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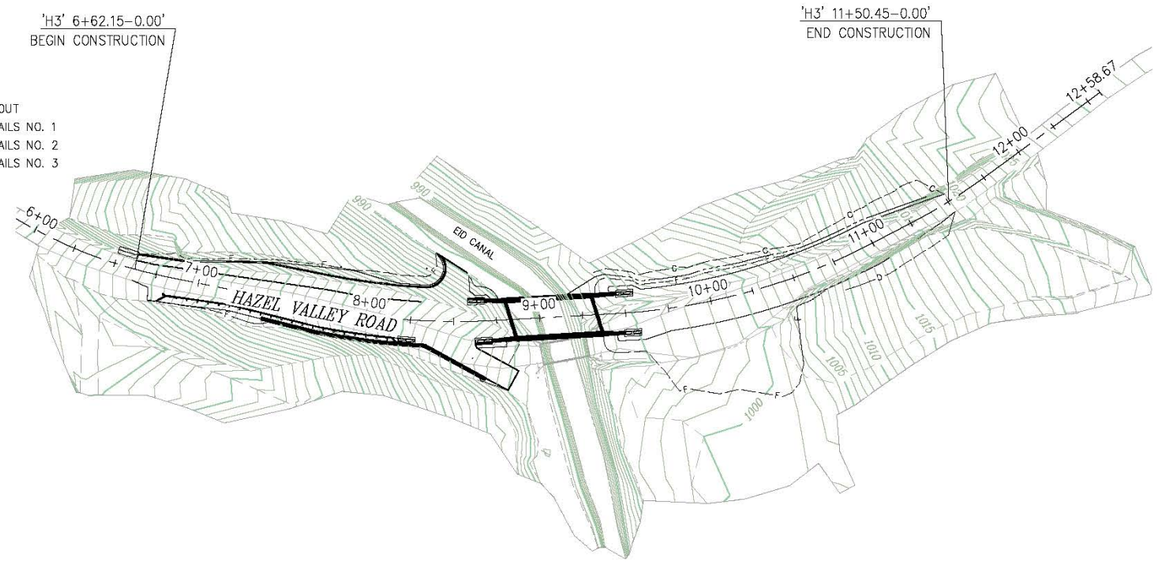
COUNTY OF EL DORADO, CA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR THE CONSTRUCTION OF

HAZEL VALLEY ROAD AT EID CANAL BRIDGE REPLACEMENT

IN THE COUNTY OF EL DORADO, DISTRICT 5
5 MILES EAST OF POLLOCK PINES AND
APPROX. 3/4 MI. SOUTHEAST OF HWY 50, ON HAZEL VALLEY ROAD

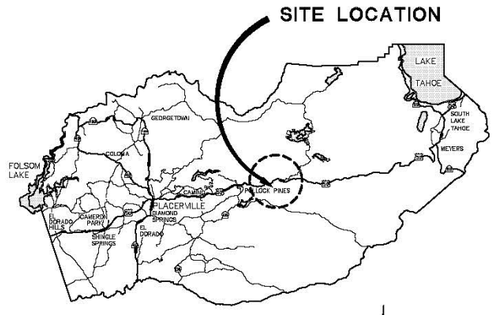
To be supplemented with Standard Plans and Specifications dated 2015, including the 2015 revised Standard Specifications, of the California Department of Transportation, unless otherwise noted.



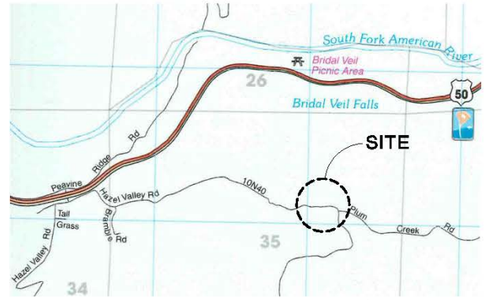
SITE PLAN
SCALE: 1"=40'

ABBREVIATIONS:

CL – CENTERLINE
EP – EDGE OF PAVEMENT
FL – FLOWLINE
HP – HINGE POINT
AP – ANGLE POINT
OG – ORIGINAL GROUND
RSP – ROCK SLOPE PROTECTION
MGS – MIDWEST GUARDRAIL SYSTEM



VICINITY MAP
COUNTY OF EL DORADO



LOCATION MAP
NOT TO SCALE

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	

EL DORADO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
DWIGHT G. ANDERSON
No. 69999
License Expires 9-30-18
CIVIL
STATE OF CALIFORNIA

Dwight D. Anderson 3-14-18
SUBMITTED BY: DATE
CIVIL ENGINEER
STATE OF CALIFORNIA NO.

FEDERAL AID PROJECT
BRLO 5925 (091)

BOARD OF SUPERVISORS

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

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION
(530) 621-5900
2850 FAIRLANE CT
PLACERVILLE, CA 95667

ADOPTED AND APPROVED BY:
MICHAEL RANALLI — DATE
CHAIR, EL DORADO COUNTY BOARD OF SUPERVISORS

APPROVED BY:
RAFAEL MARTINEZ, DIRECTOR — DATE
DEPARTMENT OF TRANSPORTATION

JOHN H. KAHLING P.E. NO. C55426 — DATE
DEPUTY DIRECTOR, ENGINEERING

PW NO. 16-31144 | PROJECT NO. 77125

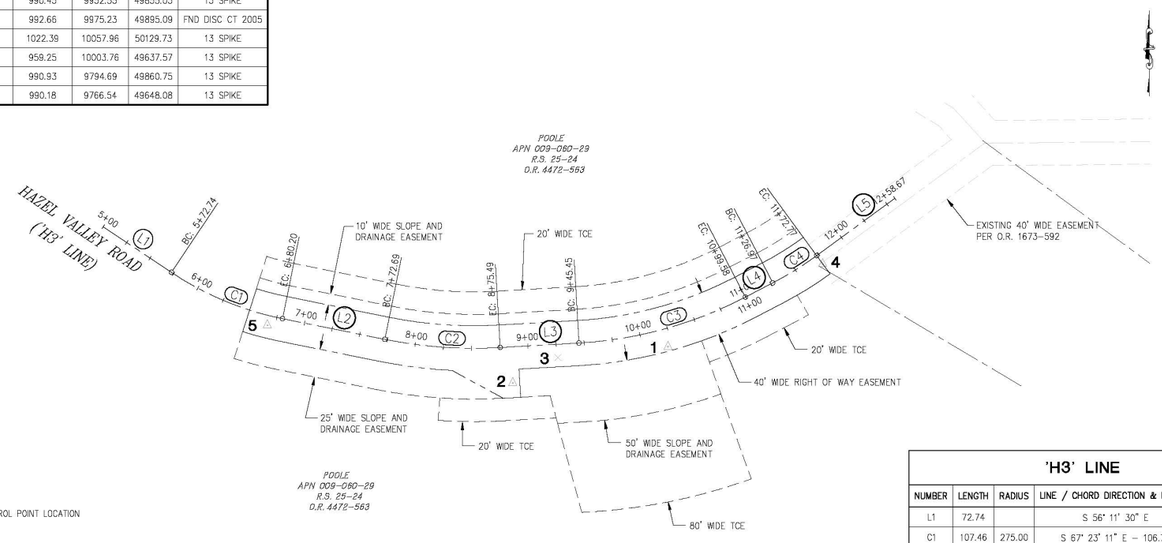
HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

TITLE SHEET

SHEET 1 OF 41

Drawing name: C:\Civil 3D Projects\77125 Hazel Valley at EID Canal\CADD Files\Sheets\Title.dwg Layout Tab: Title Mar 16,2018 - 10:33am BRichards

CONTROL TABLE				
POINT #	ELEVATION	NORTHING	EASTING	DESCRIPTION
1	1000.00	9984.61	49992.72	1.3 MAG
2	990.45	9952.55	49855.03	1.3 SPIKE
3	992.65	9975.23	49895.09	FND DISC CT 2005
4	1022.39	10057.96	50129.73	1.3 SPIKE
5	959.25	10003.76	49637.57	1.3 SPIKE
7	990.93	9794.69	49860.75	1.3 SPIKE
8	990.18	9766.54	49648.08	1.3 SPIKE



HAZEL VALLEY ROAD
'H3' LINE
SCALE: 1"=40'

'H3' LINE				
NUMBER	LENGTH	RADIUS	LINE / CHORD DIRECTION & LENGTH	DELTA
L1	72.74		S 56° 11' 30" E	
C1	107.46	275.00	S 67° 23' 11" E – 106.78	22° 23' 23"
L2	92.49		S 78° 34' 52" E	
C2	102.81	400.00	S 85° 56' 39" E – 102.52	14° 43' 33"
L3	69.96		N 86° 41' 35" E	
C3	154.13	355.00	N 74° 35' 46" E – 152.98	24° 11' 37"
L4	27.39		N 62° 29' 58" E	
C4	45.80	300.00	N 58° 07' 33" E – 45.75	8° 44' 49"
L5	85.90		N 53° 45' 08" E	

△ TRIANGLE DENOTES CONTROL POINT LOCATION

HORIZONTAL DATUM

BEARINGS SHOWN HEREON ARE BASED UPON FOUND MONUMENTS AS SHOWN ON RECORD OF SURVEY BOOK 25 PAGE 24 OFFICIAL RECORDS, EL DORADO COUNTY, STATE OF CALIFORNIA, WHICH BASIS IS TRUE NORTH.

VERTICAL DATUM

ELEVATIONS SHOWN HEREON ARE ASSUMED. CONTROL POINTS SHOWN FOR PROJECT CONTROL POINTS ARE TEMPORARY BENCH MARKS.

SURVEY AND CONTROL DIAGRAM
SCALE : AS NOTED

FOR REDUCED PLANS 0 1 2 ORIGINAL SCALE IS IN INCHES
Drawing name: C:\CAiA 3D Projects\77125 Hazel Valley at EID Canal\CADD Files\Sheets\CD-1.dwg Layout Tab: CD-1 Mar 16,2018 - 10:35am RRichards

REVISION
NUMBER | DATE | DESCRIPTION | BY

PROFESSIONAL LAND SURVEYOR — JOHN A. MADDOX — No. LS 8117 — STATE OF CALIFORNIA

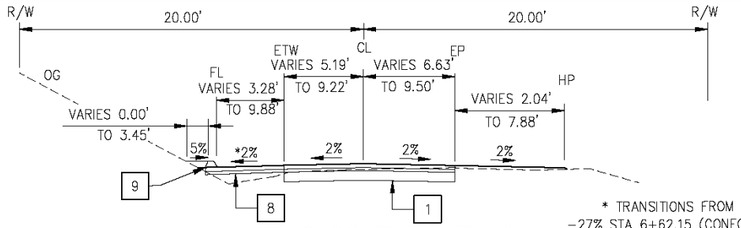
PREPARED UNDER THE SUPERVISION OF :
PROFESSIONAL LAND SURVEYOR
3-14-18
DATE

DESIGNED:	DRAWN:
LM	RR
CHECKED:	DATE:
DA	3/14/18
ROAD NUMBER:	
2403	

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

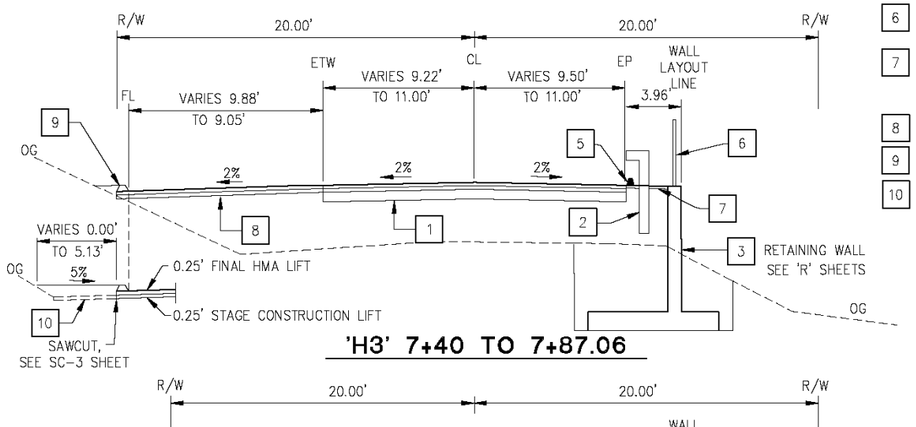
HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET
CD-1
02 OF 41
W.O. No.
77125

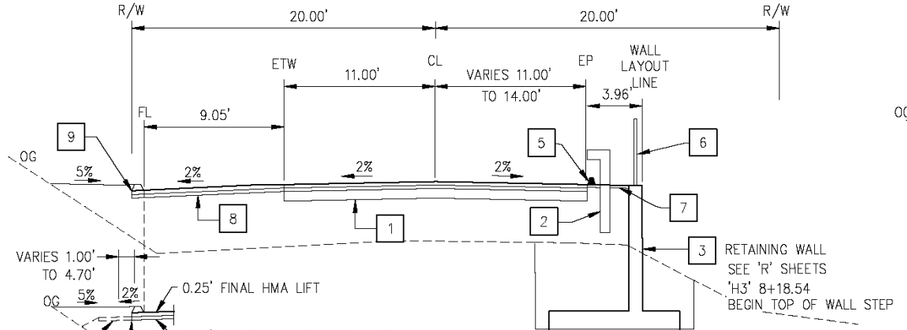


'H3' 6+62.15 TO 7+40

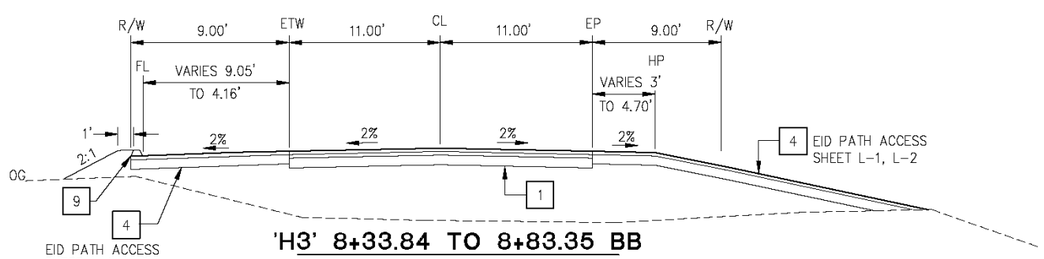
* TRANSITIONS FROM −27% STA 6+62.15 (CONFORM) TO −2% STA 6+91.01



'H3' 7+40 TO 7+87.06



'H3' 7+87.06 TO 8+33.84

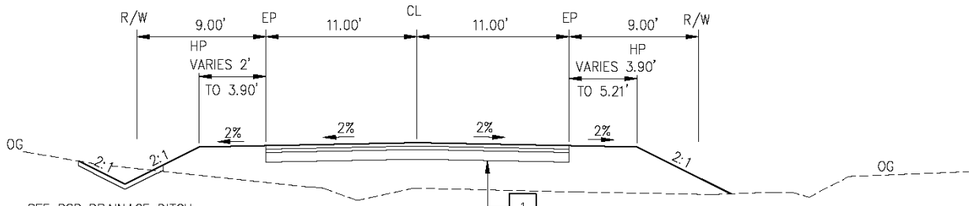


'H3' 8+33.84 TO 8+83.35 BB

CONSTRUCTION NOTES:

1. 0.5' HMA (TYPE A) / 0.7' AB (CLASS 2)
2. MBGR, STD A77N3, DETAIL C
3. TYPE 1 WALL, STD B3-1A
4. 0.25' HMA (TYPE A) / 0.7' AB (CLASS 2)
5. HMA DIKE (TYPE F), STD A87B
6. CABLE RAILING PER STD B11-47
7. VEGETATION CONTROL PER STD A77N5 AND A77N6 (MINOR CONCRETE)
8. 0.50' HMA (TYPE A)
9. TYPE A HMA DIKE, STD A87B
10. 0.25' TEMPORARY HMA WIDENING, REMOVED UNDER STAGE 3 CONSTRUCTION

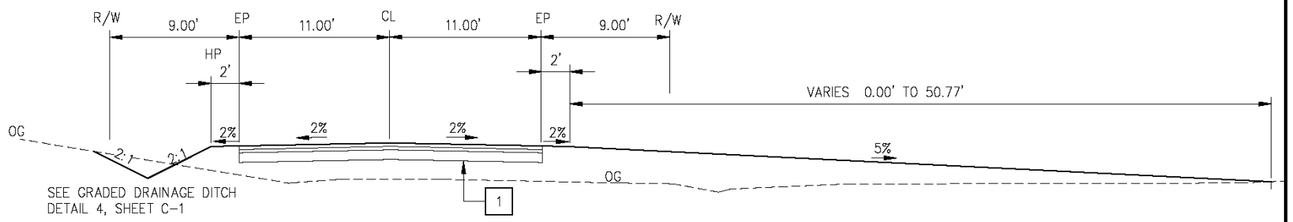
BRIDGE PLANS
'H3' 8+83.35 BB TO 9+33.35 EB



SEE RSP DRAINAGE DITCH DETAIL 1, SHEET C-1

SEE SHEET EC-1 FOR ROLLED EROSION CONTROL PRODUCT LIMITS

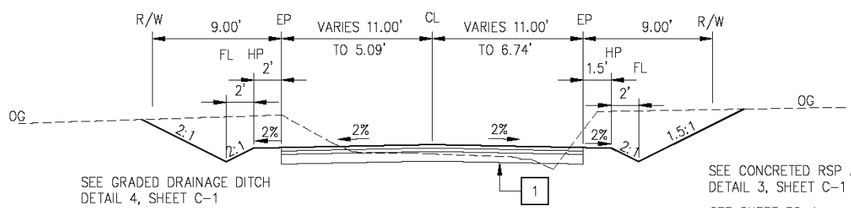
'H3' 9+33.35 EB TO 9+60
'H3' 10+40 TO 10+65



SEE GRADED DRAINAGE DITCH DETAIL 4, SHEET C-1

SEE SHEET EC-1 FOR ROLLED EROSION CONTROL PRODUCT LIMITS

'H3' 9+60 TO 10+40



SEE GRADED DRAINAGE DITCH DETAIL 4, SHEET C-1

SEE SHEET EC-1 FOR ROLLED EROSION CONTROL PRODUCT LIMITS

'H3' 10+65 TO 11+50.45

SEE CONCRETED RSP AT GMP DETAIL 3, SHEET C-1

SEE SHEET EC-1 FOR ROLLED EROSION CONTROL PRODUCT LIMITS

TYPICAL SECTIONS
SCALE : NONE

ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D Projects\77125 Hazel Valley at EID Canal\CADD Files\Sheets\X-1.dwg Layout Tab: X-1 Mar 16,2018 - 8:12am BRichards

0 1 2

FOR REDUCED PLANS

REVISION			
NUMBER	DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL ENGINEER — DWIGHT G. ANDERSON — No. 69999 — License Expires 9-30-18 — CIVIL — STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF :
Dwight D. Anderson
REGISTERED CIVIL ENGINEER
3-14-18
DATE:

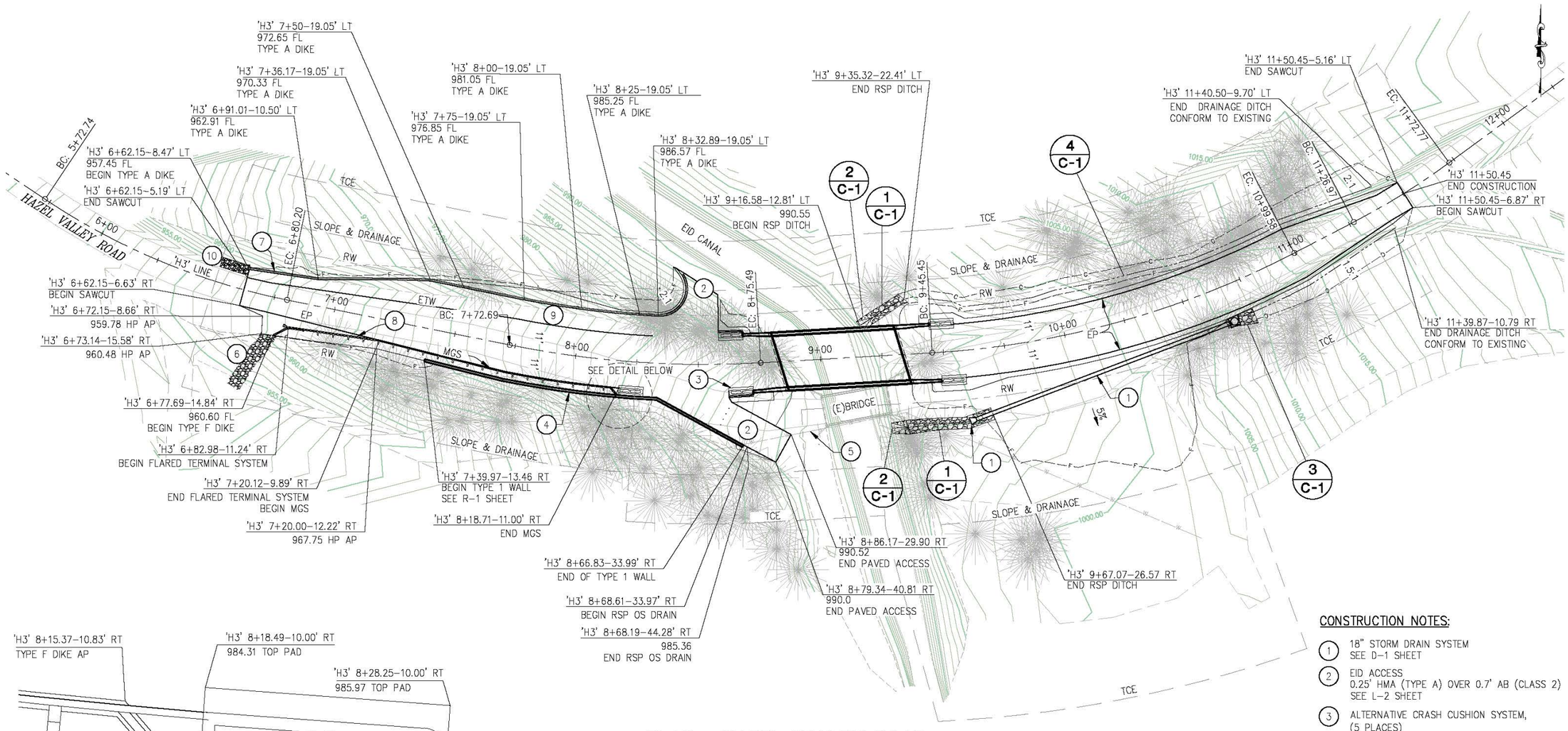
DESIGNED:	DRAWN:
DA	RR
CHECKED:	DATE:
CG	3/14/18
ROAD NUMBER:	2403

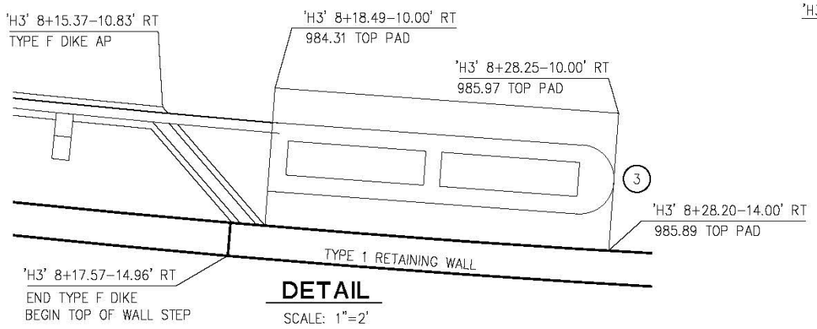
EL DORADO COUNTY — CALIFORNIA

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET **X-1**
03 OF 41
W.O. No. **77125**





DETAIL

SCALE: 1"=2'

PLAN - HAZEL VALLEY ROAD

SCALE: 1"=20'

CONSTRUCTION NOTES:

1. 18" STORM DRAIN SYSTEM SEE D–1 SHEET
2. EID ACCESS 0.25' HMA (TYPE A) OVER 0.7' AB (CLASS 2) SEE L–2 SHEET
3. ALTERNATIVE CRASH CUSHION SYSTEM, (5 PLACES)
4. RETAINING WALL TYPE 1, PER B3–1A SEE R–1 SHEET
5. RELOCATE 1¼" PRIVATE WATERLINE SEE W–1 SHEET
6. RSP OVERSIDE DRAIN SEE D–2 SHEET
7. TYPE A HMA DIKE
8. TYPE F HMA DIKE
9. 0.50' HMA (TYPE A)
10. RSP, SEE D–2 SHEET

LAYOUT
SCALE : AS NOTED

ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D Projects\77125 Hazel Valley at EID Canal\CADD Files\Sheets\L–1.dwg Layout Tab: L–1 Apr 06,2018 – 7:29am BRichards
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REVISION				
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REGISTERED PROFESSIONAL ENGINEER — DWIGHT G. ANDERSON — No. 69999 — License Expires 9–30–18 — CIVIL — STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF :
Dwight D. Anderson
REGISTERED CIVIL ENGINEER 3–14–17
DATE:

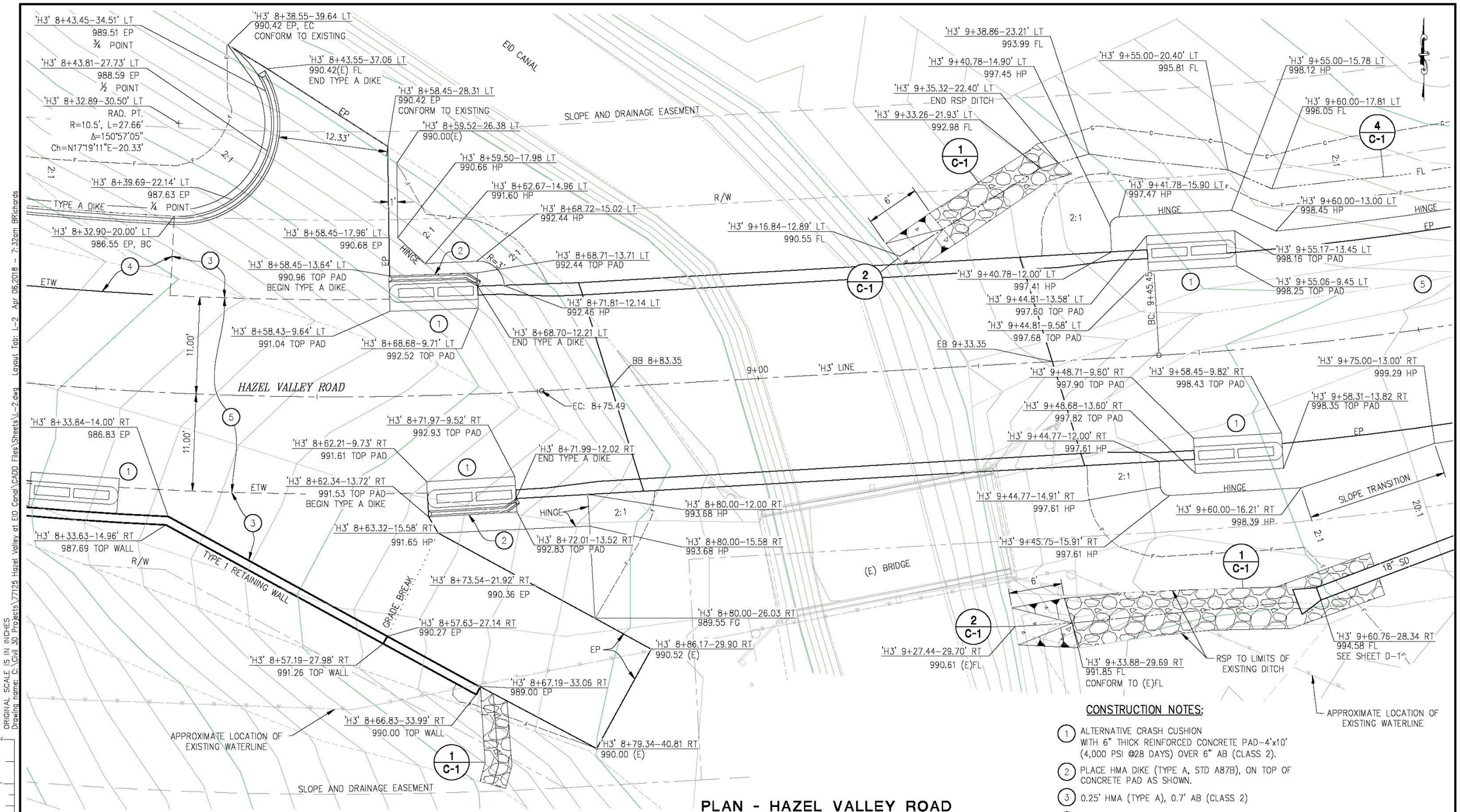
DESIGNED:	DRAWN:
DA	RR
CHECKED:	DATE:
CG	3/14/16
ROAD NUMBER:	
2403	

EL DORADO COUNTY — CALIFORNIA

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET
L-1
04 OF 41
W.O. No. **77125**



PLAN - HAZEL VALLEY ROAD

SCALE: 1"=5'

CONSTRUCTION NOTES:

1. ALTERNATIVE CRASH CUSHION WITH 6" THICK REINFORCED CONCRETE PAD–4'x10' (4,000 PSI @28 DAYS) OVER 6" AB (CLASS 2).
2. PLACE HMA DIKE (TYPE A, STD A87B), ON TOP OF CONCRETE PAD AS SHOWN.
3. 0.25' HMA (TYPE A), 0.7' AB (CLASS 2)
4. 0.50' HMA (TYPE A)
5. 0.50' HMA (TYPE A), 0.7' AB (CLASS 2)

LAYOUT SCALE : AS NOTED

ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D Projects\77125 Hazel Valley at EID Canal\CADD Files\Sheets\L-2.dwg Layout Tab: L-2 Apr 06,2018 - 7:32am BRichards

FOR REDUCED PLANS

REVISION NUMBER	DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL ENGINEER — DWIGHT G. ANDERSON — No. 69999 — License Expires 9-30-18 — CIVIL — STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF :
Dwight D. Anderson
REGISTERED CIVIL ENGINEER
DATE: 3-14-18

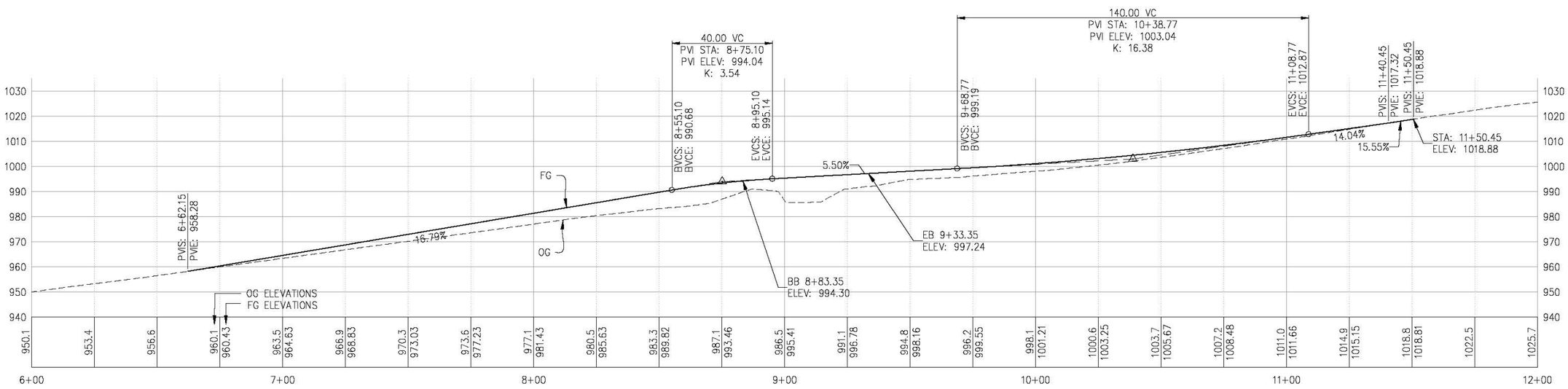
DESIGNED:	DRAWN:
DA	RR
CHECKED:	DATE:
CG	3/14/18
ROAD NUMBER:	2403

EL DORADO COUNTY — CALIFORNIA

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL BRIDGE REPLACEMENT

SHEET L-2
05 OF 41
W.O. No. 77125



PROFILE - HAZEL VALLEY ROAD

SCALE: 1"=20' H,V

PROFILE
SCALE : AS NOTED

FOR REDUCED PLANS
0 1 2
ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D Projects\77125 Hazel Valley at EID Canal\CAD Files\Sheets\P-1.dwg Layout Tab: P-1 Mar 16,2018 - 10:38am BRichards

REVISION				
NUMBER	DATE	DESCRIPTION	BY	

REGISTERED PROFESSIONAL ENGINEER
DWIGHT G. ANDERSON
No. 69999
License Expires 9-30-18
CIVIL
STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF :
Dwight D. Anderson
REGISTERED CIVIL ENGINEER
3-14-18
DATE:

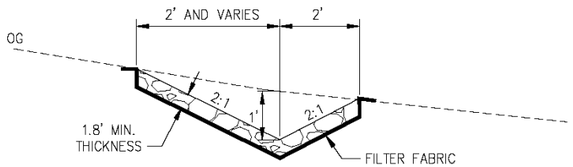
DESIGNED:	DRAWN:
DA	RR
CHECKED:	DATE:
CG	3/14/18
ROAD NUMBER:	
2403	

EL DORADO COUNTY CALIFORNIA

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

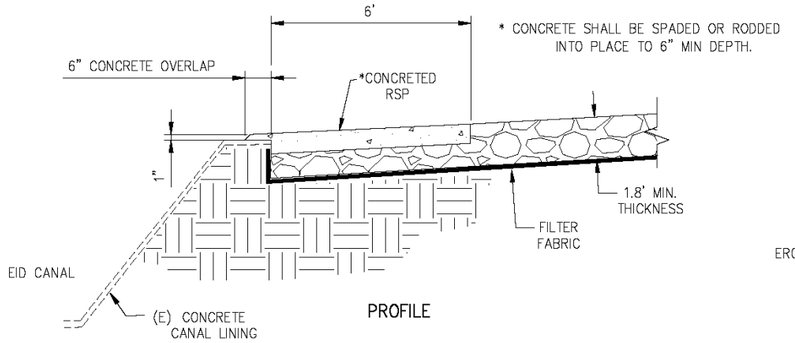
SHEET
P-1
06 OF 41
W.O. No.
77125



SECTION

1 DETAIL - RSP DRAINAGE DITCH

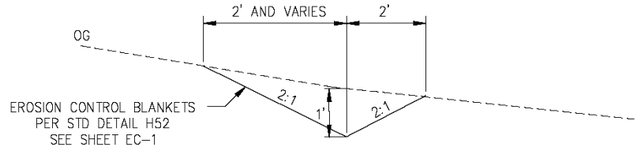
RSP, No. 1 BACKING, TYP N.T.S..



PROFILE

2 DETAIL - CONCRETED RSP

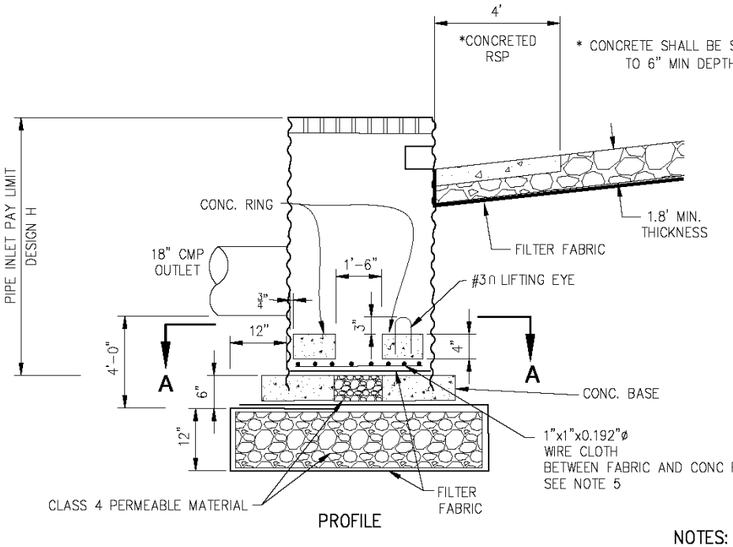
RSP, No. 1 BACKING, TYP N.T.S..



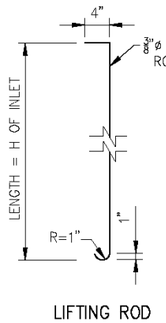
SECTION

4 DETAIL - GRADED DRAINAGE DITCH

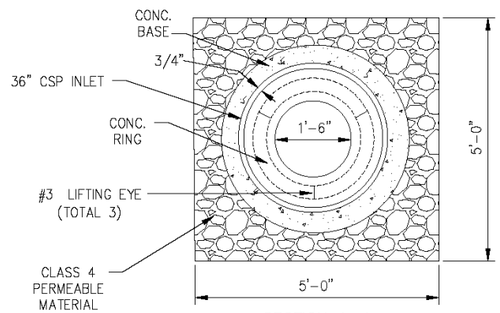
N.T.S.



PROFILE

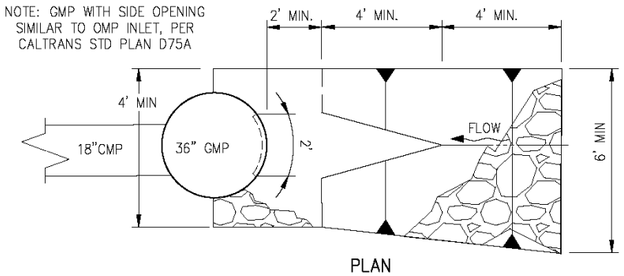


LIFTING ROD



SECTION A-A

TRANSITION V-GUTTER TO TRAPEZOIDAL GUTTER



PLAN

NOTES:

1. FOR DETAILS NOT SHOWN, SEE STD PLAN D75A AND D77B.
2. MANUFACTURER OF PRECAST PIPE INLETSAND TRAP SHALL PROVIDE SHOP DRAWINGS AND CALCULATIONS OF ALL PRECAST ELEMENTS FOR REVIEW AND APPROVAL BY THE ENGINEER.
3. SEE DRAINAGE PROFILE FOR FLOWLINE ELEVATION, INLET TYPE, "H", AND GRATE STATION, OFFSET AND ELEVATION.
4. LIFTING WIRE AND CLOTH SHALL BE TYPE 316 OR 304 STAINLESS STEEL.
5. WIRE CLOTH MUST BE HOT-DIPPED GALVANIZED OR STAINLESS STEEL.
6. SEE PIPE INLETS LADDER AND TRASH RACK DETAILS, STD PLAN D75C.

3 DETAIL - CONCRETED RSP AT GMP

RSP, No. 1 BACKING N.T.S..

CONSTRUCTION DETAILS
SCALE : AS NOTED

ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D Projects\77125 Hazel Valley at EID Canal\CADD Files\Sheets\C-1.dwg Layout Tab: C-1 Mar 16,2018 - 10:40am BRichards

FOR REDUCED PLANS

REVISION NUMBER	DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL ENGINEER DWIGHT G. ANDERSON No. 69999 License Expires 9-30-18 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF : Dwight D. Anderson
REGISTERED CIVIL ENGINEER 3-14-18
DATE:

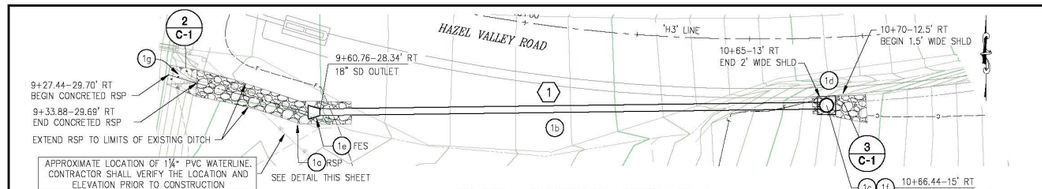
DESIGNED:	DRAWN:
DA	RR
CHECKED:	DATE:
CG	3/14/18
ROAD NUMBER:	2403

EL DORADO COUNTY CALIFORNIA

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET C-1
07 OF 41
W.O. No. 77125

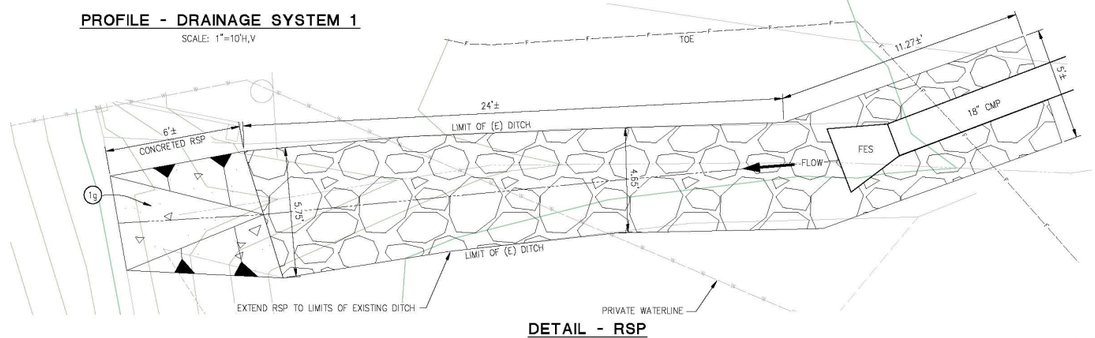


PLAN - DRAINAGE SYSTEM 1

SCALE: 1"=10'

PROFILE - DRAINAGE SYSTEM 1

SCALE: 1"=10'H,V



DETAIL - RSP

ITEM 1g RSP

SCALE: 1"=2'

NOTES:

1. TRASH RACKS TO BE INSTALLED ON ALL SIDE OPENINGS PER STANDARD DETAIL D75C

THIS SHEET ACCURATE FOR DRAINAGE WORK ONLY

LAYOUT
DRAINAGE SYSTEM 1
SCALE : AS NOTED

REVISION				
NUMBER	DATE	DESCRIPTION	BY	

PREPARED UNDER THE SUPERVISION OF :
Dwight D. Anderson
REGISTERED CIVIL ENGINEER 3-14-18
DATE:

DESIGNED	DRAWN
DA	RR
CHECKED	DATE
CH	3/14/18
ROAD NUMBER	
2403	

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET
D-1
08 OF 41
REG. No. 77125

FOR REDUCED PLANS 0 1 2 ORIGINAL SCALE IS IN INCHES
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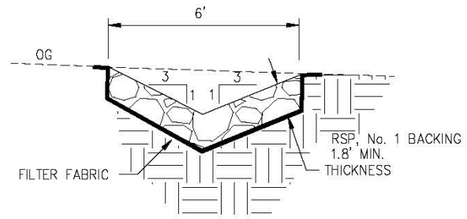

SECTION A-A
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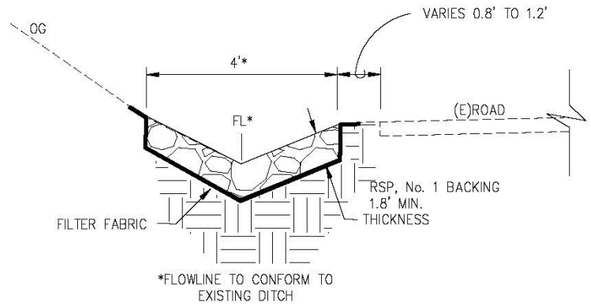

SECTION B-B
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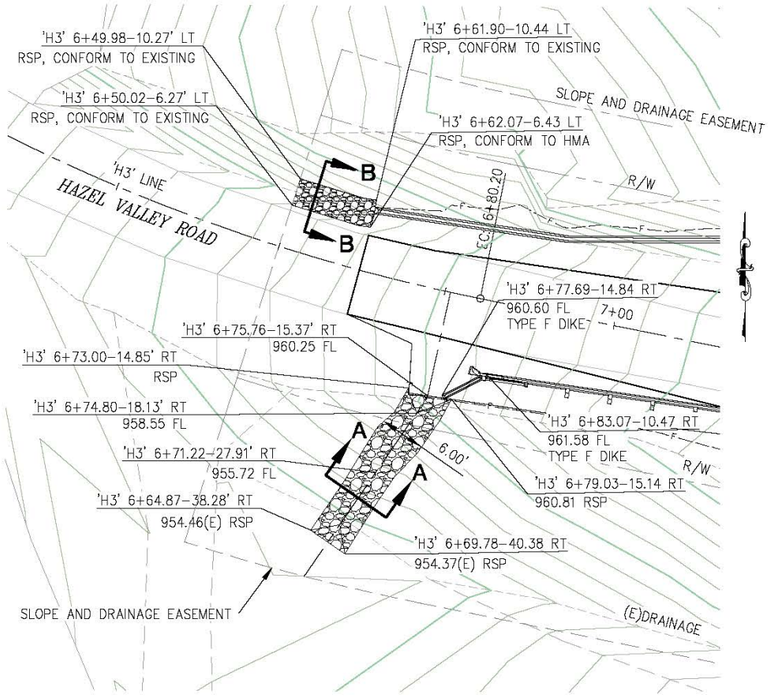
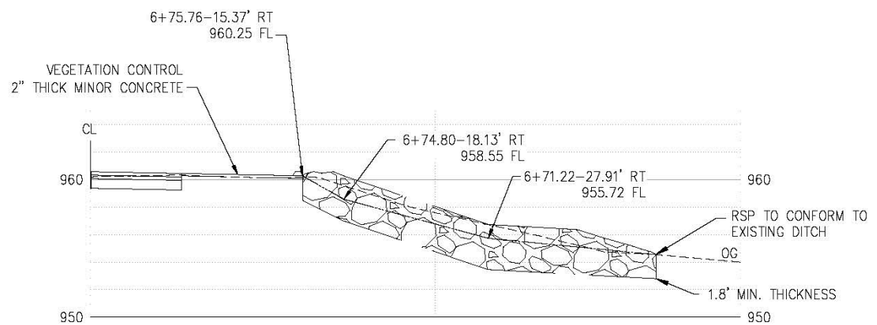


PLAN - OVERSIDE DRAIN
RSP OVERSIDE DRAIN SCALE: 1"=10'



PROFILE - OVERSIDE DRAIN
RSP, No. 1 BACKING SCALE: 1"=5'H,V

LAYOUT
DRAINAGE SYSTEM 2
SCALE : AS NOTED

THIS SHEET ACCURATE FOR DRAINAGE WORK ONLY

REVISION			
NUMBER	DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL ENGINEER DWIGHT G. ANDERSON No. 69999 License Expires 9-30-18 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF :
Dwight D. Anderson
REGISTERED CIVIL ENGINEER 3-14-18
DATE:

DESIGNED:	DRAWN:
DA	RR
CHECKED:	DATE:
CH	3/14/18
ROAD NUMBER:	2403

EL DORADO COUNTY CALIFORNIA

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET D-2
09 OF 41
W.O. No. 77125

ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D Projects\77125 Hazel Valley at EID Canal\CADD Files\Sheets\D-2.dwg Layout Tab: D-2 Mar 16,2018 - 8:37am BRichards
0 1 2
FOR REDUCED PLANS

MISC ROCK SLOPE PROTECTION			
DESCRIPTION/STATION	RSP (No.1)	FILTER FABRIC	CONCRETE
OVERSIDE DRAIN 6+50.02–6.27' LT TO 6+62.07–6.43' LT	2.9 CY	12.5 SY	
OVERSIDE DRAIN 6+75.76–15.37' RT TO 6+67.33–39.32' RT	9.6 CY	34.4 SY	
OVERSIDE DRAIN 8+68.61–33.97' RT TO 8+68.19–44.28' RT	2.1 CY	11.5 SY	
DRAINAGE DITCH 9+16.58–12.81' LT TO 9+35.32–22.41' LT	6.0 CY	9 SY	6.5' CONCRETED RSP 0.6 CY

DRAINAGE SYSTEM 1

PLAN SHEET NO.	SYSTEM NO.	DRAINAGE UNIT	36" GMP	TYPE 36R GRATE	18" CMP	18" METAL FES	RSP (No.1)	RSP FABRIC	RSP CONCRETE	CALTRANS STANDARD PLAN OR DETAIL REFERENCES	SLOPE	STATION	DRAINAGE UNIT	SYSTEM NO.	PLAN SHEET NO.
			EA	EA	LF	EA	CY	SY	CY						
D-1	1	a					10.6	28.4					a	1	D-1
		b			112'						*V.C.		b		
		c	1						1	D75A		'H3' 10+66.44–15.00' RT	c		
		d					3.4	8					d		
		e				1						'H3' 9+60.76–28.34' RT	e		
		f		1						D77B			f		
		g							1						
BID QUANTITY			1	1	112'	1	14	36.4	2						

* VERTCAL CURVE AND TANGENTS

THIS SHEET ACCURATE FOR DRAINAGE WORK ONLY

DRAINAGE QUANTITIES
SCALE : NONE

REVISION			
NUMBER	DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL ENGINEER
DWIGHT G. ANDERSON
No. 69999
License Expires 9-30-18
CIVIL
STATE OF CALIFORNIA

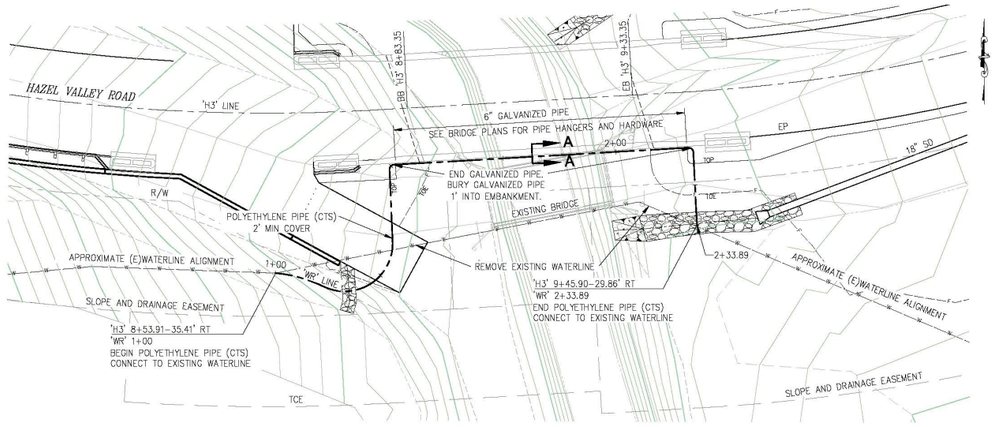
PREPARED UNDER THE SUPERVISION OF :
Dwight D. Anderson
REGISTERED CIVIL ENGINEER 3-14-18
DATE:

DESIGNED:	DRAWN:
DA	RR
CHECKED:	DATE:
CG	3/14/18
ROAD NUMBER:	
2403	

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET
D-3
10 OF 41
W.O. No. 77125



PLAN - WATERLINE RELOCATION

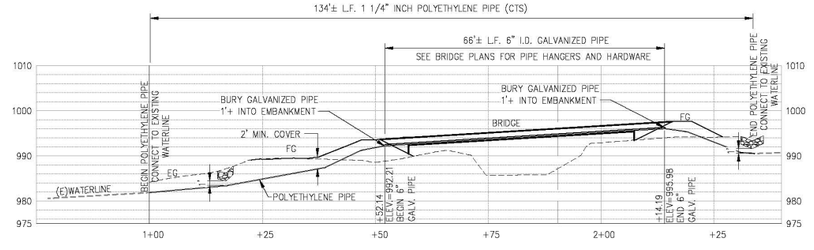
SCALE: 1"=10' H

THE 1 1/4" PVC WATERLINE, SHOWN ON THESE PLANS, IS THE APPROXIMATE LOCATION. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION PRIOR TO CONSTRUCTION.

DETAIL A-A

N.T.S.

POLYETHYLENE PIPE (CTS) WATERLINE TO BE INSULATED WITH FOAM PIPE INSULATION OR EQUAL. INSULATION TO BE SECURED IN PLACE WITH PLASTIC TIES AND EXTENDED 2'± BEYOND THE 6" GALVANIZED PIPE EMBANKMENTS. (APPROX. 70 L.F.)



PROFILE - WATERLINE RELOCATION

SCALE: 1"=10' H,V

THIS SHEET ACCURATE FOR UTILITY WORK ONLY

WATERLINE RELOCATION
SCALE : AS NOTED

ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D Projects\77125 Hazel Valley at EID Canal\CADD Files\Sheets\W-1.dwg Layout Tab: W-1 Nov 16,2018 - 8:51am RRichards
0 1 2
FOR REDUCED PLANS

REVISION				
NUMBER	DATE	DESCRIPTION	BY	

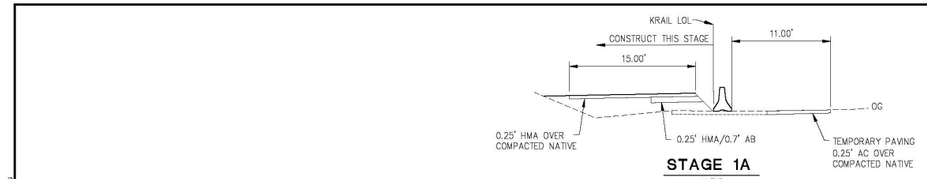
PREPARED UNDER THE SUPERVISION OF :
Dwight D. Anderson
REGISTERED CIVIL ENGINEER
3-14-18
DATE:

DESIGNED:	DRAWN:
DA	RR
CHECKED:	DATE:
CG	3/14/18
ROAD NUMBER:	
2403	

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

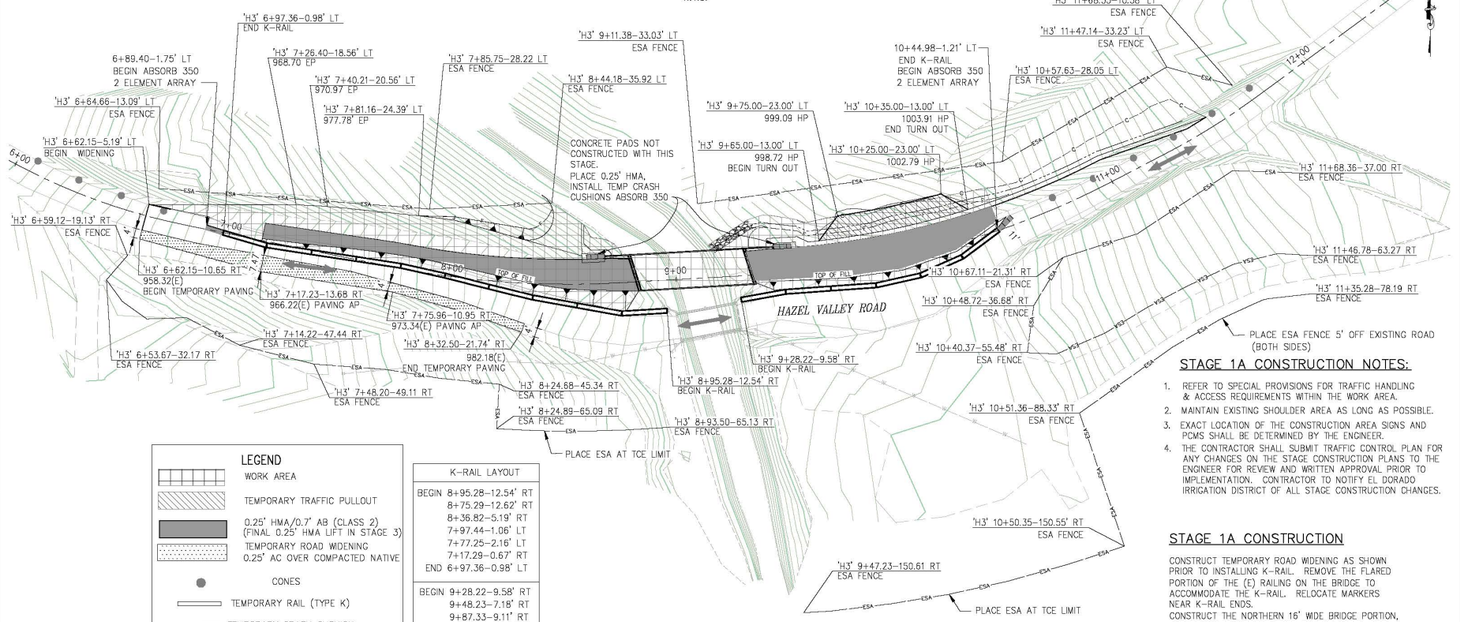
HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET
W-1
11 OF 41
W.O. No.
77125



STAGE 1A

N.T.S.



LEGEND

- WORK AREA
- TEMPORARY TRAFFIC PULLOUT
- 0.25' HMA/0.7' AB (CLASS 2) (FINAL 0.25' HMA LIFT IN STAGE 3)
- TEMPORARY ROAD WIDENING 0.25' AC OVER COMPACTED NATIVE
- CONES
- TEMPORARY RAIL (TYPE K)
- TEMPORARY CRASH CUSHION
- FLOW OF TRAFFIC

K-RAIL LAYOUT
BEGIN 8+95.28-12.54' RT
8+75.29-12.62' RT
8+36.82-5.19' RT
7+97.44-1.06' LT
7+77.25-2.16' LT
7+17.29-0.67' RT
END 6+97.36-0.98' LT
BEGIN 9+28.22-9.58' RT
9+48.23-7.18' RT
9+87.33-9.11' RT
10+06.85-8.72' RT
10+26.20-5.37' RT
END 10+44.98-1.21' LT

PLAN - HAZEL VALLEY

SCALE: 1"=20'

STAGE 1A CONSTRUCTION NOTES:

1. REFER TO SPECIAL PROVISIONS FOR TRAFFIC HANDLING & ACCESS REQUIREMENTS WITHIN THE WORK AREA.
2. MAINTAIN EXISTING SHOULDER AREA AS LONG AS POSSIBLE.
3. EXACT LOCATION OF THE CONSTRUCTION AREA SIGNS AND PCMS SHALL BE DETERMINED BY THE ENGINEER.
4. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLAN FOR ANY CHANGES ON THE STAGE CONSTRUCTION PLANS TO THE ENGINEER FOR REVIEW AND WRITTEN APPROVAL PRIOR TO IMPLEMENTATION. CONTRACTOR TO NOTIFY EL DORADO IRRIGATION DISTRICT OF ALL STAGE CONSTRUCTION CHANGES.

STAGE 1A CONSTRUCTION

CONSTRUCT TEMPORARY ROAD WIDENING AS SHOWN PRIOR TO INSTALLING K-RAIL. REMOVE THE FLARED PORTION OF THE (E) RAILING ON THE BRIDGE TO ACCOMMODATE THE K-RAIL. RELOCATE MARKERS NEAR K-RAIL ENDS.
CONSTRUCT THE NORTHERN 16' WIDE BRIDGE PORTION, AND DRAINAGE IMPROVEMENTS ON THE NORTH SIDE.
PLACE FILL FOR STAGE 2 ROADWAY.
CONSTRUCT NORTHERN ROAD APPROACHES.

STAGE CONSTRUCTION SCALE : 1" = 20'

ORIGINAL SCALE IS IN INCHES
FOR REDUCED PLANS
0 1 2
Drawing Name: C:\Civil 3D Projects\17215 Hazel Valley at EID Canal\CADD Files\Sheets\SC-1A.dwg Layout Tab: SC-1A Apr 06, 2018 - 7:35pm BRichards

REVISION				
NUMBER	DATE	DESCRIPTION	BY	

REGISTERED CIVIL ENGINEER — DWIGHT D. ANDERSON — No. 69999 — License Expires 6-30-19 — CIVIL — STATE OF CALIFORNIA

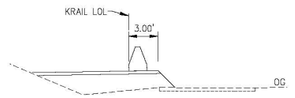
PREPARED UNDER THE SUPERVISION OF : Dwight D. Anderson
REGISTERED CIVIL ENGINEER — DATE: 3-14-18

DESIGNED:	DRAWN:
DA	RR
CHECKED:	DATE:
CG	3/14/18
ROAD NUMBER:	
2403	

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

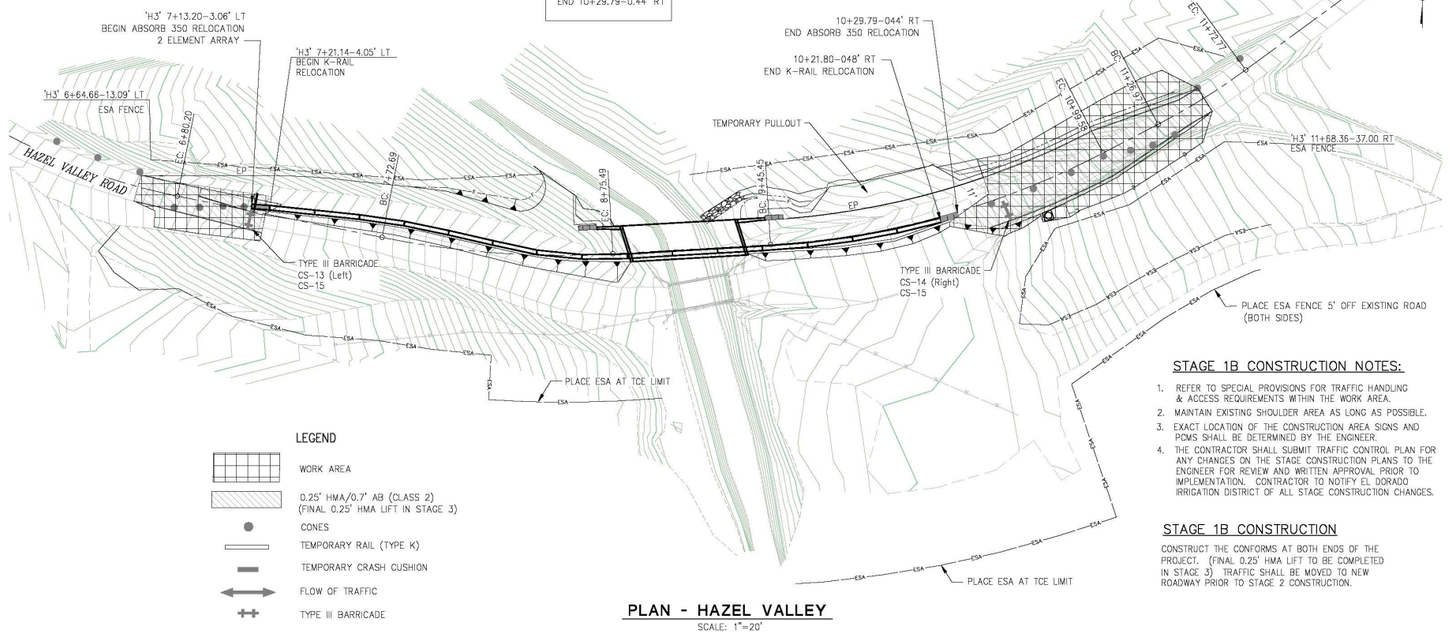
SHEET SC-1A 12 OF 41
W.O. No. 77125



K-RAIL

K-RAIL LAYOUT LINE
N.T.S.

K-RAIL LAYOUT	
BEGIN	7+13.20–3.06' LT
	7+21.19–4.05' LT
	7+61.09–7.86' LT
	7+81.38–8.88' LT
	8+01.82–7.81' LT
	8+22.00–5.36' LT
	8+41.93–2.16' LT
	8+61.90–0.20' LT
	8+81.89–0.48' RT
	9+41.89–0.43' RT
	9+61.87–0.44' RT
	9+81.85–0.43' RT
	10+01.82–0.46' RT
	10+21.80–0.48' RT
END	10+29.79–0.44' RT



PLAN - HAZEL VALLEY

SCALE: 1"=20'

STAGE 1B CONSTRUCTION NOTES:

1. REFER TO SPECIAL PROVISIONS FOR TRAFFIC HANDLING & ACCESS REQUIREMENTS WITHIN THE WORK AREA.
2. MAINTAIN EXISTING SHOULDER AREA AS LONG AS POSSIBLE.
3. EXACT LOCATION OF THE CONSTRUCTION AREA SIGNS AND PCMS SHALL BE DETERMINED BY THE ENGINEER.
4. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLAN FOR ANY CHANGES ON THE STAGE CONSTRUCTION PLANS TO THE ENGINEER FOR REVIEW AND WRITTEN APPROVAL PRIOR TO IMPLEMENTATION. CONTRACTOR TO NOTIFY EL DORADO IRRIGATION DISTRICT OF ALL STAGE CONSTRUCTION CHANGES.

STAGE 1B CONSTRUCTION

CONSTRUCT THE CONFORMS AT BOTH ENDS OF THE PROJECT. (FINAL 0.25' HMA LIFT TO BE COMPLETED IN STAGE 3) TRAFFIC SHALL BE MOVED TO NEW ROADWAY PRIOR TO STAGE 2 CONSTRUCTION.

STAGE CONSTRUCTION
SCALE : 1" = 20'

ORIGINAL SCALE IS IN INCHES
FOR REDUCED PLANS
0 1 2
Drawing name: C:\CAD\ 39 Projects\77125 Hazel Valley at EID Canal\CADD Files\Sheets\SC-1B.dwg Layout Tab: SC-1B Apr 06,2018 - 7:37am BRichards

REVISION				
NUMBER	DATE	DESCRIPTION	BY	

REGISTERED PROFESSIONAL ENGINEER — DWIGHT G. ANDERSON — No. 69999 — Licensee Expires 6-30-19 — CIVIL — STATE OF CALIFORNIA

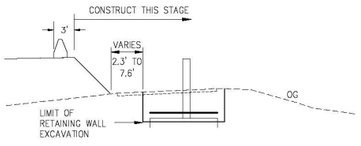
PREPARED UNDER THE SUPERVISION OF :
Dwight D. Anderson
REGISTERED CIVIL ENGINEER
3-14-18
DATE:

DESIGNED:	DRAWN:
DA	RR
CHECKED:	DATE:
CG	3/14/18
ROAD NUMBER:	
2403	

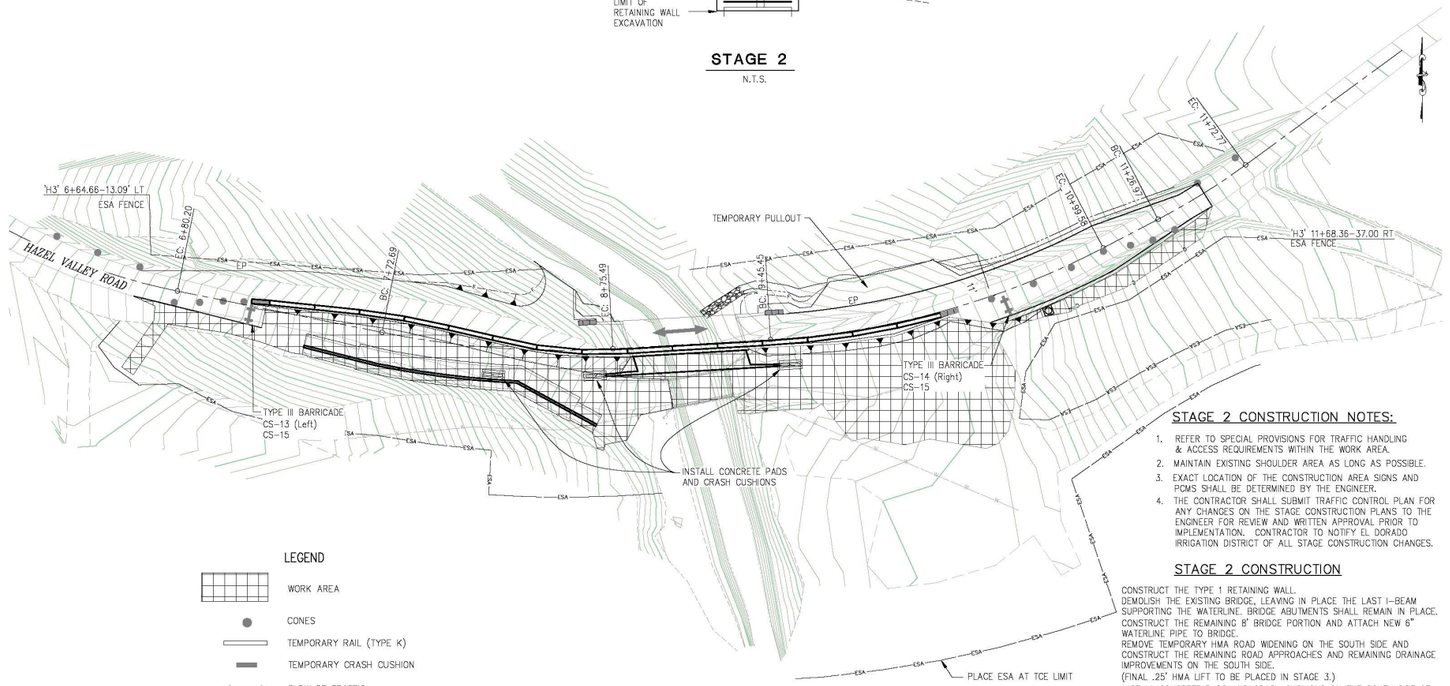
COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET
SC-1B
13 OF 41
W.O. No.
77125



STAGE 2
N.T.S.



LEGEND

- WORK AREA
- CONES
- TEMPORARY RAIL (TYPE K)
- TEMPORARY CRASH CUSHION
- FLOW OF TRAFFIC
- TYPE III BARRICADE

PLAN - HAZEL VALLEY
SCALE: 1"=20'

STAGE 2 CONSTRUCTION NOTES:

1. REFER TO SPECIAL PROVISIONS FOR TRAFFIC HANDLING & ACCESS REQUIREMENTS WITHIN THE WORK AREA.
2. MAINTAIN EXISTING SHOULDER AREA AS LONG AS POSSIBLE.
3. EXACT LOCATION OF THE CONSTRUCTION AREA SIGNS AND PCMS SHALL BE DETERMINED BY THE ENGINEER.
4. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLAN FOR ANY CHANGES ON THE STAGE CONSTRUCTION PLANS TO THE ENGINEER FOR REVIEW AND WRITTEN APPROVAL PRIOR TO IMPLEMENTATION. CONTRACTOR TO NOTIFY EL DORADO IRRIGATION DISTRICT OF ALL STAGE CONSTRUCTION CHANGES.

STAGE 2 CONSTRUCTION

CONSTRUCT THE TYPE 1 RETAINING WALL.
DEMOLISH THE EXISTING BRIDGE, LEAVING IN PLACE THE LAST I-BEAM SUPPORTING THE WATERLINE. BRIDGE ABUTMENTS SHALL REMAIN IN PLACE.
CONSTRUCT THE REMAINING 8' BRIDGE PORTION AND ATTACH NEW 6" WATERLINE PIPE TO BRIDGE.
REMOVE TEMPORARY HMA ROAD WIDENING ON THE SOUTH SIDE AND CONSTRUCT THE REMAINING ROAD APPROACHES AND REMAINING DRAINAGE IMPROVEMENTS ON THE SOUTH SIDE.
(FINAL .25' HMA LIFT TO BE PLACED IN STAGE 3.)
INSTALL CONCRETE PADS AND CRASH CUSHIONS ON THE SOUTH SIDE OF THE BRIDGE.
INSTALL MIDWEST GUARD RAIL SYSTEM.

STAGE CONSTRUCTION
SCALE : 1" = 20'

ORIGINAL SCALE IS IN INCHES
FOR REDUCED PLANS
0 1 2
Drawing Name: C:\Civil 3D Projects\77125 Hazel Valley at EID Canal\C3D Files\Sheets\SC-2.dwg Layout Tab: SC-2 Apr 06, 2018 - 7:54am BRichards

REVISION				
NUMBER	DATE	DESCRIPTION	BY	

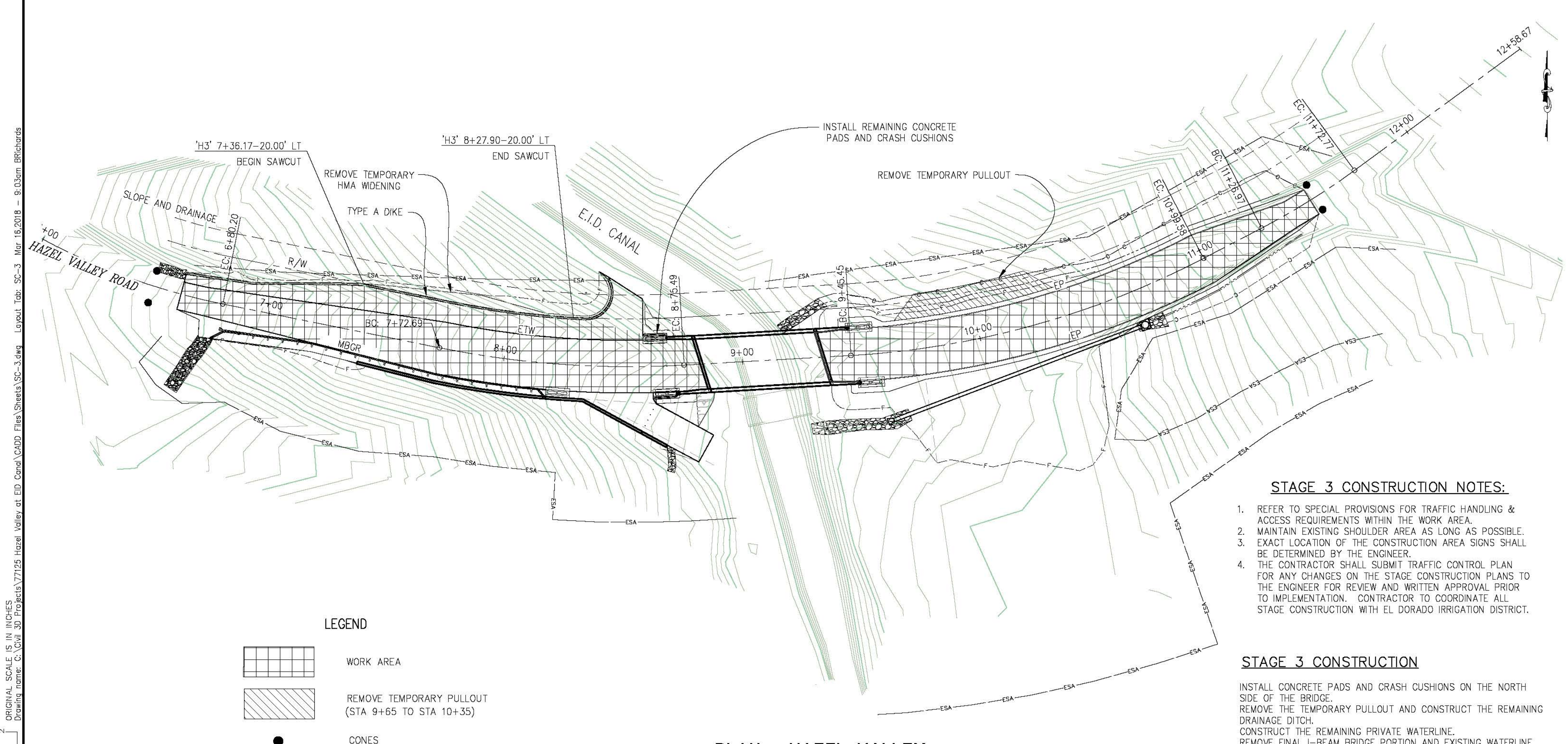
PREPARED UNDER THE SUPERVISION OF :
Dwight D. Anderson
REGISTERED CIVIL ENGINEER 3-14-18
DATE

DESIGNED:	DRAWN:
DA	RR
CHECKED:	DATE:
CG	3/14/18
ROAD NUMBER:	
2403	

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET
SC-2
14 OF 41
W.O. No.
77125



PLAN - HAZEL VALLEY

SCALE: 1"=20'

STAGE 3 CONSTRUCTION NOTES:

1. REFER TO SPECIAL PROVISIONS FOR TRAFFIC HANDLING & ACCESS REQUIREMENTS WITHIN THE WORK AREA.
2. MAINTAIN EXISTING SHOULDER AREA AS LONG AS POSSIBLE.
3. EXACT LOCATION OF THE CONSTRUCTION AREA SIGNS SHALL BE DETERMINED BY THE ENGINEER.
4. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLAN FOR ANY CHANGES ON THE STAGE CONSTRUCTION PLANS TO THE ENGINEER FOR REVIEW AND WRITTEN APPROVAL PRIOR TO IMPLEMENTATION. CONTRACTOR TO COORDINATE ALL STAGE CONSTRUCTION WITH EL DORADO IRRIGATION DISTRICT.

STAGE 3 CONSTRUCTION

INSTALL CONCRETE PADS AND CRASH CUSHIONS ON THE NORTH SIDE OF THE BRIDGE.
REMOVE THE TEMPORARY PULLOUT AND CONSTRUCT THE REMAINING DRAINAGE DITCH.
CONSTRUCT THE REMAINING PRIVATE WATERLINE.
REMOVE FINAL I-BEAM BRIDGE PORTION AND EXISTING WATERLINE. BRIDGE ABUTMENTS SHALL REMAIN IN PLACE.
SAWCUT TEMPORARY HMA WIDENING ALONG RIGHT OF WAY LINE AS SHOWN AND REMOVE HMA PAVING.
PLACE FINAL 0.25' HMA LIFT UNDER REVERSE TRAFFIC CONTROL. PLACE TYPE A DIKE, SEE SHEET L-1. PLACE FILL AND GRADE AREA BEHIND DIKE AS SHOWN ON SHEET X-1.

STAGE CONSTRUCTION
SCALE : 1" = 20'

ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS 0 1 2

REVISION	NUMBER	DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL ENGINEER DWIGHT G. ANDERSON No. 69999 License Expires 9-30-18 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF : Dwight G. Anderson
REGISTERED CIVIL ENGINEER 3-14-18 DATE:

DESIGNED: DA	DRAWN: RR
CHECKED: CG	DATE: 3/14/18
ROAD NUMBER: 2403	

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL BRIDGE REPLACEMENT

SHEET **SC-3**
15 OF 41
W.O. No. **77125**

TEMPORARY RAIL

TYPE K SHALL INCLUDE TOP MOUNTED REFLECTORS

LOCATION 'H3' LINE	L.F.	ITEM DESCRIPTION
STAGE 1 6+97 – 8+95	200	TEMPORARY RAILING (TYPE K)
STAGE 1 9+27 – 10+45	80	TEMPORARY RAILING (TYPE K)
STAGE 2 7+21 – 10+21	300	RELOCATE CONCRETE BARRIER (TYPE K) TEMPORARY RAILING (TYPE K)

NOTE – STAGE 2 K-RAIL TO BE PINNED TO BRIDGE DECK PER SPECIAL PROVISIONS

STAGE 1B CONSTRUCTION TYPE III BARRICADES

LOCATION 'H3' LINE	EA.
STA 7+13.64–4.00' RT	1
STA 10+50.65–6.00' RT	1
TOTAL	2

STAGE 1A CONSTRUCTION TEMPORARY CRASH CUSHIONS

LOCATION 'H3' LINE	EA.
STA 6+89.33–4.71' LT	1
STA 10+45.19–0.23' LT	1
TOTAL	2

STAGE 1B CONSTRUCTION TEMPORARY CRASH CUSHIONS

LOCATION 'H3' LINE	EA.
STA 7+13.43–2.67' LT (RELOCATED FROM STAGE 1)	1
STA 10+21.76–1.46' RT (RELOCATED FROM STAGE 1)	1
TOTAL	2

STAGE CONSTRUCTION
SCALE : NONE

ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D Projects\77125 Hazel Valley at EID Canal\C3D Files\Sheets\SC-4.dwg Layout Tab: SC-4 Apr 06,2018 - 7:56am BRichards

FOR REDUCED PLANS 0 1 2

REVISION NUMBER	DATE	DESCRIPTION	BY

PREPARED UNDER THE SUPERVISION OF :
Dwight D. Anderson
REGISTERED CIVIL ENGINEER 3-14-18
DATE:

DESIGNED:	DRAWN:
DA	RR
CHECKED:	DATE:
CG	3/14/18
ROAD NUMBER:	
2403	

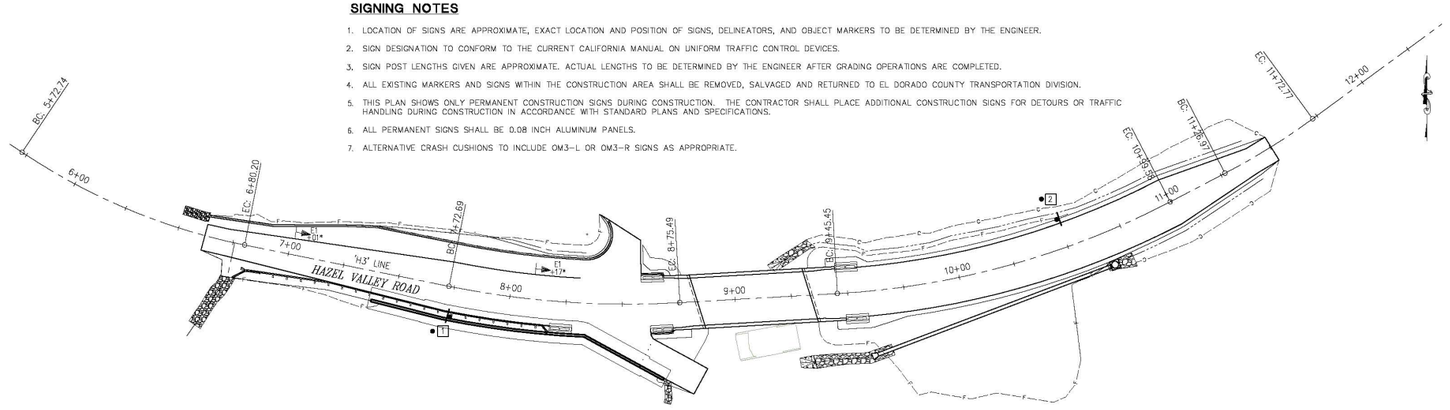
COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET
SC-4
16 OF 41
W.O. No.
77125

SIGNING NOTES

1. LOCATION OF SIGNS ARE APPROXIMATE, EXACT LOCATION AND POSITION OF SIGNS, DELINEATORS, AND OBJECT MARKERS TO BE DETERMINED BY THE ENGINEER.
2. SIGN DESIGNATION TO CONFORM TO THE CURRENT CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
3. SIGN POST LENGTHS GIVEN ARE APPROXIMATE. ACTUAL LENGTHS TO BE DETERMINED BY THE ENGINEER AFTER GRADING OPERATIONS ARE COMPLETED.
4. ALL EXISTING MARKERS AND SIGNS WITHIN THE CONSTRUCTION AREA SHALL BE REMOVED, SALVAGED AND RETURNED TO EL DORADO COUNTY TRANSPORTATION DIVISION.
5. THIS PLAN SHOWS ONLY PERMANENT CONSTRUCTION SIGNS DURING CONSTRUCTION. THE CONTRACTOR SHALL PLACE ADDITIONAL CONSTRUCTION SIGNS FOR DETOURS OR TRAFFIC HANDLING DURING CONSTRUCTION IN ACCORDANCE WITH STANDARD PLANS AND SPECIFICATIONS.
6. ALL PERMANENT SIGNS SHALL BE 0.08 INCH ALUMINUM PANELS.
7. ALTERNATIVE CRASH CUSHIONS TO INCLUDE OM3-L OR OM3-R SIGNS AS APPROPRIATE.



PLAN - HAZEL VALLEY ROAD

SCALE: 1"=20'

SIGN QUANTITIES

SIGN NO.	SIGN	CALIFORNIA MUTCD CODE	PANEL SIZE (INCHES)	POST SIZE & LENGTH		ROADSIDE SIGNS		PROPOSED LOCATION (APPROXIMATELY)
				4" X 4"	1.5" X 3"	INSTALL (STRAP & SADDLE) EA	ONE POST (WOOD) EA	
1	"NARROW BRIDGE"	W5-2	36	15			1	'H3' 7+75-12.5' RT
2	"NARROW BRIDGE"	W5-2	36	15			1	'H3' 10+50-13' LT
					TOTAL		2	

DELINEATORS	
LOCATION	TYPE E, CLASS 1
'H3' 7+01-13' LT TO 8+17-13' LT	5

* PLACE 5 CLASS 1 FLEXIBLE DELINEATORS, TYPE E, 2' OUTSIDE OF ETW FROM 'H3' 7+01 TO 8+17. SPACING OF DELINEATORS SHOULD BE EQUAL AND MUST NOT EXCEED 40' EXACT SPACING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

SIGNING LEGEND

- INSTALL SIGN
- PLACE NEW ROADSIDE SIGN(S) AND POST(ONE POST)
- CLASS 1 FLEXIBLE DELINEATOR

THIS SHEET ACCURATE FOR SIGNING WORK ONLY

SIGNING
SCALE: AS NOTED

ORIGINAL SCALE IS IN INCHES
FOR REDUCED PLANS
Drawing name: C:\Civil 3D Projects\77125 Hazel Valley at EID Canal\0400 Plan Sheets\SPD-1.dwg Layout Tab: SPD-1 Mar 16,2018 - 9:08am BRichards

REVISION			
NUMBER	DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL ENGINEER — DWIGHT D. ANDERSON — No. 69999 — License Expires 9-30-18 — CIVIL — STATE OF CALIFORNIA

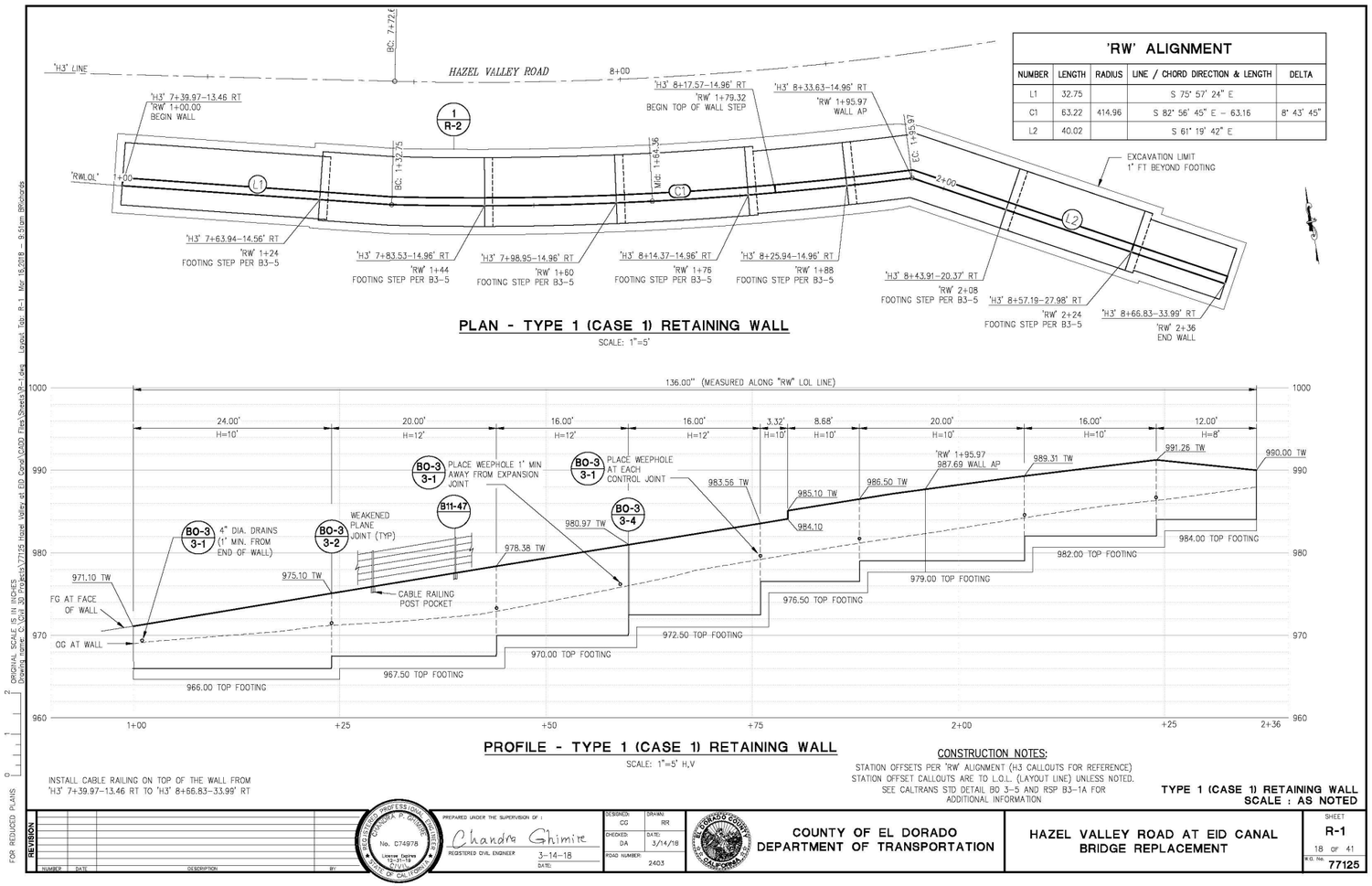
PREPARED UNDER THE SUPERVISION OF :
Dwight D. Anderson
REGISTERED CIVIL ENGINEER — 3-14-18 DATE

DESIGNED	DRAWN
DA	RR
CHECKED	DATE
CG	3/14/18
ROAD NUMBER	
2403	

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET
SPD-1
17 OF 41
W.O. No. 77125



'RW' ALIGNMENT

NUMBER	LENGTH	RADIUS	LINE / CHORD DIRECTION & LENGTH	DELTA
L1	32.75		S 75° 57' 24" E	
C1	63.22	414.96	S 82° 56' 45" E – 63.16	8° 43' 45"
L2	40.02		S 61° 19' 42" E	

PLAN - TYPE 1 (CASE 1) RETAINING WALL

SCALE: 1"=5'

PROFILE - TYPE 1 (CASE 1) RETAINING WALL

SCALE: 1"=5' H,V

INSTALL CABLE RAILING ON TOP OF THE WALL FROM "H3" 7+39.97–13.46 RT TO "H3" 8+66.83–33.99' RT

CONSTRUCTION NOTES:

STATION OFFSETS PER 'RW' ALIGNMENT (H3 CALLOUTS FOR REFERENCE)
STATION OFFSET CALLOUTS ARE TO L.O.L. (LAYOUT LINE) UNLESS NOTED.
SEE CALTRANS STD DETAIL BO 3-5 AND RSP B3-1A FOR ADDITIONAL INFORMATION

TYPE 1 (CASE 1) RETAINING WALL
SCALE : AS NOTED

ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D Projects\17715 Hazel Valley at EID Canal\GAD\ Plan Sheets\R-1.dwg Layout Tab: R-1 Mar 15,2018 - 9:55am dfitzpatrick
FOR REDUCED PLANS

REVISION

NUMBER	DATE	DESCRIPTION	BY

PREPARED UNDER THE SUPERVISION OF :
Chandra Ghimire
REGISTERED CIVIL ENGINEER
3-14-18
DATE:

DESIGNED: CG	DRAWN: RR
CHECKED: DA	DATE: 3/14/18
ROAD NUMBER: 2403	

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET R-1
18 OF 41
W.O. No. 77125

1 **RETAINING WALL**
SCALE: 1"=2' H,V

TYPE 1 (CASE 1) RETAINING WALL
SCALE : AS NOTED

FOR REDUCED PLANS 0 1 2 ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D Projects\77125 Hazel Valley at EID Canal\CADD Files\Sheets\R-2.dwg Layout Tab: R-2 Mar 16,2018 - 10:17am BRichards

REVISION				
NUMBER	DATE	DESCRIPTION	BY	

REGISTERED PROFESSIONAL ENGINEER CHANDRA P. GHIMIRE No. C74978 License Expires 12-31-19 CIVIL STATE OF CALIFORNIA

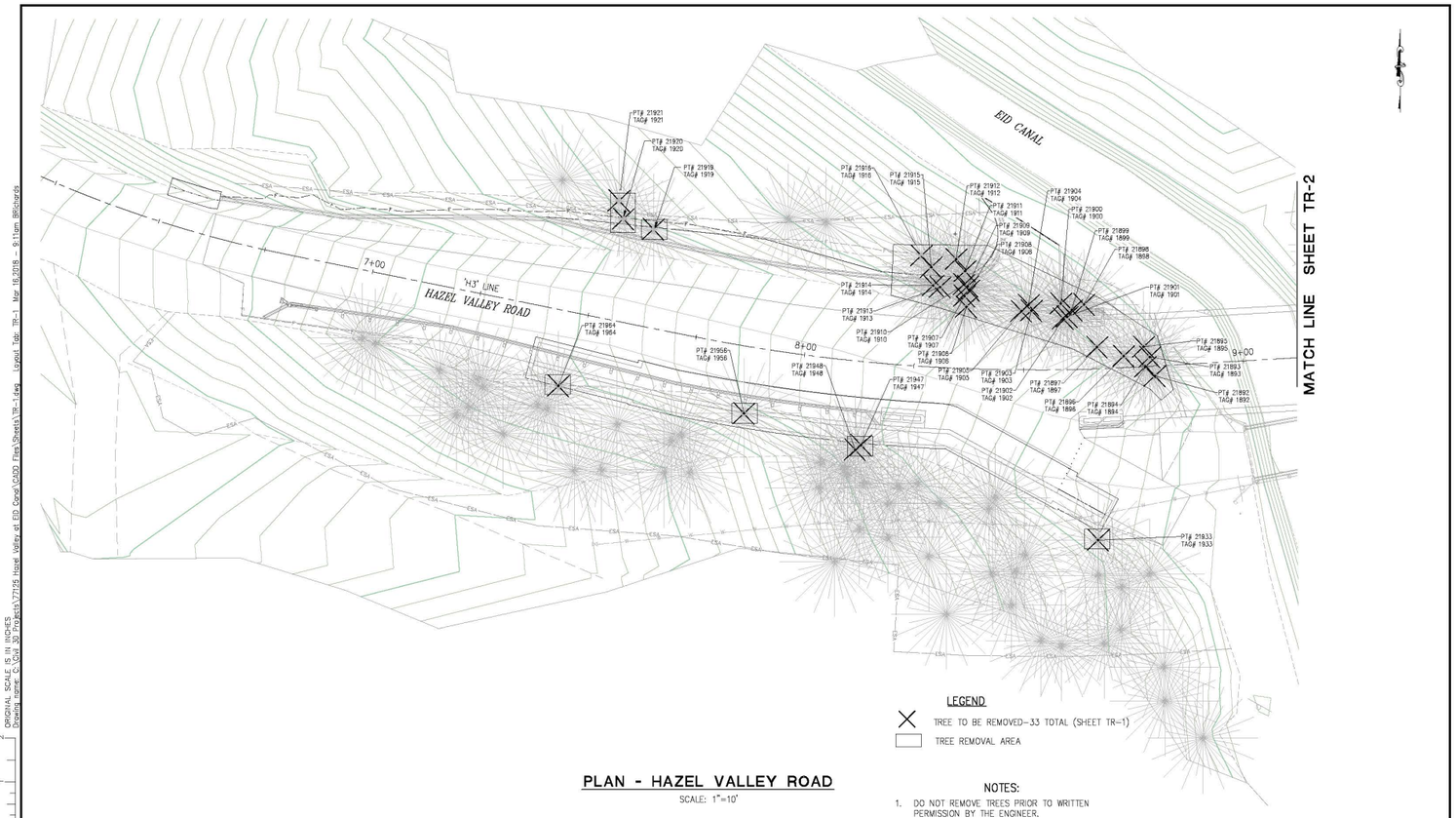
PREPARED UNDER THE SUPERVISION OF : Chandra Ghimire
REGISTERED CIVIL ENGINEER 3-14-18 DATE:

DESIGNED: CG	DRAWN: RR
CHECKED: DA	DATE: 3/14/18
ROAD NUMBER: 2403	

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET R-2
19 OF 41
W.O. No. 77125



PLAN - HAZEL VALLEY ROAD

SCALE: 1"=10'

NOTES:

1. DO NOT REMOVE TREES PRIOR TO WRITTEN PERMISSION BY THE ENGINEER.
2. ONLY REMOVE TREES AS MARKED FOR REMOVAL.

TREE REMOVAL
SCALE : AS NOTED

FOR REDUCED PLANS 0 1 2 ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D Projects\77125 Hazel Valley at EID Canal\CADD Files\Sheets\TR-1.dwg Layout Tab: TR-1 Mar 16,2018 - 9:11am BHolmes

REVISION				
NUMBER	DATE	DESCRIPTION	BY	

REGISTERED PROFESSIONAL ENGINEER DWIGHT D. ANDERSON No. 69999 License Expires 6-30-19 CIVIL STATE OF CALIFORNIA

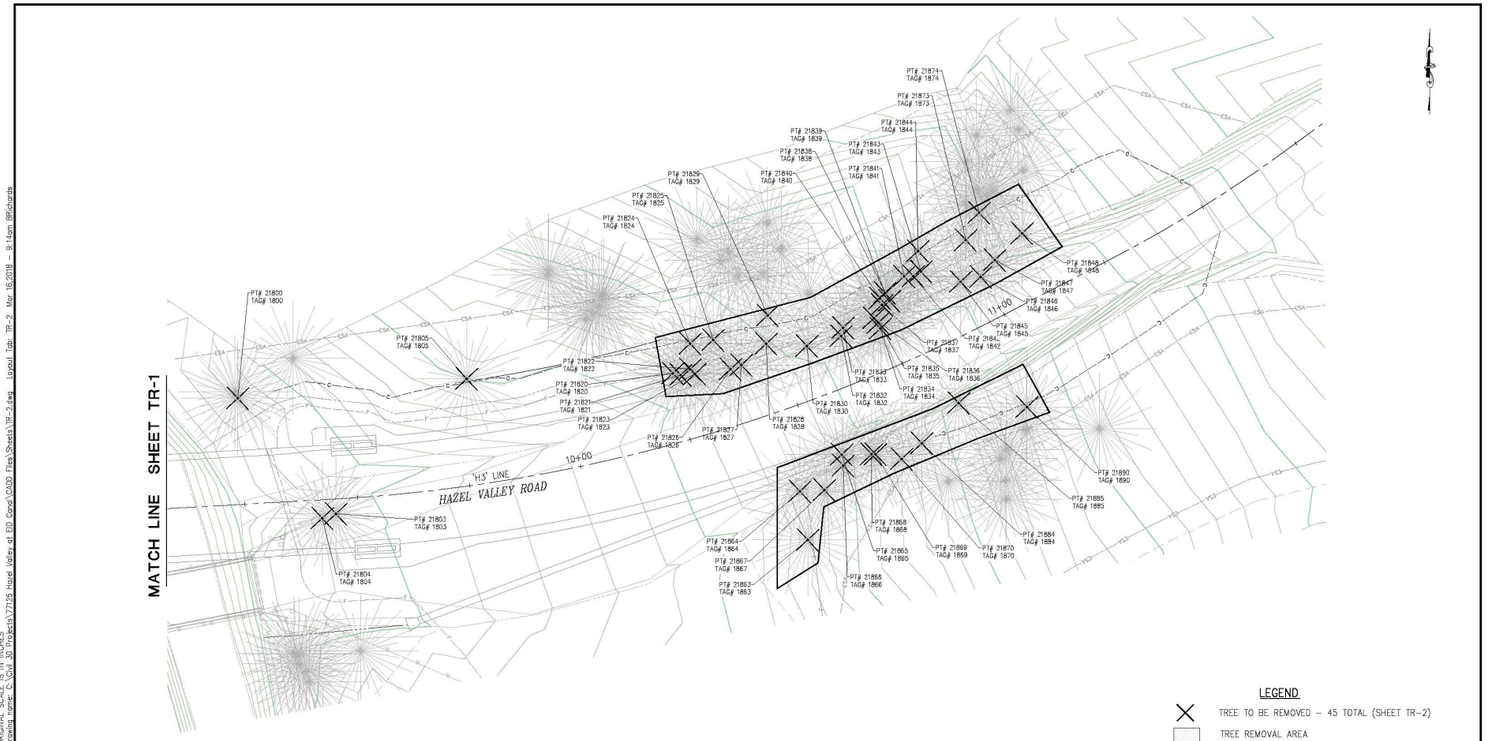
PREPARED UNDER THE SUPERVISION OF :
Dwight D. Anderson
REGISTERED CIVIL ENGINEER 3-14-18
DATE:

DESIGNED: DA	DRAWN: RR
CHECKED: CG	DATE: 3/14/18
ROAD NUMBER: 2403	

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET TR-1
20 OF 41
W.O. No. 77125



LEGEND

TREE TO BE REMOVED – 45 TOTAL (SHEET TR-2)

TREE REMOVAL AREA

NOTES:

1. DO NOT REMOVE TREES PRIOR TO WRITTEN PERMISSION BY THE ENGINEER.
2. ONLY REMOVE TREES AS MARKED FOR REMOVAL.

PLAN - HAZEL VALLEY ROAD

SCALE: 1"=10'

TREE REMOVAL
SCALE : AS NOTED

FOR REDUCED PLANS
0 1 2
ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D Projects\77125 Hazel Valley at EID Canal\CADD Files\Sheets\TR-2.dwg Layout Tab: TR-2 Mon 10/8/2018 - 9:14am RRichards

REVISION				
NUMBER	DATE	DESCRIPTION	BY	

PREPARED UNDER THE SUPERVISION OF :
Dwight D. Anderson
REGISTERED CIVIL ENGINEER
3-14-18
DATE:

DESIGNED:	DRAWN:
DA	RR
CHECKED:	DATE:
CG	3/14/18
ROAD NUMBER:	
2403	

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET
TR-2
21 OF 41
W.O. No.
77125

TREE REMOVAL TABLE

POINT #	TAG #	Desc	Circum. (ft)	Dia. (ft)	STATION	OFFSET
21800	1800	FIR	1.90	0.60	9+24.76	23.52' LT
21803	1803	PINE	4.90	1.56	9+45.00	3.29' RT
21804	1804	PINE	5.70	1.81	9+41.92	4.08' RT
21805	1805	PINE	5.30	1.69	9+77.78	23.55' LT
21820	1820	PINE	2.90	0.92	10+25.25	5.14' LT
21821	1821	PINE	2.10	0.67	10+26.89	14.31' LT
21822	1822	CEDAR	1.80	0.57	10+29.35	14.95' LT
21823	1823	PINE	1.90	0.60	10+30.14	13.66' LT
21824	1824	PINE	1.20	0.38	10+31.09	20.40' LT
21825	1825	PINE	1.60	0.51	10+36.48	19.66' LT
21826	1826	PINE	1.40	0.45	10+38.25	12.32' LT
21827	1827	PINE	1.60	0.51	10+40.90	12.45' LT
21828	1828	PINE	1.30	0.41	10+47.90	15.12' LT
21829	1829	PINE	1.20	0.38	10+50.44	20.94' LT
21830	1830	PINE	1.00	0.32	10+56.52	11.57' LT
21832	1832	PINE	1.30	0.41	10+64.64	10.88' LT
21833	1833	PINE	2.20	0.70	10+65.79	12.41' LT
21834	1834	PINE	2.60	0.83	10+73.57	9.04' LT
21835	1835	FIR	1.60	0.51	10+73.62	10.40' LT
21836	1836	FIR	1.60	0.51	10+73.12	11.70' LT
21837	1837	FIR	2.20	0.70	10+76.03	13.69' LT
21838	1838	FIR	1.10	0.35	10+77.98	13.83' LT
21839	1839	FIR	2.10	0.67	10+77.75	15.87' LT
21840	1840	FIR	1.20	0.38	10+76.25	15.18' LT
21841	1841	PINE	1.30	0.41	10+83.43	17.39' LT
21842	1842	PINE	1.70	0.54	10+85.41	16.57' LT
21843	1843	PINE	2.90	0.92	10+87.46	16.82' LT
21844	1844	CEDAR	1.20	0.38	10+88.91	21.18' LT
21845	1845	PINE	1.20	0.38	10+94.63	10.90' LT
21846	1846	PINE	1.90	0.60	10+99.21	9.81' LT
21847	1847	PINE	2.90	0.92	11+03.70	11.69' LT
21848	1848	PINE	1.80	0.57	11+11.80	14.14' LT
21863	1863	PINE	1.30	0.41	10+42.59	28.95' RT
21864	1864	PINE	1.50	0.48	10+44.27	18.21' RT
21865	1865	PINE	1.30	0.41	10+55.26	13.65' RT
21866	1866	PINE	1.10	0.35	10+54.74	16.05' RT
21867	1867	PINE	1.10	0.35	10+49.25	19.72' RT
21868	1868	FIR	1.20	0.38	10+61.21	15.97' RT

TREE REMOVAL TABLE

POINT #	TAG #	Desc	Circum. (ft)	Dia. (ft)	STATION	OFFSET
21869	1869	FIR	1.30	0.41	10+62.01	16.28' RT
21870	1870	FIR	1.40	0.45	10+66.75	19.42' RT
21873	1873	FIR	1.50	0.48	11+00.05	18.59' LT
21874	1874	FIR	2.70	0.86	11+05.47	22.58' LT
21884	1884	PINE	1.80	0.51	10+71.94	17.93' RT
21885	1885	FIR	1.70	0.54	10+82.58	13.11' RT
21890	1890	PINE	1.80	0.57	10+95.25	20.51' RT
21892	1892	FIR	2.20	0.70	8+79.70	2.24' RT
21893	1893	FIR	2.00	0.64	8+78.79	2.11' LT
21894	1894	FIR	1.60	0.51	8+77.63	0.09' RT
21895	1895	FIR	1.50	0.48	8+77.51	4.50' LT
21896	1896	FIR	1.70	0.54	8+72.85	2.65' LT
21897	1897	FIR	1.50	0.48	8+66.80	4.96' LT
21898	1898	FIR	1.20	0.38	8+64.12	14.72' LT
21899	1899	FIR	1.10	0.35	8+61.20	13.55' LT
21900	1900	CEDAR	1.20	0.38	8+58.65	15.05' LT
21901	1901	FIR	1.20	0.38	8+60.08	12.02' LT
21902	1902	FIR	1.50	0.48	8+59.16	11.62' LT
21903	1903	FIR	1.50	0.48	8+51.72	13.50' LT
21904	1904	FIR	1.30	0.41	8+51.01	14.77' LT
21905	1905	OAK	1.30	0.41	8+49.35	13.37' LT
21906	1906	PINE	2.20	0.70	8+36.37	14.03' LT
21907	1907	FIR	1.40	0.45	8+35.82	16.45' LT
21908	1908	FIR	1.60	0.51	8+36.85	17.85' LT
21909	1909	FIR	1.30	0.41	8+36.47	18.72' LT
21910	1910	OAK	2.40	0.76	8+35.57	19.07' LT
21911	1911	FIR	1.40	0.45	8+35.69	22.14' LT
21912	1912	FIR	2.40	0.76	8+33.43	24.75' LT
21913	1913	FIR	1.50	0.48	8+29.95	18.24' LT
21914	1914	FIR	1.40	0.45	8+28.26	18.53' LT
21915	1915	OAK	2.80	0.89	8+27.53	22.64' LT
21916	1916	OAK (forked)	2.20	0.70	8+24.95	25.10' LT
			1.80	0.57		
21919	1919	CEDAR	6.50	2.07	7+60.64	22.22' LT
21920	1920	CEDAR	4.30	1.37	7+53.57	22.92' LT
21921	1921	FIR	9.80	3.12	7+51.69	26.95' LT

TREE REMOVAL TABLE

POINT #	TAG #	Desc	Circum. (ft)	Dia. (ft)	STATION	OFFSET
21933	1933	FIR	5.20	1.66	8+65.61	38.87' RT
21947	1947	CEDAR	5.80	1.85	8+14.72	18.92' RT
21948	1948	CEDAR	4.40	1.40	8+13.56	20.12' RT
21956	1956	CEDAR (forked)	6.60	2.10	7+88.50	15.15' RT
			3.00	0.95		
21964	1964	FIR	2.30	0.73	7+46.51	17.04' RT

FOR REDUCED PLANS — ORIGINAL SCALE IS IN INCHES — 0 1 2
Drawing name: C:\Civil 3D Projects\77125 Hazel Valley at EID Canal\CADD Files\Sheets\TR-3.dwg Layout Tab: TR-3 Mar 16,2018 - 9:19am dhoward

TREE REMOVAL
SCALE : AS NOTED

REVISION			
NUMBER	DATE	DESCRIPTION	BY

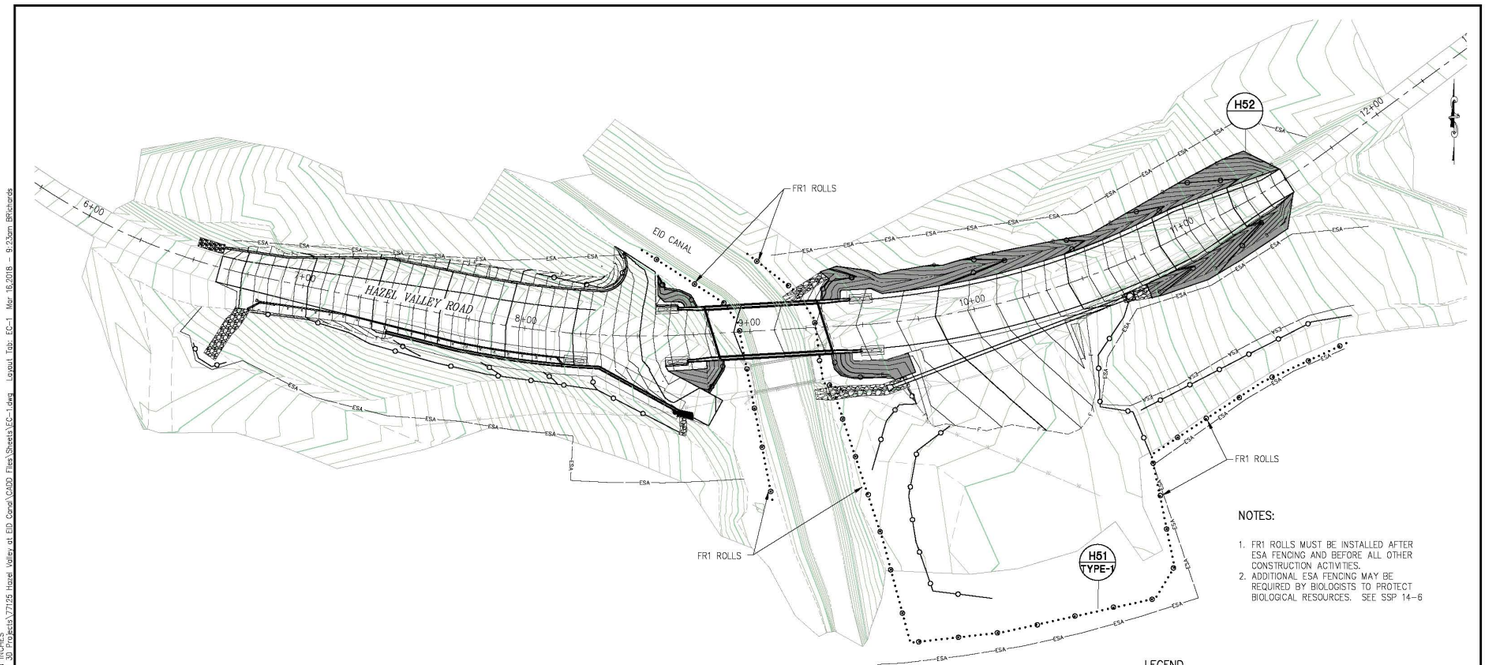
PREPARED UNDER THE SUPERVISION OF :
Dwight D. Anderson
REGISTERED CIVIL ENGINEER
3-14-18
DATE:

DESIGNED:	DRAWN:
DA	RR
CHECKED:	DATE:
CG	3/14/18
ROAD NUMBER:	
2403	

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET
TR-3
22 OF 41
W.O. No.
77125



PLAN - HAZEL VALLEY ROAD

EROSION CONTROL BLANKETS AND FIBER ROLLS

EROSION CONTROL
SCALE : 1" = 20'

FOR REDUCED PLANS
0 1 2 ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D Projects\77125 Hazel Valley at EID Canal\CADD Files\Sheets\EC-1.dwg Layout Tab: EC-1 Mar 15,2018 - 9:43am RRichards

REVISION				
NUMBER	DATE	DESCRIPTION	BY	

REGISTERED PROFESSIONAL ENGINEER DWIGHT D. ANDERSON No. 69999 License Expires 6-30-19 CIVIL STATE OF CALIFORNIA

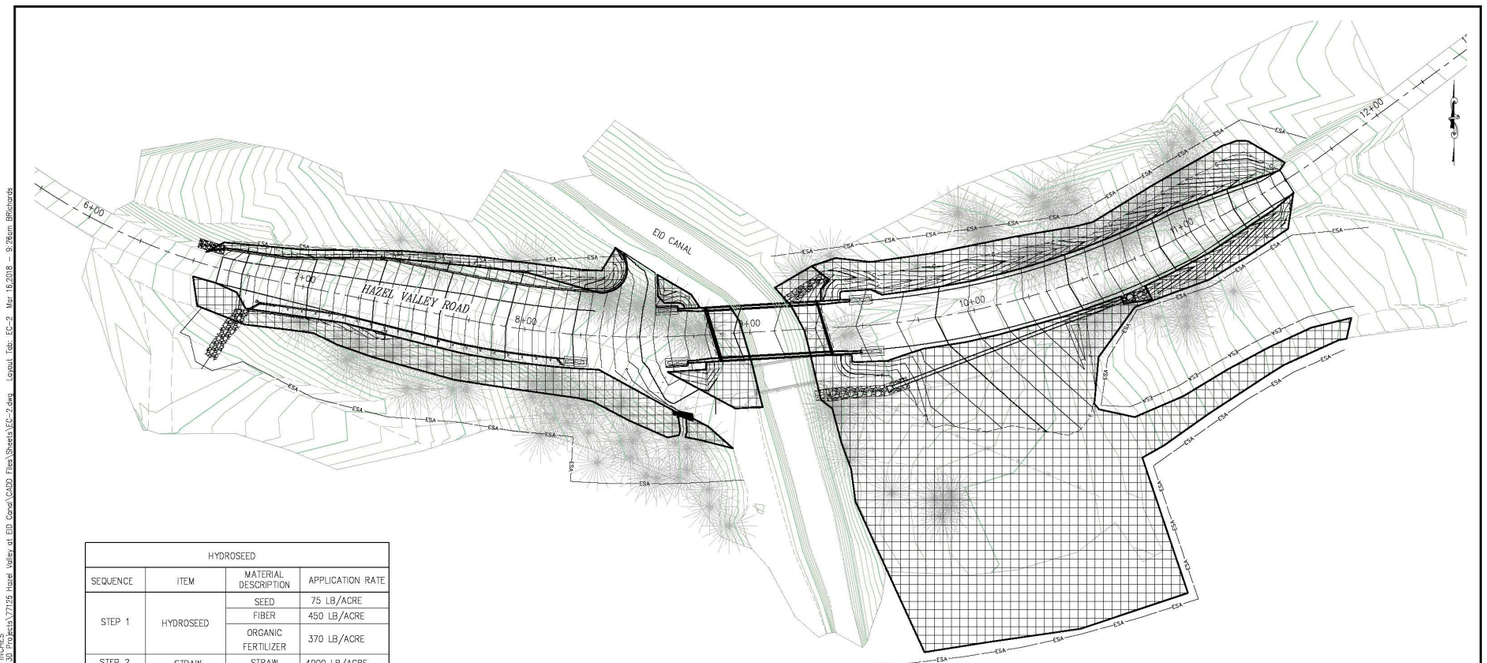
PREPARED UNDER THE SUPERVISION OF :
Dwight D. Anderson
REGISTERED CIVIL ENGINEER 3-14-18
DATE:

DESIGNED:	DRAWN:
DA	RR
CHECKED:	DATE:
CG	3/14/18
ROAD NUMBER:	
2403	

COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET
EC-1
23 OF 41
W.O. No.
77125



HYDROSEED			
SEQUENCE	ITEM	MATERIAL DESCRIPTION	APPLICATION RATE
STEP 1	HYDROSEED	SEED	75 LB/ACRE
		FIBER	450 LB/ACRE
		ORGANIC FERTILIZER	370 LB/ACRE
STEP 2	STRAW	STRAW	4000 LB/ACRE
STEP 3	HYDROMULCH	FIBER	450 LB/ACRE
		ORGANIC FERTILIZER	370 LB/ACRE
		TACKIFIER	83 LB/ACRE

SEED SOURCE SHALL ORIGINATE FROM SACRAMENTO VALLEY AND SIERRA FOOTHILLS REGIONS
SEE SPECIAL PROVISIONS 21-2.02F FOR SEED MIX

LEGEND

HYDROSEED AREA – 26,548 S.F.

PLAN - HAZEL VALLEY ROAD

EROSION CONTROL
SCALE : 1" = 20'

FOR REDUCED PLANS
0 1 2 ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D Projects\77125 Hazel Valley at EID Canal\CADD Files\Sheets\EC-2.dwg Layout Tab: EC-2 Mar 16,2018 - 9:36am BRichards

REVISION			
NUMBER	DATE	DESCRIPTION	BY

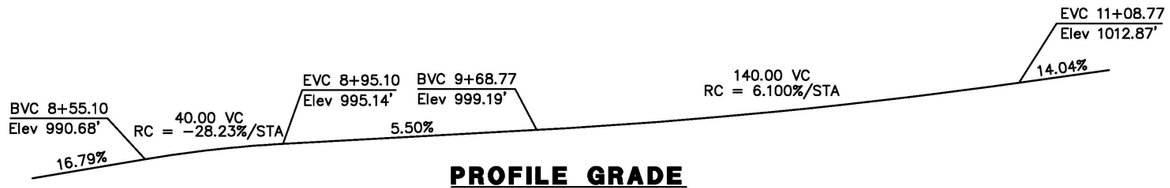
PREPARED UNDER THE SUPERVISION OF :
Dwight D. Anderson
REGISTERED CIVIL ENGINEER 3-14-18
DATE:

DESIGNED: DA	DRAWN: RR
CHECKED: CG	DATE: 3/14/18
ROAD NUMBER: 2403	

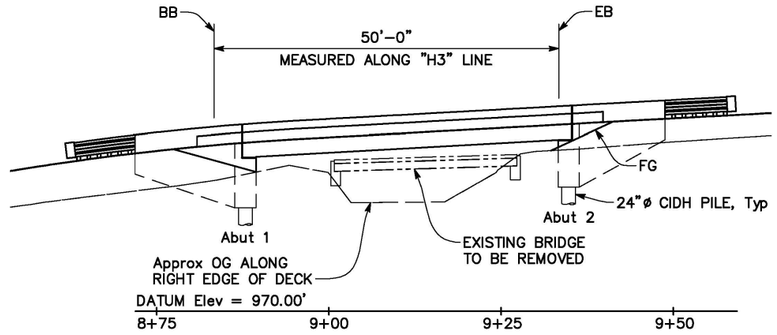
COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

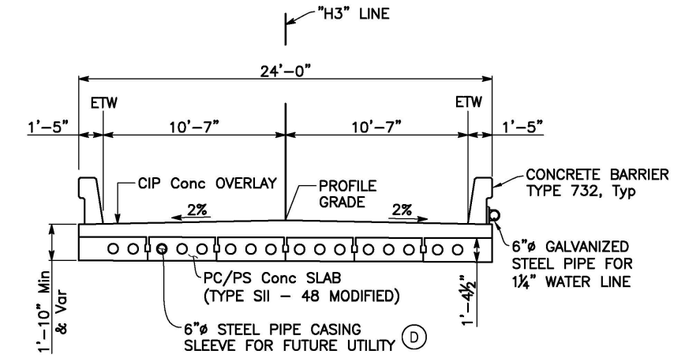
SHEET EC-2
24 OF 41
W.O. No. 77125



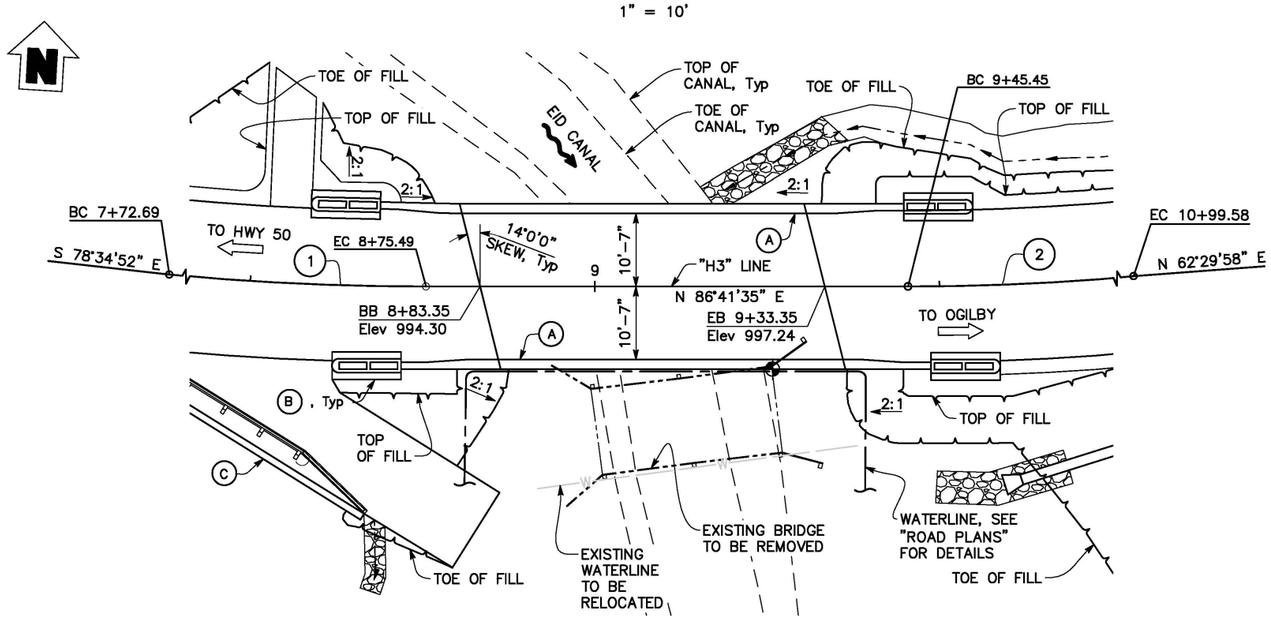
PROFILE GRADE
NO SCALE



ELEVATION
1" = 10'



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



PLAN
1" = 10'

CURVE DATA

No.	R	Δ	T	L
(1)	400.00'	14°43'33"	51.69'	102.81'
(2)	365.00'	24°11'37"	78.23'	154.13'

LEGEND:

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

NOTES:

For Index to Plans, Standard Plans, Concrete Strength and Type limits, and Quantities, see "DECK CONTOURS" sheet .

For Drainage Details not shown, see "Road Plans".

(A) Paint "HAZEL VALLEY ROAD AT EID CANAL" and Bridge No. "25C-0140".

(B) Alternative Crash Cushion System.

(C) Retaining Wall, see "ROAD PLANS".

(D) Extend 5'-0" long 6"ø Steel Pipe Casing 1'-0" beyond back face of Abutment Backwall at each Abutment and cap ends to prevent debris from entering casing as shown on "PC/PS SLAB LAYOUT" sheet. Steel Pipe Casing to be NPS 6 Schedule 40.

GENERAL PLAN
SCALE AS SHOWN

FOR REDUCED PLANS 0 1 2 ORIGINAL SCALE IS IN INCHES

REVISION				
NUMBER	DATE	DESCRIPTION	BY	

REGISTERED PROFESSIONAL ENGINEER
KEVIN ROSS
No. C 49652
Exp. 9-30-18
CIVIL
STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF :
REGISTERED CIVIL ENGINEER
03/22/18
DATE:

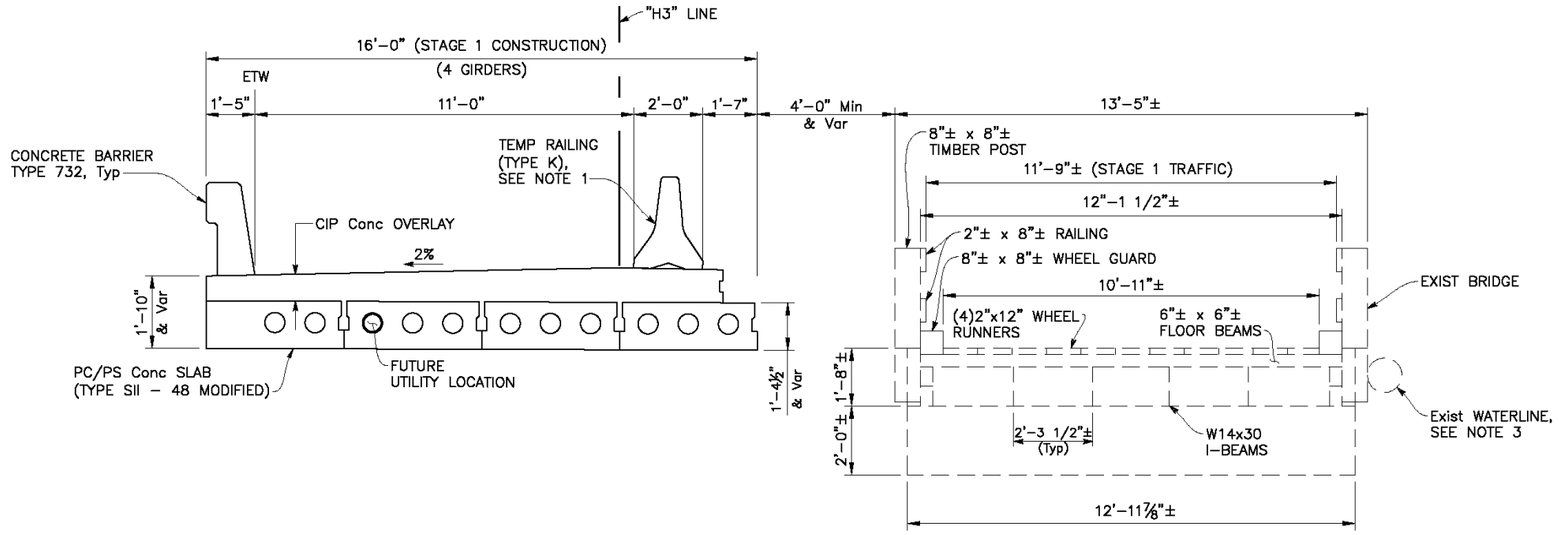
DESIGNED:	DRAWN:
GX	KD
CHECKED:	DATE:
LM	03/22/18
ROAD NUMBER:	
2403	

EL DORADO COUNTY CALIFORNIA

COUNTY OF EL DORADO
COMMUNITY DEVELOPMENT AGENCY
TRANSPORTATION DIVISION

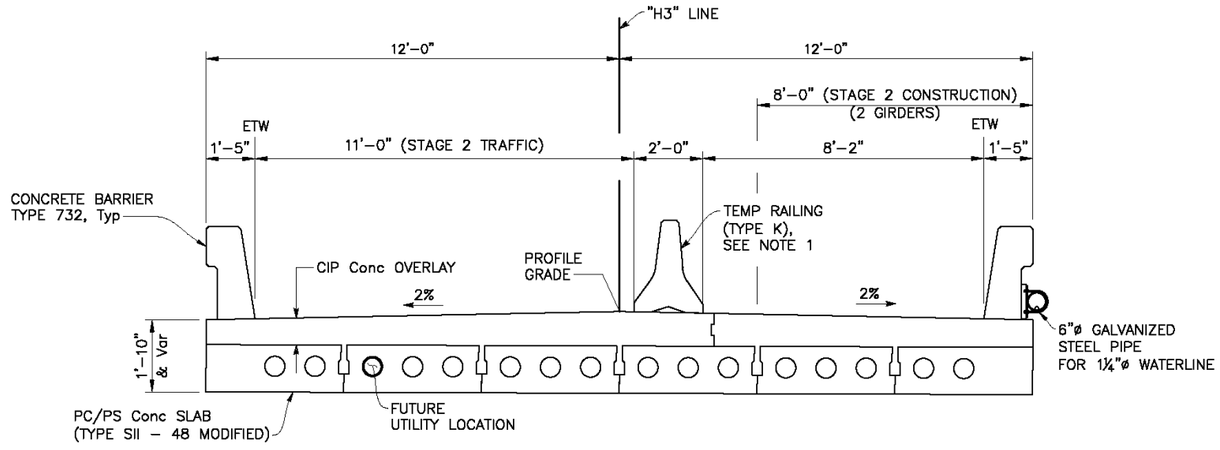
HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET
S-1
25 OF 41
W.O. No. 77125



STAGE 1 CONSTRUCTION

SCALE: 1/2" = 1'-0"



STAGE 2 CONSTRUCTION

SCALE: 1/2" = 1'-0"

NOTES:

1. For K-Rail placement, see "Road Plans".
2. Existing bridge to be removed during Stage 2 Construction.
3. Temporarily support the existing water line prior to placing on new bridge during Stage 2 Construction.

STAGE CONSTRUCTION
SCALE AS SHOWN

FOR REDUCED PLANS 0 1 2 ORIGINAL SCALE IS IN INCHES

REVISION NUMBER	DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL ENGINEER — KEVIN ROSS — No. C 49652 — Exp. 9-30-18 — CIVIL — STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF :

REGISTERED CIVIL ENGINEER — DATE: 03/22/18

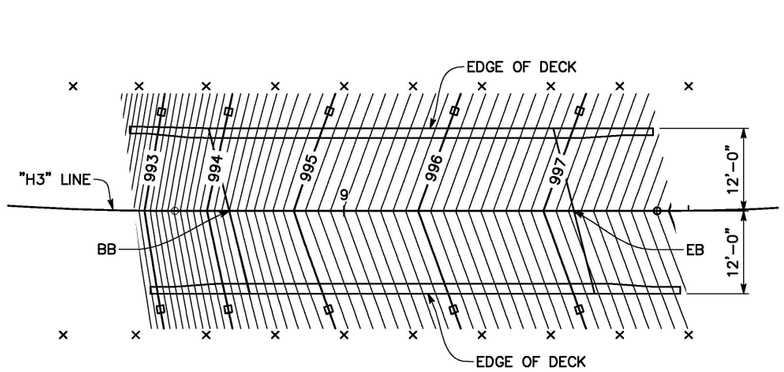
DESIGNED:	DRAWN:
GX	KD
CHECKED:	DATE:
LM	03/22/18
ROAD NUMBER:	
2403	

COUNTY OF EL DORADO
COMMUNITY DEVELOPMENT AGENCY
TRANSPORTATION DIVISION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET
S-2
26 OF 41
W.O. No.
77125

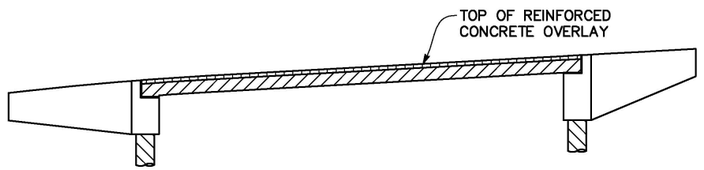
INDEX TO BRIDGE PLANS



PLAN
1" = 10'

NOTES:

1. Contours do not include Camber.
2. 0.1' Contour Interval.
3. × Indicates 10' Intervals along "Station" Line.
4. □ Indicates whole foot contours.
5. Elevations shown are for top of reinforced concrete overlay. For Roadway elevations beyond BB & EB, see "Road Plans".



LEGEND:

- Structural Concrete Bridge (Polymer Fiber) (f'c = 4.0 ksi 28 days)
- Structural Concrete, Bridge (f'c = 4.0 ksi @ 28 days)
- Precast Prestressed Concrete Slab (Type SII – 48 Modified) (See "PRECAST SLAB DETAILS NO. 2" sheet for required strength)
- CIDH Concrete Pile (f'c = 4.0 ksi @ 28 days)

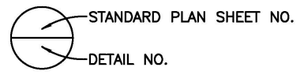
CONCRETE STRENGTH AND TYPE LIMITS
NO SCALE

QUANTITIES

Bridge Removal	LS	1
Structure Excavation (Bridge)	CY	65
Structure Backfill (Bridge)	CY	53
24" Cast-In-Drilled-Hole Concrete piling	LF	238
Structural Concrete, Bridge	CY	58
Structural Concrete, Bridge (Polymer Fiber)	CY	37
Furnish Precast Prestressed Concrete Slab (Type SII – 48 Modified)	SQFT	1,150
Erect Precast Prestressed Concrete Deck Unit	EA	6
Joint Seal (MR 1")(Type B)	LF	50
Bar Reinforcing Steel (Bridge)	LB	10,500
Bar Reinforcing Steel (Epoxy Coated) (Bridge)	LB	4,280
Bar Reinforcing Steel (Galvanized)	LB	140
6" Galvanized Steel pipe	LF	58
Steel Pipe Casing (NPS 6, Schedule 40)(Future Utility)	LF	10
Concrete Barrier (Type 732)	LF	153
Mobilization	LS	1

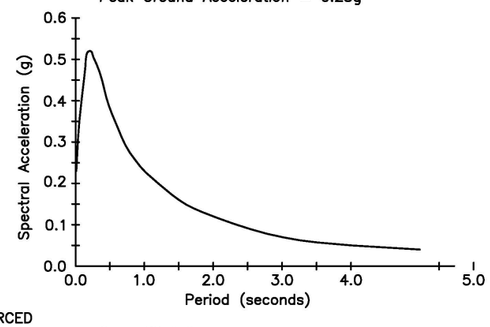
2015 STANDARD PLANS

	A3A	ABBREVIATIONS (SHEET 1 OF 3)
	A3B	ABBREVIATIONS (SHEET 2 OF 3)
	A3C	ABBREVIATIONS (SHEET 3 OF 3)
	A10A	LEGEND-LINE AND SYMBOLS (SHEET 1 OF 5)
	A10B	LEGEND-LINE AND SYMBOLS (SHEET 2 OF 5)
	A10C	LEGEND-LINE AND SYMBOLS (SHEET 3 OF 5)
	A10D	LEGEND-LINE AND SYMBOLS (SHEET 4 OF 5)
	A10E	LEGEND-LINE AND SYMBOLS (SHEET 5 OF 5)
	B0-1	BRIDGE DETAILS
RSP	B0-3	BRIDGE DETAILS
	B0-5	BRIDGE DETAILS
	B0-13	BRIDGE DETAILS
	B2-3	16" AND 24" CAST-IN-DRILLED HOLE CONCRETE PILE
	B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
	B7-10	UTILITY OPENING BOX GIRDER
	B11-55	CONCRETE BARRIER TYPE 732
	T3A	TEMPORARY RAILING (TYPE K)



GENERAL NOTES
LOAD RESISTANCE FACTOR DESIGN

DESIGN:	AASTHO LRFD Bridge Design Specifications, Sixth Edition, 2012 and the California Amendments, preface dated January 2014
SEISMIC DESIGN:	Caltrans Seismic Design Criteria (SDC), Version 1.7, April 2013
DEAD LOAD:	100 lb/ft for future utilities
LIVE LOADING:	HL 93 and permit design loading
SEISMIC LOADING:	Soil Profile: Type D VS30 = 339 m/s Moment Magnitude = 7.0 Peak Ground Acceleration = 0.23g



REINFORCED CONCRETE:	fy = 60 ksi f'c = see "Concrete Strength and Type Limits" n = 8
PRESTRESSED CONCRETE:	See "Prestressing Notes" on "Girder Details No. 2" sheet

DECK CONTOURS
SCALE AS SHOWN

FOR REDUCED PLANS 0 1 2 ORIGINAL SCALE IS IN INCHES

REVISION				
NUMBER	DATE	DESCRIPTION	BY	

REGISTERED PROFESSIONAL ENGINEER
KEVIN ROSS
No. C 49652
Exp. 9-30-18
CIVIL
STATE OF CALIFORNIA

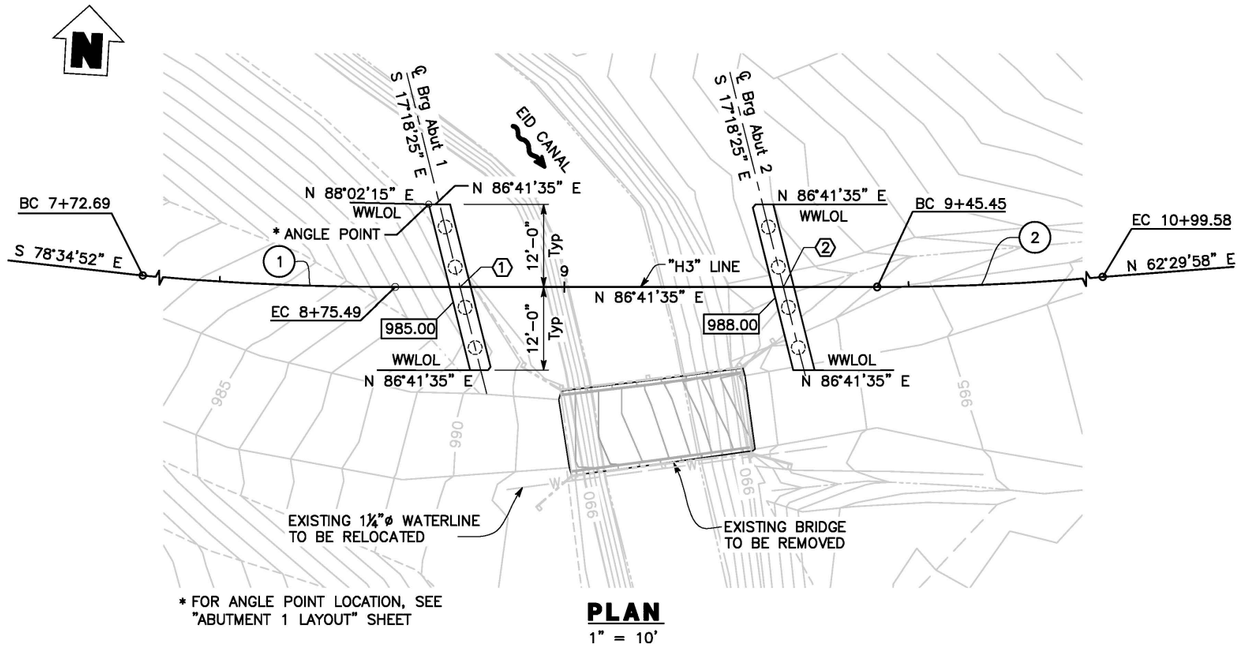
PREPARED UNDER THE SUPERVISION OF :
REGISTERED CIVIL ENGINEER
DATE: 03/22/18

DESIGNED: GX	DRAWN: KD
CHECKED: LM	DATE: 03/22/18
ROAD NUMBER: 2403	

COUNTY OF EL DORADO
COMMUNITY DEVELOPMENT AGENCY
TRANSPORTATION DIVISION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET S-3
27 OF 41
W.O. No. 77125



* FOR ANGLE POINT LOCATION, SEE "ABUTMENT 1 LAYOUT" SHEET

PLAN
1" = 10'

LEGEND:

- Indicates Bottom of Footing Elevation
- Indicates Direction of Water Flow
- Indicates Existing Bridge
- Indicates New Structure
- Indicates 24"ø CIDH Pile

BENCH MARK:

SEE "ROADWAY PLANS"

CURVE DATA

No.	R	Δ	T	L
(1)	400.00'	14°43'33"	51.69'	102.81'
(2)	365.00'	24°11'37"	78.23'	154.13'

PILE DATA TABLE

LOCATION	PILE TYPE	PILE CUT-OFF ELEVATION (FT)	NOMINAL RESISTANCE		DESIGN TIP ELEVATION (ft)	SPECIFIED TIP ELEVATION (ft)
			COMPRESSION (kips)	TENSION (kips)		
Abut 1	24" CIDH	985.25	400	0	952.0(a)	954.0
Abut 2	24" CIDH	988.25	400	0	960.0(a)	960.0

NOTE:
1. Design tip elevations are controlled by: (a) Strength Limit Compression, (b) Extreme Event Limit compression and (c) Lateral load.

	Northing	Easting
(1) ℄ Brg Abut 1 Sta 8+84.89	9984.4334	49853.3655
(2) ℄ Brg Abut 2 Sta 9+31.80	9987.0394	49899.8094

SCOUR DATA TABLE

SUPPORT NO.	LONG TERM (DEGRADATION AND CONTRACTION) SCOUR ELEVATION (FT)	SHORT TERM (LOCAL) SCOUR DEPTH (FT)
Abut 1	N/A	N/A
Abut 2	N/A	N/A

NOTE:
1. Existing channel is lined thus no scour is anticipated.

HYDROLOGIC SUMMARY

Dishcharge (Cubic feet per second)	165 cfs

NOTES:

1. El Dorado Irrigation District (EID) Canal water includes slope runoff, EID controlled diversions from South Fork American River and other various creeks and water ways.
2. Canal diversion water ways are operated by EID to prevent overtopping of the EID canal.

FOUNDATION PLAN
SCALE AS SHOWN

ORIGINAL SCALE IS IN INCHES
0 1 2
FOR REDUCED PLANS

REVISION				
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KEVIN ROSS
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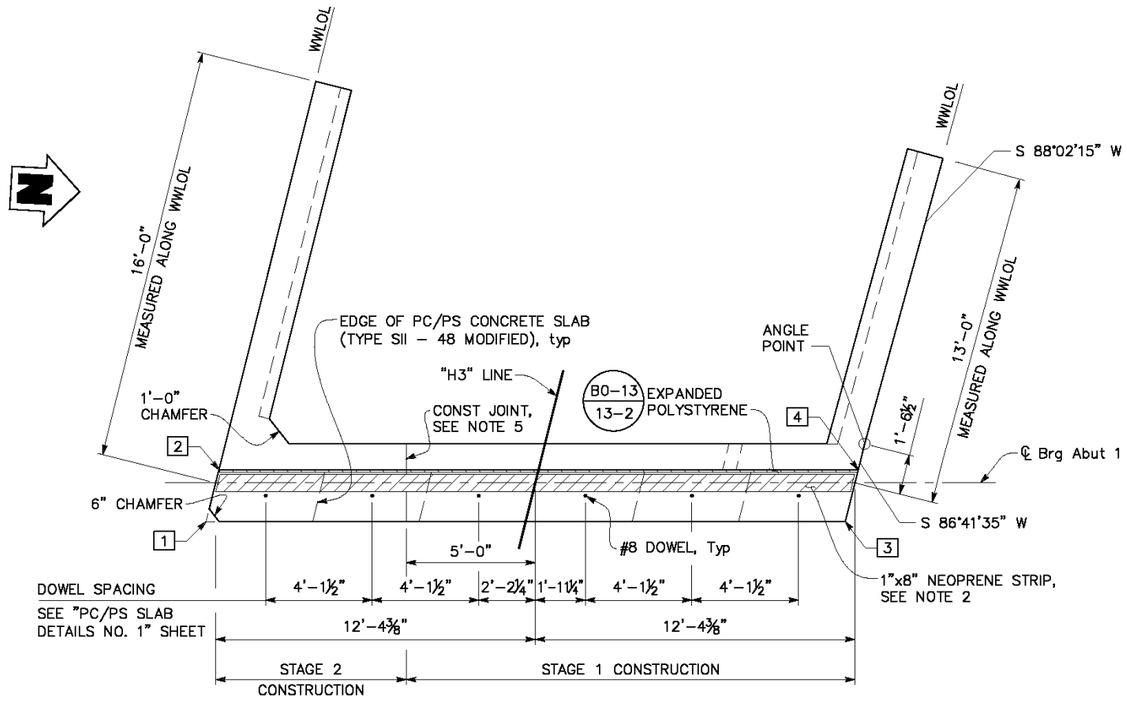
ROAD NUMBER:	
2403	

EL DORADO COUNTY CALIFORNIA

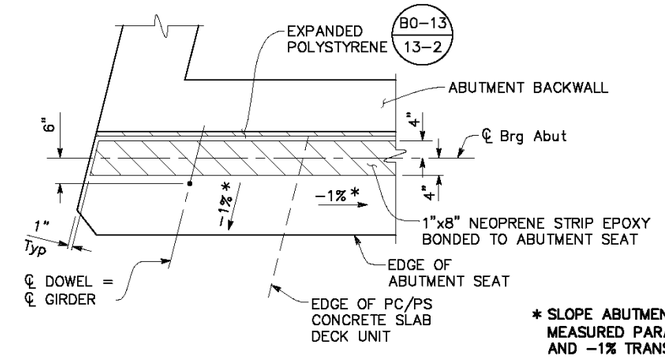
COUNTY OF EL DORADO
COMMUNITY DEVELOPMENT AGENCY
TRANSPORTATION DIVISION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET
S-4
28 OF 41
W.O. No. 77125

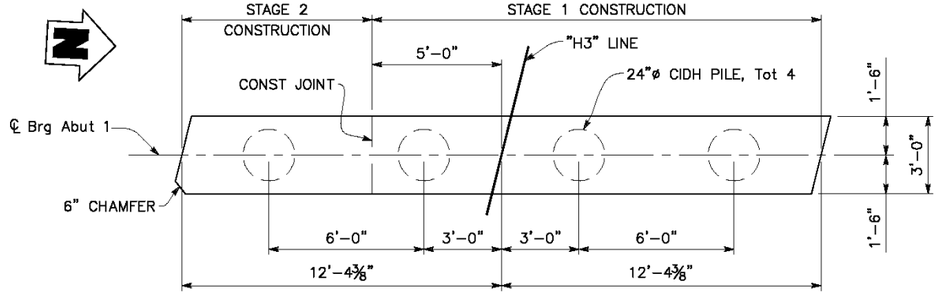


PLAN
3/8" = 1'-0"

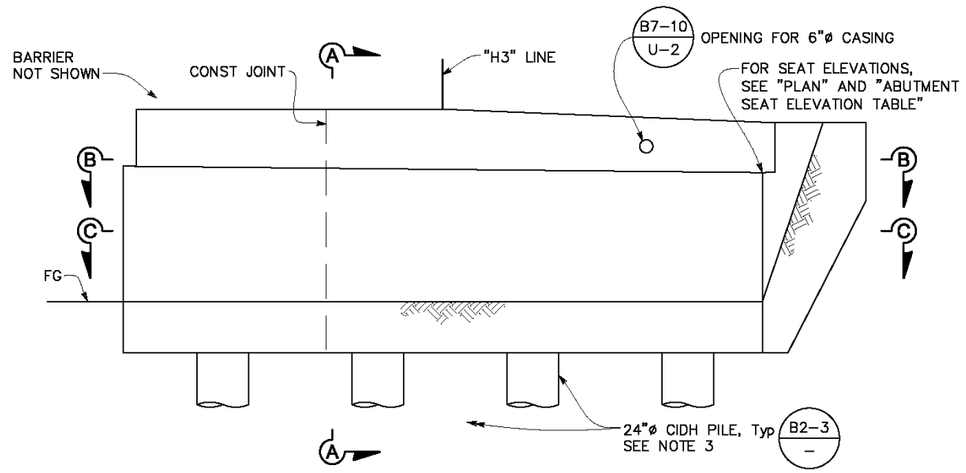


NEOPRENE STRIP DETAIL
3/4" = 1'-0"

* SLOPE ABUTMENT SEAT –1% LONGITUDINAL, MEASURED PARALLEL TO THE "H3" LINE AND –1% TRANSVERSELY, MEASURED PARALLEL TO ℄ BRG ABUT



PILE LAYOUT
3/8" = 1'-0"



ELEVATION
3/8" = 1'-0'

ABUTMENT SEAT ELEVATION TABLE

LOCATION	1	2	3	4
SEAT Elev	992.20	992.22	991.95	991.97

LEGEND:
W.P. = Working Point

[X] Abutment Seat Elevation

NOTES:
1. For "SECTION A–A", "SECTION B–B"and "SECTION C–C", see "ABUTMENT DETAILS NO. 1" sheet.
2. For Neoprene Strip details, see "NEOPRENE STRIP DETAIL" this sheet.
3. Piles must have inspection tubes per Standard Plan B2–3. Place temporary decking over excavated area as required to provide safe access over open trench during both construction stages as authorized by the Engineer. All piles may be placed in Stage 1, but the Contractor is responsible for all costs associated with making temporary adjustments to the traffic control required to construct the piles shown in Stage 2. Modifications to the traffic control plan must be authorized by the Engineer prior to making any adjustments.
4. No backfill at the abutment is allowed until the deck is in place and the dowels in both abutments are grouted and cured. Backfill must be placed in lifts such there is no more than a 1' difference in height between abutments at any time.
5. All transverse reinforcement must extend 1'–6" minimum into Stage 2 except #8 bars. Extend #8 bars 1'–0" into Stage 2. #8 bars must be mechanically spliced using service level splices. #8 bars must not be bent.
6. No construction equipment is allowed within 10'–0" of the top of the EID Canal.

ABUTMENT 1 LAYOUT
SCALE AS SHOWN

FOR REDUCED PLANS 0 1 2 ORIGINAL SCALE IS IN INCHES

REVISION NUMBER	DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL ENGINEER — KEVIN ROSS — No. C 49652 — Exp. 9-30-18 — CIVIL — STATE OF CALIFORNIA

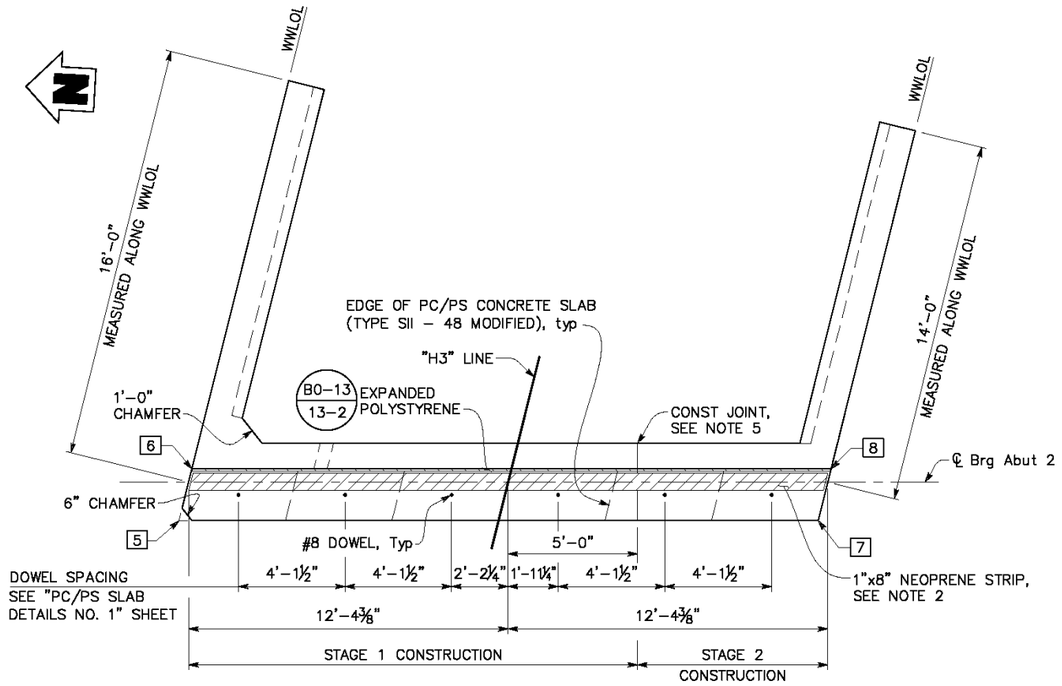
PREPARED UNDER THE SUPERVISION OF: REGISTERED CIVIL ENGINEER — DATE: 03/22/18

DESIGNED:	DRAWN:
GX	KD
CHECKED:	DATE:
LM	03/22/18
ROAD NUMBER:	
2403	

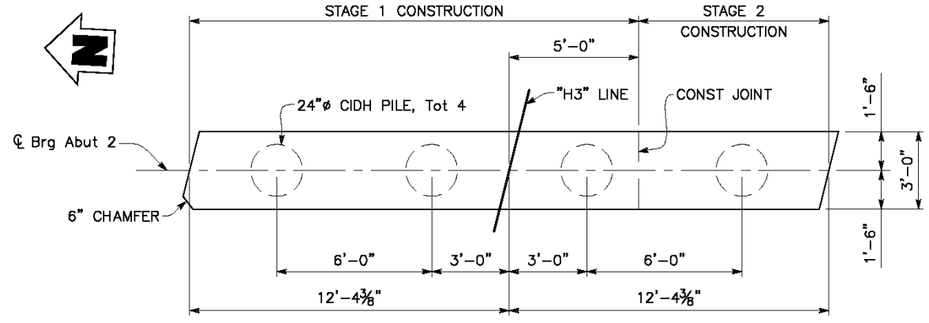
COUNTY OF EL DORADO
COMMUNITY DEVELOPMENT AGENCY
TRANSPORTATION DIVISION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

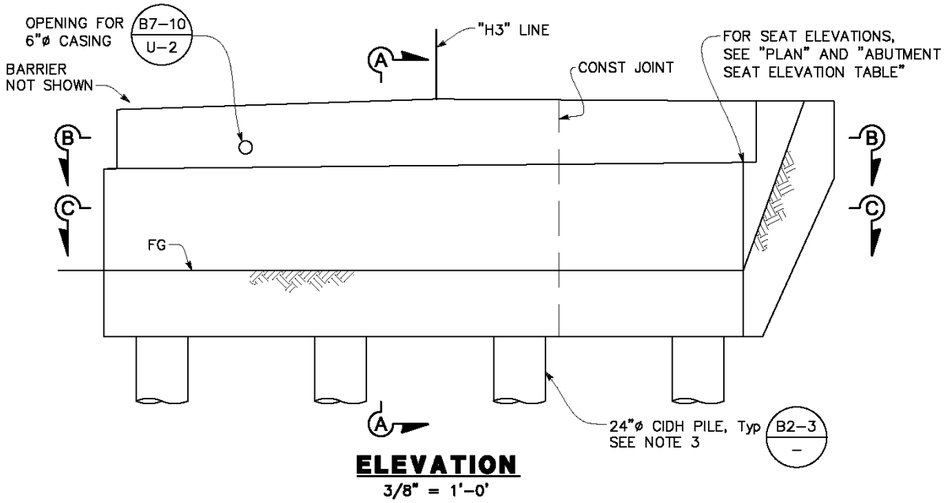
SHEET S-5
29 OF 41
W.O. No. 77125



PLAN
3/8" = 1'-0"



PILE LAYOUT
3/8" = 1'-0"



ELEVATION
3/8" = 1'-0'

ABUTMENT SEAT ELEVATION TABLE

LOCATION	5	6	7	8
SEAT Elev	994.49	994.51	994.74	994.76

LEGEND:
[X] Seat Elevation

NOTES:
1. For "SECTION A–A", "SECTION B–B"and "SECTION C–C", see "ABUTMENT DETAILS NO. 1" sheet.
2. For Neoprene Strip details, see "NEOPRENE STRIP DETAIL" on "ABUTMENT 1 LAYOUT" sheet.
3. Piles must have inspection tubes per Standard Plan B2–3. Place temporary decking over excavated area as required to provide safe access over open trench during both construction stages as authorized by the Engineer. All piles may be placed in Stage 1, but the Contractor is responsible for all costs associated with making temporary adjustments to the traffic control required to construct the piles shown in Stage 2. Modifications to the traffic control plan must be authorized by the Engineer prior to making any adjustments.
4. No backfill at the abutment is allowed until the deck is in place and the dowels in both abutments are grouted and cured. Backfill must be placed in lifts such there is no more than a 1' difference in height between abutments at any time.
5. All transverse reinforcement must extend 1'–6" minimum into Stage 2 except #8 bars. Extend #8 bars 1'–0" into Stage 2. #8 bars must be mechanically spliced using service level splices. #8 bars must not be bent.
6. No construction equipment is allowed within 10'–0" of the top of the EID Canal.

ABUTMENT 2 LAYOUT
SCALE AS SHOWN

FOR REDUCED PLANS 0 1 2 ORIGINAL SCALE IS IN INCHES

REVISION NUMBER	DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL ENGINEER — KEVIN ROSS — No. C 49652 — Exp. 9-30-18 — CIVIL — STATE OF CALIFORNIA

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REGISTERED CIVIL ENGINEER — DATE: 03/22/18

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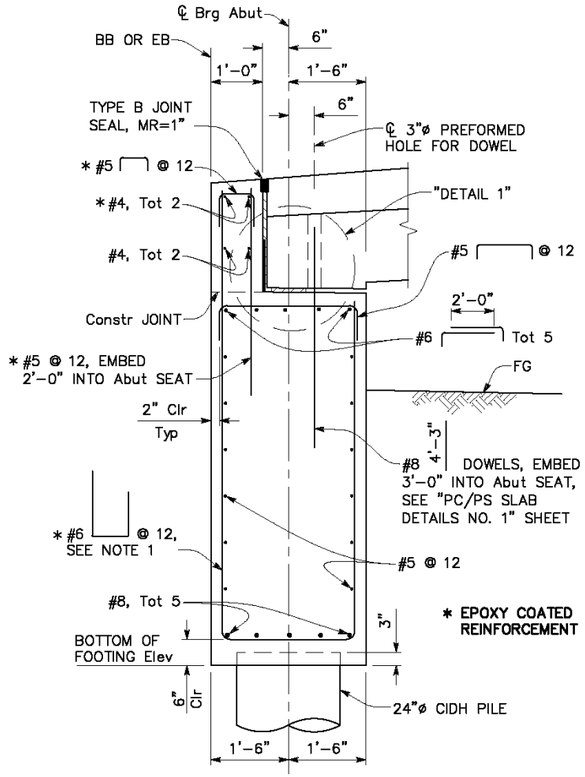
LM	03/22/18
ROAD NUMBER:	
2403	

COUNTY OF EL DORADO
COMMUNITY DEVELOPMENT AGENCY
TRANSPORTATION DIVISION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

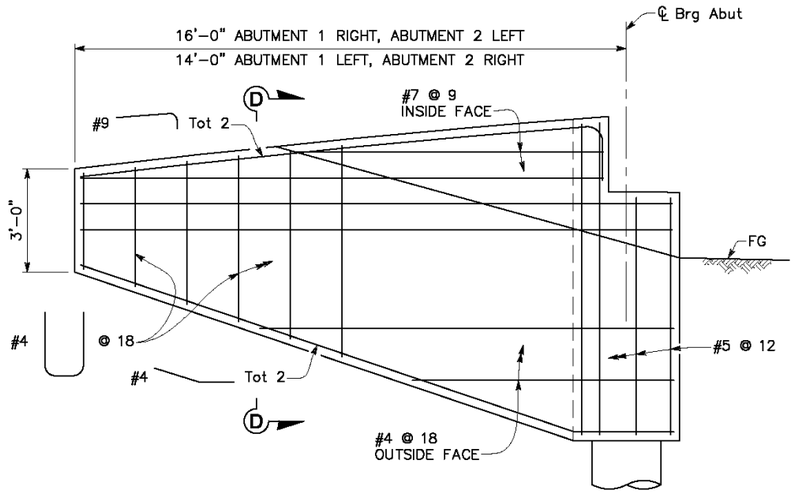
SHEET S-6
30 OF 41
W.O. No. 77125



SECTION A-A

3/4" = 1'–0"

ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR

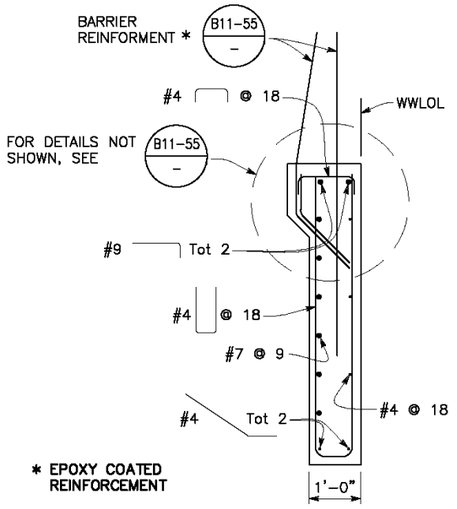


WINGWALL ELEVATION

1/2" = 1'–0"

ABUTMENT 1 RIGHT SHOWN, OTHER WALLS ARE SIMILAR

WATERLINE ALONG SOUTH SIDE NOT SHOWN

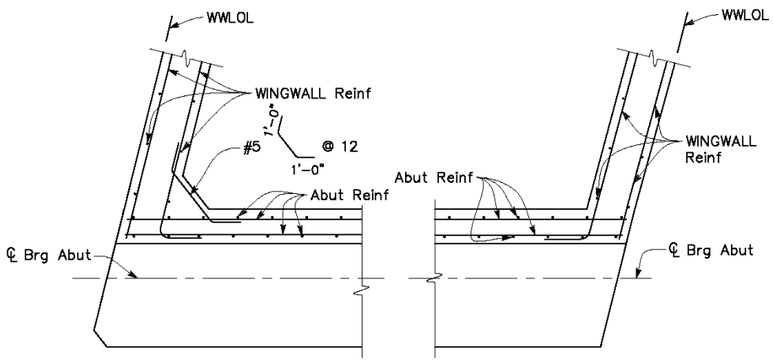


SECTION D-D

3/4" = 1'–0"

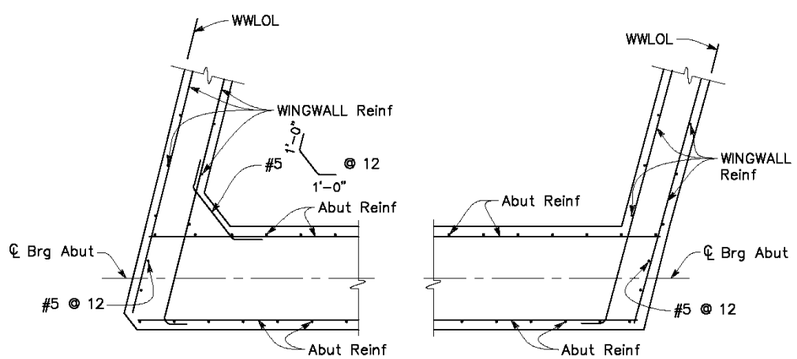
NOTE:

1. Stirrups must be placed parallel to ℄ Bridge and measured along ℄ Abutment.



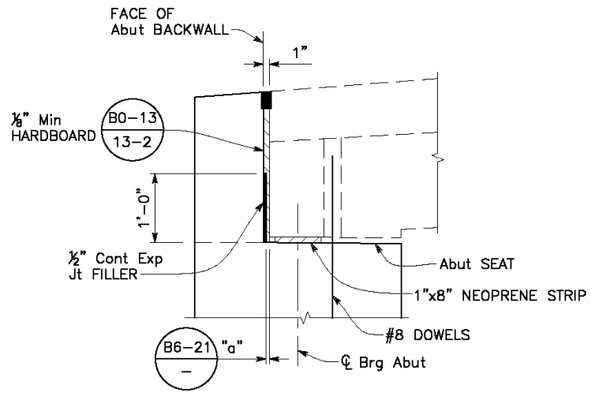
SECTION B-B

1/2" = 1'–0"



SECTION C-C

1/2" = 1'–0"



DETAIL 1

1" = 1'–0"

ABUTMENT DETAILS
SCALE AS SHOWN

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2

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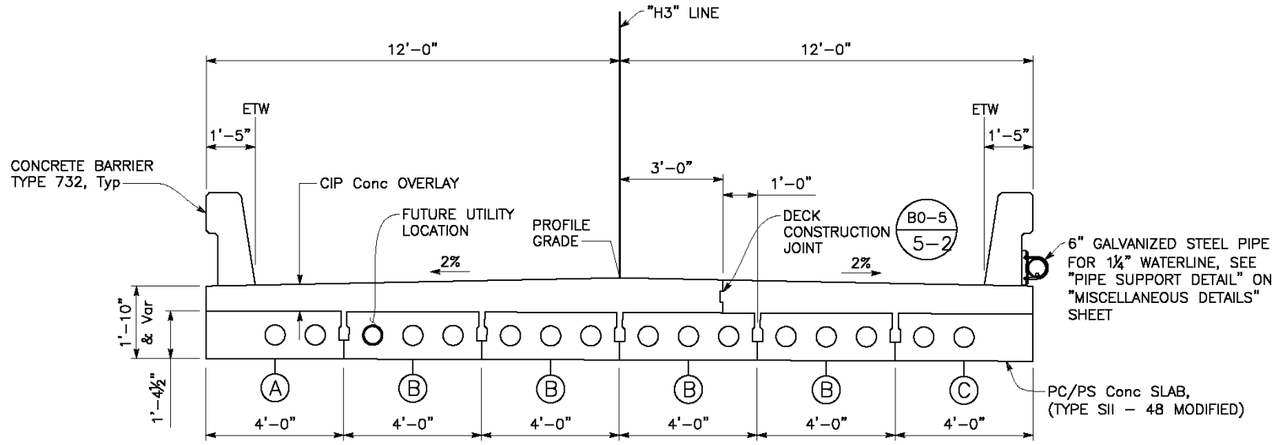
ROAD NUMBER: 2403

COUNTY OF EL DORADO
COMMUNITY DEVELOPMENT AGENCY
TRANSPORTATION DIVISION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET S-7
31 OF 41
W.O. No. 77125



TYPICAL SECTION

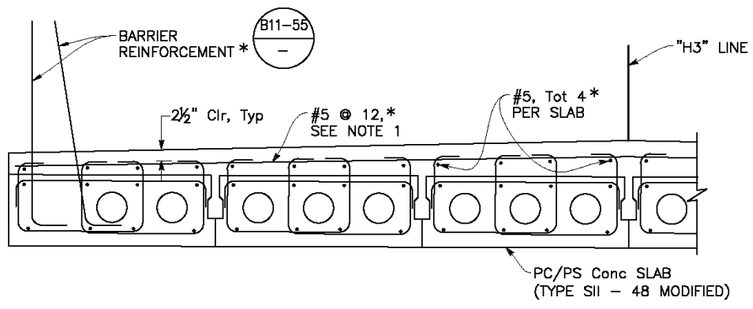
1/2" = 1'–0"

LEGEND:

- (A) North Exterior Girder
- (B) Interior Girder
- (C) South Exterior Girder

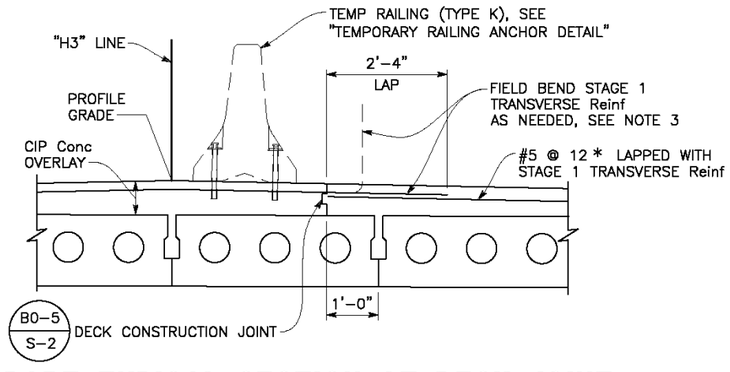
NOTES:

1. Cast–in–Place Concrete Overlay transverse reinforcement must be placed parallel to ℄ Abutment and measured along ℄ Bridge.
2. Record location of deck & stirrup reinforcement prior to placing Cast–in–Place Concrete Overlay so drilling and bonding 1"ø rods will not conflict with reinforcment.
3. After field bending, repair any coating damage as specified in the Standard Specifications. You must assume all field bent bars will require repair. Costs for repair are included in the price paid per pound of Bar Reinforcing Steel (Epoxy Coated)(Bridge).



PART TYPICAL SECTION

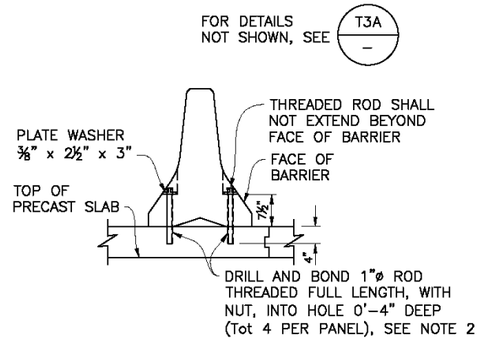
3/4" = 1'–0"



PART TYPICAL SECTION AT DECK JOINT

3/4" = 1'–0"

FOR REINFORCEMENT NOT SHOWN, SEE "PART TYPICAL SECTION"



TEMPORARY RAILING ANCHOR DETAIL

3/4" = 1'–0"

* EPOXY COATED REINFORCEMENT

FOR REDUCED PLANS 0 1 2 ORIGINAL SCALE IS IN INCHES

TYPICAL SECTION
SCALE AS SHOWN

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BRIDGE REPLACEMENT

SHEET S-8
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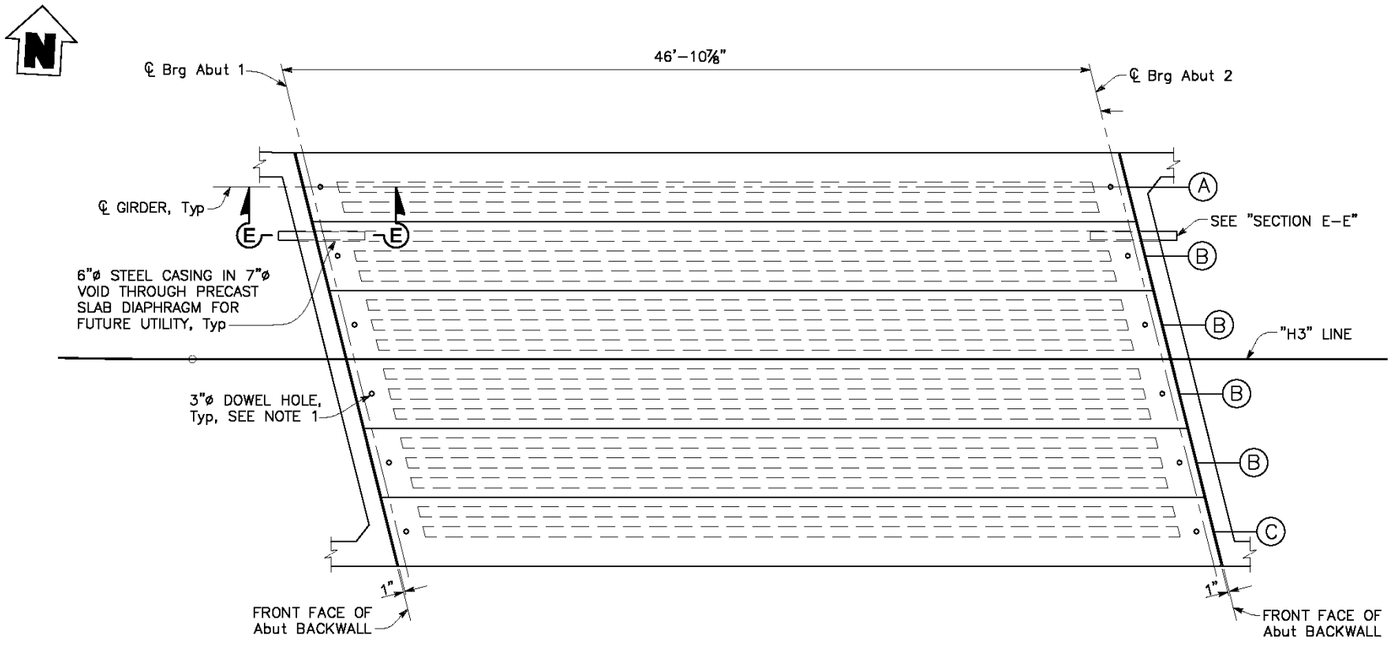
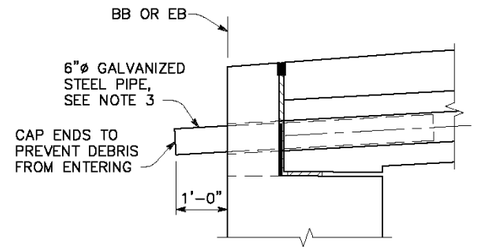


PLAN
1/4" = 10'



SECTION E-E
3/4" = 1'–0"
ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR

LEGEND:

- (A) North Exterior Girder
- (B) Interior Girder
- (C) South Exterior Girder

NOTES:

1. Dowel holes to be filled with non–shrink grout. For dowel locations, see "ABUTMENT 1 LAYOUT" & "ABUTMENT 2 LAYOUT" sheets.
2. Use additives in the CIP concrete topping in stage 2 to retard the set of the mix to 3–4 hours to allow the majority of Stage 2 deflection to occur. Retarding agents are not required for Stage 1 CIP concrete topping.
3. Extend 5'–0" long 6"ø Steel Pipe Casing 1'–0" beyond back face of Abutment Backwall at each Abutment and cap ends to prevent debris from entering casing as shown on this sheet. Steel Pipe Casing to be NPS 6 Schedule 40.

PC/PS SLAB LAYOUT
SCALE AS SHOWN

FOR REDUCED PLANS 0 1 2 ORIGINAL SCALE IS IN INCHES

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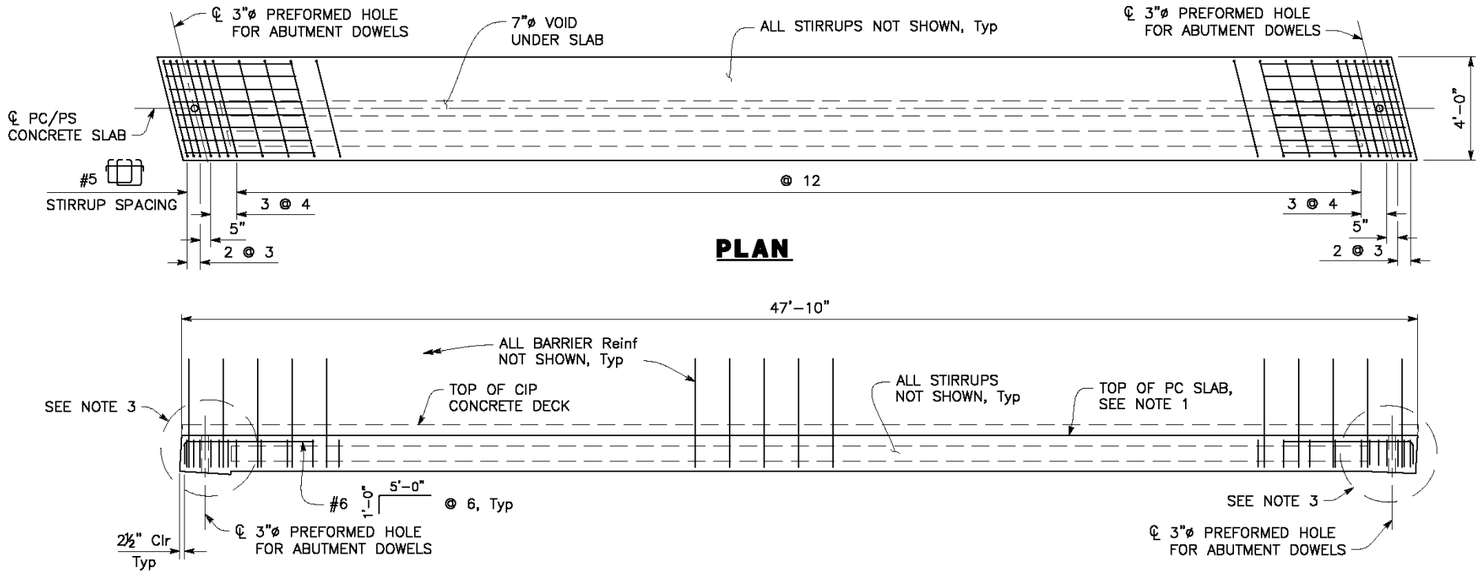
GX	KD
CHECKED:	DATE:
LM	03/22/18
ROAD NUMBER:	
2403	

COUNTY OF EL DORADO
COMMUNITY DEVELOPMENT AGENCY
TRANSPORTATION DIVISION

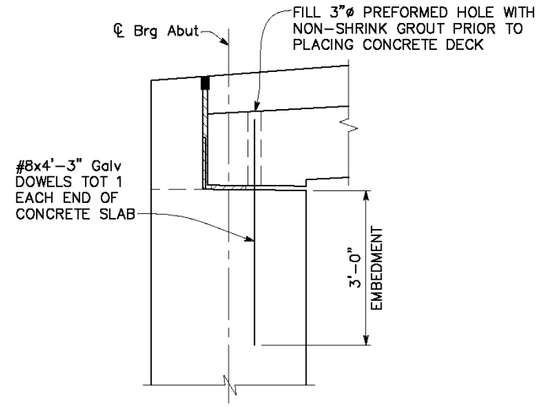
HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET S-9
33 OF 41
W.O. No. 77125

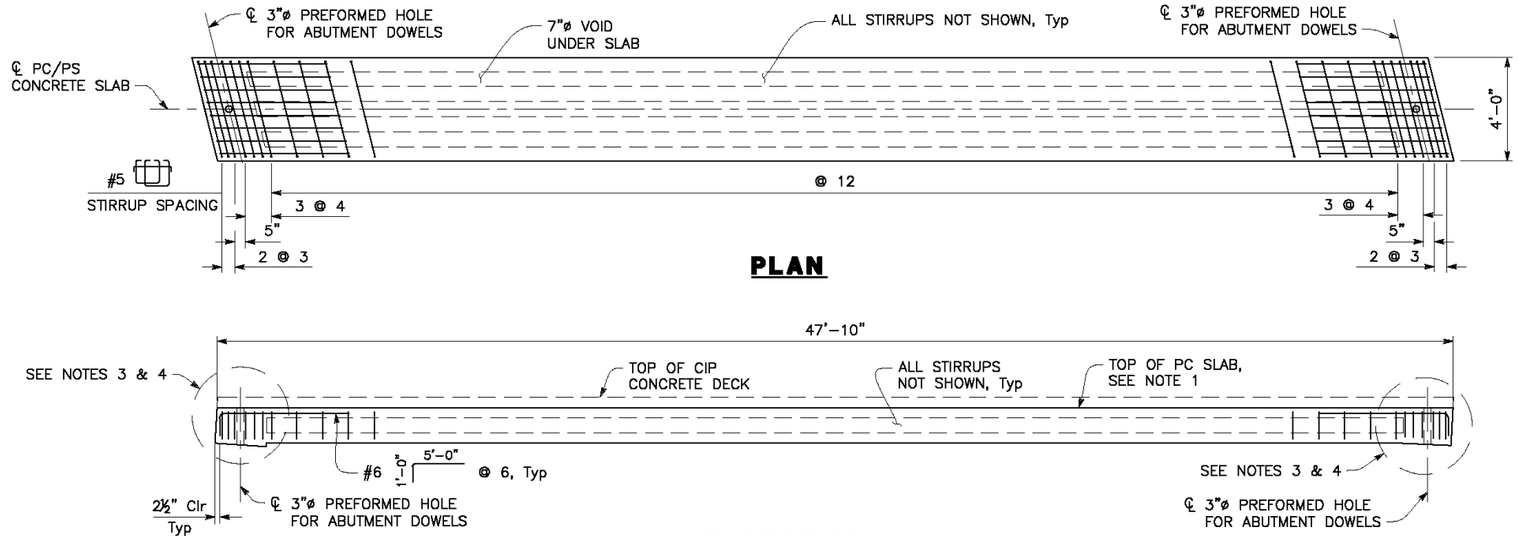


PLAN

ELEVATION
PRECAST PRESTRESSED CONCRETE SLAB Ⓐ & Ⓒ
3/8" = 1'-0"



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



PLAN

ELEVATION
PRECAST PRESTRESSED CONCRETE SLAB Ⓑ NOTE 4
3/8" = 1'-0"

NOTES:

1. Finish top of PC/PS Concrete Slab (Type SII – 48 Modified) per Standard Specifications.
2. For details not shown, see "PC/PS SLAB DETAILS NO. 2" and "PC/PS SLAB DETAILS NO. 3" sheets.
3. For end of girder geometry, see "PC/PS SLAB DETAILS NO. 3 sheet.
4. Extend void that contains 6"ø steel casing to end of girder. Girder B shown is for girders that do not have steel casing.

PC/PS SLAB DETAILS NO. 1
SCALE AS SHOWN

ORIGINAL SCALE IS IN INCHES
0 1 2
FOR REDUCED PLANS

REVISION NUMBER	DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL ENGINEER — KEVIN ROSS — No. C 49652 — Exp. 9-30-18 — CIVIL — STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF :
REGISTERED CIVIL ENGINEER
DATE: 03/22/18

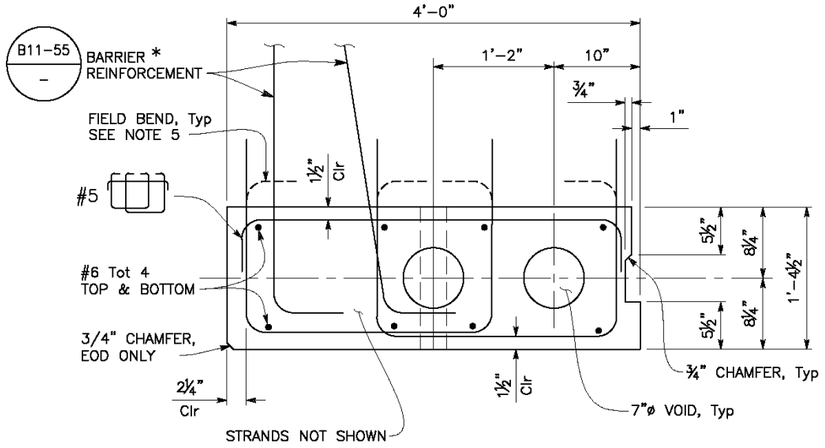
DESIGNED:	DRAWN:
GX	KD
CHECKED:	DATE:
LM	03/22/18
ROAD NUMBER:	
2403	

EL DORADO COUNTY — CALIFORNIA

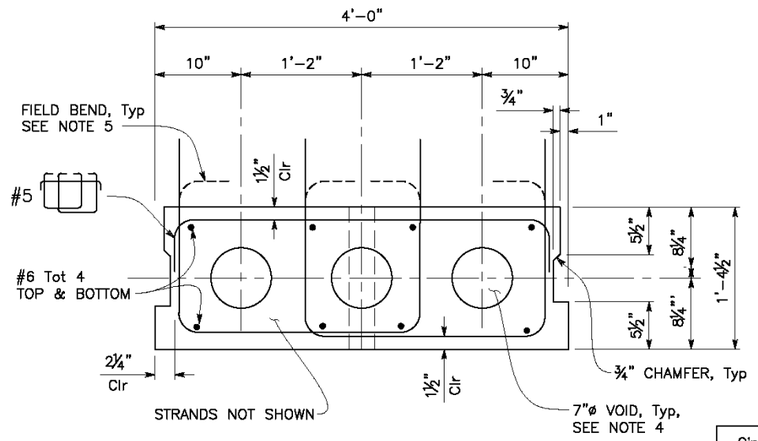
COUNTY OF EL DORADO
COMMUNITY DEVELOPMENT AGENCY
TRANSPORTATION DIVISION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET S-10
34 OF 41
W.O. No. 77125



TYPICAL SECTION Ⓐ & Ⓒ
1 1/2" = 1'–0"



TYPICAL SECTION Ⓑ
1 1/2" = 1'–0"

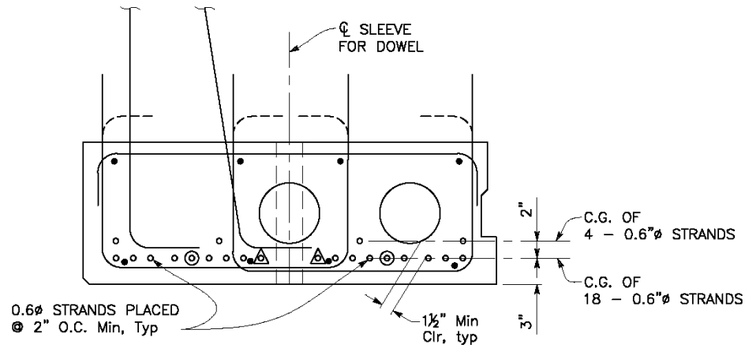
PRESTRESSING NOTES:

270 ksi Low Relaxation Srands

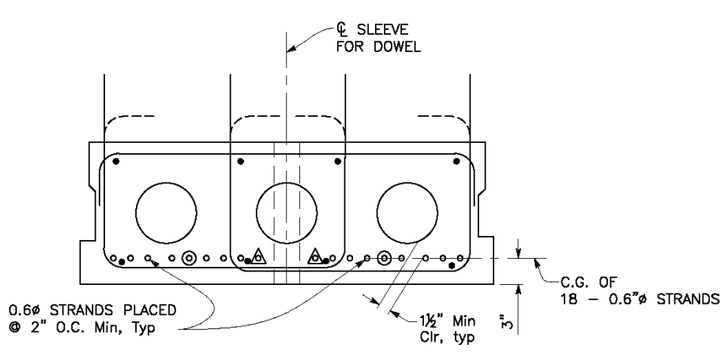
1. Pj is the total Prestress Force required in one Girder Unit Unit at time of stressing prior to release (initial pull corresponding to 0.75fpu).
2. Concrete Strength: f'ci is at time of initial prestressing f'c is at 28 days.
3. Deflection Components: Informational – to be used in setting Screed Line Elevations
4. Screed line elevations for deck overlay will be determined by the Engineer.
5. Design Details shown are for Pretensioned Units.
6. Contractor may adjust location of Strands authorized by the Engineer.

Girder Unit	Jacking Force (P), kips	C.G., in*	Concrete Strength (ksi)		Deflection Components in feet **	
			f'ci	f'c	Deck DL	Rail DL
Ⓐ&Ⓒ	968	3.4"	5.0	6.0	0.06'	0.02'
Ⓑ	791	4.5"	5.0	6.0	0.06'	0.01'

* C.G. is measured from bottom of slab
** Instantaneous deflection, unfactored



STRAND PATTERN DETAILS Ⓐ & Ⓒ
1 1/2" = 1'–0"



STRAND PATTERN DETAILS Ⓑ
1 1/2" = 1'–0"

LEGEND:

- ◬ Denotes Strand to be debonded 6' each end.
- ◎ Denotes Strand to be debonded 3' each end.
- ○ Denotes Strand
- ● Denotes Reinforcement

NOTES:

1. Strands should be placed symmetrically about ℄ slab.
2. Strand spacing shall not be less than 2" O/C.
3. The Contractor is responsible for managing differential deflection between girders. Place temporary weight on stage 2 precast slab units as needed to reduce camber difference between precast slab units.
4. Extend void that contains steel casing to the end of girder.
5. After field bending, repair any coating damage as specified in the Standard Specifications. You must assume all field bent bars will require repair. Costs for repair are included in the price paid per square foot for furnish Precast/Prestressed Concrete Slab (Type SII – 48 Modified).

PC/PS SLAB DETAILS NO. 2
SCALE AS SHOWN

FOR REDUCED PLANS 0 1 2 ORIGINAL SCALE IS IN INCHES

REVISION				
NUMBER	DATE	DESCRIPTION	BY	

REGISTERED PROFESSIONAL ENGINEER — KEVIN ROSS — No. C 49652 — Exp. 9-30-18 — CIVIL — STATE OF CALIFORNIA

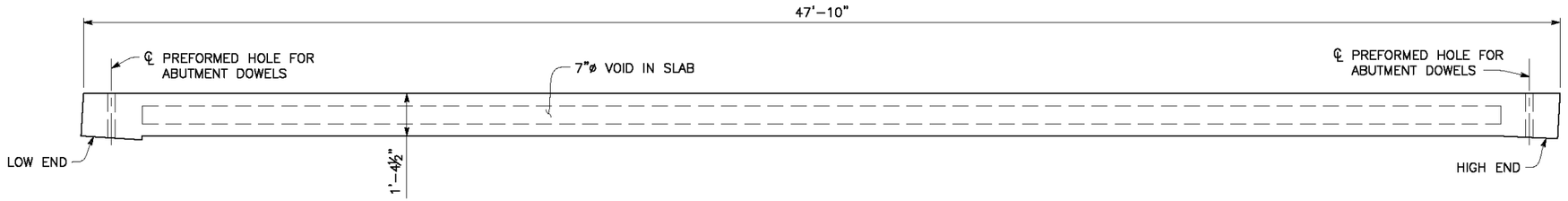
PREPARED UNDER THE SUPERVISION OF :
REGISTERED CIVIL ENGINEER
03/22/18
DATE:

DESIGNED:	DRAWN:
GX	KD
CHECKED:	DATE:
LM	03/22/18
ROAD NUMBER:	
2403	

COUNTY OF EL DORADO
COMMUNITY DEVELOPMENT AGENCY
TRANSPORTATION DIVISION

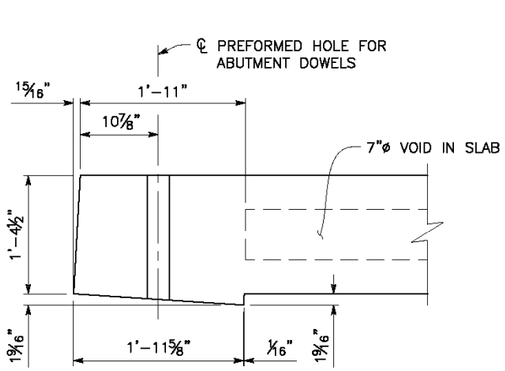
HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET
S-11
35 OF 41
W.O. No. 77125

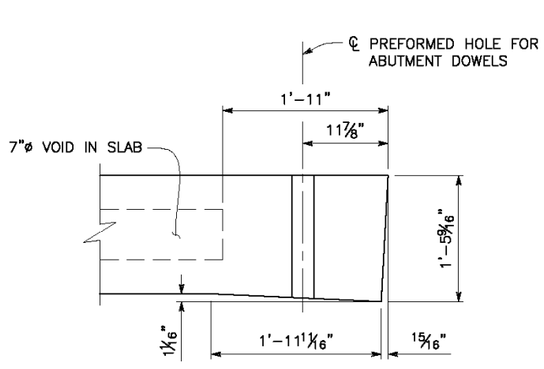


GIRDER - ELEVATION

1/2" = 1'–0"



LOW END

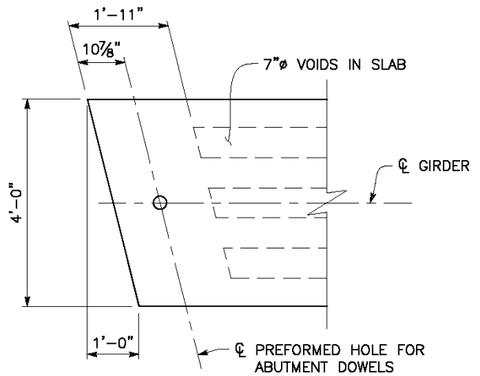


HIGH END

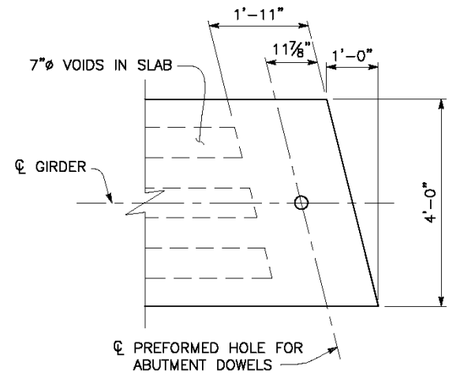
PART GIRDER - ELEVATION

1½" = 1'–0"

INTERIOR SLAB WITHOUT STEEL PIPE CASING SHOWN, OTHER SLABS SIMILAR



LOW END



HIGH END

PART GIRDER - PLAN

¾" = 1'–0"

INTERIOR SLAB WITHOUT STEEL PIPE CASING SHOWN, OTHER SLABS SIMILAR

NOTES:

1. All Slab Units to have the same blockout.
2. Dimensions shown are measured parallel to ℄ Girder.
3. Dimensions shown are based on casting Concrete Slab flat. Girder slope in final position is 5.5% upward.

PC/PS SLAB DETAILS NO. 3
SCALE AS SHOWN

FOR REDUCED PLANS 0 1 2 ORIGINAL SCALE IS IN INCHES

REVISION NUMBER	DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL ENGINEER — KEVIN ROSS — No. C 49652 — Exp. 9-30-18 — CIVIL — STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF :

REGISTERED CIVIL ENGINEER — DATE: 03/22/18

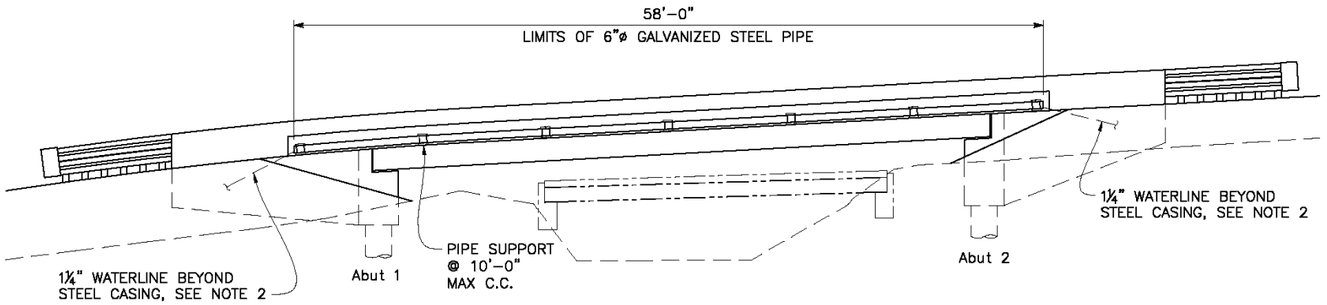
DESIGNED:	DRAWN:
GX	KD
CHECKED:	DATE:
LM	03/22/18
ROAD NUMBER:	
2403	

EL DORADO COUNTY CALIFORNIA

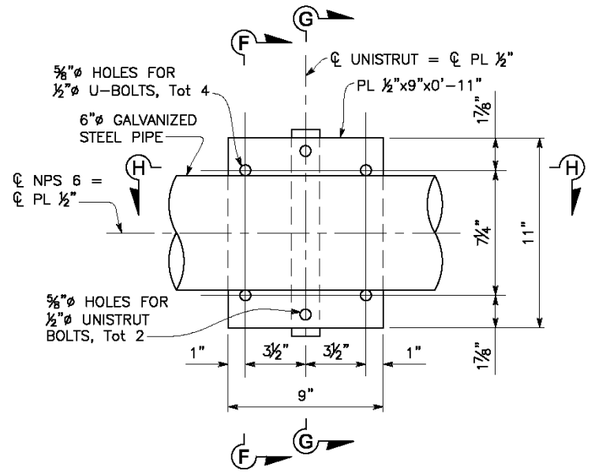
COUNTY OF EL DORADO
COMMUNITY DEVELOPMENT AGENCY
TRANSPORTATION DIVISION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

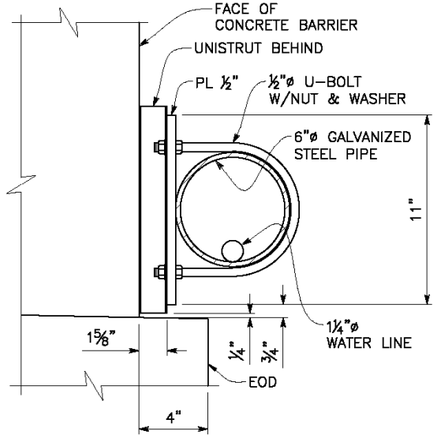
SHEET S-12
36 OF 41
W.O. No. 77125



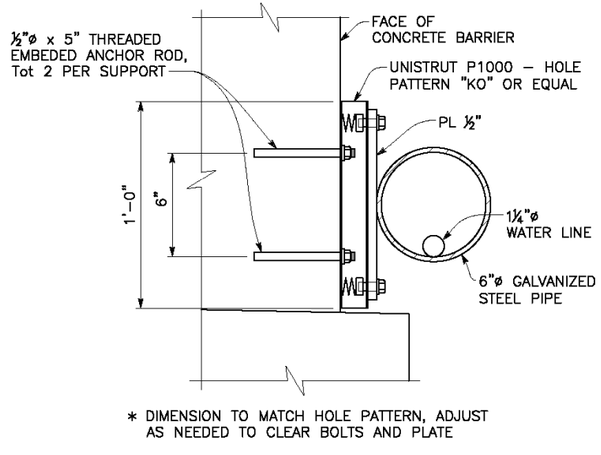
PIPE SUPPORT - ELEVATION
NO SCALE



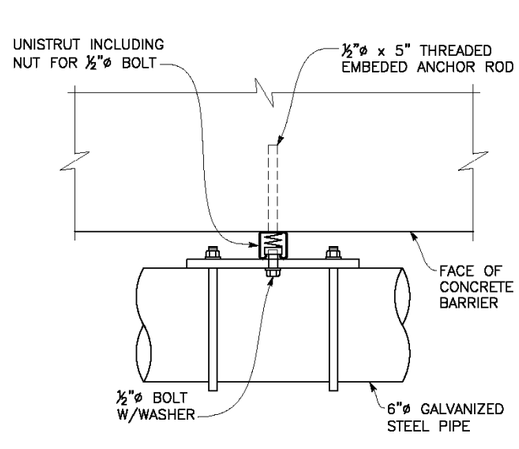
PIPE SUPPORT DETAIL
3" = 1'-0"



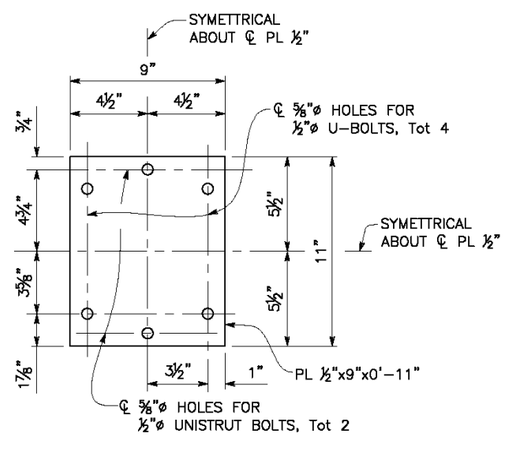
SECTION F-F
3" = 1'-0"



SECTION G-G
3" = 1'-0"



SECTION H-H
3" = 1'-0"



PIPE SUPPORT CONNECTION PLATE
3" = 1'-0"

NOTES:
1. All plates, unistruts, bolts, nuts and washers must be galvanized.
2. For layout of 1¼"ø PVC Waterline beyond bridge, see "Waterline Relocation Plans".

MISCELLANEOUS DETAILS
SCALE AS SHOWN

FOR REDUCED PLANS 0 1 2 ORIGINAL SCALE IS IN INCHES

REVISION NUMBER	DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL ENGINEER — KEVIN ROSS — No. C 49652 — Exp. 9-30-18 — CIVIL — STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF :
REGISTERED CIVIL ENGINEER — DATE: 03/22/18

DESIGNED:	DRAWN:
GX	KD
CHECKED:	DATE:
LM	03/22/18
ROAD NUMBER:	
2403	

COUNTY OF EL DORADO
COMMUNITY DEVELOPMENT AGENCY
TRANSPORTATION DIVISION

HAZEL VALLEY ROAD AT EID CANAL
BRIDGE REPLACEMENT

SHEET S-13
37 OF 41
W.O. No. 77125

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	ED	C.R.		1	4

CERTIFIED ENGINEERING GEOLOGIST DATE

APPROVAL DATE

REGISTERED GEOLOGIST DAVID A. KITZMANN No. 2412 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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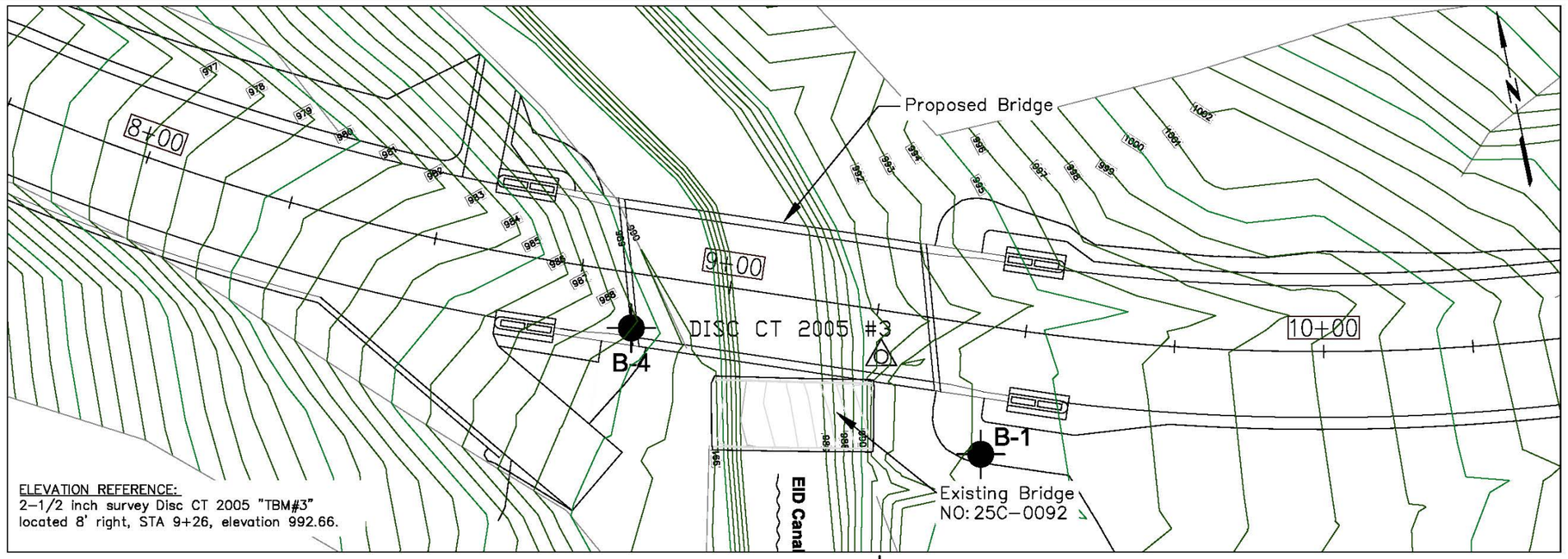
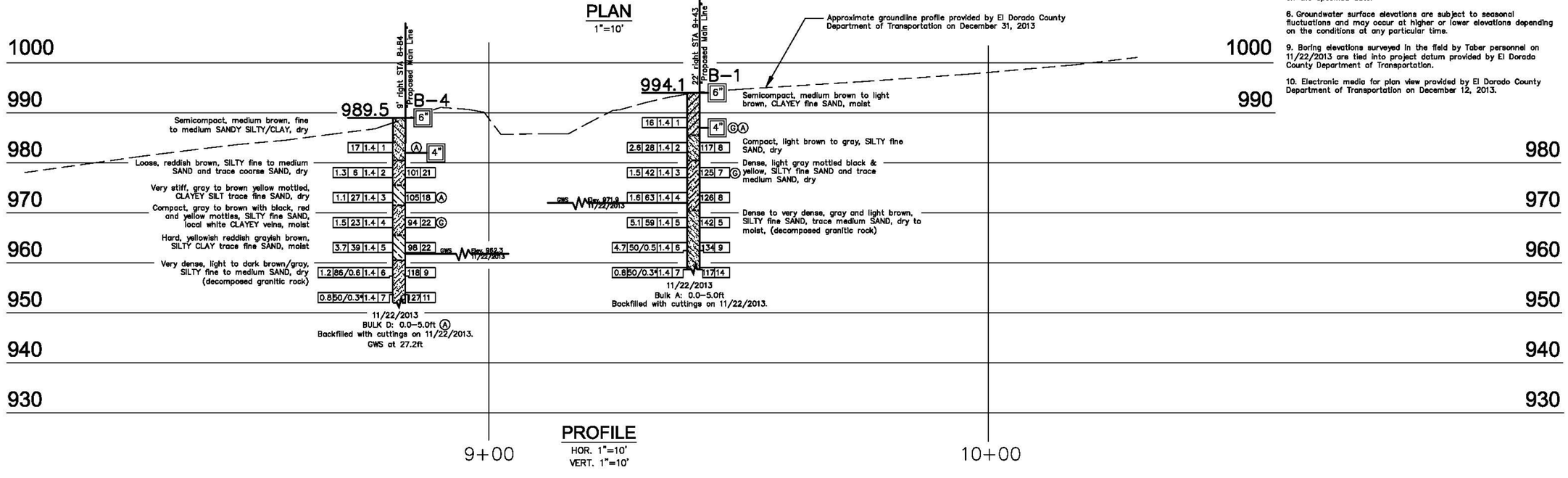
ROSEVILLE, CALIFORNIA 95661 JOB NO: P15054

County of El Dorado
Community Development Agency Transportation Division
2850 Fairlane Court
Placerville, CA 95667





NOTES:
1. Field classification of soils was in accordance with ASTM D 2488-10 "Description and Identification of Soils (Visual-Manual Procedure)".

2. Standard Penetration tests were performed in accordance with ASTM D 1586-10 using a hammer operated with an automated drop system. Drill rods were 1 5/8-inch diameter "A"-rods; sampler was driven with brass liners.

3. 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 D1586-10. 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.

4. SPT hammer energy measurements were not taken. Hammer energy ratio (ETR) measurements indicate an ETR = 87% on 6/18/2012.

4. Consistency of soils shown in ( ) where estimated.

5. Groundwater surface (GWS) elevations in the borings indicated on the Log of Test Boring Sheets reflect the fluid level in the borings on the specified date.

6. Groundwater surface elevations are subject to seasonal fluctuations and may occur at higher or lower elevations depending on the conditions at any particular time.

9. Boring elevations surveyed in the field by Taber personnel on 11/22/2013 are tied into project datum provided by El Dorado County Department of Transportation.

10. Electronic media for plan view provided by El Dorado County Department of Transportation on December 12, 2013.

ENGINEERING SERVICES		GEOTECHNICAL SERVICES		PREPARED FOR THE		BRIDGE NO.	Hazel Valley Road at EID Canal Bridge Replacement
FUNCTIONAL SUPERVISOR	DRAWN BY: X. Vang	FIELD INVESTIGATION BY:	DATE:	EL DORADO COUNTY	PROJECT ENGINEER	25C-0140	
	CHECKED BY: D. Kitzmann	A. Kahn	November 2013	COMMUNITY DEVELOPMENT AGENCY		POST MILE C.R.	LOG OF TEST BORINGS 1 OF 4

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU XXXXXX
EA XXXXXX

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 37 OF 40

T06 LOTB_recover.dwg 2010.dwg
38
41
6/15/2016
USERNAME -> $USER

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL, (2010)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	ED	C.R.		2	4

CERTIFIELD ENGINEERING GEOLOGIST DATE

APPROVAL DATE

REGISTERED GEOLOGIST DAVID A. KITZMANN No. 2412 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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County of El Dorado
Community Development Agency Transportation Division
2850 Fairlane Court
Placerville, CA 95667

CEMENTATION

Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

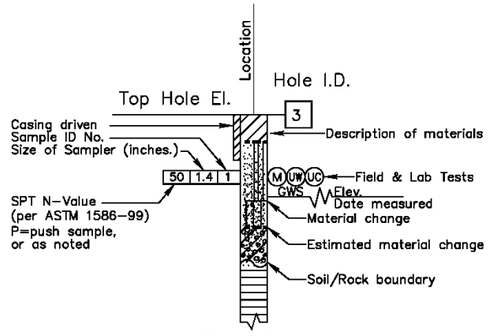
BOREHOLE IDENTIFICATION

Symbol	Hole Type	Description
Size	A	Auger Boring (hollow or solid stem bucket)
	R	Rotary drilled boring (conventional)
Size	RW	Rotary drilled with self-casing wire-line
	RC	Rotary core with continuously-sampled, self-casing wire-line
	P	Rotary percussion boring (air)
Size	R	Rotary drilled diamond core
Size	HD	Hand driven (1-inch soil tube)
	HA	Hand Auger
●	D	Dynamic Cone Penetration Boring
▲	CPT	Cone Penetration Test (ASTM D 5778)
⬚	O	Other (note on LOTB)

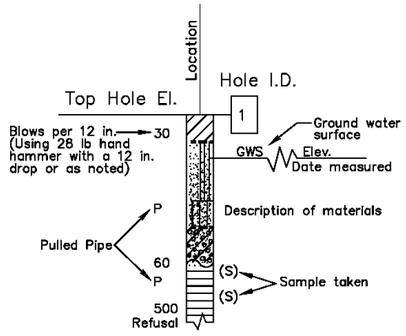
NOTE: Size in Inches.

CONSISTENCY OF COHESIVE SOILS

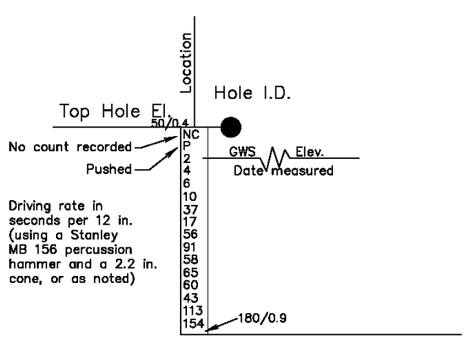
Description	Shear Strength (tsf)	Pocket Penetrometer Measurement, PP, (tsf)	Torvane Measurement, TV, (tsf)	Vane Shear measurement, VS, (tsf)
Very Soft	Less than 0.12	Less than 0.25	Less than 0.12	Less than 0.12
Soft	0.12 to 0.25	0.25 to 0.50	0.12 to 0.25	0.12 to 0.25
Medium Stiff	0.25 to 0.5	0.50 to 1.0	0.25 to 0.50	0.25 to 0.5
Stiff	0.5 to 1	1 to 2	0.50 to 1.0	0.5 to 1
Very Stiff	1 to 2	2 to 4	1.0 to 2.0	1 to 2
Hard	Greater than 2	Greater than 4.0	Greater than 2.0	Greater than 2



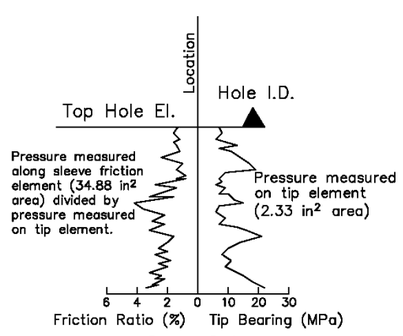
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) SOUNDING

SOIL LEGEND

ENGINEERING SERVICES		GEOTECHNICAL SERVICES		PREPARED FOR THE		BRIDGE NO.	Hazel Valley Road at EID Canal Bridge Replacement
FUNCTIONAL SUPERVISOR	DRAWN BY: X. Vang	FIELD INVESTIGATION BY:	DATE:	EL DORADO COUNTY	PROJECT ENGINEER	25C-0140	
	CHECKED BY: D. Kitzmann	A. Kahn	November 2013	COMMUNITY DEVELOPMENT AGENCY		POST MILE C.R.	**LOG OF TEST BORINGS 2 OF 4**

OGS CIVIL LOG OF TEST BORINGS SHEET — ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 — CU XXXXXX EA XXXXXX — DISREGARD PRINTS BEARING EARLIER REVISION DATES → REVISION DATES (PRELIMINARY STAGE ONLY) — SHEET 38 OF 40

T06 LOTB_recover.dwg 2010.dwg 39 41 6/15/2016 USERNAME => $USER

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL, (2010)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	ED	C.R.		3	4

CERTIFIELD ENGINEERING GEOLOGIST DATE

APPROVAL DATE

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REGISTERED GEOLOGIST DAVID A. KITZMANN No. 2412 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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ROSEVILLE, CALIFORNIA 95661 JOB NO: P15054

County of El Dorado
Community Development Agency Transportation Division
2850 Fairlane Court
Placerville, CA 95667

GROUP SYMBOLS AND NAMES

Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
GW	Well-graded GRAVEL Well-graded GRAVEL with SAND	CL	Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
GP	Poorly-graded GRAVEL Poorly-graded GRAVEL with SAND		
GW-GM	Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND	CL-ML	SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
GW-GC	Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GP-GM	Poorly-graded GRAVEL with SILT Poorly-graded GRAVEL with SILT and SAND	ML	SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
GP-GC	Poorly-graded GRAVEL with CLAY (or SILTY CLAY) Poorly-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GM	SILTY GRAVEL SILTY GRAVEL with SAND	OL	ORGANIC lean Clay ORGANIC lean Clay with SAND ORGANIC lean Clay with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
GC	CLAYEY GRAVEL CLAYEY GRAVEL with SAND		
GC-GM	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND	OL	ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
SW	Well-graded SAND Well-graded SAND with GRAVEL		
SP	Poorly-graded SAND Poorly-graded SAND with GRAVEL	CH	Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
SW-SM	Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL		
SW-SC	Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	MH	Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
SP-SM	Poorly-graded SAND with SILT Poorly-graded SAND with SILT and GRAVEL		
SP-SC	Poorly-graded SAND with CLAY (or SILTY CLAY) Poorly-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	OH	ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
SM	SILTY SAND SILTY SAND with GRAVEL		
SC	CLAYEY SAND CLAYEY SAND with GRAVEL	OH	ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
SC-SM	SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL		
PT	PEAT	OH/OL	ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND
	COBBLES COBBLES and BOULDERS BOULDERS		

FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content–% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (UC) Unconfined Compression–Soil (ASTM D 2166) Unconfined Compression–Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 2937)

APPARENT DENSITY OF COHESIONLESS SOILS

Description	SPT N_{60}–Value (Blows / 12 in.)
Very Loose	0 – 5
Loose	5 – 10
Medium Dense	11 – 30
Dense	31 – 50
Very Dense	Greater than 50

MOISTURE

Description	Criteria
Dry	No discernable moisture
Moist	Moisture present, but no free water
Wet	Visible free water

PERCENT OR PROPORTION OF SOILS

Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5% to 10%
Little	15% to 25%
Some	30% to 45%
Mostly	50% to 100%

PARTICLE SIZE

Description		Size (in.)
Boulder		Greater than 12
Cobble		3 – 12
Gravel	Coarse	3/4 – 3
	Fine	1/5 – 3/4
Sand	Coarse	1/16 – 1/5
	Medium	1/64 – 1/16
	Fine	1/300 – 1/64
Silt and Clay		Less than 1/300

SOIL LEGEND

ENGINEERING SERVICES		GEOTECHNICAL SERVICES		PREPARED FOR THE		BRIDGE NO.
FUNCTIONAL SUPERVISOR	DRAWN BY: X. Vang	FIELD INVESTIGATION BY: A. Kahn	DATE: November 2013	EL DORADO COUNTY COMMUNITY DEVELOPMENT AGENCY	PROJECT ENGINEER	25C-0140
	CHECKED BY: D. Kitzmann					POST MILE C.R.

Hazel Valley Road at EID Canal Bridge Replacement

LOG OF TEST BORINGS 3 OF 4

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU XXXXXX
EA XXXXXX

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 40 OF 41

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	ED	C.R.		4	4

CERTIFIELD ENGINEERING GEOLOGIST   DATE

APPROVAL DATE

REGISTERED GEOLOGIST DAVID A. KITZMANN No. 2412 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

WRECO
8331 SIERRA COLLEGE BLVD.
ROSEVILLE, CALIFORNIA 95661   JOB NO: P15054

County of El Dorado
Community Development Agency Transportation Division
2850 Fairlane Court
Placerville, CA 95667

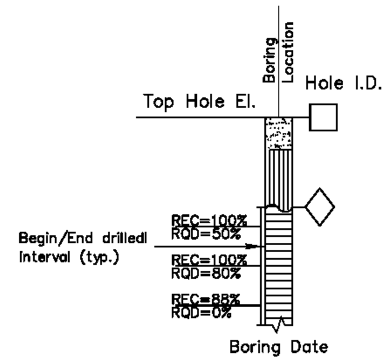
REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL, (2010)

PERCENT CORE RECOVERY (REC) & ROCK QUALITY DESIGNATION (RQD)

$$REC = \frac{\Sigma \text{ Length of the recovered core pieces (inches)}}{\text{Total length of core run (inches)}} \times 100\%$$

$$RQD = \frac{\Sigma \text{ Length of the intact core pieces} \geq 4 \text{ in.}}{\text{Total length of core run (inches)}} \times 100\%$$

RQD* Indicates soundness criteria not met.



BEDDING SPACING

Description	Thickness / Spacing
Massive	Greater than 10 ft
Very thickly bedded	3 ft – 10 ft
Thickly bedded	1 ft – 3 ft
Moderately bedded	4 in. – 1 ft
Thinly bedded	1 in. – 4 in.
Very thinly bedded	1/4 in. – 1 in.
Laminated	Less than 1/4 in.

LEGEND OF ROCK MATERIALS

- IGNEOUS ROCK
- SEDIMENTARY ROCK
- METAMORPHIC ROCK

ROCK HARDNESS

Description	Criteria
Extremely Hard	Cannot be scratched with a pocketknife or sharp pick. Can only be chipped with repeated heavy hammer blows.
Very Hard	Cannot be scratched with a pocketknife or sharp pick. Breaks with repeated heavy hammer blows.
Hard	Can be scratched with a pocketknife or sharp pick with difficulty (heavy pressure). Breaks with heavy hammer blows.
Moderately Hard	Can be scratched with a pocketknife or sharp pick with light or moderate pressure. Breaks with moderate hammer blows.
Moderately Soft	Can be grooved 1/16" deep with a pocketknife or sharp pick with moderate or heavy pressure. Breaks with light hammer blow or heavy manual pressure.
Soft	Can be grooved or gouged easily by a pocketknife or sharp pick with light pressure, can be scratched with fingernail. Breaks with light to moderate manual pressure.
Very Soft	Can be readily indented, grooved or gouged with fingernail, or carved with a pocketknife. Breaks with light manual pressure.

FRACTURE DENSITY

Description	Observed Fracture Density
Unfractured	No fractures.
Very slightly fractured	Core lengths greater than 3 ft.
Slightly fractured	Core lengths mostly from 1 to 3 ft
Moderately fractured	Core lengths mostly in 4 in. to 1 ft.
Intensely fractured	Core lenghts mostly from 1 in. to 4 in.
Very intensely fractured	Mostly chips and fragments.

WEATHERING DESCRIPTORS FOR INTACT ROCK

Description	Diagnostic features					General Characteristics
	Chemical weathering–Discoloration and/or oxidation		Mechanical Weathering–Grain boundary conditions (disaggregation) primarily for granitics and some coarse–grained sediments	Texture and Leaching		
	Body of rock	Fracture Surfaces		Texture	Leaching	
Fresh	No discoloration, not oxidized.	No discoloration or oxidation.	No separation, intact (tight).	No change.	No Leaching.	Hammer rings when crystalline rocks are struck.
Slightly Weathered	Discoloration or oxidation is limited to surface of, or short distance from, fractures; some feldspar crystals are dull.	Minor to complete discolorization or oxidation of most surfaces.	No visible separation, intact (tight).	Preserved.	Minor leaching of some soluble minerals.	Hammer rings when crystalline rocks are struck. Body of rock not weakened.
Moderately Weathered	Discoloration or oxidation extends from fractures usually throughout; Fe–Mg minerals are "rusty", feldspar crystals are "cloudy".	All fracture surfaces are discolored or oxidized.	Partial separation of boundaries visible.	Generally preserved.	Soluble minerals may be mostly leached.	Hammer does not ring when rock is struck. Body of rock is slightly weakened.
Intensely Weathered	Discoloration or oxidation throughout; all feldspars and Fe–Mg minerals are altered to clay to some extent; or chemical alteration produces in–situ disaggregation, see grain boundary conditions.	All fracture surfaces are discolored or oxidized, surfaces friable.	Partial separation, rock is friable; in semiarid conditions granitics are disaggregated.	Texture altered by chemical disintegration (hydration, argillation).	Leaching of soluble minerals may be complete.	Dull sound when struck with hammer, usually can be broken with moderate to heavy manual pressure or by light hammer blow without reference to planes of weakness such as incipient or hairline fractures, or veinlets. Rock is significantly weakened.
Decomposed	Discolored or oxidized throughout, but resistant minerals such as quartz may be unaltered; all feldspars and Fe–Mg minerals are completely altered to clay.		Complete separation of grain boundaries (disaggregated).	Resembles a soil, partial or complete remnant rock structure may be preserved; leaching of soluble minerals usually complete.		Can be granulated by hand. Resistant minerals such as quartz may be present as "stringers" or "dikes".

ROCK LEGEND

ENGINEERING SERVICES		GEOTECHNICAL SERVICES		PREPARED FOR THE		BRIDGE NO.	Hazel Valley Road at EID Canal Bridge Replacement
FUNCTIONAL SUPERVISOR	DRAWN BY: X. Vang / CHECKED BY: D. Kitzmann	FIELD INVESTIGATION BY: A. Kahn	DATE: November 2013	EL DORADO COUNTY COMMUNITY DEVELOPMENT AGENCY	PROJECT ENGINEER	25C–0140 / POST MILE C.R.	LOG OF TEST BORINGS 4 OF 4

OGS CIVIL LOG OF TEST BORINGS SHEET   ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3   CU XXXXXX EA XXXXXX   DISREGARD PRINTS BEARING EARLIER REVISION DATES →   REVISION DATES (PRELIMINARY STAGE ONLY)   SHEET 40 OF 40

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