

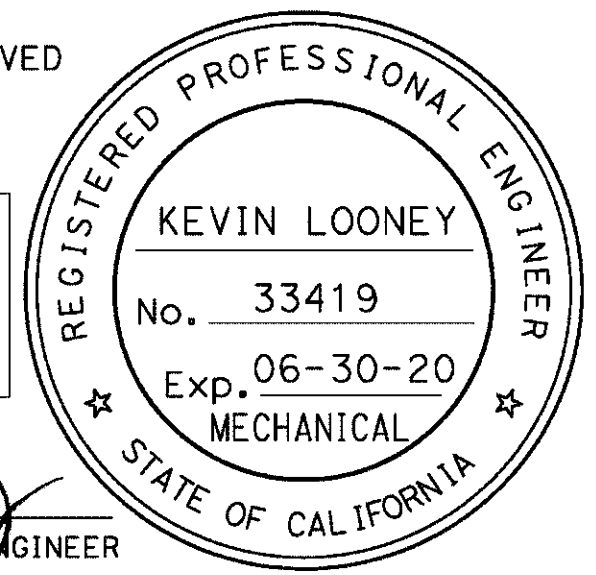
BAYS	610 [24"] WIDTH	NO. OF CARTRIDGES		DESIGN SPEED
**	MODEL #	TYPE M-I	TYPE M-II	
6	QM10024	4	3	62 MPH

TO ACCOMPANY CONTRACT October 8, 2021
PLANS DATED

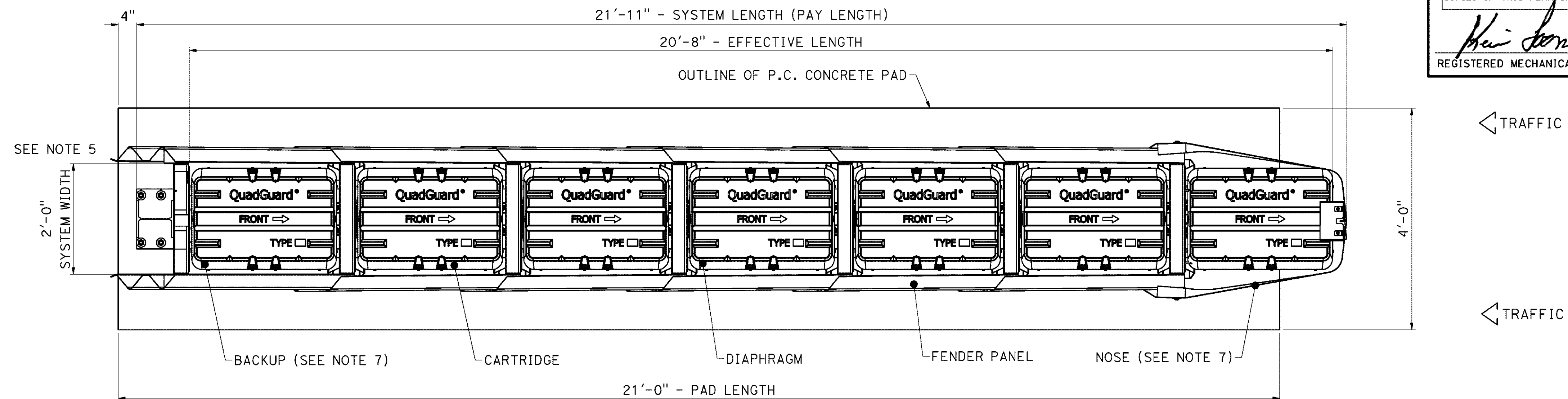
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, RO.0/RO.9	1601	1710

DATE THIS PLAN APPROVED
10-31-18

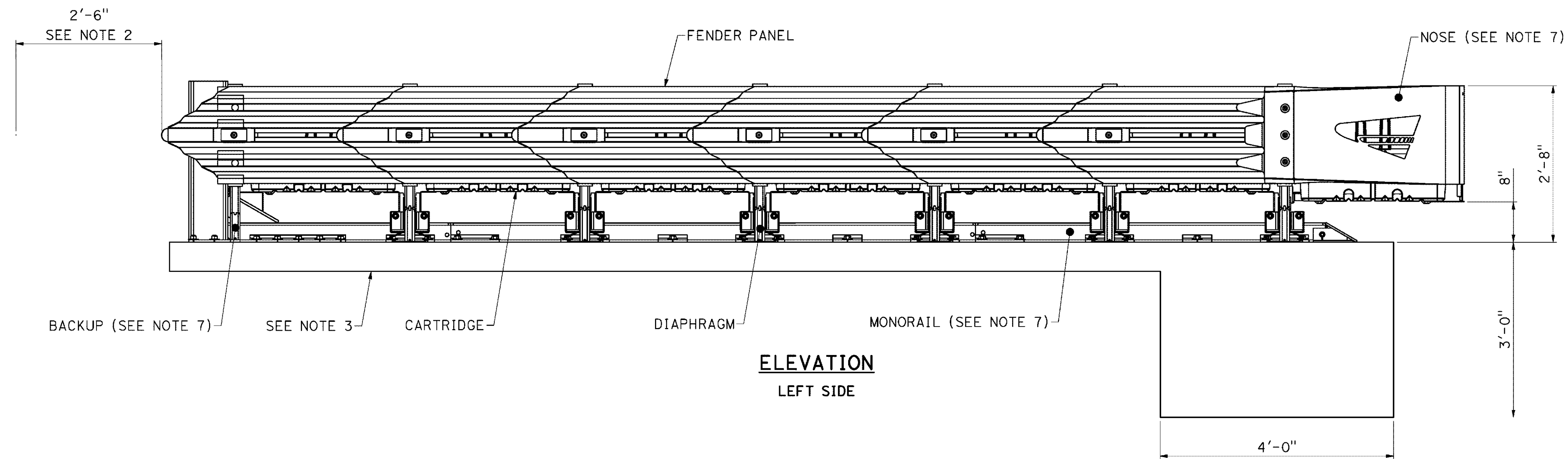
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



REGISTERED MECHANICAL ENGINEER



PLAN



ELEVATION
LEFT SIDE

NOTES:

- IN COMPLIANCE WITH THE AASHTO 2011 ROADSIDE DESIGN GUIDE, MANUFACTURER RECOMMENDS REMOVAL OF ALL CURBS AND ISLANDS TO ENSURE PROPER IMPACT PERFORMANCE.
- PROVISION SHALL BE MADE FOR REAR FENDER PANELS TO SLIDE REARWARD UPON IMPACT 762 [30.00] MIN.
- 150 [6.00] MIN. REINFORCED 28 MPa [4000 PSI] P.C. CONCRETE PAD OR 200 [8.00] MIN. NON-REINFORCED 28MPa [4000 PSI] P.C. CONCRETE ROADWAY, MEASURING AT LEAST 3.66 m [12'-0"] WIDE BY 15.24 m [50'-0"] LONG. ANCHOR BLOCK IS NOT REQUIRED WHEN USING 8" CONCRETE PAD INSTALLED AGAINST AN IMMOVABLE STRUCTURE AS A CONCRETE WALL OR ABUTMENT.
- SEE THE "QUADGUARD M10 SYSTEM PRODUCT MANUAL" FOR A DESCRIPTION OF ITS IMPACT PERFORMANCE CHARACTERISTICS AND DESIGN LIMITATIONS BEFORE PLACING A SYSTEM AT A GIVEN SITE. INFORMATION AND COPIES OF ABOVE MANUAL ARE AVAILABLE BY CALLING CUSTOMER SERVICE DEPARTMENT AT (888) 323-6374.
- WHERE NECESSARY, THE CUSTOMER SHALL SUPPLY AN ADEQUATE TRANSITION FROM THE QUADGUARD M10 SYSTEM TO THE OBJECT BEING SHIELDED.
- UNITS OF MEASUREMENT ARE MILLIMETERS [INCHES] UNLESS OTHERWISE NOTED.
- BACKUP, MONORAIL, AND NOSE ASSEMBLIES ARE NOT INCLUDED IN MODEL NUMBER, ORDER SEPARATELY.
- THE QUADGUARD M10 6-BAY SYSTEM HAS BEEN TESTED TO MASH TEST LEVEL 3.

Caltrans

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

APPROVED PLAN FOR CALTRANS USE

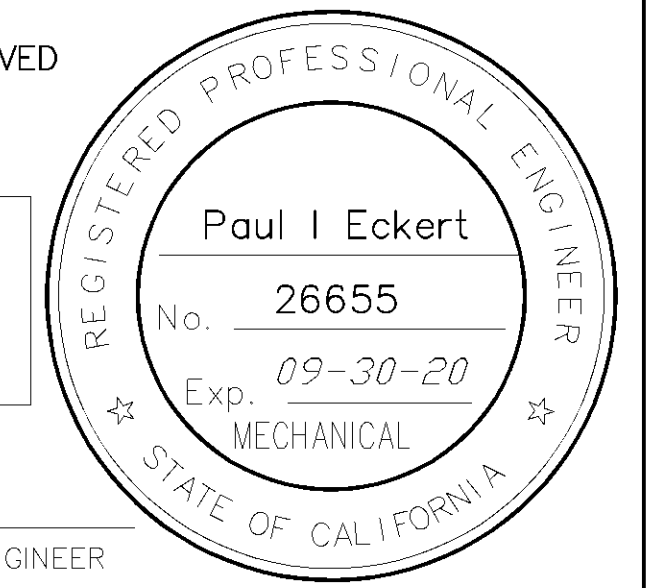
Trinity Highway Products, LLC 2525 STEMMONS FREEWAY DALLAS, TEXAS 75207	QUADGUARD® M10 SYSTEM 24" WIDE SYSTEM W/ TENSION STRUT BACKUP MASH TEST LEVEL 3
DRAWING No. Revision: QGMTSCVR-24U-R-	SHEET 1 OF 1 NO SCALE

TO ACCOMPANY CONTRACT October 8, 2021
PLANS DATED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/R0.9	1602	1710

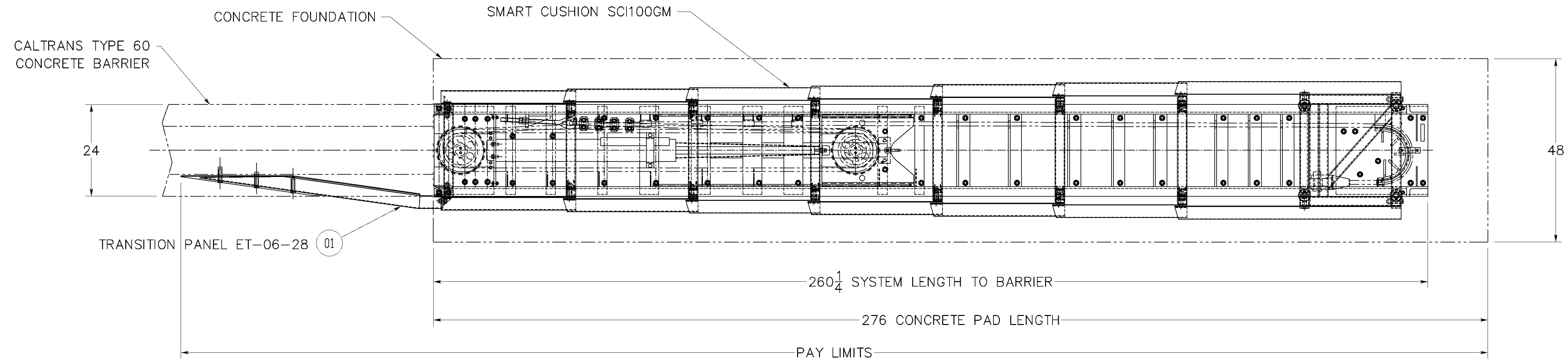
DATE THIS PLAN APPROVED
10-31-18

THE STATE OF CALIFORNIA
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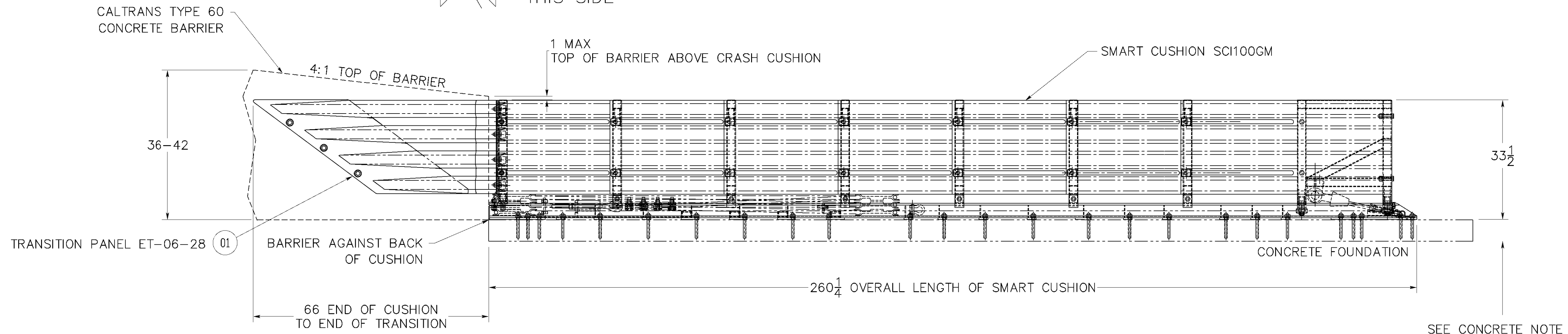
REGISTERED MECHANICAL ENGINEER

UNIDIRECTIONAL TRAFFIC
THIS SIDE



LEVEL III PLAN VIEW

BIDIRECTIONAL TRAFFIC
THIS SIDE



LEVEL III ELEVATION

Caltrans

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Concrete Note:
4000 psi at 6" (Reinforced) or 8" (Unreinforced) Thickness

Parts List:
01 - Transition Panel ET-06-28 - Left 275302

WORK AREA PROTECTION
2500 PRODUCTION DRIVE
ST. CHARLES, IL 60174

SCI100GM
SMART CUSHION WITH TRANSITION
TO CALTRANS TYPE 60 BARRIER

DRAWING No. Revision: **ET0628_T60_TL3-R1** SHEET 1 OF 1 NO SCALE

APPROVED PLAN FOR CALTRANS USE

NOTES:

INSTALL Soft+Stop® PARALLEL TO ROADWAY.

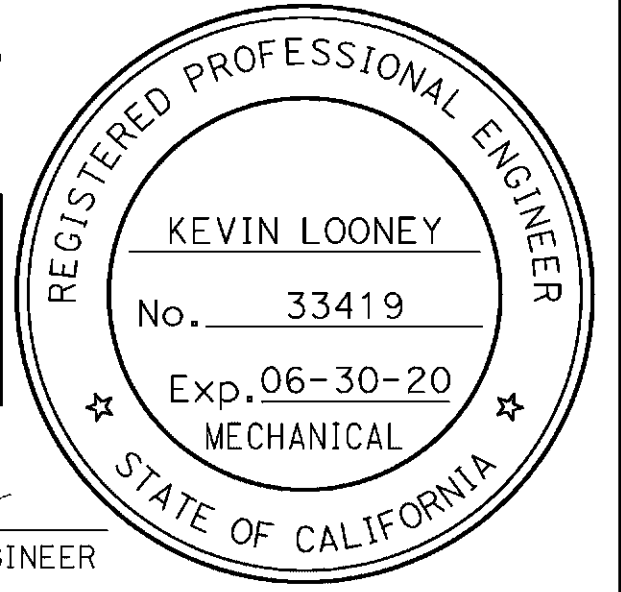
WHEN OFFSET IS REQUIRED BY DESIGN ENGINEER, SEE Soft+Stop® (8" COMPOSITE BLOCKS) MANUAL FOR REQUIREMENTS.

TO ACCOMPANY CONTRACT October 8, 2021
PLANS DATED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/R0.9	1603	1710

DATE THIS PLAN APPROVED
8-21-19

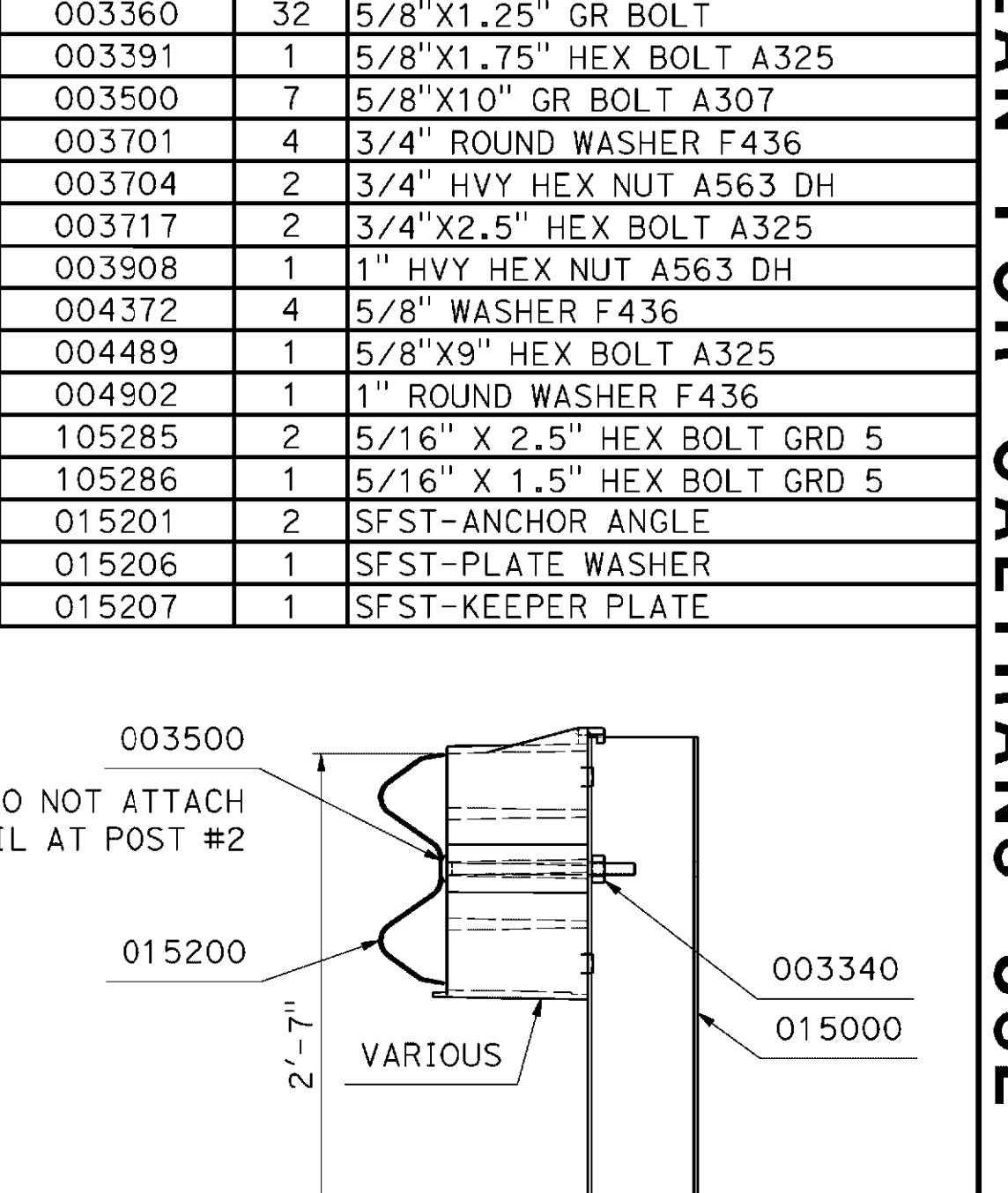
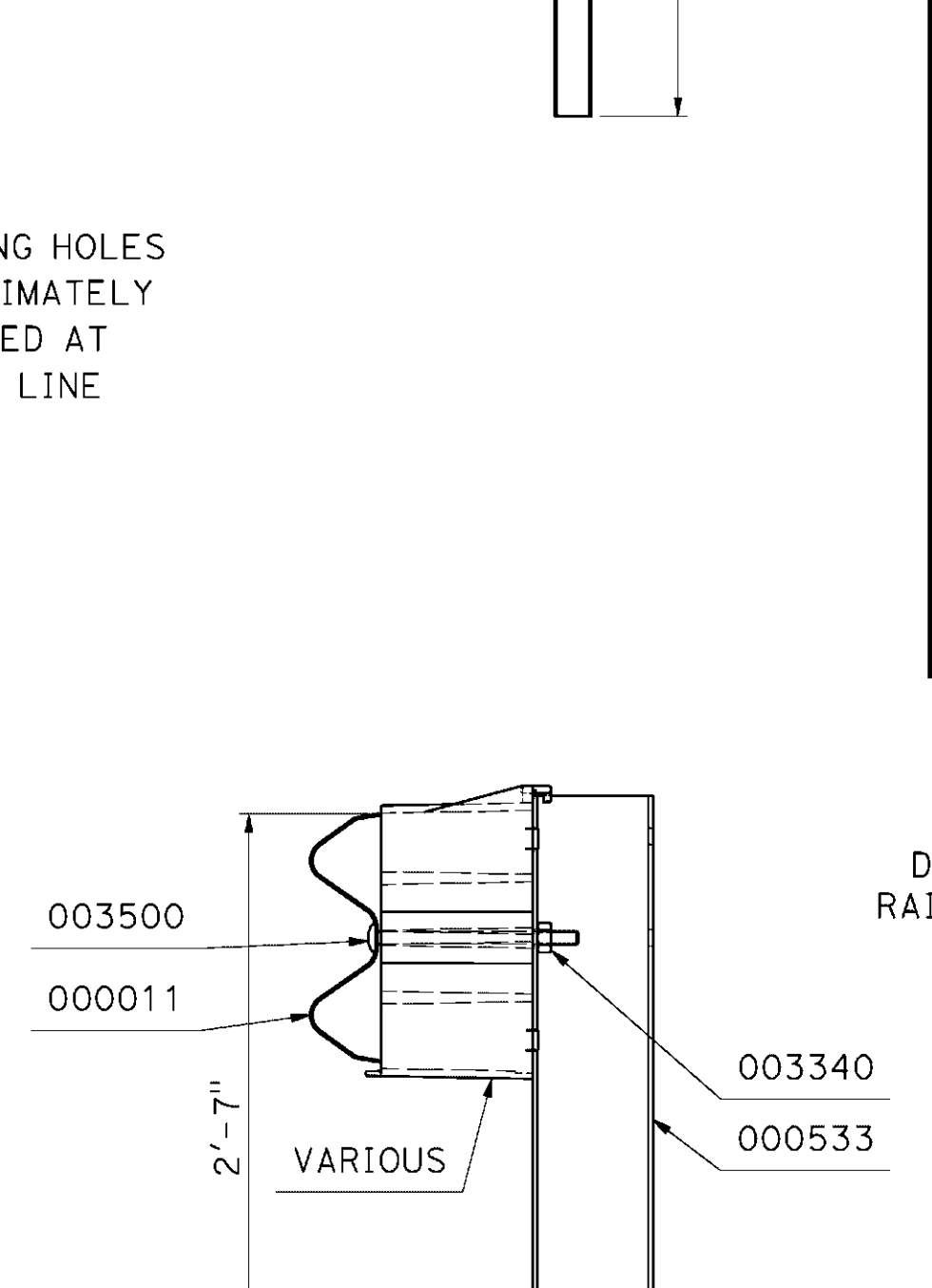
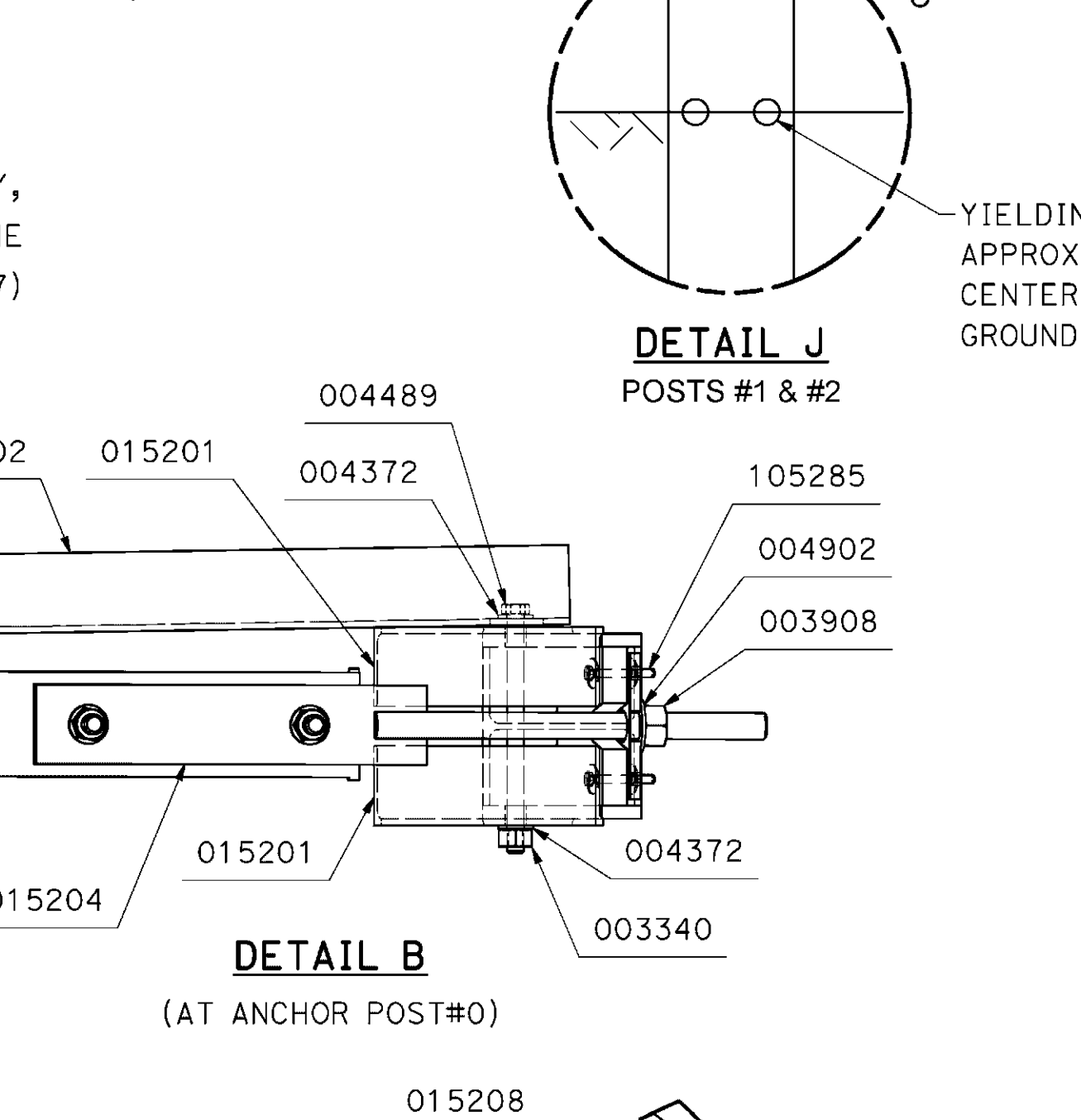
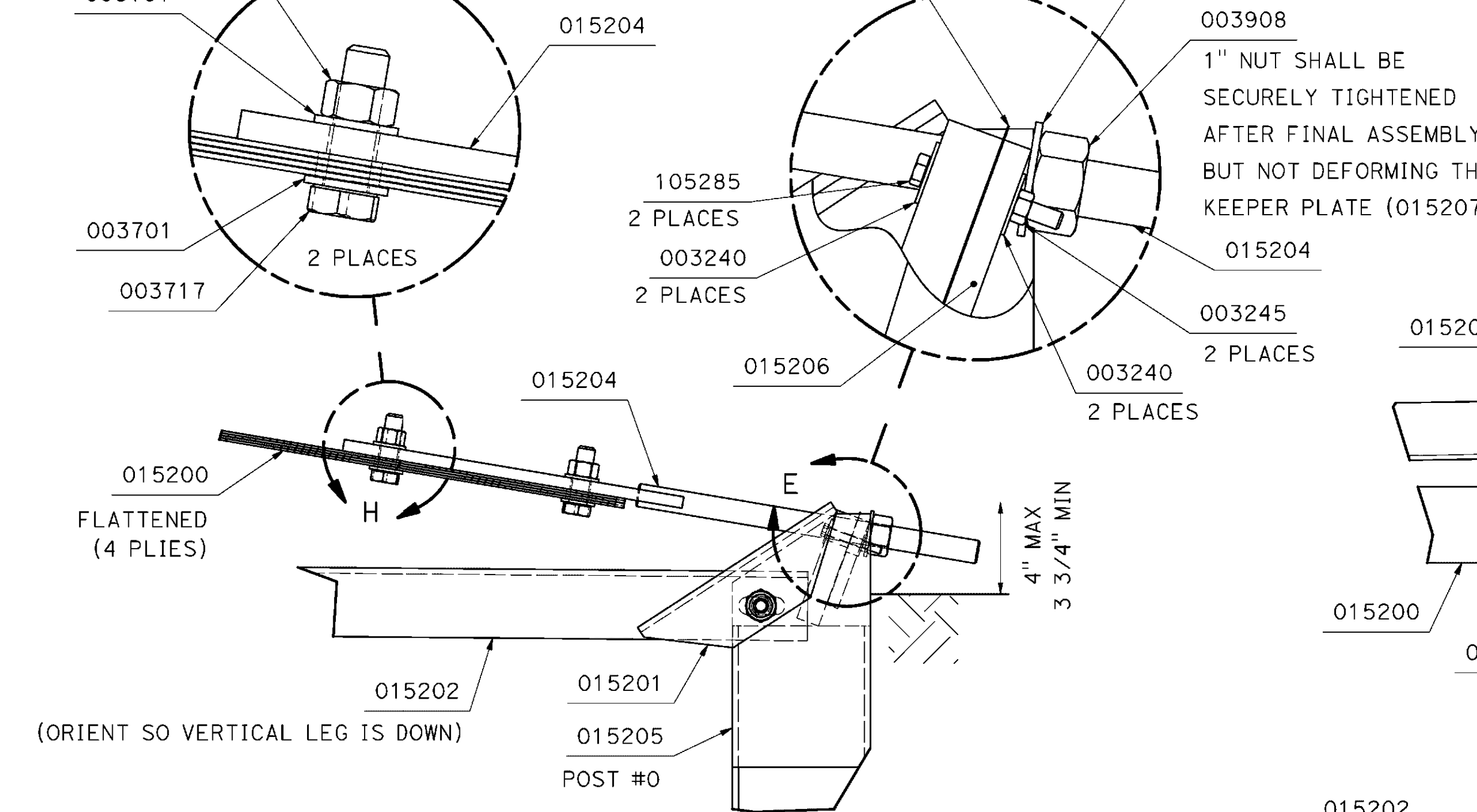
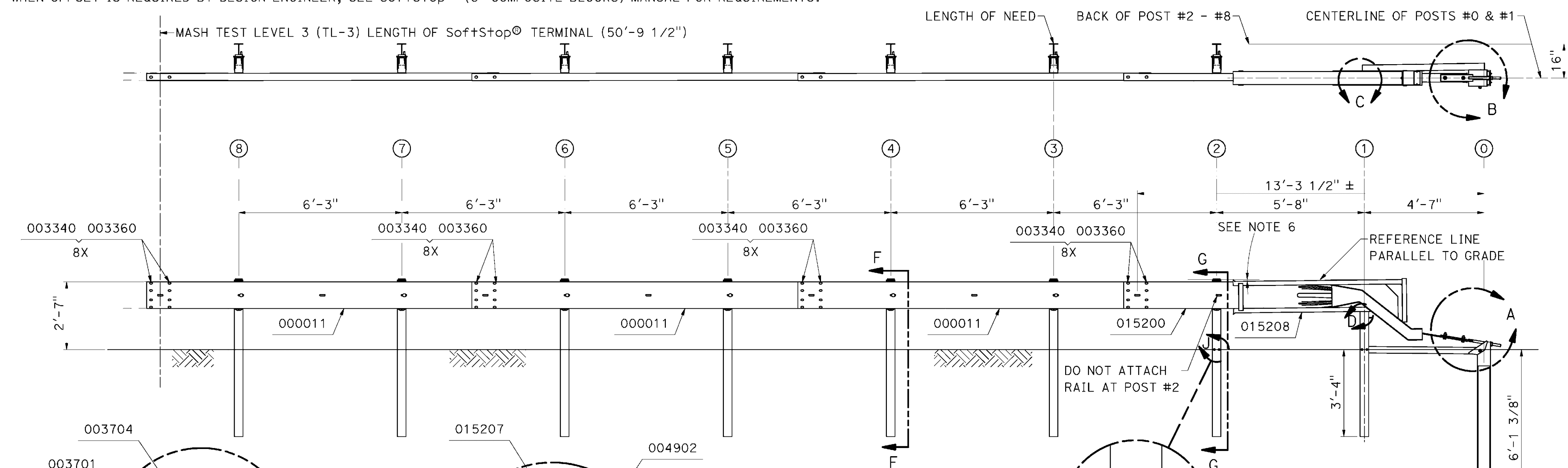
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REGISTERED MECHANICAL ENGINEER

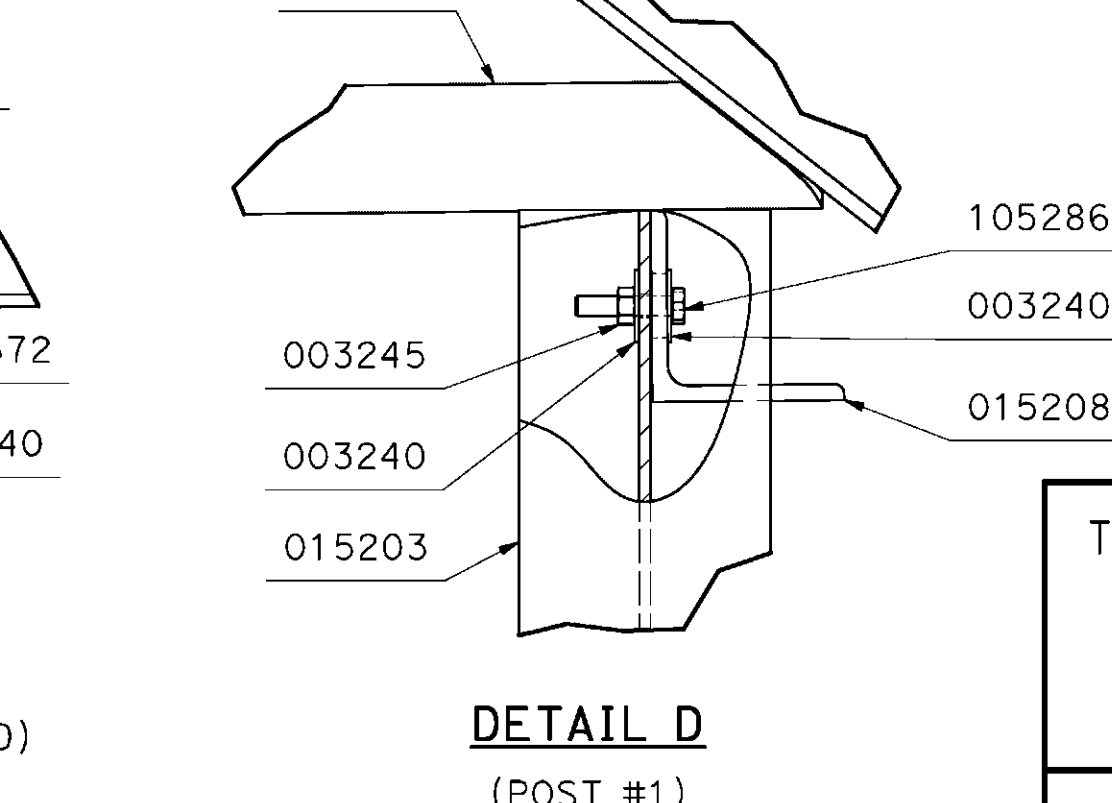
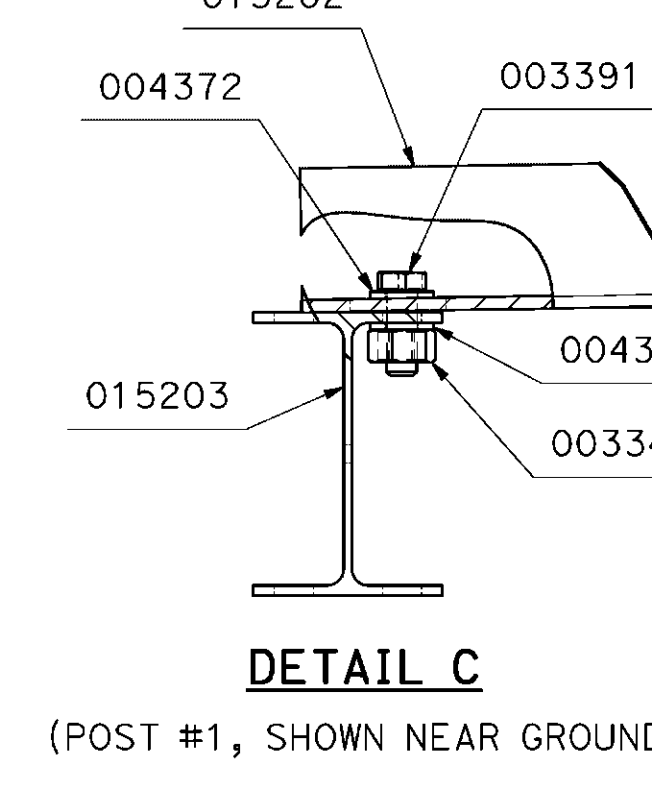
PARTS LIST

PART NO	QTY	DESCRIPTION
000011	3	12/12'6/3'1.5/S
000533	6	6'-0" POST / W6 x 8.5#
VARIOUS	7	8" COMPOSITE BLOCK
015000	1	6'0 SYT PST/8.5/31" GR HT
015200	1	SFST-ANCHOR G.RAIL 12'-6"
015202	1	SFST-ANGLE STRUT
015203	1	SFST-POST#1 SYTP
015204	1	SFST-ANCHOR PADDLE
015205	1	SFST-POST#0
015208	1	SFST-IMPACT HEAD
		HARDWARE KIT 034429
003240	6	5/16 ROUND WASHER WIDE
003245	3	5/16 HEX NUT
003340	41	NUT, HX, 5/8, G, RAIL
003360	32	5/8" X 1.25" GR BOLT
003391	1	5/8" X 1.75" HEX BOLT A325
003500	7	5/8" X 10" GR BOLT A307
003701	4	3/4" ROUND WASHER F436
003704	2	3/4" HVY HEX NUT A563 DH
003717	2	3/4" X 2.5" HEX BOLT A325
003908	1	1" HVY HEX NUT A563 DH
004372	4	5/8" WASHER F436
004489	1	5/8" X 9" HEX BOLT A325
004902	1	1" ROUND WASHER F436
105285	2	5/16" X 2.5" HEX BOLT GRD 5
105286	1	5/16" X 1.5" HEX BOLT GRD 5
015201	2	SFST-ANCHOR ANGLE
015206	1	SFST-PLATE WASHER
015207	1	SFST-KEEPER PLATE



NOTES:

- REFER TO Soft+Stop® (8" COMPOSITE BLOCKS) ASSEMBLY MANUAL.
- PROPER SITE GRADING SHOULD BE ACCOMPLISHED IN ACCORDANCE WITH LOCAL SPECIFYING AGENCY GUIDELINES AND THE AASHTO ROADSIDE DESIGN GUIDE.
- DO NOT ATTACH THE Soft+Stop® DIRECTLY TO A RIGID BARRIER.
- UNDER NO CIRCUMSTANCES SHALL THE GUARDRAIL WITHIN THE Soft+Stop® BE CURVED.
- MANUFACTURER SUGGESTS CUSTOMER TO PROVIDE REFLECTORIZATION OF THE TERMINAL.
- IT IS ACCEPTABLE TO INSTALL THE Soft+Stop® IMPACT HEAD PARALLEL TO THE GRADE LINE OR WITH AN UPWARD TILT. SEE Soft+Stop® ASSEMBLY MANUAL FOR SPECIFIC DETAILS.



Trinity Highway Products, LLC
2525 STEMMONS FREEWAY
DALLAS, TEXAS 75207

SoftStop® TL-3
MASH TEST LEVEL 3 (TL-3)

DRAWING No. Revision:	SS646-R9	SHEET 1 OF 1	NO SCALE
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

APPROVED PLAN FOR CALTRANS USE

NOTES: UNLESS OTHERWISE SPECIFIED

1. SYSTEM TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. SEE ASSEMBLY AND INSTALLATION MANUAL FOR ADDITIONAL DETAILS.
3. ALL STEEL COMPONENTS ARE GALVANIZED PER ASTM A123 OR EQUIVALENT UNLESS OTHERWISE STATED.
4. IF A DELINEATION MARKER IS REQUIRED, MARKER SHALL BE IN ACCORDANCE WITH LOCAL STANDARDS AND SPECIFICATIONS.
5. DIMENSIONS SHOWN ARE IN INCHES, DIMENSIONS ARE REFERENCES.
6. FOUNDATION SPECIFICATION:
STONE AGGREGATE CONCRETE MIX, 4,000 PSI [28 MPa] MINIMUM COMPRESSIVE STRENGTH (SAMPLING PER ASTM C31-84 OR ASTM C42-84A, TESTING PER ASTM C39-84). MINIMUM 6in REINFORCED AS SHOWN OR 8in NONREINFORCED PCC PAD. ALL REBAR IS #5 [15mm]. ANCHORAGE IS 3/4in X 8 1/4in GALVANIZED ANCHOR WITH 6in EMBEDMENT.

TO ACCOMPANY CONTRACT October 8, 2021
PLANS DATED

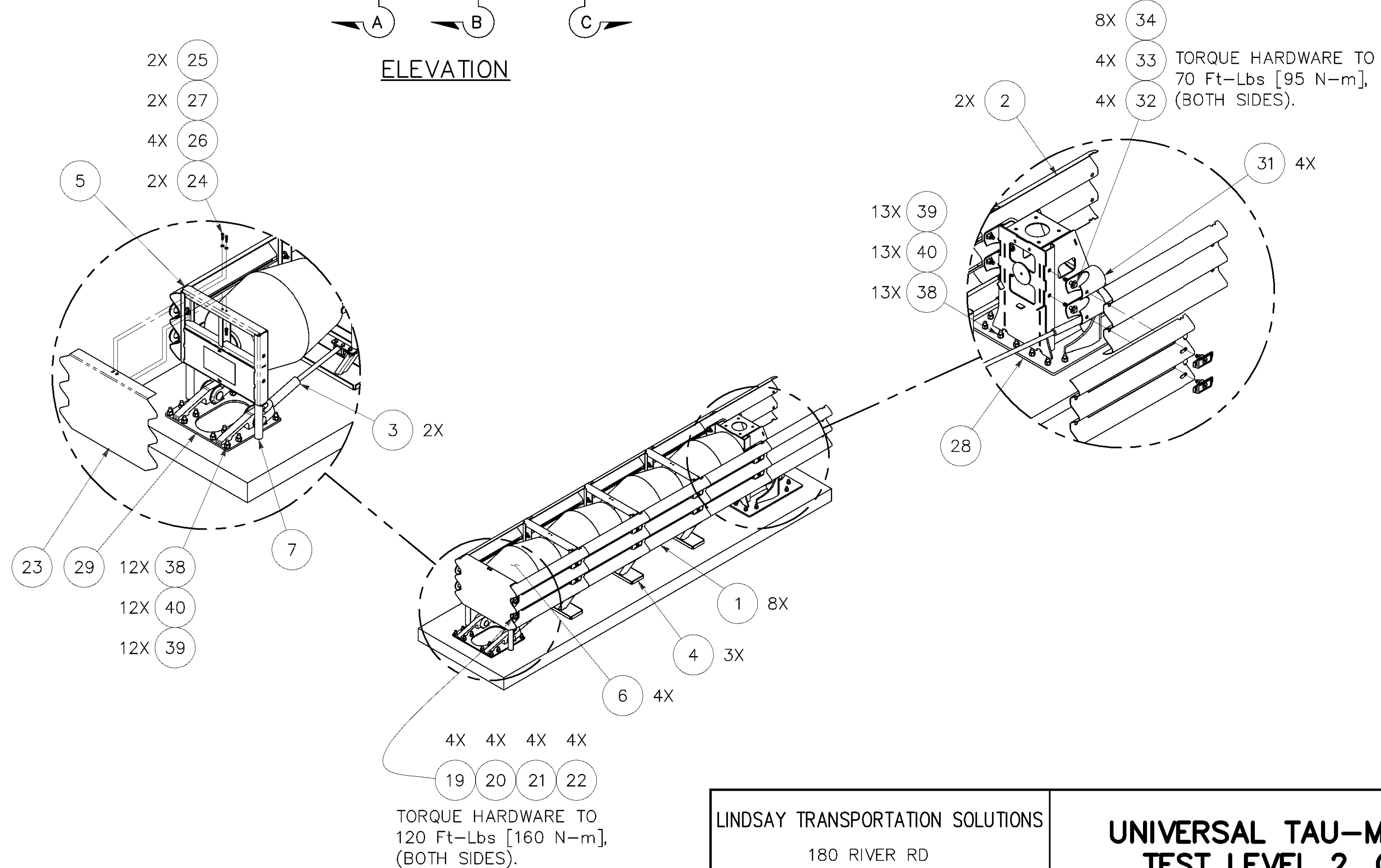
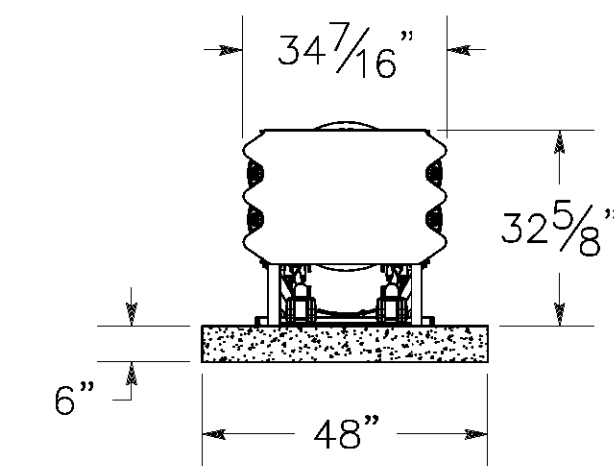
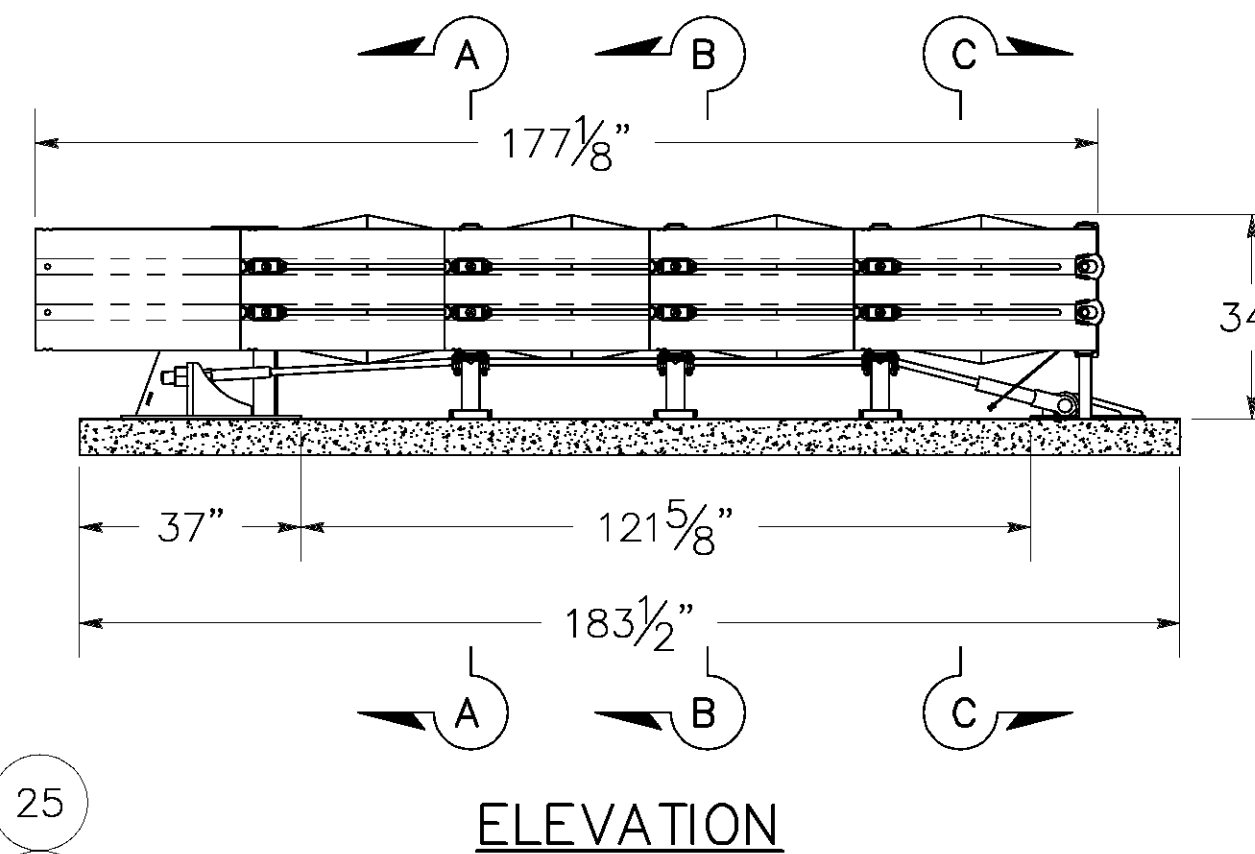
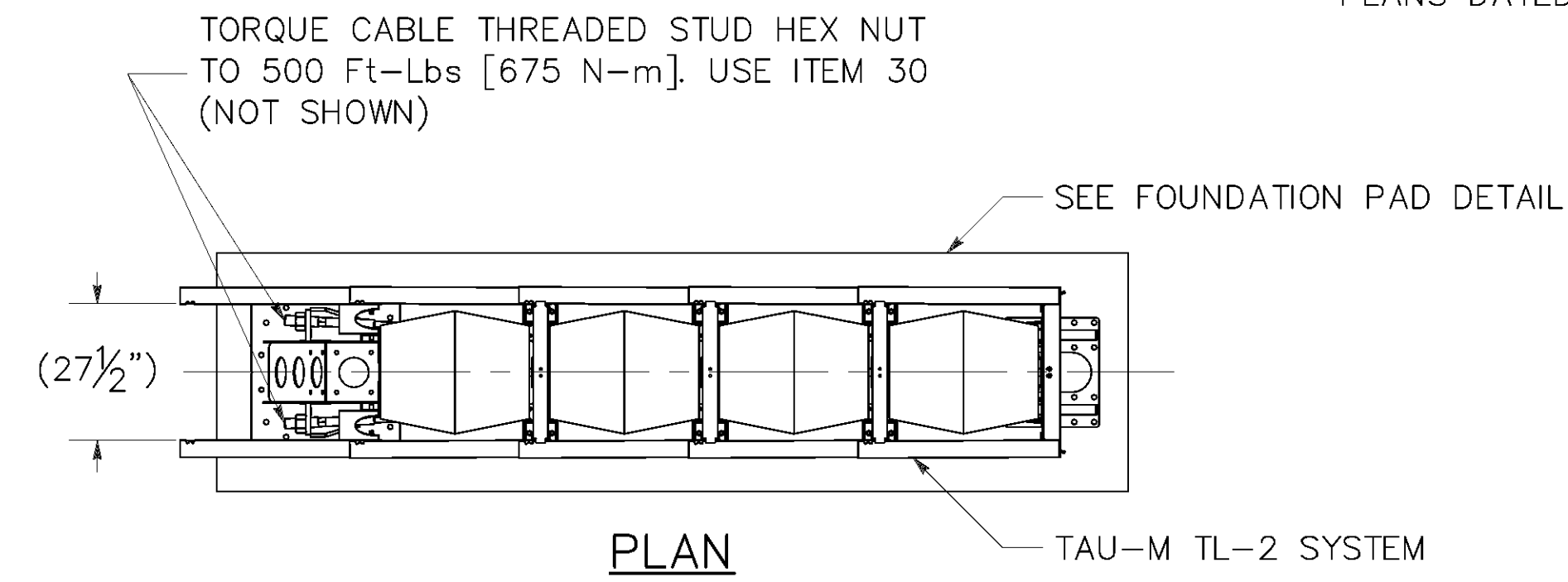
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/R0.9	1604	1710

DATE THIS PLAN APPROVED
4-17-20

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.

[Signature]
REGISTERED MECHANICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
OWEN S. DENMAN
No. M20625
Exp. 06/30/21
MECHANICAL
STATE OF CALIFORNIA



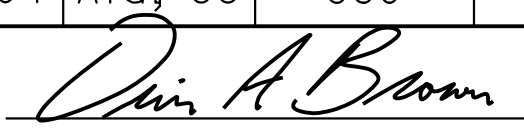
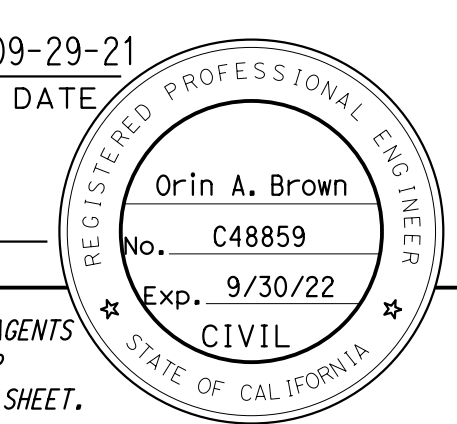
ITEM	PART NUMBER	DESCRIPTION	QTY
30TM070: TAU-M SYSTEM COMPONENTS			
1	BSI-1708019-00	SLIDING PANEL GALV TAU-M	8
2	BSI-1708030-00	END PANEL, THRIE-BEAM, GALV., TAU-M	2
3	BSI-1805036-00	CABLE ASSEMBLY, 4 BAY, TAU-M	2
4	B030703	MIDDLE SUPPORT ASSEMBLY	3
5	B030704	FRONT SUPPORT	1
6	B010722	CARTRIDGE, TAU-II, TYPE B	4
7	K001005	TAU-II FRONT SUPPORT LEG KIT	1
BSI-1709083-KT: TETHER KIT TAU-M			
8	4000316	3/16" GALV WIRE TETHER	1
9	4000317	3/16" GALV WIRE ROPE CLAMP	2
BSI-1809041-KT: SLIDER KIT, TAU-M			
10	BSI-1208032-00	SLIDER FLAT HEAD	16
11	2001788	C-SCR FSH 3/4-10X3 Gr5 GEOMET	16
12	2001789	NUT HN 3/4-10 Gr5 GEOMET	16
13	2001790	WASHER FLAT 3/4 GEOMET	16
14	BSI-1803016-00	SLIDER SHIM TAU-M GEOMET	16
BSI-1808033-KT: CABLE GUIDE KIT TAU-M			
15	BSI-1707032-00	GALVANIZED CABLE GUIDE, TAU-M	6
16	BSI-2001957	C-SCR HH 1/2-13x3 1/4, Gr5 GEOMET	24
17	2001791	WSHR SL, 1/2" STANDARD, GEOMET	24
18	2001797	NUT HN, 1/2-13, Gr5, GEOMET	24
BSI-1809040-KT: TOW HOOK KIT TAU-M			
19	BSI-1711051	TOW HOOK, GALVANIZED, TAU-M	4
20	2001795	C-SCR HH, 3/4-10x2, Gr5, GEOMET	4
21	2001790	WSHR FLAT, 3/4" STANDARD, GEOMET	4
22	2001789	NUT HN 3/4-10 Gr5 GEOMET	4
BSI-1808034-KT: DELINEATION BRACKET KIT TAU-M			
23	BSI-1708027-00	BRACKET, DELINEATION, TAU-M	1
24	2001816	C-SCR HH, 3/8-16x1 1/2, Gr5, GEOMET	2
25	2001809	NUT HN, 3/8-16, Gr5, GEOMET	2
26	2001810	WSHR FLAT, 3/8" STANDARD, GEOMET	4
27	2001811	WSHR SL, 3/8" STANDARD, GEOMET	2
COBM30: COMPACT BACKSTOP, 30" TAU-M			
28	BSI-1707034-00	COMPACT BACKSTOP, GALVANIZE, TAU-M	1
29	BSI-1708018-00	GALV. CABLE ANCHOR, TAU-M, PARALLEL	1
30	BSI-1810004-00	SOCKET 2 3/4", GALVANIZED TAU-M	1
BSI-1808035-KT: END PANEL MOUNT HW KIT TAU-M			
31	BSI-1708032-00	END PANEL MOUNT GALV TAU-M	4
32	BSI-2001956	C-SCR HH 3/4-10X3 1/2 Gr5 GEOMET	4
33	2001789	NUT HN 3/4-10 Gr5 GEOMET	4
34	2001790	WASHER FLAT 3/4 GEOMET	8
CCOBM: CONCRETE ANCHORING PACKAGE, COMPACT BACKSTOP TAU-M			
35	4004301	EPOXY ULTBD A22+1 NZL	2
36	4004302	NOZZLE ULTBD	2
37	4002468	EPOXY DISPENSER	1
BSI-1808036-KT: ANCHOR KIT, CONCRETE, TAU-M			
38	B011001	THREADED ANCHOR 3/4-10X8 1/4 Gr2	25
39	2001399	NUT HN 3/4-10 HVY A536 HD GALV	25
40	2001380	WASHER 3/4 F436 FLAT GALV	25

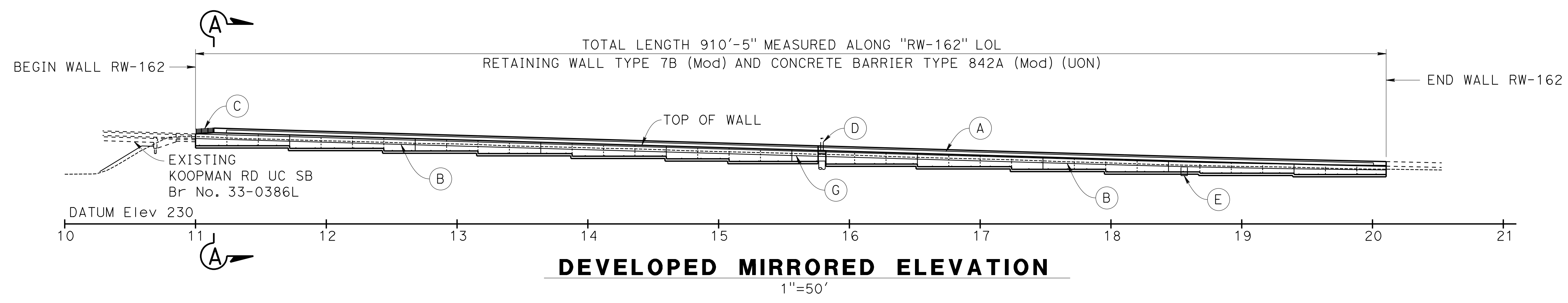
LINDSAY TRANSPORTATION SOLUTIONS
180 RIVER RD
RIO VISTA, CA 94571

**UNIVERSAL TAU-M, PARALLEL
TEST LEVEL 2, CONCRETE**

DRAWING No. Revision: **30TM070CC** SHEET 1 OF 2 1:32

APPROVED PLAN FOR CALTRANS USE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9 R0.0/0.9	1605	1710
 REGISTERED CIVIL ENGINEER			09-29-21	DATE	
October 8, 2021 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.					
ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					

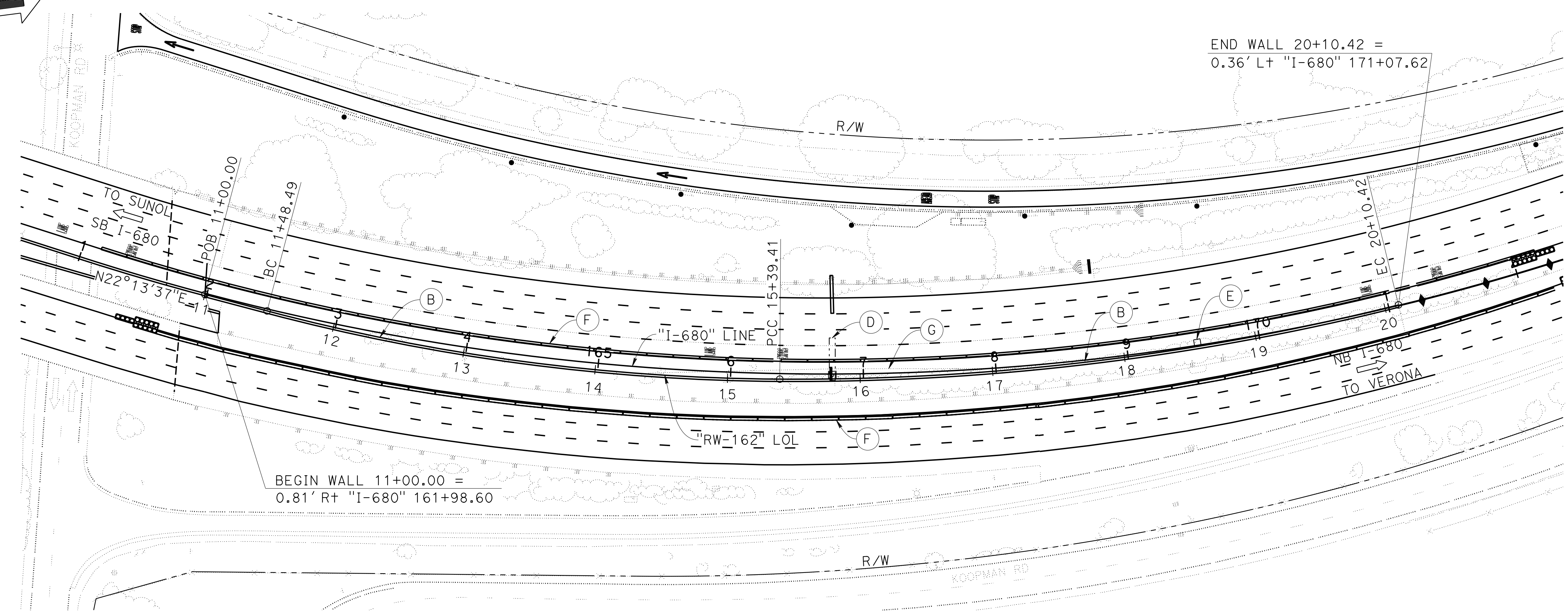
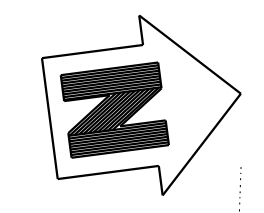


NOTES:

- (A) Concrete Barrier Type 842A (Mod)
- (B) Concrete Barrier Type 60MD (Mod), see "ROADWAY PLANS"
- (C) Cable Railing
- (D) Existing Sign Structure, see "ROADWAY PLANS"
- (E) Existing Manhole to be removed, see "ROADWAY PLANS"
- (F) Temporary Railing (Type K), see "ROADWAY PLANS"
- (G) Concrete Barrier Type 60MF (Mod), see "ROADWAY PLANS"


1. For "INDEX TO PLANS" and "STANDARD PLANS", see "INDEX TO PLANS" sheet.
2. For "CURVE DATA", see "STRUCTURE PLAN" sheets.
3. For "TYPICAL SECTION", see "GENERAL PLAN No. 2" sheet.
4. For Section A-A, see "GENERAL PLAN No. 2" sheet.

LEGEND:



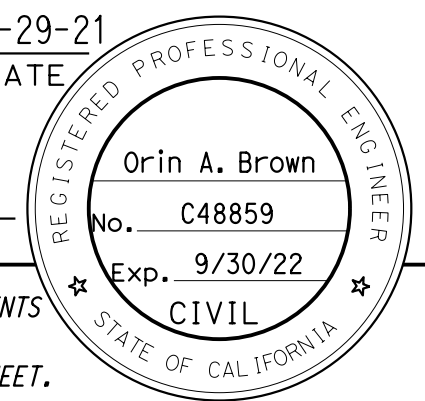
QUANTITIES

STRUCTURE EXCAVATION (RETAINING WALL)	2,720	CY
STRUCTURE BACKFILL (RETAINING WALL)	1,586	CY
STRUCTURAL CONCRETE, RETAINING WALL	1,154	CY
BAR REINFORCING STEEL (RETAINING WALL)	129,578	LB
CABLE RAILING	14	LF
CONCRETE BARRIER (TYPE 842A MODIFIED)	897	LF

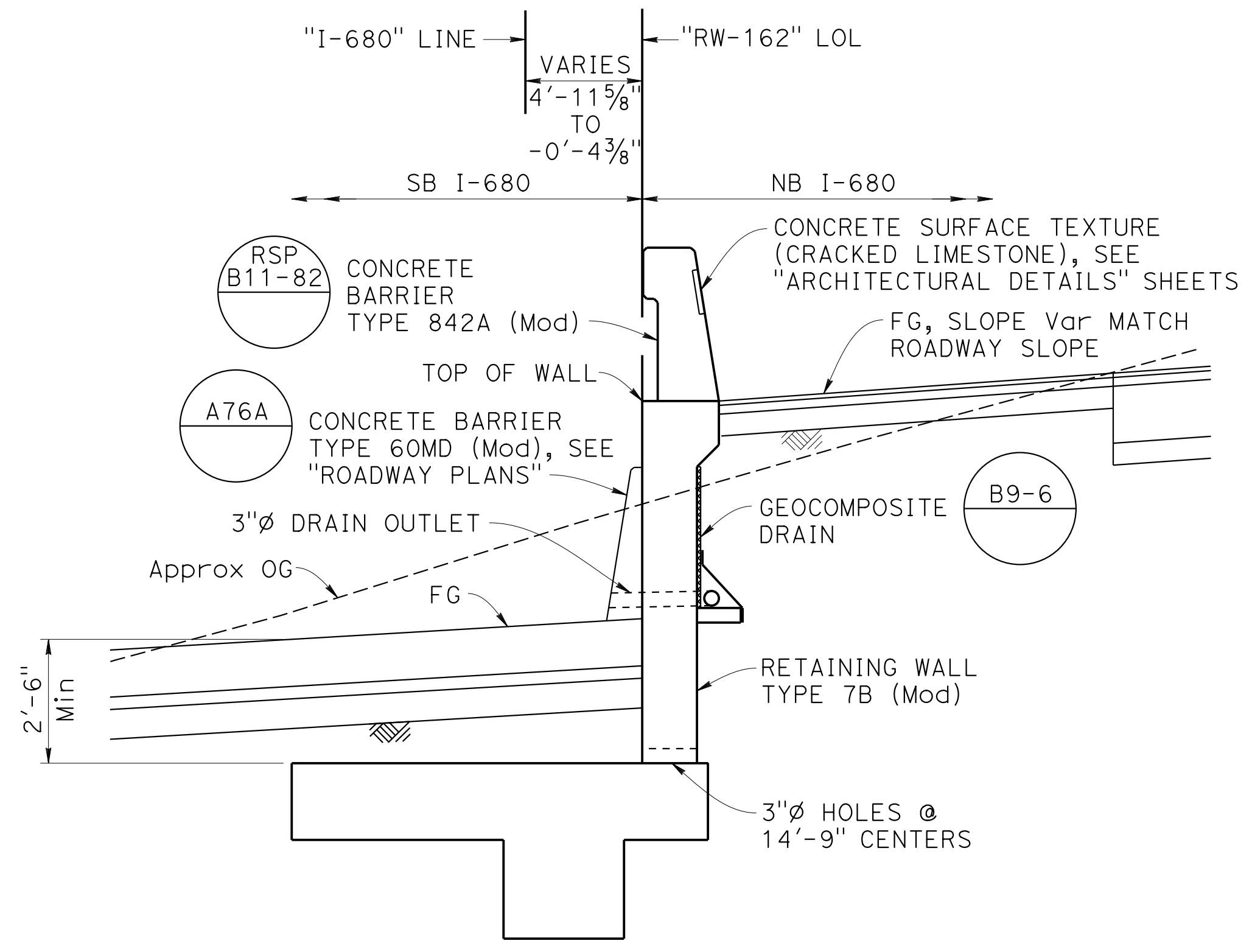
 DESIGN OVERSIGHT Norbert Gee 2/15/22 SIGN OFF DATE	DESIGN	BY W. Bai	CHECKED A. AKI	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE No.	RETAINING WALL No. 162 GENERAL PLAN No. 1
	DETAILS	BY C. Lee	CHECKED A. AKI	LAYOUT	BY W. Bai		CHECKED A. AKI	
	QUANTITIES	BY W. Bai	CHECKED A. AKI	SPECIFICATIONS	BY D. Harnage	PLANS AND SPECS COMPARED O. Brown	POST MILE	
DESIGN GENERAL PLAN SHEET (ENGLISH) (REVISION 4/19/2018)	DATE PLOTTED => 9-MAR-2022		TIME PLOTTED => 10:58		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 0733	REVISION DATES
	FILE => 33E0250-a-gp01.dgn		USERNAME => p302438		0 1 2 3		PROJECT NUMBER & PHASE: 04200002351	8-22-21 9-2-21 09-29-21 11-18-21
					CONTRACT No.: 04-0030U4		DISREGARD PRINTS BEARING EARLIER REVISION DATES	SHEET 1 OF 14

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC	680	R11.0/21.9, R0.0/0.9	1606	1710

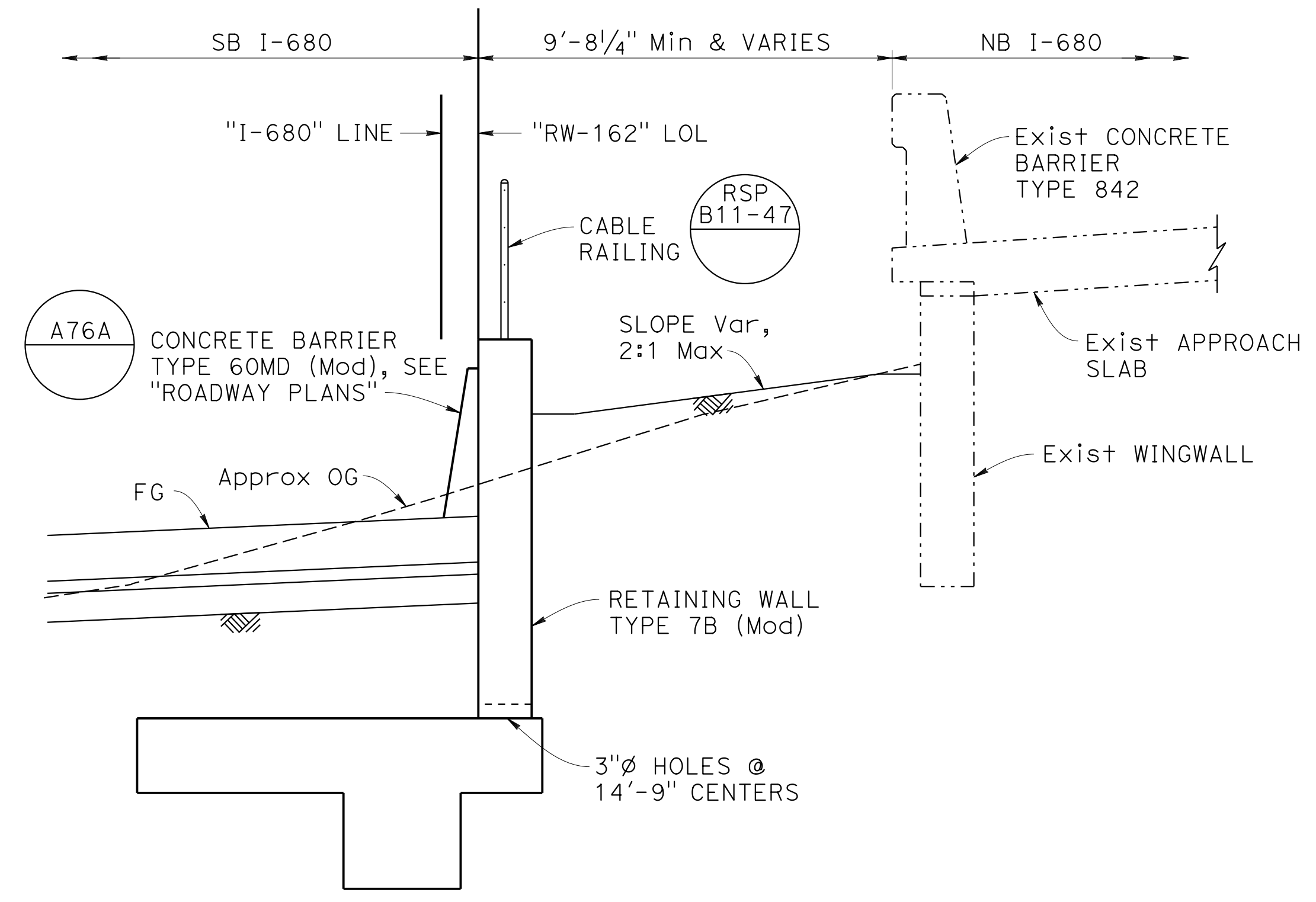
Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 09-29-21
 October 8, 2021
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607
 AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811



TYPICAL SECTION
 NO SCALE



SECTION A-A
 NO SCALE

NOTE: For location see "GENERAL PLAN No. 1" sheet.

Norbert Gee
 DESIGN OVERSIGHT
 SIGN OFF DATE 2/15/22

DESIGN	BY W. Bai	CHECKED A. Akl
DETAILS	BY C. Lee	CHECKED A. Akl
QUANTITIES	BY W. Bai	CHECKED A. Akl

LOAD & RESISTANCE FACTOR DESIGN	BY W. Bai	CHECKED A. Akl
LIVE LOADING HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	BY W. Bai	CHECKED A. Akl
LAYOUT	BY W. Bai	CHECKED A. Akl
SPECIFICATIONS	BY D. Harnage	CHECKED A. Akl
PLANS AND SPECS COMPARED	BY O. Brown	CHECKED A. Akl

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0250
POST MILE	R12.5

RETAINING WALL No. 162
GENERAL PLAN No. 2

DESIGN GENERAL PLAN SHEET (ENGLISH) (REVISION 4/19/2018)

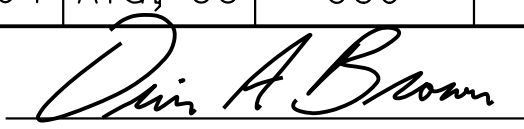
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 FILE => 33E0250-a-gp02.dgn USERNAME => p302438

UNIT: 0733
 PROJECT NUMBER & PHASE: 04200002351

CONTRACT No.: 04-0030U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 2 OF 14
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1607	1710


 REGISTERED CIVIL ENGINEER DATE 09-29-21

October 8, 2021
 PLANS APPROVAL DATE

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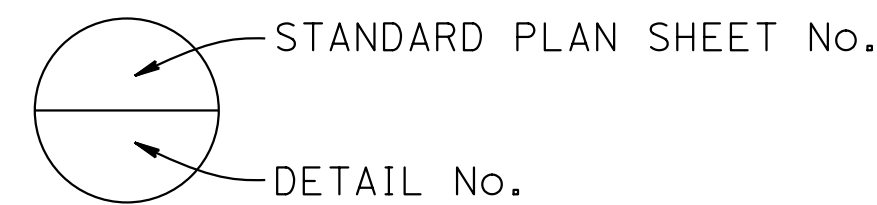
AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN No. 1
2	GENERAL PLAN No. 2
3	INDEX TO PLANS
4	STRUCTURE PLAN No. 1
5	STRUCTURE PLAN No. 2
6	FOUNDATION PLAN No. 1
7	FOUNDATION PLAN No. 2
8	RETAINING WALL DETAILS No. 1
9	RETAINING WALL DETAILS No. 2
10	ARCHITECTURAL DETAILS No. 1
11	ARCHITECTURAL DETAILS No. 2
12	LOG OF TEST BORING 1 OF 3
13	LOG OF TEST BORING 2 OF 3
14	LOG OF TEST BORING 3 OF 3

STANDARD PLANS DATED 2018

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)
RSP A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE SURCHARGE AND WALL
RSP A76A	CONCRETE BARRIER TYPE 60M
A76C	CONCRETE BARRIER TYPE 60MF
RSP B0-1	BRIDGE DETAILS
RSP B0-3	BRIDGE DETAILS
B0-13	BRIDGE DETAILS
B3-5	RETAINING WALL DETAILS No. 1
B3-6	RETAINING WALL DETAILS No. 2
B9-6	STRUCTURE APPROACH DRAINAGE DETAILS
RSP B11-47	CABLE RAILING
RSP B11-81	CONCRETE BARRIER TYPE 842 DETAILS No. 1
RSP B11-82	CONCRETE BARRIER TYPE 842 DETAILS No. 2



DESIGN DATA

Design: AASHTO LRFD Bridge Design Specifications, 6th edition with California Amendments, preface dated January 2014.

LS: Varied surcharge on level ground surface. Base on: AASHTO LRFD Bridge Design Specification, 6th edition Table 3.11.6.4-2.

CT: 54 kip transverse force applied at effective height, $H_e = 32''$ distributed over 10 feet at top of wall and 1 : 1 distribution down and outward. Distribution below footing taken no less than 40'.

SEISMIC: Horizontal seismic coefficient, $K_h = 0.28$
 Vertical seismic coefficient, $K_v = 0.0$
 $PGA = 0.85g$
 Shear Wave Velocity = 290 m/s

Soil: Friction Angle, $\phi = 32^\circ$
 Cohesion, $C = 0$ psf
 Unit Weight, $\gamma = 125$ pcf

Reinforced Concrete: $f'_c = 3,600$ psi (Compressive strength at 28 days)
 $f_y = 60,000$ psi (Yield strength of reinforcement)

Load Combinations and Limit States

Service I $Q=1.00DC+1.00EV+1.00EH+1.00LS$
 Strength I $Q=aDC+\beta EV+1.50EH+1.75LS$
 Extreme I $Q=1.00DC+1.00EV+1.00EH+1.00EQD+1.00EQE$
 Extreme II $Q=1.00DC+1.00EV+1.00EH+1.00CT$

Where: Q: Force Effects
 a: 1.25 or 0.90, whichever Controls Design
 β : 1.35 or 1.00, whichever Controls Design
 DC: Dead Load of Structure Components
 EV: Vertical Earth Fill Pressure
 LS: Live Load Surcharge
 EQE: Seismic Earth Pressure
 EQD: Soil and Structure Components Inertia
 Soil inertia ignored for stem design
 CT: Vehicular Collision Force
 EH: Horizontal Earth Fill Pressure


 DESIGN OVERSIGHT Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY C. Lee	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

Syed Kazmi PROJECT ENGINEER	BRIDGE No. 33E0250
	POST MILE R12.5

RETAINING WALL No. 162
INDEX TO PLANS

DESIGN DETAIL SHEET
 (ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 10:58
 FILE => 33E0250-a-1fp.dgn USERNAME => p302438

ORIGINAL SCALE
 IN INCHES FOR
 REDUCED PLANS

0 1 2 3

UNIT: 0733
 PROJECT NUMBER & PHASE: 04200002351

CONTRACT No.: 04-0030U4

DISREGARD PRINTS BEARING
 EARLIER REVISION DATES

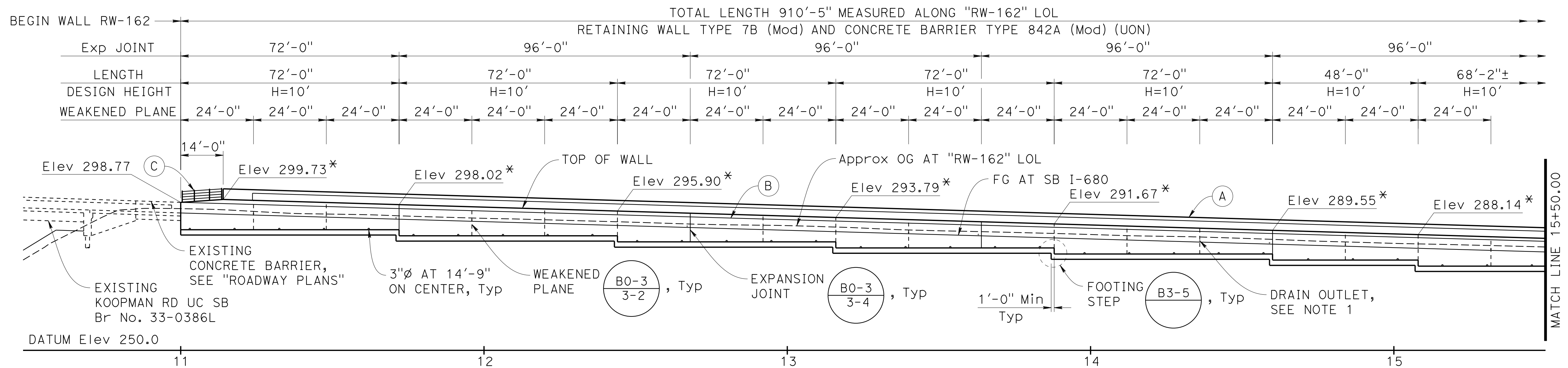
REVISION DATES
 8-22-21 9-2-21 09-29-21 11-2-21

SHEET 3 OF 14

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1608	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 09-29-21
 October 8, 2021
 PLANS APPROVAL DATE
 No. C48859
 Exp. 9/30/22
 CIVIL
 STATE OF CALIFORNIA

ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607
 AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811



DEVELOPED MIRRORED ELEVATION
 1"=20'

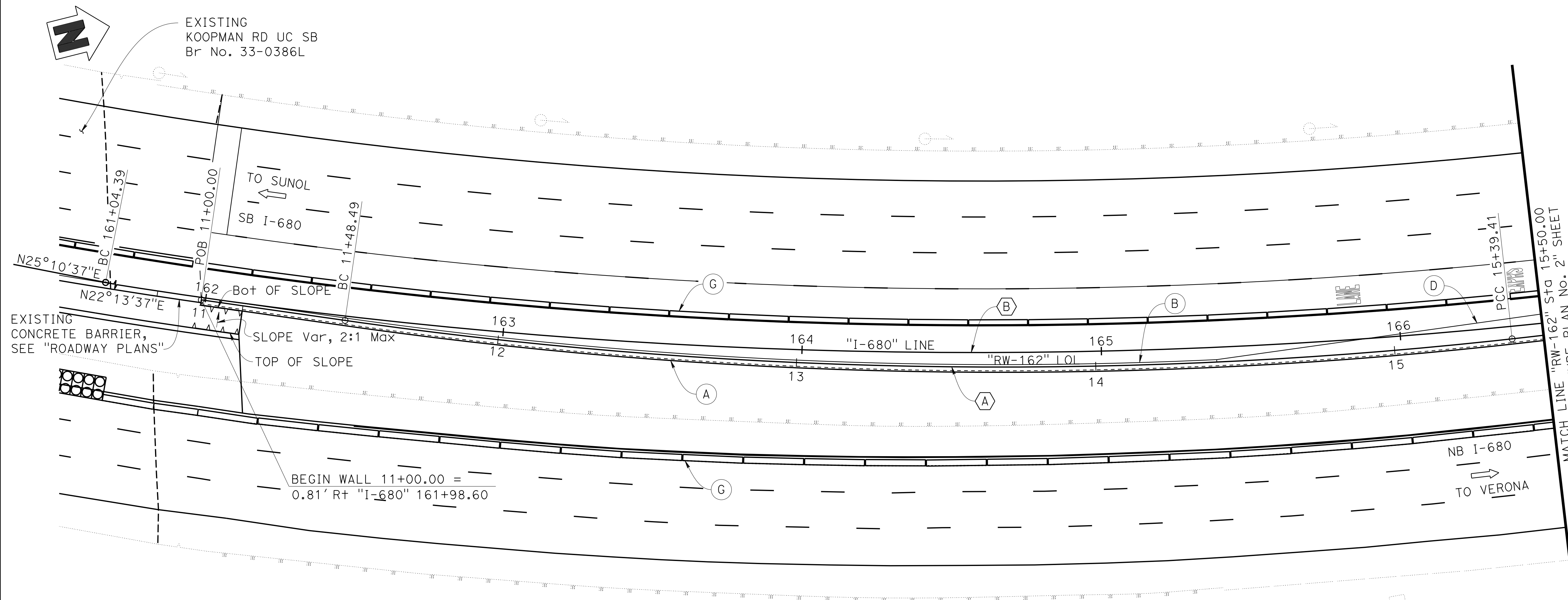
* - TOP OF WALL ELEVATION.

NOTES:

- (A) Concrete Barrier Type 842A (Mod)
 - (B) Concrete Barrier Type 60MD (Mod), see "ROADWAY PLANS"
 - (C) Cable Railing
 - (D) Concrete Barrier Type 60MF (Mod), see "ROADWAY PLANS"
 - (G) Temporary Railing (Type K), see "ROADWAY PLANS"
1. 3"Ø Drains @ 25'-0" Max center to center, 1'-0" Min away from the expansion joint. Provide 3"Ø plastic pipe to discharge thru barrier face. Exposed wall drains shall be located 3"± above finished grade.
 2. Footing key is not shown.

LEGEND:

← Direction of Traffic



PLAN
 1"=20'

CURVE DATA

(A) "RW-162" LOL	(B) "I-680" LINE
R = 1550.00'	R = 1829.72'
Δ = 14°27'01"	Δ = 43°24'06"
T = 196.50'	T = 728.17'
L = 390.92'	L = 1386.02'

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY C. Lee	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER
 BRIDGE No. 33E0250
 POST MILE R12.5

**RETAINING WALL No. 162
 STRUCTURE PLAN No. 1**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1609	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER 09-29-21 DATE
 October 8, 2021
 PLANS APPROVAL DATE

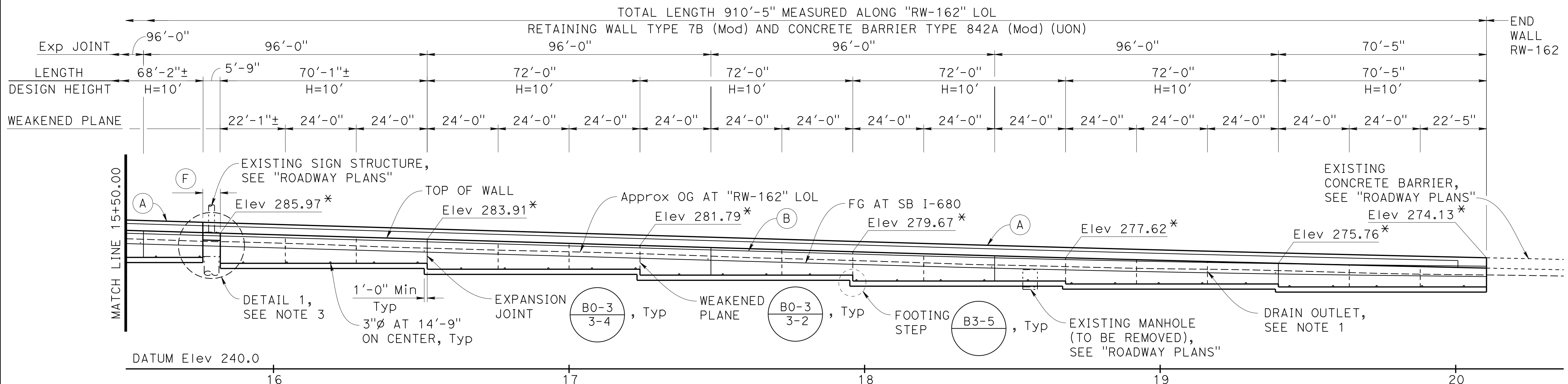
Orin A. Brown
 No. C48859
 Exp. 9/30/22
 CIVIL
 STATE OF CALIFORNIA

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AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

- NOTES:**
- (A) Concrete Barrier Type 842A (Mod)
 - (B) Concrete Barrier Type 60MD (Mod), see "ROADWAY PLANS"
 - (D) Concrete Barrier Type 60MF (Mod), see "ROADWAY PLANS"
 - (F) Concrete Barrier Type 842B (Mod) Type A
 - (G) Temporary Railing (Type K), see "ROADWAY PLANS"
1. 3"Ø Drains @ 25'-0" Max center to center, 1'-0" Min away from the expansion joint. Provide 3"Ø plastic pipe to discharge thru barrier face. Exposed wall drains shall be located 3"± above finished grade.
 2. Footing key is not shown.
 3. For DETAIL 1, see "RETAINING WALL DETAILS No. 2" sheet.

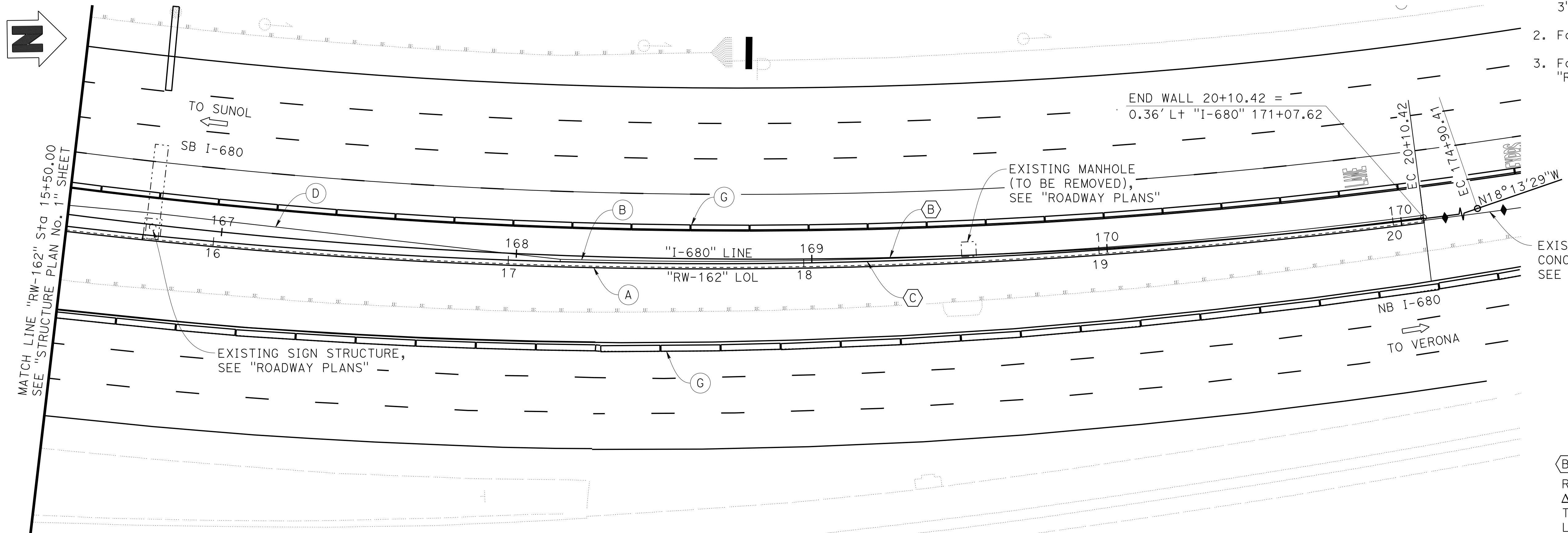


DEVELOPED MIRRORED ELEVATION
 1"=20'

* - TOP OF WALL ELEVATION.

LEGEND:

← Direction of Traffic



PLAN
 1"=20'

CURVE DATA

(B) "I-680" LINE R = 1829.72' Δ = 43°24'06" T = 728.17' L = 1386.02'	(C) "RW-162" LOL R = 1875.00' Δ = 14°23'34" T = 236.75' L = 471.00'
--	---

Norbert Gee
 DESIGN OVERSIGHT Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY C. Lee	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.
 33E0250
 POST MILE
 R12.5

RETAINING WALL No. 162
STRUCTURE PLAN No. 2

SPREAD FOOTING DATA TABLE			
Support Location	Load and Resistance Factor Design (LRFD)		
	Service Permissible Net Contact Stress (Settlement) (ksf)	Strength Factored Gross Nominal Bearing Resistance $\phi_b = 0.55$ (ksf)	Extreme Event Factored Gross Nominal Bearing Resistance $\phi_b = 0.80$ (ksf)
RW-162	2	4.24	6.17

BENCH MARK				
BENCH MARK	N	E	ELEV	DESCRIPTION
303	2044416.727	6164391.716	295.59	SET 2" BRASS DISK WITH PUNCH IN TOP OF CURB, WESTERLY SHOULDER OF KOOPMAN ROAD.
304	2045550.892	6164319.012	281.72	SET 2" BRASS DISK WITH PUNCH IN TOP OF CURB, WESTERLY SHOULDER OF KOOPMAN ROAD.

SURVEY CONTROL:
 BEARINGS AND COORDINATES ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS 83), EPOCH 2010.00, ZONE 3. ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). THE UNIT OF MEASUREMENT IS THE US SURVEY FOOT.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1610	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 09-29-21

October 8, 2021
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 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

NOTE:

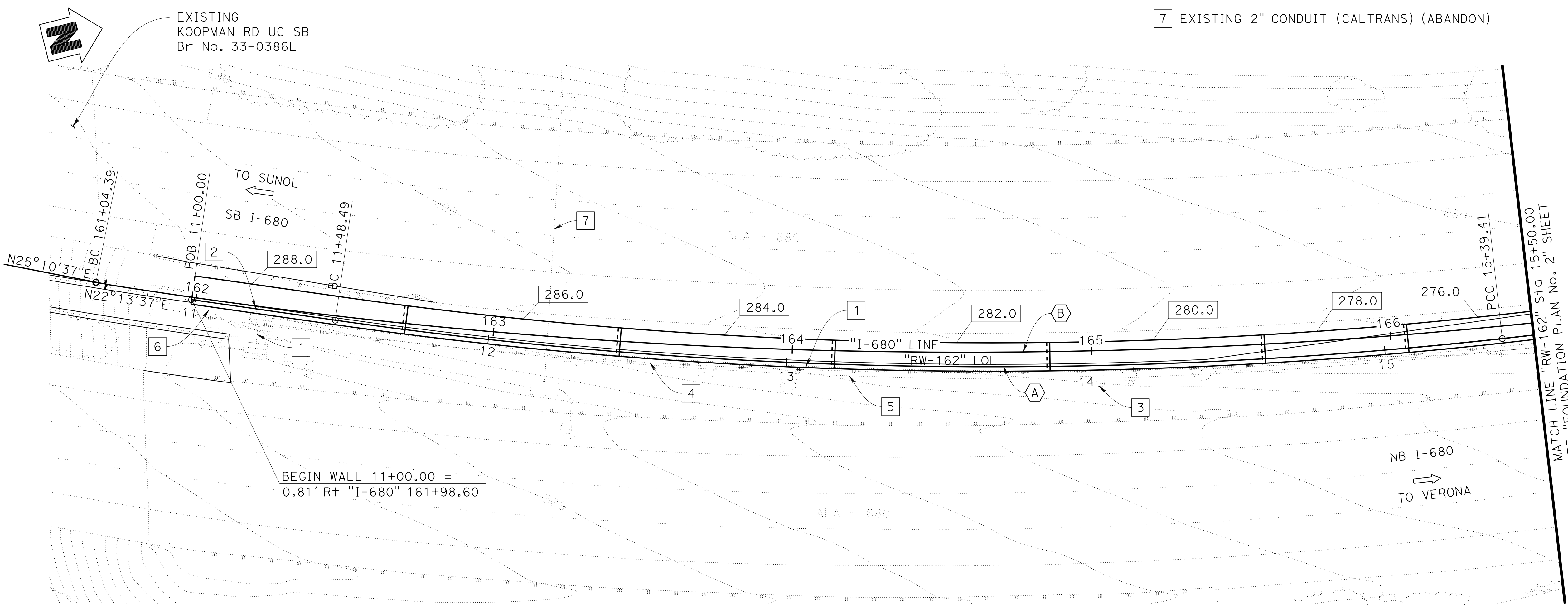
- For utilities information, see "ROADWAY PLANS".

LEGEND:

- Direction of Traffic
- Bottom of Footing Elevation

UTILITIES

- EXISTING CULVERT (CALTRANS) (TO BE REMOVED)
- EXISTING MANHOLE (CALTRANS) (TO BE REMOVED)
- DI TYPE G2 Typ (CALTRANS), SEE "ROADWAY PLANS"
- EXISTING DITCH (CALTRANS) (TO BE REMOVED)
- 18" APC DRAIN (CALTRANS)
- EXISTING 2" CONDUIT (CALTRANS) (ABANDON)
- EXISTING 2" CONDUIT (CALTRANS) (ABANDON)

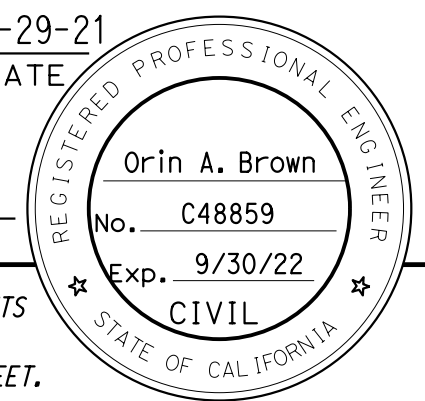


CURVE DATA

A "RW-162" LOL	B "I-680" LINE
R = 1550.00'	R = 1829.72'
$\Delta = 14^\circ 27' 01''$	$\Delta = 43^\circ 24' 06''$
T = 196.50'	T = 728.17'
L = 390.92'	L = 1386.02'

PLAN
1"=20'

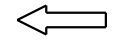
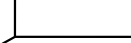
<i>Norbert Gee</i> DESIGN OVERSIGHT 2/15/22 SIGN OFF DATE	SCALE: 1" = 20'	VERT. DATUM NAVD88	HORZ. DATUM NAD83(2014.55)	DESIGN BY: W. Bai	CHECKED: A. AKI	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE No. 33E0250	RETAINING WALL No. 162 FOUNDATION PLAN No. 1
	PHOTOGRAMMETRY AS OF: 10-30-18	ALIGNMENT TIES:	DESIGN BY: C. Lee	CHECKED: A. AKI	PROJECT ENGINEER: Syed Kazmi		POST MILE: R12.5	
<i>D. Stephen</i> FOUNDATION PLAN SHEET (ENGLISH) (REVISION 4/19/2018)	SURVEYED BY: Caltrans FIELD CHECKED BY: Caltrans	CHECKED BY: Caltrans	QUANTITIES BY: W. Bai	CHECKED: A. AKI	CHECKED: A. AKI	UNIT: 0733 PROJECT NUMBER & PHASE: 04200002351	CONTRACT No.: 04-0030U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES
DATE PLOTTED => 9-MAR-2022 FILE => 33E0250-e-fd01.dgn	TIME PLOTTED => 10:58 USERNAME => p302438	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	SHEET 6 OF 14	REVISION DATES: 8-22-21, 9-2-21, 09-29-21, 11-13-21			

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9 R0.0/0.9	1611	1710
		<i>Orin A. Brown</i> REGISTERED CIVIL ENGINEER DATE 09-29-21			
October 8, 2021 PLANS APPROVAL DATE					
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AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					

NOTES:

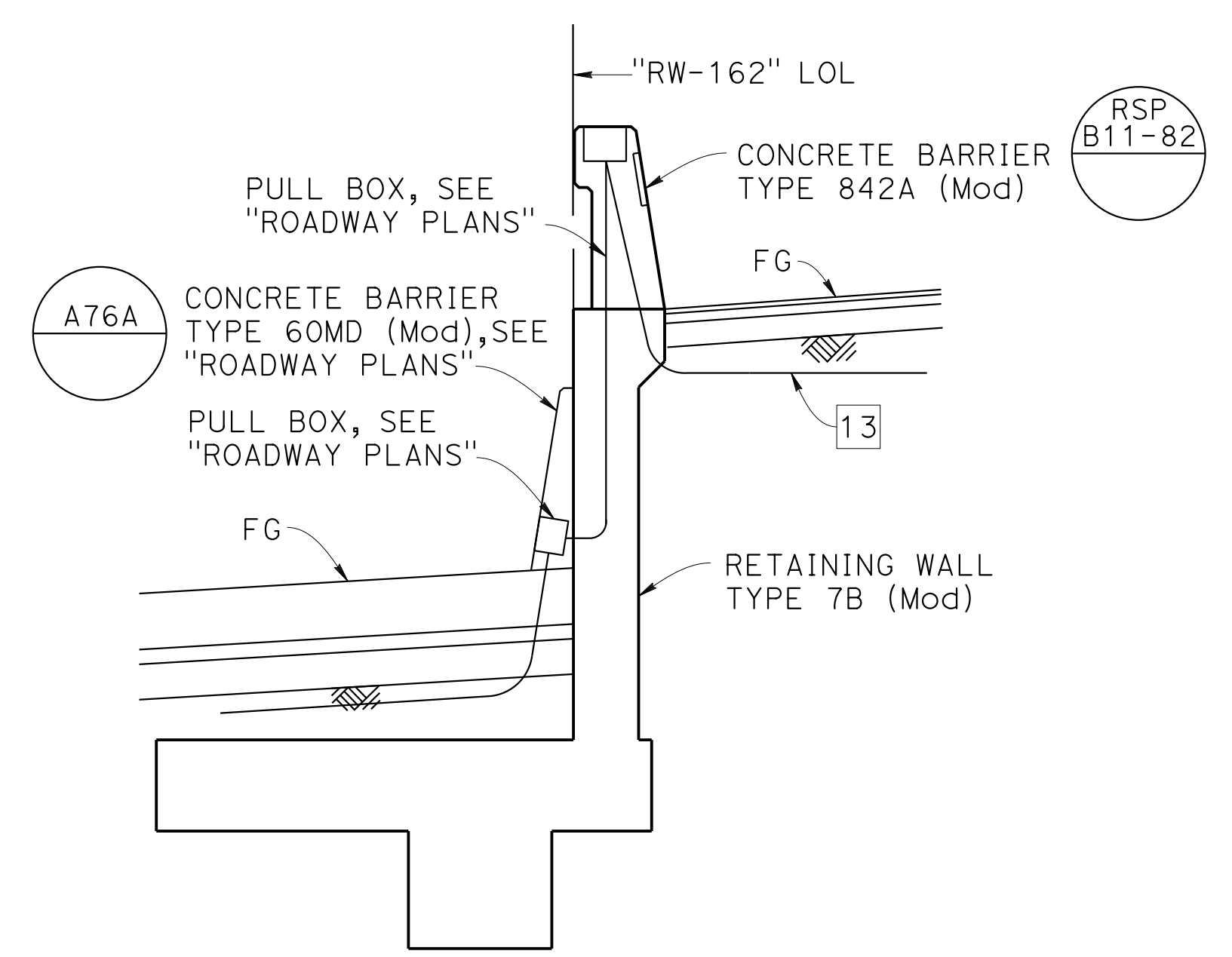
- For utilities information, see "ROADWAY PLANS".
- For the RM conduit crossing the wall, see CONDUIT DETAIL on this sheet.

LEGEND:

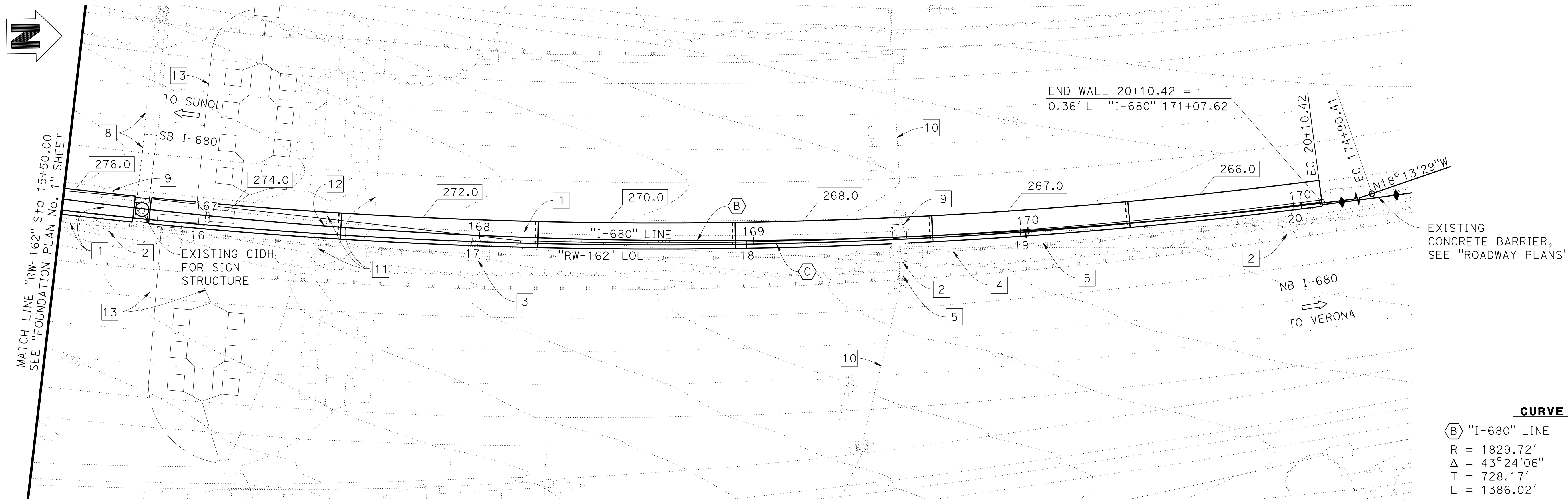
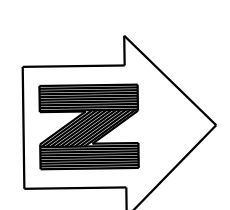
-  Direction of Traffic
-  Bottom of Footing Elevation

UTILITIES

- EXISTING CULVERT (CALTRANS) (TO BE REMOVED)
- EXISTING MANHOLE (CALTRANS) (TO BE REMOVED)
- DI TYPE G2 Typ (CALTRANS), SEE "ROADWAY PLANS"
- Existing DITCH (CALTRANS) (TO BE REMOVED)
- 18" APC DRAIN (CALTRANS)
- EXISTING TRAFFIC SIGN (CALTRANS)
- EXISTING MANHOLE (CALTRANS) (TO BE REMOVED)
- EXISTING 18" RCP DRAINAGE (CALTRANS)
- EXISTING 3" RM CONDUIT (CALTRANS) (TO BE REMOVED)
- EXISTING TOS PULL BOX (CALTRANS) (TO BE REMOVED)
- RM CONDUIT (CALTRANS), SEE NOTE 2





CONDUIT DETAIL
NO SCALE



PLAN
1"=20'

CURVE DATA

B "I-680" LINE	C "RW-162" LINE
R = 1829.72'	R = 1875.00'
Δ = 43°24'06"	Δ = 14°23'34"
T = 728.17'	T = 236.75'
L = 1386.02'	L = 471.00'

 DESIGN OVERSIGHT Norbert Gee	SCALE: 1" = 20'	VERT. DATUM NAVD88	HORZ. DATUM NAD83(2014.55)	DESIGN BY: W. Bai	CHECKED: A. AKI	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE No.	RETAINING WALL No. 162 FOUNDATION PLAN No. 2
	PHOTOGRAMMETRY AS OF: 10-30-18	ALIGNMENT TIES:	DETAILS BY: C. Lee	CHECKED: A. AKI	PROJECT ENGINEER		33E0250	
2/15/22 SIGN OFF DATE	SURVEYED BY: Caltrans	CHECKED BY: Caltrans	QUANTITIES BY: W. Bai	CHECKED: A. AKI	PROJECT NUMBER & PHASE: 04200002351	POST MILE	R12.5	CONTRACT No.: 04-0030U4
FOUNDATION PLAN SHEET (ENGLISH) (REVISION 4/19/2018)	 GEOTECHNICAL PROFESSIONAL APPROVAL DATE 7-13-21		DATE PLOTTED => 9-MAR-2022 FILE => 33E0250-e-fd02.dgn	TIME PLOTTED => 10:58 USERNAME => p302438	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 0733	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES: 8-28-21, 9-2-21, 09-29-21, 10-13-21 SHEET 7 OF 14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1612	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER
 DATE 09-29-21

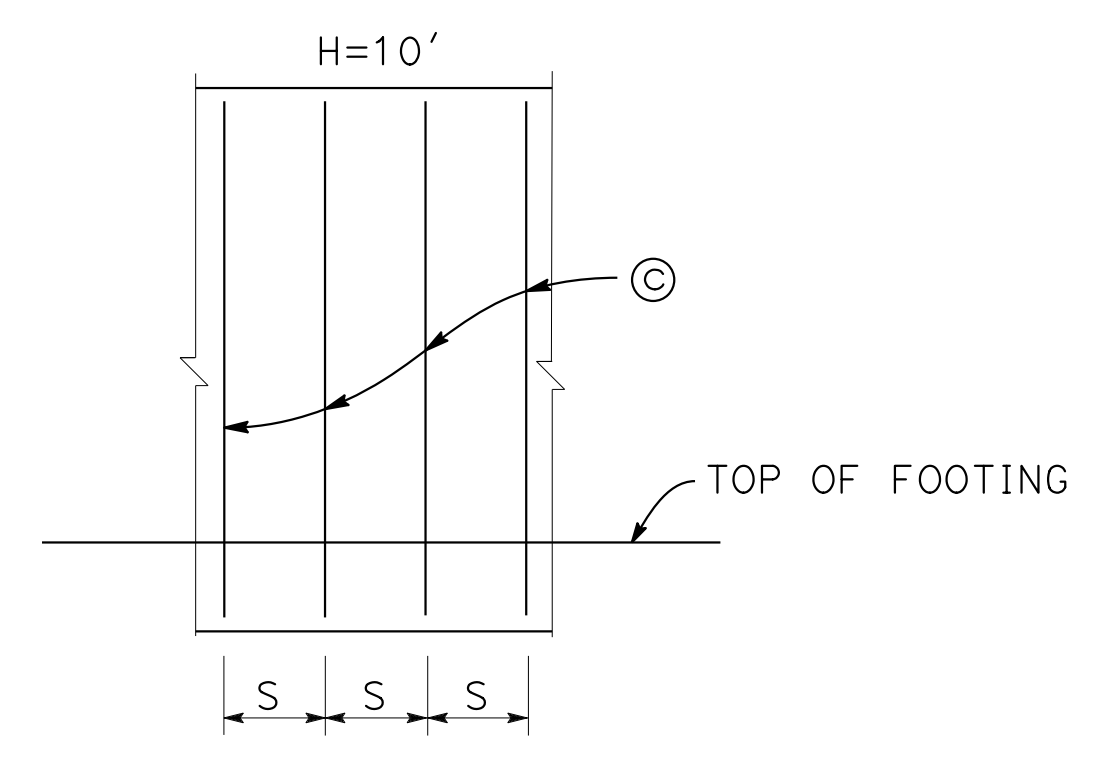
October 8, 2021
 PLANS APPROVAL DATE

Orin A. Brown
 No. C48859
 Exp. 9/30/22
 CIVIL

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AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

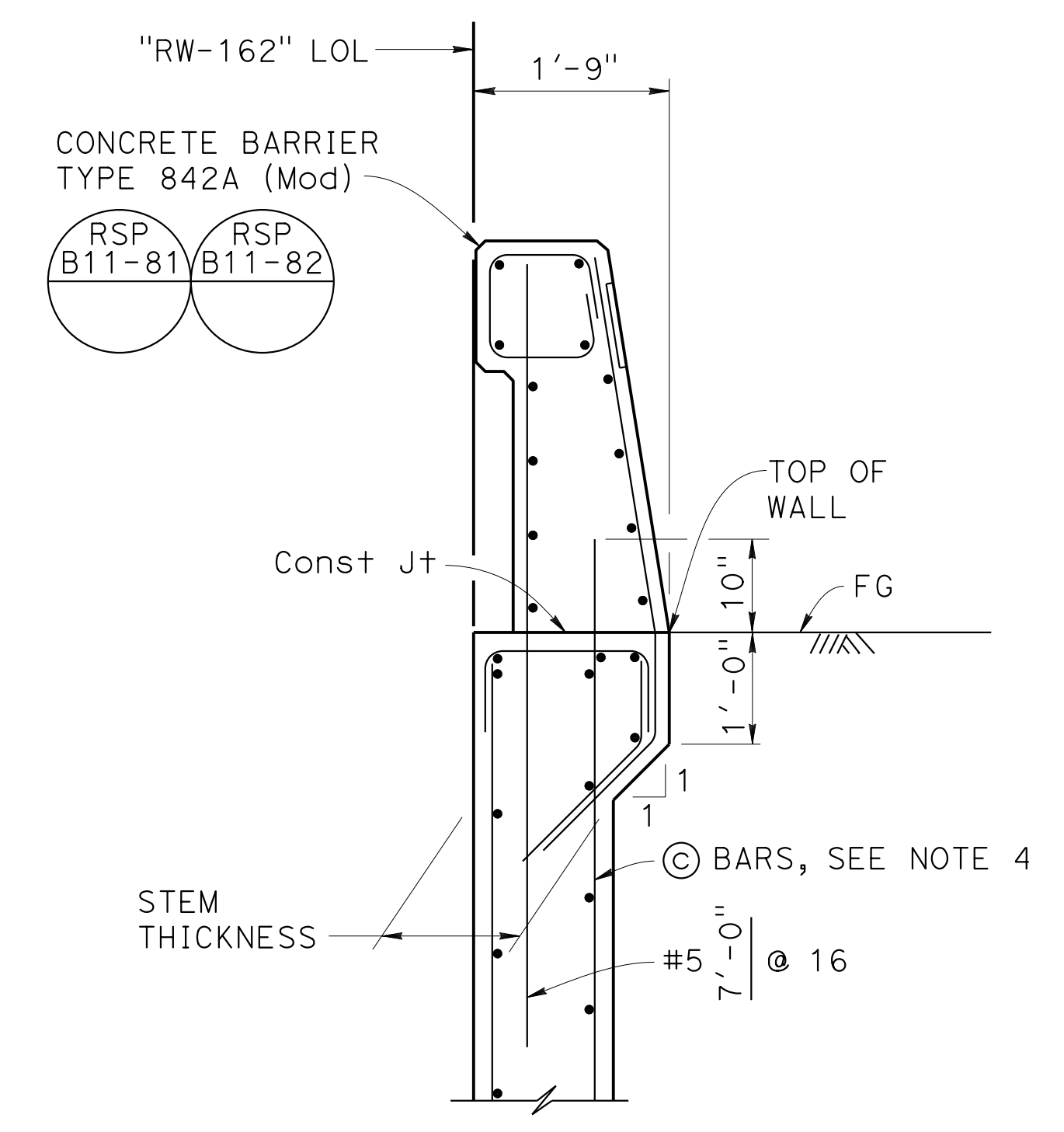


ELEVATION
RETAINING WALL TYPE 7B (Mod)
 NO SCALE

TABLE OF RETAINING WALL TYPE 7B (Mod) DIMENSIONS, REINFORCING STEEL AND BEARING STRESS DATA

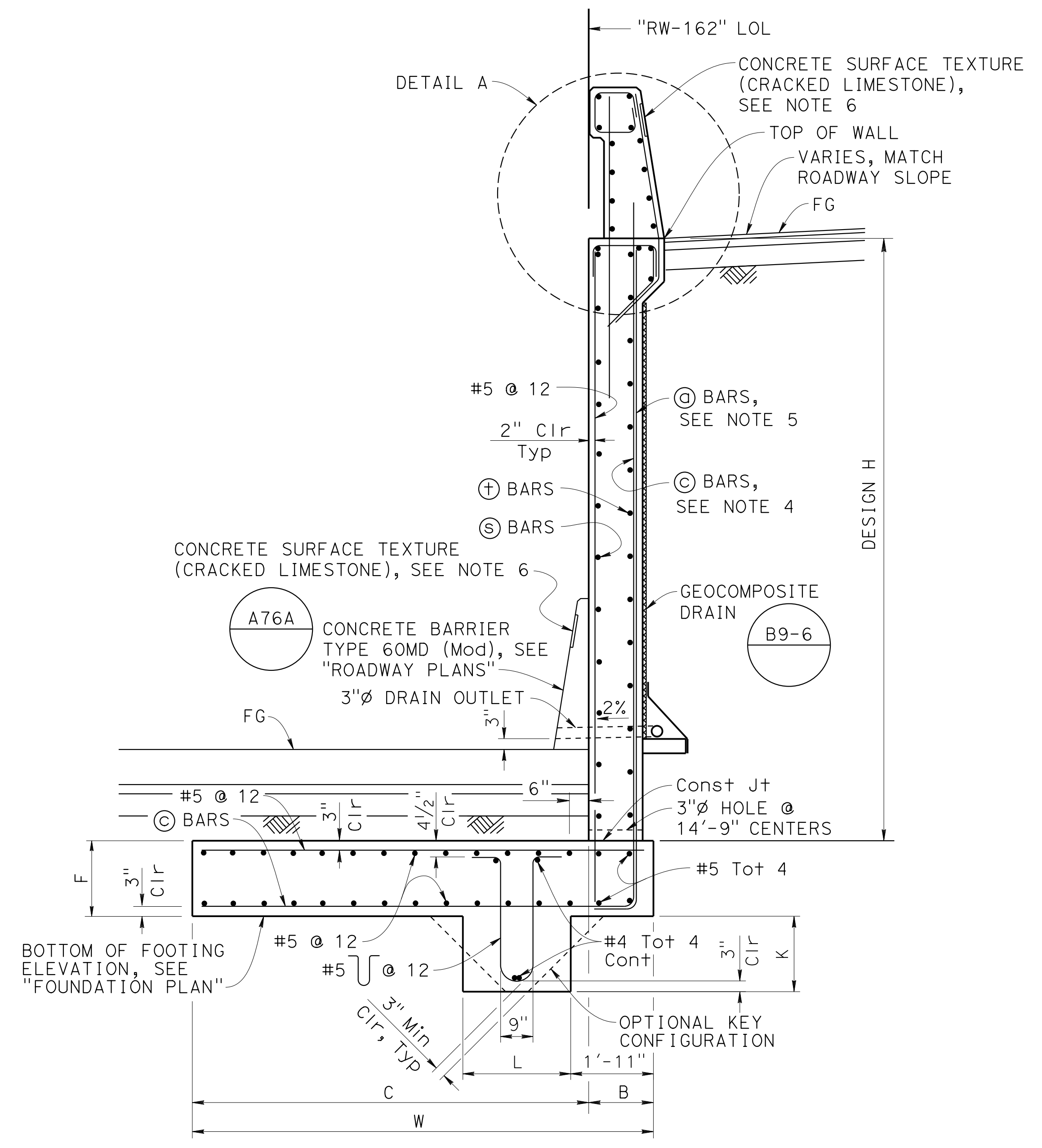
DESIGN H	10'
W	9'-6"
C	8'-0"
B	1'-6"
F	1'-9"
K	2'-3"
L	2'-9"
STEM THICKNESS	1'-3"
S	0'-9"
⊙ BARS	#7
⊕ BARS	#5 @ 15
⊗ BARS	#4 @ 12
SER I: B' (ft), q ₀ (ksf)	7.3, 0.7
STR Ia: B' (ft), q ₀ (ksf)	6.0, 1.9
STR, Ib: B' (ft), q ₀ (ksf)	3.8, 2.2
Ext I: B' (ft), q ₀ (ksf)	5.3, 1.7
Ext II: B' (ft), q ₀ (ksf)	4.4, 2.0

LEGEND:
 SER: Service limit state
 STR: Strength limit state
 EXT: Extreme event limit state
 B': Effective footing width (ft)
 q₀: Net bearing stress (ksf)
 q_p: Gross uniform bearing stress (ksf)



DETAIL A
 $\frac{3}{4} = 1'-0''$

- NOTES:**
- Concrete Surface Texture (Cracked Limestone), see "ARCHITECTURAL DETAILS No. 1" sheet.
 - For details not shown including footing steps and utility openings, see B3-5 and B3-6.
 - Footing cover, 2'-6" minimum.
 - Extend ⊙ bars into Barrier for stem with haunch.
 - Provide #6 ⊥ @ 12" @ bar over a distance of 8'-0" measured from all expansion joints, begin wall and end wall locations.
 - Provide 1" clear concrete cover from Concrete Surface Texture (Cracked Limestone) to barrier reinforcement.



RETAINING WALL TYPE 7B (Mod) TYPICAL SECTION
 NO SCALE

DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY C. Lee	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0250
POST MILE	R12.5

RETAINING WALL No. 162
RETAINING WALL DETAILS No. 1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1613	1710

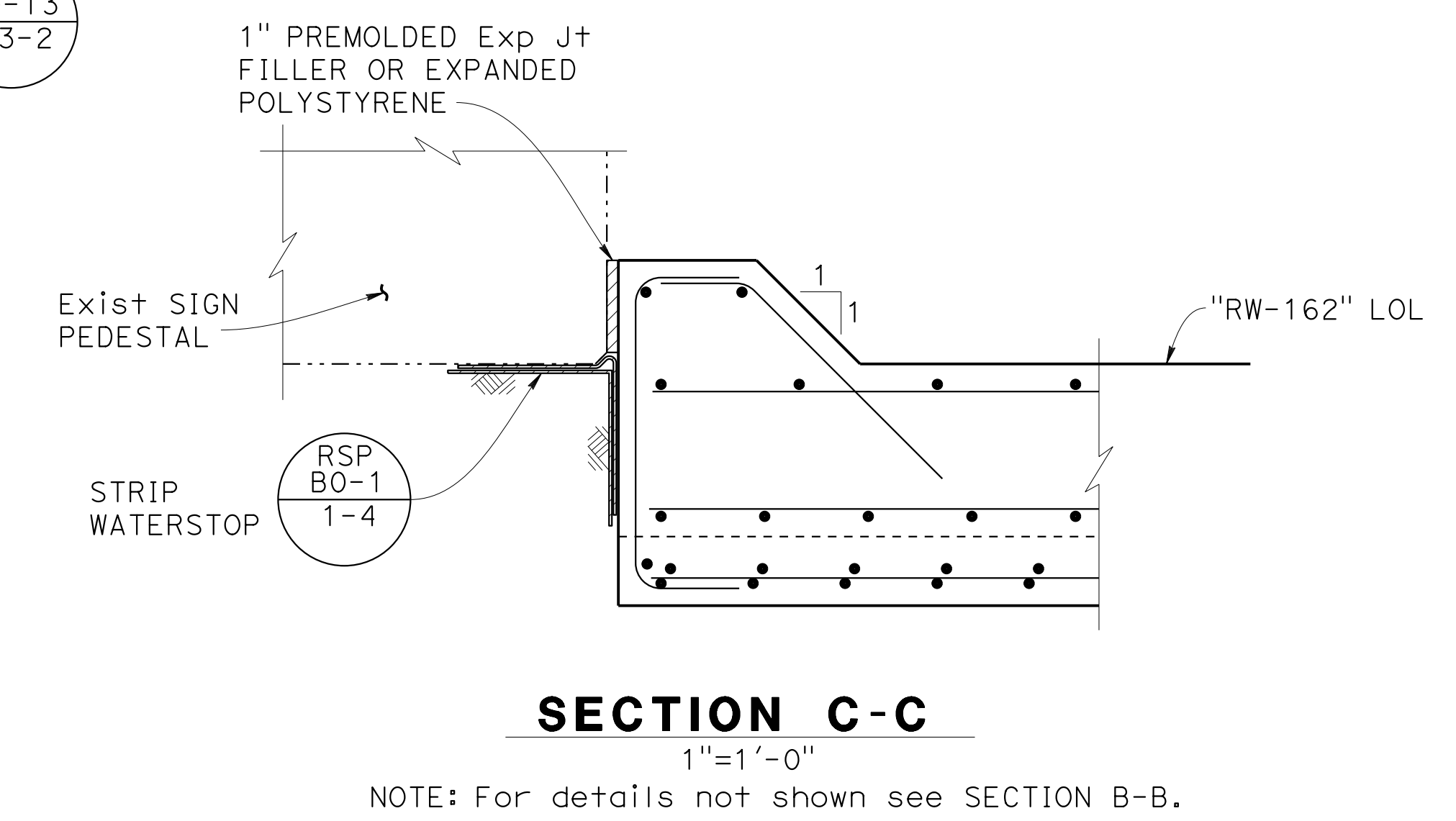
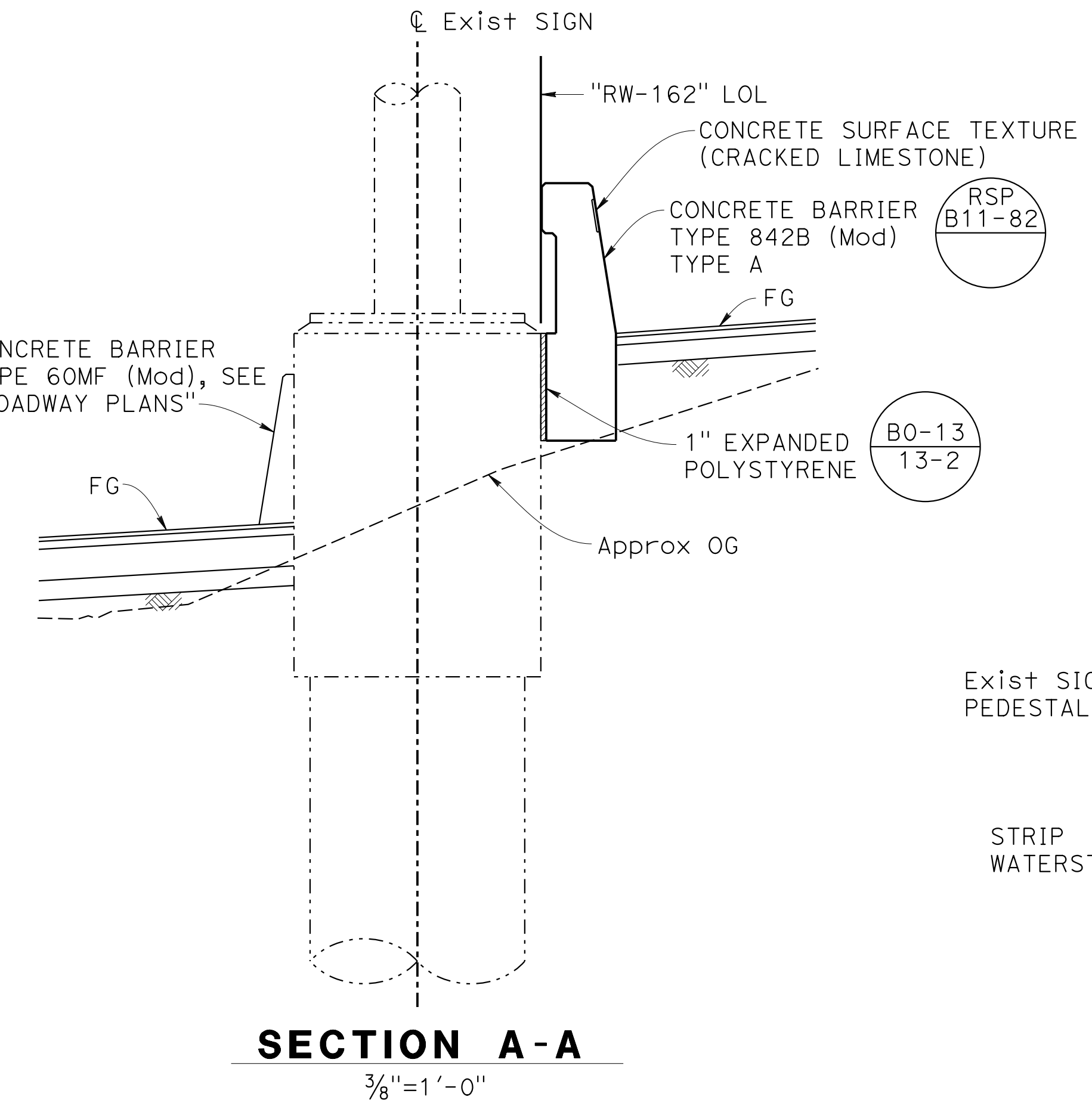
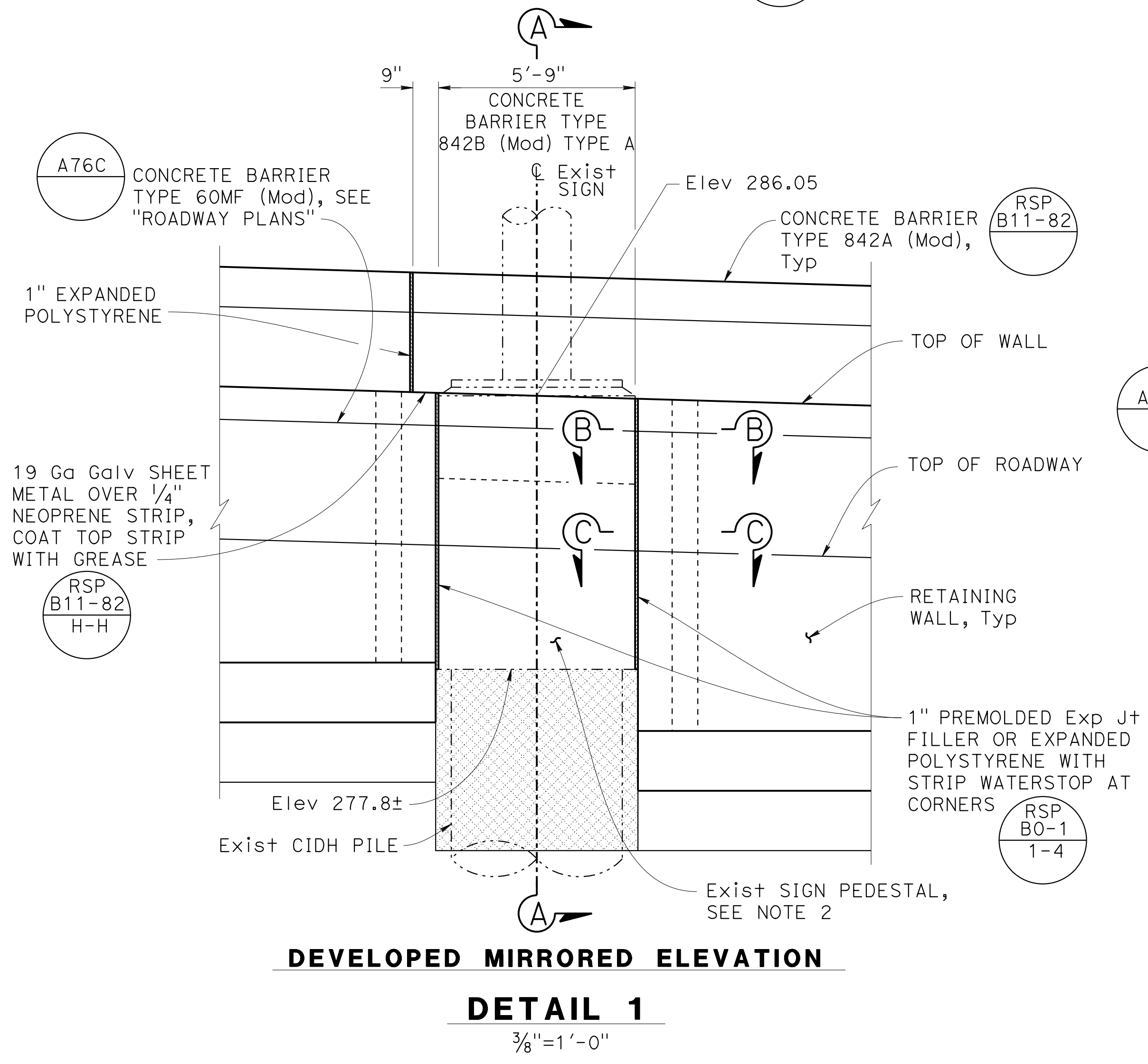
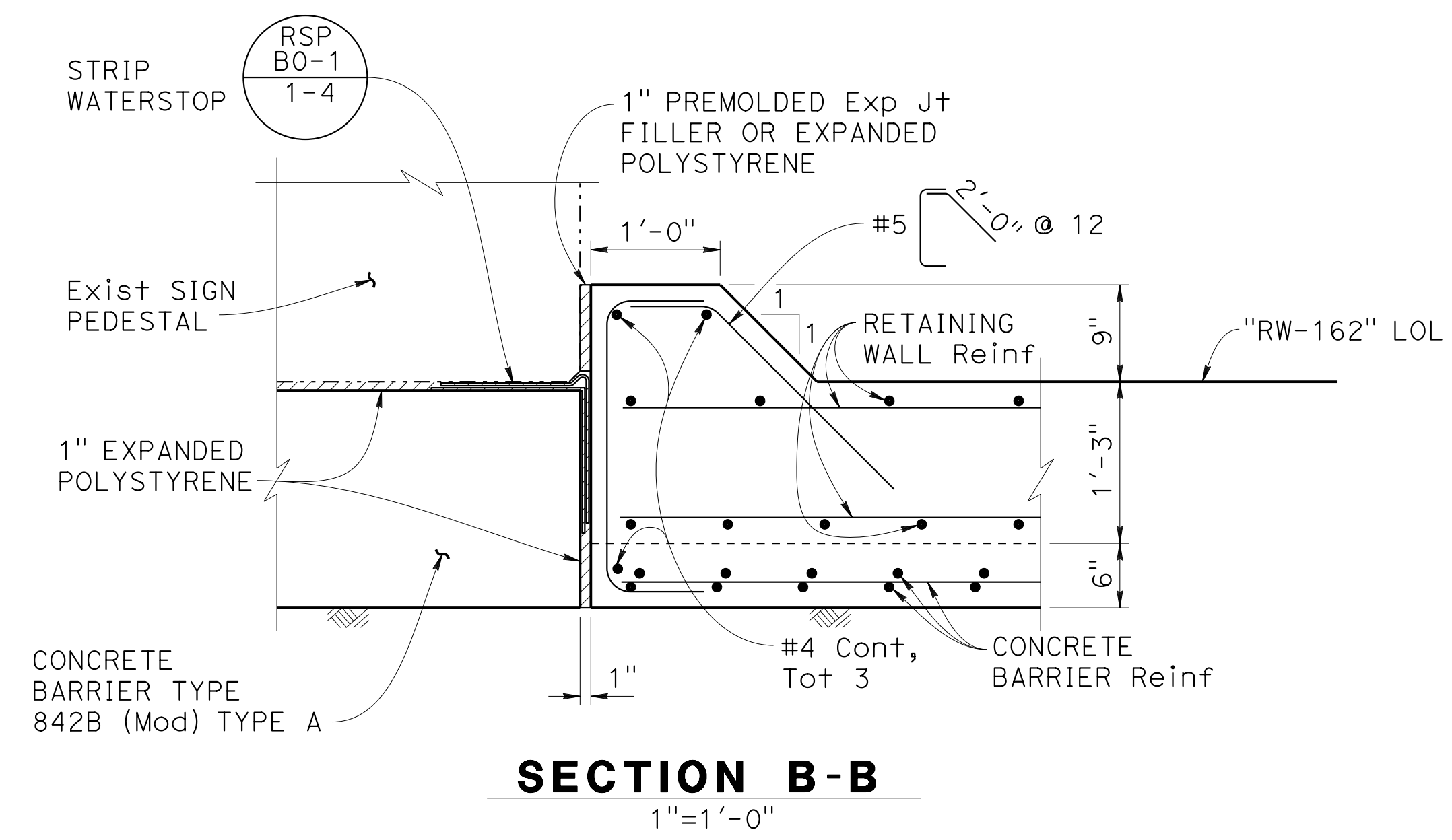
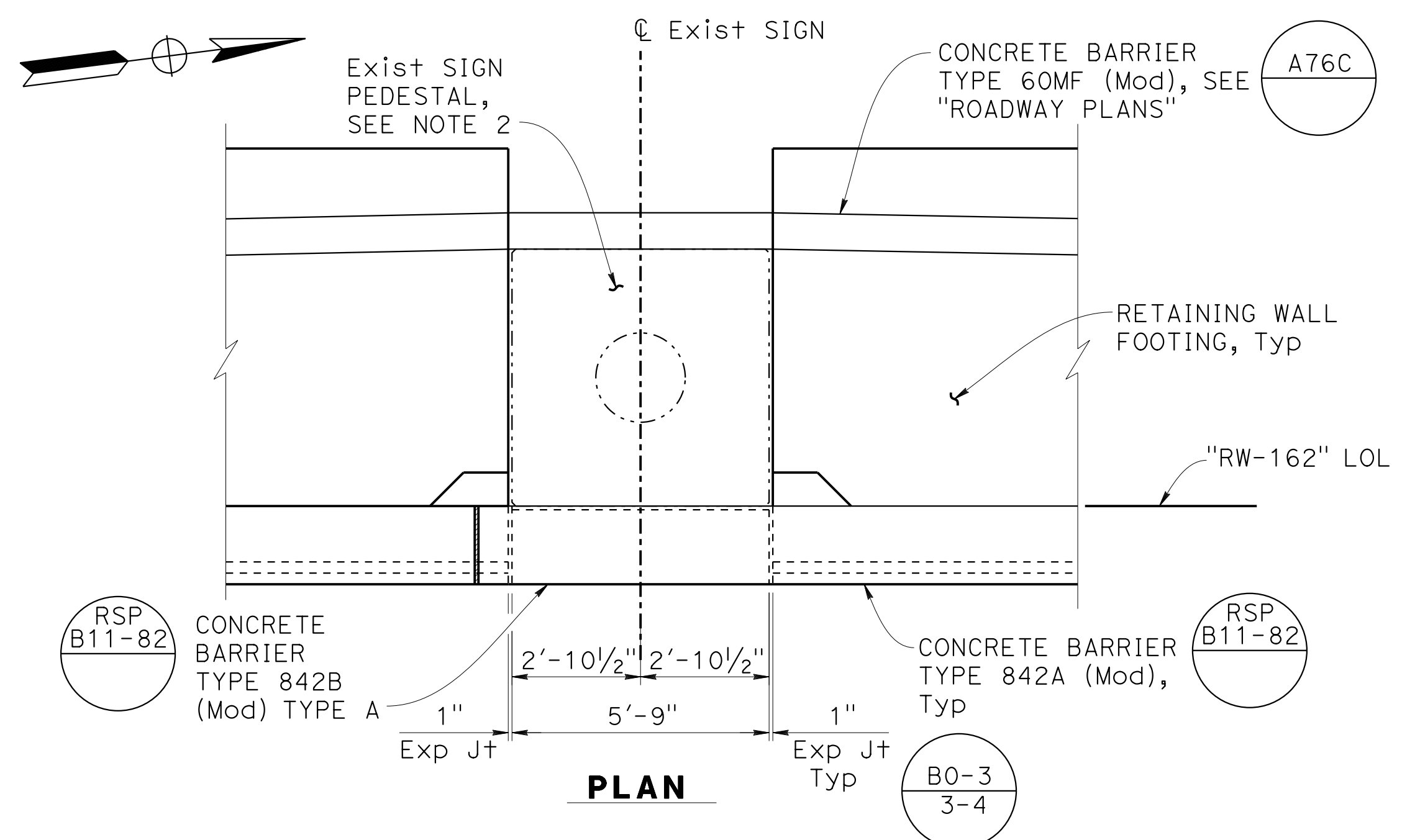
Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 09-29-21
 October 8, 2021
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 CIVIL
 STATE OF CALIFORNIA

ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607
 AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

- NOTES:**
- For location of DETAIL 1, see "STRUCTURE PLAN No. 2" sheet.
 - If existing Sign Pedestal was over-poured, then chip concrete edge of existing Sign Pedestal to required dimensions.
 - For Concrete Surface Texture (Cracked Limestone), see "ARCHITECTURAL DETAILS No. 1" sheet.
 - Controlled low-strength material backfill the gap due to wall excavation around the existing CIDH pile.

LEGEND:

Controlled Low-Strength Material Backfill, see Note 4



Norbert Gee
 DESIGN OVERSIGHT
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY C. Lee	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0250	RETAINING WALL No. 162
POST MILE	R12.5	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9 R0.0/0.9	1614	1710

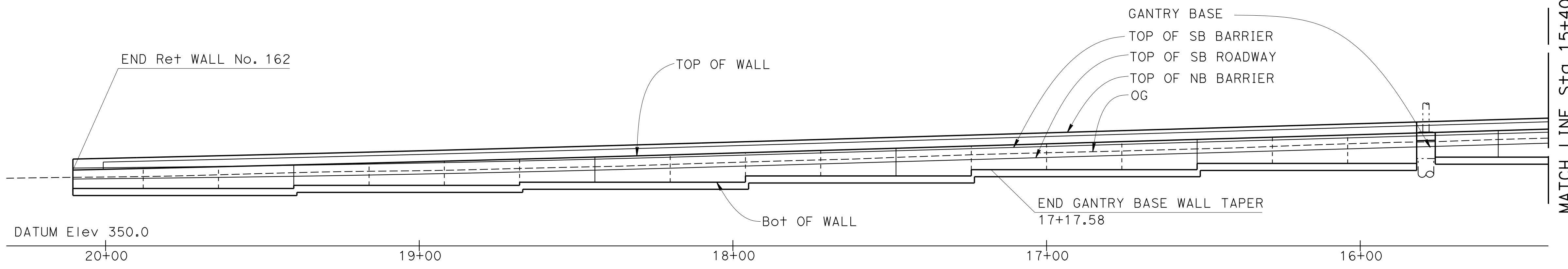
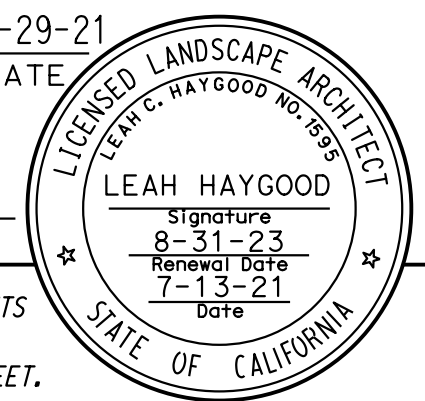
Leah Haygood
REGISTERED CIVIL ENGINEER
DATE 09-29-21

October 8, 2021
PLANS APPROVAL DATE

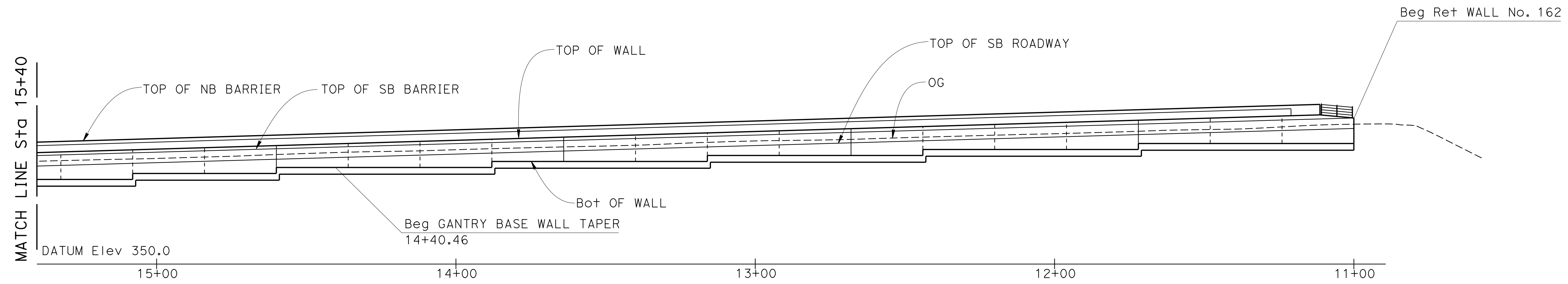
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

ALAMEDA CTC
1111 BROADWAY, SUITE 800
OAKLAND, CA 94607

HAYGOOD & ASSOCIATES
647 SANTA BARBARA ROAD
BERKELEY, CA 94707



DEVELOPED ELEVATION (VIEWED FROM FACE OF WALL)
1"=20'



DEVELOPED ELEVATION (VIEWED FROM FACE OF WALL)
1"=20'

NOTE
FOR APPLICATION OF ARCHITECTURAL TREATMENT TO NB AND SB BARRIERS ON Ret WALL No. 162 REFER TO "ARCHITECTURAL DETAIL No. 2" SHEET

Norbert Gee
DESIGN OVERSIGHT
Norbert Gee
2/15/22
SIGN OFF DATE


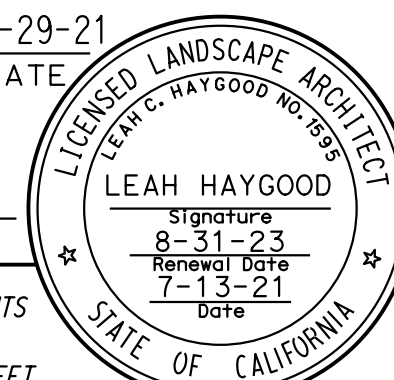
DESIGN	BY S. KENNEY	CHECKED L. HAYGOOD
DETAILS	BY S. KENNEY	CHECKED L. HAYGOOD
QUANTITIES	BY W. Bai	CHECKED A. AKI

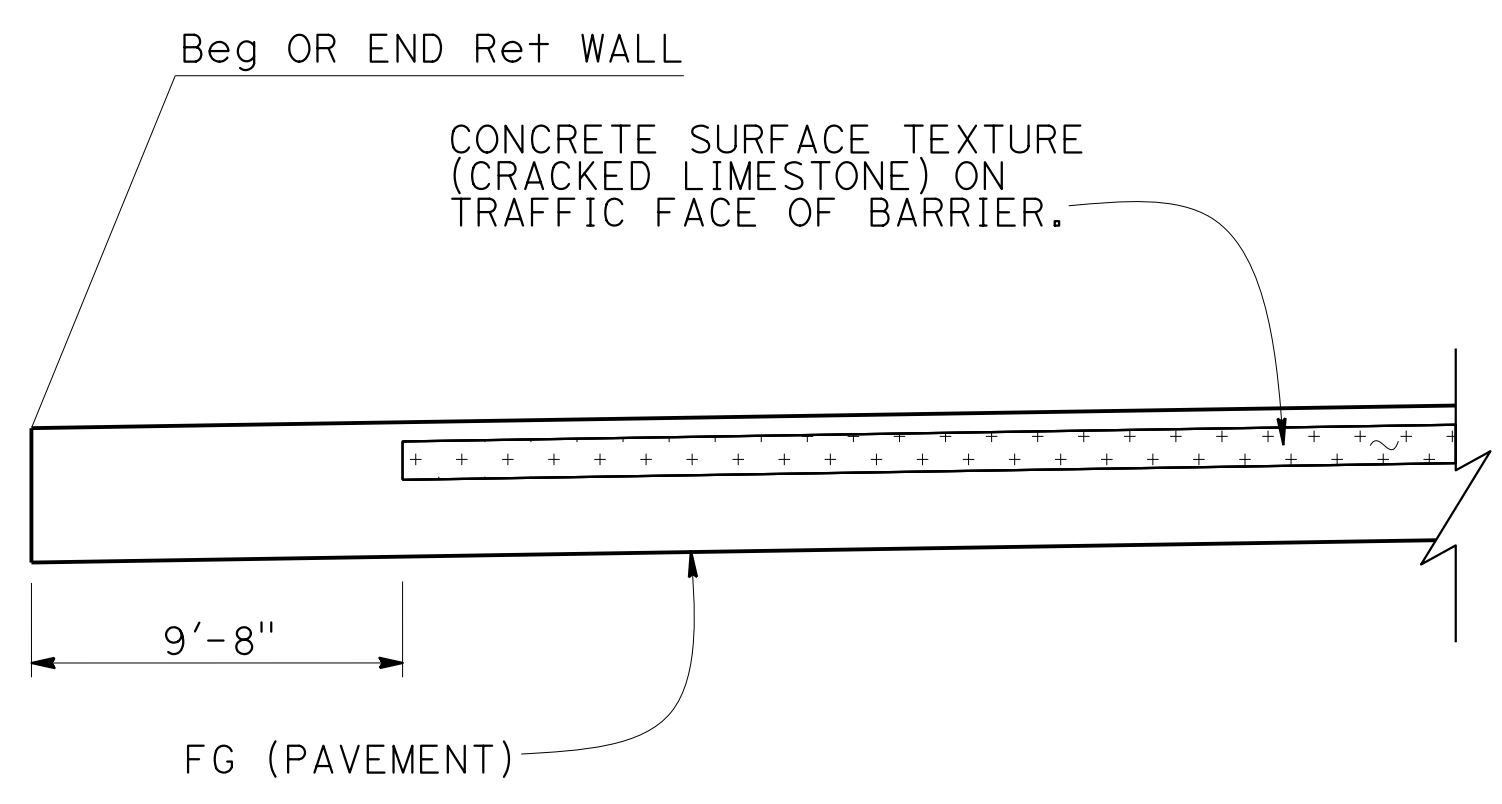
**PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
PROJECT ENGINEER

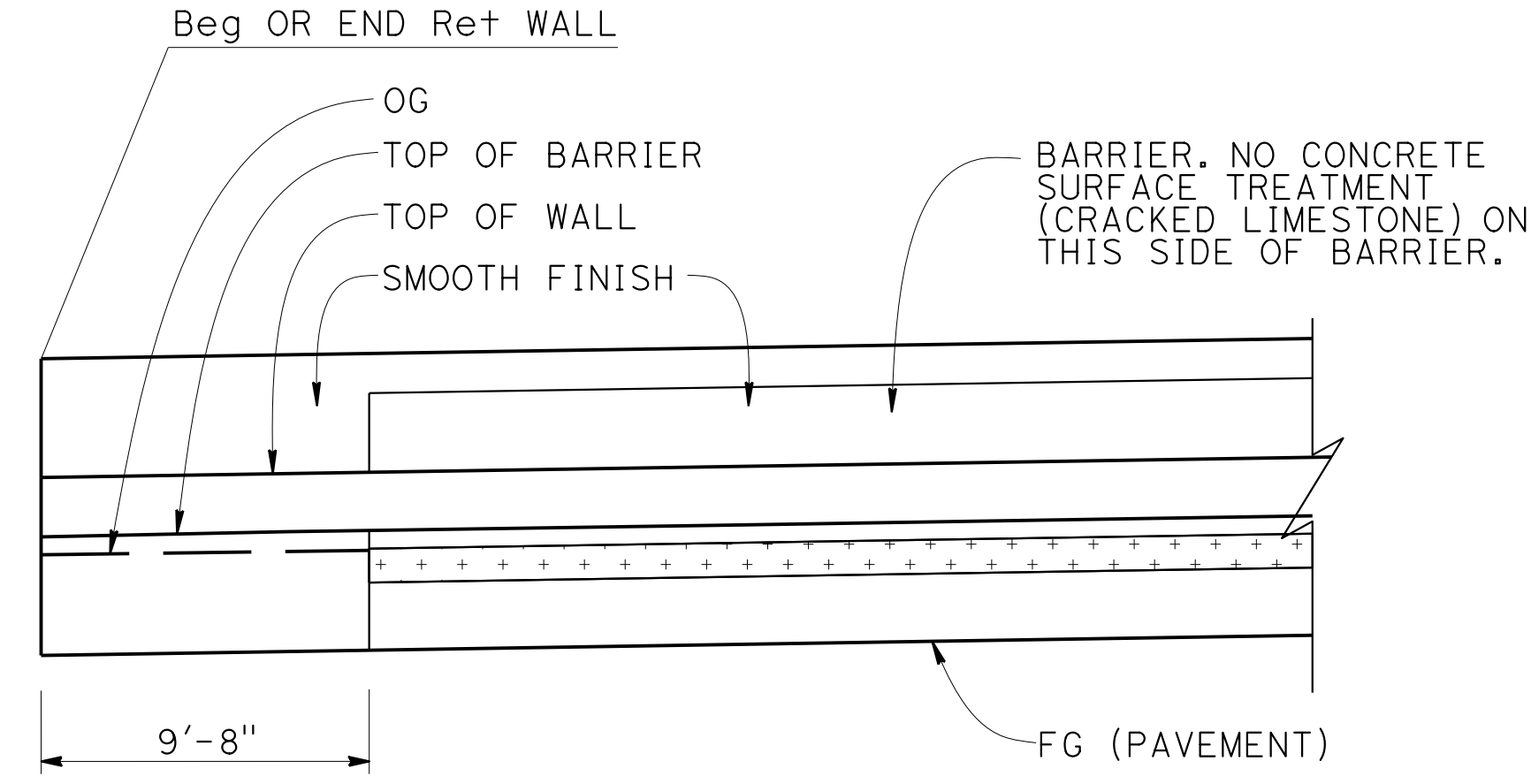
BRIDGE No.	33E0250
POST MILE	R12.5

**RETAINING WALL No. 162
ARCHITECTURAL DETAILS No. 1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1615	1710
 REGISTERED CIVIL ENGINEER			09-29-21	DATE	
October 8, 2021 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.					
ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
HAYGOOD & ASSOCIATES 647 SANTA BARBARA ROAD BERKELEY, CA 94707					



VIEW FROM NORTHBOUND ROADWAY



VIEW FROM SOUTHBOUND ROADWAY

BARRIER ARCHITECTURAL TREATMENT AT Beg OR END OF RETAINING WALL

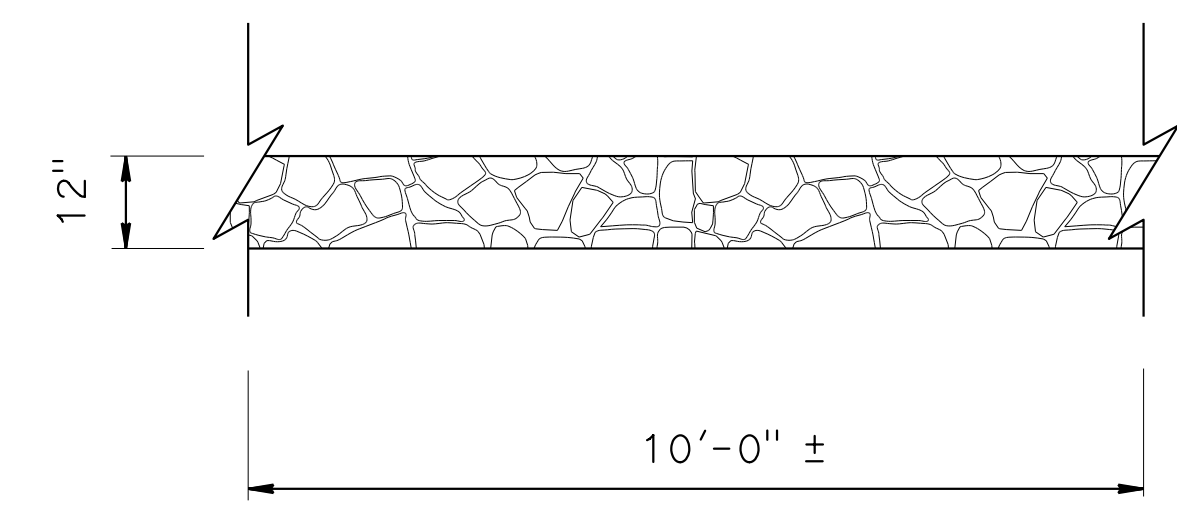
1"=5'

LEGEND

- LEVEL -1 = LEVEL 0 -1"
- LEVEL 0 = FACE OF BARRIER

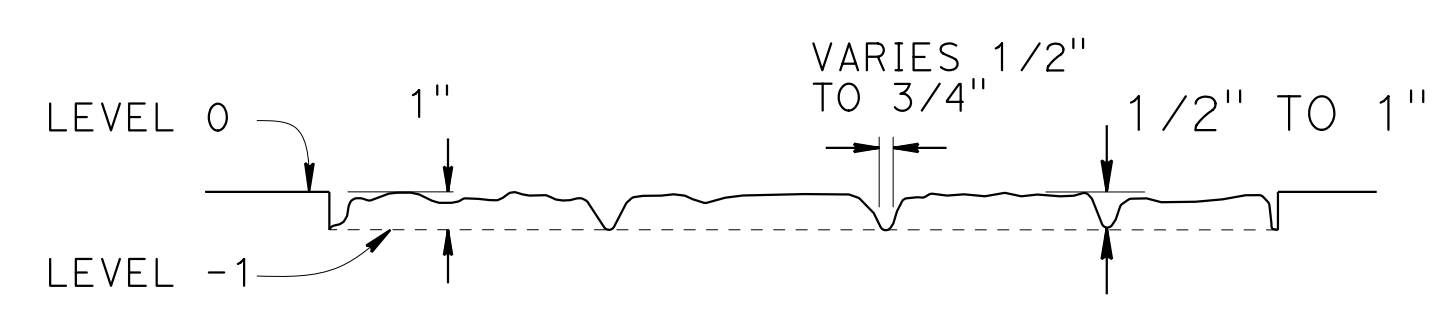
NOTES

- CONCRETE SURFACE TEXTURE (CRACKED LIMESTONE) MUST BE CONTINUOUS ALONG BARRIERS EXCEPT AT GANTRY BASE TAPERS. DO NOT ADD CONCRETE SURFACE TEXTURE (CRACKED LIMESTONE) AT GANTRY BASE TAPERS.
- CONCRETE SURFACE TEXTURE (CRACKED LIMESTONE) TO MATCH CONCRETE SURFACE TEXTURE (CRACKED LIMESTONE) ON EXIST RETAINING WALL LOCATED NB I-680 SOUTH OF ANDRADE Rd.



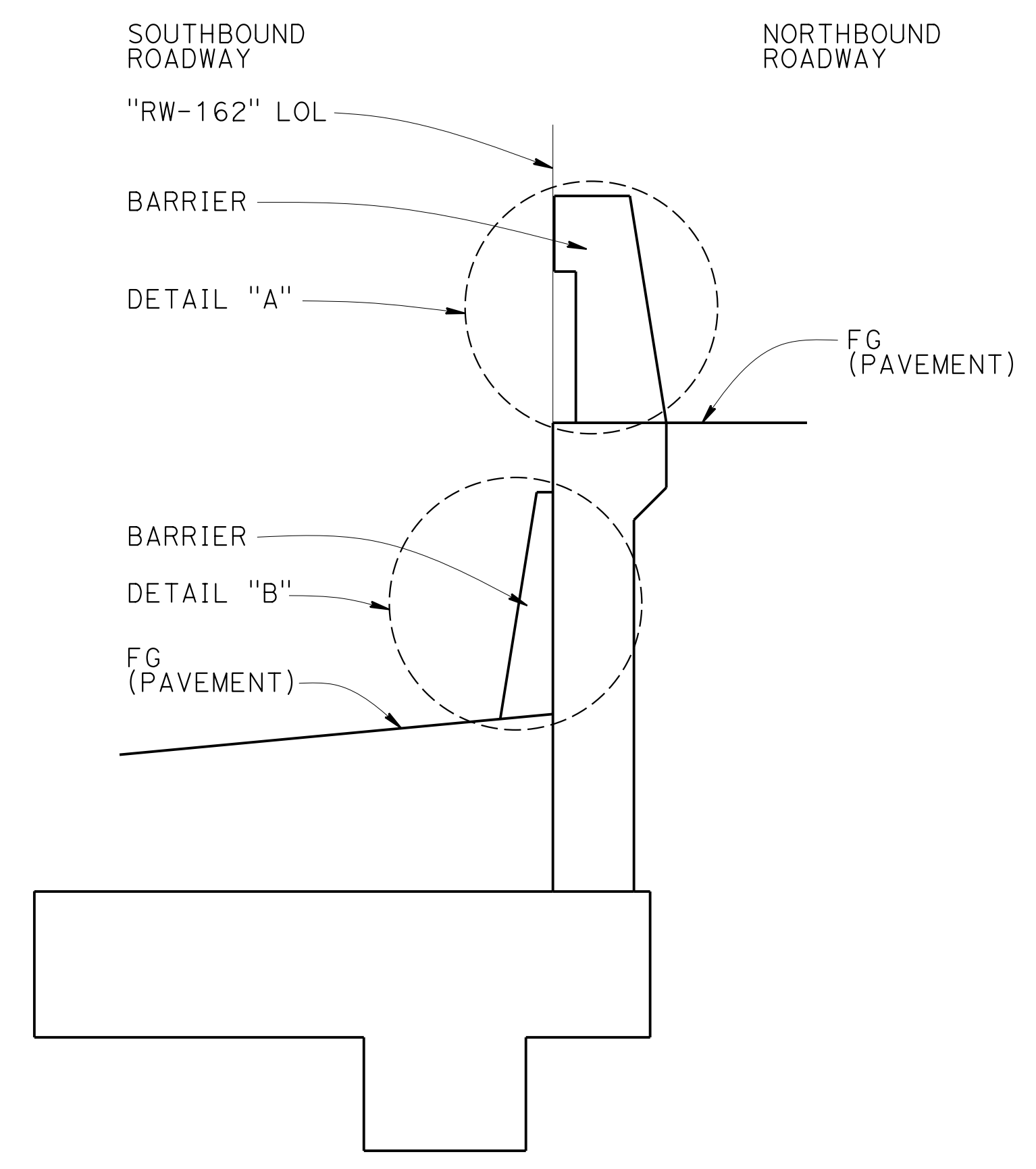
CONCRETE SURFACE TEXTURE (CRACKED LIMESTONE)

NO SCALE



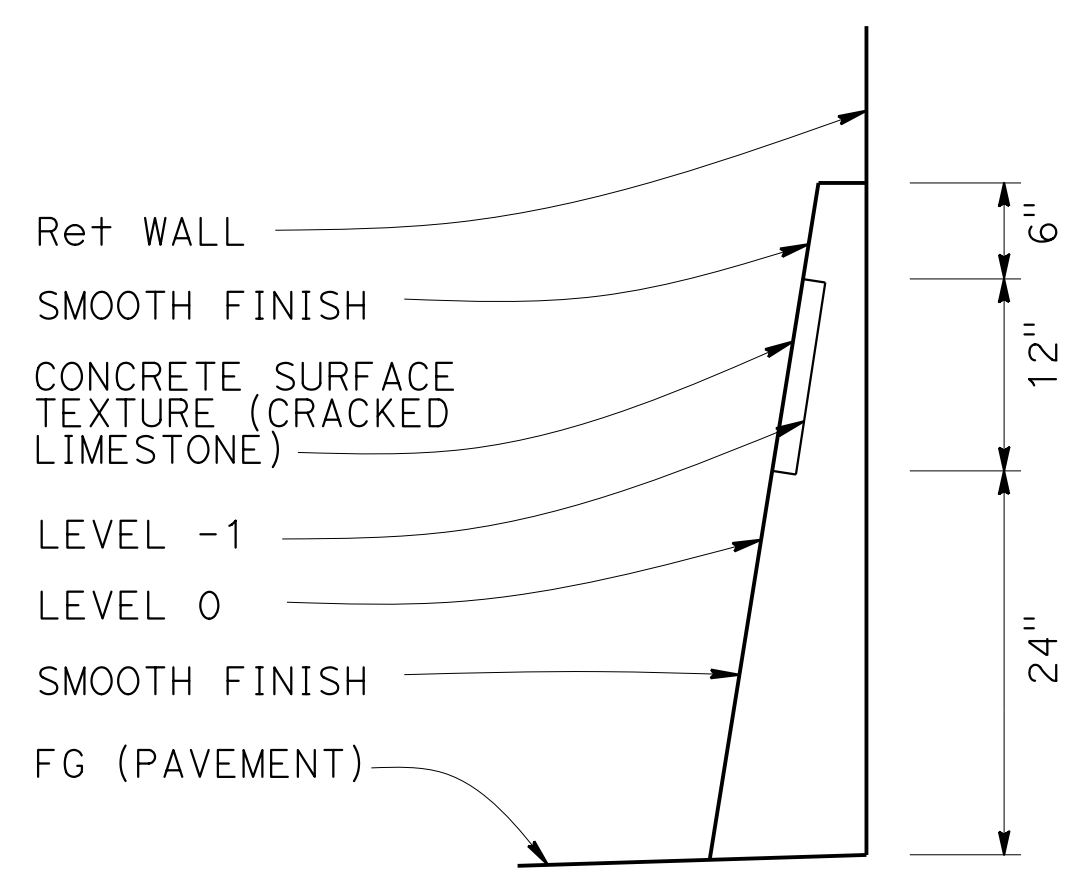
SECTION A-A

NO SCALE

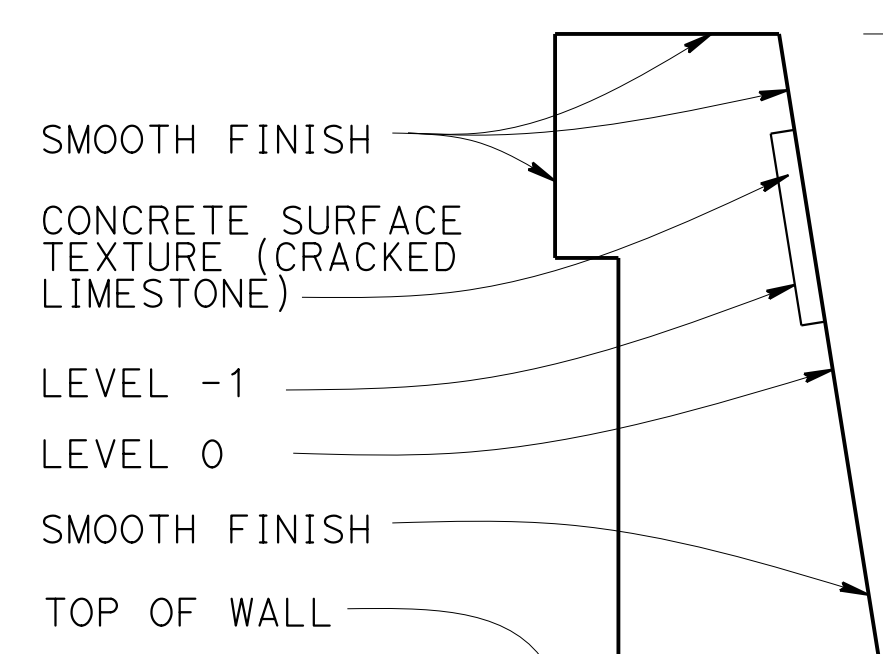


TYPICAL SECTION

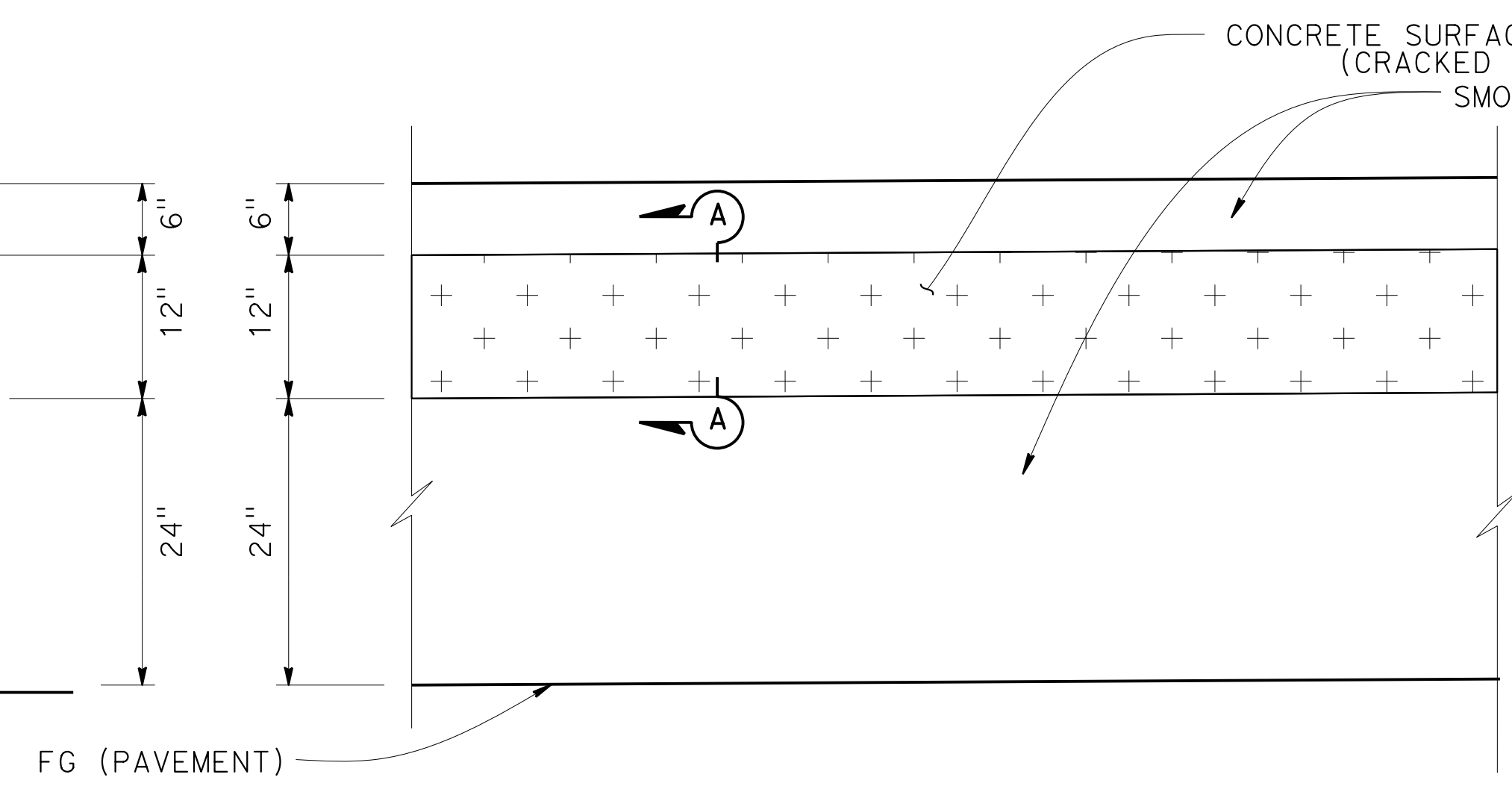
NO SCALE



DETAIL "B"



DETAIL "A"



ELEVATION DETAIL "A" AND DETAIL "B"

BARRIER ARCHITECTURAL TREATMENT

1" = 1'-0"

DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY S. KENNEY	CHECKED L. HAYGOOD
DETAILS	BY S. KENNEY	CHECKED L. HAYGOOD
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0250
POST MILE	R12.5

RETAINING WALL No. 162
ARCHITECTURAL DETAILS No. 2

DESIGN DETAIL SHEET (ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 10:59
 FILE => 33E0250-x-arcad02.dgn USERNAME => p302438

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 0733
 PROJECT NUMBER & PHASE: 04200002351

CONTRACT No.: 04-0Q30U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
09-29-21 09-29-21 11-18-21 02-28-22	11	14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9 R0.0/0.9	1616	1710

BENCH MARK

All elevations based on vertical datum NAVD88.
 All stations and offsets based on horizontal datum NAD83.
 Survey Control ID 98 El 263.49, N2044244.854 E6163956.93
 Survey Control ID 119 El 257.23, N2039888.419 E6164368.97

NOTES

- This LOTB Sheet was prepared in accordance with the Caltrans Soil and Rock Logging, Classification, and Presentation Manual (2010).
- Standard Penetration test sampler I.D. = 1.38 inch (1.4) Modified California sampler I.D. = 1.96 inch (2.0)
- REF is defined as more than 50 blows in the first 6 inches.
- Cobbles and boulders could be present based on information from published geologic maps.

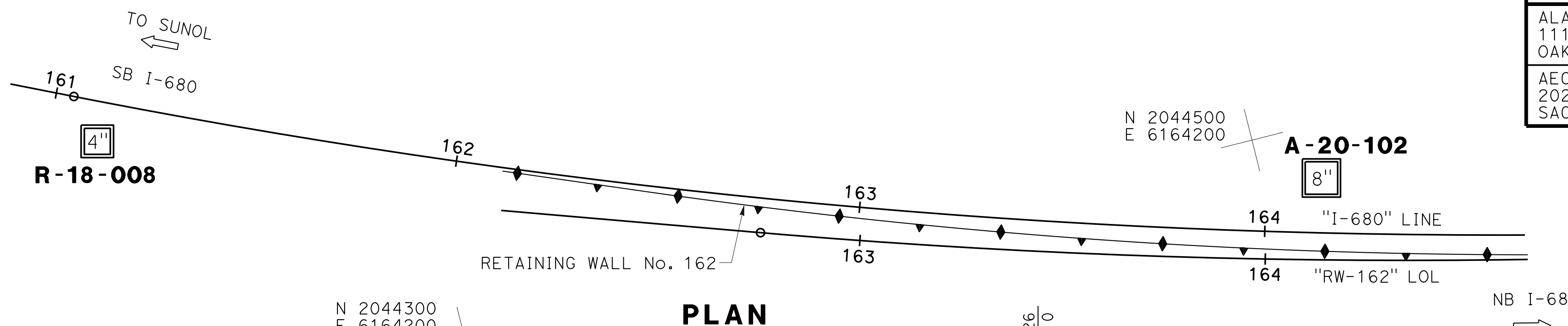
N 2044400
E 6164100

BOREHOLE LOCATION TABLE

Hole ID	Alignment Name	Station and Offset
R-18-008	"I-680" LINE	161+12 10' Rt
A-20-102	"I-680" LINE	164+14 14' Lt

09-29-21
 GEOTECHNICAL PROFESSIONAL DATE
 October 8, 2021
 PLANS APPROVAL DATE
 L. Allen Moore
 No. GE 2607
 Exp. 6-30-23
 REGISTERED PROFESSIONAL ENGINEER
 GEOTECHNICAL
 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.

ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607
 AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811



 DESIGN OVERSIGHT Norbert Gee 2/15/22 SIGN OFF DATE	DRAWN E. Garnica/B. Vuong	BY Tim VandeVoorde FIELD INVESTIGATOR	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE No. 33E0250	RETAINING WALL No. 162 LOG OF TEST BORING 1 OF 3
	CHECKED A. M. Moore	BY A. M. Moore		PROJECT ENGINEER L.A. Moore	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9 R0.0/0.9	1617	1710
			09-29-21	DATE	
			October 8, 2021	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.					
ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					

BENCH MARK

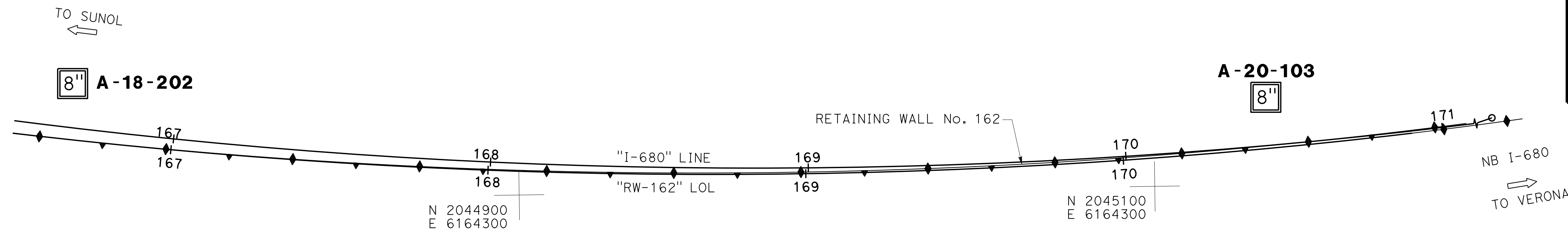
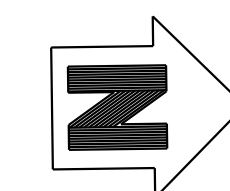
All elevations based on vertical datum NAVD88.
 All stations and offsets based on horizontal datum NAD83.
 Survey Control ID 98 El 263.49, N2044244.854 E6163956.93
 Survey Control ID 119 El 257.23, N2039888.419 E6164368.97

N 2044900
E 6164200

N 2045100
E 6164200

NOTES

1. This LOTB Sheet was prepared in accordance with the Caltrans Soil and Rock Logging, Classification, and Presentation Manual (2010).
2. Standard Penetration test sampler I.D. = 1.38 inch (1.4) Modified California sampler I.D. = 1.96 inch (2.0)
3. REF is defined as more than 50 blows in the first 6 inches.
4. Cobbles and boulders could be present based on information from published geologic maps.



BOREHOLE LOCATION TABLE

Hole ID	Alignment Name	Station and Offset
A-18-202	"I-680" LINE	166+66 14' Lt
A-20-103	"I-680" LINE	170+46 15' Lt

PLAN

1"=20'



DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DRAWN BY
 E. Garnica/B. Vuong
 CHECKED BY
 A. M. Moore

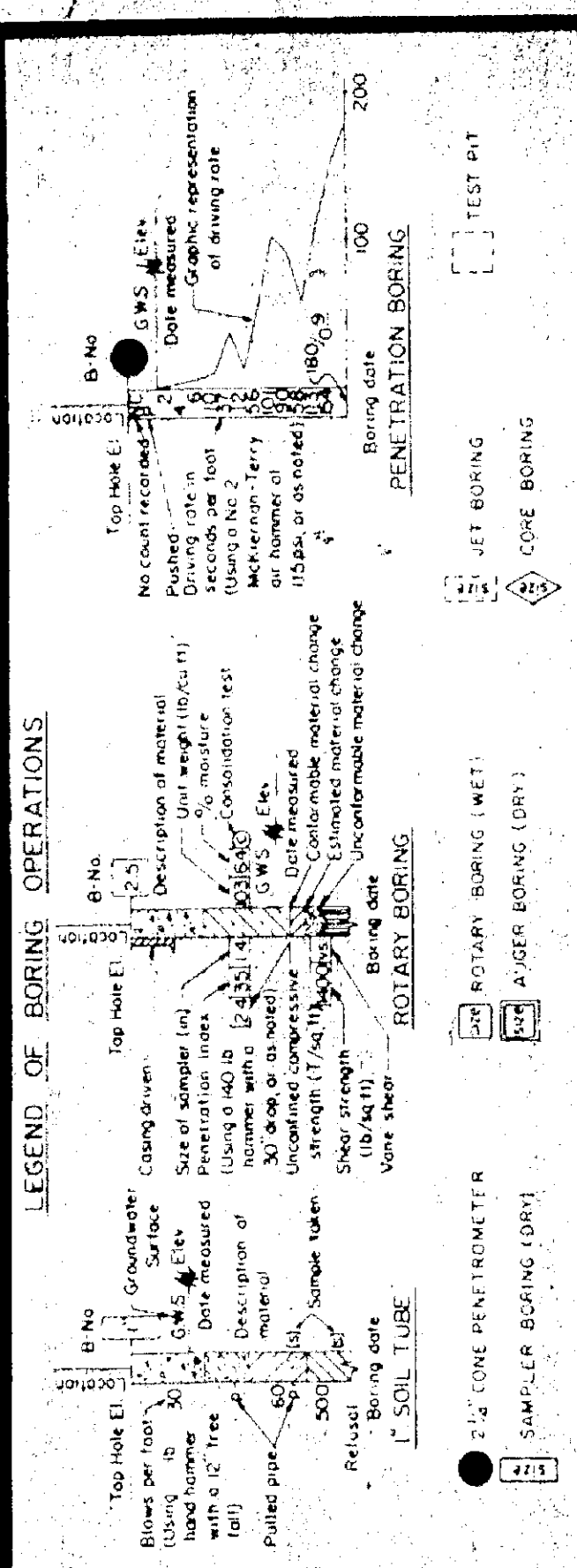
Tim VandeVoorde
 FIELD INVESTIGATOR
 DATE

PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

L.A. Moore
 PROJECT ENGINEER

BRIDGE No.
 33E0250
 POST MILE
 R12.5

RETAINING WALL No. 162
LOG OF TEST BORING 2 OF 3



LEGEND OF EARTH MATERIALS

GRAVEL	SAND	CLAY	SANDY CLAY or CLAYEY SAND	SILT	SANDY SILT or SILTY SAND
ORGANIC MATTER	CLAYEY SILT	CLAYEY SAND	SANDY CLAY	SANDY SILT	SILT
ROCK	ROCK	ROCK	ROCK	ROCK	ROCK

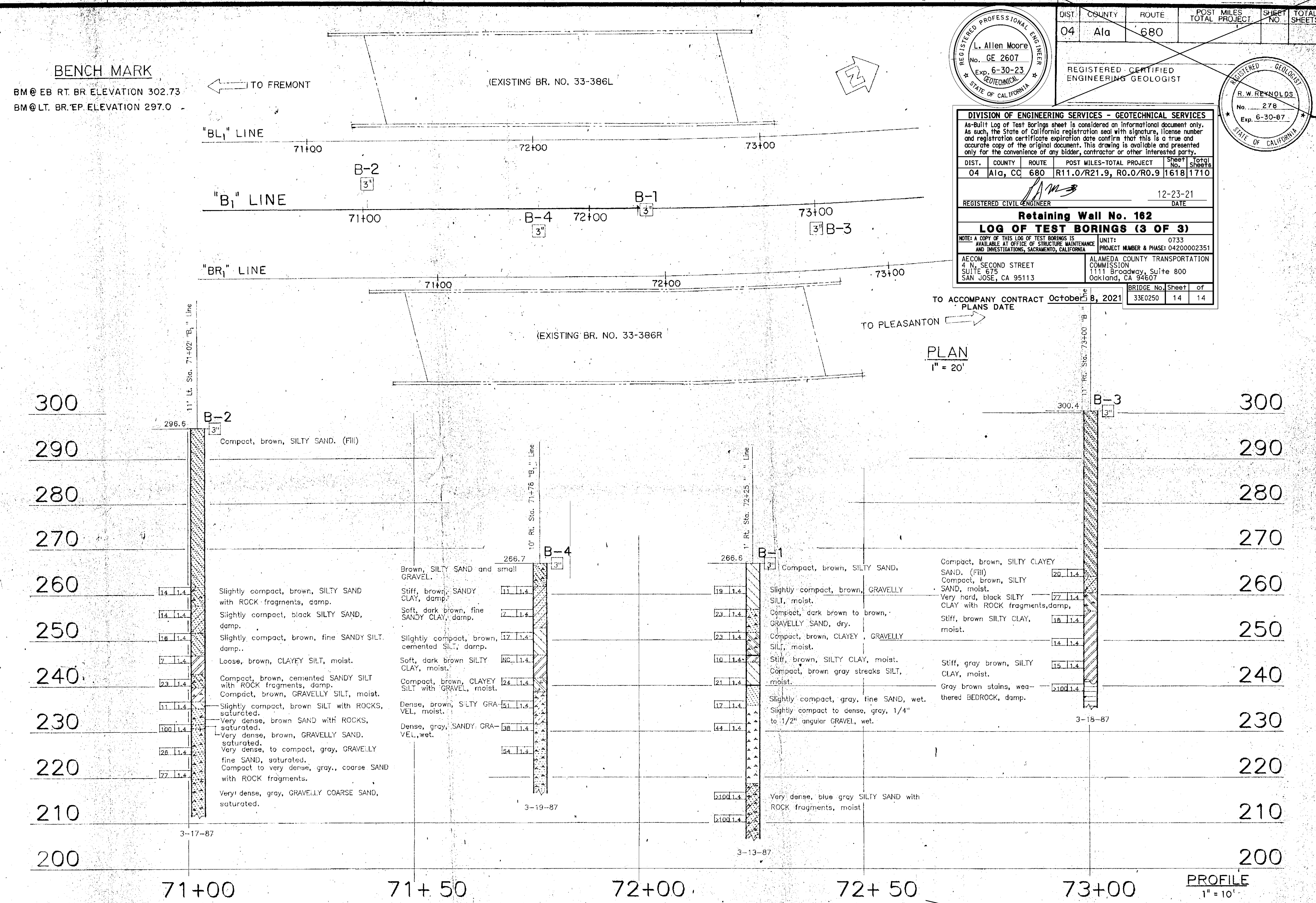
CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

Penetration (Blows/ft)	Consistency
0-4	Very loose
5-9	Loose
10-19	Slightly compact
20-29	Compact
30-59	Dense
> 70	Very dense

UNIFIED SOIL CLASSIFICATION SYSTEM

Symbol	Soil Description
CL	Clay
ML	Low plasticity clay
OL	Organic low plasticity clay
CH	High plasticity clay
MH	High plasticity clay
CL-ML	Clayey low plasticity silt
CL-ML(O)	Clayey low plasticity silt, organic
ML-CL	Low plasticity silty clay
ML-CL(O)	Low plasticity silty clay, organic
OL-CH	Organic low plasticity silty clay
OL-CH(O)	Organic low plasticity silty clay, high plasticity
CH-OL	High plasticity silty clay
CH-OL(O)	High plasticity silty clay, organic
ML-OL	Low plasticity silty clay
ML-OL(O)	Low plasticity silty clay, organic
OL-ML	Organic low plasticity silty clay
OL-ML(O)	Organic low plasticity silty clay, high plasticity
ML-OL(O)	Low plasticity silty clay, organic
OL-ML(O)	Organic low plasticity silty clay, high plasticity



PROFILE 1" = 10'

Station	Boring	Soil Description	Depth (ft)
71+00	B-2	Compact, brown, SILTY SAND. (Fill)	0 - 296.6
		Slightly compact, brown, SILTY SAND with ROCK fragments, damp.	14 - 14.4
		Slightly compact, black SILTY SAND, damp.	14 - 14.4
		Slightly compact, brown, fine SANDY SILT, damp.	18 - 1.4
		Loose, brown, CLAYEY SILT, moist.	7 - 1.4
		Compact, brown, cemented SANDY SILT with ROCK fragments, damp.	23 - 1.4
		Compact, brown, GRAVELLY SILT, moist.	11 - 1.4
		Slightly compact, brown SILT with ROCKS, saturated.	100 - 1.4
		Very dense, brown SAND with ROCKS, saturated.	26 - 1.4
		Very dense, brown, GRAVELLY SAND, saturated.	27 - 1.4
71+50	B-4	Brown, SILTY SAND and small GRAVEL.	266.7
		Stiff, brown, SANDY CLAY, damp.	11 - 1.4
		Soft, dark brown, fine SANDY CLAY, damp.	7 - 1.4
		Slightly compact, brown, cemented SILT, damp.	17 - 1.4
		Soft, dark brown SILTY CLAY, moist.	10 - 1.4
		Compact, brown, CLAYEY SILT with GRAVEL, moist.	24 - 1.4
		Dense, brown, SILTY GRAVEL, moist.	51 - 1.4
		Dense, gray, SANDY GRAVEL, wet.	38 - 1.4
			54 - 1.4
			100 - 1.4
72+00	B-1	Compact, brown, SILTY SAND.	266.6
		Slightly compact, brown, GRAVELLY SILT, moist.	19 - 1.4
		Compact, dark brown to brown, GRAVELLY SAND, dry.	23 - 1.4
		Compact, brown, CLAYEY GRAVELLY SILT, moist.	23 - 1.4
		Stiff, brown, SILTY CLAY, moist.	10 - 1.4
		Compact, brown gray streaks SILT, moist.	21 - 1.4
		Slightly compact, gray, fine SAND, wet.	17 - 1.4
		Slightly compact to dense, gray, 1/4" to 1/2" angular GRAVEL, wet.	44 - 1.4
			100 - 1.4
			100 - 1.4
72+50	B-3	Compact, brown, SILTY CLAYEY SAND. (Fill)	300.4
		Compact, brown, SILTY SAND, moist.	20 - 1.4
		Very hard, black SILTY CLAY with ROCK fragments, damp.	17 - 1.4
		Stiff, brown SILTY CLAY, moist.	18 - 1.4
		Stiff, gray brown, SILTY CLAY, moist.	15 - 1.4
		Gray brown stains, weathered BEDROCK, damp.	210 - 1.4
			14 - 1.4
			100 - 1.4
			100 - 1.4
			100 - 1.4

REGISTERED PROFESSIONAL ENGINEER
L. Allen Moore
No. GE 2607
Exp. 6-30-23
STATE OF CALIFORNIA

REGISTERED-CERTIFIED ENGINEERING GEOLOGIST
R. W. REYNOLDS
No. 278
Exp. 6-30-87
STATE OF CALIFORNIA

DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES
As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

DIST.	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	Sheet No.	Total Sheets
04	Ala	680	R11.0/R21.9, R0.0/R0.9	1618	1710

REGISTERED CIVIL ENGINEER: [Signature] DATE: 12-23-21

Retaining Wall No. 162
LOG OF TEST BORINGS (3 OF 3)

NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA. UNIT: 0733 PROJECT NUMBER & PHASE: 04200002351

AECOM: 4 N. SECOND STREET, SUITE 675, SAN JOSE, CA 95113
ALAMEDA COUNTY TRANSPORTATION COMMISSION: 111 Broadway, Suite 800, Oakland, CA 94607

BRIDGE No. Sheet of
33E0250 14 14

TO ACCOMPANY CONTRACT October 8, 2021
PLANS DATE

GEOTECHNICAL BRANCH - TRANSPORTATION LABORATORY

State of CALIFORNIA DEPARTMENT OF TRANSPORTATION

STRUCTURES - DESIGN

BRIDGE NO. 33-386R/L
POST MILE 12.44

PROJECT ENGINEER: [Signature] REGISTERED CIVIL ENGINEER NO. [Number]

LOG OF TEST BORINGS 1 OF 2

REVISION DATES (PRELIMINARY STAGE ONLY)

CU 04226
EA 112731

Disregard prints bearing earlier revision dates

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

0 1 2 3

NOTE:

1. For "INDEX TO PLANS" and "STANDARD PLANS", see "INDEX TO PLANS" sheet.

LEGEND:

← Direction of Traffic

QUANTITIES

STRUCTURE EXCAVATION (SOIL NAIL WALL)	2,271	CY
STRUCTURE BACKFILL (SLURRY CEMENT)	82	CY
STRUCTURE BACKFILL (SOIL NAIL WALL)	349	CY
SOIL NAIL	28,874	LF
STRUCTURAL CONCRETE, RETAINING WALL	1,093	CY
STRUCTURAL CONCRETE, BARRIER SLAB	1,919	CY
CONCRETE SURFACE TEXTURE (CRACKED LIMESTONE)	31,005	SQFT
JOINT SEAL (TYPE A MODIFIED)	296	LF
BAR REINFORCING STEEL (RETAINING WALL)	123,692	LB
STRUCTURAL SHOTCRETE	388	CY
CONCRETE BARRIER (TYPE 842 MODIFIED)	3,768	LF

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1619	1710

Orin A. Brown 9-29-21
 REGISTERED CIVIL ENGINEER DATE

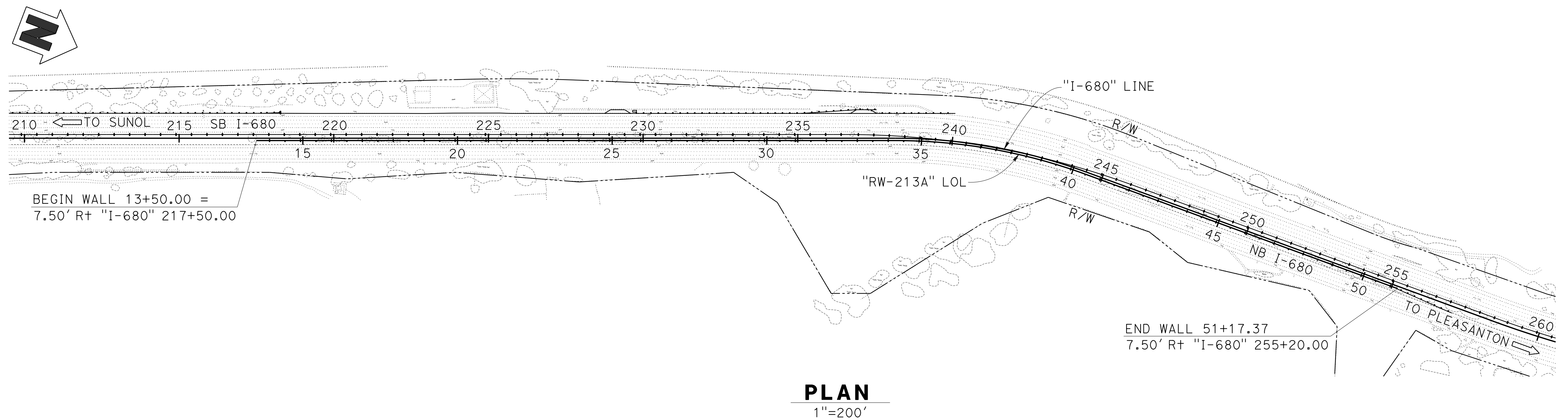
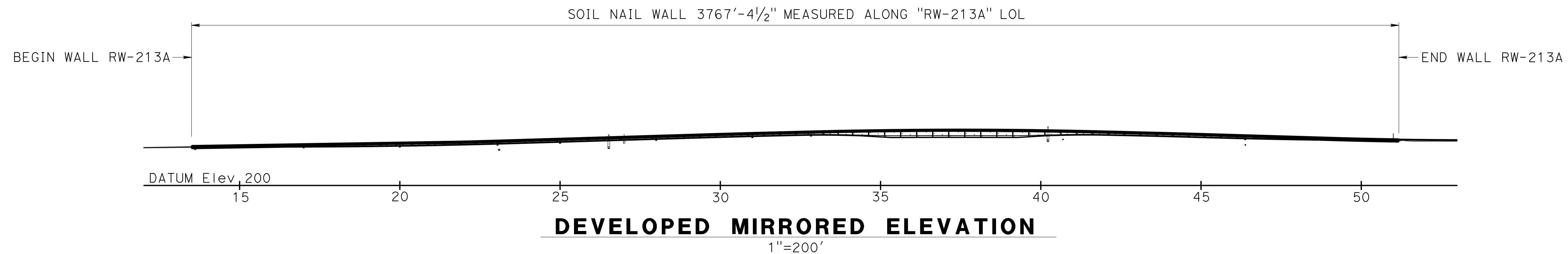
October 8, 2021
 PLANS APPROVAL DATE

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Orin A. Brown
 No. C48859
 Exp. 9/30/22
 CIVIL
 STATE OF CALIFORNIA

ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607

AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811



PLAN
 1"=200'

 DESIGN OVERSIGHT Norbert Gee 2/15/22 SIGN OFF DATE	DESIGN	BY W. Bai	CHECKED A. AKI	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE No.	RETAINING WALL No. 213A GENERAL PLAN No. 1				
	DETAILS	BY R. Lim	CHECKED A. AKI	LAYOUT	BY W. Bai		PROJECT ENGINEER		33E0251			
	QUANTITIES	BY W. Bai	CHECKED A. AKI	SPECIFICATIONS	BY D. Harnage		R13.5					
DESIGN GENERAL PLAN SHEET (ENGLISH) (REVISION 4/19/2018)	DATE PLOTTED => 9-MAR-2022		TIME PLOTTED => 10:59	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT: 0733	PROJECT NUMBER & PHASE: 04200002351	CONTRACT No.: 04-0030U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 1	OF 54

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1620	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER
 No. C48859
 Exp. 9/30/22
 CIVIL
 STATE OF CALIFORNIA

9-29-21
 DATE
 October 8, 2021
 PLANS APPROVAL DATE

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ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607

AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

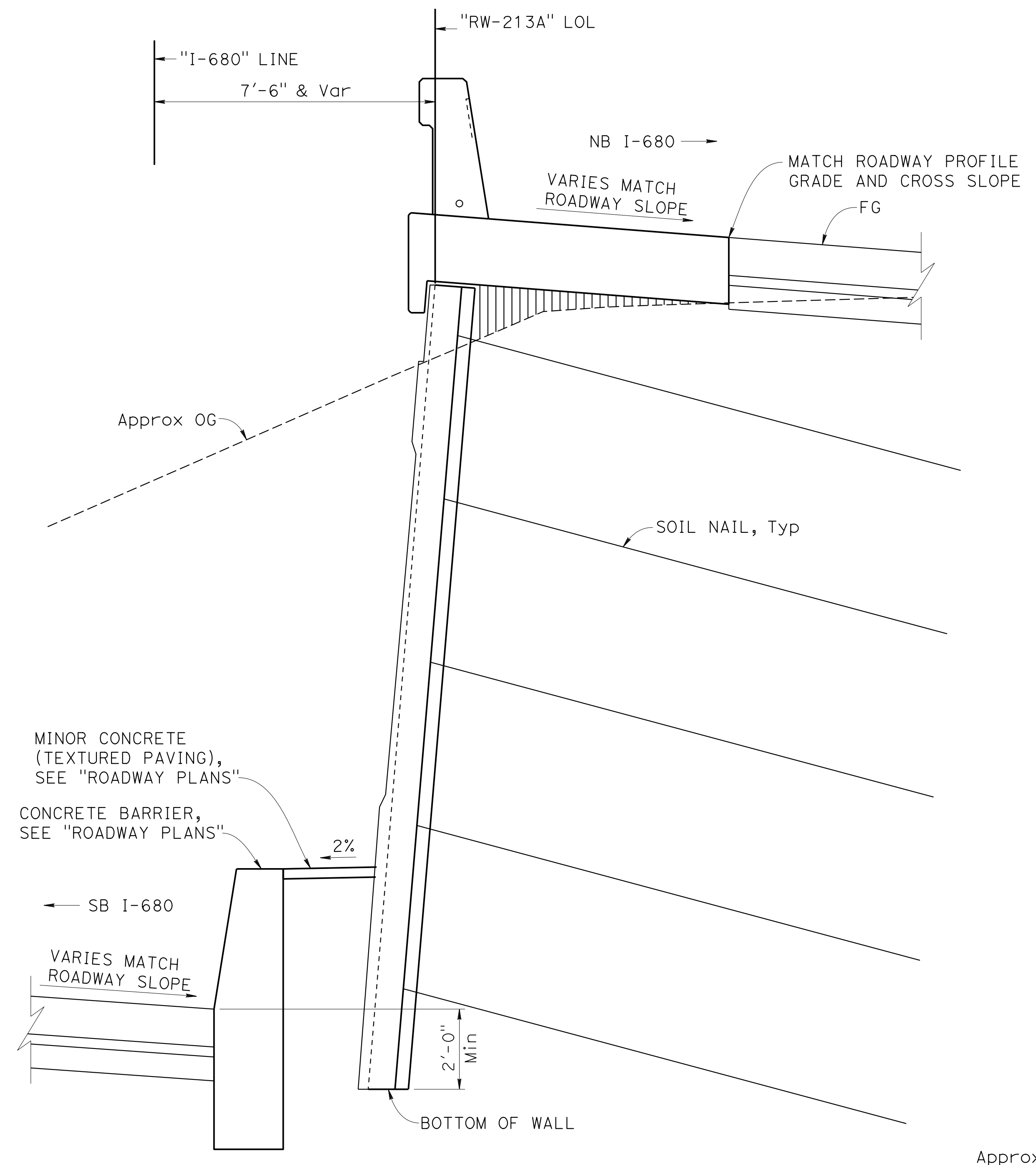
NOTE:

- Form and place structure backfill (Slurry Cement) prior to nail installation, bench as needed.

(A) Concrete Barrier Type 842 (Mod)

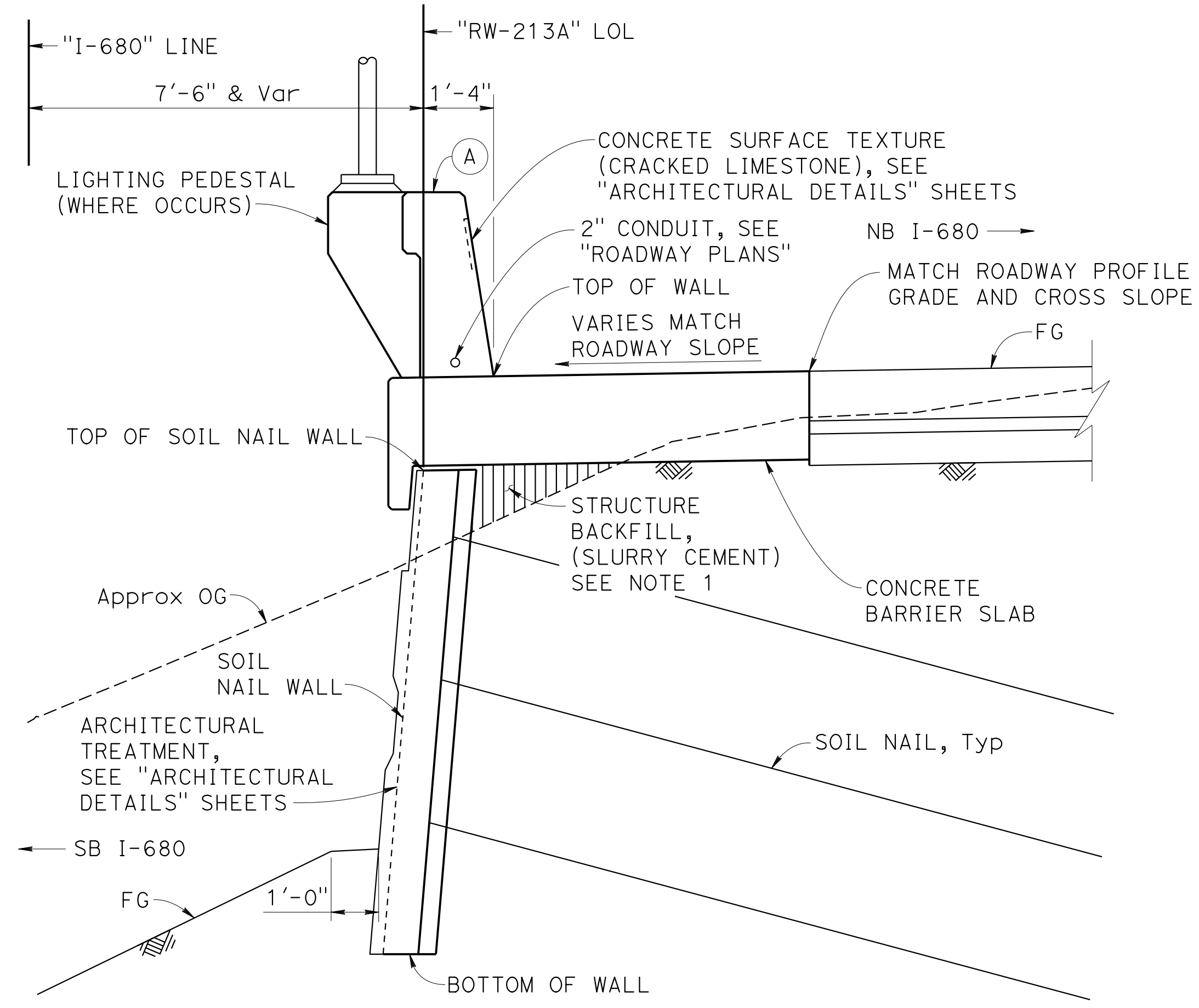
LEGEND:

- Structure Excavation (Soil Nail Wall)
- Structure Backfill (Soil Nail Wall)
- Roadway Excavation
- Structure Backfill (Slurry Cement)

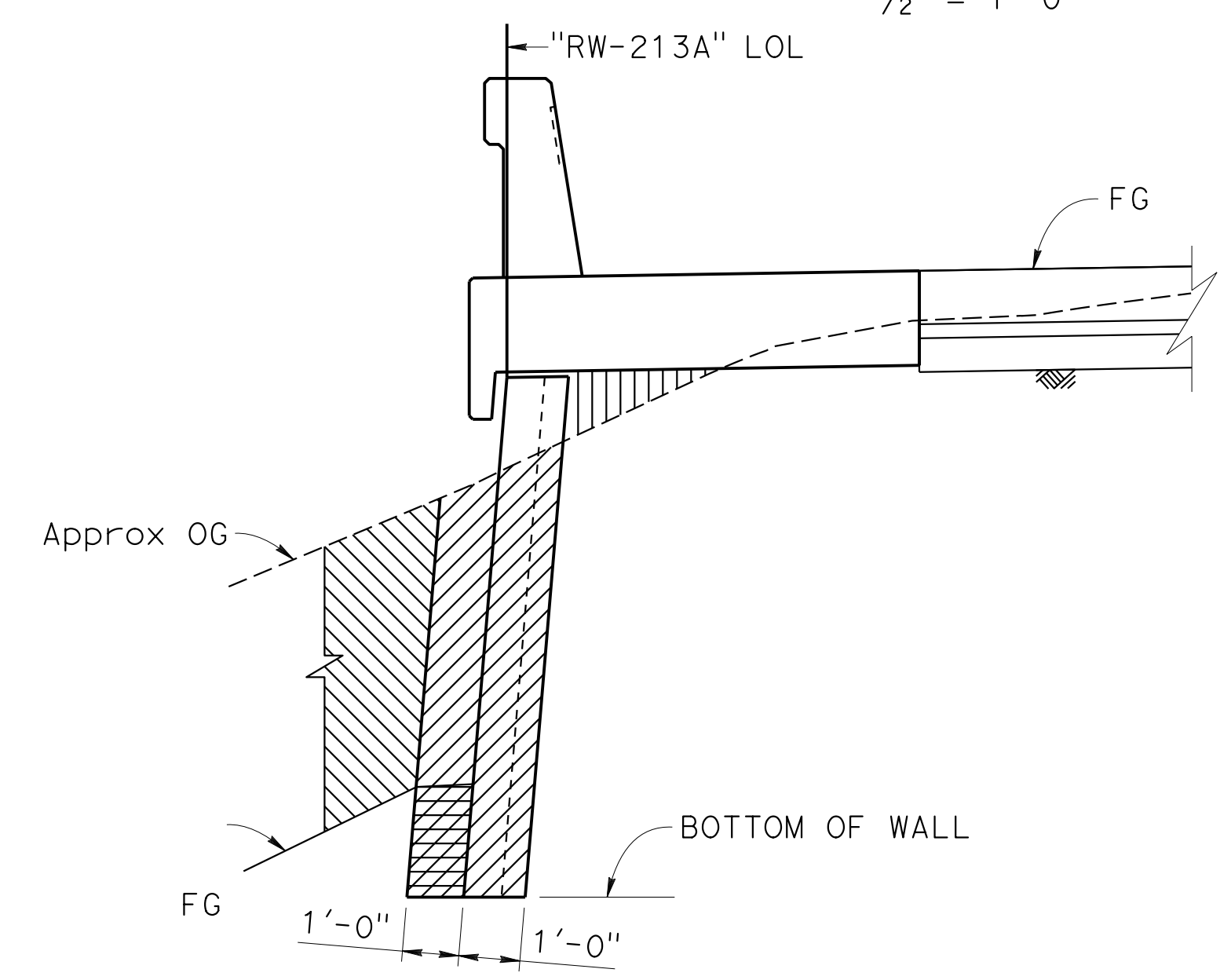


TYPICAL SECTION A
 ("RW-213A" 35+32.86 TO 39+27.08)
 1/2" = 1'-0"

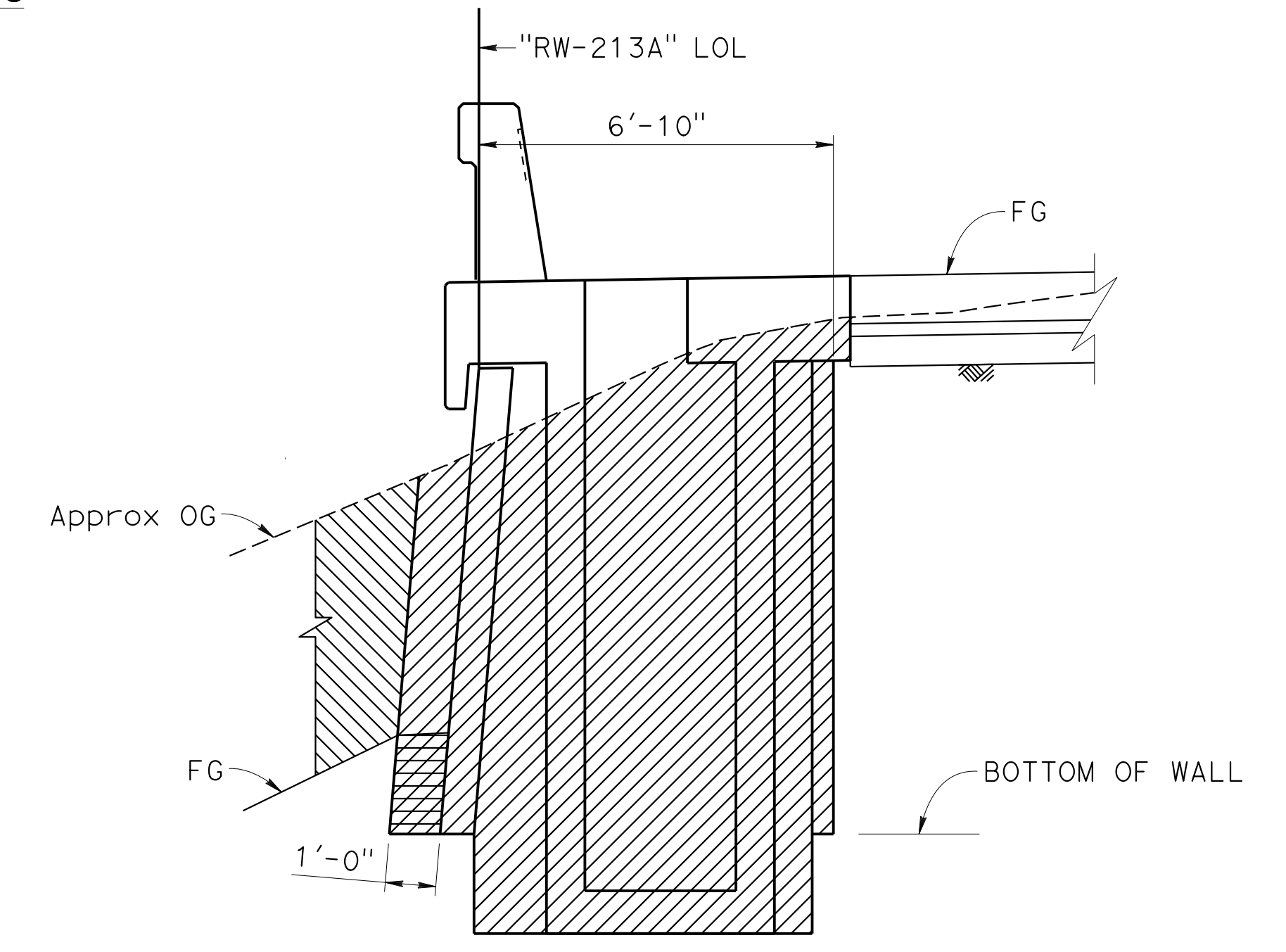
NOTE: For details not shown, see SECTION B.



TYPICAL SECTION B
 ("RW-213A" 13+50.00 TO 35+32.86 AND 39+27.08 TO 51+17.37)
 1/2" = 1'-0"



TYPICAL SOIL NAIL WALL
 LIMITS OF EXCAVATION AND BACKFILL
 NO SCALE



SOIL NAIL WALL WITH DRAINAGE INLET
 LIMITS OF EXCAVATION AND BACKFILL
 NO SCALE

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. Akl
DETAILS	BY R. Lim	CHECKED A. Akl
QUANTITIES	BY W. Bai	CHECKED A. Akl

LOAD & RESISTANCE FACTOR DESIGN	BY W. Bai	CHECKED A. Akl
LAYOUT	BY W. Bai	CHECKED A. Akl
SPECIFICATIONS	BY D. Harnagel	CHECKED O. Brown

PREPARED FOR THE
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

RETAINING WALL No. 213A
GENERAL PLAN No. 2

INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN No. 1
2	GENERAL PLAN No. 2
3	INDEX TO PLANS
4	STRUCTURE PLAN No. 1
5	STRUCTURE PLAN No. 2
6	STRUCTURE PLAN No. 3
7	STRUCTURE PLAN No. 4
8	STRUCTURE PLAN No. 5
9	STRUCTURE PLAN No. 6
10	STRUCTURE PLAN No. 7
11	STRUCTURE PLAN No. 8
12	STRUCTURE PLAN No. 9
13	STRUCTURE PLAN No. 10
14	SOIL NAIL WALL LAYOUT No. 1
15	SOIL NAIL WALL LAYOUT No. 2
16	SOIL NAIL WALL LAYOUT No. 3
17	SOIL NAIL WALL LAYOUT No. 4
18	SOIL NAIL WALL LAYOUT No. 5
19	SOIL NAIL WALL LAYOUT No. 6
20	SOIL NAIL WALL LAYOUT No. 7
21	SOIL NAIL WALL LAYOUT No. 8
22	SOIL NAIL WALL LAYOUT No. 9
23	SOIL NAIL WALL LAYOUT No. 10
24	SOIL NAIL WALL LAYOUT No. 11
25	SOIL NAIL WALL LAYOUT No. 12
26	SOIL NAIL WALL LAYOUT No. 13
27	SOIL NAIL WALL LAYOUT No. 14
28	SOIL NAIL WALL LAYOUT No. 15
29	SOIL NAIL WALL LAYOUT No. 16
30	SOIL NAIL WALL LAYOUT No. 17
31	SOIL NAIL WALL LAYOUT No. 18
32	SOIL NAIL WALL LAYOUT No. 19
33	RETAINING WALL DETAILS No. 1
34	RETAINING WALL DETAILS No. 2
35	RETAINING WALL DETAILS No. 3
36	RETAINING WALL DETAILS No. 4
37	RETAINING WALL DETAILS No. 5
38	RETAINING WALL DETAILS No. 6
39	WALL DRAIN DETAILS
40	ARCHITECTURAL DETAILS No. 1
41	ARCHITECTURAL DETAILS No. 2
42	ARCHITECTURAL DETAILS No. 3
43	ARCHITECTURAL DETAILS No. 4
44	ARCHITECTURAL DETAILS No. 5
45	LOG OF TEST BORINGS 1 OF 10
46	LOG OF TEST BORINGS 2 OF 10
47	LOG OF TEST BORINGS 3 OF 10
48	LOG OF TEST BORINGS 4 OF 10
49	LOG OF TEST BORINGS 5 OF 10
50	LOG OF TEST BORINGS 6 OF 10
51	LOG OF TEST BORINGS 7 OF 10
52	LOG OF TEST BORINGS 8 OF 10
53	LOG OF TEST BORINGS 9 OF 10
54	LOG OF TEST BORINGS 10 OF 10

GENERAL NOTES

DESIGN:
 "Soil Nail Walls Reference Manual", Publication No. FHWA-NHI-14-007, FHWA GEC 007, February 2015, based on Allowable Strength Design (ASD) methodology.
 AASHTO LRFD Bridge Design Specification, 8th edition, with California Amendments.

LIVE LOAD:
 LS: Varied surcharge on level ground surface.
 Based on: AASHTO LRFD Bridge Design Specification, 8th edition Table 3.11.6.4-2.

SEISMIC LOADING:

Kh = 0.29, Kv = 0.0

REINFORCED CONCRETE:

Note that CIP concrete facing and CIP DI Type G2 are included in items "STRUCTURE CONCRETE, RETAINING WALL" and "BAR REINFORCING STEEL (RETAINING WALL)".
 f'c = 3600 psi
 fy = 60,000 psi

STRUCTURAL SHOTCRETE:

f'c = 3600 psi
 fy = 60,000 psi (bar reinforcing)
 fy = 65,000 psi (welded wire mesh reinforcing)
 n = 8

STUD CONNECTORS:

AWS D1.1 Clause 7
 ASTM A108, fu = 60 ksi

STEEL PLATES:

ASTM A36, fy = 36 ksi

SOIL NAILS:

ASTM Designation: A706, Grade 60

Zone	Station	Soil Type	Qb (k/ft)
1	13+50 to 18+00	Sand & Gravel matrix	4.5
	24+00 to 49+00		
	50+65 to 51+18		
2	18+00 to 21+00	Alluvium	3.4
3	21+00 to 24+00	Fill	3.8
	49+00 to 50+65		

FACING RESISTANCE (PER NAIL):

Temporary = 26.3 kips
 Permanent = 21.6 kips
 Seismic = 29.5 kips

SOIL PARAMETER - SOIL NAIL DESIGN:

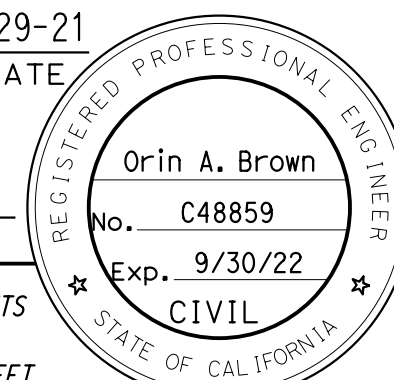
Unit	Unit Weight γ (pcf)	Friction Angle ϕ (degrees)	Cohesion c' (psf)
Alluvium	125	32	50
Sand & Gravel matrix	130	42	100
Fill	125	35	0

WELDED WIRE REINFORCEMENT:

ASTM A185

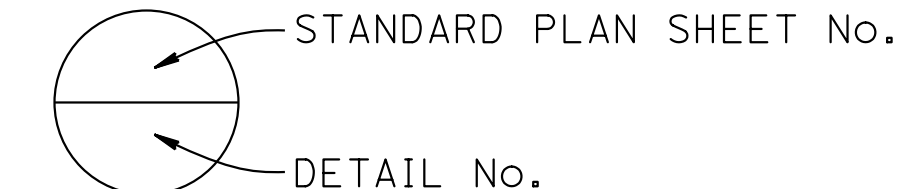
BARRIER SLAB:

See DESIGN DATA on "RETAINING WALL DETAILS No. 3" sheet.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1621	1710
			9-29-21		
			DATE		
			October 8, 2021		
			PLANS APPROVAL DATE		
					
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AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					

STANDARD PLANS DATED 2018

- 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)
- D72B CIP DRAINAGE INLETS TYPES G1, G2, G3, G4, G5 AND G6
- B0-13 BRIDGE DETAILS
- B6-21 JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
- RSP B11-81 CONCRETE BARRIER TYPE 842 DETAILS No. 1
- RSP B11-82 CONCRETE BARRIER TYPE 842 DETAILS No. 2
- D77A GRATE DETAILS No. 1
- ES-9B ELECTRICAL SYSTEMS (CONDUIT RISER AND EXPANSION FITTING, STRUCTURE INSTALLATIONS)



Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
 Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

RETAINING WALL No. 213A
INDEX TO PLANS

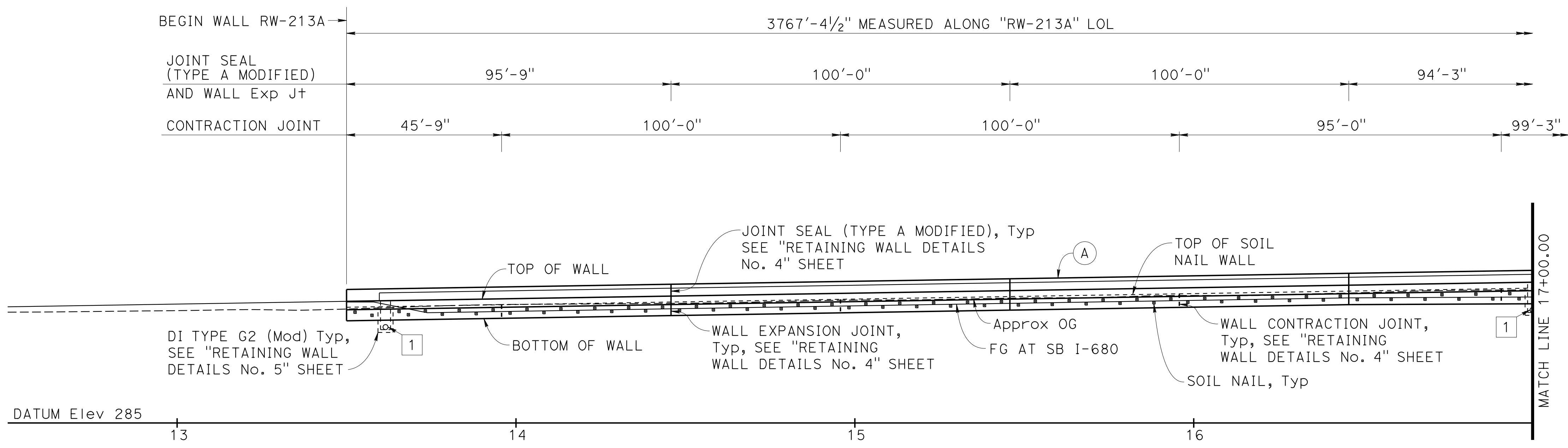
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1622	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE
 No. C48859
 Exp. 9/30/22
 CIVIL
 STATE OF CALIFORNIA

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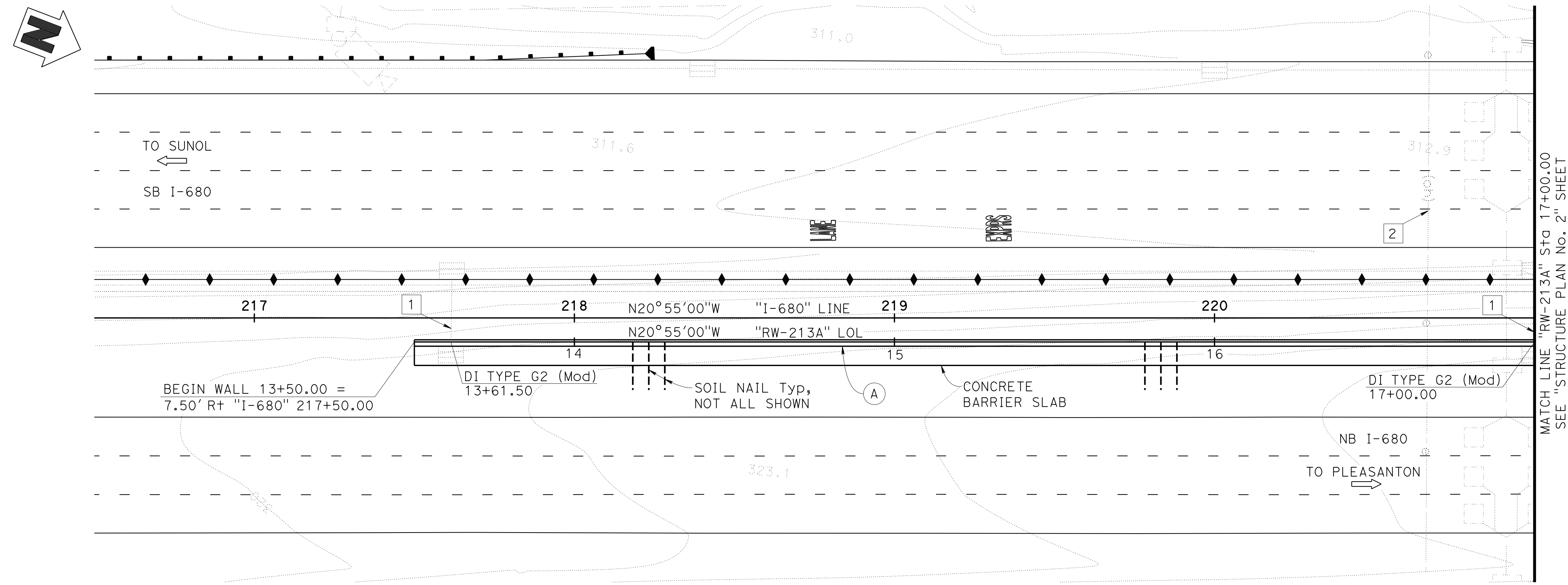


DEVELOPED MIRRORED ELEVATION
 1"=20'

- NOTES:**
- For utilities information, see "ROADWAY PLANS".
 - For finish grading, see "ROADWAY PLANS".
- (A) Concrete Barrier Type 842 (Mod)

- LEGEND:**
- ← Direction of Traffic
 - ▣ Soil Nail

- UTILITIES**
- 1 18" APC DRAINAGE
 - 2 EXISTING 12KV OH ELECTRICAL (PG&E) (PROTECT IN PLACE)



PLAN
 1"=20'

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

RETAINING WALL No. 213A
STRUCTURE PLAN No. 1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1623	1710

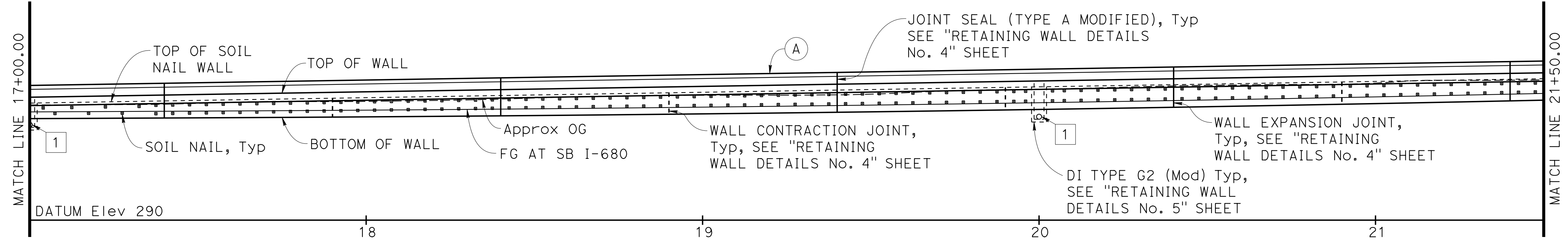
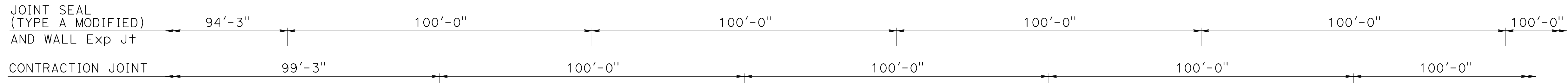
Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE
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 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

3767'-4 1/2" MEASURED ALONG "RW-213A" LOL

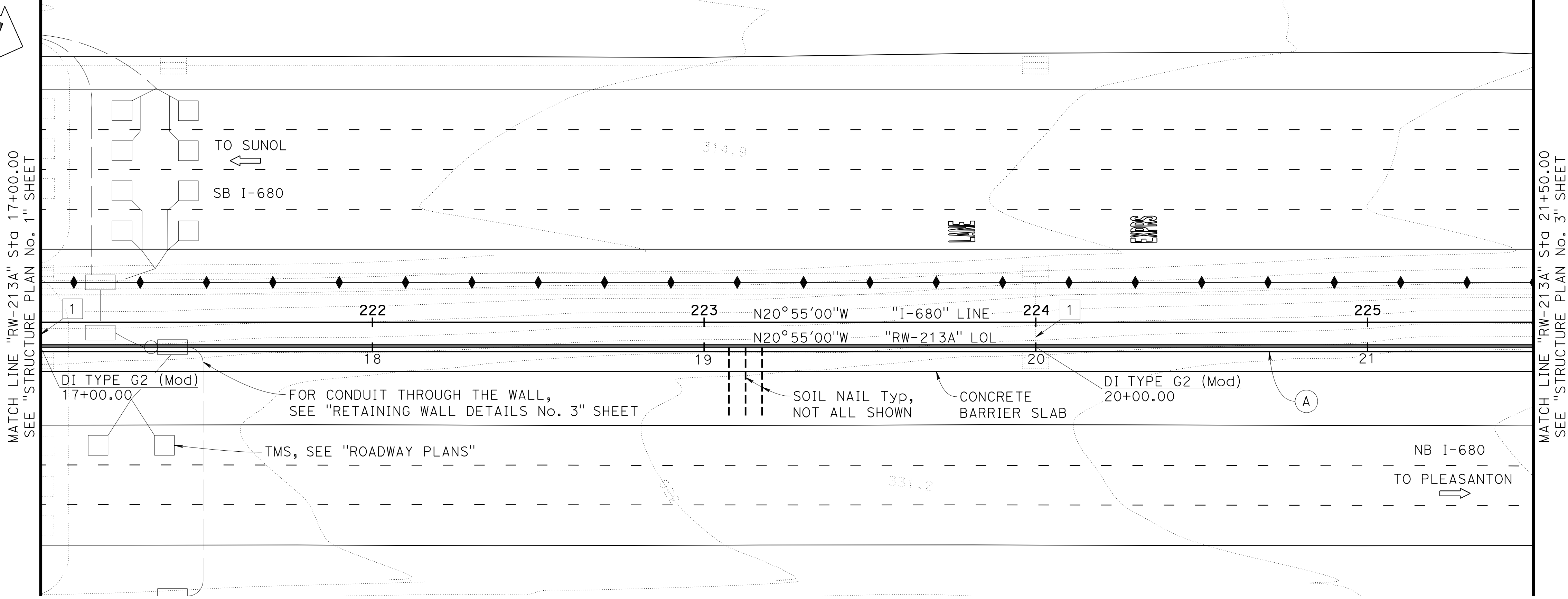
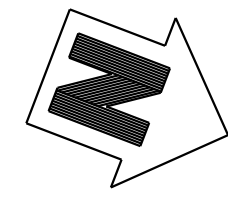


DEVELOPED MIRRORED ELEVATION
 1"=20'

- NOTES:**
- For utilities information, see "ROADWAY PLANS".
 - For finish grading, see "ROADWAY PLANS".
- (A) Concrete Barrier Type 842 (Mod)

- LEGEND:**
- ← Direction of Traffic
 - ▣ Soil Nail

- UTILITIES**
- 1 18" APC DRAINAGE



PLAN
 1"=20'

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

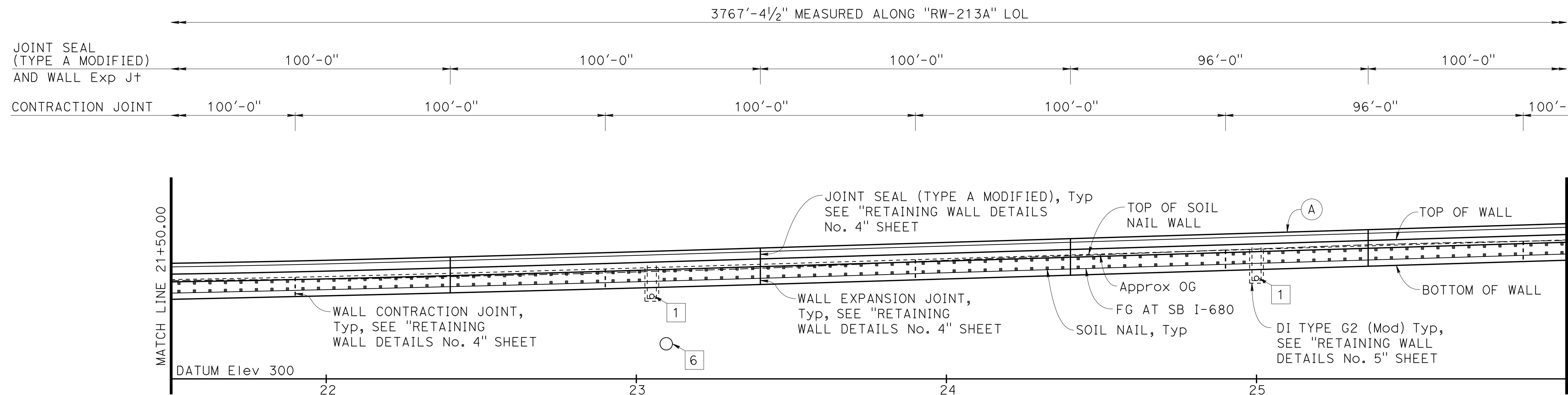
DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

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 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

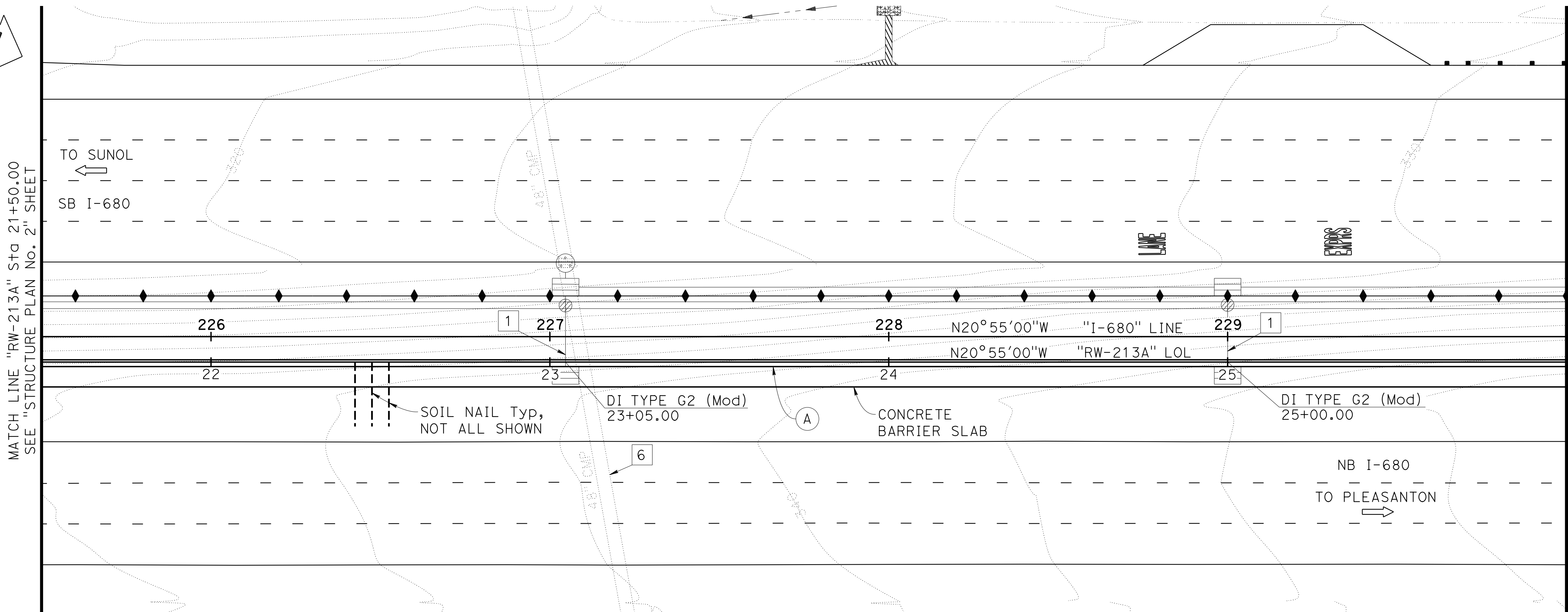
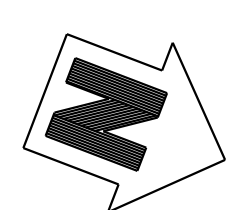
Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

**RETAINING WALL No. 213A
 STRUCTURE PLAN No. 2**



DEVELOPED MIRRORED ELEVATION
1"=20'



PLAN
1"=20'

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1624	1710

Orin A. Brown
REGISTERED CIVIL ENGINEER DATE 9-29-21

October 8, 2021
PLANS APPROVAL DATE

Orin A. Brown
No. C48859
Exp. 9/30/22
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AECOM
2020 L STREET, SUITE 400
SACRAMENTO, CA 95811

- NOTES:**
- For utilities information, see "ROADWAY PLANS".
 - For finish grading, see "ROADWAY PLANS".
- (A) Concrete Barrier Type 842 (Mod)

- LEGEND:**
- ← Direction of Traffic
 - Soil Nail

- UTILITIES**
- 1 18" APC DRAINAGE
 - 6 EXISTING 48" CMP DRAINAGE (PROTECT IN PLACE)

Norbert Gee
DESIGN OVERSIGHT Norbert Gee
2/15/22
SIGN OFF DATE

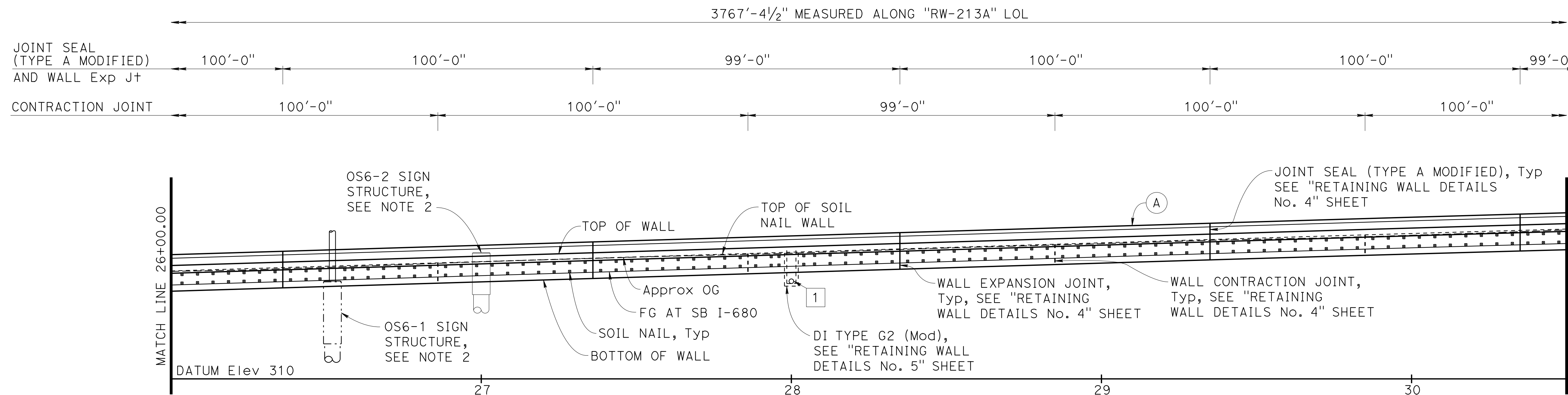
DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

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STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**

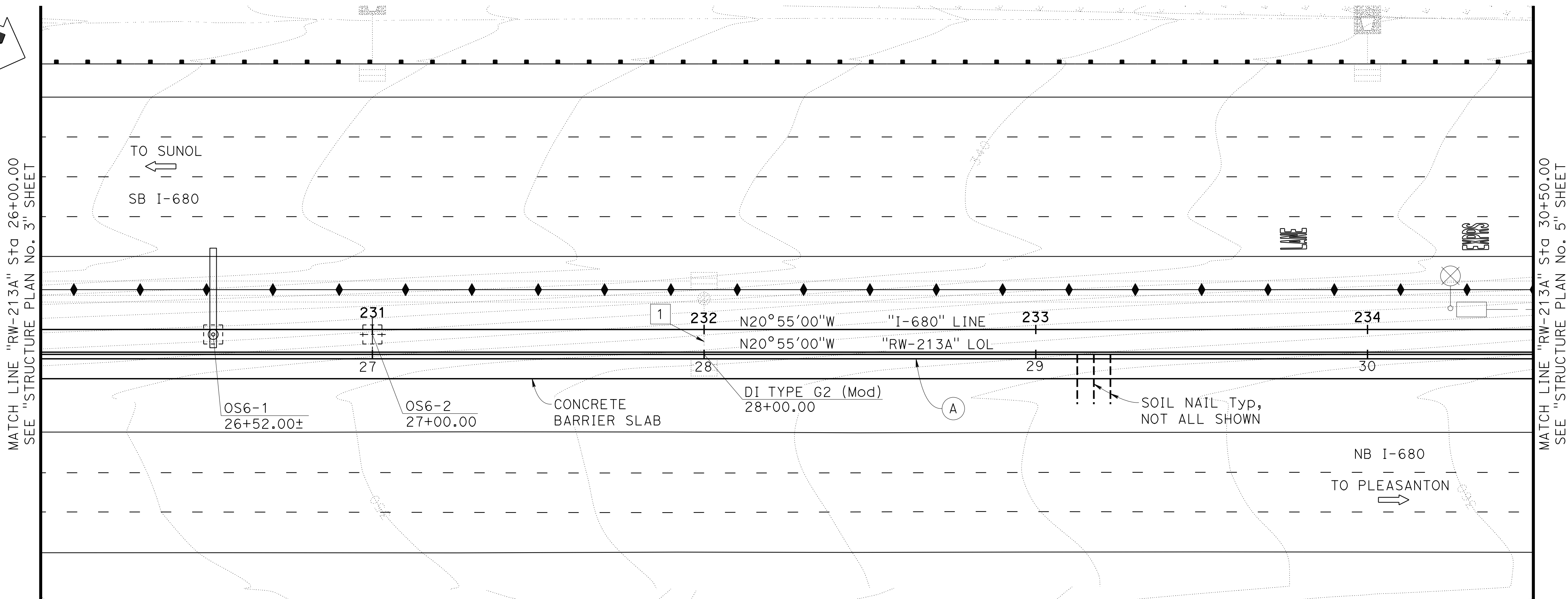
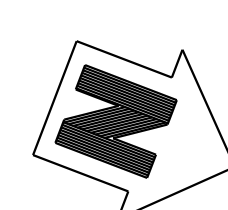
Syed Kazmi
PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

**RETAINING WALL No. 213A
STRUCTURE PLAN No. 3**



DEVELOPED MIRRORED ELEVATION
1"=20'



PLAN
1"=20'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1625	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER
 DATE: 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE

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 SACRAMENTO, CA 95811

- NOTES:**
- For utilities information, see "ROADWAY PLANS".
 - The design anticipates that the sign structure is constructed after the soil nail wall to avoid interference when installing the soil nails behind the sign structure. For the sign structure information see "ROADWAY PLANS".
 - For finish grading, see "ROADWAY PLANS".
- (A) Concrete Barrier Type 842 (Mod)

- LEGEND:**
- ← Direction of Traffic
 - Soil Nail

- UTILITIES**
- 1 18" APC DRAINAGE

DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

**RETAINING WALL No. 213A
 STRUCTURE PLAN No. 4**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1626	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE
 No. C48859
 Exp. 9/30/22
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 OAKLAND, CA 94607
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 SACRAMENTO, CA 95811

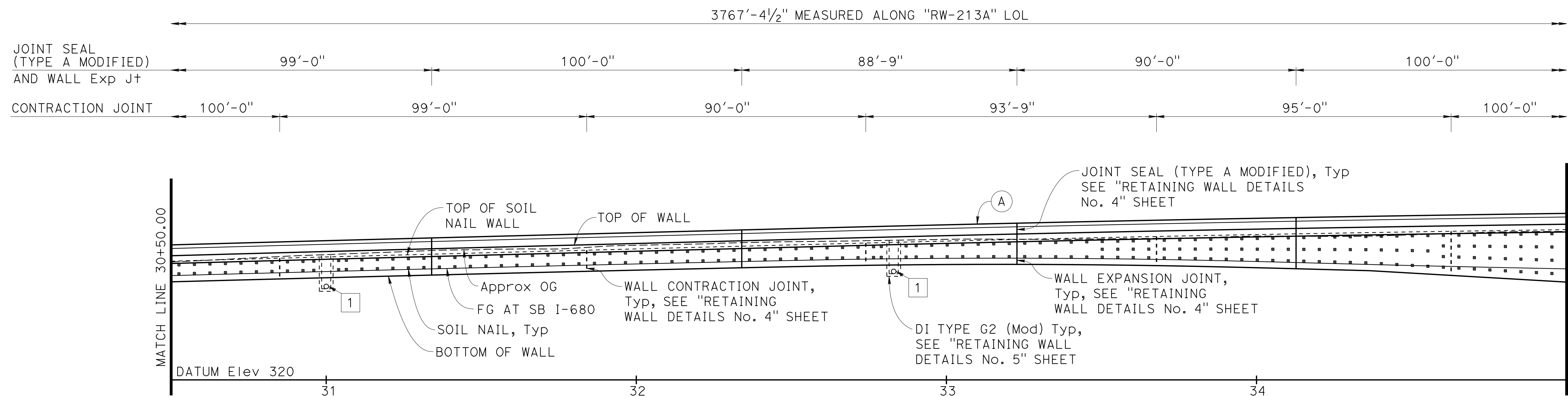
- NOTES:**
- For utilities information, see "ROADWAY PLANS".
 - For finish grading, see "ROADWAY PLANS".
- (A) Concrete Barrier Type 842 (Mod)

- LEGEND:**
- ← Direction of Traffic
 - Soil Nail

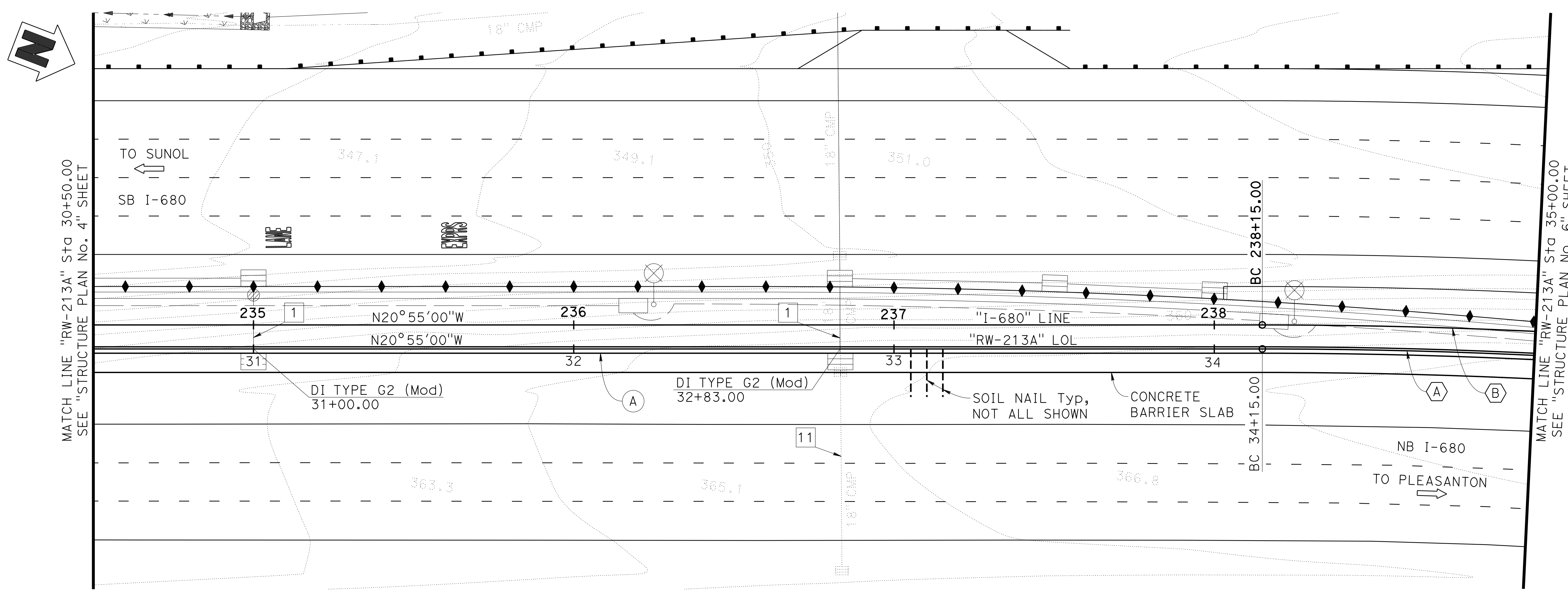
- UTILITIES**
- 1 18" APC DRAINAGE
 - 11 EXISTING 18" CMP DRAINAGE (PROTECT IN PLACE)

CURVE DATA

(A) "RW-213A" LOL	(B) "I-680" LINE
R = 1792.50'	R = 1800.00'
Δ = 20°07'00"	Δ = 20°07'00"
T = 317.95'	T = 319.28'
L = 629.35'	L = 631.98'



DEVELOPED MIRRORED ELEVATION
 1"=20'



PLAN
 1"=20'

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

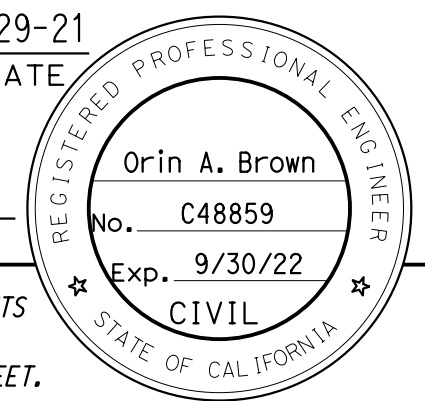
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Syed Kazmi
 PROJECT ENGINEER
 BRIDGE No. 33E0251
 POST MILE R13.5

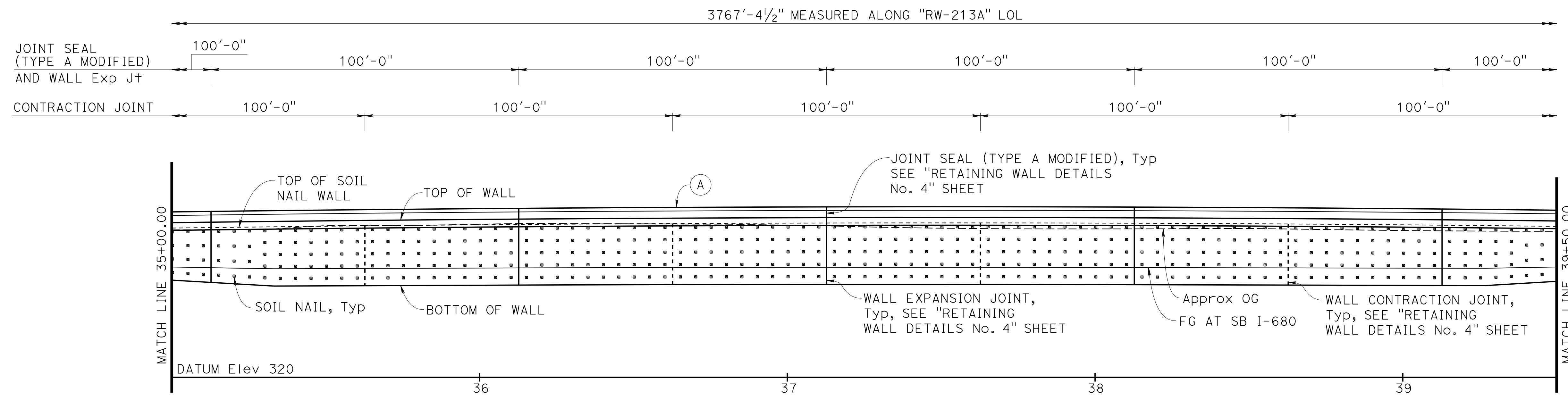
**RETAINING WALL No. 213A
 STRUCTURE PLAN No. 5**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1627	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE
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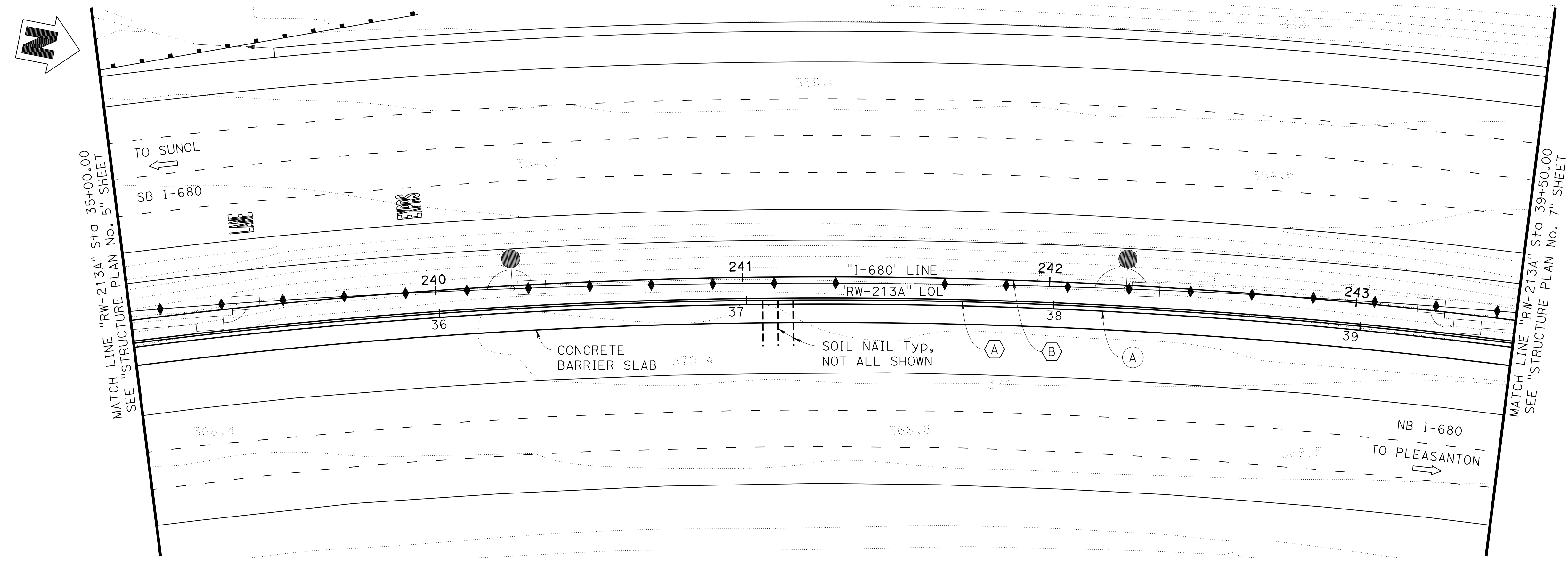
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 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607
 AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811



DEVELOPED MIRRORED ELEVATION
 1"=20'

NOTE:
 1. For finish grading, see "ROADWAY PLANS".
 (A) Concrete Barrier Type 842 (Mod)

LEGEND:
 ← Direction of Traffic
 ■ Soil Nail



PLAN
 1"=20'

CURVE DATA

(A) "RW-213A" LOL	(B) "I-680" LINE
R = 1792.50'	R = 1800.00'
Δ = 20°07'00"	Δ = 20°07'00"
T = 317.95'	T = 319.28'
L = 629.35'	L = 631.98'

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
 Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

RETAINING WALL No. 213A
STRUCTURE PLAN No. 6

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, RO.0/0.9	1628	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE
 No. C48859
 Exp. 9/30/22
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ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607
 AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

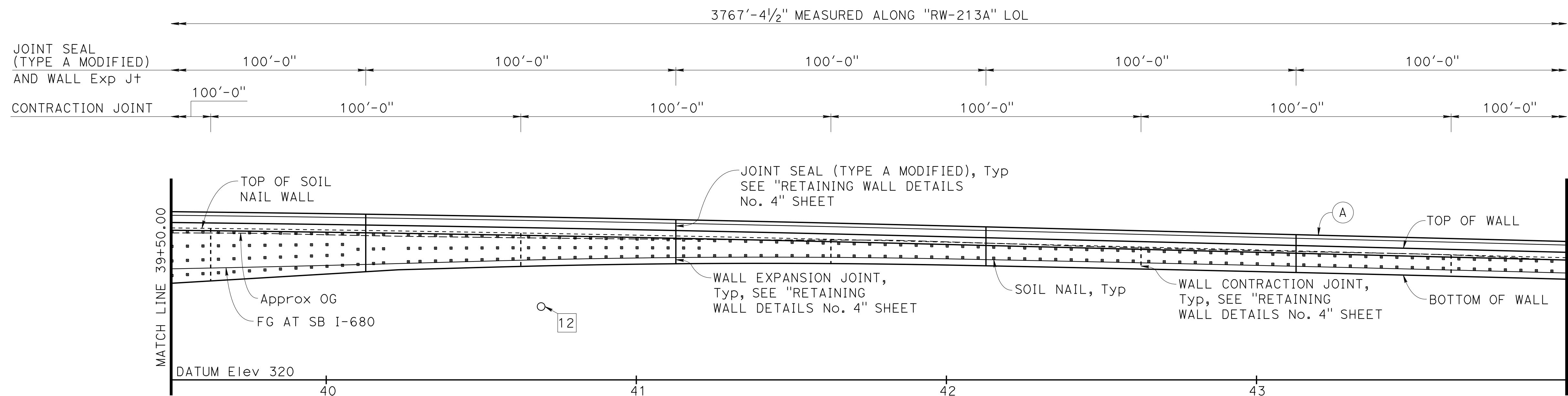
- NOTES:**
- For utilities information, see "ROADWAY PLANS".
 - For finish grading, see "ROADWAY PLANS".
- (A) Concrete Barrier Type 842 (Mod)

- LEGEND:**
- ← Direction of Traffic
 - ▣ Soil Nail

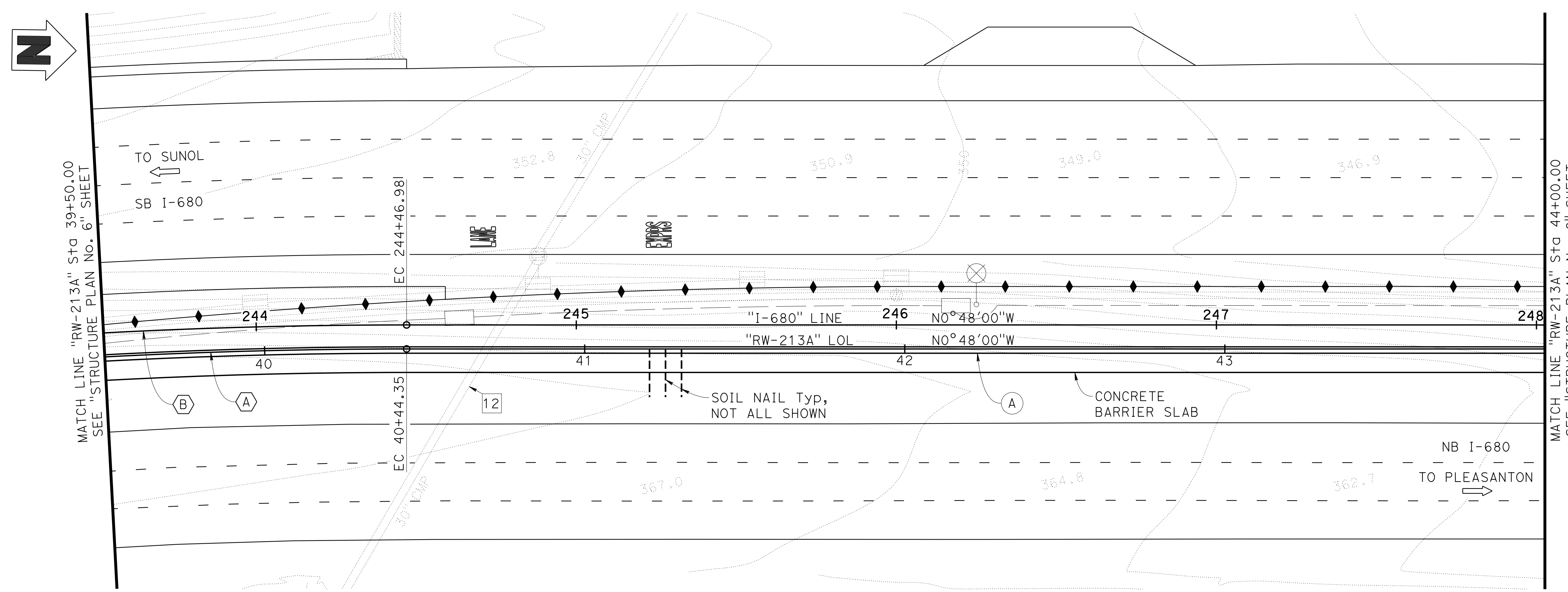
- UTILITIES**
- 12 EXISTING 30" CMP DRAINAGE (PROTECT IN PLACE)

CURVE DATA

(A) "RW-213A" LOL	(B) "I-680" LINE
R = 1792.50'	R = 1800.00'
Δ = 20°07'00"	Δ = 20°07'00"
T = 317.95'	T = 319.28'
L = 629.35'	L = 631.98'



DEVELOPED MIRRORED ELEVATION
 1"=20'



PLAN
 1"=20'

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:00
 FILE => 33E0251-c-sp07.dgn USERNAME => p302438

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 DEPARTMENT OF TRANSPORTATION**

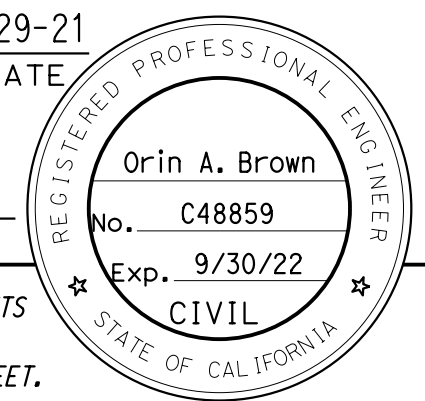
Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

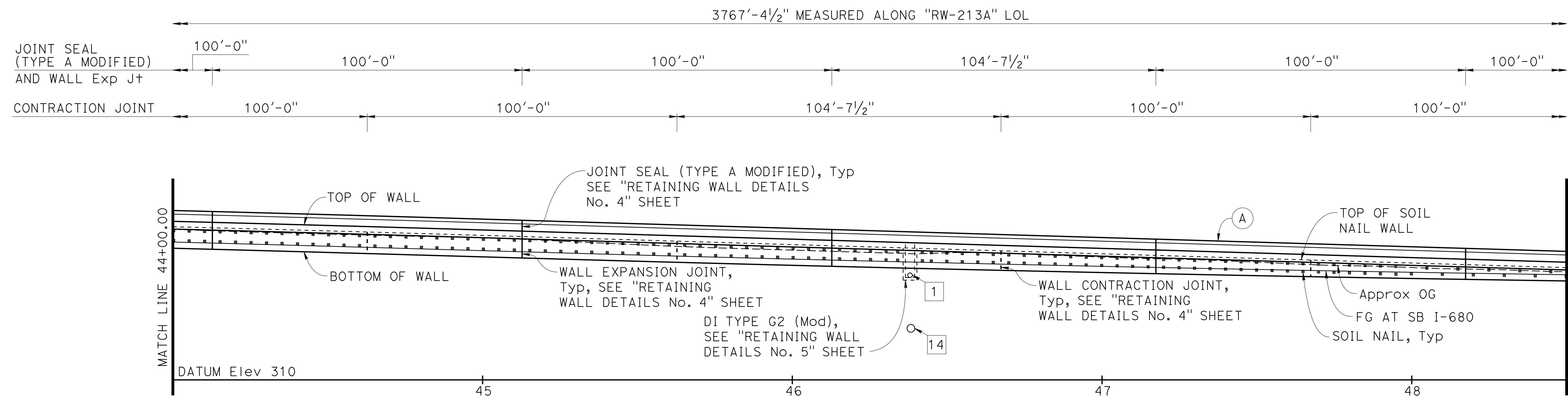
**RETAINING WALL No. 213A
 STRUCTURE PLAN No. 7**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1629	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 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.



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 OAKLAND, CA 94607
 AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

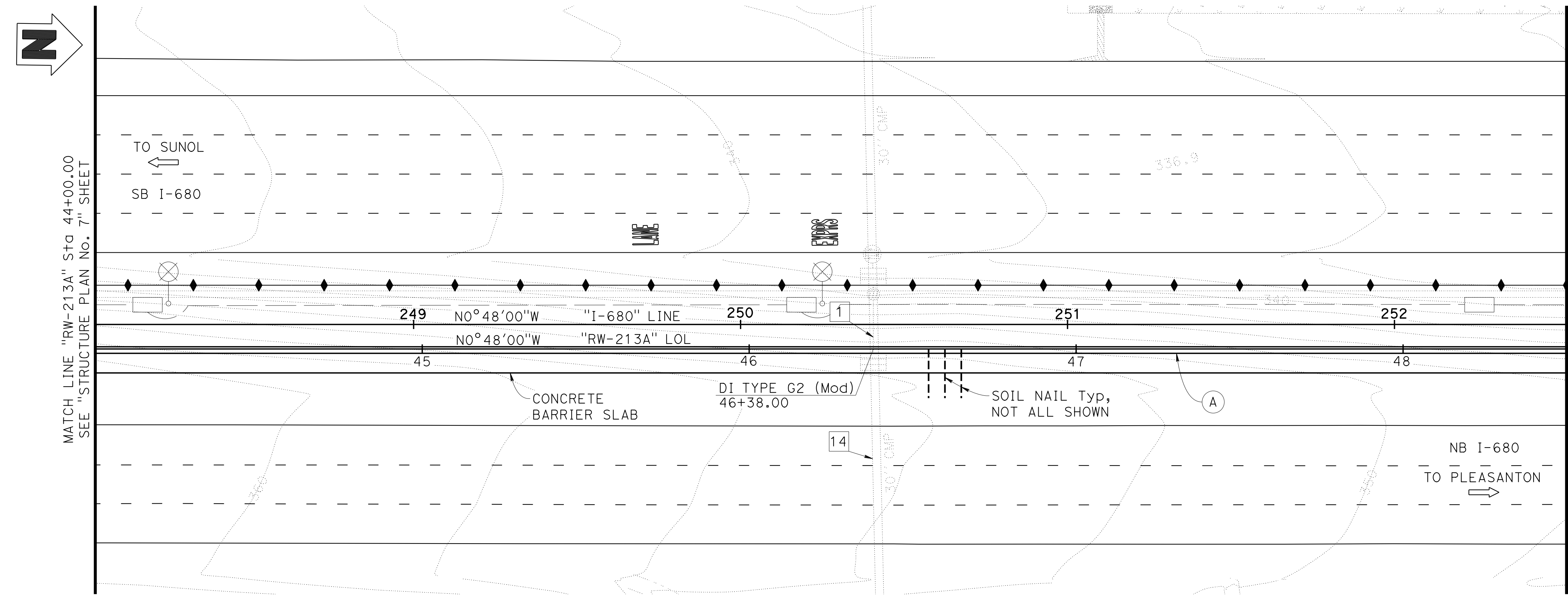


DEVELOPED MIRRORED ELEVATION
 1"=20'

- NOTES:**
- For utilities information, see "ROADWAY PLANS".
 - For finish grading, see "ROADWAY PLANS".
- (A) Concrete Barrier Type 842 (Mod)

- LEGEND:**
- ← Direction of Traffic
 - ▣ Soil Nail

- UTILITIES**
- 1 18" APC DRAINAGE
 - 14 EXISTING 30" CMP DRAINAGE (PROTECT IN PLACE)



PLAN
 1"=20'

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

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Syed Kazmi
 PROJECT ENGINEER

BRIDGE No. 33E0251
 POST MILE R13.5

RETAINING WALL No. 213A
STRUCTURE PLAN No. 8

Dist	COUNTY	ROUTE	POST MILES		SHEET No.	TOTAL SHEETS
			TOTAL PROJECT	POST MILE		
04	Ala, CC	680	R11.0/R21.9	R0.0/0.9	1630	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21

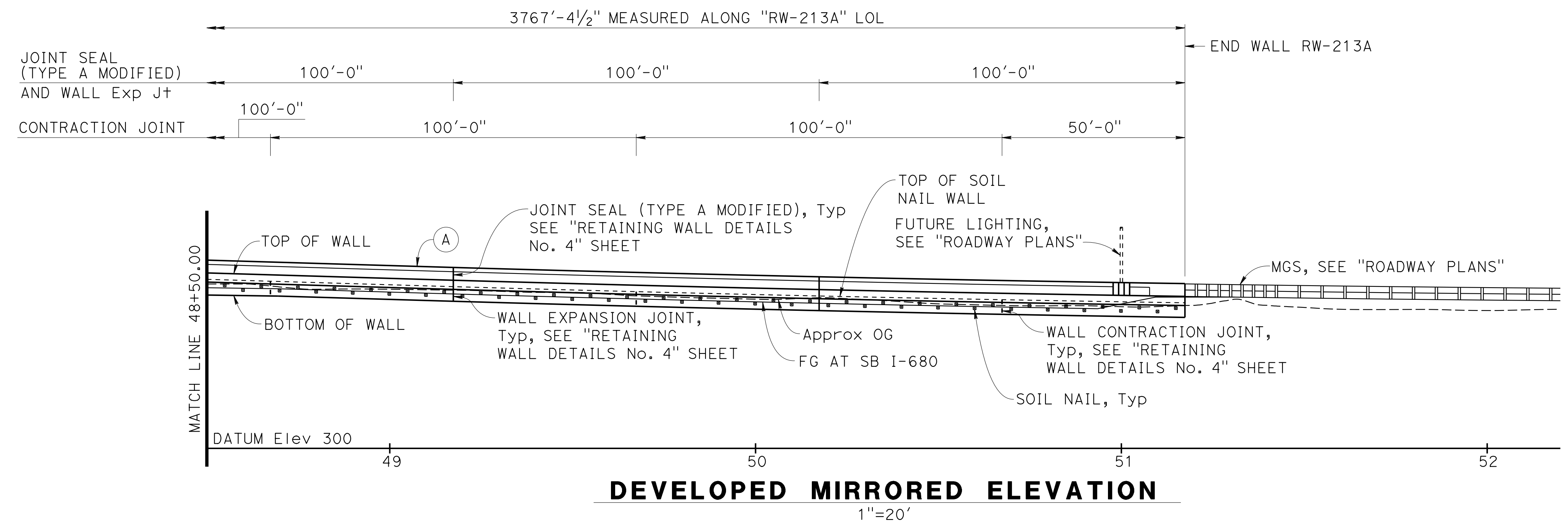
October 8, 2021
 PLANS APPROVAL DATE

Orin A. Brown
 No. C48859
 Exp. 9/30/22
 CIVIL
 STATE OF CALIFORNIA

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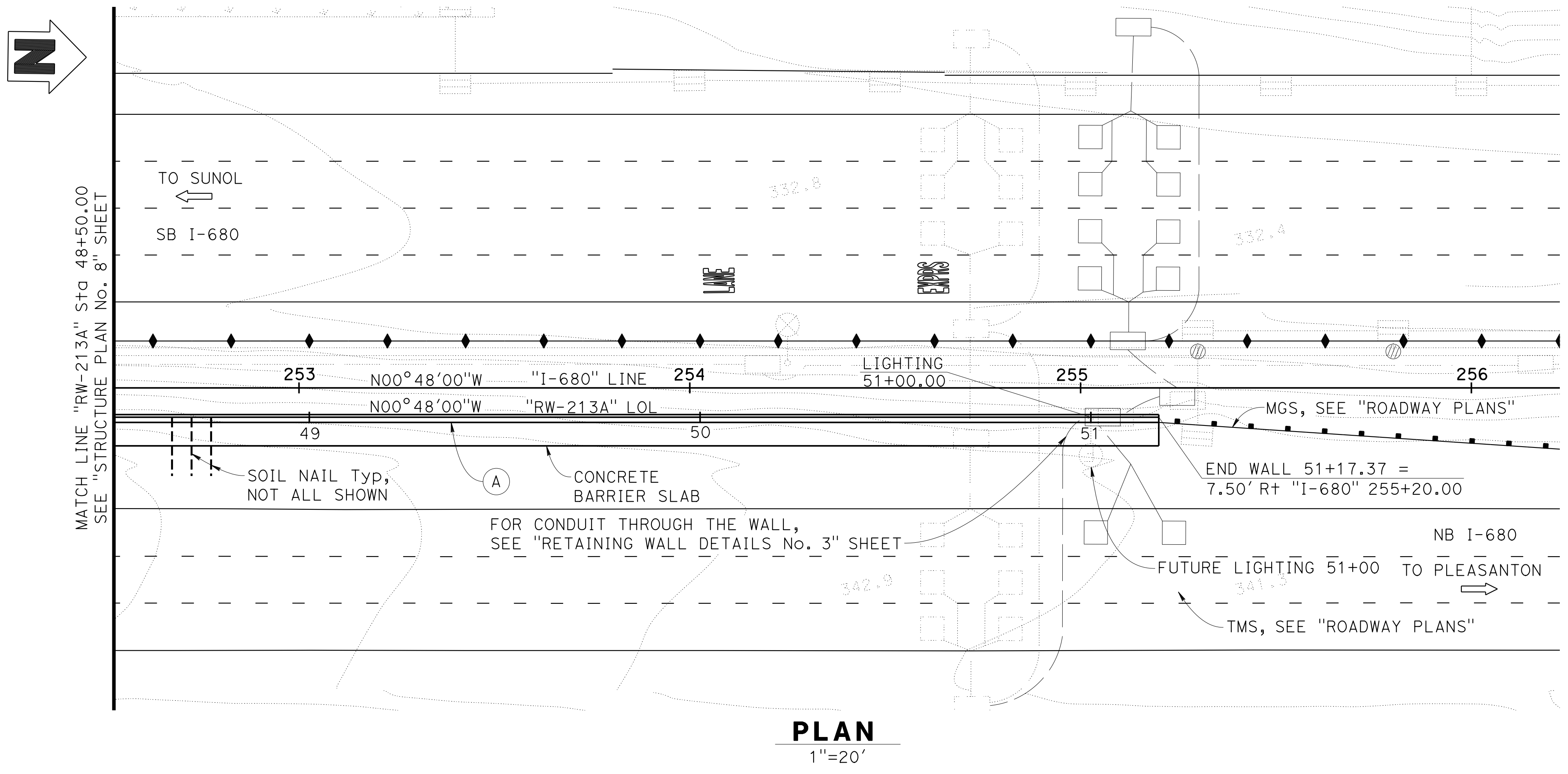
ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607

AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811



- NOTE:**
- For finish grading, see "ROADWAY PLANS".
- (A) Concrete Barrier Type 842 (Mod)

- LEGEND:**
- ← Direction of Traffic
 - ▣ Soil Nail



Norbert Gee
 DESIGN OVERSIGHT Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

RETAINING WALL No. 213A
STRUCTURE PLAN No. 9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1631	1710

Orin A. Brown
REGISTERED CIVIL ENGINEER DATE 9-29-21

October 8, 2021
PLANS APPROVAL DATE

Orin A. Brown
No. C48859
Exp. 9/30/22
CIVIL
STATE OF CALIFORNIA

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OAKLAND, CA 94607

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SACRAMENTO, CA 95811

NOTE:

- For location of top of wall elevation, bottom of wall elevation, FG at SB I-680 elevation, and OG elevation, see "RETAINING WALL DETAILS No. 1" sheet.

WALL PROFILE TABLE				
STATION	TOP OF WALL ELEVATION	BOTTOM OF WALL ELEVATION	Approx OG ELEVATION	FG AT SB I-680 ELEVATION
13+50.00	320.90	315.15	318.62	320.70
13+58.00	321.03	315.28	318.89	320.70
13+73.84	321.28	315.53	319.45	317.53
13+75.00	321.30	315.55	319.48	317.55
14+00.00	321.70	315.95	320.00	317.95
14+25.00	322.11	316.36	320.14	318.36
14+50.00	322.51	316.76	320.35	318.76
14+75.00	322.91	317.16	320.78	319.16
15+00.00	323.32	317.57	321.27	319.57
15+25.00	323.72	317.97	321.46	319.97
15+50.00	324.12	318.37	321.90	320.37
15+75.00	324.52	318.77	322.12	320.77
16+00.00	324.93	319.18	322.63	321.18
16+25.00	325.33	319.58	322.80	321.58
16+50.00	325.73	319.94	323.46	321.94
16+75.00	326.14	320.06	324.10	322.06
17+00.00	326.54	320.17	324.25	322.17
17+25.00	326.94	320.29	324.33	322.29
17+50.00	327.34	320.41	324.72	322.41
17+75.00	327.75	320.54	325.27	322.54
18+00.00	328.15	320.70	325.31	322.70
18+25.00	328.55	320.88	325.65	322.88
18+50.00	328.96	321.09	326.31	323.09
18+75.00	329.36	321.33	326.91	323.33
19+00.00	329.76	321.59	327.12	323.59
19+25.00	330.16	321.88	327.15	323.88
19+50.00	330.57	322.19	327.45	324.19
19+75.00	330.97	322.54	328.50	324.54
20+00.00	331.37	322.90	328.92	324.90
20+25.00	331.78	323.30	329.52	325.30
20+50.00	332.18	323.72	330.06	325.72
20+75.00	332.58	324.17	330.31	326.17
21+00.00	332.99	324.64	330.73	326.64
21+25.00	333.39	325.14	331.55	327.14
21+50.00	333.79	325.66	331.71	327.66
21+75.00	334.22	326.22	331.97	328.22
22+00.00	334.76	326.79	332.17	328.79
22+25.00	335.40	327.38	332.60	329.38
22+50.00	336.07	328.00	333.22	330.00
22+75.00	336.77	328.65	333.79	330.65
23+00.00	337.50	329.32	334.49	331.32
23+25.00	338.25	330.01	335.20	332.01
23+50.00	339.01	330.74	336.07	332.74
23+75.00	339.77	331.48	337.13	333.48
24+00.00	340.52	332.24	338.25	334.24
24+25.00	341.28	332.99	339.22	334.99
24+50.00	342.03	333.75	340.06	335.75
24+75.00	342.79	334.50	341.01	336.50
25+00.00	343.54	335.26	341.90	337.26
25+25.00	344.30	336.01	342.88	338.01
25+50.00	345.06	336.77	343.64	338.77
25+75.00	345.81	337.52	344.19	339.52
26+00.00	346.57	338.28	344.68	340.28
26+25.00	347.33	339.03	345.17	341.03
26+50.00	348.08	339.79	345.96	341.79
26+75.00	348.84	340.54	346.87	342.54

WALL PROFILE TABLE				
STATION	TOP OF WALL ELEVATION	BOTTOM OF WALL ELEVATION	Approx OG ELEVATION	FG AT SB I-680 ELEVATION
27+00.00	349.59	341.30	347.77	343.30
27+25.00	350.35	342.05	348.55	344.05
27+50.00	351.10	342.81	349.29	344.81
27+75.00	351.86	343.56	349.92	345.56
28+00.00	352.62	344.32	350.55	346.32
28+25.00	353.37	345.07	351.39	347.07
28+50.00	354.13	345.83	352.21	347.83
28+75.00	354.88	346.58	352.92	348.58
29+00.00	355.64	347.34	353.62	349.34
29+25.00	356.40	348.09	354.40	350.09
29+50.00	357.15	348.84	355.03	350.84
29+75.00	357.91	349.57	355.57	351.57
30+00.00	358.65	350.28	356.33	352.28
30+25.00	359.37	350.98	357.11	352.98
30+50.00	360.08	351.66	358.08	353.66
30+75.00	360.77	352.33	359.30	354.33
31+00.00	361.44	352.98	360.44	354.98
31+25.00	362.10	353.61	361.40	355.61
31+50.00	362.74	354.24	362.02	356.24
31+75.00	363.39	354.84	362.28	356.84
32+00.00	364.03	355.43	363.45	357.43
32+25.00	364.68	356.00	363.98	358.00
32+50.00	365.32	356.55	364.62	358.55
32+75.00	365.96	357.00	364.95	359.00
33+00.00	366.57	357.24	365.37	359.24
33+25.00	367.14	357.29	365.38	359.29
33+50.00	367.68	357.13	365.51	359.13
33+75.00	368.19	356.77	365.78	358.77
34+00.00	368.67	356.22	366.43	358.22
34+25.00	369.11	355.56	366.32	357.56
34+50.00	369.52	354.47	366.83	356.92
34+75.00	369.90	353.02	367.69	356.35
35+00.00	370.25	351.57	367.93	355.85
35+25.00	370.57	350.12	368.02	355.40
35+33.14	370.66	349.65	368.19	355.27
35+50.00	370.85	349.73	369.32	355.33
35+75.00	371.10	349.81	369.37	355.41
36+00.00	371.32	349.90	369.74	355.50
36+25.00	371.50	349.99	369.99	355.59
36+50.00	371.65	350.06	369.88	355.66
36+75.00	371.77	350.11	369.77	355.71
37+00.00	371.86	350.14	369.46	355.74
37+25.00	371.91	350.15	368.91	355.75
37+50.00	371.93	350.15	368.46	355.75
37+75.00	371.91	350.13	368.26	355.73
38+00.00	371.86	350.09	368.23	355.69
38+25.00	371.78	350.03	368.28	355.63
38+50.00	371.65	349.98	368.34	355.58
38+75.00	371.50	349.93	368.01	355.53
39+00.00	371.30	349.88	367.70	355.48
39+25.00	371.07	349.81	367.52	355.43
39+26.80	371.05	349.80	367.51	355.43
39+50.00	370.81	351.19	367.44	355.85
39+75.00	370.51	352.67	367.34	356.37

WALL PROFILE TABLE				
STATION	TOP OF WALL ELEVATION	BOTTOM OF WALL ELEVATION	Approx OG ELEVATION	FG AT SB I-680 ELEVATION
40+00.00	370.17	354.16	366.85	356.95
40+25.00	369.80	355.60	366.36	357.60
40+50.00	369.39	356.30	366.03	358.30
40+75.00	368.95	356.92	365.73	358.92
41+00.00	368.47	357.35	365.49	359.35
41+25.00	367.96	357.58	365.31	359.58
41+50.00	367.41	357.61	365.17	359.61
41+75.00	366.83	357.45	365.13	359.45
42+00.00	366.22	357.08	364.57	359.08
42+25.00	365.59	356.58	363.77	358.58
42+50.00	364.96	356.07	362.96	358.07
42+75.00	364.33	355.53	362.28	357.53
43+00.00	363.70	354.96	361.72	356.96
43+25.00	363.07	354.38	361.20	356.38
43+50.00	362.44	353.77	360.72	355.77
43+75.00	361.82	353.15	359.81	355.15
44+00.00	361.18	352.50	358.63	354.50
44+25.00	360.53	351.83	357.76	353.83
44+50.00	359.85	351.14	357.08	353.14
44+75.00	359.14	350.43	356.45	352.43
45+00.00	358.40	349.72	355.85	351.72
45+25.00	357.66	349.00	354.82	351.00
45+50.00	356.91	348.30	353.65	350.30
45+75.00	356.17	347.63	352.64	349.63
46+00.00	355.42	346.98	351.90	348.98
46+25.00	354.68	346.36	351.12	348.36
46+50.00	353.94	345.77	351.02	347.77
46+75.00	353.19	345.20	350.67	347.20
47+00.00	352.45	344.65	349.66	346.65
47+25.00	351.70	344.14	348.96	346.14
47+50.00	350.96	343.64	348.02	345.64
47+75.00	350.22	343.18	346.95	345.18
48+00.00	349.47	342.74	346.28	344.74
48+25.00	348.73	342.32	345.66	344.32
48+50.00	347.99	341.94	344.96	343.94
48+75.00	347.24	341.49	343.70	343.49
49+00.00	346.50	340.75	343.52	342.75
49+25.00	345.77	340.02	343.12	342.02
49+50.00	345.08	339.33	342.64	341.33
49+75.00	344.43	338.68	341.46	340.68
50+00.00	343.83	338.08	340.80	340.08
50+25.00	343.26	337.51	340.94	339.51
50+50.00	342.75	337.00	339.52	339.00
50+75.00	342.27	336.52	338.98	338.52
50+93.53	341.95	336.20	338.94	338.20
51+00.00	341.84	336.09	338.74	339.50
51+09.37	341.69	335.94	338.76	341.37
51+17.37	341.57	335.82	339.08	341.37

WALL ELEVATIONS

Norbert Gee
DESIGN OVERSIGHT
Norbert Gee
2/15/22
SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
PROJECT ENGINEER

BRIDGE No. 33E0251
POST MILE R13.5

**RETAINING WALL No. 213A
STRUCTURE PLAN No. 10**

NOTES:

- The contractor shall provide and maintain stable soil above and below the soil nails within each lift.
- For Expansion Joint and Contraction Joint locations, see "STRUCTURE PLAN No. 1" through "STRUCTURE PLAN No. 9" sheets.
- Soil Nail shall be placed normal to shotcrete surface on the plan view.
- A total of 146 proof test nails are to be installed at locations determined by the Engineer. For "PROOF TEST SOIL NAIL" detail, see "SOIL NAIL DETAILS No. 2" sheet.
- For the future lighting locations, see "STRUCTURE PLAN" sheets.
- For locations of (a) bar and (b) bar, see "RETAINING WALL DETAILS" sheets.
- Install and test 2 verification test soil nails for each wall zone. The locations are to be determined by the Contractor.
- The Contractor shall submit to the Engineer for approval any rearrangement of reinforcing steel necessary for the soil nail system proposed for use.
- The contractor shall field locate all utilities before installing soil nails.

(A) Concrete Barrier Type 842 (Mod)

LEGEND:

- Location of production nail assembly.
- ⊗ Preliminary locations of proof test nail assembly. Final locations to be determined by the Engineer, see note 4.
- ST Vertical distance from top of soil nail wall to first row of soil nails.
- SB Vertical distance from bottom of wall to last row of soil nails.
- SV Vertical spacing of soil nail assembly.
- Le Soil nail embedment length, see "SOIL NAIL WALL SCHEDULE TABLE"

SOIL NAIL WALL SCHEDULE TABLE					
SCHEDULE	NUMBER OF NAIL ROWS	Le (ft)	SOIL NAIL SIZE	SEE NOTE 6	
				(a)	(b)
A	1	15	#9	#4	#5
B	2	15	#9	#4	#5
C	2	21	#9	#4	#5
D	2	19	#9	#4	#5
E	3	15	#9	#4	#5
F	4	15	#9	#4	#5
G	5	15	#9	#4	#5
H	1	15	#9	#6	#6
I	2	30	#9	#6	#6
J	2	27	#9	#6	#6
K	2	15	#9	#6	#6
L	3	15	#9	#6	#6

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1632	1710

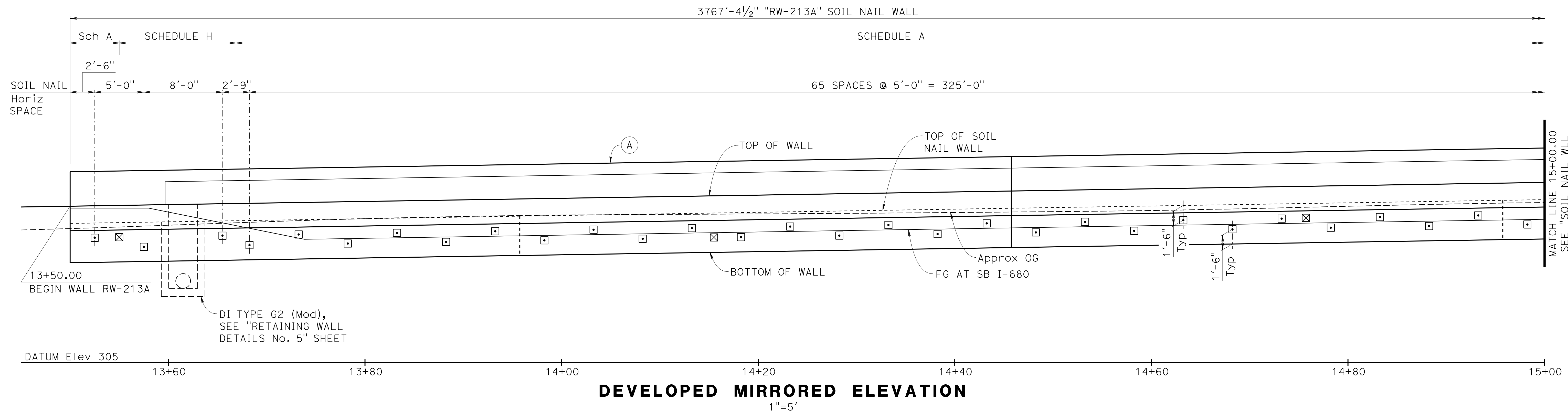
Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21

October 8, 2021
 PLANS APPROVAL DATE

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ALAMEDA CTC
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 OAKLAND, CA 94607

AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811



Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

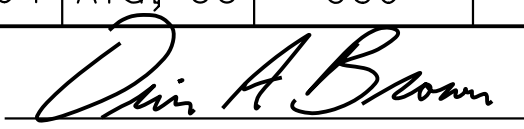
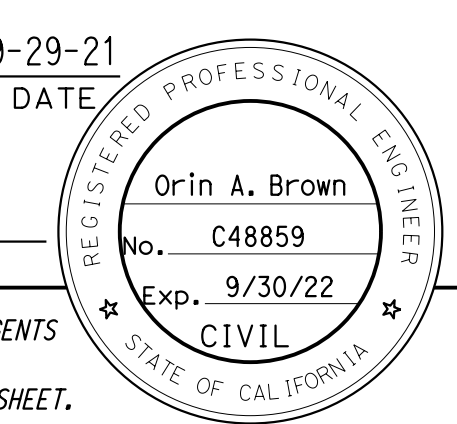
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QUANTITIES	BY W. Bai	CHECKED A. AKI

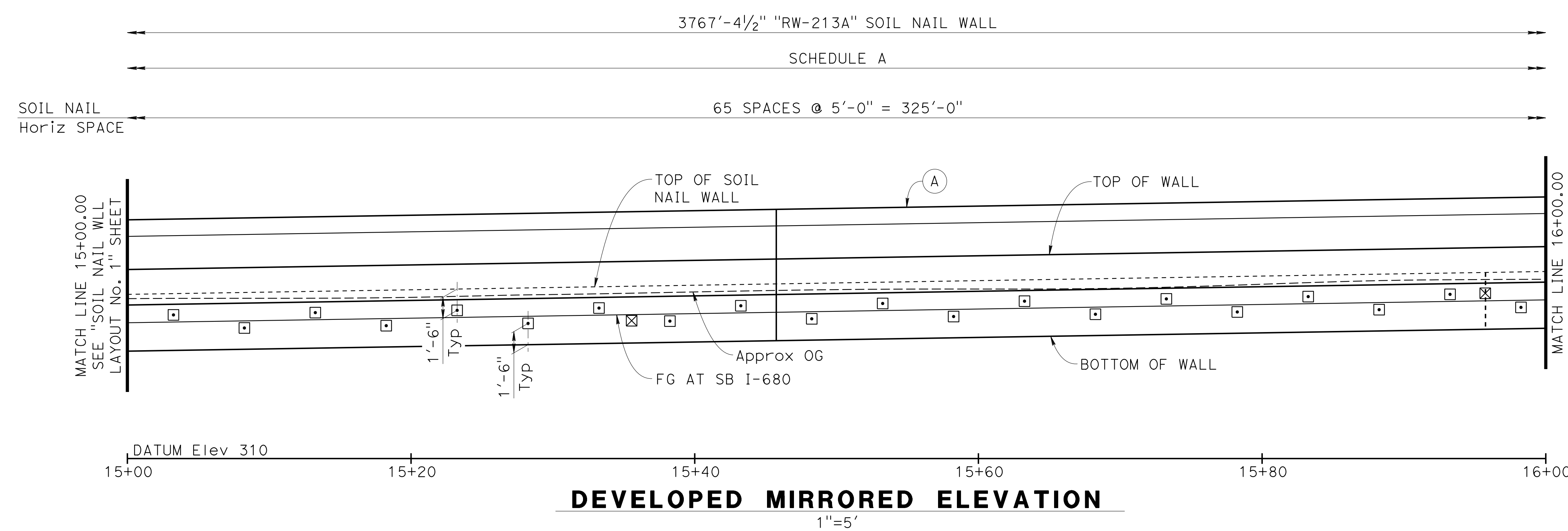
PREPARED FOR THE
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Syed Kazmi
 PROJECT ENGINEER

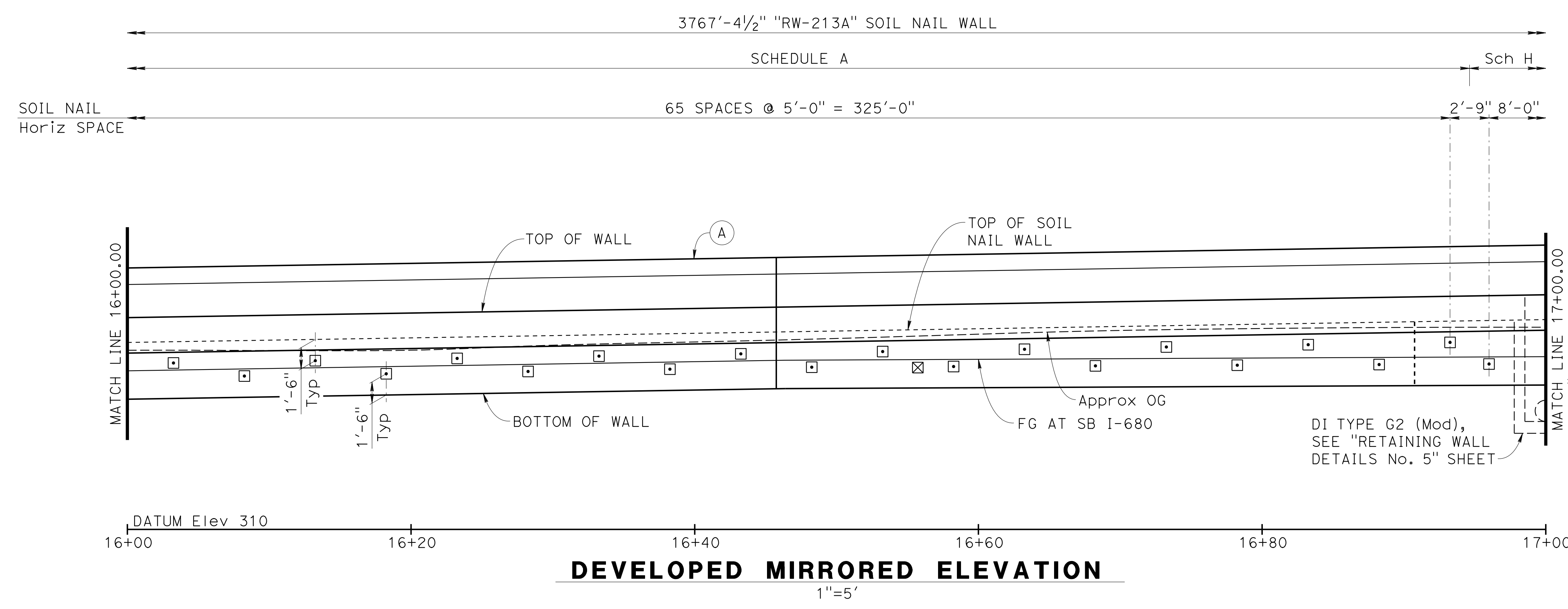
BRIDGE No. 33E0251
 POST MILE R13.5


RETAINING WALL No. 213A
SOIL NAIL WALL LAYOUT No. 1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1633	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 PLANS APPROVAL DATE					
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ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					



NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.




 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

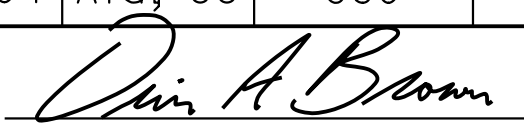
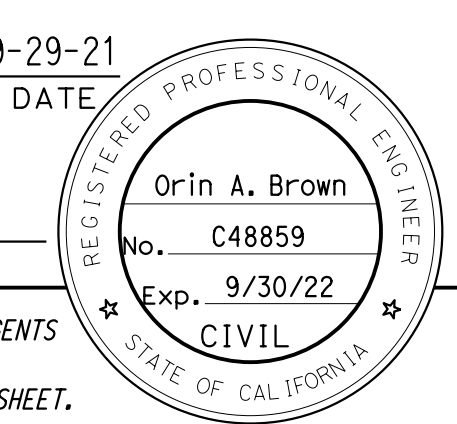
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DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

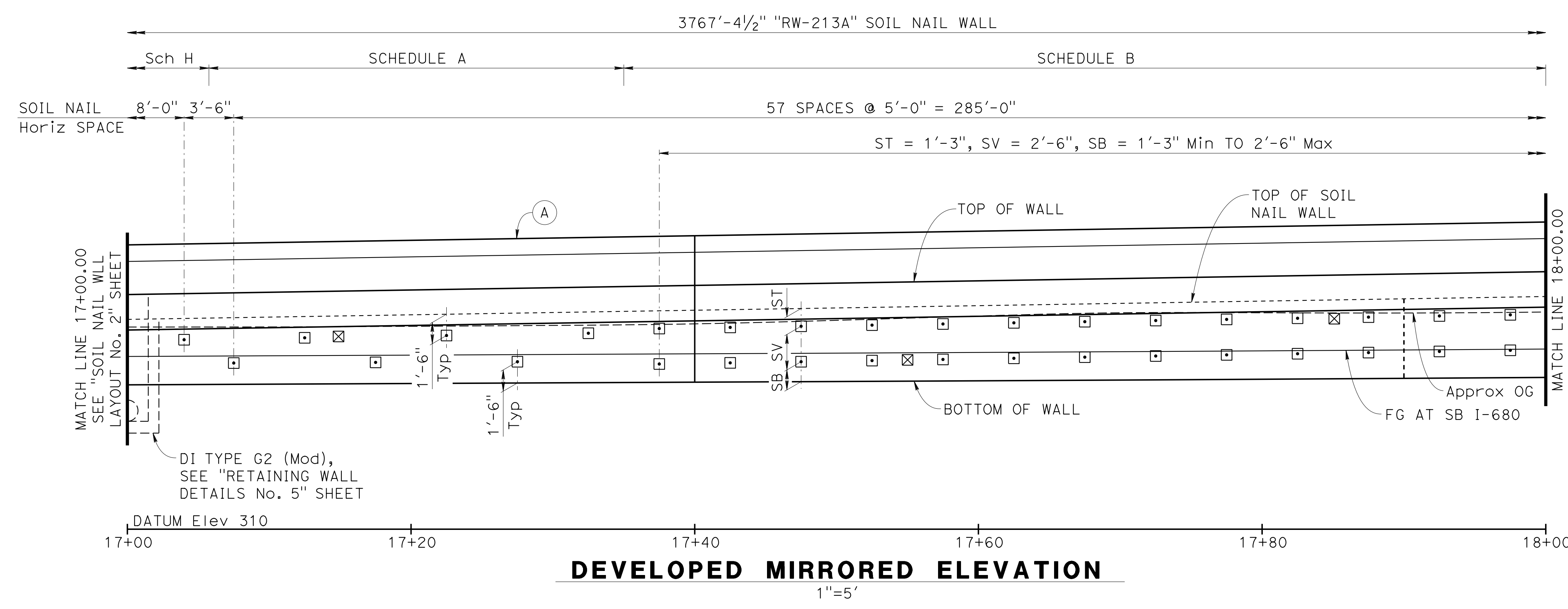
**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER

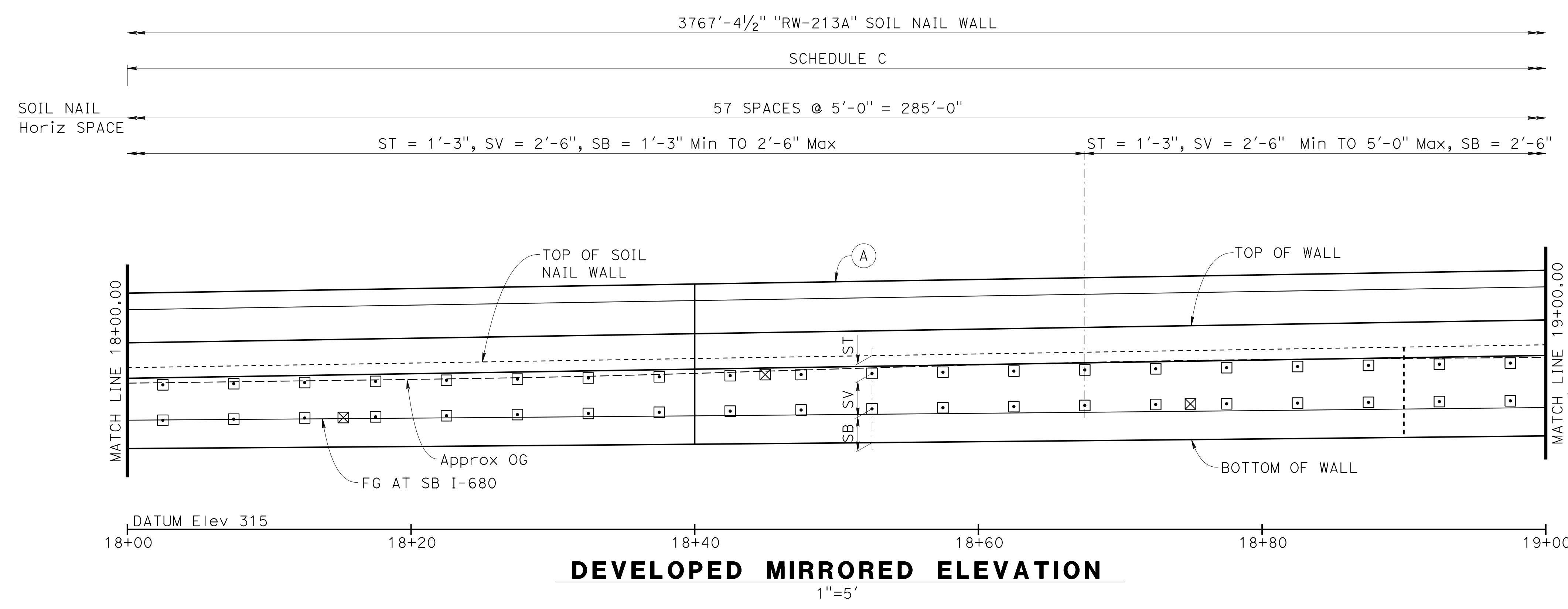
BRIDGE No.	33E0251
POST MILE	R13.5

**RETAINING WALL No. 213A
 SOIL NAIL WALL LAYOUT No. 2**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1634	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 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.					
ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					




DEVELOPED MIRRORED ELEVATION
1"=5'



DEVELOPED MIRRORED ELEVATION
1"=5'

NOTE:
1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.


DESIGN OVERSIGHT
Norbert Gee
2/15/22
SIGN OFF DATE

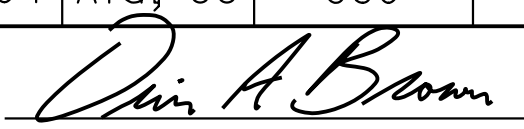
DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

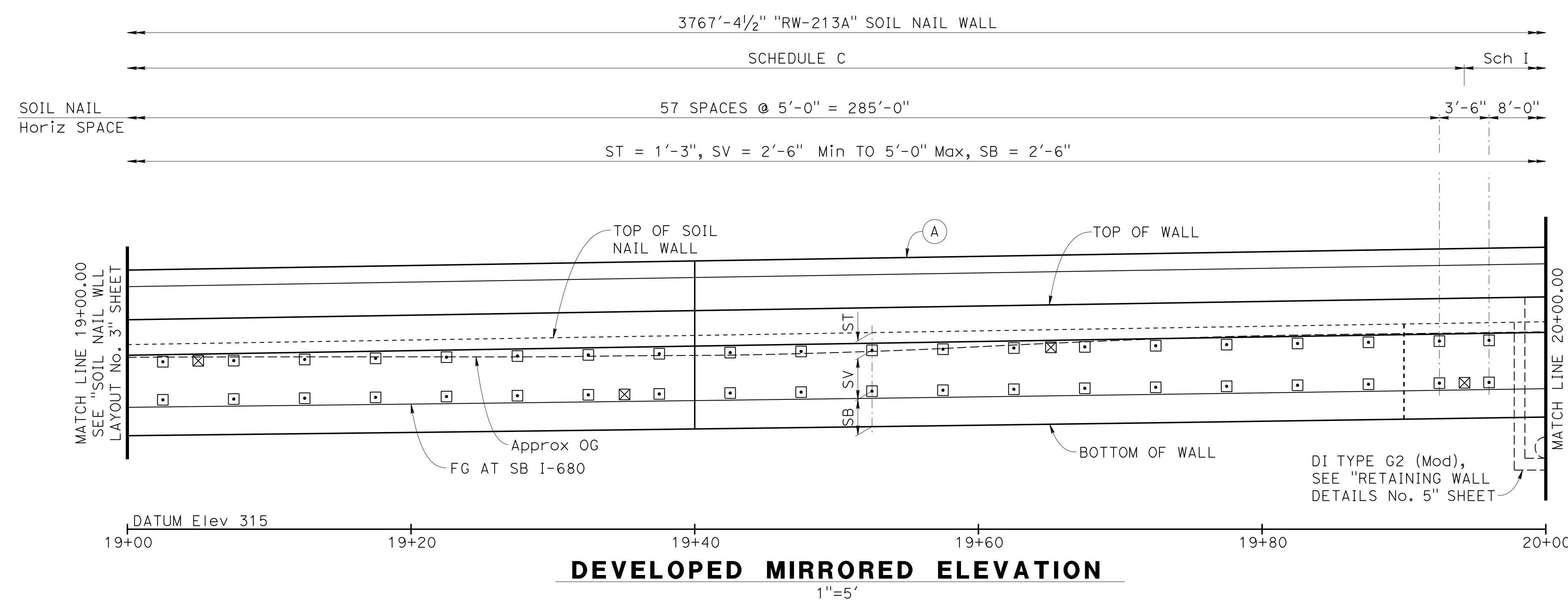
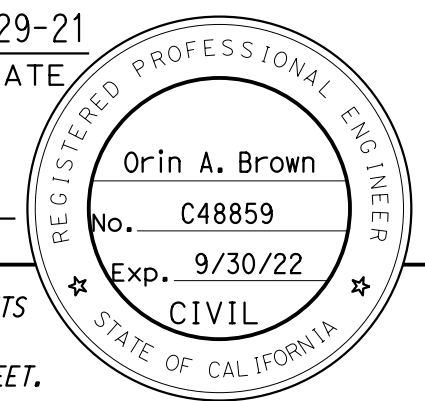
**PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

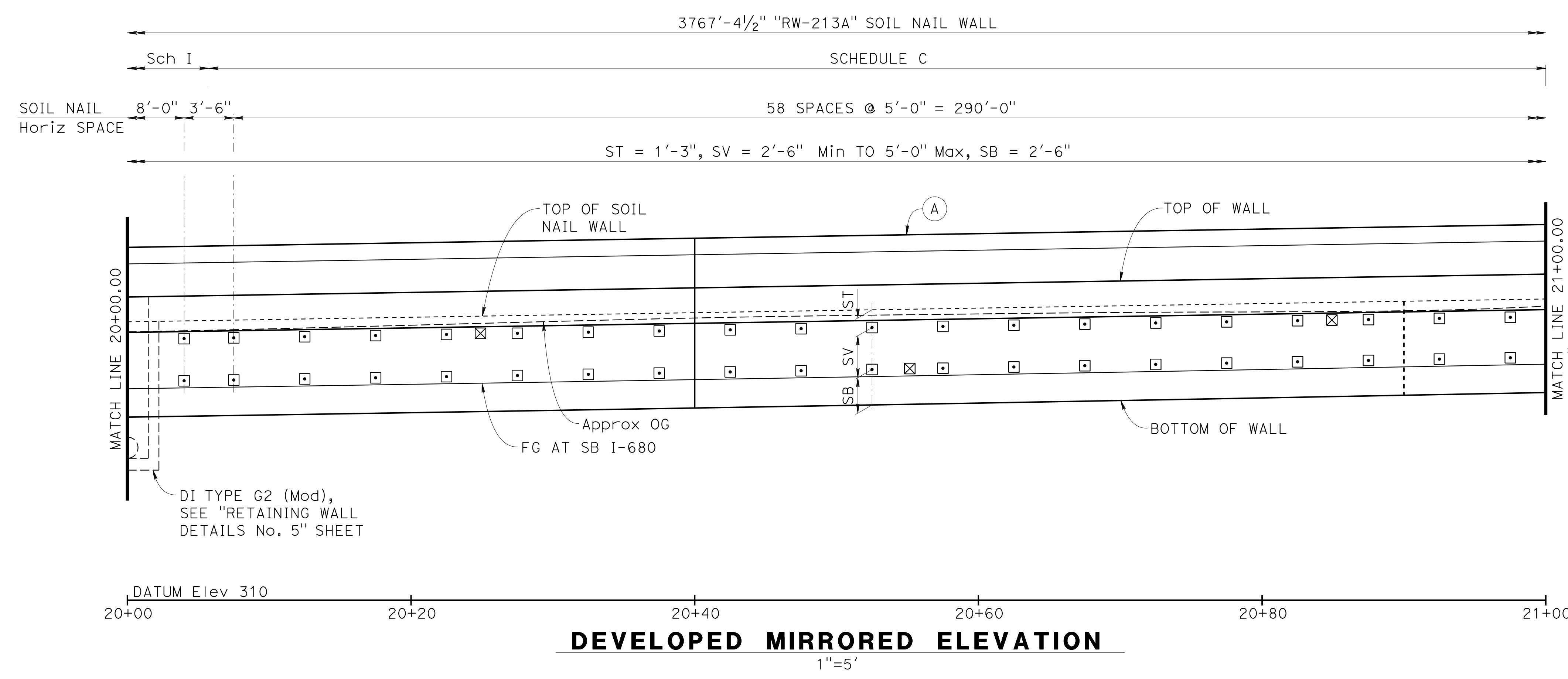
**RETAINING WALL No. 213A
SOIL NAIL WALL LAYOUT No. 3**


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1635	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 PLANS APPROVAL DATE					
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ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					



NOTE:

1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.




 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

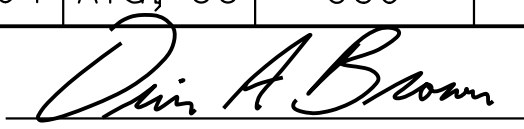
DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

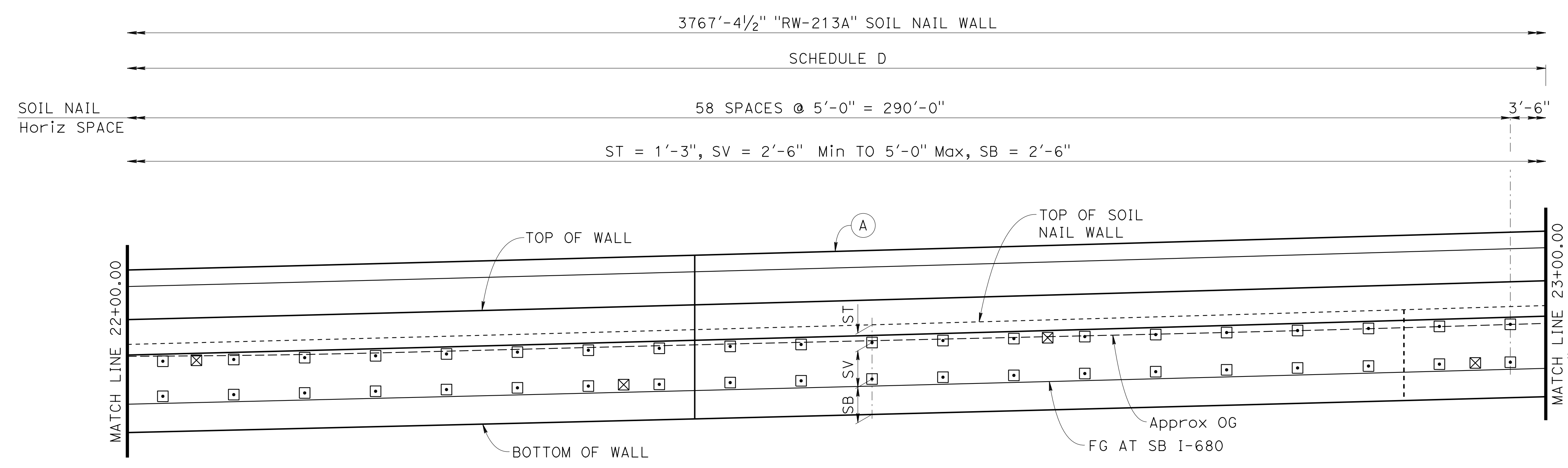
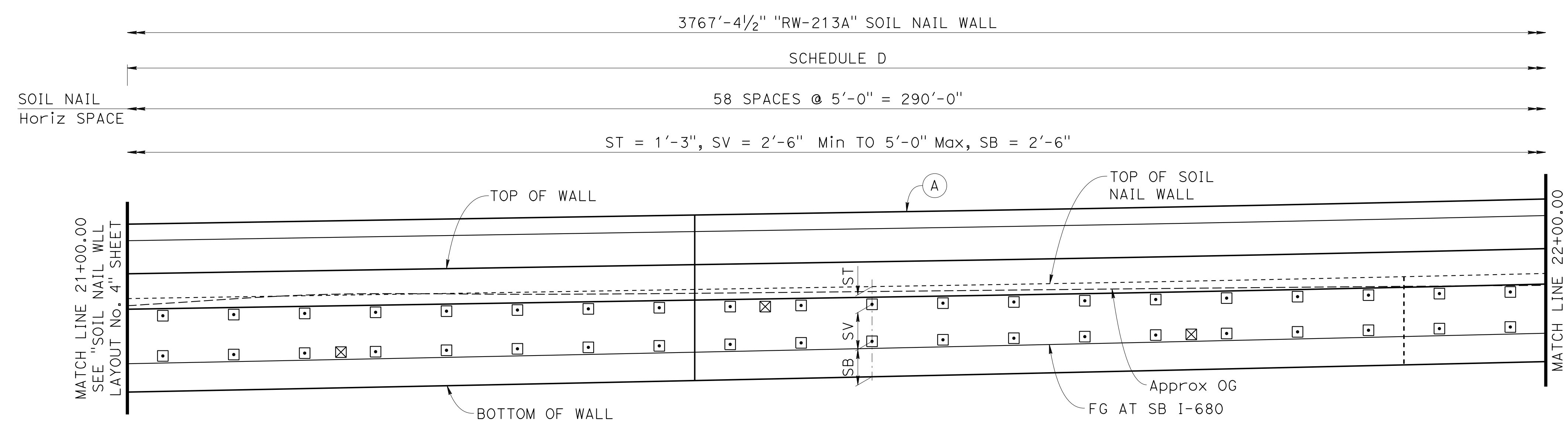
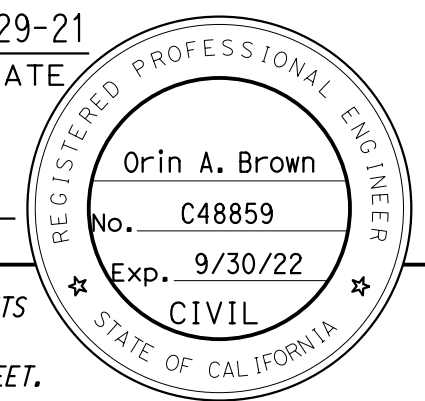
**PREPARED FOR THE
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 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER


BRIDGE No.	33E0251
POST MILE	R13.5

**RETAINING WALL No. 213A
 SOIL NAIL WALL LAYOUT No. 4**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1636	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021					
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.					
ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					



NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.


 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

**RETAINING WALL No. 213A
 SOIL NAIL WALL LAYOUT No. 5**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1637	1710

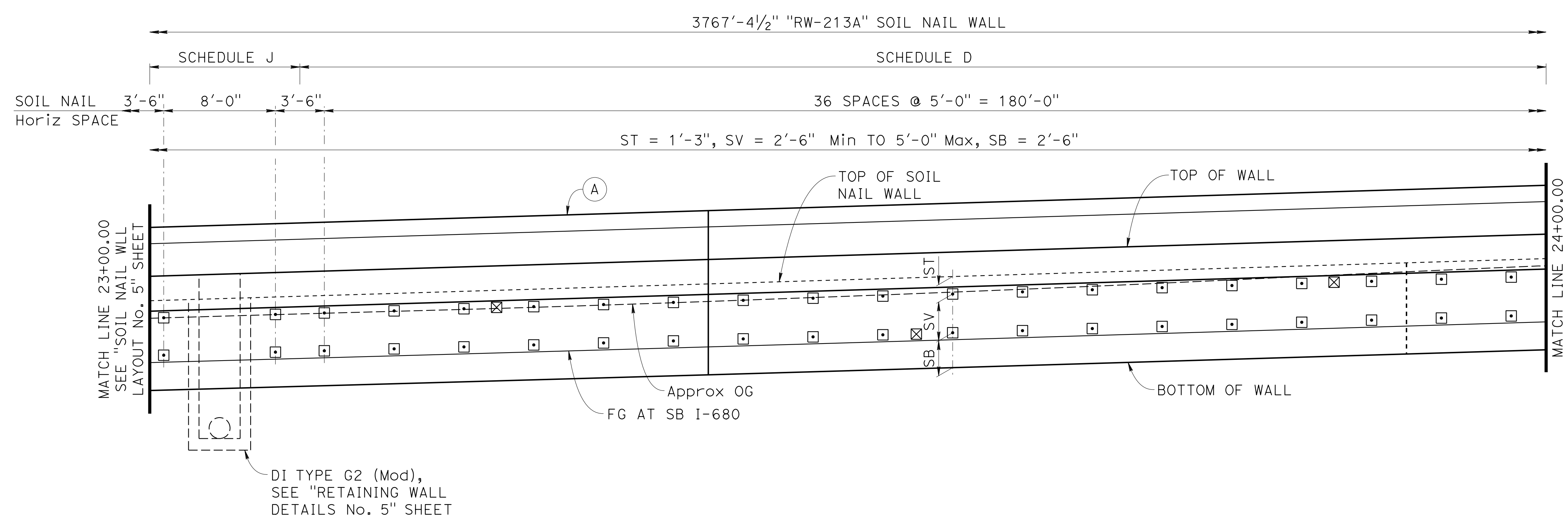
Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21

October 8, 2021
 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.

ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607

AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

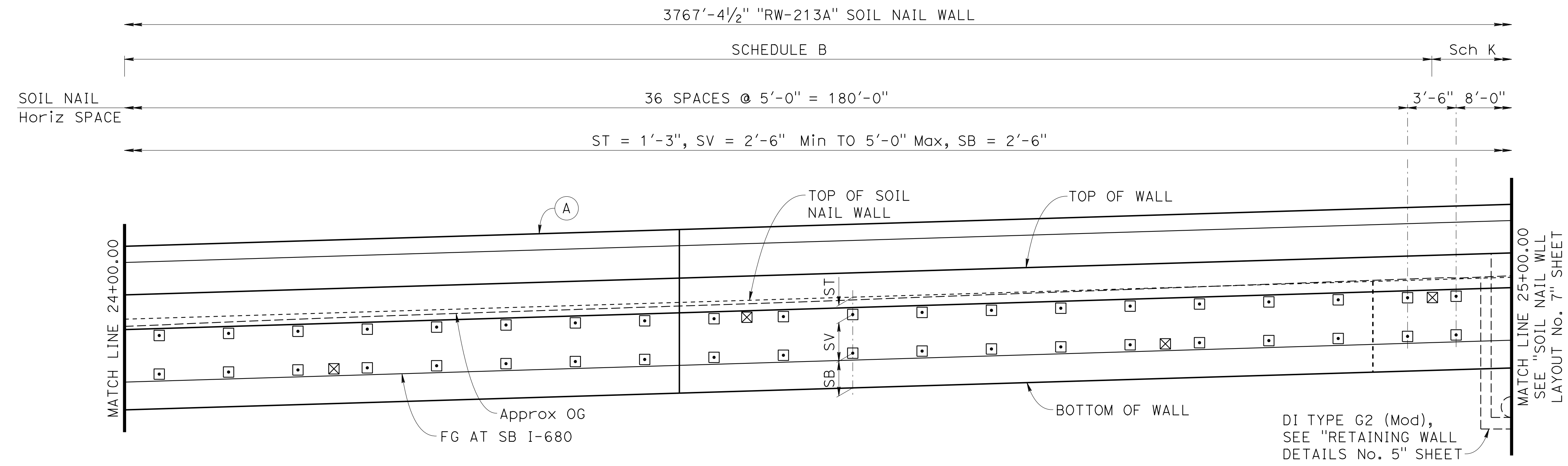


DATUM Elev 315

23+00 23+20 23+40 23+60 23+80 24+00

DEVELOPED MIRRORED ELEVATION

1"=5'



DATUM Elev 325

24+00 24+20 24+40 24+60 24+80 25+00

DEVELOPED MIRRORED ELEVATION

1"=5'

NOTE:

1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.

Norbert Gee
 DESIGN OVERSIGHT
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

RETAINING WALL No. 213A
SOIL NAIL WALL LAYOUT No. 6

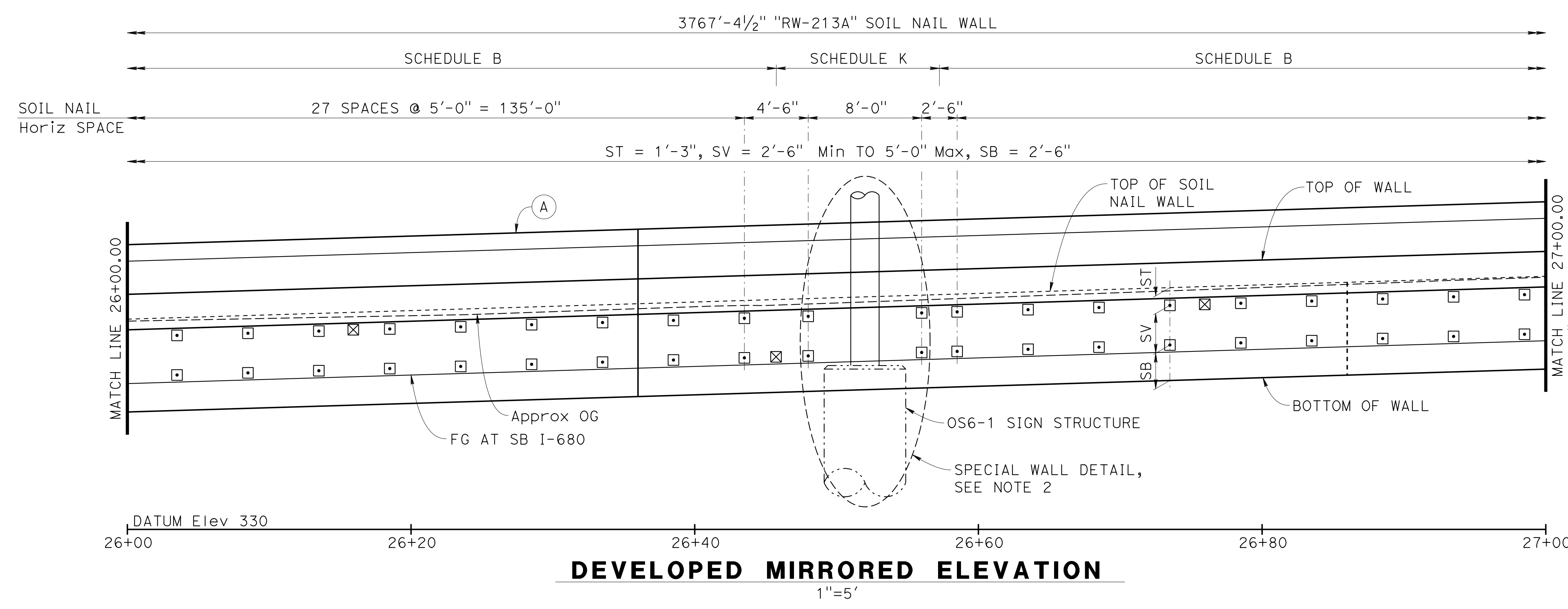
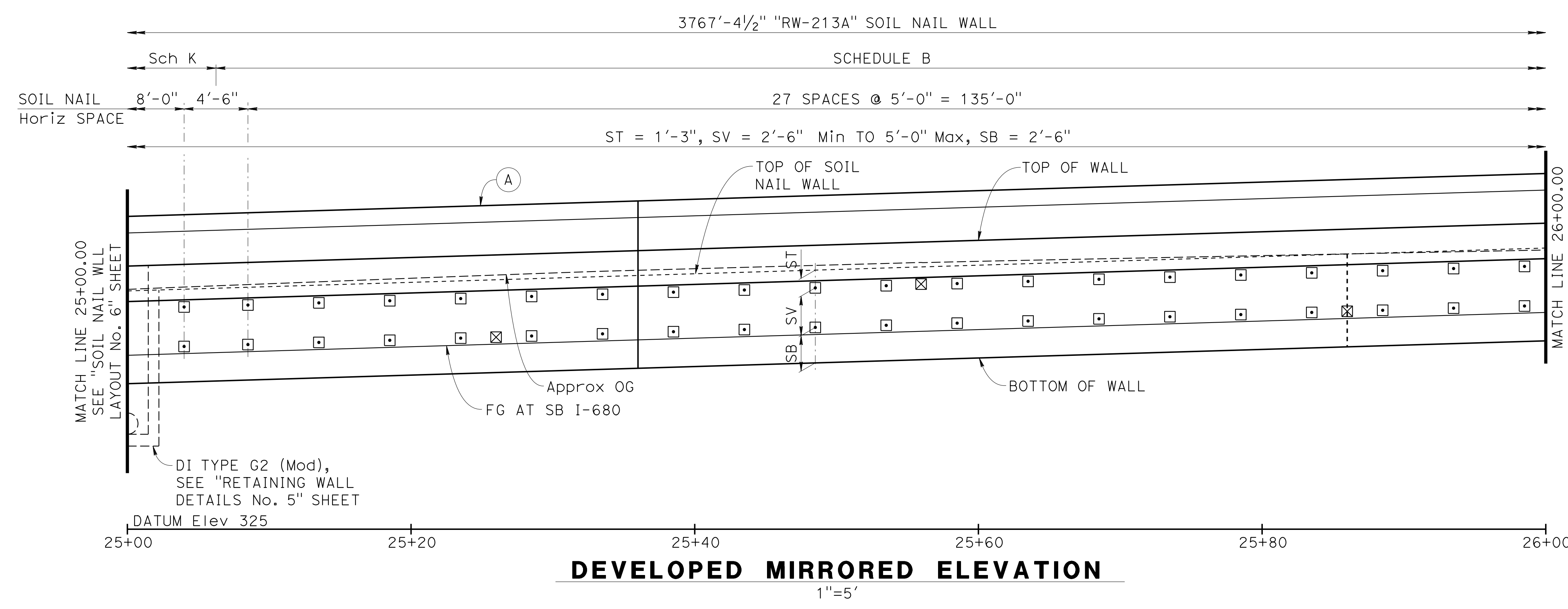
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1638	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE

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ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607

AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811



- NOTE:**
- For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.
 - For wall details with 8 feet soil nail spacing, see "SPECIAL WALL DETAIL" at "RETAINING WALL DETAILS No. 4" sheet.

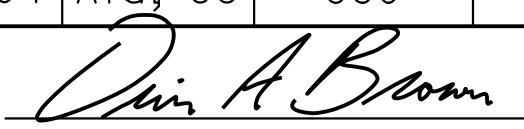
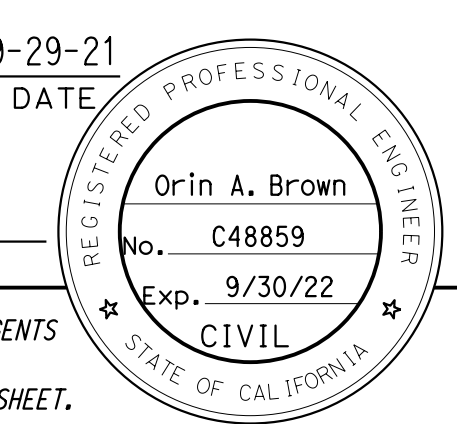
Norbert Gee
 DESIGN OVERSIGHT
 2/15/22
 SIGN OFF DATE

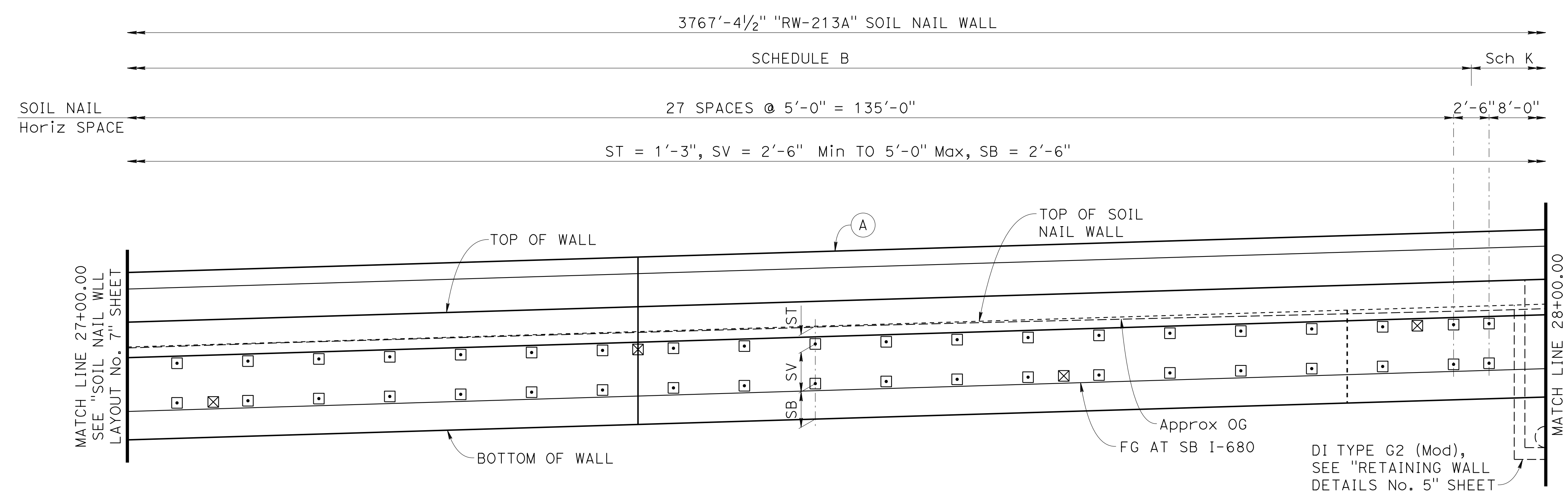
DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE
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 Syed Kazmi
 PROJECT ENGINEER

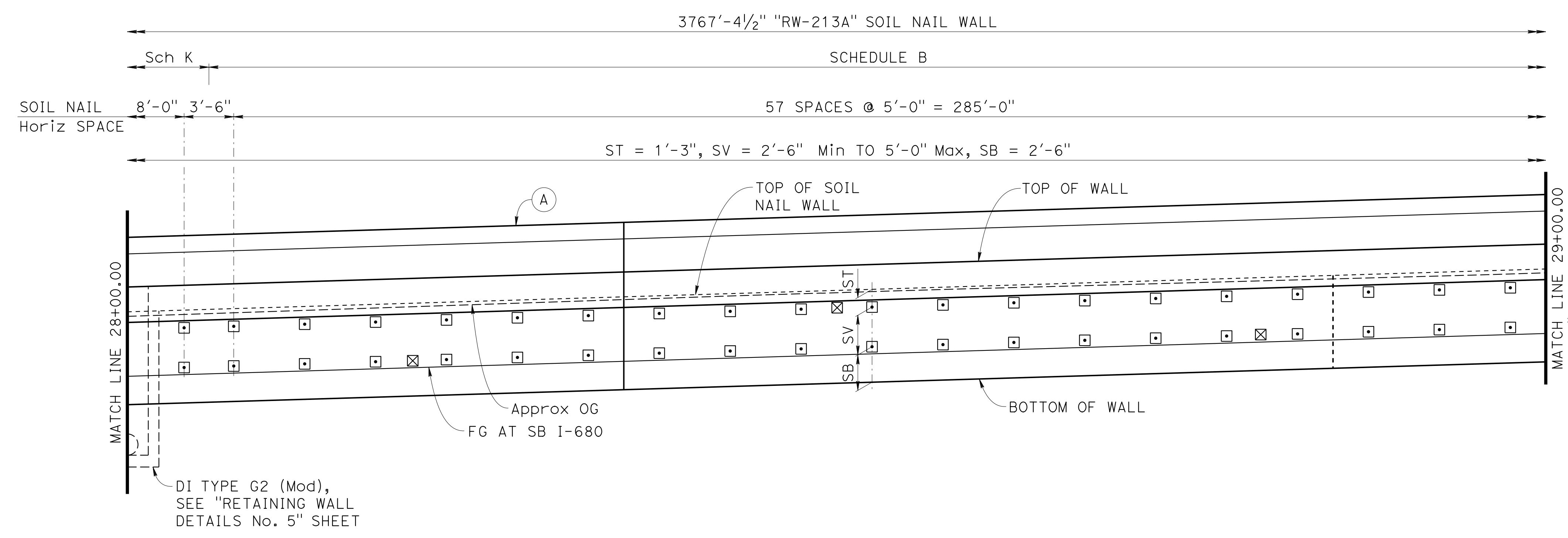
BRIDGE No.	33E0251
POST MILE	R13.5

RETAINING WALL No. 213A
SOIL NAIL WALL LAYOUT No. 7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1639	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 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>					
ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					




DATUM Elev 335
 27+00 27+20 27+40 27+60 27+80 28+00
DEVELOPED MIRRORED ELEVATION
 1"=5'



DATUM Elev 330
 28+00 28+20 28+40 28+60 28+80 29+00
DEVELOPED MIRRORED ELEVATION
 1"=5'

NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.


 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

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 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

**RETAINING WALL No. 213A
 SOIL NAIL WALL LAYOUT No. 8**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1640	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21

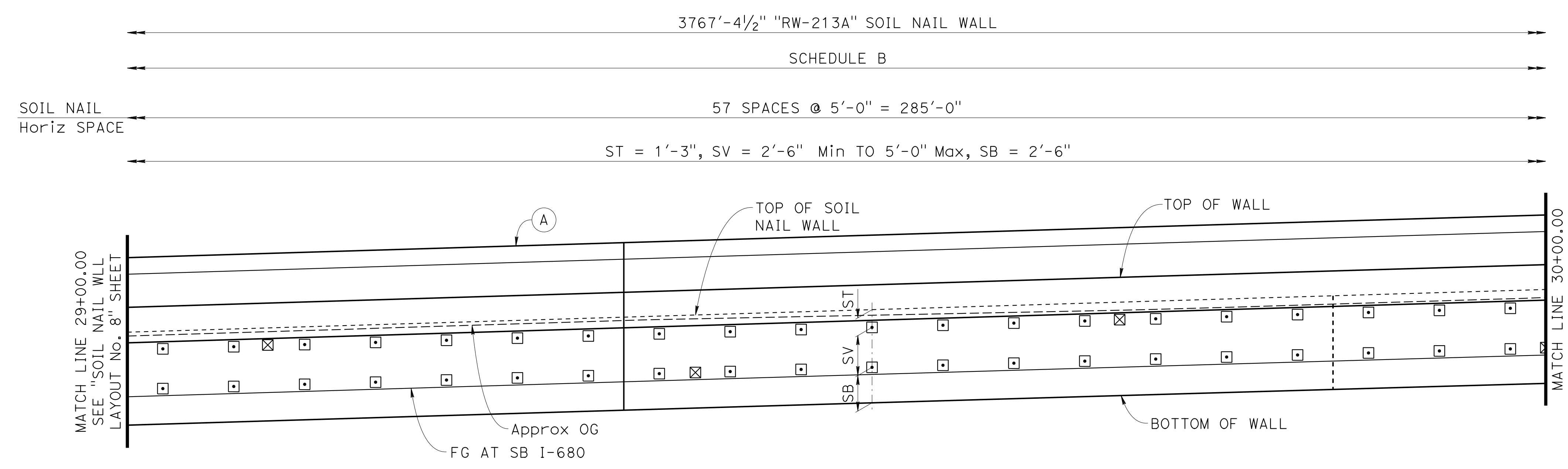
October 8, 2021
 PLANS APPROVAL DATE

Orin A. Brown
 No. C48859
 Exp. 9/30/22
 CIVIL
 STATE OF CALIFORNIA

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ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607

AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

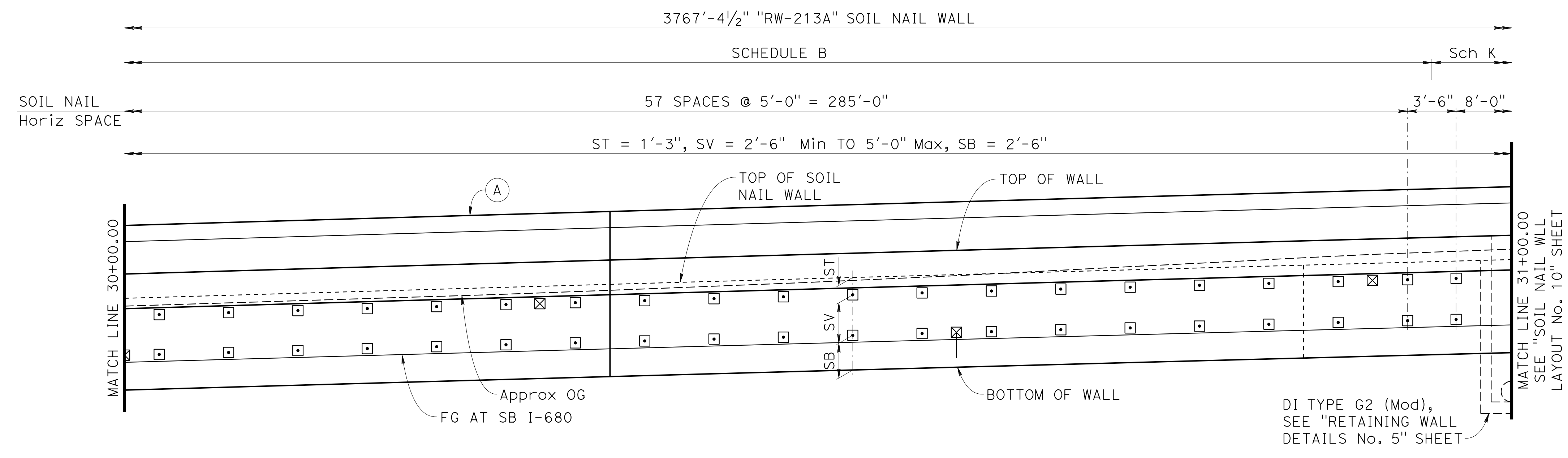


DATUM Elev 340

29+00 29+20 29+40 29+60 29+80 30+00

DEVELOPED MIRRORED ELEVATION

1"=5'



DATUM Elev 340

30+00 30+20 30+40 30+60 30+80 31+00

DEVELOPED MIRRORED ELEVATION

1"=5'

NOTE:

1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

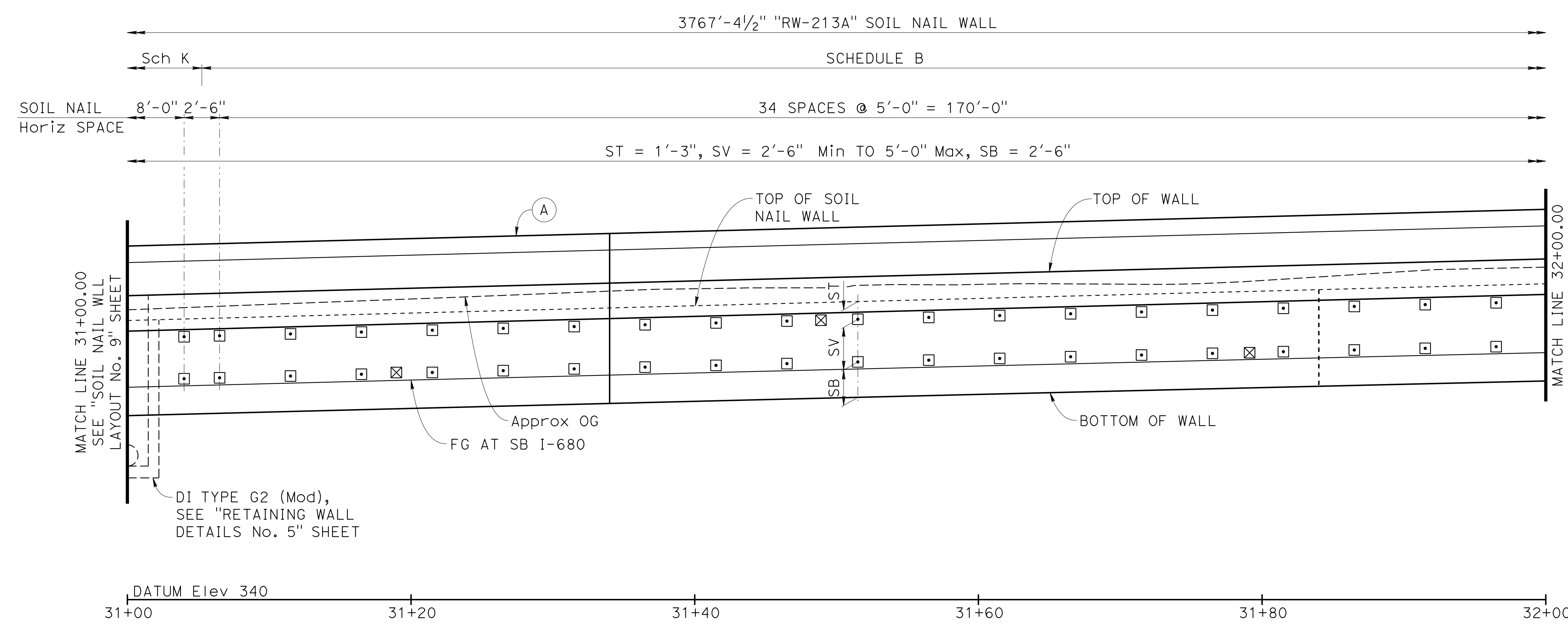
**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER

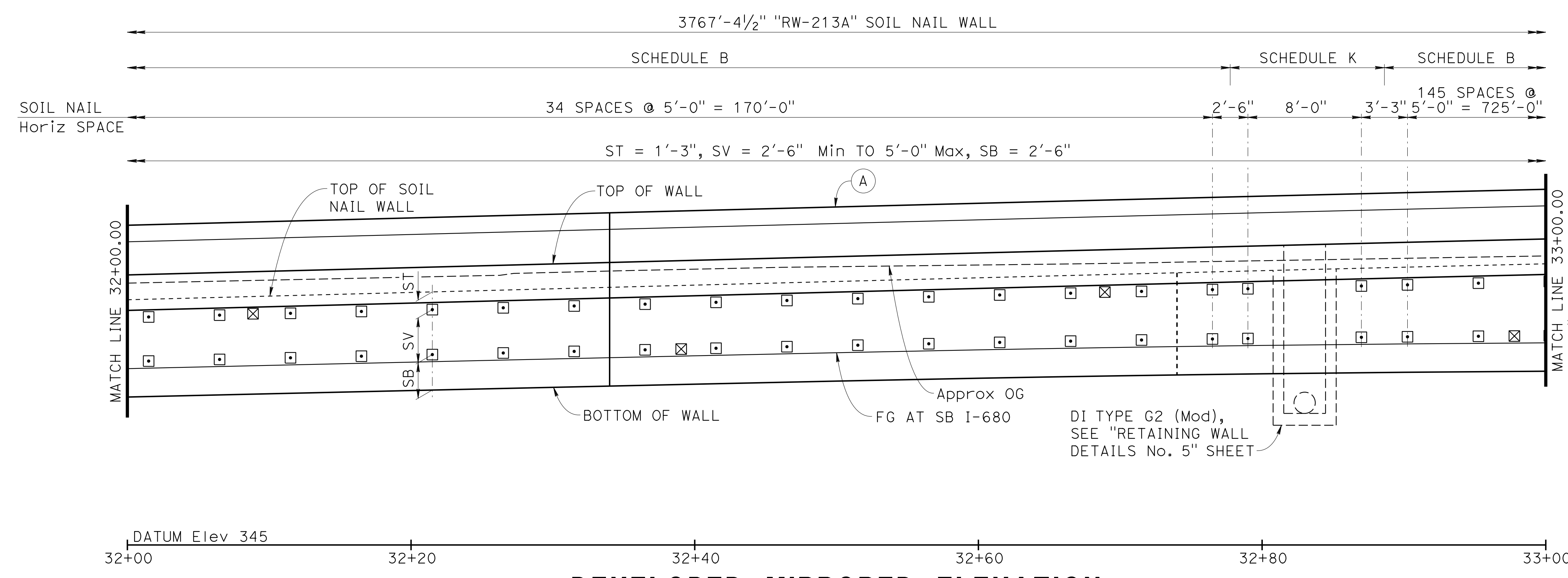
BRIDGE No.	33E0251
POST MILE	R13.5

**RETAINING WALL No. 213A
 SOIL NAIL WALL LAYOUT No. 9**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1641	1710
			9-29-21		
Orin A. Brown			DATE		
REGISTERED CIVIL ENGINEER					
October 8, 2021			PLANS APPROVAL DATE		
			Orin A. Brown		
			No. C48859		
			Exp. 9/30/22		
			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.					
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AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					



DEVELOPED MIRRORED ELEVATION
1"=5'



DEVELOPED MIRRORED ELEVATION
1"=5'

NOTE:
1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.

Norbert Gee
DESIGN OVERSIGHT
Norbert Gee
2/15/22
SIGN OFF DATE

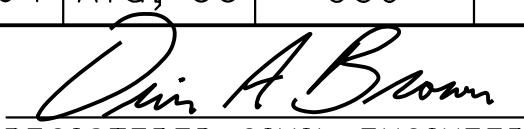
DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

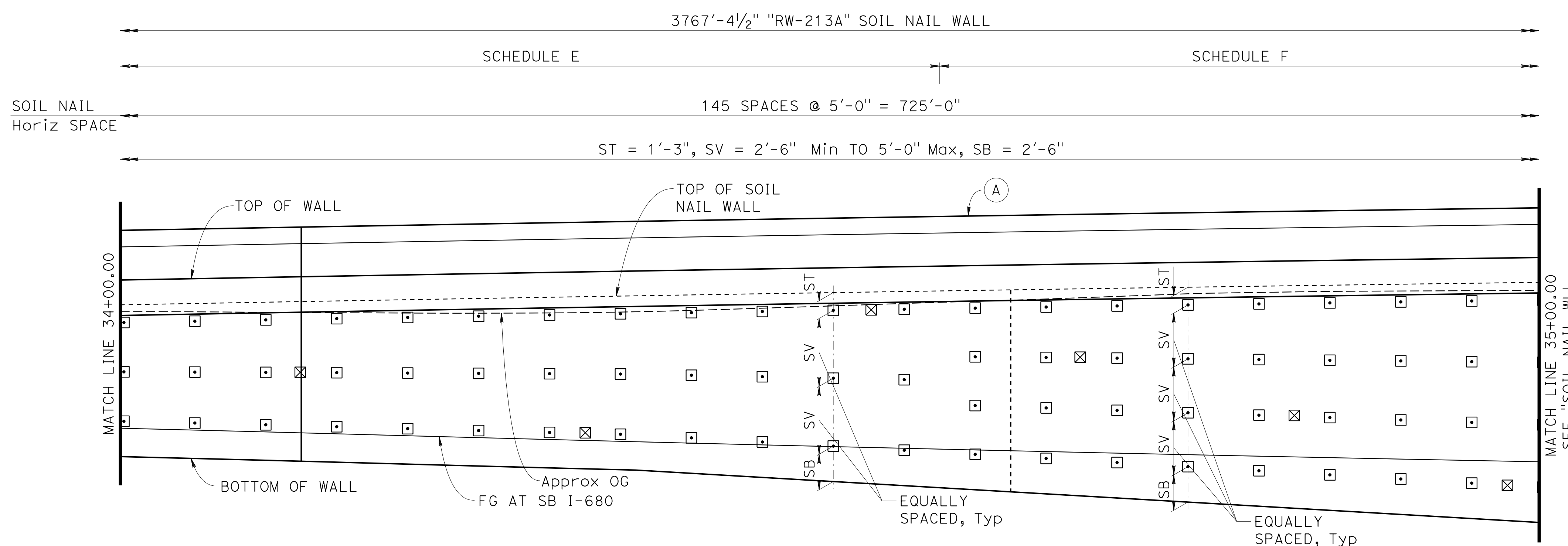
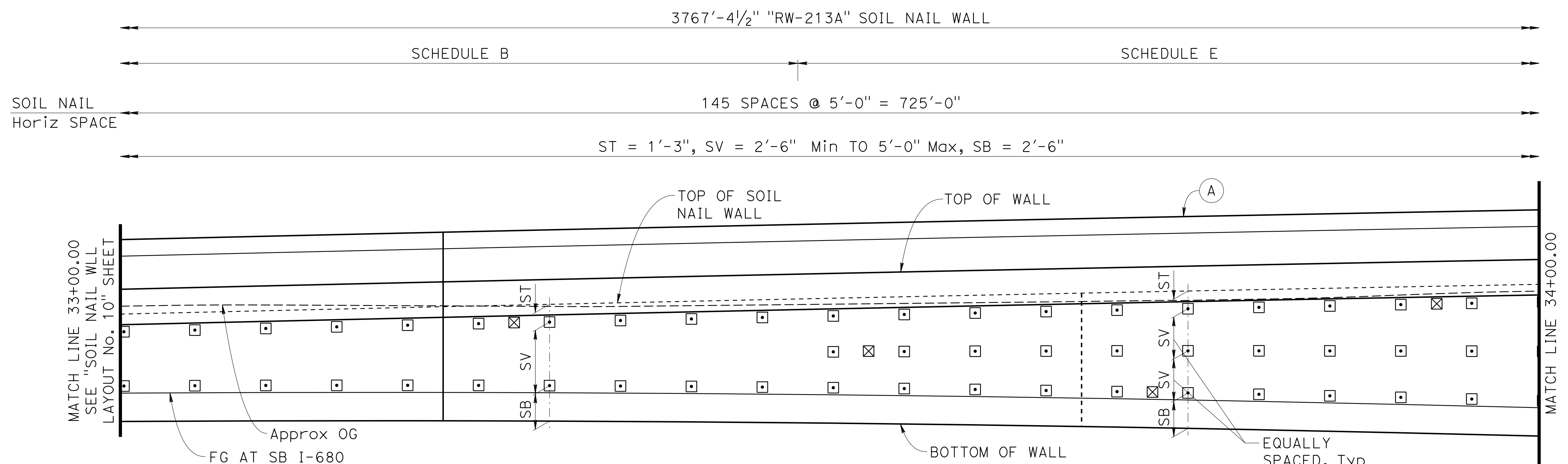
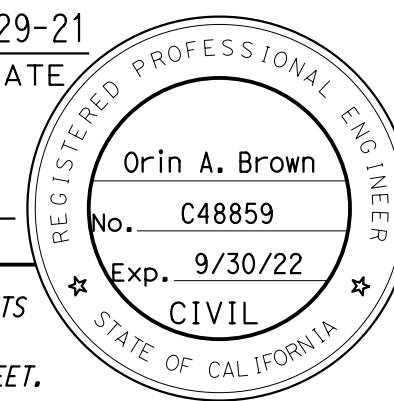
**PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

**RETAINING WALL No. 213A
SOIL NAIL WALL LAYOUT No. 10**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1642	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 PLANS APPROVAL DATE					
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ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					



NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

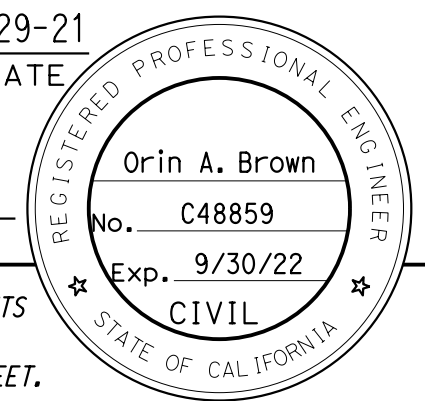
Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

RETAINING WALL No. 213A
SOIL NAIL WALL LAYOUT No. 11

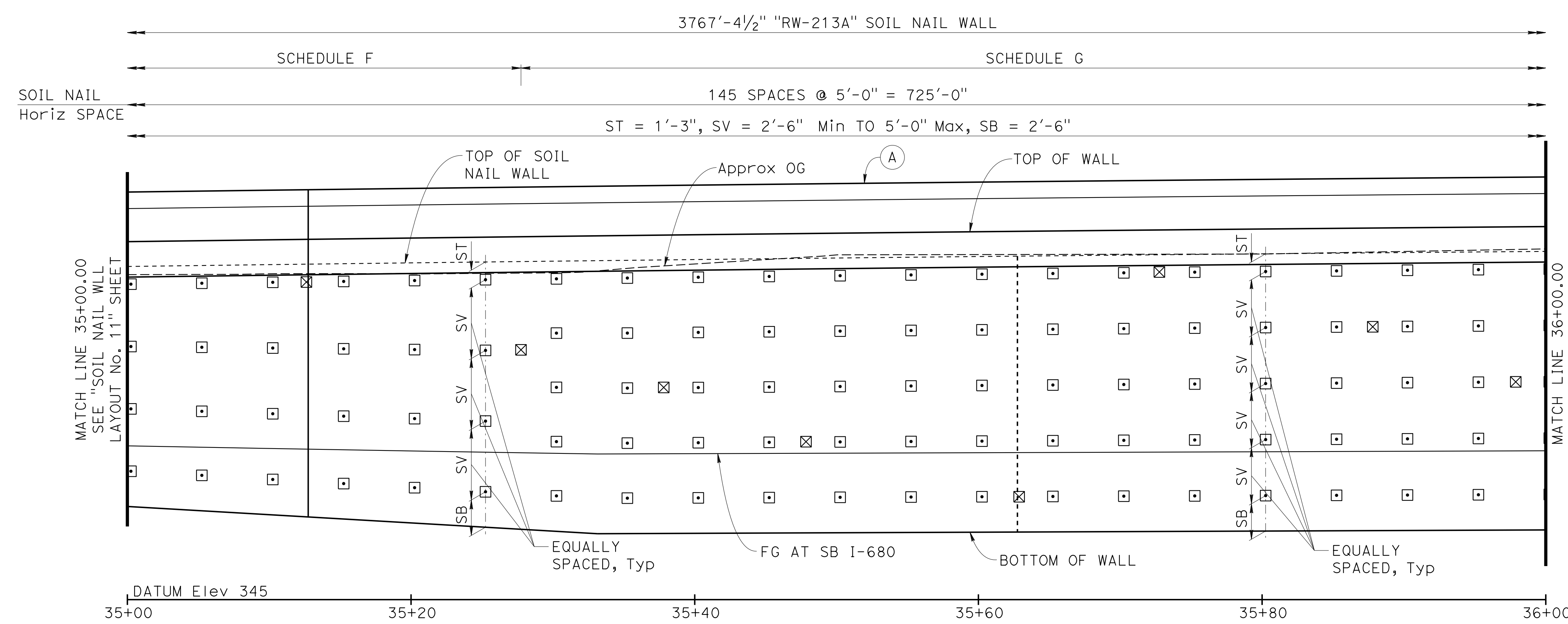
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1643	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 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.



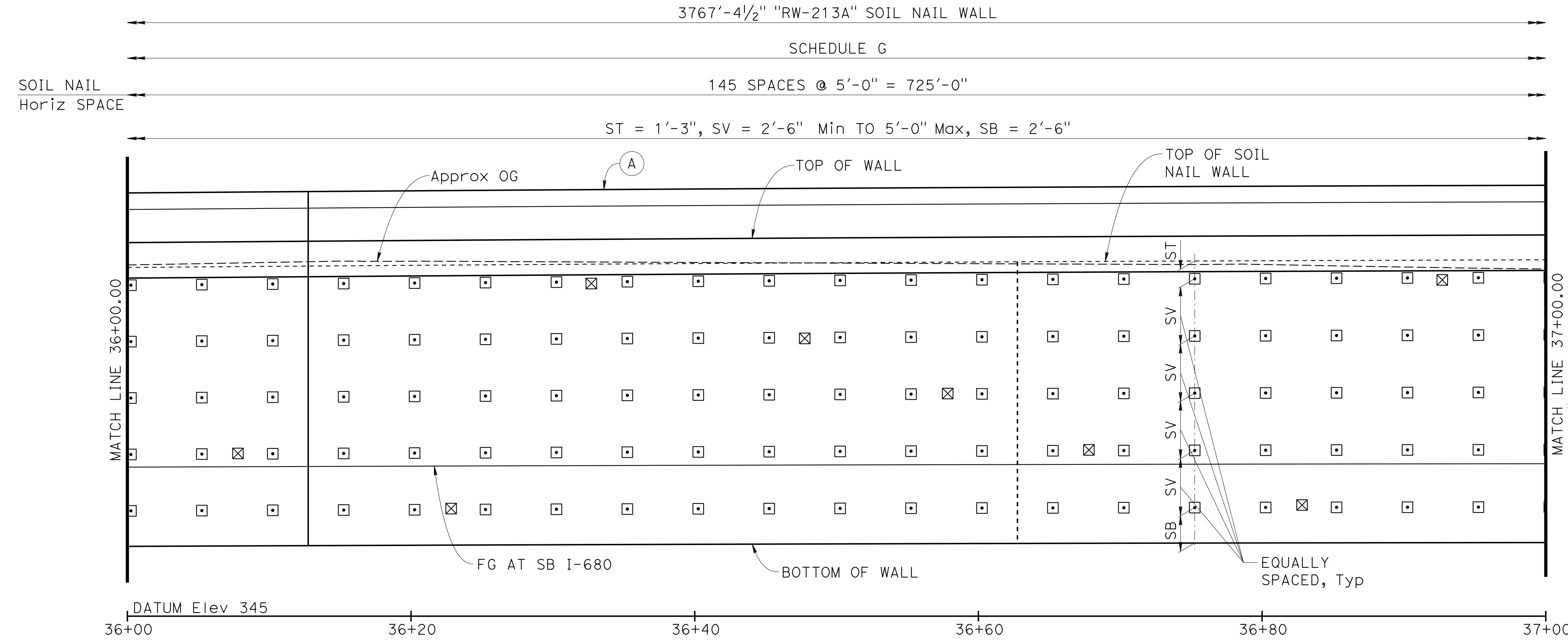
ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607
 AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.



DEVELOPED MIRRORED ELEVATION

1"=5'



DEVELOPED MIRRORED ELEVATION

1"=5'

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
 Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

RETAINING WALL No. 213A
SOIL NAIL WALL LAYOUT No. 12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1644	1710

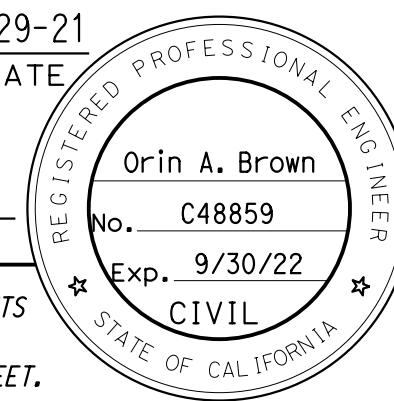
Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21

October 8, 2021
 PLANS APPROVAL DATE

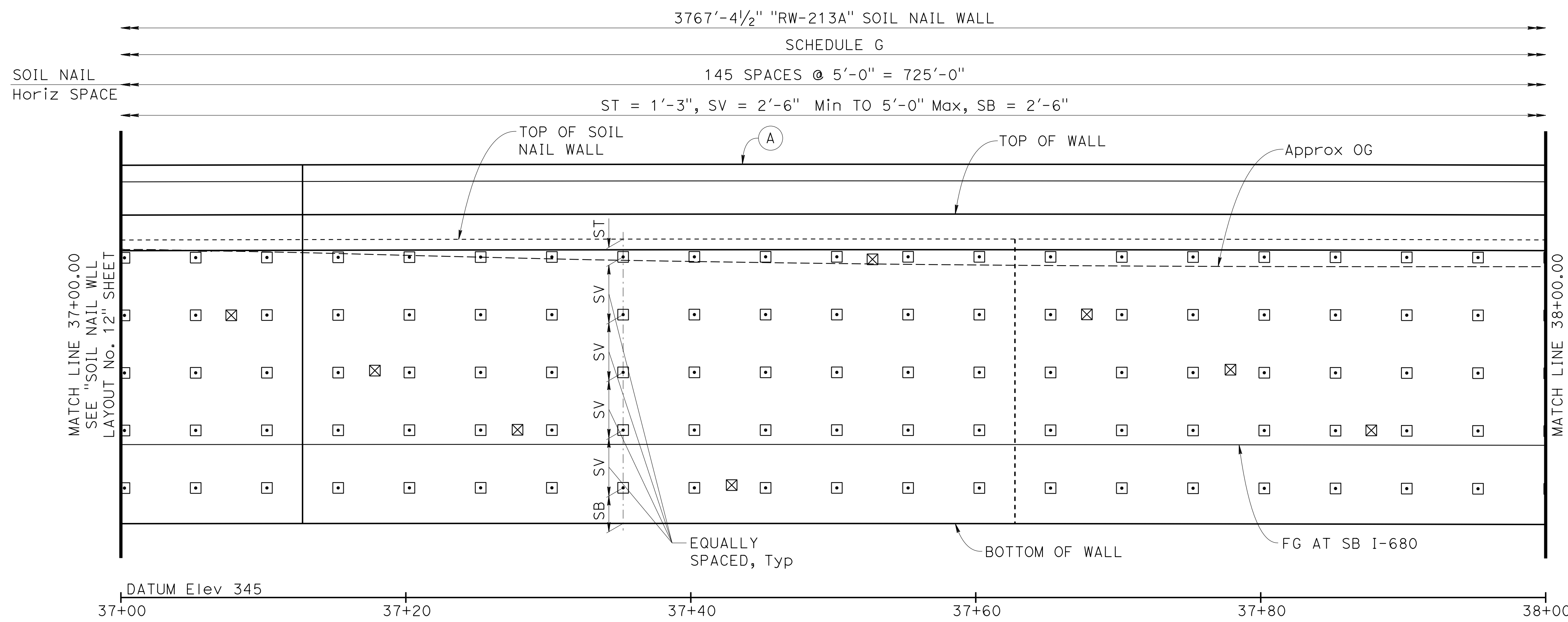
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607

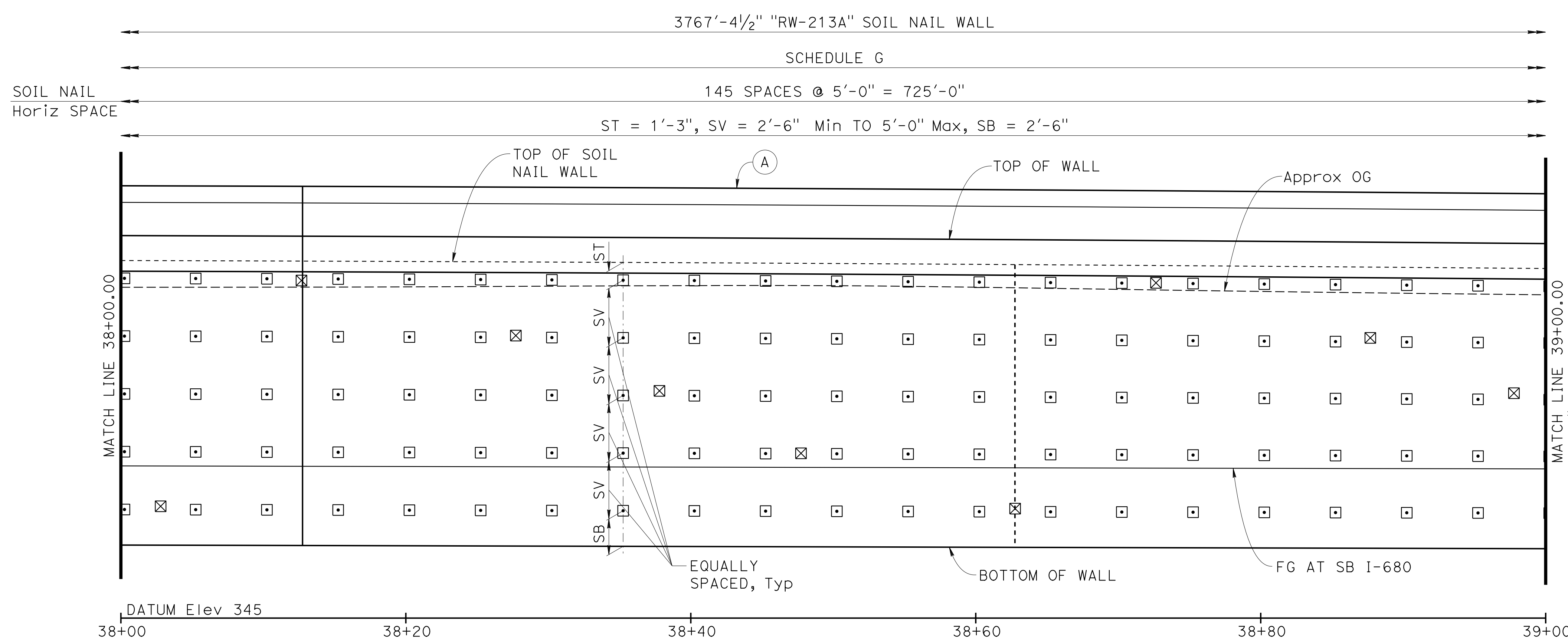
AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811



NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.



DEVELOPED MIRRORED ELEVATION
 1"=5'



DEVELOPED MIRRORED ELEVATION
 1"=5'


DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

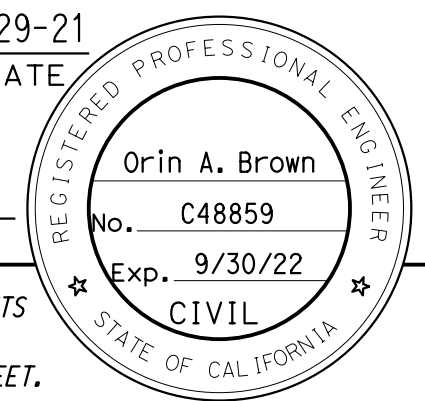
DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
 Syed Kazmi
 PROJECT ENGINEER

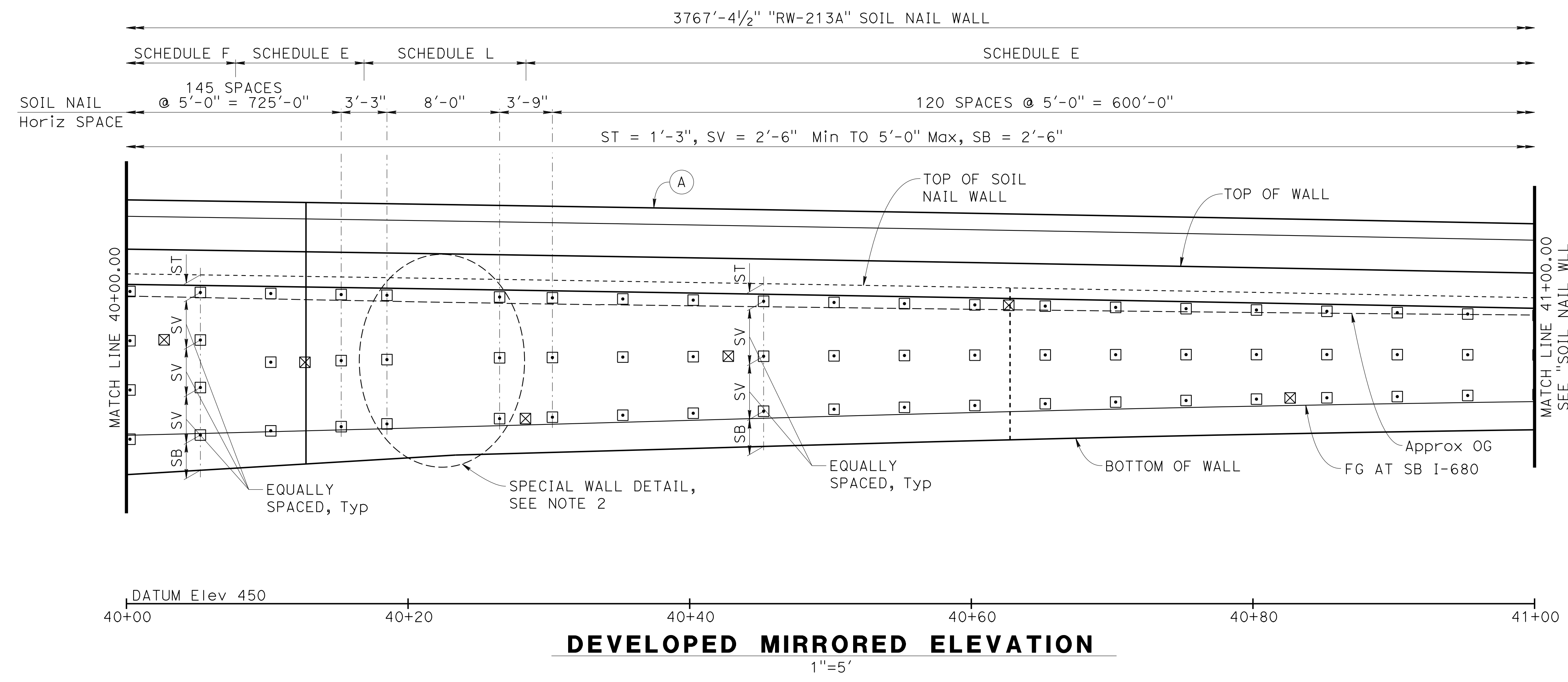
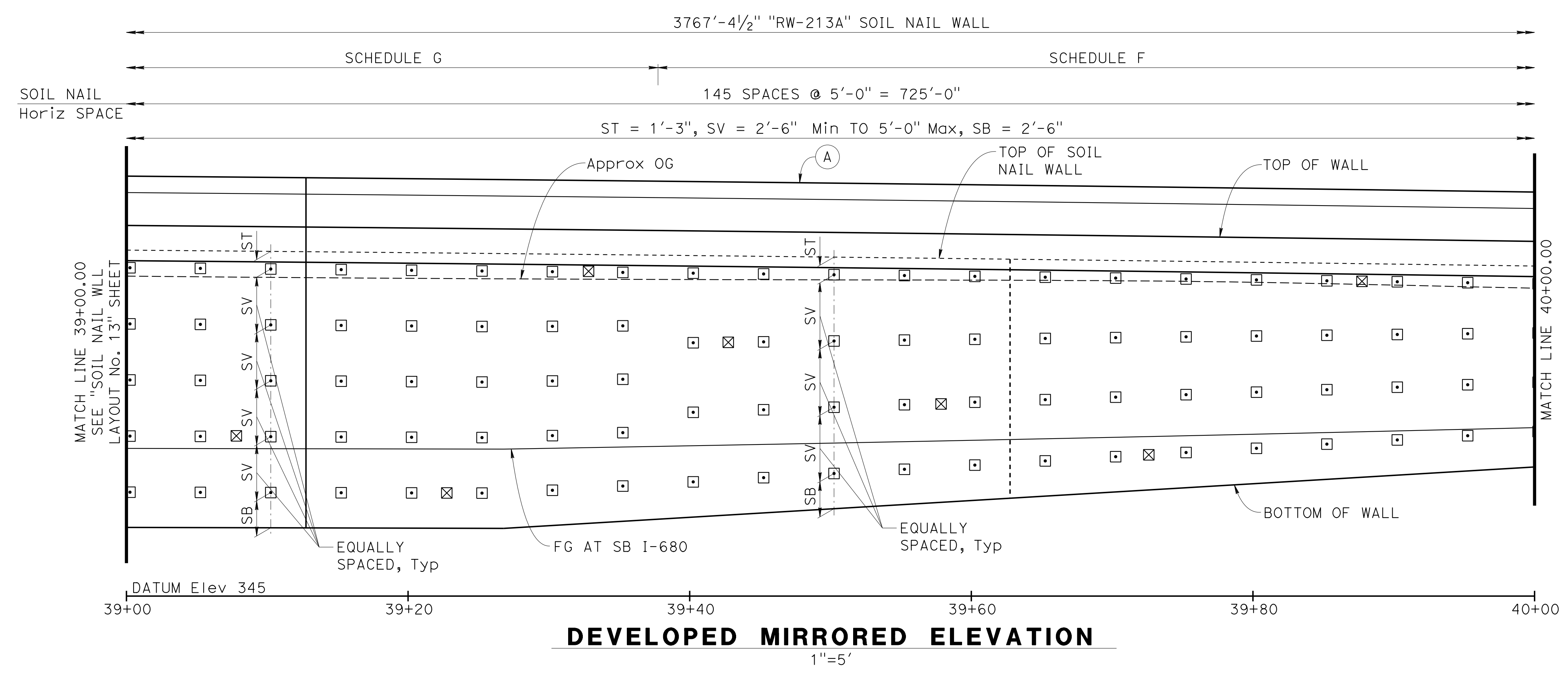
BRIDGE No.	33E0251
POST MILE	R13.5


RETAINING WALL No. 213A
SOIL NAIL WALL LAYOUT No. 13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1645	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021			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.					
ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					



- NOTE:**
- For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.
 - For wall details with 8 feet soil nail spacing, see "SPECIAL WALL DETAIL" at "RETAINING WALL DETAILS No. 4" sheet.



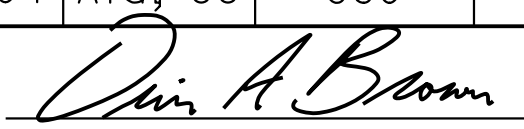
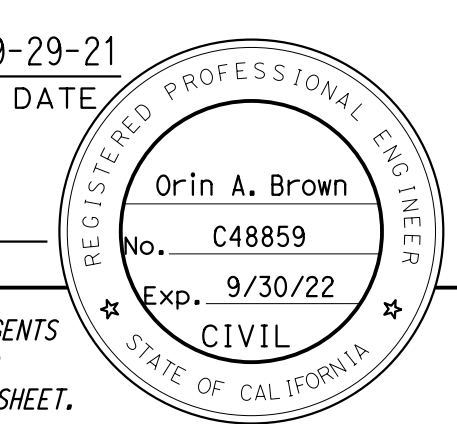

 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

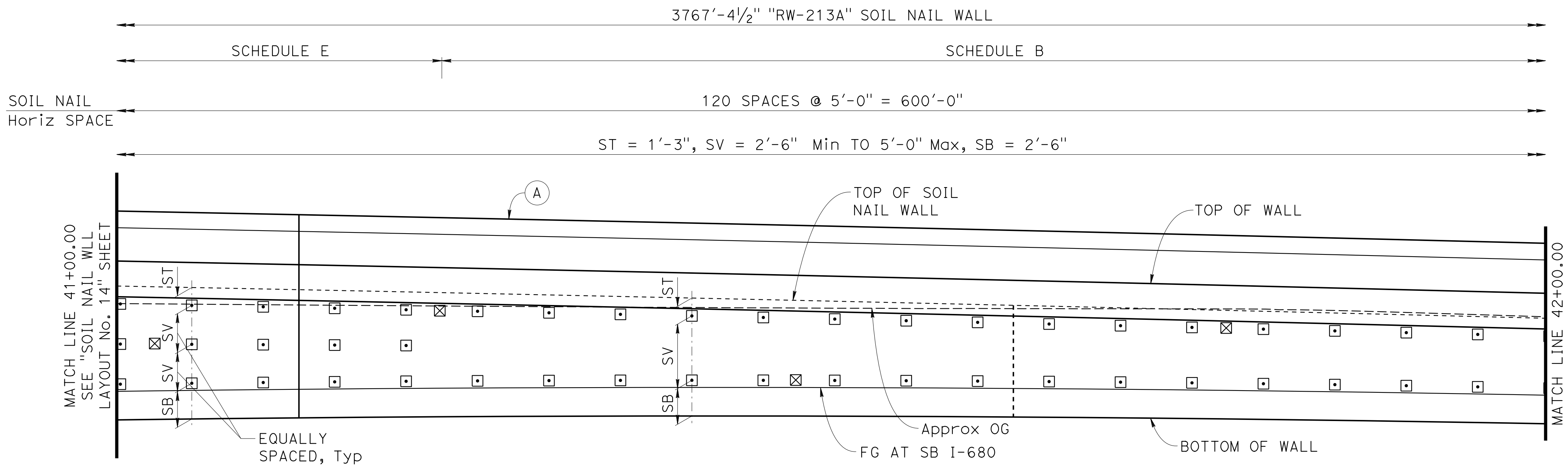
DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE
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DEPARTMENT OF TRANSPORTATION
 Syed Kazmi
 PROJECT ENGINEER

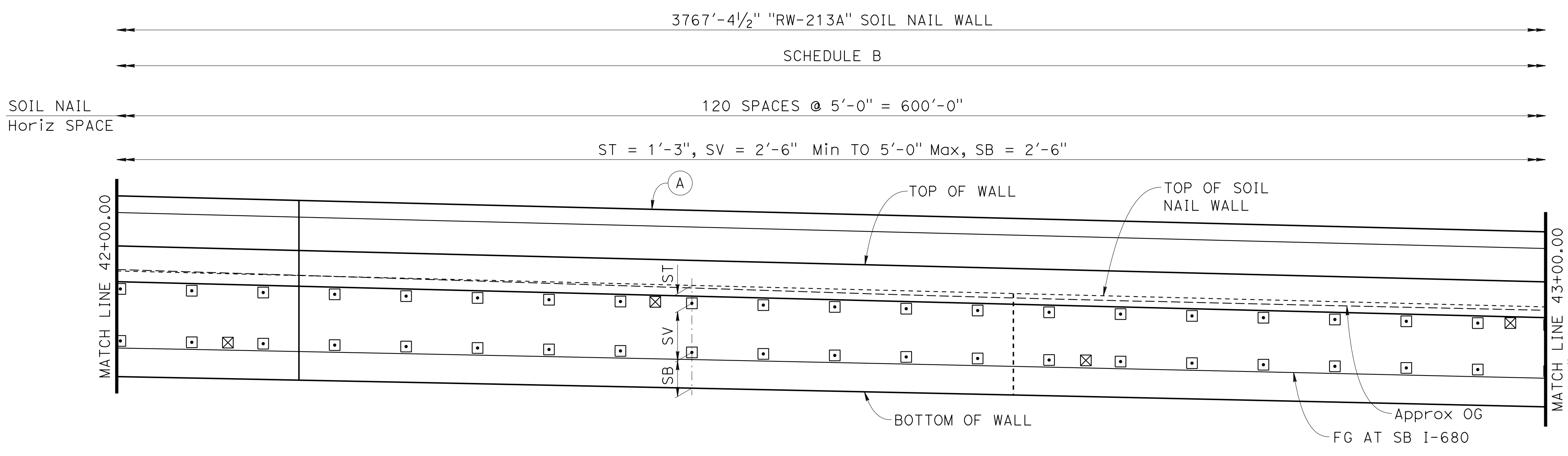
BRIDGE No.	33E0251
POST MILE	R13.5

RETAINING WALL No. 213A
SOIL NAIL WALL LAYOUT No. 14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1646	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 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>					
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AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					




DATUM Elev 350
 41+00 41+20 41+40 41+60 41+80 42+00
DEVELOPED MIRRORED ELEVATION
 1"=5'



DATUM Elev 345
 42+00 42+20 42+40 42+60 42+80 43+00
DEVELOPED MIRRORED ELEVATION
 1"=5'

NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.


 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

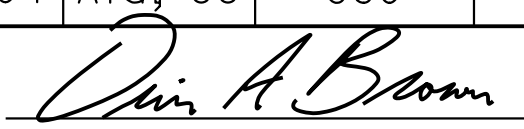
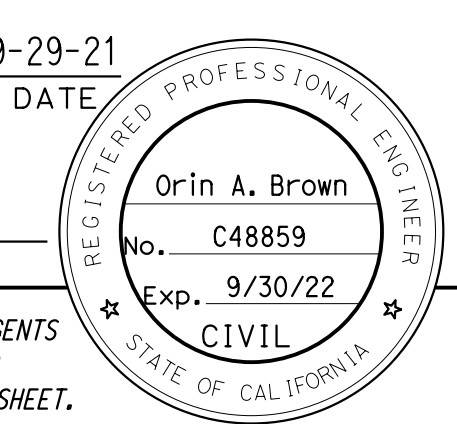
DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

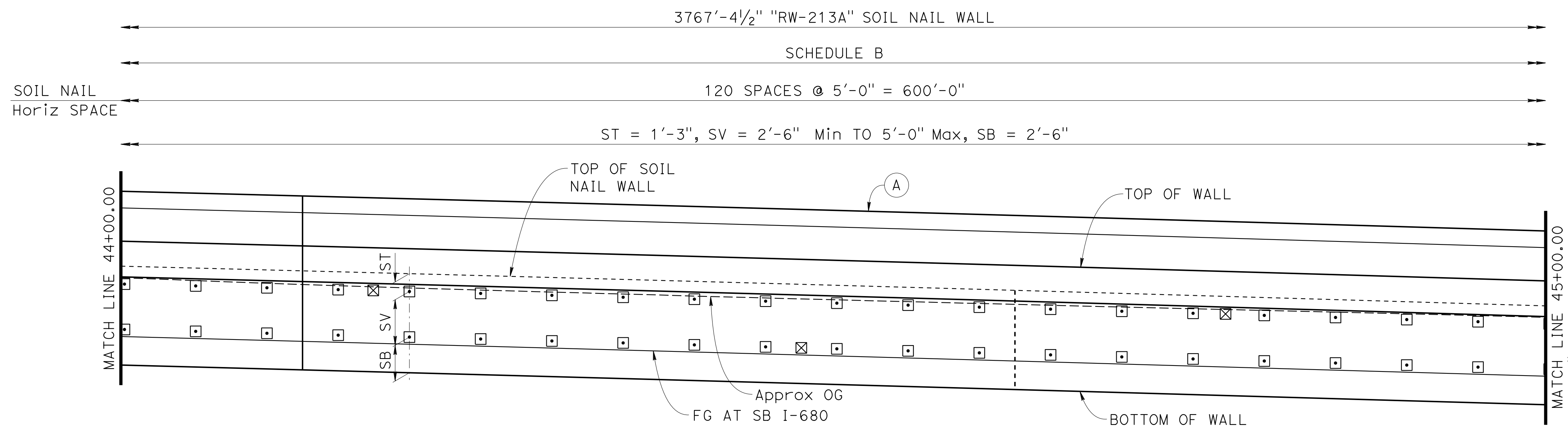
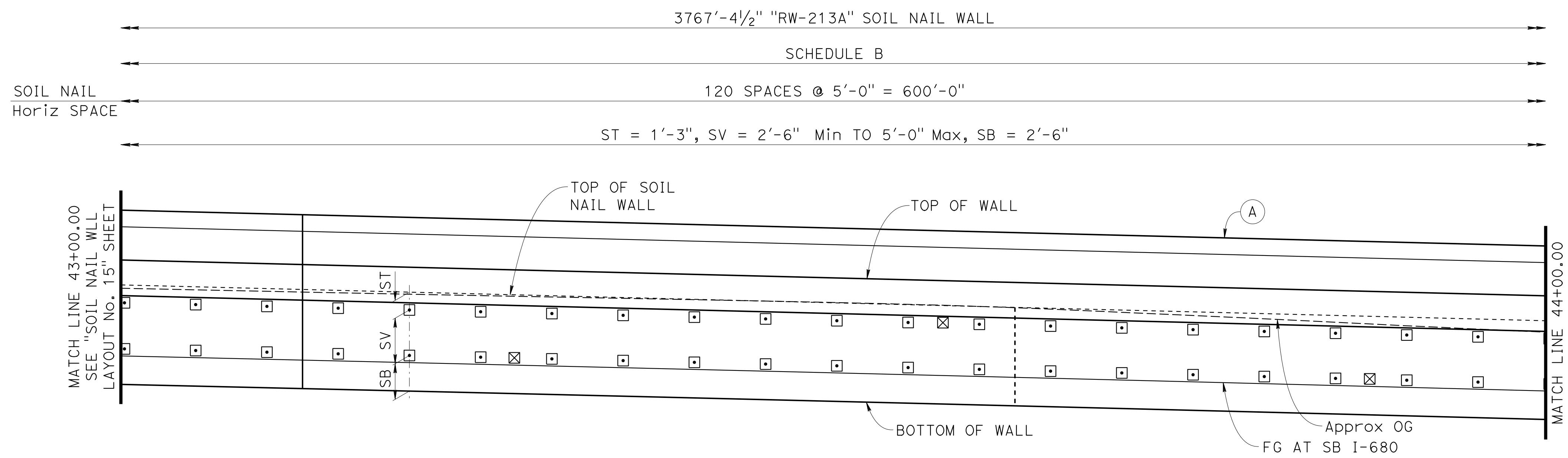
**PREPARED FOR THE
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 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

**RETAINING WALL No. 213A
 SOIL NAIL WALL LAYOUT No. 15**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1647	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 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>					
ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					



NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

RETAINING WALL No. 213A
SOIL NAIL WALL LAYOUT No. 16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1648	1710

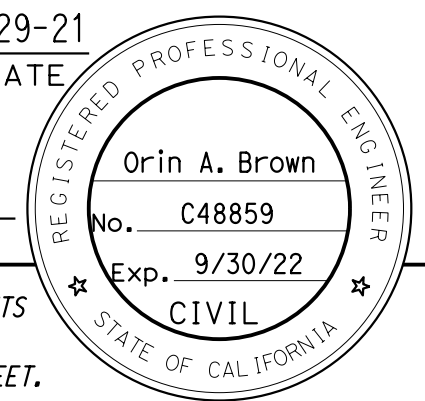
Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21

October 8, 2021
 PLANS APPROVAL DATE

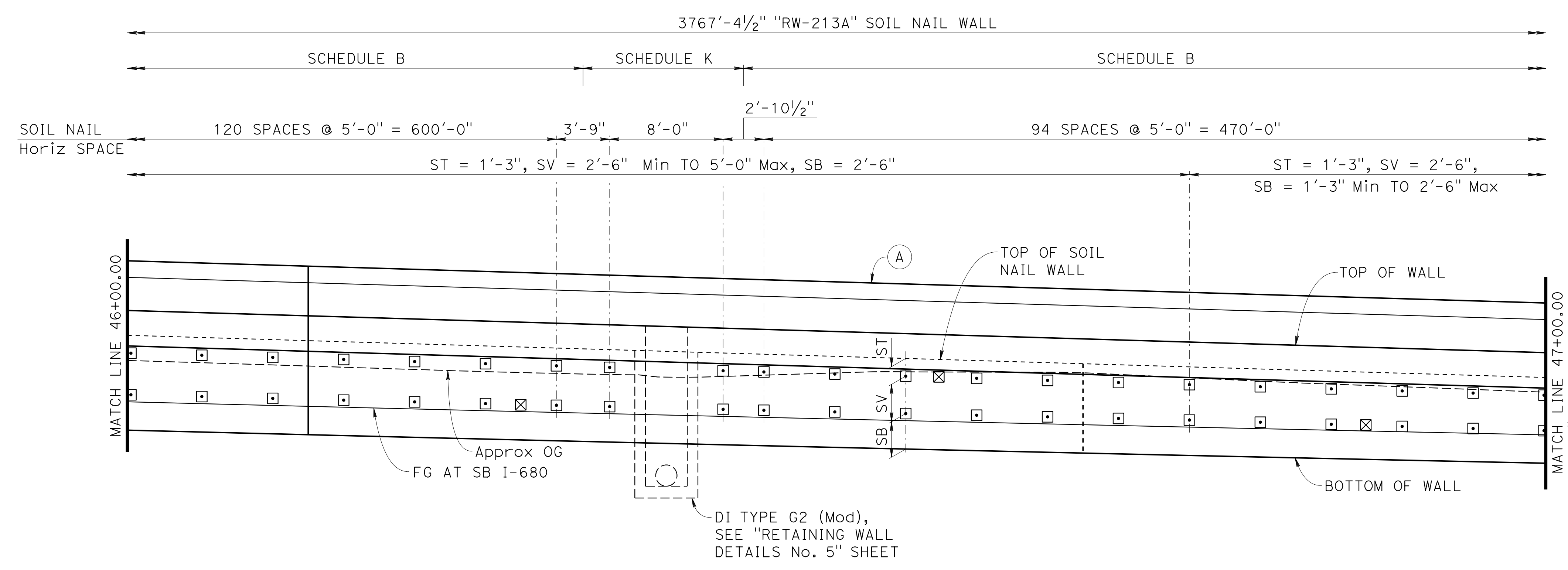
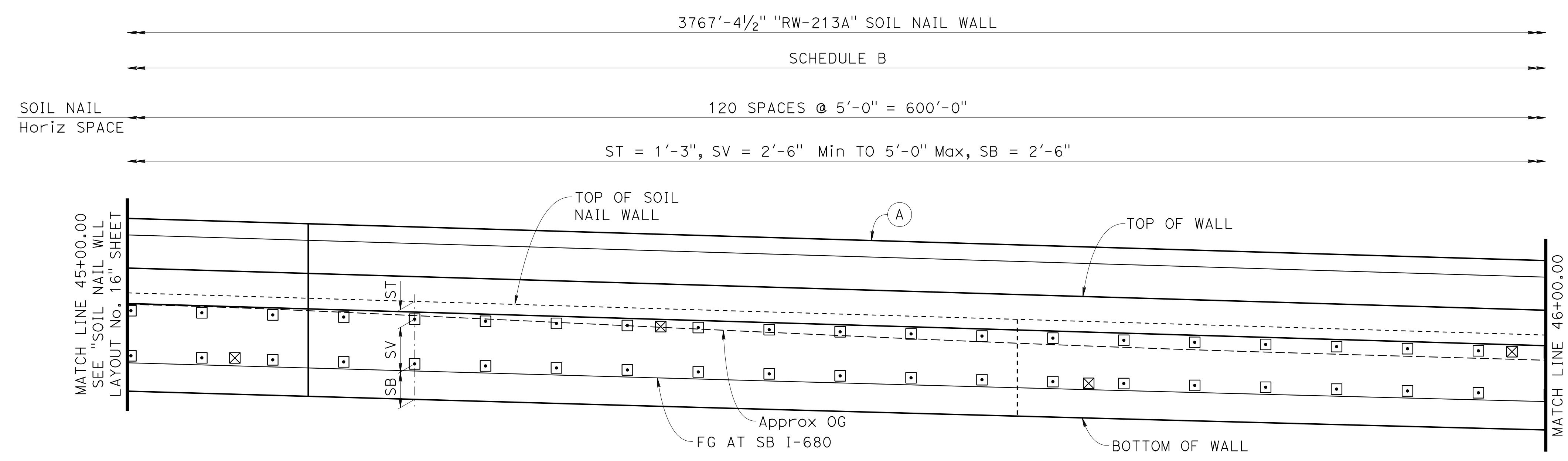
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ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607

AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811



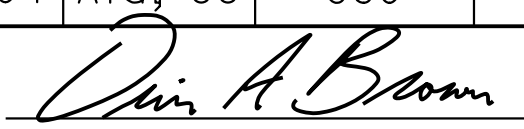
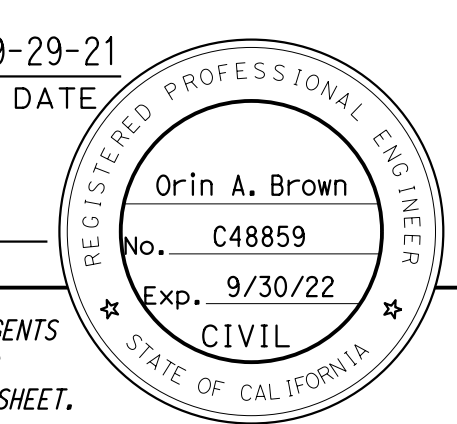
NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.

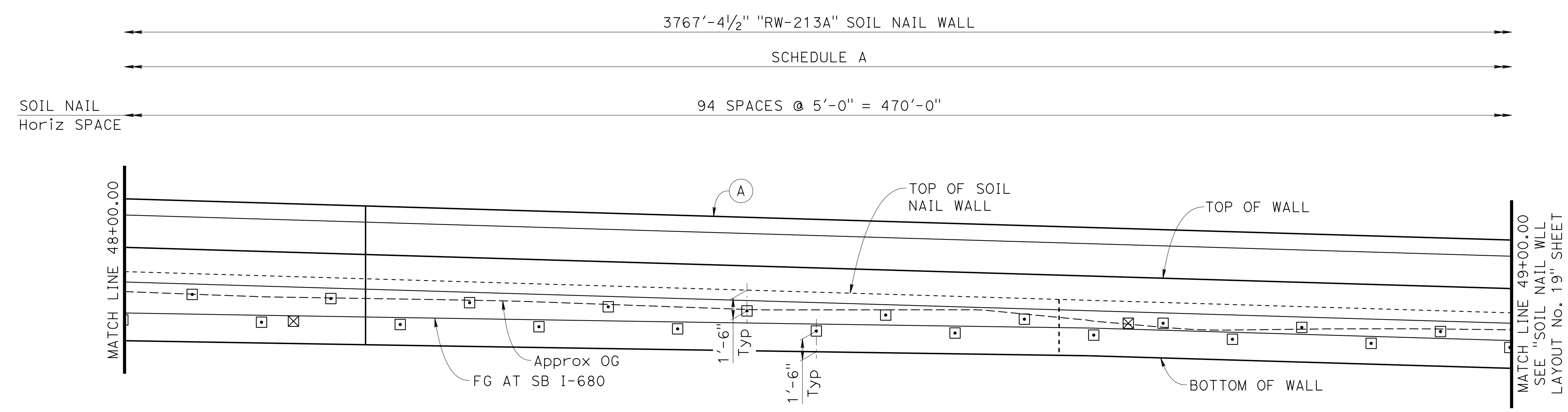
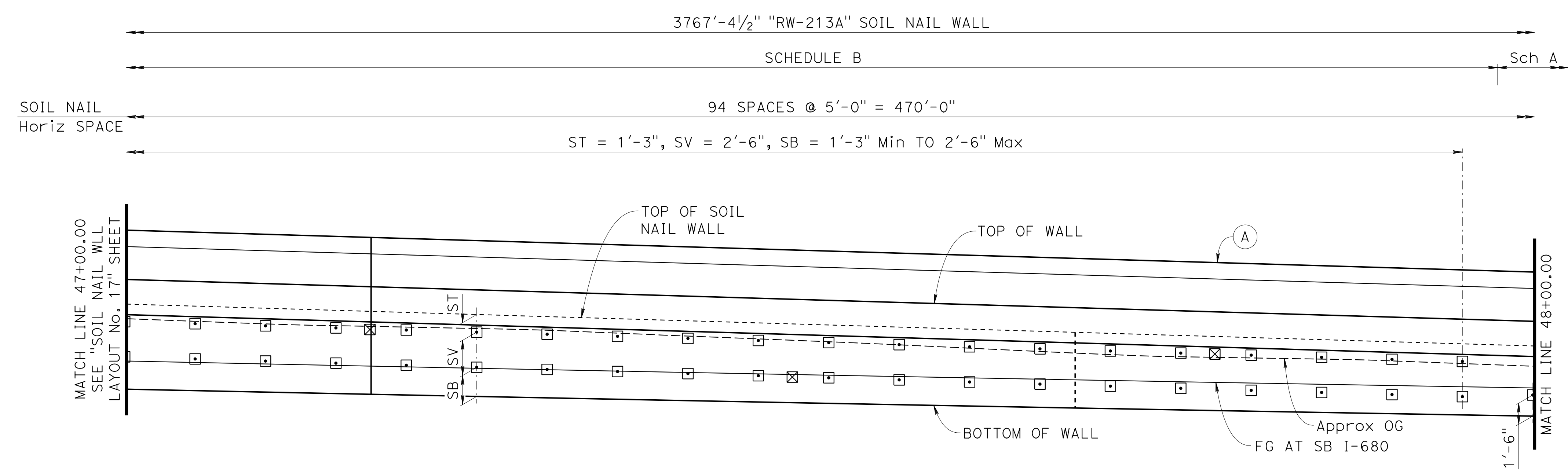


DESIGN OVERSIGHT <i>Norbert Gee</i> Norbert Gee 2/15/22 SIGN OFF DATE	DESIGN BY W. Bai	CHECKED A. AKI	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE No. 33E0251	RETAINING WALL No. 213A SOIL NAIL WALL LAYOUT No. 17
	DETAILS BY R. Lim	CHECKED A. AKI		PROJECT ENGINEER Syed Kazmi	
QUANTITIES BY W. Bai	CHECKED A. AKI	PROJECT NUMBER & PHASE: 04200002351	CONTRACT No.: 04-0030U4	REVISION DATES 8-22-21 9-2-21 09-29-21 11-2-21	SHEET 30 OF 54


DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:02 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3
 FILE => 33E0251-g-rw_1017.dgn USERNAME => p302438

UNIT: 0733
 PROJECT NUMBER & PHASE: 04200002351 CONTRACT No.: 04-0030U4 DISREGARD PRINTS BEARING EARLIER REVISION DATES

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1649	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 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>					
ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					



NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.


 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

**RETAINING WALL No. 213A
 SOIL NAIL WALL LAYOUT No. 18**

DESIGN DETAIL SHEET
 (ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:02
 FILE => 33E0251-g-rw_1018.dgn USERNAME => p302438

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS
 0 1 2 3

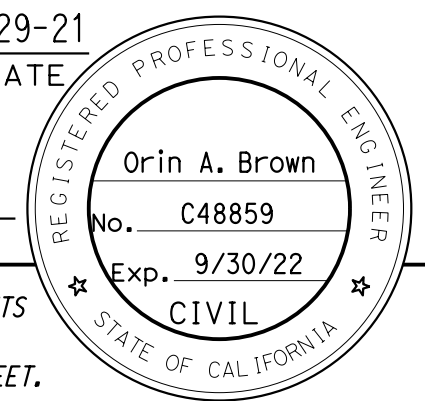
UNIT: 0733
 PROJECT NUMBER & PHASE: 04200002351

CONTRACT No.: 04-0030U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF
	8-22-21 9-21 09-29-21 11-21	31	54

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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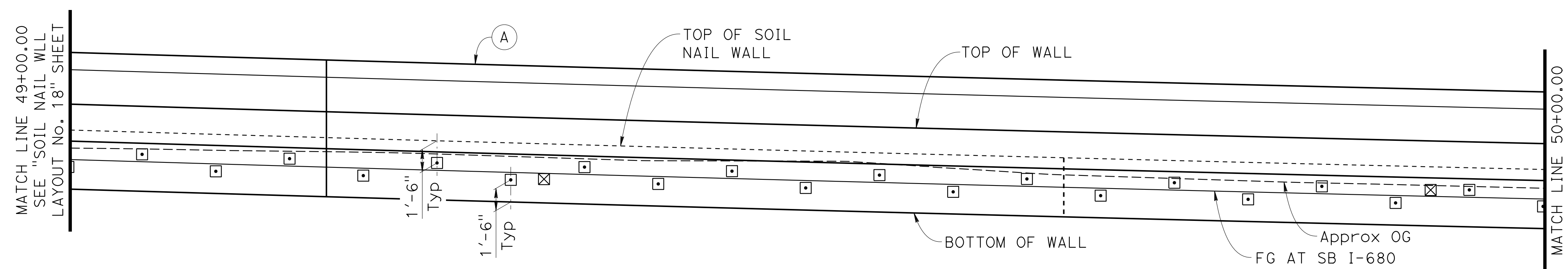
Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607
 AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

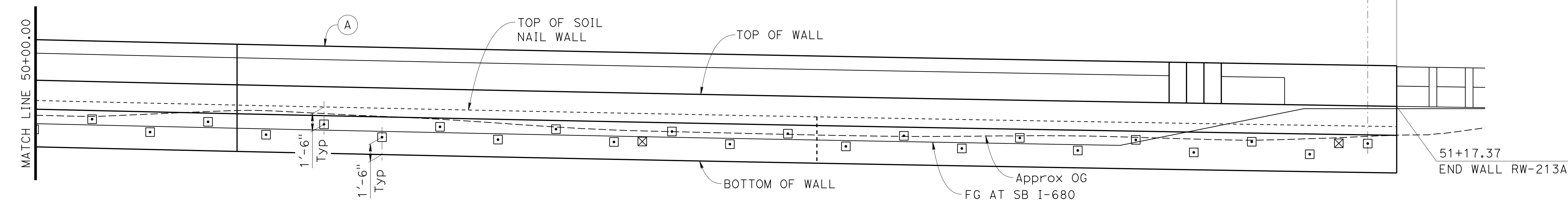
NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.

3767'-4 1/2" "RW-213A" SOIL NAIL WALL
 SCHEDULE A
 94 SPACES @ 5'-0" = 470'-0"
 SOIL NAIL Horiz SPACE



DATUM Elev 330
 49+00 49+20 49+40 49+60 49+80 50+00
DEVELOPED MIRRORED ELEVATION
 1"=5'

3767'-4 1/2" "RW-213A" SOIL NAIL WALL
 SCHEDULE A
 94 SPACES @ 5'-0" = 470'-0"
 SOIL NAIL Horiz SPACE



DATUM Elev 330
 50+00 50+20 50+40 50+60 50+80 51+00 51+20
DEVELOPED MIRRORED ELEVATION
 1"=5'

Norbert Gee
 DESIGN OVERSIGHT Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
 Syed Kazmi
 PROJECT ENGINEER

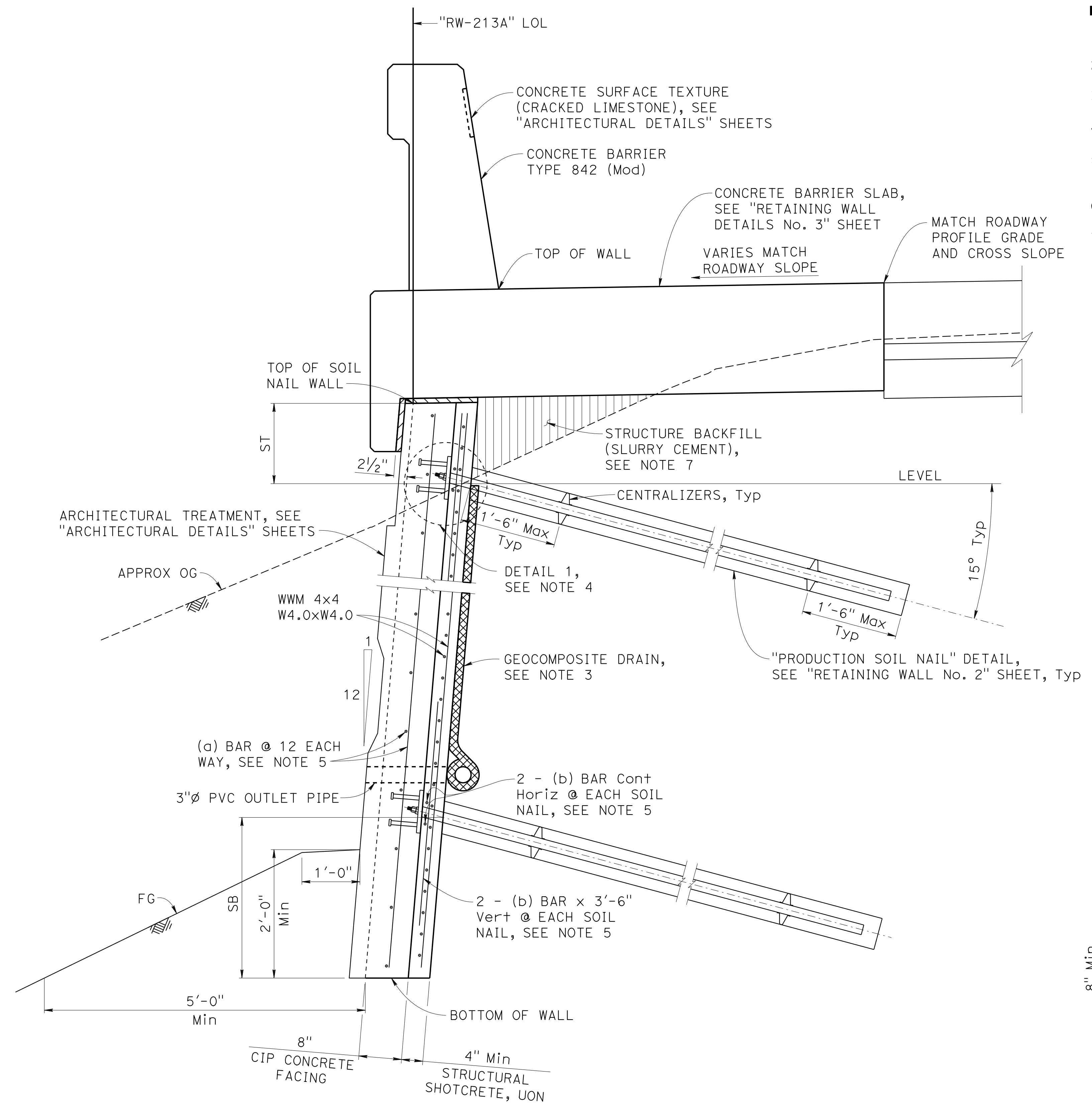
BRIDGE No.	33E0251
POST MILE	R13.5

RETAINING WALL No. 213A
SOIL NAIL WALL LAYOUT No. 19

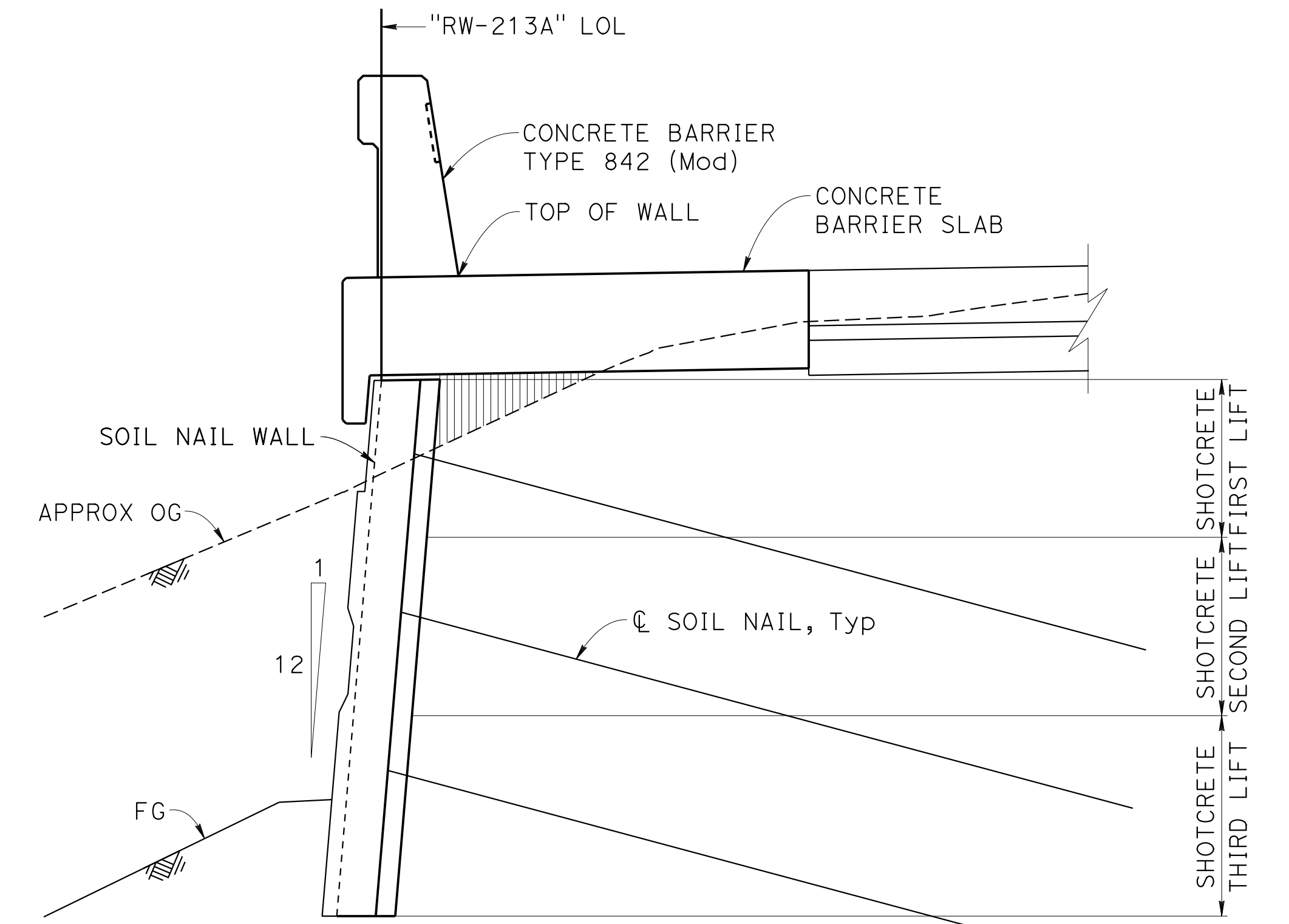
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1651	1710
			REGISTERED CIVIL ENGINEER	DATE	
			Orin A. Brown	9-29-21	
			PLANS APPROVAL DATE		
			October 8, 2021		
			REGISTERED PROFESSIONAL ENGINEER		
			No. C48859		
			Exp. 9/30/22		
			CIVIL		
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.					
ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					

NOTES:

1. For Soil Nail spacing, see "SOIL NAIL WALL LAYOUT" sheets.
2. Bottom of wall to be placed against undisturbed material.
3. For drainage details, see "WALL DRAIN DETAILS" sheet.
4. For DETAIL 1, see "RETAINING WALL DETAIL No. 2" sheet.
5. For (a) bar and (b) bar size, see "SOIL NAIL WALL SCHEDULE TABLE" on "SOIL NAIL WALL LAYOUT No. 1" sheet.
6. For ST and SB, see "SOIL NAIL LAYOUT" sheets.
7. Form and place slurry cement backfill prior to nail installation, bench as needed.



SOIL NAIL WALL DETAIL
1" = 1'-0"

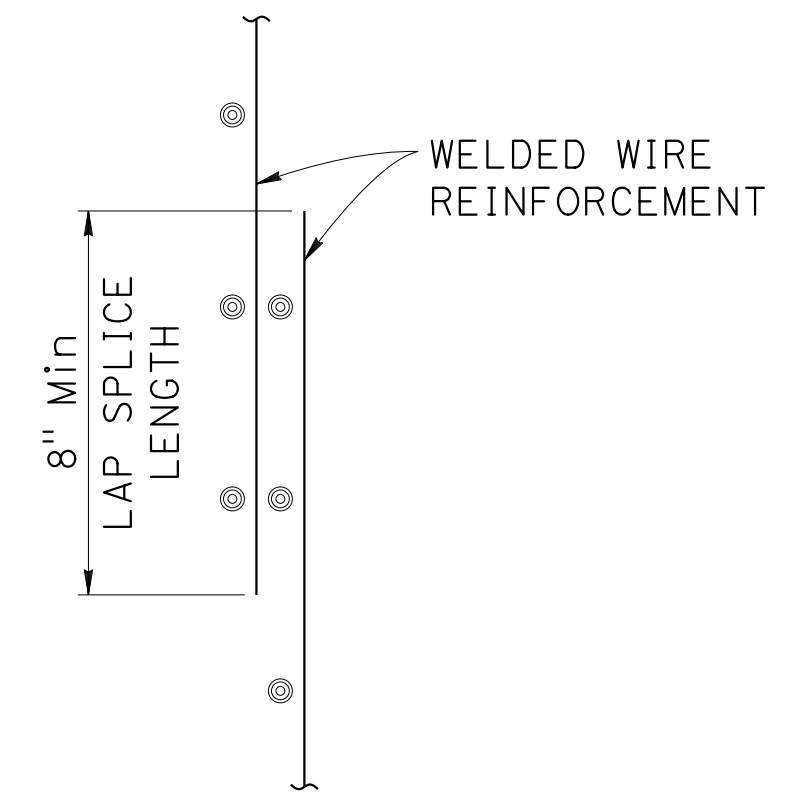


WALL LIFT NOTES:

1. Lift limit line are located in the middle between soil nails.
2. Each lift shall be completed, including testing of soil nail, before excavation of lower lift commences.

SOIL NAIL WALL LIFT DETAIL

1/2" = 1'-0"
NOTE: Three lifts shown, two, four and five lifts similar.



LAP SPLICE DETAIL
NO SCALE

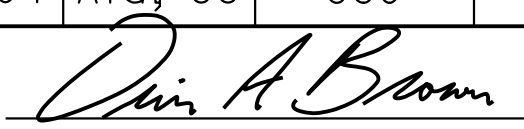
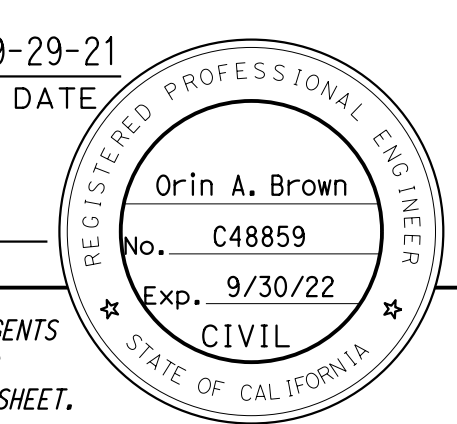
DESIGN OVERSIGHT
Norbert Gee
2/15/22
SIGN OFF DATE

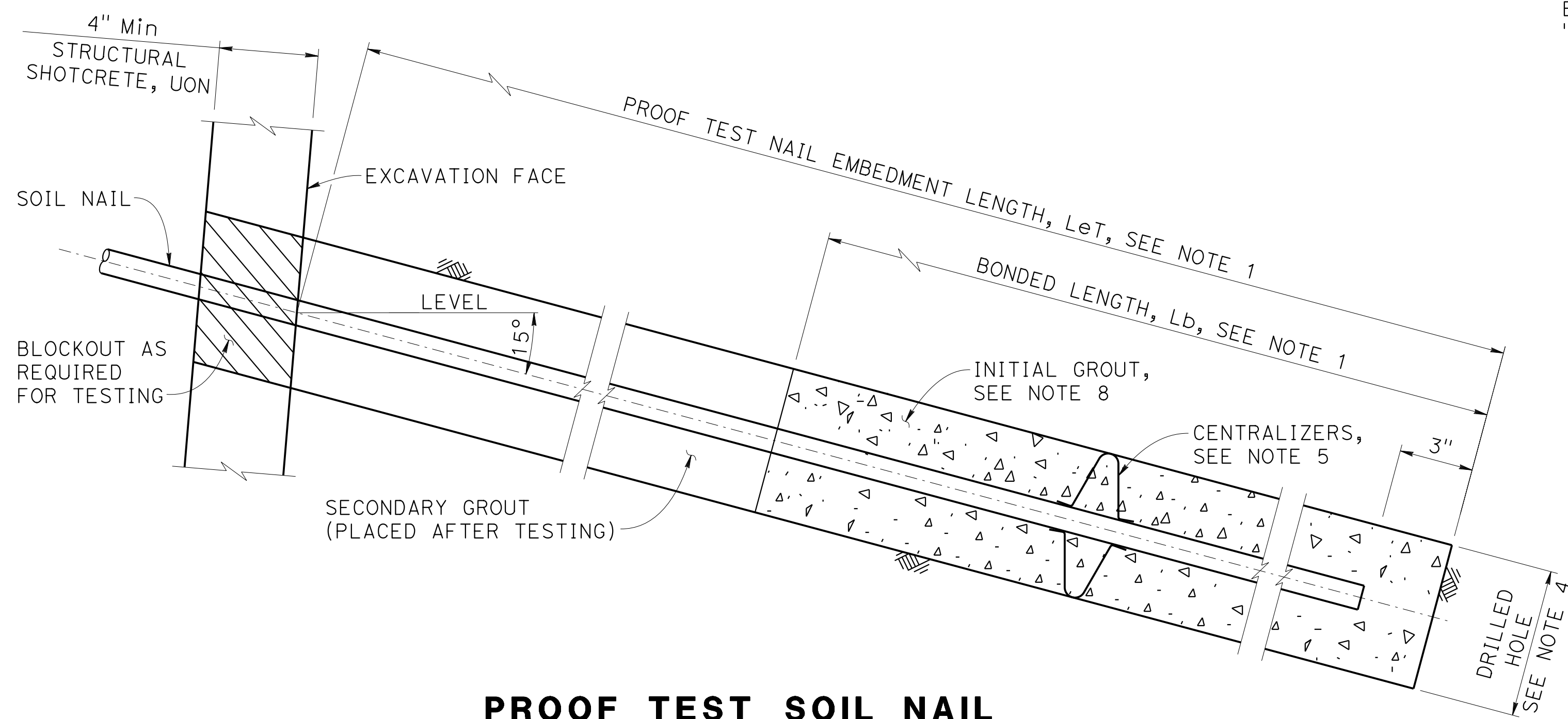
DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
Syed Kazmi
PROJECT ENGINEER

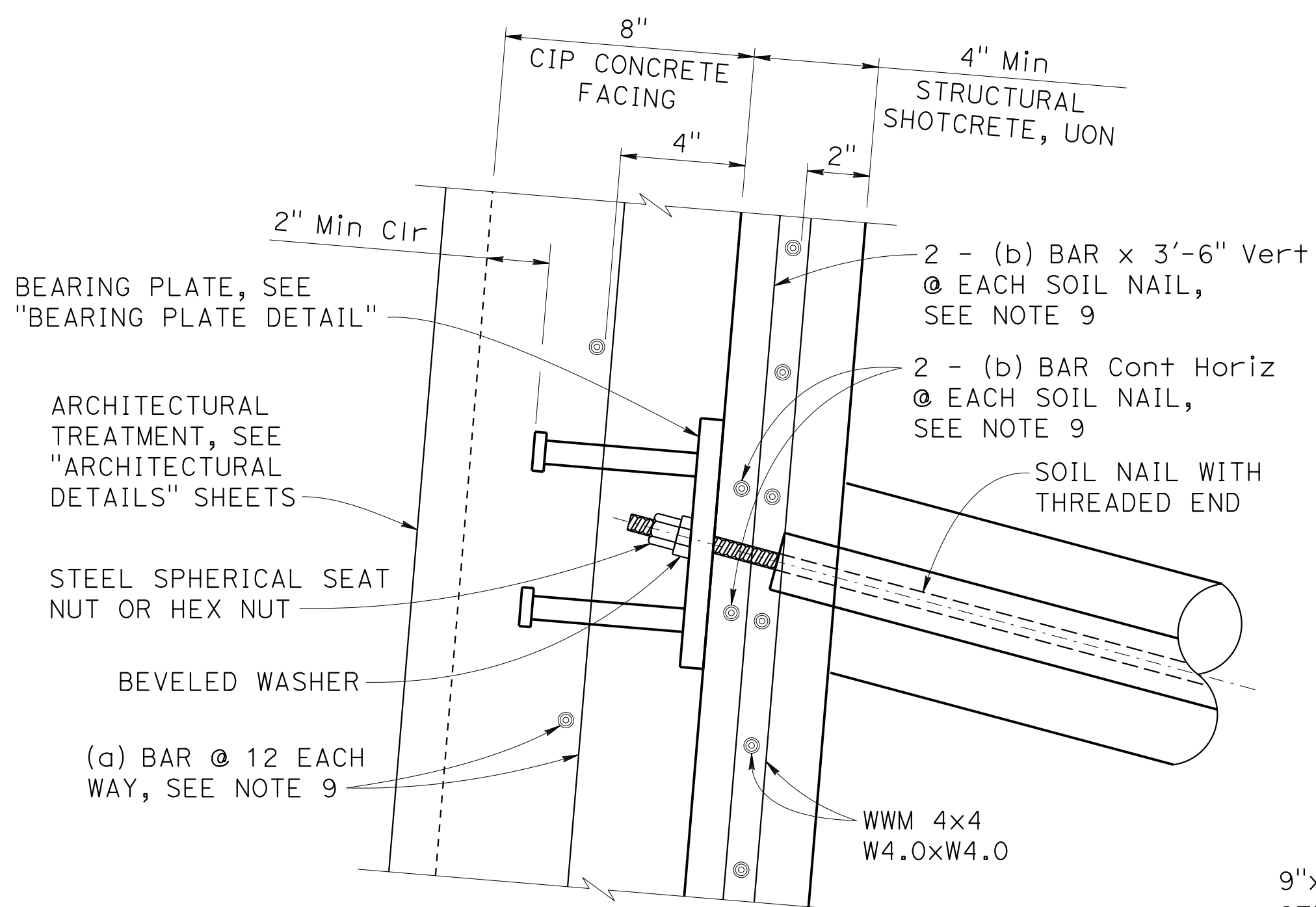
BRIDGE No.	33E0251
POST MILE	R13.5

RETAINING WALL No. 213A
RETAINING WALL DETAILS No. 1

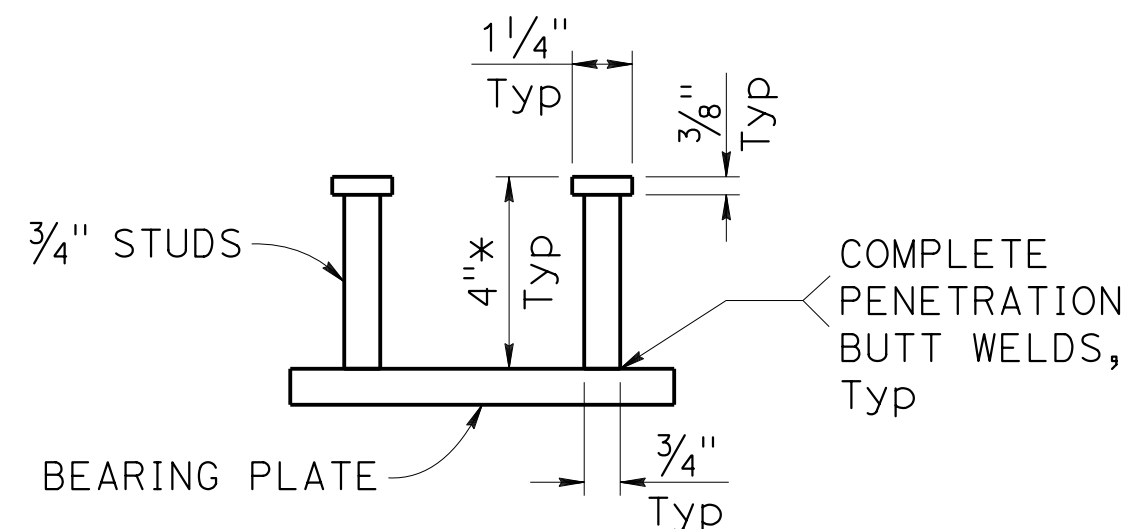
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, RO.0/0.9	1652	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 PLANS APPROVAL DATE					
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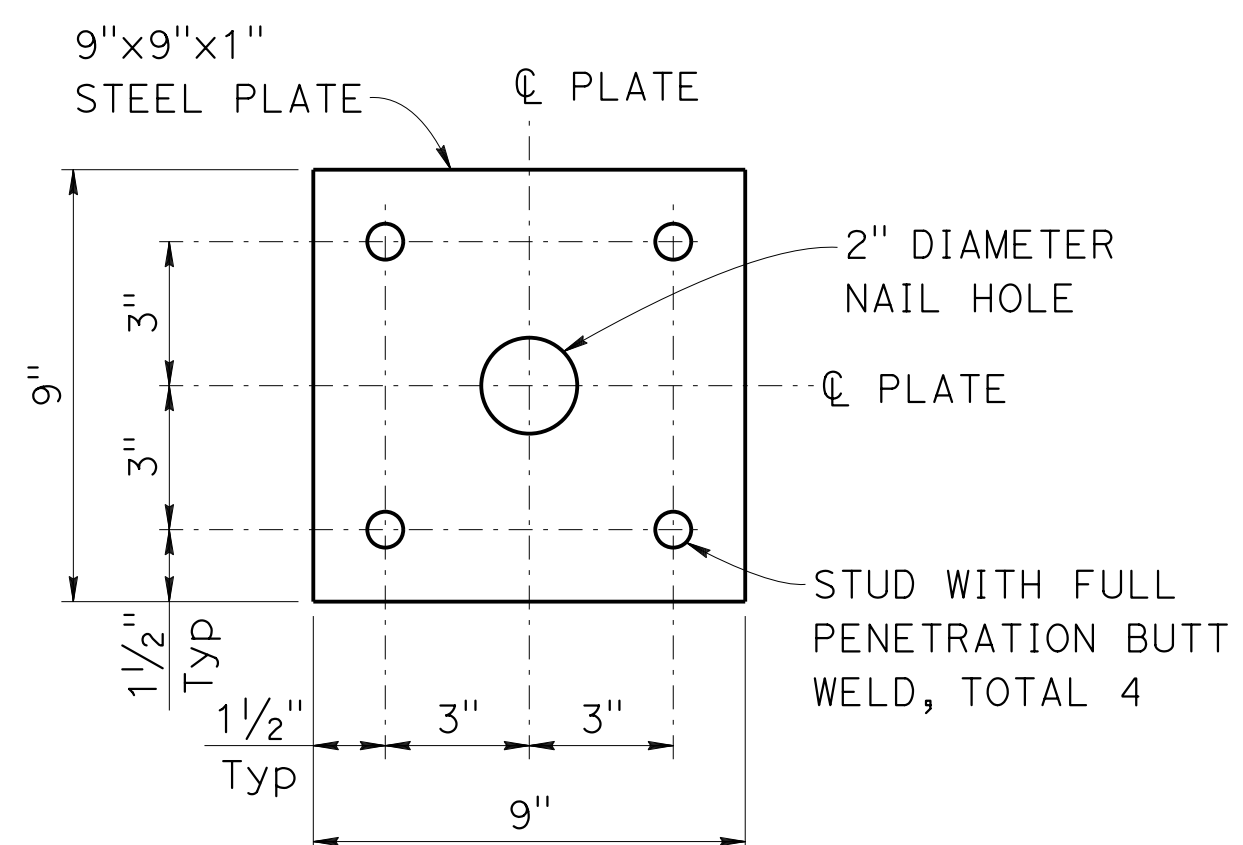
PROOF TEST SOIL NAIL
3" = 1'-0"



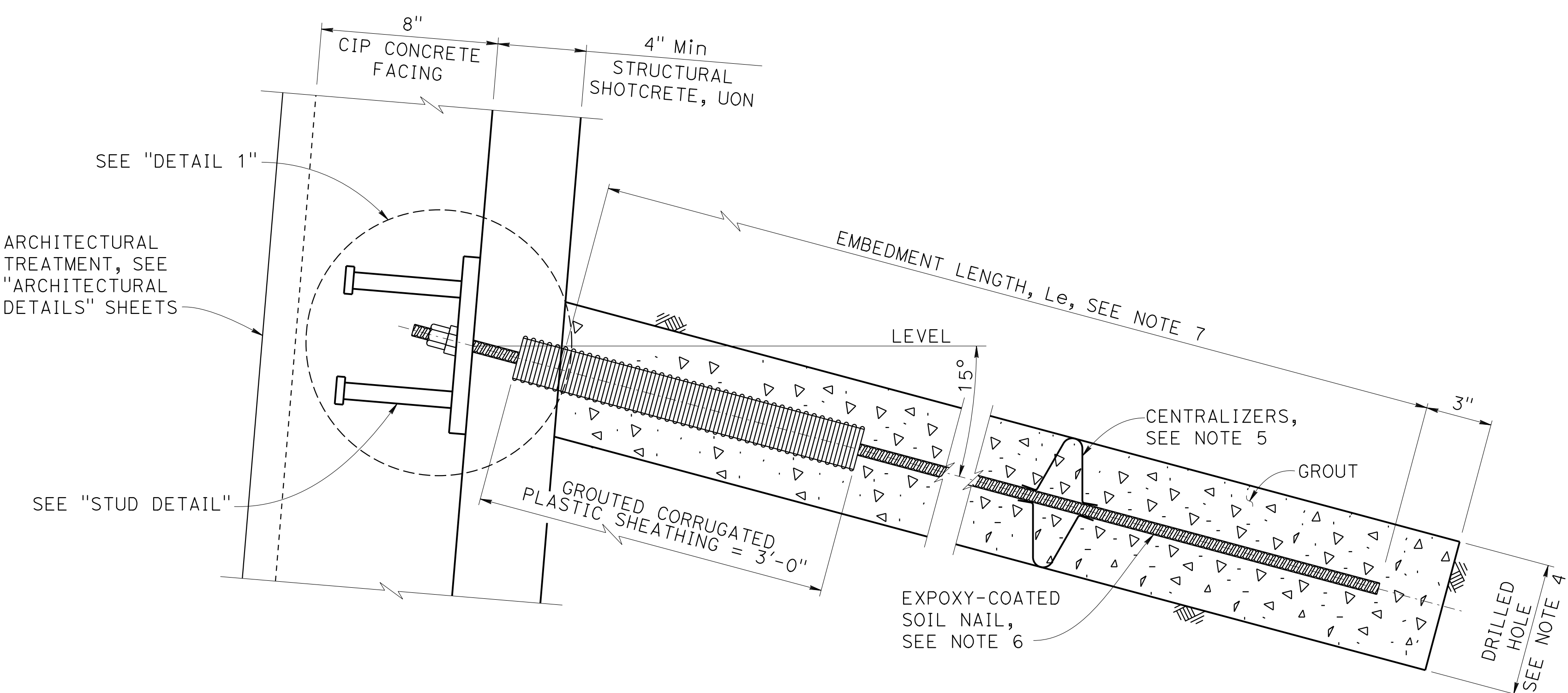
DETAIL 1
3" = 1'-0"



STUD DETAIL
3" = 1'-0"




BEARING PLATE DETAIL
3" = 1'-0"



PRODUCTION SOIL NAIL
3" = 1'-0"

NOTES:

1. The proof test nail embedment length L_{eT} , shall be equal to 2/3 of the embedment length, L_e , of adjacent production soil nail assemblies, but not less than 12'-0". The proof test nail bonded length, L_b , shall not be less than 10'-0".
2. The total length of the proof test nail assembly equals the proof test nail embedment length plus the length required for jacking equipment.
3. For locations of proof test nails, see "SOIL NAIL WALL LAYOUT" sheets.
4. Contractor to determine drilled hole diameter based on ultimate pullout resistance Q_b listed in "INDEX TO PLANS" sheet.
5. Space centralizers at 7'-6" maximum center to center and 1'-6" maximum from the hole ends.
6. Each production soil nail must be either an epoxy coated prefabricated solid steel bar partially encapsulated in a grouted corrugated plastic sheathing as shown, or a solid steel bar encapsulated full length in a grouted corrugated plastic sheathing.
7. For embedment length and soil nail size, see "SOIL NAIL WALL SCHEDULE TABLE" at "SOIL NAIL LAYOUT No. 1" sheet.
8. Finished grout surface to be normal to the bar.
9. For (a) bar and (b) bar size, see "SOIL NAIL WALL SCHEDULE TABLE" on "SOIL NAIL WALL LAYOUT No. 1" sheet.


 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
PROJECT ENGINEER
BRIDGE No. 33E0251
POST MILE R13.5

**RETAINING WALL No. 213A
RETAINING WALL DETAILS No. 2**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1653	1710
			9-29-21		
Orin A. Brown			REGISTERED CIVIL ENGINEER	DATE	
October 8, 2021			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.		
ALAMEDA CTC			1111 BROADWAY, SUITE 800 OAKLAND, CA 94607		
AECOM			2020 L STREET, SUITE 400 SACRAMENTO, CA 95811		

DESIGN DATA

DESIGN: AASHTO LRFD Bridge Design Specifications, 8th Edition with California Amendments.

F_t : Collision load of 54 kips on barrier. Load assumed to distribute over a minimum barrier slab length of 40 ft.

REINFORCED CONCRETE: $f'_c = 3600$ psi
 $f_y = 60,000$ psi
 $n = 8$

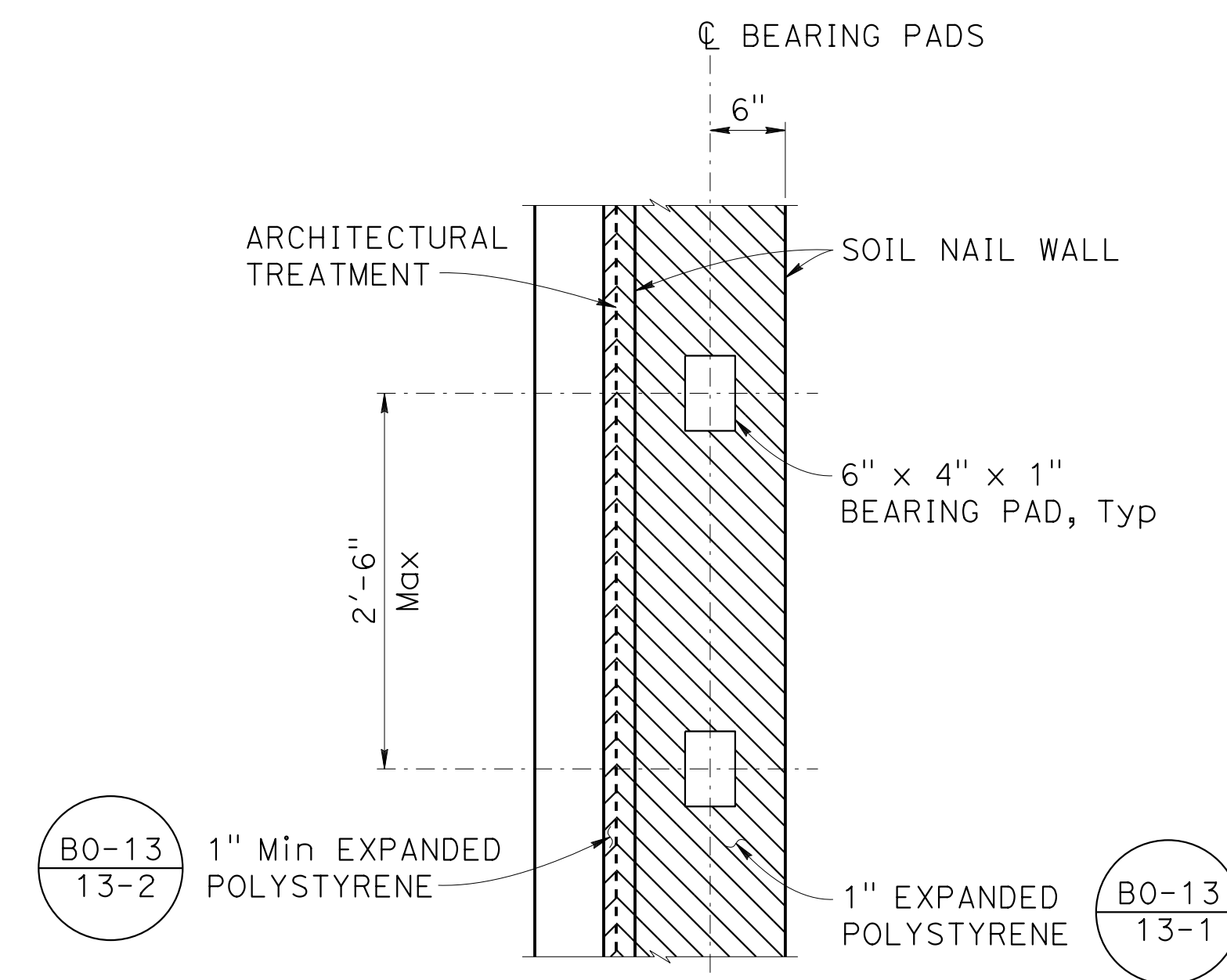
SEISMIC: $k_h = 0.29, k_v = 0.0$

SOIL TYPE: Varies, see "INDEX TO PLANS" sheet.

- NOTES:**
- Not all barrier reinforcement shown.
 - Minimum slab length : 40 ft.

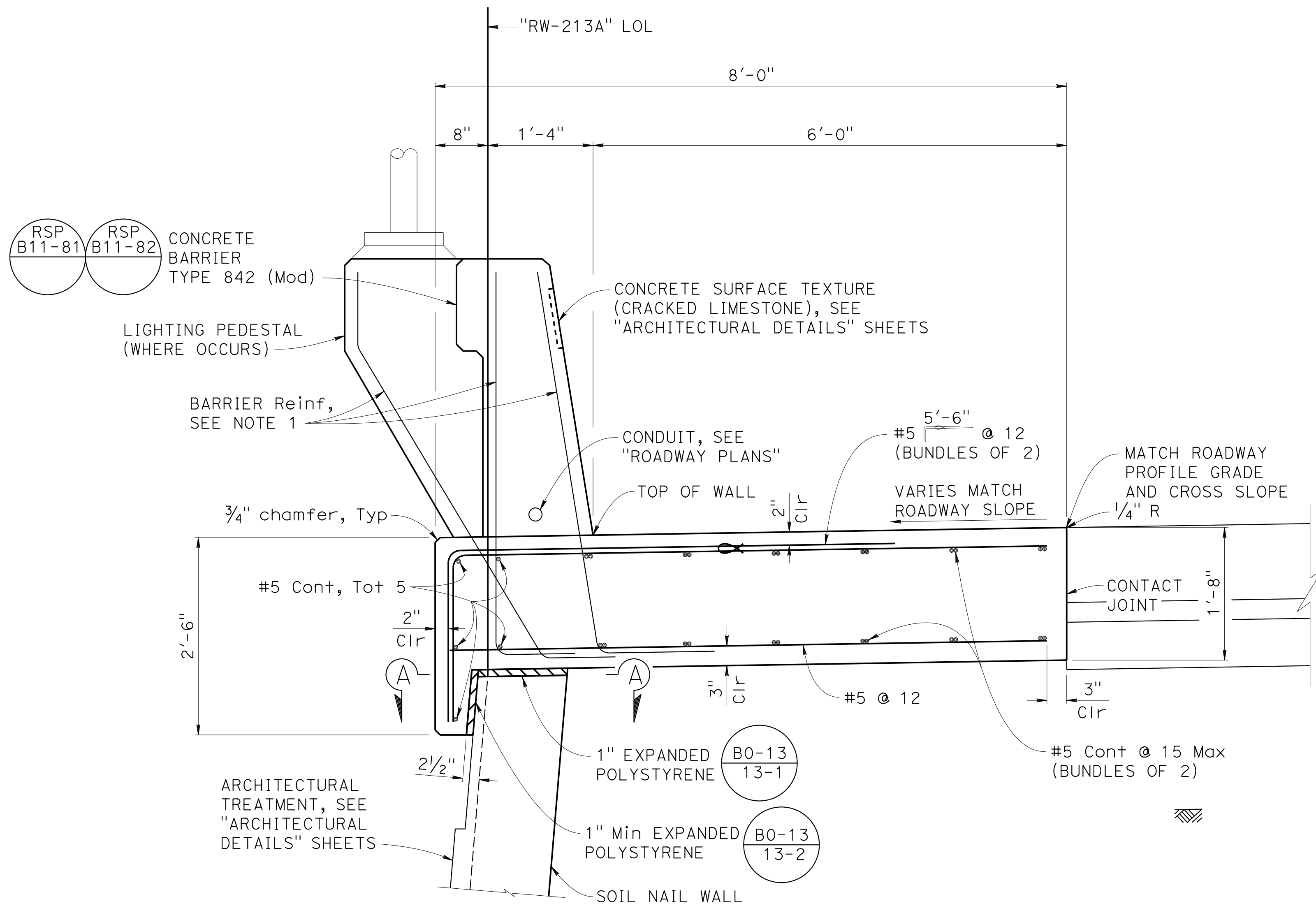
LEGEND:

∞ Bundled bars



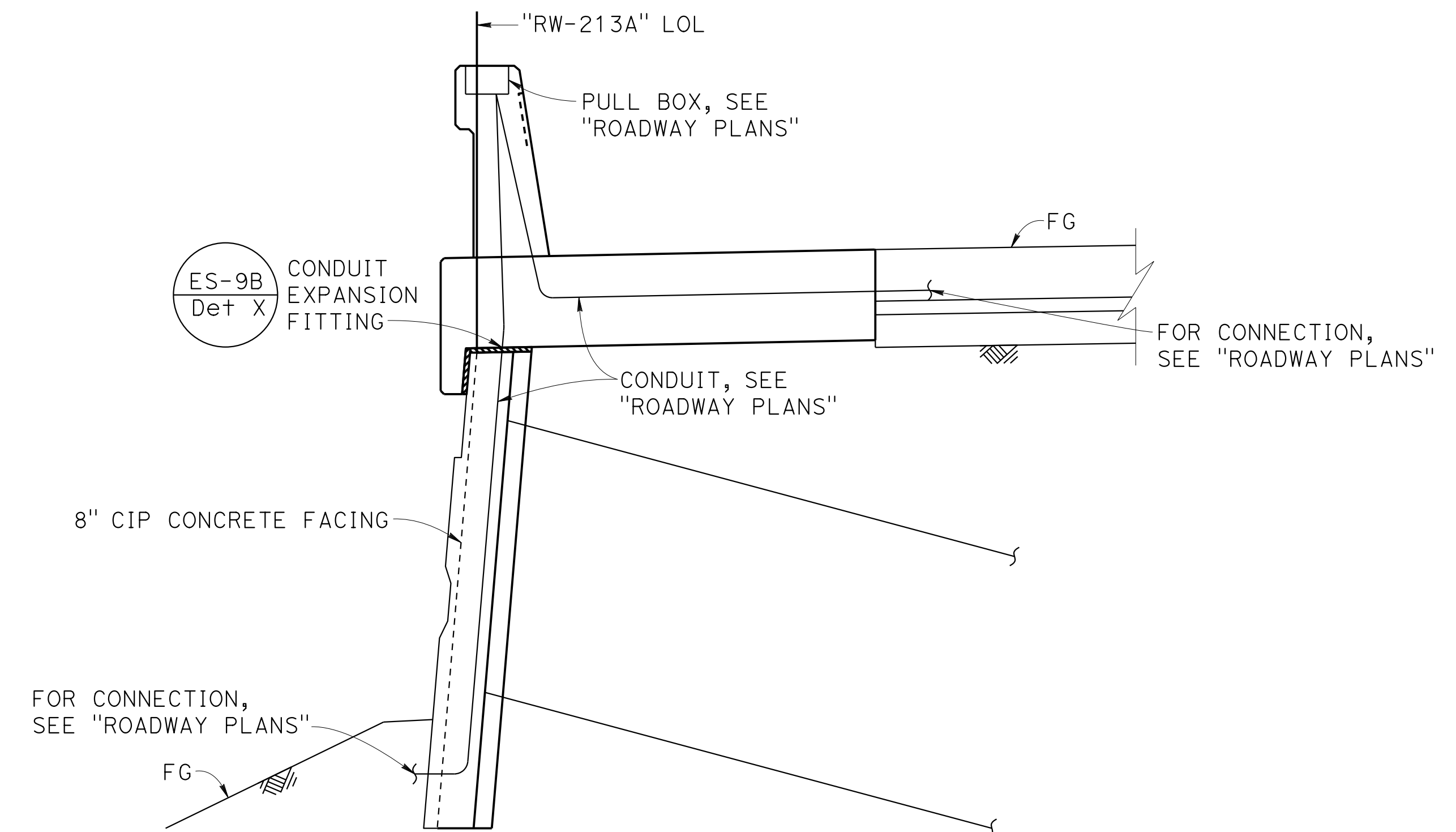
SECTION A-A

1" = 1'-0"



CONCRETE BARRIER SLAB

1" = 1'-0"



SECTION AT CONDUIT THROUGH THE WALL

1/2" = 1'-0"

DESIGN OVERSIGHT
Norbert Gee
2/15/22
SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

Syed Kazmi
PROJECT ENGINEER

BRIDGE No.
33E0251
POST MILE
R13.5

RETAINING WALL No. 213A
RETAINING WALL DETAILS No. 3

DESIGN DETAIL SHEET
(ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:02
FILE => 33E0251-g-rwd+03.dgn USERNAME => p302438

ORIGINAL SCALE
IN INCHES FOR
REDUCED PLANS

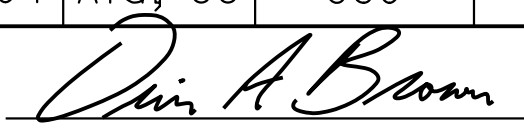
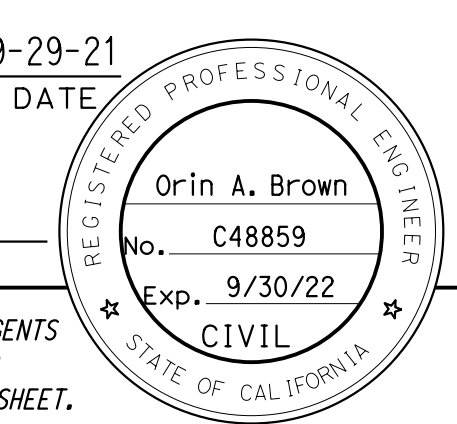
0 1 2 3

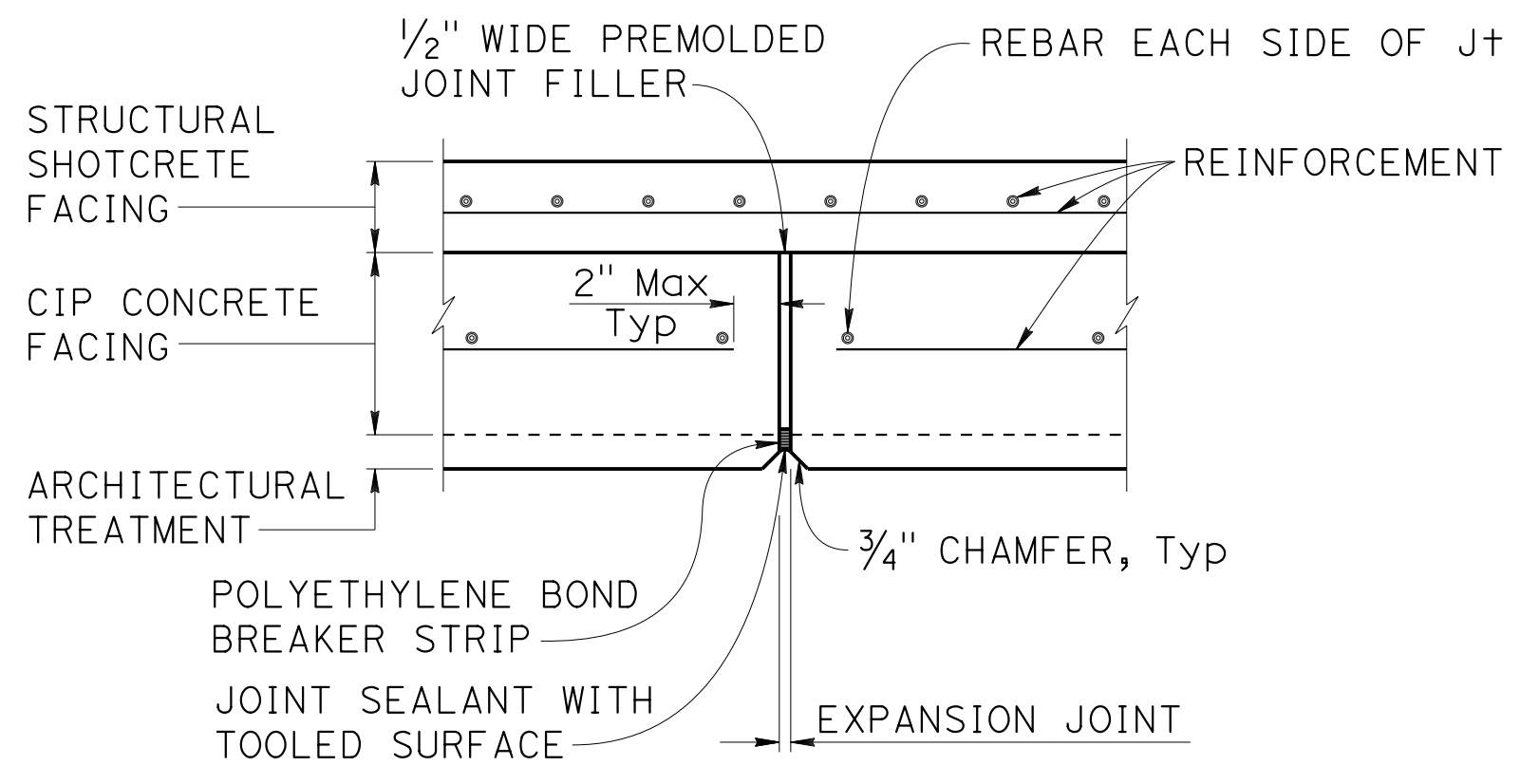
UNIT: 0733
PROJECT NUMBER & PHASE: 04200002351

CONTRACT No.: 04-0Q30U4

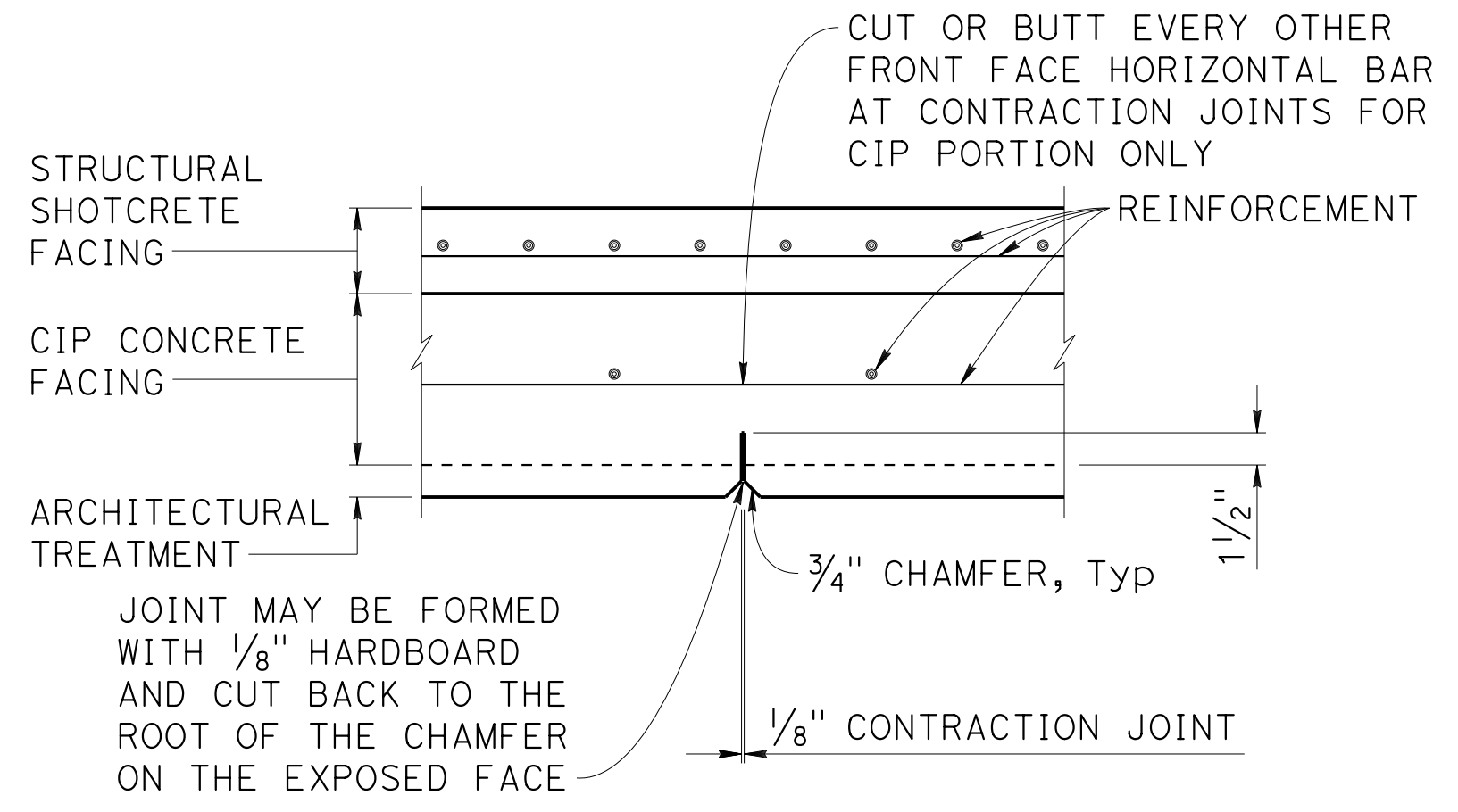
DISREGARD PRINTS BEARING
EARLIER REVISION DATES

REVISION DATES	SHEET	OF
8-22-21 9-2-21 09-29-21 11-18-21	35	54

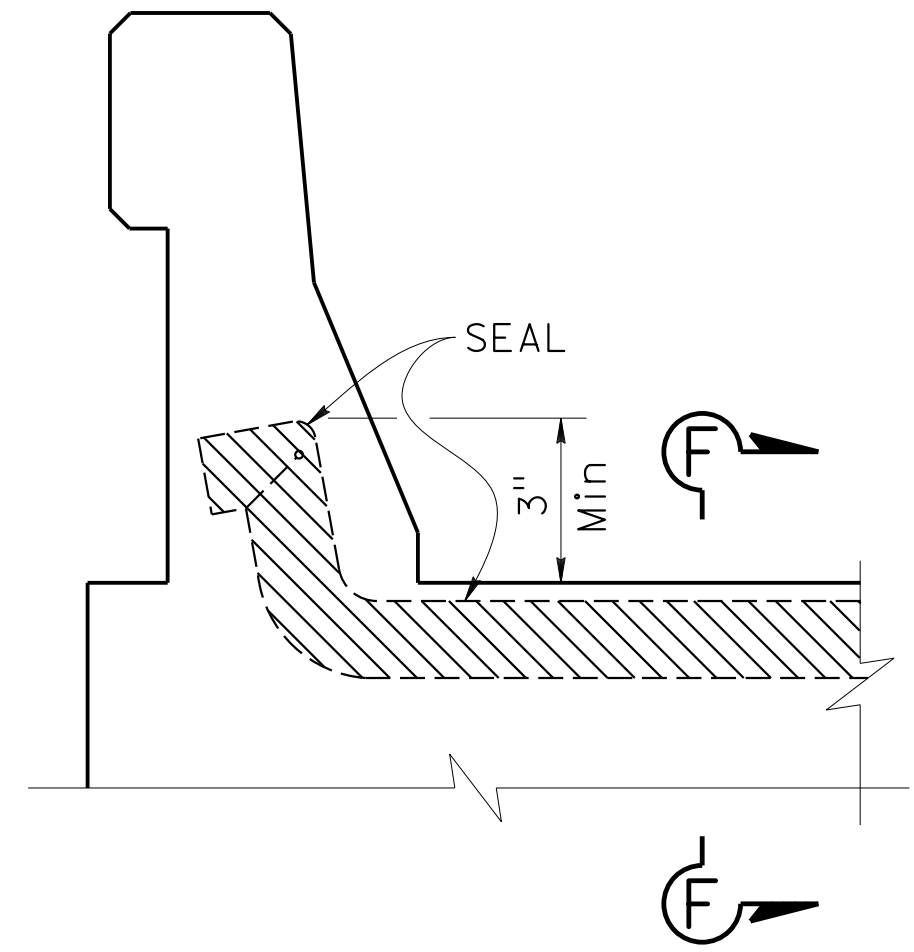
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1654	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					
ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					



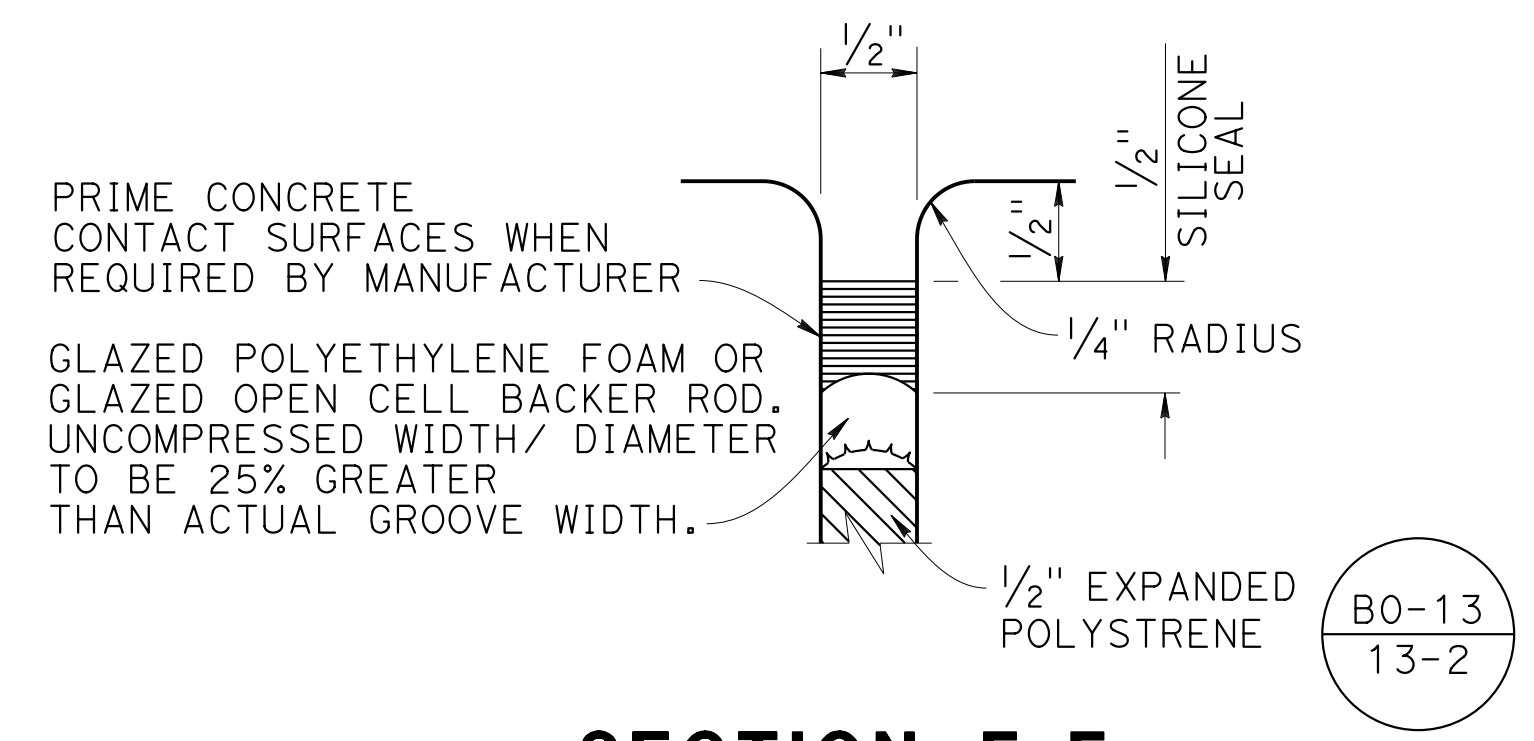
WALL EXPANSION JOINT DETAIL
1/2" = 1'-0"



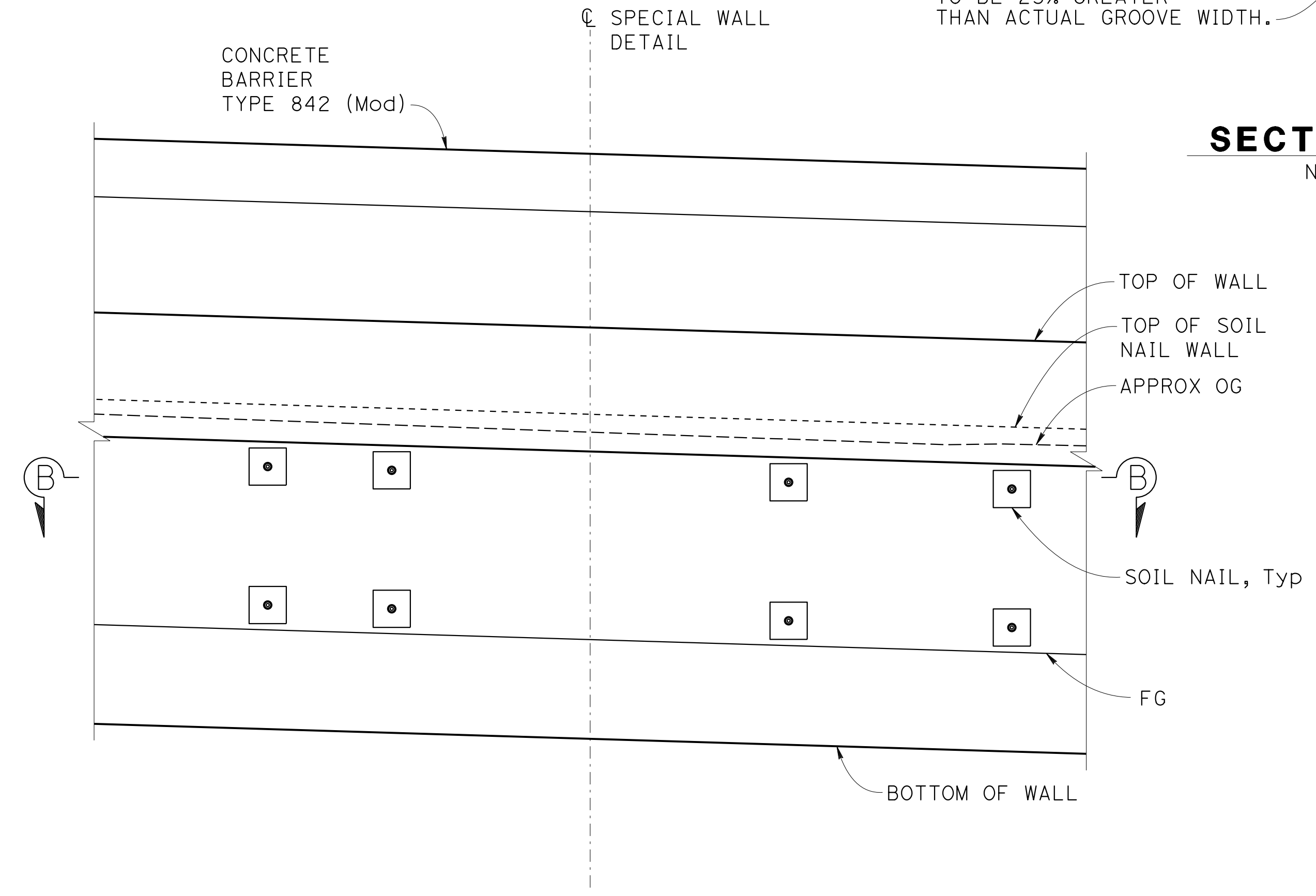
WALL CONTRACTION JOINT DETAIL
1/2" = 1'-0"



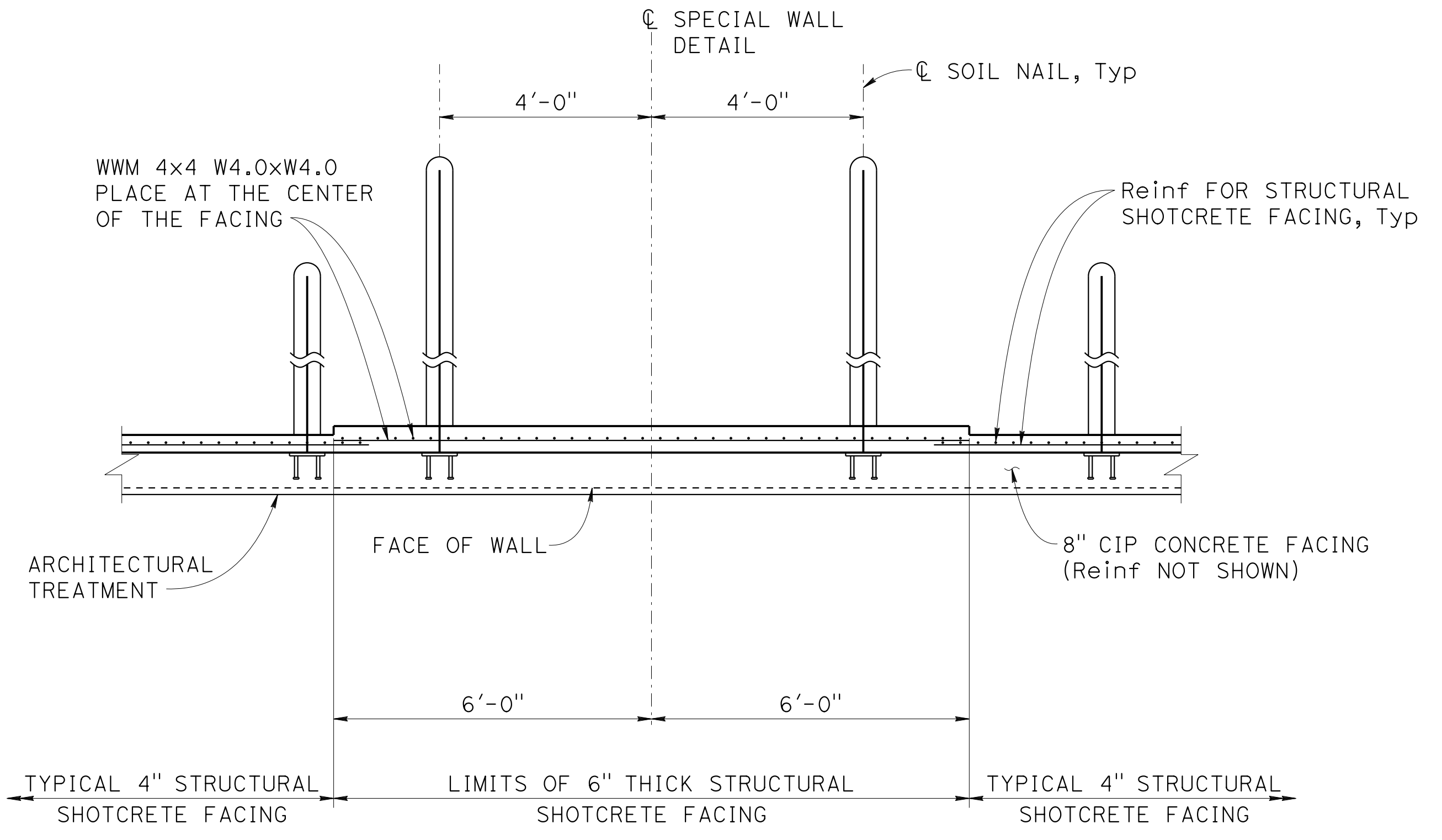
JOINT SEAL (TYPE A MODIFIED)
NO SCALE



SECTION F-F
NO SCALE



SPECIAL WALL DETAIL
1/2" = 1'-0"



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

Norbert Gee
DESIGN OVERSIGHT
Norbert Gee
2/15/22
SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

RETAINING WALL No. 213A
RETAINING WALL DETAILS No. 4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1655	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER 9-29-21 DATE
 October 8, 2021
 PLANS APPROVAL DATE

Orin A. Brown
 No. C48859
 Exp. 9/30/22
 CIVIL
 STATE OF CALIFORNIA

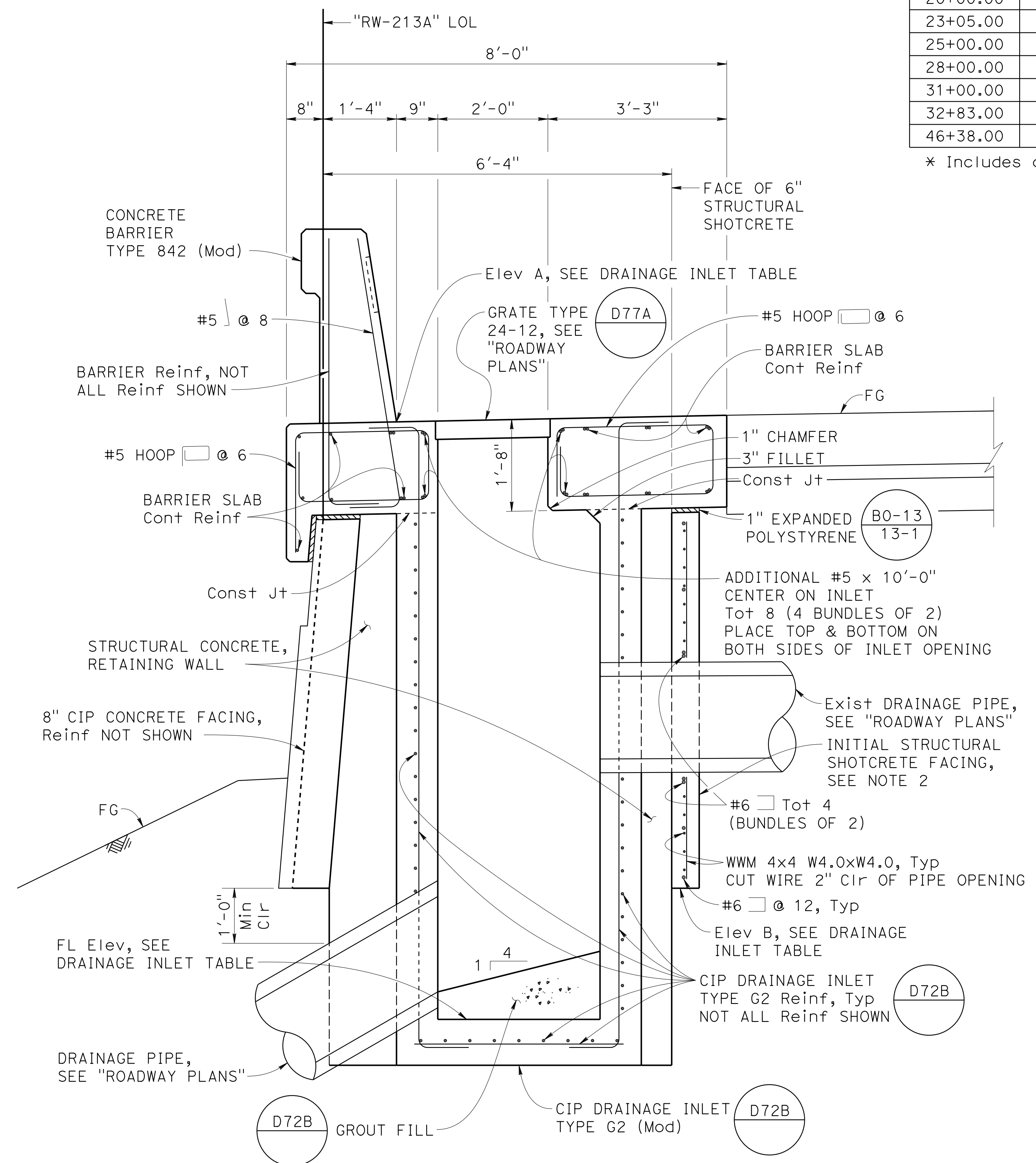
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 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607

AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

DRAINAGE INLET TABLE				
STATION LOCATION	Elev A	Elev B	FL Elev	DRAINAGE SYSTEM No. SEE NOTE 3
13+61.50	321.09	315.32	312.54	18-l
17+00.00	326.54	320.18	317.61	18-j
20+00.00	331.37	322.90	320.00	18-h
23+05.00	337.64	329.44	325.88	19-u
25+00.00	343.55	335.26	331.69	19-r
28+00.00	352.62	344.32	340.75	19-o
31+00.00	361.44	352.98	349.42	19-l
32+83.00	366.16	357.10	354.27	15-d*
46+38.00	354.30	346.05	343.03	27-d

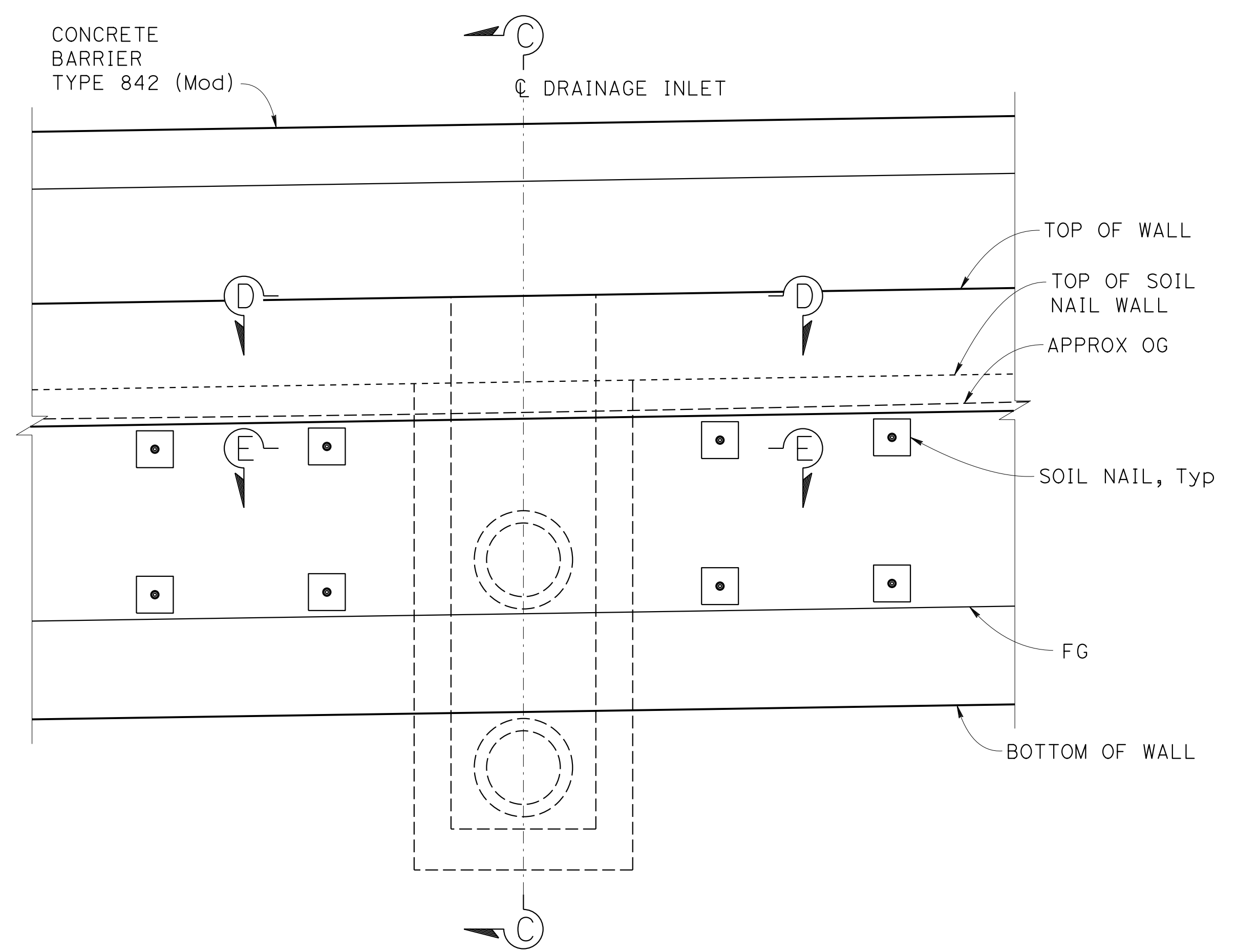
* Includes an existing drainage pipe inlet.



SECTION C-C
 $\frac{3}{4}'' = 1'-0''$

NOTES:

1. For SECTION D-D and SECTION E-E, see "RETAINING WALL DETAILS No. 6" sheet.
2. The initial structural shotcrete facing to be cast against and around the existing drainage pipe.
3. For DRAINAGE SYSTEM, see "ROADWAY PLANS".



TYPICAL ELEVATION AT DRAINAGE INLET
 $\frac{1}{2}'' = 1'-0''$

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

RETAINING WALL No. 213A
RETAINING WALL DETAILS No. 5

DESIGN DETAIL SHEET
 (ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:03
 FILE => 33E0251-g-rwd+05.dgn USERNAME => p302438

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS
 0 1 2 3

UNIT: 0733
 PROJECT NUMBER & PHASE: 04200002351

CONTRACT No.: 04-0030U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF
	8-22-21 9-29-21 09-29-21 11-21-21	37	54

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1656	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21

October 8, 2021
 PLANS APPROVAL DATE

Orin A. Brown
 No. C48859
 Exp. 9/30/22
 CIVIL
 STATE OF CALIFORNIA

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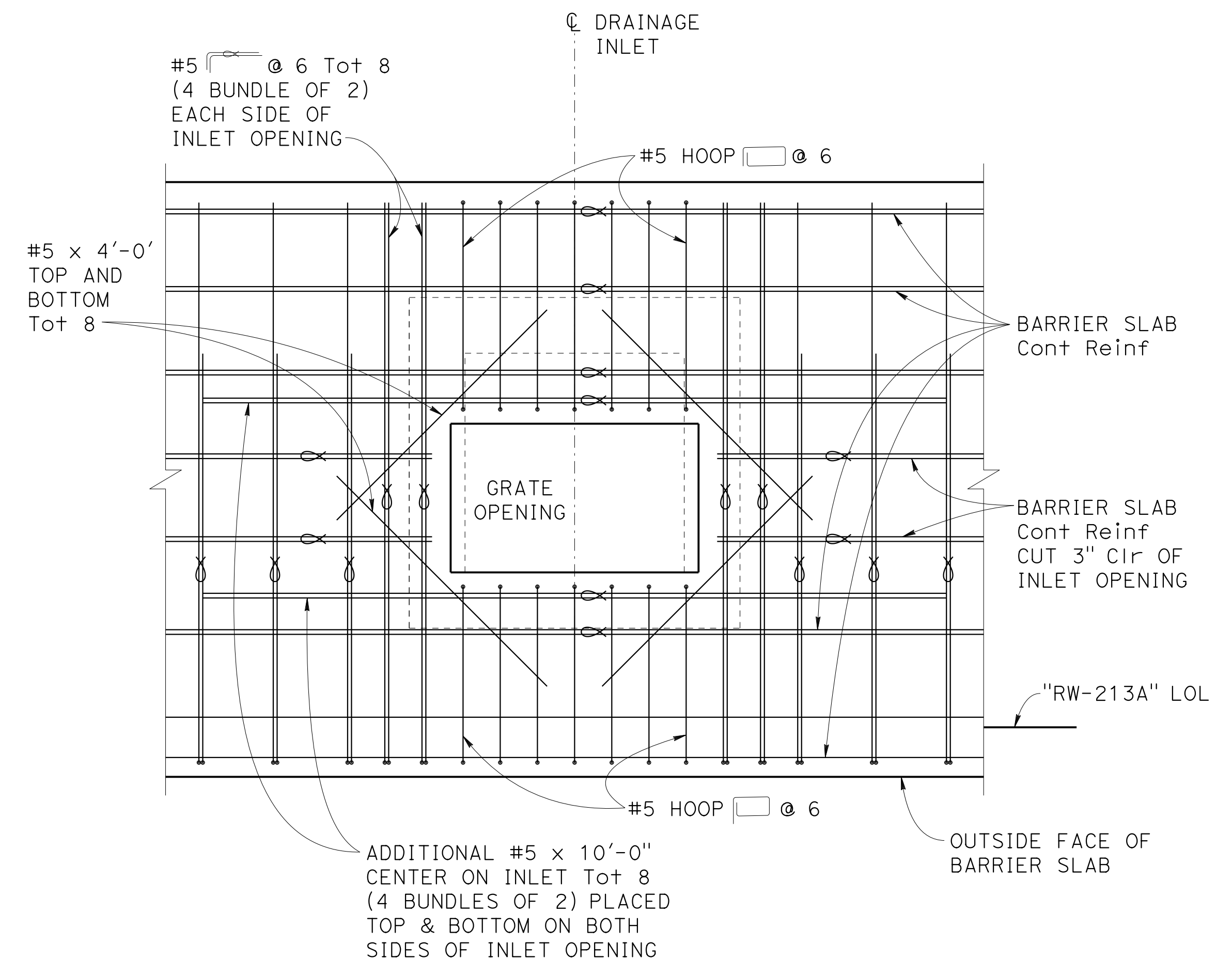
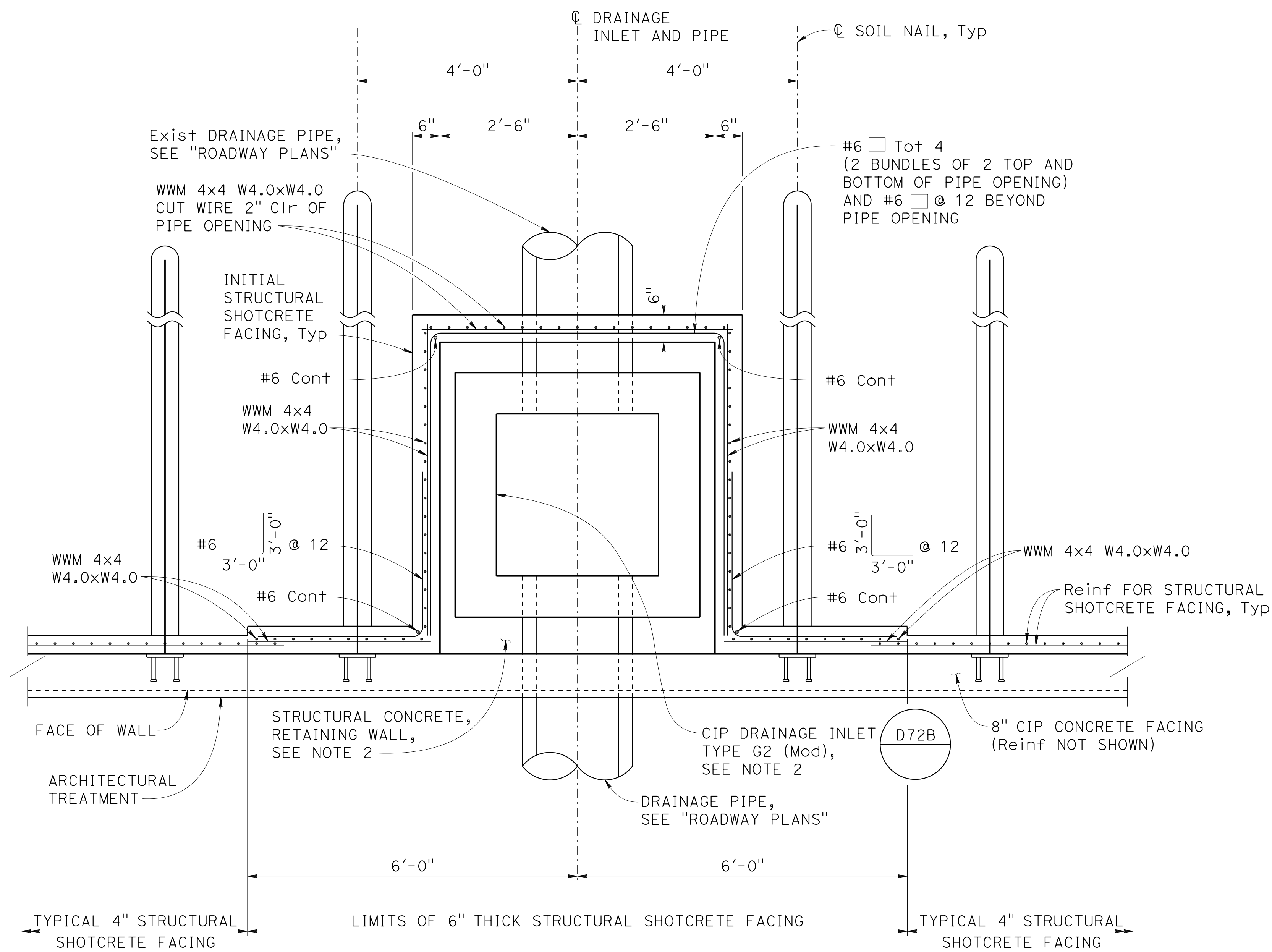
AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

NOTES:

- For location of SECTION D-D and SECTION E-E, see "RETAINING WALL DETAILS No. 5" sheet.
- After placing drainage inlet reinforcement, the drainage inlet structural concrete may be cast against the initial structural shotcrete facing, instead of forming the drainage inlet and separately filling the space between the drainage inlet and the structural shotcrete facing with structural concrete.

LEGEND:

∞ Bundled bars



Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

RETAINING WALL No. 213A
RETAINING WALL DETAILS No. 6

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1657	1710

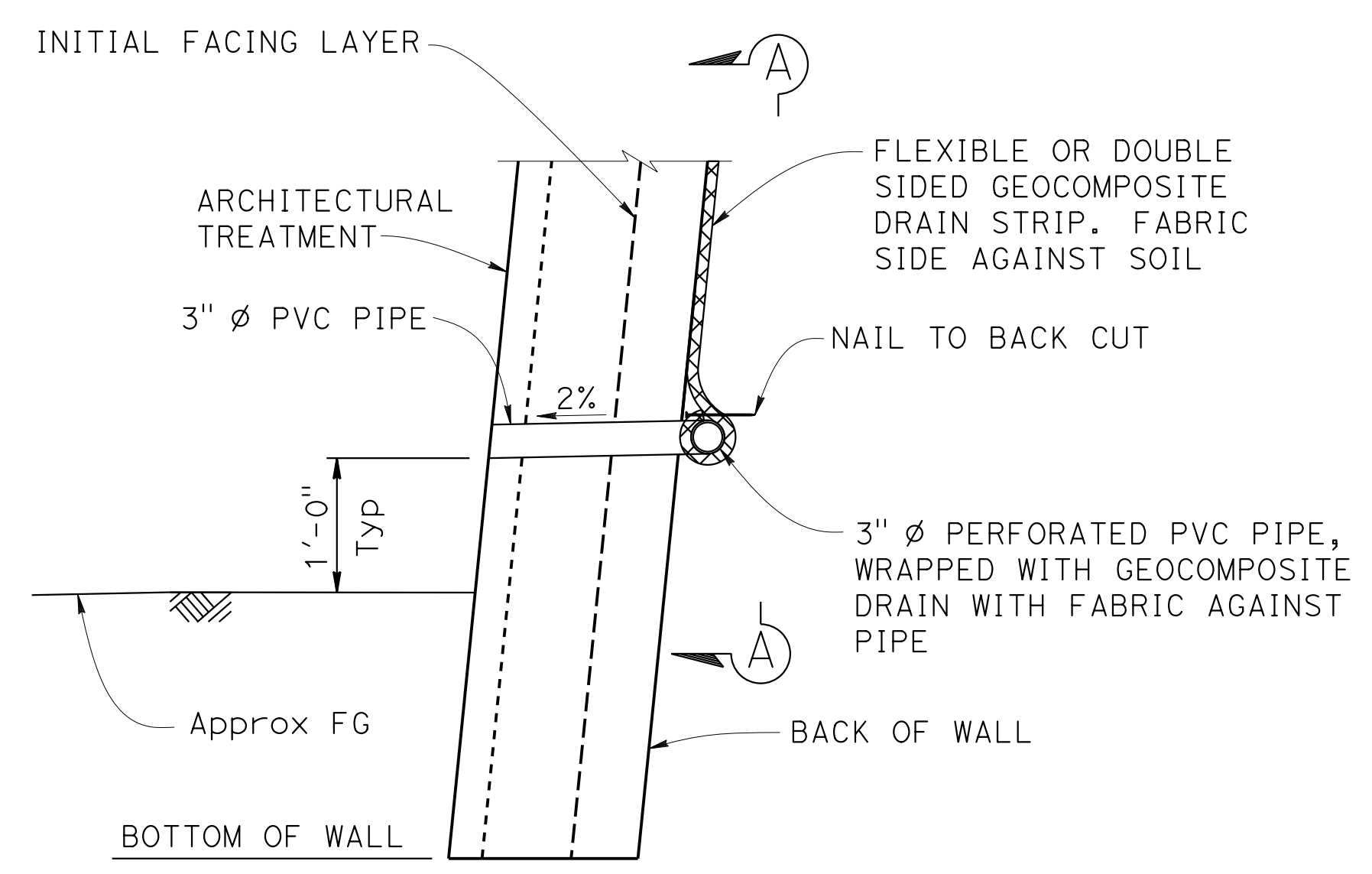
Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE

Orin A. Brown
 No. C48859
 Exp. 9/30/22
 CIVIL
 STATE OF CALIFORNIA

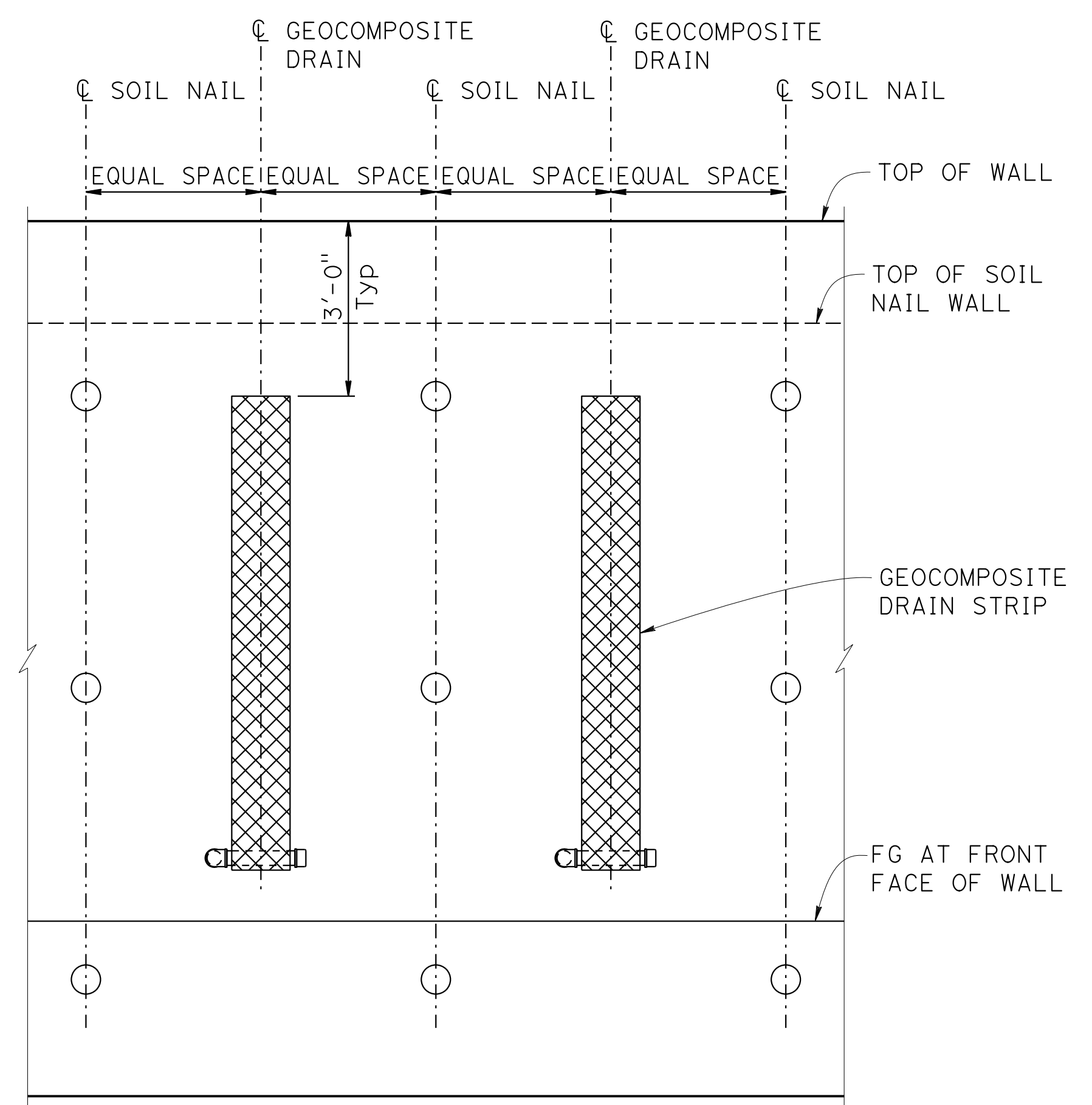
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ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607

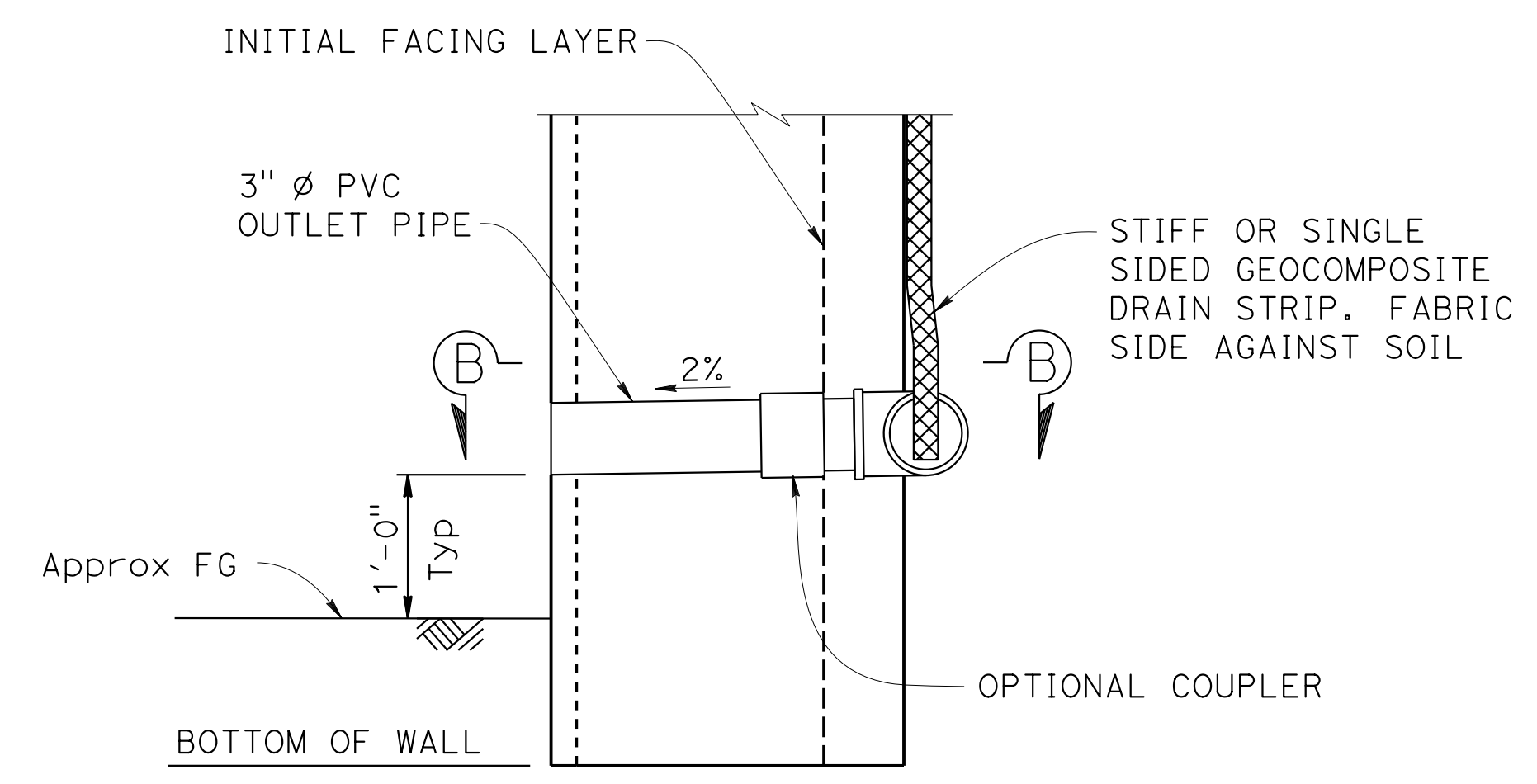
AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811



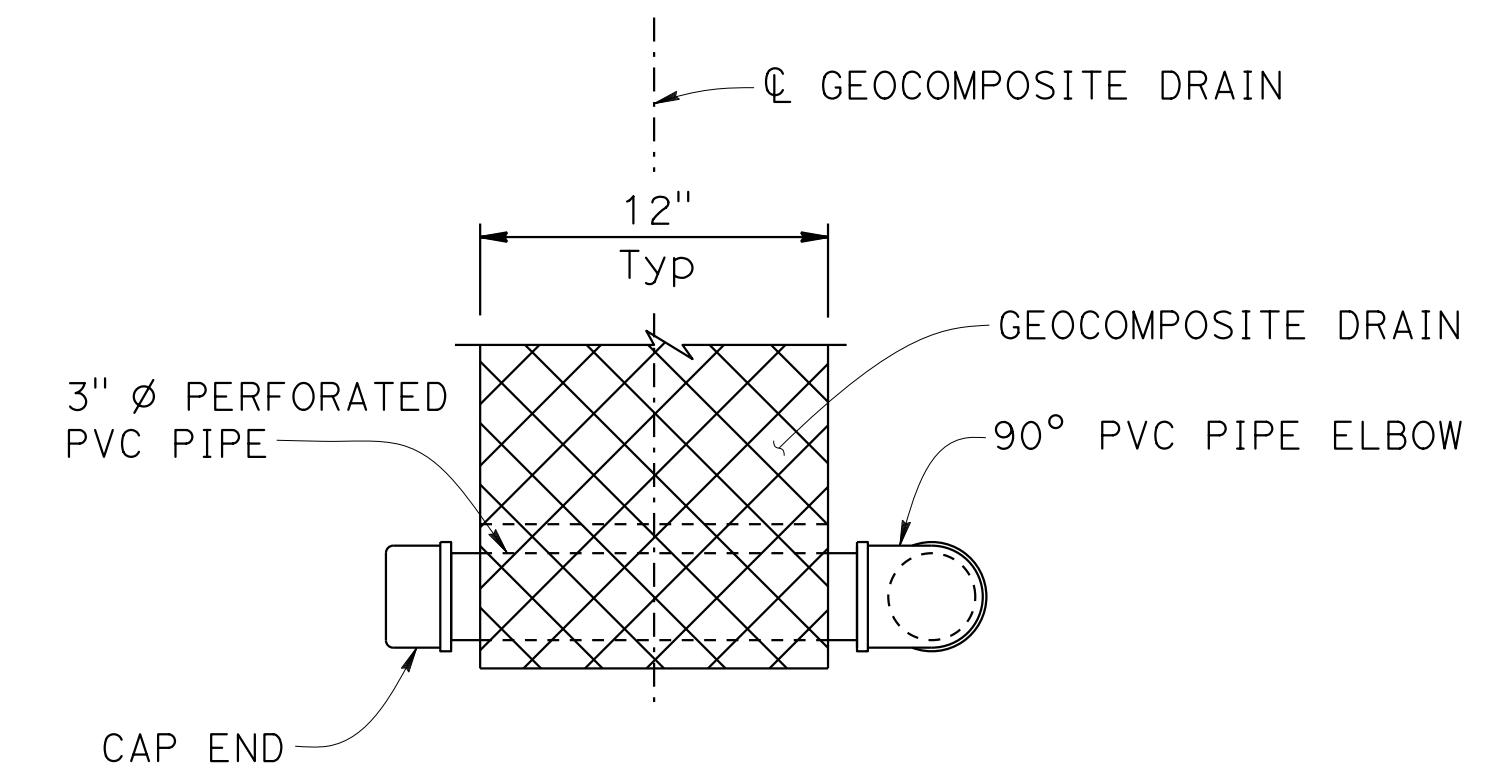
4 WALL DRAIN DETAIL AT WEEPHOLE
OPTION A
 NO SCALE



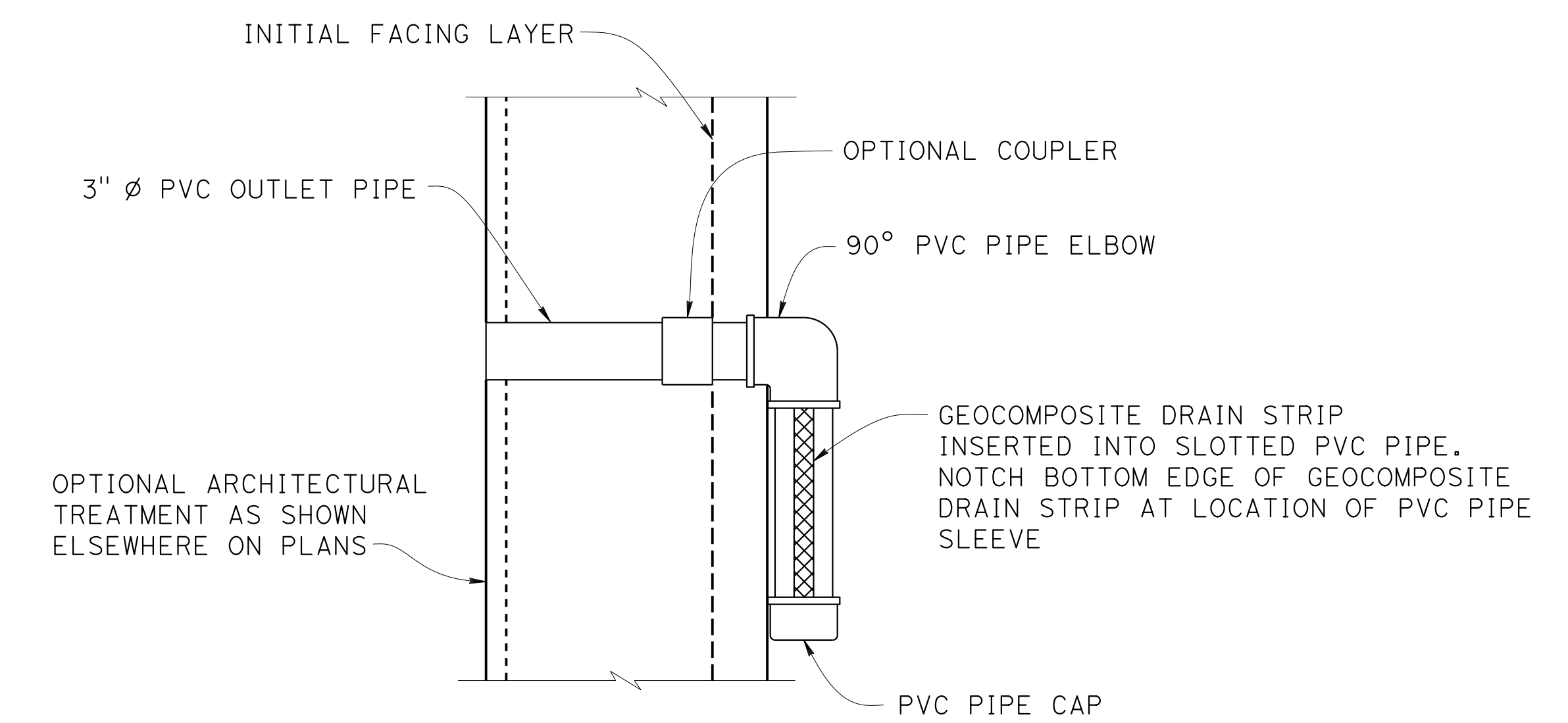
2 PART ELEVATION
 NO SCALE



1 WALL DRAIN DETAIL AT WEEPHOLE
OPTION B
 NO SCALE



VIEW A-A
 NO SCALE



SECTION B-B
 NO SCALE

SPECIAL DETAILS

RETAINING WALL No. 213A

WALL DRAIN DETAILS

BRIDGE STANDARD DETAILS	
xs12-021 FILE NO.	July 2014 APPROVAL DATE

MODIFICATIONS SHOWN:	
1 DETAIL MODIFIED	3 NOTE MODIFIED
2 DETAIL ADDED	4 DETAIL MODIFIED

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE No. 33E0251
POST MILE R13.5

Refer to: <http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html>

DATE PLOTTED => 9-MAR-2022
 FILE => 33E0251-r-xs12-021.dgn

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

0 1 2 3

UNIT: 0733
 PROJECT NUMBER & PHASE: 04200002351

CONTRACT No.: 04-0Q30U4

REVISION DATES	SHEET	OF
8-28-21 9-2-21 09-29-21 1-13-21	39	54

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1658	1710

REGISTERED CIVIL ENGINEER
 LEAH HAYGOOD
 9-29-21
 DATE

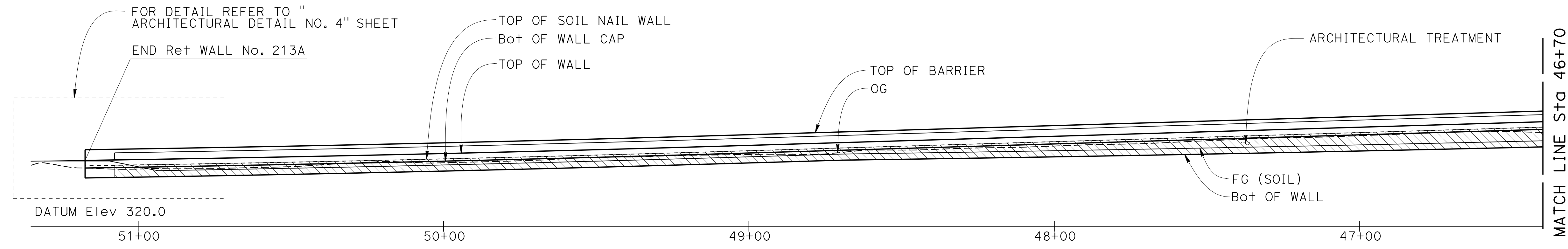
LICENSED LANDSCAPE ARCHITECT
 LEAH HAYGOOD
 Signature
 8-31-23
 Renewal Date
 7-13-21
 DATE
 STATE OF CALIFORNIA

October 8, 2021
 PLANS APPROVAL DATE

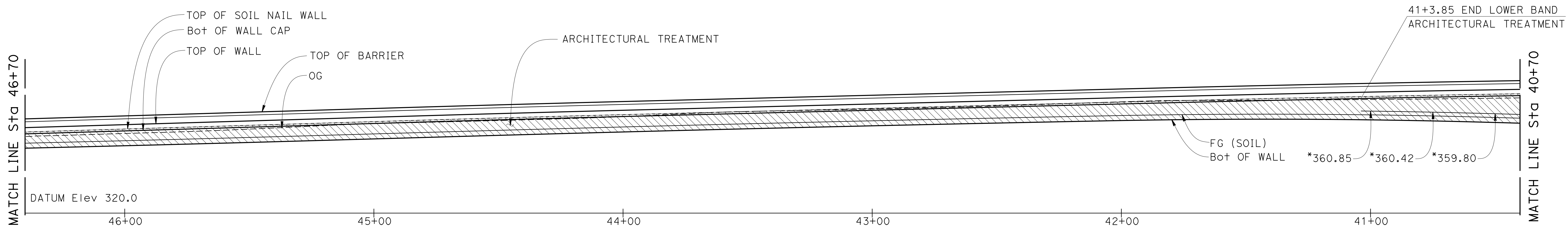
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ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607

HAYGOOD & ASSOCIATES
 647 SANTA BARBARA ROAD
 BERKELEY, CA 94707

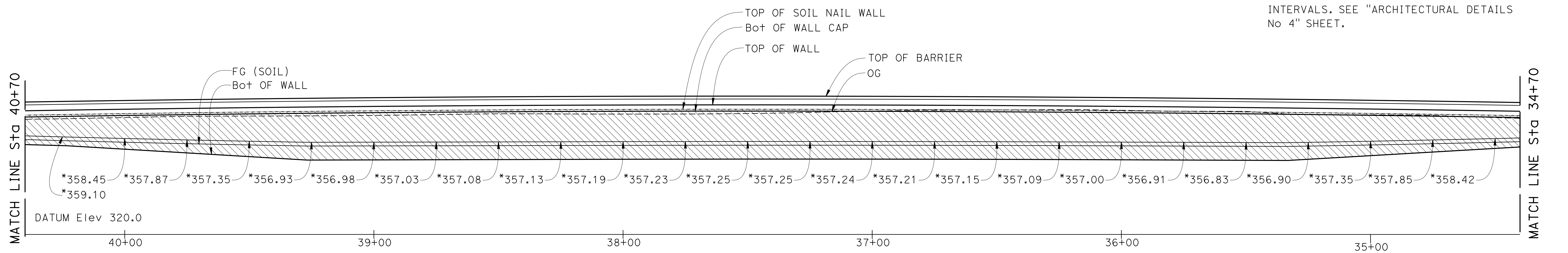


DEVELOPED ELEVATION (VIEWED FROM FACE OF WALL)
1"=20'



DEVELOPED ELEVATION (VIEWED FROM FACE OF WALL)
1"=20'

NOTES
 ELEVATIONS INDICATED BY A * REPRESENT THE BOTTOM EDGE OF THE CHAMFER IN THE LOWER BAND, FOR ARCHITECTURAL TREATMENT. THE ELEVATIONS ARE AT 25' INTERVALS. SEE "ARCHITECTURAL DETAILS No 4" SHEET.



DEVELOPED ELEVATION (VIEWED FROM FACE OF WALL)
1"=20'

DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY S. KENNEY	CHECKED L. HAYGOOD
DETAILS	BY S. KENNEY	CHECKED L. HAYGOOD
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

**RETAINING WALL No. 213A
 ARCHITECTURAL DETAILS No. 1**

DESIGN DETAIL SHEET (ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:03
 FILE => 33E0251-x-arcd+01.dgn USERNAME => p302438


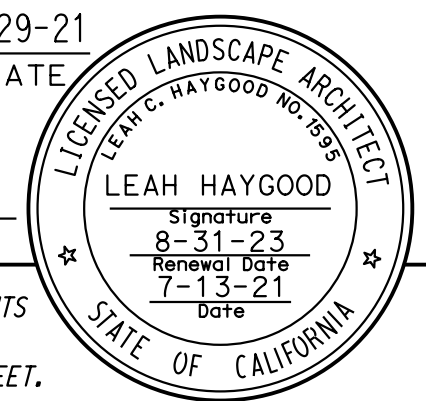
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS
 0 1 2 3

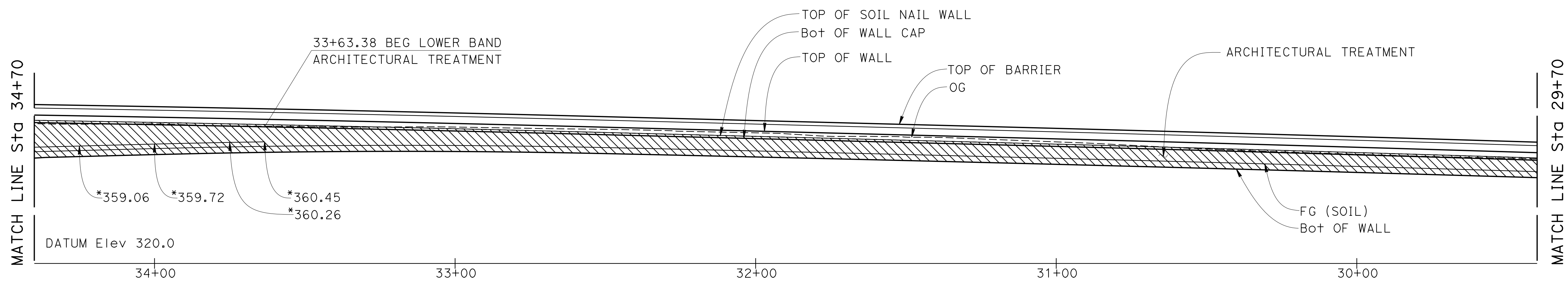
UNIT: 0733
 PROJECT NUMBER & PHASE: 04200002351

CONTRACT No.: 04-0Q30U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
9-2-21 09-29-21 11-17-21 9-29-21	40	54

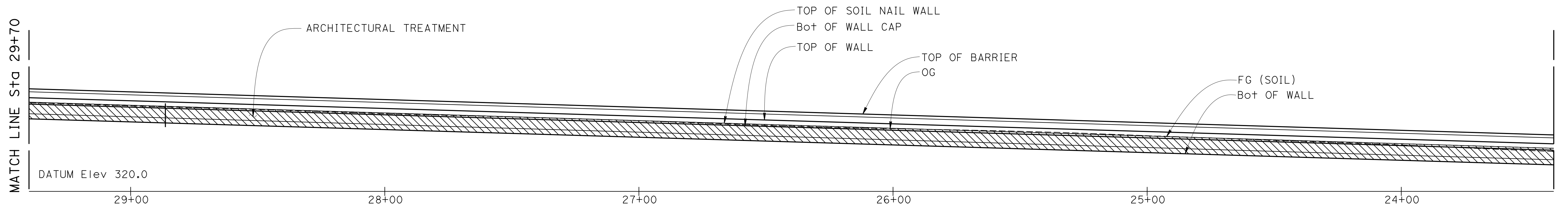
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1659	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 PLANS APPROVAL DATE					
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HAYGOOD & ASSOCIATES 647 SANTA BARBARA ROAD BERKELEY, CA 94707					



DEVELOPED ELEVATION (VIEWED FROM FACE OF WALL)

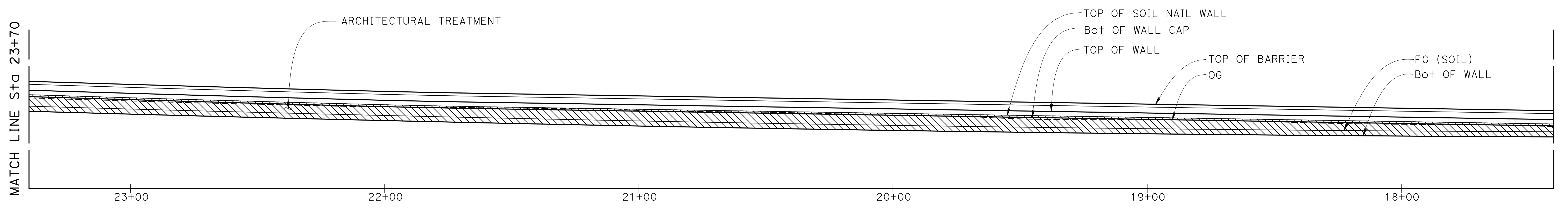
1"=20'

NOTES
 ELEVATIONS INDICATED BY A * REPRESENT THE BOTTOM EDGE OF THE CHAMFER IN THE LOWER BAND, FOR ARCHITECTURAL TREATMENT. THE ELEVATIONS ARE AT 25' INTERVALS. SEE "ARCHITECTURAL DETAILS No 4" SHEET.




DEVELOPED ELEVATION (VIEWED FROM FACE OF WALL)

1"=20'



DEVELOPED ELEVATION (VIEWED FROM FACE OF WALL)

1"=20'


 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY S. KENNEY	CHECKED L. HAYGOOD
DETAILS	BY S. KENNEY	CHECKED L. HAYGOOD
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

**RETAINING WALL No. 213A
 ARCHITECTURAL DETAILS No. 2**

DESIGN DETAIL SHEET (ENGLISH) (REVISION 4/19/2018)


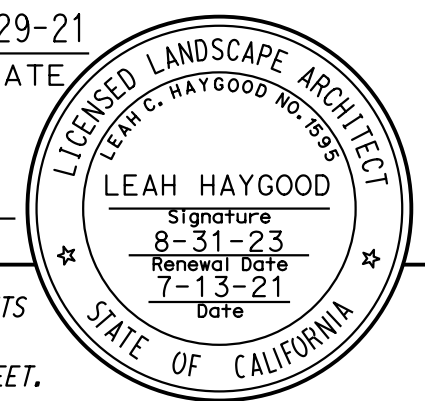
DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:03 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3
 FILE => 33E0251-x-arcd+02.dgn USERNAME => p302438

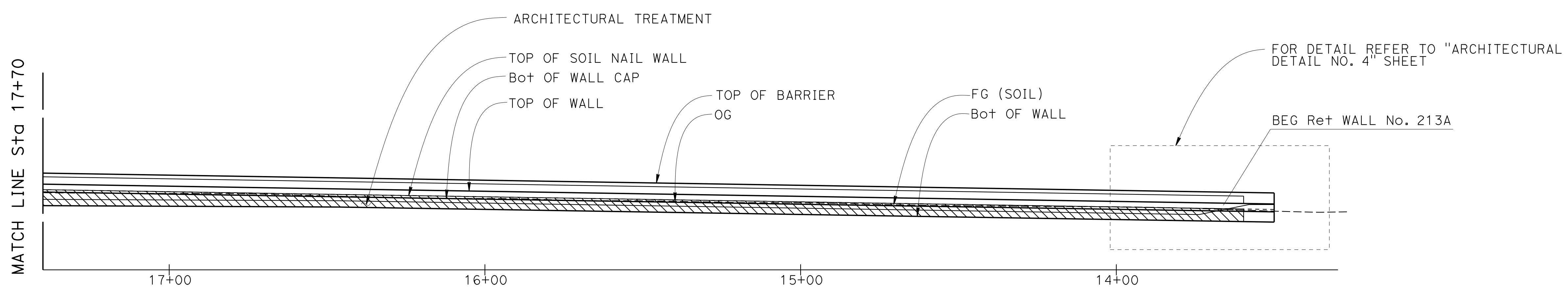
UNIT: 0733
 PROJECT NUMBER & PHASE: 04200002351

CONTRACT No.: 04-0Q30U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

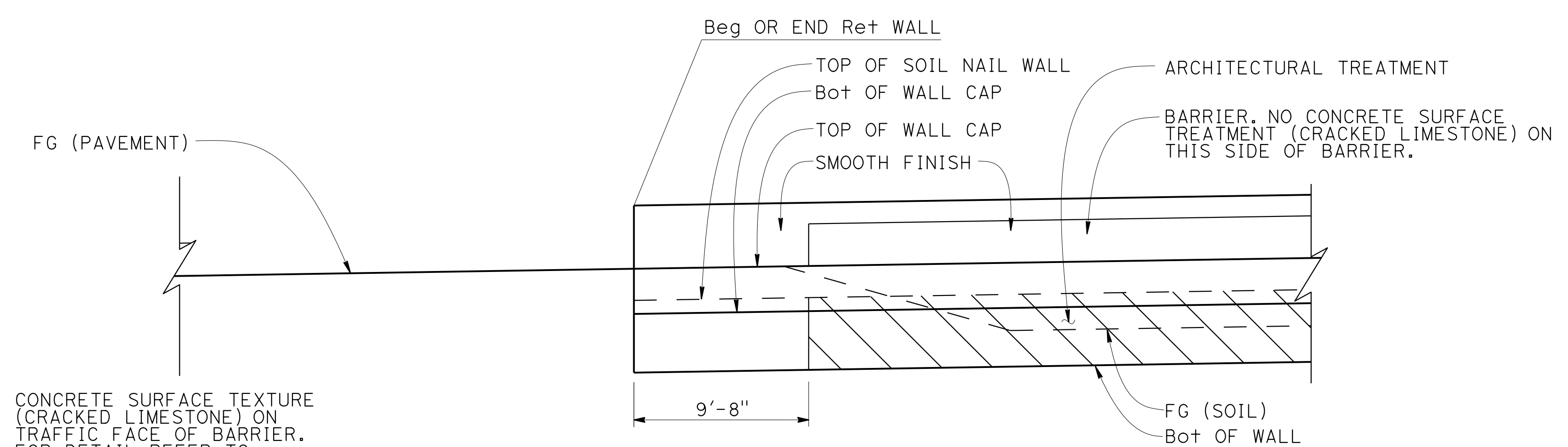
REVISION DATES	SHEET	OF
9-29-21 09-29-21 12-17-21 02-28-22	41	54

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1660	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 PLANS APPROVAL DATE					
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HAYGOOD & ASSOCIATES 647 SANTA BARBARA ROAD BERKELEY, CA 94707					

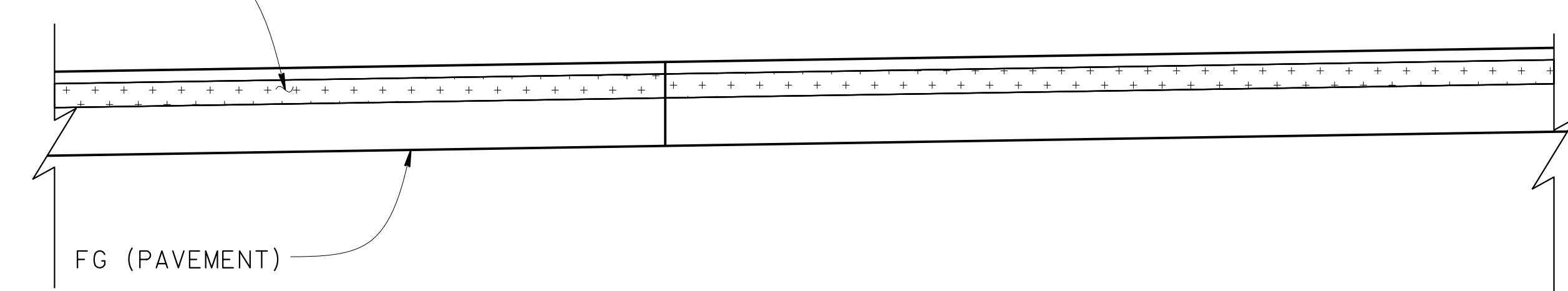


DEVELOPED ELEVATION (VIEWED FROM FACE OF WALL)
 1"=20'

- NOTES**
- CONCRETE SURFACE TEXTURE (CRACKED LIMESTONE) MUST BE CONTINUOUS ALONG BARRIERS.
 - WALL CAP MEANS THE CONCRETE BARRIER SLAB SHOWN IN THE RETAINING WALL STRUCTURE PLANS




VIEW FROM SOUTHBOUND ROADWAY



VIEW FROM NORTHBOUND ROADWAY

BARRIER ARCHITECTURAL TREATMENT TRANSITION AT RETAINING WALL
 1"=5'


 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY S. KENNEY	CHECKED L. HAYGOOD
DETAILS	BY S. KENNEY	CHECKED L. HAYGOOD
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
 Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

RETAINING WALL No. 213A
ARCHITECTURAL DETAILS No. 3

DESIGN DETAIL SHEET (ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:03
 FILE => 33E0251-x-arcad+03.dgn USERNAME => p302438

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

0	1	2	3
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UNIT: 0733
 PROJECT NUMBER & PHASE: 04200002351

CONTRACT No.: 04-0030U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

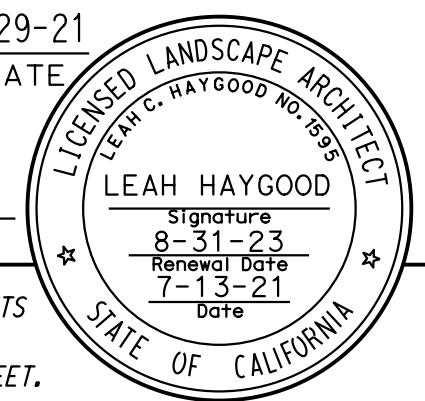
REVISION DATES	SHEET	OF
9-2-21 09-29-21 1-14-21 8-24-21	42	54

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1661	1710

Leah Haygood
REGISTERED CIVIL ENGINEER
DATE 9-29-21

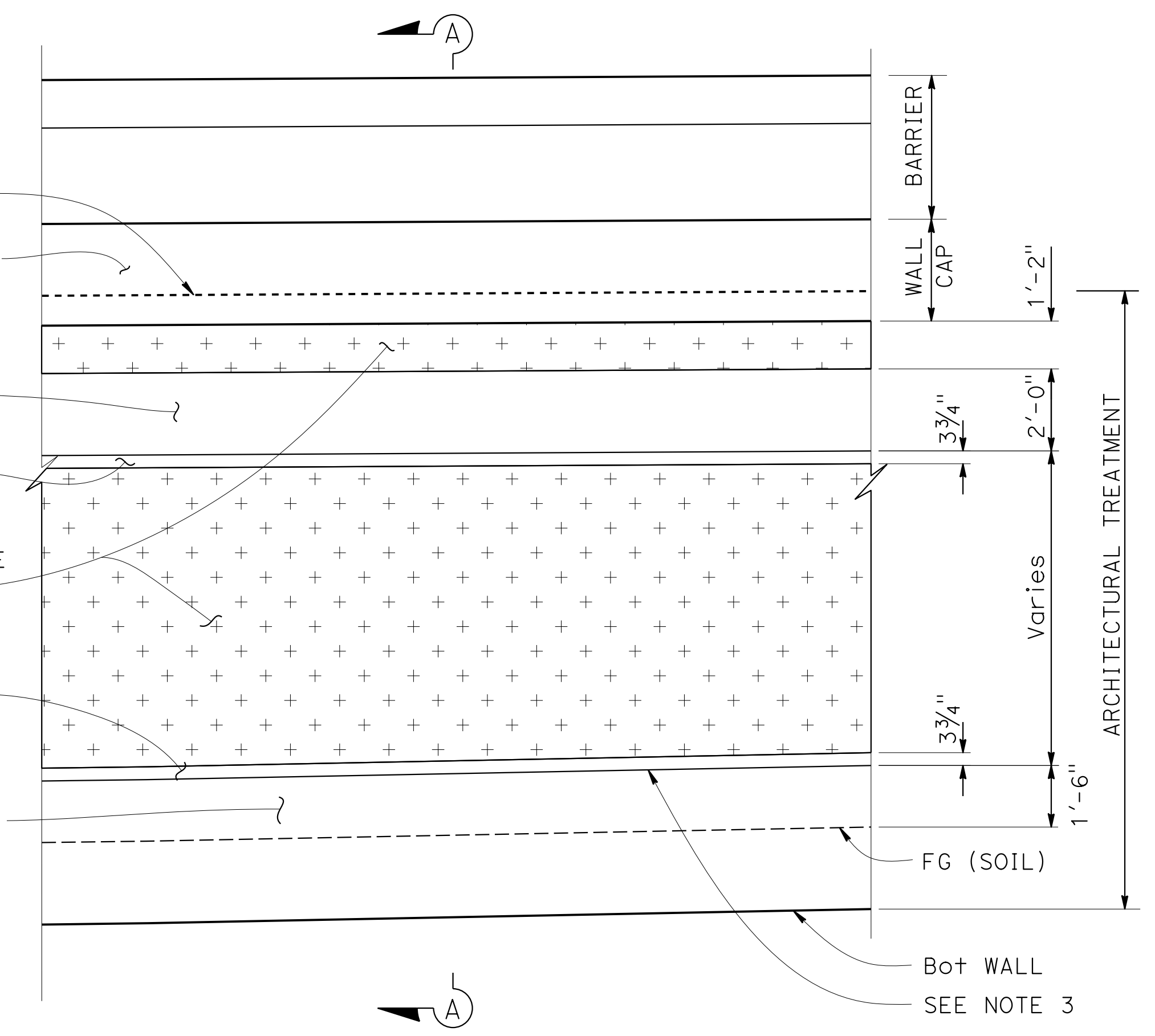
October 8, 2021
PLANS APPROVAL DATE

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ALAMEDA CTC
1111 BROADWAY, SUITE 800
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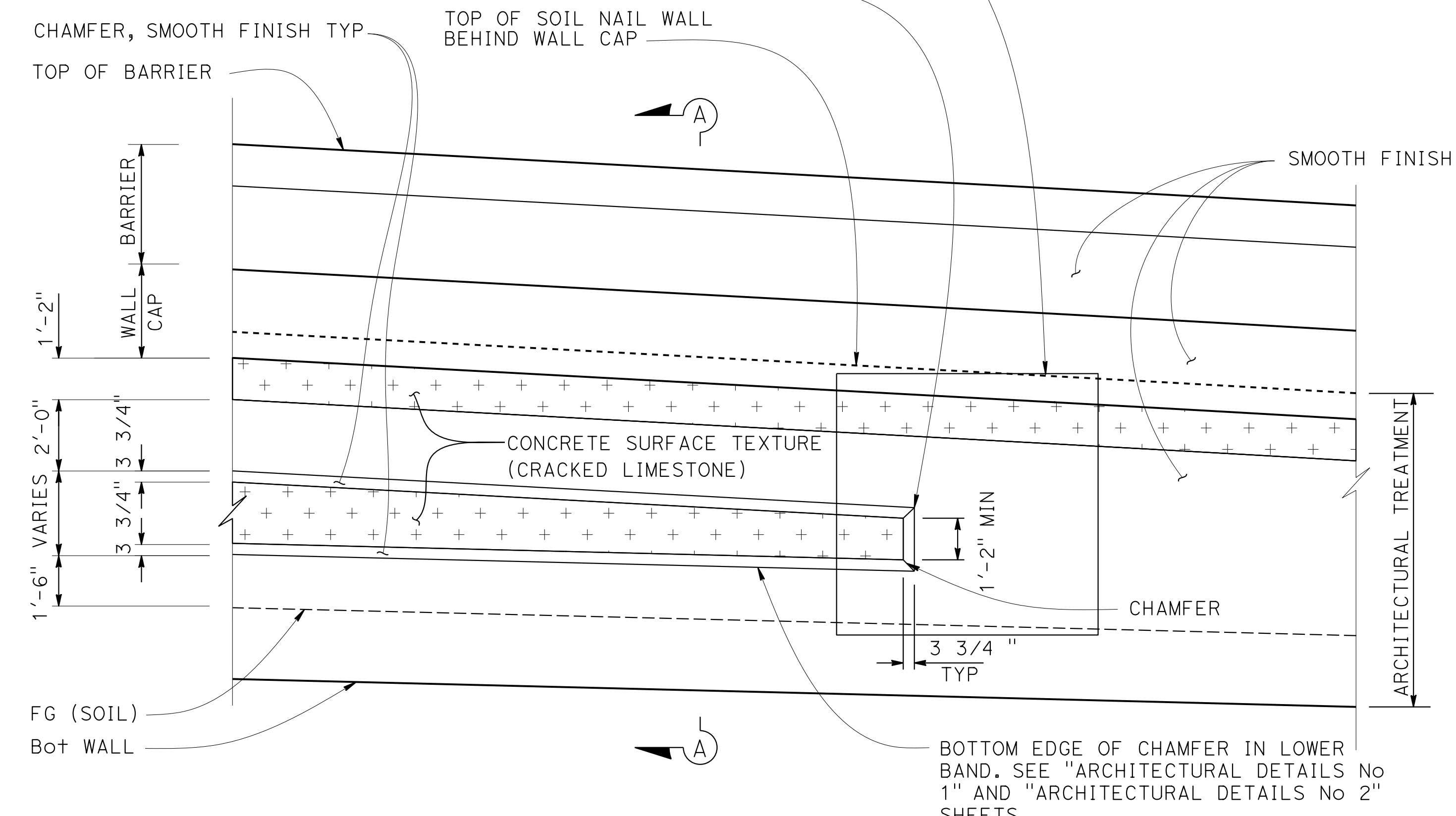
HAYGOOD & ASSOCIATES
647 SANTA BARBARA ROAD
BERKELEY, CA 94707



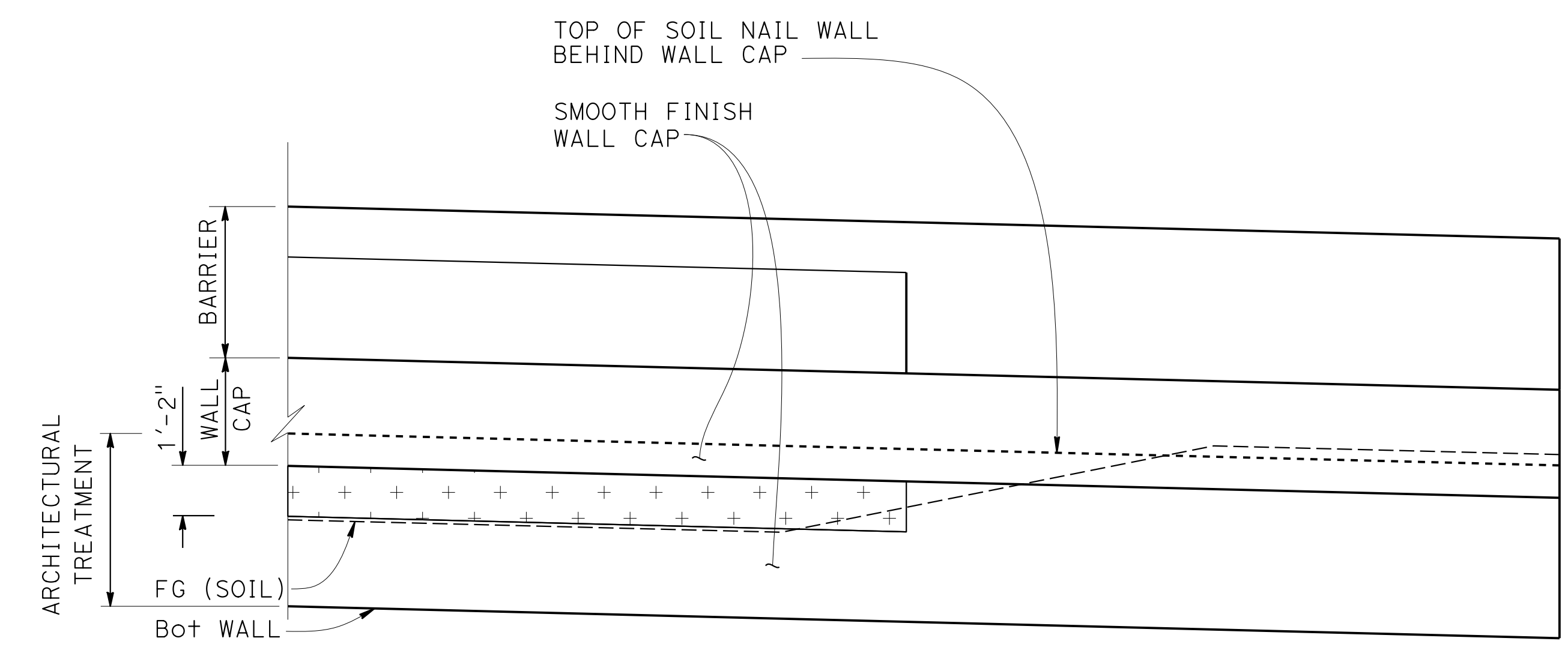
TYPICAL ELEVATION
3/8" = 1'-0"

TEST PANEL RW213A NO. 1 MIN 5'X5' MUST INCLUDE AREA OF CONCRETE SURFACE TEXTURE (CRACKED LIMESTONE) SMOOTH BANDING AND CHAMFER.

FOR LOCATION OF Beg OR END OF LOWER BAND SEE "ARCHITECTURAL DETAIL NO. 1" AND "ARCHITECTURAL DETAIL NO.2" SHEETS



TYPICAL ELEVATION - BEGIN OR END LOWER BAND
3/8" = 1'-0"



TYPICAL ELEVATION - Beg OR END OF Ret WALL
3/8" = 1'-0"

- NOTES**
- FOR SECTION A-A SEE "ARCHITECTURAL DETAIL NO. 5" SHEET.
 - WALL CAP MEANS THE CONCRETE BARRIER SLAB SHOWN IN THE RETAINING WALL STRUCTURE PLANS

Norbert Gee
DESIGN OVERSIGHT
2/15/22
SIGN OFF DATE

DESIGN	BY S. KENNEY	CHECKED L. HAYGOOD
DETAILS	BY S. KENNEY	CHECKED L. HAYGOOD
QUANTITIES	BY W. Bgi	CHECKED A. AKI

**PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

**RETAINING WALL No. 213A
ARCHITECTURAL DETAILS No. 4**

DESIGN DETAIL SHEET (ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:03 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3
FILE => 33E0251-x-arcad04.dgn USERNAME => p302438

UNIT: 0733
PROJECT NUMBER & PHASE: 04200002351

CONTRACT No.: 04-0030U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 43	OF 54
---	----------------	----------	-------

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/21.9 R0.0/0.9	1662	1710

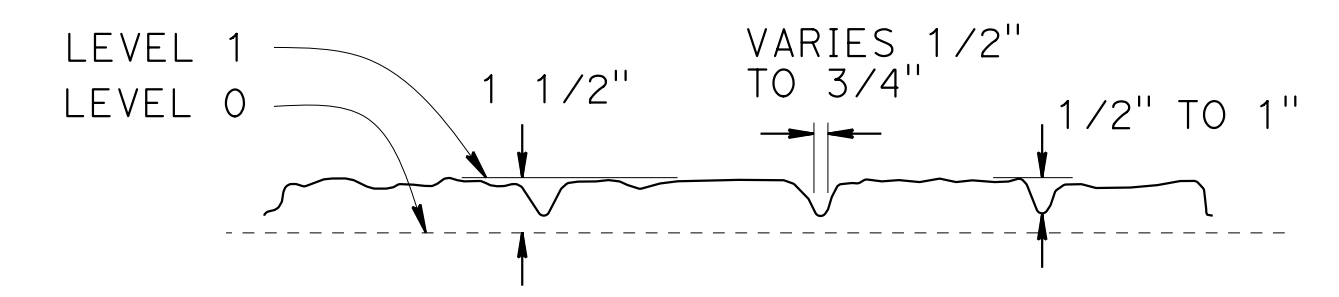
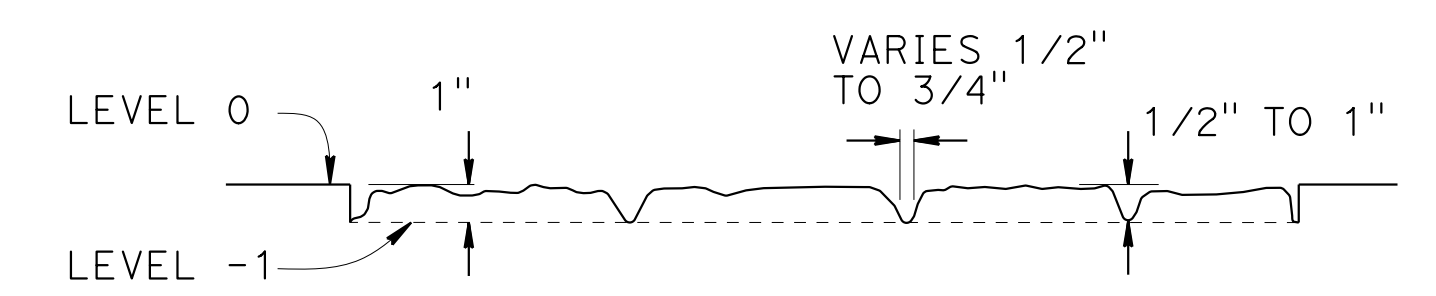
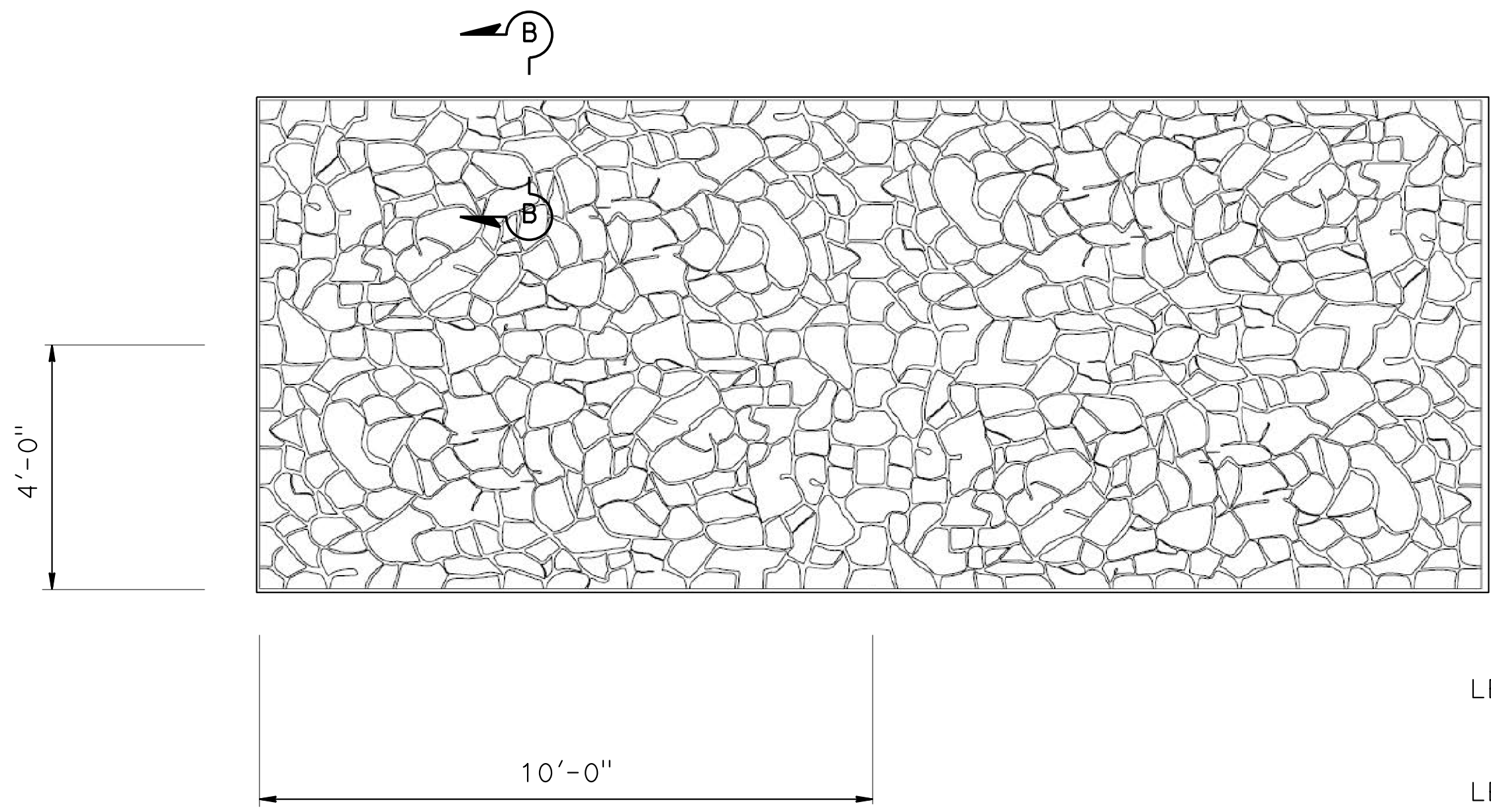
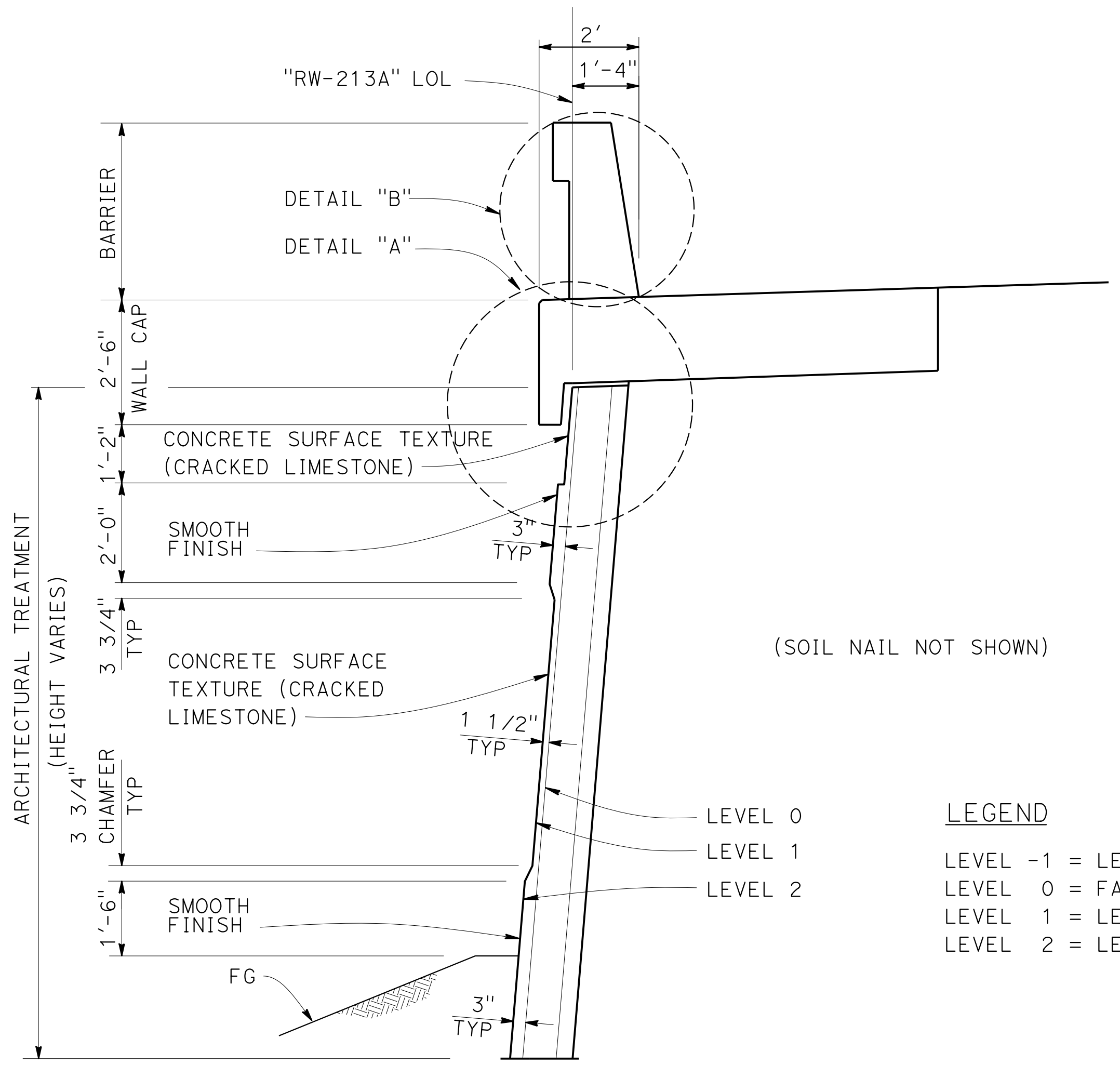
Leah Haygood
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 LICENSED LANDSCAPE ARCHITECT
 LEAH HAYGOOD
 Signature 8-31-23
 Renewal Date 7-13-21
 STATE OF CALIFORNIA

October 8, 2021
 PLANS APPROVAL DATE

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ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607

HAYGOOD & ASSOCIATES
 647 SANTA BARBARA ROAD
 BERKELEY, CA 94707



CONCRETE SURFACE TEXTURE (CRACKED LIMESTONE)

NO SCALE

SECTION C-C

NO SCALE

SECTION B-B

NO SCALE

LEGEND

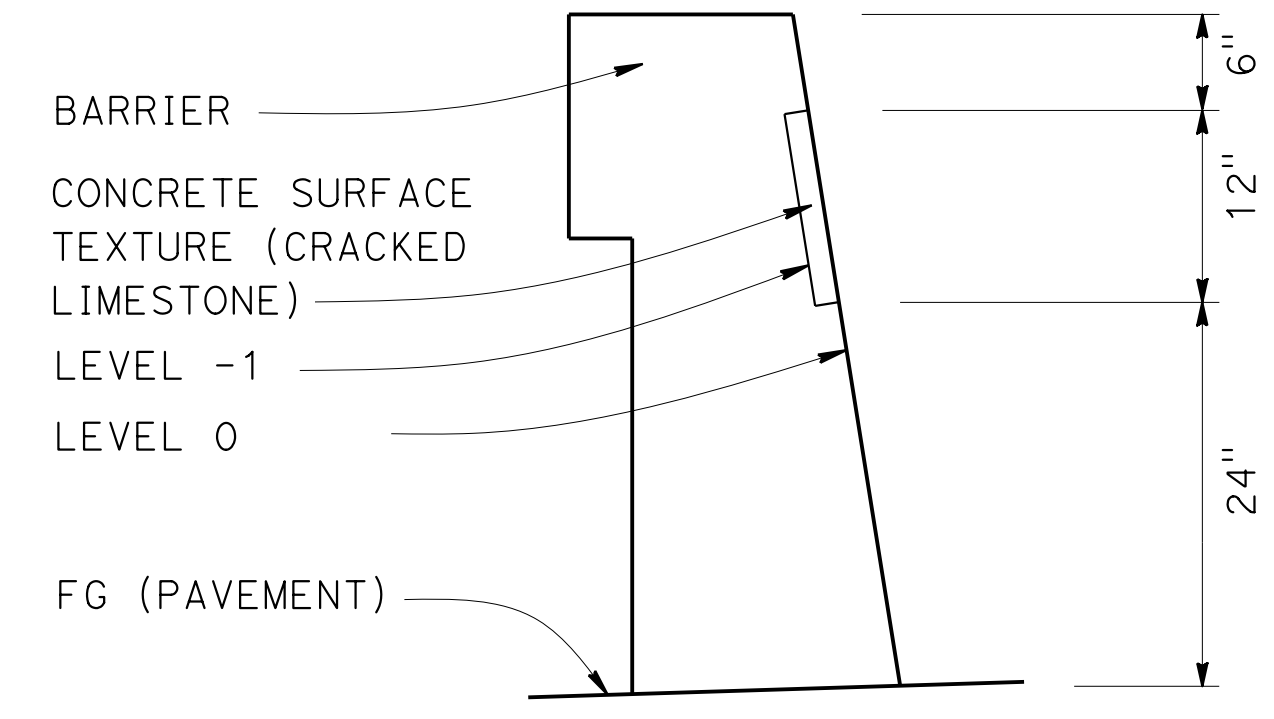
- LEVEL -1 = LEVEL 0 - 1"
- LEVEL 0 = FACE OF BARRIER OR FACE OF CORE OF WALL
- LEVEL 1 = LEVEL 0 + 1 1/2"
- LEVEL 2 = LEVEL 0 + 3"

NOTES

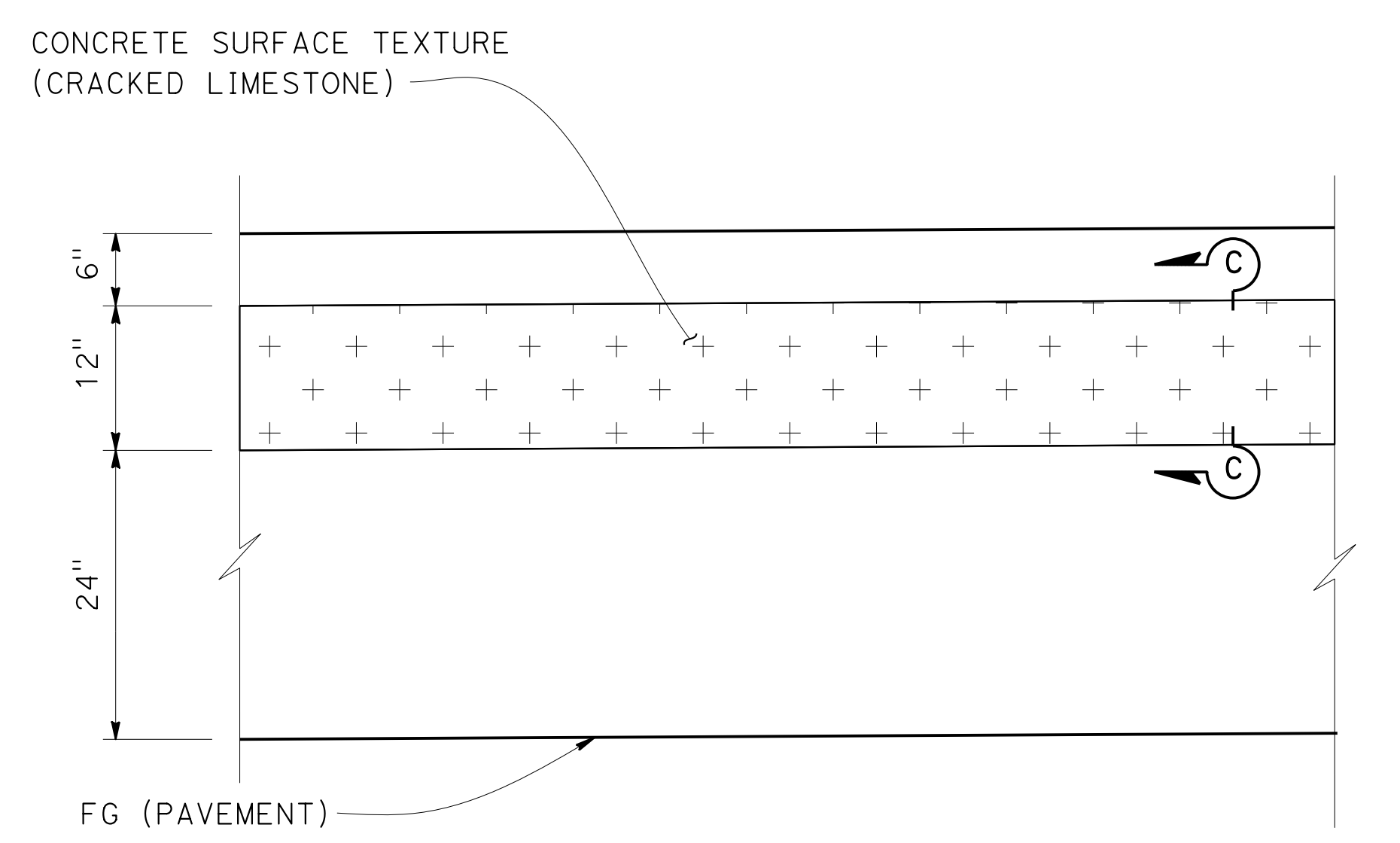
1. CONCRETE SURFACE TEXTURE (CRACKED LIMESTONE) MUST BE CONTINUOUS ALONG BARRIERS.
2. WALL CAP MEANS THE CONCRETE BARRIER SLAB SHOWN IN THE RETAINING WALL STRUCTURE PLANS
3. CONCRETE SURFACE TEXTURE (CRACKED LIMESTONE) TO MATCH CONCRETE SURFACE TEXTURE (CRACKED LIMESTONE) ON Exist RETAINING WALL LOCATED NB I-680 SOUTH OF ANDRADE Rd.

SECTION A-A

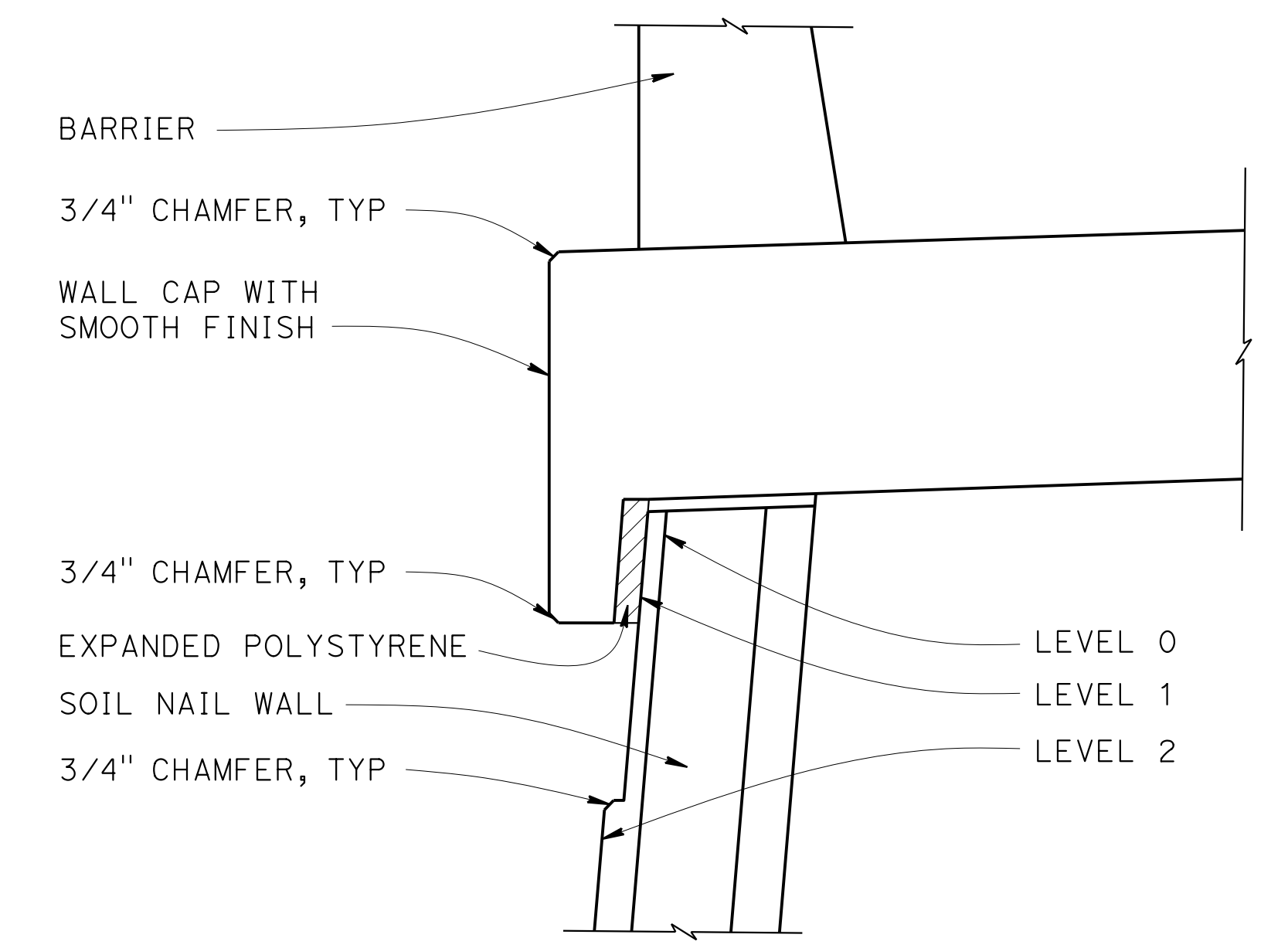
1/2" = 1'-0"



DETAIL "B"



ELEVATION VIEWED FROM TRAFFIC SIDE



DETAIL "A"

NO SCALE

BARRIER ARCHITECTURAL TREATMENT

1" = 1'-0"

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY S. KENNEY	CHECKED L. HAYGOOD
DETAILS	BY S. KENNEY	CHECKED L. HAYGOOD
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0251
POST MILE	R13.5

RETAINING WALL No. 213A
ARCHITECTURAL DETAILS No. 5

DESIGN DETAIL SHEET (ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:03
 FILE => 33E0251-x-arcad105.dgn USERNAME => p302438

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 0733
 PROJECT NUMBER & PHASE: 04200002351

CONTRACT No.: 04-0030U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF
	9-2-21 09-29-21 1-13-21 8-28-21	44	54

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1663	1710

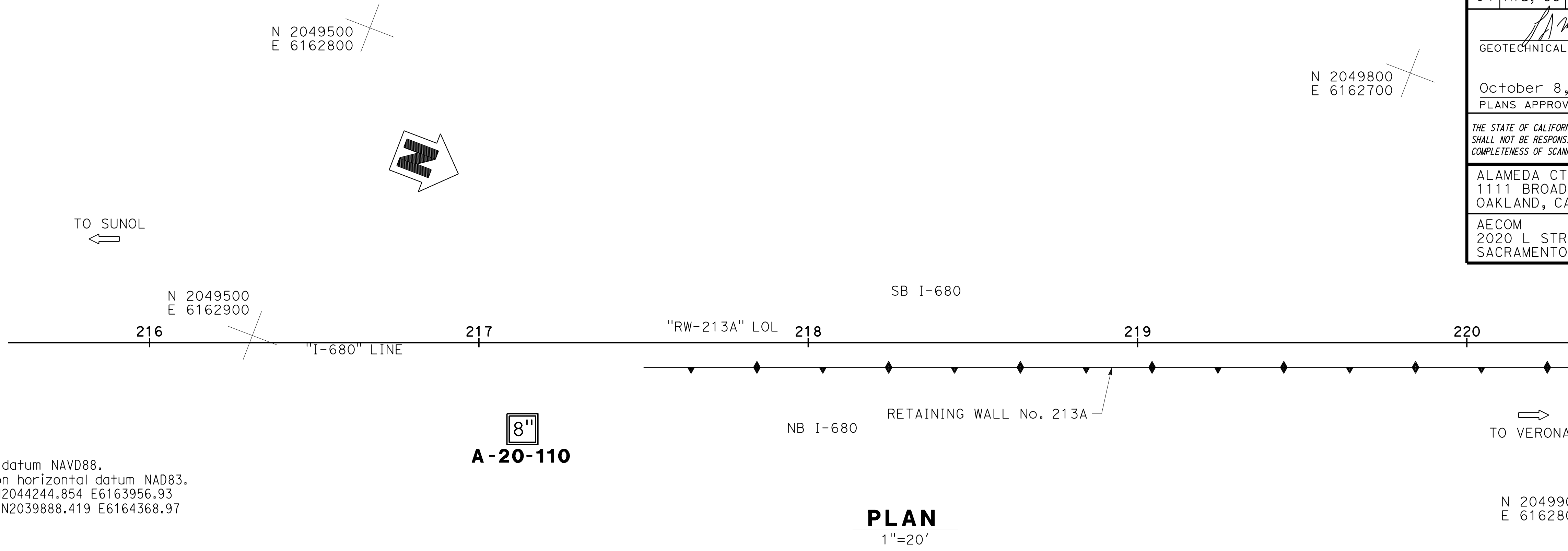
9-29-21
 GEOTECHNICAL PROFESSIONAL DATE
 October 8, 2021
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 L. Allen Moore
 No. GE 2607
 Exp. 6-30-23
 GEOTECHNICAL
 STATE OF CALIFORNIA

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 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607

AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811



BENCH MARK

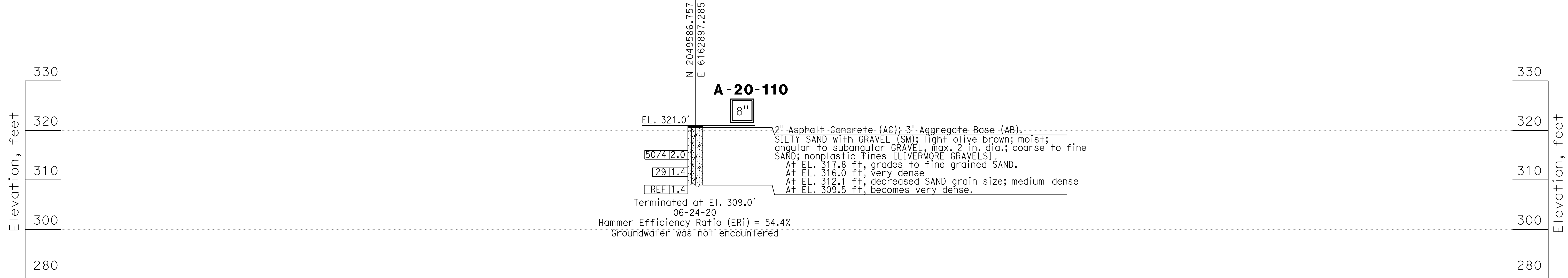
All elevations based on vertical datum NAVD88.
 All stations and offsets based on horizontal datum NAD83.
 Survey Control ID 98 EI 263.49, N2044244.854 E6163956.93
 Survey Control ID 119 EI 257.23, N2039888.419 E6164368.97

NOTES

1. This LOTB Sheet was prepared in accordance with the Caltrans Soil and Rock Logging, Classification, and Presentation Manual (2010).
2. Standard Penetration test sampler I.D. = 1.38 inch (1.4) Modified California sampler I.D. = 1.96 inch (2.0)
3. REF is defined as more than 50 blows in the first 6 inches.
4. Cobbles and boulders could be present based on information from published geologic maps.
5. Boring A-20-110 encountered refusal to hollow stem auger in very dense or very hard soil or formational material at a depth of about 12 feet and was terminated

BOREHOLE LOCATION TABLE

Hole ID	Alignment Name	Station and Offset
A-20-110	"I-680" LINE	217+13 26' Rt



 DESIGN OVERSIGHT Norbert Gee 2/15/22 SIGN OFF DATE	DRAWN	BY E. Garnica/B. Vuong	Timothy VandeVoorde/Joshua Moore FIELD INVESTIGATOR	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE No. 33E0251	RETAINING WALL No. 213A LOG OF TEST BORING 1 of 10				
	CHECKED	BY A. M. Moore	DATE		PROJECT ENGINEER A. L. Moore		POST MILE R13.5			
GS GEOTECHNICAL LOG OF TEST BORINGS SHEET (ENGLISH) (REVISION 4/19/2018)		DATE PLOTTED => 9-MAR-2022 FILE => 33E0251-Z-1+tb01.dgn	TIME PLOTTED => 11:03 USERNAME => p302438	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	UNIT: X 0733 PROJECT NUMBER & PHASE: 04200002351	CONTRACT No.: 04-0030U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 3-2-21 09-29-21 1-14-21 8-24-21	SHEET 45	OF 54

BENCH MARK

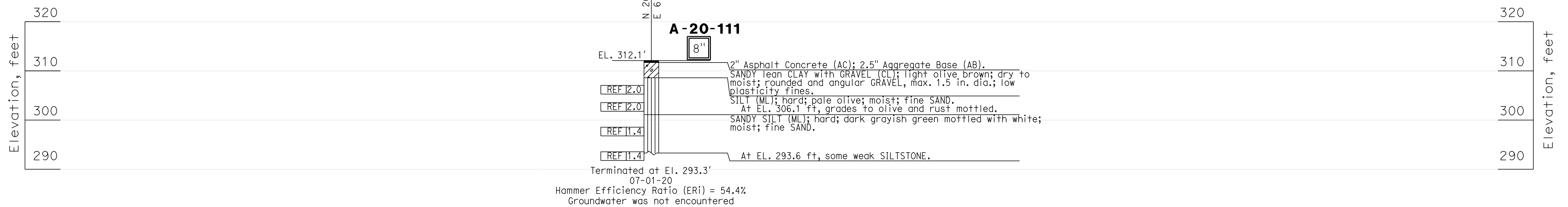
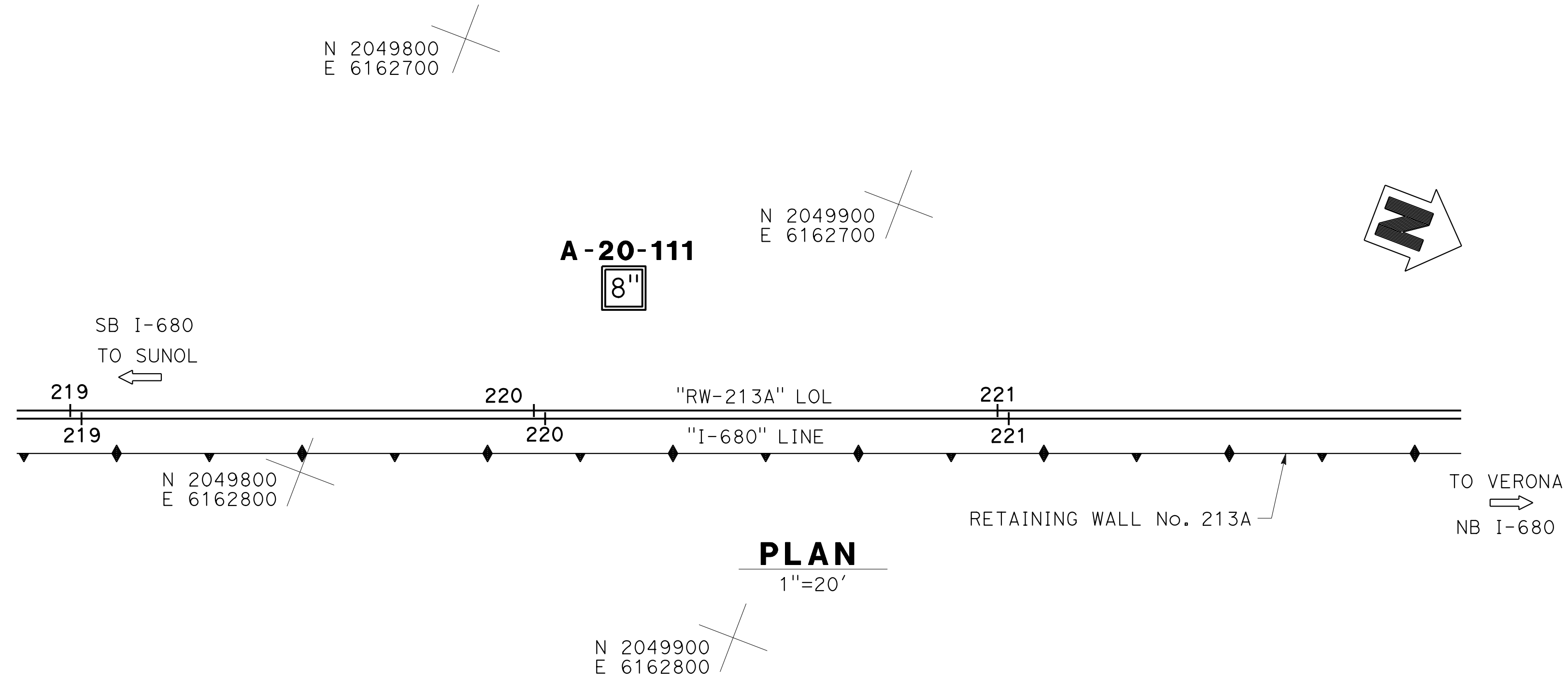
All elevations based on vertical datum NAVD88.
 All stations and offsets based on horizontal datum NAD83.
 Survey Control ID 98 El 263.49, N2044244.854 E6163956.93
 Survey Control ID 119 El 257.23, N2039888.419 E6164368.97

NOTES

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3. REF is defined as more than 50 blows in the first 6 inches.
4. Cobbles and boulders could be present based on information from published geologic maps.

EXPLORATION LOCATION TABLE

Hole ID	Alignment Name	Station and Offset
A-20-111	"I-680" LINE	220+17 28' Lt



Terminated at El. 293.3'
 07-01-20
 Hammer Efficiency Ratio (ERi) = 54.4%
 Groundwater was not encountered

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1664	1710

9-29-21
 GEOTECHNICAL PROFESSIONAL DATE
 October 8, 2021
 PLANS APPROVAL DATE

L. Allen Moore
 No. GE 2607
 Exp. 6-30-23
 REGISTERED PROFESSIONAL ENGINEER
 GEOTECHNICAL
 STATE OF CALIFORNIA

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ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607

AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DRAWN BY
 E. Garnica/B. Vuong
 CHECKED BY
 A. M. Moore

BY
 Timothy VandeVoorde/Joshua Moore
 FIELD INVESTIGATOR
 DATE

PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER
 A. L. Moore

BRIDGE No.
 33E0251
 POST MILE
 R13.5

RETAINING WALL No. 213A
 LOG OF TEST BORING 2 of 10

GS GEOTECHNICAL LOG OF TEST BORINGS SHEET
 (ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022
 FILE => 33E0251-2-1+tb02.dgn
 TIME PLOTTED => 11:03
 USERNAME => p302438

ORIGINAL SCALE
 IN INCHES FOR
 REDUCED PLANS 0 1 2 3

UNIT: X 0733
 PROJECT NUMBER & PHASE: 04200002351

CONTRACT No.: 04-0030U4

DISREGARD PRINTS BEARING
 EARLIER REVISION DATES

REVISION DATES SHEET OF
 3-2-21 09-29-21 11-17-21 8-28-21 46 54

BENCH MARK

All elevations based on vertical datum NAVD88.
 All stations and offsets based on horizontal datum NAD83.
 Survey Control ID 98 El 263.49, N2044244.854 E6163956.93
 Survey Control ID 119 El 257.23, N2039888.419 E6164368.97

NOTES

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2. Standard Penetration test sampler I.D. = 1.38 inch (1.4) Modified California sampler I.D. = 1.96 inch (2.0)
3. REF is defined as more than 50 blows in the first 6 inches.
4. Cobbles and boulders could be present based on information from published geologic maps.

BOREHOLE LOCATION TABLE

Hole ID	Alignment Name	Station and Offset
A-20-112	"I-680" LINE	222+99 26' Rt
A-20-113	"I-680" LINE	226+00 28' Lt

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, RO.0/0.9	1665	1710

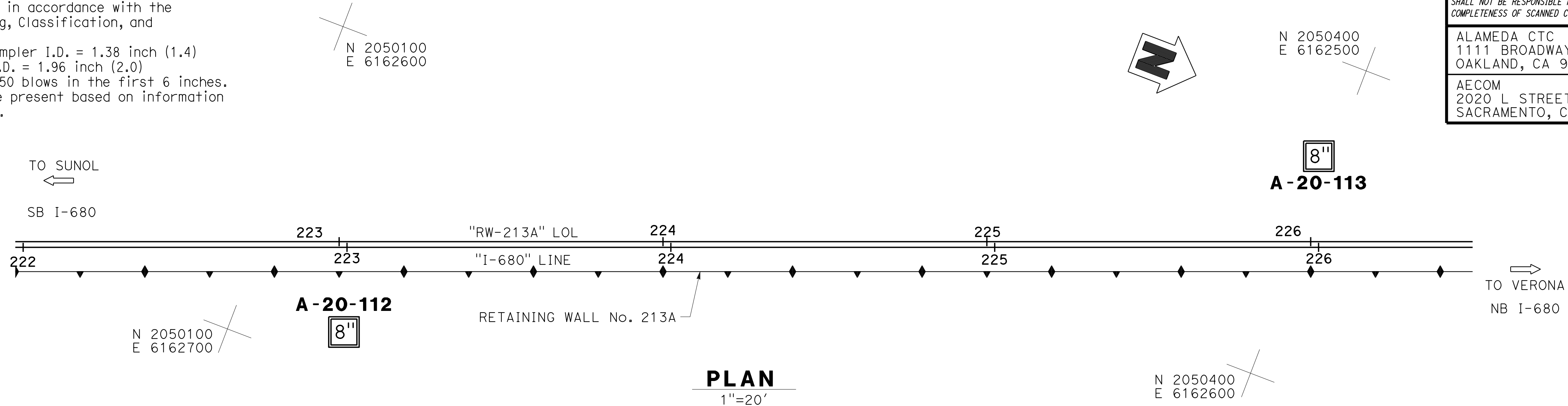
GEOTECHNICAL PROFESSIONAL DATE: 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 L. Allen Moore
 No. GE 2607
 Exp. 6-30-23
 GEOTECHNICAL
 STATE OF CALIFORNIA

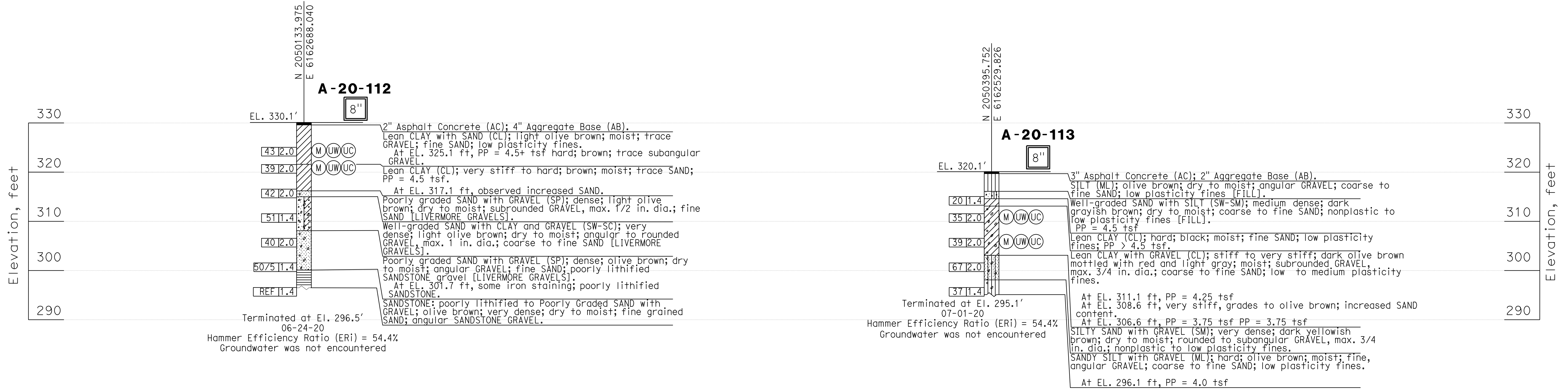
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 OAKLAND, CA 94607

AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811



PLAN
1"=20'



 DESIGN OVERSIGHT Norbert Gee 2/15/22 SIGN OFF DATE	DRAWN E. Garnica/B. Vuong	BY Timothy VandeVoorde/Joshua Moore FIELD INVESTIGATOR	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE No. 33E0251	RETAINING WALL No. 213A LOG OF TEST BORING 3 of 10
	CHECKED A. M. Moore	BY A. M. Moore		PROJECT ENGINEER A. L. Moore	

GS GEOTECHNICAL LOG OF TEST BORINGS SHEET (ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:03 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3
 FILE => 33E0251-2-1+03.dgn USERNAME => p302438

UNIT: X 0733 PROJECT NUMBER & PHASE: 04200002351 CONTRACT No.: 04-0030U4 DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
3-2-21 09-29-21 1-11-21 8-24-21	47	54

BENCH MARK

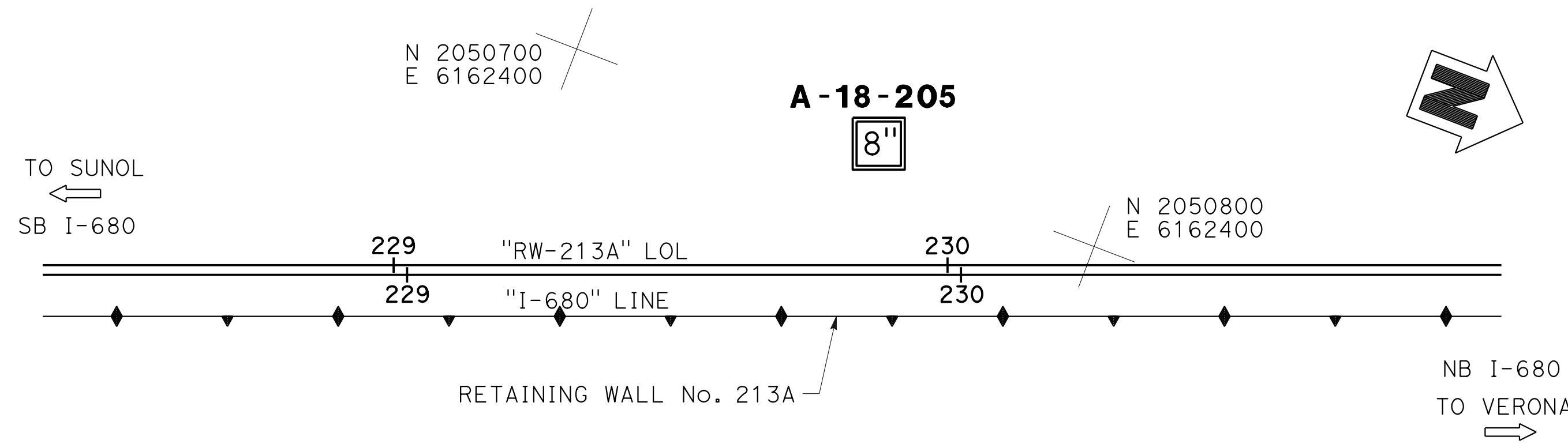
All elevations based on vertical datum NAVD88.
 All stations and offsets based on horizontal datum NAD83.
 Survey Control ID 98 El 263.49, N2044244.854 E6163956.93
 Survey Control ID 119 El 257.23, N2039888.419 E6164368.97

NOTES

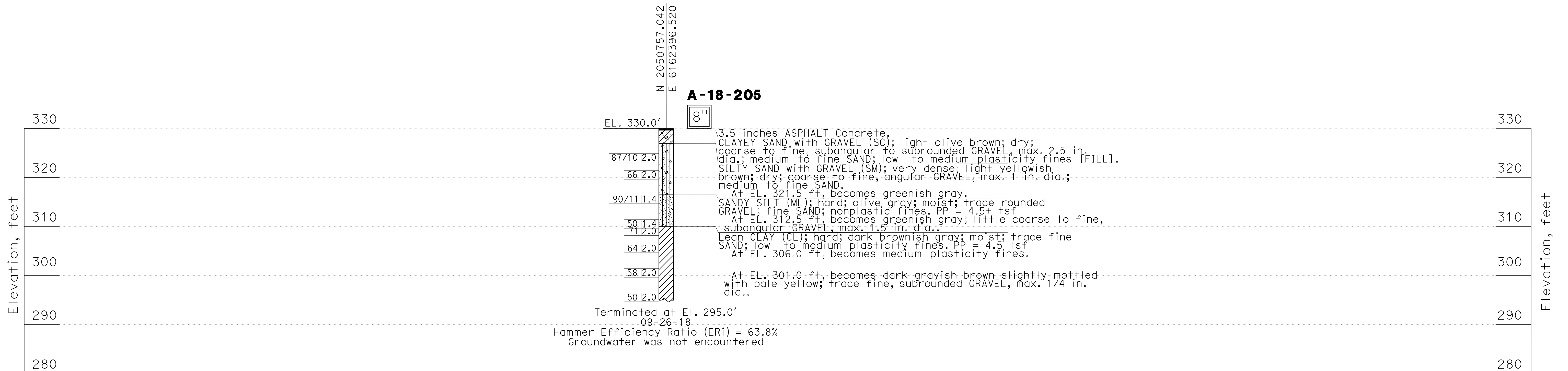
1. This LOTB Sheet was prepared in accordance with the Caltrans Soil and Rock Logging, Classification, and Presentation Manual (2010).
2. Standard Penetration test sampler I.D. = 1.38 inch (1.4) Modified California sampler I.D. = 1.96 inch (2.0)
3. REF is defined as more than 50 blows in the first 6 inches.
4. Cobbles and boulders could be present based on information from published geologic maps.

EXPLORATION LOCATION TABLE

Hole ID	Alignment Name	Station and Offset
A-18-205	"I-680" LINE	229+85 24' Lt



PLAN
1"=20'



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1666	1710

GEOTECHNICAL PROFESSIONAL DATE 9-29-21
 L. Allen Moore
 No. GE 2607
 Exp. 6-30-23
 REGISTERED PROFESSIONAL ENGINEER
 GEOTECHNICAL
 STATE OF CALIFORNIA

October 8, 2021
 PLANS APPROVAL DATE

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ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607

AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

 DESIGN OVERSIGHT Norbert Gee 2/15/22 SIGN OFF DATE	DRAWN	BY E. Garnica/B. Vuong	Timothy VandeVoorde/Joshua Moore FIELD INVESTIGATOR	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE No. 33E0251	RETAINING WALL No. 213A LOG OF TEST BORING 4 OF 10
	CHECKED	BY A. M. Moore	DATE		PROJECT ENGINEER A. L. Moore	

GS GEOTECHNICAL LOG OF TEST BORINGS SHEET (ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:04 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3
 FILE => 33E0251-z-1+tb04.dgn USERNAME => p302438

UNIT: X 0733 PROJECT NUMBER & PHASE: 04200002351 CONTRACT No.: 04-0030U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
3-2-21 09-29-21 1-11-21 8-28-21	48	54

BENCH MARK

All elevations based on vertical datum NAVD88.
 All stations and offsets based on horizontal datum NAD83.
 Survey Control ID 98 El 263.49, N2044244.854 E6163956.93
 Survey Control ID 119 El 257.23, N2039888.419 E6164368.97

NOTES

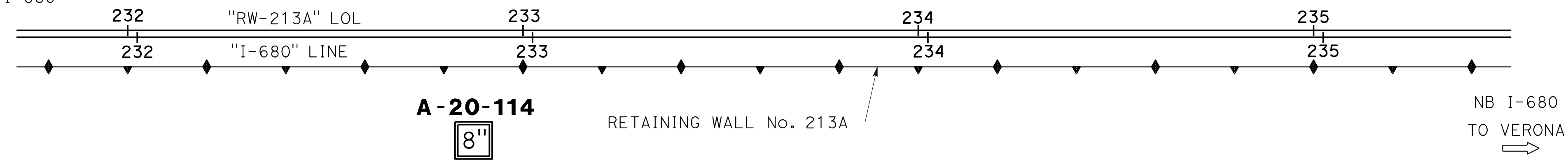
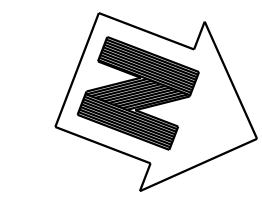
1. This LOTB Sheet was prepared in accordance with the Caltrans Soil and Rock Logging, Classification, and Presentation Manual (2010).
2. Standard Penetration test sampler I.D. = 1.38 inch (1.4) Modified California sampler I.D. = 1.96 inch (2.0)
3. REF is defined as more than 50 blows in the first 6 inches.
4. Cobbles and boulders could be present based on information from published geologic maps.

N 2051000
E 6162200

N 2051200
E 6162200

N 2051000
E 6162300

TO SUNOL
←
SB I-680



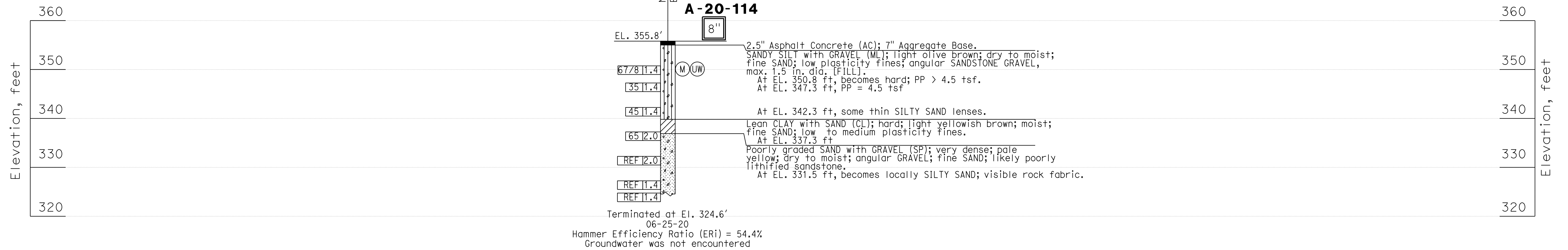
BOREHOLE LOCATION TABLE

Hole ID	Alignment Name	Station and Offset
A-20-114	"I-680" LINE	232+85 26' Rt

PLAN

1"=20'

N 2051200
E 6162300



Terminated at El. 324.6'
 06-25-20
 Hammer Efficiency Ratio (ERI) = 54.4%
 Groundwater was not encountered

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DRAWN BY
 E. Garnica/B. Vuong
 CHECKED BY
 A. M. Moore

BY
 Timothy VandeVoorde/Joshua Moore
 FIELD INVESTIGATOR
 DATE

**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

A. L. Moore
 PROJECT ENGINEER

BRIDGE No.
 33E0251
 POST MILE
 R13.5

**RETAINING WALL No. 213A
 LOG OF TEST BORING 5 OF 10**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1667	1710
			9-29-21		
GEOTECHNICAL PROFESSIONAL			DATE		
October 8, 2021			PLANS APPROVAL DATE		
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ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					

BENCH MARK

All elevations based on vertical datum NAVD88.
 All stations and offsets based on horizontal datum NAD83.
 Survey Control ID 98 El 263.49, N2044244.854 E6163956.93
 Survey Control ID 119 El 257.23, N2039888.419 E6164368.97

NOTES

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2. Standard Penetration test sampler I.D. = 1.38 inch (1.4) Modified California sampler I.D. = 1.96 inch (2.0)
3. REF is defined as more than 50 blows in the first 6 inches.
4. Cobbles and boulders could be present based on information from published geologic maps.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1668	1710

GEOTECHNICAL PROFESSIONAL DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE
 L. Allen Moore
 No. GE 2607
 Exp. 6-30-23
 REGISTERED PROFESSIONAL ENGINEER
 GEOTECHNICAL
 STATE OF CALIFORNIA

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AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

N 2051300
E 6162100

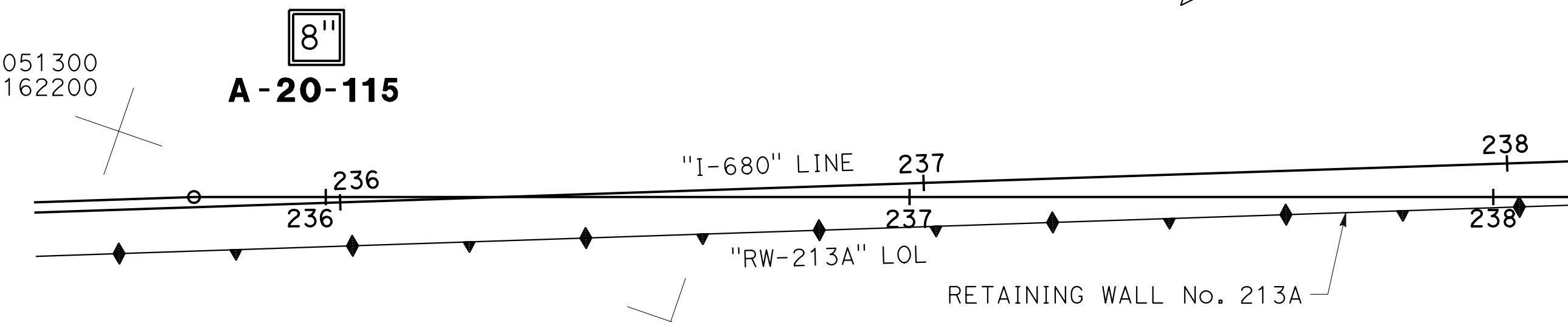
N 2051400
E 6162100

N 2051300
E 6162200

N 2051400
E 6162200

TO SUNOL
←
SB I-680

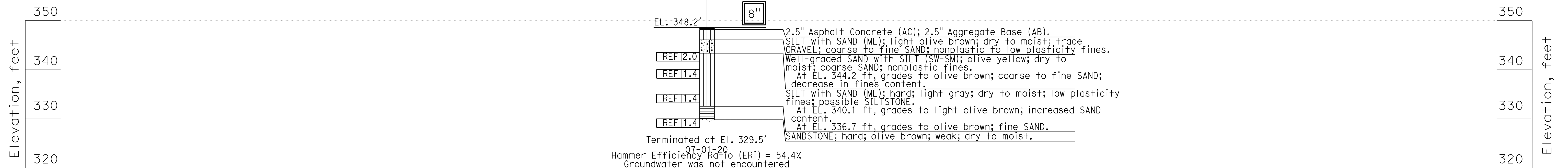
NB I-680
→
TO VERONA



PLAN
1"=20'

BOREHOLE LOCATION TABLE

Hole ID	Alignment Name	Station and Offset
A-20-115	"I-680" LINE	235+97 28' Lt



DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DRAWN BY E. Garnica/B. Vuong
 CHECKED BY A. M. Moore

Timothy VandeVoerde/Joshua Moore
 FIELD INVESTIGATOR
 DATE

**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

A. L. Moore
 PROJECT ENGINEER

BRIDGE No.
 33E0251
 POST MILE
 R13.5

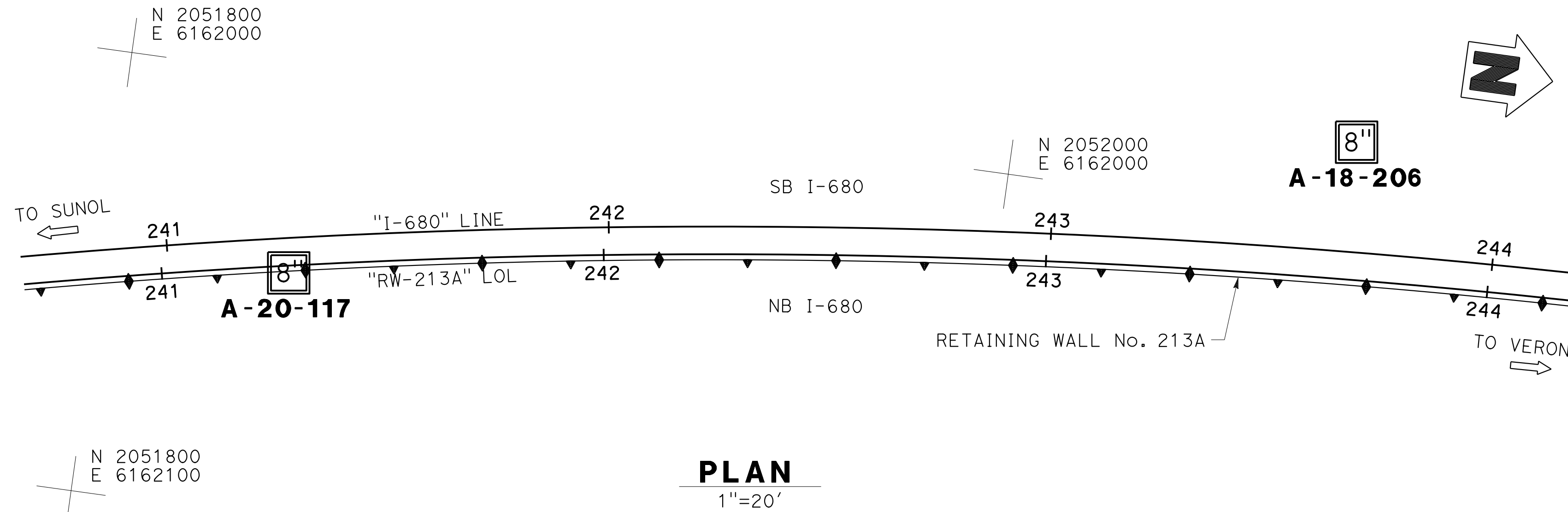
**RETAINING WALL No. 213A
 LOG OF TEST BORING 6 OF 10**

BENCH MARK

All elevations based on vertical datum NAVD88.
 All stations and offsets based on horizontal datum NAD83.
 Survey Control ID 98 El 263.49, N2044244.854 E6163956.93
 Survey Control ID 119 El 257.23, N2039888.419 E6164368.97

NOTES

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2. Standard Penetration test sampler I.D. = 1.38 inch (1.4) Modified California sampler I.D. = 1.96 inch (2.0)
3. REF is defined as more than 50 blows in the first 6 inches.
4. Cobbles and boulders could be present based on information from published geologic maps.



BOREHOLE LOCATION TABLE

Hole ID	Alignment Name	Station and Offset
A-20-117	"I-680" LINE	241+28 8' Rt
A-18-206	"I-680" LINE	243+67 25' Lt



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1669	1710

9-29-21
 GEOTECHNICAL PROFESSIONAL DATE
 October 8, 2021
 PLANS APPROVAL DATE
 L. Allen Moore
 No. GE 2607
 Exp. 6-30-23
 REGISTERED PROFESSIONAL ENGINEER
 GEOTECHNICAL
 STATE OF CALIFORNIA

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 AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

BENCH MARK

All elevations based on vertical datum NAVD88.
 All stations and offsets based on horizontal datum NAD83.
 Survey Control ID 98 EI 263.49, N2044244.854 E6163956.93
 Survey Control ID 119 EI 257.23, N2039888.419 E6164368.97

NOTES

1. This LOTB Sheet was prepared in accordance with the Caltrans Soil and Rock Logging, Classification, and Presentation Manual (2010).
2. Standard Penetration test sampler I.D. = 1.38 inch (1.4) Modified California sampler I.D. = 1.96 inch (2.0)
3. REF is defined as more than 50 blows in the first 6 inches.
4. Cobbles and boulders could be present based on information from published geologic maps.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1670	1710

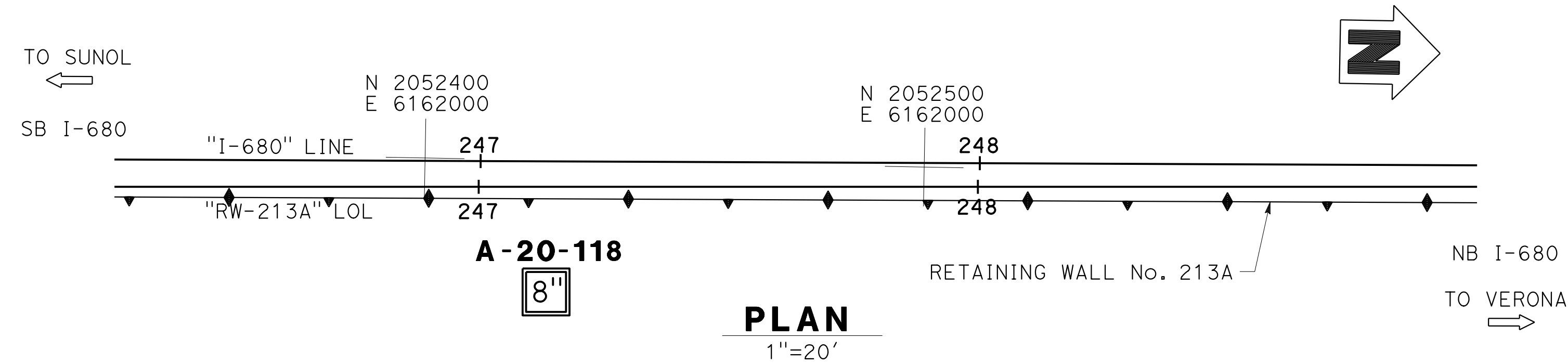
GEOTECHNICAL PROFESSIONAL DATE 9-29-21
 L. Allen Moore
 No. GE 2607
 Exp. 6-30-23
 REGISTERED PROFESSIONAL ENGINEER
 GEOTECHNICAL
 STATE OF CALIFORNIA

October 8, 2021
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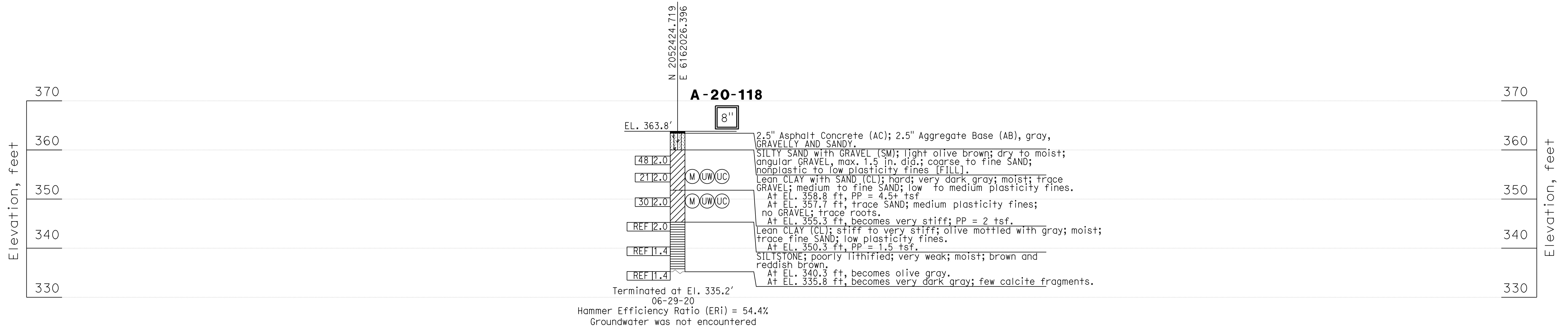
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 OAKLAND, CA 94607

AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811



EXPLORATION LOCATION TABLE

Hole ID	Alignment Name	Station and Offset
A-20-118	"I-680" LINE	247+13 26' R+



 DESIGN OVERSIGHT Norbert Gee 2/15/22 SIGN OFF DATE	DRAWN	BY E. Garnica/B. Vuong	Timothy VandeVoorde/Joshua Moore FIELD INVESTIGATOR	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE No. 33E0251	RETAINING WALL No. 213A LOG OF TEST BORING 8 OF 10			
	CHECKED	BY A. M. Moore	DATE		PROJECT ENGINEER A. L. Moore		POST MILE R13.5		
GS GEOTECHNICAL LOG OF TEST BORINGS SHEET (ENGLISH) (REVISION 4/19/2018)		DATE PLOTTED => 9-MAR-2022 FILE => 33E0251-2-1fb08.dgn	TIME PLOTTED => 11:04 USERNAME => p302438	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	UNIT: X 0733 PROJECT NUMBER & PHASE: 04200002351	CONTRACT No.: 04-0030U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 52 OF 54

BENCH MARK

All elevations based on vertical datum NAVD88.
 All stations and offsets based on horizontal datum NAD83.
 Survey Control ID 98 EI 263.49, N2044244.854 E6163956.93
 Survey Control ID 119 EI 257.23, N2039888.419 E6164368.97

NOTES

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4. Cobbles and boulders could be present based on information from published geologic maps.

N 2052700
E 6161900

N 2053000
E 6161900

BOREHOLE LOCATION TABLE

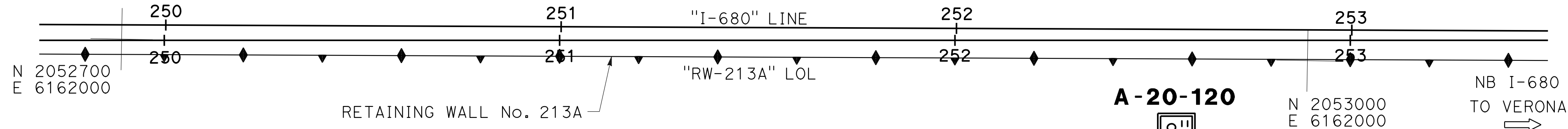
Hole ID	Alignment Name	Station and Offset
A-20-119	"I-680" LINE	249+67 27' Lt
A-20-120	"I-680" LINE	252+56 26' Rt

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1671	1710

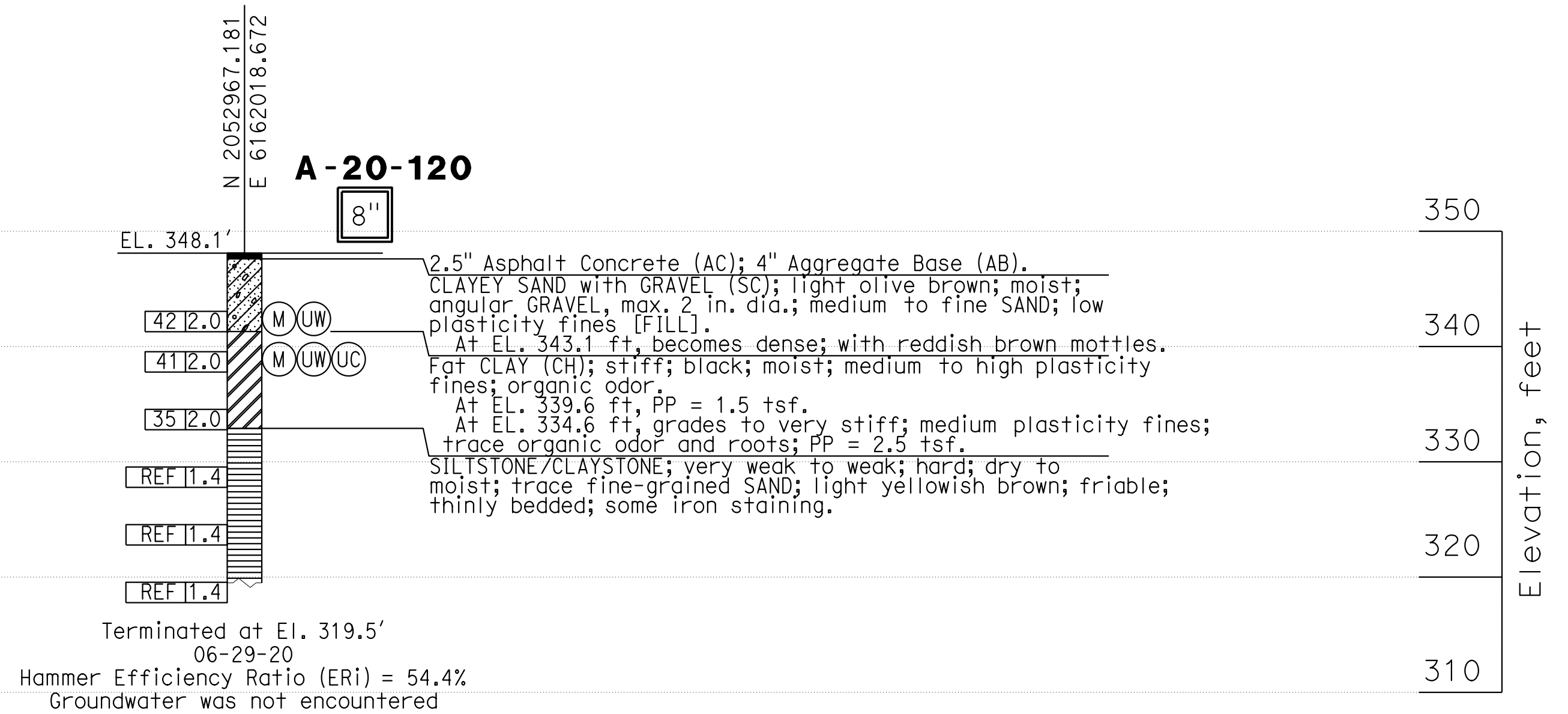
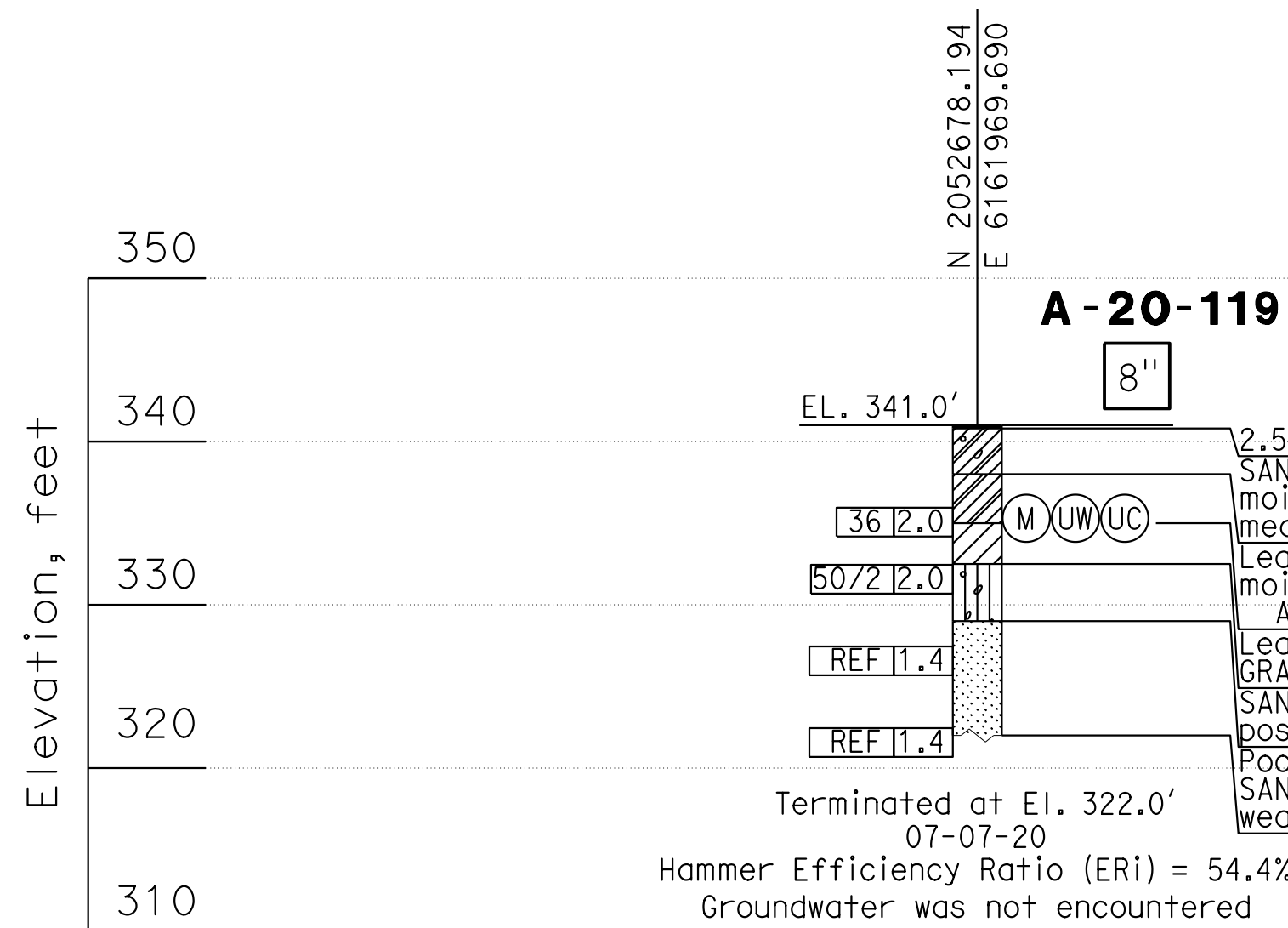
9-29-21
 GEOTECHNICAL PROFESSIONAL DATE
 October 8, 2021
 PLANS APPROVAL DATE
 L. Allen Moore
 No. GE 2607
 Exp. 6-30-23
 REGISTERED PROFESSIONAL ENGINEER
 GEOTECHNICAL
 STATE OF CALIFORNIA
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 SACRAMENTO, CA 95811

8" A-20-119

TO SUNOL
←
SB I-680



PLAN
1"=20'



DESIGN OVERSIGHT
Norbert Gee
2/15/22
SIGN OFF DATE

DRAWN BY
E. Garnica/B. Vuong
CHECKED BY
A. M. Moore

Timothy VandeVoorde/Joshua Moore
FIELD INVESTIGATOR
DATE

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

A. L. Moore
PROJECT ENGINEER

BRIDGE No.
33E0251
POST MILE
R13.5

RETAINING WALL No. 213A
LOG OF TEST BORING 9 OF 10

GS GEOTECHNICAL LOG OF TEST BORINGS SHEET
(ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022
FILE => 33E0251-z-1f+b09.dgn
TIME PLOTTED => 11:04
USERNAME => p302438

ORIGINAL SCALE
IN INCHES FOR
REDUCED PLANS
0 1 2 3

UNIT: X 0733
PROJECT NUMBER & PHASE: 04200002351

CONTRACT No.: 04-0Q30U4

DISREGARD PRINTS BEARING
EARLIER REVISION DATES

REVISION DATES	SHEET	OF
3-2-21 09-29-21 12-1-21 8-28-21	53	54

BENCH MARK

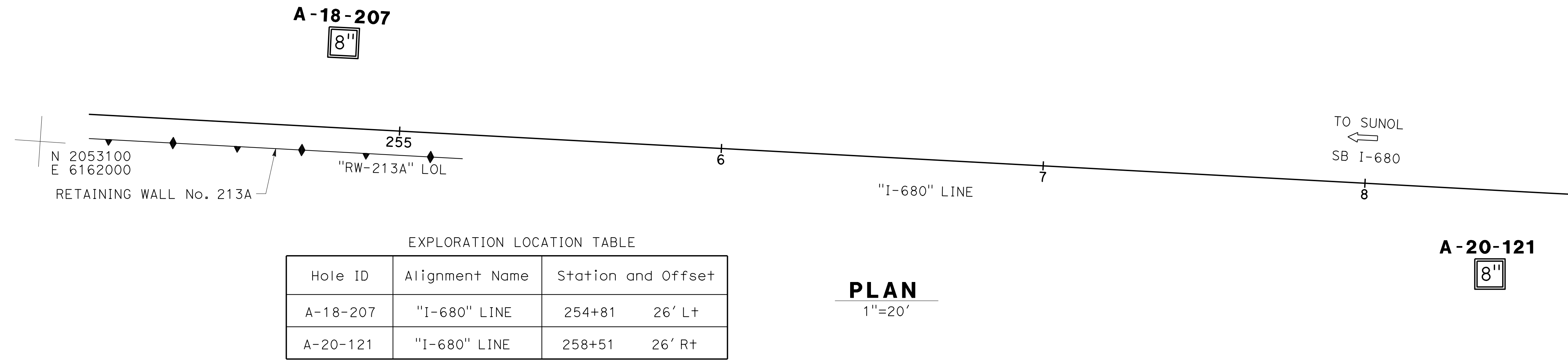
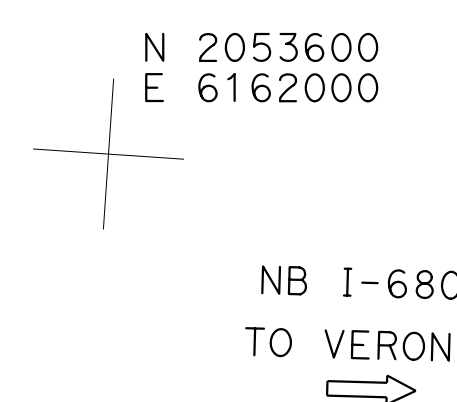
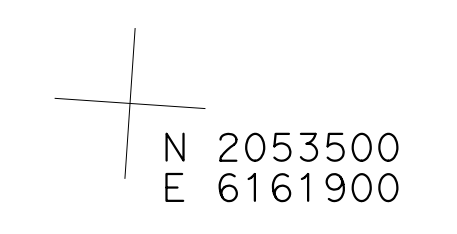
All elevations based on vertical datum NAVD88.
 All stations and offsets based on horizontal datum NAD83.
 Survey Control ID 98 El 263.49, N2044244.854 E6163956.93
 Survey Control ID 119 El 257.23, N2039888.419 E6164368.97

NOTES

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4. Cobbles and boulders could be present based on information from published geologic maps.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1672	1710

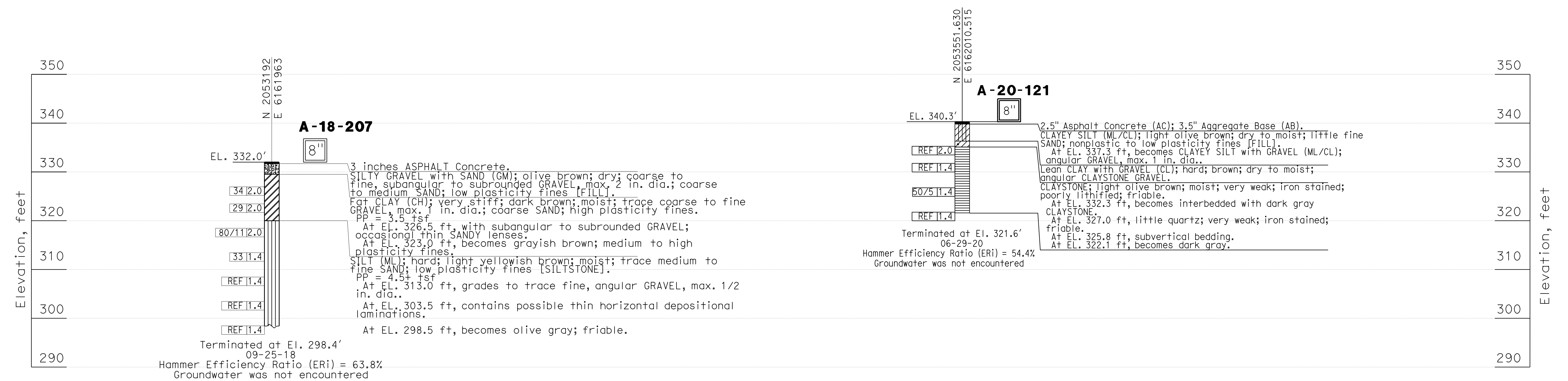
GEOTECHNICAL PROFESSIONAL DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE
 L. Allen Moore
 No. GE 2607
 Exp. 6-30-23
 REGISTERED PROFESSIONAL ENGINEER
 GEOTECHNICAL
 STATE OF CALIFORNIA
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 AECOM
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 SACRAMENTO, CA 95811



EXPLORATION LOCATION TABLE

Hole ID	Alignment Name	Station and Offset
A-18-207	"I-680" LINE	254+81 26' Lt
A-20-121	"I-680" LINE	258+51 26' Rt

PLAN
1"=20'



DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DRAWN BY E. Garnica/B. Vuong
 CHECKED BY A. M. Moore

BY Timothy VandeVoorde/Joshua Moore
 FIELD INVESTIGATOR
 DATE

PREPARED FOR THE
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER
 A. L. Moore
 BRIDGE No. 33E0251
 PROJECT MILE R13.5

RETAINING WALL No. 213A
LOG OF TEST BORING 10 OF 10

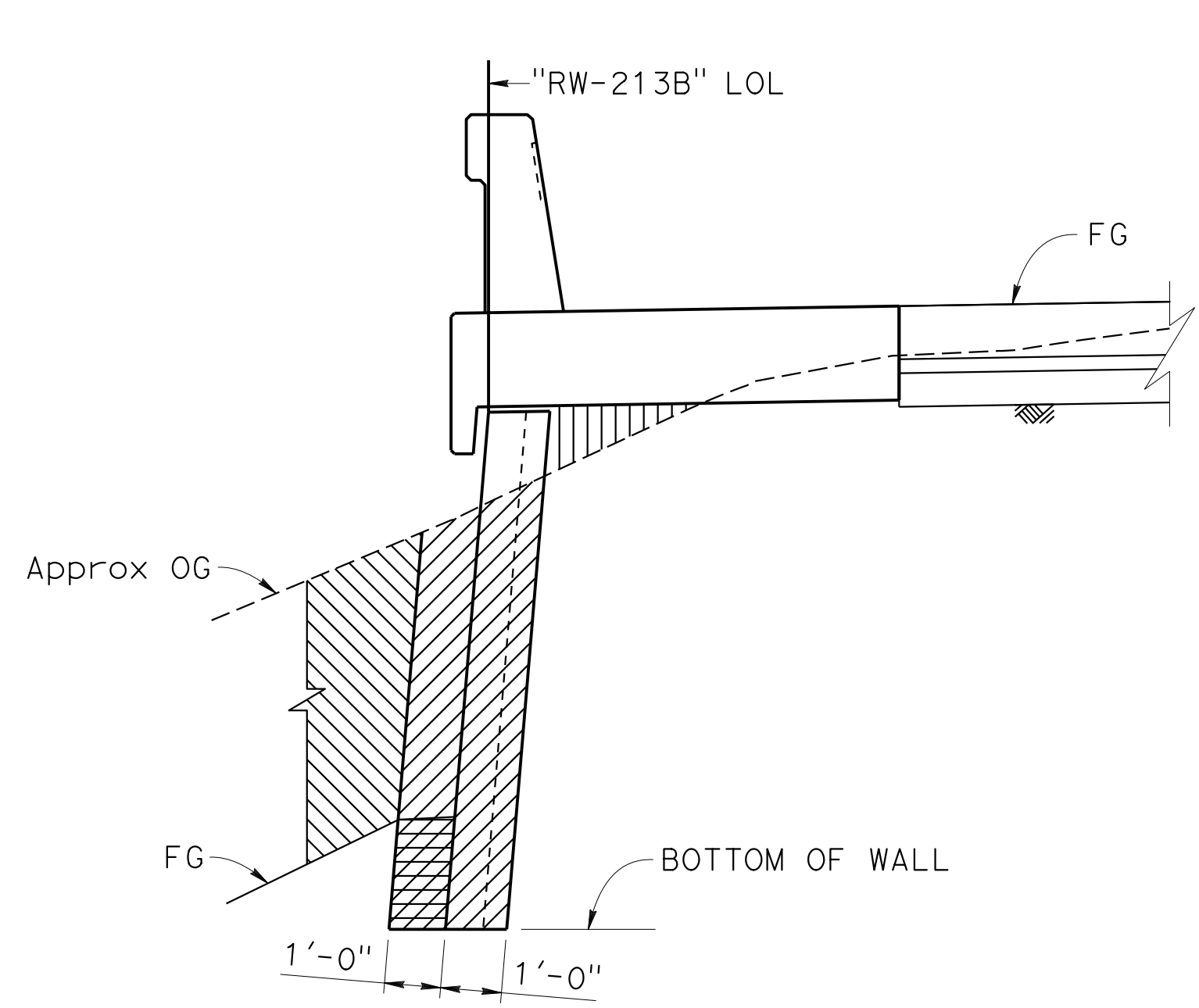
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1674	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE
 No. C48859
 Exp. 9/30/22
 CIVIL
 STATE OF CALIFORNIA

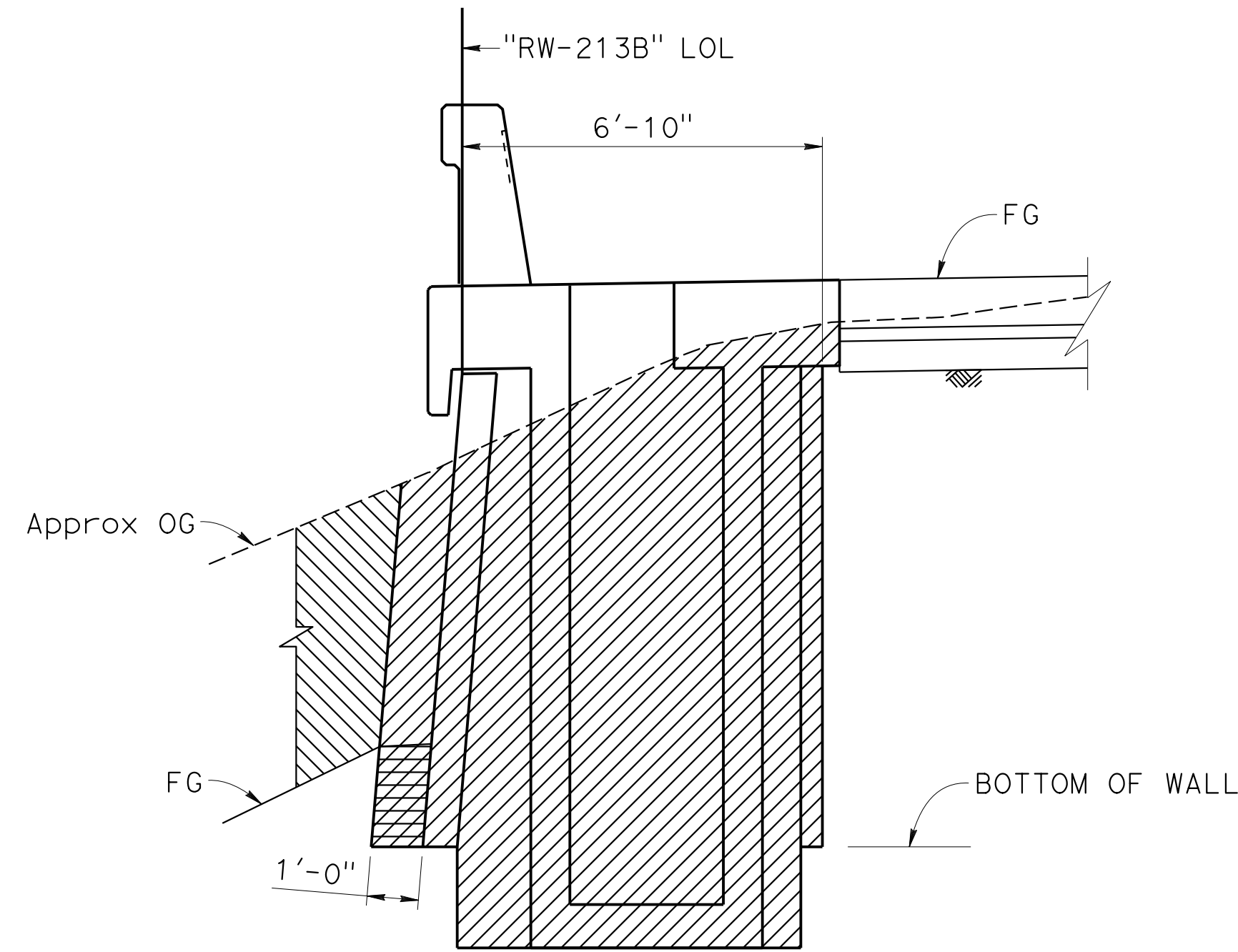
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- LEGEND:**
- Structure Excavation (Soil Nail Wall)
 - Structure Backfill (Soil Nail Wall)
 - Roadway Excavation
 - Structure Backfill (Slurry Cement)

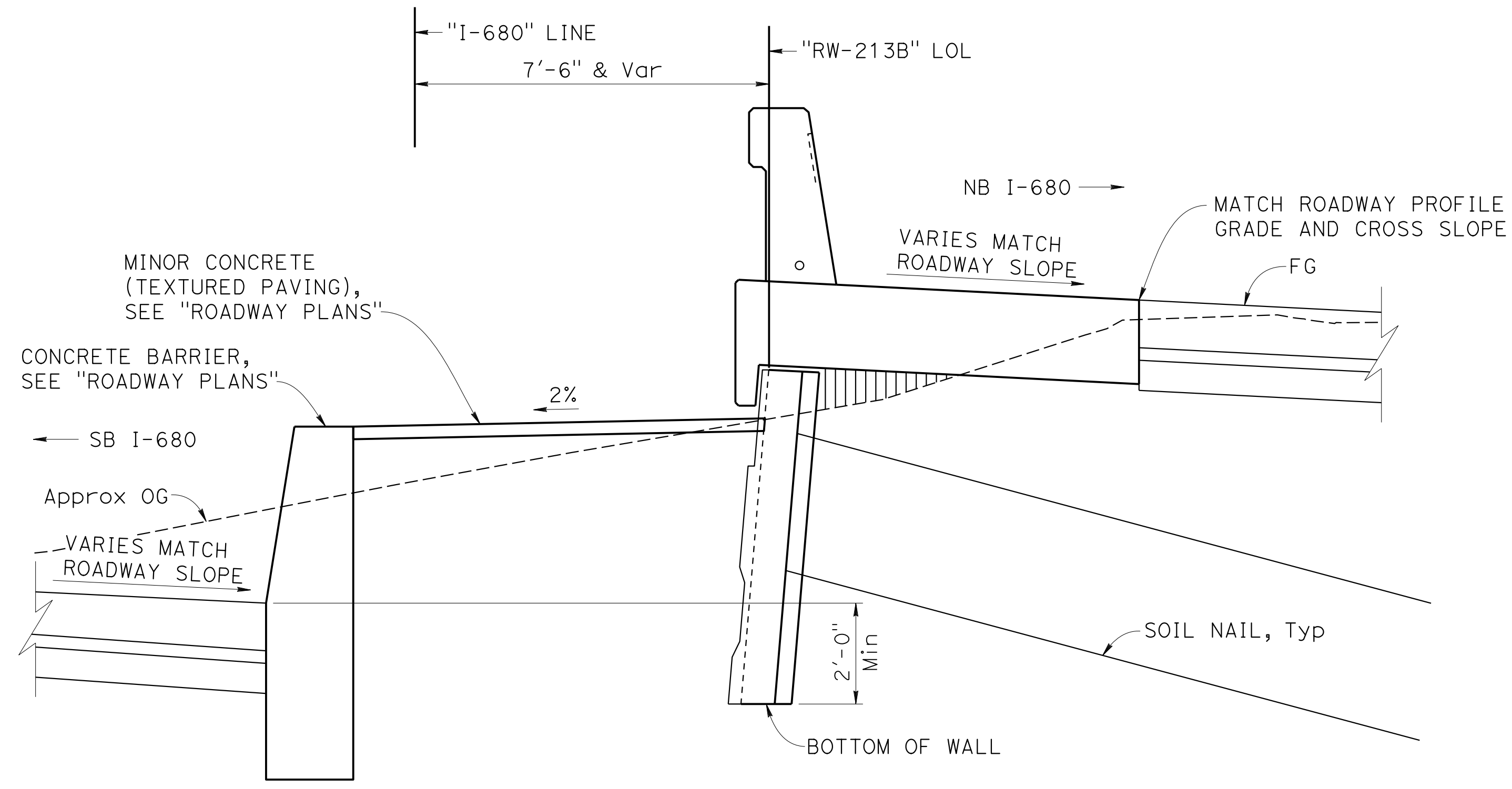
- NOTE:**
- Form and place structure backfill (Slurry Cement) prior to nail installation, bench as needed.
- (A) Concrete Barrier Type 842 (Mod)



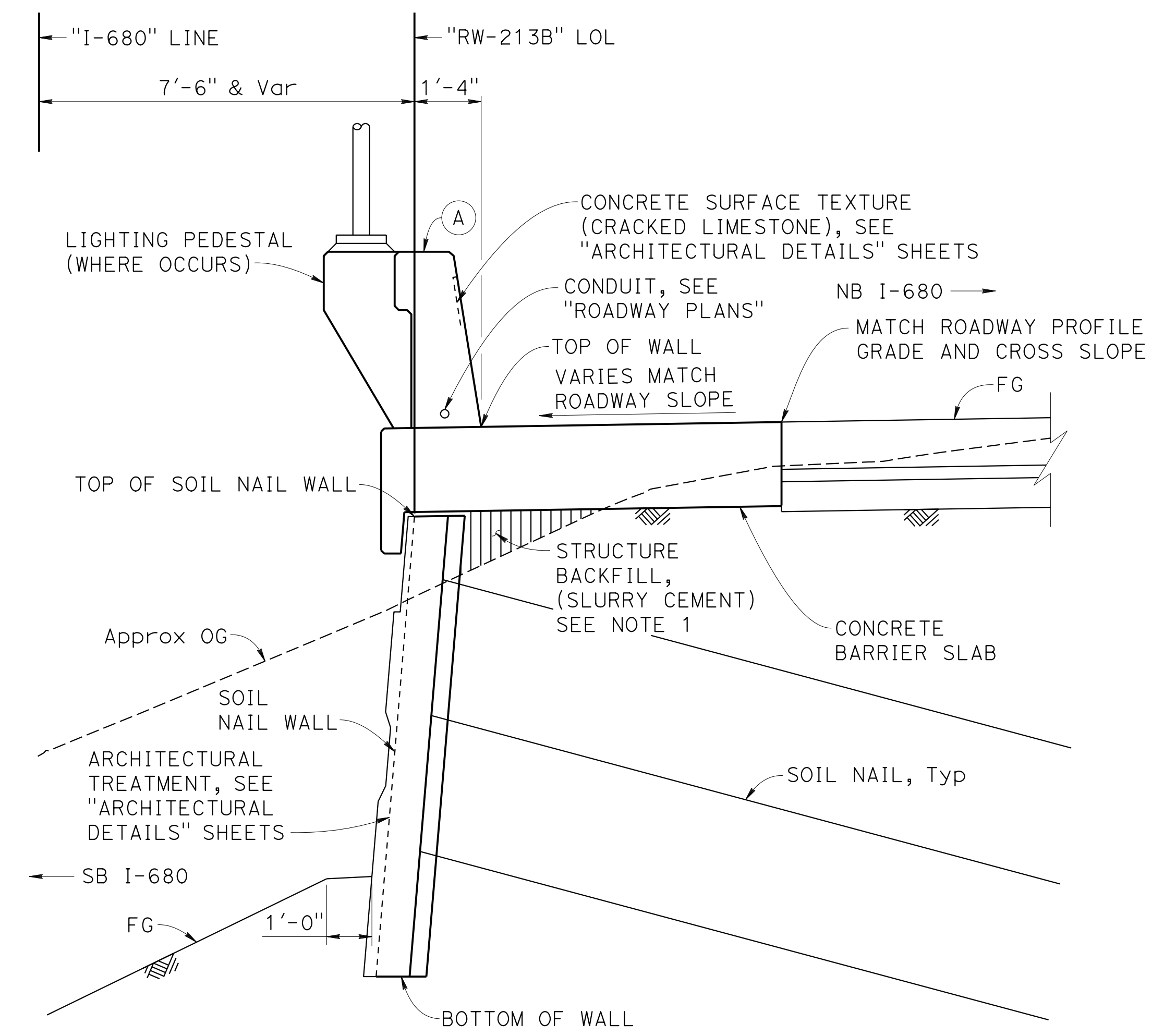
**TYPICAL SOIL NAIL WALL
LIMITS OF EXCAVATION AND BACKFILL**
NO SCALE



**SOIL NAIL WALL WITH DRAINAGE INLET
LIMITS OF EXCAVATION AND BACKFILL**
NO SCALE



**TYPICAL SECTION A
("RW-213B" 84+93.41 TO 88+38.83)**
1/2" = 1'-0"
NOTE: For details not shown, see SECTION B.



**TYPICAL SECTION B
("RW-213B" 64+49.67 TO 84+93.41)**
1/2" = 1'-0"

DESIGN OVERSIGHT Norbert Gee 2/15/22 SIGN OFF DATE	DESIGN	BY W. Bai	CHECKED A. Akl	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE No.	RETAINING WALL No. 213B GENERAL PLAN No. 2					
	DETAILS	BY R. Lim	CHECKED A. Akl	LAYOUT	BY W. Bai		CHECKED A. Akl		33E0252				
	QUANTITIES	BY W. Bai	CHECKED A. Akl	SPECIFICATIONS	BY D. Harnage	PLANS AND SPECS COMPARED O. Brown	POST MILE R14.5						
DESIGN GENERAL PLAN SHEET (ENGLISH) (REVISION 4/19/2018)	DATE PLOTTED => 9-MAR-2022		TIME PLOTTED => 11:04		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT: 0733	PROJECT NUMBER & PHASE: 04200002351	CONTRACT No.: 04-0030U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 2	OF 38

INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN No. 1
2	GENERAL PLAN No. 2
3	INDEX TO PLANS
4	STRUCTURE PLAN No. 1
5	STRUCTURE PLAN No. 2
6	STRUCTURE PLAN No. 3
7	STRUCTURE PLAN No. 4
8	STRUCTURE PLAN No. 5
9	STRUCTURE PLAN No. 6
10	STRUCTURE PLAN No. 7
11	SOIL NAIL WALL LAYOUT No. 1
12	SOIL NAIL WALL LAYOUT No. 2
13	SOIL NAIL WALL LAYOUT No. 3
14	SOIL NAIL WALL LAYOUT No. 4
15	SOIL NAIL WALL LAYOUT No. 5
16	SOIL NAIL WALL LAYOUT No. 6
17	SOIL NAIL WALL LAYOUT No. 7
18	SOIL NAIL WALL LAYOUT No. 8
19	SOIL NAIL WALL LAYOUT No. 9
20	SOIL NAIL WALL LAYOUT No. 10
21	SOIL NAIL WALL LAYOUT No. 11
22	SOIL NAIL WALL LAYOUT No. 12
23	RETAINING WALL DETAILS No. 1
24	RETAINING WALL DETAILS No. 2
25	RETAINING WALL DETAILS No. 3
26	RETAINING WALL DETAILS No. 4
27	RETAINING WALL DETAILS No. 5
28	RETAINING WALL DETAILS No. 6
29	WALL DRAIN DETAILS
30	ARCHITECTURAL DETAILS No. 1
31	ARCHITECTURAL DETAILS No. 2
32	ARCHITECTURAL DETAILS No. 3
33	ARCHITECTURAL DETAILS No. 4
34	LOG OF TEST BORINGS 1 OF 5
35	LOG OF TEST BORINGS 2 OF 5
36	LOG OF TEST BORINGS 3 OF 5
37	LOG OF TEST BORINGS 4 OF 5
38	LOG OF TEST BORINGS 5 OF 5

GENERAL NOTES

DESIGN:
 "Soil Nail Walls Reference Manual", Publication No. FHWA-NHI-14-007, FHWA GEC 007, February 2015, based on Allowable Strength Design (ASD) methodology. AASHTO LRFD Bridge Design Specification, 8th edition, with California Amendments.

LIVE LOAD:
 LS: Varied surcharge on level ground surface.
 Based on: AASHTO LRFD Bridge Design Specification, 8th edition Table 3.11.6.4-2.

SEISMIC LOADING:

Kh = 0.29, Kv = 0.0

REINFORCED CONCRETE:

Note that CIP concrete facing and CIP DI Type G2 are included in items "STRUCTURE CONCRETE, RETAINING WALL" and "BAR REINFORCING STEEL (RETAINING WALL)".

f'c = 3600 psi

fy = 60,000 psi

STRUCTURAL SHOTCRETE:

f'c = 3600 psi

fy = 60,000 psi (bar reinforcing)

fy = 65,000 psi (welded wire mesh reinforcing)

n = 8

STUD CONNECTORS:

AWS D1.1 Clause 7

ASTM A108, fu = 60 ksi

STEEL PLATES:

ASTM A36, fy = 36 ksi

SOIL NAILS:

ASTM Designation: A706, Grade 60

Zone	Station	Soil Type	Qb (k/ft)
1	64+49 to 88+39	Alluvium	3.4

FACING RESISTANCE (PER NAIL):

Temporary = 26.3 kips

Permanent = 21.6 kips

Seismic = 29.5 kips

SOIL PARAMETER - SOIL NAIL DESIGN:

Unit	Unit Weight γ (pcf)	Friction Angle φ (degrees)	Cohesion c' (psf)
Alluvium	125	32	50

WELDED WIRE REINFORCEMENT:

ASTM A185

BARRIER SLAB:

See DESIGN DATA on "RETAINING WALL DETAILS No. 3" sheet.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1675	1710

Orin A. Brown 9-29-21
 REGISTERED CIVIL ENGINEER DATE

October 8, 2021
 PLANS APPROVAL DATE

Orin A. Brown
 No. C48859
 Exp. 9/30/22
 CIVIL
 STATE OF CALIFORNIA

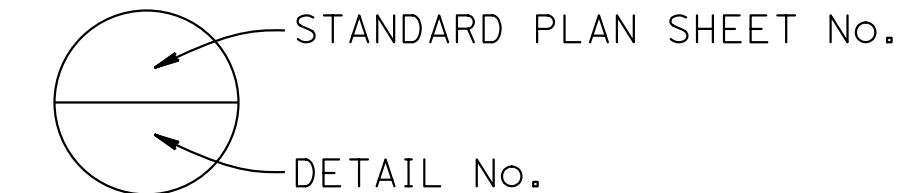
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STANDARD PLANS DATED 2018

- 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)
- D72B CIP DRAINAGE INLETS TYPES G1, G2, G3, G4, G5 AND G6
- B0-13 BRIDGE DETAILS
- B6-21 JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
- RSP B11-81 CONCRETE BARRIER TYPE 842 DETAILS No. 1
- RSP B11-82 CONCRETE BARRIER TYPE 842 DETAILS No. 2
- D77A GRATE DETAILS No. 1
- ES-9B ELECTRICAL SYSTEMS (CONDUIT RISER AND EXPANSION FITTING, STRUCTURE INSTALLATIONS)



Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0252
POST MILE	R14.5

RETAINING WALL No. 213B

INDEX TO PLANS

DESIGN DETAIL SHEET
 (ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:04
 FILE => 33E0252-a-1fp.dgn USERNAME => p302438

ORIGINAL SCALE
 IN INCHES FOR
 REDUCED PLANS

UNIT: 0733
 PROJECT NUMBER & PHASE: 04200002351

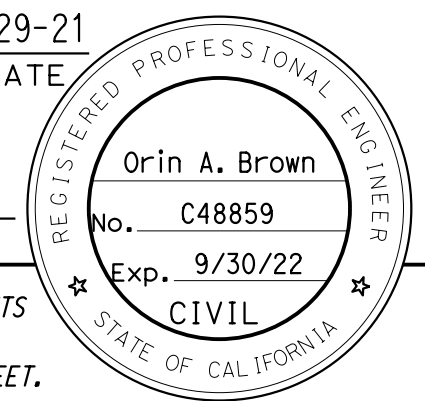
CONTRACT No.: 04-0030U4

DISREGARD PRINTS BEARING
 EARLIER REVISION DATES

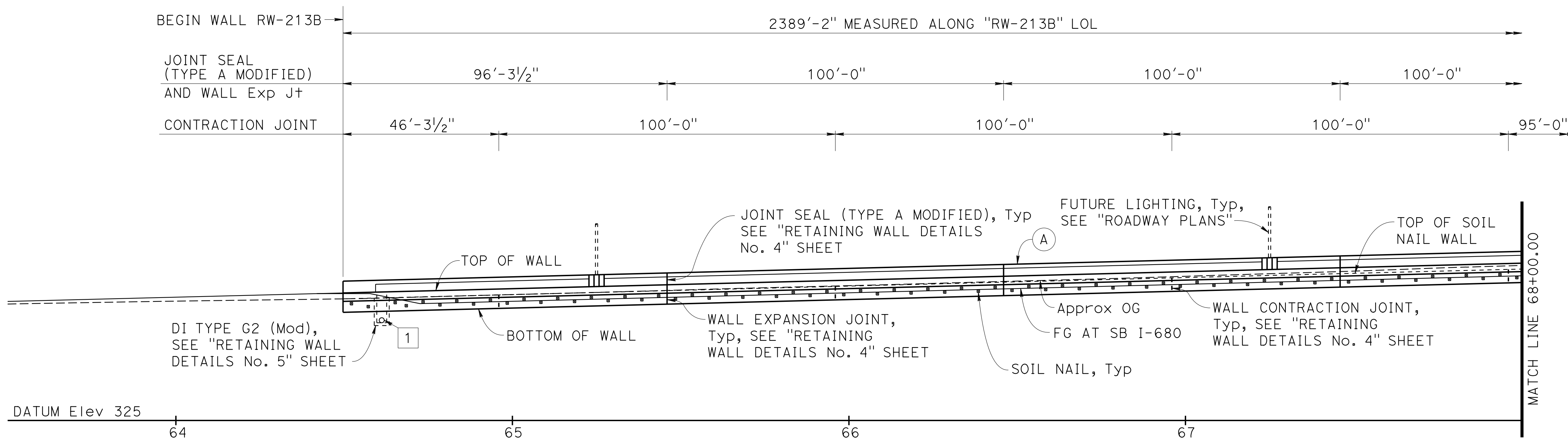
REVISION DATES	SHEET	OF
8-22-21 9-2-21 09-29-21 12-8-21	3	38

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9 R0.0/0.9	1676	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
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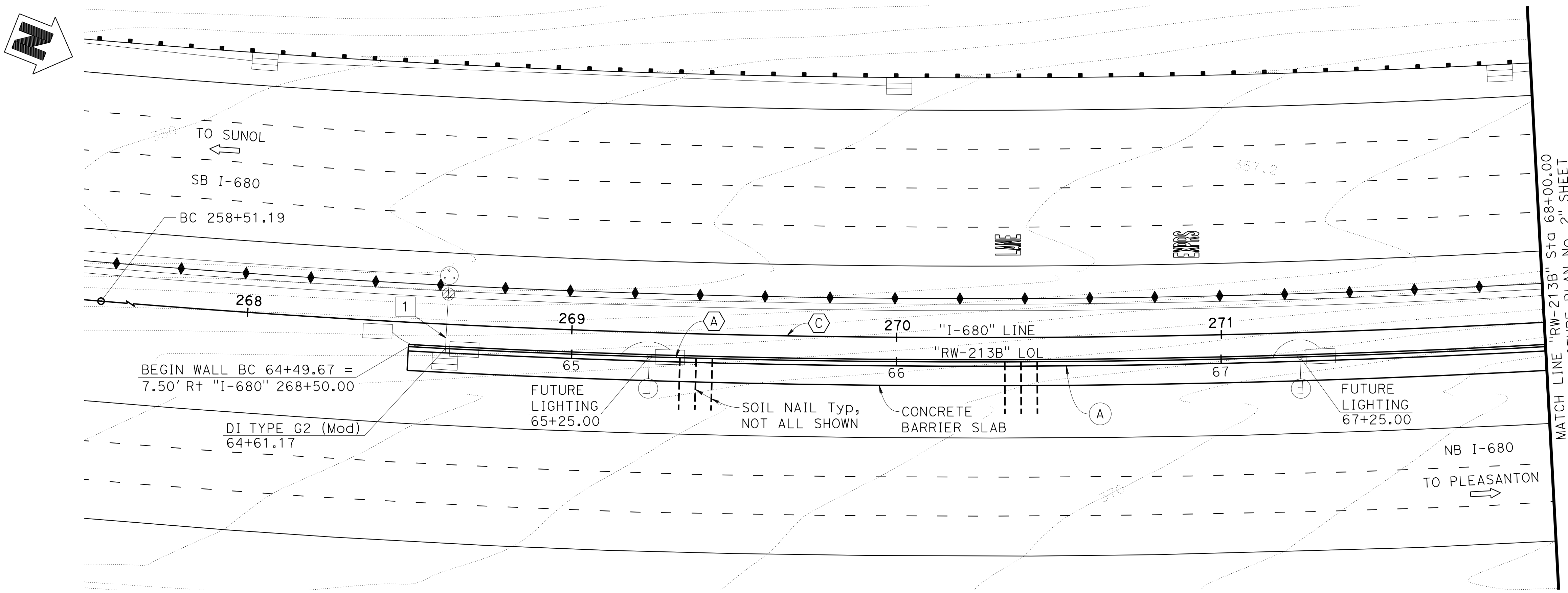


DEVELOPED MIRRORED ELEVATION
 1"=20'

- NOTES:**
- For utilities information, see "ROADWAY PLANS".
 - For finish grading, see "ROADWAY PLANS".
- (A) Concrete Barrier Type 842 (Mod)

- LEGEND:**
- ← Direction of Traffic
 - ▣ Soil Nail

- UTILITIES**
- 1 18" APC DRAINAGE



PLAN
 1"=20'

CURVE DATA

(A) "RW-213B" LOL	(C) "I-680" LINE
R = 3257.49'	R = 3249.99'
Δ = 12°33'29"	Δ = 30°10'00"
T = 358.43'	T = 875.90'
L = 713.98'	L = 1711.14'

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

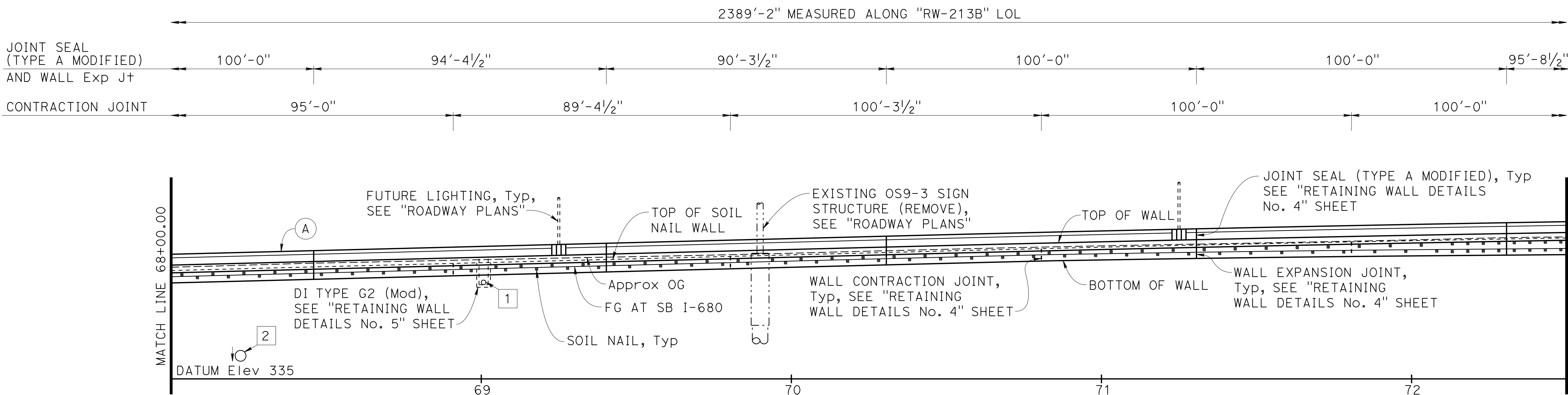
DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0252
POST MILE	R14.5

**RETAINING WALL No. 213B
 STRUCTURE PLAN No. 1**



DEVELOPED MIRRORED ELEVATION
1"=20'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, RO.0/0.9	1677	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE

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 AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

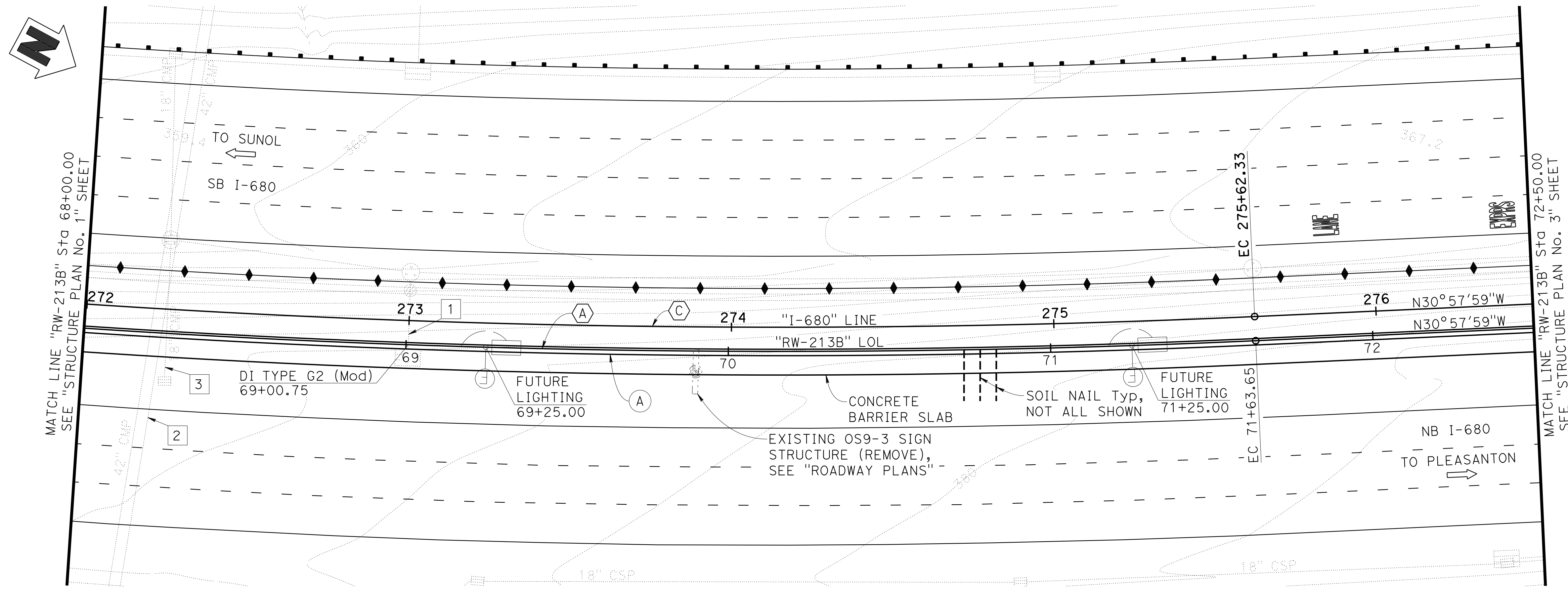
- NOTES:**
- For utilities information, see "ROADWAY PLANS".
 - For finish grading, see "ROADWAY PLANS".
- (A) Concrete Barrier Type 842 (Mod)

- LEGEND:**
- ← Direction of Traffic
 - Soil Nail

- UTILITIES**
- 18" APC DRAINAGE
 - EXISTING 42" CMP DRAINAGE (PROTECT IN PLACE)
 - EXISTING 18" CMP DRAINAGE (REMOVE)

CURVE DATA

(A) "RW-213B" LOL	(C) "I-680" LINE
R = 3257.49'	R = 3249.99'
Δ = 12°33'29"	Δ = 30°10'00"
T = 358.43'	T = 875.90'
L = 713.98'	L = 1711.14'



PLAN
1"=20'

DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

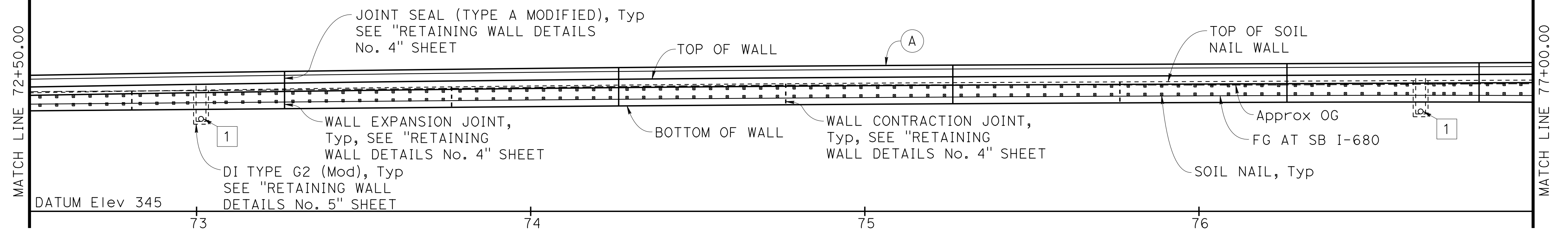
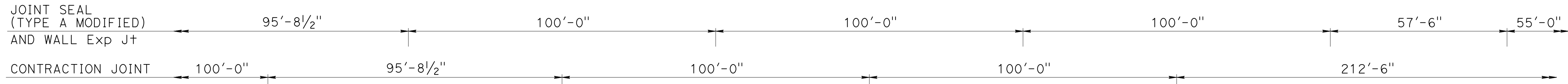
DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
 Syed Kazmi
 PROJECT ENGINEER

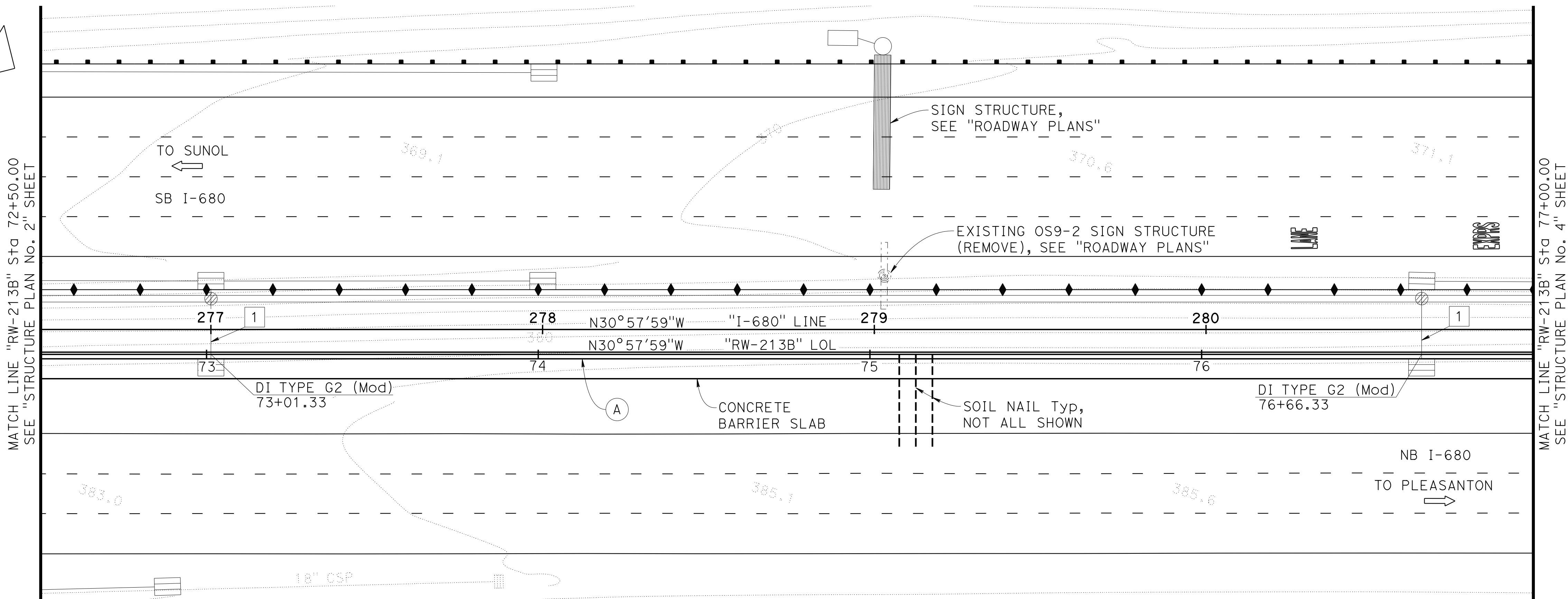
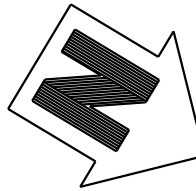
BRIDGE No.	33E0252
POST MILE	R14.5

RETAINING WALL No. 213B
STRUCTURE PLAN No. 2

2389'-2" MEASURED ALONG "RW-213B" LOL



DEVELOPED MIRRORED ELEVATION
1"=20'



PLAN
1"=20'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1678	1710

Orin A. Brown
REGISTERED CIVIL ENGINEER
9-29-21
DATE

October 8, 2021
PLANS APPROVAL DATE

Orin A. Brown
No. C48859
Exp. 9/30/22
CIVIL
STATE OF CALIFORNIA

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OAKLAND, CA 94607

AECOM
2020 L STREET, SUITE 400
SACRAMENTO, CA 95811

- NOTES:**
- For utilities information, see "ROADWAY PLANS".
 - For finish grading, see "ROADWAY PLANS".
- (A) Concrete Barrier Type 842 (Mod)

- LEGEND:**
- ← Direction of Traffic
 - ▣ Soil Nail

- UTILITIES**
- 1 18" APC DRAINAGE

Norbert Gee
DESIGN OVERSIGHT
Norbert Gee
2/15/22
SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
PROJECT ENGINEER

BRIDGE No.
33E0252
POST MILE
R14.5

**RETAINING WALL No. 213B
STRUCTURE PLAN No. 3**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1679	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE
 No. C48859
 Exp. 9/30/22
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ALAMEDA CTC
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 OAKLAND, CA 94607
 AECOM
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 SACRAMENTO, CA 95811

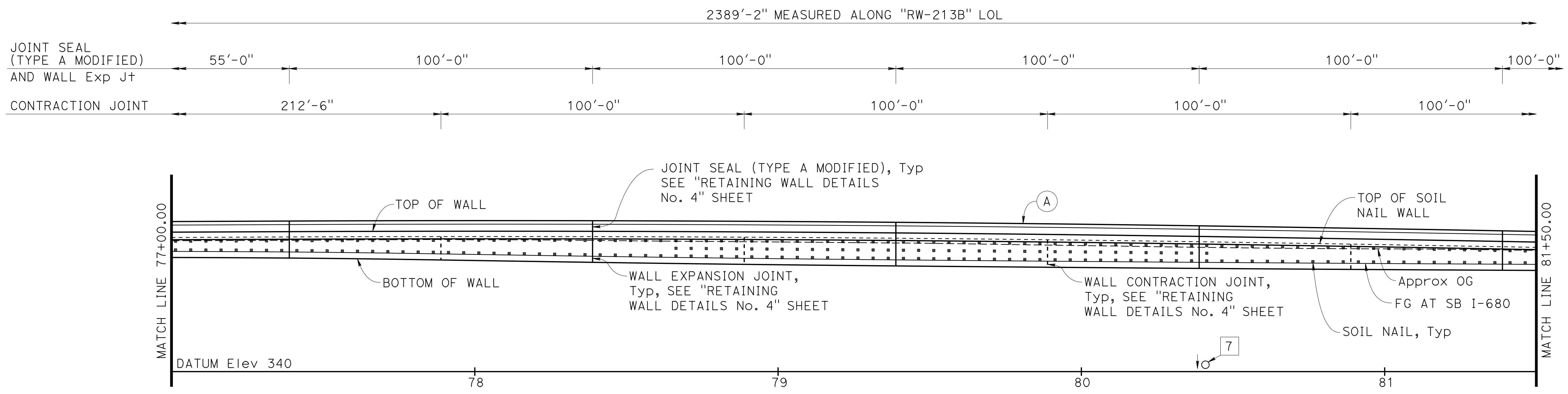
- NOTES:**
- For utilities information, see "ROADWAY PLANS".
 - For finish grading, see "ROADWAY PLANS".
- (A) Concrete Barrier Type 842 (Mod)

- LEGEND:**
- ← Direction of Traffic
 - ▣ Soil Nail

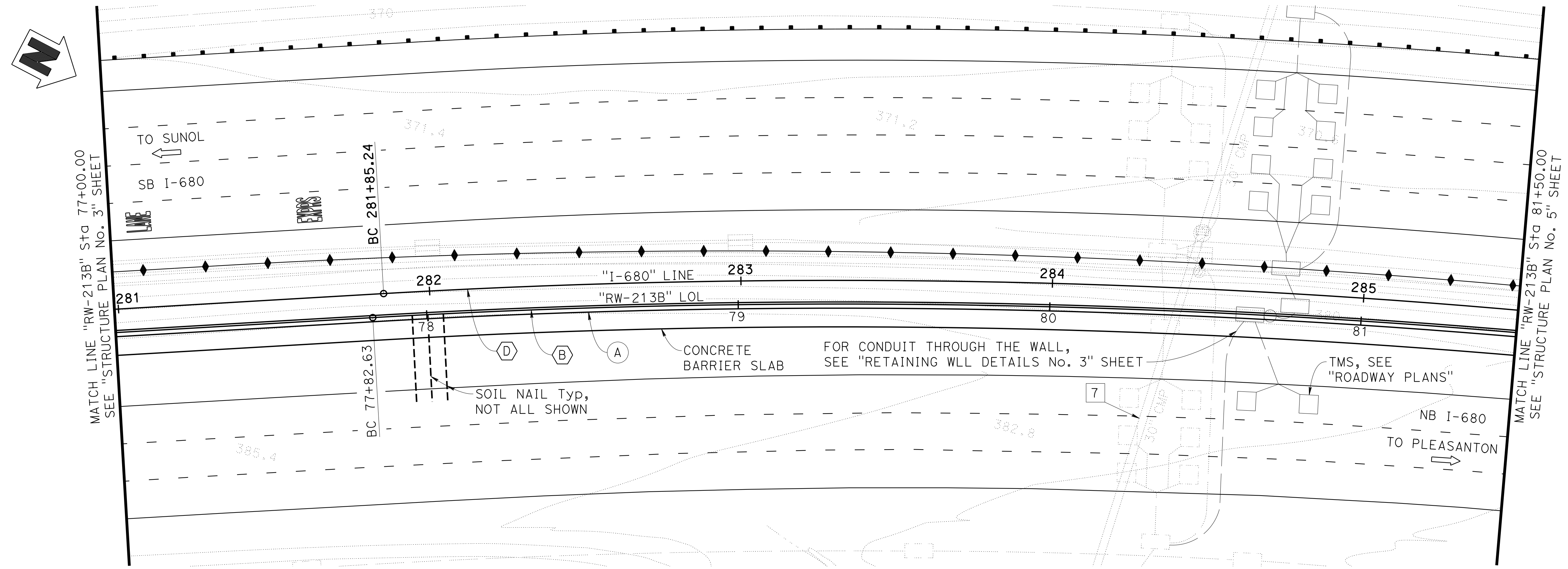
- UTILITIES**
- 7 EXISTING 30" CMP DRAINAGE (PROTECT IN PLACE)

CURVE DATA

(B) "RW-213B" LOL	(D) "I-680" LINE
R = 2575.00'	R = 2500.01'
Δ = 23°30'04"	Δ = 33°40'59"
T = 535.63'	T = 756.78'
L = 1056.20'	L = 1469.71'



DEVELOPED MIRRORED ELEVATION
 1"=20'



PLAN
 1"=20'

Norbert Gee
 DESIGN OVERSIGHT Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No. 33E0252
 POST MILE R14.5

RETAINING WALL No. 213B
STRUCTURE PLAN No. 4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1680	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE
 No. C48859
 Exp. 9/30/22
 CIVIL
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ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607
 AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

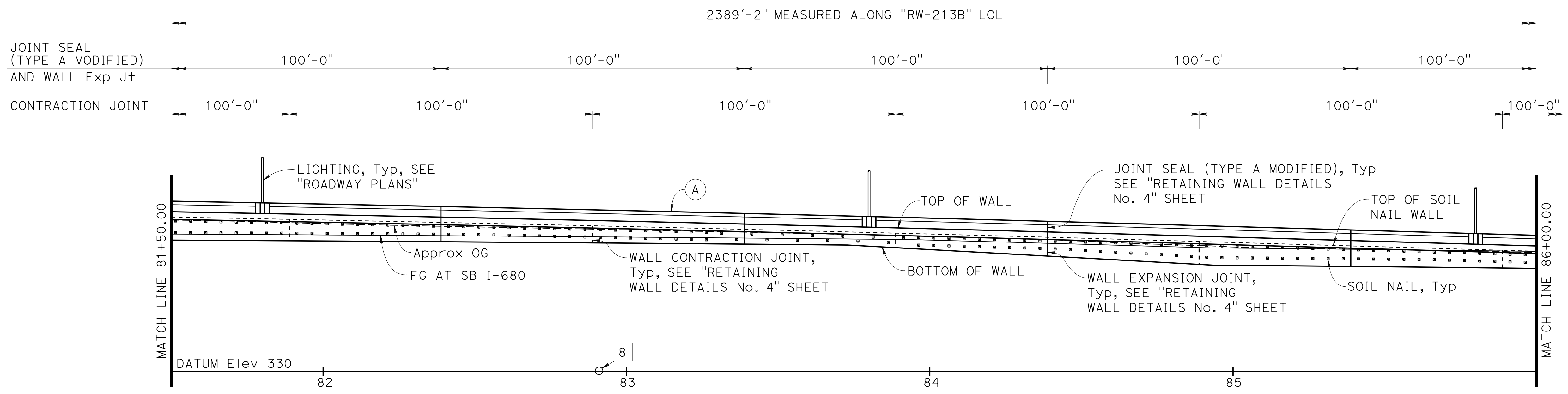
- NOTES:**
- For utilities information, see "ROADWAY PLANS".
 - For finish grading, see "ROADWAY PLANS".
- (A) Concrete Barrier Type 842 (Mod)

- LEGEND:**
- ← Direction of Traffic
 - ▣ Soil Nail

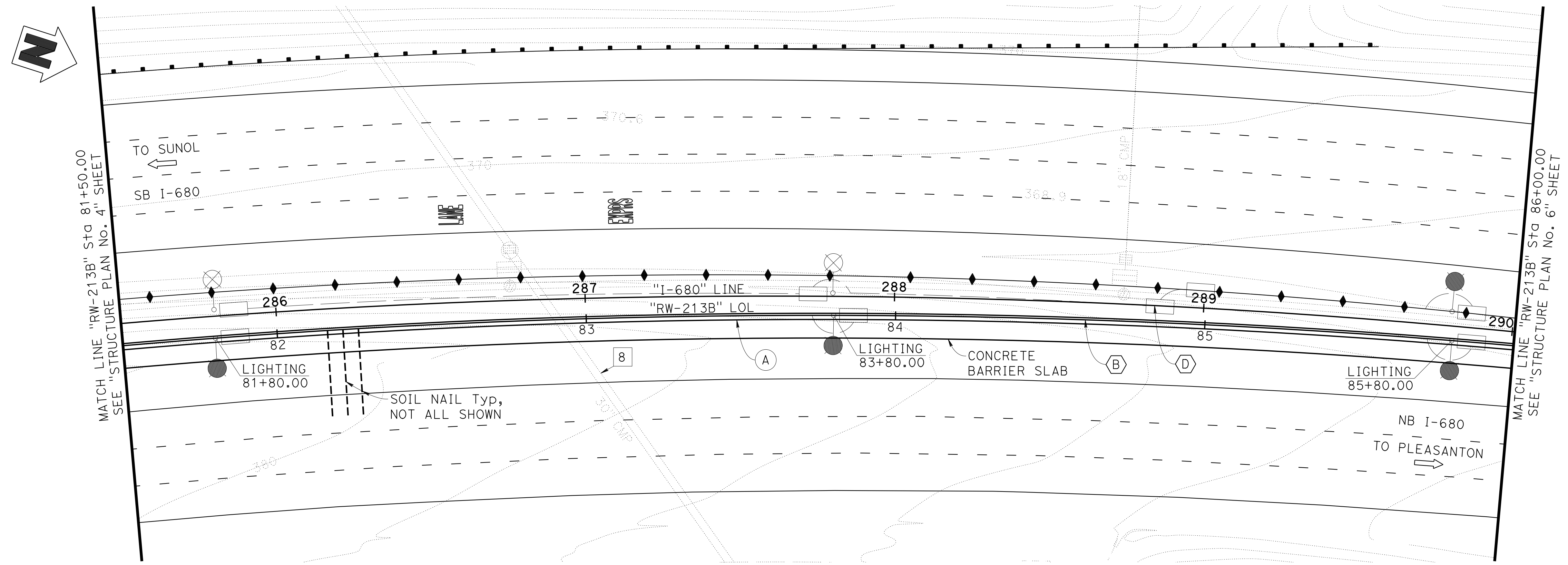
- UTILITIES**
- 8 EXISTING 30" CMP DRAINAGE (PROTECT IN PLACE)

CURVE DATA

(B) "RW-213B" LOL	(D) "I-680" LINE
R = 2575.00'	R = 2500.01'
Δ = 23°30'04"	Δ = 33°40'59"
T = 535.63'	T = 756.78'
L = 1056.20'	L = 1469.71'



DEVELOPED MIRRORED ELEVATION
 1"=20'



PLAN
 1"=20'

Norbert Gee
 DESIGN OVERSIGHT
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

DATE PLOTTED =>	9-MAR-2022	TIME PLOTTED =>	11:05
FILE =>	33E0252-c-sp05.dgn	USERNAME =>	p302438

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Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0252
POST MILE	R14.5

**RETAINING WALL No. 213B
 STRUCTURE PLAN No. 5**

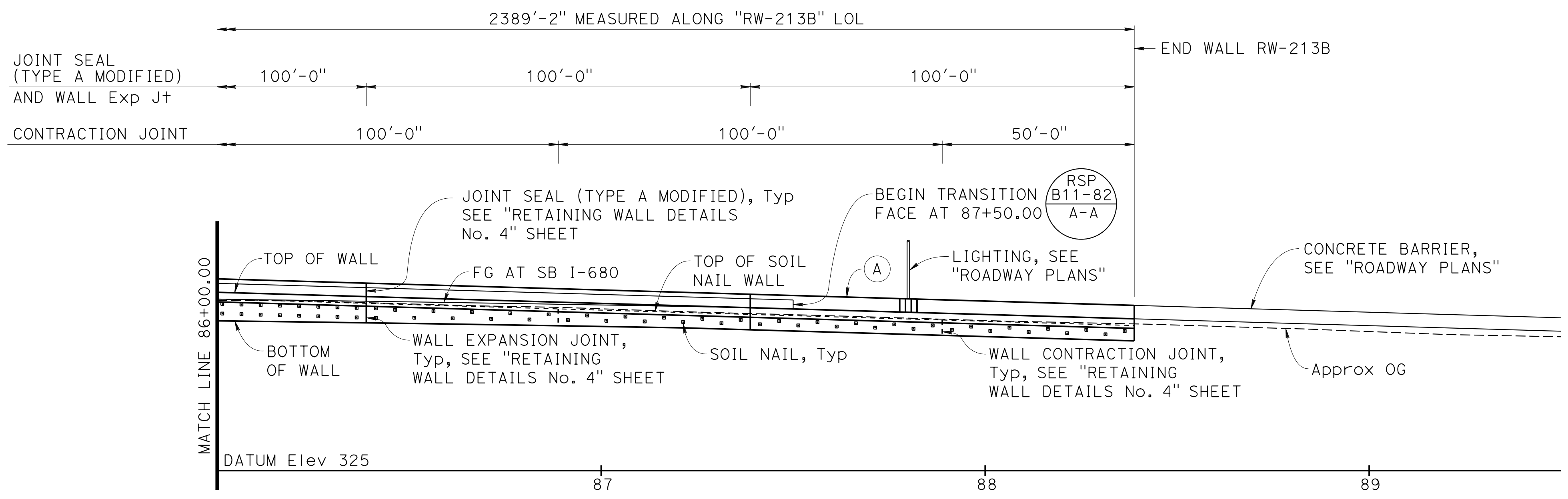
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1681	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE
 No. C48859
 Exp. 9/30/22
 CIVIL
 STATE OF CALIFORNIA

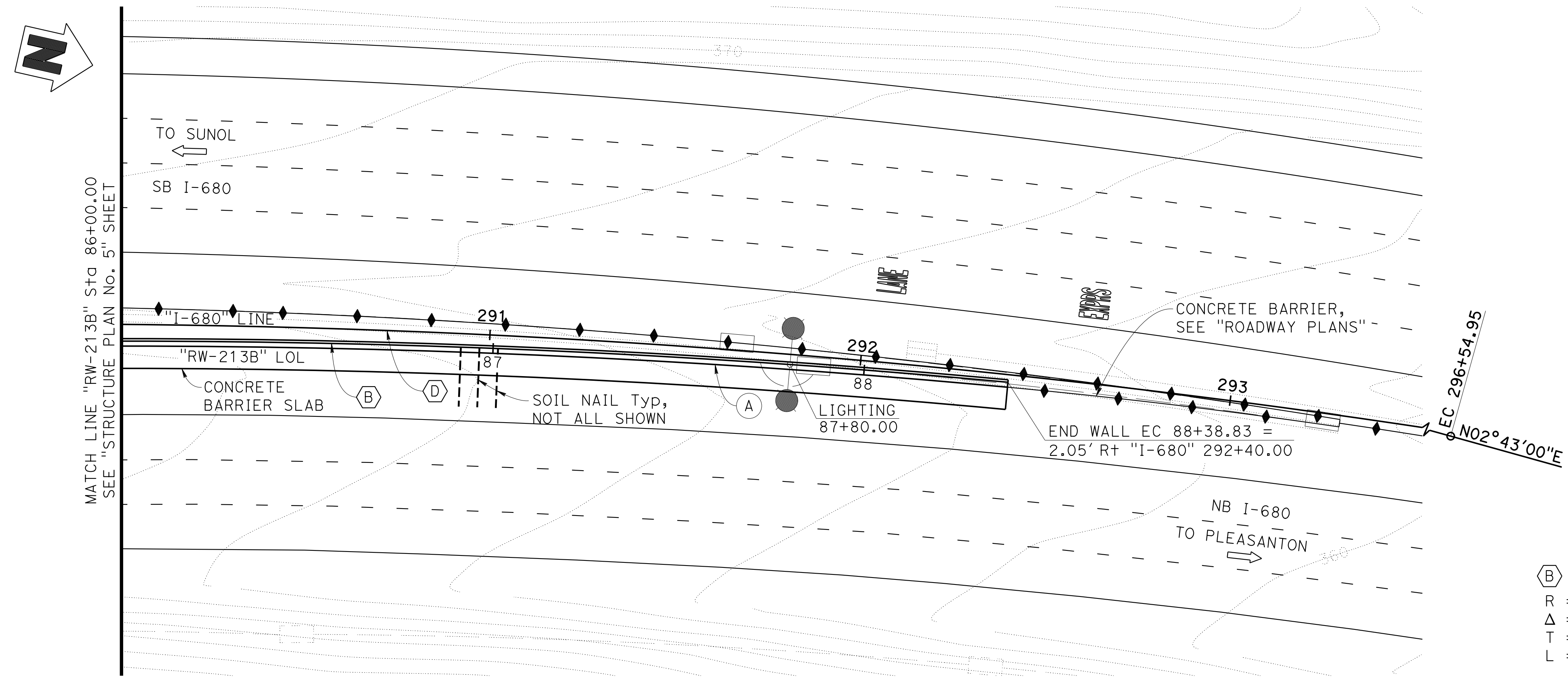
ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607
 AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

NOTE:
 1. For finish grading, see "ROADWAY PLANS".
 (A) Concrete Barrier Type 842 (Mod)

LEGEND:
 ← Direction of Traffic
 □ Soil Nail



DEVELOPED MIRRORED ELEVATION
 1"=20'



CURVE DATA

(B) "RW-213B" LOL	(D) "I-680" LINE
R = 2575.00'	R = 2500.01'
Δ = 23°30'04"	Δ = 33°40'59"
T = 535.63'	T = 756.78'
L = 1056.20'	L = 1469.71'

PLAN
 1"=20'

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0252
POST MILE	R14.5

**RETAINING WALL No. 213B
 STRUCTURE PLAN No. 6**

DESIGN DETAIL SHEET
 (ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:05
 FILE => 33E0252-c-sp06.dgn USERNAME => p302438

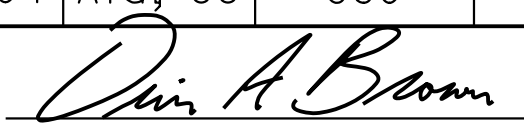
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 0733
 PROJECT NUMBER & PHASE: 04200002351

CONTRACT No.: 04-0Q30U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 9	OF 38
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1682	1710

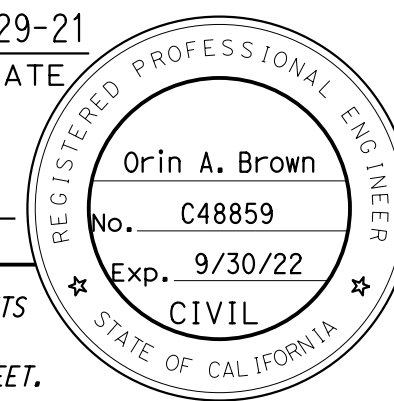

 REGISTERED CIVIL ENGINEER DATE 9-29-21

October 8, 2021
 PLANS APPROVAL DATE

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AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811



WALL PROFILE TABLE				
STATION	TOP OF WALL ELEVATION	BOTTOM OF WALL ELEVATION	Approx OG ELEVATION	FG AT SB I-680 ELEVATION
64+49.67	362.86	357.11	361.10	362.66
64+57.67	363.06	357.31	361.25	362.66
64+72.55	363.43	357.68	361.64	359.68
64+75.00	363.50	357.75	361.71	359.75
65+00.00	364.13	358.38	362.38	360.38
65+25.00	364.76	359.01	363.02	361.01
65+50.00	365.39	359.64	363.72	361.64
65+75.00	366.02	360.27	364.41	362.27
66+00.00	366.65	360.90	365.03	362.90
66+25.00	367.28	361.53	365.69	363.53
66+50.00	367.92	362.17	366.38	364.17
66+75.00	368.55	362.80	367.05	364.80
67+00.00	369.18	363.43	367.80	365.43
67+25.00	369.81	364.06	368.58	366.06
67+50.00	370.44	364.69	369.34	366.69
67+75.00	371.07	365.32	370.27	367.32
68+00.00	371.70	365.95	371.02	367.95
68+25.00	372.33	366.58	371.73	368.58
68+50.00	372.97	367.22	372.41	369.22
68+75.00	373.60	367.85	372.92	369.85
69+00.00	374.23	368.48	373.46	370.48
69+25.00	374.86	369.11	373.97	371.11
69+50.00	375.49	369.74	374.44	371.74
69+75.00	376.12	370.37	374.95	372.37
70+00.00	376.75	371.00	375.53	373.00
70+25.00	377.38	371.63	376.21	373.63
70+50.00	378.02	372.27	376.81	374.27
70+75.00	378.63	372.88	377.39	374.88
71+00.00	379.22	373.36	377.91	375.36
71+25.00	379.78	373.76	378.38	375.76
71+50.00	380.32	374.12	378.82	376.12
71+75.00	380.83	374.42	379.31	376.42
72+00.00	381.32	374.67	379.83	376.67
72+25.00	381.78	374.88	380.44	376.88
72+50.00	382.21	375.08	380.80	377.08
72+75.00	382.62	375.29	380.98	377.29
73+00.00	383.00	375.49	381.12	377.49
73+25.00	383.36	375.70	381.31	377.70
73+50.00	383.69	375.91	381.56	377.91
73+75.00	383.99	376.12	381.80	378.12
74+00.00	384.26	376.33	382.07	378.33
74+25.00	384.51	376.53	382.34	378.53
74+50.00	384.74	376.71	382.56	378.71
74+75.00	384.94	376.89	382.75	378.89
75+00.00	385.11	377.05	382.84	379.05
75+25.00	385.25	377.19	382.87	379.19
75+50.00	385.37	377.33	382.86	379.33
75+75.00	385.48	377.45	382.82	379.45
76+00.00	385.59	377.56	382.80	379.56
76+25.00	385.70	377.65	382.83	379.65
76+50.00	385.81	377.71	382.96	379.71
76+75.00	385.91	377.72	383.09	379.72

WALL PROFILE TABLE				
STATION	TOP OF WALL ELEVATION	BOTTOM OF WALL ELEVATION	Approx OG ELEVATION	FG AT SB I-680 ELEVATION
77+00.00	386.02	377.67	383.20	379.67
77+25.00	386.13	377.56	383.29	379.56
77+50.00	386.23	377.37	383.40	379.37
77+75.00	386.30	377.06	383.54	379.06
78+00.00	386.33	376.66	383.50	378.66
78+25.00	386.32	376.27	383.43	378.27
78+50.00	386.27	375.90	383.19	377.90
78+75.00	386.18	375.56	382.96	377.56
79+00.00	386.05	375.27	382.78	377.27
79+25.00	385.88	375.00	382.56	377.00
79+50.00	385.67	374.77	382.34	376.77
79+75.00	385.42	374.55	381.96	376.55
80+00.00	385.14	374.35	381.59	376.35
80+25.00	384.81	374.16	381.21	376.16
80+50.00	384.44	373.98	380.88	375.98
80+75.00	384.05	373.81	380.63	375.81
81+00.00	383.64	373.66	380.52	375.66
81+25.00	383.20	373.52	380.32	375.52
81+50.00	382.75	373.39	380.02	375.39
81+75.00	382.28	373.25	379.56	375.25
82+00.00	381.79	373.11	378.84	375.11
82+25.00	381.28	372.95	378.26	374.95
82+50.00	380.75	372.78	377.77	374.78
82+75.00	380.20	372.59	377.30	374.59
83+00.00	379.63	372.40	376.79	374.40
83+25.00	379.04	372.20	376.29	374.20
83+50.00	378.43	371.98	375.80	373.98
83+75.00	377.80	371.66	375.23	373.76
84+00.00	377.15	370.28	374.64	373.40
84+25.00	376.49	368.90	374.00	372.74
84+50.00	375.80	367.52	373.07	372.05
84+75.00	375.09	366.15	372.05	371.34
84+93.46	374.56	365.13	371.46	370.81
85+00.00	374.37	365.08	371.12	370.76
85+25.00	373.65	364.85	370.57	370.53
85+50.00	372.92	364.59	370.26	370.27
85+75.00	372.20	364.31	369.87	369.99
86+00.00	371.47	364.00	369.36	369.68
86+25.00	370.75	363.66	369.19	369.34
86+50.00	370.03	363.30	368.44	368.98
86+75.00	369.30	362.91	367.81	368.59
87+00.00	368.58	362.49	367.17	368.17
87+25.00	367.86	362.11	366.31	367.72
87+50.00	367.13	361.38	365.63	367.25
87+75.00	366.41	360.66	364.90	366.75
88+00.00	365.68	359.93	364.11	366.22
88+25.00	364.96	359.21	363.53	365.67
88+38.83	364.56	358.81	363.24	365.35

WALL ELEVATIONS

 DESIGN OVERSIGHT Norbert Gee 2/15/22 SIGN OFF DATE	DESIGN BY W. Bai CHECKED A. AKI	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE No. 33E0252	RETAINING WALL No. 213B STRUCTURE PLAN No. 7					
	DETAILS BY R. Lim CHECKED A. AKI		PROJECT ENGINEER Syed Kazmi		POST MILE R14.5				
DESIGN DETAIL SHEET (ENGLISH) (REVISION 4/19/2018)	DATE PLOTTED => 9-MAR-2022 FILE => 33E0252-c-sp07.dgn	TIME PLOTTED => 11:05 USERNAME => p302438	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	UNIT: PROJECT NUMBER & PHASE: 04200002351	CONTRACT No.: 04-0030U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 8-22-21 9-2-21 09-29-21 1-13-21	SHEET 10	OF 38

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1683	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE

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ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607

AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

NOTES:

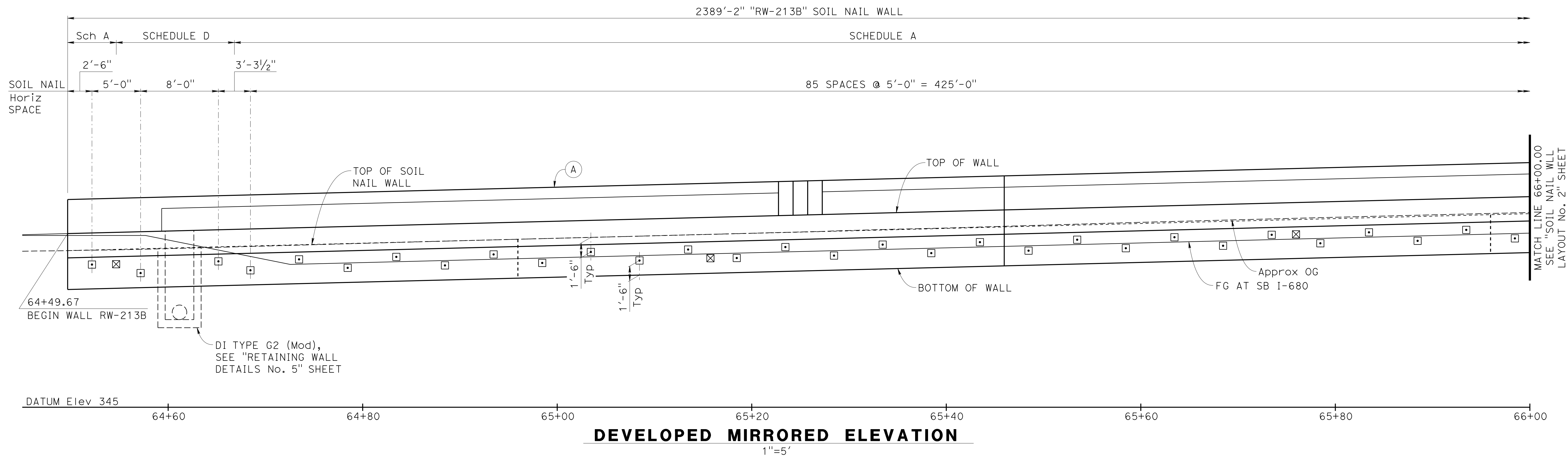
- The contractor shall provide and maintain stable soil above and below the soil nails within each lift.
- For Expansion Joint and Contraction Joint locations, see "STRUCTURE PLAN No. 1" through "STRUCTURE PLAN No. 6" sheets.
- Soil Nail shall be placed normal to shotcrete surface on the plan view.
- A total of 67 proof test nails are to be installed at locations determined by the Engineer. For "PROOF TEST SOIL NAIL" detail, see "SOIL NAIL DETAILS No. 2" sheet.
- For the lighting and future lighting locations, see "STRUCTURE PLAN" sheets.
- For locations of (a) bar and (b) bar, see "RETAINING WALL DETAILS" sheets.
- Install and test 2 verification test soil nails for each wall zone. The locations are to be determined by the Contractor.
- The contractor shall submit to the Engineer for approval any rearrangement of reinforcing steel necessary for the soil nail system proposed for use.
- The contractor shall field locate all utilities before installing soil nails.

(A) Concrete Barrier Type 842 (Mod)

LEGEND:

- Location of production nail assembly.
- ⊗ Preliminary locations of proof test nail assembly. Final locations to be determined by the Engineer, see note 4.
- ST Vertical distance from top of soil nail wall to first row of soil nails.
- SB Vertical distance from bottom of wall to last row of soil nails.
- SV Vertical spacing of soil nail assembly.
- Le Soil nail embedment length, see "SOIL NAIL WALL SCHEDULE TABLE"

SCHEDULE	NUMBER OF NAIL ROWS	Le (ft)	SOIL NAIL SIZE	SEE NOTE 6	
				(a)	(b)
A	1	16	#9	#4	#5
B	2	28	#9	#4	#5
C	3	23	#9	#4	#5
D	1	23	#9	#6	#6
E	1	16	#9	#6	#6
F	2	27	#9	#6	#6



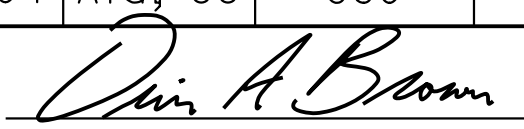
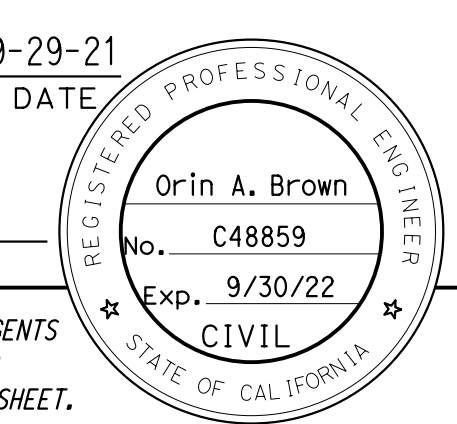
Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

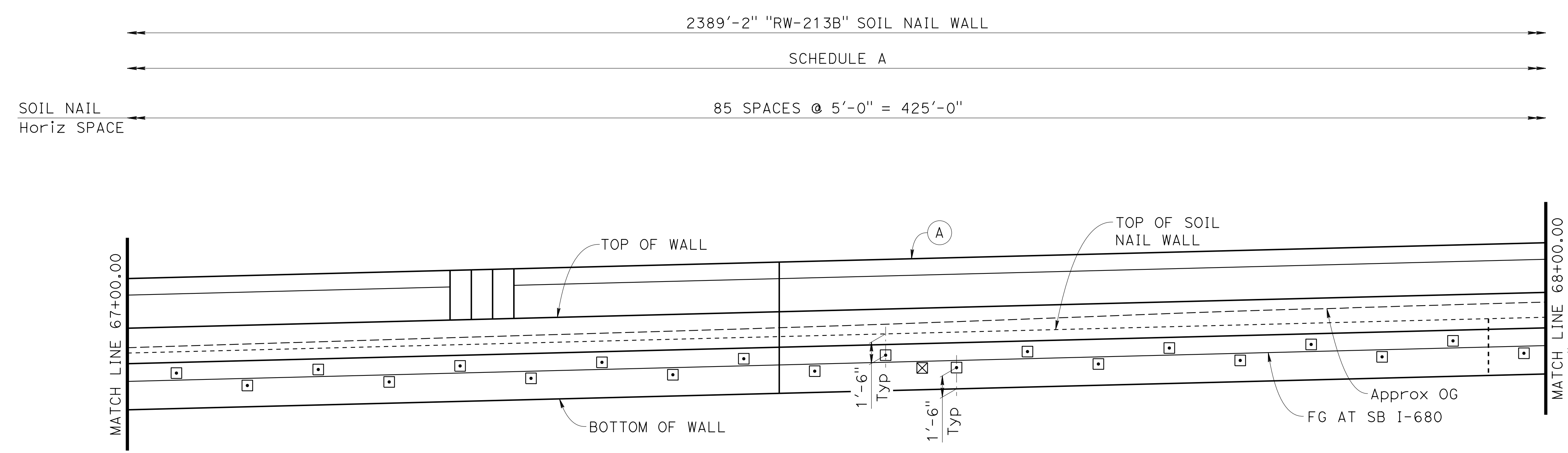
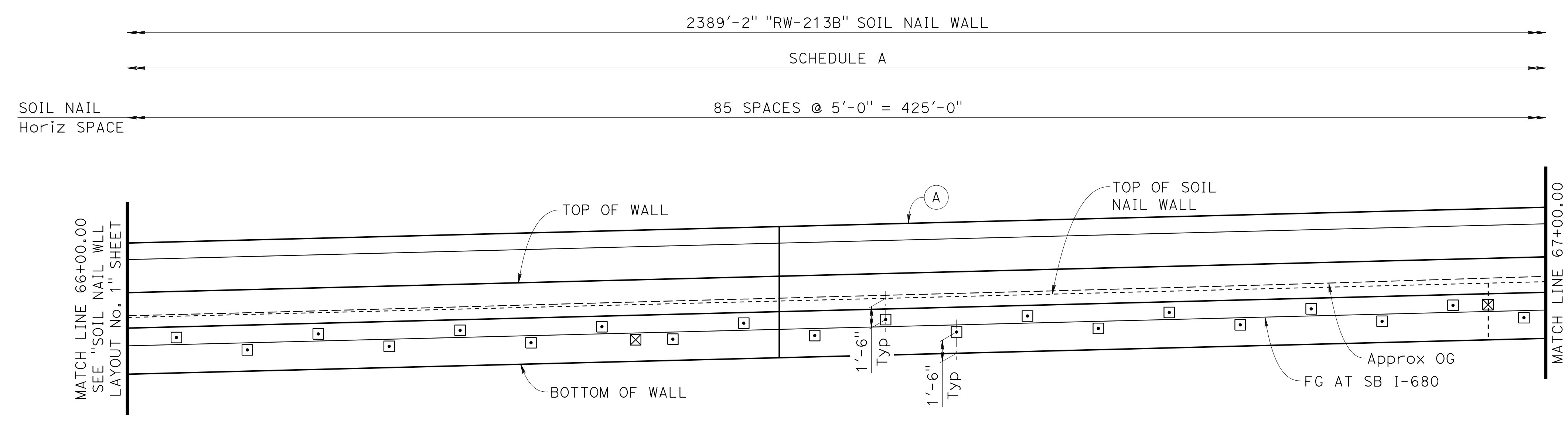
DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
 Syed Kazmi
 PROJECT ENGINEER


BRIDGE No.	33E0252
POST MILE	R14.5

RETAINING WALL No. 213B
SOIL NAIL WALL LAYOUT No. 1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1684	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 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>					
ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					



NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.


 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

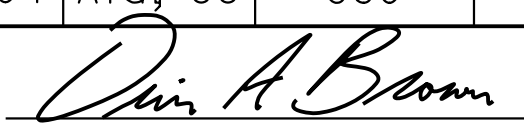
DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

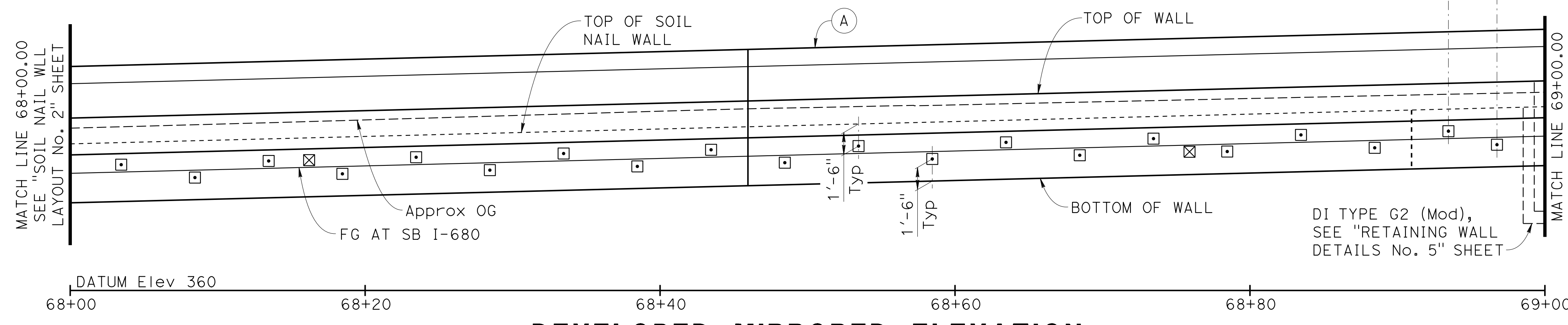
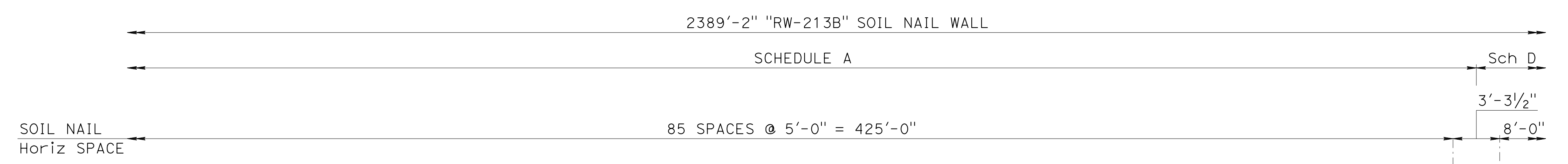
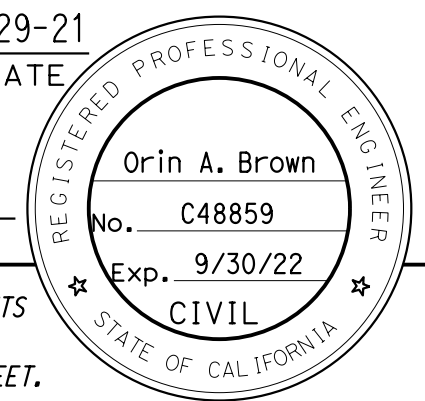
**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER

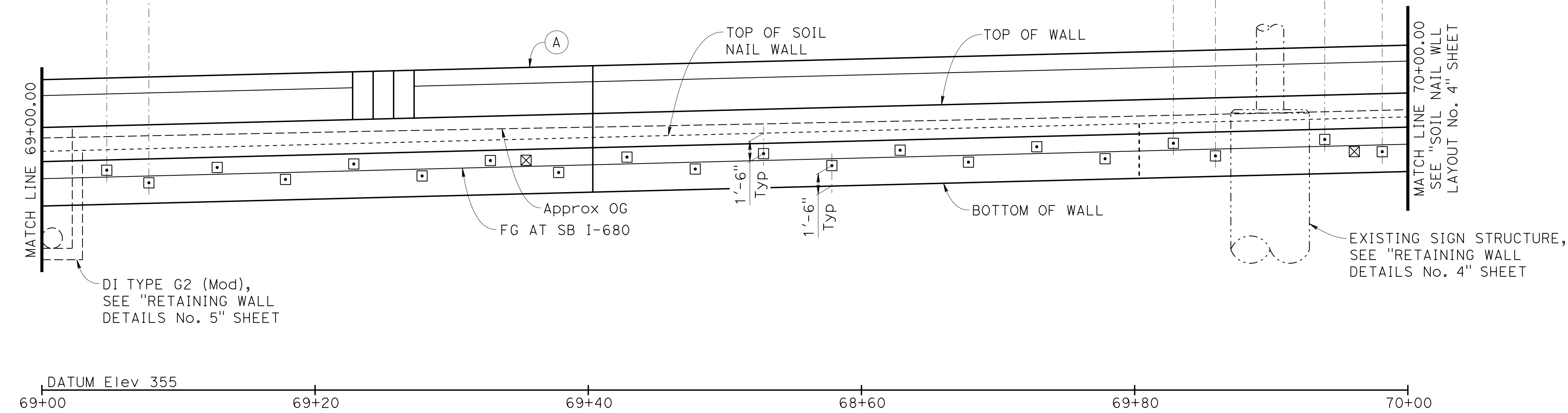
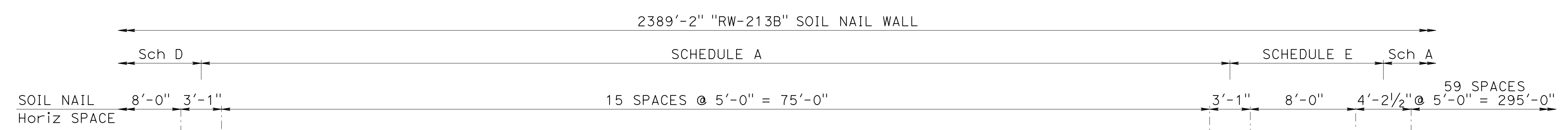
BRIDGE No.	33E0252
POST MILE	R14.5

**RETAINING WALL No. 213B
 SOIL NAIL WALL LAYOUT No. 2**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1685	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021			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.					
ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					



DEVELOPED MIRRORED ELEVATION
1"=5'



DEVELOPED MIRRORED ELEVATION
1"=5'

NOTE:
1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.

Norbert Gee
DESIGN OVERSIGHT
Norbert Gee
2/15/22
SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
PROJECT ENGINEER

BRIDGE No.	33E0252
POST MILE	R14.5

**RETAINING WALL No. 213B
SOIL NAIL WALL LAYOUT No. 3**

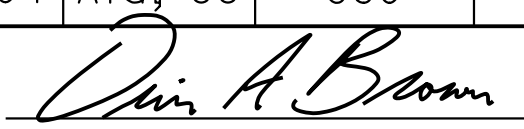
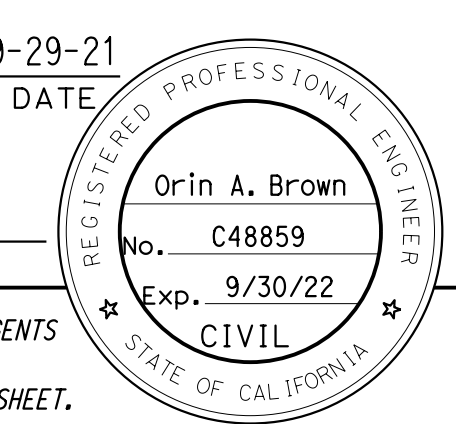
DESIGN DETAIL SHEET
(ENGLISH) (REVISION 4/19/2018)

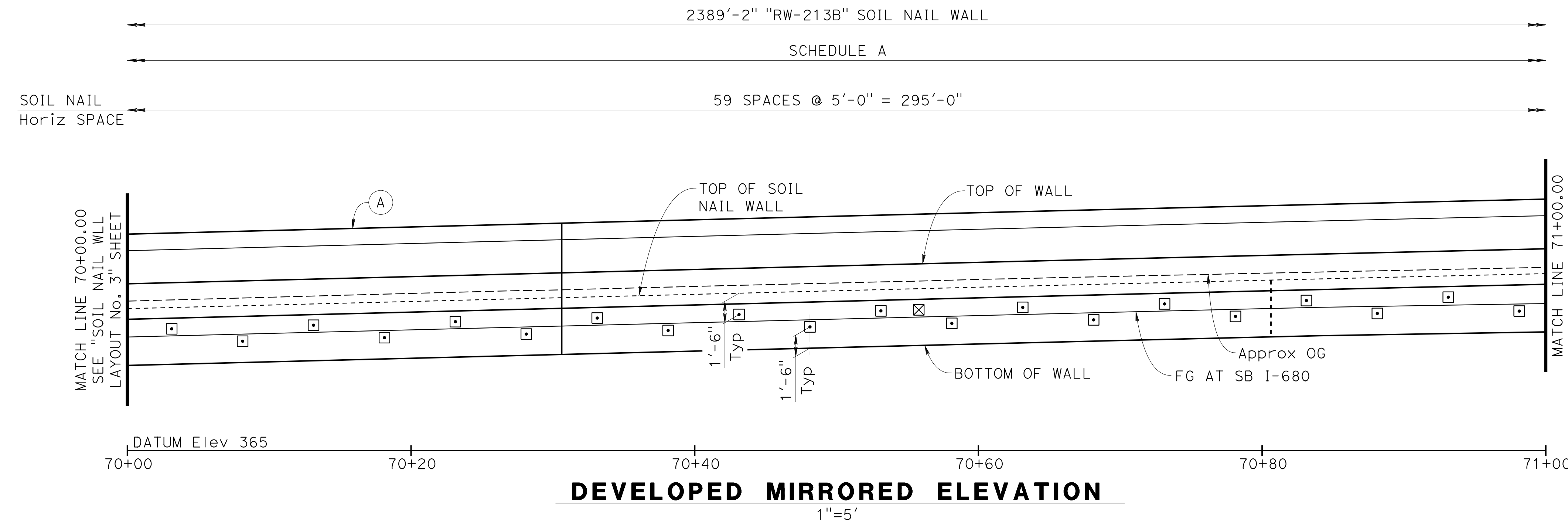
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FILE => 33E0252-g-rw_1003.dgn USERNAME => p302438

UNIT: 0733
PROJECT NUMBER & PHASE: 04200002351

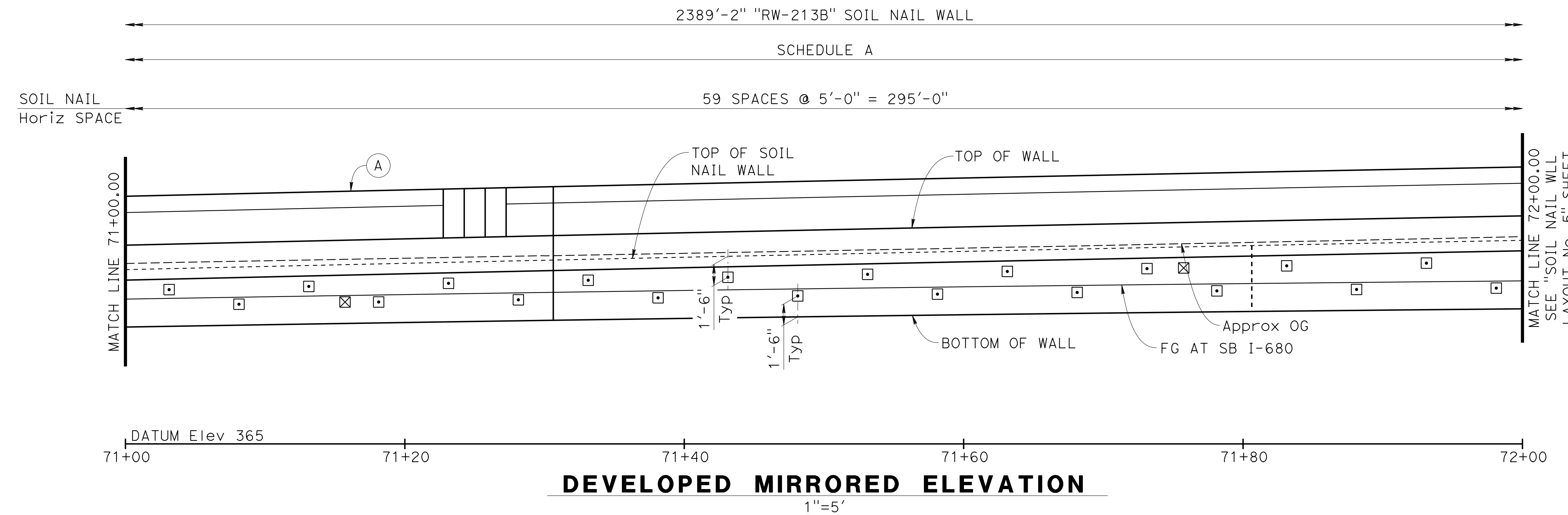
CONTRACT No.: 04-0030U4


DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF
	8-22-21 9-2-21 09-29-21 10-13-21	13	38

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1686	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 PLANS APPROVAL DATE					
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ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					



NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.




 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0252
POST MILE	R14.5

**RETAINING WALL No. 213B
 SOIL NAIL WALL LAYOUT No. 4**

DESIGN DETAIL SHEET
 (ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:06
 FILE => 33E0252-g-rw_1004.dgn USERNAME => p302438

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

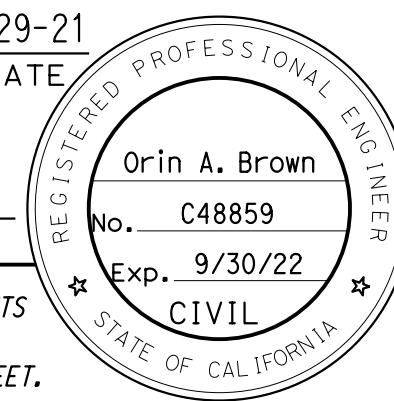
UNIT: 0733
 PROJECT NUMBER & PHASE: 04200002351

CONTRACT No.: 04-0030U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF
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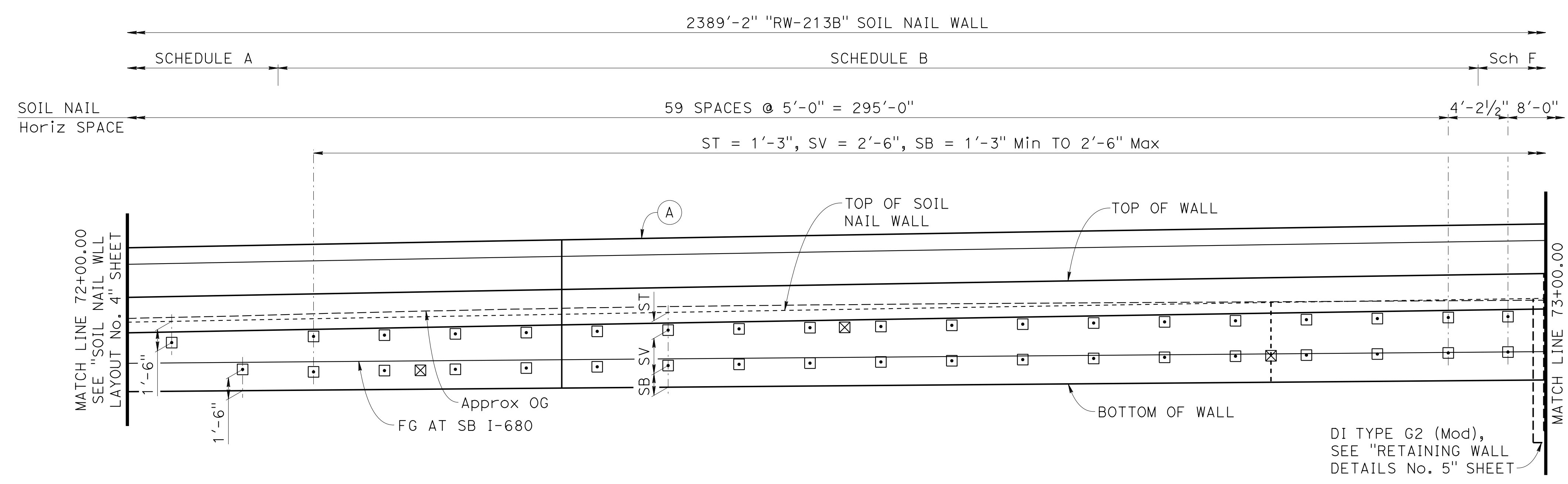
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1687	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 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.

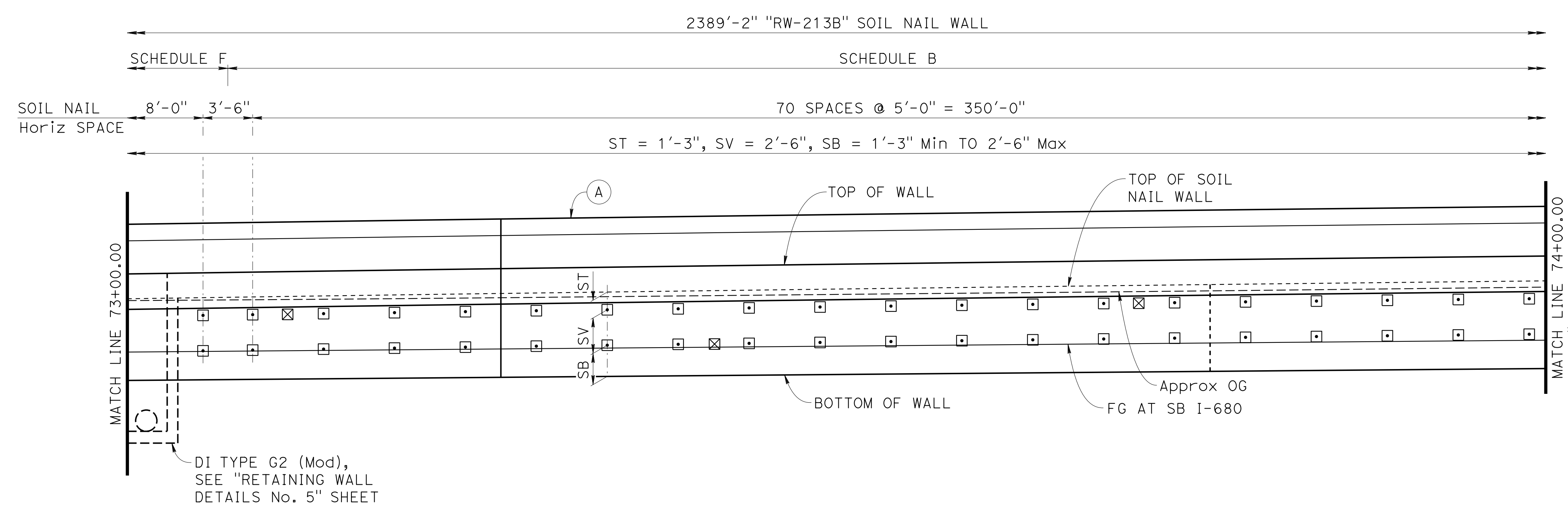


ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607
 AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.



DATUM Elev 365
 72+00 72+20 72+40 72+60 72+80 73+00
DEVELOPED MIRRORED ELEVATION
 1"=5'



DATUM Elev 365
 73+00 73+20 73+40 73+60 73+80 74+00
DEVELOPED MIRRORED ELEVATION
 1"=5'

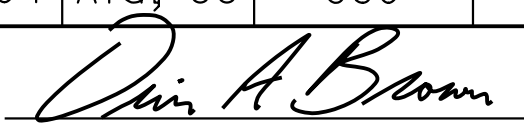
Norbert Gee
 DESIGN OVERSIGHT
 2/15/22
 SIGN OFF DATE

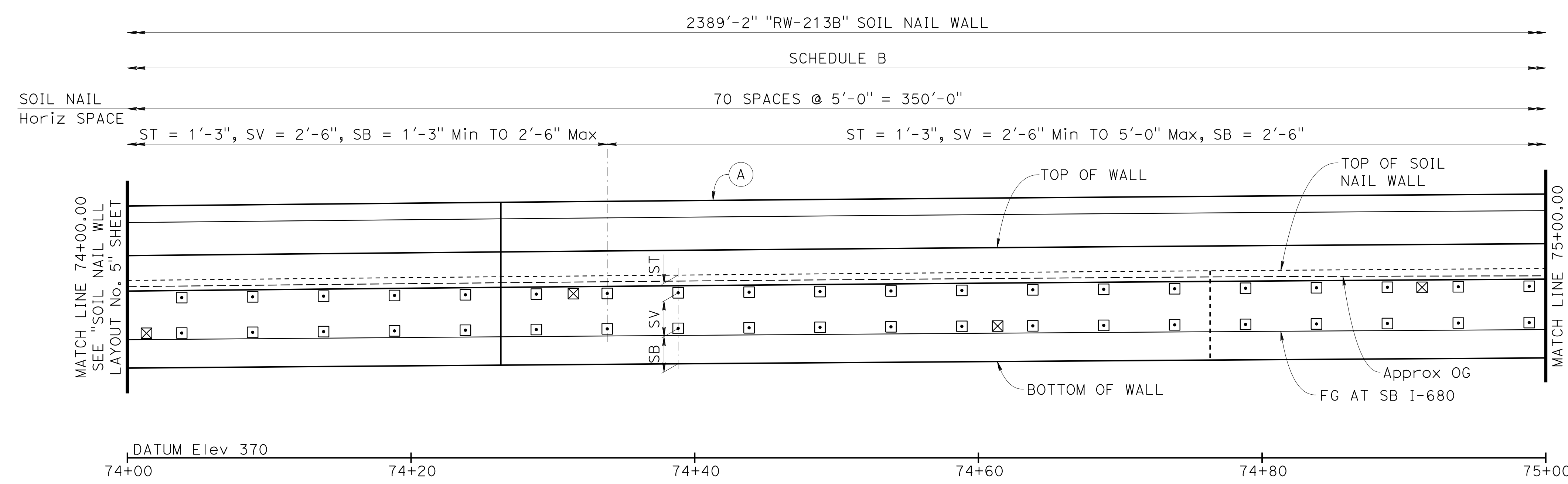
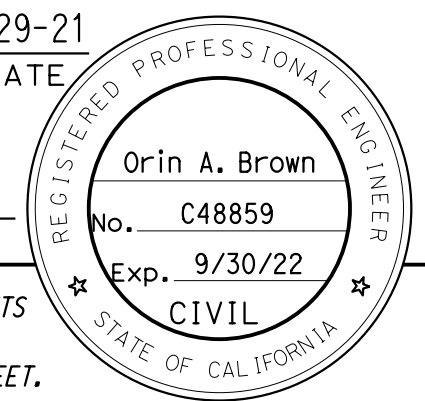
DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

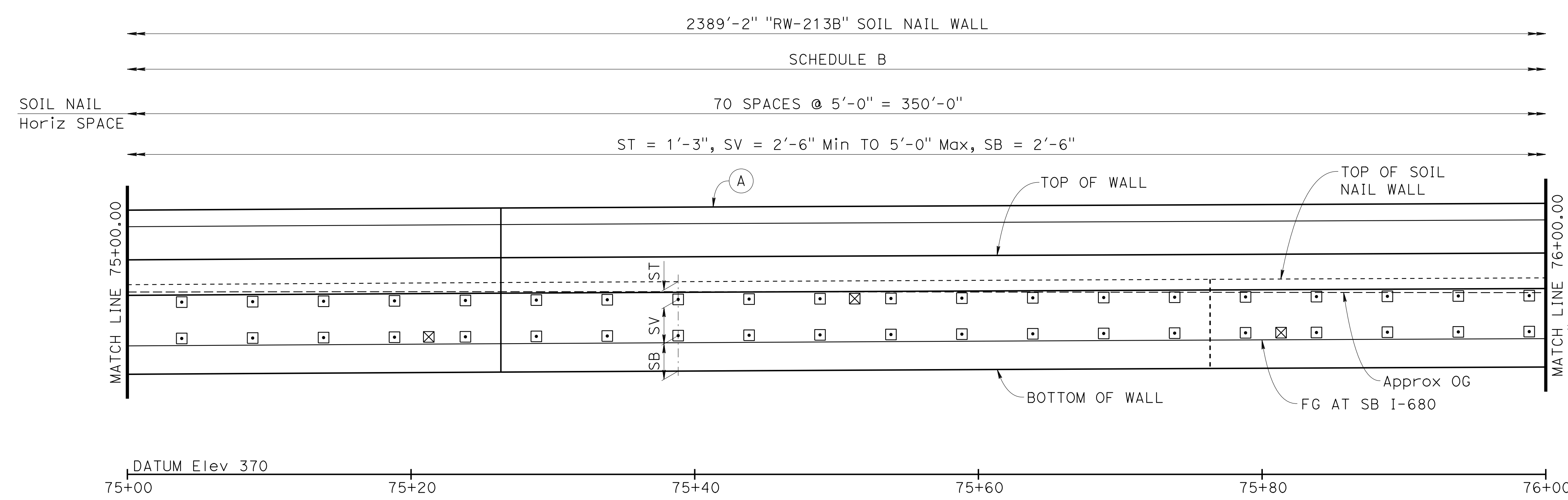
Syed Kazmi
 PROJECT ENGINEER
 BRIDGE No. 33E0252
 POST MILE R14.5

**RETAINING WALL No. 213B
 SOIL NAIL WALL LAYOUT No. 5**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1688	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021			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.					
ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					



DEVELOPED MIRRORED ELEVATION
1"=5'



DEVELOPED MIRRORED ELEVATION
1"=5'

NOTE:

1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.

Norbert Gee
DESIGN OVERSIGHT
Norbert Gee
2/15/22
SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
PROJECT ENGINEER

BRIDGE No.	33E0252
POST MILE	R14.5

**RETAINING WALL No. 213B
SOIL NAIL WALL LAYOUT No. 6**

DESIGN DETAIL SHEET
(ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:06
FILE => 33E0252-g-rw_1006.dgn USERNAME => p302438

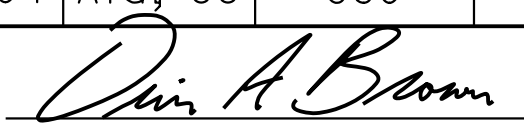
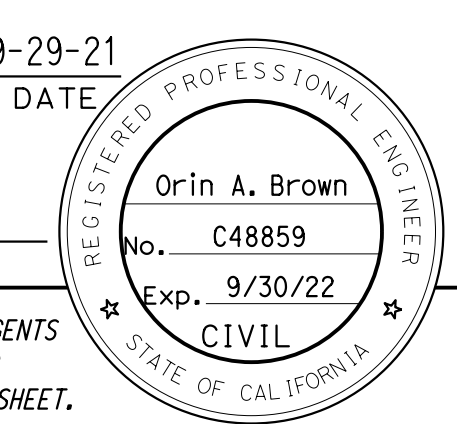
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

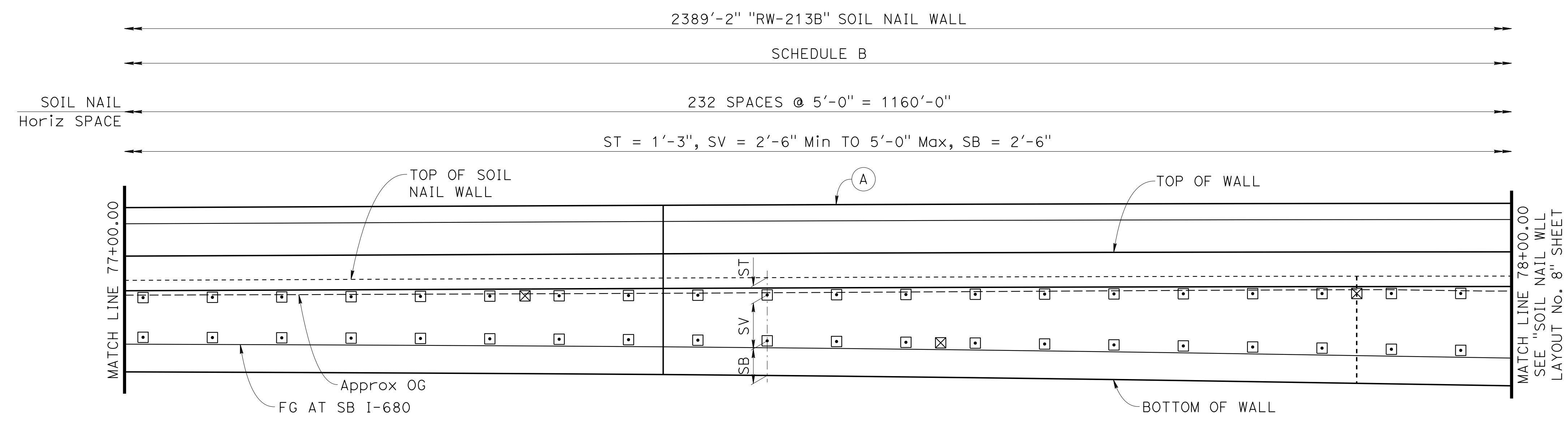
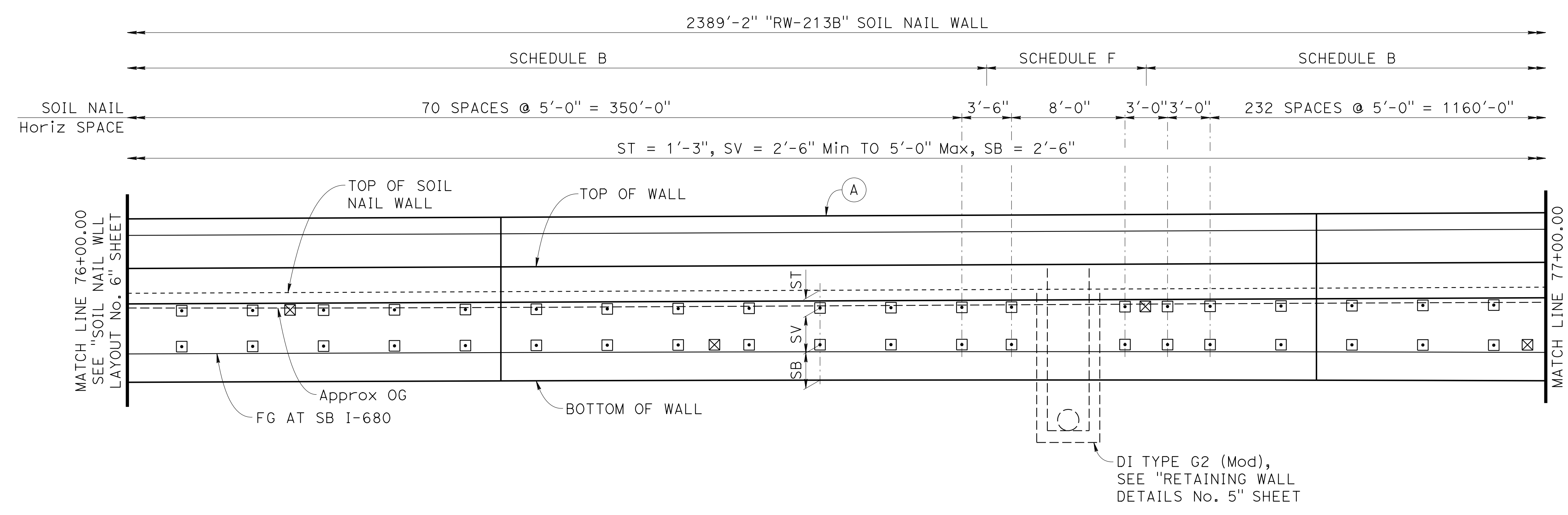
UNIT: 0733
PROJECT NUMBER & PHASE: 04200002351

CONTRACT No.: 04-0030U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
8-22-21 9-2-21 09-29-21 11-2-21	16	38

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1689	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 PLANS APPROVAL DATE					
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ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					



NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.

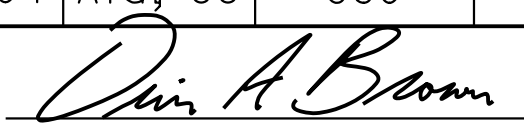
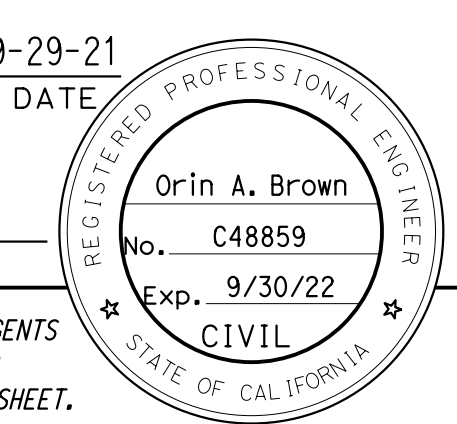
Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

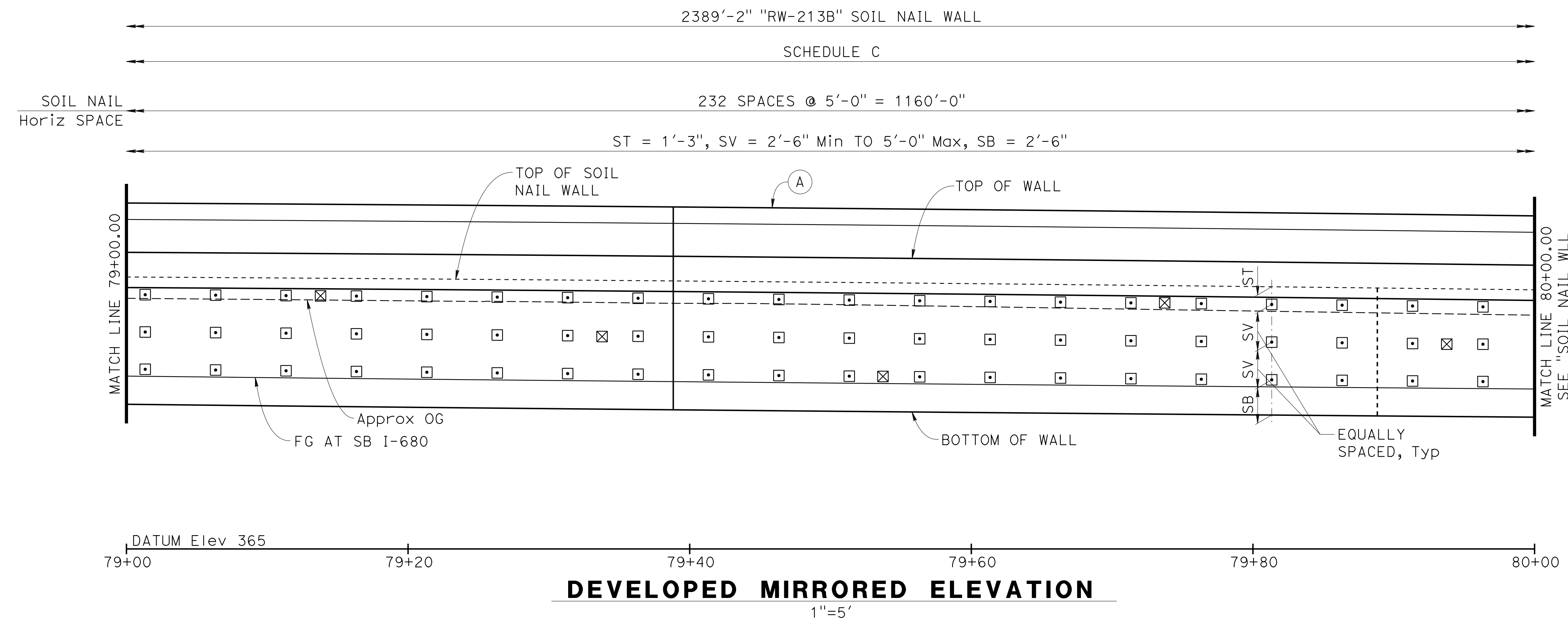
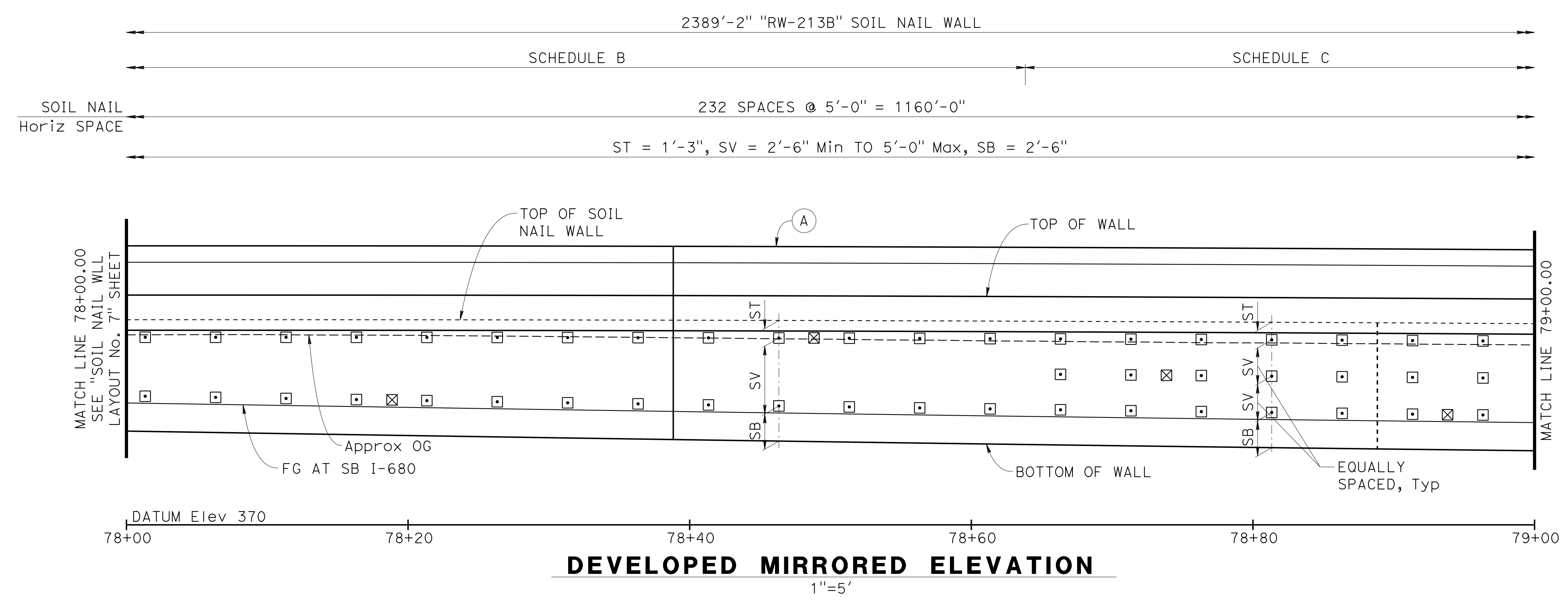
**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**
 Syed Kazmi
 PROJECT ENGINEER


BRIDGE No.	33E0252
POST MILE	R14.5

**RETAINING WALL No. 213B
 SOIL NAIL WALL LAYOUT No. 7**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9 R0.0/0.9	1690	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 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>					
ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					

NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.




 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0252
POST MILE	R14.5

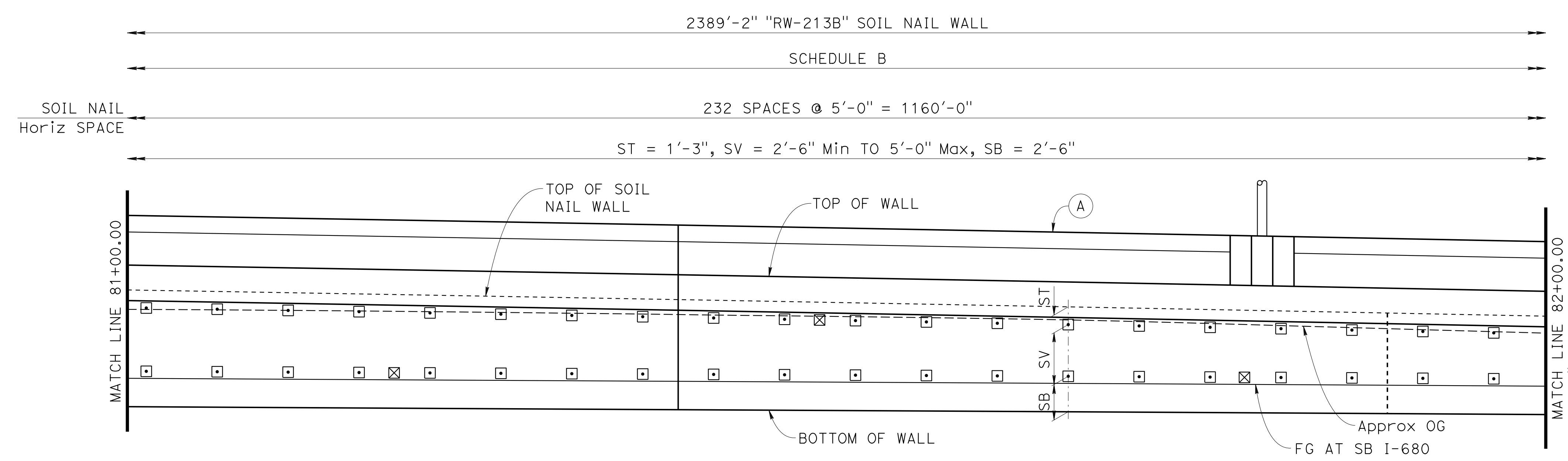
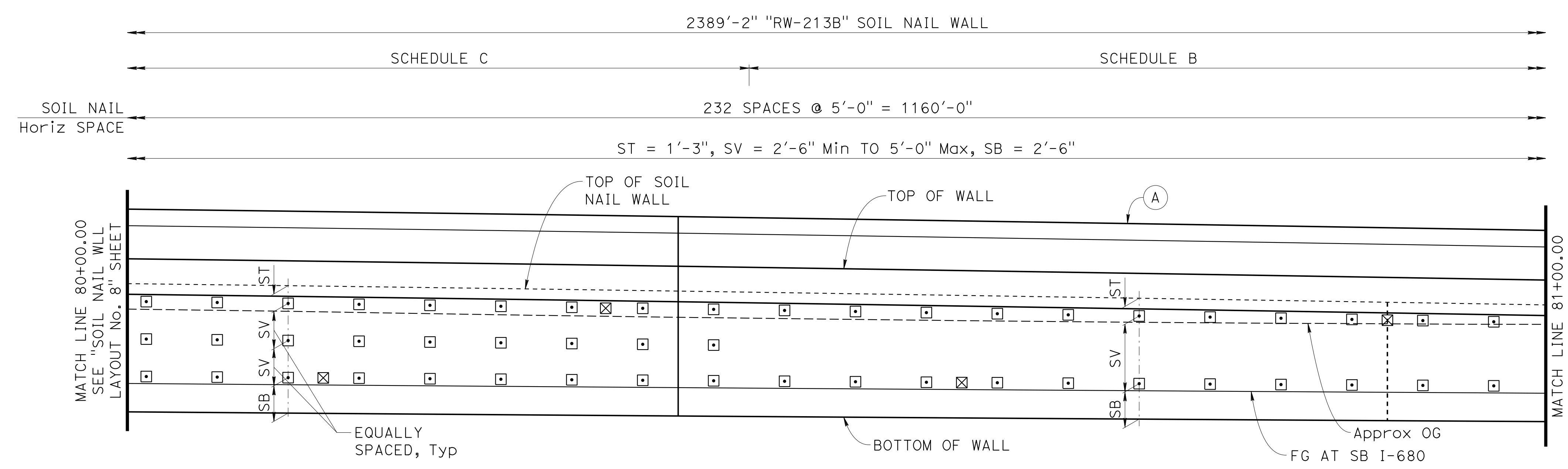
**RETAINING WALL No. 213B
 SOIL NAIL WALL LAYOUT No. 8**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1691	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE
 No. C48859
 Exp. 9/30/22
 CIVIL
 STATE OF CALIFORNIA

ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607
 AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.



Norbert Gee
 DESIGN OVERSIGHT
 SIGN OFF DATE 2/15/22

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:06
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PREPARED FOR THE
STATE OF CALIFORNIA
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Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0252
POST MILE	R14.5

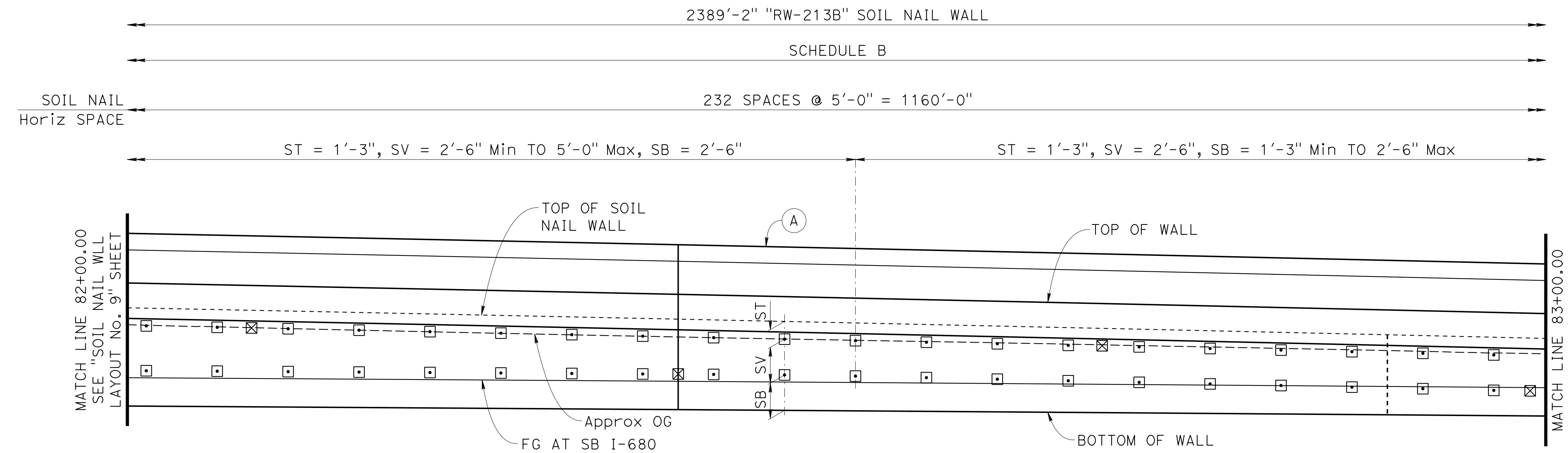
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SOIL NAIL WALL LAYOUT No. 9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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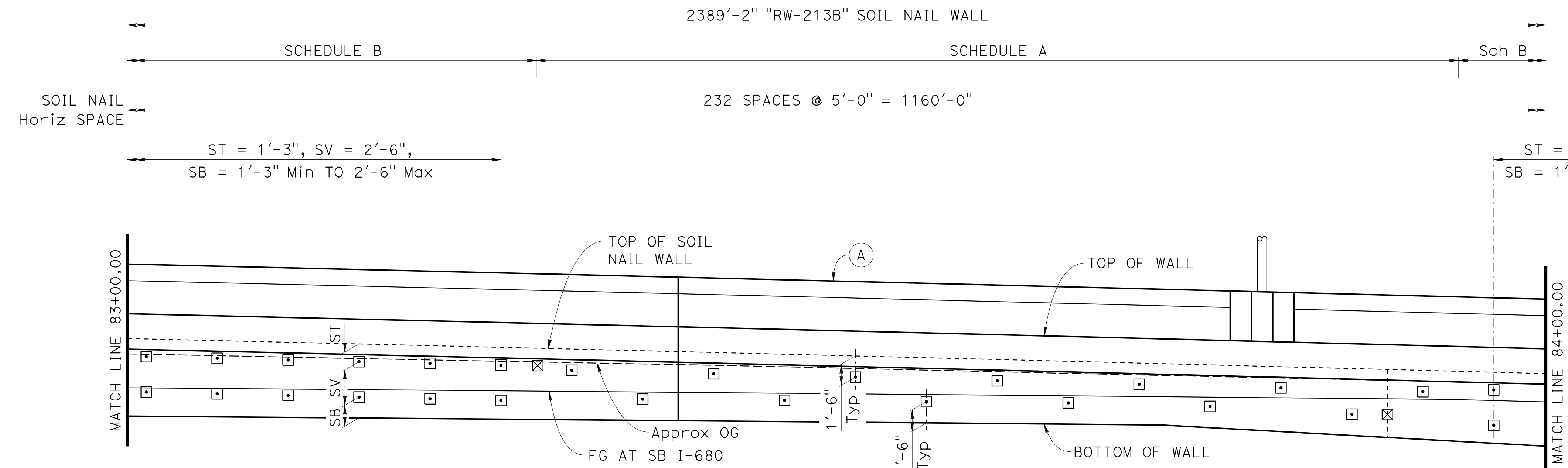
Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE
 No. C48859
 Exp. 9/30/22
 CIVIL
 STATE OF CALIFORNIA

ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607
 AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.



DATUM Elev 365
 82+00 82+20 82+40 82+60 82+80 83+00
DEVELOPED MIRRORED ELEVATION
 1"=5'



DATUM Elev 365
 82+00 82+20 82+40 82+60 82+80 83+00
DEVELOPED MIRRORED ELEVATION
 1"=5'

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**
 Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0252
POST MILE	R14.5

RETAINING WALL No. 213B
SOIL NAIL WALL LAYOUT No. 10

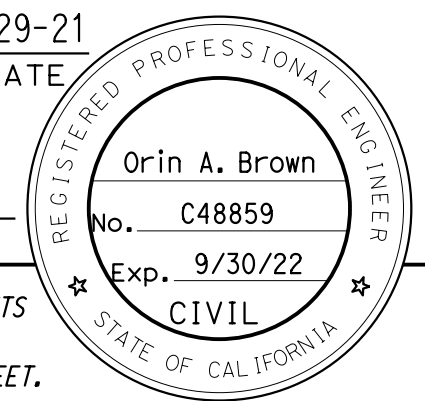
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1693	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21
 October 8, 2021
 PLANS APPROVAL DATE

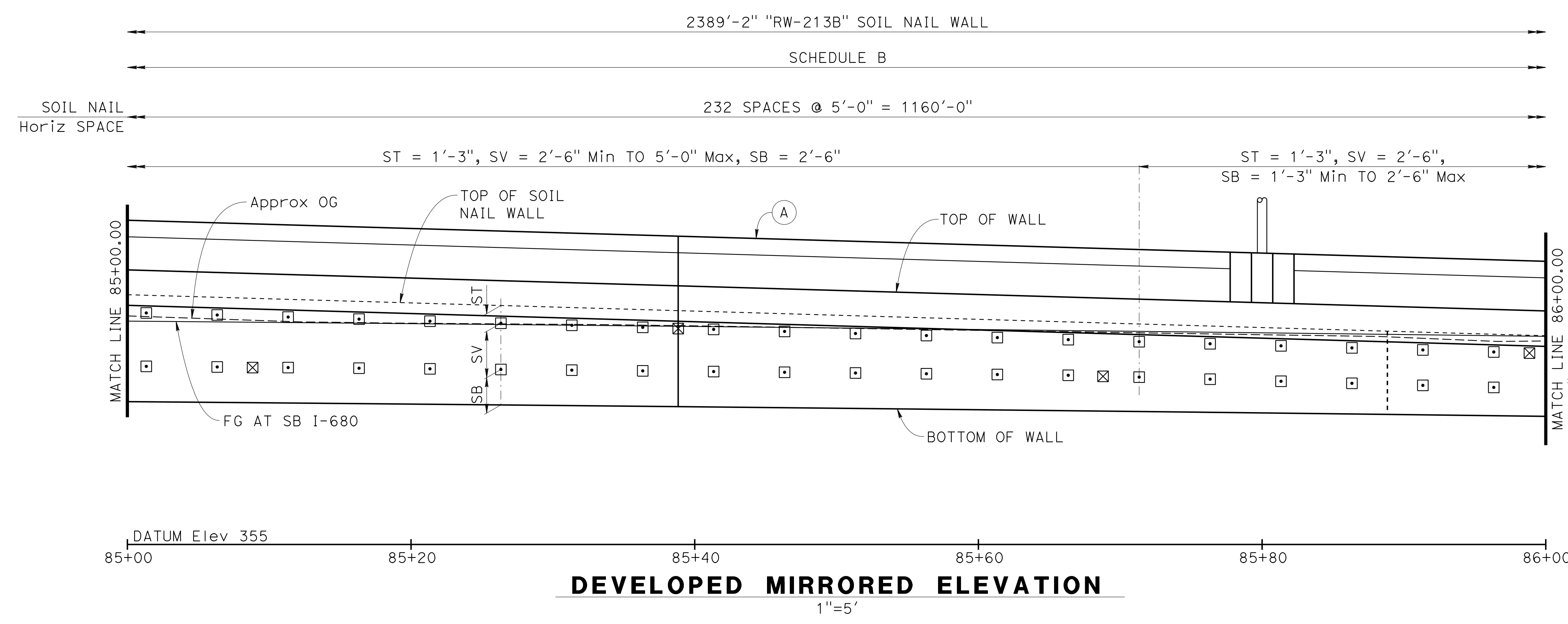
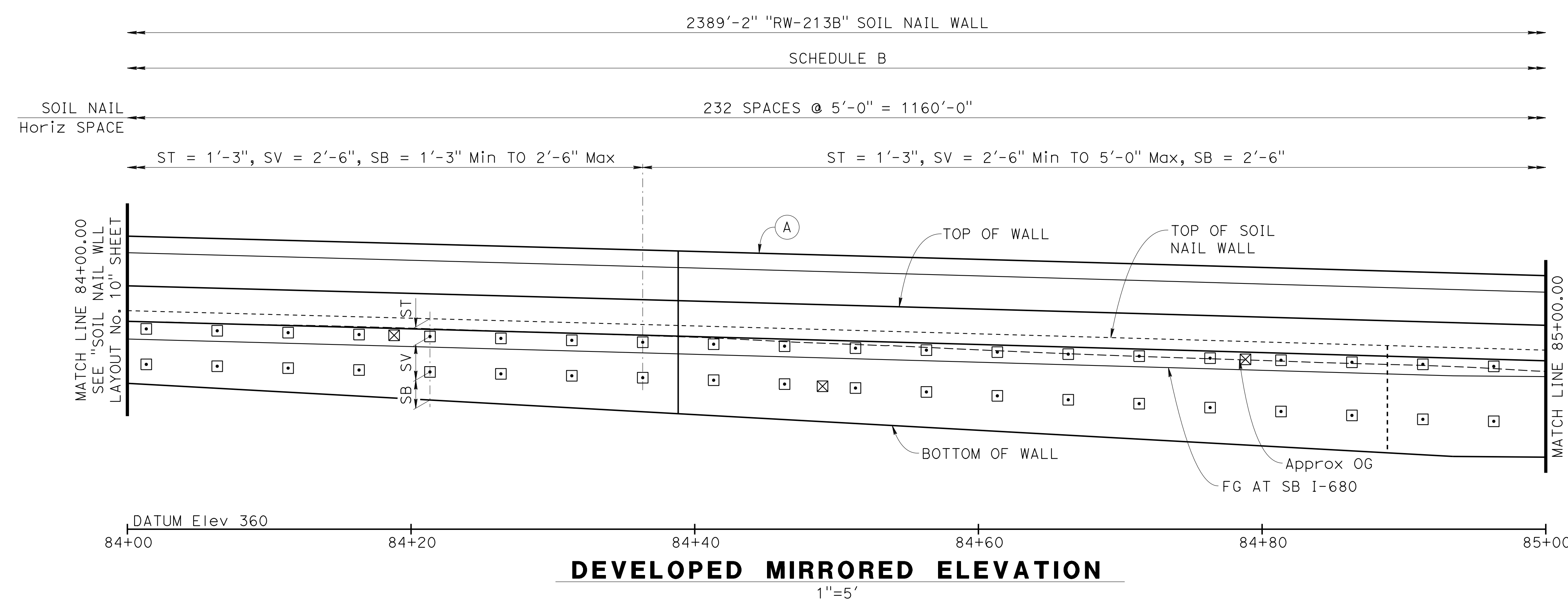
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607

AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811



NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.



Norbert Gee
 DESIGN OVERSIGHT
 2/15/22
 SIGN OFF DATE

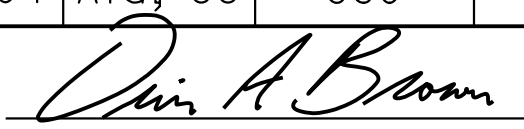
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DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

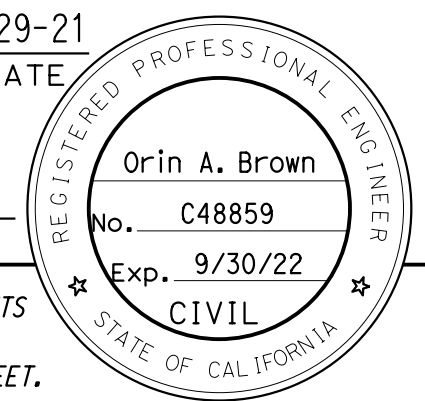
PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0252
POST MILE	R14.5

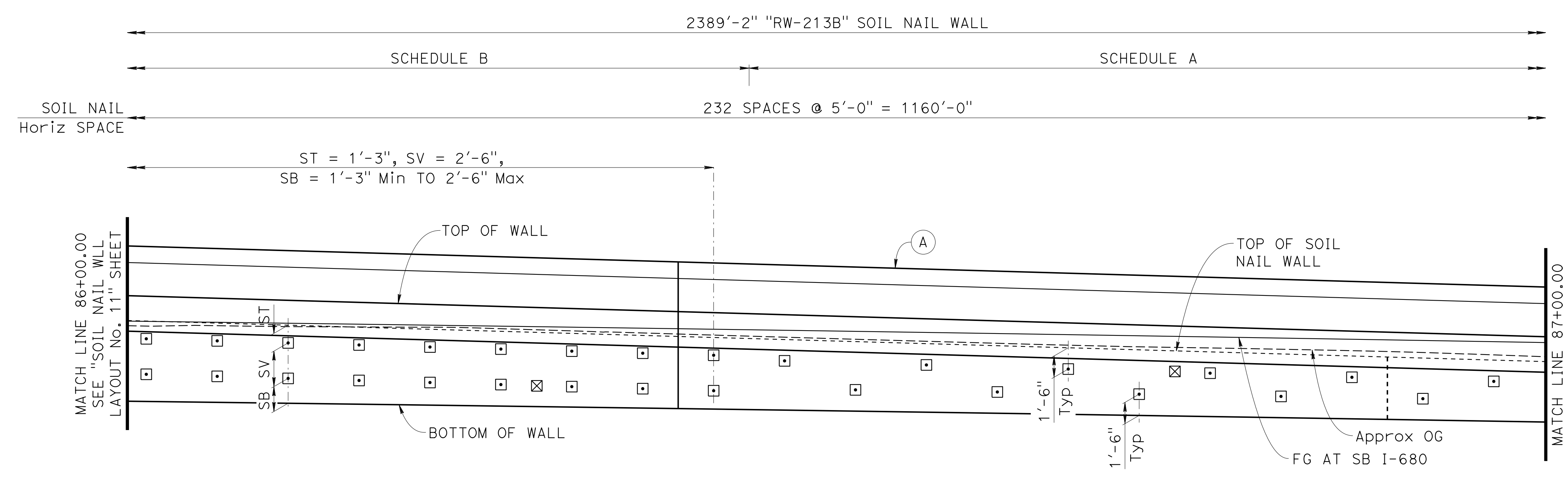
RETAINING WALL No. 213B
SOIL NAIL WALL LAYOUT No. 11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1694	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021			PLANS APPROVAL DATE		
ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607			AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811		

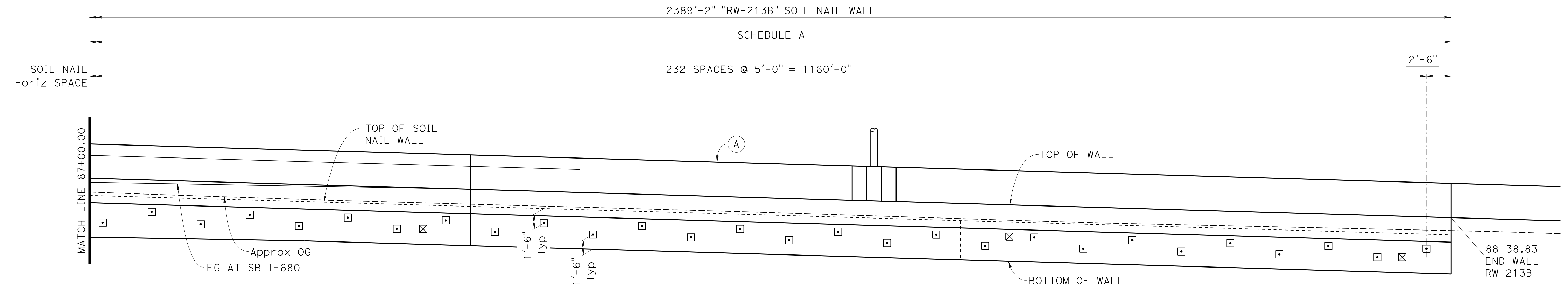


THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.


NOTE:
 1. For "NOTES", "LEGEND" and "SOIL NAIL WALL SCHEDULE TABLE", see "SOIL NAIL WALL LAYOUT No. 1" sheet.



DATUM Elev 355
 86+00 86+20 86+40 86+60 86+80 87+00
DEVELOPED MIRRORED ELEVATION
 1"=5'



DATUM Elev 350
 87+00 87+20 87+40 87+60 87+80 88+00 88+20 88+40
DEVELOPED MIRRORED ELEVATION
 1"=5'


 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

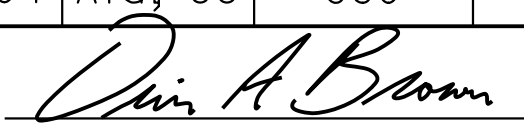
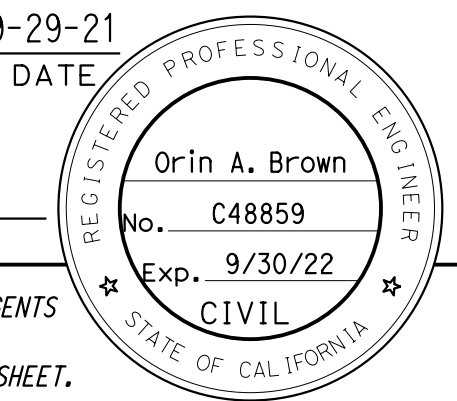
DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

**PREPARED FOR THE
 STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
 PROJECT ENGINEER

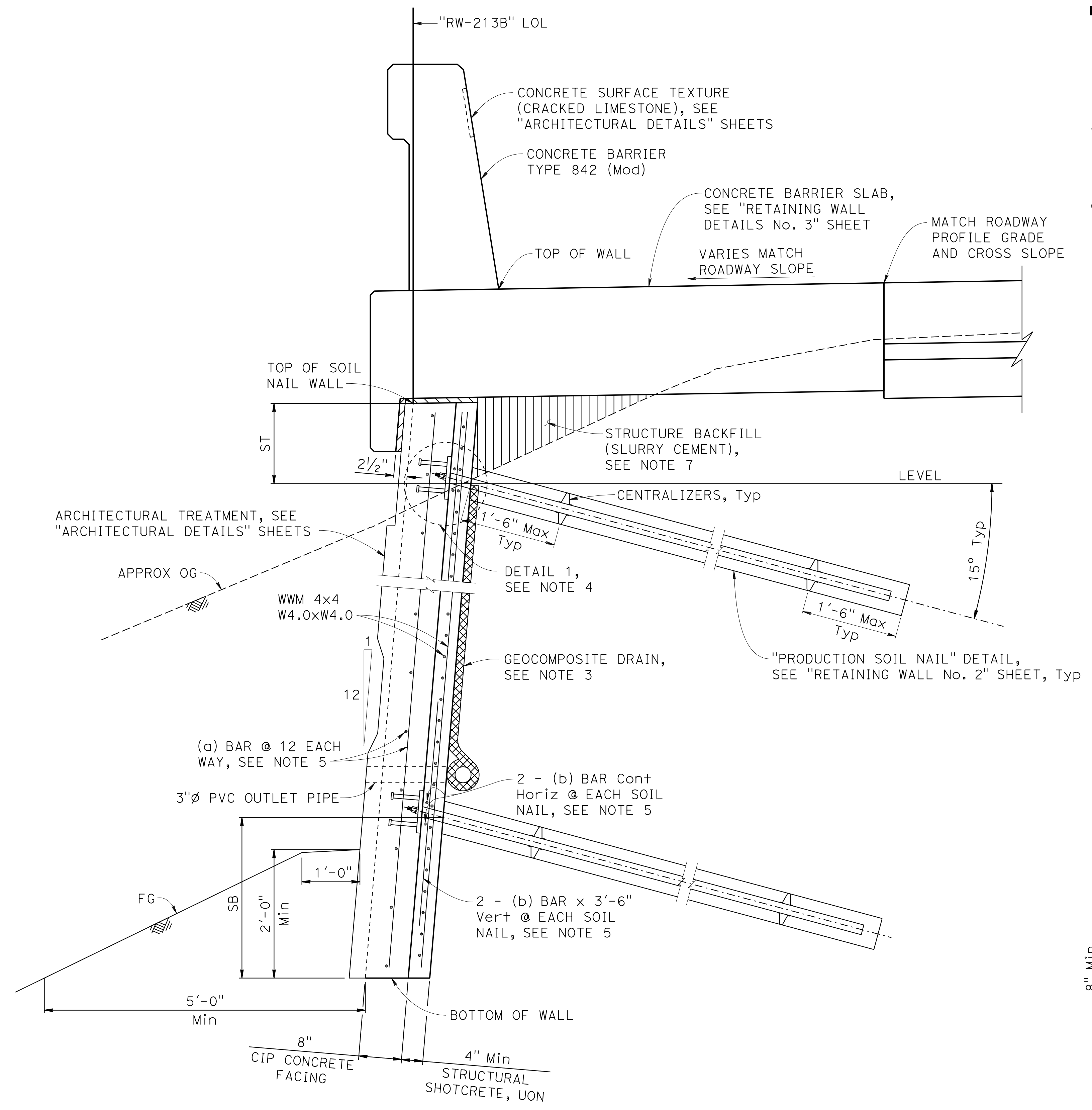
BRIDGE No.	33E0252
POST MILE	R14.5

**RETAINING WALL No. 213B
 SOIL NAIL WALL LAYOUT No. 12**

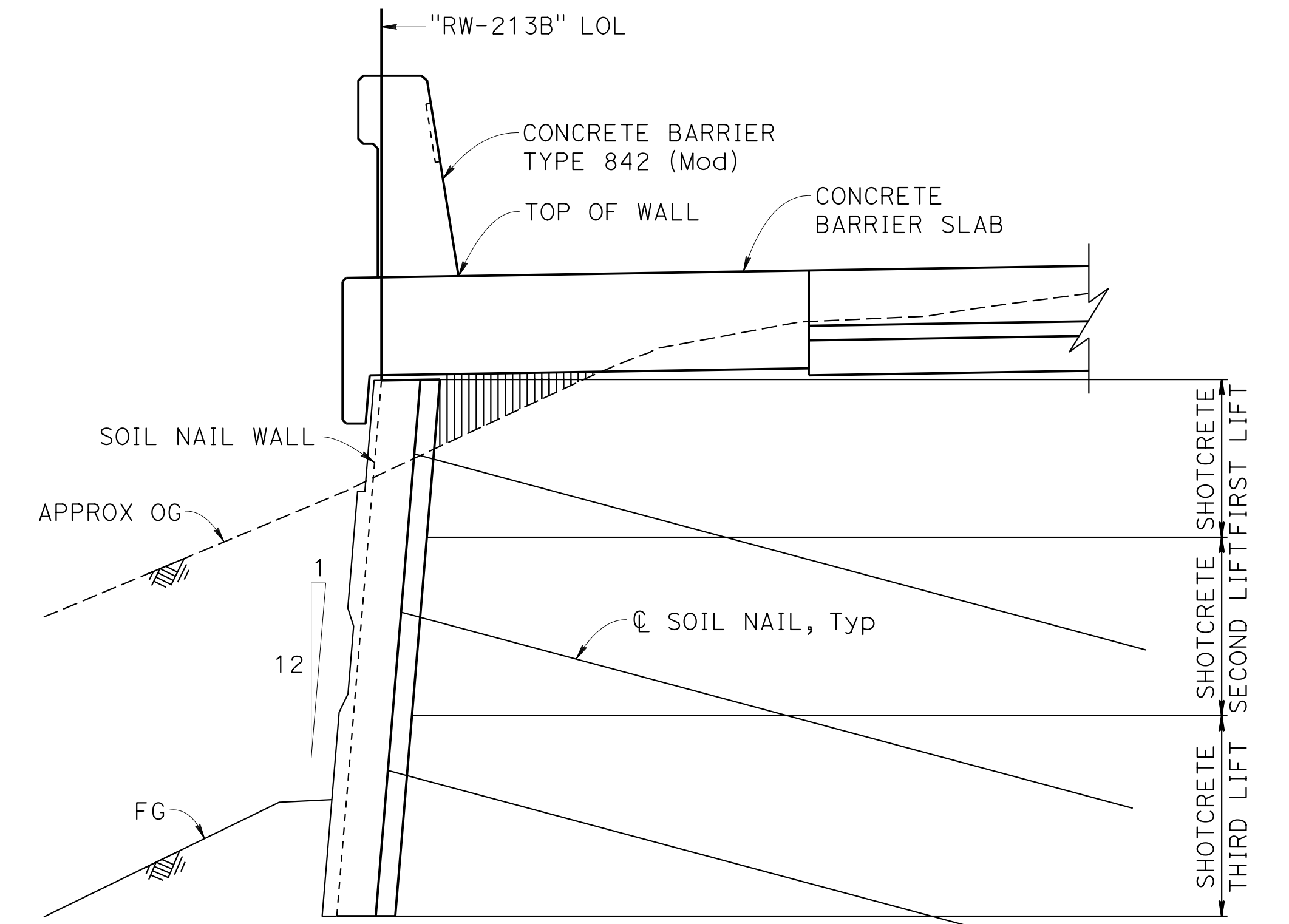
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1695	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 PLANS APPROVAL DATE					
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ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					

NOTES:

1. For Soil Nail spacing, see "SOIL NAIL WALL LAYOUT" sheets.
2. Bottom of wall to be placed against undisturbed material.
3. For drainage details, see "WALL DRAIN DETAILS" sheet.
4. For DETAIL 1, see "RETAINING WALL DETAIL No. 2" sheet.
5. For (a) bar and (b) bar size, see "SOIL NAIL WALL SCHEDULE TABLE" on "SOIL NAIL WALL LAYOUT No. 1" sheet.
6. For ST and SB, see "SOIL NAIL LAYOUT" sheets.
7. Form and place slurry cement backfill prior to nail installation, bench as needed.



SOIL NAIL WALL DETAIL
1" = 1'-0"

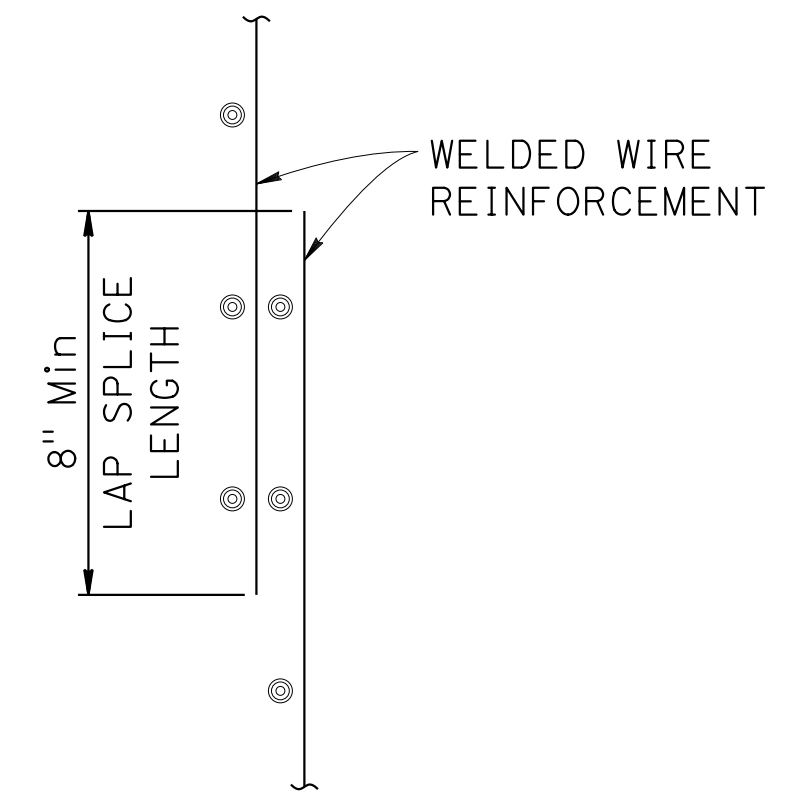


WALL LIFT NOTES:


1. Lift limit line are located in the middle between soil nails.
2. Each lift shall be completed, including testing of soil nail, before excavation of lower lift commences.

SOIL NAIL WALL LIFT DETAIL

1/2" = 1'-0"
NOTE: Three lifts shown, two lifts similar.



LAP SPLICE DETAIL
NO SCALE


 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

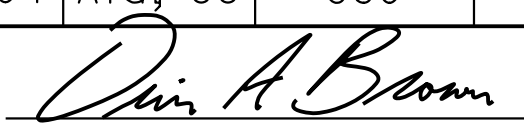
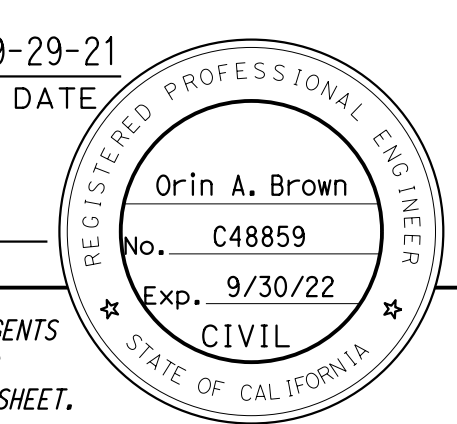
DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

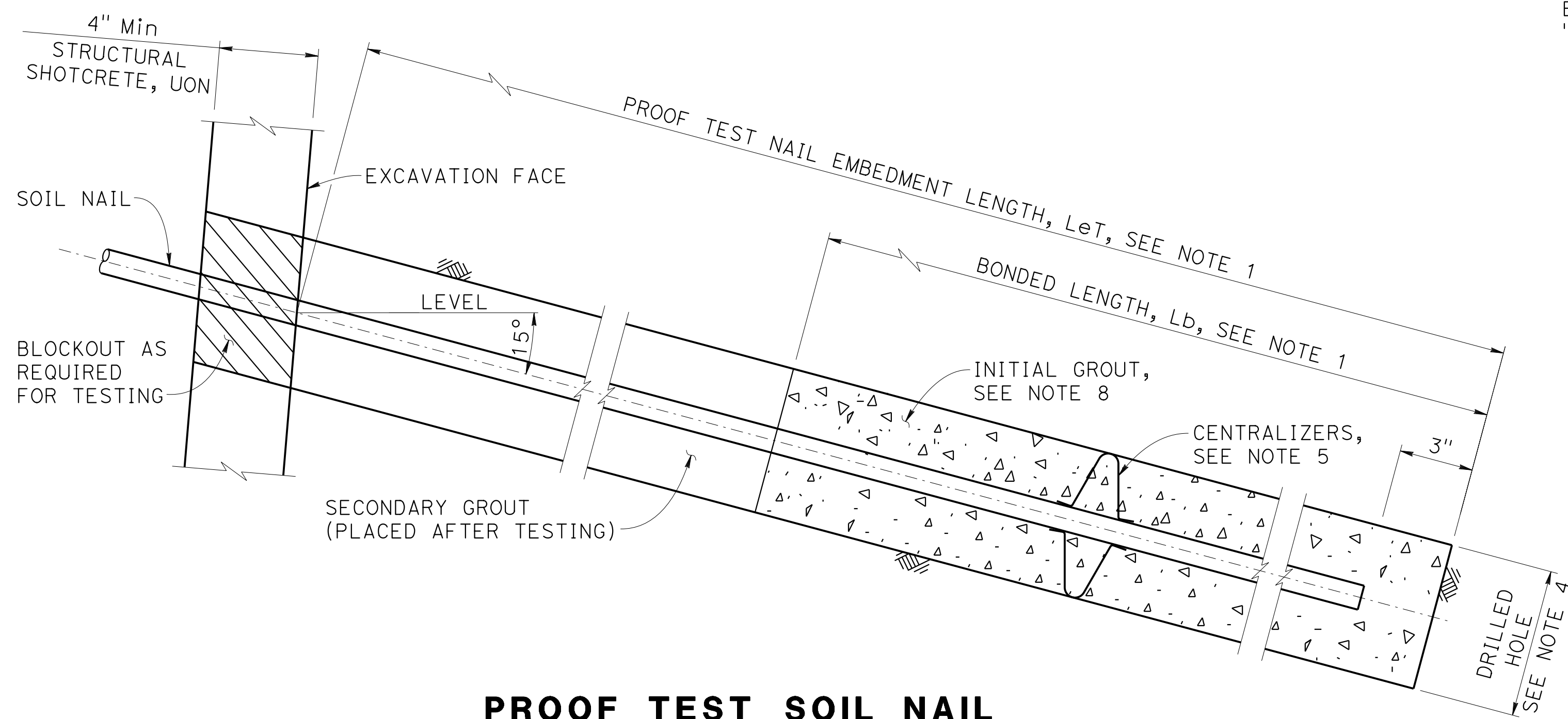
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PROJECT ENGINEER

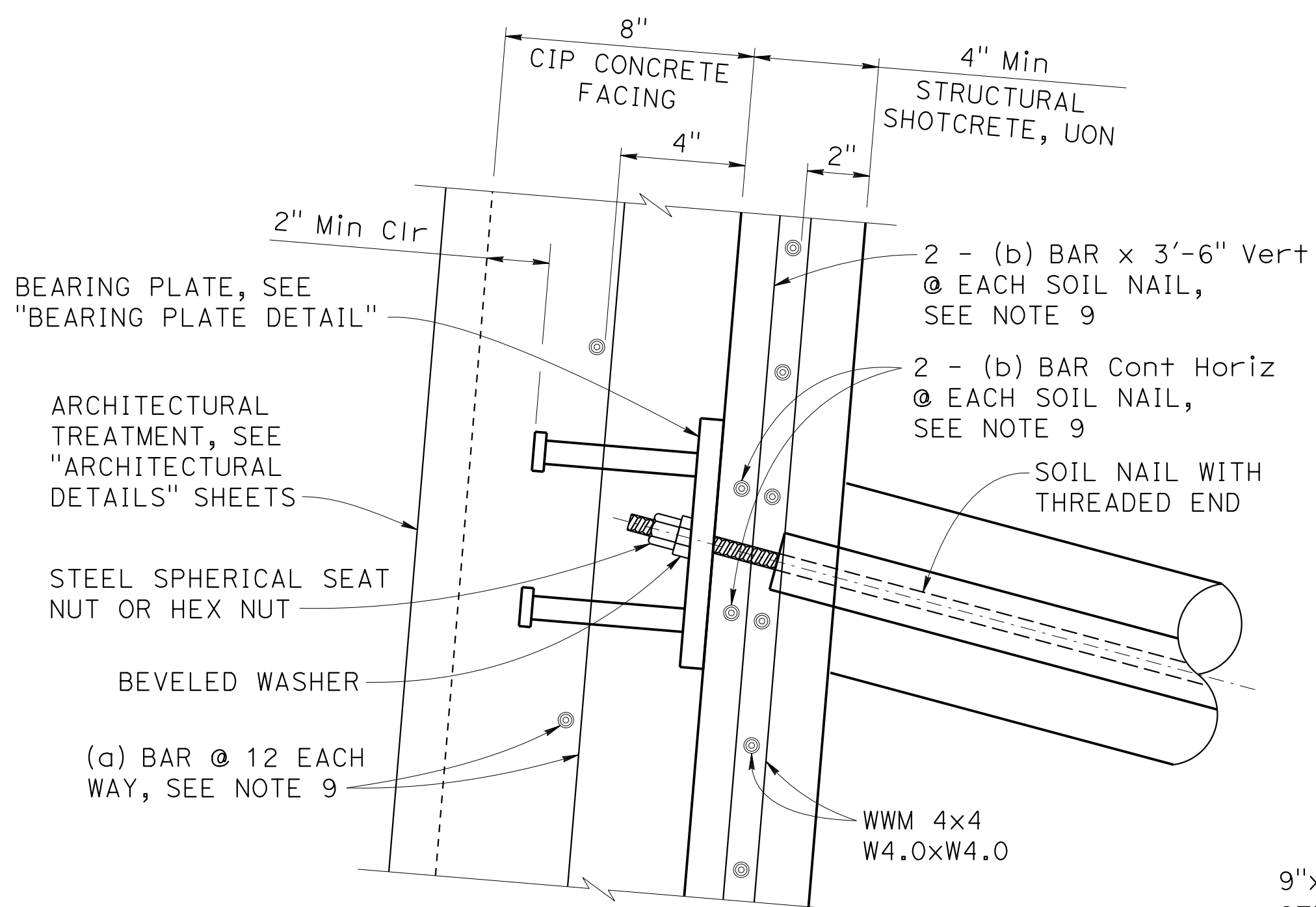
BRIDGE No.	33E0252
POST MILE	R14.5

RETAINING WALL No. 213B
RETAINING WALL DETAILS No. 1

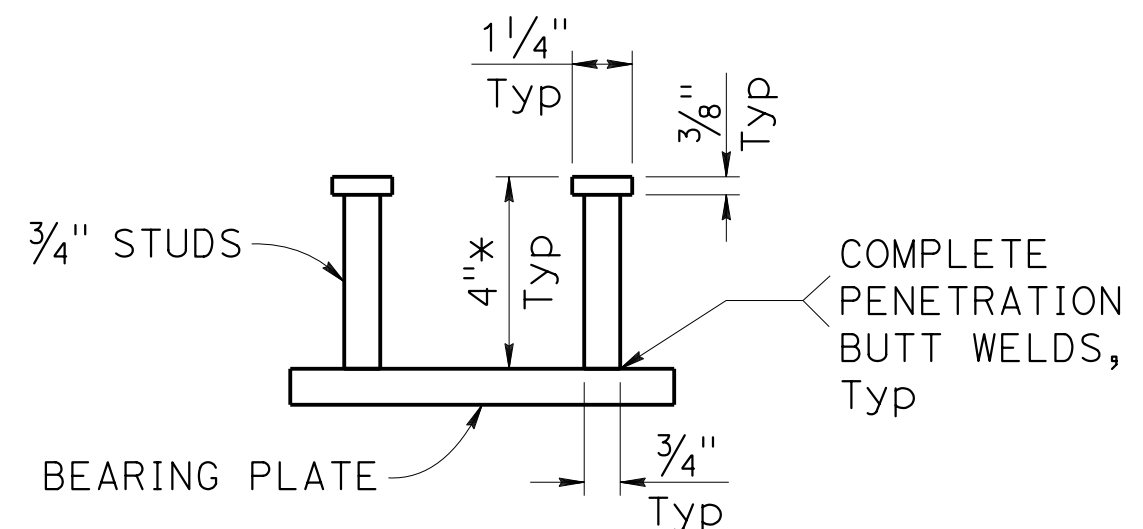
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04	Ala, CC	680	R11.0/R21.9, RO.0/0.9	1696	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 PLANS APPROVAL DATE					
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ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					



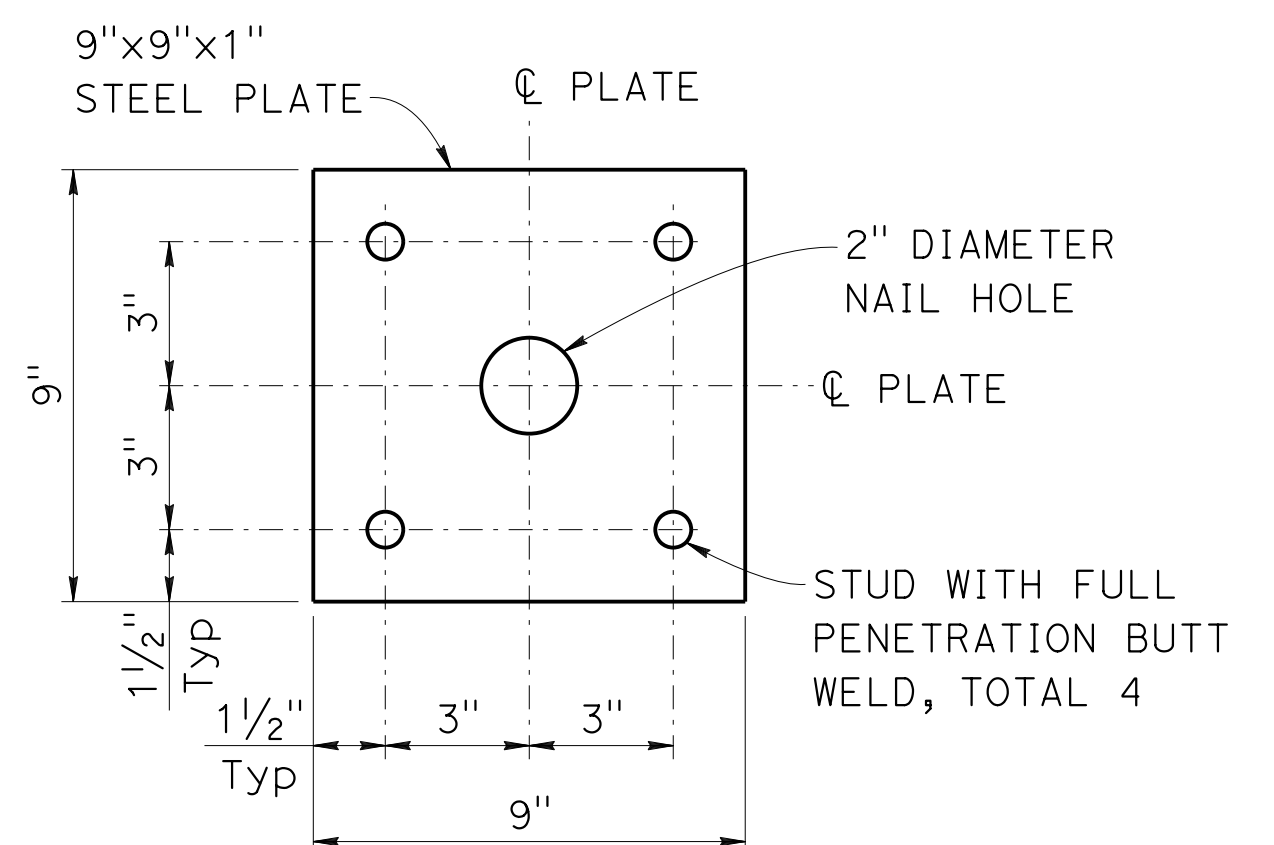
PROOF TEST SOIL NAIL
3" = 1'-0"



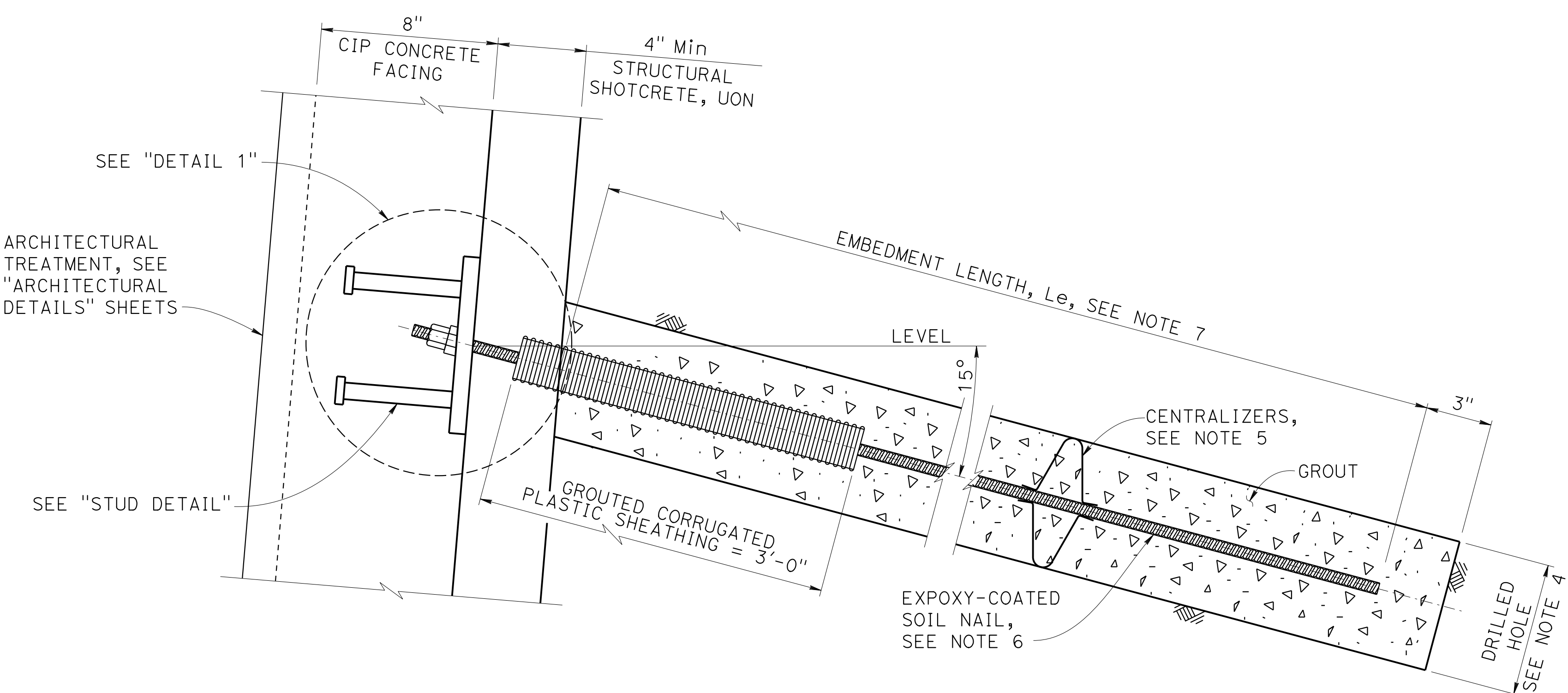
DETAIL 1
3" = 1'-0"



STUD DETAIL
3" = 1'-0"




BEARING PLATE DETAIL
3" = 1'-0"



PRODUCTION SOIL NAIL
3" = 1'-0"

NOTES:

1. The proof test nail embedment length L_{eT} , shall be equal to 2/3 of the embedment length, L_e , of adjacent production soil nail assemblies, but not less than 12'-0". The proof test nail bonded length, L_b , shall not be less than 10'-0".
2. The total length of the proof test nail assembly equals the proof test nail embedment length plus the length required for jacking equipment.
3. For locations of proof test nails, see "SOIL NAIL WALL LAYOUT" sheets.
4. Contractor to determine drilled hole diameter based on ultimate pullout resistance Q_b listed in "INDEX TO PLANS" sheet.
5. Space centralizers at 7'-6" maximum center to center and 1'-6" maximum from the hole ends.
6. Each production soil nail must be either an epoxy coated prefabricated solid steel bar partially encapsulated in a grouted corrugated plastic sheathing as shown, or a solid steel bar encapsulated full length in a grouted corrugated plastic sheathing.
7. For embedment length and soil nail size, see "SOIL NAIL WALL SCHEDULE TABLE" at "SOIL NAIL LAYOUT No. 1" sheet.
8. Finished grout surface to be normal to the bar.
9. For (a) bar and (b) bar size, see "SOIL NAIL WALL SCHEDULE TABLE" on "SOIL NAIL WALL LAYOUT No. 1" sheet.


 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

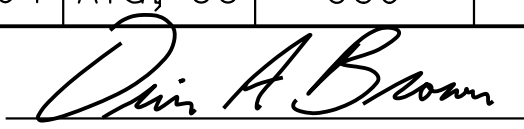
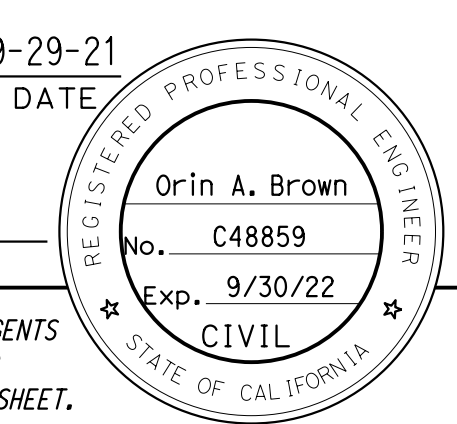
DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

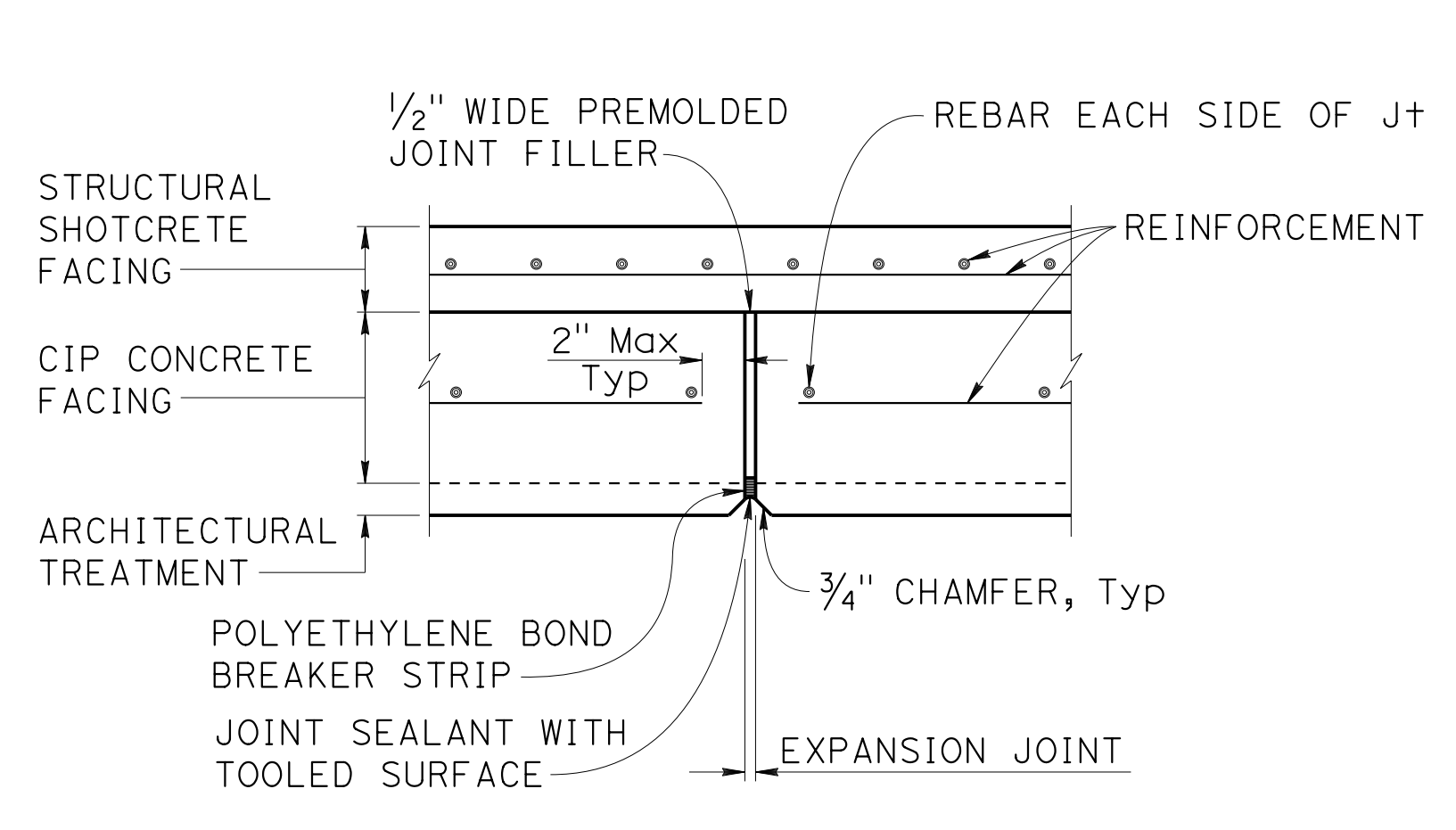
**PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
PROJECT ENGINEER

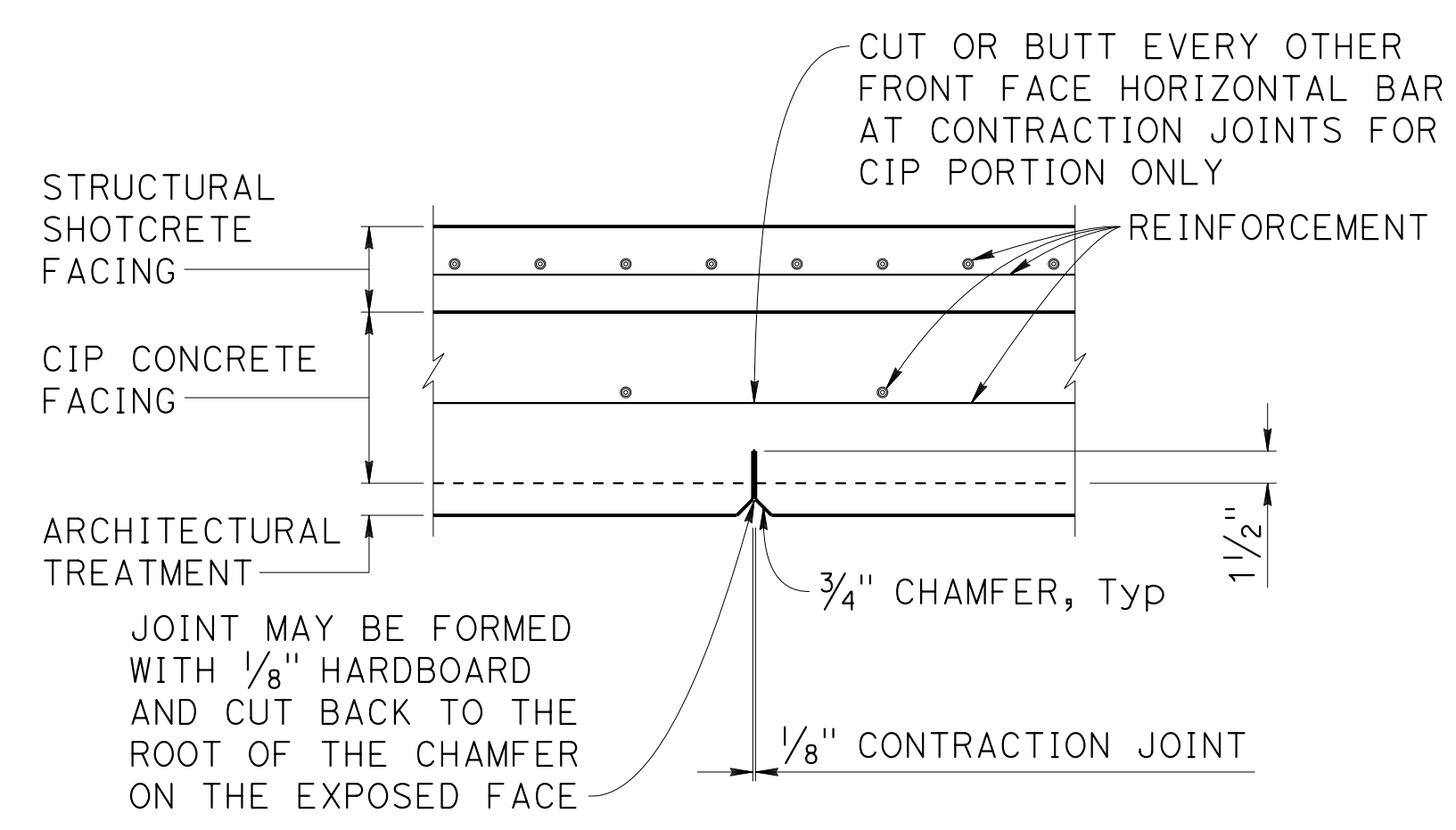
BRIDGE No.	33E0252
POST MILE	R14.5

**RETAINING WALL No. 213B
RETAINING WALL DETAILS No. 2**

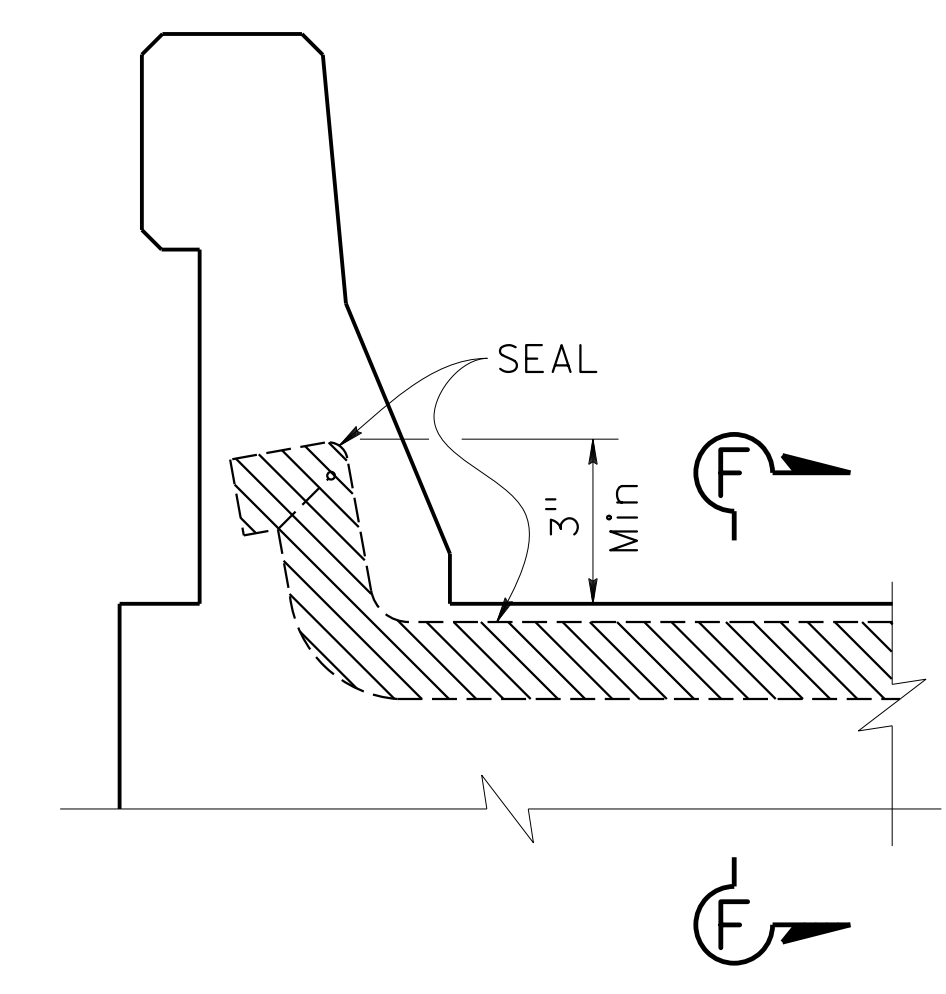
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1698	1710
 REGISTERED CIVIL ENGINEER			9-29-21	DATE	
October 8, 2021 PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					
ALAMEDA CTC 1111 BROADWAY, SUITE 800 OAKLAND, CA 94607					
AECOM 2020 L STREET, SUITE 400 SACRAMENTO, CA 95811					



WALL EXPANSION JOINT DETAIL
1 1/2" = 1'-0"



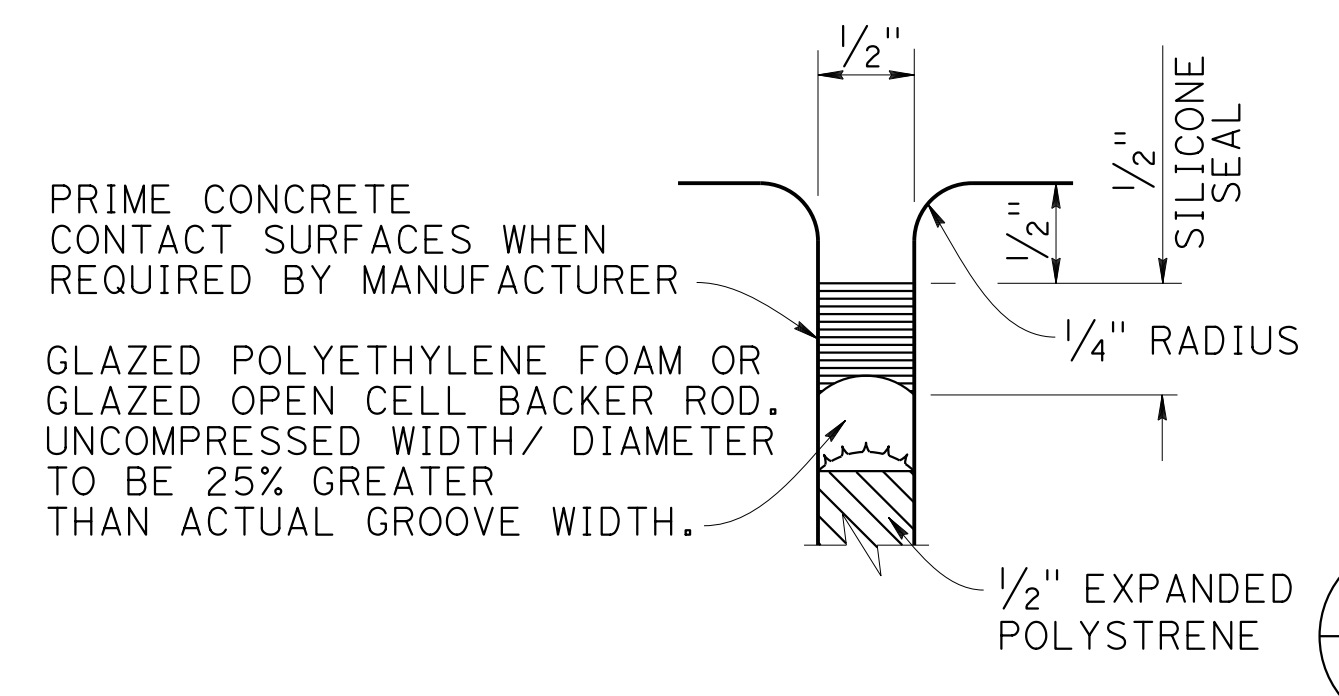
WALL CONTRACTION JOINT DETAIL
1 1/2" = 1'-0"



JOINT SEAL (TYPE A MODIFIED)
NO SCALE

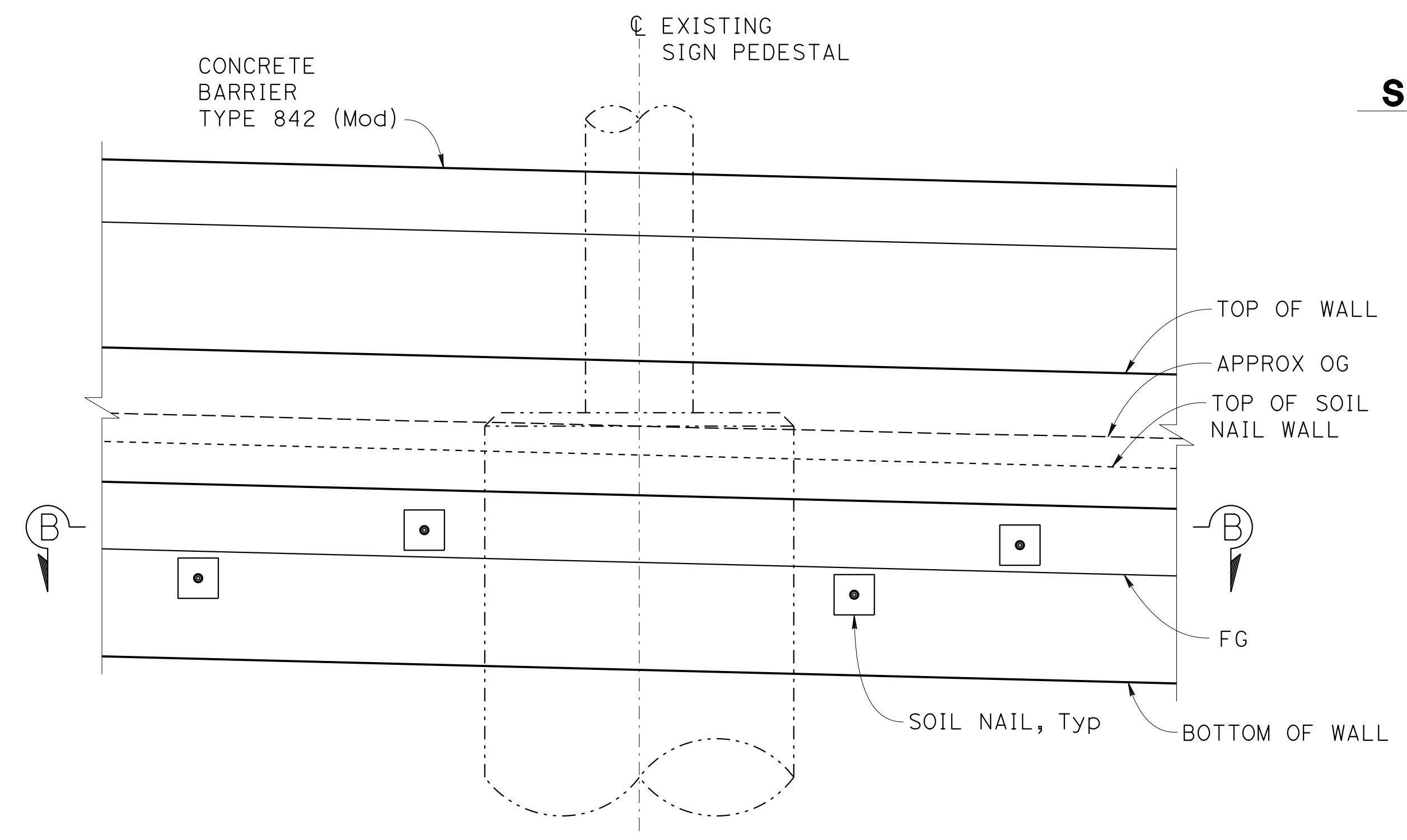
NOTE:

- Existing sign structure to be removed, see "ROADWAY PLANS". If the existing sign pedestal's diameter is greater than 5'-9", remove the pedestal down to 3'-0" below the bottom of the wall, otherwise remove the pedestal concrete down to at least 1'-6" below the bottom of barrier slab.

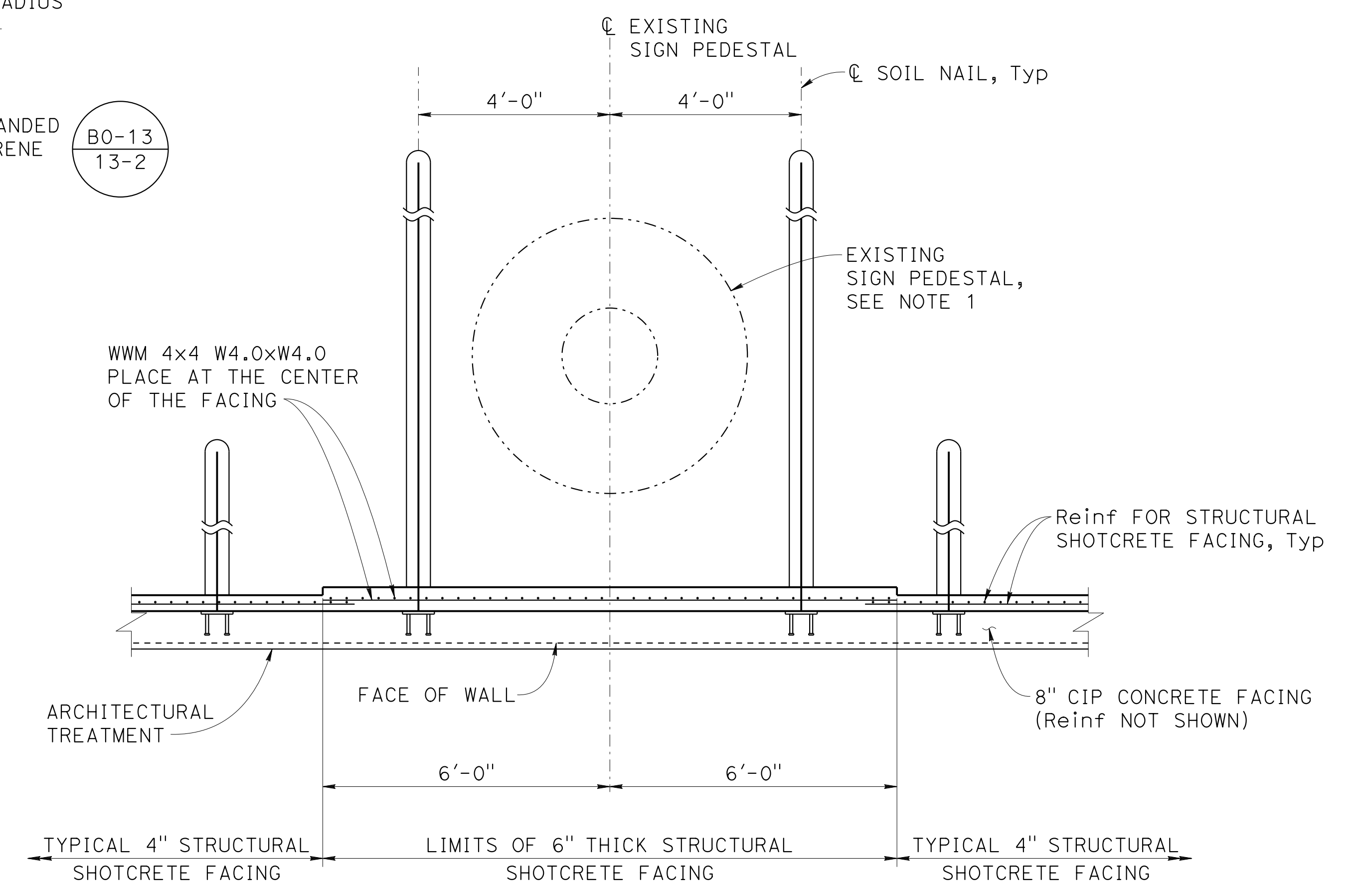


SECTION F-F
NO SCALE


BO-13
13-2



EXISTING PEDESTAL ELEVATION
1/2" = 1'-0"



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


 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

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STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**

Syed Kazmi
PROJECT ENGINEER

BRIDGE No.	33E0252
POST MILE	R14.5

RETAINING WALL No. 213B
RETAINING WALL DETAILS No. 4

DESIGN DETAIL SHEET
(ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:07 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3
 FILE => 33E0252-g-rwd+04.dgn USERNAME => p302438

UNIT: 0733
PROJECT NUMBER & PHASE: 04200002351 CONTRACT No.: 04-0030U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF
	8-22-21 9-2-21 09-29-21 11-18-21	26	38

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1699	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER 9-29-21 DATE
 October 8, 2021
 PLANS APPROVAL DATE

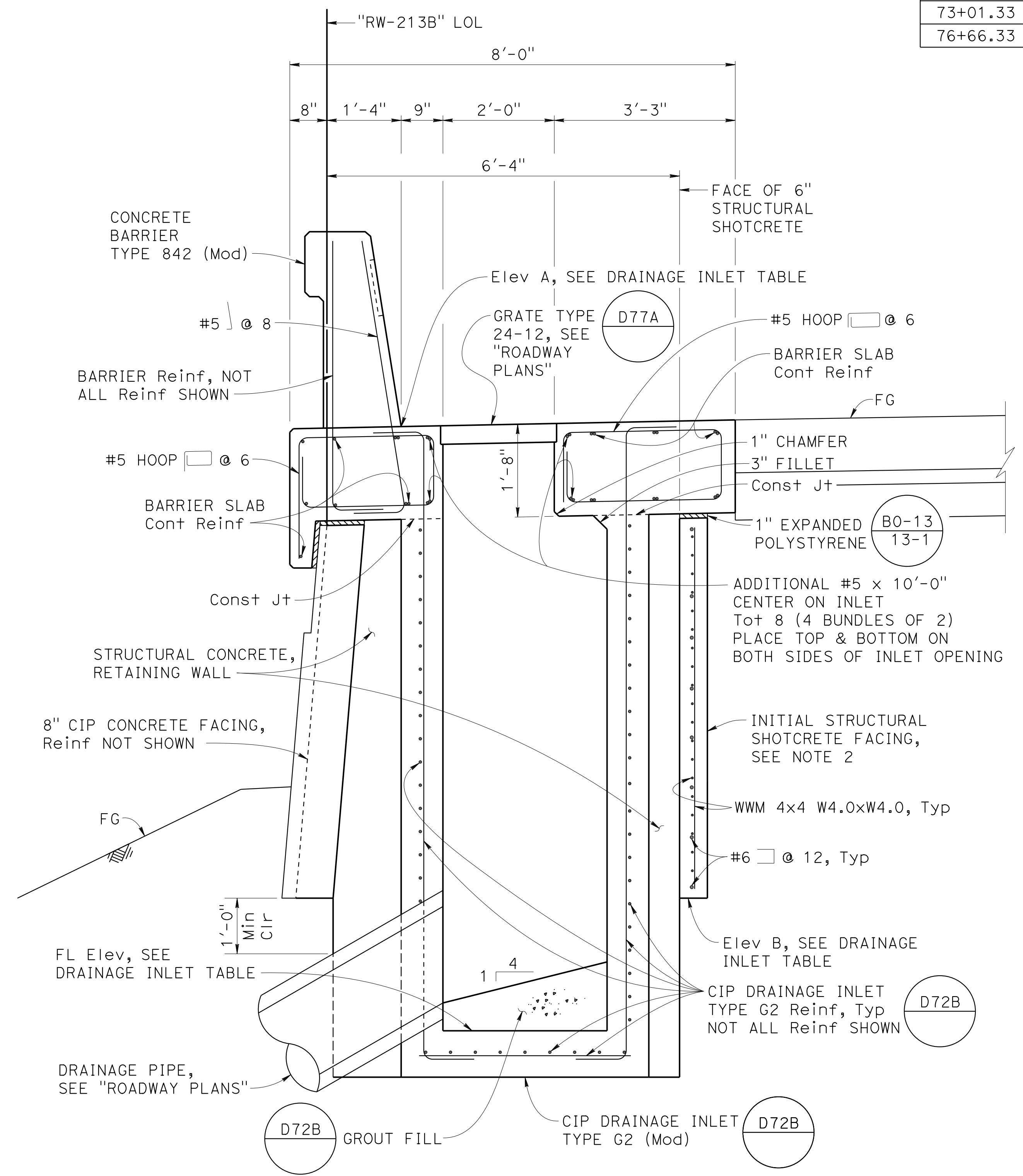
Orin A. Brown
 No. C48859
 Exp. 9/30/22
 CIVIL
 STATE OF CALIFORNIA

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ALAMEDA CTC
 1111 BROADWAY, SUITE 800
 OAKLAND, CA 94607

AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

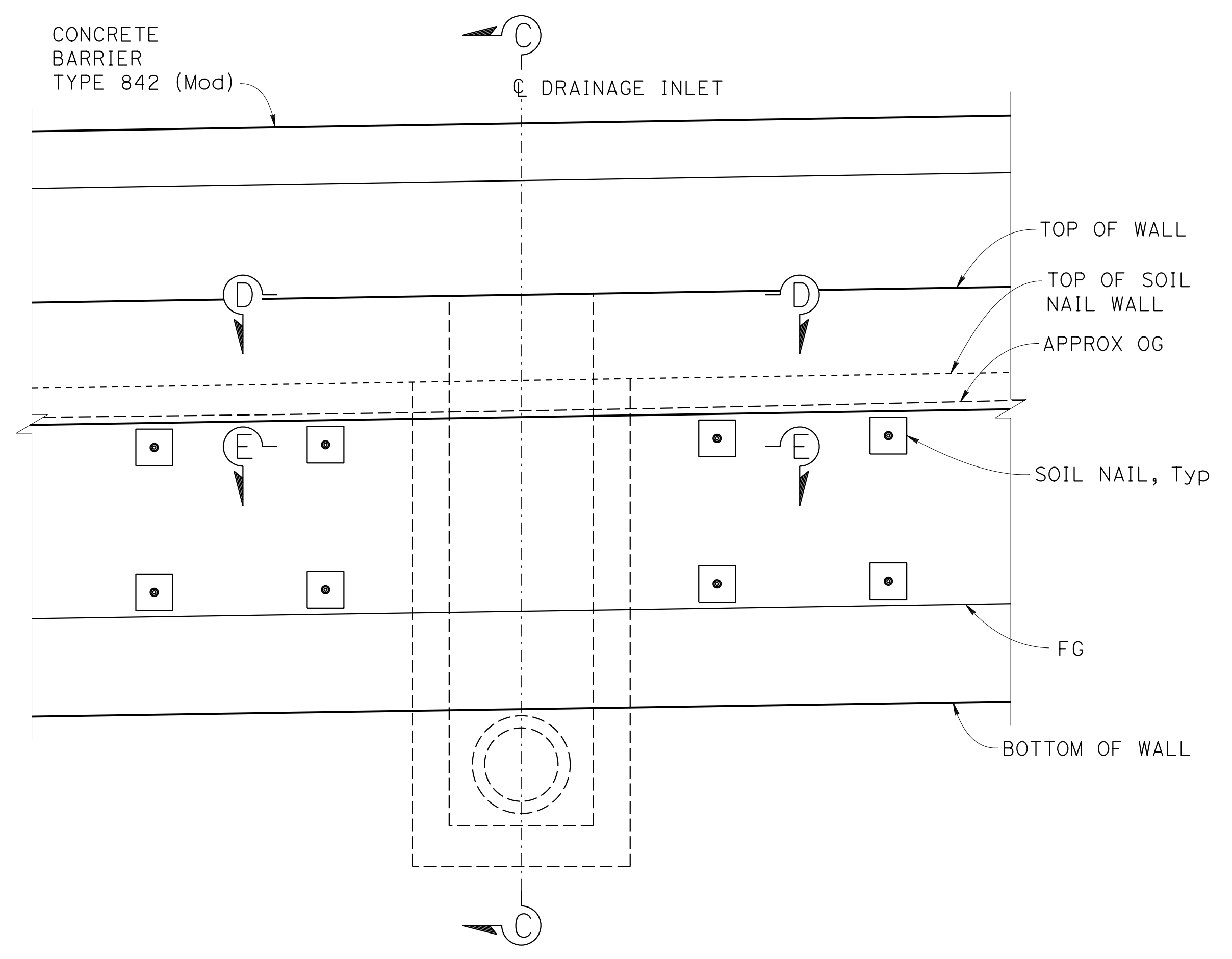
DRAINAGE INLET TABLE				
STATION LOCATION	Elev A	Elev B	FL Elev	DRAINAGE SYSTEM No. SEE NOTE 3
64+61.17	363.15	357.39	354.01	36-a
69+00.75	374.25	368.48	365.38	39-l
73+01.33	383.02	375.49	371.91	39-o
76+66.33	385.88	377.72	374.15	40-m



SECTION C-C
 $\frac{3}{4}'' = 1'-0''$

NOTES:

1. For SECTION D-D and SECTION E-E, see "RETAINING WALL DETAILS No. 6" sheet.
2. The initial structural shotcrete facing to be cast against and around the existing drainage pipe.
3. For DRAINAGE SYSTEM, see "ROADWAY PLANS".



TYPICAL ELEVATION AT DRAINAGE INLET
 $\frac{1}{2}'' = 1'-0''$

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

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Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0252
POST MILE	R14.5

RETAINING WALL No. 213B
RETAINING WALL DETAILS No. 5

DESIGN DETAIL SHEET
 (ENGLISH) (REVISION 4/19/2018)

DATE PLOTTED => 9-MAR-2022 TIME PLOTTED => 11:07
 FILE => 33E0252-g-rwd+05.dgn USERNAME => p302438

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 0733
 PROJECT NUMBER & PHASE: 04200002351

CONTRACT No.: 04-0Q30U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF
	8-22-21 9-2-21 09-29-21 1-18-22	27	38

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC	680	R11.0/R21.9, R0.0/0.9	1700	1710

Orin A. Brown
 REGISTERED CIVIL ENGINEER DATE 9-29-21

October 8, 2021
 PLANS APPROVAL DATE

Orin A. Brown
 No. C48859
 Exp. 9/30/22
 CIVIL
 STATE OF CALIFORNIA

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ALAMEDA CTC
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 OAKLAND, CA 94607

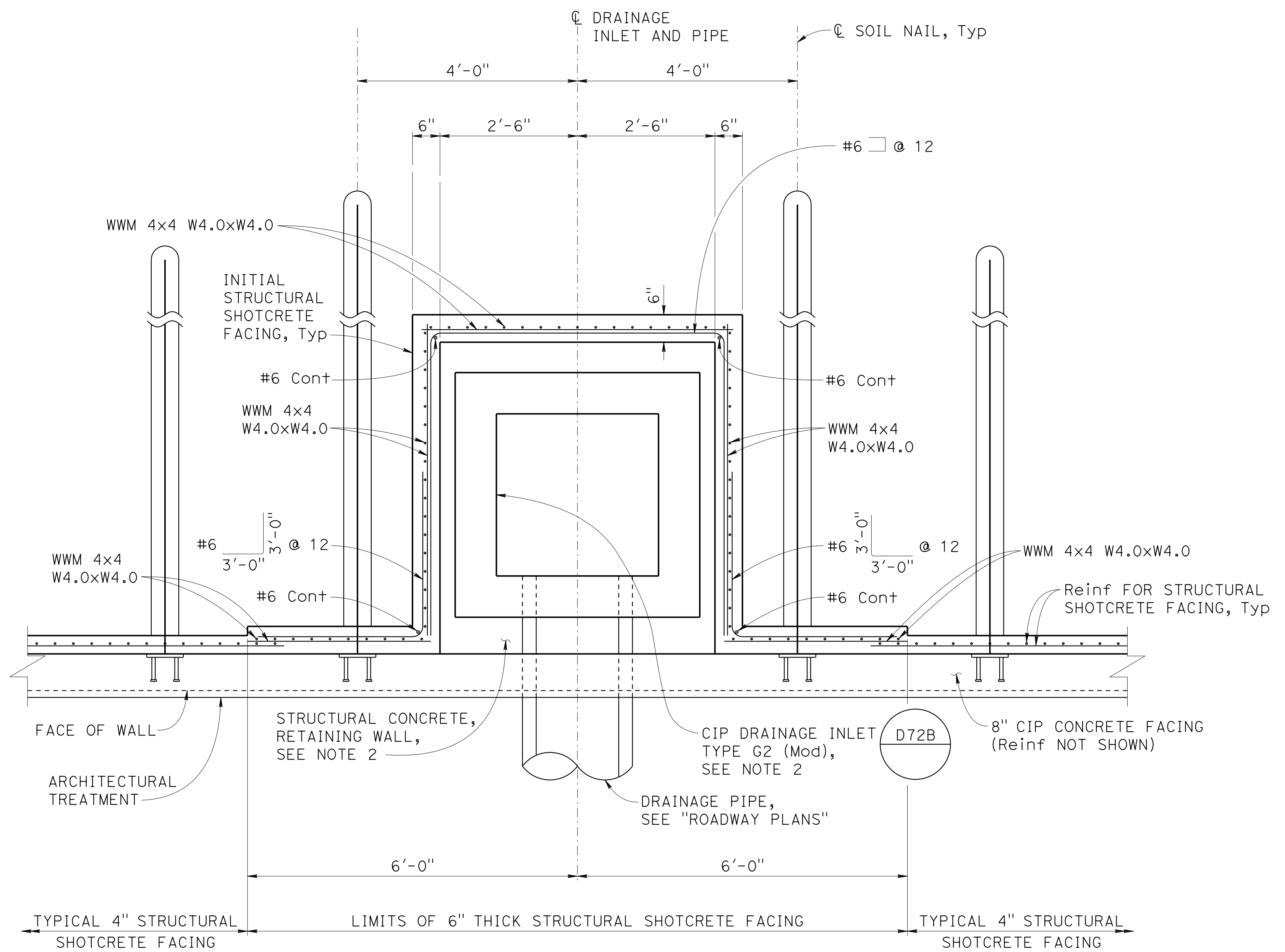
AECOM
 2020 L STREET, SUITE 400
 SACRAMENTO, CA 95811

NOTES:

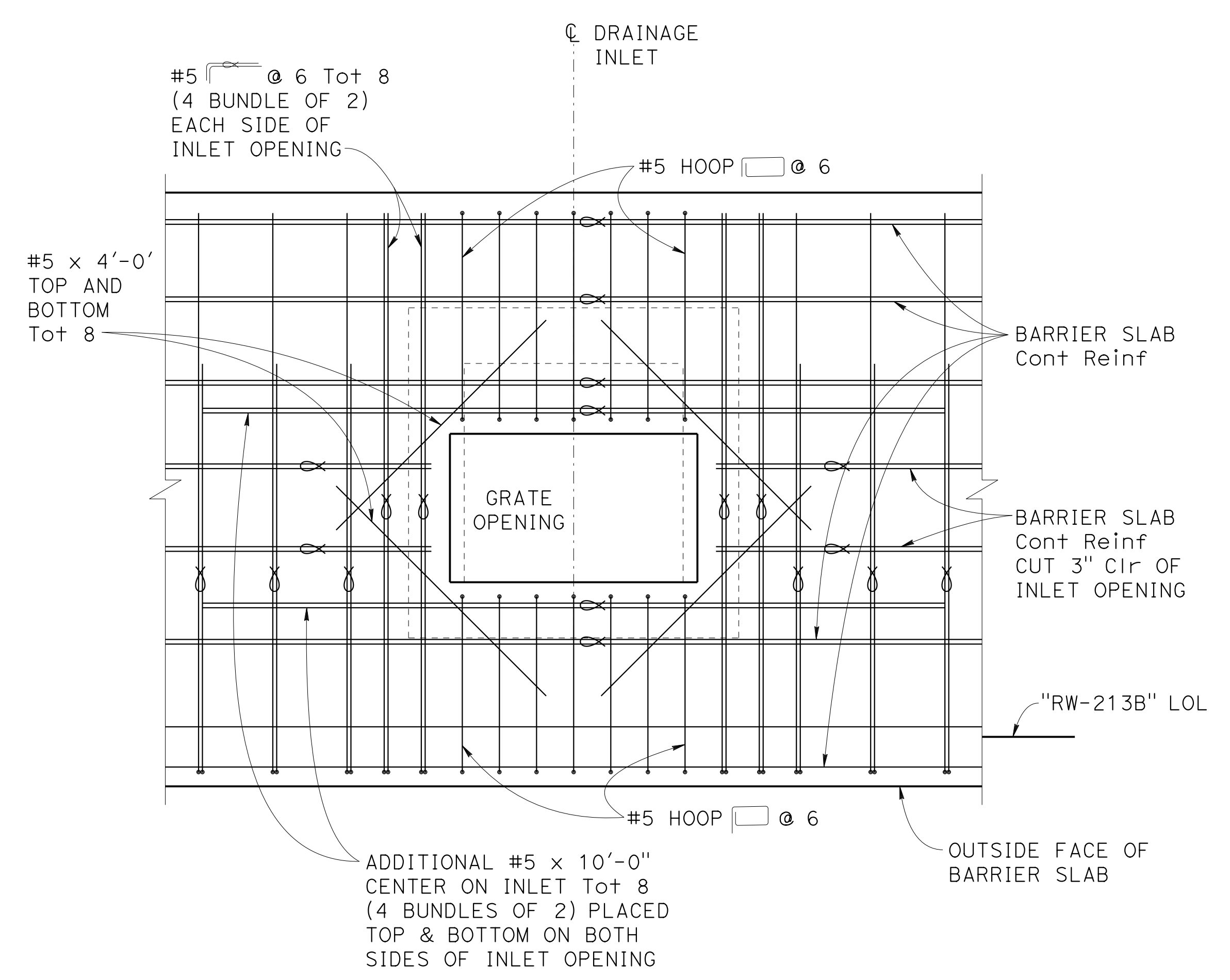
- For location of SECTION D-D and SECTION E-E, see "RETAINING WALL DETAILS No. 5" sheet.
- After placing drainage inlet reinforcement, the drainage inlet structural concrete may be cast against the initial structural shotcrete facing, instead of forming the drainage inlet and separately filling the space between the drainage inlet and the structural shotcrete facing with structural concrete.

LEGEND:

∞ Bundled bars



SECTION E-E
 $\frac{3}{4}'' = 1'-0''$



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

Norbert Gee
 DESIGN OVERSIGHT
 Norbert Gee
 2/15/22
 SIGN OFF DATE

DESIGN	BY W. Bai	CHECKED A. AKI
DETAILS	BY R. Lim	CHECKED A. AKI
QUANTITIES	BY W. Bai	CHECKED A. AKI

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Syed Kazmi
 PROJECT ENGINEER

BRIDGE No.	33E0252
POST MILE	R14.5

RETAINING WALL No. 213B
RETAINING WALL DETAILS No. 6