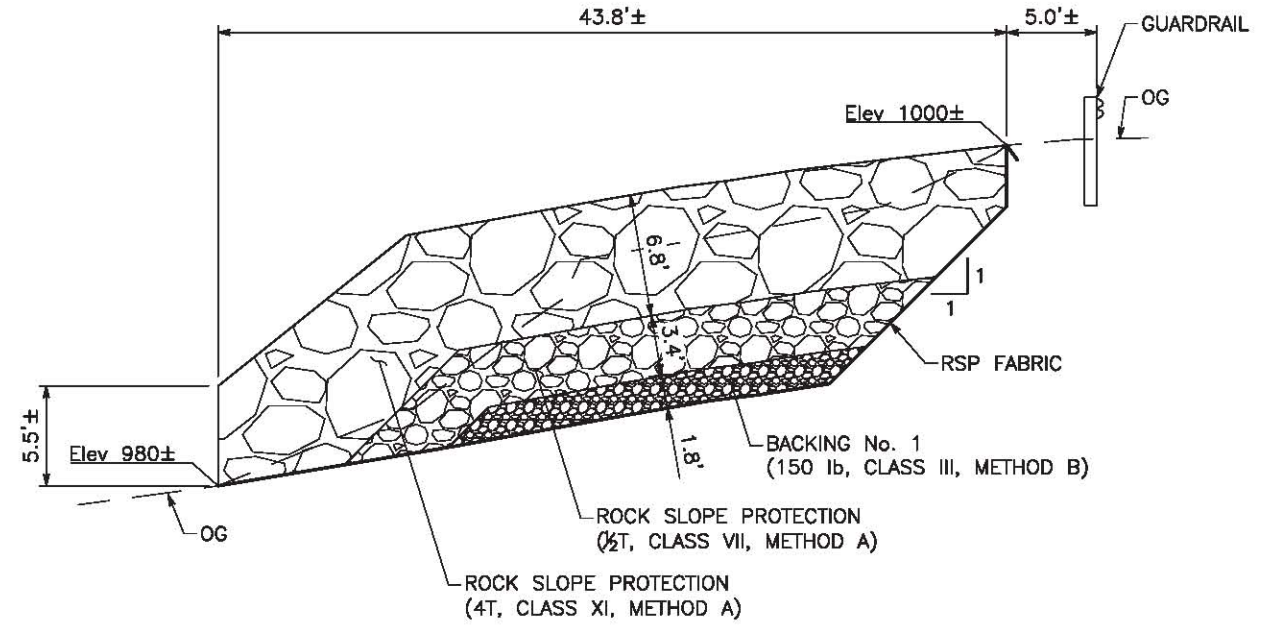
SECTION B-B
NO SCALE



SECTION D-D
NO SCALE



SECTION E-E
NO SCALE



SECTION C-C
NO SCALE

NOTES:

1. SEE SHEET L-3 FOR CROSS SECTION LOCATIONS.
2. EXCAVATE AND PLACE RSP. BACKFILL WITH EXCAVATED MATERIAL AND REBUILD SLOPE AND CHANNEL TO EXISTING GRADE.

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
Nathan J. Donnelly
 REGISTERED CIVIL ENGINEER
 DATE: 5/8/2018

DESIGNED: ND
 DRAWN: FDM
 CHECKED: LK
 DATE: 04/09/18
 ROAD NUMBER: 25C-0102

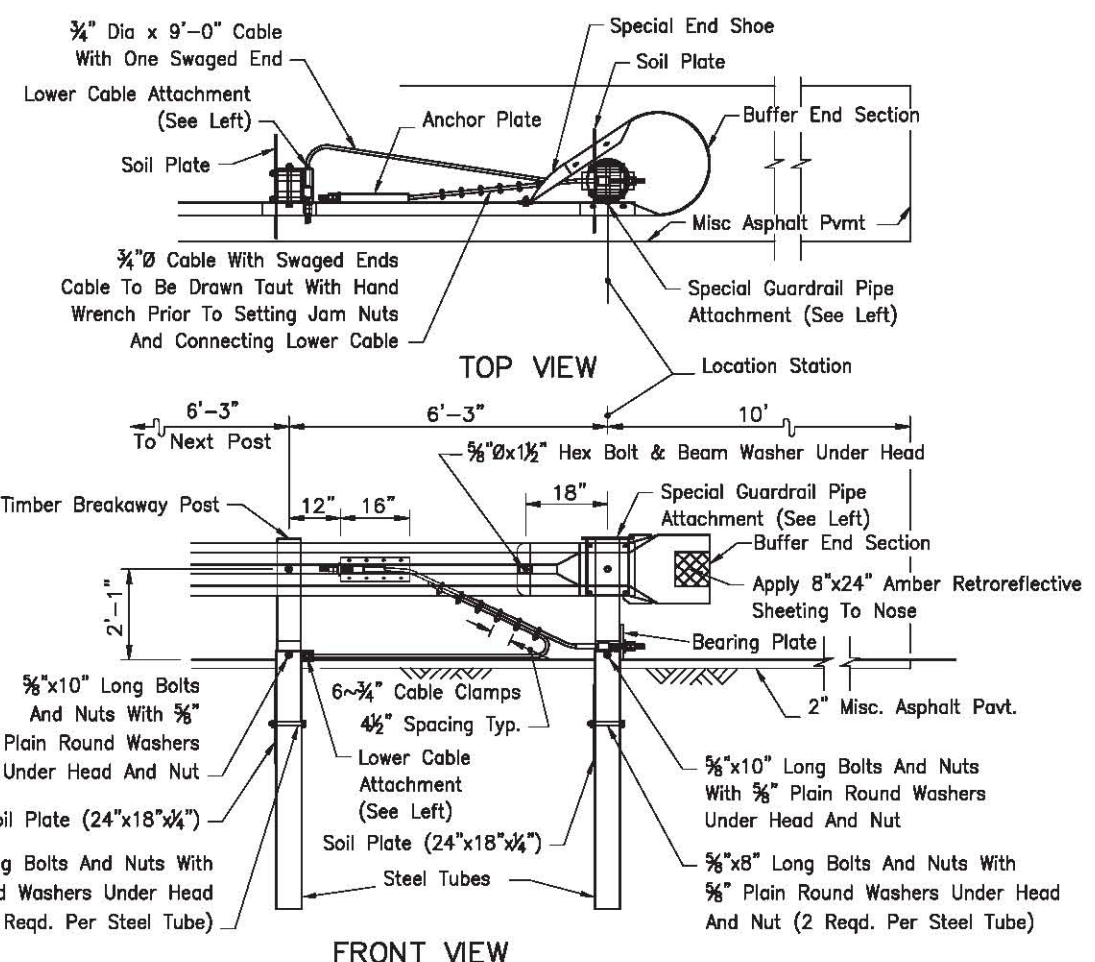
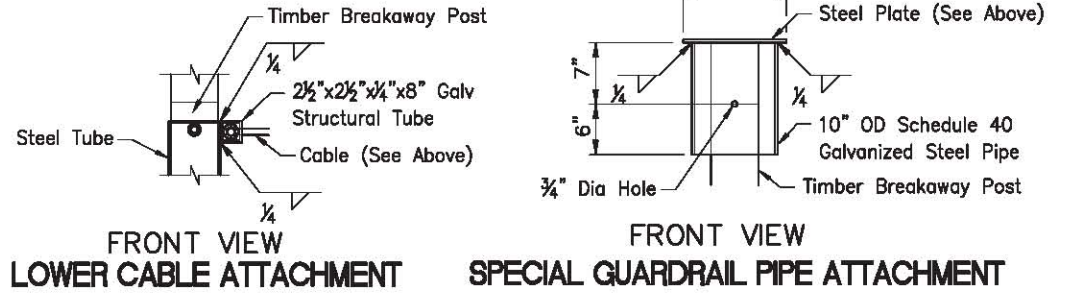
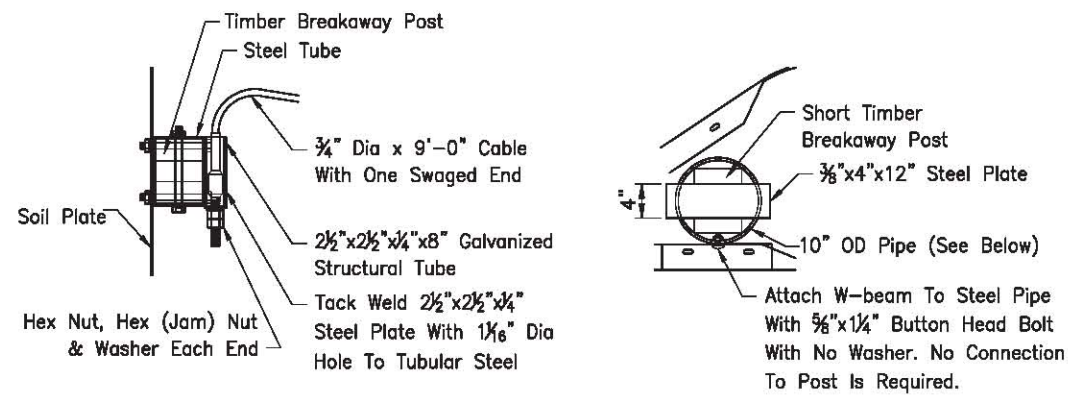


COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION

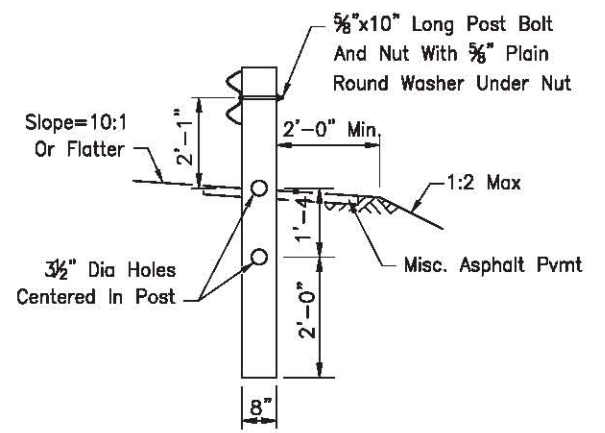
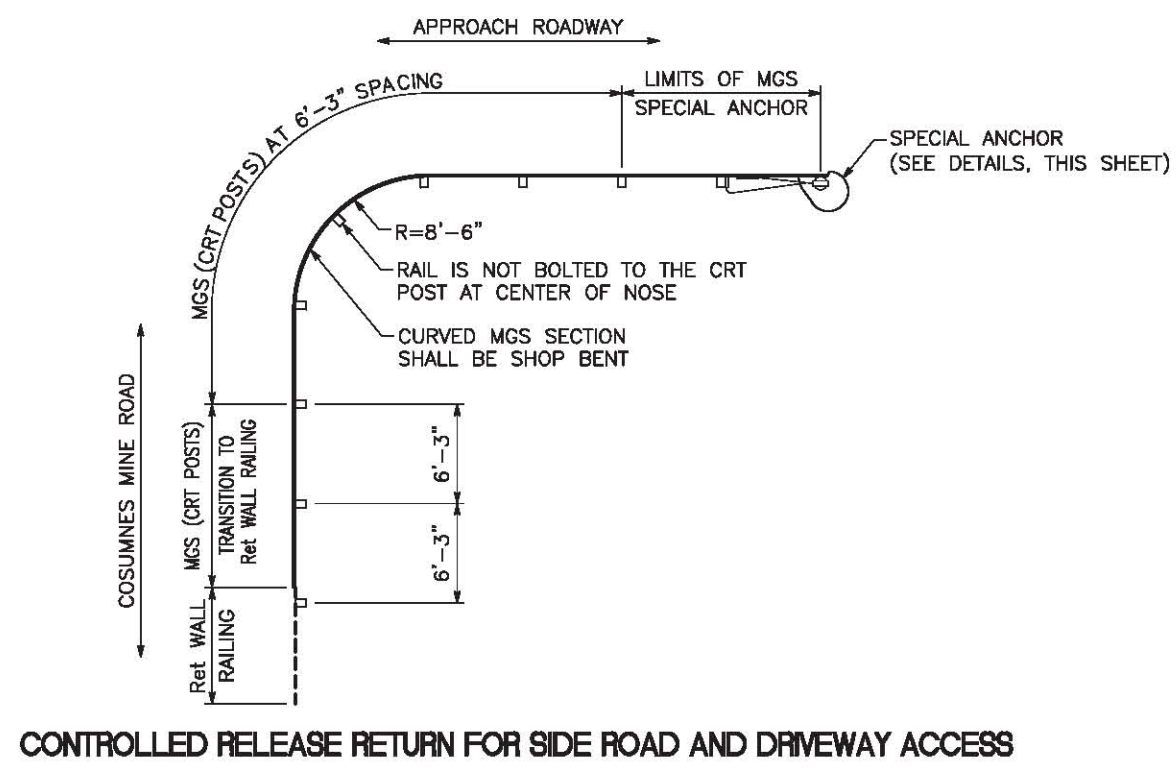
COSUMNES MINE ROAD and BRIDGE
 STORM DAMAGE REPAIRS
 CONSTRUCTION DETAILS

NO SCALE
 SHEET C-1
 5 OF 22
 W.C. No. 78700

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 FOR REDUCED PLANS
 2
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 EDC\400 Project Design Files\420 Roadway & Civil\Plans\CMR-R-C.dwg Layout Tab: 2 Apr 09, 2018 - 5:06pm fdemarco



GUARDRAIL END ANCHORAGE ASSEMBLY TYPE CRT



Note: To be constructed when flares and transitions or standard radial returns can not be applied.

CONTROLLED RELEASE RETURN NOTES

- Controlled release returns are intended for use (a) in openings in continuous guardrail for driveway and side road access when flares and transitions or standard radial returns can not be applied and, (b) for shielding the ends of bridge traffic rails and barrier walls where the driveway and side road access is in close proximity to the structure and space does not permit the proper use of approved flared and parallel types of Guardrail End Anchorage Assemblies.
- The controlled release returns shown are designed as full returns based on an intersection angle of 90°. The return can be terminated with the Guardrail End Anchorage Assembly Type CRT or connected to standard guardrail as shown or as otherwise detailed in the plans.
- The area immediately behind the control release return shall have slopes not steeper than 1:2 and be maintained free of fixed objects.
- The surface approaching the controlled release return shall have a transverse slope not exceeding 1:10. The effective width of the transverse surface is to be based on standard vehicle departure, return radii and preceding shielding.
- The curved guardrail portion of the controlled release return shall be full section shop bent panels (12.5' or 25' panels).
- Washers are not to be used between the guardrail beam and the head of the button head post bolts at any controlled release terminal (CRT) post or at any Guardrail End Anchorage Assembly Type CRT breakaway timber post.
- The guardrail beam of the 8'-6" radius return is not bolted to the center control release post.
- See the Standard Specifications for galvanizing requirements of metallic components.
- Controlled release return systems shall be paid for under the contract unit prices for Metal Beam Guardrail (CRT Posts) and Guardrail End Anchorage Assembly (Type CRT), as called for in the plans or by permit and shall be full compensation for furnishing and installing all components in accordance with the plans and with this index. CRT posts are included in the cost for guardrail.

REVISION	NUMBER	DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL ENGINEER
 MATTHEW J. DONNELLY
 No. 64459
 Exp. 9/30/19
 CIVIL
 STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF:
Nathaniel Condy
 REGISTERED CIVIL ENGINEER
 5/8/2018

DESIGNED: ND	DRAWN: FDM
CHECKED: LK	DATE: 04/09/18
ROAD NUMBER: 25C-0102	



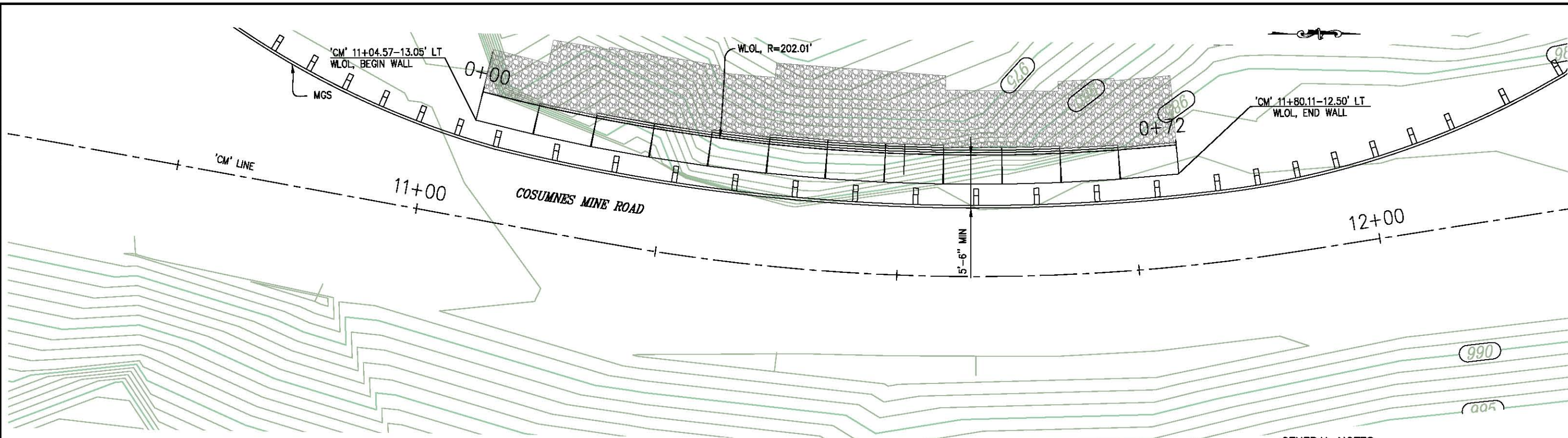
COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

COSUMNES MINE ROAD and BRIDGE
STORM DAMAGE REPAIRS
CONSTRUCTION DETAILS

NO SCALE

SHEET	C-2
6 OF 22	
W.C. No.	78700

ORIGINAL SCALE IS IN INCHES
 FOR REDUCED PLANS
 2
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 COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION
 COSUMNES MINE ROAD AND BRIDGE
 STORM DAMAGE REPAIRS
 SHEET R-1
 7 OF 22
 W.G. No. 78701
 18-0653 C 7 of 22



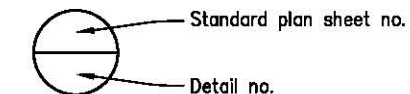
SOIL NAIL GABION WALL PLAN

SCALE: 1"=5'

GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN

CALTRANS STANDARD PLANS DATED 2015

Sheet No.	Title
D100A	Gabion Basket Details No. 1
D100B	Gabion Basket Details No. 2



DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION WITH CALTRANS AMENDMENTS.

SERVICE LOAD DESIGN METHOD PER FHWA MANUAL FOR DESIGN & CONSTRUCTION-MONITORING OF SOIL NAIL WALLS (FHWA-SA-96-069R AND FHWAO-IF-03-017)

SOIL NAILS: ASTM DESIGNATION: A615, GRADE 60
 $f_y = 60$ ksi

STRUCTURAL STEEL: ASTM DESIGNATION: A709, GRADE 50
 $f_y = 50$ ksi

DESIGN SOIL PARAMETERS: $\phi = 28^\circ-30^\circ$
 UNIT WT = 120 pcf

DESIGN PULLOUT RESISTANCE
 $Q_d = 3.4$ k/ft (UNIT 3 SOILS)
 $Q_d = 2.3$ k/ft (UNIT 2 SOILS)

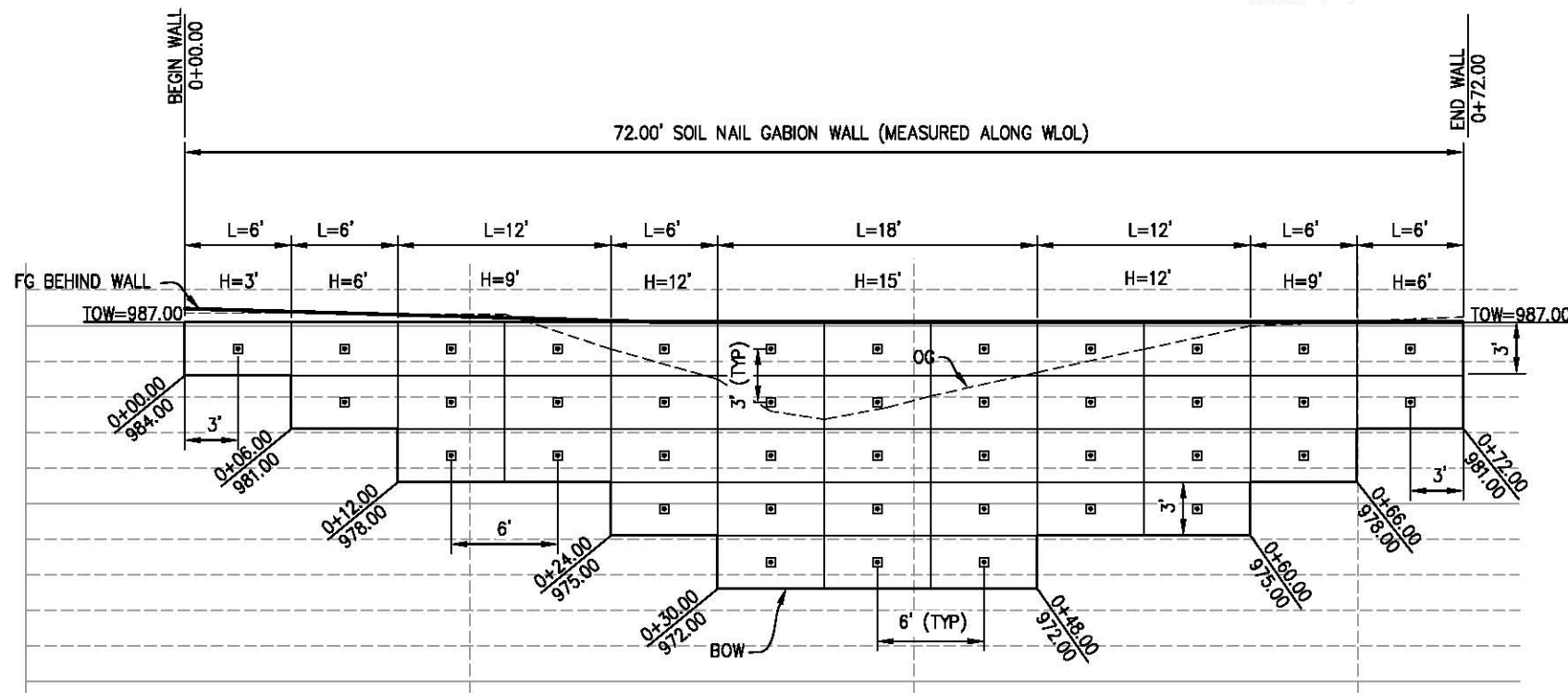
LIVE LOAD SURCHARGE: 240 psf

LATERAL SEISMIC LOAD: 0.22g

*ALL SOIL NAIL MATERIALS (TO INCLUDE THREADED BAR, FASTENERS, BEARING PLATES, ETC.) TO CONTAIN A MINIMUM OF TWO LAYERS OF CORROSION PROTECTION.

SOIL NAIL WALL SYSTEM NOTES:

1. THE PLANS DEPICT AN ACCEPTABLE DESIGN. CONTRACTOR MAY PROPOSE AN ALTERNATIVE DESIGN. WHEN PROPOSING AN ALTERNATIVE DESIGN, CONTRACTOR MUST DESIGN AND INSTALL A SYSTEM WITH A MINIMUM FACTOR OF SAFETY OF 1.5 FOR STATIC LOADING, AND 1.1 FOR SEISMIC LOADING.
2. CONTRACTOR TO VERIFY AND DETERMINE ACTUAL SOIL NAIL DIAMETER, LENGTHS, SPACING, AND NUMBER OF ROWS REQUIRED TO MEET DESIGN REQUIREMENTS AND SUBMIT THE ENGINEERED CALCULATIONS & DRAWINGS ACCORDINGLY.



SOIL NAIL GABION WALL MIRRORED ELEVATION

SCALE: 1"=5'

SOIL NAIL GABION WALL PLAN AND ELEVATION
 SCALE : AS NOTED



PREPARED UNDER THE SUPERVISION OF:
T. Osterkamp
 REGISTERED CIVIL ENGINEER
 DATE: 5/8/2018

DESIGNED: NO
 DRAWN: NO
 CHECKED: GM
 DATE: 4/11/2018
 ROAD NUMBER:



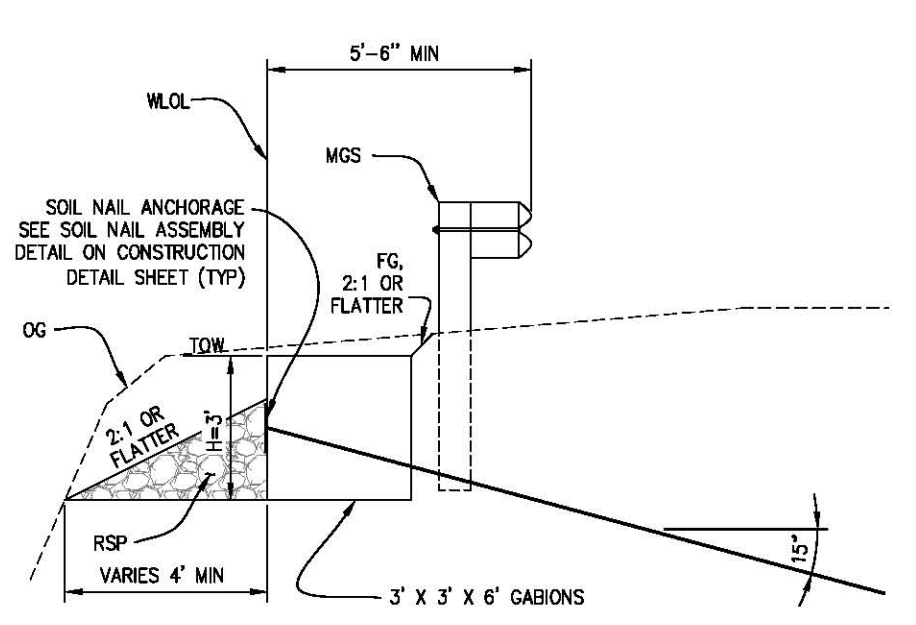
COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION

COSUMNES MINE ROAD AND BRIDGE
 STORM DAMAGE REPAIRS

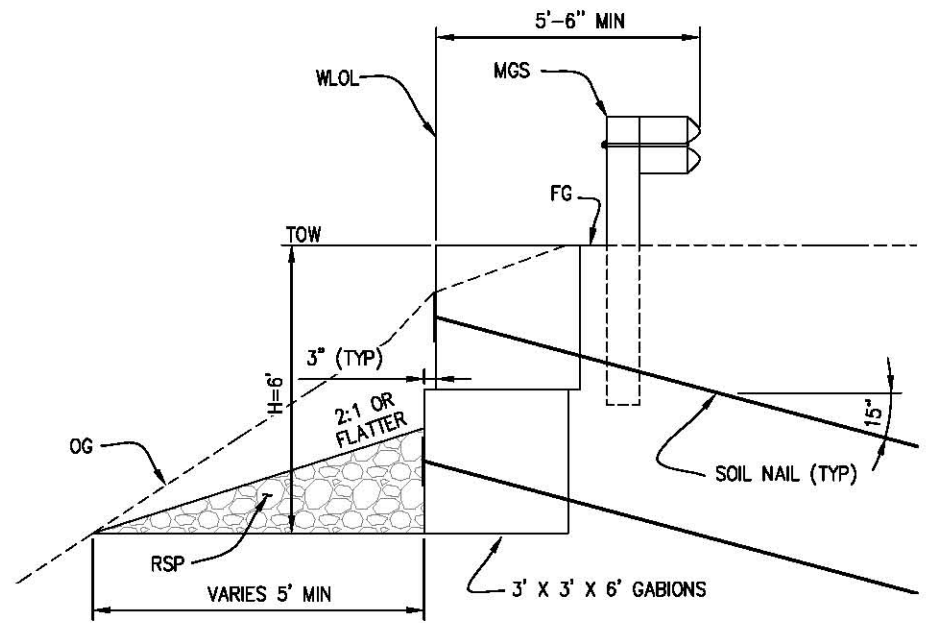
SHEET
 R-1
 7 OF 22
 W.G. No. 78701

REVISION	NUMBER	DATE	DESCRIPTION	BY

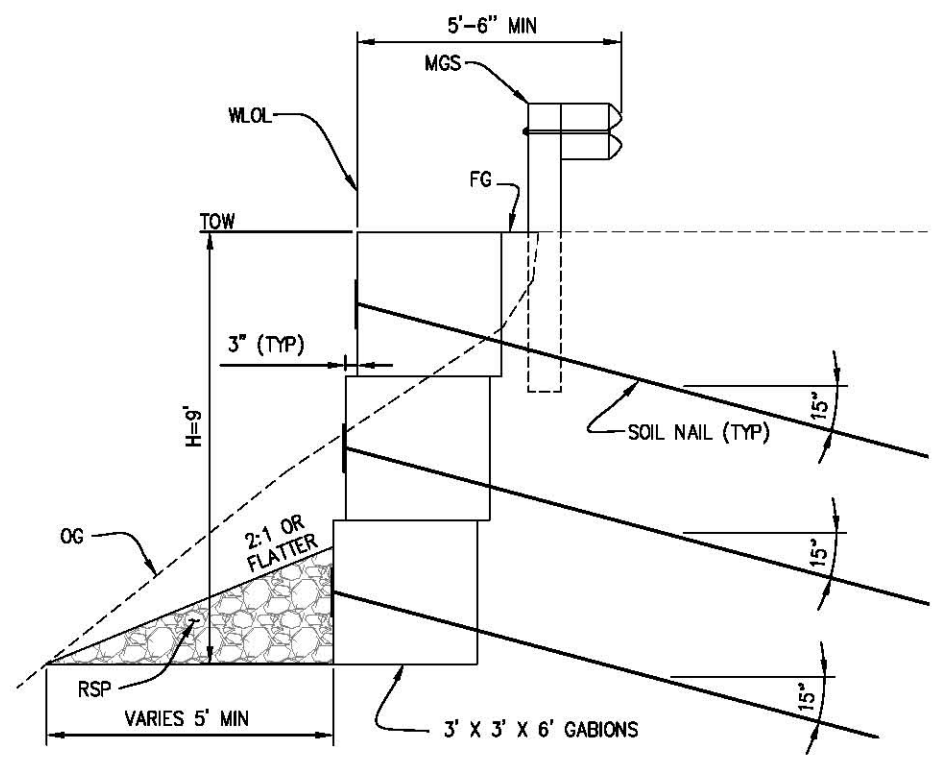
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 FOR REDUCED PLANS



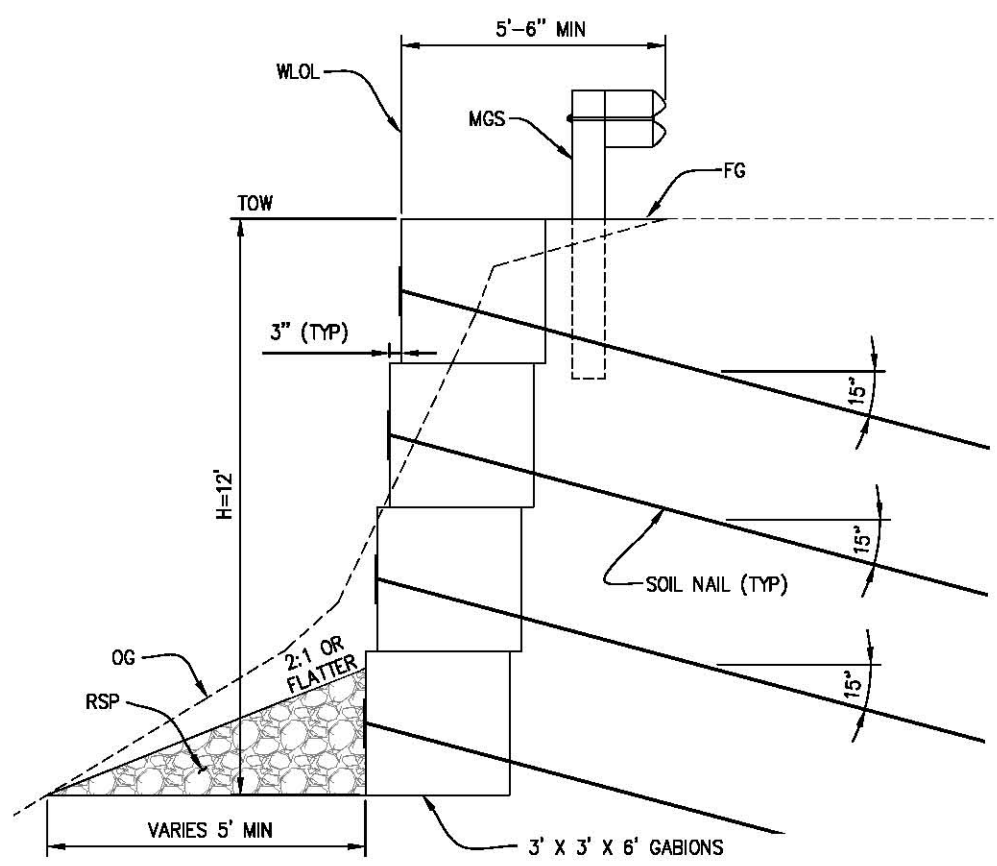
H=3' WALL SECTION
 STA 0+00 TO 0+06
 SCALE: 1"=2'



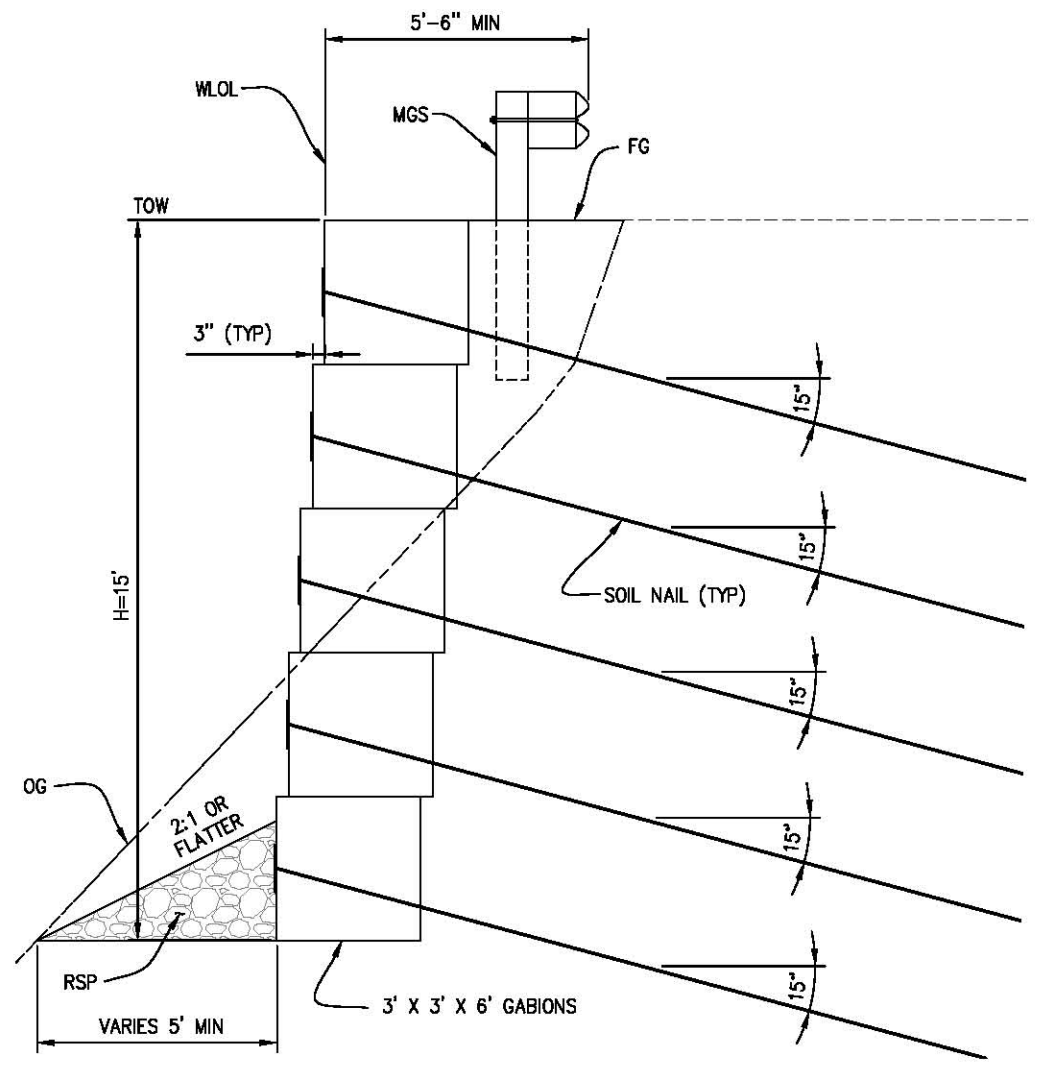
H=6' WALL SECTION
 STA 0+06 TO 0+12
 STA 0+66 TO 0+72
 SCALE: 1"=2'



H=9' WALL SECTION
 STA 0+12 TO 0+24
 STA 0+60 TO 0+66
 SCALE: 1"=2'



H=12' WALL SECTION
 STA 0+24 TO 0+30
 STA 0+48 TO 0+60
 SCALE: 1"=2'



H=15' WALL SECTION
 STA 0+30 TO 0+48
 SCALE: 1"=2'

**SOIL NAIL GABION WALL
 TYPICAL WALL SECTIONS
 SCALE : AS NOTED**

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
T. Osterkamp
 REGISTERED CIVIL ENGINEER
 DATE: 5/8/2018

DESIGNED: NO
 DRAWN: NO
 CHECKED: GM
 DATE: 4/11/2018
 ROAD NUMBER:

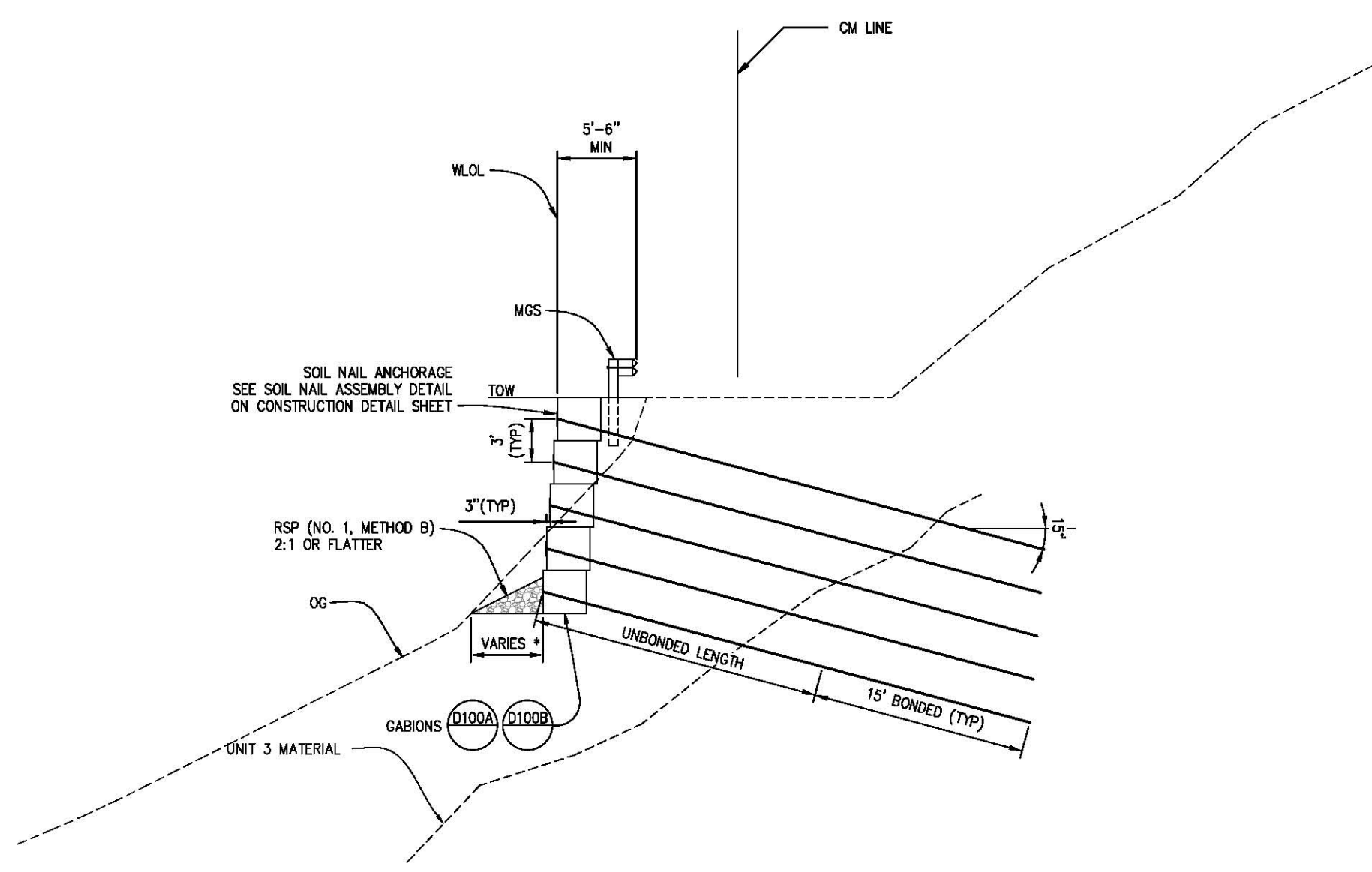


**COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION**

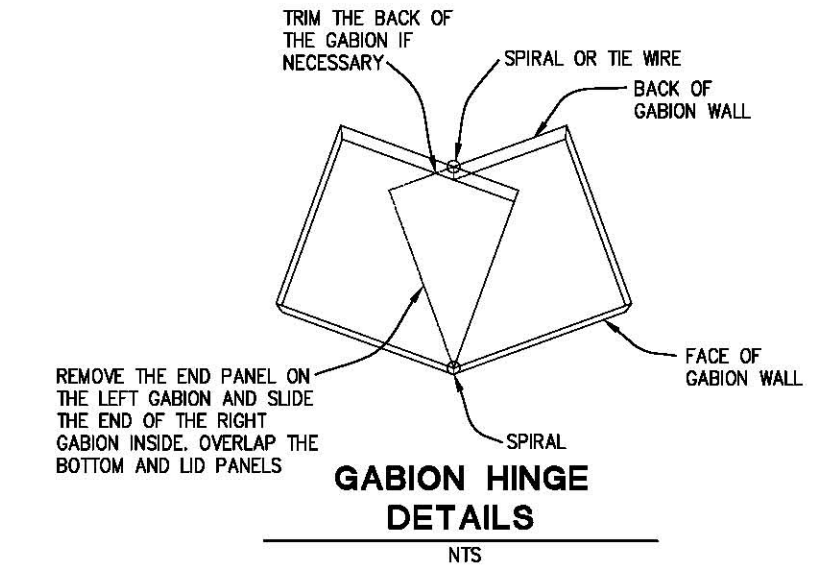
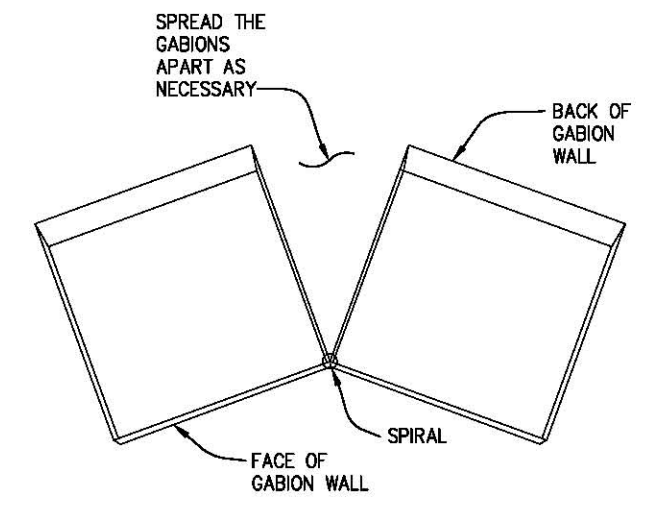
**COSUMNES MINE ROAD AND BRIDGE
 STORM DAMAGE REPAIRS**

SHEET
R-2
 8 OF 22
 W.O. No. 78701

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D Projects\78701_Cosumnes Mine Rd Slipout\CADD Files\Consultant data\from Dokken 4-12-18\Cosumnes soil nails2013_4.11.18.dwg Layout Tab: R-3 Apr 12 2018 12:40pm Brij
 FOR REDUCED PLANS



TYPICAL SECTION
SCALE: 1"=5'



* 4' MIN for H=3
5' MIN for H>3'

**SOIL NAIL GABION WALL
TYPICAL SECTIONS
SCALE : AS NOTED**

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
T. Osterkamp
 REGISTERED CIVIL ENGINEER
 DATE: 5/8/2018

DESIGNED: NO
 CHECKED: GM
 DRAWN: NO
 DATE: 4/11/2018
 ROAD NUMBER:

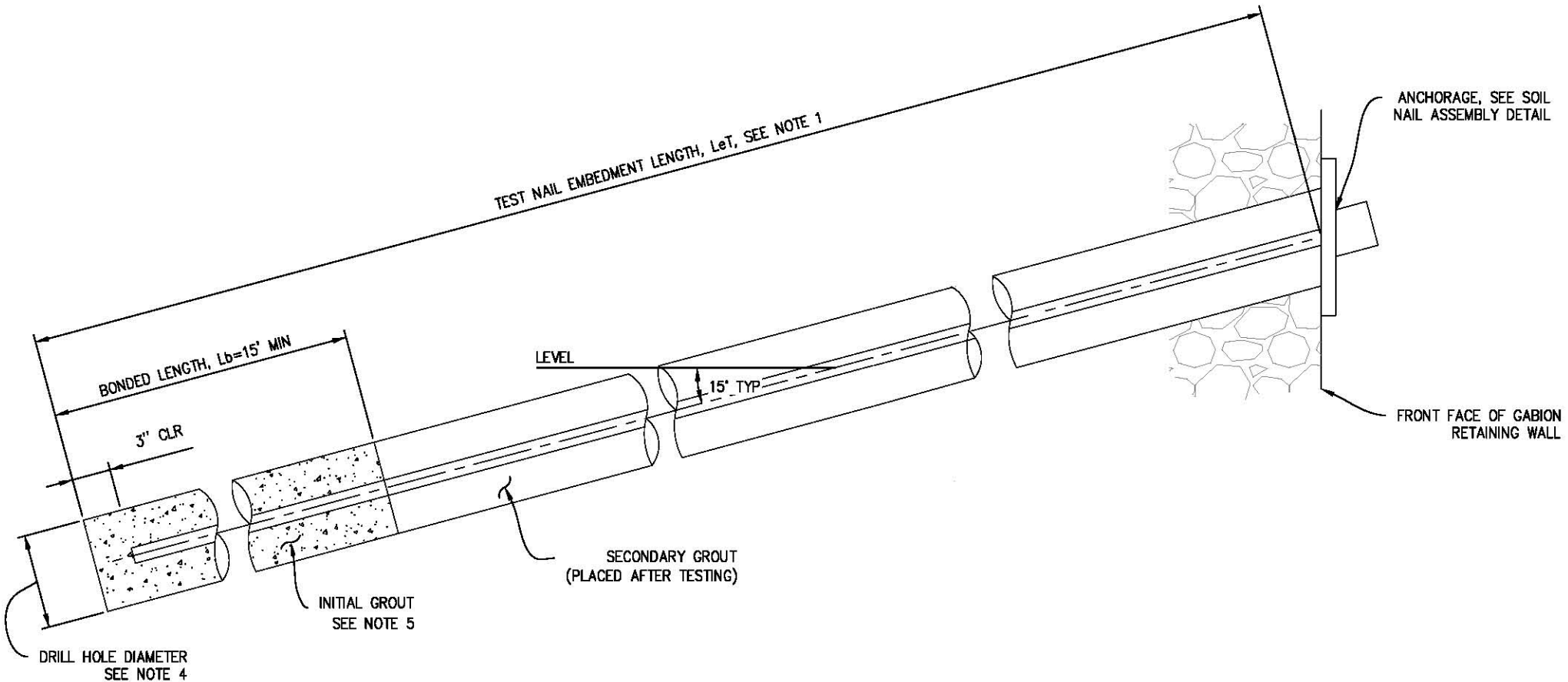


**COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION**

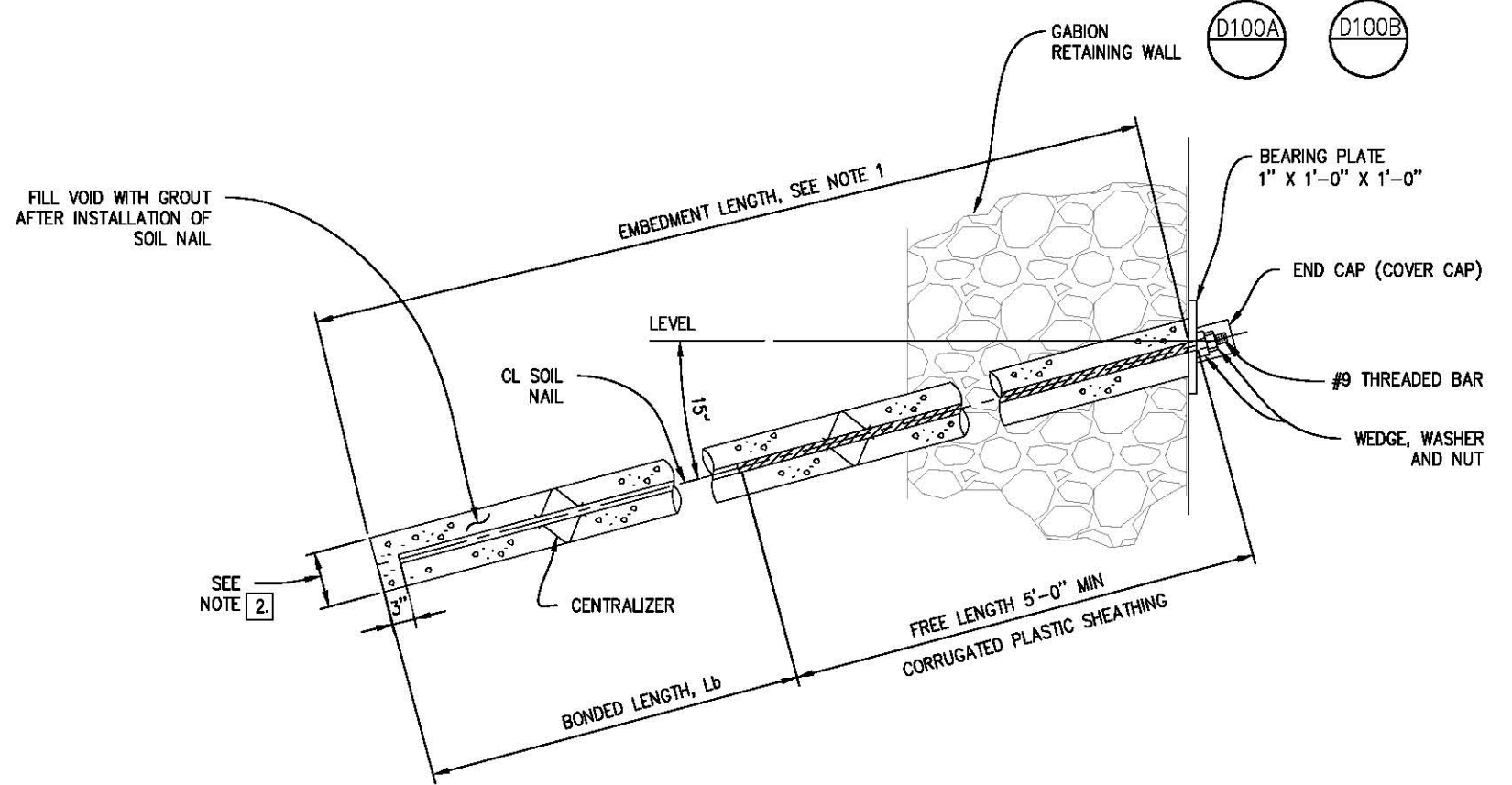
**COSUMNES MINE ROAD AND BRIDGE
STORM DAMAGE REPAIRS**

SHEET
R-3
9 OF 22
W.G. No. **78701**

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 FOR REDUCED PLANS



TEST NAIL DETAIL
 (ACTUAL DETAILS TO BE DETERMINED BY CONTRACTOR APPROVED SUBMITTALS)
 NTS



SOIL NAIL ASSEMBLY DETAIL
 (ACTUAL DETAILS TO BE DETERMINED BY CONTRACTOR APPROVED SUBMITTALS)
 NTS

TEST NAIL DETAIL NOTES:

1. THIS TEST NAIL EMBEDMENT LENGTH L_{eT} , SHALL BE EQUAL TO $2/3$ OF THE EMBEDMENT LENGTH, L_e , OF ADJACENT PRODUCTION SOIL NAIL ASSEMBLIES, BUT NOT LESS THAN 12'-0".
2. THE TOTAL LENGTH OF THE TEST NAIL ASSEMBLY EQUALS THE EMBEDMENT LENGTH PLUS THE LENGTH REQUIRED FOR JACKING EQUIPMENT.
3. TEST NAIL LOCATION TO BE INDICATED ON CONTRACTOR APPROVED SUBMITTALS.
4. CONTRACTOR TO DETERMINE DRILLED HOLE DIAMETER.
5. FINISHED GROUT SURFACE TO BE NORMAL TO THE BAR
6. A MINIMUM OF TWO TEST NAILS REQUIRED. (WITH A MINIMUM OF 1 EACH IN THE CRITICAL LOADING SECTION)

SOIL NAIL ASSEMBLY DETAIL NOTES:

1. EMBEDMENT LENGTH OF SOIL NAILS MUST BE A MINIMUM OF 30 FEET BEHIND THE BACK OF THE WALL OR A MINIMUM OF 15 FEET INTO UNIT 3 MATERIAL.
2. CONTRACTOR MUST DETERMINE DRILLED HOLE DIAMETER.
3. SOIL NAIL SYSTEM TO BE ANALYZED AND EVALUATED TO STABILIZE ENTIRE LENGTH OF GABION WALL.

SOIL NAIL GABION WALL CONSTRUCTION DETAILS SCALE : AS NOTED



PREPARED UNDER THE SUPERVISION OF:
T. Osterkamp
 REGISTERED CIVIL ENGINEER
 DATE: 5/8/2018

DESIGNED: NO
 DRAWN: NO
 CHECKED: GM
 DATE: 4/11/2018
 ROAD NUMBER:



COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION

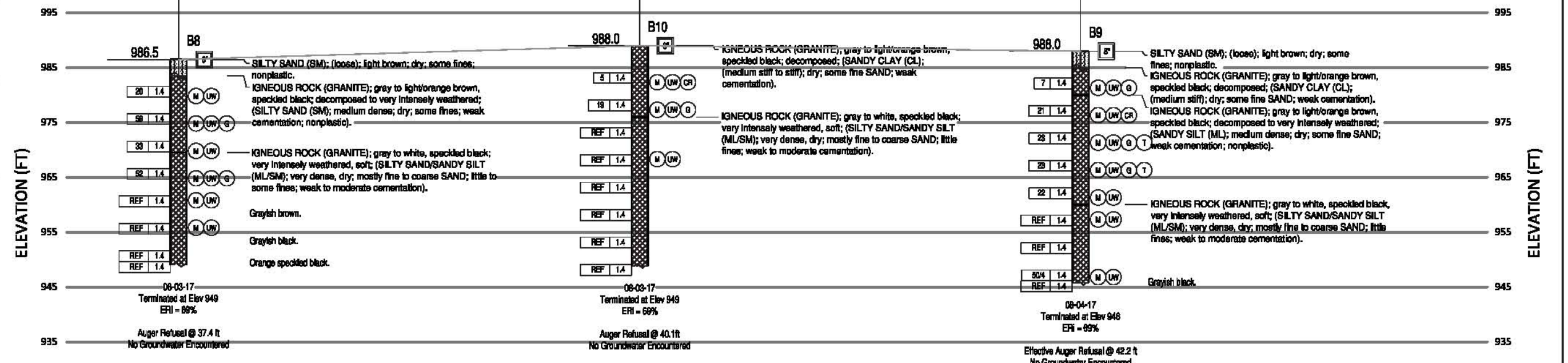
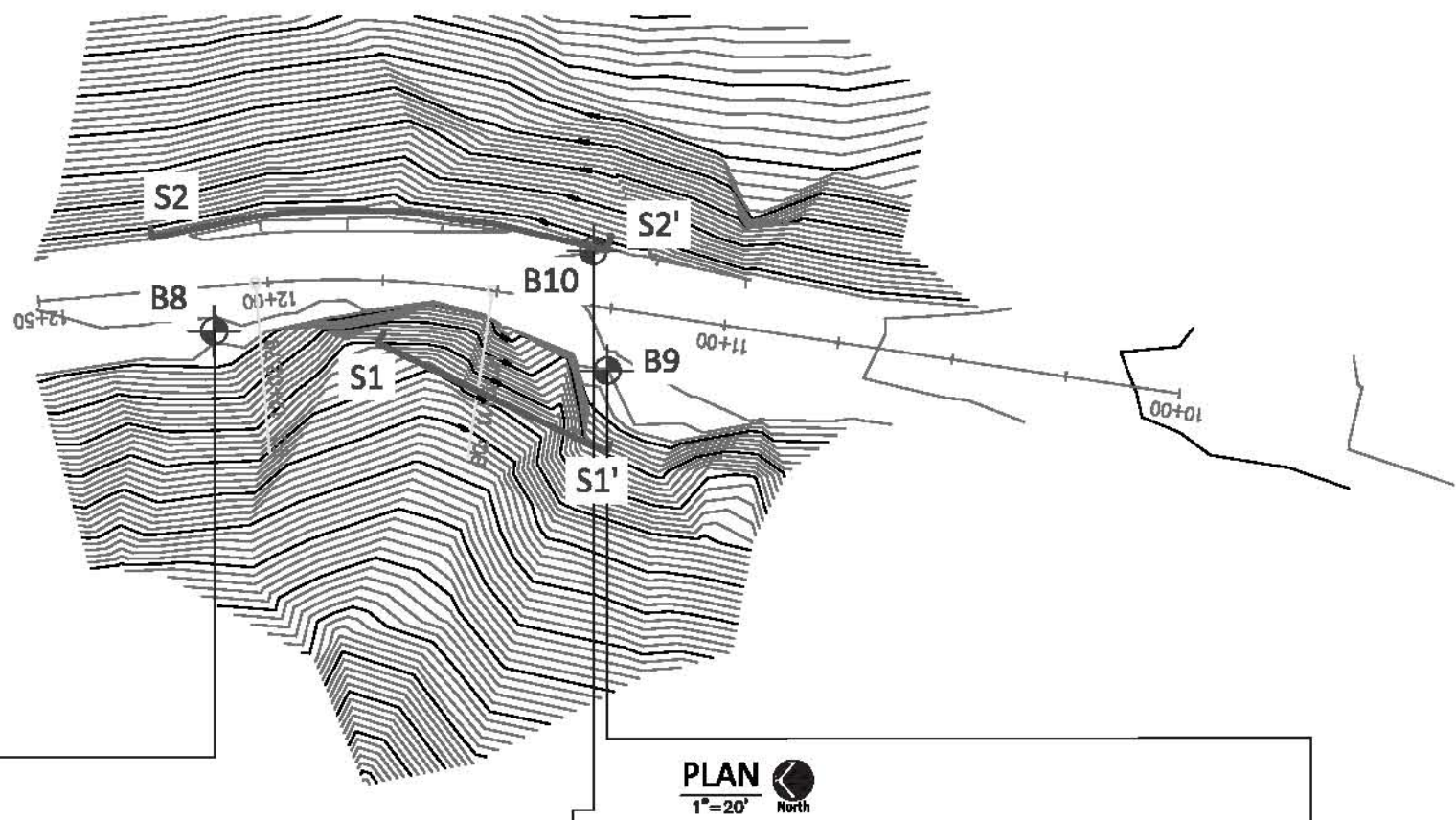
COSUMNES MINE ROAD AND BRIDGE
 STORM DAMAGE REPAIRS

SHEET
R-4
 10 OF 22
 W.G. No. 78701

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
3	ED	C.R.		11	22

REGISTERED CIVIL ENGINEER
 5/8/2018
 PLANS APPROVAL DATE
 Crawford & Associates, Inc.
 1100 Corporate Way, Suite 230
 Sacramento, CA 95831
 (916) 455-4225
 JOB NO. 16-303.2 LOCATION: 38.65613; -120.340955

- Notes:
- Field classification of soils and rocks was in accordance with ASTM D 2488-09a "Description and Identification of Soils (Visual-Manual Procedure)".
 - Standard Penetration tests (SPTs) were performed in accordance with ASTM D 1586-11 using hammer operated with an automated drop system. Drill rods were 1 5/8-inch diameter "A"-rods; sampler was driven with brass and stainless steel liners. SPT hammer energy ratio (ETR) measurements indicate an ETR=69% as of 11/28/2016.
 - The length of each sampled interval is shown graphically on the boring log. Whole number blow counts ("N") represent the "standard penetration resistance" interval in accordance with ASTM D1586-11. Where less than 1 foot of penetration is achieved, the blow count shown is for that fraction of the "standard penetration resistance" interval actually penetrated. Where indicated by an asterisk (*) the number of blows shown is for only that fraction of the initial 0.5 ft "seating drive" interval penetration. Material characteristics shown in () where estimated.
 - Groundwater was not encountered in the borings on the specified date. Groundwater surface elevations are subject to seasonal fluctuations and may occur at higher or lower elevations depending on the conditions at any particular time.
 - Borings 8 through 10 elevations were estimated based on topography provided by El Dorado County Department of Transportation.
 - Electronic media for plan view provided by El Dorado County Department of Transportation.
 - S2 S2' Seismic Line



LEGEND OF BORING OPERATIONS

LEGEND OF EARTH MATERIALS

CONSISTENCY CLASSIFICATION FOR SOILS

Standard Penetration Test (SPT) Value	Consistency
0-5	Very soft
6-10	Soft
11-20	Medium stiff
21-30	Stiff
31-50	Very stiff
>50	Very hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

PROFILE
HOR. 1"=10'
VERT. 1"=10'

DESIGN OVERSIGHT	DRAWN BY S. Crawford	Hailey Wagenman FIELD INVESTIGATOR	PREPARED FOR EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS	Tim Osterkamp PROJECT ENGINEER	BRIDGE NO.	COSUMNES MINE ROAD SLIP OUT PM 2.71
SIGN OFF DATE	CHECKED BY J. Wright	DATE 10/4/17			POST MILE 2.71	

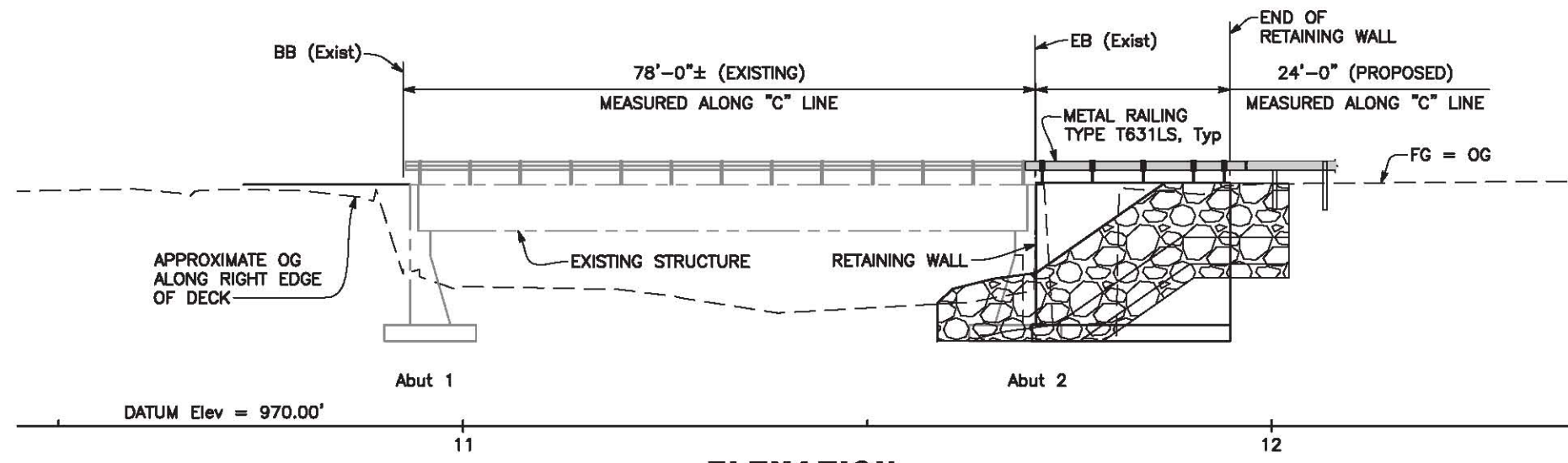
10/5/2017 16-303-2 LDTBs.dwg ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 CU EA

REVISION DATES (PRELIMINARY STAGE ONLY)

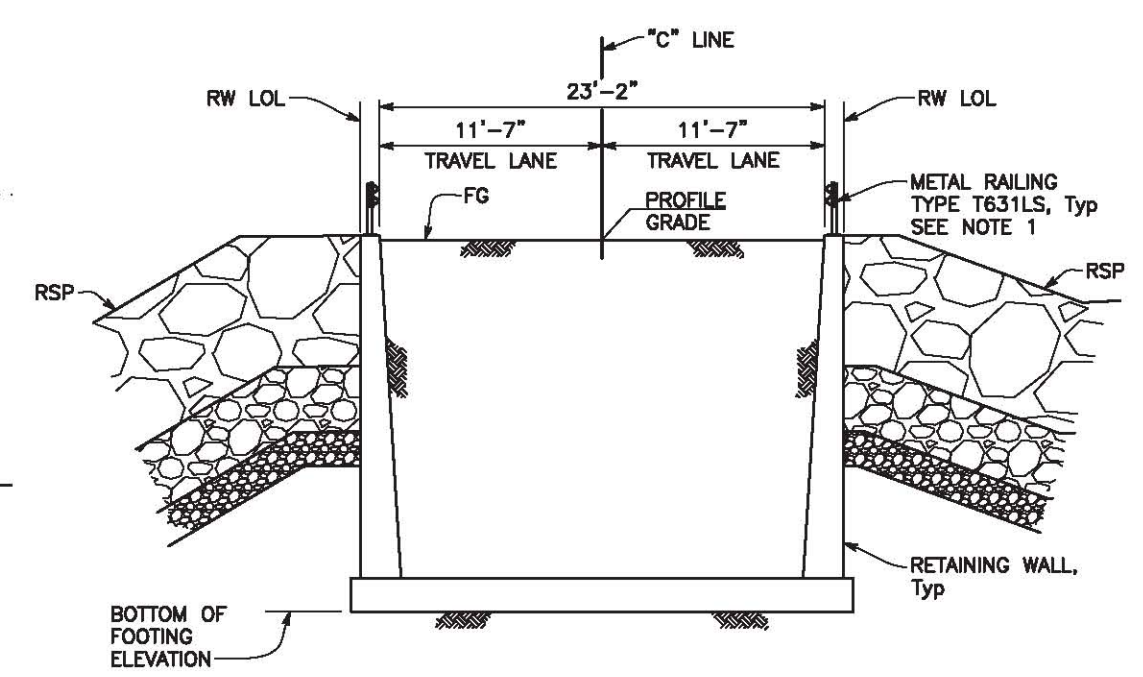
NO.	DATE	DESCRIPTION
1		
2		

SHEET 1 OF 1

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 FOR REDUCED PLANS
 REVISION
 NUMBER DATE DESCRIPTION BY

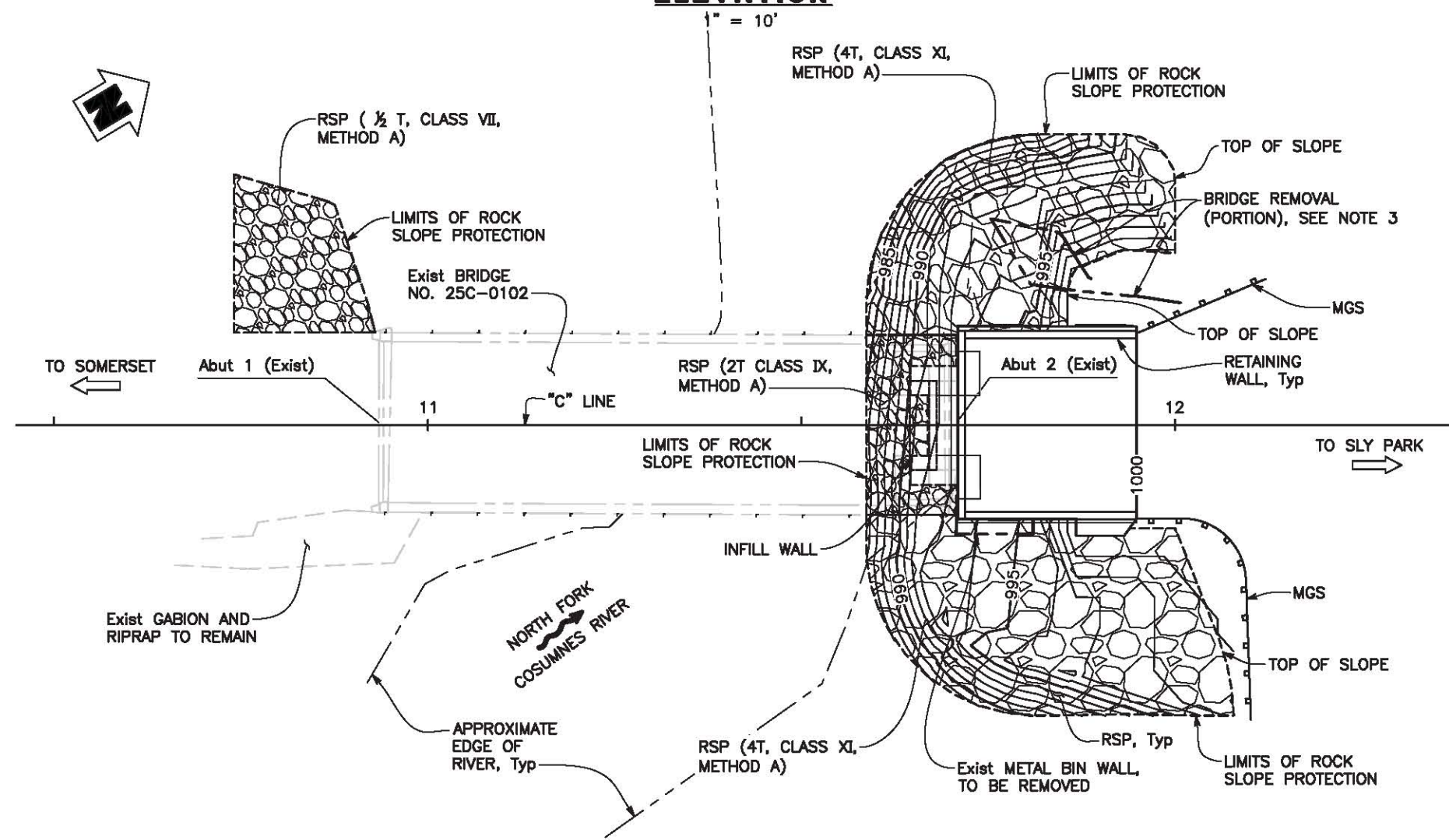


ELEVATION



TYPICAL SECTION

1" = 5'



PLAN

1" = 10'

NOTES:

1. For MGS and Metal Railing Details, see "CONSTRUCTION DETAILS", "METAL RAILING DETAILS NO. 1 & METAL RAILING (TYPE T631LS) DETAILS NO. 2" sheets.
2. For RSP Details, see "LAYOUT" and "CONSTRUCTION DETAILS" sheets.
3. The existing metal bin wall is to be completely removed.

LEGEND:

- Indicates Direction of Water Flow
- Indicates Direction of Traffic
- Indicates Existing Bridge
- Indicates New Structure

SCALE: 1"=10'



PREPARED UNDER THE SUPERVISION OF:
Levi Kinnear
 REGISTERED CIVIL ENGINEER
 DATE: 5/8/2018

DESIGNED: LK
 DRAWN: EC
 CHECKED: KR
 DATE: 04/09/18
 ROAD NUMBER: 25C-0102



COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION

COSUMNES MINE ROAD and BRIDGE
 STORM DAMAGE REPAIRS
GENERAL PLAN

SHEET
S-1
 12 OF 22
 W.O. No. 78700

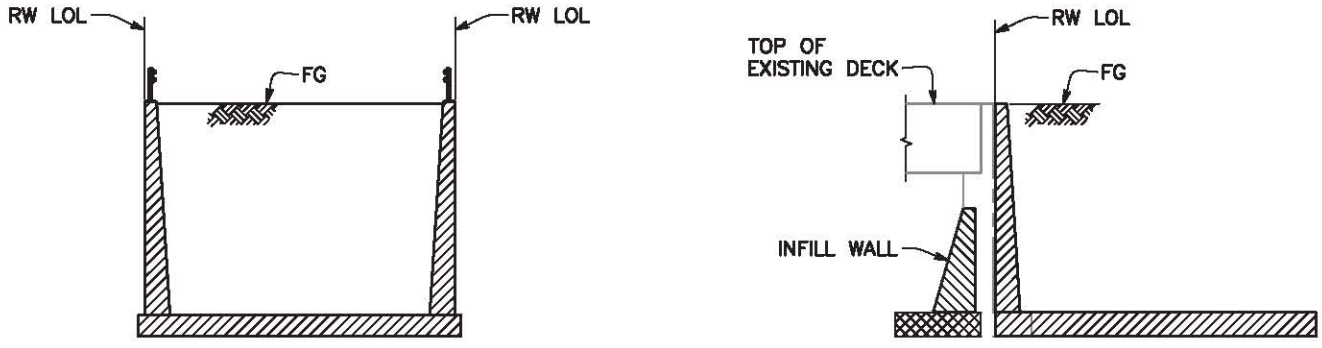
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INDEX TO PLANS

No.	Title
1	GENERAL PLAN
2	INDEX TO PLANS
3	FOUNDATION PLAN
4	RETAINING WALL LAYOUT
5	RETAINING WALL DETAILS
6	INFILL WALL LAYOUT
7	INFILL WALL DETAILS
8	WALL DRAINAGE DETAILS
9	METAL RAILING DETAILS NO. 1
10	METAL RAILING DETAILS NO. 2
11	LOG OF TEST BORINGS

STANDARD PLANS DATED 2015

No.	Title
A3A	ABBREVIATIONS (SHEET 1 OF 3)
A3B	ABBREVIATIONS (SHEET 2 OF 3)
A3C	ABBREVIATIONS (SHEET 3 OF 3)
A10A	LEGEND LINES AND SYMBOLS (SHEET 1 OF 5)
RSP A10B	LEGEND LINES AND SYMBOLS (SHEET 2 OF 5)
A10C	LEGEND LINES AND SYMBOLS (SHEET 3 OF 5)
A10D	LEGEND LINES AND SYMBOLS (SHEET 4 OF 5)
A10E	LEGEND LINES AND SYMBOLS (SHEET 5 OF 5)
A10F	LEGEND - SOIL (SHEET 1 OF 2)
A10G	LEGEND - SOIL (SHEET 2 OF 2)
A10H	LEGEND - ROCK
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE SURCHARGE AND WALL
RSP A77L1	MIDWEST GUARDRAIL SYSTEM STANDARD RAILING SECTION (WOOD POST WITH WOOD BLOCK)
B0-1	BRIDGE DETAILS
RSP B0-3	BRIDGE DETAILS
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
RSP B9-6	STRUCTURE APPROACH-DRAINAGE DETAILS



CONCRETE STRENGTH AND TYPE LIMITS

NO SCALE

LEGEND:

- Structural Concrete, Retaining Wall ($f'c = 4000$ psi @ 28 Days)
- Structural Concrete, Bridge ($f'c = 3600$ psi @ 28 Days)
- Structural Concrete, Bridge Footing ($f'c = 3600$ psi @ 28 Days)

LOAD AND RESISTANCE FACTOR DESIGN

DESIGN: AASHTO LRFD Bridge Design Specifications, 6th Edition 2012 with Caltrans Amendments, Preface Dated January 2014.

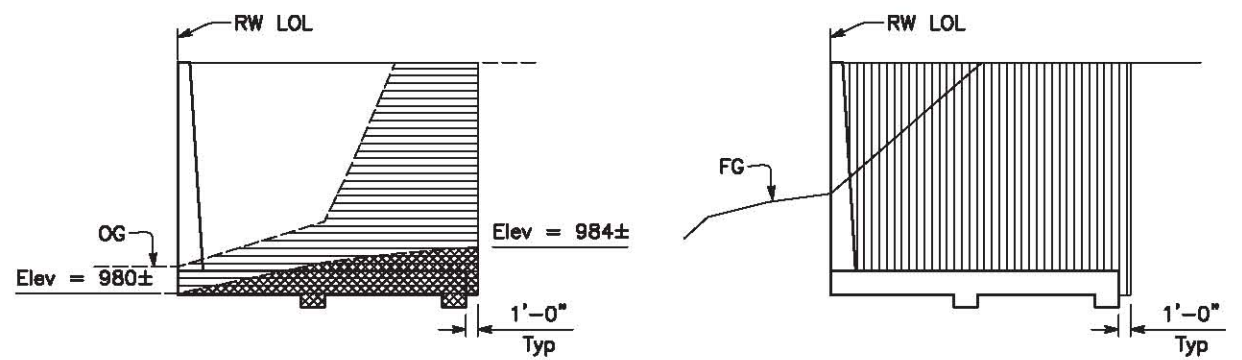
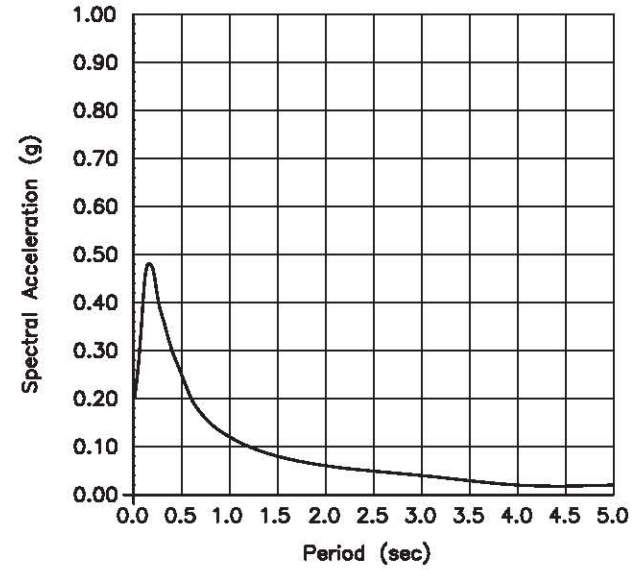
SEISMIC LOADING: $K_h = 0.2$
 $K_v = 0.0$

REINFORCED CONCRETE: See Concrete Strength and Type Limits
 $f_y = 60$ ksi (Yield strength of bar reinforcement, ASTM A706)

LIVE LOAD SURCHARGE: Varied surcharge on ground level

SEISMIC LOADING: Soil profile: V_{30} Liquefaction Case = 760 m/s
Moment Magnitude: 7.0
Peak Ground Acceleration = 0.2 g

SOIL: $\phi = 34^\circ$
 $\gamma = 120$ pcf



EXCAVATION AND BACKFILL-RETAINING WALL

NO SCALE

- Structure Excavation (Type D)
- Structure Backfill (Retaining Wall)
- Approximate Rock Elevation

NOTE:

1. Rock Excavation is included in the payment for the bid item that necessitates the Rock Excavation.

FOR REDUCED PLANS

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
Levi Kinnear
REGISTERED CIVIL ENGINEER
DATE: 5/8/2018

DESIGNED: LK
DRAWN: EC
CHECKED: KR
DATE: 04/09/18
ROAD NUMBER: 25C-0102

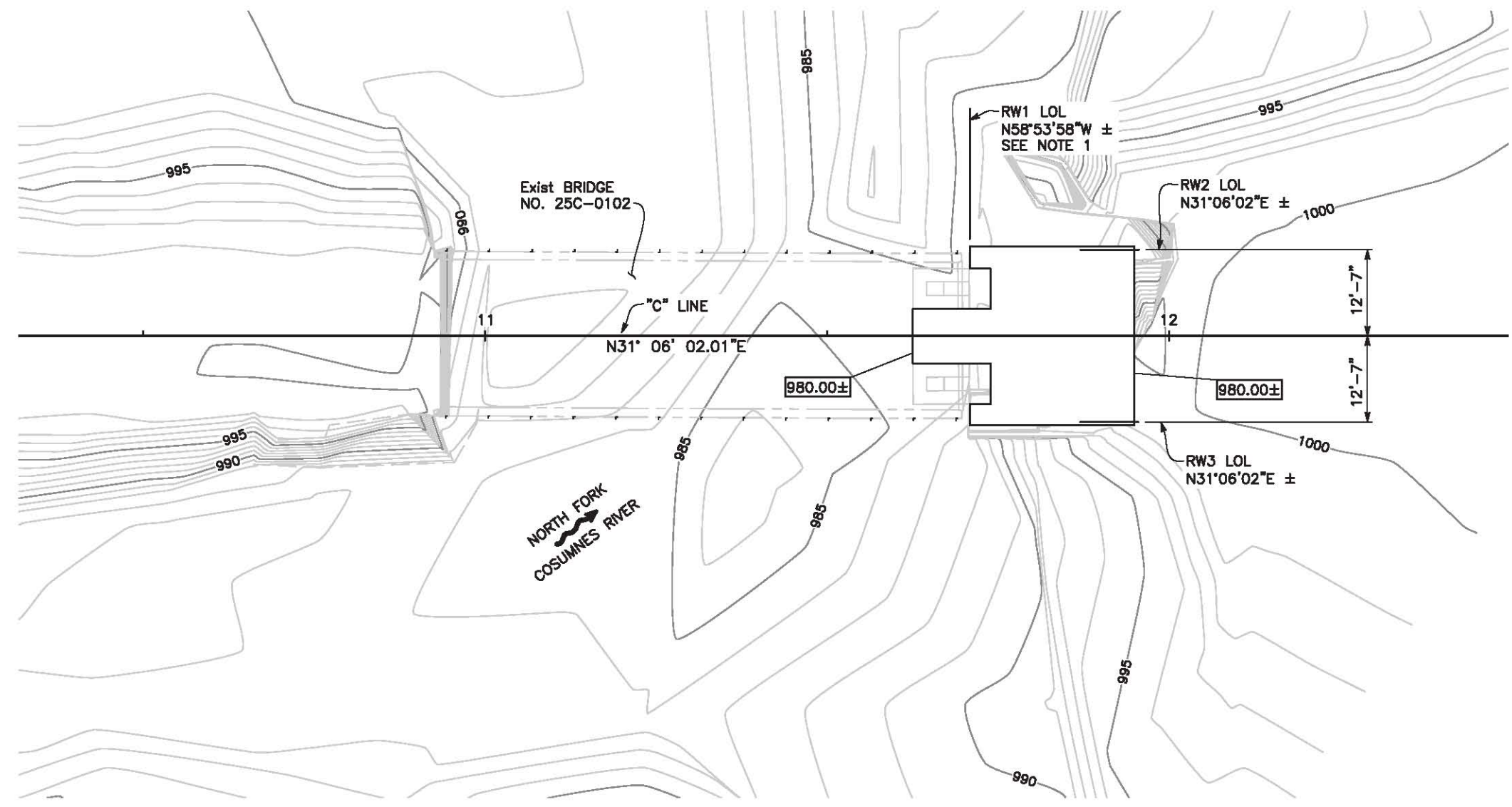


COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

COSUMNES MINE ROAD and BRIDGE
STORM DAMAGE REPAIRS
INDEX TO PLANS

NO SCALE
SHEET S-2
13 OF 22
W.O. No. 78700

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 FOR REDUCED PLANS
 REVISION
 NUMBER DATE DESCRIPTION BY



PLAN
1" = 10'

FOOTING DATA TABLE

SUPPORT LOCATION	SERVICE PERMISSIBLE NET CONTACT STRESS (SETTLEMENT) (ksf)	Strength/Construction Factored Gross Nominal Bearing Resistance $\phi_b = 0.45$ (ksf)	Extreme Event Factored Gross Nominal Bearing Resistance $\phi_b = 1.0$ (ksf)
Infill Wall	10	25	N/A
RW1	10	25	N/A
RW2	10	25	N/A
RW3	10	25	N/A

SCOUR DATA TABLE

SUPPORT LOCATION	Long Term (Degradation and Contraction Scour Depth) (Ft)	Short Term (Local) Scour Elevation (Ft)
Infill Wall	0.0	0.0
RW1	0.0	0.0
RW2	0.0	0.0
RW3	0.0	0.0

NOTE:

1. Retaining Wall No. 1 must follow alignment of existing Abutment.

LEGEND:

- Indicates Bottom of Footing Elevation
- Indicates Direction of Water Flow
- Indicates Existing Bridge
- Indicates New Structure

SCALE: 1"=10'



PREPARED UNDER THE SUPERVISION OF:
Levi Kinnear
 REGISTERED CIVIL ENGINEER
 DATE: 5/8/2018

DESIGNED: LK
 DRAWN: EC
 CHECKED: KR
 DATE: 04/09/18
 ROAD NUMBER: 25C-0102

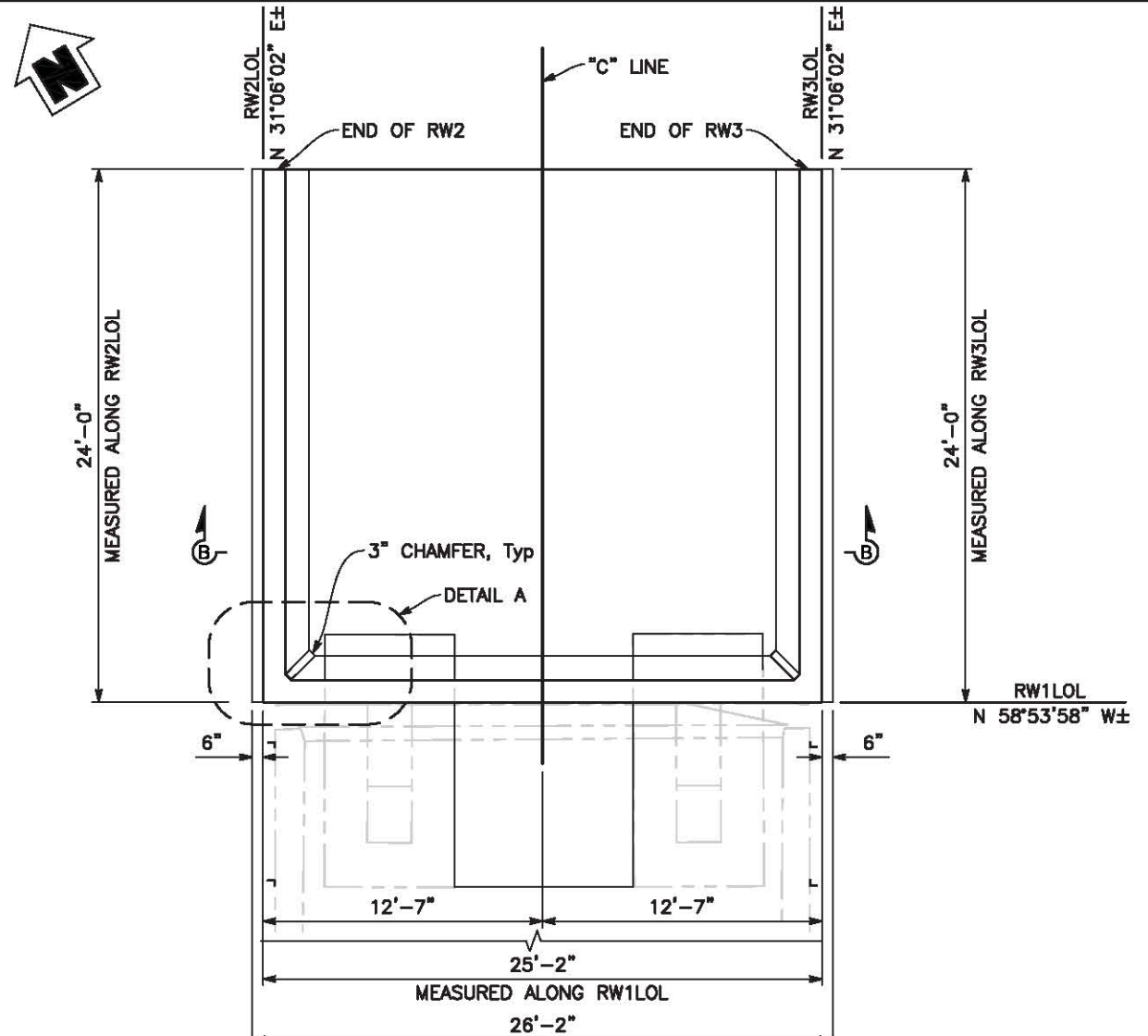


COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION

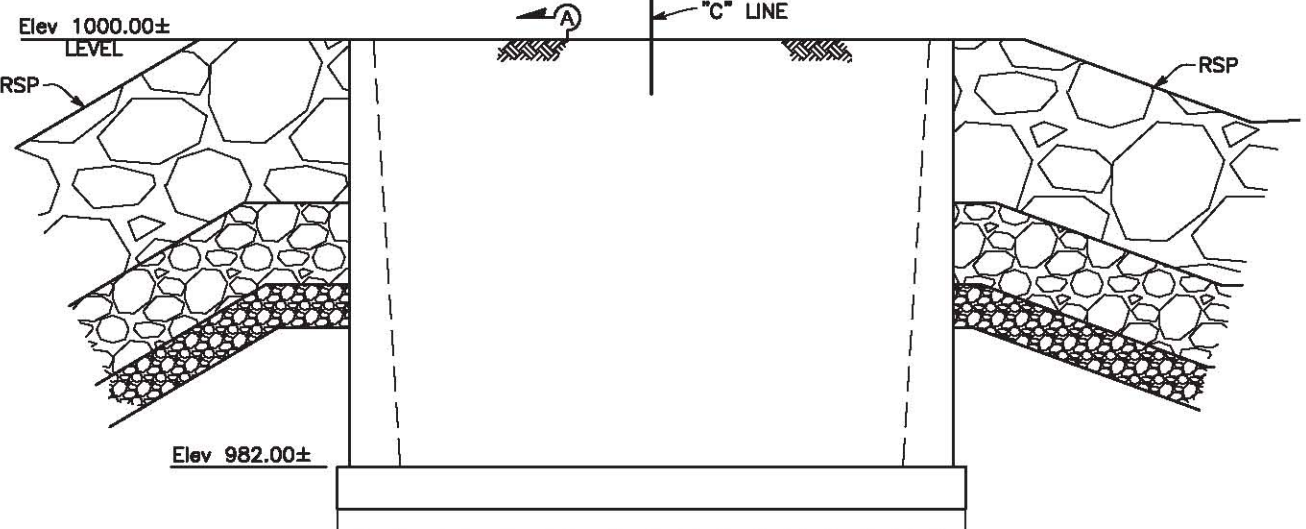
COSUMNES MINE ROAD and BRIDGE
 STORM DAMAGE REPAIRS
FOUNDATION PLAN

SHEET
S-3
 14 OF 22
 W.O. No. 78700

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 FOR REDUCED PLANS
 REVISION
 NUMBER DATE DESCRIPTION BY

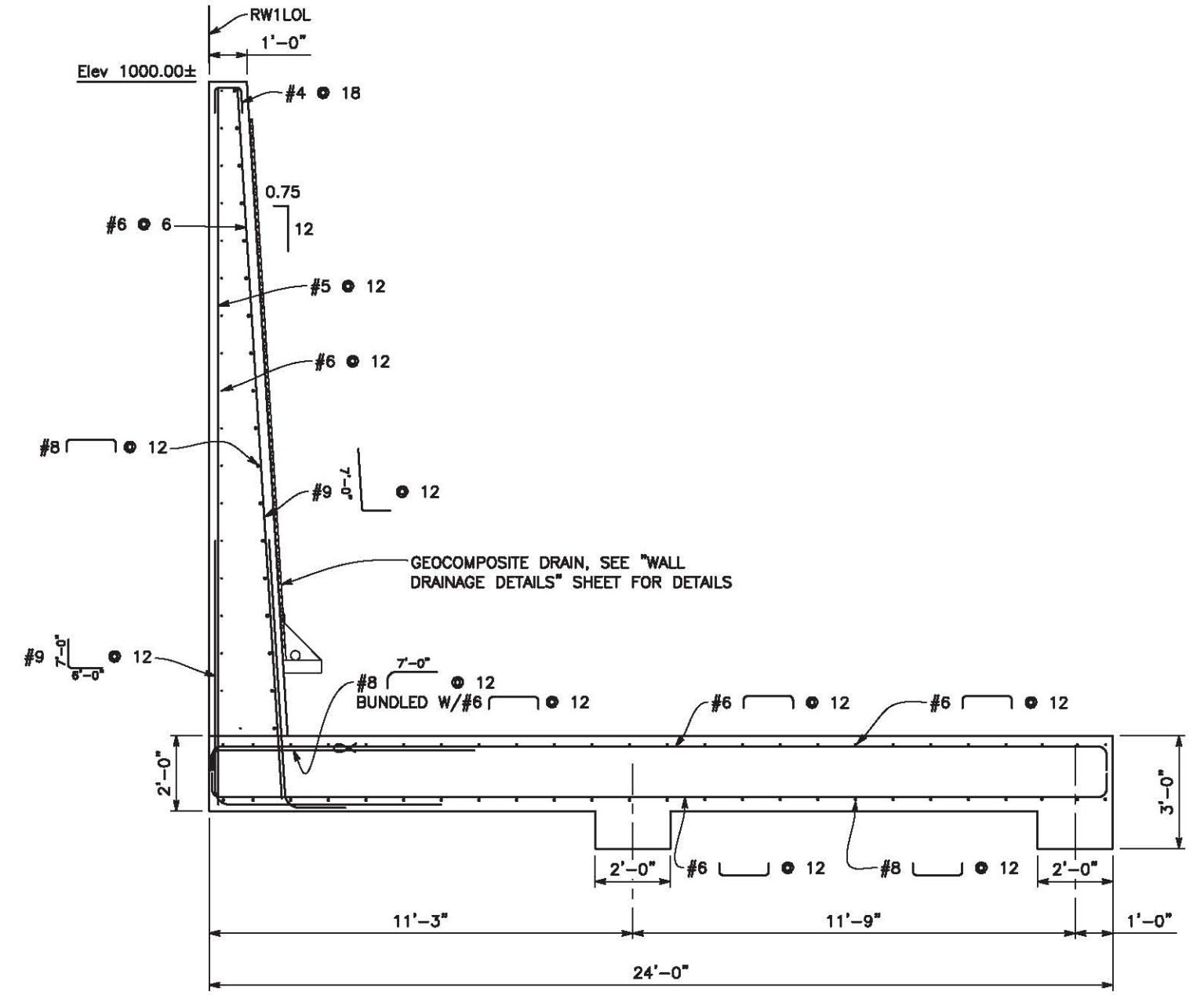


PLAN
1/4" = 1'-0"



ELEVATION
1/4" = 1'-0"

Note:
Top of proposed retaining wall footing to match Elev of Existing Abutment Footing.



SECTION A-A
1/2" = 1'-0"

LEGEND:
 - - - - - Indicates Existing Bridge
 _____ Indicates New Structure

NOTES:
 1. For "DETAIL A" see "RETAINING WALL DETAILS" sheet.
 2. For Section B-B, see "RETAINING WALL DETAILS" sheet.

SCALE: AS SHOWN



PREPARED UNDER THE SUPERVISION OF:
Levi Kinnear
 REGISTERED CIVIL ENGINEER
 DATE: 5/8/2018

DESIGNED: LK
 DRAWN: EC
 CHECKED: KR
 DATE: 04/09/18
 ROAD NUMBER: 25C-0102

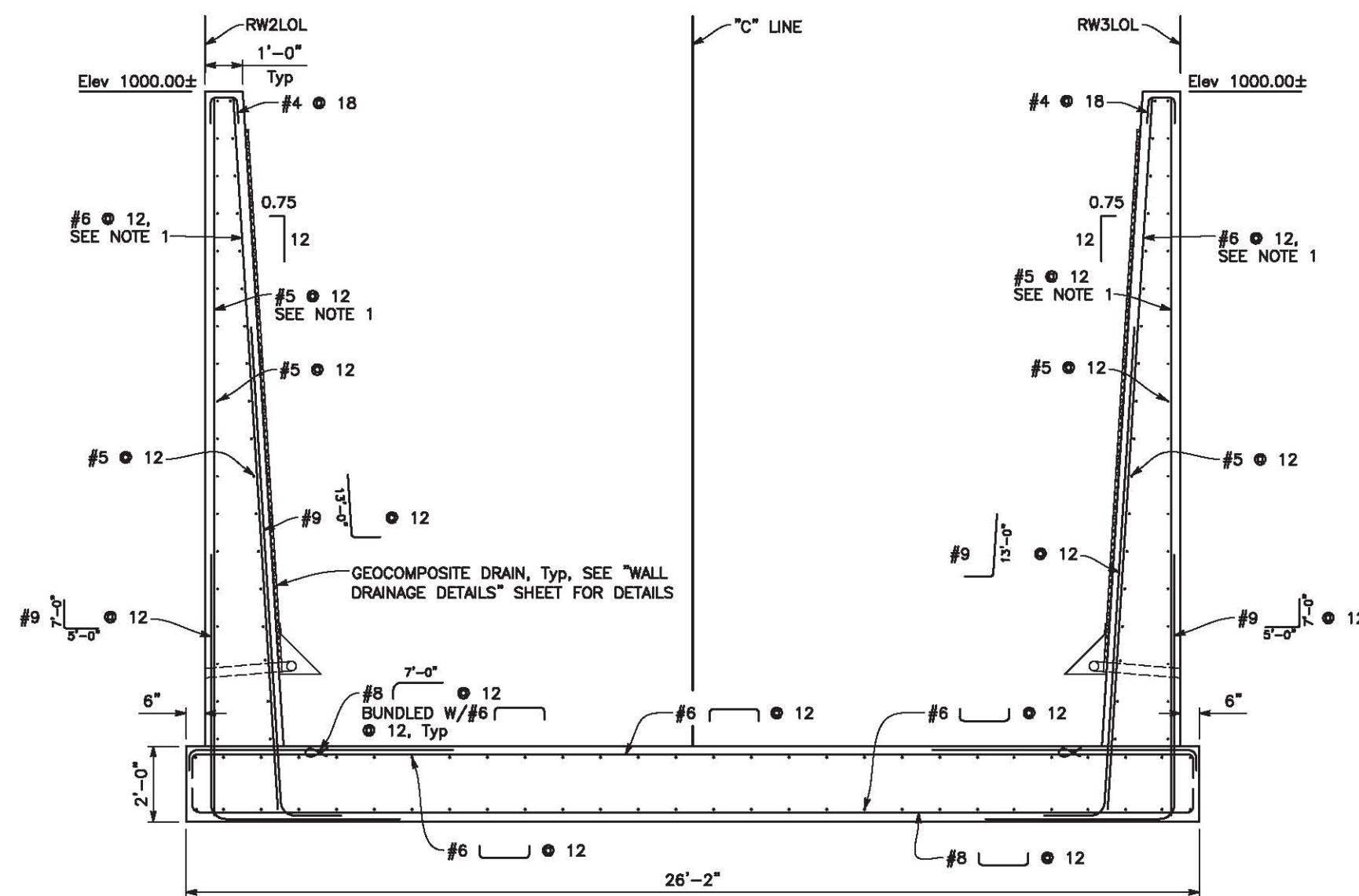


COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION

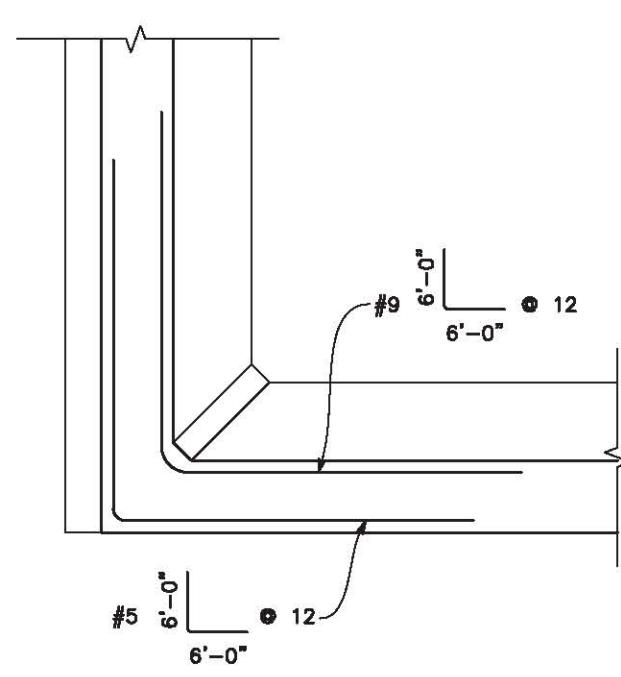
COSUMNES MINE ROAD and BRIDGE
 STORM DAMAGE REPAIRS
RETAINING WALL LAYOUT

SHEET
S-4
 15 OF 22
 W.O. No. 78700

ORIGINAL SCALE IS IN INCHES
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 FOR REDUCED PLANS
 REVISION
 NUMBER DATE DESCRIPTION BY



SECTION B-B
1/2" = 1'-0"



DETAIL A
3/4" = 1'-0"

NOTE:

1. Provide additional #6 @ 12 on Back Face & #5 @ 12 on Front Face over a distance of 8'-0" measured from End of walls 2 & 3.

SCALE: AS SHOWN



PREPARED UNDER THE SUPERVISION OF:
Levi Kinnear
 REGISTERED CIVIL ENGINEER
 DATE: 5/8/2018

DESIGNED: LK
 DRAWN: EC
 CHECKED: KR
 DATE: 04/09/18
 ROAD NUMBER: 25C-0102

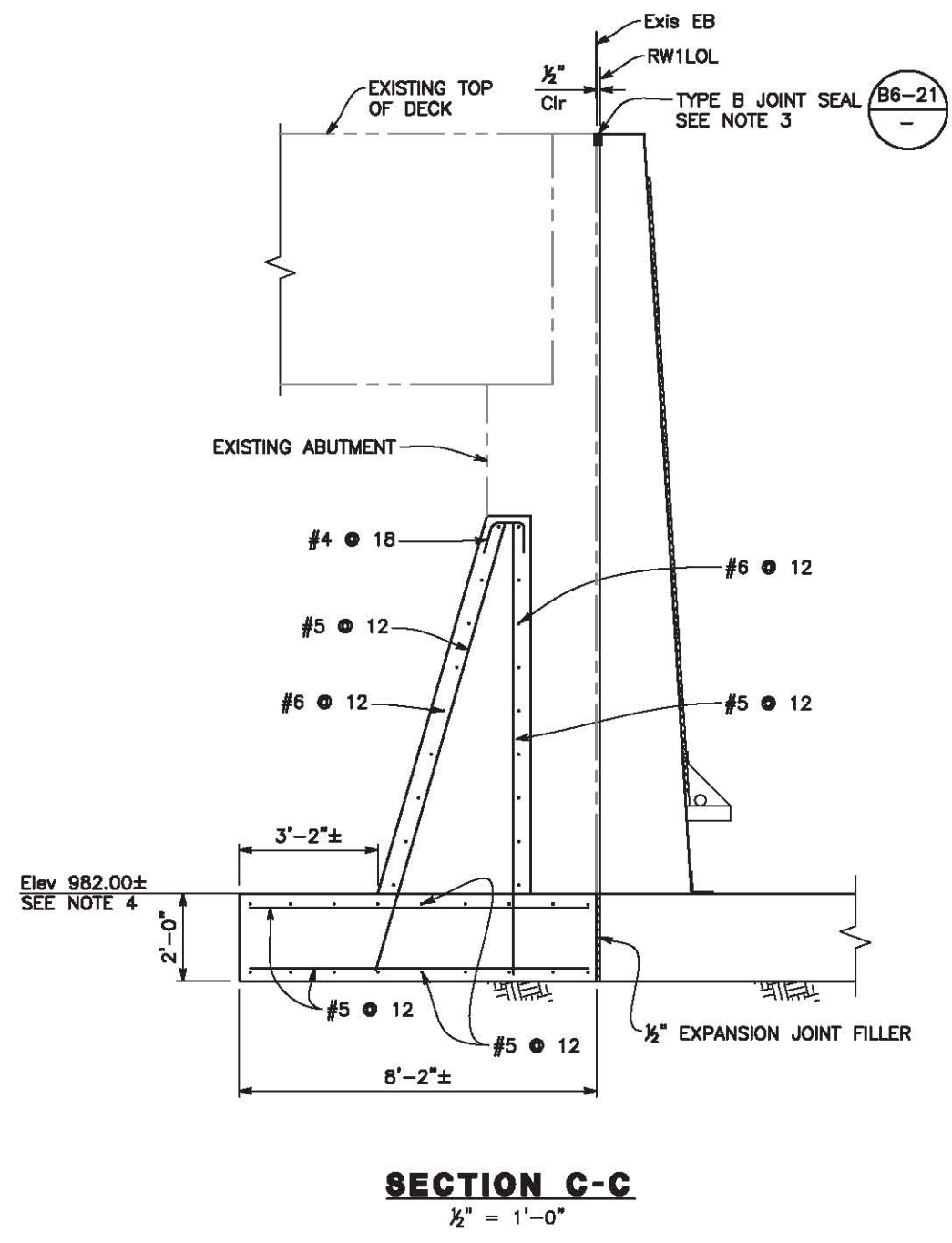
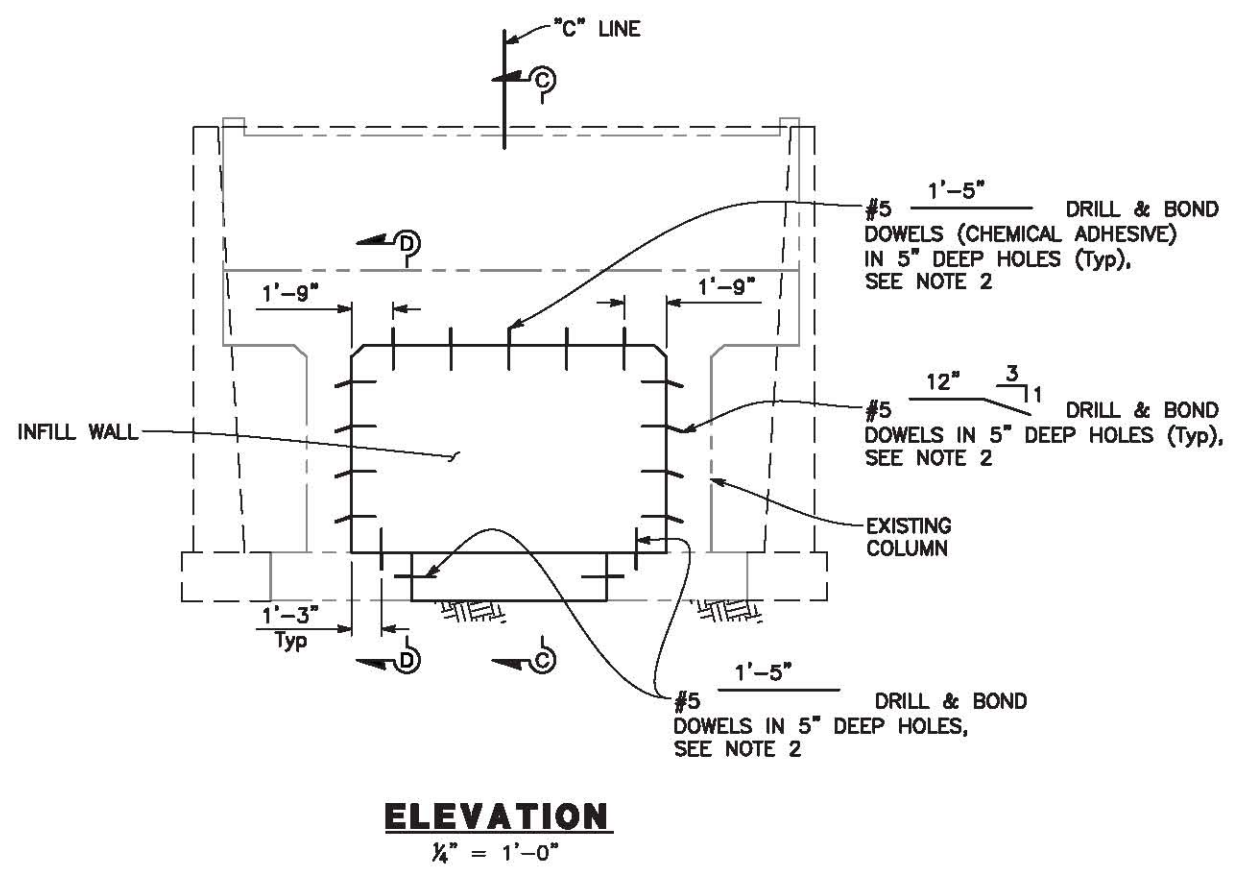
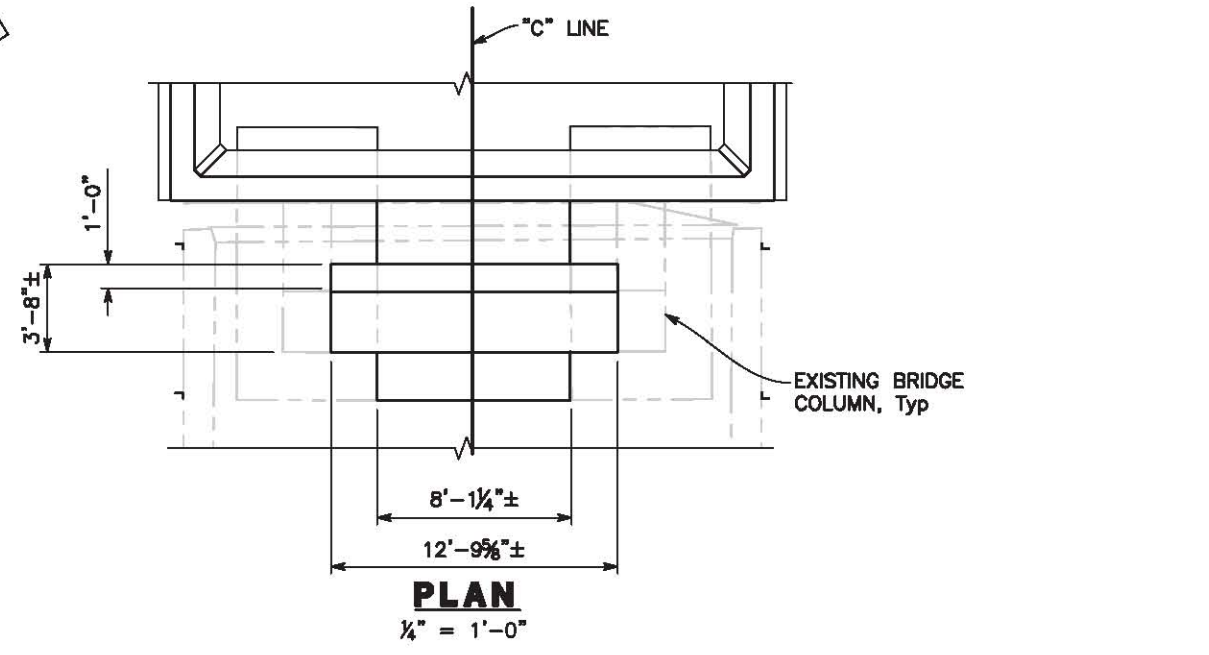


COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION

COSUMNES MINE ROAD and BRIDGE
 STORM DAMAGE REPAIRS
RETAINING WALL DETAILS

SHEET
S-5
 16 OF 22
 W.O. No. 78700

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 FOR REDUCED PLANS
 REVISION
 NUMBER DATE DESCRIPTION BY



LEGEND:

- Indicates Existing Bridge
- Indicates New Structure

NOTES:

1. For "SECTION D-D" see "INFILL WALL DETAILS" sheet.
2. For Dowel drilled hole locations see "INFILL WALL DETAILS" sheet.
3. Per Standard Plan B6-21 a = 1/2" & an equivalent MR = 1".
4. Top of Infill Wall to match Elev of Abutment Footing.

SCALE: AS SHOWN



PREPARED UNDER THE SUPERVISION OF:
Levi Kinnear
 REGISTERED CIVIL ENGINEER
 DATE: 5/8/2018

DESIGNED: LK
 DRAWN: EC
 CHECKED: KR
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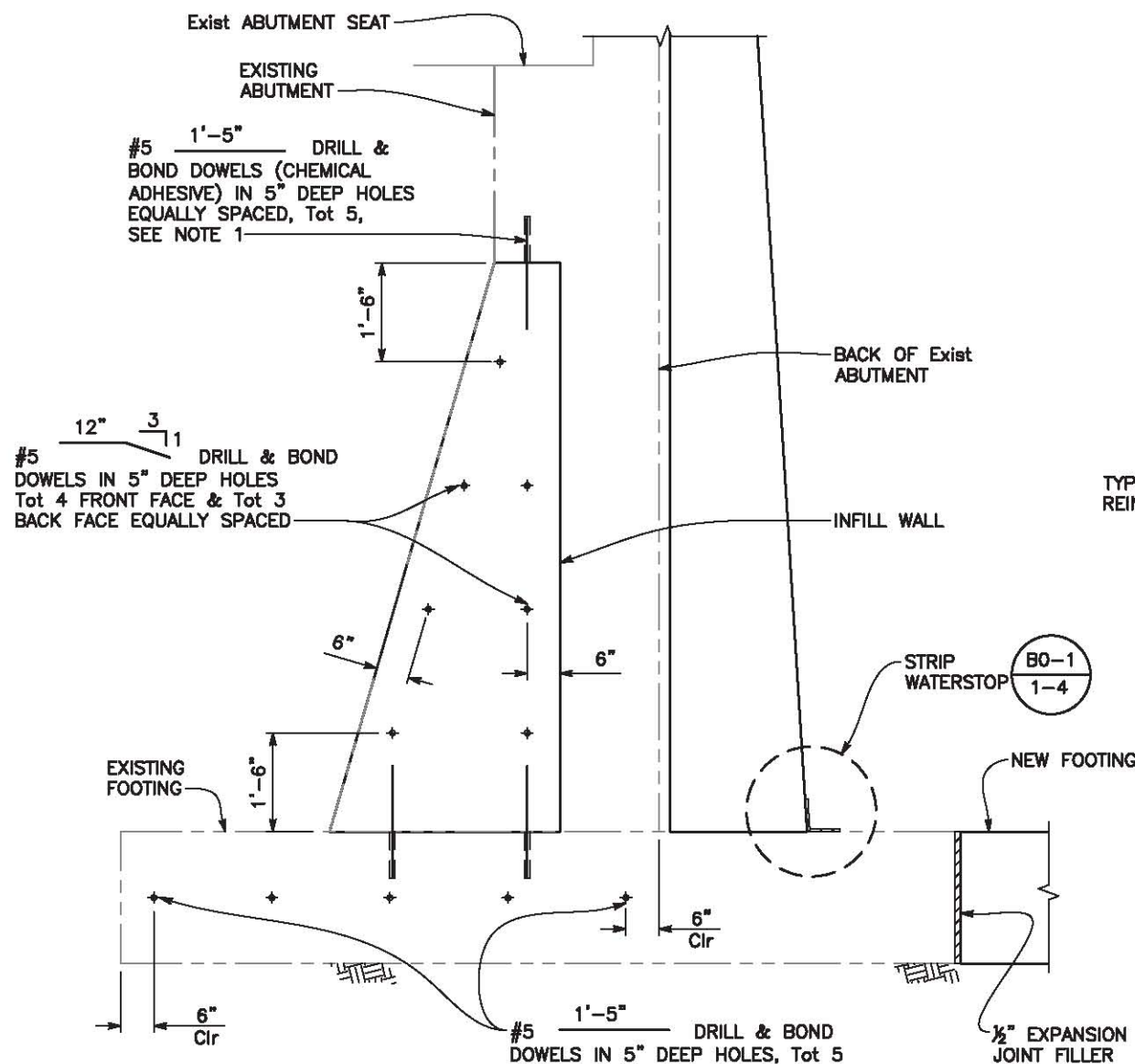


COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION

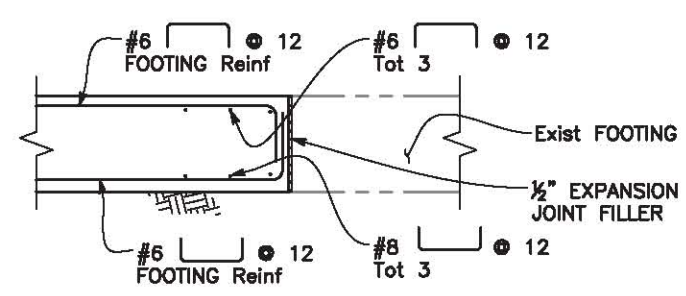
COSUMNES MINE ROAD and BRIDGE
 STORM DAMAGE REPAIRS
INFILL WALL LAYOUT

SHEET
S-6
 17 OF 22
 W.O. No. 78700

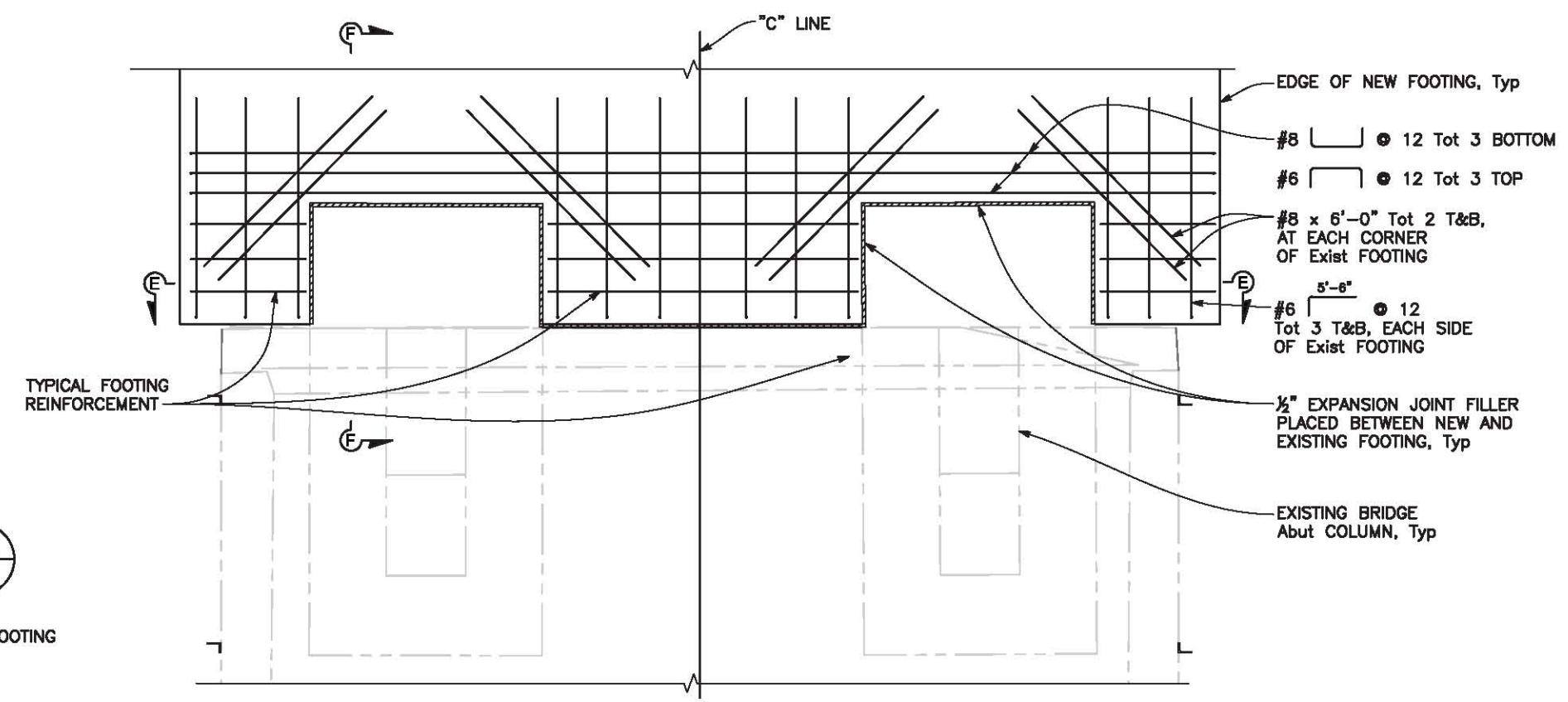
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 FOR REDUCED PLANS
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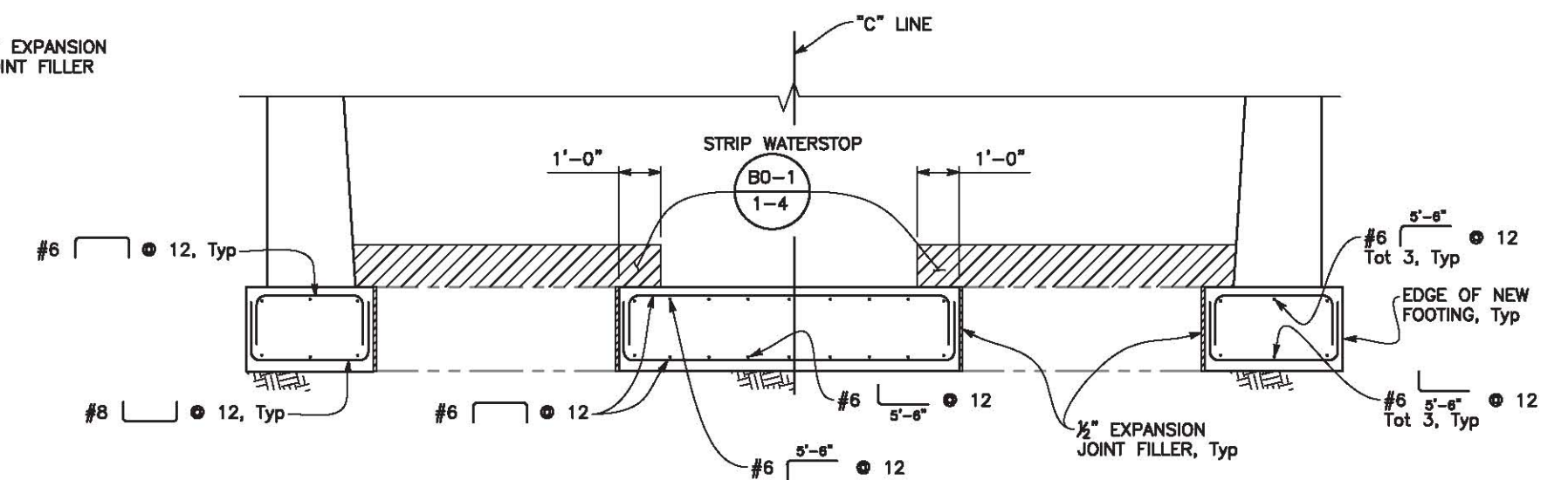
SECTION D-D
 $\frac{3}{4}'' = 1'-0''$



SECTION F-F
 $\frac{1}{2}'' = 1'-0''$



PLAN
 $\frac{1}{2}'' = 1'-0''$



SECTION E-E
 $\frac{1}{2}'' = 1'-0''$

NOTE:

1. Use Resin Capsules to Anchor Overhead Dowel Bars.

LEGEND:

- Indicates Bonded Neoprene Strip
- Indicates Existing Bridge
- Indicates New Structure

SCALE: AS SHOWN

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
Levi Kinnear
 REGISTERED CIVIL ENGINEER
 DATE: 5/8/2018

DESIGNED: LK
 DRAWN: EC
 CHECKED: KR
 DATE: 04/09/18
 ROAD NUMBER: 25C-0102

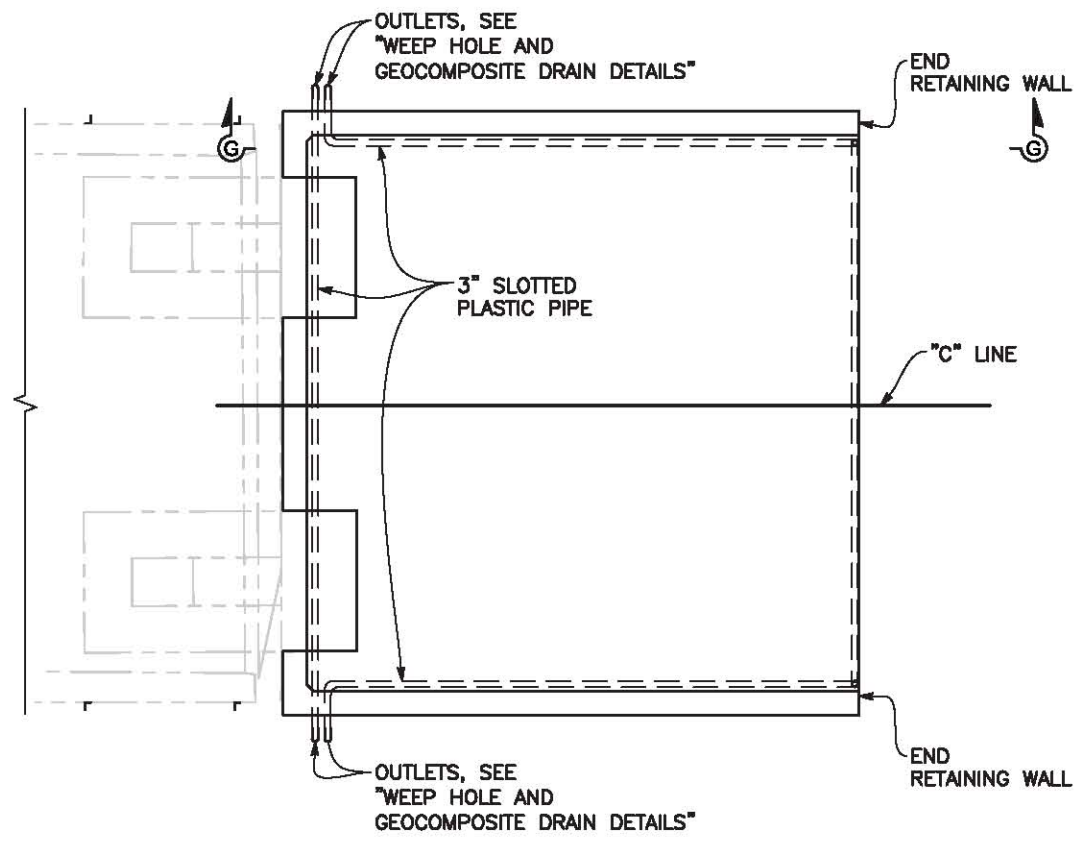


COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION

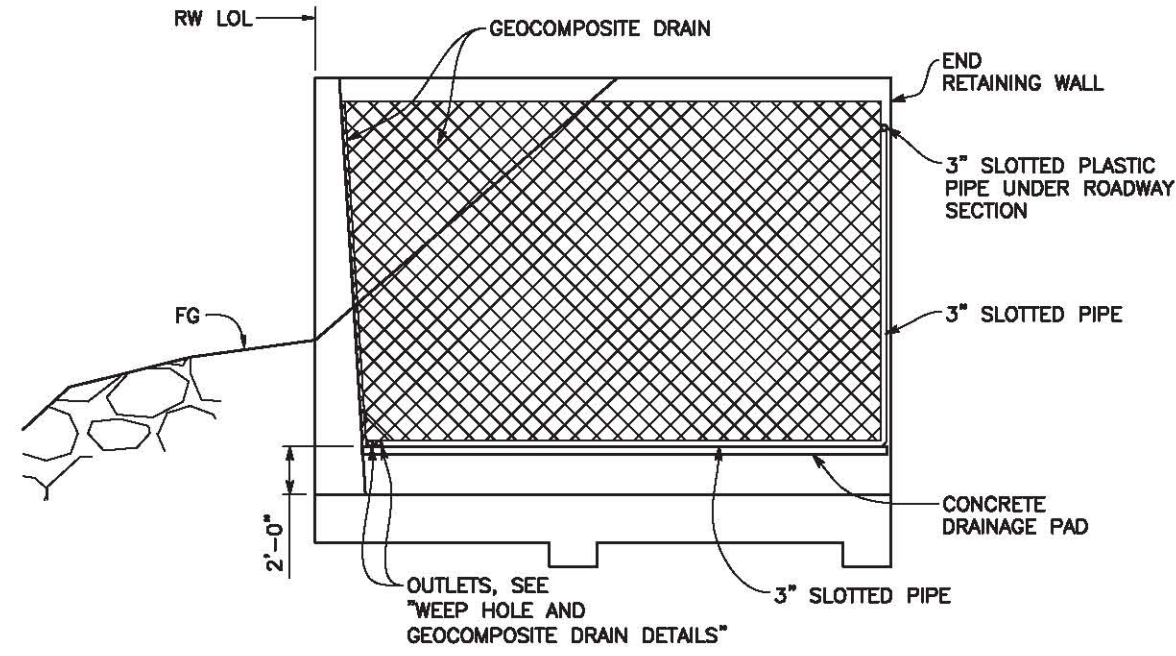
COSUMNES MINE ROAD and BRIDGE
 STORM DAMAGE REPAIRS
INFILL WALL DETAILS

SHEET
S-7
 18 OF 22
 W.O. No. 78700

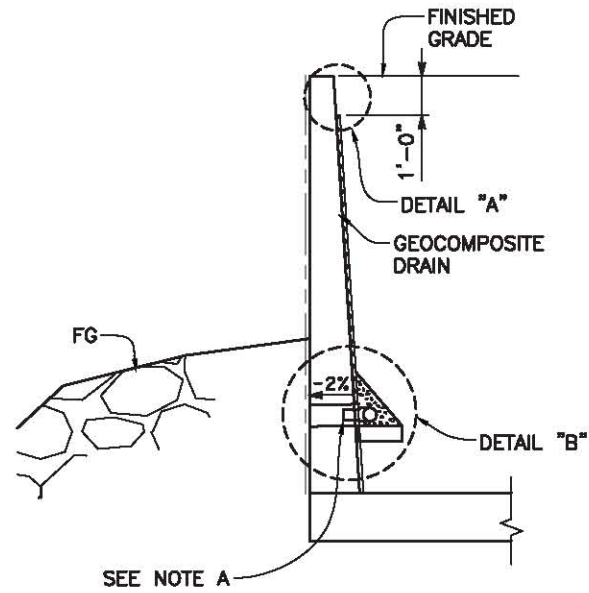
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 FOR REDUCED PLANS
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 NUMBER DATE DESCRIPTION BY



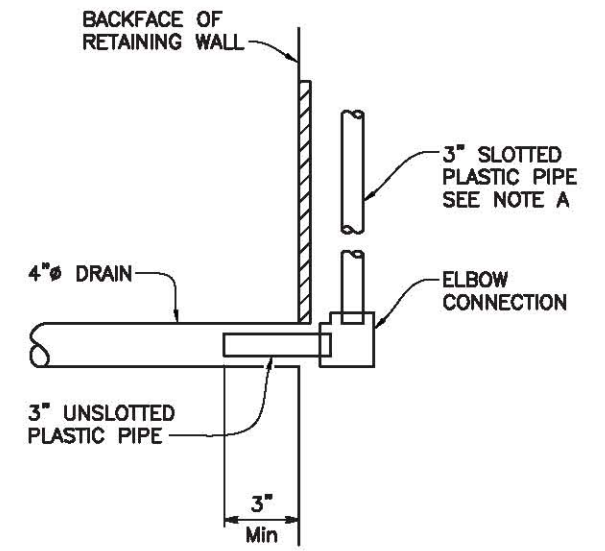
PLAN
1/4" = 1'-0"



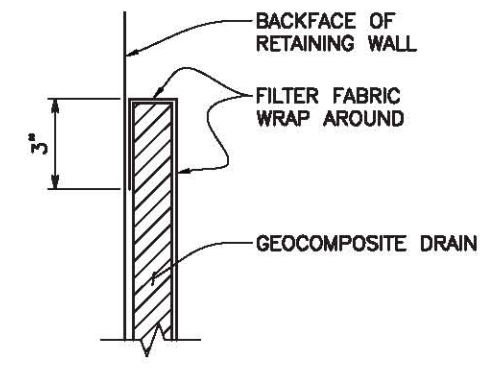
SECTION G-G
1/4" = 1'-0"



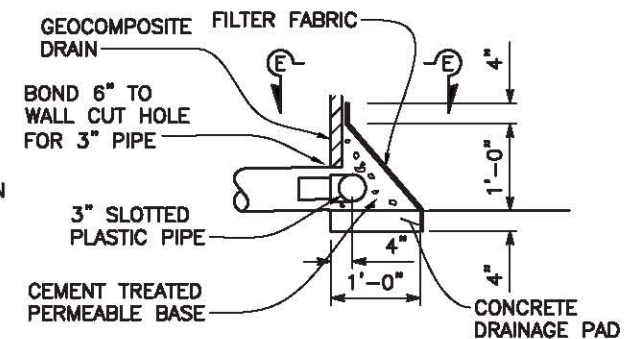
WALL SECTION



SECTION E-E



DETAIL "A"



DETAIL "B"

WEEP HOLE AND GEOCOMPOSITE DRAIN DETAILS
NO SCALE

NOTES:

- A. Geocomposite Drain, Cement Treated Permeable Base, Drainage Pad, and 3"ø Slotted Plastic Pipe continuous behind Wall. Provide "Elbow" connection at each 4" drain.
- B. Provide 1'-0" x 4" Drainage Pad when Pipe is not supported by Footing.

NOTE:

- 1. See Revised Standard Plan B9-6 for additional Drainage Details.

LEGEND:

- Indicates Existing Bridge
- Indicates New Structure

SCALE: AS SHOWN



PREPARED UNDER THE SUPERVISION OF:
Levi Kinnear
 REGISTERED CIVIL ENGINEER
 DATE: 5/8/2018

DESIGNED: LK
 DRAWN: EC
 CHECKED: KR
 DATE: 04/09/18
 ROAD NUMBER: 25C-0102

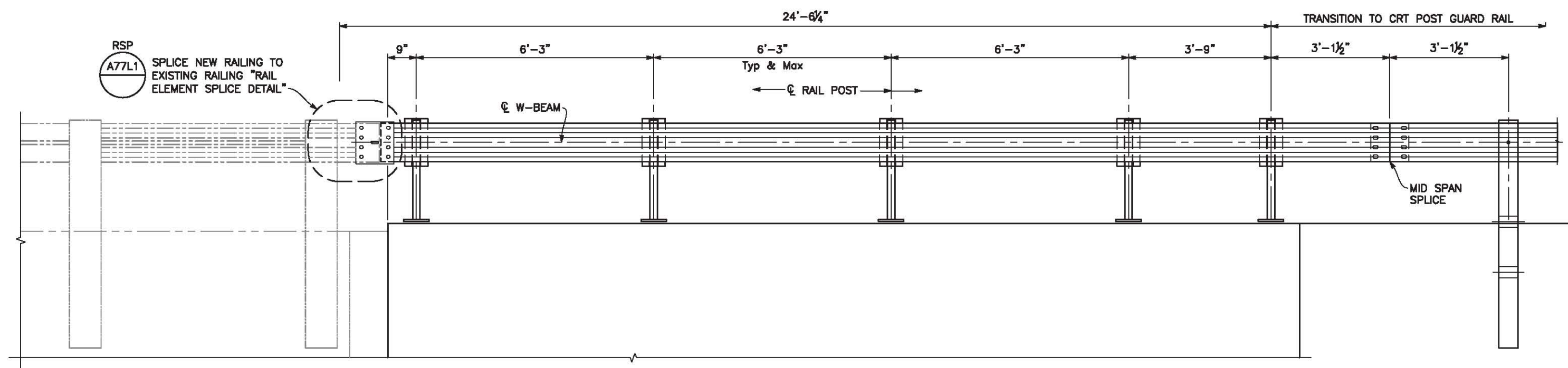


COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION

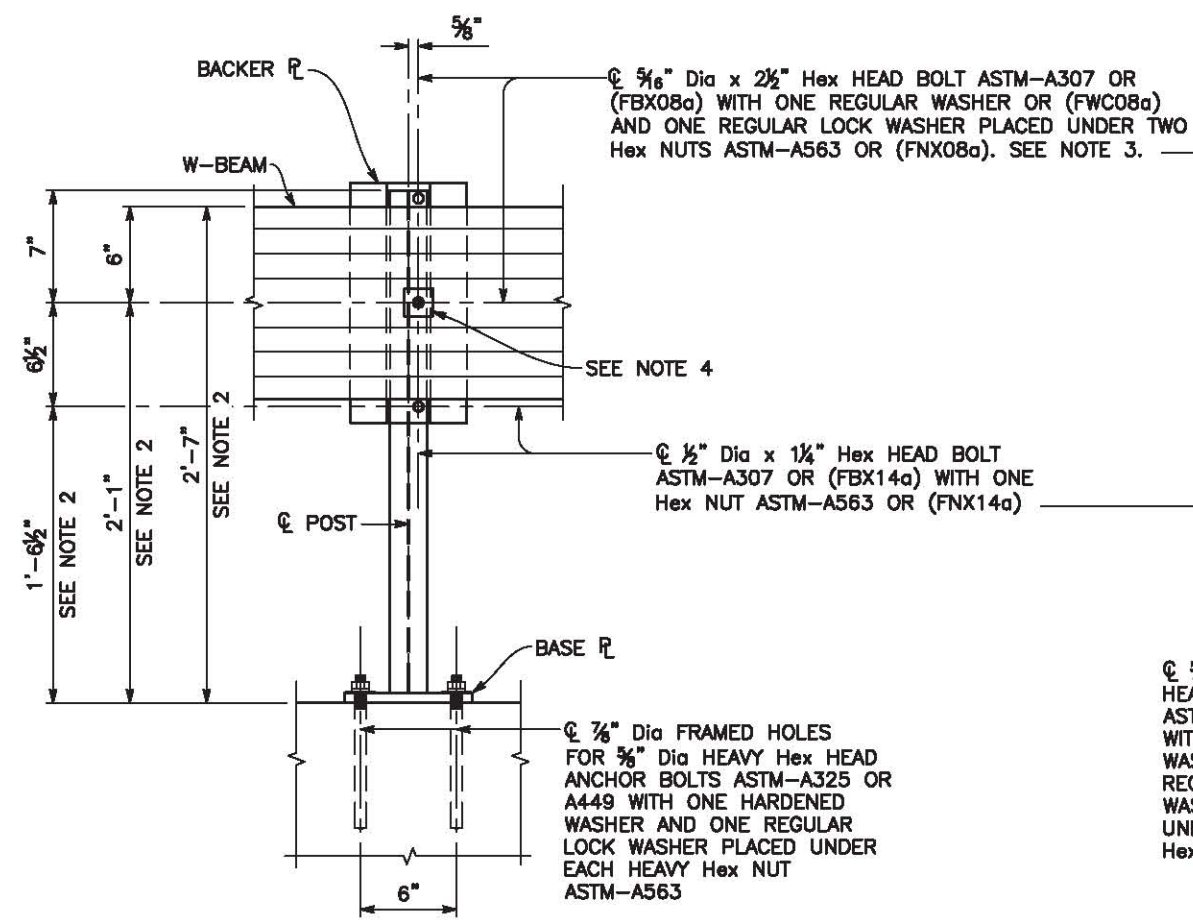
COSUMNES MINE ROAD and BRIDGE
 STORM DAMAGE REPAIRS
WALL DRAINAGE DETAILS

SHEET
S-8
 19 OF 22
 W.O. No. 78700

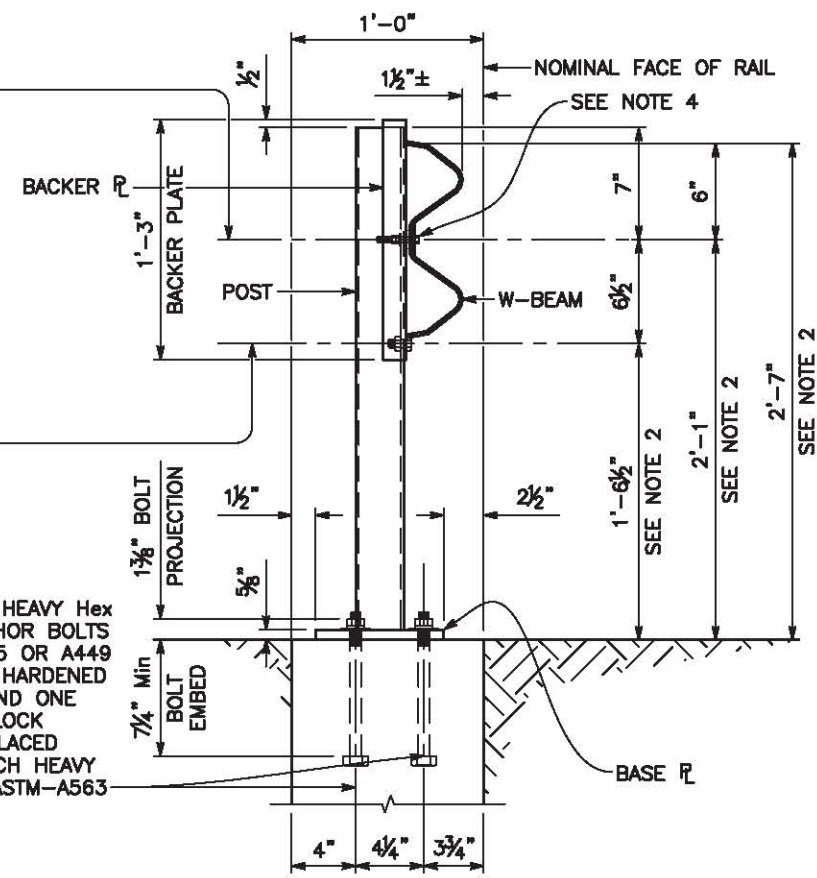
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ROADWAY ELEVATION OF RAIL



**TRAFFIC SIDE RAIL VIEW
RAIL DETAILS ON RETAINING WALL**



**RAIL SECTION ON
RETAINING WALL**

NOTES:

- Maintain 6'-3" Rail Post spacing wherever possible for use with nominal 25'-0" or 12'-6" W-Beam sections. Symmetry of post spacing on both sides and along the structure is not necessary.
- Increase 2" for structures with overlay.
- Tighten the first hex nut by hand until the top and bottom edges of the W-Beam engage the Backer Plate (Backer Plate should be snug against the post). Then tighten hex nut one revolution with wrench and secure with the second hex nut.
- $\frac{1}{2}$ " x $1\frac{3}{4}$ " x $1\frac{3}{4}$ " with $\frac{3}{8}$ " Dia Hole centered in $\frac{1}{2}$ " ASTM-A36. Square Guardrail Washer (FWR01).

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
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 DATE: 5/8/2018

DESIGNED: LK
 DRAWN: EC
 CHECKED: KR
 DATE: 04/08/18
 ROAD NUMBER: 25C-0102

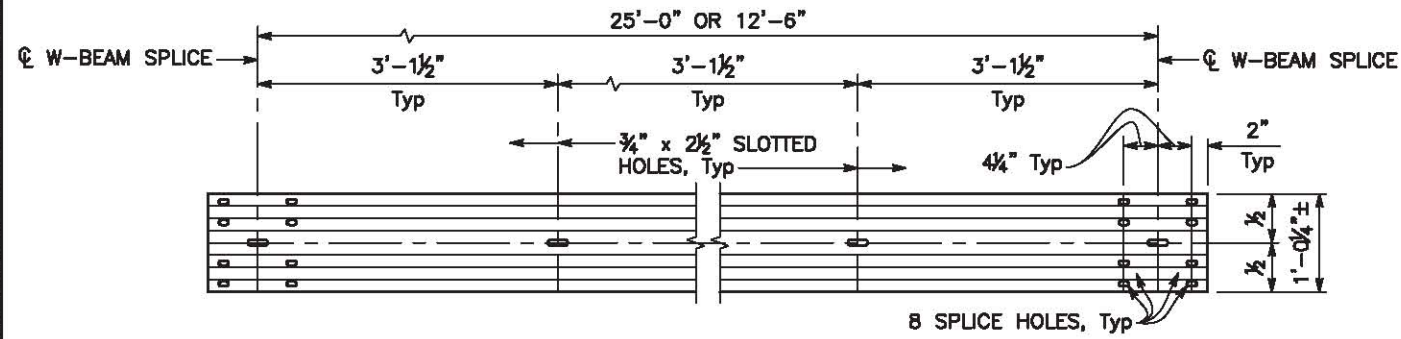


COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION

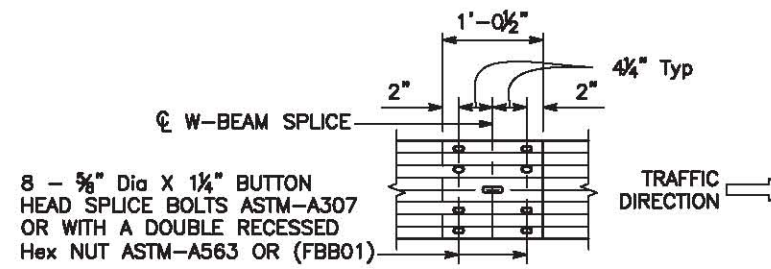
**COSUMNES MINE ROAD and BRIDGE
 STORM DAMAGE REPAIRS
 METAL RAILING (TYPE T631LS)
 DETAILS NO. 1**

NO SCALE
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S-9
 20 OF 22
 W.O. No. 78700

ORIGINAL SCALE IS IN INCHES
 FOR REDUCED PLANS
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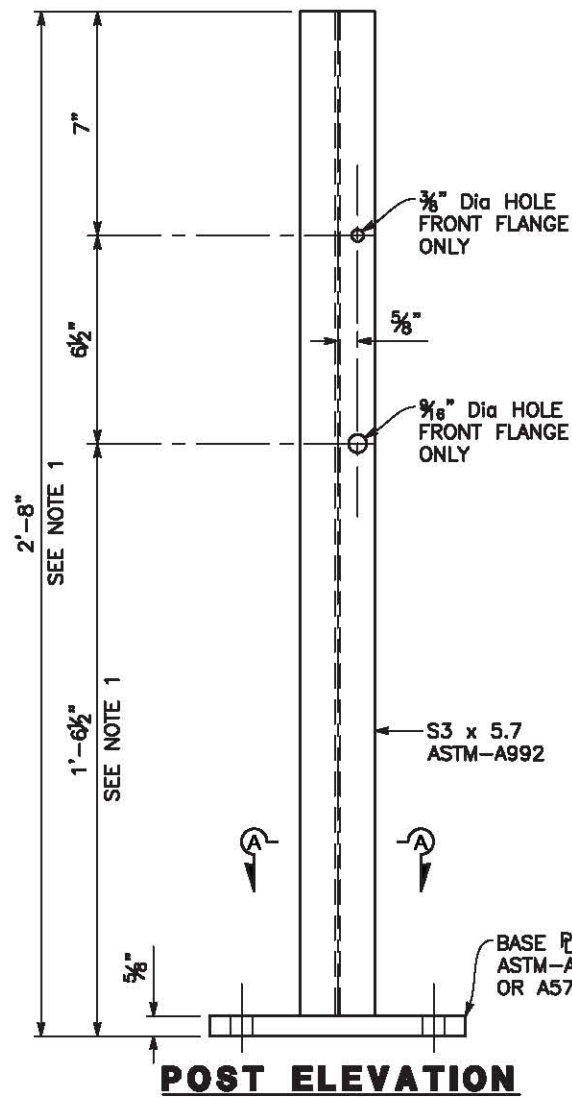
W-BEAM ELEVATION



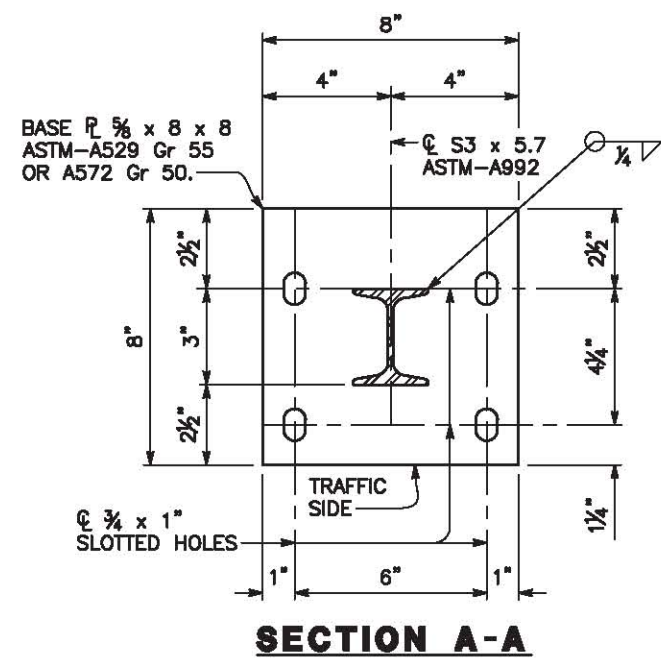
W-BEAM SPLICE ELEVATION

NOTES:

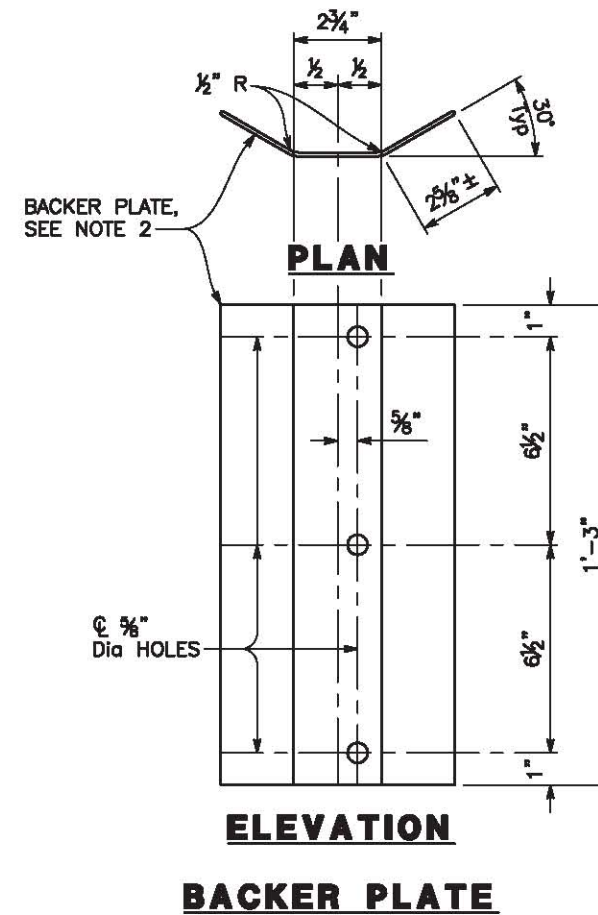
1. Increase 2" for structures with overlay.
2. Backer \bar{P} $\frac{1}{2}$ X 8 X 1'-3" ASTM-A1011 CS or SS Gr 33, or A1008 CS or SS Gr 33 (11 Gage acceptable).



POST ELEVATION



SECTION A-A



ELEVATION

BACKER PLATE

GUARDRAIL AND END TREATMENT NOTES:

This traffic railing must be anchored by Midwest Guardrail System (MGS). see Roadway Plans for MGS Layout and Plans.

CONSTRUCTION NOTES:

Face of rail post must be plumb unless otherwise Authorized by the Engineer. Post must be perpendicular to adjacent roadway grade. Use epoxy mortar under post base plates if gaps larger than $\frac{1}{8}$ " exist.

Fully anchored guardrail must be attached to each end of rail. A metal beam guard rail transition is not used with this rail.

It is recommended to show a Rail Layout with rail posts and W-beam splices. Fabricator must submit erection drawings to the Engineer for approval.

Round or chamfer exposed edges of rail post and backer plate to approximately $\frac{1}{8}$ " by grinding.

MATERIAL NOTES:

Galvanize all steel components.

Anchor bolts for base plate must be $\frac{5}{8}$ " Dia ASTM-A325 or A449 bolts with one hardened washer and one regular lock washer placed under each heavy hex nut. Nuts must conform to A563 requirements.

W-beam must meet the requirements of Section 83 of the standard Specification except as modified in the plans. The Contractor may furnish rail elements of 25'-0", or 12'-6" (Nominal) lengths. W-Beam must have slotted holes at 3'-1 1/2".

Some part numbers from the "Task Force 13" Guide to Standardized Highway Barrier Hardware have been furnished for quick reference.

GENERAL NOTES:

This railing has been successfully evaluated by full-scale crash test to meet MASH TL-2 criteria. This railing can be used for speeds of 45 mph and less.

This rail is designed to deflect approximately 2' to 2'-6" as it contains and redirects the errant vehicle. This rail may not be installed on top of or behind curbs that project above finished grade.

Repairs to impact-damaged post and base plate unit are not permitted. Replace all impact-damaged posts with a new post and base plate unit.

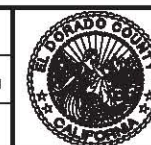
Average weight of railing with no overlay: 13 plf total.

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
Levi Kinnear
 REGISTERED CIVIL ENGINEER
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DESIGNED: LK
 DRAWN: EC
 CHECKED: KR
 DATE: 04/09/18
 ROAD NUMBER: 25C-0102



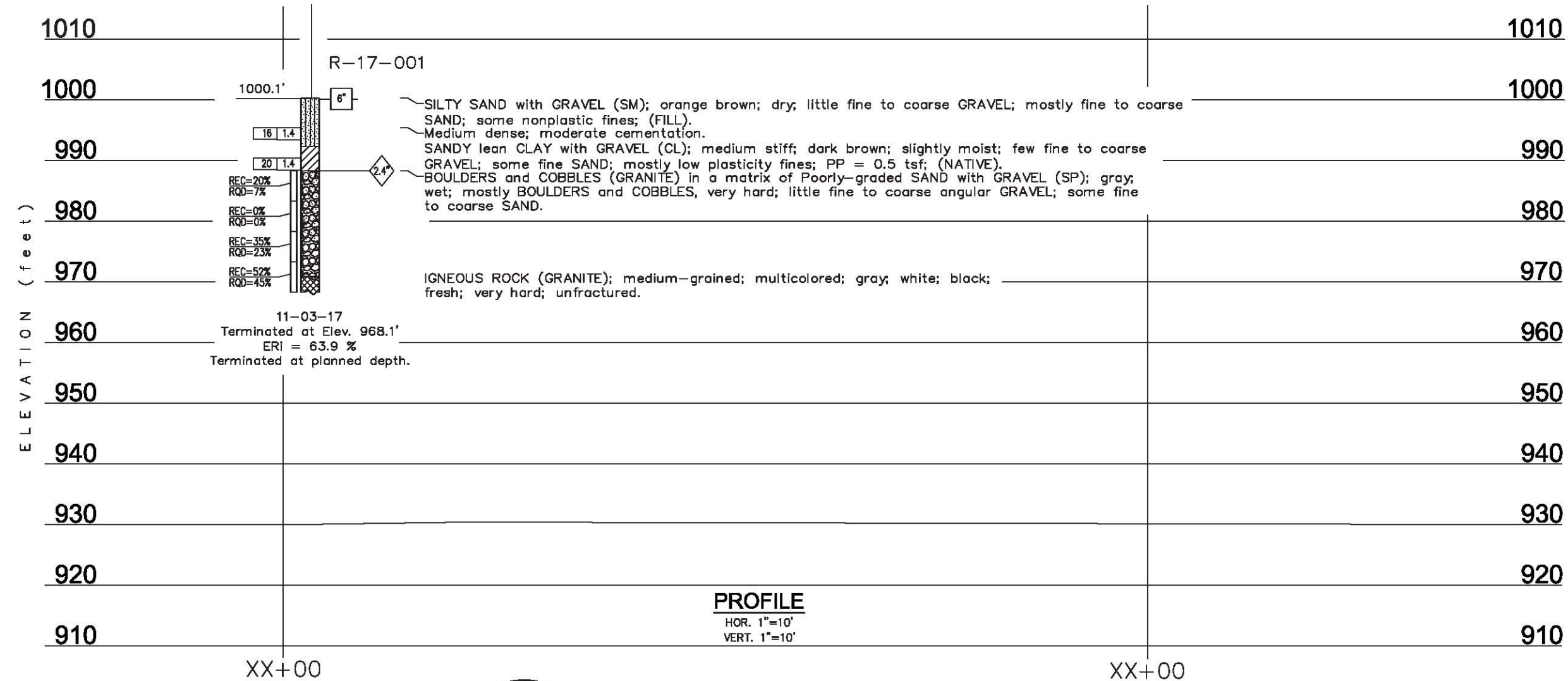
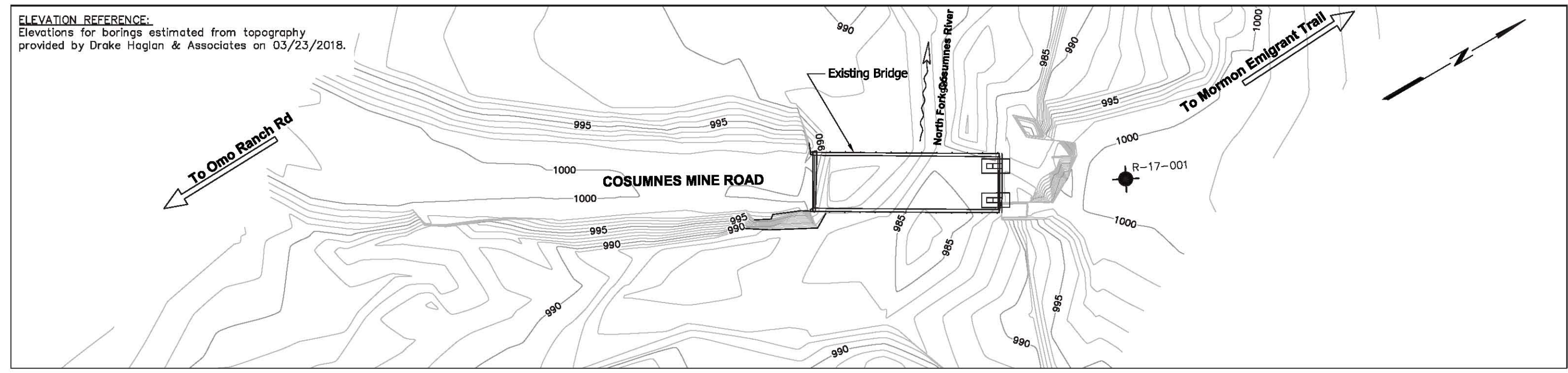
COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION

COSUMNES MINE ROAD and BRIDGE
 STORM DAMAGE REPAIRS
METAL RAILING (TYPE T631LS)
DETAILS NO. 2

NO SCALE
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S-10
 21 OF 22
 W.O. No. 78700

ORIGINAL SCALE IS IN INCHES
 FOR REDUCED PLANS
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 EDC\400 Project Design Files\450 Geotechnical & Materials\PI15054_09A_CosumnesMineRd LOTB_UPDATED BORDER.dwg Layout Tab: LOTB Apr 05 2018

ELEVATION REFERENCE:
 Elevations for borings estimated from topography provided by Drake Haglan & Associates on 03/23/2018.



- Notes:**
- Field classification of soils was in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010 Edition).
 - 1.4" samples were taken using a 1.375" ID split barrel sampler per Standard Penetration Test (SPT) performed in accordance with ASTM D 1586-11.
 - 1.4" and 2.5" samples were taken with an automated hammer system consisting of a hammer weight of 140 lbs. free falling a distance of 30". Autohammer energy ratio (ETR) measurements indicate an ETR=XX%. The last 12" of an 18" drive were recovered as the blow count number required to drive the sampler.
 - The length of each sampled interval is shown graphically on the boring log. Whole number blow counts ("N") represent the "standard penetration resistance" interval in accordance with ASTM D1586-11. Where less than 1 foot of penetration is achieved, the blow count shown is for that fraction of the "standard penetration resistance" interval actually penetrated. Where indicated by an asterisk (*) the number of blows shown is for only that fraction of the initial 6" "seating drive" interval penetration. Material characteristics shown in () where estimated.
 - The blow counts shown on the logs are the raw blow counts which have not been corrected for hammer energy, sample size, overburden, or any other correction factor.
 - The apparent density of granular soil is based on a corrected Standard Penetration Test N60 value.
 - Rock classification according to Caltrans Soil and Rock Logging, Classification and Presentation manual (2010 Edition). Descriptions were determined in the field. REC = Core Recovered (percent). RQD = Rock Quality Designation (percent).
 - Boring locations were measured in the field based on existing site features and correlated to topographic survey provided by Drake Haglan and Associates on 02/23/2018.
 - Electronic media for plan view provided by Drake Haglan and Associates on 02/23/2018.

PROFILE
 HOR. 1"=10'
 VERT. 1"=10'

SCALE: 1"=20'

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">REVISION</th> <th style="width: 10%;">NUMBER</th> <th style="width: 10%;">DATE</th> <th style="width: 70%;">DESCRIPTION</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	REVISION	NUMBER	DATE	DESCRIPTION									<p>PREPARED UNDER THE SUPERVISION OF: REGISTERED CIVIL ENGINEER DATE: 5/8/2018</p>	<p>DESIGNED: S.L. DRAWN: S.L. CHECKED: A.K. DATE: 04/09/18 ROAD NUMBER: 25C-0102</p>	<p>COUNTY OF EL DORADO DEPARTMENT OF TRANSPORTATION</p>	<p>COSUMNES MINE ROAD and BRIDGE STORM DAMAGE REPAIRS LOG OF TEST BORINGS</p>	<p>SHEET S-11 22 OF 22 W.O. No. 78700</p>
REVISION	NUMBER	DATE	DESCRIPTION														