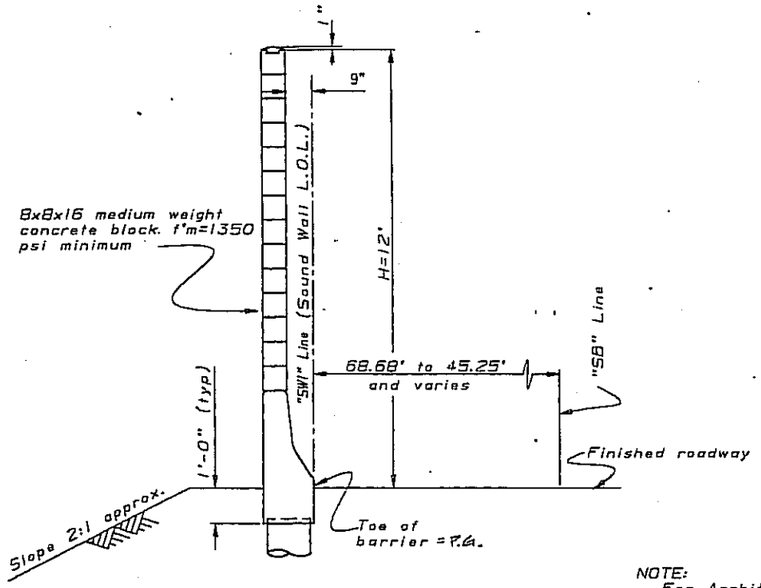
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	87	3.3/5.7	143	180

REGISTERED ENGINEER CIVIL

REGISTERED PROFESSIONAL ENGINEER Nelson Magsayo No. 42516 Exp. 3-31-92 CIVIL STATE OF CALIFORNIA

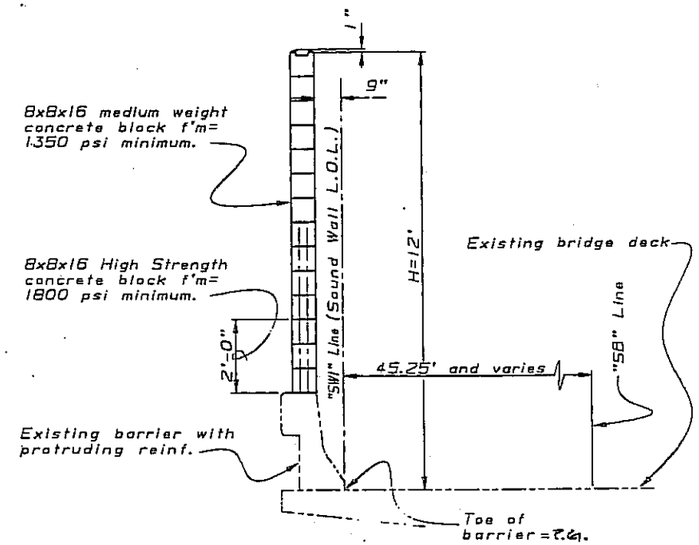
8-27-90
PLANS APPROVAL DATE



TYPICAL SECTION

1/2"=1'-0"

NOTE:
For Architectural Details see "ROAD PLANS".



TYPICAL SECTION (BRIDGE)

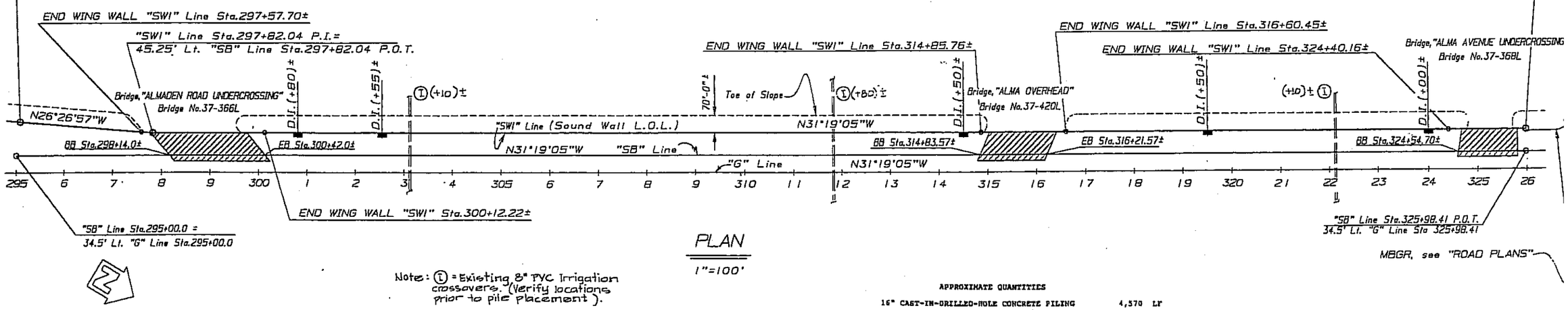
1/2"=1'-0"

INDEX TO PLANS

SHEET NO.	SHEET TITLE
1	GENERAL PLAN
2	STRUCTURE PLAN NO.1
3	STRUCTURE PLAN NO.2
4	STRUCTURE PLAN NO.3
5	STRUCTURE PLAN NO.4
6	STRUCTURE PLAN NO.5
7	STRUCTURE PLAN NO.6
8	SOUND WALL ON STRUCTURE
9	SOUND WALL-MASONRY BLOCK ON BARRIER DETAILS NO.1
10	SOUND WALL-MASONRY BLOCK ON BARRIER DETAILS NO.2
11	ACCESS GATE-SOUND WALL MASONRY ON BARRIER 3'-8" GATE DETAILS NO1
12	ACCESS GATE-SOUND WALL MASONRY ON BARRIER 3'-8" GATE DETAILS NO.2

BEGIN SOUND WALL "SWI" Line Sta.295+06.01 P.O.T. = 68.68' Lt. "SB" Line Sta.295+07.00 P.O.T.

END SOUND WALL/END WING WALL "SWI" Line Sta.325+98.41± P.O.T.= 45.25' Lt. "SB" Line Sta.325+98.41± P.O.T.



PLAN

1"=100'

MBGR, see "ROAD PLANS"

Note: (1) = Existing 8" PVC Irrigation crossovers. (Verify locations prior to pile placement).

APPROXIMATE QUANTITIES

16" CAST-IN-DRILLED-HOLE CONCRETE PILING	4,570	LF

FINAL PAY QUANTITIES

SOUND WALL (BARRIER) (MASONRY)	28,550	SQFT
CONCRETE BARRIER (TYPE 27SV)	2,505	LF

NOTE:
THE CONTRACTOR SHALL VERIFY AL. CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN ENGINEER

DESIGN	BY James Vassaka 9-89	CHECKED N.Magsayo 11-89	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY Dave Radley 9-89	CHECKED N.Magsayo 11-89	LAYOUT	BY J.Vassaka 9-89 / CHECKED N.Magsayo 11-89
QUANTITIES	BY Denise Blakeley	CHECKED J.Vassaka 11-89	SPECIFICATIONS	BY Scott Strand / PLANS AND SPECS COMPARED Scott Strand

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN 10

BRIDGE NO. SW-1
POST MILE 3.3/5.6

GUADALUPE CORRIDOR
ALMADEN ROAD SOUND WALL
GENERAL PLAN

DS 050 2138 (CADD 4/89)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04
EA 467041

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)
8-1-89 9-1-89 9-15-89 10-2-89 10-27-89 11-21-89 11-29-89 11-30-89 7-1-

SHEET 1 OF 1

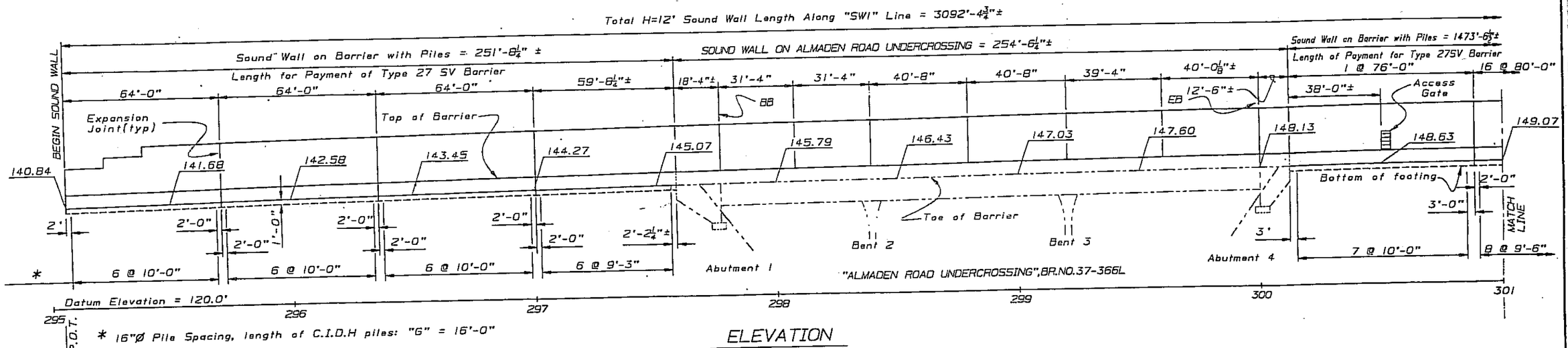
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	87	3.3/5.7	144	180

REGISTERED ENGINEER - CIVIL

Nelson Magsayo
No. 42516
Exp. 3-31-92
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

8-27-90
PLANS APPROVAL DATE

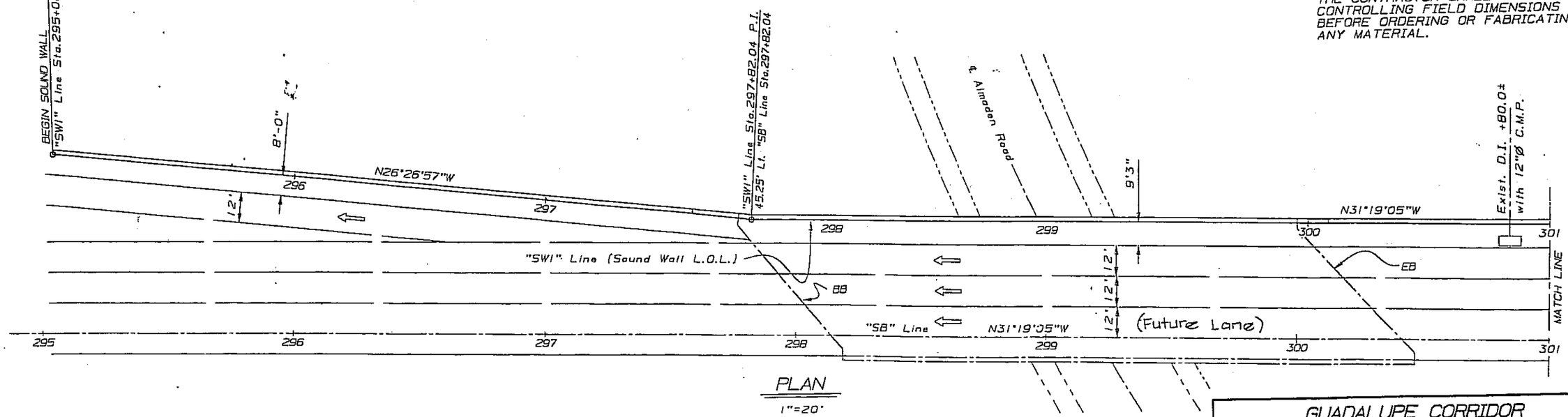
NOTE:
Profile grade elevations at 50' stations along "SWI" (Sound Wall L.O.L.) Line except as shown.



ELEVATION

1"=20' Horz.
1"=10' Vert.

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



PLAN

1"=20'

DESIGN	BY JIM VASSAKA	CHECKED NELSON MAGSAYO	
DETAILS	BY Dave Radley 11-89	CHECKED JIM VASSAKA	
QUANTITIES	BY Denise Blakesley	CHECKED JIM VASSAKA	

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN 10

CU 04
EA 487041

BRIDGE NO. SW-1
POST MILE 3.3/5.6

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 11-1-89 11-20-89 11-27-89 11-29-89 10/21/91

SHEET 2 OF 12

GUADALUPE CORRIDOR
ALMADEN ROAD SOUND WALL
STRUCTURE PLAN NO.1

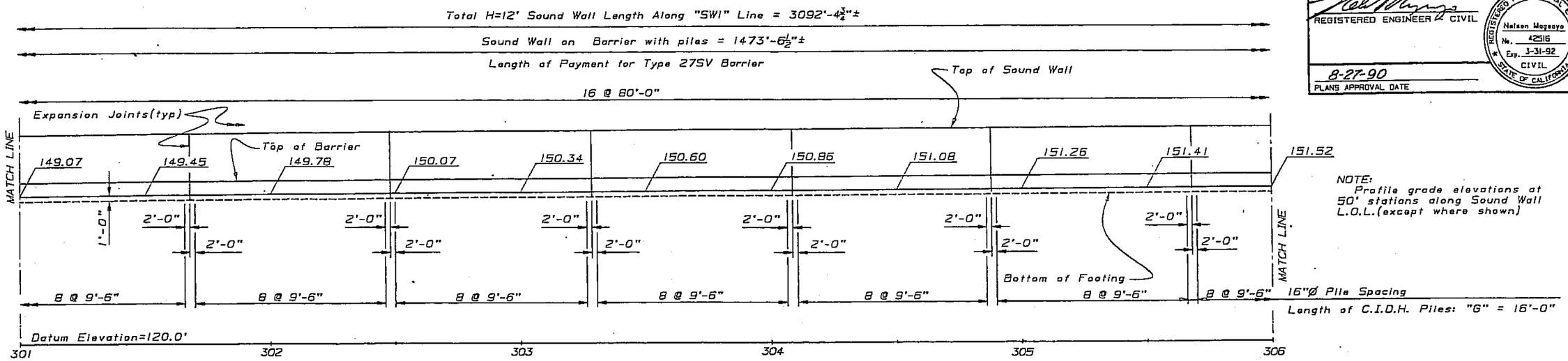
DS 050 2139 (CADD 4/89)

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	87	3.3/5.7	145	180

REGISTERED ENGINEER CIVIL

REGISTERED PROFESSIONAL ENGINEER Nelson Magsayo No. 42516 Exp. 3-31-92 CIVIL STATE OF CALIFORNIA

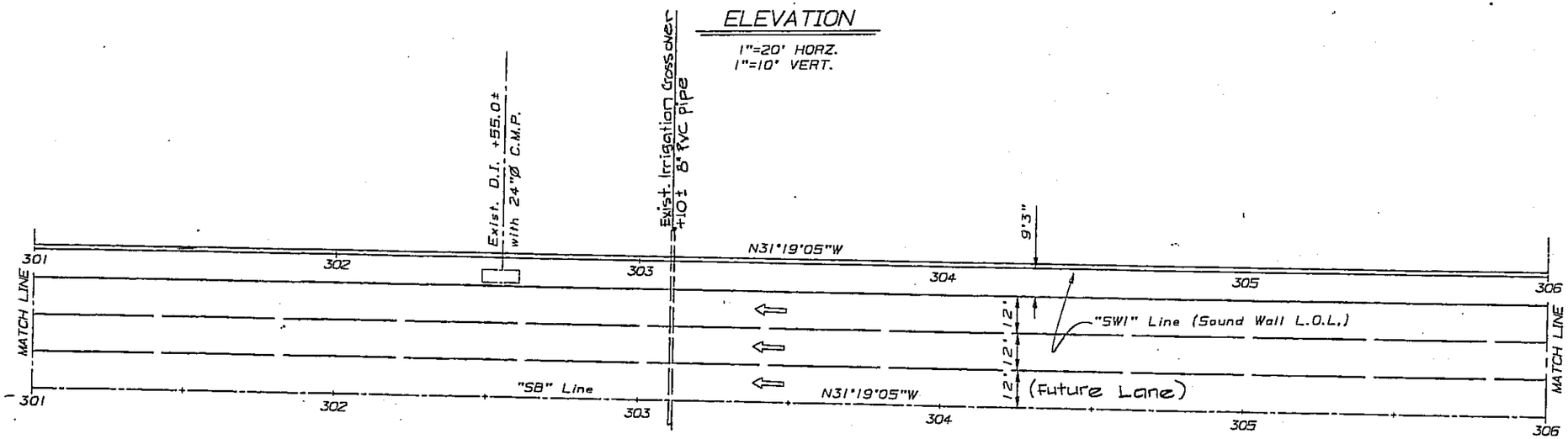
8-27-90
PLANS APPROVAL DATE



NOTE:
Profile grade elevations at 50' stations along Sound Wall L.O.L.(except where shown)

ELEVATION

1"=20' HORZ.
1"=10' VERT.



PLAN

1"=20'

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY JIM VASSAKA	CHECKED Nelson MAGSAYO	
DETAILS	BY Dave Radley 10-89	CHECKED JIM VASSAKA	
QUANTITIES	BY Denise Bickesley	CHECKED JIM VASSAKA	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN 10

BRIDGE NO. SW-1
POST MILE 3.3/5.6

GUADALUPE CORRIDOR
ALMADEN ROAD SOUND WALL
STRUCTURE PLAN NO.2

DS DSD 2139 (CADD 4/89)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04
EA 487041

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

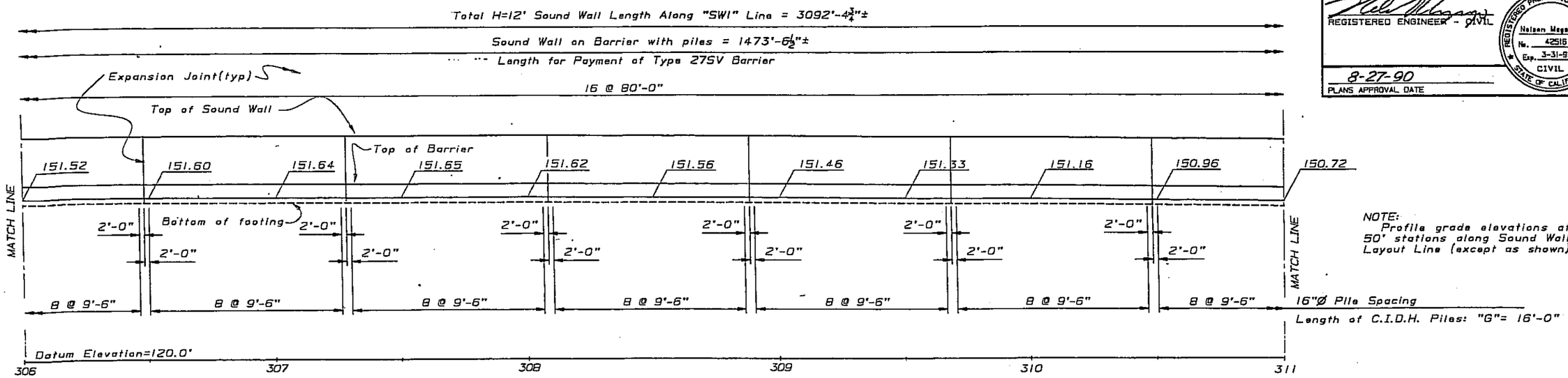
SHEET 3 OF 12

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCl	87	3.315.7	146	180

REGISTERED ENGINEER - CIVIL

REGISTERED PROFESSIONAL ENGINEER Nelson Magsayo No. 42516 Exp. 3-31-92 CIVIL STATE OF CALIFORNIA

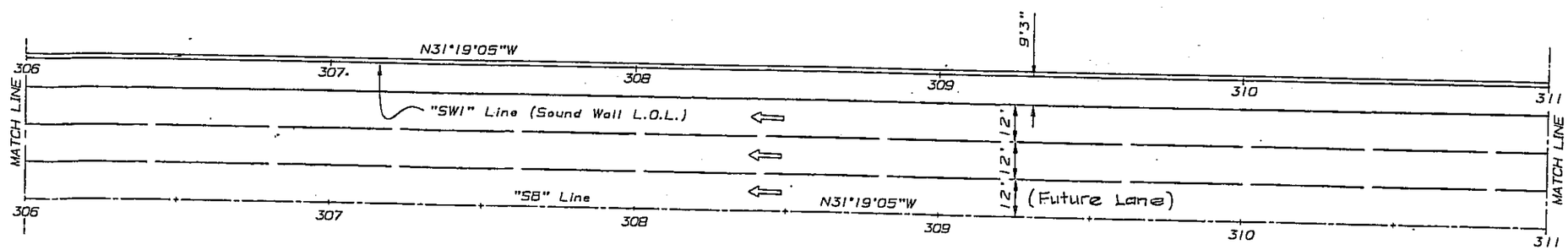
8-27-90
PLANS APPROVAL DATE



NOTE:
Profile grade elevations at 50' stations along Sound Wall Layout Line (except as shown)

ELEVATION

1"=20' HORZ.
1"=10' VERT.



PLAN

1"=20'

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY JIM VASSAKA	CHECKED NELSON MAGSAYO	
DETAILS	BY Dave Radley 10-89	CHECKED JIM VASSAKA	
QUANTITIES	BY Denise Blakesley	CHECKED JIM VASSAKA	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN 10

BRIDGE NO. SW-1
POST MILE 3.3/5.6

GUADALUPE CORRIDOR
ALMADEN ROAD SOUND WALL
STRUCTURE PLAN NO.3

DS DSD 2139 (CADD 4/89)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04
EA 487041

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 10-26-89 11-13-89 11-17-89 11-20-89 12/27/89

SHEET 4 OF 12

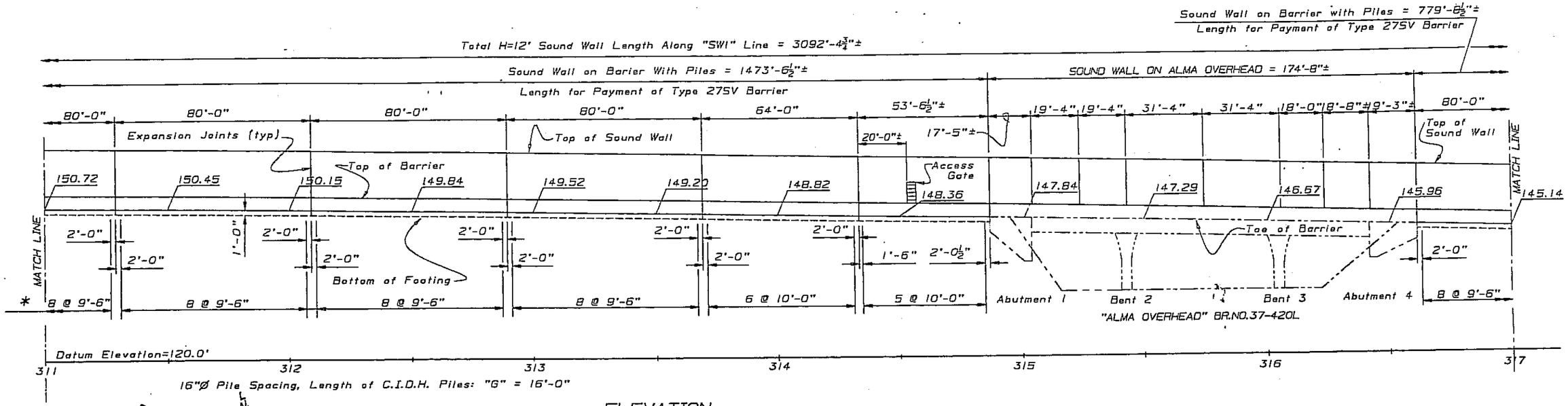
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	87	3.3/5.7	147	180

REGISTERED ENGINEER - CIVIL

REGISTERED PROFESSIONAL ENGINEER Nelson Magsayo No. 42516 Exp. 3-31-92 CIVIL STATE OF CALIFORNIA

8-27-90
PLANS APPROVAL DATE

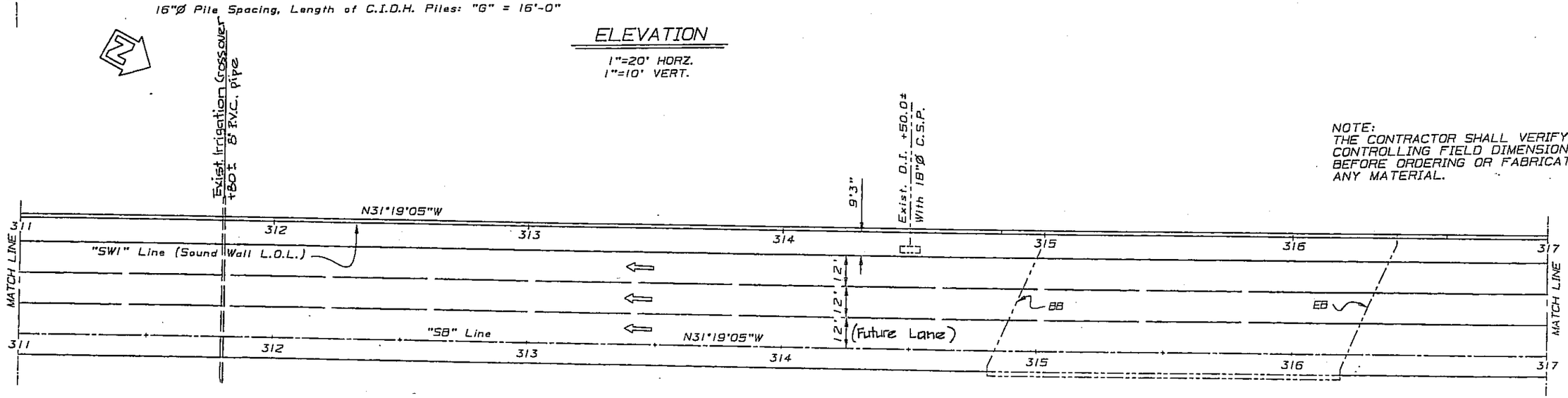
NOTE:
Profile grade elevations at 50' stations along Sound Wall Layout Line (except as shown)



ELEVATION

1"=20' HORZ.
1"=10' VERT.

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



PLAN

1"=20'

DESIGN	BY Jim Yassaka	CHECKED Nelson Magsayo	
DETAILS	BY Dave Radley 10-89	CHECKED Jim Yassaka	
QUANTITIES	BY Denise Blakesley	CHECKED Jim Yassaka	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN 10

BRIDGE NO. SW-1
POST MILE 3.3/5.6

GUADALUPE CORRIDOR
ALMADEN ROAD SOUND WALL
STRUCTURE PLAN NO.4

DS OSD 2139 (CADD 4/89)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04
EA 487041

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES PRELIMINARY STAMP ONLY

SHEET 5 OF 12

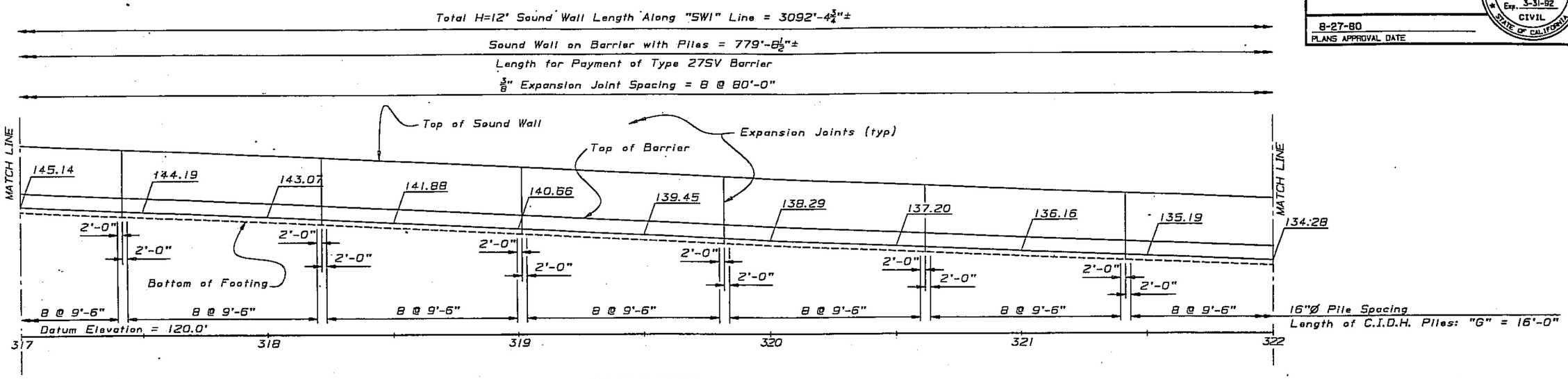
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	87	3.3/5.7	148	180

REGISTERED ENGINEER - CIVIL

REGISTERED PROFESSIONAL ENGINEER Nelson Magsayo No. 42516 Exp. 3-31-92 CIVIL STATE OF CALIFORNIA

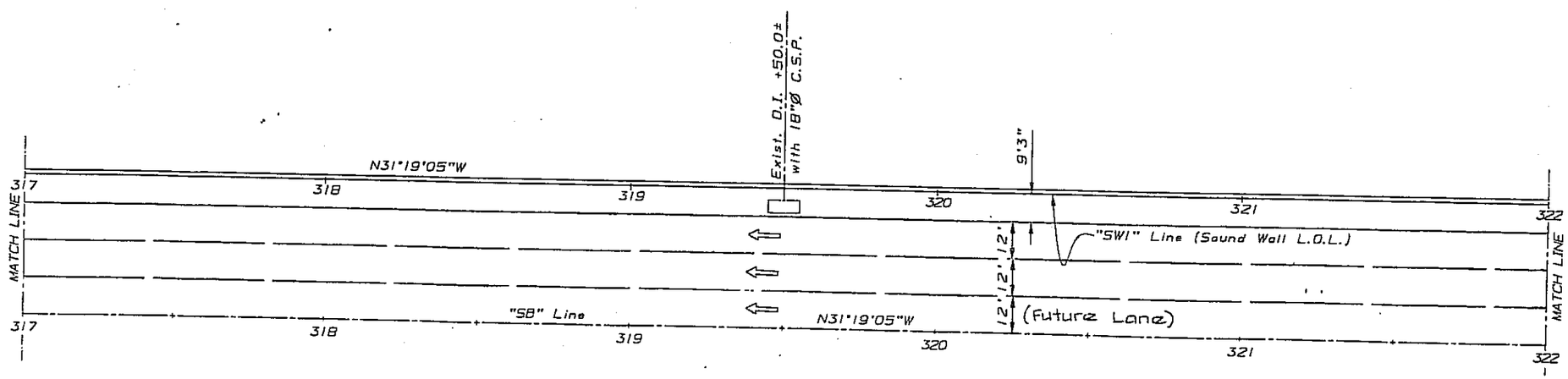
8-27-80
PLANS APPROVAL DATE

NOTE:
Profile grade elevations at 50' stations along Sound Wall Layout Line (except as shown)



ELEVATION

1"=20' HORZ.
1"=10' VERT.



PLAN

1"=20'

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY JIM YASSAKA	CHECKED Nelson Magsayo	
DETAILS	BY Dave Radley 10-89	CHECKED JIM YASSAKA	
QUANTITIES	BY Denise Blakesley	CHECKED JIM YASSAKA	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN 10

BRIDGE NO. SW-1
POST MILE 3.3/5.6

GUADALUPE CORRIDOR
ALMADEN ROAD SOUND WALL
STRUCTURE PLAN NO.5

CU 04
EA 487041

DS DSD 2139 (CADD 4/89)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

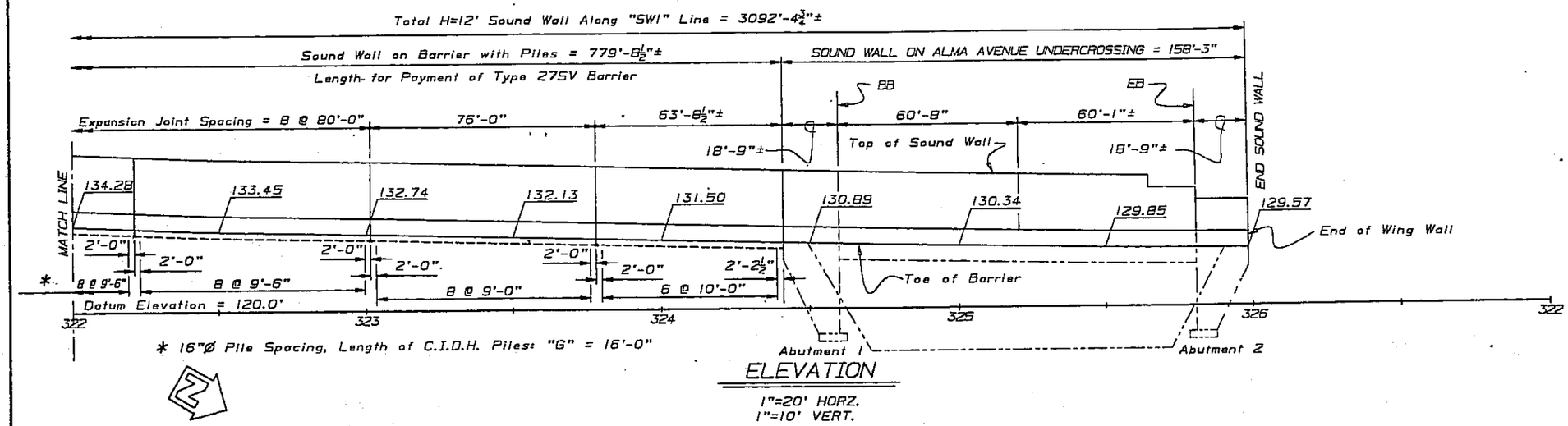
SHEET 6 OF 12

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	87	3.3/5.7	149	180

REGISTERED ENGINEER - CIVIL

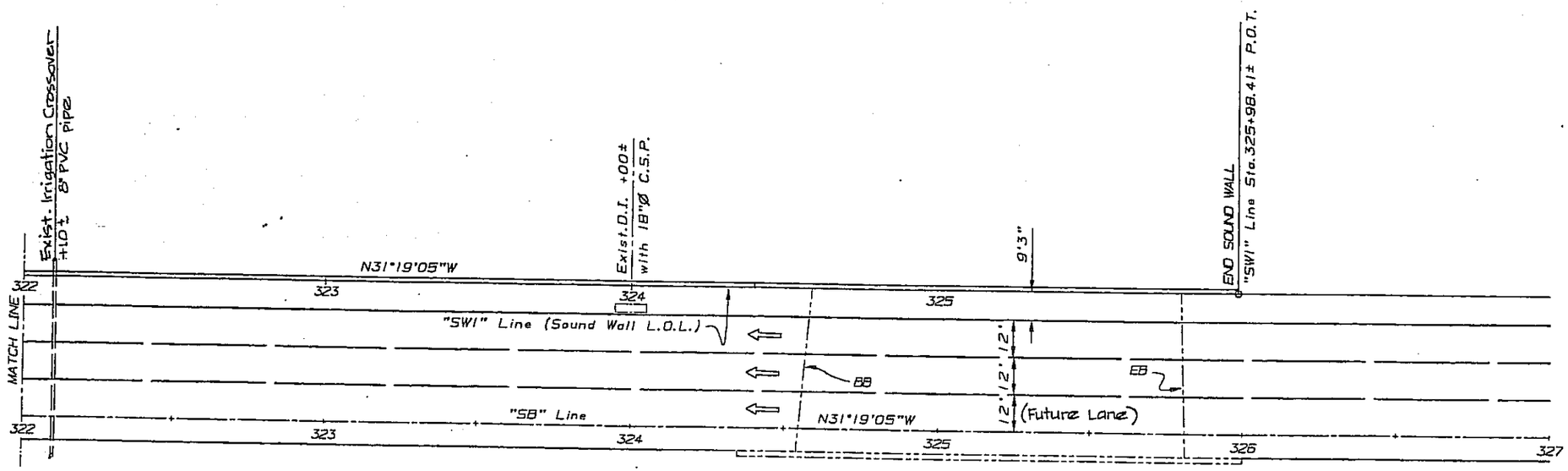
REGISTERED PROFESSIONAL ENGINEER Nelson Magsaya No. 42516 Exp. 3-31-92 CIVIL STATE OF CALIFORNIA

8-27-90
PLANS APPROVAL DATE



ELEVATION

1"=20' HORZ.
1"=10' VERT.



PLAN

1"=20'

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY JIM VASSAKA	CHECKED Nelson Magsayo	
DETAILS	BY Dave Radley 10-89	CHECKED JIM VASSAKA	
QUANTITIES	BY Denise Bickosley	CHECKED JIM VASSAKA	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN 10

CU 04
EA 487041

BRIDGE NO. SW-1
POST MILE 3.3/5.6

GUADALUPE CORRIDOR
ALMADEN ROAD SOUND WALL
STRUCTURE PLAN NO.6

DS OSD 2139 (CADD 4/89)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)
10-26-89 11-16-89 11-20-89 12-7-89

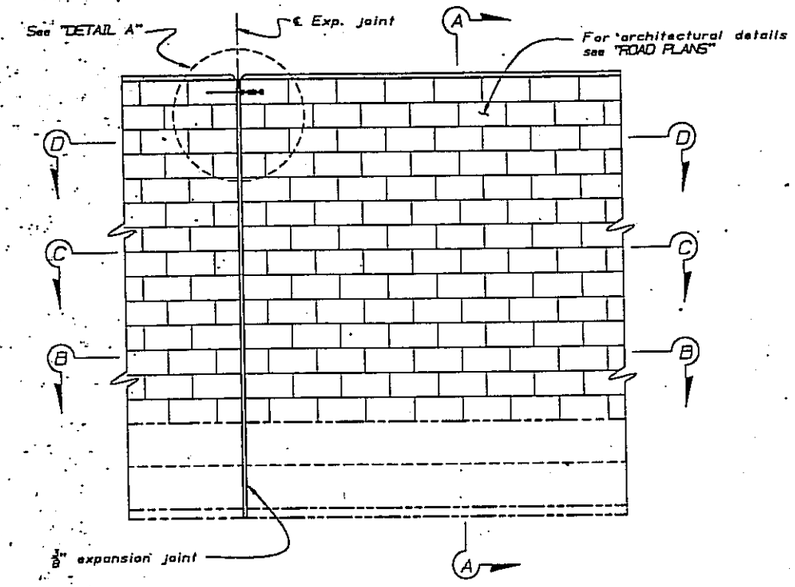
SHEET 7 OF 12

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	87	3.3/5.7	150	180

REGISTERED ENGINEER - CIVIL

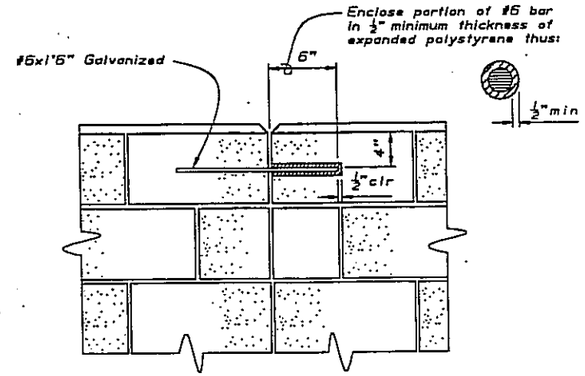
REGISTERED PROFESSIONAL ENGINEER NELSON MAGSAYO No. 42516 Exp. 3-31-92 CIVIL STATE OF CALIFORNIA

8-27-90
PLANS APPROVAL DATE



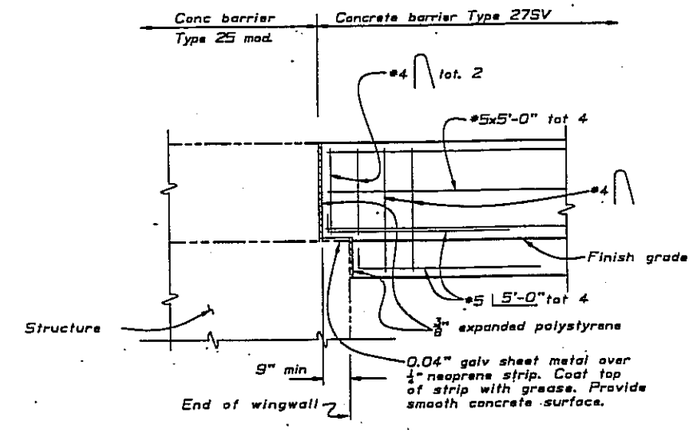
ELEVATION

SCALE: 1/2" = 1'



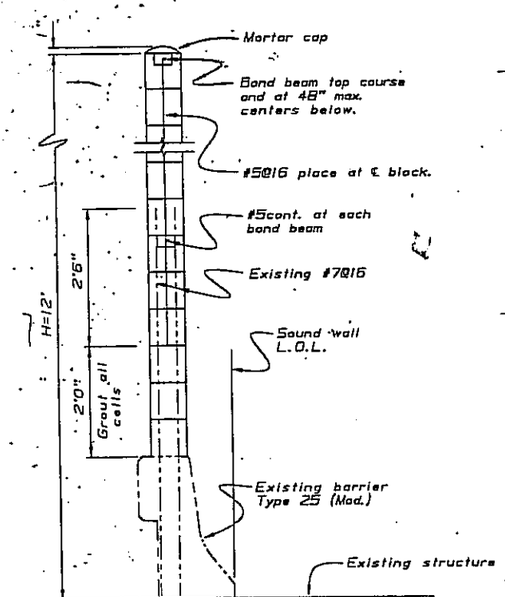
DETAIL A

NO SCALE



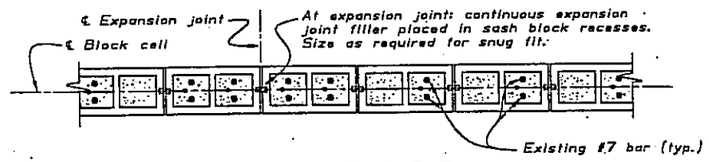
BARRIER TRANSITION AT CONNECTION TO STRUCTURE

NO SCALE



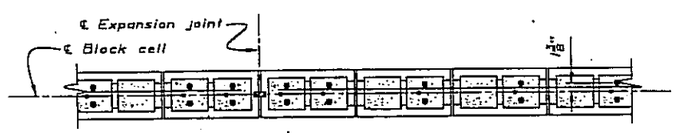
SECTION A-A

SCALE: 3/4" = 1'



SECTION B-B

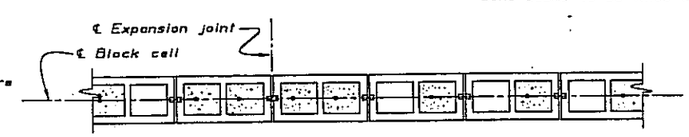
SCALE: 1" = 1'



SECTION C-C

SCALE: 1" = 1'

NOTE:
Cells with vertical reinforcement and bond beams to be filled with grout.



SECTION D-D

SCALE: 1" = 1'

GENERAL NOTES

DESIGN

Uniform building code, 1979 edition and the bridge design specifications.

Working stress design.

DESIGN WIDE LOAD

30 PSF

DESIGN SEISMIC LOAD

1.0 dead load

REINFORCED CONCRETE

f'c = 3,250 PSI
fc = 1,300 PSI
fs = 24,000 PSI
n = 9

CONCRETE MASONRY (HOLLOW) WITH REINF. CELLS GROUTED

f'm = 1,350 PSI
fm = 450 PSI
fs = 24,000 PSI
n = 22

CONCRETE MASONRY ALL CELLS GROUTED

f'm = 1,800 PSI
fm = 600 PSI
fs = 24,000 PSI
n = 16.7

NOTE:
FOR DETAILS NOT SHOWN SEE "MASONRY BLOCK ON BARRIER" DETAIL SHEET

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

GUADALUPE CORRIDOR
ALMADEN ROAD SOUND WALL
SOUND WALL ON STRUCTURE
DETAIL SHEET

DESIGN	BY JIM YASSAKA	CHECKED NELSON MAGSAYO	
DETAILS	BY Don Helm 11-89	CHECKED JIM YASSAKA	
QUANTITIES	BY O Blackesley	CHECKED JIM YASSAKA	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN 10

BRIDGE NO. SW-1
POST MILE 3.3/5.6

CU 04
EA 487041

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES 11-14-89 11-14-89 11-20-89

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 8 OF 12

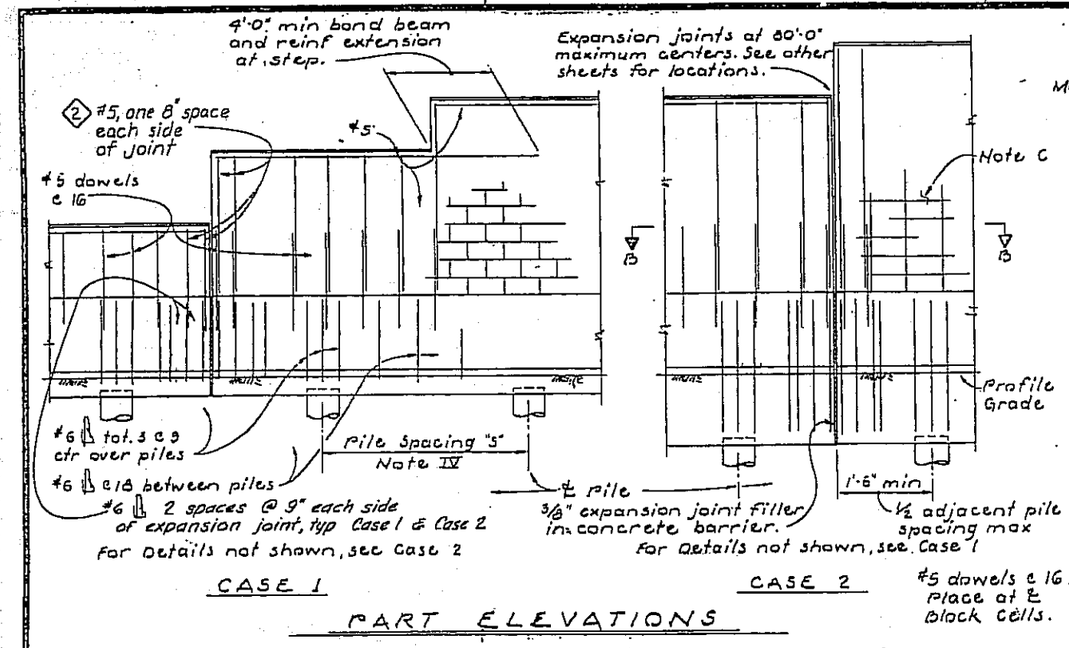
DS DSG 2139 (CADD 4/89)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCl	87	3.3/5.7	151	180

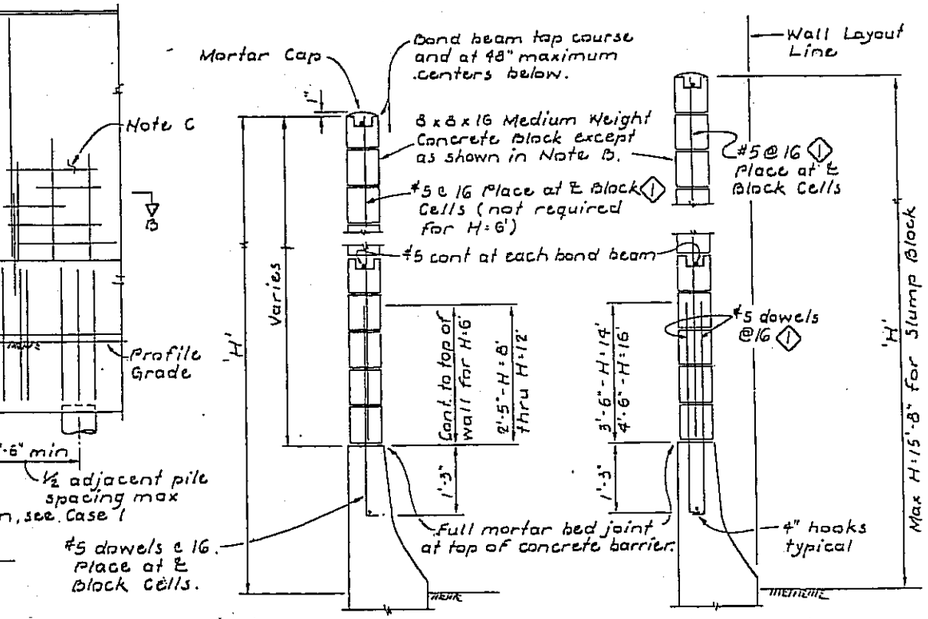
REGISTERED ENGINEER - CIVIL

8-27-90
PLANS APPROVAL DATE

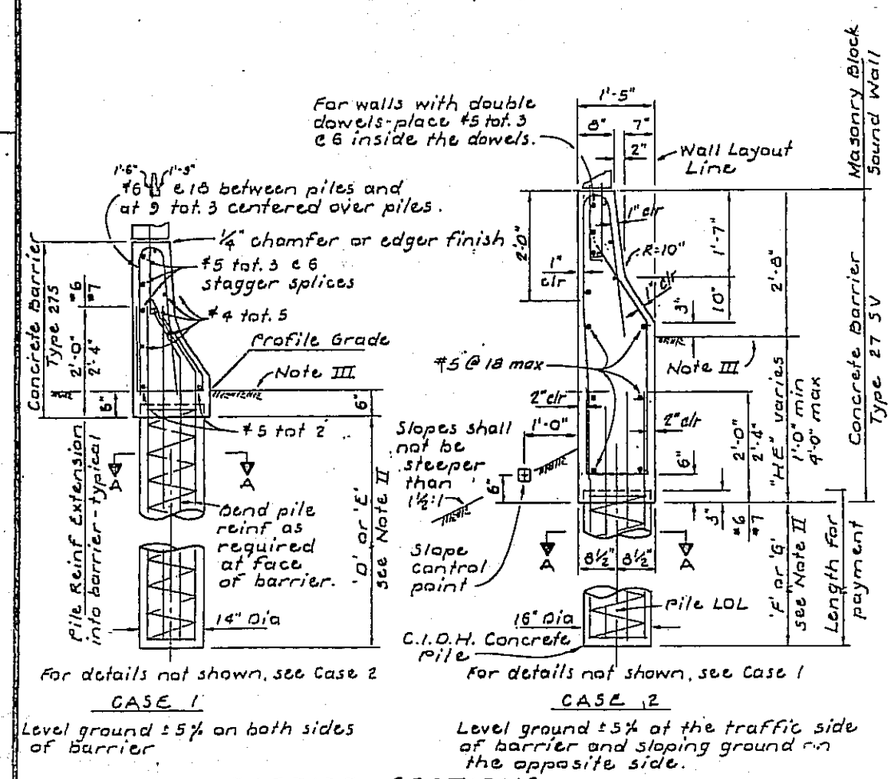
REGISTERED PROFESSIONAL ENGINEER — NELSON MAGSAYO — No. 42516 — Exp. 3-31-92 — CIVIL — STATE OF CALIFORNIA



PART ELEVATIONS



WALL SECTIONS



BARRIER SECTIONS

Note II: Pile dimensions 'E' and 'G' required for walls with Standard Aesthetic Features using 12" wide projecting block only. Use pile dimensions 'D' and 'F' for all other walls.

Note III: Slope ground at traffic side of barrier to drain. Maximum slope ± 5%.

Note IV: Pile spacing may be varied but shall not exceed the tabular values.

Note V: For Case 1 - ground line to be at the same elevation on both sides of the barrier. Barrier shall not be used to retain earth.

See Section A-A
① 7-#6 pile reinf
② 6-#7 pile reinf

CASE 1 PILE DATA

H	SP=300 S	SP=300 O	SP=300 Standard Aesthetic Feature Alternatives 4 and 5 S	SP=300 Standard Aesthetic Feature Alternatives 4 and 5 E	SP=300 Standard Aesthetic Feature Alternative 6 ② S	SP=300 Standard Aesthetic Feature Alternative 6 ② E	SP=450 S	SP=450 O	SP=450 Standard Aesthetic Feature Alternatives 4 and 5 S	SP=450 Standard Aesthetic Feature Alternatives 4 and 5 E	SP=450 Standard Aesthetic Feature Alternative 6 ② S	SP=450 Standard Aesthetic Feature Alternative 6 ② E	H
6'	10'-0"	7'-9"					10'-0"	5'-6"					6'
8'	10'-0"	8'-6"	10'-0"	9'-0"			10'-0"	6'-0"	10'-0"	6'-3"			8'
10'	10'-0"	9'-6"	10'-0"	9'-9"			10'-0"	6'-9"	10'-0"	7'-0"			10'
12'	10'-0"	10'-3"	10'-0"	10'-6"	10'-0"	11'-3"	10'-0"	7'-3"	10'-0"	7'-6"	10'-0"	8'-3"	12'
14'	10'-0"	11'-0"	10'-0"	11'-6"	10'-0"	12'-6" ②	10'-0"	8'-0"	10'-0"	8'-3"	10'-0"	9'-0" ①	14'
16'	10'-0"	12'-0" ①	10'-0"	12'-3" ①	8'-3"	12'-9" ②	10'-0"	8'-6"	10'-0"	9'-0" ①	8'-0"	9'-6" ①	16'

② See "Detail U" for pile spacing limits

GENERAL NOTES

NOTE A: FOR TYPE OF BLOCK, TYPE OF BLOCK BOND AND JOINT FINISH, SEE OTHER SHEETS.

NOTE B: WHERE CONCRETE SLUMP BLOCKS ARE REQUIRED, THE SIZE SHALL BE 8 x 6 x 16.

NOTE C: WHEN BLOCKS ARE LAID IN STACKED BOND, LADDER TYPE, GALVANIZED JOINT REINFORCEMENT SHALL BE PROVIDED. A MINIMUM OF 2 - 9 GAGE WIRES CONTINUOUS AT 48" MAXIMUM TO BE USED. LOCATE REINFORCEMENT IN JOINTS THAT ARE AT THE APPROXIMATE MIDPOINT BETWEEN BOND BEAMS.

NOTE D: HORIZONTAL JOINTS SHALL BE TOOLED CONCAVE OR MAY BE WEATHERED;

VERTICAL JOINTS SHALL BE TOOLED CONCAVE OR MAY BE RAKED. WEATHERED AND RAKED JOINTS ARE NOT PERMITTED FOR SLUMP BLOCK.

NOTE E: FOR INTERMEDIATE WALL HEIGHTS (H), OR BARRIER DEPTHS (HE), THAT ARE BETWEEN THE VALUES GIVEN, USE THE TABULAR INFORMATION FOR THE NEXT HIGHER (H) OR (HE).

NOTE F: CLASS A CONCRETE TO BE USED FOR PILES AND BARRIER.

NOTE G: FOR USE OF PREASSEMBLED PANELS.

THE MINIMUM RADIUS FOR HORIZONTALLY CURVED WALLS ON WHICH 20-FOOT LONG PANELS ARE TO BE USED SHALL BE 2,000 FEET. THE ENGINEER TO APPROVE LAYOUTS.

BOND BEAMS SHALL BE CONTINUOUS BETWEEN EXPANSION JOINTS.

MORTARED JOINTS REQUIRED WHERE PANELS JOIN.

A TEMPLATE WHICH MATCHES THE LOCATION OF THE BLOCK CELLS IN THE PANEL SHALL BE USED FOR POSITIONING THE VERTICAL WALL REINFORCEMENT IN THE BARRIER.

NOTE H: ALLOWABLE ULTIMATE LATERAL SOIL PRESSURE FOR LEVEL GROUND ON BOTH SIDES OF BARRIER: SP = 300.

Note I: For details not shown, see "Sound Wall-Masonry Block On Barrier -- Details No. 2" sheet.

MEDIUM WEIGHT MASONRY

GUADALUPE CORRIDOR

ALMADEN ROAD SOUND WALL

SOUND WALL-MASONRY BLOCK ON BARRIER

DETAILS NO. 1

STANDARD DRAWING

FILE No. XS-3-57.1 | DRAWING DATE 11/88 | DESIGN By | DETAILS By | SUBMITTED BY | Checked | Checked | Approval Recommended by Deputy Director, Engineering Services 8/88

① Vertical steel is doubled.
② Vertical steel each side of joint is doubled.

State of CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES STRUCTURE DESIGN 10

BRIDGE NO. SW-1 | POST MILE 3.3/5.6

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04 EA 487041

Disregard prints bearing earlier revision dates. 10/88

REVISION DATES (PRELIMINARY STAGE ONLY)

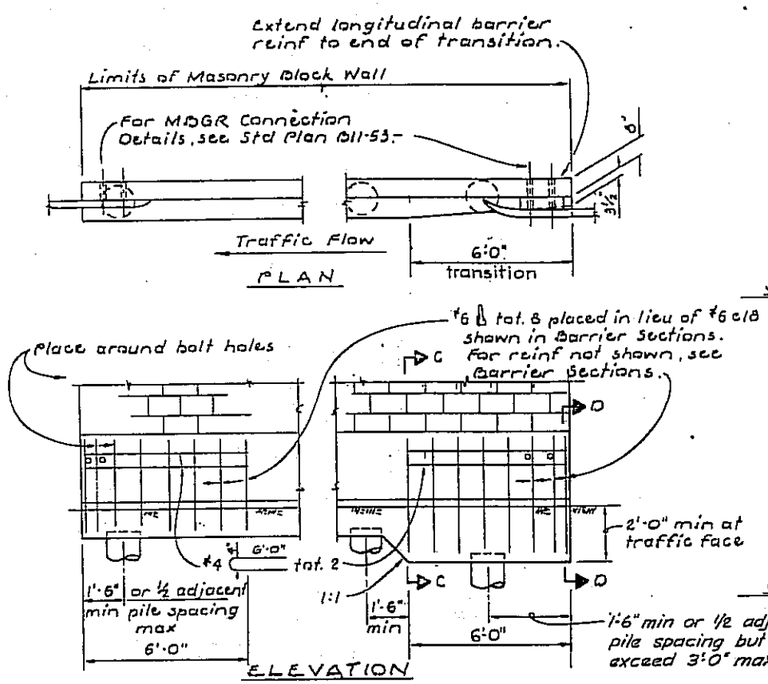
SHEET 9 OF 12

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	87	3.3/5.7	152	180

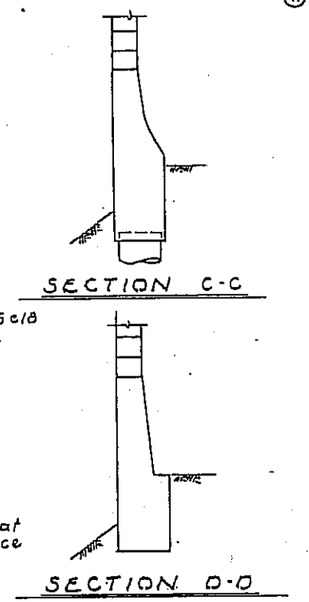
REGISTERED ENGINEER - CIVIL

REGISTERED PROFESSIONAL ENGINEER NELSON MAGSAYO No. 42516 Exp. 3-31-92 CIVIL STATE OF CALIFORNIA

8-27-90
PLANS APPROVAL DATE

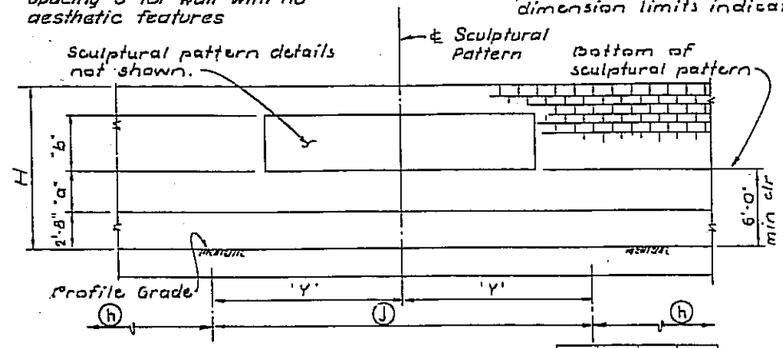


METAL BEAM GUARD RAIL ANCHORAGE



(h) Use Pile Dimension F and Pile Spacing S for wall with no aesthetic features

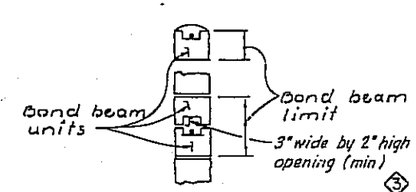
(J): Pile dimension 'G' required for all piles that are located within the dimension limits indicated.



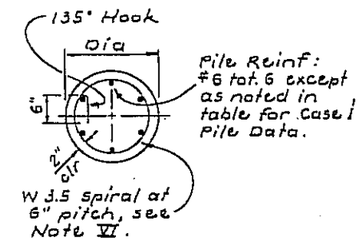
H	'Y'	"a"	"b"
12'	14'-0"	3'-4"	4'-0"
14'	16'-0"	3'-4"	4'-8"
16'	18'-0"	3'-4"	6'-0"

ALTERNATIVE 6
DETAIL U

Note VII:
Detail U required for Standard Aesthetic Features with Sculptural Patterns using 12" wide projecting block only.

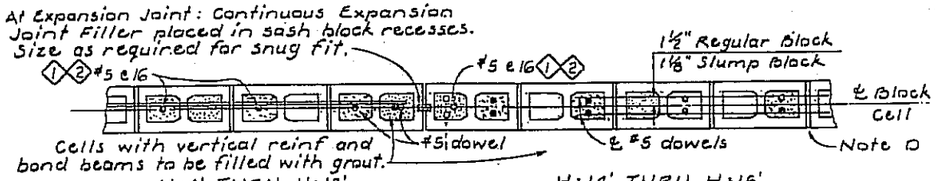


SLUMP OR TEXTURED BLOCK - BOND BEAM DETAIL



SECTION A-A

Note VI:
Where splices are required, spiral reinforcement shall be lapped 80 diameters minimum. A 135 degree hook that is hooked around a longitudinal bar shall be used to terminate the ends of the spiral reinforcement at lapped splices and at the top and bottom of the pile.



SECTION B-B

DESIGN NOTES

DESIGN

UNIFORM BUILDING CODE, 1979 EDITION AND THE BRIDGE DESIGN SPECIFICATIONS.

DESIGN WIND LOAD

10 PSF H LESS THAN 12'
15 PSF H = 12' AND GREATER

DESIGN SEISMIC LOAD

0.3 DEAD LOAD

REINFORCED CONCRETE

f'c = 3,250 PSI
fy = 60,000 PSI

CONCRETE MASONRY

f'm = 1,350 PSI
fm = 450 PSI
fs = 24,000 PSI
n = 22

LOAD FACTORS AND LOAD COMBINATIONS

GROUP A: $\beta D + 1.7 E + 1.7 SC$
GROUP B: $\beta D + 1.7 E + 1.3 W$
GROUP C: $\beta D + 1.3 E + 1.3 EQE$
GROUP D: $\beta D + 1.3 E + 1.3 EQD$
GROUP E: $\beta D + 1.1 E + 1.1 (EQE + EQD)$

WHERE:

β = 1.0 or 1.3, WHICHEVER CONTROLS IN DESIGN
D = DEAD LOAD
E = LATERAL EARTH PRESSURE
SC = LIVE LOAD SURCHARGE
W = WIND LOAD
EQE = SEISMIC EARTH LOAD
EQD = SEISMIC DEAD LOAD (0.3D)

STRENGTH REDUCTION FACTORS, ϕ

REINFORCED CONCRETE:

FOR FLEXURE ..... ϕ = 0.90
FOR SHEAR ..... ϕ = 0.85
FOR AXIAL COMPRESSION ..... ϕ = 0.70

FOUNDATIONS:

FOR SOIL PASSIVE RESISTANCE ..... ϕ = 0.90
FOR SOIL ACTIVE PRESSURE ..... ϕ = 1.00
FOR PILE BEARING LOAD, EXCEPT UNDER EQ ..... ϕ = 0.75
FOR PILE BEARING LOAD, UNDER EQ ..... ϕ = 1.00

NOTE 1: BARRIER AND PILES ARE DESIGNED BY THE ULTIMATE STRENGTH METHOD. CONCRETE MASONRY DESIGNED BY THE WORKING STRESS METHOD.

NOTE 2: PILE LENGTHS FOR LEVEL GROUND ON BOTH SIDES OF BARRIER: CASE 1.

THE ALLOWABLE ULTIMATE LATERAL SOIL PRESSURES USED FOR DETERMINING THE PILE LENGTHS WERE OBTAINED FROM THE LOG-SPIRAL METHOD ASSUMING A COHESIONLESS MATERIAL. THE ANGLES OF SHEARING RESISTANCE, ϕ, USED WERE 25° FOR SP = .300 and 35° for SP = 450. THE UNIT WEIGHTS OF SOIL USED WERE 110 PCF FOR ϕ = 25° and 120 PCF for ϕ = 35°. ISOLATION FACTORS: 1.5 FOR BOTH SIDES.

NOTE 3: PILE LENGTHS FOR LEVEL GROUND ON ONE SIDE OF BARRIER AND SLOPING GROUND ON THE OPPOSITE SIDE: CASE 2

THE ALLOWABLE ULTIMATE LATERAL SOIL PRESSURES USED FOR DETERMINING THE PILE LENGTHS WERE OBTAINED FROM THE LOG-SPIRAL METHOD ASSUMING A COHESIONLESS MATERIAL. THE ANGLE OF SHEARING RESISTANCE, ϕ, IS DETERMINED BY ASSUMING THE SLOPE HAS A FACTOR OF SAFETY OF 1.25 FOR STABILITY. THE FOLLOWING VALUES WERE USED: ϕ = 32°, SLOPE = 2:1 AND UNIT WEIGHT OF SOIL = 120 PCF. ISOLATION FACTORS: 1.5 FOR LEVEL SIDE AND 1.0 FOR SLOPE SIDE.

CASE 2 PILE DATA

H	HE=1'-0" S	HE=1'-0" F	HE=1'-0" Standard Aesthetic Feature: Alternatives 4 and 5 S	Alternatives 4 and 5 G	Alternative 6 (c) S	Alternative 6 (c) G	HE=2'-0" S	HE=2'-0" F	HE=2'-0" Standard Aesthetic Feature: Alternatives 4 and 6 S	Alternatives 4 and 6 G	Alternative 6 (c) S	Alternative 6 (c) G	HE=3'-0" S	HE=3'-0" F	HE=3'-0" Standard Aesthetic Feature: Alternatives 4 and 5 S	Alternatives 4 and 5 G	Alternative 6 (c) S	Alternative 6 (c) G	HE=4'-0" S	HE=4'-0" F	HE=4'-0" Standard Aesthetic Feature: Alternatives 4 and 5 S	Alternatives 4 and 5 G	Alternative 6 (c) S	Alternative 6 (c) G	H
6'	10'-0"	12'-6"					10'-0"	14'-3"					7'-6"	16'-0"					5'-0"	16'-0"					6'
8'	10'-0"	13'-6"	10'-0"	14'-0"			10'-0"	15'-3"	9'-6"	16'-0"			7'-0"	16'-0"	6'-9"	16'-0"			4'-9"	16'-0"	4'-6"	16'-0"			8'
10'	10'-0"	14'-6"	10'-0"	15'-0"			8'-9"	16'-0"	8'-6"	16'-0"			6'-3"	16'-0"	6'-0"	16'-0"			4'-6"	16'-0"	4'-3"	16'-0"			10'
12'	10'-0"	15'-9"	10'-0"	16'-0"	8'-0"	16'-0"	7'-9"	16'-0"	7'-6"	16'-0"	6'-3"	16'-0"	5'-9"	16'-0"	5'-6"	16'-0"	4'-9"	16'-0"	4'-3"	16'-0"	4'-0"	16'-0"	3'-6"	16'-0"	12'
14'	9'-3"	16'-0"	8'-9"	16'-0"	7'-0"	16'-0"	7'-0"	16'-0"	6'-9"	16'-0"	5'-6"	16'-0"	5'-3"	16'-0"	5'-0"	16'-0"	4'-3"	16'-0"	4'-0"	16'-0"	3'-9"	16'-0"	3'-3"	16'-0"	14'
16'	7'-9"	16'-0"	7'-6"	16'-0"	5'-9"	16'-0"	6'-0"	16'-0"	5'-9"	16'-0"	4'-6"	16'-0"	4'-9"	16'-0"	4'-6"	16'-0"	3'-9"	16'-0"	3'-6"	16'-0"	3'-6"	16'-0"	3'-0"	16'-0"	16'

(c) See "Detail U" for pile spacing limits

Note I: For details not shown, see "Sound Wall-Masonry Block On Barrier-Details No. 1" sheet

MEDIUM WEIGHT MASONRY

GUADALUPE CORRIDOR

ALMADEN ROAD SOUND WALL

SOUND WALL - MASONRY BLOCK ON BARRIER

DETAILS NO. 2

STANDARD DRAWING

FILE NO. XS-3-57.2 | DESIGN By | Checked | DRAWING DATE 11/88 | DETAILS By | Checked | SUBMITTED BY | Approval Recommended By | REGISTERED CIVIL ENGINEER NUMBER 8198

⚠ Vertical steel is doubled.
⚠ Vertical steel each side of joint

State of CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES STRUCTURE DESIGN 10

BRIDGE NO. SW-1
POST MILE 3.3/5.6

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04
EA 487041

Disregard prints bearing earlier revision dates

10/88

REVISION DATES (PRELIMINARY STAGE ONLY)

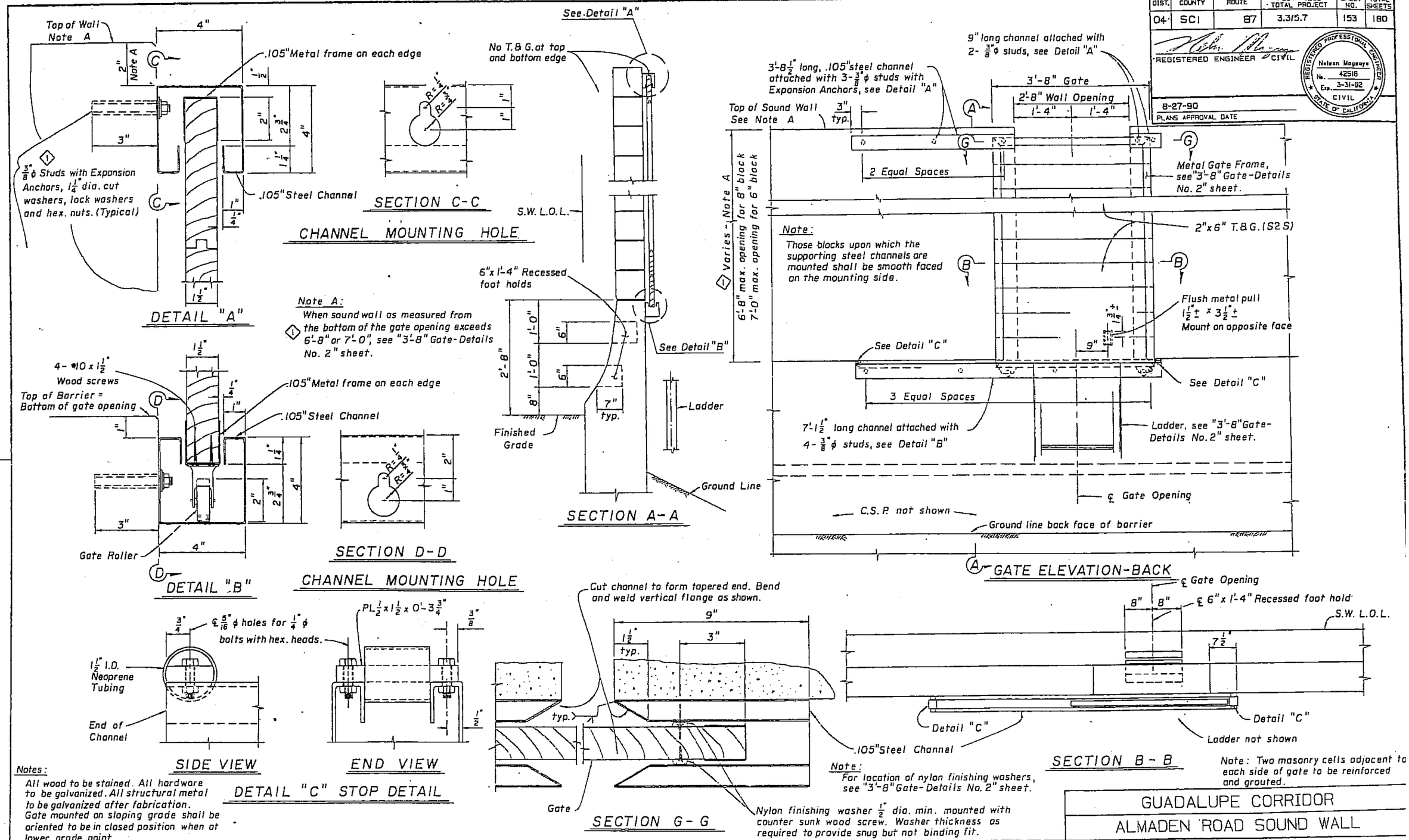
SHEET 10 OF 12

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	87	3.3/5.7	153	180

REGISTERED ENGINEER CIVIL

REGISTERED PROFESSIONAL ENGINEER Nelson Magsaya No. 42516 Exp. 3-31-92 CIVIL STATE OF CALIFORNIA

8-27-90
PLANS APPROVAL DATE



Notes:
All wood to be stained. All hardware to be galvanized. All structural metal to be galvanized after fabrication.
Gate mounted on sloping grade shall be oriented to be in closed position when at lower grade point.

Note: Two masonry cells adjacent to each side of gate to be reinforced and grouted.

GUADALUPE CORRIDOR
ALMADEN ROAD SOUND WALL
ACCESS GATE-SOUND WALL/MASONRY ON BARRIER
3'-8" GATE-DETAILS NO. 1

STANDARD DRAWING
FILE NO. XS-3-65 | DESIGN | CHECKED | APPROVAL RECOMMENDED BY
DRAWING DATE 11/82 | DETAILS | CHECKED | DESIGN SUPERVISOR
SUBMITTED BY

1 Notes & Misc. Revisions
2 Revised Title

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN 10

BRIDGE NO. SW-1
POST MILE 3.3/5.6

CU 04
EA 487041

DISREGARD PRINTS BEARING EARLIER REVISION DATES

SHEET 11 OF 12

OS 050 2147A (CADD 4/89)

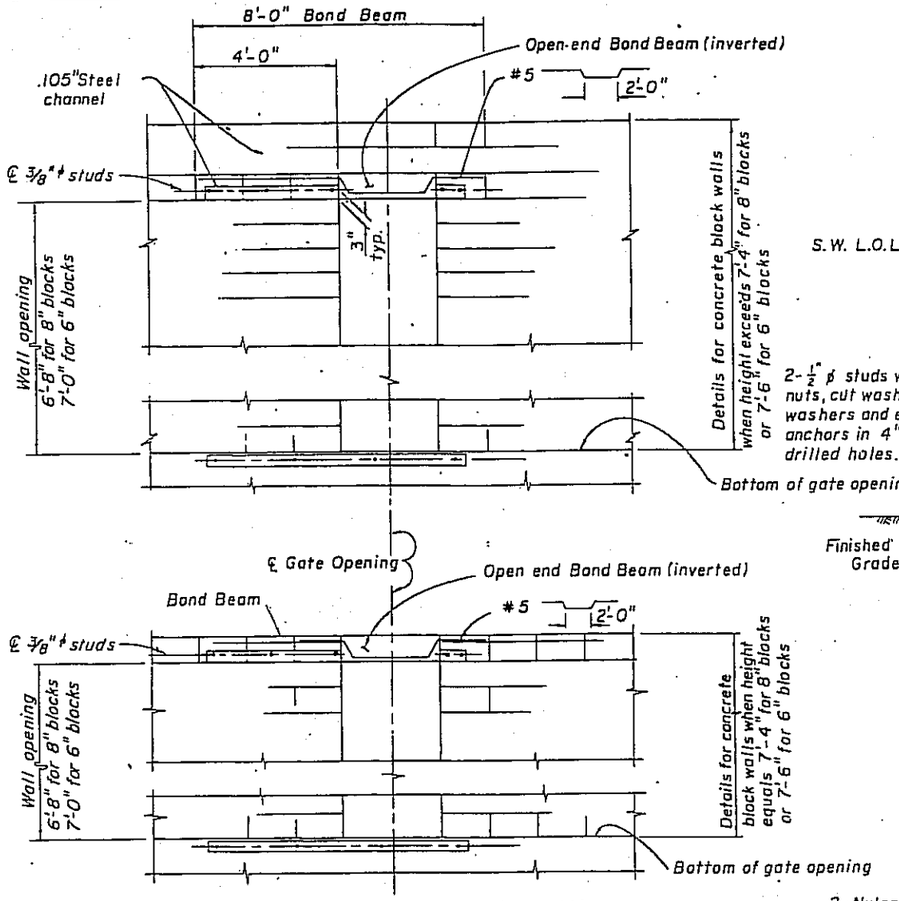
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	87	3.3/5.7	154	180

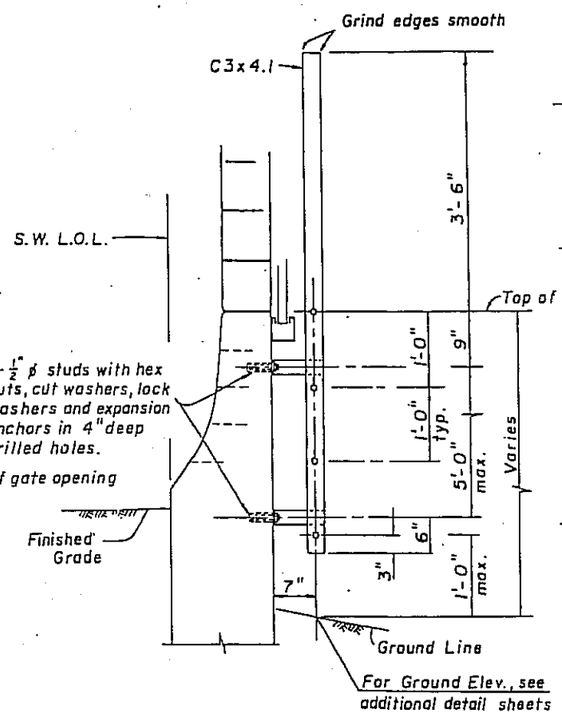
REGISTERED ENGINEER - CIVIL

REGISTERED PROFESSIONAL ENGINEER Nelson Magsaya No. 42516 Exp. 3-31-92 CIVIL STATE OF CALIFORNIA

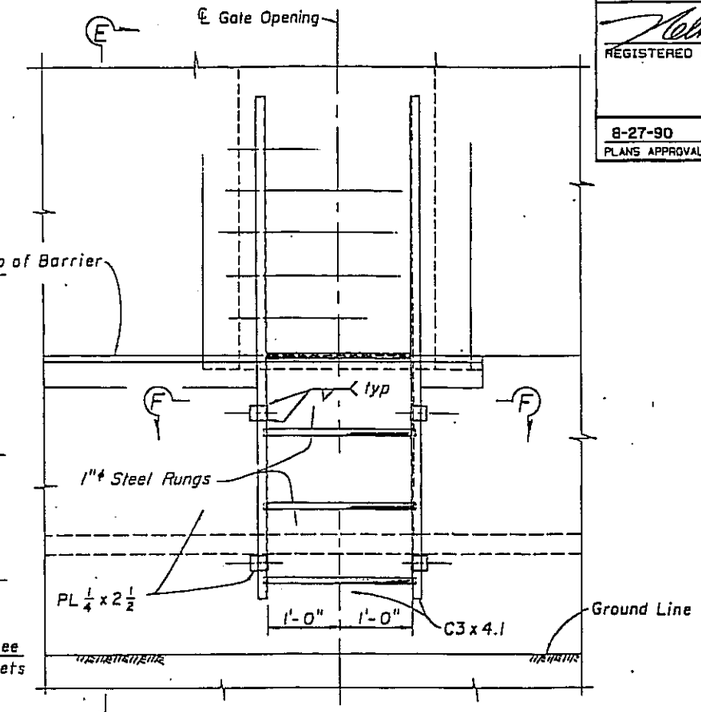
8-27-90
PLANS APPROVAL DATE



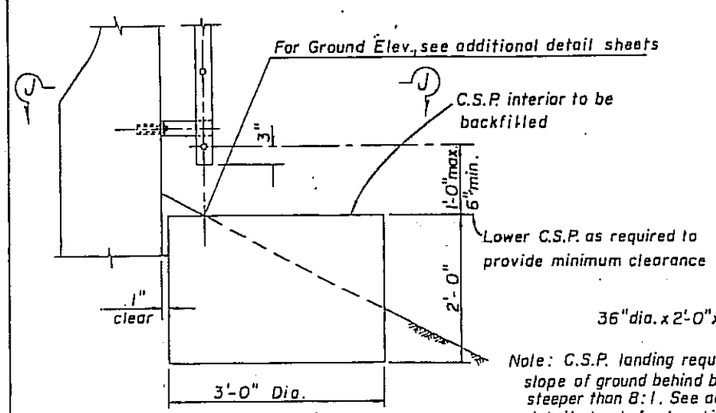
PART ELEVATION (BACK)



SECTION E-E

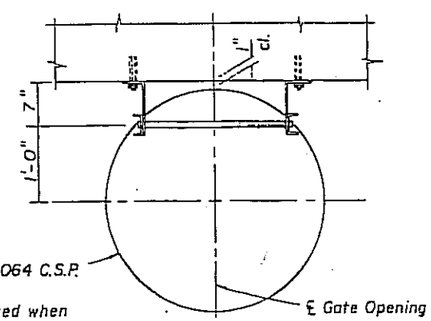


ELEVATION (BACK) 1



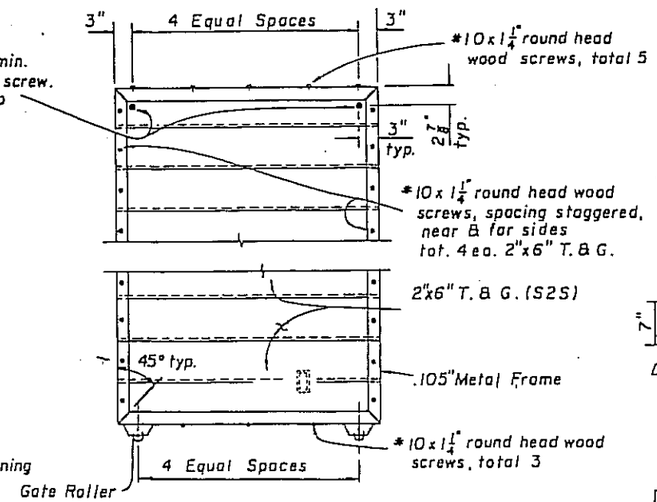
C.S.P. LANDING DETAILS

Note: C.S.P. landing required when slope of ground behind barrier is steeper than 8:1. See additional detail sheets for location where required.

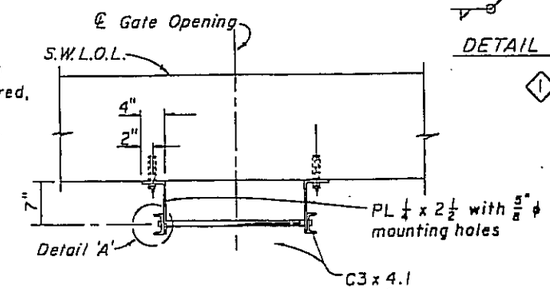


SECTION J-J

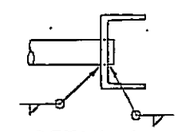
2-Nylon finishing washers 1/2" dia. min. mounted with counter sunk wood screw. Washer thickness as required to provide snug but not binding fit.



ELEVATION-METAL FRAME



SECTION F-F 1



DETAIL A 1

1 Ladder detail revised

STANDARD DRAWING

FILE NO. XS-3-65.1	DESIGN	CHECKED	APPROVAL RECOMMENDED BY
DRAWING DATE 5/83	DETAILS	CHECKED	DESIGN SUPERVISOR
	SUBMITTED BY		

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN 10

BRIDGE NO. SW-1
POST MILE 3.3/5.6

GUADALUPE CORRIDOR
ALMADEN ROAD SOUND WALL
ACCESS GATE-SOUND WALL/MASONRY ON BARRIER
3'-8" GATE-DETAILS NO. 2

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04
EA 487041

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 12 OF 12

DS D30 21A7A (CADD 6/90)