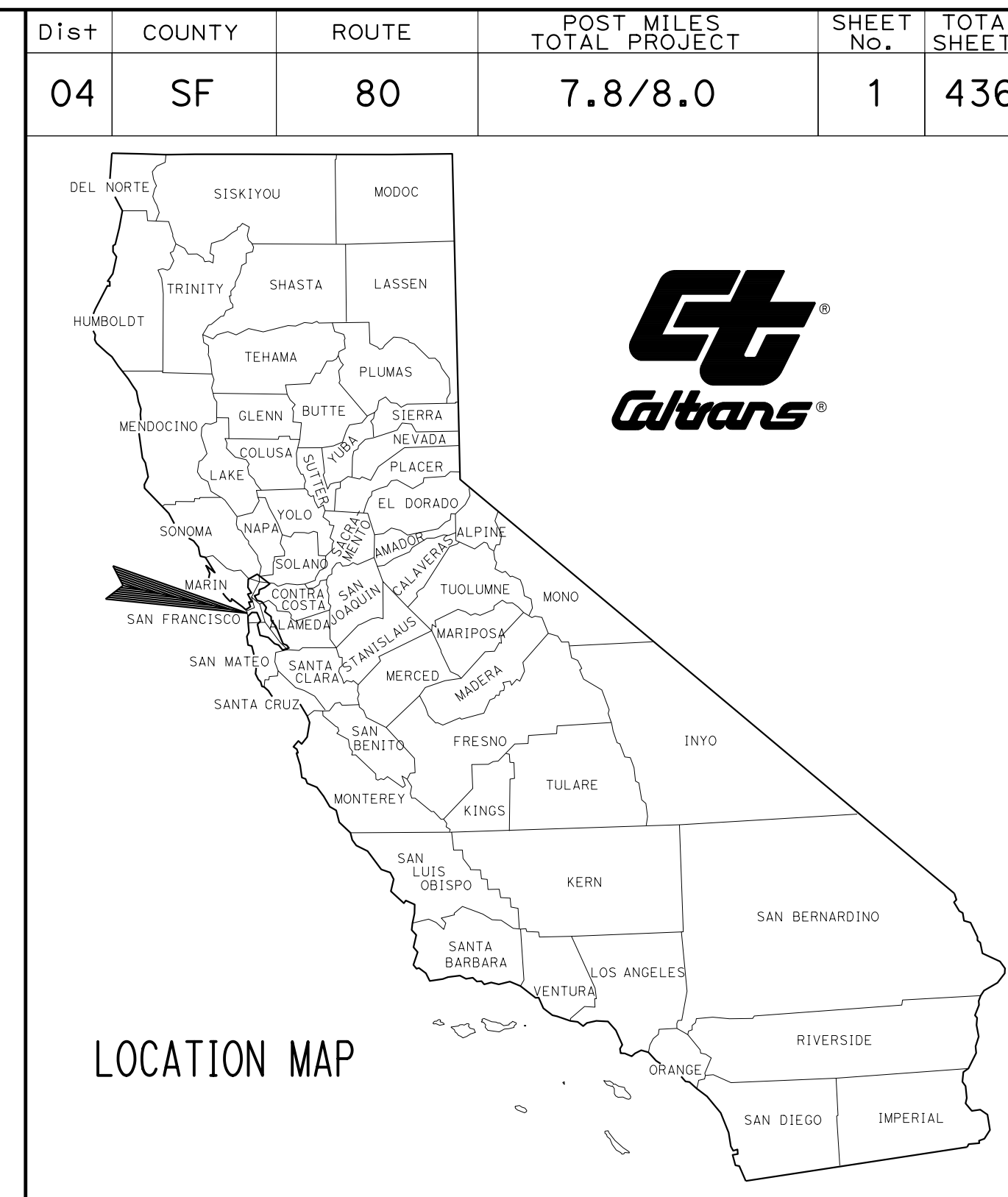


STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN THE CITY AND COUNTY OF SAN FRANCISCO
FROM THE YERBA BUENA TUNNEL
TO 0.2 MILE EAST OF THE YERBA BUENA TUNNEL

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018



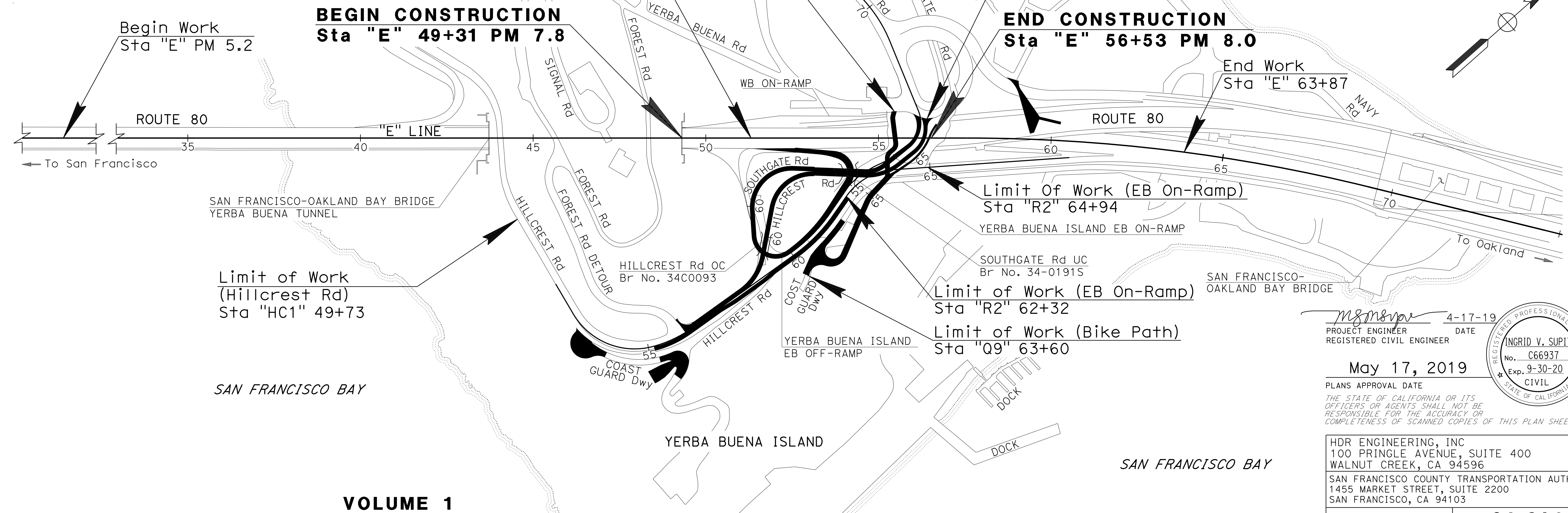
INDEX OF PLANS

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13	KEY MAP AND LINE INDEX
14	PROJECT CONTROL
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73-76	CONTOUR GRADING PLANS
77-100	DRAINAGE PLANS, PROFILES, DETAILS AND QUANTITIES
101-109	UTILITY PLANS, DETAILS AND QUANTITIES
110	CONSTRUCTION AREA SIGNS
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114-122	TRAFFIC HANDLING PLANS AND QUANTITIES
123	DETOUR PLAN
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210-249	SOUTHGATE ROAD UC, Br No. 34-0191S
250-417	RETAINING WALLS
418-436	HILLCREST ROAD OC, Br No. 34C0093

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.



VOLUME 1

NO SCALE

FEDERAL PROJECT No. **BRLS-6272(047)**

PROJECT ENGINEER DATE 4-17-19
 REGISTERED CIVIL ENGINEER
May 17, 2019
 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.
 HDR ENGINEERING, INC
 100 PRINGLE AVENUE, SUITE 400
 WALNUT CREEK, CA 94596
 SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY
 1455 MARKET STREET, SUITE 2200
 SAN FRANCISCO, CA 94103
 CONTRACT No. **04-3A6414**
 PROJECT ID **0419000153**

APPROVED AS TO IMPACT ON STATE FACILITIES AND CONFORMANCE WITH APPLICABLE STATE STANDARDS AND PRACTICES AND THAT TECHNICAL OVERSIGHT WAS PERFORMED.
 DATE SIGNED 5-20-19
 LICENSE EXP DATE 3-31-21
 REGISTRATION No. 38994
 CALTRANS DESIGN OVERSIGHT APPROVAL Bob Zandipour
 CONSULTANT DESIGN MANAGER GREGORY C. OSLUND

7-NOV-2019 15:28
 DATE PLOTTED =>
 TIME PLOTTED =>
 00-00-00

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: INGRID SUPIT
 CHECKED BY: INGRID SUPIT
 REVISOR: TP 1-9-19
 IK 4-26-18

NOTES:

- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- SUPERELEVATIONS ARE SHOWN ON THE SUPERELEVATION DIAGRAMS.
- FOR LOCATIONS AND TYPES OF CONCRETE BARRIERS, SEE LAYOUTS.
- FOR LOCATIONS, LIMITS AND DETAILS OF RETAINING WALLS, APPROACH WALLS AND BRIDGE STRUCTURES, SEE STRUCTURE PLANS.
- HAND METHODS MAY BE REQUIRED TO REMOVE THE UPPER 0.20' OF PAVEMENT ADJACENT TO AND BENEATH THE GUARDRAIL.

ABBREVIATIONS:

- CIP/PS CAST IN PLACE / PRESTRESSED
 GB GRADE BREAK
 MES MATCH EXISTING SLOPE
 SFOBB SAN FRANCISCO OAKLAND BAY BRIDGE

DESIGN DESIGNATION

AADT (2018)	265,000	D (AM/PM)	(0.52/0.55)
AADT (2040)	265,000	T	2.50%
DHV	17,000	V	25 mph
ESAL	N/A	TI ₂₀	10, FOR "R1" LINE
		TI ₂₀	11, FOR "SG1" LINE
PAVEMENT CLIMATE REGION:		CENTRAL COAST	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	2	436

REGISTERED CIVIL ENGINEER: PRAVEEN K. CHILAKAPATI
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19
 REGISTERED PROFESSIONAL ENGINEER No. C76058 Exp. 6-30-20 CIVIL
 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.
 HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596
 SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103

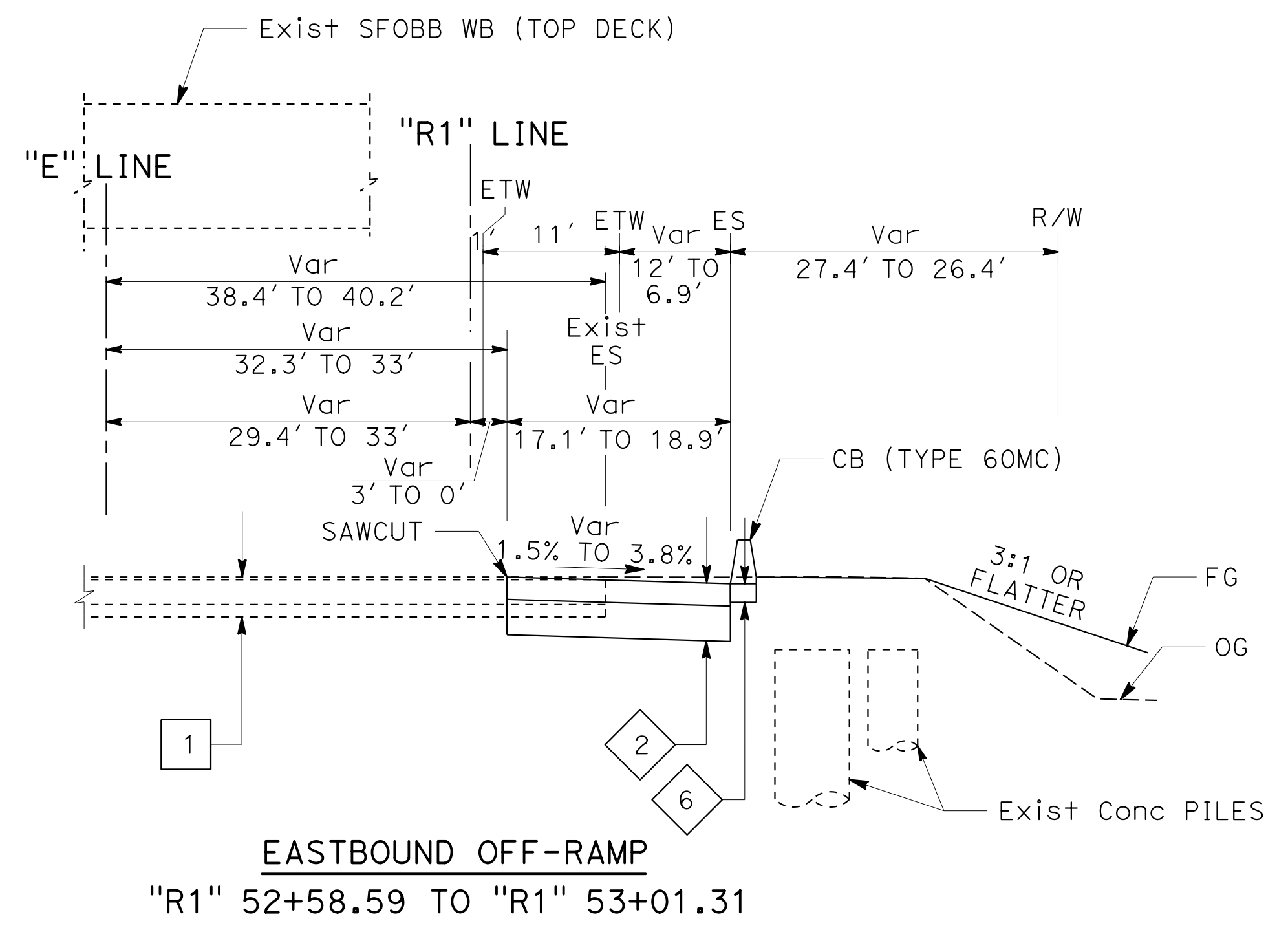
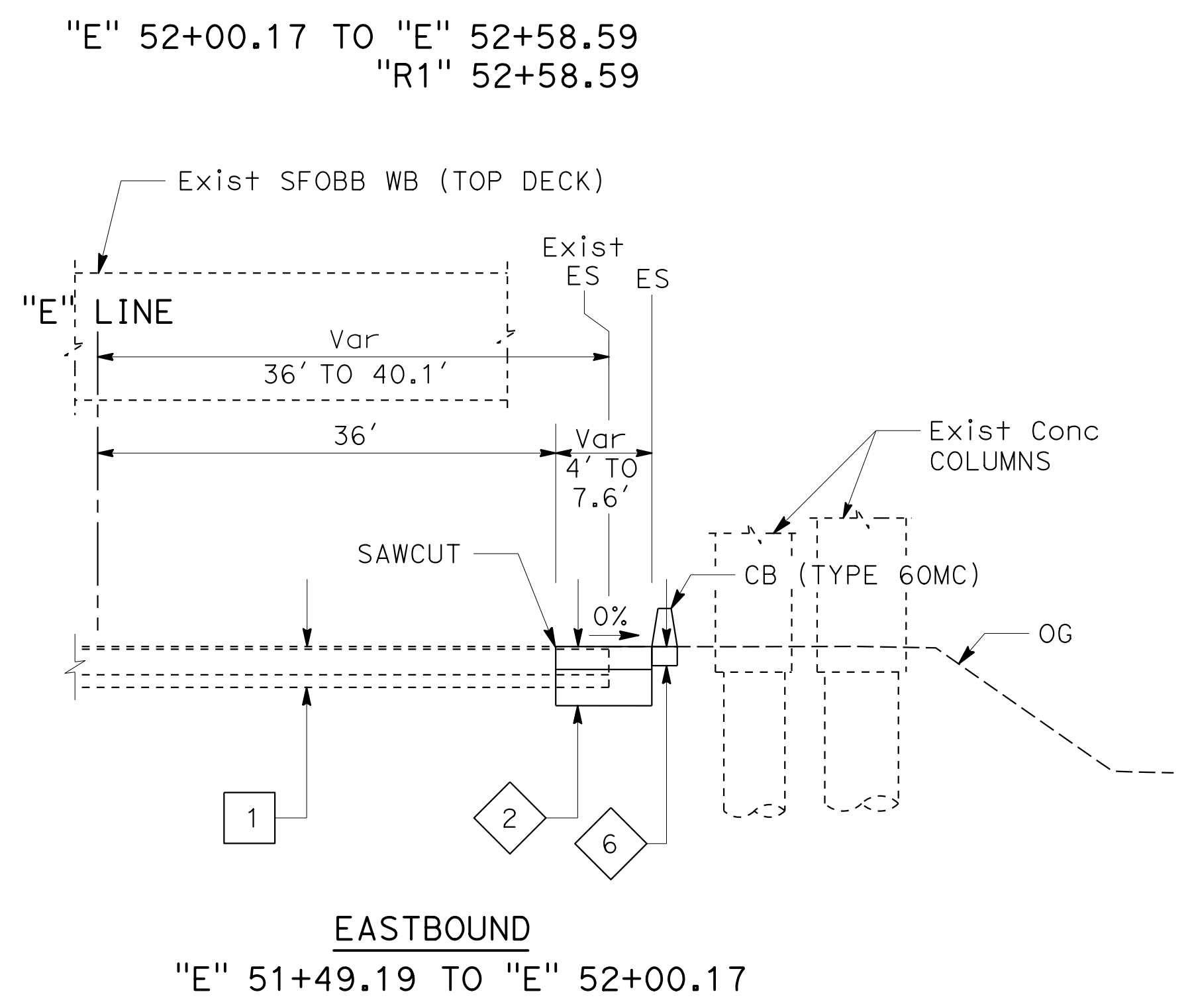
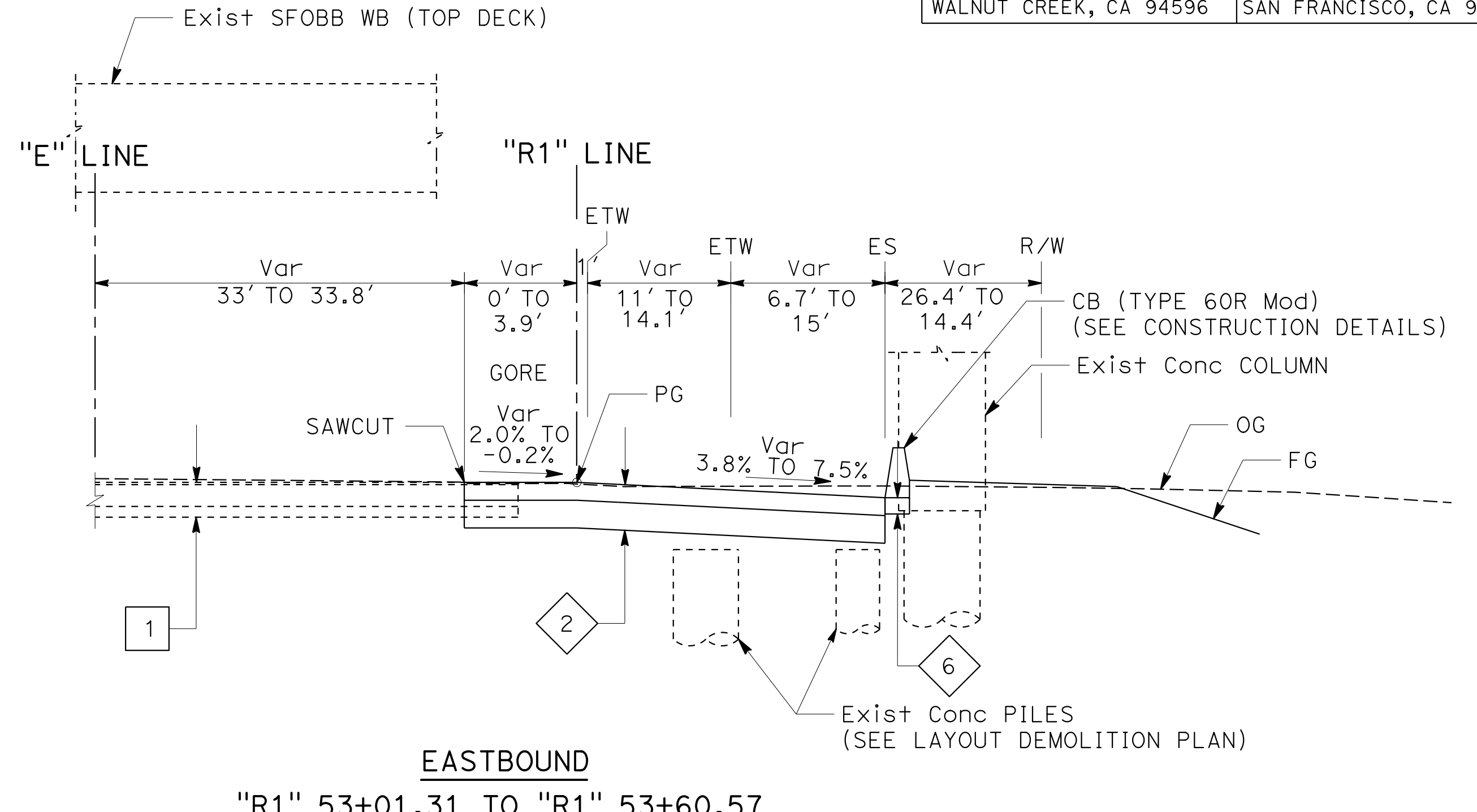
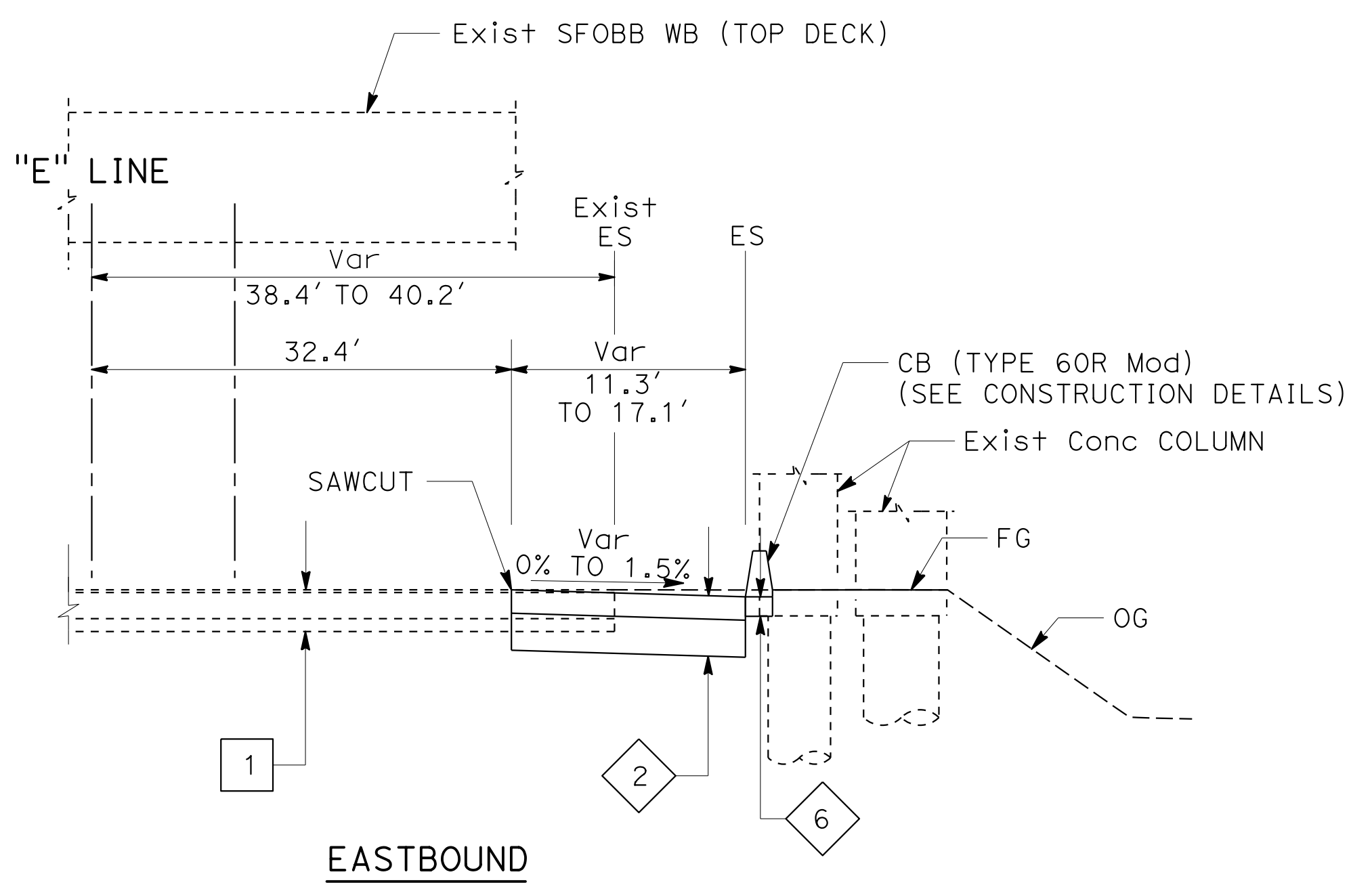
TYPICAL PAVEMENT STRUCTURE SECTIONS

EXISTING

- 1 0.07' EPOXY AC
0.67' PCC
0.33' AGGREGATE BASE
(CONCRETE STRIPS ALONG UNDERLYING SLAB JOINTS)
- 2 0.33' & Var AC
0.69' & Var AB
- 3 0.60' HMA (TYPE A)
0.79' CI 2 AB
- 4 0.50' HMA (TYPE A)
Var Conc SLURRY BACKFILL
(OVER Exist DUCT BANK)

NEW

- 1 0.60' HMA (TYPE A)
0.95' CI 2 AB
- 2 0.55' HMA (TYPE A)
0.85' CI 2 AB
- 3 0.33' HMA (TYPE A)
0.67' CONCRETE BASE
- 4 0.50' MINOR CONCRETE
0.50' CI 2 AB
- 5 0.20' COLD PLANE AC Pvm+
0.20' HMA (TYPE A)
- 6 0.50' CI 2 AB
- 7 0.30' SLOPE PAVING (CONCRETE)
0.50' CI 2 AB
- 8 0.33' HMA (TYPE A)
0.67' CI 2 AB

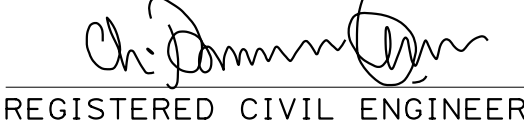
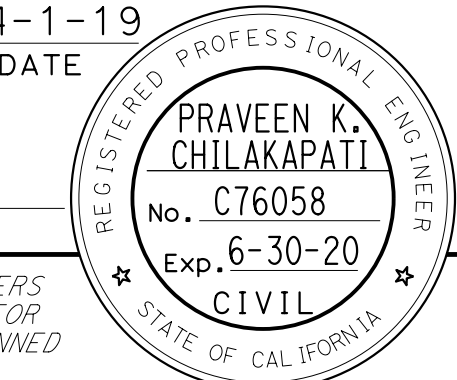


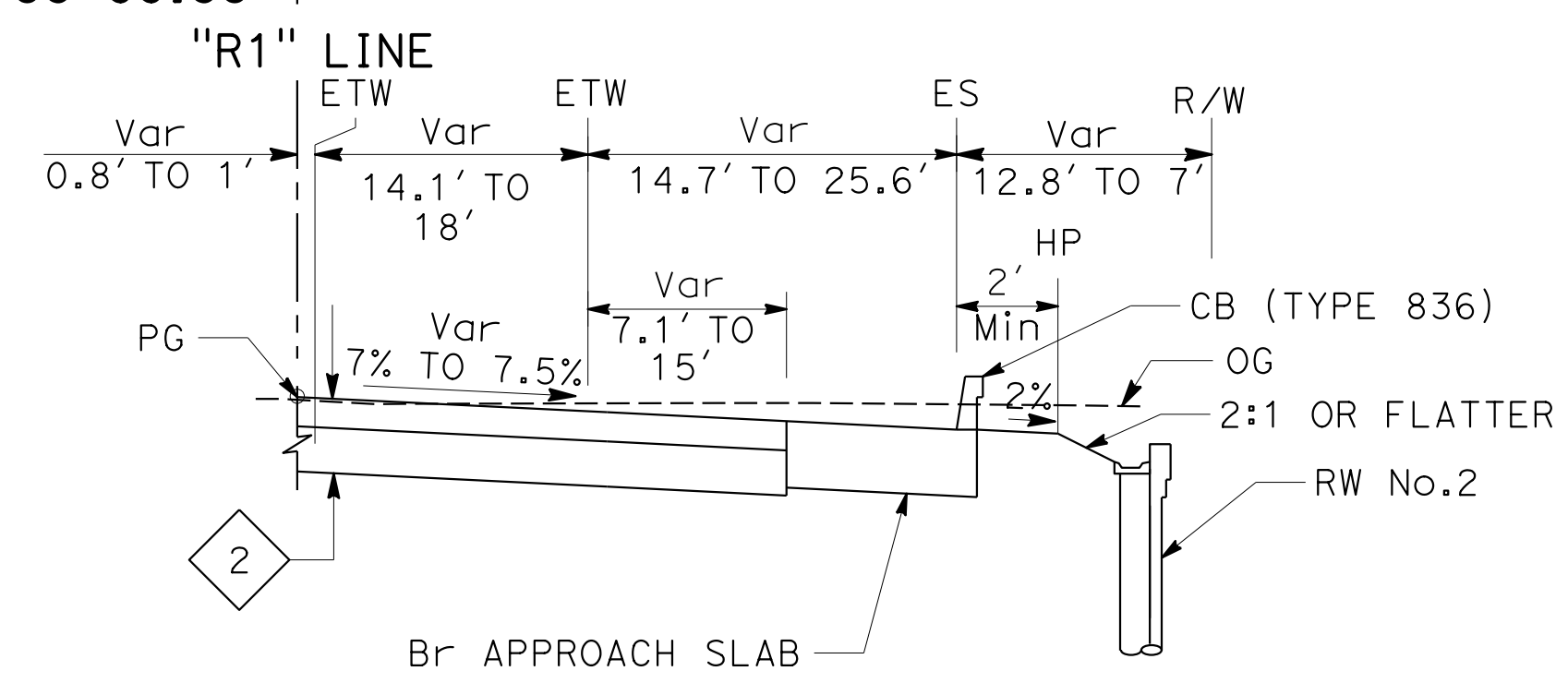
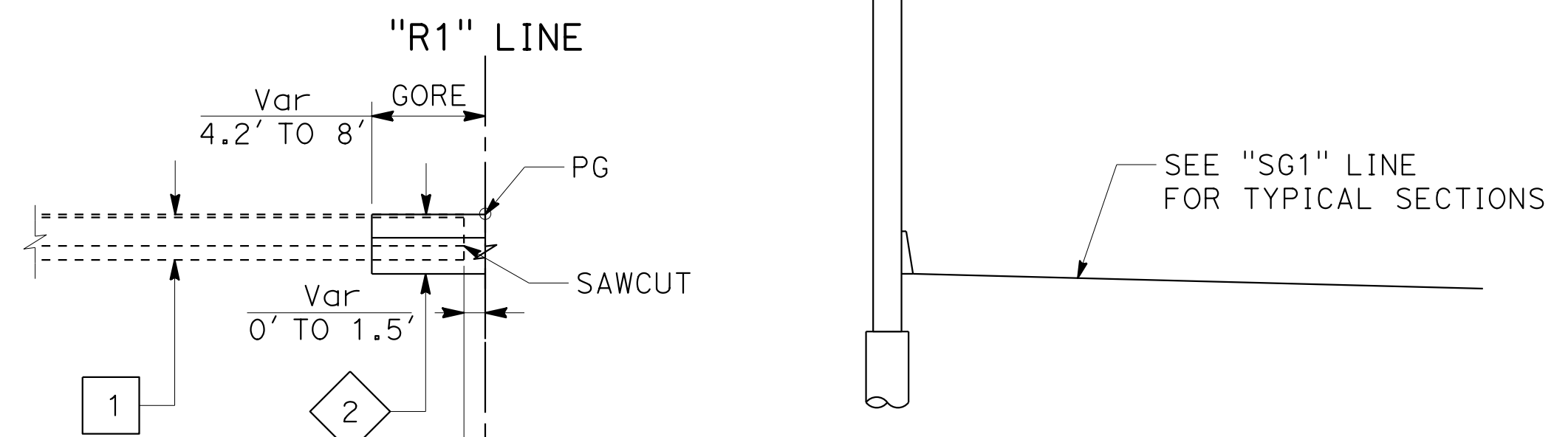
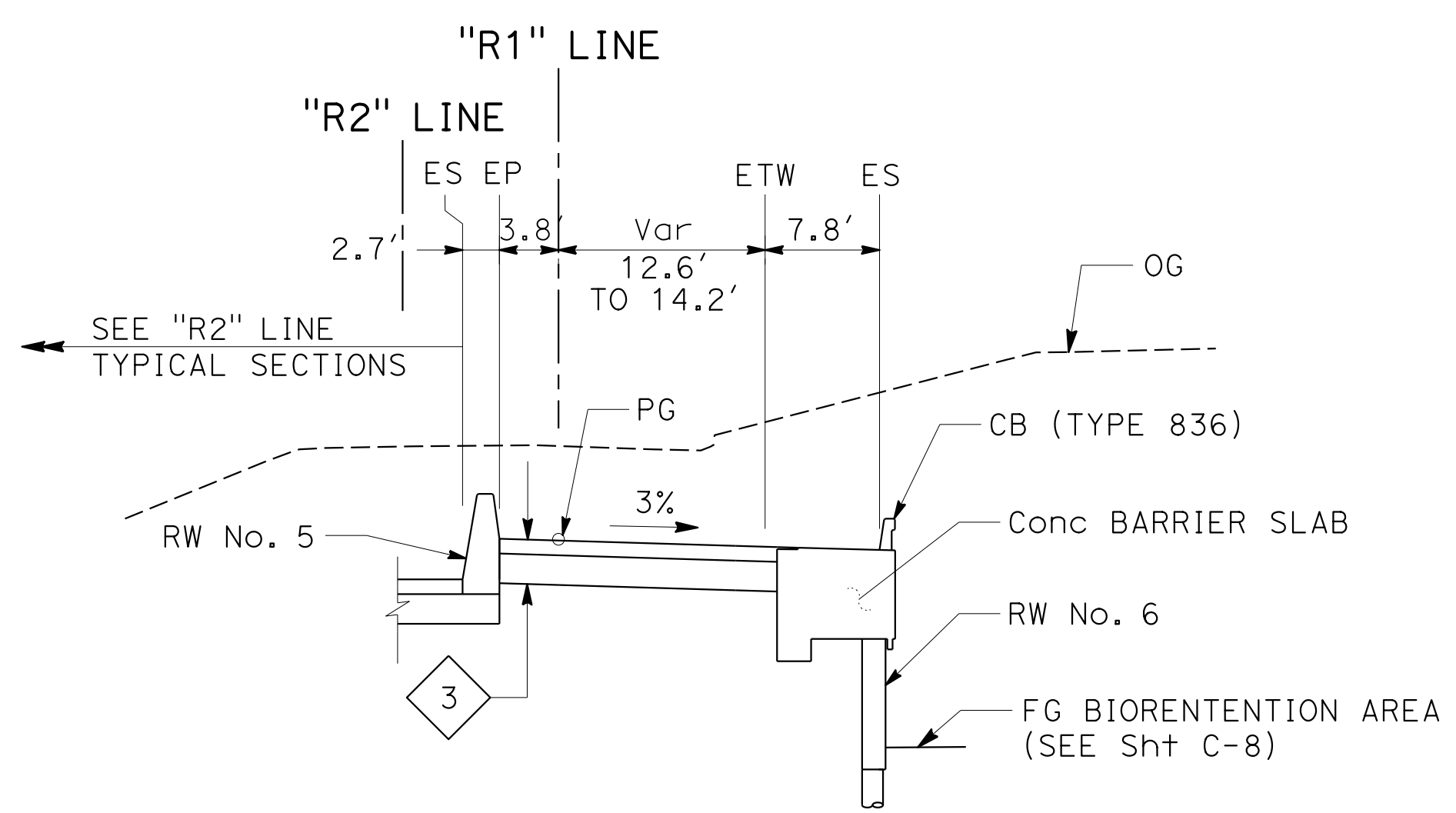
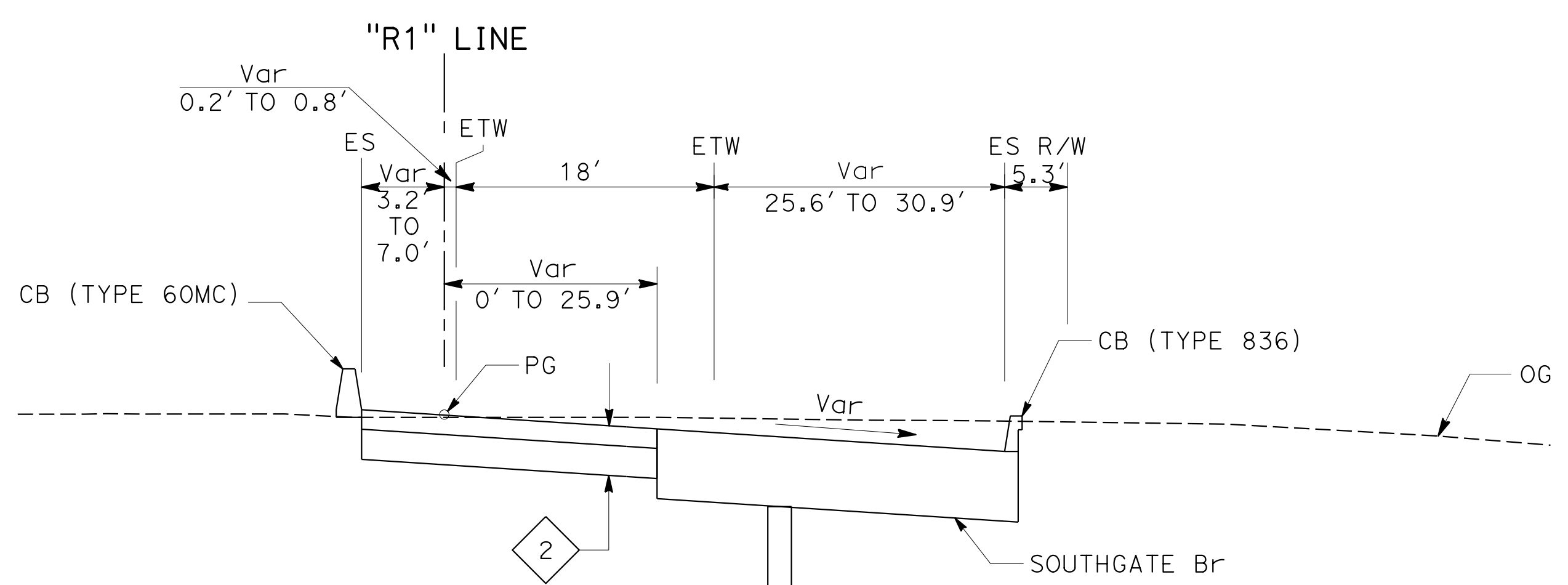
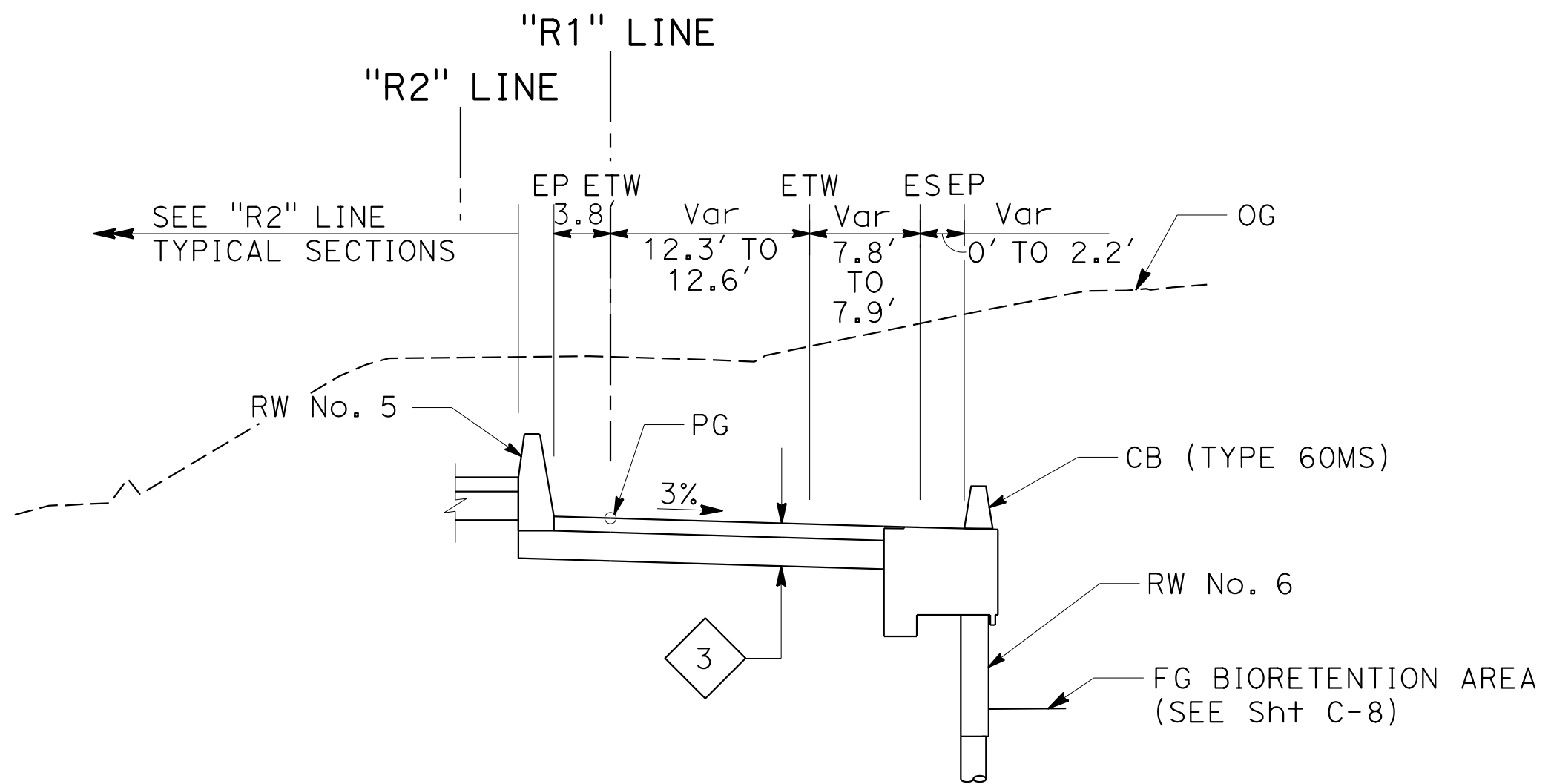
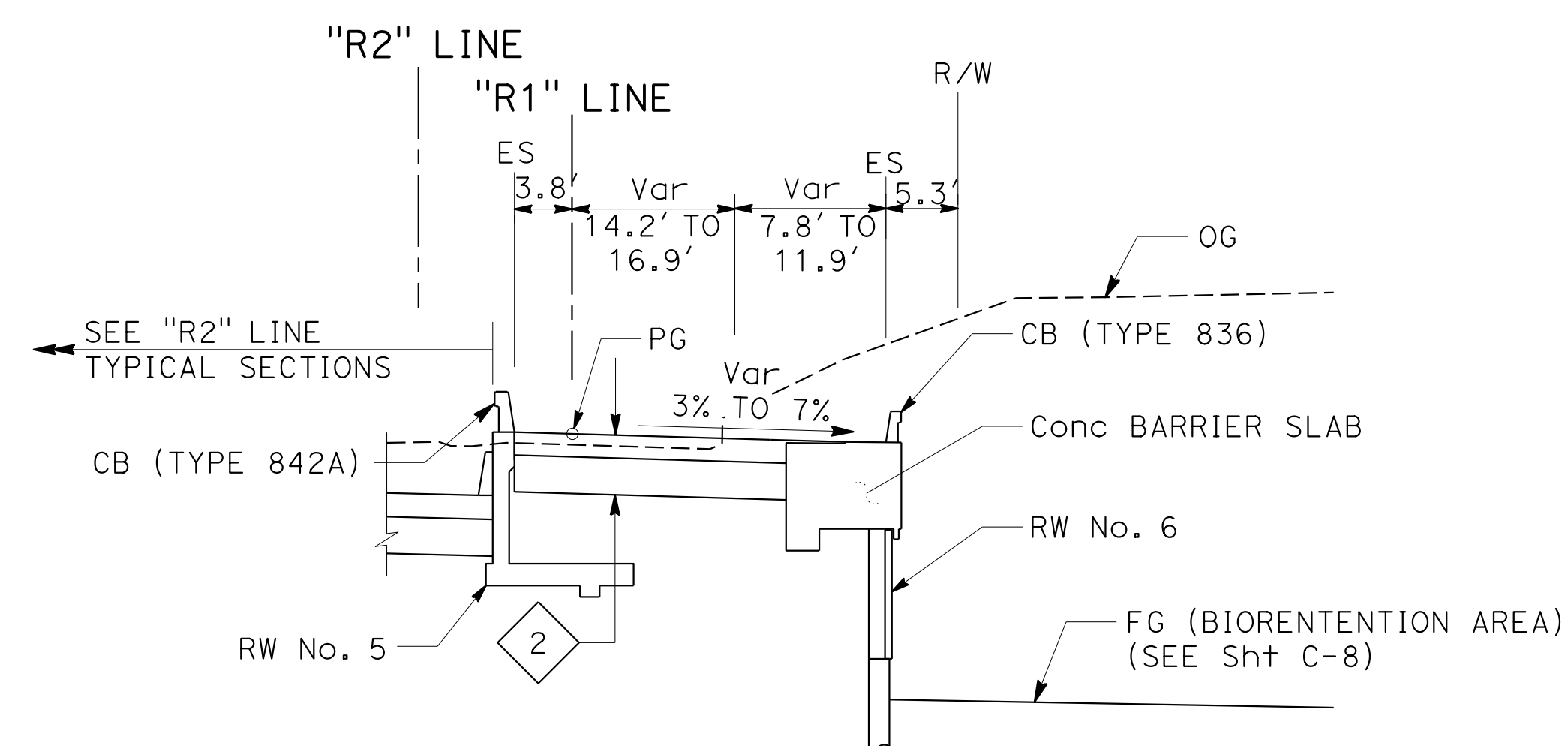
ROUTE 80

TYPICAL CROSS SECTIONS

NO SCALE

X-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	3	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



**ROUTE 80
EB OFF-RAMP**

FOR NOTES AND ABBREVIATIONS,
SEE SHEET X-1

TYPICAL CROSS SECTIONS

NO SCALE

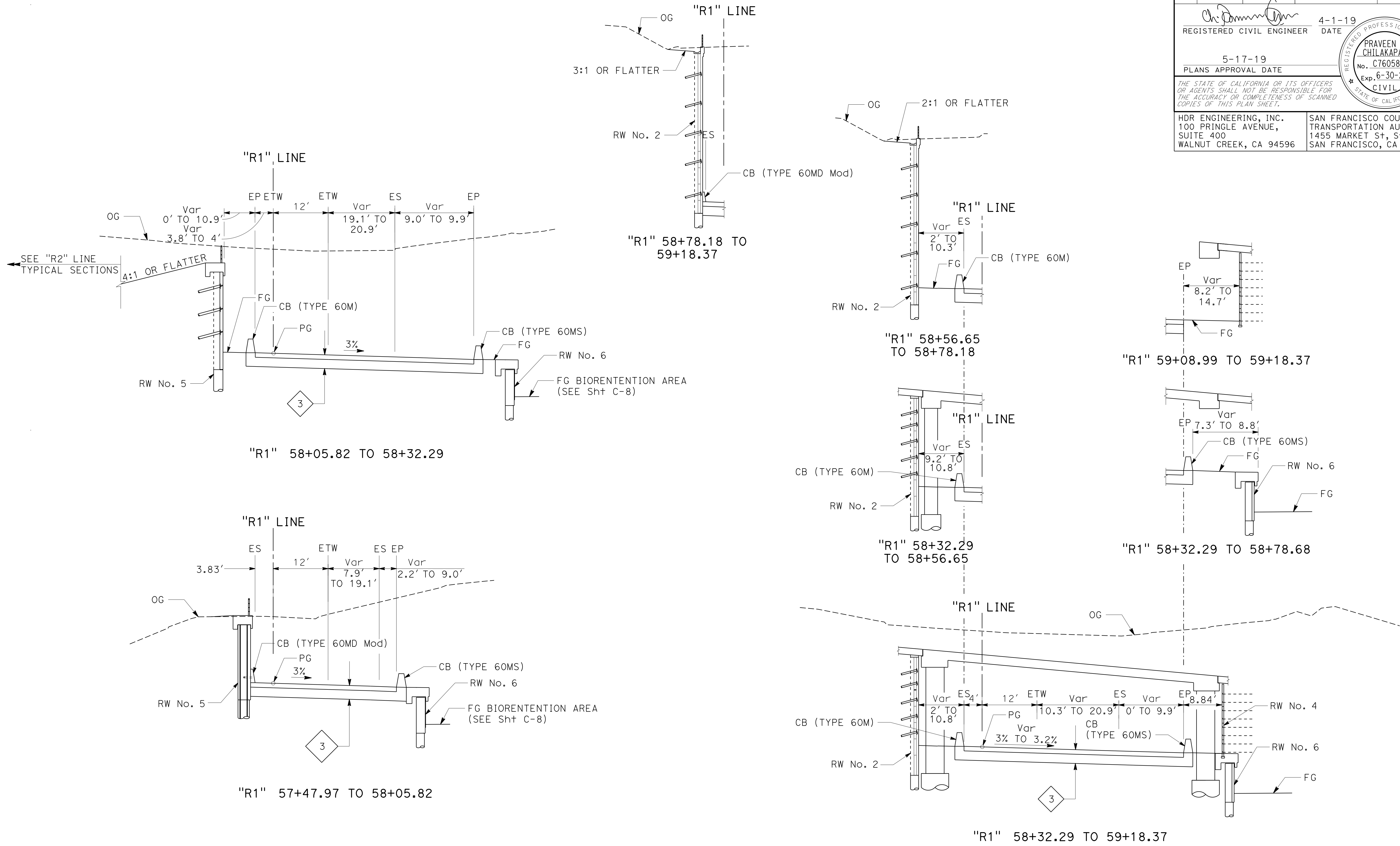
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 CONSULTANT - FUNCTIONAL SUPERVISOR
 PRAVEEN CHILAKAPATI
 INGRID V. SUPIT
 INGRID SUPIT
 PC
 TB
 4-26-18
 12-11-18

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CONSULTANT: CHILAKAPATI, PRAVEEN
 INGRID SUPIT
 DESIGNED BY: INGRID SUPIT
 CHECKED BY:
 REVISIONS:
 TB 12-11-18
 KB 4-27-18
 REVISED BY: DATE REVISED:

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	4	436

REGISTERED CIVIL ENGINEER
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19
 PRAVEEN K. CHILAKAPATI
 No. C76058
 Exp. 6-30-20
 CIVIL
 STATE OF CALIFORNIA
 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.
 HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400, WALNUT CREEK, CA 94596
 SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET ST, Ste 2200, SAN FRANCISCO, CA 94103



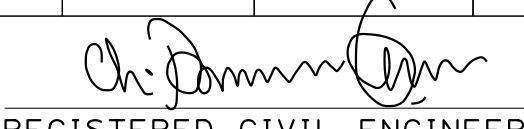
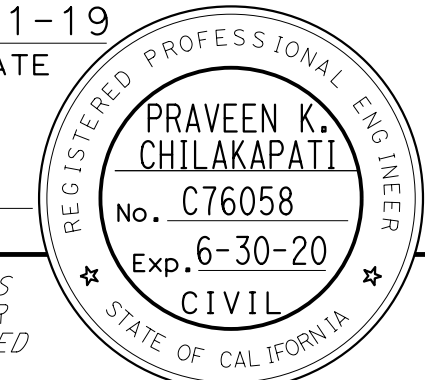
**ROUTE 80
 EB OFF-RAMP**

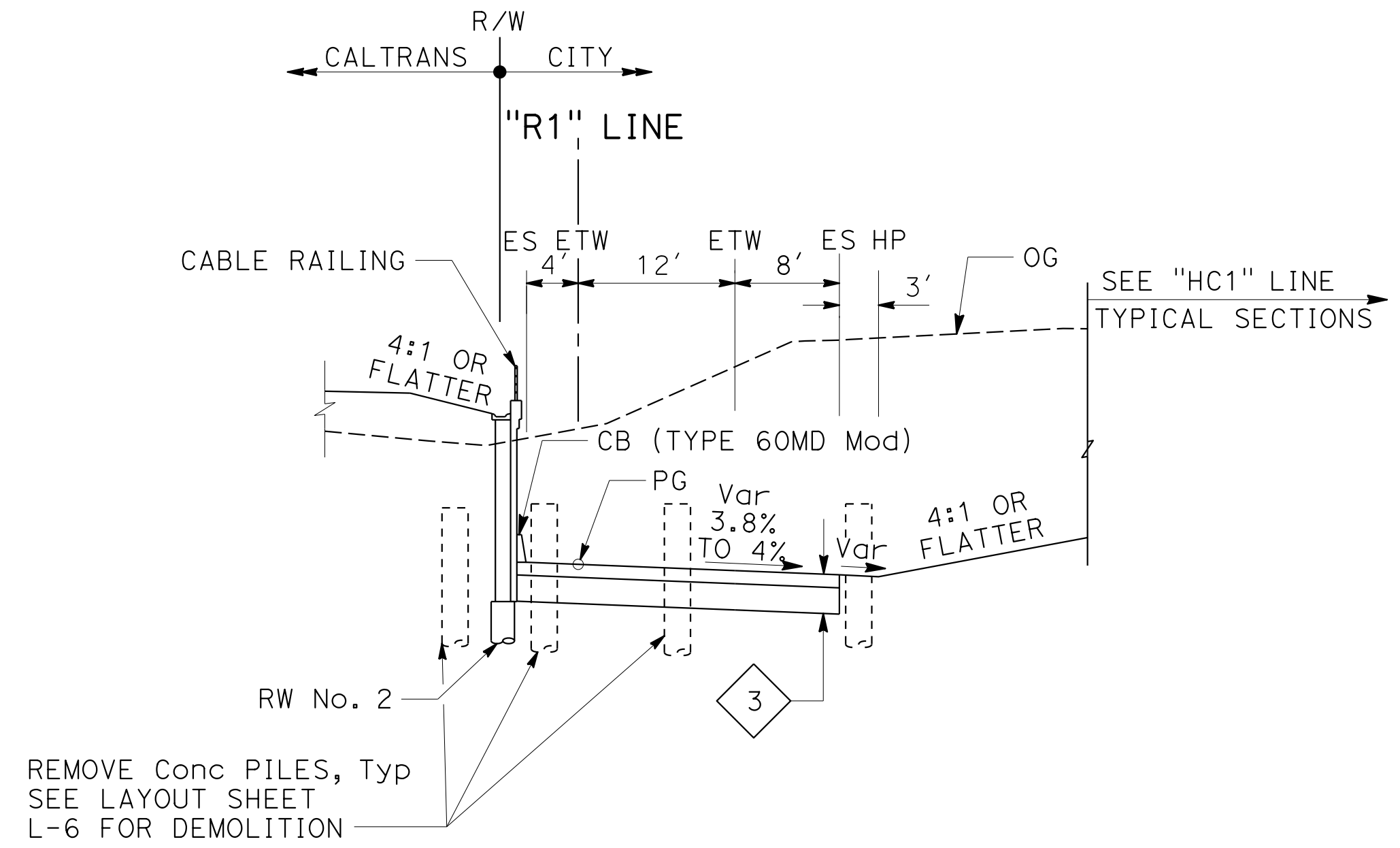
FOR NOTES AND ABBREVIATIONS,
 SEE SHEET X-1

TYPICAL CROSS SECTIONS

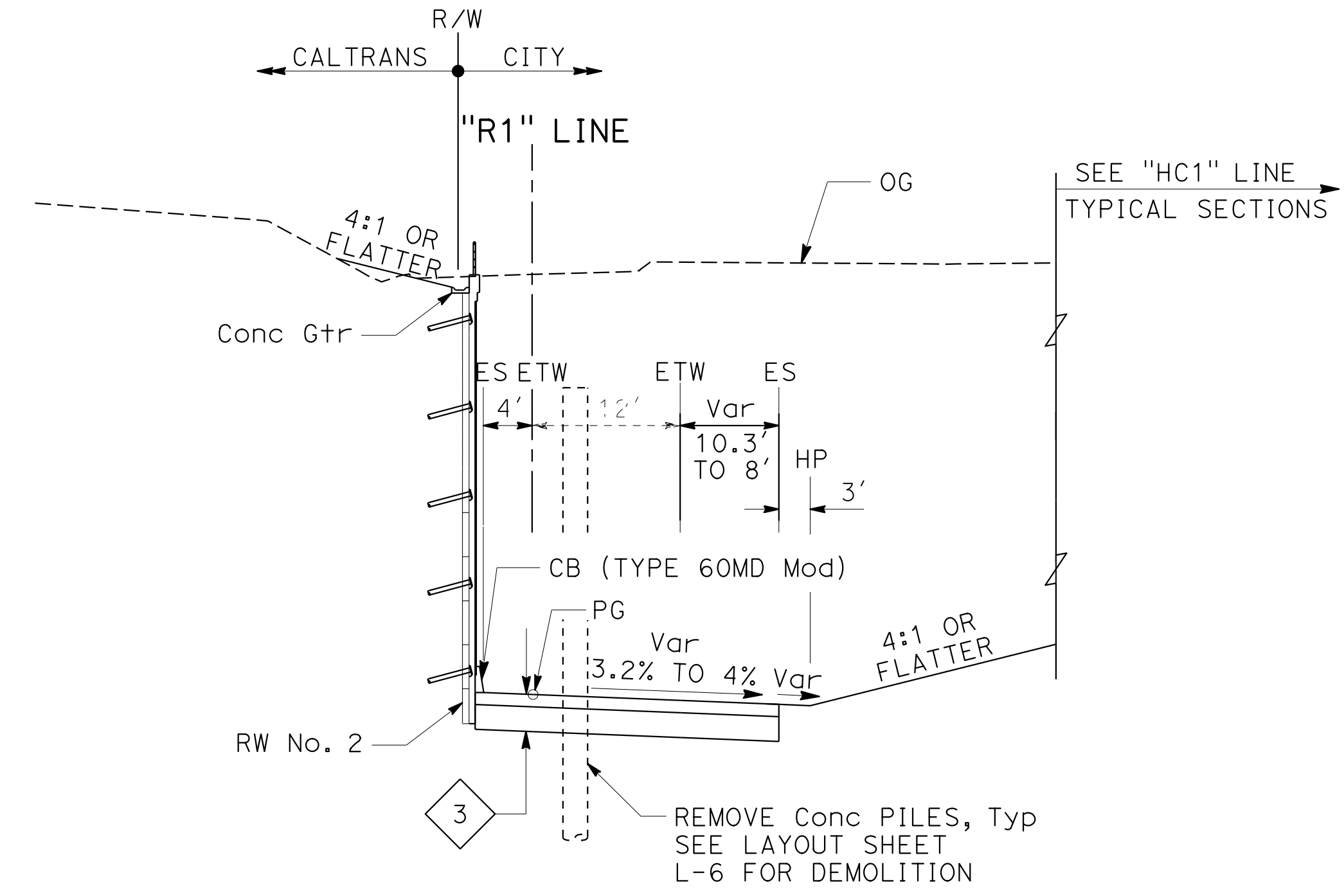
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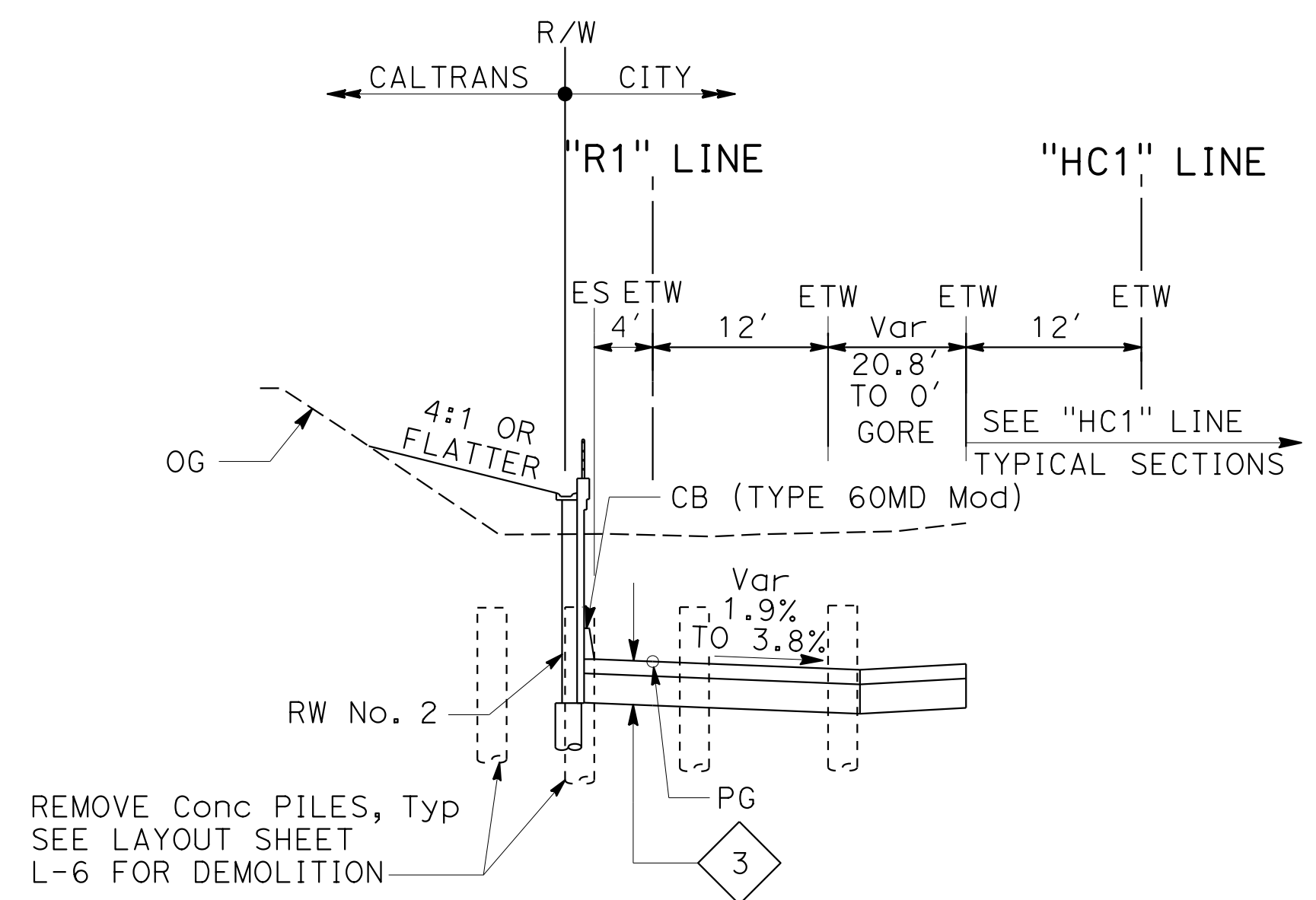
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	5	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



"R1" 60+90.79 TO "R1" 61+76.14



"R1" 59+18.37 TO "R1" 60+90.79



"R1" 61+76.14 TO "R1" 62+49.08


**ROUTE 80
EB OFF-RAMP**

FOR NOTES AND ABBREVIATIONS,
SEE SHEET X-1


TYPICAL CROSS SECTIONS

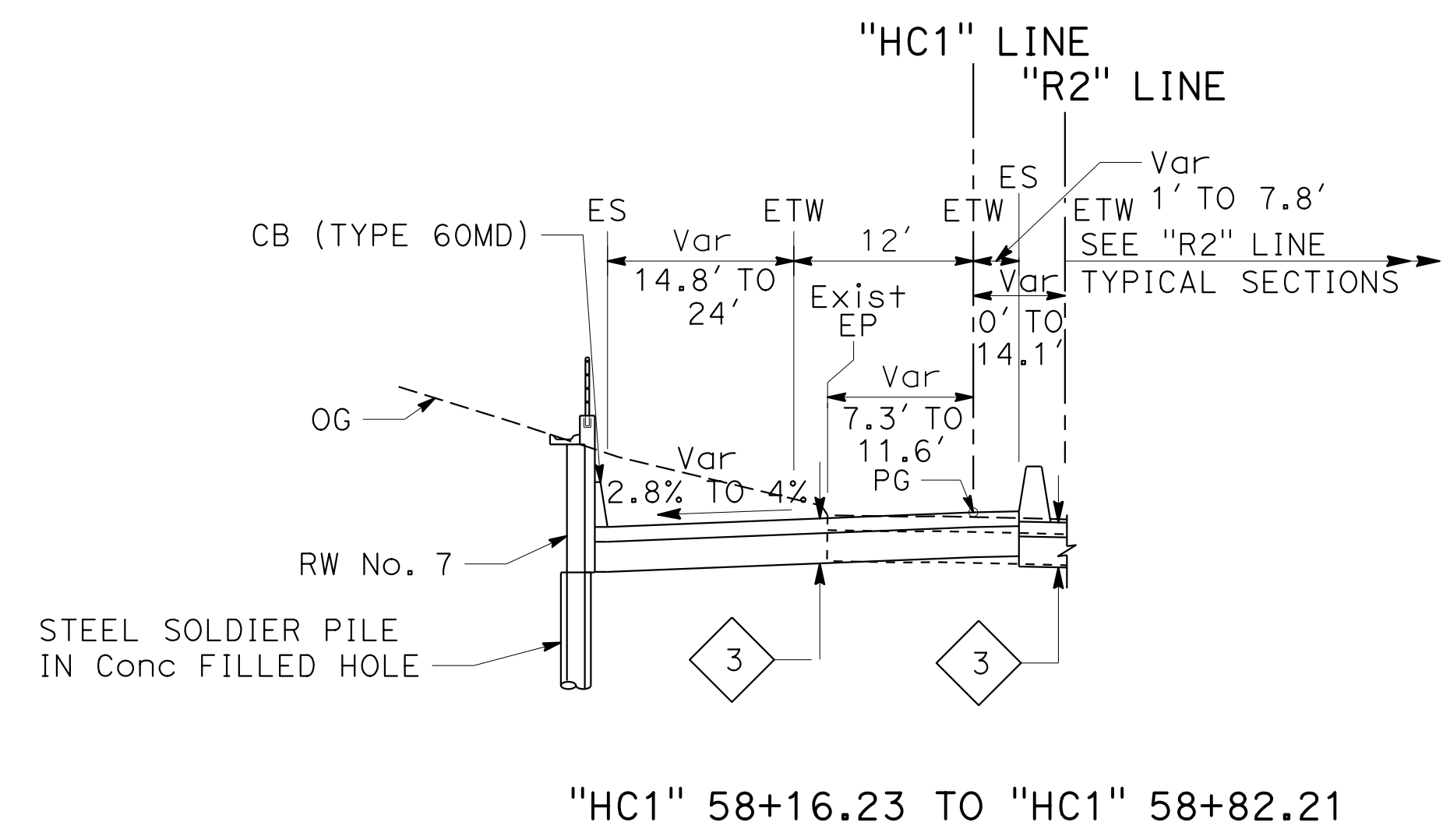
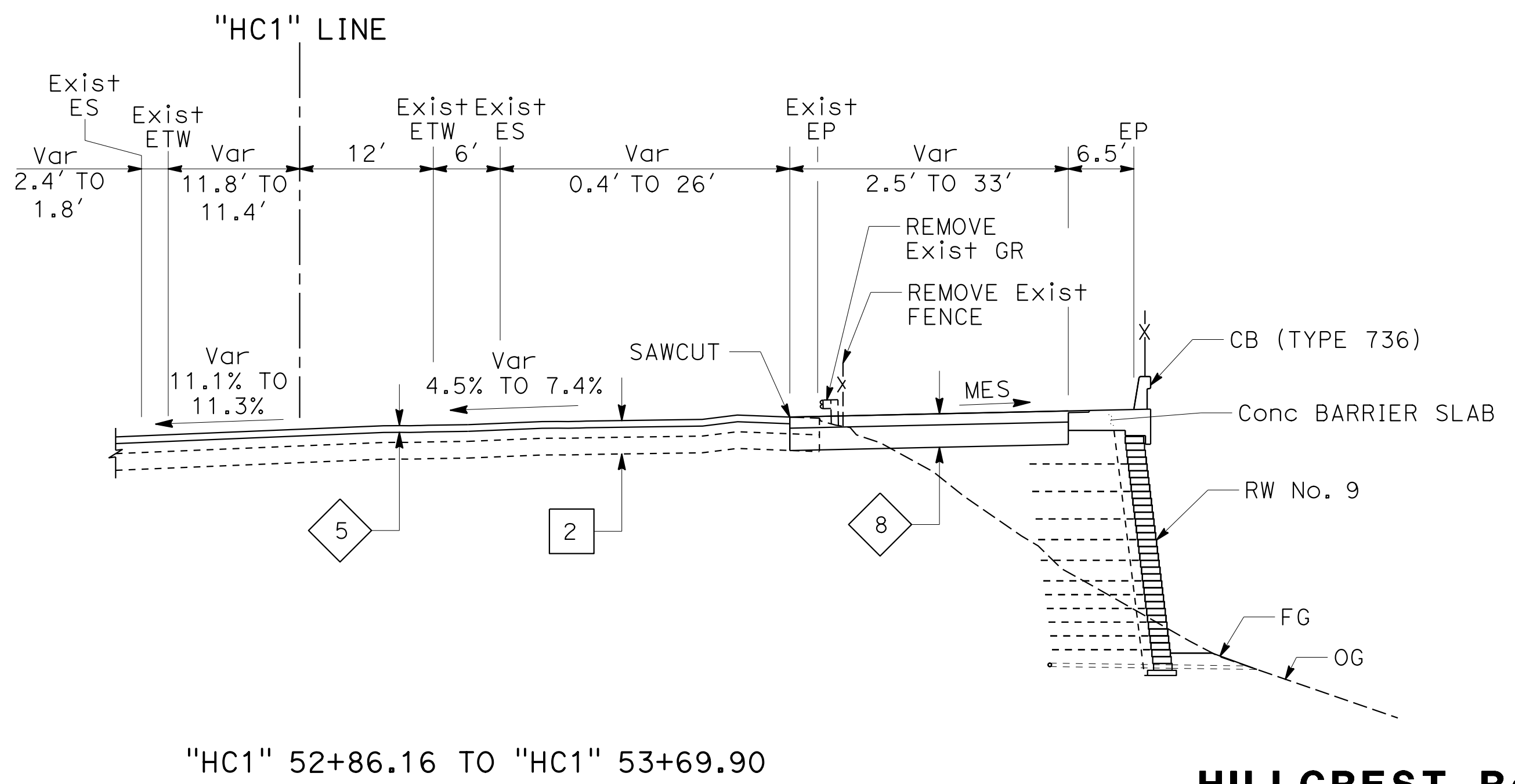
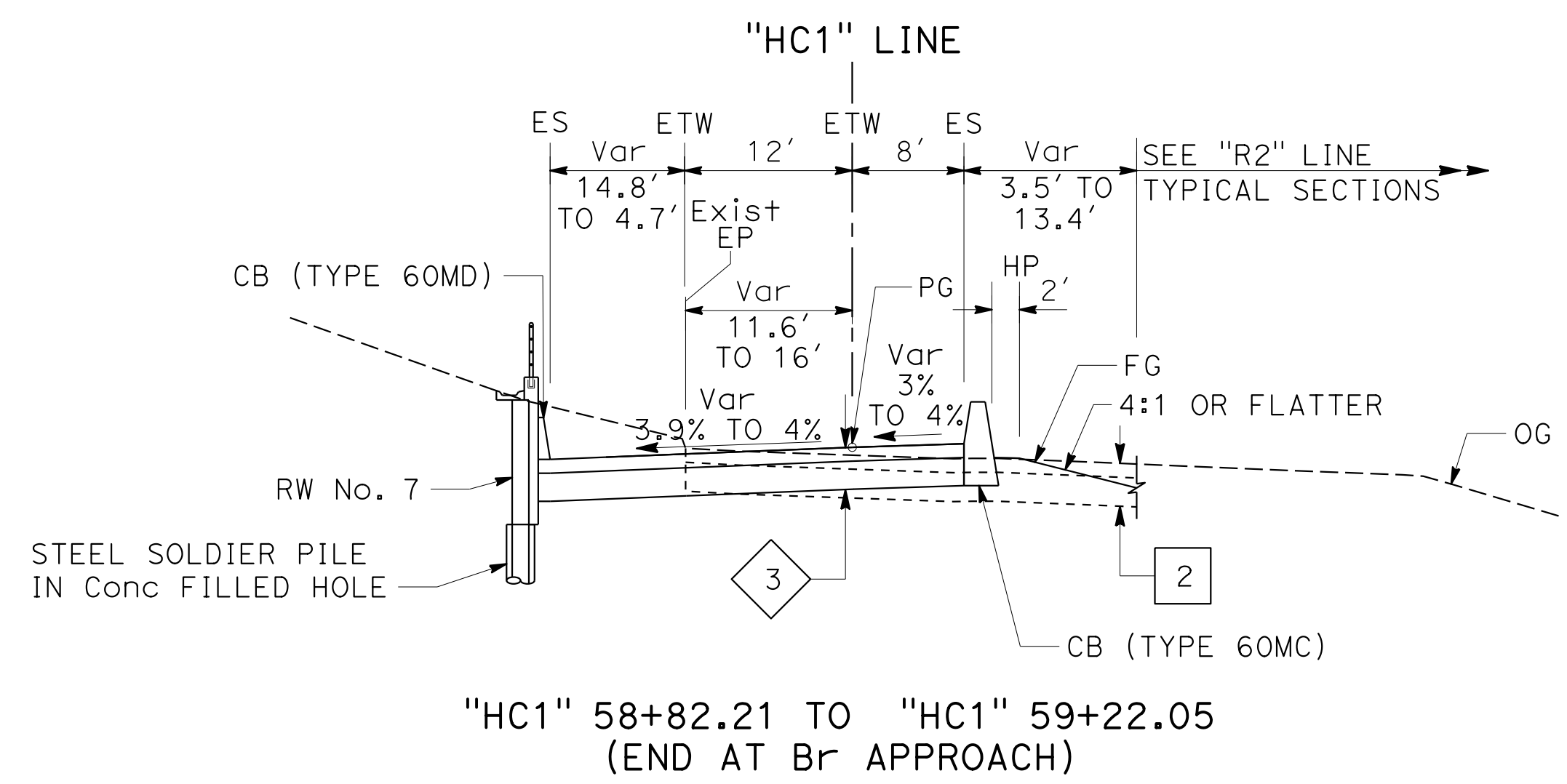
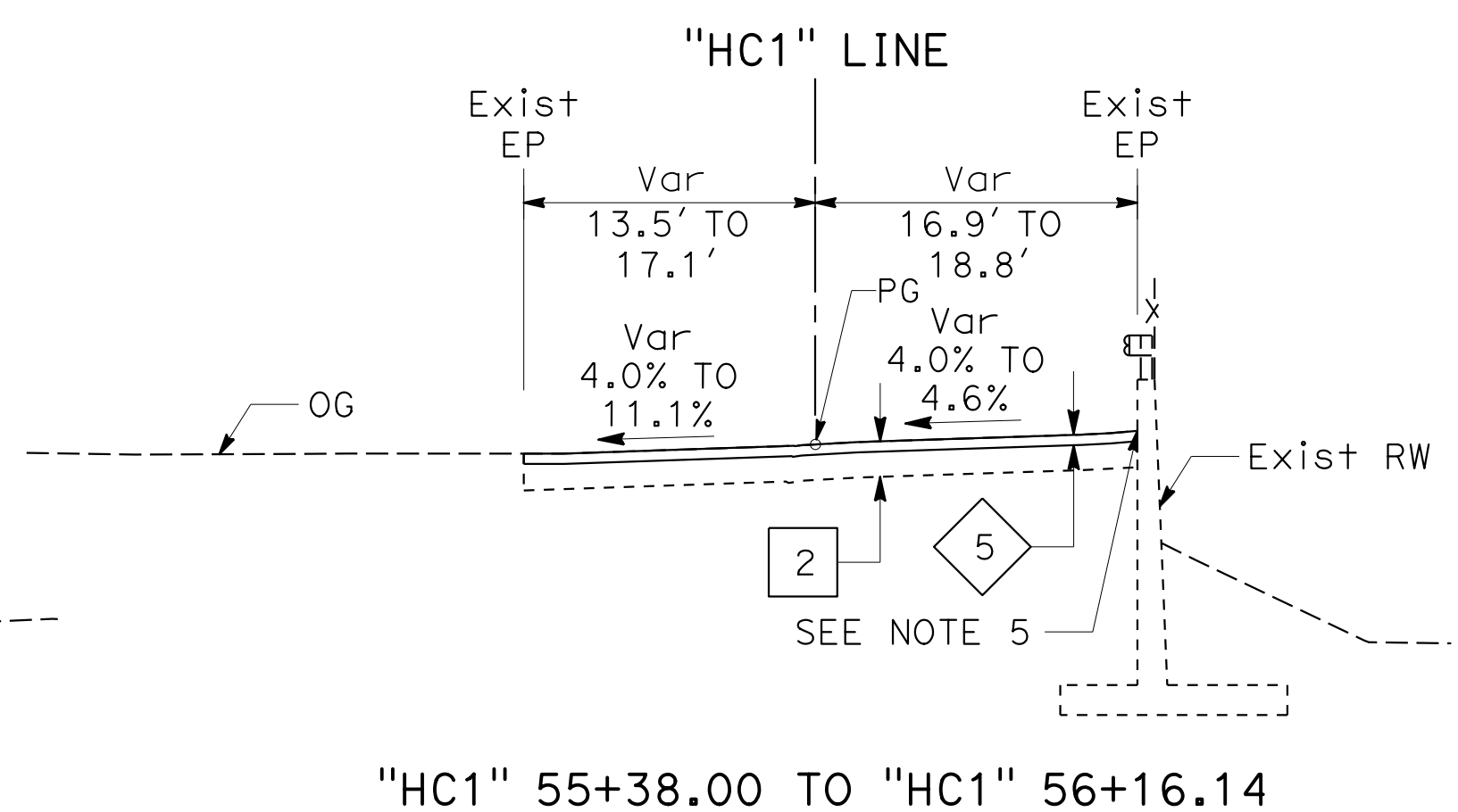
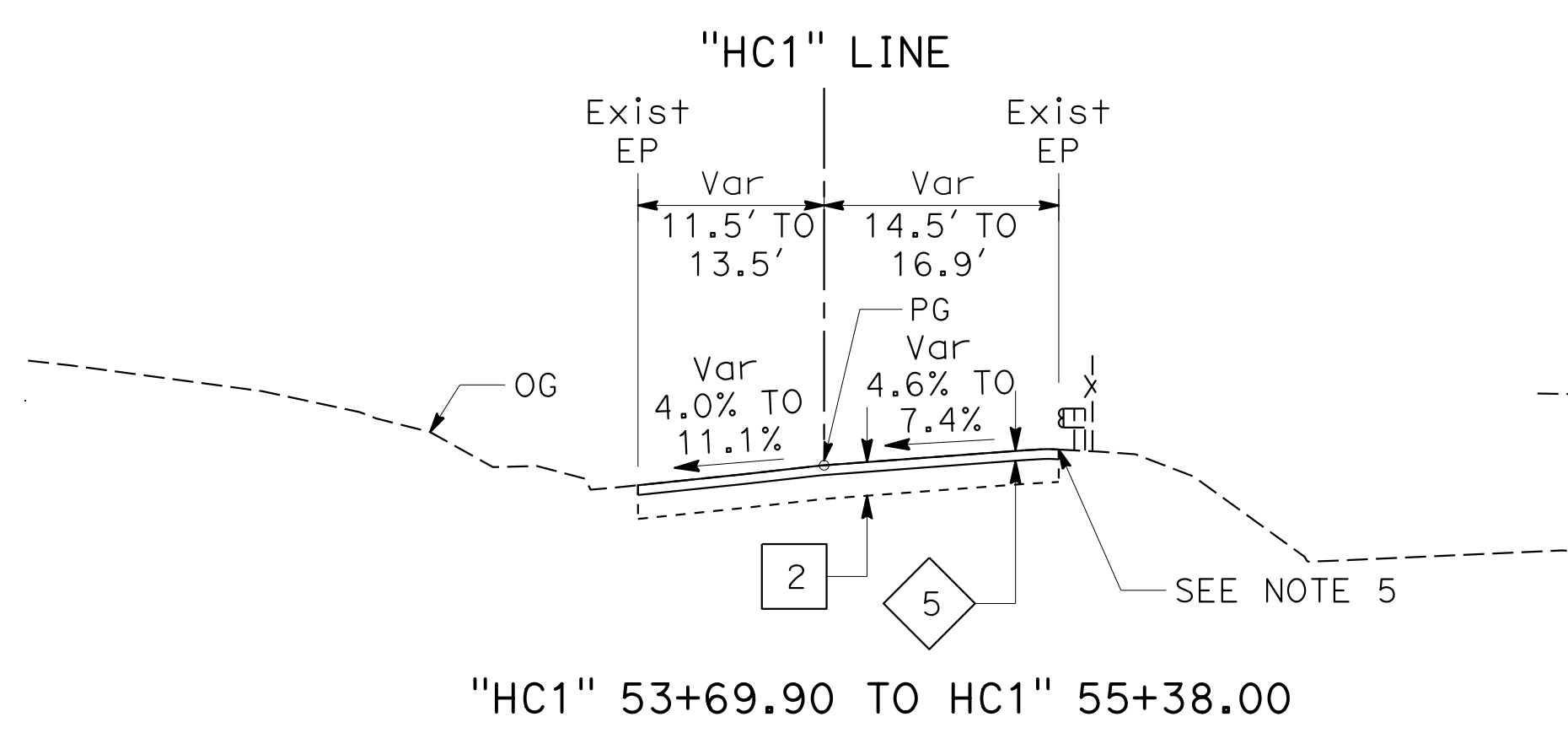
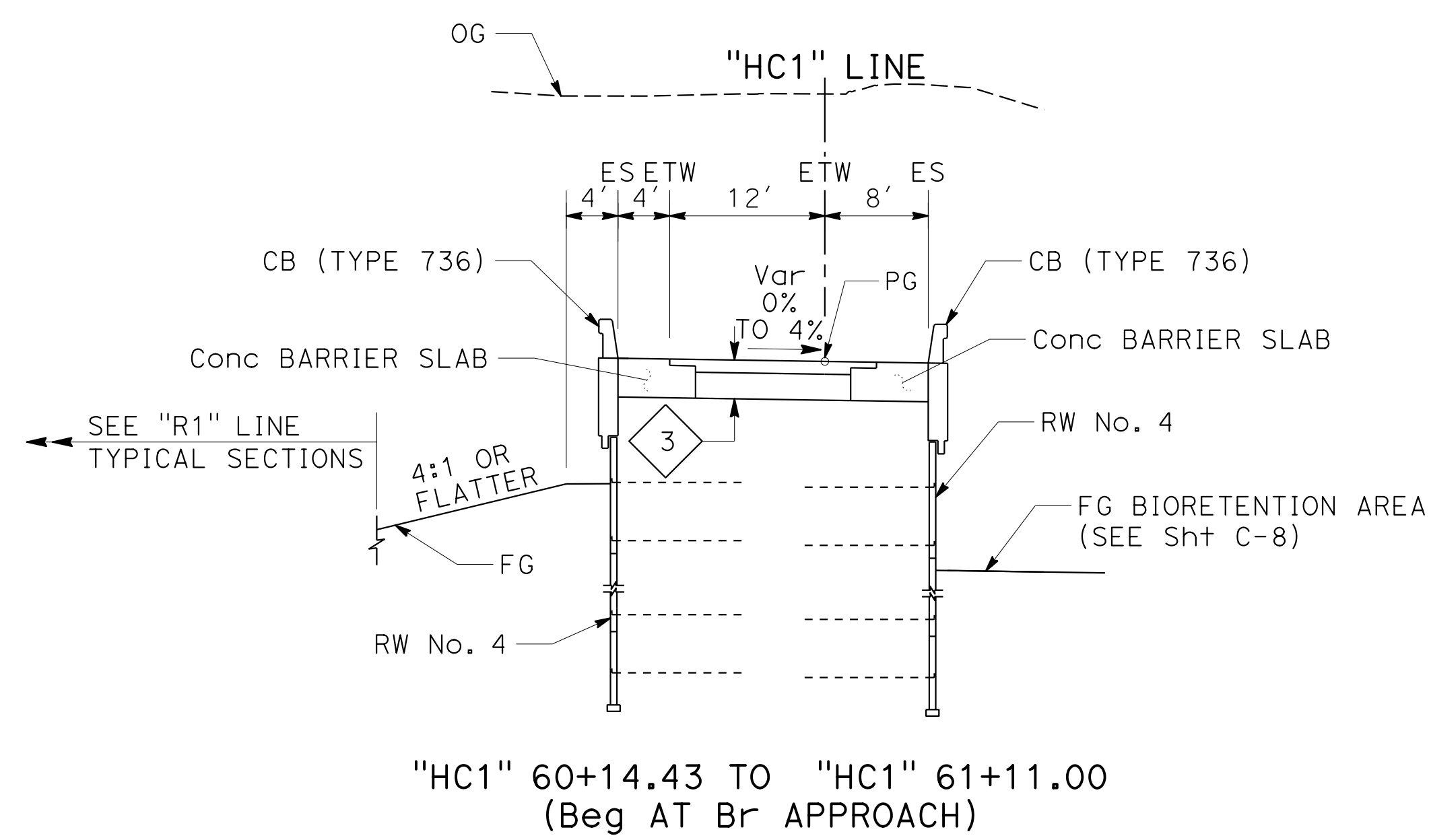
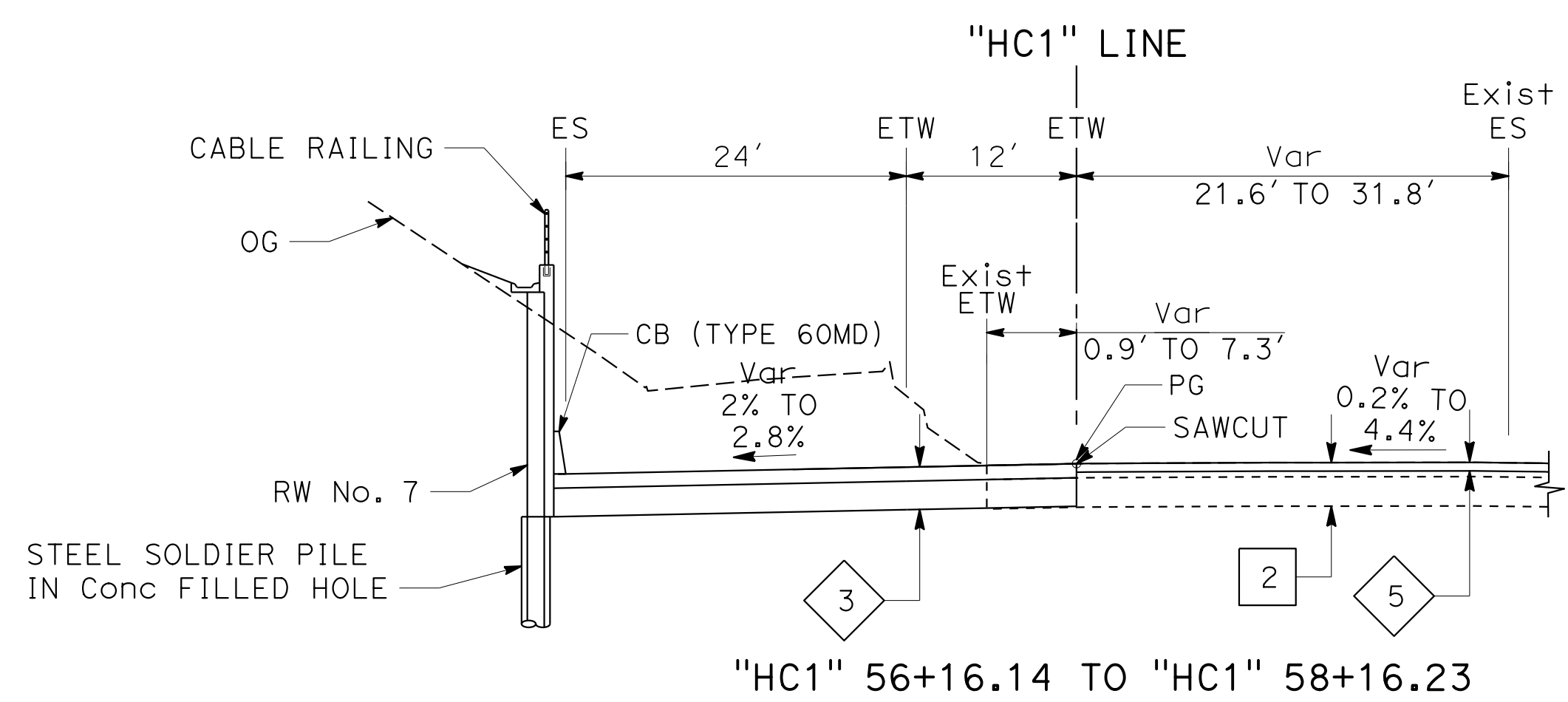
NO SCALE

X-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR	DATE
	INGRID V. SUPIT	PRAVEEN CHILAKAPATI	INGRID SUPIT	4-26-18
				12-12-18

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: INGRID SUPIT
 CHECKED BY: INGRID SUPIT
 REVISIONS: TB 12-12-18, IK 4-26-18
 REVISOR: PRAVEEN CHILAKAPATI
 DATE: 4-26-18

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	6	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 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.					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

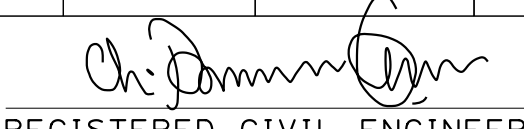
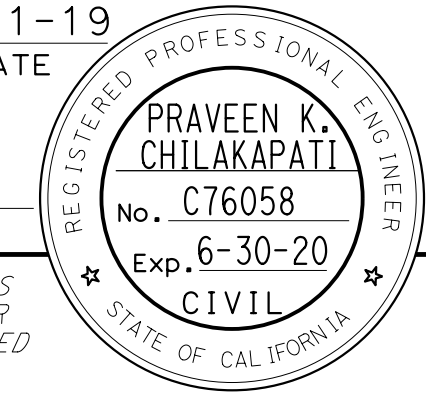


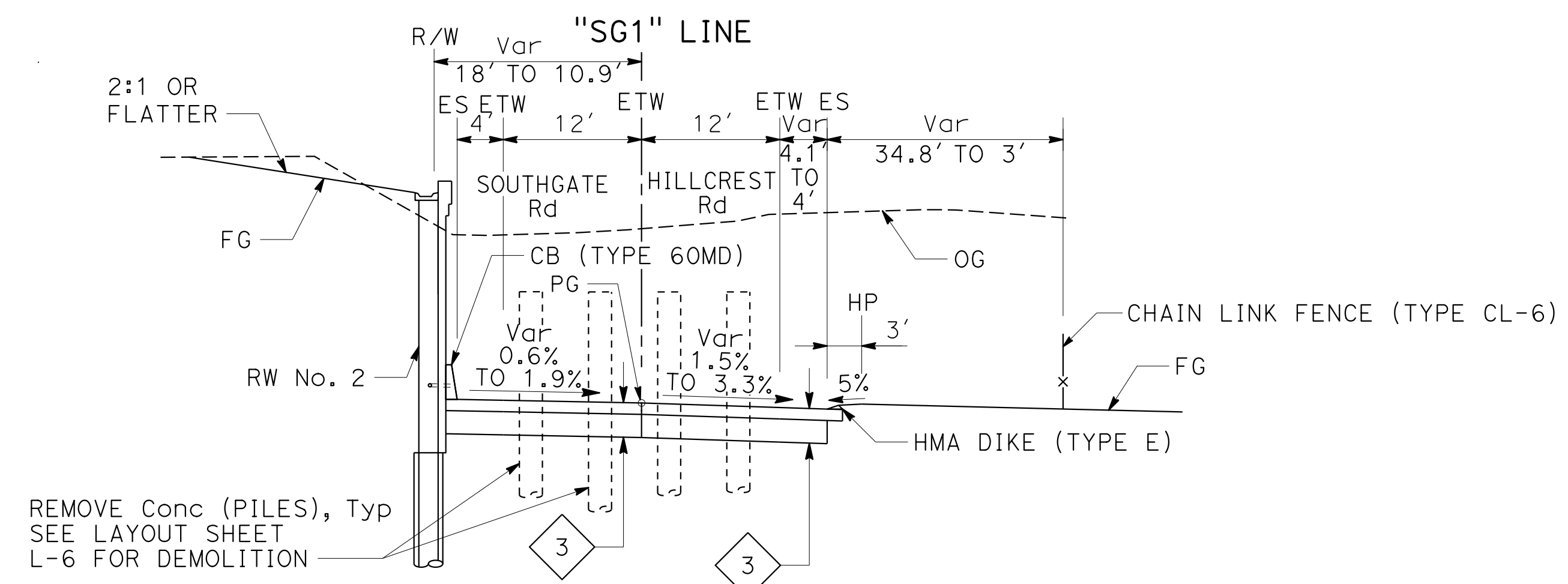
FOR NOTES AND ABBREVIATIONS, SEE SHEET X-1

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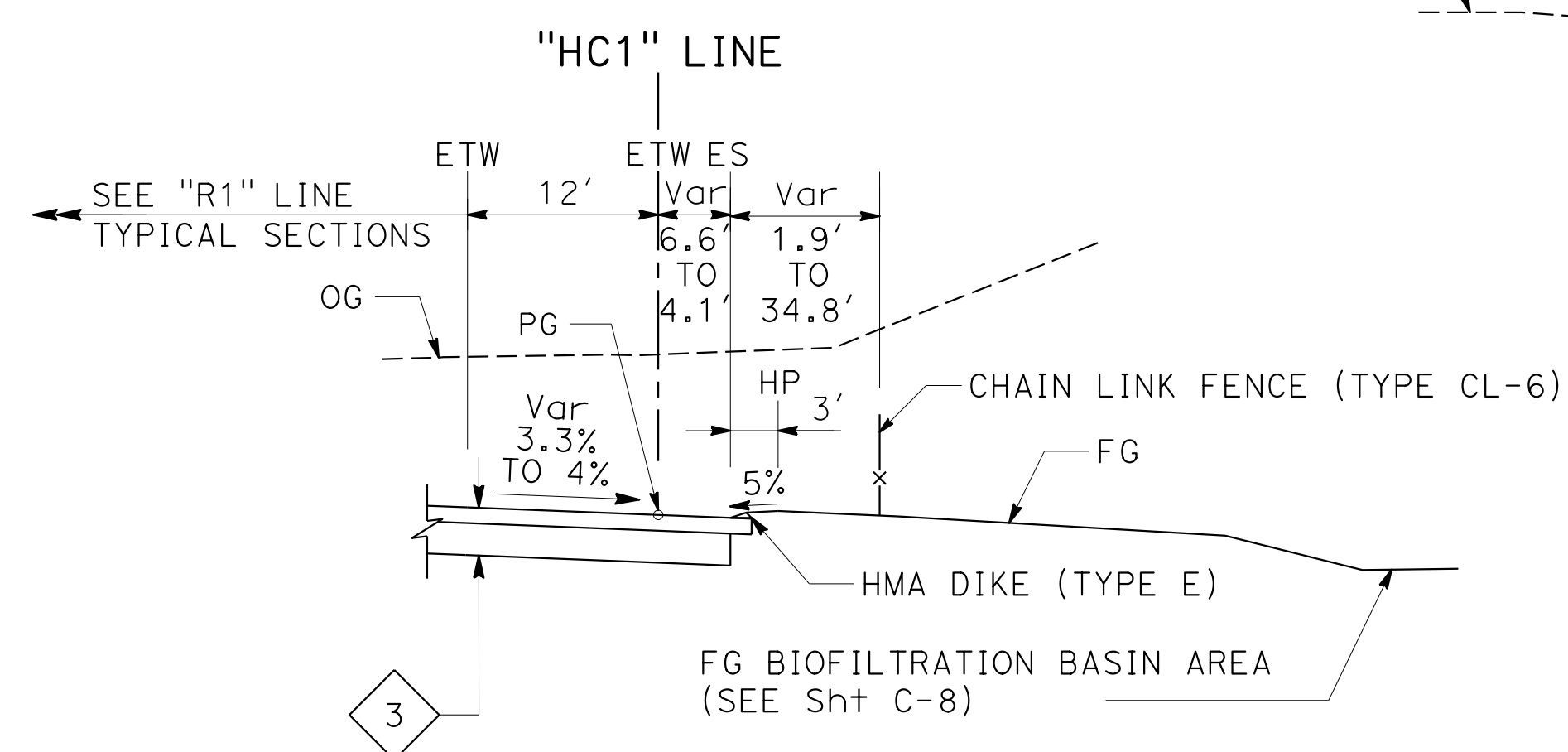
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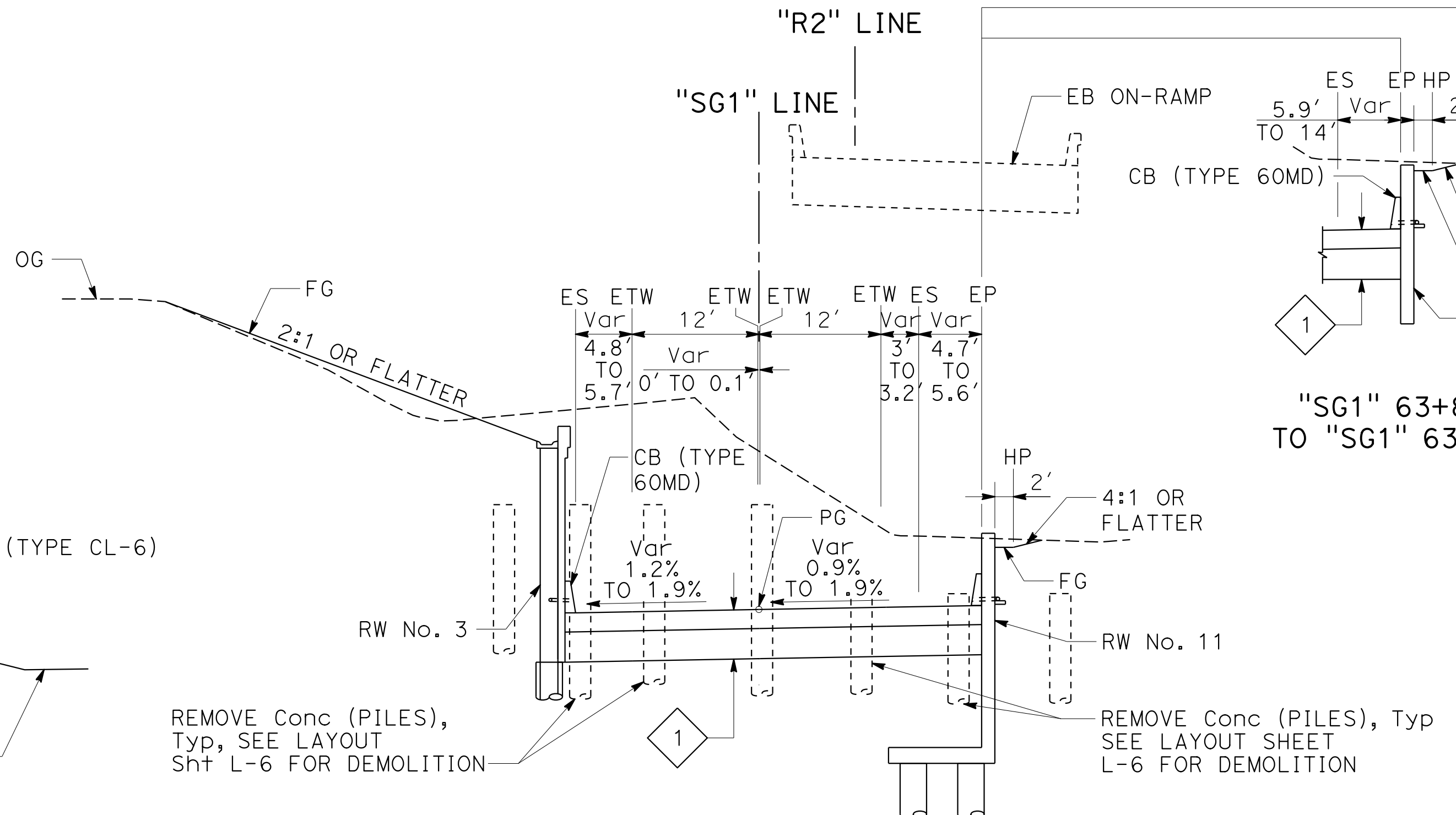
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	7	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



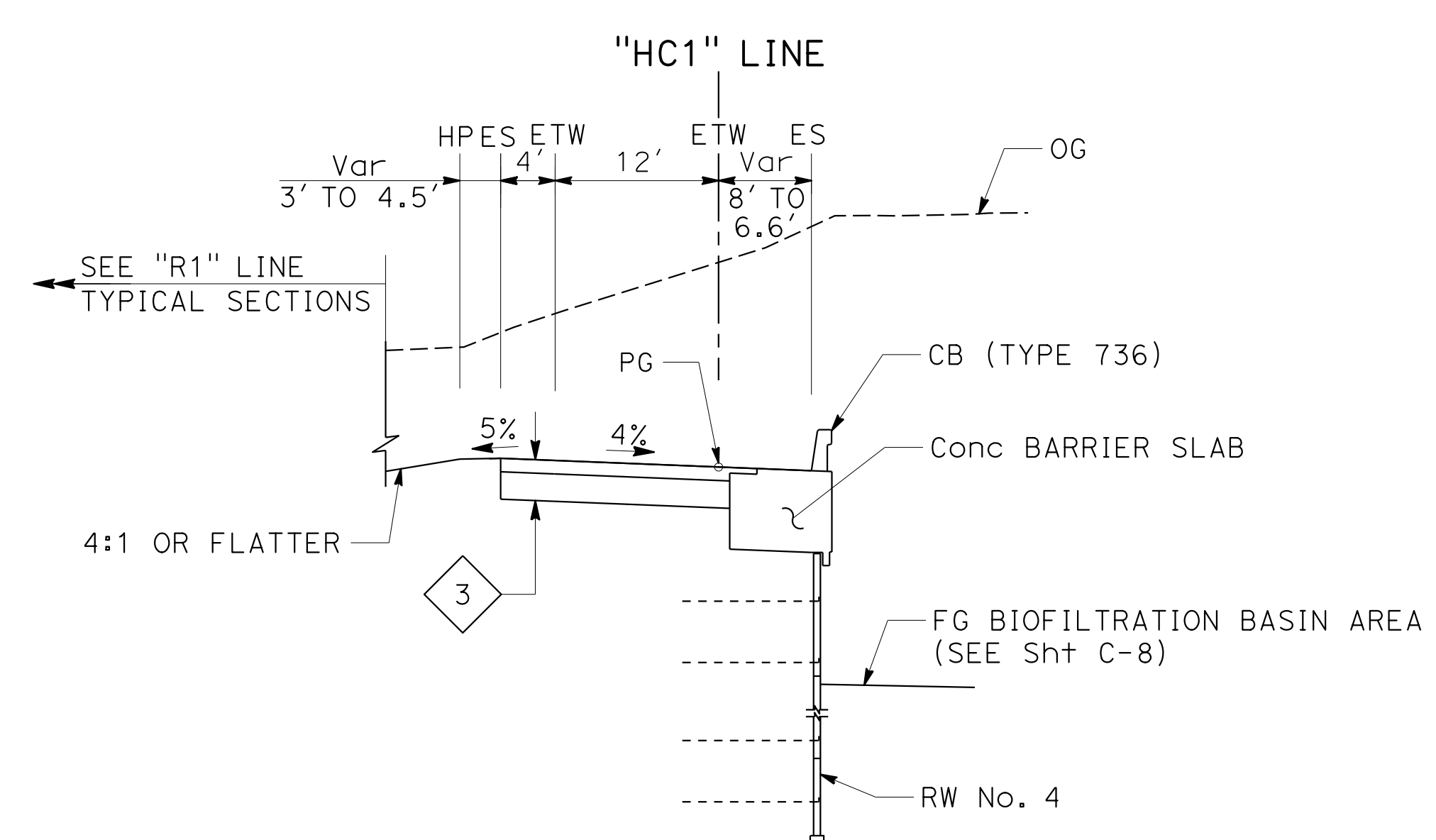
"SG1" 62+49.86 TO "SG1" 63+00.00
 "HC1" 62+49.86
SOUTHGATE Rd



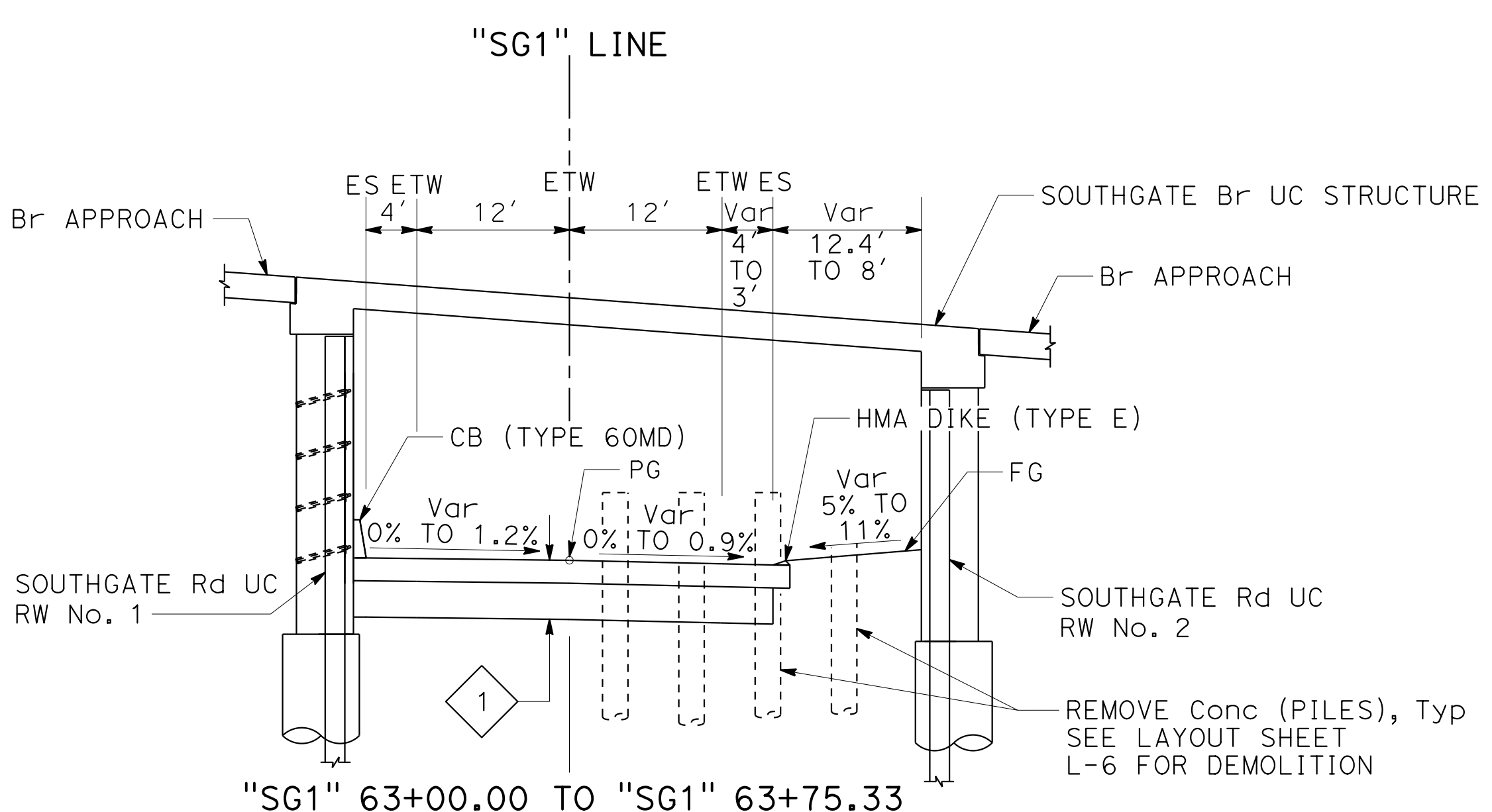
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HILLCREST Rd



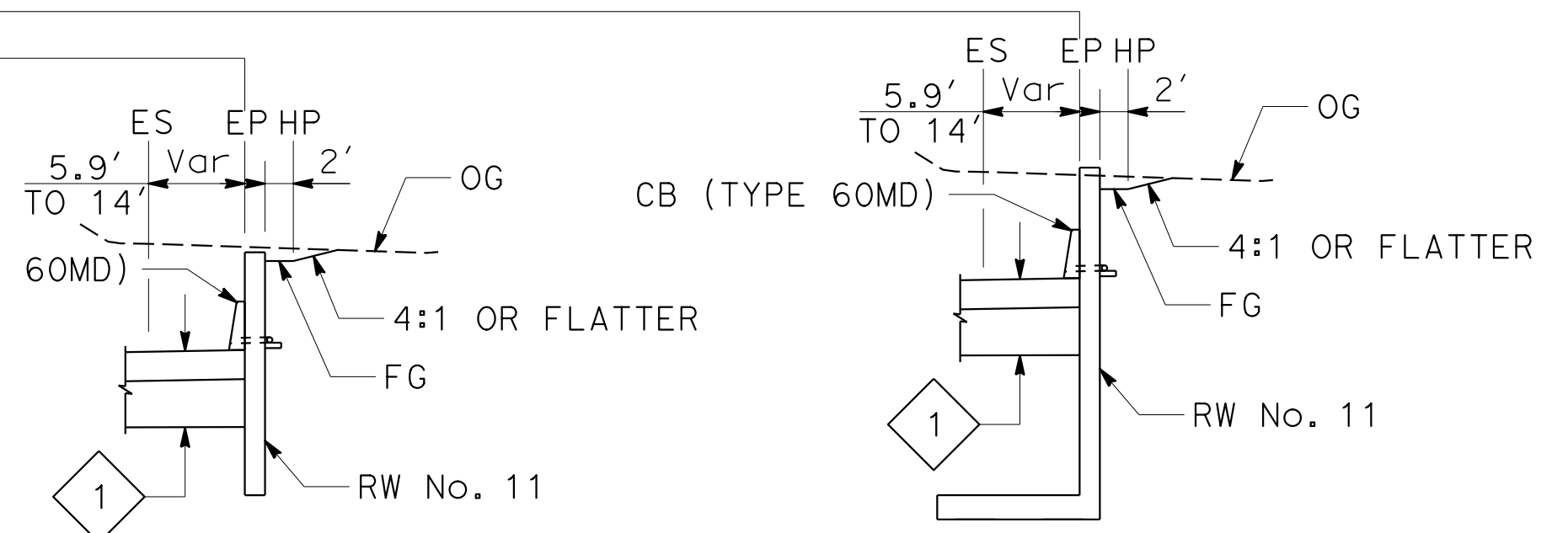
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SOUTHGATE Rd



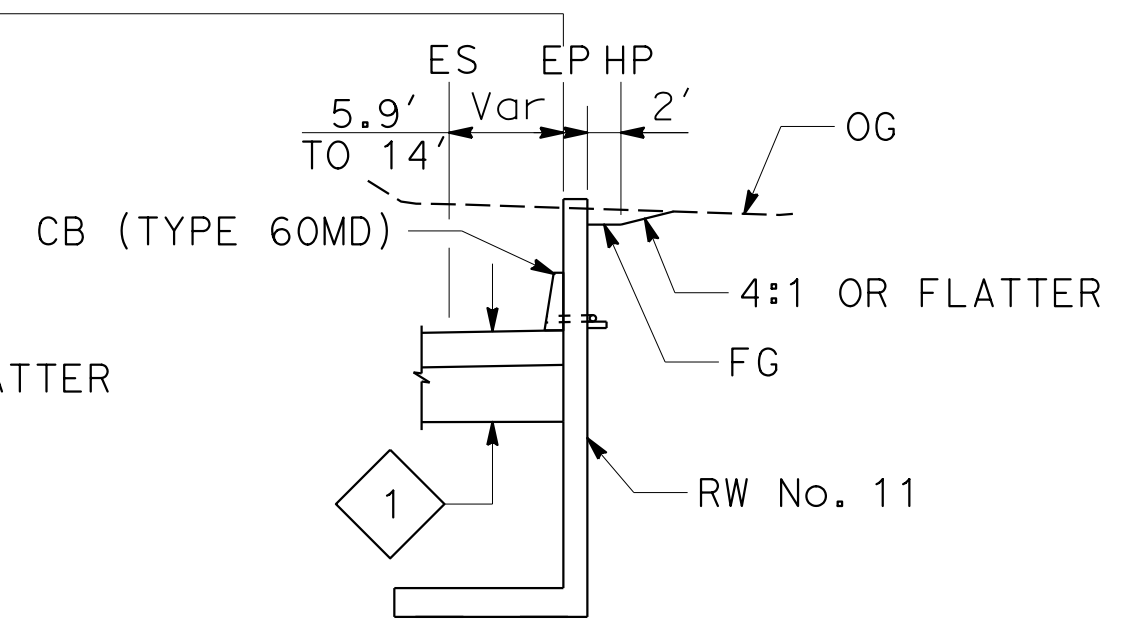
"HC1" 61+11.00 TO "HC1" 61+79.93
HILLCREST Rd



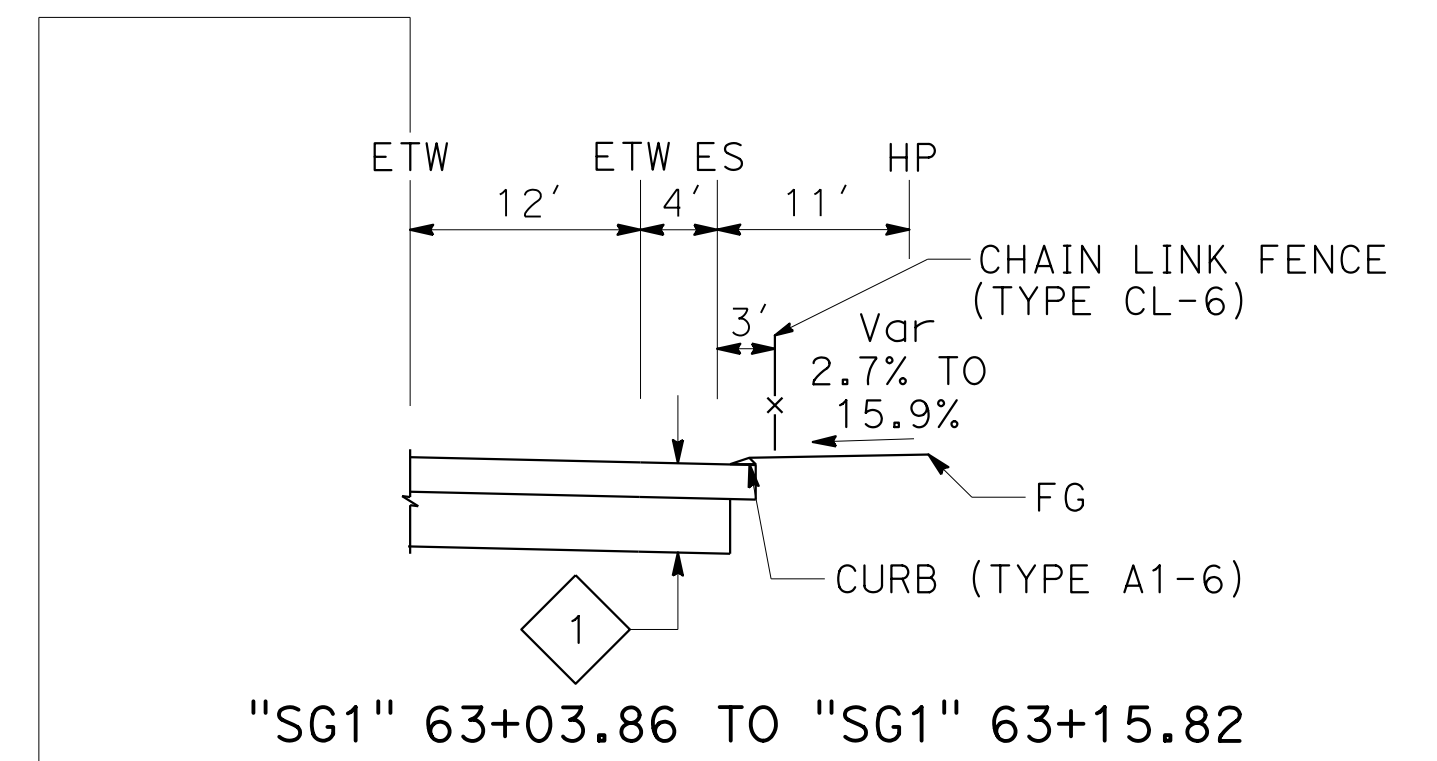
"SG1" 63+00.00 TO "SG1" 63+75.33
SOUTHGATE Rd



"SG1" 63+82.80 TO "SG1" 63+92.80
SOUTHGATE Rd



"SG1" 63+92.80 TO "SG1" 64+13.30
SOUTHGATE Rd



"SG1" 63+03.86 TO "SG1" 63+15.82
SOUTHGATE Rd

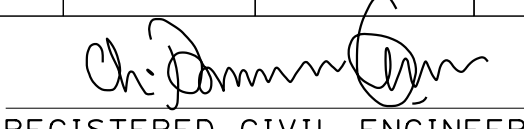
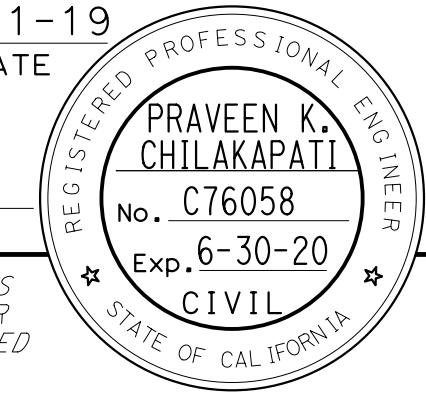
FOR NOTES AND ABBREVIATIONS,
 SEE SHEET X-1


TYPICAL CROSS SECTIONS

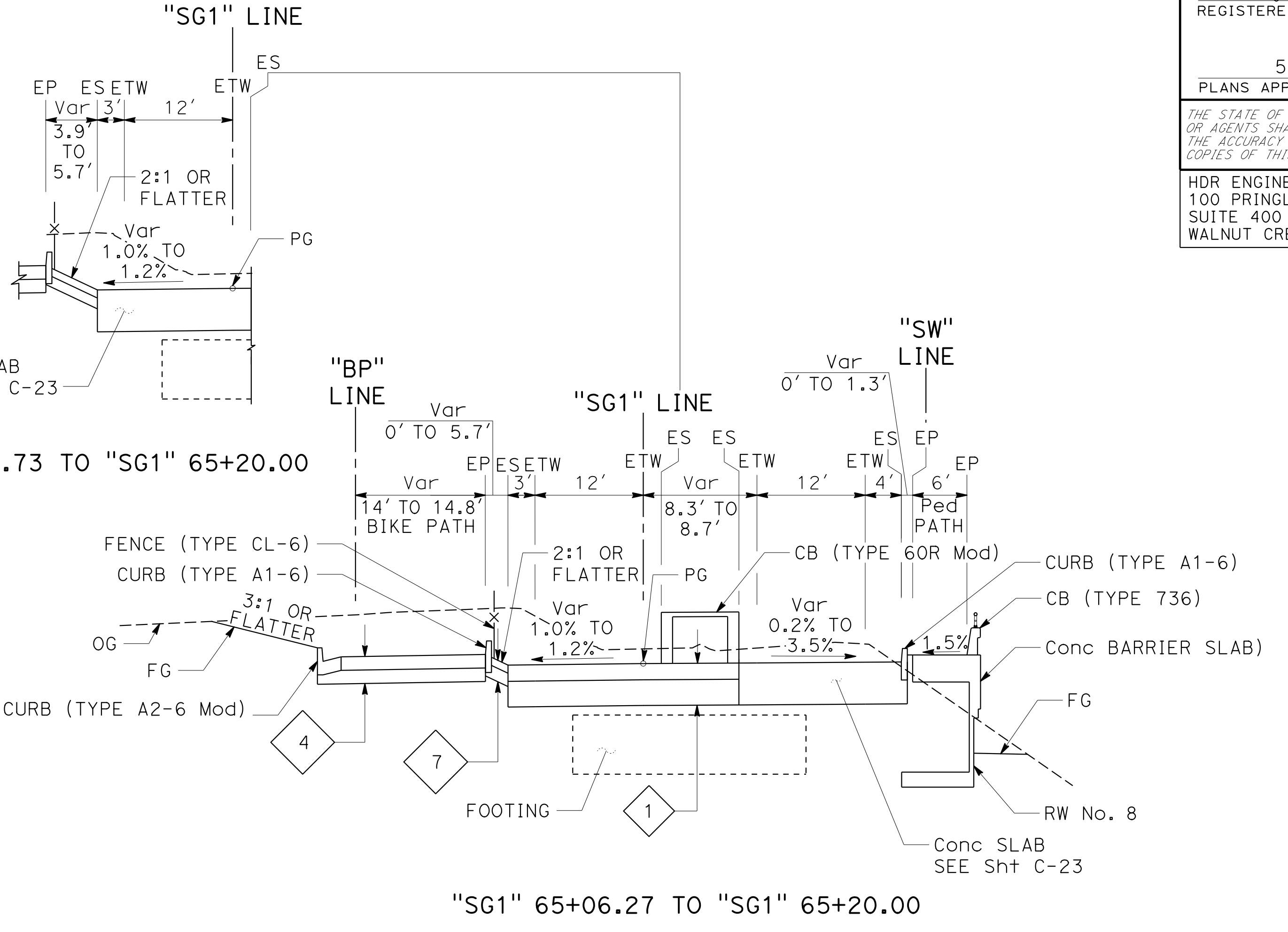
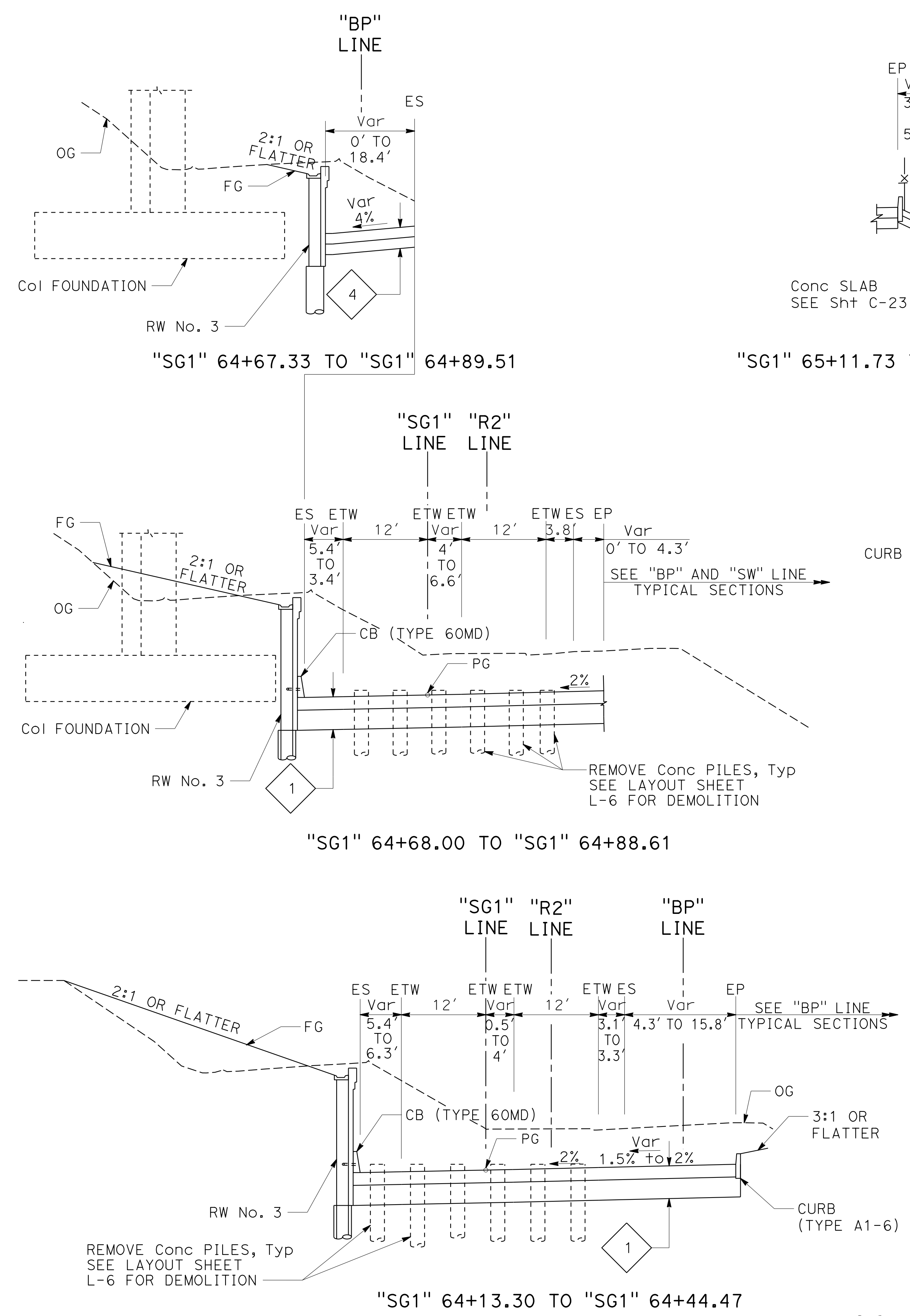
NO SCALE

X-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	REVISOR	DATE
INGRID V. SUPIT	INGRID SUPIT	4-26-18	3-6-19
INGRID V. SUPIT	INGRID SUPIT	4-26-18	3-6-19
INGRID V. SUPIT	INGRID SUPIT	4-26-18	3-6-19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	8	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR	DATE
	INGRID V. SUPIT	INGRID SUPIT	IK	2-13-19
			IK	4-26-18



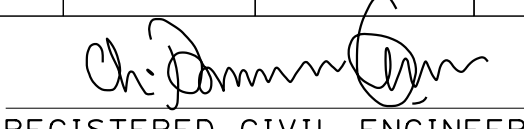
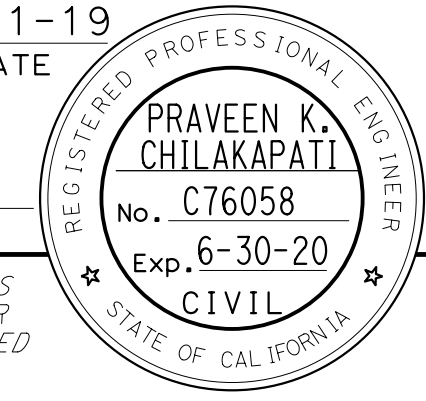
SOUTHGATE Rd

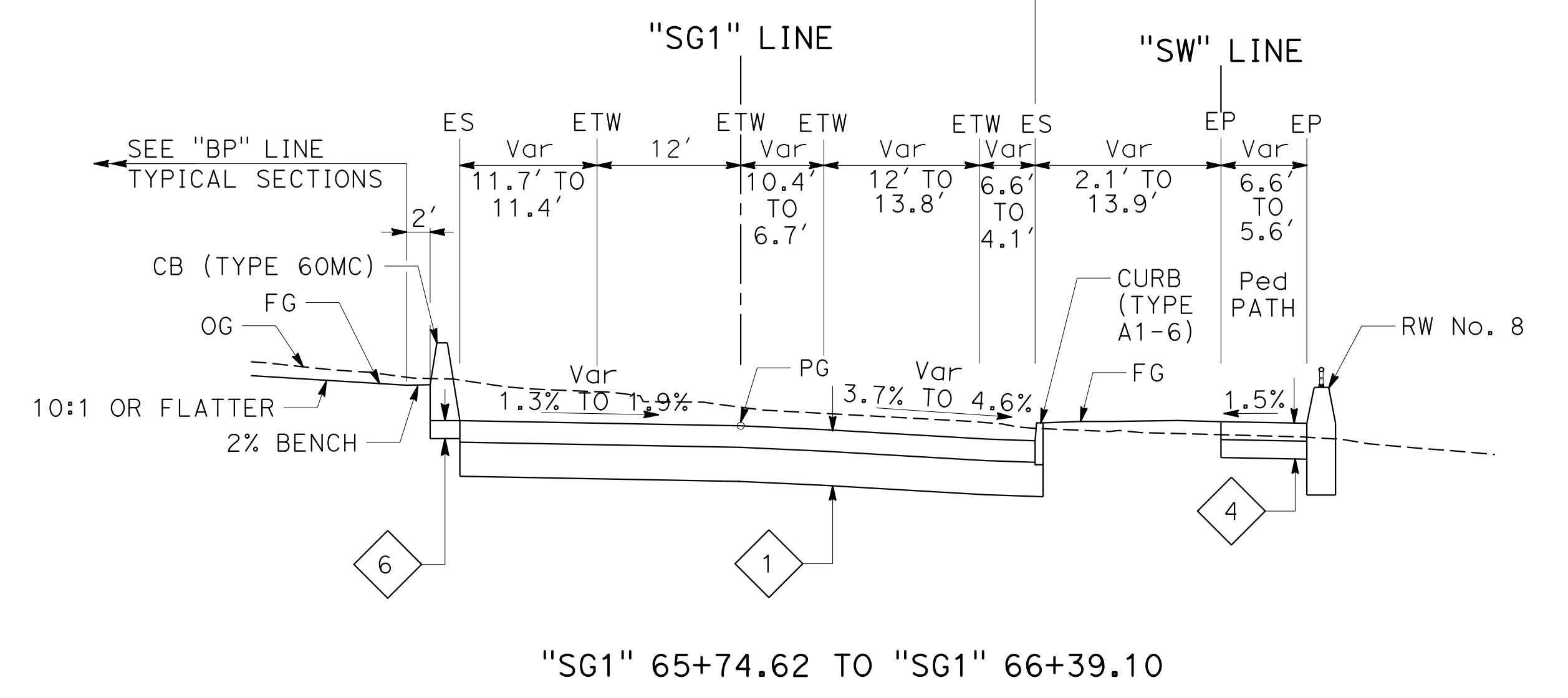
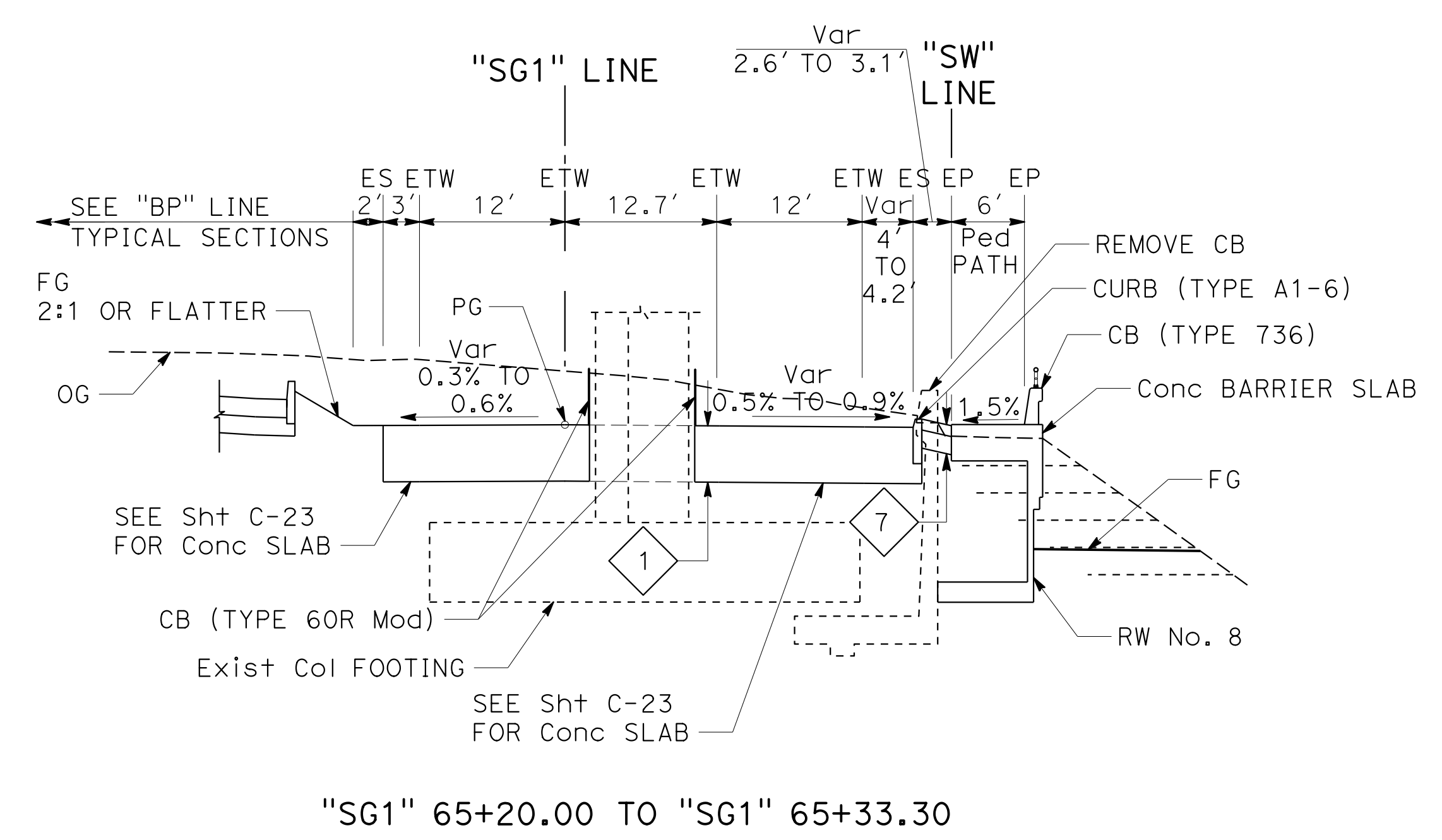
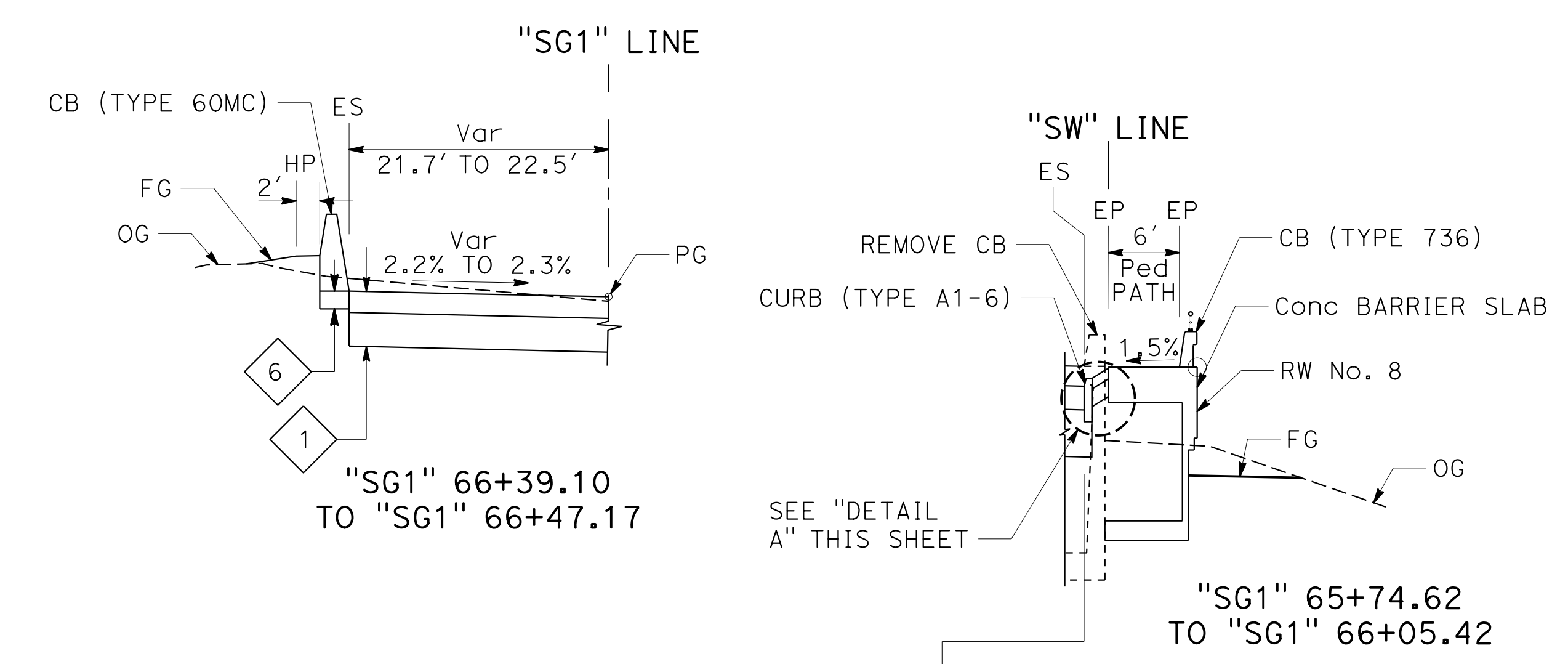
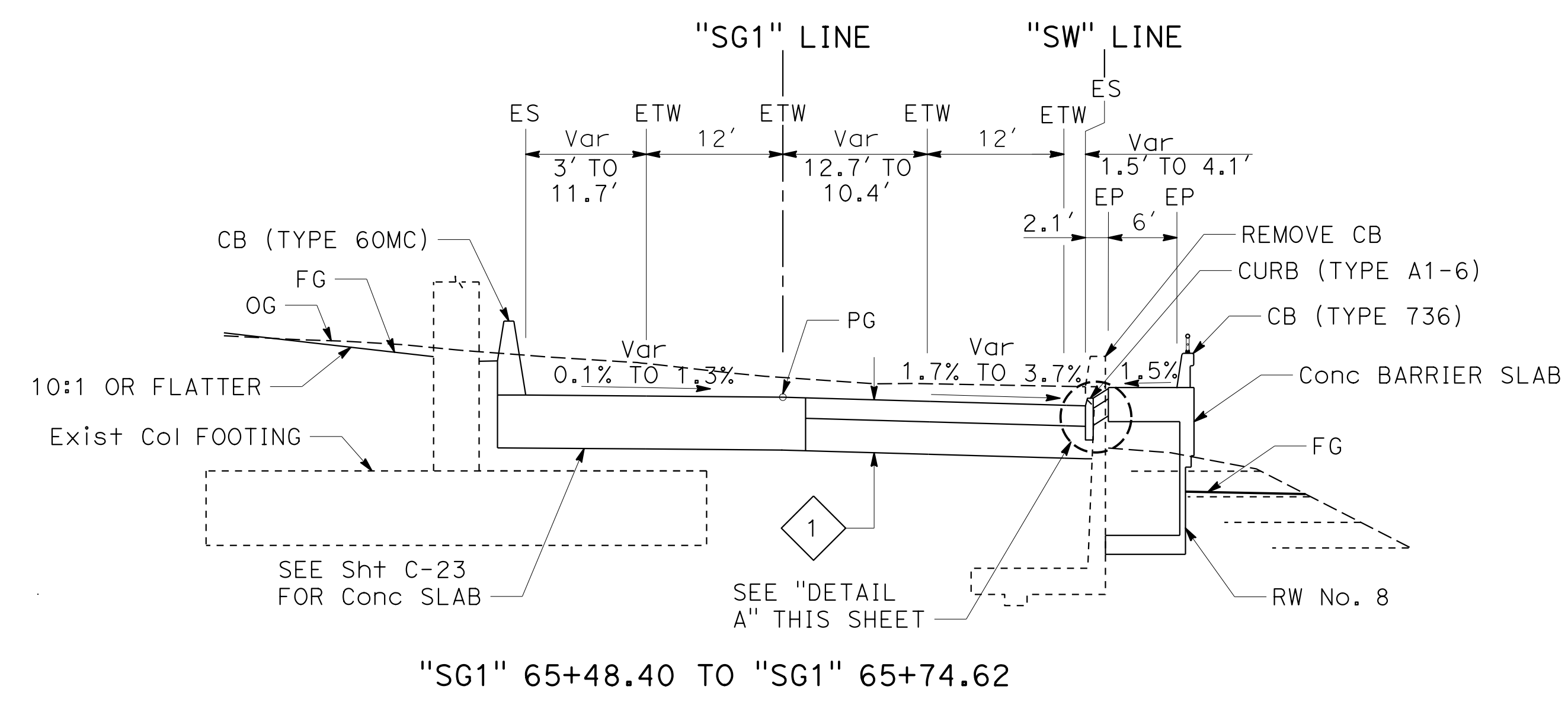
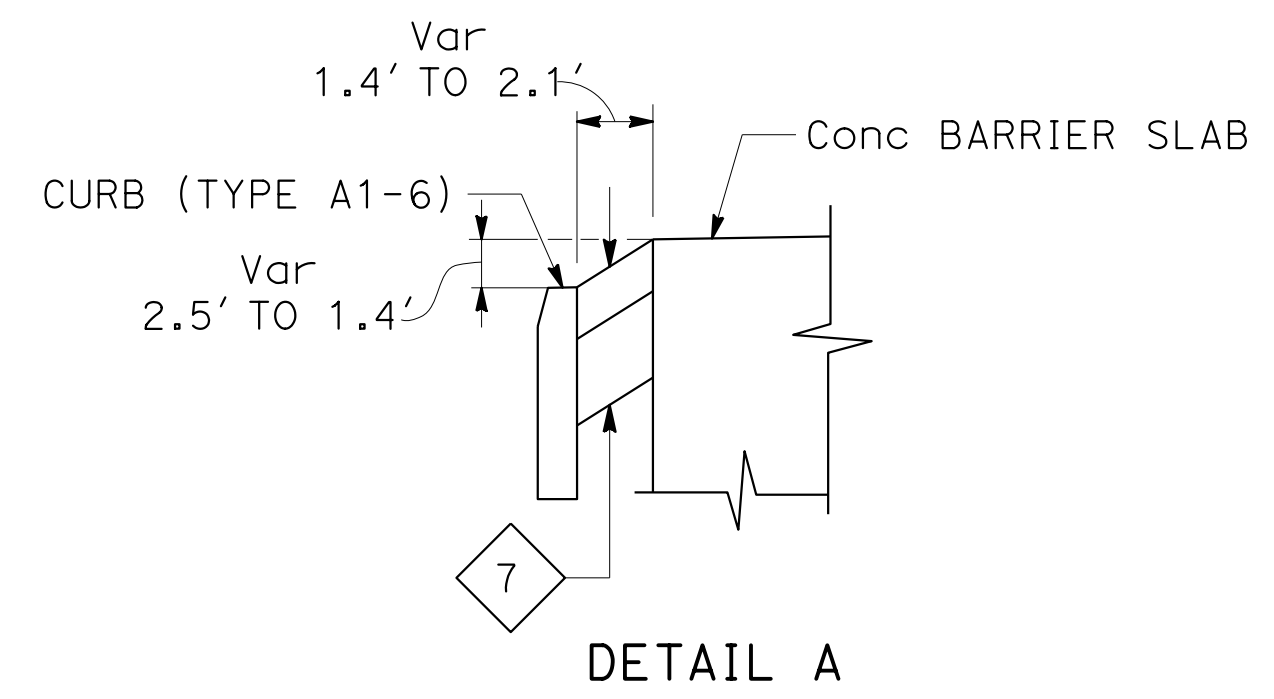
FOR NOTES AND ABBREVIATIONS, SEE SHEET X-1

TYPICAL CROSS SECTIONS

NO SCALE

X-7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	9	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



SOUTHGATE Rd

TYPICAL CROSS SECTIONS

NO SCALE

X-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Et Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: PRAVEEN CHILAKAPATI
 CHECKED BY: INGRID SUPIT
 REVISOR: IK
 DATE: 4-26-18
 DATE: 2-13-19

USERNAME => svc_in_pwservice
 DGN FILE => 0419000153ca008.dgn

RELATIVE BORDER SCALE
 1" = 10' IN INCHES


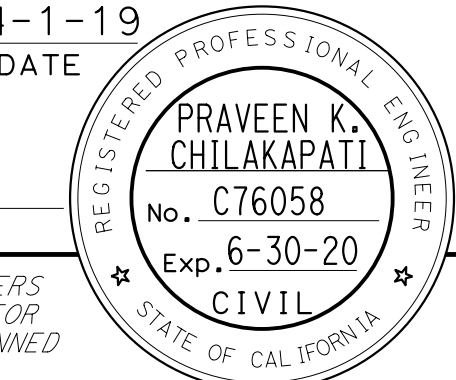


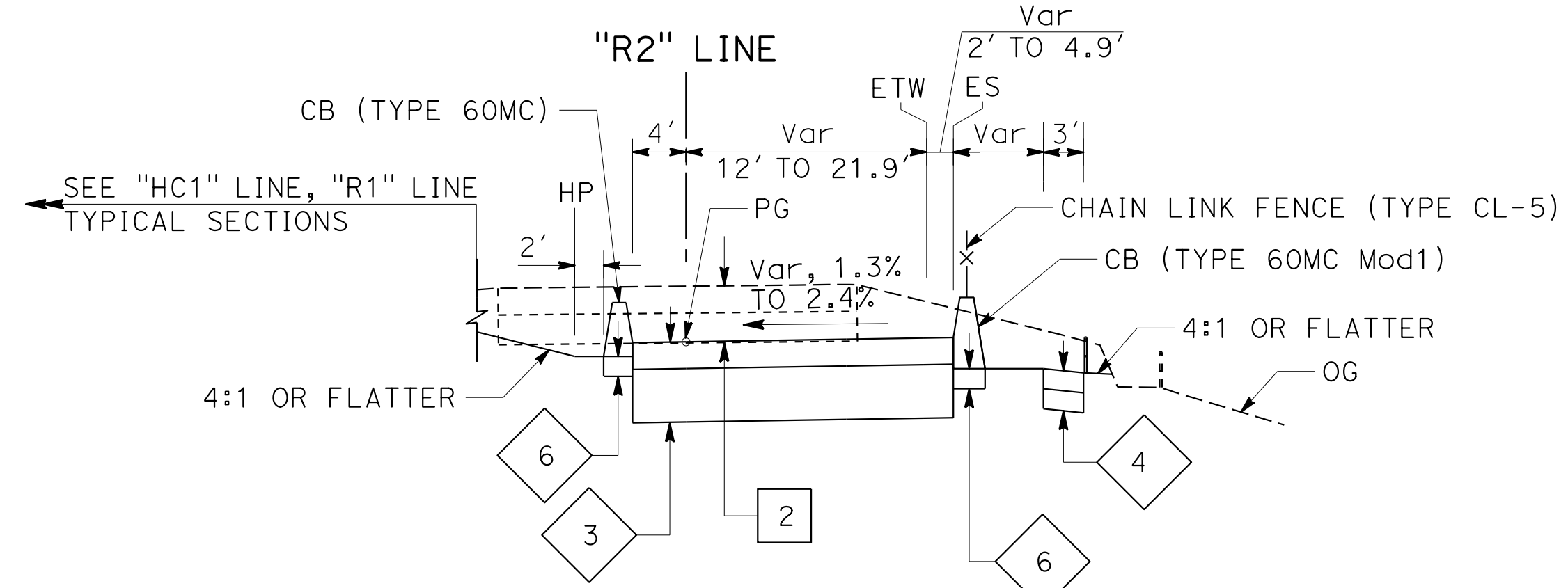
UNIT 0728

PROJECT NUMBER & PHASE

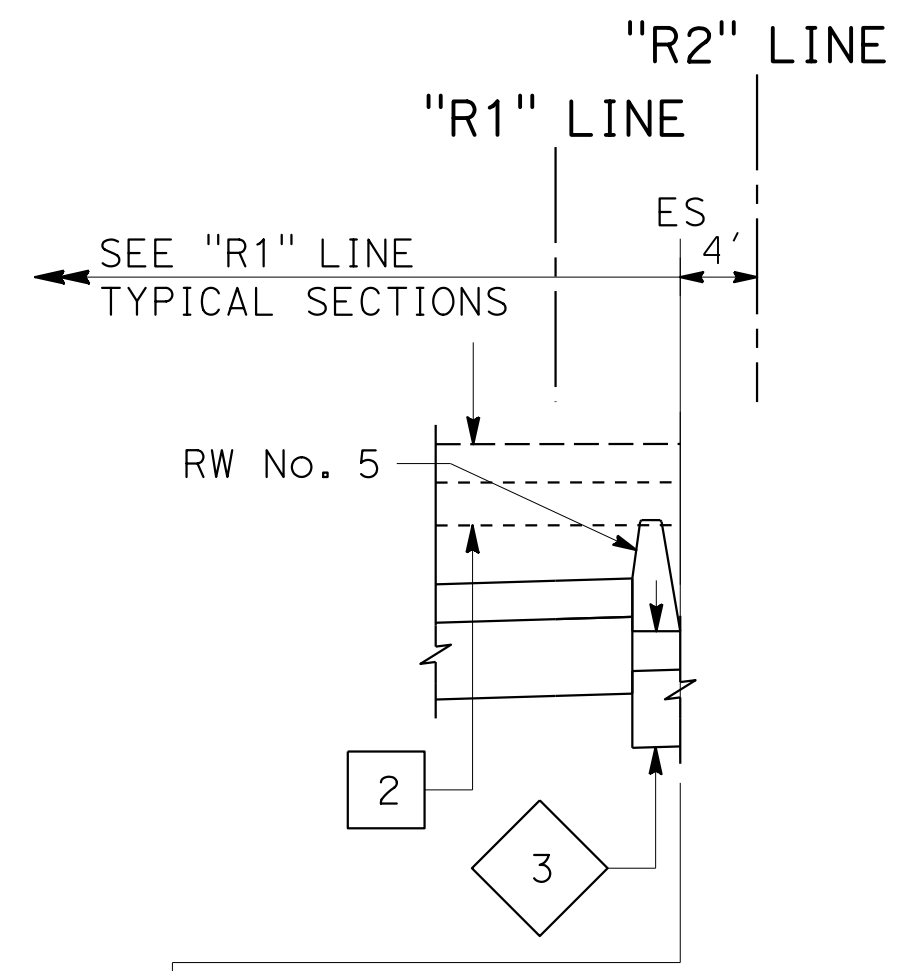
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LAST REVISION: DATE PLOTTED => 12-NOV-2019
 00-00-00 TIME PLOTTED => 2:14:11

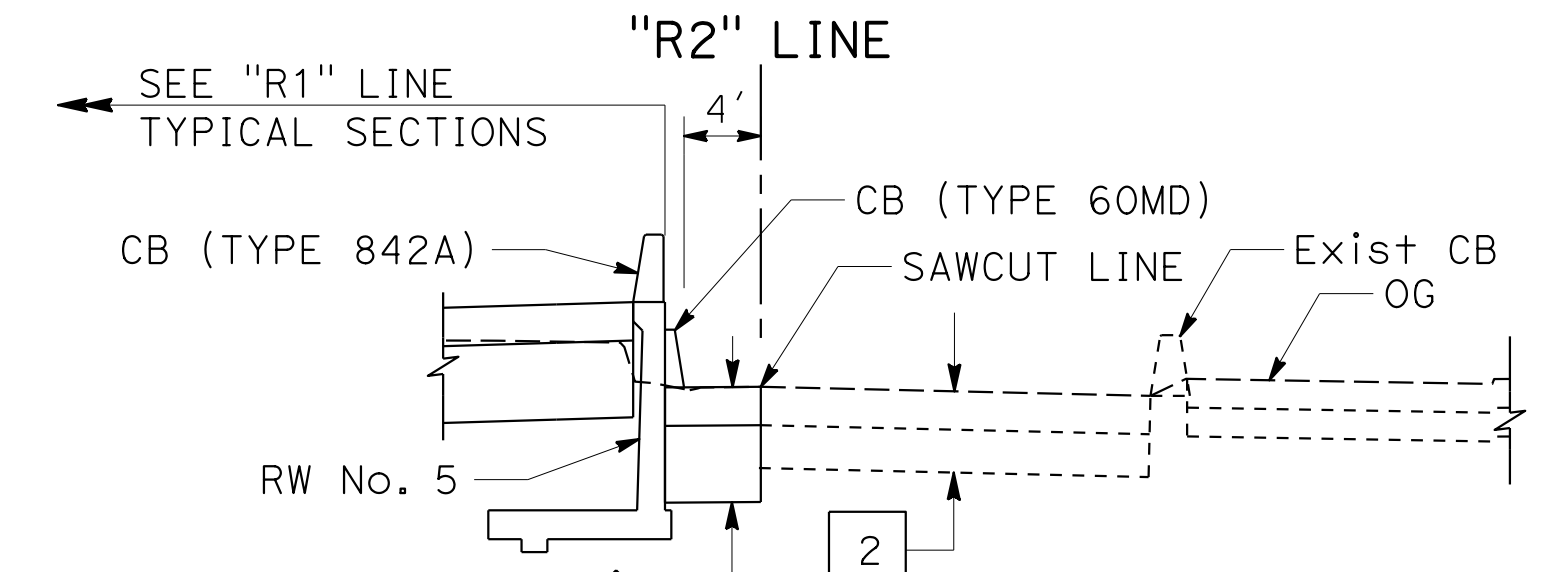
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	10	436
 REGISTERED CIVIL ENGINEER			DATE		
PLANS APPROVAL DATE			5-17-19		
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



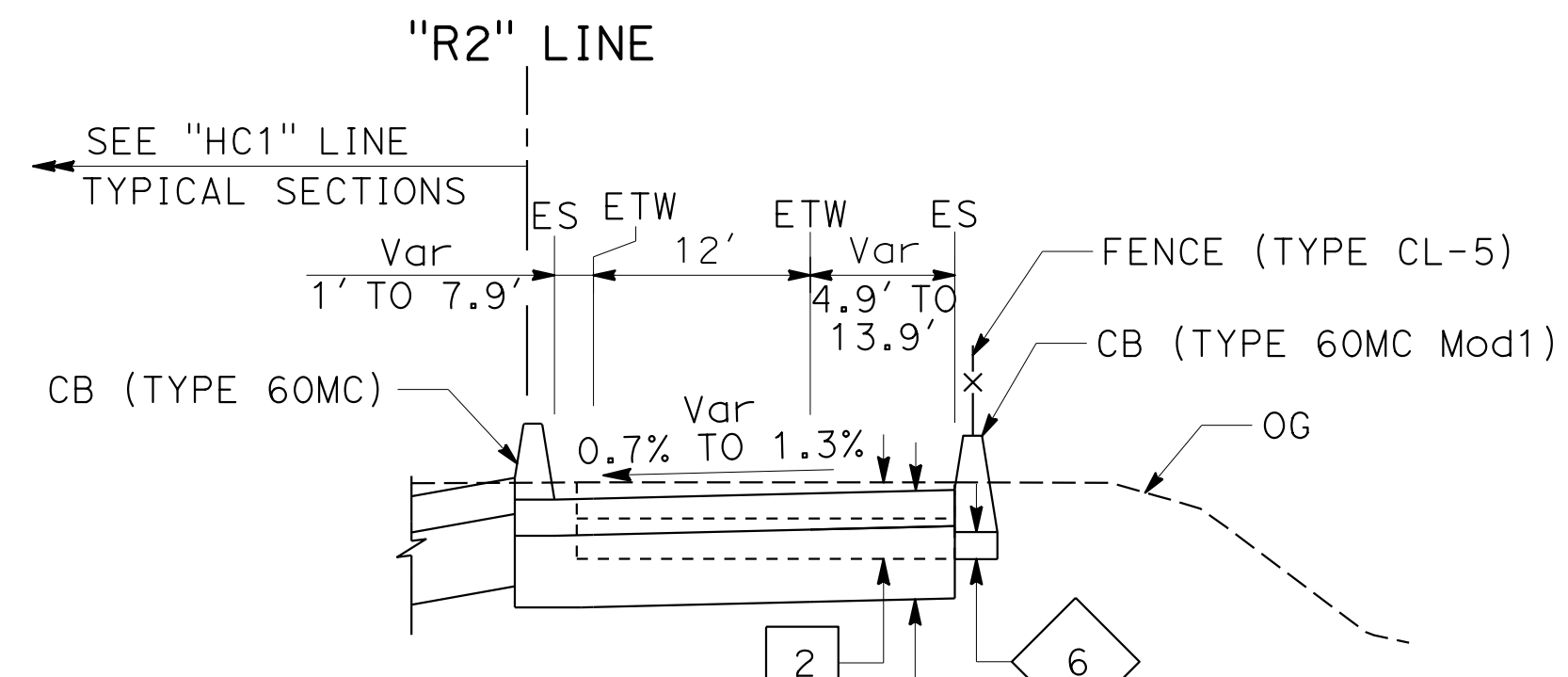
"R2" 58+84.27 TO "R2" 59+71.50



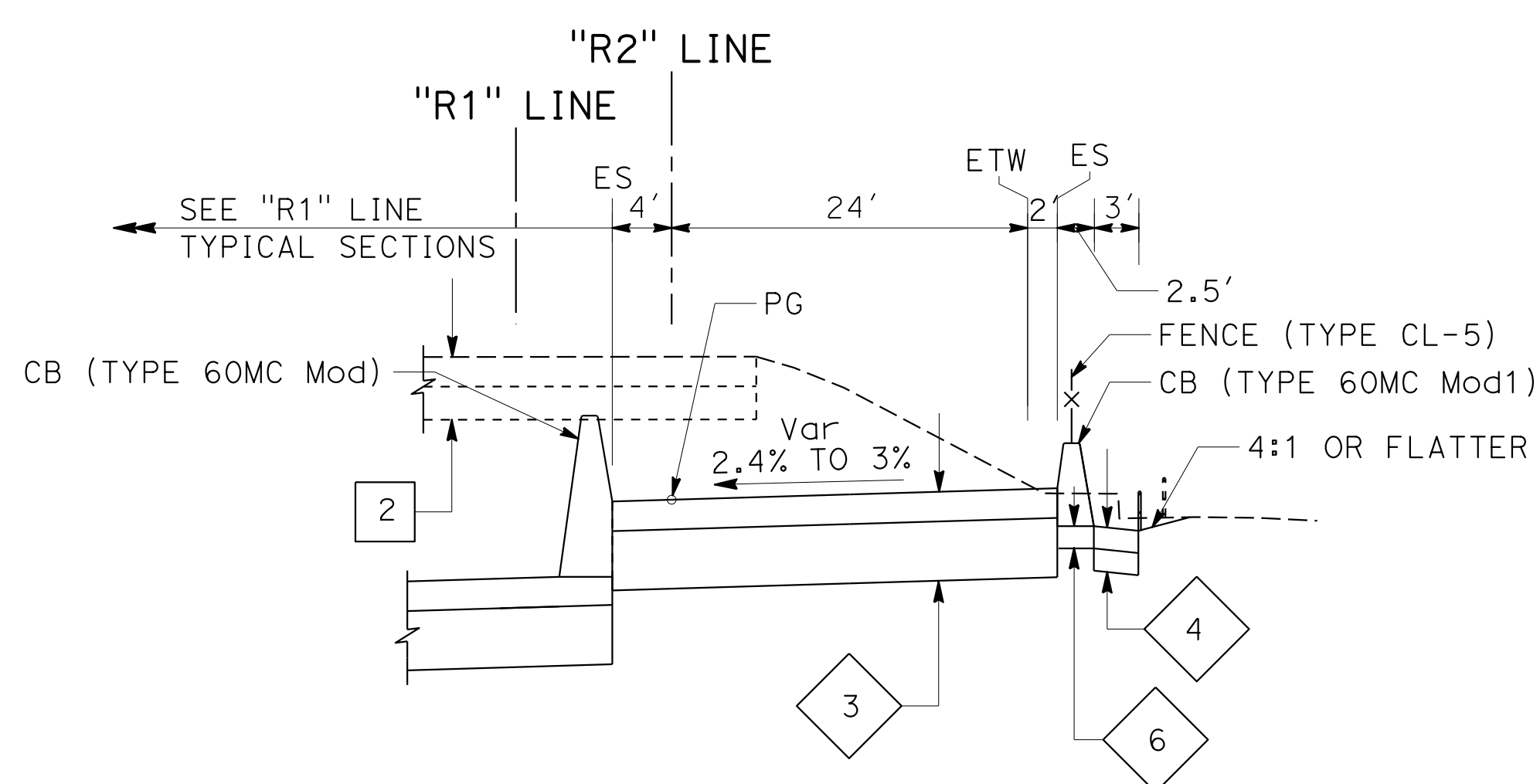
"R2" 60+35.76 TO "R2" 60+70.12



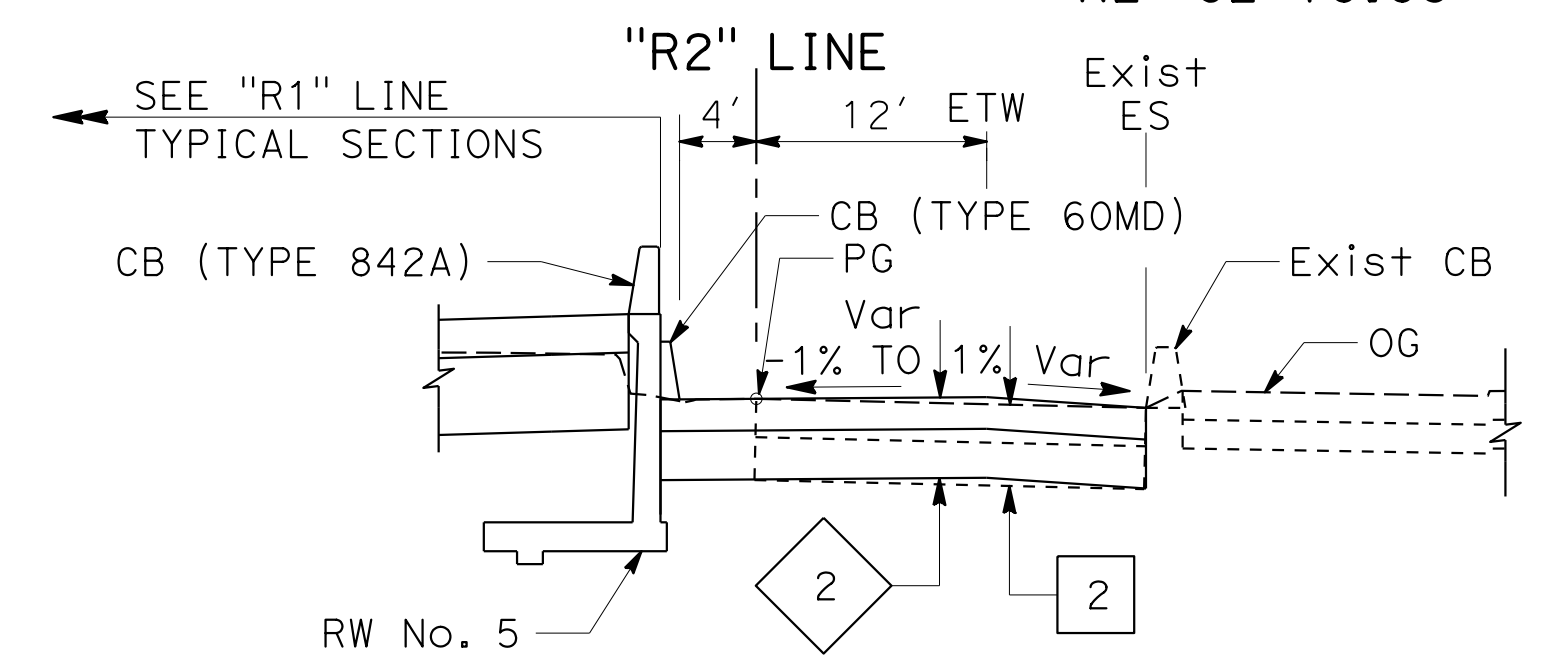
"R2" 61+67.26 TO "R2" 62+78.83



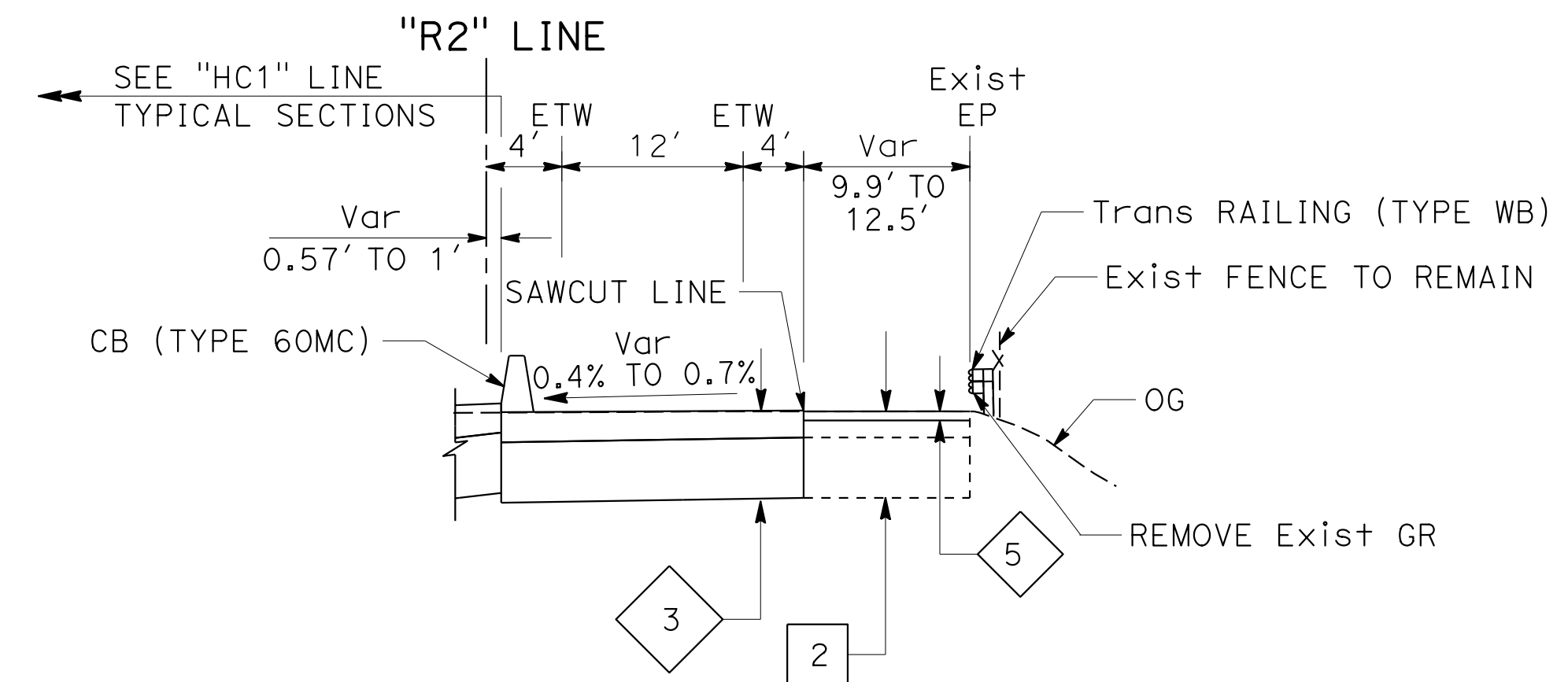
"R2" 58+40.70 TO "R2" 58+84.27



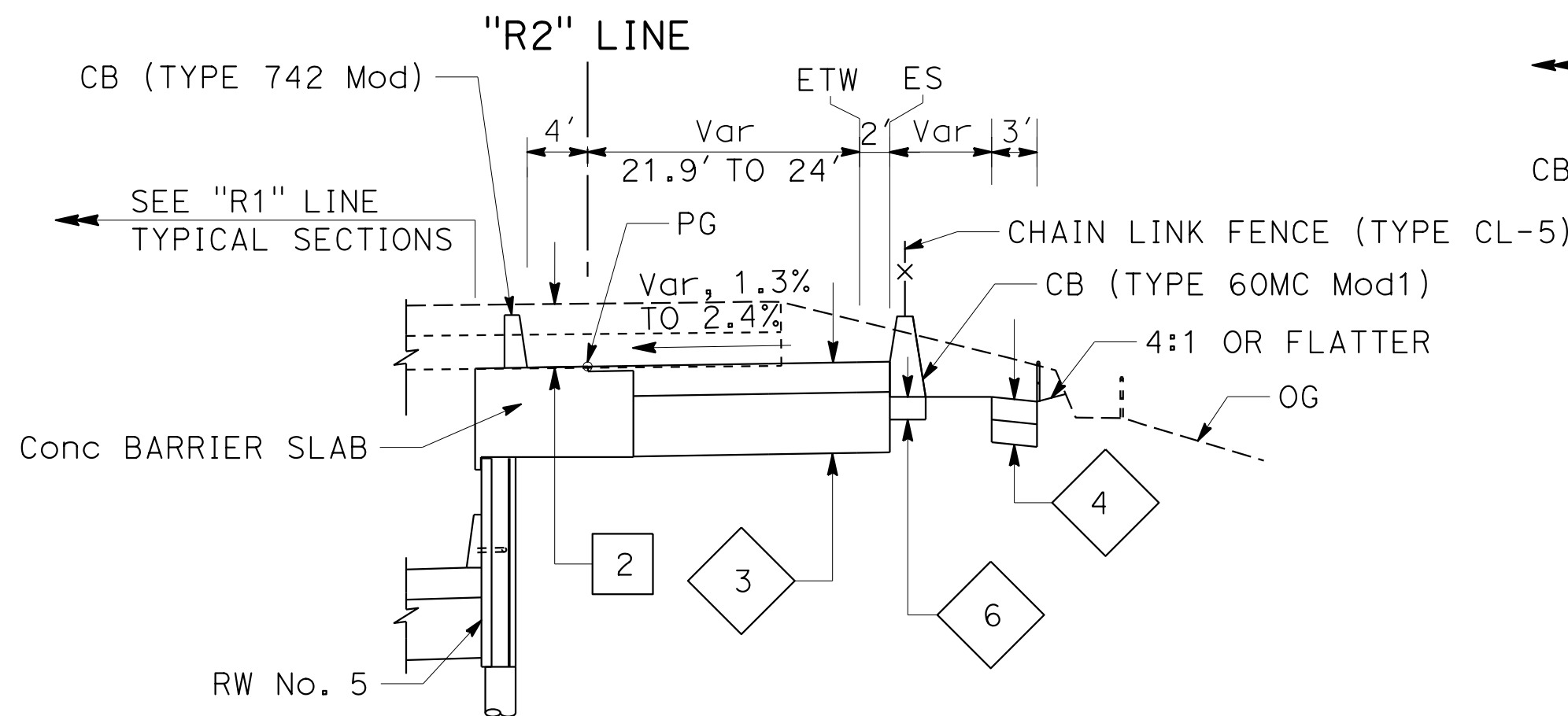
"R2" 60+14.73 TO "R2" 60+70.12



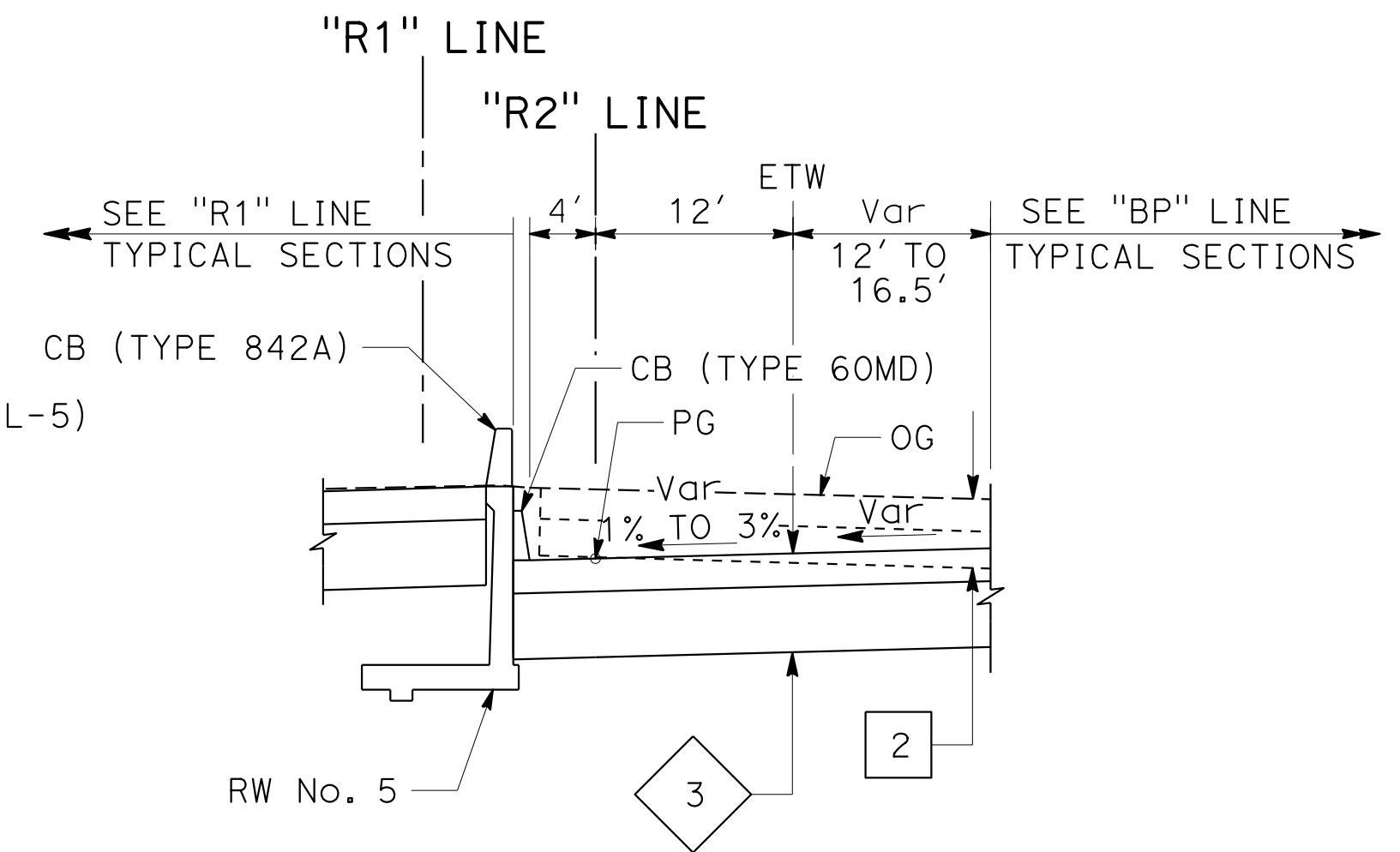
"R2" 61+40.00 TO "R2" 61+67.26



"R2" 58+16.23 TO "R2" 58+40.70



"R2" 59+71.50 TO "R2" 60+14.73



"R2" 60+70.12 TO "R2" 61+40.00

**ROUTE 80
EB ON-RAMP**

FOR NOTES AND ABBREVIATIONS,
SEE SHEET X-1

TYPICAL CROSS SECTIONS

NO SCALE

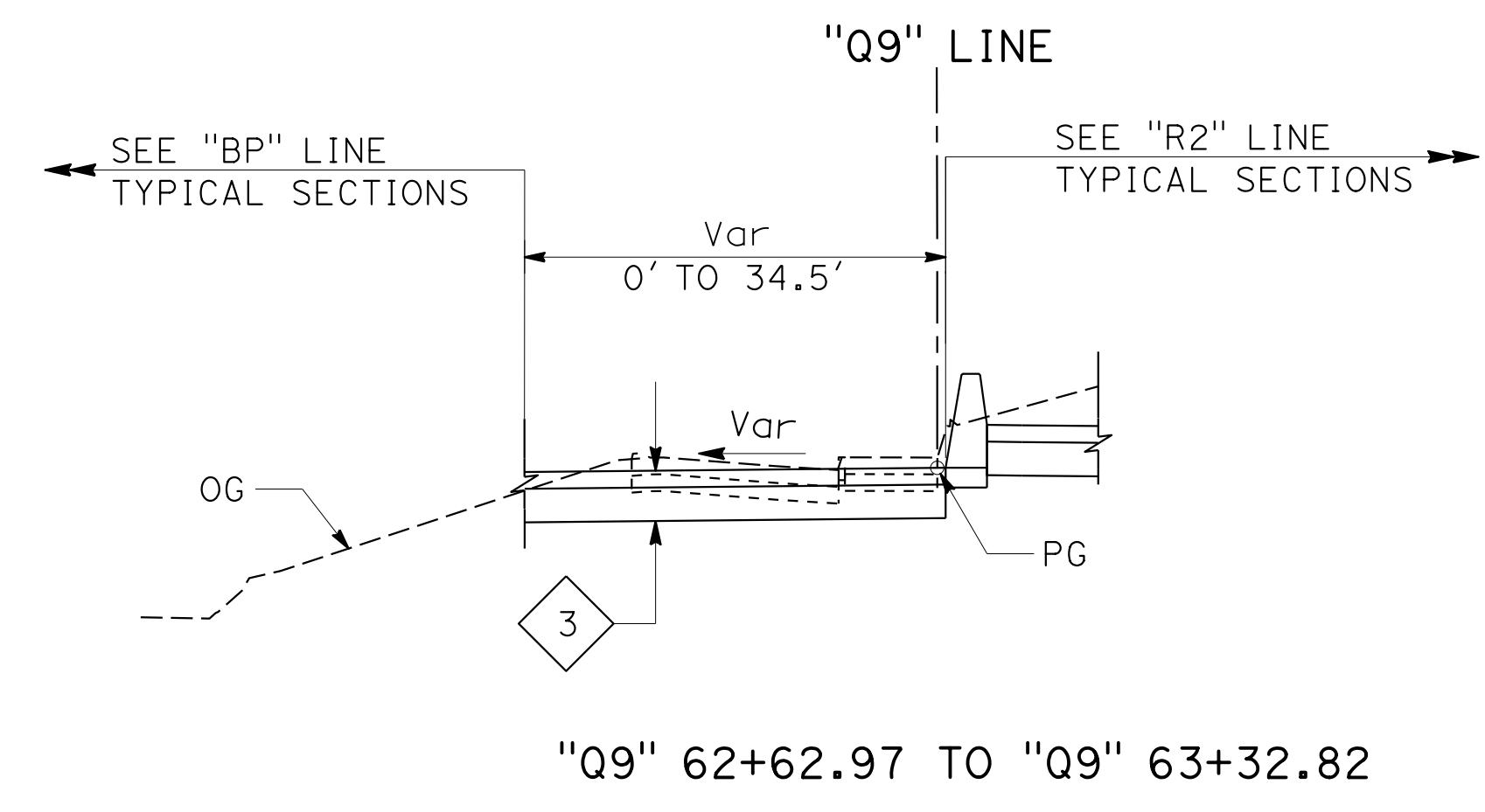
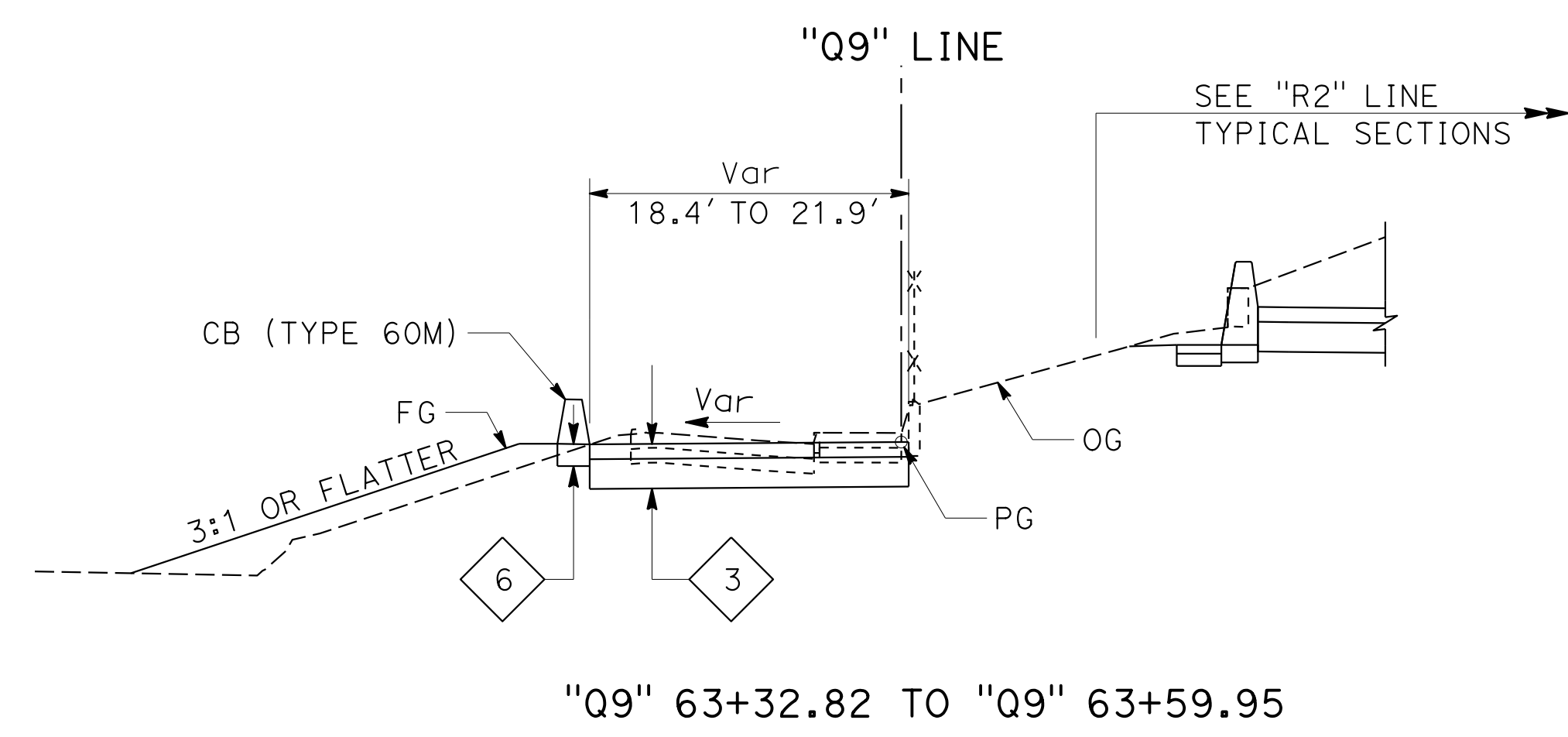
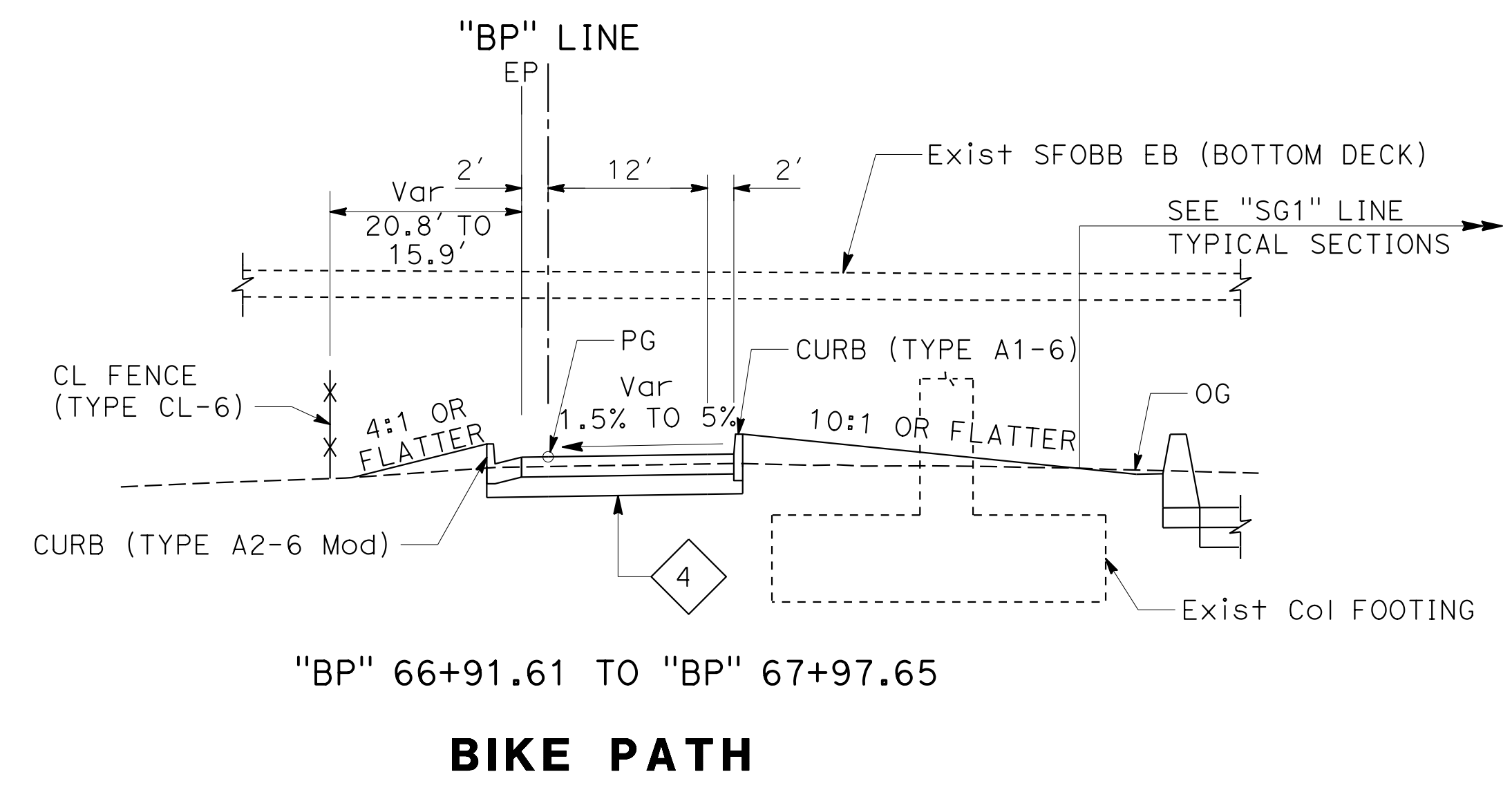
X-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 CONSULTANT - PRAVEEN CHILAKAPATI
 SUPERVISOR - INGRID V. SUPIT
 DESIGNED BY - INGRID SUPIT
 CHECKED BY -
 REVISIONS:
 TB 12-12-18
 PC 4-26-18
 REVISED BY
 DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: INGRID SUPIT
 CHECKED BY: INGRID SUPIT
 REVISED BY: DATE REVISED: 4-26-18
 PC: 4-26-18
 TP: 2-14-19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	12	436

REGISTERED CIVIL ENGINEER: *Praveen K. Chilakapati*
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19
 REGISTERED PROFESSIONAL ENGINEER: PRAVEEN K. CHILAKAPATI
 No. C76058
 Exp. 6-30-20
 CIVIL
 STATE OF CALIFORNIA
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.
 HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400, WALNUT CREEK, CA 94596
 SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103



FOR NOTES AND ABBREVIATIONS,
 SEE SHEET X-1

TYPICAL CROSS SECTIONS

NO SCALE

X-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: INGRID SUPIT
 CHECKED BY: INGRID SUPIT
 REVISOR: PRAVEEN CHILAKAPATI
 DATE REVISED: 4-24-18
 IK: 10-19-18
 IK: 4-24-18

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	13	436

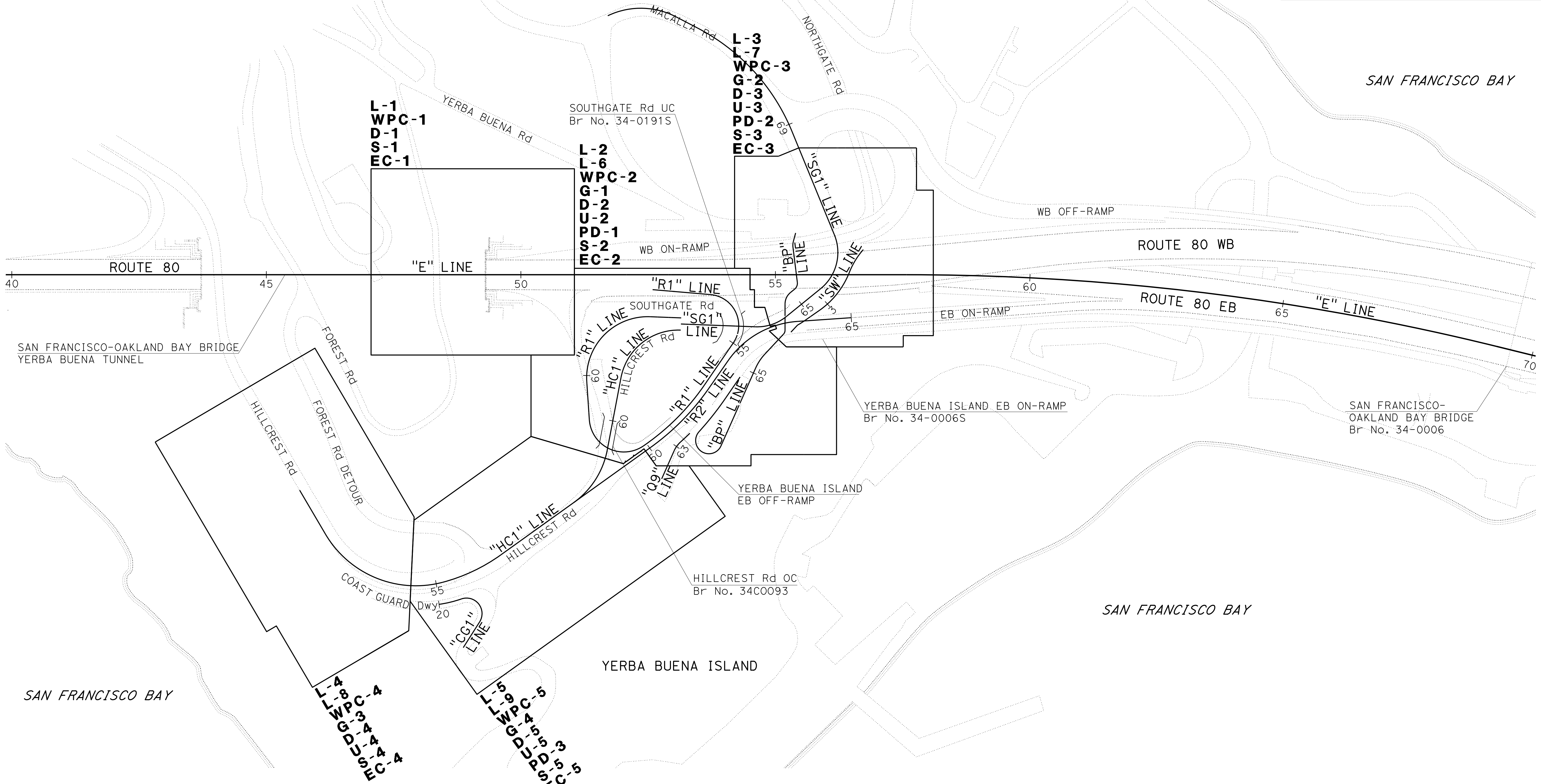
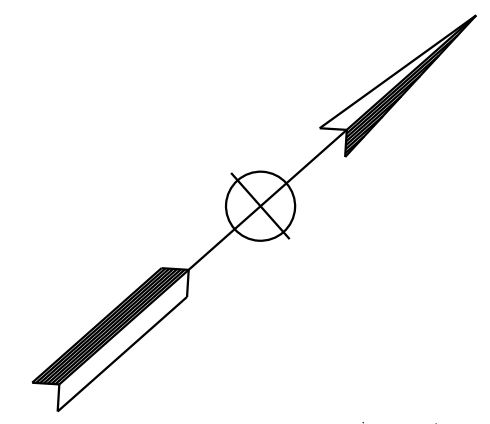
REGISTERED CIVIL ENGINEER: *m8m8m8* 4-1-19
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

REGISTERED PROFESSIONAL ENGINEER
 INGRID V. SUPIT
 No. C66937
 Exp. 9-30-20
 CIVIL
 STATE OF CALIFORNIA

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.

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



KEY MAP AND LINE INDEX

NO SCALE

K-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	14	436

PROFESSIONAL LAND SURVEYOR *Frank Borges* DATE 4-1-19
 PLANS APPROVAL DATE 5-17-19
 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.

PROFESSIONAL LAND SURVEYOR
FRANK BORGES
 No. 7922
 Exp. 12-31-19
 STATE OF CALIFORNIA

TOWILL, INC 2300 CLAYTON ROAD SUITE 1200 CONCORD, CA 94520	SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103
---	---

NOTES:

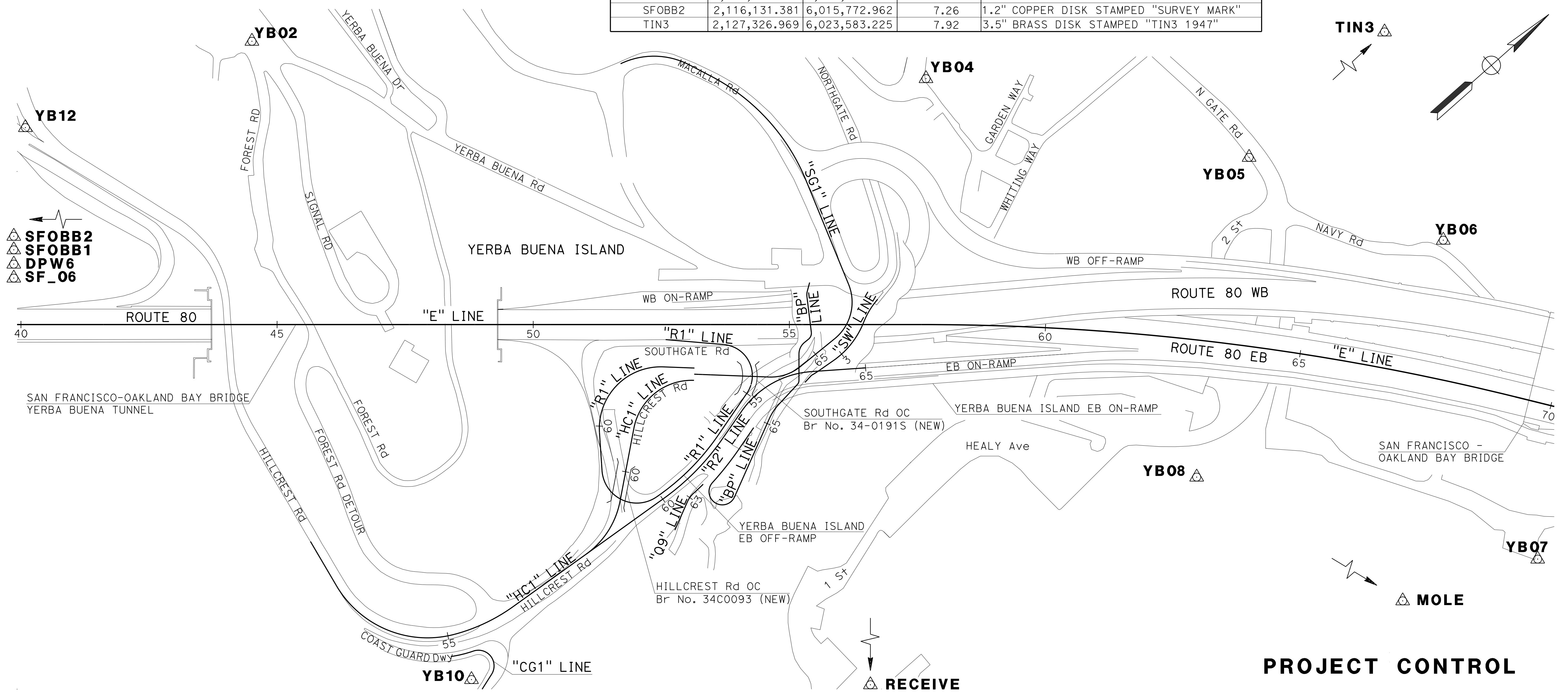
- FOR COMPLETE PROJECT CONTROL DATA, SEE THE SURVEY RECORDS ON FILE IN THE SURVEYS DEPARTMENT AT THE DISTRICT OFFICE.
- BASIS OF BEARING AND COORDINATES:
THIS PROJECT IS BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 (1992) 1991.35 EPOCH, ZONE 3, US SURVEY FEET. MULTIPLY DISTANCES SHOWN BY 1.00007026 TO OBTAIN GROUND DISTANCES.
THIS GPS STATIC SURVEY WAS CONSTRAINED TO THE FOLLOWING STATIONS: DPW6, MOLE, RECEIVE, SFO6, SFOBB1, SFOBB2 AND TIN3.
- BASIS OF ELEVATIONS:
THIS PROJECT IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29).
STATIONS AND RESPECTIVE ELEVATIONS CONSTRAINED TO ARE:
MOLE 8.30'
- IF GPS MACHINE CONTROL/GUIDANCE IS USED, CONTACT THE SURVEYS DEPARTMENT AT THE DISTRICT OFFICE TO OBTAIN THE CONTROL NECESSARY TO ESTABLISH A PROJECT CALIBRATION COMPATIBLE FOR ALL USERS.

LEGEND:

△ RECORD HORIZONTAL AND VERTICAL CONTROL POINT

CONTROL FOR DESIGN AND CONSTRUCTION

STATION DESIGNATION	NORTHING	EASTING	ELEVATION	DESCRIPTION
YB02	2,122,827.670	6,022,193.680	296.89	MAG NAIL WITH TOWILL TAG
YB04	2,123,764.640	6,023,120.450	85.54	MAG NAIL WITH TOWILL TAG
YB05	2,124,135.070	6,023,653.520	31.58	MAG NAIL WITH TOWILL TAG
YB06	2,124,311.780	6,024,025.780	61.97	REBAR WITH CAP
YB07	2,124,037.400	6,024,613.710	9.98	MAG NAIL WITH TOWILL TAG
YB08	2,123,645.010	6,024,052.760	8.48	REBAR WITH CAP
YB10	2,122,323.240	6,023,410.110	187.58	MAG NAIL WITH TOWILL TAG
YB12	2,122,384.930	6,022,026.690	191.68	MAG NAIL WITH TOWILL TAG
DPW6	2,116,586.574	6,015,333.927	6.74	2.6" BRASS DISK STAMPED "DPW BM-006"
MOLE	2,126,485.800	6,033,057.619	8.30	3.5" BRASS DISK STAMPED "MOLE 1947"
RECEIVE	2,122,822.828	6,024,020.646	9.30	3.5" BRASS DISK STAMPED "RECEIVE RESET 1970"
SF_06	2,111,375.475	6,012,570.846	18.04	1.2" BRASS DISK STAMPED "SF6"
SFOBB1	2,114,516.056	6,016,248.624	9.56	1.2" COPPER DISK STAMPED "SURVEY MARK"
SFOBB2	2,116,131.381	6,015,772.962	7.26	1.2" COPPER DISK STAMPED "SURVEY MARK"
TIN3	2,127,326.969	6,023,583.225	7.92	3.5" BRASS DISK STAMPED "TIN3 1947"



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 CONSULTANT SUPERVISOR: FRANK BORGES
 CALCULATED/DESIGNED BY: FRANK BORGES
 CHECKED BY: JEREMIAH HERMAN
 REVISED BY: FRANK BORGES
 DATE REVISED: 4-24-18
 TB: 11-9-18
 IK: 4-24-18



PROJECT CONTROL

NO SCALE

PC-1

LAST REVISION: DATE PLOTTED => 7-NOV-2019
 00-00-00 TIME PLOTTED => 15:50

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: PRAVEEN CHILAKAPATI
 CHECKED BY: CHI WAI NG
 REVISOR: IK
 DATE: 10-16-18
 REVISOR: IK
 DATE: 3-26-18

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- FOR PAVEMENT STRUCTURAL SECTIONS, SEE TYPICAL CROSS SECTION SHEETS.
- FOR REMOVAL ITEMS, SEE LAYOUT DEMOLITION PLANS.
- "Q9", "BP", "SW", AND "CG1" ALIGNMENT DATA NOT SHOWN FOR CLARITY. SEE CONSTRUCTION DETAIL SHEETS C-1, C-2, C-3, AND C-27.
- FOR SAWCUT LINE DATA SEE LAYOUT DEMOLITION SHEETS FROM L-6 TO L-9.
- SEE PROJECT CONTROL SHEET PC-1 FOR THE BASIS OF THE HORIZONTAL CONTROLS.
- DO NOT REMOVE Temp SHORING AS SHOWN IN SHEET L-7 UNTIL RETAINING WALL No.3 IS CONSTRUCTED.

ABBREVIATIONS:

- C&G CURB AND GUTTER
 DWP DETECTABLE WARNING PANEL

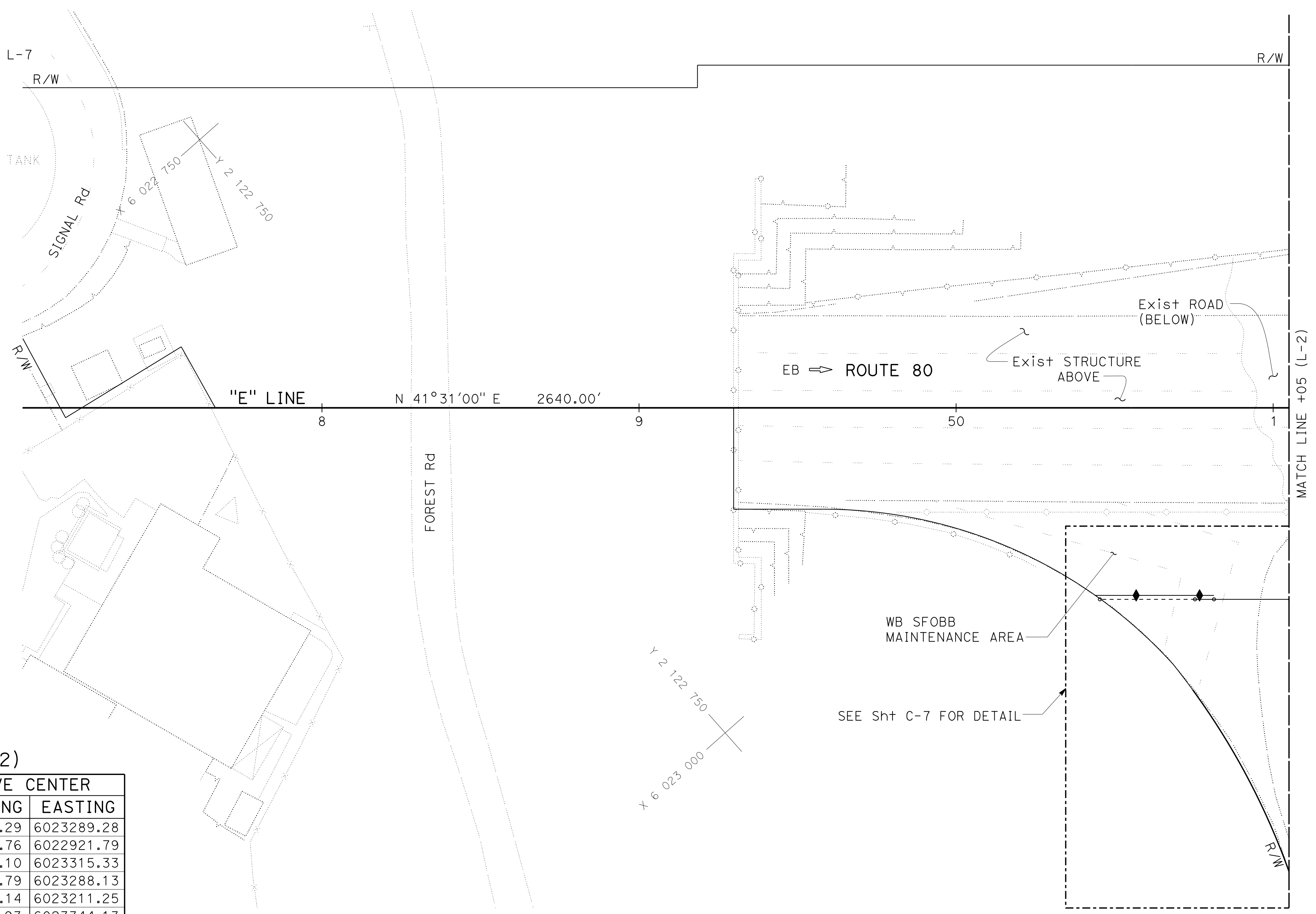
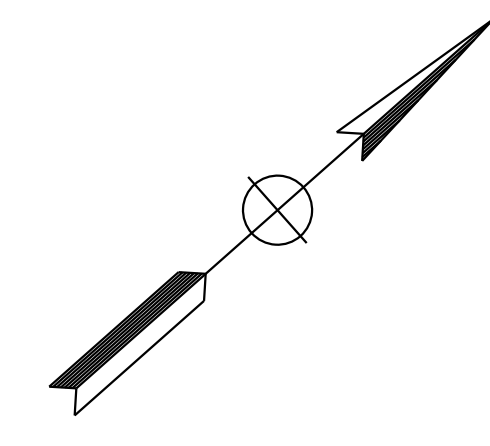
LEGEND:

- NEW PAVEMENT STRUCTURAL SECTION
- SAWCUT
- COLD PLANE AND OVERLAY 5
- COLD PLANE AND OVERLAY (SEE CONSTRUCTION DETAIL SHEET C-11 FOR DETAILS)
- SLOPE PAVING (SEE CONSTRUCTION DETAIL SHEET C-26 FOR DETAILS)
- CONCRETE SLAB (SEE CONSTRUCTION DETAIL SHEET C-23 FOR DETAILS)
- DECOMPOSED GRANITE (SEE CONSTRUCTION DETAIL Sht C-9)
- REMOVE RETAINING WALL
- REMOVE PILES (SEE CONSTRUCTION DETAIL SHEETS C-32 TO C-34 FOR DETAILS)
- CLEARING AND GRUBBING LIMIT

CURVE DATA (FROM SHEET L-2)

No. (#)	R	Δ	T	L	CURVE CENTER	
					NORTHING	EASTING
1	60.78'	119°32'34"	104.31'	126.81'	2123081.29	6023289.28
2	464.54'	21°07'12"	86.60'	171.23'	2122886.76	6022921.79
3	68'	120°37'22"	119.27'	143.16'	2122838.10	6023315.33
4	120'	96°00'33"	133.30'	201.08'	2122924.79	6023288.13
7	165'	43°35'04"	65.97'	125.51'	2122670.14	6023211.25
8	115'	81°24'47"	98.94'	163.41'	2122955.93	6023344.13
9	91'	41°14'23"	34.24'	65.50'	2123212.37	6023287.59
11	480'	19°28'36"	82.38'	163.17'	2122887.37	6022916.86
12	181'	51°11'33"	86.71'	161.72'	2123107.88	6023543.55

SAN FRANCISCO



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	15	436

REGISTERED CIVIL ENGINEER: *Praveen K. Chilakapati*
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

REGISTERED PROFESSIONAL ENGINEER
PRAVEEN K. CHILAKAPATI
 No. C76058
 Exp. 6-30-20
 CIVIL
 STATE OF CALIFORNIA

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.

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

LAYOUT

SCALE: 1" = 20'

STATE OF CALIFORNIA	DEPARTMENT OF TRANSPORTATION	CONSULTANT SUPERVISOR	CHECKED BY	REVISIONS	DATE	REVISIONS	DATE
Caltrans	INGRID V. SUPIT	PRAVEEN CHILAKAPATI	CHI WAI WING	TP	4-3-19	IK	4-26-18
				REVISOR	DATE	REVISOR	DATE

- NOTES:**
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
 - SEE SHEET L-1 FOR ALIGNMENTS CURVE DATA SHOWN ON SHEET L-2 ONLY.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	16	436

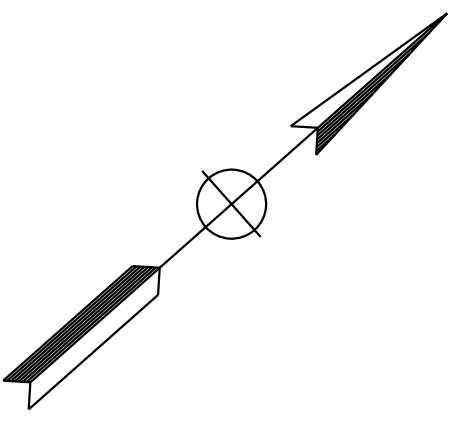
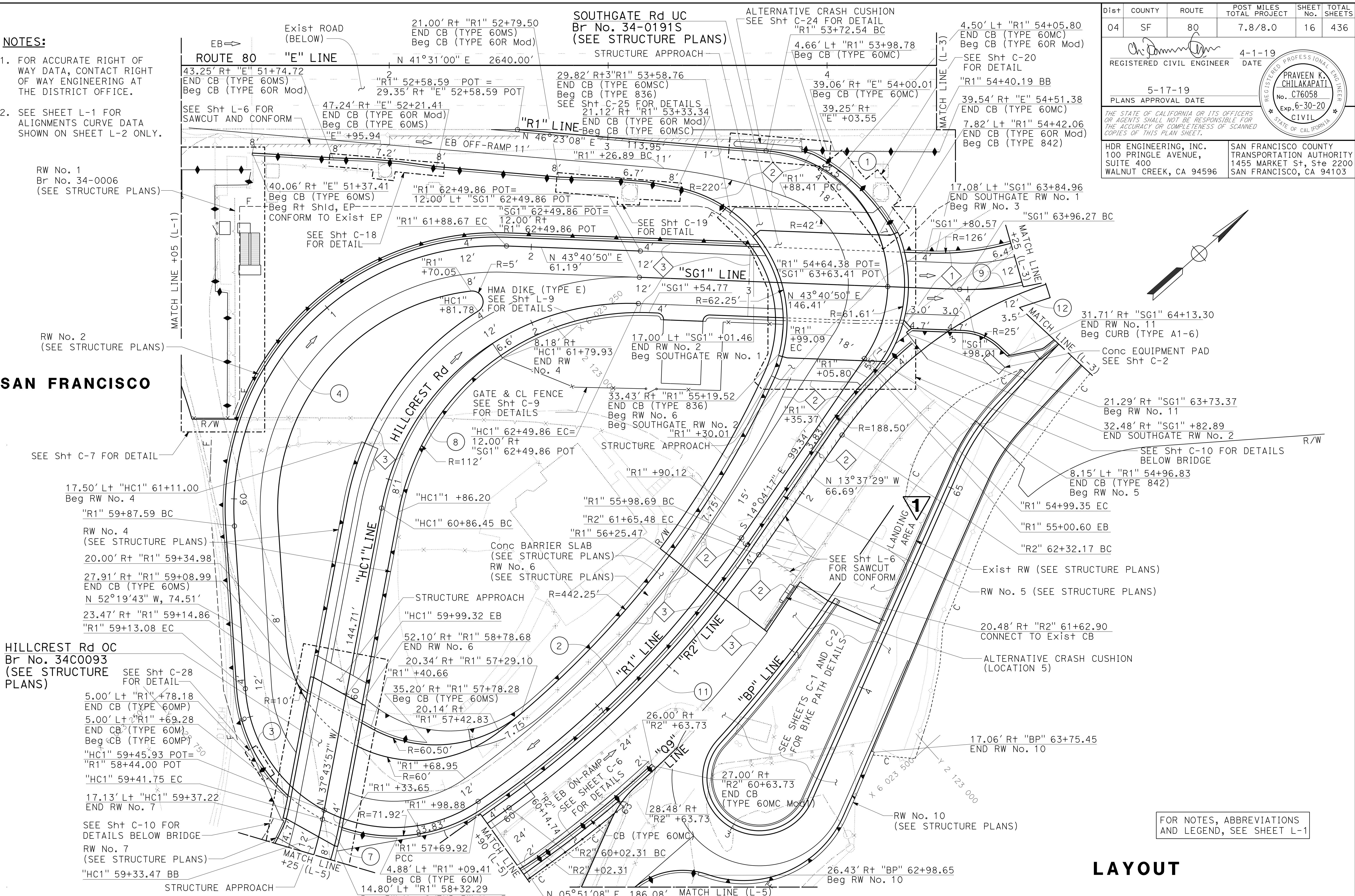
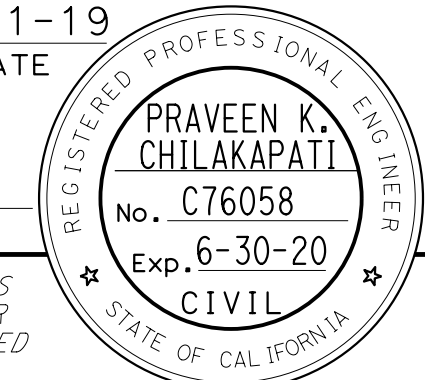
REGISTERED CIVIL ENGINEER
 4-1-19
 DATE

PLANS APPROVAL DATE
 5-17-19

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.

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



SAN FRANCISCO

HILLCREST Rd OC
 Br No. 34C0093
 (SEE STRUCTURE PLANS)

1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

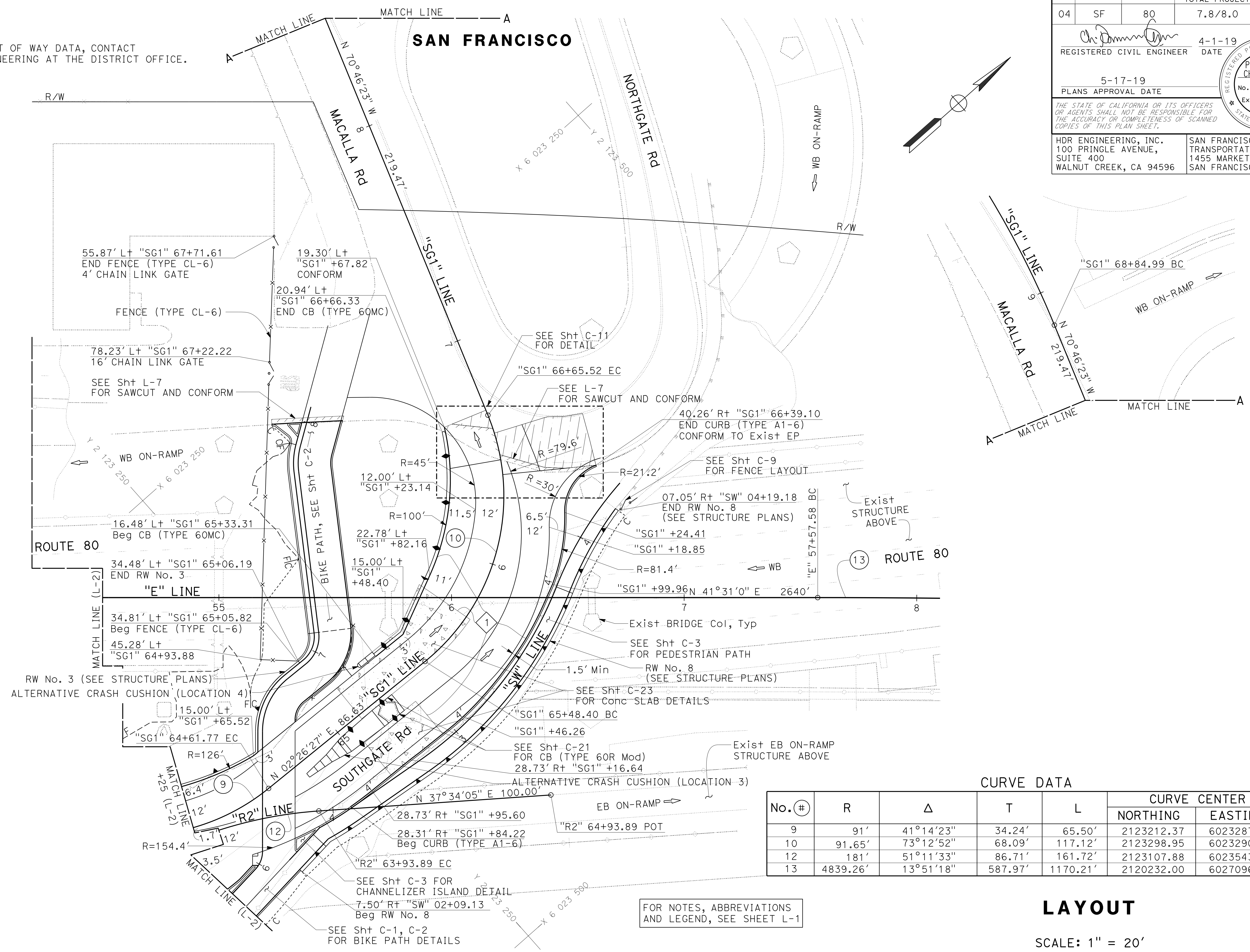
LAYOUT

SCALE: 1" = 20'

L-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: PRAVEEN CHILAKAPATI
 CHECKED BY: CHI WAI NG
 REVISED BY: DATE REVISION: 4-20-18, 11-29-18, 4-1-19
 TP: 4-1-19

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	17	436

REGISTERED CIVIL ENGINEER: PRAVEEN K. CHILAKAPATI
 No. C76058
 Exp. 6-30-20
 CIVIL
 STATE OF CALIFORNIA

DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

CURVE DATA

No. (#)	R	Δ	T	L	CURVE CENTER	
					NORTHING	EASTING
9	91'	41°14'23"	34.24'	65.50'	2123212.37	6023287.59
10	91.65'	73°12'52"	68.09'	117.12'	2123298.95	6023290.63
12	181'	51°11'33"	86.71'	161.72'	2123107.88	6023543.55
13	4839.26'	13°51'18"	587.97'	1170.21'	2120232.00	6027096.98

FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET L-1

LAYOUT

SCALE: 1" = 20'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	18	436

REGISTERED CIVIL ENGINEER DATE 4-1-19

PLANS APPROVAL DATE 5-17-19

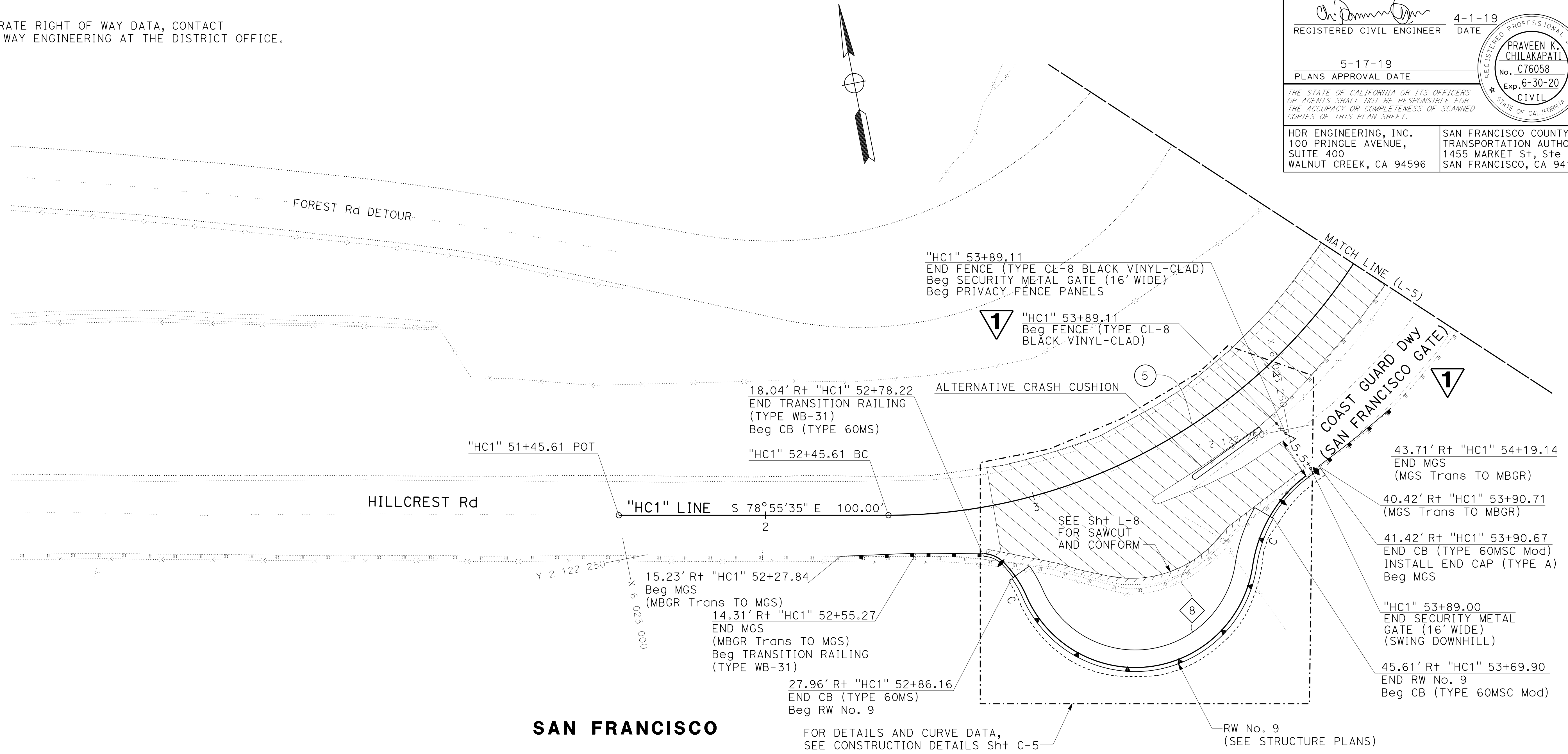
REGISTERED PROFESSIONAL ENGINEER
PRAVEEN K. CHILAKAPATI
 No. C76058
 Exp. 6-30-20
 CIVIL
 STATE OF CALIFORNIA

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.

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



CURVE DATA

No. #	R	Δ	T	L	CURVE CENTER	
					NORTHING	EASTING
5	206'	74°25'08"	156.42'	267.56'	2122449.33	6023137.96

1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET L-1

LAYOUT

SCALE: 1" = 20'

L-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 In Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR
 INGRID V. SUPIT

CALCULATED/DESIGNED BY
 CHECKED BY

PRAVEEN CHILAKAPATI
 CHI WAI NG

REVISOR
 DATE REVISED

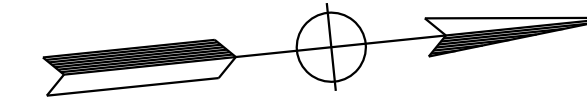
IK
 4-25-18

TP
 2-10-19

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

SAN FRANCISCO



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	19	436

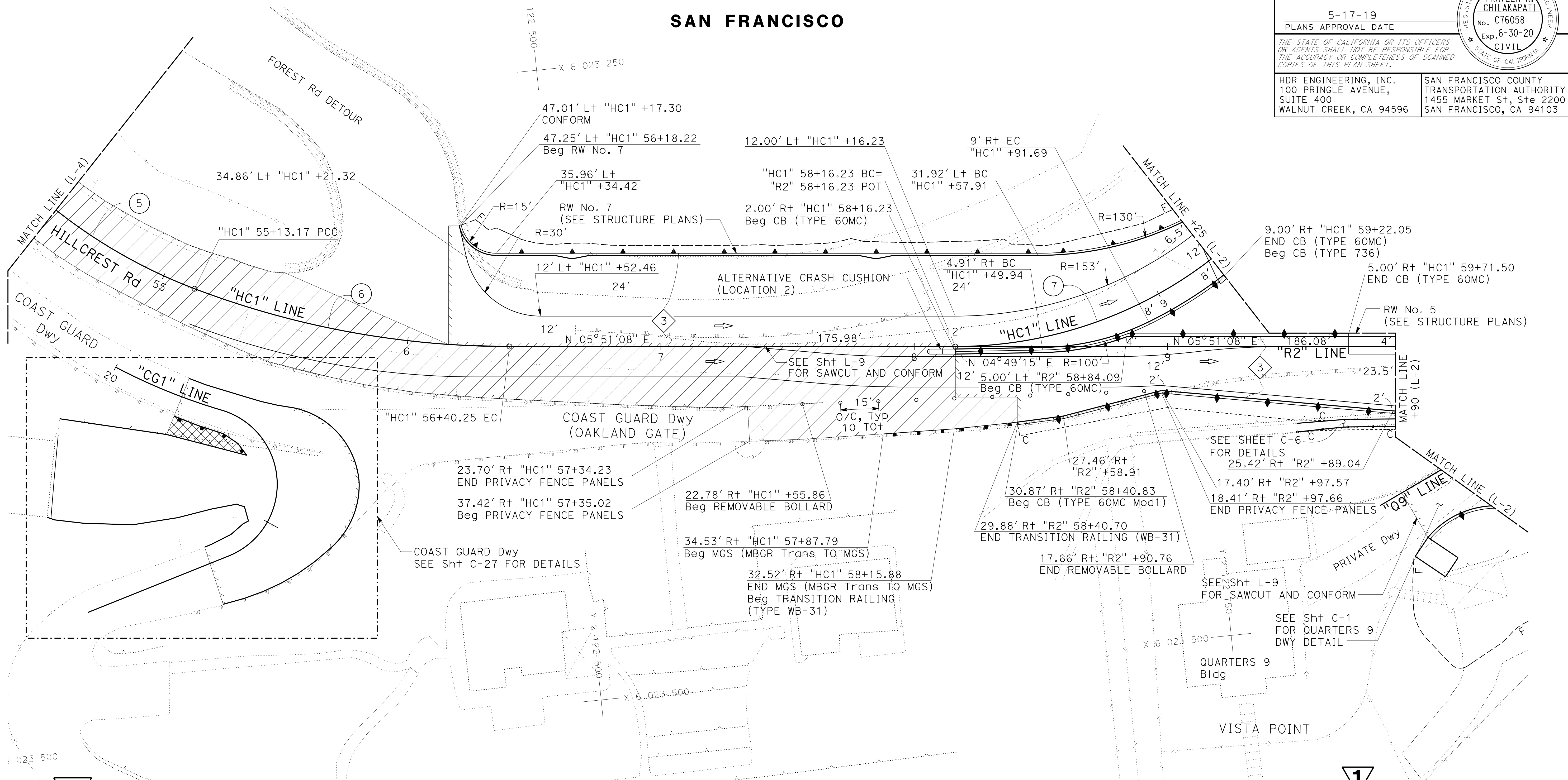
REGISTERED CIVIL ENGINEER: *Praveen K. Chilakapati* DATE: 4-1-19

PLANS APPROVAL DATE: 5-17-19

REGISTERED PROFESSIONAL ENGINEER: **PRAVEEN K. CHILAKAPATI**
No. C76058
Exp. 6-30-20
CIVIL

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.

HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596
SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103



1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

CURVE DATA

No. #	R	Δ	T	L	CURVE CENTER	
					NORTHING	EASTING
5	206'	74°25'08"	156.42'	267.56'	2122449.33	6023137.96
6	350'	20°48'09"	64.25'	127.08'	2122513.93	6023009.27
7	165'	43°35'04"	65.97'	125.52'	2122670.14	6023211.25


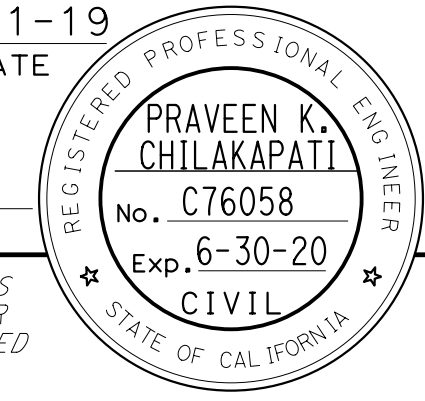
FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

LAYOUT

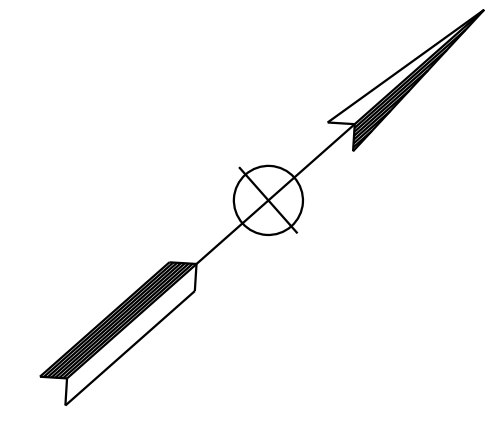
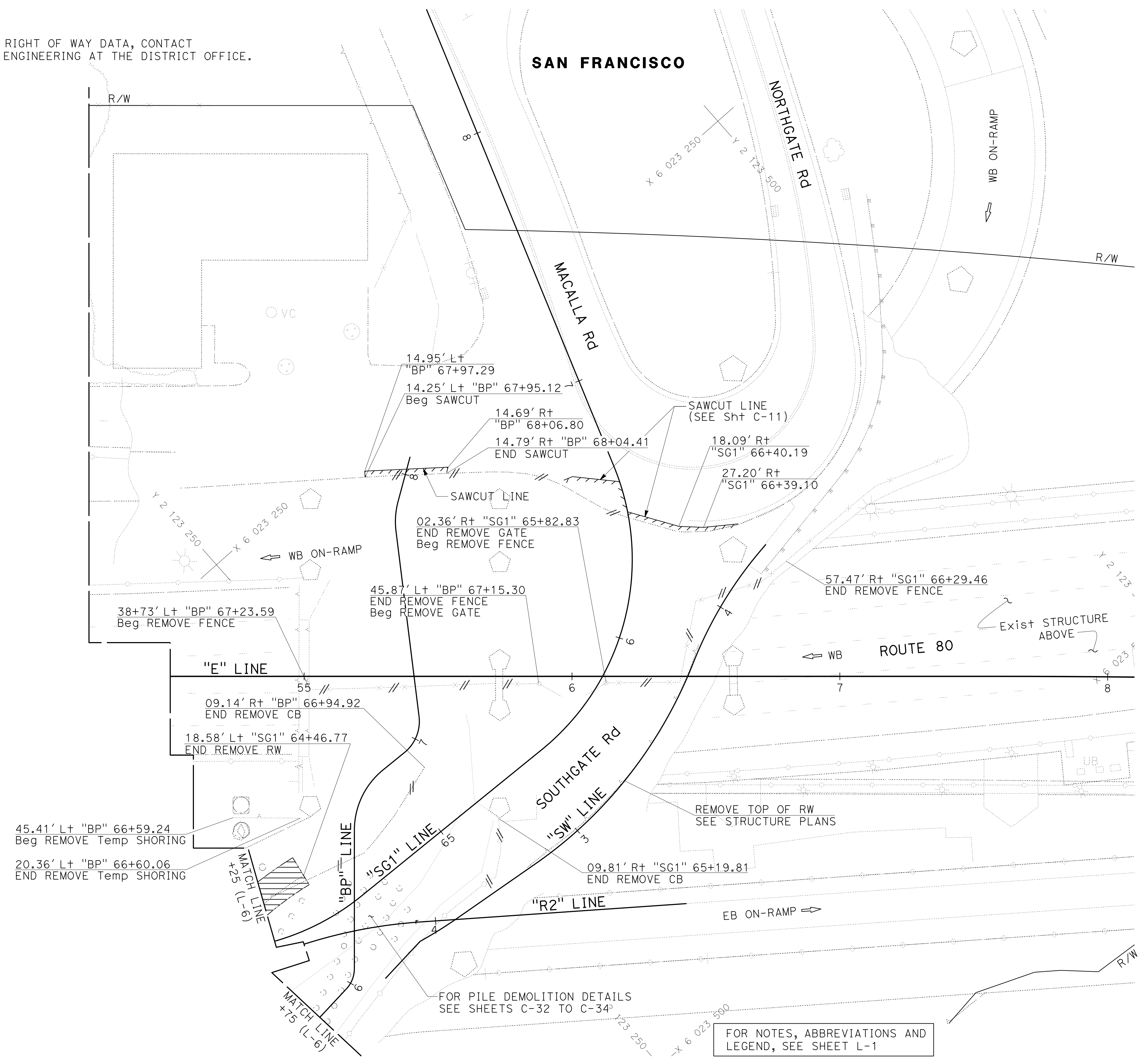
SCALE: 1" = 20'

L-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: CHECKED BY:
 PRAVEEN CHILAKAPATI CHI WAI WING
 REVISOR: DATE: TB: 2-10-19
 IK: 4-20-18

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	21	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		


NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



FOR NOTES, ABBREVIATIONS AND
 LEGEND, SEE SHEET L-1

**LAYOUT
 DEMOLITION**
 SCALE: 1" = 20'

L-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR	DATE
	INGRID V. SUPIT	CHI WAI NG	IK	10-12-18
			IK	3-6-18
			REVISOR	DATE
			REVISOR	DATE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: CHI WAI NG
 CHECKED BY: PRAVEEN CHILAKAPATI
 REVISOR: CHI WAI NG
 DATE REVISED: 8-3-18
 TB: 8-3-18
 IK: 10-12-18

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	22	436

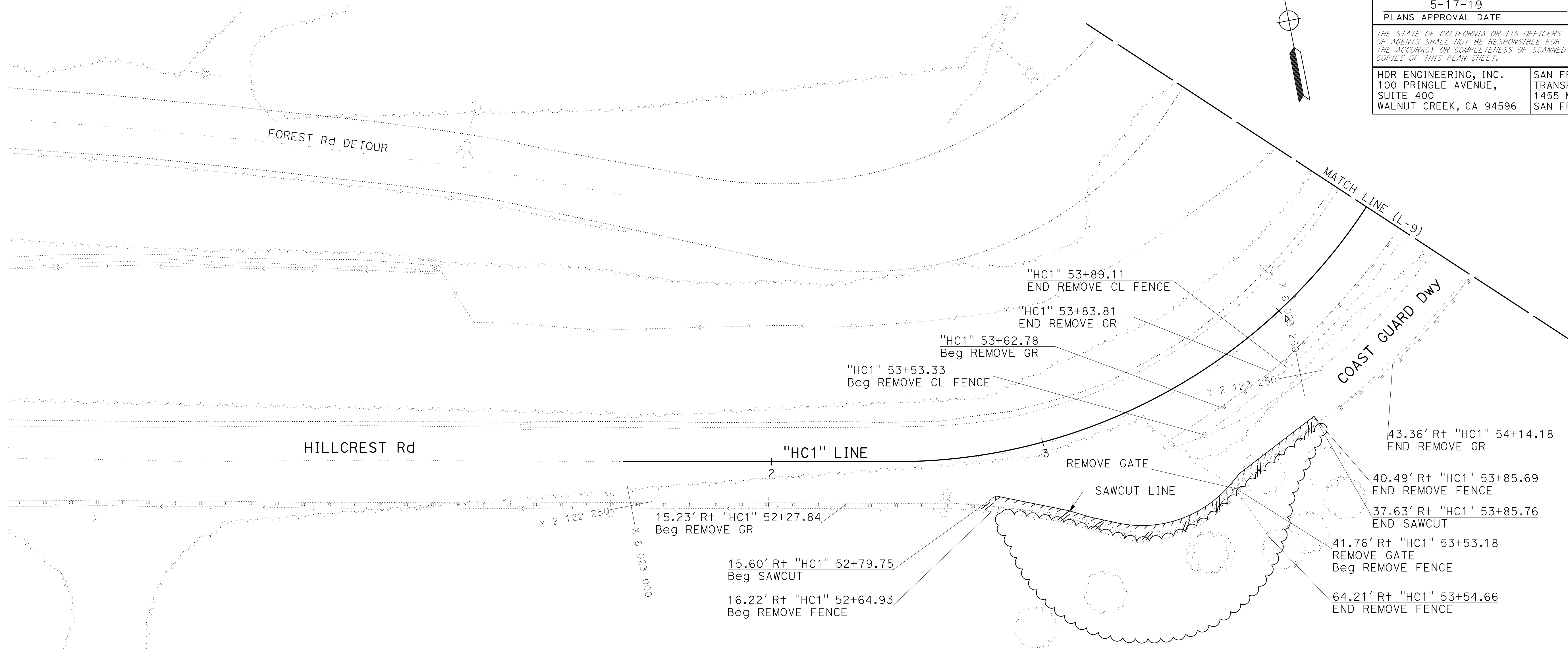
REGISTERED CIVIL ENGINEER: *Praveen K. Chilakapati* DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

REGISTERED PROFESSIONAL ENGINEER
 PRAVEEN K. CHILAKAPATI
 No. C76058
 Exp. 6-30-20
 CIVIL
 STATE OF CALIFORNIA

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.

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



SAN FRANCISCO

FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET L-1


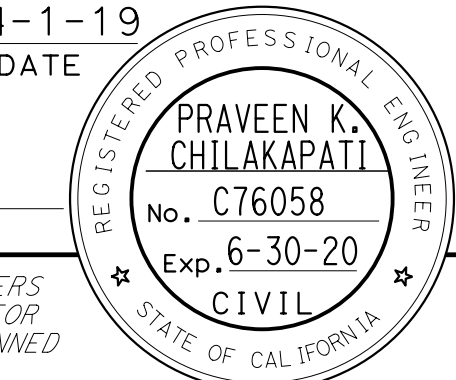
**LAYOUT
 DEMOLITION**
 SCALE: 1" = 20'

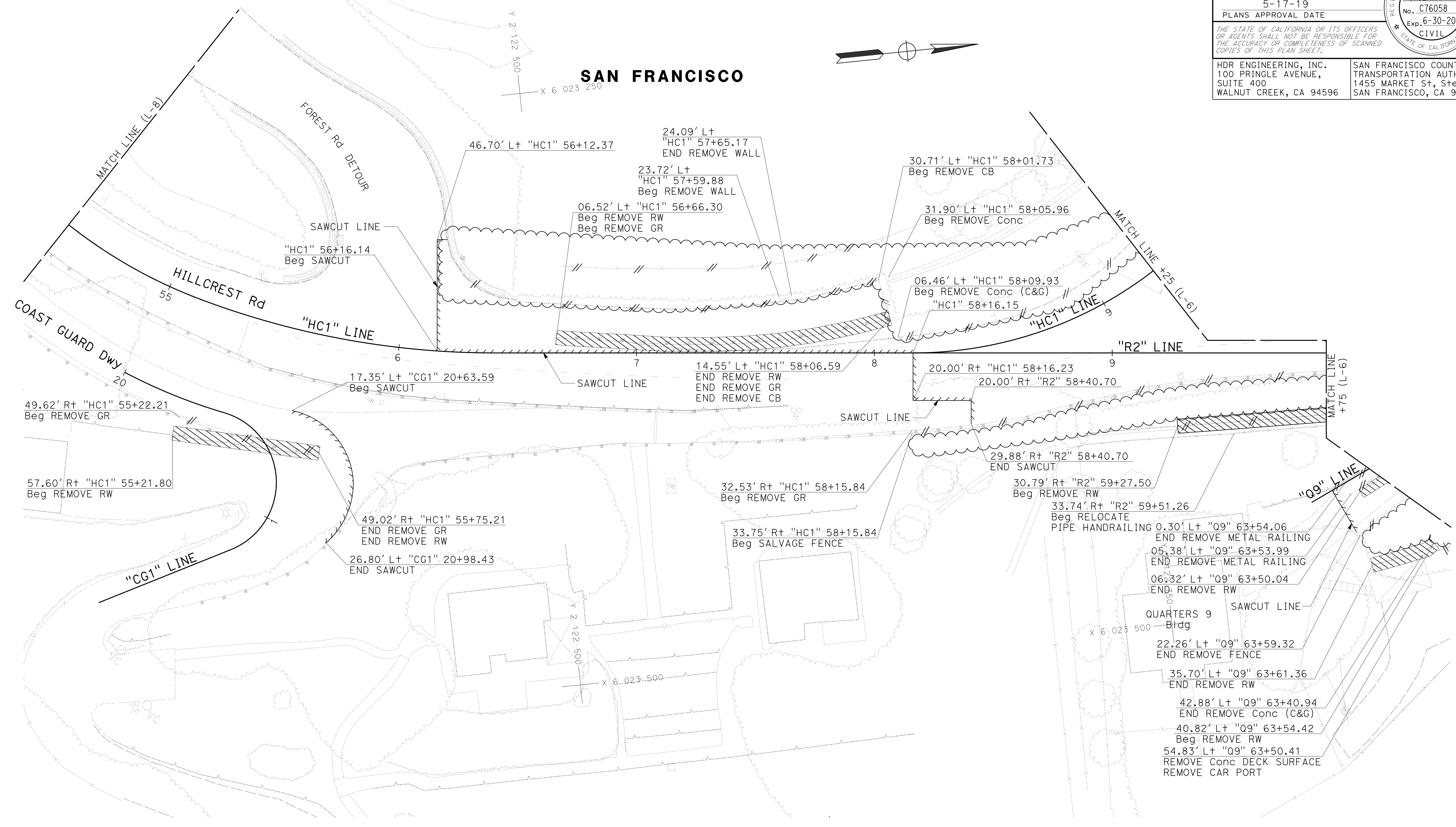
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LAST REVISION: DATE PLOTTED => 07-NOV-2019 00-00-00 TIME PLOTTED => 14:09

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE	TP
Caltrans	INGRID V. SUPIT	CHI WAI WING	CHI WAI WING	3-5-18	2-12-19

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	23	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

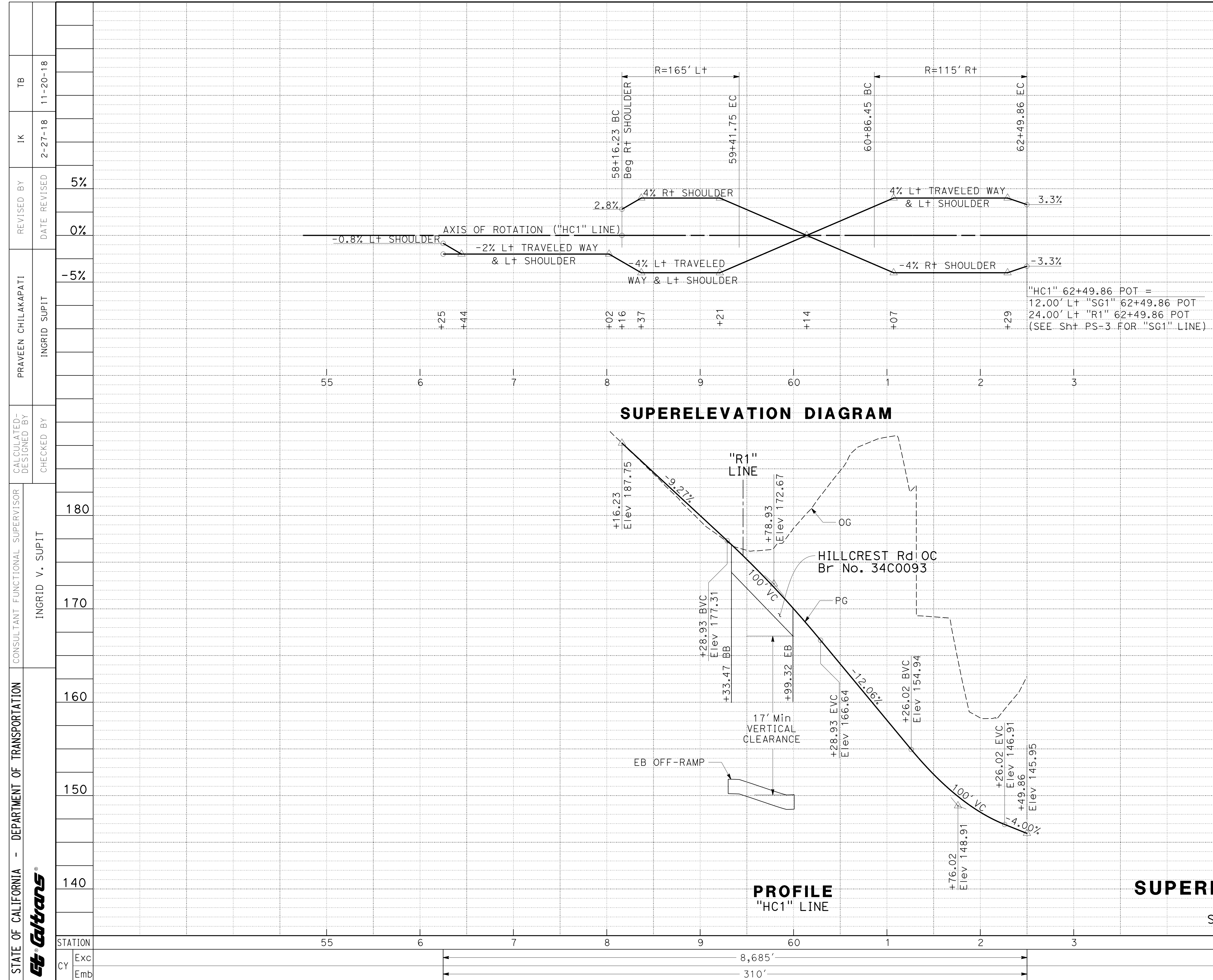



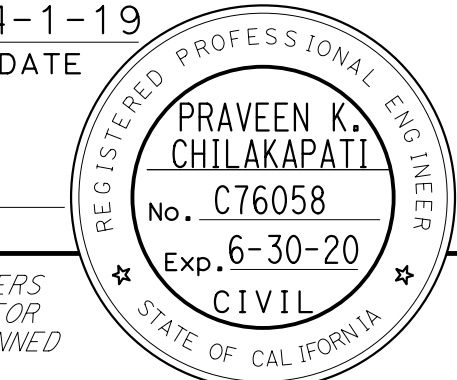
FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET L-1

**LAYOUT
DEMOLITION**
SCALE: 1" = 20'

L-9

LAST REVISION: DATE PLOTTED => 07-NOV-2019 00:00:00 TIME PLOTTED => 14:10



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	25	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
<small>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.</small>					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

REVISOR	DATE	REVISION
5%		
0%		
-5%		

DESIGNED BY	CHECKED BY
INGRID SUPIT	
DESIGNED BY	CHECKED BY
INGRID V. SUPIT	
DESIGNED BY	CHECKED BY
INGRID V. SUPIT	

STATION	55	6	7	8	9	60	1	2	3	TOTAL
Exc										
Emb										

SUPERELEVATION DIAGRAM

**PROFILE
"HC1" LINE**

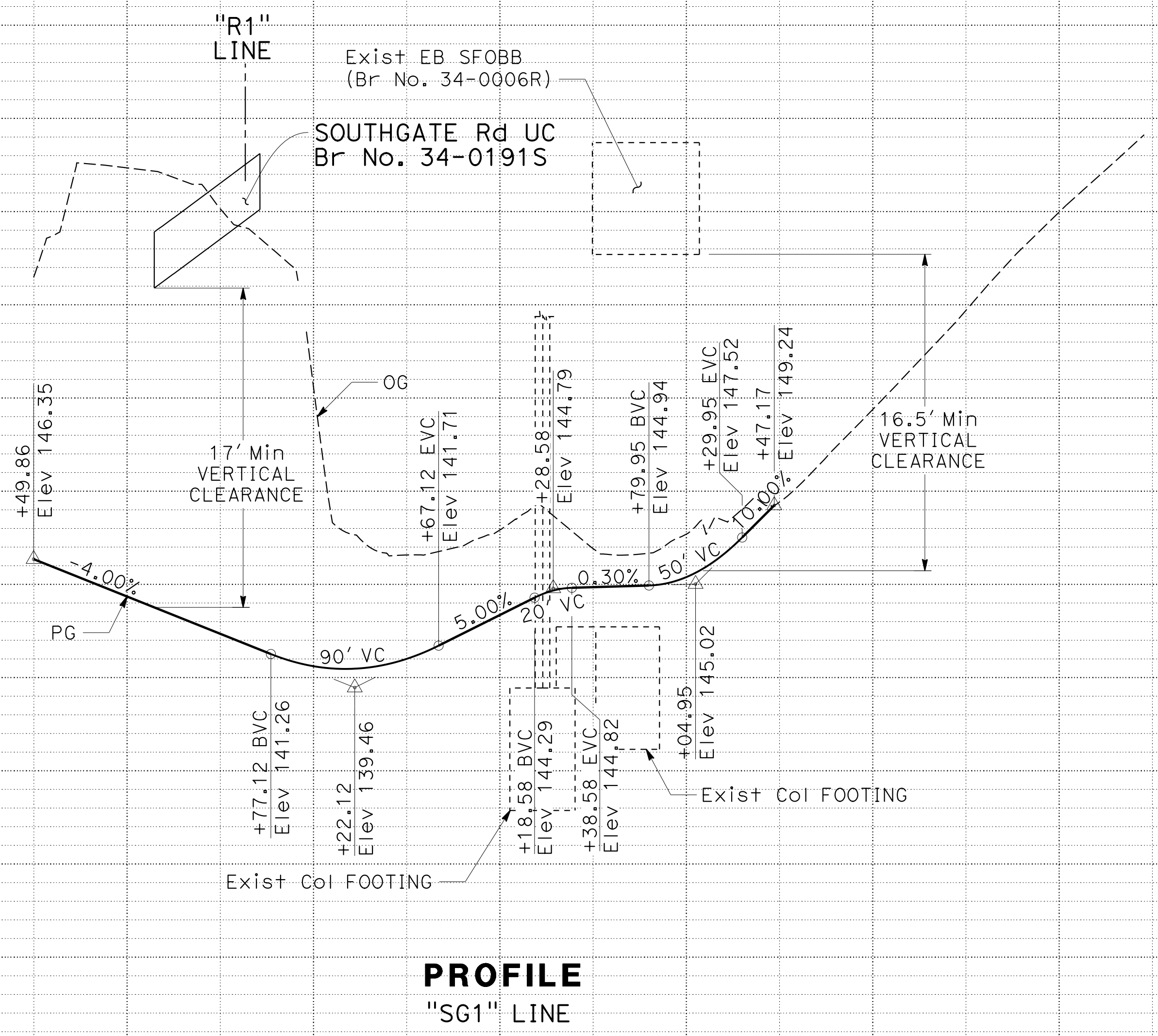
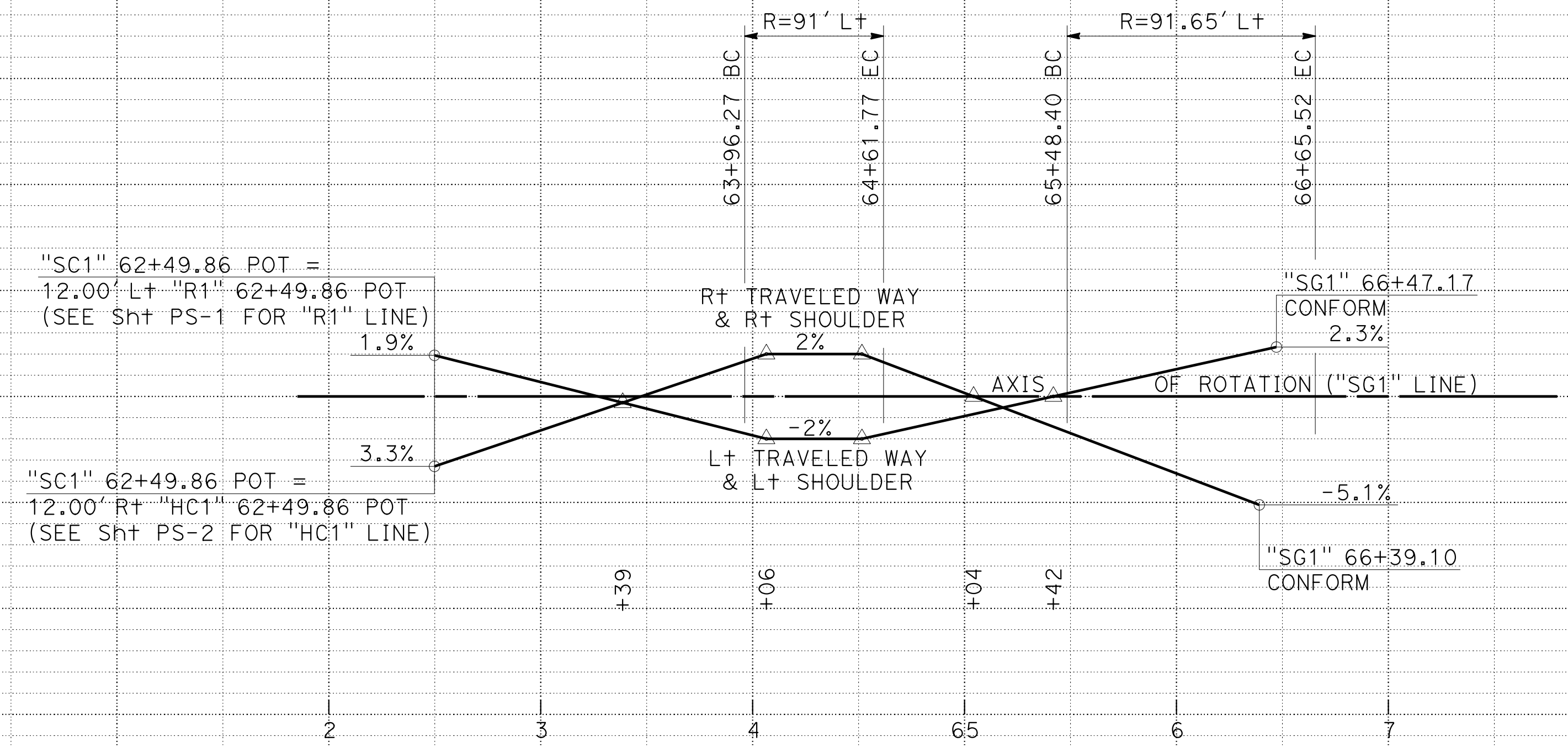
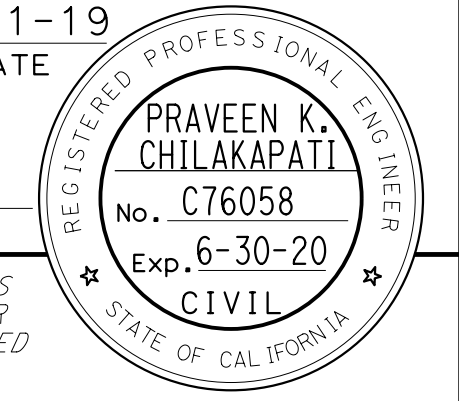
**PROFILE AND
SUPERELEVATION DIAGRAM**

SCALE: Horiz 1" = 50'
Vert 1" = 5'

PS-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	INGRID V. SUPIT
	CHECKED BY	170
CALCULATED-DESIGNED BY	CHECKED BY	170
	CHECKED BY	170
PRAVEEN CHILAKAPATI	INGRID SUPIT	
	INGRID SUPIT	
REVISOR	DATE	REVISION
IK	2-27-18	5%
IK	11-9-18	

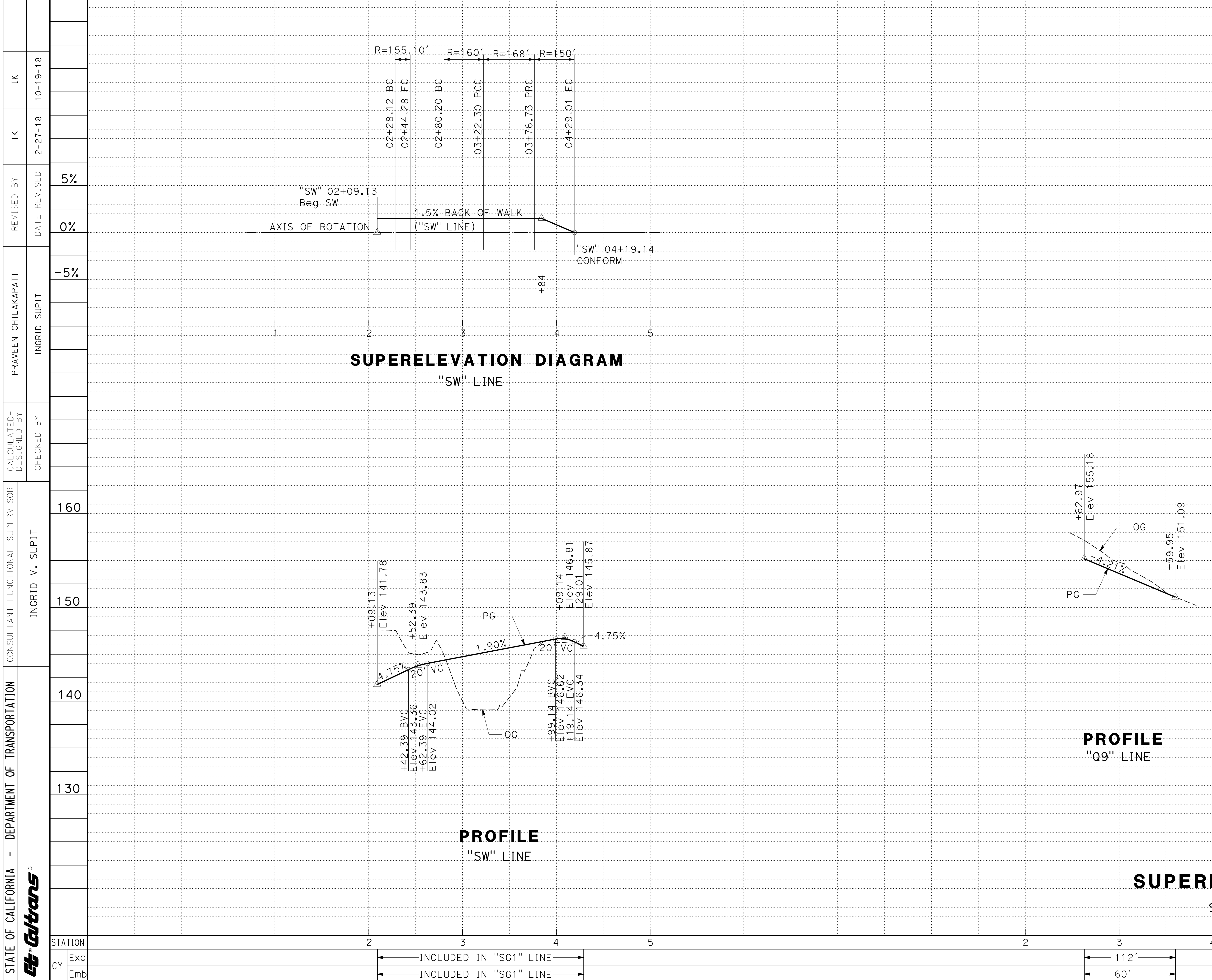
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	26	436
REGISTERED CIVIL ENGINEER			DATE	4-1-19	
5-17-19			PLANS APPROVAL DATE		
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		


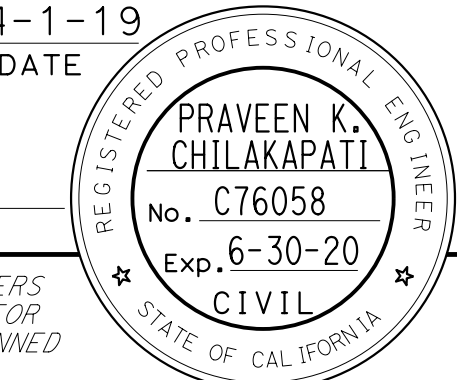


PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 50'
Vert 1" = 5'

PS-3



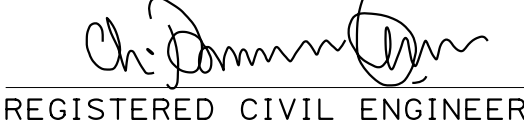
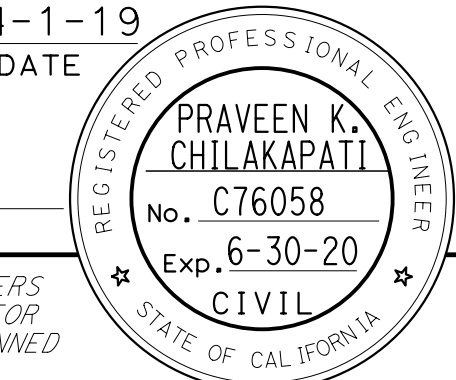
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	29	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: Horiz 1" = 50'
Vert 1" = 5'

PS-6



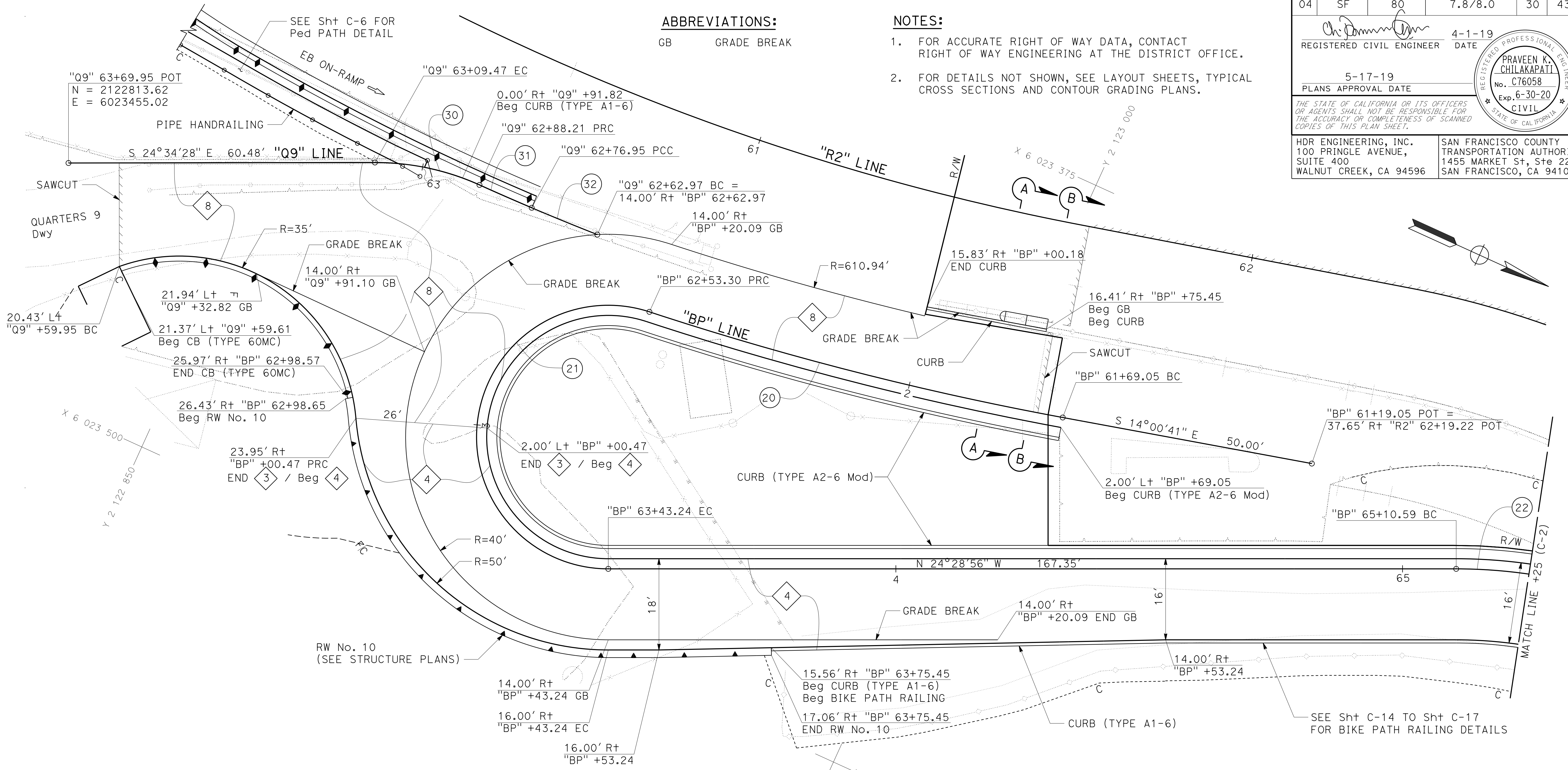
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	30	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

ABBREVIATIONS:

GB GRADE BREAK

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- FOR DETAILS NOT SHOWN, SEE LAYOUT SHEETS, TYPICAL CROSS SECTIONS AND CONTOUR GRADING PLANS.

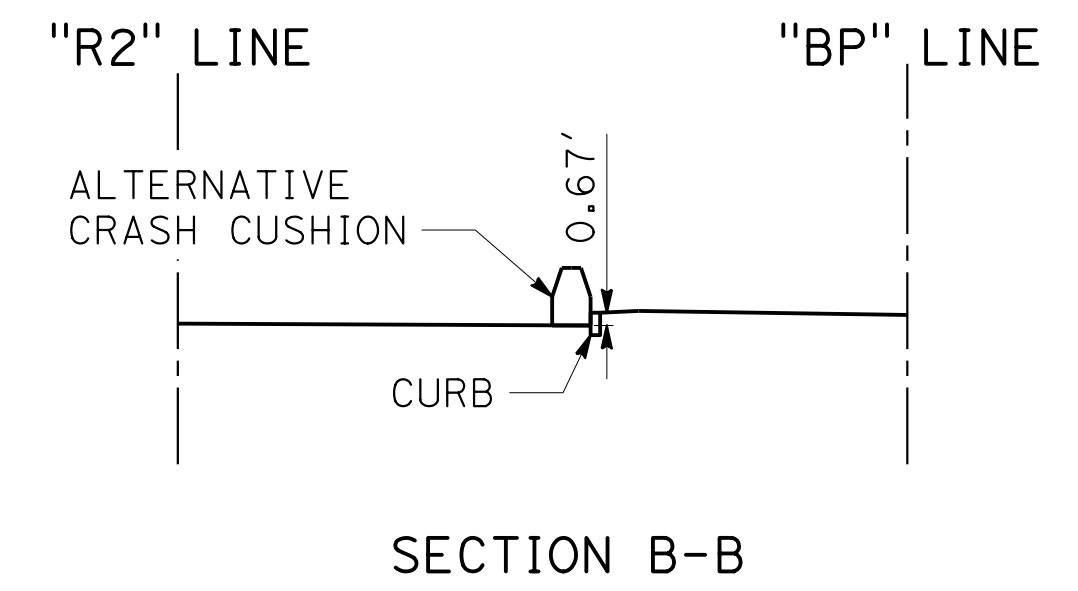
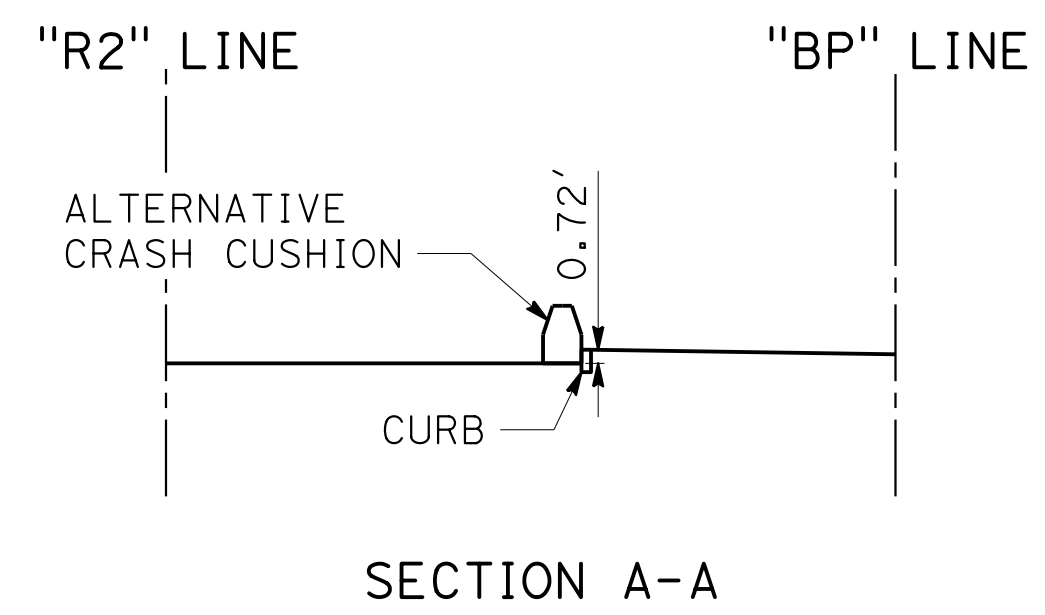


"BP" LINE CURVE DATA

No. (#)	R	Δ	T	L	CURVE CENTER	
					NORTHING	EASTING
20	624.94'	07°43'29"	42.19'	84.25'	2122861.71	6022813.05
21	26'	198°11'44"	162.37'	89.94'	2122932.99	6023460.07
22	100'	19°01'53"	16.76'	33.22'	2123137.51	6023505.39

"Q9" LINE CURVE DATA

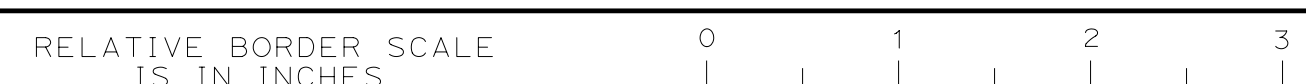
No. (#)	R	Δ	T	L	CURVE CENTER	
					NORTHING	EASTING
30	50.00'	24°21'49"	10.79'	21.26'	2122889.42	6023475.34
31	508.48'	01°16'05"	5.63'	11.25'	2122887.37	6022916.86
32	508.48'	01°34'33"	6.99'	13.98'	2122887.37	6022916.86



CONSTRUCTION DETAILS

BIKE PATH
SCALE: 1" = 10'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Et Caltrans®
 CONSULTANT SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: INGRID SUPIT
 CHECKED BY:
 PRAVEEN CHILAKAPATI
 DATE REVISED: 4-25-18
 TP: 2-12-19
 USERNAME => IKUKANE6
 DGN FILE => 0419000153ga001.dgn



LAST REVISION: DATE PLOTTED => 07-NOV-2019
 TIME PLOTTED => 15:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	31	436

REGISTERED CIVIL ENGINEER: *Praveen K. Chilakapati*
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

REGISTERED PROFESSIONAL ENGINEER
 No. C76058
 Exp. 6-30-20
 CIVIL
 STATE OF CALIFORNIA

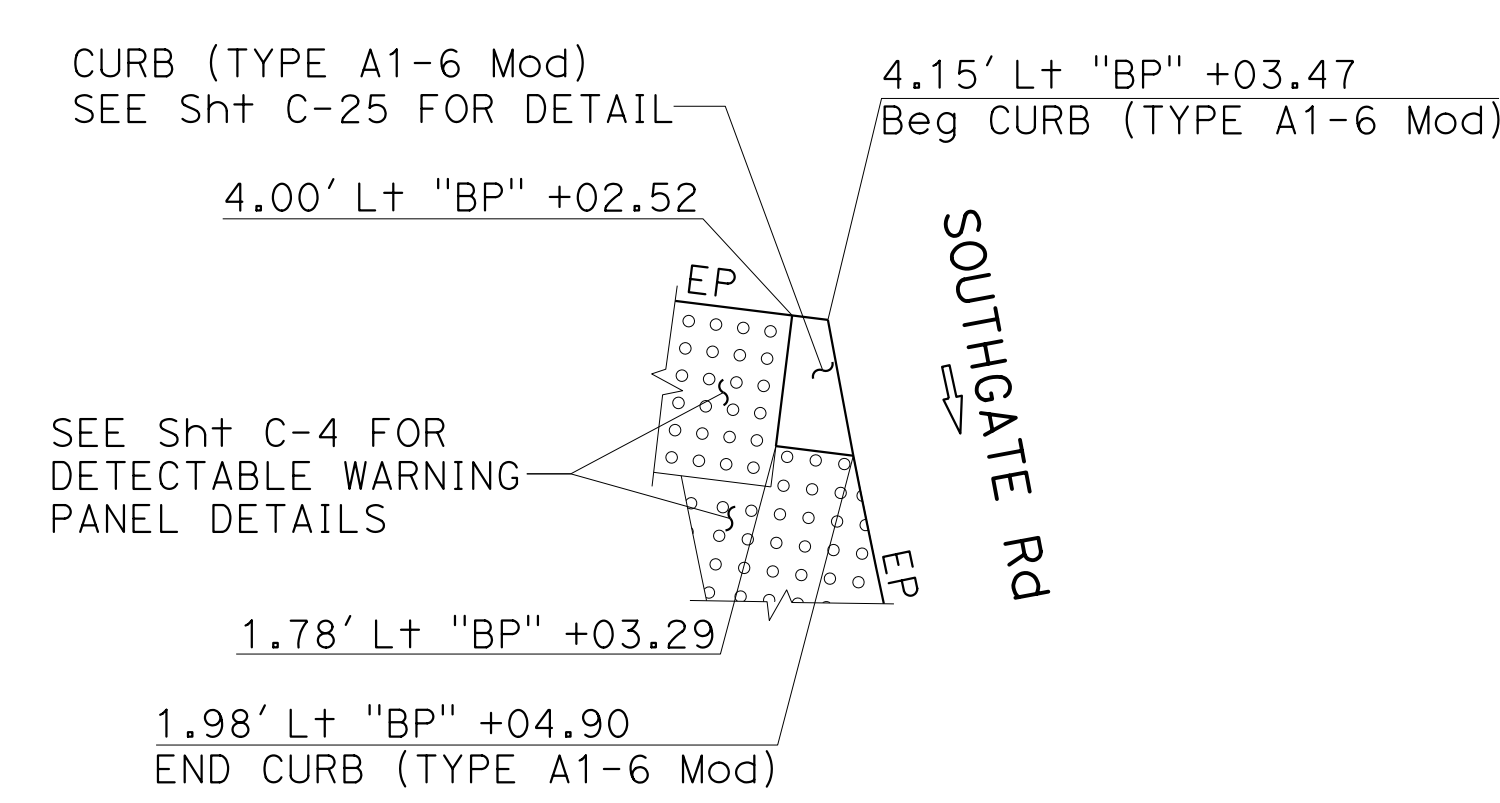
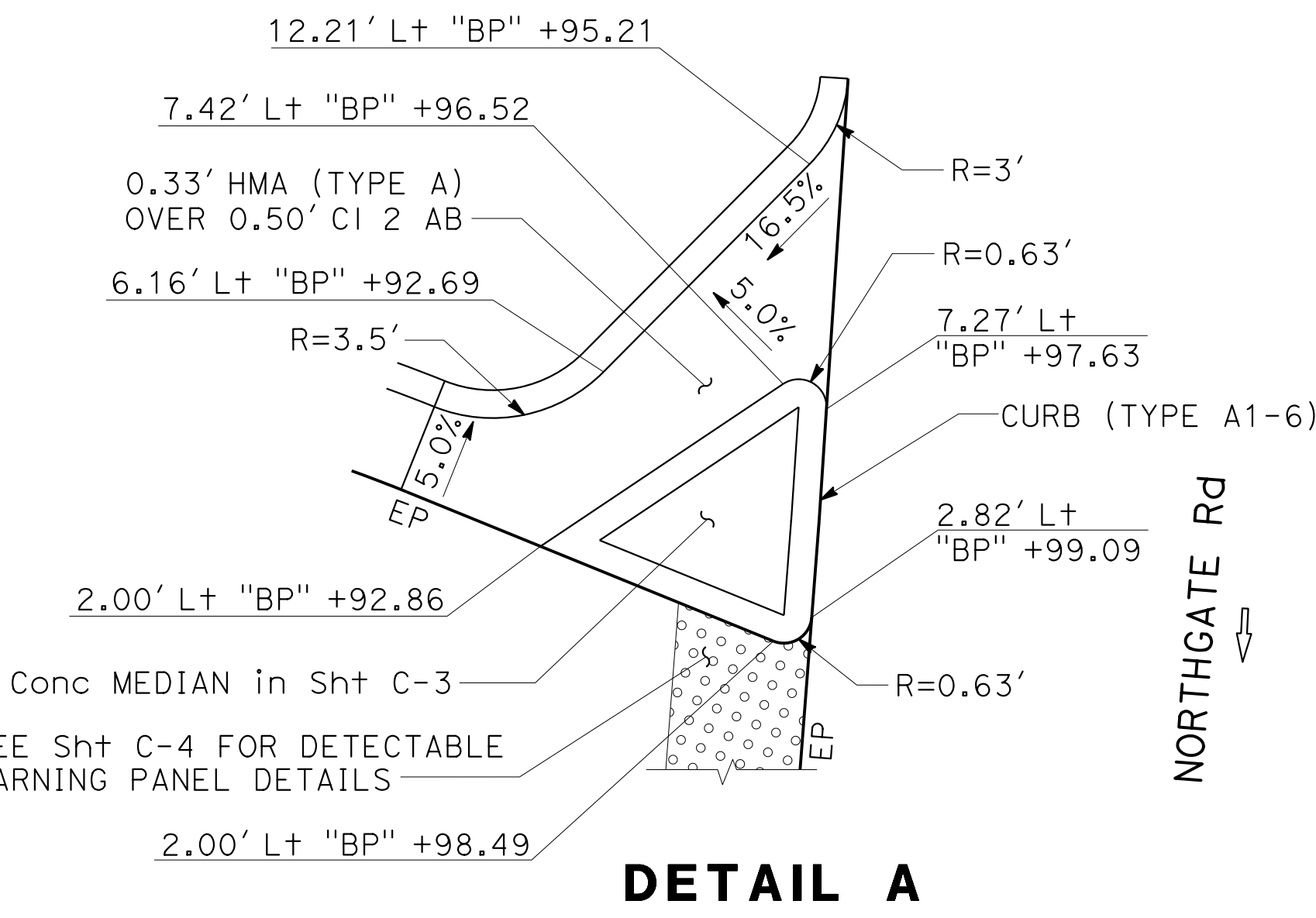
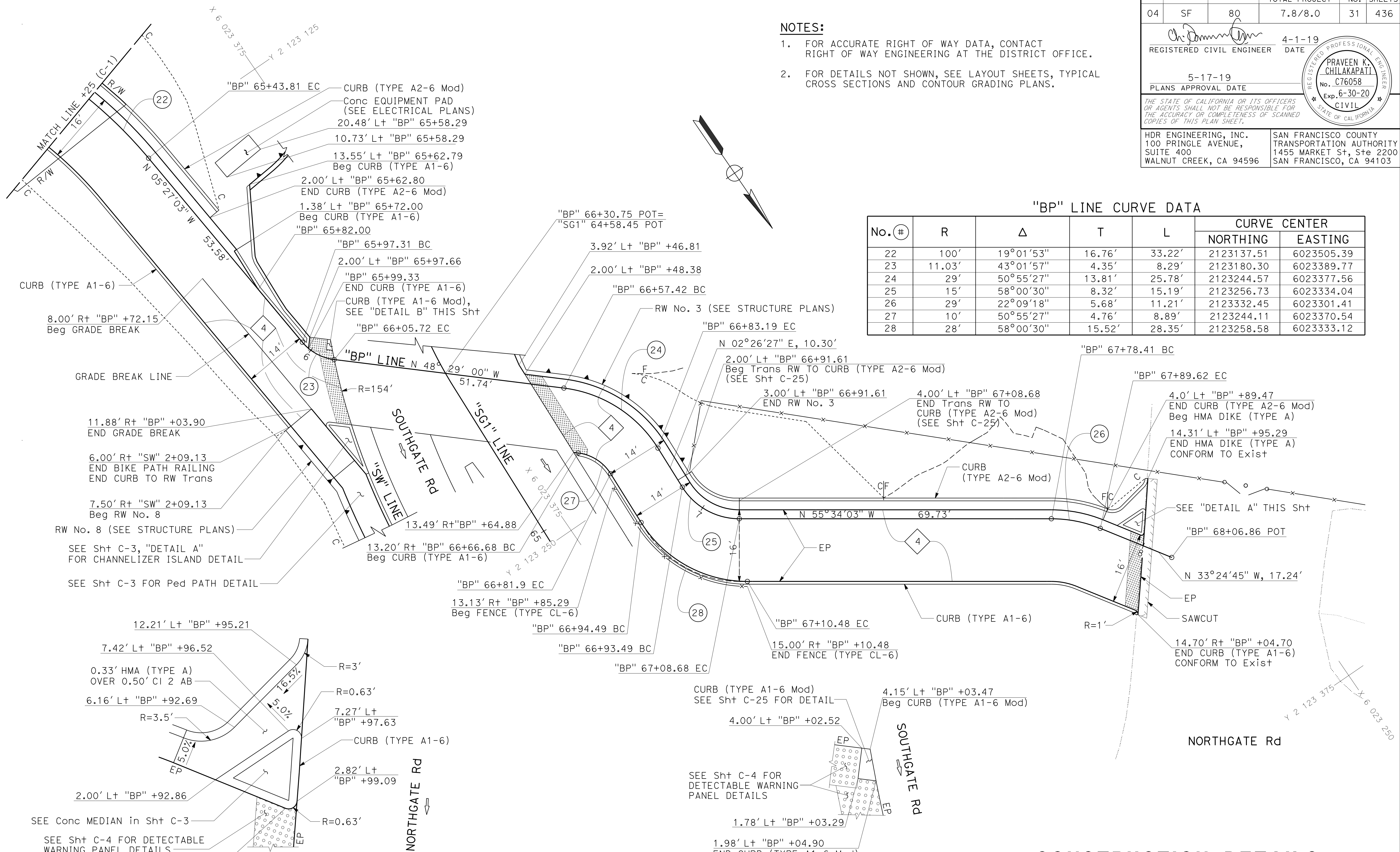
HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

- NOTES:**
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
 - FOR DETAILS NOT SHOWN, SEE LAYOUT SHEETS, TYPICAL CROSS SECTIONS AND CONTOUR GRADING PLANS.

"BP" LINE CURVE DATA

No. #	R	Δ	T	L	CURVE CENTER	
					NORTHING	EASTING
22	100'	19°01'53"	16.76'	33.22'	2123137.51	6023505.39
23	11.03'	43°01'57"	4.35'	8.29'	2123180.30	6023389.77
24	29'	50°55'27"	13.81'	25.78'	2123244.57	6023377.56
25	15'	58°00'30"	8.32'	15.19'	2123256.73	6023334.04
26	29'	22°09'18"	5.68'	11.21'	2123332.45	6023301.41
27	10'	50°55'27"	4.76'	8.89'	2123244.11	6023370.54
28	28'	58°00'30"	15.52'	28.35'	2123258.58	6023333.12



CONSTRUCTION DETAILS

BIKE PATH

SCALE: 1" = 10'

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT

DESIGNED BY: INGRID SUPIT

CHECKED BY:

REVISOR: PRAVEEN CHILAKAPATI

DATE REVISED: 4-25-18

TP: 1-16-19

IK: 4-25-18

REVISIONS:

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR
 INGRID V. SUPIT
 CHECKED BY
 INGRID SUPIT
 DESIGNED BY
 INGRID SUPIT
 REVISIONS:
 TB 1-2-19
 KB 4-26-18
 REVISED BY DATE

NOTE:
 FOR DETAILS NOT SHOWN, SEE LAYOUT SHEETS, TYPICAL CROSS SECTIONS SHEETS, AND CONTOUR GRADING SHEETS.

LEGEND:
 X NEW PAVEMENT STRUCTURAL SECTION
 # CURVE No.

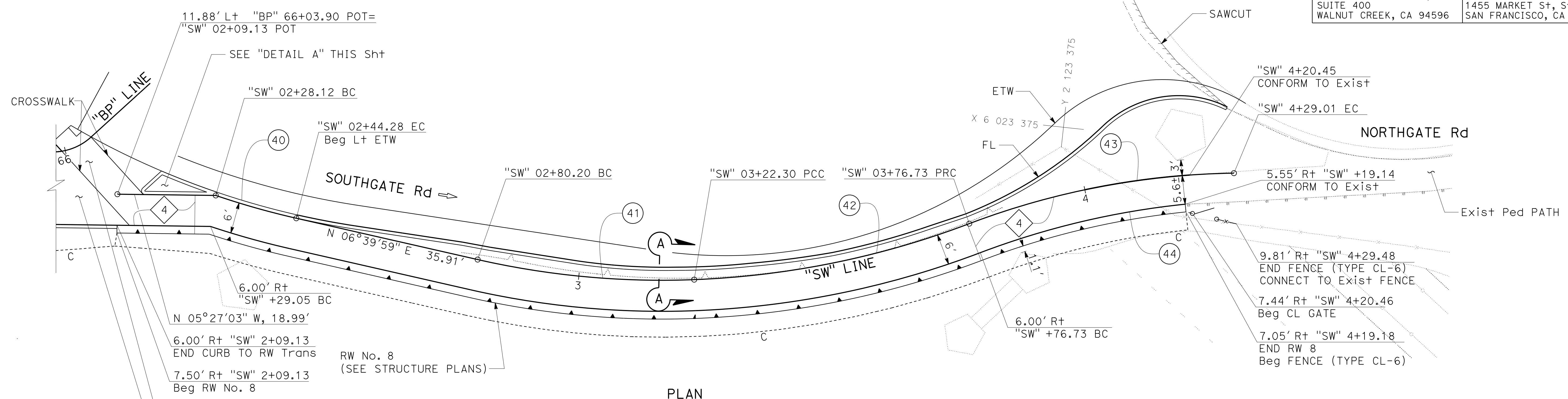
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	32	436

REGISTERED CIVIL ENGINEER
 DATE 4-1-19
 PLANS APPROVAL DATE 5-17-19

PRAVEEN K. CHILAKAPATI
 No. C76058
 Exp. 6-30-20
 CIVIL
 STATE OF CALIFORNIA

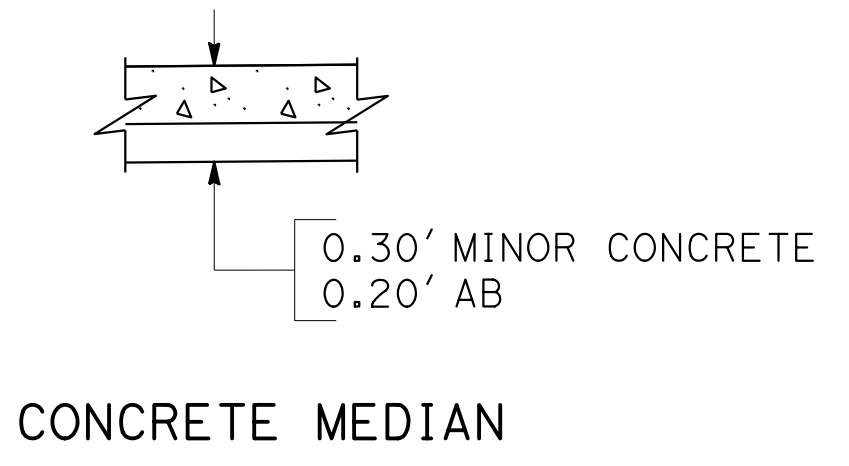
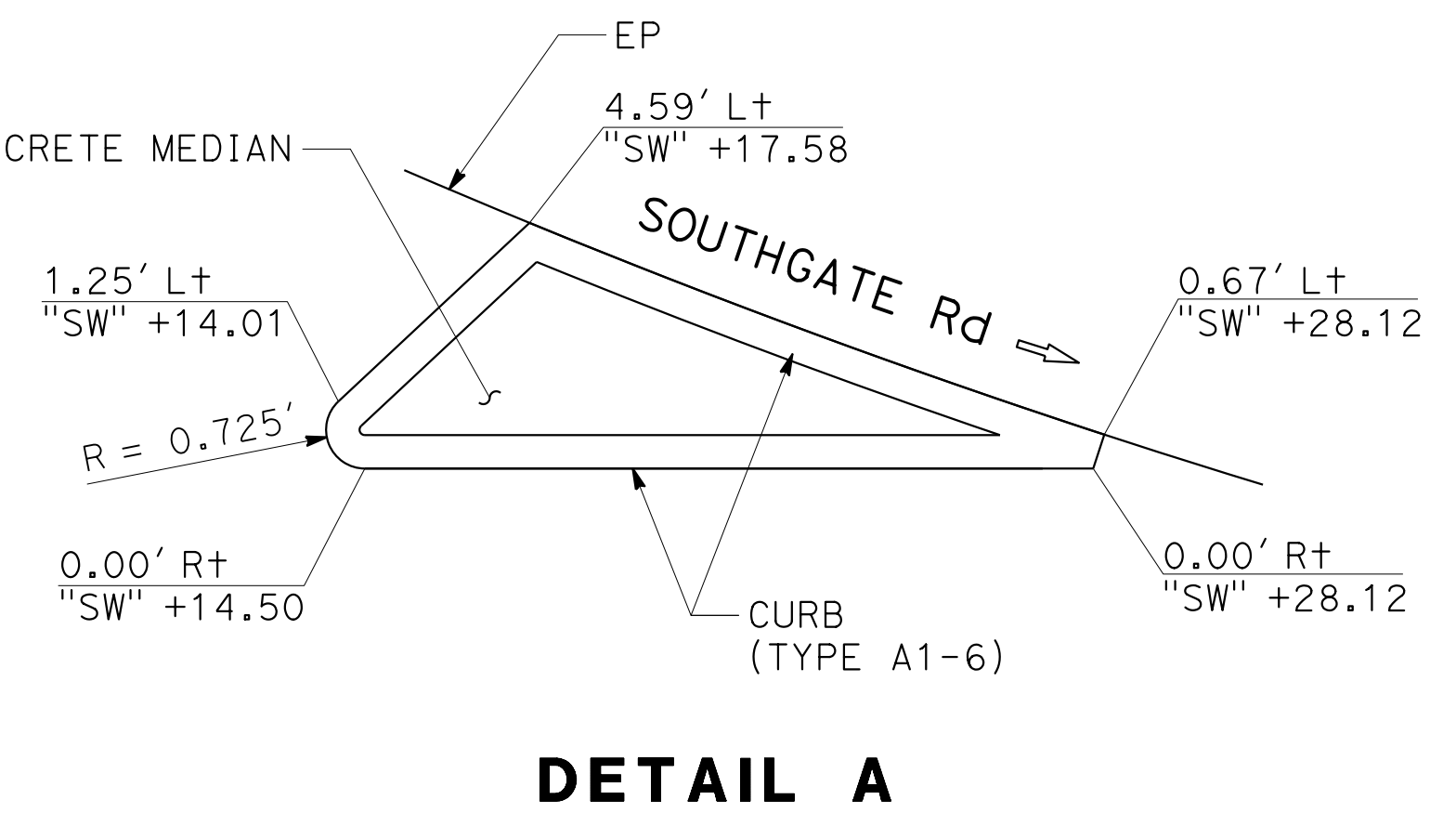
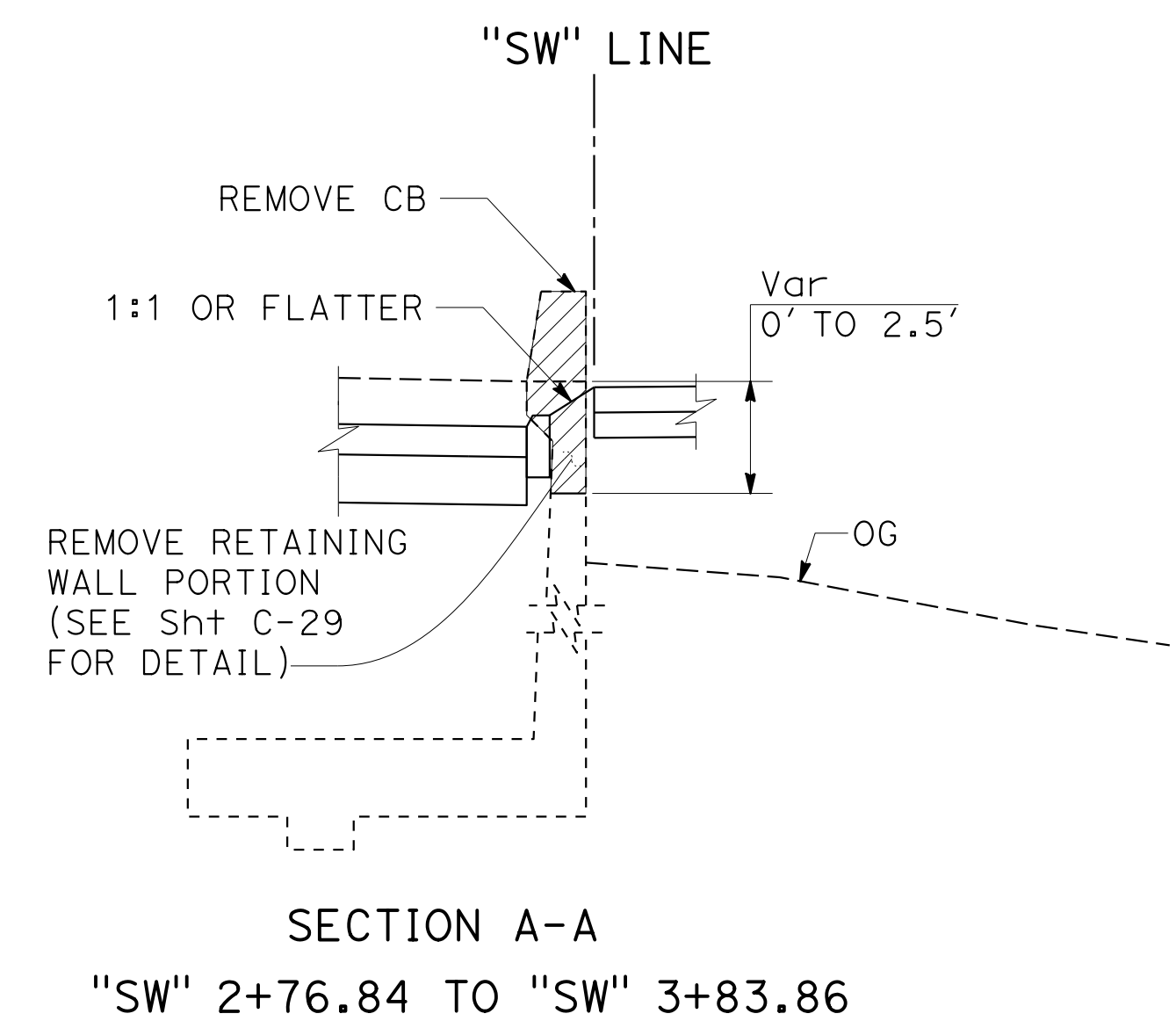
HDR ENGINEERING, INC.
 100 PRINGLE AVENUE, SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



CURVE DATA

No. (#)	R	Δ	T	L	CURVE CENTER	
					NORTHING	EASTING
40	155.10'	05°58'16"	8.09'	16.16'	2123247.65	6023254.36
41	160.00'	15°04'37"	21.17'	42.10'	2123283.89	6023253.66
42	168.00'	18°33'50"	27.46'	54.43'	2123282.72	6023245.74
43	150.00'	19°58'15"	26.41'	52.28'	2123426.96	6023529.15
44	156.23'	14°56'56"	20.50'	40.76'	2123432.51	6023540.05



CONSTRUCTION DETAILS
PEDESTRIAN PATH
 SCALE: 1" = 10'

C-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	REVISOR	DATE	DT	TP
INGRID V. SUPIT	TARYN PASQUA	PRAVEEN CHILAKAPATI	11-12-18	2-12-19	3-15-19
CALCULATED BY	CHECKED BY	DESIGNED BY	DATE	REVISED BY	DATE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	33	436

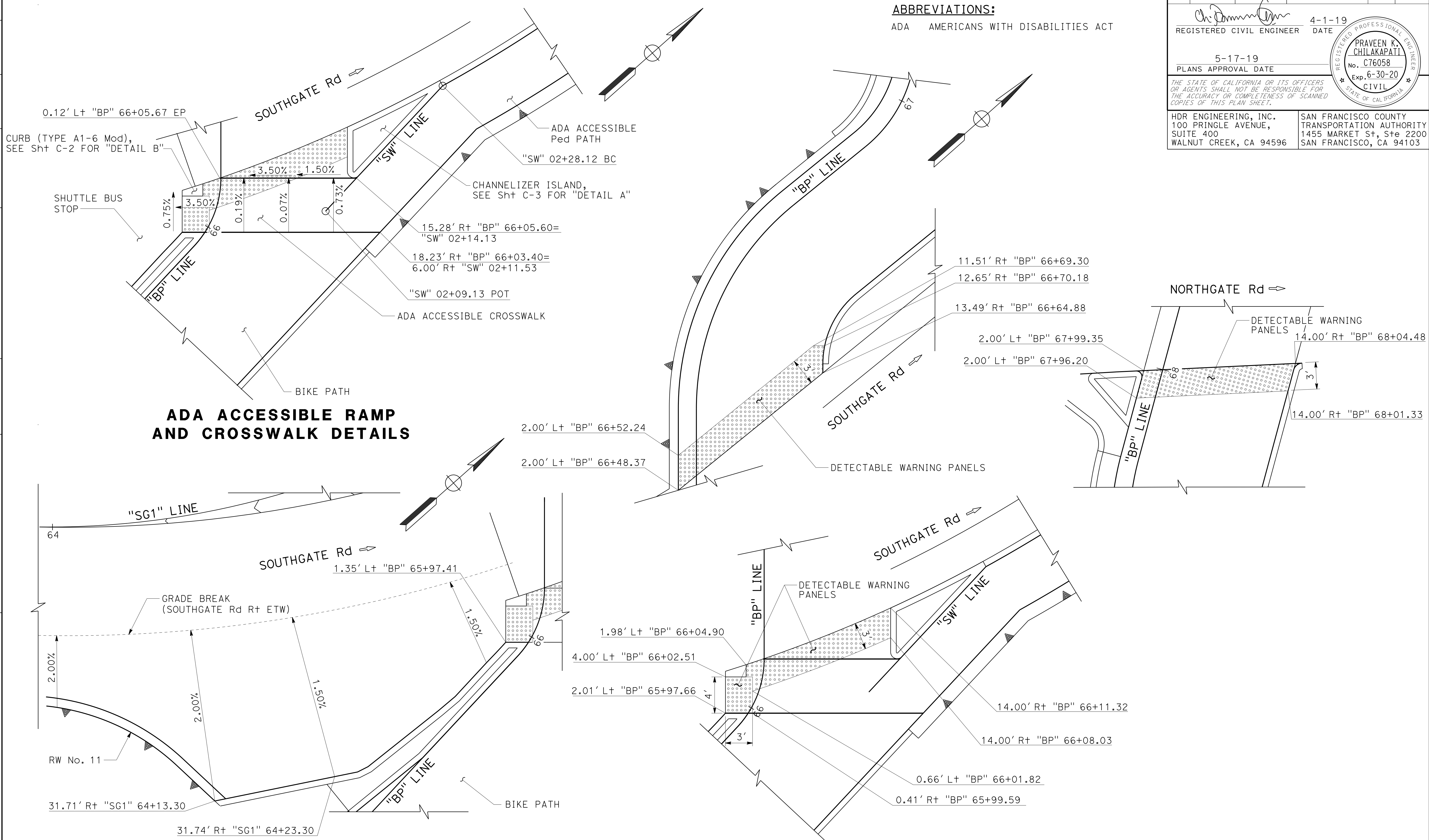
REGISTERED CIVIL ENGINEER
 DATE 4-1-19
 PLANS APPROVAL DATE 5-17-19
 REGISTERED PROFESSIONAL ENGINEER
 PRAVEEN K. CHILAKAPATI
 No. C76058
 Exp. 6-30-20
 CIVIL
 STATE OF CALIFORNIA

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

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.

ABBREVIATIONS:
 ADA AMERICANS WITH DISABILITIES ACT



ADA ACCESSIBLE RAMP AND CROSSWALK DETAILS

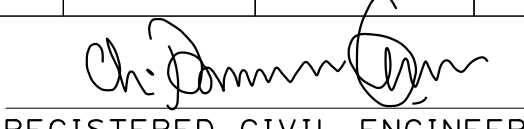
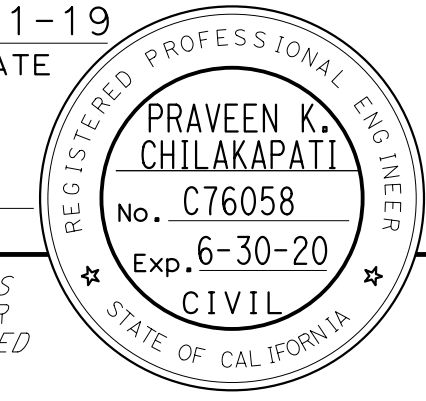
ADA ACCESSIBLE SHUTTLE BUS STOP DETAILS

DETECTABLE WARNING PANEL DETAILS

CONSTRUCTION DETAILS

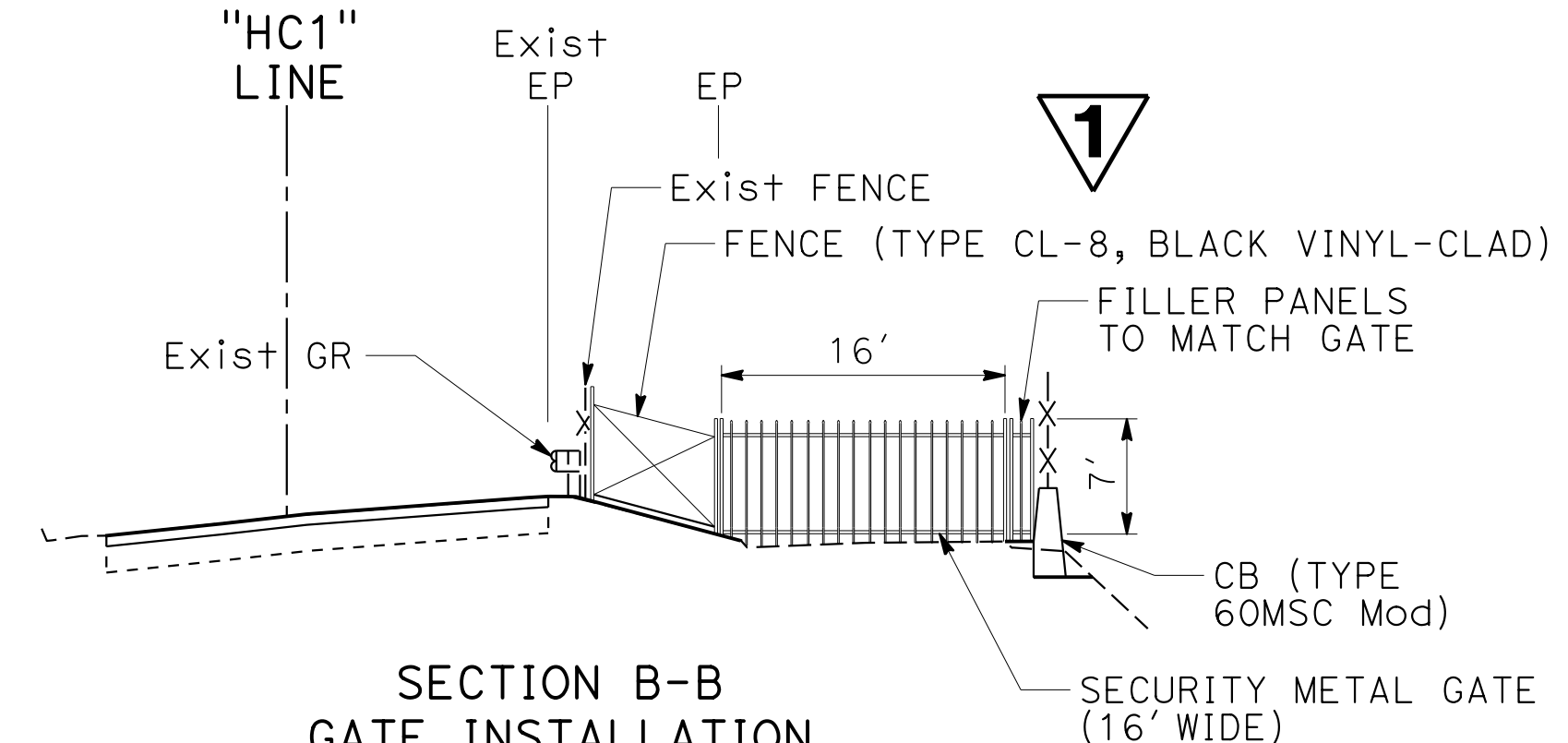
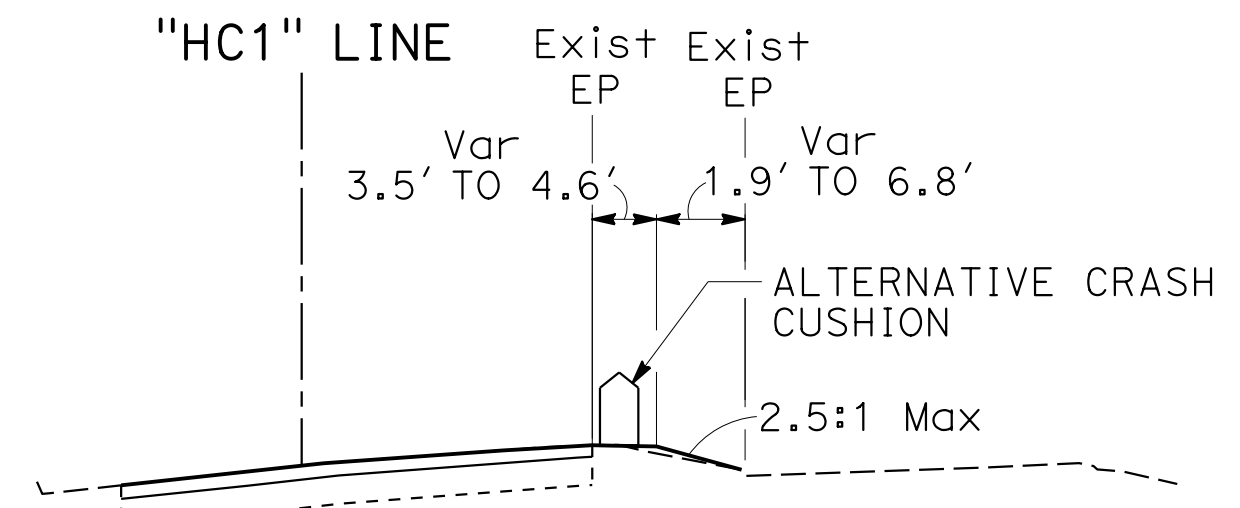
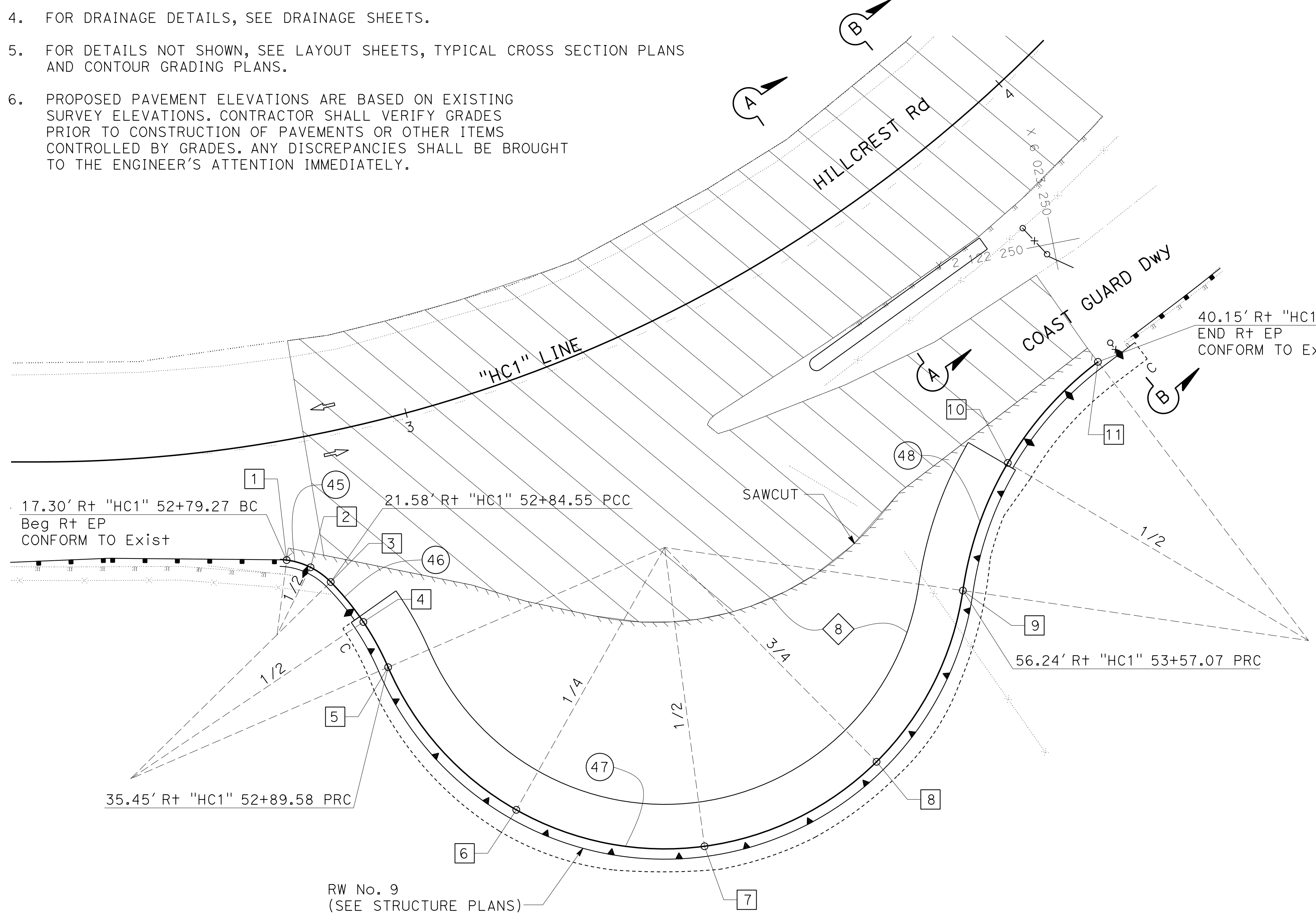
NO SCALE

C-4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	34	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

- NOTES:**
- FOR SAWCUT DETAILS, SEE DEMOLITION PLANS.
 - FOR RETAINING WALL DETAILS, SEE STRUCTURE PLANS.
 - FOR PAVEMENT STRUCTURAL SECTIONS, SEE TYPICAL CROSS SECTION PLANS.
 - FOR DRAINAGE DETAILS, SEE DRAINAGE SHEETS.
 - FOR DETAILS NOT SHOWN, SEE LAYOUT SHEETS, TYPICAL CROSS SECTION PLANS AND CONTOUR GRADING PLANS.
 - PROPOSED PAVEMENT ELEVATIONS ARE BASED ON EXISTING SURVEY ELEVATIONS. CONTRACTOR SHALL VERIFY GRADES PRIOR TO CONSTRUCTION OF PAVEMENTS OR OTHER ITEMS CONTROLLED BY GRADES. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.

- LEGEND:**
- # CONSTRUCTION WORK ITEM
 - ◇ NEW PAVEMENT STRUCTURAL SECTION
 - ⊗ CURVE No.



PAVEMENT ELEVATIONS DATA

No. #	LOCATION	ELEVATION	POINT DESCRIPTION
1	17.04' Rt 'HC1' 52+79.27	Exist	EP, CONFORM
2	18.94' Rt 'HC1' 52+82.27	216.46	EP
3	21.58' Rt 'HC1' 52+84.55	216.55	EP
4	28.24' Rt 'HC1' 52+87.70	217.07	EP
5	35.45' Rt 'HC1' 52+89.58	217.60	EP
6	60.12' Rt 'HC1' 53+00.33	218.51	EP
7	73.59' Rt 'HC1' 53+18.86	218.09	EP
8	72.18' Rt 'HC1' 53+39.52	216.47	EP
9	56.24' Rt 'HC1' 53+57.07	214.00	EP
10	44.11' Rt 'HC1' 53+69.62	212.09	EP
11	40.15' Rt 'HC1' 53+85.70	210.17	EP, CONFORM

PLAN SCALE: 1"=10'

EP CURVE DATA

No. #	R	Δ	T	L	CURVE CENTER	
					NORTHING	EASTING
45	11'	38°08'14"	3.80'	7.32'	2122215.69	6023127.82
46	41'	21°05'18"	7.63'	15.09'	2122199.17	6023102.78
47	44'	148°21'46"	155.30'	113.93'	2122217.33	6023185.82
48	51'	44°40'58"	20.96'	39.78'	2122185.94	6023275.49

**CONSTRUCTION DETAILS
COAST GUARD DRIVEWAY**

SCALE: 1" = 10'

C-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 TARYN PASCUA
 PRAVEEN CHILAKAPATI
 INGRID V. SUPIT
 CALTRANS

1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

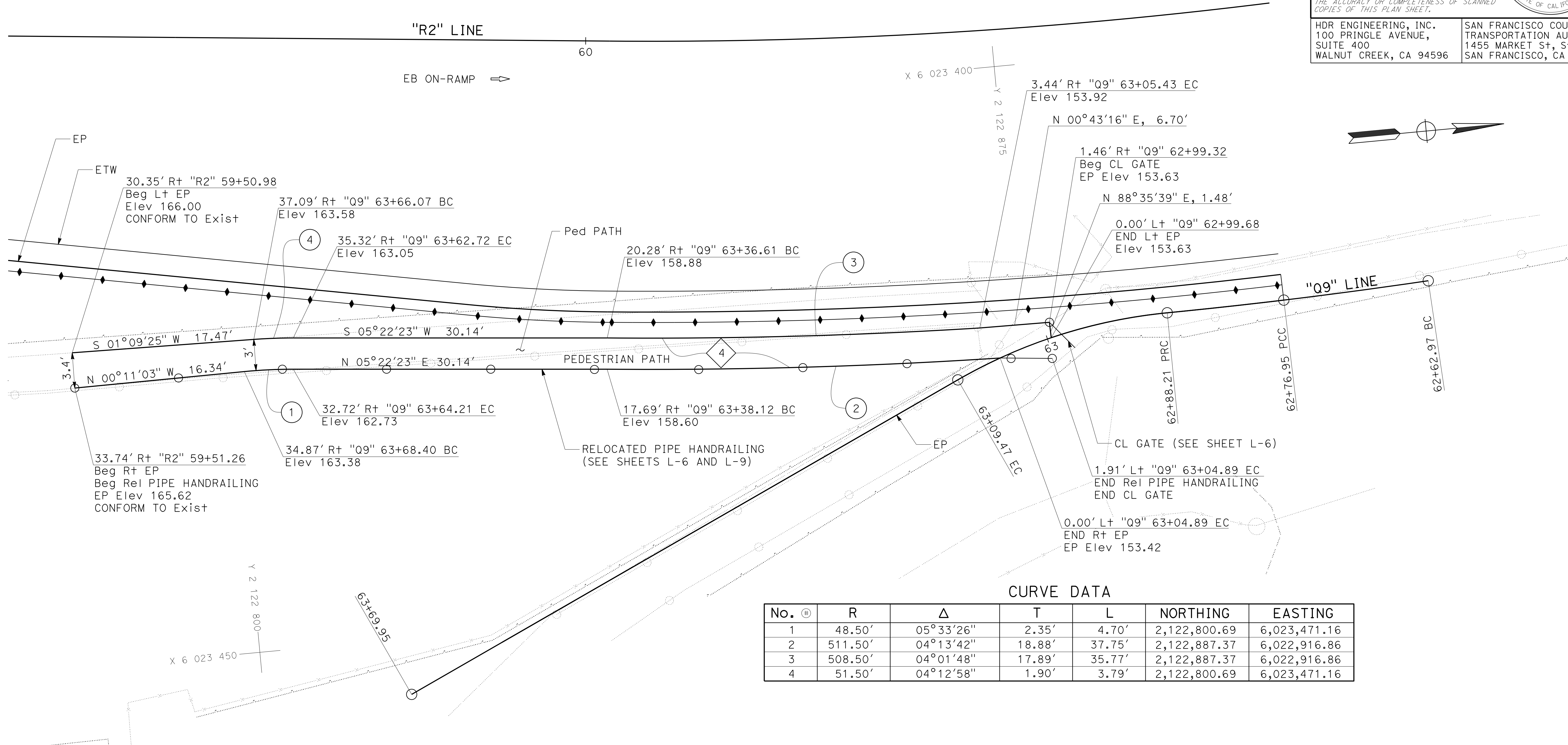
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	35	436

REGISTERED CIVIL ENGINEER: *Praveen K. Chilakapati*
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

REGISTERED PROFESSIONAL ENGINEER
PRAVEEN K. CHILAKAPATI
 No. C76058
 Exp. 6-30-20
 CIVIL
 STATE OF CALIFORNIA

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.

HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596	SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103
---	---



CURVE DATA

No. #	R	Δ	T	L	NORTHING	EASTING
1	48.50'	05°33'26"	2.35'	4.70'	2,122,800.69	6,023,471.16
2	511.50'	04°13'42"	18.88'	37.75'	2,122,887.37	6,022,916.86
3	508.50'	04°01'48"	17.89'	35.77'	2,122,887.37	6,022,916.86
4	51.50'	04°12'58"	1.90'	3.79'	2,122,800.69	6,023,471.16

1 PEDESTRIAN PATH AT QUARTER'S 9 Bldg


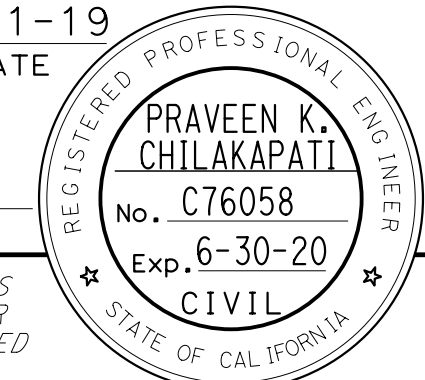
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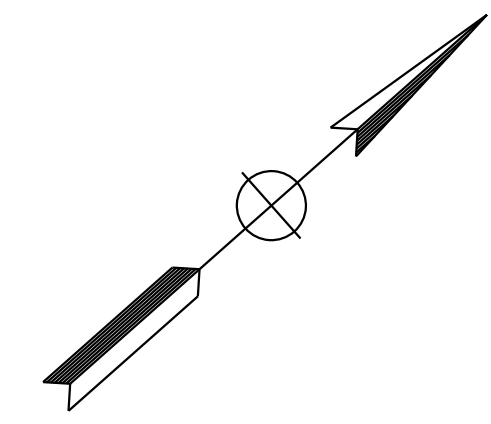
CONSTRUCTION DETAILS

SCALE: 1" = 5'


C-6

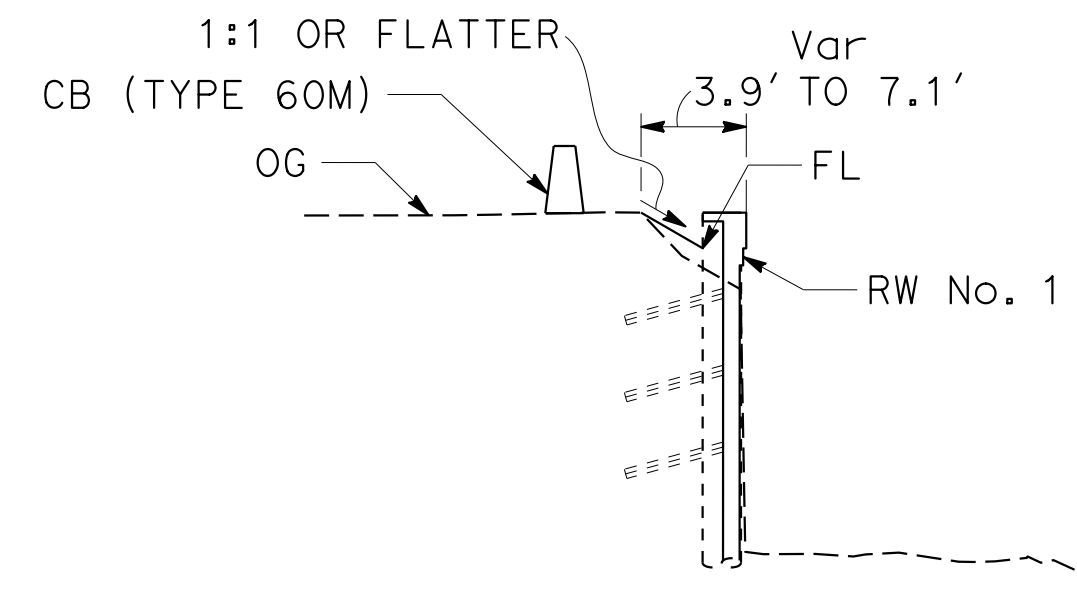
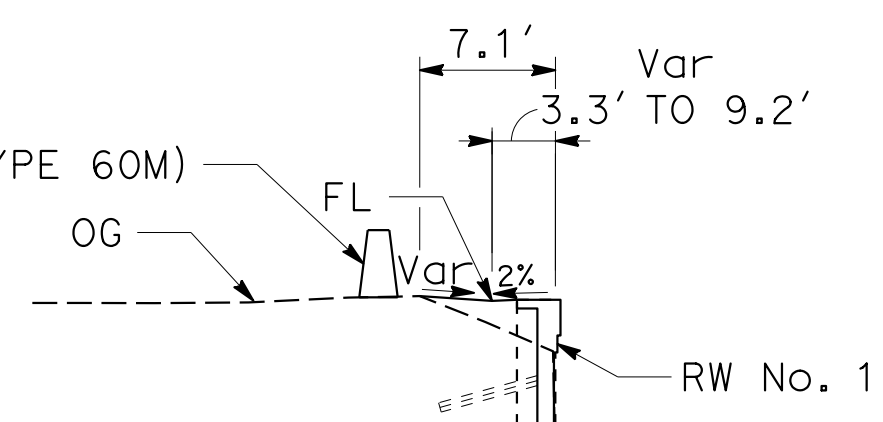
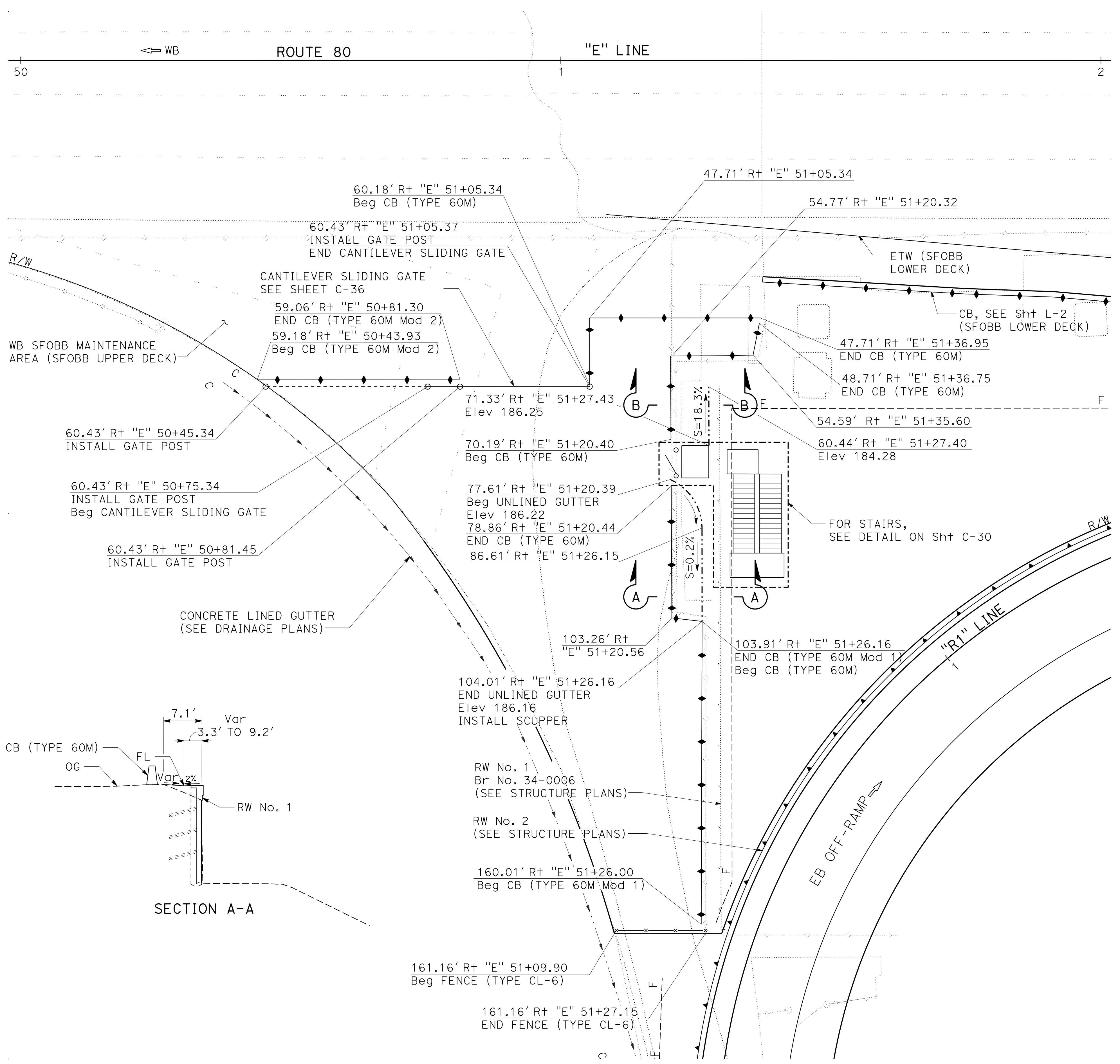
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Et Caltrans®
 CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: TARYN PASCUA
 CHECKED BY: PRAVEEN CHILAKAPATI
 REVISED BY: IK: 10-5-18
 TP: 2-12-19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	36	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



ABBREVIATION:
 SFOBB SAN FRANCISCO OAKLAND BAY BRIDGE


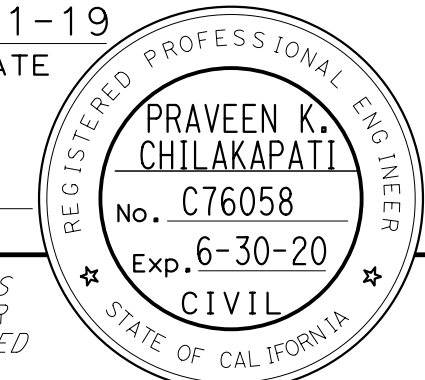
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	REGISTERED CIVIL ENGINEER
	REGISTERED CIVIL ENGINEER
CONSULTANT - FUNCTIONAL SUPERVISOR	REGISTERED CIVIL ENGINEER
DESIGNED BY	REGISTERED CIVIL ENGINEER
CHECKED BY	REGISTERED CIVIL ENGINEER
TARYN PASCUA	REGISTERED CIVIL ENGINEER
PRAVEEN CHILAKAPATI	REGISTERED CIVIL ENGINEER
REVISOR	REGISTERED CIVIL ENGINEER
DATE	REGISTERED CIVIL ENGINEER
IK	REGISTERED CIVIL ENGINEER
10-5-18	REGISTERED CIVIL ENGINEER
TB	REGISTERED CIVIL ENGINEER
2-7-19	REGISTERED CIVIL ENGINEER



CONSTRUCTION DETAILS
WB SFOBB MAINTENANCE AREA
 SCALE: 1" = 10'

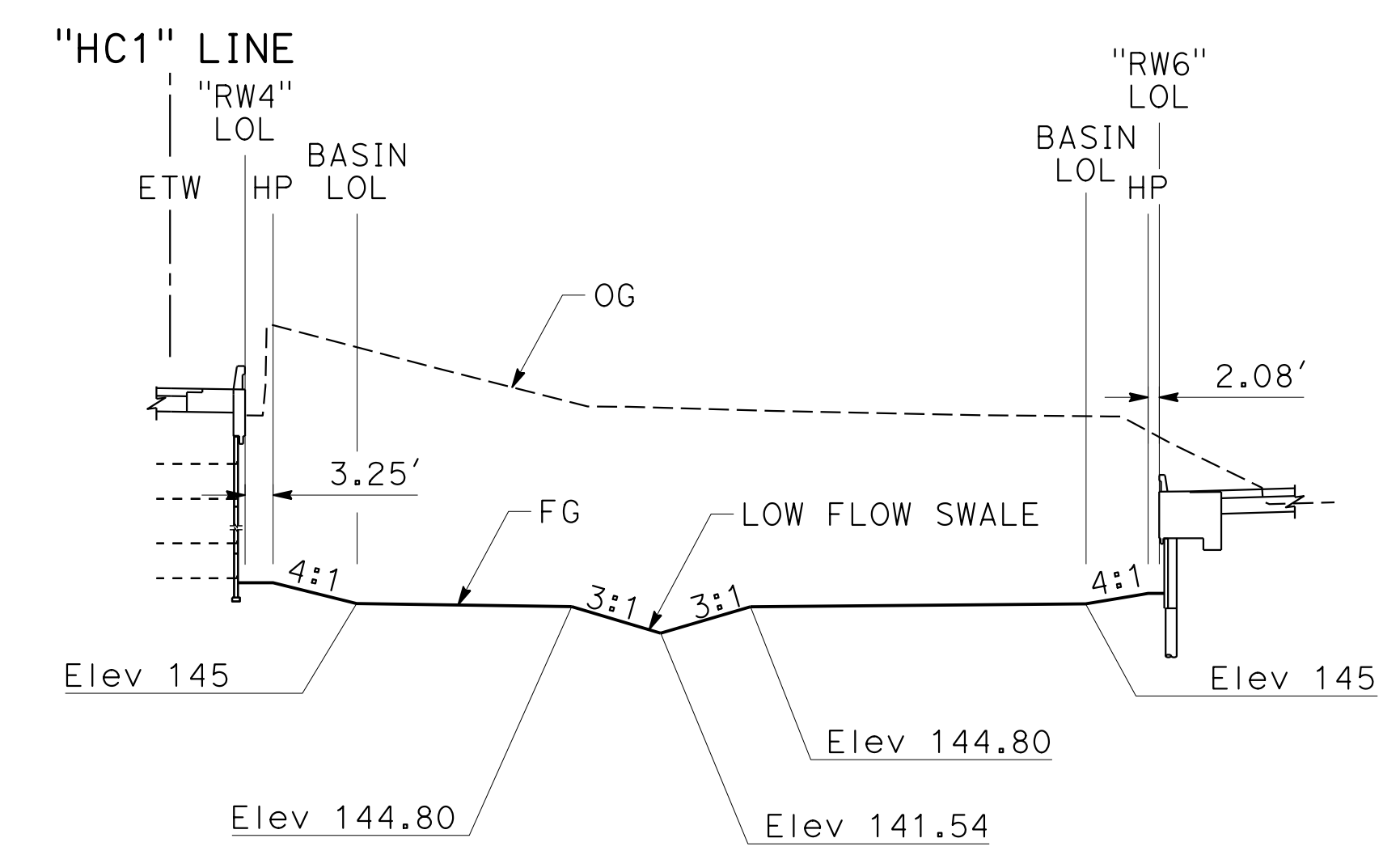
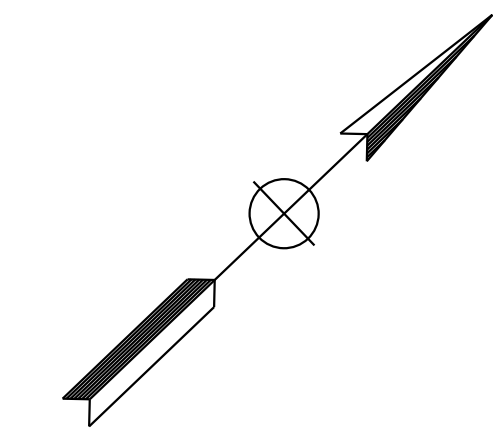
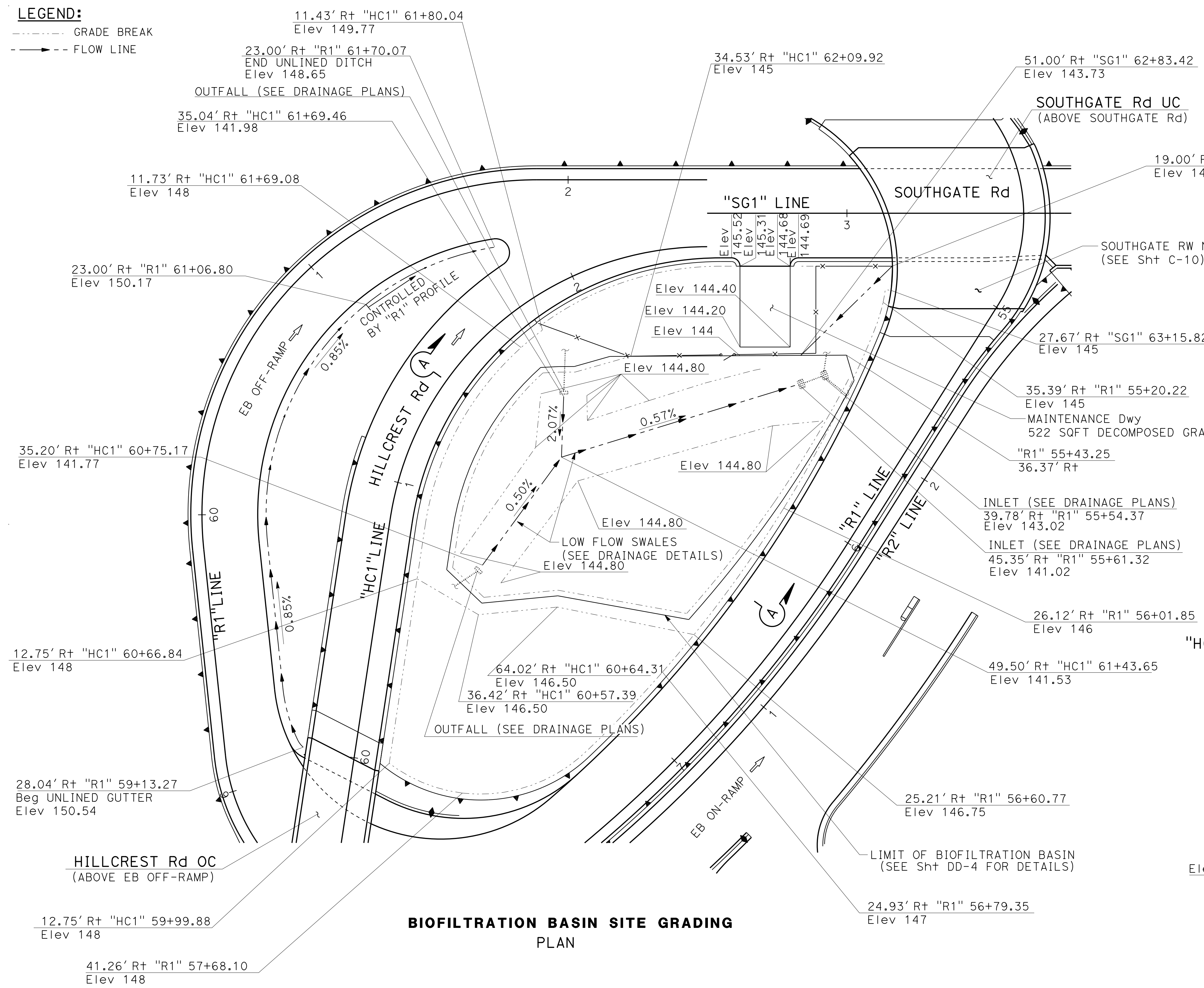
C-7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	37	436


 REGISTERED CIVIL ENGINEER DATE 4-1-19		
5-17-19 PLANS APPROVAL DATE		

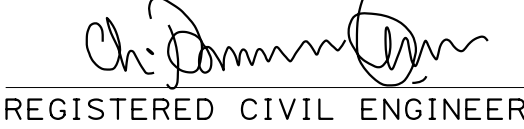
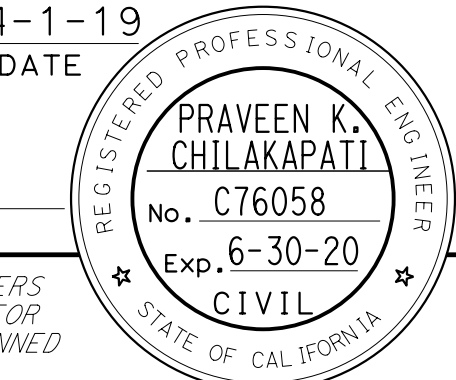
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596	SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103
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LEGEND:
 - - - - - GRADE BREAK
 - - - - - FLOW LINE

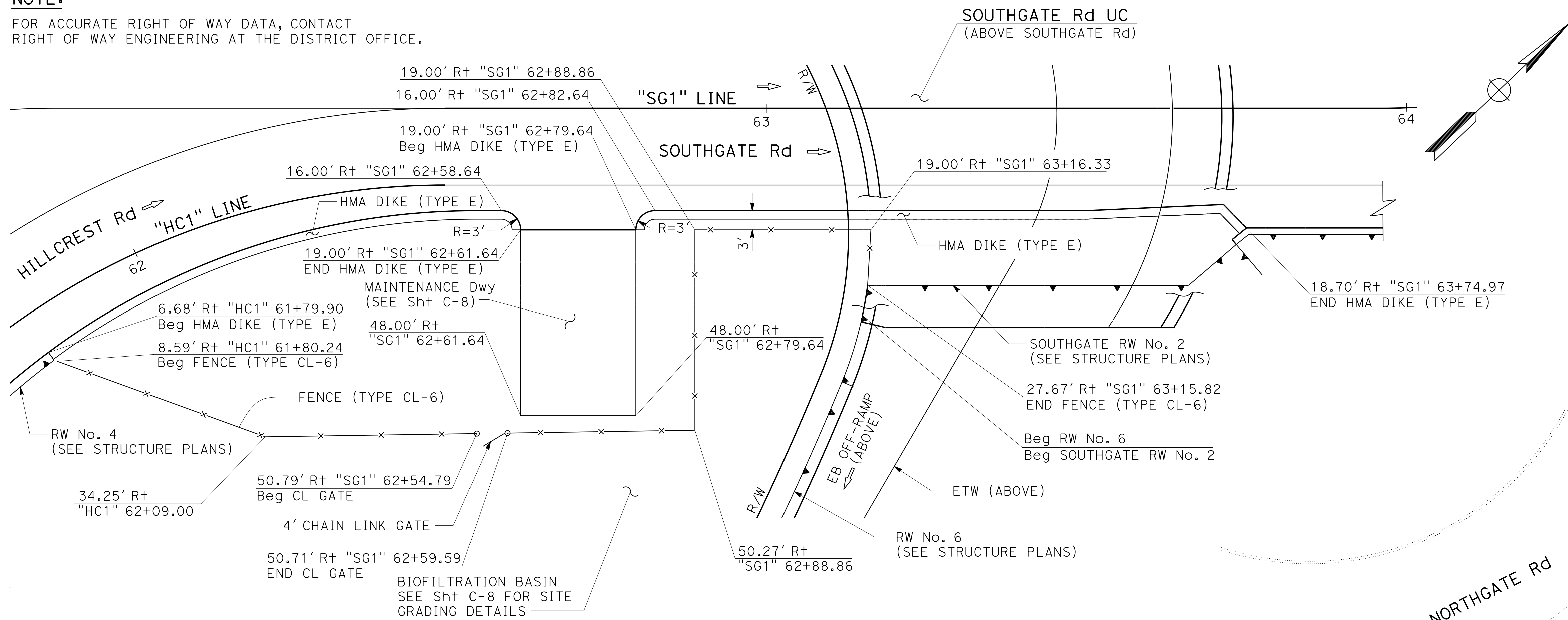


CONSTRUCTION DETAILS
BIOFILTRATION BASIN SITE GRADING
 SCALE: 1" = 20'
C-8

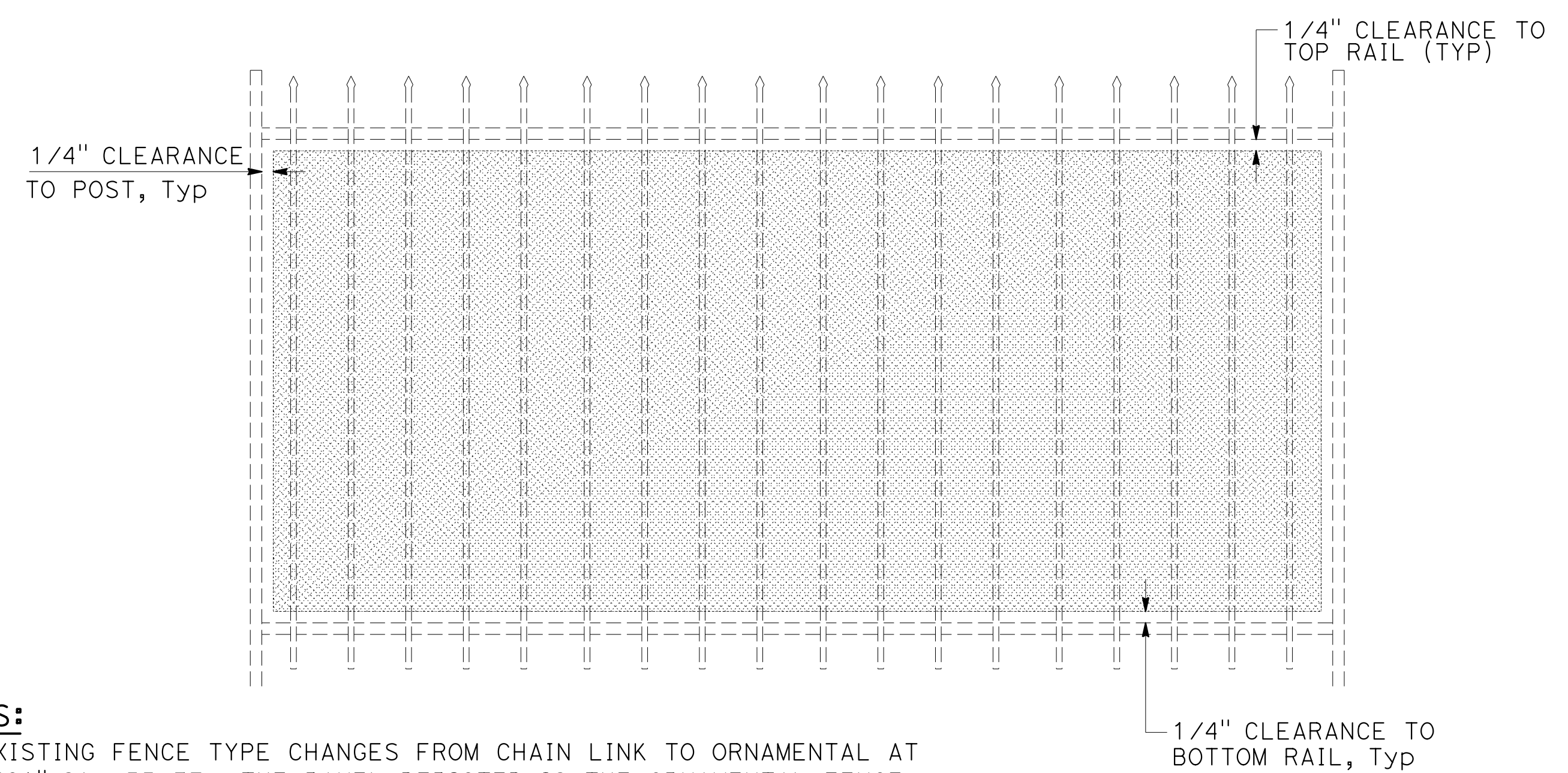
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT	FUNCTIONAL SUPERVISOR	CHECKED BY	DESIGNED BY	TARYN PASCUA	REVISOR	DATE	REVISED BY	DATE	REVISION
	INGRID V. SUPIT	INGRID V. SUPIT	INGRID V. SUPIT	INGRID V. SUPIT	INGRID V. SUPIT	INGRID V. SUPIT	3-6-19	INGRID V. SUPIT	10-31-18	3-6-19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	38	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

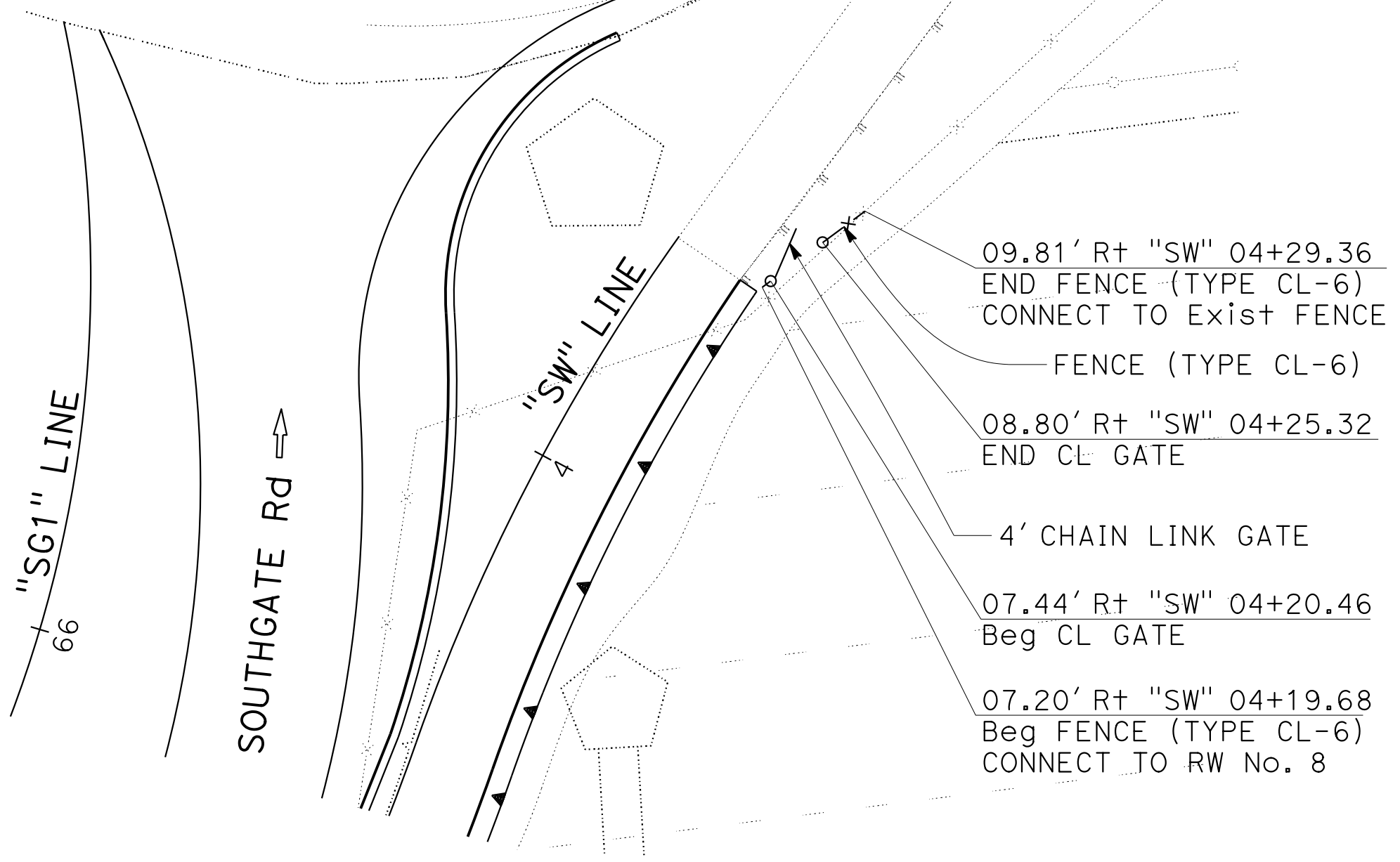


**BIOFILTRATION BASIN
 FENCING LAYOUT**



NOTES:
 1. EXISTING FENCE TYPE CHANGES FROM CHAIN LINK TO ORNAMENTAL AT
 "HC1" Sta 55+37. THE PANEL DEPICTED IS THE ORNAMENTAL FENCE;
 FOR CHAIN LINK FENCE INSTALL PRIVACY FENCE PANELS WITH 2"
 CLEARANCE ABOVE EXISTING GROUND.


PRIVACY FENCE PANELS



**SOUTHGATE PEDESTRIAN PATH
 FENCING LAYOUT**

CONSTRUCTION DETAILS

SCALE: 1" = 10'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	INGRID V. SUPIT	CONSULTANT FUNCTIONAL SUPERVISOR	CHECKED BY	CALCULATED/DESIGNED BY	TARYN PASCUA	REVISOR	TB	TP
			PRAVEEN CHILAKAPATI				11-5-18	2-3-19

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: INGRID SUPIT
 CHECKED BY: INGRID SUPIT
 REVISIONS: TP 3-6-19, KB 4-26-18

NOTE:
 FOR DETAILS NOT SHOWN, SEE LAYOUT SHEETS,
 TYPICAL CROSS SECTION SHEETS AND CONTOUR
 GRADING SHEETS.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	39	436

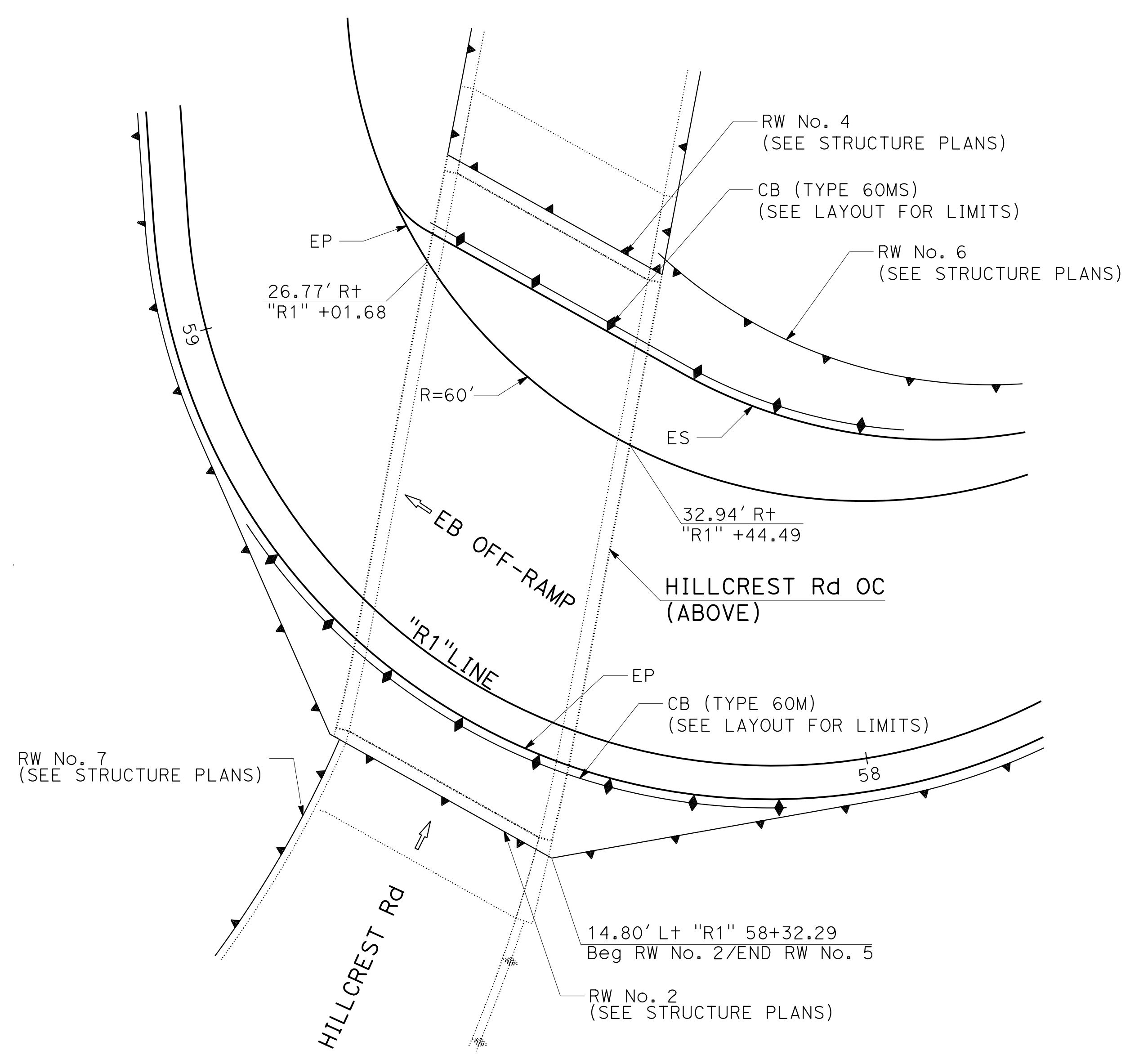
REGISTERED CIVIL ENGINEER: *Praveen K. Chilakapati* DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

REGISTERED PROFESSIONAL ENGINEER
 PRAVEEN K. CHILAKAPATI
 No. C76058
 Exp. 6-30-20
 CIVIL
 STATE OF CALIFORNIA

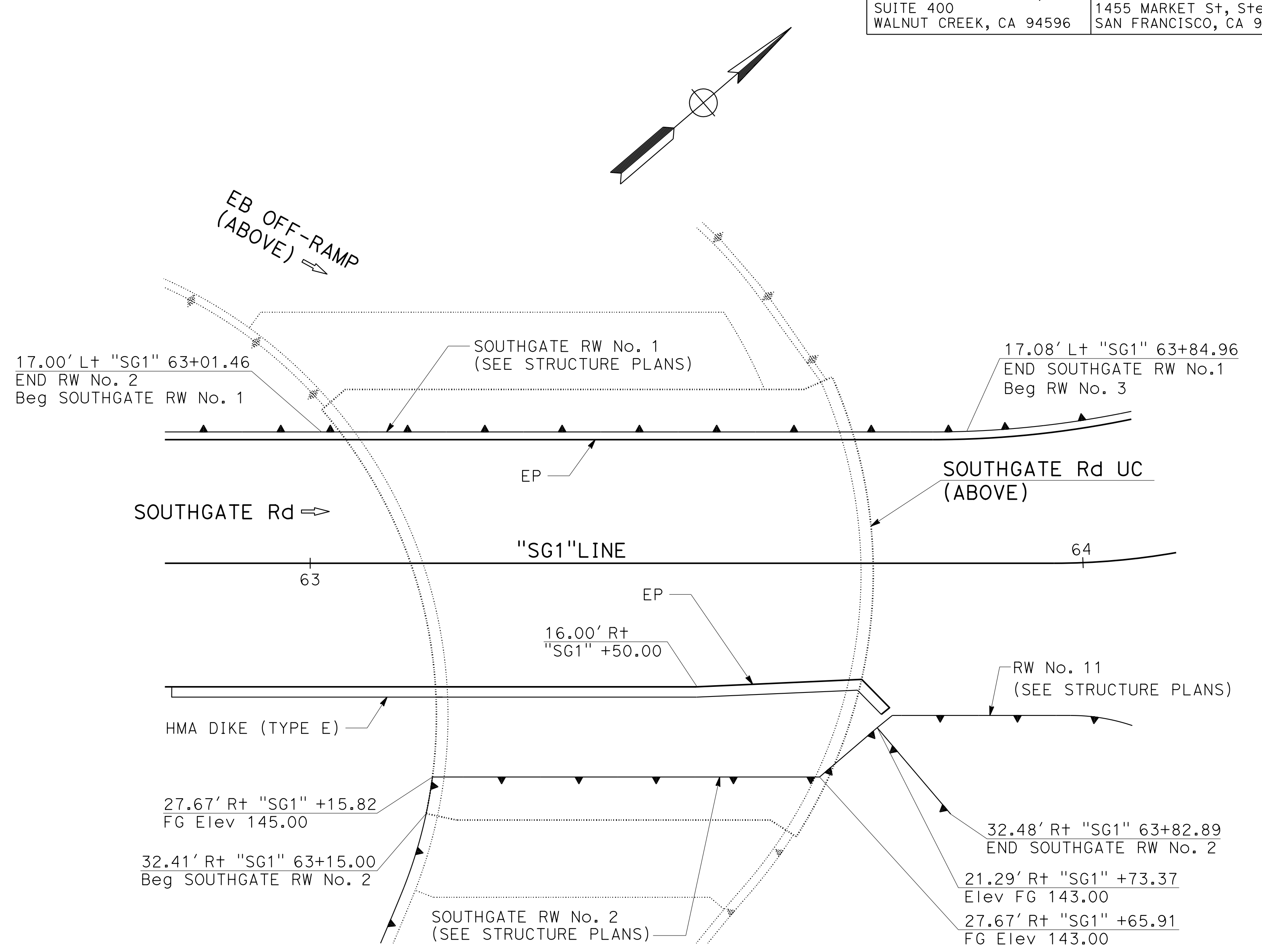
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



HILLCREST ROAD OC



SOUTHGATE ROAD UC

CONSTRUCTION DETAILS

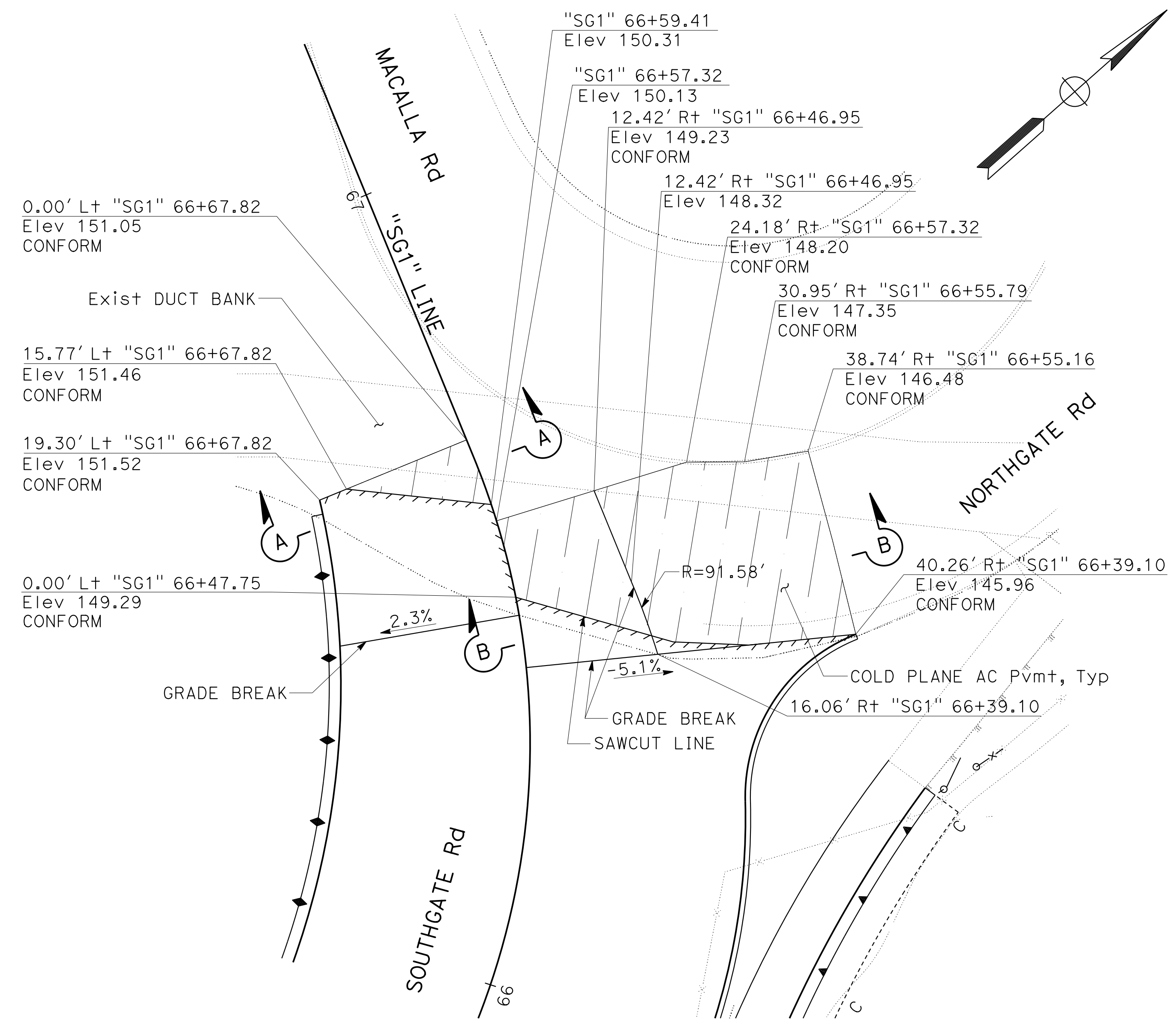
SCALE: 1" = 10'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 TARYN PASCUA
 PRABEEN CHILAKAPATI
 REVISIONS: TB 1-9-19, IK 11-12-18
 REVISIONS: REVISOR, DATE

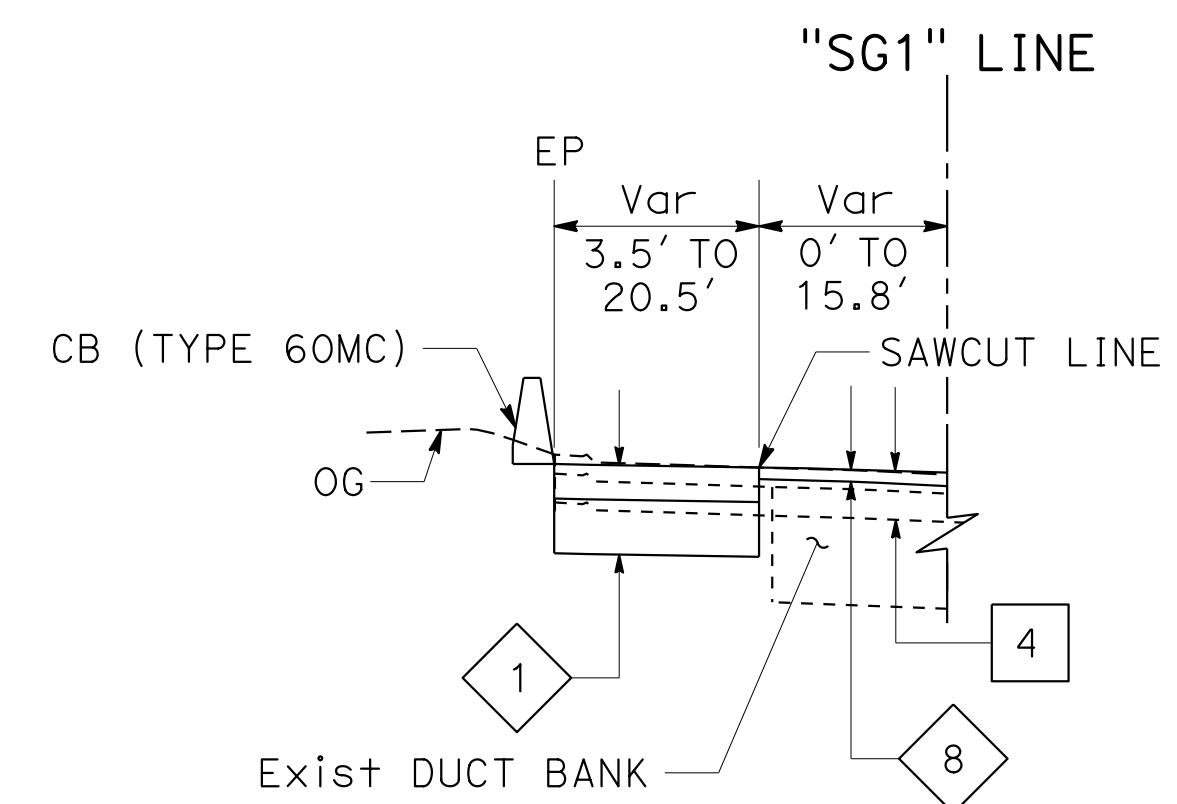
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	40	436

REGISTERED CIVIL ENGINEER: **Praveen K. Chilakapati** No. C76058 Exp. 6-30-20
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

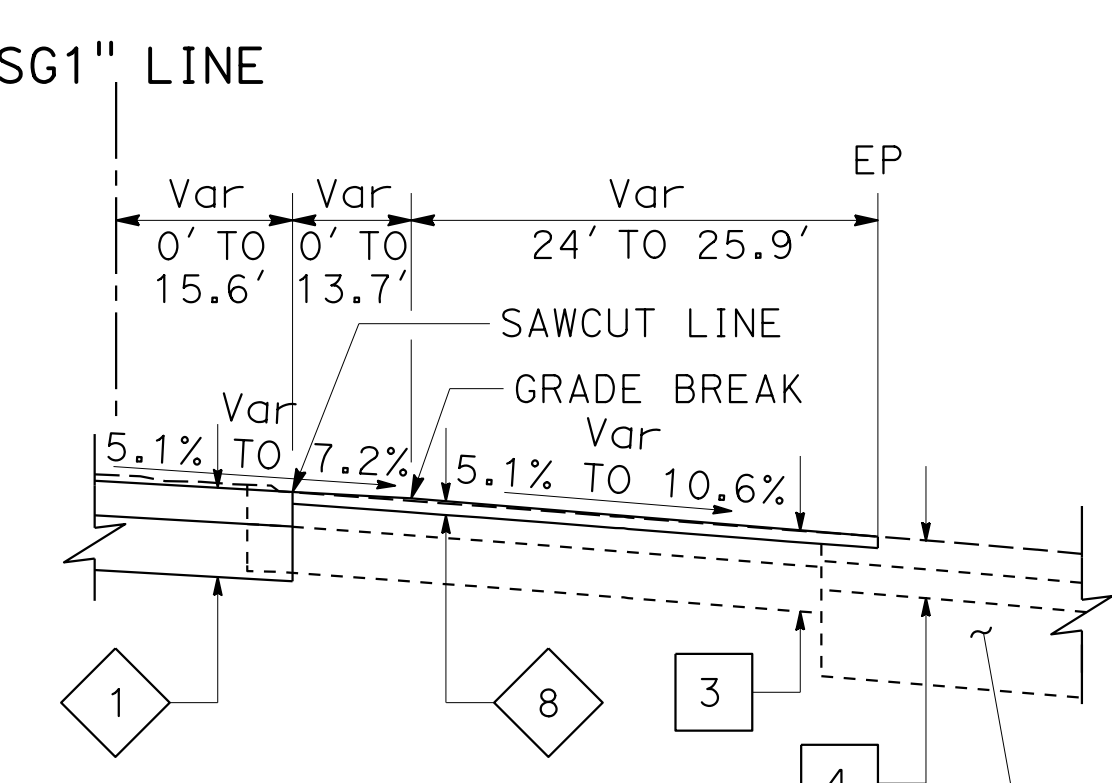
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400, WALNUT CREEK, CA 94596
 SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200, SAN FRANCISCO, CA 94103



PLAN



SECTION A-A
 "SG1" 66+59.41 TO 66+67.82

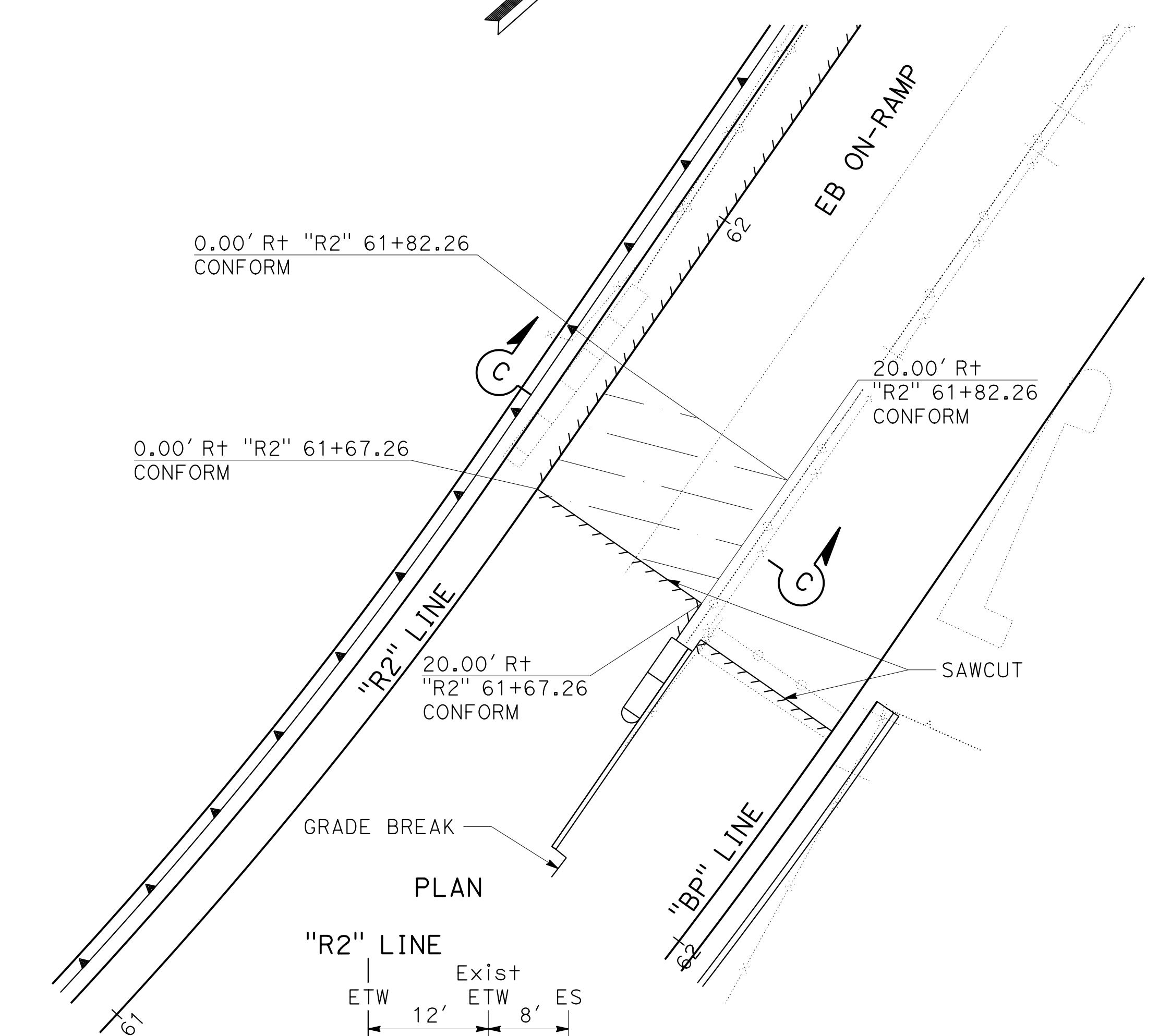


SECTION B-B
 "SG1" 66+39.10 TO 66+57.32

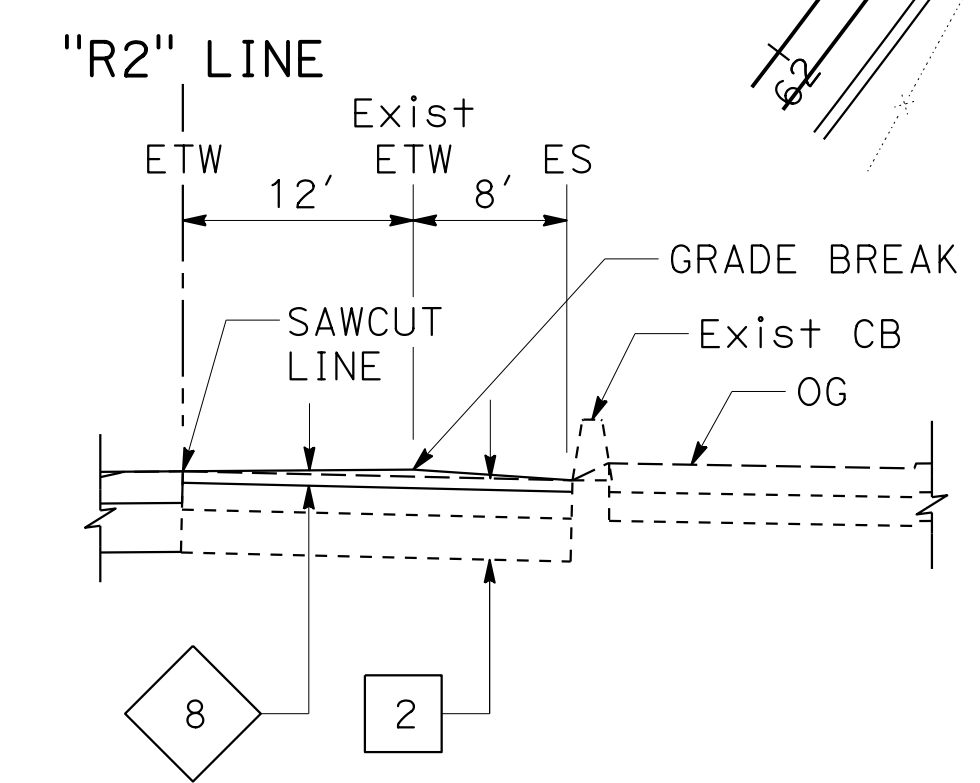
MACALLA Rd CONFORM

NOTE:
 SEE X-1 FOR Exist TYPICAL PAVEMENT STRUCTURE SECTIONS
 NEW TYPICAL PAVEMENT STRUCTURE SECTION:
 (THIS SHEET ONLY)

8 0.20' COLD PLANE AC Pvm+
 Var 0.20' TO 0.25' HMA (TYPE A)



PLAN



SECTION C-C
 "R2" 61+67.26 TO 61+82.26

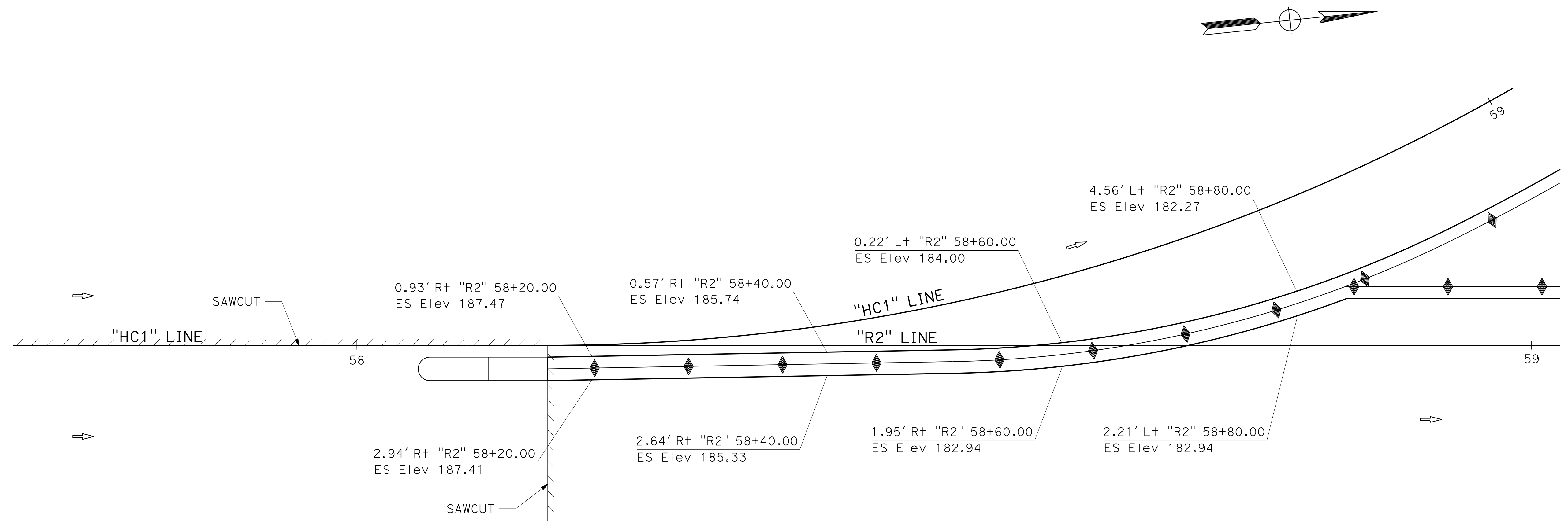
EB ON-RAMP CONFORM

CONSTRUCTION DETAILS

SCALE: 1' = 10'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	41	436
			4-1-19	DATE	
REGISTERED CIVIL ENGINEER			DATE		
5-17-19			PLANS APPROVAL DATE		
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT	FUNCTIONAL SUPERVISOR	CALCULATED- DESIGNED BY	REVISOR	DATE
	INGRID V. SUPIT	INGRID V. SUPIT	CHAI WAI NG	CHAI WAI NG	4-4-19



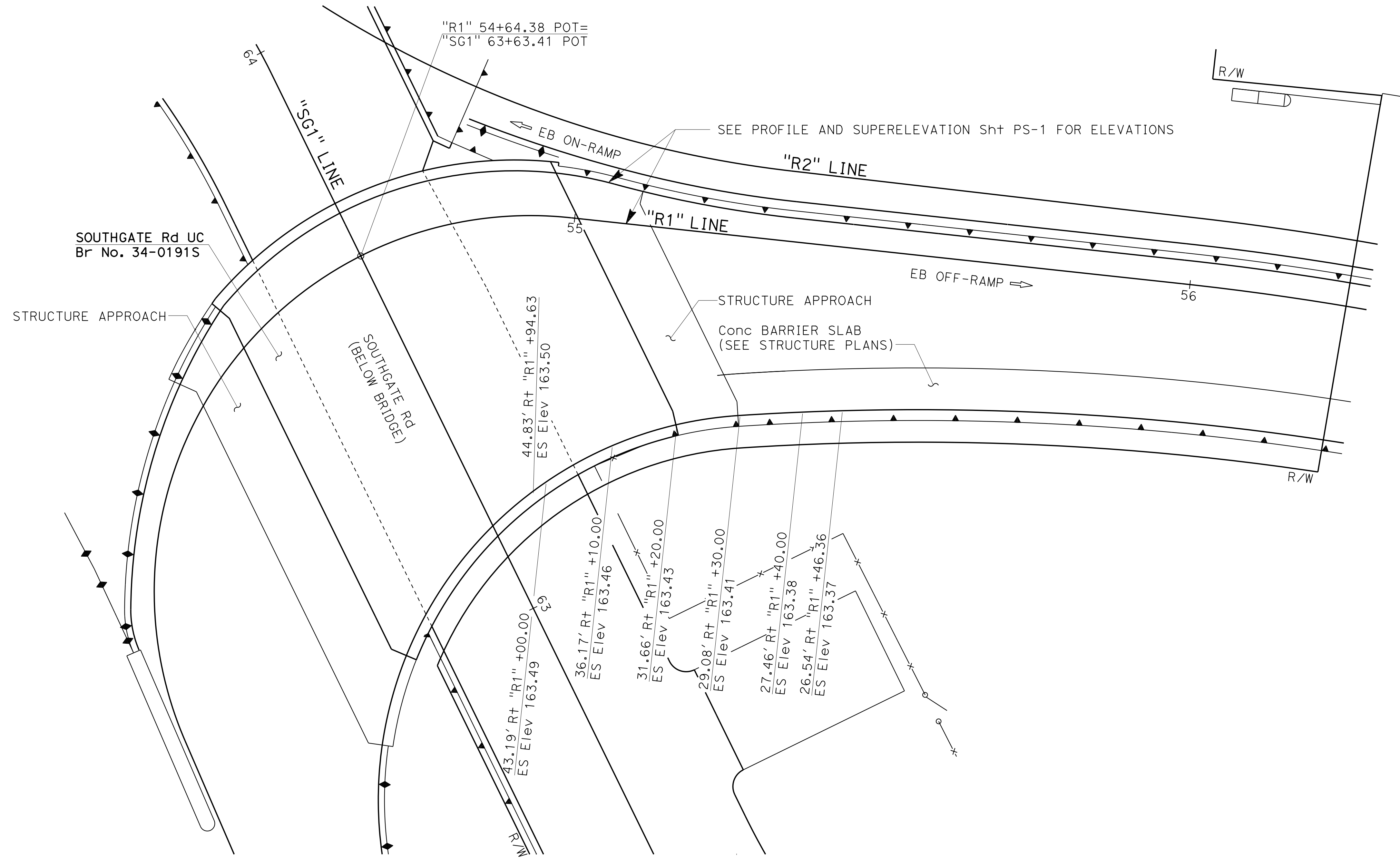
CONSTRUCTION DETAILS
PAVEMENT ELEVATIONS
 SCALE: 1" = 5'

C-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	PRAVEEN CHILAKAPATI	REVISOR	IK
Caltrans	INGRID V. SUPIT	INGRID SUPIT	CHECKED BY	DATE REVISED	1-30-19	

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

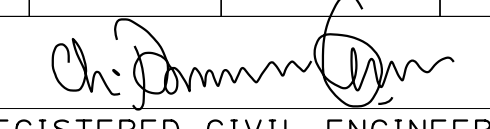
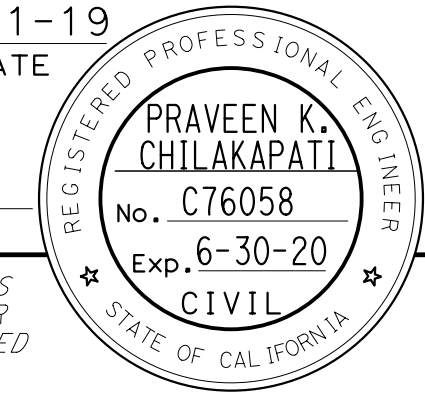
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	42	436
			REGISTERED CIVIL ENGINEER	4-1-19	DATE
			PLANS APPROVAL DATE	5-17-19	
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

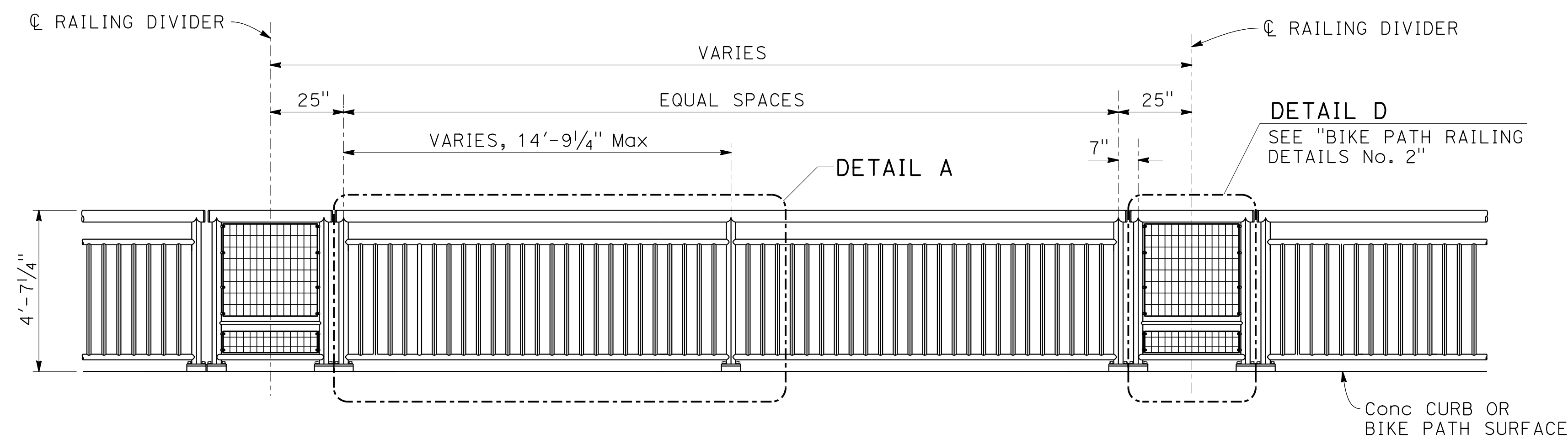


**CONSTRUCTION DETAILS
PAVEMENT ELEVATIONS**

SCALE: 1" = 10'

C-13

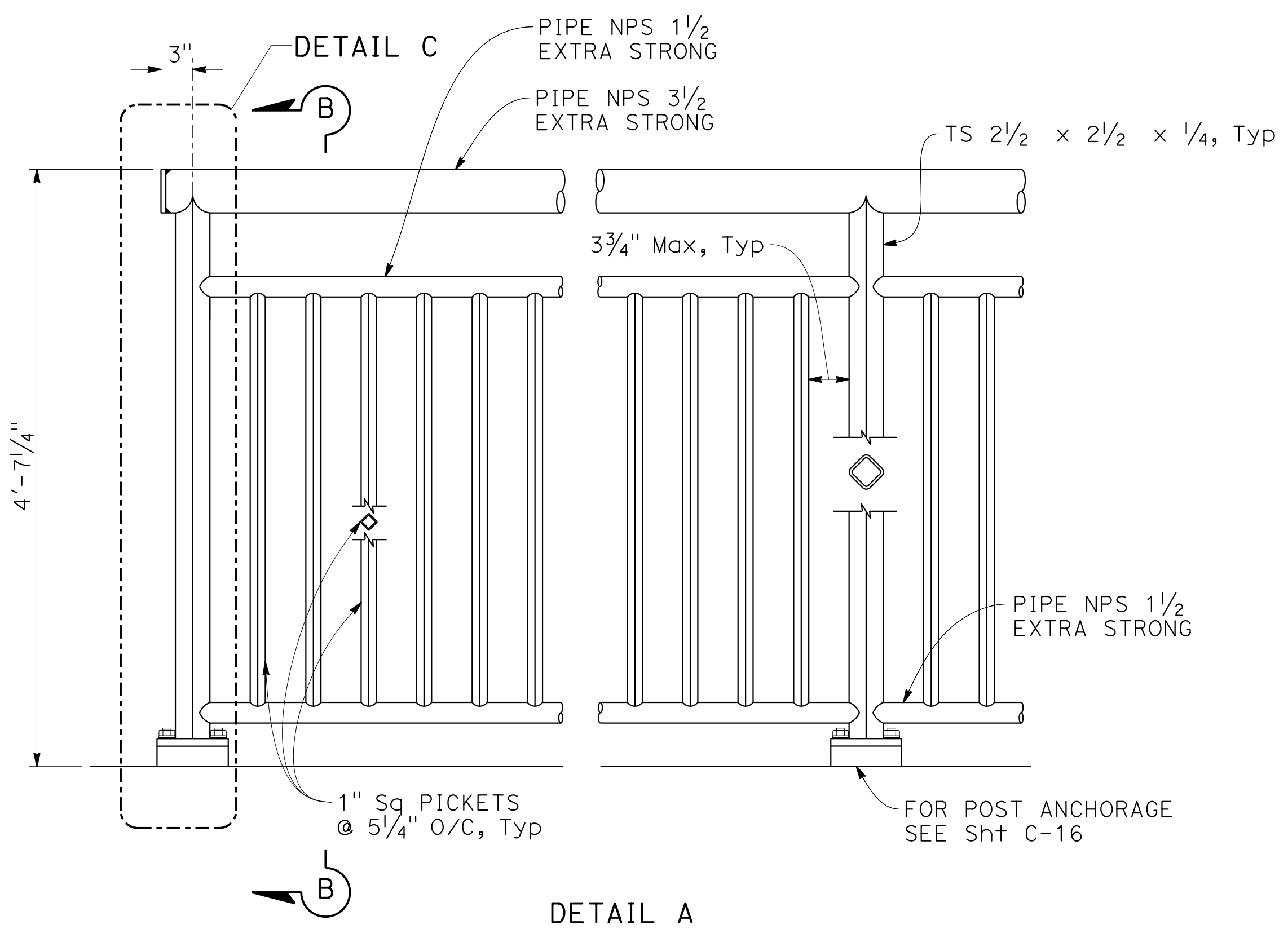
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	43	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



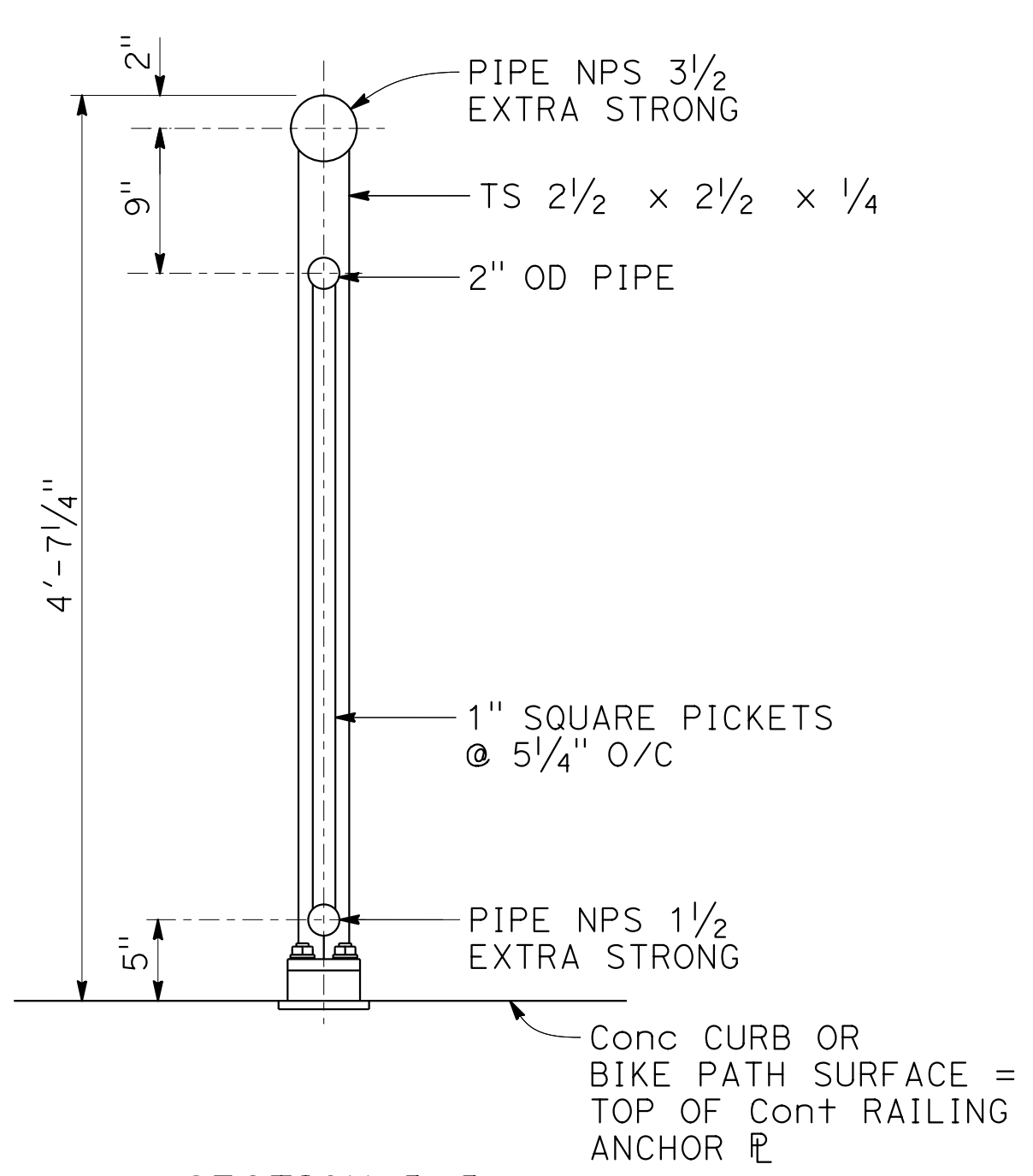
BIKE PATH RAILING - TYPICAL ELEVATION

NOTES:

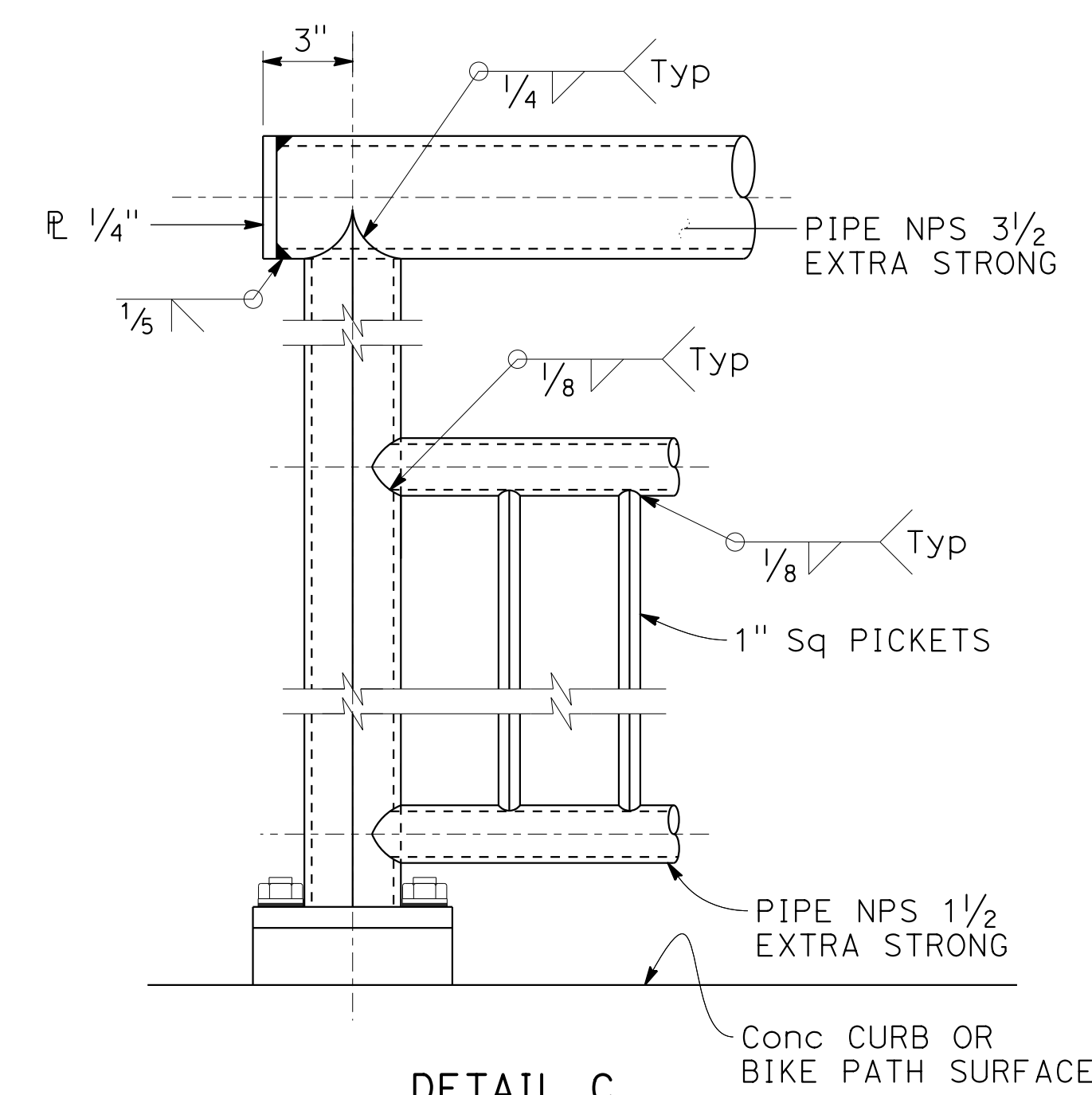
- ALL METAL (EXCEPT STAINLESS STEEL) PARTS OF RAILING ASSEMBLY INCLUDING GRILL SHALL BE GALVANIZED AND COATED.
- RAILING POSTS SHALL COMFORM TO ASTM A500 GRADE C (Fy = 50,000 psi).
- RAILING SHALL CONFORM TO VERTICAL AND HORIZONTAL ALIGNMENT OF BIKE PATH.
- POSTS AND PICKETS SHALL BE VERTICAL. RAILS SHALL BE PARALLEL TO TOP OF BIKE PATH. RAILING GRILL VERTICAL BARS SHALL BE PARALLEL TO RAILING POSTS AND GRILL HORIZONTAL BARS SHALL BE PARALLEL TO RAILS.
- RAILS SHALL BE SHOP BENT OR FABRICATED TO FIT HORIZONTAL CURVE WHEN RADIUS IS LESS THAN 82 FEET.
- ALL EXPOSED WELDS SHALL BE GROUND SMOOTH.
- WELDING TO STAINLESS STEEL SHALL BE IN ACCORDANCE WITH AWS D1.6-1999.
- SHIM STACK BENEATH POST BASE PLATE TO BE ADJUSTED DURING INSTALLATION AS REQUIRED TO MAINTAIN RAILING ALIGNMENT. FULL WIDTH STAINLESS STEEL SHIMS SHALL BE UTILIZED, TAPERED AS NECESSARY TO MAINTAIN POST VERTICALITY.



DETAIL A



SECTION B-B





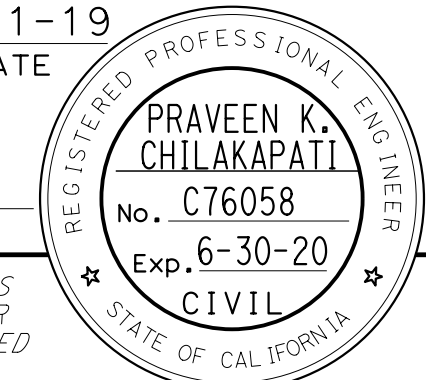
DETAIL C

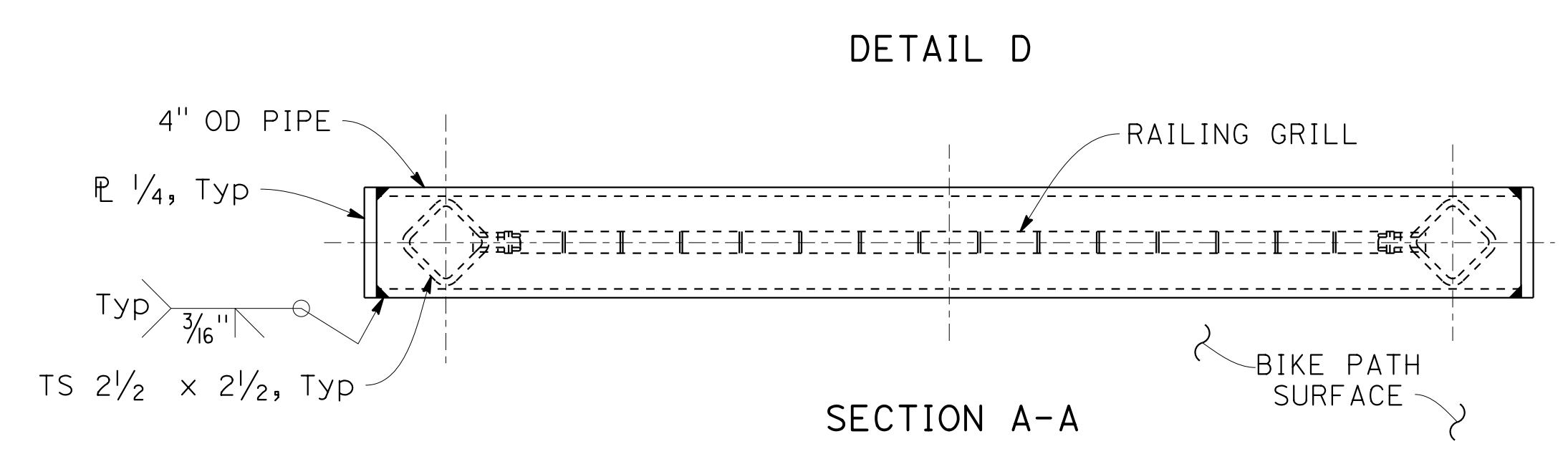
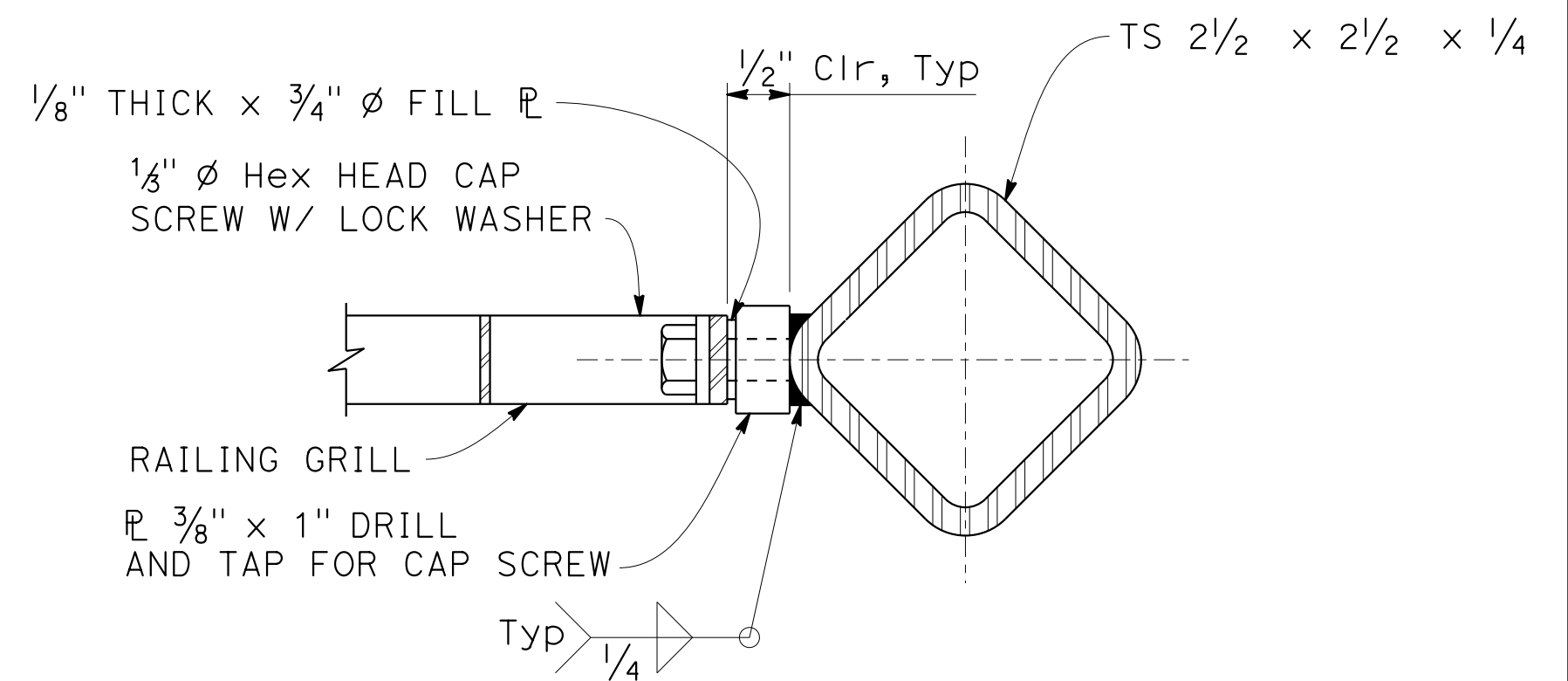
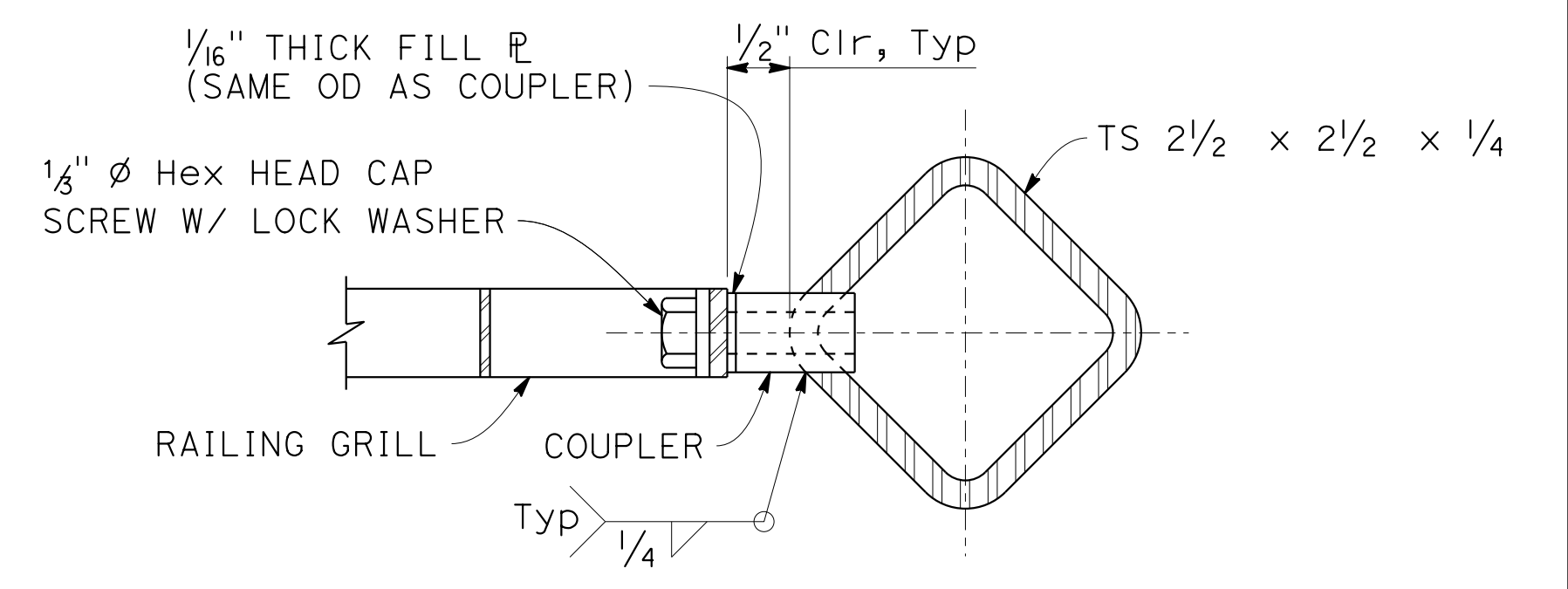
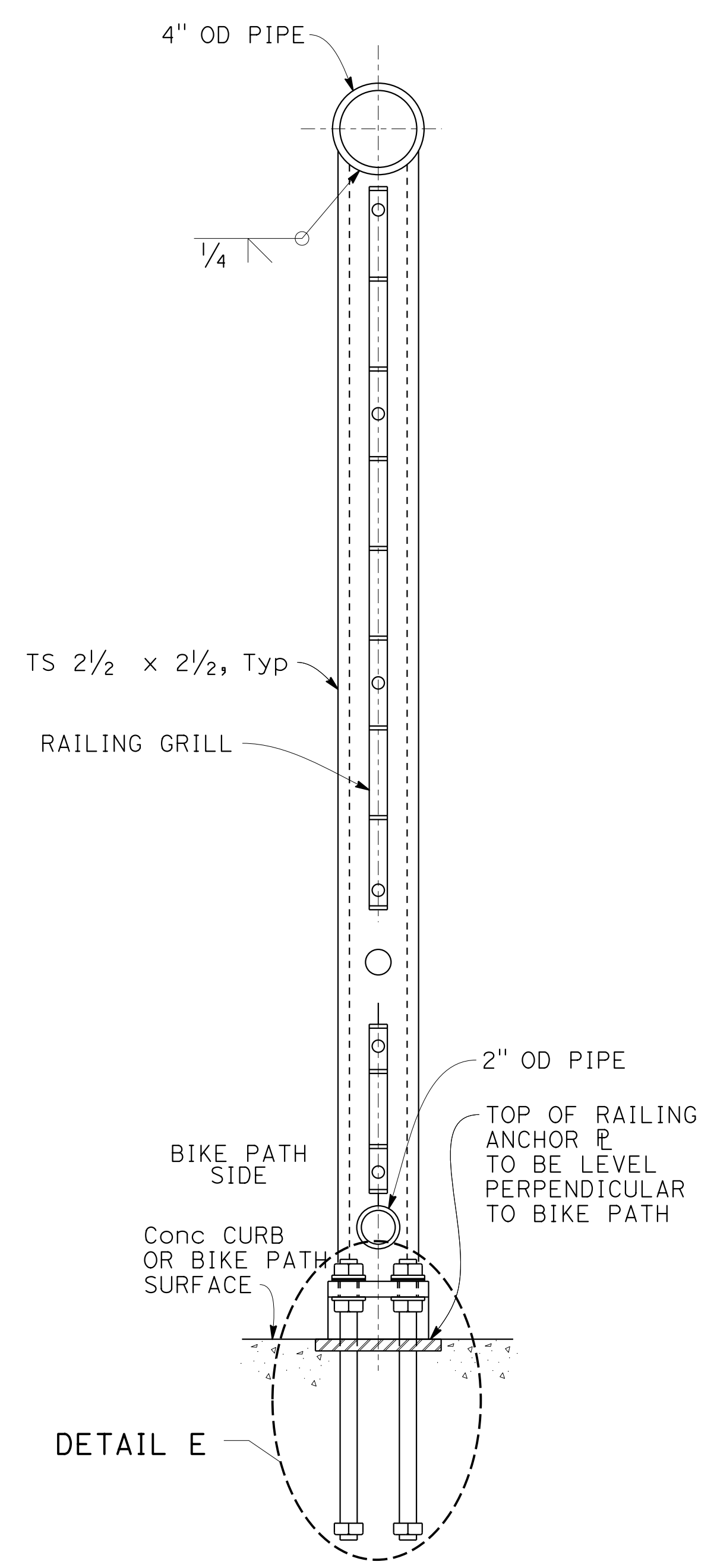
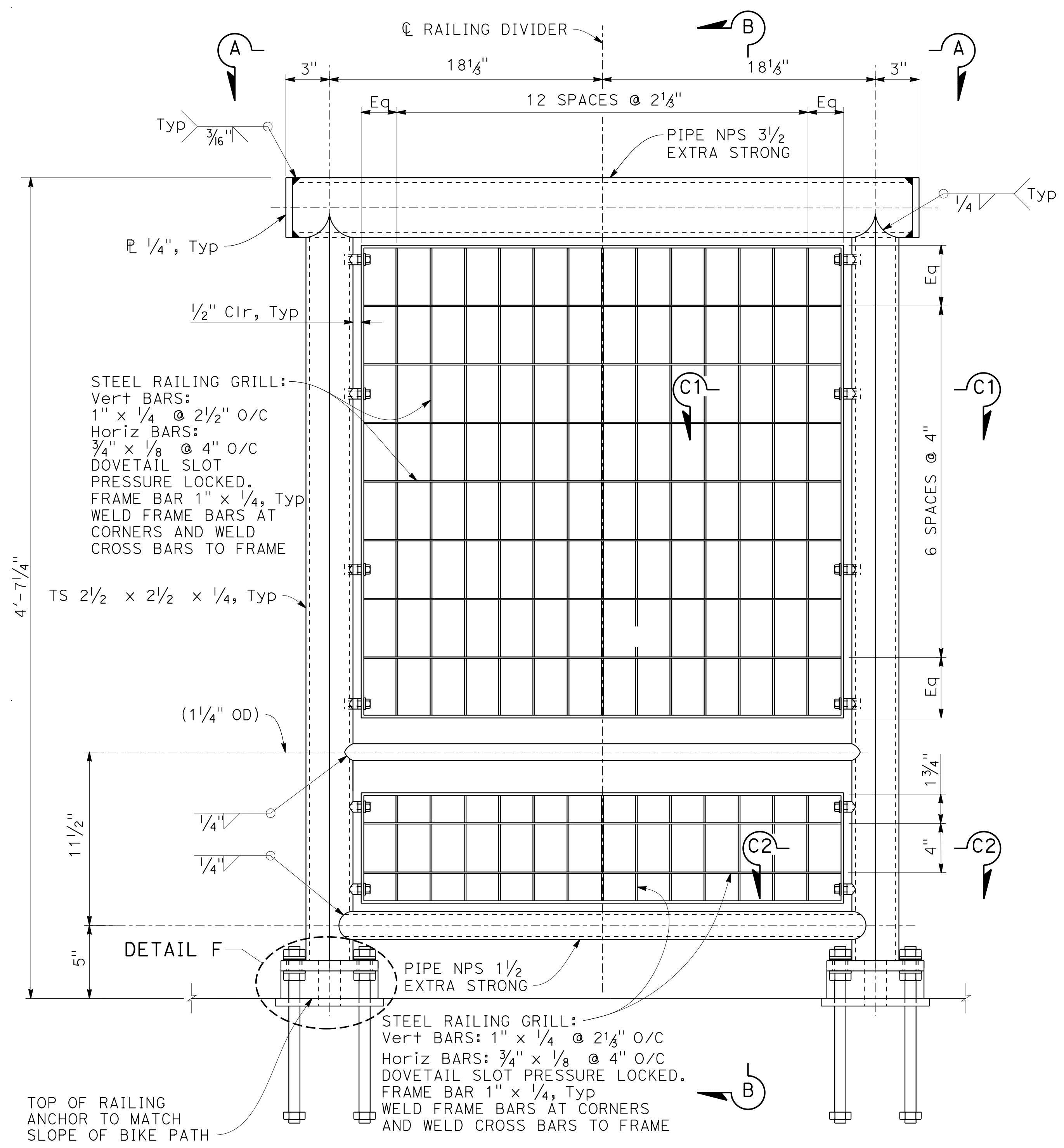
CONSTRUCTION DETAILS
BIKE PATH RAILING DETAIL No. 1

NO SCALE

C-14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	REVISOR	DATE
	INGRID V. SUPIT	IK	4-23-18
	CHECKED BY	DESIGNED BY	
		PRAVEEN CHILAKAPATI	
		INGRID SUPIT	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	44	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



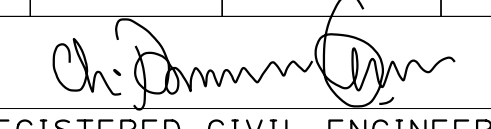
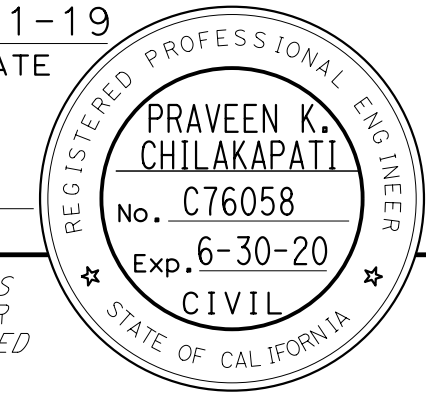
TYPICAL RAILING DIVIDER

CONSTRUCTION DETAILS
BIKE PATH RAILING DETAIL No. 2

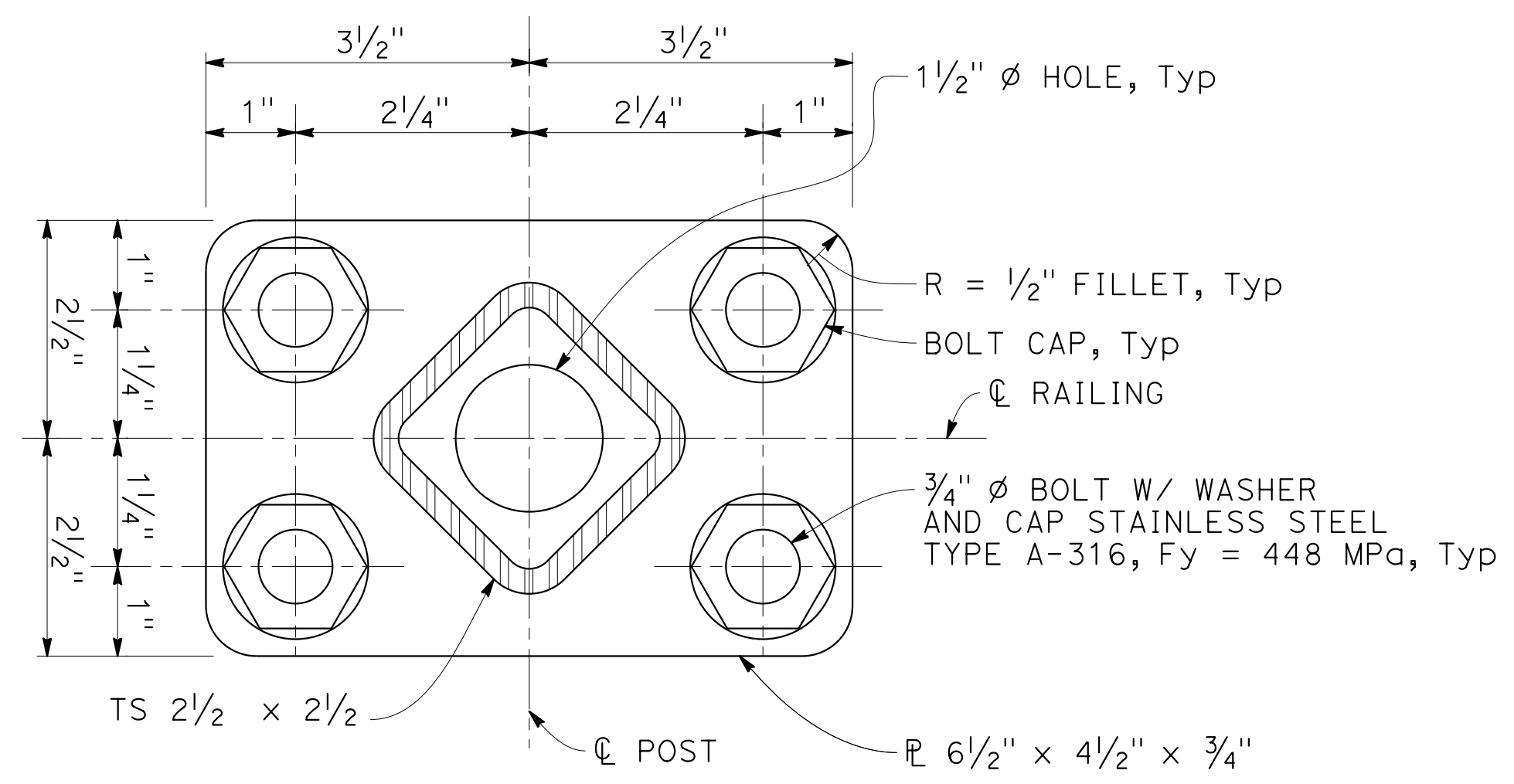
NO SCALE

C-15

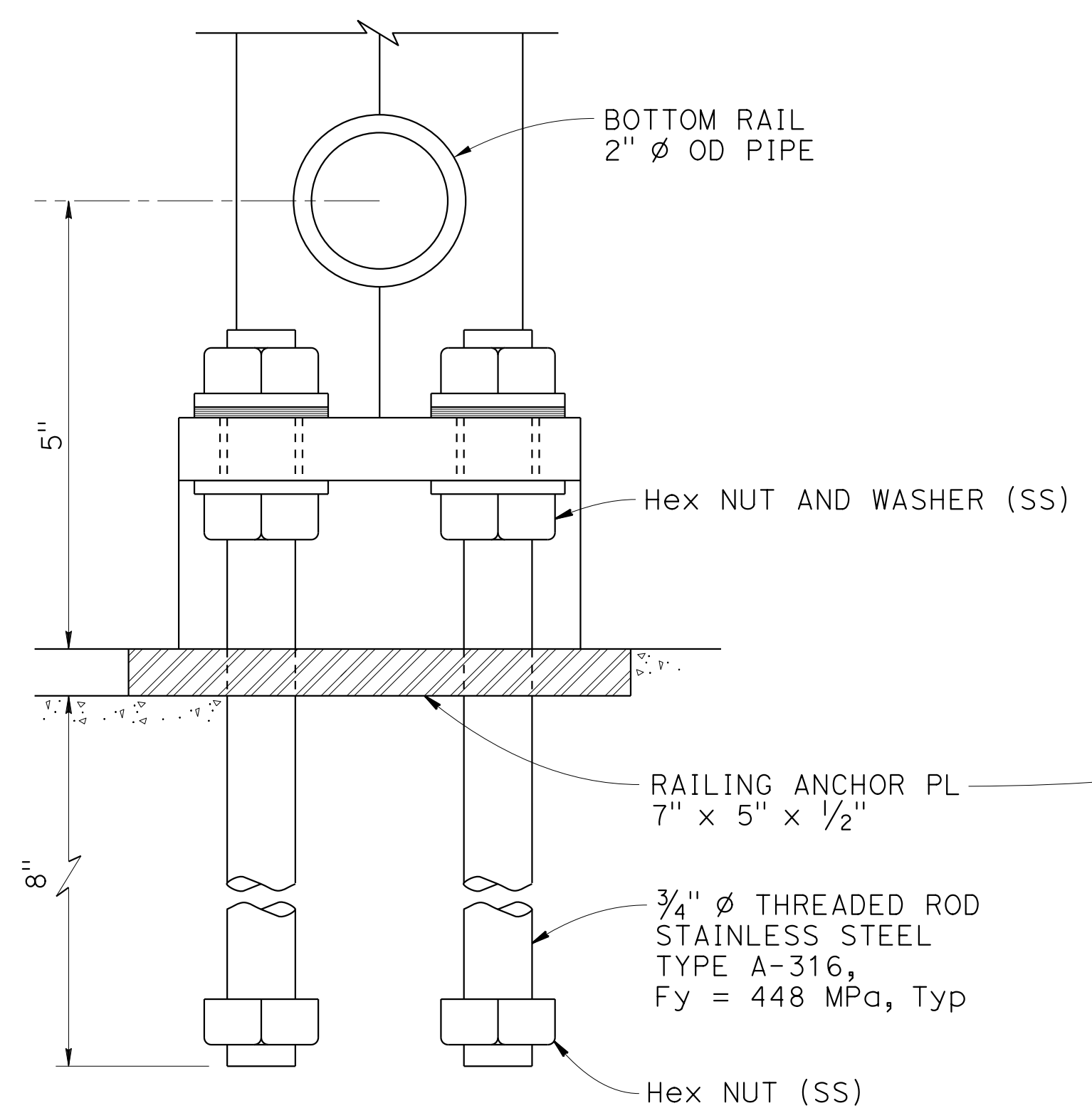
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Et Caltrans®
 CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: INGRID SUPIT
 CHECKED BY:
 PRAVEEN CHILAKAPATI
 INGRID SUPIT
 REVISIONS:
 REVISION NO. REVISION DATE
 1 IK 4-23-18
 2 4-23-18

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	45	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

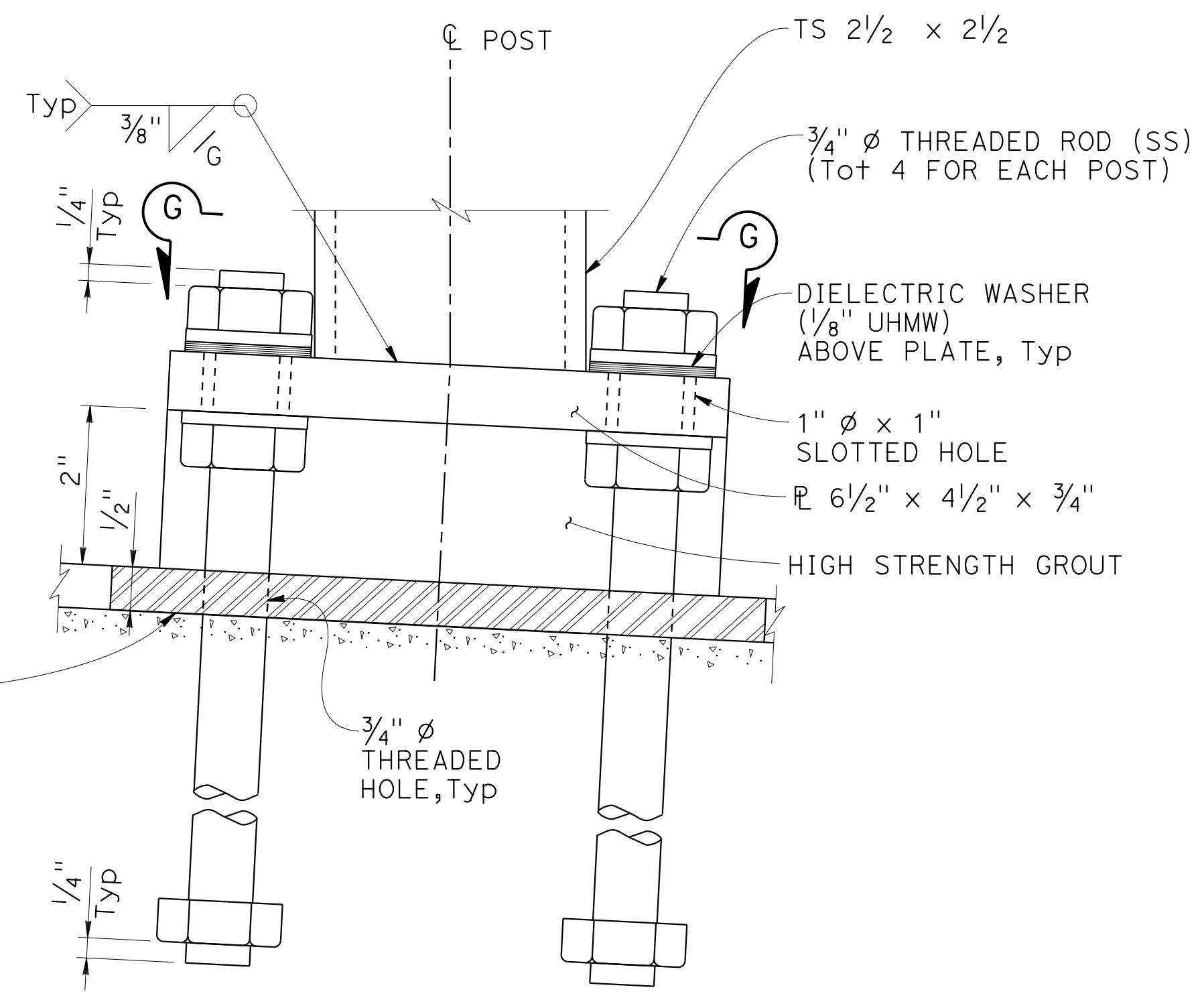
NOTE:
 FOR LOCATION OF DETAILS E AND F,
 SEE "BIKE PATH RAILING DETAILS No. 2" SHEET.



SECTION G-G




DETAIL E



DETAIL F

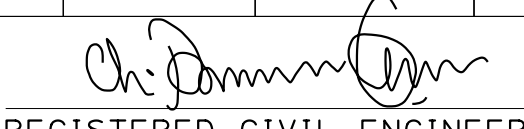
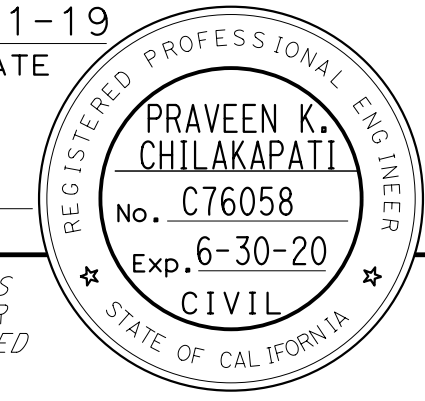
TYPICAL POST ANCHORAGE

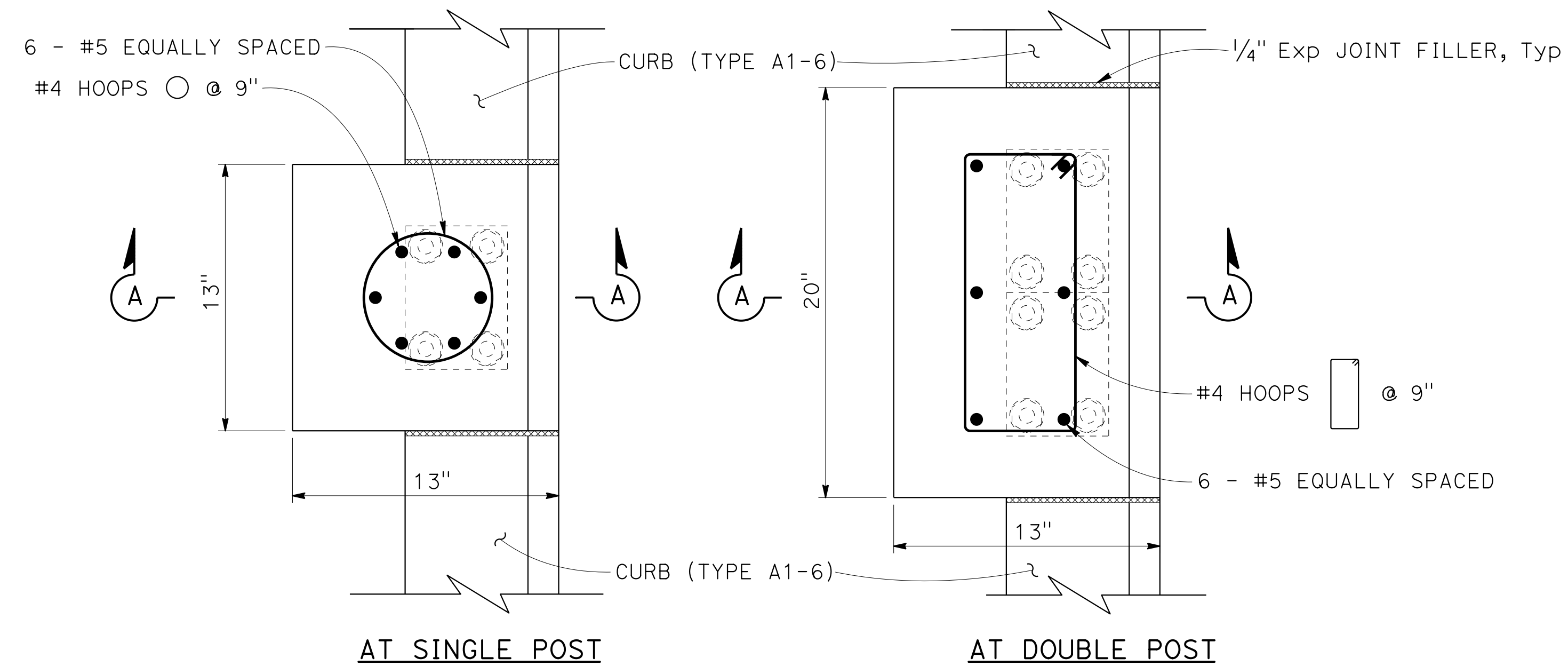
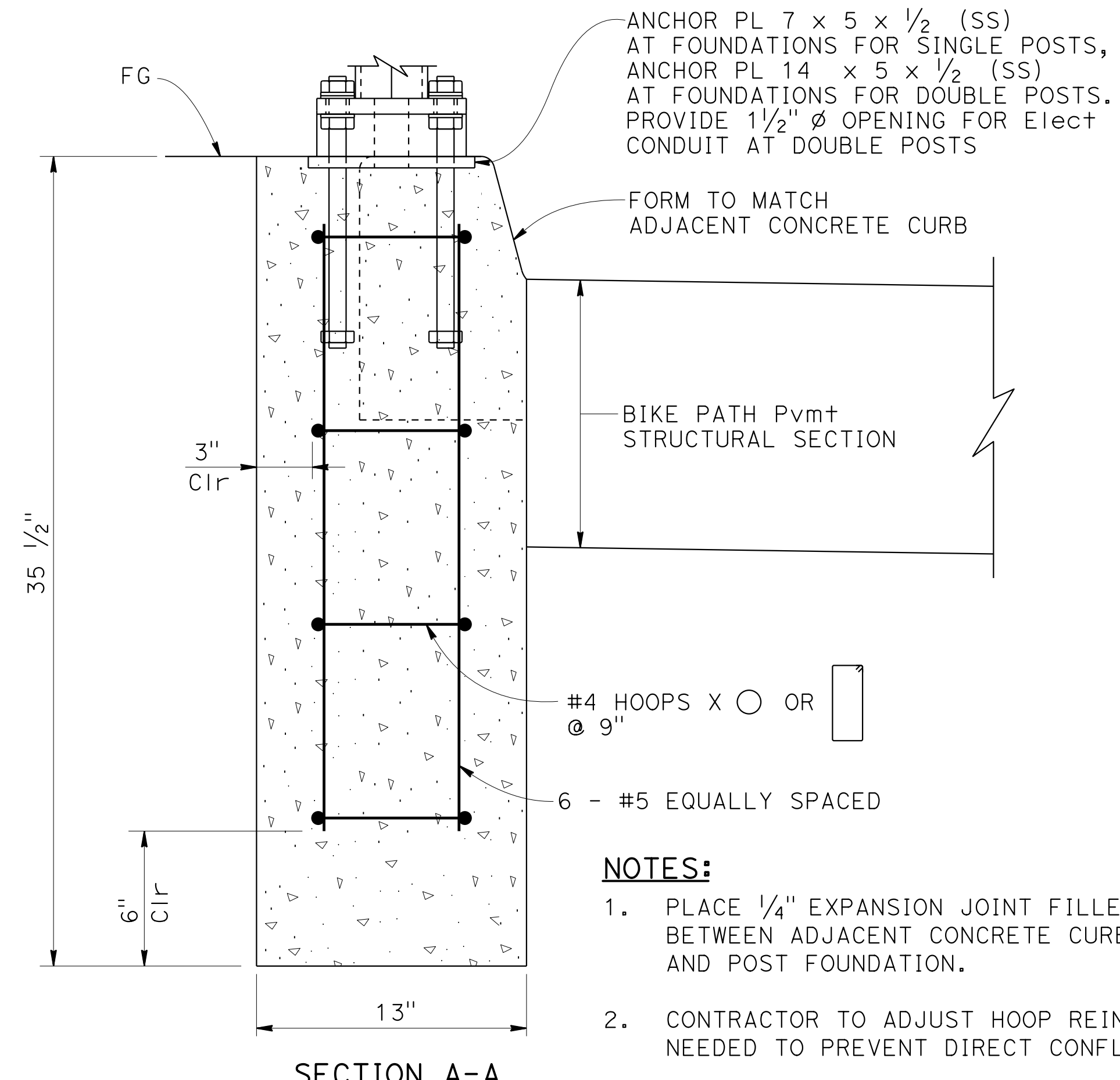
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: PRAVEEN CHILAKAPATI
 CHECKED BY: INGRID SUPIT
 REVISED BY: IK
 DATE REVISED: 4-23-18

CONSTRUCTION DETAILS
BIKE PATH RAILING DETAIL No. 3

NO SCALE

C-16

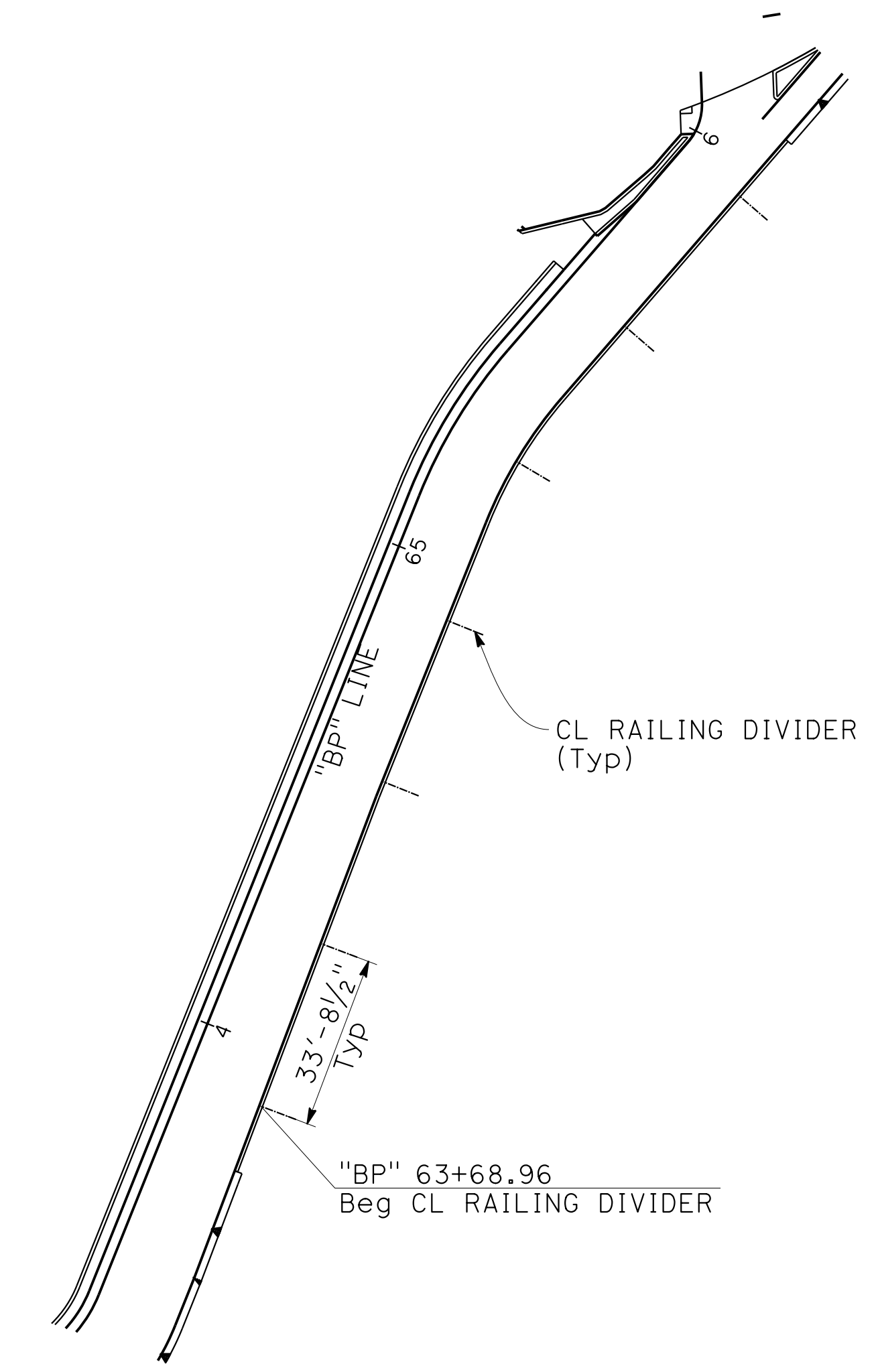
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	46	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



PLAN VIEW

BIKE PATH RAILING POST FOUNDATION

(FOR USE WHEN RAILING POSTS
 ARE LOCATED ADJACENT TO CONCRETE CURB,
 FOR DETAILS NOT SHOWN SEE
 "BIKE PATH RAILING DETAILS" SHEETS)




RAILING DIVIDER SPACING


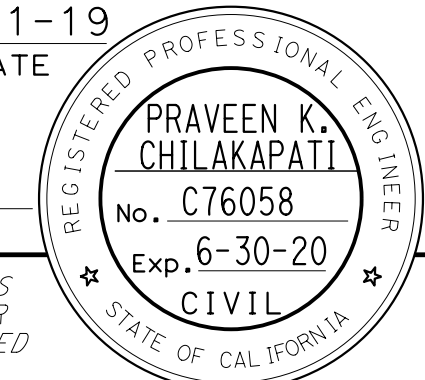
CONSTRUCTION DETAILS
BIKE PATH RAILING DETAIL No. 4

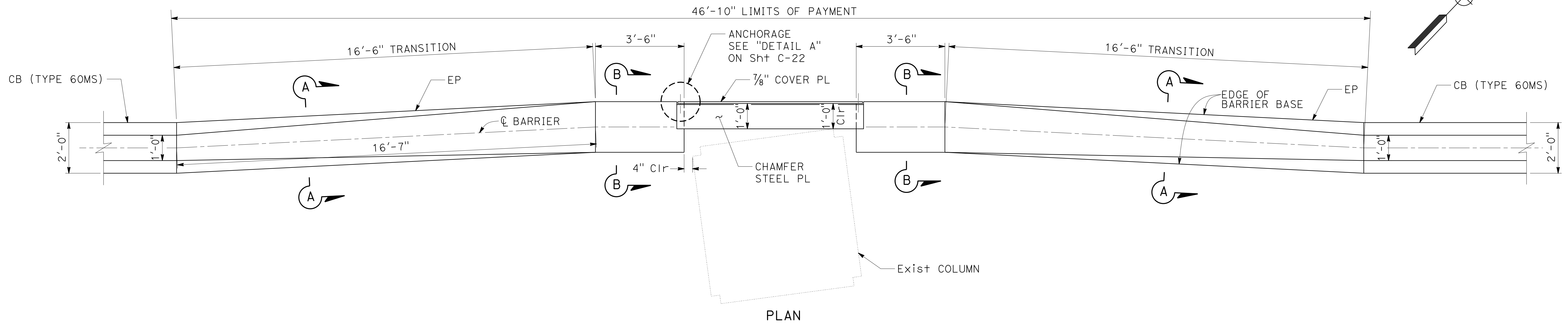
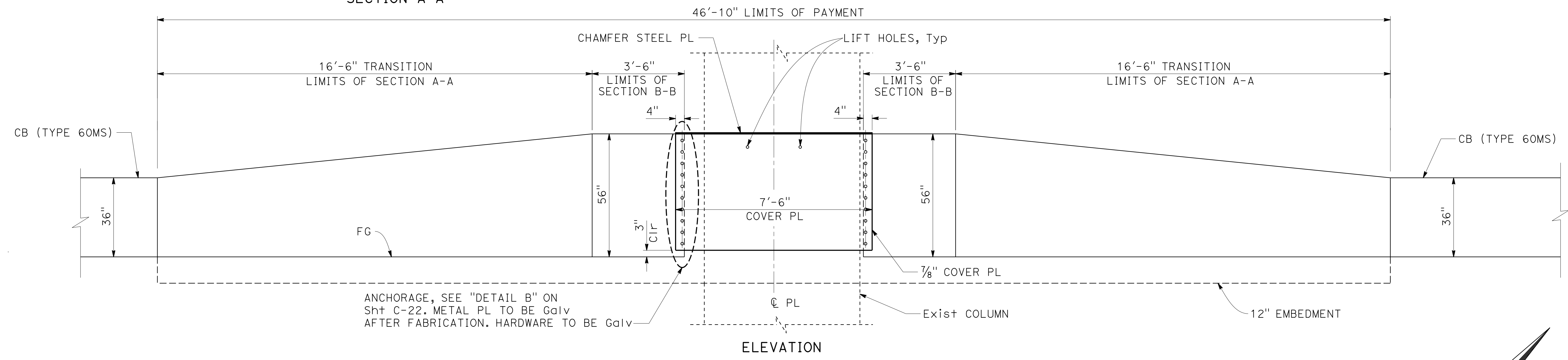
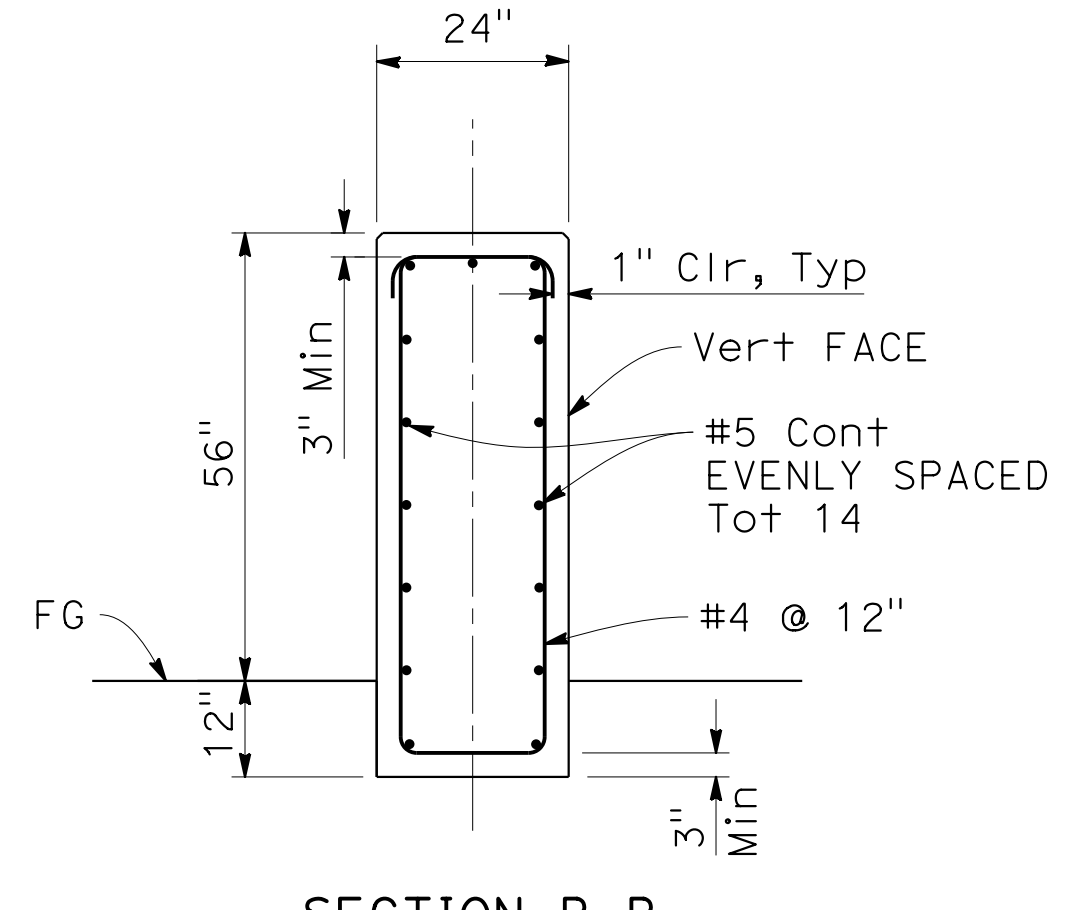
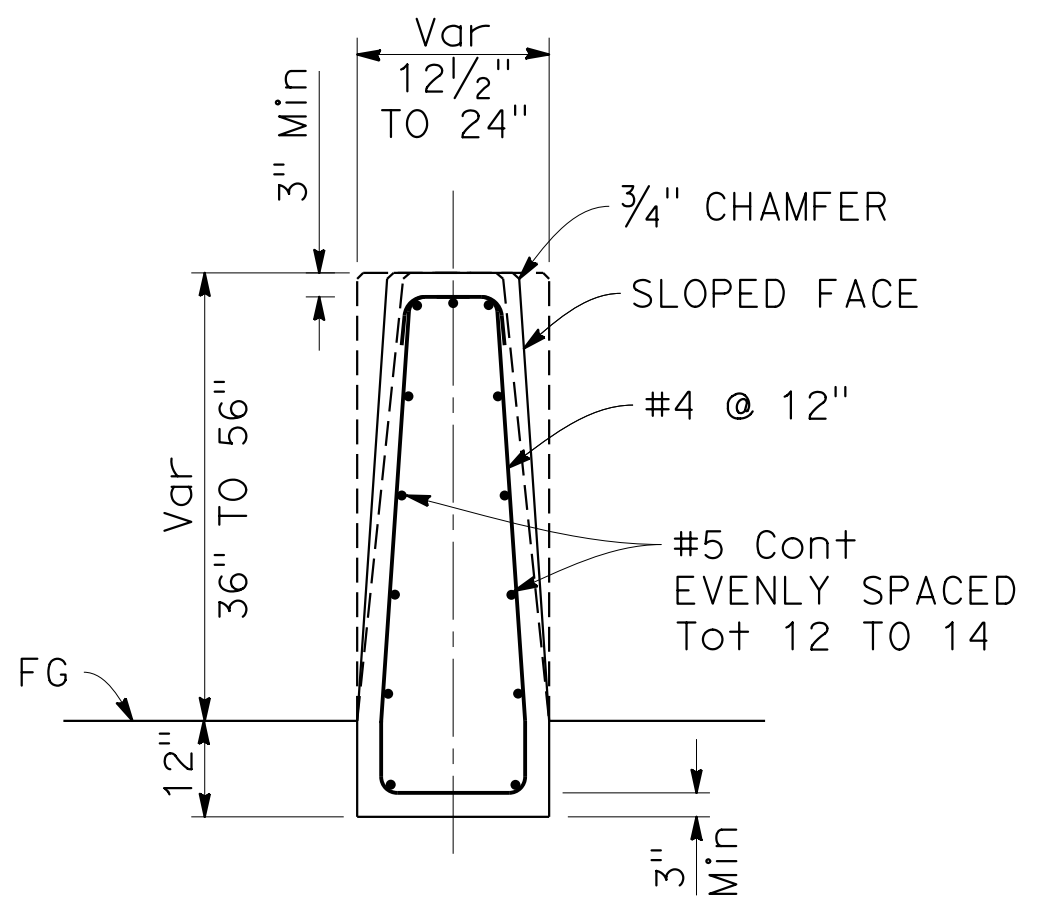
NO SCALE

C-17

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	REVISOR	DATE
	INGRID V. SUPIT	IK	11-12-18
CHECKED BY	DESIGNED BY	REVISOR	DATE
		INGRID SUPIT	11-12-18

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	INGRID V. SUPIT
	CALCULATED-DESIGNED BY	CHECKED BY
Caltrans	DESIGNED BY	PRAVEEN CHILAKAPATI
	DESIGNED BY	TAPAN MEHTA
REVISIONS	REVISOR	DATE
1	IK	10-23-18
2	IK	4-25-18

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	47	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



CONCRETE BARRIER (TYPE 60R Mod)
 "E" 51+74.72 TO "E" 52+21.41

CONSTRUCTION DETAILS

NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: PRAVEEN CHILAKAPATI
 CHECKED BY: TAPAN MEHTA
 REVISIONS:
 IK 10-9-18
 IK 4-25-18
 REVISOR: PRAVEEN CHILAKAPATI
 DATE: 10-9-18

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	48	436

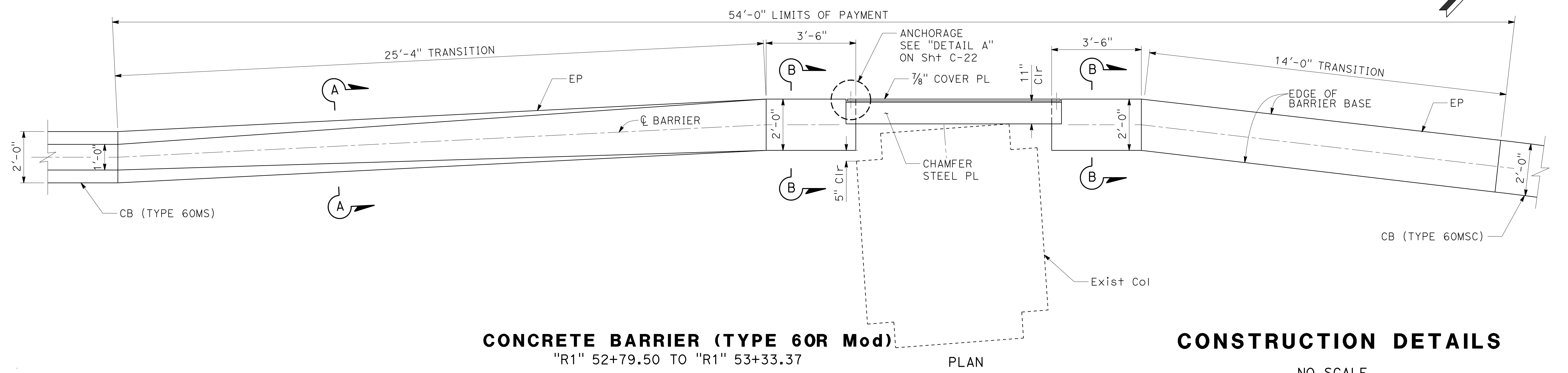
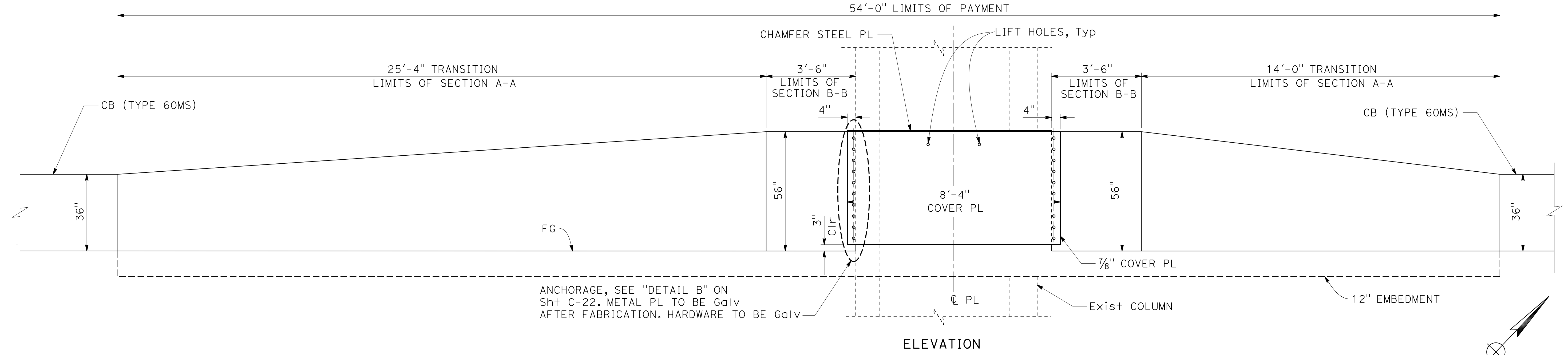
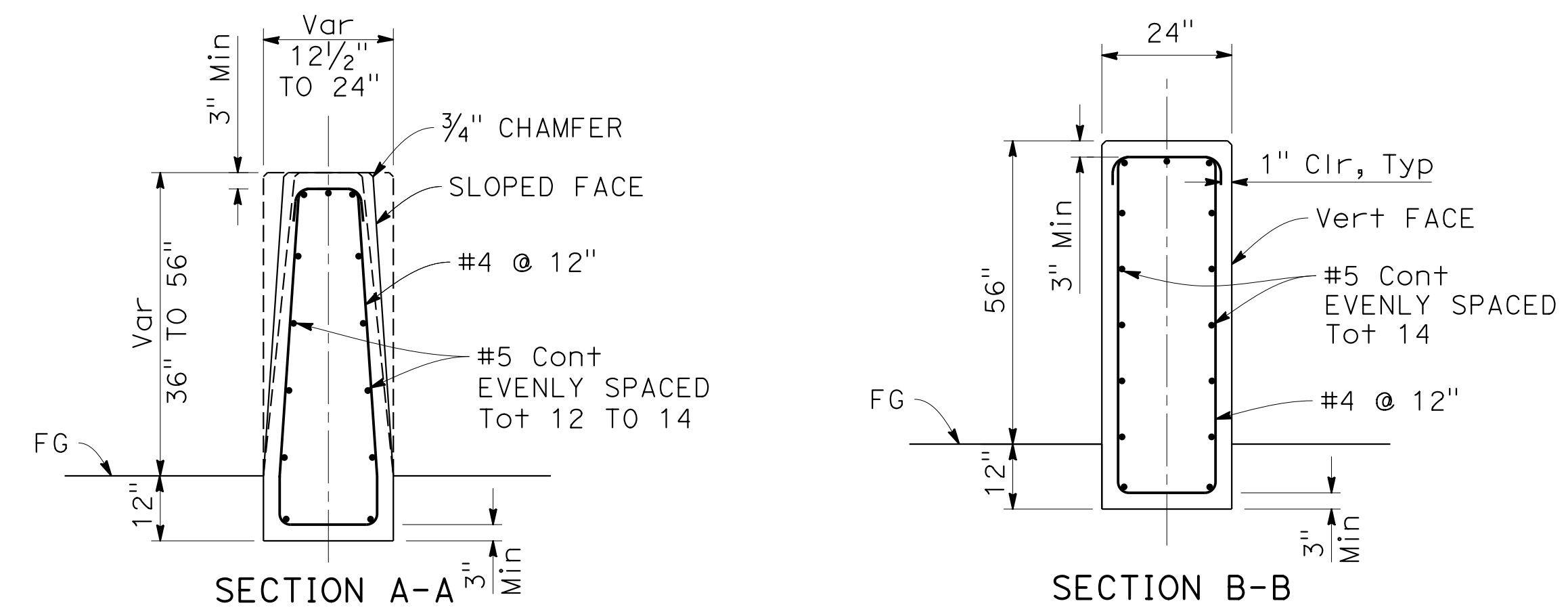
REGISTERED CIVIL ENGINEER: *Praveen K. Chilakapati*
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

REGISTERED PROFESSIONAL ENGINEER
 PRAVEEN K. CHILAKAPATI
 No. C76058
 Exp. 6-30-20
 CIVIL
 STATE OF CALIFORNIA

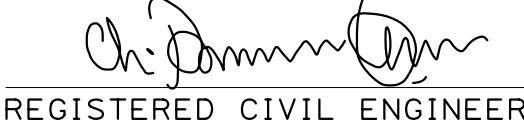
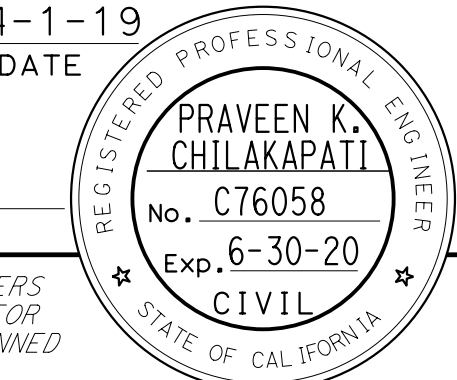
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

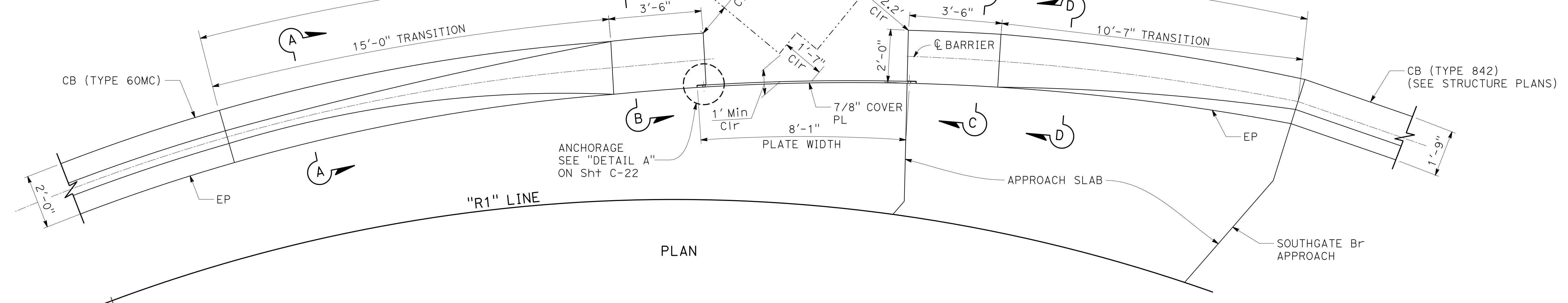
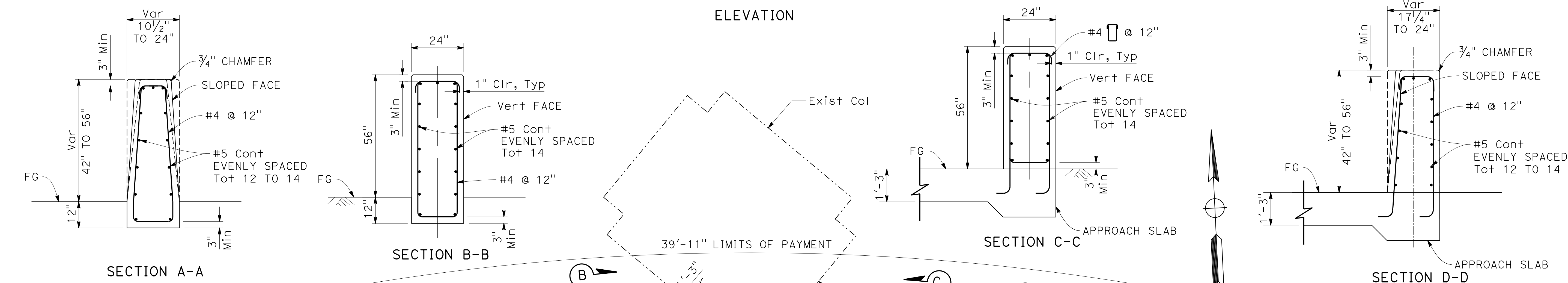
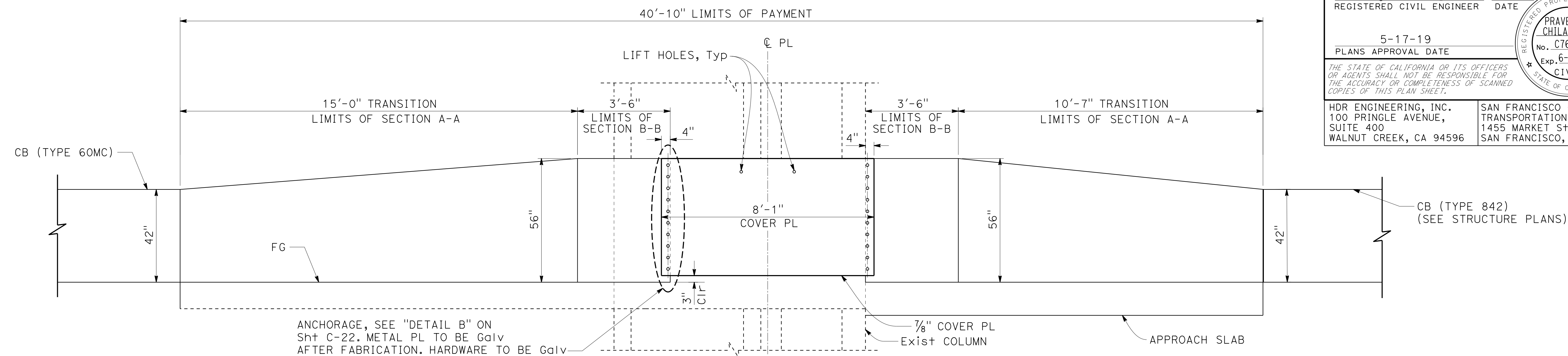
HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



CONCRETE BARRIER (TYPE 60R Mod)
 "R1" 52+79.50 TO "R1" 53+33.37
CONSTRUCTION DETAILS
 NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	49	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		


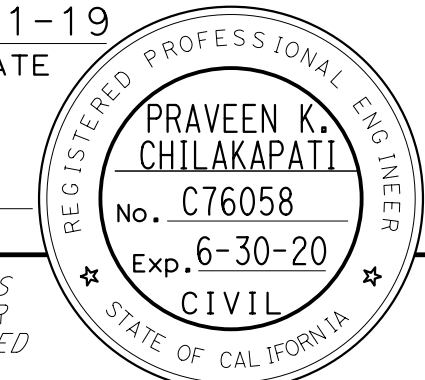


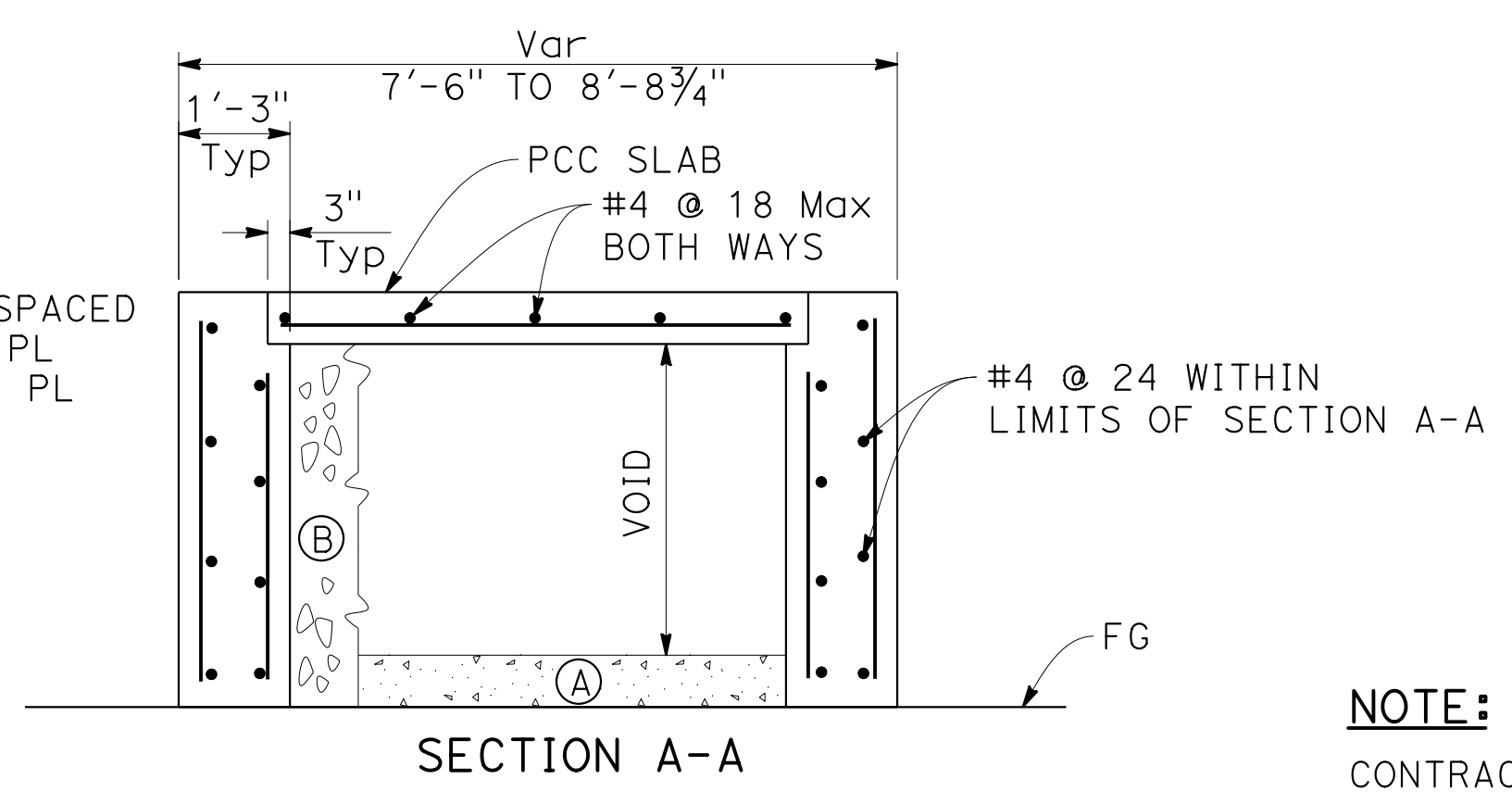
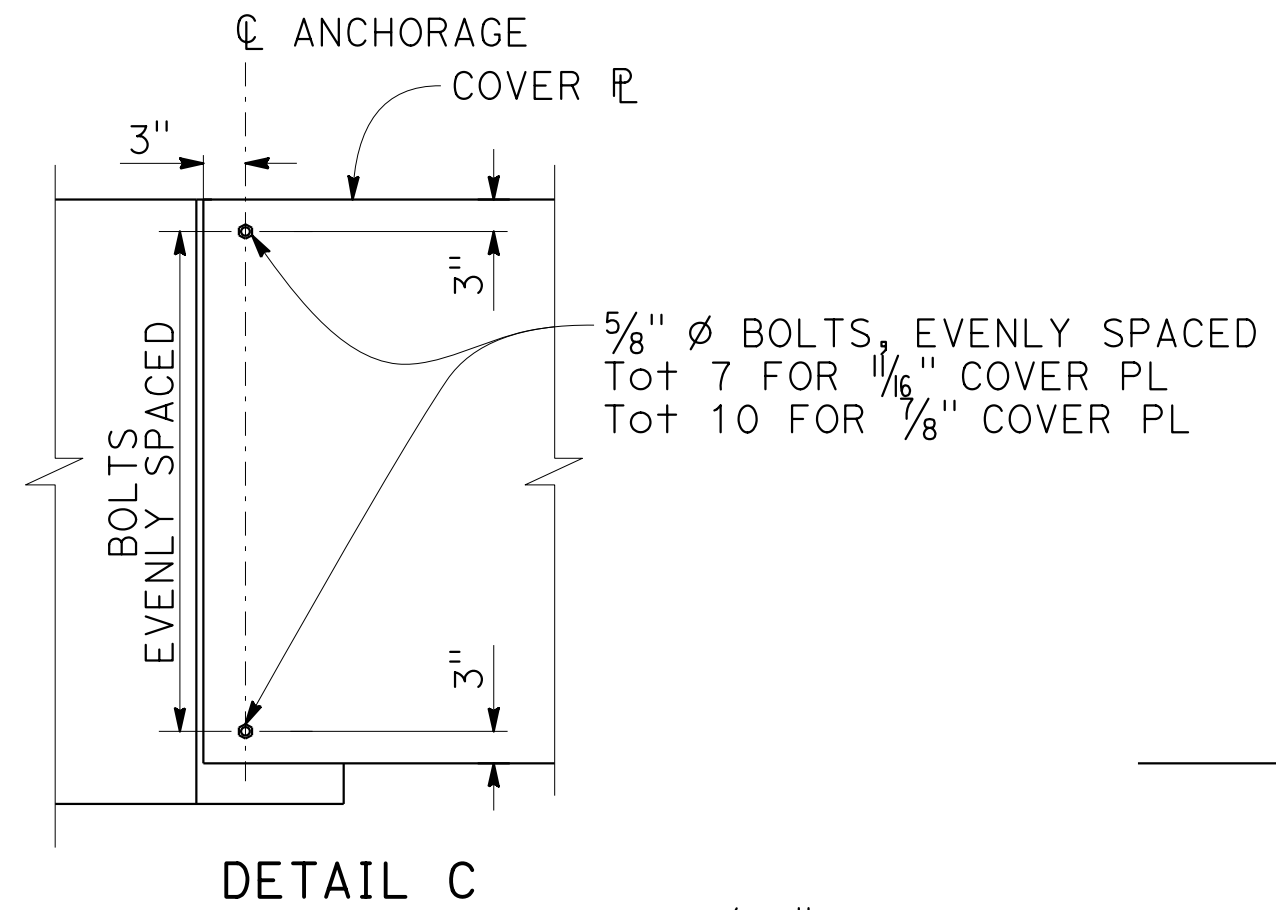
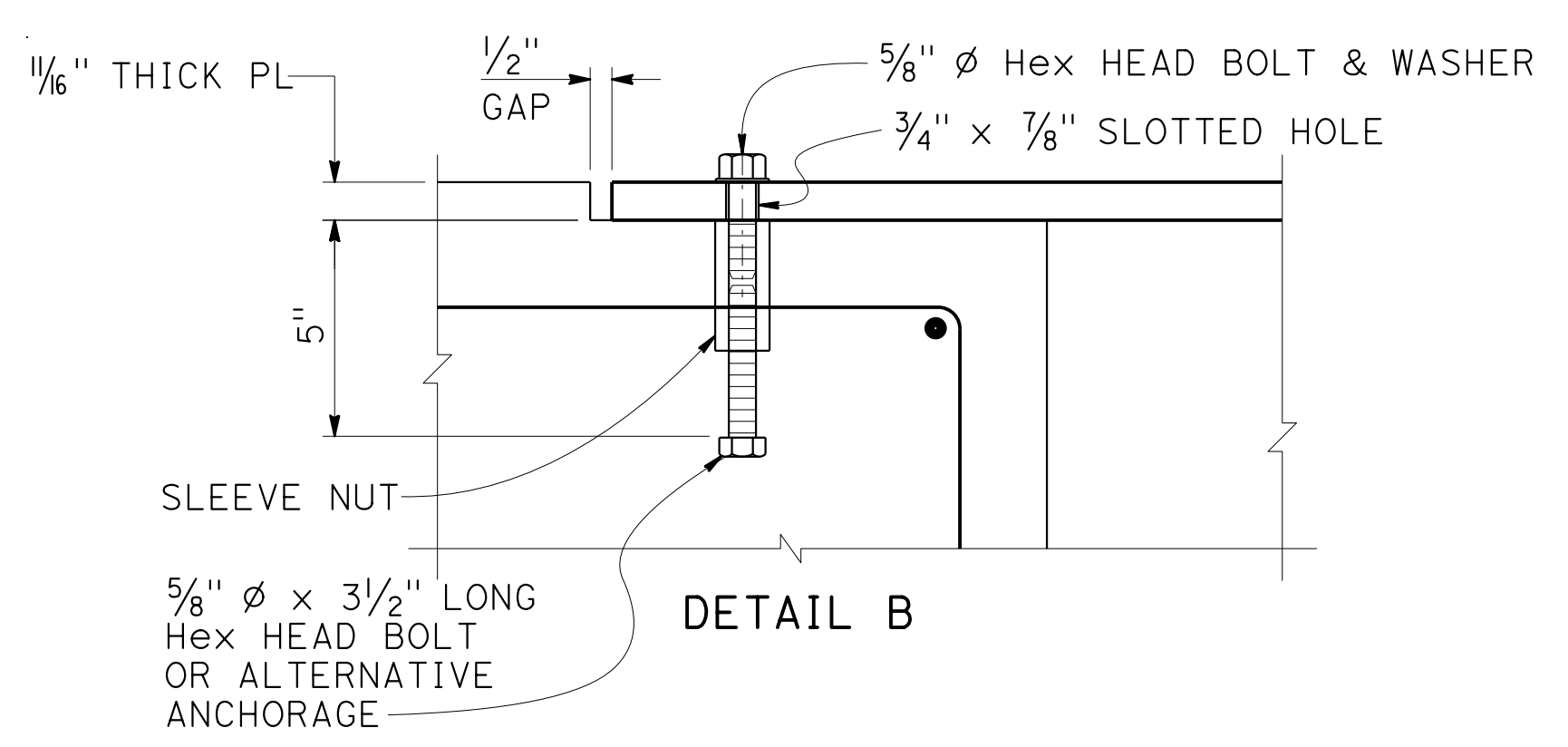
CONCRETE BARRIER (TYPE 60R Mod)
 "R1" 54+05.80 TO "R1" 54+42.06

CONSTRUCTION DETAILS

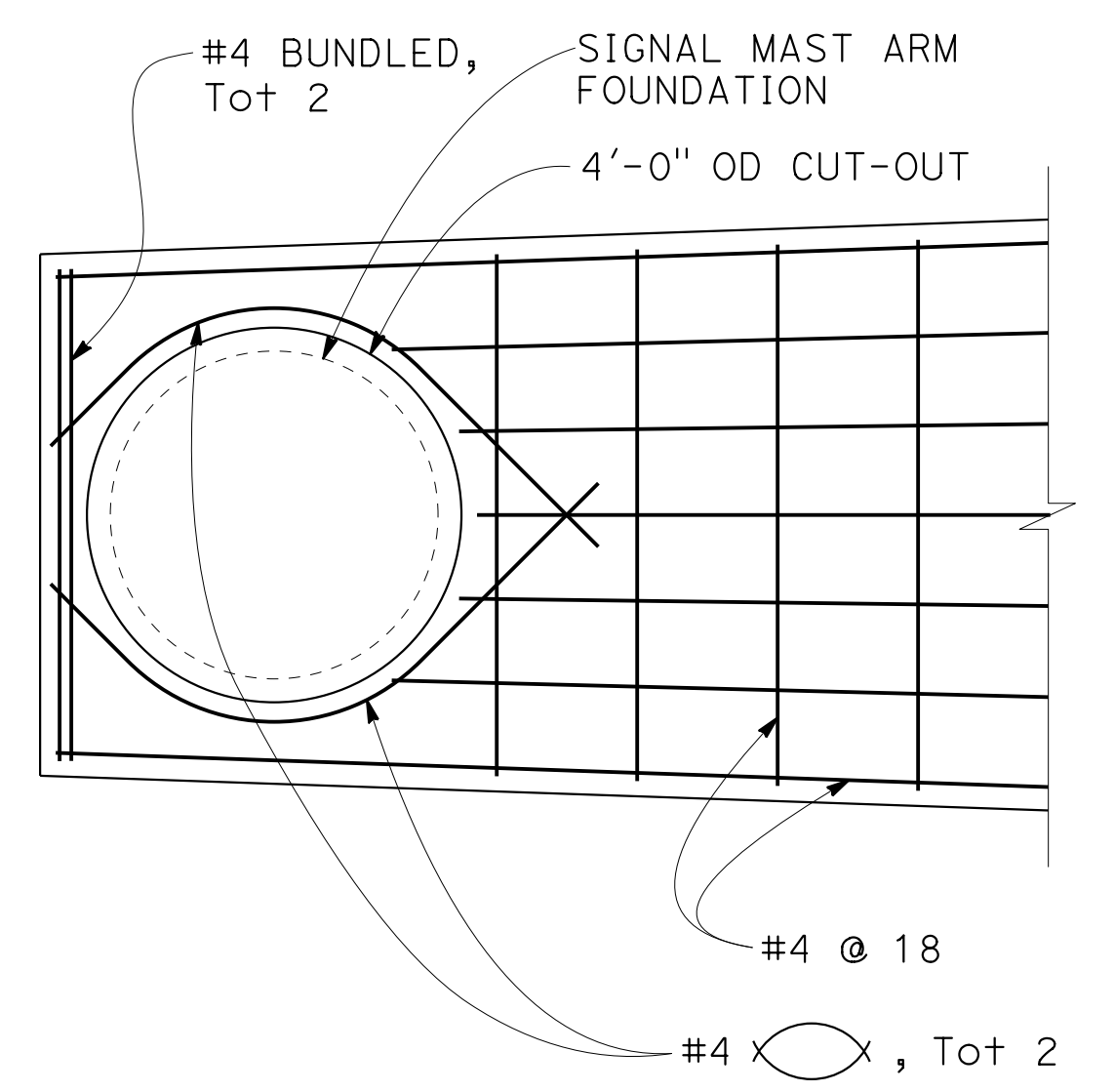
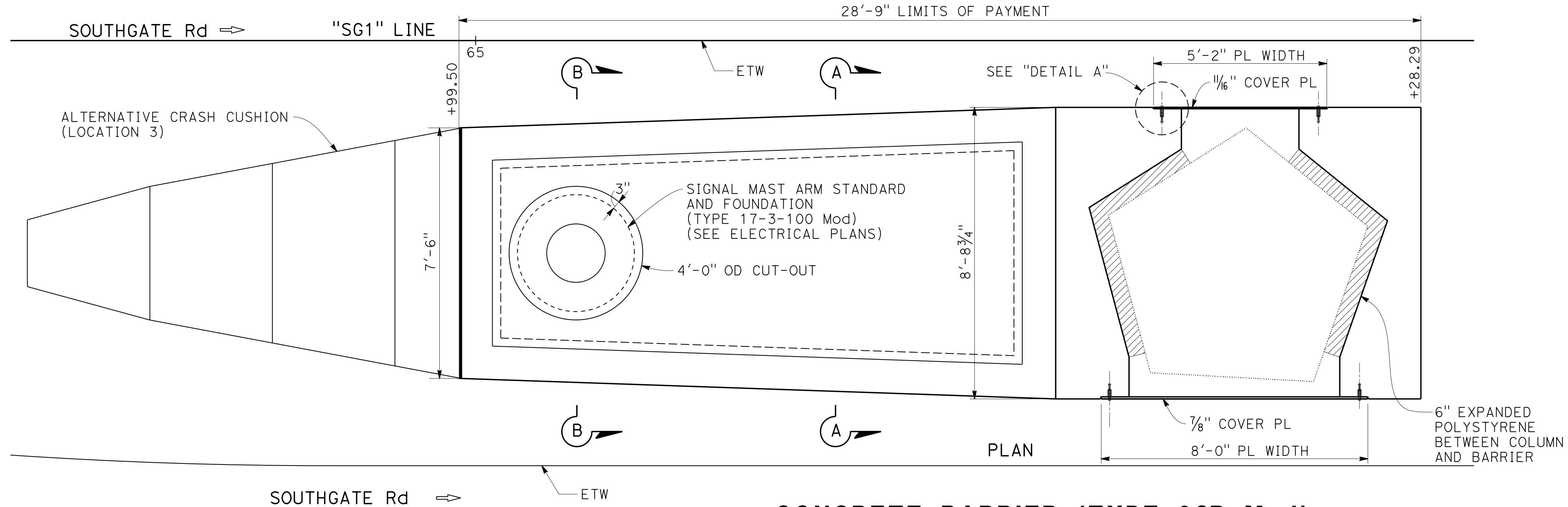
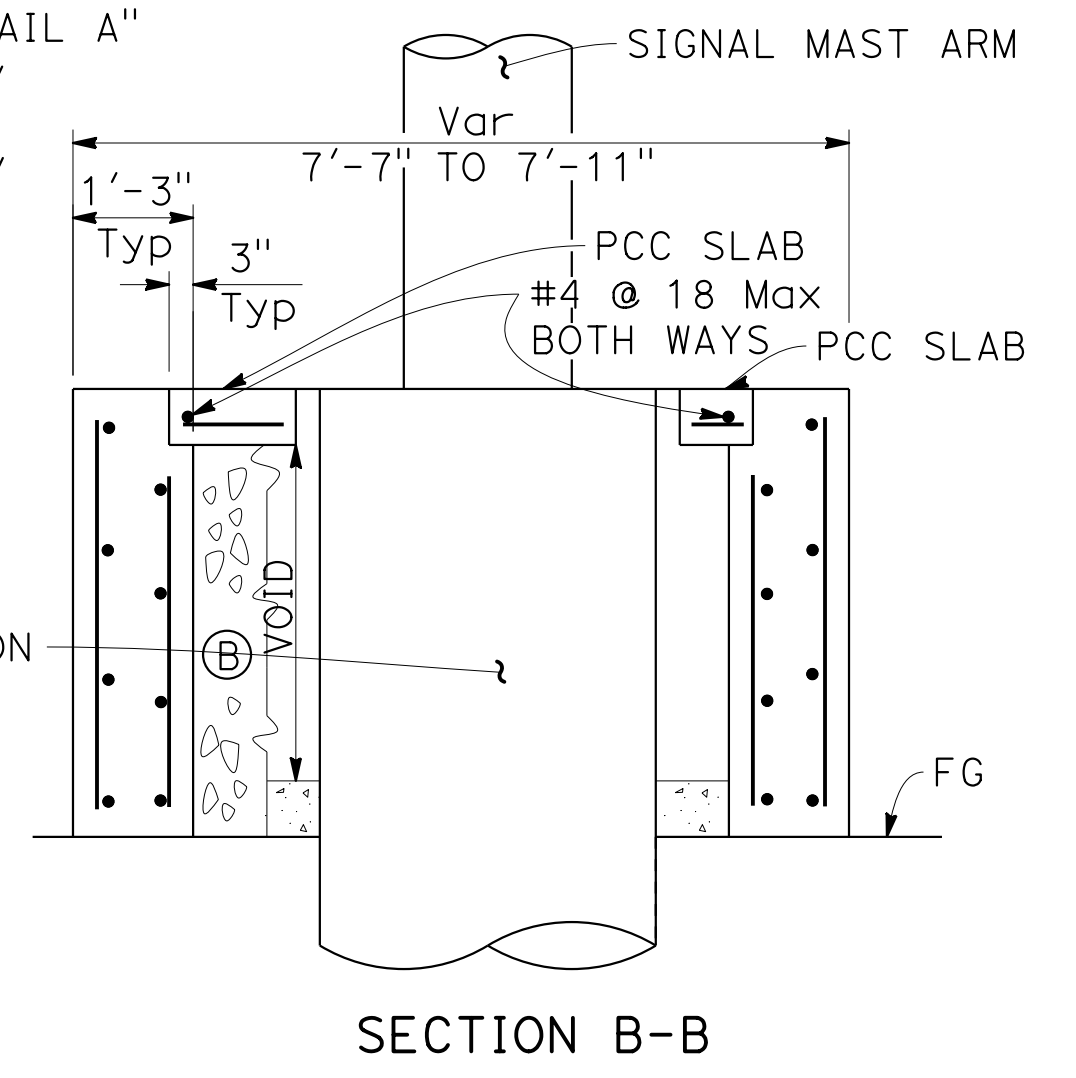
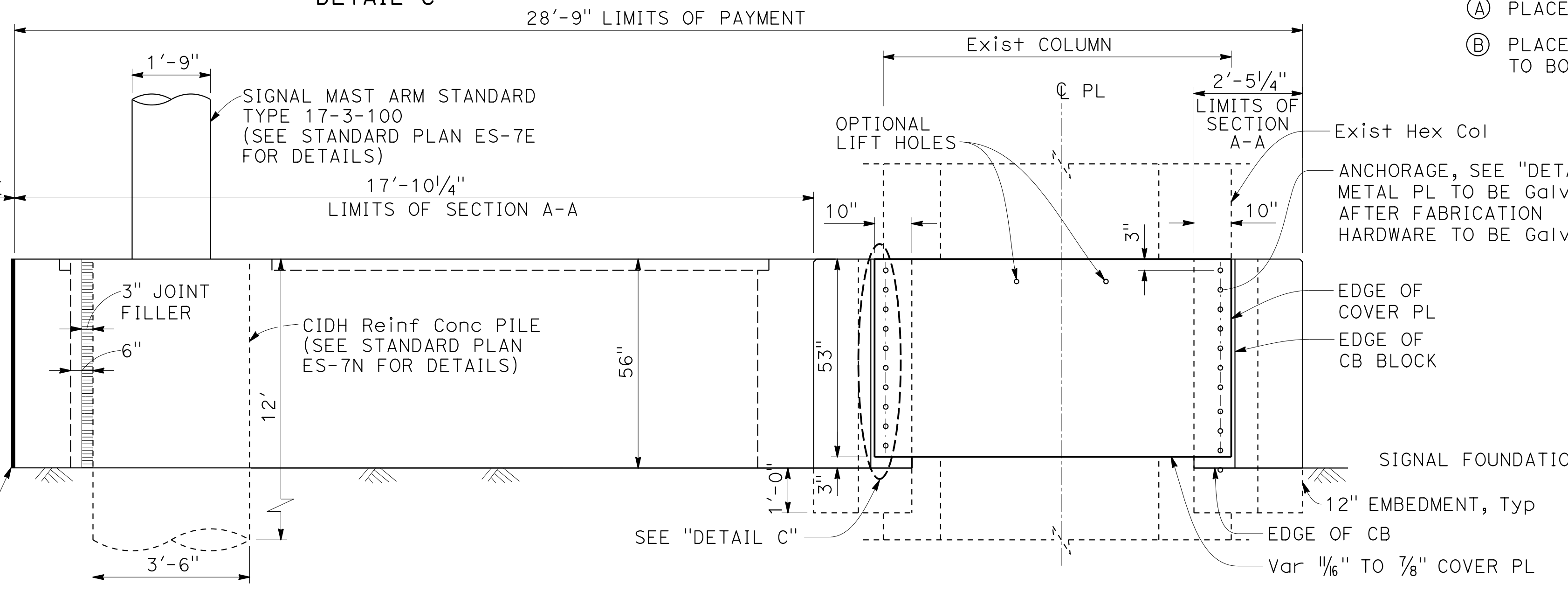
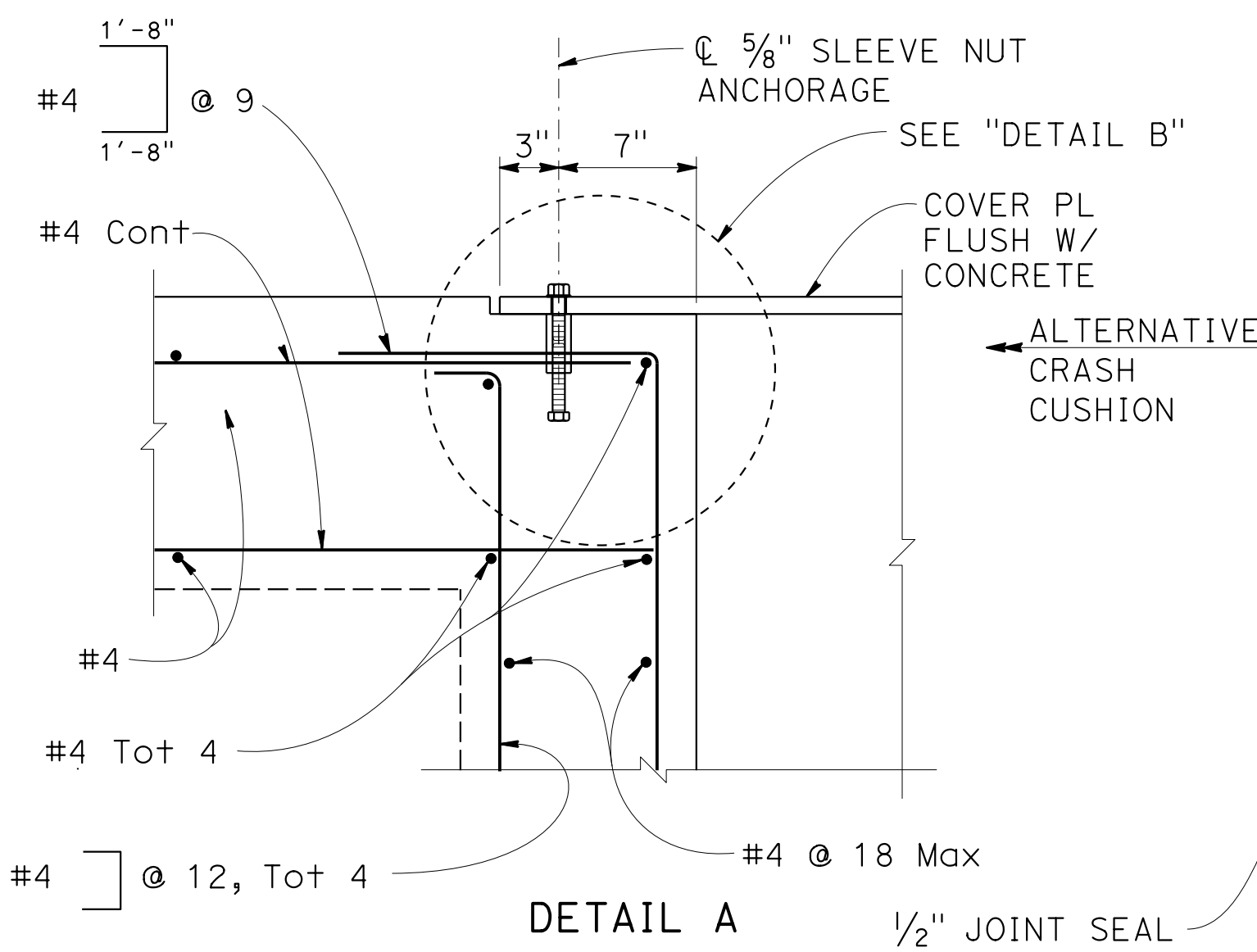
NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Et Caltrans®
 CONSULTANT - FUNCTIONAL SUPERVISOR
 INGRID V. SUPIT
 CALCULATED/DESIGNED BY
 CHECKED BY
 TAPAN MEHTA
 REVISOR
 DATE
 4-25-18
 10-23-18
 IK
 IK

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	50	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



NOTE:
 CONTRACTOR OPTIONS FOR FILL BETWEEN BARRIER WALLS:
 (A) PLACE 4" PCC AT BASE BETWEEN WALLS.
 (B) PLACE GRANULAR MATERIAL FROM BASE TO BOTTOM OF 4" CAP.



CONCRETE BARRIER (TYPE 60R Mod)
 "R1" 64+99.50 TO "R1" 65+28.79

CONSTRUCTION DETAILS

NO SCALE

C-21

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Et Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 DESIGNED BY: PRAVEEN CHILAKAPATI
 CHECKED BY: TAPAN MEHTA
 REVISIONS: TP 3-22-19, IK 5-18-18, REVISED BY DATE

USERNAME => IKUKANE
 DGN FILE => 0419000153ga021.dgn

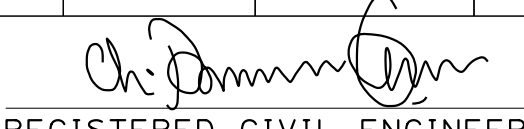
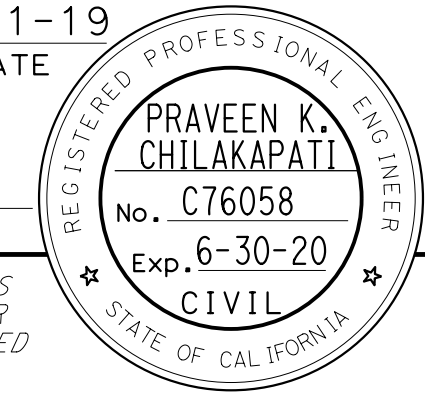
RELATIVE BORDER SCALE 15 IN INCHES


UNIT 0728

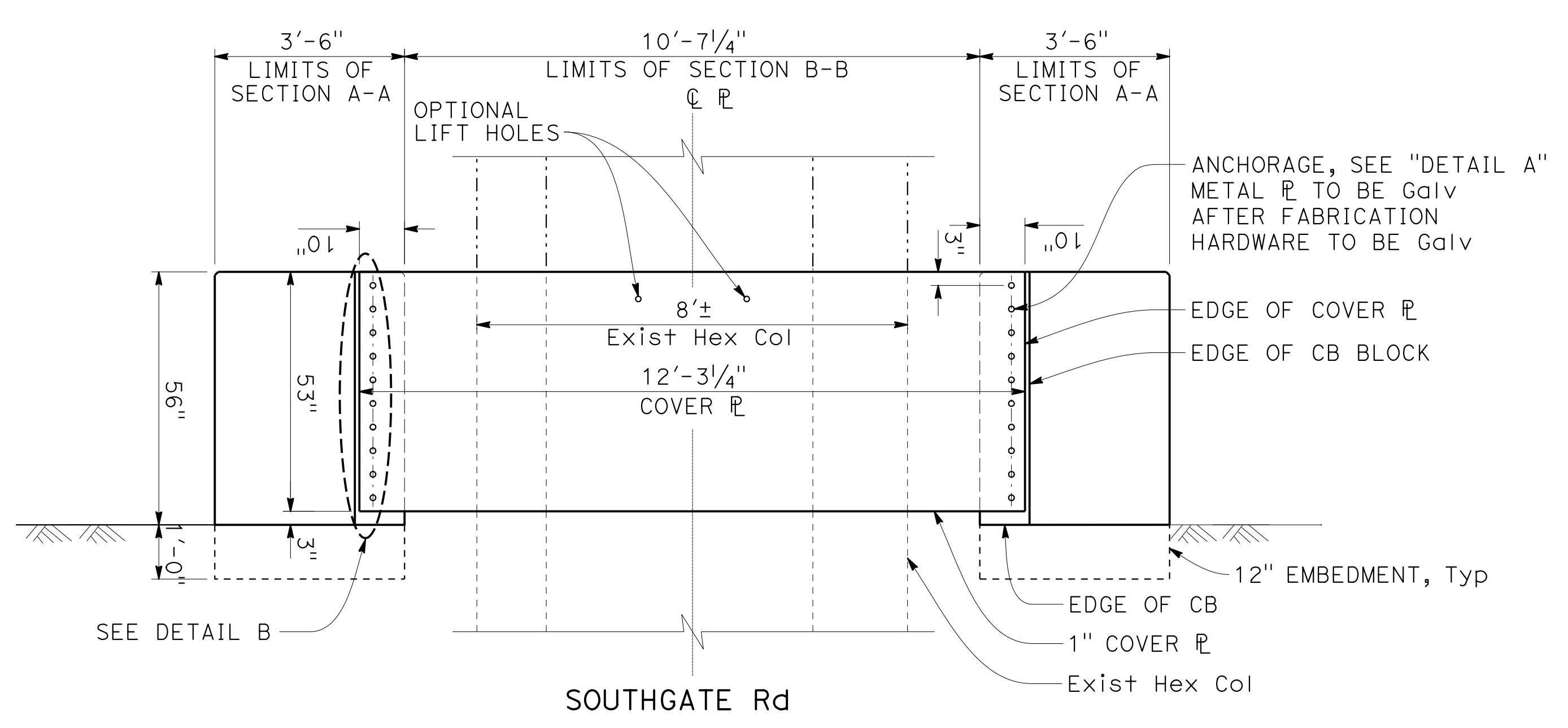
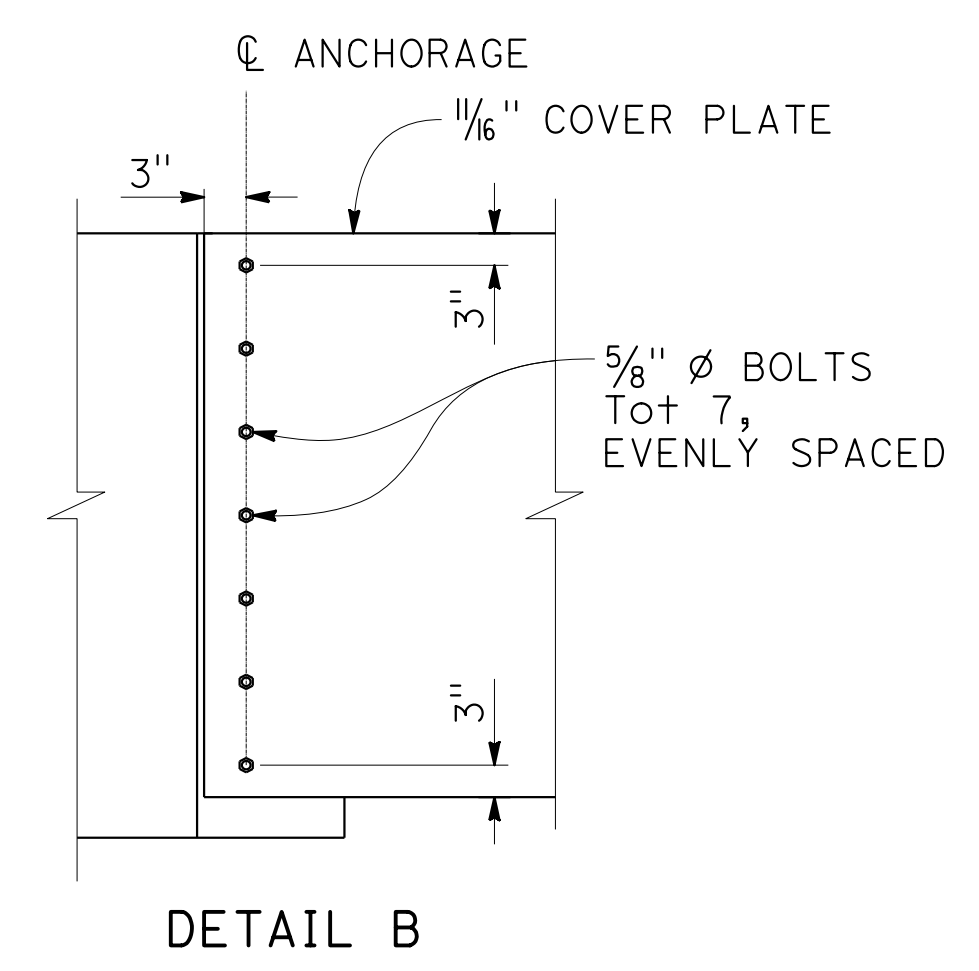
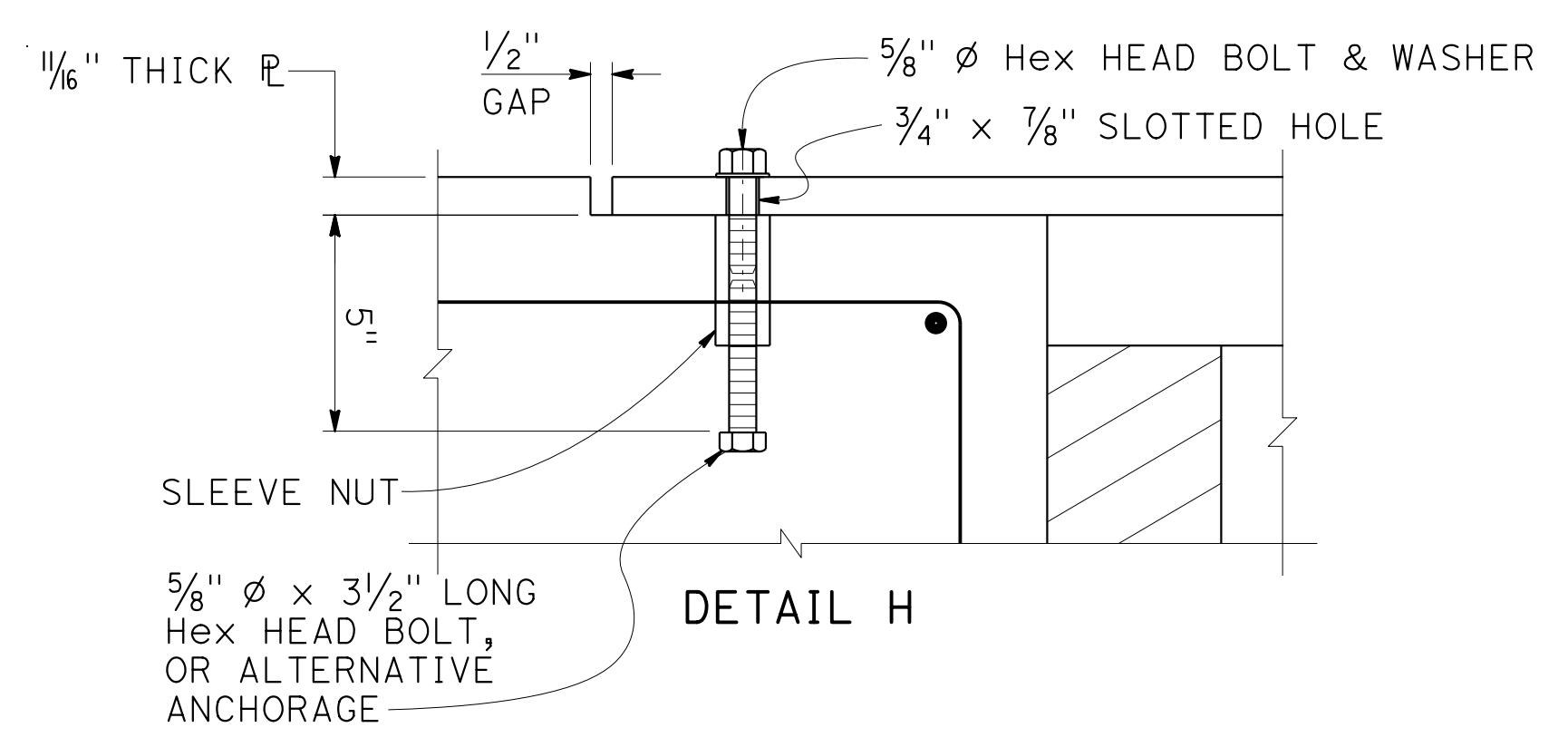
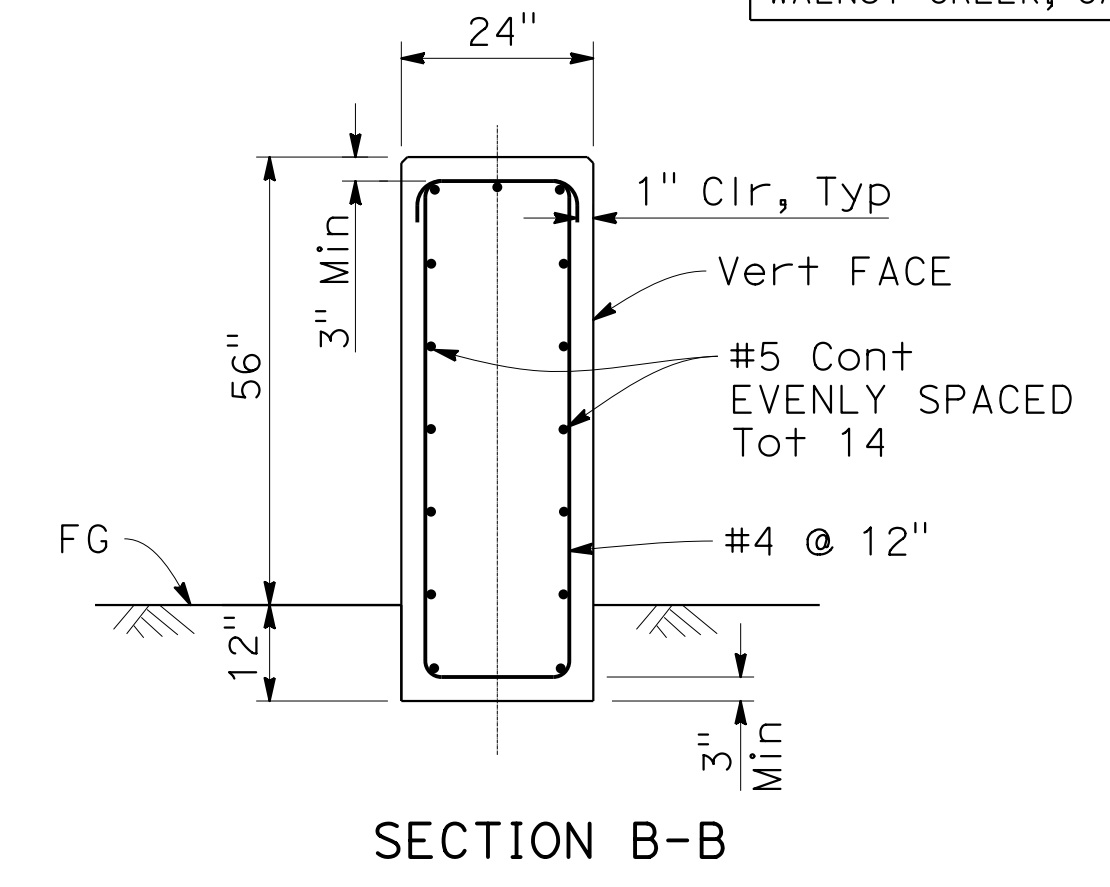
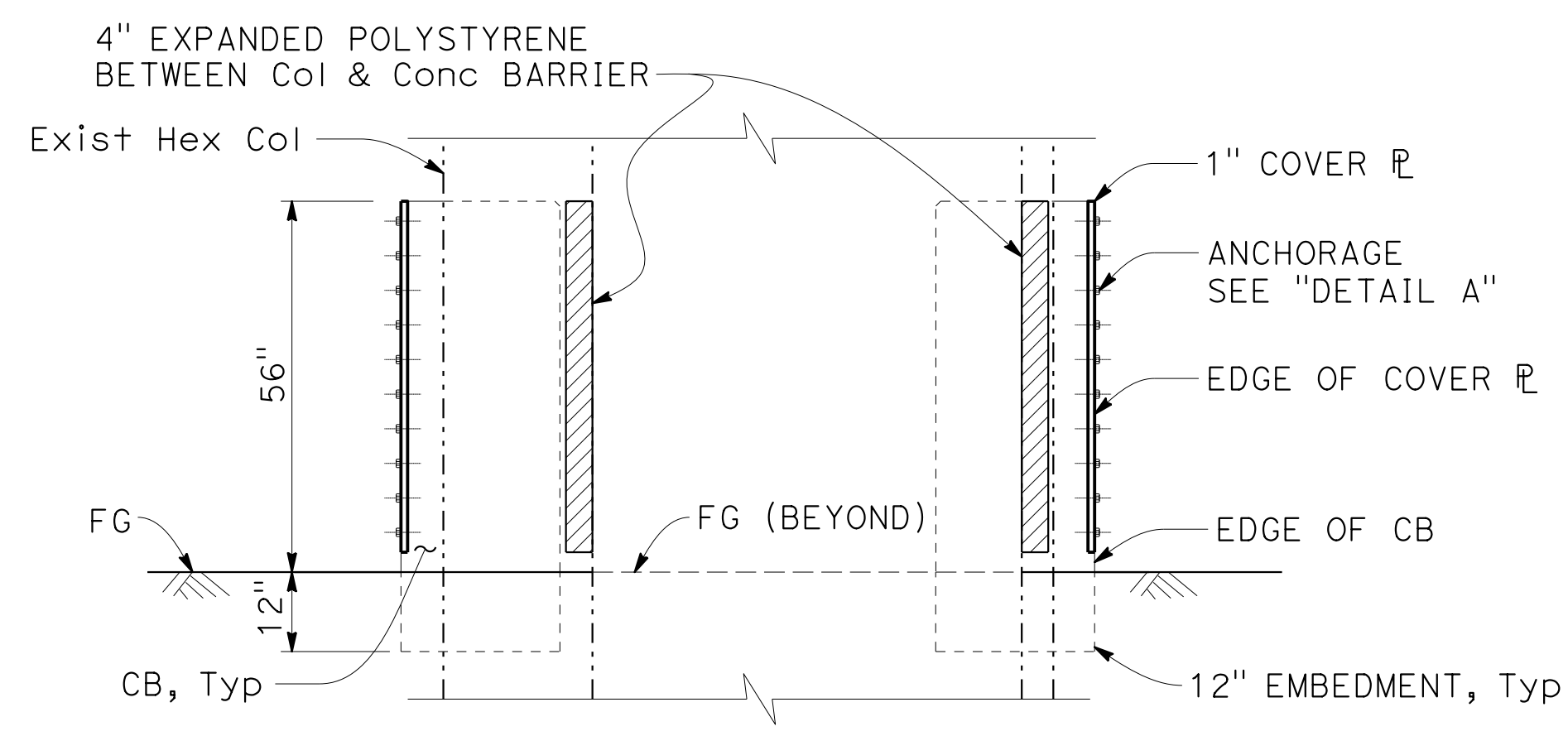
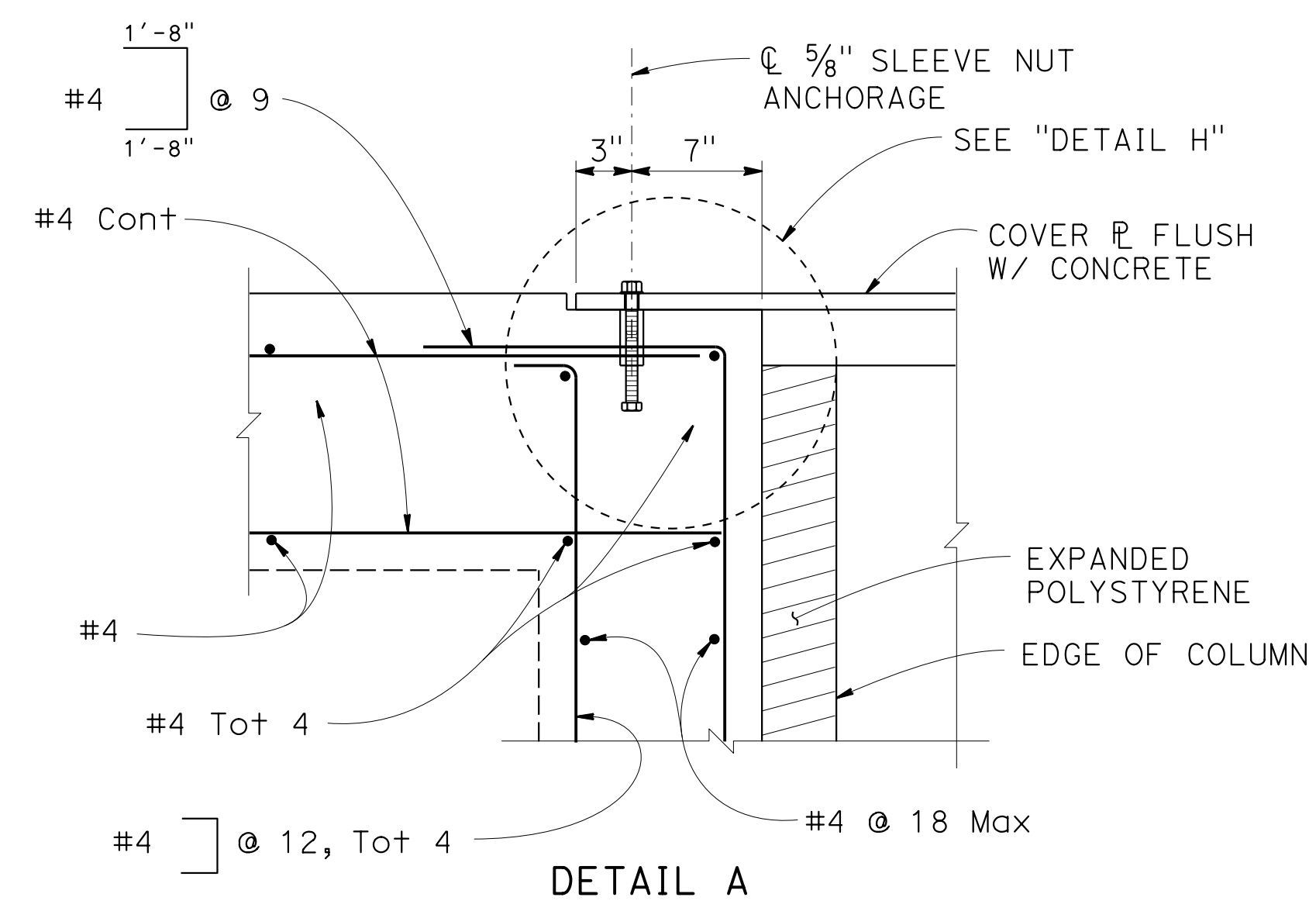
PROJECT NUMBER & PHASE

04190001531

LAST REVISION DATE PLOTTED => 07-NOV-2019
 00-00-00 TIME PLOTTED => 15:57

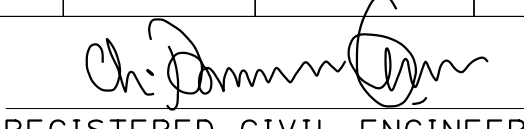
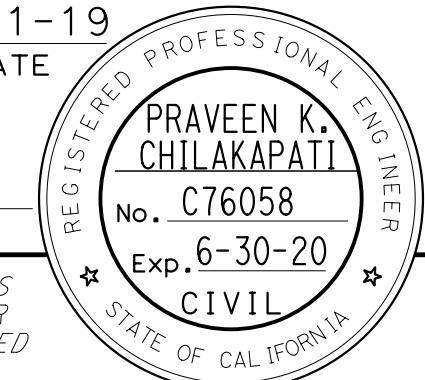
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	51	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR	DATE
	INGRID V. SUPIT	INGRID V. SUPIT	IK	5-18-18



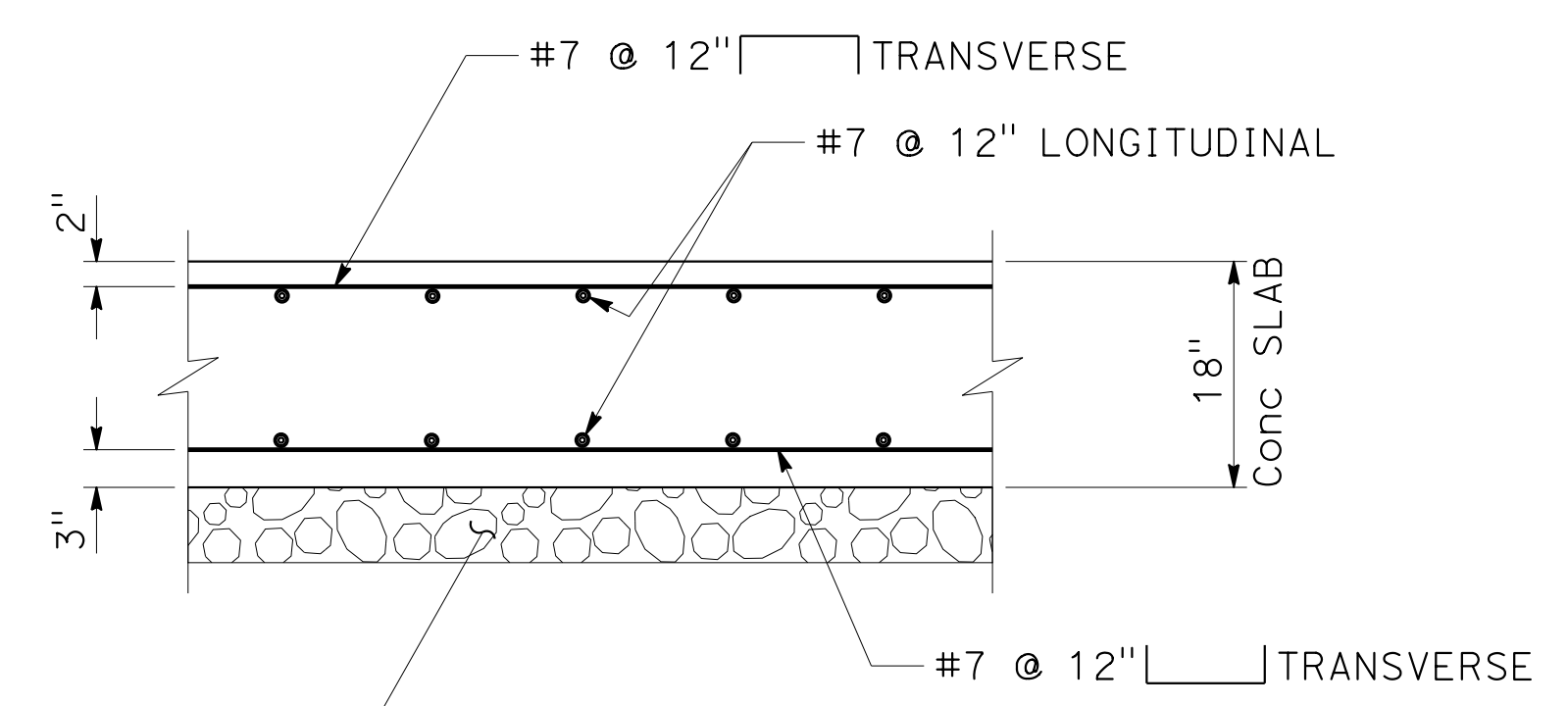
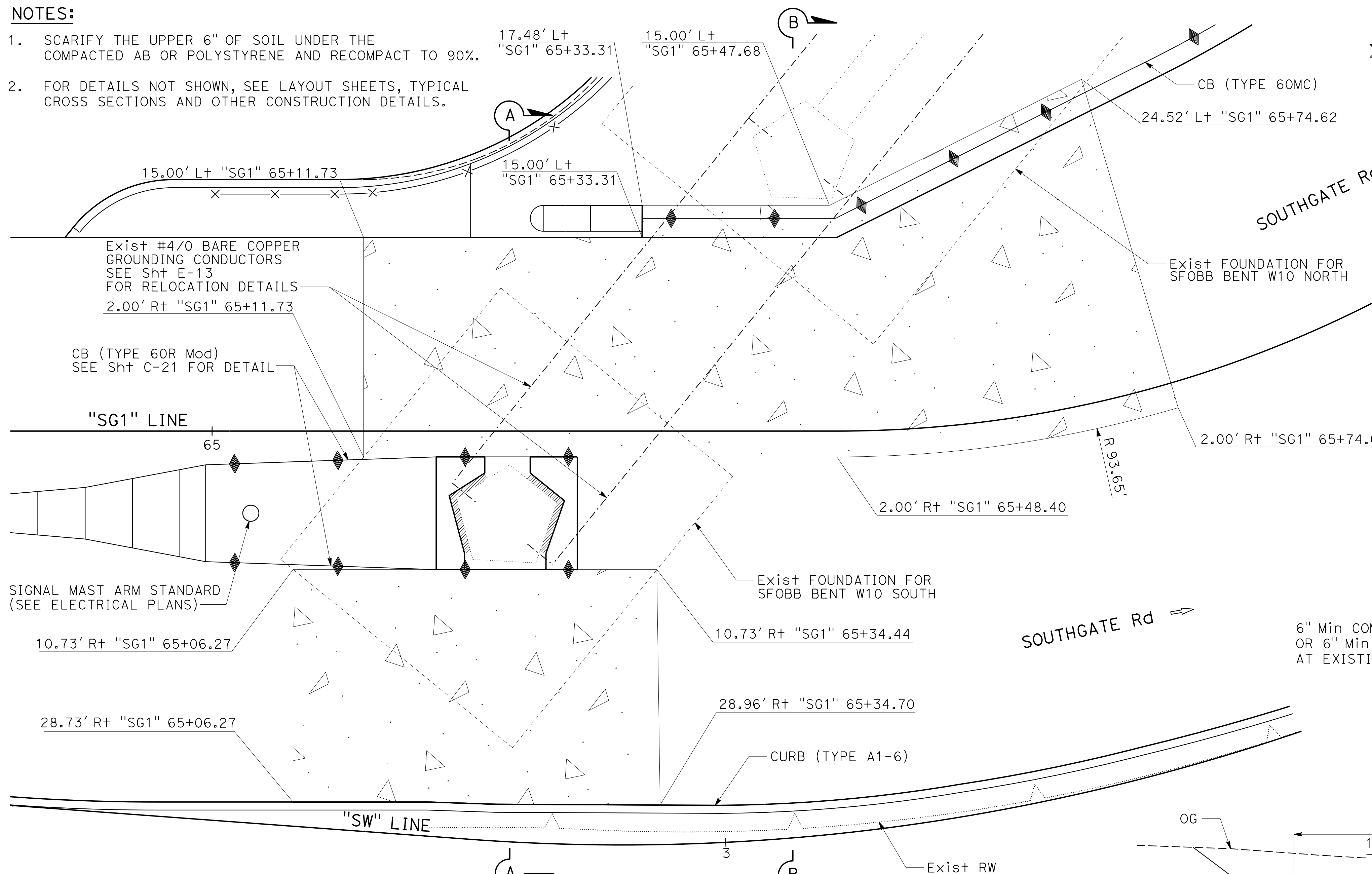
CONCRETE BARRIER (TYPE 60R Mod)

CONSTRUCTION DETAILS
CONCRETE BARRIER DETAILS
 NO SCALE

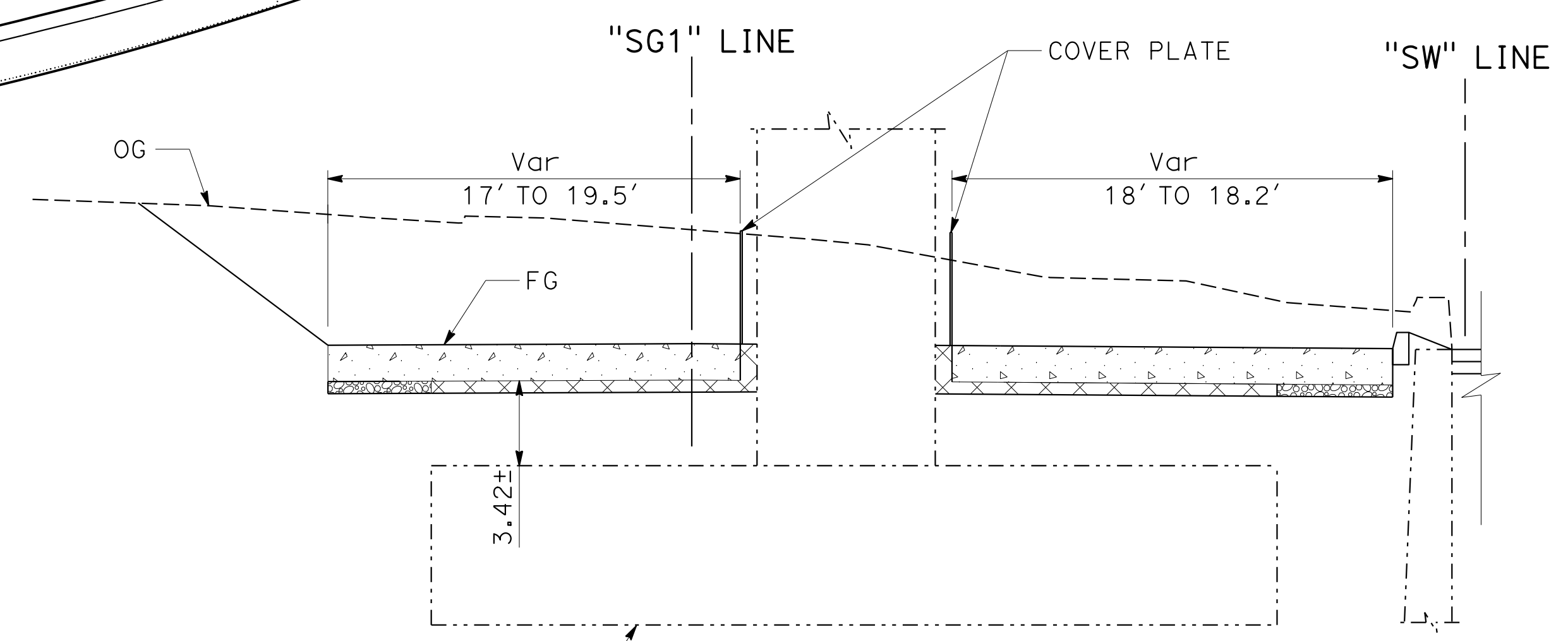
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	52	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

NOTES:

- SCARIFY THE UPPER 6" OF SOIL UNDER THE COMPACTED AB OR POLYSTYRENE AND RECOMPACT TO 90%.
- FOR DETAILS NOT SHOWN, SEE LAYOUT SHEETS, TYPICAL CROSS SECTIONS AND OTHER CONSTRUCTION DETAILS.



TYPICAL SLAB DETAIL



SECTION A-A
"SG1" 65+06.27 TO 65+33.31

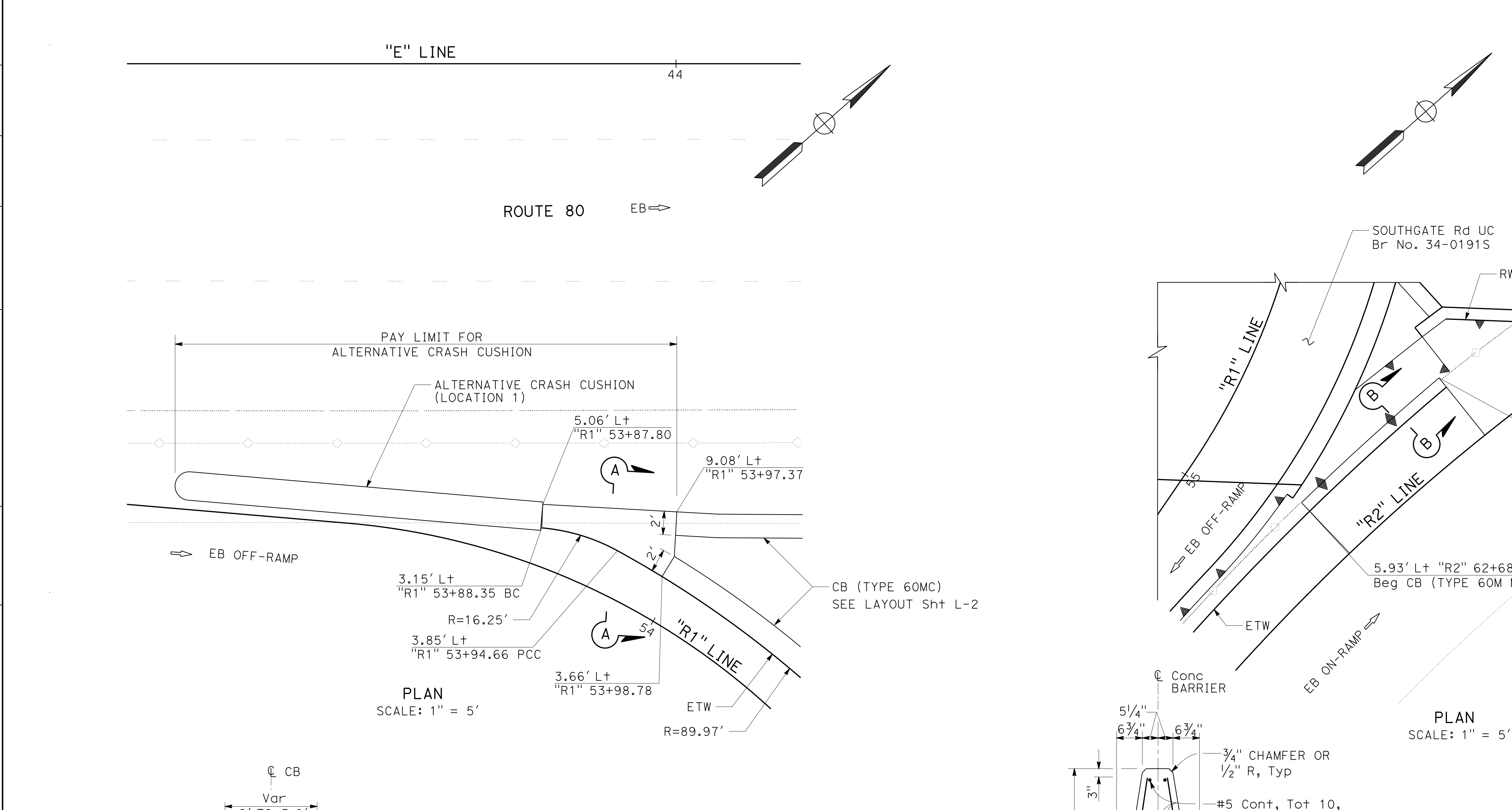
**CONSTRUCTION DETAILS
REINFORCED CONCRETE**

NO SCALE

C-23

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	TP	3-21-19
PRAVEEN CHILAKAPATI	IK	11-28-18
INGRID SUPIT	REVISOR	DATE
INGRID V. SUPIT	DESIGNED BY	CHECKED BY
INGRID V. SUPIT	FUNCTIONAL SUPERVISOR	
INGRID V. SUPIT	CONSULTANT	
INGRID V. SUPIT	DESIGNED BY	CHECKED BY
INGRID V. SUPIT	DESIGNED BY	CHECKED BY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR
 TARYN PASCUA
 PRABEEN CHILAKAPATI
 CHECKED BY
 INGRID V. SUPIT



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	53	436

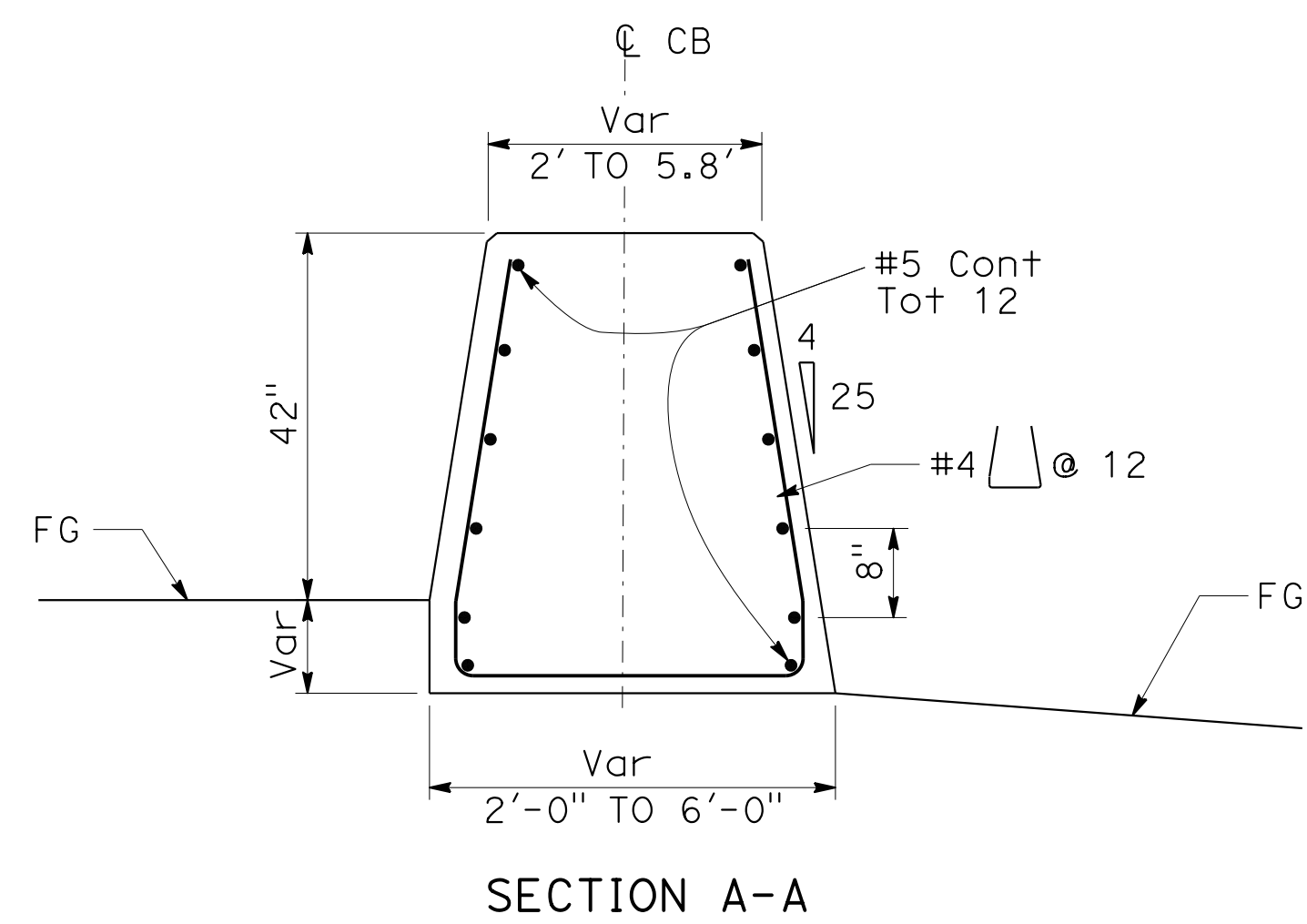
REGISTERED CIVIL ENGINEER
 DATE 4-1-19
 PLANS APPROVAL DATE 5-17-19

REGISTERED PROFESSIONAL ENGINEER
 PRAVEEN K. CHILAKAPATI
 No. C76058
 Exp. 6-30-20
 CIVIL
 STATE OF CALIFORNIA

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.

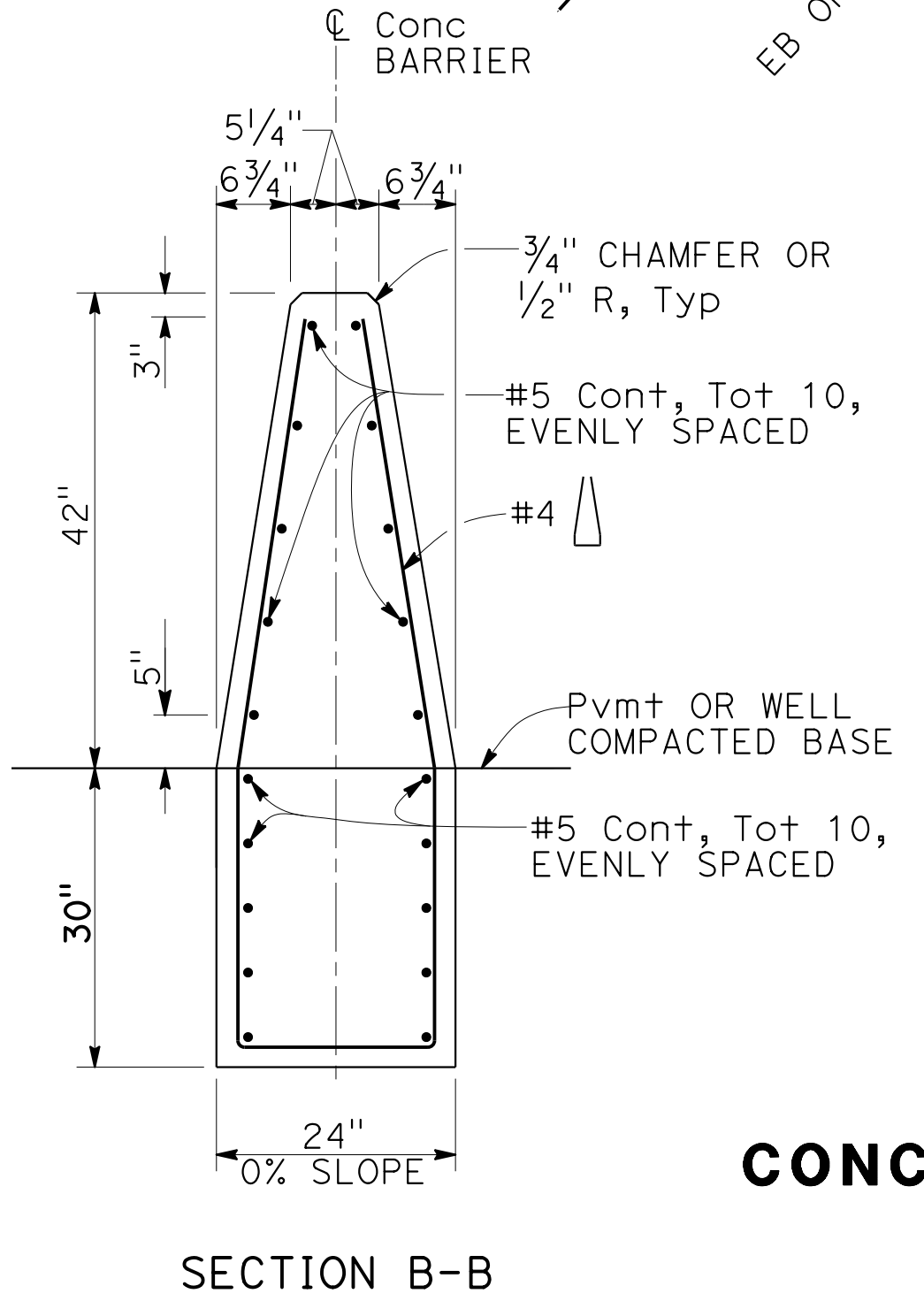
HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



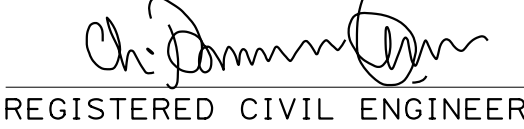
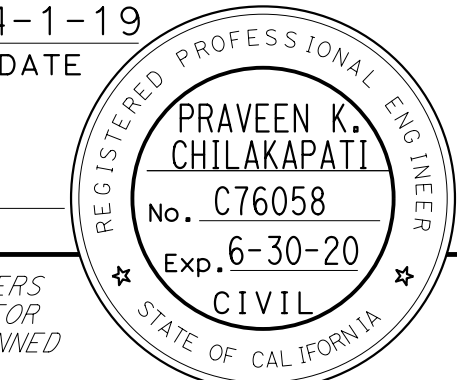
**ALTERNATIVE CRASH CUSHION
 ROUTE 80 EB OFF RAMP**

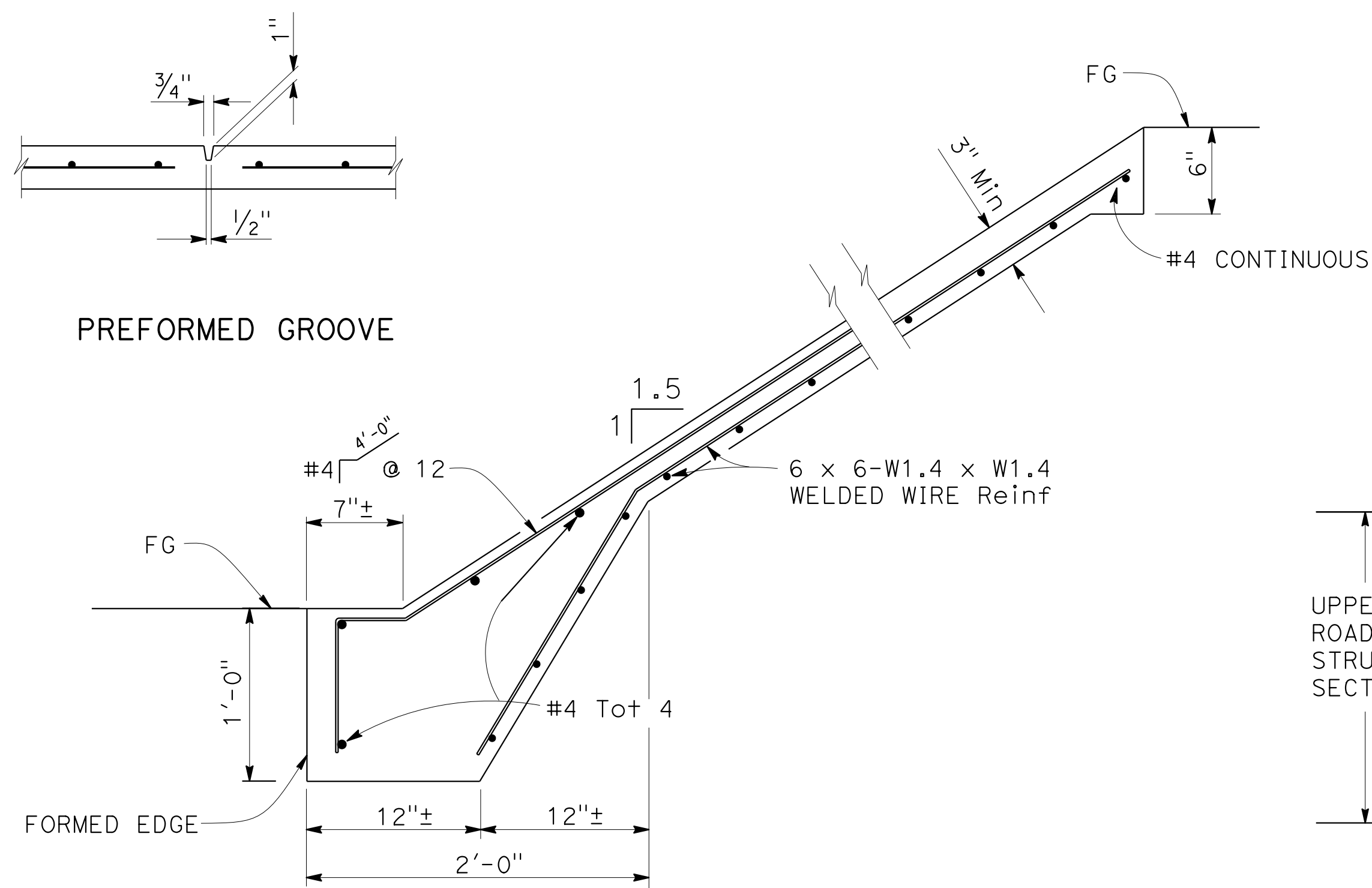
- NOTES:**
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE CRASH CUSHION SYSTEM TO THE ENGINEER FOR APPROVAL. SEE PROJECT SPECIFICATIONS FOR PREAPPROVED SYSTEMS.
 2. REFER TO MANUFACTURER'S PRODUCT MANUAL FOR DETAILS NOT SHOWN.
 3. FOR DETAILS NOT SHOWN, SEE LAYOUT SHEETS.



**CONCRETE BARRIER (TYPE 60M Mod)
 ROUTE 80 EB ON-RAMP
 "R2" 62+68.78 TO 62+84.04
 CONSTRUCTION DETAILS**

NO SCALE

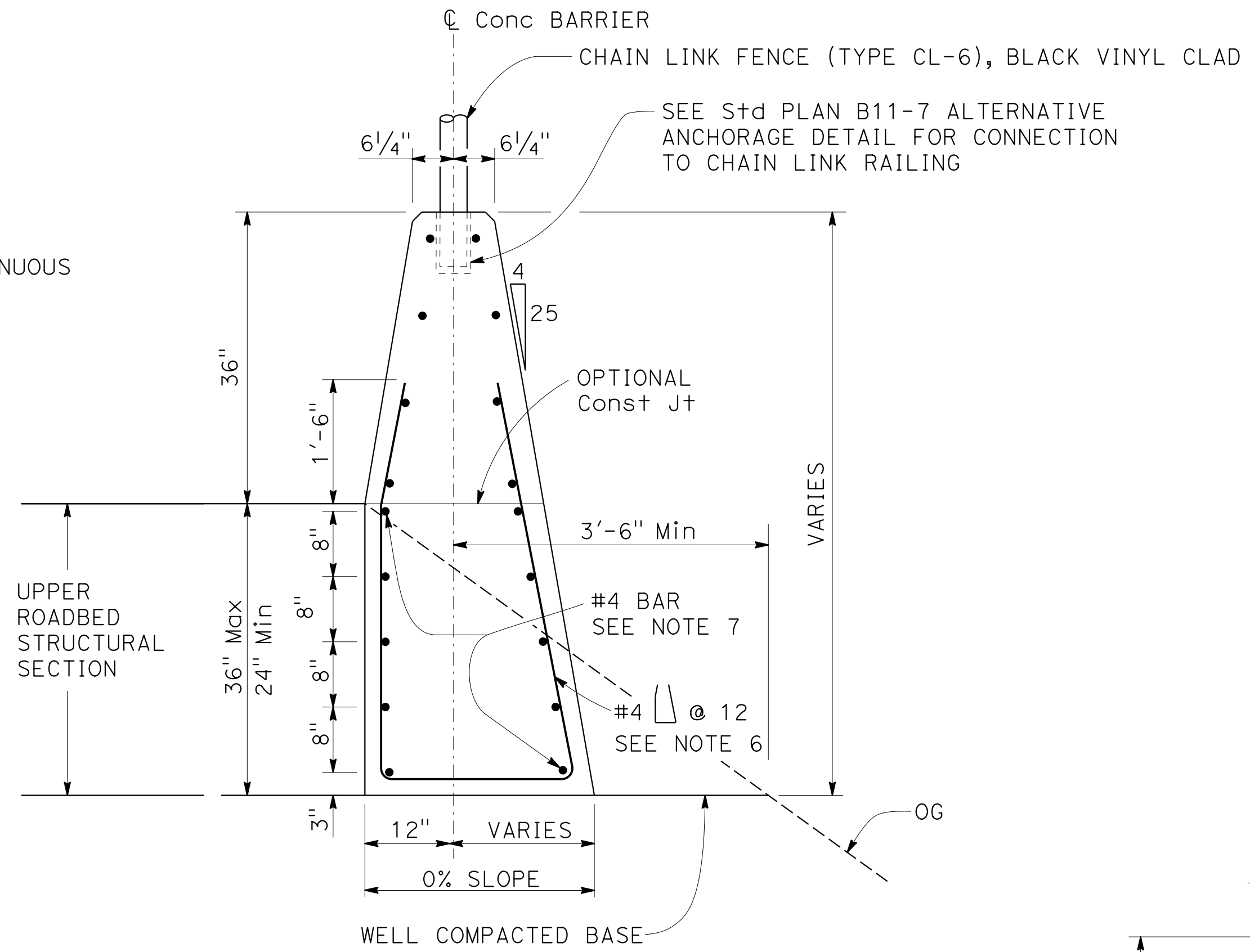
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	55	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



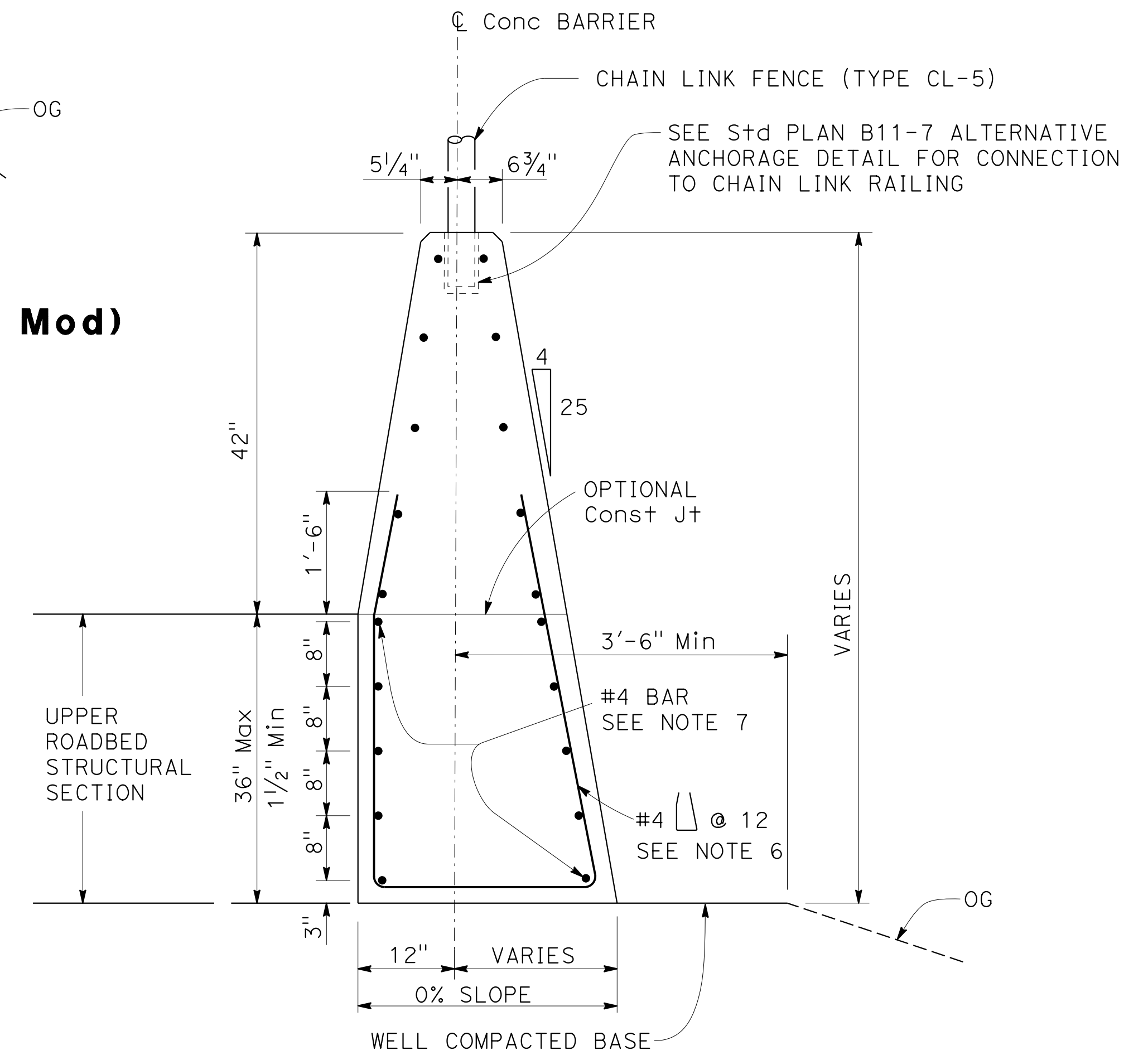
PREFORMED GROOVE

TYPICAL SECTION (CONCRETE PAVING)

SLOPE PAVING DETAILS
 "CG1" 20+28.54 TO 20+67.50

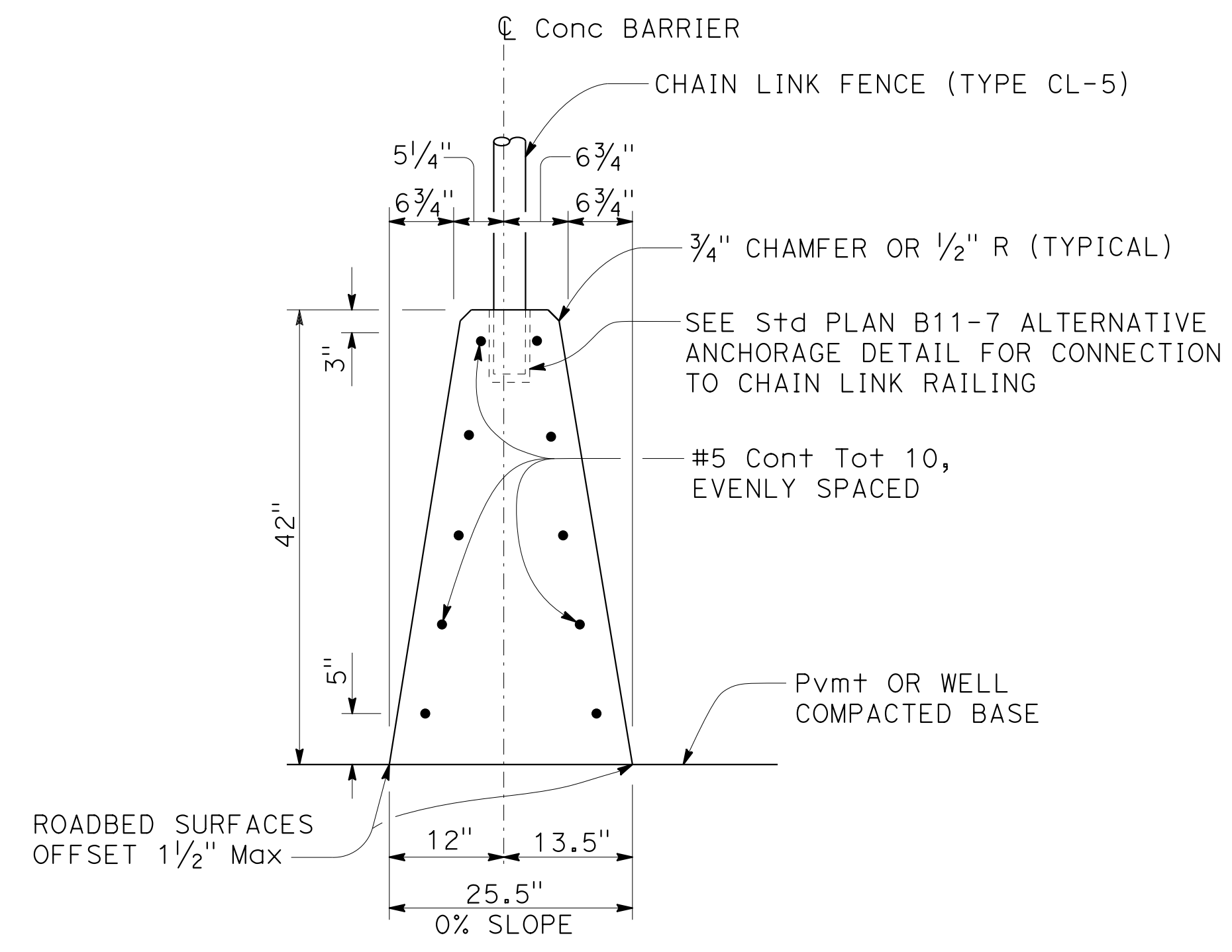


CONCRETE BARRIER (TYPE 60MSC Mod)
 "HC1" 53+69.90 TO 53+90.67

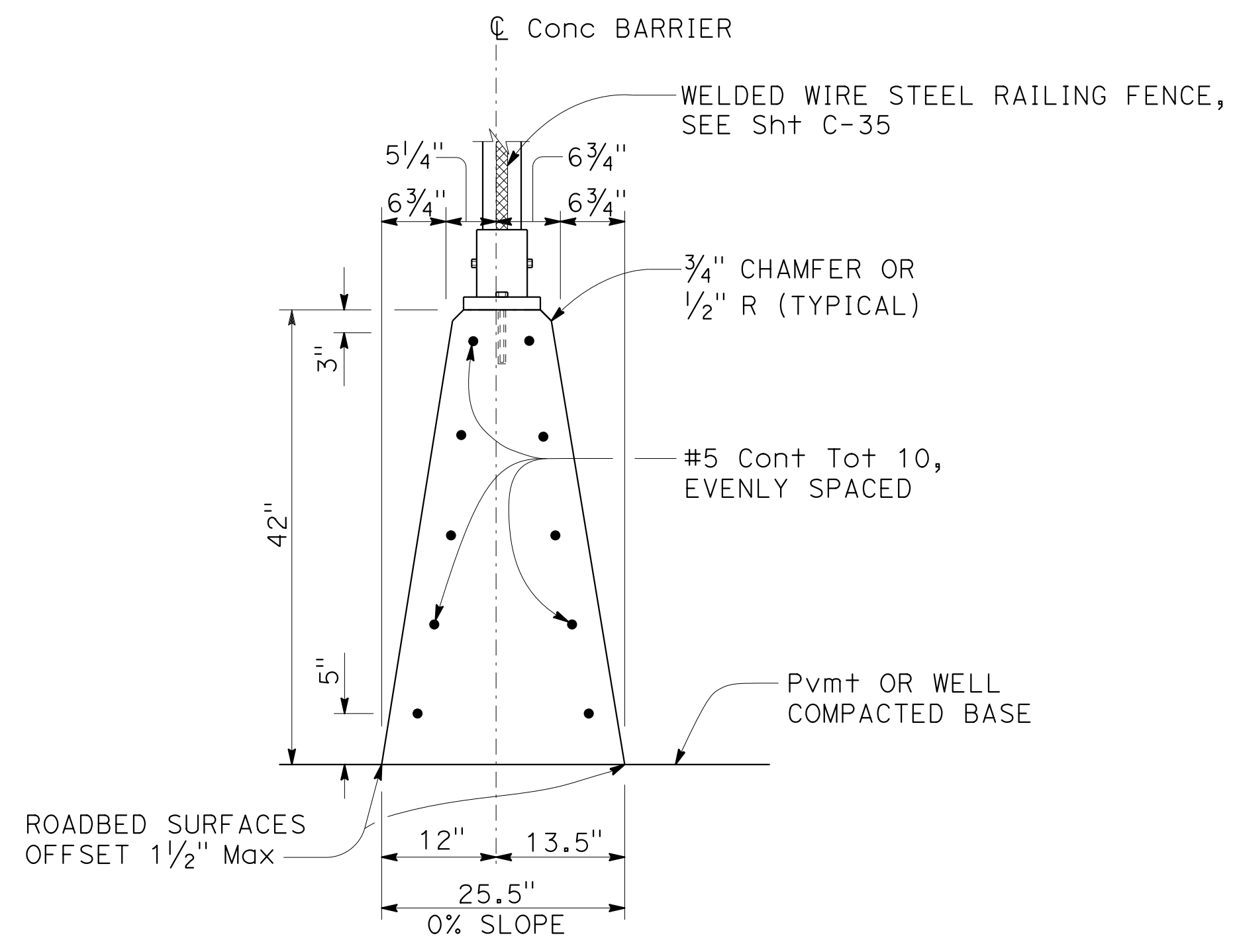


NOTE: DETAILS SIMILAR TO TYPE 60M EXCEPT AS NOTED. USE CONCRETE BARRIER END ANCHOR WHEN NECESSARY. 36" ROADBED SURFACES OFFSET SHOWN.

CONCRETE BARRIER (TYPE 60MC Mod1)
 "R2" 58+40.83 TO 60+63.73



CONCRETE BARRIER (TYPE 60M Mod 1)
 "E" 51+26.00 TO 51+26.16



CONCRETE BARRIER (TYPE 60M Mod 2)
 "E" 50+43.93 TO 50+81.30

CONSTRUCTION DETAILS

NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 INGRID V. SUPIT
 TARYN PASCUA
 PRAVEEN CHILAKAPATI
 REVISIONS: 00-00-00 TIME PLOTTED => 15:59

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR	DATE	TP
Caltrans	CHECKED BY	DATE REVISION	REVISION	DATE	REVISION

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	57	436

REGISTERED CIVIL ENGINEER: *Praveen K. Chilakapati*
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

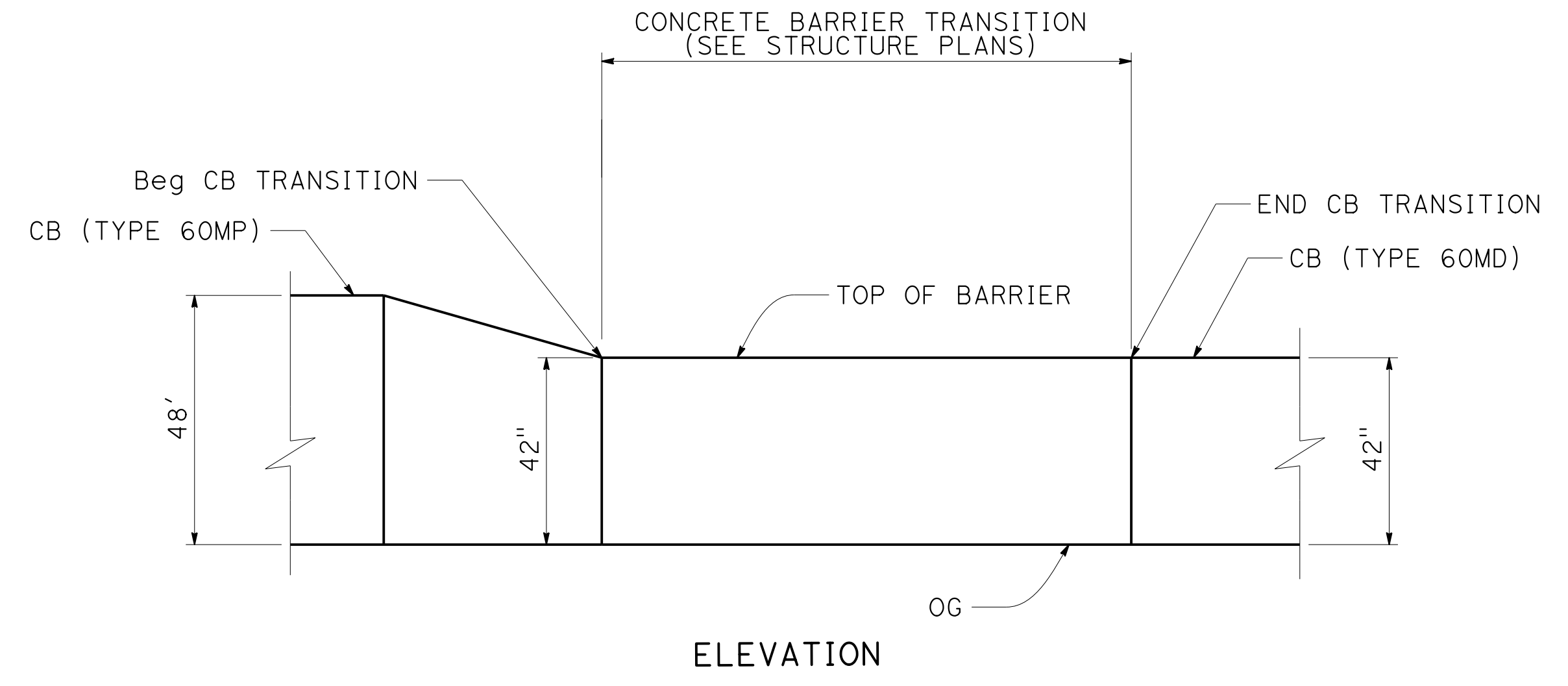
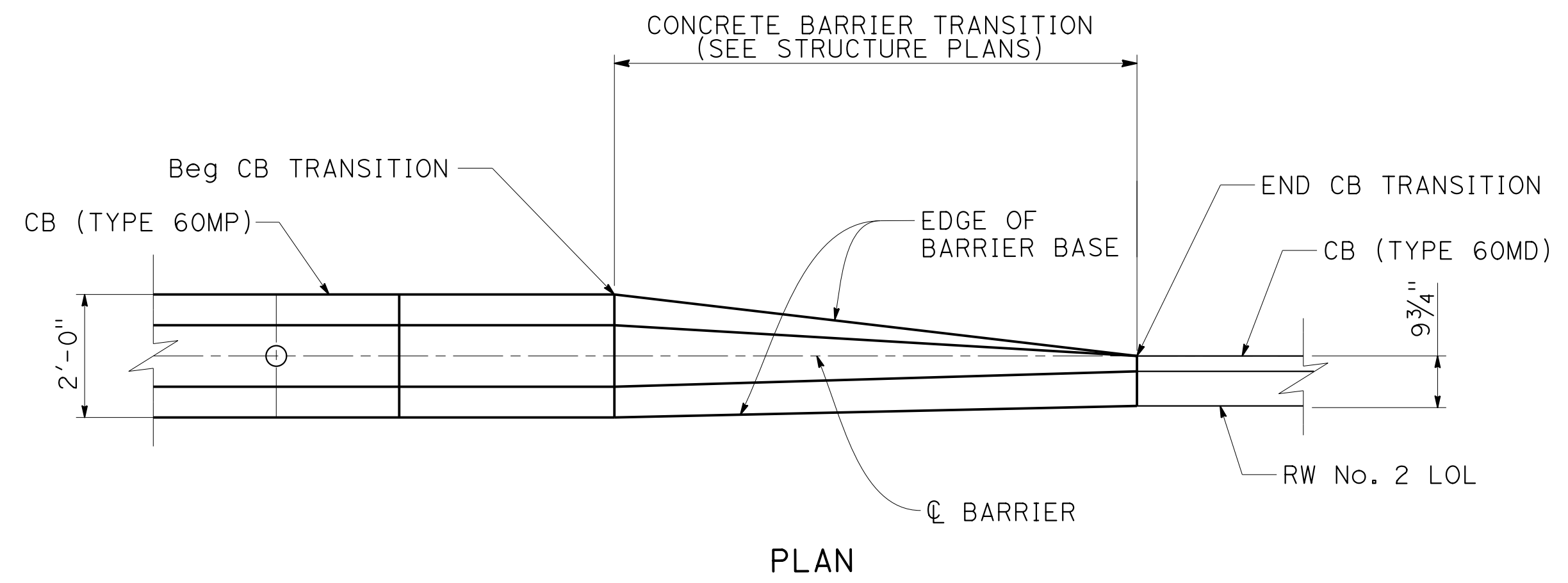
REGISTERED PROFESSIONAL ENGINEER
 PRAVEEN K. CHILAKAPATI
 No. C76058
 Exp. 6-30-20
 CIVIL
 STATE OF CALIFORNIA

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE, SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

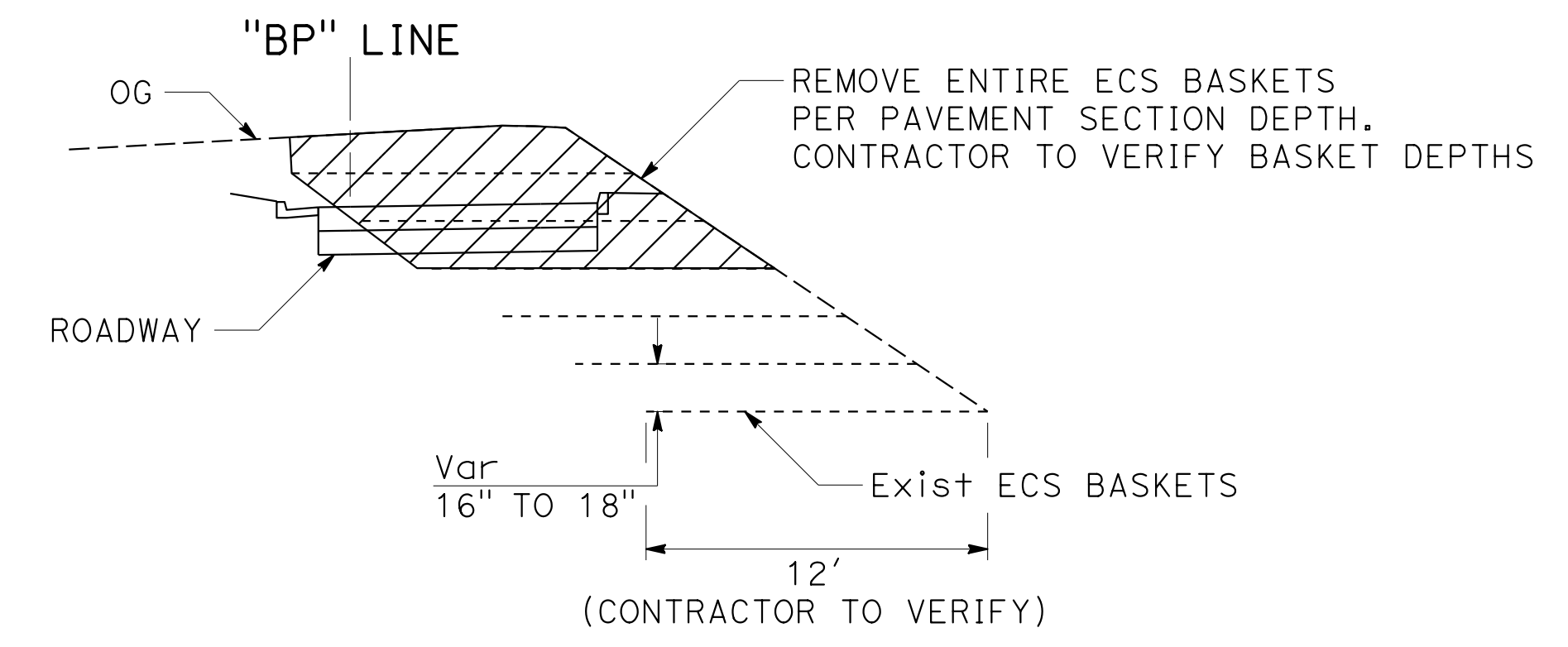
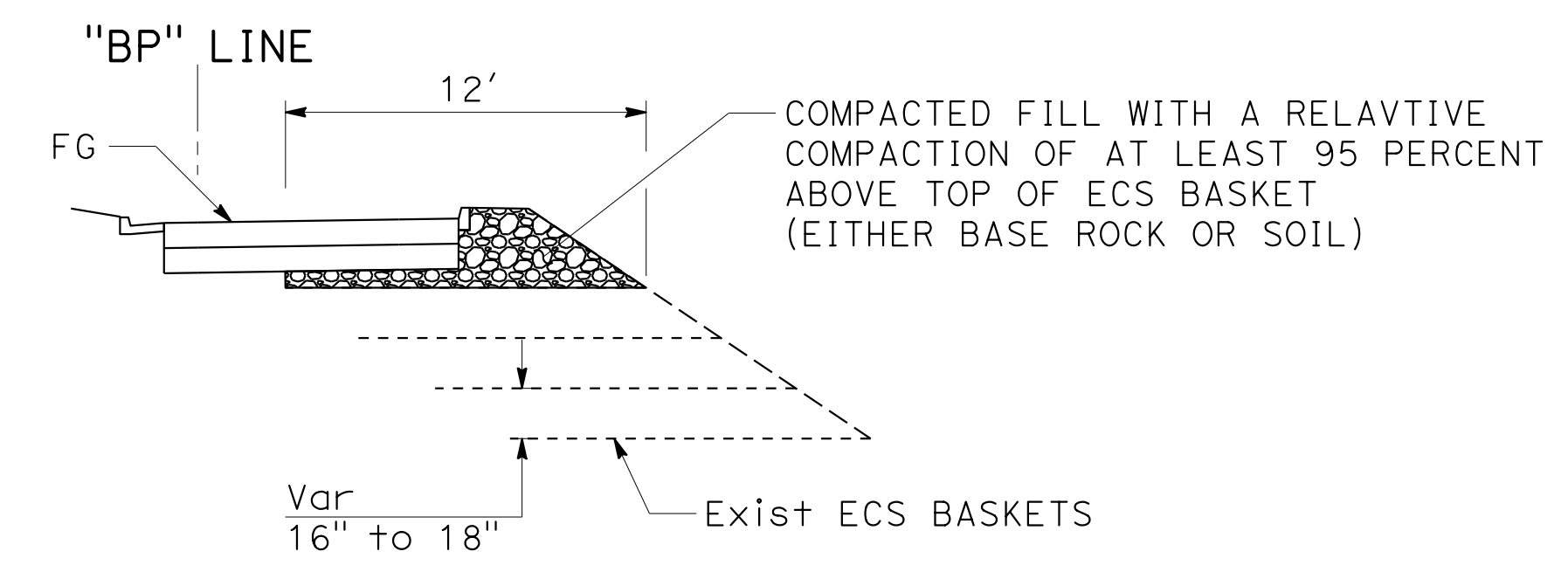
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

ABBREVIATIONS:
ECS EMBANKMENT CONFINEMENT SYSTEM



**CONCRETE BARRIER TRANSITION
(TYPE 60MP TO TYPE 60MD)**

"R1" 58+78.18 TO 58+89.17



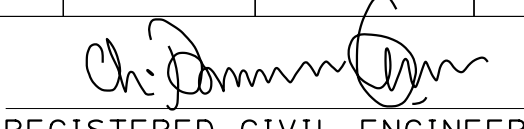
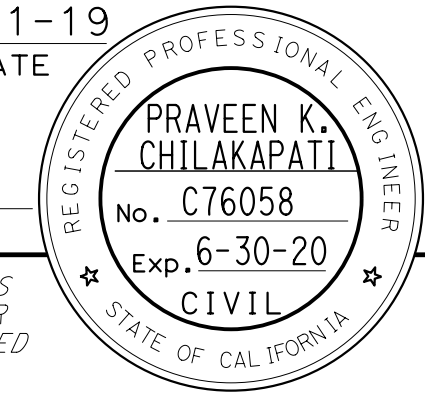
REMOVAL OF ECS SYSTEM

"BP" 64+21.75 TO 66+09.92
"SW" 2+26.94 TO 4+19.18


CONSTRUCTION DETAILS

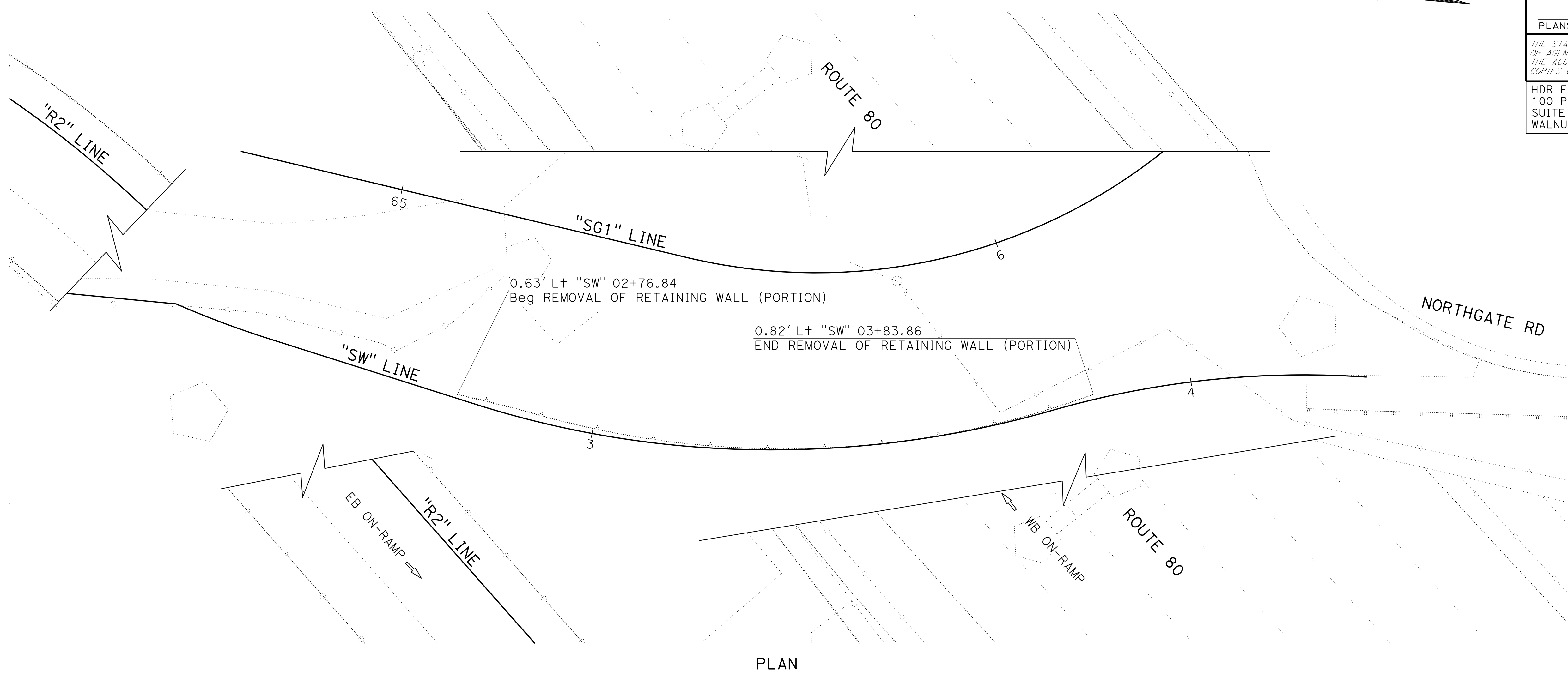
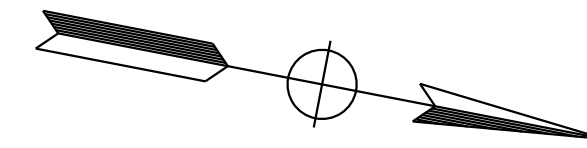
NO SCALE

C-28

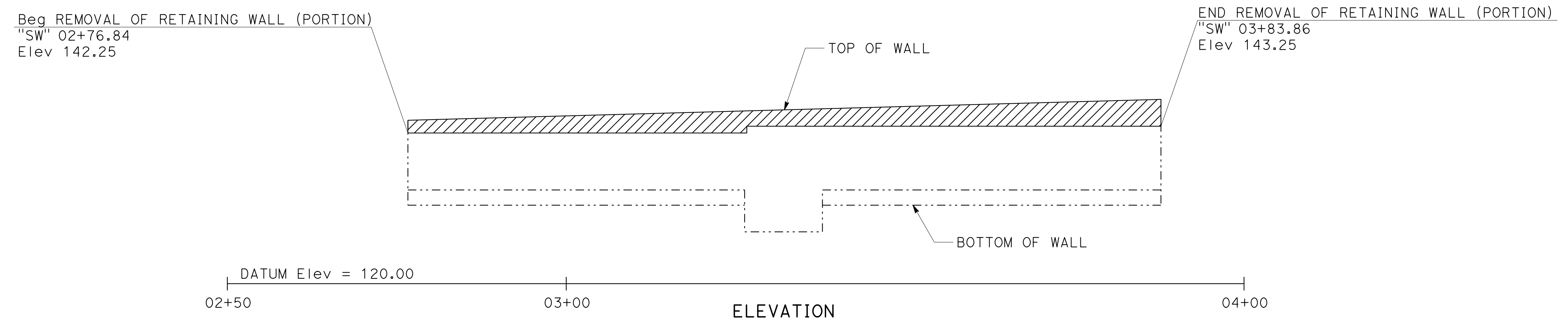
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	58	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

NOTE:
FOR DETAILS NOT SHOWN, SEE
DEMOLITION SHEETS.

LEGEND:
 RETAINING WALL
 REMOVAL LIMITS



PLAN



**RETAINING WALL
REMOVAL LIMITS**

CONSTRUCTION DETAILS

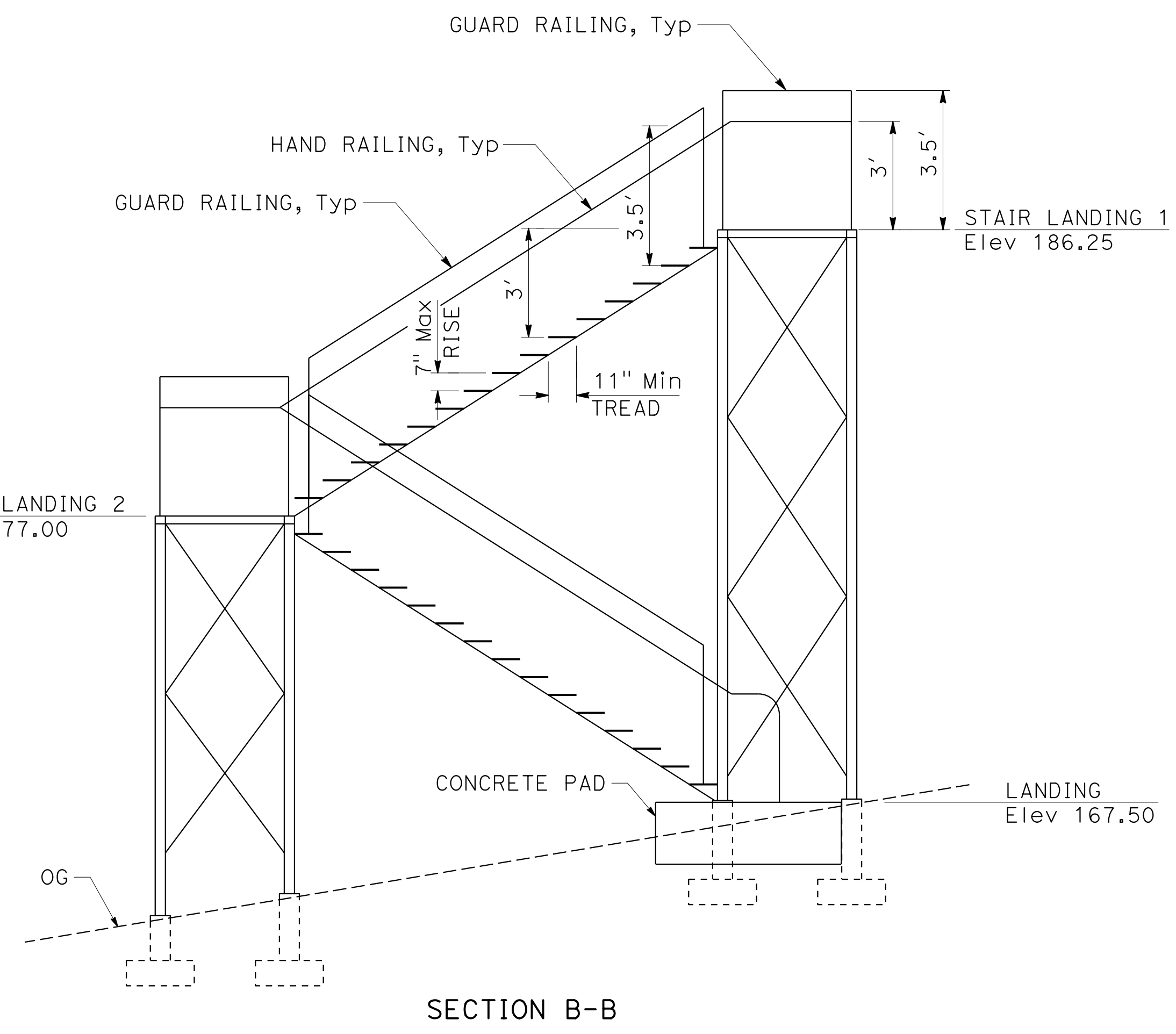
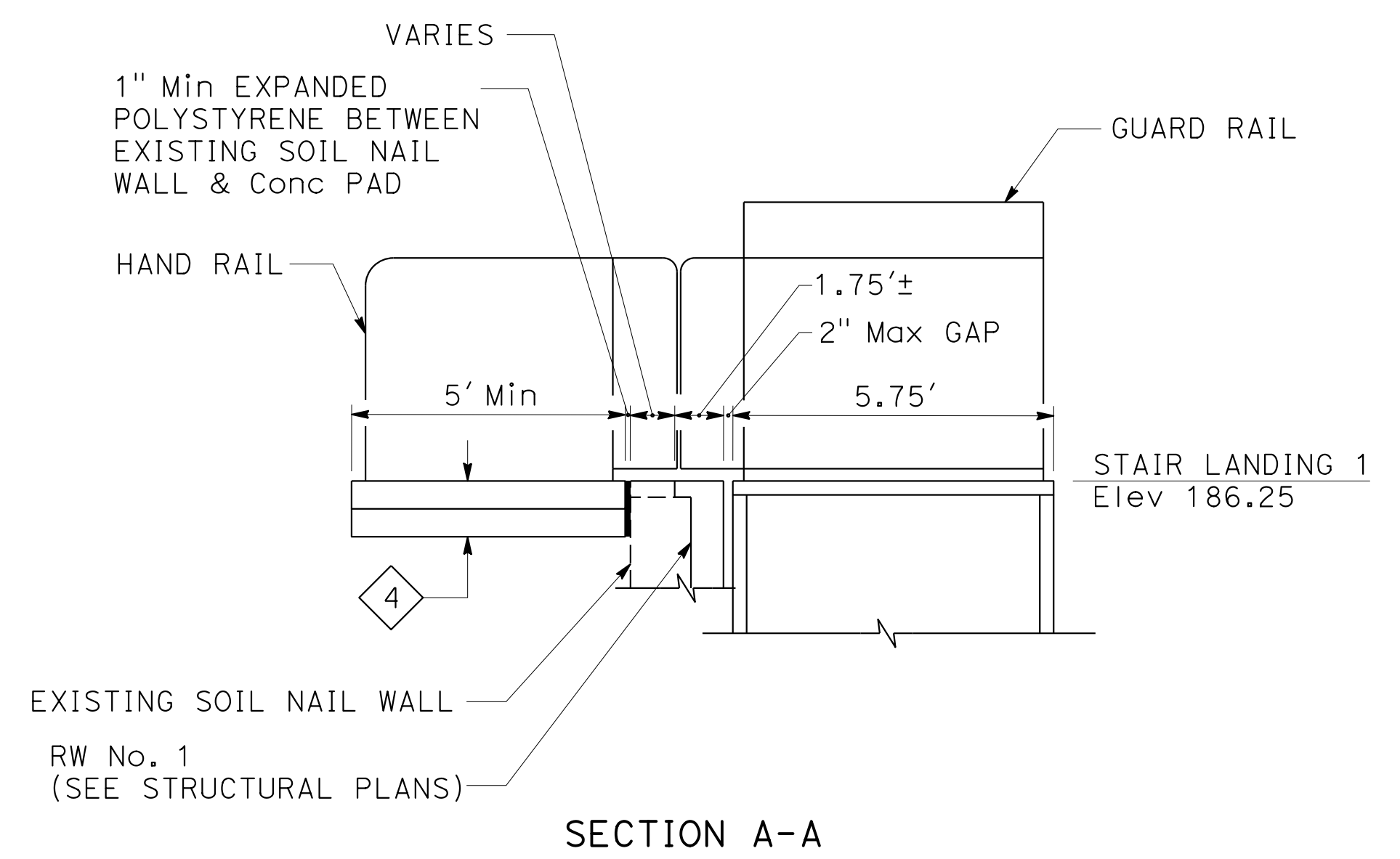
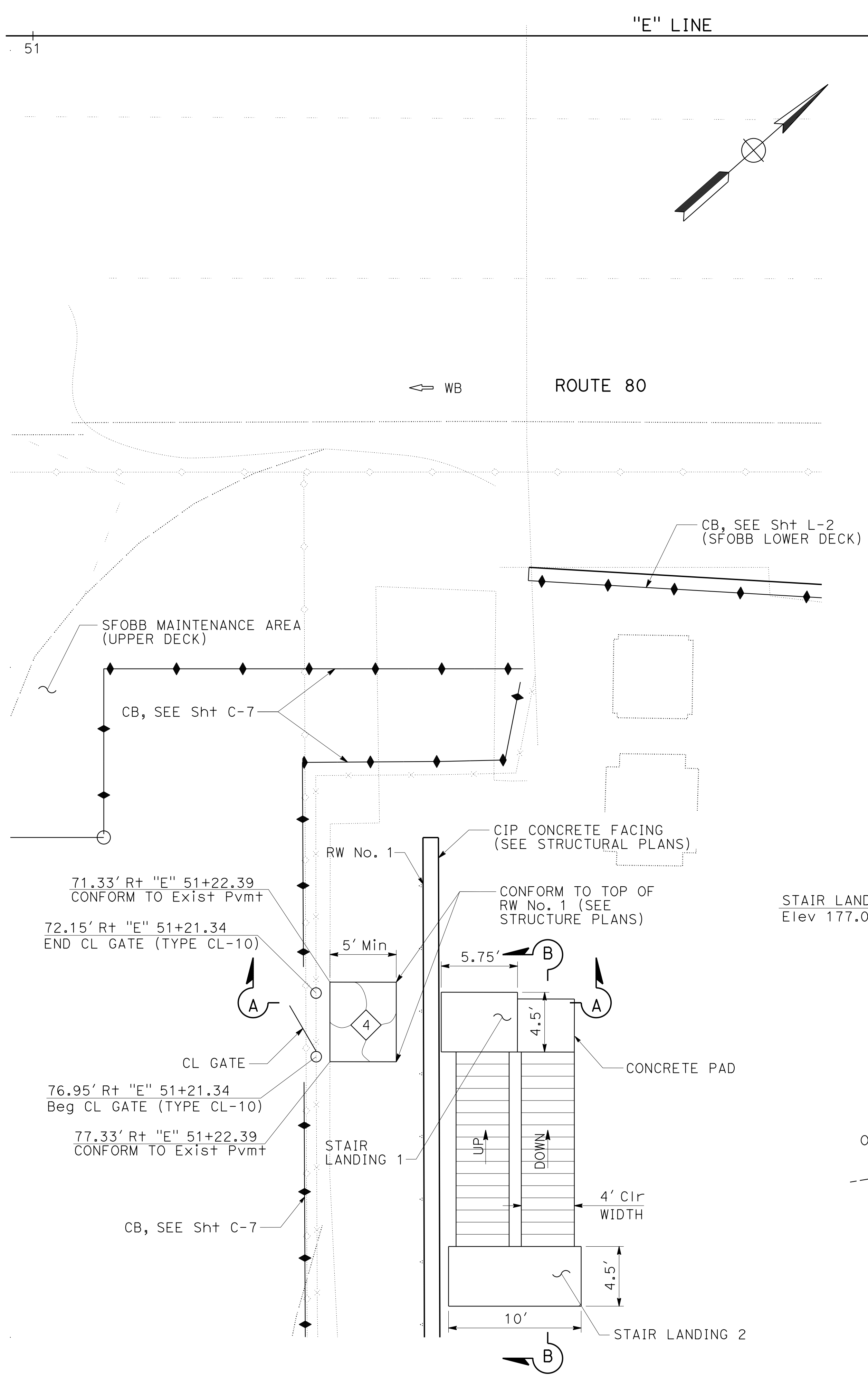
SCALE: 1" = 10'

C-29

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	INGRID V. SUPIT	INGRID SUPIT	10-11-18
CONSULTANT - FUNCTIONAL SUPERVISOR	INGRID V. SUPIT		
CALCULATED - DESIGNED BY			
CHECKED BY			
PRAVEEN CHILAKAPATI			
REVISOR			
IK			

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE	TP
INGRID V. SUPIT	INGRID SUPIT	PRAVEEN CHILAKAPATI	IK	11-28-18	1-10-19
INGRID V. SUPIT	INGRID V. SUPIT	PRAVEEN CHILAKAPATI	REVISOR	DATE	TP
INGRID V. SUPIT	INGRID SUPIT	PRAVEEN CHILAKAPATI	IK	11-28-18	1-10-19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	59	436
REGISTERED CIVIL ENGINEER			DATE	4-1-19	
PLANS APPROVAL DATE			5-17-19		
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.					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

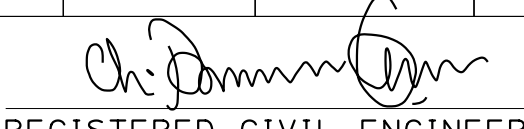
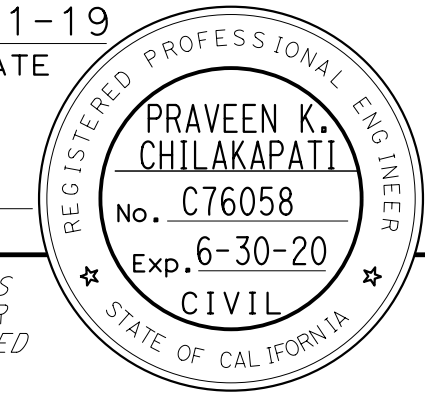


- NOTES:**
- FOR STRUCTURAL NOTES SEE CONSTRUCTION DETAILS Sht C-31.
 - FOR PAVEMENT SECTION **4** SEE TYPICAL CROSS SECTIONS Sht X-1.

ABBREVIATION:
 SFOBB SAN FRANCISCO OAKLAND BAY BRIDGE

CONSTRUCTION DETAILS
STAIR DETAILS
 SCALE: 1" = 5'

C-30

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	61	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

NOTES:

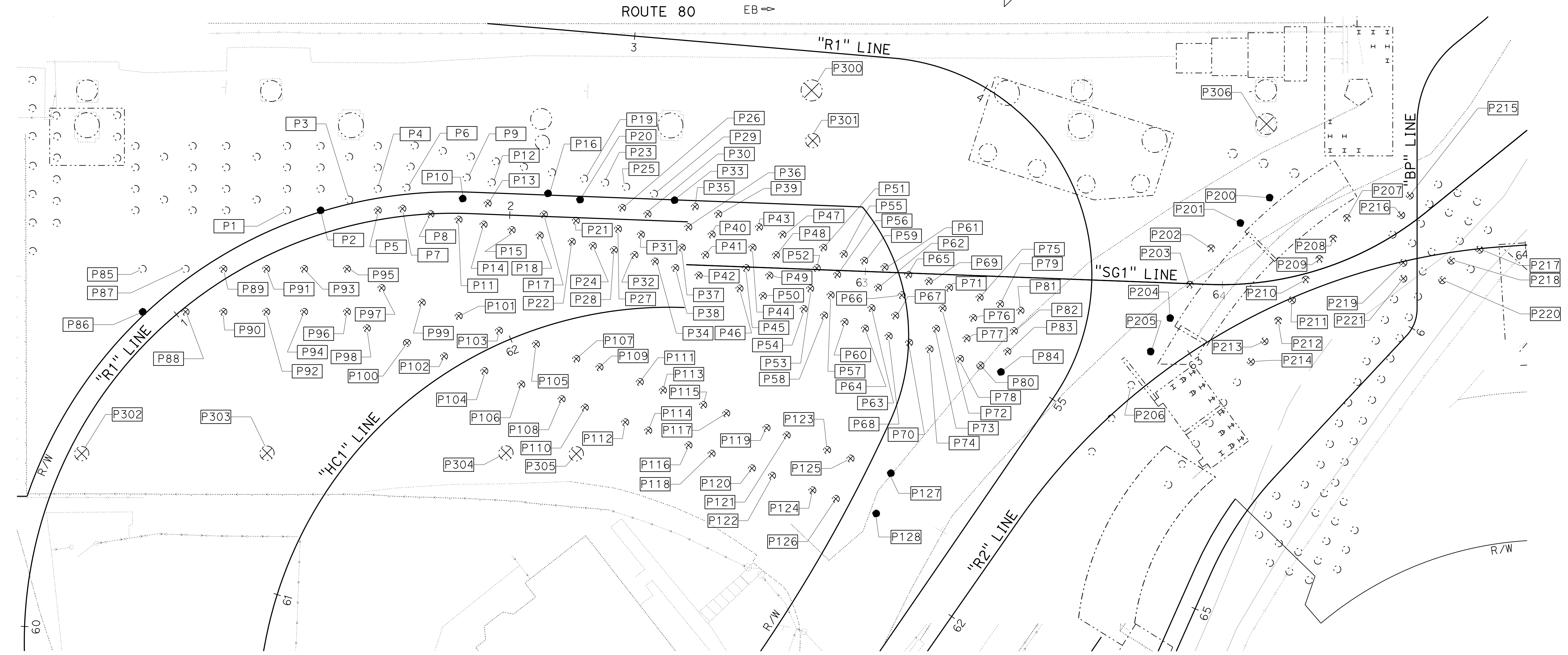
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- NORTHING AND EASTING SHOWN ARE DEVELOPED FROM AS-BUILT PLANS. CONTRACTOR TO VERIFY ACTUAL LOCATION BEFORE PERFORMING ANY WORK. ENGINEERS APPROVAL IS REQUIRED PRIOR TO REMOVAL OF ANY PILES.
- REMOVE PILE TO AN ELEVATION THAT HAS A 3' MIN CLEARANCE FROM:
 - BOTTOM OF PAVEMENT STRUCTURAL SECTION WITHIN ROADWAY PORTION;
 - FINISHED GRADE OUTSIDE ROADWAY PORTION;
 - BOTTOM OF STORM DRAIN PIPE OR INLETS;
 - BOTTOM OF WALL FOUNDATION.
- PILES P1 TO P128, P200 TO P221 ARE OF 2' Dia.
P301 TO P305 ARE OF 4' Dia, P300 AND P306 ARE OF 6' Dia.

LEGEND:

- PXXX PILE No.
- Exist CIDH PILE
 - ⊗ Exist PILE TO BE REMOVED (ROADWAY)
 - Exist PILE TO BE REMOVED (STRUCTURES)

ABBREVIATIONS:

NA NOT APPLICABLE



CONSTRUCTION DETAILS
PILE DEMOLITION PLAN

SCALE: 1" = 15'

C-32

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Et Caltrans®
 CONSULTANT - FUNCTIONAL SUPERVISOR
 INGRID V. SUPIT
 CALCULATED - DESIGNED BY
 INGRID SUPIT
 REVISOR
 DATE REVISED
 11-12-18
 PW

USERNAME => IKUKANEG
DGN FILE => 0419000153ga032.dgn

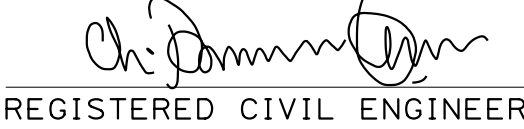
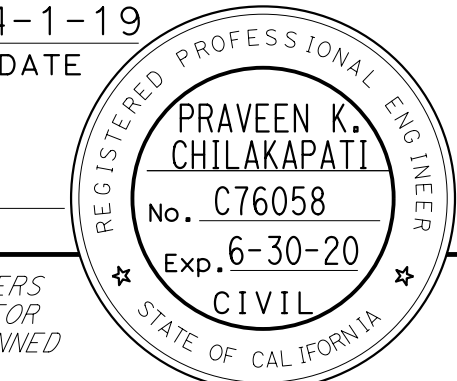
RELATIVE BORDER SCALE 15" IN INCHES
0 1 2 3

UNIT 0728

PROJECT NUMBER & PHASE

04190001531

LAST REVISION DATE PLOTTED => 07-NOV-2019
 00-00-00 TIME PLOTTED => 16:08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	62	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

Exist PILE REMOVAL QUANTITY

PILE No.	LOCATION		PILE ELEVATION		REMOVE CONC PILE (PARTIAL)
			TOP	TIP	
	NORTHING	EASTING	FEET		
P1	2122970.06	6023166.87	156.41	127.95	NA
P2	2122977.09	6023173.09	156.29	127.95	10.0
P3	2122985.08	6023176.15	155.49	127.95	NA
P4	2122993.05	6023179.20	155.43	127.95	NA
P5	2122989.07	6023183.70	156.55	127.95	19.0
P6	2122999.31	6023184.27	156.84	119.75	NA
P7	2122994.54	6023187.92	157.07	119.75	20.6
P8	2122999.40	6023194.27	156.21	119.75	17.8
P9	2123013.80	6023193.32	157.10	119.75	NA
P10	2123009.03	6023196.97	156.59	119.75	19.6
P11	2123004.26	6023200.62	156.71	119.75	11.8
P12	2123018.14	6023199.00	157.07	119.75	NA
P13	2123013.37	6023202.64	156.57	119.75	19.6
P14	2123008.60	6023206.29	156.97	119.75	12.3
P15	2123013.47	6023212.65	156.99	119.75	12.7
P16	2123027.86	6023211.70	156.63	119.75	12.4
P17	2123023.10	6023215.35	156.91	119.75	12.8
P18	2123018.33	6023219.00	156.83	119.75	12.9
P19	2123038.19	6023215.31	155.17	119.75	NA
P20	2123033.42	6023218.96	156.30	119.75	12.5
P21	2123028.66	6023222.61	156.37	119.75	12.7
P22	2123023.89	6023226.26	156.57	119.75	13.0
P23	2123041.84	6023220.07	156.89	119.75	NA
P24	2123027.53	6023231.02	156.29	119.75	13.0
P25	2123045.48	6023224.84	157.02	119.75	NA
P26	2123040.71	6023228.49	157.05	119.75	21.2
P27	2123035.95	6023232.14	156.60	119.75	13.4
P28	2123031.18	6023235.79	156.98	119.75	13.9
P29	2123050.04	6023231.43	158.66	111.55	NA
P30	2123044.88	6023234.50	158.23	111.55	21.2
P31	2123039.71	6023237.58	159.05	111.55	16.1
P32	2123034.56	6023240.65	158.90	111.55	16.1
P33	2123053.26	6023236.58	158.99	111.55	16.1
P34	2123037.63	6023245.80	158.95	111.55	16.4
P35	2123056.18	6023241.74	158.23	111.55	22.7
P36	2123051.02	6023244.81	158.15	111.55	15.7
P37	2123045.85	6023247.89	158.36	111.55	16.0
P38	2123040.70	6023250.96	158.40	111.55	16.1
P39	2123059.69	6023247.63	159.04	111.55	22.5
P40	2123054.53	6023250.70	159.04	111.55	16.9
P41	2123049.36	6023253.78	159.04	111.55	16.9
P42	2123044.21	6023256.85	159.04	111.55	17.0
P43	2123065.83	6023257.94	159.04	111.55	17.4
P44	2123060.67	6023261.01	159.04	111.55	17.4
P45	2123055.50	6023264.09	159.04	111.55	17.5
P46	2123050.35	6023267.16	159.04	111.55	17.6
P47	2123069.33	6023263.83	159.04	111.55	17.7
P48	2123064.18	6023266.90	159.04	111.55	17.7
P49	2123059.01	6023269.98	159.04	111.55	17.8
P50	2123053.87	6023273.27	159.04	111.55	17.9
SUBTOTAL					651.6

Exist PILE REMOVAL QUANTITY

PILE No.	LOCATION		PILE ELEVATION		REMOVE CONC PILE (PARTIAL)
			TOP	TIP	
	NORTHING	EASTING	FEET		
P51	2123075.48	6023274.14	159.04	111.55	18.2
P52	2123070.32	6023277.21	159.04	111.55	18.2
P53	2123065.15	6023280.29	159.04	111.55	18.3
P54	2123060.00	6023283.36	159.04	111.55	18.4
P55	2123078.55	6023279.30	157.07	111.55	16.5
P56	2123073.39	6023282.37	157.07	111.55	16.5
P57	2123068.22	6023285.45	157.07	111.55	16.6
P58	2123063.07	6023288.52	157.07	111.55	16.6
P59	2123081.62	6023284.45	157.07	111.55	16.8
P60	2123066.14	6023293.67	157.07	111.55	16.9
P61	2123084.69	6023289.61	157.07	111.55	17.0
P62	2123079.53	6023292.68	157.07	111.55	17.0
P63	2123074.37	6023295.78	157.07	111.55	24.2
P64	2123069.21	6023298.82	157.07	111.55	17.1
P65	2123088.25	6023295.58	157.07	111.55	17.3
P66	2123083.09	6023298.66	157.07	111.55	17.3
P67	2123077.93	6023301.73	157.07	111.55	17.3
P68	2123072.71	6023304.81	157.07	111.55	17.2
P69	2123091.32	6023300.74	157.07	111.55	17.6
P70	2123075.84	6023309.96	157.07	111.55	17.3
P71	2123094.39	6023305.89	157.07	111.55	17.8
P72	2123089.23	6023308.97	157.07	111.55	25.2
P73	2123084.07	6023312.04	157.07	111.55	17.8
P74	2123078.91	6023315.11	157.07	111.55	17.0
P75	2123098.97	6023313.59	157.07	111.55	18.1
P76	2123093.82	6023316.66	157.07	111.55	18.1
P77	2123088.65	6023319.74	157.07	111.55	17.5
P78	2123083.50	6023322.81	157.07	111.55	17.3
P79	2123102.04	6023318.75	157.07	111.55	25.7
P80	2123086.57	6023327.97	157.07	111.55	17.7
P81	2123105.11	6023323.90	157.07	111.55	26.3
P82	2123099.96	6023326.97	157.07	111.55	18.5
P83	2123094.79	6023330.05	157.07	111.55	17.9
P84	2123089.64	6023333.12	157.07	111.55	40.1
P85	2122928.95	6023152.36	158.76	129.59	NA
P86	2122920.98	6023161.35	159.04	129.59	8.9
P87	2122937.93	6023160.31	157.54	129.59	NA
P88	2122929.99	6023169.56	158.50	129.59	11.4
P89	2122945.85	6023167.32	157.47	129.59	10.6
P90	2122937.89	6023176.32	158.22	129.59	11.6
P91	2122954.84	6023175.28	157.90	129.59	11.4
P92	2122946.86	6023184.00	158.70	129.59	12.5
P93	2122962.76	6023182.29	157.69	129.59	11.6
P94	2122954.80	6023191.28	158.28	129.59	14.6
P95	2122971.74	6023190.25	158.02	129.59	15.2
P96	2122963.78	6023199.24	157.54	129.59	14.7
P97	2122975.46	6023200.66	158.12	116.47	13.1
P98	2122964.90	6023206.39	158.66	116.47	12.1
P99	2122981.17	6023211.18	158.36	116.47	13.7
P100	2122970.61	6023216.91	159.00	116.47	12.6
SUBTOTAL					821.5

Exist PILE REMOVAL QUANTITY

PILE No.	LOCATION		PILE ELEVATION		REMOVE CONC PILE (PARTIAL)
			TOP	TIP	
	NORTHING	EASTING	FEET		
P101	2122986.42	6023220.85	158.17	116.47	18.9
P102	2122975.86	6023226.58	158.79	116.47	13.2
P103	2122992.14	6023231.40	158.23	116.47	13.8
P104	2122981.59	6023237.13	158.54	116.47	13.9
P105	2122997.39	6023241.07	158.04	116.47	18.7
P106	2122986.60	6023246.81	158.65	116.47	14.8
P107	2123003.12	6023251.61	157.23	116.47	14.1
P108	2122992.56	6023257.34	158.27	116.47	15.8
P109	2123006.42	6023257.69	158.20	116.47	15.6
P110	2122995.86	6023263.42	158.27	116.47	16.5
P111	2123012.15	6023268.25	158.05	116.47	16.3
P112	2123001.59	6023273.98	158.72	116.47	17.6
P113	2123015.42	6023274.28	157.07	108.27	15.5
P114	2123004.87	6023280.01	157.07	108.27	15.6
P115	2123021.15	6023284.82	157.07	108.27	16.0
P116	2123010.60	6023290.66	157.07	108.27	16.1
P117	2123024.43	6023290.86	157.07	108.27	16.3
P118	2123013.87	6023296.59	157.07	108.27	16.7
P119	2123029.83	6023301.43	157.07	108.27	16.8
P120	2123019.59	6023307.14	157.07	108.27	17.7
P121	2123033.01	6023306.68	154.77	108.27	14.7
P122	2123022.46	6023312.41	154.77	108.27	15.8
P123	2123038.75	6023317.24	154.77	108.27	14.5
P124	2123028.19	6023322.97	154.77	108.27	21.3
P125	2123042.07	6023323.37	154.77	108.27	14.6
P126	2123031.52	6023329.10	154.77	108.27	14.9
P127	2123047.80	6023333.92	154.77	108.27	15.0
P128	6023339.65	6023339.65	154.77	108.27	18.6
SUBTOTAL					449.2

3

3

3 REPLACED PER ADDENDUM No. 3 DATED JANUARY 6, 2020


FOR NOTES AND LEGEND, SEE SHEET C-32

**CONSTRUCTION DETAILS
PILES REMOVAL QUANTITIES**

NO SCALE

C-33

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	63	436


 REGISTERED CIVIL ENGINEER DATE 4-1-19
 PLANS APPROVAL DATE 5-17-19

REGISTERED PROFESSIONAL ENGINEER
PRAVEEN K. CHILAKAPATI
 No. C76058
 Exp. 6-30-20
 CIVIL
 STATE OF CALIFORNIA

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.

HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596	SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103
---	---

Exist PILE REMOVAL QUANTITY

PILE No.	LOCATION		PILE ELEVATION		REMOVE CONC PILE (PARTIAL) LF
			TOP	TIP	
	NORTHING	EASTING	FEET		
XXX					
P200	2123178.24	6023346.43	157.71	UNKNOWN	5.7
P201	2123167.43	6023346.35	159.08	UNKNOWN	23.2
P202	2123156.64	6023346.14	160.53	UNKNOWN	24.1
P203	2123145.36	6023349.87	161.56	UNKNOWN	24.8
P204	2123135.05	6023353.23	161.83	UNKNOWN	28.2
P205	2123124.82	6023356.57	163.02	UNKNOWN	29.4
P206	2123114.52	6023360.00	UNKNOWN	UNKNOWN	NA
P207	2123190.68	6023365.07	152.52	UNKNOWN	16.1
P208	2123184.00	6023366.82	151.25	UNKNOWN	14.9
P209	2123177.32	6023368.57	148.90	UNKNOWN	12.5
P210	2123170.60	6023370.31	146.66	UNKNOWN	10.2
P211	2123163.93	6023372.05	146.54	UNKNOWN	14.1
P212	2123157.28	6023373.77	147.55	UNKNOWN	11.0
P213	2123150.59	6023375.51	146.72	UNKNOWN	12.5
P214	2123143.89	6023377.28	146.88	UNKNOWN	12.6
P215	2123208.06	6023371.93	137.80	UNKNOWN	5.6
P216	2123202.62	6023374.46	137.80	UNKNOWN	5.6
P217	2123212.38	6023395.99	137.80	UNKNOWN	5.8
P218	2123204.69	6023393.29	137.80	UNKNOWN	5.8
P219	2123194.21	6023384.86	137.80	UNKNOWN	5.6
P220	2123199.19	6023395.76	137.80	UNKNOWN	5.7
P221	2123191.28	6023388.15	137.80	UNKNOWN	5.6
P300	2123102.23	6023239.01	167.70	UNKNOWN	3.3
P301	2123093.14	6023249.75	167.82	UNKNOWN	2.7
P302	2122881.93	6023179.76	168.52	UNKNOWN	21.0
P303	2122920.83	6023214.03	169.25	UNKNOWN	18.7
P304	2122970.94	6023258.28	168.47	UNKNOWN	26.6
P305	2122985.51	6023271.52	167.28	UNKNOWN	25.8
P306	2123191.28	6023330.40	164.00	UNKNOWN	4.0
SHEET TOTAL FROM C-34					380.8
SHEET TOTAL FROM C-33					1922.4
TOTAL					2303.2

3


3 REPLACED PER ADDENDUM No. 3 DATED JANUARY 6, 2020

FOR NOTES AND LEGEND,
SEE SHEET C-32


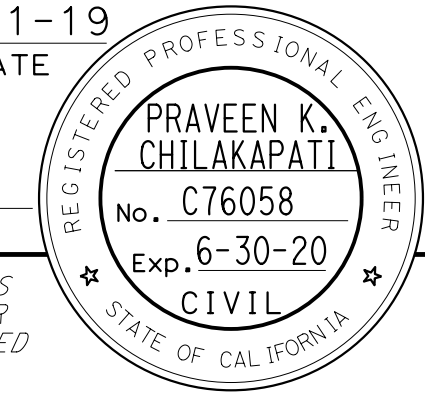
CONSTRUCTION DETAILS
PILES DEMOLITION QUANTITIES

NO SCALE

C-34

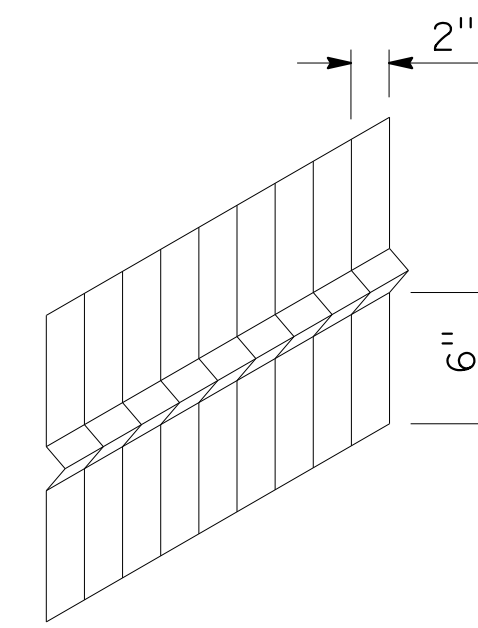
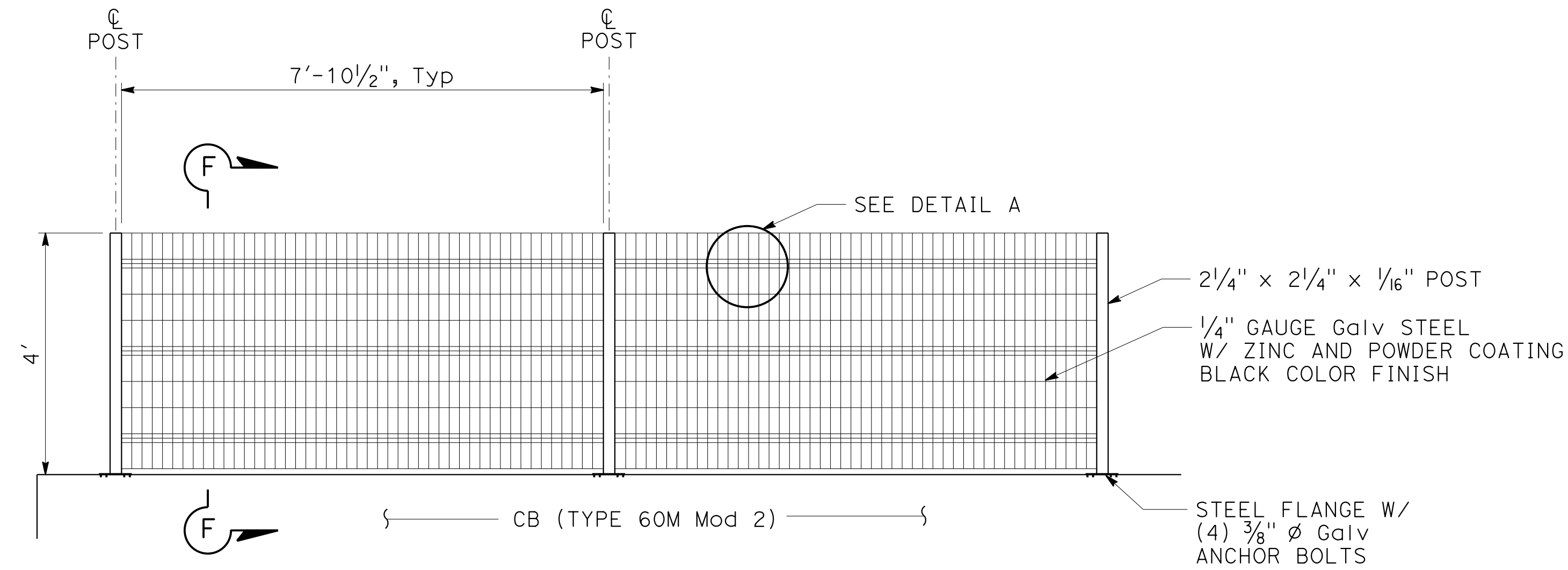
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

 CONSULTANT - FUNCTIONAL SUPERVISOR
 INGRID V. SUPIT
 CALCULATED/DESIGNED BY
 CHECKED BY
 PRAVEEN CHILAKAPATI
 INGRID SUPIT
 REVISED BY
 DATE REVISED
 PW
 11-12-18

LAST REVISION DATE PLOTTED => 6-JAN-2020
 00-00-00 TIME PLOTTED => 13:55

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	64	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

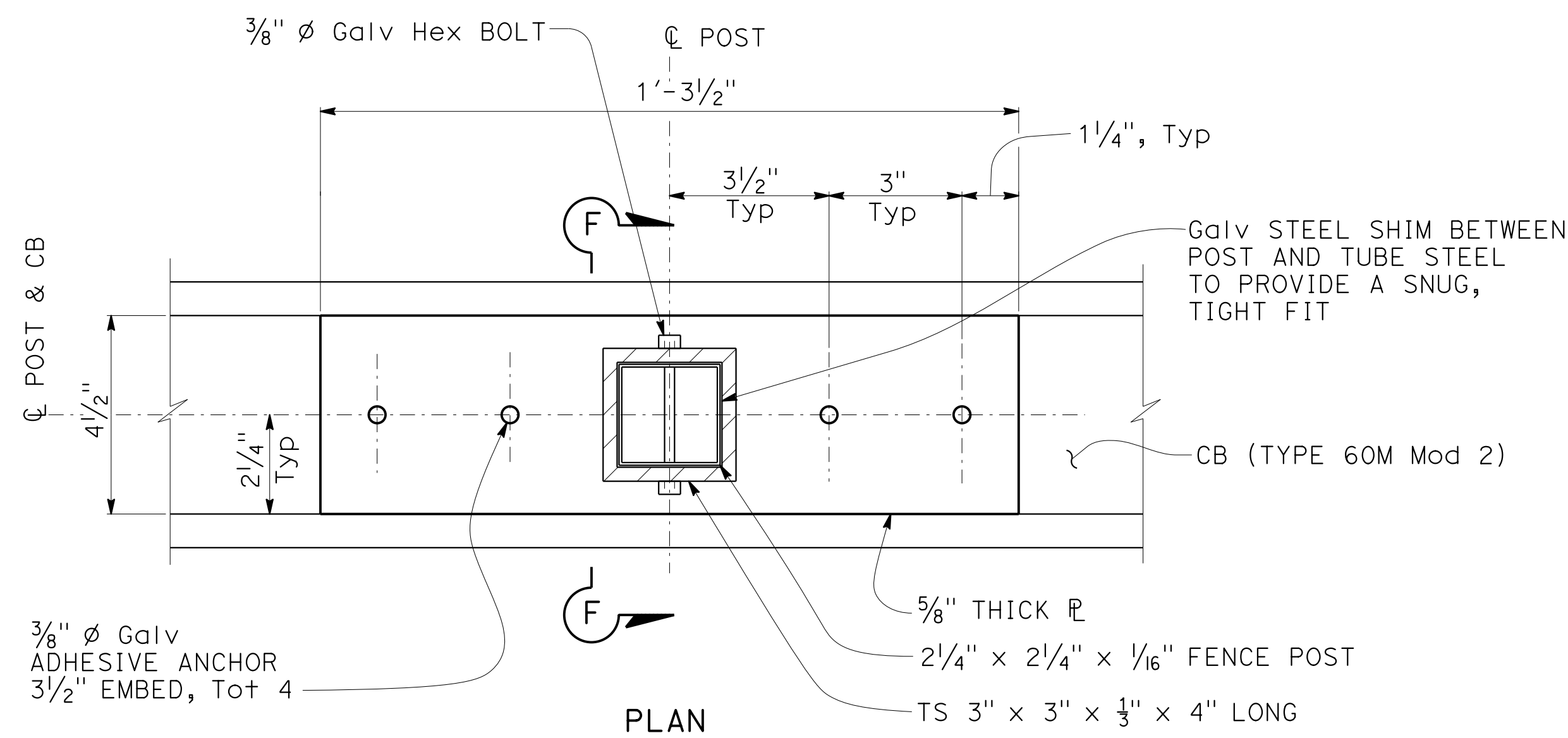
NOTES:

1. PLATE AND TS TO BE PAINTED AND FINISHED TO MATCH FENCE POST.
2. PROVIDE A STEEL SHIM BETWEEN POST AND TUBE STEEL TO PROVIDE A SNUG, TIGHT FIT.

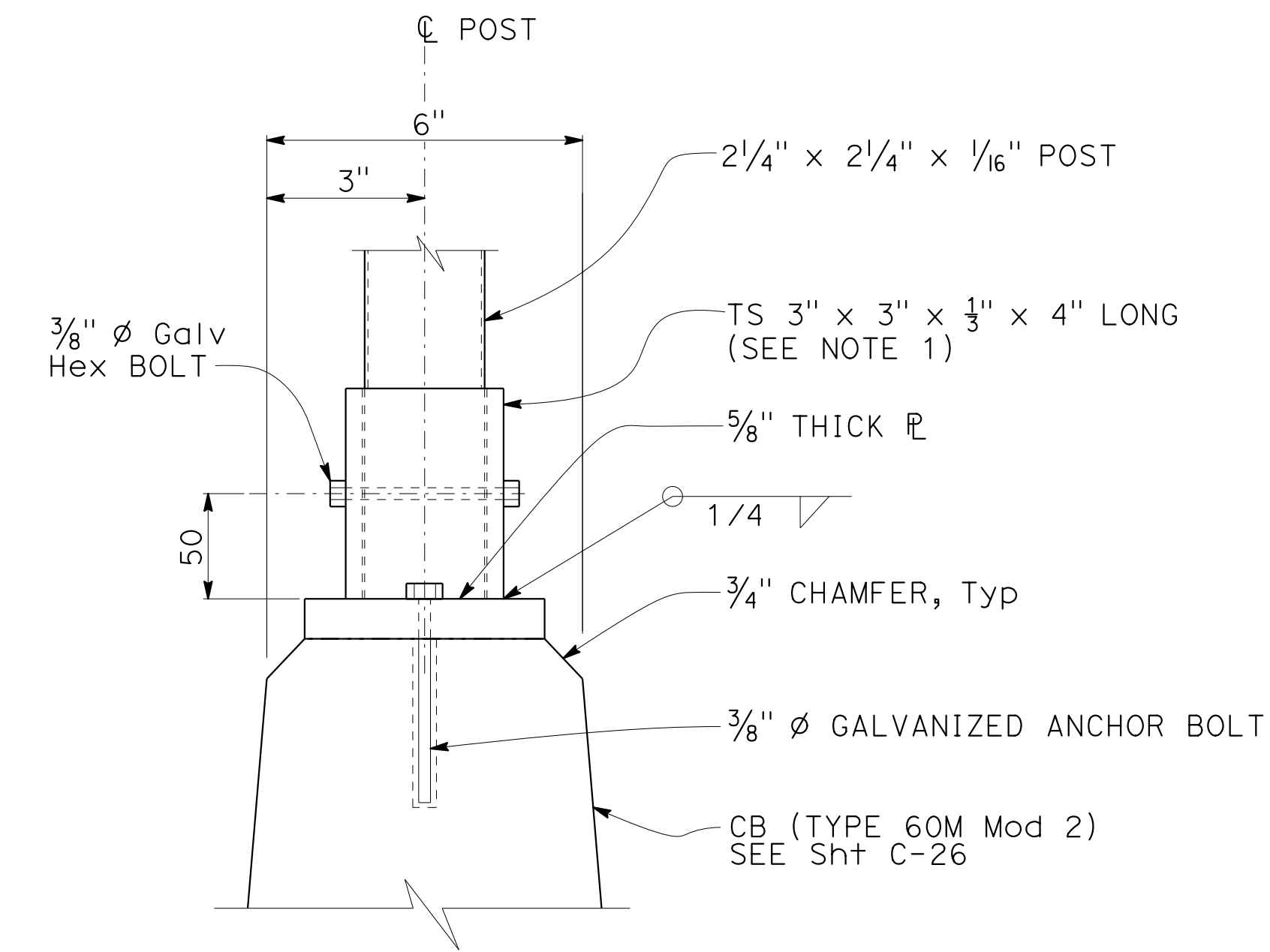


DETAIL A

WELDED WIRE STEEL RAILING DETAIL



TYPICAL FENCE POST CONNECTION





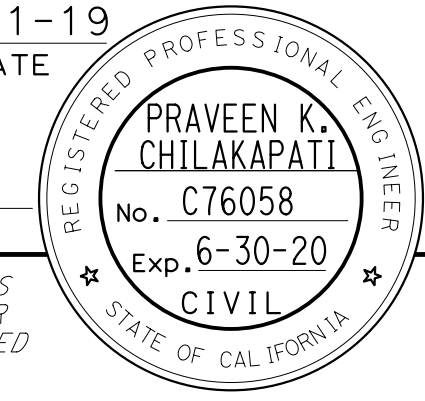
SECTION F-F

**CONSTRUCTION DETAILS
WELDED WIRE STEEL RAILING**

NO SCALE

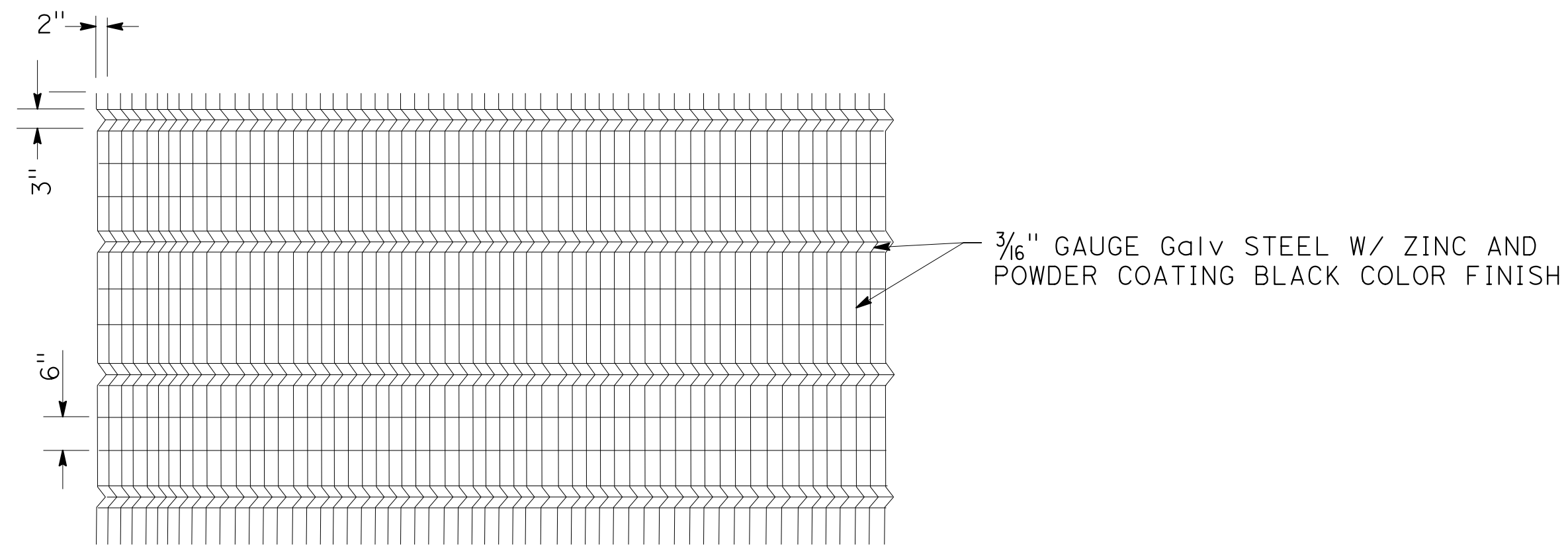
C-35

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	REVISOR	DATE
	INGRID V. SUPIT	TARYN PASCUA	1-14-19
	CHECKED BY	REVISOR	DATE
		PRAVEEN CHILAKAPATI	

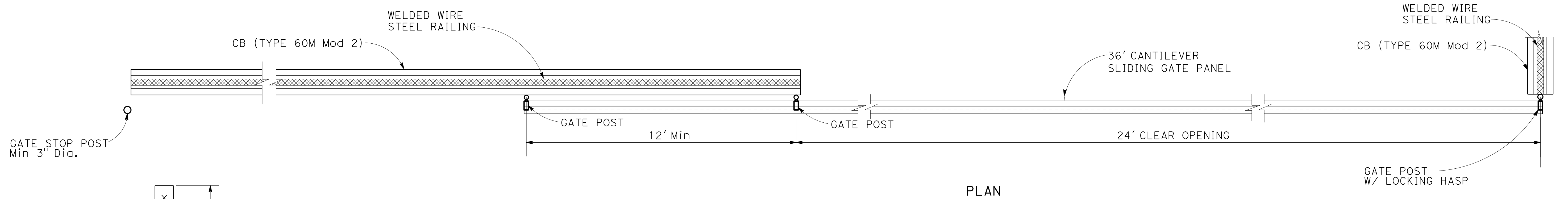
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	65	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

NOTE:

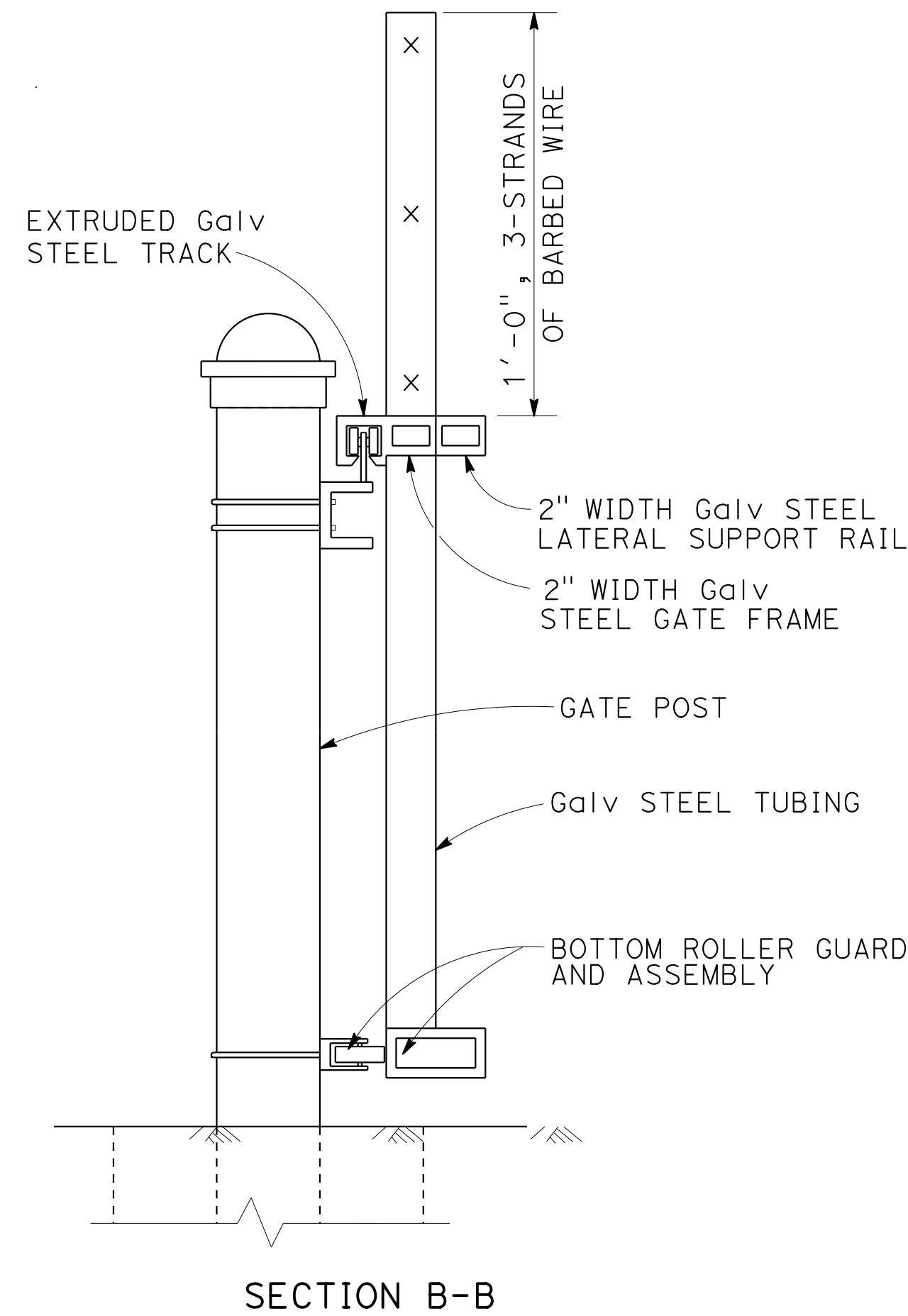
1. GATE AND SUPPORTS TO BE DESIGNED BY THE GATE MANUFACTURER IN ACCORDANCE WITH THESE GENERAL DETAILS AND THE SPECIFICATION REQUIREMENTS.



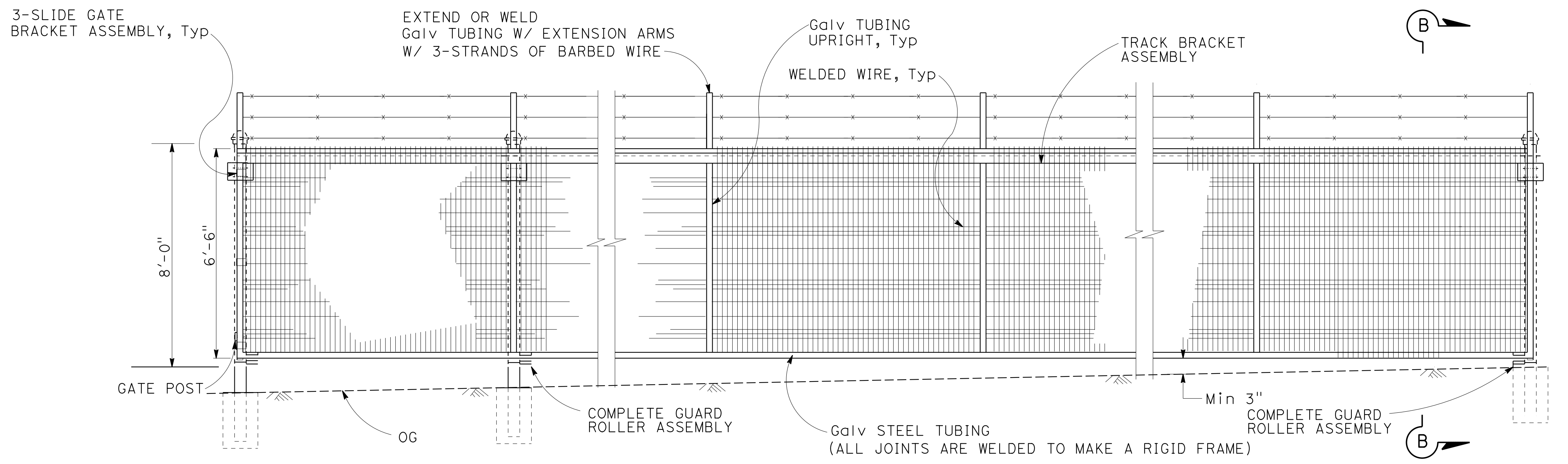
PANEL



PLAN



SECTION B-B



ELEVATION

CONSTRUCTION DETAILS
CANTILEVER SLIDING GATE
 NO SCALE

C-36

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	66	436

REGISTERED CIVIL ENGINEER
 DATE 4-1-19
 PLANS APPROVAL DATE 5-17-19

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.

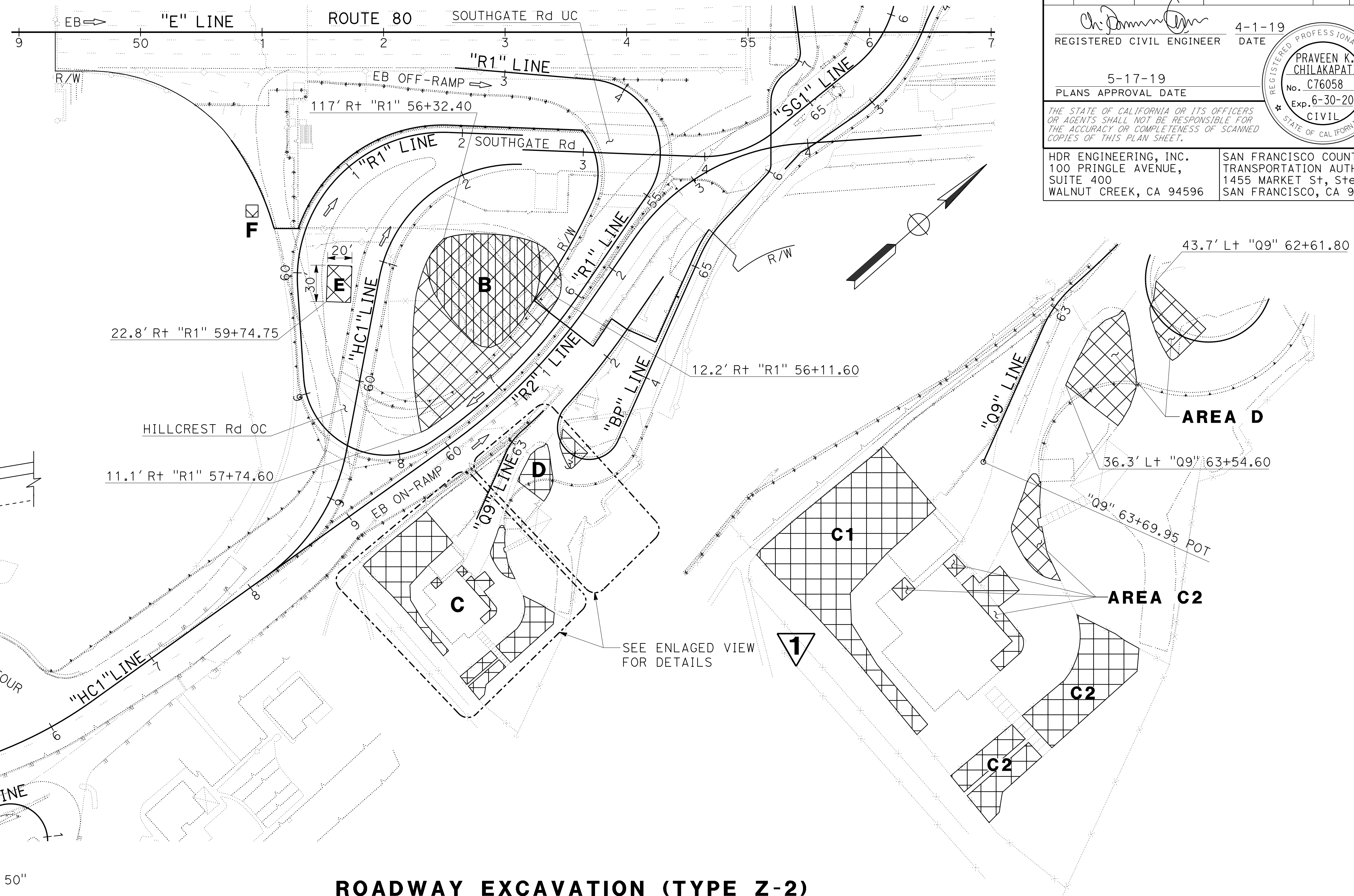
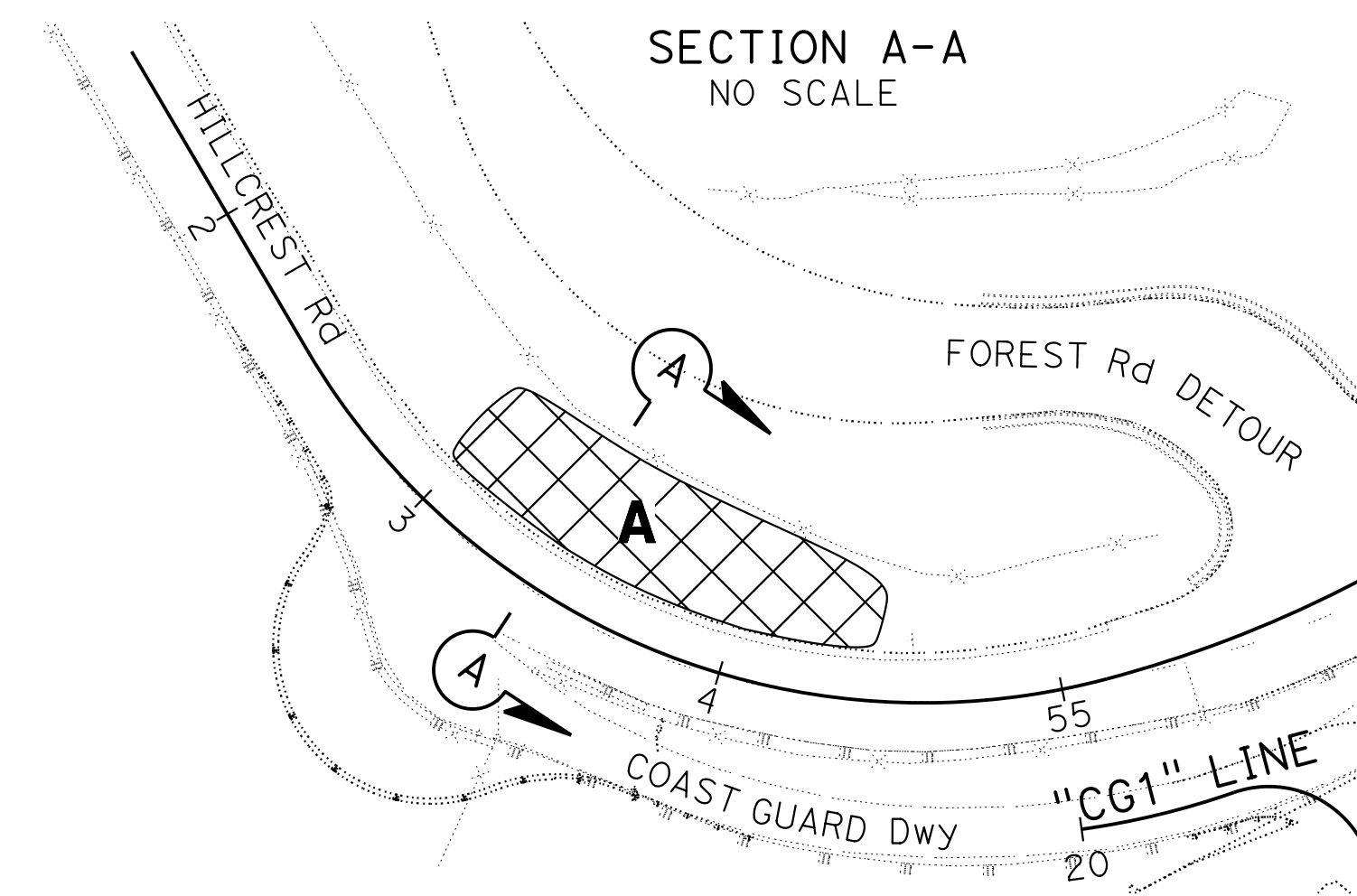
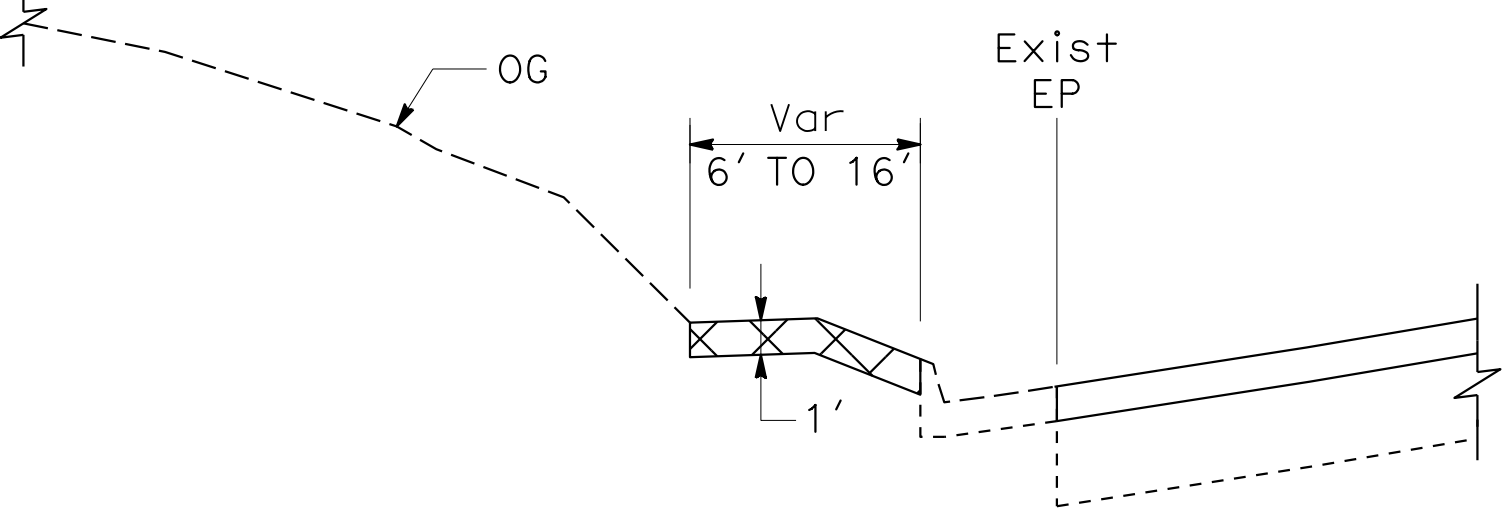
HDR ENGINEERING, INC.
 100 PRINGLE AVENUE, SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

- NOTES:**
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
 - ALL THE AREAS SHOWN ARE APPROXIMATE AND WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - THE AREAS SHOWN ARE AREAS OF EXPOSED SOIL AND DO NOT INCLUDE AREAS UNDER SURFACING.

ABBREVIATIONS:
 RCRA RESOURCE CONSERVATION AND RECOVERY ACT

- LEGEND:**
- ROADWAY EXCAVATION, LOCATION X
 - ROADWAY EXCAVATION, TYPE Z-3



SHOTCRETE

LOCATION	AREA	DEPTH	VOLUME
	SQFT	FT	CY
C1	2870	1.0	105
TOTAL			105

ROADWAY EXCAVATION (TYPE Z-3)

LOCATION	AREA	DEPTH	VOLUME
	SQFT	FT	CY
B	4380*	0.5	65
TOTAL			65**

* BUILDING FOOTPRINT AREA EXCLUDED
 ** INCULDED IN Sht Q-2, EARTHWORK QUANTITIES TABLE

ROADWAY EXCAVATION (TYPE Z-2)

LOCATION	AREA	DEPTH	VOLUME
	SQFT	FT	CY
A	5200	1.0	150
B	9750*	1.5***	485
C1	2870*	1.0	105
C2	3980*	0.5 to 2.5	290
D	1975	1.0 to 2.0	80
E	600	3.0	70
F	100	3.0	15
TOTAL			1195**

* BUILDING FOOTPRINT AREA EXCLUDED
 ** INCULDED IN Sht Q-2, EARTHWORK QUANTITIES TABLE
 *** TOP 0.5 FOOT OF SOIL ARE CLASSIFIED AS AND DISPOSED OF AS A RCRA HAZARDOUS WASTE (TYPE Z-3)

ENLARGED PLAN VIEW
 NO SCALE

**CONSTRUCTION DETAILS
 AREAS CONTAINING LEAD**

SCALE: AS SHOWN

C-37

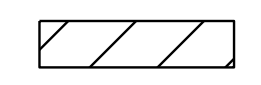
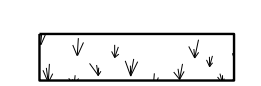
1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

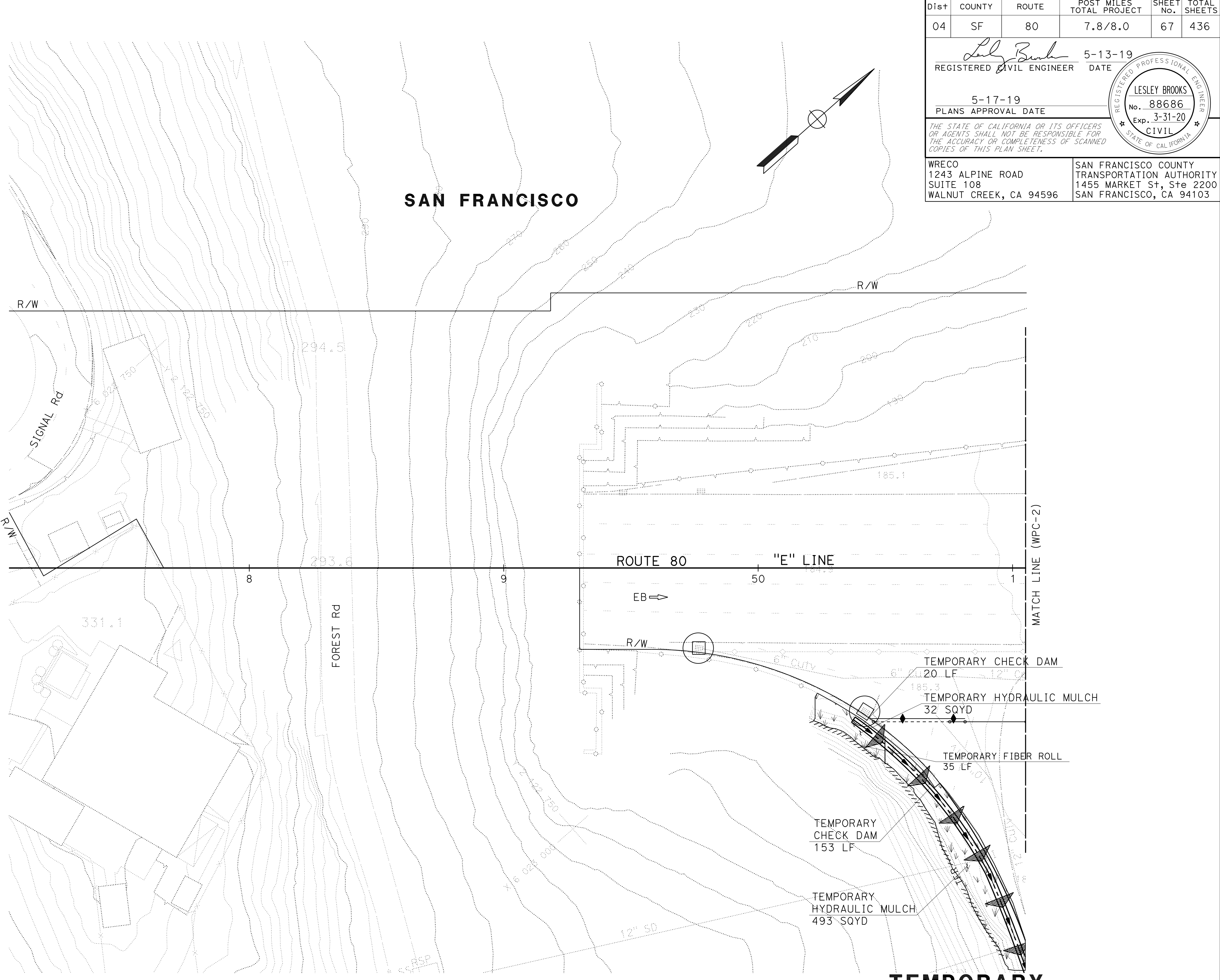
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	LESLEY BROOKS	REVISOR	DATE	LB	5-17-19
Caltrans	HAN-BIN LIANG	CHECKED BY	ANALETTE OCHOA	DATE REVISED		LB	2-18-19
						LB	11-12-18

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- ADJUSTMENT/MODIFICATION OR ADDITIONAL WATER POLLUTION CONTROL MEASURES MAY BE NEEDED TO ADDRESS ACTUAL SITE CONDITIONS OR AS DIRECTED BY THE ENGINEER.

LEGEND:

-  TEMPORARY COVER
-  TEMPORARY HYDRAULIC MULCH (BONDED FIBER MATRIX)



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	67	436

REGISTERED CIVIL ENGINEER *Lesley Brooks* DATE 5-13-19
 PLANS APPROVAL DATE 5-17-19
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
LESLEY BROOKS
 No. 88686
 Exp. 3-31-20
 CIVIL
 STATE OF CALIFORNIA

WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596	SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103
--	---

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

TEMPORARY WATER POLLUTION CONTROL PLAN

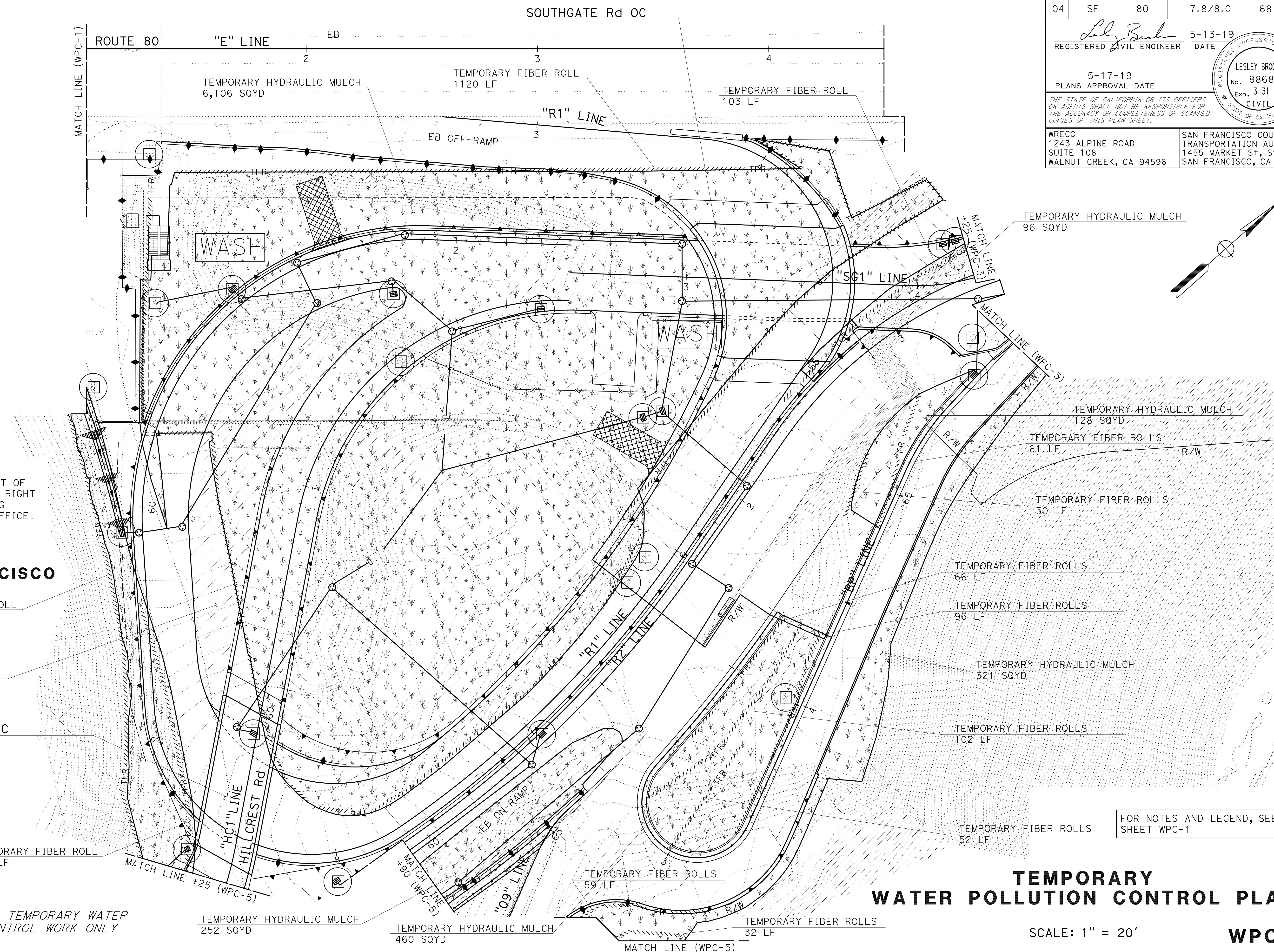
SCALE: 1" = 20'

WPC-1

LAST REVISION DATE PLOTTED => 29-OCT-2019 00-00-00 TIME PLOTTED => 14:59

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR	DATE	REVISED BY	DATE	REVISED BY	DATE	REVISED BY	DATE
Caltrans	HAN-BIN LIANG	LESLEY BROOKS	ANALETTE OCHOA	5-17-19	LESLEY BROOKS	ANALETTE OCHOA	2-18-19	5-17-19	LESLEY BROOKS	ANALETTE OCHOA

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	68	436
			REGISTERED CIVIL ENGINEER	DATE	
			5-13-19		
			PLANS APPROVAL DATE		
			5-17-19		
			REGISTERED PROFESSIONAL ENGINEER		
			No. 88686		
			Exp. 3-31-20		
			CIVIL		
			STATE OF CALIFORNIA		
WRECO			SAN FRANCISCO COUNTY		
1243 ALPINE ROAD			TRANSPORTATION AUTHORITY		
SUITE 108			1455 MARKET St, Ste 2200		
WALNUT CREEK, CA 94596			SAN FRANCISCO, CA 94103		



NOTES:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

SAN FRANCISCO

TEMPORARY FIBER ROLL
290 LF

TEMPORARY COVER
568 SQYD

HILLCREST Rd OC

TEMPORARY FIBER ROLL
116 LF

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

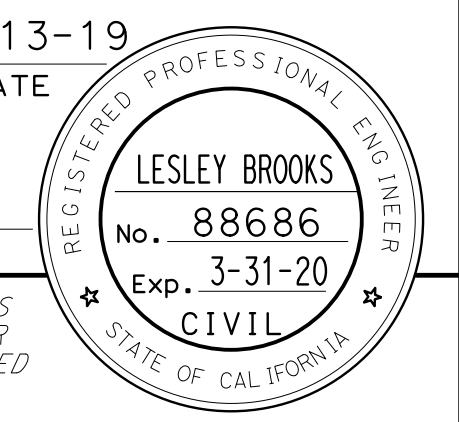
TEMPORARY WATER POLLUTION CONTROL PLAN

SCALE: 1" = 20'

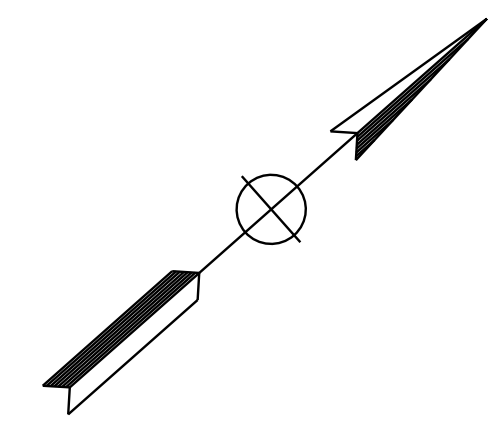
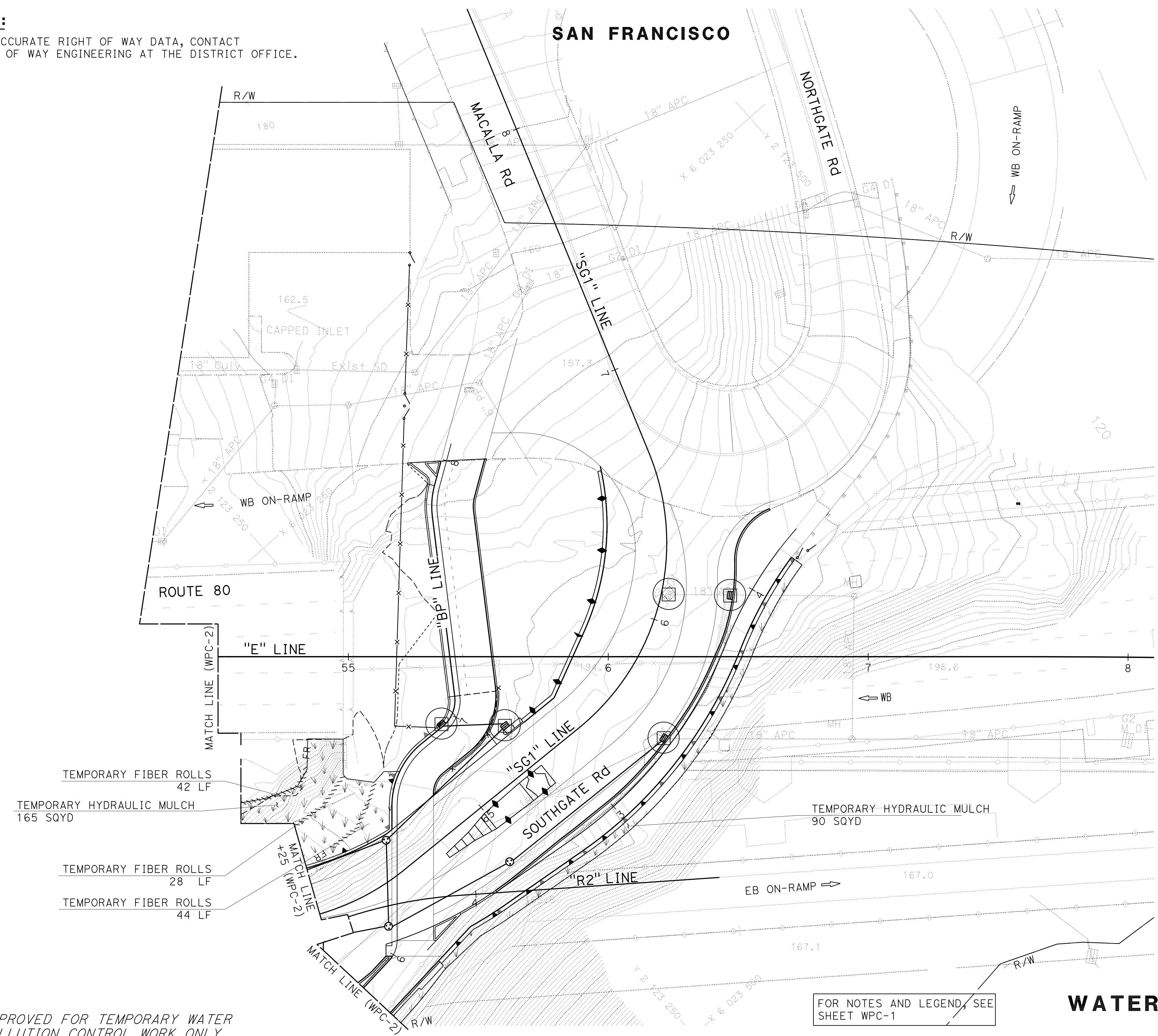
WPC-2

FOR NOTES AND LEGEND, SEE SHEET WPC-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	69	436
			REGISTERED CIVIL ENGINEER	DATE	
			5-13-19		
			5-17-19	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.		
WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



- TEMPORARY FIBER ROLLS 42 LF
- TEMPORARY HYDRAULIC MULCH 165 SQYD
- TEMPORARY FIBER ROLLS 28 LF
- TEMPORARY FIBER ROLLS 44 LF

FOR NOTES AND LEGEND, SEE SHEET WPC-1

TEMPORARY WATER POLLUTION CONTROL PLAN

SCALE: 1" = 20' **WPC-3**

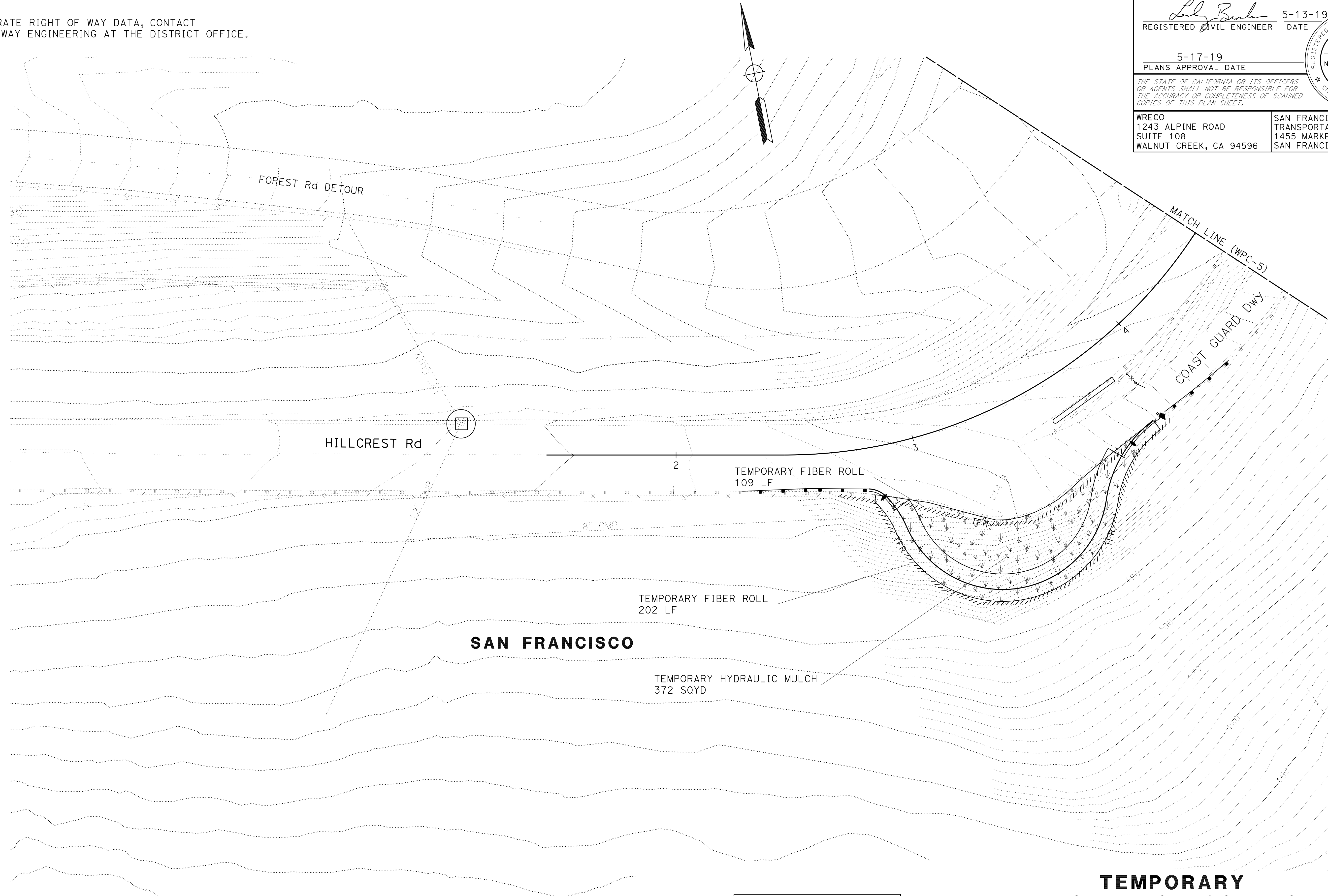
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	REVISOR	DATE
LESLEY BROOKS	HAN-BIN LIANG	ANALETTE OCHOA	5-17-19
LESLEY BROOKS	ANALETTE OCHOA	ANALETTE OCHOA	5-17-19
ANALETTE OCHOA	ANALETTE OCHOA	ANALETTE OCHOA	5-17-19

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR
 HAN-BIN LIANG
 CALCULATED-DESIGNED BY
 CHECKED BY
 LESLEY BROOKS
 ANALETTE OCHOA
 REVISED BY
 DATE REVISED
 LB
 11-12-18
 LB
 2-18-19
 LB
 5-17-19

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	70	436

Lesley Brooks
 REGISTERED CIVIL ENGINEER DATE 5-13-19
 5-17-19
 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.
 WRECO
 1243 ALPINE ROAD
 SUITE 108
 WALNUT CREEK, CA 94596
 SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



APPROVED FOR TEMPORARY WATER
 POLLUTION CONTROL WORK ONLY

FOR NOTES AND LEGEND, SEE
 SHEET WPC-1

**TEMPORARY
 WATER POLLUTION CONTROL PLAN**

SCALE: 1" = 20'

WPC-4

LAST REVISION DATE PLOTTED => 29-OCT-2019 00-00-00 TIME PLOTTED => 15:01

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR
 HAN-BIN LIANG
 CHECKED BY
 ANALETTE OCHOA
 DESIGNED BY
 LESLEY BROOKS
 REVISOR
 ANALETTE OCHOA
 DATE
 11-12-18
 2-18-19
 5-17-19

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

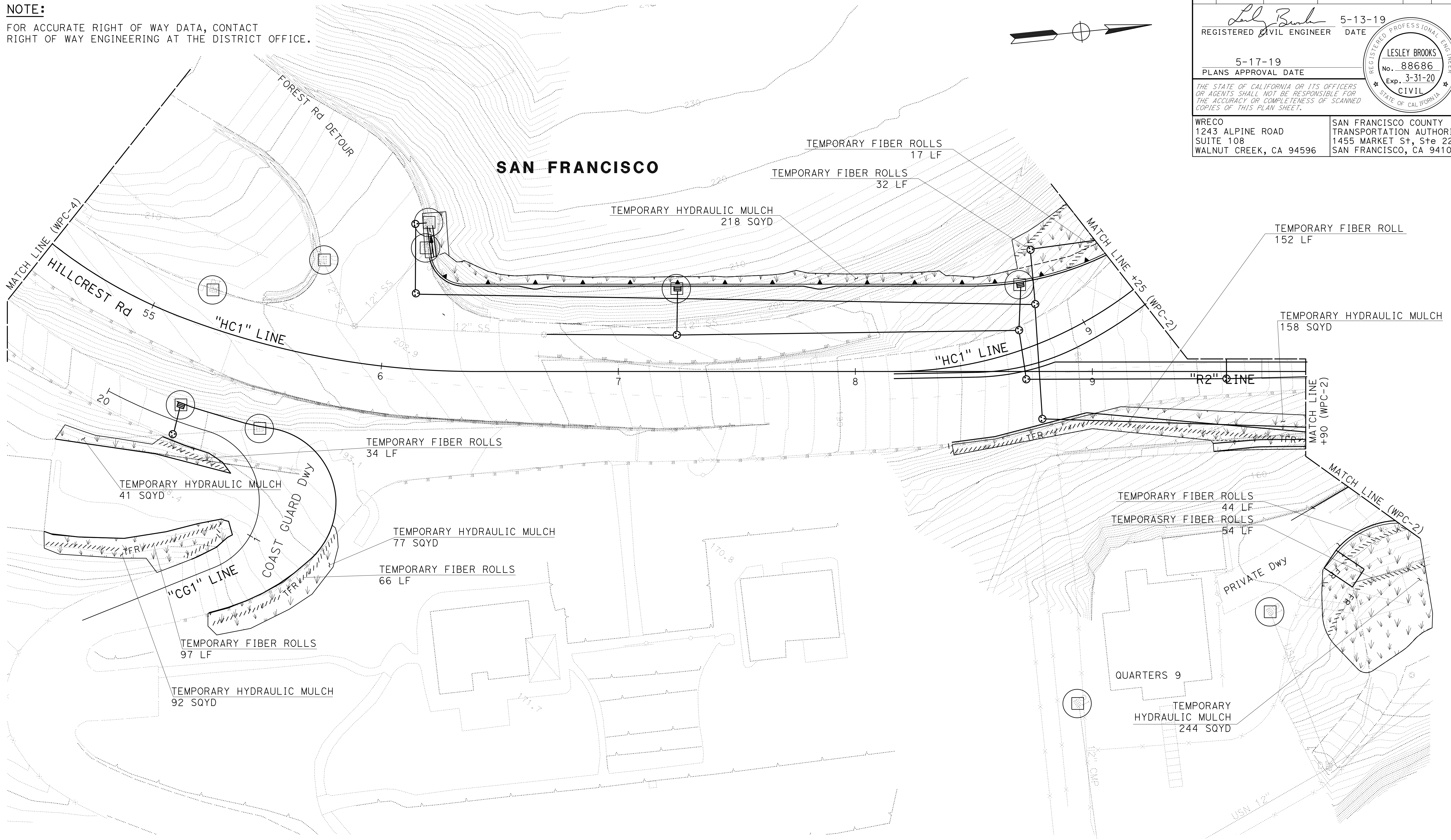
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	71	436

REGISTERED CIVIL ENGINEER *Lesley Brooks* DATE 5-13-19
 PLANS APPROVAL DATE 5-17-19

LESLEY BROOKS
 No. 88686
 Exp. 3-31-20
 CIVIL
 STATE OF CALIFORNIA

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.

WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596	SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103
--	---



APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

FOR NOTES AND LEGEND, SEE SHEET WPC-1

TEMPORARY WATER POLLUTION CONTROL PLAN

SCALE: 1" = 20'

WPC-5

LAST REVISION DATE PLOTTED => 29-OCT-2019 00-00-00 TIME PLOTTED => 15:02

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR
 HAN-BIN LIANG
 CALCULATED-DESIGNED BY
 CHECKED BY
 LESLEY BROOKS
 ANALETTE OCHOA
 REVISED BY
 DATE REVISED
 LB
 11-12-18
 LB
 2-18-19
 LB
 5-17-19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	72	436

Lesley Brooks 5-13-19
 REGISTERED CIVIL ENGINEER DATE
 5-17-19
 PLANS APPROVAL DATE

WRECO
 1243 ALPINE ROAD
 SUITE 108
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

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.

TEMPORARY WATER POLLUTION CONTROL QUANTITIES

STATION	TEMPORARY HYDRAULIC MULCH (BONDED FIBER MATRIX)	TEMPORARY COVER	TEMPORARY CHECK DAM	TEMPORARY DRAINAGE INLET PROTECTION	TEMPORARY FIBER ROLL	TEMPORARY CONSTRUCTION ENTRANCE
	SQYD	SQYD	LF	EA	LF	EA
"E" 48+00 TO "E" 50+50	32	-	20	2	35	-
"E" 50+50 TO "R2" 63+50	7,856	568	153	21	2,493	2
"E" 54+50 TO "E" 57+84	321	-	-	5	146	1
"HC1" 51+45 TO "HC1" 54+50	255	-	-	1	279	-
"HC1" 54+50 TO "R2" 59+90	830	-	-	9	496	-
TOTAL	9,294	568	173	38	3,449	3

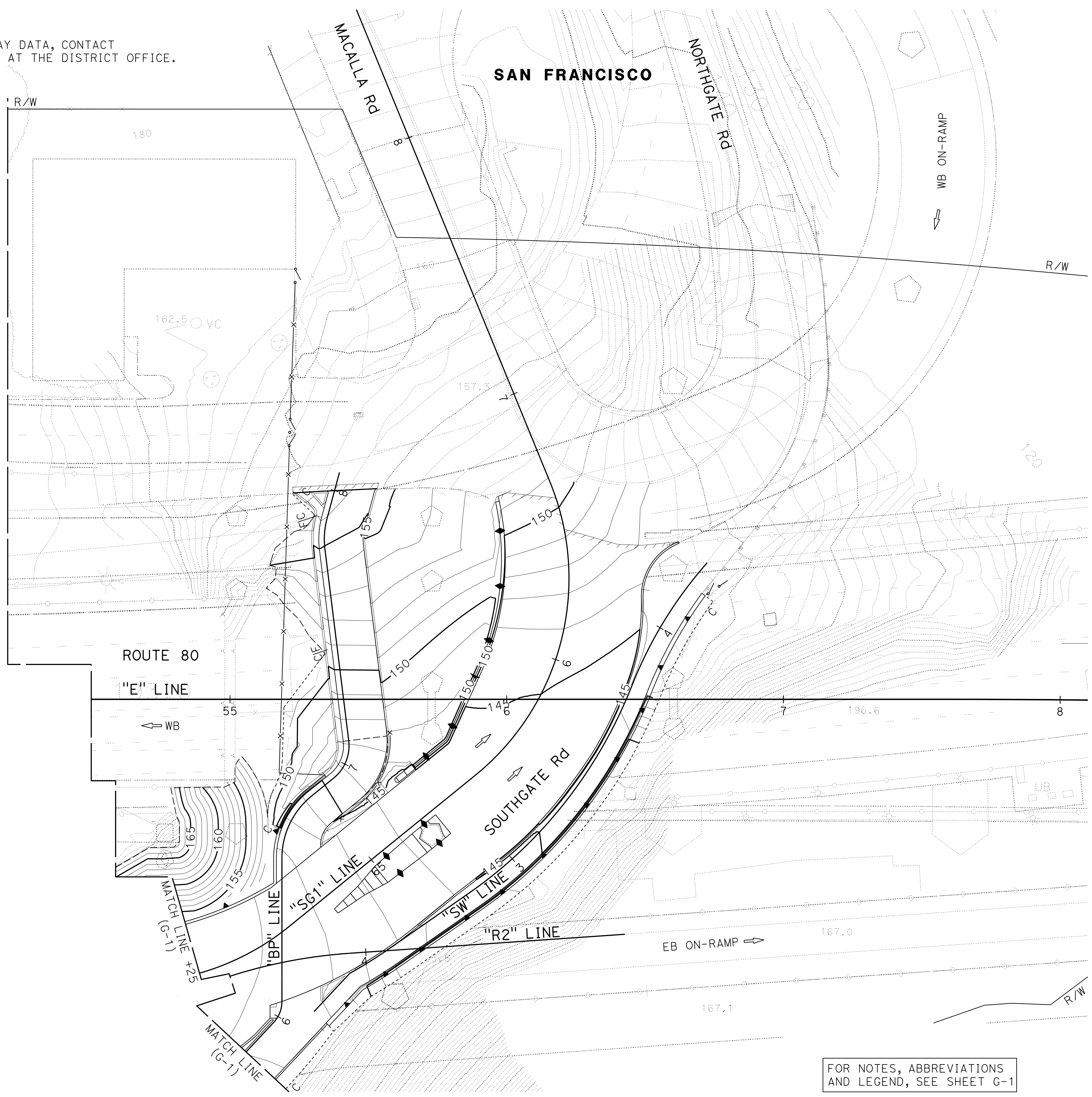
TEMPORARY WATER POLLUTION CONTROL QUANTITIES


WPCQ-1

LAST REVISION | DATE PLOTTED => 29-OCT-2019
 00-00-00 | TIME PLOTTED => 15:02

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	REVISOR	DATE	TP
Caltrans	INGRID V. SUPIT	TARYN PASCUA	4-27-18	3-1-19
		PRAVEEN CHILAKAPATI		
	CHECKED BY	DESIGNED BY		

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	74	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
			5-17-19	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.					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET G-1

CONTOUR GRADING

SCALE: 1" = 20'

G-2

APPROVED FOR CONTOUR GRADING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: TARYN PASCUA
 CHECKED BY: PRAVEEN CHILAKAPATI
 REVISED BY: TARYN PASCUA
 DATE REVISED: 4-27-18
 TB: 4-27-18
 IK: 11-12-18

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

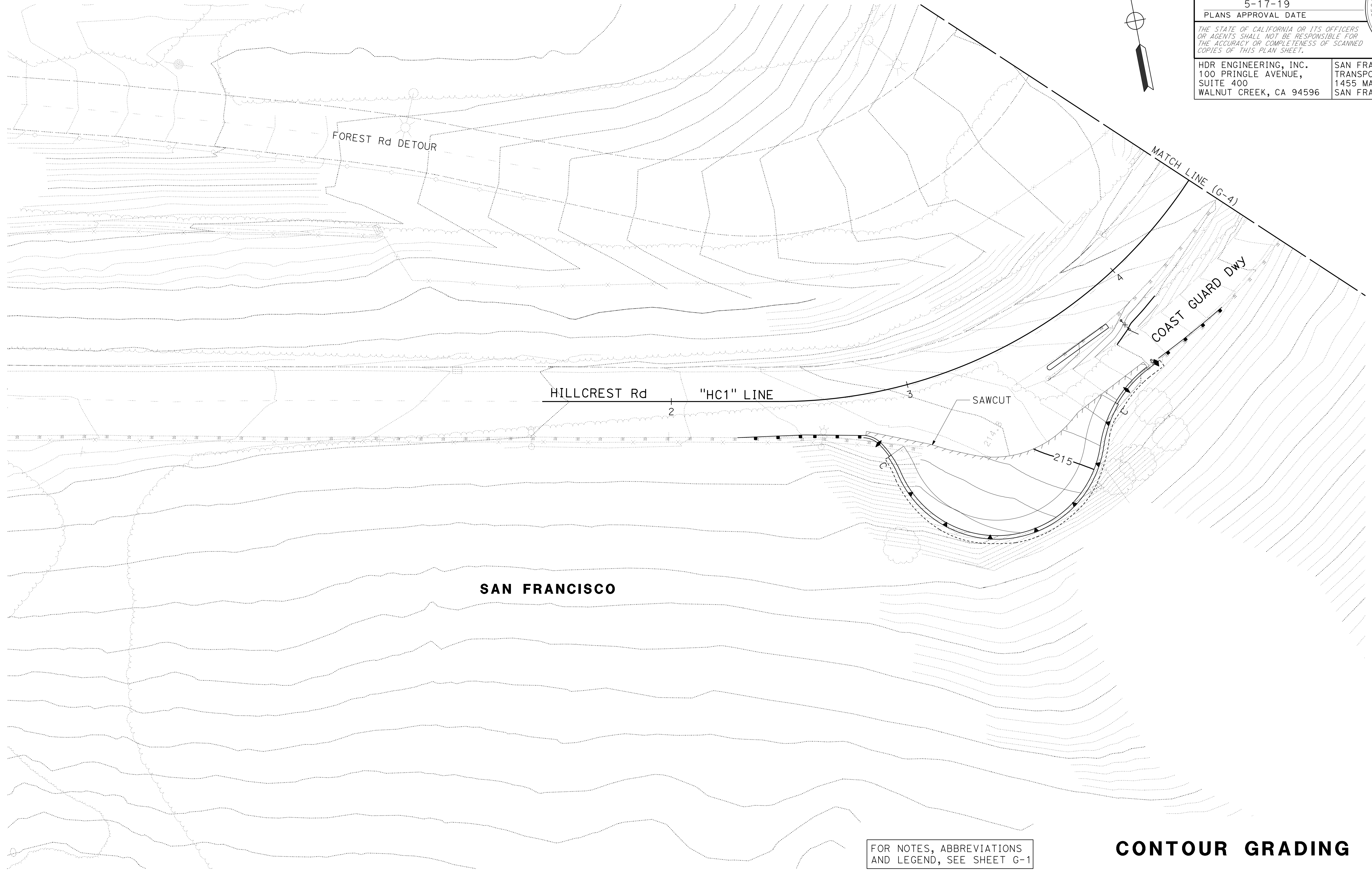
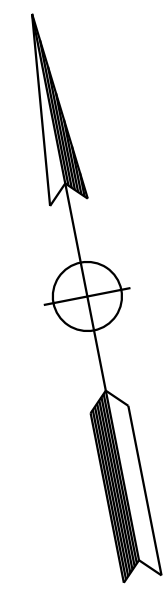
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	75	436

REGISTERED CIVIL ENGINEER: *Praveen K. Chilakapati* DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

REGISTERED PROFESSIONAL ENGINEER
 PRAVEEN K. CHILAKAPATI
 No. C76058
 Exp. 6-30-20
 CIVIL
 STATE OF CALIFORNIA

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.

HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596	SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103
---	---



FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET G-1


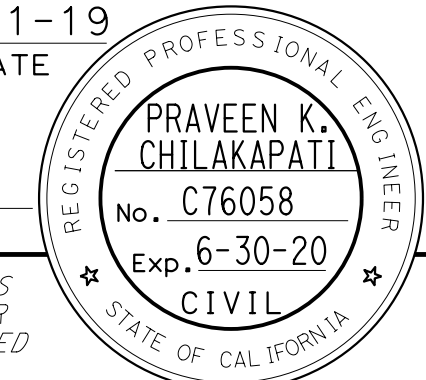
CONTOUR GRADING

SCALE: 1" = 20'

G-3

APPROVED FOR CONTOUR GRADING WORK ONLY

LAST REVISION: DATE PLOTTED => 07-NOV-2019 00-00-00 TIME PLOTTED => 16:50

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	76	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
<small>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.</small>					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



Conc BARRIER SLAB
 (SEE STRUCTURE PLANS)

3 REPLACED PER ADDENDUM No. 3 DATED JANUARY 6, 2020


FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET G-1

CONTOUR GRADING

APPROVED FOR CONTOUR GRADING WORK ONLY

SCALE: 1" = 20'

G-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR	DATE
	INGRID V. SUPIT	TARYN PASCUA	TB	11-12-18
		PRAVEEN CHILAKAPATI	IK	4-27-18
			REVISOR	DATE
			REVISOR	DATE

LAST REVISION: DATE PLOTTED => 6-JAN-2020
 00-00-00 TIME PLOTTED => 13:59

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR	DATE	BY
	HAN-BIN LIANG	LESLEY BROOKS	ANALETTE OCHOA	5-17-19	5-17-19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	77	436
			5-13-19		
REGISTERED CIVIL ENGINEER			DATE		
			5-17-19		
			PLANS APPROVAL DATE		
WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

NOTES:

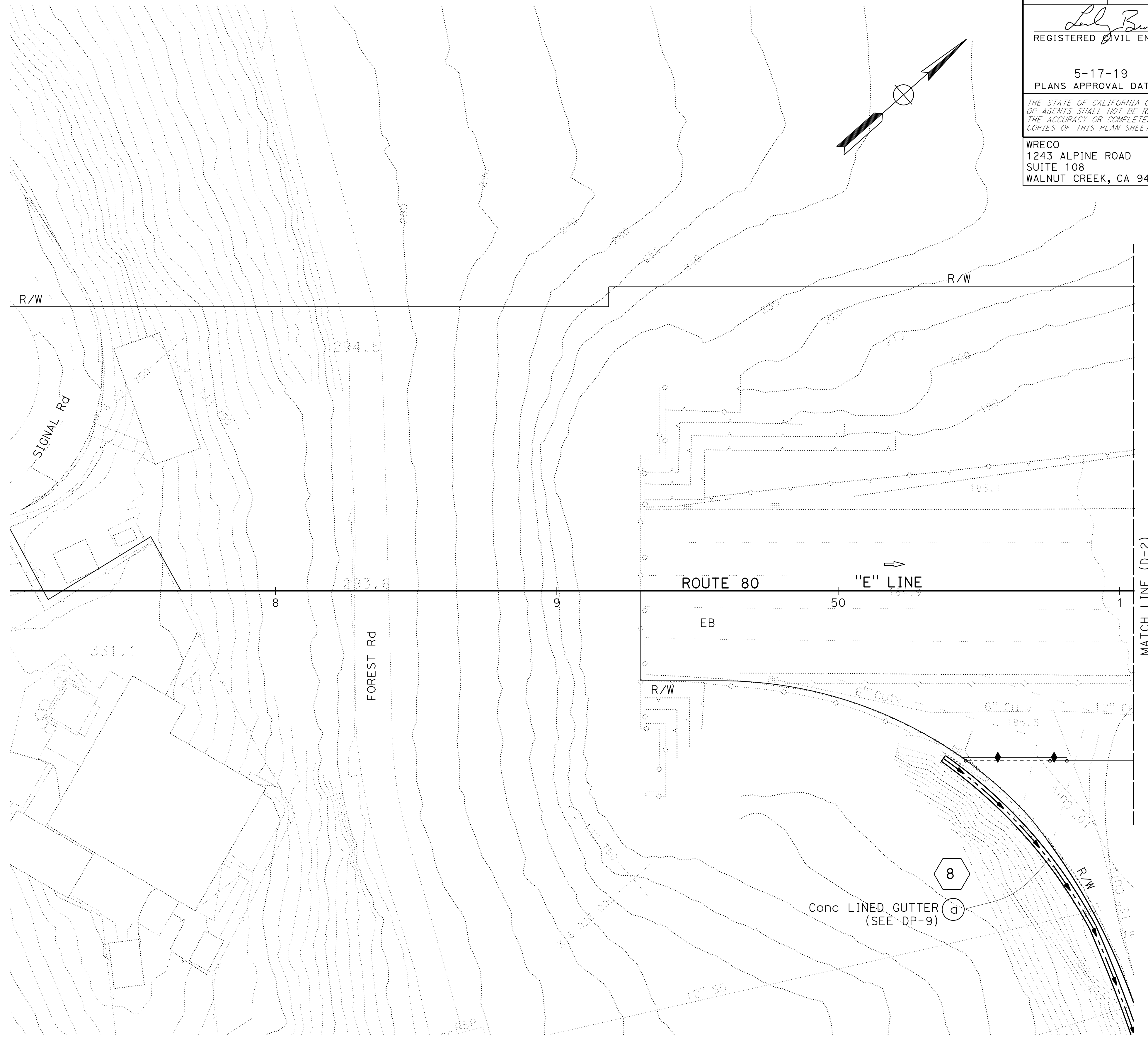
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- STATION & OFFSET TIES TO DRAINAGE STRUCTURES ARE MEASURED PER DETAILS ON SHEET DD-1.
- FOR FINISHED GRADE ELEVATIONS, SEE PROFILES AND CONSTRUCTION DETAILS SHEETS.
- LOCATIONS OF EXISTING DRAINAGE FACILITIES ARE APPROXIMATE. FIELD VERIFY LOCATION AND ELEVATION OF EXISTING DRAINAGE FACILITIES BEFORE MODIFYING.
- UNLESS NOTED OTHERWISE, STANDARD INLET DEPRESSIONS, PER STANDARD PLAN D78B, MUST BE PROVIDED FOR ALL INLETS. INLET DEPRESSIONS MUST BE CONSTRUCTED OF 8" THICK PORTLAND CEMENT CONCRETE. ASPHALT INLET DEPRESSIONS ARE NOT ALLOWED. WHERE LOCATED WITHIN ASPHALT SHOULDERS, ISOLATION JOINTS ARE NOT REQUIRED.

LEGEND:

- AFES
- ROCK SLOPE PROTECTION

ABBREVIATIONS:

- BOW BOTTOM OF WALL



DRAINAGE PLAN

SCALE: 1" = 20'

D-1

APPROVED FOR DRAINAGE WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	REVISOR	DATE
Et Caltrans	HAN-BIN LIANG	LESLIE BROOKS	11-12-18
	CHECKED BY	REVISOR	DATE
	ANALETTE OCHOA	LESLIE BROOKS	2-18-19
	DESIGNED BY	REVISOR	DATE
		ANALETTE OCHOA	5-17-19

NOTE:
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING
AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	78	436

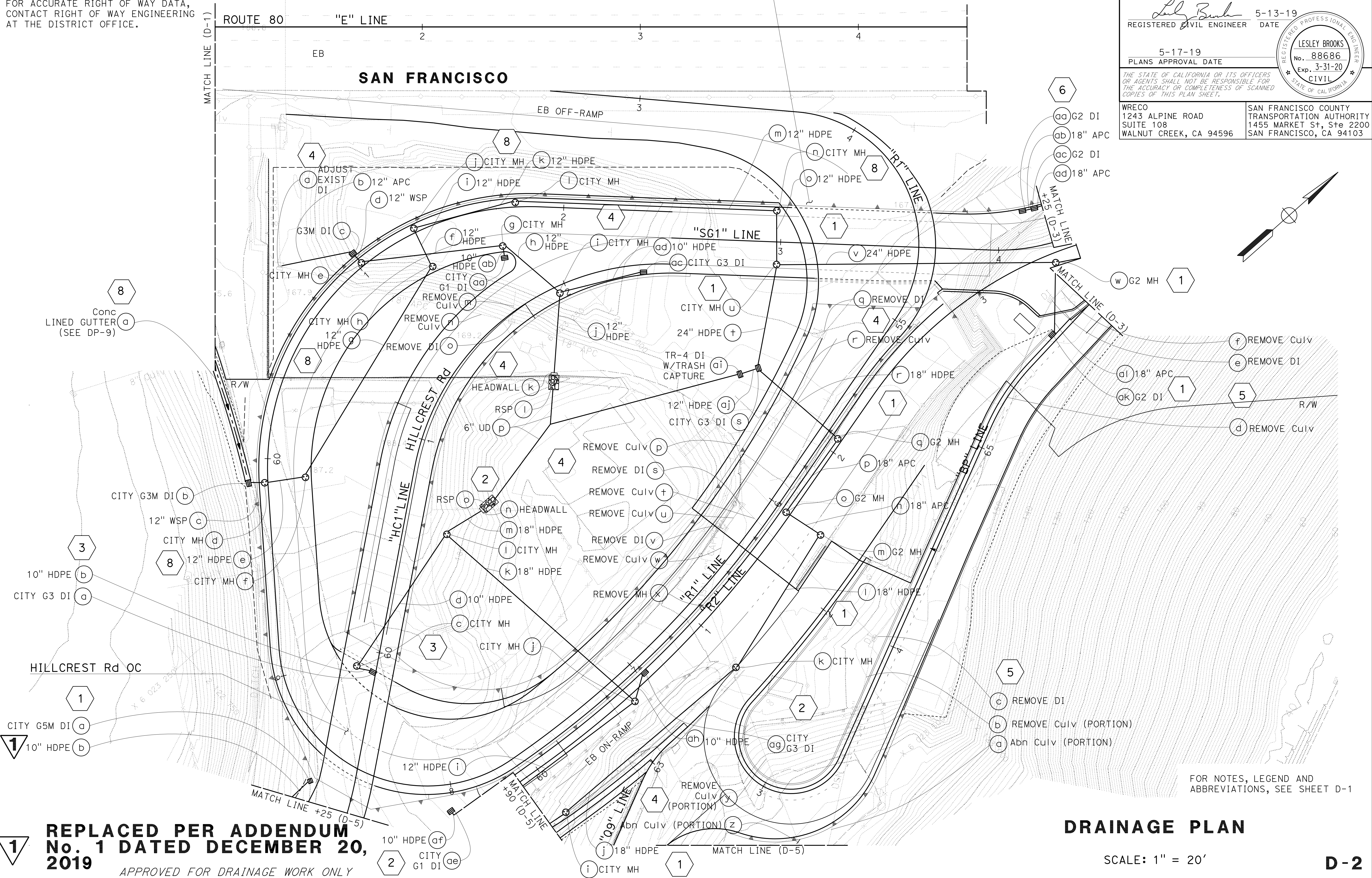
5-13-19
REGISTERED CIVIL ENGINEER DATE

5-17-19
PLANS APPROVAL DATE

LESLEY BROOKS
No. 88686
Exp. 3-31-20
CIVIL
STATE OF CALIFORNIA

WRECO
1243 ALPINE ROAD
SUITE 108
WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
TRANSPORTATION AUTHORITY
1455 MARKET St, Ste 2200
SAN FRANCISCO, CA 94103

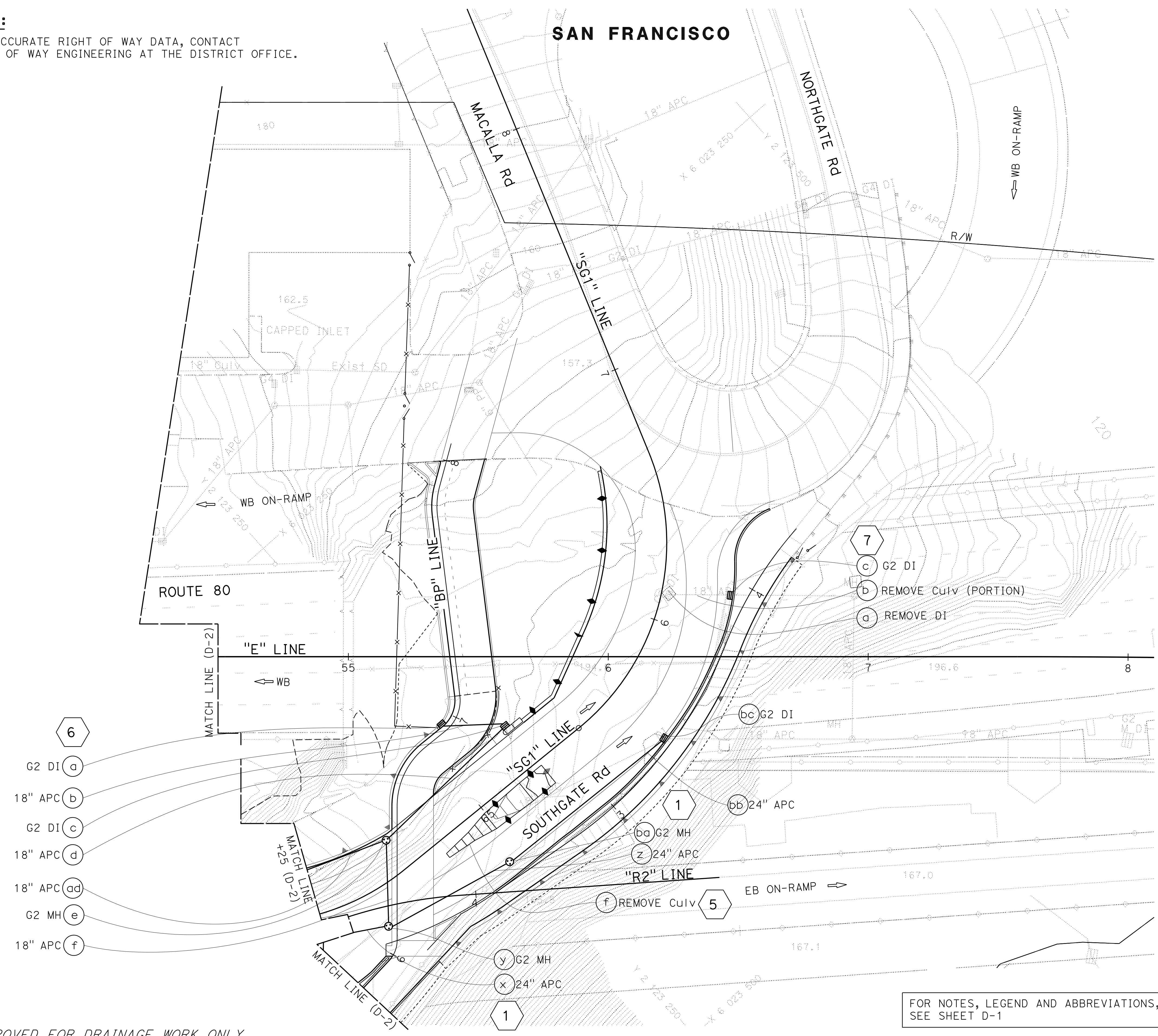


**REPLACED PER ADDENDUM
No. 1 DATED DECEMBER 20,
2019**
APPROVED FOR DRAINAGE WORK ONLY

DRAINAGE PLAN
SCALE: 1" = 20'
D-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	79	436
			5-13-19		
REGISTERED CIVIL ENGINEER			DATE		
5-17-19			PLANS APPROVAL DATE		
WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



- 6
- G2 DI (a)
- 18" APC (b)
- G2 DI (c)
- 18" APC (d)
- 18" APC (ad)
- G2 MH (e)
- 18" APC (f)

- 7
- (c) G2 DI
- (b) REMOVE CuiV (PORTION)
- (a) REMOVE DI

- 1
- (ba) G2 MH
- (z) 24" APC
- (f) REMOVE CuiV
- 5

- y) G2 MH
- x) 24" APC
- 1

FOR NOTES, LEGEND AND ABBREVIATIONS,
SEE SHEET D-1

DRAINAGE PLAN

SCALE: 1" = 20'

D-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	REVISOR	DATE
	HAN-BIN LIANG	LESLEY BROOKS	11-12-18
	CHECKED BY	ANALETTE OCHOA	2-18-19
	DESIGNED BY		5-17-19

APPROVED FOR DRAINAGE WORK ONLY

USERNAME => Patrick_Galindez
DGN FILE => 04190001531a003.dgn

RELATIVE BORDER SCALE
15" IN INCHES

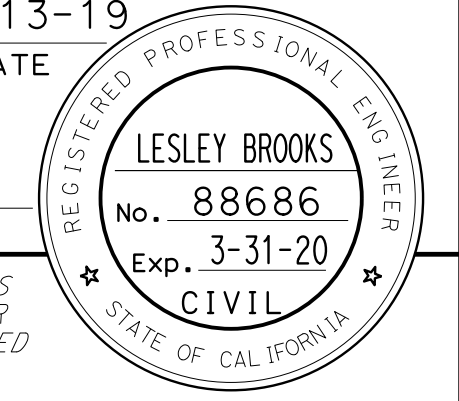
UNIT 0728

PROJECT NUMBER & PHASE

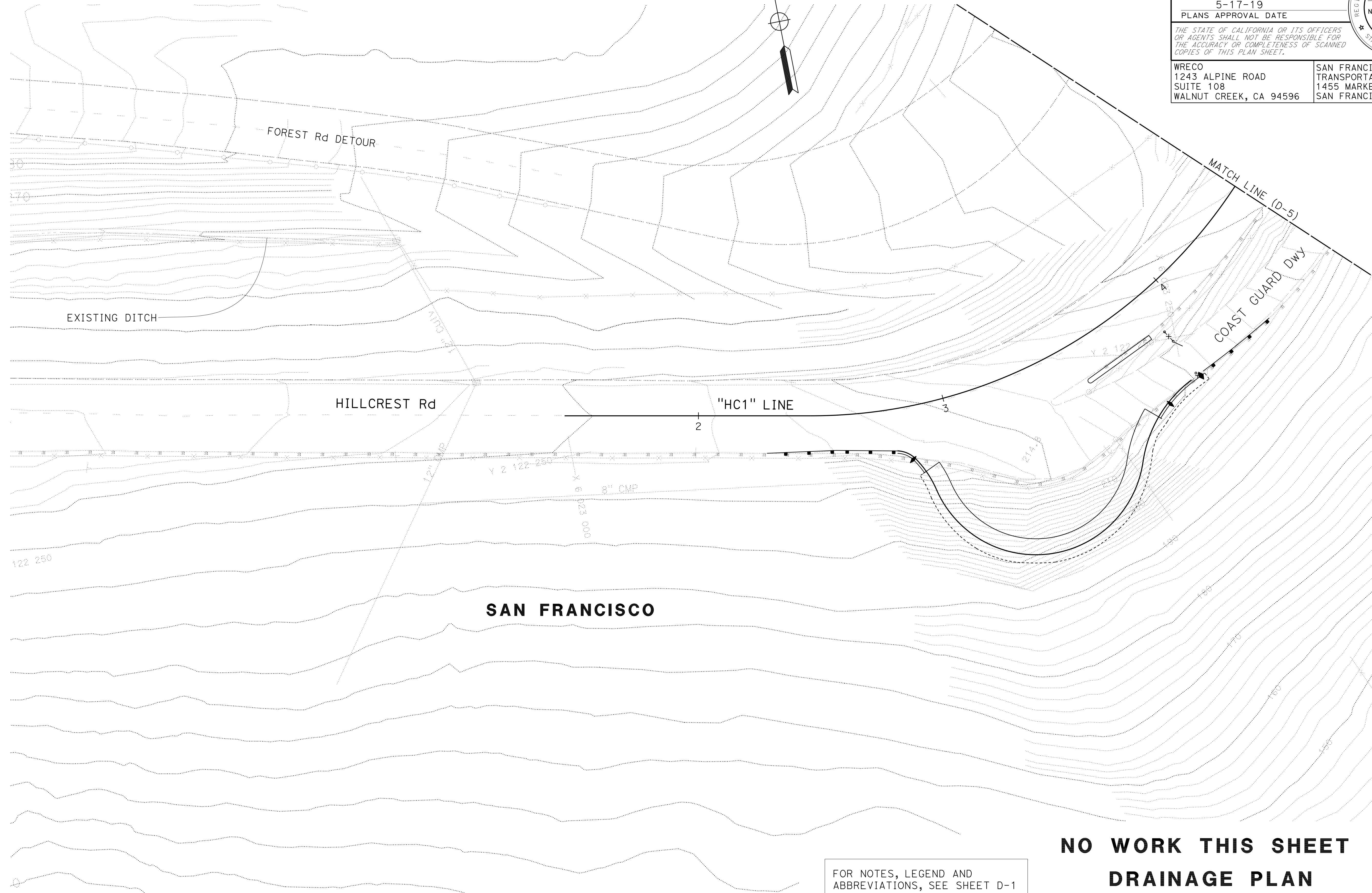
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LAST REVISION: DATE PLOTTED => 29-OCT-2019
00-00-00 TIME PLOTTED => 14:37

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	80	436
			5-13-19		
REGISTERED CIVIL ENGINEER			DATE		
			5-17-19		
			PLANS APPROVAL DATE		
<small>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.</small>					
WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR	DATE	BY
	HAN-BIN LIANG	CHECKED BY	ANALETTE OCHOA	11-12-18	LB
			LESLEY BROOKS	2-18-19	LB
				5-17-19	LB

**NO WORK THIS SHEET
 DRAINAGE PLAN**

FOR NOTES, LEGEND AND ABBREVIATIONS, SEE SHEET D-1

SCALE: 1" = 20'

D-4

APPROVED FOR DRAINAGE WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR: HAN-BIN LIANG
 DESIGNED BY: ANALETTE OCHOA
 CHECKED BY:
 CALCULATED-DESIGNED BY:
 REVISIONS:
 LB 5-17-19
 LB 2-18-19
 LB 11-12-18
 REVISED BY: ANALETTE OCHOA
 DATE REVISED: 11-12-18
 LESLEY BROOKS
 LESLEY BROOKS
 LESLEY BROOKS

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

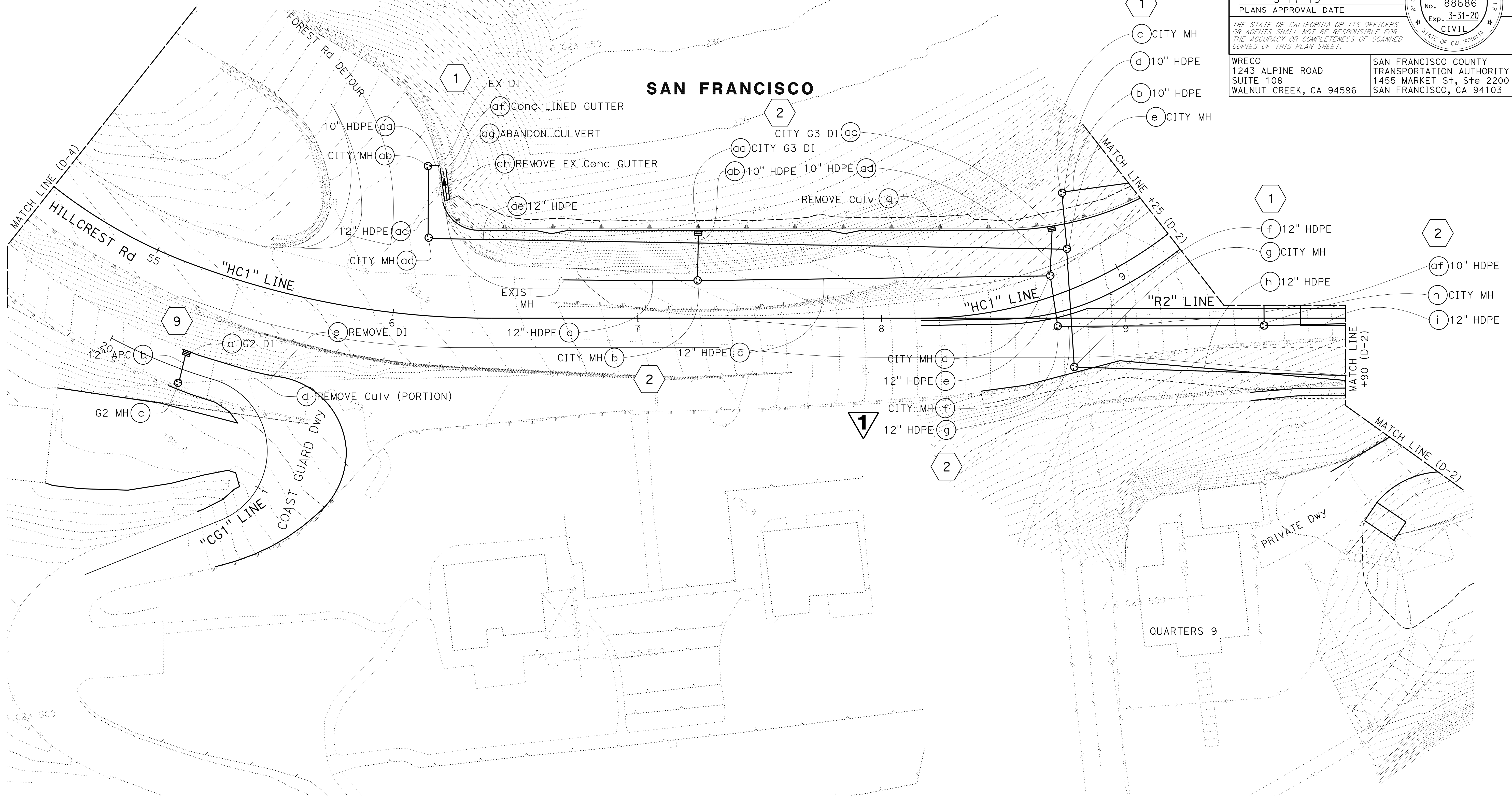
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	81	436

REGISTERED CIVIL ENGINEER: *Lesley Brooks* 5-13-19
 DATE: 5-13-19
 PLANS APPROVAL DATE: 5-17-19

LESLEY BROOKS
 No. 88686
 Exp. 3-31-20
 CIVIL
 STATE OF CALIFORNIA

WRECO
 1243 ALPINE ROAD
 SUITE 108
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

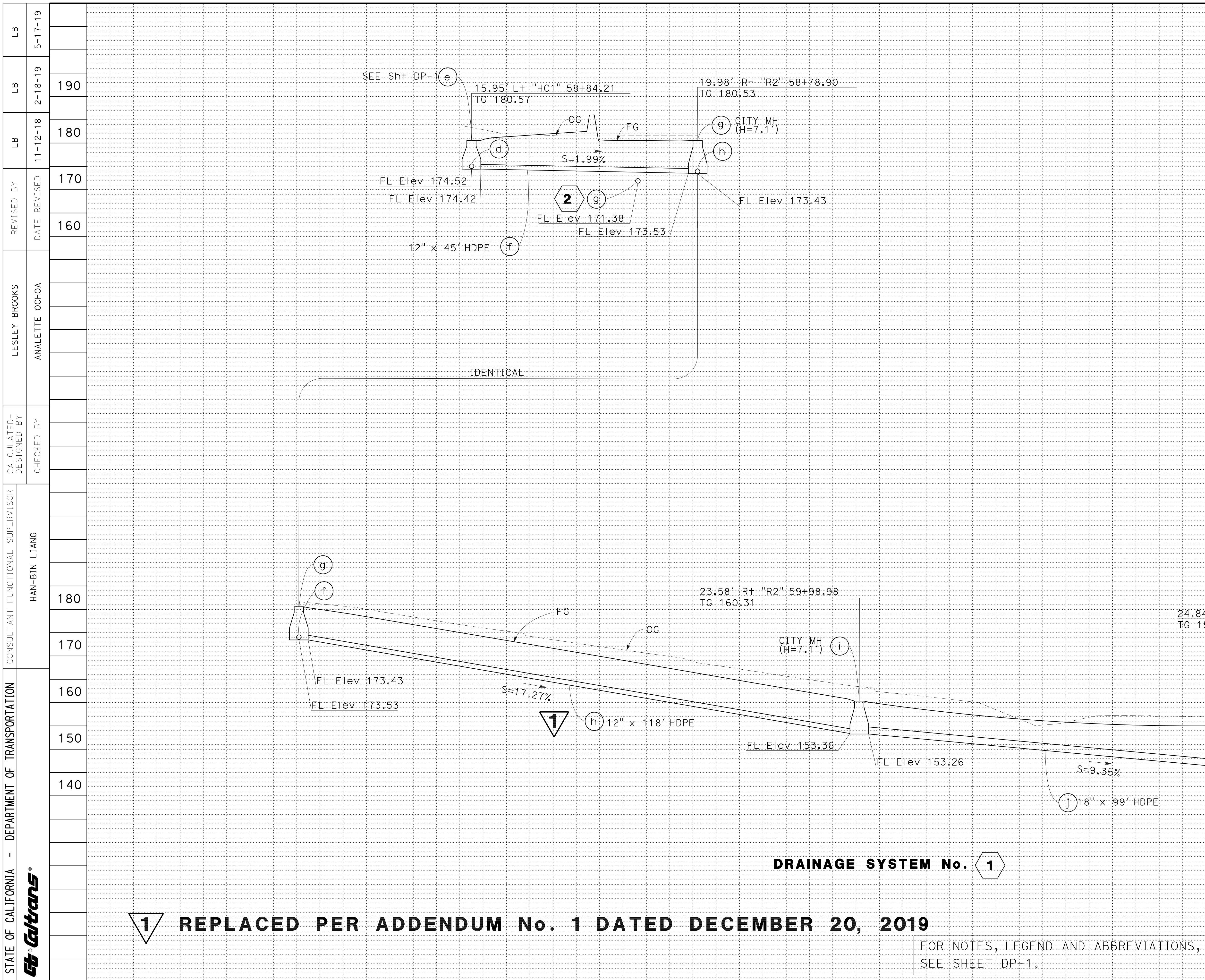
APPROVED FOR DRAINAGE WORK ONLY

FOR NOTES, LEGEND AND ABBREVIATIONS,
 SEE SHEET D-1

DRAINAGE PLAN

SCALE: 1" = 20'

D-5



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
4	SF	80	7.8/8.0	83	436
REGISTERED CIVIL ENGINEER			DATE		
5-17-19			5-13-19		
PLANS APPROVAL DATE			REGISTERED PROFESSIONAL ENGINEER		
No. 88686			STATE OF CALIFORNIA		
Exp. 3-31-20			CIVIL		
WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596			BAY AREA TOLL AUTHORITY 375 BEALE ST SUITE 800 SAN FRANCISCO, CA 94105		

REVISED BY	DATE REVISED	REVISION
LESLEY BROOKS	11-12-18	180
ANALETTE OCHOA	2-18-19	190
	5-17-19	

CALCULATED-DESIGNED BY	CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR	
HAN-BIN LIANG	
DEPARTMENT OF TRANSPORTATION	
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	
Et Caltrans	

1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

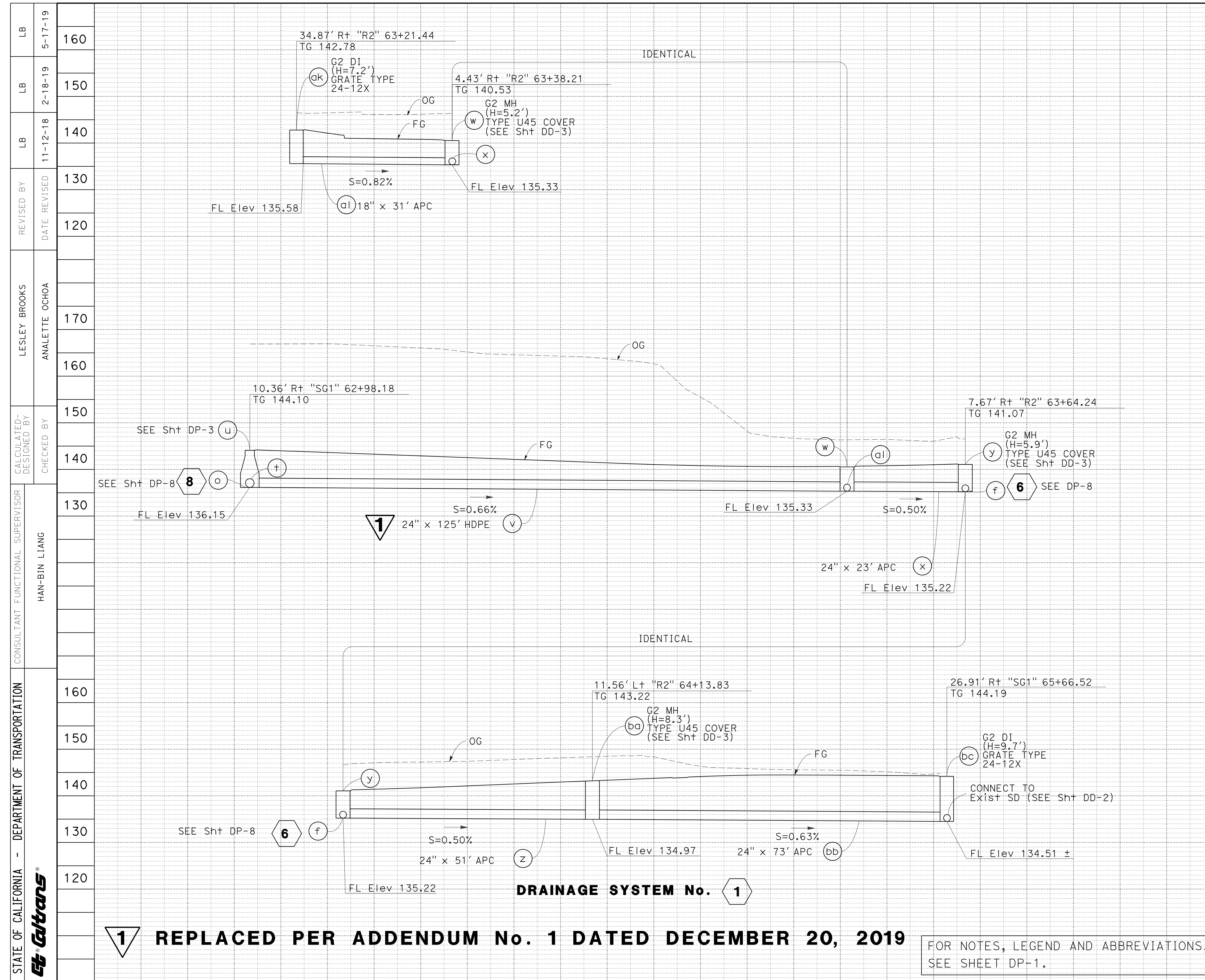
DRAINAGE SYSTEM No. 1

DRAINAGE PROFILES

FOR NOTES, LEGEND AND ABBREVIATIONS, SEE SHEET DP-1.

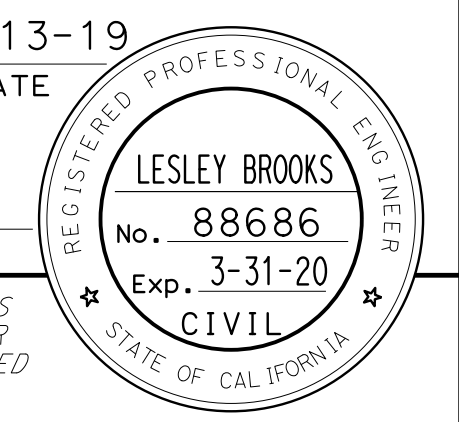
SCALE: HORIZ 1" = 10'
VERT 1" = 10'

DP-2



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS	
160	4	SF	80	7.8/8.0	85	436

150	<i>Lesley Brooks</i> REGISTERED CIVIL ENGINEER DATE 5-13-19	
140	5-17-19 PLANS APPROVAL DATE	
130	WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596	BAY AREA TOLL AUTHORITY 375 BEALE ST SUITE 800 SAN FRANCISCO, CA 94105



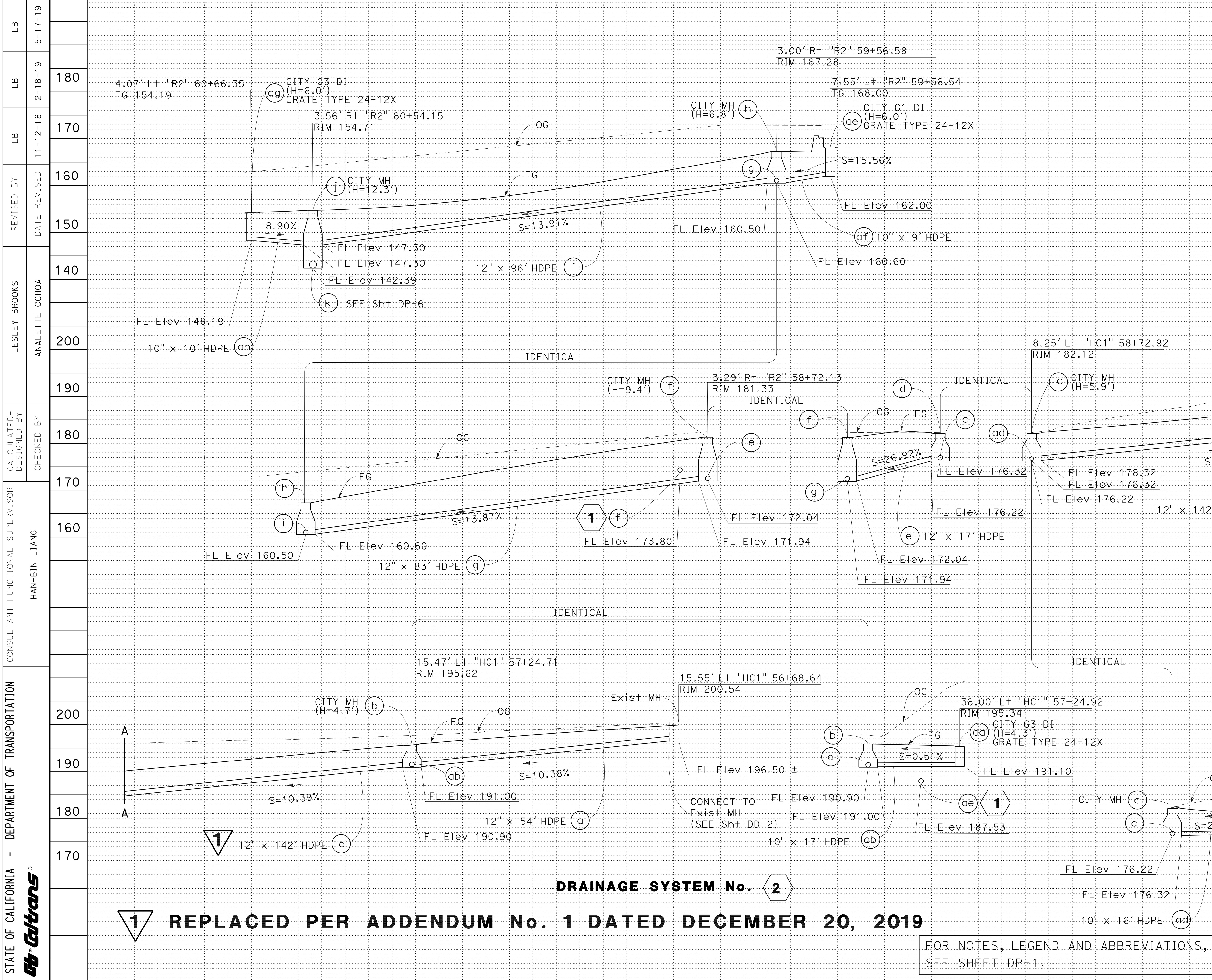
1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019


FOR NOTES, LEGEND AND ABBREVIATIONS, SEE SHEET DP-1.

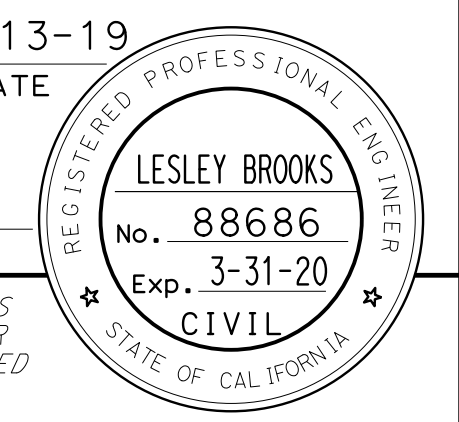
DRAINAGE PROFILES

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

DP-4



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
4	SF	80	7.8/8.0	86	436
			5-13-19		
REGISTERED CIVIL ENGINEER			DATE		
180			5-17-19		
170			PLANS APPROVAL DATE		
<small>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.</small>					
WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596			BAY AREA TOLL AUTHORITY 375 BEALE ST SUITE 800 SAN FRANCISCO, CA 94105		



1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

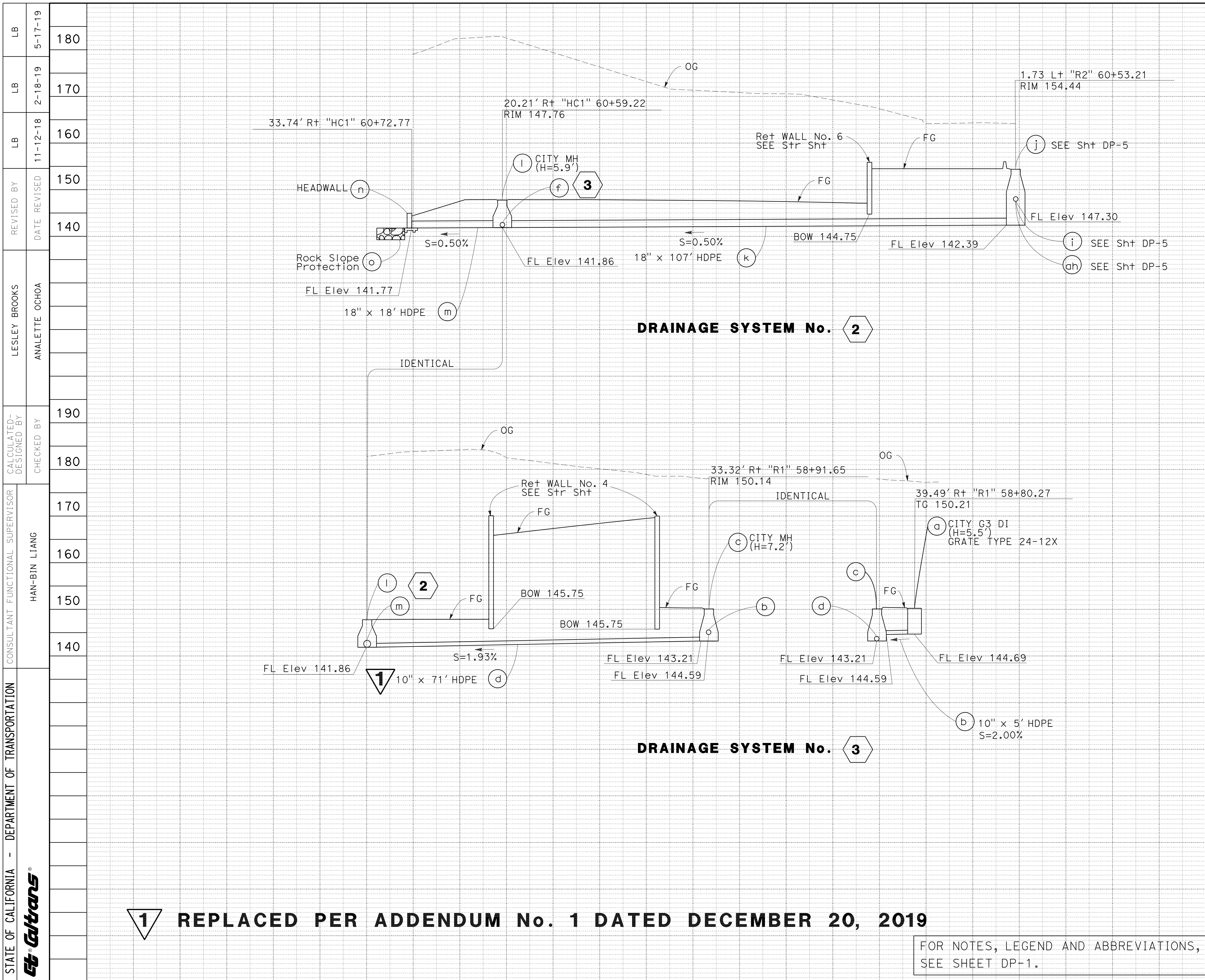
DRAINAGE SYSTEM No. 2

DRAINAGE PROFILES

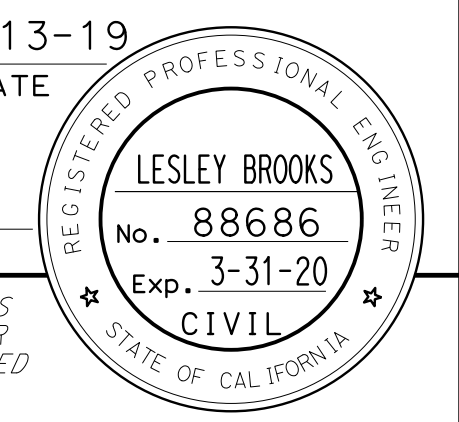
FOR NOTES, LEGEND AND ABBREVIATIONS, SEE SHEET DP-1.

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

DP-5



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
4	SF	80	7.8/8.0	87	436
<i>Lesley Brooks</i> REGISTERED CIVIL ENGINEER			5-13-19 DATE		
5-17-19 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.					
WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596			BAY AREA TOLL AUTHORITY 375 BEALE ST SUITE 800 SAN FRANCISCO, CA 94105		



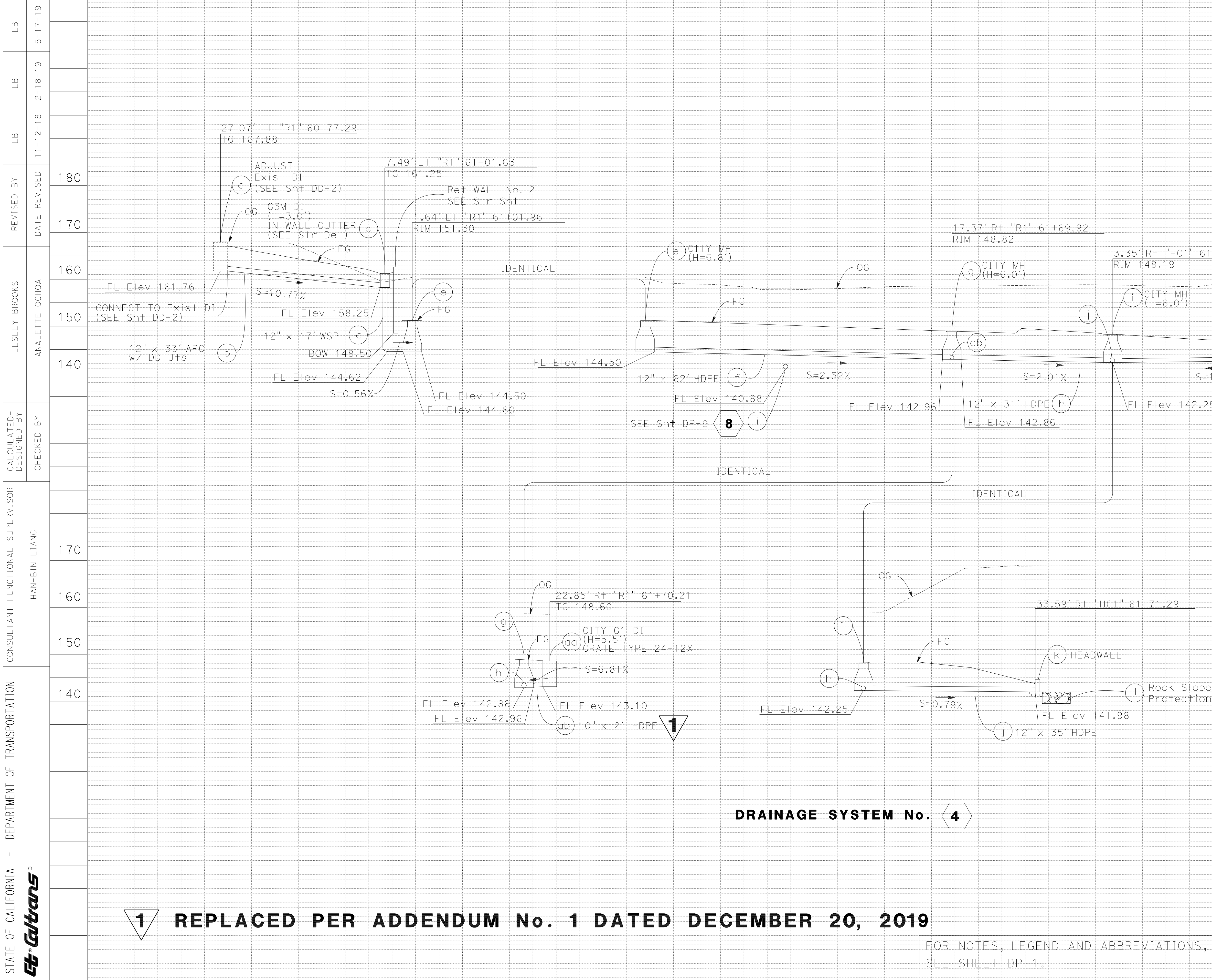
1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

DRAINAGE PROFILES

FOR NOTES, LEGEND AND ABBREVIATIONS, SEE SHEET DP-1.

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

DP-6



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
4	SF	80	7.8/8.0	88	436
REGISTERED CIVIL ENGINEER <i>Lesley Brooks</i> DATE 5-13-19			REGISTERED PROFESSIONAL ENGINEER LESLEY BROOKS No. 88686 Exp. 3-31-20 CIVIL STATE OF CALIFORNIA		
PLANS APPROVAL DATE			5-17-19		
WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596			BAY AREA TOLL AUTHORITY 375 BEALE ST SUITE 800 SAN FRANCISCO, CA 94105		
180					

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	REVISIONS	DATE	REVISOR	BY
STATE OF CALIFORNIA Caltrans®	HAN-BIN LIANG	1	5-17-19	ANALLETTE OCHOA	LESLEY BROOKS
		2	2-18-19		
		3	11-12-18		
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1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

DRAINAGE SYSTEM No. 4

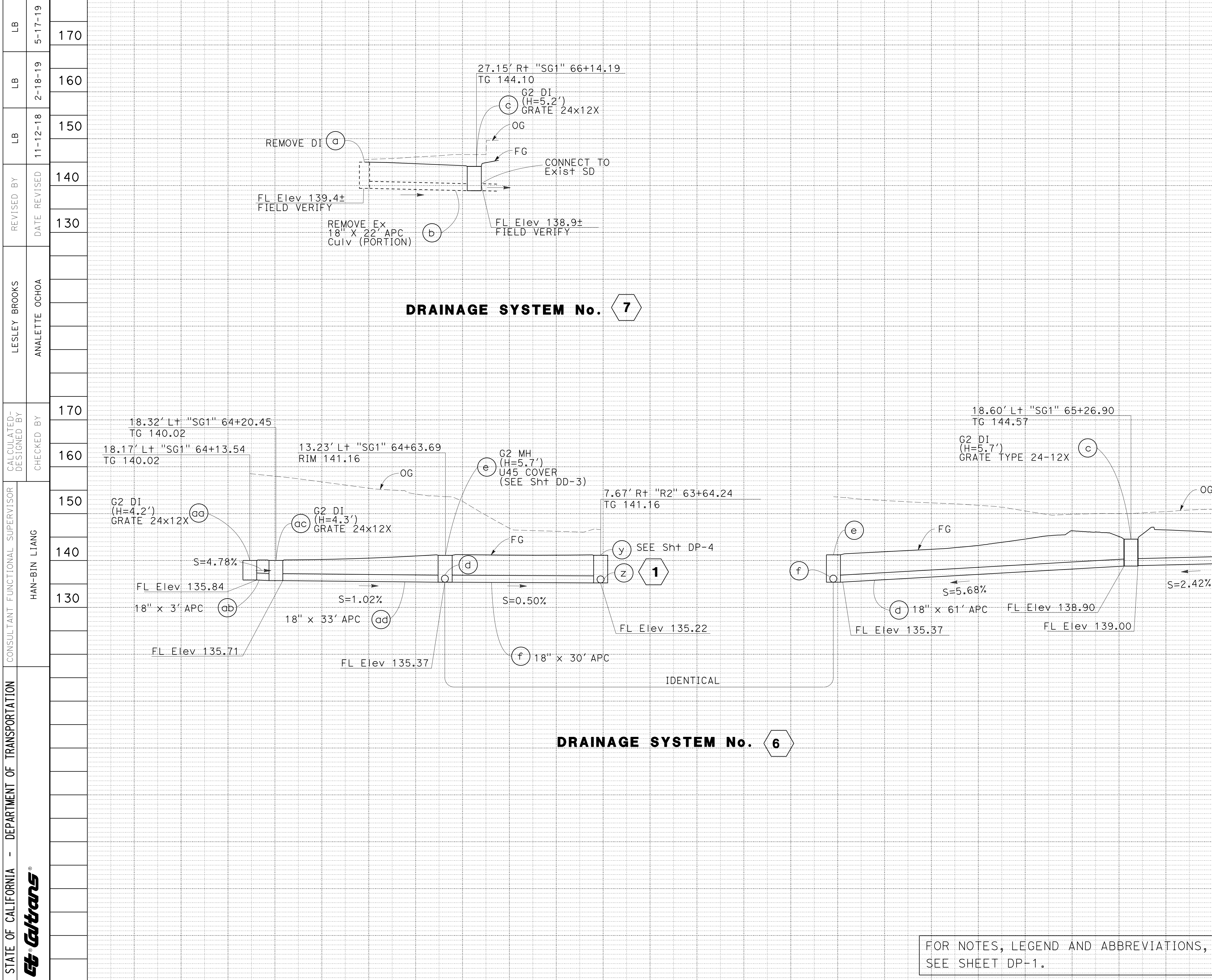
DRAINAGE PROFILES

FOR NOTES, LEGEND AND ABBREVIATIONS, SEE SHEET DP-1.

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

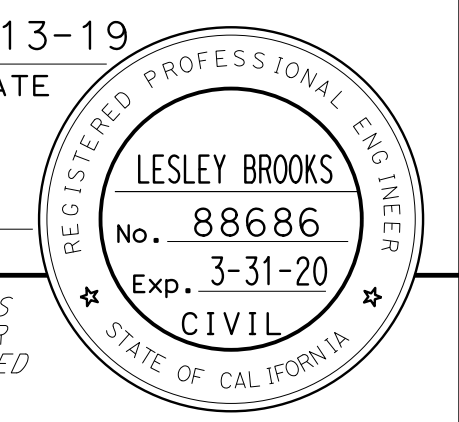
DP-7

LAST REVISION DATE PLOTTED => 16-DEC-2019 00-00-00 TIME PLOTTED => 15:07



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
4	SF	80	7.8/8.0	89	436

170	5-13-19	REGISTERED CIVIL ENGINEER DATE
160	5-17-19	PLANS APPROVAL DATE
150	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.	
140	WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596	BAY AREA TOLL AUTHORITY 375 BEALE ST SUITE 800 SAN FRANCISCO, CA 94105



DRAINAGE PROFILES

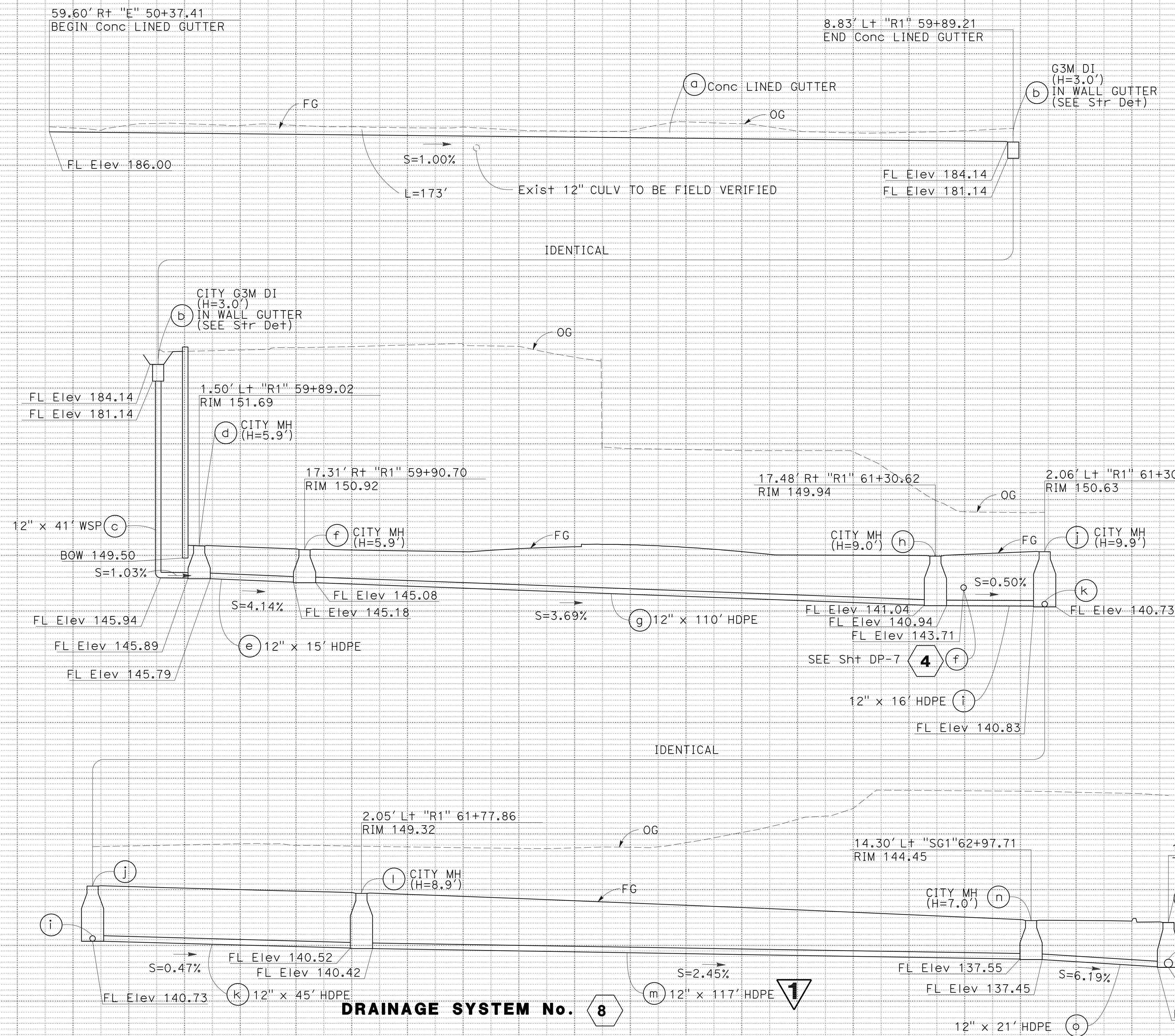
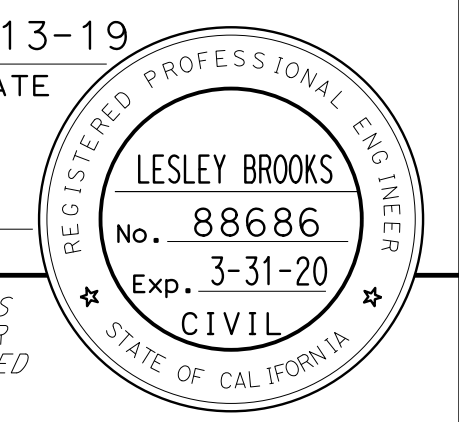
FOR NOTES, LEGEND AND ABBREVIATIONS, SEE SHEET DP-1.

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

DP-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: HAN-BIN LIANG
 CALCULATED/DESIGNED BY: ANALETTE OCHOA
 CHECKED BY: ANALETTE OCHOA
 LESLEY BROOKS
 REVISIONS:
 180 REVISED BY: DATE REVISED: 11-12-18
 190 LB LB LB
 200 LB LB LB
 5-17-19 LB
 2-18-19 LB
 5-17-19 LB

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
4	SF	80	7.8/8.0	90	436
			5-13-19		
			REGISTERED CIVIL ENGINEER		
			DATE		
			5-17-19		
			PLANS APPROVAL DATE		
<small>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.</small>					
WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596			BAY AREA TOLL AUTHORITY 375 BEALE ST SUITE 800 SAN FRANCISCO, CA 94105		



DRAINAGE SYSTEM No. 9

DRAINAGE SYSTEM No. 8

DRAINAGE PROFILES

1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

FOR NOTES, LEGEND AND ABBREVIATIONS, SEE SHEET DP-1.

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

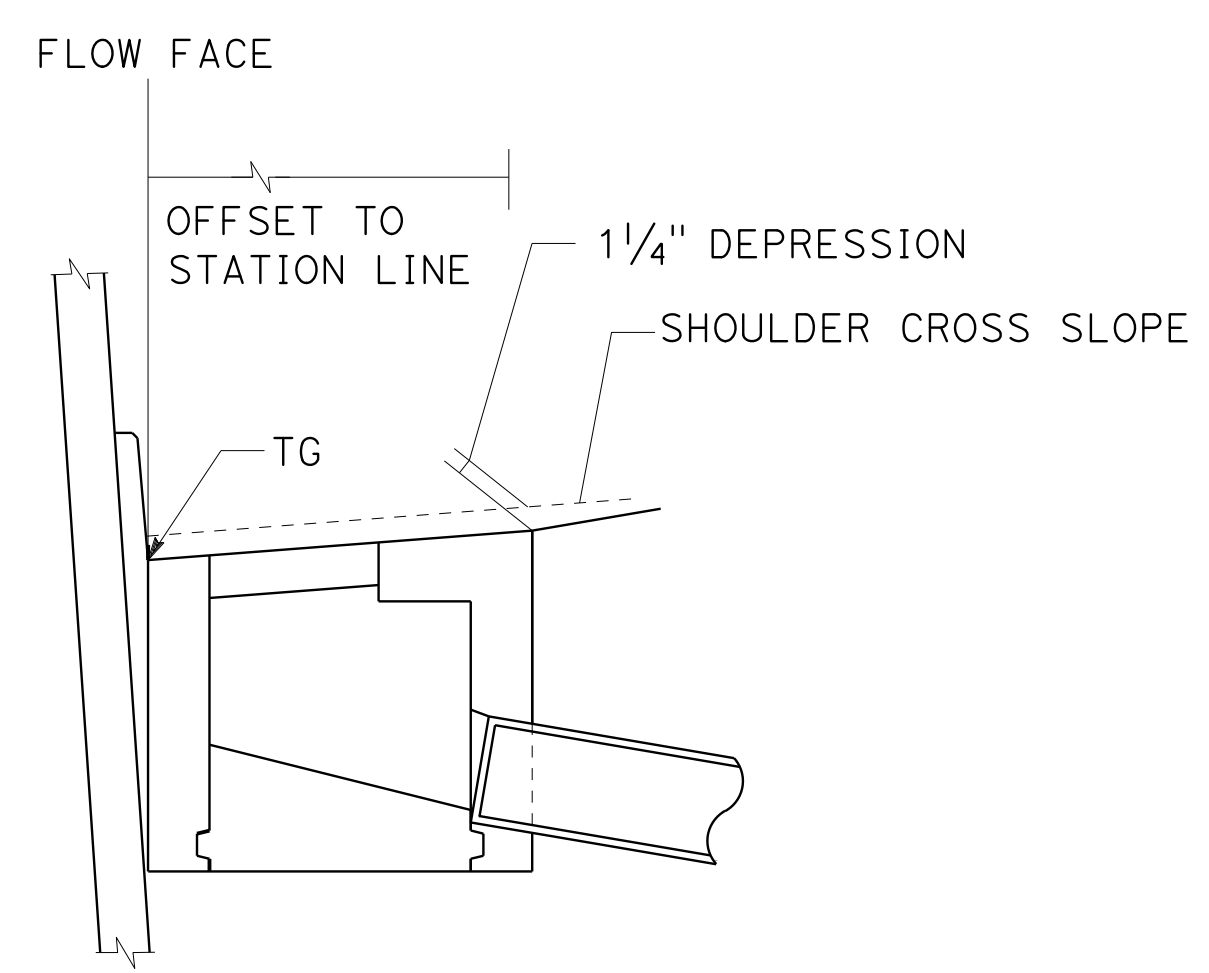
DP-9



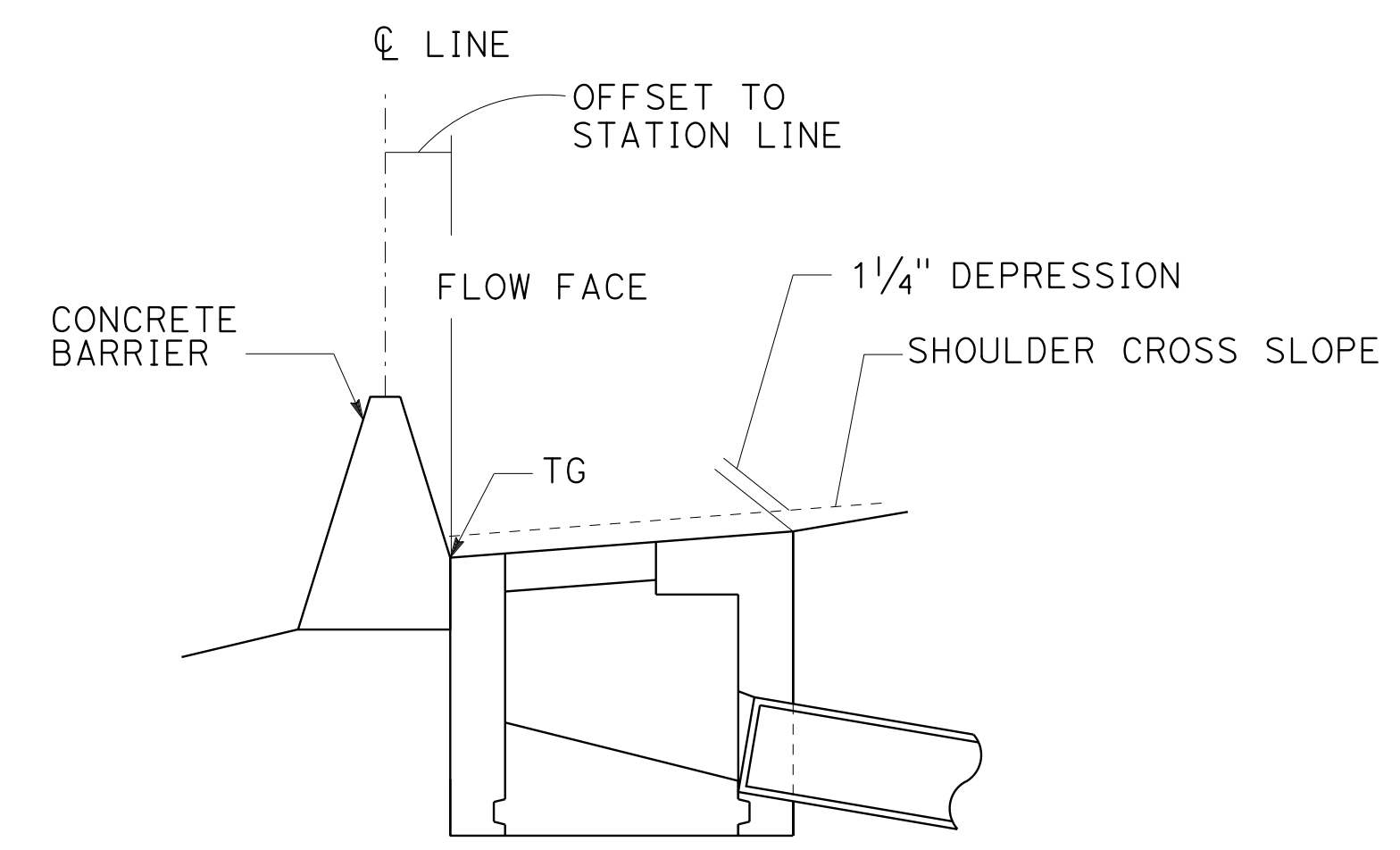
LAST REVISION: DATE PLOTTED => 16-DEC-2019
 00-00-00 TIME PLOTTED => 15:08

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR
 HAN-BIN LIANG
 CALCULATED-DESIGNED BY
 CHECKED BY
 ANALETTE OCHOA
 LESLEY BROOKS
 REVISED BY
 DATE REVISED
 11-12-18
 2-18-19
 5-17-19
 LB
 LB
 LB

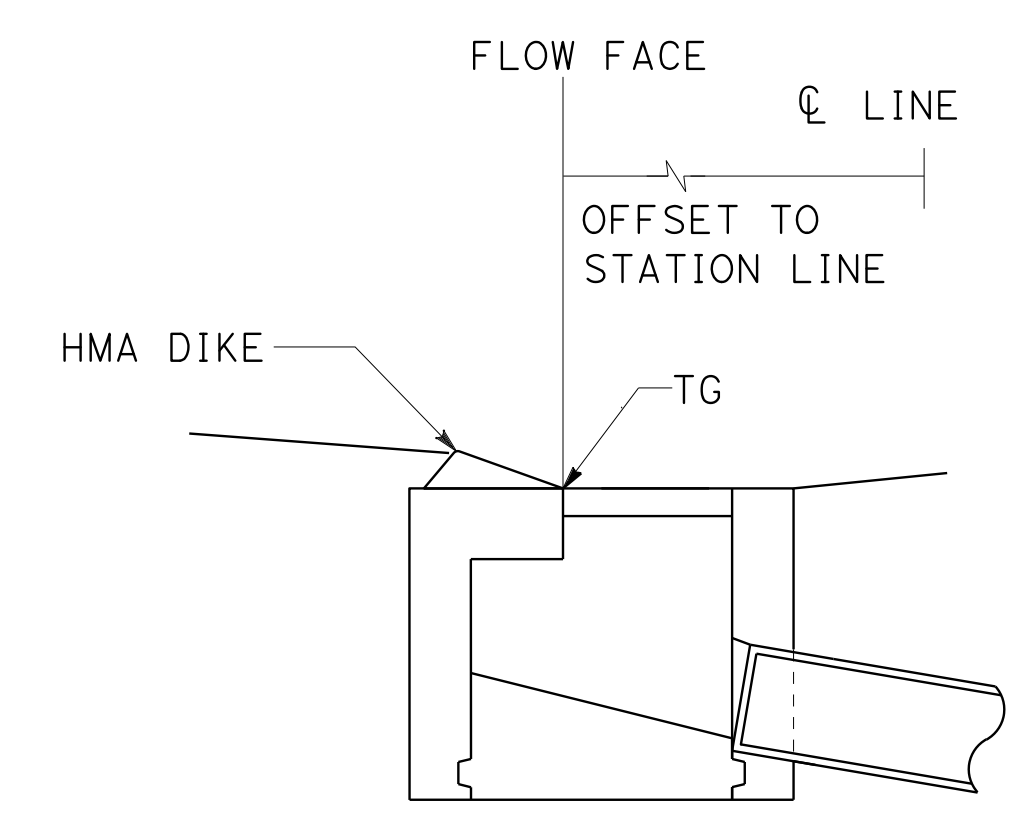
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	91	436
<i>Lesley Brooks</i> REGISTERED CIVIL ENGINEER				5-13-19	DATE
PLANS APPROVAL DATE 5-17-19					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					
WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



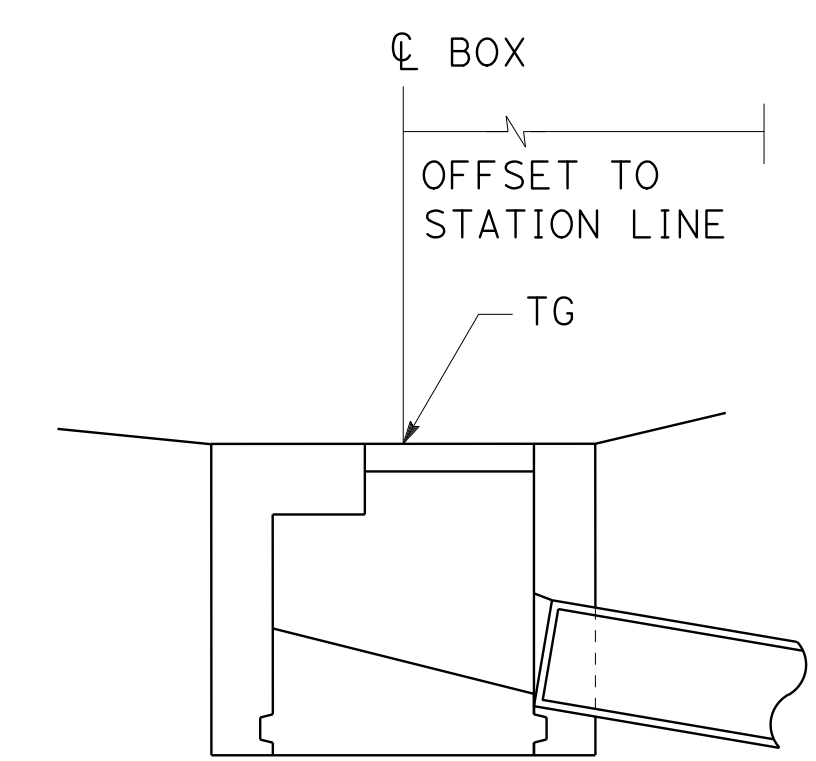
SECTION A-A



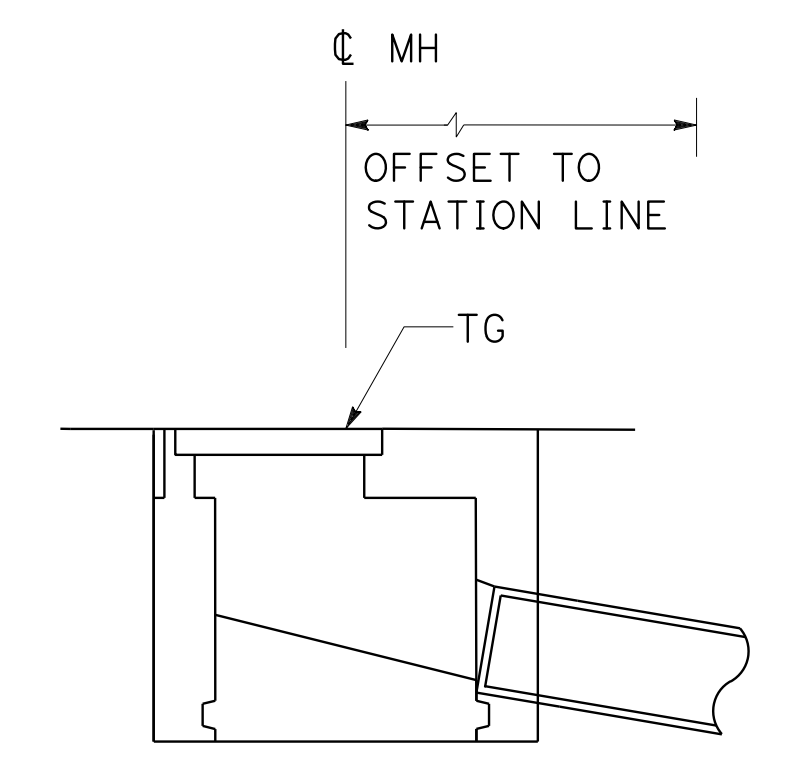
SECTION B-B



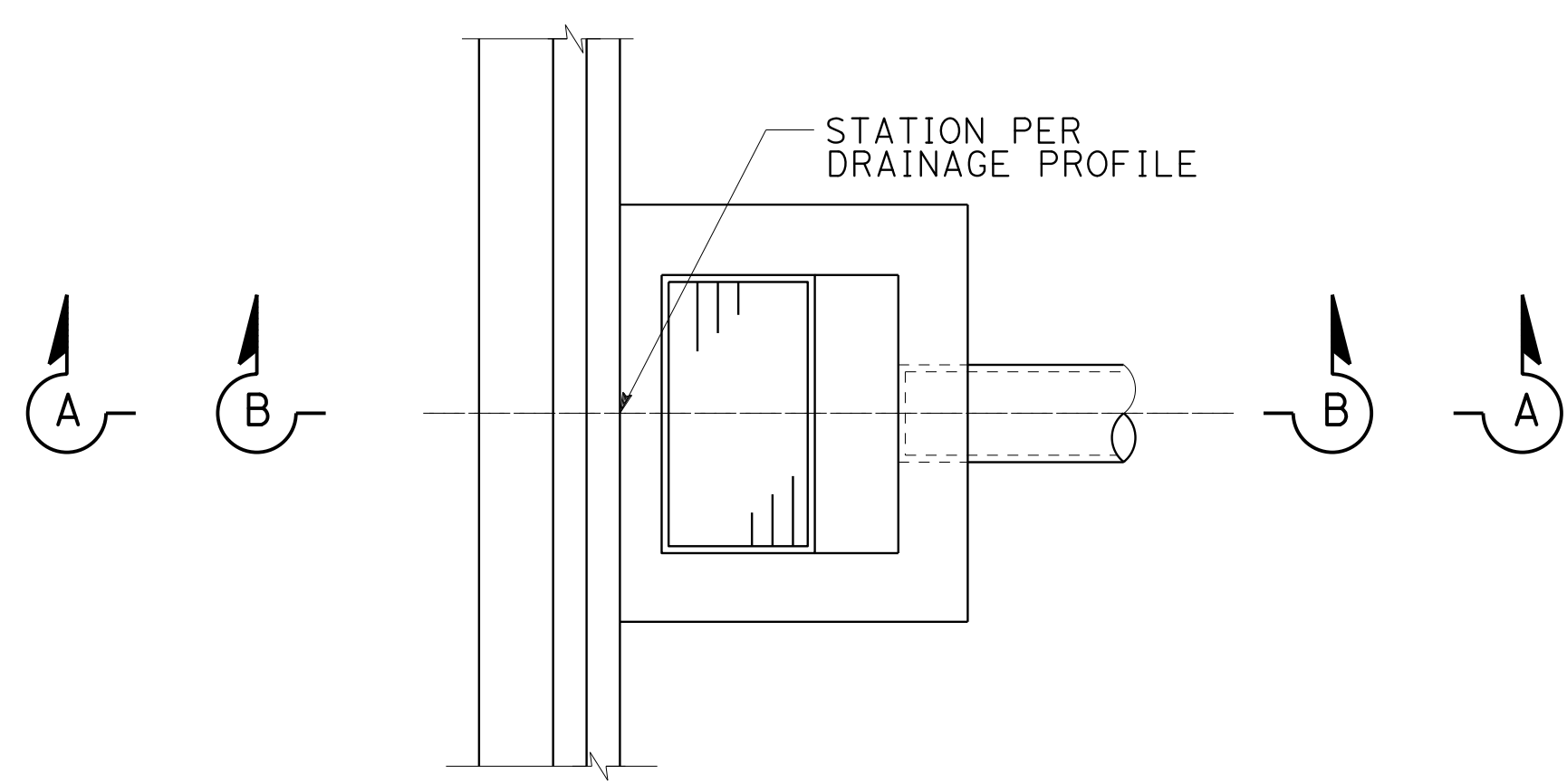
SECTION C-C



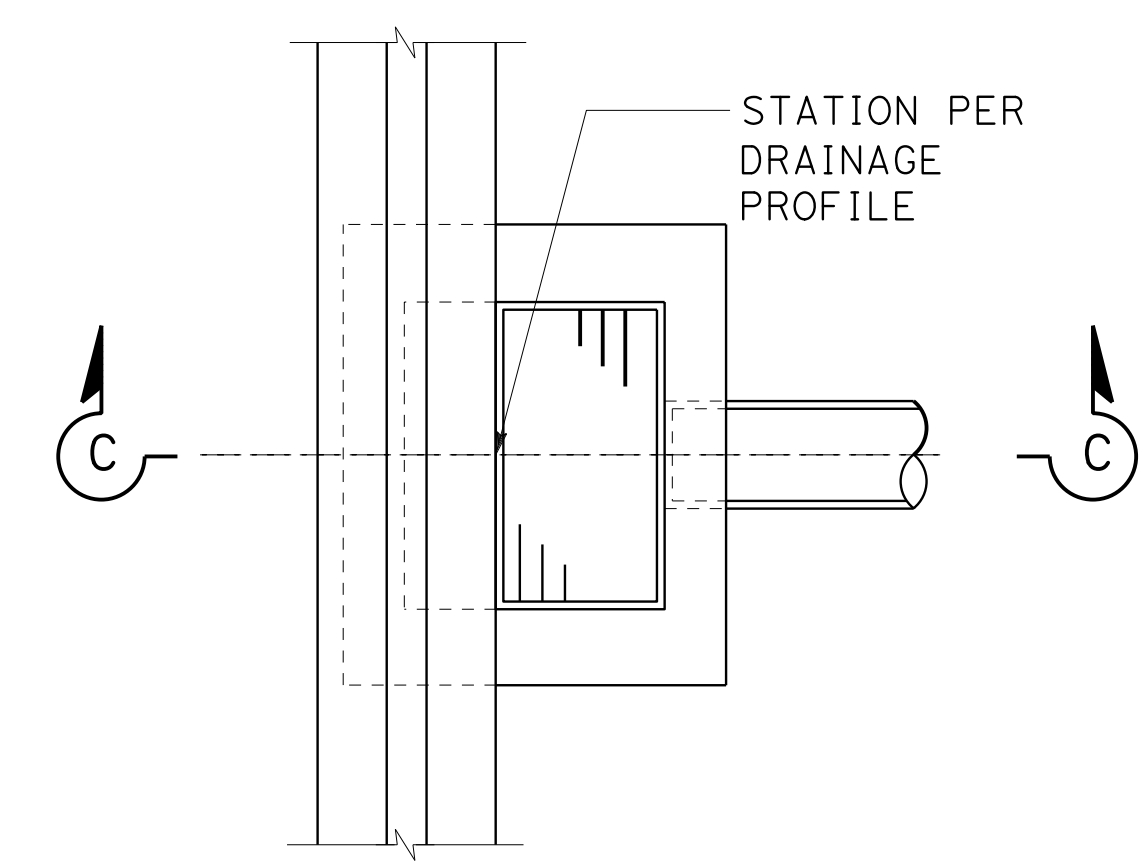
SECTION D-D



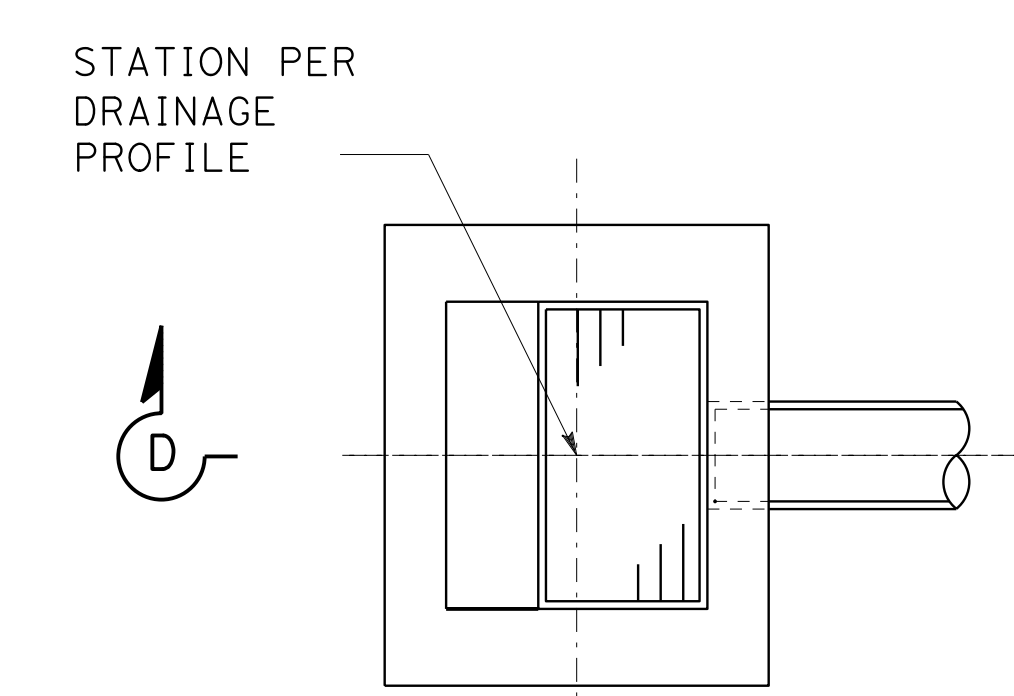
SECTION E-E



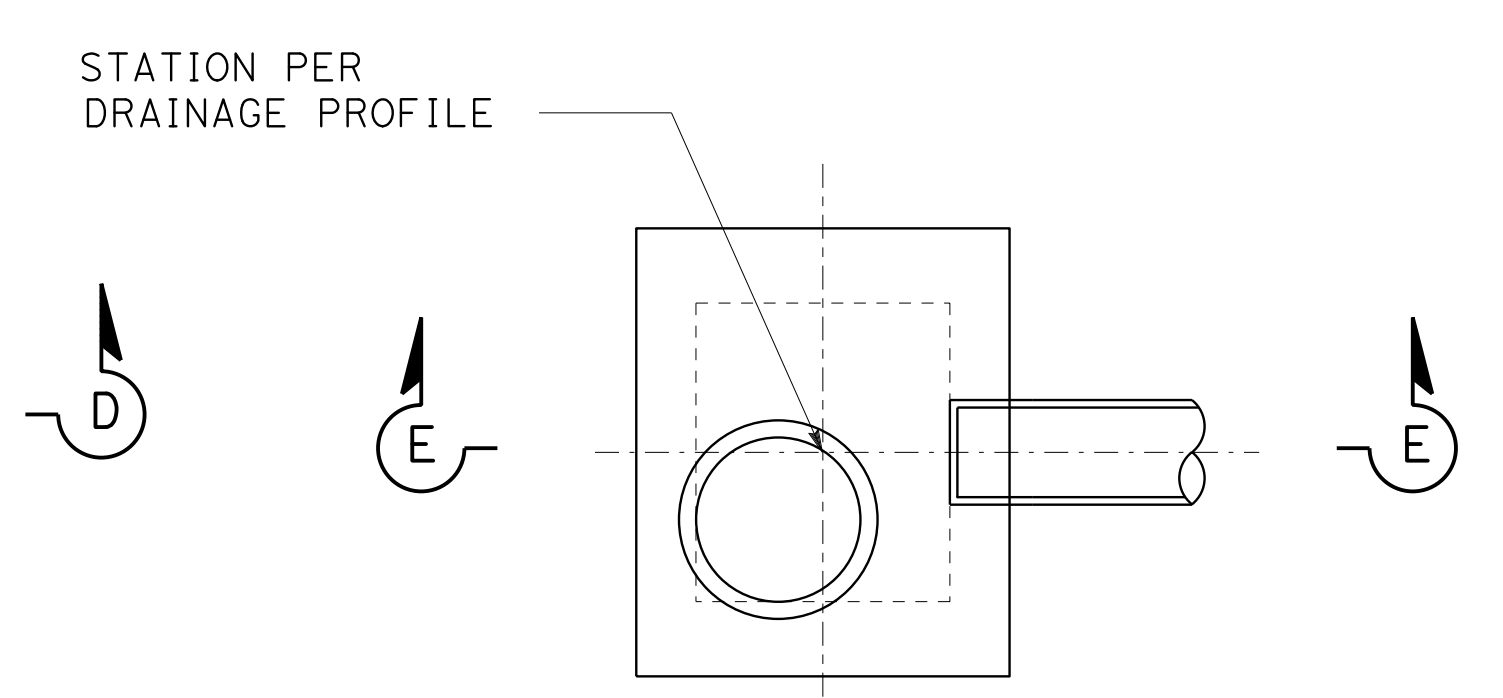
PLAN
INLET ADJACENT TO RETAINING WALL (SECTION A-A) OR CONCRETE BARRIER (SECTION B-B)



PLAN
INLET ADJACENT TO HMA DIKE



PLAN
FIELD INLET



PLAN
FIELD MANHOLE

DRAINAGE DETAILS

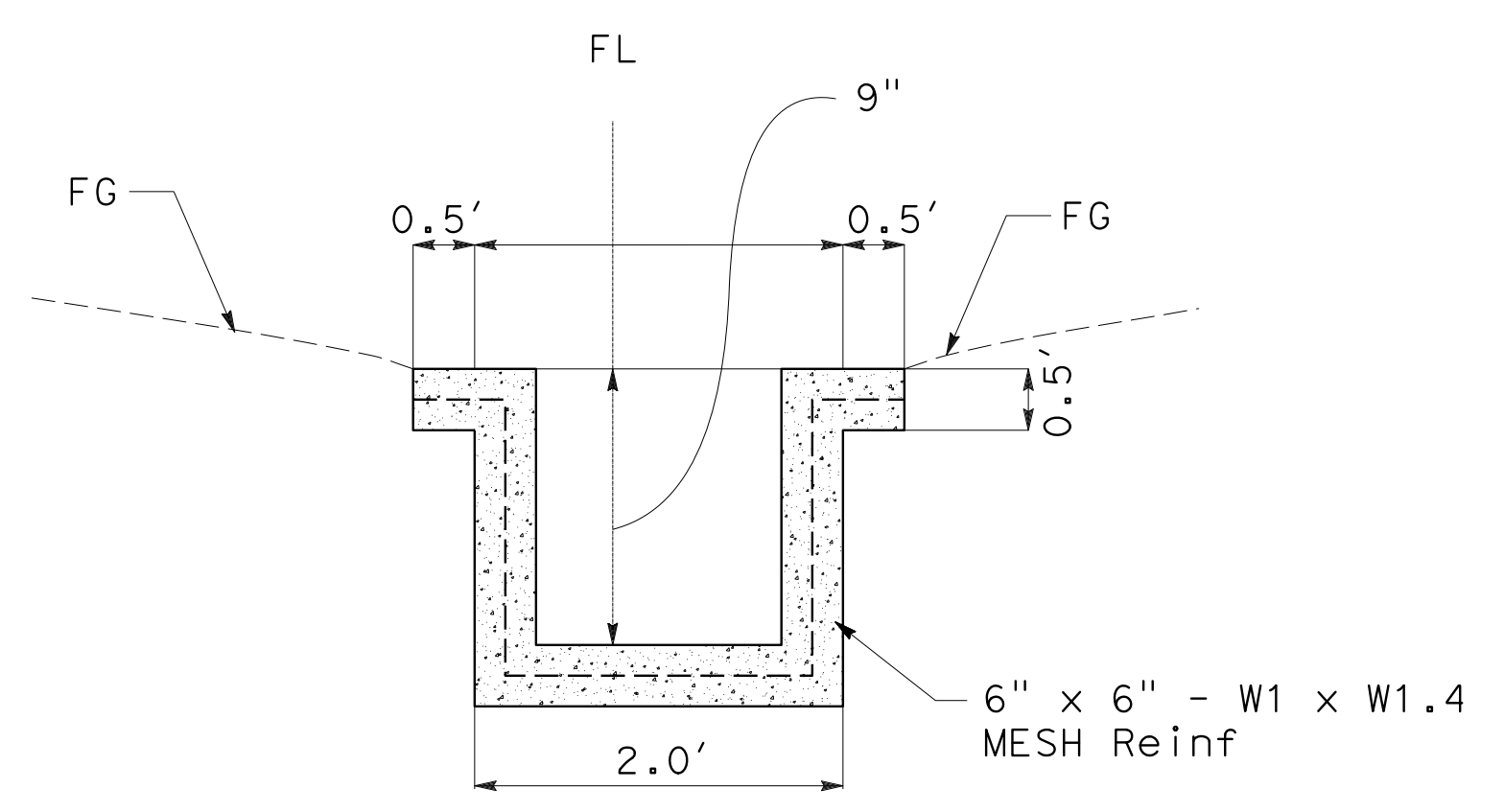
NO SCALE

DD-1



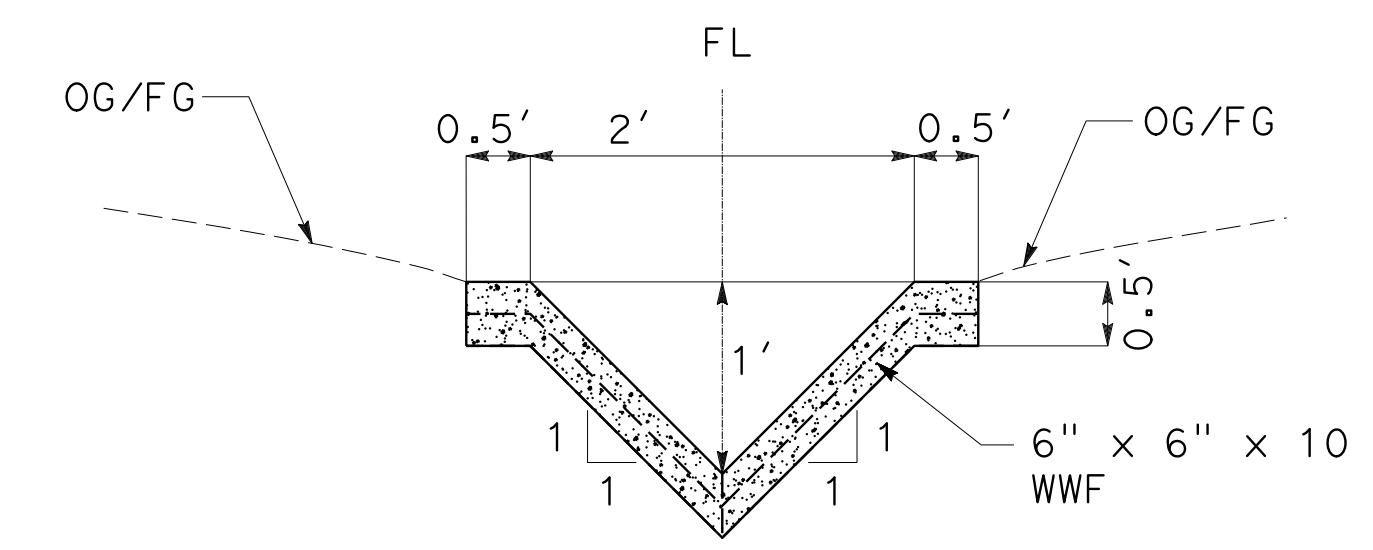
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: HAN-BIN LIANG
 CALCULATED/DESIGNED BY: ANALETTE OCHOA
 CHECKED BY: ANALETTE OCHOA
 LESLEY BROOKS
 REVISIONS:
 LB 5-17-19
 LB 2-18-19
 LB 11-12-18
 REVISED BY: DATE REVISION
 DIST COUNTY ROUTE POST MILES TOTAL PROJECT SHEET No. TOTAL SHEETS
 04 SF 80 7.8/8.0 92 436

REGISTERED CIVIL ENGINEER
 LESLEY BROOKS
 No. 88686
 Exp. 3-31-20
 CIVIL
 STATE OF CALIFORNIA
 5-13-19
 DATE
 5-17-19
 PLANS APPROVAL DATE
 WRECO
 1243 ALPINE ROAD
 SUITE 108
 WALNUT CREEK, CA 94596
 SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



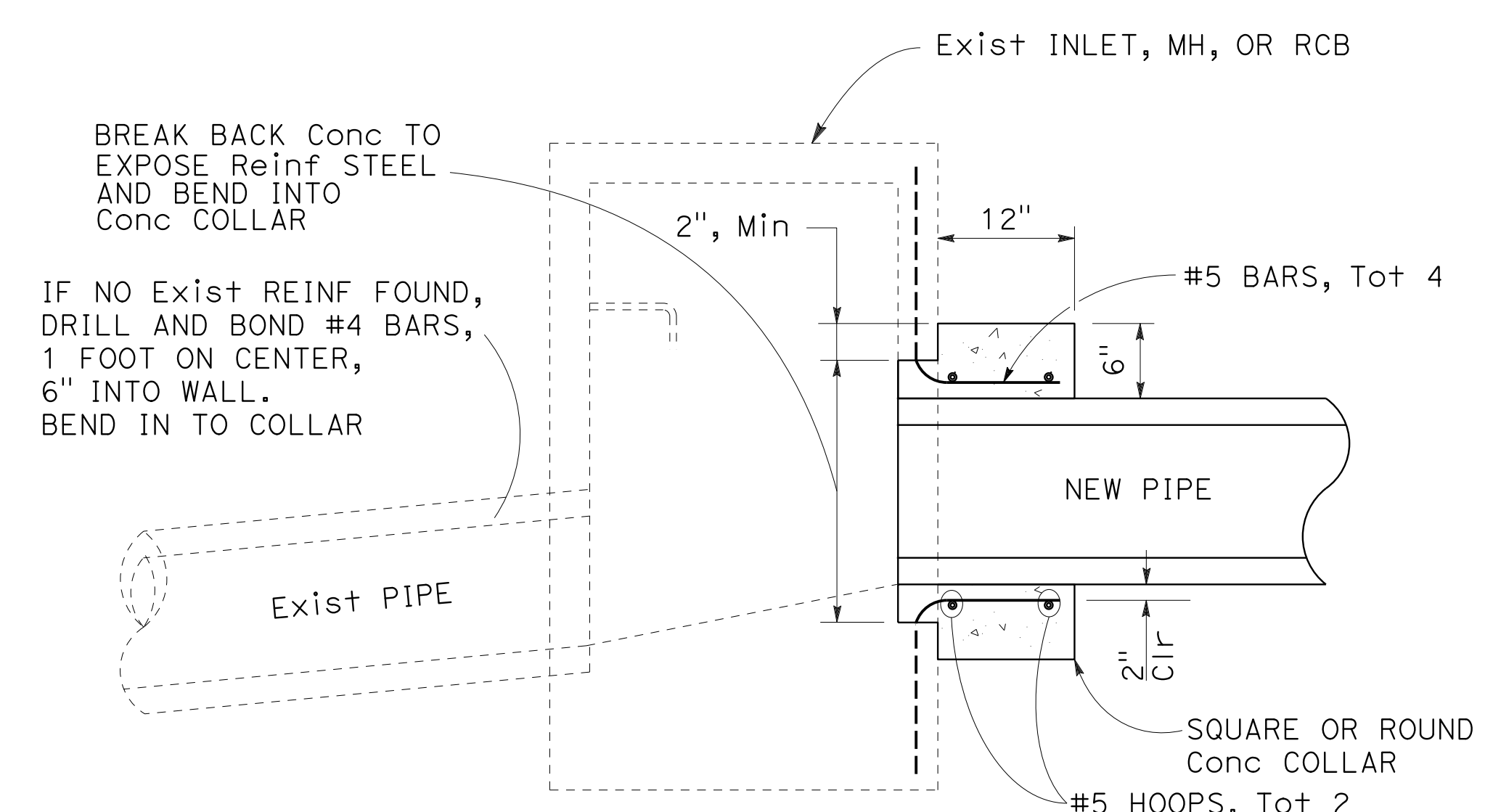
CONCRETE LINED GUTTER

8 a



CONCRETE LINED GUTTER

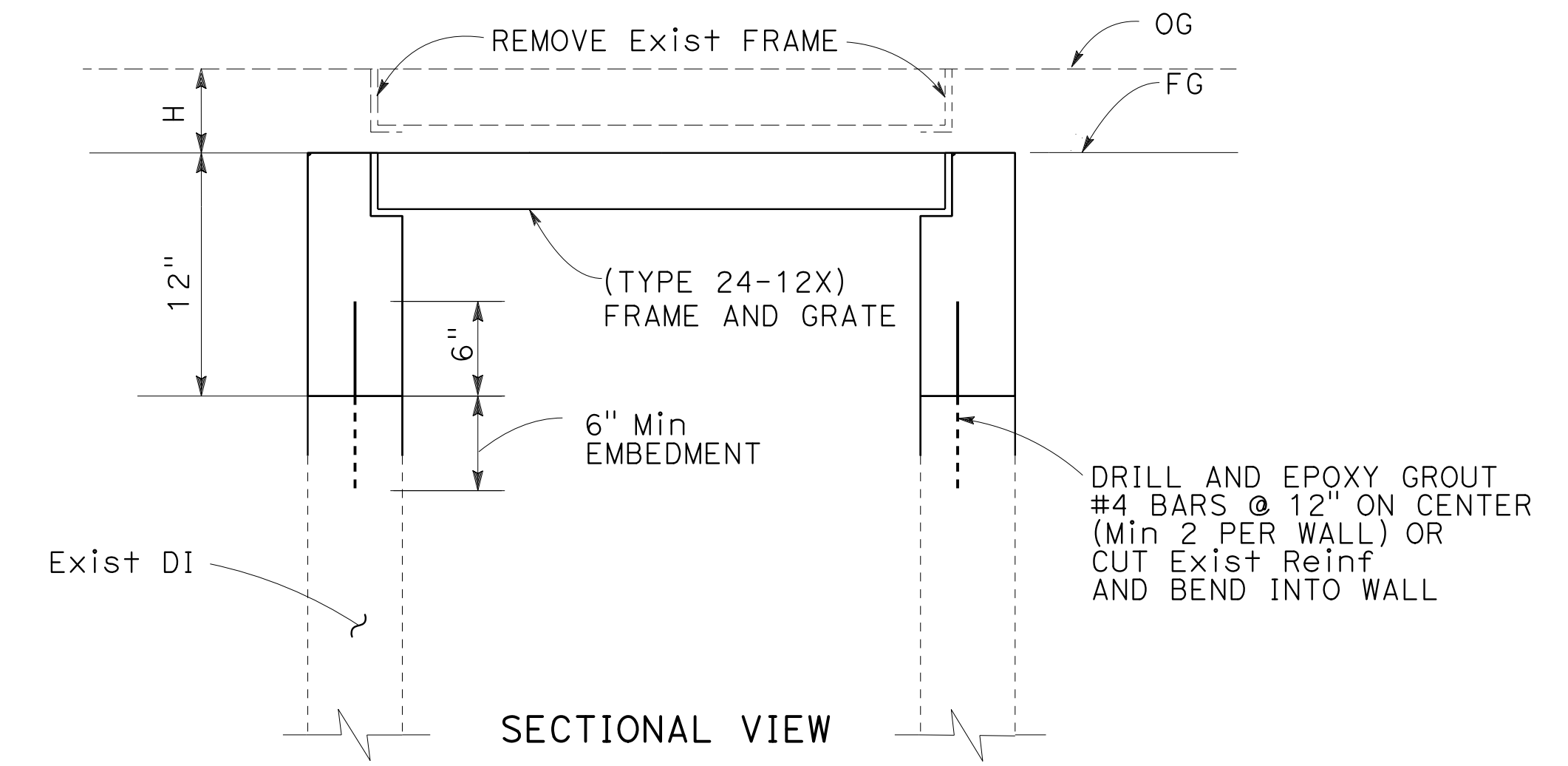
1 af



SECTIONAL VIEW

PIPE CONNECTION TO EXISTING DRAINAGE STRUCTURE

1 aa 2 a 4 b
 1 bb 9 b



NOTES:

- FOR DETAILS NOT SHOWN FOR INLETS AND GRATE TYPE, SEE Std PLANS D73, D77-A, AND D77-B.
- REMOVE 12" Min OF EXISTING WALL FOR SPLICING, ON ALL Adj DI.
- CONTRACTOR TO ADJUST "H" SO THAT TG IS FLUSH WITH FG.

ADJUST DRAINAGE INLET TO GRADE

4 a

DRAINAGE DETAILS

NO SCALE

DD-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	93	436

5-13-19
 REGISTERED CIVIL ENGINEER DATE
 5-17-19
 PLANS APPROVAL DATE

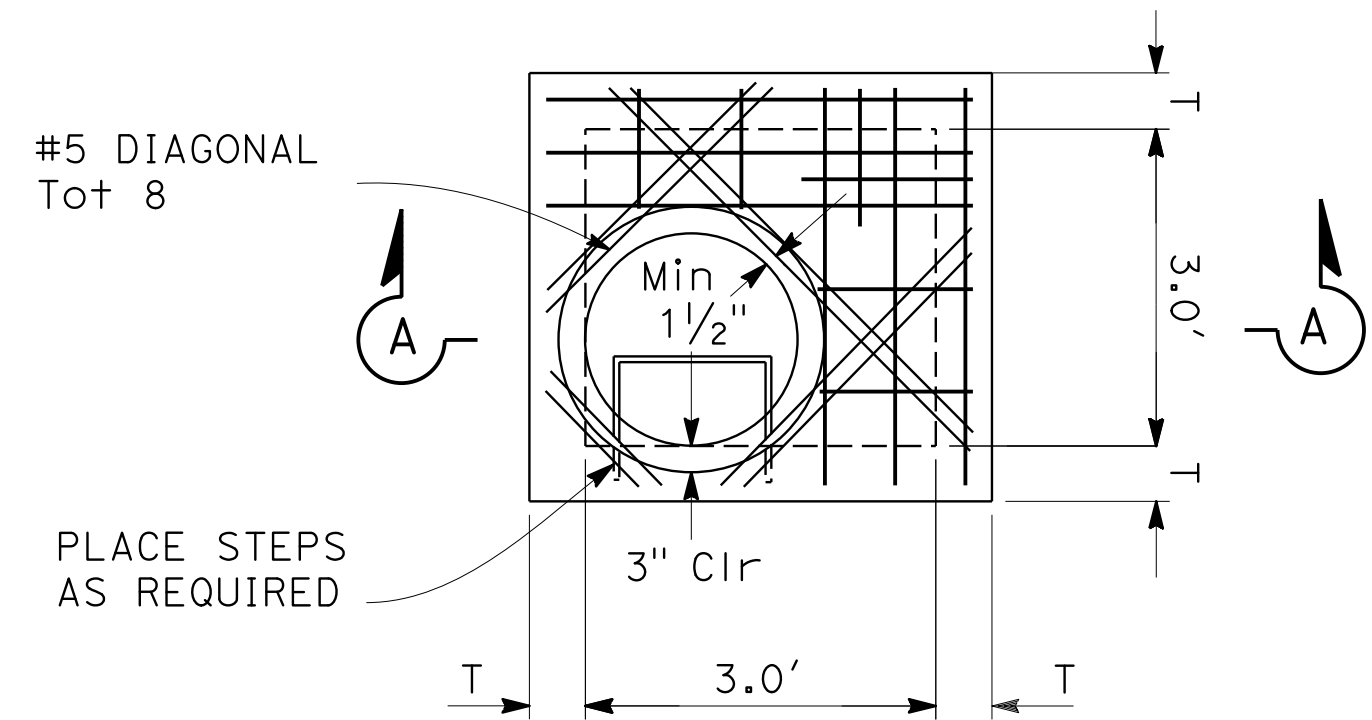
LESLEY BROOKS
 No. 88686
 Exp. 3-31-20
 CIVIL
 STATE OF CALIFORNIA

WRECO
 1243 ALPINE ROAD
 SUITE 108
 WALNUT CREEK, CA 94596

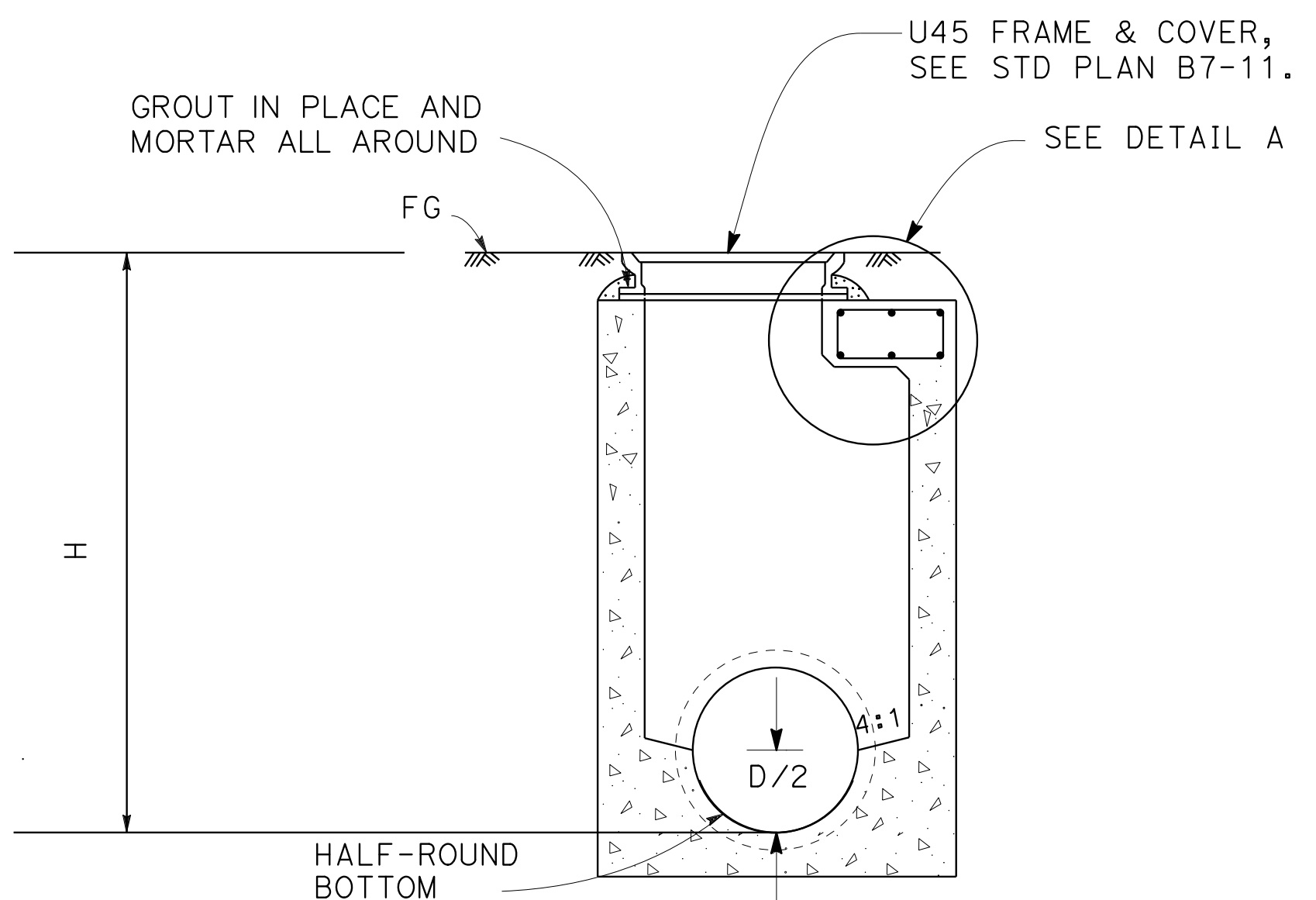
SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

NOTES:

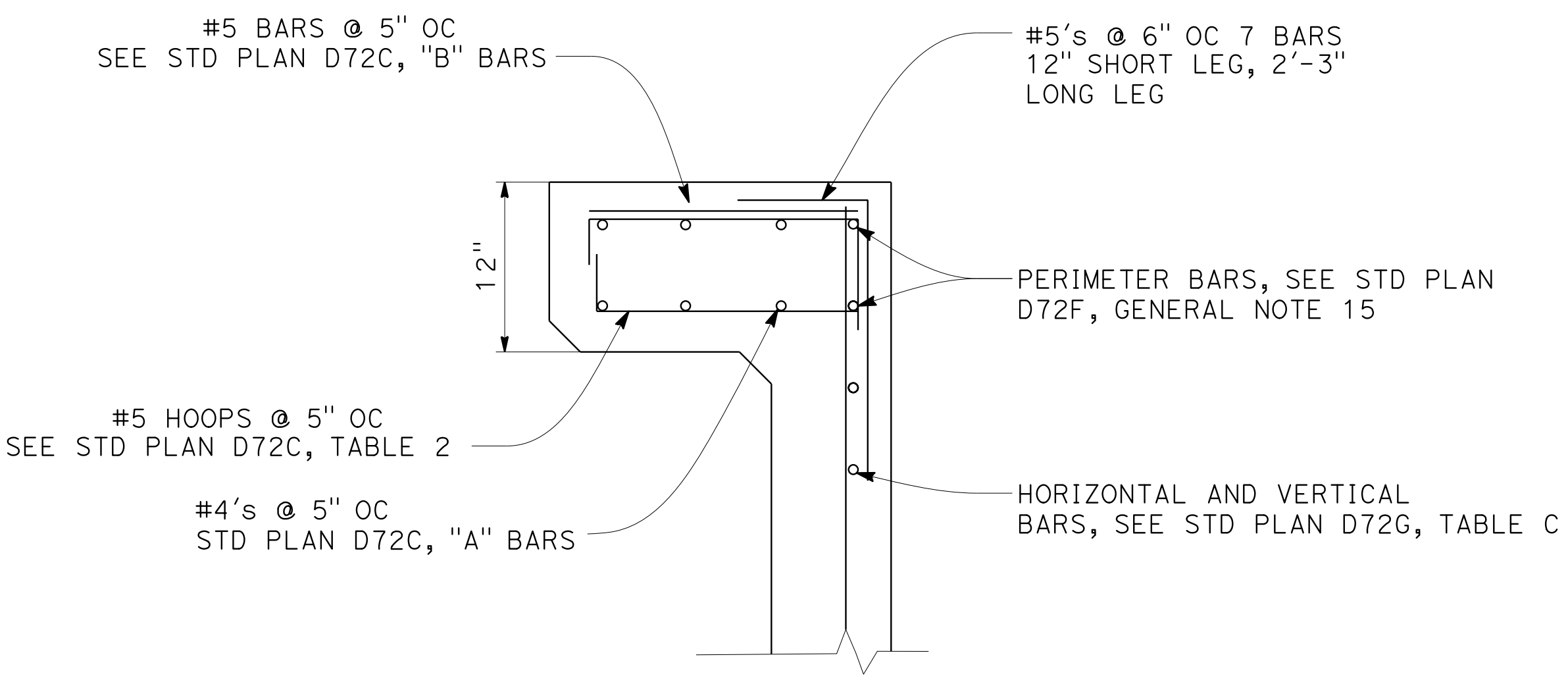
1. CIP SHOWN, PC SIMILAR
2. FOR CIP G2 INLET DETAILS NOT SHOWN, SEE STD PLAN D72B, STD PLAN D72D, STD PLAN D72F, AND STD PLAN D72G.
3. FOR PC G2 INLET DETAILS NOT SHOWN, SEE STD PLAN D73B, STD PLAN D73C, STD PLAN D73F, AND STD PLAN D73G.
4. FOR HEADWALL DETAILS NOT SHOWN, SEE REVISED STANDARD PLAN RSP D89B.



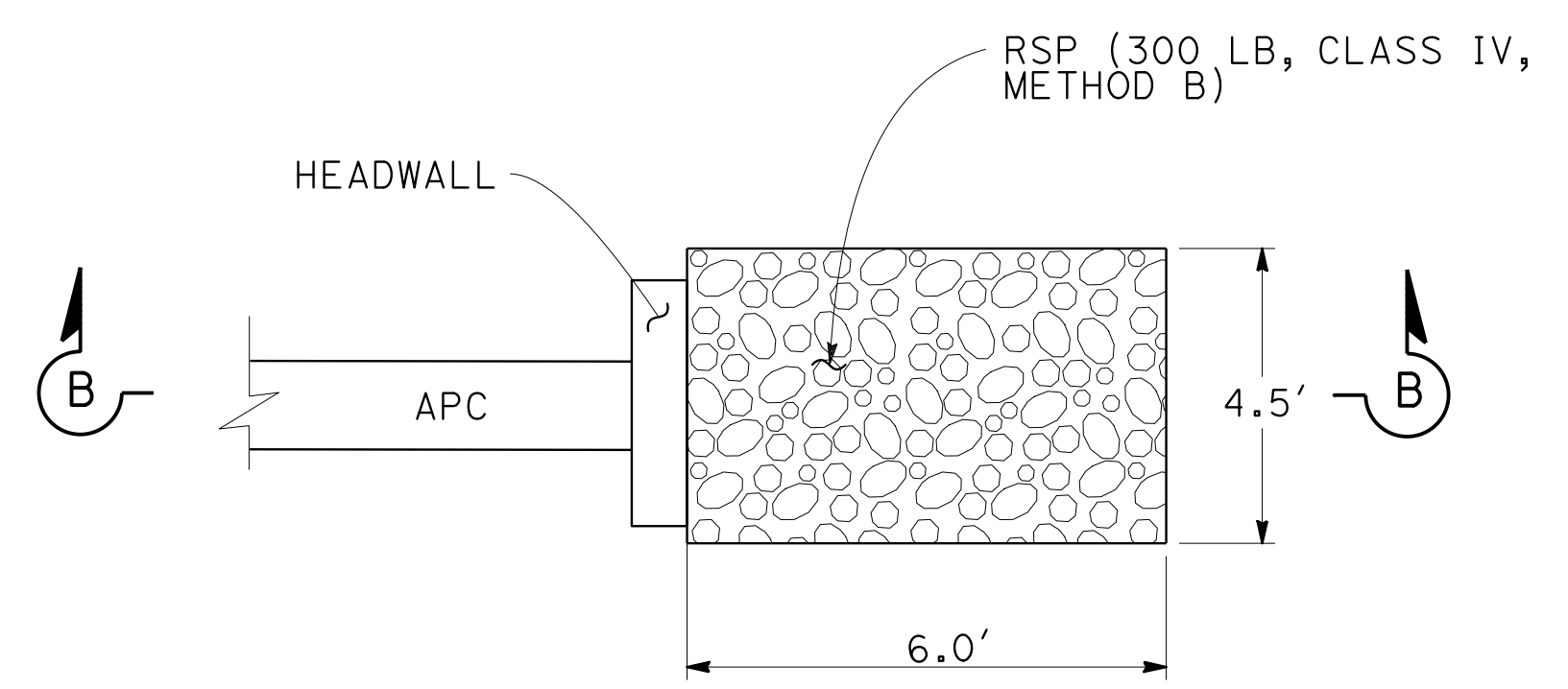
PLAN VIEW



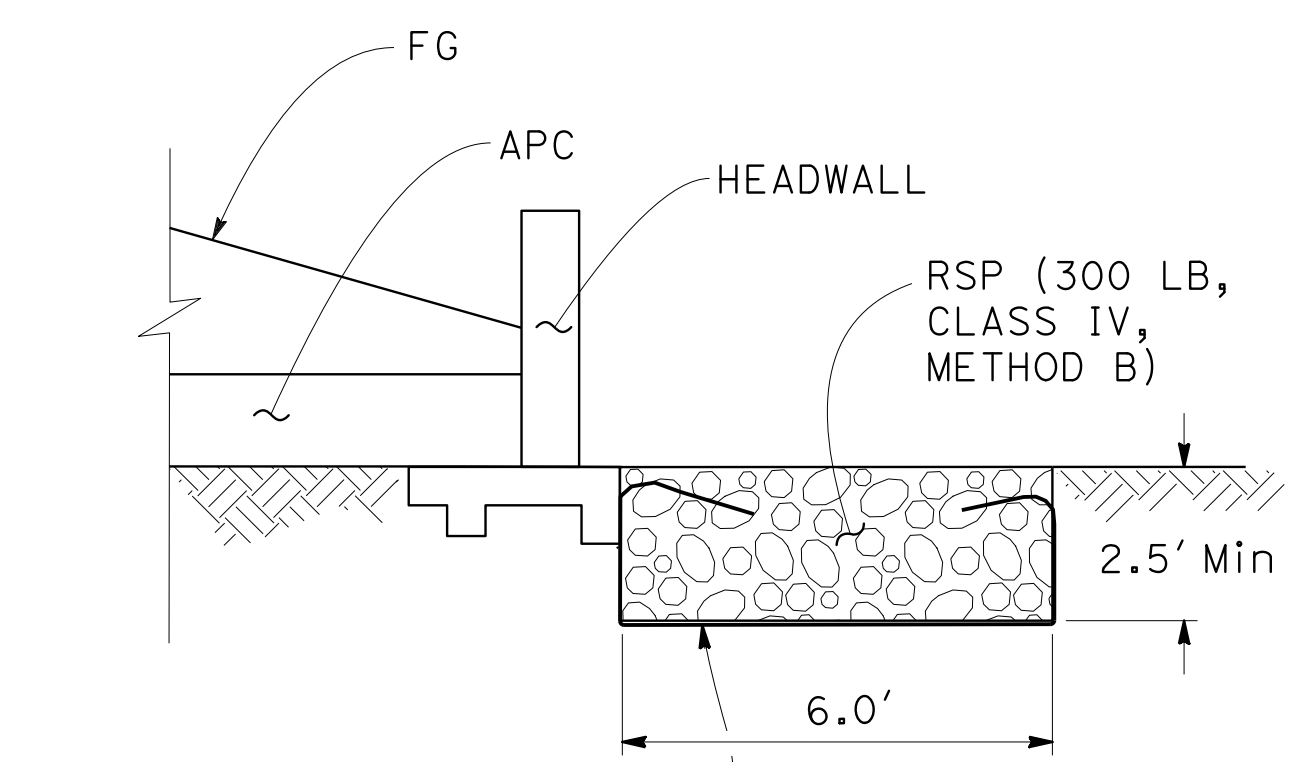
SECTION A-A



DETAIL A

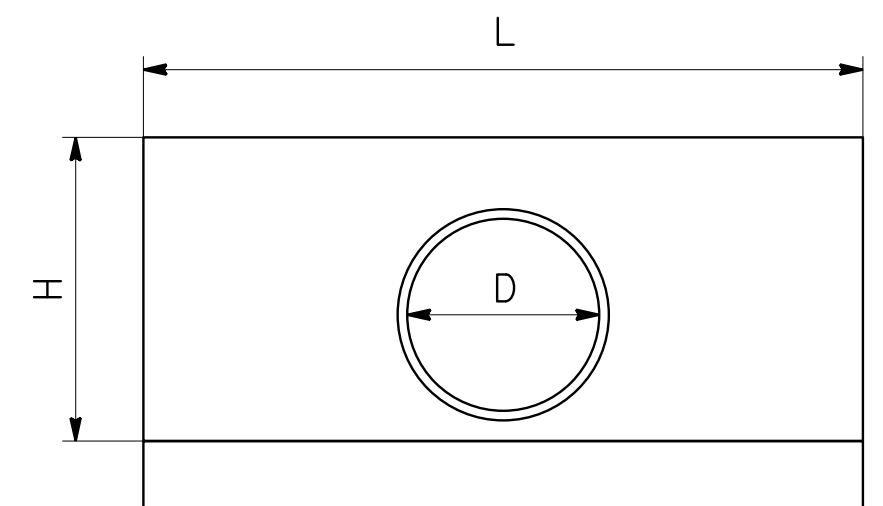
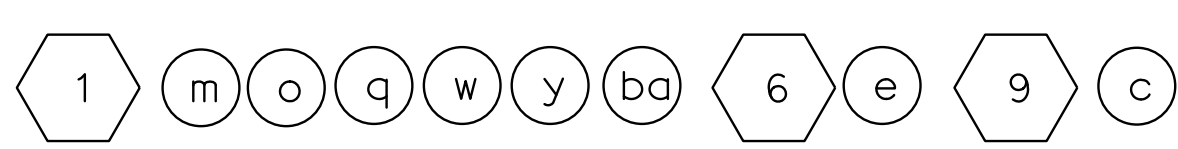


PLAN VIEW

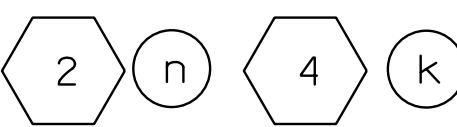


SECTION B-B

G2 MANHOLE



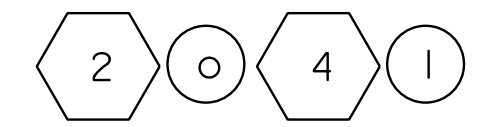
HEADWALL



CIRCULAR PIPE SIZE D	H	L
12"	2'-8"	8'
18"	3'-2"	9.5'

RSP FABRIC (ALL SIDES)
 BURY ALL ENDS IN RSP

RSP AT HEADWALL



DRAINAGE DETAILS

NO SCALE

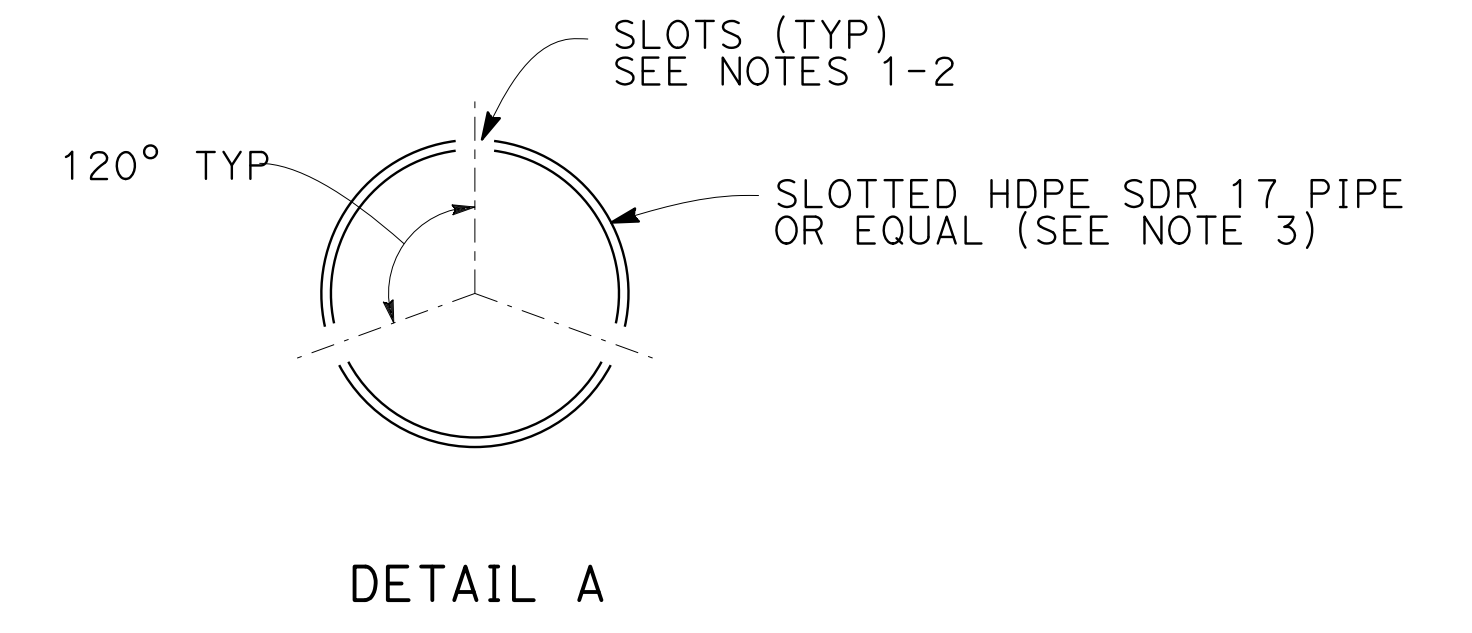
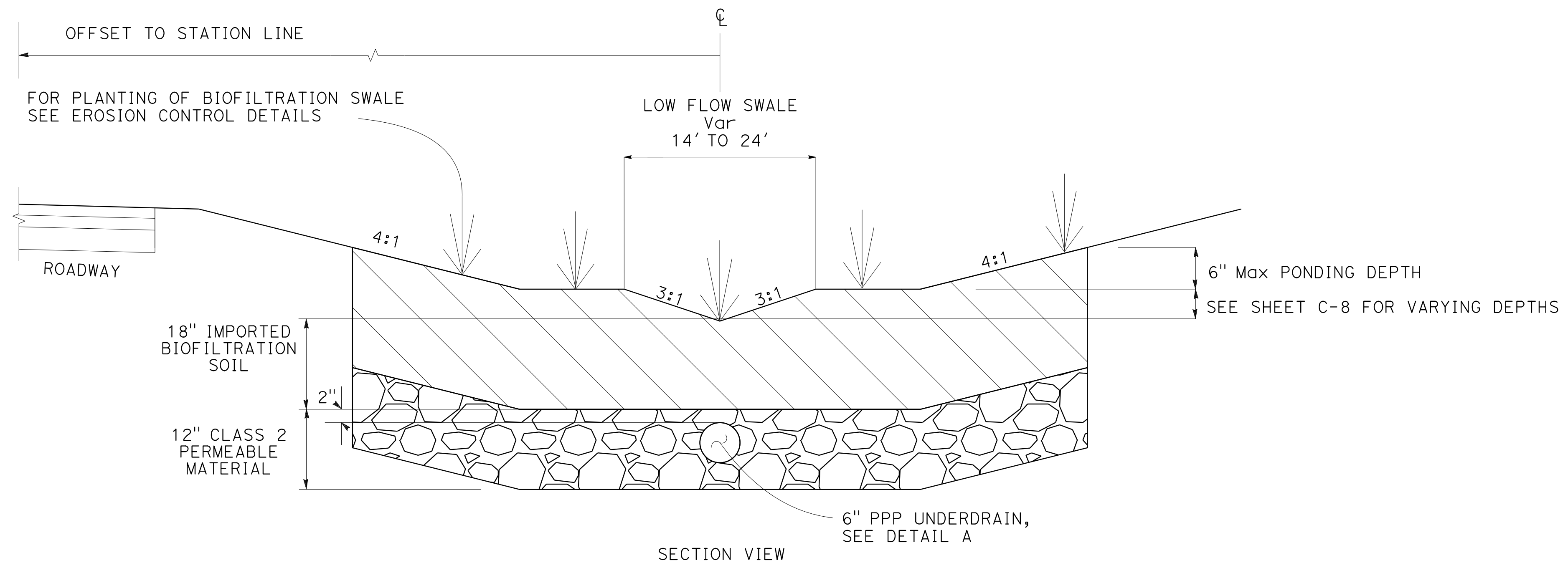
DD-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR
 HAN-BIN LIANG
 CALCULATED-DESIGNED BY
 CHECKED BY
 LESLEY BROOKS
 ANALETTE OCHOA
 REVISED BY
 DATE REVISED
 LB
 LB
 LB
 5-17-19
 2-18-19
 11-12-18

NOTES:

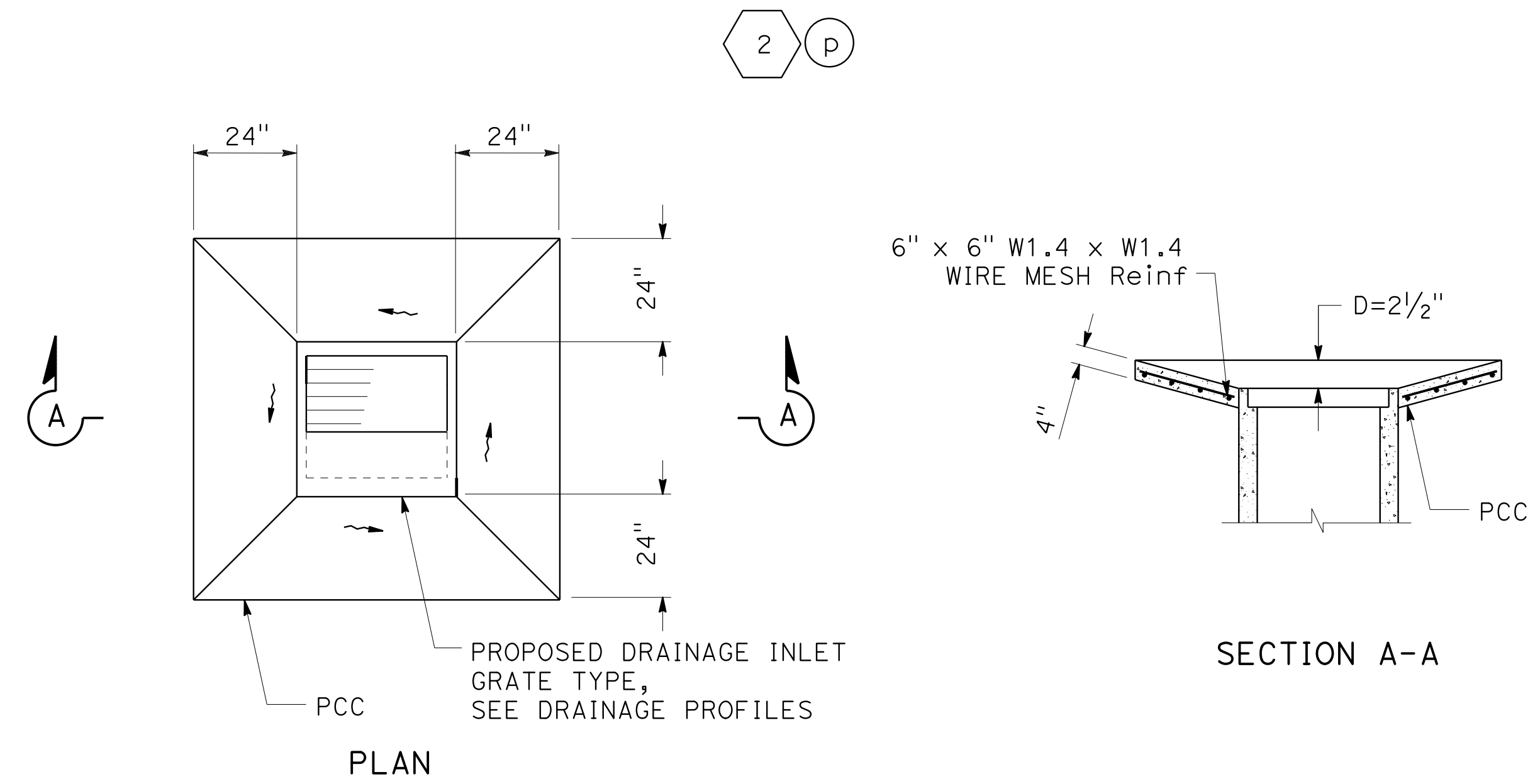
1. UNDERDRAIN PIPE SHALL BE SLOTTED TYPE, MEASURING 0.032 INCH WIDE (MAX), SPACED AT 0.25 INCH (MIN), AND PROVIDING A MINIMUM INLET AREA OF 5.0 SQUARE INCH PER LINEAR FOOT OF PIPE.
2. SLOTS SHALL BE ORIENTED PERPENDICULAR TO LONG AXIS OF PIPE, AND EVENLY SPACED AROUND CIRCUMFERENCE AND LENGTH OF PIPE.
3. UNDERDRAIN PIPE SHALL BE SLOTTED HDPE SDR 17 OR ACCEPTABLE SUBSTITUTE MATERIAL PER ENGINEERS SPECIFICATION. SINGLE WALL AND DUAL WALL CORRUGATED HDPE PIPE (AASHTO M252 AND M295 TYPES C, S, AND D) ARE NOT ACCEPTABLE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	94	436
			5-13-19	DATE	
			5-17-19	PLANS APPROVAL DATE	
WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596					
SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103					



BIOFILTRATION BASIN

FOR DETAILS NOT SHOWN, SEE CONSTRUCTION DETAILS SHEET C-8



DRAINAGE INLET AND MANHOLE WITH PCC APRON

DRAINAGE DETAILS

NO SCALE

DD-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: HAN-BIN LIANG
 CALCULATED-DESIGNED BY: LESLEY BROOKS
 CHECKED BY: ANALETTE OCHOA
 REVISOR: LB
 DATE: 5-17-19

NOTES:

1. MANHOLE FRAME AND ALL JOINTS SHALL BE SET IN CLASS "C" MORTAR AND SHALL CONFORM TO THE REQUIREMENTS IN SECTION 800.09 OF THE STANDARD SPECIFICATIONS OF THE CITY AND COUNTY OF SAN FRANCISCO DEPARTMENT OF PUBLIC WORKS.
2. ALL PRECAST COMPONENTS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C-478.
3. CAST-IN-PLACE CONCRETE FOUNDATION SHALL BE CLASS 6-300-3/4 AND SHALL CONFORM TO THE REQUIREMENTS IN SECTION 800.11 OF THE STANDARD SPECIFICATIONS OF THE CITY AND COUNTY OF SAN FRANCISCO DEPARTMENT OF PUBLIC WORKS.
4. CULVERT OPENINGS SHALL BE A MINIMUM OF 8" FROM PRECAST SECTION JOINTS.
5. CONTRACTOR SHALL MINIMIZE NUMBER OF SECTION RINGS BY UTILIZING LARGEST SECTIONS AVAILABLE.
6. CULVERT CONNECTIONS SHALL BE FLUSH WITH INSIDE FACE OF THE MANHOLE WALL.
7. MANHOLE DEPTH SHALL NOT EXCEED 17'.
8. FOR DETAILS NOT SHOWN SEE FILE NO. 87,181 OF THE STANDARD PLANS OF THE CITY AND COUNTY OF SAN FRANCISCO DEPARTMENT OF PUBLIC WORKS.

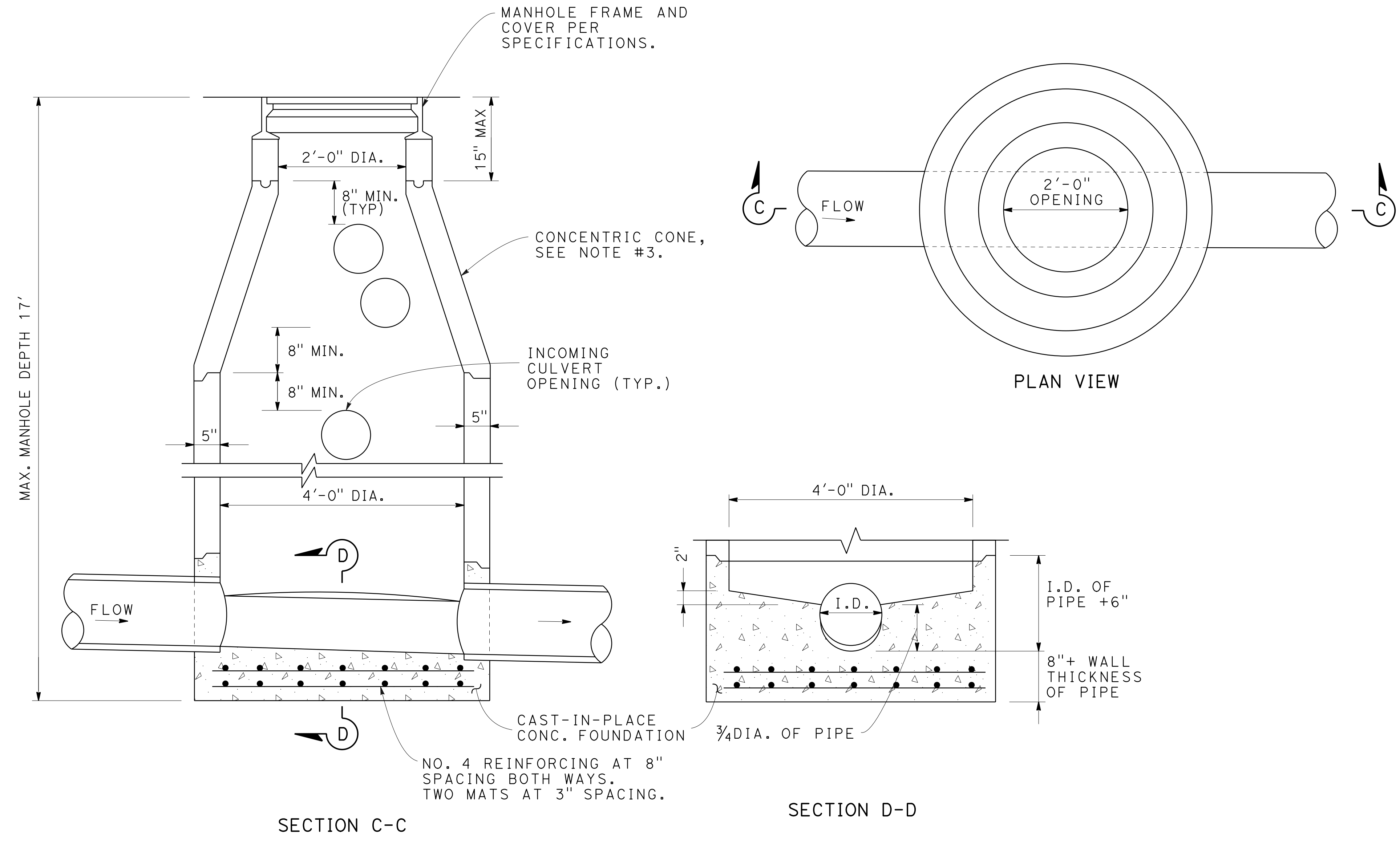
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	94d	436

5-13-19
 REGISTERED CIVIL ENGINEER DATE
 5-17-19
 PLANS APPROVAL DATE

LESLEY BROOKS
 No. 88686
 Exp. 3-31-20
 CIVIL
 STATE OF CALIFORNIA

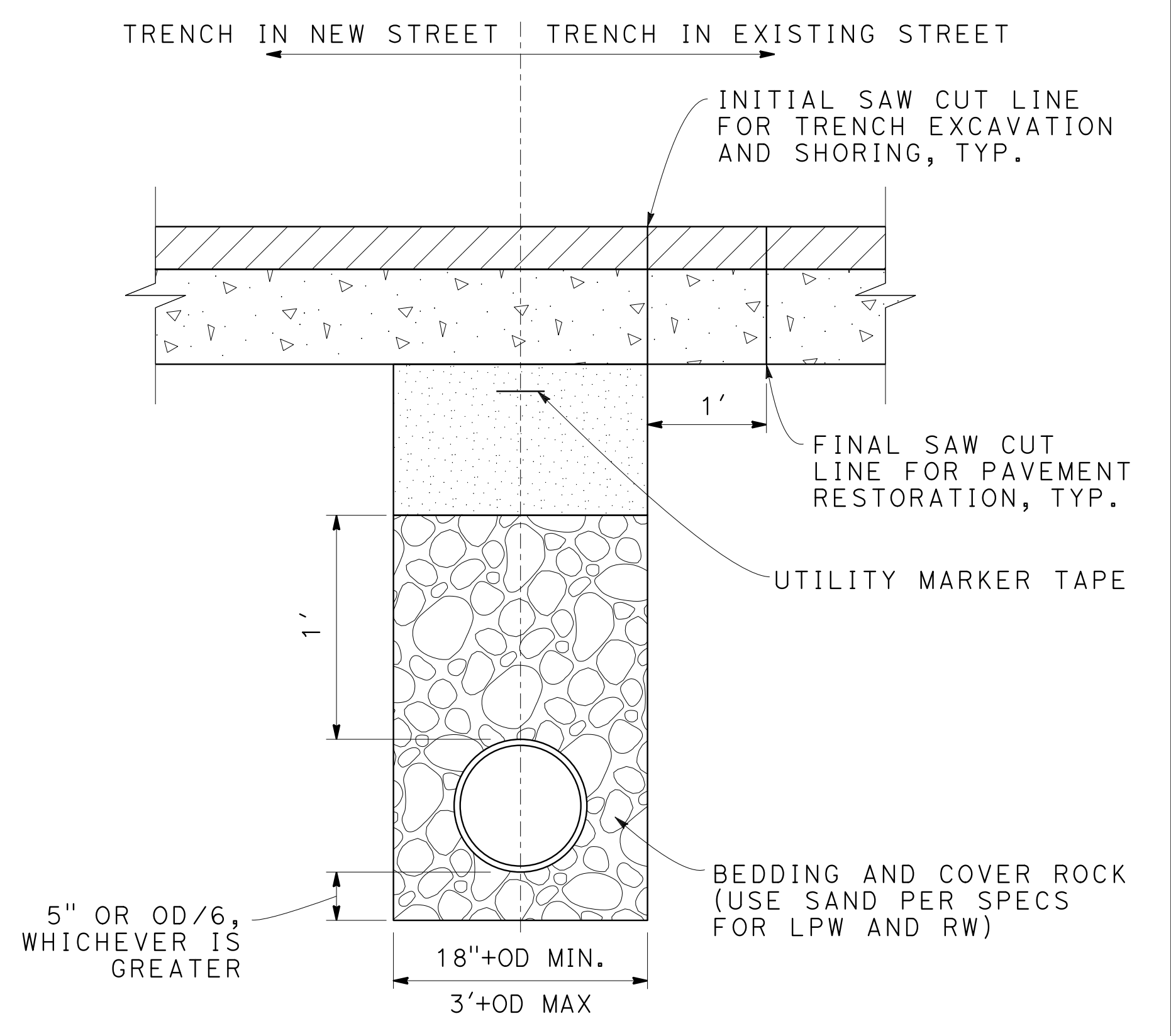
WRECO
 1243 ALPINE ROAD
 SUITE 108
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



MODIFIED CITY MANHOLE PLAN AND DETAILS

1 c e g i k u a b a d 2 b d f h j l 3 c 4 e g i 8 d f h j l n



NOTES:

1. ALL WORK SHALL BE DONE PER SPECIFICATIONS AND ALL REFERENCES MADE WITHIN, AS WELL AS SECTION 2.4.55 OF CITY PUBLIC WORKS CODE.
2. WHERE CRUSH ROCK USED AS BACKFILL, BEDDING, COVER, AND/OR STABILIZATION MATERIAL, IT SHALL BE ENTIRELY COVERED BY A FILTER FABRIC (MIRAFI 140 NC OR EQUIVALENT).
3. IN CERTAIN LOCATIONS LIGHT WEIGHT FILL MAY BE USED AS BACKFILL, BEDDING, OR COVER AS DETERMINED BY THE GEOTECHNICAL ENGINEER.

CITY CULVERT TYPICAL TRENCH DETAIL

DRAINAGE DETAILS

NO SCALE

DD-4a

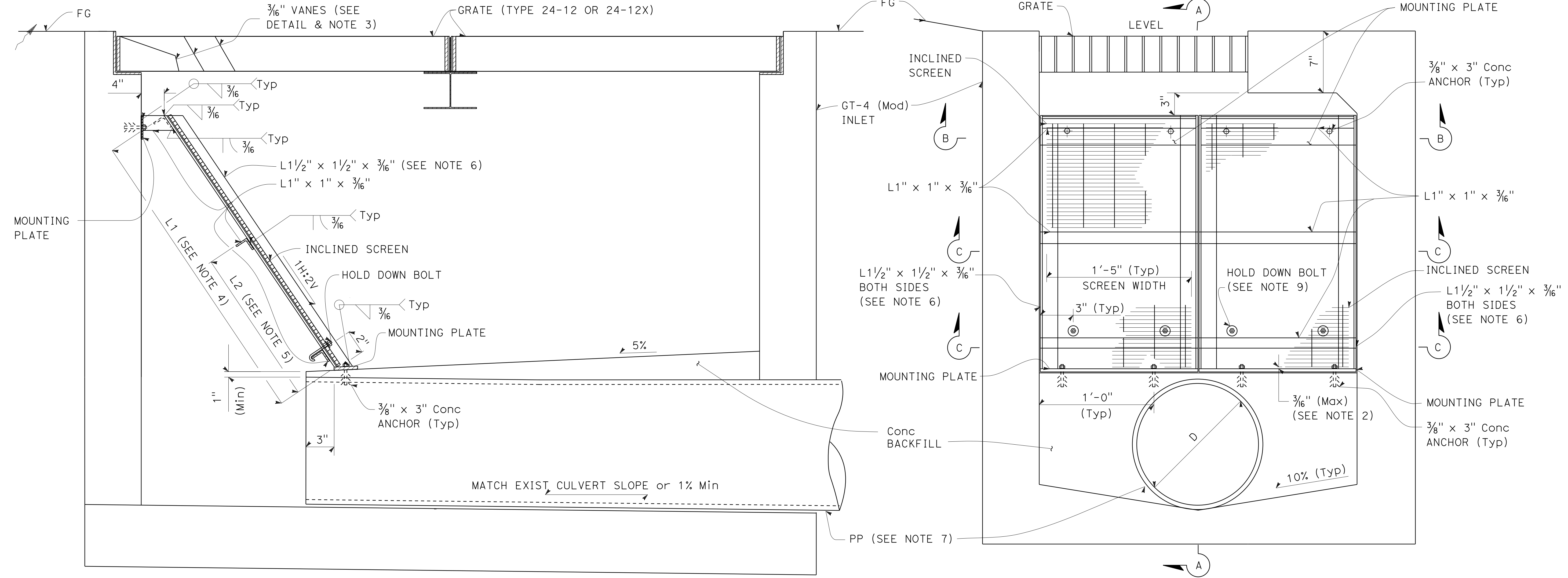
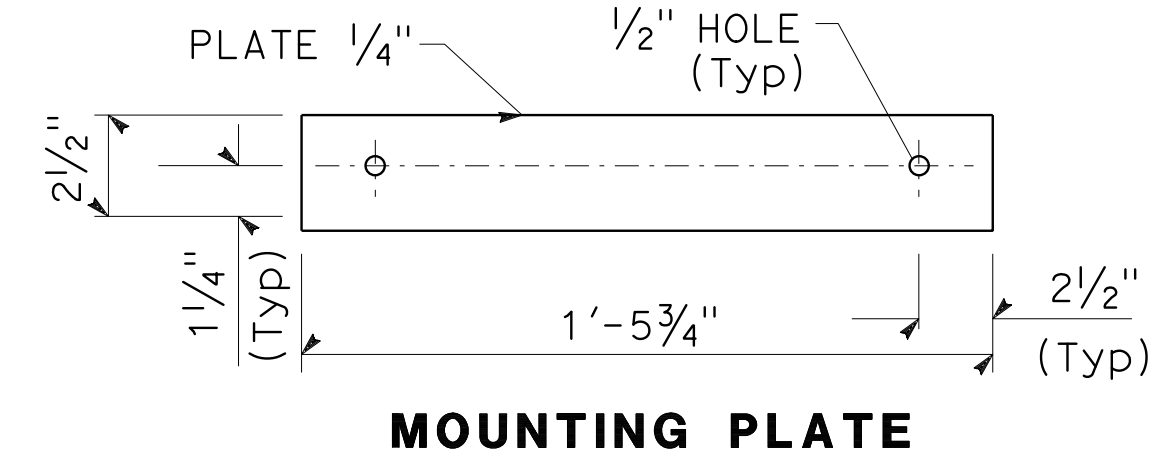
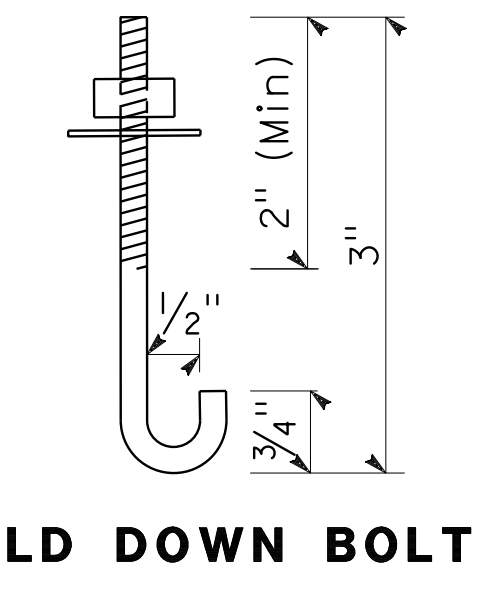
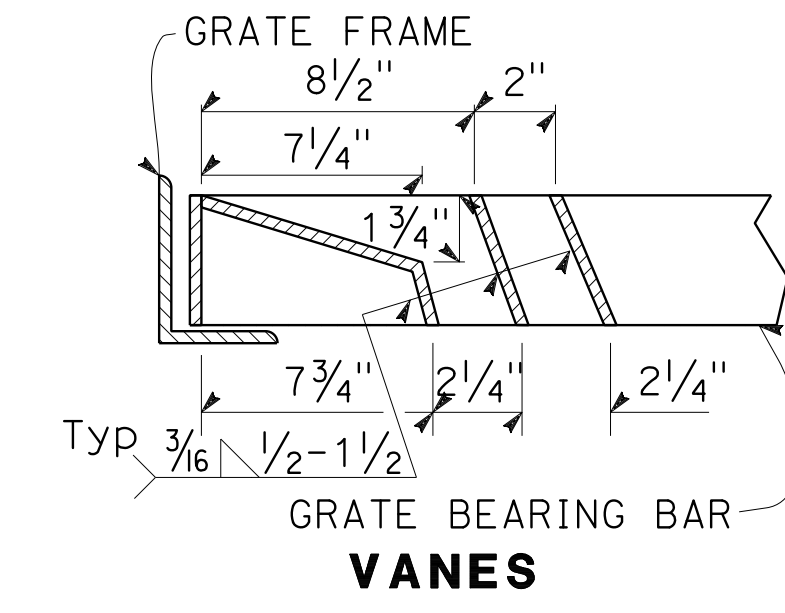
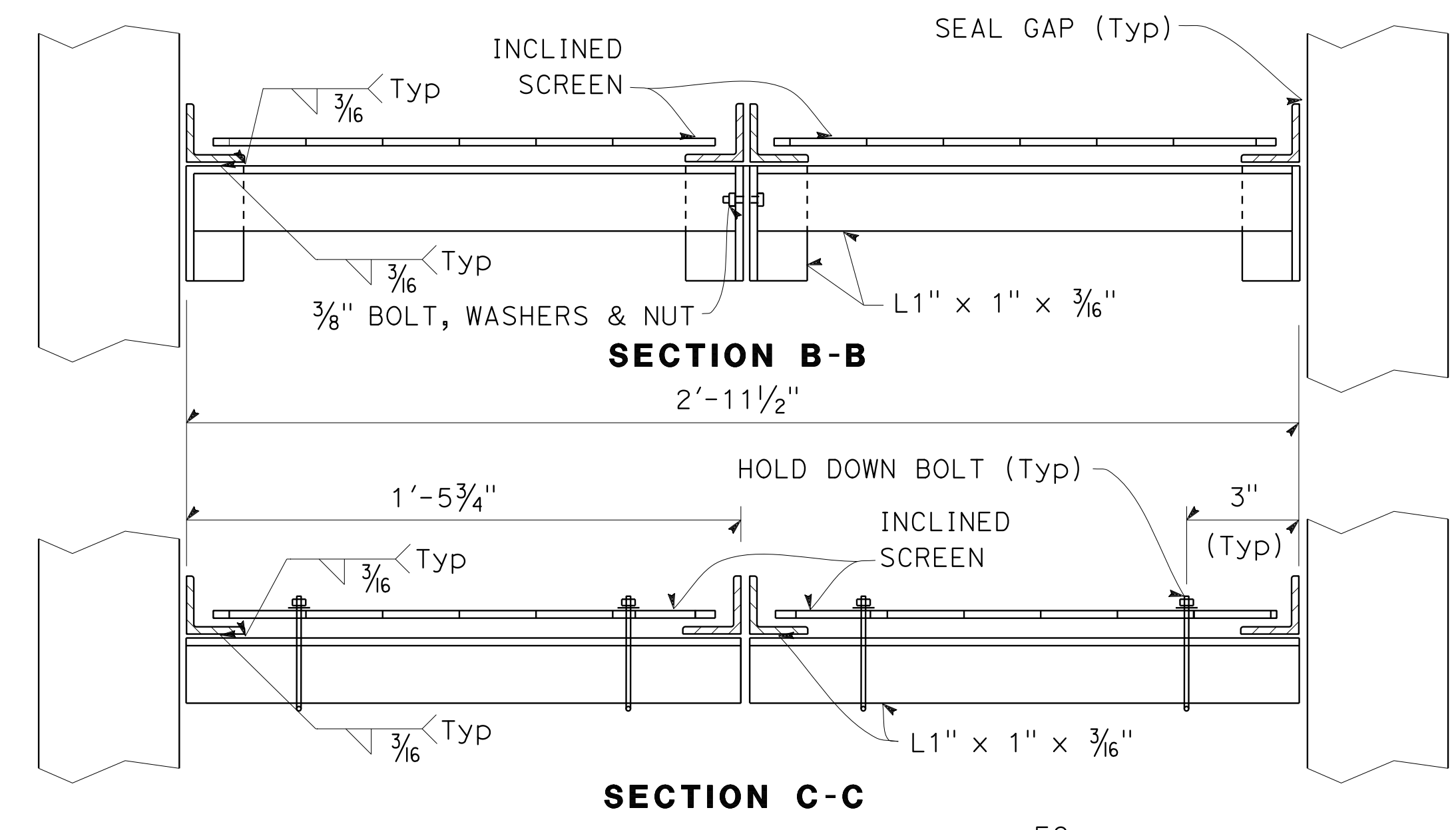
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR
 HAN-BIN LIANG
 CHECKED BY
 ANALETTE OCHOA
 REVISOR
 LESLEY BROOKS
 DATE
 5-17-19
 LB
 5-17-19

NOTES:

- For GT-4 details not shown, see Standard Plan D72D or D73D.
- The dimension shown is the distance between top of mounting plate and bottom of Inclined Screen.
- Vanes welded between each bearing bar on grate.
- L1 = 4'-6" max, 1'-3" Min
- L2 = 1/2 L1 for L1 < 3' or 1/3 L1 for L1 > 3' (2 angles req). Omit intermedaite angle if L1 < 1'-6".
- For L1 < 3', L1" x 1" x 3/16".
- Match inlet culvert diameter. If no inlet culvert, Dia = 18".
- Use standard gutter depression except as noted.
- #10 x 3/2" stainless steel threaded rod, fender washer & lock nut. Tighten aganst inclined screen.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	94b	436

Lesley Brooks 5-13-19
 REGISTERED CIVIL ENGINEER DATE
 5-17-19
 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.
 WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596
 SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103



SECTION A-A

ELEVATION

TR-4 TRASH INLET

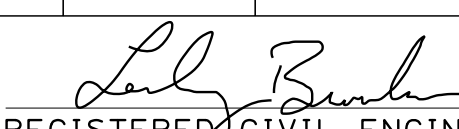
DRAINAGE DETAILS

THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY

NO SCALE

DD-4b

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 CONSULTANT - HAN-BIN LIANG
 CALCULATED/DESIGNED BY - LESLEY BROOKS
 CHECKED BY - ANALETTE OCHOA
 REVISOR - REVISED BY - DATE REVISED
 11-12-18 5-17-19
 2-18-19
 5-17-19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	96	436
 REGISTERED CIVIL ENGINEER DATE 5-13-19					
5-17-19 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.					
WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

DRAINAGE QUANTITIES

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT	CY	CY	LF	LF	EA	EA	LF	EA	LF	EA	CY	SQYD	LB	EA	FT	FT	DESCRIPTION	STATION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT														
																								12"	18"	24"	10"	12"	18"	24"	6" UNDERDRAIN	12" WELDED STEEL PIPE (.134" THICK)	CITY MANHOLE	CITY MANDHOLE FRAME AND COVER	INLET DEPRESSION	ABANDON CULVERT	CULVERT
D-5	1	ab						1	1								4.7		CITY MH	61.10' Lt "HC1" 56+08.87	D-5	1	ab														
		ac				25												DD	4.9	10" HDPE	61.10' Lt "HC1" 56+08.87 TO 31.94' Lt "HC1" 56+12.03			ac													
		ad						1	1										CITY MH	31.94' Lt "HC1" 56+12.03			ad														
		ae			259													DD	5.5	10" HDPE	31.94' Lt "HC1" 56+12.03 TO 15.95' Lt "HC1" 58+84.21			ae													
		af	1.5										0.5						Conc LINED GUTTER	47.54' Lt "HC1" 56+19.36 TO 62.20' Lt "HC1" 56+15.87			af														
		ag							1										ABANDON CULVERT	62.20' Lt "HC1" 56+15.87			ag														
		ah												14					REMOVE Conc GUTTER	47.54' Lt "HC1" 56+19.36 TO 62.20' Lt "HC1" 56+15.87			ah														
D-2	1	ai		3.4						1					478	170		4.0	TR-4 DI	44.54' Rt "R1" 55+60.68	D-2	1	ai														
		aj				7												DD	6.0	12" HDPE	44.54' Rt "R1" 55+60.68 TO 39.18' Rt "R1" 55+53.57			aj													
		ak		3.8						1					239				G2 DI	34.87' Rt "R2" 63+21.44			ak														
		al			30													S	5.8	18" APC	34.87' Rt "R2" 63+21.44 TO 4.43 Rt "R2" 63+38.21			al													
D-5	2	a				54												DD	3.8	12" HDPE	15.55' Lt "HC1" 56+68.64 TO 15.47' Lt "HC1" 57+24.71	D-5	2	a													
		b						1	1											CITY MH	15.47' Lt "HC1" 57+24.71			b													
		c				142													DD	5.0	12" HDPE	15.47' Lt "HC1" 57+24.71 TO 8.25' Lt "HC1" 58+72.92			c												
		d						1	1											CITY MH	8.25' Lt "HC1" 58+72.92			d													
		e				17													DD	8.4	12" HDPE	8.25' Lt "HC1" 58+72.92 TO 3.29' Rt "R2" 58+72.13			e												
		f						1	1											CITY MH	3.29' Rt "R2" 58+72.13			f													
		g				83													DD	8.4	12" HDPE	3.29' Rt "R2" 58+72.13 TO 3.00' Rt "R2" 59+56.58			g												
		h						1	1											CITY MH	3.00' Rt "R2" 59+56.58			h													
		i				95													DD	7.5	12" HDPE	3.00' Rt "R2" 59+56.58 TO 3.56' Rt "R2" 60+54.15			i												
D-2	2	j						1	1											CITY MH	3.56' Rt "R2" 60+54.15	D-2	2	j													
		k				107													DD	11.0	18" HDPE	3.56' Rt "R2" 60+54.15 TO 20.21' Rt "HC1" 60+59.22			k												
		l						1	1											CITY MH	20.21' Rt "HC1" 60+59.22			l													
		m				18													DD	4.5	18" HDPE	20.21' Rt "HC1" 60+59.22 TO 27.37' Rt "HC1" 60+77.26			m												
		n		2.0											200					HEADWALL	27.37' Rt "HC1" 60+77.26			n													
		o																		RSP	27.37' Rt "HC1" 60+77.26			o													
		p								148									S	2	6" UD	61.89' Rt "HC1" 62+17.47			p												
D-5	2	q									192									REMOVE Culv	15.55' Lt "HC1" 56+68.64 TO 50.25' Lt "HC1" 58+72.85	D-5	2	q													
		aa		1.4											239					CITY G3 DI	36.00' Lt "HC1" 57+24.92			aa													
		ab				17													DD	4.0	10" HDPE	36.00' Lt "HC1" 57+24.92 TO 15.47' Lt "HC1" 57+24.71			ab												
			1.5	8.6	2.0	30		17	682	125	148	3	8	8	3	1	192	14																			
															2.5	0.5	8.9	1,156	170		3																

1 TOTAL (THIS SHEET)

(N) NOT A SEPARATE BID ITEM

DRAINAGE QUANTITIES

1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

DQ-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR
 INGRID V. SUPIT
 TARYN PASCUA
 INGRID SUPIT
 REVISOR BY
 DATE REVISED
 IK
 3-23-18
 TP
 2-6-19

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- LOCATION OF UTILITY FACILITIES SHOWN ON THESE PLANS ARE APPROXIMATE. CONTRACTOR MUST VERIFY UTILITY LOCATION PRIOR TO CONSTRUCTION.
- UTILITY INFORMATION SHOWN IS INCOMPLETE. ACTIVITIES AT UTILITY LOCATIONS MUST BE CONCURRENT WITH CONSTRUCTION ACTIVITIES. MAKE ARRANGEMENTS WITH THE UTILITY OWNERS TO COORDINATE ACTIVITIES.
- FOR EXISTING UTILITY INFORMATION, SEE THIS SHEET.
- FOR POSITIVE LOCATION INFORMATION SEE THIS SHEET.
- "ABANDONED" REFERS TO UTILITIES PREVIOUSLY ABANDONED.
- "TO BE ABANDONED" REFERS TO UTILITIES THAT MUST BE ABANDONED AS PART OF THE PROJECT.
- REMOVE AND DISPOSE OF UTILITIES FOUND TO BE IN CONFLICT WITH EXCAVATION AS PART OF EXCAVATION WORK.
- HORIZONTAL AND VERTICAL UTILITY SEPARATIONS MUST CONFORM TO REQUIREMENTS OF SFPD AND SFPUC.

LEGEND:

- ca--- Exist COMPRESSED AIR
- /// Exist UTILITY - ABANDONED
- Exist UTILITY - TO BE ABANDONED
- PROPOSED UTILITY
- /// ABANDON UTILITY
- ||| REMOVE UTILITY
- WATER METER VAULT
- ⊗ GATE VALVE OR BALL VALVE
- ⊗ BACKFLOW PREVENTION ASSEMBLY
- ▷ REDUCER
- ⊗ AIR RELEASE VALVE
- ⊗ Exist GATE VALVE
- ⊗ Exist AIR RELEASE VALVE
- ▷ Exist REDUCER
- Exist BLOW OFF VALVE
- UX-XX EXISTING UTILITY IDENTIFIER
- IDENTIFIER No.
- Sht No.

ABBREVIATIONS:

- CALTRANS CALIFORNIA DEPARTMENT OF TRANSPORTATION
- CCSF CITY AND COUNTY OF SAN FRANCISCO
- COMCAST COMCAST CORPORATION
- PG&E PACIFIC GAS AND ELECTRIC
- PSD POWER SYSTEMS DESIGN
- SFDT SAN FRANCISCO DEPARTMENT OF TECHNOLOGY
- SFPD SAN FRANCISCO DEPARTMENT OF PUBLIC WORKS
- SFPUC SAN FRANCISCO PUBLIC UTILITIES COMMISSION
- SFWD SAN FRANCISCO WATER DEPARTMENT
- TIDA TREASURE ISLAND DEVELOPMENT AUTHORITY
- TIMMA TREASURE ISLAND MOBILITY MANAGEMENT AGENCY
- TV TELEVISION
- USCG UNITED STATES COAST GUARD

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	101	436

REGISTERED CIVIL ENGINEER
 4-1-19 DATE
 5-17-19 PLANS APPROVAL DATE
 INGRID V. SUPIT
 No. C66937
 Exp. 9-30-20
 CIVIL
 STATE OF CALIFORNIA
 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.
 HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596
 SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

POSITIVE LOCATION INFORMATION

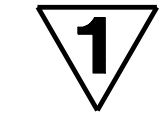
No.	UTILITY	LOCATION	NORTHING	EASTING	DEPTH	ELEVATION	METHOD
1	GAS	27.35' Rt "R2" 61+18.14	2,122,957.75	6,023,419.30	2.5	155.71	TEST HOLE
2	WATER	6.30' Rt "R2" 61+13.34	2,122,950.01	6,023,399.10	3.1	155.70	TEST HOLE
3	GAS	26.98' Rt "R2" 61+21.93	2,122,961.66	6,023,418.37	2.6	155.53	TEST HOLE
4	GAS	26.37' Rt "R2" 61+21.89	2,122,961.78	6,023,418.95	2.6	155.53	TEST HOLE
5	GAS	26.63 Rt "R2" 61+22.10	2,122,962.25	6,023,418.90	2.6	155.52	TEST HOLE
6	WATER	11.93 Rt "BP" 67+96.75	2,123,329.00	6,023,283.23	6.3	149.28	TEST HOLE
7	WATER	12.12 Rt "BP" 67+99.82	2,123,331.70	6,023,281.70	2.7	152.85	TEST HOLE
8	Elect	20.18 Rt "R2" 61+28.99	2,122,968.17	6,023,410.72	2.9	155.14	TEST HOLE
9	Elect	20.16 Rt "R2" 61+26.66	2,122,965.77	6,023,411.09	2.9	155.17	TEST HOLE
10	Elect	19.97 Rt "R2" 61+27.29	2,122,965.76	6,023,410.85	2.8	155.25	TEST HOLE
11	Elect	19.87 Rt "R2" 61+28.91	2,122,965.76	6,023,410.42	2.8	155.28	TEST HOLE
12	Elect	19.87 Rt "R2" 61+28.91	2,122,968.19	6,023,410.19	2.8	155.24	TEST HOLE
13	Elect	20.07 Rt "R2" 61+25.81	2,122,965.62	6,023,410.59	2.9	155.18	TEST HOLE

EXISTING UTILITY LEGEND:

IDENTIFIER	EXISTING UTILITY	DISPOSITION
U2-1	3" WATER	ABANDONED
U2-2	1.5" WATER WROUGHT IRON	ABANDONED
U2-3	TIDA 2" WATER	REMOVE, SEE Sht UD-1
U2-4	TELECOMMUNICATIONS	ABANDONED
U2-5	COMCAST OVERHEAD CABLE	ABANDONED
U2-6	OVERHEAD ELECTRIC	ABANDONED
U2-7	4" SEWER VCP	REMOVE, SEE Sht UD-2
U2-9	TIDA 12" WATER	ABANDONED, SEE Sht UD-3
U2-10	TIDA 2" GAS HDPE	ABANDONED, SEE Sht UD-3
U2-11	TIDA 12" WATER	ABANDONED
U2-12	TIDA 2" GAS HDPE	ABANDONED
U2-13	4" SEWER	ABANDONED
U2-14	AT&T TELEPHONE	ABANDONED
U2-15	AT&T TELEPHONE	ABANDONED
U2-16	AT&T TELEPHONE	ABANDONED, CAP LINE AND REMOVE
U2-17	AT&T TELEPHONE	ABANDONED
U2-18	TIDA 4" WATER	ABANDONED
U2-19	TELECOMMUNICATIONS	ABANDONED
U2-20	2.5" WATER WROUGHT IRON	ABANDONED
U2-21	1.5" WATER	ABANDONED
U2-22	CCSF 8" WATER	ABANDONED
U2-23	AT&T TELEPHONE	ABANDONED
U2-24 *	TIDA 12" WATER DIP	REMOVE, SEE Sht UD-1, UD-3
U2-25	6" WATER	REMOVE, SEE Sht UD-1
U2-26	FIRE HYDRANT	REMOVE, SEE Sht UD-1
U2-27	2" WATER	REMOVE, SEE Sht UD-1
U2-28	1" GAS HDPE	ABANDONED

IDENTIFIER	EXISTING UTILITY	DISPOSITION
U2-29	ELECTRIC	TO BE ABANDONED, SEE Sht UD-2
U2-30	TELECOMMUNICATIONS	ABANDONED
U2-31	2" GAS HDPE	ABANDONED
U2-32	ELECTRIC	TO BE ABANDONED, SEE Sht UD-2
U2-33	3 x 2.5" SFPUC ELECTRIC	TO BE ABANDONED, SEE Sht UD-2
U2-34	ELECTRIC	TO BE ABANDONED, SEE Sht UD-2
U2-35	ELECTRICAL TRANSFORMER AND SERVICE EQUIPMENT ENCLOSURE	DISCONNECT POWER AND REMOVE, SEE Sht UD-2
U2-36	FIBER OPTIC	ABANDONED
U2-37	OVERHEAD ELECTRIC	REMOVE, SEE Sht UD-2
U2-38	CALTRANS COMPRESSED AIR	ABANDONED
U2-39	4" WATER	ABANDONED
U2-40	TELECOMMUNICATIONS	ABANDONED
U2-41	USCG 12" WATER PVC	ABANDONED
U3-1	CALTRANS ELECTRICAL DUCT BANK	ABANDONED
U3-2	CCSF 6" WATER	ABANDONED
U3-3	CALTRANS UG UTILITY ENCASEMENT	REMOVE, SEE Sht UD-3
U3-4	CCSF 2" HDPE GAS	REMOVE, SEE Sht UD-3
U3-5	CCSF 12" WATER DIP	REMOVE, SEE Sht UD-3
U3-6	CALTRANS Elect DUCT BANK	REMAIN IN PLACE
U3-7	CALTRANS COMPRESSED AIR	REMAIN IN PLACE
U3-8	WATER	ABANDONED
U3-9	6" SEWER	ABANDONED
U4-2	AT&T TELEPHONE	REMAIN IN PLACE
U5-1	USCG WATER	REMAIN IN PLACE
U5-2	COMCAST TV	REMAIN IN PLACE
U5-3	USCG 6" WATER	REMAIN IN PLACE

IDENTIFIER	EXISTING UTILITY	DISPOSITION
U5-4	SFPUC OH STREET LIGHT ELECTRIC	REMAIN IN PLACE
U5-5	USCG TELECOMMUNICATIONS	REMAIN IN PLACE
U5-6	SFPUC 8" WATER DIP	REMAIN IN PLACE
U5-7	6" WATER	ABANDONED
U5-8	WATER	ABANDONED
U5-9	SFPUC WATER	REMOVE, SEE Sht UD-1
U5-10	SFPUC WATER	CAP WATERLINE @ TOP OF HILL (FOREST), BOTTOM OF HILL BEHIND RW#7, FILL W CEMENT SLURRY
U5-11	TICD PROPANE TANKS	REMAIN IN PLACE
U5-12	MANHOLE	ABANDONED
U5-13	SFPUC ELECTRIC	TO BE ABANDONED, SEE Sht UD-2
U5-14	1" GAS PE	ABANDONED



UTILITY PLAN
GENERAL NOTES AND LEGEND
 NO SCALE

U-1

*TIDA 12" WATER LINE MUST REMAIN IN SERVICE UNTIL COMPLETION OF MACALLA ROAD UTILITY IMPROVEMENTS.

1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

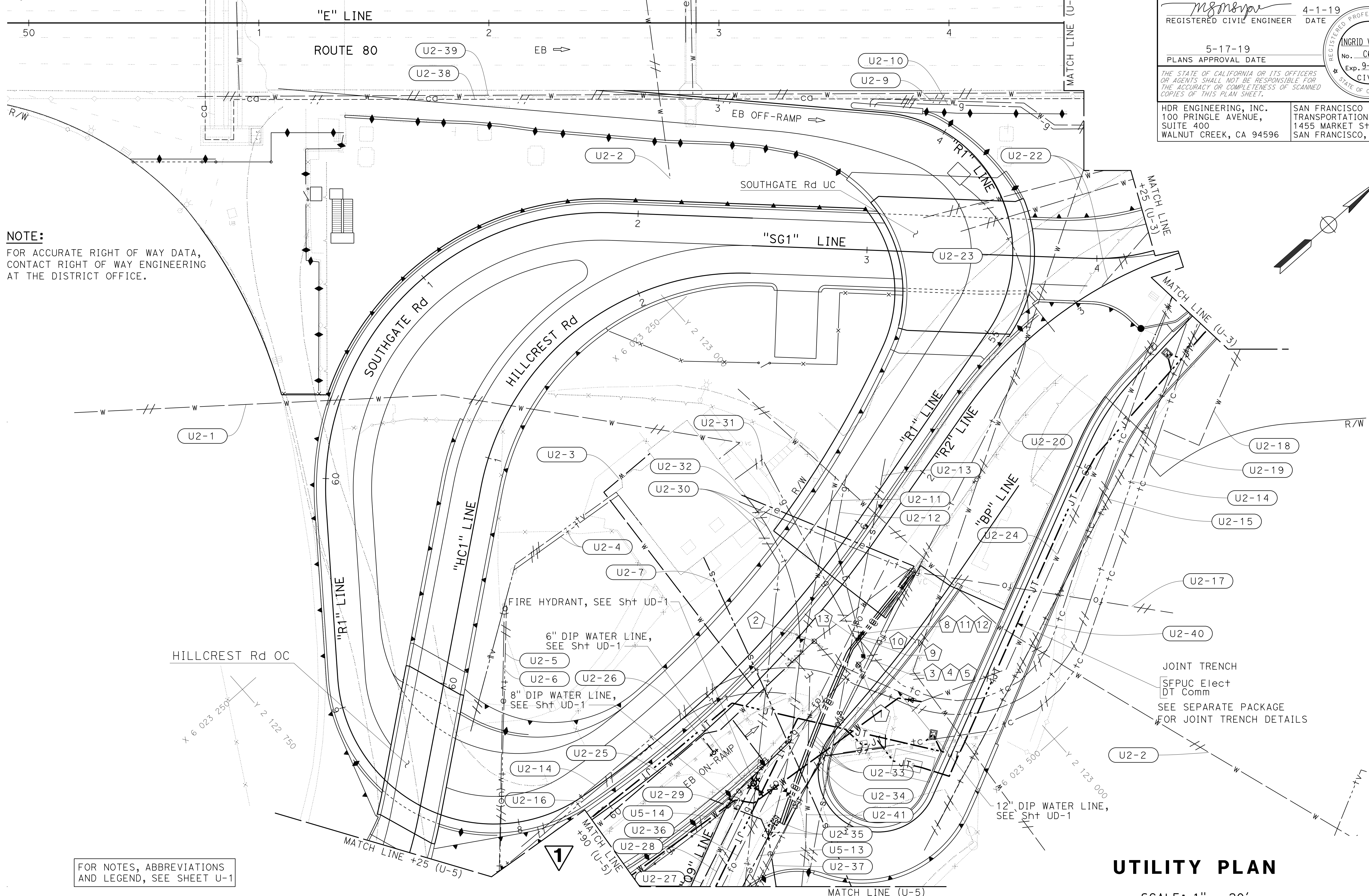
1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	102	436

REGISTERED CIVIL ENGINEER *m8m8m8m* DATE 4-1-19
 PLANS APPROVAL DATE 5-17-19
 REGISTERED PROFESSIONAL ENGINEER
INGRID V. SUPIT
 No. C66937
 Exp. 9-30-20
 CIVIL
 STATE OF CALIFORNIA

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



NOTE:
 FOR ACCURATE RIGHT OF WAY DATA,
 CONTACT RIGHT OF WAY ENGINEERING
 AT THE DISTRICT OFFICE.

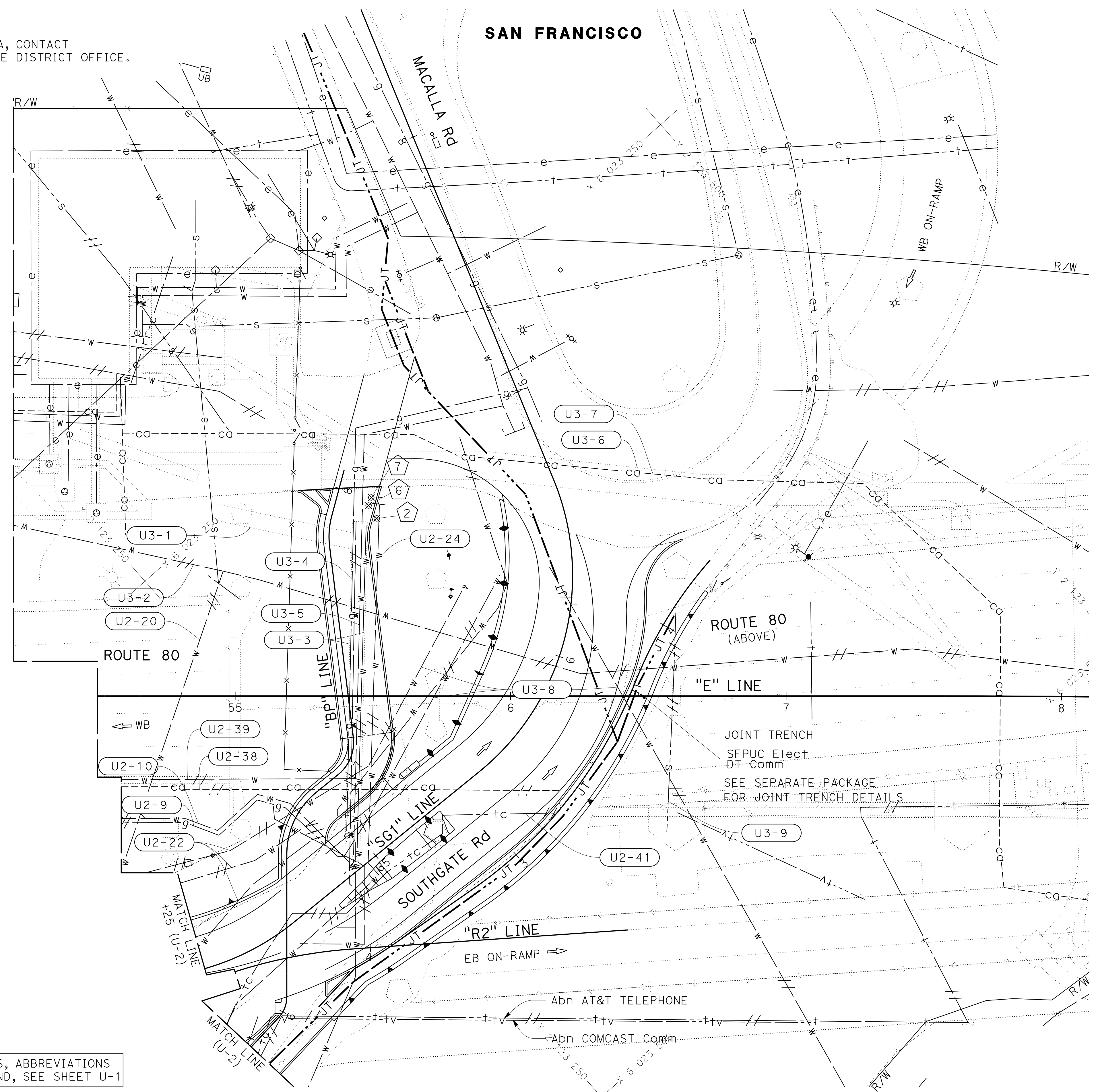
FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET U-1

UTILITY PLAN
 SCALE: 1" = 20'
U-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CHECKED BY: INGRID SUPIT
 REVISIONS:
 REVISOR: TARYN PASCUA
 DATE: 3-23-18
 REVISION: TP
 DATE: 2-12-19

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 TARYN PASCUA
 REVISIONS: IK 3-23-18, TP 2-12-19
 CHECKED BY: INGRID SUPIT
 DESIGNED BY: INGRID V. SUPIT
 DATE REVISOR: 3-23-18, 2-12-19

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET U-1

APPROVED FOR UTILITY WORK ONLY

UTILITY PLAN
 SCALE: 1" = 20'
U-3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	103	436

REGISTERED CIVIL ENGINEER: *Ingrid V. Supit*
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19
 REGISTERED PROFESSIONAL ENGINEER: INGRID V. SUPIT
 No. C66937
 Exp. 9-30-20
 CIVIL
 STATE OF CALIFORNIA

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: CHECKED BY:
 TARYN PASCUA INGRID SUPIT
 REVISED BY: DATE REVISED:
 IK 3-32-18
 IK 10-22-18

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	104	436

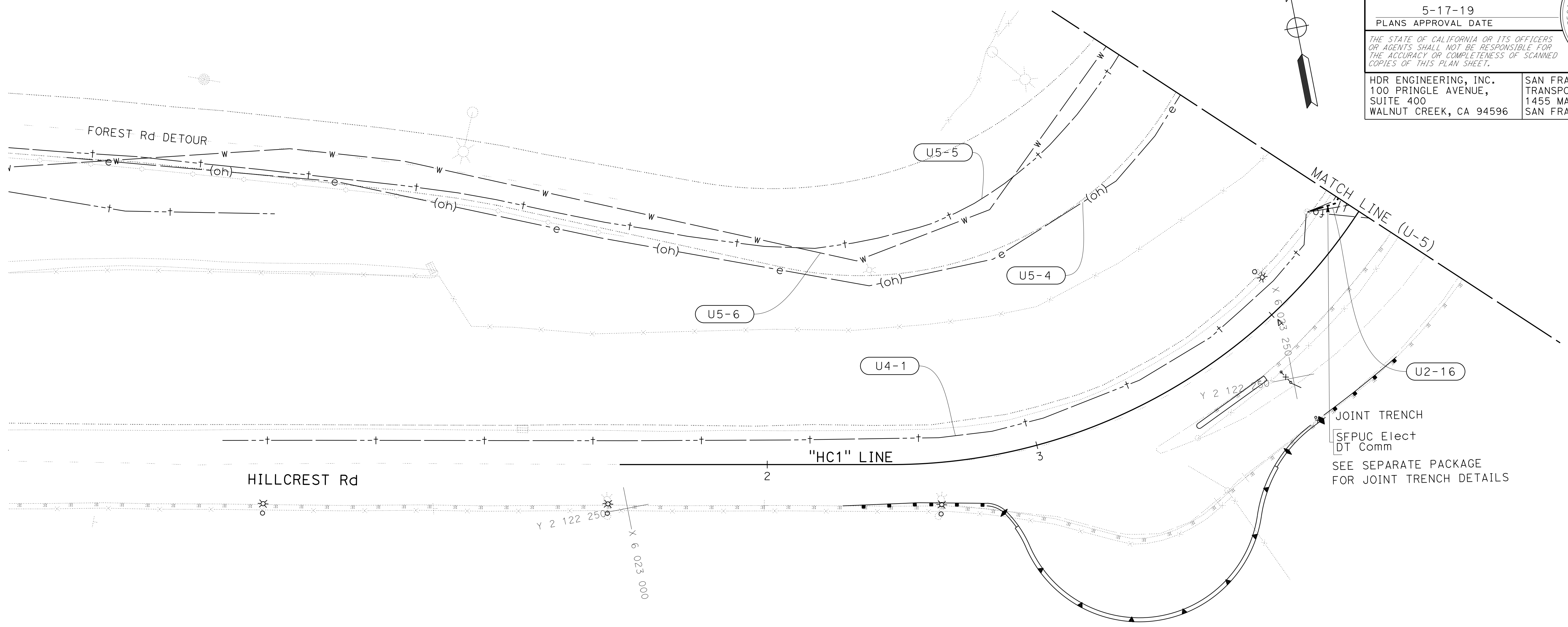
REGISTERED CIVIL ENGINEER: *m8m8m8* DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

INGRID V. SUPIT
 No. C66937
 Exp. 9-30-20
 CIVIL
 STATE OF CALIFORNIA

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.

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET U-1

UTILITY PLAN
 SCALE: 1" = 20'
U-4

APPROVED FOR UTILITY WORK ONLY

LAST REVISION: DATE PLOTTED => 07-NOV-2019 00-00-00 TIME PLOTTED => 16:20

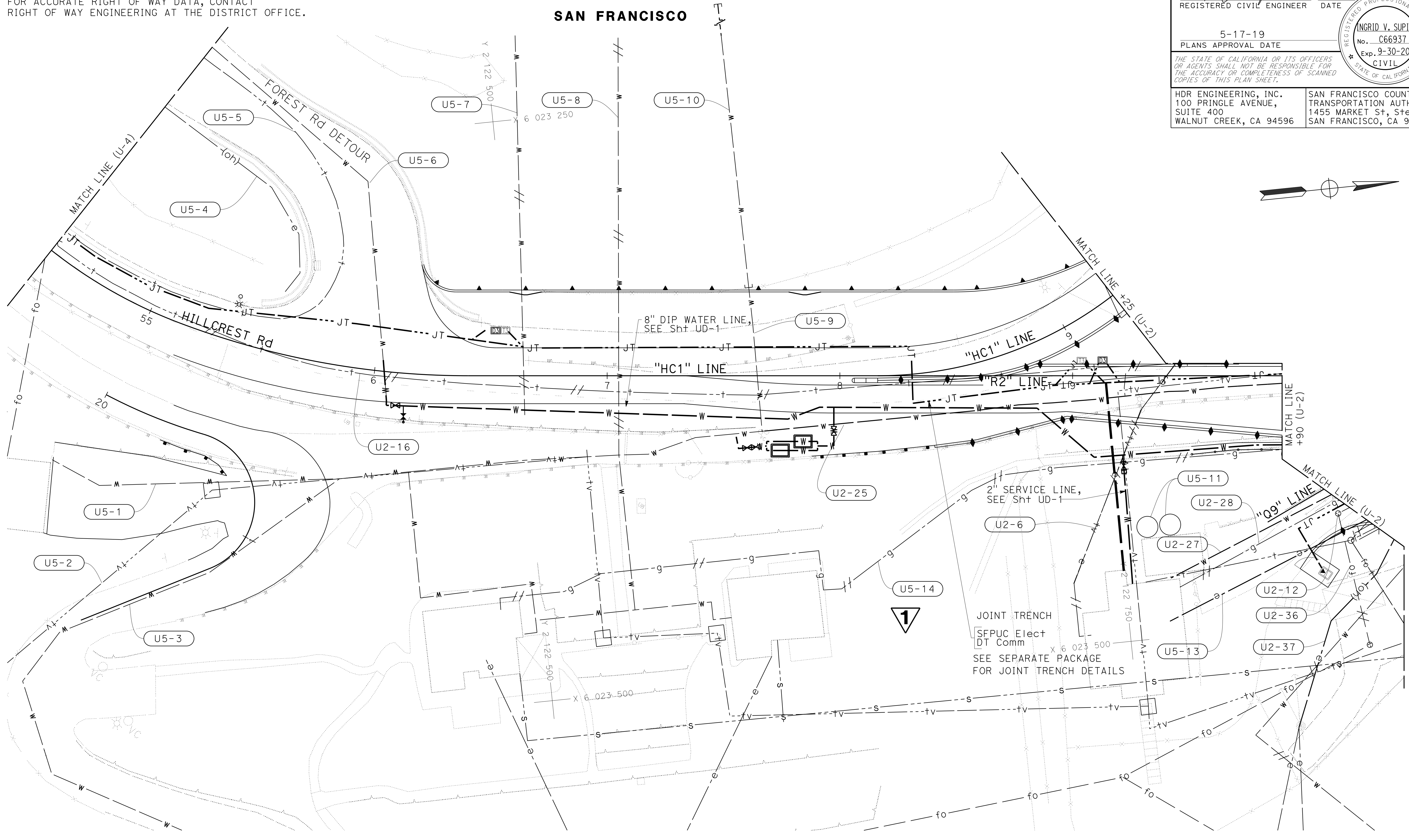
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CHECKED BY: INGRID SUPIT
 REVISIONS:
 IK 3-23-18
 TP 2-12-19

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	105	436

REGISTERED CIVIL ENGINEER: *m8m8m* DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19
 REGISTERED PROFESSIONAL ENGINEER: INGRID V. SUPIT
 No. C66937
 Exp. 9-30-20
 CIVIL
 STATE OF CALIFORNIA

HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400, WALNUT CREEK, CA 94596
 SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103



1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET U-1

UTILITY PLAN

SCALE: 1" = 20'

U-5

APPROVED FOR UTILITY WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 TARYN PASCUA
 REVISIONS:
 TB 10-29-18
 IK 8-14-19

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- INSTALL WATER LINE PER SFPUC STANDARDS.
- FOR CLARITY, ONLY WATER LINES, STORM DRAIN, AND JOINT TRENCH ARE SHOWN ON THIS SHEET.
- ALL JOINTS SHALL BE RESTRAINED PER SFPUC STANDARDS.
- MATERIALS AND INSTALLATION SHALL BE PER SFPUC STANDARD PLANS AND SPECIFICATIONS FOR WATER MAIN INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR COLLECTING AND DE-CHLORINATING WATER USED IN DISINFECTION ACTIVITIES PER ALL APPLICABLE STATE AND LOCAL REQUIREMENTS.
- WATER LINE ITEMS OF WORK SHALL BE INSTALLED BY THE CONTRACTOR UNLESS INDICATED OTHERWISE ON THIS SHEET.

SUGGESTED CONNECTION SEQUENCE:

- TEMPORARY JUMPER CONNECTION AT "HC1" 56+04.96.
- CHLORINATION AND DISINFECTION OF NEW MAIN.
- FINAL CONNECTION AT "HC1" 56+04.96 & "BP" 62+18.98.

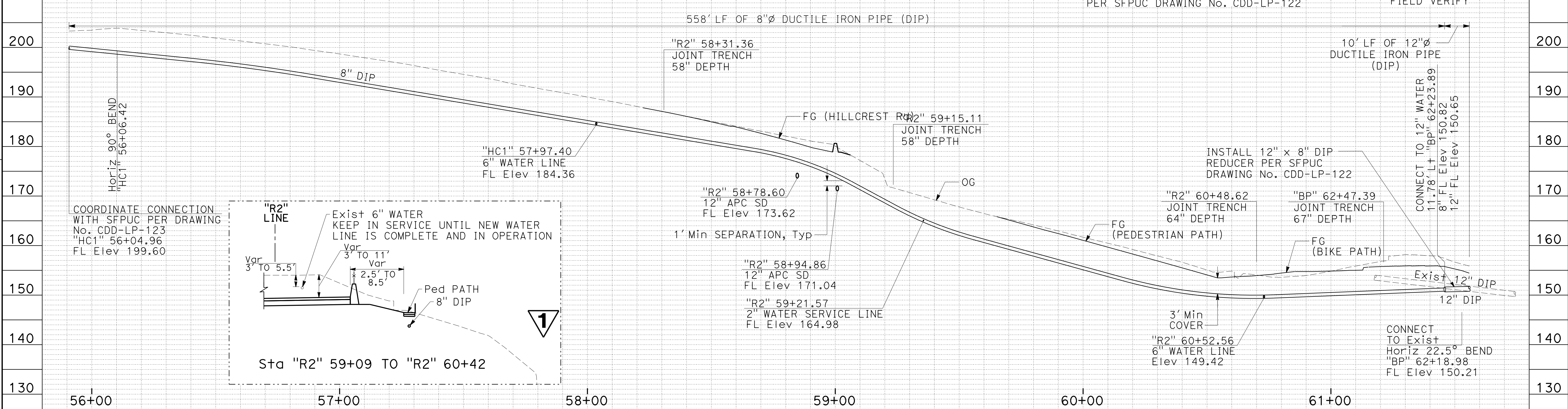
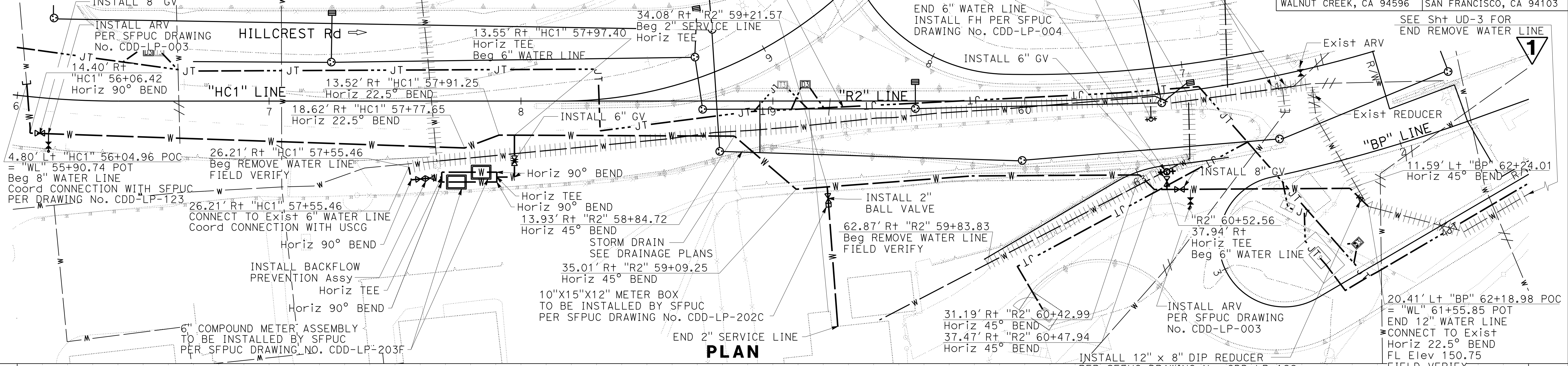
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	106	436

REGISTERED CIVIL ENGINEER: *mgn* 4-1-19
 DATE: 5-17-19
 PLANS APPROVAL DATE

INGRID V. SUPIT
 No. C66937
 Exp. 9-30-20
 CIVIL
 STATE OF CALIFORNIA

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

UTILITY PLAN
 SCALE: Horiz 1" = 20'
 Vert 1" = 10' **UD-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	REVISOR	DATE	TP
Caltrans	INGRID V. SUPIT	TARYN PASCUA	10-29-18	1-25-19
		INGRID SUPIT		
	CHECKED BY	DATE REVISED		
	DESIGNED BY			

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- FOR CLARITY, ONLY ACTIVE UTILITIES TO QUARTERS 8 AND QUARTERS 9 BUILDINGS ARE SHOWN ON THIS SHEET.
- REMOVE UNDERGROUND ELECTRIC UTILITIES AS REQUIRED FOR EXCAVATION AND ROADWAY RECONSTRUCTION.

LEGEND:

- ABANDON UTILITY
- REMOVE UTILITY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	107	436

REGISTERED CIVIL ENGINEER DATE 4-1-19

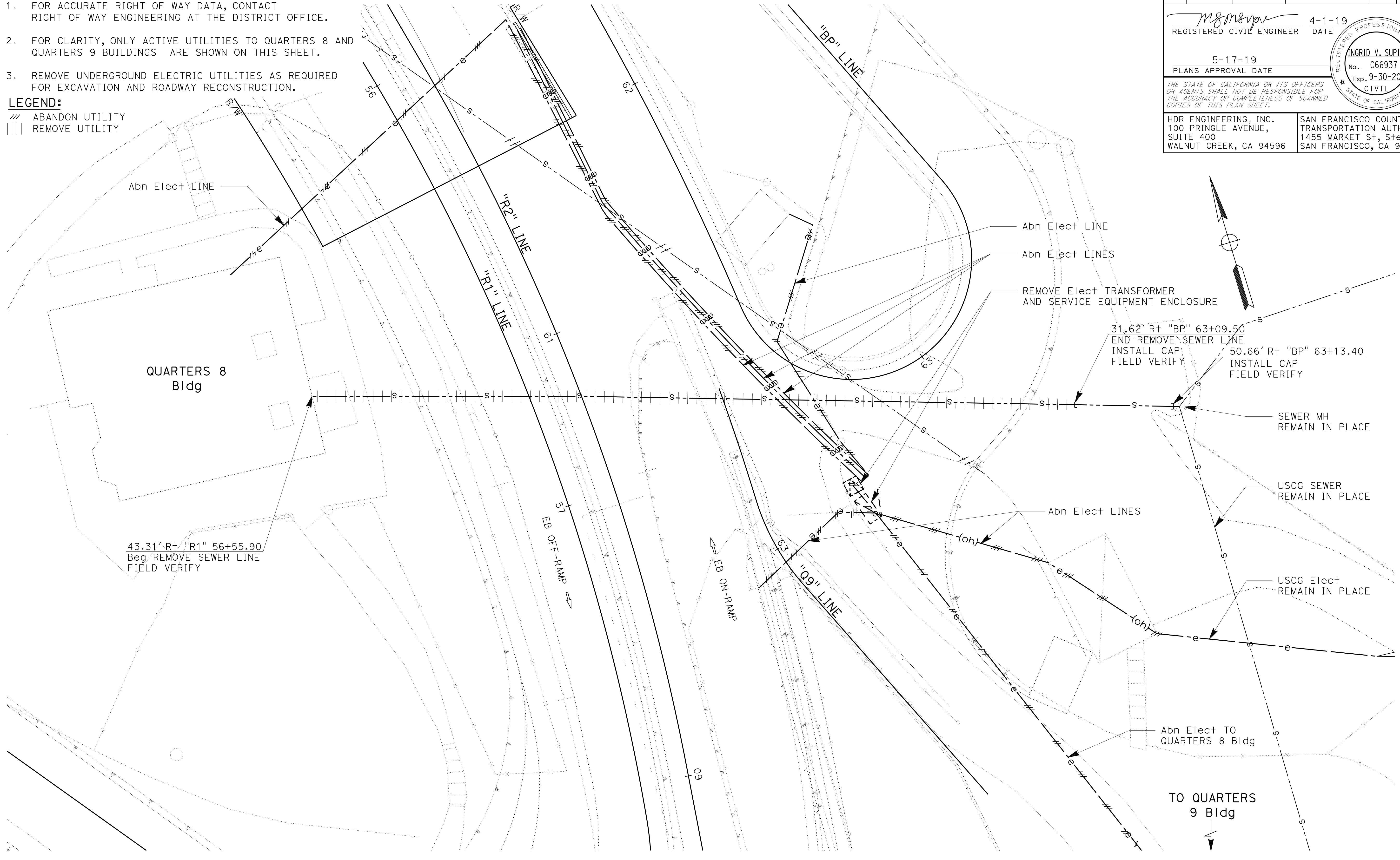
5-17-19 PLANS APPROVAL DATE

INGRID V. SUPIT No. C66937 Exp. 9-30-20 CIVIL

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.

HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103



UTILITY DETAILS
QUARTERS 8 UTILITY REMOVALS
 SCALE: 1" = 10'

APPROVED FOR UTILITY WORK ONLY

1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	108	436

REGISTERED CIVIL ENGINEER: *Ingrid V. Supit*
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

REGISTERED PROFESSIONAL ENGINEER
 No. C66937
 Exp. 9-30-20
 CIVIL
 STATE OF CALIFORNIA

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

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 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

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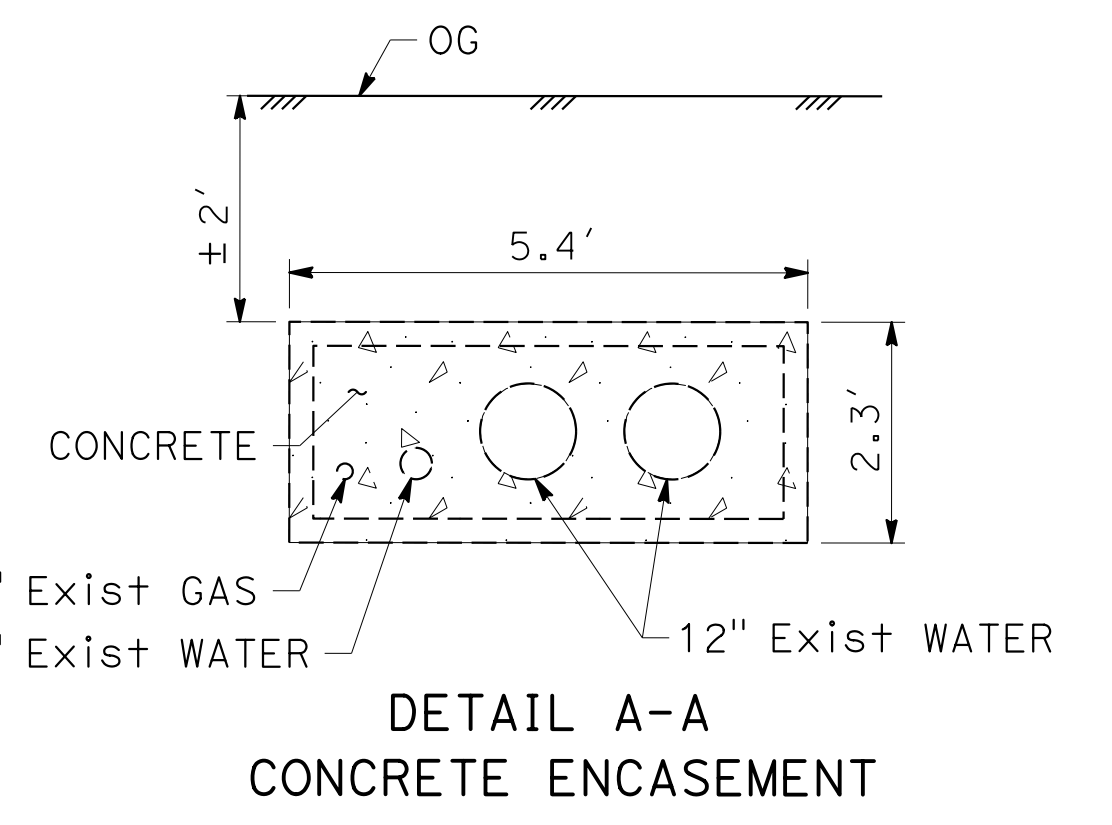
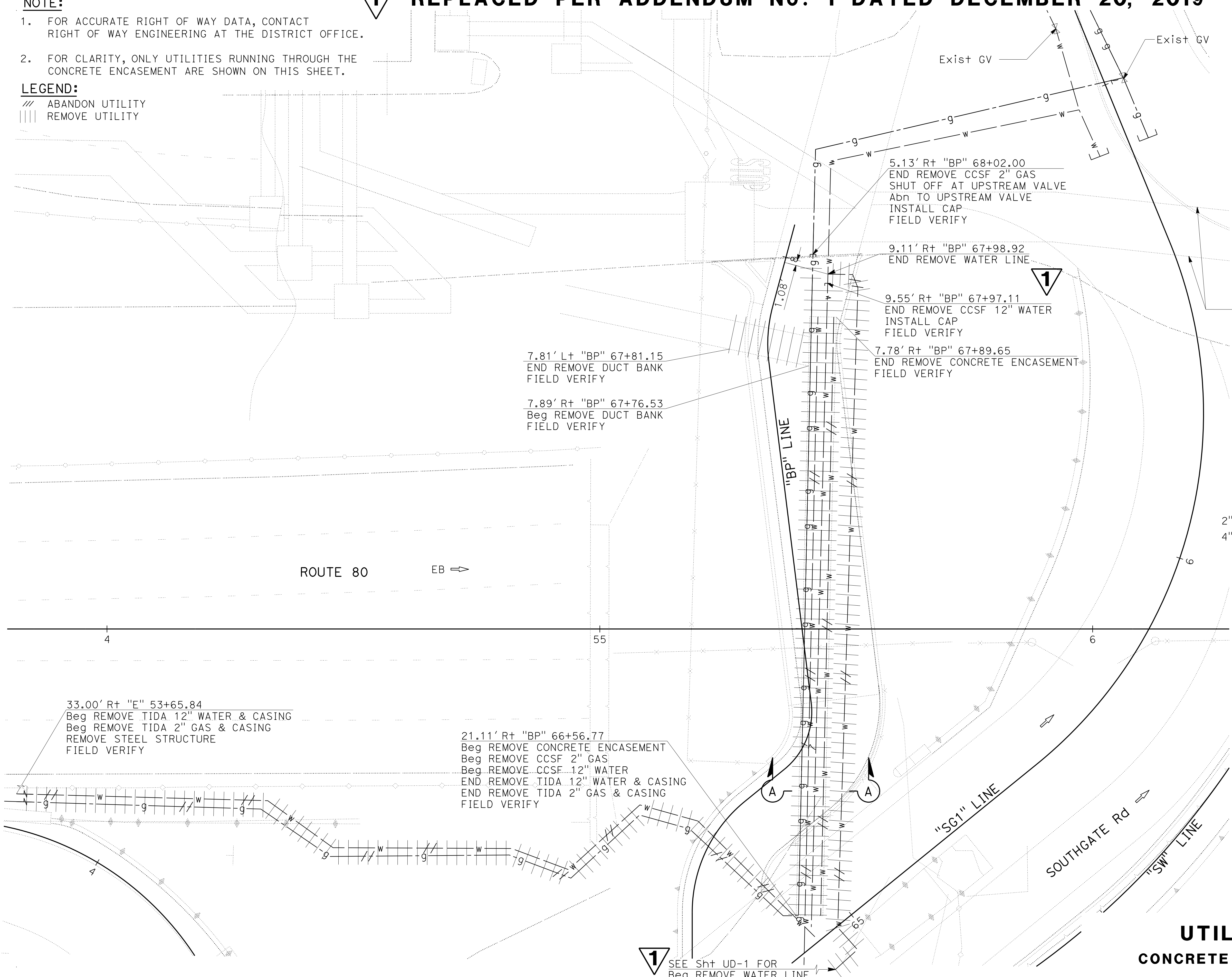
NOTE:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- FOR CLARITY, ONLY UTILITIES RUNNING THROUGH THE CONCRETE ENCASEMENT ARE SHOWN ON THIS SHEET.

LEGEND:

// ABANDON UTILITY
 ||| REMOVE UTILITY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Ingrid V. Supit
 CONSULTANT - FUNCTIONAL SUPERVISOR
 INGRID V. SUPIT
 TARYN PASCUA
 INGRID SUPIT
 REVISOR
 DATE REVISED
 1-25-19
 TP



FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET U-1

**UTILITY DETAILS
CONCRETE ENCASEMENT REMOVAL**

SCALE: 1" = 10'

UD-3

APPROVED FOR UTILITY WORK ONLY

1 SEE Sht UD-1 FOR Beg REMOVE WATER LINE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	109	436

REGISTERED CIVIL ENGINEER: *m8m8m8* 4-1-19
 DATE: 5-17-19
 PLANS APPROVAL DATE: 5-17-19

INGRID V. SUPIT
 No. C66937
 Exp. 9-30-20
 CIVIL
 STATE OF CALIFORNIA

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.

HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596	SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103
---	---

UTILITY QUANTITIES

SHEET No.	STATION	12" DUCTILE IRON PIPE	8" DUCTILE IRON PIPE	6" DUCTILE IRON PIPE	2" COPPER PIPE (SUPPLY LINE)	8" GATE VALVE	6" GATE VALVE	2" BALL VALVE	6" BACKFLOW PREVENTER ASSEMBLY	AIR RELEASE VALVE	FIRE HYDRANT	12" x 8" REDUCER	10"x15"x12" METER BOX ASSEMBLY	48"x72"x30" METER VAULT ASSEMBLY	HORIZONTAL BENDS [N]				
		LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
U-6	"HC1" 56+04.96 TO "R2" 62+21.10		558			3				2					3	1			
	"HC1" 57+55.46 TO "HC1" 57+92.40			90			1		1					2	2	7			
	"R2" 59+21.57				56			1				1							
	"R2" 60+52.56			7			1				1								
	"BP" 62+21.10 TO "R2" 62+18.98	10										1							1
TOTAL	10	558	97	56	3	2	1	1	2	1	1	1	2	5	8	1	4	1	

[N] NOT A BID ITEM. FOR INFORMATION ONLY.

UTILITY REMOVALS

SHEET No.	STATION	REMOVE WATER PIPE	REMOVE FIRE HYDRANT	REMOVE GAS PIPE	REMOVE SEWER PIPE	REMOVE ELECTRICAL TRANSFORMER AND SERVICE ENCLOSURE	REMOVE CONCRETE (MISCELLANEOUS)
		LF	EA	LF	LF	EA	CY
UD-1	"HC1" 57+55.46 TO "R2" 61+13.33	360					
	"HC1" 57+60.23 TO "HC1" 57+66.61	66					
	"R1" 56+33.16 TO "R2" 60+80.78	136					
	"R2" 61+01.05 TO "R2" 61+02.00	10					
	"R2" 61+13.33 TO "BP" 62+18.98	56					
	"R2" 59+83.83 TO "R2" 60+64.87	116					
UD-2	"R2" 60+49.25		1				
	"R1" 56+55.90 TO "BP" 63+09.50				166		
UD-3	"Q9" 63+00.00					1	
	"E" 53+65.84 TO "BP" 66+56.77	190		190			
	"BP" 66+56.77 TO "BP" 67+89.65						56
	"BP" 67+76.53 TO "BP" 67+81.15						10
	"BP" 66+56.77 TO "BP" 68+02.00			134			
"BP" 66+56.77 TO "BP" 67+97.11	128						
TOTAL	1,062	1	324	166	1	66	

UTILITY QUANTITIES

UQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR
 INGRID V. SUPIT
 CALCULATED-DESIGNED BY
 CHECKED BY
 VINCENT FUNG
 INGRID SUPIT
 REVISED BY
 DATE REVISED
 HO
 2-18-19
 HO
 11-12-18
 HO
 5-17-19

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS [N]

SIGN No. (X)	SIGN DESIGNATION	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
A	W20-1	60" x 60"	ROAD WORK AHEAD	2 - 4" x 6"	3
B	G20-2	48" x 24"	END ROAD WORK	1 - 4" x 6"	9
C	W20-1	48" x 48"	ROAD WORK AHEAD	1 - 4" x 6"	6
D	C40 (CA)	144" x 60"	TRAFFIC FINES DOUBLED IN WORK ZONES	2 - 4" x 6"	3
E	SPECIAL	144" x 90"	CONSTRUCTION PROJECT FUNDING SIGN	2 - 4" x 6"	1

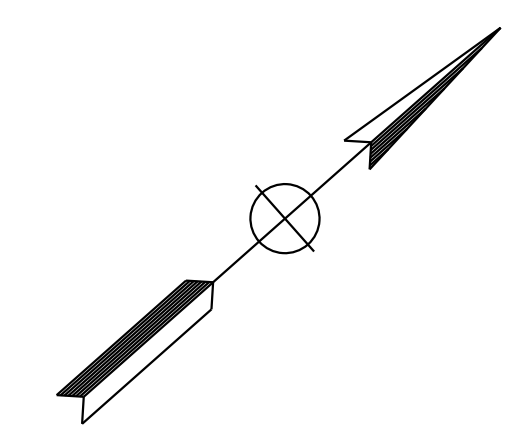
(N) - NOT A SEPARATE BID ITEM

NOTES:

- FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE TRAFFIC HANDLING PLANS.
- LOCATIONS OF CONSTRUCTION AREA SIGNS ARE APPROXIMATE. EXACT LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER.
- ALL EXISTING SIGNS IN CONFLICT SHALL BE TEMPORARILY COVERED WITH WOOD OR REMOVED AS DIRECTED BY THE ENGINEER.
- EXACT SIZE AND LENGTH OF SIGN POSTS WILL BE DETERMINED BY THE ENGINEER.
- FOR SPECIAL SIGN PANEL, SEE SIGN DETAIL PLANS.

LEGEND:

(X) CONSTRUCTION AREA SIGNS LETTER

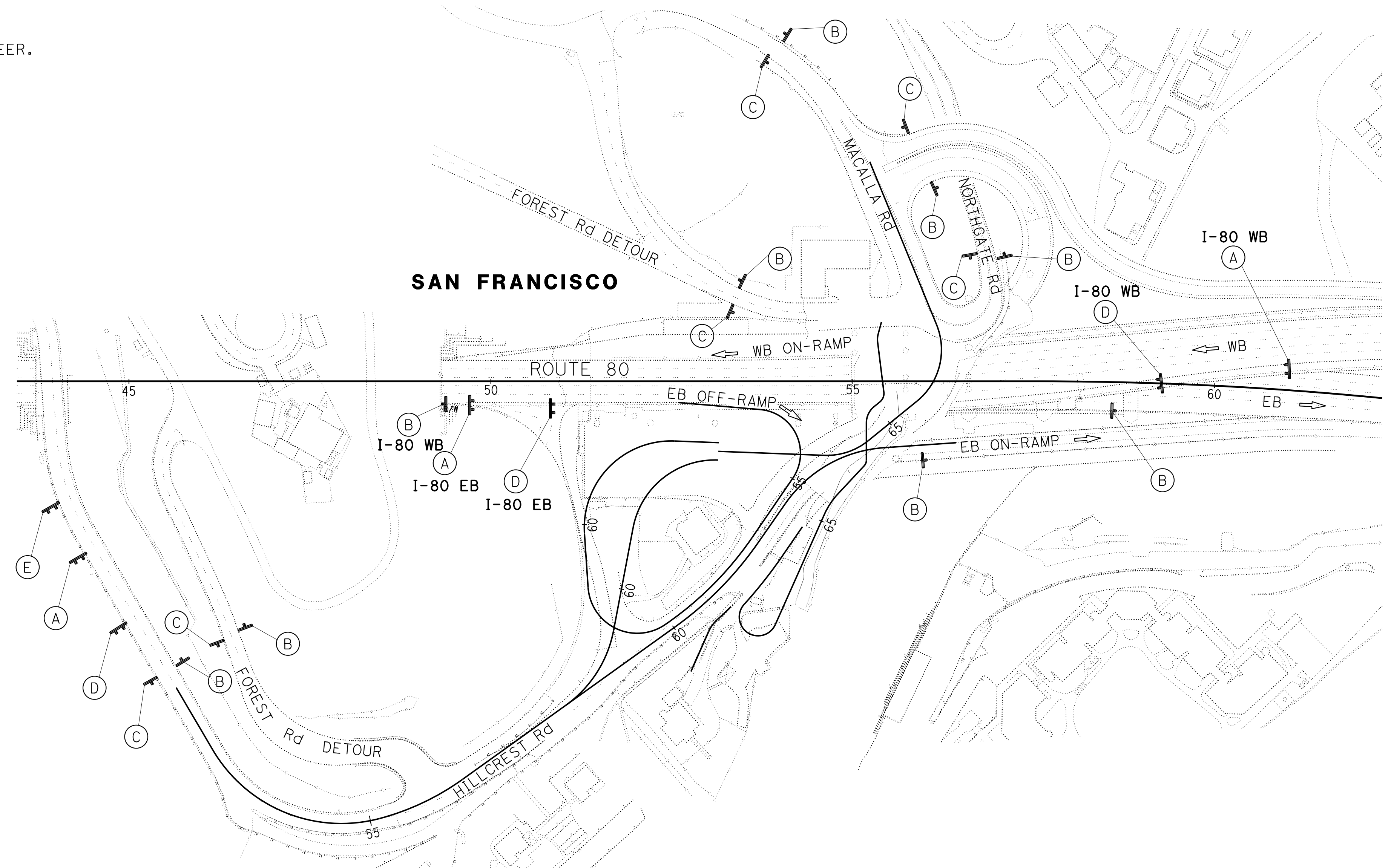


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	110	436

Vincent Fung
 REGISTERED CIVIL ENGINEER
 DATE 4-1-19
 5-17-19
 PLANS APPROVAL DATE

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



CONSTRUCTION AREA SIGNS

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

NO SCALE

CS-1

LAST REVISION DATE PLOTTED => 12-NOV-2019 00-00-00 TIME PLOTTED => 18:50

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR
 INGRID V. SUPIT
 CHECKED BY
 INGRID SUPIT
 CALCULATED/DESIGNED BY
 VINCENT FUNG
 REVISOR: DATE
 HO 5-17-19
 HO 2-18-19
 HO 11-12-18

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	111	436

REGISTERED CIVIL ENGINEER
 Vincent W. Fung
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA

4-1-19 DATE
 5-17-19 PLANS APPROVAL DATE

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- SEE STRUCTURE PLANS FOR ADDITIONAL STRUCTURE STAGE CONSTRUCTION.
- ITEM No. 102 MUST BE COMPLETED BEFORE WORK ON ITEM No. 103 CAN BEGIN.
- AFTER CONSTRUCTION ITEM No. 108, CONSTRUCTION AND TRAFFIC HANDLING OF STAGE 2 CAN BEGIN.
- ITEM No. 105 MUST BE COMPLETED BEFORE WORK ON ITEM No. 107 CAN BEGIN.

LEGEND:

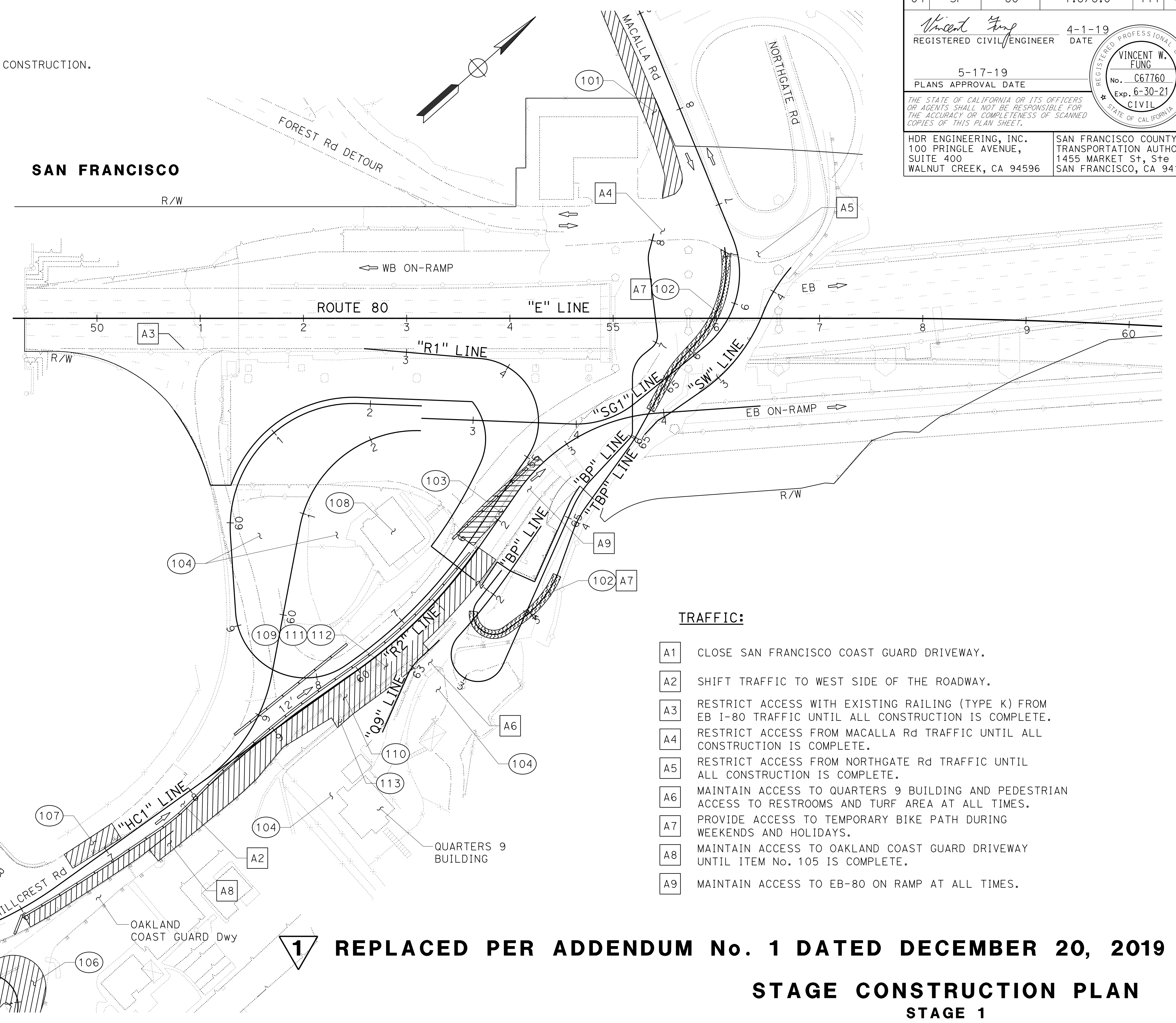
- WORK TO BE CONSTRUCTED THIS STAGE
- PAVED TEMPORARY BIKE PATH
- CONSTRUCTION NOTE
- TRAFFIC NOTE

CONSTRUCTION STAGE 1A:

- 101 FIRST ORDER OF WORK, CONSTRUCT PART OF JOINT TRENCH.
- 102 CONSTRUCT PAVED TEMPORARY BIKE PATH.
- 103 CONSTRUCT TEMPORARY PAVEMENT.
- 104 PERFORM SOIL REMEDIATION, SEE Sht C-37 FOR EXCAVATION DETAILS.
- 105 CONSTRUCT RW No. 9 AND SECURITY GATE AT SAN FRANCISCO COAST GUARD Dwy.
- 106 RECONSTRUCT COAST GUARD Dwy.
- 107 DEMOLISH PORTION OF Exist Ret WALL (SEE Sht TH-1D).
- 108 DEMOLISH NAVAL QUARTERS 8 BUILDING.

CONSTRUCTION STAGE 1B:

- 109 CONSTRUCT PART OF DRAINAGE SYSTEMS.
- 110 RECONSTRUCT HILLCREST ROAD (PORTION).
- 111 CONSTRUCT PART OF JOINT TRENCH.
- 112 CONSTRUCT 8" WATER LINE.
- 113 CONSTRUCT PEDESTRIAN PATH.



TRAFFIC:

- A1 CLOSE SAN FRANCISCO COAST GUARD DRIVEWAY.
- A2 SHIFT TRAFFIC TO WEST SIDE OF THE ROADWAY.
- A3 RESTRICT ACCESS WITH EXISTING RAILING (TYPE K) FROM EB I-80 TRAFFIC UNTIL ALL CONSTRUCTION IS COMPLETE.
- A4 RESTRICT ACCESS FROM MACALLA Rd TRAFFIC UNTIL ALL CONSTRUCTION IS COMPLETE.
- A5 RESTRICT ACCESS FROM NORTHGATE Rd TRAFFIC UNTIL ALL CONSTRUCTION IS COMPLETE.
- A6 MAINTAIN ACCESS TO QUARTERS 9 BUILDING AND PEDESTRIAN ACCESS TO RESTROOMS AND TURF AREA AT ALL TIMES.
- A7 PROVIDE ACCESS TO TEMPORARY BIKE PATH DURING WEEKENDS AND HOLIDAYS.
- A8 MAINTAIN ACCESS TO OAKLAND COAST GUARD DRIVEWAY UNTIL ITEM No. 105 IS COMPLETE.
- A9 MAINTAIN ACCESS TO EB-80 ON RAMP AT ALL TIMES.

REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

STAGE CONSTRUCTION PLAN

STAGE 1
 SCALE: 1" = 50'

SC-1

APPROVED FOR STAGE CONSTRUCTION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: CHECKED BY:
 VINCENT FUNG INGRID SUPIT
 REVISED BY: DATE REVISED:
 HO: 5-17-19
 HO: 2-18-19
 HO: 11-12-18

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	112	436

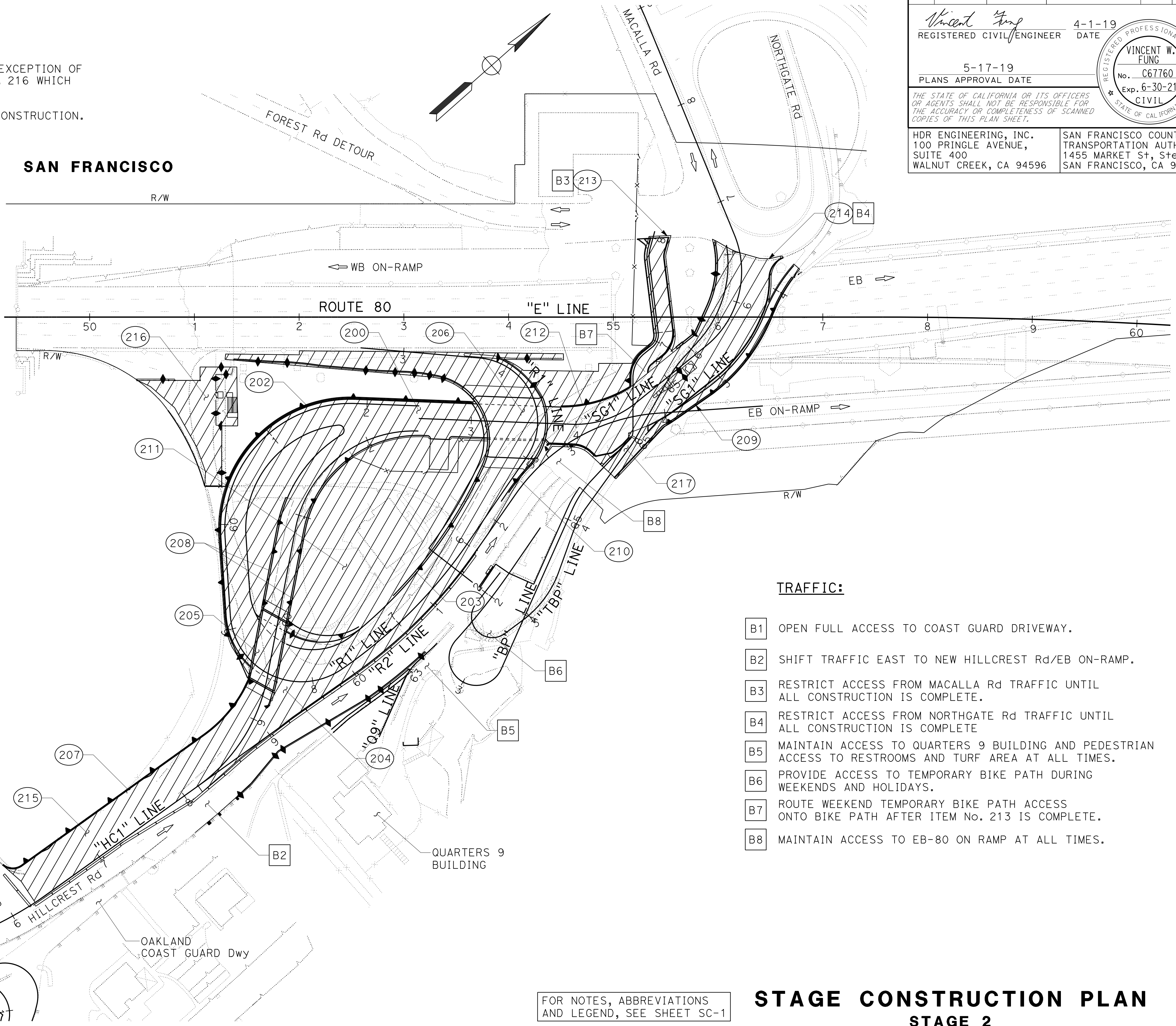
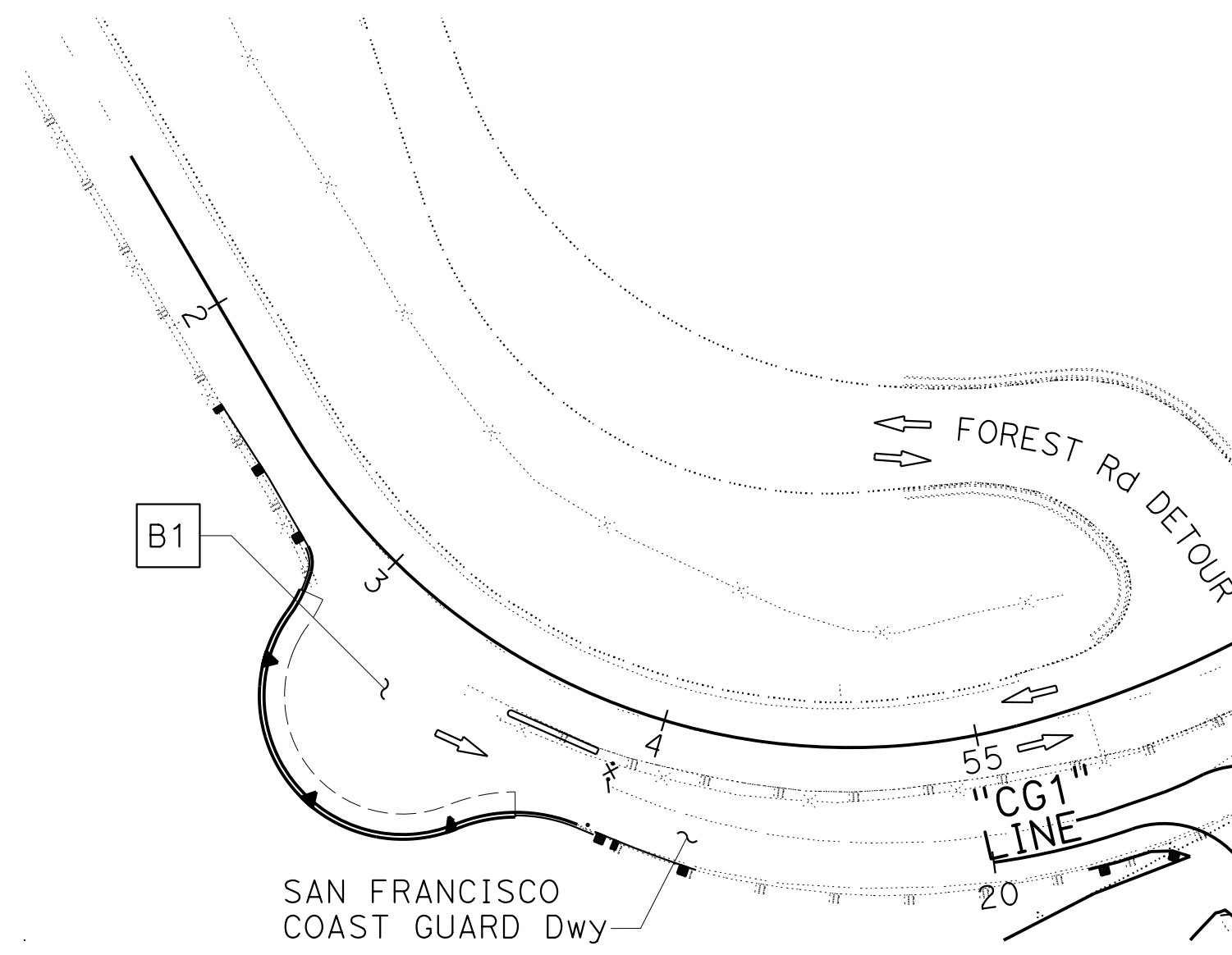
Vincent W. Fung
 REGISTERED CIVIL ENGINEER
 DATE: 4-1-19
 5-17-19
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
 HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596
 SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- CONSTRUCTION SHALL BE DONE IN SEQUENTIAL ORDER WITH EXCEPTION OF ITEMS No. 208 THROUGH No. 209, AND No. 215 THROUGH No. 216 WHICH CAN BE DONE CONCURRENTLY.
- SEE STRUCTURE PLANS FOR ADDITIONAL STRUCTURE STAGE CONSTRUCTION.

CONSTRUCTION:

- 200 REMOVE PILE CAPS AND PILES. SEE SHEETS C-32 TO C-34 FOR DETAILS.
- 202 CONSTRUCT RW No. 2.
- 203 CONSTRUCT RW No. 6.
- 204 CONSTRUCT RW No. 5 PORTION AND OF EB OFF-RAMP.
- 205 CONSTRUCT HILLCREST Rd OC.
- 206 CONSTRUCT SOUTHGATE Rd UC.
- 207 CONSTRUCT RW No. 7 AND ADJACENT ROADWAY.
- 208 CONSTRUCT RW No. 4.
- 209 CONSTRUCT RW No. 8 AND ADJACENT BIKEPATH.
- 210 CONSTRUCT RW No. 5 PORTION.
- 211 CONSTRUCT BIORETENTION BASIN AREA.
- 212 CONSTRUCT RW No. 3 AND REMAINDER OF SOUTHGATE Rd.
- 213 CONSTRUCT BIKE PATH CONFORM.
- 214 CONSTRUCT SOUTHGATE ROAD CONFORM.
- 215 CONSTRUCT REMAINING PORTIONS OF DRAINAGE SYSTEMS.
- 216 CONSTRUCT WB SFOBB MAINTENANCE AREA.
- 217 CONSTRUCT REMAINDER OF JOINT TRENCH.



TRAFFIC:

- B1 OPEN FULL ACCESS TO COAST GUARD DRIVEWAY.
- B2 SHIFT TRAFFIC EAST TO NEW HILLCREST Rd/EB ON-RAMP.
- B3 RESTRICT ACCESS FROM MACALLA Rd TRAFFIC UNTIL ALL CONSTRUCTION IS COMPLETE.
- B4 RESTRICT ACCESS FROM NORTHGATE Rd TRAFFIC UNTIL ALL CONSTRUCTION IS COMPLETE.
- B5 MAINTAIN ACCESS TO QUARTERS 9 BUILDING AND PEDESTRIAN ACCESS TO RESTROOMS AND TURF AREA AT ALL TIMES.
- B6 PROVIDE ACCESS TO TEMPORARY BIKE PATH DURING WEEKENDS AND HOLIDAYS.
- B7 ROUTE WEEKEND TEMPORARY BIKE PATH ACCESS ONTO BIKE PATH AFTER ITEM No. 213 IS COMPLETE.
- B8 MAINTAIN ACCESS TO EB-80 ON RAMP AT ALL TIMES.

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET SC-1

STAGE CONSTRUCTION PLAN

STAGE 2
 SCALE: 1" = 50'

SC-2

APPROVED FOR STAGE CONSTRUCTION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: CHECKED BY:
 VINCENT FUNG INGRID SUPIT
 REVISED BY: DATE REVISED:
 HO: 11-12-18
 HO: 2-18-19
 HO: 5-17-19

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	113	436

REGISTERED CIVIL ENGINEER: Vincent W. Fung
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19
 REGISTERED PROFESSIONAL ENGINEER: VINCENT W. FUNG
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA
 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.
 HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400, WALNUT CREEK, CA 94596
 SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- SEE STRUCTURE PLANS FOR ADDITIONAL STRUCTURE STAGE CONSTRUCTION.

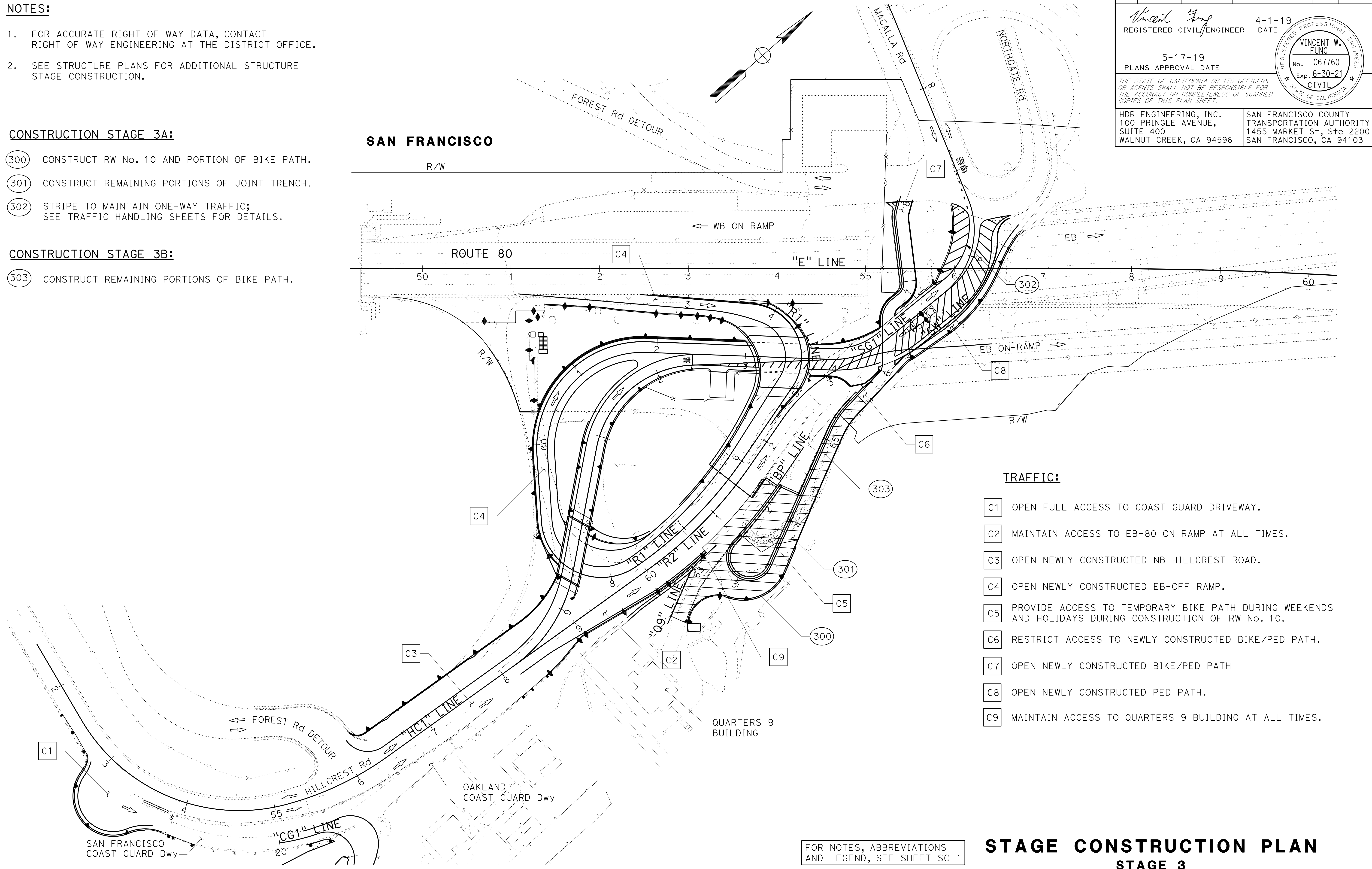
CONSTRUCTION STAGE 3A:

- 300 CONSTRUCT RW No. 10 AND PORTION OF BIKE PATH.
- 301 CONSTRUCT REMAINING PORTIONS OF JOINT TRENCH.
- 302 STRIPE TO MAINTAIN ONE-WAY TRAFFIC; SEE TRAFFIC HANDLING SHEETS FOR DETAILS.

CONSTRUCTION STAGE 3B:

- 303 CONSTRUCT REMAINING PORTIONS OF BIKE PATH.

SAN FRANCISCO



TRAFFIC:

- C1 OPEN FULL ACCESS TO COAST GUARD DRIVEWAY.
- C2 MAINTAIN ACCESS TO EB-80 ON RAMP AT ALL TIMES.
- C3 OPEN NEWLY CONSTRUCTED NB HILLCREST ROAD.
- C4 OPEN NEWLY CONSTRUCTED EB-OFF RAMP.
- C5 PROVIDE ACCESS TO TEMPORARY BIKE PATH DURING WEEKENDS AND HOLIDAYS DURING CONSTRUCTION OF RW No. 10.
- C6 RESTRICT ACCESS TO NEWLY CONSTRUCTED BIKE/PED PATH.
- C7 OPEN NEWLY CONSTRUCTED BIKE/PED PATH
- C8 OPEN NEWLY CONSTRUCTED PED PATH.
- C9 MAINTAIN ACCESS TO QUARTERS 9 BUILDING AT ALL TIMES.

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET SC-1

STAGE CONSTRUCTION PLAN

STAGE 3
 SCALE: 1" = 50'

SC-3

APPROVED FOR STAGE CONSTRUCTION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: [blank] CHECKED BY: [blank]
 VINCENT FUNG
 INGRID SUPIT
 REVISOR: [blank] DATE REVISED: [blank]
 JS 4-30-17
 HQ 11-12-18
 HQ 2-18-19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	114	436

Vincent Fung
 REGISTERED CIVIL ENGINEER
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

NOTES:

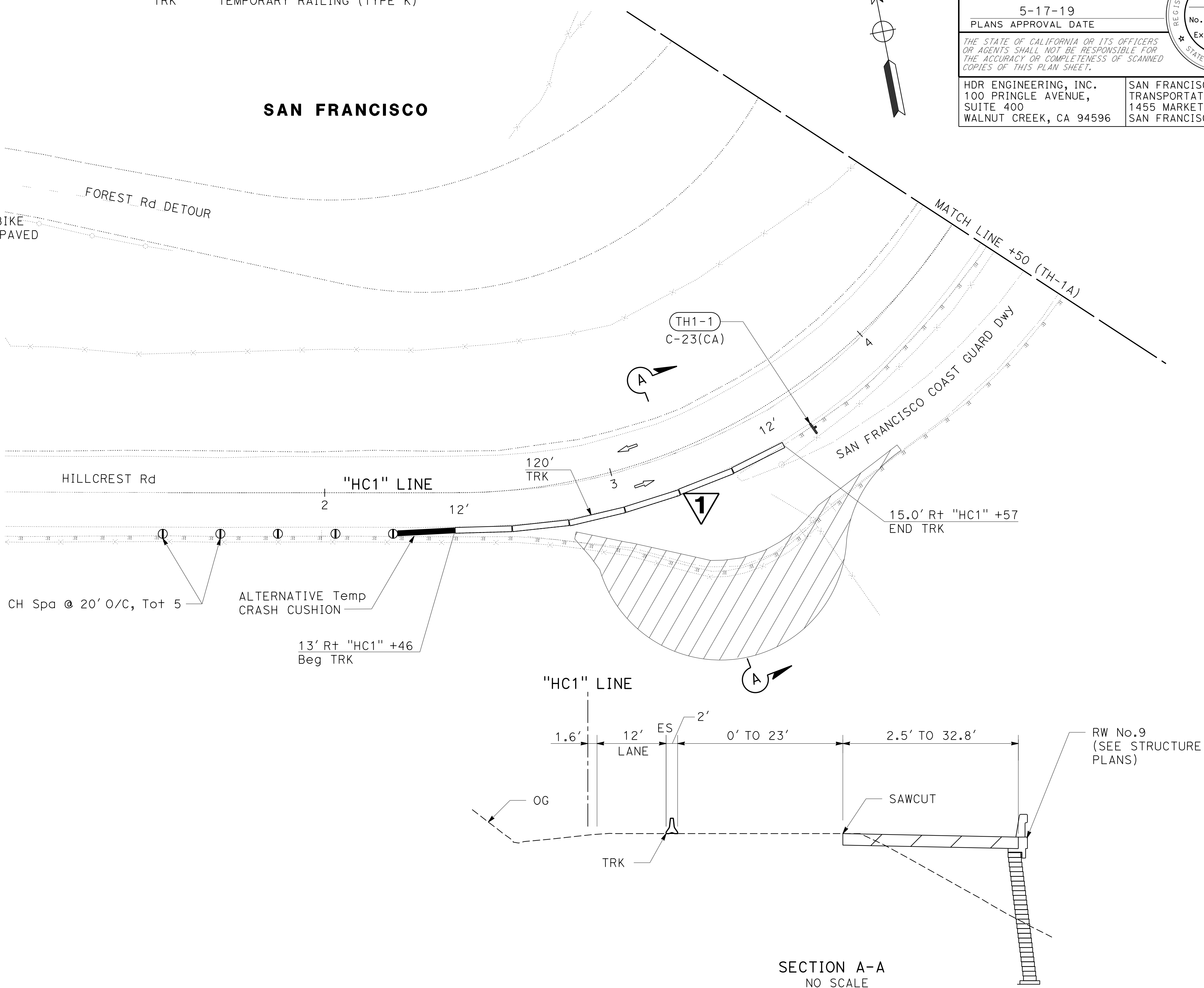
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- ALL OFFSETS ON THIS SHEET ARE FROM THE "R2" LINE UNLESS OTHERWISE SPECIFIED.
- STATION/OFFSET CALLOUTS FOR TRK REFER TO THE TRAFFIC SIDE OF THE RAILING.
- ADDITIONAL SIGNS EXIST WHICH ARE NOT SHOWN ON THE TRAFFIC HANDLING PLANS. FOR COMPLETE INFORMATION ON SIGN REMOVAL AND RELOCATION, SEE SIGN PLANS.
- FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE CONSTRUCTION AREA SIGN PLANS.
- EXACT LOCATION OF SIGNS TO BE DETERMINED BY THE ENGINEER.
- THE CONTRACTOR MAY MODIFY THE LOCATION OF THE TEMPORARY BIKE PATH AS APPROVED BY THE ENGINEER. PATH REQUIRED TO BE ON PAVED SURFACE WITH A Max GRADE OF 12% AND Min GRADE OF 0.5%.
- FOR PERMANENT STRIPING DETAILS, SEE PAVEMENT DELINEATION PLANS.

ABBREVIATIONS:

- CH CHANNELIZER
 Spa SPACING
 TRK TEMPORARY RAILING (TYPE K)

LEGEND:

- WORK AREA
- TEMPORARY PAVEMENT
SEE DETOUR SHEET FOR DETAILS
- TEMPORARY BIKE PATH
- CHANNELIZER(S) (SURFACE MOUNTED)
- ALTERNATIVE TEMPORARY CRASH CUSHION
- TEMPORARY CRASH CUSHION MODULE
- TEMPORARY SIGN MOUNTED ON POST
- OBJECT MARKER (TYPE P)
- FLASHING ARROW BOARD
- DIRECTIONAL ARROW
- DUAL DIRECTION ARROW
- TEMPORARY TRAFFIC SIGN No.
- TEMPORARY TRAFFIC STRIPE
- REMOVE EXISTING TRAFFIC STRIPE



1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

**TRAFFIC HANDLING PLAN
 STAGE 1A**

APPROVED FOR TRAFFIC HANDLING WORK ONLY

SCALE: 1" = 20'

TH-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	114A	436

Vincent Fung
 REGISTERED CIVIL ENGINEER
 DATE 4-1-19
 PLANS APPROVAL DATE 5-17-19

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.

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

HQ	2-18-19
TB	1-3-19
JS	4-30-18
REVISOR	DATE
VINCENT FUNG	
INGRID SUPIT	
CALCULATED-DRAWN BY	CHECKED BY
INGRID V. SUPIT	
CONSULTANT	FUNCTIONAL SUPERVISOR
INGRID V. SUPIT	
DEPARTMENT OF TRANSPORTATION	
STATE OF CALIFORNIA	



1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET TH-1

TRAFFIC HANDLING PLAN
STAGE 1A
 SCALE: 1" = 20'
TH-1A

APPROVED FOR TRAFFIC HANDLING WORK ONLY


LAST REVISION: 00-00-00 DATE PLOTTED => 18-DEC-2019 TIME PLOTTED => 15:09

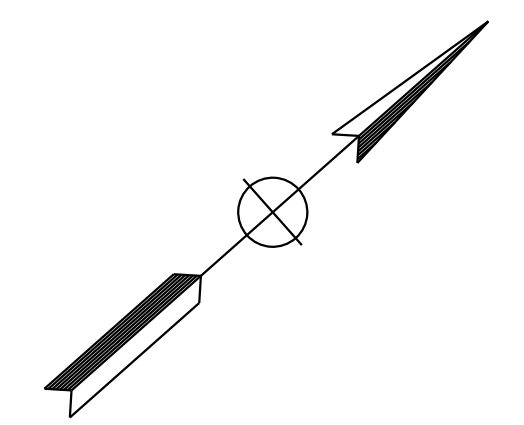
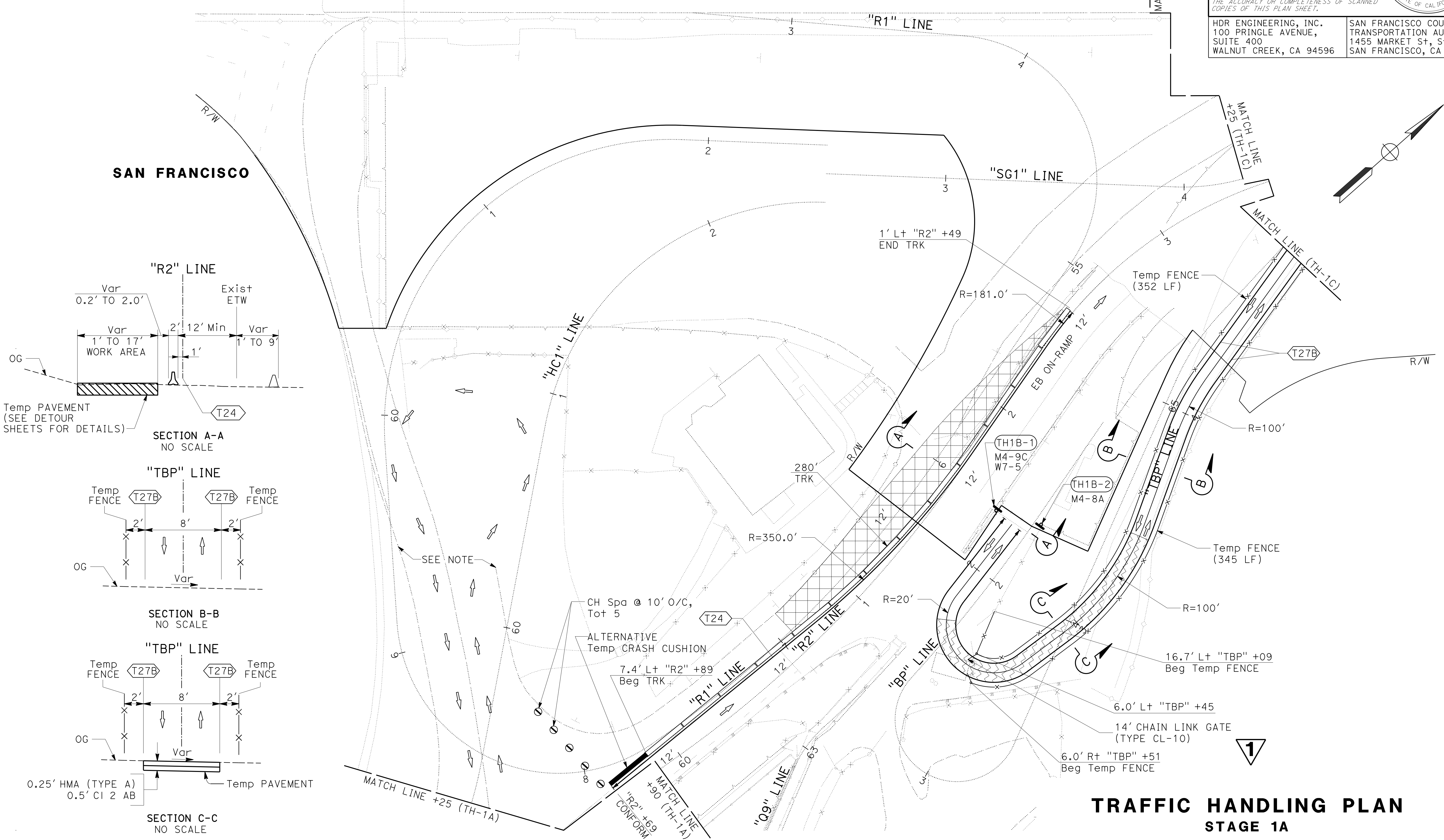
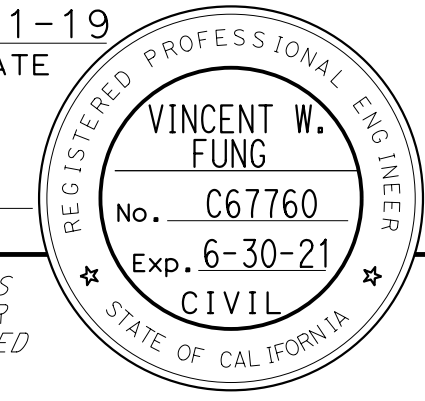
HO	2-18-19	VINCENT FUNG	INGRID SUPIT	INGRID V. SUPIT	INGRID V. SUPIT	INGRID V. SUPIT	INGRID V. SUPIT
HO	11-12-18						
JS	4-30-18						
REVISOR	DATE	DESIGNED BY	CHECKED BY	FUNCTIONAL SUPERVISOR	CONSULTANT	DEPARTMENT	STATE
						TRANSPORTATION	CALIFORNIA

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- MAINTAIN ACCESS FOR COAST GUARD TURN AROUND AREA.

1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	114B	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19			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.					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

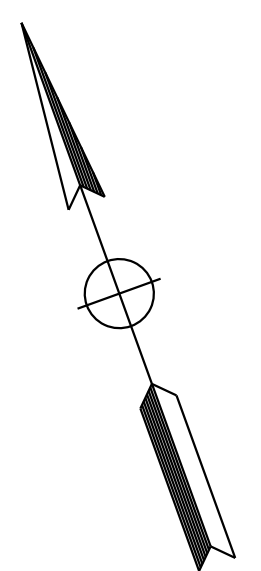
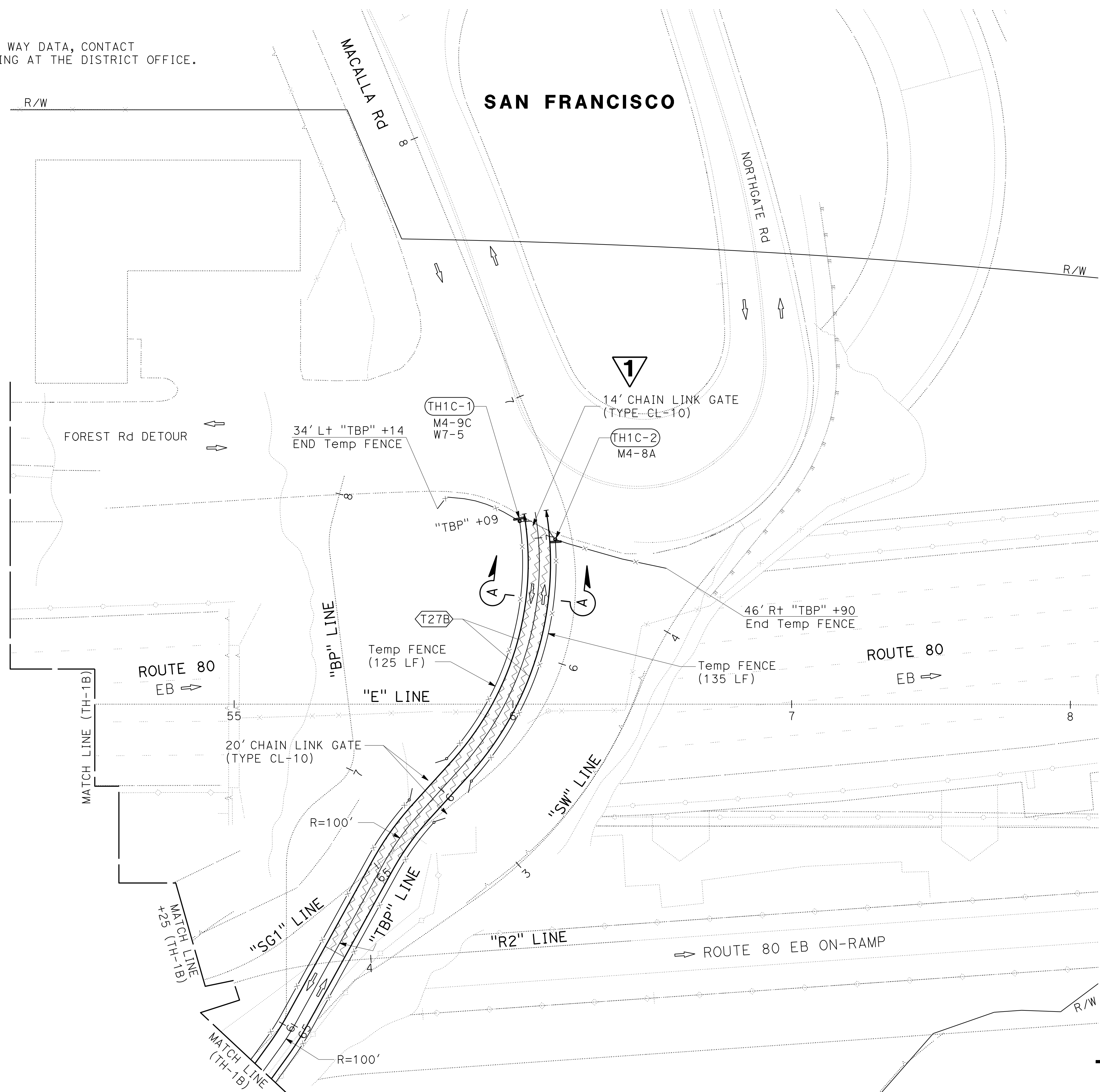


TRAFFIC HANDLING PLAN
STAGE 1A
 SCALE: 1" = 20'
TH-1B

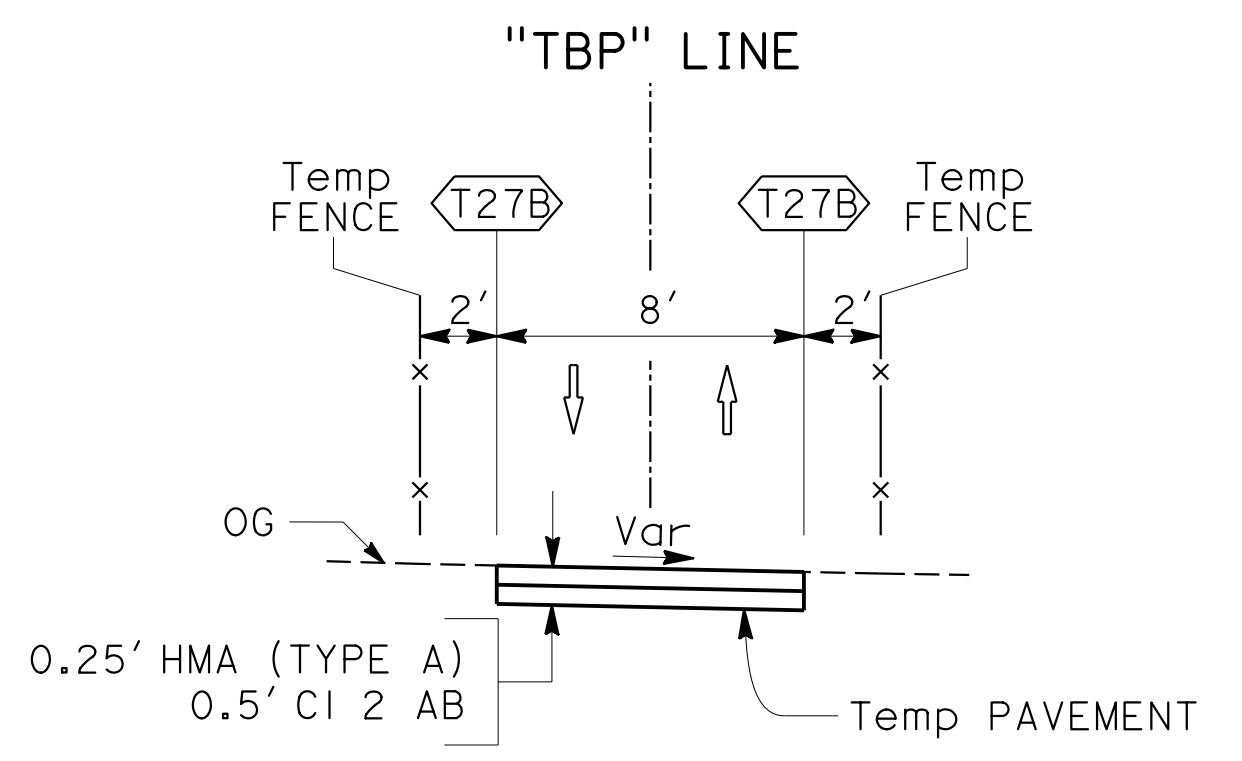
APPROVED FOR TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	REVISOR	DATE	NO.	DATE
Caltrans	INGRID V. SUPIT	VINCENT FUNG	4-30-18	HO	2-18-19
	CHECKED BY	INGRID SUPIT	4-30-18	HO	11-12-18
	DESIGNED BY			JS	
				REVISOR	DATE

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.




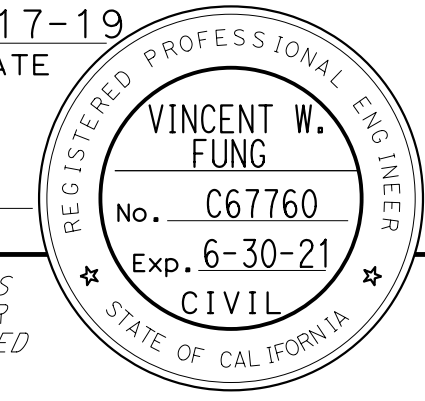
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	114C	436
			4-1-19	DATE	
5-17-19			PLANS APPROVAL DATE		
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

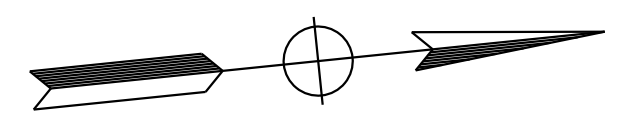


1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019
APPROVED FOR TRAFFIC HANDLING WORK ONLY

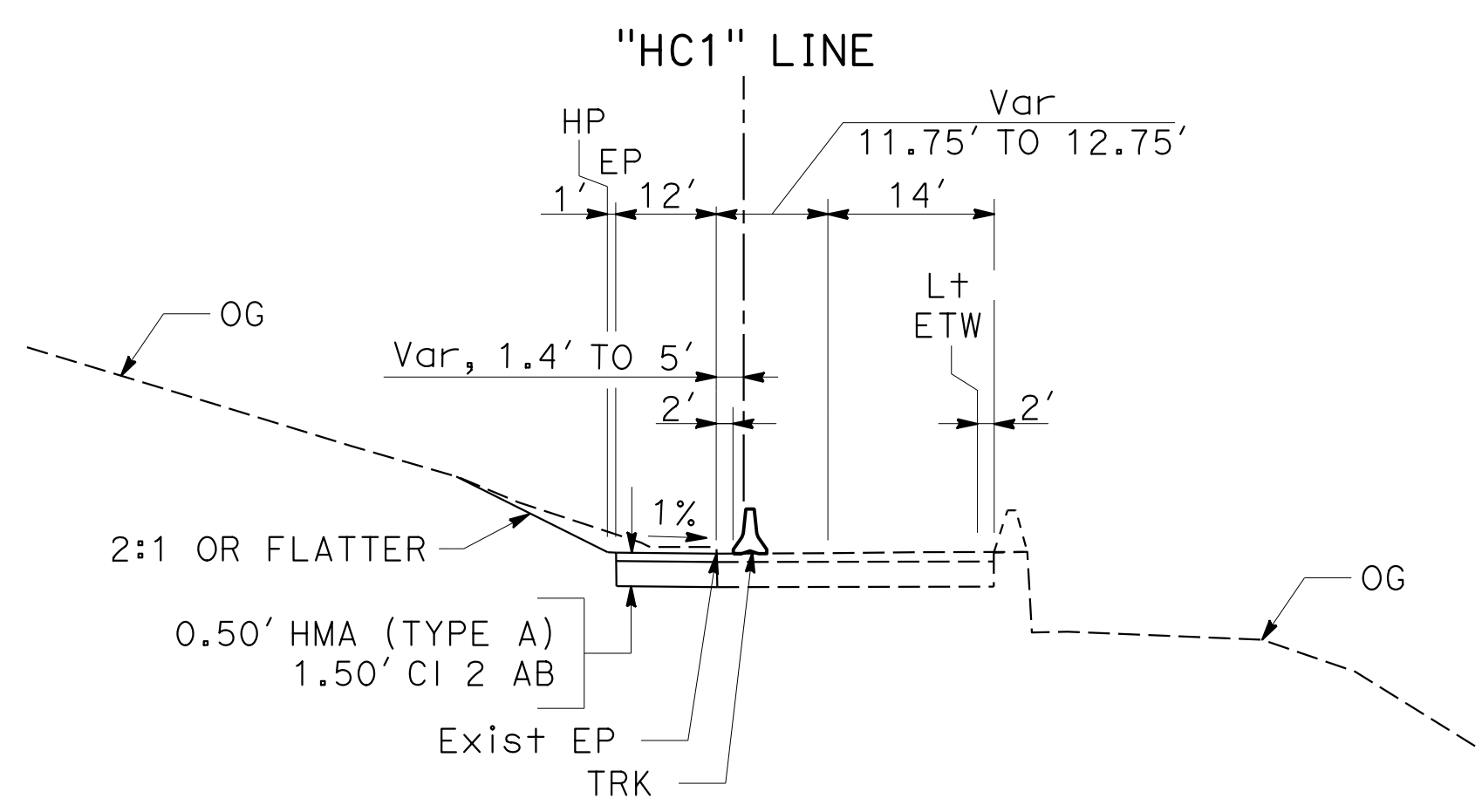
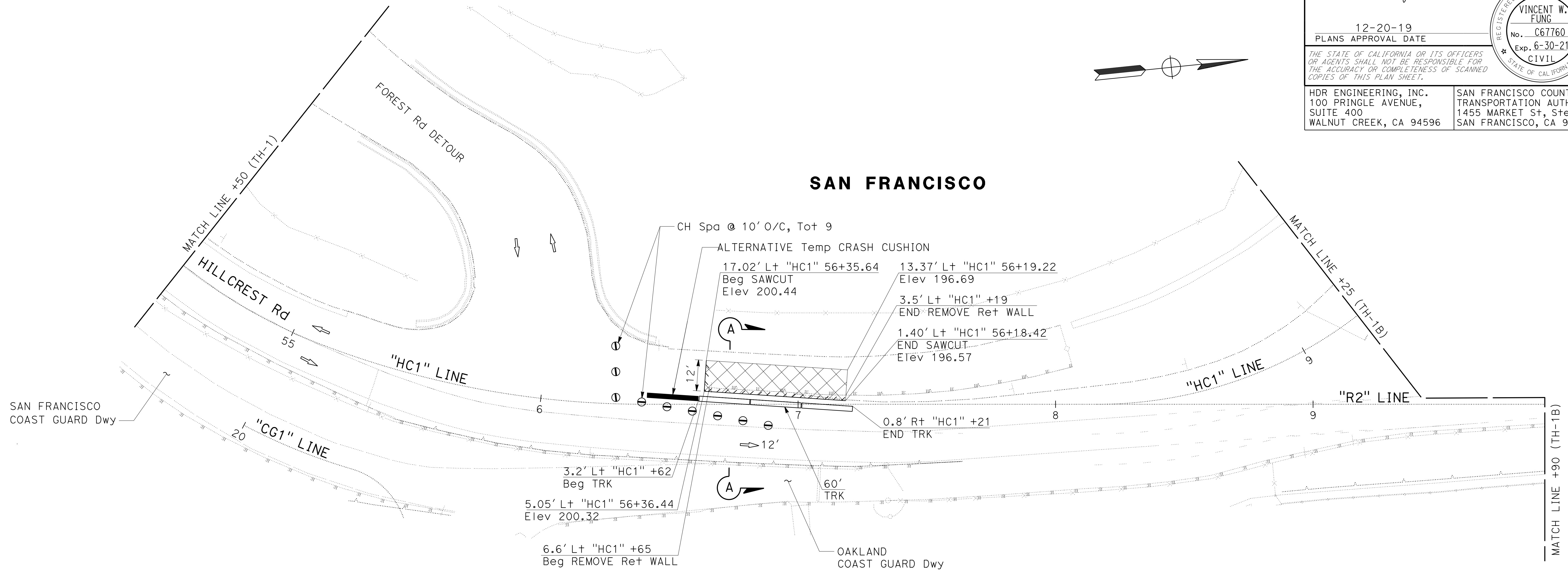
TRAFFIC HANDLING PLAN
STAGE 1A
SCALE: 1" = 20'
TH-1C

LAST REVISION DATE PLOTTED => 18-DEC-2019 00-00-00 TIME PLOTTED => 17:22

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	114D	436
 REGISTERED CIVIL ENGINEER			12-17-19 DATE		
12-20-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



SAN FRANCISCO



SECTION A-A
NO SCALE

"HC1" 56+36 TO "HC1" 57+29

1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019


FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET TH-1

TRAFFIC HANDLING PLAN
STAGE 1A

SCALE: 1" = 20'

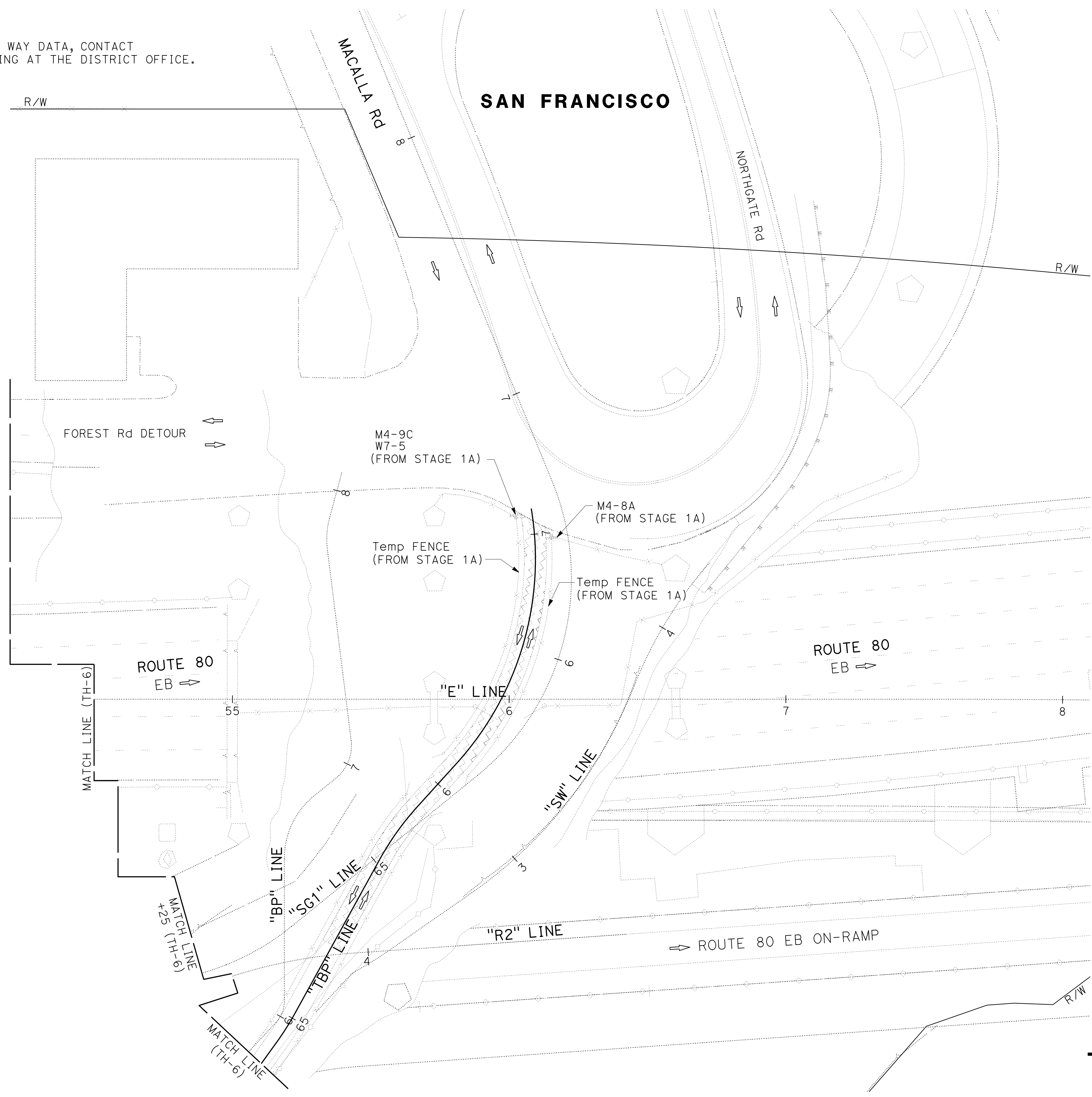
TH-1D

APPROVED FOR TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CHECKED BY	REVISOR	DATE
	INGRID V. SUPIT	VINCENT FUNG	IK	12-7-19

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	REVISOR	DATE	NO.	DATE
Caltrans	INGRID V. SUPIT	VINCENT FUNG	4-30-18	HO	2-18-19
	CHECKED BY	INGRID SUPIT	4-30-18	JS	11-12-18
	DESIGNED BY				

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



TRAFFIC HANDLING PLAN
STAGE 1B
SCALE: 1" = 20'
TH-3A

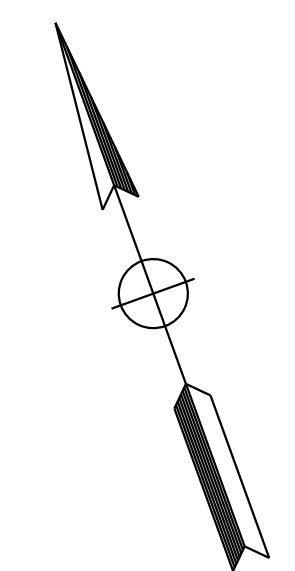
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	116A	436

Vincent Fung
REGISTERED CIVIL ENGINEER
DATE: 4-1-19
PLANS APPROVAL DATE: 5-17-19

VINCENT W. FUNG
No. C67760
Exp. 6-30-21
CIVIL
STATE OF CALIFORNIA

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.

HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596	SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103
---	---



APPROVED FOR TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: INGRID SUPIT
 CHECKED BY: INGRID SUPIT
 VINCENT FUNG
 REVISOR: INGRID SUPIT
 DATE REVISED: 4-30-18
 JS
 TB
 TP
 1-3-19
 3-14-19

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	117	436

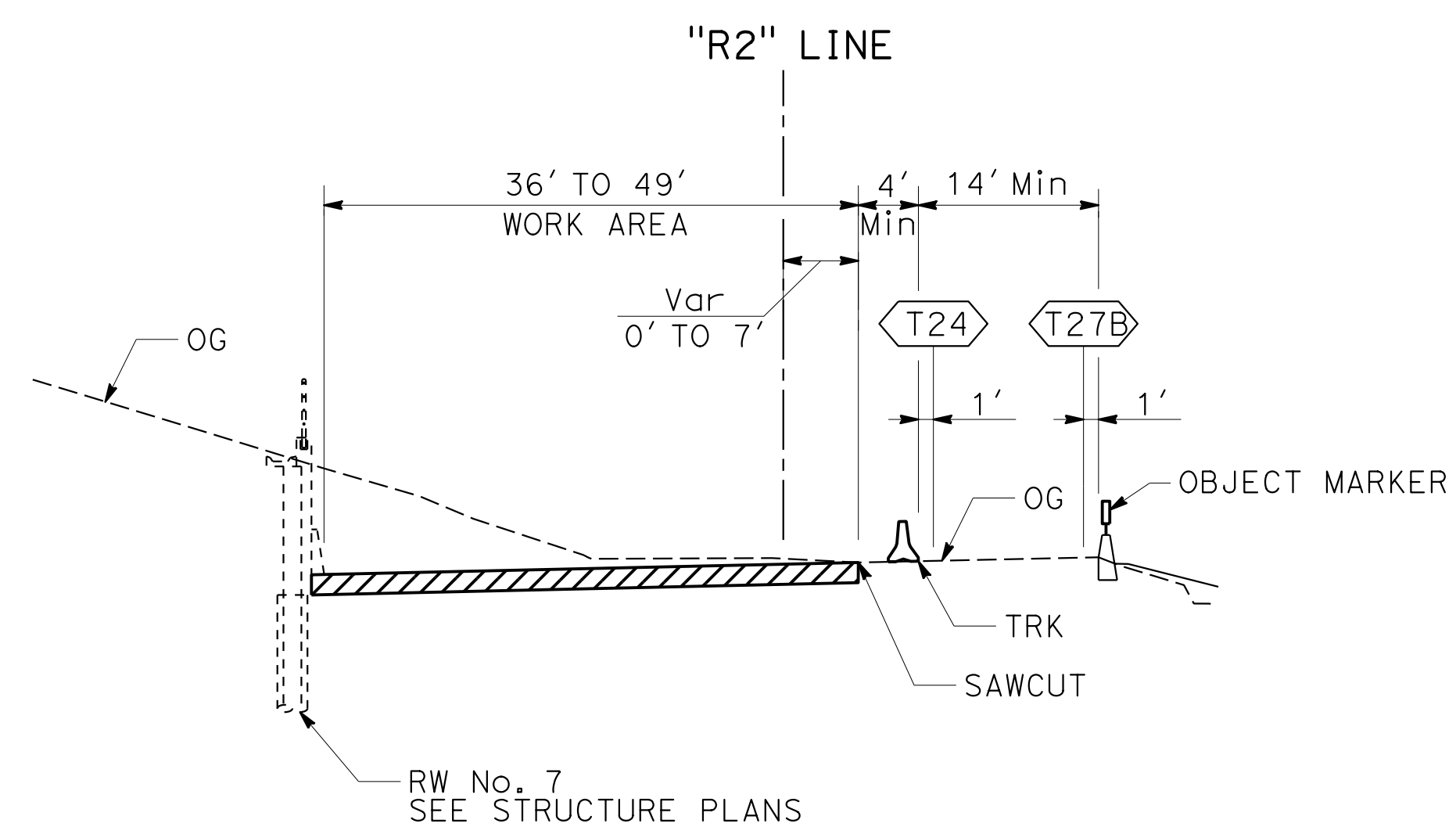
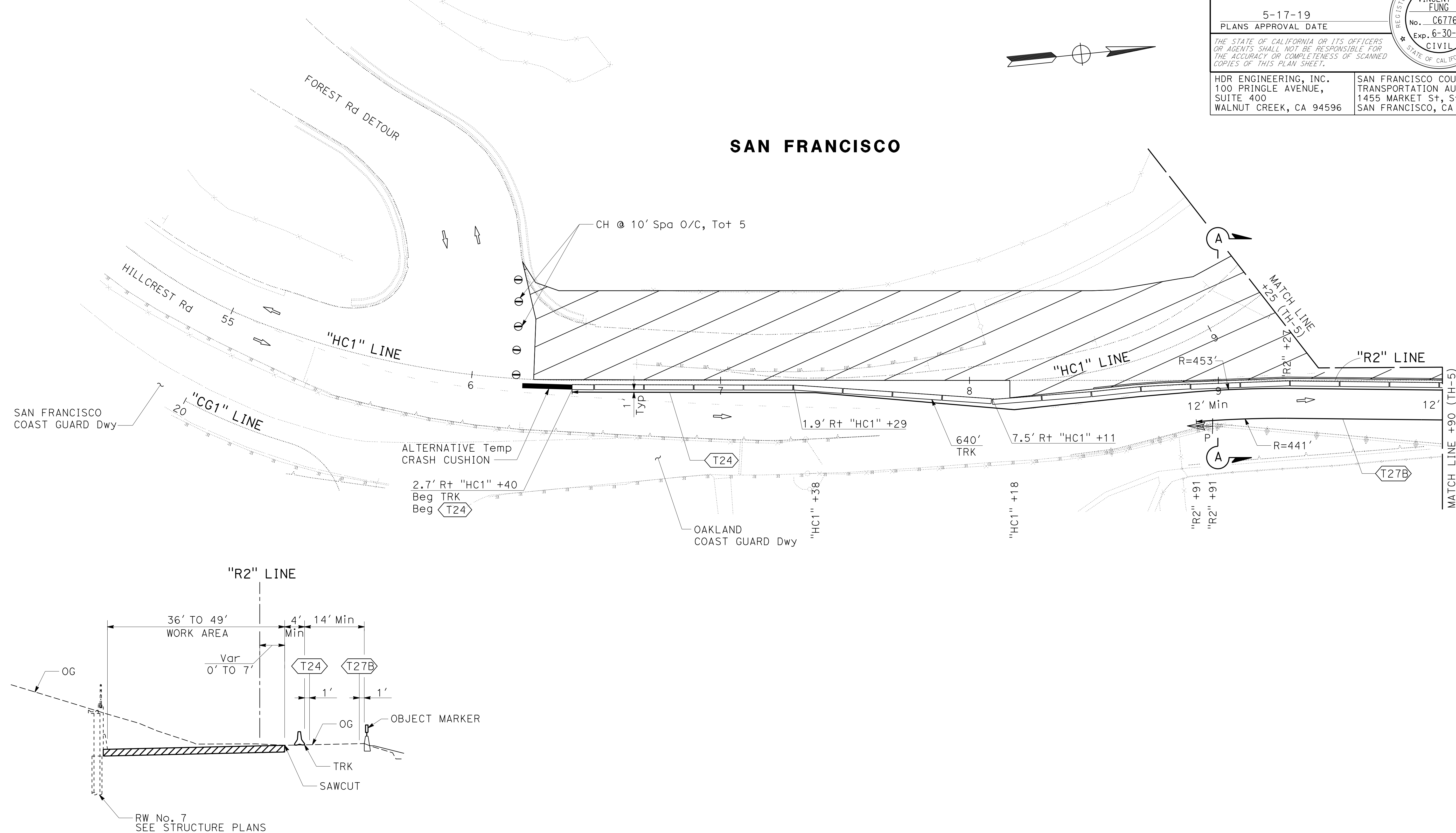
REGISTERED CIVIL ENGINEER: Vincent Fung
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

REGISTERED PROFESSIONAL ENGINEER
 VINCENT W. FUNG
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA

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HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY
 1455 MARKET ST, Ste 2200
 SAN FRANCISCO, CA 94103



FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET TH-1

**TRAFFIC HANDLING PLAN
 STAGE 2**

SCALE: 1" = 20'

TH-4

APPROVED FOR TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	REVISOR	DATE	REVISION
Caltrans	INGRID V. SUPIT	INGRID SUPIT	4-30-18	11-12-18
		VINCENT FUNG	4-30-18	2-18-19
	CHECKED BY	DESIGNED BY		

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	118	436

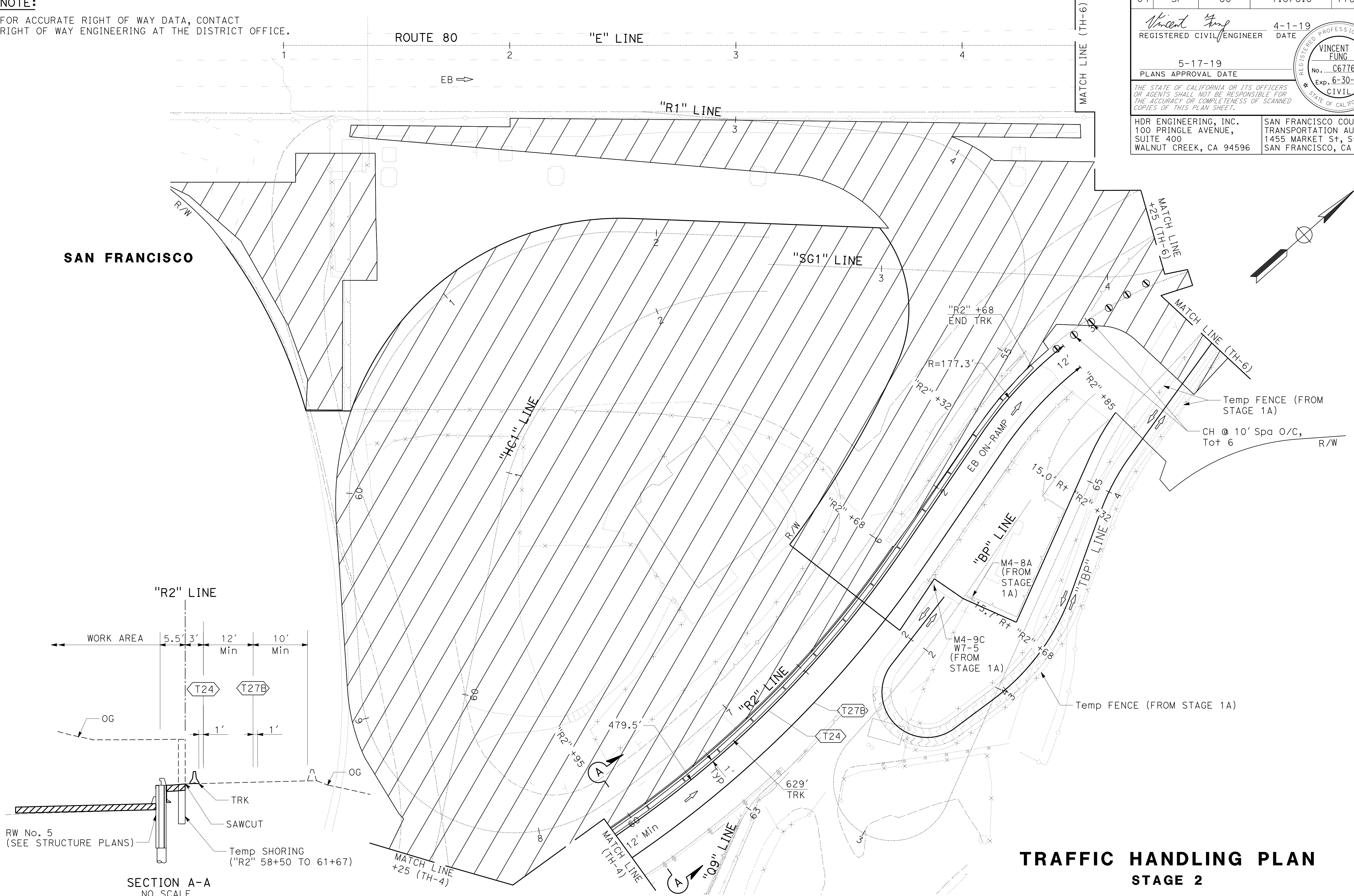
Vincent Fung
REGISTERED CIVIL ENGINEER
4-1-19
DATE

5-17-19
PLANS APPROVAL DATE

VINCENT W. FUNG
No. C67760
Exp. 6-30-21
CIVIL
STATE OF CALIFORNIA

HDR ENGINEERING, INC.
100 PRINGLE AVENUE,
SUITE 400
WALNUT CREEK, CA 94596

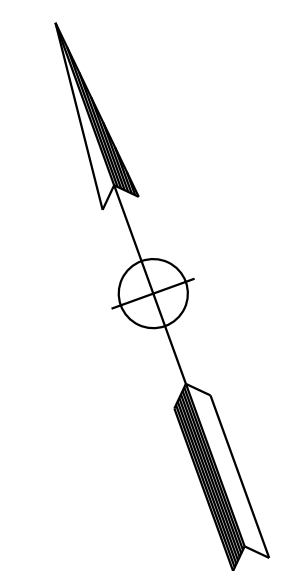
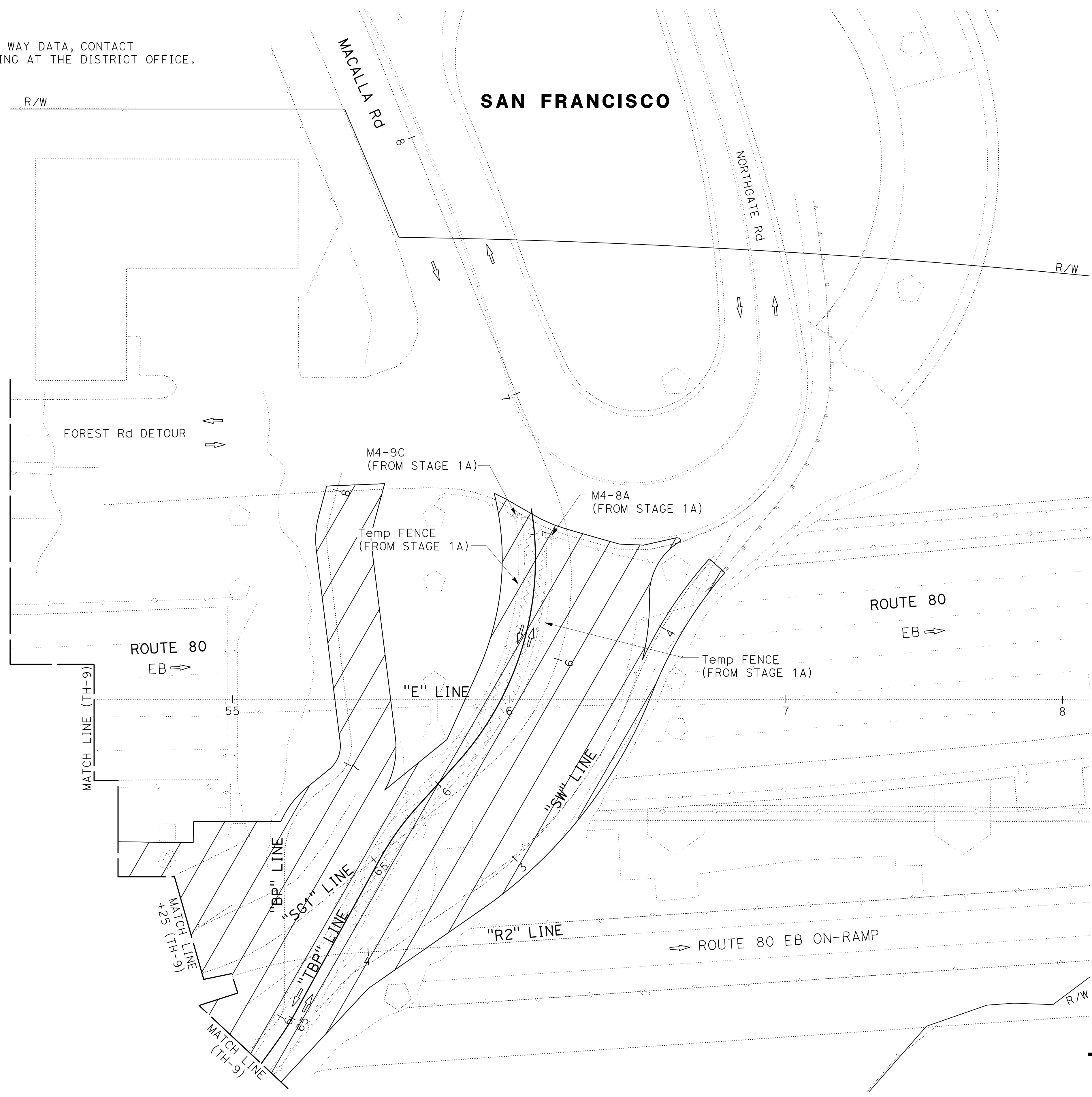
SAN FRANCISCO COUNTY
TRANSPORTATION AUTHORITY
1455 MARKET St, Ste 2200
SAN FRANCISCO, CA 94103



TRAFFIC HANDLING PLAN
STAGE 2
SCALE: 1" = 20'
TH-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR	DATE	HO	HO
Caltrans	INGRID V. SUPIT	INGRID SUPIT	CHECKED BY	VINCENT FUNG	4-30-18	11-12-18	2-18-19

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	119	436

<i>Vincent Fung</i> REGISTERED CIVIL ENGINEER	4-1-19 DATE
5-17-19 PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
VINCENT W. FUNG
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA

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.

HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596	SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103
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APPROVED FOR TRAFFIC HANDLING WORK ONLY

**TRAFFIC HANDLING PLAN
STAGE 2**

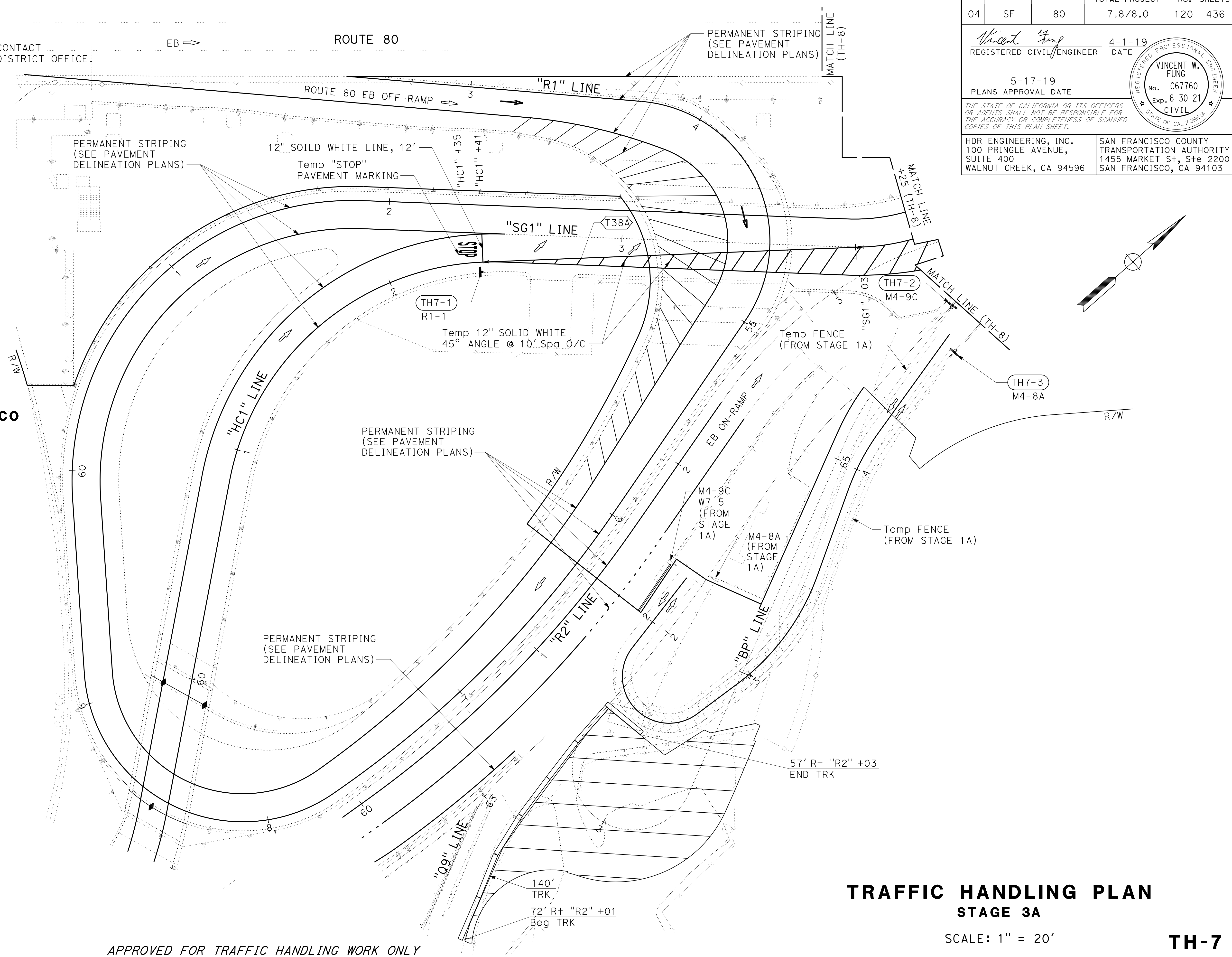
SCALE: 1" = 20'

TH-6



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR	DATE	NO.
Caltrans	INGRID V. SUPIT	CHECKED BY	INGRID SUPIT	4-30-18	1-3-19
			VINCENT FUNG	4-30-18	2-18-19

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	120	436

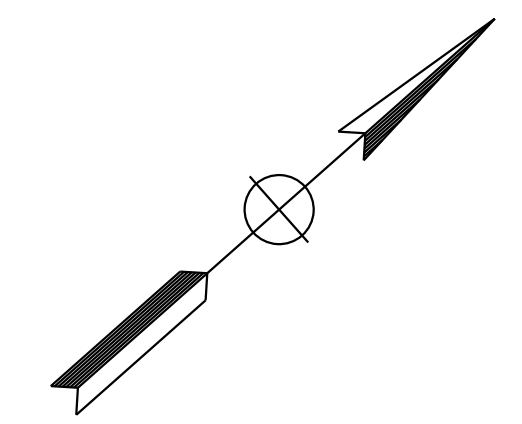
Vincent Fung
 REGISTERED CIVIL ENGINEER
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

VINCENT W. FUNG
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA

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.

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



APPROVED FOR TRAFFIC HANDLING WORK ONLY

**TRAFFIC HANDLING PLAN
STAGE 3A**

SCALE: 1" = 20'


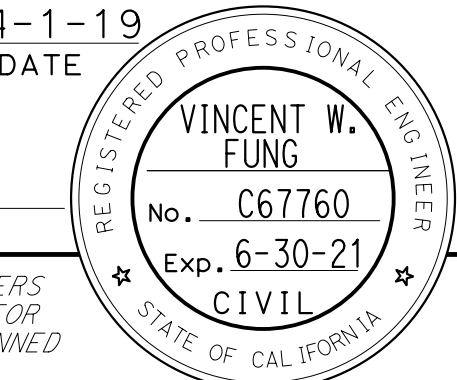
TH-7

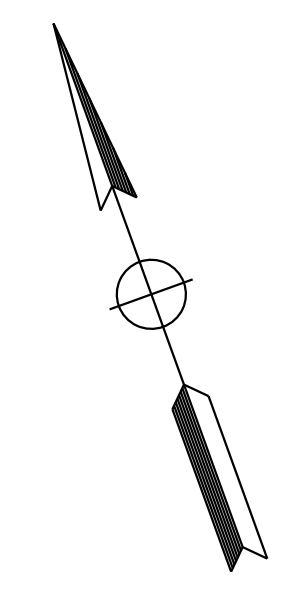
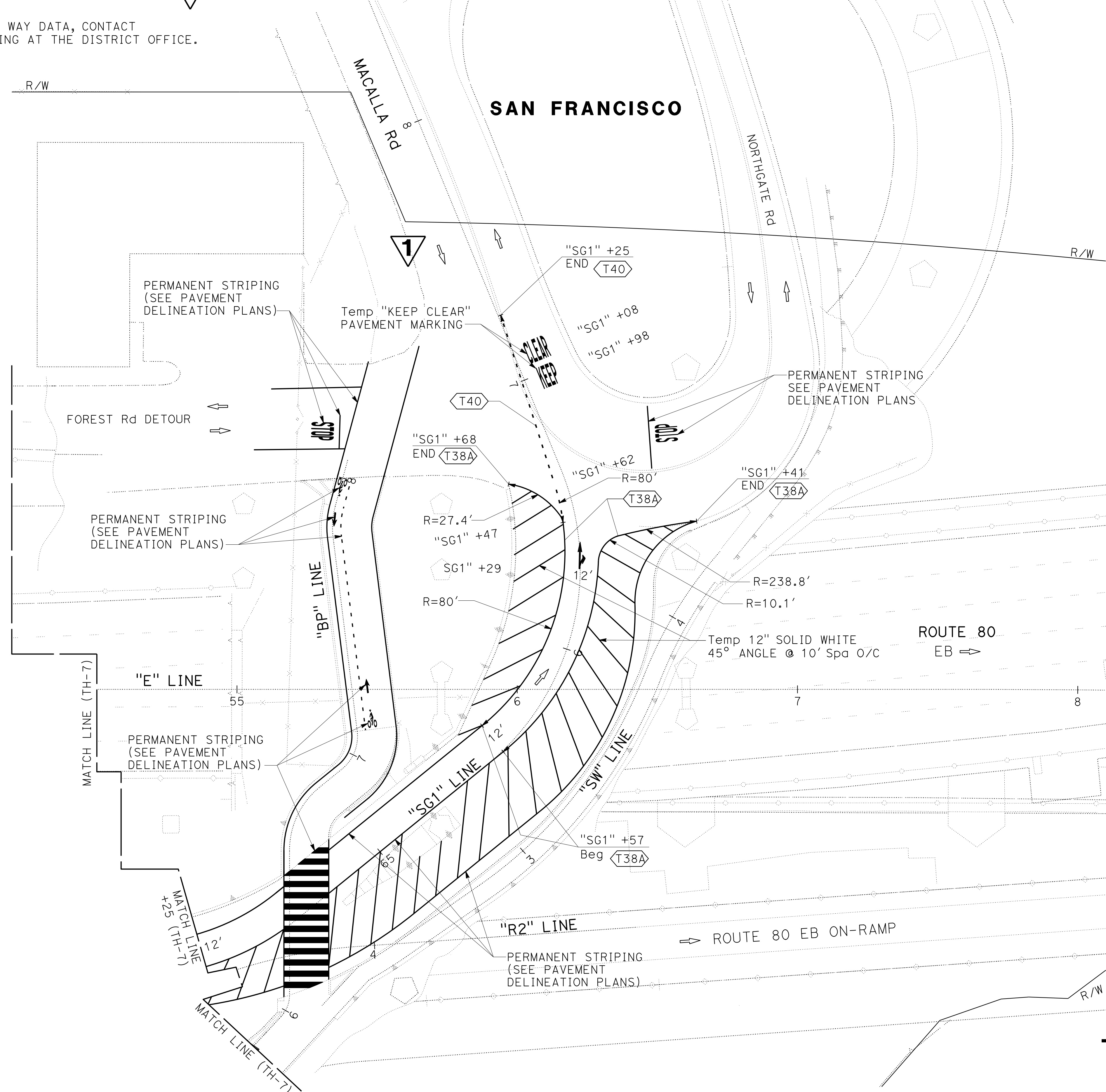
LAST REVISION: DATE PLOTTED => 12-NOV-2019
 00-00-00 TIME PLOTTED => 20:56

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	REVISOR	DATE
Caltrans	INGRID V. SUPIT	VINCENT FUNG	4-30-18
		INGRID SUPIT	11-12-18
	CHECKED BY	REVISOR	DATE
		INGRID SUPIT	4-30-18
	DESIGNED BY	REVISOR	DATE
		INGRID SUPIT	11-12-18
			2-18-19

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	121	436
 REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



TRAFFIC HANDLING PLAN
STAGE 3

SCALE: 1" = 20'

TH-8

APPROVED FOR TRAFFIC HANDLING WORK ONLY

USERNAME => svc_in_pwservice
DGN FILE => 0419000153md008.dgn



UNIT 0728

PROJECT NUMBER & PHASE

04190001531

BORDER LAST REVISED 7/2/2010

LAST REVISION DATE PLOTTED => 18-DEC-2019 00-00-00 TIME PLOTTED => 13:37

TEMPORARY PAVEMENT DELINEATION QUANTITIES

SHEET No.	STAGE	STATION	DIRECTION	DETAIL No. OR TEMPORARY PAVEMENT MARKING	TEMPORARY PAVEMENT MARKING (PAINT) SQFT	TEMPORARY TRAFFIC STRIPE (PAINT)					
						6" DASHED LF	6" WHITE LF	8" WHITE LF	6" YELLOW LF	12" WHITE LF	
TH-1	1A	"R2" 59+69 TO "R2" 62+49	NB	24				279			
TH-1B & TH-1C	1A	"TBP" 1+76 TO "TBP" 7+06	NB/SB	27B		1058					
TH-2	1B	"HC1" 55+26 TO "HC1" 55+26	NB	STOP BAR					14		
TH-2 & TH-3	1B	"HC1" 58+53 TO "R2" 62+73	NB	24				420			
TH-2 & TH-3	1B	"HC1" 56+98 TO "R2" 62+73	NB	27B		575					
TH-4 & TH-5	2	"HC1" 56+40 TO "R2" 62+85	NB	24				645			
TH-4 & TH-5	2	"HC1" 58+90 TO "R2" 62+85	NB	27B		395					
TH-7	3A	"HC1" 62+40	NB	STOP	22						
TH-7	3A	"HC1" 62+40 TO "SG1" 62+41	NB	STOP BAR						12	
TH-7	3A	"SG1" 62+41 TO "SG1" 66+68	NB/SB	38A			163				
TH-8	3A	"SG1" 66+75 TO "SG1" 67+25	NB	KEEP CLEAR	51						
TH-8	3A	"SG1" 65+58 TO "SG1" 66+68	NB/SB	38A			225				
TH-8	3A	"SG1" 66+29 TO "SG1" 66+39	NB/SB	ARROW	7						
TH-8	3A	"SG1" 66+48 TO "SG1" 67+25	NB/SB	40		77					
TH-7 & TH-8	3A	"HC1" 62+40 TO "SG1" 67+25	NB/SB	HATCHING						697	
TOTAL					80	77	2,028	388	1344	723	4,561

TEMPORARY TRAFFIC CONTROL QUANTITIES

SHEET No.	STAGE	STATION	LOCATION		CHANNELIZER (SURFACE MOUNTED) EA	TEMPORARY TERMINAL SECTION (TYPE K) EA	TEMPORARY RAILING (TYPE K) LF	TEMPORARY CRASH CUSHION MODULE EA	TYPE III BARRICADE EA	TEMPORARY ALTERNATIVE CRASH CUSHION EA	TEMPORARY FENCE LF	14' CHAIN LINK GATE (TYPE CL-10 FT) EA	20' CHAIN LINK GATE (TYPE CL-10) EA	OBJECT MARKER (TYPE P) EA	FLASHING ARROW EA
			DIRECTION (MEDIAN)	SHOULDER (OFFSET)											
TH-1 TO TH-1C	1A	"HC1" 52+00 TO "SG1" 67+02	NB		19		520			3	959	2	2		
TH-2 TO TH-3A	1B	"HC1" 55+00 TO "R2" 64+00	NB		16	3	840	22		1				1	1
TH-4 TO TH-6	2	"HC1" 56+00 TO "R2" 64+00	NB		11		640			1				1	
TH-7 TO TH-8	3A	"R2" 60+00 TO "R2" 64+00	NB				140								
TH-8A	3B	"R2" 60+00 TO "R2" 64+00	NB						6						
TOTAL					46	3	2140	22	6	5	959	2	2	2	1

CONSTRUCTION AREA SIGNS

SHEET No.	SIGN No.	STAGE	SIGN CODE	PANEL SIZE	SIGN MESSAGE	No. OF POSTS AND SIZE		(N) No. OF SIGNS
TH1	TH1-1	1A	C23 (CA)	36" x 36"	RAMP WORK AHEAD	1	4" x 6"	1
TH1B	TH1B-1	1A	M4-9C	30" x 24"	BIKE DETOUR	1	4" x 6"	1
			W7-5	18" x 18"	HILL			1
TH1C	TH1B-2	1A	M4-8A	24" x 18"	END DETOUR	1	4" x 6"	1
	TH1C-1	1A	M4-9C	30" x 24"	BIKE DETOUR	1	4" x 6"	1
TH2	TH1C-2	1A	M4-8A	24" x 18"	END DETOUR	1	4" x 6"	1
	TH2-1	1B	W1-4	36" x 36"	TURN AND CURVE SIGNS	1	4" x 6"	1
TH7	TH7-1	3A	R1-1	30" x 30"	STOP	1	4" x 6"	1
	TH7-2	3A	M4-9C	30" x 24"	BIKE DETOUR	1	4" x 6"	1
	TH7-3	3A	M4-8A	24" x 18"	END DETOUR	1	4" x 6"	1
TH8A	TH8A-1	3B	R11-2	30" x 48"	ROAD CLOSED	BARRICADE MOUNTED		3
	TH8A-2	3B	R11-2	30" x 48"	ROAD CLOSED	BARRICADE MOUNTED		3
TOTAL						9		16

(N) - NOT A SEPARATE BID ITEM

PAVEMENT DELINEATION REMOVAL

SHEET No.	STAGE	STATION	DIRECTION	DETAIL No. OR PAVEMENT MARKING	REMOVAL QUANTITIES	
					REMOVE PAVEMENT MARKER EA	REMOVE THERMOPLASTIC TRAFFIC STRIPE LF
TH-6	1B	"R2" 60+00 TO "R2" 63+00	NB		7	300
TOTAL					7	300

TRAFFIC HANDLING QUANTITIES

THQ-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	122	436
			4-1-19	DATE	
REGISTERED CIVIL ENGINEER 5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	123	436

REGISTERED CIVIL ENGINEER
 PRAVEEN K. CHILAKAPATI
 No. C76058
 Exp. 6-30-20
 CIVIL
 STATE OF CALIFORNIA

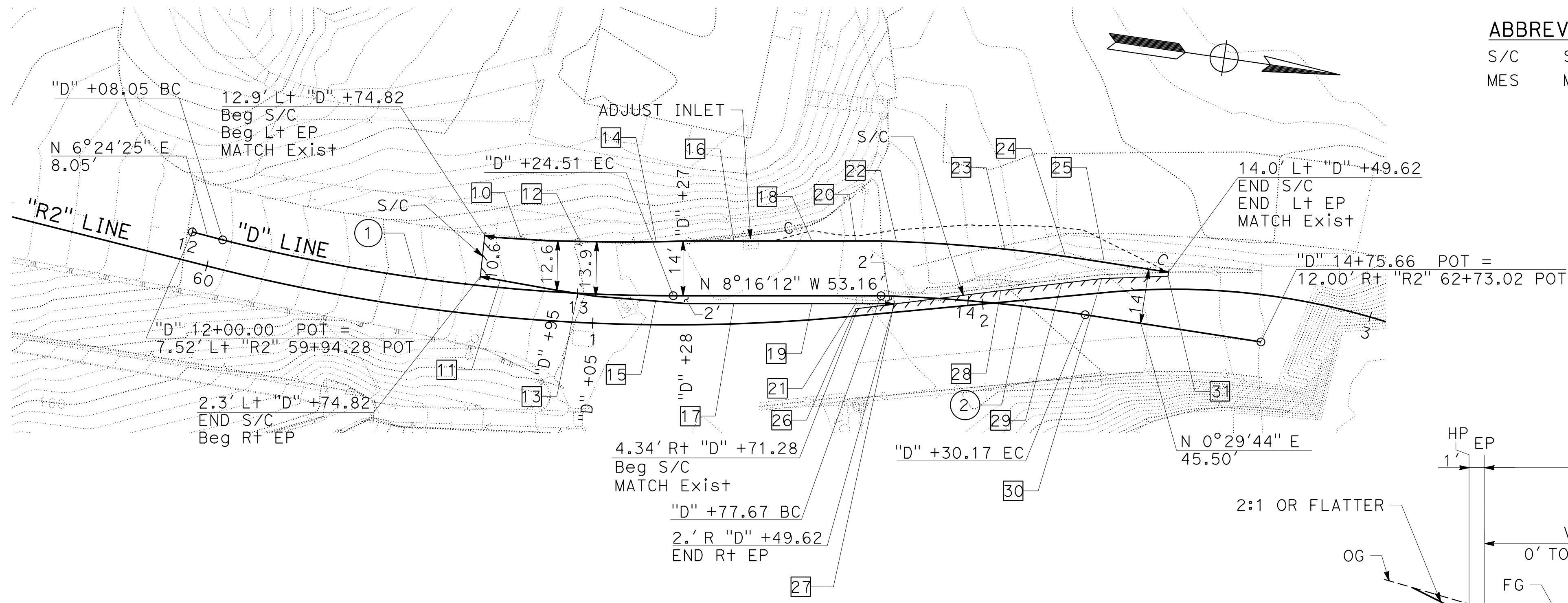
4-1-19
 DATE
 5-17-19
 PLANS APPROVAL DATE

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.

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

ABBREVIATIONS (THIS SHEET ONLY):
 S/C SAWCUT
 MES MATCH EXISTING SLOPE



DETOUR CONSTRUCTION PLAN
 SCALE: 1" = 20'

- NOTES:**
- FOR ADDITIONAL CROSS SECTIONS AND DETAILS, SEE TRAFFIC HANDLING SHEETS.
 - SEE Q1 FOR DETOUR QUANTITIES.

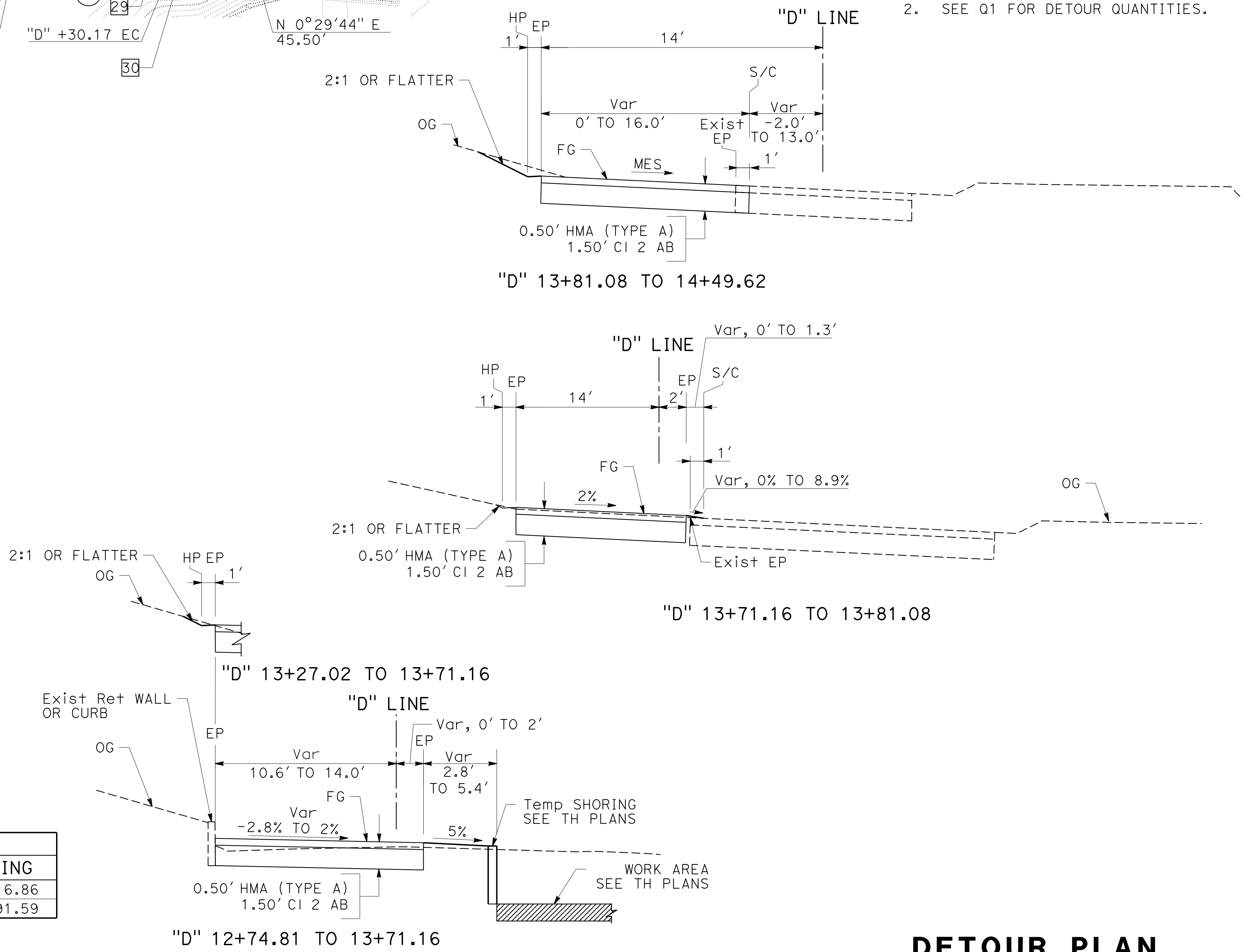
PAVEMENT ELEVATIONS DATA

No. #	LOCATION *	ELEVATION	POINT DESCRIPTION
10	12.75' Lt 12+80.00	161.84	EP
11	1.89' Rt 12+80.00	162.12	EP
12	13.28' Lt 13+00.00	160.20	EP
13	0.06' Rt 13+00.00	160.50	EP
14	13.76' Lt 13+20.00	159.27	EP
15	1.40' Rt 13+20.00	159.41	EP
16	14.00' Lt 13+40.00	158.88	EP
17	2.00' Rt 13+40.00	158.79	EP
18	14.00' Lt 13+60.00	158.99	EP
19	2.00' Rt 13+60.00	158.67	EP
20	14.00' Lt 13+71.16	159.17	EP
21	2.00' Rt 13+71.16	158.85	EP
22	14.00' Lt 13+81.08	159.38	EP
23	14.00' Lt 14+08.06	160.21	EP
24	14.00' Lt 14+23.12	160.82	EP
25	14.00' Lt 14+32.98	161.10	EP
26	3.35' Rt 13+71.16	Exist	S/C
27	2.00' Rt 13+81.08	Exist	S/C
28	3.34' Lt 14+08.06	Exist	S/C
29	7.09' Lt 14+23.12	Exist	S/C
30	9.79' Lt 14+32.98	Exist	S/C
31	12.98' Lt 14+49.62	Exist	S/C

* ALL STATIONS AND OFFSETS IN THE LOCATION COLUMN REFERENCE THE "D" LINE.

CURVE DATA

No. #	R	Δ	T	L	CURVE CENTER	
					NORTHING	EASTING
1	472.56'	14°07'14"	58.53'	116.46'	2122887.37	6022916.86
2	417.46'	7°12'17"	26.28'	52.49'	2123055.59	6023791.59



DETOUR PLAN

SCALE: 1" = 20'

DE-1

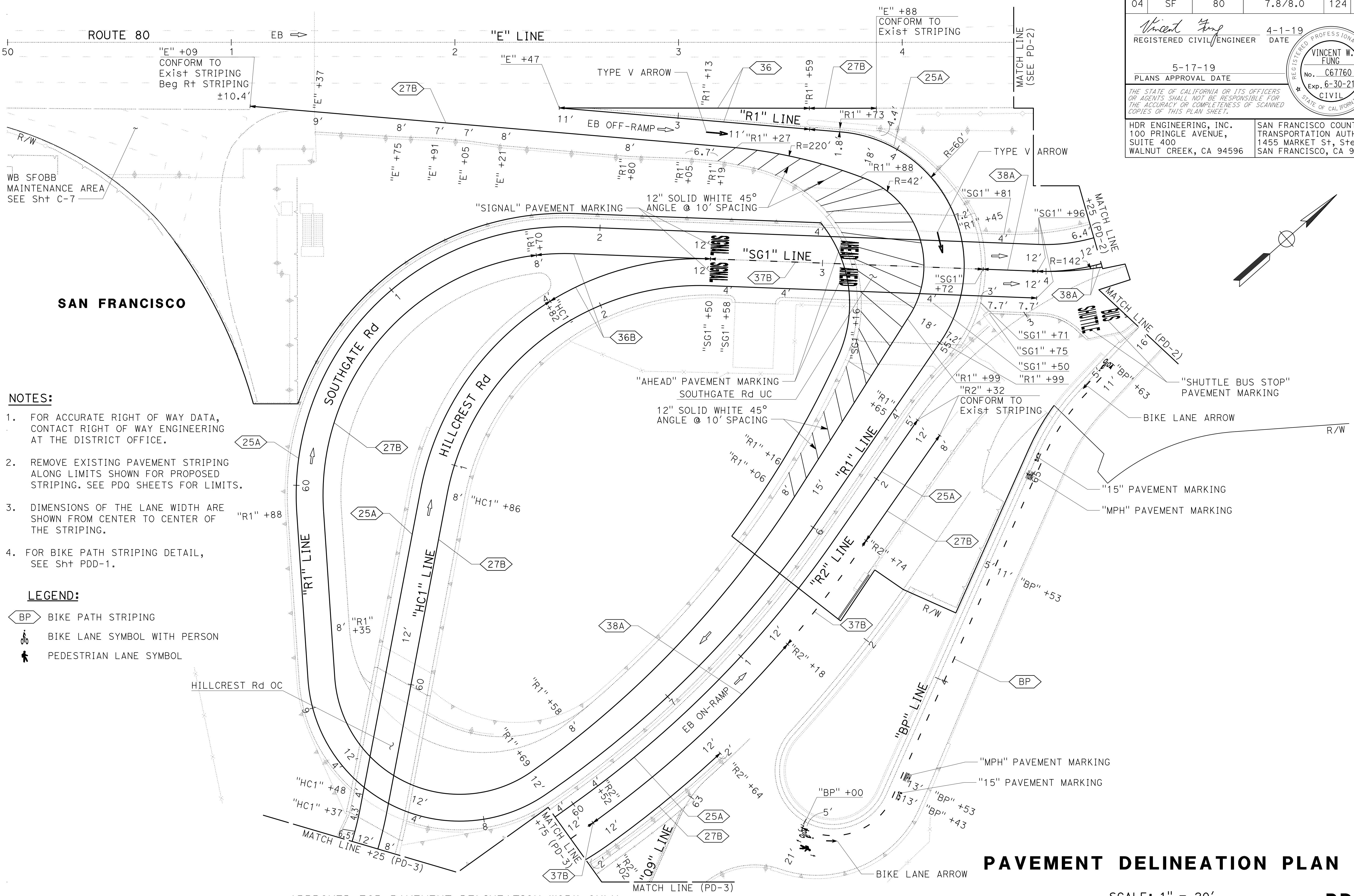
APPROVED FOR DETOUR CONSTRUCTION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Keil Barnard
 Praveen Chilakapati
 Ingrid V. Supit
 Et Caltrans

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: INGRID V. SUPIT
 CHECKED BY:
 VINCENT FUNG
 INGRID SUPIT
 REVISOR: DATE: 4-30-18
 HQ: 2-18-19
 HQ: 11-12-18
 HQ: 2-18-19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	124	436

Vincent Fung
 REGISTERED CIVIL ENGINEER
 4-1-19 DATE
 5-17-19 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.
 HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596
 SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103



- NOTES:**
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
 - REMOVE EXISTING PAVEMENT STRIPING ALONG LIMITS SHOWN FOR PROPOSED STRIPING. SEE PDQ SHEETS FOR LIMITS.
 - DIMENSIONS OF THE LANE WIDTH ARE SHOWN FROM CENTER TO CENTER OF THE STRIPING.
 - FOR BIKE PATH STRIPING DETAIL, SEE Sht PDD-1.
- LEGEND:**
- BP BIKE PATH STRIPING
 - BIKE LANE SYMBOL WITH PERSON
 - PEDESTRIAN LANE SYMBOL

APPROVED FOR PAVEMENT DELINEATION WORK ONLY

PAVEMENT DELINEATION PLAN
 SCALE: 1" = 20'
PD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans	CONSULTANT	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR	DATE
	INGRID V. SUPIT	INGRID V. SUPIT	CHECKED BY	REVISOR	DATE
				REVISOR	DATE
				REVISOR	DATE

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

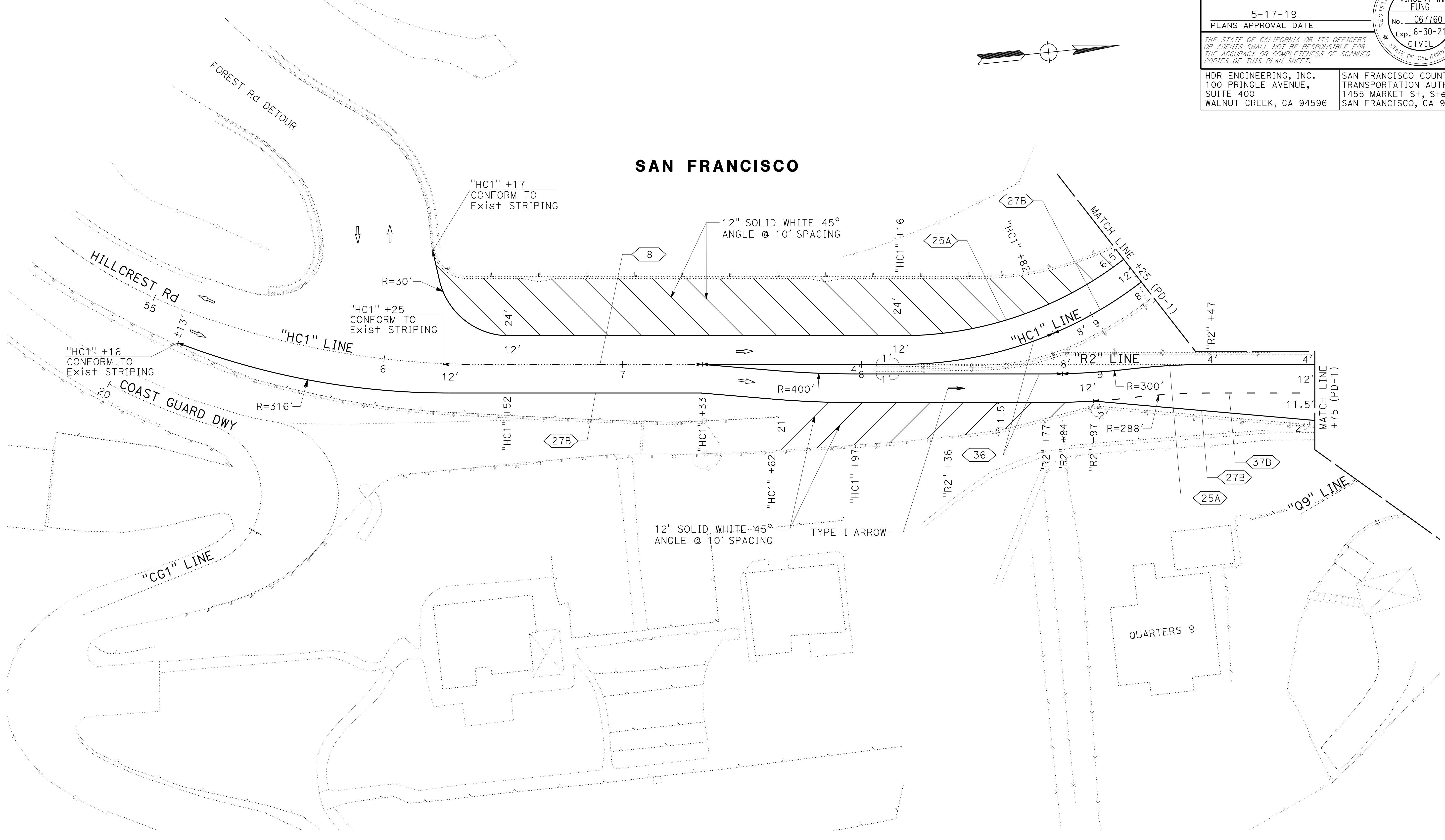
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	126	436

REGISTERED CIVIL ENGINEER: Vincent W. Fung
DATE: 4-1-19
PLANS APPROVAL DATE: 5-17-19

REGISTERED PROFESSIONAL ENGINEER
VINCENT W. FUNG
No. C67760
Exp. 6-30-21
CIVIL
STATE OF CALIFORNIA

HDR ENGINEERING, INC.
100 PRINGLE AVENUE,
SUITE 400
WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
TRANSPORTATION AUTHORITY
1455 MARKET St, Ste 2200
SAN FRANCISCO, CA 94103



FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET PD-1

PAVEMENT DELINEATION PLAN


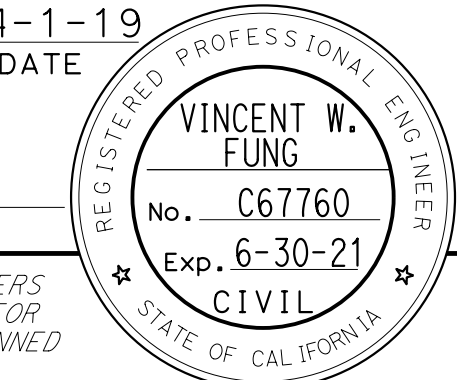
APPROVED FOR PAVEMENT DELINEATION WORK ONLY

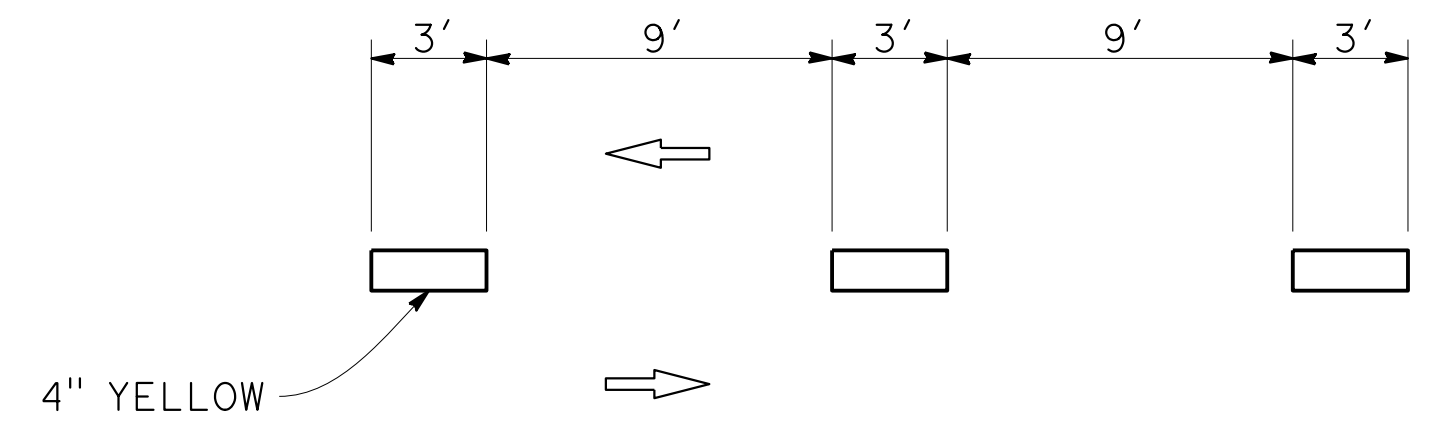
SCALE: 1" = 20'

PD-3

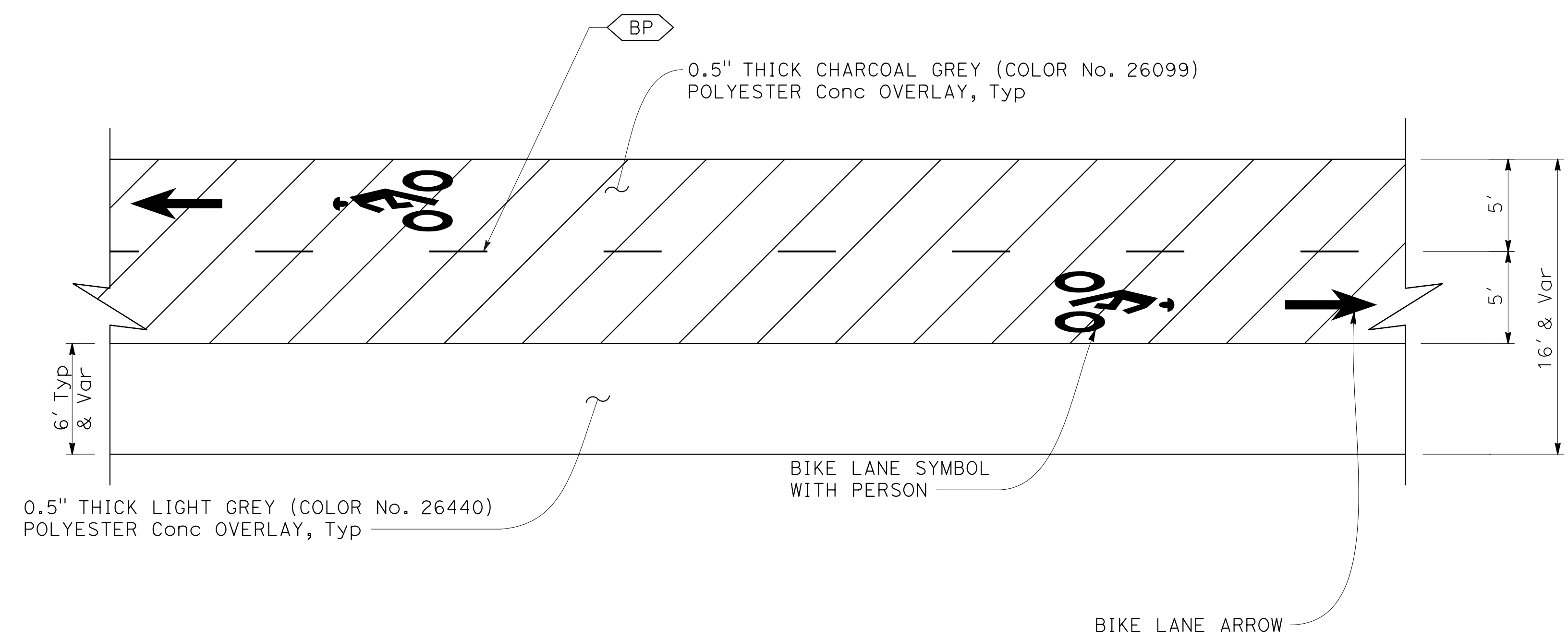
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00-00-00 TIME PLOTTED => 11:27

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans	CONSULTANT - FUNCTIONAL SUPERVISOR	INGRID V. SUPIT	CALCULATED-DESIGNED BY	VINCENT FUNG	REVISOR	HO	HO	HO
	DESIGNED BY	INGRID SUPIT	CHECKED BY	INGRID SUPIT	DATE REVISED	4-30-18	11-12-18	2-18-19
	DATE	5-17-19	DATE	5-17-19	DATE	5-17-19	DATE	5-17-19
	DATE	5-17-19	DATE	5-17-19	DATE	5-17-19	DATE	5-17-19

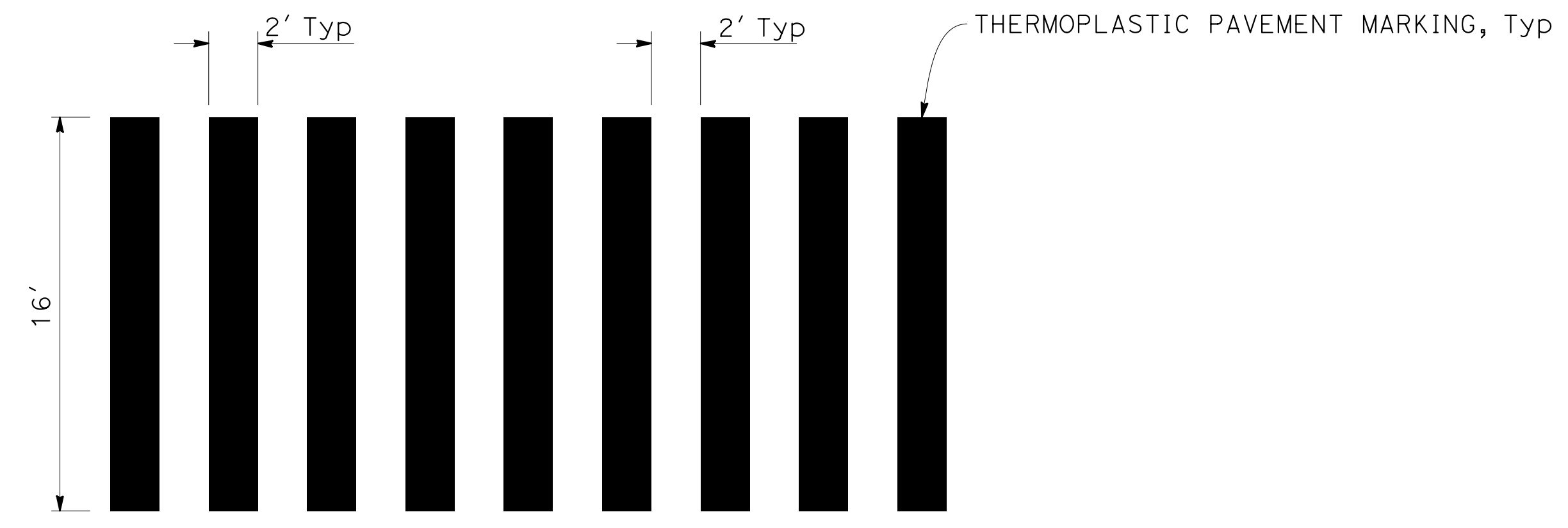
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	127	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



BIKE PATH STRIPING DETAIL (BP)



BIKE PATH DETAIL



CONTINENTAL CROSSWALK DETAIL

PAVEMENT DELINEATION DETAILS

NO SCALE

PDD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR
 INGRID V. SUPIT
 CALCULATED-DESIGNED BY
 CHECKED BY
 VINCENT FUNG
 INGRID SUPIT
 REVISED BY
 DATE REVISED
 HQ
 HQ
 HQ
 3-19-19
 11-12-18
 4-30-18

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	128	436

Vincent Fung
 REGISTERED CIVIL ENGINEER
 DATE 4-1-19
 PLANS APPROVAL DATE 5-17-19

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

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.

PAVEMENT DELINEATION QUANTITIES

SHEET No.	STATION	DIRECTION	DETAIL No. OR PvmT MARKING	THERMOPLASTIC TRAFFIC STRIPE (ENHANCED WET NIGHT VISIBILITY)						PAVEMENT MARKER (RETROREFLECTIVE)			THERMOPLASTIC PAVEMENT MARKING (ENHANCED WET NIGHT VISIBILITY)		
				4"		6"		8"		12"	TYPE C	TYPE G		TYPE RY	
				LF (BROKEN 9-3)	LF WHITE SOLID	LF (BROKEN 17-7)	LF YELLOW SOLID	LF WHITE SOLID	LF (BROKEN 12-3)	LF WHITE SOLID					EA
PD-1	"E" 51+09 TO "R1" 61+70	EB	27B					976							
PD-1	"E" 52+47 TO "E" 53+59	EB	36							112		5			
PD-1	"E" 52+47 TO "R1" 53+59	EB	36							112		5			
PD-1	"E" 53+59 TO "E" 53+88	EB	27B					29							
PD-1	"R1" 53+13 TO "R1" 53+23		TYPE V ARROW										11		33
PD-1	"R1" 54+45 TO "R1" 54+56		TYPE V ARROW										11		33
PD-1	"R1" 53+27 TO "R1" 55+93		12" SOLID WHITE HATCHING												347
PD-1	"R1" 61+70 TO "SG1" 62+50	EB	36B							78		4			
PD-1	"R2" 60+02 TO "R2" 61+18	EB	38A							118					
PD-1	"R2" 61+74 TO "R2" 62+32	EB	27B					58							
PD-1	"R2" 61+18 TO "R2" 61+74	EB	37B						58				3		
PD-1	"HC1" 61+82 TO "SG1" 62+50	EB	36B							75		4			
PD-1	"SG1" 62+50 TO "SG1" 63+71	EB	37B						122				10		
PD-1	"SG1" 62+58		SIGNAL												64
PD-1	"SG1" 63+16		AHEAD												62
PD-1	"SG1" 63+71 TO "SG1" 63+96	EB	38A							24					
PD-1	"BP" 63+00 TO "BP" 65+63	EB	BIKE PATH STRIPING	267											
PD-1	"BP" 63+00 TO "BP" 63+06		BIKE SYMBOL W/ PERSON												7
PD-1	"BP" 63+11 TO "BP" 63+15		BIKE LANE ARROW												4
PD-1	"BP" 63+00 TO "BP" 63+09		PEDESTRIAN LANE SYMBOL												7
PD-1	"BP" 63+43 TO "BP" 63+56		15 MPH												4
PD-1	"BP" 64+98 TO "BP" 65+11		15 MPH												4
PD-1	"BP" 65+45 TO "BP" 65+50		BIKE LANE ARROW												4
PD-1	"BP" 65+56 TO "BP" 65+63		BIKE SYMBOL W/ PERSON												7
PD-1 TO PD-2	"R1" 53+59 TO "SG1" 66+65	EB	25A			1,098							46		
PD-1 TO PD-2	"SG1" 63+96 TO "SG1" 64+56	EB	38A							60					
PD-1 TO PD-2	"SG1" 63+96 TO "SG1" 64+52		38A							57					
PD-1 TO PD-2	"SG1" 63+96 TO "SG1" 64+54		12" SOLID WHITE HATCHING												13
PD-1 TO PD-2	"SG1" 64+12 TO "SG1" 64+34		SHUTTLE BUS STOP												78
PD-1 & PD-3	"HC1" 56+17 TO "HC1" 61+82	EB	25A			583							25		
PD-1 & PD-3	"HC1" 56+19 TO "HC1" 59+30		12" SOLID WHITE HATCHING												613
PD-1 & PD-3	"R2" 58+97 TO "R2" 60+02	EB	37B						105			12			
PD-1 & PD-3	"HC1" 55+16 TO "R2" 60+64	EB	27B					557							
PD-1 & PD-3	"R2" 58+84 TO "R2" 62+32	EB	25A			348							15		
PD-1 TO PD-3	"HC1" 58+82 TO "SG1" 63+96	EB	27B					514							
SUBTOTAL				267			2,029	2,134	285	637		18	25	108	1,278

PAVEMENT DELINEATION QUANTITIES

PDQ-1

LAST REVISION DATE PLOTTED => 13-NOV-2019
 00-00-00 TIME PLOTTED => 13:40

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: TARYN PASCUA
 CHECKED BY: VINCENT FUNG
 TB: 12-28-18
 TB: 11-17-17
 REVISOR: TARYN PASCUA
 DATE: 5-17-19
 HQ: 5-17-19

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- EXACT LOCATION AND POSITION OF ROADSIDE SIGNS TO BE DETERMINED BY THE ENGINEER.
- CONTRACTOR SHALL DOCUMENT THE EXISTING CONDITION OF THE EXISTING SIGNS TO BE RELOCATED BEFORE REMOVAL. ANY SIGNS DAMAGED BY THE CONTRACTOR THAT WERE TO BE RELOCATED WILL BE REPLACED AT CONTRACTOR EXPENSE.
- REMOVAL OF SIGNS MOUNTED TO EXISTING FENCE TO BE REMOVED SHALL BE PAID FOR AS PART OF FENCE REMOVAL.

LEGEND:

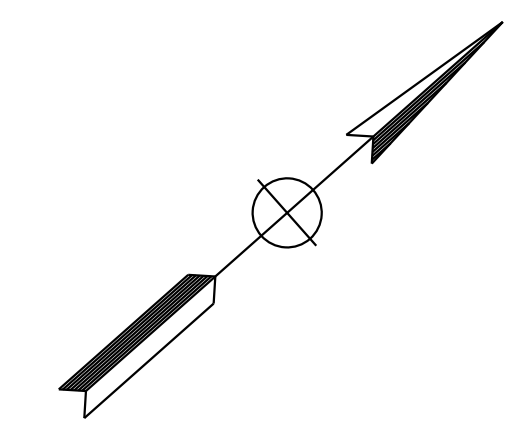
- * EXISTING ROADSIDE SIGN TO REMAIN
- REMOVE EXISTING ROADSIDE SIGN / REMOVE SIGN PANEL
- RELOCATE EXISTING ROADSIDE SIGN / RELOCATE EXISTING ROADSIDE SIGN PANEL
- ▲ RESET EXISTING ROADSIDE SIGN
- BMS BARRIER MOUNTED SIGN
- DMS DECK MOUNTED SIGN
- Juris JURISDICTION

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	130	436

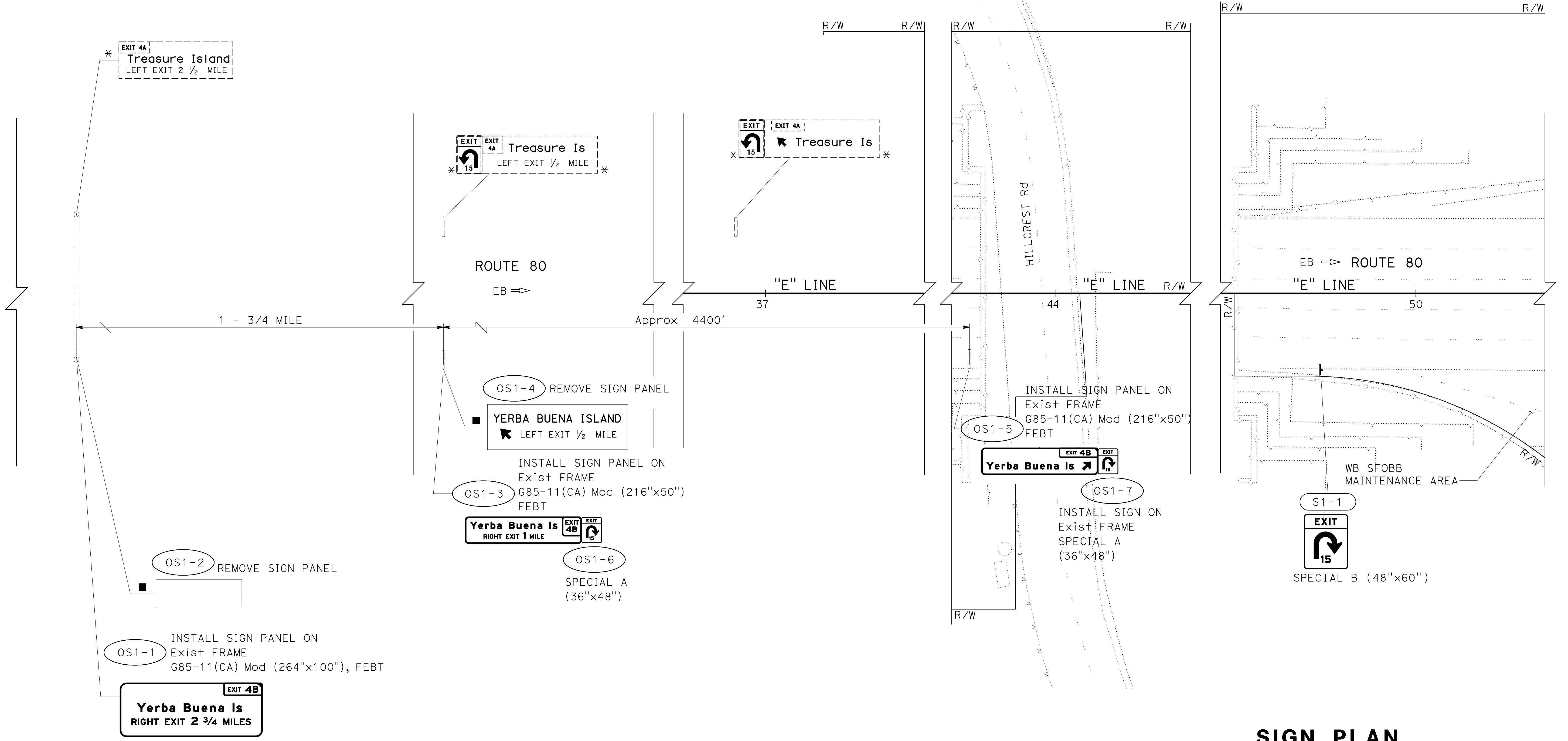
Vincent Fung
 REGISTERED CIVIL ENGINEER
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



SAN FRANCISCO



SIGN PLAN

SCALE: 1" = 20'

APPROVED FOR SIGN WORK ONLY

S-1

HQ	5-17-19
TP	2-5-19
TB	11-17-17
REVISOR	DATE
TARYN PASCUA	VINCENT FUNG
CALCULATED/DESIGNED BY	CHECKED BY
INGRID V. SUPIT	
CONSULTANT	FUNCTIONAL SUPERVISOR
DEPARTMENT OF TRANSPORTATION	
STATE OF CALIFORNIA	

NOTE:
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY
ENGINEERING AT THE DISTRICT OFFICE.

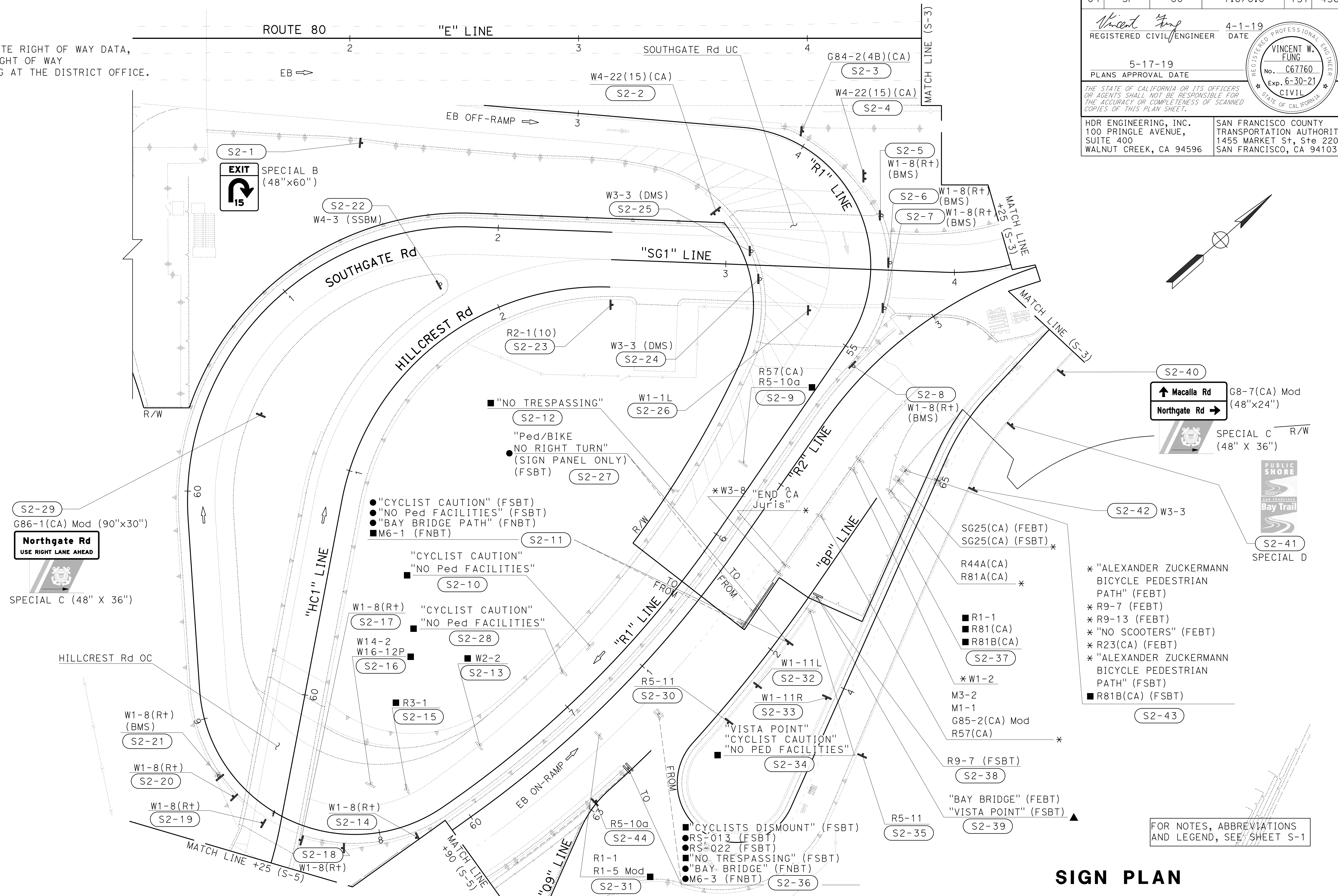
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	131	436

Vincent Fung
REGISTERED CIVIL ENGINEER
DATE 4-1-19
PLANS APPROVAL DATE 5-17-19

VINCENT W. FUNG
No. C67760
Exp. 6-30-21
CIVIL
STATE OF CALIFORNIA

HDR ENGINEERING, INC.
100 PRINGLE AVENUE,
SUITE 400
WALNUT CREEK, CA 94596

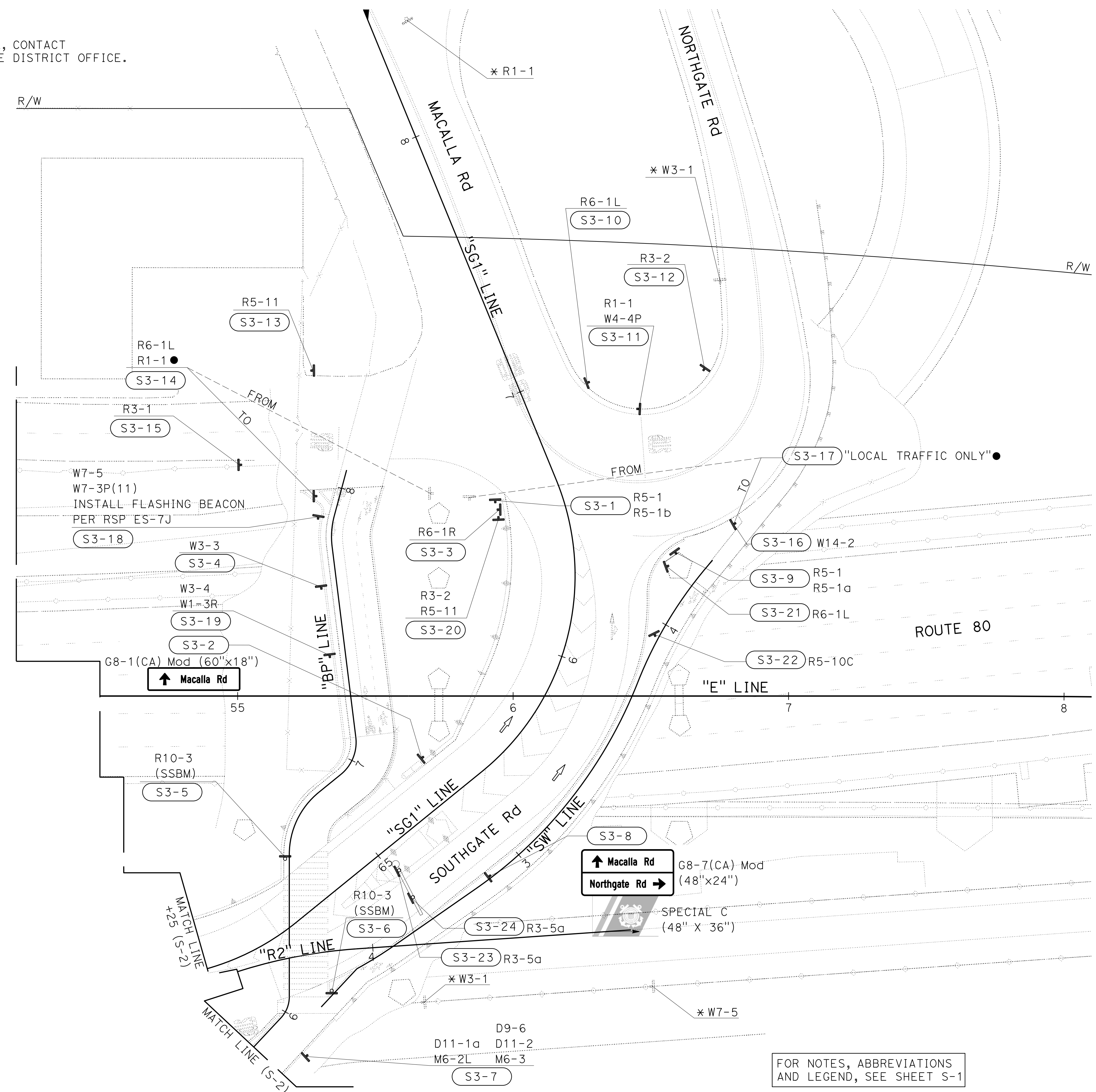
SAN FRANCISCO COUNTY
TRANSPORTATION AUTHORITY
1455 MARKET St, Ste 2200
SAN FRANCISCO, CA 94103



SIGN PLAN
SCALE: 1" = 20'
S-2

HQ	5-17-19
TP	2-5-19
TB	11-17-17
REVISED BY	DATE REVISED
TARYN PASCUA	VINCENT FUNG
CALCULATED-DESIGNED BY	CHECKED BY
INGRID V. SUPIT	
CONSULTANT FUNCTIONAL SUPERVISOR	
DEPARTMENT OF TRANSPORTATION	
STATE OF CALIFORNIA - Caltrans	

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



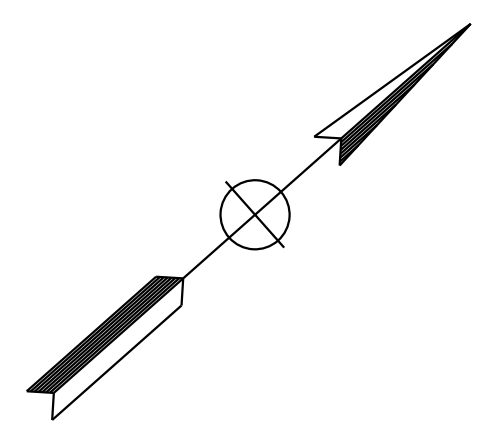
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	132	436

Vincent Fung
 REGISTERED CIVIL ENGINEER
 DATE 4-1-19
 PLANS APPROVAL DATE 5-17-19

VINCENT W. FUNG
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE SHEET S-1

SIGN PLAN

SCALE: 1" = 20'

S-3

APPROVED FOR SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: CHECKED BY:
 TARYN PASCUA VINCENT FUNG
 REVISED BY: DATE REVISED: 11-17-17
 TB: 11-17-17
 AC: 4-11-18
 HQ: 5-17-19

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

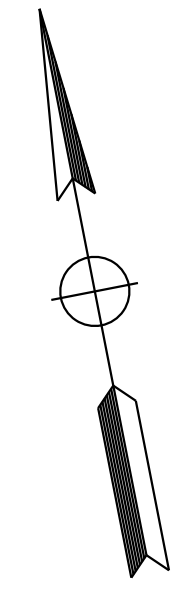
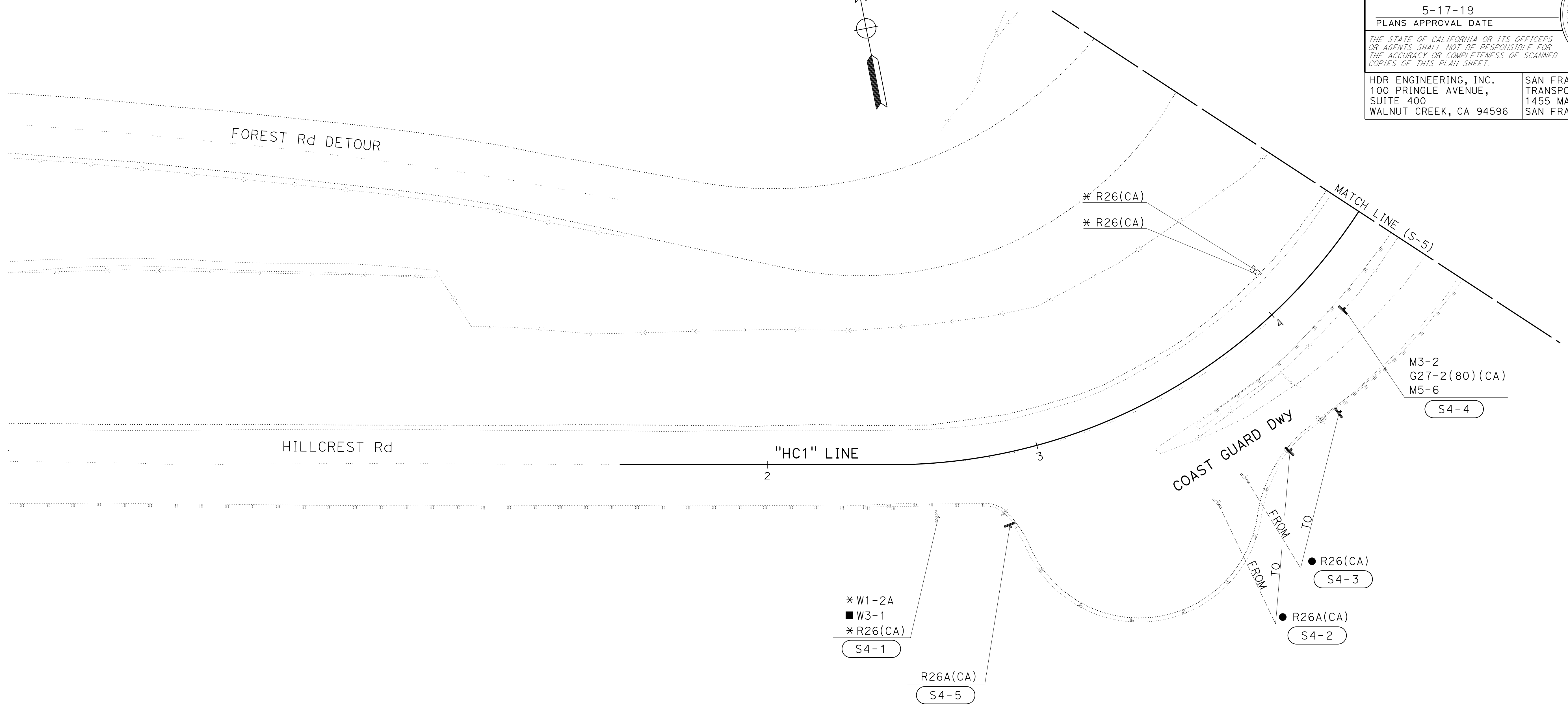
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	133	436

Vincent Fung
 REGISTERED CIVIL ENGINEER
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

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.



FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET S-1

SIGN PLAN

SCALE: 1" = 20'

S-4

APPROVED FOR SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 TARYN PASQUA
 VINCENT FUNG
 REVISOR: TARYN PASQUA
 DATE: 11-17-17
 DATE: 2-5-19
 HQ: 5-17-19

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

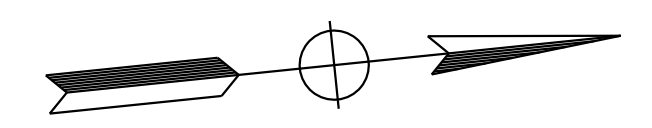
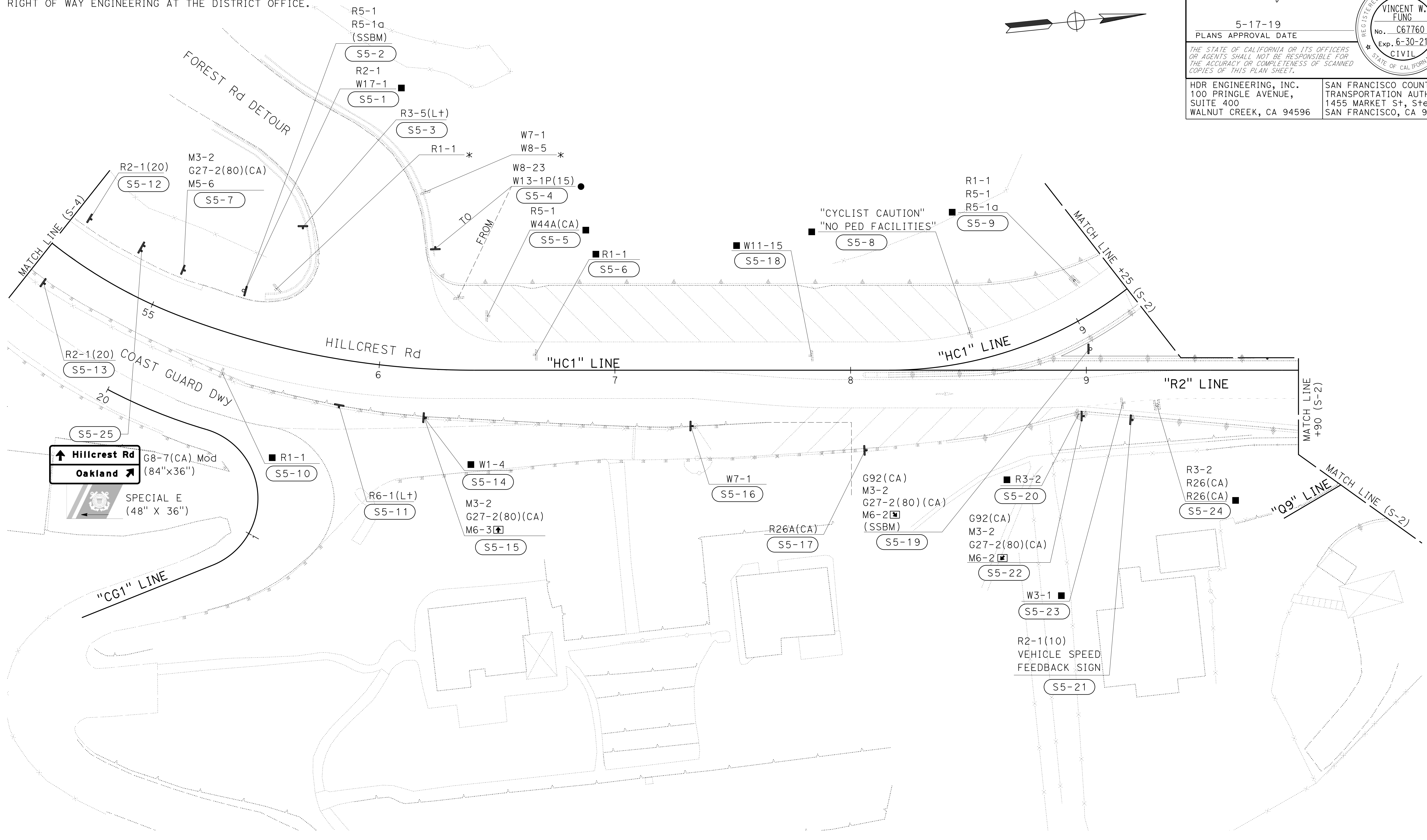
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	134	436

REGISTERED CIVIL ENGINEER: Vincent Fung
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

REGISTERED PROFESSIONAL ENGINEER: VINCENT W. FUNG
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET S-1

SIGN PLAN


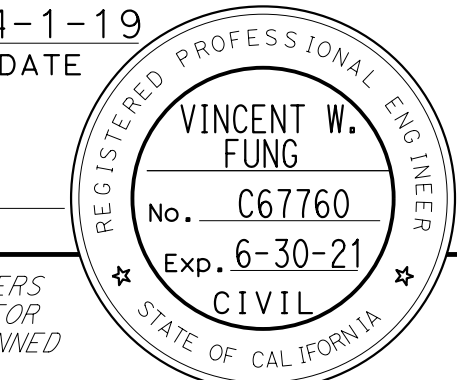
SCALE: 1" = 20'

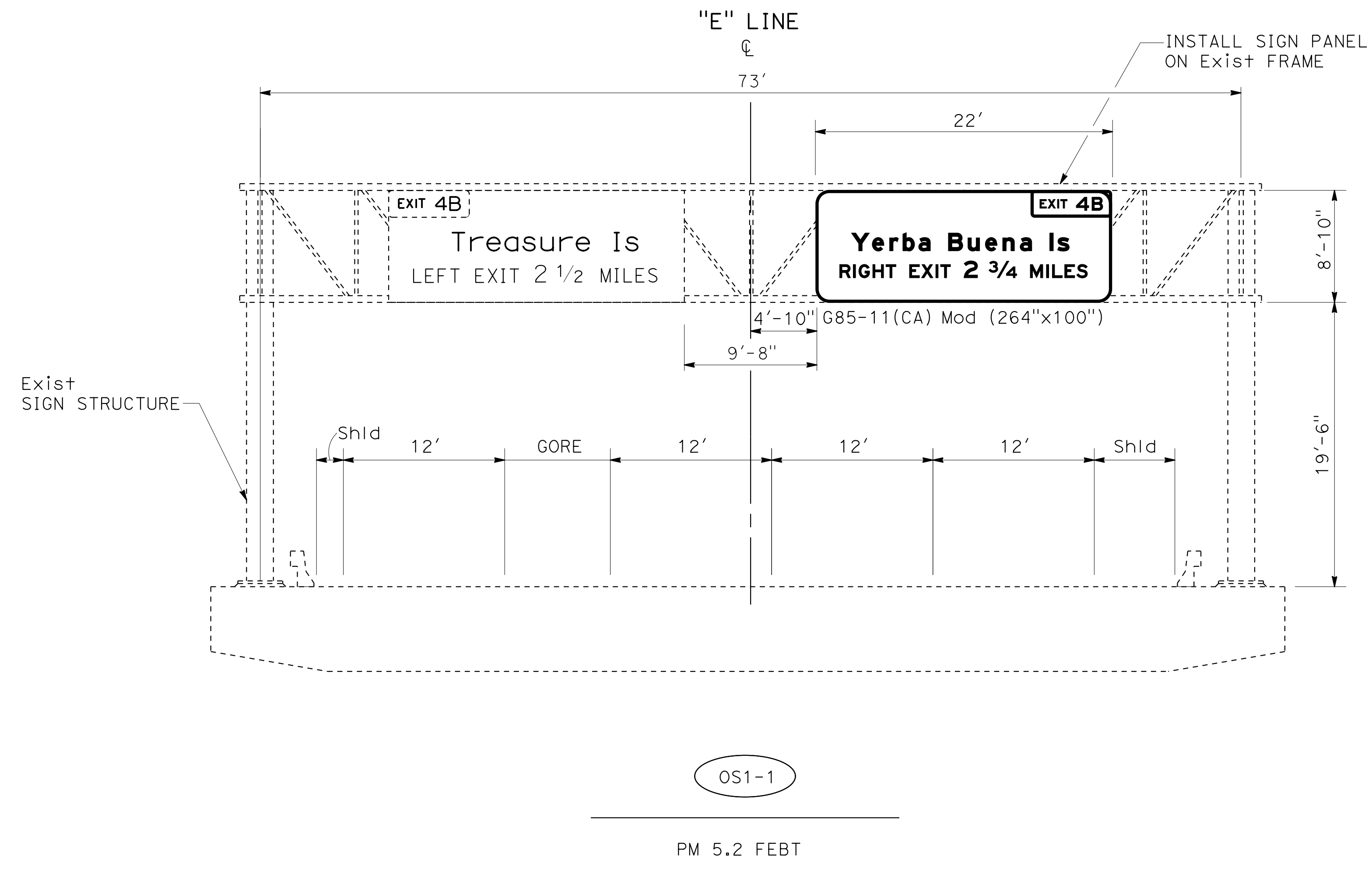
S-5

APPROVED FOR SIGN WORK ONLY

LAST REVISION: DATE PLOTTED => 13-NOV-2019 00-00-00 TIME PLOTTED => 12:50

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	TARYN PASCUA	REVISOR	TB	TB	TB	HQ
Caltrans	INGRID V. SUPIT	CHECKED BY	VINCENT FUNG	DATE REVISED	10-6-17	12-28-18	5-17-19	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	135	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
<small>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.</small>					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		




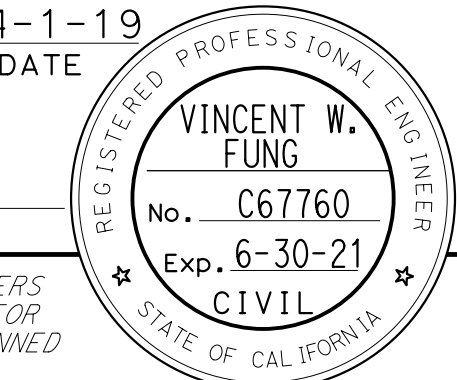
SIGN DETAILS

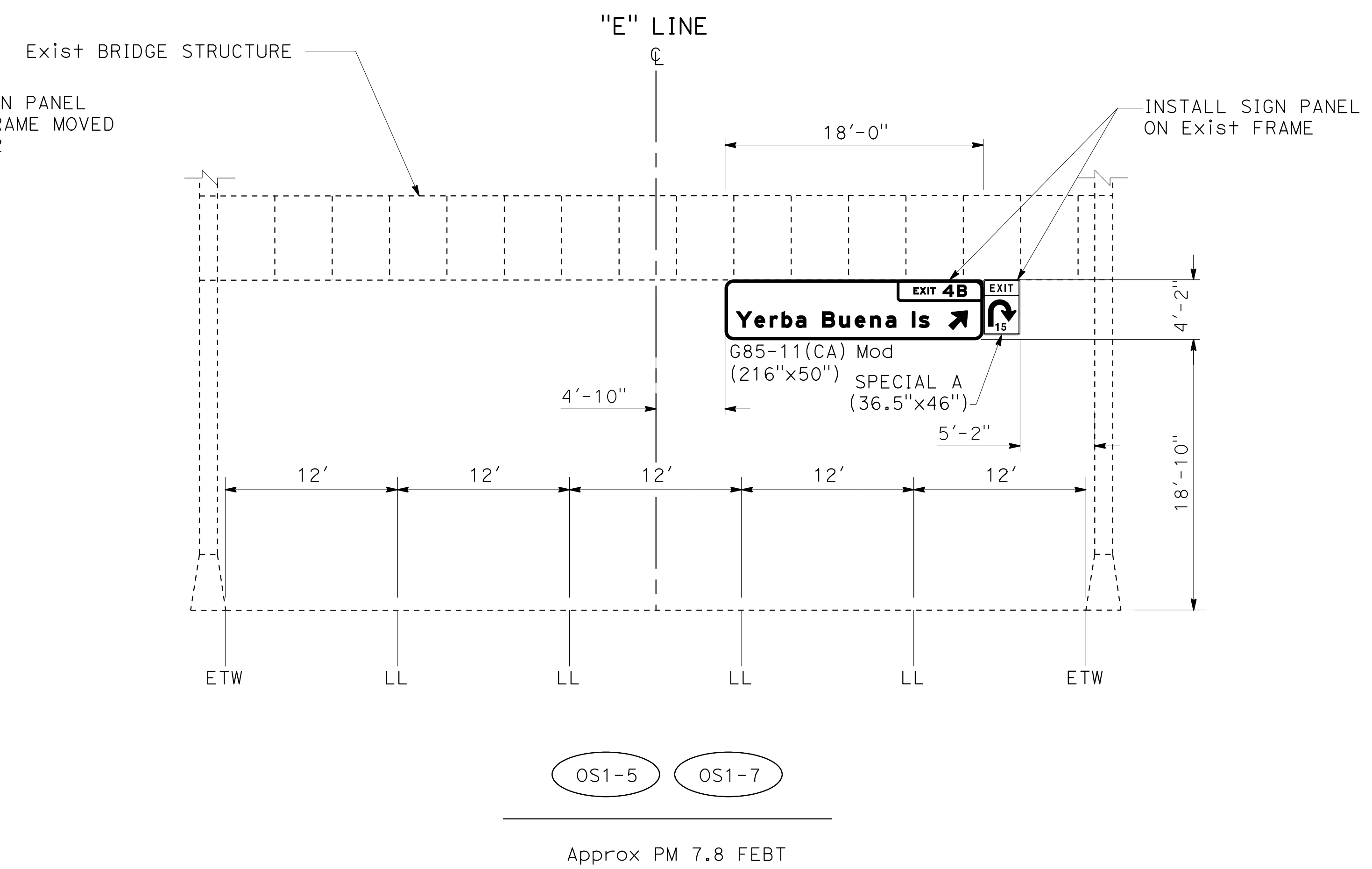
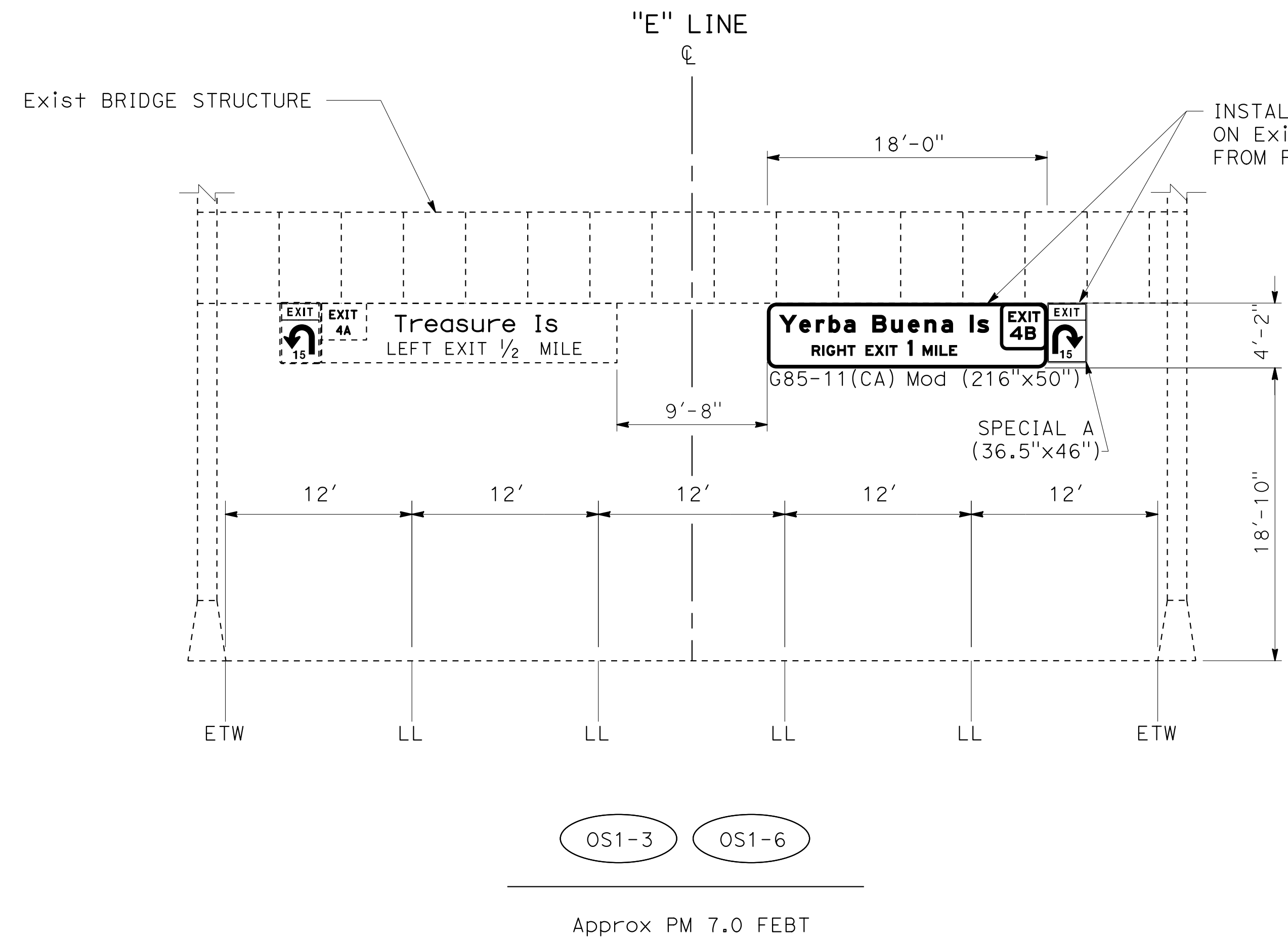
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SD-1

LAST REVISION DATE PLOTTED => 13-NOV-2019
 00-00-00 TIME PLOTTED => 14:31

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: TARYN PASCUA
 CHECKED BY: VINCENT FUNG
 REVISIONS:
 TB 10-6-17
 TP 1-10-19
 HQ 5-17-19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	136	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
<small>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.</small>					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



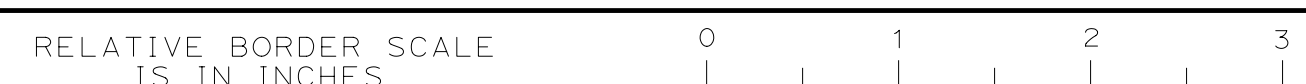
SIGN DETAILS
 NO SCALE
SD-2

LAST REVISION DATE PLOTTED => 13-NOV-2019 00-00-00 TIME PLOTTED => 14:31

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	REVISOR	DATE	PROJECT	DATE
Caltrans	INGRID V. SUPIT	TARYN PASCUA	10-6-17	4-17-18	5-17-19
		VINCENT FUNG			
	CALCULATED/DESIGNED BY	REVISOR	DATE	PROJECT	DATE
	CHECKED BY				

BORDER LAST REVISED 7/2/2010


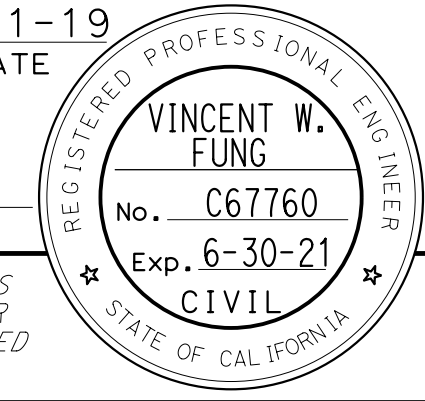
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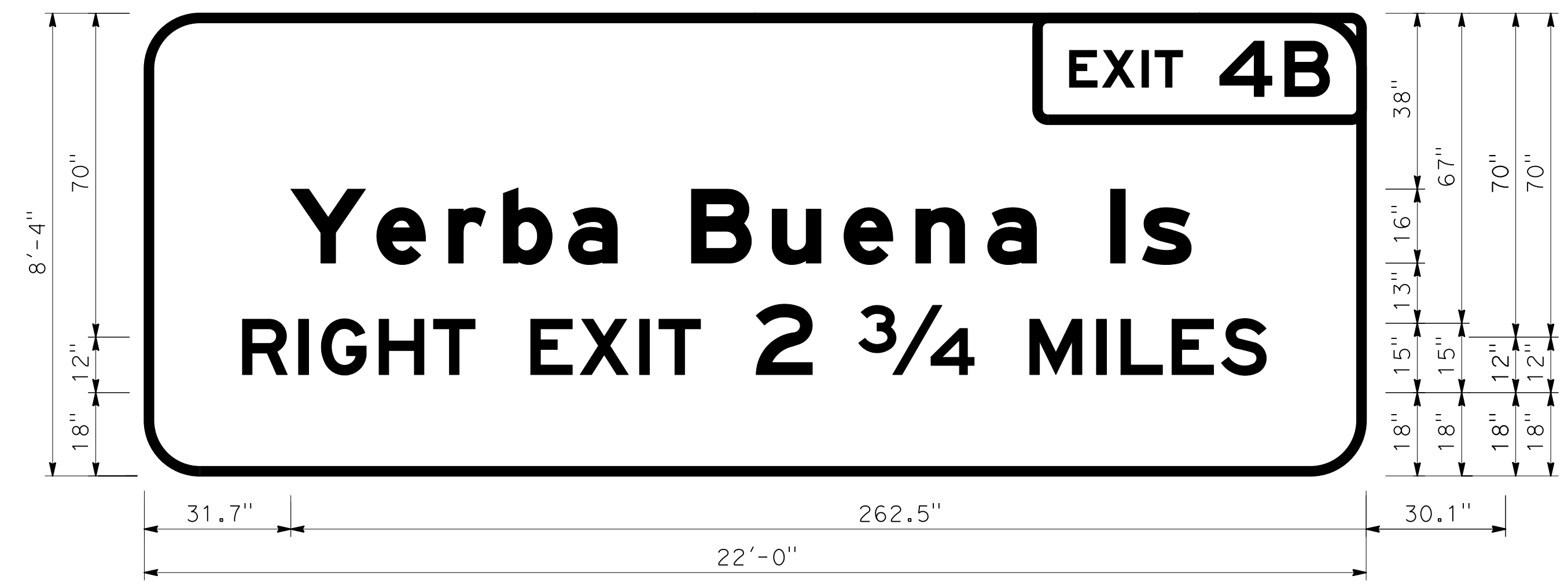


UNIT 0728

PROJECT NUMBER & PHASE

04190001531

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	137	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



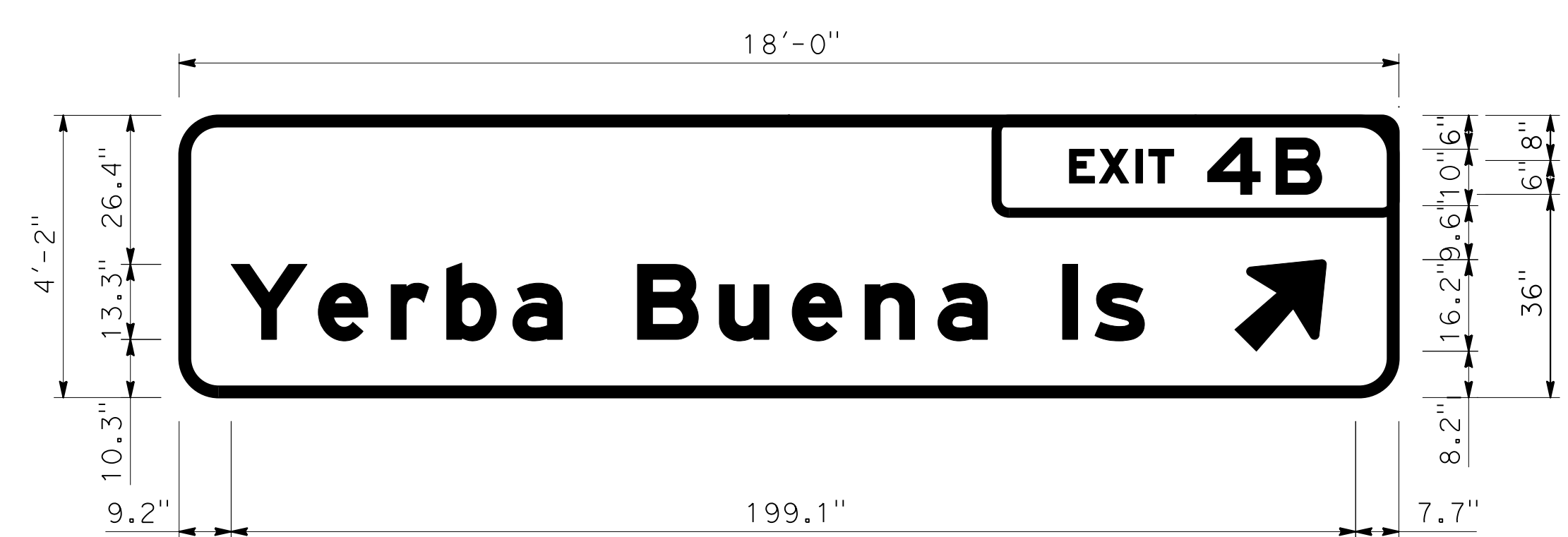
12.0" RADIUS, 2.0" BORDER, WHITE ON GREEN;
[EXIT] E; [4B] E; [YERBA BUENA IS] E Mod; [2 3/4 MILES] E

OS1-1



6.0" RADIUS, 2.0" BORDER, WHITE ON GREEN;
[EXIT] E; [4B] E; [YERBA BUENA IS] E Mod; [RIGHT EXIT 1 MILE] E

OS1-3



6.0" RADIUS, 2.0" BORDER, WHITE ON GREEN;
[EXIT 4B] E; [YERBA BUENA IS] E Mod; UP ARROW - 16.2" 45°

OS1-5


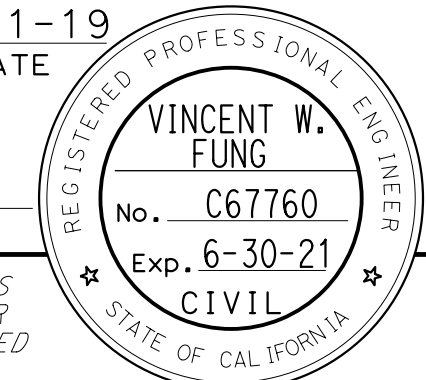
SIGN DETAILS

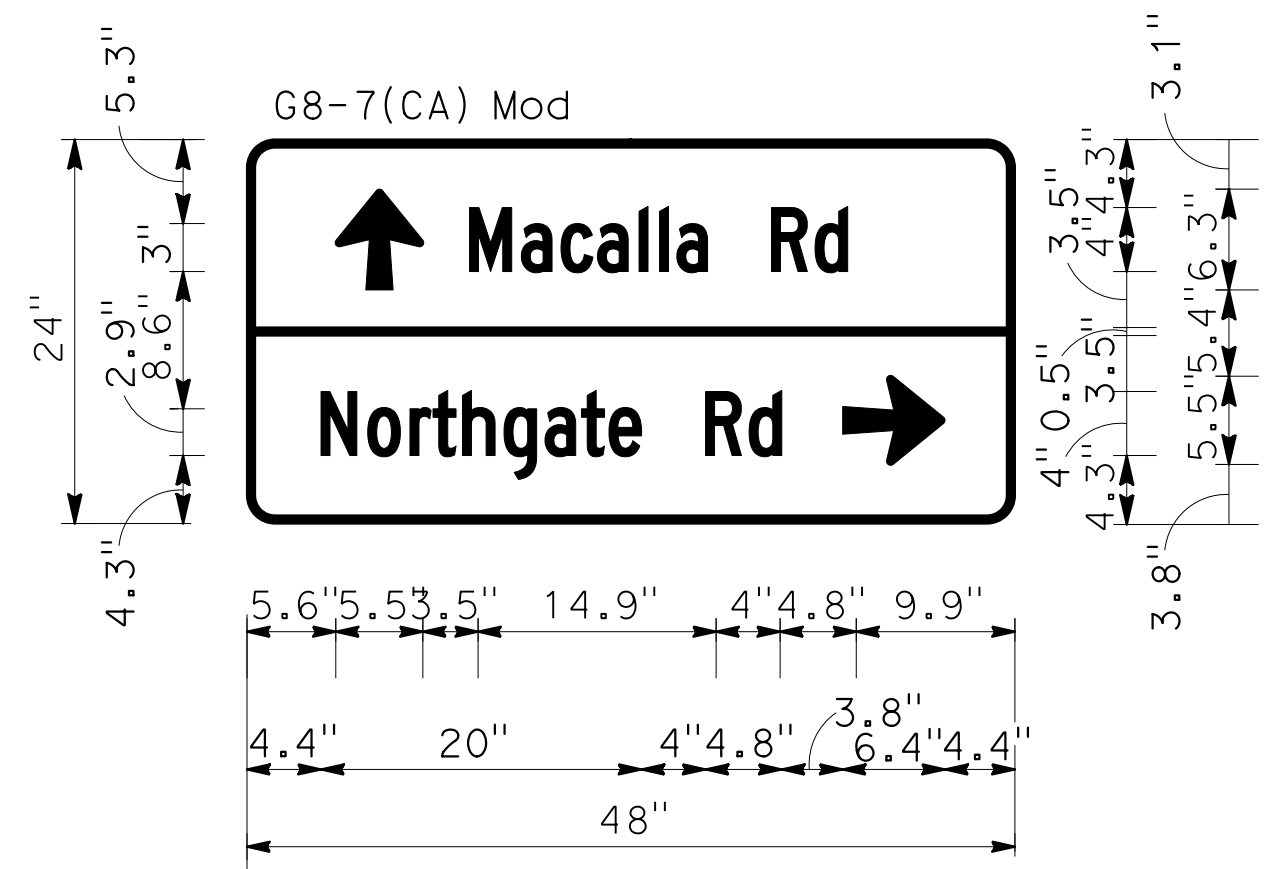
NO SCALE

SD-3

LAST REVISION | DATE PLOTTED => 13-NOV-2019
00-00-00 | TIME PLOTTED => 14:31

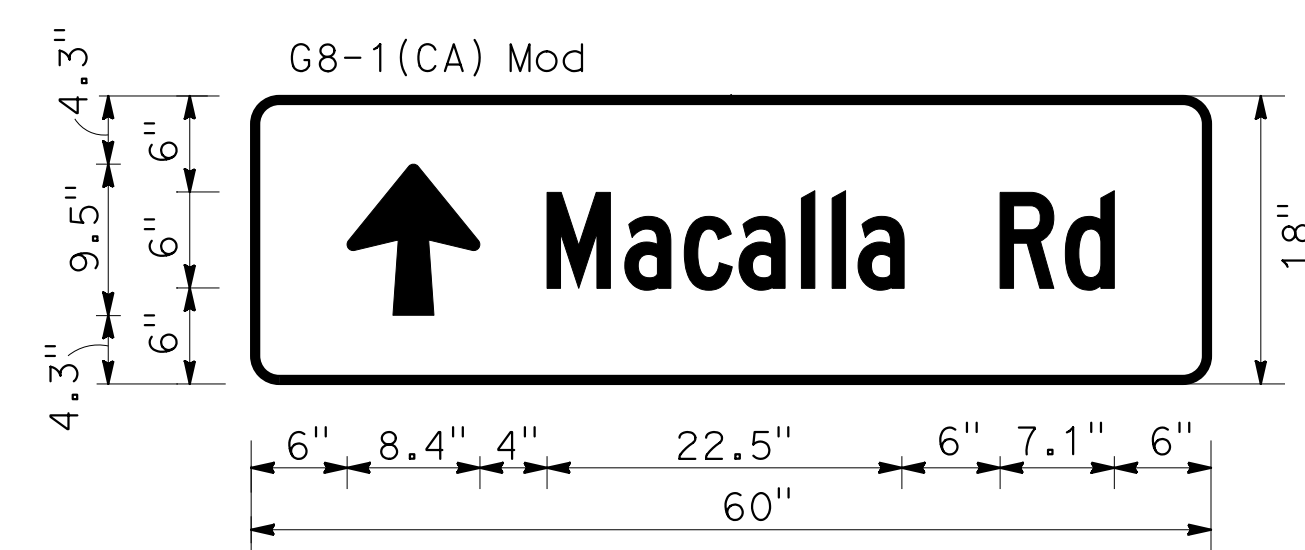
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE	TP	HQ
Et Caltrans		CHECKED BY				

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	138	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



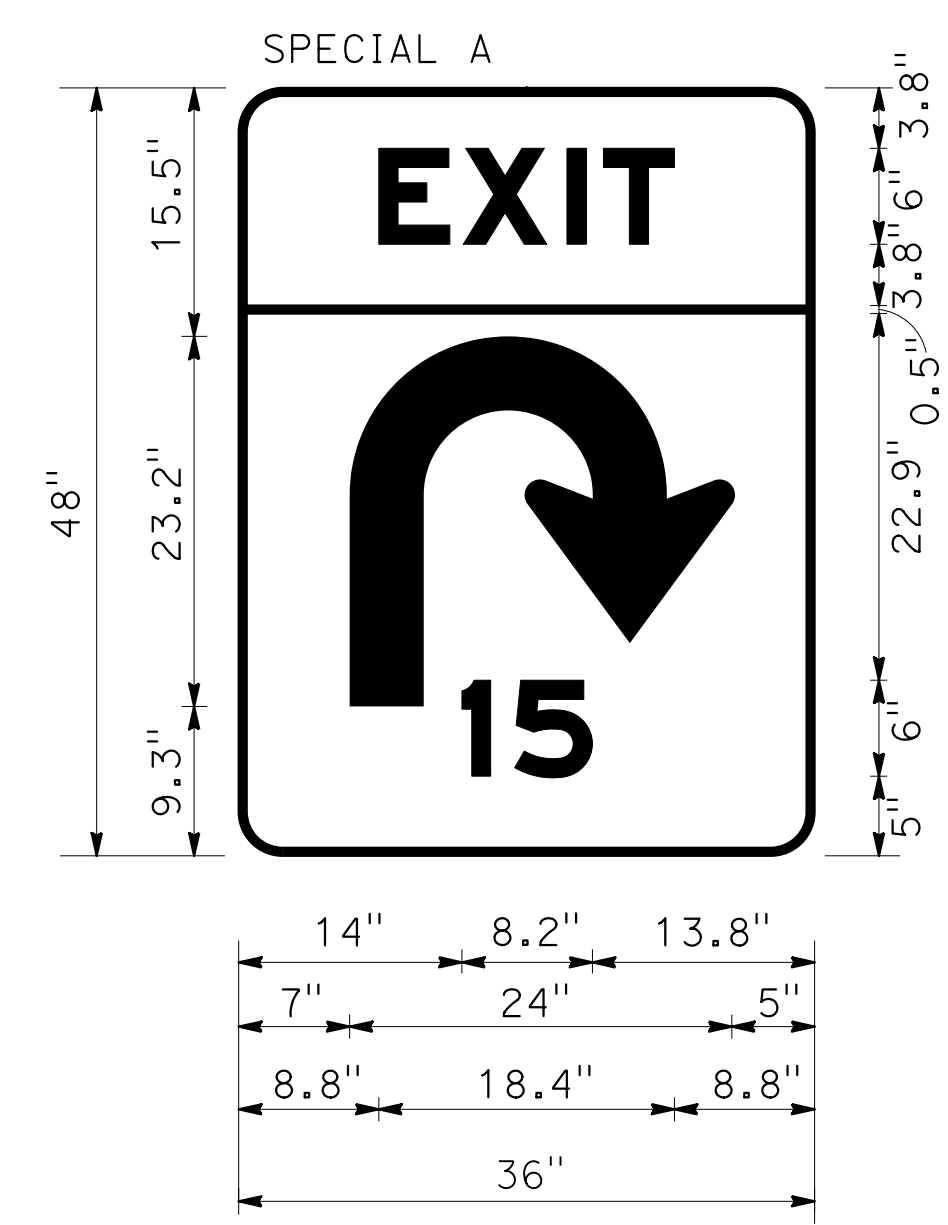
G8-7(CA) Mod
 1.75" RADIUS, 0.5" BORDER, WHITE ON GREEN;
 UP ARROW - 6.3" 90°; [MACALLA RD] E;
 [NORTHGATE RD] E; UP ARROW - 5.5" 0°

(S3-8) (S2-40)



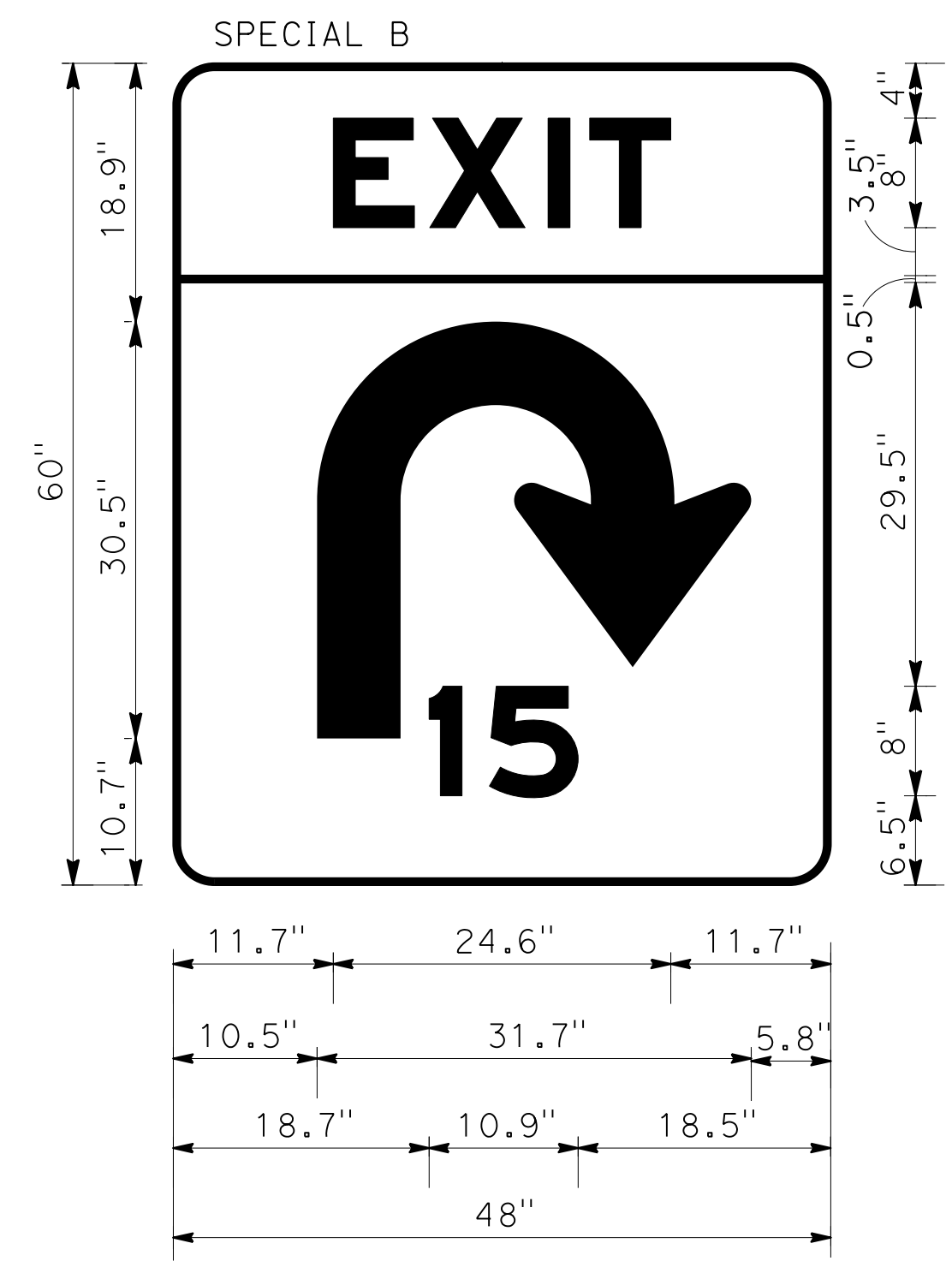
G8-1(CA) Mod
 1.5" RADIUS, 0.5" BORDER, WHITE ON GREEN;
 UP ARROW - 9.5" 90°; [MACALLA RD] C

(S3-2)



SPECIAL A
 2.75" RADIUS, 0.5" BORDER, BLACK ON YELLOW;
 [EXIT] E; U-TURN ARROW - 23.2" 270°; [15] E;

(OS1-6) (OS1-7)



SPECIAL B
 3.0" RADIUS, 0.5" BORDER, BLACK ON YELLOW;
 [EXIT] E; U-TURN ARROW - 30.5" 270°; [15] E;

(S1-1) (S2-1)

SIGN DETAILS

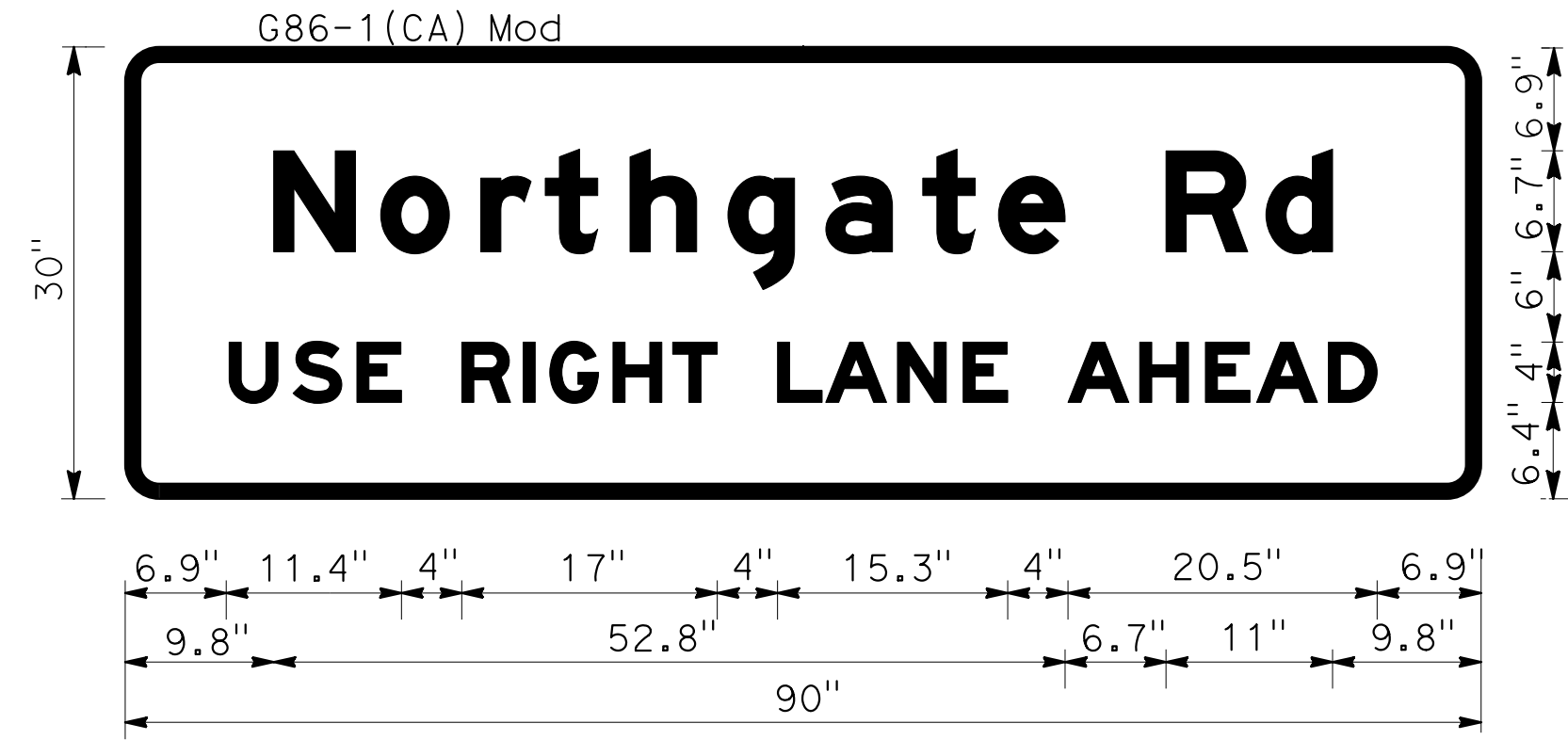
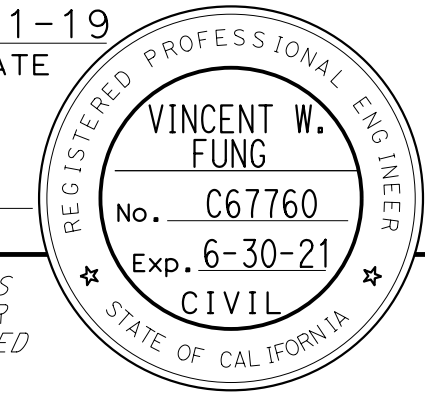
NO SCALE

SD-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	INGRID V. SUPIT	CALCULATED-DESIGNED BY	TARYN PASCUA	REVISOR	TB	TP	HQ
	CHECKED BY	VINCENT FUNG	DATE REVISED	10-6-17	1-28-19	5-17-19		



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	139	436
			4-1-19	DATE	
REGISTERED CIVIL ENGINEER					
5-17-19			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.					

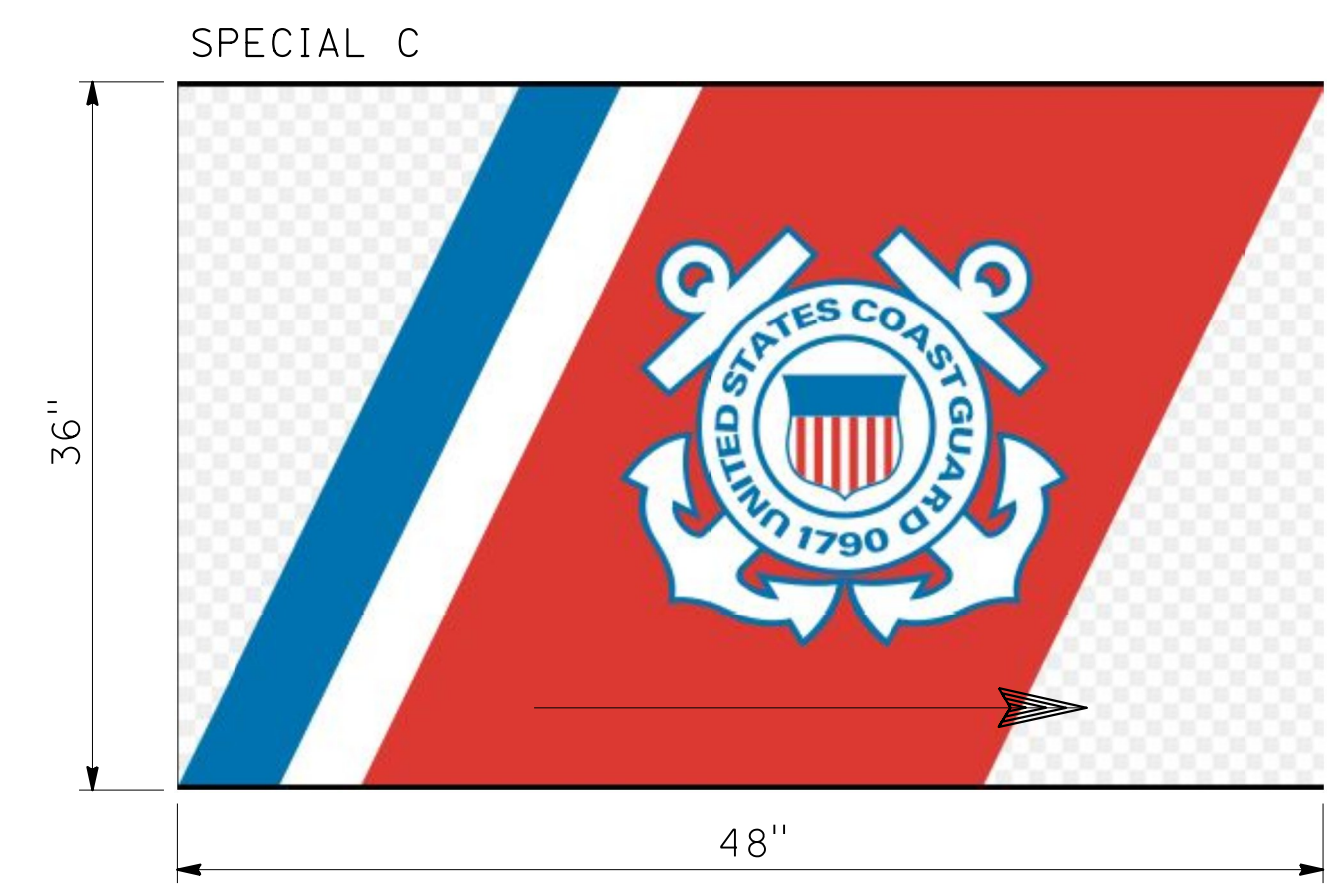


3.0" RADIUS, 2.0" BORDER, WHITE ON GREEN;
 [NORTHGATE RD] E Mod; [USE RIGHT LANE AHEAD] E Mod

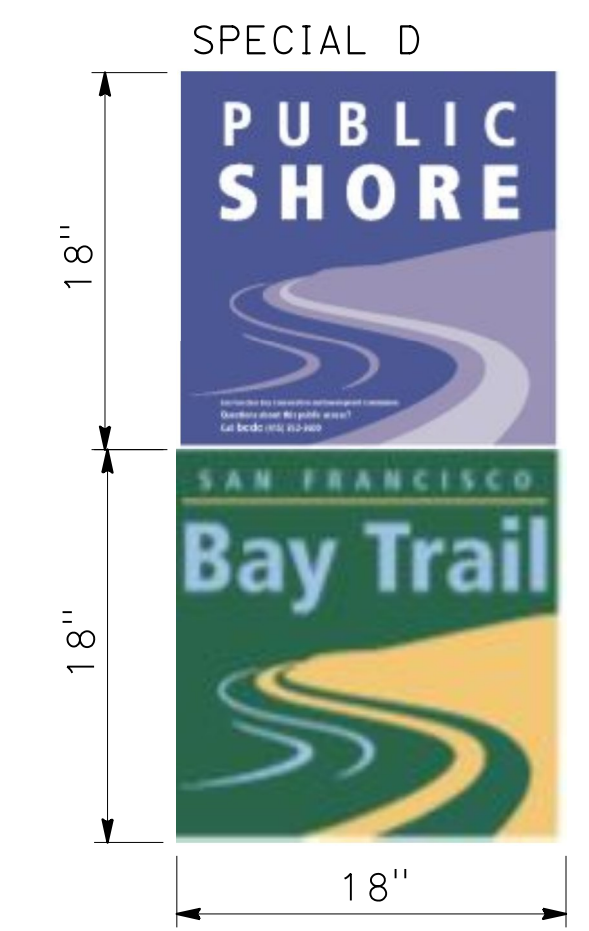
(S2-29)



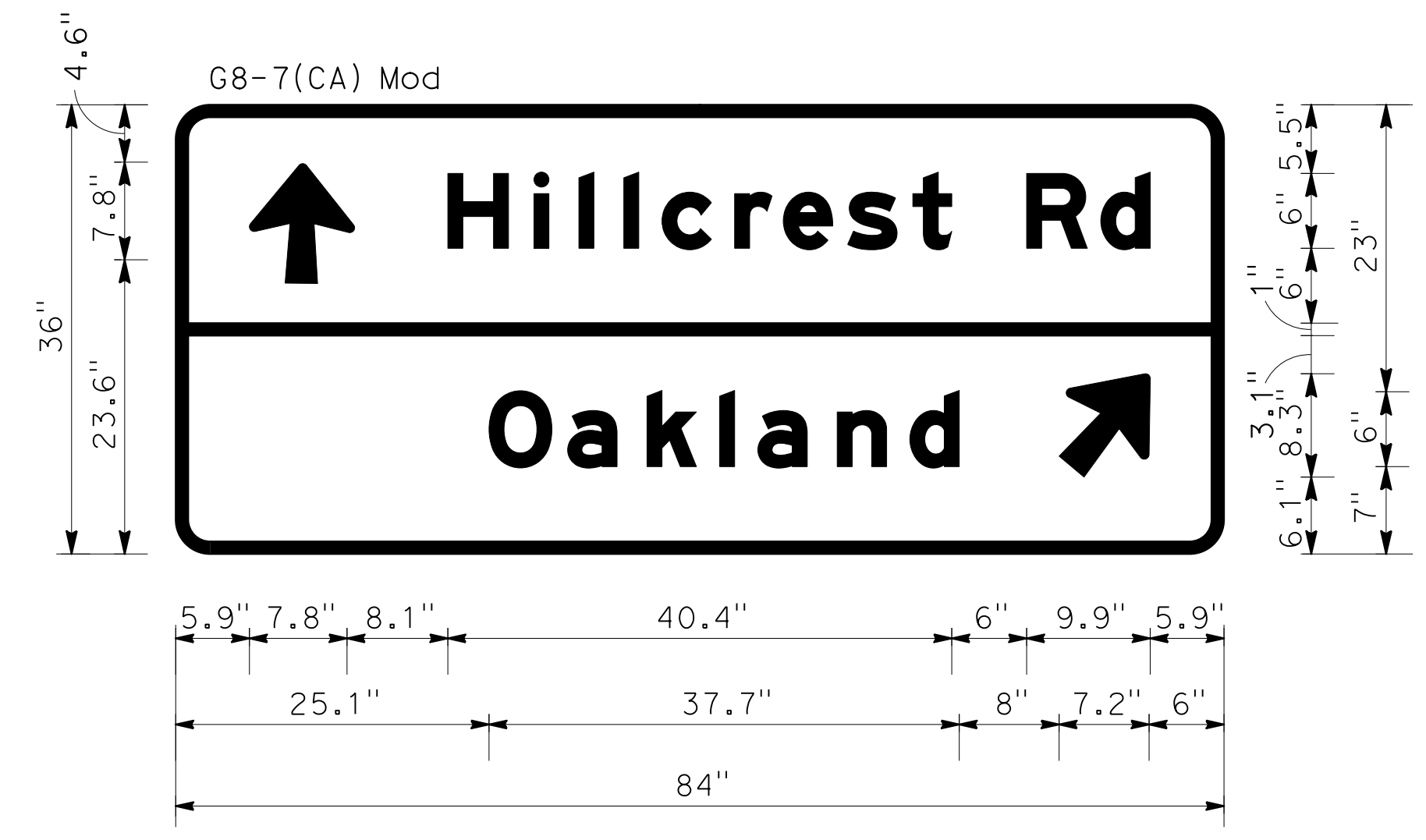
(S5-25)



(S2-29) (S2-40) (S3-8)



(S2-41)



2.75" RADIUS, 1.0" BORDER, WHITE ON GREEN;
 UP ARROW - 7.8" 135°; [HILLCREST RD] E; [OAKLAND] E;
 UP ARROW - 8.3" 45°

(S5-25)

SIGN DETAILS

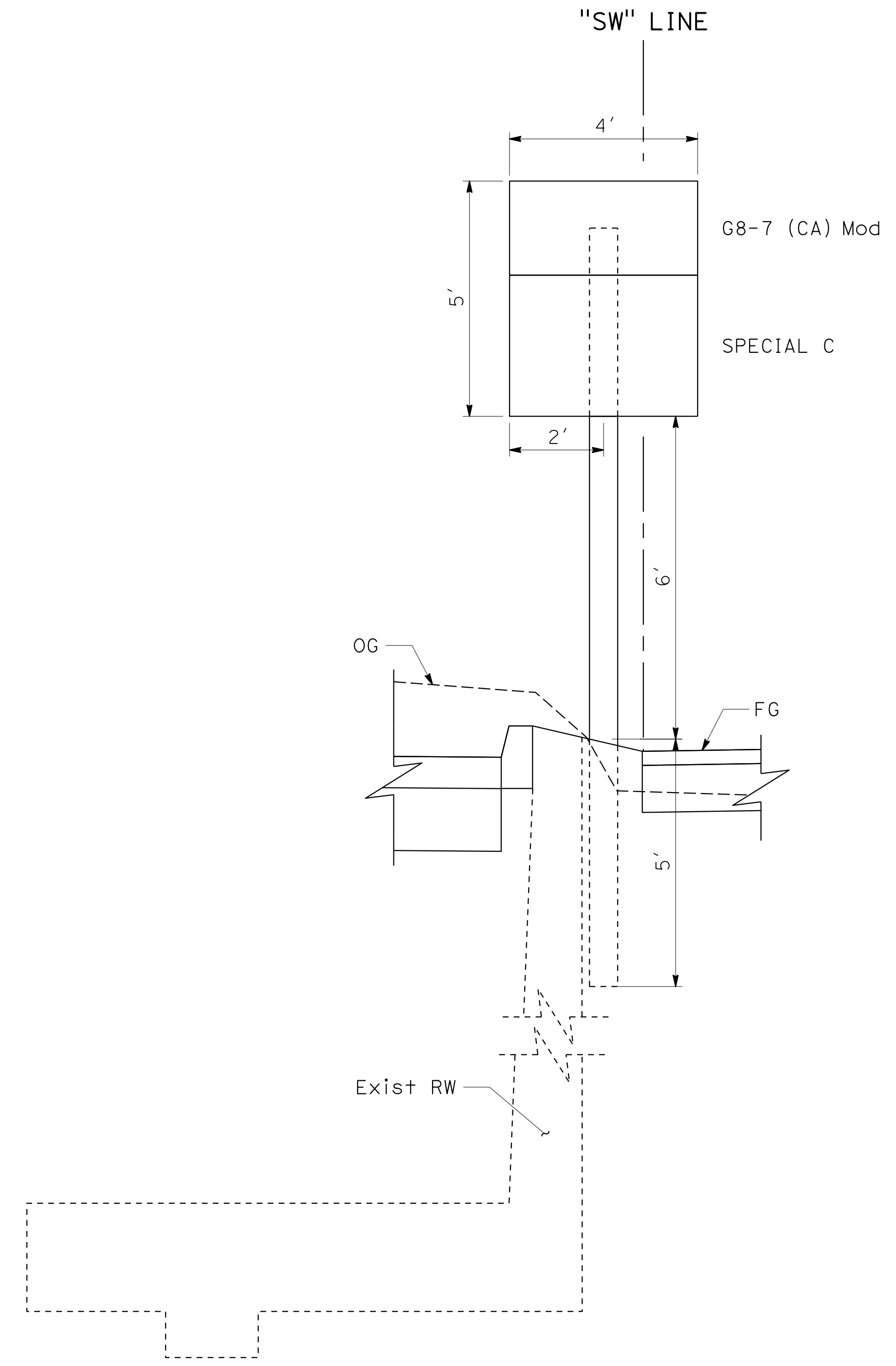
NO SCALE

SD-5

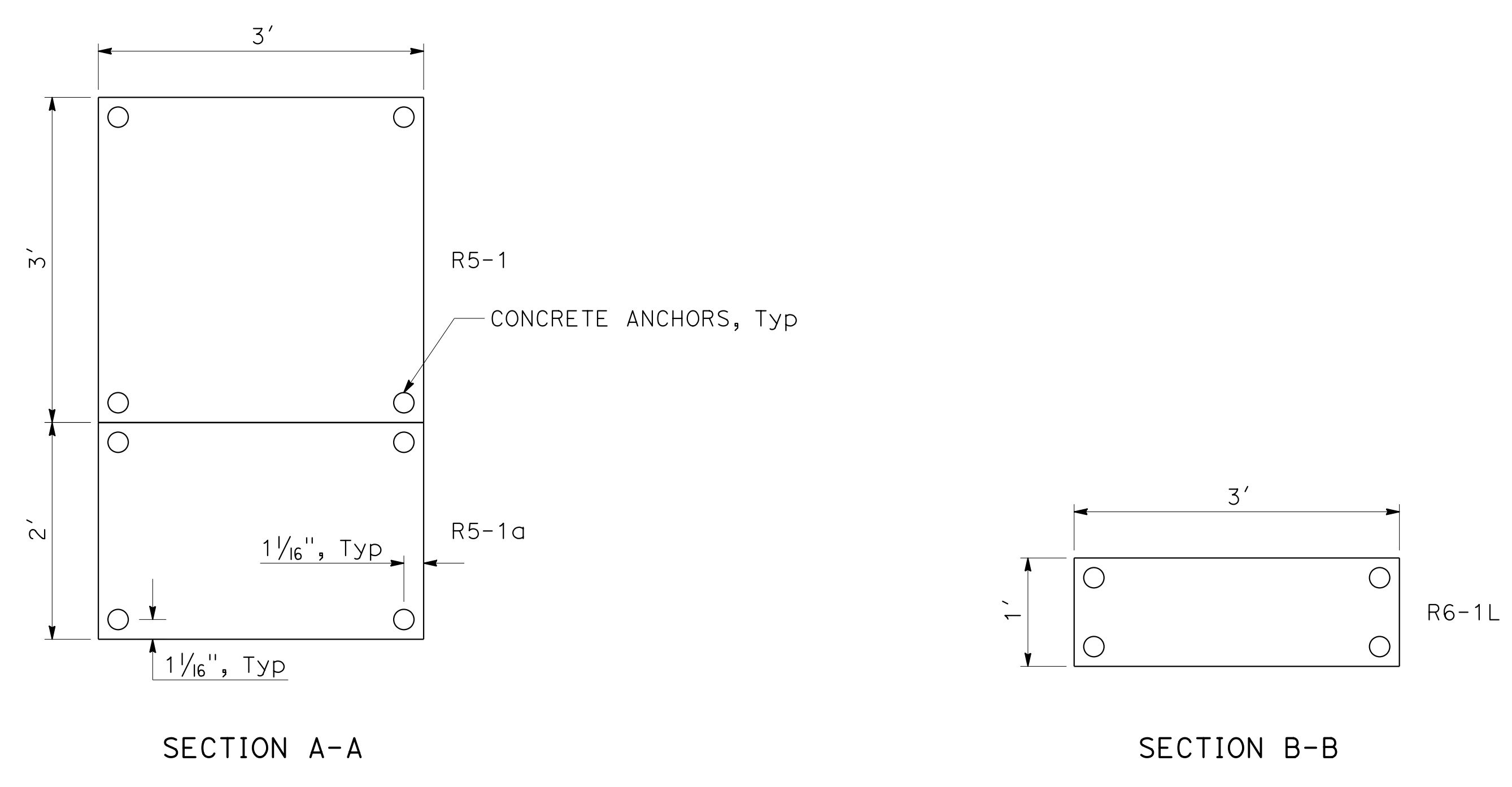
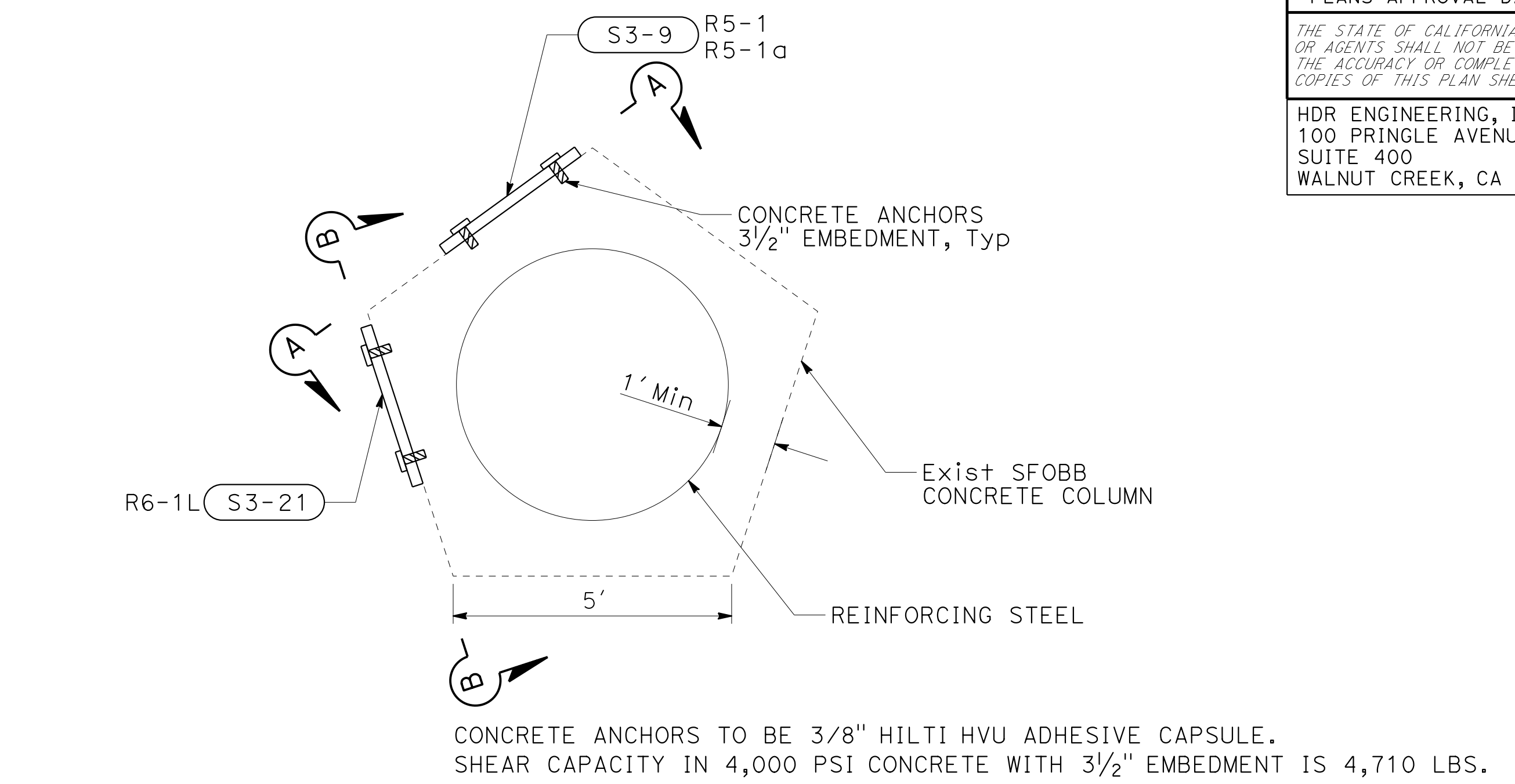
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT SUPERVISOR	INGRID V. SUPIT	CALCULATED-DESIGNED BY	TARYN PASCUA	REVISOR	TB	TP	HQ
	FUNCTIONAL SUPERVISOR		CHECKED BY	VINCENT FUNG	DATE REVISED	10-30-18	1-29-19	5-17-19



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	140	436
			4-1-19		
REGISTERED CIVIL ENGINEER			DATE		
			5-17-19		
			PLANS APPROVAL DATE		
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



SIGN MOUNTING DETAIL
 0.85' L+ "SW" 02+87
 S3-8



SIGN BRACKET MOUNTING DETAIL ON COLUMN
 37.63' R+ "SG1" 66+32.22
 S3-9 S3-21

SIGN DETAILS
 NO SCALE
SD-6

LAST REVISION DATE PLOTTED => 13-NOV-2019 00-00-00 TIME PLOTTED => 14:31

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	141	436

REGISTERED CIVIL ENGINEER: *Vincent Fung* DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19
 VINCENT W. FUNG
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

ROADSIDE SIGN QUANTITIES

SHEET No.	SIGN No. (SIGN-No.)	SIGN DESIGNATION	PANEL SIZE L x D		POST SIZE AND LENGTH [N]			ROADSIDE SIGN		INSTALL SIGN (SSBM)	INSTALL ROADSIDE SIGN ON Exist POST	INSTALL PANEL ON Exist COLUMN	METAL		INSTALL SIGN (MAST ARM HANGER METHOD)	REMOVE ROADSIDE SIGN	REMOVE ROADSIDE SIGN (METAL POST)	REMOVE SIGN PANEL	REMOVE SIGN FROM ELECTROLIER	RELOCATE ROADSIDE SIGN (WOOD POST)	RELOCATE ROADSIDE SIGN (METAL POST)	RELOCATE SIGN PANEL	RESET ROADSIDE SIGN (WOOD POST)	REMARKS	
			INCHES	SQFT	4"x4"	4"x6"	6"x6"	ONE POST	TWO POST				BARRIER MOUNTED SIGN	DECK MOUNTED SIGN											
								EA	EA				EA	EA											
S-1	S1-1	SPECIAL B	48 x 60	20.0			17.0	1																	
	S2-1	SPECIAL B	48 x 60	20.0			17.0	1																	
	S2-2	W4-22(15)(CA)	72 x 72	36.0			17.5		1																
	S2-3	G84-2(4B)(CA)	54 x 48	18.0			16.0	1																	
S-2	S2-4	W4-22(15)(CA)	72 x 72	36.0		15.4			1																
	S2-5	W1-8(Rt)	30 x 36	7.5									116											MOUNT ON CB TYPE 742	
	S2-6	W1-8(Rt)	30 x 36	7.5									116											MOUNT ON CB TYPE 742	
	S2-7	W1-8(Rt)	30 x 36	7.5									116											MOUNT ON CB TYPE 742	
	S2-8	W1-8(Rt)	30 x 36	7.5									116											MOUNT ON Exist CB	
	S2-9	R5-10a		30 x 36	7.5											1									RELOCATE SIGN PANELS ONLY; MOUNT ON CB TYPE 736
		R57(CA)		48 x 26	8.7																				
	S2-10	"CYCLIST CAUTION"															1								
		"NO Ped FACILITIES"																							
	S2-11	"CYCLIST CAUTION"																							
		"NO Ped FACILITIES"																	1						
		"BAY BRIDGE PATH"																							
	S2-12	M6-1																							
	S2-13	"NO TRESPASSING"														1									
	S2-14	W2-2														1									
	S2-15	W1-8(Rt)	30 x 36	7.5		13.5				1															
	S2-16	R3-1															1								
		W14-2																							
	S2-17	W16-1P														1									
	S2-18	W1-8(Rt)	30 x 36	7.5		13.5				1															
S2-19	W1-8(Rt)	30 x 36	7.5		13.5				1																
S2-20	W1-8(Rt)	30 x 36	7.5		13.5				1																
S2-21	W1-8(Rt)	30 x 36	7.5										85											MOUNT ON CB TYPE 60M	
S2-22	W4-3	36 x 36	9.0							1														MOUNT ON ELECTROLIER	
S2-23	R2-1(10)	30 x 36	7.5		13.5				1															MOUNT ON SOUTHGATE Br	
S2-24	W3-3	30 x 30	6.3																						
SUBTOTAL								9	2	1			549	93		6		1		1					

[N] - NOT A SEPARATE BID ITEM

SIGN QUANTITIES

SQ-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	142	436

5-17-19
 PLANS APPROVAL DATE
 REGISTERED CIVIL ENGINEER
 VINCENT W. FUNG
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

ROADSIDE SIGN QUANTITIES

SHEET No.	SIGN No. (SIGN-No.)	SIGN DESIGNATION	PANEL SIZE L x D	AREA	POST SIZE AND LENGTH [N]			ROADSIDE SIGN		INSTALL SIGN (SSBM)	INSTALL ROADSIDE SIGN ON EXIST POST	INSTALL PANEL ON EXIST COLUMN	METAL		INSTALL SIGN (MAST ARM HANGER METHOD)	REMOVE ROADSIDE SIGN	REMOVE ROADSIDE SIGN (METAL POST)	REMOVE SIGN PANEL	REMOVE SIGN FROM ELECTROLIER	RELOCATE ROADSIDE SIGN (WOOD POST)	RELOCATE ROADSIDE SIGN (METAL POST)	RELOCATE SIGN PANEL	RESET ROADSIDE SIGN (WOOD POST)	REMARKS
					4"x4"	4"x6"	6"x6"	ONE POST	TWO POST				BARRIER MOUNTED SIGN	DECK MOUNTED SIGN										
					INCHES	SQFT	EA	EA	EA				LB	LB										
S-2	S2-25	W3-3	30 x 30	6.3										93									MOUNT ON SOUTHGATE Br	
	S2-26	W1-1aL(15)	36 x 36	9.0		14.7		1																
	S2-27	"PEDS/BIKES NO RIGHT TURN"													1						1		RELOCATE SIGN PANEL ONTO (S2-11) POST	
	S2-28	"CYCLIST CAUTION"	24 x 30	5.0																				
		"NO PED FACILITIES"	30 x 30	6.3																				
	S2-29	G86-1(CA) Mod	90 x 30	18.8			17.0		1															
		SPECIAL C	48 x 36	12.0																				
	S2-30	R5-11	30 x 24	5.0		17.5		1																
	S2-31	R1-1																						
		R1-5 Mod																						
	S2-32	W1-11L	18 x 18	2.3	12.6				1															
	S2-33	W1-11R	18 x 18	2.3	12.6				1															
	S2-34	"VISTA POINT"																						
		"CYCLIST CAUTION"																						
		"NO PED FACILITIES"																						
	S2-35	R5-11	30 x 24	5.0	12.5				1															
		"CYCLIST DISMOUNT"																						
		RS-013																						
		RS-022																						
	S2-36	"NO TRESPASSING"																	2					
"BAY BRIDGE PATH"																								
M6-3																								
S2-37	R1-1																							
	R81(CA) R81B(CA)																							
S2-38	R9-7	12 x 18	1.5																					
S2-39	"BAY BRIDGE PATH"	30 x 24	5.0	12.5																				
	"VISTA POINT"																							
S2-40	G8-7(CA) Mod	48 x 24	8.0			19.5																		
	SPECIAL C	48 x 36	12.0																					
S2-41	SPECIAL D	18 x 36	4.5	13.5				1																
S2-42	W3-3	18 x 18	2.3	12.6				1																
SUBTOTAL								7	2		1			93	2	3	2		1		1			

[N] - NOT A SEPARATE BID ITEM

*SEE SOUTHGATE Rd UC
 MISC DETAILS No. 2

SIGN QUANTITIES

SQ-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	143	436

REGISTERED CIVIL ENGINEER: *Vincent Fung*
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19
 REGISTERED PROFESSIONAL ENGINEER: VINCENT W. FUNG
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA
 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.
 HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400, WALNUT CREEK, CA 94596
 SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103

ROADSIDE SIGN QUANTITIES

SHEET No.	SIGN No. (SIGN-No.)	SIGN DESIGNATION	PANEL SIZE L x D	AREA	POST SIZE AND LENGTH [N]			ROADSIDE SIGN		INSTALL SIGN (SSBM)	INSTALL ROADSIDE SIGN ON EXIST POST	INSTALL PANEL ON EXIST COLUMN	METAL		INSTALL SIGN (MAST ARM HANGER METHOD)	REMOVE ROADSIDE SIGN	REMOVE ROADSIDE SIGN (METAL POST)	REMOVE SIGN PANEL	REMOVE SIGN FROM ELECTROLIER	RELOCATE ROADSIDE SIGN (WOOD POST)	RELOCATE ROADSIDE SIGN (METAL POST)	RELOCATE SIGN PANEL	RESET ROADSIDE SIGN (WOOD POST)	REMARKS		
					4"x4"	4"x6"	6"x6"	ONE POST	TWO POST				BARRIER MOUNTED SIGN	DECK MOUNTED SIGN												
					INCHES	SQFT	EA	EA	EA				EA	EA												
S-2	S2-43	"ALEXANDER ZUCKERMAN BICYCLE PEDESTRIAN PATH"																								
		R9-7																								
		R9-13																								
		"NO SCOOTERS"																								
		R23(CA)																								
S-2	S2-44	"ALEXANDER ZUCKERMAN BICYCLE PEDESTRIAN PATH"																								
		R81B(CA)																								
		R5-10a	30 x 36	7.5		13.5		1																		
		R5-1	36 x 36	9.0																						
		R5-1b	36 x 24	6.0		16.0		1																		
S-3	S3-2	G8-1(CA) Mod	60 x 18	4.0	11.0		1																			
		R6-1R	36 x 12	3.0	11.0		1																			
		W3-3	18 x 18	2.3	11.3		1																			
		R10-3	9 x 15	0.9					1																MOUNT ON Ped PUSH BUTTON	
	S3-6	R10-3	9 x 15	0.9					1																	MOUNT ON Ped PUSH BUTTON
		D11-1a	18 x 18	2.3																						
	S3-7	M6-2L	12 x 9	0.8																						
		D9-6	18 x 18	2.3		17.5		1																		
		D11-2	18 x 18	2.3																						
		M6-3	12 x 9	0.8																						
	S3-8	G8-7(CA) Mod	48 x 24	8.0				17.0	1																	SEE SD-6 FOR MOUNTING DETAIL
		SPECIAL C	48 x 36	12.0																						
	S3-9	R5-1	36 x 36	9.0							1															MOUNT ON COLUMN SEE SD-6 FOR DETAIL
		R5-1a	36 x 24	6.0																						
S3-10	R6-1L	36 x 12	3.0	11.5			1																			
S3-11	R1-1	36 x 36	9.0		15.5		1																			
	W4-4P	24 x 12	2.0																							
S3-12	R3-2	36 x 36	9.0		14.5		1																			
S3-13	R5-11	30 x 24	5.0	12.5			1																			
S3-14	R6-1L	36 x 12	3.0		15.5																					
	R1-1																									
SUBTOTAL								11		2	1	1					1		1							

[N] - NOT A SEPARATE BID ITEM

SIGN QUANTITIES

SQ-3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	144	436

Vincent Fung
 REGISTERED CIVIL ENGINEER DATE 4-1-19
 5-17-19
 PLANS APPROVAL DATE
 VINCENT W. FUNG
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA
 REGISTERED PROFESSIONAL ENGINEER
 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.
 HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596
 SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

ROADSIDE SIGN QUANTITIES

SHEET No.	SIGN No. (SIGN-No.)	SIGN DESIGNATION	PANEL SIZE L x D	AREA	POST SIZE AND LENGTH [N]			ROADSIDE SIGN		INSTALL SIGN (SSBM)	INSTALL ROADSIDE SIGN ON EXIST POST	INSTALL PANEL ON EXIST COLUMN	METAL		INSTALL SIGN (MAST ARM HANGER METHOD)	REMOVE ROADSIDE SIGN	REMOVE ROADSIDE SIGN (METAL POST)	REMOVE SIGN PANEL	REMOVE SIGN FROM ELECTROLIER	RELOCATE ROADSIDE SIGN (WOOD POST)	RELOCATE ROADSIDE SIGN (METAL POST)	RELOCATE SIGN PANEL	RESET ROADSIDE SIGN (WOOD POST)	REMARKS		
					4"x4"	4"x6"	6"x6"	ONE POST	TWO POST				BARRIER MOUNTED SIGN	DECK MOUNTED SIGN												
					INCHES	SQFT	EA	EA	EA				EA	EA												
S-3	S3-15	R3-1	36 x 36	9.0		14.5		1																		
	S3-16	W14-2	36 x 36	9.0		14.5		1																		
	S3-17	"LOCAL TRAFFIC ONLY"																								
	S3-18	W7-5	18 x 18	2.3	12.0																					
		W7-3P(11)	18 x 12	1.5																						
	S3-19	W3-4	18 x 18	2.25	13.5																					
		W1-3R	18 x 18	2.25																						
	S3-20	R3-2	36 x 36	9.0			16.0		1																	
		R5-11	30 x 24	5.0																						
	S3-21	R6-1L	36 x 12	3.0							1														MOUNT ON COLUMN SEE SD-6 FOR DETAIL	
S3-22	R5-10C	24 x 12	2.0	12.0				1																		
S3-23	R3-5a	30 x 36	7.5											1												
S3-24	R3-5a	30 x 36	7.5											1												
S-4	S4-1	W1-2A																1								
		W3-1																								
	S4-2	R26(CA)																								
	S4-3	R26A(CA)																								MOUNT ON FENCE
		R26(CA)																								MOUNT ON FENCE
S4-4	M3-2	24 x 12	2.0			16.0																				
	G27-2(80)(CA)	24 x 24	4.0																							
S4-5	R26A(CA)	24 x 30	5.0	11.8				1																	MOUNT ON FENCE	
S-5	S5-1	R2-1																	2							
		W17-1																								
	S5-2	R5-1	36 x 36	9.0						2																MOUNT ON ELECTROLIER
		R5-1a	36 x 24	6.0																						
	S5-3	R3-5(L+)	30 x 36	7.5		14.5		1																		
	S5-4	W8-23																								
		W13-1P(15)																								
S5-5	R5-1																									
	W44A(CA)																									
S5-6	R1-1																									
S5-7	M3-2	24 x 12	2.0			16.8																				
	G27-2(80)(CA)	24 x 24	4.0																							
SUBTOTAL								10		2		1			2		2	1	2	2	2					

[N] - NOT A SEPARATE BID ITEM

SIGN QUANTITIES

SQ-4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	145	436

Vincent Fung
 REGISTERED CIVIL ENGINEER
 4-1-19 DATE
 5-17-19 PLANS APPROVAL DATE
 VINCENT W. FUNG
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA
 REGISTERED PROFESSIONAL ENGINEER
 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.
 HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596
 SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103

ROADSIDE SIGN QUANTITIES

SHEET No.	SIGN No. (SIGN-No.)	SIGN DESIGNATION	PANEL SIZE L x D		AREA	POST SIZE AND LENGTH [N]			ROADSIDE SIGN		INSTALL SIGN (SSBM)	INSTALL ROADSIDE SIGN ON EXIST POST	INSTALL PANEL ON EXIST COLUMN	METAL		INSTALL SIGN (MAST ARM SIGN (MAST ARM HANGER METHOD))	REMOVE ROADSIDE SIGN	REMOVE ROADSIDE SIGN (METAL POST)	REMOVE SIGN PANEL	REMOVE SIGN FROM ELECTROLIER	RELOCATE ROADSIDE SIGN (WOOD POST)	RELOCATE ROADSIDE SIGN (METAL POST)	RELOCATE SIGN PANEL	RESET ROADSIDE SIGN (WOOD POST)	REMARKS	
			INCHES	SQFT		4"x4"	4"x6"	6"x6"	ONE POST	TWO POST				BARRIER MOUNTED SIGN	DECK MOUNTED SIGN											
									EA	EA				EA	EA											
S-5	S5-8	"CYCLIST CAUTION" "NO Ped FACILITIES"															1									
	S5-9	R1-1 R5-1 R5-1a															1									
	S5-10	R1-1															1									
	S5-11	R6-1(Lt)	36 x 12	3.0	11.5				1																	
	S5-12	R2-1(20)	24 x 30	5.0	13.0				1																	
	S5-13	R2-1(20)	24 x 30	5.0	13.0				1																	
	S5-14	W1-4															1									
	S5-15	M3-2	24 x 12	2.0																						
		G27-2(80)(CA)	24 x 24	4.0		15.8			1																	
		M6-3	21 x 15	2.2																						
	S5-16	W7-1	30 x 30	6.3		14.0			1																	
	S5-17	R26A(CA)	24 x 30	5.0	11.8				1																	
	S5-18	W11-15															1									
	S5-19	G92(CA)	48 x 30	10.0							4															MOUNT ON ELECTROLIER
		M3-2	24 x 12	2.0																						
		G27-2(80)(CA)	24 x 24	4.0																						
	S5-20	R3-2	21 x 15	2.2																						
	S5-21	R2-1(10)	24 x 30	5.0	13.0				1										1							
	S5-22	G92(CA)	48 x 30	10.0																						
		M3-2	24 x 12	2.0																						
		G27-2(80)(CA)	24 x 24	4.0			18.3		1																	
	S5-23	W3-1															1									
	S5-24	R3-2																1								
		R26(CA) R26(CA)																								
	S5-25	G8-7(CA) Mod	84 x 36	21.0						1																
SPECIAL E		48 x 36	12.0			16.5																				
SHEET SQ-5 TOTAL									8	1	4					7	1									
SHEET SQ-4 TOTAL									10		2		1			2		2	1	2	2	2				
SHEET SQ-3 TOTAL									11		2	1	1						1		1					
SHEET SQ-2 TOTAL									7	2		1			93	2	3	2		1		1	1			
SHEET SQ-1 TOTAL									9	2	1			549	93	6		1		1						
GRAND TOTAL									45	5	9	2	2	549	186	2	15	6	5	2	5	2	1	1		

SIGN QUANTITIES

SQ-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR
 INGRID V. SUPIT
 CALCULATED/DESIGNED BY
 TARYN PASCUA
 CHECKED BY
 VINCENT FUNG
 REVISOR
 AC
 TP
 HQ
 4-18-18
 2-5-19
 5-17-19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	146	436

5-17-19
 PLANS APPROVAL DATE

REGISTERED CIVIL ENGINEER
 DATE 4-1-19

REGISTERED PROFESSIONAL ENGINEER
 VINCENT W. FUNG
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA

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.

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

ROADSIDE SIGN PANEL QUANTITIES

SHEET No.	SIGN No. (SIGN-No.)	SIGN DESIGNATION	SIGN MESSAGE/DESCRIPTION	PANEL SIZE L x D		AREA	SINGLE FACED	BACKGROUND		LEGEND		PROTECTIVE FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.063"-UNFRAMED)	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED)	FURNISH SINGLE SHEET ALUMINUM SIGN (0.063"-FRAMED)	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-FRAMED)
				INCHES	SQFT			SHEETING COLOR	RETROFLECTIVE ASTM TYPE	SHEETING COLOR	RETROFLECTIVE ASTM TYPE					
S-1	S1-1	SPECIAL B	EXIT HAIRPIN CURVE 15	48 x 60	20.0	X	YELLOW	XI	BLACK	PLAIN	X		20.0			
	S2-1	SPECIAL B	EXIT HAIRPIN CURVE 15	48 x 60	20.0	X	YELLOW	XI	BLACK	PLAIN	X		20.0			
S-2	S2-2	W4-22(15)(CA)	CURVE TRUCK ROLLOVER WITH ADVISORY SPEED	72 x 72	36.0	X	YELLOW	XI	BLACK	XI	X			36.0		
	S2-3	G84-2(4B)(CA)	EXIT 4B	54 x 48	18.0	X	GREEN	XI	WHITE	XI	X		18.0			
	S2-4	W4-22(15)(CA)	CURVE TRUCK ROLLOVER WITH ADVISORY SPEED	72 x 72	36.0	X	YELLOW	XI	BLACK	PLAIN	X			36.0		
	S2-5	W1-8(R+)	RIGHT CHEVRON	30 x 36	7.5	X	YELLOW	XI	BLACK	PLAIN	X	7.5				
	S2-6	W1-8(R+)	RIGHT CHEVRON	30 x 36	7.5	X	YELLOW	XI	BLACK	PLAIN	X	7.5				
	S2-7	W1-8(R+)	RIGHT CHEVRON	30 x 36	7.5	X	YELLOW	XI	BLACK	PLAIN	X	7.5				
	S2-8	W1-8(R+)	RIGHT CHEVRON	30 x 36	7.5	X	YELLOW	XI	BLACK	PLAIN	X	7.5				
	S2-14	W1-8(R+)	RIGHT CHEVRON	30 x 36	7.5	X	YELLOW	XI	BLACK	PLAIN	X	7.5				
	S2-17	W1-8(R+)	RIGHT CHEVRON	30 x 36	7.5	X	YELLOW	XI	BLACK	PLAIN	X	7.5				
	S2-18	W1-8(R+)	RIGHT CHEVRON	30 x 36	7.5	X	YELLOW	XI	BLACK	PLAIN	X	7.5				
	S2-19	W1-8(R+)	RIGHT CHEVRON	30 x 36	7.5	X	YELLOW	XI	BLACK	PLAIN	X	7.5				
	S2-20	W1-8(R+)	RIGHT CHEVRON	30 x 36	7.5	X	YELLOW	XI	BLACK	PLAIN	X	7.5				
	S2-21	W1-8(R+)	RIGHT CHEVRON	30 x 36	7.5	X	YELLOW	XI	BLACK	PLAIN	X	7.5				
	S2-22	W4-3	ADDED LANE	36 x 36	9.0	X	YELLOW	XI	BLACK	PLAIN	X	9.0				
	S2-23	R2-1(10)	SPEED LIMIT 10	30 x 36	7.5	X	WHITE	XI	BLACK	PLAIN	X	7.5				
	S2-24	W3-3	SIGNAL AHEAD	30 x 30	6.3	X	YELLOW	XI	BLACK	PLAIN	X	6.3				
	S2-25	W3-3	SIGNAL AHEAD	30 x 30	6.3	X	YELLOW	XI	BLACK	PLAIN	X	6.3				
	S2-26	W1-1aL(15)	CURVE TRUCK ROLLOVER WITH ADVISORY SPEED	36 x 36	9.0	X	YELLOW	XI	BLACK	PLAIN	X	9.0				
	S2-29	G86-1(CA) Mod	NORTHGATE Rd USE RIGHT LANE AHEAD	90 x 30	18.8	X	GREEN	XI	WHITE	XI	X				18.8	
		SPECIAL C	USCG WAYFINDER SIGN	48 x 36	12.0	X	WHITE	XI	BLACK/RED/BLUE	XI	X		12.0			
		R5-11	AUTHORIZED VEHICLES ONLY	30 x 24	5.0	X	WHITE	XI	BLACK	PLAIN	X	5.0				
		W1-11L	HAIRPIN CURVE AHEAD	18 x 18	2.3	X	YELLOW	XI	BLACK	PLAIN	X	2.3				
		W1-11R	HAIRPIN CURVE AHEAD	18 x 18	2.3	X	YELLOW	XI	BLACK	PLAIN	X	2.3				
		R5-11	AUTHORIZED VEHICLES ONLY	30 x 24	5.0	X	WHITE	XI	BLACK	PLAIN	X	5.0				
	R9-7	BIKES KEEP LEFT / PEDESTRIANS KEEP RIGHT	12 x 18	1.5	X	WHITE	XI	BLACK	PLAIN	X	1.5					
	G8-7(CA) Mod	MACALLA Rd / NORTHGATE Rd	48 x 24	8.0	X	GREEN	XI	WHITE	XI	X		8.0				
	SPECIAL C	USCG WAYFINDER SIGN	48 x 36	12.0	X	WHITE	XI	BLACK/RED/BLUE	XI	X		12.0				
	SPECIAL D	PUBLIC SHORE BAY TRAIL	18 x 18	2.3	X	BLUE	XI	WHITE	XI	X	2.3					
			18 x 18	2.3	X	GREEN	XI	YELLOW/BLUE	XI	X	2.3					
	W3-3	SIGNAL AHEAD	18 x 18	2.3	X	YELLOW	XI	RED/BLACK	XI	X	2.3					
	R5-10a	NO PEDESTRIANS BICYCLES MOTOR-DRIVEN CYCLES	30 x 36	7.5	X	WHITE	XI	BLACK	PLAIN	X	7.5					
SUBTOTAL												143.6	90.0	72.0	18.8	

SIGN QUANTITIES

SQ-6

LAST REVISION DATE PLOTTED => 13-NOV-2019
 00-00-00 TIME PLOTTED => 14:31

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	147	436

5-17-19
 PLANS APPROVAL DATE

4-1-19
 DATE

REGISTERED CIVIL ENGINEER
 VINCENT W. FUNG
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA

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HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

ROADSIDE SIGN PANEL QUANTITIES

SHEET No.	SIGN No. (SIGN-No.)	SIGN DESIGNATION	SIGN MESSAGE/DESCRIPTION	PANEL SIZE L x D		AREA	SINGLE FACED	BACKGROUND		LEGEND		PROTECTIVE FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.063"-UNFRAMED)	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED)	FURNISH SINGLE SHEET ALUMINUM SIGN (0.063"-FRAMED)	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-FRAMED)	
				INCHES	SQFT			SHEETING COLOR	RETROFLECTIVE ASTM TYPE	SHEETING COLOR	RETROFLECTIVE ASTM TYPE						SQFT
S-3	S3-1	R5-1	DO NOT ENTER	36 x 36	9.0	X	WHITE	XI	RED/WHITE	XI	X	9.0					
		R5-1b	BICYCLE WRONG WAY	36 x 24	6.0	X	RED	XI	WHITE	XI	X	6.0					
	S3-2	G8-1(CA) Mod	MACALLA Rd	60 x 18	7.5	X	GREEN	XI	WHITE	XI	X		7.5				
	S3-3	R6-1R	ONE WAY	36 x 12	3.0	X	WHITE	XI	BLACK	PLAIN	X	3.0					
	S3-4	W3-3	SIGNAL AHEAD	18 x 18	2.3	X	YELLOW	XI	BLACK/RED	XI	X	2.3					
	S3-5	R10-3	PUSH BUTTON FOR PED CROSSING	9 x 15	0.9	X	WHITE	XI	BLACK	PLAIN	X	0.9					
	S3-6	R10-3	PUSH BUTTON FOR PED CROSSING	9 x 15	0.9	X	WHITE	XI	BLACK	PLAIN	X	0.9					
	S3-7		D11-1a	BIKE PATH	18 x 18	2.3	X	GREEN	XI	WHITE	XI	X	2.3				
			M6-2L	DIAGONAL ARROW	12 x 9	0.8	X	WHITE	XI	BLACK	PLAIN	X	0.8				
			D9-6	HANDICAP ACCESSIBLE	18 x 18	2.3	X	BLUE	XI	WHITE	XI	X	2.3				
			D11-2	PEDESTRIAN PATH	18 x 18	2.3	X	GREEN	XI	WHITE	XI	X	2.3				
	S3-8		M6-3	AHEAD ARROW	12 x 9	0.8	X	WHITE	XI	BLACK	PLAIN	X	0.8				
			G8-7(CA) Mod SPECIAL C	MACALLA Rd / NORTHGATE Rd USCG WAYFINDER SIGN	48 x 24 48 x 36	8.0 12.0	X X	GREEN WHITE	XI XI	WHITE BLACK/RED/BLUE	XI XI	X X	 12.0		8.0		
	S3-9		R5-1	DO NOT ENTER	36 x 36	9.0	X	WHITE	XI	RED/WHITE	XI	X	9.0				
			R5-1a	WRONG WAY	36 x 24	6.0	X	RED	XI	WHITE	XI	X	6.0				
	S3-10	R6-1L	ONE WAY	36 x 12	3.0	X	WHITE	XI	BLACK	PLAIN	X	3.0					
	S3-11	R1-1	STOP	36 x 36	9.0	X	RED	XI	BLACK	PLAIN	X	9.0					
	S3-12	W4-4P	CROSS TRAFFIC DOES NOT STOP	24 x 12	2.0	X	YELLOW	XI	BLACK	PLAIN	X	2.0					
	S3-13	R3-2	NO LEFT TURN	36 x 36	9.0	X	WHITE	XI	BLACK	PLAIN	X	9.0					
	S3-14	R5-11	AUTHORIZED VEHICLES ONLY	30 x 24	5.0	X	WHITE	XI	BLACK	PLAIN	X	5.0					
	S3-15	R6-1L	ONE WAY	36 x 12	3.0	X	WHITE	XI	BLACK	PLAIN	X	3.0					
	S3-16		R3-1	NO RIGHT TURN	36 x 36	9.0	X	WHITE	XI	BLACK	PLAIN	X	9.0				
		W14-2	NO OUTLET	36 x 36	9.0	X	YELLOW	XI	BLACK	PLAIN	X	9.0					
S3-18		W7-5	BICYCLE HILL WARNING	18 x 18	2.3	X	YELLOW	XI	BLACK	PLAIN	X	2.3					
		W7-3P(11)	11% GRADE	18 x 12	1.5	X	YELLOW	XI	BLACK	PLAIN	X	2.3					
S3-19		W3-4	BE PREPARED TO STOP	18 x 18	2.3	X	YELLOW	XI	BLACK	PLAIN	X	2.3					
		W1-3R	REVERSE CUVE WARNING	18 x 18	2.3	X	YELLOW	XI	BLACK	PLAIN	X	2.3					
S3-20		R3-2	NO LEFT TURN	36 x 36	9.0	X	WHITE	XI	BLACK/RED	XI	X	9.0					
		R5-11	AUTHORIZED VEHICLES ONLY	30 x 24	5.0	X	WHITE	XI	BLACK	PLAIN	X	5.0					
S3-21	R6-1L	ONE WAY	36 x 12	3.0	X	WHITE	XI	BLACK	PLAIN	X	3.0						
S3-22	R5-10C	NO PEDESTRIANS	24 x 12	2.0	X	WHITE	XI	BLACK	PLAIN	X	2.0						
S-4	S4-4	G27-2(80)(CA)	INTERSTATE ROUTE MARKER	24 x 24	4.0	X	BLUE/RED	XI	WHITE	XI	X	4.0					
		M5-6	RIGHT LANE	24 x 18	3.0	X	WHITE	XI	BLACK	PLAIN	X	3.0					
S4-5	R26A(CA)	NO PARKING ANY TIME	24 x 30	5.0	X	WHITE	XI	RED	XI	X	5.0						
S-5	S5-2	R5-1	WRONG WAY	36 x 36	9.0	X	WHITE	XI	BLACK/RED	XI	X	9.0					
		R5-1a	NO LEFT TURN	36 x 24	6.0	X	RED	XI	WHITE	XI	X	6.0					
SUBTOTAL												151.3	27.5				

SIGN QUANTITIES

SQ-7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	148	436

Vincent Fung
 REGISTERED CIVIL ENGINEER DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE, SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

ROADSIDE SIGN PANEL QUANTITIES

SHEET No.	SIGN No. (SIGN-No.)	SIGN DESIGNATION	SIGN MESSAGE/DESCRIPTION	PANEL SIZE		SINGLE FACED	BACKGROUND		LEGEND		PROTECTIVE FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.063"-UNFRAMED)	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED)	FURNISH SINGLE SHEET ALUMINUM SIGN (0.063"-FRAMED)	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-FRAMED)
				INCHES	SQFT		SHEETING COLOR	RETROFLECTIVE ASTM TYPE	SHEETING COLOR	RETROFLECTIVE ASTM TYPE					
S-5	S5-3	R3-5(L+)	LEFT TURN ONLY	30 x 36	7.5	X	WHITE	XI	BLACK	PLAIN	X	7.5			
		M3-2	EAST	24 x 12	2.0	X	WHITE	XI	BLACK	PLAIN	X	2.0			
	S5-7	G27-2(80)(CA)	INTERSTATE SHIELD	24 x 24	4.0	X	BLUE/RED	XI	WHITE	XI	X	4.0			
		M5-6	RIGHT LANE	24 x 18	3.0	X	WHITE	XI	BLACK	PLAIN	X	3.0			
	S5-11	R6-1L	ONE WAY	36 x 12	3.0	X	WHITE	XI	BLACK	PLAIN	X	3.0			
	S5-12	R2-1(20)	SPEED LIMIT 20	24 x 30	5.0	X	WHITE	XI	BLACK	PLAIN	X	7.5			21.0
	S5-13	R2-1(20)	SPEED LIMIT 20	24 x 30	5.0	X	WHITE	XI	BLACK	PLAIN	X	7.5			
		M3-2	EAST	24 x 12	2.0	X	WHITE	XI	BLACK	PLAIN	X	2.0			
	S5-15	G27-2(80)(CA)	INTERSTATE ROUTE MARKER	24 x 24	4.0	X	RED/BLUE	XI	WHITE	XI	X	4.0			
		M6-3	AHEAD ARROW	21 x 15	2.2	X	WHITE	XI	BLACK	PLAIN	X	2.2			
	S5-16	W7-1	HILL TRUCK	30 x 30	6.3	X	YELLOW	XI	WHITE	XI	X	6.3			
	S5-17	R26A(CA)	NO PARKING ANY TIME	24 x 30	5.0	X	WHITE	XI	RED	XI	X	5.0			
		G92(CA)	FREEWAY ENTRANCE	48 x 30	10.0	X	GREEN	XI	WHITE	XI	X		10.0		
	S5-19	M3-2	EAST	24 x 12	2.0	X	WHITE	XI	BLACK	PLAIN	X	2.0			
		G27-2(80)(CA)	INTERSTATE ROUTE MARKER	24 x 24	4.0	X	RED/BLUE	XI	WHITE	XI	X	4.0			
		M6-2	DIAGONAL ARROW	21 x 15	2.2	X	WHITE	XI	BLACK	PLAIN	X	2.2			
	S5-21	R2-1(10)	SPEED LIMIT 10	24 x 30	5.0	X	WHITE	XI	BLACK	PLAIN	X	7.5			
		G92(CA)	FREEWAY ENTRANCE	48 x 30	10.0	X	GREEN	XI	WHITE	XI	X		10.0		
	S5-22	M3-2	EAST	24 x 12	2.0	X	WHITE	XI	BLACK	PLAIN	X	2.0			
		G27-2(80)(CA)	INTERSTATE ROUTE MARKER	24 x 24	4.0	X	RED/BLUE	XI	WHITE	XI	X	4.0			
	M6-2	DIAGONAL ARROW	21 x 15	2.2	X	WHITE	XI	BLACK	PLAIN	X	2.2				
S5-25	G8-7(CA) Mod	HILLCREST Rd / OAKLAND	84 x 36	21.0	X	GREEN	XI	WHITE	XI	X		21.0			
	SPECIAL E	USCG WAYFINDER SIGN	48 x 36	12.0	X	WHITE	XI	BLACK/RED/BLUE	XI	X		12.0			
SHEET SQ-7 TOTAL												77.9	53.0		21.0
SHEET SQ-6 TOTAL												151.3	27.5		
SHEET SQ-5 TOTAL												143.6	90.0	72.0	18.8
GRAND TOTAL												372.8	170.5	72.0	39.8

SIGN QUANTITIES

SQ-8

LAST REVISION: DATE PLOTTED => 13-NOV-2019
 00-00-00 TIME PLOTTED => 14:31

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 TARYN PASCUA
 VINCENT FUNG
 AC: 4-18-18
 TP: 1-16-19
 HQ: 5-17-19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	149	436

REGISTERED CIVIL ENGINEER: *Vincent Fung*
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

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.

OVERHEAD SIGN QUANTITIES

SHEET No.	SIGN No. (SIGN-No.)	SIGN DESIGNATION	REMOVE SIGN PANEL	INSTALL SIGN PANEL ON EXISTING FRAME
			EA	SQFT
S-1	OS1-1	G85-11(CA) Mod		183.3
	OS1-2	BLANK PANEL	1	
	OS1-3	G85-11(CA) Mod		75.0
	OS1-4	"YERBA BUENA ISLAND LEFT EXIT 1/2 MILE"	1	
	OS1-5	G85-11(CA) Mod		75.0
	OS1-6	SPECIAL A		12.0
	OS1-7	SPECIAL A		12.0
TOTAL			2	357.3

OVERHEAD SIGN PANEL QUANTITIES

SHEET No.	SIGN No. (SIGN-No.)	SIGN DESIGNATION	SIGN MESSAGE/DESCRIPTION	PANEL SIZE		AREA	SINGLEFACED	BACKGROUND		LEGEND		PROTECTIVE FILM	FURNISH LAMINATED PANEL SIGN (1"-TYPE A)
				INCHES	SQFT			SHEETING COLOR	RETROFLECTIVE ASTM TYPE	SHEETING COLOR	RETROFLECTIVE ASTM TYPE		
S-1	OS1-1	G85-11(CA) Mod	EXIT 4B YERBA BUENA IS 2 3/4 MILES	264 x 100	183.3	X	GREEN	XI	WHITE	XI	X	183.3	
	OS1-3	G85-11(CA) Mod	EXIT 4B YERBA BUENA IS RIGHT EXIT 3/4 MILE	216 x 50	75.0	X	GREEN	XI	WHITE	XI	X	75.0	
	OS1-5	G85-11(CA) Mod	YERBA BUENA IS EXIT 4B	216 x 50	75.0	X	GREEN	XI	WHITE	XI	X	75.0	
	OS1-6	SPECIAL A	EXIT HAIRPIN CURVE 15	36 x 48	12.0	X	YELLOW	XI	BLACK	PLAIN	X	12.0	
	OS1-7	SPECIAL A	EXIT HAIRPIN CURVE 15	36 x 48	12.0	X	YELLOW	XI	BLACK	PLAIN	X	12.0	
TOTAL												357.3	

SIGN QUANTITIES

SQ-9

LAST REVISION: DATE PLOTTED => 13-NOV-2019
 00-00-00 TIME PLOTTED => 14:50

3 REPLACED PER ADDENDUM No. 3 DATED JANUARY 6, 2020

FENCE & RAILING



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	150	436

REGISTERED CIVIL ENGINEER
 4-1-19 DATE
 5-17-19 PLANS APPROVAL DATE
 INGRID V. SUPIT
 No. C66937
 Exp. 9-30-20
 CIVIL
 STATE OF CALIFORNIA

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

SHEET No.	STATION	SIDE	CHAIN LINK FENCE (TYPE CL-6)	CHAIN LINK FENCE (TYPE CL-8, BLACK VINYL CLAD)	CANTILEVER SLIDING GATE	4' CHAIN LINK GATE (TYPE CL-6)	16' CHAIN LINK GATE (TYPE CL-6)	5' CHAIN LINK GATE (TYPE CL-10)	INSTALL BIKE PATH RAILING	COAST GUARD SECURITY METAL GATE	PRIVACY FENCE PANELS
			LF	LF	EA	EA	EA	EA	EA	EA	EA
C-1 TO C-2	"BP" 63+75.45 TO "SW" 2+09.13	X							230		
C-2	"BP" 66+85.29 TO "BP" 67+10.48	X	39								
C-3	"SW" 4+19.18 TO "SW" 4+29.34	X	5			1					
C-7	"E" 51+09.90 TO "E" 51+27.15	X	17								
C-7	"E" 50+75.34 TO "E" 51+05.37	X			1						
C-30	"E" 51+21.34 TO "E" 51+21.34	X						1			
C-9	"HC1" 61+80.24 TO "SG1" 63+15.82	X	164			1					
L-3	"SG1" 65+05.82 TO "SG1" 67+71.61	X	184			1	1				
L-4 TO L-5	"HC1" 53+89.11 TO "R2" 59+97.66	X		5						1	4539
TOTAL			409	5	1	3	1	1	230	1	4539

MIDWEST GUARDRAIL SYSTEM

SHEET No.	STATION	SIDE	MIDWEST GUARDRAIL SYSTEM	TRANSITION RAILING (TYPE WB-31)	END CAP (TYPE A)
			LF	EA	EA
C-27	"CG1" 20+28.46 TO "CG1" 20+67.51	X	45		
L-4	"HC1" 52+27.84 TO "HC1" 52+55.27	X	28		
L-4	"HC1" 52+55.27 TO "HC1" 52+78.22	X		1	
L-4	"HC1" 53+85.67 TO "HC1" 54+14.18	X	34		1
L-5	"HC1" 57+87.79 TO "HC1" 58+15.88	X	28		
L-5	"HC1" 58+15.84 TO "R2" 58+40.70	X		1	
TOTAL			136	2	1

ROADWAY QUANTITIES

SHEET No.	STATION	PAVEMENT SECTION No.	AREA	COLD PLANE ASPHALT CONCRETE Pvmf	CLASS 2 AGGREGATE BASE	CONCRETE BASE	HOT MIX ASPHALT (TYPE A)	TACK COAT	MINOR CONCRETE	
				SQFT	SQYD	CY	TON	TON	CY	
L-2	"E" 51+49.19 TO "E" 52+58.59	2	1203		38		49	0.08		
L-2	"R1" 52+58.59 TO "R1" 56+25.39	2	7463		217		281	0.48		
L-2	"SG1" 62+49.86 TO "SG1" 63+00.00	3	1655			41	40	0.08		
L-2	"R1" 56+25.39 TO "R1" 62+49.86	3	16451			389	383	0.73		
L-2 TO L-3	"SG1" 63+00.00 TO "SG1" 65+17.36	1	8218		289		365	0.57		
L-2 TO L-3	"BP" 63+00.47 TO "BP" 66+05.00	4	5549		103				103	
L-3	"SG1" 65+28.29 TO "SG1" 66+67.82	1	5120		180		228	0.36		
L-4 TO L-5	"HC1" 52+84.66 TO "HC1" 58+37.93	5	17465	1941			259			
L-2 & L-5	"HC1" 56+12.42 TO "HC1" 59+28.05	3	10987			273	269	0.51		
L-2	"HC1" 60+09.32 TO "HC1" 62+49.86	3	5306			88	87	0.16		
L-2 & L-5	"R2" 58+16.23 TO "R2" 61+40.00	3	8675			215	212	0.60		
L-2	"R2" 61+40.00 TO "R2" 62+84.07	2	1326		42		54	0.09		
L-2 & L-5	"R2" 59+92.45 TO "R2" 61+64.30	8	4485		111		110	0.31		
L-2 & L-5	"R2" 59+50.98 TO "Q9" 60+42.40	4	286		5				5	
L-3	"BP" 66+48.38 TO "BP" 68+04.70	4	2301		43				43	
L-3	"SW" 02+14.20 TO "SW" 04+19.14	4	1208		5				5	
C-5	"HC1" 52+79.27 TO "HC1" 53+85.70	8	2855		71		70	0.13		
C-27	"CG1" 20+28.64 TO "CG1" 21+28.64	8	4137		103		101	0.19		
C-27	"CG1" 20+00.00 TO "CG1" 20+84.09			79			30	0.12		
C-11	"SG1" 66+39.10 TO "SG1" 66+67.82			90			15			
C-11	"R2" 61+67.26 TO "SG1" 61+82.26			34			6			
C-30	STAIRS ACCESS	4							1	
Q-1	STRUCTURAL CONCRETE SLABS								22	
L-2 TO L-5	CONCRETE BARRIERS								25	
L-2 TO L-3	CURBS								37	
DE-1	"D" 12+74.81 TO "D" 14+49.62								120	
TH-2	"HC1" 56+35.64 TO "HC1" 56+19.42								37	
TH-3	"TBP" 62+25 TO "TBP" 63+45								9	
TH-4	"TBP" 65+30 TO "TBP" 67+05								13	
PLACE HMA DIKE									5	
TOTAL				2144	1471	1041	2755	5	157	

PLACE HOT MIX ASPHALT DIKE

SHEET No.	STATION	(TYPE E)	HOT MIX ASPHALT (TYPE A) *	
			LF	TONS
L-2	"HC1" 61+79.90 TO "SG1" 62+59.11		76	2
L-2	"SG1" 62+82.07 TO "SG1" 63+71.37		90	2
TOTAL			166	4

* QUANTITY INCLUDED IN ROADWAY QUANTITIES

STRUCTURAL CONCRETE SLABS

LOCATION	STRUCTURAL CONCRETE, CONCRETE SLAB	CLASS 2 AGGREGATE BASE
	CY	CY
"SG1" 65+06.27 TO "SG1" 65+34.46	28	6
"SG1" 65+11.75 TO "SG1" 65+74.62	68	16
TOTAL	96	22

DETECTABLE WARNING PANELS

LOCATION	DETECTABLE WARNING PANELS SQFT
"BP" 65+99.23 TO "BP" 66+04.89	16
"BP" 66+05.67 TO "BP" 66+11.32	38
"BP" 66+48.37 TO "BP" 66+69.37	85
"BP" 67+97.00 TO "BP" 68+00.00	57
TOTAL	196

ECS REMOVAL NOTE: "Q9" AND "BP" PORTION INCLUDED IN "R2" LINE.

LOCATION	REMOVE EMBANKMENT CONFINEMENT SYSTEM (ECS) LS
"BP" 64+21.75 TO "BP" 66+09.92	1
"SW" 2+26.94 TO "SW" 4+19.18	1
TOTAL	1

REMOVABLE BOLLARDS

LOCATION	REMOVABLE BOLLARDS EA
22.78' R+ "HC1" 57+55.86 TO 17.66' R+ "R2" 58+90.76	10
TOTAL	10

SUMMARY OF QUANTITIES

Q-1

1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 TARYN PASCUA
 INGRID V. SUPIT
 INGRID V. SUPIT
 INGRID V. SUPIT

REMOVAL QUANTITIES

SHEET No.	STATION	SIDE	REMOVE Conc	REMOVE Ret WALL	REMOVE Conc DECK SURFACE	REMOVE CONC (C&G)	OBLITERATE SURFACING	REMOVE FENCE	REMOVE GATE	SALVAGE FENCE	RELOCATE PIPE HANDRAIL	RELOCATE GATE	REMOVE GR	REMOVE CB	REMOVE METAL RAILING	REMOVE CRASH CUSHION	REMOVE Temp SHORING	REMOVE STAIRS	REMOVE CAR PORT	REMOVE BOLLARDS	RESET BOLLARDS	REMOVE DWP	
			L+R+ SQYD	LF	SQFT	LF	SQYD	LF	EA	LF	EA	LF	EA	LF	EA	LF	EA	LF	EA	EA	EA	EA	EA
L-6	"E" 49+81.29 TO "E" 51+37.32		X											156									
L-6	"E" 51+20.42 TO "E" 51+20.69		X											70									
L-6	"E" 51+21.34 TO "E" 51+21.35	X	X					5															
L-6	"R1" 60+48.01 TO "R1" 60+77.61	X	X											95									
L-6	"R1" 60+22.64 TO "R1" 60+24.86		X					6	1														
L-6	"R1" 60+28.00 TO "HC1" 61+17.45	X	X											57									
L-6	"R1" 60+28.00 TO "HC1" 60+64.13		X					122	1														
L-6	"HC1" 60+57.85 TO "R1" 55+86.40		X					266	1														
L-6	"R1" 55+87.09 TO "R1" 62+30.75		X					43															
L-6	"Q9" 62+93.57 TO "BP" 62+45.61		X						1						53					1			
L-6	"Q9" 62+99.69	X							1														
L-6	"R2" 60+98.00		X																			1	
L-6	"R2" 61+66.19		X																		2	1	
L-6	"R2" 61+42.14 TO "R2" 61+62.71		X					22								1							
L-6	"BP" 61+69.34 TO "BP" 62+09.72	X	X					42	1														
L-6	"BP" 62+44.05 TO "BP" 63+38.82	X	X			148																	
L-6	"BP" 62+51.91 TO "BP" 63+79.83	X	X										60										
L-6	"BP" 62+47.74 TO "BP" 63+42.65	X	X					74															
L-6	"BP" 62+31.38 TO "BP" 62+81.63	X						52	1														
L-6	"R2" 61+67.97 TO "R2" 61+89.45	X														1							
L-6	"R2" 61+89.45 TO "R2" 62+70.91	X												81									
L-6	"R2" 61+79.91 TO "R2" 62+70.91	X						96	1														
L-6 & L-9	"R1" 60+04.34 TO "HC1" 58+09.93	X				277																	
L-6 & L-9	"HC1" 58+15.84 TO "R2" 60+35.64		X						1	260													
L-6 & L-9	"HC1" 58+15.84 TO "R2" 60+88.36		X										288										
L-6 & L-9	"R2" 59+27.50 TO "R2" 60+43.03		X				118																
L-6 & L-9	"HC1" 58+05.96 TO "R1" 60+30.22	X		87																			
L-6 & L-9	"R2" 59+51.26 TO "R2" 60+35.88		X								87	1											
L-6 & L-9	"Q9" 63+01.12 TO "Q9" 63+54.06	X	X											60									
L-6 & L-9	"BP" 62+45.75 TO "Q9" 63+53.99	X	X											113						1			
L-6 & L-9	"BP" 62+45.61 TO "Q9" 62+93.57	X	X											53									
L-6 & L-9	"Q9" 63+50.04 TO "BP" 62+43.03	X	X				118																
L-6 & L-9	"Q9" 62+81.92 TO "Q9" 63+59.32	X						74															
L-6 & L-9	"BP" 62+44.52 TO "Q9" 63+61.36	X	X				110																
L-6 & L-9	"Q9" 62+89.42 TO "Q9" 63+40.94	X				70																	
L-6 & L-7	"BP" 63+78.20 TO "SG1" 65+19.81	X	X											321									
L-6 & L-7	"SG1" 63+87.84 TO "SG1" 64+46.77	X	X				69																
L-6 & L-7	"R2" 61+83.29 TO "BP" 66+94.92	X	X											250									
L-7	"BP" 66+59.24 TO "BP" 66+60.06		X														25						
L-7	"BP" 67+23.59 TO "BP" 67+15.29	X	X					85	1														
L-7	"SG1" 65+82.83 TO "SG1" 66+29.46		X					96															
L-7	"BP" 67+97.48 TO "BP" 68+04.38	X	X				23																
L-7	"SG1" 66+38.83 TO "SG1" 66+66.27	X	X				70																
L-8	"HC1" 52+27.84 TO "HC1" 54+14.18		X					120	1					222									
L-8	"HC1" 53+53.33 TO "HC1" 53+89.11		X					40						23									
L-9	"HC1" 55+22.21 TO "HC1" 55+75.21		X											61									
L-9	"HC1" 55+21.80 TO "HC1" 55+75.21		X				62																
L-9	"HC1" 56+66.30 TO "HC1" 58+06.59	X					143							143									
L-9	"HC1" 58+01.08 TO "HC1" 58+06.59	X												17									
L-9	"HC1" 57+59.88 TO "HC1" 57+65.17	X	X				7																
L-9	"Q9" 63+54.42 TO "Q9" 63+61.36	X					28																
L-9	"Q9" 63+50.41	X				340														1			
TOTAL					87	655	340	588	0	1143	11	260	87	1	797	1047	279	2	25	0	1	2	2

Dist COUNTY ROUTE POST MILES TOTAL PROJECT SHEET No. TOTAL SHEETS
 04 SF 80 7.8/8.0 152 436

m8m8m 4-1-19
 REGISTERED CIVIL ENGINEER DATE

5-17-19
 PLANS APPROVAL DATE

INGRID V. SUPIT
 No. C66937
 Exp. 9-30-20
 CIVIL
 STATE OF CALIFORNIA

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.

HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596
 SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103

SUMMARY OF QUANTITIES

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR HAN-BIN LIANG
 CALCULATED/DESIGNED BY
 CHECKED BY
 LESLEY BROOKS ANALETTE OCHOA
 REVISED BY DATE REVISED
 LB 11-12-18
 LB 2-18-19
 LB 5-17-19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	153	436

Lesley Brooks 5-13-19
 REGISTERED CIVIL ENGINEER DATE
 5-17-19
 PLANS APPROVAL DATE

WRECO
 1243 ALPINE ROAD
 SUITE 108
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

EROSION CONTROL TYPE 1

SEQUENCE	ITEM	MATERIAL		APPLICATION RATE	DEPTH	REMARKS
		DESCRIPTION	TYPE			
STEP 1	COMPOST	COMPOST	FINE	135 CY/ACRE	1"	
STEP 2	STRAW	STRAW	RICE	1.75 TONS/ACRE	-	
STEP 3	INCORPORATE MATERIALS	COMPOST/STRAW	-	-	2" TO 4"	
STEP 4	FIBER ROLLS	RICE STRAW FILLED AND JUTE COVERED	8 TO 10 INCHES IN Dia	-	-	INSTALLATION TYPE 2
STEP 5	HYDROSEED	SEED	MIX	70 LB/ACRE	-	
		FIBER	COMBINATION	1000 LB/ACRE		
		FERTILIZER	ORGANIC	600 LB/ACRE		
STEP 6	HYDROMULCH	FIBER	COMBINATION	2000 LB/ACRE	-	
		TACKIFIER	PLANT BASED	200 LB/ACRE		

SEED MIX

BOTANICAL NAME (COMMON NAME)	PERCENT GERMINATION (MINIMUM)	POUNDS PURE LIVE SEED PER ACRE (SLOPE MEASUREMENT)
BROMUS CARINATUS (CALIFORNIA BROME)	40	8
ELYMUS GLAUCUS (BLUE WILDRYE)	40	8
ESCHSCHOLZIA CALIFORNICA (CALIFORNIA POPPY)	35	2
FESTUCA IDAHOENSIS (IDAHO FESCUE)	35	8
HORDEUM BRACHYANTHERUM (BARLEY)	40	6
LUPINUS NANUS (SKY LUPINE)	40	3
POA SECUNDA (NATIVE PINE BLUEGRASS)	30	4
STIPA CERNUA (NODDING NEEDLEGRASS)	35	8
STIPA PULCHRA (PURPLE NEEDLEGRASS)	35	12
TRIFOLIUM TRIDENTATUM (TOMCAT CLOVER)	50	5
VULPIA MICROSTACHYS (THREE WEEKS FESCUE)	45	6

EROSION CONTROL TYPE 2

SEQUENCE	ITEM	MATERIAL		APPLICATION RATE	DEPTH	REMARKS
		DESCRIPTION	TYPE			
STEP 1	IMPORTED BIOFILTRATION SOIL	IMPORTED BIOFILTRATION SOIL	-	-	18"	
STEP 2	HYDROSEED	SEED	MIX	70 LB/ACRE	-	
		FIBER	COMBINATION	1000 LB/ACRE		
		FERTILIZER	ORGANIC	600 LB/ACRE		
STEP 3	HYDROMULCH	FIBER	COMBINATION	1000 LB/ACRE	-	
		TACKIFIER	PLANT BASED	200 LB/ACRE		
STEP 4	ROLLED EROSION CONTROL PRODUCT (BLANKET)	BLANKET	TYPE A	-	-	
STEP 5	FIBER ROLLS	RICE STRAW FILLED AND JUTE COVERED	8 TO 10 INCHES IN Dia	-	-	INSTALLATION TYPE 2

EROSION CONTROL LEGEND

NO SCALE

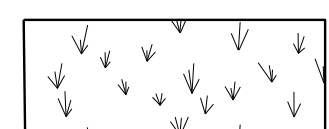

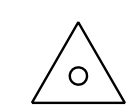
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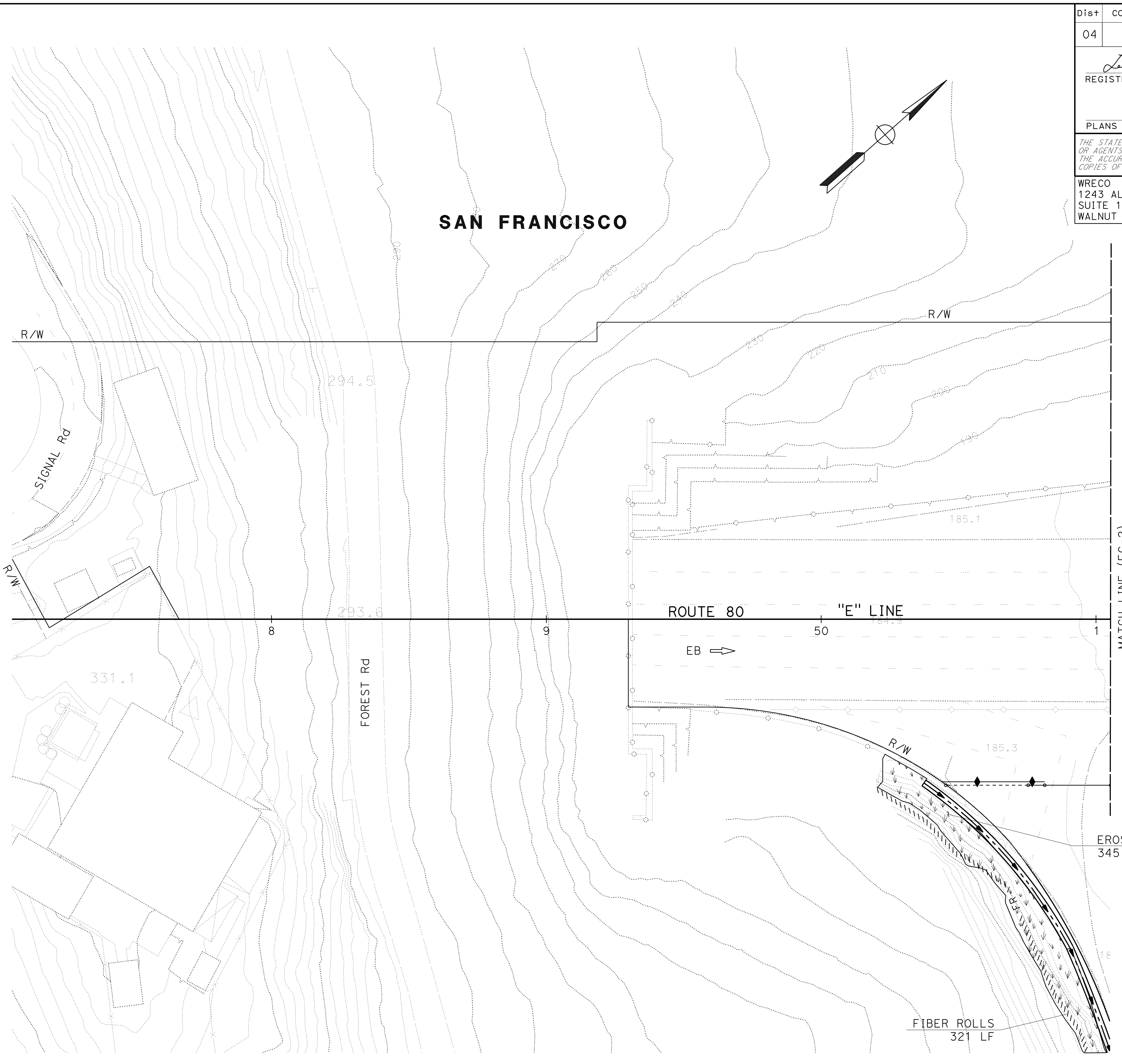
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	LESLEY BROOKS	REVISOR	DATE	LB
Caltrans	HAN-BIN LIANG	CHECKED BY	ANALETTE OCHOA	DATE	11-12-18	5-17-19


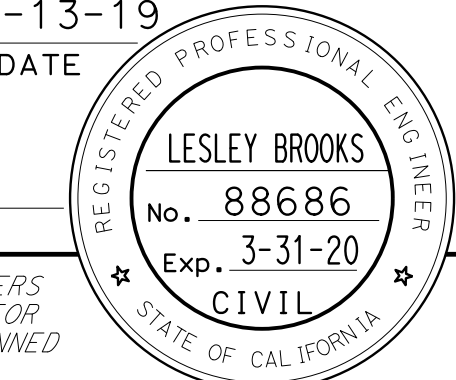
NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

LEGEND:

-  EROSION CONTROL TYPE 1
DISTURBED SOIL AREAS
-  EROSION CONTROL TYPE 2
BIOFILTRATION SWALE
-  SPECIAL MARKER



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	154	436
 REGISTERED CIVIL ENGINEER			5-13-19 DATE		
5-17-19 PLANS APPROVAL DATE					
WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

EROSION CONTROL TYPE 1
345 SQFT

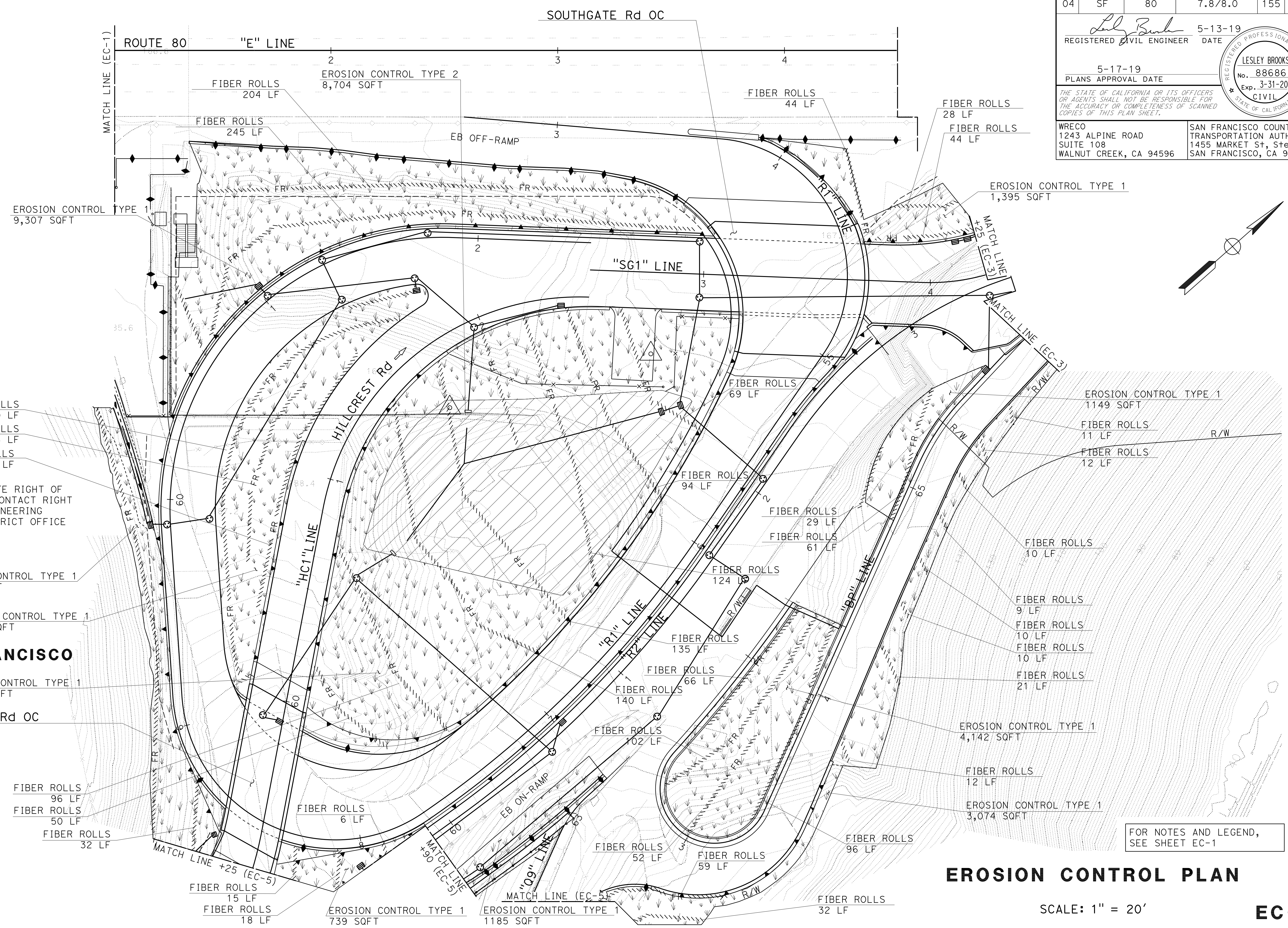
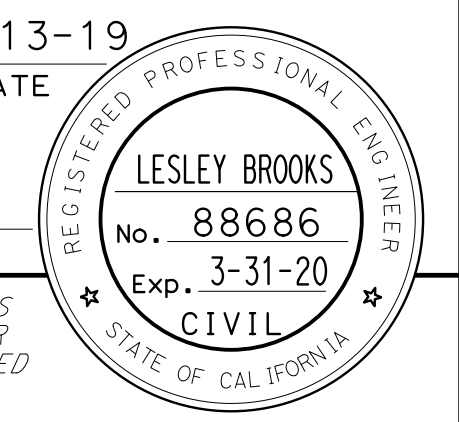
FIBER ROLLS
321 LF

EROSION CONTROL PLAN

SCALE: 1" = 20'

EC-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	155	436
			5-13-19		
REGISTERED CIVIL ENGINEER			DATE		
			5-17-19		
			PLANS APPROVAL DATE		
<small>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.</small>					
WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE

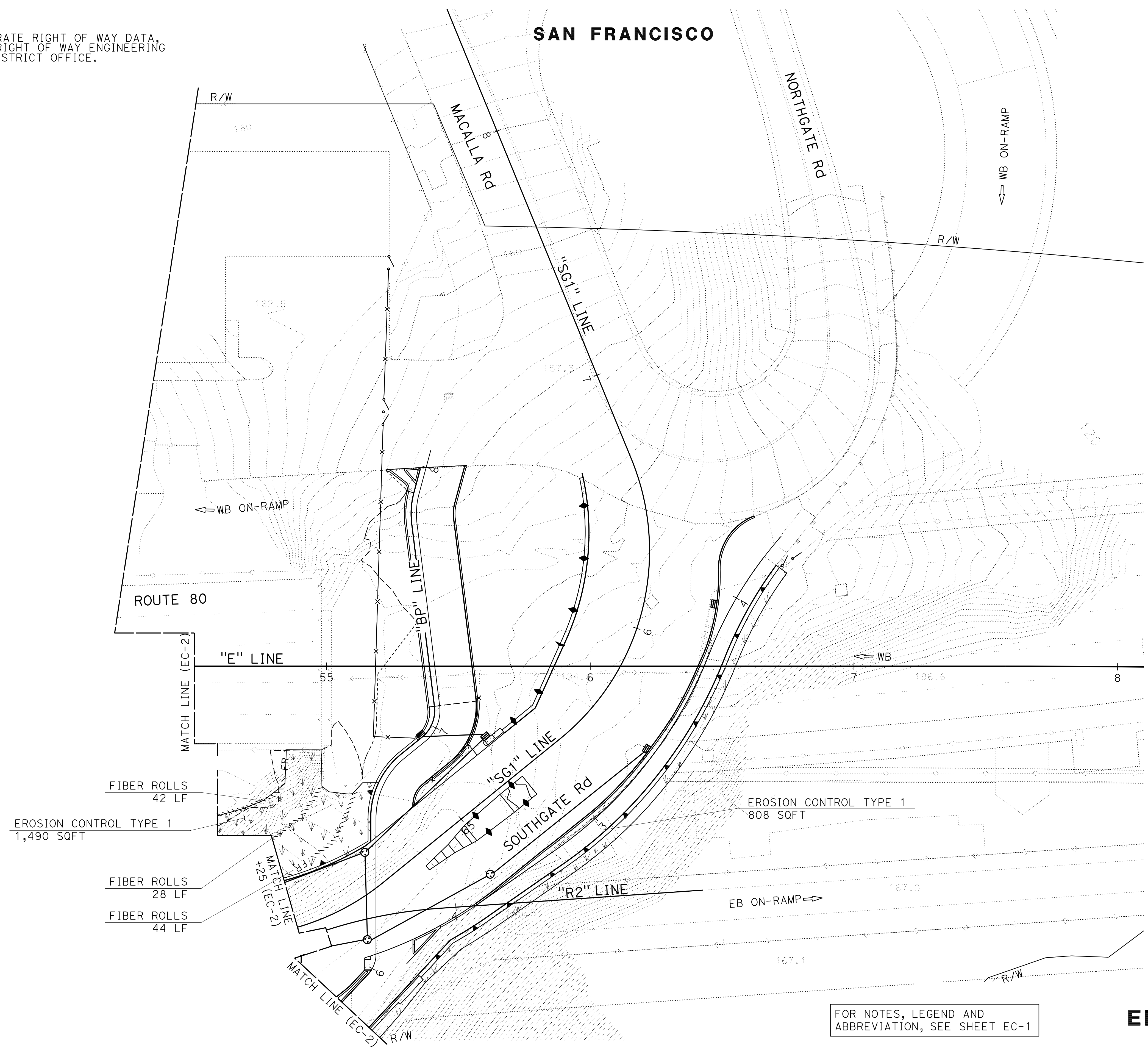
FOR NOTES AND LEGEND, SEE SHEET EC-1

EROSION CONTROL PLAN
SCALE: 1" = 20'
EC-2

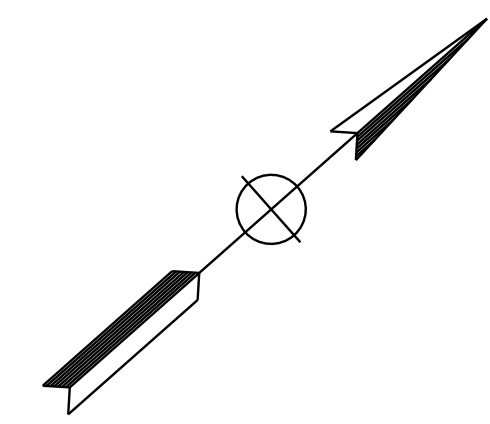
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT SUPERVISOR	DESIGNED BY	REVISOR	DATE	REVISION
	HAN-BIN LIANG	LESLEY BROOKS	ANALETTE OCHOA	5-17-19	2-18-19
				11-12-18	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	REVISOR	DATE	BY	DATE
Caltrans	HAN-BIN LIANG	LESLIE BROOKS	11-12-18	ANALETTE OCHOA	5-17-19

NOTE:
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING
AT THE DISTRICT OFFICE.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	156	436
			REGISTERED CIVIL ENGINEER DATE 5-13-19 LESLEY BROOKS No. 88686 Exp. 3-31-20 CIVIL STATE OF CALIFORNIA		
PLANS APPROVAL DATE			5-17-19		
WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



FOR NOTES, LEGEND AND ABBREVIATION, SEE SHEET EC-1

EROSION CONTROL PLAN

SCALE: 1" = 20'

EC-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT: FUNCTIONAL SUPERVISOR: HAN-BIN LIANG
 CALCULATED/DESIGNED BY: CHECKED BY:
 LESLEY BROOKS ANALETTE OCHOA
 REVISED BY: DATE REVISED: 11-12-18
 LB LB LB 5-17-19 2-18-19

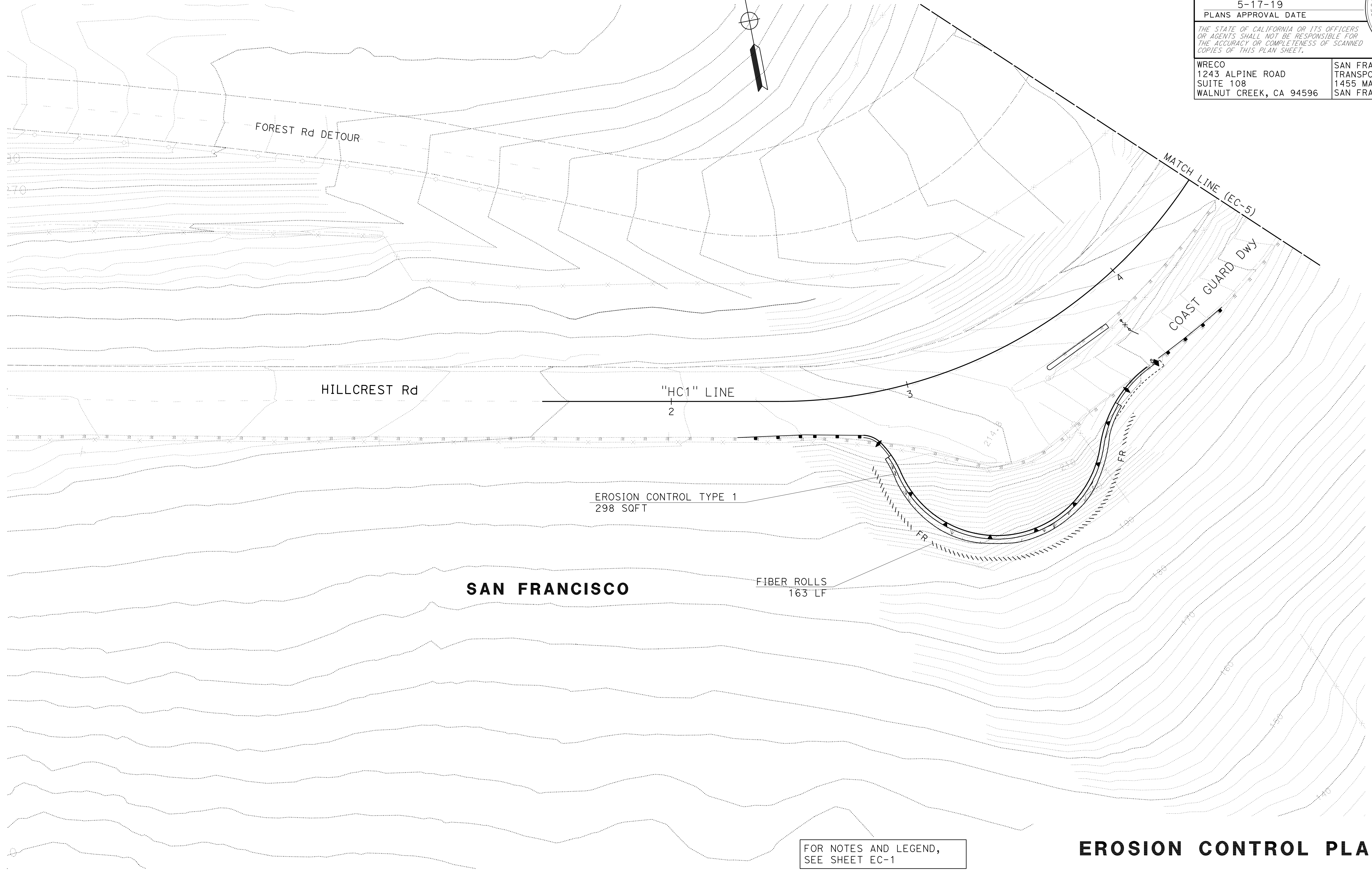
NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	157	436

REGISTERED CIVIL ENGINEER: *Lesley Brooks* DATE: 5-13-19
 PLANS APPROVAL DATE: 5-17-19
 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
LESLEY BROOKS
 No. 88686
 Exp. 3-31-20
 CIVIL
 STATE OF CALIFORNIA

WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596	SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103
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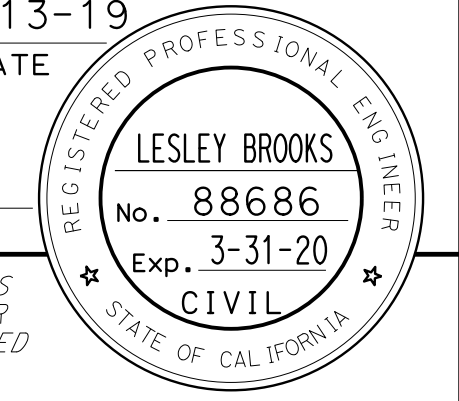


FOR NOTES AND LEGEND,
 SEE SHEET EC-1

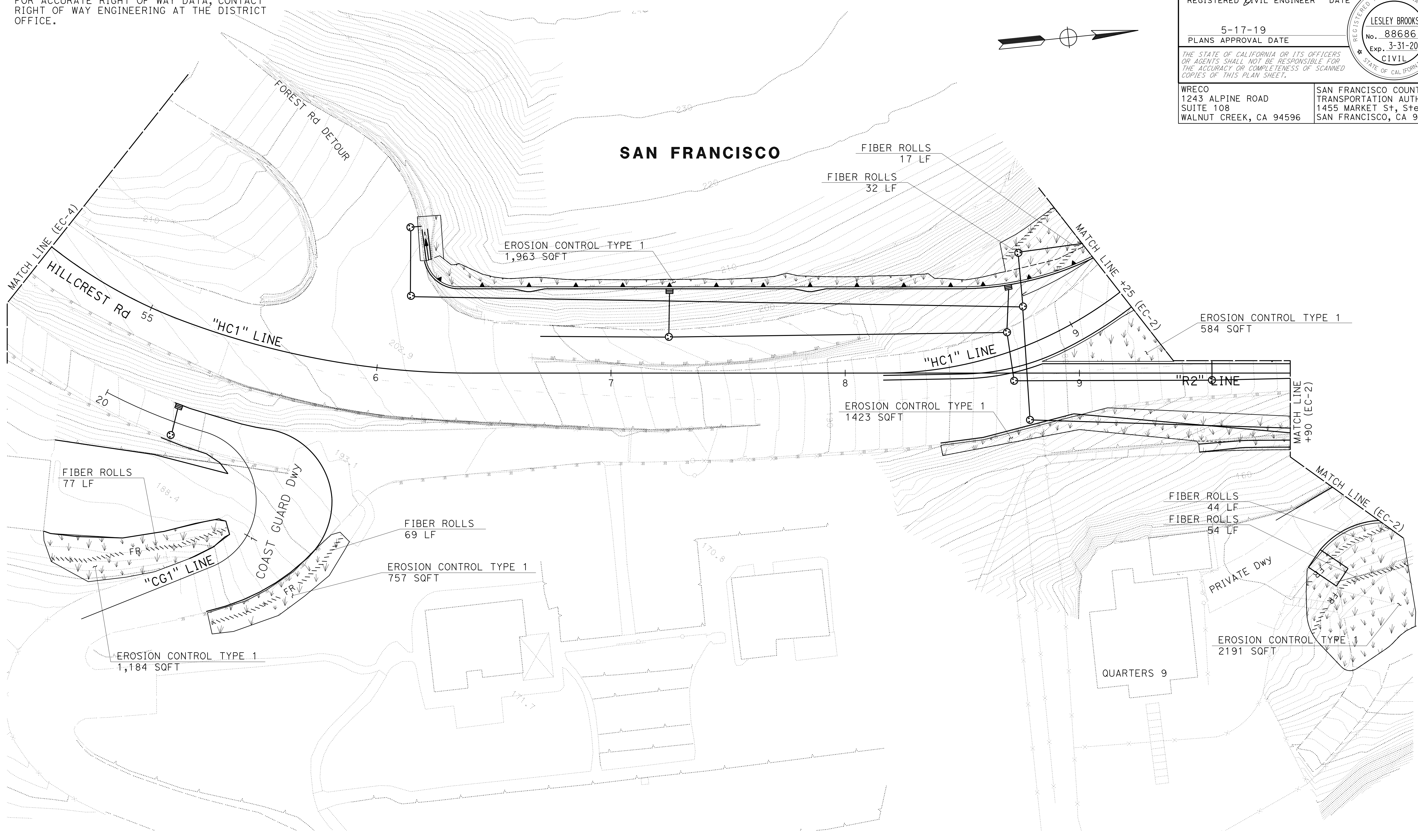
EROSION CONTROL PLAN
 SCALE: 1" = 20'
EC-4

LAST REVISION: DATE PLOTTED => 29-OCT-2019
 00-00-00 TIME PLOTTED => 14:56

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	158	436
			5-13-19		
REGISTERED CIVIL ENGINEER			DATE		
			5-17-19		
			PLANS APPROVAL DATE		
<small>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.</small>					
WRECO 1243 ALPINE ROAD SUITE 108 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



FOR NOTES AND LEGEND,
 SEE SHEET EC-1

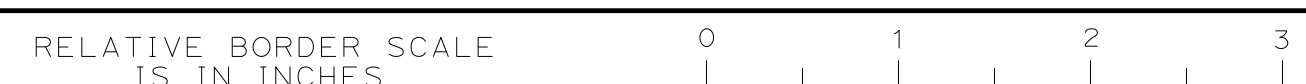
EROSION CONTROL PLAN

SCALE: 1" = 20'

EC-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR	DATE	LB
Caltrans	HAN-BIN LIANG	CHECKED BY	LESLEY BROOKS	11-12-18	2-18-19
			ANALETTE OCHOA	5-17-19	

USERNAME => Patrick_Galindez
 DGN FILE => 0419000153te005.dgn



UNIT 0728

PROJECT NUMBER & PHASE

04190001531

LAST REVISION: DATE PLOTTED => 29-OCT-2019
 00-00-00 TIME PLOTTED => 14:56

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: HAN-BIN LIANG
 CALCULATED/DESIGNED BY: ANALETTE OCHOA
 CHECKED BY: LESLEY BROOKS
 REVISIONS: LB 5-17-19, LB 2-18-19, LB 11-12-18

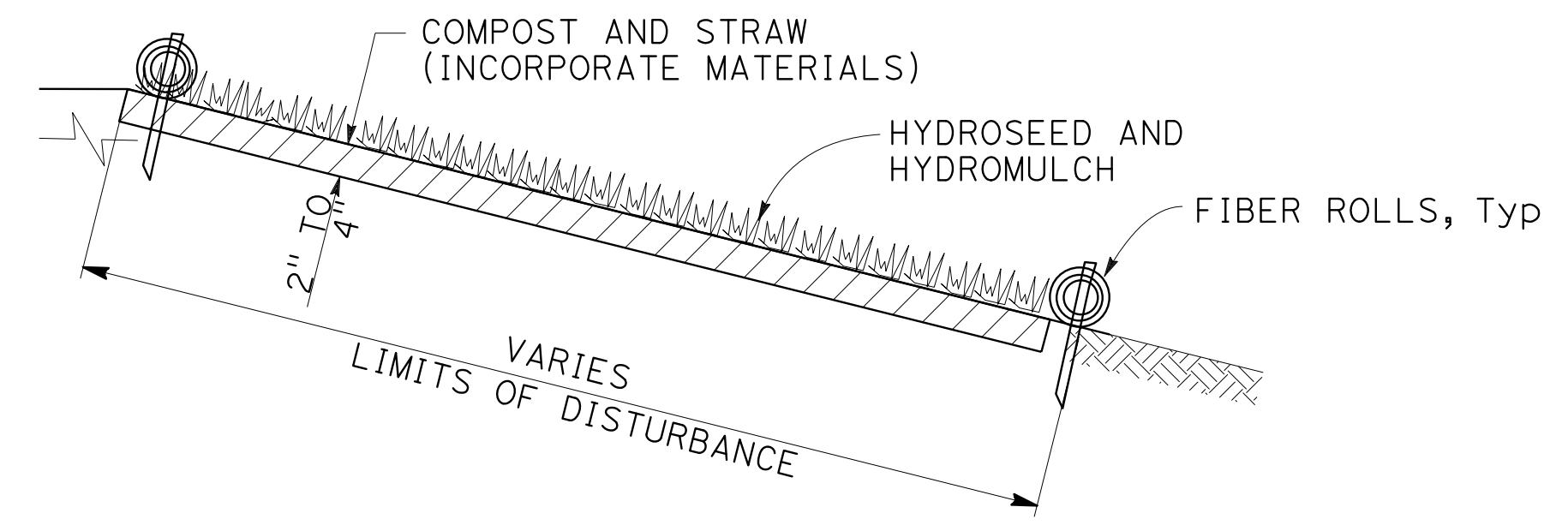
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	159	436

5-13-19
 REGISTERED CIVIL ENGINEER DATE
 5-17-19
 PLANS APPROVAL DATE

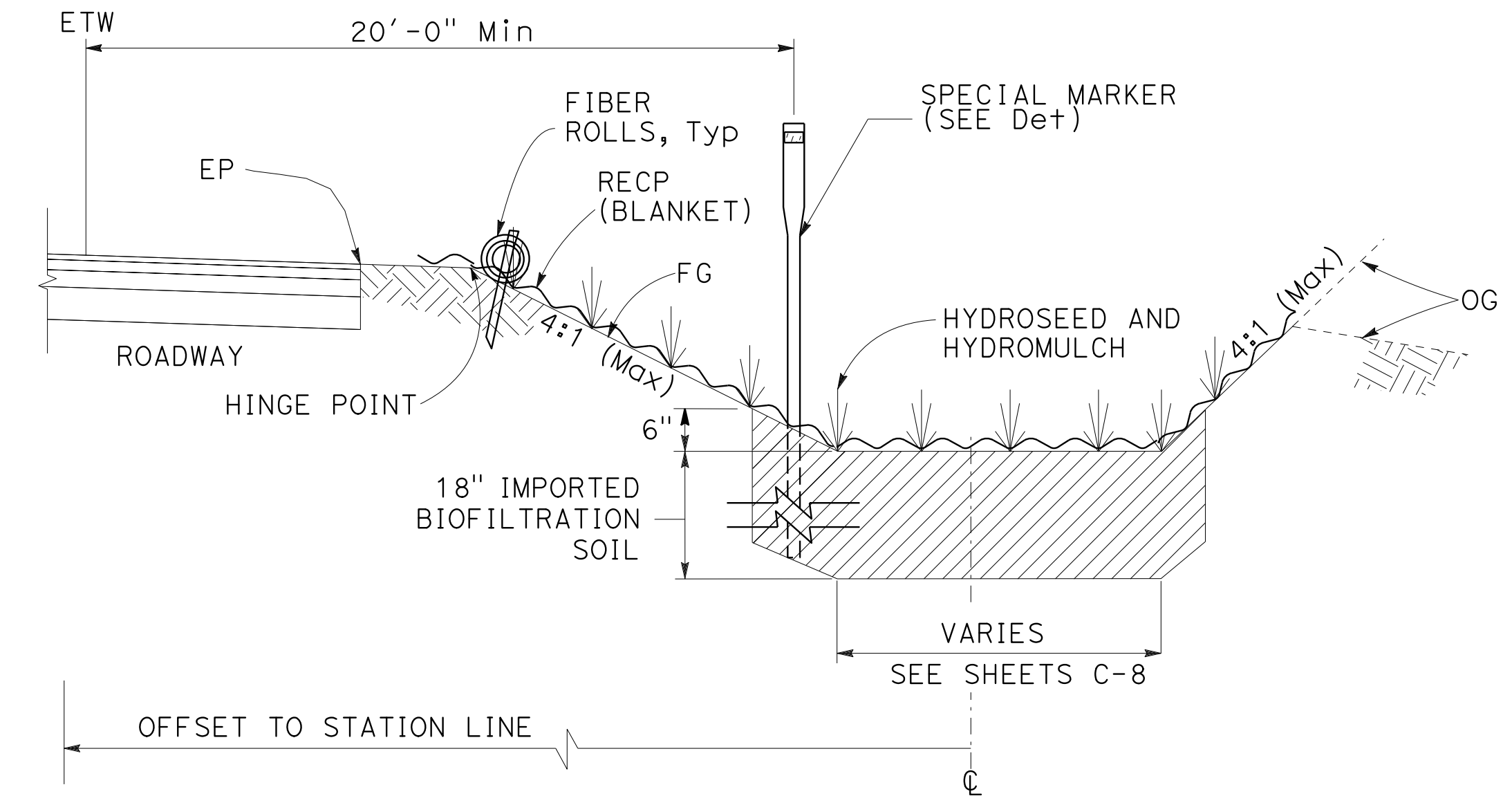
LESLEY BROOKS
 No. 88686
 Exp. 3-31-20
 CIVIL
 STATE OF CALIFORNIA

WRECO
 1243 ALPINE ROAD
 SUITE 108
 WALNUT CREEK, CA 94596

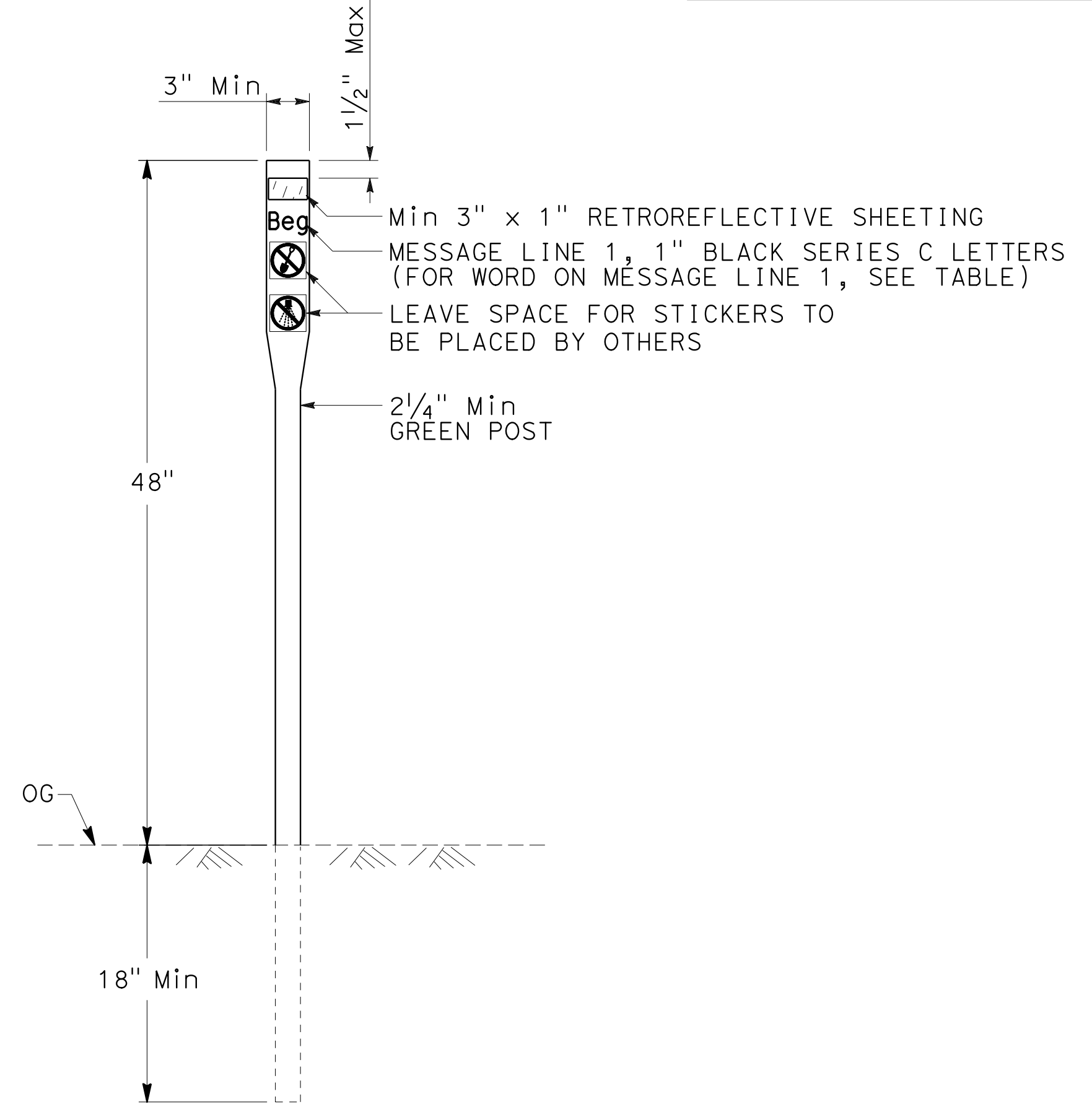
SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



EROSION CONTROL TYPE 1



EROSION CONTROL TYPE 2



SPECIAL MARKER

SEE Std PLANS A73C FOR ADDITIONAL DETAILS

SHEET No.	STATION	LINE 1 MESSAGE	RETROREFLECTIVE SHEETING		No. OF SIGNS
			FRONT	BACK	EA
EC-2	28' Rt " HC1" 61+64	Beg	BLUE	NONE	1
	36' Rt " SG1" 62+78	END	BLUE	NONE	1
TOTAL					2

EROSION CONTROL DETAILS

NO SCALE

ECD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: HAN-BIN LIANG
 CALCULATED/DESIGNED BY: LESLEY BROOKS
 CHECKED BY: ANALETTE OCHOA
 REVISED BY: LB
 DATE REVISED: 11-12-18
 LB
 2-18-19
 LB
 5-17-19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	160	436

Lesley Brooks 5-13-19
 REGISTERED CIVIL ENGINEER DATE
 5-17-19
 PLANS APPROVAL DATE

WRECO
 1243 ALPINE ROAD
 SUITE 108
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

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.

EROSION CONTROL QUANTITIES

SHEET	STATION	ROLLED EROSION CONTROL PRODUCT (BLANKET)	HYDROMULCH	STRAW	HYDROSEED	COMPOST (CY)	INCORPORATE MATERIALS	FIBER ROLLS	IMPORTED BIOFILTRATION SOIL	SPECIAL MARKER
		SQFT	SQFT	SQFT	SQFT	CY	SQFT	LF	CY	EA
EROSION CONTROL TYPE 1										
EC-1	"E" 48+00 TO "E" 50+50	-	345	345	345	1.1	345	39	-	-
EC-2	"E" 50+50 TO "R2" 63+50	-	43,825	43,825	43,825	135.3	43,825	2,635	-	-
EC-3	"E" 54+50 TO "E" 57+84	-	2,298	2,298	2,298	7.1	2,298	114	-	-
EC-4	"HC1" 51+45 TO "HC1" 54+50	-	298	298	298	0.9	298	163	-	-
EC-5	"HC1" 54+50 TO "R2" 59+90	-	8,102	8,102	8,102	25.0	8,102	293	-	-
EROSION CONTROL TYPE 2										
EC-2	"HC1" 60+00 TO "HC1" 62+50	8,704	8,704	-	8,704	-	-	221	484	2
GRAND TOTAL		8,704	63,572	54,868	63,572	169.4	54,868	3,465	484	2

EROSION CONTROL QUANTITIES

ECQ-1

LAST REVISION DATE PLOTTED => 29-OCT-2019
 00-00-00 TIME PLOTTED => 14:57

NOTES:

- ALL WORK MUST CONFORM TO THE 2018 EDITION OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD PLANS, STANDARD SPECIFICATIONS, AND THE SPECIAL PROVISIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL EXISTING UNDERGROUND UTILITIES, WHETHER OR NOT THEY ARE SHOWN ON THESE PLANS. THE CONTRACTOR MUST CONTACT USA NORTH 811 (1-800-277-2600) AT LEAST 48 HOURS BEFORE BEGINNING WORK, WHERE MARKINGS ARE NEAR PROPOSED FOUNDATIONS, THE CONTRACTOR MUST LOCATE UNDERGROUND UTILITIES BY POTHOLING PRIOR TO EXCAVATING.
- ALL EXISTING ELECTRICAL EQUIPMENT, INCLUDING SUBSTRUCTURES, FOUNDATIONS, CONDUITS AND PULL BOXES ARE TO REMAIN IN PLACE AND BE PROTECTED, UNLESS OTHERWISE NOTED.
- ALL ELECTRICAL EQUIPMENT, INCLUDING CONDUITS AND PULL BOXES, IS SHOWN IN APPROXIMATE LOCATIONS ONLY. PROPOSED FINAL LOCATIONS ARE TO BE APPROVED IN THE FIELD. THE CONTRACTOR MUST GIVE 48 HOURS NOTICE FOR APPROVAL OF PROPOSED EQUIPMENT LOCATIONS.
- MINIMUM CONDUIT SIZE MUST BE 2" FOR ALL NEW INSTALLATIONS, UNLESS NOTED OTHERWISE.
- ALL EXISTING ELECTRICAL EQUIPMENT TO REMAIN MUST BE FUNCTIONAL AT THE END OF EACH WORKING DAY AND UPON PROJECT COMPLETION. ALL EXISTING TRAFFIC OPERATION SYSTEMS AND ELECTRONIC TOLL SYSTEMS MUST BE KEPT FUNCTIONAL AT ALL TIMES DURING ALL CONSTRUCTION PHASES.
- ALL EMPTY CONDUITS MUST BE INSTALLED WITH PULL TAPE FOR FUTURE CONDUCTORS/CABLES.
- ALL CONDUITS MUST BE INSTALLED OUTSIDE OF THE TREE DRIP LINE. TRENCHING WITHIN THE DRIP LINE IS PROHIBITED.
- SHOULD CONDUCTORS OF DIFFERENT VOLTAGE BE MIXED IN THE SAME PULL BOX, CONDUCTORS MUST BE LABELLED ACCORDINGLY.
- ALL CONDUITS FROM PULL BOXES TO THE NEAREST OVERHEAD SIGN STRUCTURES OR TOLL GANTRIES WITH TOLL EQUIPMENT INTO FOUNDATION MUST BE 3" MINIMUM, UNLESS NOTED OTHERWISE.
- ALL NEW ELECTRICAL EQUIPMENT SHALL BE INSTALLED 5' BEHIND EXISTING MBGR AND NEW MGS.
- ALL PULL BOXES INSTALLED IN THE PAVED ROADWAY/SHOULDER AND IN THE CONCRETE PAD MUST BE TRAFFIC RATED (BOX AND LID).
- THE CONTRACTOR SHALL OBTAIN AN O.S.H.A. PERMIT FROM THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY PRIOR TO THE CONSTRUCTION OF TRENCHES OR EXCAVATIONS WHICH ARE FIVE FEET DEEPER.
- THE CONTRACTOR SHALL ENSURE THAT REQUIRED NOTIFICATION AND COORDINATION IS PROVIDED TO APPROPRIATE UTILITY COMPANIES PRIOR TO EXCAVATION, GRADING OR ANY OTHER WORK WHICH MAY AFFECT ACTIVE UTILITY COMPANY FACILITIES.
- CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING ADJACENT TO OR AROUND EXISTING ABOVE GROUND UTILITIES. UTILITY LINES SHALL AT NO TIME BE DISTURBED.
- FIELD VERIFY THE EXACT LOCATION AND DEPTH OF BELOW GROUND PIPING AND UTILITIES IN THE IMMEDIATE VICINITY OF SUBSURFACE WORK, WHETHER SHOWN ON THE DRAWINGS OR NOT. MARK ALL EXISTING PIPING AND UTILITIES AFFECTED BY THE WORK USING UNDERGROUND MAP LOCATOR POSITION OF PIPES AND CONDUITS ON THE SURFACE. CONTACT UNDERGROUND SERVICE ALERT, 48 HOURS IN ADVANCE FOR ASSISTANCE IN MARKING OUT THE AREAS INVOLVING SUBSURFACE WORK. ADD THE EXISTING UNDERGROUND UTILITIES FOUND DURING BLUE STAKING TO DRAWINGS FOR RECORD. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE GENERAL CONTRACTOR'S OR ANY SUBCONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- ANY POWER SHUTDOWN OR INTERRUPTION OF UTILITIES SHALL BE COORDINATED WITH THE ENGINEER. SUBMIT SHUTDOWN/OUTAGE SCHEDULE IN A TIMELY MANNER TO THE ENGINEER IN SUFFICIENT TIME TO SUBMIT AN OUTAGE REQUEST TO THE UTILITIES TWO WEEKS PRIOR TO THE START OF WORK. ALL EQUIPMENT, TOOLS, AND SUPPLIES TO BE USED IN OUTAGE MUST BE ON HAND 10 DAYS PRIOR TO THE SCHEDULE SHUTDOWN/OUTAGE DATE AND ALL EQUIPMENT MUST BE INSPECTED BY THE ENGINEER; OTHERWISE NOTIFY ENGINEER REQUESTING A CANCELATION OF THE SCHEDULED SHUTDOWN/OUTAGE.
- THE CONTRACTOR'S BID AND ALL WORK SHALL COMPLY WITH THE 2016 EDITION OF THE CALIFORNIA ELECTRICAL CODE AND ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL CODES. WHERE THE PLANS SHOW MORE RESTRICTIVE REQUIREMENTS, THE PLANS SHALL GOVERN. HOWEVER, NOTHING ON THESE PLANS SHALL BE INTERPRETED AS AUTHORITY TO VIOLATE ANY CODE OR REGULATION. WHEN REFERENCE SARE MADE TO SPECIFIC CODE SECTIONS, STANDARDS, GUIDES, AND OTHER SIMILAR REFERENCES, THEY ARE INTENDED TO ADD EMPHASIS TO THE REQUIREMENTS OF THAT PARTICULAR REFERENCE AND ARE NOT INTENDED IN ANY WAY TO RELIEVE THE CONTRACTOR OF THE REMAINING REFERENCES.
- DO NOT BORE, NOTCH OR IN ANY WAY CUT INTO ANY STRUCTURAL MEMBER WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.
- CONDUIT THAT IS TO BE ABANDONED SHALL HAVE WIRES REMOVED. THE CONDUIT SHALL BE REMOVED TO A DEPTH OF AT LEAST 12 INCHES BELOW THE SURFACE AND HAVE BOTH ENDS CRIMPED.
- ALL ACTIVE RAMP METERING AND TRAFFIC OPERATIONS SYSTEM ELEMENTS MUST BE KEPT OPERATIONAL THROUGHOUT THE CONSTRUCTION PHASE OF THIS PROJECT. THE EXISTING AND OPERATIONAL RAMP METERING AND TRAFFIC OPERATIONS SYSTEM ELEMENTS THAT MAY BE AFFECTED BY THIS PROJECT MUST BE RELOCATED, MODIFIED, OR FULLY REPLACED AS NECESSARY.

INDEX OF ELECTRICAL PLANS:

SHEET No.	TITLE
E-1	NOTES, LEGEND, ABBREVIATIONS, AND INDEX OF ELECTRICAL PLANS
E-2	LEGEND
E-3 TO E-4	LIGHTING SYSTEM
E-5 TO E-6	MODIFYING EXISTING ELECTRICAL SYSTEM, LIGHTING (CITY STREET)
E-7	MODIFYING EXISTING ELECTRICAL SYSTEM, RAMP METERING SYSTEM
E-8 TO E-9	ELECTRONIC TOLL SYSTEM
E-10 TO E-11	SIGNAL AND LIGHTING (CITY)
E-12	GROUNDING PLAN
E-12a	MODIFYING EXISTING ELECTRICAL SYSTEM, SECURITY GATE (USCG)
E-13	TEMPORARY LIGHTING SYSTEM
ED-1 TO ED-8	ELECTRICAL SYSTEMS DETAILS
EQ-1	ELECTRICAL SYSTEMS QUANTITIES



ABBREVIATIONS:

(SEE A3A, A3B, A3C)

ETS	ELECTRONIC TOLL SYSTEM
FDU	FIBER DISTRIBUTION UNIT
G	GROUND
LVCC	LOW VOLTAGE CONTROL CENTER
SFOBB	SAN FRANCISCO OAKLAND BAY BRIDGE
SFPUC	SAN FRANCISCO PUBLIC UTILITY COMMISSION
SMFO	SINGLE MODE FIBER OPTIC CABLE
TB	TERMINAL BOX
TR	TOLL READER
USCG	UNITED STATES COAST GUARD
YBI	YERBA BUENA ISLAND

LEGEND:

(SEE RSP ES-1A, RSP ES-1B, RSP ES-1C)

NEW	
■	BATTERY BACK-UP SYSTEM
□SV	FIBER OPTIC SPLICE VAULT
□R	NEW CONDUIT RISER STRUCTURE
⬠	PENTAGON POLE MOUNTED BIKE PATH LIGHTING POLE AND FIXTURES (DEPARTMENT-FURNISHED)
⬠	PENTAGON POLE MOUNTED ROADWAY LIGHTING POLE AND FIXTURES (DEPARTMENT-FURNISHED)
----	Exist #4/0 BARE COPPER GROUNDING CONDUCTORS, SEE Sht E-12
—	RELOCATED #4/0 BARE COPPER GROUNDING CONDUCTORS, SEE Sht E-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	161	436
			4-1-19		
REGISTERED CIVIL ENGINEER			DATE		
			5-17-19		
			PLANS APPROVAL DATE		
<small>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.</small>					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

NOTES, LEGEND, ABBREVIATIONS, AND INDEX OF ELECTRICAL PLANS

LAST REVISION DATE PLOTTED => 16-DEC-2019 00-00-00 TIME PLOTTED => 10:55

1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

LEGEND:

- 1 Exist 4"C, PT. INSTALL 3#6 (480 V Ltg), 1#8 (G) FROM Exist TB-23E IN Exist VAULT-2A TO Exist VAULT-2B, Exist MH-2 AND Exist 480 V LVCC-A CONTROL CENTER LOCATED INSIDE YBI SUBSTATION BUILDING.
- 2 Exist 4"C, PT. INSTALL 3#6 (480 V Ltg), 1#8 (G).
- 3 INSTALL 3"C, 3#6 (480 V Ltg), 1#8 (G).
- 4 INSTALL 3"C, 2#6 (480 V Ltg), 1#8 (G).
- 5 INSTALL PENTAGONAL SHAPE ROADWAY LIGHT POLE WITH FIXTURE BEHIND Exist Conc BARRIER. SEE SHEET ED-3 FOR DETAILS.
- 6 INSTALL PULL BOX IN Exist 4"C STUB OUT.
- 7 INSTALL 110 W LED (480 V Ltg) SURFACE MOUNTED SOFFIT LUMINAIRE ON THE LOWER DECK STRUCTURE.
- 8 INSTALL 2"C, 3#6 (480 V Ltg), 1#8 (G).
- 9 INSTALL PENTAGONAL SHAPE BIKE PATH LIGHT POLE WITH FIXTURE BEHIND CURB. SEE SHEET ED-2 FOR DETAILS.
- 10 INSTALL 110 W LED (480 V Ltg) SURFACE MOUNTED TO SOFFIT LUMINAIRE ON THE LOWER DECK STRUCTURE. BACKBOX WAS INSTALLED UNDER YBITS-I CONTRACT.
- 11 INSTALL 3#6 (480 V Ltg), 1#8 (G) IN Exist CONDUIT INSTALLED UNDER YBITS-I CONTRACT.
- 12 INSTALL PENTAGONAL SHAPE ROADWAY LIGHT POLE WITH FIXTURE BEHIND CURB. SEE SHEET ED-3 FOR DETAILS.
- 13 INSTALL 2"C, 13 DLC, 1-12 SMFO.
- 14 **1** INSTALL SFPUC STREET LIGHT STEEL SINGLE ARM POLE (UNION METAL 5809-B4-Y1) WITH PHOTOCELLS, LUMEC ROADFOCUS MEDIUM 108 W, 120/277 V (RFM-108W32LED3K-T-R3M) LED LUMINAIRE BEHIND CURB. SEE SHEET ED-1 FOR DETAILS.
- 15 **1** INSTALL SFPUC STREET LIGHT STEEL DUAL ARM POLE (METAL 5809-B4-Y2) WITH PHOTOCELLS, LUMEC ROADFOCUS MEDIUM 108 W, 120/277 V (RFM-108W32LED3K-T-R3M) LED LUMINAIRE BEHIND CURB. SEE SHEET ED-1 FOR DETAILS.
- 16 **1** INSTALL SFPUC STREET LIGHT STEEL SINGLE ARM POLE (UNION METAL 5809-B4-Y1) WITH PHOTOCELLS, LUMEC ROAD FOCUS MEDIUM 108 W, 120/277 V (RFM-108W32LED3K-T-R3M) LED LUMINAIRE BEHIND RW No. 4. SEE SHEET ED-1 FOR DETAILS.
- 17 **1** INSTALL SFPUC STREET LIGHT STEEL DUAL ARM POLE (METAL 5809-B4-Y2) WITH PHOTOCELLS, LUMEC ROAD FOCUS MEDIUM 108 W, 120/277 V (RFM-108W32LED3K-T-R3M) LED LUMINAIRE ON RW No. 5 WITHOUT THE 17" PEDESTAL. INCLUDE ALUMINUM BREAKAWAY REGARDLESS OF PEDESTAL. SEE SHEET ED-1 AND STRUCTURE PLANS FOR DETAILS.
- 18 INSTALL 1/2"C, 2#6 (277 V CITY Ltg), 1#8 (G).
- 19 INSTALL 110 W LED (277 V CITY Ltg) SURFACE MOUNTED SOFFIT LUMINAIRE ON THE LOWER DECK STRUCTURE.
- 20 **RC** Exist TEMP MODEL 334 CABINET FOUNDATION, CONDUIT STUB OUTS, AND COILED 1-12 SMFO.
- 21 **1** INSTALL SFPUC STREET LIGHT STEEL SINGLE ARM POLE (UNION METAL 5809-B4-Y1) WITH PHOTOCELLS, LUMEC ROADFOCUS MEDIUM 108 W, 120/277 V (RFM-108W32LED3K-T-R3M) LED LUMINAIRE ON CONCRETE BARRIER WITHOUT THE 17" PEDESTAL. INCLUDE ALUMINUM BREAKAWAY REGARDLESS OF PEDESTAL. SEE SHEET ED-1 AND STRUCTURE PLANS FOR DETAILS.
- 22 Exist 2#6 (277 V CITY Ltg), 1#8 (G) IN OVERHEAD MESSENGER WIRE.
- 23 Exist CONDUITS AND CONDUCTORS TO REMAIN.
- 24 RELOCATE Exist MODEL 334 RAMP METERING CABINET FROM EB ON-RAMP TO WB SFOBB MAINTENANCE AREA. REPLACE Exist MODEL 170 CONTROLLER WITH DEPARTMENT FURNISHED MODEL 2070E CONTROLLER. INSTALL FOUNDATION FOR MODEL 334 CABINET PER CALTRANS STANDARD PLAN RSP ES-3C.
- 25 INSTALL 2"C, 2#8 (120 V RM), 6#14 (120 V RM SIGNAL), 2#12 (120 V RM FLASHING BEACON), 3#8 (120 V FLASHING BEACON), 3#10 (G), 1#10 (SIGNAL NEUTRAL).

- 26 INSTALL 2"C ON RW No. 2.
- 27 INSTALL 2"C, 14 DLC, 1-12 SMFO.
- 28 SEE UTILITY PLANS U-3, U-5 AND UD-1 FOR JOINT TRENCH LOCATION AND DETAILS.
- 29 INSTALL 2-4"C, PT.
- 30 Exist 2-4"C, PT.
- 31 Exist 1-4"C, PT.
- 32 Exist 4"C. INSTALL 2#8 (120 V LTG), 2#6 (120 V SIGNAL), 3#14 (120 V PEU), 1#8 (G), TO Exist 120/208 V LP-A PANEL LOCATED INSIDE YBI SUBSTATION BUILDING.
- 33 INSTALL CALTRANS TYPE 332 CONTROLLER CABINET FOUNDATION AND PAD WITH CCSF/SFMTA FURNISHED CABINET AND CONTROLLER. SEE CALTRANS STANDARD PLAN ES-3C FOR CONTROLLER CABINET FOUNDATION AND PAD DETAILS, SHEETS X-11 AND C-2 FOR PAD LOCATION.
- 34 INSTALL 3"C, 2#8 (120 V LTG), 2#6 (120 V SIGNAL), 3#14 (120 V PEU), 1#8 (G).
- 35 INSTALL FDU IN THE CABINET AND PERFORM OPTICAL LOSS TEST SET (OLTS) TESTING FOR CONNECTION TO Exist TOS SPLICE CABINET #TOS-01ES LOCATED ON SERVICE PLATFORM 1E.
- 36 INSTALL 2"C, 13 DLC, AND Exist COILED 1-12 SMFO.
- 37 SPLICE Exist COILED 1-12 SMFO AND EXTEND 1-12 SMFO TO RELOCATED RAMP METERING CABINET AT WB SFOBB MAINTENANCE AREA.
- 38 INSTALL R3-5a SIGN ON SIGNAL MAST ARM. SEE SHEET S-3 FOR DETALIS.
- 39 FURNISH AND INSTALL A BATTERY BACK-UP SYSTEM AND ANCHOR BOLTS AND CONSTRUCT THE CABINET FOUNDATION TO CONFORM TO SECTION 34 41 13 2.23 OF THE CCSF/SFMTA SPECIFICATIONS.
- 40 INSTALL 2"C, 2#6 (120 V SIGNAL).
- 41 INSTALL 2"C, 2#8 (120 V LTG), 3#14 (120 V PEU), 1#8 (G).
- 42 EXISTING CAMERA MOUNTED UNDER THE EB ON-RAMP STRUCTURE TO BE PROTECTED IN PLACE DURING CONSTRUCTION.
- 43 INSTALL 10' TEMPORARY WOOD POLE. SEE CALTRANS STANDARD PLANS RSP ES-18B FOR DETAILS.
- 44 INSTALL 2#8 (120 V LTG), 1#8 (G).
- 45 INSTALL 3"C TO Exist MH-2. NOT PART OF THIS BID ITEM. SEE SHEET E-10 AND 32 FOR CONNECTION TO Exist 120/208 V LP-A PANEL LOCATED INSIDE YBI SUBSTATION BUILDING.
- 46 NOT PART OF THIS BID ITEM. SEE SHEET E-10 FOR DETAILS.
- 47 OVERHEAD MESSENGER LINE (3/8" 7-STRAND WIRE), 2#8 (120 V LTG), 1#8 (G).
- 48 INSTALL 10' TEMPORARY WOOD POLE WITH 6' LUMINAIRE MAST ARM BEHIND TEMPORARY FENCE. SEE CALTRANS STANDARD PLANS RSP ES-18B FOR DETAILS.
- 49 **1** FURNISH AND INSTALL PULL BOX TYPE II FOR CITY STREET LIGHTING. THE PULL BOX COVER MUST BE MARKED AS "STREET LIGHTING 120/240 VOLT". REFER TO CCSF/SFMTA STANDARD PLAN 87,201 FOR DETAILS.
- 50 EXISTING USCG SECURITY GATE COMMUNICATION PULL BOX TO REMAIN. **1**
- 51 RELOCATE EXISTING USCG SECURITY GATE ENTRANCE KEY PAD FROM "HC1" LINE Sta 57+47, 37' Rt TO Sta 53+87, 25' Rt. **1**
- 52 EXISTING JUNCTION BOX TO REMAIN. **1**
- 53 RELOCATE EXISTING SERVICE EQUIPMENT ENCLOSURE FROM "HC1" LINE Sta 53+63, 21' Rt TO Sta 53+98, 25' Rt. **1**

- 54 **1** CONNECT NEW AND EXISTING CONDUIT RUN WITH LOW VOLTAGE POWER CONDUCTORS TO RELOCATED SERVICE EQUIPMENT ENCLOSURE AND COMMUNICATION CONDUCTORS TO RELOCATED USCG SECURITY GATE COMMUNICATION PULL BOX.
- 55 **1** EXISTING WALL MOUNTED CONDUIT WITH LOW VOLTAGE POWER AND COMMUNICATION CONDUCTORS TO REMAIN.
- 56 **1** CONNECT NEW AND EXISTING CONDUIT RUN WITH LOW VOLTAGE POWER CONDUCTORS TO RELOCATED SERVICE EQUIPMENT ENCLOSURE.
- 57 **1** INSTALL 1"C WITH LOW VOLTAGE POWER CONDUCTORS. **1**
- 58 **1** RELCOATE EXISTING JUNCTION BOX FROM "HC1 LINE STA 53+68, 22' Rt TO 54+03, 25' Rt. **1**
- 59 **1** EXISTING UNDERGROUND CONDUIT WITH LOW VOLTAGE POWER AND COMMUNICATION CONDUCTORS TO REMAIN. **1**
- 60 **1** PROPOSED USCG SECURITY METAL GATE SEE SHEETS C-5 AND L-4 FOR DETAILS. **1**

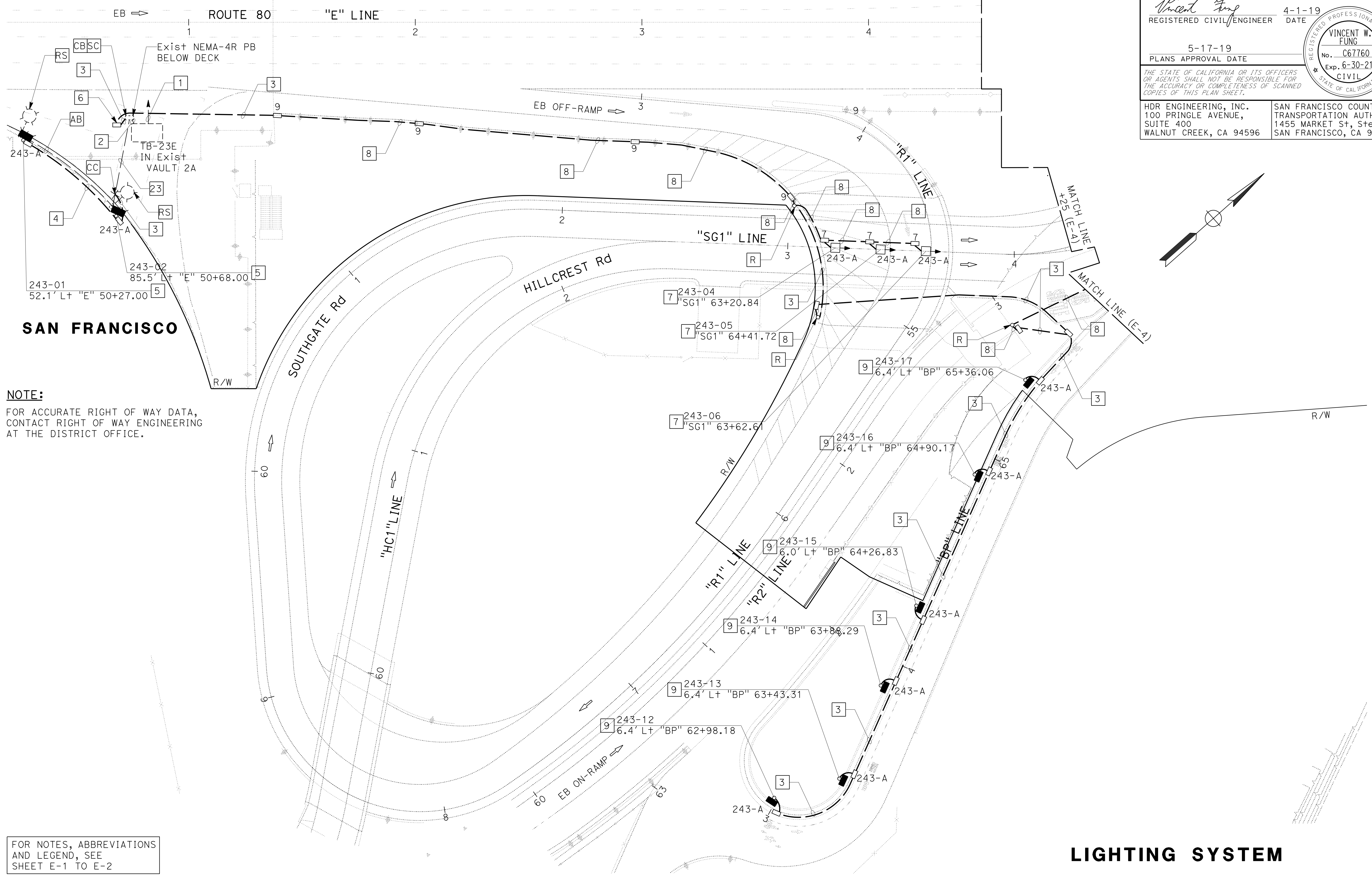
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	162	436
REGISTERED CIVIL ENGINEER			4-1-19 DATE		
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

LEGEND

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: CHECKED BY:
 VINCENT FUNG PETER KERESZTES
 REVISOR: DATE: HQ: HQ: HQ: HQ:
 VINCENT FUNG PETER KERESZTES
 4-30-18 11-12-18 2-18-19

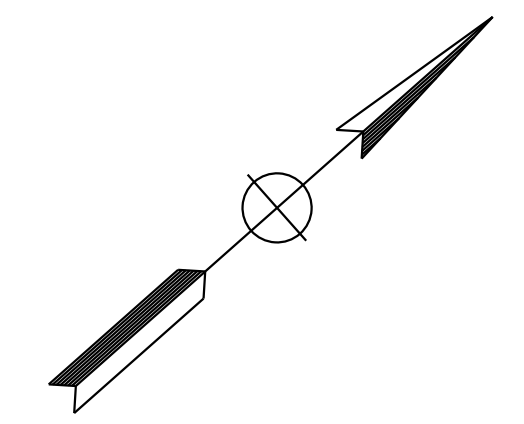
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	163	436

Vincent W. Fung
 REGISTERED CIVIL ENGINEER
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19
 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.
 HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596
 SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET ST, Ste 2200 SAN FRANCISCO, CA 94103



NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET E-1 TO E-2



APPROVED FOR ELECTRICAL WORK ONLY

LIGHTING SYSTEM

SCALE: 1" = 20'

E-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: VINCENT FUNG
 CHECKED BY: PETER KERESZTES
 REVISIONS:
 HQ 2-18-19
 HQ 11-12-18
 HQ 4-30-18
 REVISOR: HQ
 DATE: 4-30-18

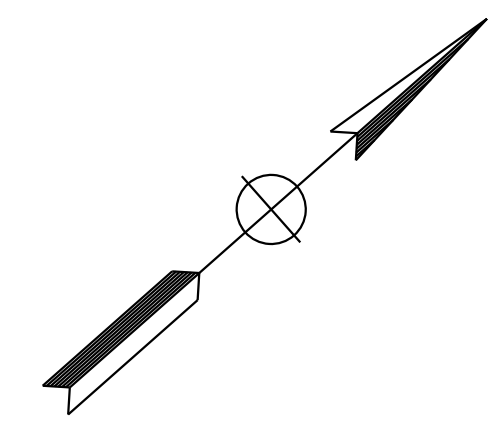
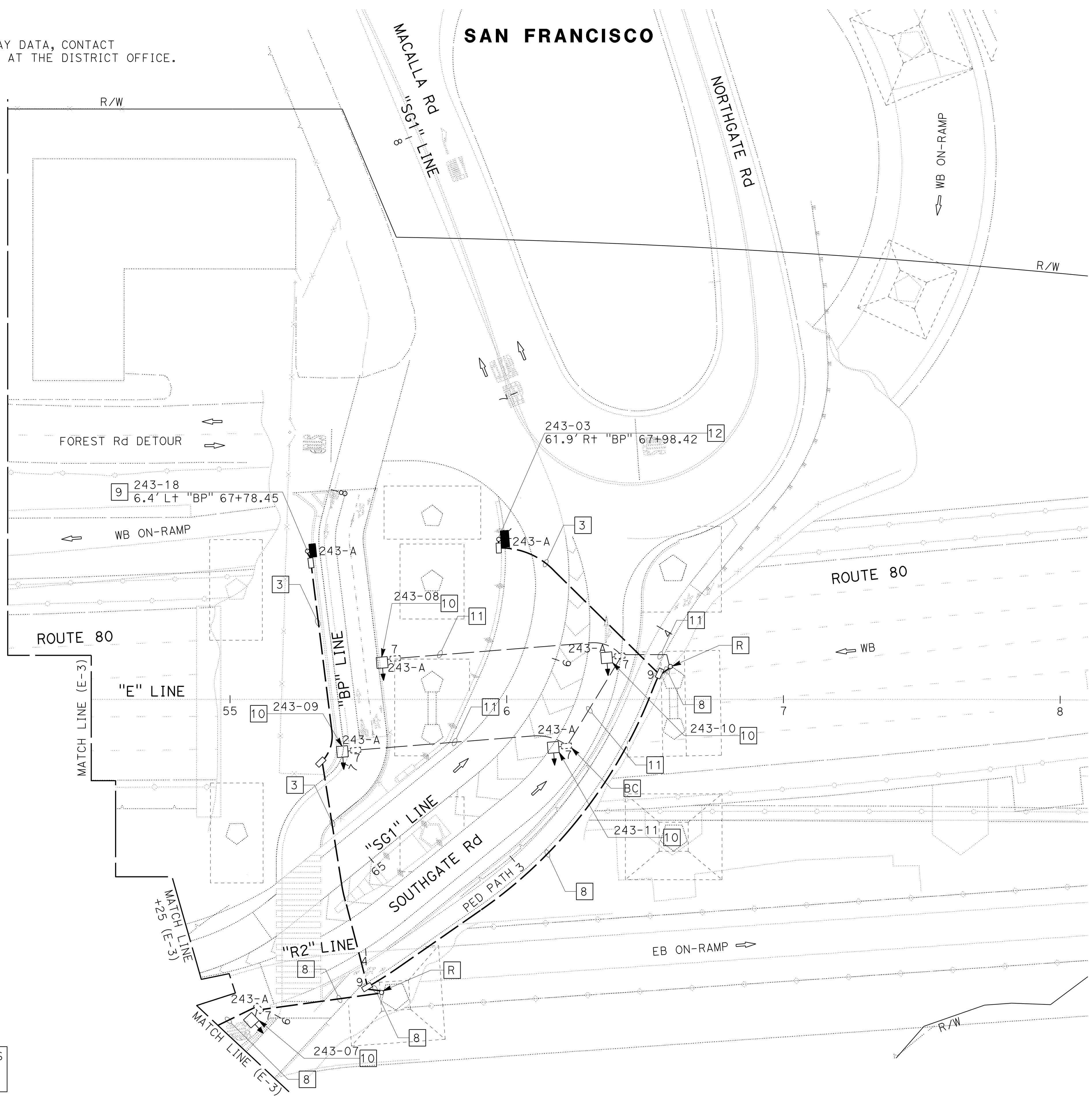
NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	164	436

Vincent Fung
 REGISTERED CIVIL ENGINEER
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19
 VINCENT W. FUNG
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE
 SHEET E-1 TO E-2

APPROVED FOR ELECTRICAL WORK ONLY

LIGHTING SYSTEM

SCALE: 1" = 20'

E-4

LAST REVISION DATE PLOTTED => 13-NOV-2019
 00-00-00 TIME PLOTTED => 13:03

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	165	436

Vincent Fung
 REGISTERED CIVIL ENGINEER
 DATE 4-1-19
 PLANS APPROVAL DATE 5-17-19

REGISTERED PROFESSIONAL ENGINEER
 VINCENT W. FUNG
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA

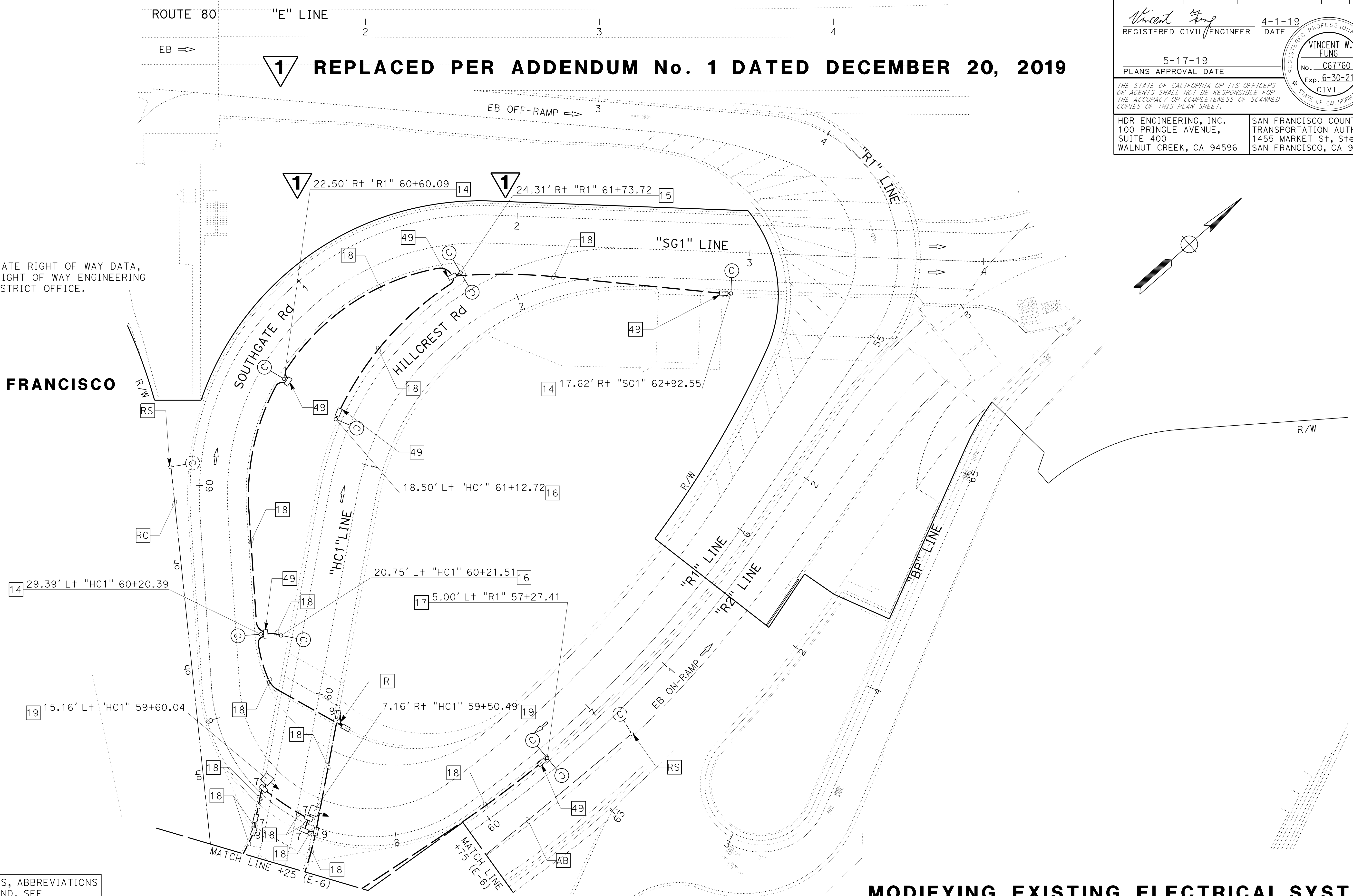
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

HQ	2-18-19	REVISOR	DATE
HQ	11-12-18	REVISOR	DATE
HQ	4-30-18	REVISOR	DATE
VINCENT FUNG		PETER KERESZTES	
CALCULATED-DESIGNED BY		CHECKED BY	
CONSULTANT FUNCTIONAL SUPERVISOR	INGRID V. SUPIT		
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION			
Caltrans			

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA,
 CONTACT RIGHT OF WAY ENGINEERING
 AT THE DISTRICT OFFICE.



FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE
 SHEET E-1 TO E-2

LIGHTING (CITY STREET)


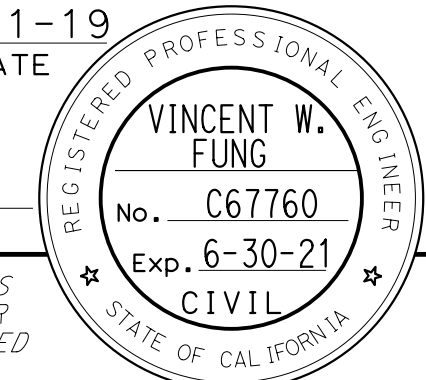
MODIFYING EXISTING ELECTRICAL SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY

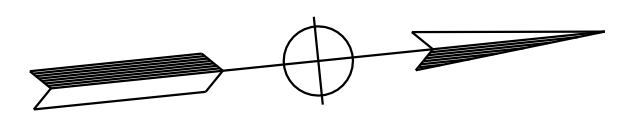
SCALE: 1" = 20'

E-5

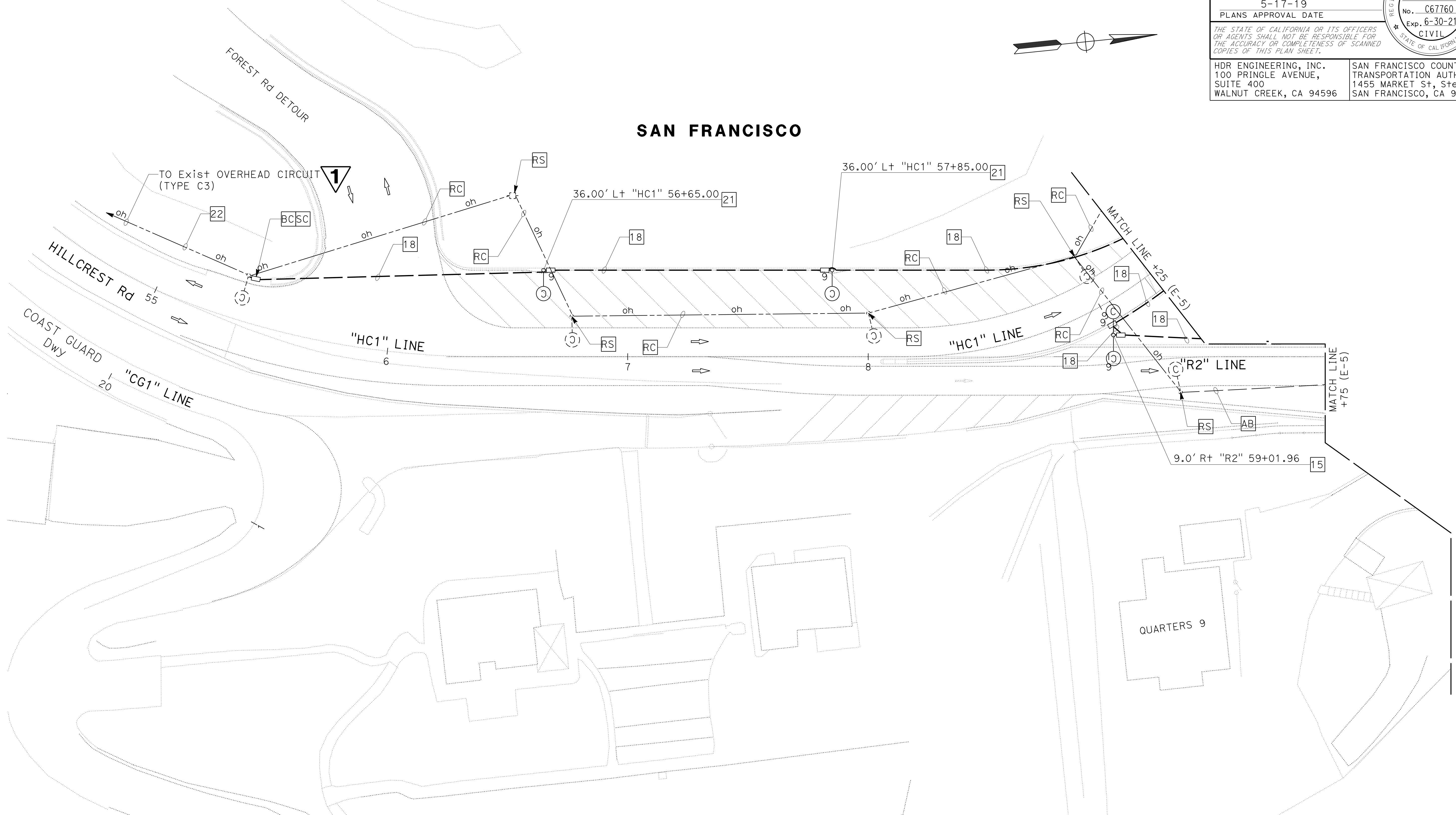
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	166	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



SAN FRANCISCO




REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019
LIGHTING (CITY STREET) MODIFYING EXISTING ELECTRICAL SYSTEM

FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE
 SHEET E-1 TO E-2

APPROVED FOR ELECTRICAL WORK ONLY

SCALE: 1" = 20'

E-6

HQ	2-18-19
HQ	11-12-18
HQ	4-30-18
REVISOR	DATE
VINCENT FUNG	PETER KERESZTES
CALCULATED/DESIGNED BY	CHECKED BY
INGRID V. SUPIT	
CONSULTANT	FUNCTIONAL SUPERVISOR
DEPARTMENT OF TRANSPORTATION	
STATE OF CALIFORNIA	DEPARTMENT OF TRANSPORTATION
	

LAST REVISION DATE PLOTTED => 13-DEC-2019 00:00:00 TIME PLOTTED => 16:58

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: VINCENT FUNG
 CHECKED BY: PETER KERESZTES
 REVISIONS:
 HQ 3-15-19
 HQ 11-12-18
 HQ 4-30-18
 REVISOR: HQ
 DATE: 3-15-19

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

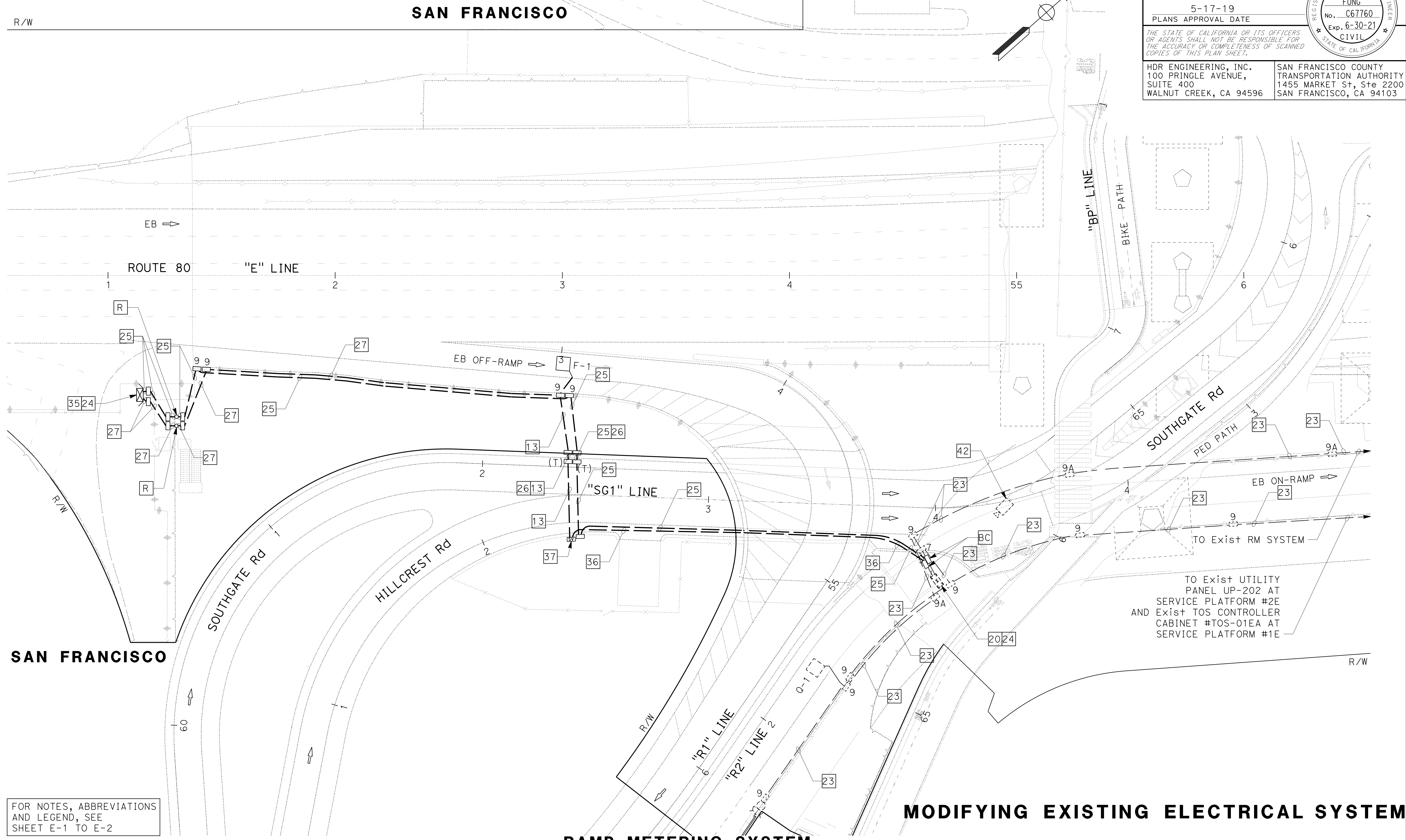
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	167	436

Vincent W. Fung
 REGISTERED CIVIL ENGINEER
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

VINCENT W. FUNG
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE
 SHEET E-1 TO E-2

TO Exist UTILITY
 PANEL UP-202 AT
 SERVICE PLATFORM #2E
 AND Exist TOS CONTROLLER
 CABINET #TOS-01EA AT
 SERVICE PLATFORM #1E

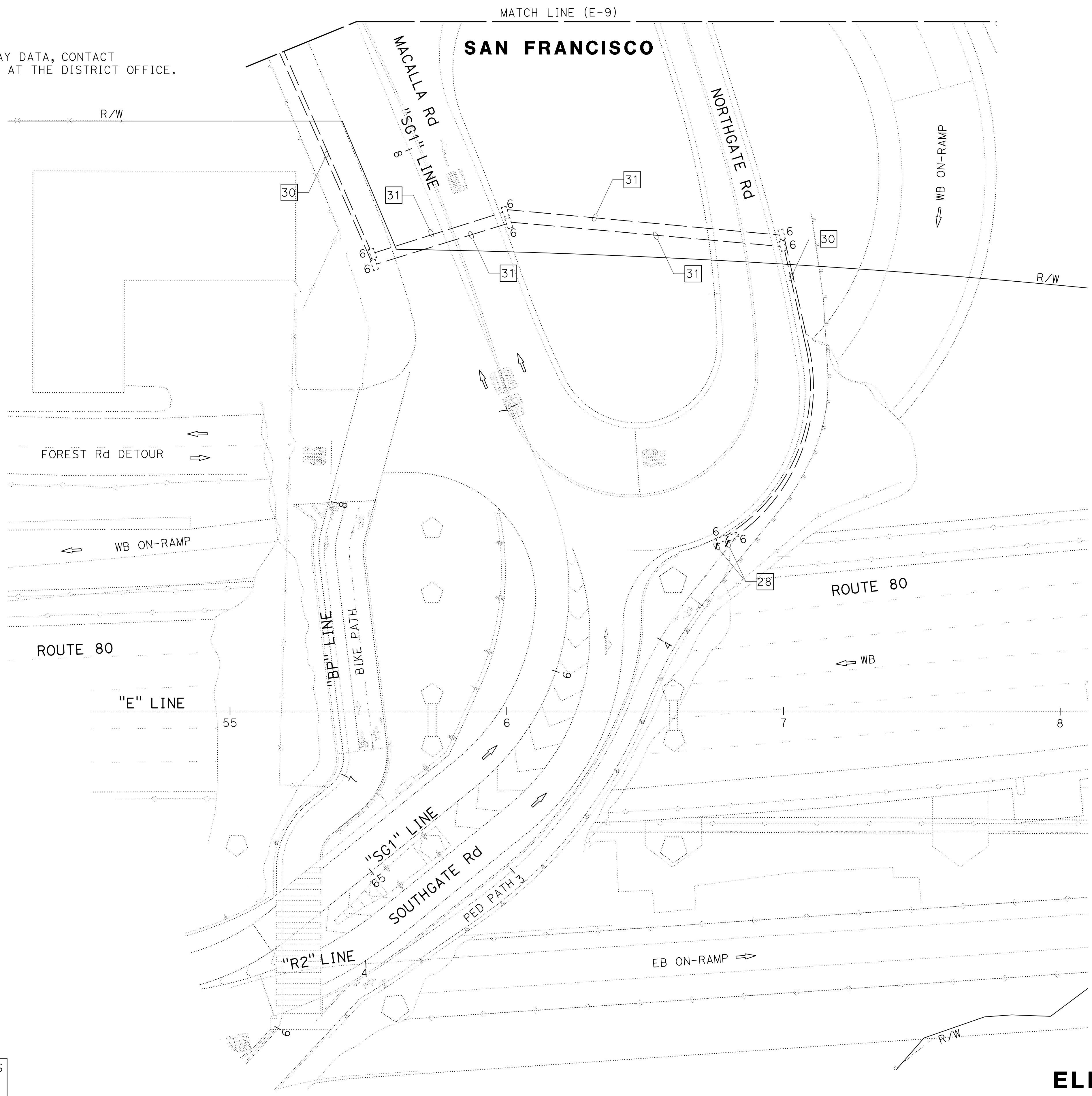
RAMP METERING SYSTEM
 APPROVED FOR ELECTRICAL WORK ONLY

MODIFYING EXISTING ELECTRICAL SYSTEM

SCALE: 1" = 20'
E-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR	DATE	HO	HO	HO	HO
					INGRID V. SUPIT	PETER KERESZTES	4-30-18	11-12-18
Et Caltrans	INGRID V. SUPIT	CHECKED BY	VINCENT FUNG	DATE	REVISOR	DATE	DATE	DATE
					PETER KERESZTES	4-30-18	11-12-18	2-18-19

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



MATCH LINE (E-9)

SAN FRANCISCO

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	168	436

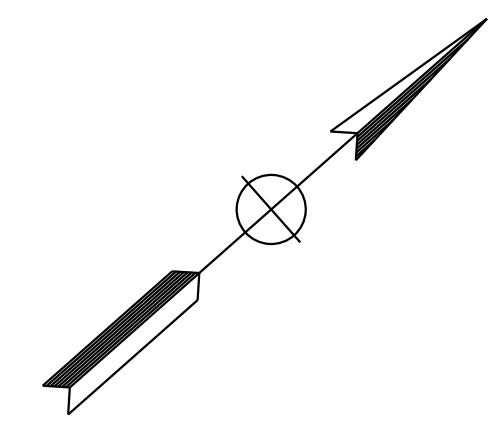
Vincent Fung
 REGISTERED CIVIL ENGINEER
 DATE 4-1-19
 PLANS APPROVAL DATE 5-17-19

VINCENT W. FUNG
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

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FOR NOTES, ABBREVIATIONS
AND LEGEND, SEE
SHEET E-1 TO E-2

ELECTRONIC TOLL SYSTEM

SCALE: 1" = 20'

E-8

APPROVED FOR ELECTRICAL WORK ONLY

LAST REVISION DATE PLOTTED => 13-NOV-2019
 00-00-00 TIME PLOTTED => 13:09

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: VINCENT FUNG
 CHECKED BY: PETER KERESZTES
 REVISED BY: HQ
 DATE REVISED: 4-30-18
 HQ
 11-12-18
 HQ
 2-18-19

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

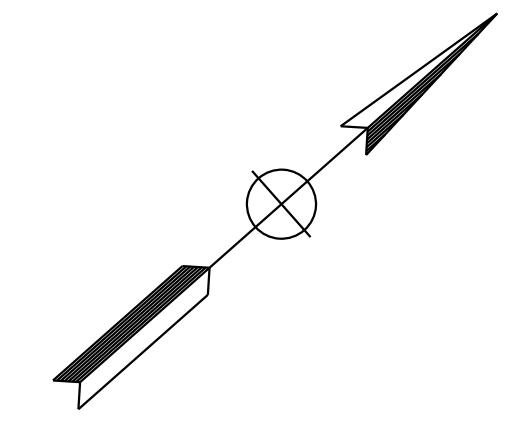
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	169	436

Vincent Fung
 REGISTERED CIVIL ENGINEER
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

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.



FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE
 SHEET E-1 TO E-2


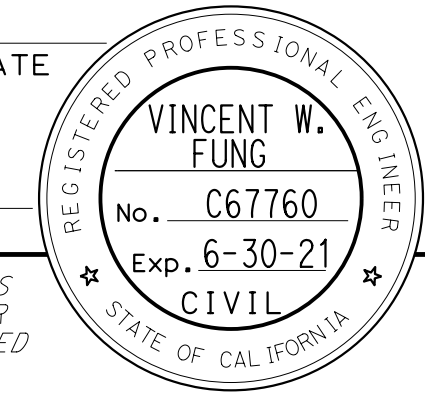
ELECTRONIC TOLL SYSTEM

SCALE: 1" = 20'

E-9

APPROVED FOR ELECTRICAL WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	170	436

 REGISTERED CIVIL ENGINEER DATE		
5-17-19 PLANS APPROVAL DATE		
<small>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.</small>		

HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596	SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103
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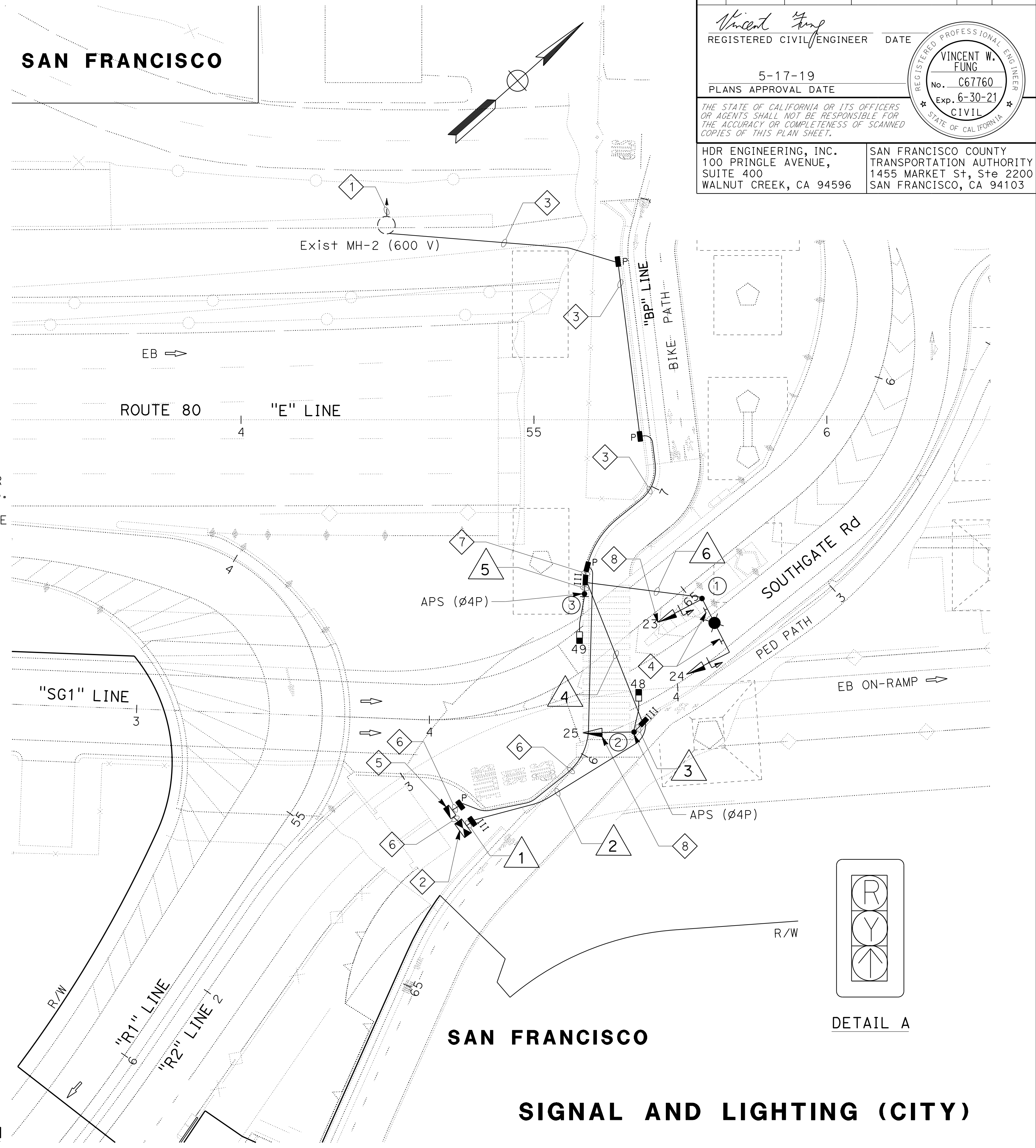
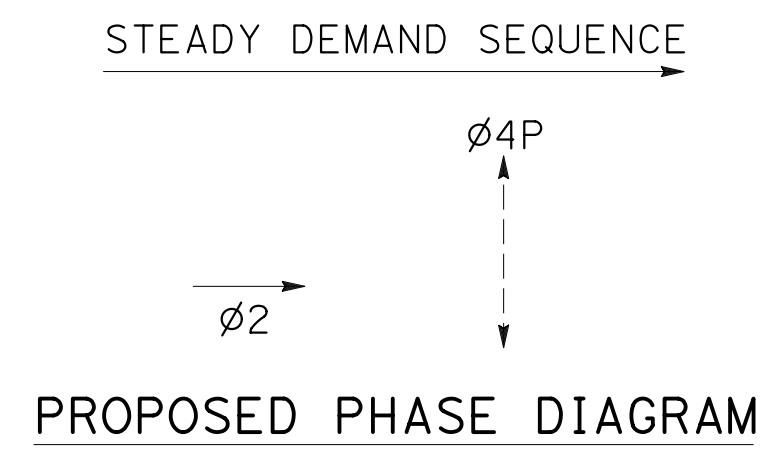
NOTES:

- ALL WORK MUST CONFORM TO THE 2018 EDITION OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD PLANS, STANDARD SPECIFICATIONS, AND THE SPECIAL PROVISIONS UNLESS OTHERWISE SPECIFIED IN THE CCSF/SFMTA SPECIFICATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL EXISTING UNDERGROUND UTILITIES, WHETHER OR NOT THEY ARE SHOWN ON THESE PLANS. THE CONTRACTOR MUST CONTACT USA NORTH 811 (1-800-277-2600) AT LEAST 48 HOURS BEFORE BEGINNING WORK, WHERE MARKINGS ARE NEAR PROPOSED FOUNDATIONS, THE CONTRACTOR MUST LOCATE UNDERGROUND UTILITIES BY POTHOLING PRIOR TO EXCAVATING.
- THE CONDUCTOR AND EQUIPMENT SCHEDULES ARE FURNISHED FOR INSTALLATION GUIDELINES ONLY. IT IS THE RESPONSIBILITY OF HE CONTRACTOR TO PROVIDE THE CORRECT WIRING AND EQUIPMENT FOR THE INTENDED PURPOSE.
- ALL ELECTRICAL EQUIPMENT, INCLUDING CONDUITS AND PULL BOXES, IS SHOWN IN APPROXIMATE LOCATIONS ONLY. PROPOSED FINAL LOCATIONS ARE TO BE APPROVED IN THE FIELD. THE CONTRACTOR MUST GIVE 48 HOURS NOTICE FOR APPROVAL OF PROPOSED EQUIPMENT LOCATIONS.
- THE CONTRACTOR SHALL OBTAIN AN O.S.H.A. PERMIT FROM THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY PRIOR TO THE CONSTRUCTION OF TRENCHES OR EXCAVATIONS WHICH ARE FIVE FEET DEEPER.
- THE CONTRACTOR SHALL ENSURE THAT REQUIRED NOTIFICATION AND COORDINATION IS PROVIDED TO APPROPRIATE UTILITY COMPANIES PRIOR TO EXCAVATION, GRADING OR ANY OTHER WORK WHICH MAY AFFECT ACTIVE UTILITY COMPANY FACILITIES.
- CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING ADJACENT TO OR AROUND EXISTING ABOVE GROUND UTILITIES. UTILITY LINES SHALL AT NO TIME BE DISTURBED.
- FIELD VERIFY THE EXACT LOCATION AND DEPTH OF BELOW GROUND PIPING AND UTILITIES IN THE IMMEDIATE VICINITY OF SUBSURFACE WORK, WHETHER SHOWN ON THE DRAWINGS OR NOT. MARK ALL EXISTING PIPING AND UTILITIES AFFECTED BY THE WORK USING UNDERGROUND MAP LOCATOR POSITION OF PIPES AND CONDUITS ON THE SURFACE. CONTACT UNDERGROUND SERVICE ALERT, 48 HOURS IN ADVANCE FOR ASSISTANCE IN MARKING OUT THE AREAS INVOLVING SUBSURFACE WORK. ADD THE EXISTING UNDERGROUND UTILITIES FOUND DURING BLUE STAKING TO DRAWINGS FOR RECORD. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE GENERAL CONTRACTOR'S OR ANY SUBCONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- THE LOCATIONS OF SIGNAL EQUIPMENT ON THE PLAN ARE SCHEMATIC. LOCATIONS SHALL BE MARKED BY THE CONTRACTOR AND BE APPROVED BY THE ENGINEER PRIOR TO COMMENCEMENT OF WORK.
- ALL NEW VEHICLE SIGNAL HEAD INDICATIONS SHALL BE 12 INCH.
- DO NOT BORE, NOTCH OR IN ANY WAY CUT INTO ANY STRUCTURAL MEMBER WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.
- ALL PULLBOXES SHALL BE CALTRANS No. 5 UNLESS OTHERWISE NOTED ON THE PLAN. REFER TO CCSF/SFMTA STANDARD PLAN 87,201 FOR REQUIRED LID MARKINGS PER USE.
- CONTRACTOR TO INSTALL APS WIRING. CITY FORCES TO FURNISH AND INSTALL APS PUSH BUTTONS, SIGNAL CABINET, CONTROLLER, AND PEDESTRIAN SIGNAL HEADS AT THE OWNERS EXPENSE.
- POLE LAYOUT MEETING WITH TRAFFIC SIGNAL SHOP AND TRAFFIC ENGINEER REQUIRED PRIOR TO POLE FOUNDATION CONSTRUCTION.

SHEET NOTES:

- Exist 4"C. INSTALL 2#8 (120 V LTG), 2#6 (120 V SIGNAL), 3#14 (120 V PEU), 1#8 (G), TO Exist 120/208 V LP-A PANEL LOCATED INSIDE YBI SUBSTATION BUILDING.
- INSTALL CALTRANS TYPE 332 CONTROLLER CABINET FOUNDATION AND PAD WITH CCSF/SFMTA FURNISHED CABINET AND CONTROLLER. SEE CALTRANS STANDARD PLAN ES-3C FOR CONTROLLER CABINET FOUNDATION AND PAD DETAILS, SHEET L-2 FOR PAD LOCATION.
- INSTALL 3"C, 2#8 (120 V LTG), 2#6 (120 V SIGNAL), 3#14 (120 V PEU), 1#8 (G).
- INSTALL R3-5a SIGN ON SIGNAL MAST-ARM. SEE SHEET S-3 FOR DETAILS.
- FURNISH AND INSTALL A BATTERY BACK-UP SYSTEM AND ANCHOR BOLTS AND CONSTRUCT THE CABINET FOUNDATION TO CONFORM TO SECTION 34 41 13 2.23 OF THE CCSF/SFMTA SPECIFICATIONS.
- INSTALL 2"C, 2#6 (120 V SIGNAL).
- INSTALL 2"C, 2#8 (120 V LTG), 3#14 (120 V PEU), 1#8 (G).
- VEHICLE SIGNAL FACE CONSISTING OF RED AND YELLOW SECTIONS WITH AN UP GREEN ARROW SECTION. SEE DETAIL A ON THIS SHEET.

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET E-1 TO E-2



SIGNAL AND LIGHTING (CITY)

SCALE: 1" = 20'

E-10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Vincent Fung
 PETER KERESZTES
 INGRID V. SUPIT
 CONSULTANT FUNCTIONAL SUPERVISOR
 CALCULATED/DESIGNED BY
 CHECKED BY
 REVISED BY
 DATE REVISED
 HO
 4-12-19

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR
 INGRID V. SUPIT
 CALCULATED-DESIGNED BY
 CHECKED BY
 VINCENT FUNG
 PETER KERESZTES
 REVISED BY
 DATE REVISED
 HO
 4-12-19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	171	436

Vincent Fung
 REGISTERED CIVIL ENGINEER DATE
 5-17-19
 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.

HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596	SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103
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STANDARD AND EQUIPMENT SCHEDULE

POLE No. ⊗	STANDARD TYPE	SIGNAL MAST ARM	LUMINAIRE MAST ARM	LUMINAIRE (WATTS)	VEHICLE SIGNAL		Ped SIGNAL			ACCESSIBLE PED SIGNAL		SPECIAL REQUIREMENTS
					No.	TYPE	MOUNTING	No.	TYPE	MOUNTING	∅	
1	17-3-100	20'	12'	160 (LED)	23 24	3S12"	SV-1-T MAS					INSTALL PEU ON TOP OF STANDARD AND R3-5a SIGNS ON MAST ARM
2	1-A (10')					3S12"	TV-1-T	48	1S-LED	SP-1-T	4	←
3	1-A (7')				25	3S12"		49	1S-LED	TP-1-T	4	←

CONDUCTOR AND CONDUIT SCHEDULE

CONDUIT AND WIRING SCHEDULE						
CONDUIT RUN NUMBER	1	2	3	4	5	6
CONDUIT SIZE (INCHES)	3"	3"	3"	2"	2"	2"
CONDUCTORS	NEW	NEW	NEW	NEW	NEW	NEW
No. 14 CONDUCTORS						
SIGNAL 23	3	3		3		3
SIGNAL 24	3	3		3		3
SIGNAL 25	3	3	3			
SIGNAL 48	2	2	2			
SIGNAL 49	2	2		2	2	
PPB 48	2	2	2			
PPB 49	2	2		2	2	
NEUTRAL	3	3	2	2	1	1
PEU						3
SPARES	3	3	3	3	3	3
TOTAL No. 14 CONDUCTORS	23	23	12	15	8	13
No. 8 CONDUCTORS						
SIGNAL NEUTRAL (120V)	1	1		1		1
LIGHTING						2
TOTAL No. 8 CONDUCTORS	1	1		1		3

SIGNAL AND LIGHTING (CITY)

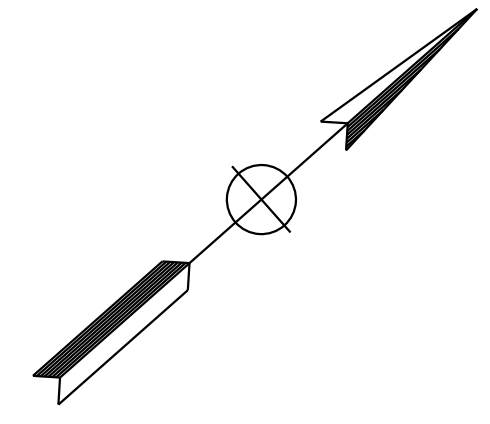
NO SCALE

E-11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	172	436

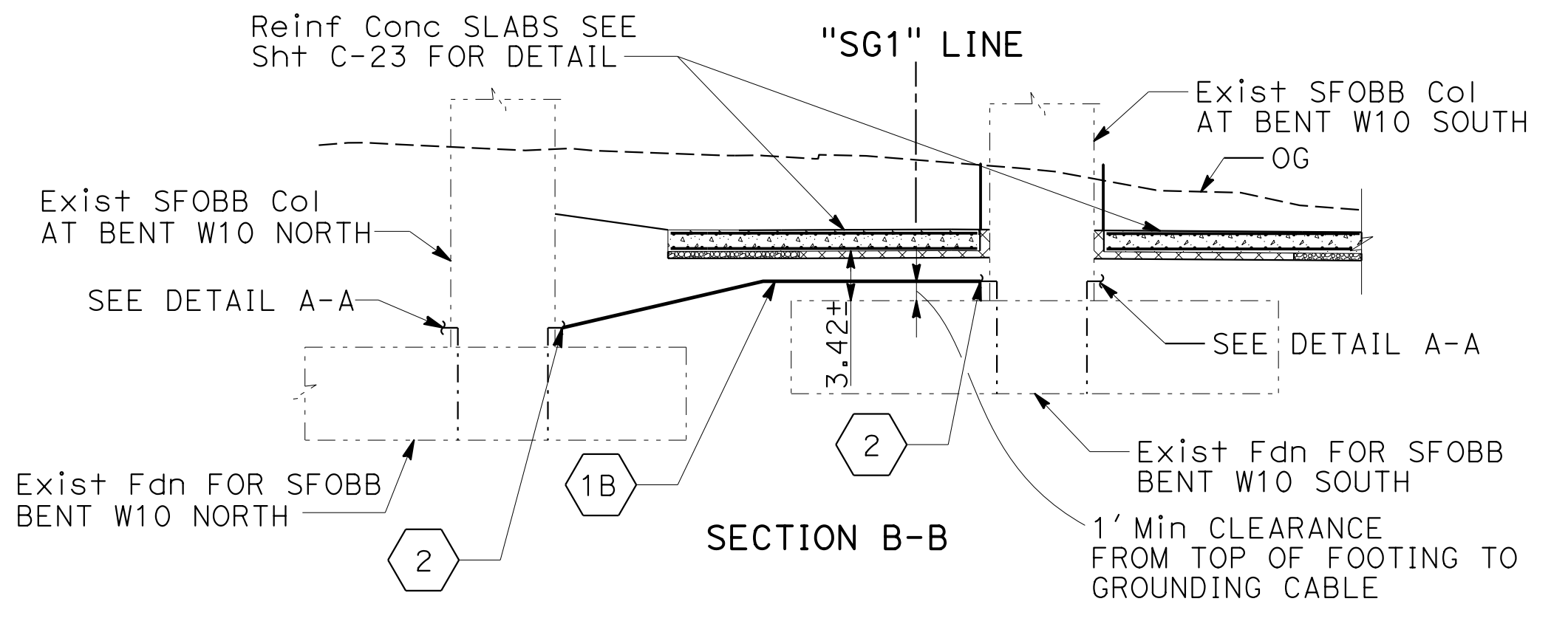
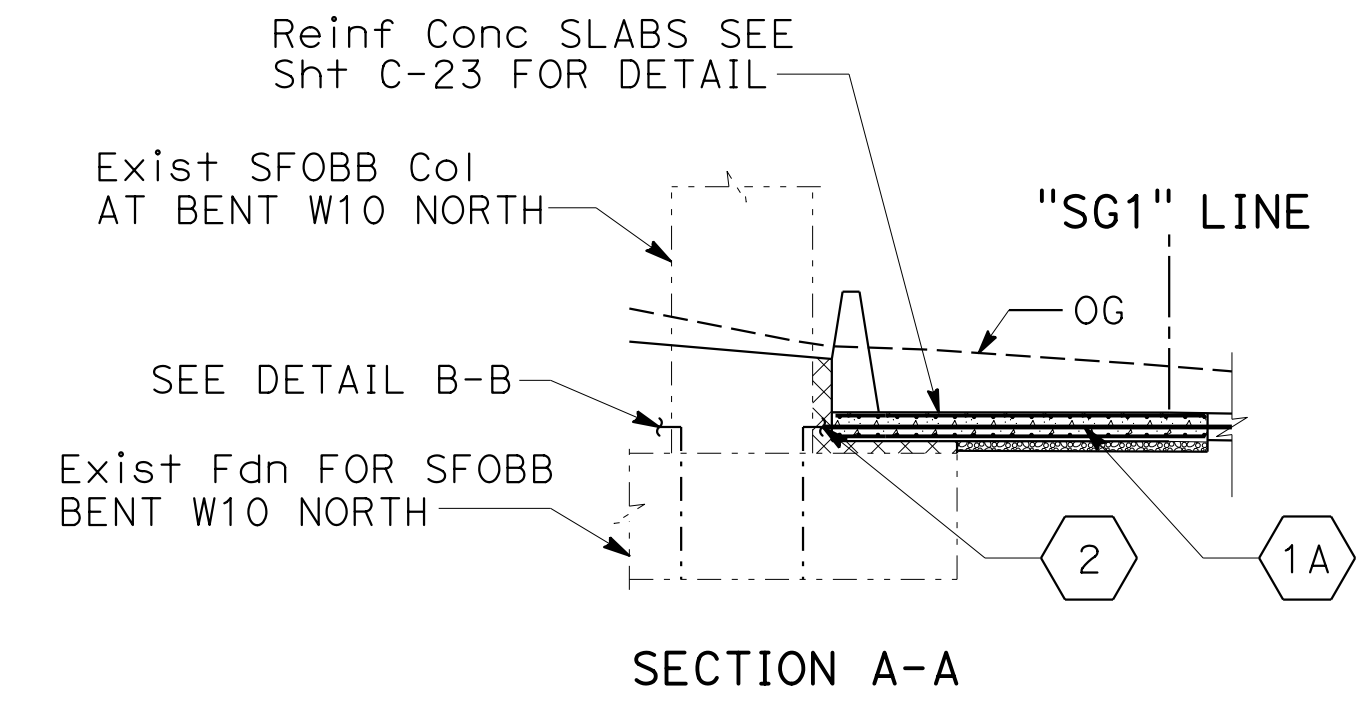
<i>Vincent Fung</i> REGISTERED CIVIL ENGINEER	4-1-19 DATE
5-17-19 PLANS APPROVAL DATE	

HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596	SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103
---	---



NOTES:

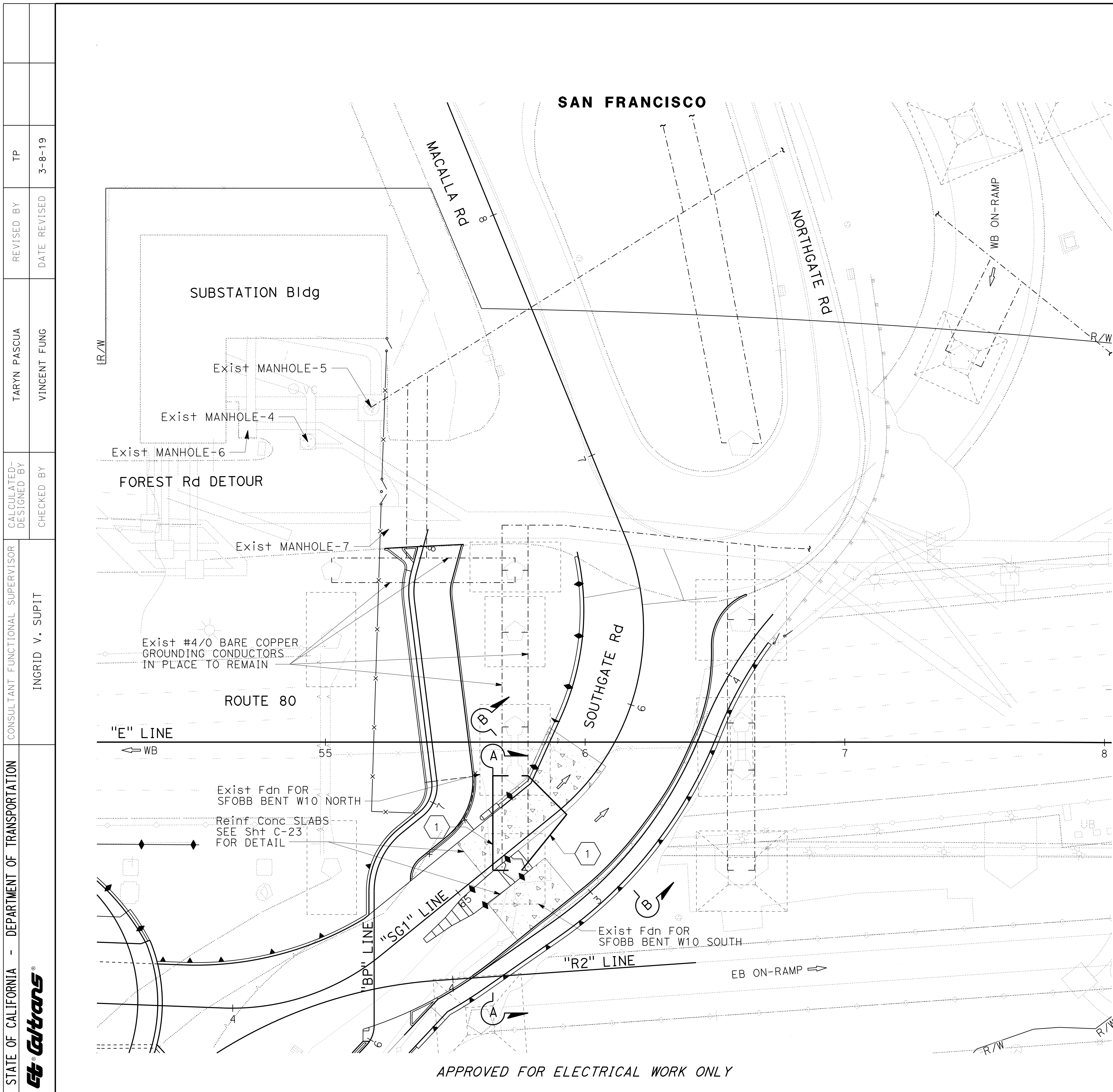
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
 2. SEE SHEET E-1 FOR LEGEND.
 3. ONLY GROUNDING CABLES WITHIN PROJECT WORK LIMITS ARE SHOWN ON THIS SHEET.
 4. RELOCATION OF GROUNDING CABLES SHOWN ON THIS SHEET IS APPROXIMATE. MUST FIELD FIT AND FIELD VERIFY.
 5. GROUND CONDUCTOR MUST BE PROTECTED FROM DAMAGE WHEN EXPOSED OUTSIDE THE STRUCTURES. ROUTE GROUND CONDUCTOR IN LIQUIDTIGHT METAL CONDUIT (LFMC) FOR PROTECTION.
-
- ① RELOCATE TWO #4/0 BARE COPPER GROUNDING CABLES. FIELD FIT AND FIELD VERIFY.
- ①A RELOCATE TWO #4/0 BARE COPPER GROUNDING CABLES BETWEEN REBAR IN REINFORCED CONCRETE SLAB. FIELD FIT.
- ①B RELOCATE TWO #4/0 BARE COPPER GROUNDING CABLES BETWEEN REINFORCED CONCRETE SLAB AND TOP OF SFOBB FOOTING FOUNDATION. FIELD FIT.
- ② EXOTHERMICALLY WELD THE CONNECTION TO REBAR IN THE FOUNDATION. FIELD FIT AND FIELD VERIFY.



GROUNDING PLAN

SCALE: 1" = 20'

E-12



APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	REVISOR	DATE
INGRID V. SUPIT	INGRID V. SUPIT	TARYN PASCUA	3-8-19
	CHECKED BY	REVISIONS	
	VINCENT FUNG		
	DESIGNED BY		
	VINCENT FUNG		

USERNAME => IKUKANE6
DGN FILE => 0419000153u012.dgn

RELATIVE BORDER SCALE IS IN INCHES


UNIT 0728

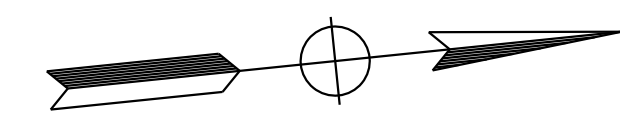
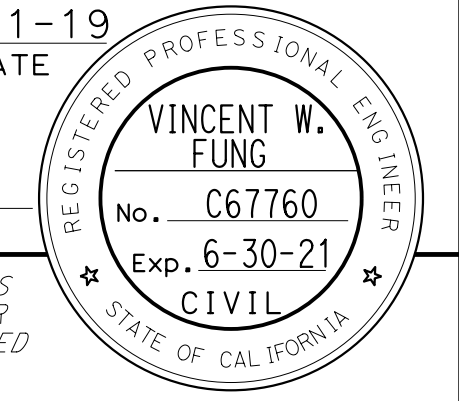
PROJECT NUMBER & PHASE

04190001531

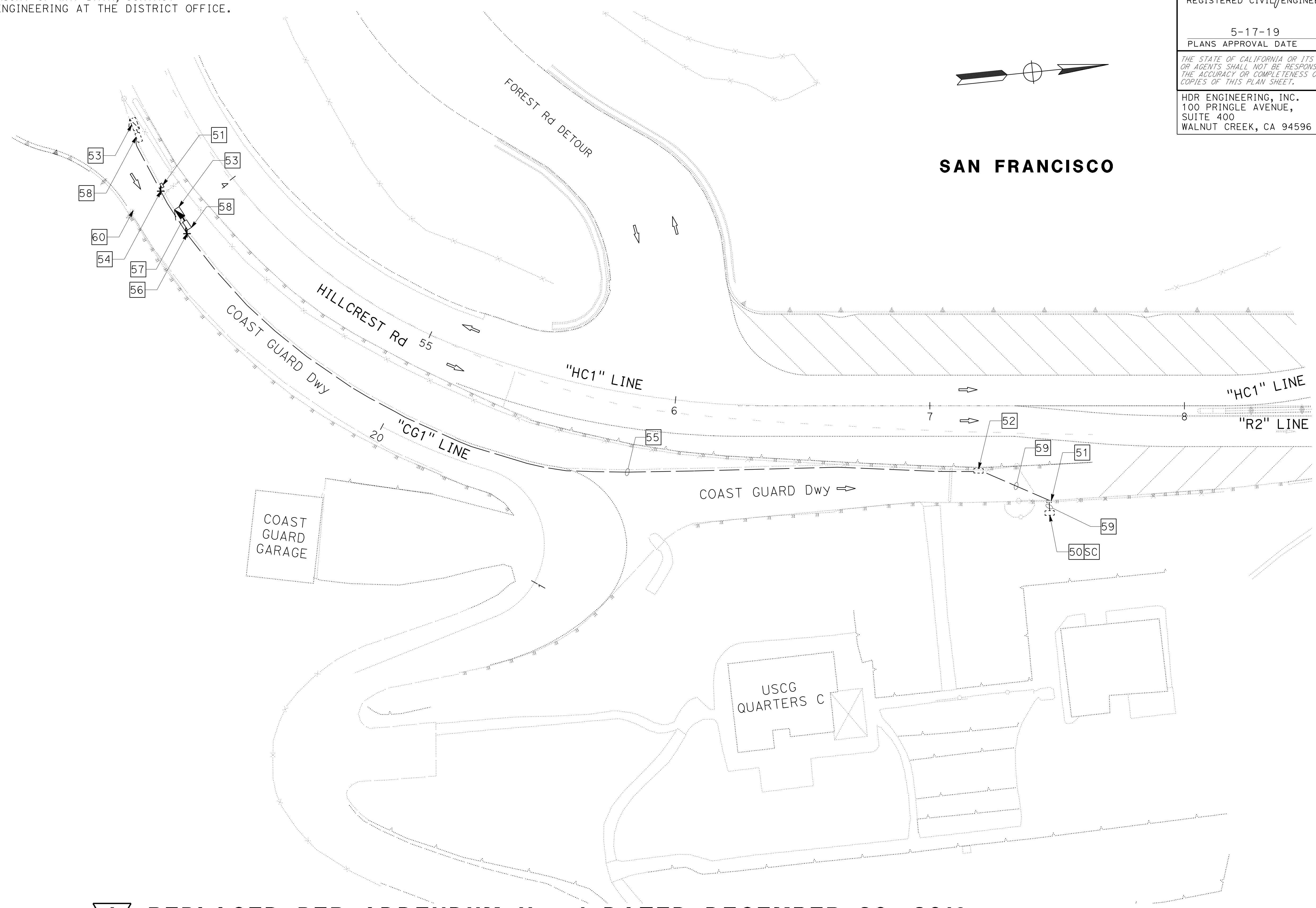
BORDER LAST REVISED 7/2/2010

LAST REVISION DATE PLOTTED => 13-NOV-2019 00-00-00 TIME PLOTTED => 13:17

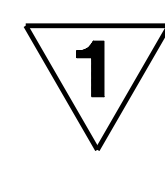
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	172B	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



SAN FRANCISCO




REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019
SECURITY GATE (USCG) MODIFYING EXISTING ELECTRICAL SYSTEM

FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE
 SHEET E-1 TO E-2

APPROVED FOR ELECTRICAL WORK ONLY

SCALE: 1" = 20'

E-12a

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR
	INGRID V. SUPIT	CHECKED BY	DATE
		VINCENT FUNG	
		PETER KERESZTES	

LAST REVISION DATE PLOTTED => 19-DEC-2019 00-00-00 TIME PLOTTED => 17:07

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	172A	436

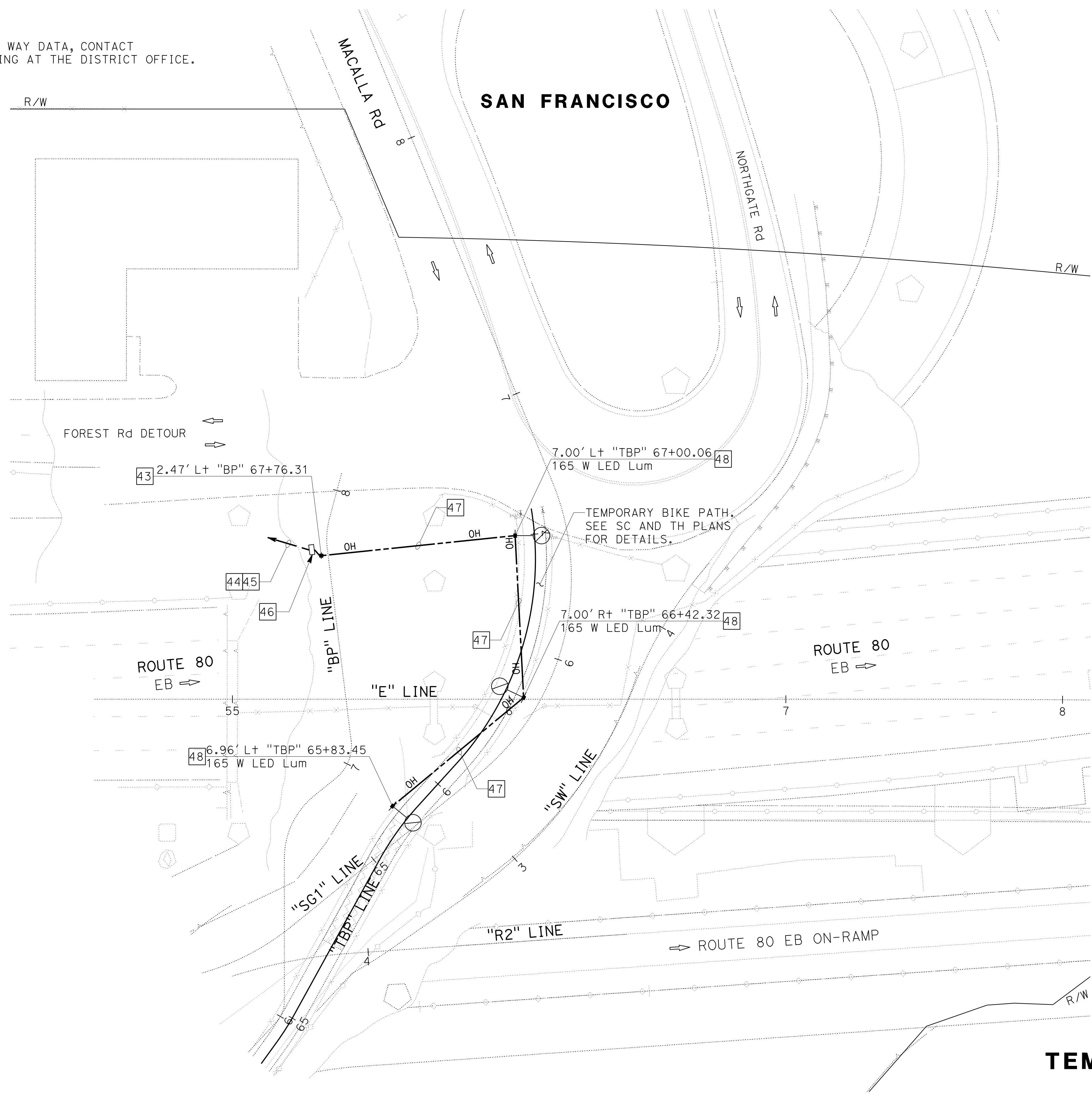
Vincent Fung
 REGISTERED CIVIL ENGINEER
 DATE 4-1-19
 PLANS APPROVAL DATE 5-17-19

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.

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE,
 SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
 TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103

NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



**TEMPORARY LIGHTING SYSTEM
 STAGE 1A**

SCALE: 1" = 20'

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	INGRID V. SUPIT	INGRID SUPIT	REVISOR	DATE
CONSULTANT	FUNCTIONAL SUPERVISOR	CHECKED BY	DESIGNED BY	REVISION
INGRID V. SUPIT	INGRID V. SUPIT	INGRID SUPIT	VINCENT FUNG	DATE

LAST REVISION DATE PLOTTED => 13-NOV-2019
 00-00-00 TIME PLOTTED => 13:17

1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019

NOTES:

- DESIGNED IN ACCORDANCE WITH 1994 AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" FOR 80 MPH WIND ZONE.
- CONTRACTOR TO CONFIRM ALL DIMENSIONS & ORIENTATIONS BEFORE RELEASING ORDER FOR MANUFACTURING.
- DASH LINES DENOTE THAT TWIN-MEMBER STANDARD SHALL BE IDENTICAL CONSTRUCTION EXCEPT FOR ADDITIONAL MAST ARM WITH FITTINGS AND LUMINAIRE. THE TWIN MAST ARMS SHALL BE MOUNTED 180° "BACK-TO-BACK" TO EACH OTHER.
- EACH ANCHOR BOLT - THREADED TOP 8".
- THE STANDARD, HANDHOLE COVER, MAST ARM, AND ANCHOR BOLTS WITH NUTS AND WASHERS, SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
- ALL EXPOSED WELDS SHALL BE GROUNDED SMOOTH AND SHALL CONFORM TO CONTOURS OF ADJACENT SURFACES. ALL WELDS SHALL HAVE A FINISHED DEPTH OF 3/8".
- DOOR OR HANDHOLE COVER SHALL BE SECURELY RETAINED IN PLACE WITH TWO 1/4" X 20 STAINLESS STEEL SCREWS.
- THE THREADS OF ALL FASTERS SHALL BE COATED WITH AN APPROVED INDUSTRIAL TYPE OF WATER-PROOF GREASE LUBRICANT CONTAINING A HIGH CONTENT OF GRAPHITE.
- THE DOOR OR HANDHOLE COVER GASKET SHALL BE MOUNTED TO THE COVER WITH AN APPROVED TYPE OF AUTOMOTIVE ENGINE GASKET CEMENT. THE NON-CEMENTED SURFACE OF THE GASKET SHALL BE COATED WITH A SILICONE-IMPREGNATED RUBBER LUBRICANT.
- HOT-DIP GALVANIZED STEEL OR SHEET ALUMINUM SHALL DOME SHAFT CAP SHALL BE RETAINED BY THREE 1/2" X 20 TYPE 316 STAINLESS STEEL SET SCREWS. CAP TOP SHALL NOT EXTEND MORE THAN 1" ABOVE POLE.
- PROVIDE NEOPRENE GASKET FOR BRACKET PLATE TO INSURE WATER-TIGHT SEAL.
- FREE OPENING. FRONT DOOR SHALL BE MOUNTED FLUSH WITH THE CIRCULAR SURFACE POLE. DOOR SHALL BE FURNISHED WITH NEOPRENE GASKET.

U.M.C. DESIGN NUMBER	LUMINAIRE ARM SPAN	LUM ARM TUBE SIZE	LUMINAIRE MTG HEIGHT	SINGLE OR DUAL	POLE TUBE SIZE	POLE BASE CONNECTION DATA (in)			
						BC = BOLT CIRCLE	S	F	T
5809-B4-Y1	6'-0"	2" SCH 40 PIPEx6'-6"	26'-8"	SINGLE	11E-7.00x3.50x25'-0"	9 1/2-10 1/2	10 1/2	7 1/16	1
5809-B4-Y2	6'-0"	2" SCH 40 PIPEx6'-6"	26'-8"	DUAL					

11 GA = 0.120" WALL THICKNESS
E = ROUND TAPERED STEEL TUBE @ 0.14 in/ft TAPER

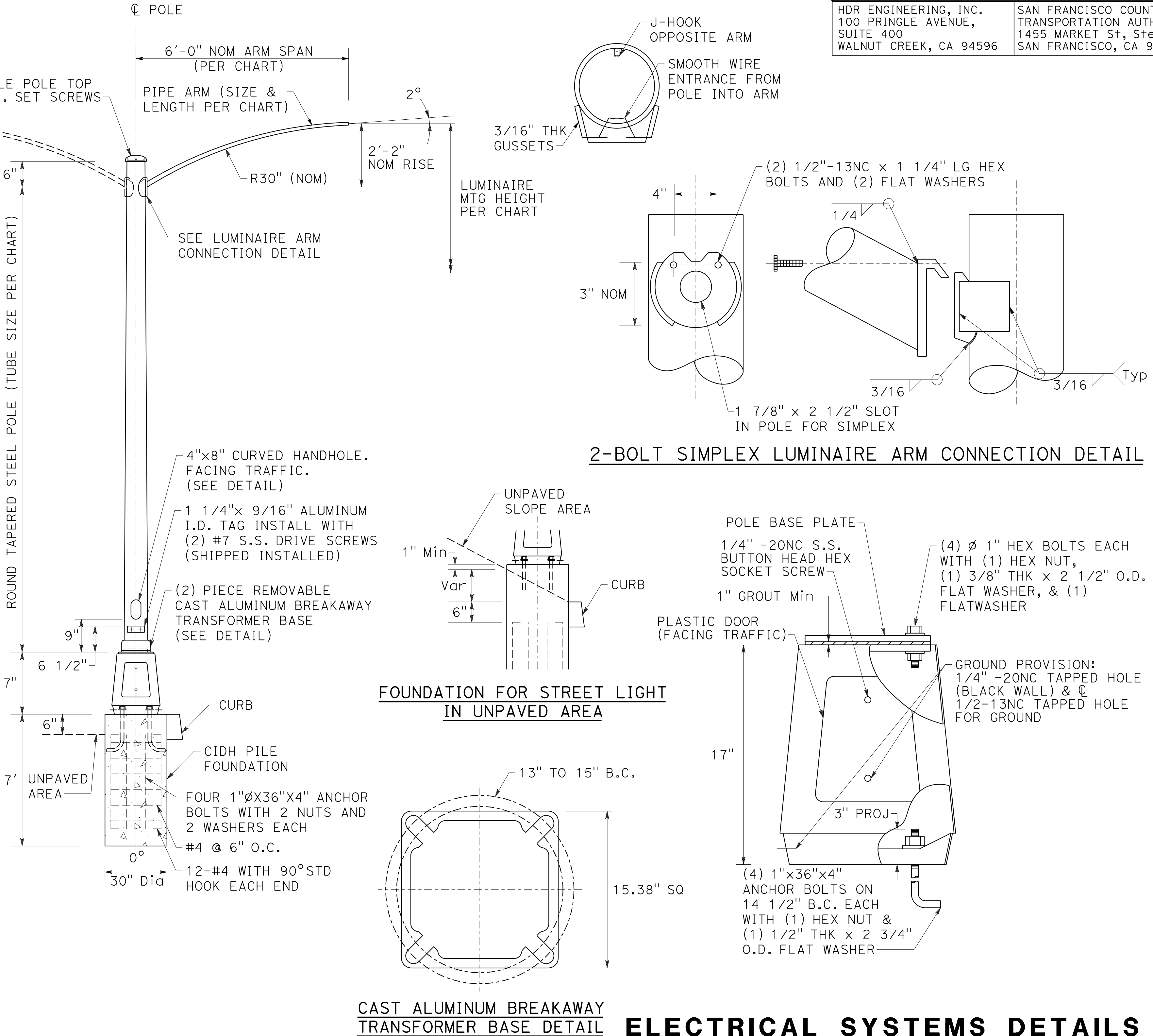
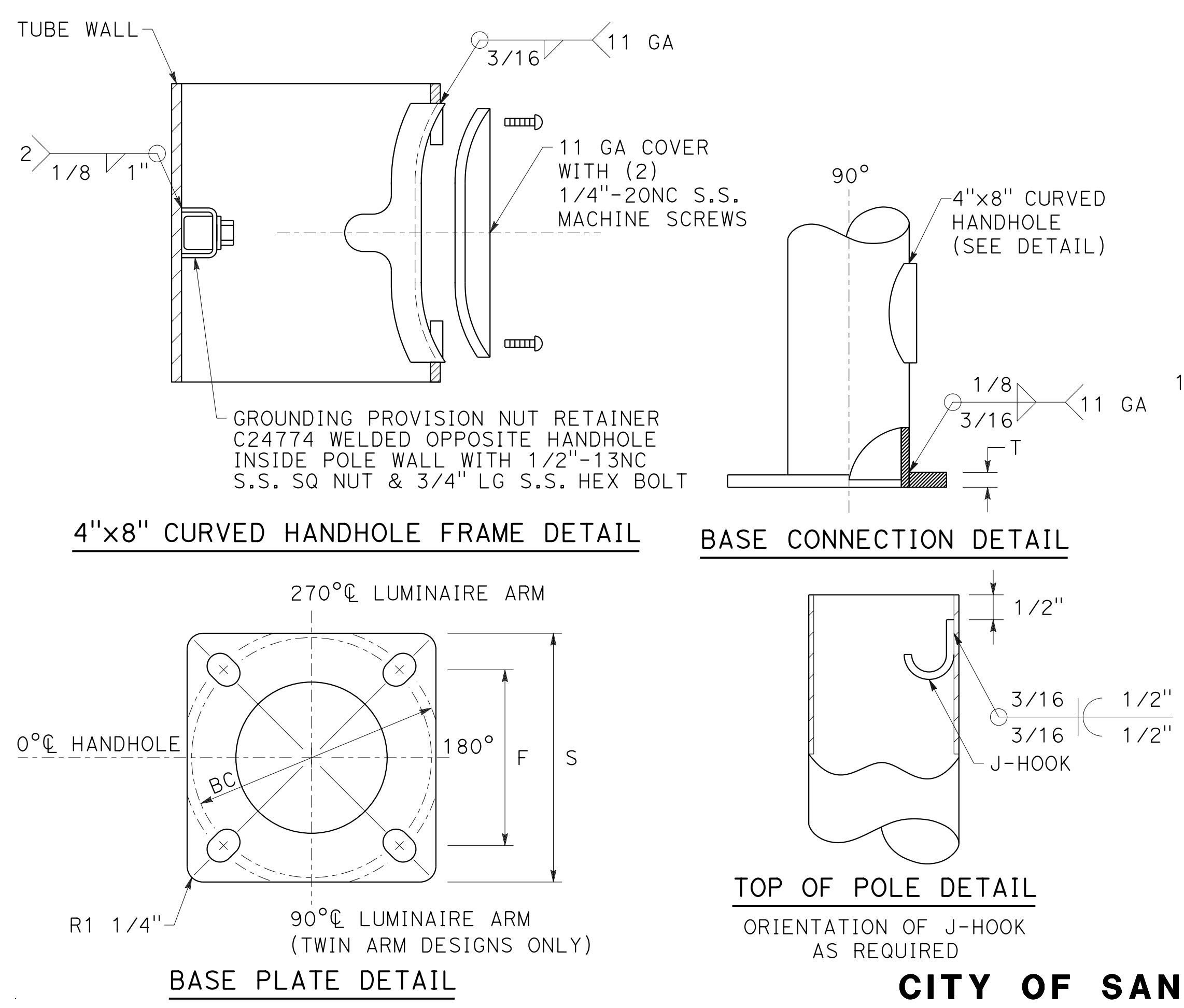
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	173	436

REGISTERED CIVIL ENGINEER
VINCENT W. FUNG
No. C67760
Exp. 6-30-21
CIVIL
STATE OF CALIFORNIA

4-1-19 DATE
5-17-19 PLANS APPROVAL DATE

HDR ENGINEERING, INC.
100 PRINGLE AVENUE,
SUITE 400
WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY
TRANSPORTATION AUTHORITY
1455 MARKET St, Ste 2200
SAN FRANCISCO, CA 94103



ELECTRICAL SYSTEMS DETAILS

CITY OF SAN FRANCISCO STREET LIGHT DETAILS

APPROVED FOR ELECTRICAL WORK ONLY

ED-1

1 REPLACED PER ADDENDUM No. 1 DATED DECEMBER 20, 2019
 DIMENSIONS SHOWN ARE AT TOP OF POLE
NOTE: (THIS SHEET ONLY)

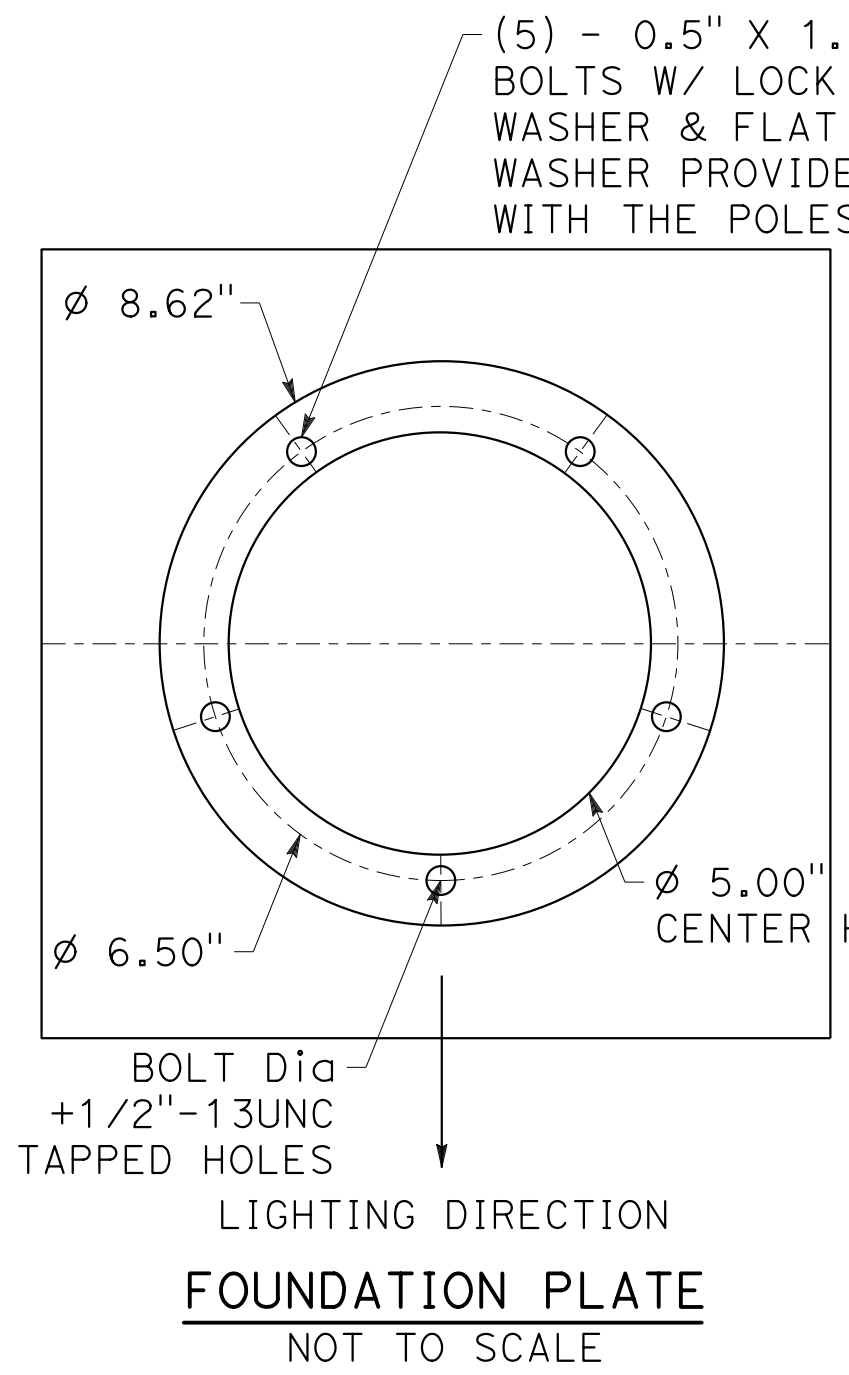
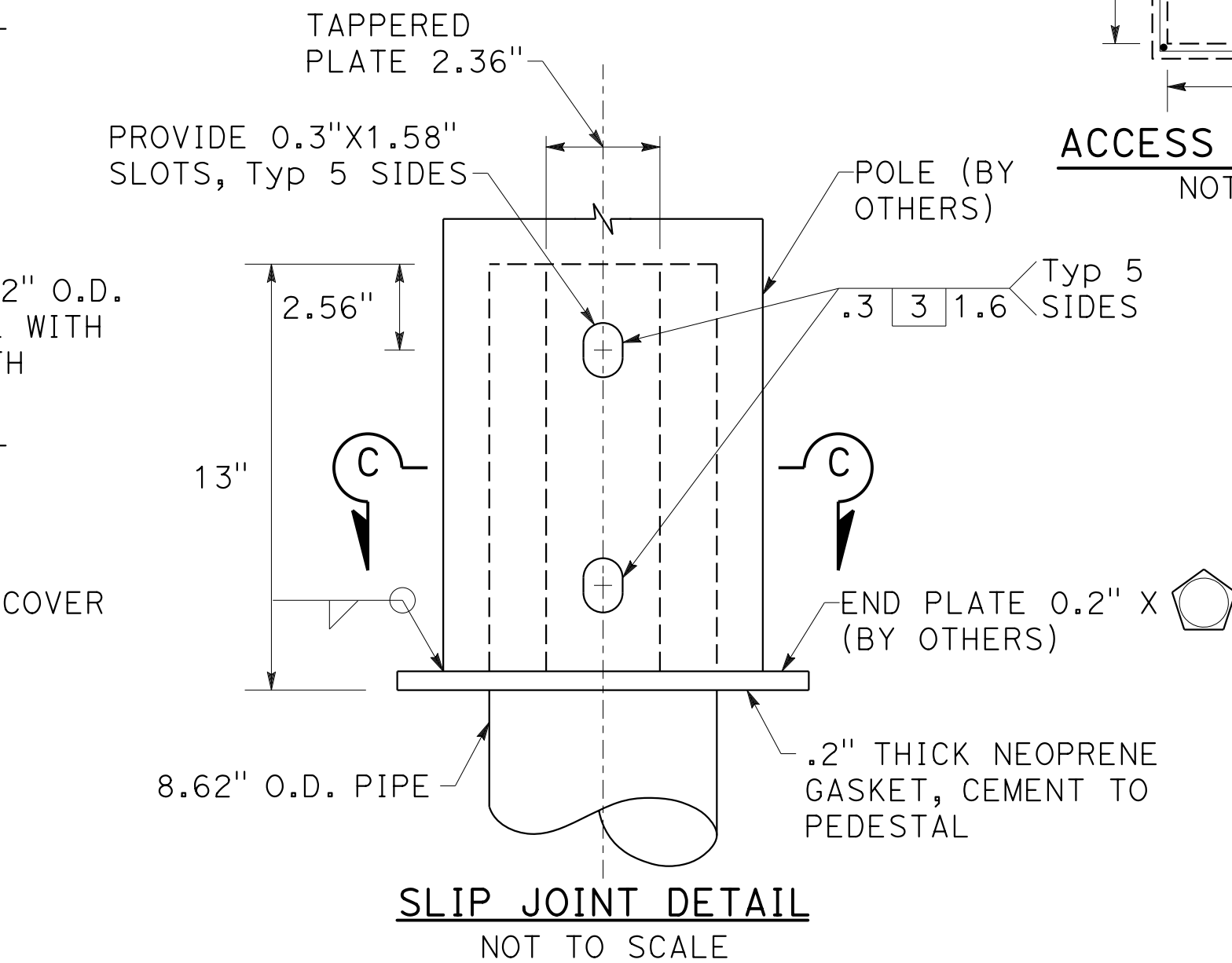
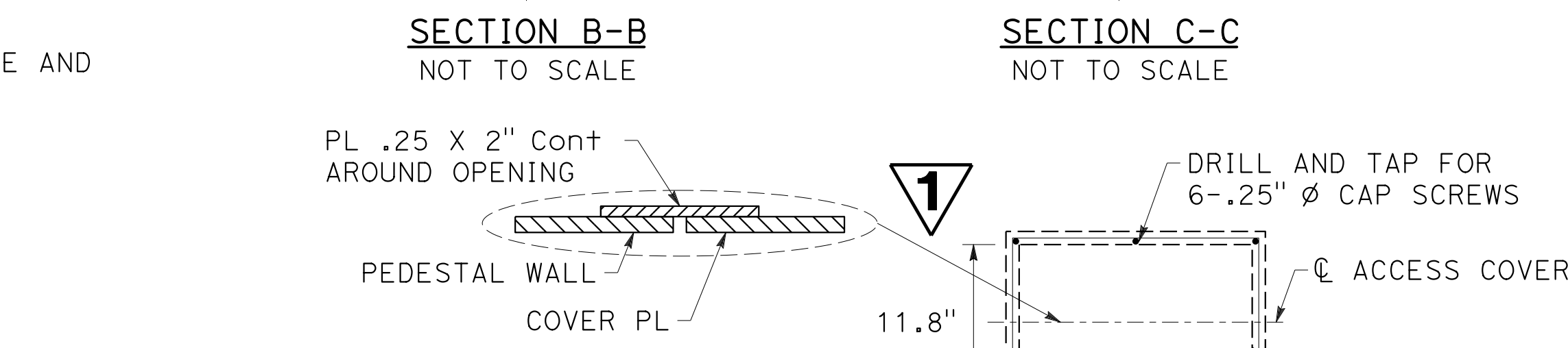
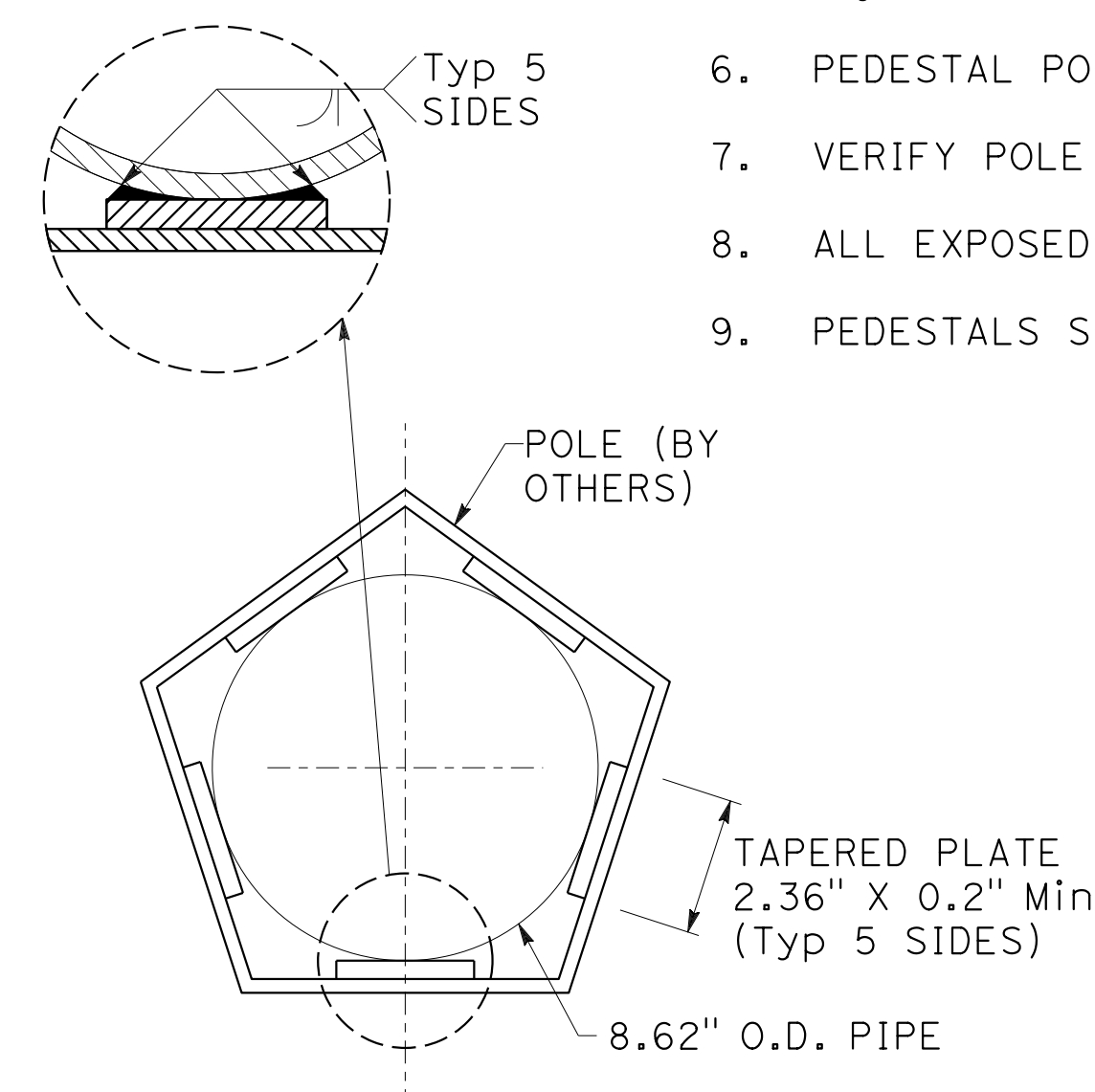
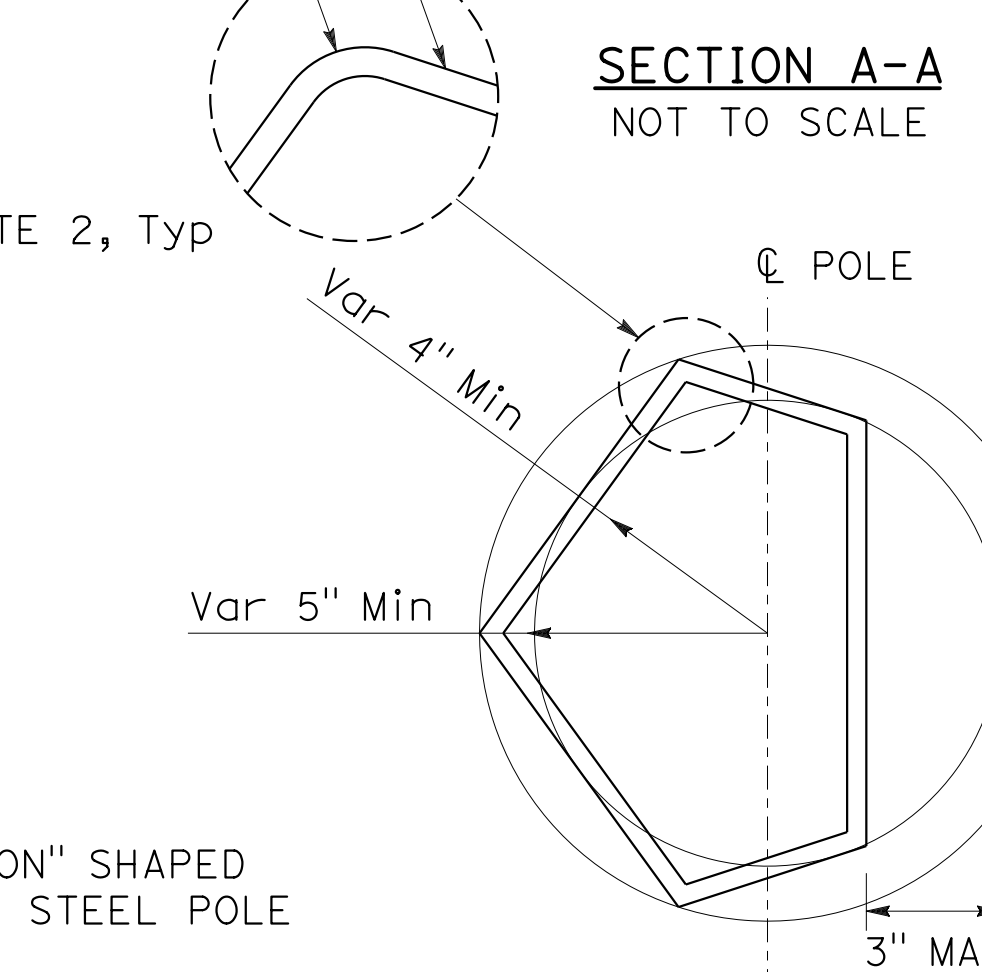
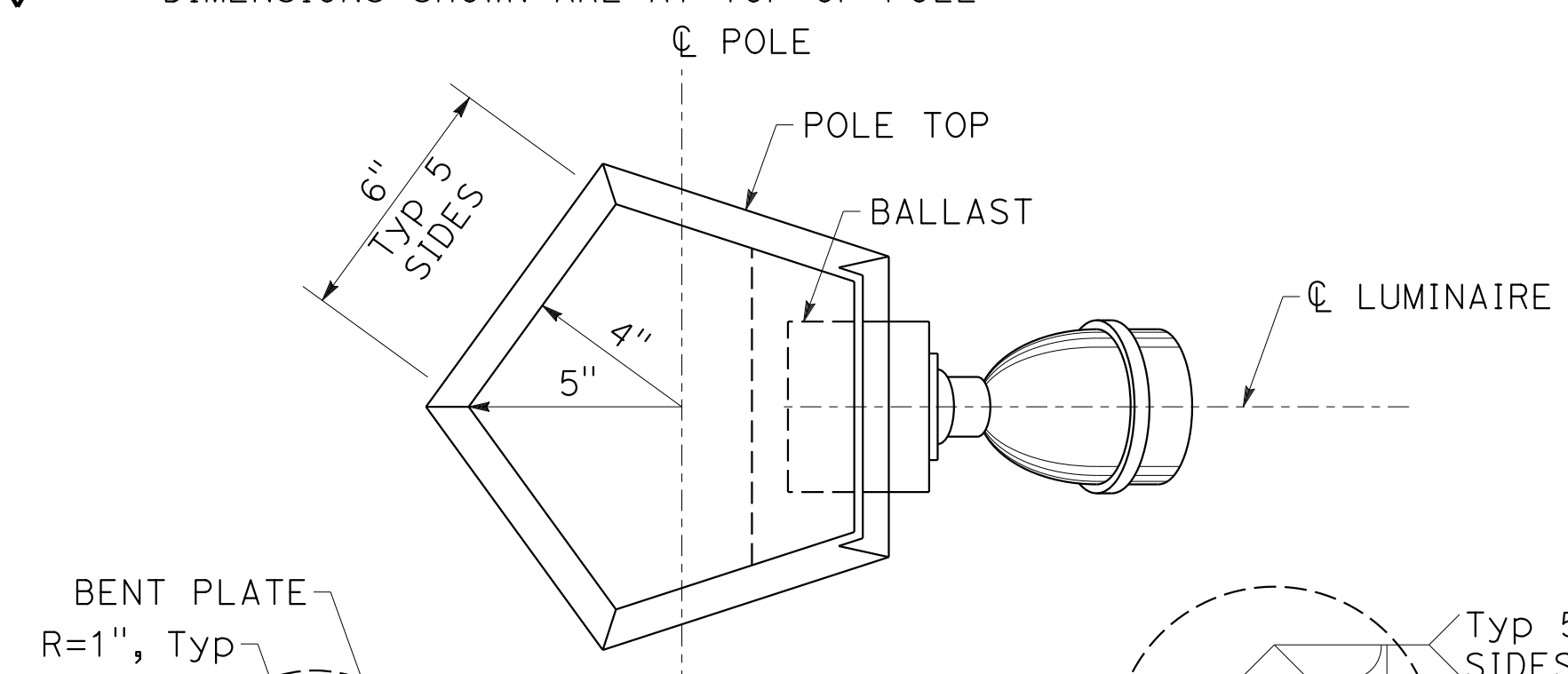
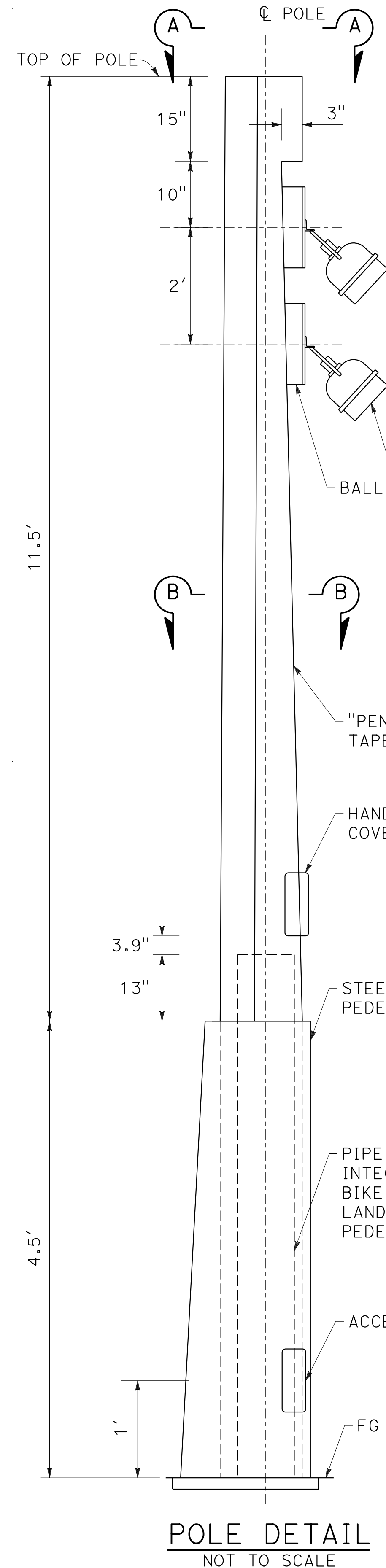
- ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL.
- PERFORM THE NECESSARY FIELD ADJUSTMENT AND AIMING DURING NIGHT TIME TO ACHIEVE OPTIMUM ILLUMINATION. AVOID GLARE AND DARK SPOT. COORDINATE AND OBTAIN INSPECTOR'S APPROVAL.
- CONTRACTOR TO FURNISH AND INSTALL ANCHOR BOLTS, LEVELING NUTS, DOUBLE HEAVY HEX NUTS AND WASHERS.
- ALL METAL PARTS OF PEDESTAL SHALL BE GALV AND PAINTED.
- PEDESTAL STEEL PLATES AND SHAPES SHALL CONFORM TO ASTM-A709 (Fy=345 MPa).
- PEDESTAL POSTS SHALL CONFORM TO ASTM-A572 (Fy=345 MPa).
- VERIFY POLE ORIENTATION WITH ENGINEER BEFORE WELDING MOUNTING PLATE.
- ALL EXPOSED WELDS SHALL BE GROUND SMOOTH.
- PEDESTALS SHALL BE VERTICAL.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	174	436

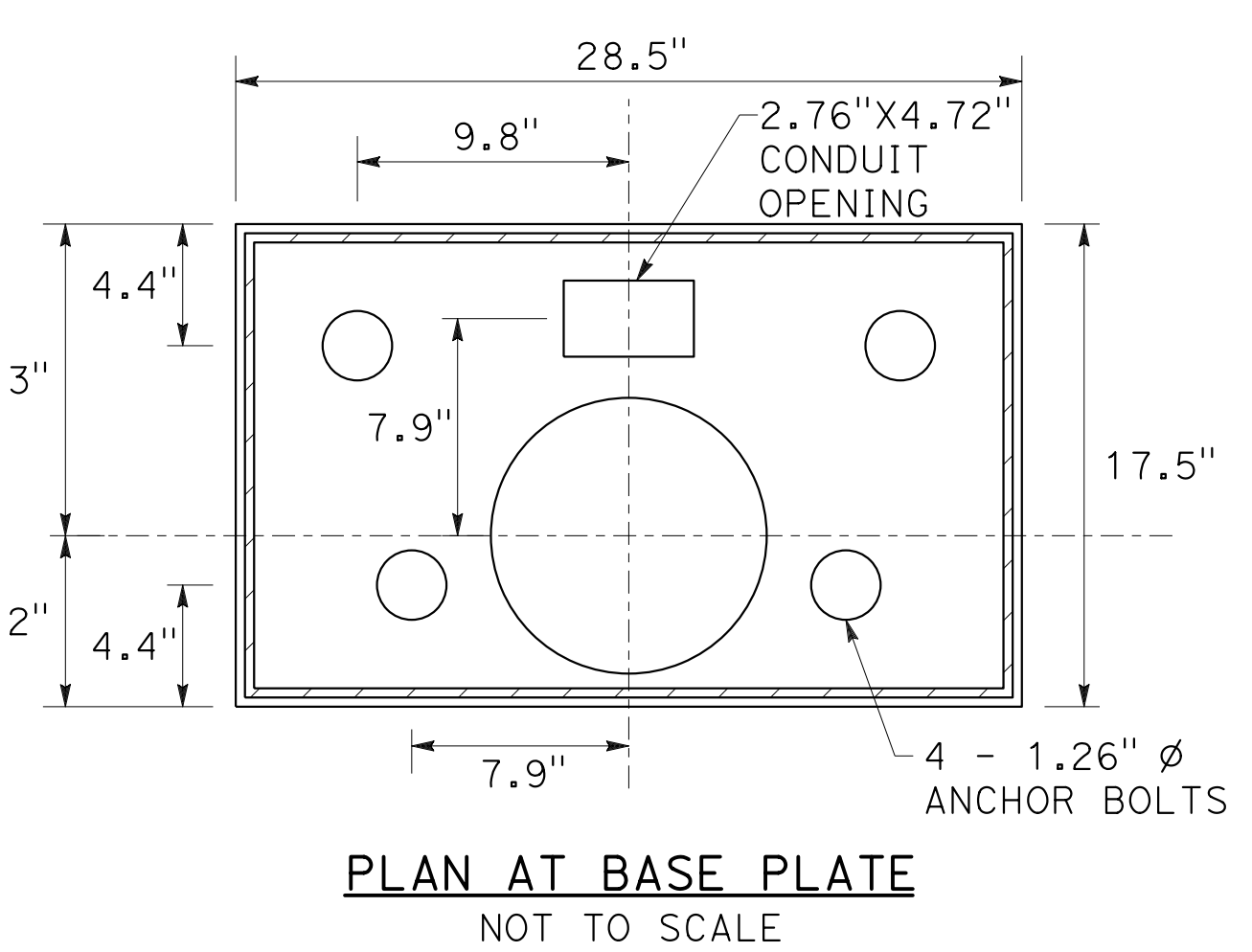
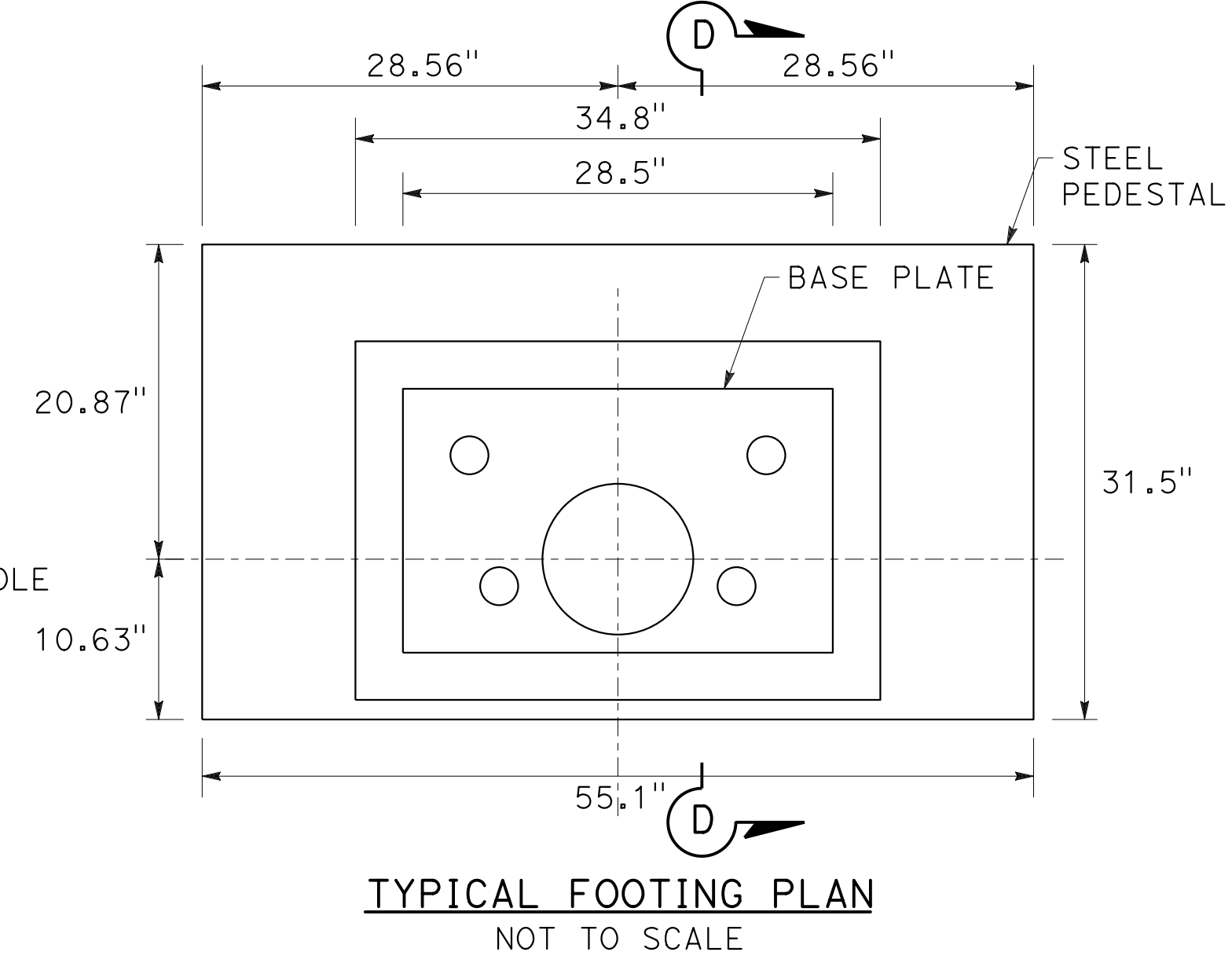
REGISTERED CIVIL ENGINEER: Vincent Fung
 DATE: 4-1-19
 PLANS APPROVAL DATE: 5-17-19
 No. C67760
 Exp. 6-30-21
 CIVIL
 STATE OF CALIFORNIA

HDR ENGINEERING, INC.
 100 PRINGLE AVENUE, SUITE 400
 WALNUT CREEK, CA 94596

SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY
 1455 MARKET St, Ste 2200
 SAN FRANCISCO, CA 94103



ANCHORAGE			
POLE HEIGHT "H"	ANCHOR BOLT CIRCLE RADIUS= R(IN)	BASE PLATE DIA(IN)	ANCHOR BOLTS NUMBER(EA) - DIA(IN) X LENGTH(IN)
11.5'	6.5	8.62	5 - 0.5 X 24



YBI BIKE PATH LIGHTING POLE AND ANCHORAGE DETAILS


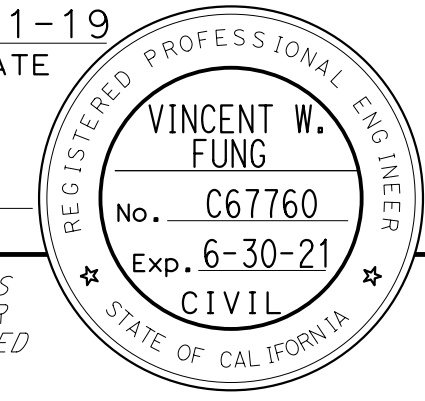
ELECTRICAL SYSTEMS DETAILS

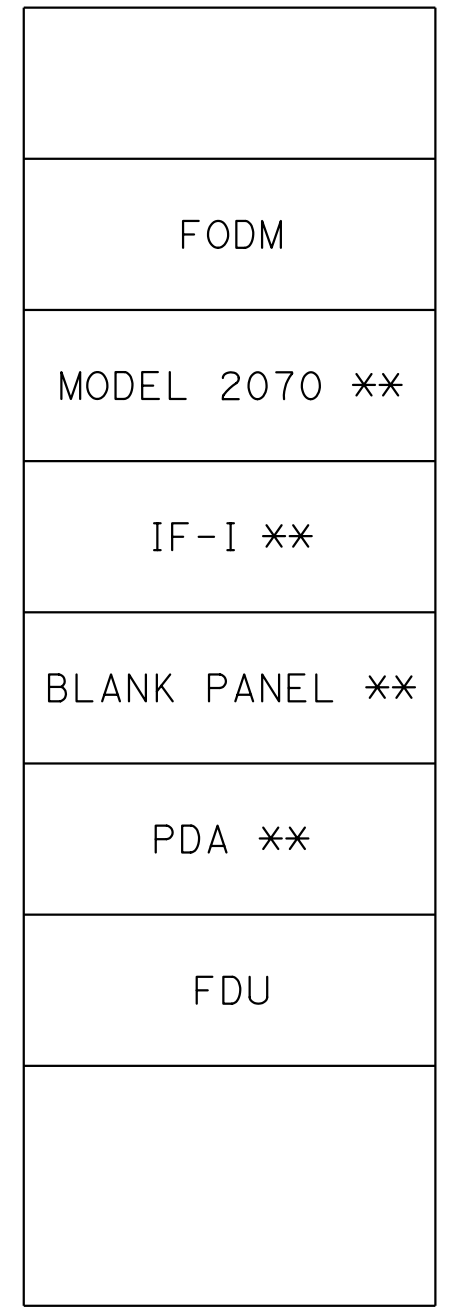
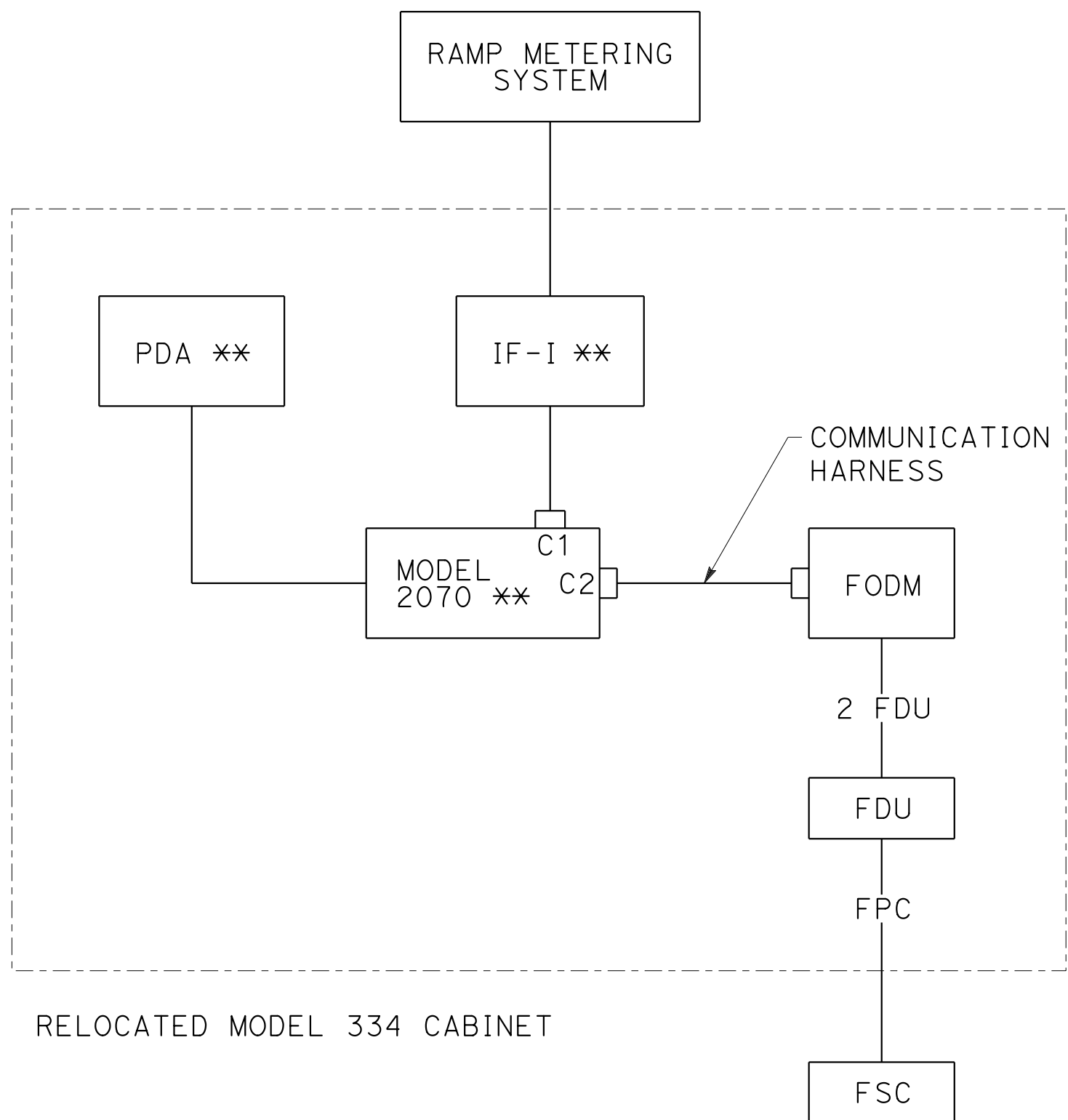
APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	INGRID V. SUPIT	CONSULTANT - FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISOR	DATE
					VINCENT FUNG	2-18-19
Caltrans					REVISOR	DATE
					PETER KERESZTES	11-12-18
					REVISOR	DATE
					REVISOR	DATE

NOTE: (THIS SHEET ONLY)

- 1. (**) DEPARTMENT FURNISHED.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	176	436
			4-1-19		
REGISTERED CIVIL ENGINEER			DATE		
			5-17-19		
			PLANS APPROVAL DATE		
					
<small>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.</small>					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		




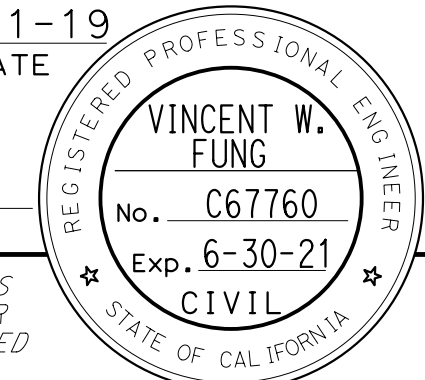
FIBER / RAMP METERING

**RAMP METERING SYSTEM
CONTROLLER CONFIGURATION**

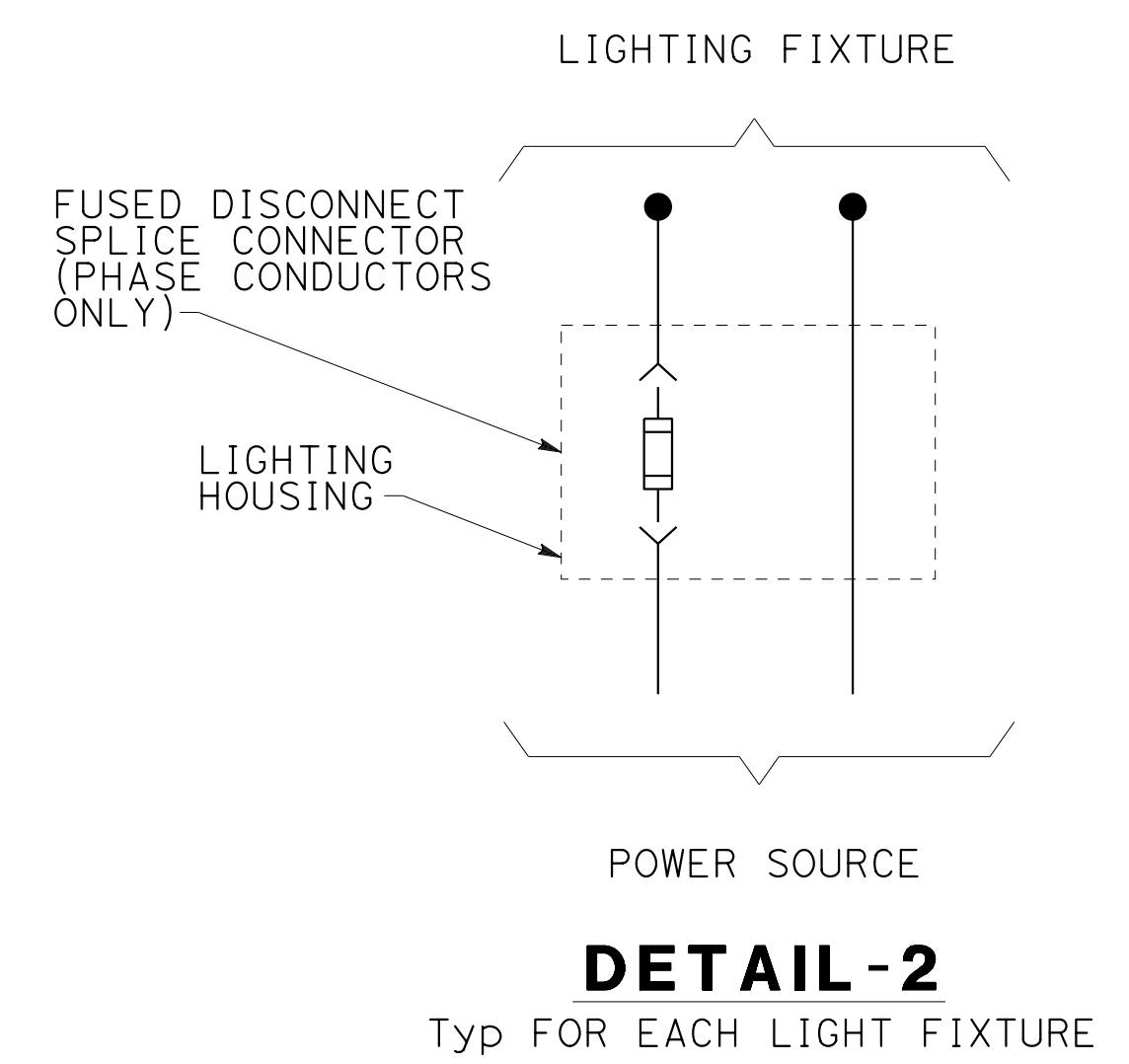
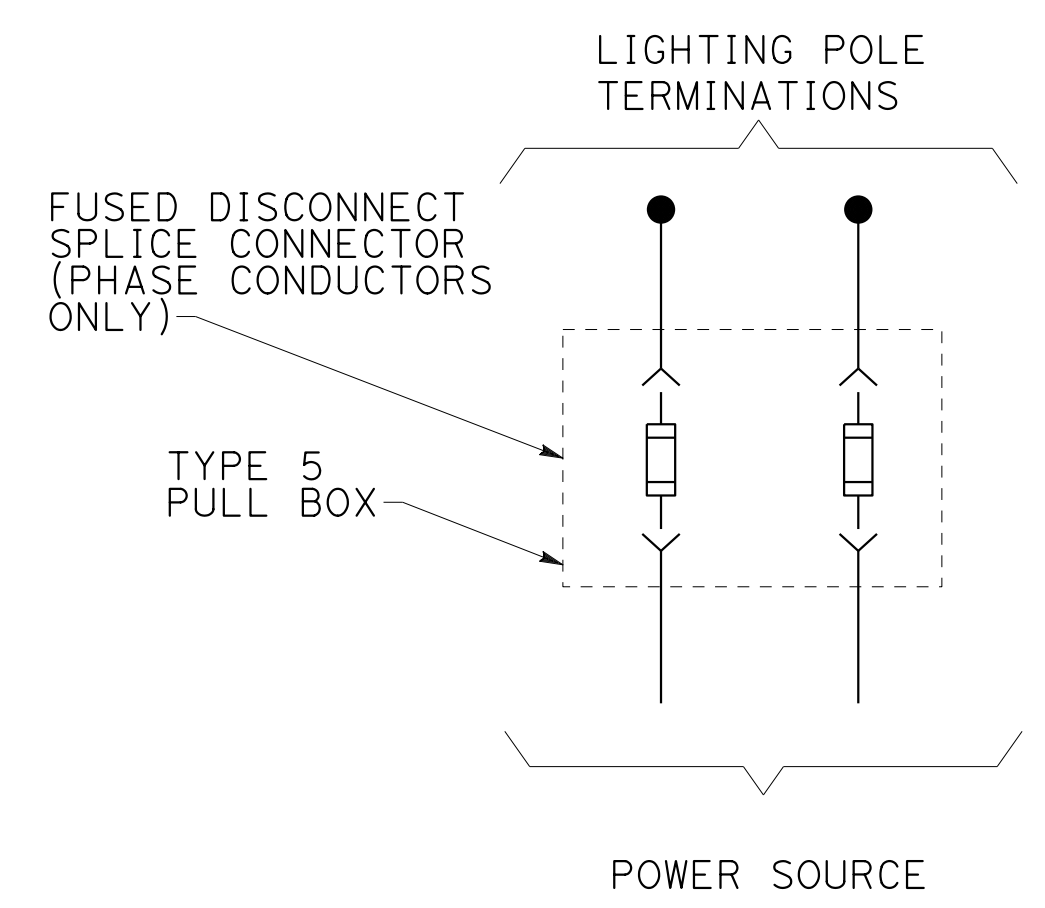
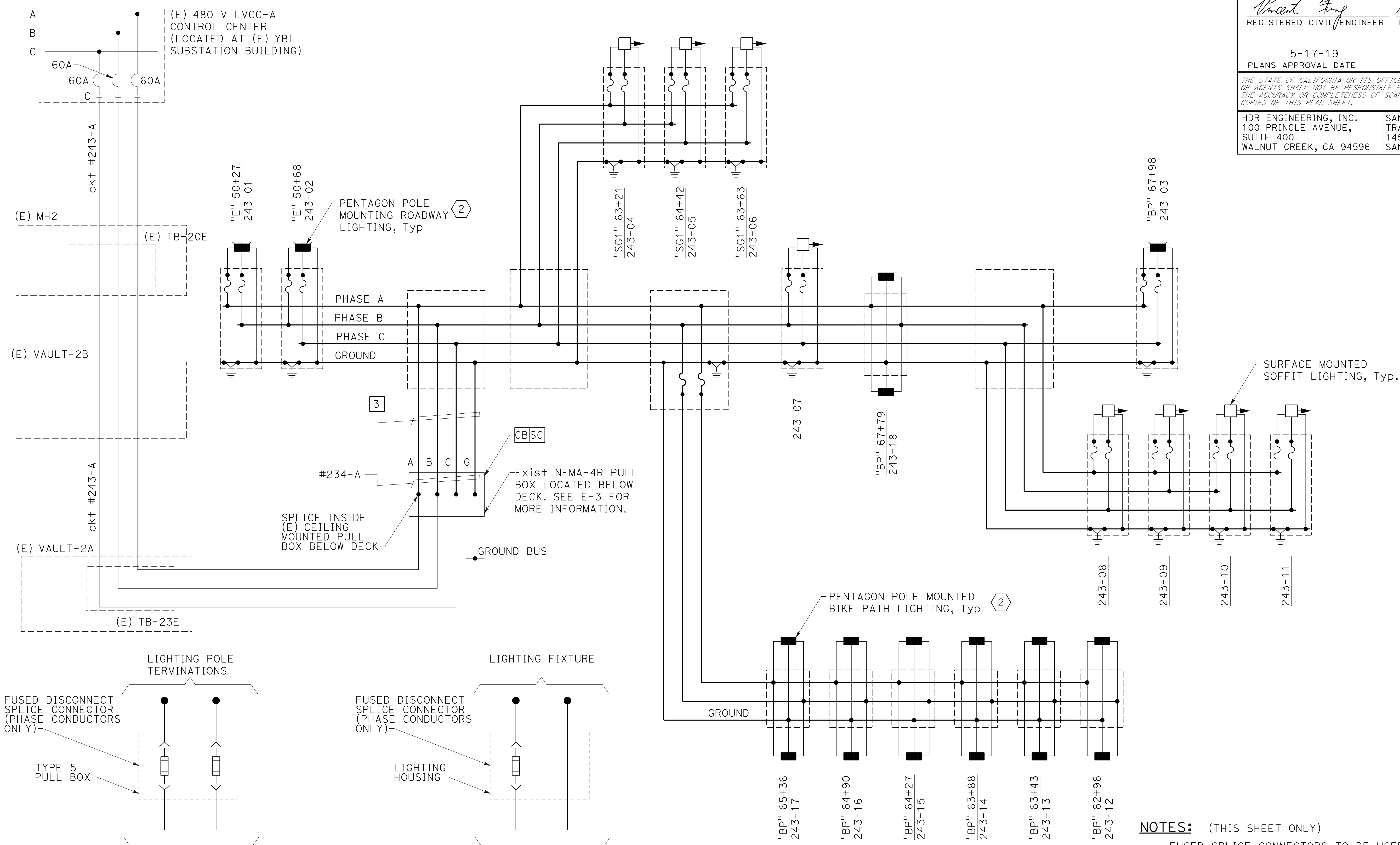
APPROVED FOR ELECTRICAL WORK ONLY

ELECTRICAL SYSTEMS DETAILS

ED-4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	177	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: VINCENT FUNG
 CHECKED BY: PETER KERESZTES
 HO: 2-18-19
 REVISIONS: (None listed)




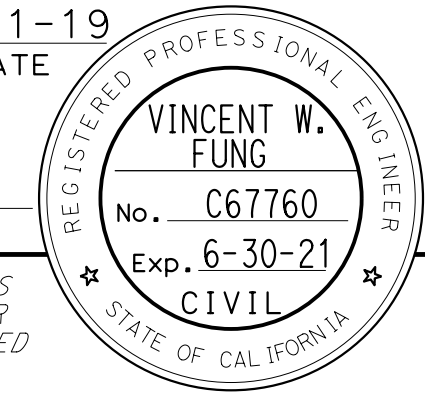
- NOTES:** (THIS SHEET ONLY)
- ① FUSED SPLICE CONNECTORS TO BE USED FOR EACH UNGROUNDED CONDUCTORS BETWEEN LINE AND BALLAST (Typ). SEE DETAIL-1 ON THIS SHEET.
 - ② STATE-FURNISHED LIGHT POLE AND FIXTURES. INSTALLED AND CONNECTED BY THE CONTRACTOR.

480 V ROADWAY LIGHTING WIRING DIAGRAM

ELECTRICAL SYSTEMS DETAILS

APPROVED FOR ELECTRICAL WORK ONLY

ED-5

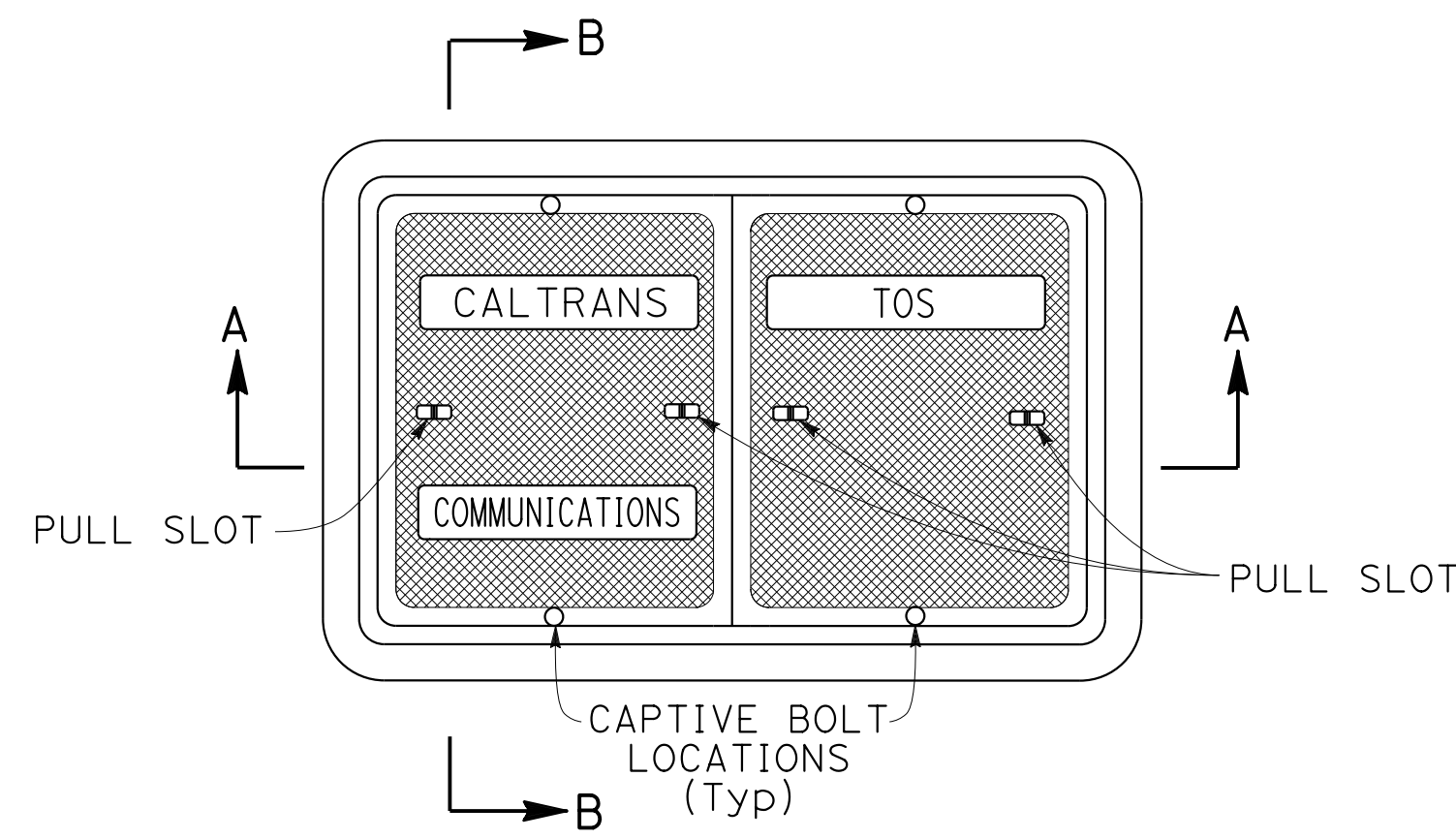
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	178	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

NOTES:

1. PORTLAND CEMENT CONCRETE FLOOR OVER CLEAN CRUSHED ROCK SUMP. BOTTOM OF VAULT MUST BE SLOPED TOWARD THE DRAIN PIPE AND MUST HAVE A SMOOTH FINISH.
2. CONCRETE MUST CONTAIN A MINIMUM OF 550 LB OF PORTLAND CEMENT PER CUBIC YARD.
3. VAULT, VAULT EXTENSION, AND VAULT COVER MUST BE QUAZITE OR APPROVED EQUIVALENT, AND MUST SUPPORT MINIMUM TEST LOAD OF 25,000 LB. IF VAULT IS LOCATED IN TRAVEL WAY, VAULT AND COVER MUST CONFORM WITH VERTICAL PROOF LOAD STRENGTH REQUIREMENT UNDER SECTION 86-1.02(C)3.
4. SEE RSP ES-8A FOR VAULT COVER CAPTIVE BOLT AND VAULT THREADED INSERT DETAILS.
5. MARK "CALTRANS TOS COMMUNICATIONS" ON THE TOP FACE OF ALL COVERS.
6. MINIMUM VAULT DEPTH MUST BE 20". IF NECESSARY, AN EXTENSION MAY BE USED TO MEET THE REQUIREMENT.
7. CONDUITS MUST ENTER THROUGH KNOCKOUTS. IF MORE THAN 3 CONDUITS ARE REQUIRED IN SAME KNOCKOUT, KNOCKOUT MUST BE WIDENED TO 3/8" MORE THAN THE CONDUIT COMBINATION.
8. TRUNK LINE CONDUITS FROM THE TYPICAL BORE OR TRENCH SECTION MUST NOT DEFLECT BY MORE THAN 1' PER 10' FROM THE ALIGNMENT PRECEDING OR FOLLOWING VAULT ENTRANCE/EXIT.
9. BOTTOM OF CONDUIT CENTERLINE MUST BE ALIGNED TO EXIT TOP OF VAULT TO FACILITATE CABLE PULLING. IF EXISTING CONDUIT IS USED, MODIFY CONDUIT TO MATCH SWEEP AS SHOWN. IF NEW CONDUIT IS USED, INSTALL CONDUIT ELBOW AS SHOWN.
10. THE CONDUITS MUST HAVE THREADED BUSHINGS. PVC AND HDPE CONDUITS MUST HAVE BELL ENDS.
11. IF APPLICABLE, VAULT HEIGHT ABOVE EXISTING DIRT GRADE MUST PERMIT 1" OF FUTURE SURFACE LANDSCAPING. WHEN VAULT IS INSTALLED IN EXISTING SIDEWALK, VAULT COVER MUST SIT FLUSH WITH THE PAVEMENT.
12. VAULT MUST BE FURNISHED WITH TWO RACKS AND HOOKS INSTALLED ON EACH OF THE TWO LONG SIDES.
13. SPLICE ENCLOSURES IN FIBER OPTIC VAULT MUST BE USED ONLY WHERE SHOWN. SPLICE ENCLOSURE MUST BE ATTACHED TO THE RACK AND HOOK ASSEMBLY.
14. PROVIDE PERMANENT MARKERS FOR FIBER OPTIC VAULT.

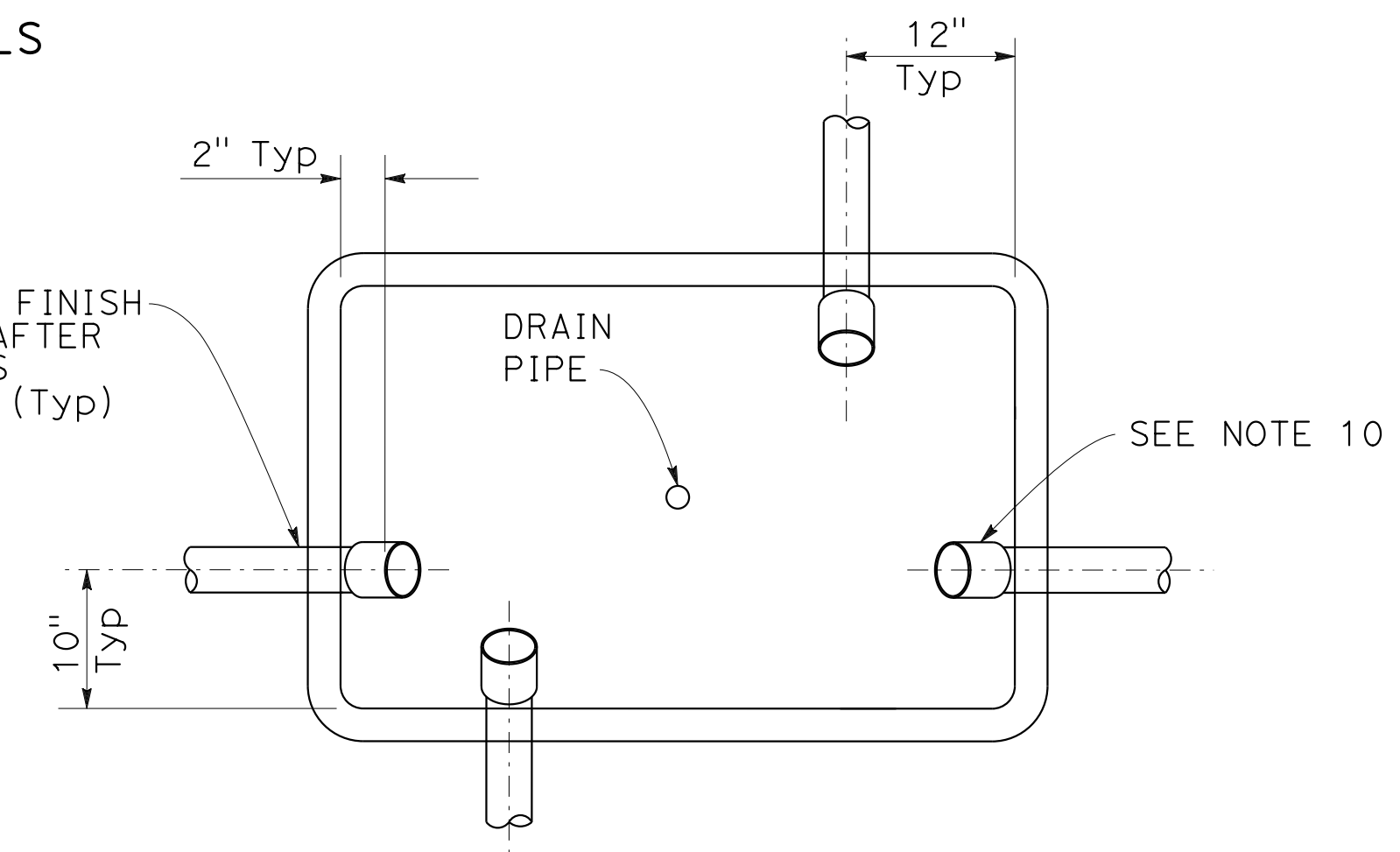
LEGEND:

- ① FIBER OPTIC SPLICE ENCLOSURE.
- ② FIBER OPTIC VAULT COVER.
- ③ RACK & HOOK ASSEMBLY, SEE NOTE 12.
- ④ 45 DEGREE ELBOW, 3' RADIUS MINIMUM. ELBOW AND COUPLING MAY NOT BE NECESSARY FOR NEW CONDUIT INSTALLED BY DIRECTIONAL BORING. NEW CONDUIT INSTALLED BY DIRECTIONAL DRILLING MUST ENTER THE PULL BOX WITH A BENDING RADIUS OF 3' MINIMUM.
- ⑤ WARNING TAPE (FOR NEW CONDUIT INSTALLED BY TRENCHING).

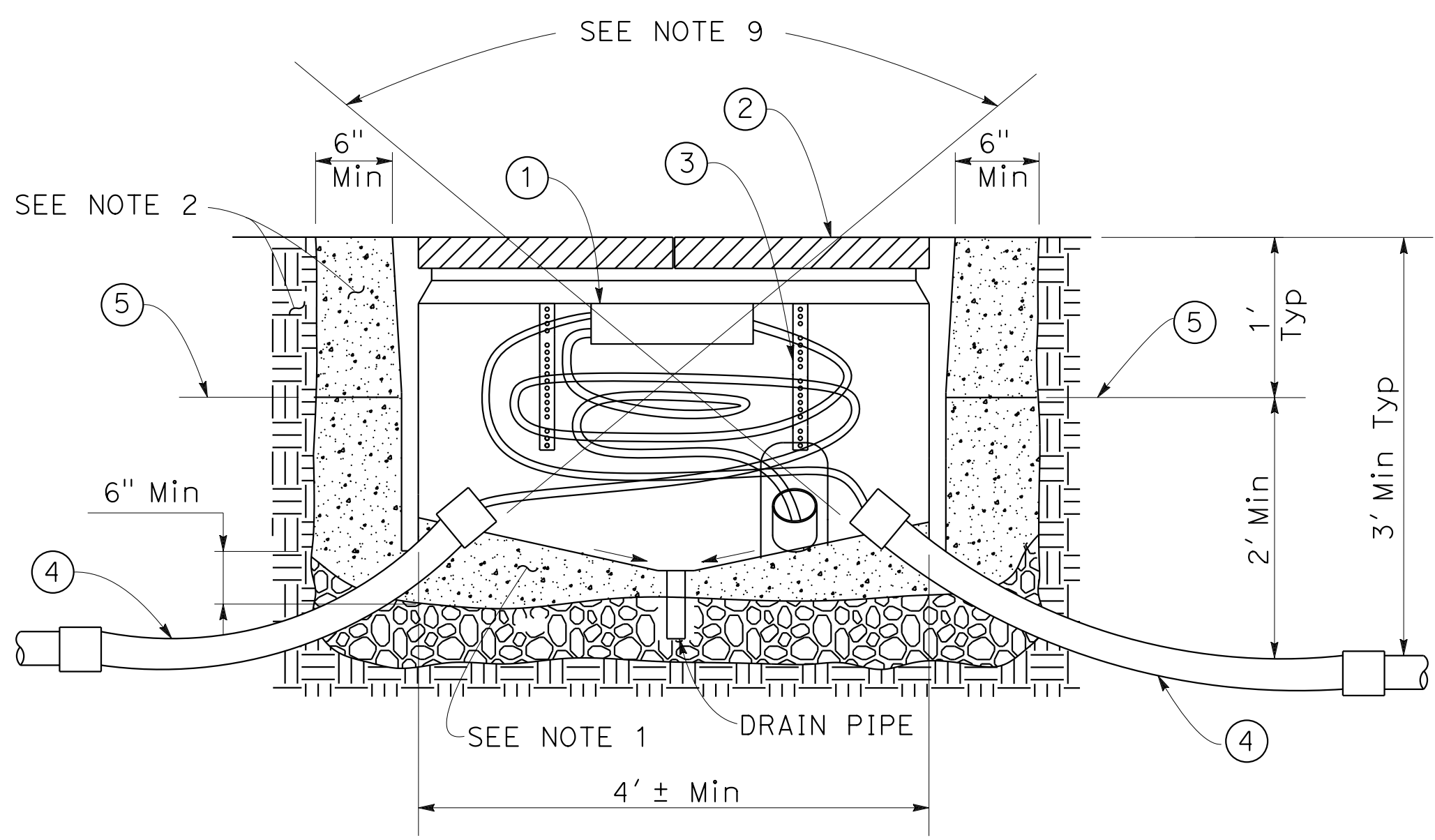


PLAN VIEW

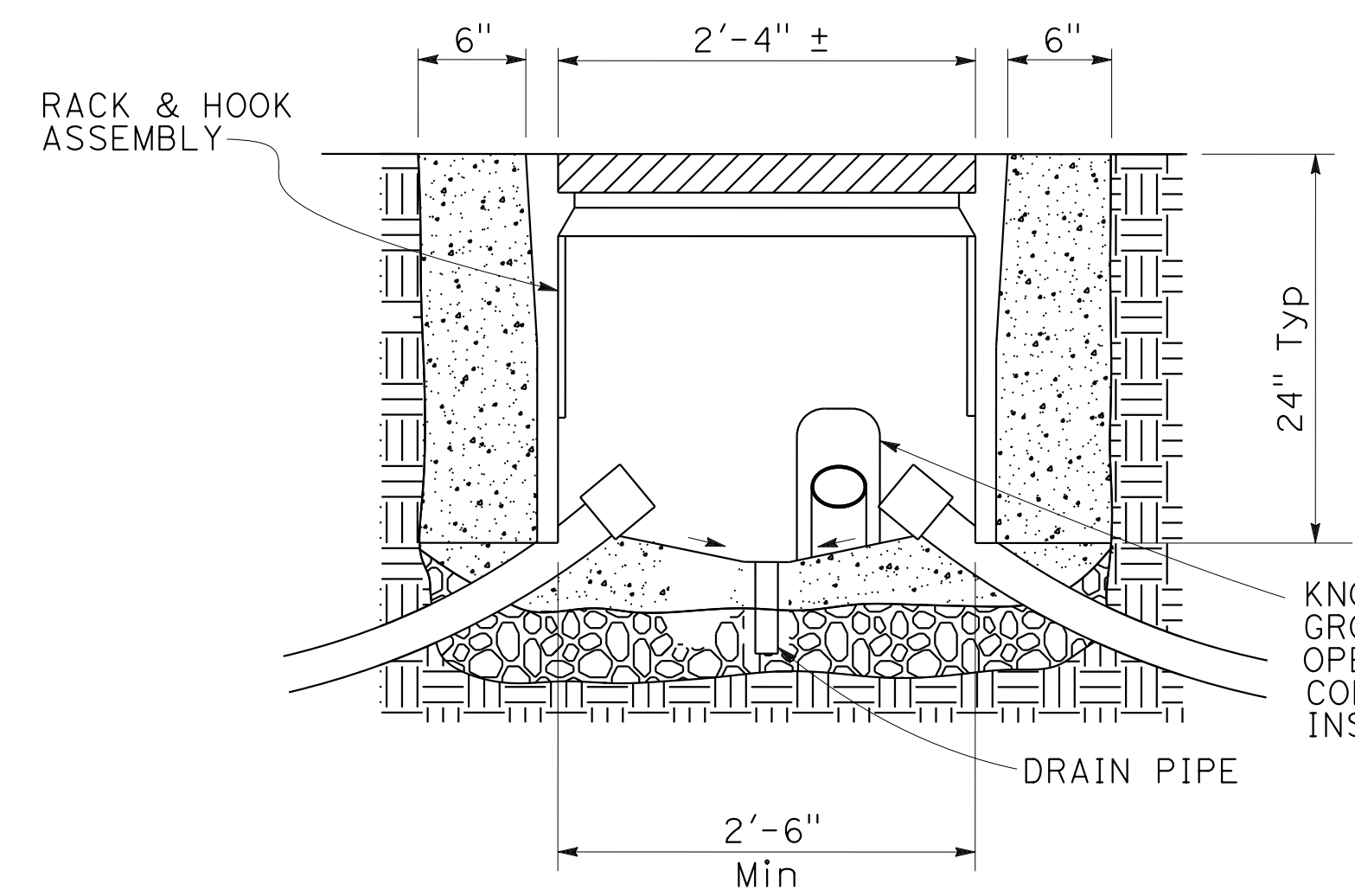
FOR EACH PIECE OF COVER,
SEE RSP ES-8A COVER TOP VIEW FOR OTHER DETAILS



PLAN VIEW WITHOUT COVER



SECTION A-A




SECTION B-B


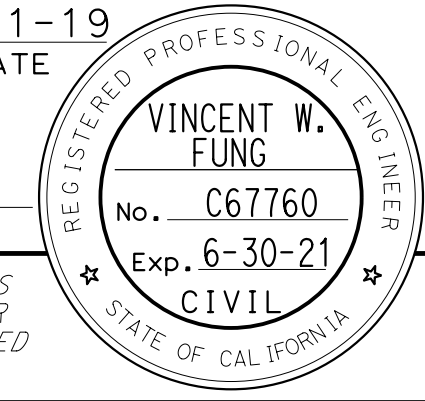
ELECTRICAL SYSTEMS DETAILS

FIBER OPTIC VAULT

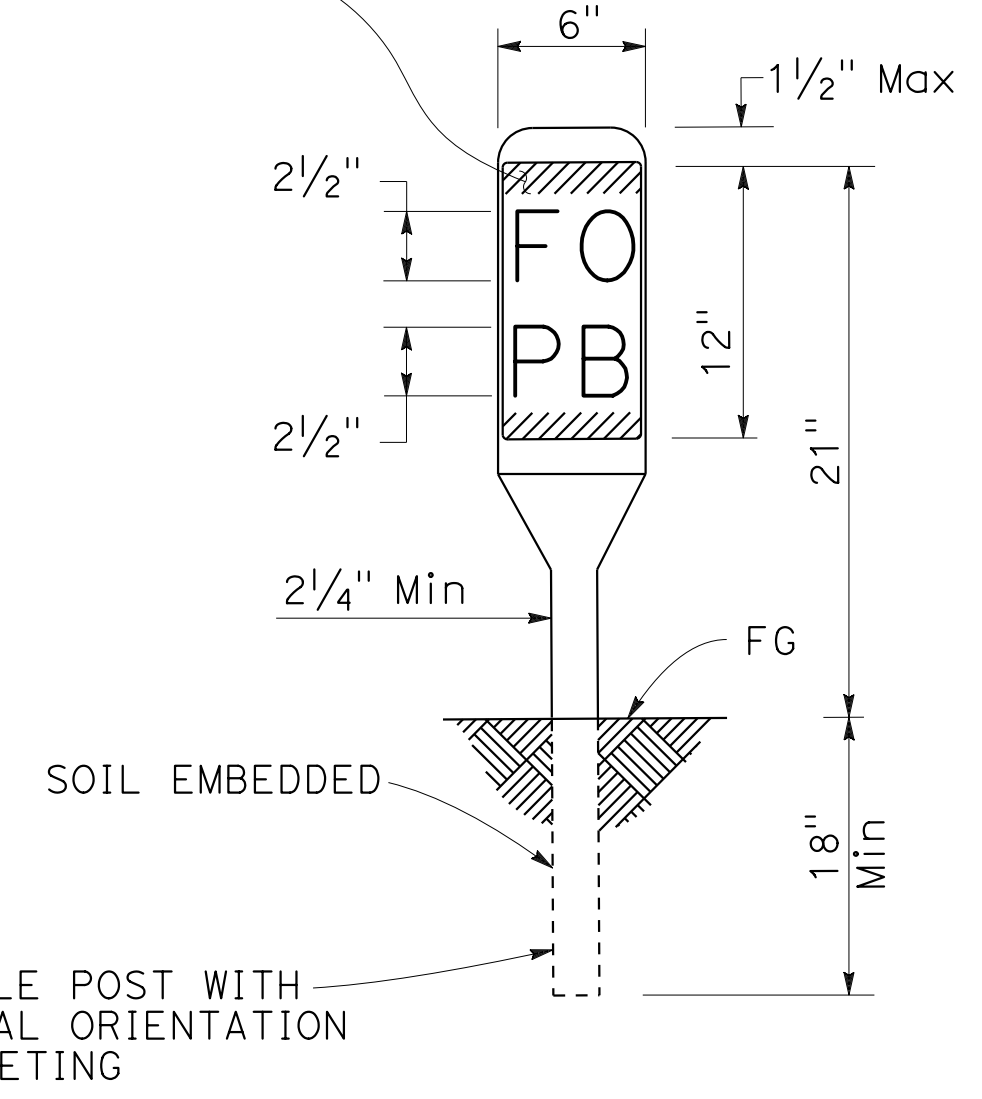
APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

 CONSULTANT - FUNCTIONAL SUPERVISOR: INGRID V. SUPIT
 CALCULATED/DESIGNED BY: VINCENT FUNG
 CHECKED BY: PETER KERESZTES
 REVISED BY: HO
 DATE REVISED: 3-15-19

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	VINCENT FUNG	REVISOR	HO
Caltrans	INGRID V. SUPIT	CHECKED BY	PETER KERESZTES	DATE	3-15-19

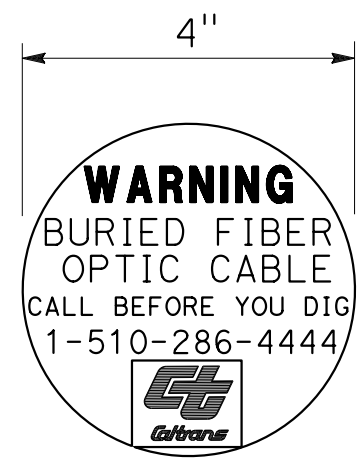
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	179	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		

CALTRANS STANDARD TYPE K-2 OBJECT MARKER WITH 6" x 12" YELLOW REFLECTIVE BACKGROUND (DIAMOND GRADE SHEETING) AND BLACK LETTERS

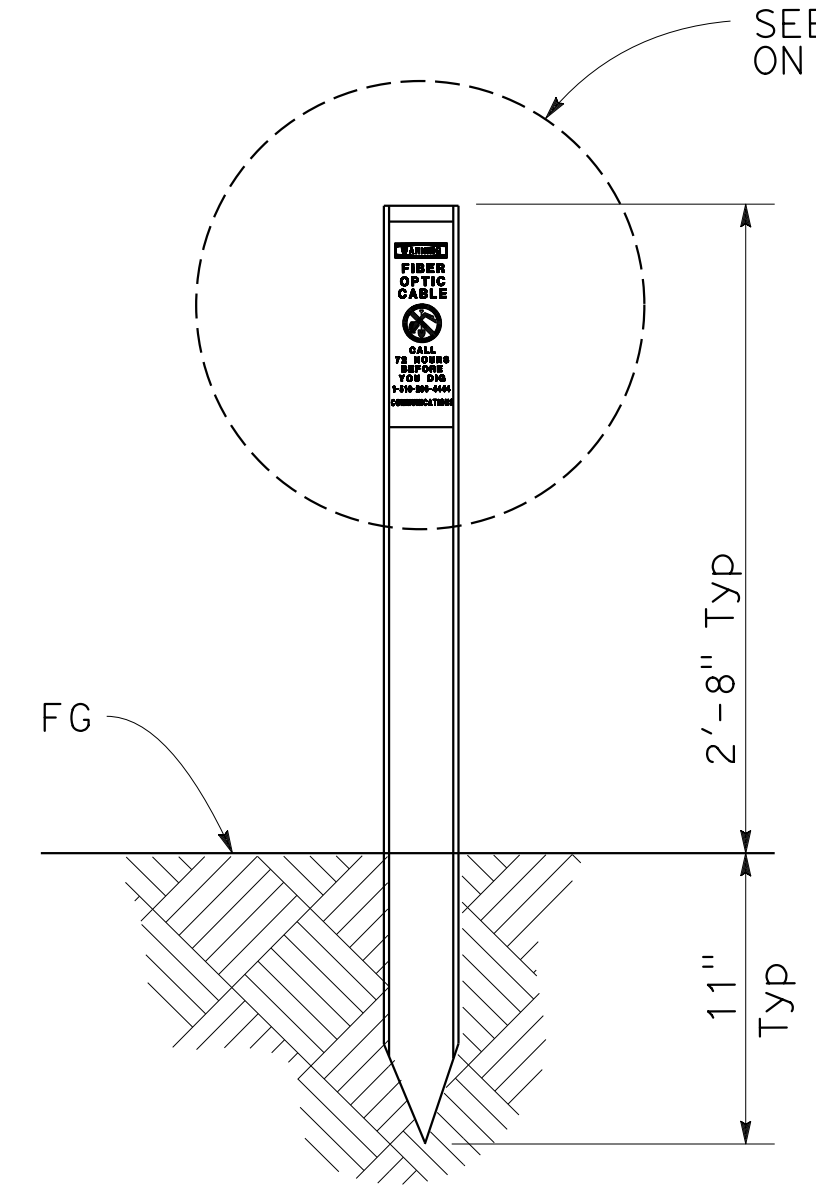


VAULT OR PULL BOX MARKER

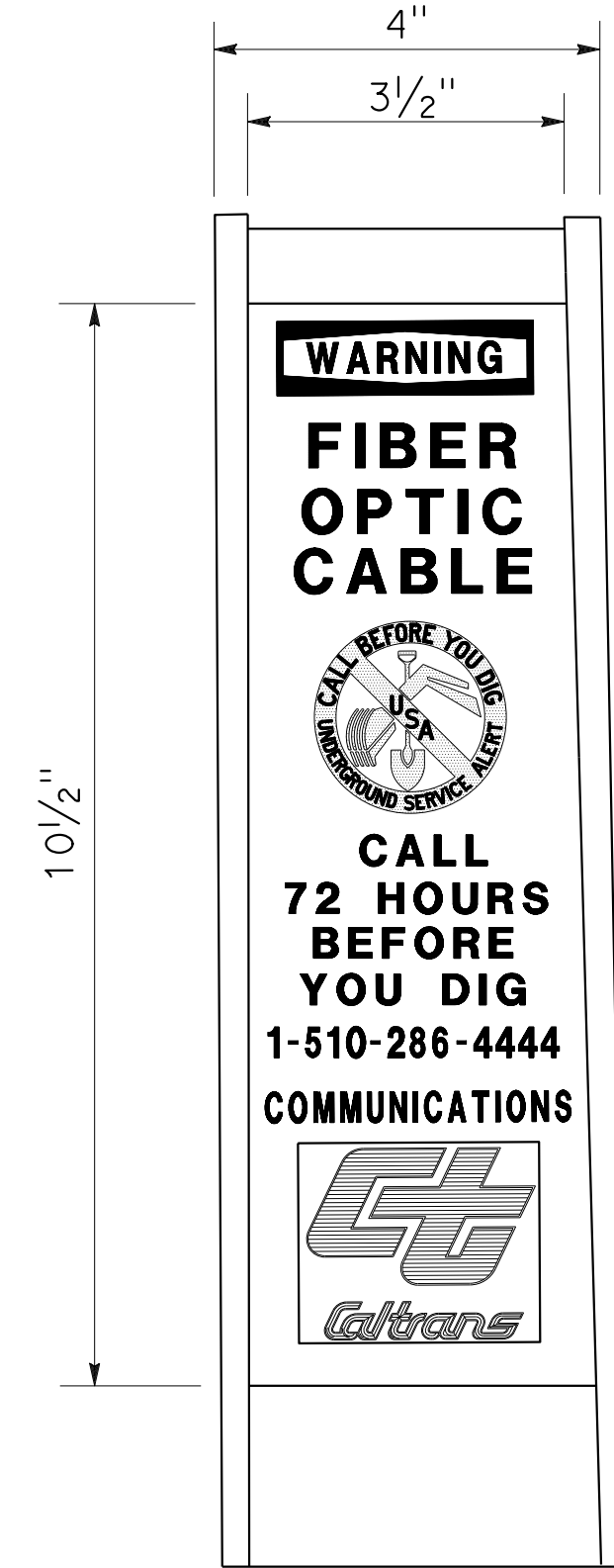
NOTE: IN UNPAVED AREAS, INSTALL ONE MARKER 1 FOOT AWAY FROM EACH VAULT OR PULL BOX IN WHICH FIBER OPTIC CABLE IS INSTALLED.



ROUND CABLE MARKER
PAVED AREAS



CABLE MARKER
UNPAVED AREAS




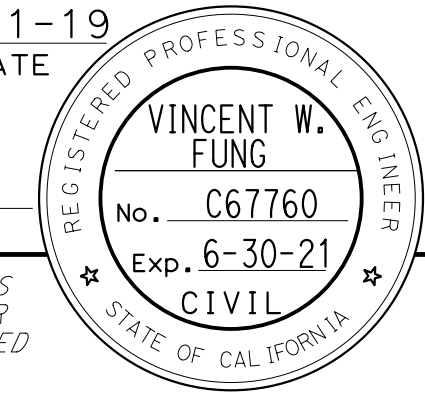
DETAIL A

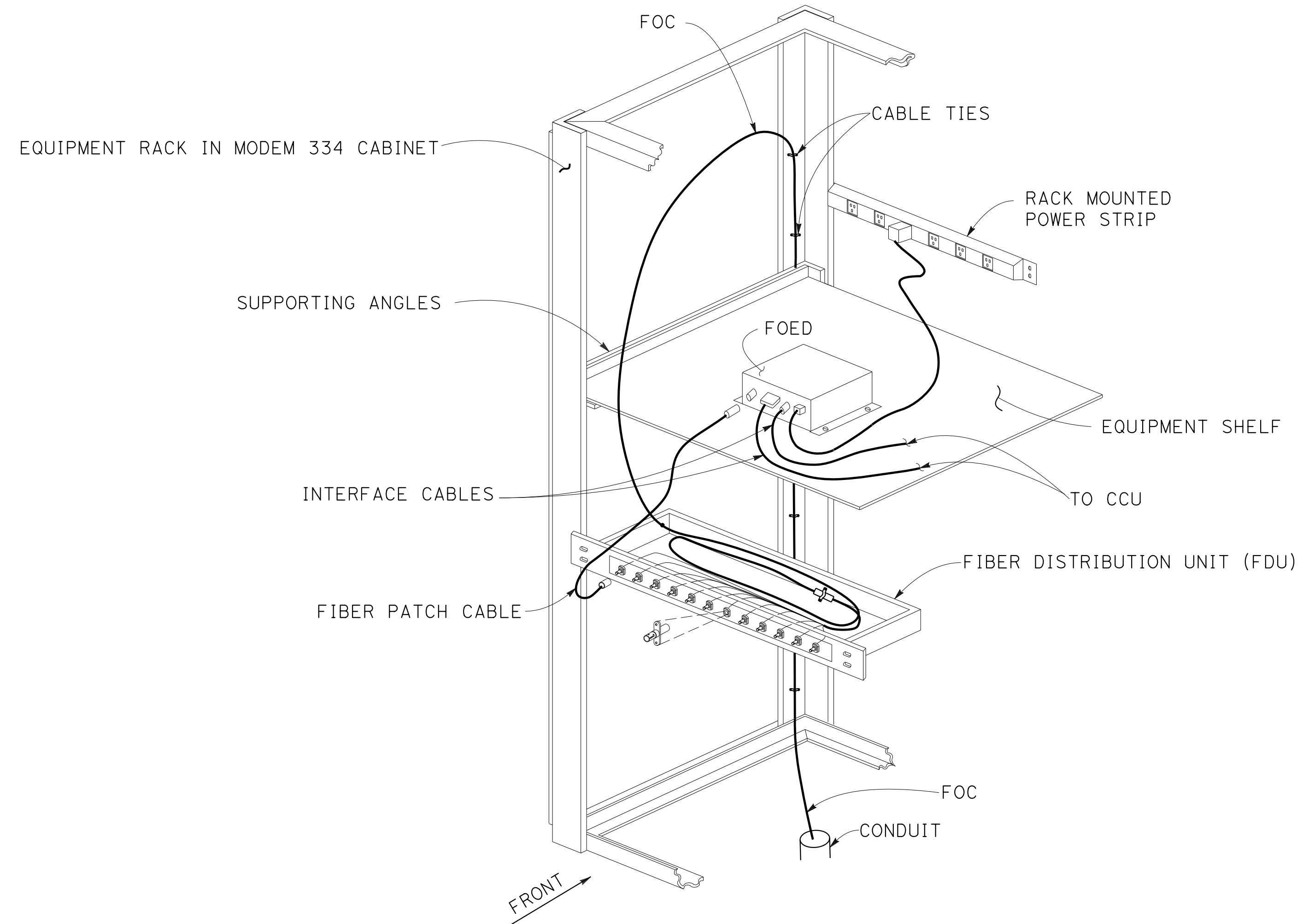
ELECTRICAL SYSTEMS DETAILS

PERMANENT FIBER OPTIC MARKER

APPROVED FOR ELECTRICAL WORK ONLY

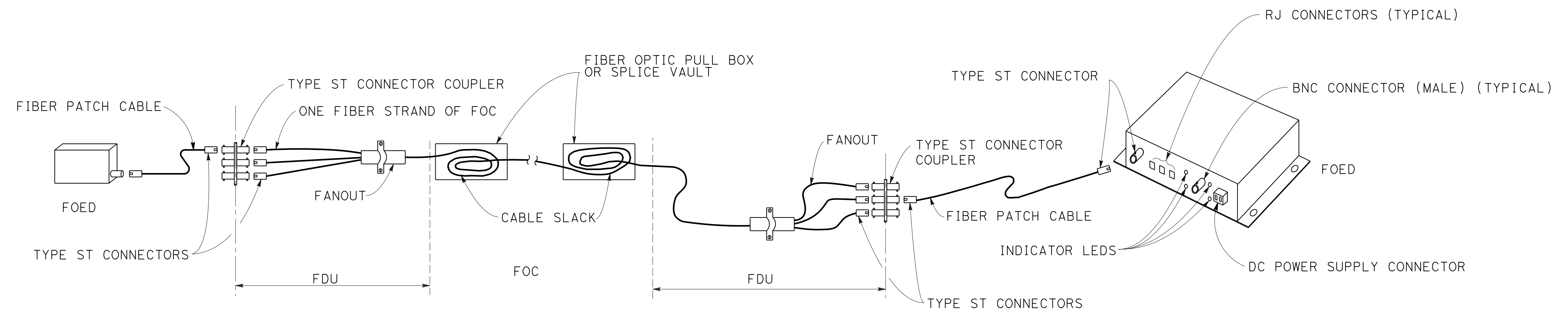
ED-7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	180	436
 REGISTERED CIVIL ENGINEER			4-1-19	DATE	
5-17-19 PLANS APPROVAL DATE					
HDR ENGINEERING, INC. 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596			SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET St, Ste 2200 SAN FRANCISCO, CA 94103		



PARTIAL CABINET EQUIPMENT LAYOUT

- ABBREVIATIONS:**
- FOED - FIBER OPTIC ELECTRONIC DEVICE
 - FDU - FIBER DISTRIBUTION UNIT
 - FOC - FIBER OPTIC CABLE
 - CCU - CAMERA CONTROL UNIT
 - WAN - WIDE AREA NETWORK




TYPICAL FIBER OPTIC LINK

FIBER OPTIC LINK INSTALLATION

ELECTRICAL SYSTEMS DETAILS

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPERVISOR	REVISOR	DATE
	INGRID V. SUPIT	VINCENT FUNG	3-15-19
	CHECKED BY	REVISIONS	

USERNAME => IKUKANE
DGN FILE => 0419000153ub008.dgn

RELATIVE BORDER SCALE IS IN INCHES



UNIT 0728

PROJECT NUMBER & PHASE

04190001531

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Caltrans®
 CONSULTANT - FUNCTIONAL SUPERVISOR
 INGRID V. SUPIT
 CALCULATED/DESIGNED BY
 CHECKED BY
 VINCENT FUNG
 PETER KERESZTES
 REVISOR
 DATE
 HQ
 HQ
 HQ
 4-30-18
 11-12-18
 3-15-19

NOTE:

ELECTRICAL SYSTEMS QUANTITY TABLES SUMMARIZE SIGNIFICANT COMPONENTS. SEE ELECTRICAL SYSTEMS PLANS AND SPECIFICATIONS TO DETERMINE ALL MATERIALS NEEDED FOR EACH SYSTEM.

LIGHTING SYSTEM

SHEET No.	CONDUIT (N)		PULL BOX (N)			CONDUCTORS (N)		NEW CONDUIT RISER STRUCTURE (N)	PENTAGONAL SHAPE ROADWAY LIGHT		PENTAGONAL SHAPE BIKE PATH LIGHT *		110 W LED SOFFIT LUMINAIRE (N)
	2"	3"	No. 5	No. 7	No. 9	#8	#6		POLE +	FIXTURE *	POLE	FIXTURE	
	LF	LF	EA	EA	EA	LF	LF	EA	EA	EA	EA	EA	
E-3	356	562	12	3	4	920	3397	3	2	4	6	12	3
E-4	220	225	3		2	655	1965	2	1	2	1	2	5
TOTAL (N)	576	787	15	3	6	1575	5362	5	3	6	7	14	8

TEMPORARY LIGHTING SYSTEM

SHEET No.	OVERHEAD MESSENGER WIRE 3/8" (N)	#8 CONDUCTORS (N)	LED Lum (N)	TEMPORARY LIGHTING POLE (N)	TEMPORARY WOOD POLE (N)
		LF	LF	EA	EA
E-12A	191	619	3	3	1
TOTAL (N)	191	619	3	3	1

MODIFYING EXISTING ELECTRICAL SYSTEM, LIGHTING (CITY STREET)

SHEET No.	CONDUIT (N)		PULL BOX (N)			CONDUCTORS (N)		STREET LIGHT STEEL SINGLE ARM POLE (N)	STREET LIGHT STEEL DUAL ARM POLE (N)	STREET LIGHT FIXTURE (N)	110 W LED SOFFIT LUMINAIRE (N)
	1 1/2"	2"	No. 5	No. 7	No. 9	#8	#6				
	LF	LF	EA	EA	EA	LF	LF	EA	EA	EA	EA
E-5	618	37	7	4	3	655	1309	5	2	9	2
E-6	423		2		3	423	845	2	1	4	
TOTAL (N)	1041	37	9	4	6	1077	2155	7	3	13	2

MODIFYING EXISTING ELECTRICAL SYSTEM, RAMP METERING SYSTEM

SHEET No.	2" CONDUIT (N)	PULL BOX (N)			CONDUCTORS (N)						TYPE A LOOP DETECTOR (N)	NEW CONDUIT RISER STRUCTURE (N)	INSTALL SPLICE VAULT (N)	MODEL 2070E CONTROLLER *
		No. 5	No. 5 (T)	No. 9	#14	#12	#10	#8	DLC	SMFO				
	LF	EA	EA	EA	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA
E-7	815	11	2	4	2451	817	1634	2043	5899	248	1	2	1	1
TOTAL (N)	815	11	2	4	2451	817	1634	2043	5899	248	1	2	1	1

GROUNDING PLAN

SHEET No.	RELOCATE 2-#4/0 CONDUCTOR (N)
	LF
E-12	100
TOTAL (N)	100

ELECTRONIC TOLL SYSTEM

SHEET No.	4" CONDUIT (N)	PULL BOX No. 6 (N)
	LF	EA
E-8		
E-9	410	4
TOTAL (N)	410	4

SIGNAL AND LIGHTING (CITY)

CONDUIT RUN No.	CONDUIT (N)		PULL BOX (N)		CONDUCTORS (N)				POLE STANDARD (N)			SIGNAL MOUNT			PED SIGNAL MOUNT		APS	MODEL 2070E* CONTROLLER	MODEL 332L* CABINET	BATTERY BACK-UP SYSTEM	165 W LED Lum (N)
	2"	3"	No. 5	No. 6	#14	#10	#8	#6	TYPE 1-A (7')	TYPE 1-A (10')	17-3-100 W/ 20' SMA & 12' LMA	MAS	TV-1-T	SV-1-T	SP-1-T	TP-1-T					
	LF	LF																			
E-10	100	187	4	1	686	109	686	269	1	1	1	1	1	1	1	1	2	1	1	1	1
TOTAL (N)	100	187	4	1	686	109	686	269	1	1	1	1	1	1	1	1	2	1	1	1	1

ELECTRICAL SYSTEMS QUANTITIES

(N) - NOT A SEPARATE BID ITEM.
 * - DEPARTMENT-FURNISHED
 + - PROVIDED BY CALTRANS

LAST REVISION DATE PLOTTED => 13-NOV-2019
 00-00-00 TIME PLOTTED => 13:33

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	182	436

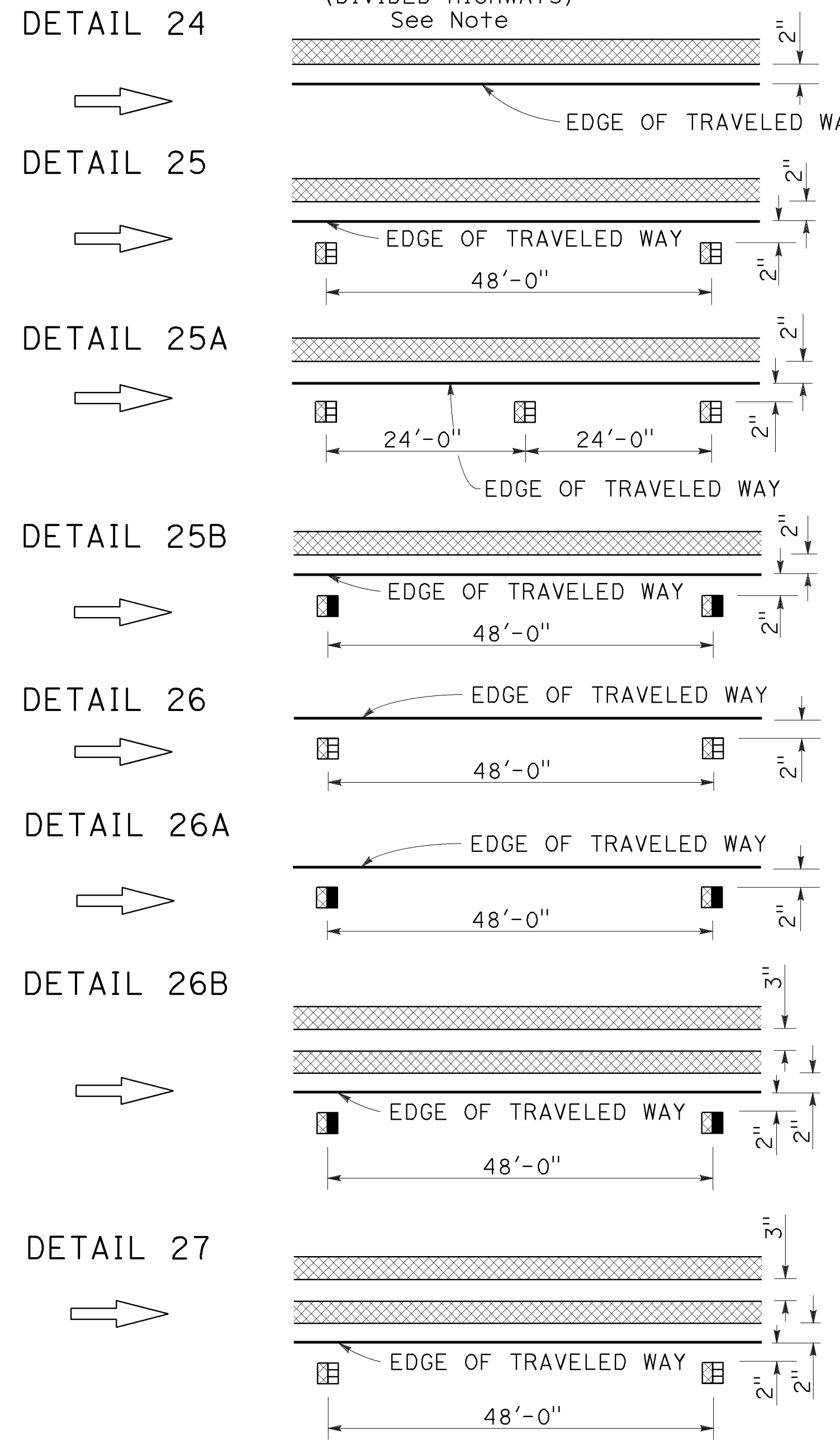
Atifa Ferouz
REGISTERED CIVIL ENGINEER

April 19, 2019
PLANS APPROVAL DATE

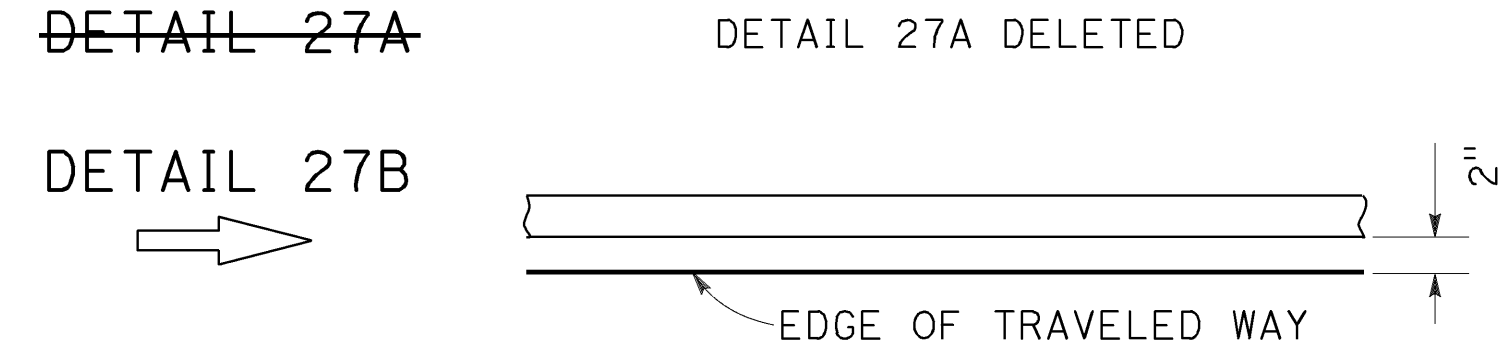
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Atifa Ferouz
No. C80402
Exp. 3-31-21
CIVIL
STATE OF CALIFORNIA

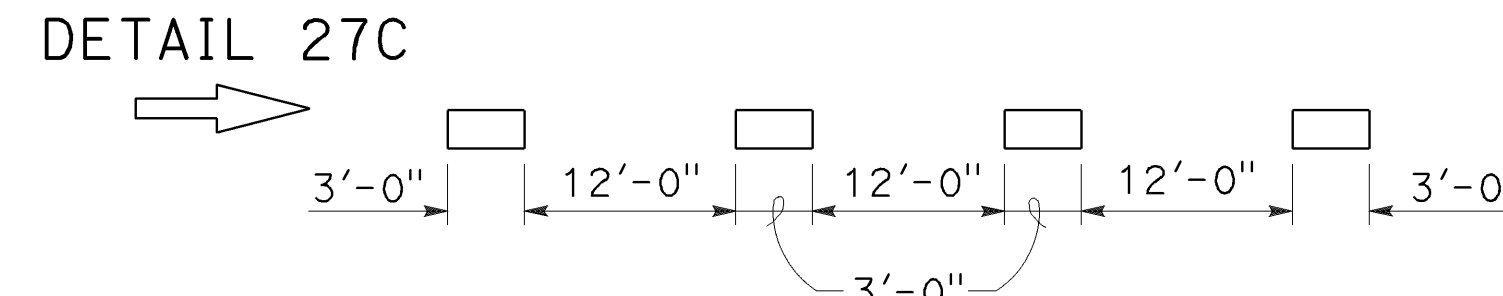
LEFT EDGE LINES



RIGHT EDGE LINES

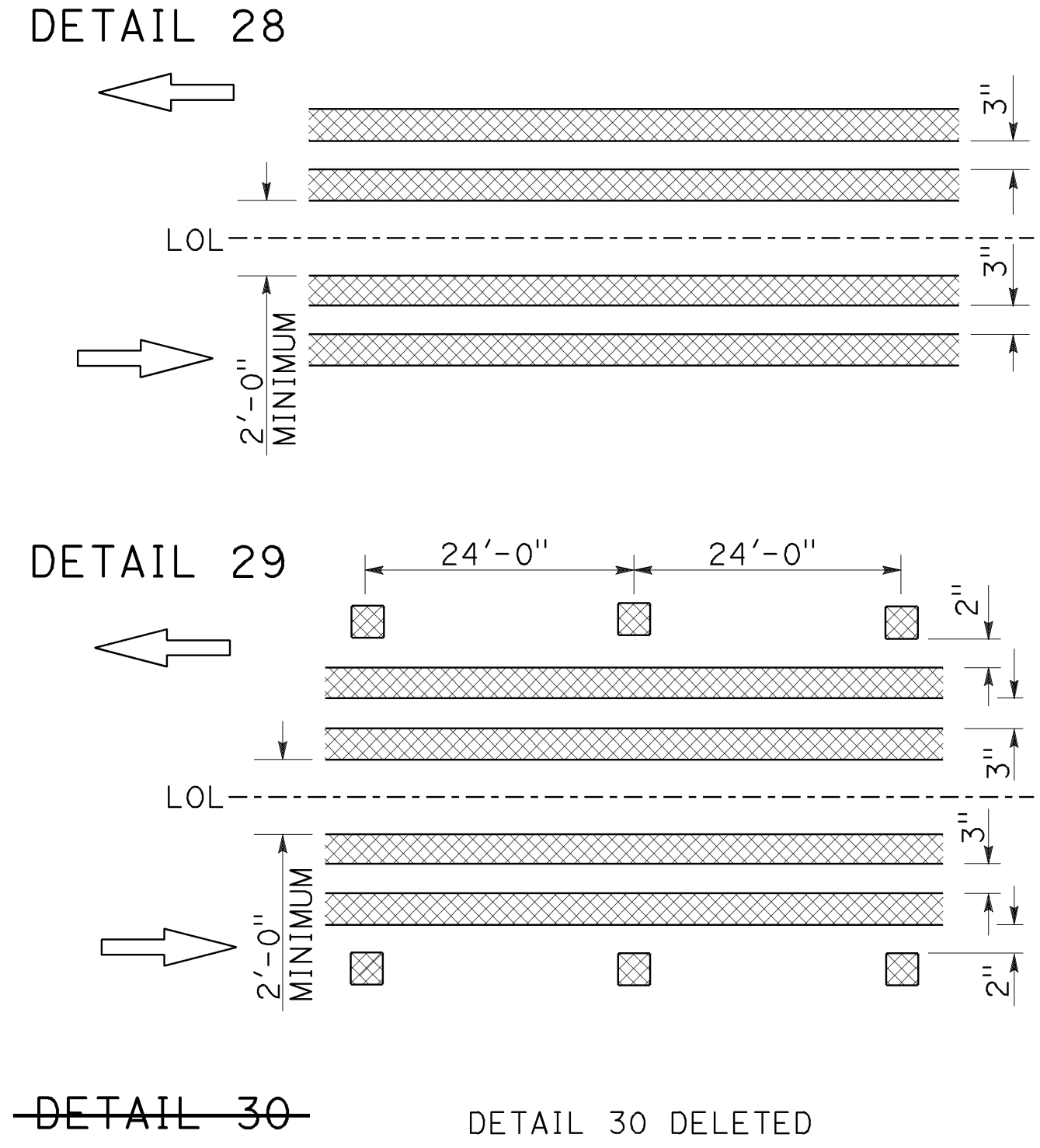


RIGHT EDGE LINE EXTENSION THROUGH INTERSECTIONS

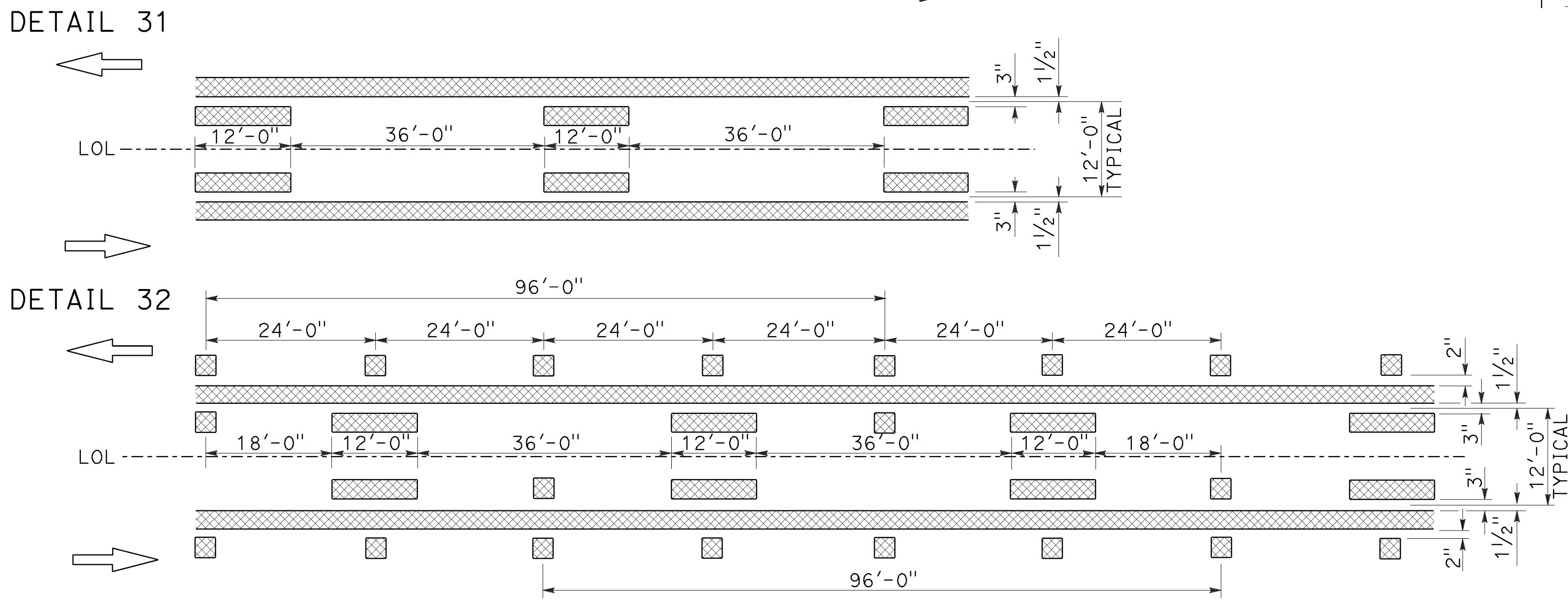


LEFT EDGE LINES NOTE:
On freeways use traffic stripe details with Type RY markers.

MEDIAN ISLANDS



TWO-WAY LEFT TURN LANES



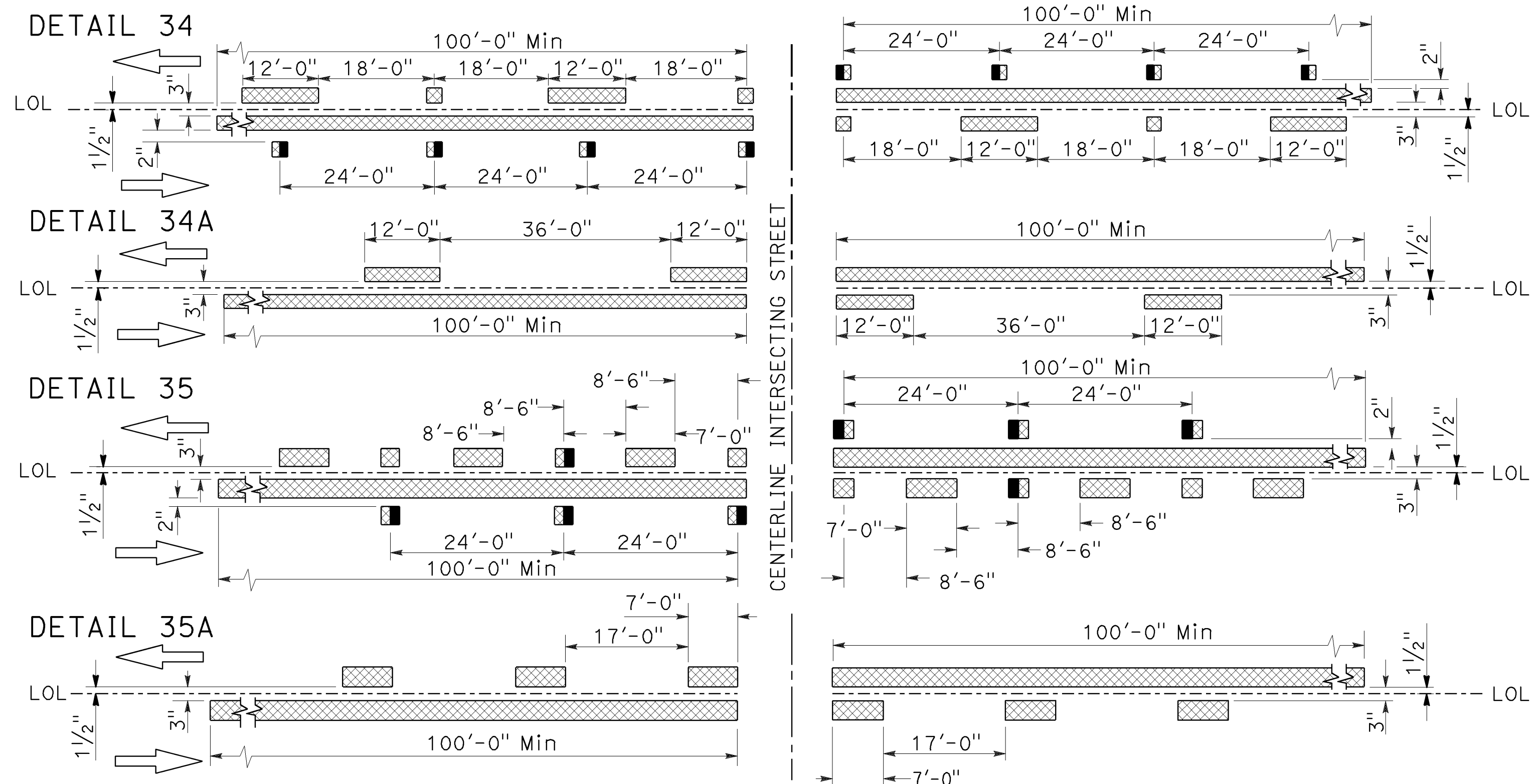
LEGEND

- MARKERS
- TYPE D TWO-WAY YELLOW RETROREFLECTIVE
 - TYPE H ONE-WAY YELLOW RETROREFLECTIVE
 - TYPE RY RED-YELLOW RETROREFLECTIVE

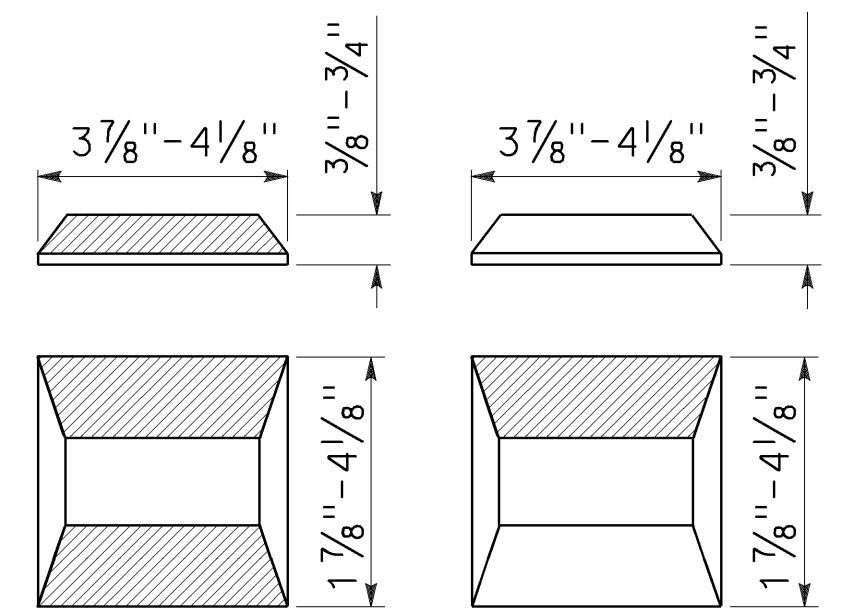
LINES

- 6" WHITE
- 6" YELLOW

INTERSECTION TREATMENTS



MARKER DETAILS



TYPE RY AND TYPE D
TYPE H

RETROREFLECTIVE FACE

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS

NO SCALE

RSP A20B DATED APRIL 19, 2019 SUPERSEDES STANDARD PLAN A20B
DATED MAY 31, 2018 - PAGE 13 OF THE STANDARD PLANS BOOK DATED 2018.

REVISED STANDARD PLAN RSP A20B

2018 REVISED STANDARD PLAN RSP A20B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	183	436

Atifa Ferouz
REGISTERED CIVIL ENGINEER

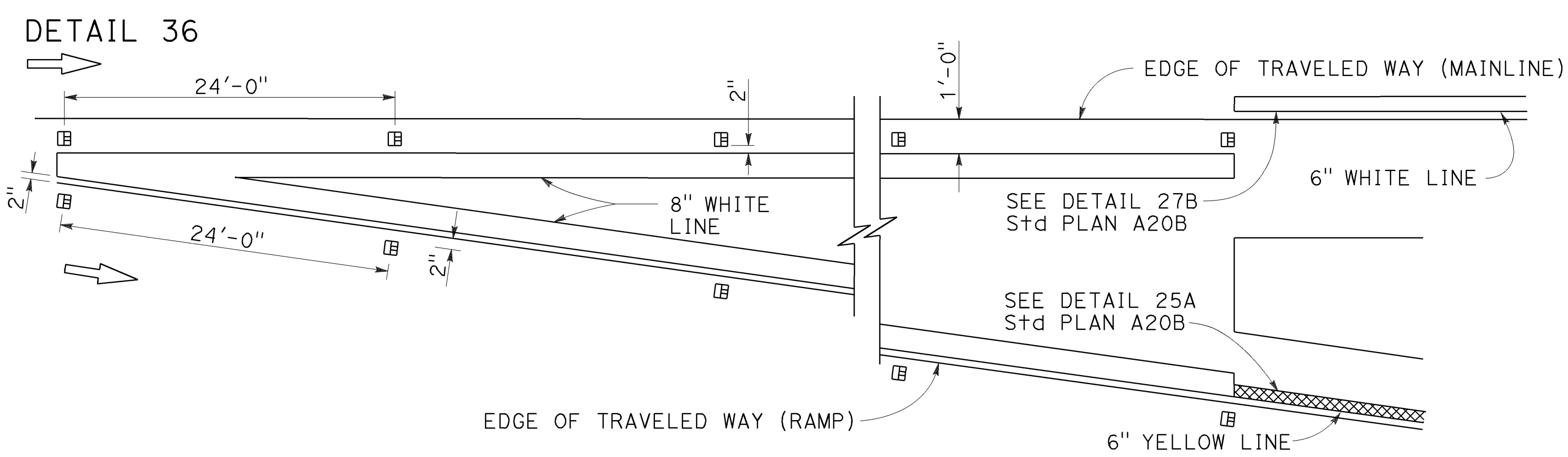
October 19, 2018
PLANS APPROVAL DATE

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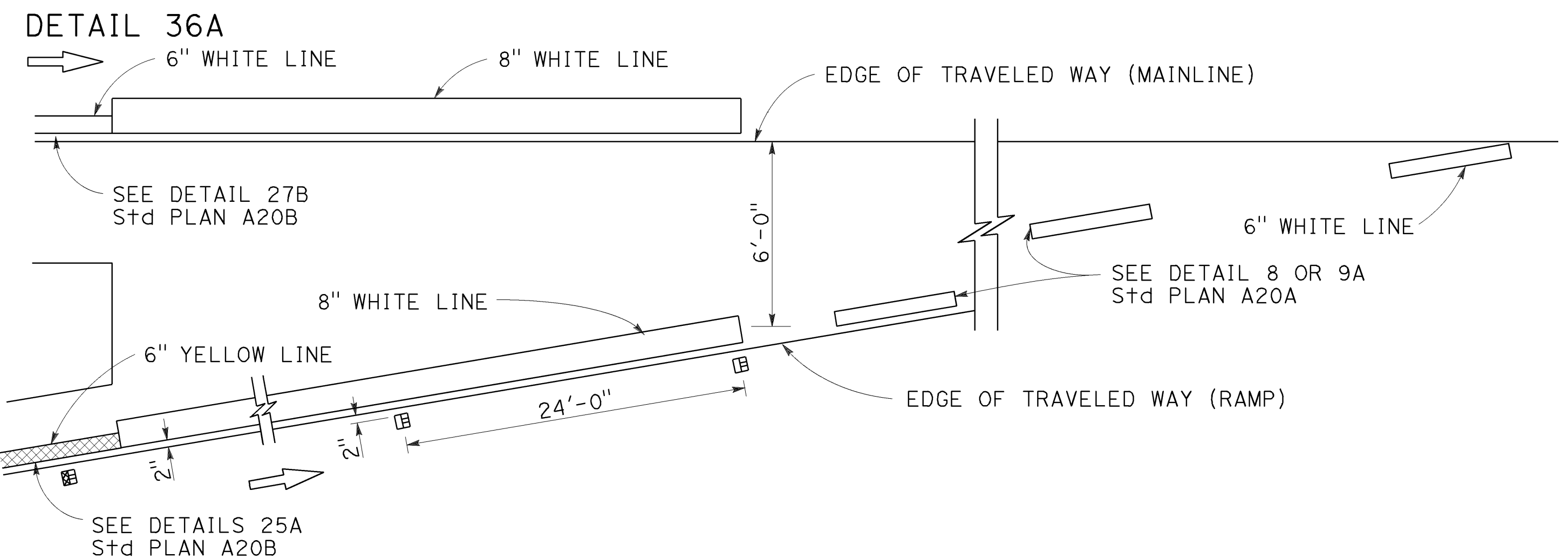
TO ACCOMPANY PLANS DATED 5-17-19

Atifa Ferouz
REGISTERED PROFESSIONAL ENGINEER
No. C80402
Exp. 3-31-19
CIVIL
STATE OF CALIFORNIA

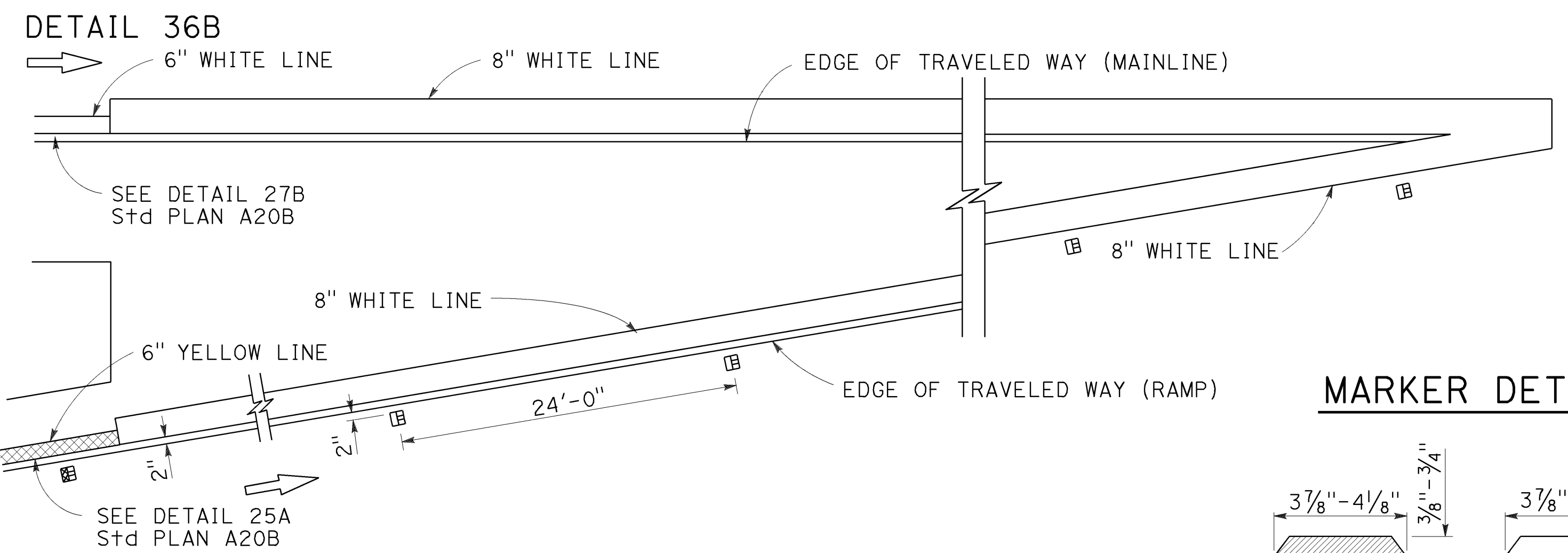
EXIT RAMP NEUTRAL AREA (GORE) TREATMENT



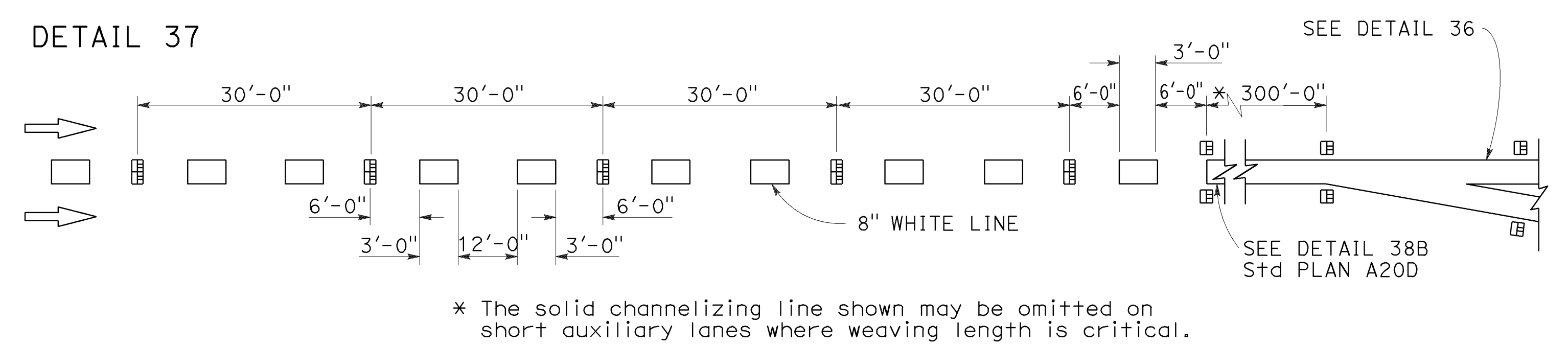
ENTRANCE RAMP NEUTRAL AREA (MERGE) TREATMENT



ENTRANCE RAMP NEUTRAL AREA (ACCELERATION LANE) TREATMENT

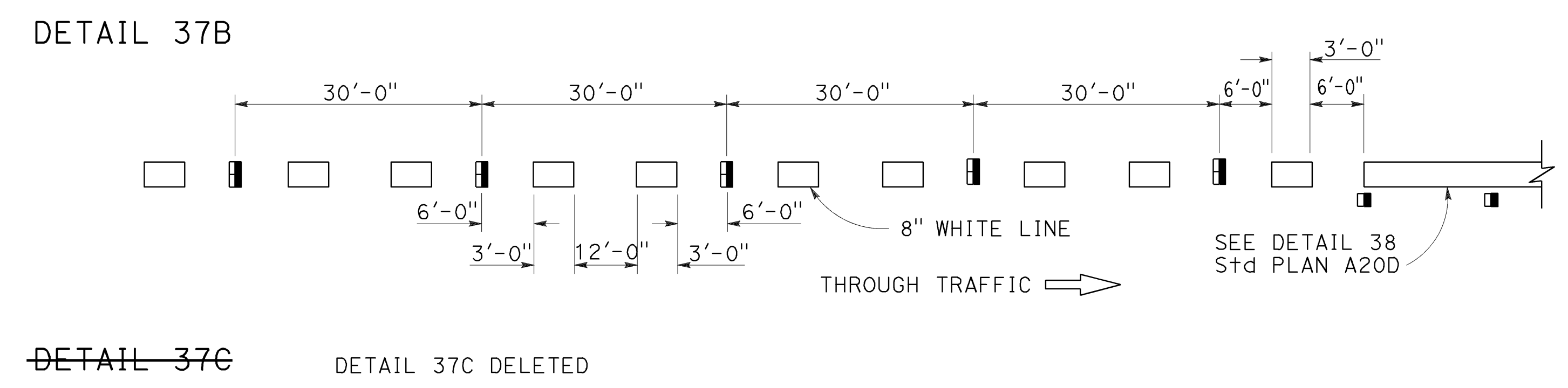


LANE DROP AT EXIT RAMP

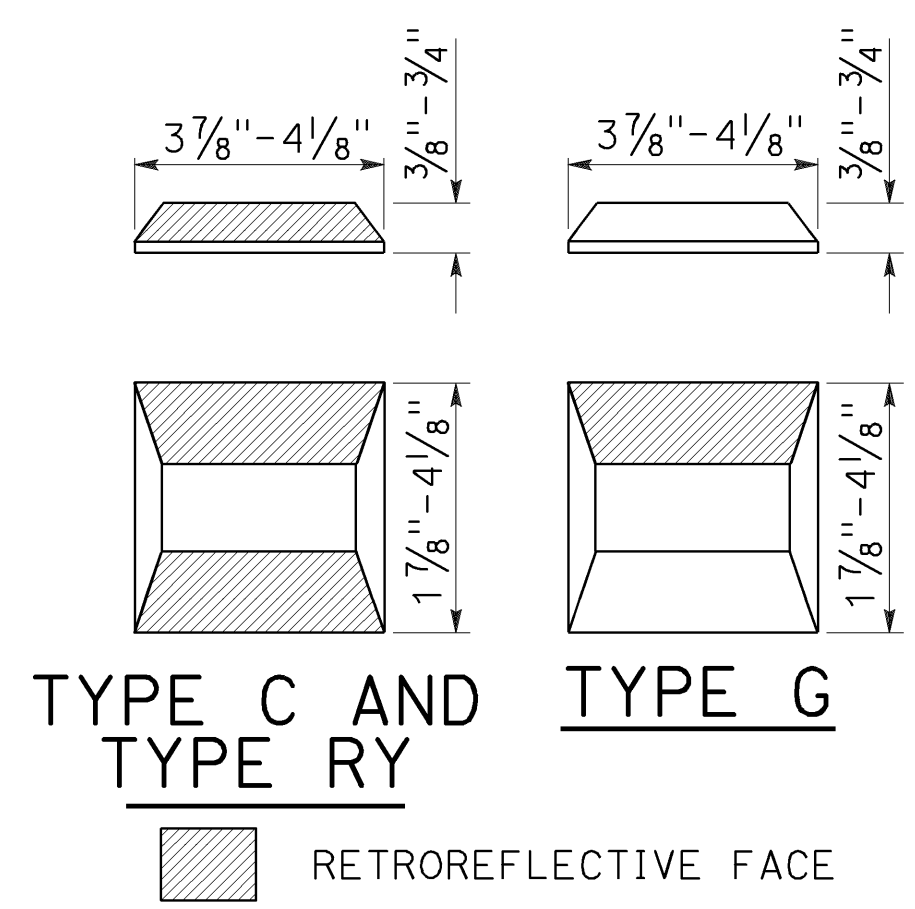


~~DETAIL 37A~~ DETAIL 37A DELETED

LANE DROP AT INTERSECTIONS



MARKER DETAILS



LEGEND:

- MARKERS
- TYPE C RED-CLEAR RETROREFLECTIVE
 - TYPE G ONE-WAY CLEAR RETROREFLECTIVE
 - TYPE RY RED-YELLOW RETROREFLECTIVE

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**PAVEMENT MARKERS
AND TRAFFIC LINES
TYPICAL DETAILS**

NO SCALE

RSP A20C DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN A20C
DATED MAY 31, 2018 - PAGE 14 OF THE STANDARD PLANS BOOK DATED 2018.

REVISED STANDARD PLAN RSP A20C

2018 REVISED STANDARD PLAN RSP A20C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	184	436

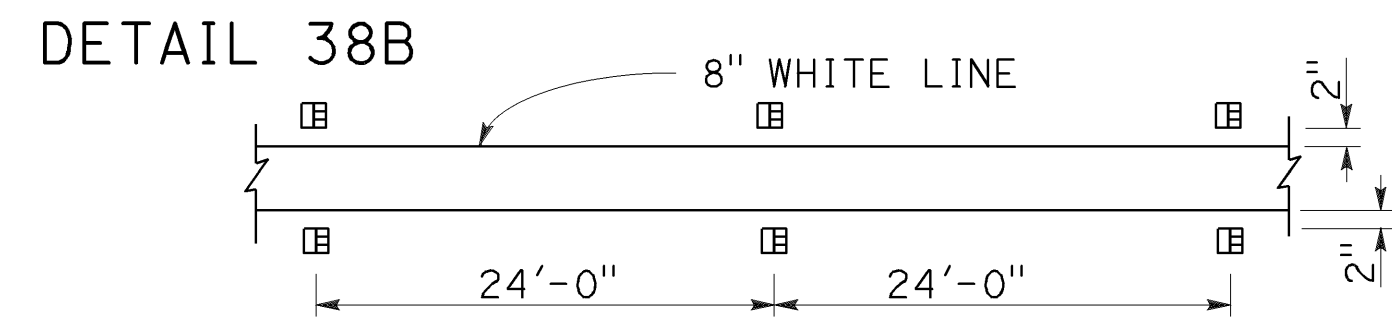
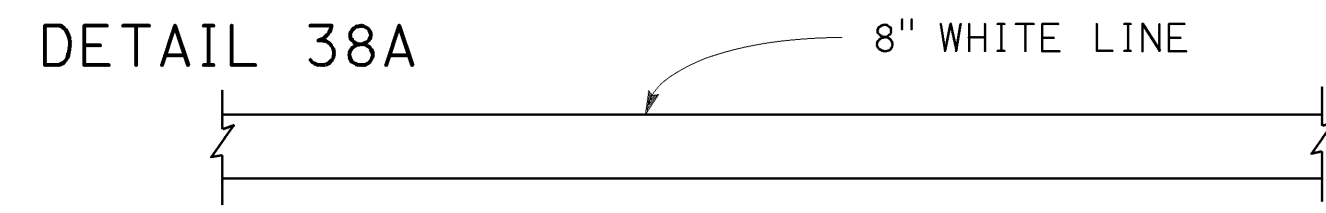
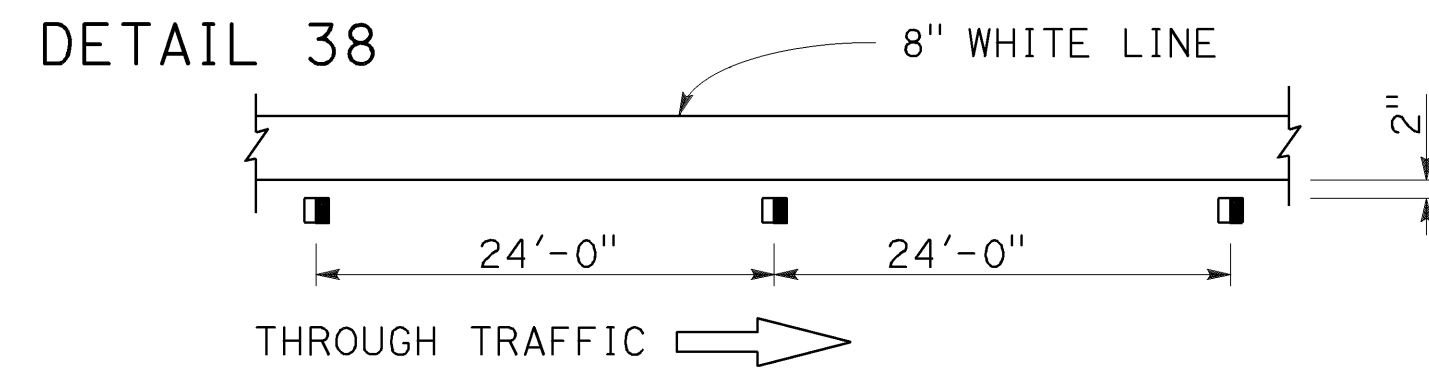
Atifa Ferouz
REGISTERED CIVIL ENGINEER

October 19, 2018
PLANS APPROVAL DATE

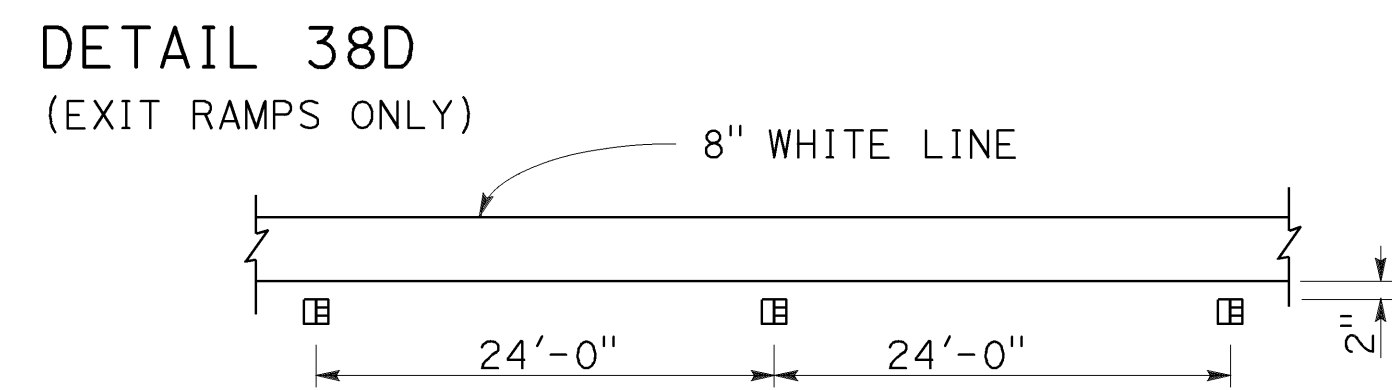
Atifa Ferouz
No. C80402
Exp. 3-31-19
CIVIL
STATE OF CALIFORNIA

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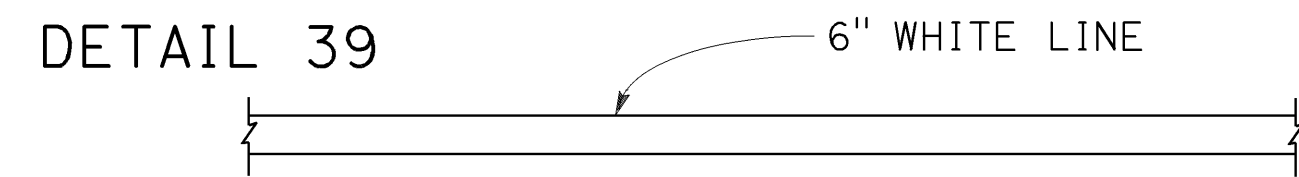
CHANNELIZING LINE



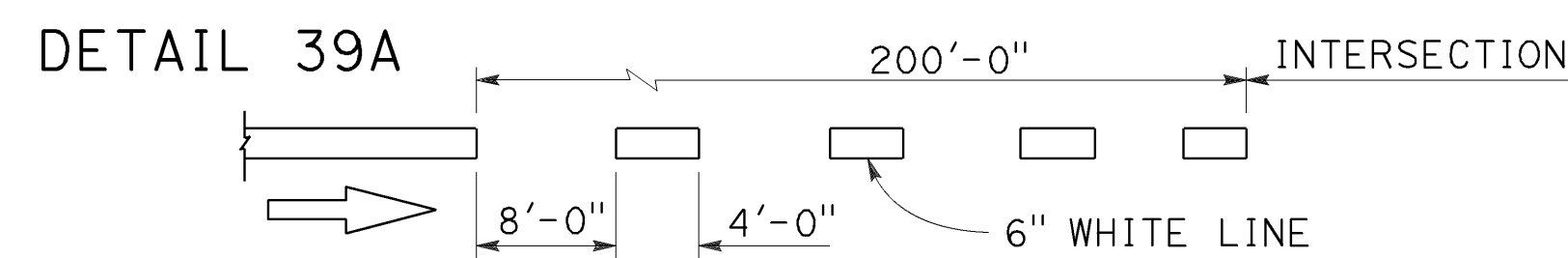
DETAIL 38C DETAIL 38C DELETED



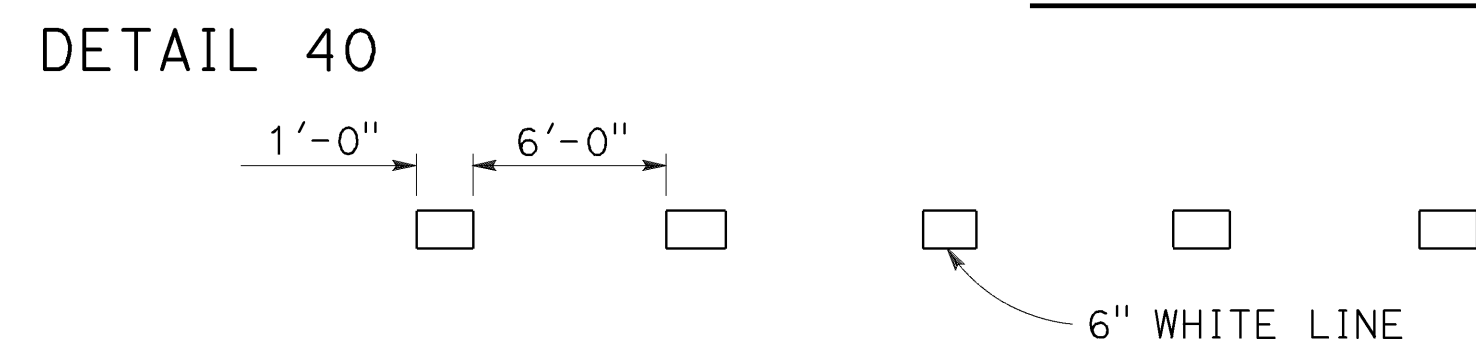
BIKE LANE LINE



INTERSECTION LINE BIKE LANE

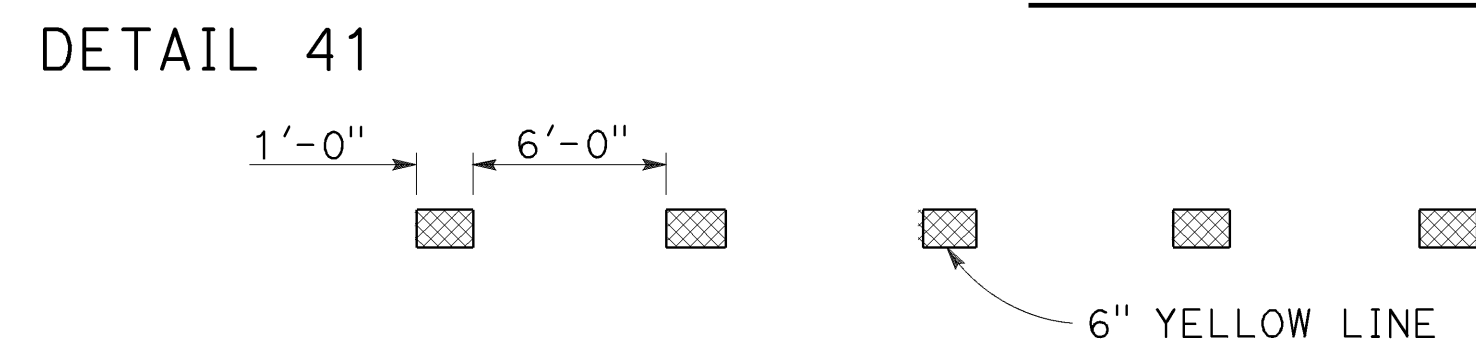


LANE LINE EXTENSIONS THROUGH INTERSECTIONS



DETAIL 40A DETAIL 40A DELETED

CENTER LINE EXTENSIONS THROUGH INTERSECTIONS

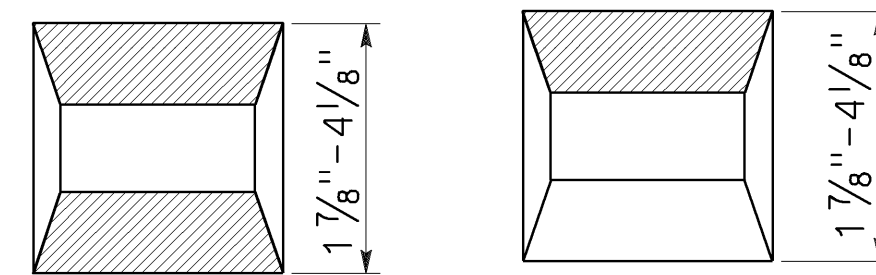
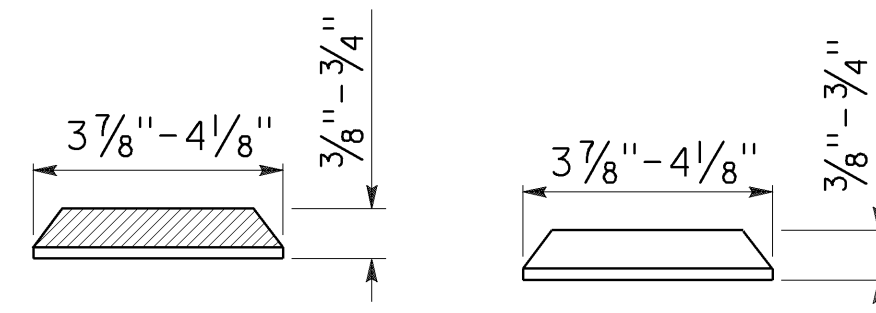


LEGEND

MARKERS

- TYPE C RED-CLEAR RETROREFLECTIVE
- TYPE G ONE-WAY CLEAR RETROREFLECTIVE
- 6" YELLOW LINE

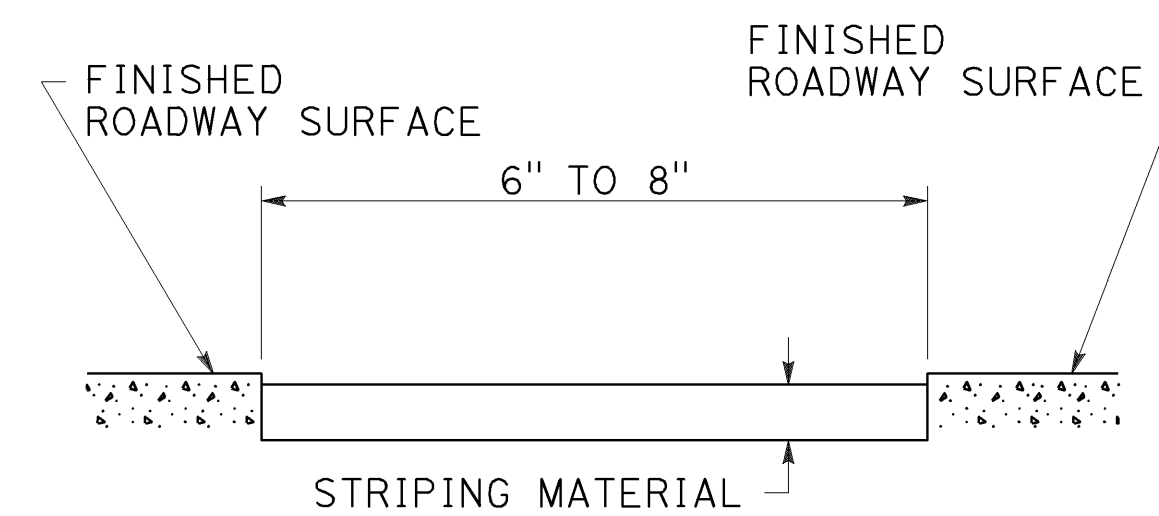
MARKER DETAILS



TYPE C

TYPE G

RETROREFLECTIVE FACE

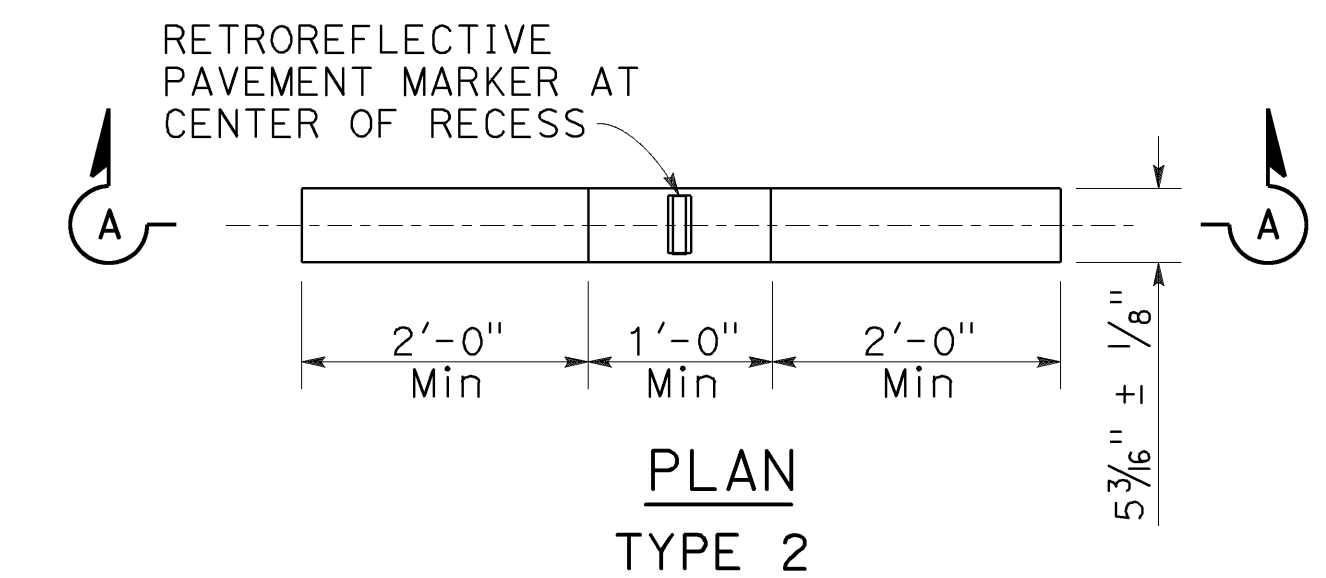
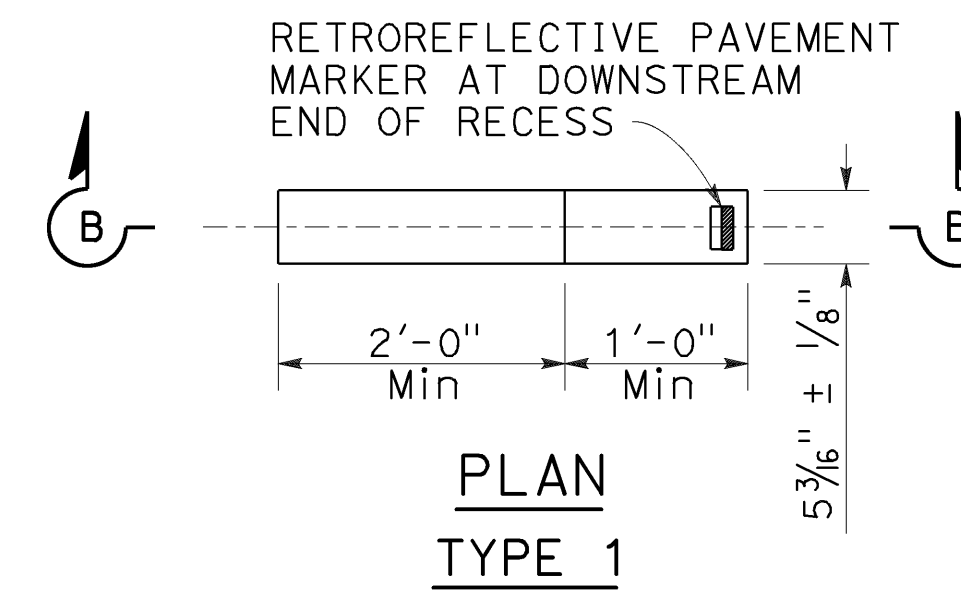
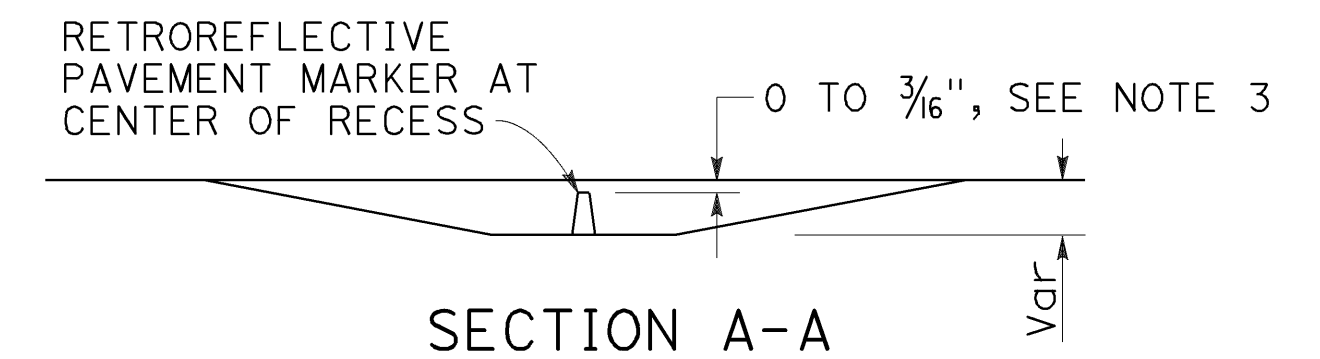
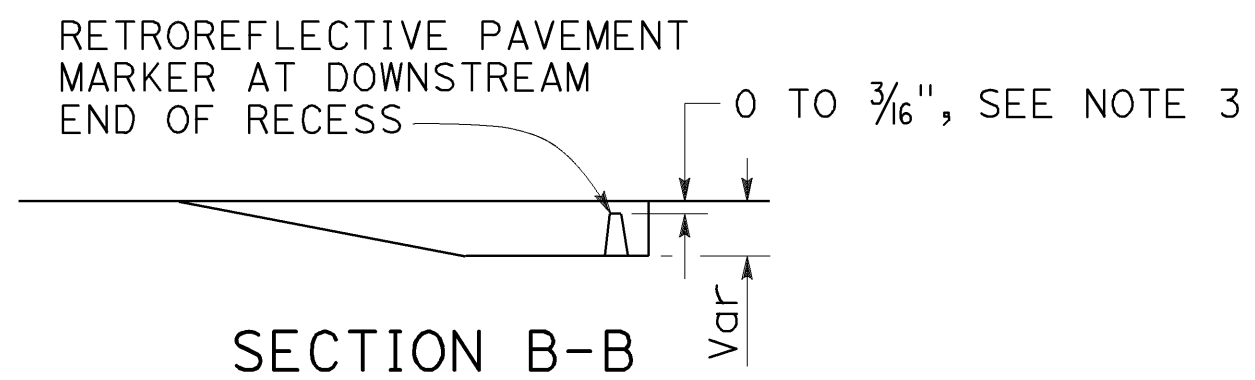


DETAIL FOR RECESSED TRAFFIC STRIPE

See Notes A and B.

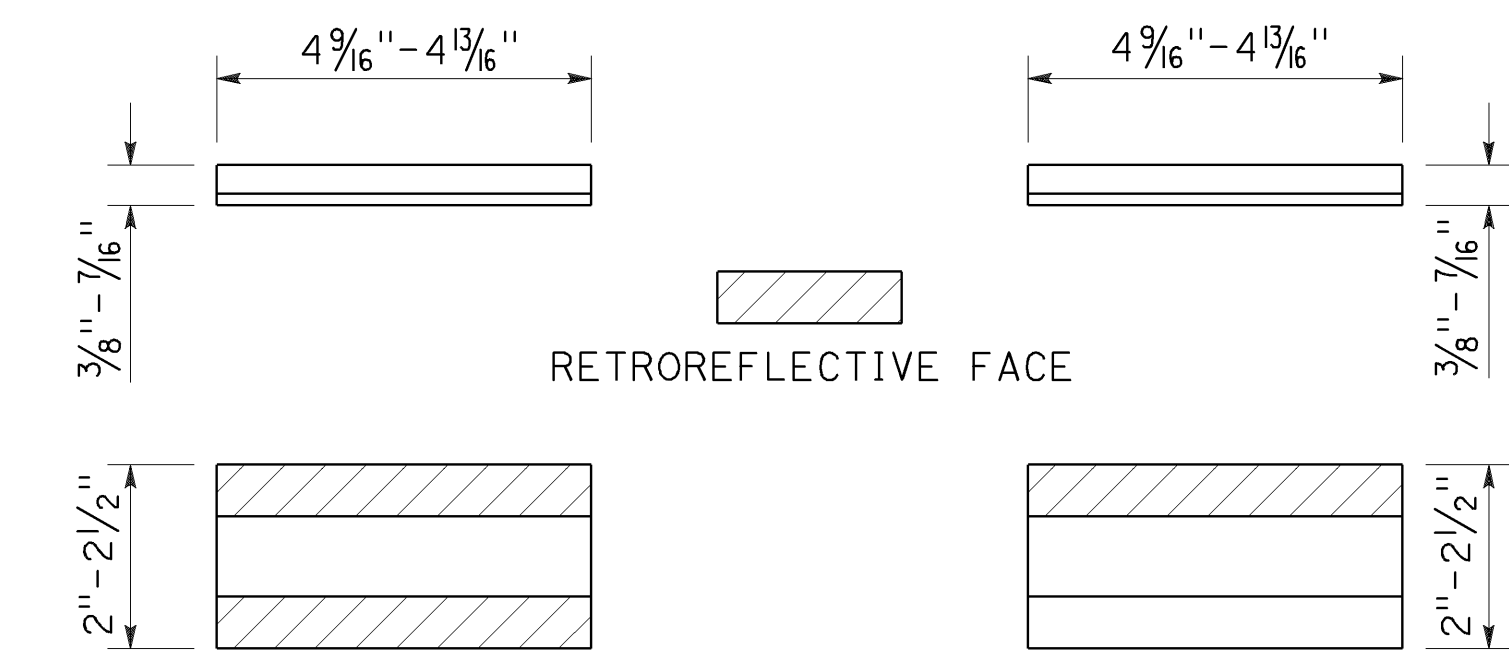
RECESSED NOTES:

- A. See typical traffic line details for pavement marking patterns.
- B. See standard specifications for recess depth and recess striping material thickness.



RECESS DETAIL FOR RETROREFLECTIVE PAVEMENT MARKER

See Note 4



TYPE C, TYPE RY,
AND TYPE D

TYPE G, TYPE R,
AND TYPE H

RETROREFLECTIVE PAVEMENT MARKER FOR RECESSED INSTALLATION

See Notes 1 and 2.

RECESSED MARKER NOTES:

1. See typical traffic line details for marker patterns to be used with recessed pavement markers.
2. The retroreflective pavement markers shown for recessed installations are not to be used for non-recessed installations.
3. The top of pavement markers installed in recesses shall be 0 to 3/16 inch below the pavement surface.
4. Use Type 1 recess for pavement markers with one-way retroreflective face. Use Type 2 recess for pavement markers with two-way retroreflective face.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS

NO SCALE

RSP A20D DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN A20D
DATED MAY 31, 2018 - PAGE 15 OF THE STANDARD PLANS BOOK DATED 2018.

REVISED STANDARD PLAN RSP A20D

2018 REVISED STANDARD PLAN RSP A20D

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	185	436

Atifa Ferouz
REGISTERED CIVIL ENGINEER

April 19, 2019
PLANS APPROVAL DATE

Atifa Ferouz
No. C80402
Exp. 3-31-21
CIVIL
STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 5-17-19

NOTE:

1. See Standard Plans A20A, A20B, A20C, A20D, and A20F for pavement markers and traffic lines typical details.



TYPICAL LANE LINE OR RIGHT EDGE LINE CONTRAST DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**PAVEMENT MARKERS
AND TRAFFIC LINES**

TYPICAL DETAIL FOR CONTRAST STRIPING

NO SCALE

RSP A20E DATED APRIL 19, 2019 SUPERSEDES STANDARD PLAN A20E
DATED MAY 31, 2018 - PAGE 16 OF THE STANDARD PLANS BOOK DATED 2018.

REVISED STANDARD PLAN RSP A20E

2018 REVISED STANDARD PLAN RSP A20E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	186	436

Atifa Ferouz
REGISTERED CIVIL ENGINEER

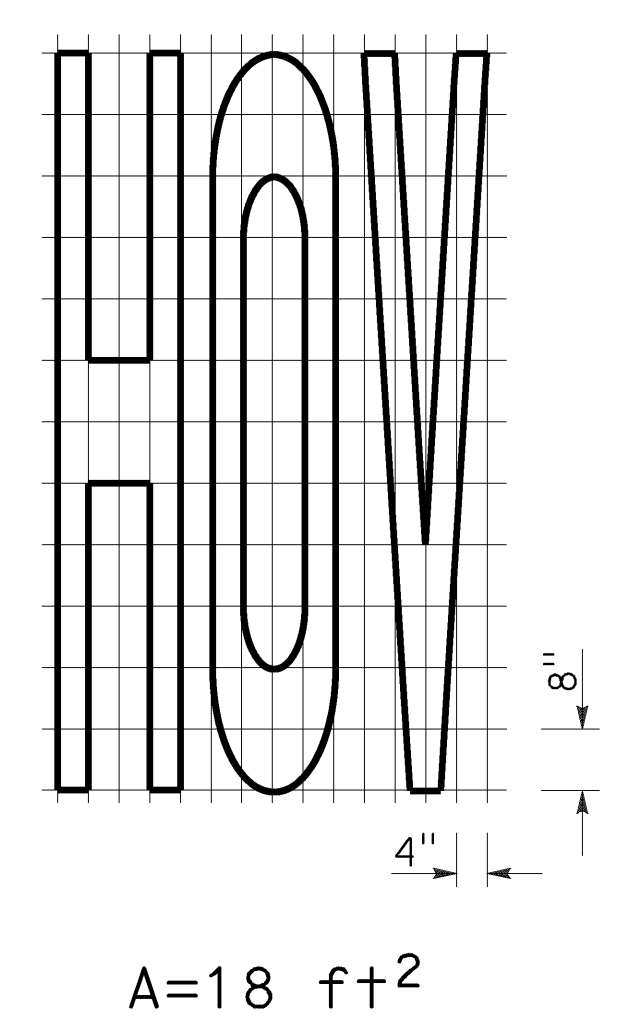
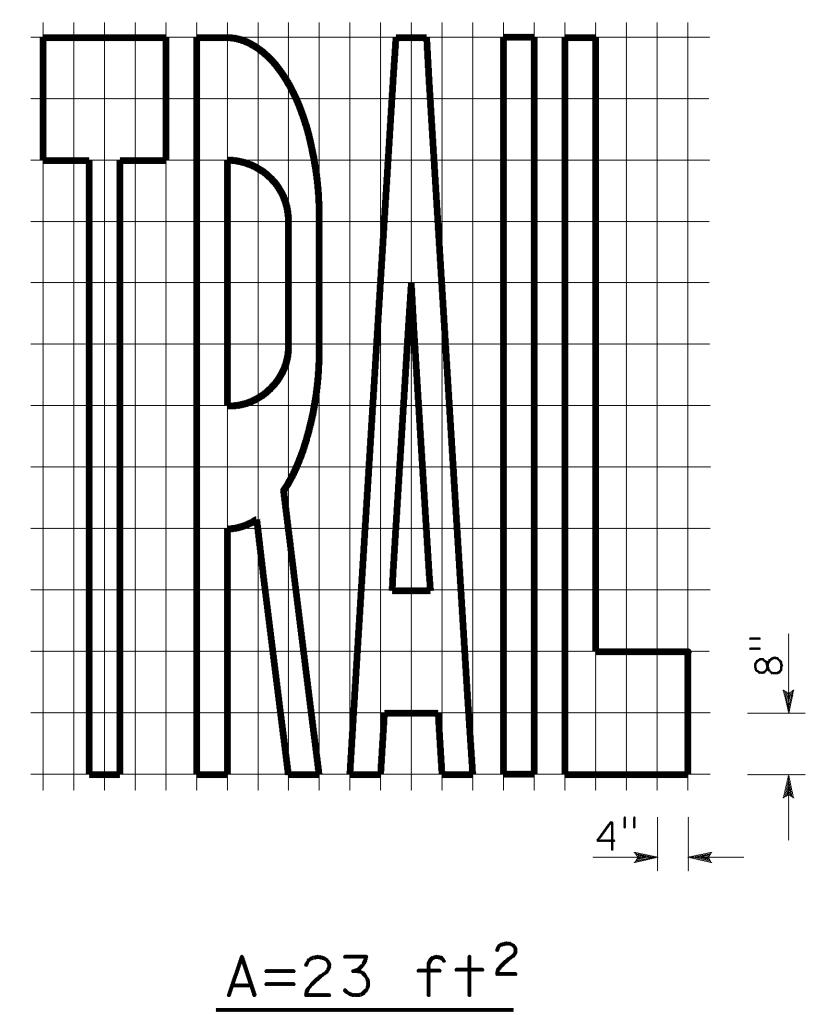
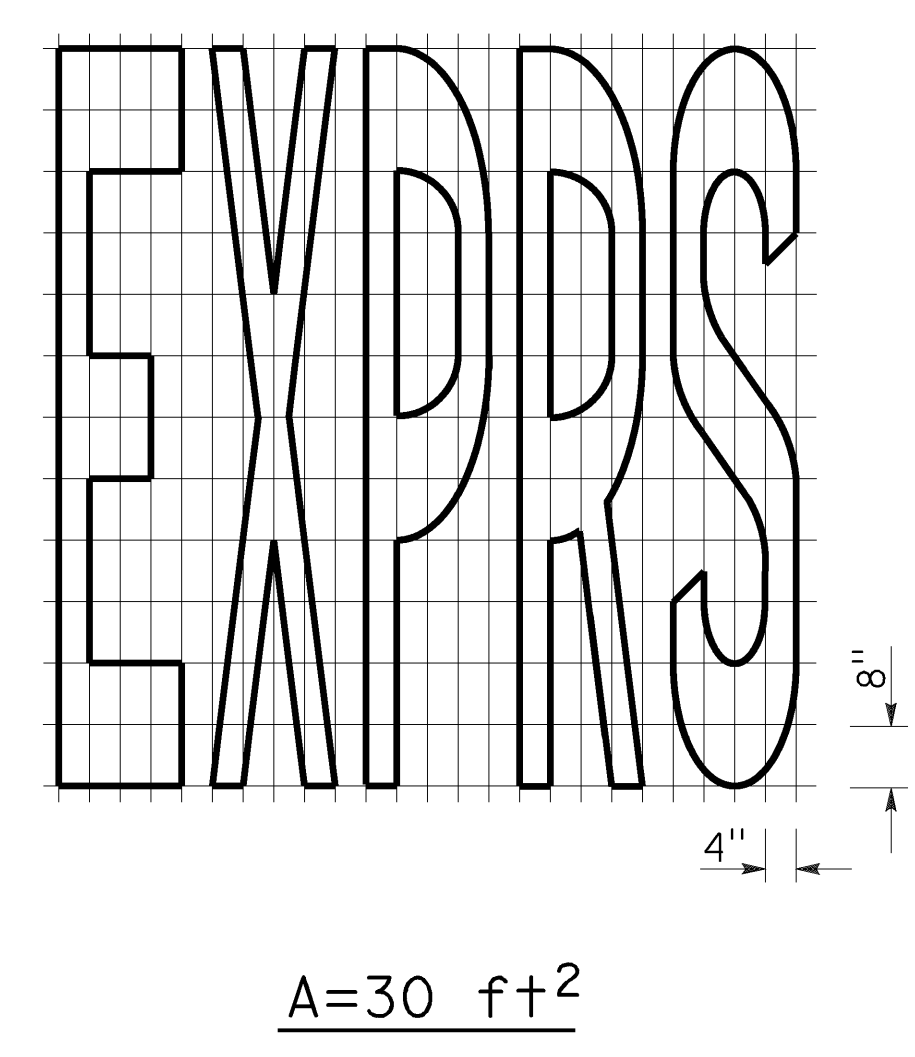
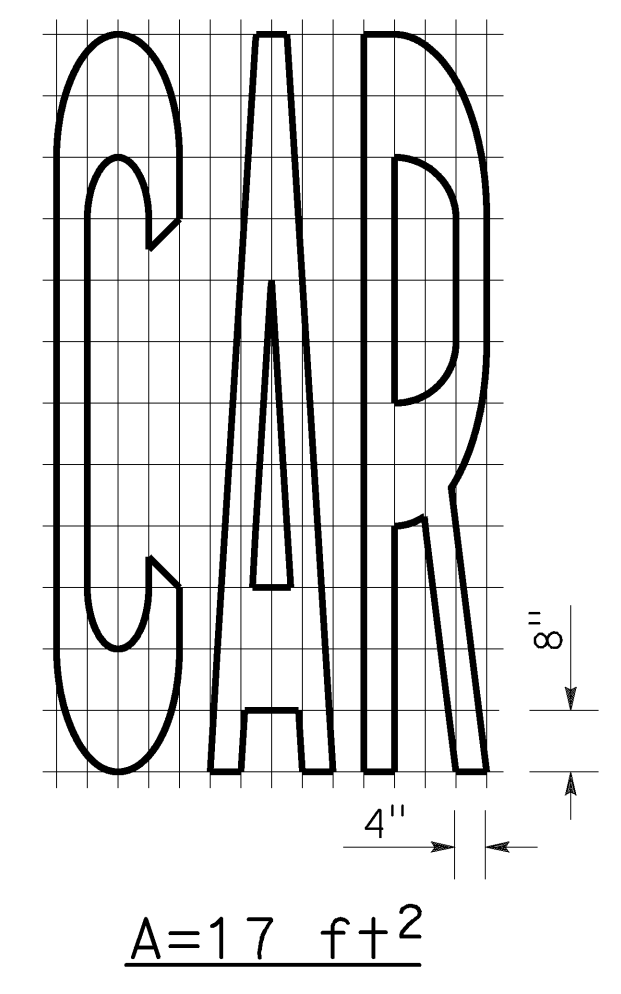
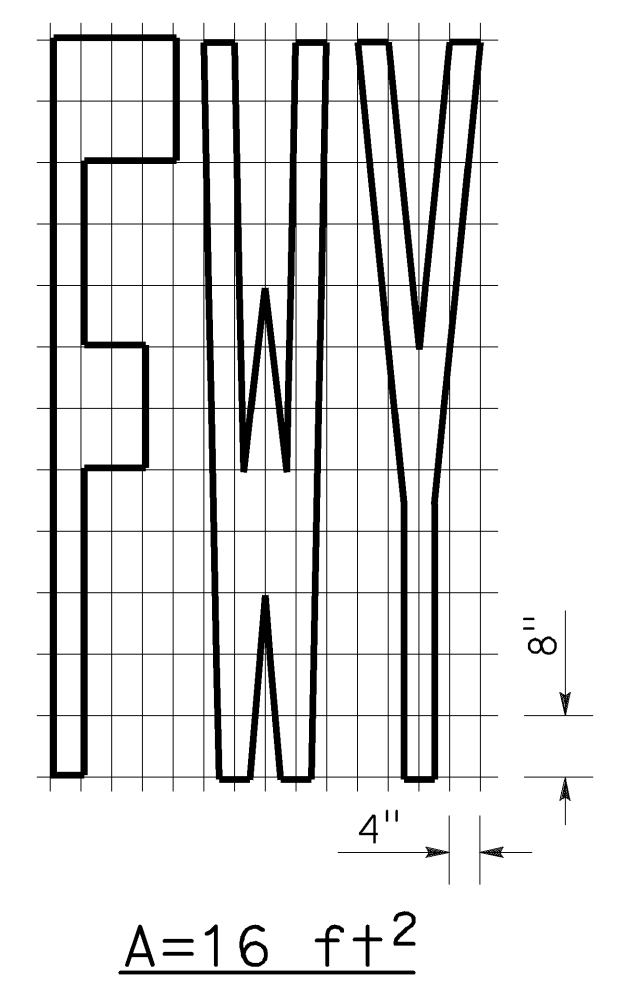
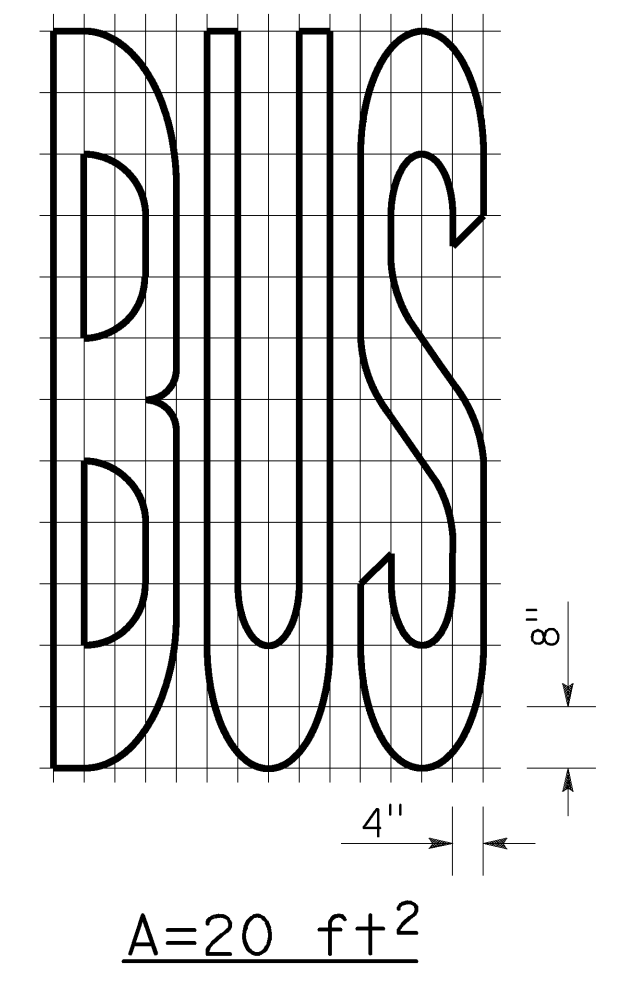
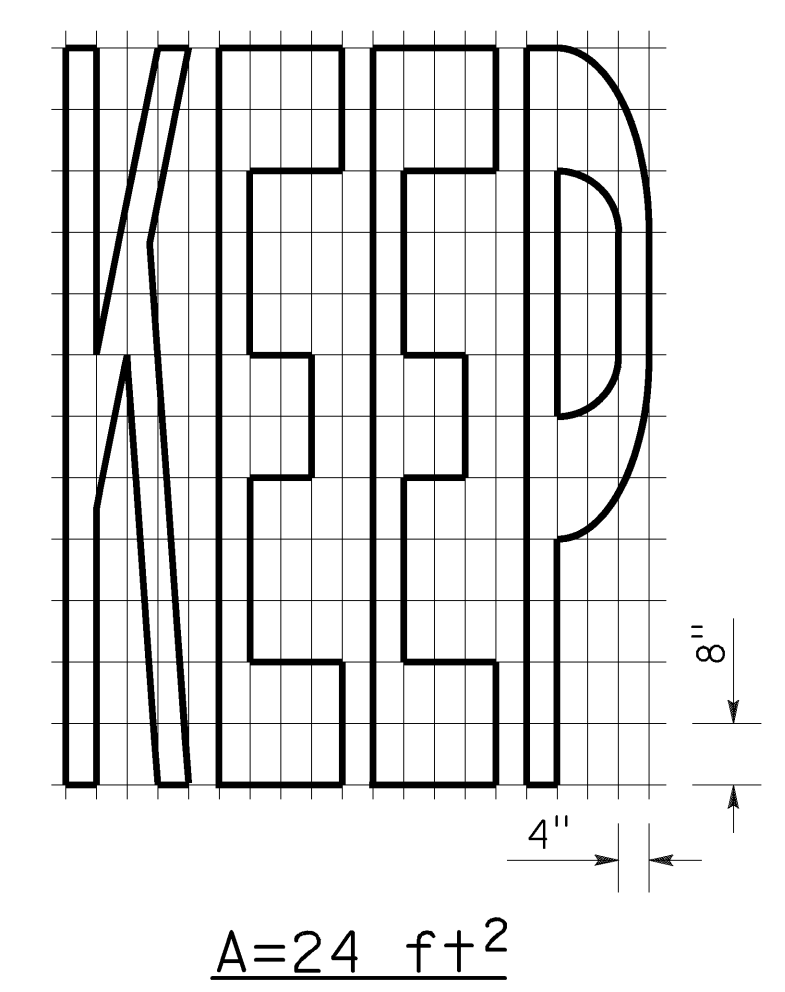
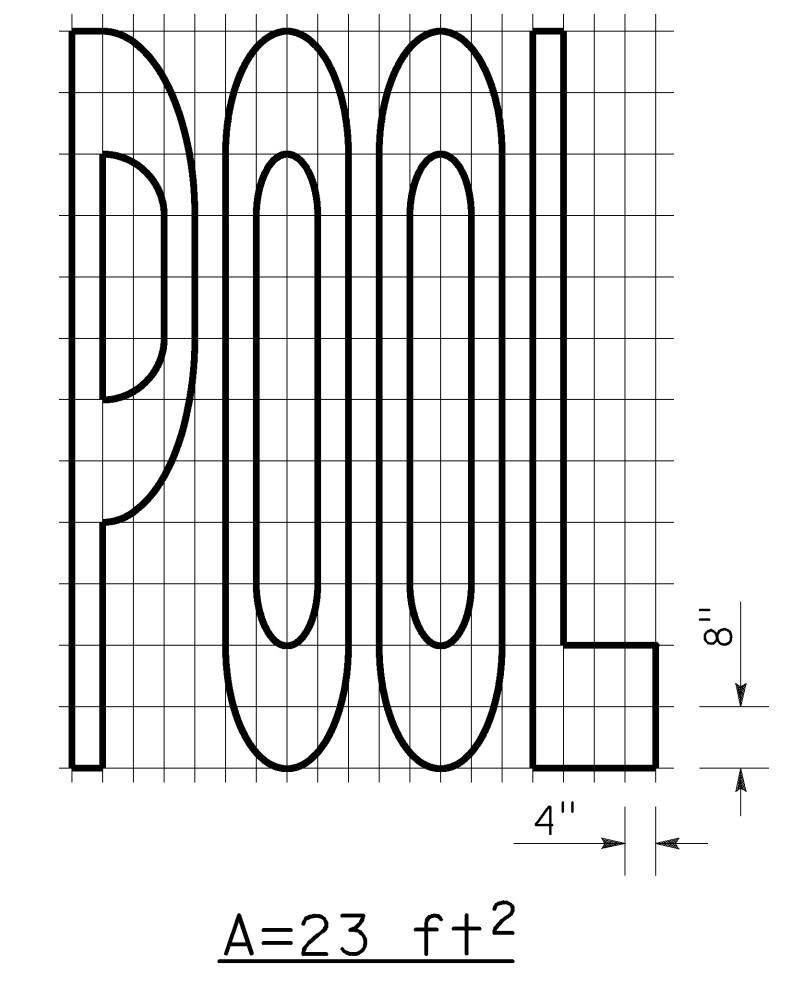
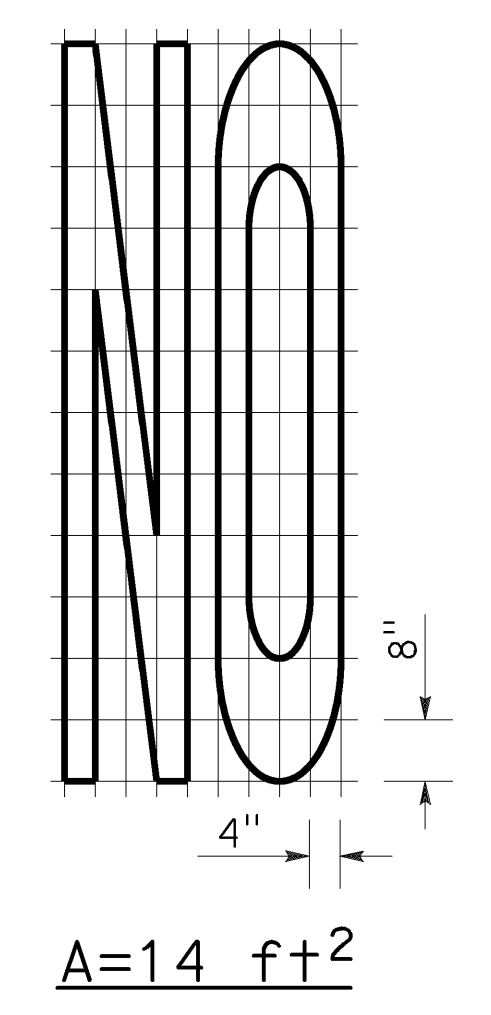
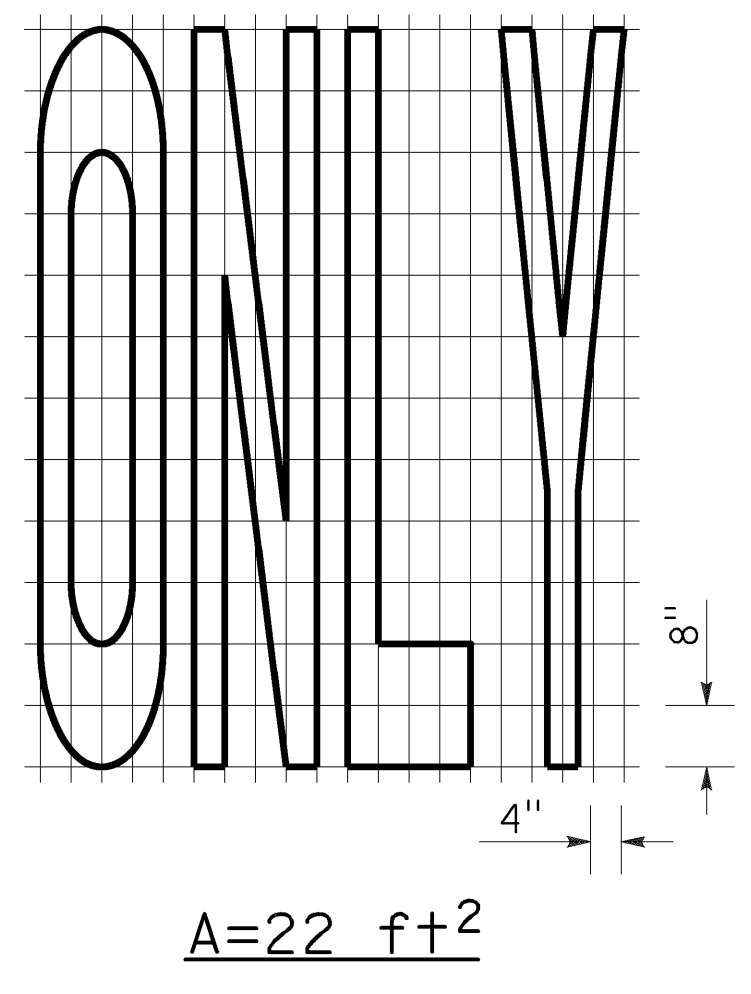
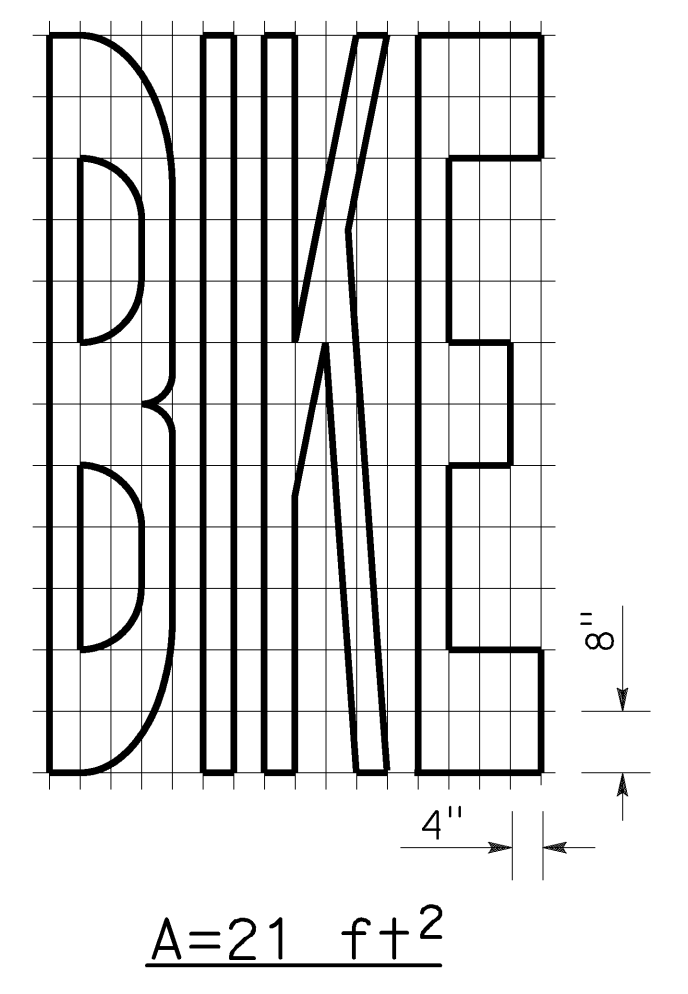
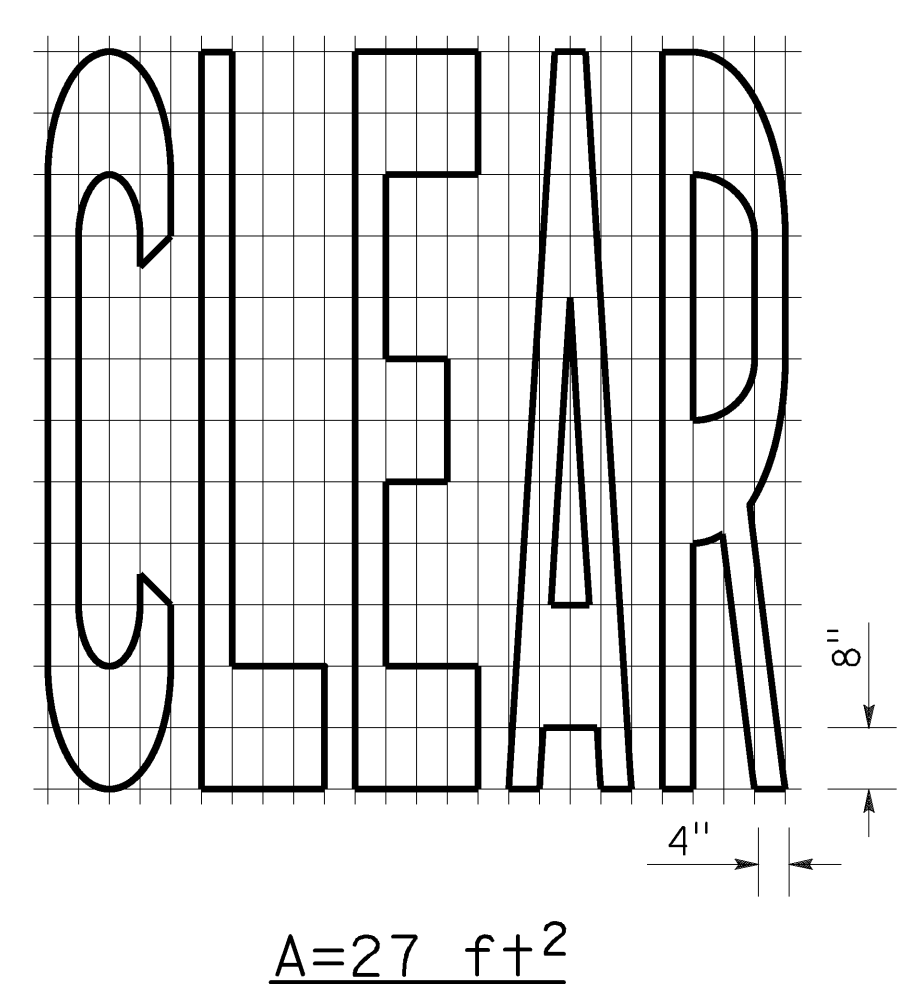
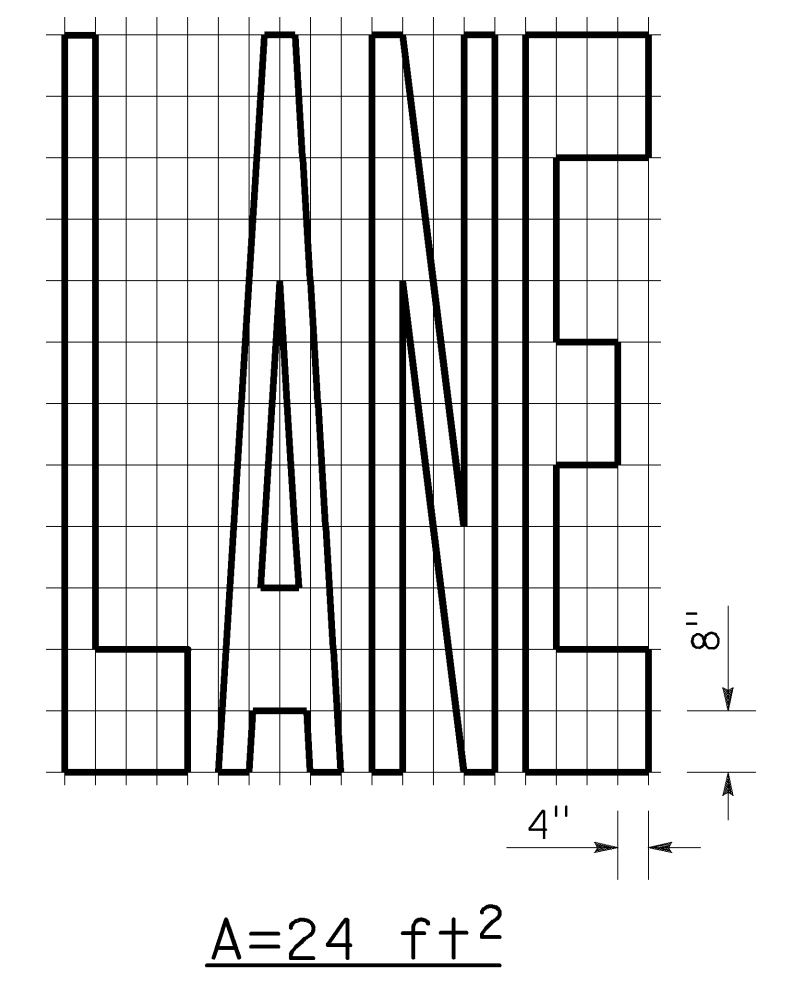
October 19, 2018
PLANS APPROVAL DATE

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.

TO ACCOMPANY PLANS DATED 5-17-19

WORD MARKINGS			
ITEM	ft ²	ITEM	ft ²
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16
HOV	18	EXPRS	30
TRAIL	23		

- NOTES:**
- If a message consists of more than one word, it must read "UP", i.e., the first word must be nearest the driver.
 - The space between words must be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
 - Minor variations in dimensions may be accepted by the Engineer.
 - Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.
 - The words "NO PARKING" pavement marking is to be used for parking facilities. For typical locations of markings, see Standard Plans A90A and A90B.
 - The words "NO PARKING", shall be painted in white letters no less than 1'-0" high on a contrasting background and located so that it is visible to traffic enforcement officials.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**PAVEMENT MARKINGS
WORDS**

NO SCALE

RSP A24E DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN A24E
DATED MAY 31, 2018 - PAGE 21 OF THE STANDARD PLANS BOOK DATED 2018.

2018 REVISED STANDARD PLAN RSP A24E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	187	436

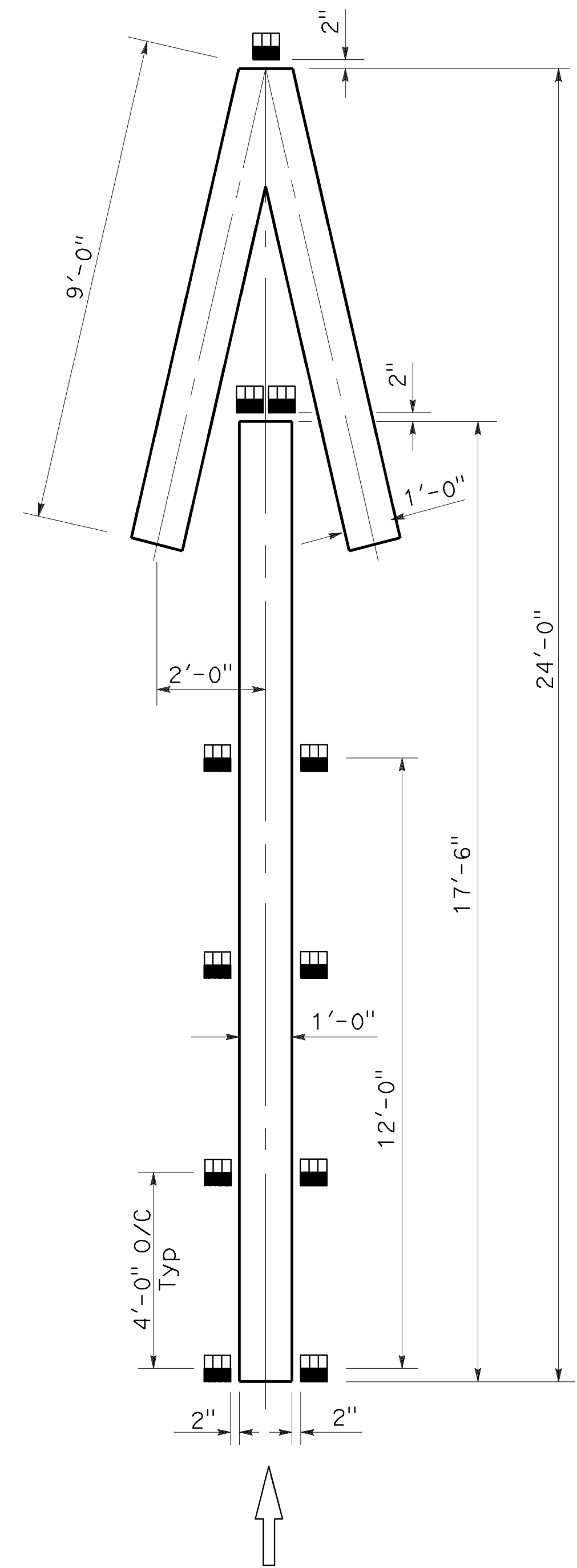
Atifa Ferouz
 REGISTERED CIVIL ENGINEER
 No. C80402
 Exp. 3-31-19
 CIVIL
 STATE OF CALIFORNIA

October 19, 2018
 PLANS APPROVAL DATE

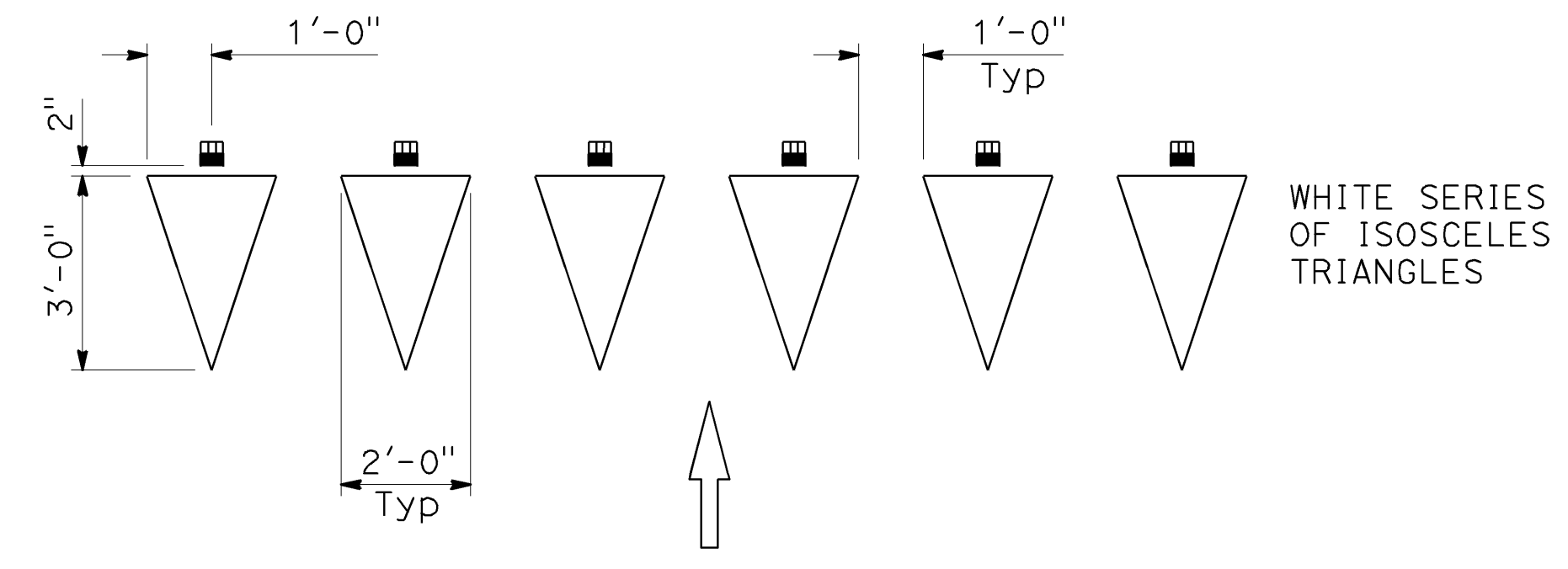
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TO ACCOMPANY PLANS DATED 5-17-19

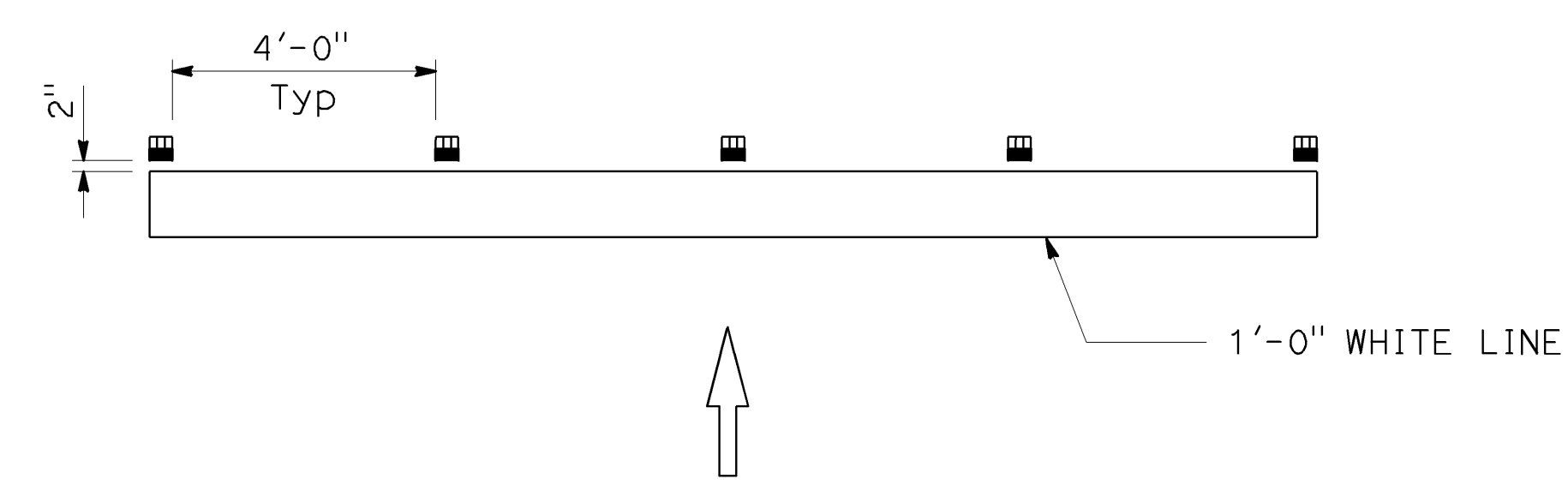
2018 REVISED STANDARD PLAN RSP A24G



TYPE V ARROW AT EXIT RAMP



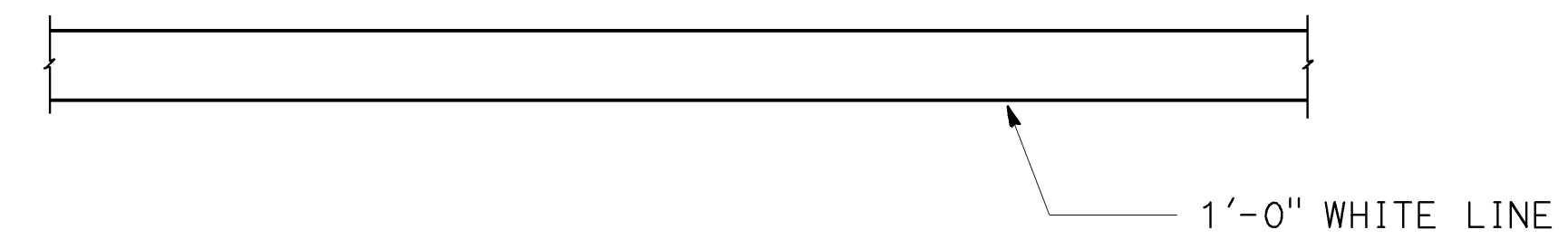
YIELD LINE AT EXIT RAMP



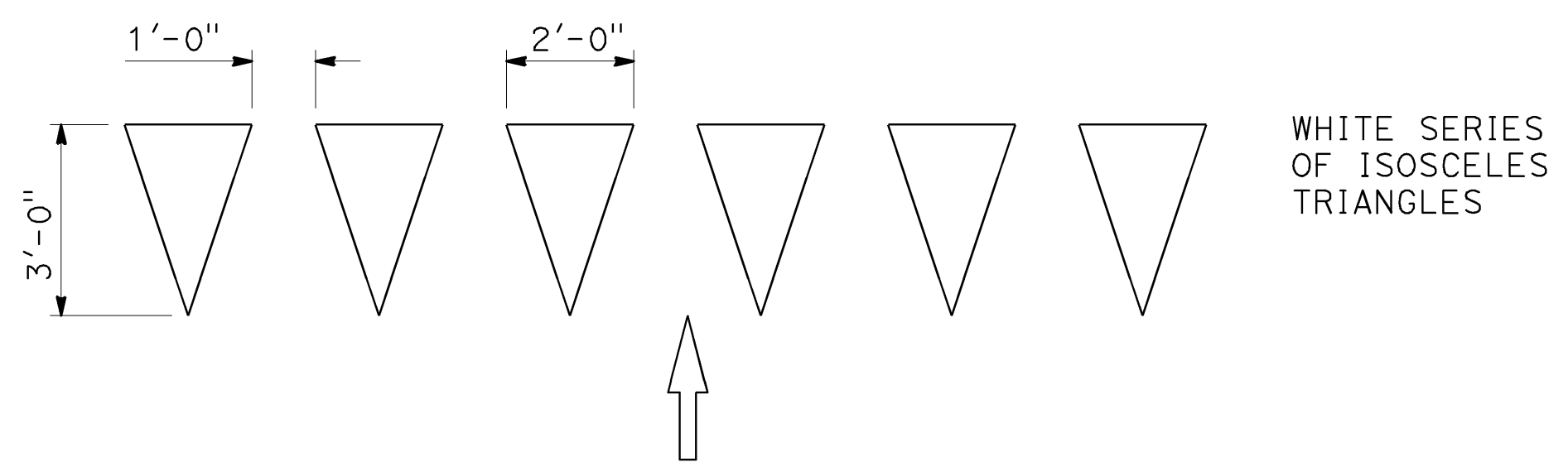
LIMIT LINE (STOP LINE) AT EXIT RAMP

NOTE:

1. If there is crosswalk at the end of the exit ramp, place Type R markers in front of the first line for wrong way vehicle that travels up the ramp with the red reflective side facing the intersection.



LIMIT LINE (STOP LINE)



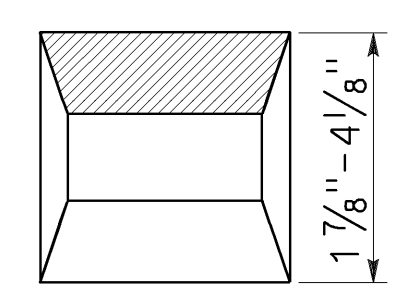
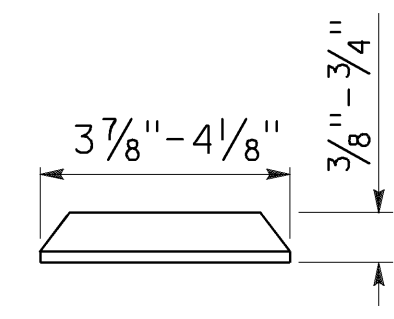
YIELD LINE

LEGEND

MARKERS

■ TYPE R ONE-WAY RED RETROREFLECTIVE

MARKER DETAILS



TYPE R

■ RETROREFLECTIVE FACE ON BACKSIDE

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**PAVEMENT MARKINGS
YIELD LINES, LIMIT LINES,
AND WRONG WAY DETAILS**

NO SCALE

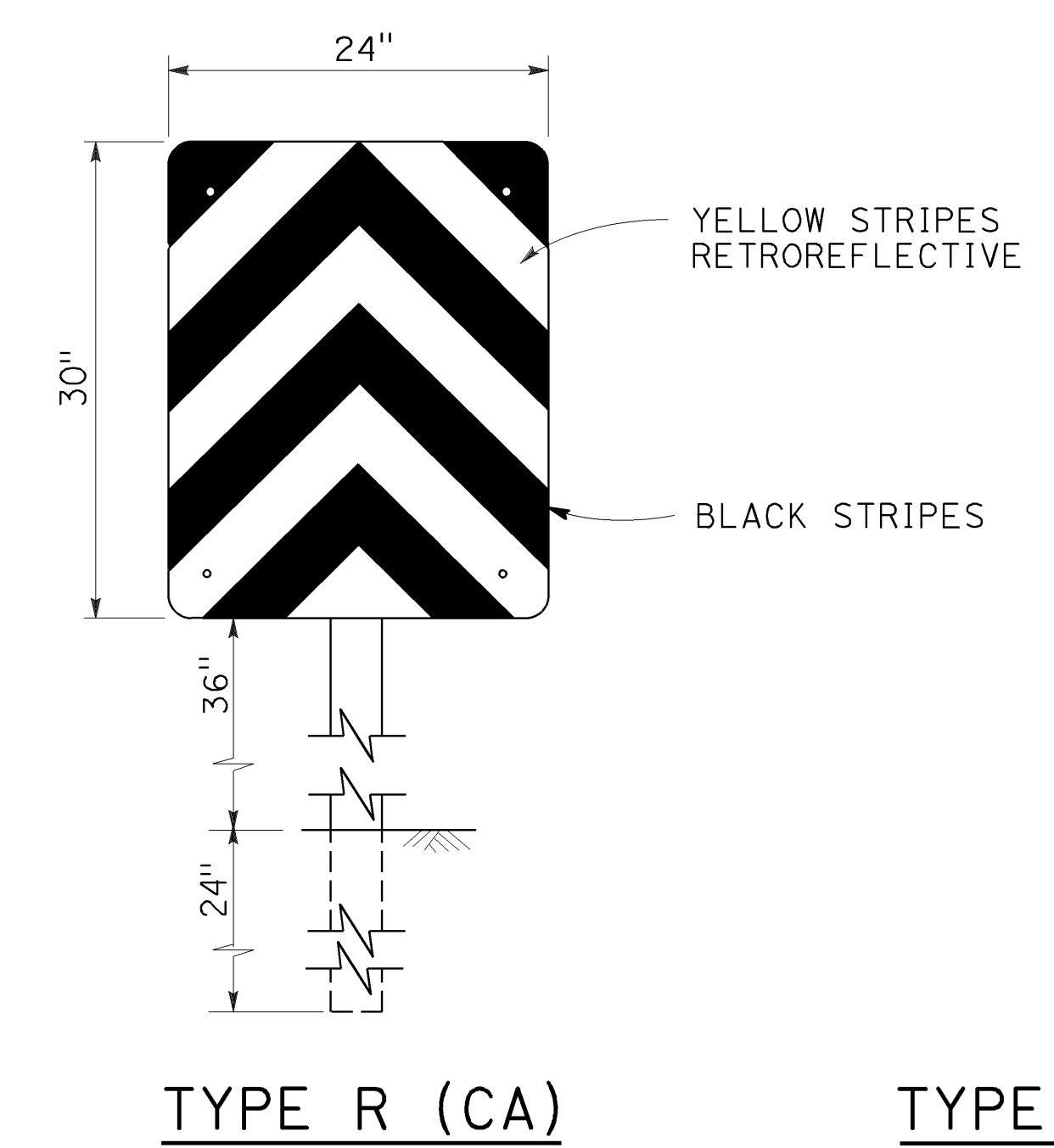
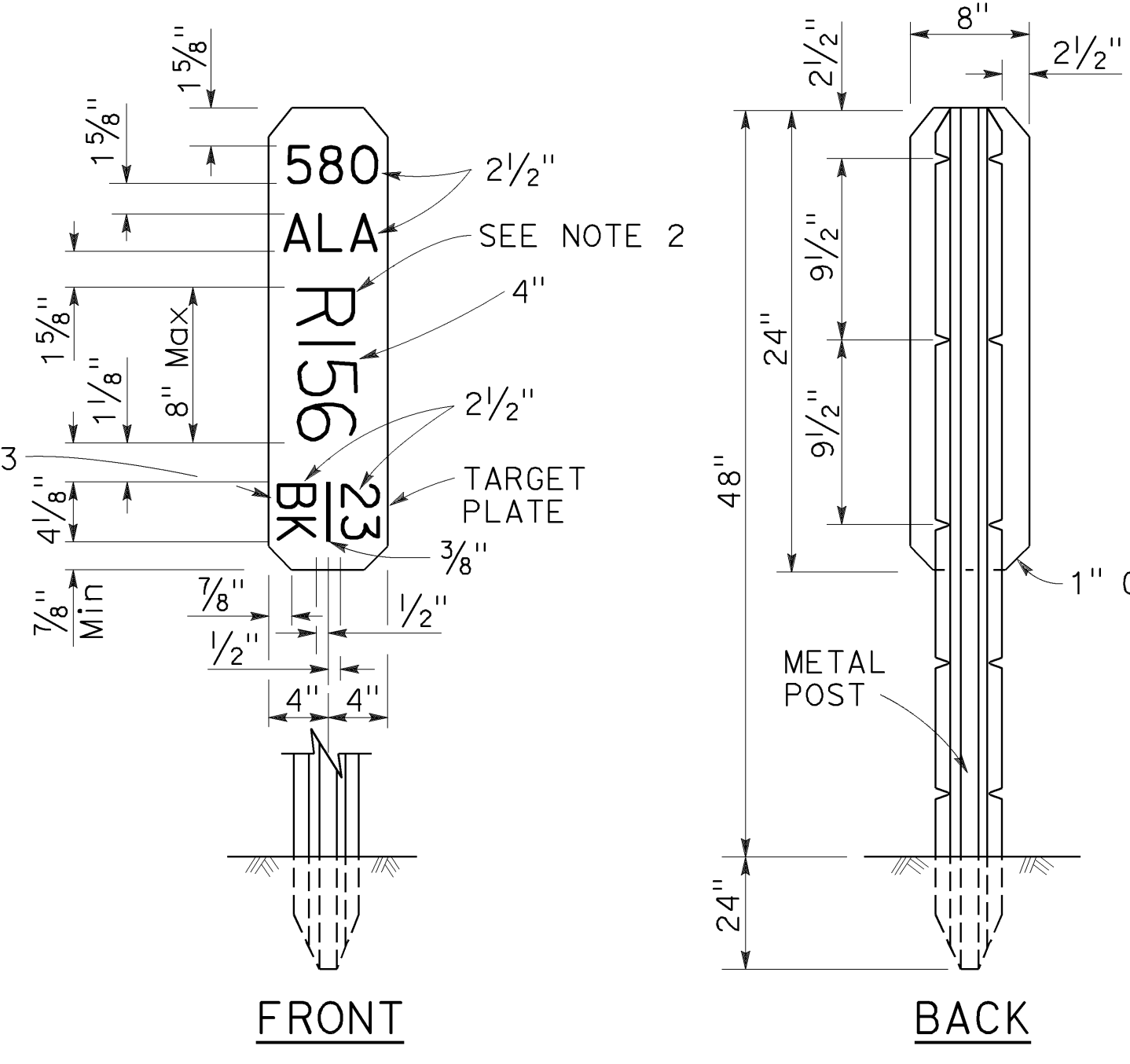
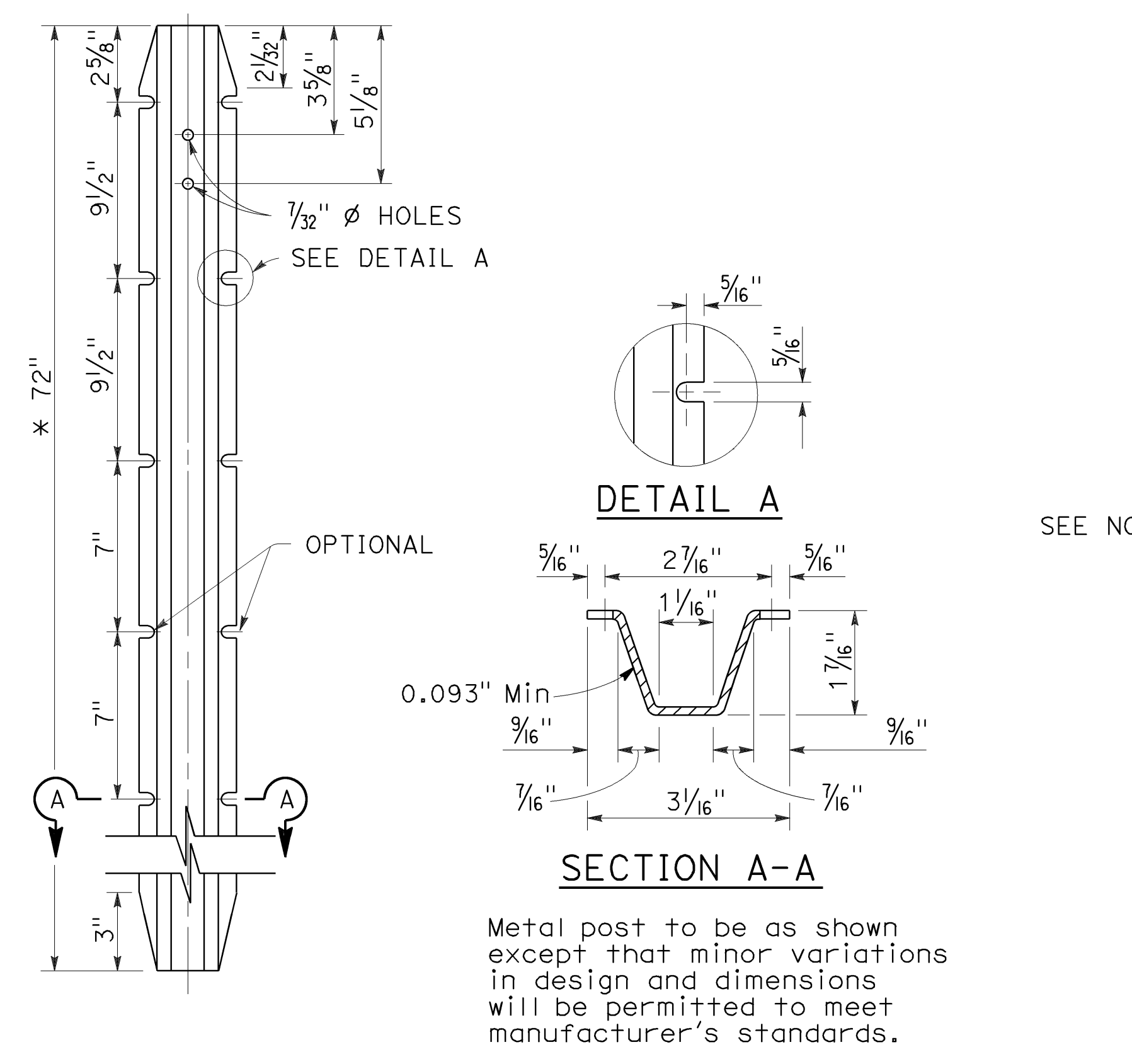
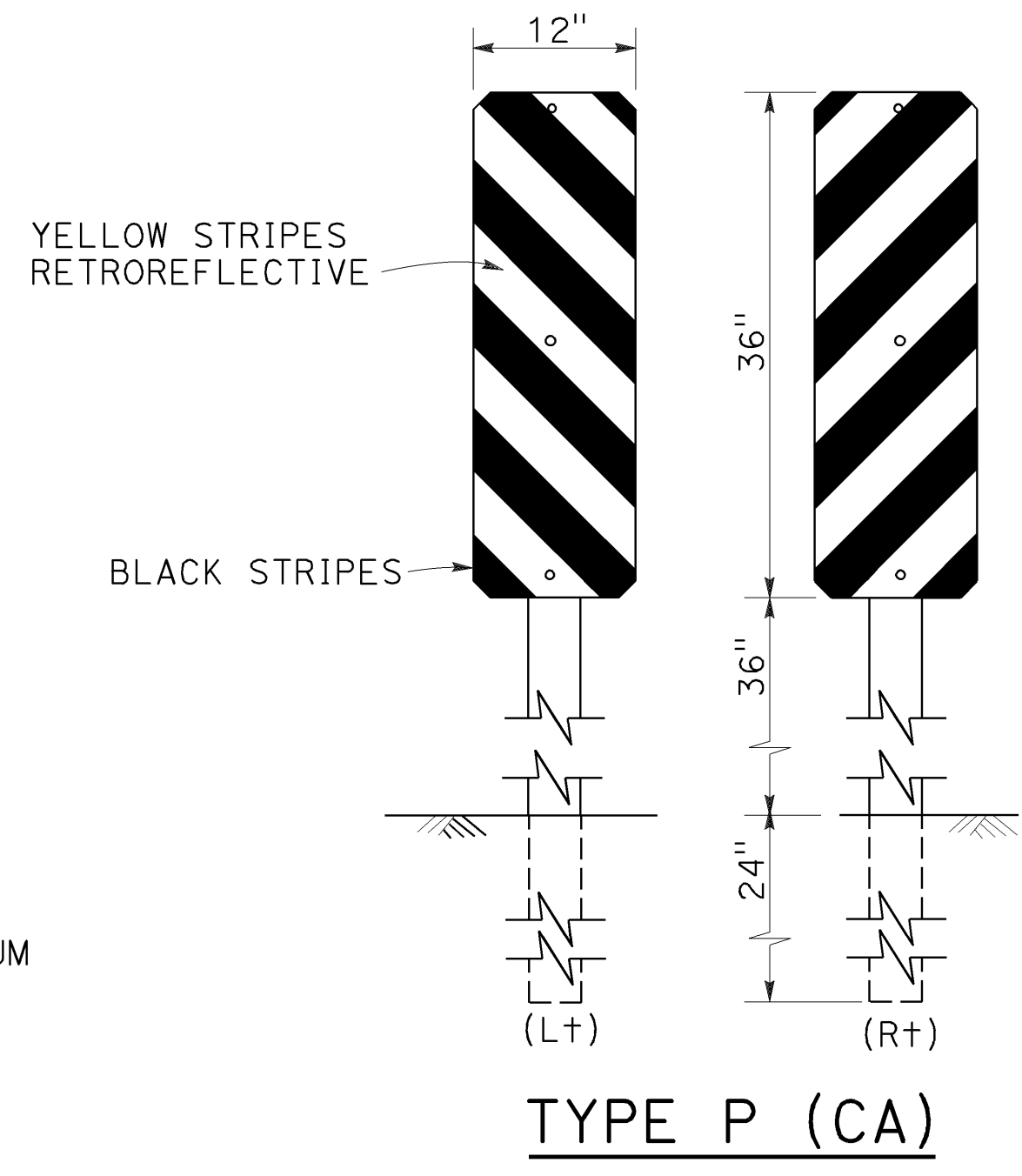
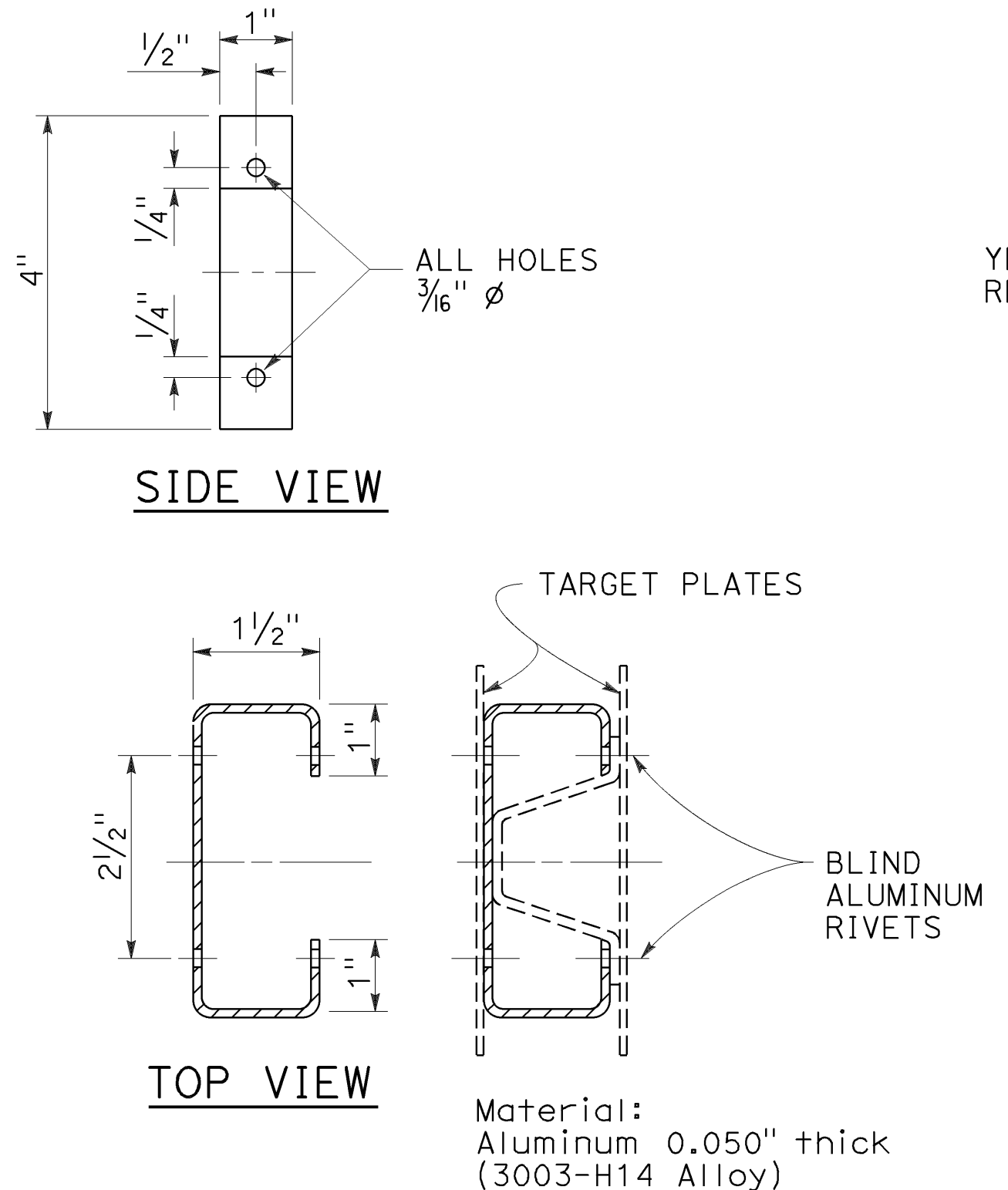
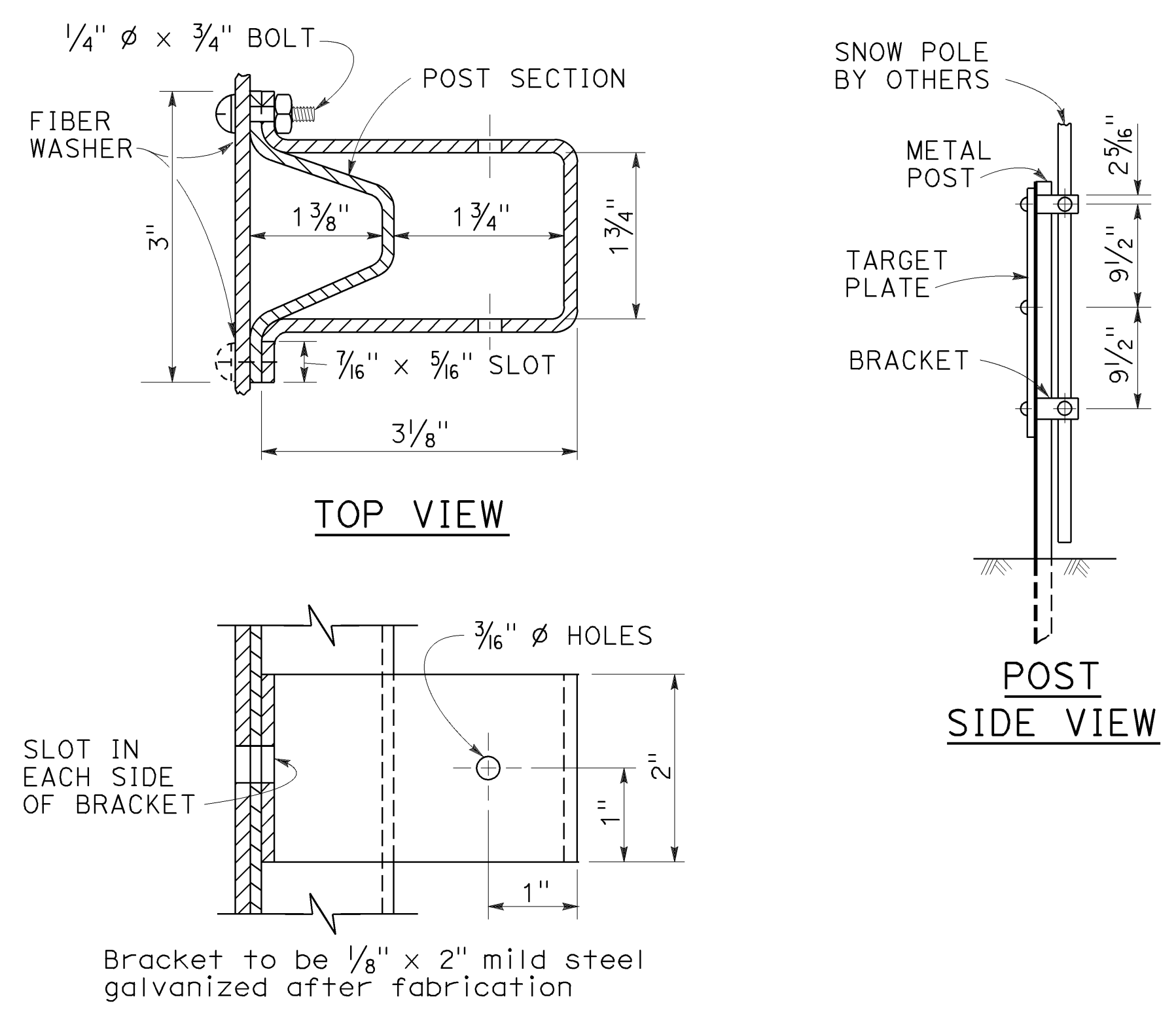
RSP A24G DATED OCTOBER 19, 2018 SUPPLEMENT TO THE STANDARD PLANS BOOK DATED 2018.

REVISED STANDARD PLAN RSP A24G

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	188	436

REGISTERED CIVIL ENGINEER
October 19, 2018
PLANS APPROVAL DATE
Arshad Iqbal
No. C62831
Exp. 6-30-20
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 5-17-19



NOTES:

A. See Std Plan A73A for additional object markers.

B. Type P(CA) and R(CA) markers shall have orange and white retroreflective stripes in work zones.

C. Diagonal stripes on Type P(CA) markers shall be sloped down in the direction of travel.

MILEPOST MARKER NOTES:

- The marker shall be white (non-reflective) target plate with black Series D numerals and letters.
- A post mile prefix, such as "R", shall apply only when directed by the Engineer.
- "BK"(Back), "AH" (Ahead), or a blank space shall apply as directed by the Engineer.
- All information shall be in U.S. Customary units (miles).

OBJECT MARKERS

N-1(CA). Yellow retroreflective.
N-2(CA). Red retroreflective.
N-3(CA). Orange retroreflective.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

MARKERS

NO SCALE

* 8'-0" for Type P object marker

RSP A73B DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN A73B DATED MAY 31, 2018 - PAGE 39 OF THE STANDARD PLANS BOOK DATED 2018.

2018 REVISED STANDARD PLAN RSP A73B

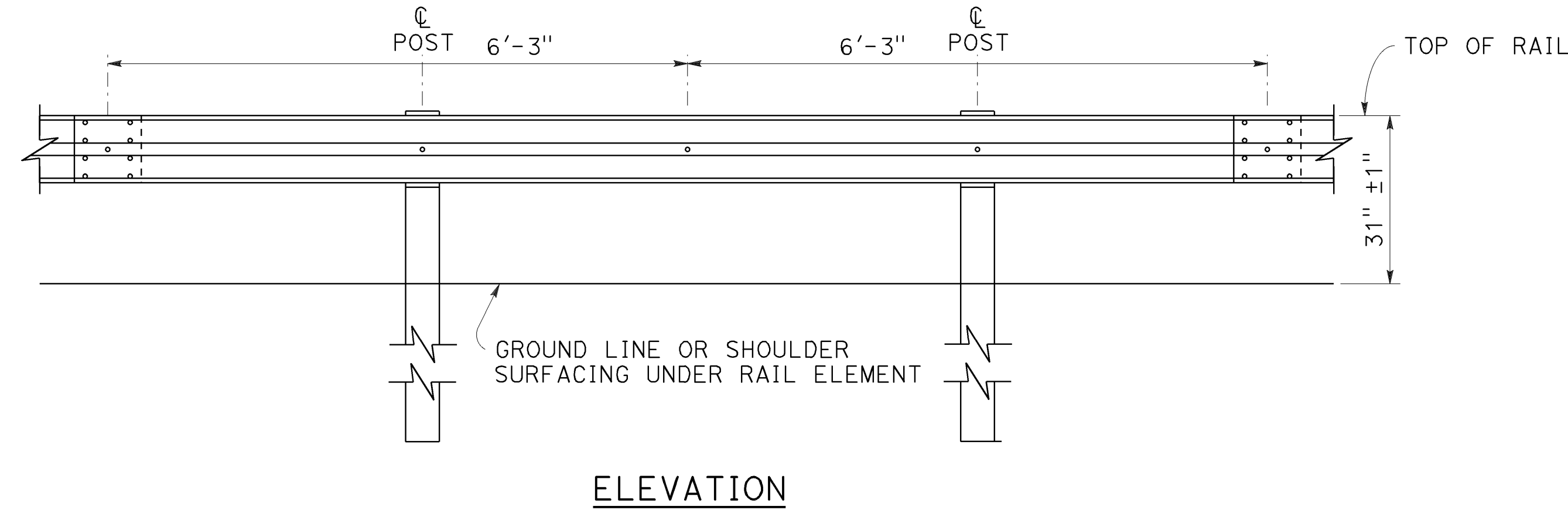
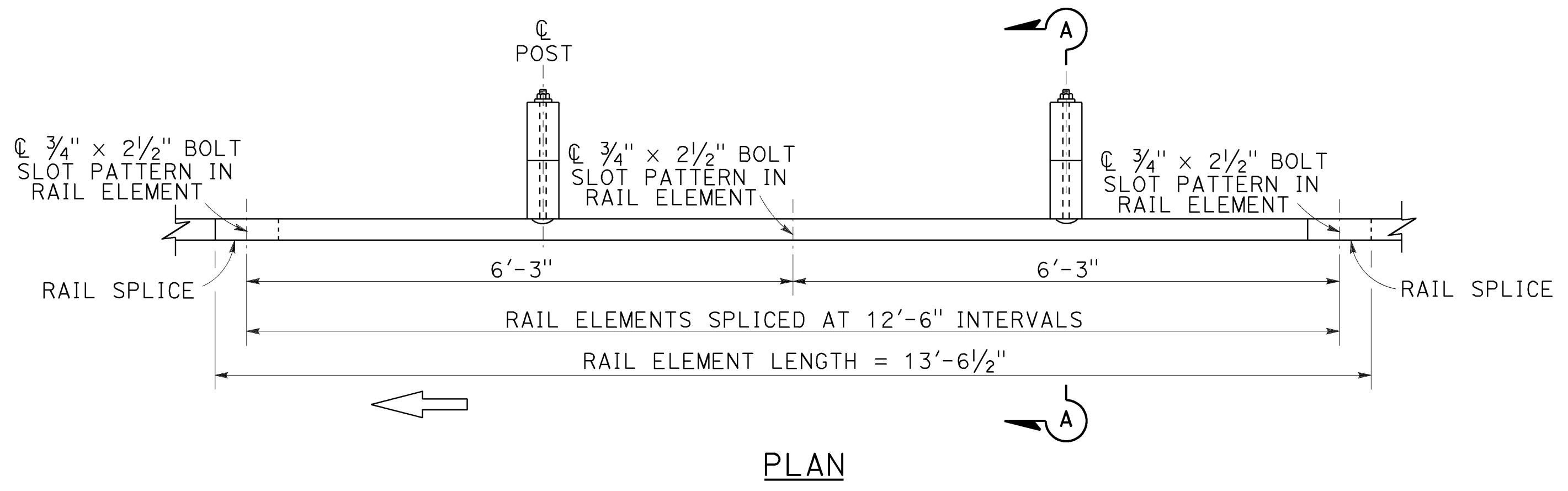
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	189	436

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

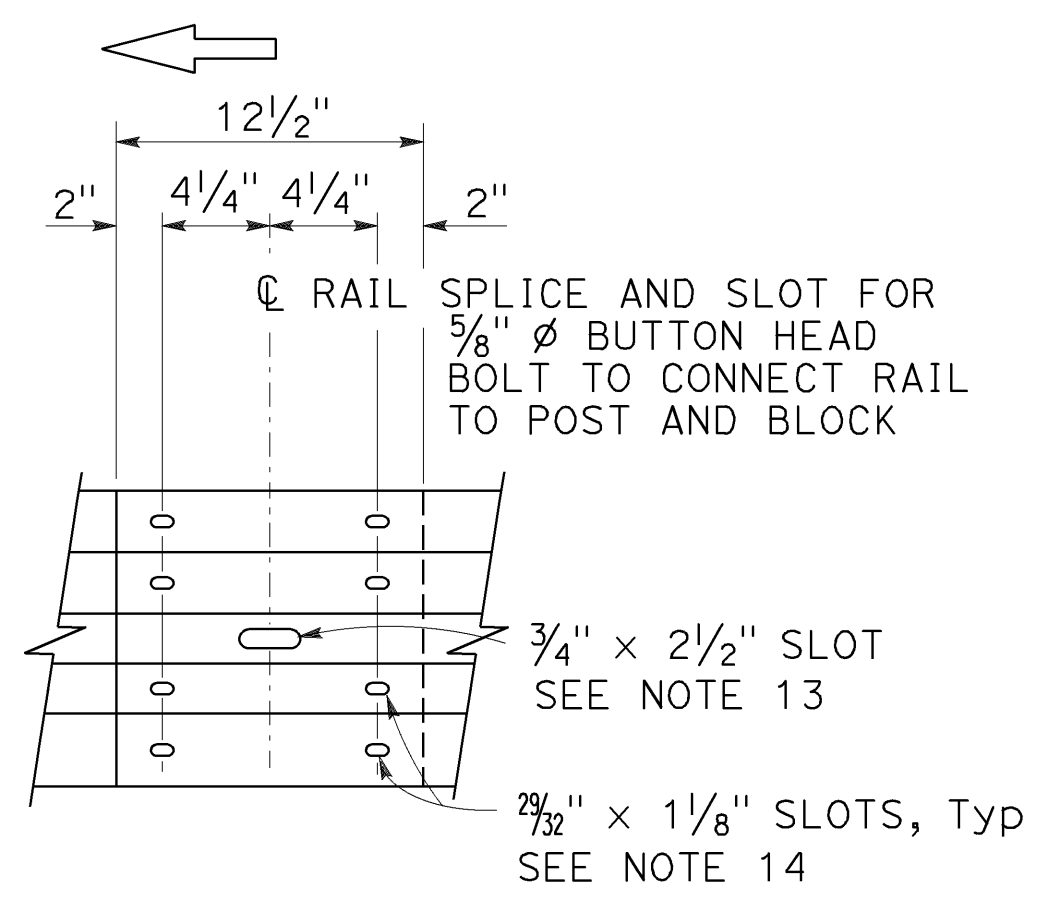
April 19, 2019
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-19
CIVIL
STATE OF CALIFORNIA

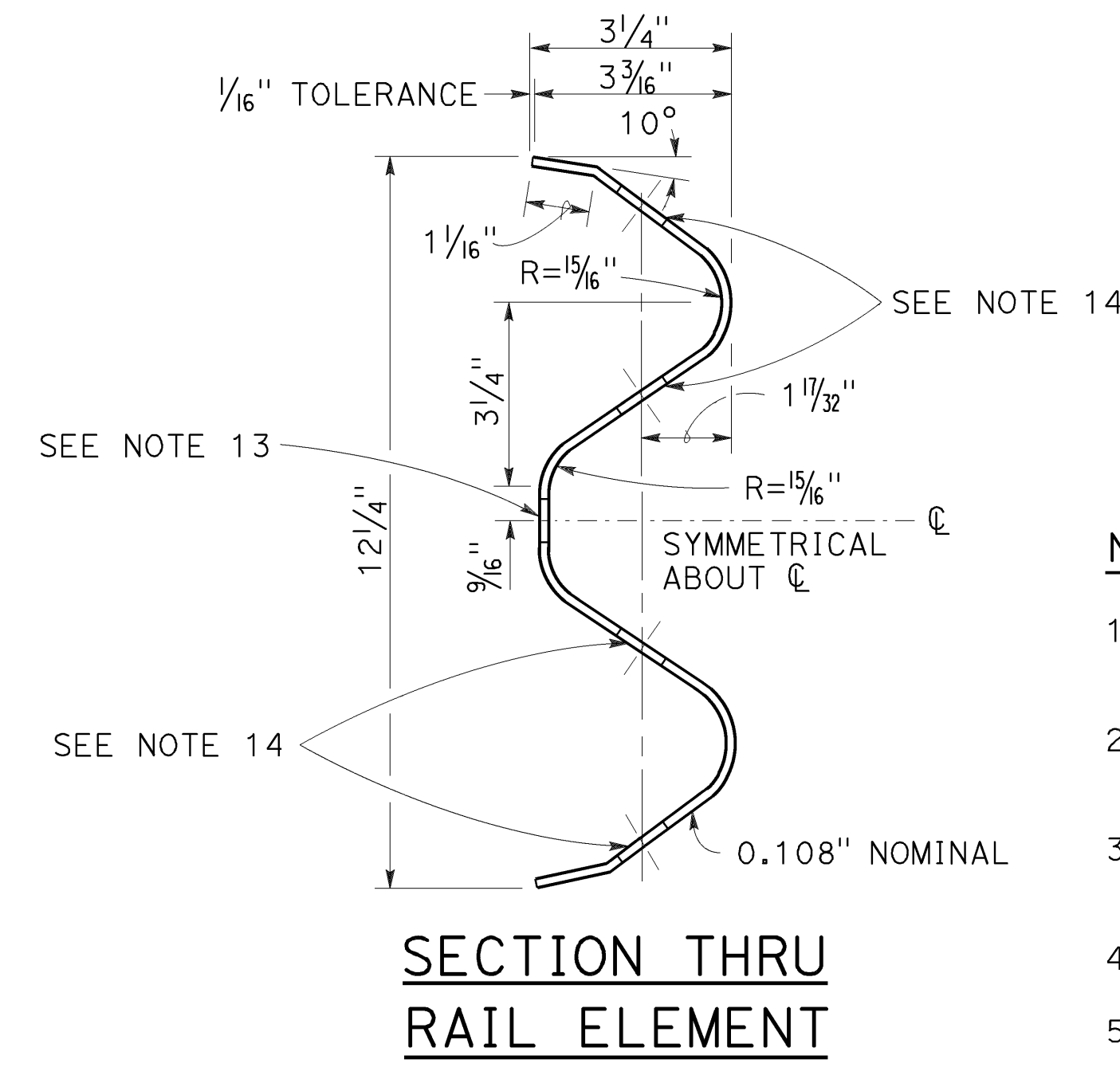


MIDWEST GUARDRAIL SYSTEM WITH WOOD POST AND BLOCKS

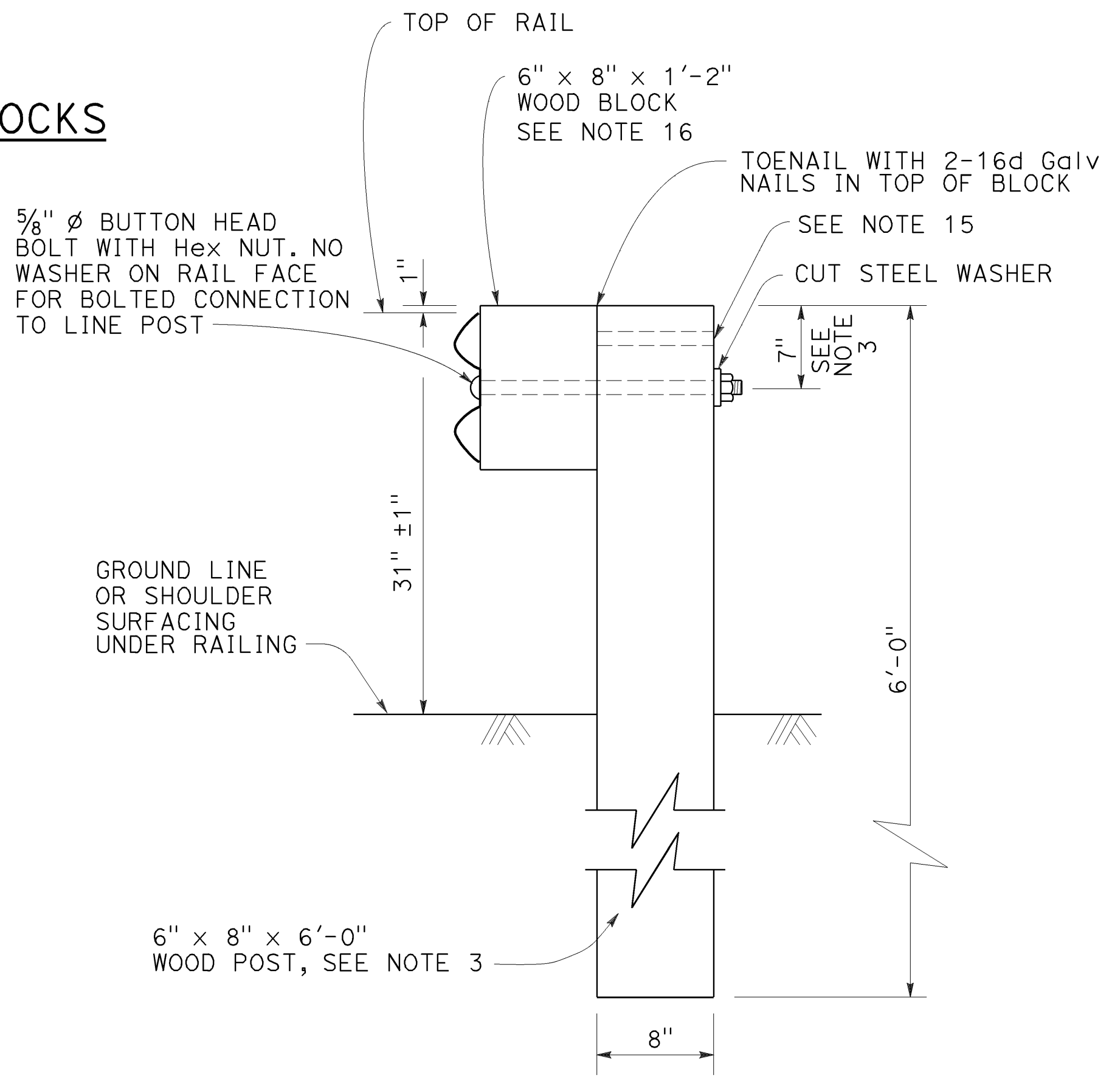


RAIL ELEMENT SPLICE DETAIL

- Connect the overlapped end of the rail elements with $\frac{5}{8}$ " ϕ x $1\frac{3}{8}$ " button head oval shoulder splice bolts inserted into the $\frac{7}{32}$ " x $1\frac{1}{8}$ " slots and bolted together with $\frac{5}{8}$ " ϕ recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



SECTION THRU RAIL ELEMENT



**SECTION A-A
TYPICAL WOOD LINE
POST INSTALLATION**

See Note 4

NOTES:

- For details of steel post installations, see Revised Standard Plan RSP A77L2.
- For details of standard hardware used to construct MGS, see Standard Plan A77M1.
- For details of wood posts and wood blocks used to construct MGS, see Standard Plan A77N1.
- For additional installation details, see Standard Plan A77N3.
- MGS post spacing to be 6'-3" center to center, except as otherwise noted.
- For MGS typical layouts, see the A77P, A77Q and A77R Series of Standard Plans.
- If railing is connected to terminal system end treatment, use 31" height terminal system end treatment.
- For MGS end anchor details, see Standard Plans A77S1 and A77T2.
- For details of MGS transition to bridge railing, see Revised Standard Plan RSP A77U4.
- For additional details of MGS connection to bridge railing, see Standard Plans A77U1, A77U2 and A77V1.
- For MGS connection details to abutments and walls, see Standard Plan A77U3.
- For typical MGS delineation and dike positioning details, see Revised Standard Plan RSP A77N4.
- Slotted hole for bolted connection of rail element to block and post.
- Slotted holes for splice bolts to overlap ends of rail element.
- Additional hole in uppermost portion of line post is for potential future adjustments of railing height. See Standard Plan A77N1.
- 6" x 12" x 1'-2" block must be used with 6" dike.
- Install posts in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
STANDARD RAILING SECTION
(WOOD POST WITH
WOOD BLOCK)**

NO SCALE

RSP A77L1 DATED APRIL 19, 2019 SUPERSEDES STANDARD PLAN A77L1
DATED MAY 31, 2018 - PAGE 57 OF THE STANDARD PLANS BOOK DATED 2018.

REVISED STANDARD PLAN RSP A77L1

2018 REVISED STANDARD PLAN RSP A77L1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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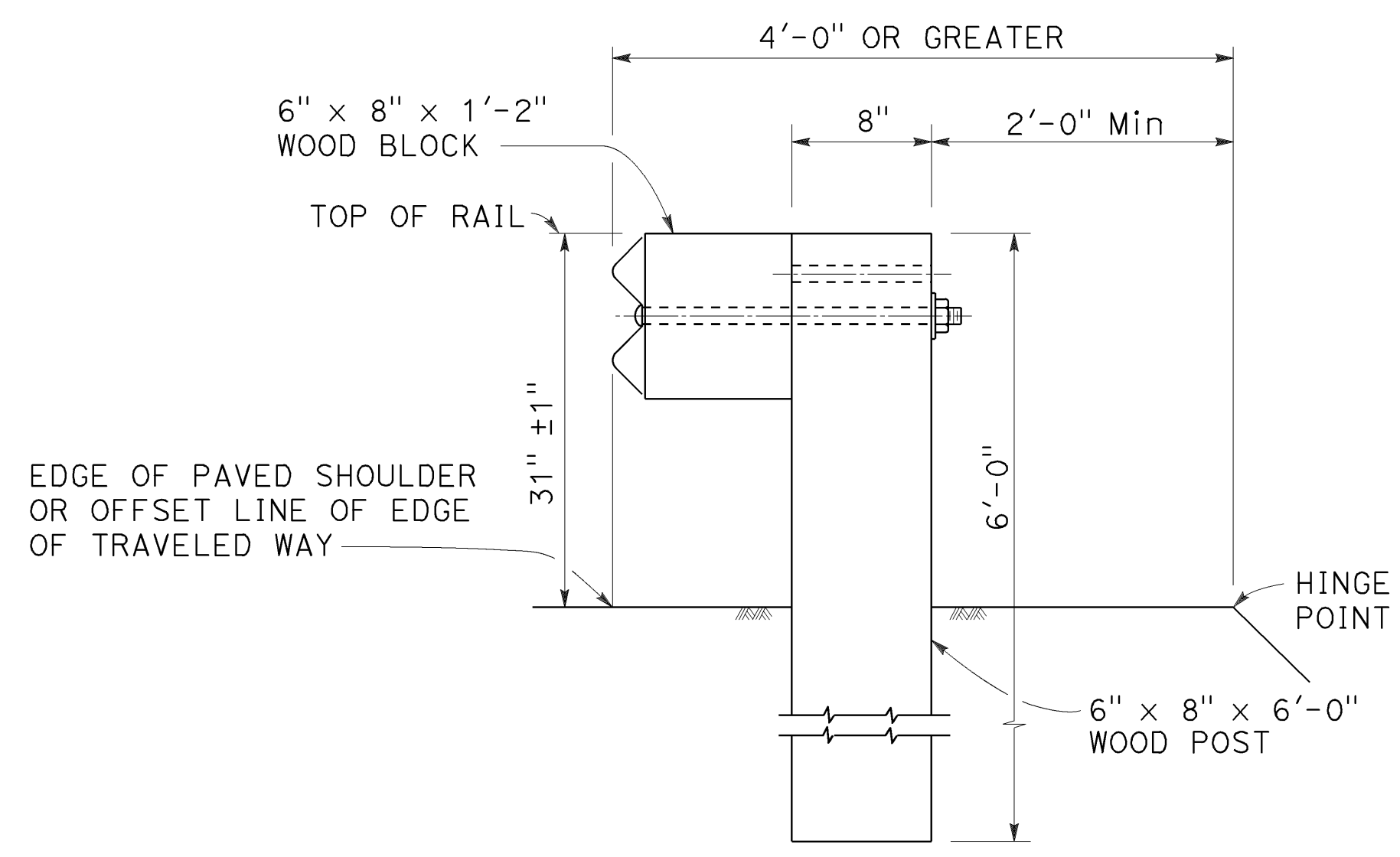
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

October 19, 2018
PLANS APPROVAL DATE

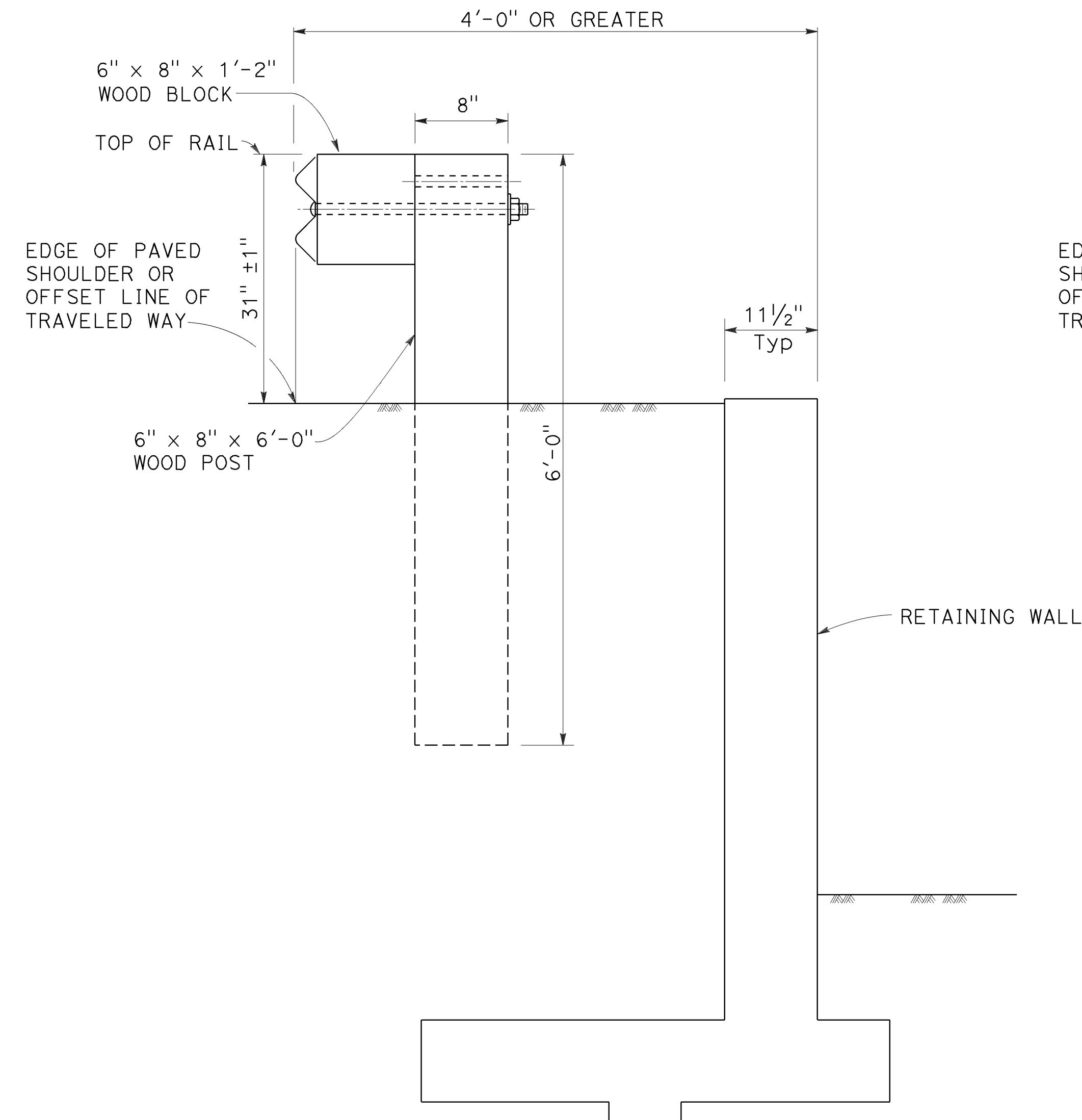
Randell D. Hiatt
No. C50200
Exp. 6-30-19
CIVIL
STATE OF CALIFORNIA

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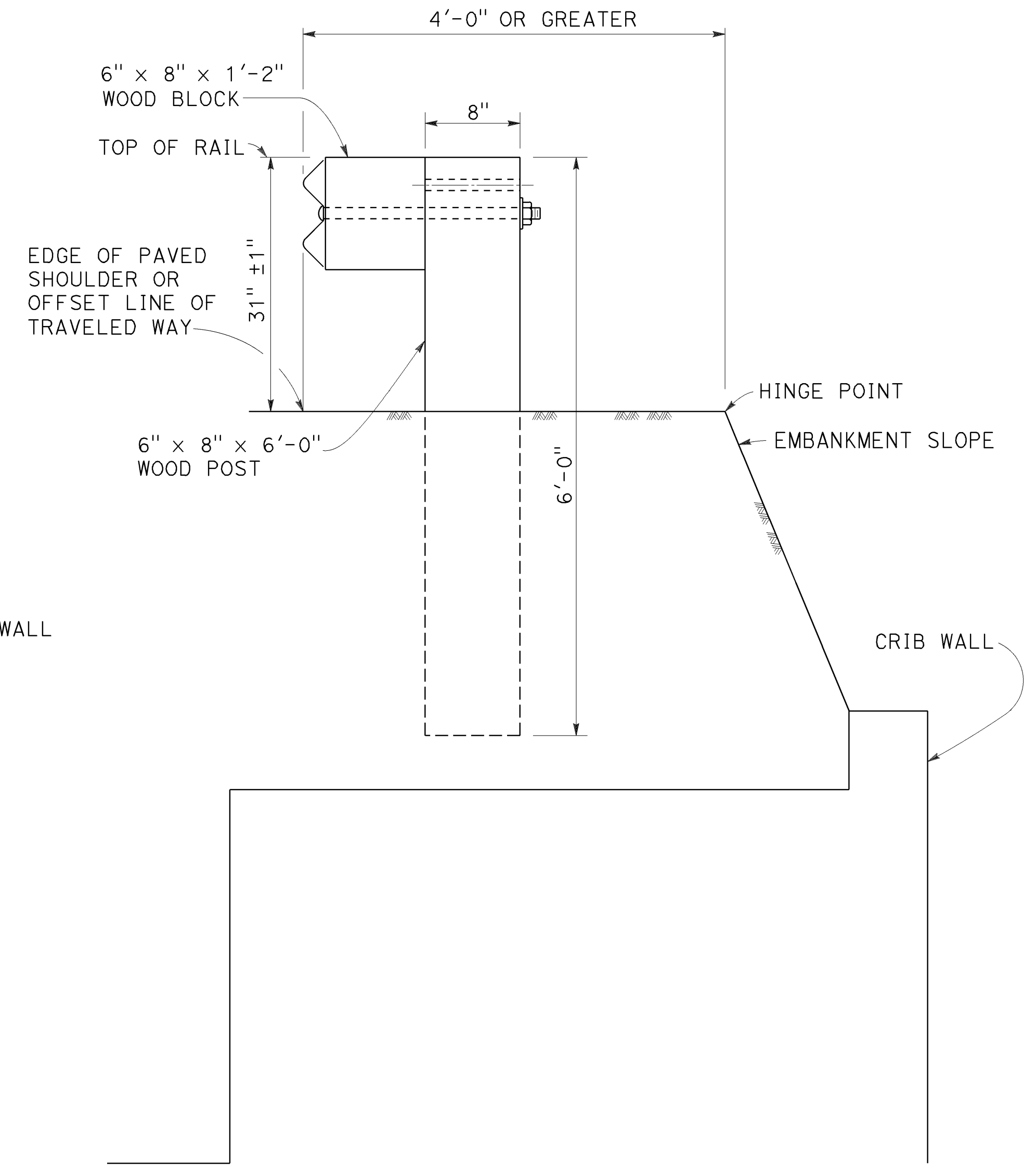
TO ACCOMPANY PLANS DATED 5-17-19



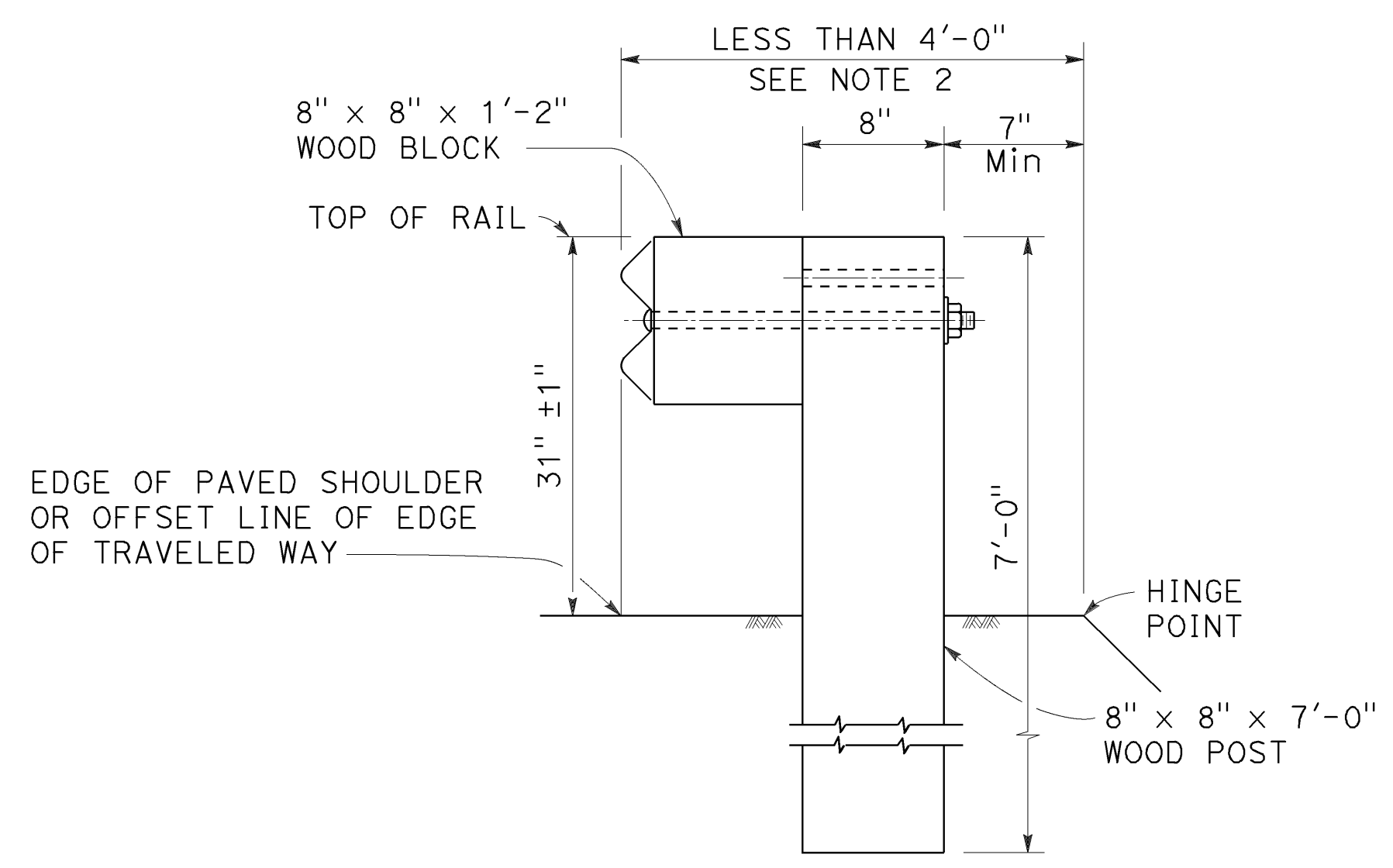
DETAIL A
TYPICAL ROADWAY
INSTALLATION
See Note 1



DETAIL C
INSTALLATION AT EARTH RETAINING WALLS



DETAIL D



DETAIL B
NARROW ROADWAY
INSTALLATION
See Note 1

POST EMBEDMENT

NOTES:

1. These installation details also applicable to steel line post installations. For Detail A, C, and D, where steel line post installations are constructed, W6 x 8.5 or W6 x 9 steel post, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For Detail B, where steel line post installations are constructed, W6 x 8.5 or W6 x 9 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For additional installation details, see Standard Plans A77L1 and A77L2.
2. Where the distance between the back of the post and the hinge point is less than 7", see the Project Plans for special details.
3. For dike positioning with MGS installations, see Standard Plan A77N4.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
MIDWEST GUARDRAIL SYSTEM
TYPICAL LINE POST
EMBEDMENT AND
HINGE POINT OFFSET DETAILS
NO SCALE

RSP A77N3 DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN A77N3
DATED MAY 31, 2018 - PAGE 63 OF THE STANDARD PLANS BOOK DATED 2018.

REVISED STANDARD PLAN RSP A77N3

2018 REVISED STANDARD PLAN RSP A77N3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	192	436

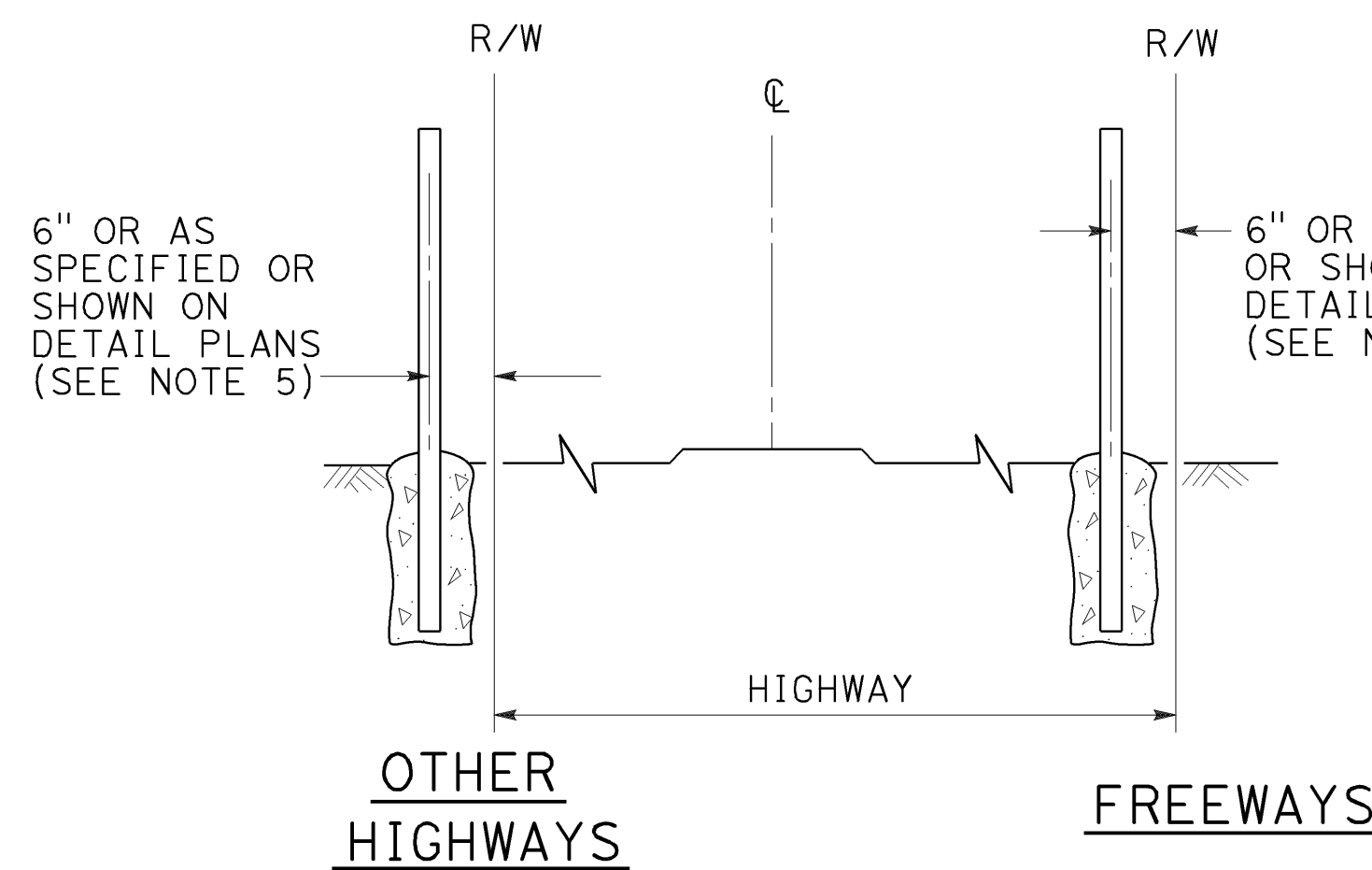
B. Valizadeh
REGISTERED CIVIL ENGINEER

October 19, 2018
PLANS APPROVAL DATE

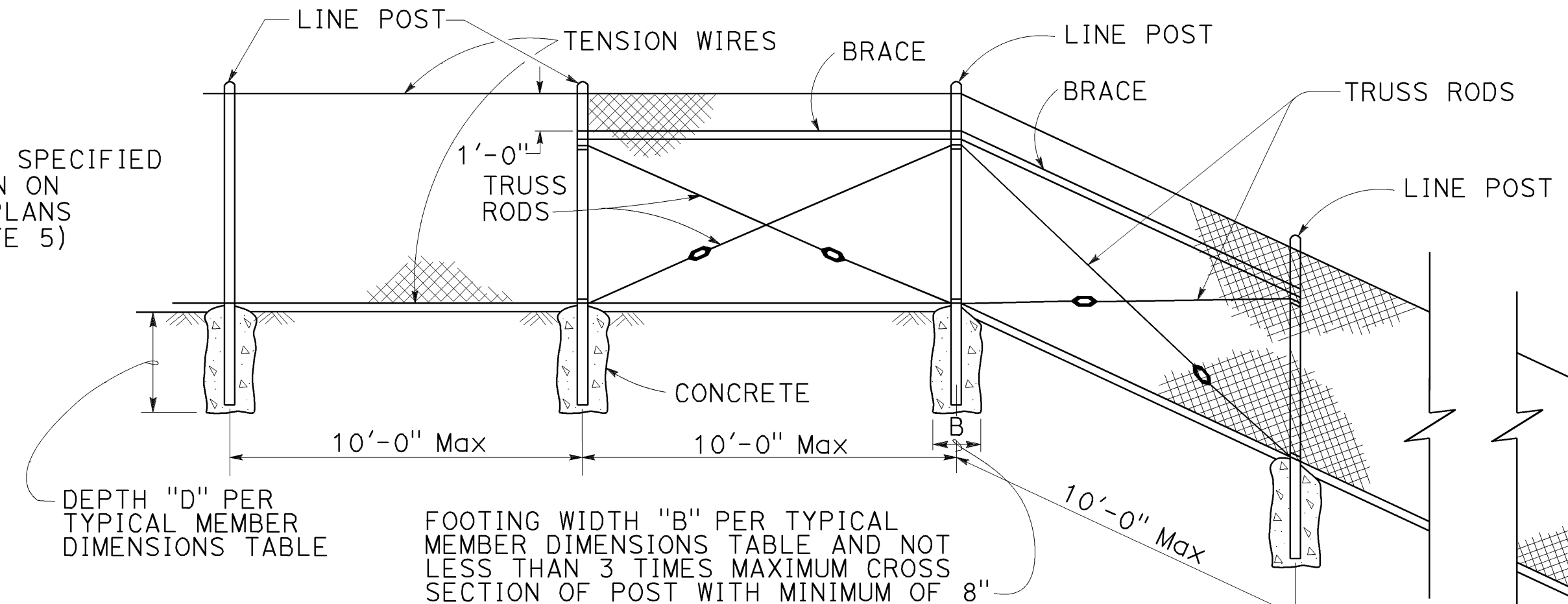
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TO ACCOMPANY PLANS DATED 5-17-19

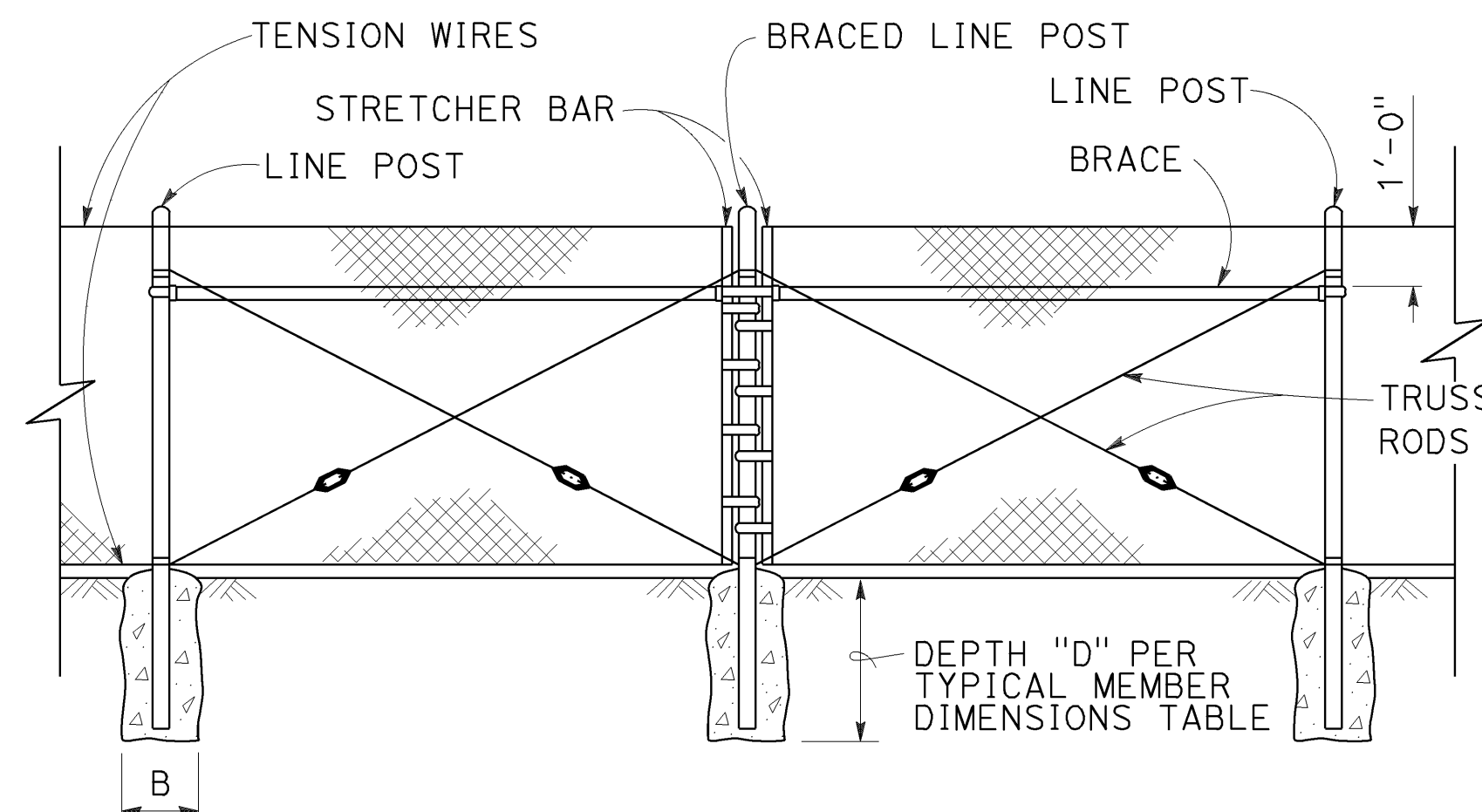
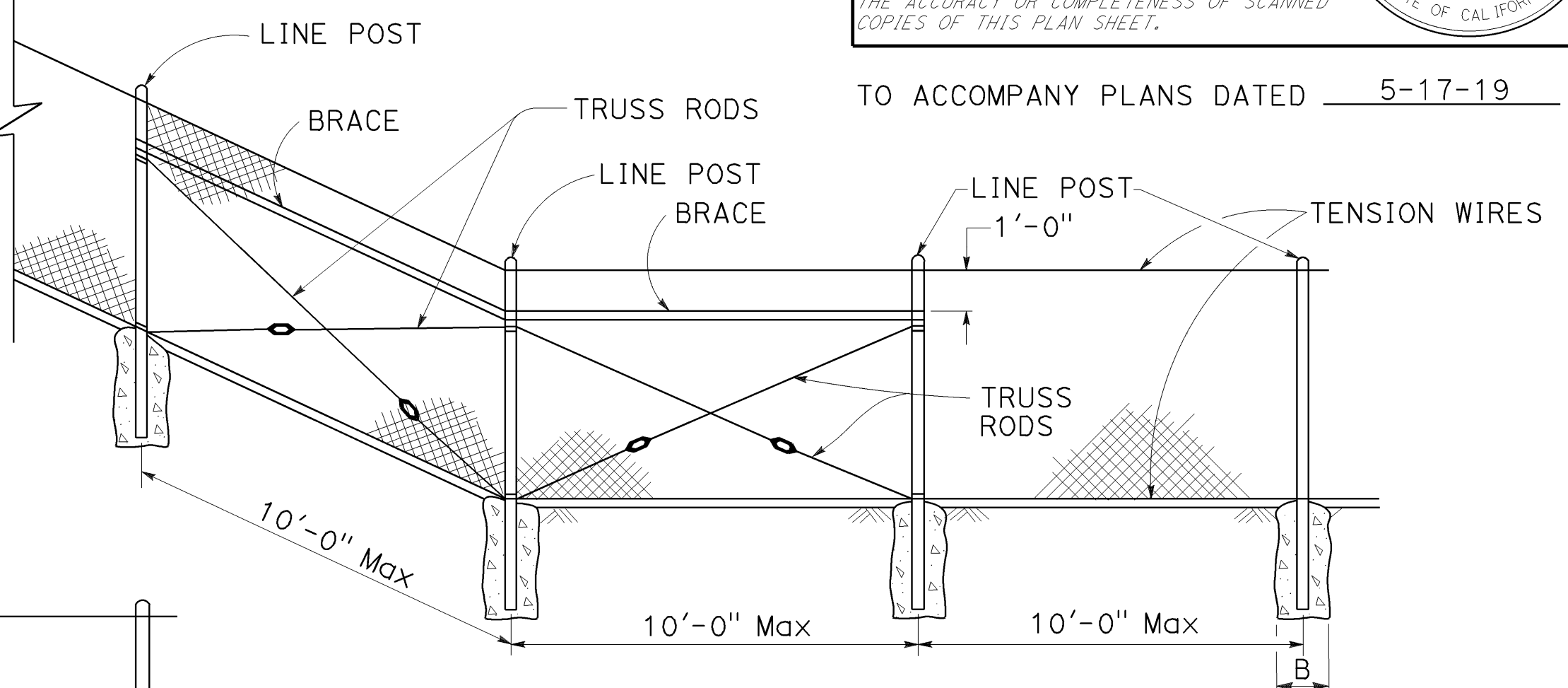
REGISTERED PROFESSIONAL ENGINEER
M. Reza Valizadeh
No. C51902
Exp. 6-30-20
CIVIL
STATE OF CALIFORNIA



FENCE LOCATION

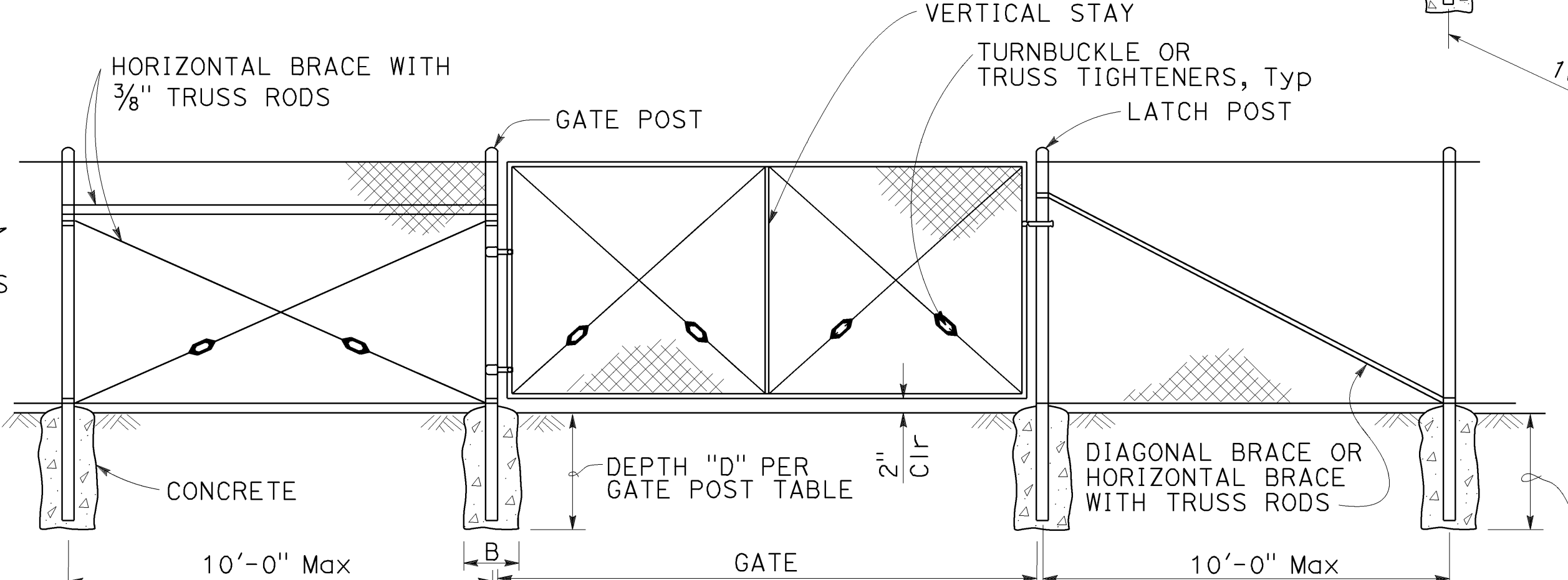


CHAIN LINK FENCE ON SHARP BREAK IN GRADE



BRACED LINE POST INSTALLATION

Braced line post at intervals not exceeding 1000'

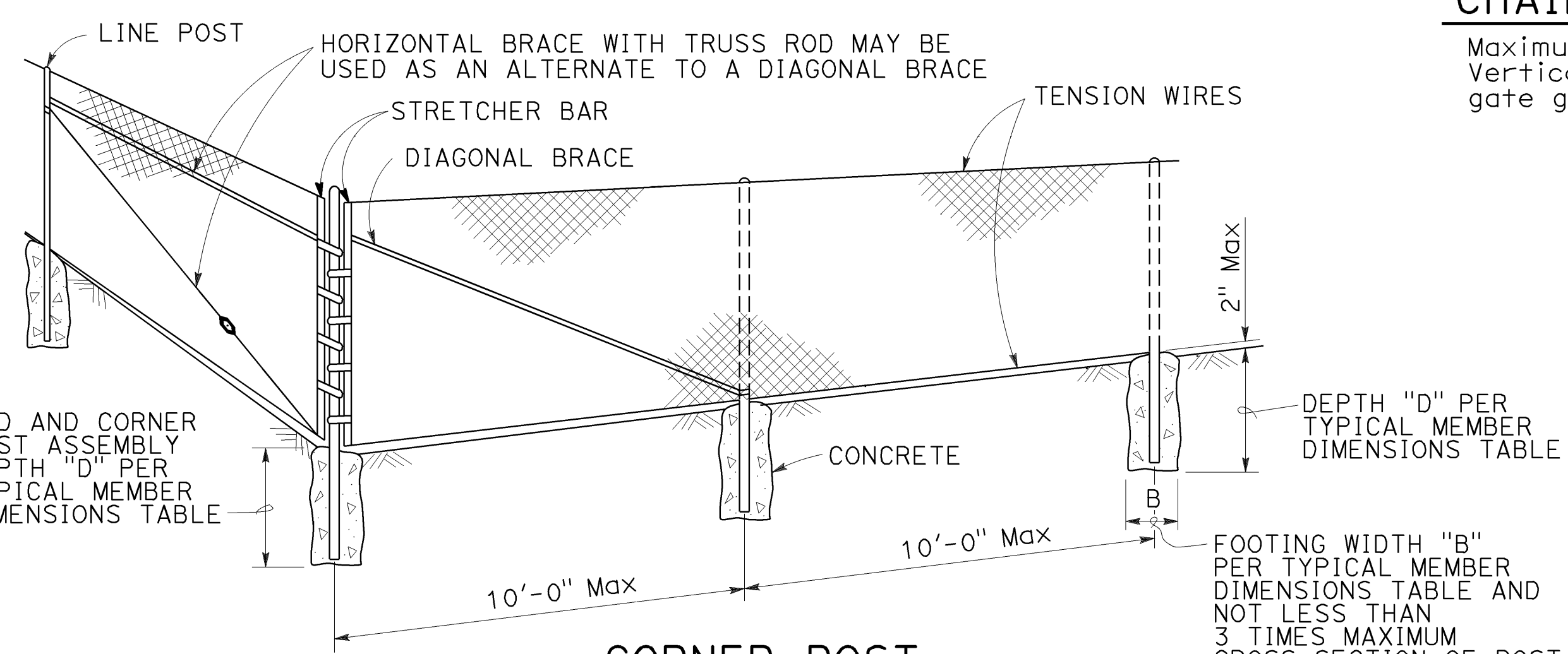


CHAIN LINK GATE INSTALLATION

Maximum Gate Width is 12'-0"
Vertical Stay is required in middle of gate greater than 8'-0" in width.

GATE POST						
FENCE HEIGHT (Max)	SLATTED	B (in)	D (ft)	ROUND PIPE		
				ROUND OD PIPE	GROUP 1A WEIGHT (lb/ft)	GROUP 1C WEIGHT (lb/ft)
5'-0"	NO	12"	2'-6"	3.50"	7.58	5.71
6'-0"	NO	12"	2'-6"	3.50"	7.58	5.71
8'-0"	NO	12"	3'-0"	3.50"	7.58	5.71
10'-0"	NO	14"	3'-6"	3.50"	7.58	5.71
5'-0"	YES	12"	3'-0"	4.00"	9.12	6.56
6'-0"	YES	14"	3'-6"	4.50"	10.80	-
8'-0"	YES	18"	3'-6"	5.56"	14.60	-
10'-0"	YES	20"	4'-0"	6.63"	19.00	-

Above post dimensions and weights are minimums. Larger sizes may be used upon approval.



CORNER POST

TYPICAL MEMBER DIMENSIONS (See Notes)														
FENCE HEIGHT (Max)	SLATTED	B (in)	D (ft)	LINE POSTS						BRACES				
				ROUND PIPE			ROLL FORMED			ROUND PIPE			ROLL FORMED	
				ROUND OD PIPE	GROUP 1A WEIGHT (lb/ft)	GROUP 1C WEIGHT (lb/ft)	SECTION	WEIGHT (lb/ft)	SECTION	WEIGHT (lb/ft)	ROUND OD PIPE	GROUP 1A WEIGHT (lb/ft)	GROUP 1C WEIGHT (lb/ft)	SECTION
5'-0"	NO	8"	2'-6"	1.90"	2.72	2.28	1.875" x 1.625"	1.85	1.90"	2.72	2.28	1.625" x 1.250"	1.35	
6'-0"	NO	10"	2'-6"	2.38"	3.66	3.12	1.875" x 1.625"	2.40	2.38"	3.66	3.12	1.625" x 1.250"	1.35	
8'-0"	NO	12"	3'-0"	2.88"	5.80	4.64	3.250" x 2.500"	4.50	2.38"	3.66	3.12	1.625" x 1.250"	1.35	
10'-0"	NO	14"	3'-6"	3.50"	7.58	5.71	3.250" x 2.500"	4.50	2.88"	5.80	4.64	1.625" x 1.250"	1.35	
5'-0"	YES	12"	3'-0"	4.00"	9.12	6.56	N/A	-	2.38"	3.66	3.12	N/A	-	
6'-0"	YES	14"	3'-0"	4.50"	10.80	-	N/A	-	2.38"	3.66	3.12	N/A	-	
8'-0"	YES	18"	3'-6"	5.56"	14.60	-	N/A	-	2.38"	3.66	3.12	N/A	-	
10'-0"	YES	20"	4'-0"	6.63"	19.00	-	N/A	-	2.88"	5.80	4.64	N/A	-	

- NOTES:**
- The table to the right shows minimum sized posts and braces complying with the specifications. Larger or heavier post and brace sizes may be used upon approval.
 - Sections shown in the tables must also comply with the strength requirements and other provisions of the Specifications.
 - Other sections which comply with the strength requirements and other provisions of the Specifications may be used upon approval.
 - Options exercised shall be uniform on any one project.
 - Offset to be 2'-0" at monument locations, measured at right angles to R/W lines. Taper to achieve offset to be at least 20'-0" long.
 - See Standard Plan A85B for Brace, Stretcher Bar, and Truss Tightener Details.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CHAIN LINK FENCE
NO SCALE

RSP A85 DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN A85
DATED MAY 31, 2018 - PAGE 140 OF THE STANDARD PLANS BOOK DATED 2018.

REVISED STANDARD PLAN RSP A85

2018 REVISED STANDARD PLAN RSP A85

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	193	436

Peter W. Norboe
REGISTERED CIVIL ENGINEER

October 19, 2018
PLANS APPROVAL DATE

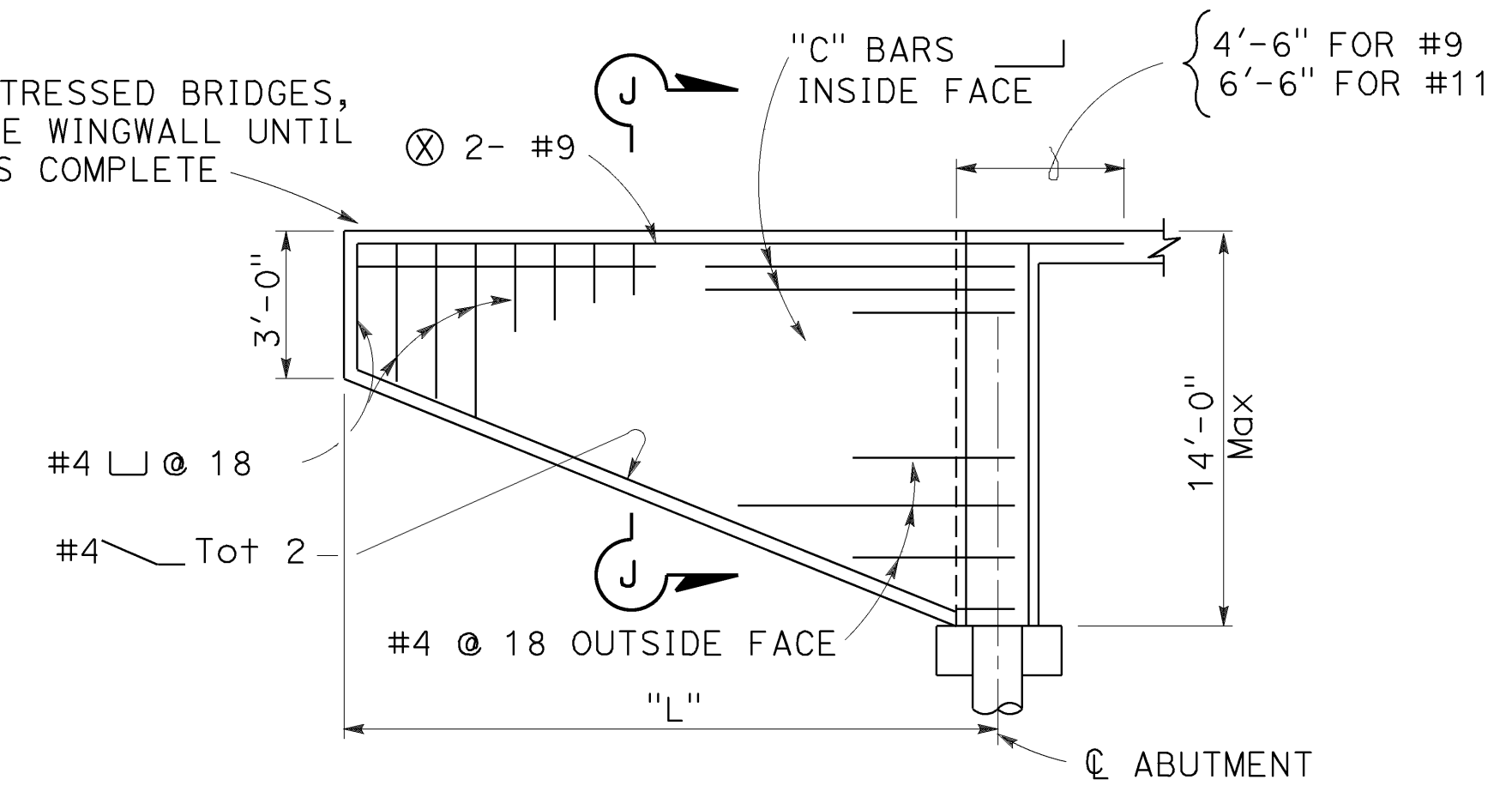
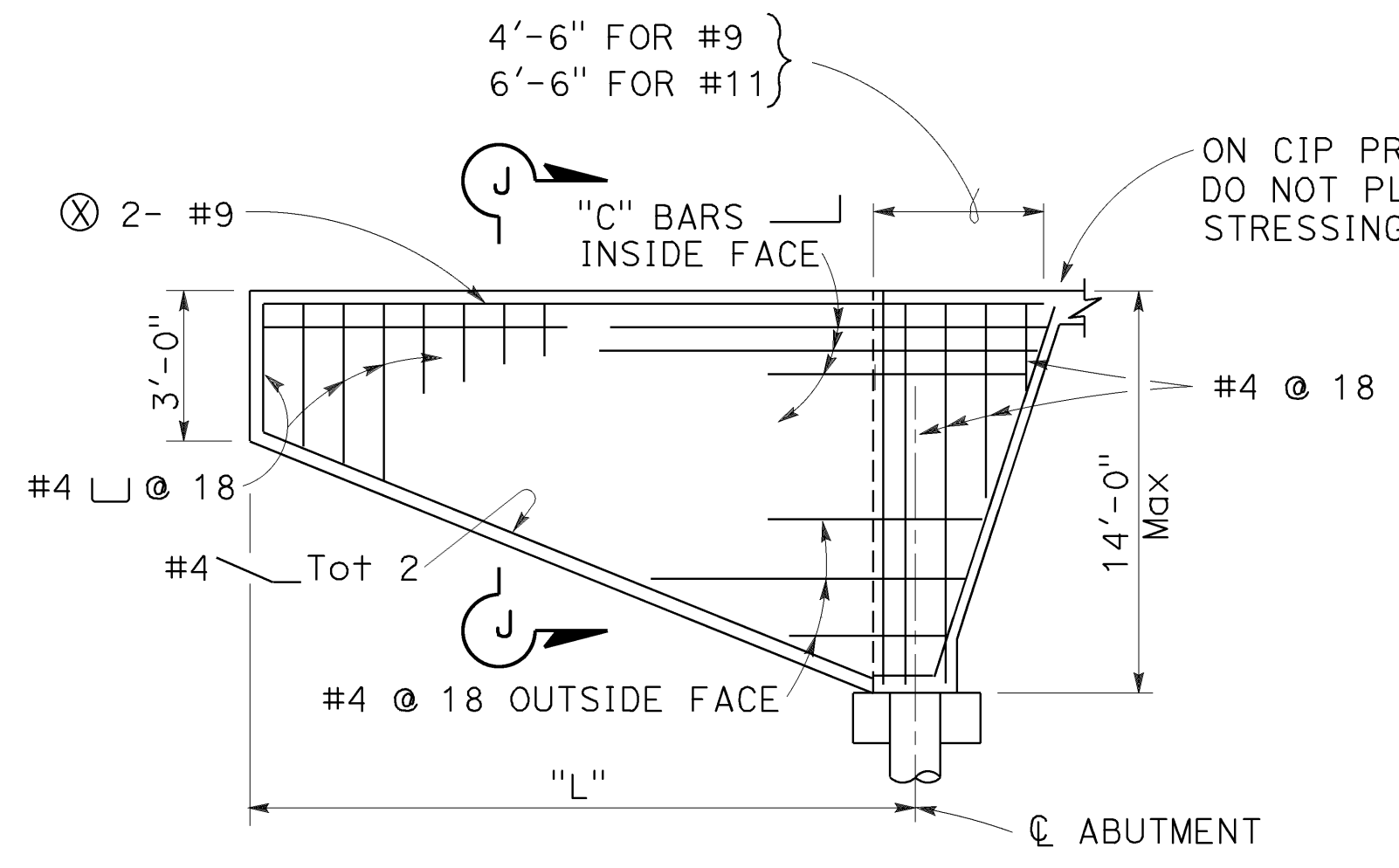
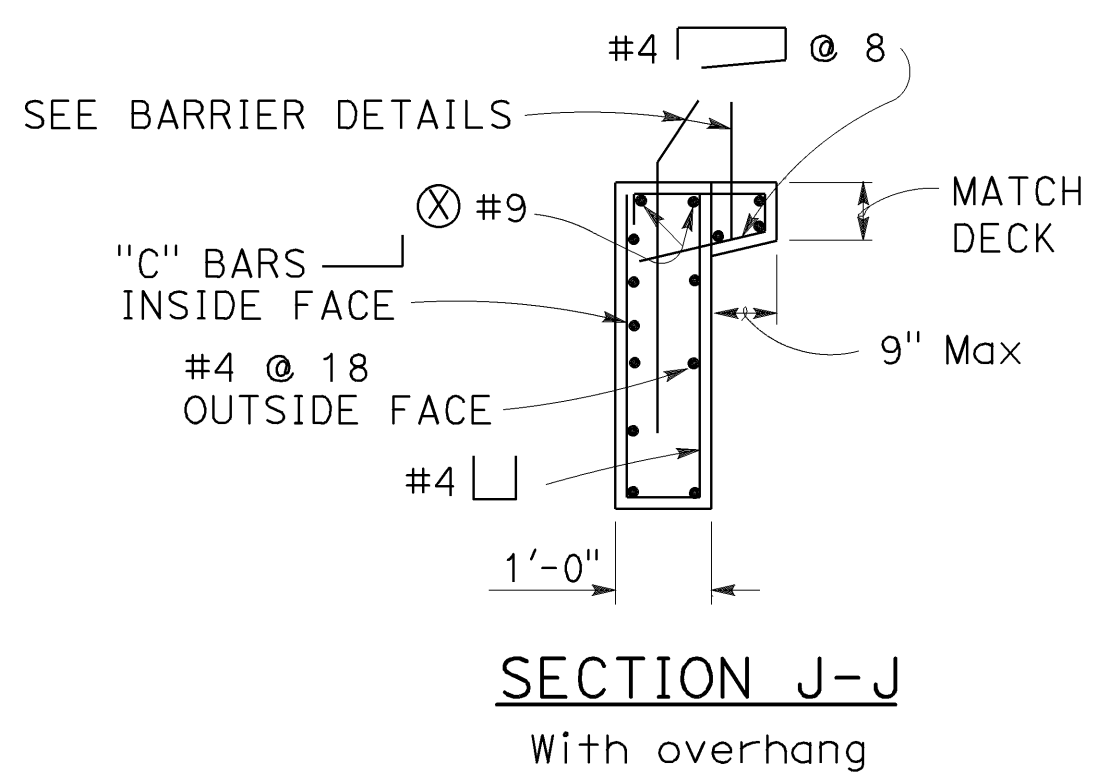
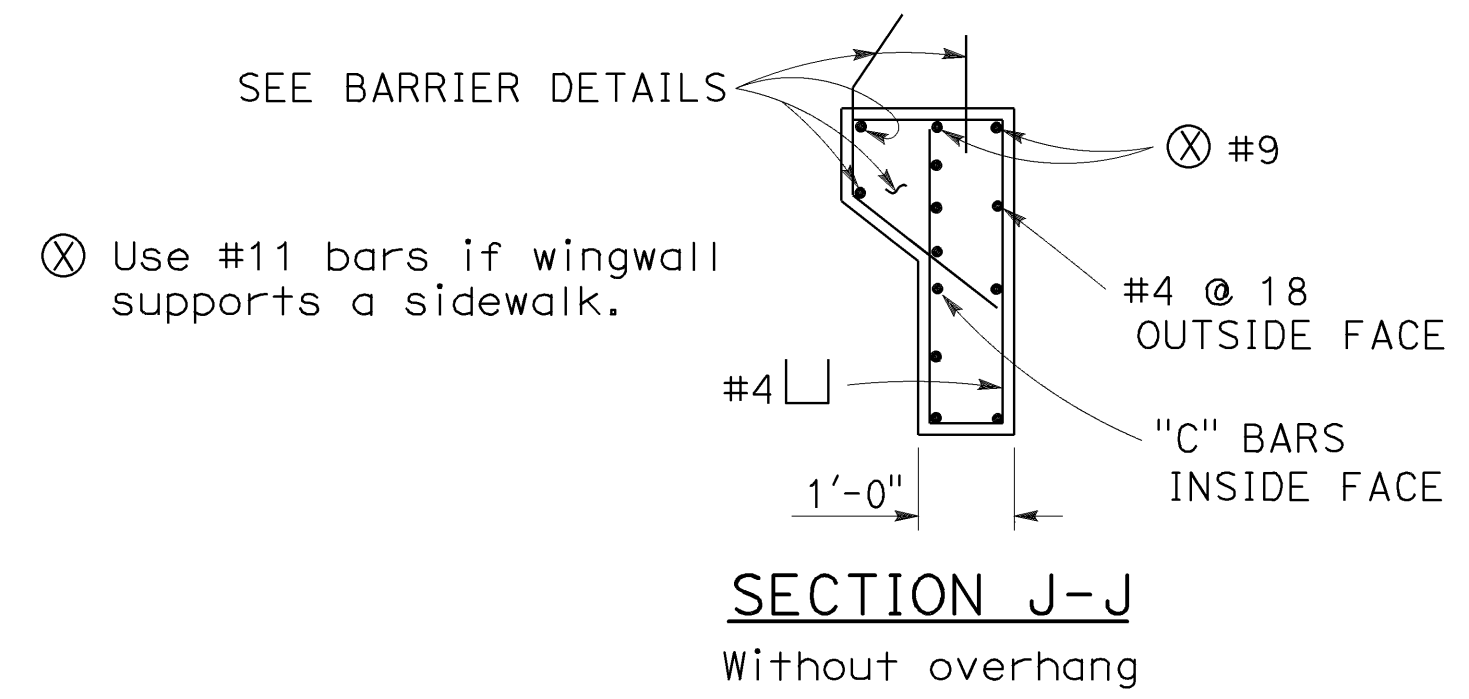
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TO ACCOMPANY PLANS DATED 5-17-19

BRIDGE DESIGNATIONS AND ABBREVIATIONS

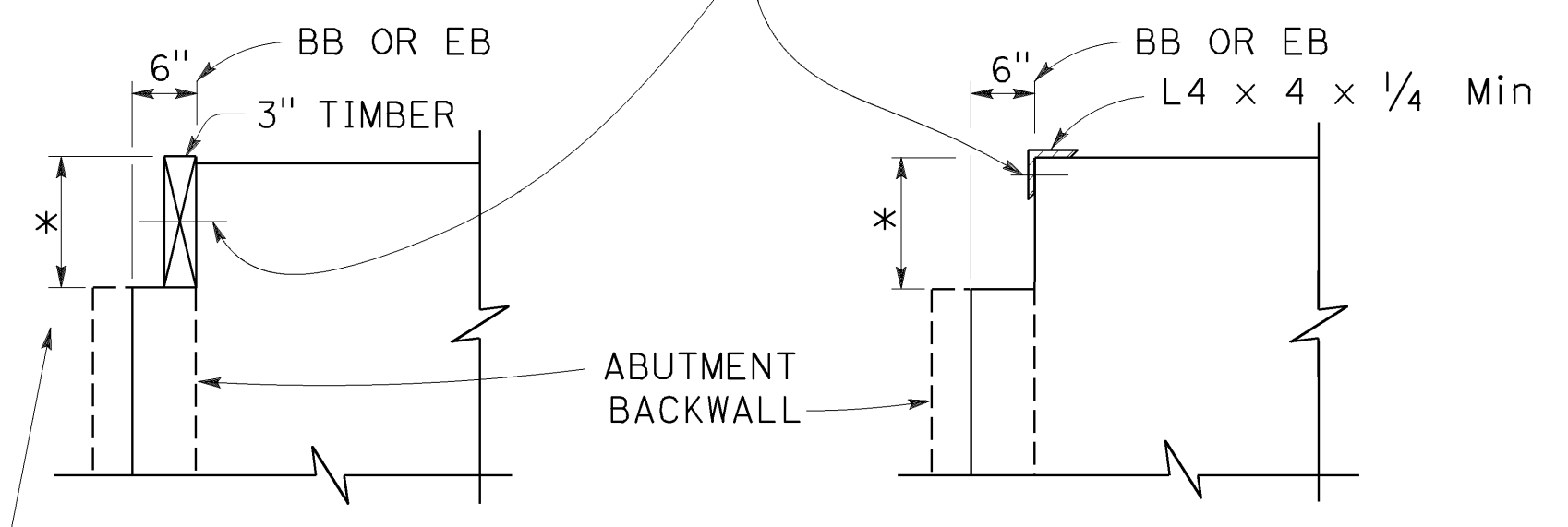
See Standard Plans A3A, A3B, and A3C for additional or standard abbreviations

- J Outer, outer left bridge
- K Outer left bridge
- S Outer right bridge
- T Outer, outer right bridge
- RWLOL Retaining Wall Layout Line
- WWLOL Wingwall Layout Line



* Depth of paving notch or dimension to abutment backwall construction joint. Varies, see abutment details.

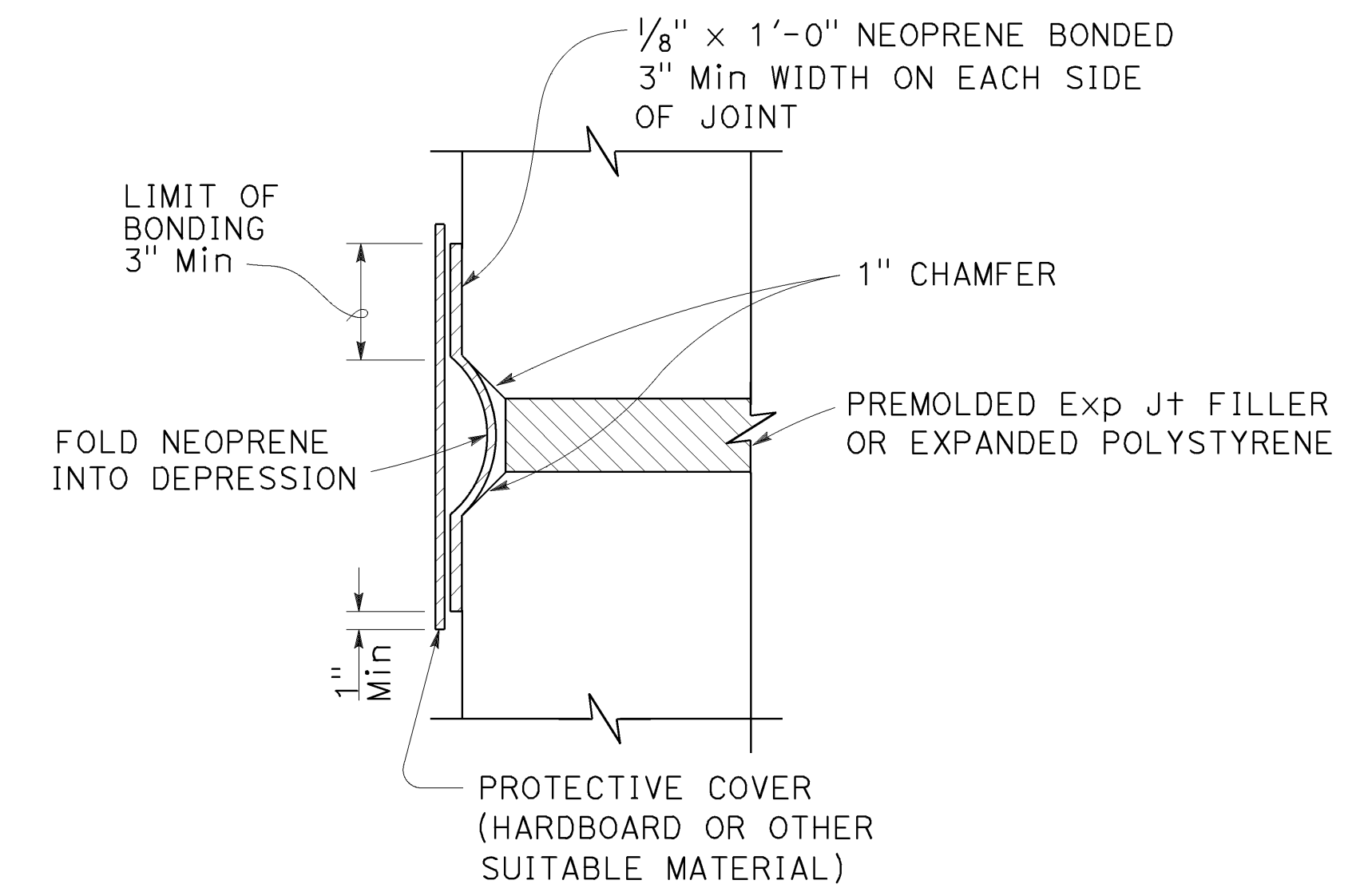
1/2" Min Dia BOLT, 3'-0" Max SPACING, 3" Min EMBEDMENT INSERT ASSEMBLY MAY BE USED UPON ENGINEER'S APPROVAL



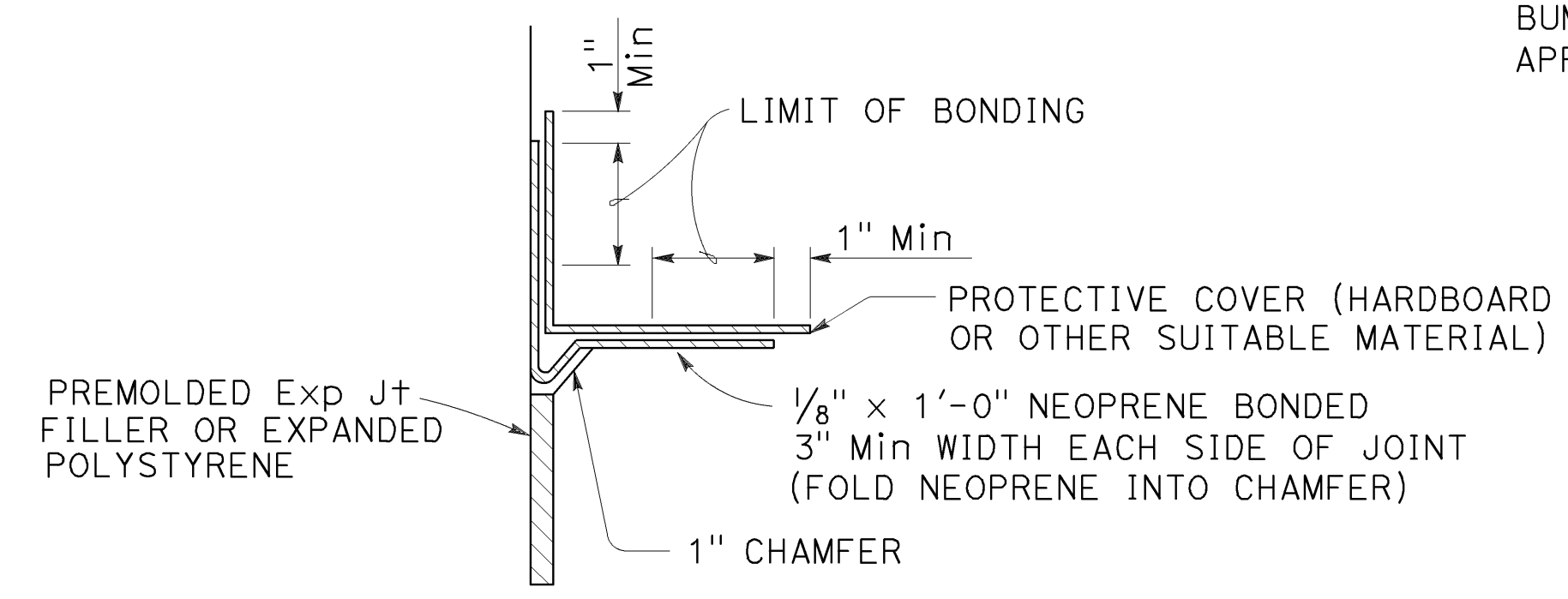
ALTERNATIVE 1

ALTERNATIVE 2

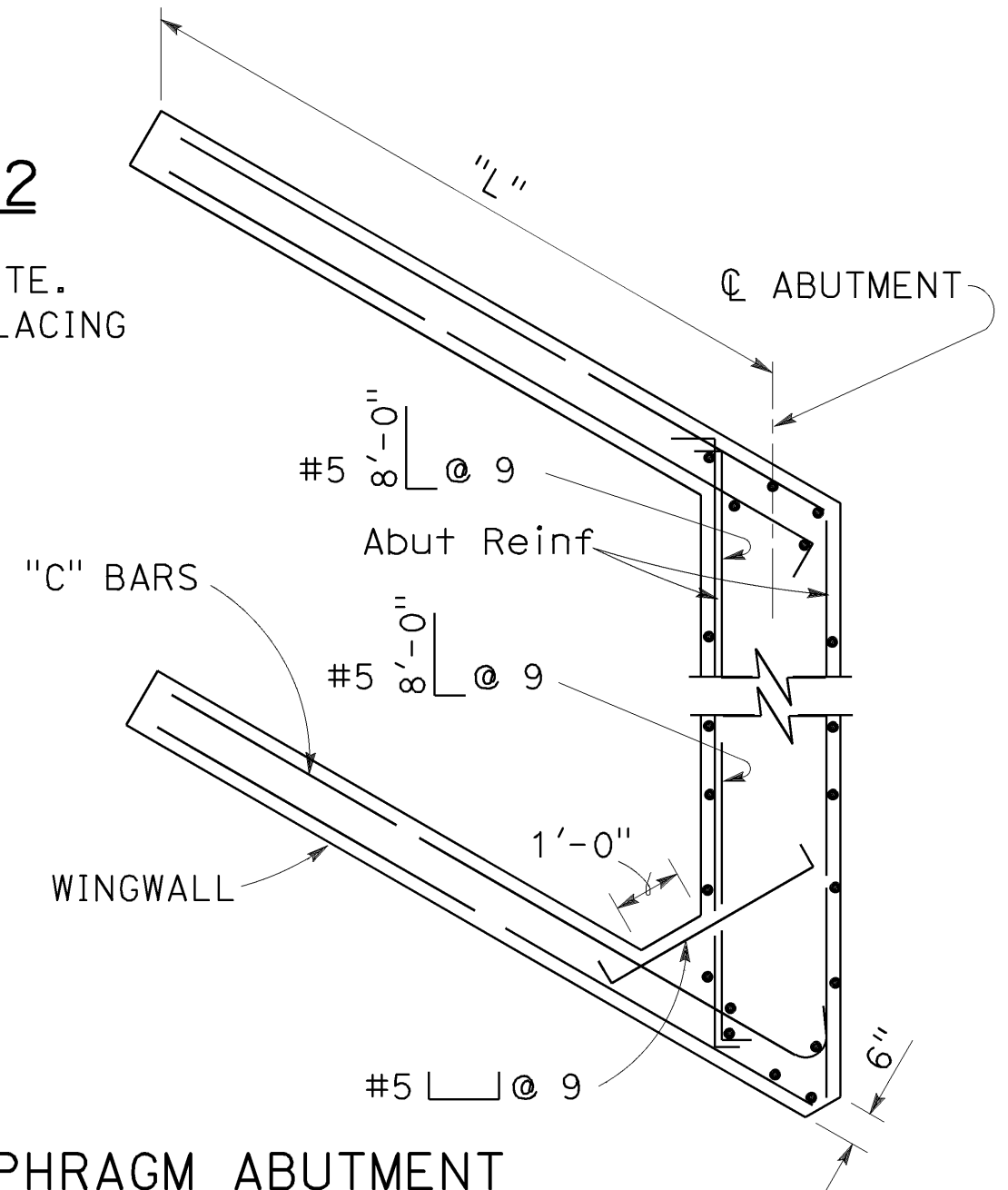
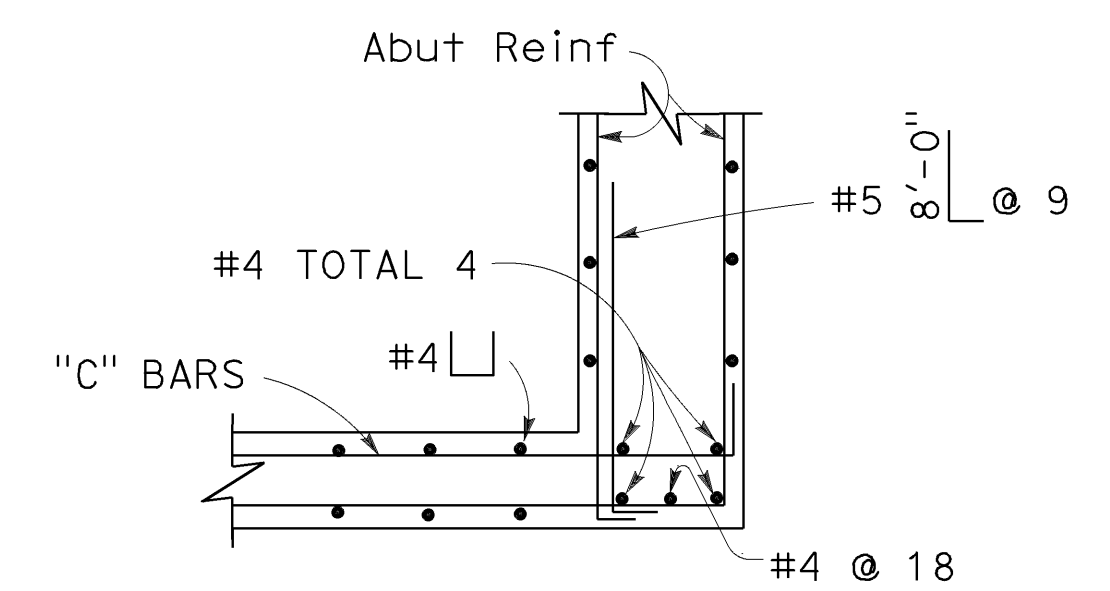
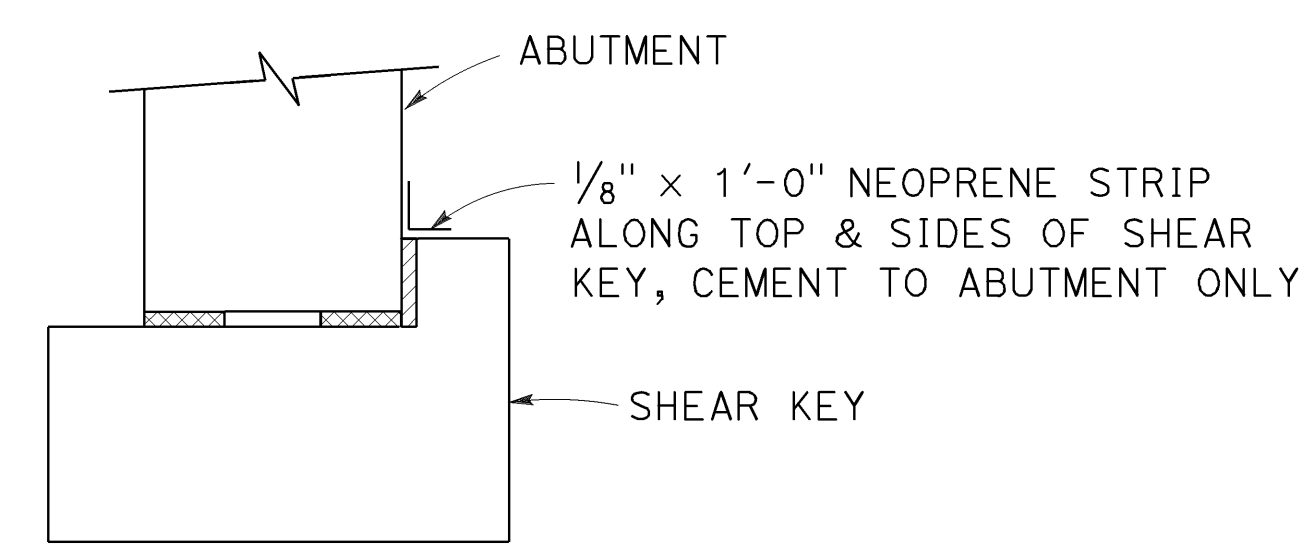
TOP OF BUMPER TO BE AT OR ABOVE THE TOP OF DECK CONCRETE. BUMPERS AND BOLTS TO BE REMOVED IMMEDIATELY PRIOR TO PLACING APPROACH PAVEMENT



When used on CIP prestressed bridges, do not apply waterstop until stressing is complete.



When used on CIP prestressed bridges, do not apply waterstop until stressing is complete.



CORNER DETAIL FOR SKEW 20° AND LESS

"L"	"C" BARS
12'-0"	#5 @ 9"
14'-0"	#6 @ 9"
16'-0"	#7 @ 9"
18'-0"	#8 @ 9"
20'-0"	#9 @ 9"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

BRIDGE DETAILS

NO SCALE

RSP D83B DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN D83B DATED MAY 31, 2018 - PAGE 318 OF THE STANDARD PLANS BOOK DATED 2018.

REVISED STANDARD PLAN RSP B0-1

2018 REVISED STANDARD PLAN RSP B0-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	194	436

H.R. J. [Signature]
REGISTERED ELECTRICAL ENGINEER

October 19, 2018
PLANS APPROVAL DATE

Hamid Zolfaghari
No. E15636
Exp. 12-31-19
ELECTRICAL
STATE OF CALIFORNIA

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.

TO ACCOMPANY PLANS DATED 5-17-19

ANNOTATION

SYMBOL	DESCRIPTION
AB	ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS
BC	INSTALL PULL BOX IN EXISTING CONDUIT RUN
BP	PEDESTRIAN BARRICADE, TYPE AS INDICATED ON PLAN
CB	INSTALL CONDUIT INTO EXISTING PULL BOX
CC	CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED
CF	CONDUIT TO REMAIN FOR FUTURE USE. REMOVE CONDUCTORS. INSTALL PULL TAPE
DH	DETECTOR HANDHOLE
FA	FOUNDATION TO BE ABANDONED
IS	INSTALL SIGN ON SIGNAL MAST ARM
NS	NO SLIP BASE ON STANDARD
PEC	PHOTOELECTRIC CONTROL
PEU	PHOTOELECTRIC UNIT
RC	EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR
RL	RELOCATE EQUIPMENT
RR	REMOVE AND REUSE EQUIPMENT
RS	REMOVE AND SALVAGE EQUIPMENT
SC	SPLICE NEW TO EXISTING CONDUCTORS
SD	SERVICE DISCONNECT
TSP	TELEPHONE SERVICE POINT
9	SPECIFIC PROJECT NOTES

STANDARD

NEW	EXISTING	TYPE
		15
		15D
		15 STRUCTURE
		15D STRUCTURE
		21
		21D
		21 STRUCTURE
		21D STRUCTURE
		30
		31
		32

SOFFIT AND WALL-MOUNTED LUMINAIRES

SYMBOL	DESCRIPTION
	PENDANT SOFFIT LUMINAIRE
	FLUSH-MOUNTED SOFFIT LUMINAIRE
	WALL-MOUNTED LUMINAIRE
	EXISTING SOFFIT OR WALL-MOUNTED LUMINAIRE TO REMAIN UNMODIFIED
	EXISTING SOFFIT OR WALL-MOUNTED LUMINAIRE TO BE MODIFIED AS SPECIFIED

NOTE:
Arrow indicates "street side" of luminaire.

MISCELLANEOUS ELECTROLIERS

NEW	EXISTING	DESCRIPTION
		LUMINAIRE ON WOOD POLE
		NON-STANDARD ELECTROLIER (SEE PROJECT LEGEND)
		CITY ELECTROLIER
		ELECTROLIER FOUNDATION (FUTURE INSTALLATION)

NOTE:
1. Luminaires shall be Roadway 2 when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. Luminaires shall be Roadway 1 when installed on other type standards or poles, unless otherwise specified.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (LEGEND)
NO SCALE

RSP ES-1A DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 31, 2018 - PAGE 475 OF THE STANDARD PLANS BOOK DATED 2018.

2018 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	195	436

H.R. J. [Signature]
REGISTERED ELECTRICAL ENGINEER

October 19, 2018
PLANS APPROVAL DATE

Hamid Zolfaghari
No. E15636
Exp. 12-31-19
ELECTRICAL
STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 5-17-19

CONDUIT

SIGNAL EQUIPMENT

NEW	EXISTING	DESCRIPTION
---	---	LIGHTING CONDUIT, UNLESS OTHERWISE INDICATED OR NOTED
---	---	TRAFFIC SIGNAL CONDUIT
---C---	---c---	COMMUNICATION CONDUIT
---T---	---t---	TELEPHONE CONDUIT
---F---	---f---	FIRE ALARM CONDUIT
---FO---	---fo---	FIBER OPTIC CONDUIT
---	---	CONDUIT TERMINATION
		CONDUIT RISER ATTACHED TO THE STRUCTURE OR SERVICE POLE

NEW	EXISTING	DESCRIPTION
		PEDESTRIAN SIGNAL HEAD
		PUSH BUTTON ASSEMBLY POST
		PEDESTRIAN BARRICADE
		VEHICLE SIGNAL HEAD
		VEHICLE SIGNAL HEAD WITH ANGLE VISOR
		MODIFICATIONS OF BASIC SYMBOL: "L" INDICATES ALL NON-ARROW SECTIONS LOUVERED "LG" INDICATES LOUVERED GREEN SECTION ONLY "PV" INDICATES ALL 12" SECTIONS PROGRAMMED VISIBILITY "8" INDICATES ALL 8" SECTIONS (ONLY WHEN SPECIFIED)

NOTES:

- All signal sections shall be 12" unless shown otherwise.
- Signal heads shall be provided with backplates unless shown otherwise.

SERVICE EQUIPMENT

NEW	EXISTING	DESCRIPTION
---OH---	---oh---	OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

		VEHICLE SIGNAL HEAD CONSISTING OF RED, YELLOW AND GREEN LEFT ARROW SECTIONS
		VEHICLE SIGNAL HEAD CONSISTING OF RED AND YELLOW SECTIONS WITH AN UP GREEN ARROW SECTION
		VEHICLE SIGNAL HEAD (5 SECTION) CONSISTING OF RED, YELLOW AND GREEN SECTIONS WITH YELLOW AND GREEN RIGHT ARROW SECTIONS
		TYPE 15TS STANDARD WITH VEHICLE SIGNAL HEAD, PEDESTRIAN SIGNAL HEAD, AND LUMINAIRE
		TYPE 21TS STANDARD WITH VEHICLE SIGNAL HEAD, PEDESTRIAN SIGNAL HEAD, AND LUMINAIRE
		STANDARD WITH LUMINAIRE AND SIGNAL MAST ARMS AND ATTACHED VEHICLE SIGNAL HEADS
		TYPE 1 STANDARD WITH ATTACHED VEHICLE SIGNAL HEADS
		STANDARD WITH A SIGNAL MAST ARM, ATTACHED VEHICLE SIGNAL HEADS AND INTERNALLY ILLUMINATED STREET NAME SIGN

OVERHEAD SIGN

NEW	EXISTING	DESCRIPTION
		SINGLE POST, SINGLE SIGN, BALANCED BUTTERFLY
		SINGLE POST, DOUBLE SIGN, BALANCED BUTTERFLY
		SINGLE POST, SINGLE SIGN, FULL CANTILEVER
		DOUBLE POST, SINGLE SIGN
		SINGLE SIGN MOUNTED ON STRUCTURE
		SINGLE POST, SINGLE SIGN, FULL CANTILEVER WITH ELECTROLIER
		DOUBLE POST, SINGLE SIGN WITH ELECTROLIER

POLE-MOUNTED SERVICE DESIGNATION

SYMBOL	DESCRIPTION
	TYPE H SERVICE, 28'-10" TYPE OF INSTALLATION AND POLE HEIGHT ABOVE GRADE

FLASHING BEACON

NEW	EXISTING	DESCRIPTION
		FLASHING BEACON (ONE VEHICLE SIGNAL HEAD WITH BACKPLATE AND VISOR) "R" INDICATES RED INDICATION "Y" INDICATES YELLOW INDICATION
		FLASHING BEACON WITH TYPE 15-FBS STANDARD AND A SIGN.
		FLASHING BEACON WITH TYPES 9, 9A OR 9B SIGN UNLESS OTHERWISE SPECIFIED OR INDICATED

		CONTROLLER ASSEMBLY. DOOR INDICATES FRONT OF CABINET
		GUARD POST
		OPTICAL DETECTOR FOR THE EMERGENCY VEHICLE DETECTION

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LEGEND)**
NO SCALE

RSP ES-1B DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN ES-1B DATED MAY 31, 2018 - PAGE 476 OF THE STANDARD PLANS BOOK DATED 2018.

REVISED STANDARD PLAN RSP ES-1B

2018 REVISED STANDARD PLAN RSP ES-1B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	196	436

H.R. J.
REGISTERED ELECTRICAL ENGINEER

October 19, 2018
PLANS APPROVAL DATE

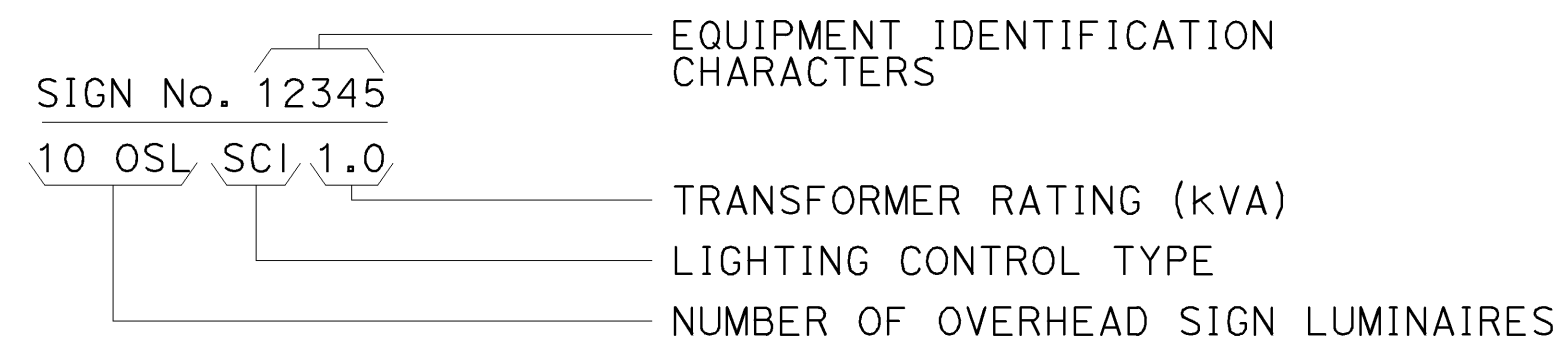
Hamid Zolfaghari
No. E15636
Exp. 12-31-19
ELECTRICAL
STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 5-17-19

EQUIPMENT DESIGNATION

SIGN:



LIGHTING STANDARD, SIGNAL AND LIGHTING STANDARD:



SOFFIT:



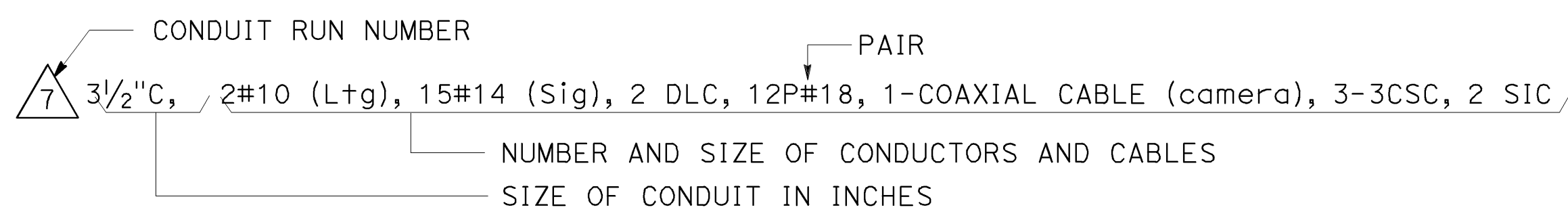
NOTE:

EXISTING EQUIPMENT IDENTIFICATION CHARACTERS ARE SHOWN IN PARENTHESIS

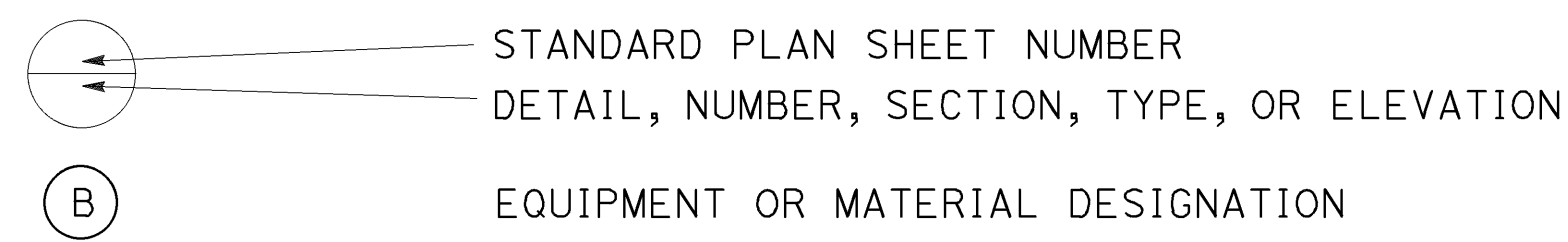
MISCELLANEOUS EQUIPMENT

NEW	EXISTING	DESCRIPTION
		CHANGEABLE MESSAGE SIGN
		CAMERA
		HIGHWAY ADVISORY RADIO POLE AND ANTENNA
		EXTINGUISHABLE MESSAGE SIGN
		DETECTION DEVICE M = MICROWAVE SENSOR
		DETECTION DEVICE V = VIDEO IMAGE SENSOR

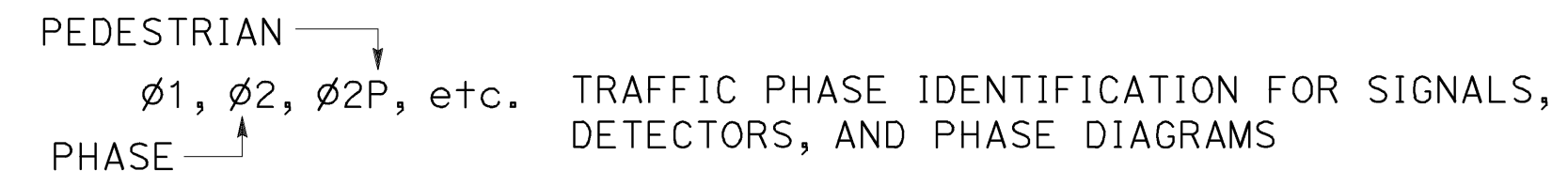
CONDUIT AND CONDUCTORS



DETAILS



PHASE

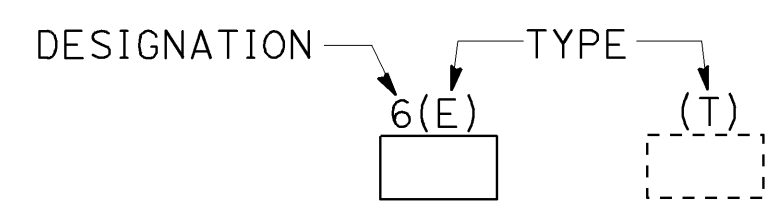


WIRING COMPONENTS

SYMBOL	DESCRIPTION
	EXTERNAL CONDUCTOR
	CONDUCTOR OR BUS
	TIE POINT
	CONTACTOR COIL
	CONTACTOR, NO CONTACT
	TERMINAL BLOCKS
	CONTACTOR, NC CONTACT
	ENCLOSURE BOND
	GROUNDING ELECTRODE
	CIRCUIT BREAKER
	RECEPTACLE

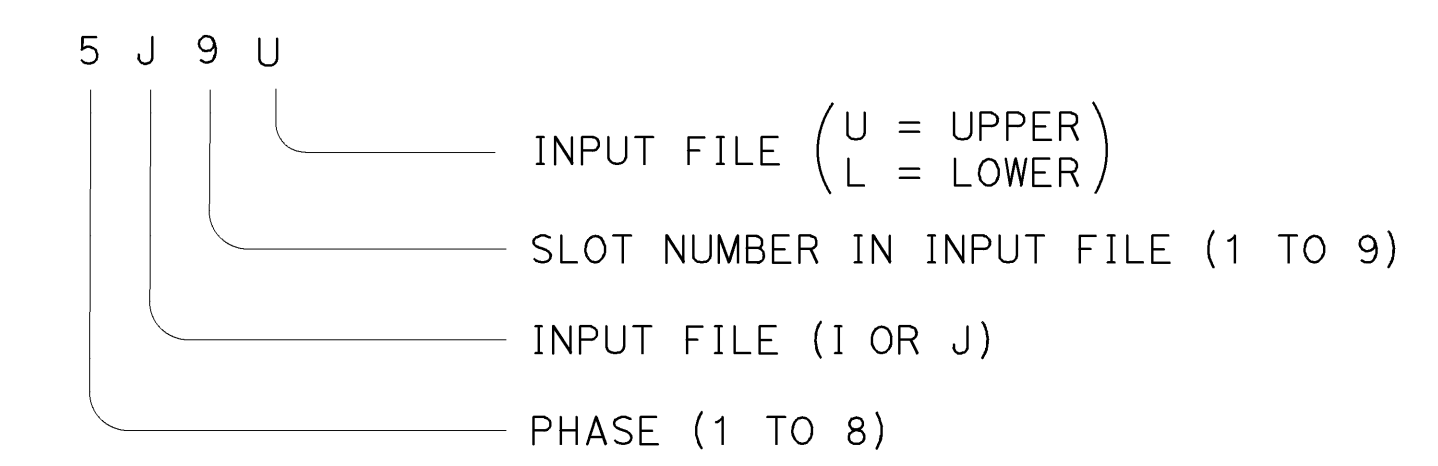
HANDHOLES, PULL BOXES, AND VAULTS

NEW	EXISTING	DESCRIPTION
		DETECTOR HANDHOLE
		PULL BOX, No. 5 UNLESS OTHERWISE INDICATED
		VAULT



- DESIGNATIONS:**
- 3 No. 3 PULL BOX
 - 5 No. 5 PULL BOX
 - 6 No. 6 PULL BOX
 - 7 No. 7 PULL BOX (CEILING)
 - 8 No. 8 PULL BOX
 - 9 No. 9 PULL BOX (STRUCTURE)
 - 9A No. 9A PULL BOX (STRUCTURE)
- TYPE:**
- (E) PULL BOX WITH EXTENSION
 - (T) TRAFFIC PULL BOX
 - (TR) TAMPER-RESISTANT PULL BOX

VEHICLE DETECTOR DESIGNATION



DETECTORS

NEW	EXISTING	DESCRIPTION
		TYPE A LOOP DETECTOR. OUTLINE OF SAW CUT SHOWN
		TYPE B LOOP DETECTOR. OUTLINE OF SAW CUT SHOWN
		TYPE C LOOP DETECTOR. OUTLINE OF SAW CUT SHOWN
		TYPE D LOOP DETECTOR. OUTLINE OF SAW CUT SHOWN
		TYPE E LOOP DETECTOR. OUTLINE OF SAW CUT SHOWN
		TYPE F LOOP DETECTOR. OUTLINE OF SAW CUT SHOWN
		TYPE Q LOOP DETECTOR. OUTLINE OF SAW CUT SHOWN
		MICROWAVE OR VIDEO DETECTION ZONE

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND)

NO SCALE

RSP ES-1C DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN ES-1C DATED MAY 31, 2018 - PAGE 477 OF THE STANDARD PLANS BOOK DATED 2018.

REVISED STANDARD PLAN RSP ES-1C

2018 REVISED STANDARD PLAN RSP ES-1C

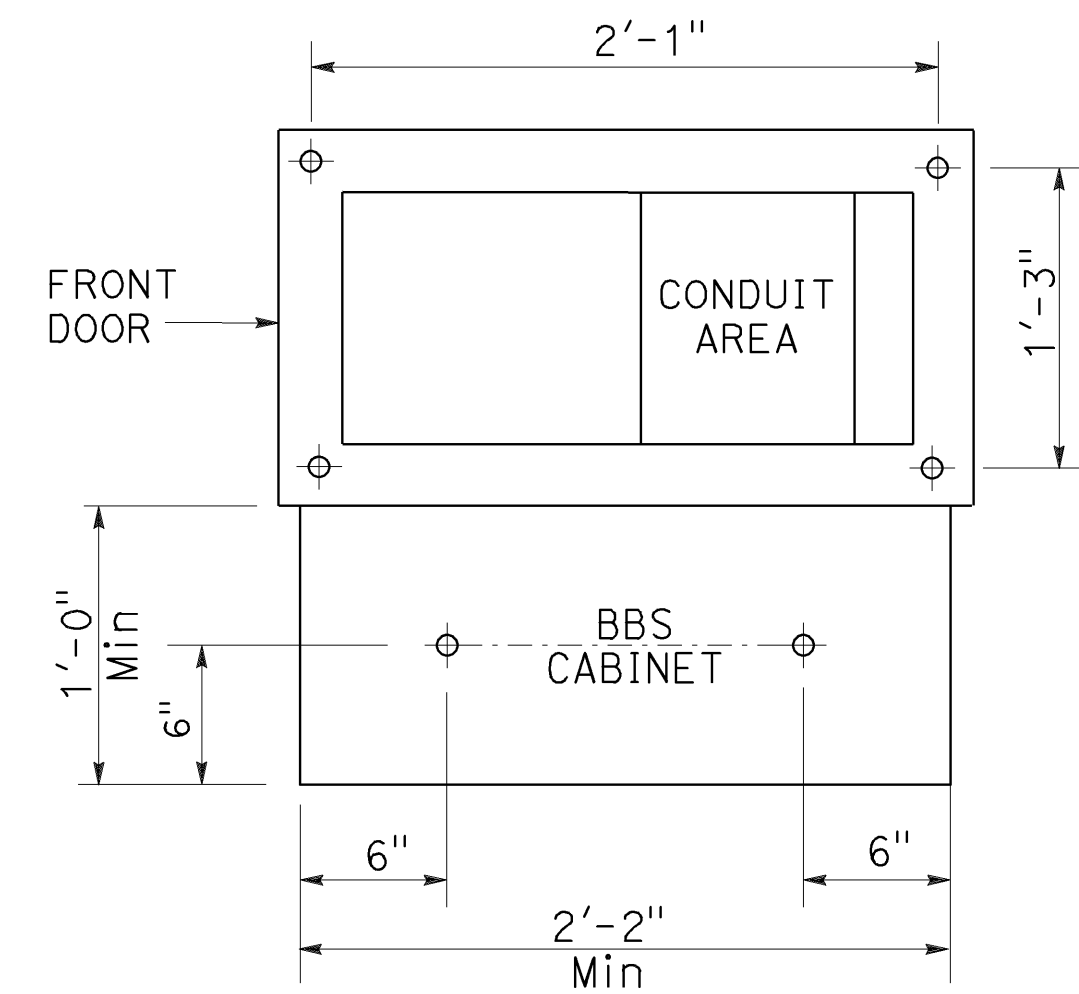
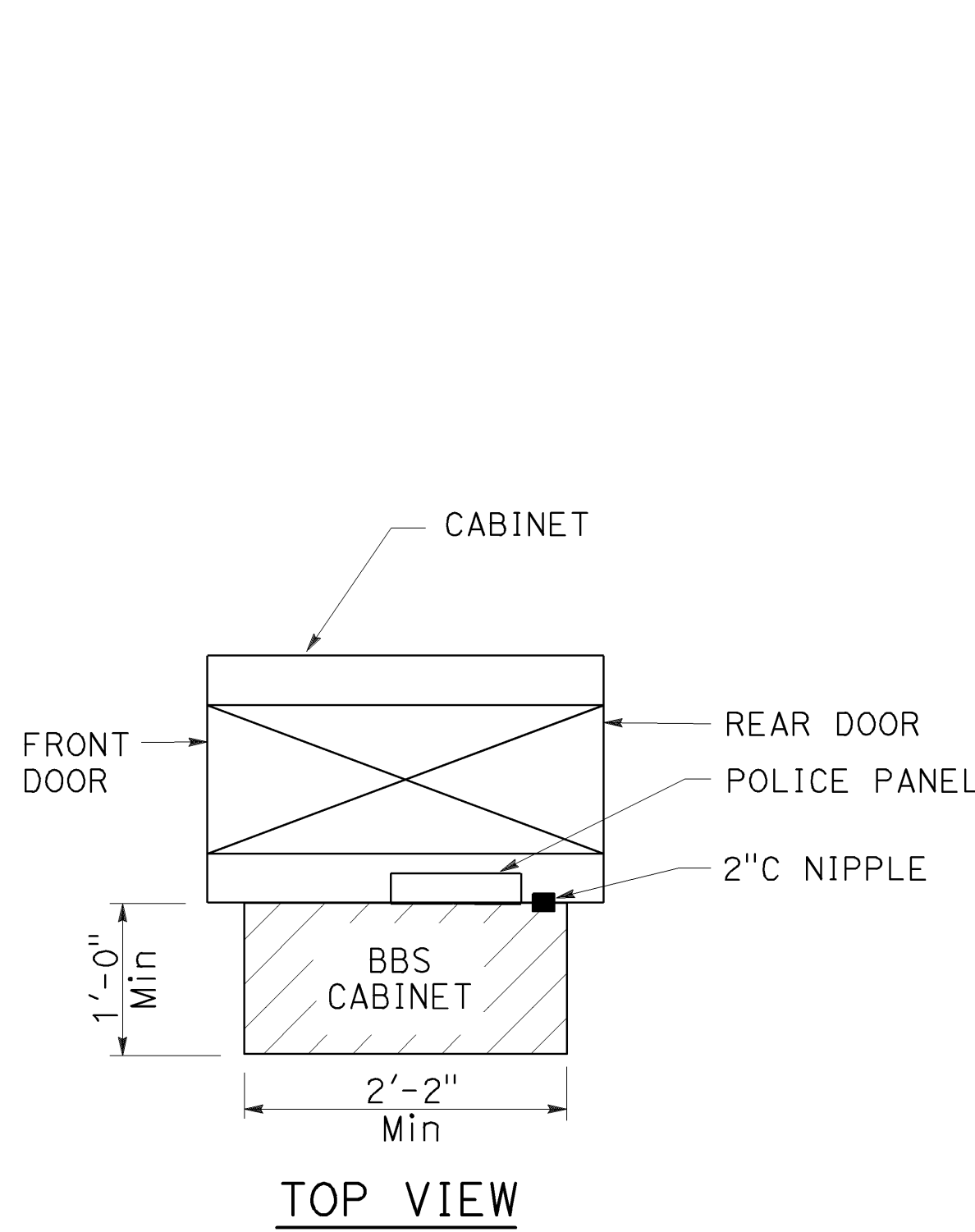
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	7.8/8.0	197	436

H.R.J.
REGISTERED ELECTRICAL ENGINEER
October 19, 2018
PLANS APPROVAL DATE
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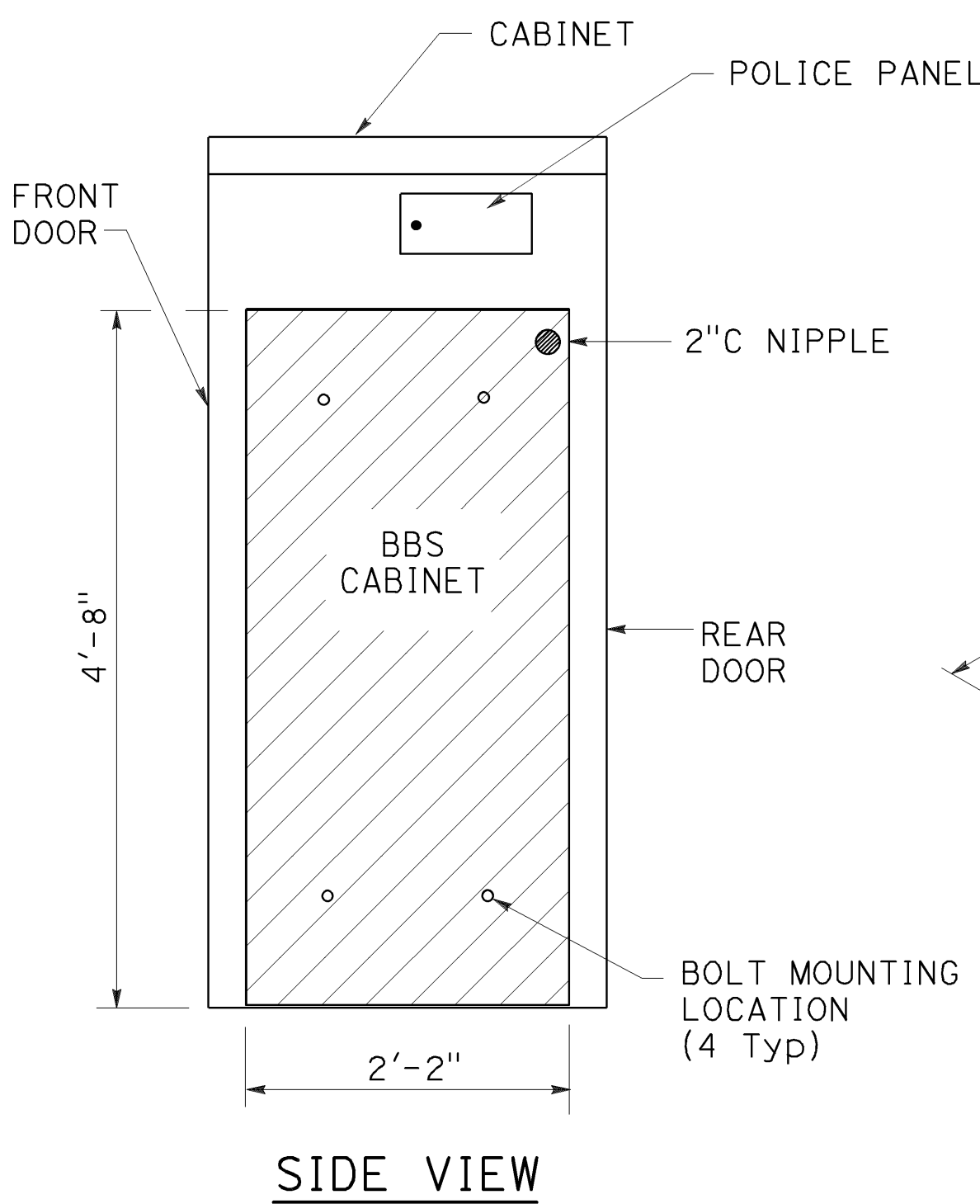
Hamid Zolfaghari
REGISTERED PROFESSIONAL ENGINEER
No. E15636
Exp. 12-31-19
ELECTRICAL
STATE OF CALIFORNIA

NOTES:

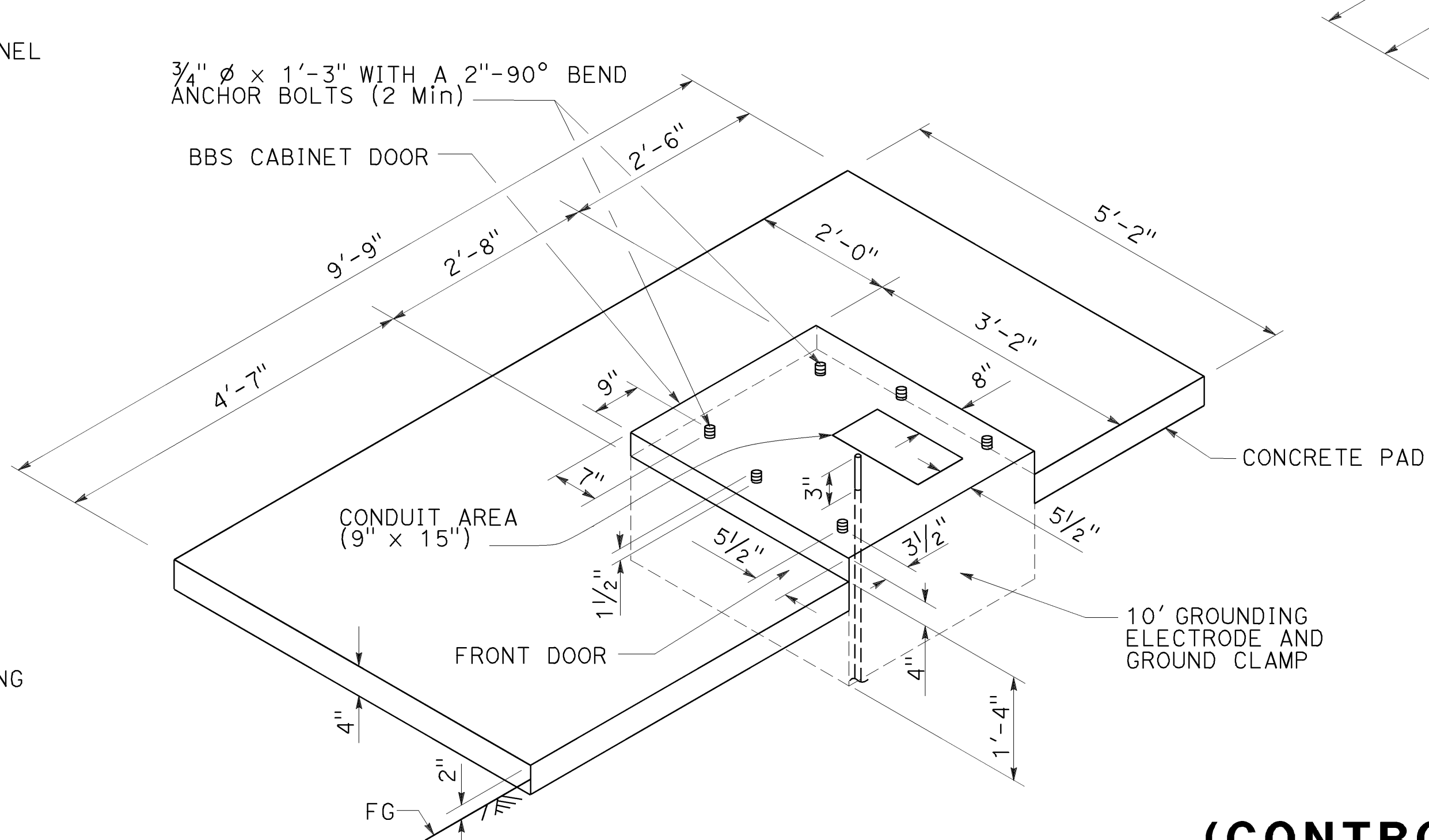
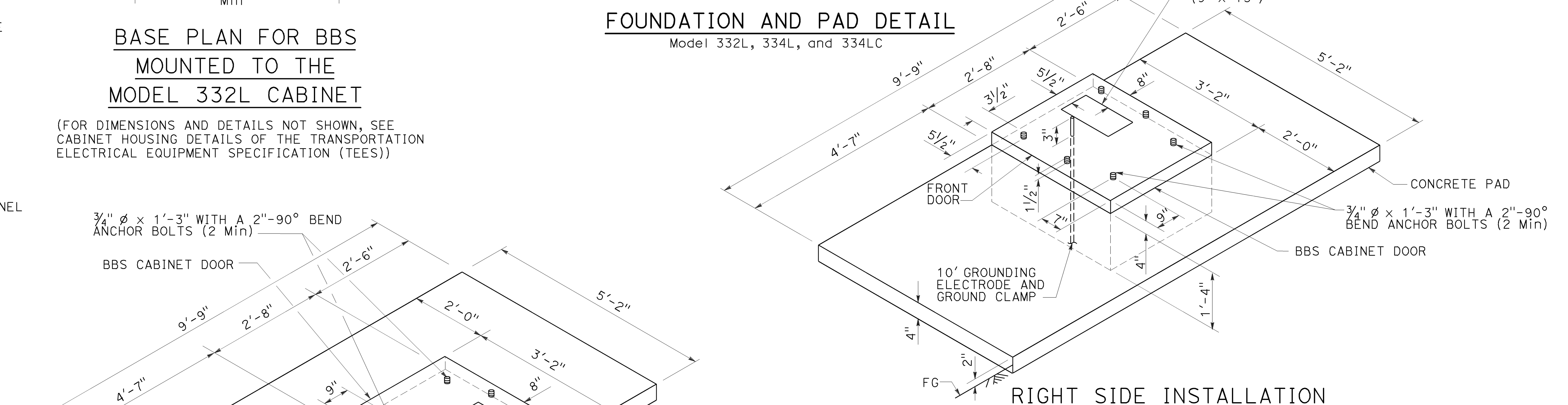
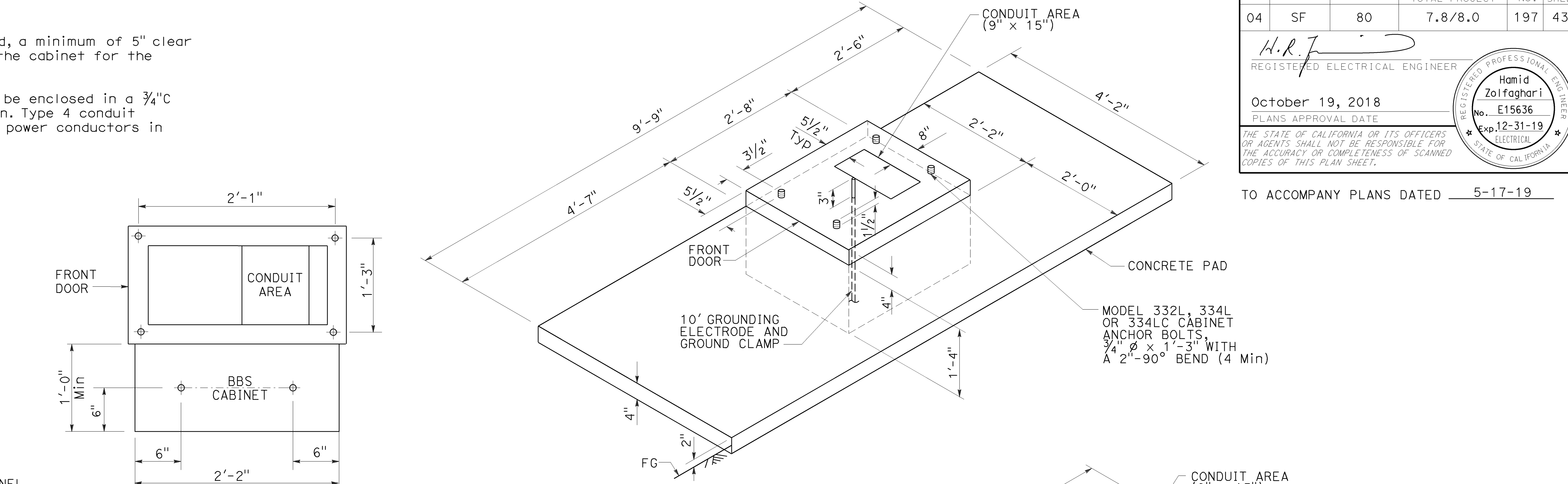
- Where telephone interconnect is required, a minimum of 5" clear vertical space shall be provided inside the cabinet for the equipment.
- Telephone interconnect conductors shall be enclosed in a 3/4" or larger conduit through the foundation. Type 4 conduit shall be used to separate telephone and power conductors in cabinets.



(FOR DIMENSIONS AND DETAILS NOT SHOWN, SEE CABINET HOUSING DETAILS OF THE TRANSPORTATION ELECTRICAL EQUIPMENT SPECIFICATION (TEES))



BBS CABINET MOUNTED TO THE MODEL 332L CABINET



LEFT SIDE INSTALLATION DETAIL A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(CONTROLLER CABINET FOUNDATION AND PAD DETAILS)
NO SCALE

2018 REVISED STANDARD PLAN RSP ES-3C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	198	436

H.R. J.
REGISTERED ELECTRICAL ENGINEER

October 19, 2018
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
Hamid Zolfaghari
No. E15636
Exp. 12-31-19
ELECTRICAL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 5-17-19

PLAN VIEW OF OTHER SIDE MOUNTINGS

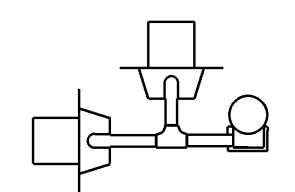
ABBREVIATIONS:

- SV SIDE MOUNTED SIGNAL HEADS
- T TERMINAL COMPARTMENT
- TV TOP MOUNTED SIGNAL HEADS
- 1, 2, 3, 4 NUMBER OF SIGNAL FACES (3 - SECTION, UNLESS OTHERWISE INDICATED)
- A, B, C, D CONFIGURATION OF SIGNALS

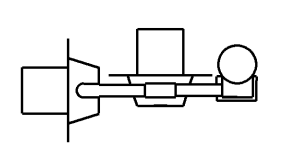
NOTES:

1. Mountings shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. See Revised Standard Plans RSP ES-4D and RSP ES-4E for attachment fitting details.

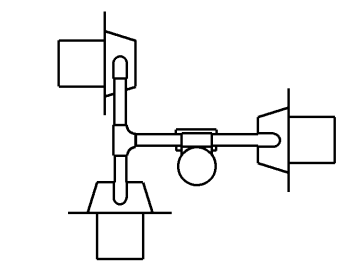
PLAN VIEW OF TOP MOUNTINGS



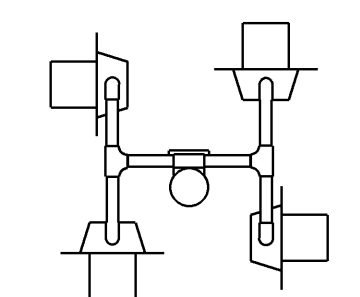
SV-2-TD



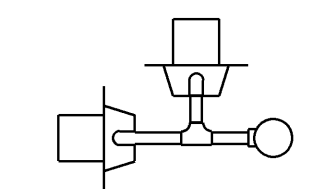
SV-2-TC



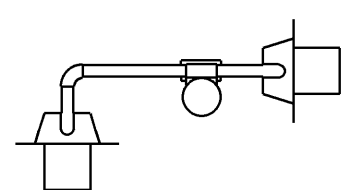
SV-3-TC



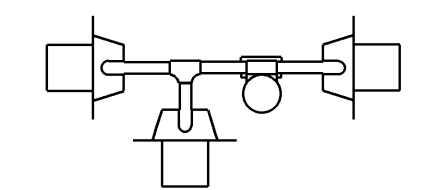
SV-4-TC



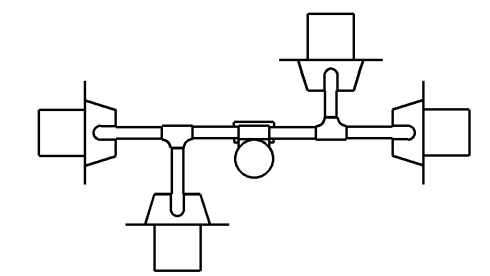
SV-2B



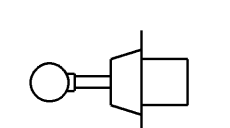
SV-2-TB



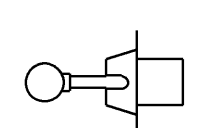
SV-3-TB



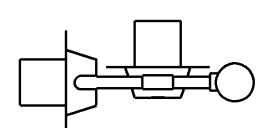
SV-4-TB



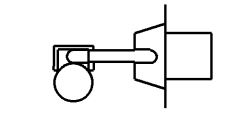
SV



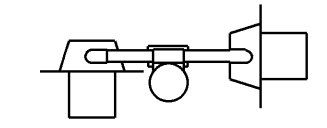
SV-1



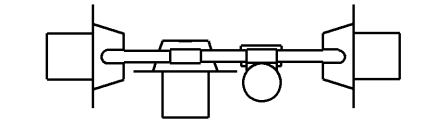
SV-2A



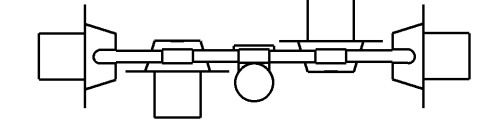
SV-1-T



SV-2-TA

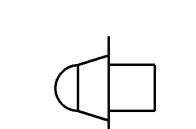


SV-3-TA

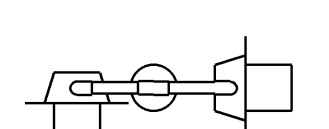


SV-4-TA

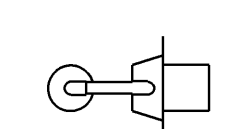
SIDE MOUNTINGS



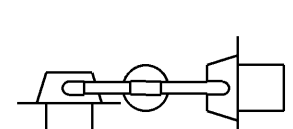
TV-1



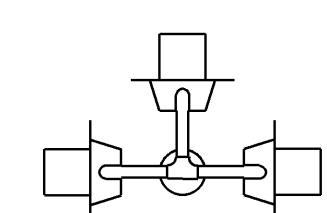
TV-2



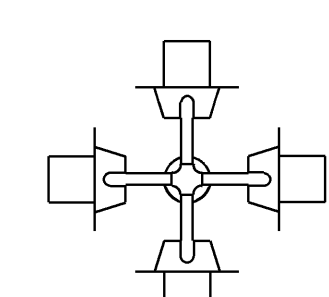
TV-1-T



TV-2-T



TV-3-T



TV-4-T

TOP MOUNTINGS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SIGNAL HEAD MOUNTING)**

NO SCALE
RSP ES-4A DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN ES-4A
DATED MAY 31, 2018 - PAGE 499 OF THE STANDARD PLANS BOOK DATED 2018.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	7.8/8.0	199	436

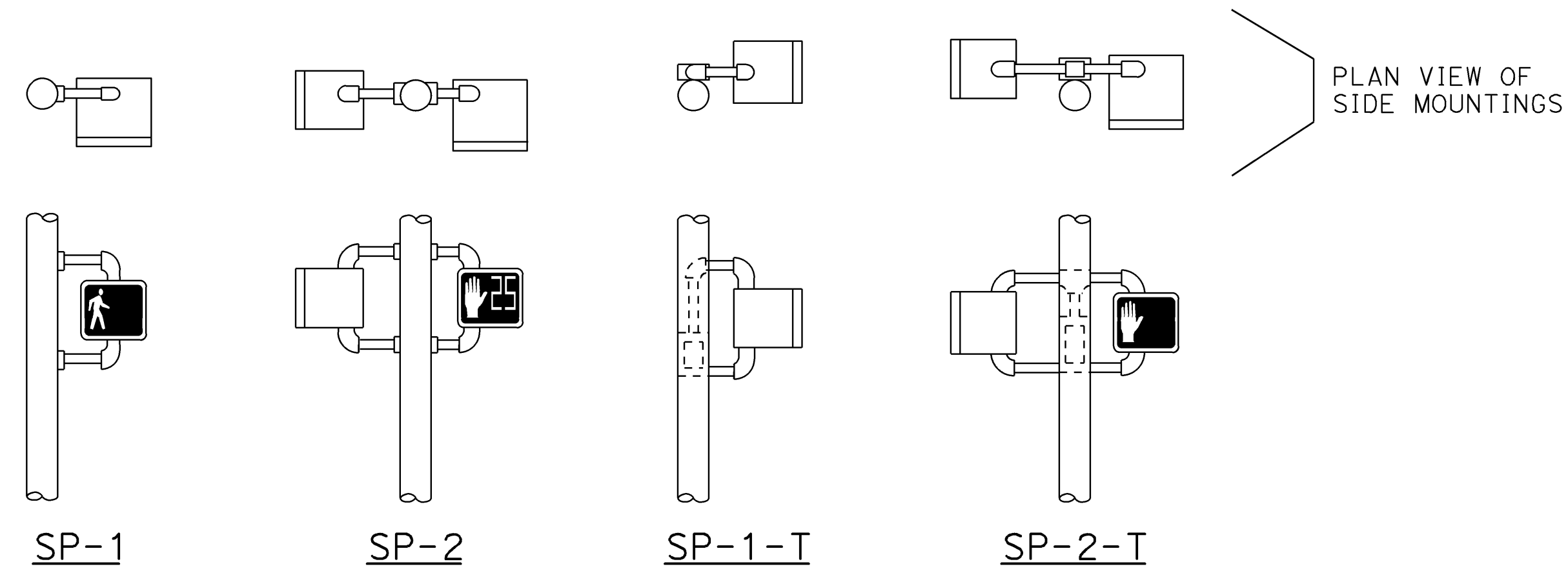
H.R. J.
REGISTERED ELECTRICAL ENGINEER

October 19, 2018
PLANS APPROVAL DATE

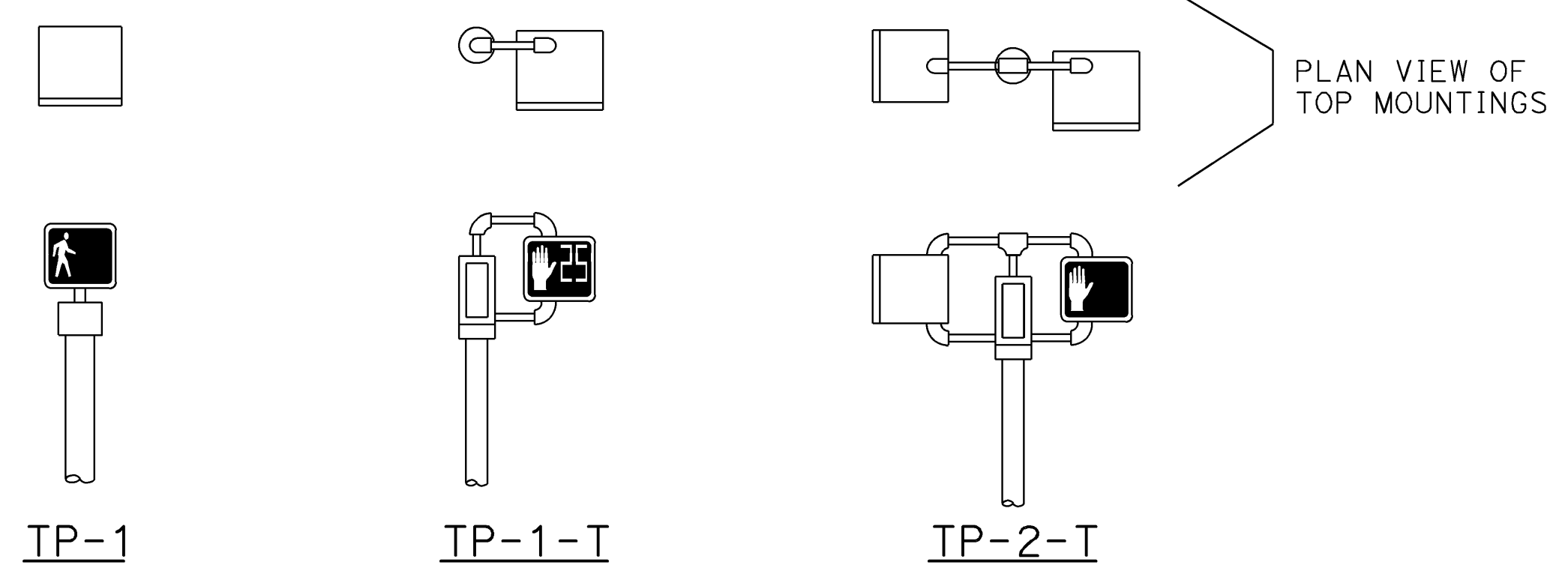
Hamid Zolfaghari
No. E15636
Exp. 12-31-19
ELECTRICAL
STATE OF CALIFORNIA

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.

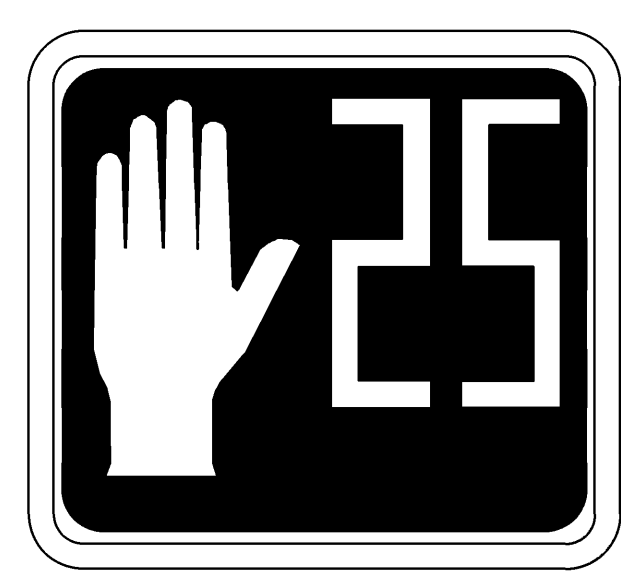
TO ACCOMPANY PLANS DATED 5-17-19



SP-1 SP-2 SP-1-T SP-2-T
SIDE MOUNTINGS



IP-1 IP-1-T IP-2-T
TOP MOUNTINGS
PEDESTRIAN SIGNAL HEAD MOUNTINGS
DETAIL A



PERSON WALKING INTERVAL FLASHING UPRaised HAND INTERVAL STEADY UPRaised HAND INTERVAL
LED COUNTDOWN PEDESTRIAN SIGNAL FACE MODULE
DETAIL B

NOTES:

1. Mounting shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. See Revised Standard Plan RSP ES-4D for attachment fittings details.

ABBREVIATIONS:

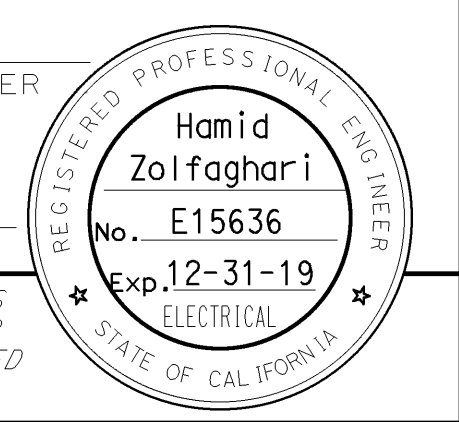
- 1, 2 NUMBER OF SIGNAL FACES
- SP SIDE MOUNTED PEDESTRIAN SIGNAL
- T TERMINAL COMPARTMENT
- TP TOP MOUNTED PEDESTRIAN SIGNAL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(PEDESTRIAN SIGNAL HEADS)**
NO SCALE

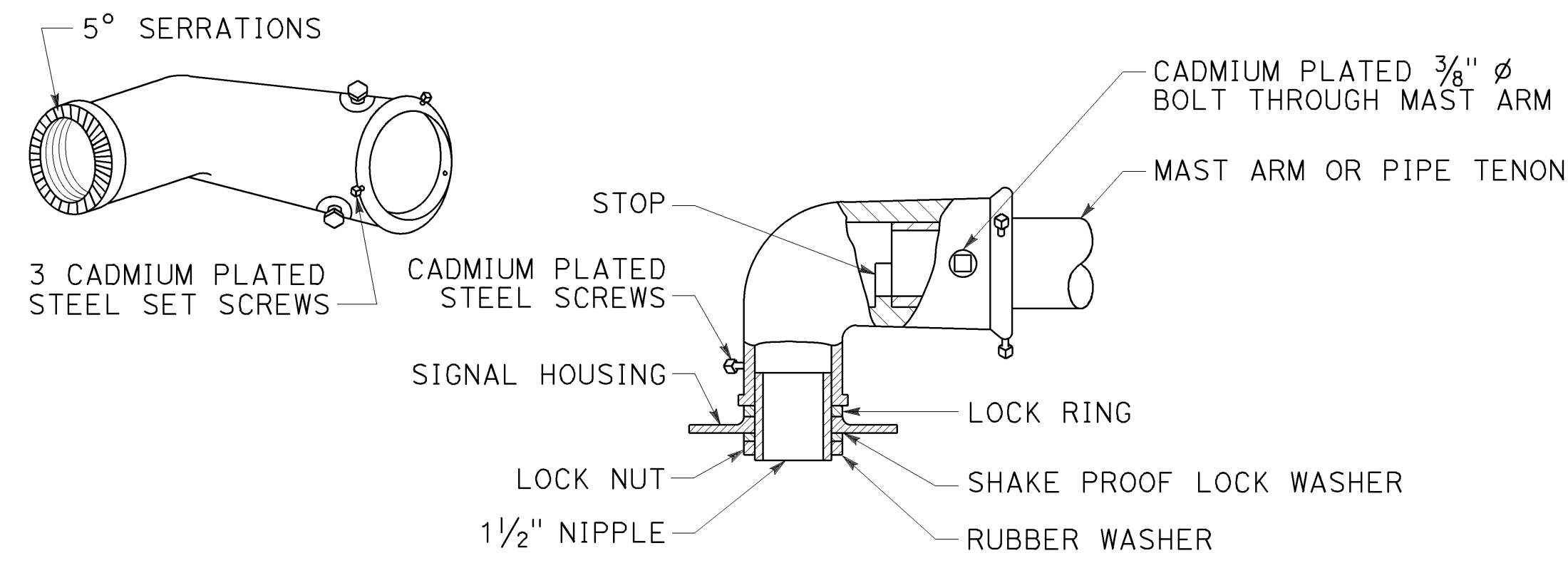
RSP ES-4B DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN ES-4B
DATED MAY 31, 2018 - PAGE 500 OF THE STANDARD PLANS BOOK DATED 2018.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	200	436

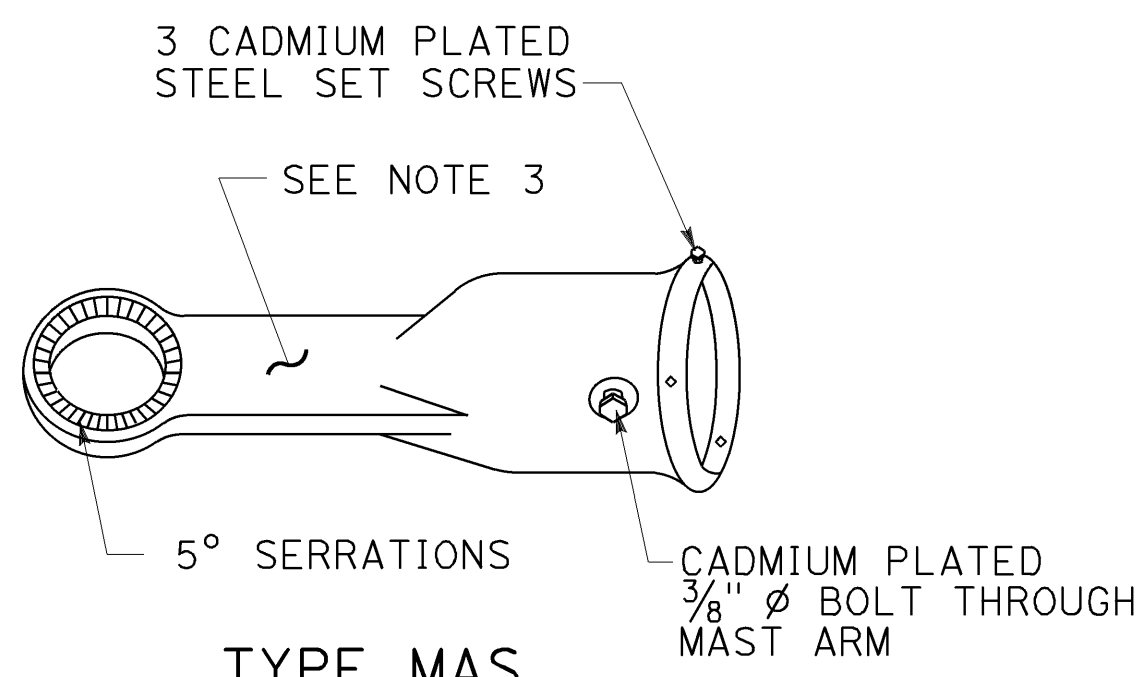
H.R.F.
 REGISTERED ELECTRICAL ENGINEER
 October 19, 2018
 PLANS APPROVAL DATE
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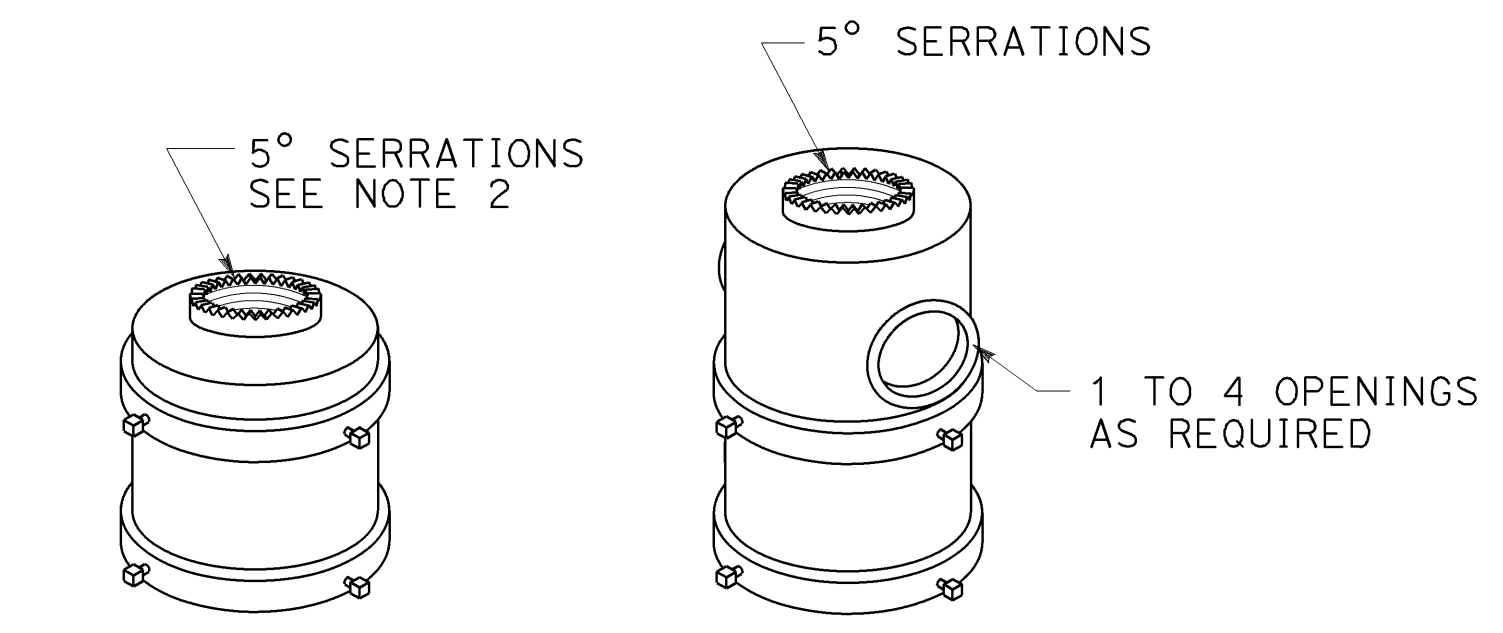
TO ACCOMPANY PLANS DATED 5-17-19



TYPE MAT
MAST ARM MOUNTING
For 2 NPS pipe, see Note 1.

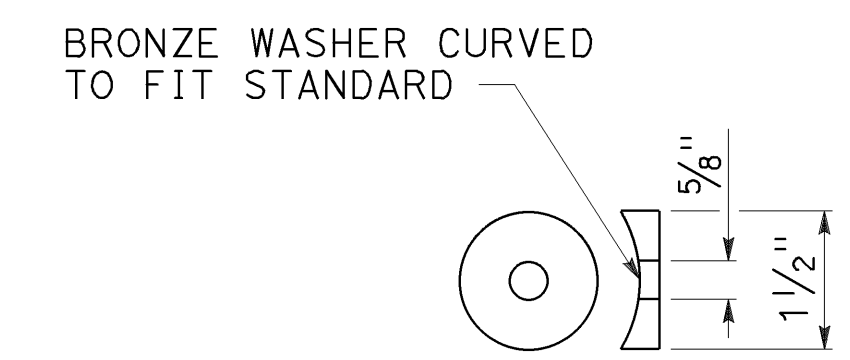


TYPE MAS
MAST ARM MOUNTING
For 2 NPS pipe, see Note 1.

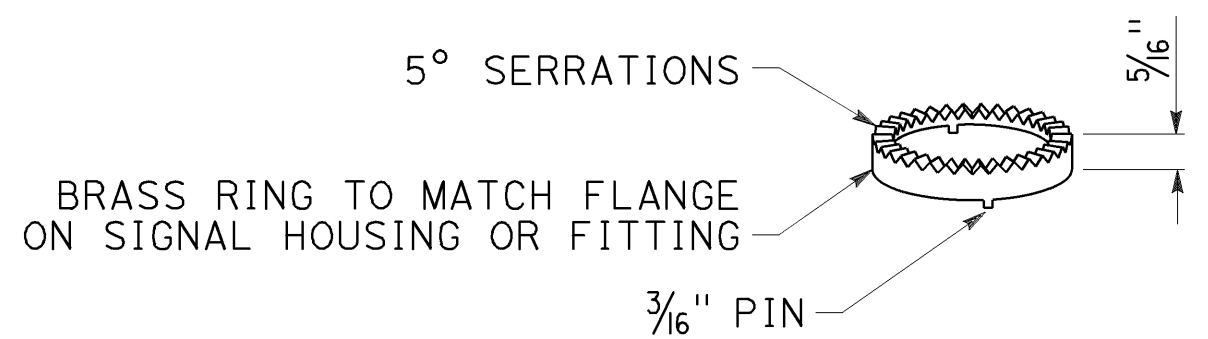


TOP MOUNTINGS
For 4 NPS pipe, see Note 2.

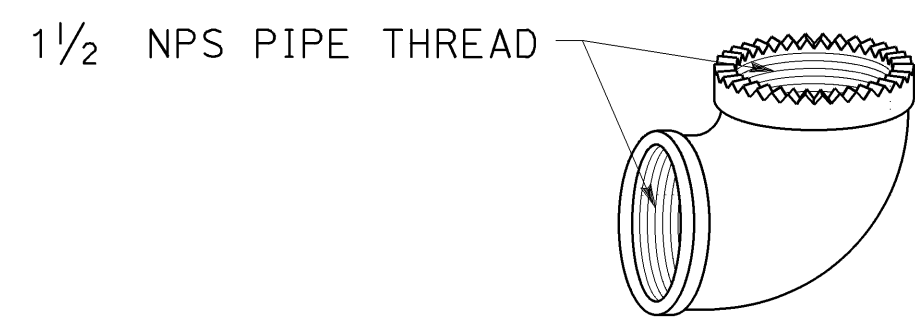
SIGNAL SLIP FITTERS



DETAIL C



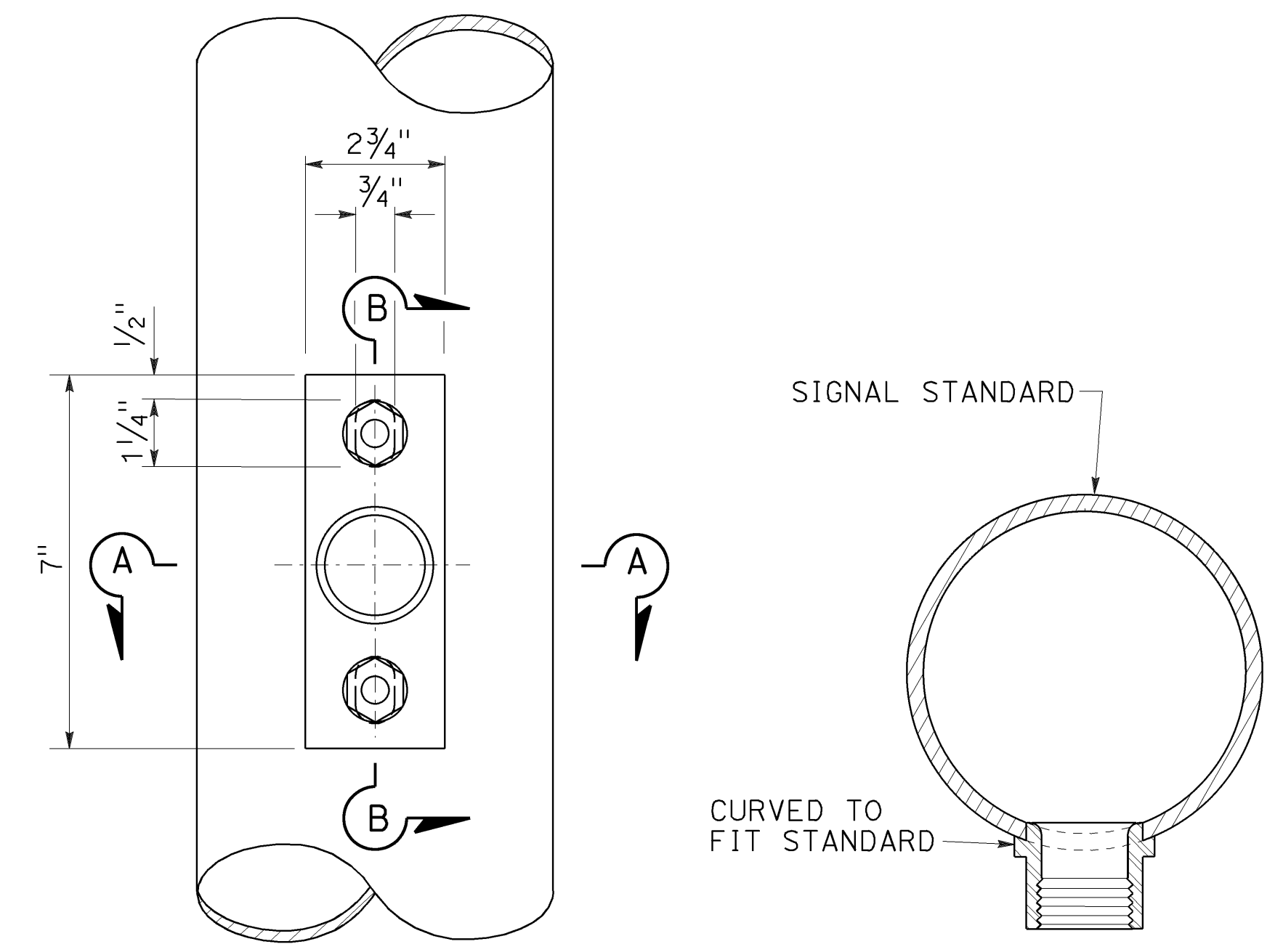
LOCK RING
Use where locking ring is not integral with signal housing or fitting.



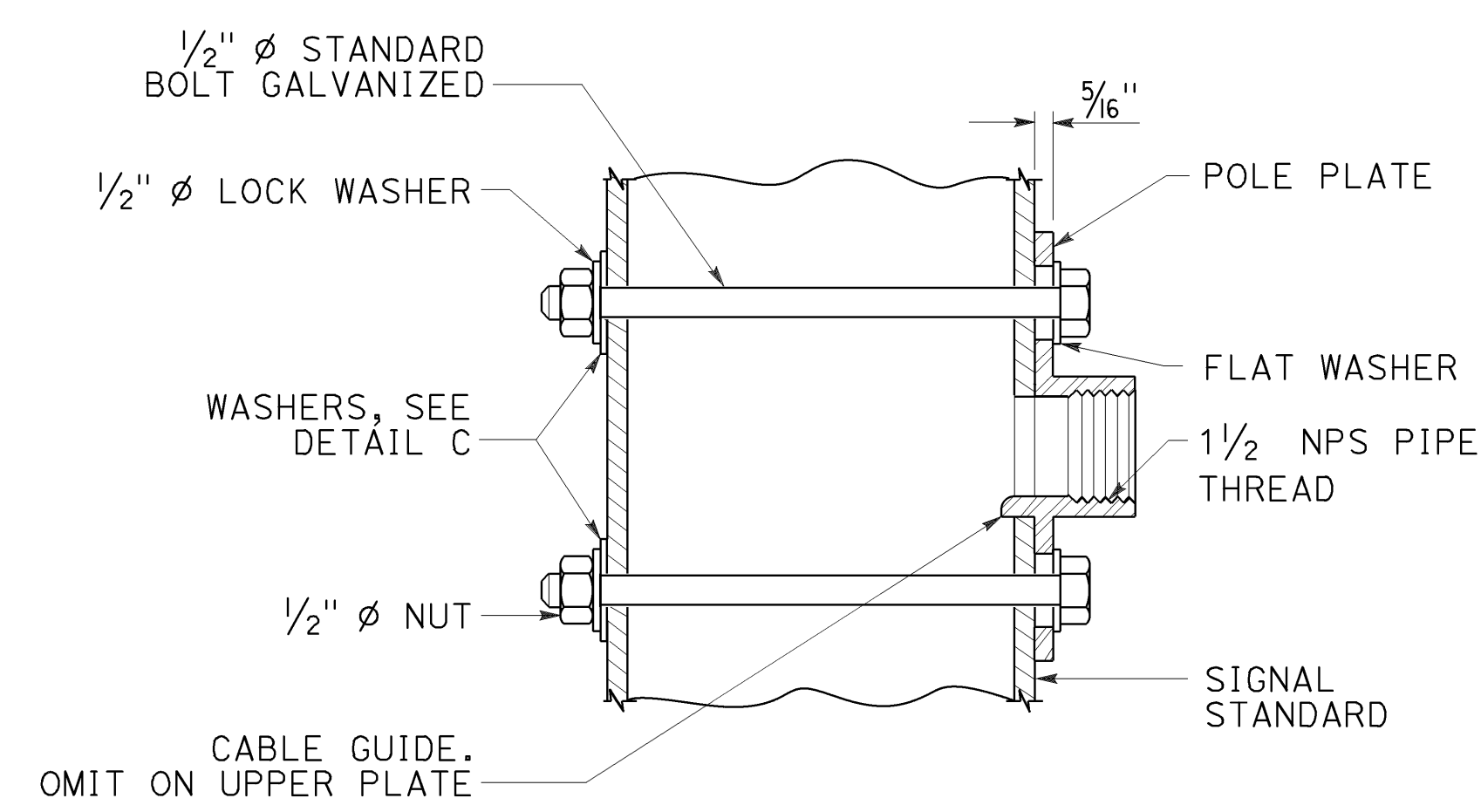
SPECIAL 90° ELBOW
One for each signal head, except those with special slip fitter mounting

- NOTES:**
1. After mast arm signal has been plumbed and secured, drill $\frac{7}{16}$ " hole through mast arm tenon in line with slip fitter hole. Place a cadmium plated $\frac{3}{8}$ " ϕ galvanized bolt with washer under bolt head through hole and secure with washer, nut, and locknut. Seal openings between mast arm mountings and mast arm with mastic.
 2. Threaded top mounted slip fitter openings shall be $\frac{1}{2}$ " NPS. Serrations in fittings shall match those on bottom of signal heads or in lock ring. Top opening shall be offset when backplate is used.
 3. Wireway shall have a cross section area of 0.95 square inch minimum. Minimum width of $\frac{1}{2}$ ".

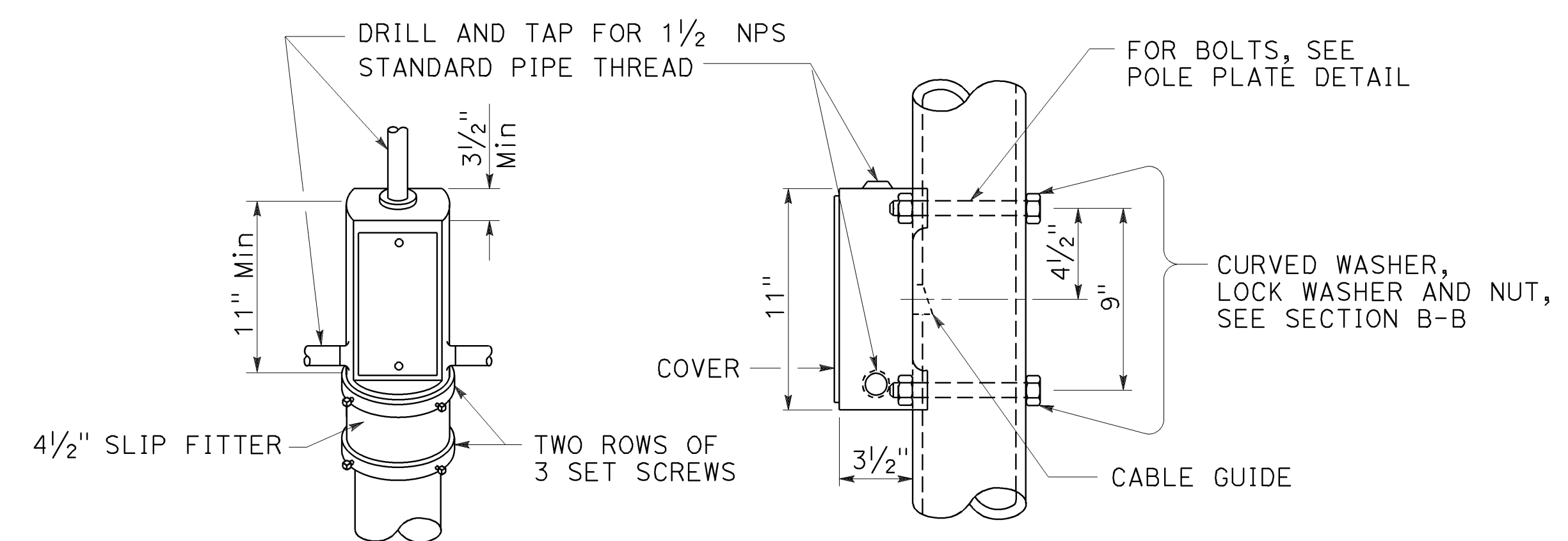
MISCELLANEOUS MOUNTING HARDWARE



POLE PLATE FOR SIDE MOUNTED SIGNAL HEAD WITHOUT TERMINAL COMPARTMENT



SECTION B-B



TOP MOUNTING
SIDE MOUNTING
TERMINAL COMPARTMENT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL HEAD MOUNTING)
NO SCALE

RSP ES-4D DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN ES-4D DATED MAY 31, 2018 - PAGE 502 OF THE STANDARD PLANS BOOK DATED 2018.

2018 REVISED STANDARD PLAN RSP ES-4D

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	201	436

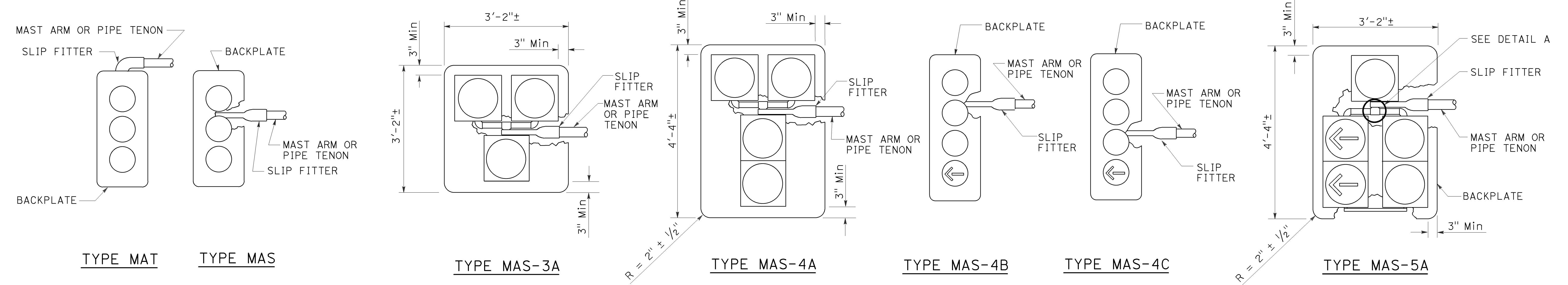
H.R. J.
REGISTERED ELECTRICAL ENGINEER

October 19, 2018
PLANS APPROVAL DATE

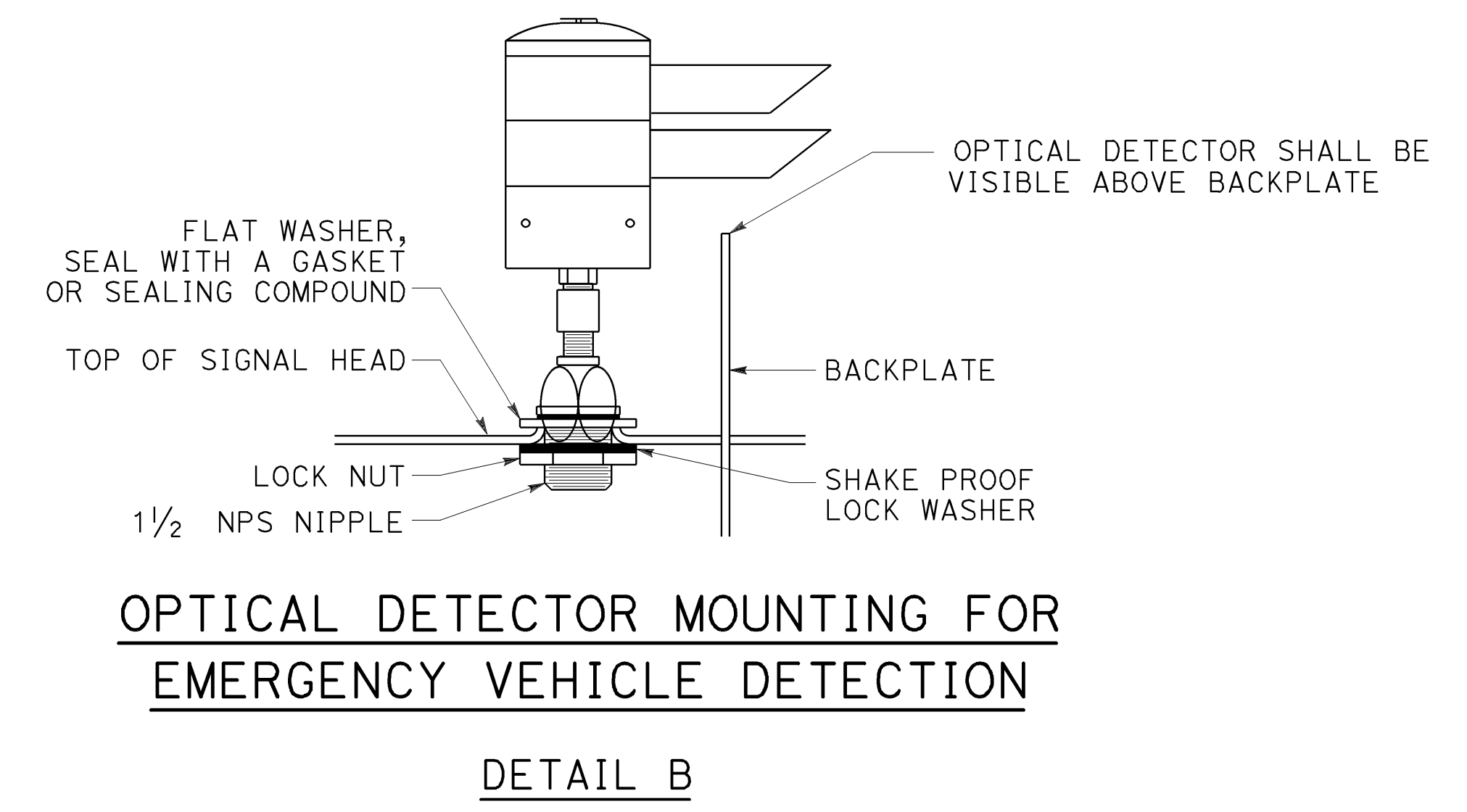
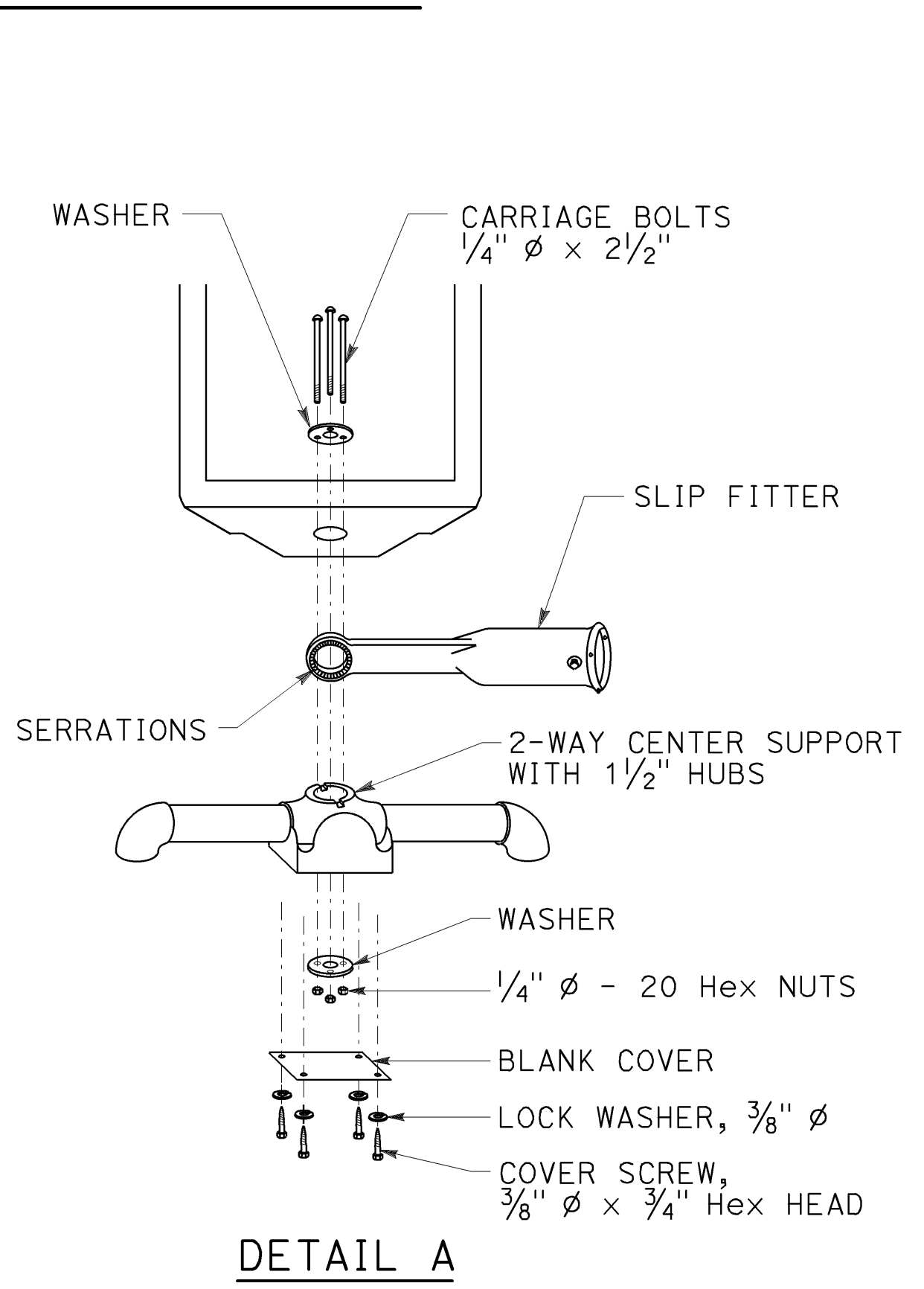
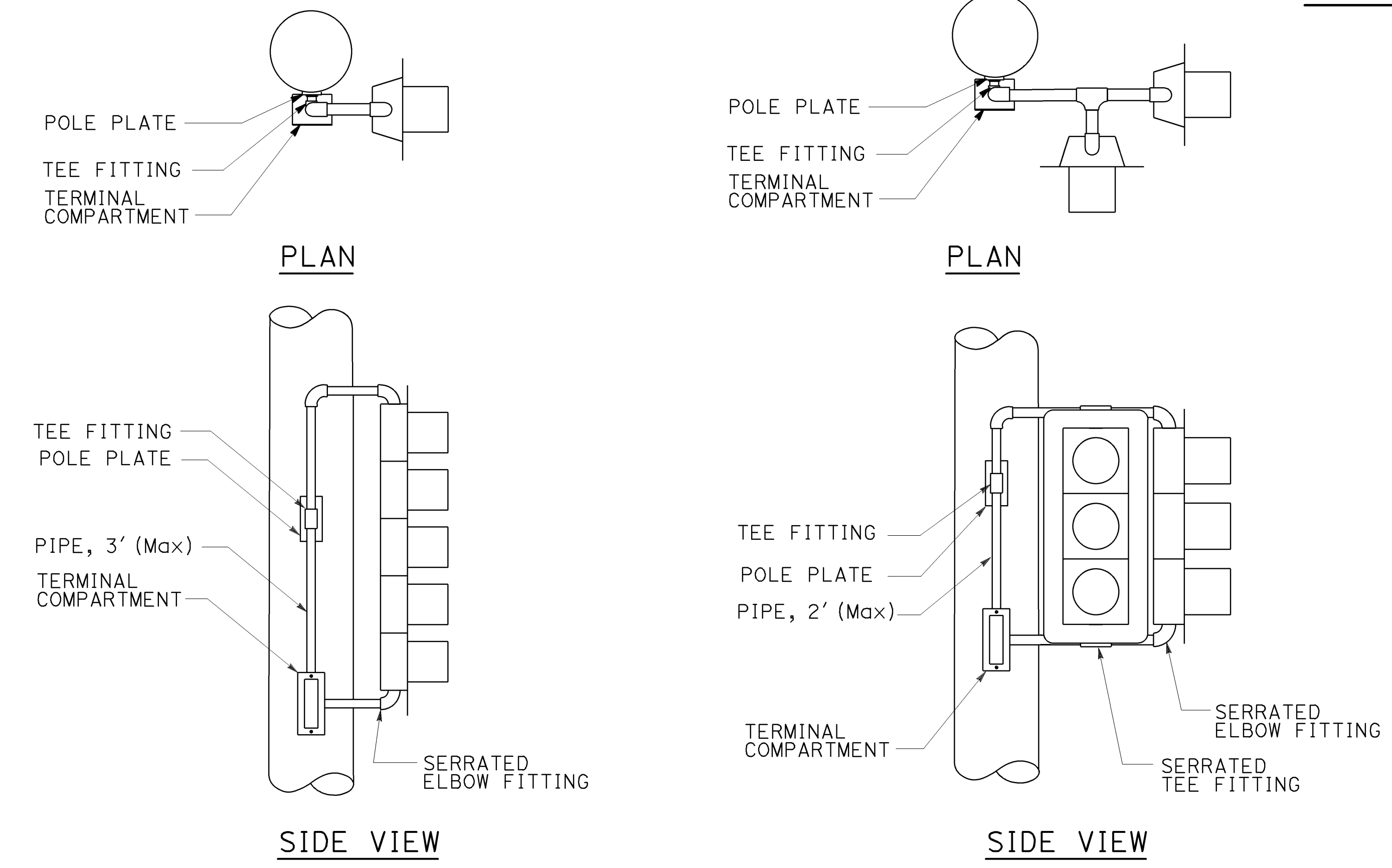
Hamid Zolfaghari
No. E15636
Exp. 12-31-19
ELECTRICAL
STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 5-17-19



MAST ARM MOUNTINGS



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SIGNAL HEADS AND
OPTICAL DETECTOR MOUNTING)**

NO SCALE

RSP ES-4E DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN ES-4E DATED MAY 31, 2018 - PAGE 503 OF THE STANDARD PLANS BOOK DATED 2018.

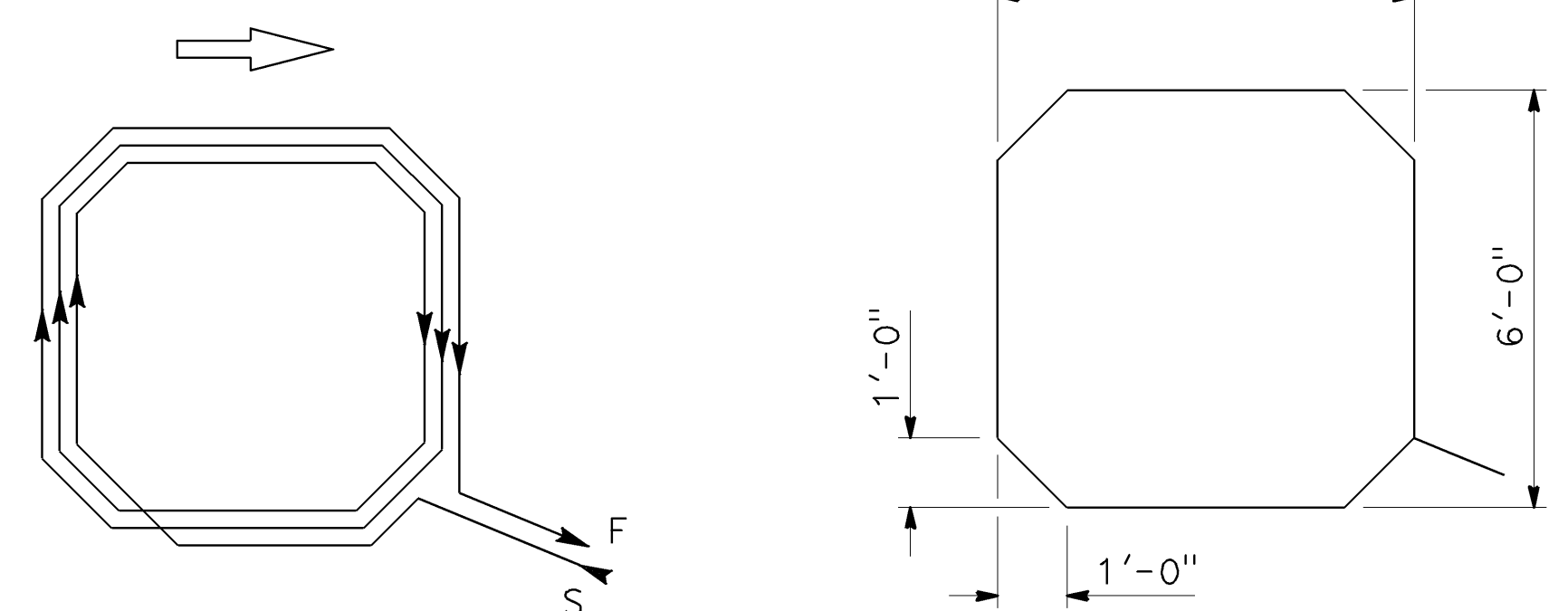
2018 REVISED STANDARD PLAN RSP ES-4E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	7.8/8.0	202	436

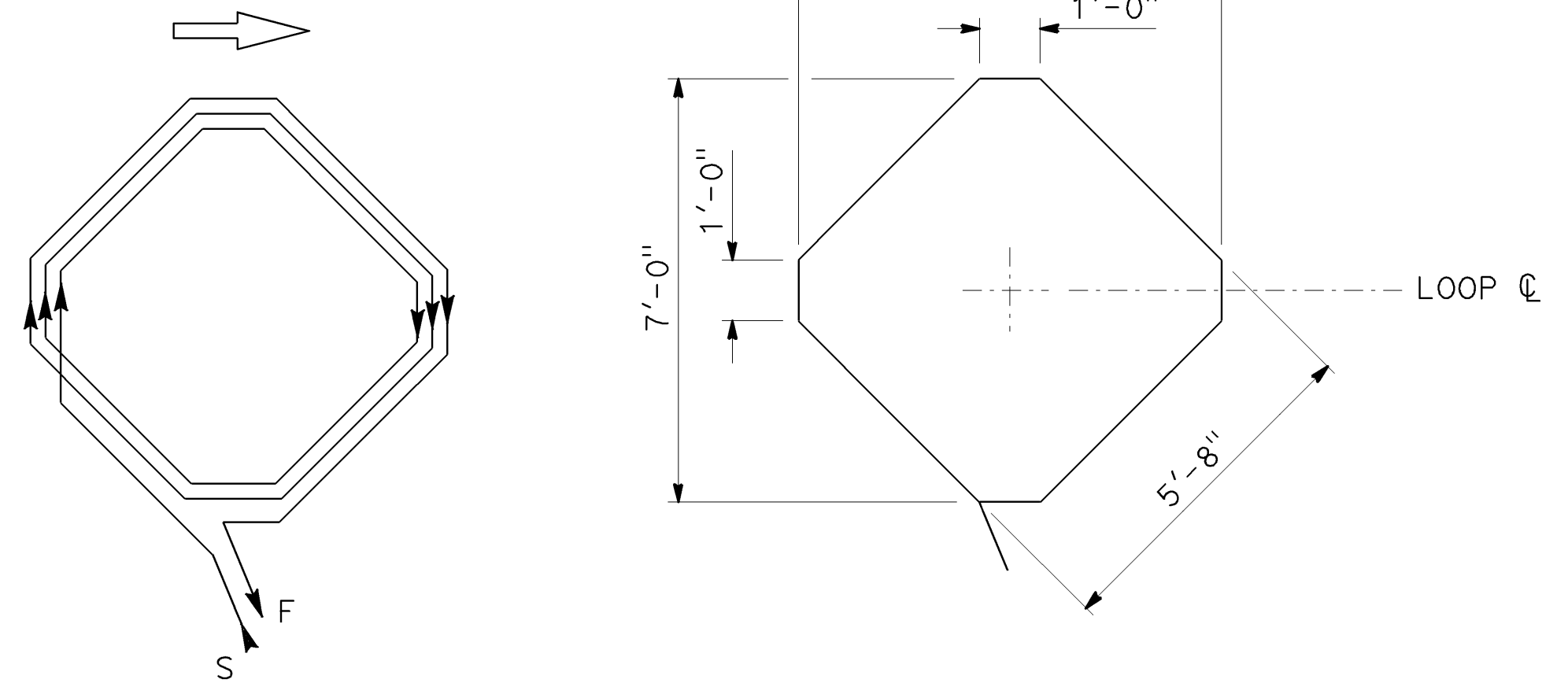
H.R. J.
 REGISTERED ELECTRICAL ENGINEER
 October 19, 2018
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 Hamid Zolfaghari
 No. E15636
 Exp. 12-31-19
 ELECTRICAL
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 5-17-19

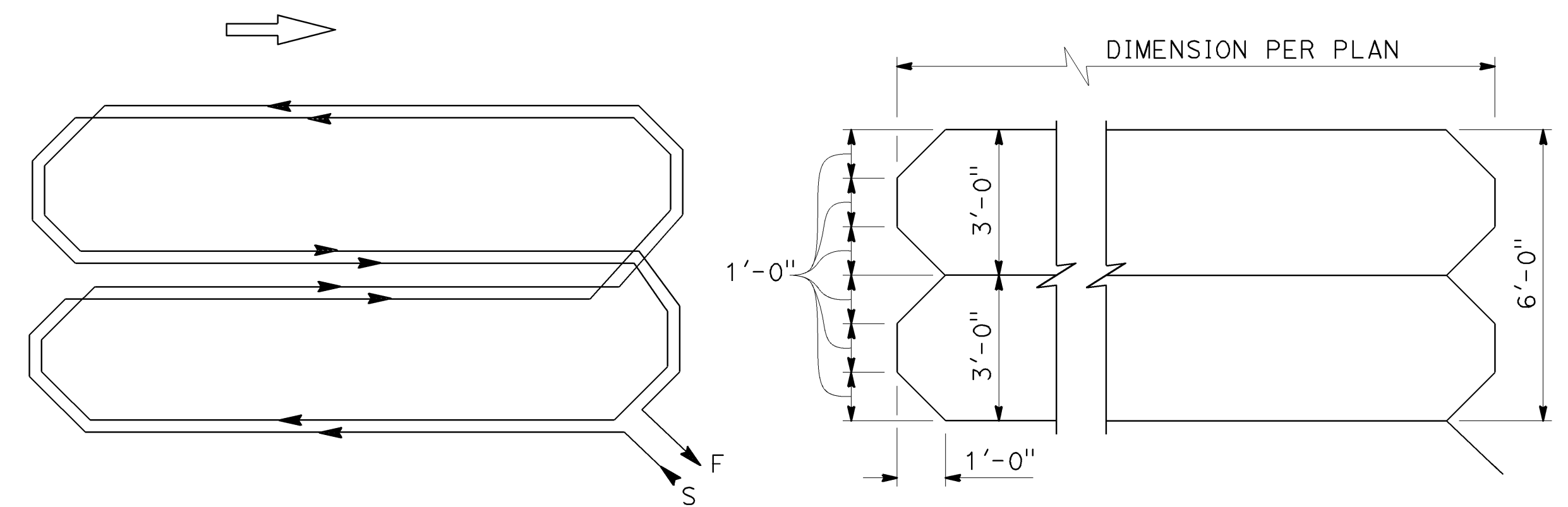


WINDING DETAIL
SAW CUT DETAIL
TYPE A LOOP DETECTOR CONFIGURATION

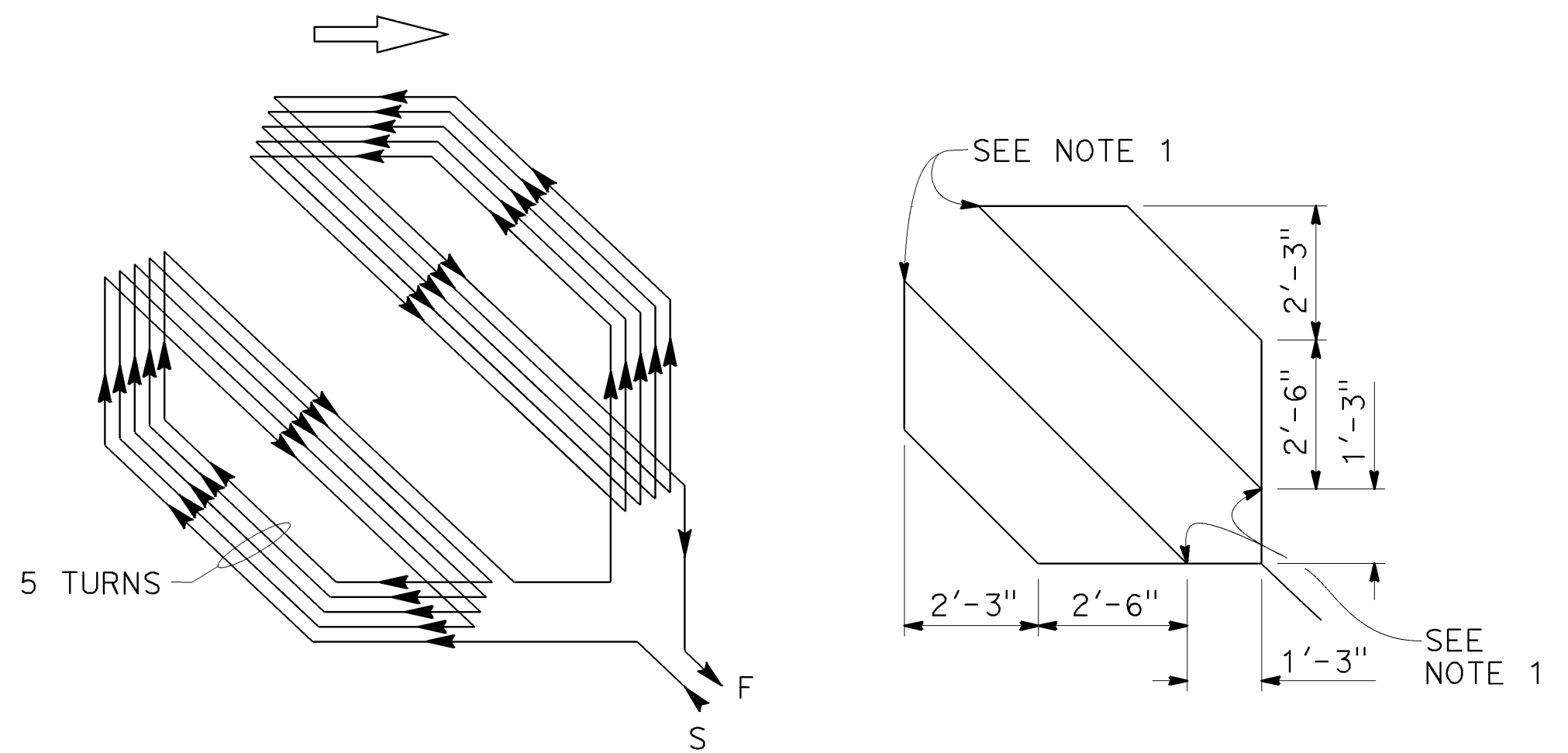


WINDING DETAIL
SAW CUT DETAIL
TYPE B LOOP DETECTOR CONFIGURATION

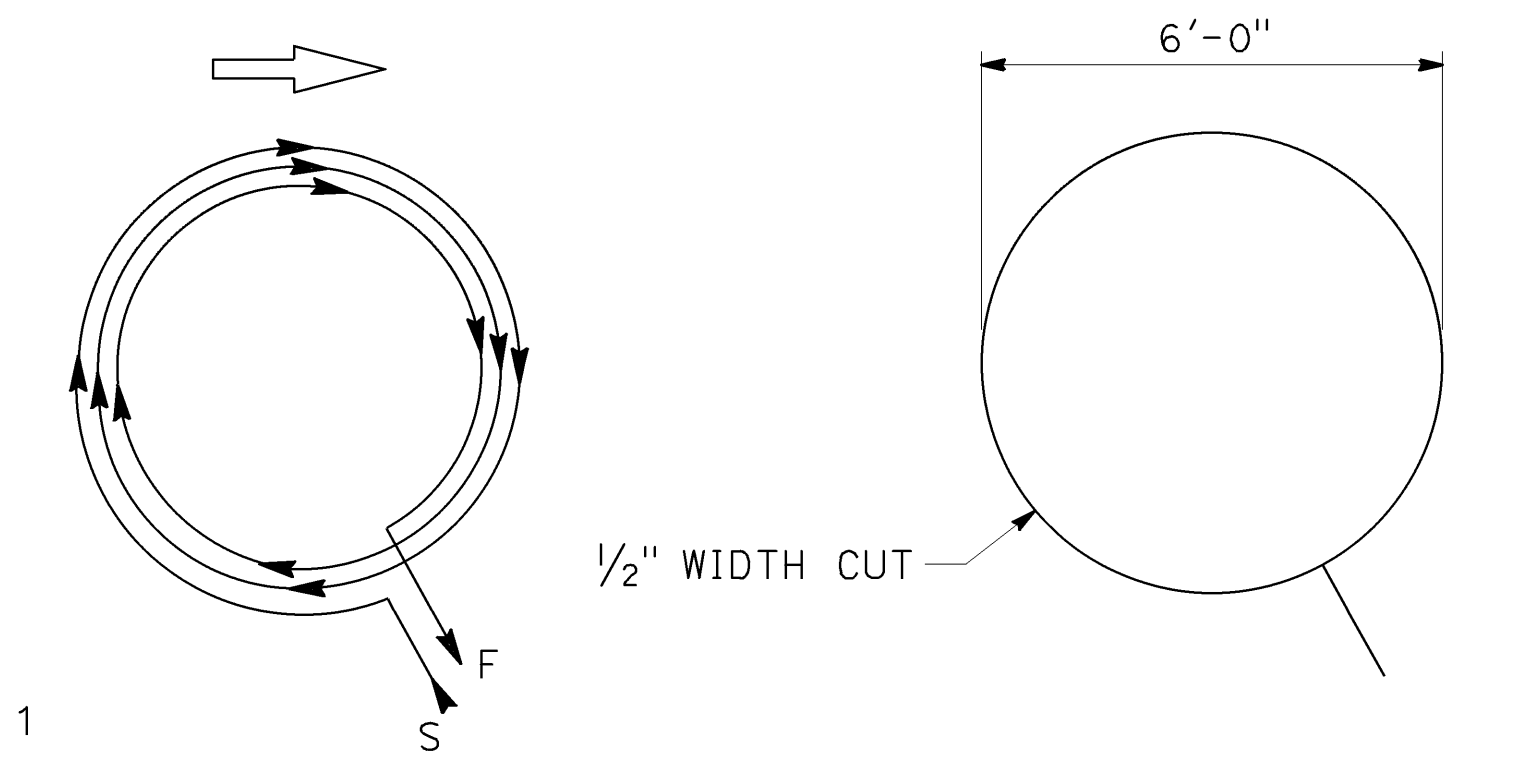
- NOTES:**
1. Round corners of acute angle saw cuts to prevent damage to conductors.
 2. Typical distance separating loops from edge to edge is 10' for Type A, B, D, E, and F installation in single lane.
 3. Use Type D and F loops for limit line detection and bicycle lanes.



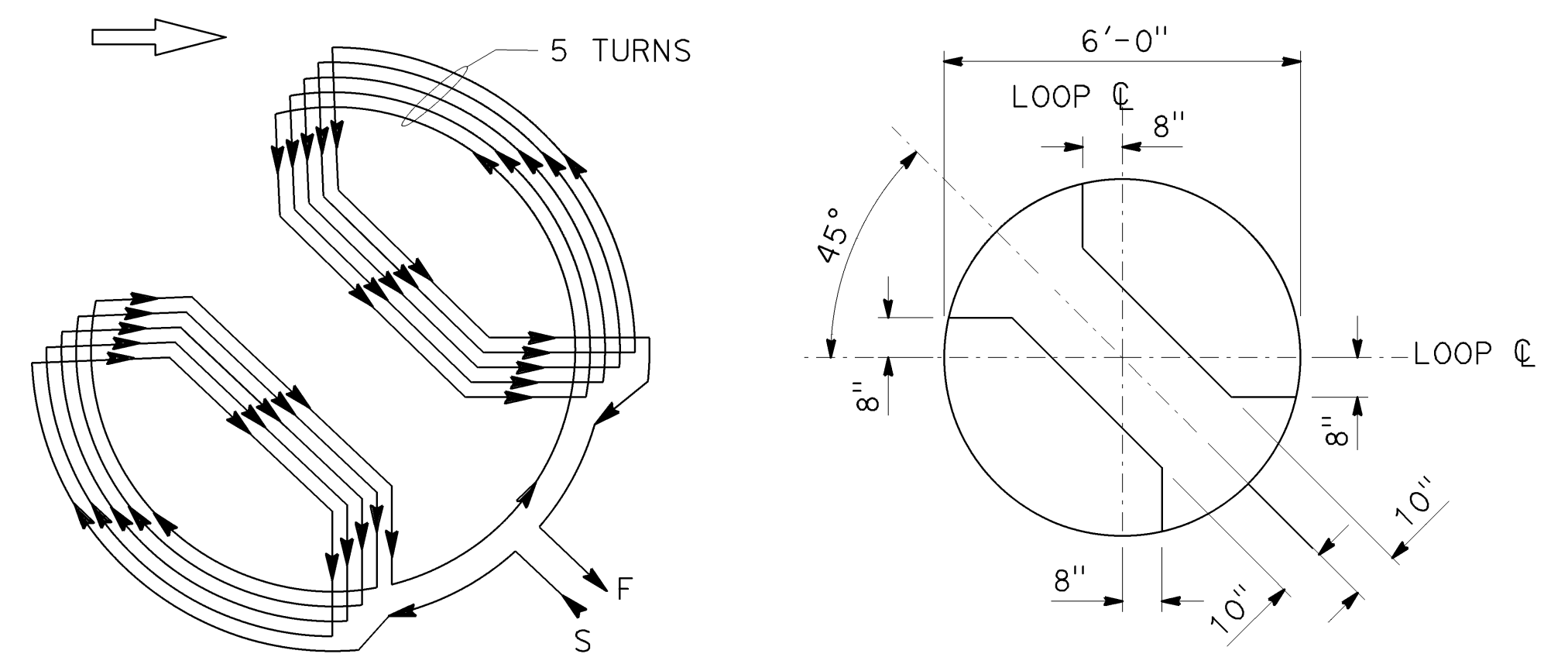
WINDING DETAIL
SAW CUT DETAIL
TYPE C LOOP DETECTOR CONFIGURATION



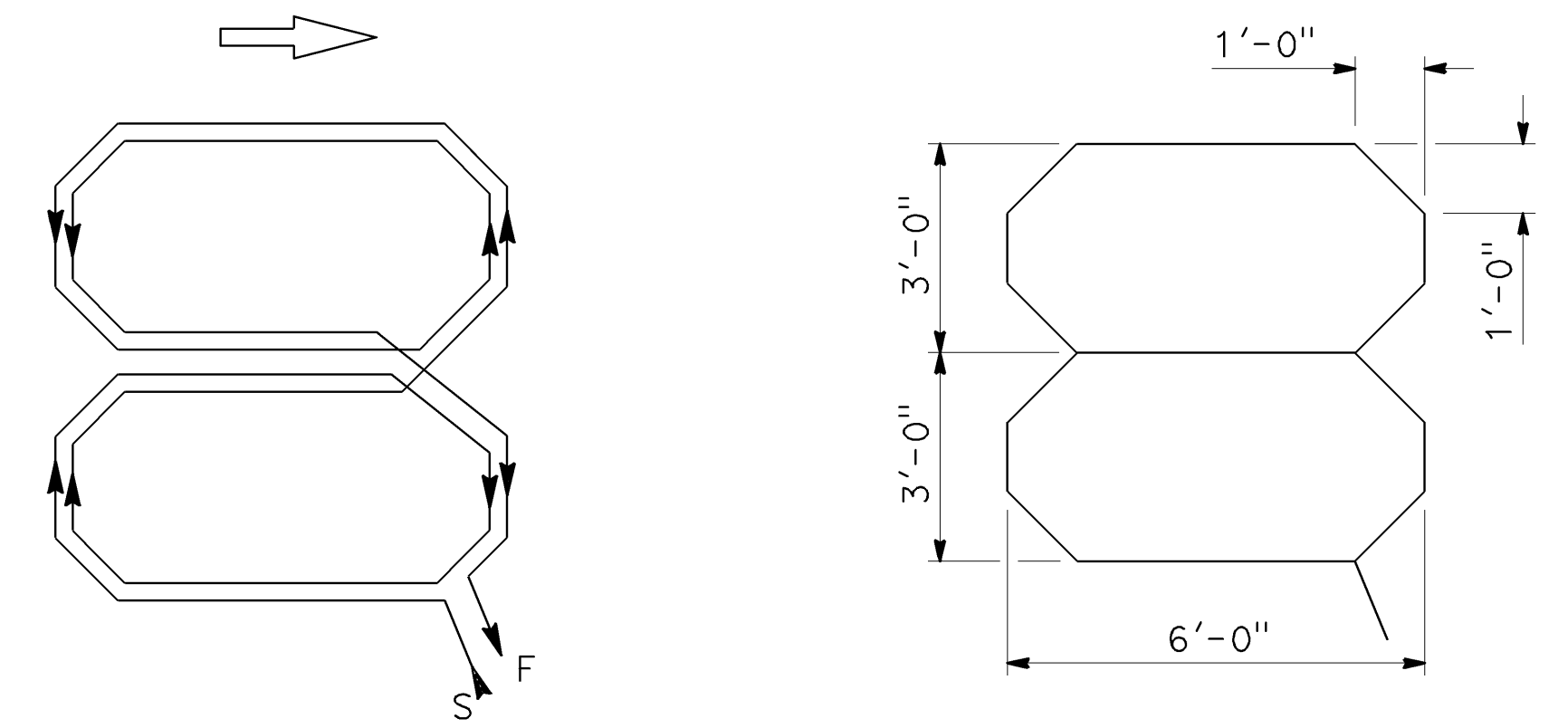
WINDING DETAIL
SAW CUT DETAIL
TYPE D LOOP DETECTOR CONFIGURATION



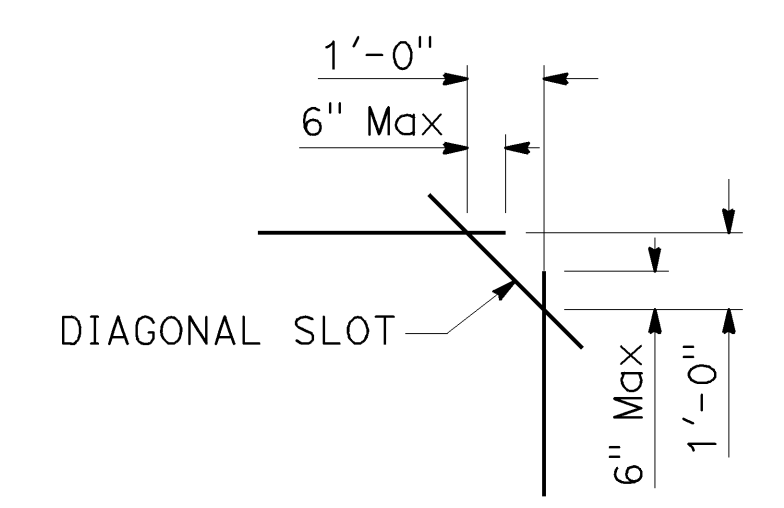
WINDING DETAIL
SAW CUT DETAIL
TYPE E LOOP DETECTOR CONFIGURATION



WINDING DETAIL
SAW CUT DETAIL
TYPE F LOOP DETECTOR CONFIGURATION



WINDING DETAIL
SAW CUT DETAIL
TYPE Q LOOP DETECTOR CONFIGURATION



PLAN VIEW OF
DIAGONAL SLOT
AT CORNERS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(DETECTORS)

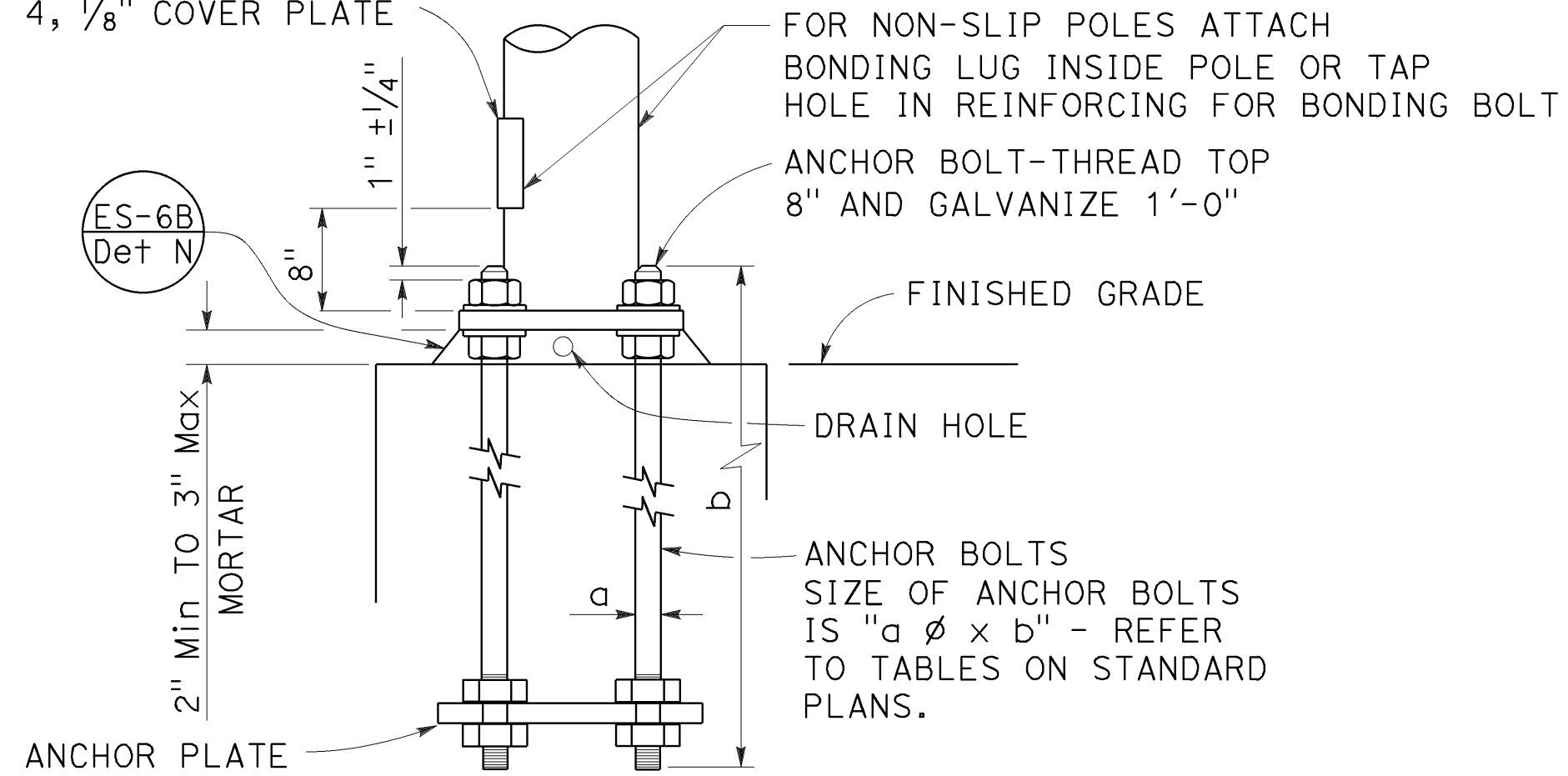
NO SCALE

RSP ES-5B DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN ES-5B
DATED MAY 31, 2018- PAGE 505 OF THE STANDARD PLANS BOOK DATED 2018.

REVISED STANDARD PLAN RSP ES-5B

2018 REVISED STANDARD PLAN RSP ES-5B

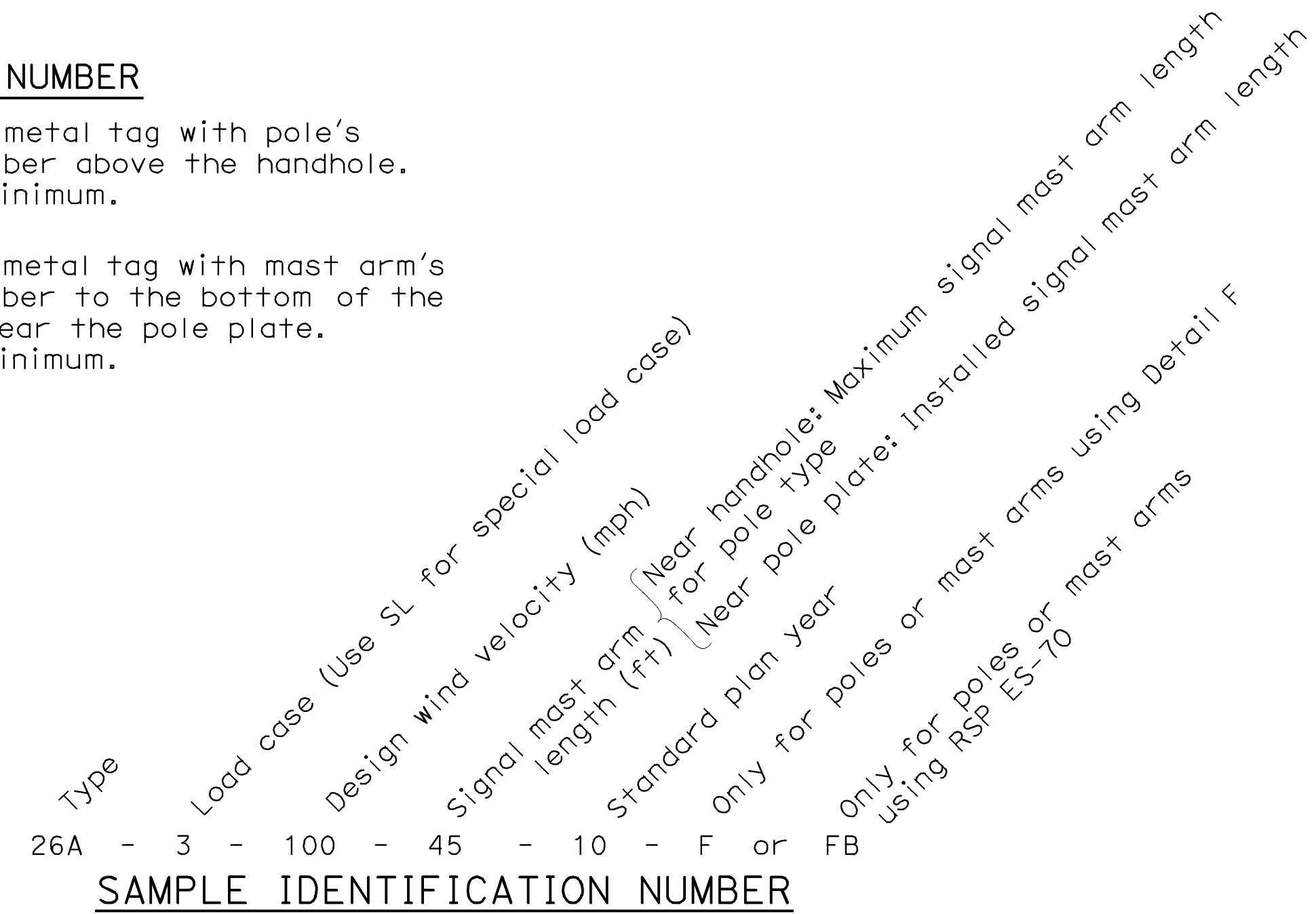
4" x 6 1/2" ROUNDED RECTANGLE HANDHOLE REINFORCED WITH RING WELDED TO OUTSIDE OF POLE. SEE NOTE 4, 1/8" COVER PLATE



HANDHOLE AND ANCHORAGE
DETAIL A

IDENTIFICATION NUMBER

1. Attach a stamped metal tag with pole's identification number above the handhole. 1/4" high number, minimum.
2. Attach a stamped metal tag with mast arm's identification number to the bottom of the signal mast arm near the pole plate. 1/4" high number, minimum.



SAMPLE IDENTIFICATION NUMBER

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	203	436

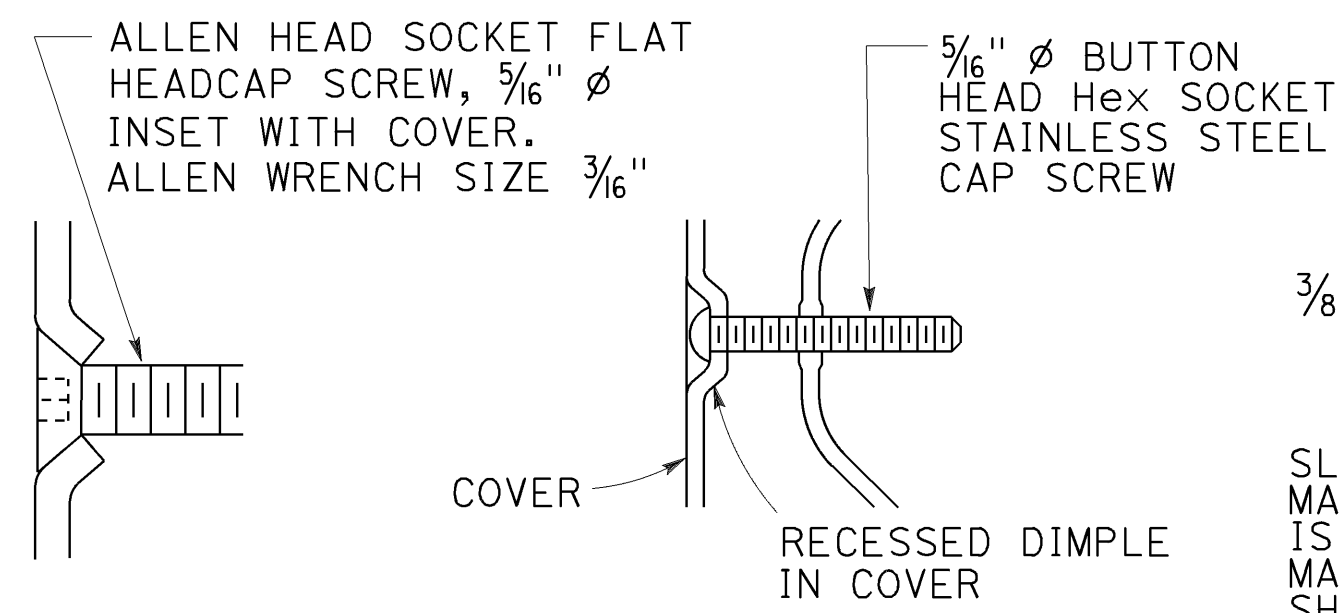
Stanley P. Johnson
REGISTERED CIVIL ENGINEER

October 19, 2018
PLANS APPROVAL DATE

Stanley P. Johnson
No. C57793
Exp. 3-31-20
CIVIL
STATE OF CALIFORNIA

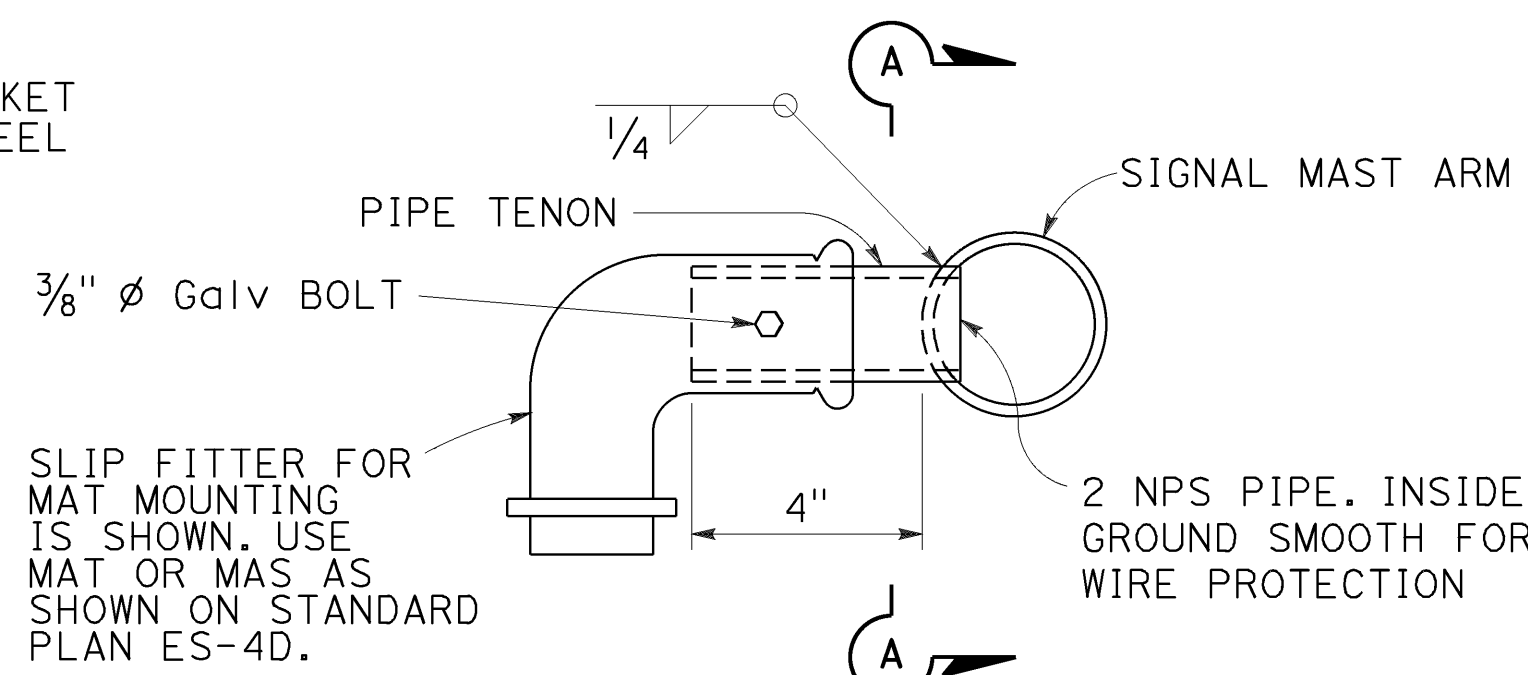
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TO ACCOMPANY PLANS DATED 5-17-19

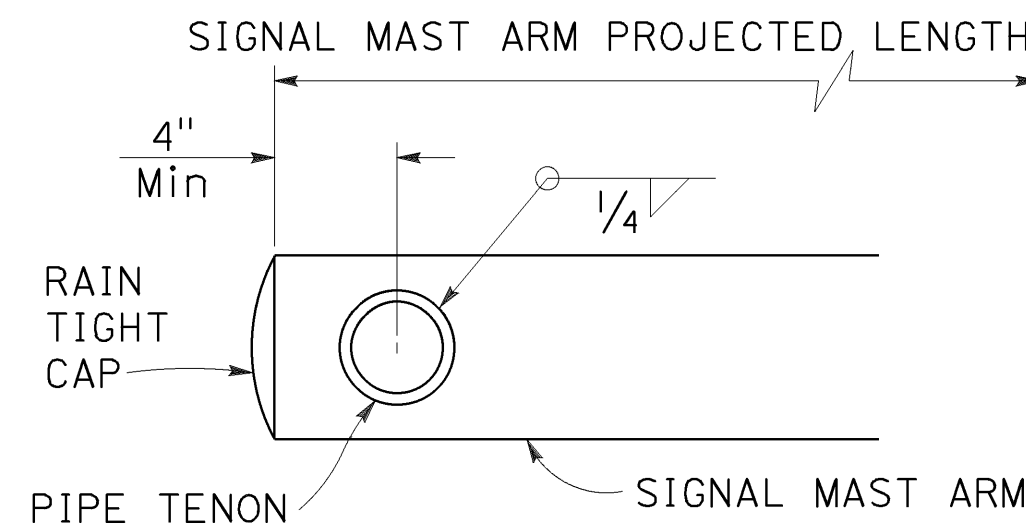


TYPICAL DETAIL
DETAIL B-1

ALTERNATIVE DETAIL
DETAIL B-2



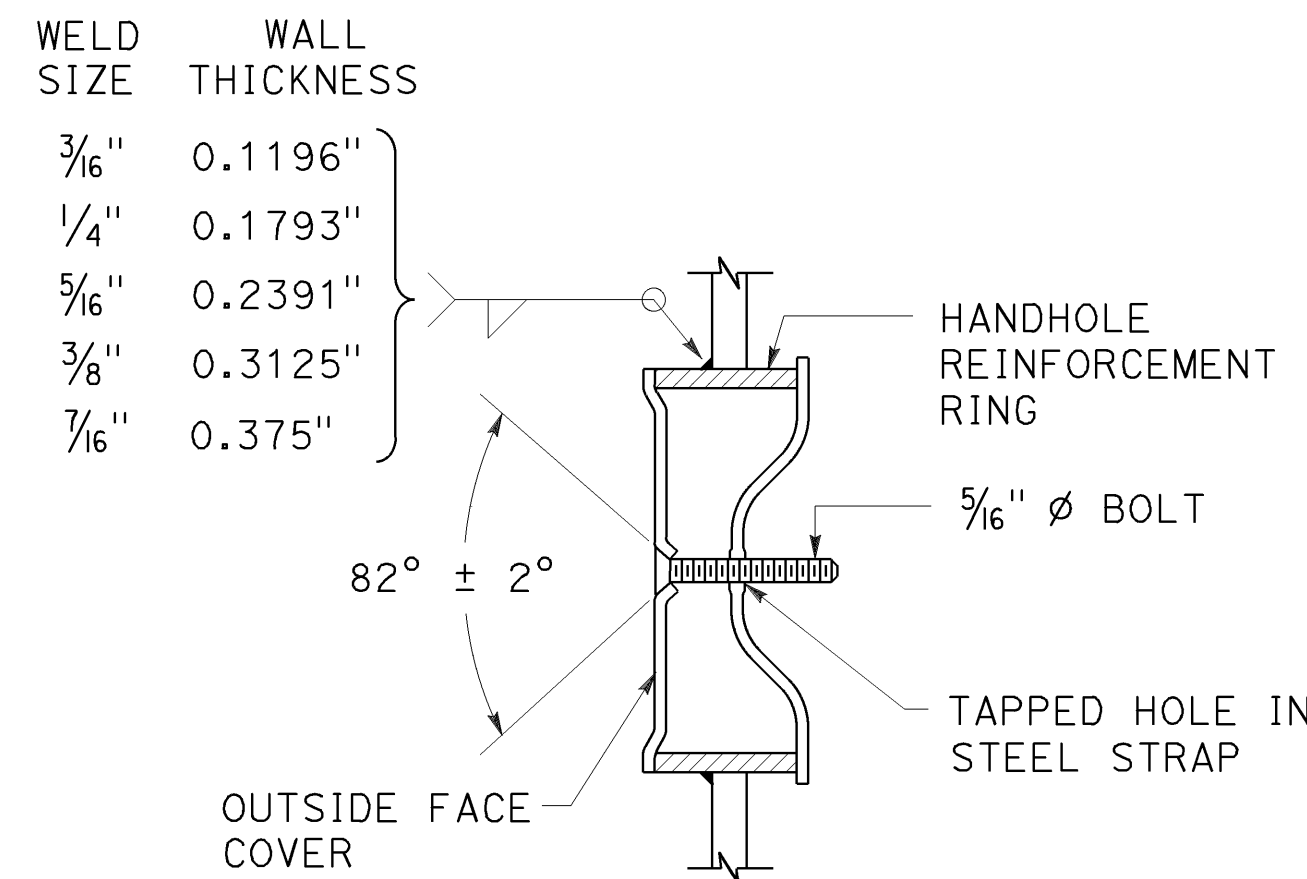
SIDE TENON
DETAIL S-1



SECTION A-A

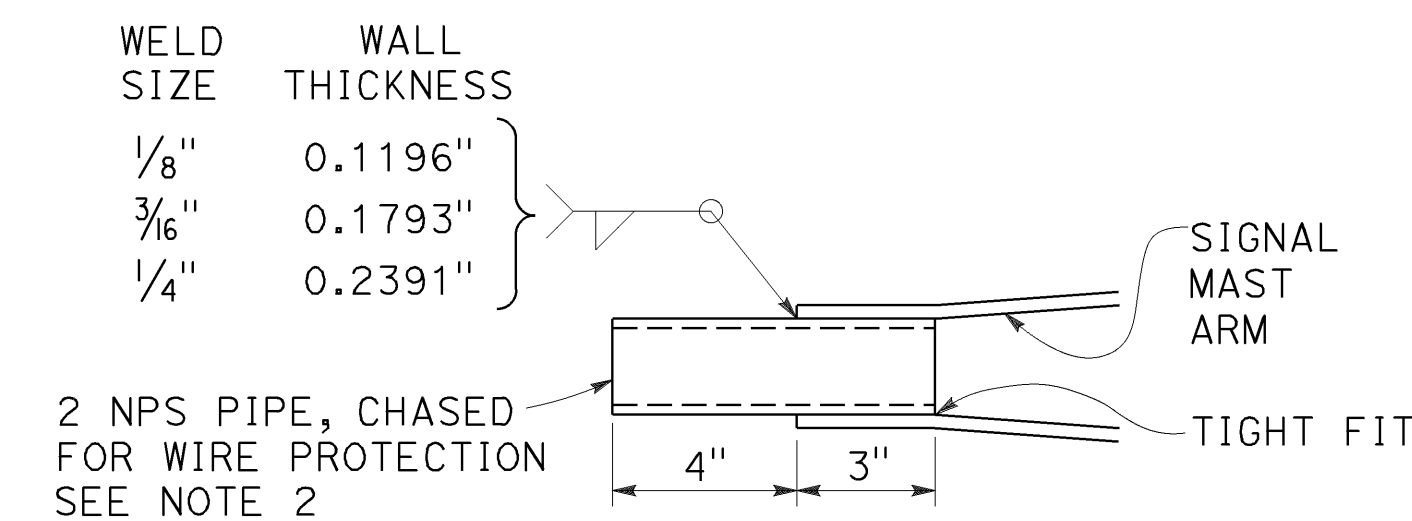
NOTES:

1. Provide a Hex nut, leveling nut and 2 washers for each bolt.
2. Luminaire mast arms shall be round, tapered steel tubes, taper of 0.1375" to 0.143-inch per foot with an end section 2 3/8" OD for mounting hardware. Extensions of 2 NPS Standard pipe and 7" long may be used at the option of the manufacturer. When low pressure sodium luminaires are required, the extension shall be 1'-3".
3. Signal mast arms shall be round, tapered steel tubes, maximum taper 0.143-inch per foot.
4. Handhole reinforcement ring shall be 1/4" x 2" for 0.1196" to 0.2391" thick poles, 3/8" x 2" for 0.3125" to 0.375" thick poles.
5. Handholes shall be located on the downstream side of traffic.
6. Detail F, fatigue resistant weld, is required at socket welded signal mast arm plate and pole base plate.
7. Cap screws shall be tightened by the turn-of-nut method 1/3 turn from a snug tight condition. No washer will be required.
8. Outside diameter, wall thickness, and corresponding section properties of poles and mast arms as shown in the Standard Plans are minimums. Unless otherwise specified, alternative sections shall require approval by the Engineer.
9. Design: AASHTO Standard Specifications for Structural Support for Highway Signs, Luminaires, and Traffic Signals, 6th Edition. Basic Wind Speed = 100 mph (3 seconds gust). Yearly Mean Wind Velocity = 15.6 mph.
10. Materials (Structural steel):
fy = 55,000 psi (tapered steel tube and anchor bolts)
fy = 50,000 psi (unless otherwise noted)
11. Materials (Reinforced concrete):
f'c = 3,625 psi
fy = 60,000 psi

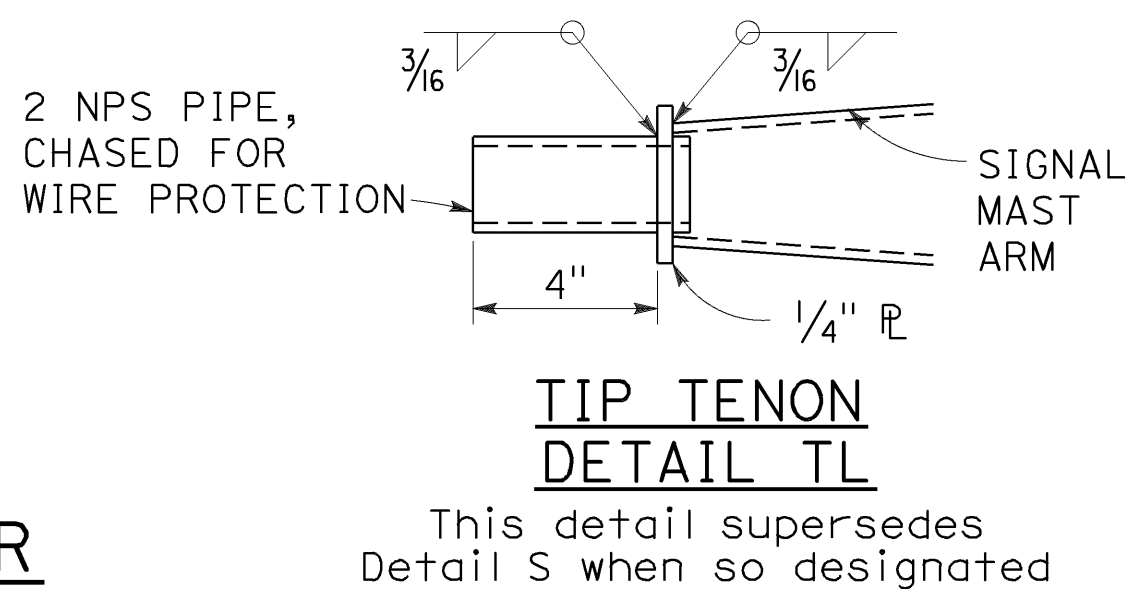


TAMPER RESISTANT HANDHOLE COVER
DETAIL B

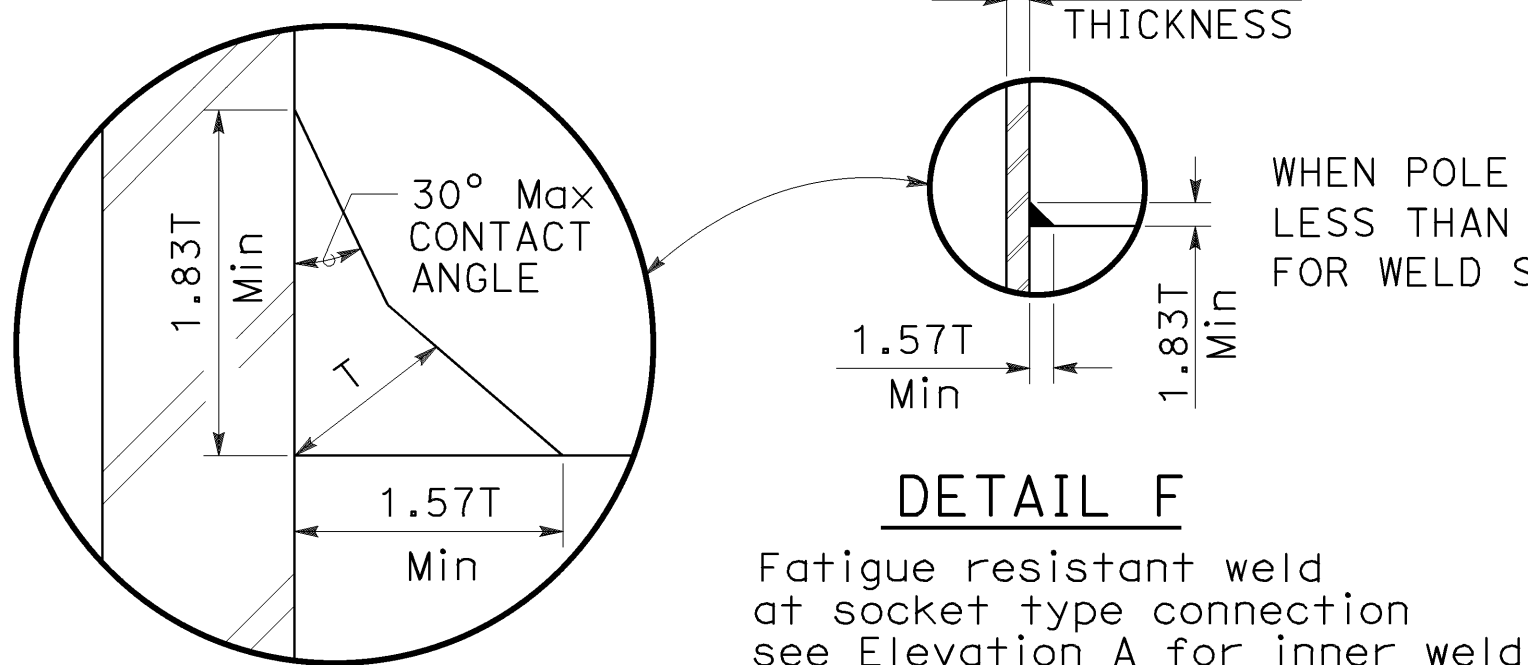
PIPE TENONS
DETAIL S



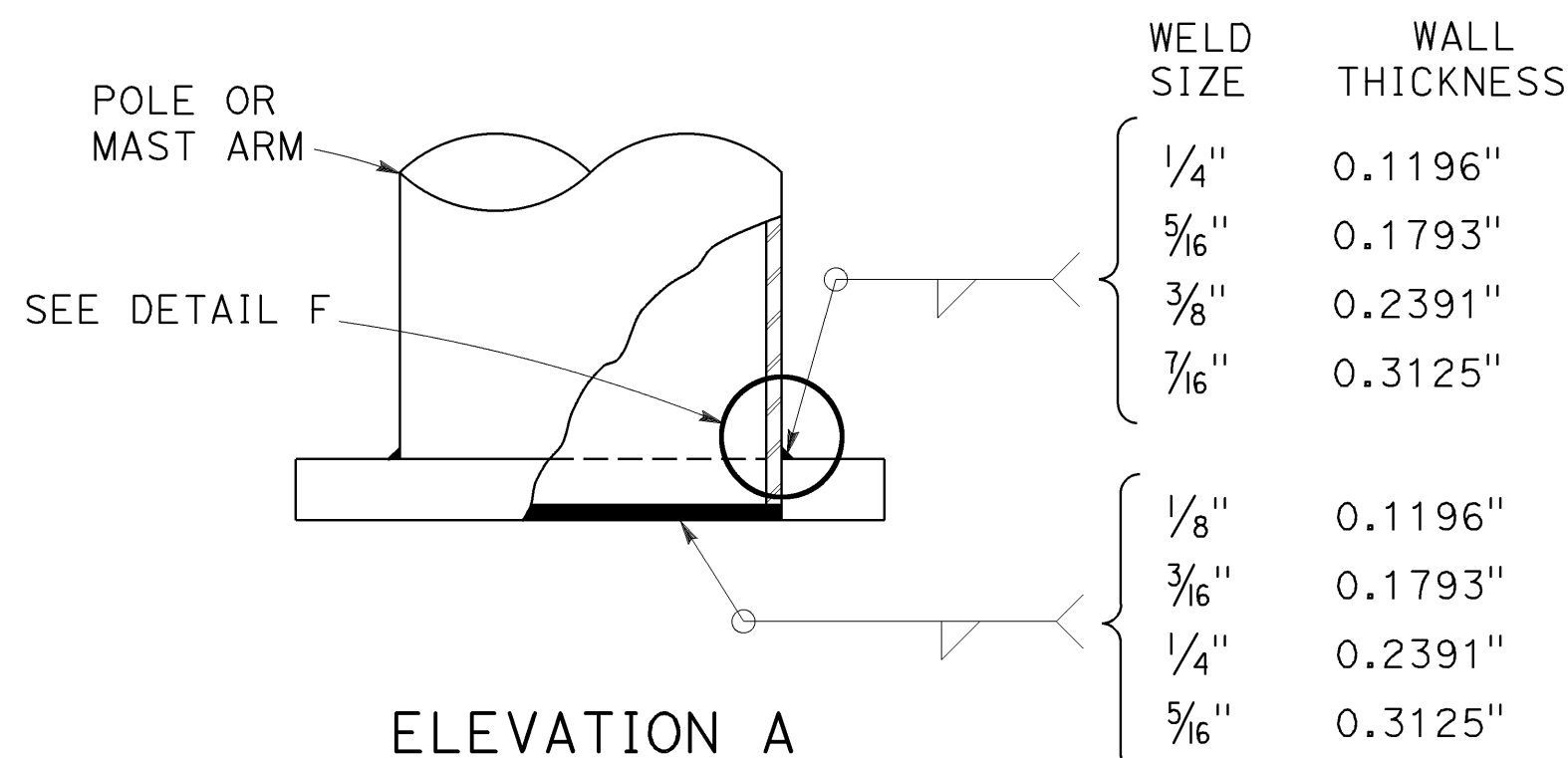
TIP TENON
DETAIL TS



TIP TENON
DETAIL TL



DETAIL F



ELEVATION A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
DETAIL No. 1)

NO SCALE

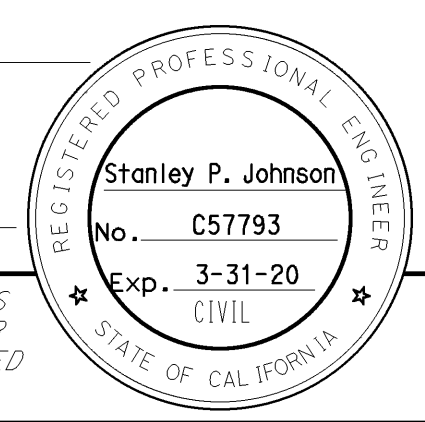
RSP ES-7M DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN ES-7M
DATED MAY 31, 2018 - PAGE 526 OF THE STANDARD PLANS BOOK DATED 2018.

REVISED STANDARD PLAN RSP ES-7M

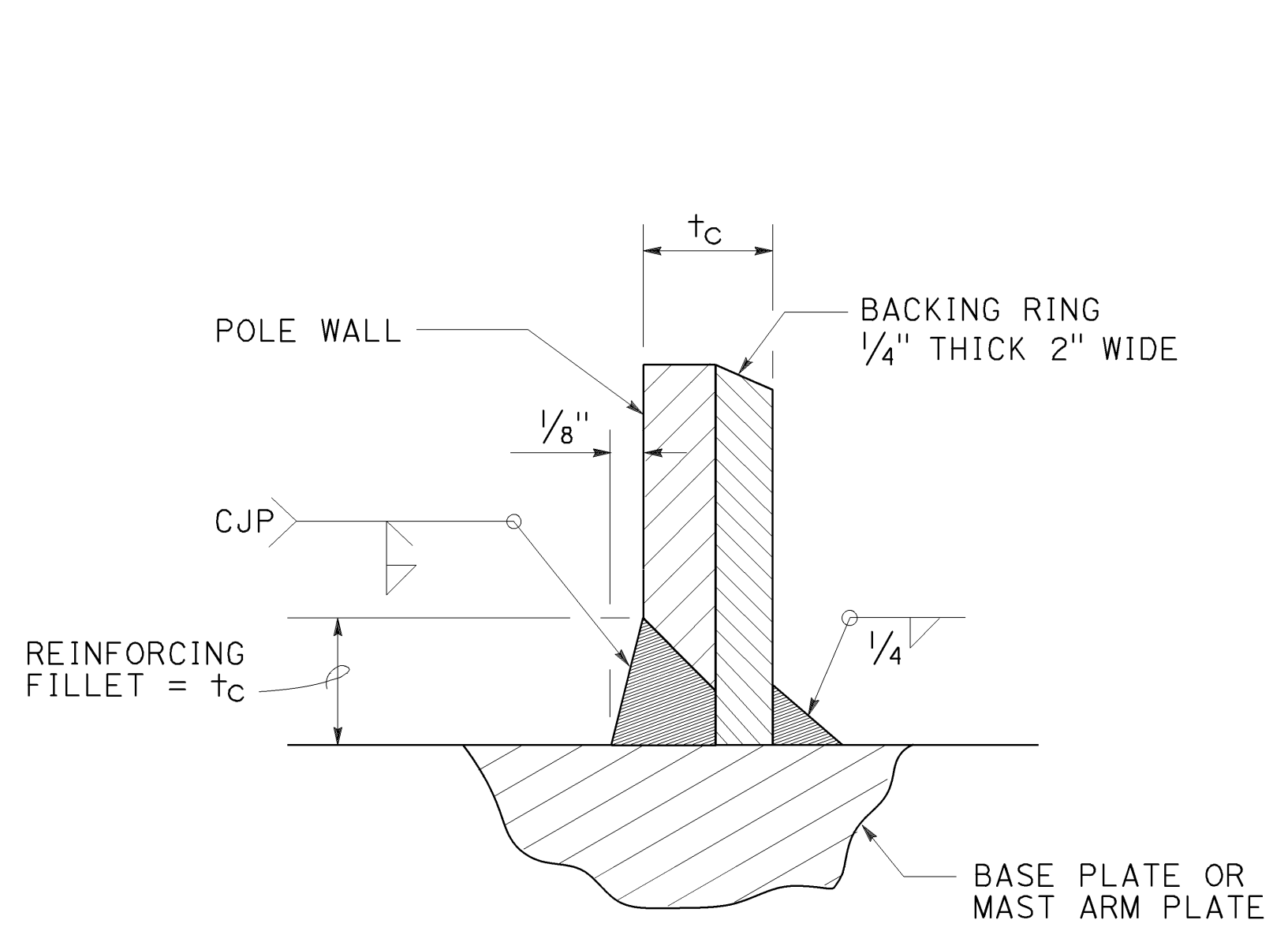
2018 REVISED STANDARD PLAN RSP ES-7M

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	204	436

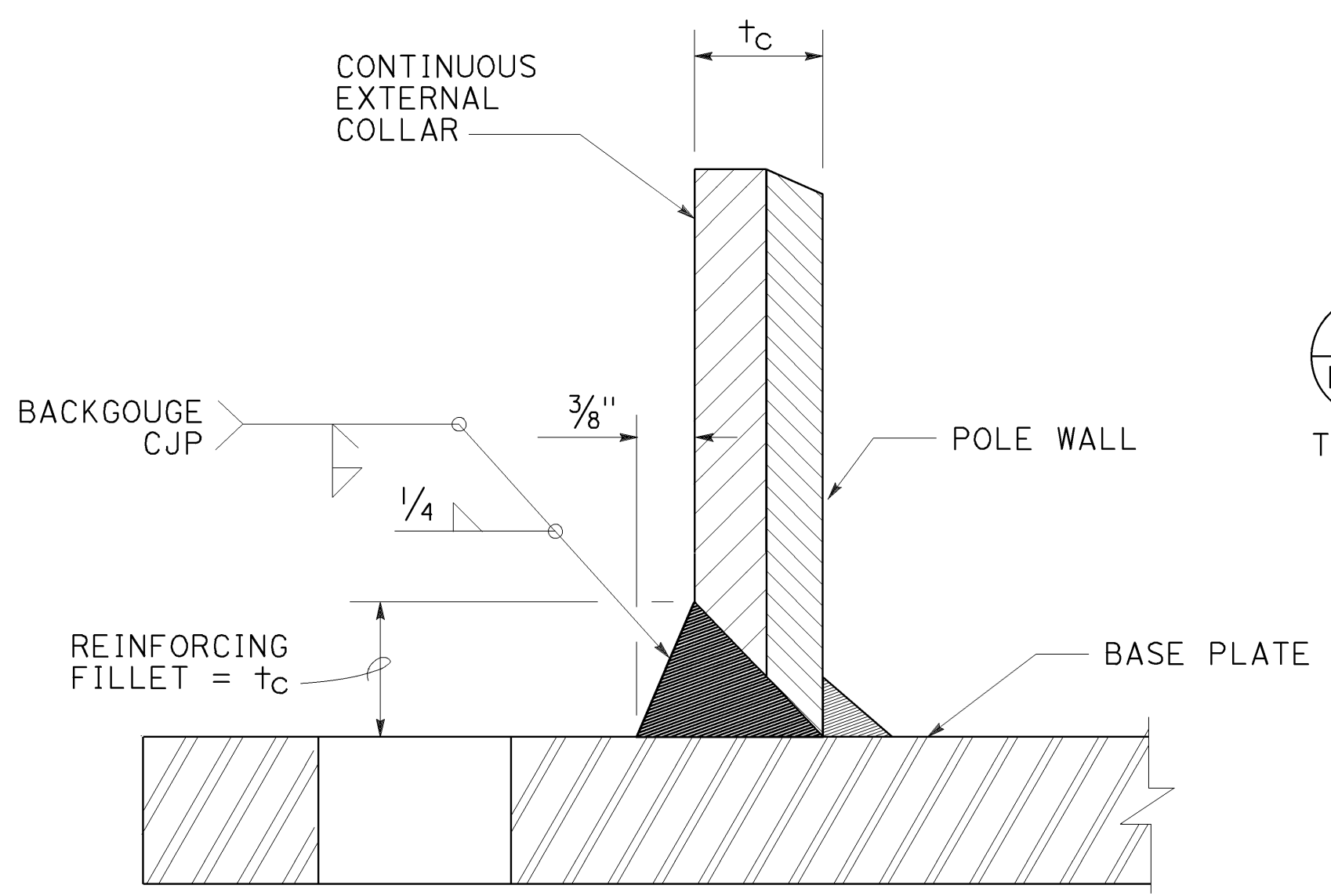
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 October 19, 2018
 PLANS APPROVAL DATE
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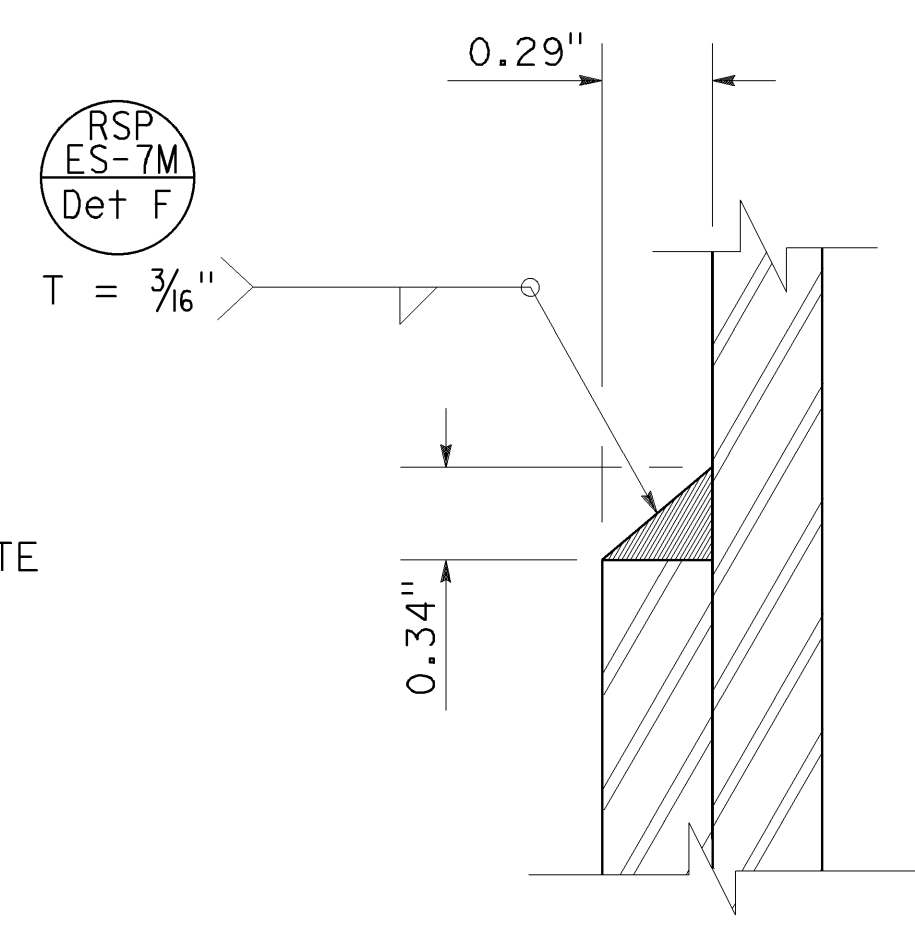
TO ACCOMPANY PLANS DATED 5-17-19



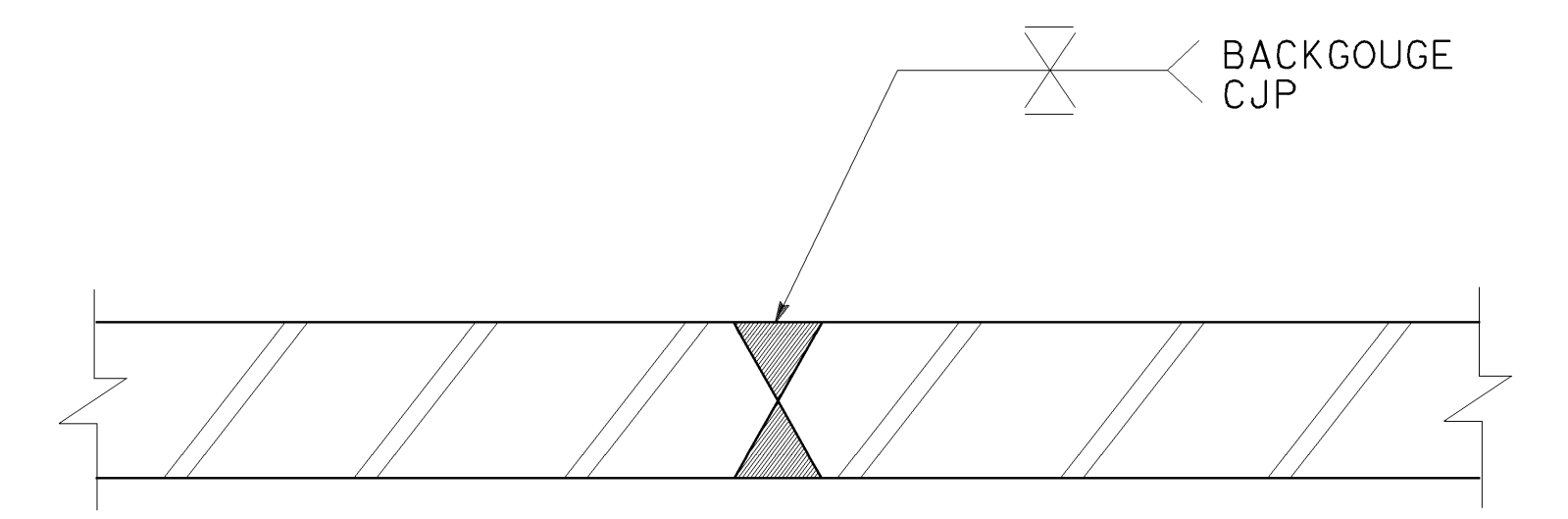
DETAIL B



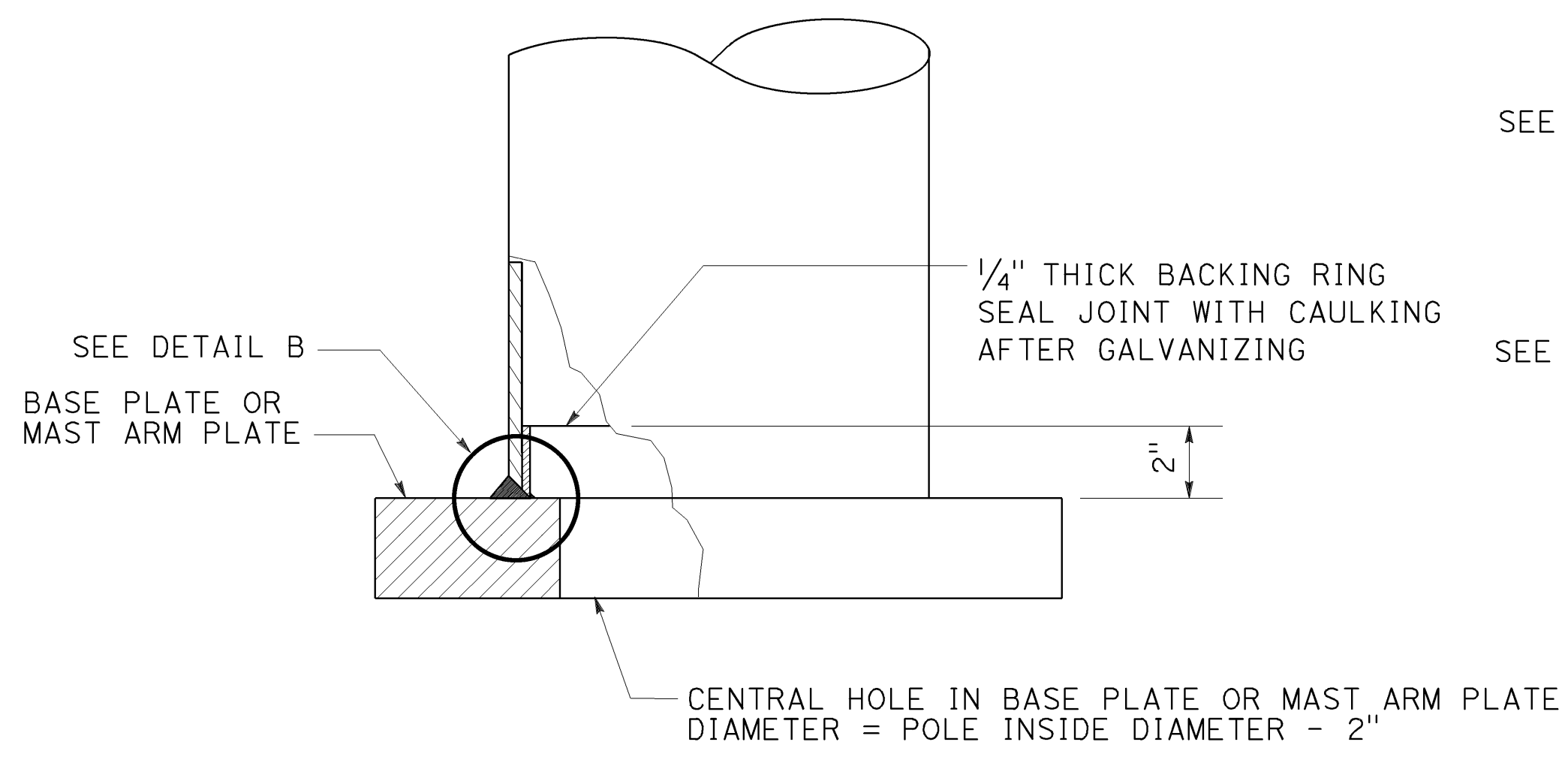
DETAIL C1



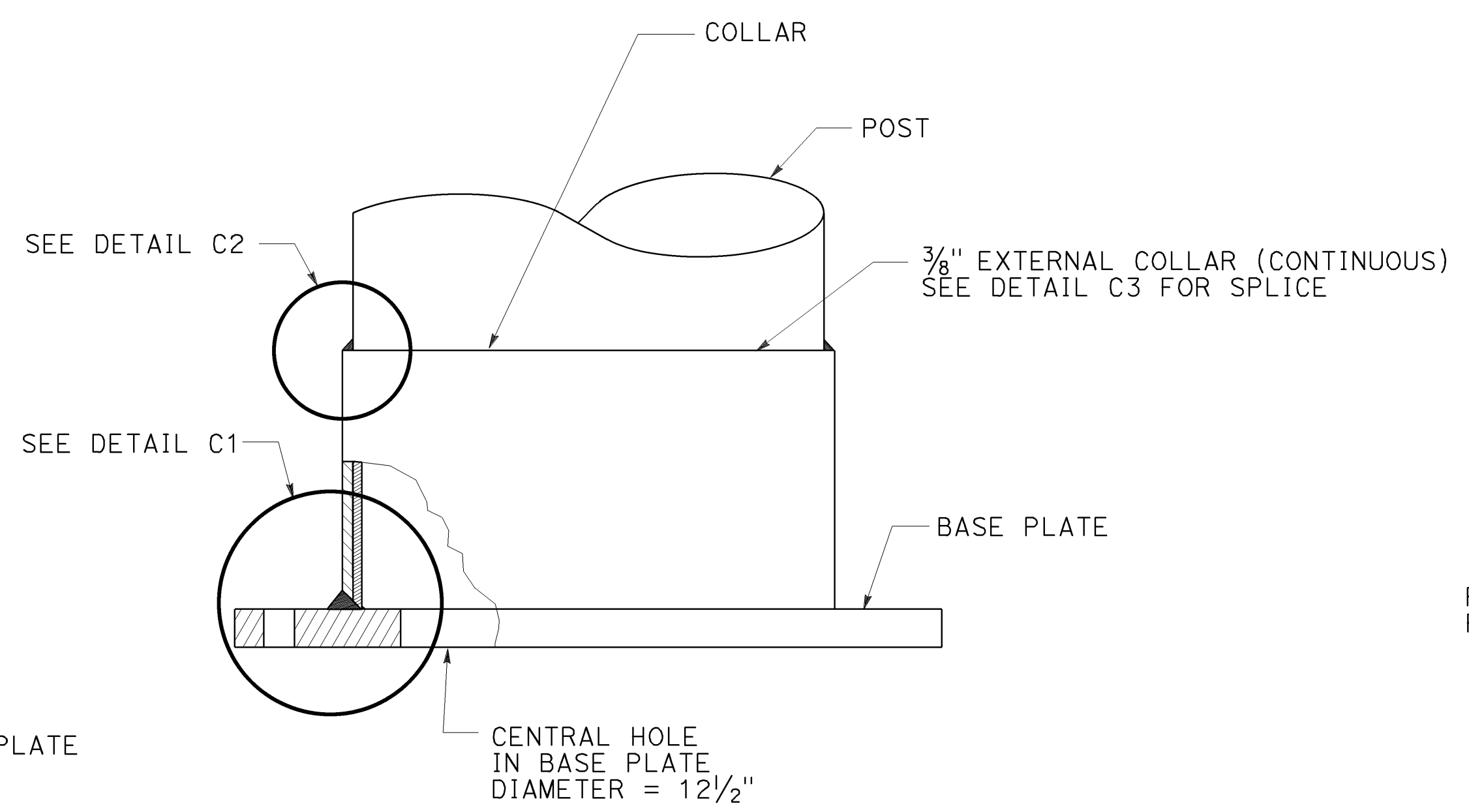
DETAIL C2



DETAIL C3

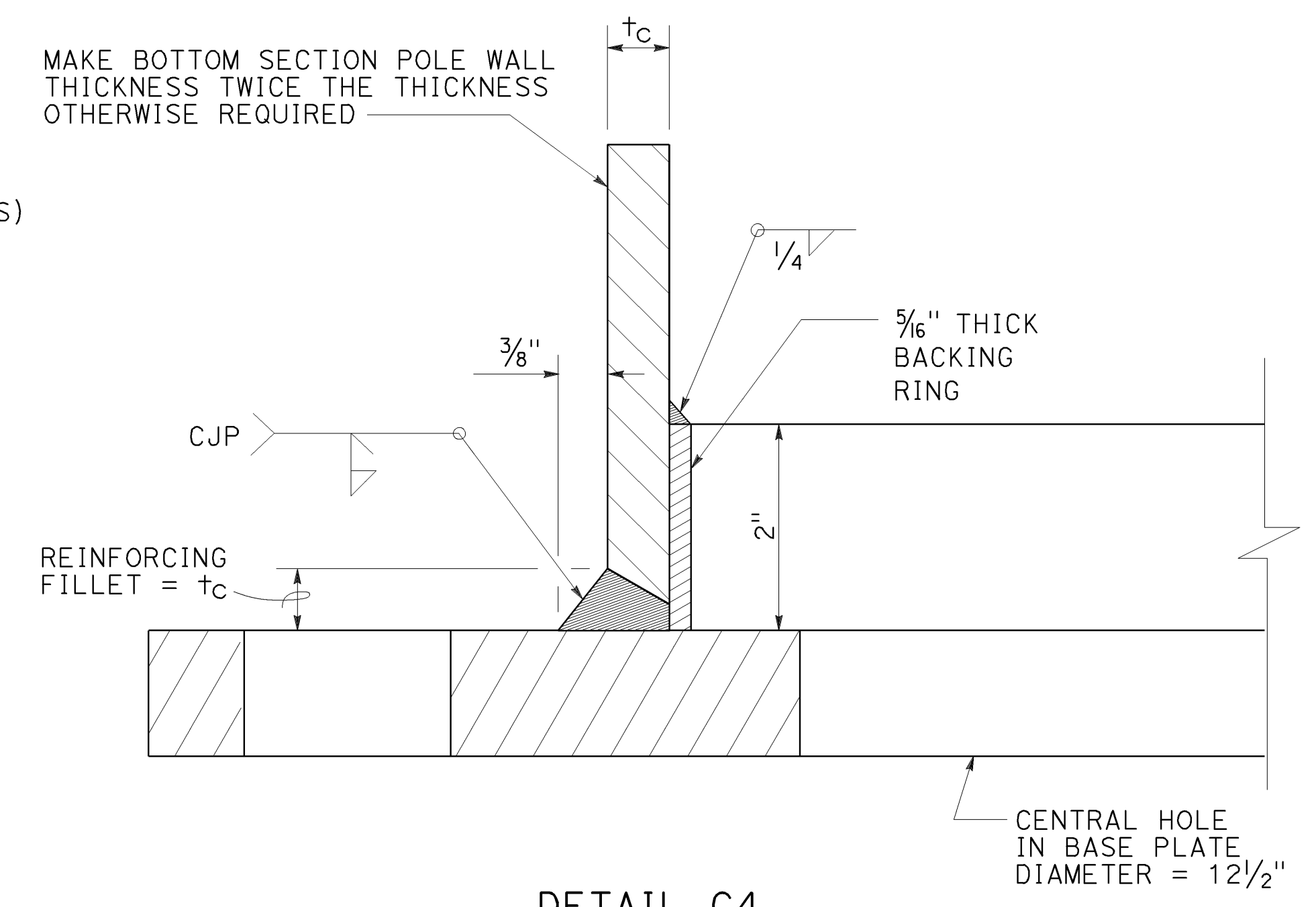


ELEVATION B



ELEVATION C

For alternative base, see Detail C4



DETAIL C4

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
DETAIL No. 3)**
NO SCALE

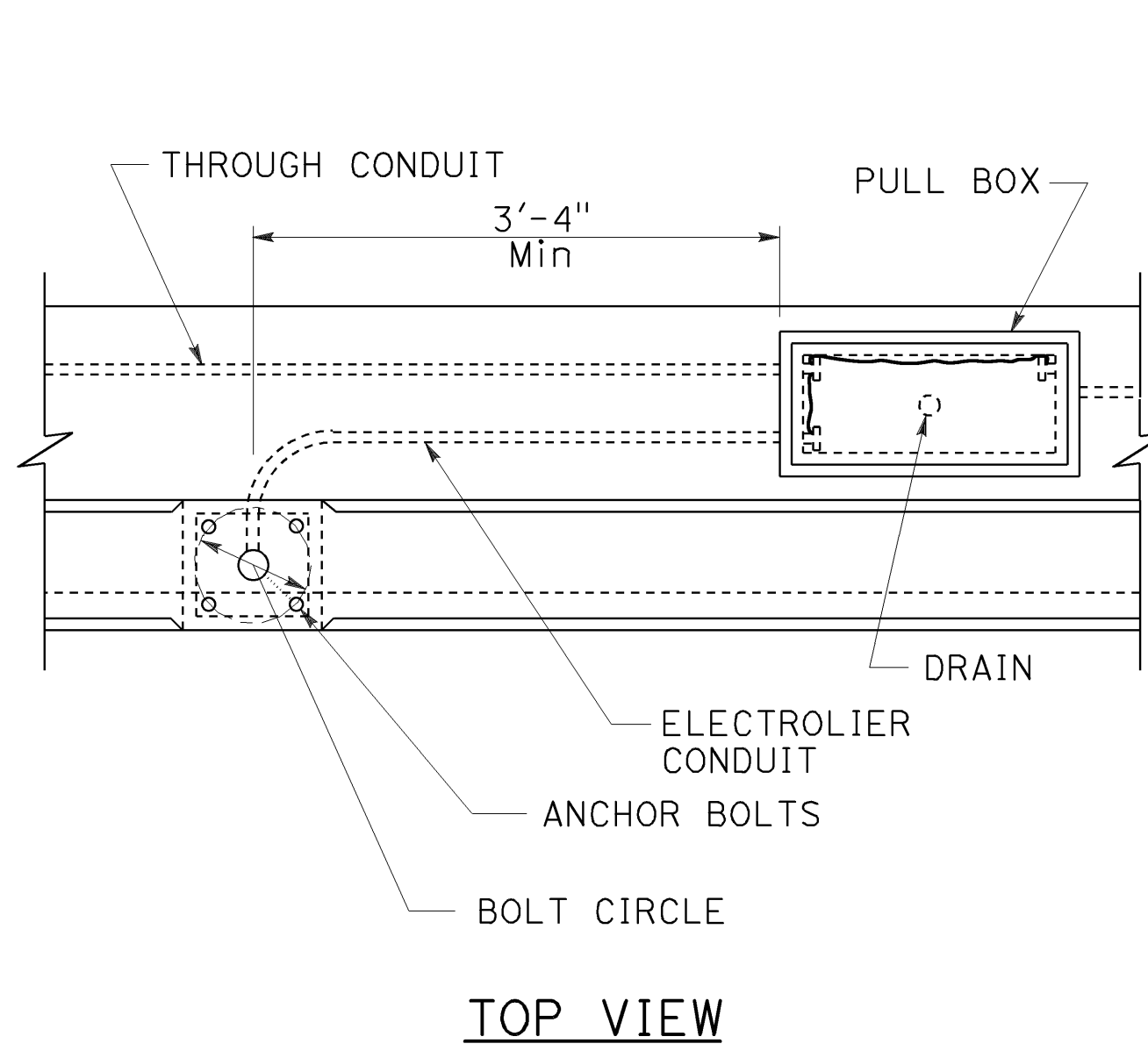
RSP ES-70 DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN ES-70
DATED MAY 31, 2018 - PAGE 528 OF THE STANDARD PLANS BOOK DATED 2018.

2018 REVISED STANDARD PLAN RSP ES-70

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	7.8/8.0	205	436

H.R.F.
 REGISTERED ELECTRICAL 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.

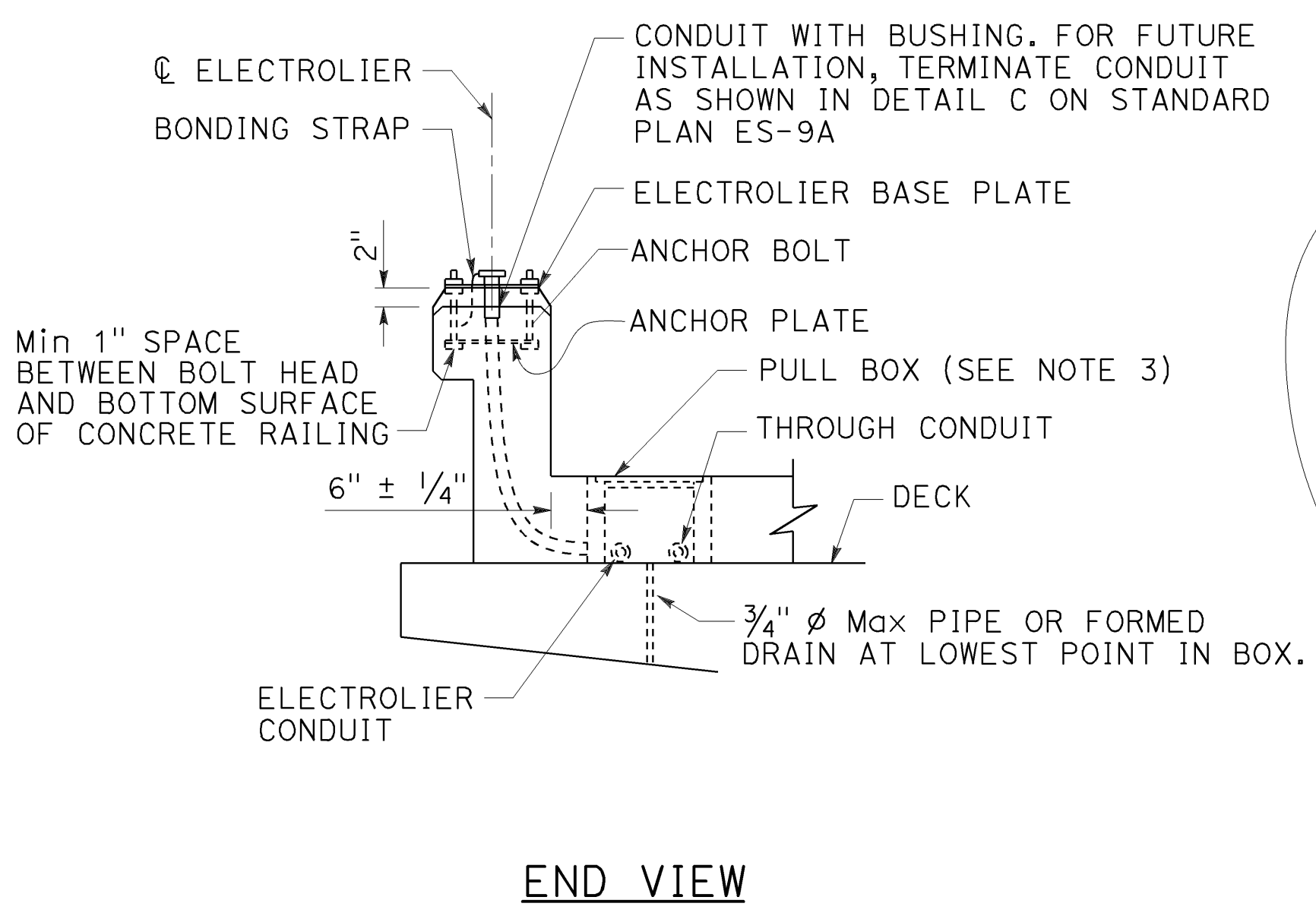
REGISTERED PROFESSIONAL ENGINEER
Hamid Zolfaghari
 No. E15636
 Exp. 12-31-19
 ELECTRICAL
 STATE OF CALIFORNIA



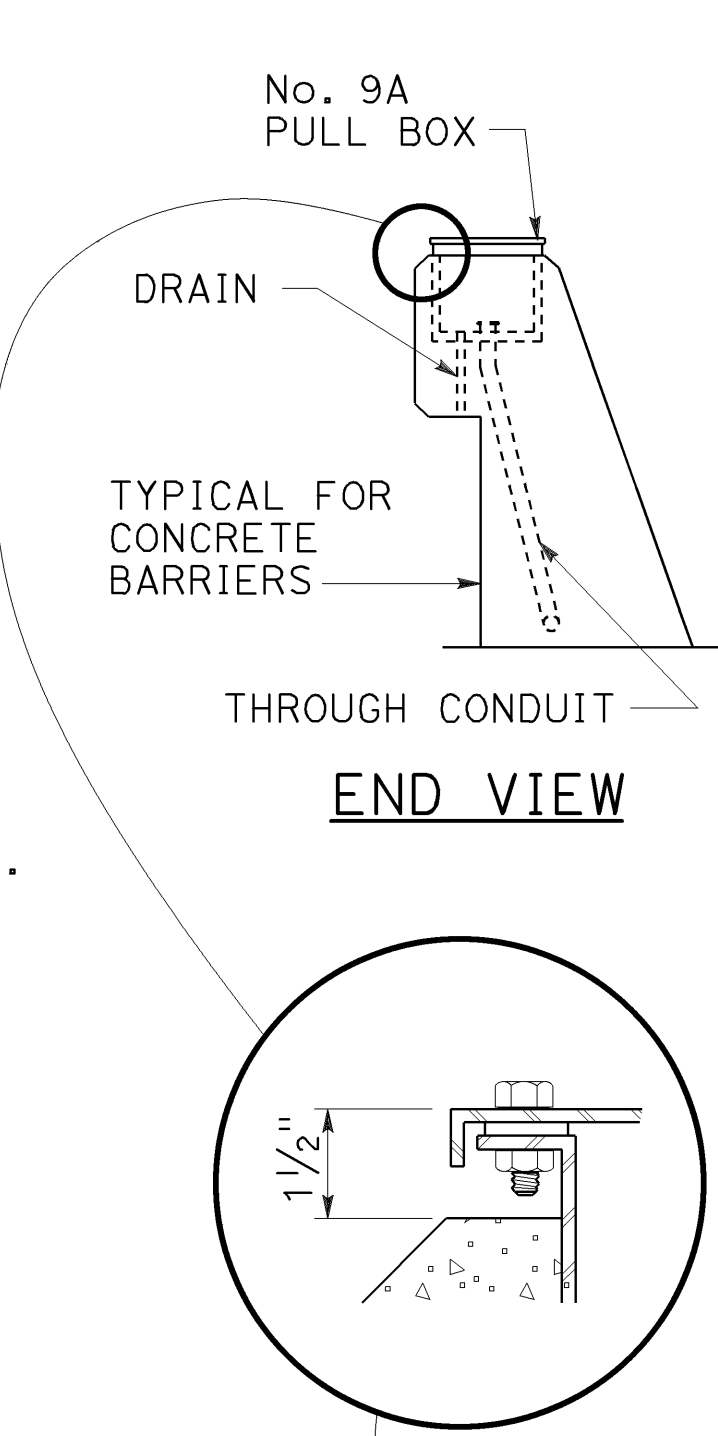
TOP VIEW

No. 3 1/2, 5, OR 6 PULL BOX INSTALLATION

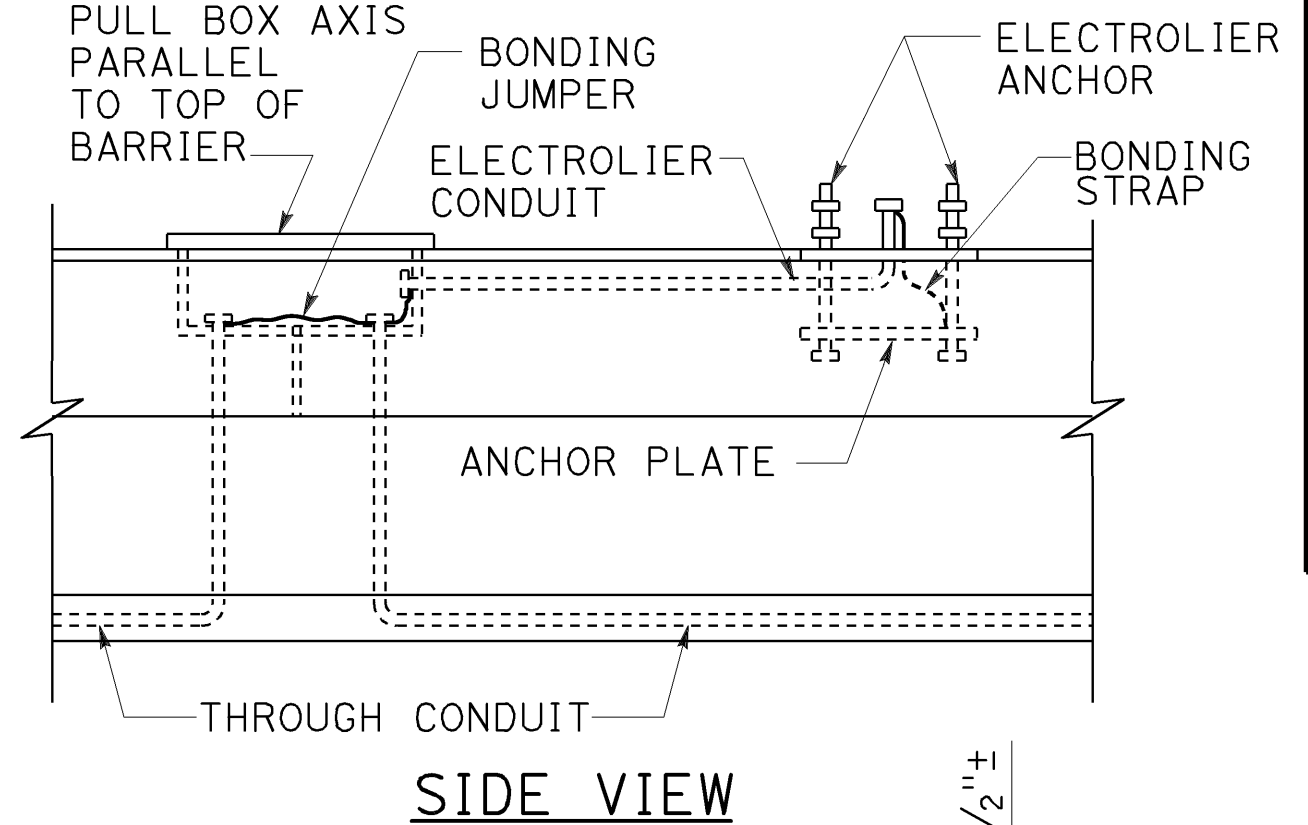
DETAIL A



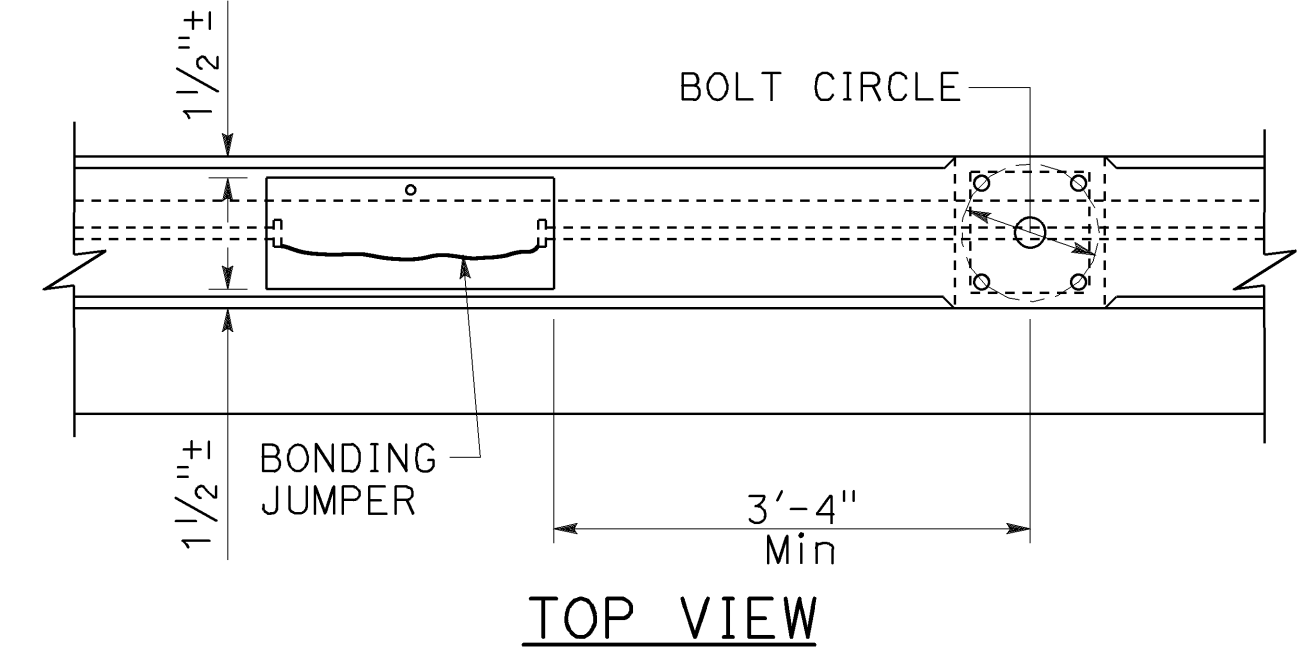
END VIEW



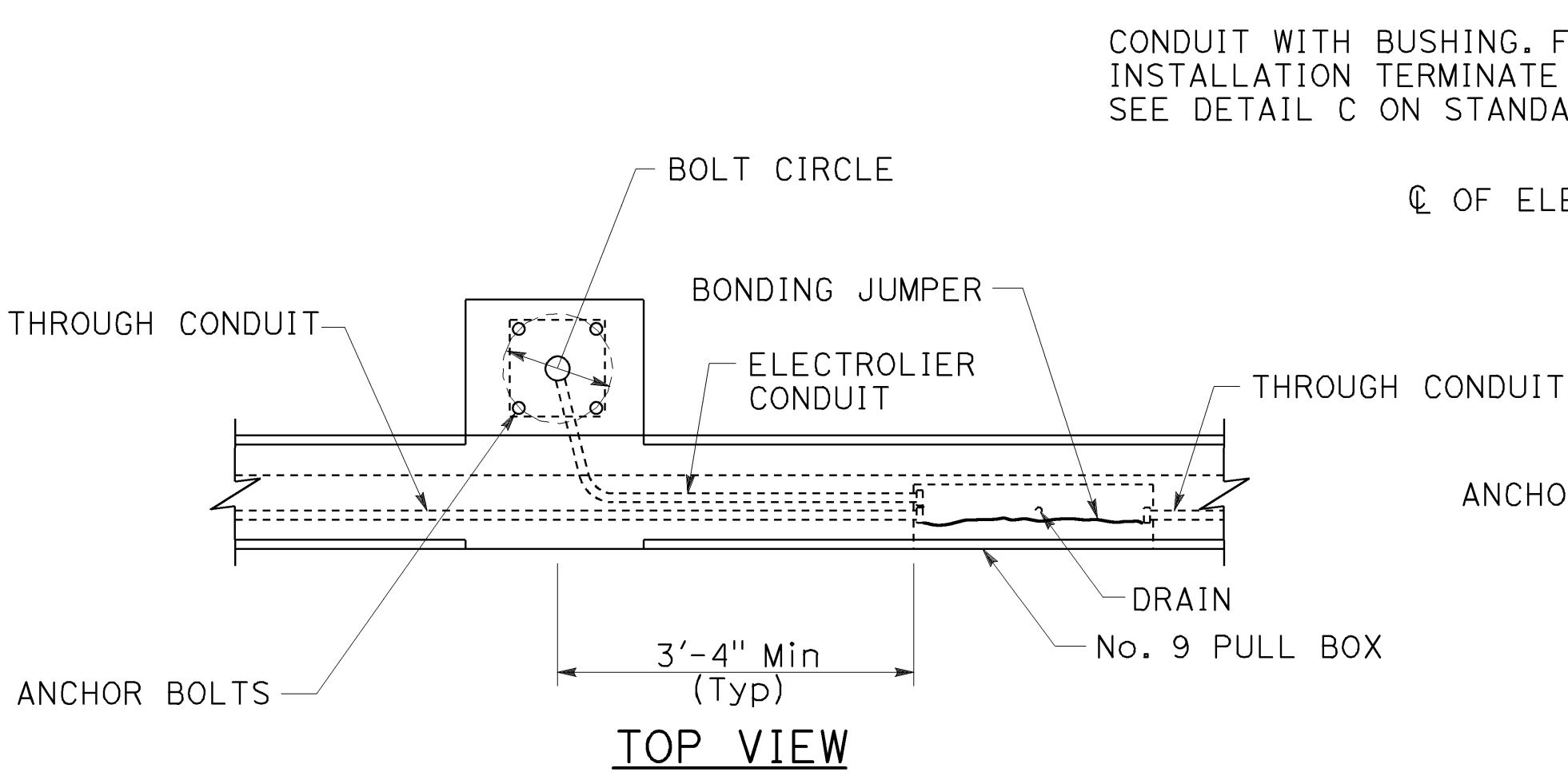
END VIEW



SIDE VIEW



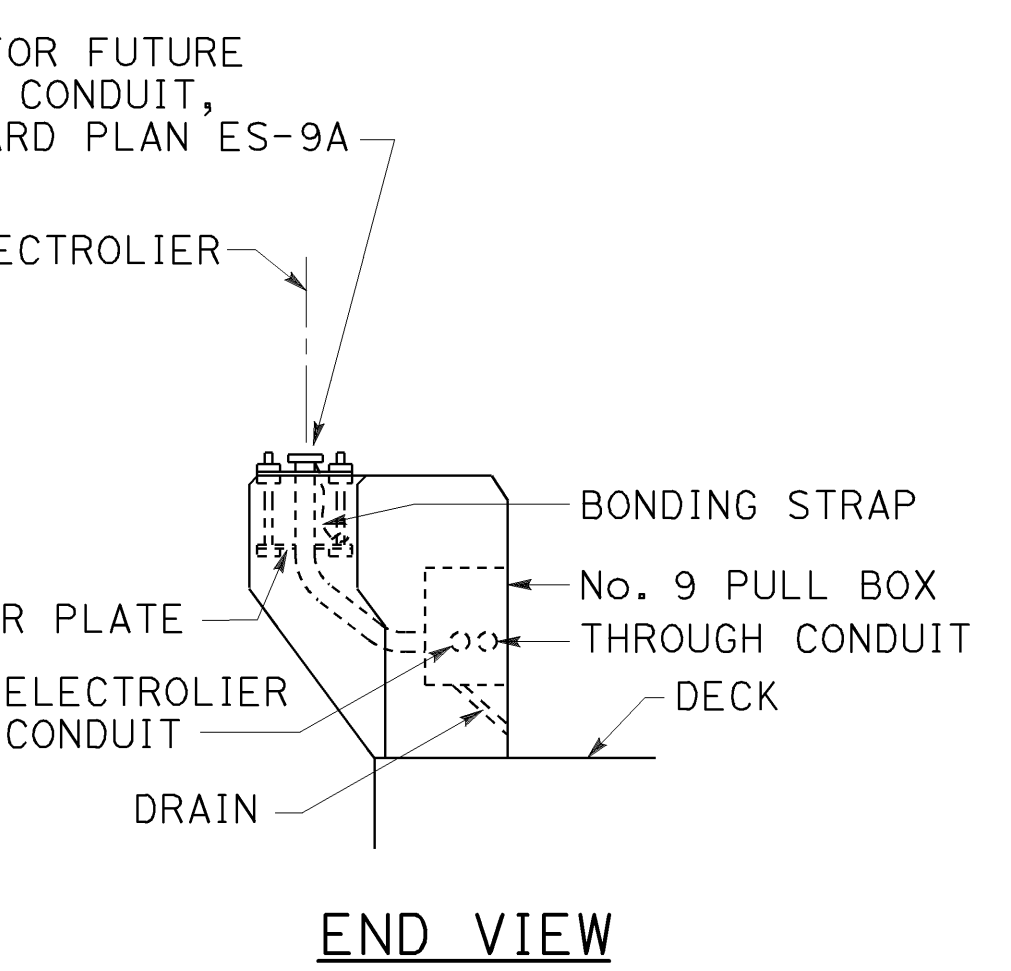
TOP VIEW



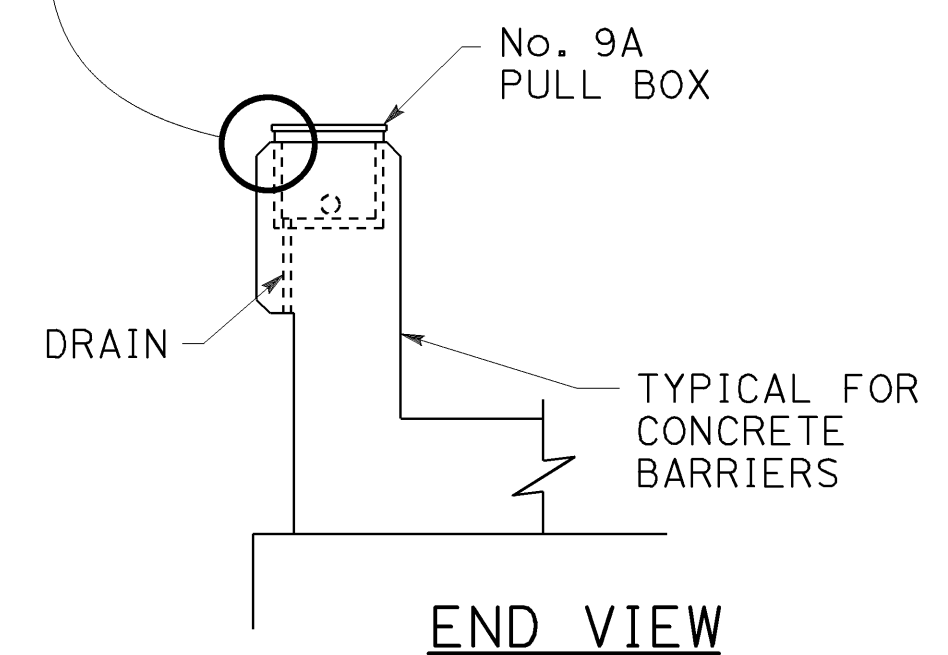
TOP VIEW

No. 9 PULL BOX INSTALLATION

DETAIL B



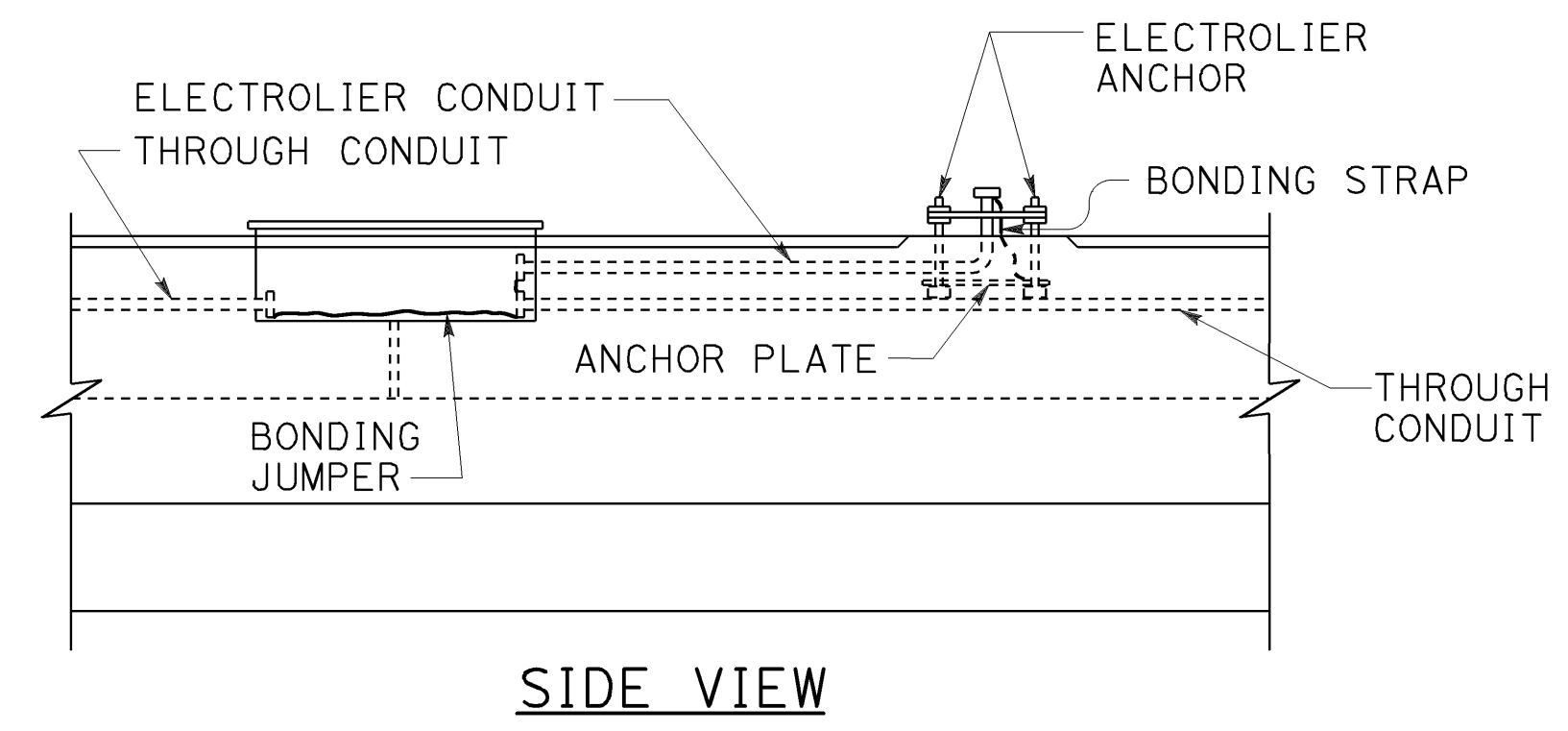
END VIEW



END VIEW

No. 9A PULL BOX INSTALLATION

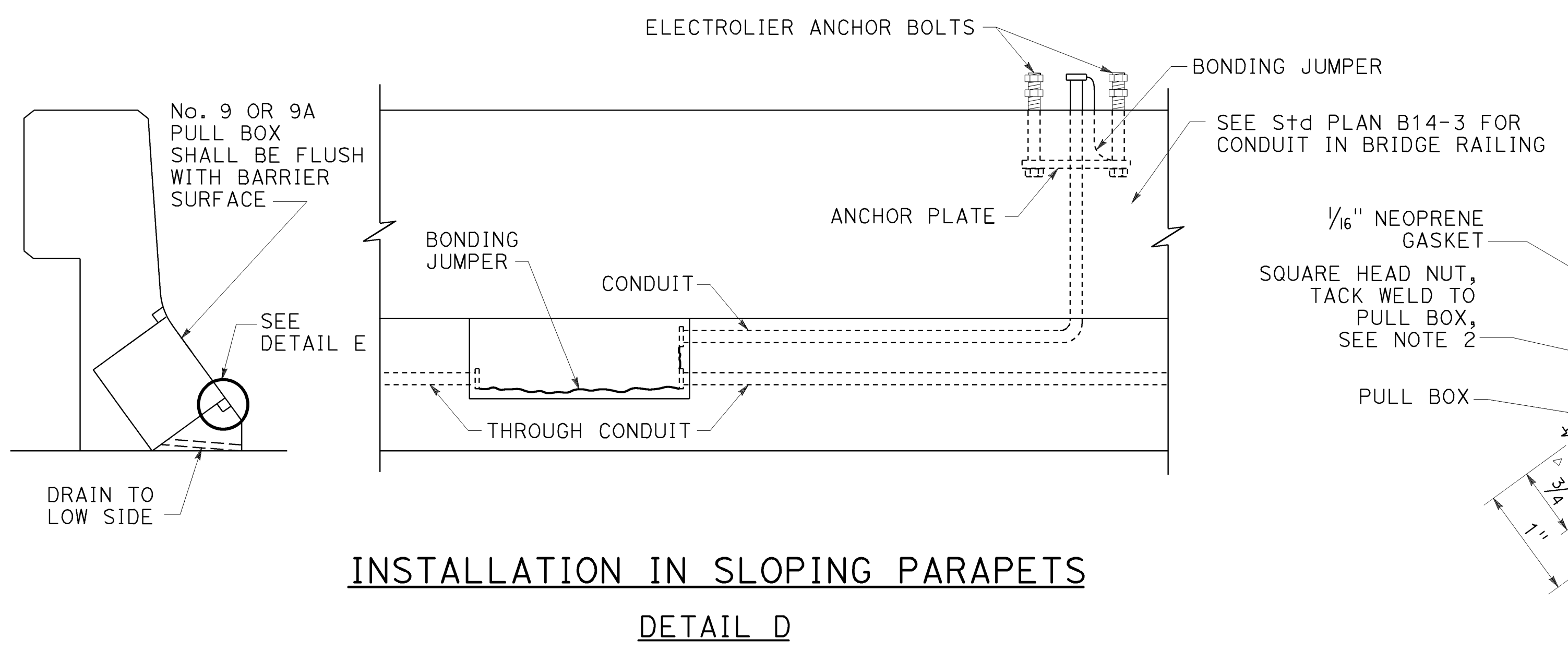
DETAIL C



SIDE VIEW

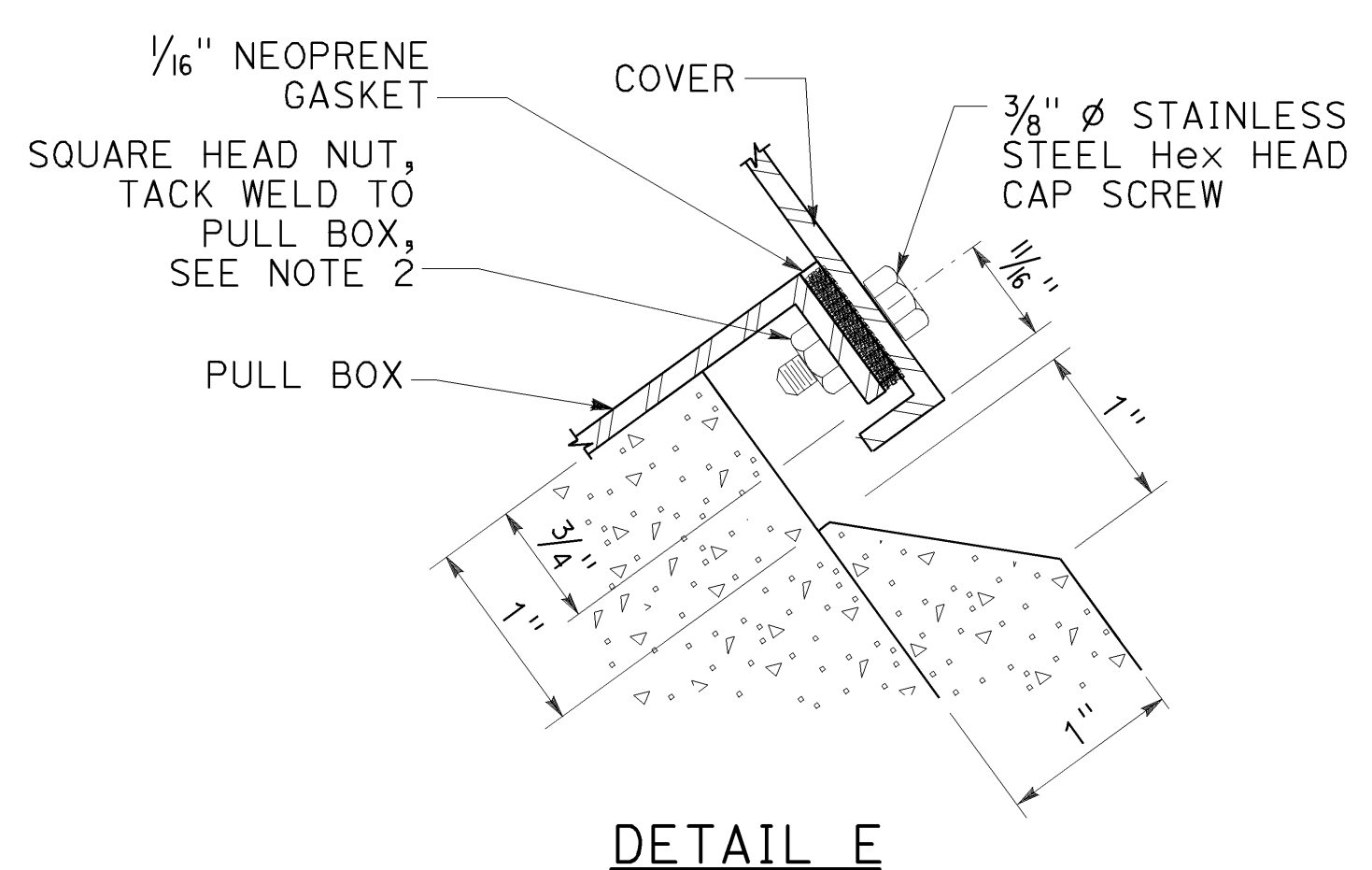
NOTES:

1. Axis of pull box shall be parallel to top of barrier, sidewalk or railing.
2. See railing sheet for reinforcement and structural details at electroliers and pull boxes.
3. Top of pull boxes in sidewalk areas shall be flush with sidewalk. Modify base of pull box as required.
4. Boxes inside of vertical barrier or railing shall be closed during pouring of PCC with 1/4" plywood of sufficient size to provide 1:1 chamfer on 3 sides of cover. Upper edge of plywood shall fit against lower edge of raintight hood.
5. Use drain in center if box is horizontal, or at low end if box is inclined. When box is mounted in sloping parapet 1/2" elongated drain hole inside at center or near end as required for drainage.
6. For electrolier anchorage bolts and grouting details, see Standard Plan ES-6B.
7. See Standard Plan B14-3 for conduit in concrete barrier.



INSTALLATION IN SLOPING PARAPETS

DETAIL D



DETAIL E

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(STRUCTURE PULL BOX
INSTALLATIONS)**

NO SCALE

RSP ES-9D DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN ES-9D DATED MAY 31, 2018 - PAGE 538 OF THE STANDARD PLANS BOOK DATED 2018.

REVISED STANDARD PLAN RSP ES-9D

2018 REVISED STANDARD PLAN RSP ES-9D

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	206	436

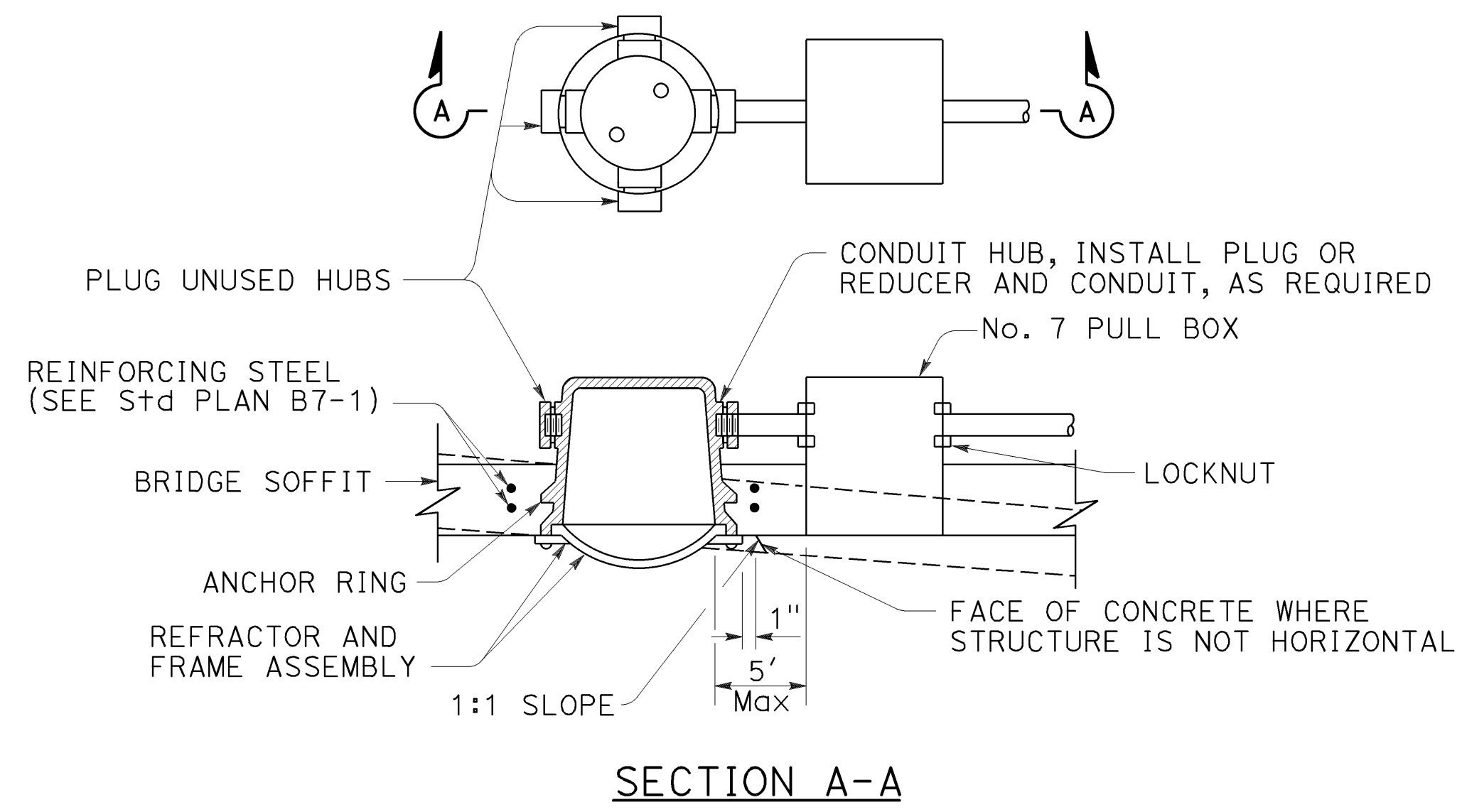
H.R. J.
REGISTERED ELECTRICAL ENGINEER

April 19, 2019
PLANS APPROVAL DATE

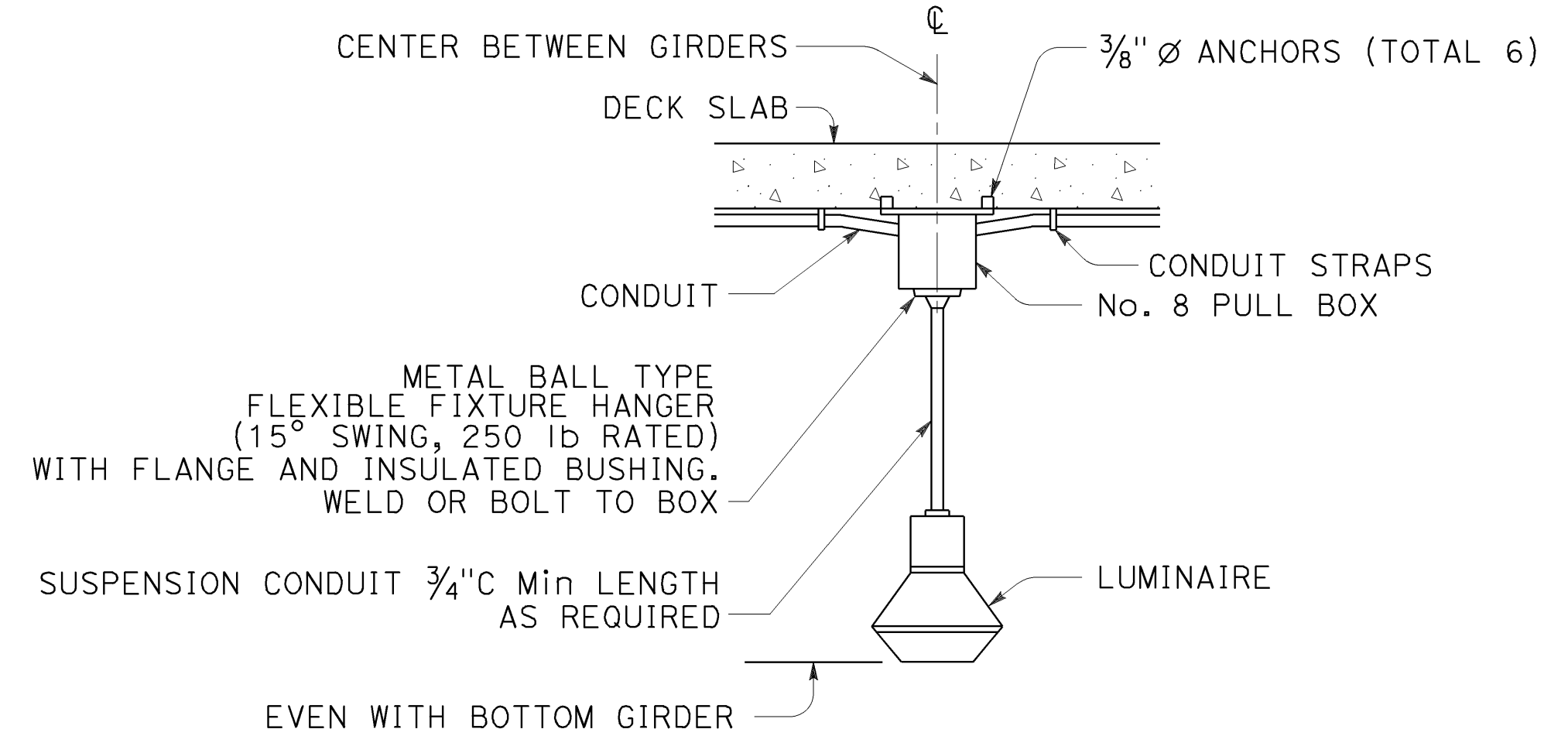
Hamid Zolfaghari
No. E15636
Exp. 12-31-19
ELECTRICAL
STATE OF CALIFORNIA

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.

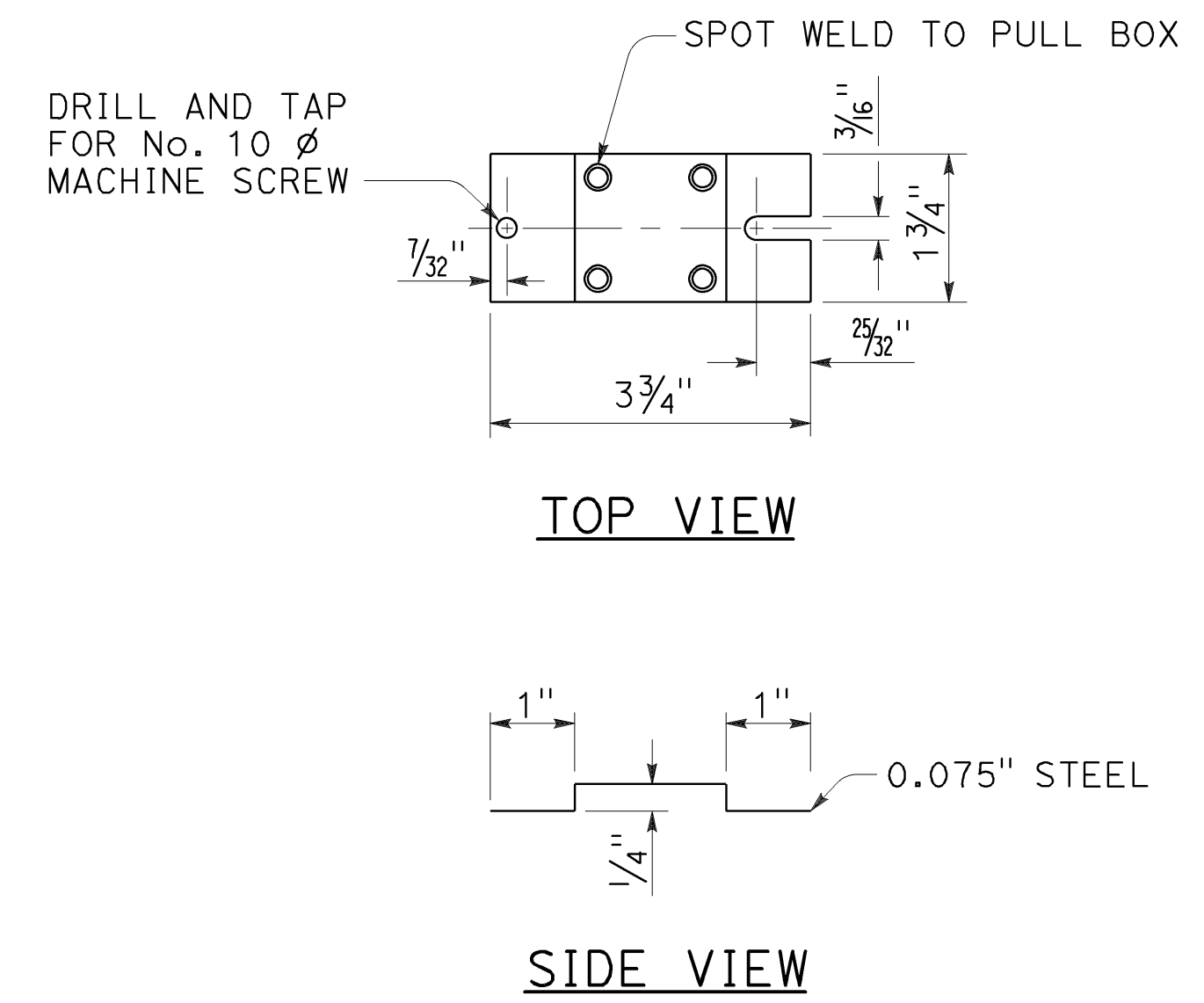
TO ACCOMPANY PLANS DATED 5-17-19



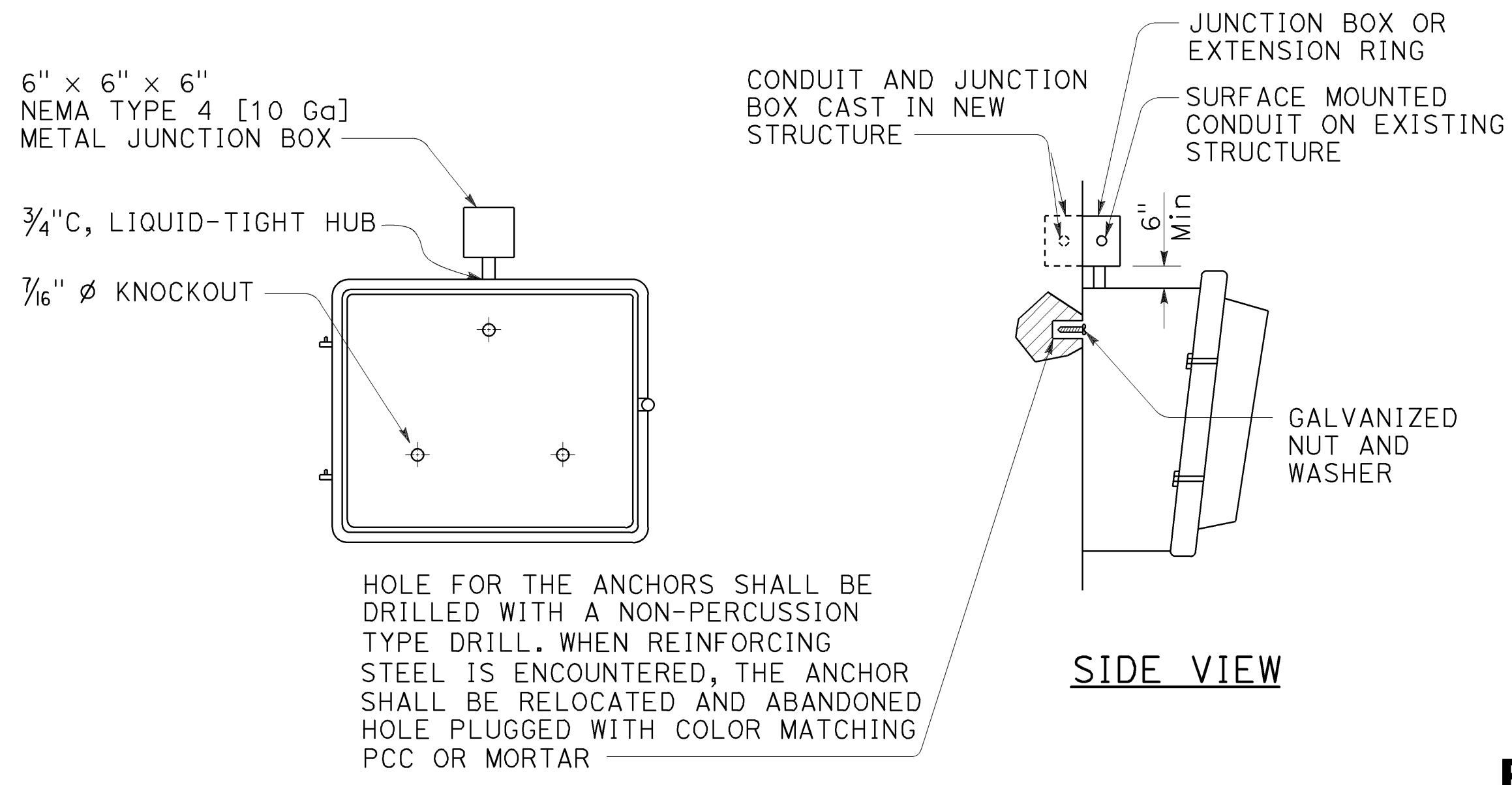
FLUSH-MOUNTED SOFFIT LUMINAIRE INSTALLATION
DETAIL F



PENDANT SOFFIT LUMINAIRE INSTALLATION
DETAIL P



**TERMINAL BLOCK
MOUNTING BRACKET**
DETAIL T



WALL-MOUNTED LUMINAIRE INSTALLATION
DETAIL W

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(FLUSH-MOUNTED SOFFIT,
PENDANT SOFFIT
AND WALL-MOUNTED LUMINAIRE
STRUCTURE INSTALLATIONS)**

NO SCALE

RSP ES-9E DATED APRIL 19, 2019 SUPERSEDES RSP ES-9E DATED OCTOBER 19, 2018 AND STANDARD PLAN ES-9E DATED MAY 31, 2018 - PAGE 539 OF THE STANDARD PLANS BOOK DATED 2018.

REVISED STANDARD PLAN RSP ES-9E

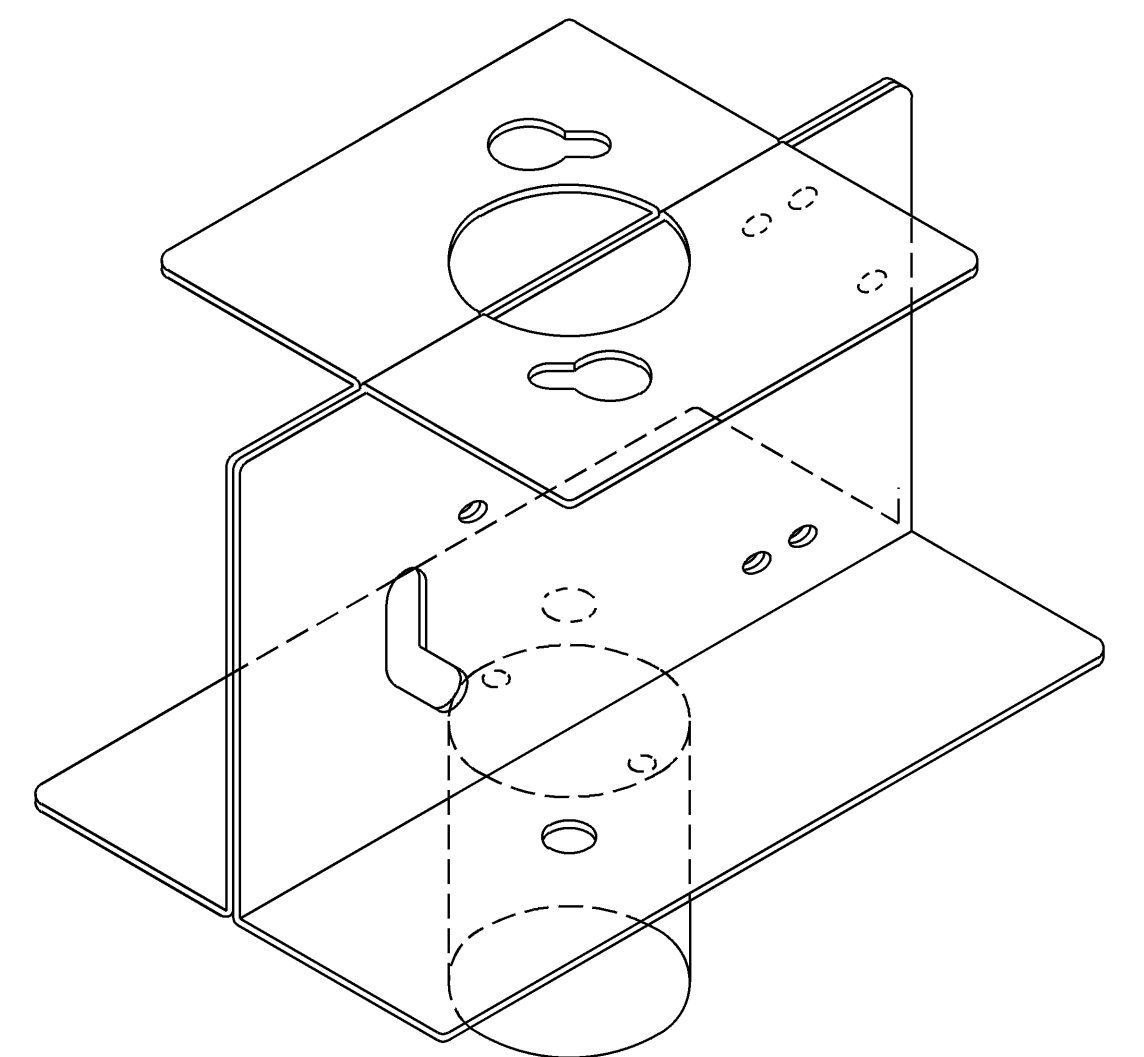
2018 REVISED STANDARD PLAN RSP ES-9E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	207	436

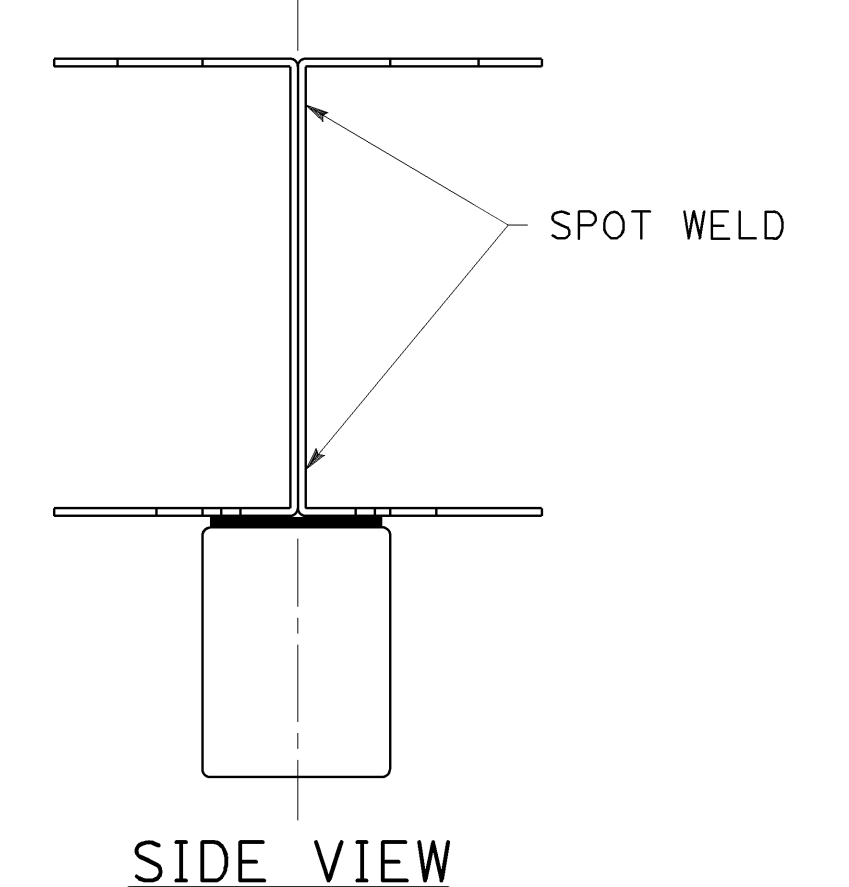
H.R. J.
 REGISTERED ELECTRICAL ENGINEER
 October 19, 2018
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
 Hamid Zolfaghari
 No. E15636
 Exp. 12-31-19
 ELECTRICAL
 STATE OF CALIFORNIA

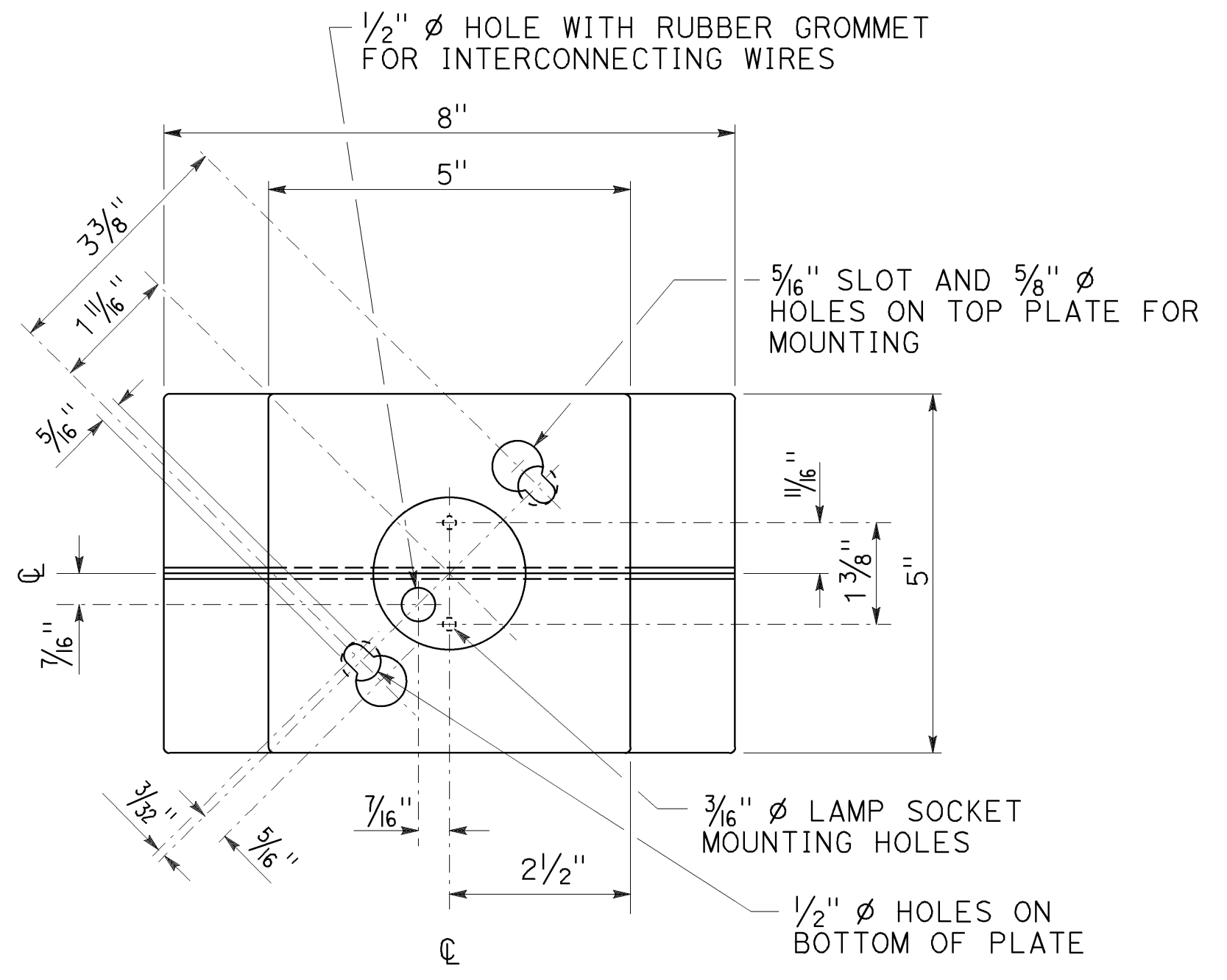
TO ACCOMPANY PLANS DATED 5-17-19



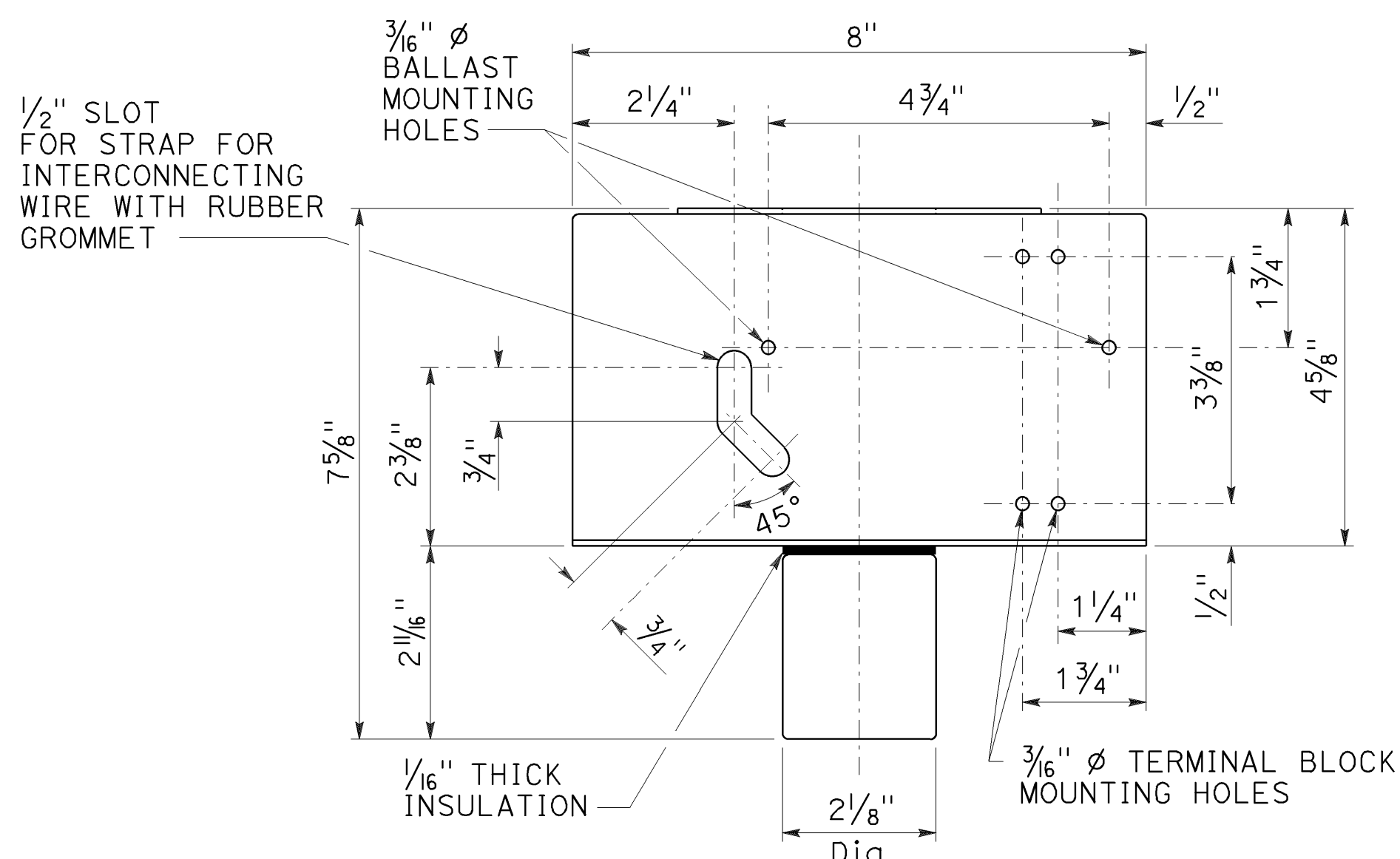
PERFORM TWO SHEETS 1/16" MILD STEEL AS SHOWN, SPOTWELD TOGETHER IN EACH CORNER WITH FOUR SPOTWELDS.



SIDE VIEW

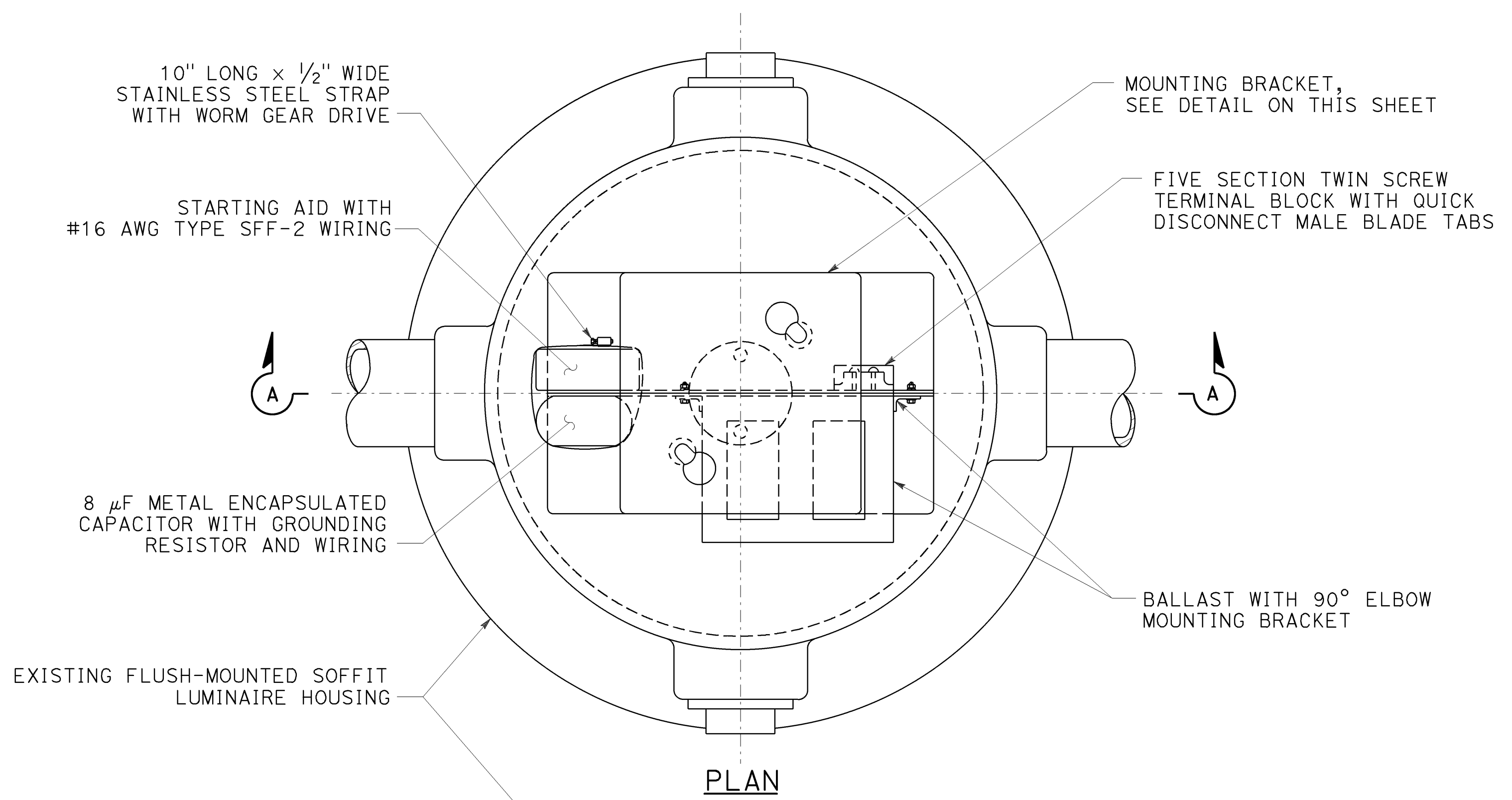


TOP VIEW

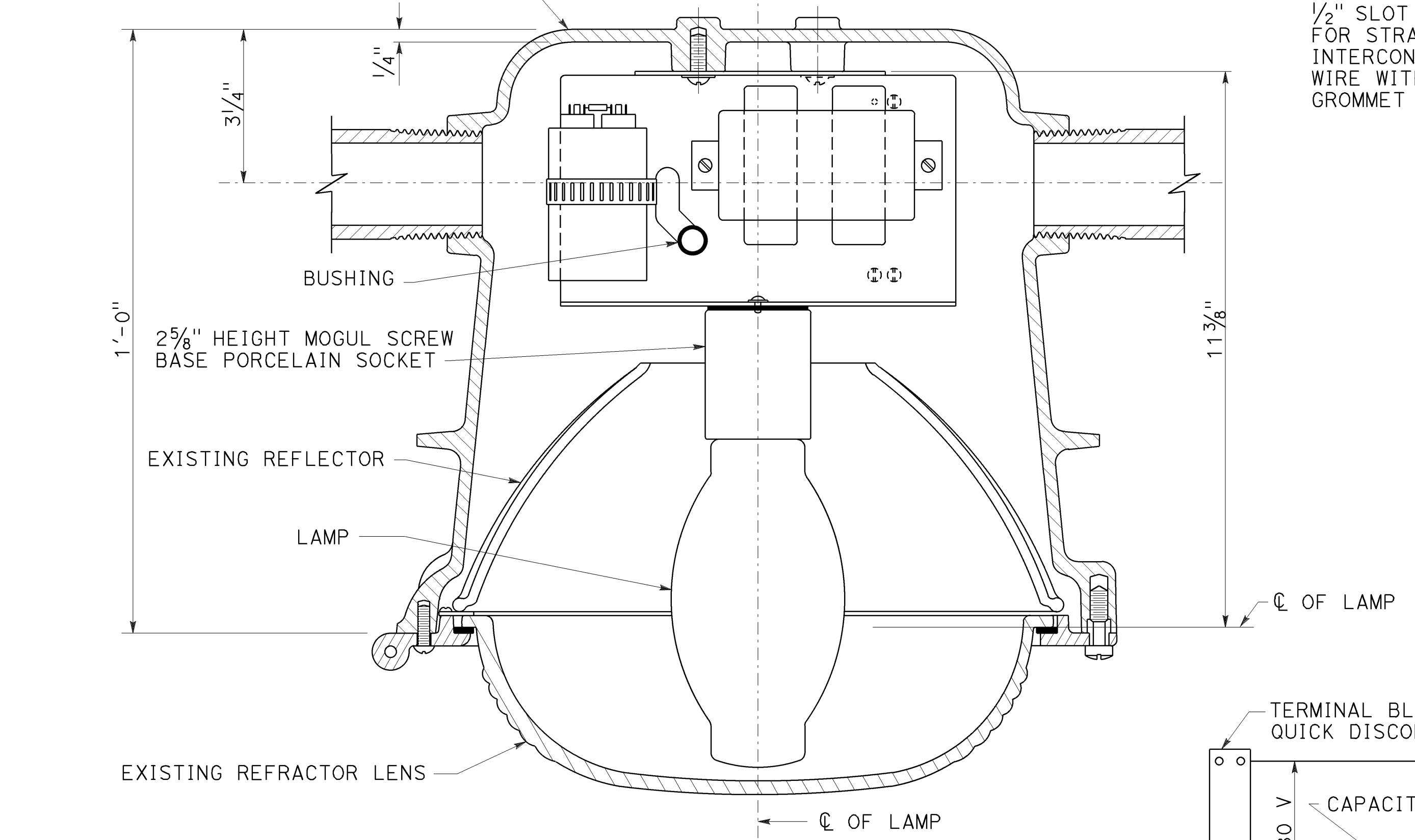


FRONT VIEW

MOUNTING BRACKET DETAILS

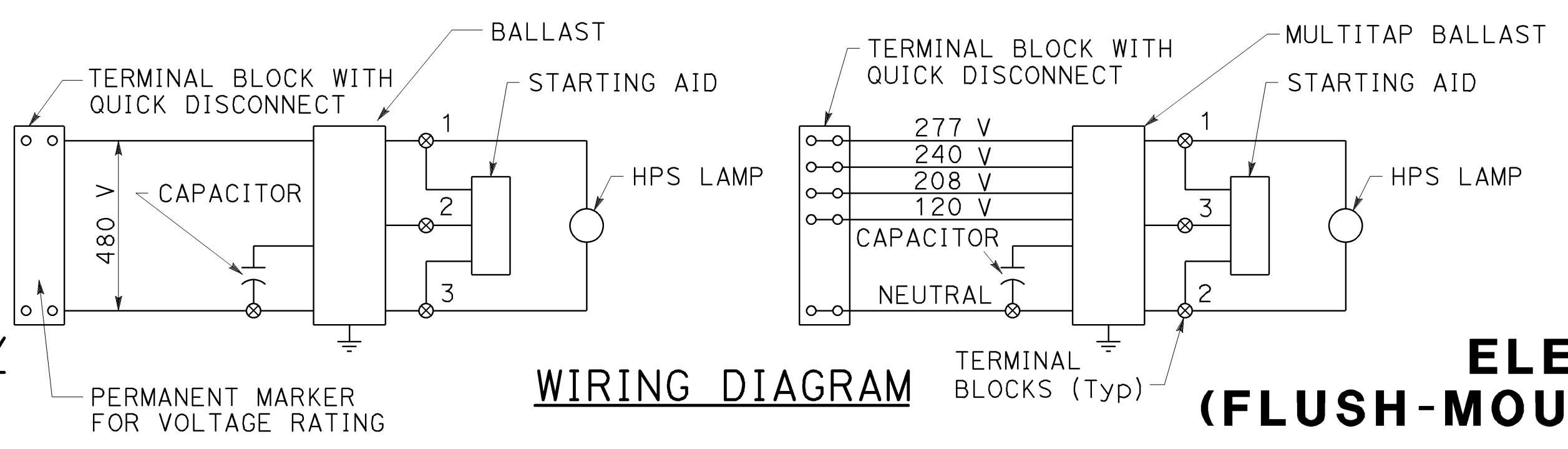


PLAN



SECTION A-A

FLUSH-MOUNTED SOFFIT LUMINAIRE ASSEMBLY



WIRING DIAGRAM

NOTE:
1. Use No. 8 ϕ machine screws, lockwashers and nuts for mounting ballast and terminal strips.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(FLUSH-MOUNTED SOFFIT LUMINAIRE
DETAILS)**

NO SCALE

RSP ES-9F DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN ES-9F
DATED MAY 31, 2018 - PAGE 540 OF THE STANDARD PLANS BOOK DATED 2018.

2018 REVISED STANDARD PLAN RSP ES-9F

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	7.8/8.0	208	436

H.R.J.
REGISTERED ELECTRICAL ENGINEER

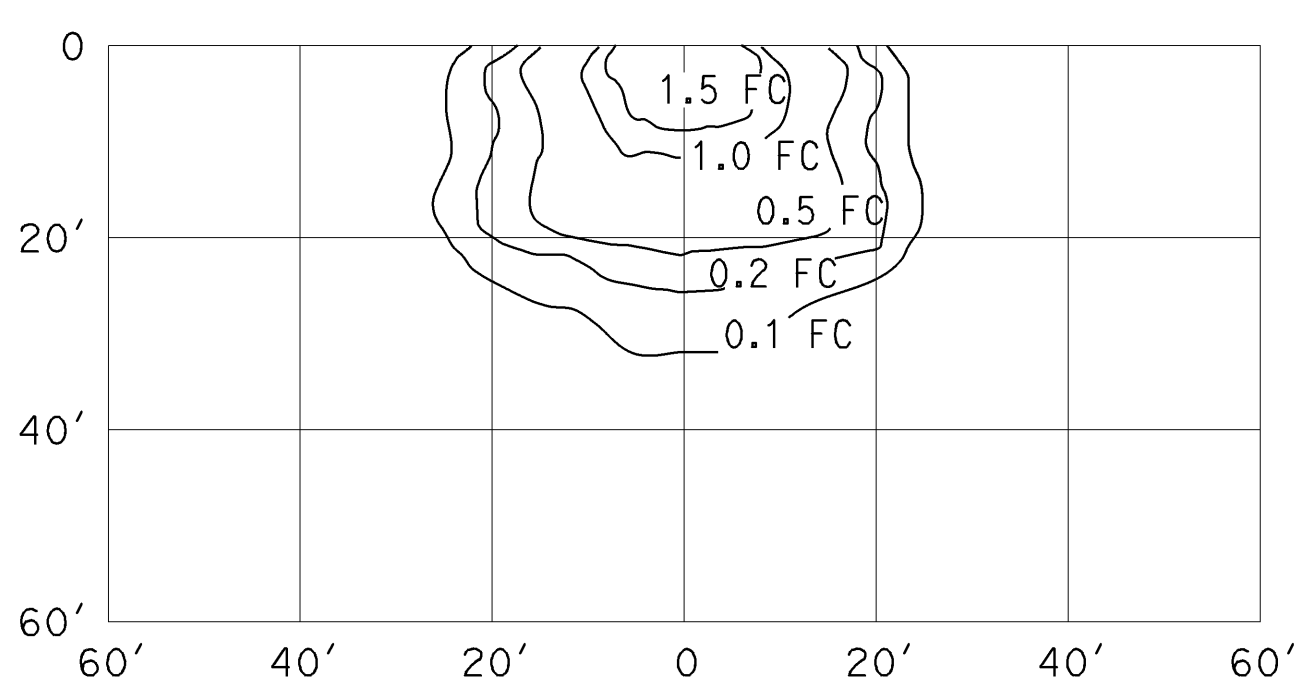
April 19, 2019
PLANS APPROVAL DATE

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.

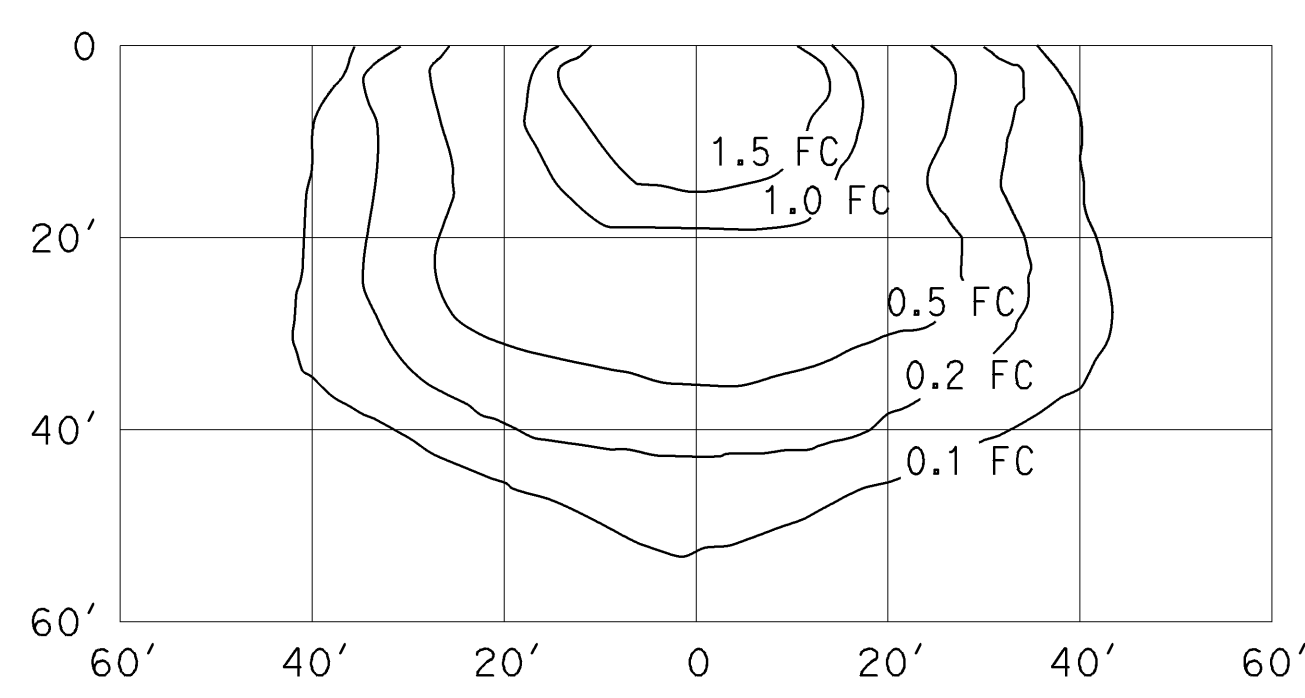
REGISTERED PROFESSIONAL ENGINEER
Hamid Zolfaghari
No. E15636
Exp. 12-31-19
ELECTRICAL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 5-17-19

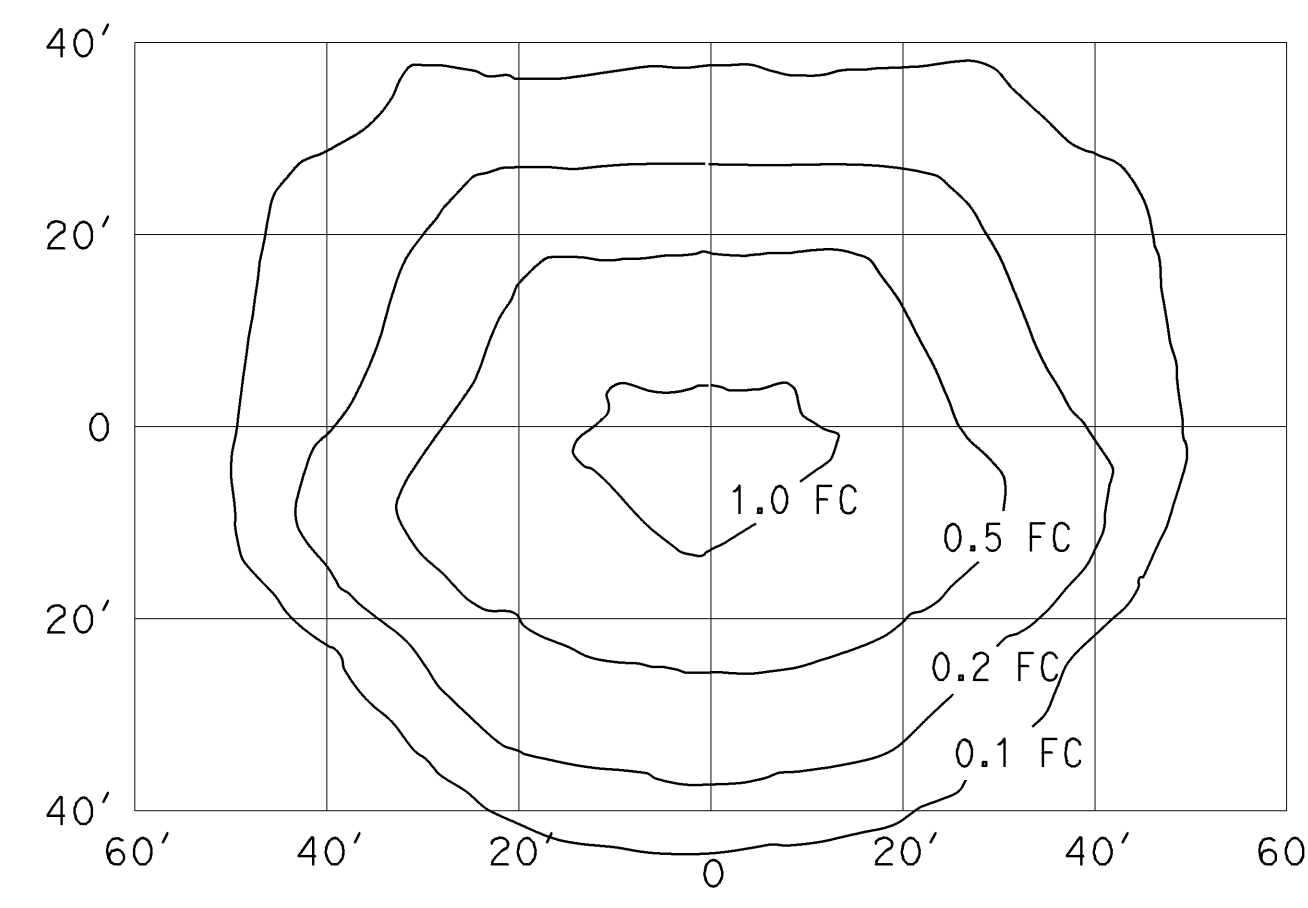
NOTE:
Curves represent the minimum maintained illuminance (FC).



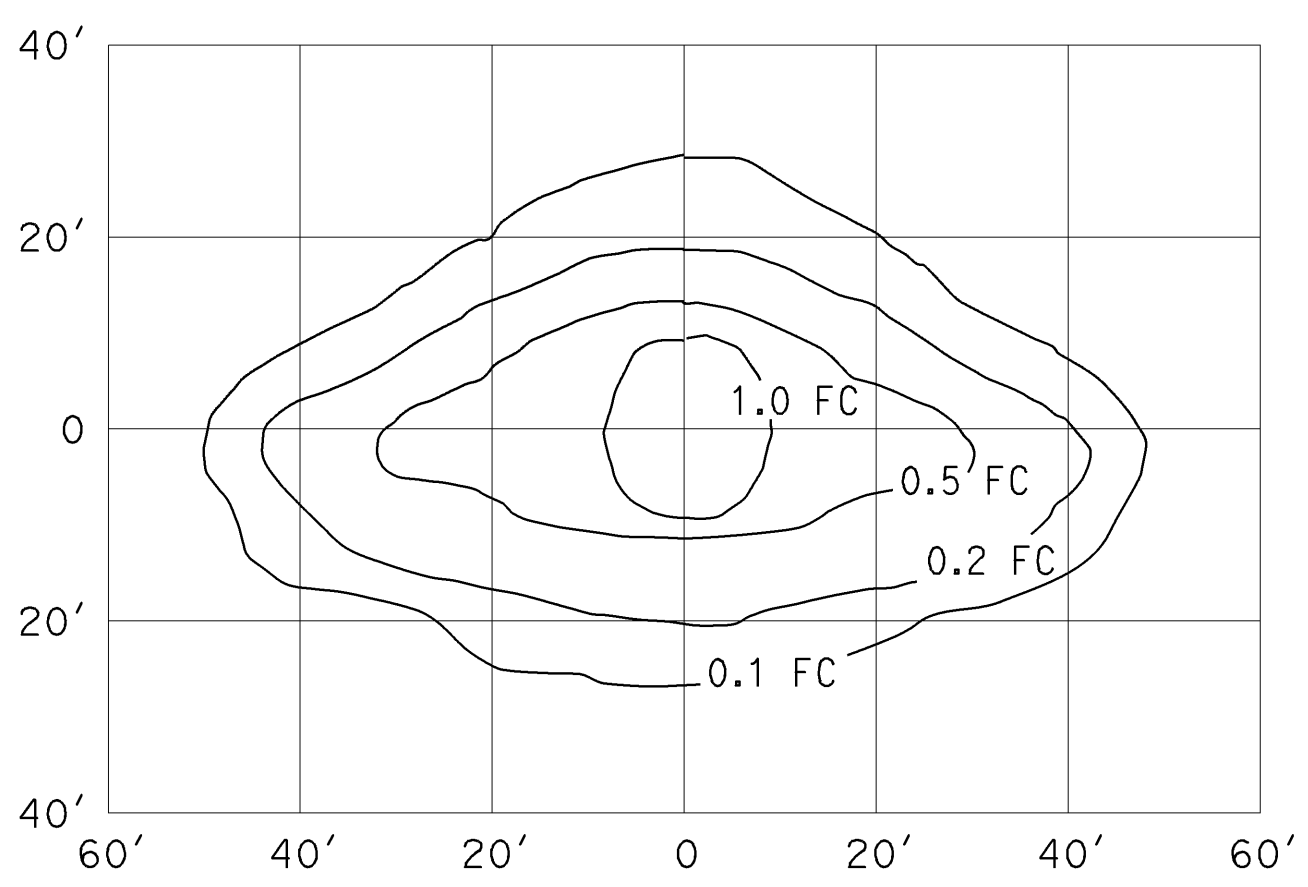
WALL-MOUNTED
15' Mounting Height
ANSI Designation S62
Lamp operated at 5,800 lm
70 W (Max)



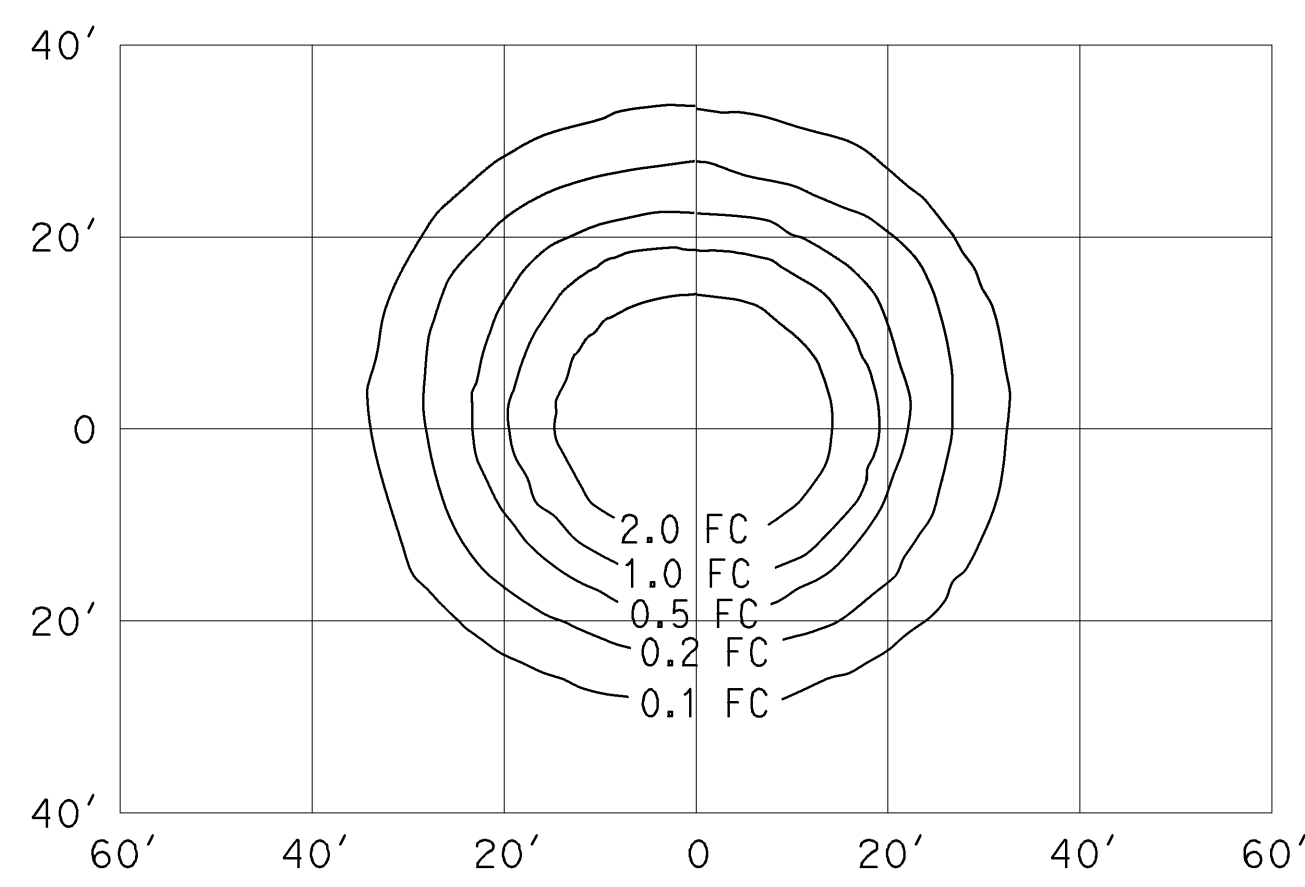
WALL-MOUNTED
15' Mounting Height
ANSI Designation S54
Lamp operated at 9,500 lm
100 W (Max)



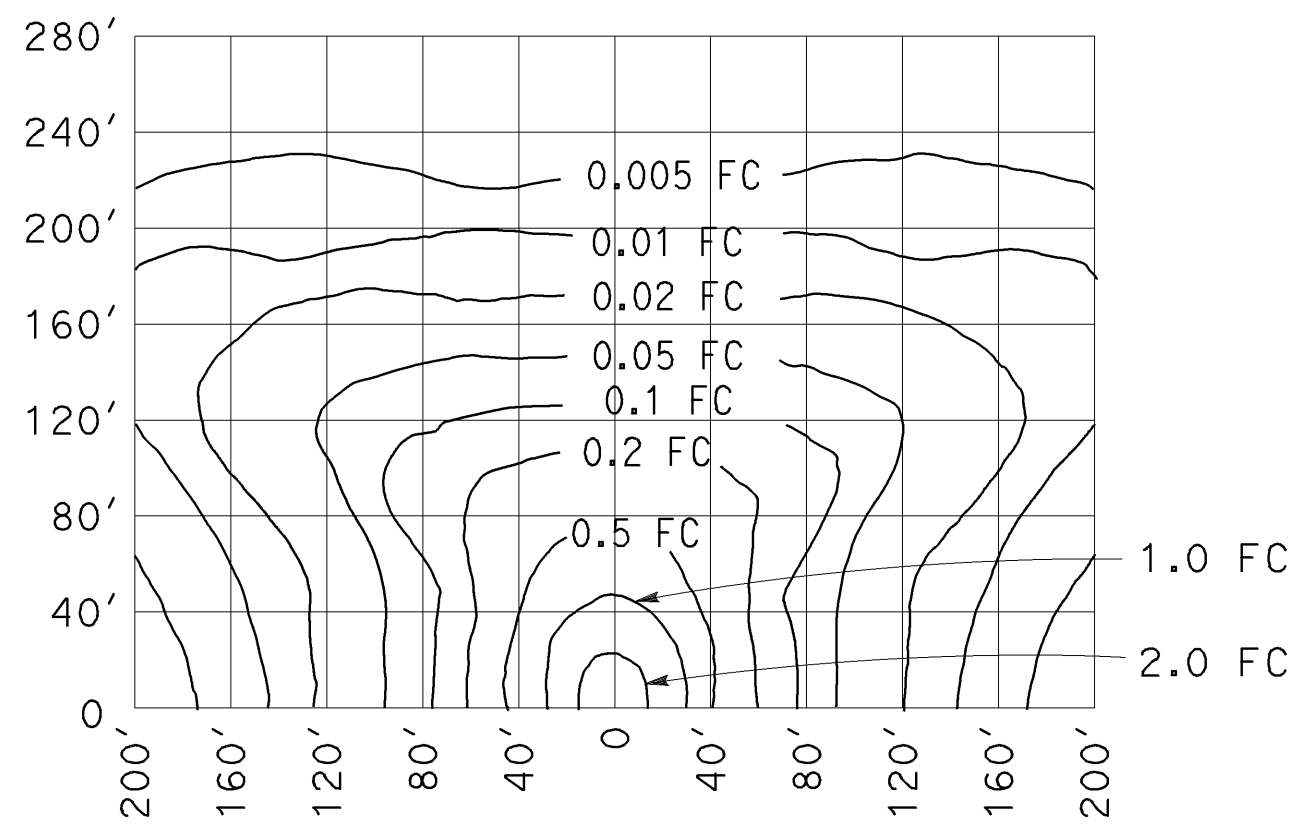
FLUSH-MOUNTED SOFFIT
17' Mounting Height
ANSI Designation S62
Lamp operated at 5,800 lm
70 W (Max)



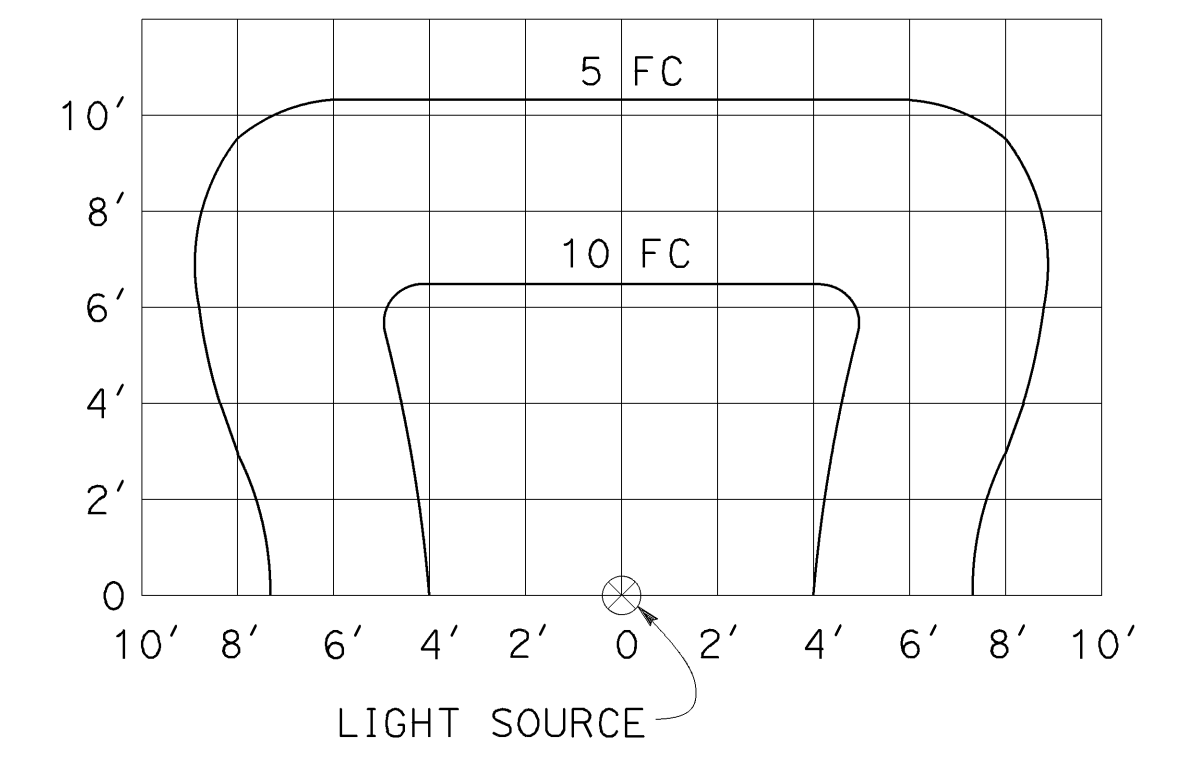
**PENDANT SOFFIT
TYPE III SHORT**
17' Mounting Height
ANSI Designation S62
Lamp operated at 5,800 lm
70 W (Max)



PENDANT SOFFIT
17' Mounting Height
ANSI Designation S62
Lamp operated at 5,800 lm
70 W (Max)



LOW-PRESSURE SODIUM
40' Mounting Height
Lamp operated at 33,000 lm
180 W (Max)



OVERHEAD SIGN LUMINAIRE
60 W (Max)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(ISOFOOTCANDLE CURVES)**

NO SCALE

RSP ES-10B DATED april 19, 2019 SUPERSEDES RSP ES-10B DATED OCTOBER 19, 2018 AND STANDARD PLAN ES-10B DATED MAY 31, 2018 - PAGE 542 OF THE STANDARD PLANS BOOK DATED 2018.

REVISED STANDARD PLAN RSP ES-10B

2018 REVISED STANDARD PLAN RSP ES-10B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	209	436

H.R. J. [Signature]
REGISTERED ELECTRICAL ENGINEER

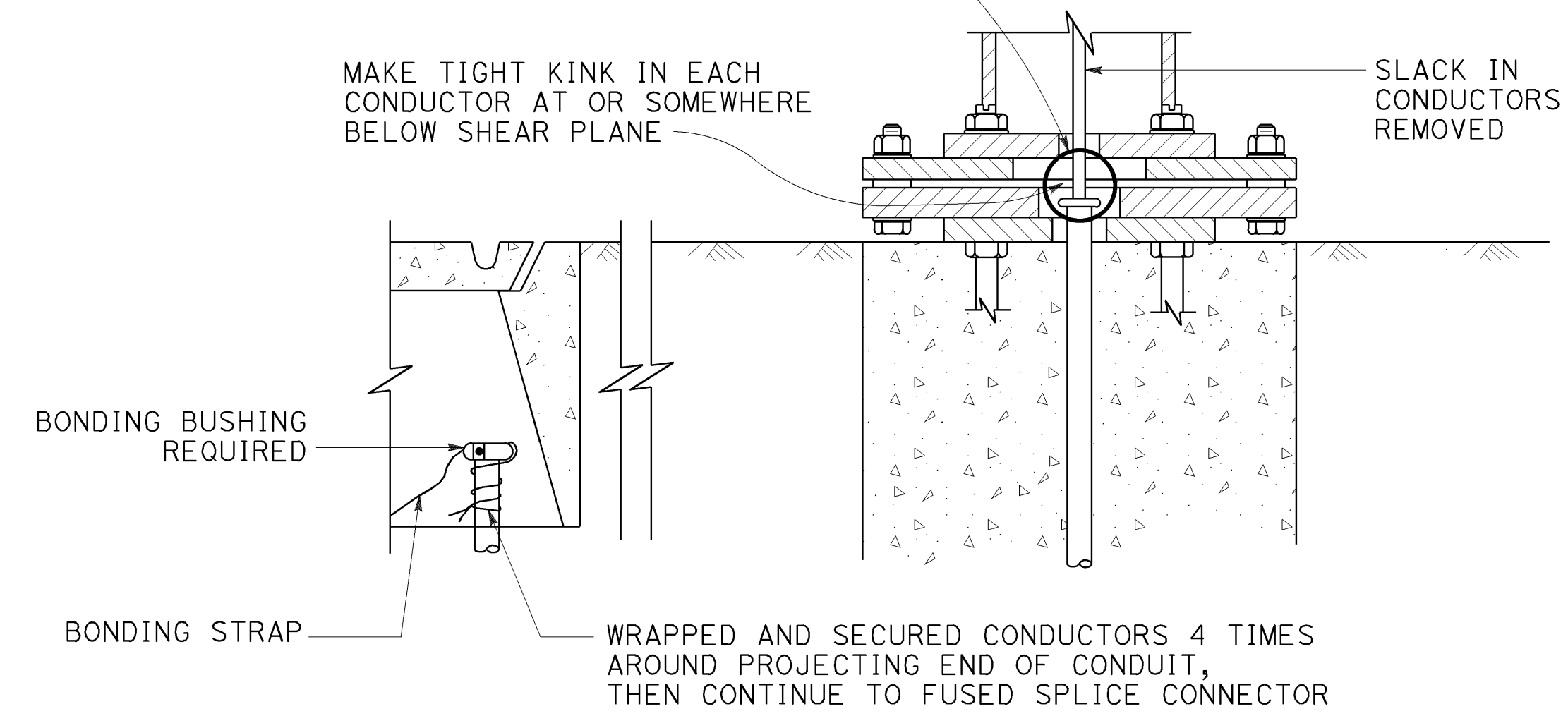
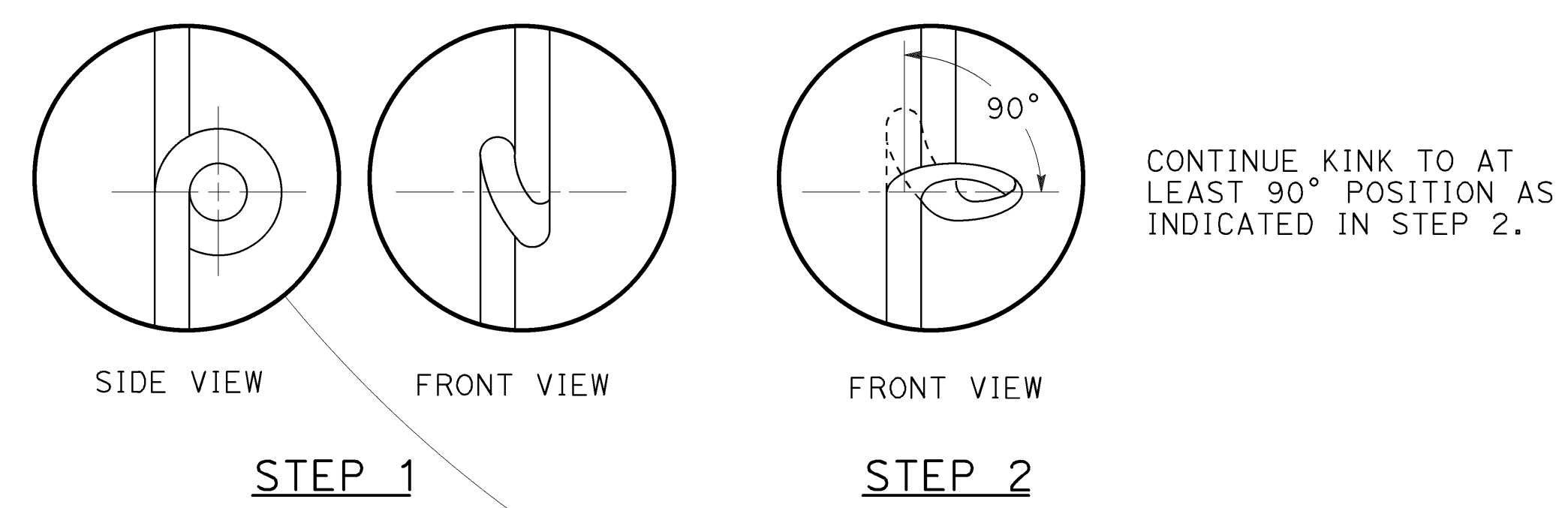
October 19, 2018
PLANS APPROVAL DATE

Hamid Zolfaghar i
No. E15636
Exp. 12-31-19
ELECTRICAL
STATE OF CALIFORNIA

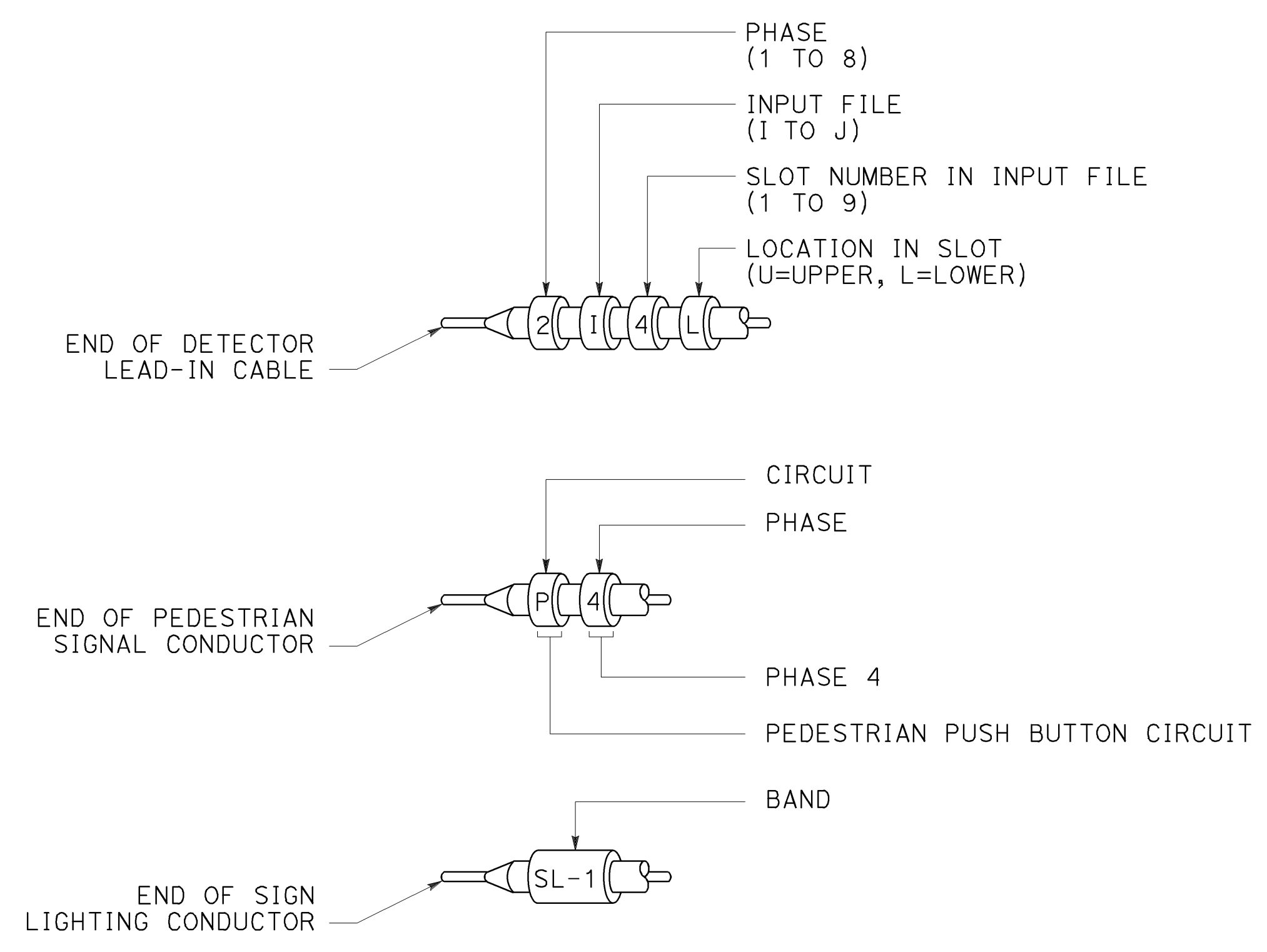
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TO ACCOMPANY PLANS DATED 5-17-19

2018 REVISED STANDARD PLAN RSP ES-13B



**KINKING DETAIL FOR
SLIP BASE STANDARDS
DETAIL A**



**TYPICAL BANDING DETAILS
DETAIL B**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(KINKING AND BANDING DETAIL)**

NO SCALE

RSP ES-13B DATED OCTOBER 19, 2018 SUPERSEDES STANDARD PLAN ES-13B
DATED MAY 31, 2018 - PAGE 545 OF THE STANDARD PLANS BOOK DATED 2018.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	7.8/8.0	210	436

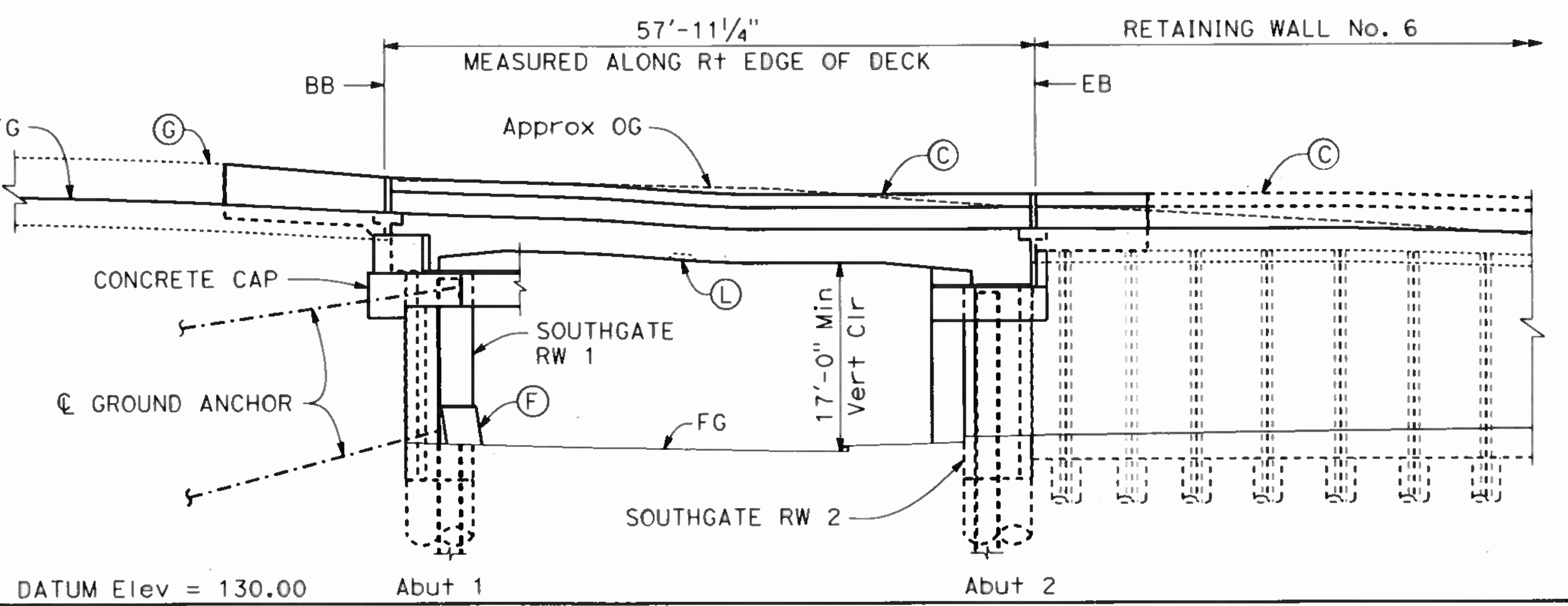
REGISTERED CIVIL ENGINEER
DATE 7-25-19
PLANS APPROVAL DATE

JOHN MANISCALCO
No. 40911
Exp. 3/31/21
CIVIL
STATE OF CALIFORNIA

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SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY
1455 MARKET STREET, SUITE 2200
SAN FRANCISCO, CA 94103

HDR ENGINEERING, INC
100 PRINGLE AVENUE, SUITE 400
WALNUT CREEK, CA 94596



- LEGEND:**
- Indicates existing structure
 - Indicates new structure
 - ← Indicates direction of traffic
 - Point of minimum vertical clearance

- KEY NOTES:**
- (A) Paint "Bridge No. 34-0191S" and year completed
 - (B) Paint "SOUTHGATE ROAD UC"
 - (C) Concrete Barrier (Type 836)
 - (D) Concrete Barrier (Type 842)
 - (E) Structure Approach Type EQ (10)
 - (F) Concrete Barrier (Type 60MD Mod)
 - (G) Concrete Barrier, see "ROADWAY PLANS"
 - (H) Crash Cushion, see "ROADWAY PLANS"
 - (J) Concrete Barrier (Type 842A)
 - (K) Structure Approach Type EQ (10) Mod
 - (L) Flush Mounted Soffit Luminaire, see "MISCELLANEOUS DETAILS No. 1" and "ELECTRICAL PLANS"
 - (M) Sign Mounted on Bridge or Concrete Barrier, see "MISCELLANEOUS DETAILS No. 2" and "SIGN PLANS"

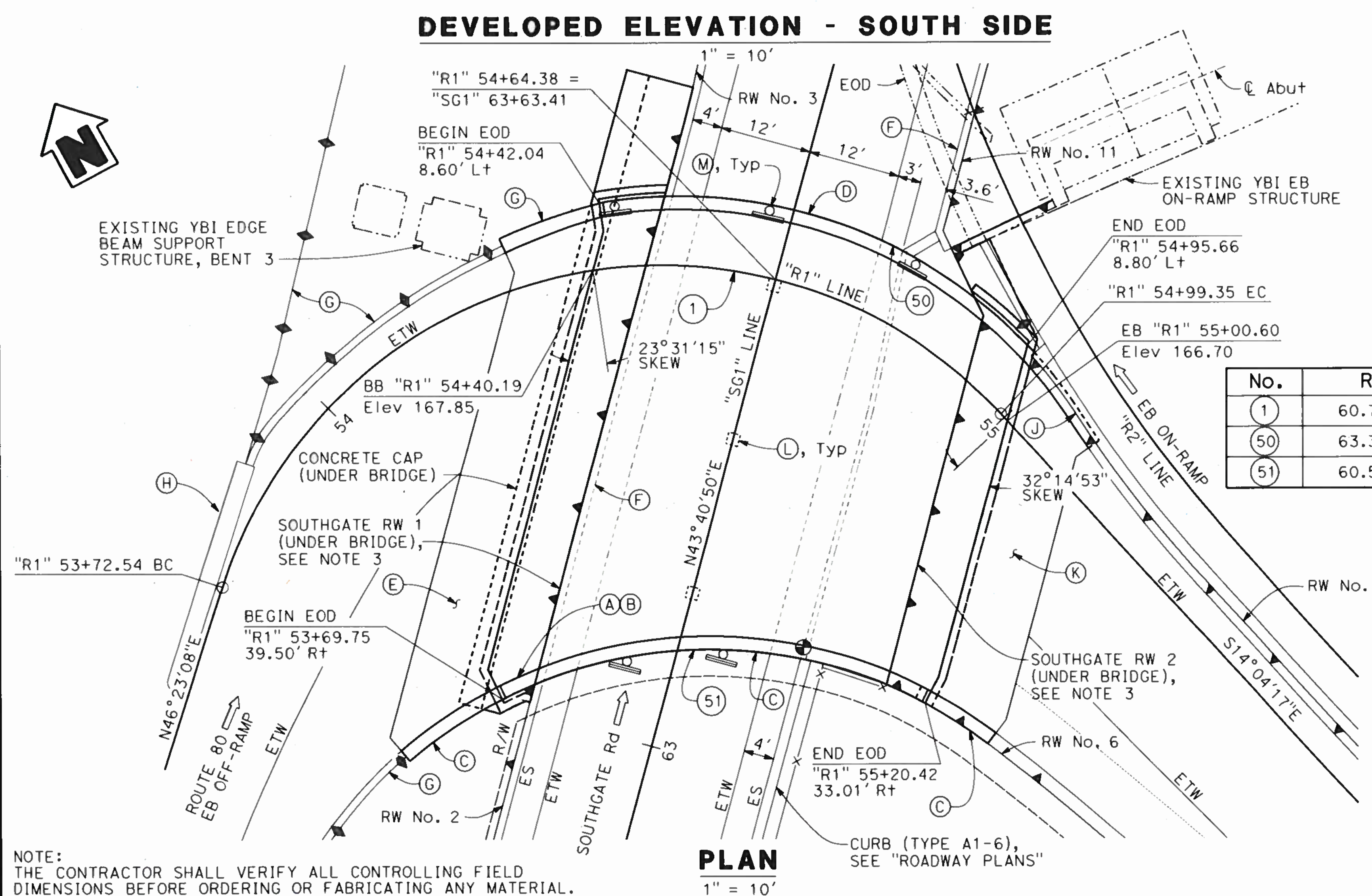
- NOTES:**
- For "TYPICAL SECTION" see "GENERAL PLAN No. 2" sheet.
 - For "PILE DATA TABLE" see "FOUNDATION PLAN" sheet.
 - For Southgate retaining wall information, see "SOUTHGATE RW 1 LAYOUT" and "SOUTHGATE RW 2 LAYOUT" sheets.

QUANTITIES

STRUCTURE EXCAVATION (SOLDIER PILE WALL)	305 CY
STRUCTURE EXCAVATION (GROUND ANCHOR WALL)	12 CY
STRUCTURE BACKFILL (GROUND ANCHOR WALL)	1 CY
STRUCTURE BACKFILL (SOLDIER PILE WALL)	24 CY
CONCRETE BACKFILL (SOLDIER PILE WALL)	45 CY
LEAN CONCRETE BACKFILL	307 CY
GROUND ANCHOR (SUB HORIZONTAL), LOCATION A	11 EA
GROUND ANCHOR (SUB HORIZONTAL), LOCATION B	5 EA
STEEL SOLDIER PILE (W24x192)	328 LF
STEEL SOLDIER PILE (W24x250)	447 LF
36" DRILLED HOLE	1,408 LF
48" PERMANENT NEW STEEL PIPE FORM	162 LF
72" STEEL CASING	282 LF
72" CAST-IN-DRILLED-HOLE CONCRETE PILING	468 LF
STRUCTURAL CONCRETE, BRIDGE	184 CY
STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER)	92 CY
STRUCTURAL CONCRETE, RETAINING WALL	232 CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE EQ Mod)	61 CY
FRACTURED RIB TEXTURE	2,486 SQFT
JOINT SEAL ASSEMBLY (MR 6")	116 LF
BAR REINFORCING STEEL (BRIDGE)	360,034 LB
BAR REINFORCING STEEL (RETAINING WALL)	34,916 LB
STRUCTURAL SHOTCRETE	4 CY
STRUCTURAL STEEL (BRIDGE)	3504 LB
TIMBER LAGGING	1 MFBM
CLEAN AND PAINT STRUCTURAL STEEL	1 LS
MINOR CONCRETE (GUTTER) (CY)	1 CY
MISCELLANEOUS METAL (RETAINING WALL)	38,422 LB
CONCRETE BARRIER (TYPE 60MD Mod)	84 LF
CONCRETE BARRIER (TYPE 836)	76 LF
CONCRETE BARRIER (TYPE 842)	69 LF
CABLE RAILING	14 LF

CURVE DATA

No.	R	Δ	T	L
(1)	60.78'	119°32'34"	104.31'	126.81'
(50)	63.36'	56°11'45"	33.83'	62.14'
(51)	60.50'	53°00'45"	30.17'	55.98'



NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN OVERSIGHT	BY A. MALLA	CHECKED J. SUK	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE
DETAILS	BY J. GREEN	CHECKED A. MALLA	LAYOUT	BY T. MEHTA
QUANTITIES	BY A. MALLA	CHECKED A. CARMAZZI	SPECIFICATIONS	BY T. MEHTA
			PLANS AND SPECS COMPARED	BY M. JACKSON

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

JOHN MANISCALCO
PROJECT ENGINEER

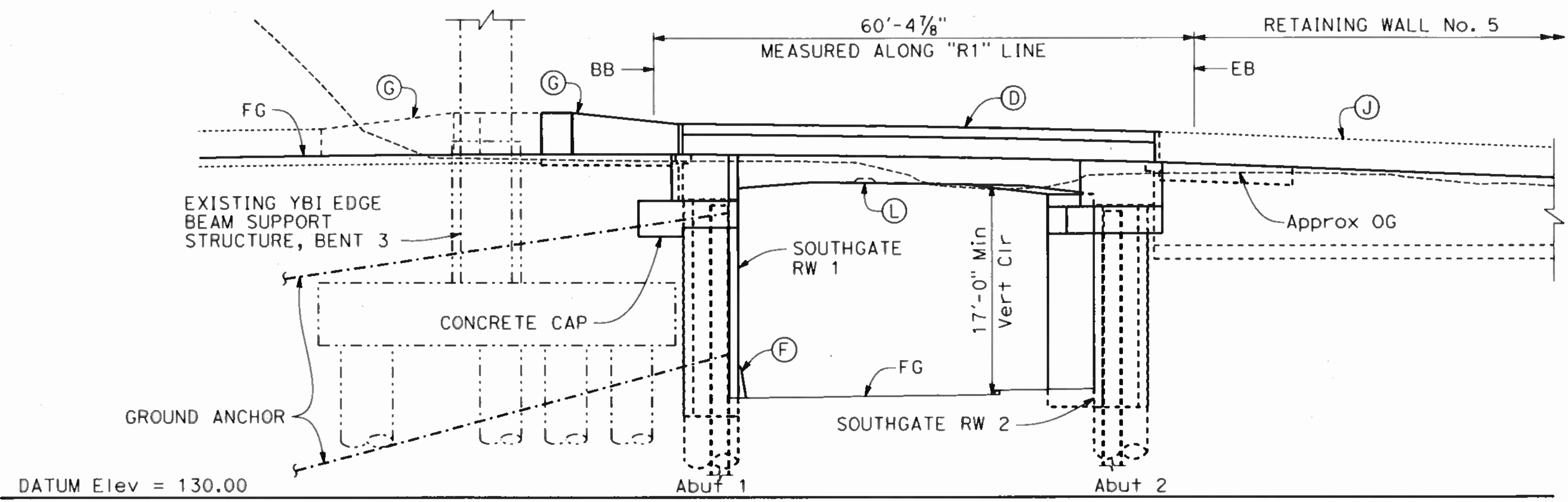
BRIDGE NO. 34-0191S
POST MILES 7.9

SOUTHGATE ROAD UC
GENERAL PLAN No. 1

REVISION DATES: 10-22-19, 11-12-19, 2-21-19, 1-28-19

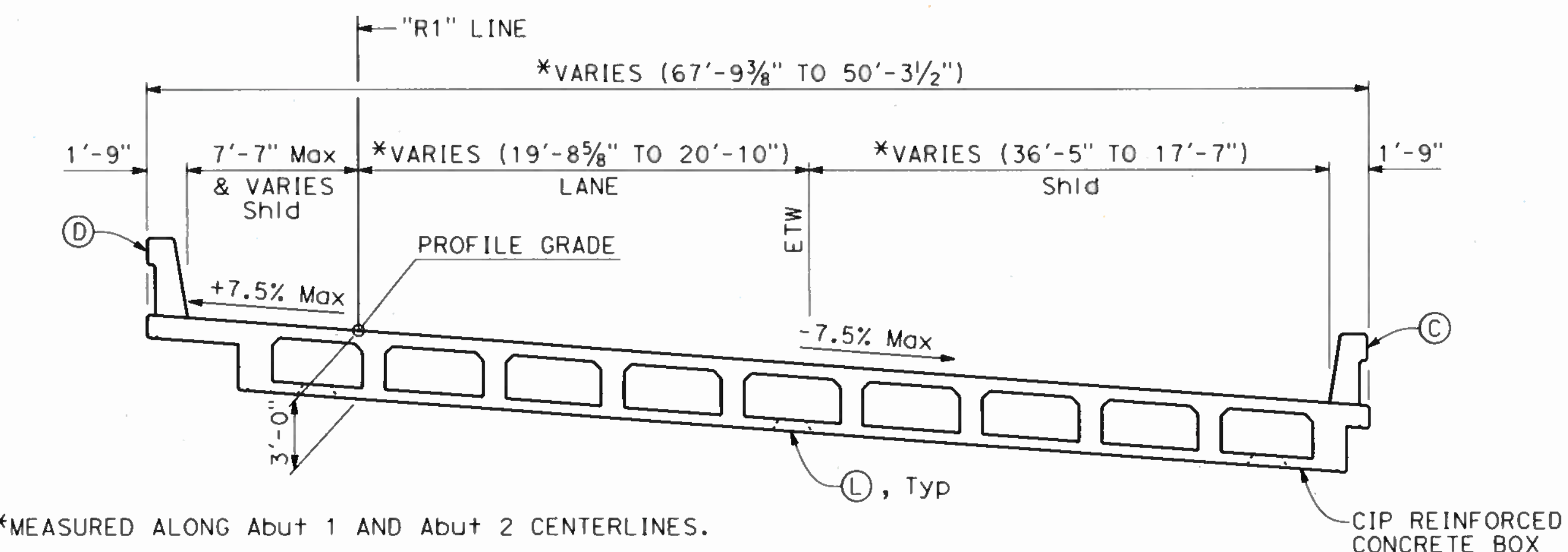
SHEET 1 OF 40

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	211	436
REGISTERED CIVIL ENGINEER			DATE	7-25-19	
PLANS APPROVAL DATE					
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SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY 1455 MARKET STREET, SUITE 2200 SAN FRANCISCO, CA 94103					
HDR ENGINEERING, INC 100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596					



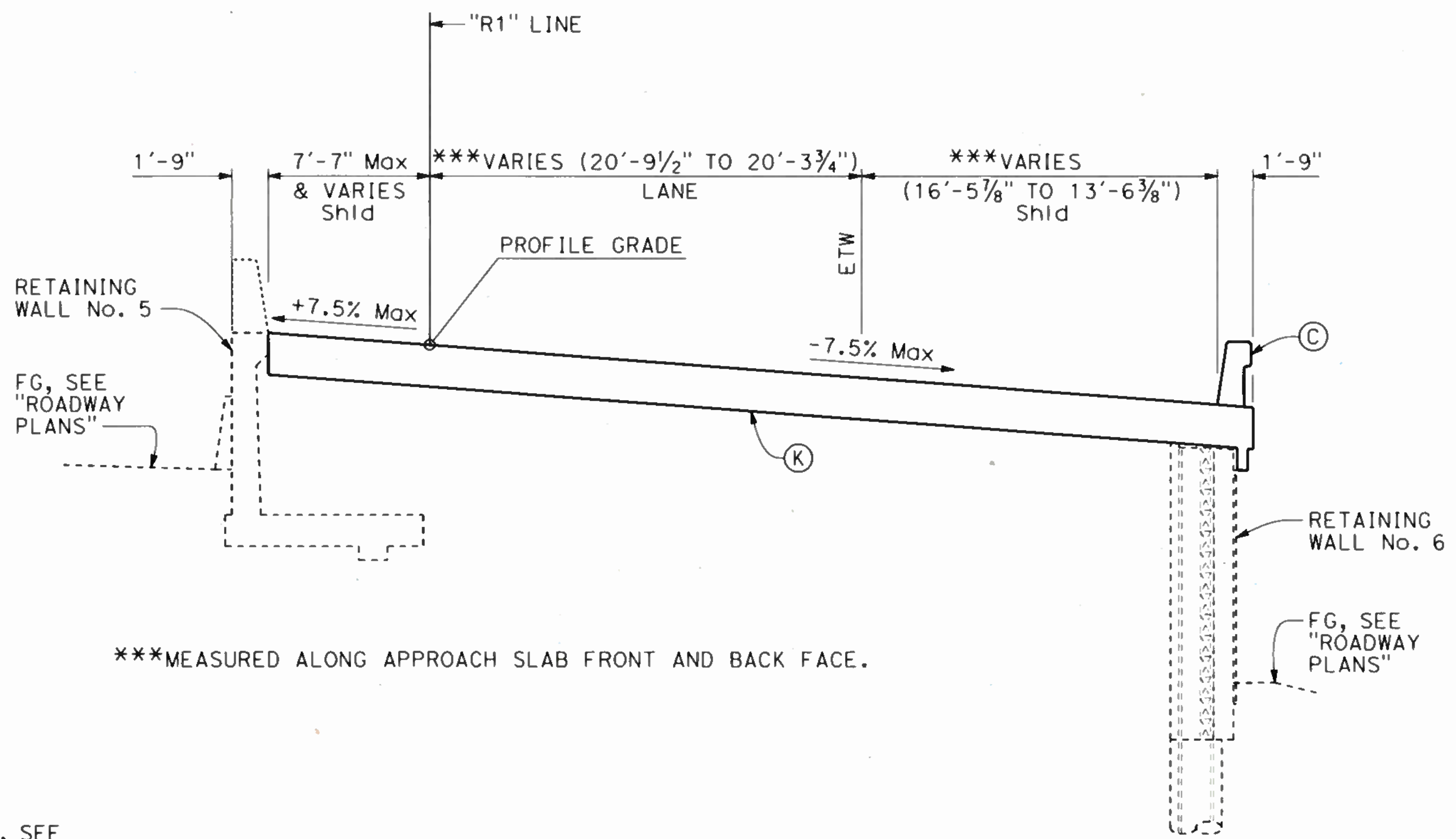
MIRRORED DEVELOPED ELEVATION - NORTH SIDE

1" = 10'



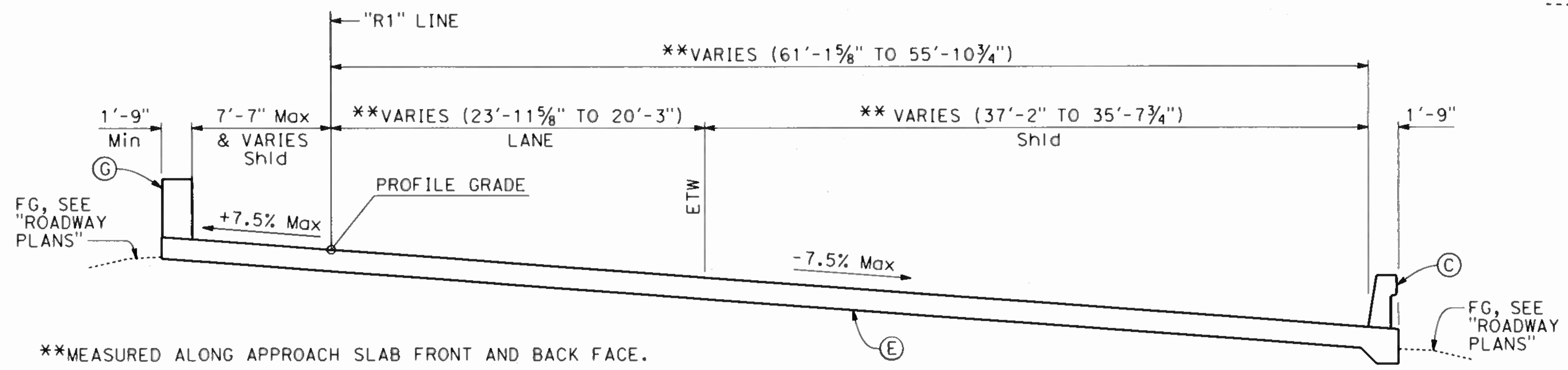
TYPICAL SECTION

1" = 5'



APPROACH SECTION AT RW5 AND RW6

1" = 5'



APPROACH SECTION AT SOUTHGATE RW 1

1" = 5'

***MEASURED ALONG APPROACH SLAB FRONT AND BACK FACE.

*MEASURED ALONG Abut 1 AND Abut 2 CENTERLINES.

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

 DESIGN OVERSIGHT SIGN OFF DATE: 11/19/19	DESIGN	BY: A. MALLA	CHECKED: J. SUK	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	34-01915	SOUTHGATE ROAD UC GENERAL PLAN No. 2
	DETAILS	BY: J. GREEN	CHECKED: A. MALLA		PROJECT ENGINEER	POST MILES	
	QUANTITIES	BY: A. MALLA	CHECKED: A. CARMAZZI	UNIT: 0728	PROJECT NUMBER & PHASE: 04190001531 CONTRACT NO.: 04-3A6414		REVISION DATES
DESIGN DETAIL SHEET (ENGLISH) (REV. 03/14/12)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	DISREGARD PRINTS BEARING EARLIER REVISION DATES		SHEET 2 OF 40 REVISION DATES: 10-22-19, 11-12-19, 2-21-19, 7-25-19

USERNAME => SVC_INL_PWDPRJCEI_PLOTTED => 22-OCT-2019 TIME PLOTTED => 15:24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	7.8/8.0	212	436

GENERAL NOTES

STANDARD PLANS DATED OCTOBER 2018

INDEX TO PLANS

LOAD AND RESISTANCE FACTOR DESIGN

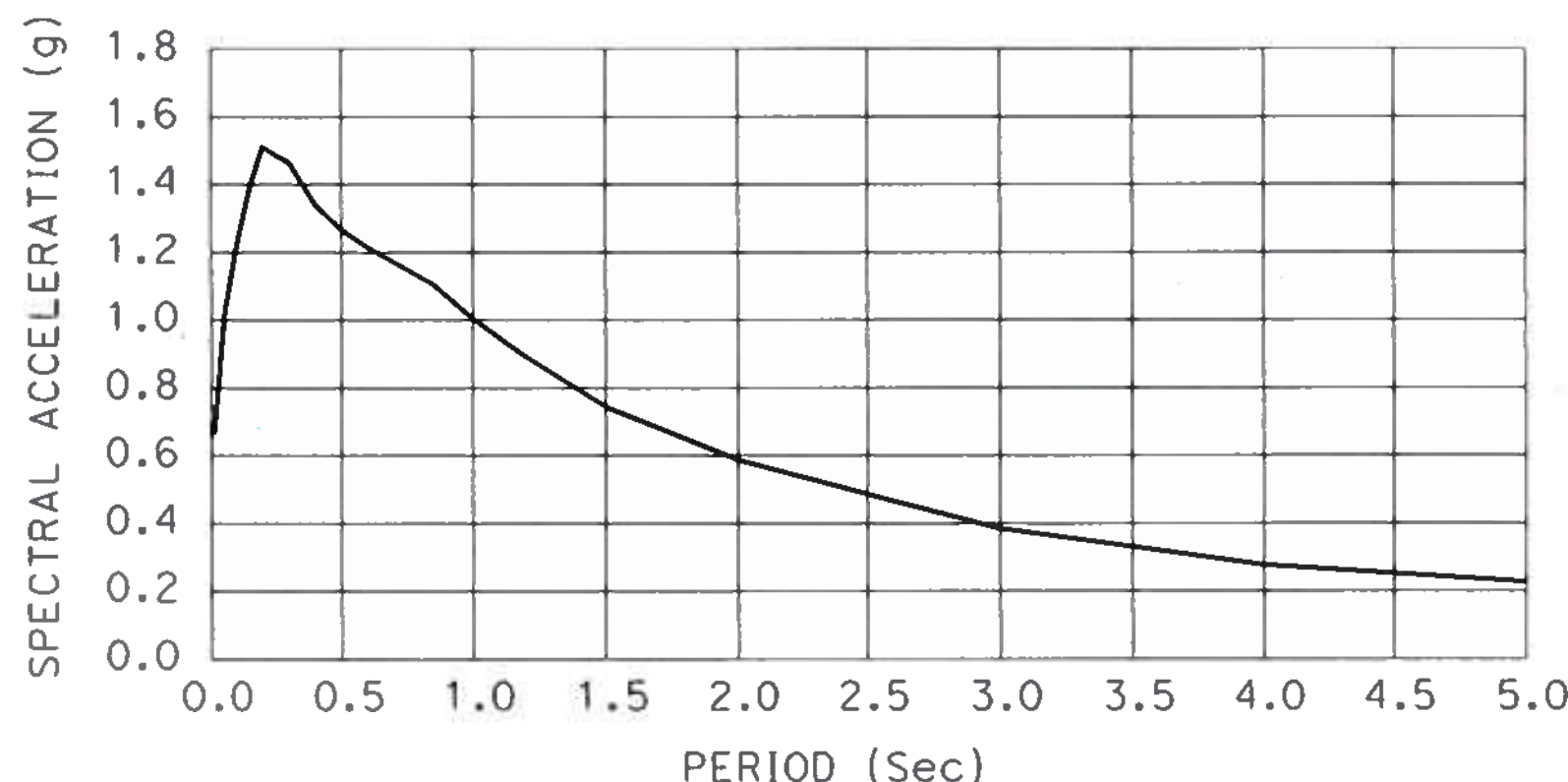
DESIGN:
AASHTO LRFD Bridge Design Specifications 2018, 8th edition with Caltrans Amendments.

SEISMIC DESIGN:
Caltrans Seismic Design Criteria (SDC), Version 1.7 dated April 2013.

DEAD LOAD:
Includes 35 psf for future wearing surface.

LIVE LOADING:
HL93 and permit design load.

SEISMIC LOADING:
Soil Profile: Vs30 = 1148 ft/sec
Moment Magnitude: Mmax = 7.3 R at 7.4 miles
Peak Ground Acceleration: 0.665 g



ARS CURVE (5% DAMPING)

REINFORCED CONCRETE:
fy = 60,000 psi
f'c = 4,000 psi (UON)
n = 8

STEEL CASING:
ASTM A252 GRADE 3

STEEL PIPE:
ASTM A53 GRADE B

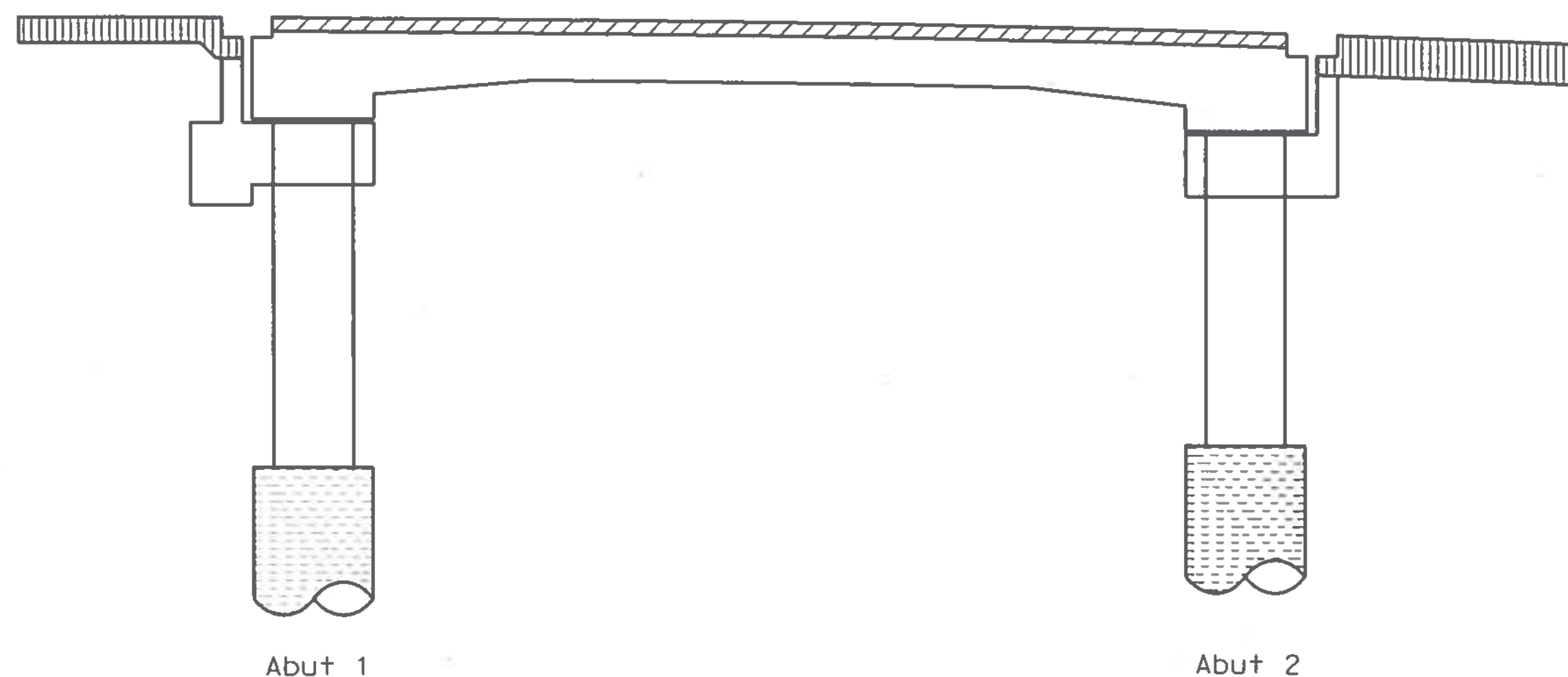
- A3A ABBREVIATIONS (SHEET 1 OF 3)
- A3B ABBREVIATIONS (SHEET 2 OF 3)
- A3C ABBREVIATIONS (SHEET 3 OF 3)
- A10A LEGEND - LINES AND SYMBOLS (SHEET 1 OF 5)
- A10B LEGEND - LINES AND SYMBOLS (SHEET 2 OF 5)
- A10C LEGEND - LINES AND SYMBOLS (SHEET 3 OF 5)
- A10D LEGEND - LINES AND SYMBOLS (SHEET 4 OF 5)
- A10E LEGEND - LINES AND SYMBOLS (SHEET 5 OF 5)
- A10F LEGEND - SOIL (SHEET 1 OF 2)
- A10G LEGEND - SOIL (SHEET 2 OF 2)
- A10H LEGEND - ROCK
- A62C LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE
- A76A CONCRETE BARRIER TYPE 60M
- RSP B0-1 BRIDGE DETAILS
- B0-3 BRIDGE DETAILS
- B0-5 BRIDGE DETAILS
- B0-13 BRIDGE DETAILS
- B3-6 RETAINING WALL DETAILS No. 2
- B7-1 BOX GIRDER DETAILS
- B9-4 STRUCTURE APPROACH TYPE EQ (10)
- B9-5 STRUCTURE APPROACH SLAB DETAILS
- B9-6 STRUCTURE APPROACH DRAINAGE DETAILS
- B11-47 CABLE RAILING
- RSP B11-79 CONCRETE BARRIER TYPE 836 DETAILS No. 1
- RSP B11-80 CONCRETE BARRIER TYPE 836 DETAILS No. 2
- RSP B11-81 CONCRETE BARRIER TYPE 842 DETAILS No. 1
- RSP B11-82 CONCRETE BARRIER TYPE 842 DETAILS No. 2



SHEET No.	TITLE
1	GENERAL PLAN No. 1
2	GENERAL PLAN No. 2
3	INDEX TO PLANS
4	DECK CONTOURS
5	EXCAVATION AND BACKFILL LIMITS
6	FOUNDATION PLAN
7	COLUMN AND CIDH PILE DETAILS
8	SOUTHGATE RW 1 LAYOUT
9	SOUTHGATE RW 2 LAYOUT
10	SOUTHGATE RW 1 CONCRETE CAP DETAILS No. 1
11	SOUTHGATE RW 1 CONCRETE CAP DETAILS No. 2
12	SOUTHGATE RW 1 CONCRETE CAP DETAILS No. 3
13	SOUTHGATE RW 2 CONCRETE CAP DETAILS No. 1
14	SOUTHGATE RW 2 CONCRETE CAP DETAILS No. 2
15	SOUTHGATE RW 2 CONCRETE CAP DETAILS No. 3
16	SOUTHGATE RW 1 DETAILS No. 1
17	SOUTHGATE RW 1 DETAILS No. 2
18	SOUTHGATE RW 1 DETAILS No. 3
19	SOUTHGATE RW 1 DETAILS No. 4
20	SOUTHGATE RW 1 DETAILS No. 5
21	SOUTHGATE RW 2 DETAILS No. 1
22	SOUTHGATE RW 2 DETAILS No. 2
23	SOUTHGATE RW 2 DETAILS No. 3
24	SOUTHGATE RW 2 DETAILS No. 4
25	SUB HORIZONTAL GROUND ANCHOR DETAILS
26	TYPICAL SECTION
27	GIRDER LAYOUT
28	GIRDER DETAILS
29	DIAPHRAGM ABUTMENT 1 LAYOUT
30	DIAPHRAGM ABUTMENT 2 LAYOUT
31	DIAPHRAGM ABUTMENT DETAILS No. 1
32	DIAPHRAGM ABUTMENT DETAILS No. 2
33	MISCELLANEOUS DETAILS No. 1
34	MISCELLANEOUS DETAILS No. 2
35	MISCELLANEOUS DETAILS No. 3
36	STRUCTURE APPROACH DETAILS No. 1
37	STRUCTURE APPROACH DETAILS No. 2
38	LOG OF TEST BORINGS 1 OF 3
39	LOG OF TEST BORINGS 2 OF 3
40	LOG OF TEST BORINGS 3 OF 3

ABBREVIATIONS

TOW Top of wall
BOW Bottom of wall



CONCRETE STRENGTH AND TYPE LIMITS

NO SCALE
(SOUTHGATE RW 1 AND RW 2 NOT SHOWN FOR CLARITY)

- LEGEND:**
- Structural Concrete, Bridge (f'c = 4,000 psi @ 28 days)
 - Structural Concrete, Bridge (Polymer Fiber) (f'c = 4,000 psi @ 28 days)
 - Structural Concrete, Approach Slab (f'c = 3,600 psi @ 28 days)
 - Cast-In-Drilled Hole Concrete Pile (f'c = 4,000 psi @ 28 days)

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN OVERSIGHT
SIGN OFF DATE 11/14/19

DESIGN	BY A. MALLA	CHECKED J. SUK
DETAILS	BY J. GREEN	CHECKED A. MALLA
QUANTITIES	BY A. MALLA	CHECKED A. CARMAZZI

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

JOHN MANISCALCO
PROJECT ENGINEER

BRIDGE NO.	34-0191S
POST MILES	7.9

SOUTHGATE ROAD UC
INDEX TO PLANS

DESIGN DETAIL SHEET (ENGLISH) (REV. 03/14/12)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 0728
PROJECT NUMBER & PHASE: 04190001531 CONTRACT NO.: 04-3A6414

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF
	10-22-19 11-14-19 1-28-19	3	40

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	7.8/8.0	213	436

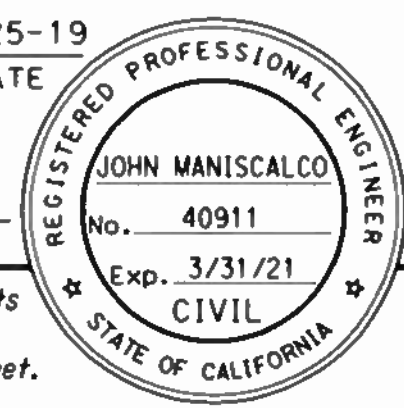
REGISTERED CIVIL ENGINEER DATE 7-25-19

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.

SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY
1455 MARKET STREET, SUITE 2200
SAN FRANCISCO, CA 94103

HDR ENGINEERING, INC
100 PRINGLE AVENUE, SUITE 400
WALNUT CREEK, CA 94596

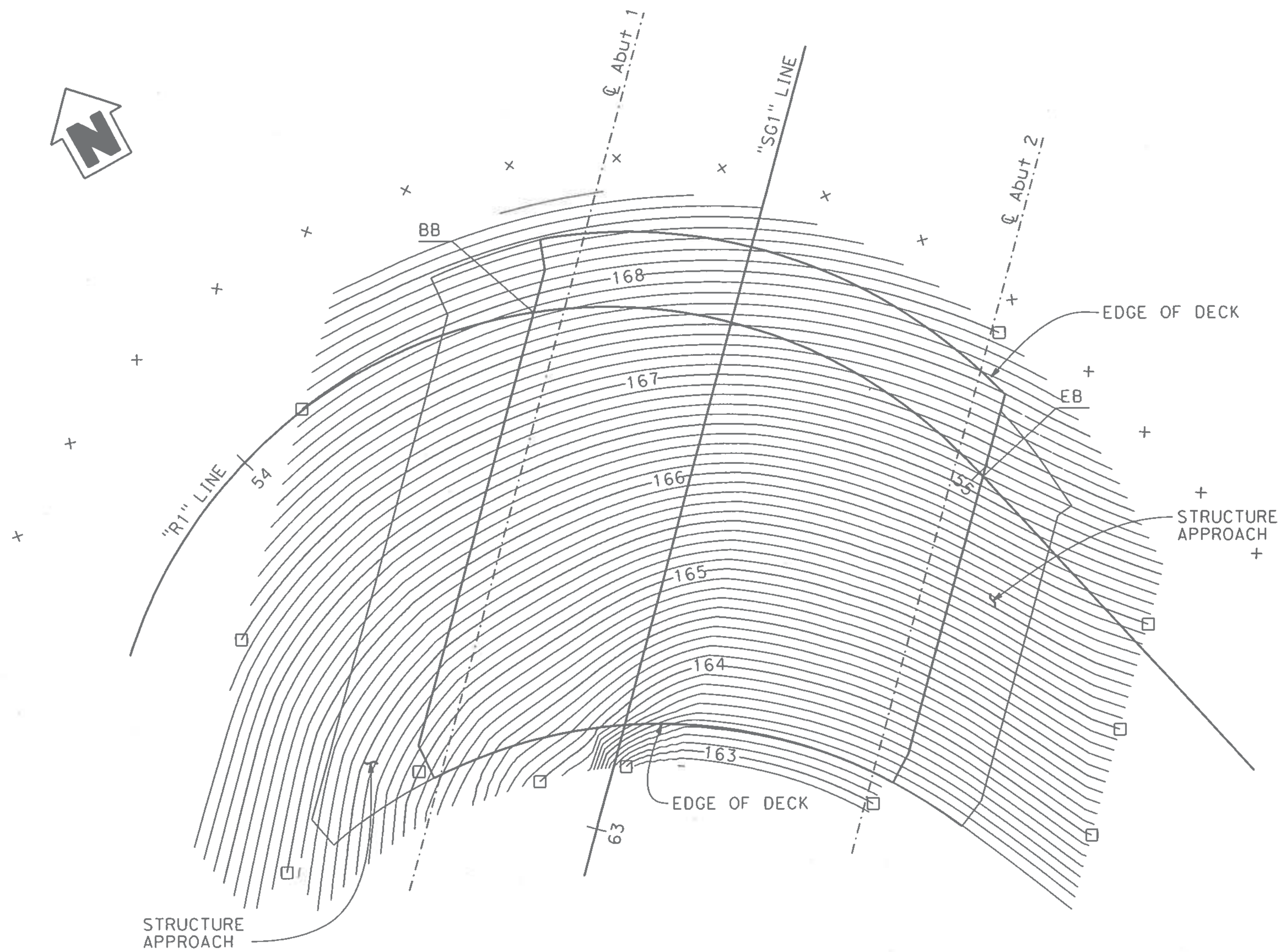


LEGEND:

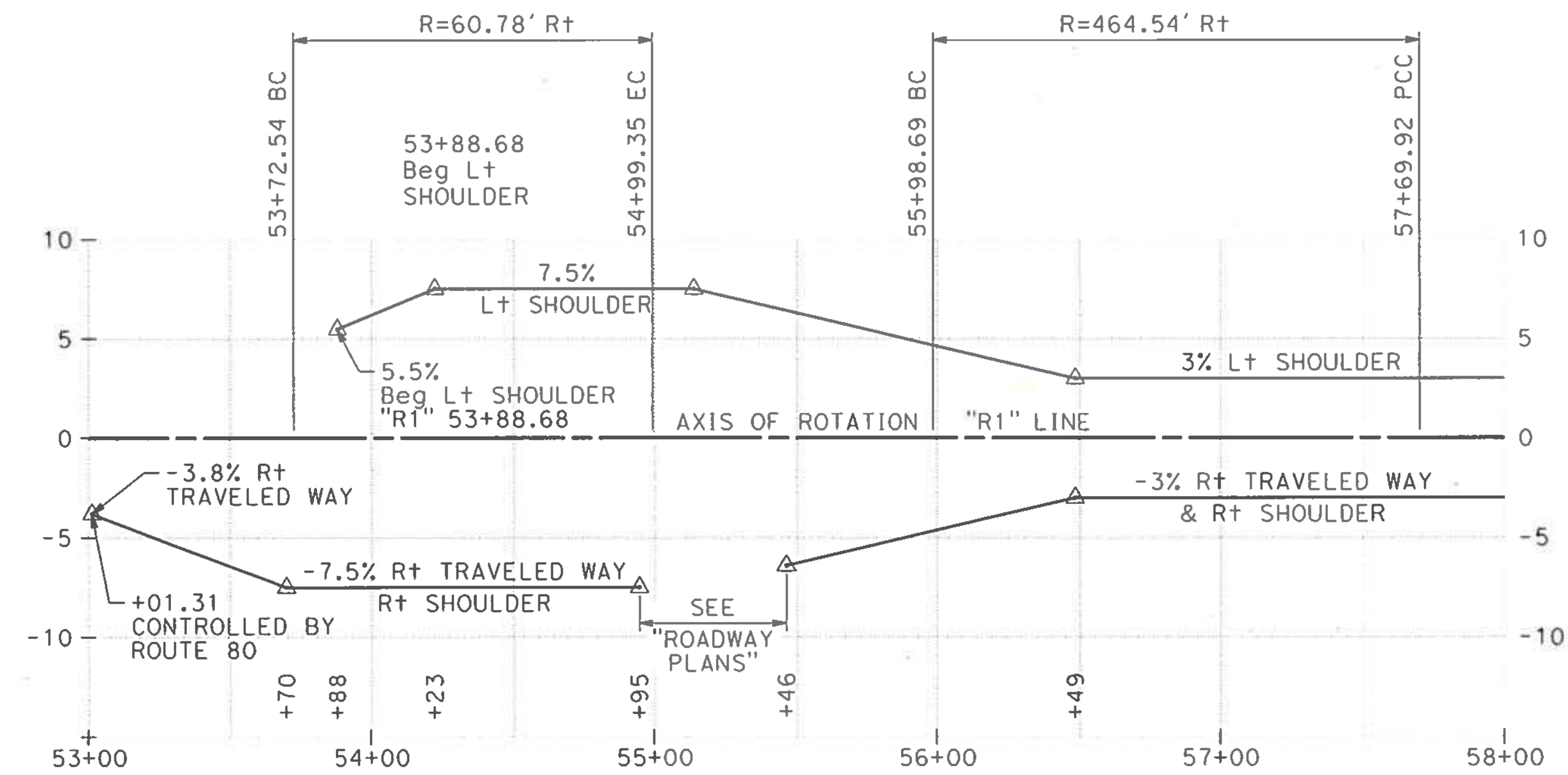
- x Indicates 10' interval measured along "R1" Line.
- Indicates even foot contours

NOTES:

1. Contour interval = 0.10'.
2. Contours do not include camber.



PLAN
1" = 10'



SUPERELEVATION DIAGRAM
NO SCALE

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN OVERSIGHT
SIGN OFF DATE 11/14/19

DESIGN	BY A. MALLA	CHECKED J. SUK
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**SOUTHGATE ROAD UC
DECK CONTOURS**

DESIGN DETAIL SHEET (ENGLISH) (REV. 03/14/12)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 0728
PROJECT NUMBER & PHASE: 04190001531 CONTRACT NO.: 04-3A6414

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET OF
	10-22-19 11-12-19 2-24-19 1-18-19	4 40

FILE => 34-0191S-d-dc01.dgn

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