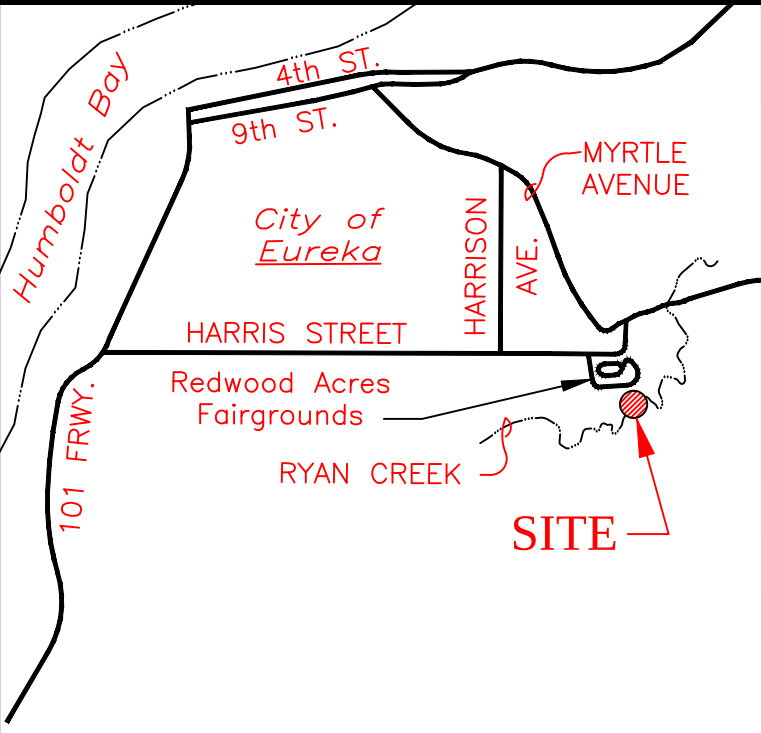


60% DESIGN

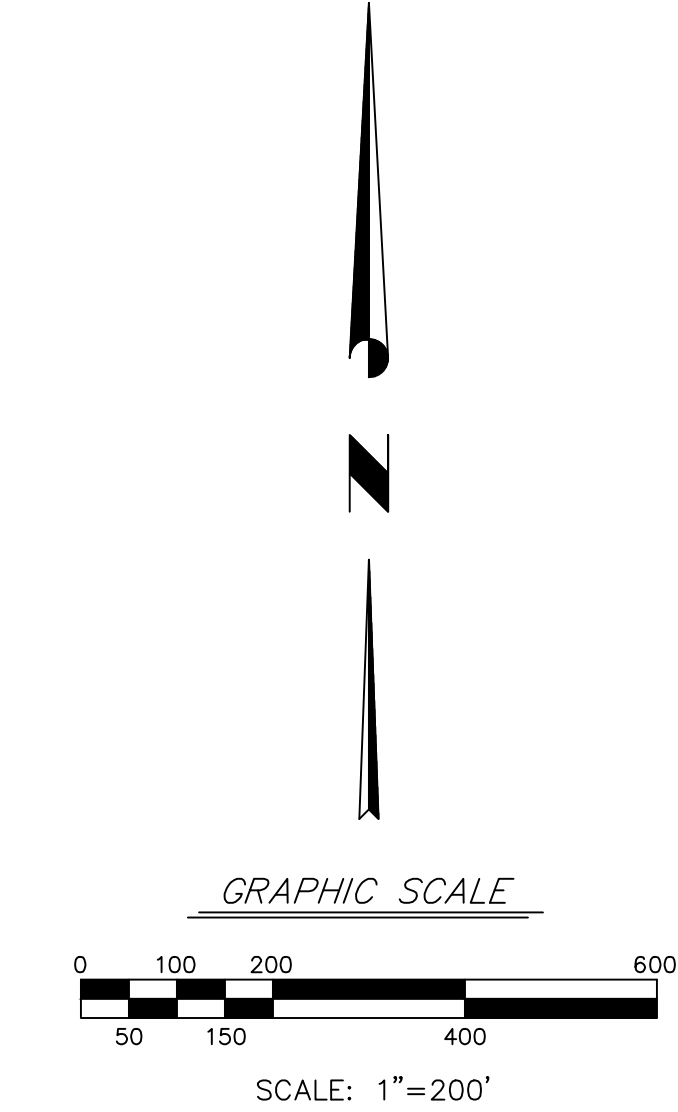


VICINITY MAP - N.T.S.

BENCH MARK:

HUMBOLDT COUNTY BM # 9 1937
FROM US HWY 101 N. TAKE SAMOA EXIT
FROM STATE HWY 255, PROCEED NW FOR 1.8
MI. TO A T INTERSECTION, TURN S. ONTO THE
NAVY BASE RD FOR 4 MI. TO HUMBOLDT BAY
COAST GUARD STATION. BENCH MARK ARE ON
COAST GUARD CASE PROPERTY. TIDE GAUGE
IS AT THE EAST END OF THE S PIER OF
TWO FINGER PIERS DIRECTLY EAST OF THE 3
STORY BUILDING.

DATUM: NAVD88



YCE

INCORPORATED

Civil Engineering & Land Surveying

1987 Mendocino, Suite A - Ukiah, CA 95503
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Email: yce-mydb@pacbell.net

LONGITUDE 123, INC.

LAND CONSTRUCTION MANAGEMENT

2100 VALLEY MEADOW DRIVE
OAK VIEW, CA 95022
TEL: 955.460.3364
EMAIL: MST@P@LONGITUDE123.NET

PG&E PIPELINE RT-102
PIPELINE EROSION REMEDIATION
PROJECT

REVISIONS:					
No.	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
1	01/23/19	PRELIMINARY - MISC. REVISION	JED	SA	XXX
2	05/17/19	EXTENDED AZ ONE S-LY, REMOVED 12" PIPE	CM	JED	MVA
3	06/06/19	REPLACE ARIZONA CROSSING WITH LOW FLOW SWALE	CMF	JED	
4	08/20/19	REPLACED LOW FLOW SWALE WITH 4' X 2' CULVERT	CMF	JED	
5	10/01/19	REVISIONS TO DETAILS TO PROPOSED DROP INLET AND CULVERT	CMF	JED	
6	10/16/19	REVISIONS TO ORDER OF COMPLETION AND EXISTING CONDITION SHEET	CMF	JED	

DRAWING NO.

1018-08

SHEET NAME:

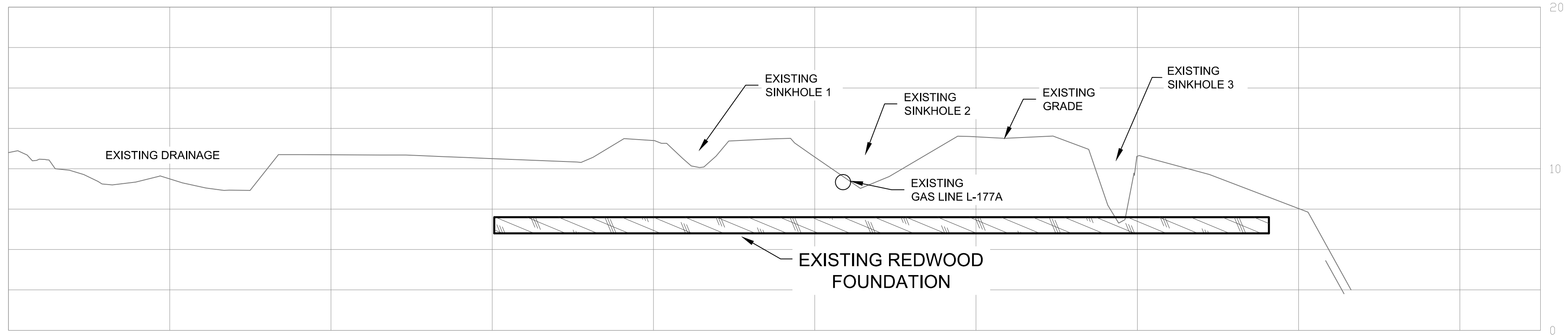
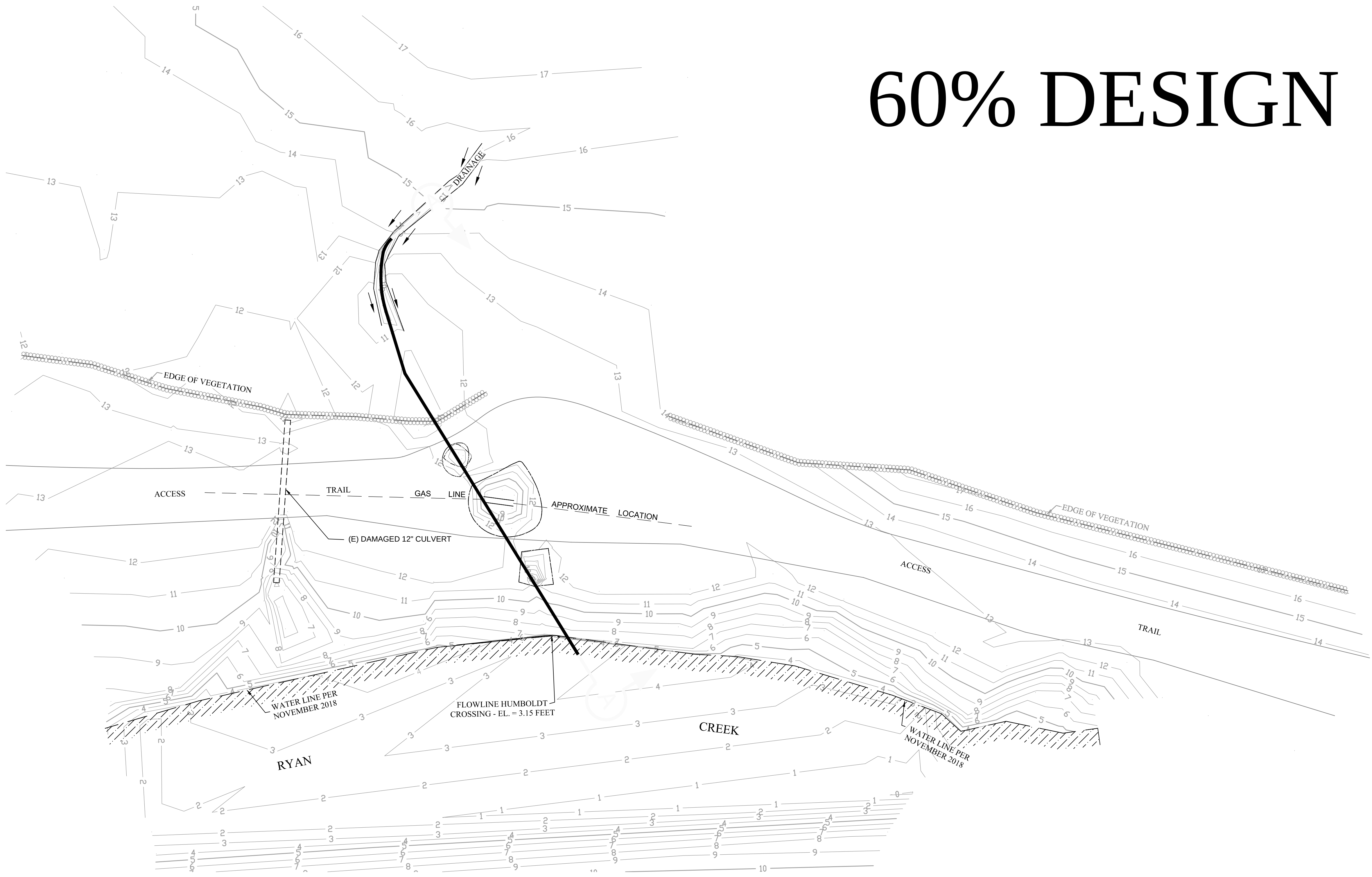
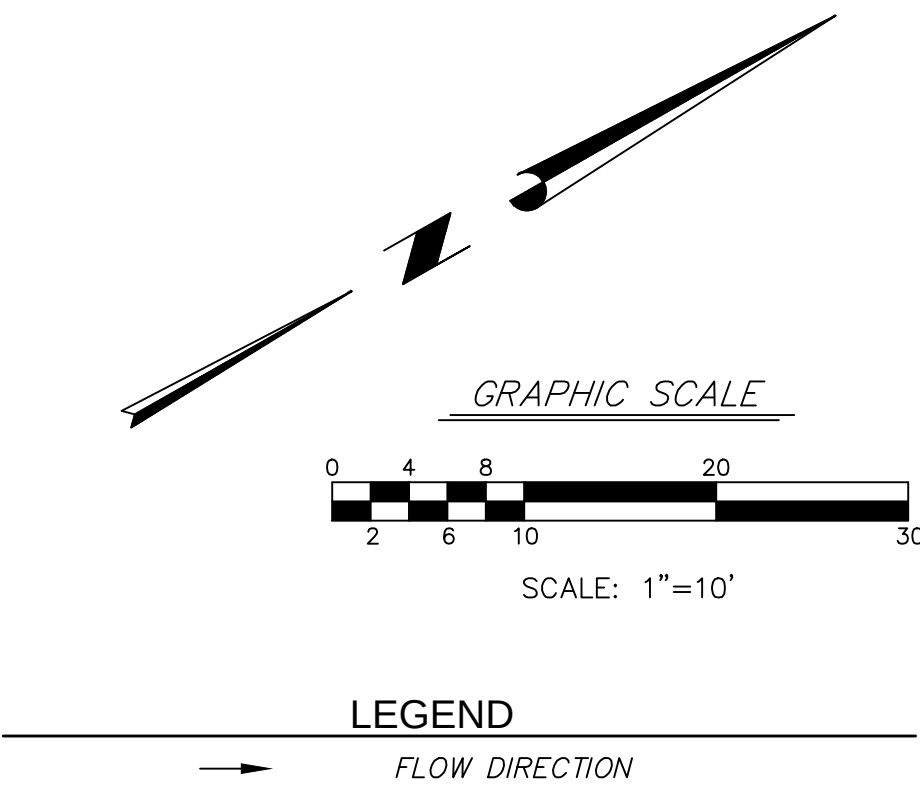
LOCATION MAP

Sheet NO.

T-1

1 OF 6

60% DESIGN



SECTION A-A
SCALES: 1"=5'

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PG&E PIPELINE RT-102
PIPELINE EROSION REMEDIATION
PROJECT

REVISIONS:			APPROVED:		
No.	DATE	DESCRIPTION	DRAWN:	CHECKED:	APPROVED:
1	01/23/19	PRELIMINARY - MISC. REVISION	JED	SA	XXX
2	05/17/19	EXTENDED AZ RING S-LY, REMOVED 12" PIPE	CM	JED	MYA
3	06/06/19	REPLACE ARIZONA CROSSING WITH LOW FLOW SWALE	CMF	JED	
4	08/20/19	REPLACED LOW FLOW SWALE WITH 4' X 2' CULVERT	CMF	JED	
5	10/20/19	REVISIONS TO DETAILS TO PROPOSED DRIP INLET AND CULVERT	CMF	JED	
6	10/16/19	REVISIONS TO ORDER OF COMPLETION AND EXISTING CONDITION SHEET	CMF	JED	

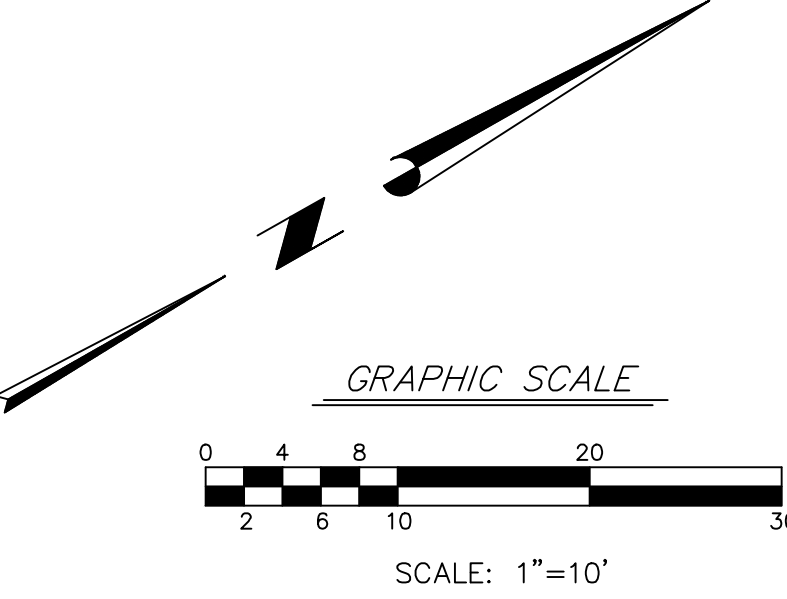
DRAWING NO.
1018-08

SHEET NAME:
EXISTING CONDITION

Sheet NO.
T-2

2 OF 6

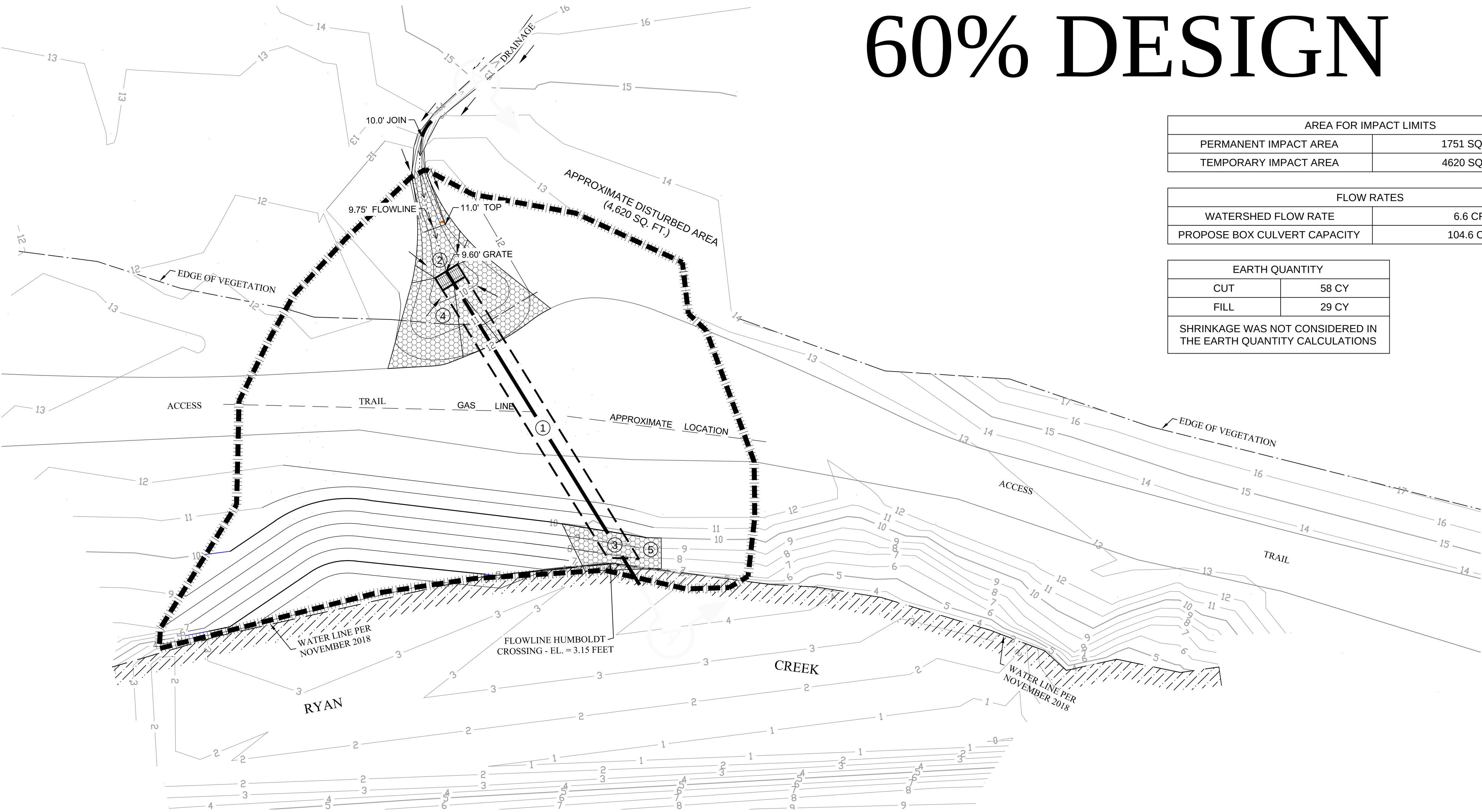
60% DESIGN



LEGEND	
	PROPOSED RIPRAP
	TEMPORARY IMPACT AREA
	FLOW DIRECTION
	DISTURBED AREA (APPROXIMATE)

- CONSTRUCTION NOTES
- 1) INSTALL 4' X 2' PRECAST REINFORCED CONCRETE BOX CULVERT PER 2018 CALTRANS STANDARD PLAN RSP D83A OR APPROVED EQUAL. SEE SHT. 5
 - 2) INSTALL 2' X 4' COLUMBIA PRECAST O.D.O.T. - TYPE CG2 CATCH BASIN OR APPROVE EQUAL
 - 3) INSTALL SLOPE PROTECTION BARRIER PER 2012 STANDARD PLANS FOR PUBLIC WORK CONSTRUCTION 360-2 OR APPROVED EQUAL, SEE SHT. 6
 - 4) CONSTRUCT 2' THICK UNGROUTED RIP RAP AREA WITH 15" ROCKS PER KLEINFELDER DESIGN SUPPORT DATED JULY 2, 2019.
 - 5) CONSTRUCT 5' THICK UNGROUTED RIP RAP SLOPE PROTECTION WITH 36" ROCKS PER KLEINFELDER DESIGN SUPPORT DATED JULY 2, 2019.
 - 6) SINKHOLES TO BE EXCAVATED, BACKFILLED, AND COMPACTED DURING RECONSTRUCTION.
 - 7) EXISTING REDWOOD FOUNDATION TO BE REMOVED PRIOR TO BERM RECONSTRUCTION.

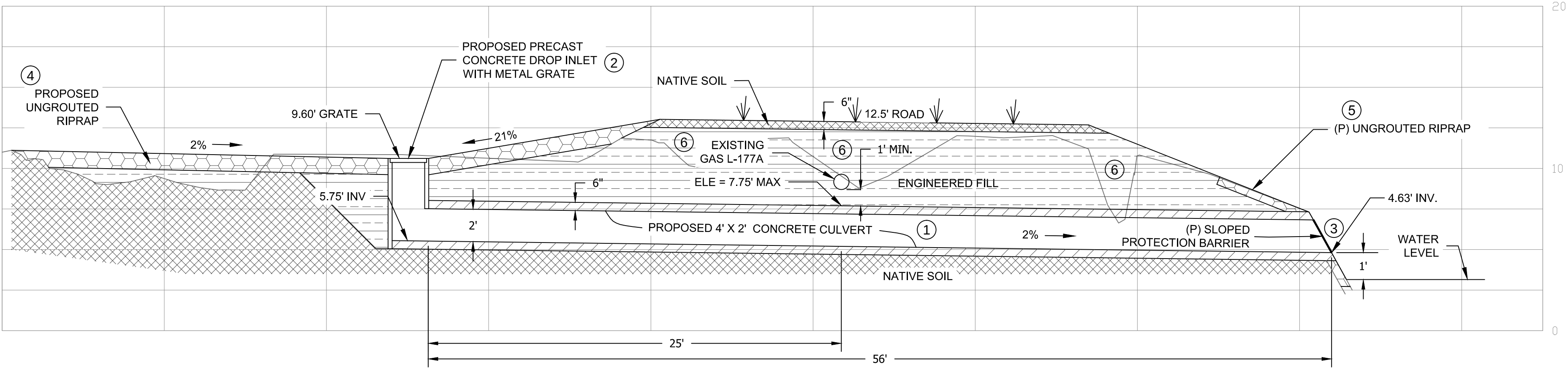
- RT-102 ORDER OF COMPLETION
- 1) EXCAVATE BERM ACROSS PROJECT AREA.
 - 2) DEMOLISH AND REMOVE REDWOOD FOUNDATION.
 - 3) CONSTRUCT CULVERT
 - 4) BACKFILL AND COMPACT BERM WITH SPOILS AND NATIVE SOILS.
 - 5) INSTALL RIPRAP AROUND CULVERT INLET AND OUTLET.



AREA FOR IMPACT LIMITS	
PERMANENT IMPACT AREA	1751 SQ. FT.
TEMPORARY IMPACT AREA	4620 SQ. FT.

FLOW RATES	
WATERSHED FLOW RATE	6.6 CFS
PROPOSE BOX CULVERT CAPACITY	104.6 CFS

EARTH QUANTITY	
CUT	58 CY
FILL	29 CY
SHRINKAGE WAS NOT CONSIDERED IN THE EARTH QUANTITY CALCULATIONS	



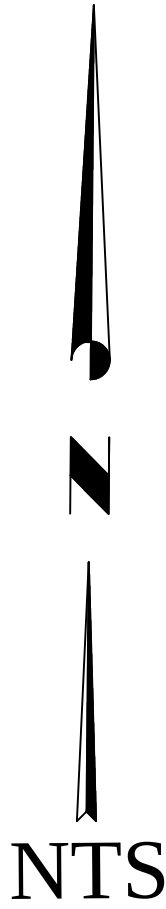
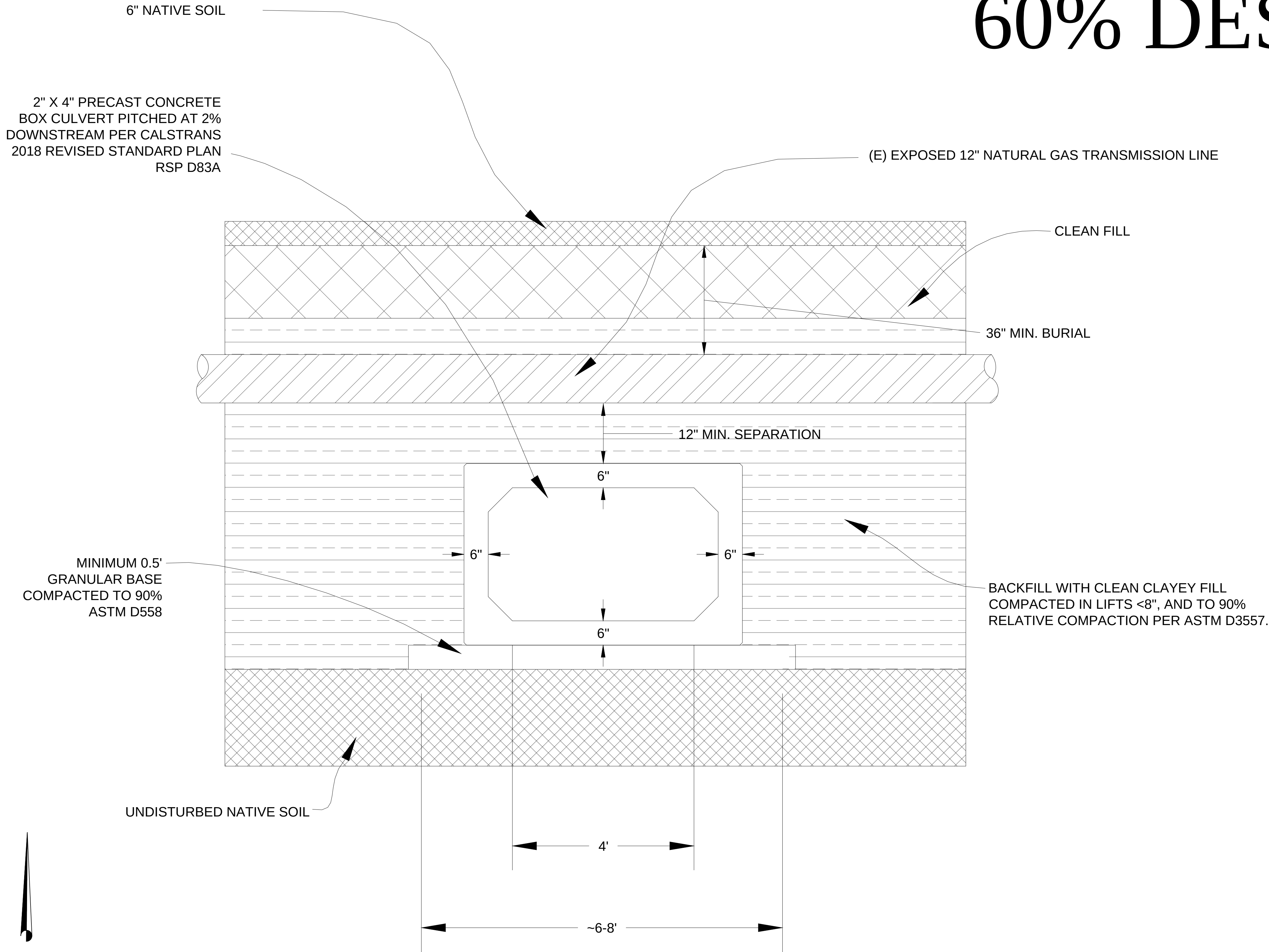
DIRECT BURIAL COATING SELECTIONS	
MAIN LINE COATING	FBE (E-35.4)
MINOR REPAIRS	LIQUID EPOXY (E-35.3) OR FBE PATCH STICK (E-35.4)
TIE-IN WELDS	LIQUID EPOXY (E-35.1)
GIRTH WELDS	LIQUID EPOXY (E-35.1)
BUTT WELDED FITTINGS	LIQUID EPOXY (E-35.1)
VALVE ASSEMBLIES	LIQUID EPOXY (E-35.7), WAX TAPE (E-35.7)
SHORT SEGMENTS OF PIPE	LIQUID EPOXY (E-35.1)
AIR TO SOIL TRANSITIONS	LIQUID EPOXY/ PSX 700 (E-35.8)
PRESSURE CONTROL FITTINGS	LIQUID EPOXY (E-35.7), WAX TAPE (E-35.7)
TIE-INS/ COATING TRANSITIONS	LIQUID EPOXY (E-35.3)
BORED COATING SELECTIONS	
MAIN LINE COATING	ARO APPLIED OVER FBE (E-35.4)
MINOR REPAIRS	LIQUID EPOXIES (E-35.2)
TIE-IN WELDS	LIQUID EPOXIES (E-35.2)
NOTES: 1) REFERENCE CONSTRUCTION NOTE 10, COATING REQUIREMENTS	

SECTION A-A
SCALES: 1"=5'

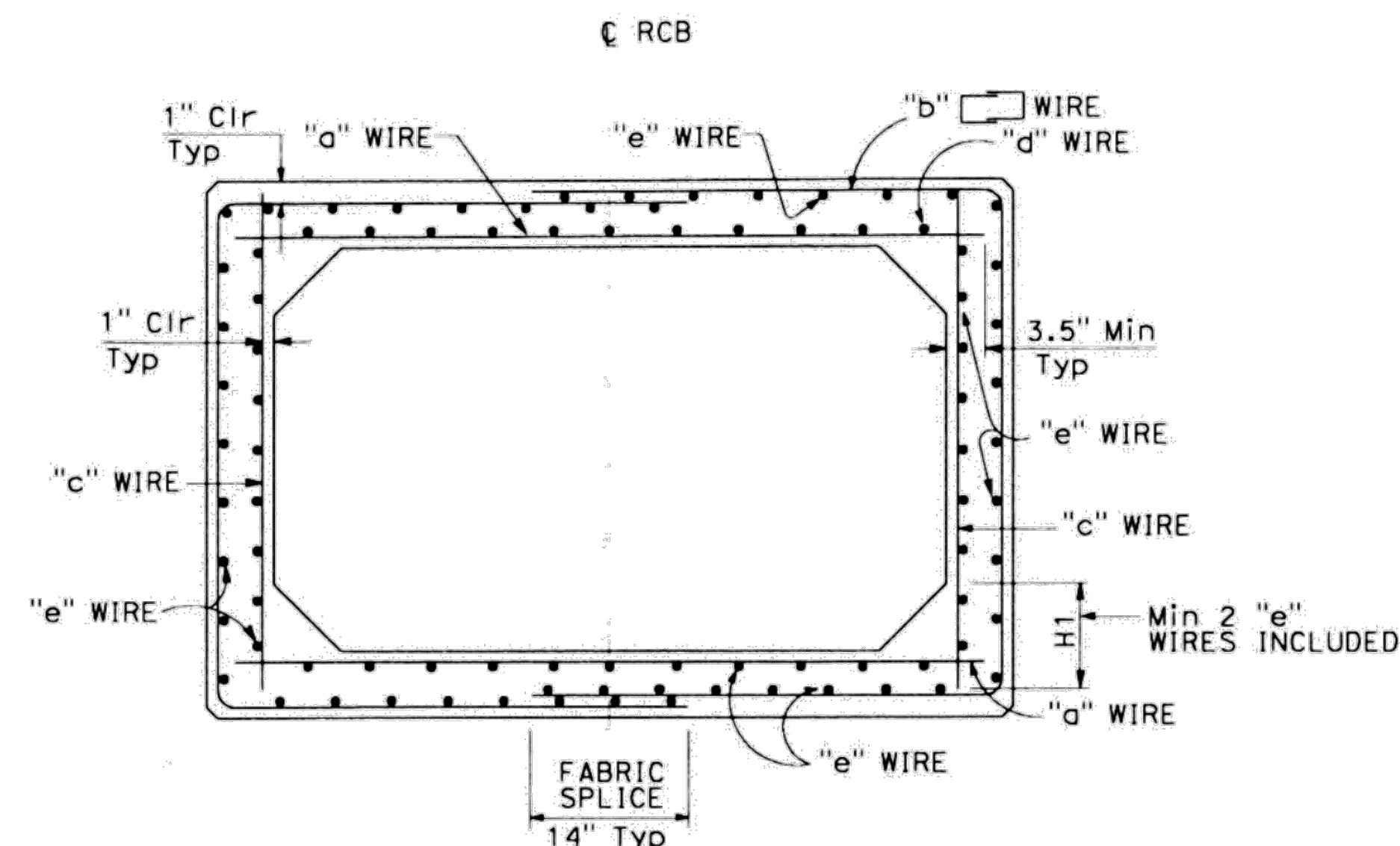
REVISIONS:		DATE:	DESCRIPTION:	APPROVED:
No.	DATE:	DESCRIPTION:	APPROVED:	
1	01/23/19	PRELIMINARY - MISC. REVISION	SA	XXX
2	05/17/19	EXTENDED AZ INK S-LY, REMOVED 12" PIPE	CM	MM
3	06/06/19	REPLACE ARIZONA CROSSING WITH LOW FLOW SWALE	CMF	JOE
4	06/20/19	REPLACE LOW FLOW SWALE WITH 4' X 2' CULVERT	CMF	JOE
5	10/01/19	REVISIONS TO DETAILS TO PROPOSED DROP INLET AND CULVERT	CMF	JOE
6	10/16/19	REVISIONS TO ORDER OF COMPLETION AND EXISTING CONDITION SHEET	CMF	JOE

TYPICAL CULVERT TRENCH SECTION VIEW

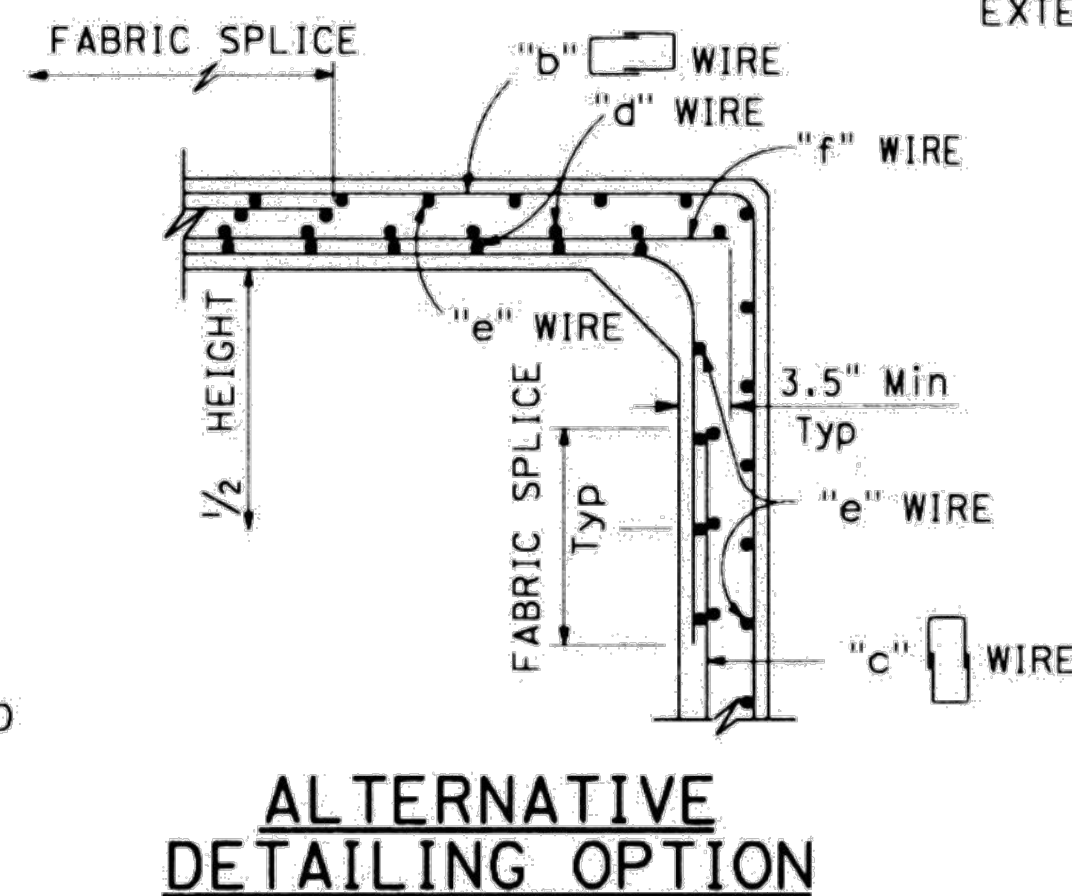
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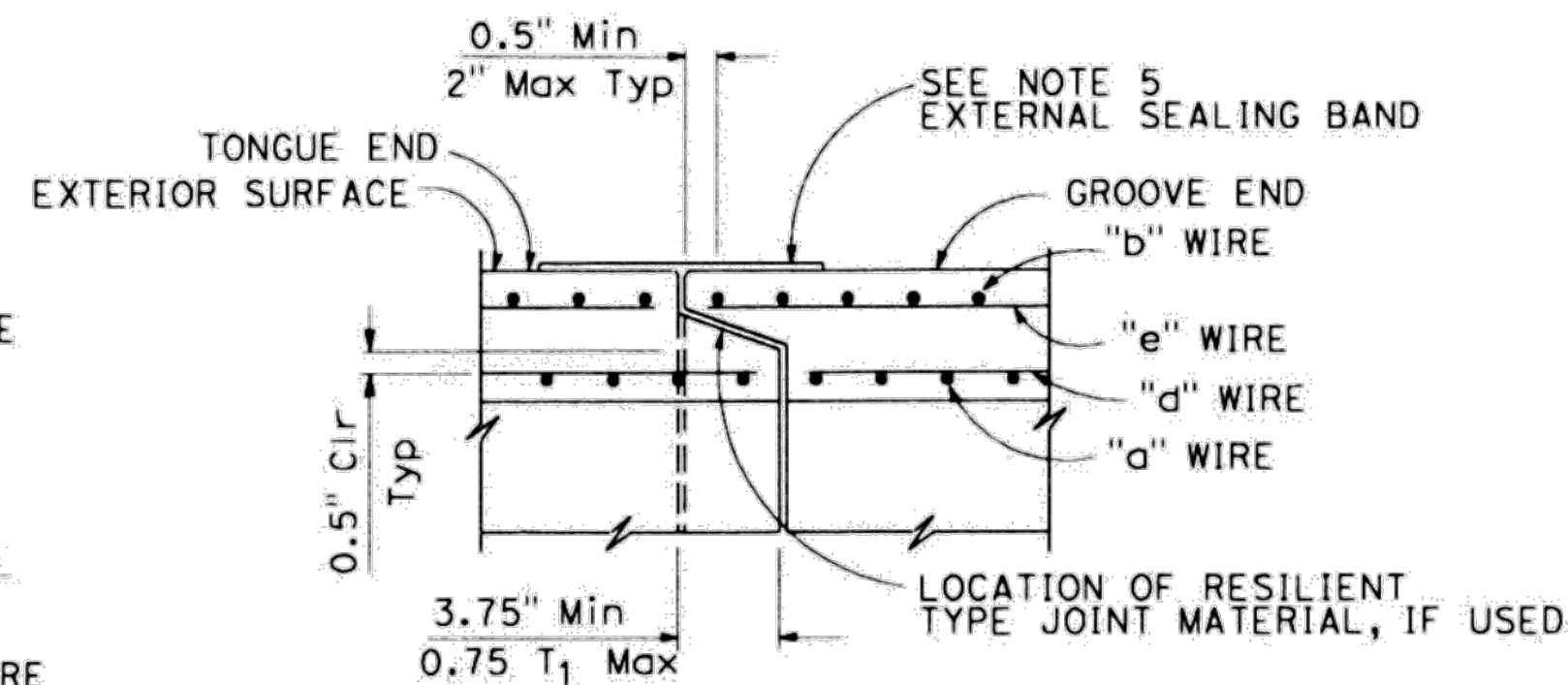
REVISIONS:		DRAWN:		CHECKED:		APPROVED:	
No.	DATE:	DESCRIPTION					
1	01/31/19	PRELIMINARY - MISC. REVISION	JED	SA	JED	XXX	
2	05/17/19	EXTENDED A2 AND S-1X, REMOVED 12" PIPE	CM	JED	MVA	MVA	
3	06/05/19	REPLACE ARIZONA CROSSING WITH LOW FLOW SWALE	CMF				
4	06/20/19	REPLACE LOW FLOW SWALE WITH 4' X 2' CULVERT	CMF	JED	JED		
5	10/01/19	REVISIONS TO DETAILS TO PROPOSED DROP INLET AND CULVERT	CMF	JED	JED		
6	10/16/19	REVISIONS TO ORDER OF COMPLETION AND EXISTING CONDITION SHEET	CMF	JED	JED		



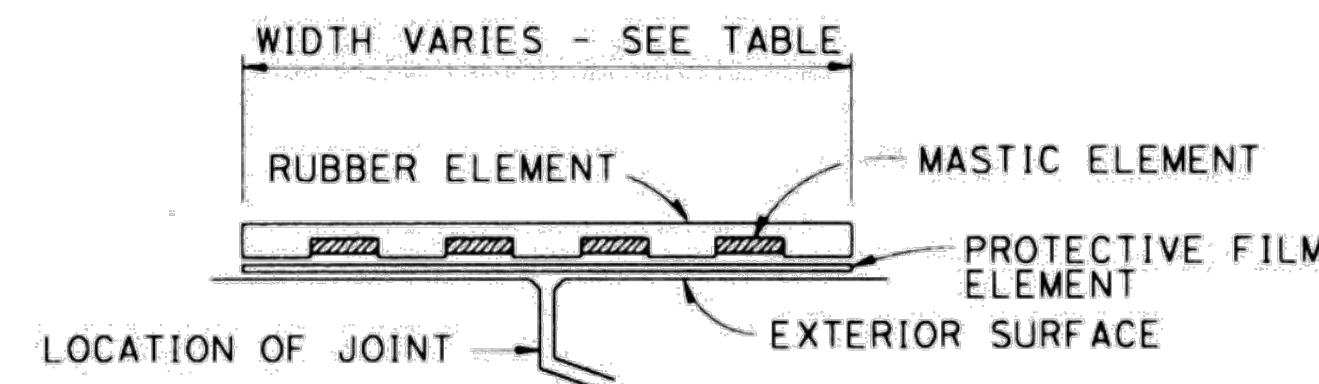
TYPICAL SECTION - SPANS 4'-0" THRU 12'-0"



ALTERNATIVE
DETAILING OPTION



END JOINT DETAIL



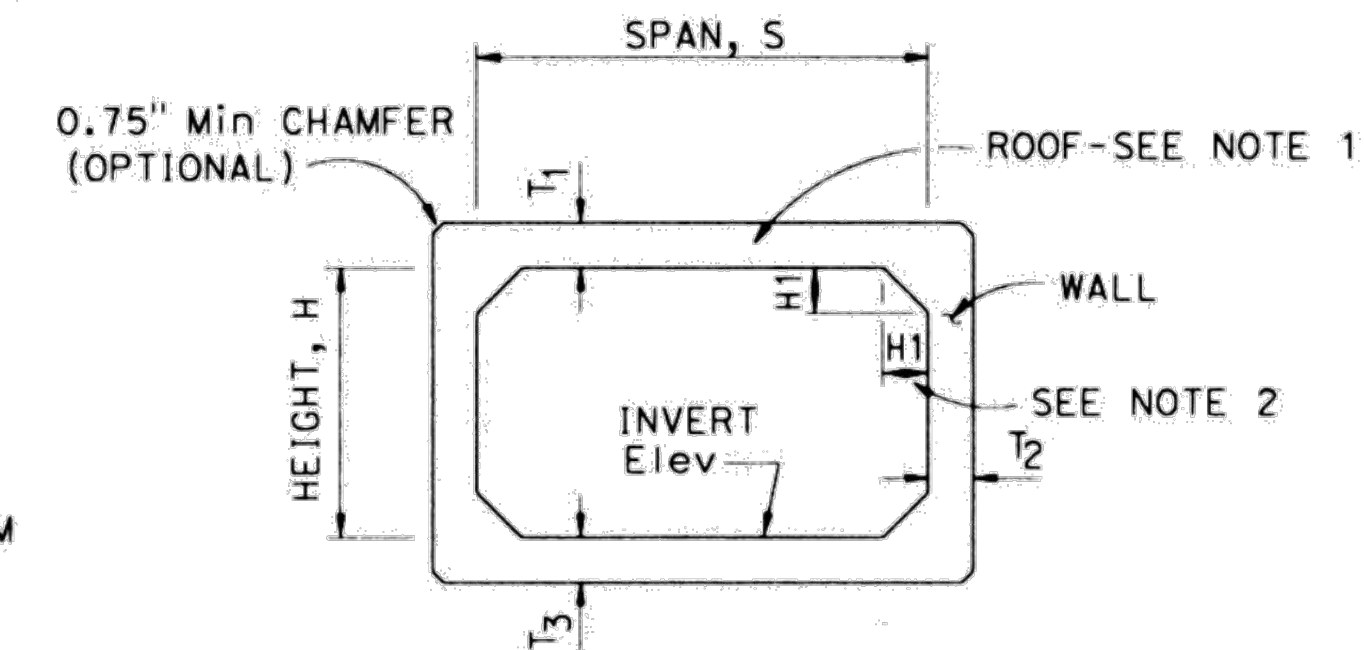
EXTERNAL SEALING BAND SCHEMATIC

DIST	COUNTY	ROUTE	POST MILES	SHEET TOTAL
			TOTAL PROJECT	SHEETS

REGISTERED CIVIL ENGINEER
October 19, 2018
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
Carl M. Duan
No. C59976
Exp. 6-30-20
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED _____



SCHEMATIC

TABLE	
SPAN	EXTERNAL SEALING BAND WIDTH, Min
4'-6'	9"
7'-8'	11"
10'-12'	13"

SPAN, S		4'		5'		6'		7'	
HEIGHT, H		2'	3'	4'	2'	3'	4'	5'	6'
MAXIMUM EARTH COVER		10'	20'	10'	20'	10'	20'	10'	20'
CONCRETE (INCH)	ROOF	T ₁	6"	6"	6"	6"	6"	6"	6"
	SIDE WALL	T ₂	6"	6"	6"	6"	6"	6"	6"
	INVERT	T ₃	6"	6"	6"	6"	6"	6"	6"
MINIMUM WELDED WIRE FABRIC (inch ² /ft)	"a"	.33	.47	.34	.49	.34	.50	.40	.62
	"b"	.23	.28	.23	.25	.21	.23	.26	.36
	"c"	.11	.11	.11	.12	.18	.24	.11	.11
	"d"	.16	.11	.16	.11	.16	.11	.17	.11
	"e"	.11	.11	.11	.11	.11	.11	.11	.11
* QUANTITY		Conc	.31	.34	.38	.37	.41	.44	.48
** SOIL PRESSURE (ksf)		Reinf	35	41	39	45	45	51	49

SPAN, S		8'		10'		12'	
HEIGHT, H		4'	5'	6'	7'	8'	9'
MAXIMUM EARTH COVER		10'	20'	10'	20'	10'	20'
CONCRETE (INCH)	ROOF	T ₁	8.5"	8.5"	8.5"	8.5"	8.5"
	SIDE WALL	T ₂	8.5"	8.5"	8.5"	8.5"	8.5"
	INVERT	T ₃	8.5"	8.5"	8.5"	8.5"	8.5"
MINIMUM WELDED WIRE FABRIC (inch ² /ft)	"a"	.55	.87	.56	.90	.57	.92
	"b"	.37	.59	.35	.55	.33	.52
	"c"	.11	.11	.11	.11	.20	.31
	"d"	.19	.11	.19	.11	.20	.11
	"e"	.11	.11	.11	.11	.11	.11
* QUANTITY		Conc	.78	.83	.88	.94	.99
** SOIL PRESSURE (ksf)		Reinf	93	129	97	133	105

* See Note 3

** See Note 6

NOTES:

- The inside and outside surfaces of the RCB roof shall be marked "TOP".
- H1 minimum shall equal the wall thickness. H1 maximum shall be 8" for spans through 8' and 14" for spans over 8'.
- Quantities are approximate and for design purposes only.
- For design and details not shown see Revised Standard Plan RSP D83B.
- For external sealing band applications see Revised Standard Plan RSP A62G.
- Soil pressures shown are factored per AASHTO LRFD and include soil weight of fill over box, self weight of box and live load where applicable.
- If earth cover is less than 2', the concrete cover for the reinforcement at the top of top slab shall be 2". T₁ in the Table shall have an additional 1" and quantities shall be revised accordingly in this case.

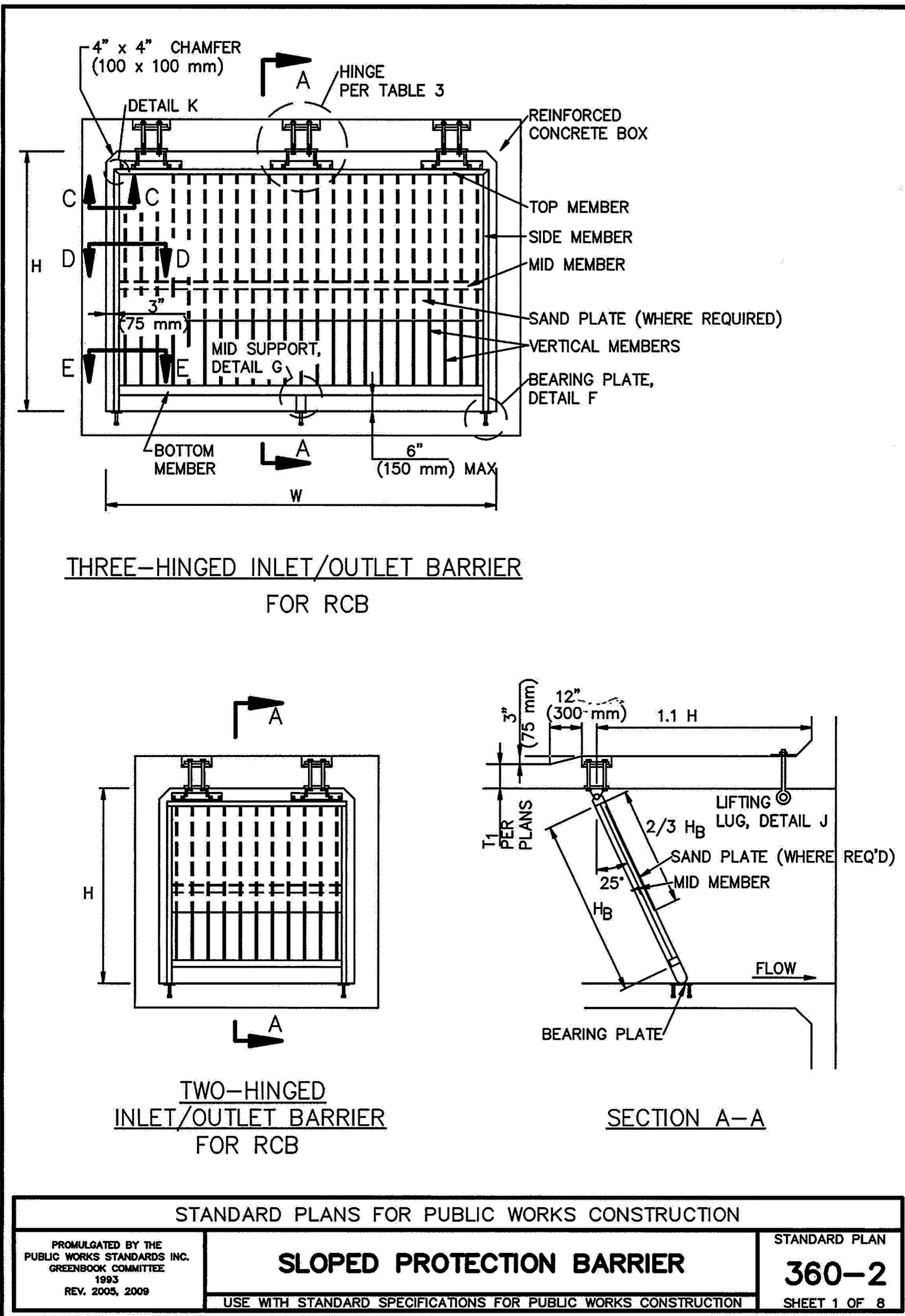
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PRECAST REINFORCED
CONCRETE BOX CULVERT**
NO SCALE

RSP D83A DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN D83A
DATED MAY 31, 2018 - PAGE 224 OF THE STANDARD PLANS BOOK DATED 2018.

REVISED STANDARD PLAN RSP D83A

REVISIONS:		DATE:	DESCRIPTION:	DRAWN:	CHECKED:	APPROVED:
No.	1	01/31/19	PRELIMINARY - MISC. REVISION	JED	SA	XXX
2	05/17/19	EXTENDED A2 AND S-LY, REMOVED 12" PIPE	CA	JED	MVA	
3	06/05/19	REPLACE A2 AND S-LY CROSSING WITH LOW FLOW SWALE	CA	JED	MVA	
4	06/20/19	REPLACE LOW FLOW SWALE WITH 4' X 2' CULVERT	CA	JED	MVA	
5	10/01/19	REVISIONS TO DETAILS TO PROPOSED DROP INLET AND CULVERT	CA	JED	MVA	
6	10/16/19	REVISIONS TO ORDER OF COMPLETION AND EXISTING CANTONMENT SHEET	CA	JED	MVA	

DRAWING NO.		1018-08
SHEET NAME:		PROPOSED CONCRETE BOX CULVERT DETAIL
Sheet NO.		T-5



60% DESIGN

REVISIONS:		DATE:	DESCRIPTION:	DRAWN:	CHECKED:	APPROVED:
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4	06/20/19	REPLACE LOW FLOW SWALE WITH 4' X 2' CULVERT	CMF	JED		
5	10/01/19	REVISIONS TO DETAILS TO PROPOSED DROP INLET AND CULVERT	CMF	JED		
6	10/16/19	REVISIONS TO ORDER OF COMPLETION AND EXISTING CONDITION SHEET	CMF	JED		

DRAWING NO. 1018-08

SHEET NAME: SLOPE PROTECTION BARRIER DETAIL

Sheet NO. T-6