DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
7	CALIF.			1	204

New 05-S.B.SLO-101,135

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB,SLO	2		1	137

S.S. P.m. 23.-192.7
S.L.O. P.m. 0.-19.2

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4		Paving Details
5		Project Limit Determinations
6	-27	Engineering Details
28	-35	Miscellaneous Profiles
36	-38	Detours
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55	-59	Miscellaneous Details
60	-67	Quantity Summary (Drainage)
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70	-82	Standard Structures
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95	-98	Standard Electrical Details
99	-115	Traffic Signing
116		Miscellaneous Roadside Sign Details
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BRIDGE PLANS

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B-1	- B-6	Betteravia Road Overcrossing
C-1	- C-6	Stowell Road Separation
D-1	- D-6	East Santa Maria Overhead
E-1	- E-6	Main Street Undercrossing
F-1	- F-6	Donovan Road Overcrossing
G-1	- G-6	North Santa Maria Overcrossing
H-1	- H-12	Bridges Across Santa Maria River
J-1	- J-3	Route 2/57 Separation
S-1	- S-6	Standard Details

STATE OF CALIFORNIA

DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PLANS FOR CONSTRUCTION ON

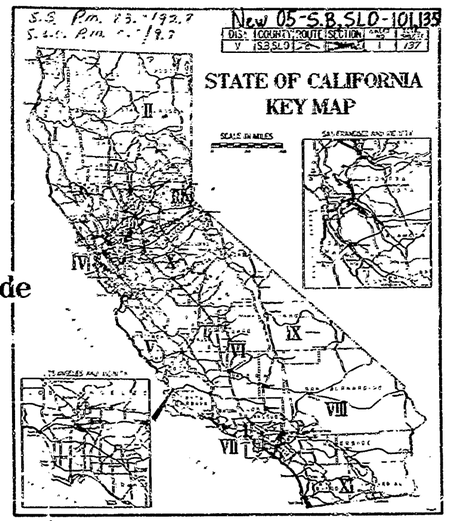
STATE HIGHWAY

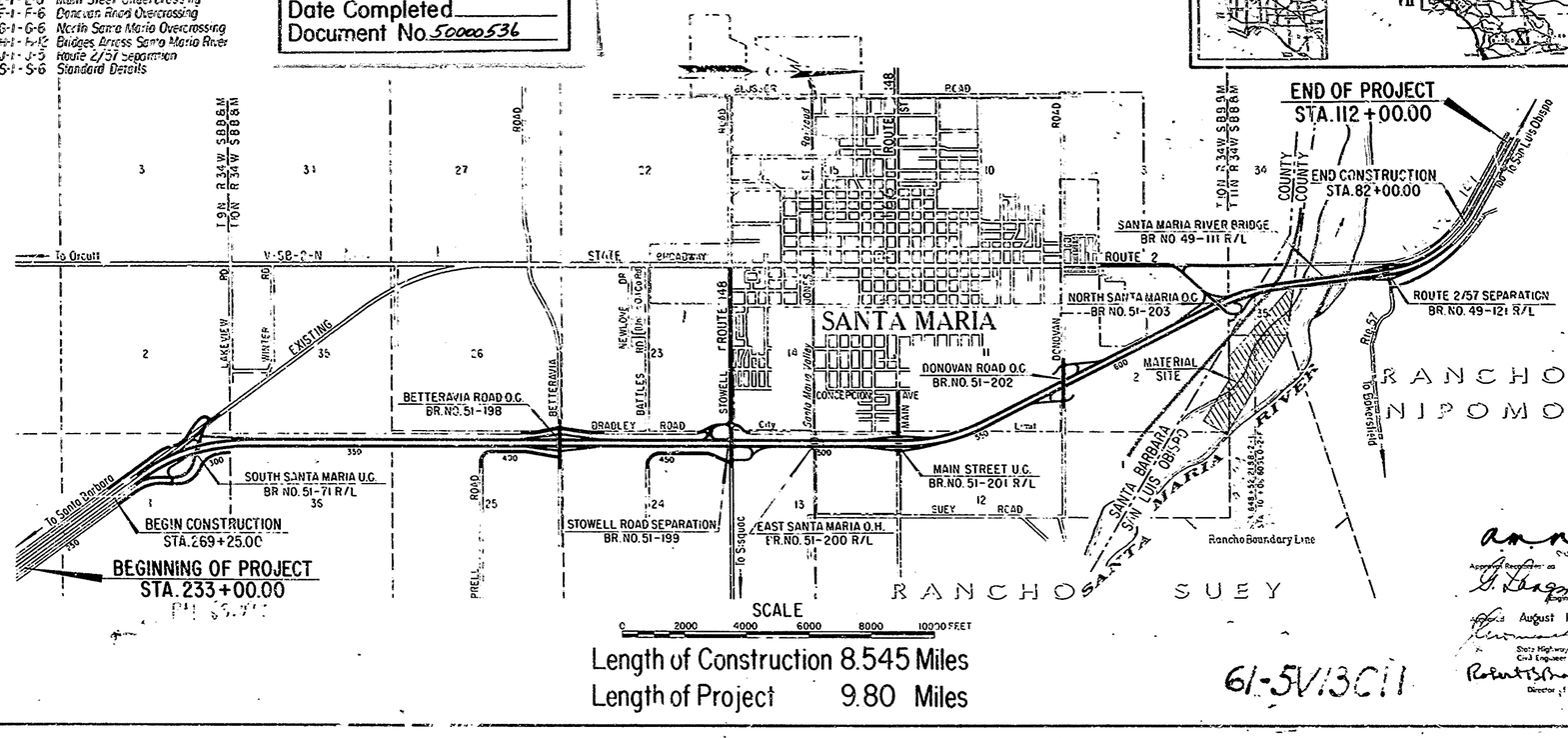
In Santa Barbara and San Luis Obispo Counties on Route 2 between 4 miles south of Santa Maria and Hourihan Grade with Connection to Santa Maria on Route 148

(being the detail plans of a portion of the route for the State highway adopted by the California Highway Commission on March 24, 1955, April 20, 1955 and declared a FREEWAY by resolution of the California Highway Commission March 24, 1955 April 20, 1955)

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

STATE OF CALIFORNIA
KEY MAP





SCALE
0 2000 4000 6000 8000 10000 FEET

Length of Construction 8.545 Miles
Length of Project 9.80 Miles

61-5V13C11

August 15, 1960

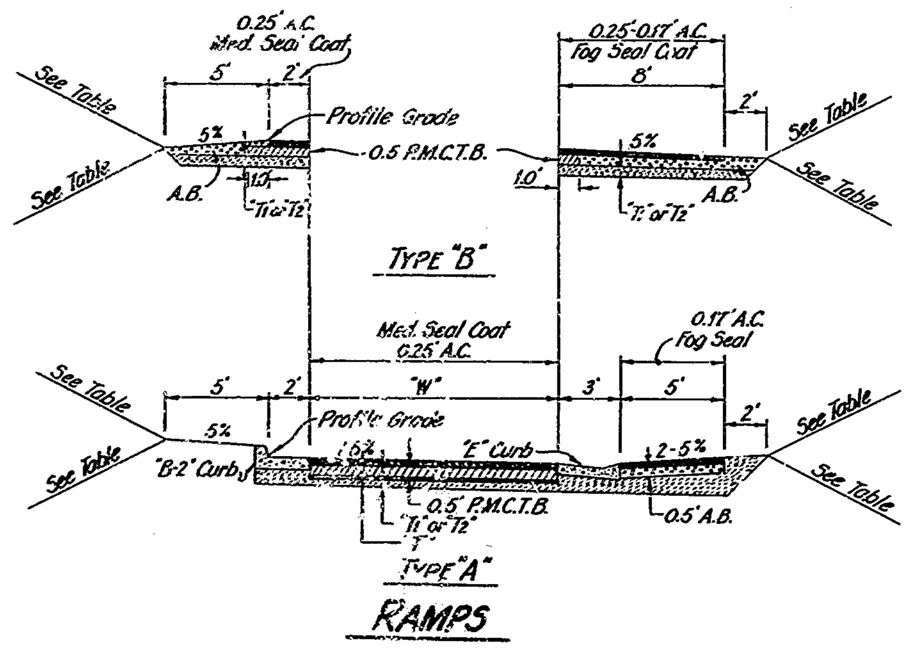
State Highway Engineer
Civil Engineer License 5545

Director of Public Works

B.P.R. DIV. No.	STATE	FEDERAL PROJECT No.	SHEET No.	TOTAL SHEETS
7	CALIF		2	204

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
V	SB;SLO	2	L,SMra;F	2	137

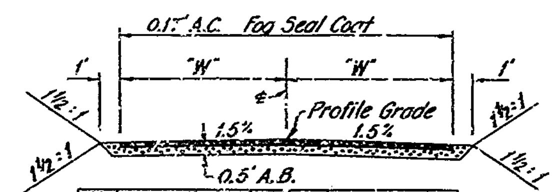
DISTRICT ENGINEER - DIST. V
APPROVED August 15, 1960
J.C. Womack, STATE HIGHWAY ENGINEER
BY: Deputy State Highway Engineer, Civil Engineer License No. 5451



RAMPS

No.	Type	"W"	"T1" S.M.	"T2" A.S.	Side Slopes
10	B	12'	0.5'	0	2½:1 Max
11	"	"	"	"	"
12	"	"	"	"	"
13	"	"	"	"	"
20	"	"	0	"	2:1 Max.
21	"	"	"	"	"
22	"	"	"	"	"
23	"	"	"	"	"
30	A	"	0.53'	"	"
31	A & B	12'-24'*	"	"	"
32	A	12'	"	"	"
33	A & B	12'-24'*	"	"	"
40	A	12'-24'	0	0.5'	"
41	"	12'	"	"	"
42	"	12'-24'	"	"	"
45	"	12'	"	"	"
50	A & B	12'-24'	"	"	"
51	A	12'	"	"	"
52	"	"	"	"	"
53	A & B	12'-24'*	"	"	"
60	A	12'	"	"	"
61	"	"	"	"	"
62	"	"	"	"	"
63	"	"	"	"	"
70	B	12'-24'	"	"	"
71	"	"	"	"	"
72	"	"	"	"	"
73	"	"		"	"

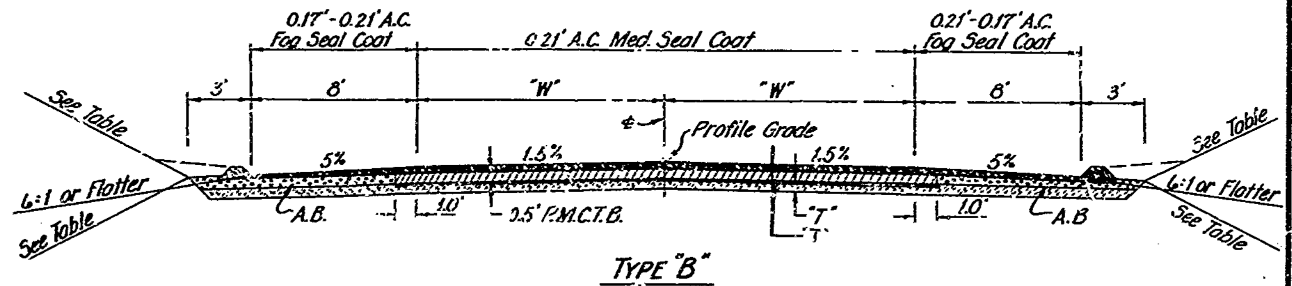
* 24' Width has 2-way crown slope and 8' shoulders on both sides.



No.	Location	W
F-54	25+00 "Donovan Rd."	8
F-55	15+00 " "	8
PR-1	186+00 "F-17"	6
PR-2	86+60 "F-16"	6

No.	Location	W
PR-3	204+75 "F-17"	6
PR-4	306+25 "F-24"	6
PR-5	313+85 "F-24"	6
PR-6	215+35 "F-26"	6
PR-7	215+90 "F-26"	6
PR-8	555+10 "F-26"	6

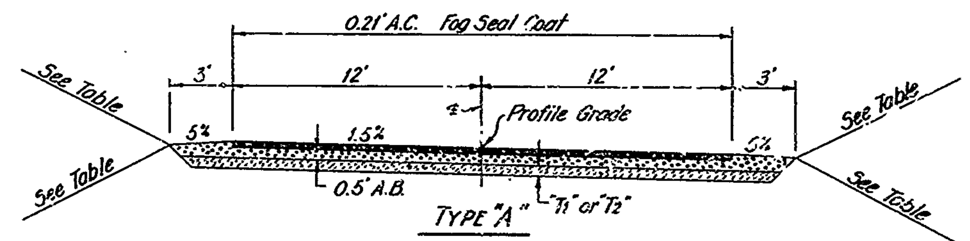
PRIVATE ROAD CONNECTION



TYPE "B" FRONTAGE ROADS

No.	"T"	"W"	Side Slopes
18	0.5' S.M.	12'	2½:1 Max.
*64	0.5' A.S.	12'-24'	2:1 Max.

* See N. Broadway Section Also



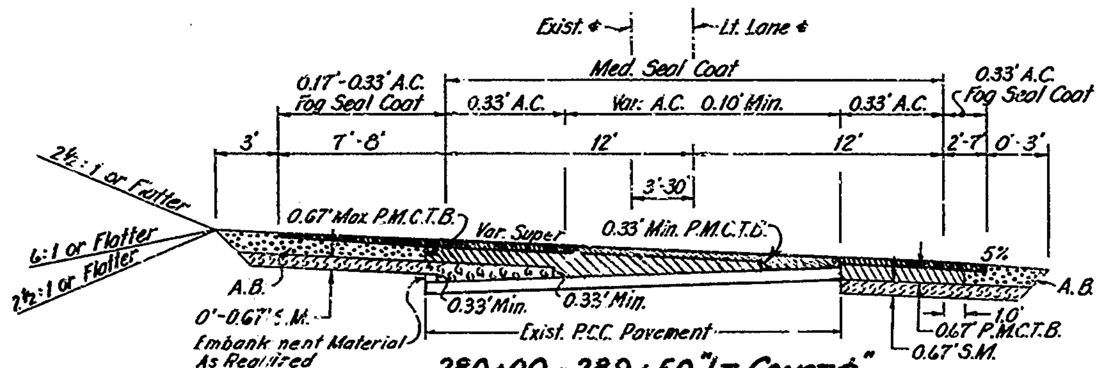
FRONTAGE ROADS

TYPE "A" FRONTAGE ROADS

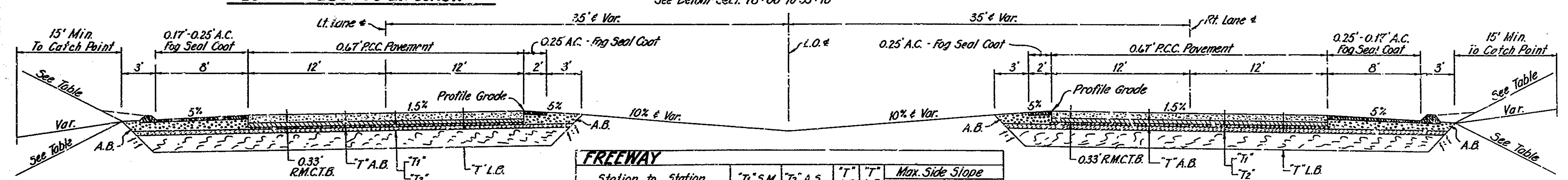
Name	"T1" S.M.	"T2" A.S.	Side Slopes
† F-16	0.5'	0	2½:1 Max.
F-17	"	"	"
* F-24	0	"	2:1 Max.
F-25	"	"	"
F-26	"	"	"
F-34	0.5	"	"
F-35	"	"	"
F-36	"	"	"
F-65	0	0.5'	1½:1 Max.
F-66	"	"	2:1 Max.
F-74	"	"	"
F-75	"	"	"
Winsman Rd.	"	"	1½:1 Max.

* 1.5% 2-Way Crown Slope
† Resurface Exist. Pavt. 93+10 to 101+10
See Detour Sect. 78+00 to 93+10

Note: Dimensions are subject to tolerances specified in the Standard Specifications



280+00 - 289+50 "Lt. Const. ℄"



*289+50 "L" - 71+00 "F"
* Const. Shoulders Only 71+00 "F" - 78+50 "F"

*278+00 - 74+50
* Const. Shoulders Only 270+75 - 278+00 & 74+50 - 82+00

FREEWAY

Station to Station	"T1" S.M.	"T2" A.S.	"T" A.B.	"T" L.B.	Max. Side Slope Cut	Max. Side Slope Fill
278+00 "L" - 398+00 "L"	0.5' 0.33'	0	0.17'	0	2½:1	2½:1
398+00 "L" - 423+90 "L"	" "	"	0.17'	"	2:1	"
423+90 "L" - 491+50 "L"	0.5' "	"	0.17'	"	"	"
491+50 "L" - 495+00 "L"‡	" "	"	0.17'	"	"	2:1
495+00 "L"‡ - 14+60 "F"	0	0.33'	0.17'	1.5'	"	"
14+60 "F" - 35+50 "F"	Bridge	0	0	0	"	"
35+50 "F" - 74+50 "F"	0	0.33'	0.17'	1.5'	"	"

LEGEND

P.C.C. ..... Portland Cement Concrete
A.C. ..... Asphalt Concrete, Type "B"
P.M.C.T.B. Plant-Mixed Cement Treated Base, Class "B"
R.M.C.T.B. Road-Mixed Cement Treated Base, Class "B"
A.B. ..... Aggregate Base, Class 2
S.M. ..... Selected Material
L.B. ..... Local Borrow
A.S. ..... Aggregate Subbase, Class "2"

(V-SB; SLO-2-L, S.Mra.; F)
4 Mi. S. Of Santa Maria To Hourihan Grade
Scale: 1" = 5'

TYPICAL CROSS-SECTIONS

1. YEAR E.W.L. : 32 MILLION
DESIGN DESIGNATION:
ADT 1959...11,150 D = 60%
ADT 1980...20,000 T = 6%
DHV .... 2,400 V = 70 M.P.H.

61-5V13C11

RECOMMENDED: ASSISTANT STATE HIGHWAY ENGINEER
Engineer of Design

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dayden	3/24/60	[illegible]	3/60	[illegible]	3/60

Oct. 1959 D.D.I.

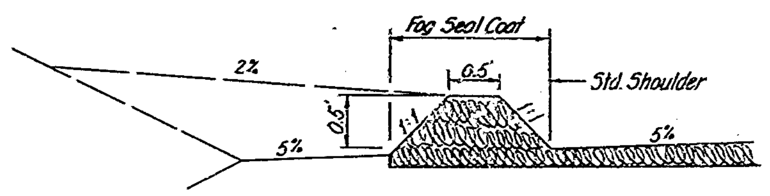
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

DIST.	STATE	FEDERAL PROJECT No.	SHEET No.	TOTAL SHEETS
7	CALIF.		3	20A

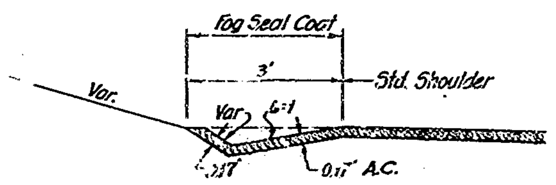
10 YEAR E.W.L. : 32 MILLION
DESIGN DESIGNATION:
ADT 1959...11,150 D=60%
ADT 1980 20,000 T=6%
DHV ....2,400 V=70 M.P.H.

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
V	SB,SLO	2	L,S.Mra;F	3	137

DISTRICT ENGINEER - DIST. V
APPROVED: August 15, 1960
J.C. Womack
STATE HIGHWAY ENGINEER
BY:
Deputy State Highway Engineer
C.E. Engineer License No. 5451

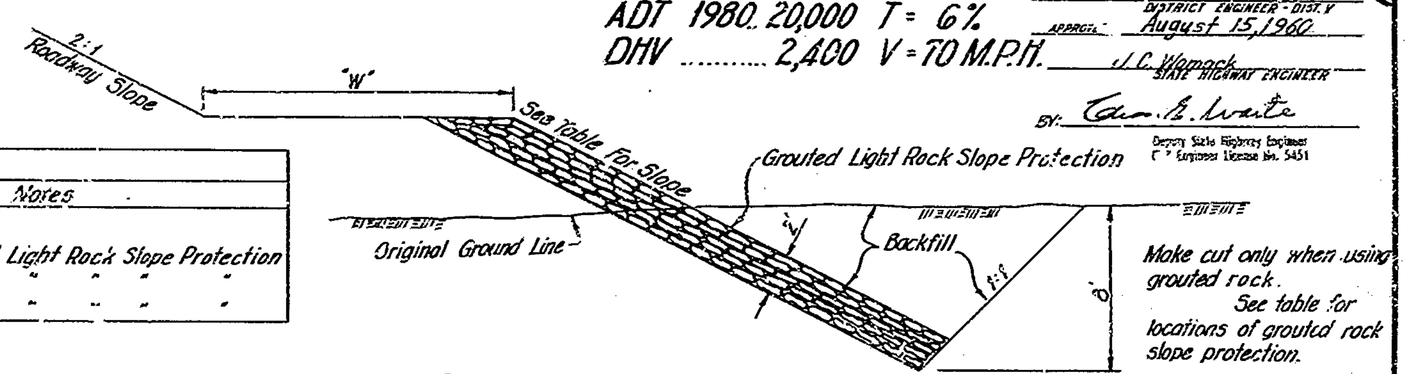


A.C. DIKE DETAIL
Scale: 1"=1'



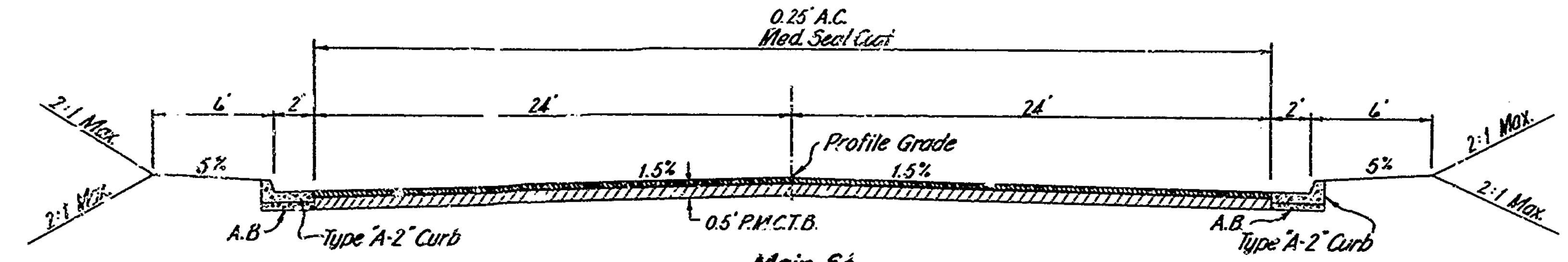
A.C. ROADWAY GUTTER DETAIL
Scale: 1"=2'
Note: Use high side of super.

FILL WIDENING					
Station	to Station	Line	"W"	Slope	Notes
12+00	14+00 Rt.&Lt.	L.O.&	15&0	2:1&2½:1	Use Grouted Light Rock Slope Protection
36+00	39+00 Lt.	"	18'	2½:1	" " " " " "



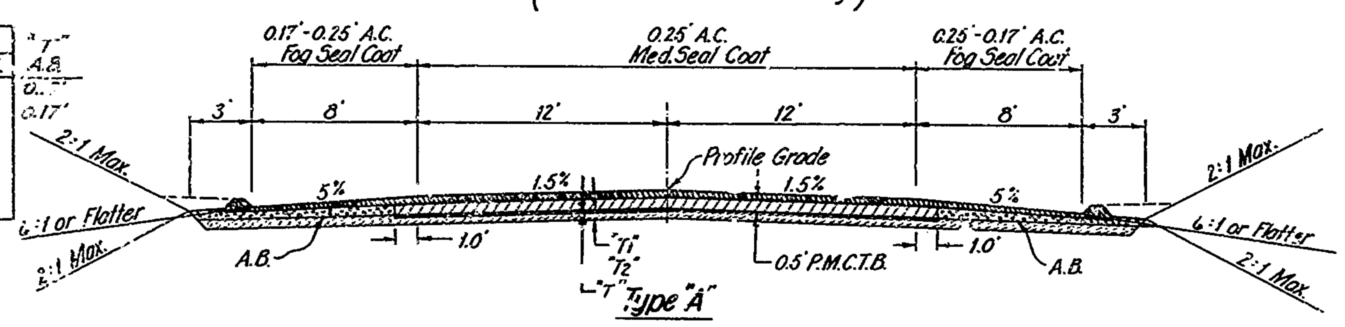
Make cut only when using grouted rock.
See table for locations of grouted rock slope protection.

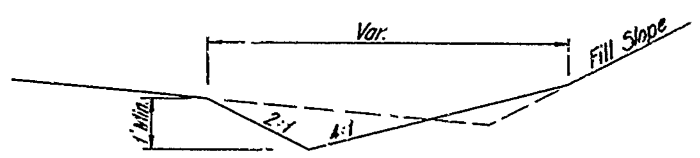
FILL WIDENING
Scale: 1"=5'



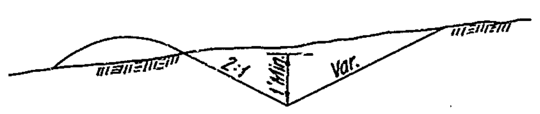
Main St.
(At Undercrossing)

TYPE "A" ROADS			
Name	"T1" S.M.	"T2" A.S.	"T" A.B.
Betteravia Rd.	0'	0'	[illegible]
Stowell Rd.	0.5' .33'	"	0.17'
Donovan Rd. SLO-57-A	0 "	0.5' "	

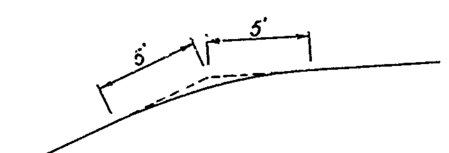




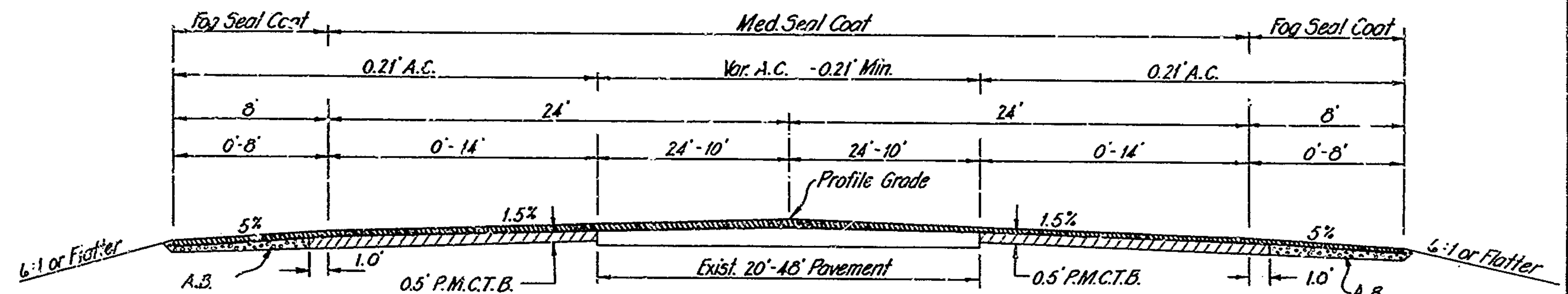
GUTTER
(Toe Of Fill Ditch)
Scale: 1"=2'



INTERCEPTION DITCH & DIKE
Scale: 1"=2'



SLOPE ROUNDING
Scale: 1"=5'
Note: Use on all cut slopes.



614+00 - 635+79.84 "N. Broadway"
111+80.72 - 117+00 "F-64"
COUNTY ROADS & CITY STREETS
Scale: 1"=5'

61-5V13C11

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

(V-SB; SLO-2-L, S.Mra; F)
4 MI. S. OF SANTA MARIA TO HOURIHAN GRADE
Scale: As Shown

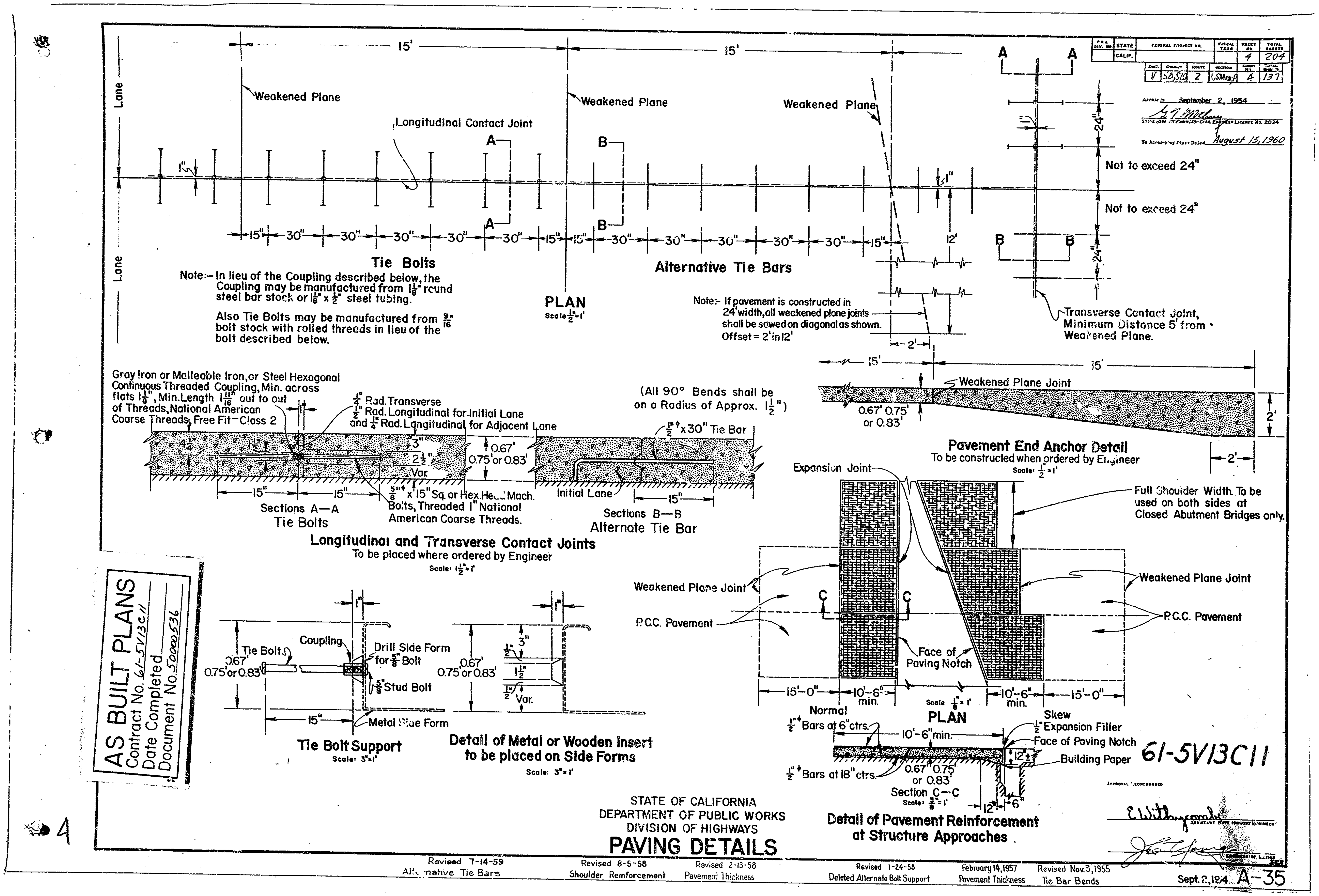
TYPICAL CROSS-SECTIONS

Note: Dimensions are subject to tolerances specified in the Standard Specifications

Note: See 100 Scale Layout Sheets for Additional Typical Cross-Sections

RECOMMENDED:
ASSISTANT STATE HIGHWAY ENGINEER
Civil Engineer License No.

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60		2/60	R.A.	2/60



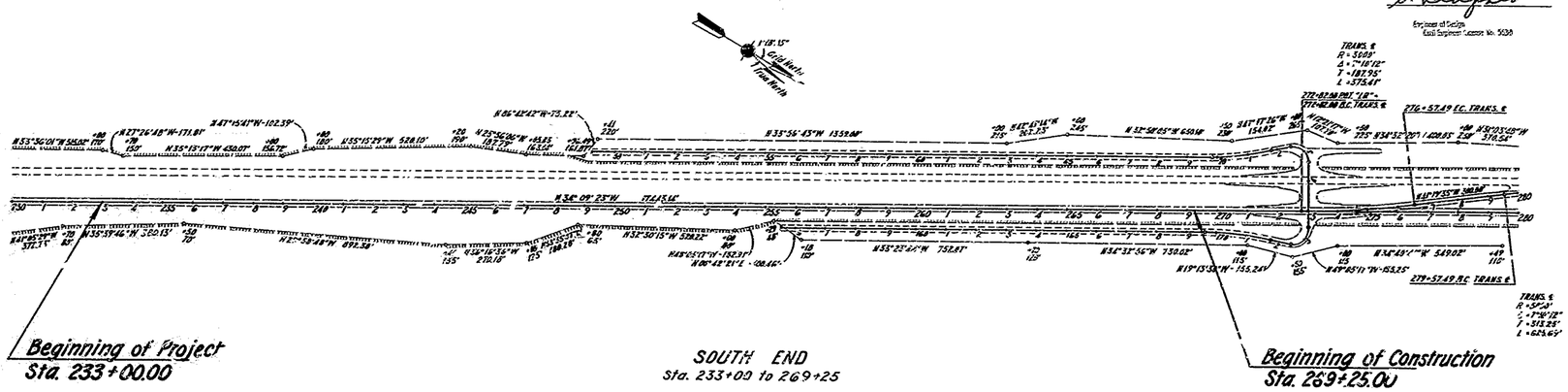
15'
15'
Weakened Plane
Weakened Plane
Weakened Plane
Longitudinal Contact Joint
Lane
Lane
Tie Bolts
Alternative Tie Bars
Note:– In lieu of the Coupling described below, the Coupling may be manufactured from 1¼" round steel bar stock or 1⅛" x ½" steel tubing.
Also Tie Bolts may be manufactured from 9/16" bolt stock with rolled threads in lieu of the bolt described below.
PLAN
Scale ½"=1'
Note:- If pavement is constructed in 24' width, all weakened plane joints shall be sawed on diagonal as shown. Offset = 2' in 12'
Not to exceed 24"
Not to exceed 24"
Transverse Contact Joint, Minimum Distance 5' from Weakened Plane.
Gray Iron or Malleable Iron, or Steel Hexagonal Continuous Threaded Coupling, Min. across flats 1⅛", Min. Length 1 11/16" out to out of Threads, National American Coarse Threads, Free Fit-Class 2
¼" Rad. Transverse
½" Rad. Longitudinal for Initial Lane and ¼" Rad. Longitudinal for Adjacent Lane
(All 90° Bends shall be on a Radius of Approx. 1½")
½"ø x 30" Tie Bar
0.67' 0.75' or 0.83'
Var.
5/8"ø x 15" Sq. or Hex. Head Mach. Bolts, Threaded 1" National American Coarse Threads.
Initial Lane
Sections A—A
Tie Bolts
Sections B—B
Alternate Tie Bar
Longitudinal and Transverse Contact Joints
To be placed where ordered by Engineer
Scale: 1½"=1'
Weakened Plane Joint
Pavement End Anchor Detail
To be constructed when ordered by Engineer
Scale: ½"=1'
Expansion Joint
Full Shoulder Width. To be used on both sides at Closed Abutment Bridges only.
Weakened Plane Joint
Weakened Plane Joint
P.C.C. Pavement
P.C.C. Pavement
Face of Paving Notch
15'-0"
10'-6" min.
PLAN
Scale 1/8"=1'
Tie Bolt
Coupling
Drill Side Form for 5/8" Bolt
5/8" Stud Bolt
Metal Side Form
Tie Bolt Support
Scale: 3"=1'
Detail of Metal or Wooden Insert to be placed on Side Forms
Scale: 3"=1'
Normal
½"ø Bars at 6" ctrs.
½"ø Bars at 18" ctrs.
Skew
½" Expansion Filler
Face of Paving Notch
Building Paper
Section C—C
Detail of Pavement Reinforcement at Structure Approaches
61-5V13C11
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
Approved September 2, 1954
To Accompany Plans Dated August 15, 1960
STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
PAVING DETAILS
Revised 7-14-59 Alternative Tie Bars
Revised 8-5-58 Shoulder Reinforcement
Revised 2-13-58 Pavement Thickness
Revised 1-24-58 Deleted Alternate Bolt Support
February 14, 1957 Pavement Thickness
Revised Nov. 3, 1955 Tie Bar Bends
Sept. 2, 1954
A-35

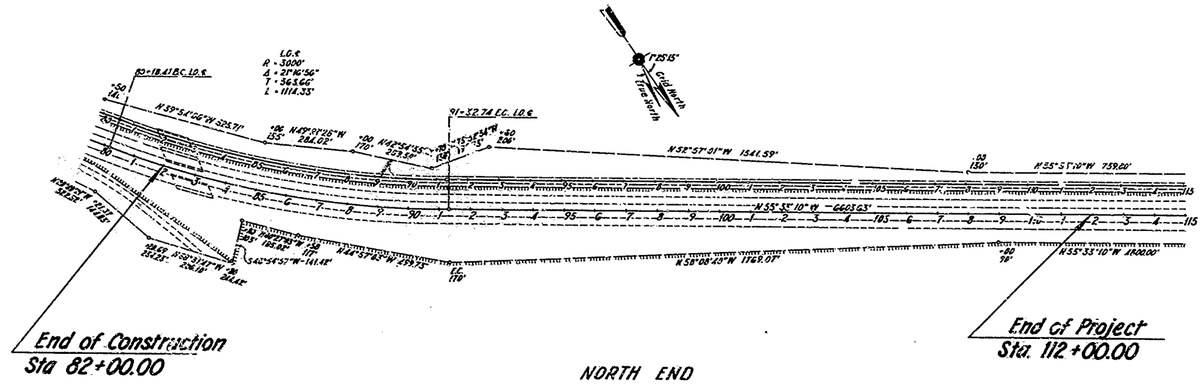
B.P.R. DIV. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			5	204

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB,SLO	2	L,F	5	137

August 15, 1960

Engineer of Work
Field Engineers License No. 5038





AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

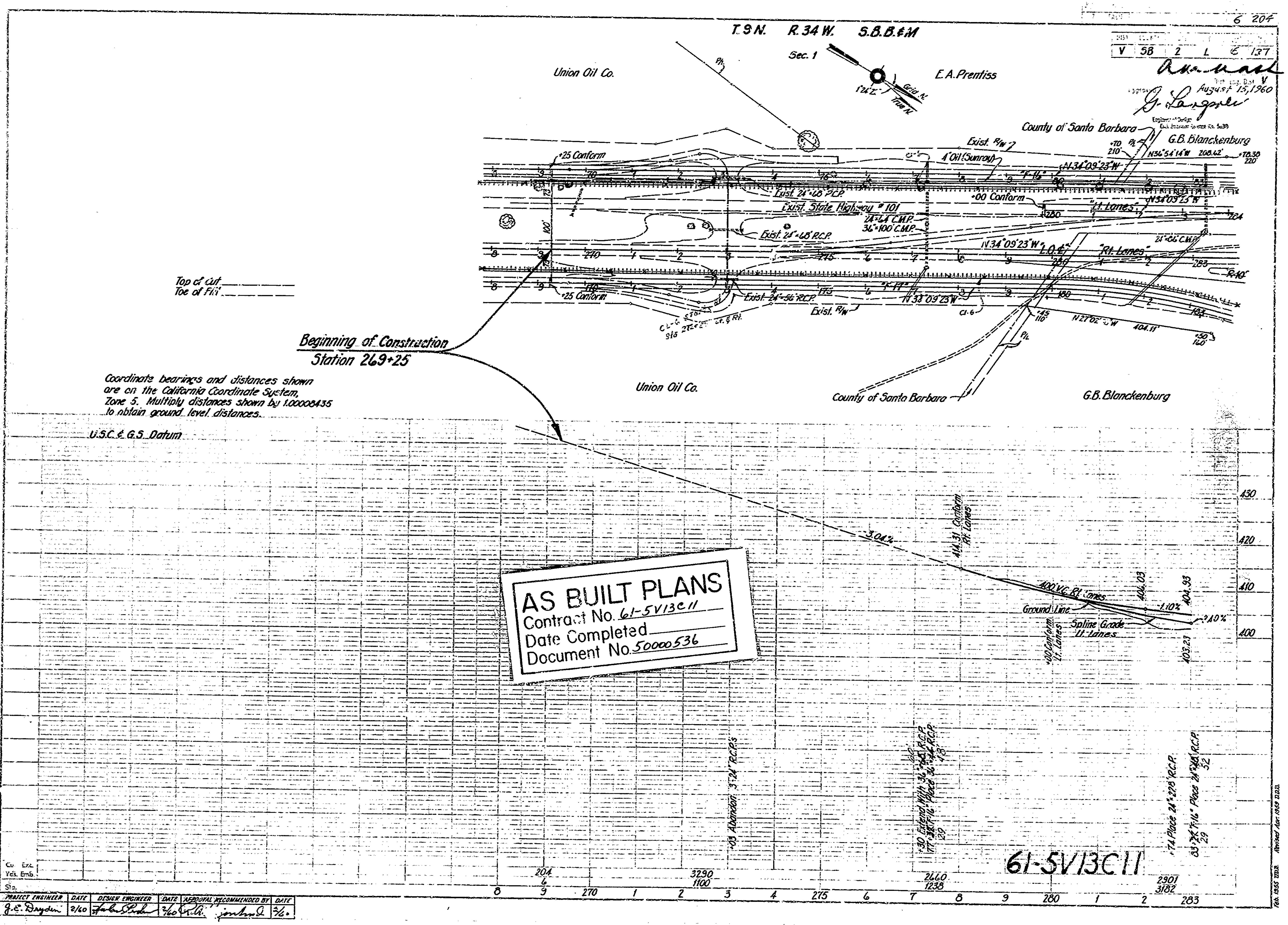
61-5V13C11

PROJECT LIMIT EXTENSIONS

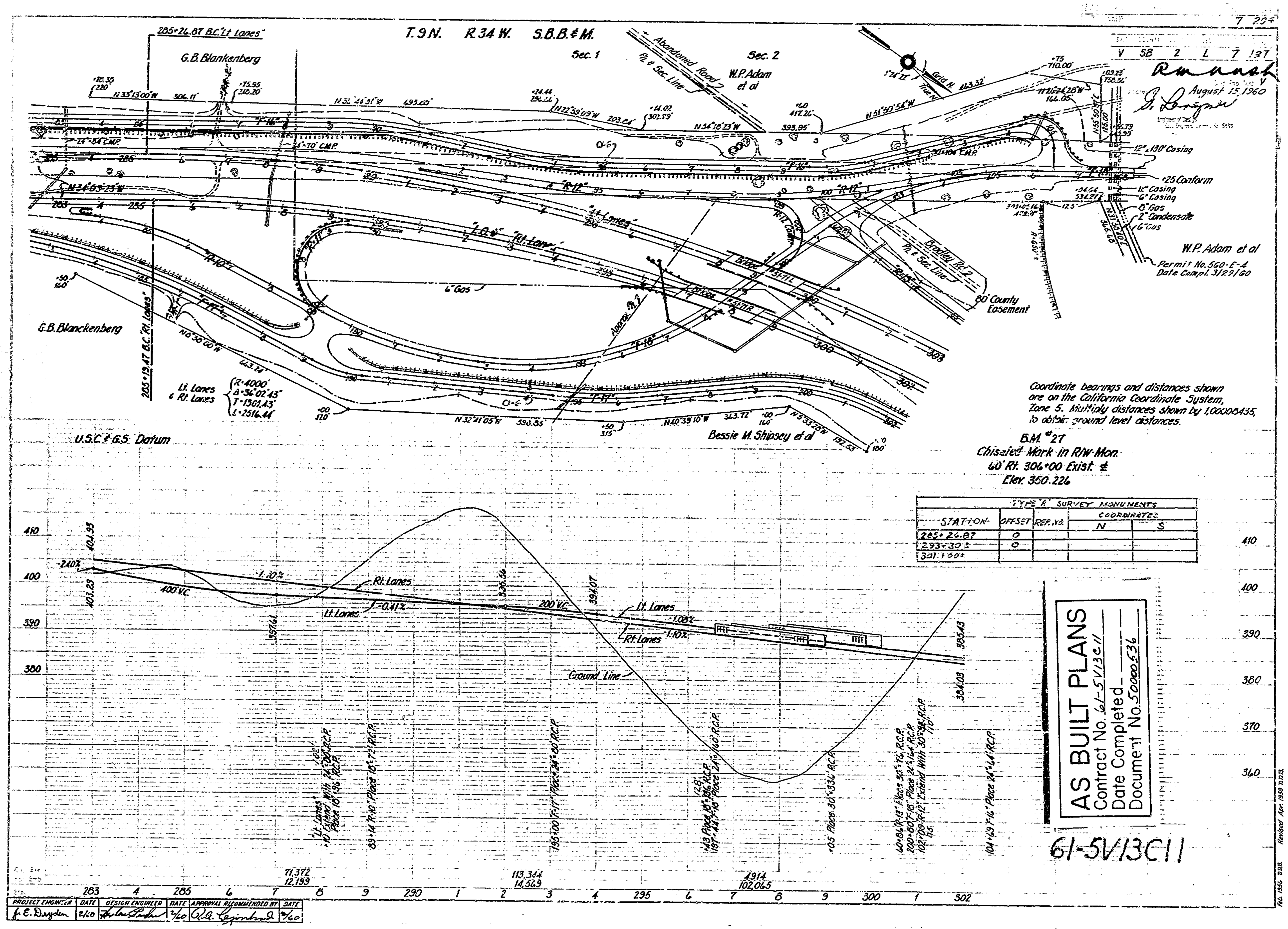
Scale: 1" = 200'

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Snyder	2/60		2/60		2/60

5

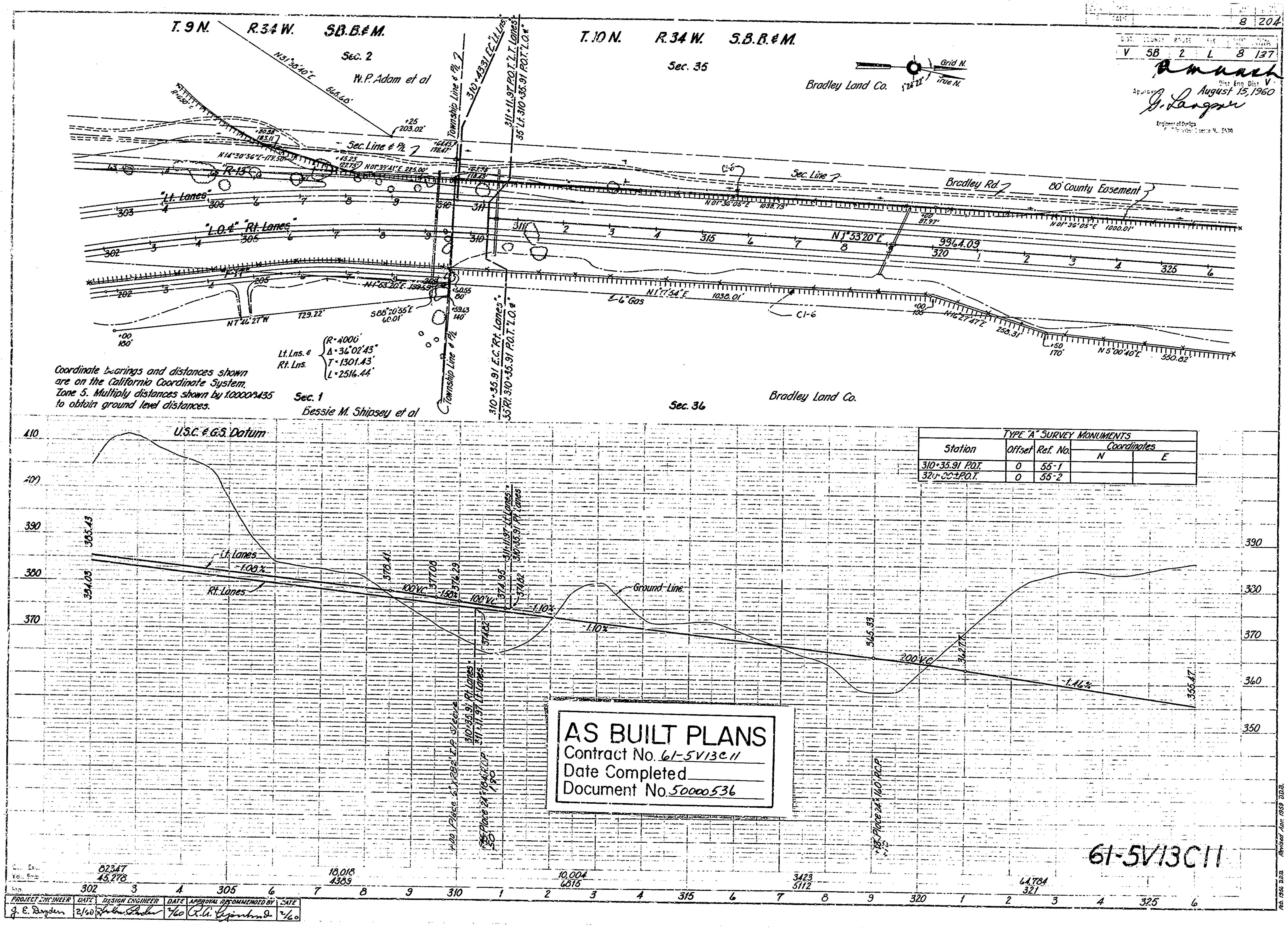


6 204
V 5B 2 L 137
August 15, 1960
T.9N. R.34W. S.B.B.&M
Sec. 1
Union Oil Co.
E.A.Prentiss
County of Santa Barbara
G.B. Blanckenburg
+25 Conform
Exist. R/W
4' Oil (Sunray)
Exist. 24"-48" RCP
Exist. State Highway # 101
24"-14 CMP
36"-100' CMP
Exist. 24"-48" RCP
+00 Conform
N34°09'23"W
Lt. Lanes
Rt. Lanes
Exist. 24"-56" RCP
Exist. R/W
Top of Cut
Toe of Fill
Beginning of Construction
Station 269+25
Coordinate bearings and distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.0000 8435 to obtain ground level distances.
U.S.C.& G.S. Datum
Union Oil Co.
County of Santa Barbara
G.B. Blanckenburg
3.04%
+14.31 Conform Rt. Lanes
400' V.C. Rt. Lanes
Ground Line
Spline Grade Lt. Lanes
+00 Conform Lt. Lanes
430
420
410
400
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
+05 Abandon 3'-24" RCP
61-5V13C11
204
3290
1100
2460
1235
2901
3182
Sta.
269 270 275 280 283
PROJECT ENGINEER
DATE
DESIGN ENGINEER
DATE
APPROVAL RECOMMENDED BY
DATE



TYPE "A" SURVEY MONUMENTS				
STATION	OFFSET	REF. NO.	COORDINATES N	COORDINATES S
285+26.87	0			
293+30±	0			
301+00±				

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dayden	2/60	[illegible]	2/60	O.A. Lejonhud	2/60



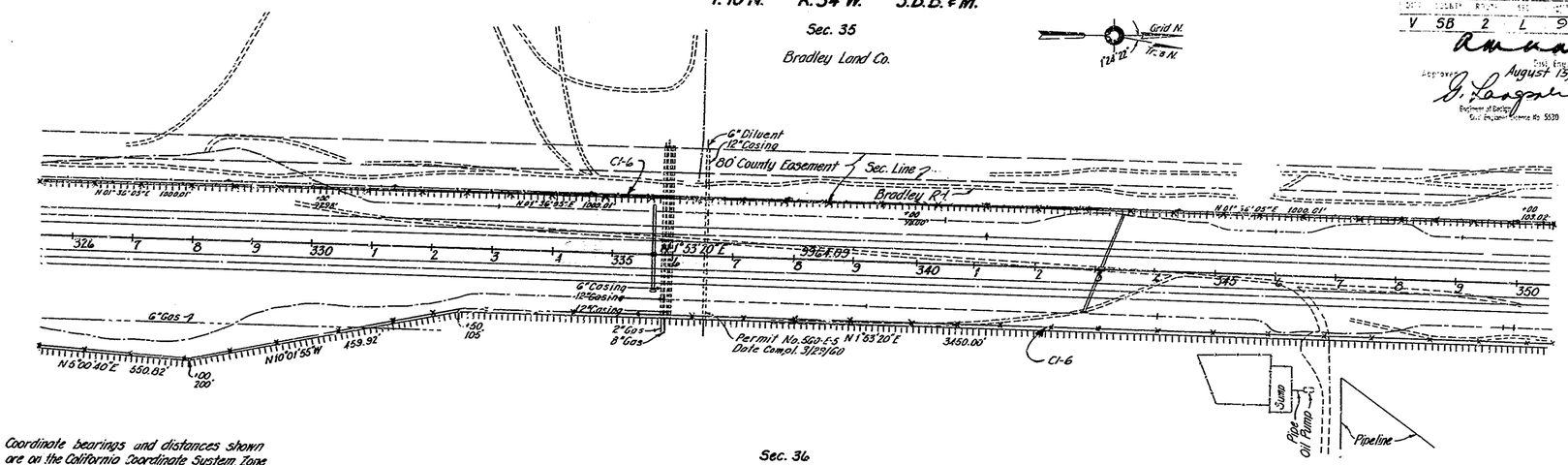
T. 9 N. R. 34 W. S.B.B.&M.
Sec. 2
W. P. Adam et al
T. 10 N. R. 34 W. S.B.B.&M.
Sec. 35
Bradley Land Co.
Grid N.
True N.
V SB 2 L 8 137
August 15, 1960
Sec. Line & P/L
Township Line & P/L
Sec. Line
Bradley Rd.
80' County Easement
"Lt. Lanes"
"Rt. Lanes"
"L.O.4"
N 1°33'20" E
9964.09
6" Gas
N 1°17'54" E 1038.01'
Lt. Lns. & Rt. Lns.
R=4000'
Δ=36°02'43"
T=1301.43'
L=2514.44'
Coordinate bearings and distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.0000 3435 to obtain ground level distances.
Sec. 1
Bessie M. Shipsey et al
Sec. 36
Bradley Land Co.
U.S.C. & G.S. Datum
Lt. Lanes
Rt. Lanes
-1.06%
-1.10%
-1.46%
100' VC
200' VC
Ground Line
61-5V13C11

TYPE "A" SURVEY MONUMENTS				
Station	Offset	Ref. No.	Coordinates N	Coordinates E
310+35.91 P.O.T.	0	56-1		
320+00 P.O.T.	0	56-2		

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	[illegible]	2/60	[illegible]	2/60

8



V	SB	2	L	9	137

R. M. ...
Dist. Eng. Dist. V
August 15, 1960

Approved G. Langner
Engineer of Design
Civil Engineer License No. 5530

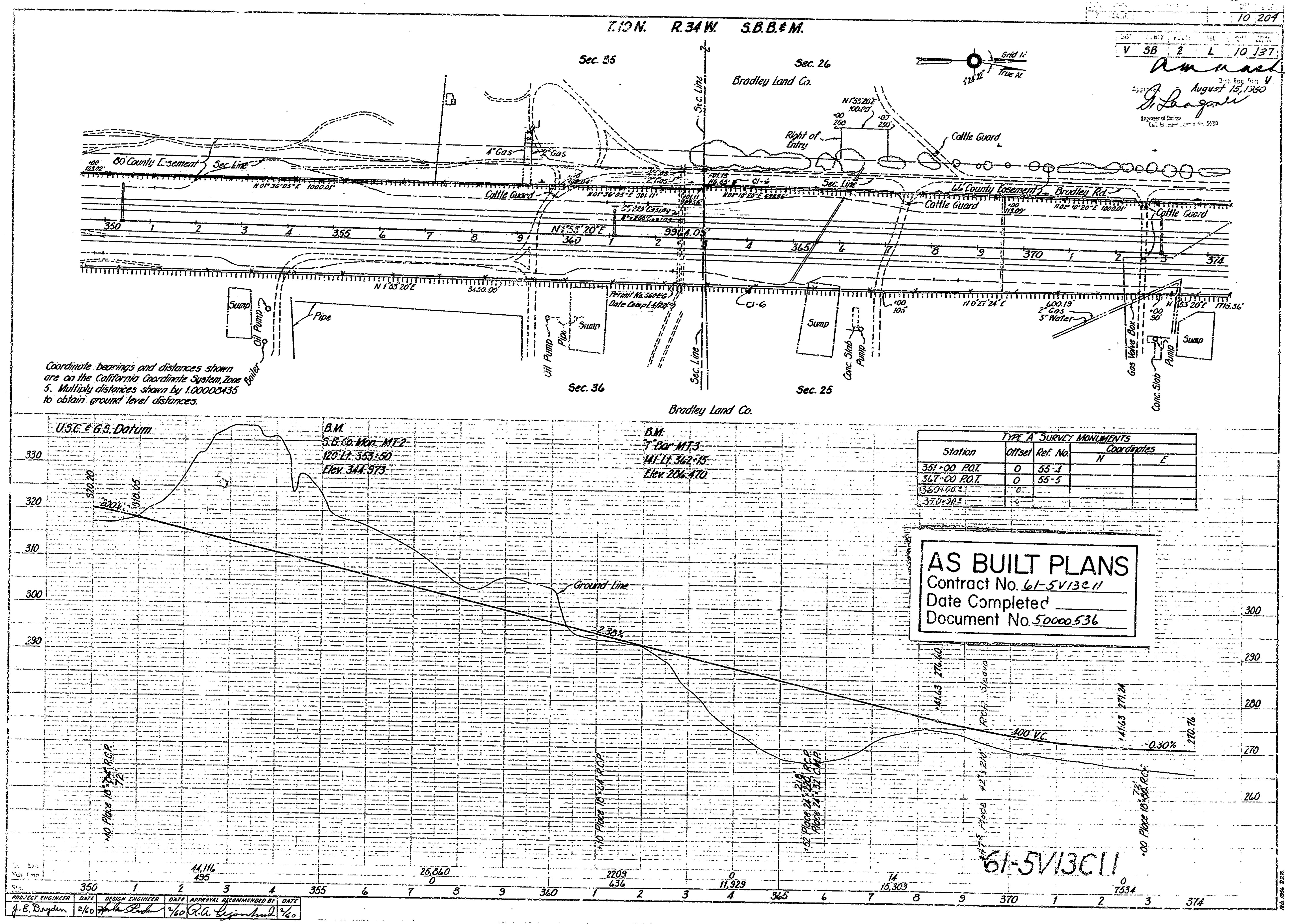
Coordinate bearings and distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.00008435 to obtain ground level distances.

TYPE "A" SURVEY MONUMENTS				
Station	Offset	Ref. No.	Coordinates	
			N	E
~~337+00 P.O.T.~~	~~0~~	~~55-3~~		
330+00±	0			
340+00±	0			
350+00±	0			

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

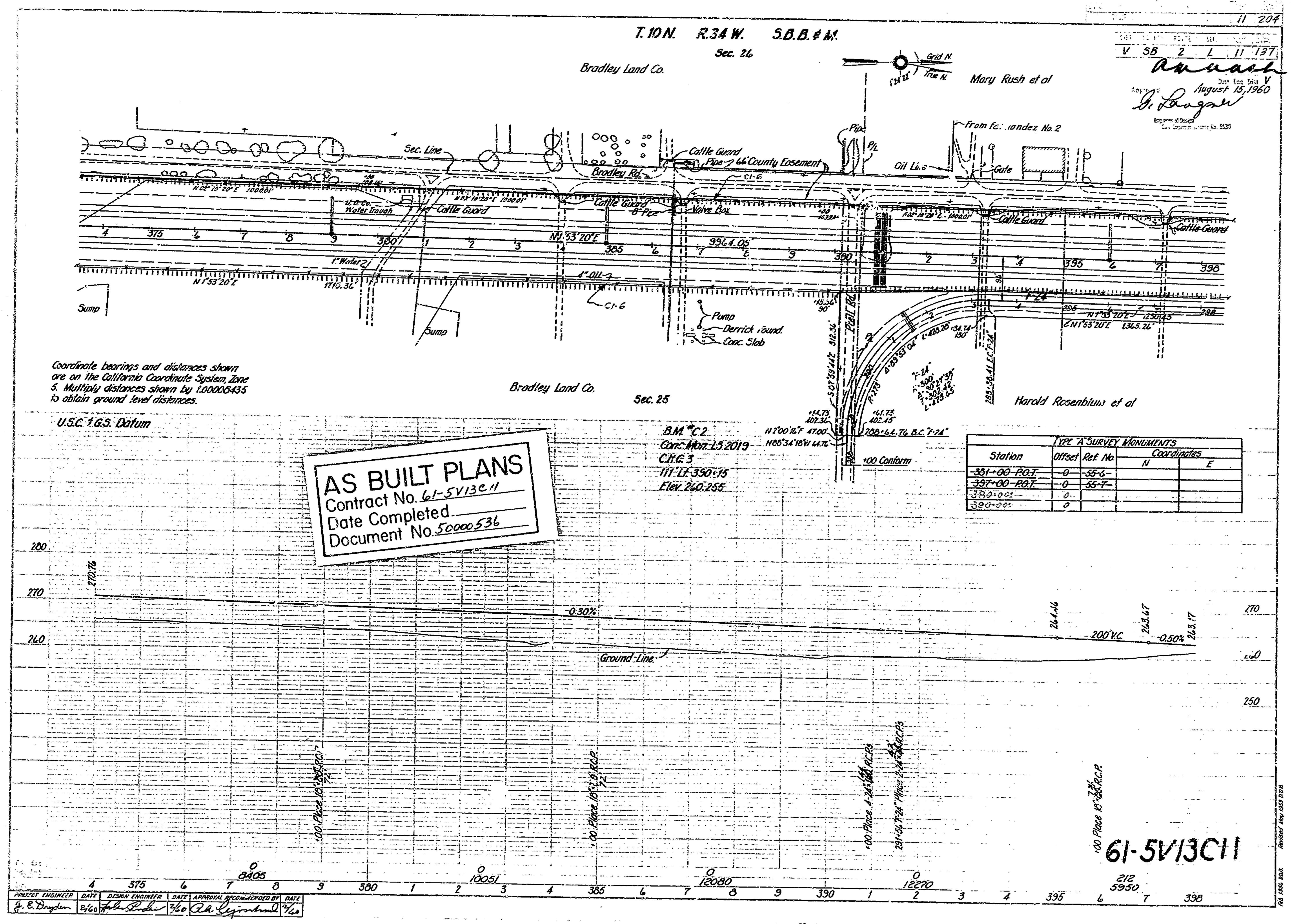
61-5V13C11

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Snyder	2/60		2/60	R. A.	2/60


10 204
V SB 2 L 10 137
Dist. Eng. Div. V
August 15, 1960
Engineer of Design
T. 10 N. R. 34 W. S.B.B.& M.
Sec. 35
Sec. 26
Bradley Land Co.
Grid N.
True N.
Right of Entry
Cattle Guard
80' County Easement
Sec. Line
4" Gas
2" Gas
N 01°36'05"E 1000.01'
N 1°53'20"E
9904.05
C1-6
66' County Easement
Bradley Rd.
Sump
Oil Pump
Pipe
Boiler
3" Water
Gas Valve Box
Conc. Slab
Pump
N 1°53'20"E
Sec. 36
Sec. 25
Bradley Land Co.
Coordinate bearings and distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.00006435 to obtain ground level distances.
U.S.C.& G.S. Datum
B.M.
S.B. Co. Mon. MT 2
120 Lt. 353+50
Elev. 344.973
B.M.
T Bar MT 3
141 Lt. 362+15
Elev. 206.470
Ground Line
-2.30%
400' V.C.
-0.30%
350
355
360
365
370
374
330
320
310
300
290
280
270
260
61-5V13C11
Project Engineer
J. E. Boyden
Date
2/60
Design Engineer
Approval Recommended By
R. A. Gjerdrum

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

TYPE "A" SURVEY MONUMENTS				
Station	Offset	Ref. No.	Coordinates	
			N	E
351+00 P.O.T.	0	55-1		
367+00 P.O.T.	0	55-5		
360+00±	0			
370+90±	0			

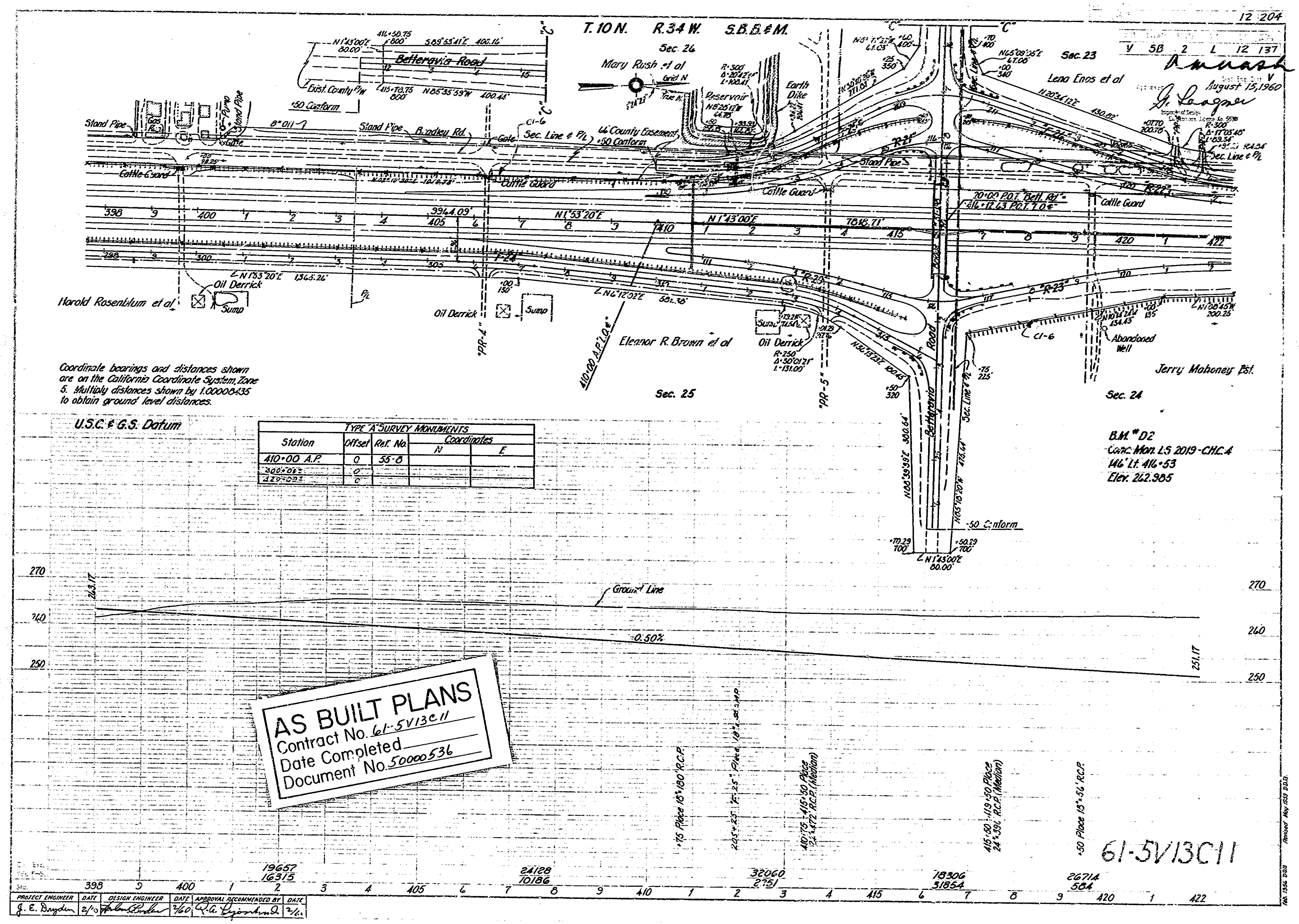


V | SB | 2 | L | 11 | 137
11 204
August 15, 1960
T. 10 N. R. 34 W. S.B.B. & M.
Sec. 26
Grid N.
True N.
Bradley Land Co.
Mary Rush et al
From Fernandez No. 2
Sec. Line
Cattle Guard
66' County Easement
Bradley Rd.
Oil Line
Gate
Water Trough
Cattle Guard
Valve Box
Pipe
1" Water
4" Oil
N 1°53'20" E
9964.05'
Sump
C1-6
Pump
Derrick round
Conc. Slab
Bradley Rd.
Coordinate bearings and distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.00005435 to obtain ground level distances.
Bradley Land Co.
Sec. 25
Harold Rosenblum et al
U.S.C. & G.S. Datum
B.M. # C2
Conc. Mon. LS 2019
C.H.C. 3
111' Lt. 390+15
Elev. 260.255
+00 Conform
0.30%
200' V.C.
0.50%
Ground Line
280
270
260
250
61-5V13C11

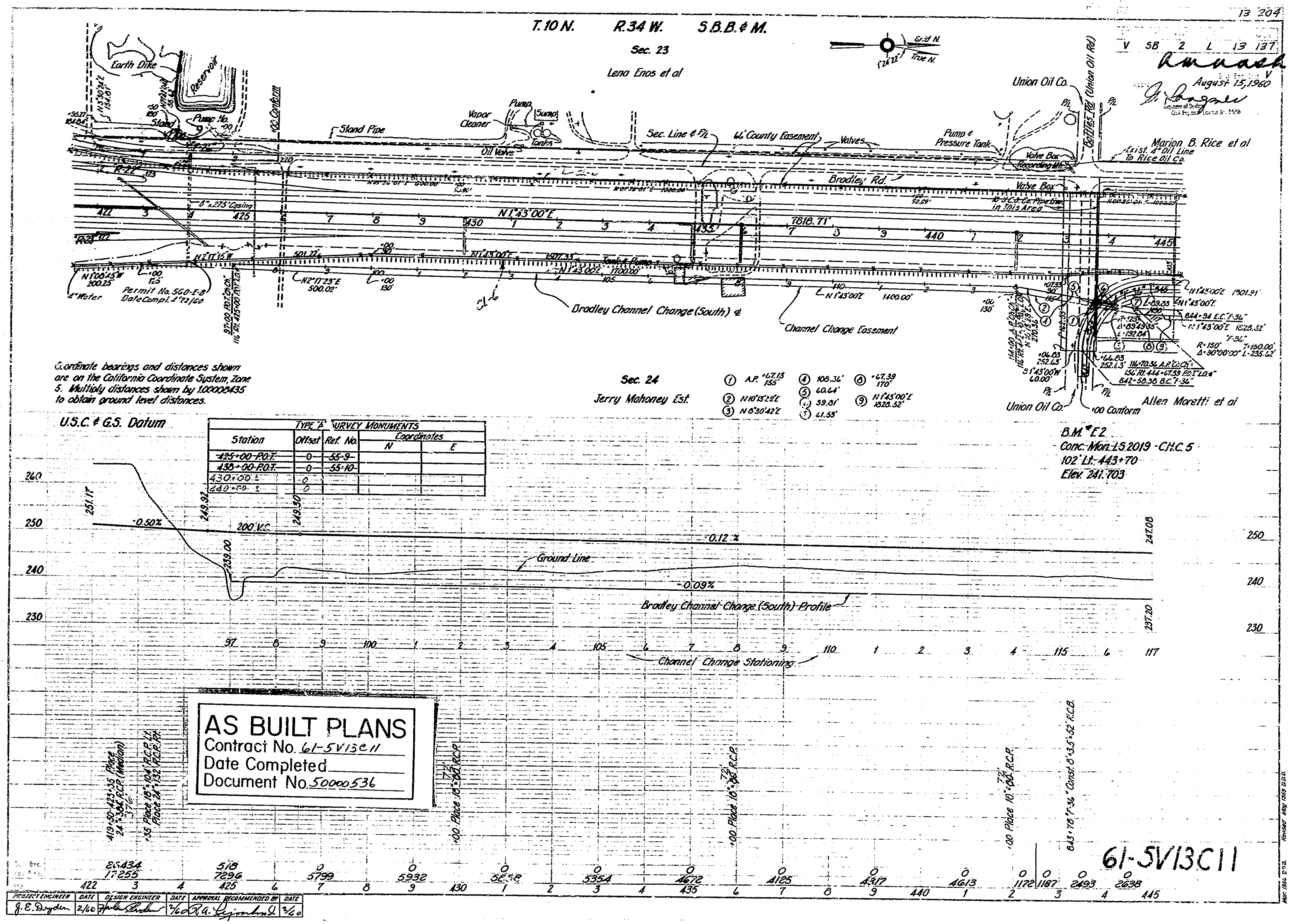
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

Type "A" Survey Monuments				
Station	Offset	Ref. No.	Coordinates N	Coordinates E
381+00 P.O.T.	0	55-6		
397+00 P.O.T.	0	55-7		
380+00	0			
390+00	0			

Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
J. E. Bryden	2/60		2/60		2/60


12 204
V 5B 2 L 12 137
August 15, 1960
T. 10 N. R. 34 W. S.B.B.&M.
Sec. 26
Sec. 23
Sec. 25
Sec. 24
Mary Rush et al
Lena Enos et al
Harold Rosenblum et al
Eleanor R. Brown et al
Jerry Mahoney Est.
Betteravia Road
Bradley Rd.
Stand Pipe
Cattle Guard
Oil Derrick
Sump
Reservoir
Earth Dike
Abandoned Well
Sec. Line & P/L
Coordinate bearings and distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.00008435 to obtain ground level distances.
U.S.C.&G.S. Datum
TYPE "A" SURVEY MONUMENTS
Station
Offset
Ref. No.
Coordinates
N
E
410+00 A.P.
B.M. # D2
Conc. Mon. LS 2019-CHC.4
146' Lt. 416+53
Elev. 242.985
Ground Line
0.50%
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
61-5V13C11
PROJECT ENGINEER
DESIGN ENGINEER
APPROVAL RECOMMENDED BY
J. E. Dryden

12



T. 10 N. R. 34 W. S.B.B. & M.
Sec. 23
Lena Enos et al
13 204
V SB 2 L 13 137
August 15, 1960
Earth Dike
Reservoir
Pump Ho.
Stand Pipe
Vapor Cleaner
Pump
Sump
Tanks
Oil Valve
Sec. Line & P/L
W. County Easement
Valves
Pump & Pressure Tank
Union Oil Co.
Bradley Rd.
Marion B. Rice et al
Exist. 4" Oil Line To Rice Oil Co.
Valve Box
Recording Mtr.
Valve Box
N 1°43'00" E
1818.71'
Permit No. SGO-E-8
Date Compl. 4-22/60
4" Water
N 2°11'23" E 500.00'
N 1°43'00" E 1700.00'
N 1°45'00" E 1400.00'
Bradley Channel Change (South) ⊈
Channel Change Easement
Coordinate bearings and distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.00006435 to obtain ground level distances.
Sec. 24
Jerry Mahoney Est.
Union Oil Co.
Allen Moretti et al
+00 Conform
U.S.C. & G.S. Datum
TYPE "A" SURVEY MONUMENTS
Station | Offset | Ref. No. | Coordinates N | E
425+00 P.O.T. | 0 | 55-9
435+00 P.O.T. | 0 | 55-10
430+00 | 0
440+00 | 0
B.M. # E2
Conc. Mon. LS 2019 - CH.C 5
102' Lt. 443+70
Elev. 241.703
200' V.C.
-0.50%
-0.12%
Ground Line
-0.09%
Bradley Channel Change (South) Profile
Channel Change Stationing
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
61-5V13C11
Project Engineer J. E. Dryden 2/60
Design Engineer
Approval Recommended By

13

V	SB	2	L	14	137

A. M. Nash

Dist. Eng. Dist. V

August 15, 1960

G. Langner

Engineer of Design

Coordinate bearings and distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.00008435 to obtain ground level distances.

T. 10 N. **R. 34 W.** **S.B.B. & M.**

Sec. 23

TYPE "A" SURVEY MONUMENTS				
Station	Offset	Ref. No.	Coordinates	
			N	E
~~453+00 P.O.T.~~	~~0~~	~~55-11~~		
450+00±	0			
60+00±	0			

AS BUILT PLANS

Contract No. 61-5V13C11

Date Completed

Document No. 50000536

61-5V13C11

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	Harlan Strocher	2/60	R. A. Lejonhud	2/60

15 204

CITY OF SANTA MARIA

V 56 2 L.S.Mtg. 15 137

Dirs. Res. Eng.
August 15, 1960

Hancock Airport

Grid N.
True N.
1°28'11"

Engineer of Design

Coordinate bearings and distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.00005435 to obtain ground level distances.

Taxi Strip

Aux. Landing Strip

Bradley Rd.

Stowell Rd.

66' County Easement

City Limit

Bridge #51-199

1192.40' to Sec. Line

Brodley Channel Change (South) & Channel Easement

U.S.C. & G.S. Datum

B.M. #F-2
Chiseled Mark on H.W.
107' Lt. 469+58
Elev. 241.646

TYPE "A" SURVEY MONUMENTS

Station	Offset	Ref. No	Coordinates N.	E.
~~469+25 P.O.T.~~	~~9~~	~~55-12~~		
~~479+00 P.O.T.~~	~~0~~	~~56-18~~		
485+18.71 B.C.	0	55-14		
470+00 ±	0			
480+0 ±	0			

R=15,000'
Δ=2°12'00"
T=288.01'
L=575.96'

Channel Change Stationing

Ground Line

Brodley Channel Change (South) Profile

+2.518%

-0.12%

-0.09%

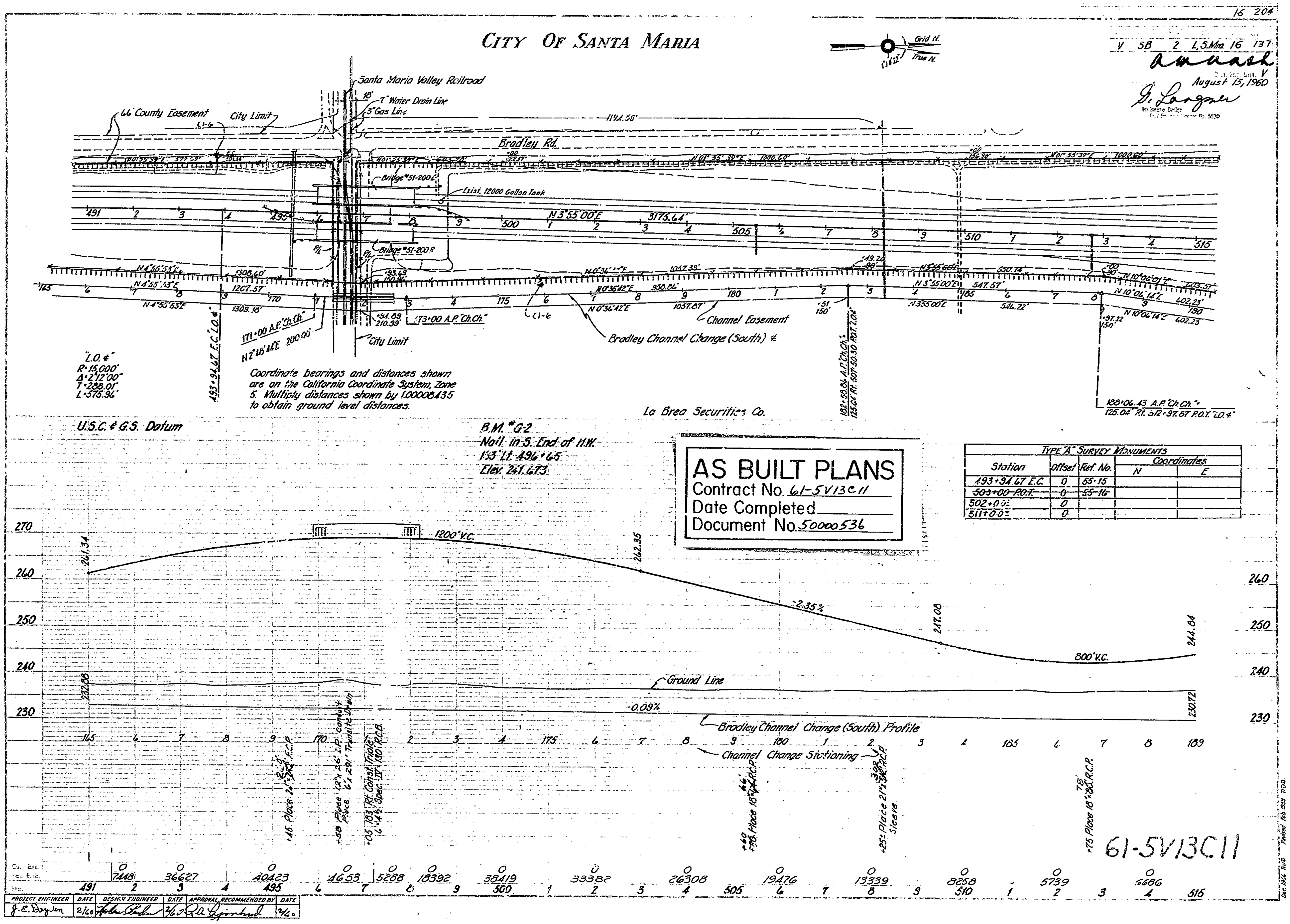
400' V.C.

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

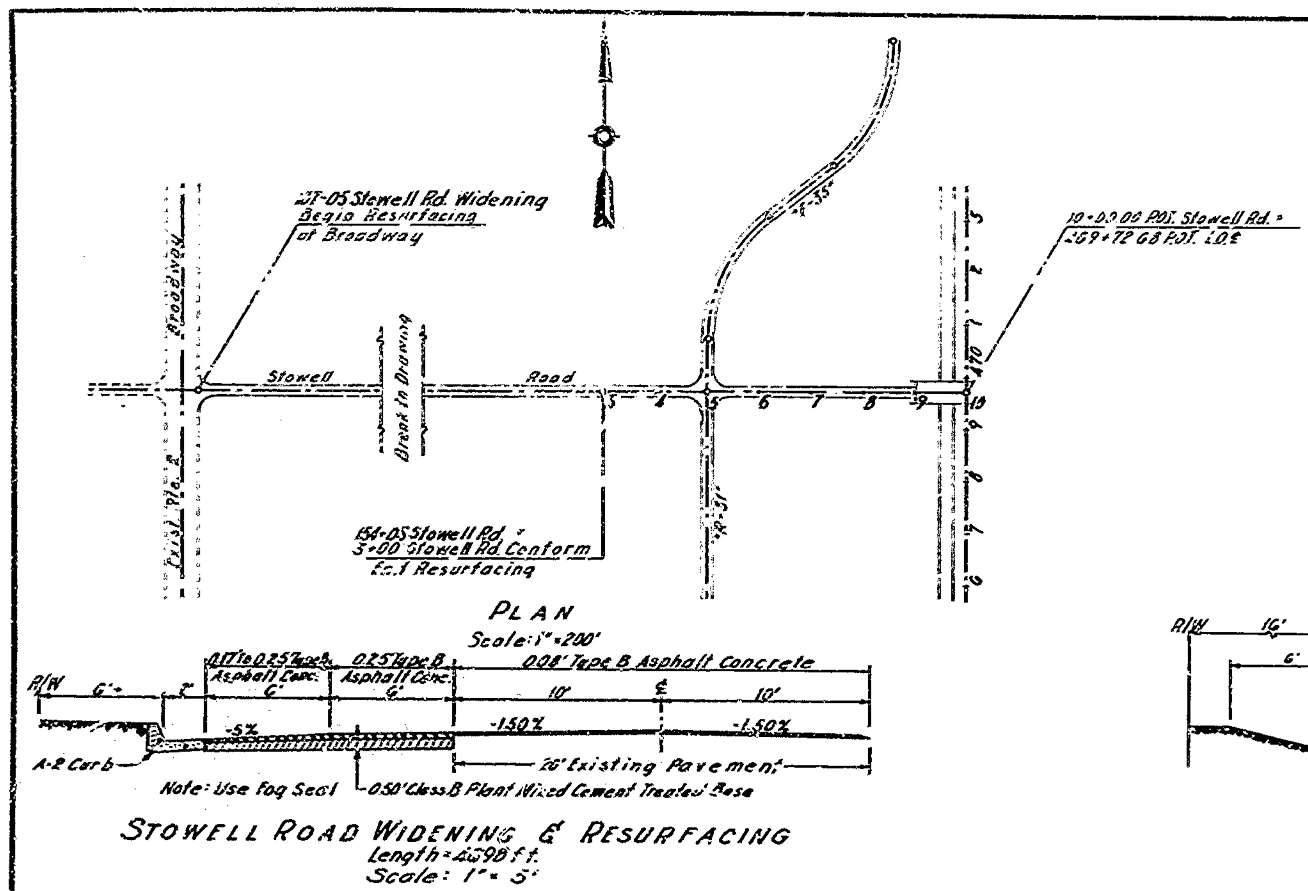
15

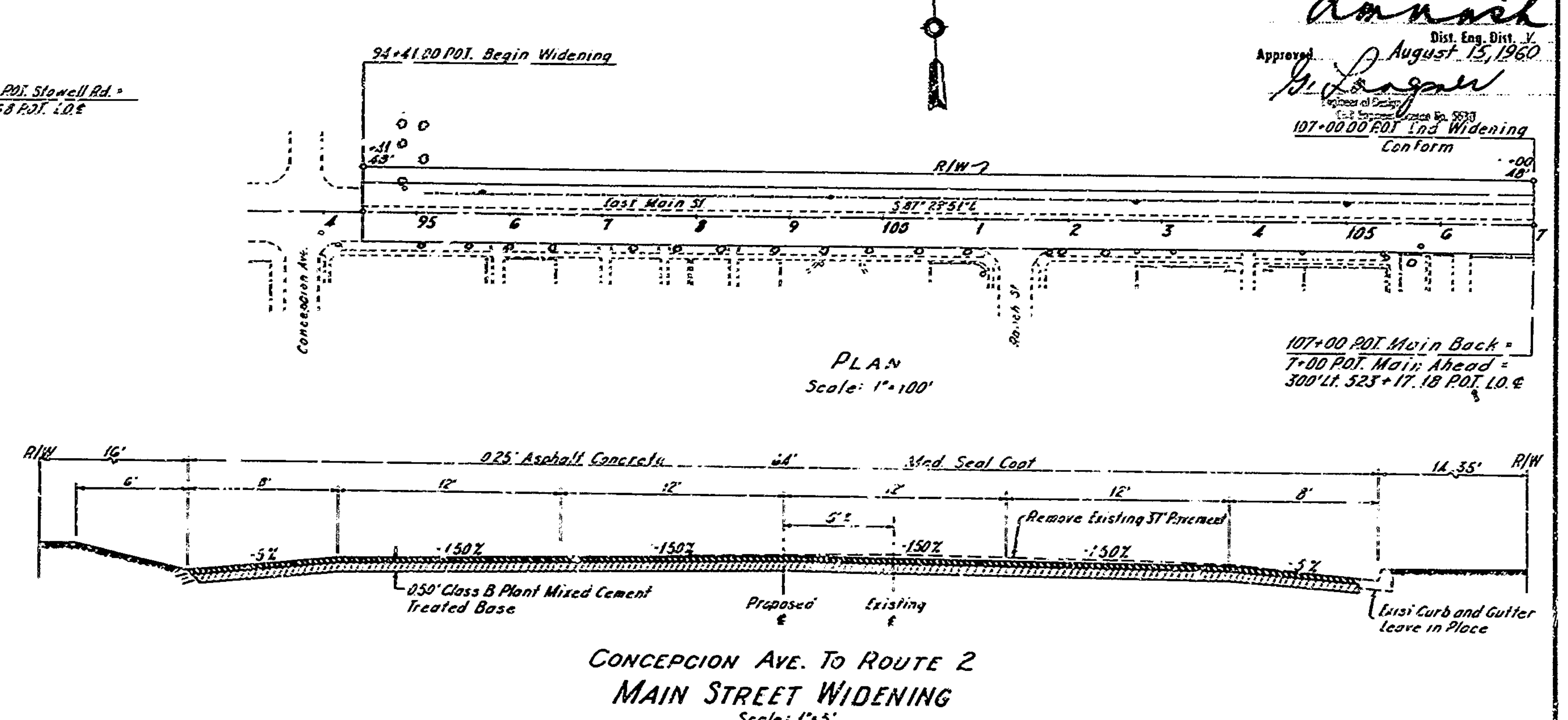
PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
R. E. Ingalls	2/60	Harlan Smith	2/60	[illegible]	2/60

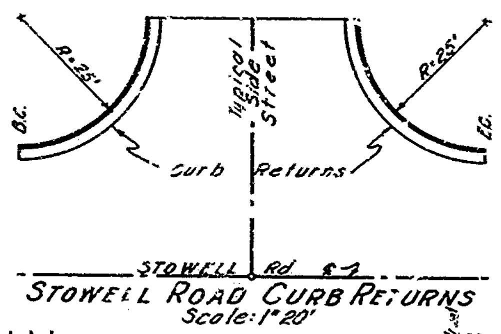

CITY OF SANTA MARIA
Grid N.
True N.
V SB 2 L.S.Ma 16 137
August 15, 1960
Santa Maria Valley Railroad
LL County Easement
City Limit
Bradley Rd.
Bridge #51-200L
Bridge #51-200R
Exist. 12000 Gallon Tank
N 3°55'00"E 3176.64'
Channel Easement
Bradley Channel Change (South) ℄
"L.O.℄"
R=15,000'
Δ=2°12'00"
T=288.01'
L=575.96'
Coordinate bearings and distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.00008435 to obtain ground level distances.
La Brea Securities Co.
U.S.C. & G.S. Datum
B.M. #G-2
Nail in S. End of H.W.
133' Lt. 496+65
Elev. 261.673
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
TYPE "A" SURVEY MONUMENTS
Station
Offset
Ref. No.
Coordinates
N
E
493+94.67 E.C.
503+00 P.O.T.
502+00±
511+00±
1200' V.C.
-2.35%
800' V.C.
Ground Line
-0.09%
Bradley Channel Change (South) Profile
Channel Change Stationing
61-5V13C11

DIST.	COUNTY	ROUTE	SEC.	SHEET NO.	TOTAL SHEETS
V	SB	148	S.Mra	17	137

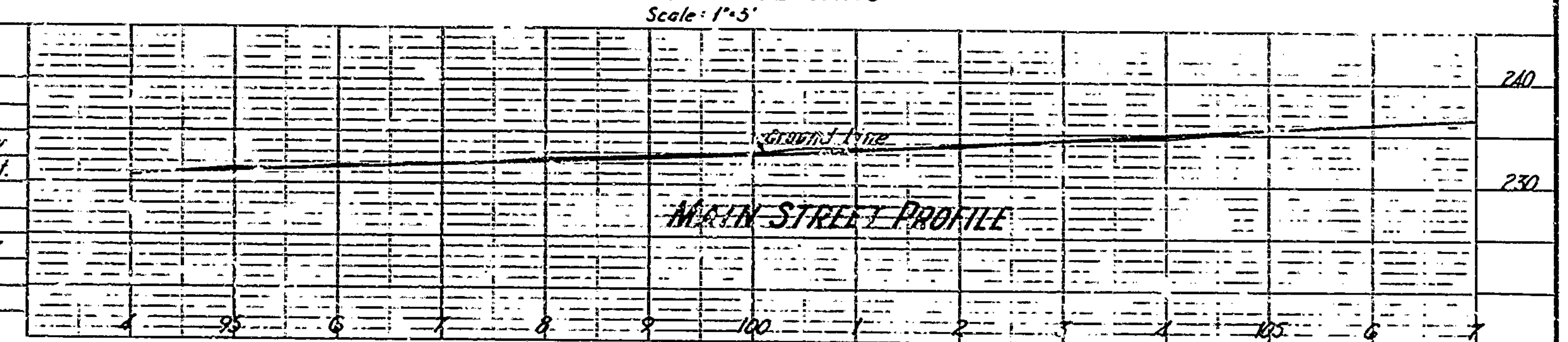
Approved: August 15, 1960 — Dist. Eng. Dist. V

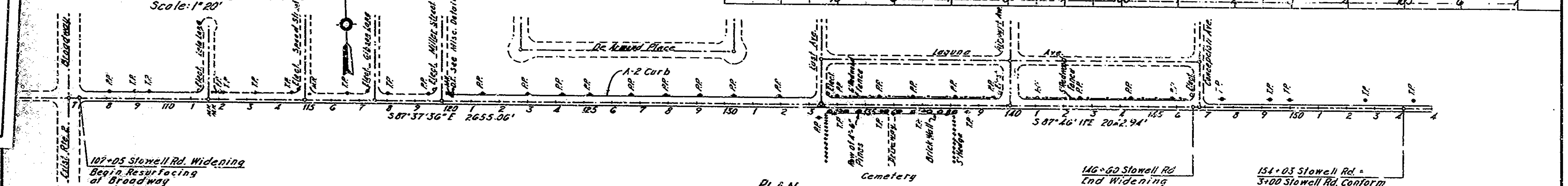


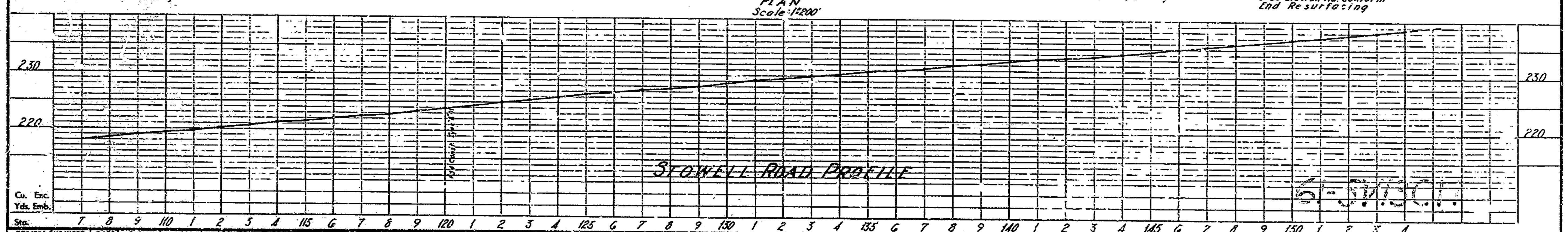




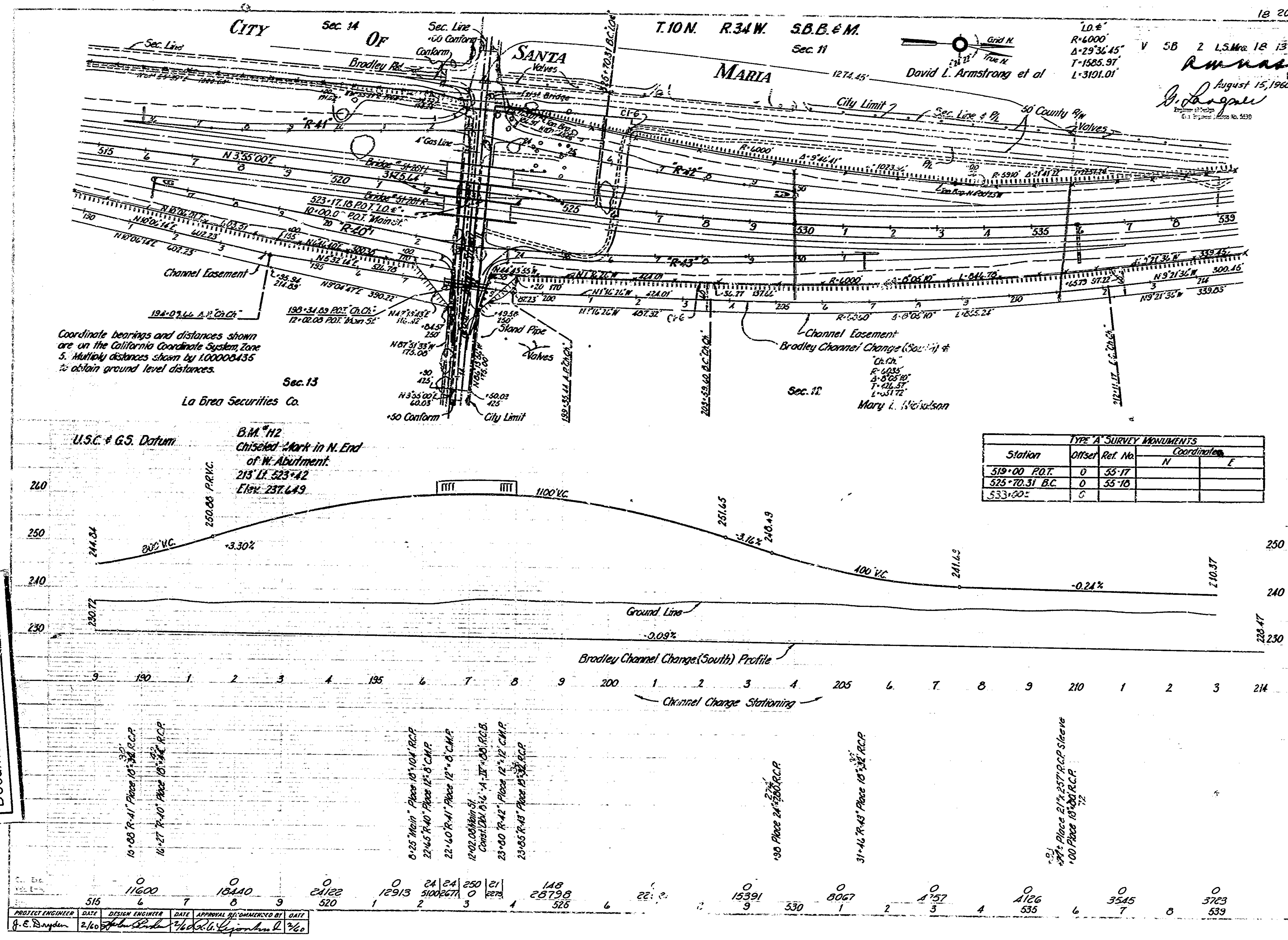
LOCATIONS OF CURB NORTH SIDE OF STOWELL ROAD			
Location		Length Inc. Curb Return	
E.C.	B.C.		
107 + 30	111 + 18	465.6	New
112 + 08	114 + 66	Leave in Place	Exist.
115 + 52	117 + 17	"	"
117 + 98	119 + 47	"	"
120 + 38	133 + 01	1341.6	New
133 + 67	139 + 57	668.6	"
140 + 67	146 + 35	646.6	"







Project Engineer: J. E. Dryden — Date: 2/60



City of Santa Maria
Sec. 14
Sec. 11
Sec. 13
Sec. 12
T. 10 N. R. 34 W. S.B.B. & M.
Sec. Line
+50 Conform
Bradley Rd.
Valves
City Limit
Sec. Line & R/L
50' County R/W
David L. Armstrong et al
La Brea Securities Co.
Mary L. Nelsdson
Channel Easement
Bradley Channel Change (South) ℄
Stand Pipe
4" Gas Line
Coordinate bearings and distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.00006435 to obtain ground level distances.
L.O.℄
R=6000'
Δ=29°36'45"
T=1585.97'
L=3101.01'
V SB 2 L.S.Mra. 18 137
August 15, 1960
U.S.C. & G.S. Datum
B.M. #H2
Chiseled Mark in N. End of W. Abutment.
213' Lt. 523+42
Elev. 237.49
1100' V.C.
800' V.C.
400' V.C.
+3.30%
-3.16%
-0.24%
-0.09%
Ground Line
Bradley Channel Change (South) Profile
Channel Change Stationing

TYPE 'A' SURVEY MONUMENTS				
Station	Offset	Ref. No.	Coordinates N	Coordinates E
519+00 P.O.T.	0	55-17		
525+70.31 B.C.	0	55-18		
533+00±	0			

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed ____
Document No. 50000536

18

T. 10 N. R. 34 W. S.B.B.&M.

Sec. 11

CITY OF SANTA MARIA

V 58 2 1.5 Mx 19 131

August 15, 1960

M.H. Concepcion & Bunnell

"L.O.E."
R=4000'
Δ=29°36'45"
T=1585.97'
L=3101.01'

City Limit Sec. Line & P/L — 30' County R/W — Bradley Rd.

David L. Armstrong et al

Manuel Fernandez et al

Valves

556+71.32 E.C. "L.O.E."

Grid N. (24°22' East N.)

N 25°41'45" W 2128.68'

N 25°41'45" W 1722.73'

N 25°41'45" W 770.68'

R=5910' Δ=21°31'22" L=2237.26'

R=6150' Δ=7°25'21" L=796.36'

R=6090' Δ=15°57'30" L=1696.40'

Stand Pipe

Pipe

Coordinate bearings and distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.0000843.5 to obtain ground level distances.

Bradley Channel Change (South) ℄

Mary E. Nicholson

Sec. 12

"Ch.Ch." R=6135' Δ=7°20'54" T=410.37' L=835.43'

Begins E.C. 224+13 Conform to Exist. Channel

J.P. Machado

City Limit

50' County R/W

44' County R/W

Manuel Fernandez et al

U.S.C. & G.S. Datum

B.M. "J2"
Mon. LS 2293-C.H.C. 9
16.6' RF 549+41
Elev. 234.338

Station	Offset	Ref. No.	Coordinates N	E
556+71.32 E.C.	0	55-19		
541+00±	0			
549+00±	0			

240.37'
228.47'
-0.09%
-0.24%
234.41'
Ground Lines
Bradley Channel Change (South) Profile

Channel Change Stationing

AT 20 227.42 Conform to Exist. Channel

+00 Place 18"ø R.C.P. 145'

+00 Place 18"ø R.C.P. 72'

+15 Place 21"x 14" R.C.P. Sleeve

+00 Place 18"ø R.C.P. 72'

+00 Place 18"ø R.C.P. 72'

Sta. Place 18"ø R.C.P. Sleeve

+25 Place 21"x 14" R.C.P. Sleeve

	539	540	1	2	3	4	545	6	7	8	9	550	1	2	3	4	555	6	7	8	9	560	1	2	563
		89 2964			311 1840		370 2166		74 3680		0 4762		5 4776		0 4406		0 3606		0 3939		0 3650		0 3764		0 1258

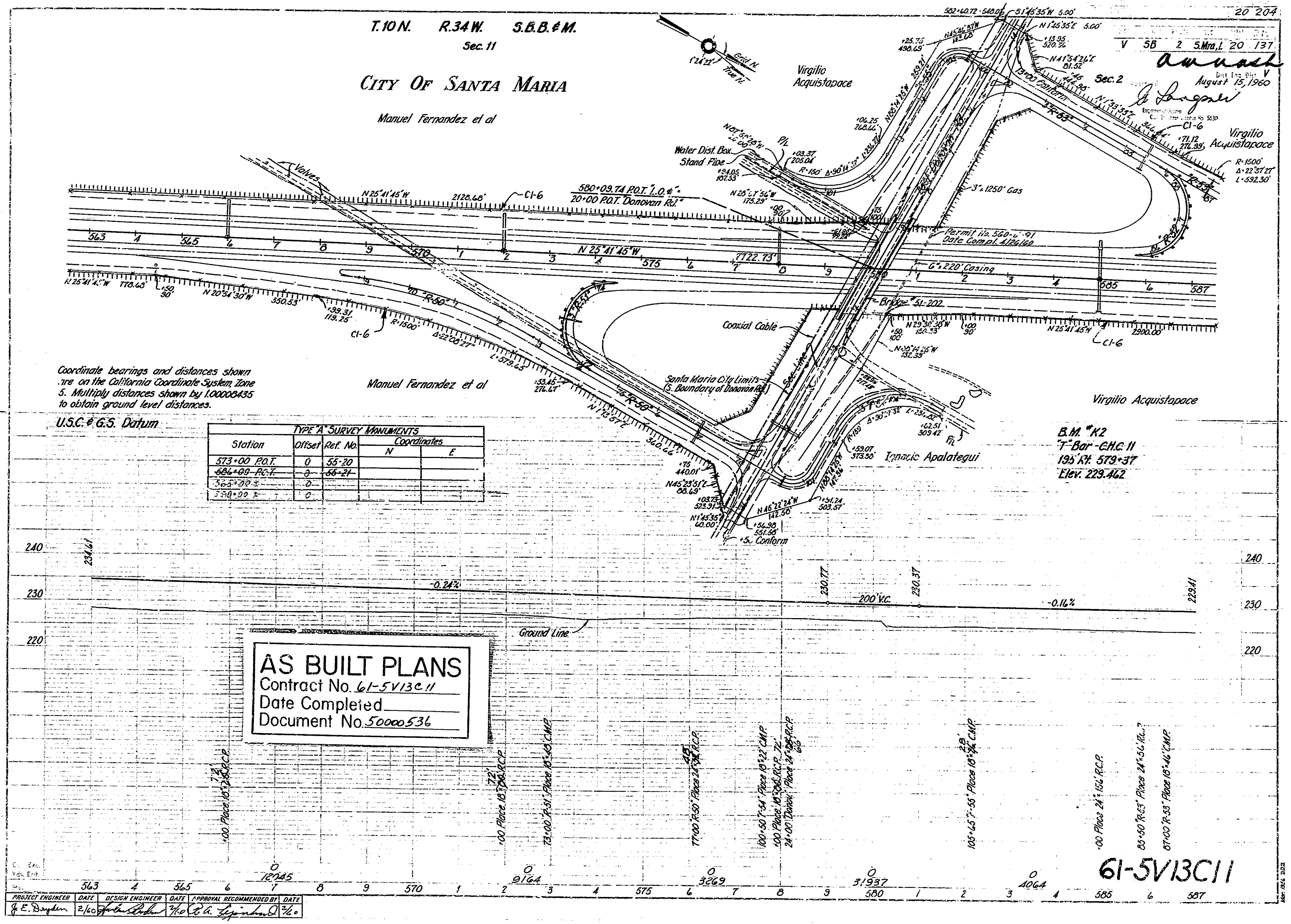
PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Snyder	2/60	[illegible]	2/60	[illegible]	2/60

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

19

MAY 1962



T.10N. R.34W. S.B.B.&M.
Sec. 11
CITY OF SANTA MARIA
Manuel Fernandez et al
Virgilio Acquistapace
Sec. 2
Water Dist. Box
Stand Pipe
N 25°41'45"W
580+09.74 P.O.T. "I.O.C."
20+00 P.O.T. Donovan Rd.
3" x 1250' Gas
G" x 220' Casing
Coaxial Cable
Bridge 51-202
Santa Maria City Limits (S. Boundary of Donovan Rd.)
Virgilio Acquistapace
Ignacio Apalategui
Coordinate bearings and distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.00008435 to obtain ground level distances.
U.S.C.&G.S. Datum
B.M. #K2
"T" Bar - C.H.C. 11
195' Rt. 579+37
Elev. 229.462
-0.24%
200' V.C.
-0.16%
Ground Line
August 15, 1960

TYPE "A" SURVEY MONUMENTS				
Station	Offset	Ref. No.	Coordinates	
			N	E
573+00 P.O.T.	0	55-20		
~~584+09 P.O.T.~~	~~0~~	~~55-21~~		
565+00 ±	0			
580+00 ±	0			

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

V 5B 2 S.Mra.L 20 137

21 204

V 5B 2 L 21 137

August 15, 1960

T. 10 N. R. 34 W. S.B.B.&M.

Sec. 2

Virgilio Acquistapace

Theodore Holcomb

Edna F. Roemer et al

Virgilio Acquistapace

Edna F. Roemer et al

Coordinate bearings and distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.00006435 to obtain ground level distances.

U.S.C. & G.S. Datum

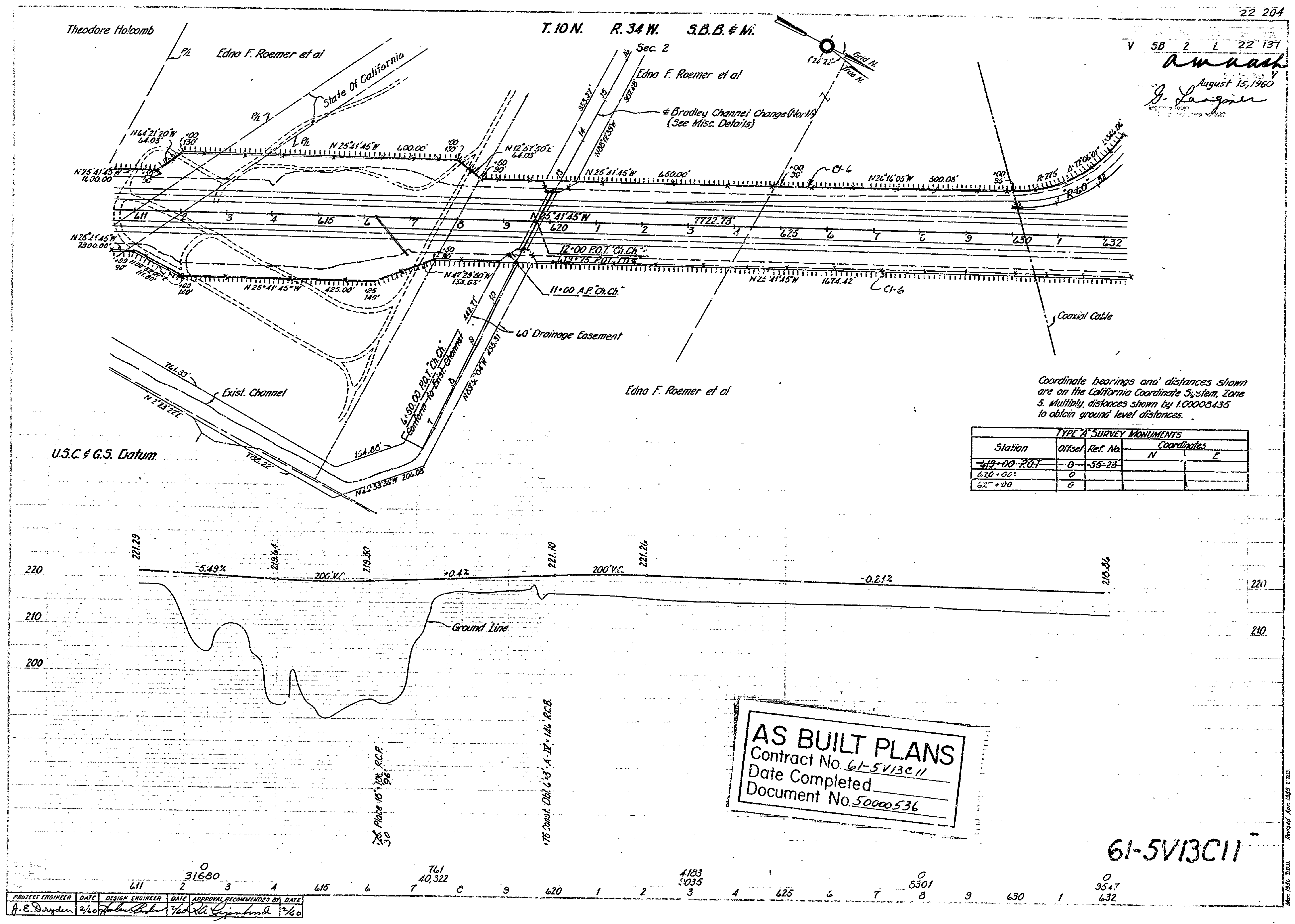
TYPE 'A' SURVEY MONUMENTS				
Station	Offset	Ref. No.	Coordinates N	E
582+30 P.O.T.	0	55-22		
590+83	0			
600.42	C			
613.100	C			

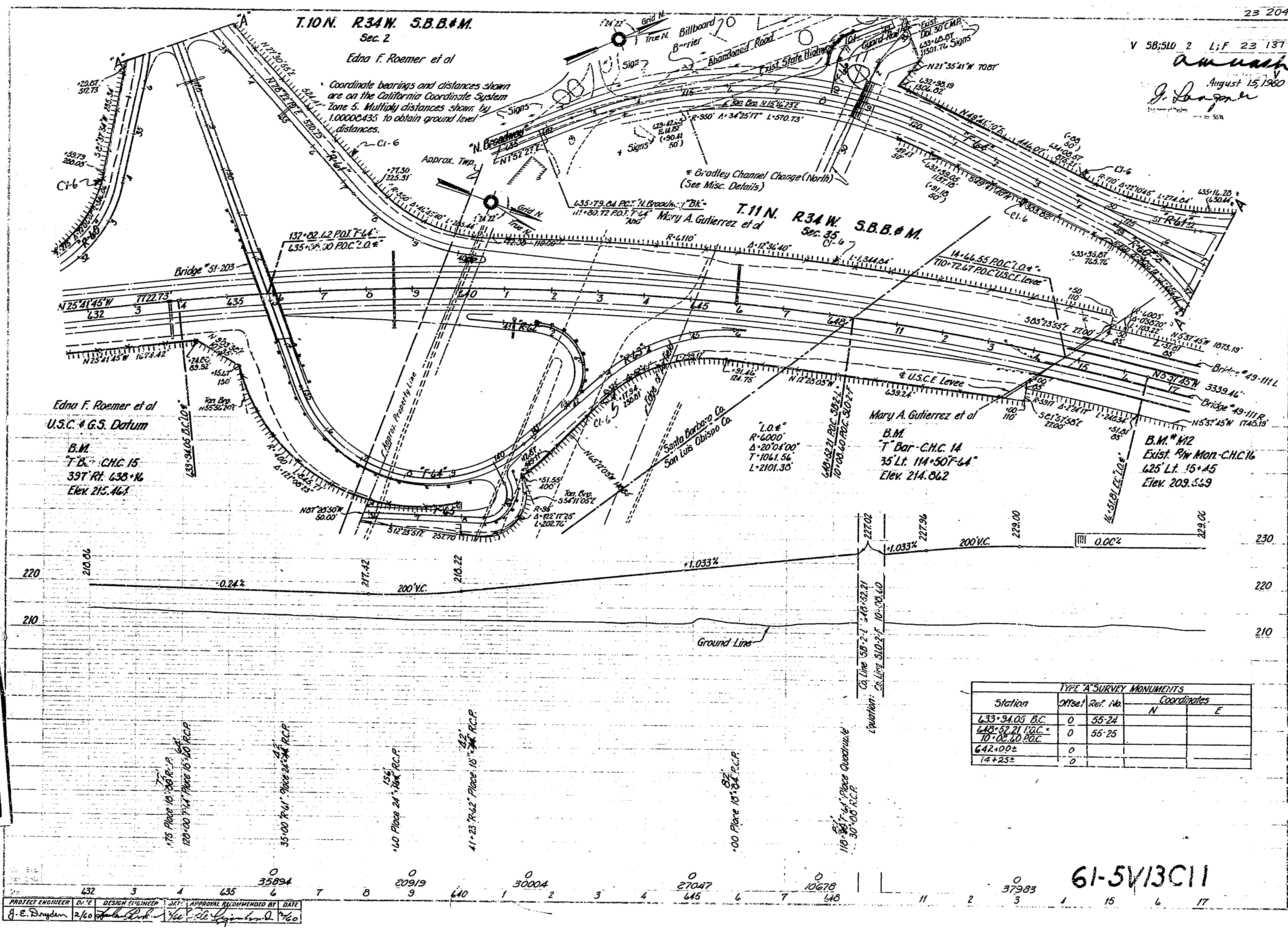
PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Snyder	2/60		2/60		3/60

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 500000536

61-5V13C11

21


22 204
V 5B 2 L 22 137
August 15, 1960
Theodore Holcomb
T. 10 N. R. 34 W. S.B.B. & M.
Sec. 2
Edna F. Roemer et al
State of California
Edna F. Roemer et al
Bradley Channel Change (North) (See Misc. Details)
Grid N.
True N.
N 25°41'45"W 400.00'
N 25°41'45"W 450.00'
N 26°16'05"W 500.03'
N 25°41'45"W 1600.00
N 25°41'45"W 2300.00'
N 25°41'45"W 425.00'
N 47°25'50"W 154.63'
N 22°41'45"W 1674.42
N 25°41'45"W
7722.73'
12+00 P.O.T. "Ch.Ch."
11+00 A.P. "Ch.Ch."
C1-6
60' Drainage Easement
Coaxial Cable
Exist. Channel
6+50.00 P.O.T. "Ch.Ch." Conform to Exist. Channel
Edna F. Roemer et al
U.S.C. & G.S. Datum
Coordinate bearings and distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.00008435 to obtain ground level distances.
TYPE "A" SURVEY MONUMENTS
Station | Offset | Ref. No. | Coordinates N | E
619+00 P.O.T. | 0 | 55-23
620+00 | 0
62_+00 | 0
220
210
200
221.29
219.64
219.30
221.10
221.26
218.86
-5.49%
200' V.C.
+0.4%
200' V.C.
-0.21%
Ground Line
30" Place 18" R.C.P.
+75 Const. Dbl. 6'x3' "A-II" x 146' R.C.B.
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
61-5V13C11
611 2 3 4 615 6 7 8 9 620 1 2 3 4 625 6 7 8 9 630 1 632
PROJECT ENGINEER | DATE | DESIGN ENGINEER | DATE | APPROVAL RECOMMENDED BY | DATE
A. E. Dryden | 2/60 | 2/60 | 2/60

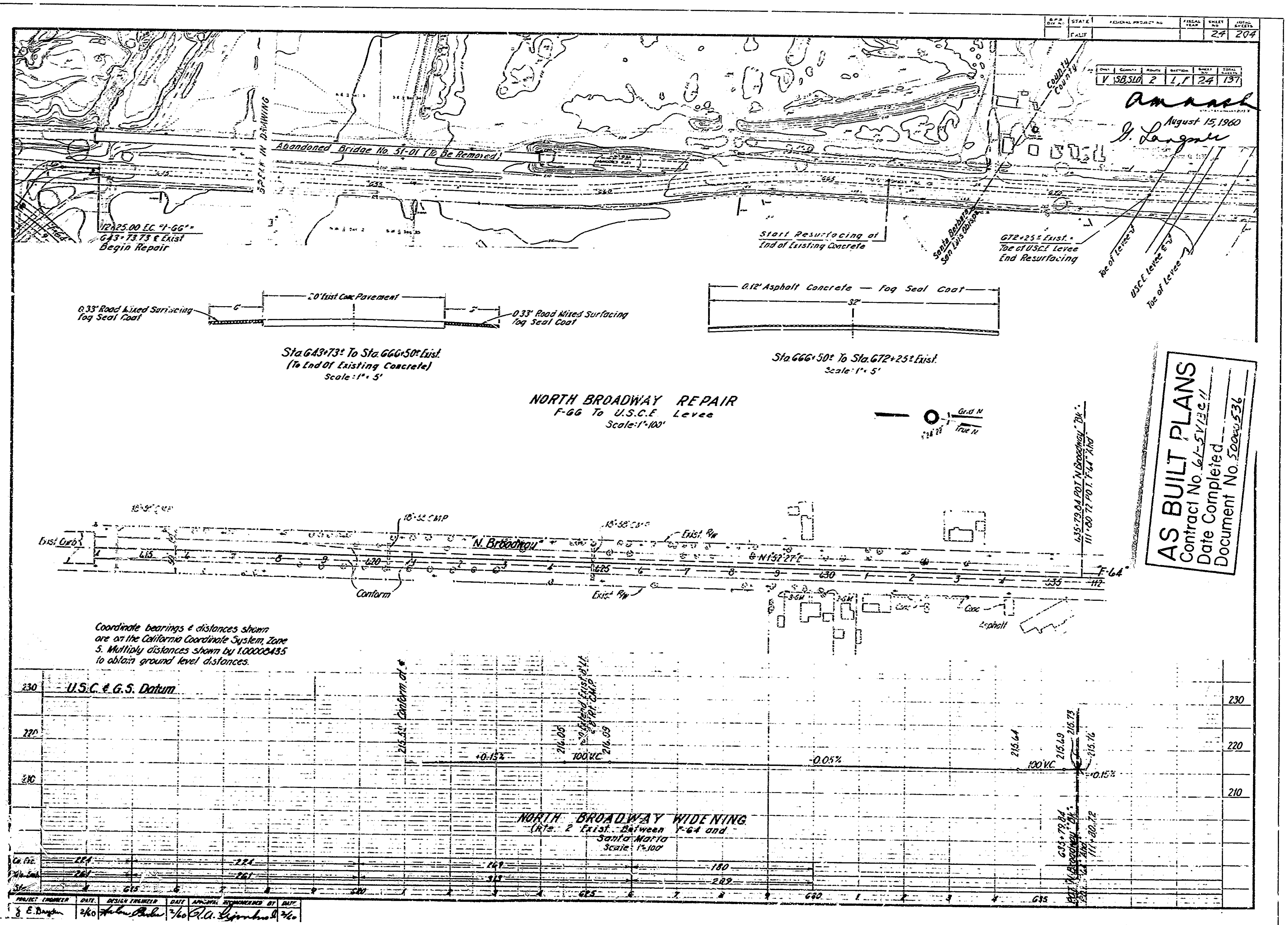


23 204
V SB;SLO 2 L;F 23 137
August 15, 1960
T. 10 N. R. 34 W. S.B.B.&M.
Sec. 2
Edna F. Roemer et al
Coordinate bearings and distances shown are on the California Coordinate System Zone 5. Multiply distances shown by 1.00008435 to obtain ground level distances.
Billboard
Barrier
Abandoned Road
Exist. State Highway
Signs
"N. Broadway"
Approx. Twp. Line
Grid N.
True N.
℄ Bradley Channel Change (North) (See Misc. Details)
T. 11 N. R. 34 W. S.B.B.&M.
Sec. 35
Mary A. Gutierrez et al
Bridge # 51-203
Bridge # 49-111 L
Bridge # 49-111 R
℄ U.S.C.E. Levee
Approx. Property Line
Santa Barbara Co.
San Luis Obispo Co.
Edna F. Roemer et al
U.S.C.&G.S. Datum
B.M. "T" Bar - C.H.C. 15 39' Rt. 638+16 Elev. 215.463
B.M. "T" Bar - C.H.C. 14 35' Lt. 114+50 "F-6A" Elev. 214.862
B.M. # M2 Exist. R/W Mon. - C.H.C. 16 625' Lt. 15+45 Elev. 209.569
"L.O.℄" R=6000' Δ=20°04'00" T=1061.56' L=2101.38'
-0.24%
200' V.C.
+1.033%
0.00%
Ground Line
Equation: Co. Line SB-2.21 = Co. Line SLO-0.0
230
220
210
632 3 4 635 6 7 8 9 640 1 2 3 4 645 6 7 648 11 2 3 4 15 6 17
35894
20919
30004
27047
10678
37983
61-5V13C11
PROJECT ENGINEER J. E. Dryden 2/60
DESIGN ENGINEER
APPROVAL RECOMMENDED BY

TYPE "A" SURVEY MONUMENTS				
Station	Offset	Ref. No.	Coordinates	
			N	E
633+94.05 B.C.	0	55-24		
648+52.21 P.O.C. = 10+02.60 P.O.C.	0	55-25		
642+00±	0			
14+25±	0			

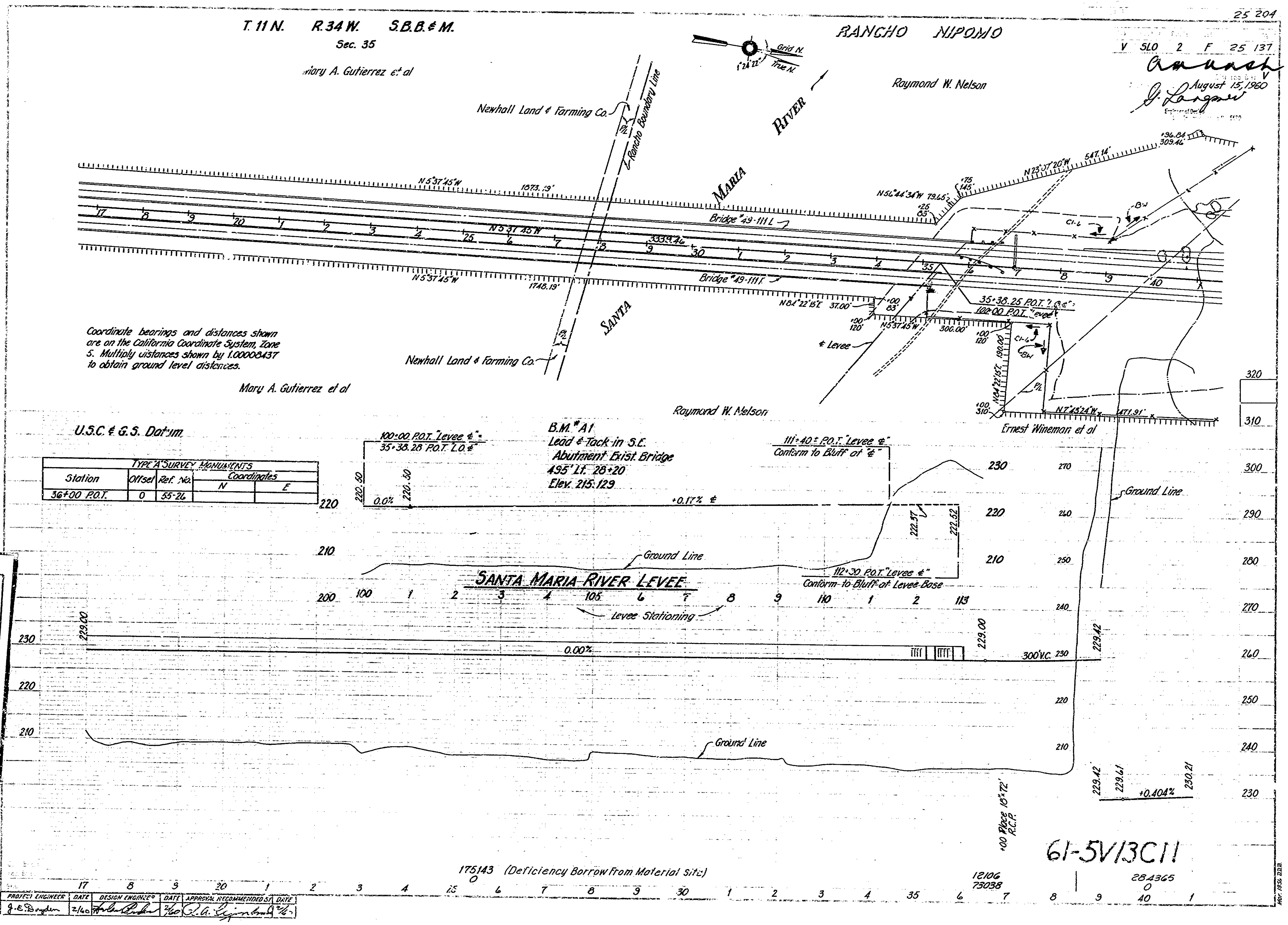
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

23



24
204
V
SB,SLO
2
L,F
24
137
August 15, 1960
Abandoned Bridge No. 51-01 (To Be Removed)
12+25.00 E.C. "F-66" = 643+73.73 ℄ Exist.
Begin Repair
Start Resurfacing at End of Existing Concrete
Santa Barbara
San Luis Obispo
County
County
672+25± Exist. = Toe of USCE Levee
End Resurfacing
Toe of Levee
USCE Levee ℄
Toe of Levee
20' Exist. Conc. Pavement
0.33' Road Mixed Surfacing Fog Seal Coat
0.33' Road Mixed Surfacing Fog Seal Coat
Sta. 643+73± To Sta. 666+50± Exist.
(To End Of Existing Concrete)
Scale: 1" = 5'
0.12' Asphalt Concrete — Fog Seal Coat
32'
Sta. 666+50± To Sta. 672+25± Exist.
Scale: 1" = 5'
NORTH BROADWAY REPAIR
F-66 To U.S.C.E. Levee
Scale: 1"=100'
Grid N
True N
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
18"-36" CMP
18"-32" CMP
18"-58" CMP
Exist. Curb
N. Broadway
Exist. R/W
N 13°27' E
Conform
Conc.
Asphalt
F-64
Coordinate bearings & distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.00008435 to obtain ground level distances.
U.S.C. & G.S. Datum
Conform at ℄
+0.15%
100' V.C.
-0.05%
100' V.C.
+0.15%
230
220
210
NORTH BROADWAY WIDENING
(Rte. 2 Exist. Between F-64 and Santa Maria)
Scale: 1"=100'
615
620
625
630
635
Project Engineer
Date
Design Engineer
Date
Approval Recommended By
Date

2.4

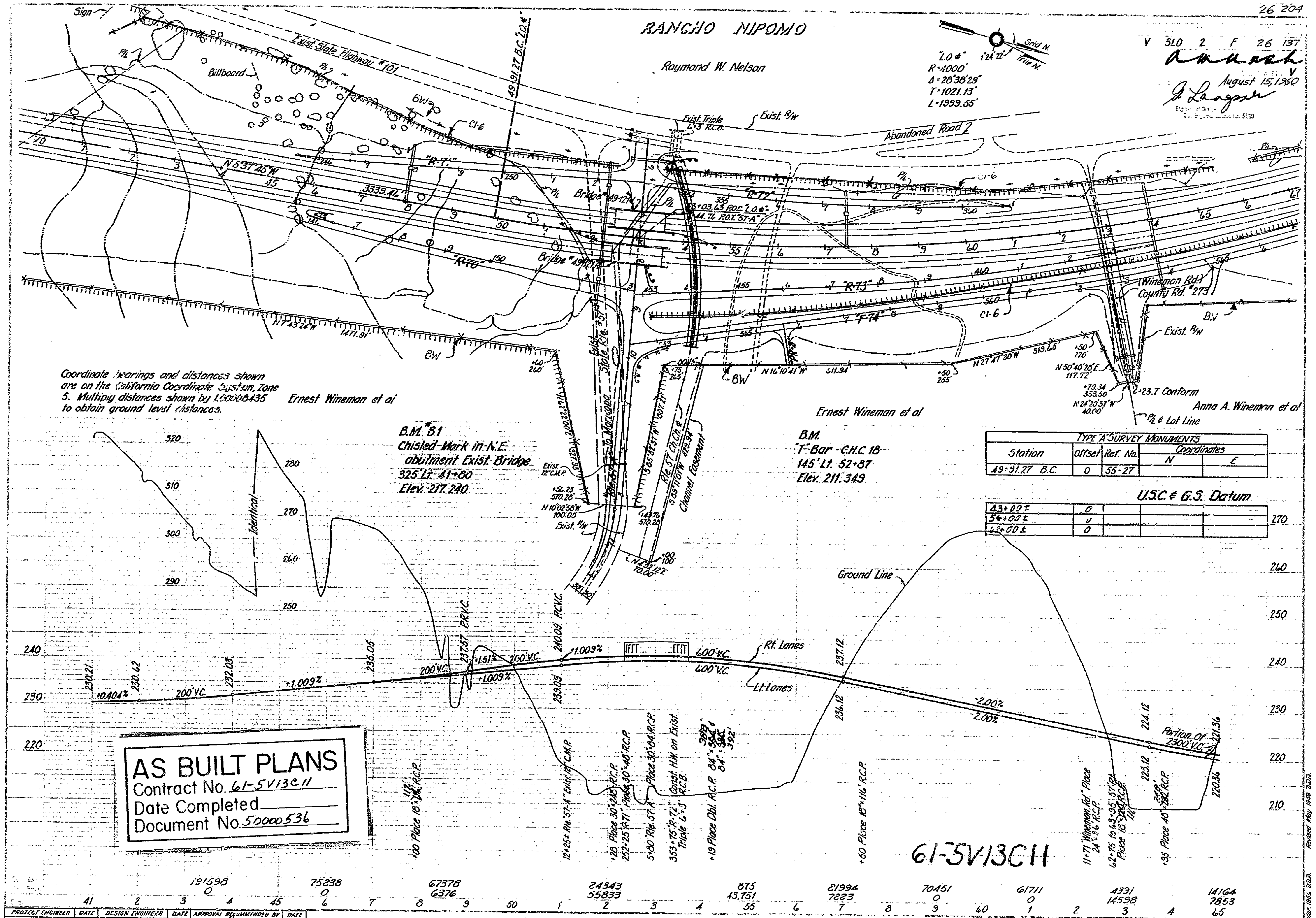


T. 11 N. R. 34 W. S.B.B.&M.
Sec. 35
RANCHO NIPOMO
25 204
V SLO 2 F 25 137
August 15, 1960
Mary A. Gutierrez et al
Newhall Land & Farming Co.
Rancho Boundary Line
Raymond W. Nelson
SANTA MARIA RIVER
Grid N.
True N.
N 5°37'45" W 1073.19'
N 5°37'45" W 1748.19'
N 5°37'45" W
Bridge #49-111 L
Bridge #49-111 R
N 56°44'34" W 79.65'
N 23°37'20" W 547.14'
N 84°22'15" E 57.00'
35+38.25 P.O.T. "L.O."
102+00 P.O.T. "Levee"
300.00'
N 7°45'24" W 471.91'
℄ Levee
Coordinate bearings and distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.00006437 to obtain ground level distances.
Newhall Land & Farming Co.
Mary A. Gutierrez et al
Raymond W. Nelson
Ernest Wineman et al
U.S.C. & G.S. Datum
100+00 P.O.T. "Levee ℄" = 35+38.28 P.O.T. "L.O. ℄"
B.M. # A1
Lead & Tack in S.E.
Abutment Exist. Bridge
495' Lt. 28+20
Elev. 215.129
111+40± P.O.T. "Levee ℄"
Conform to Bluff at "℄"
+0.17% ℄
0.0%
Ground Line
SANTA MARIA RIVER LEVEE
112+30 P.O.T. "Levee ℄"
Conform to Bluff at Levee Base
Levee Stationing
0.00%
300' V.C.
Ground Line
+0.404%
+00 Place 10"x72" R.C.P.
61-5V13C11
175143 (Deficiency Borrow From Material Site)
12106
73038
284365

Type "A" Survey Monuments				
Station	Offset	Ref. No.	Coordinates N	Coordinates E
36+00 P.O.T.	0	55-26		

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed ____
Document No. 50000336

25



26 204
RANCHO NIPOMO
Raymond W. Nelson
V SLO 2 F 26 137
August 15, 1960
"L.O.¢" R=4000' Δ=28°38'29" T=1021.13' L=1999.55'
Grid N.
True N.
Exist. State Highway #101
Billboard
Sign
Abandoned Road 2
Exist. Triple 6'x3' R.C.B.
Exist. R/W
Bridge #49-171R
Bridge #49-171L
"R-T1"
"R-T6"
"R-T3"
"R-T7"
"F-T4"
N 53°17'45"W
3339.46'
N 17°43'24"W 1471.51'
Wineman Rd. County Rd. 273
+23.7 Conform
Anna A. Wineman et al
P/L & Lot Line
N 16°10'41"W
N 27°47'30"W
N 50°40'28"E 117.72'
N 24°20'51"W 40.00'
Channel Easement
Coordinate bearings and distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.00008435 to obtain ground level distances.
Ernest Wineman et al
B.M. 81 Chisled Mark in N.E. abutment Exist. Bridge 325' Lt. 41+80 Elev. 217.240
B.M. "T" Bar - C.H.C. 18 145' Lt. 52+87 Elev. 211.349
Identical
Ground Line
Rt. Lanes
Lt. Lanes
+0.404%
+1.009%
+1.514%
+1.009%
-2.00%
200' V.C.
400' V.C.
Portion of 2300' V.C.
61-5V13C11

TYPE "A" SURVEY MONUMENTS				
Station	Offset	Ref. No.	Coordinates N	Coordinates E
49+91.27 B.C.	0	55-27		

U.S.C. & G.S. Datum

43+00 ±	0			
54+00 ±	0			
63+00 ±	0			

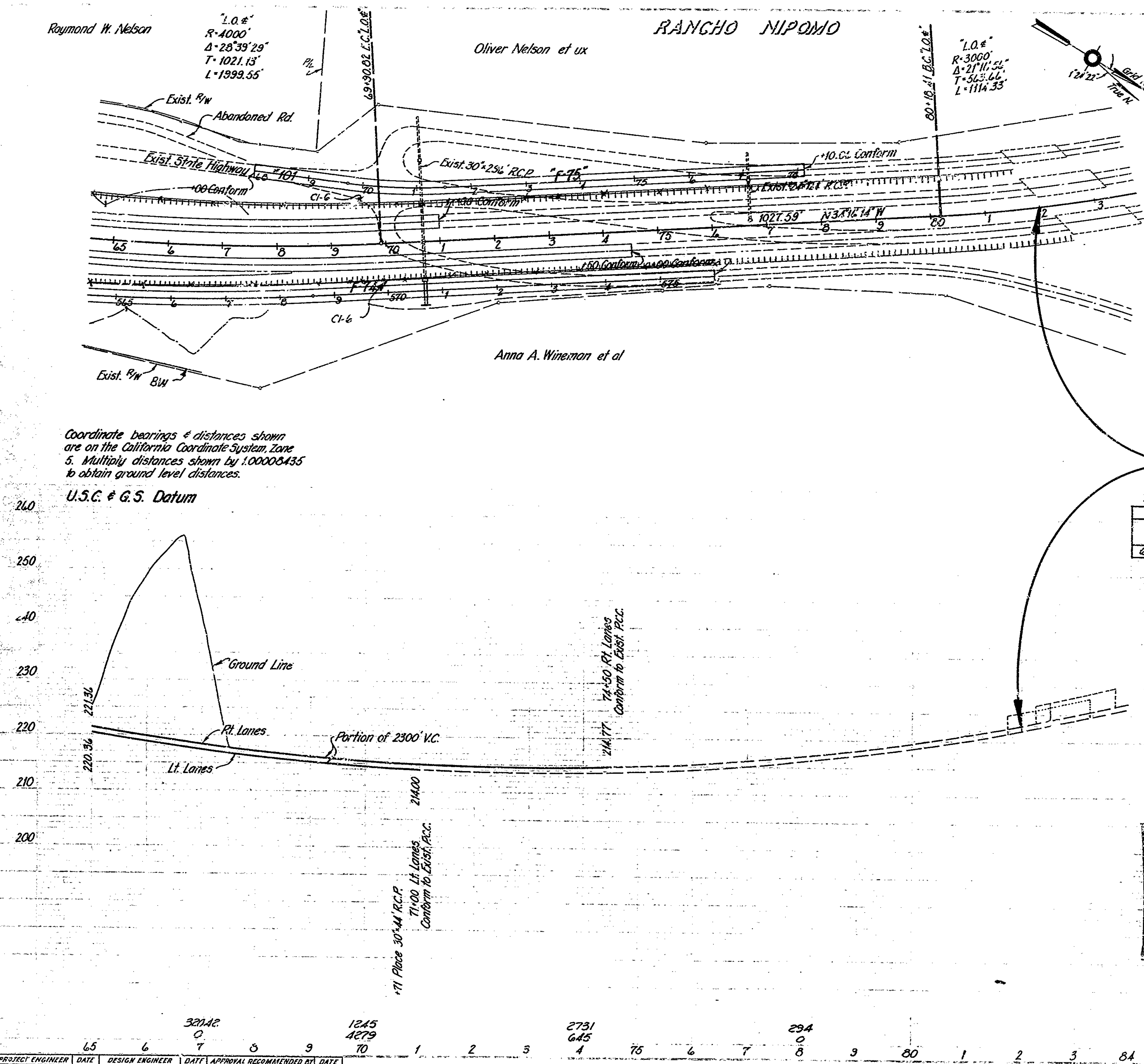
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Boyden	2/60	[signature]	2/60	[signature]	2/60

26

V SLO 2 F 27 137

August 15, 1960



RANCHO NIPOMO
Raymond W. Nelson
L.O.¢
R=4000'
Δ=28°39'29"
T=1021.13'
L=1999.55'
Oliver Nelson et ux
69+90.82 E.C. L.O.¢
80+10.41 B.C. L.O.¢
L.O.¢
R=3000'
Exist. R/W
Abandoned Rd.
Exist. State Highway
Exist. 30"x 254' R.C.P.
+10 C.L. Conform
1027.59' N3°16'14"W
Anna A. Wineman et al
End of Construction
Station 82+00
Ground Line
Rt. Lanes
Lt. Lanes
Portion of 2300' V.C.
74+50 Rt. Lanes Conform to Exist. P.C.C.
71+00 Lt. Lanes Conform to Exist. P.C.C.
+71 Place 30"x 44' R.C.P.

Coordinate bearings & distances shown are on the California Coordinate System, Zone 5. Multiply distances shown by 1.00008435 to obtain ground level distances.

U.S.C. & G.S. Datum

TYPE "A" SURVEY MONUMENTS				
STATION	OFFSET	REF. NO.	COORDINATES N	COORDINATES S
69+90.82 E.C.	3			

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60		2/60		2/60

61-5V13C11

27

28 204

V 58 2 L 28 137

Dist. August 15, 1960

"R-11"

"R-10"

"F-16"

"F-16"

"F-18"

"R-13"

Ground Line

Soline Grade

Exist. Pvmt.

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Brayton	2/60		2/60	C. A. Lyon	2/60

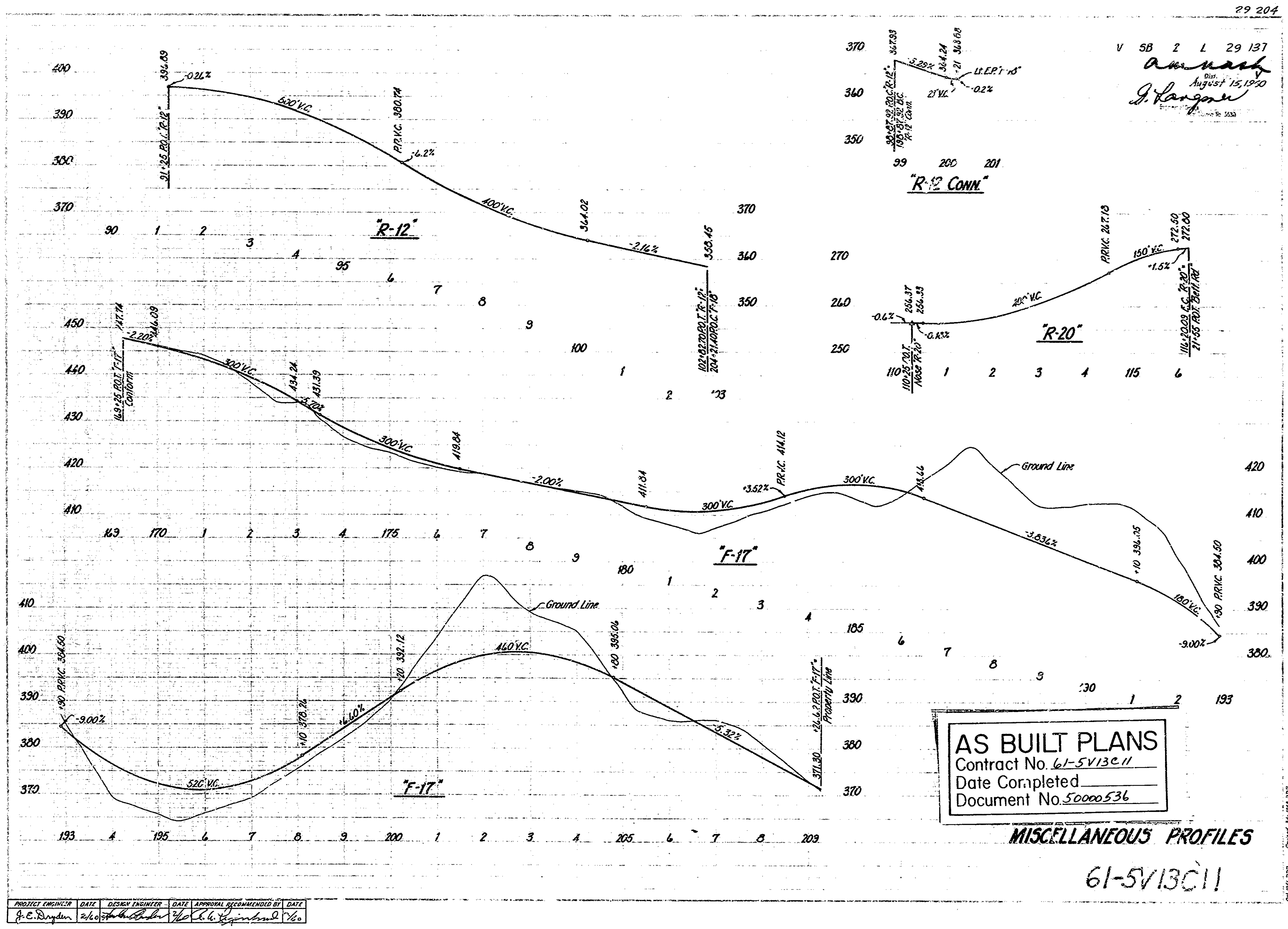
MISCELLANEOUS PROFILES

61-5V13C11

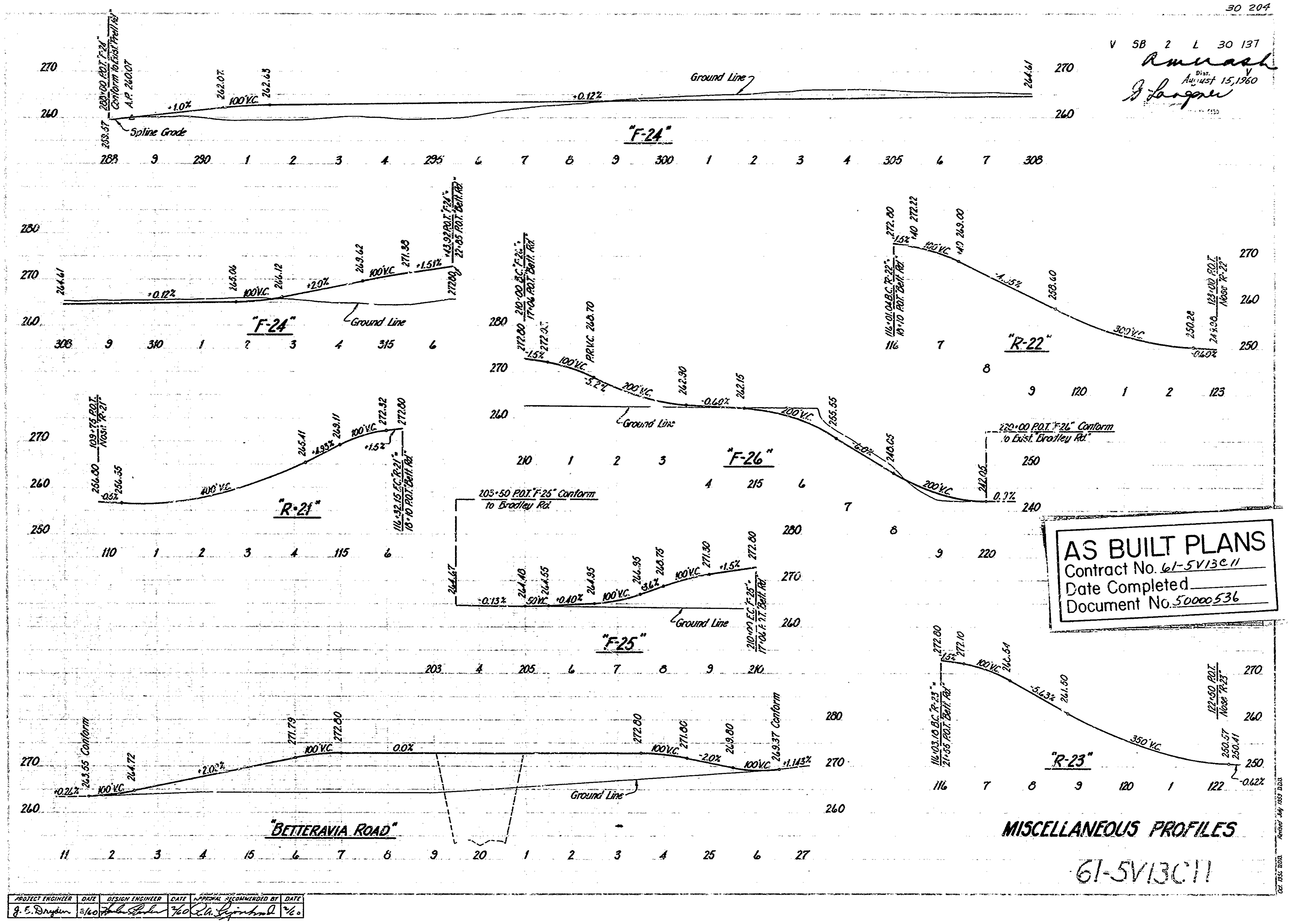
28

Revised June 1959 D.O.D.

Oct. 1956 D.O.D.

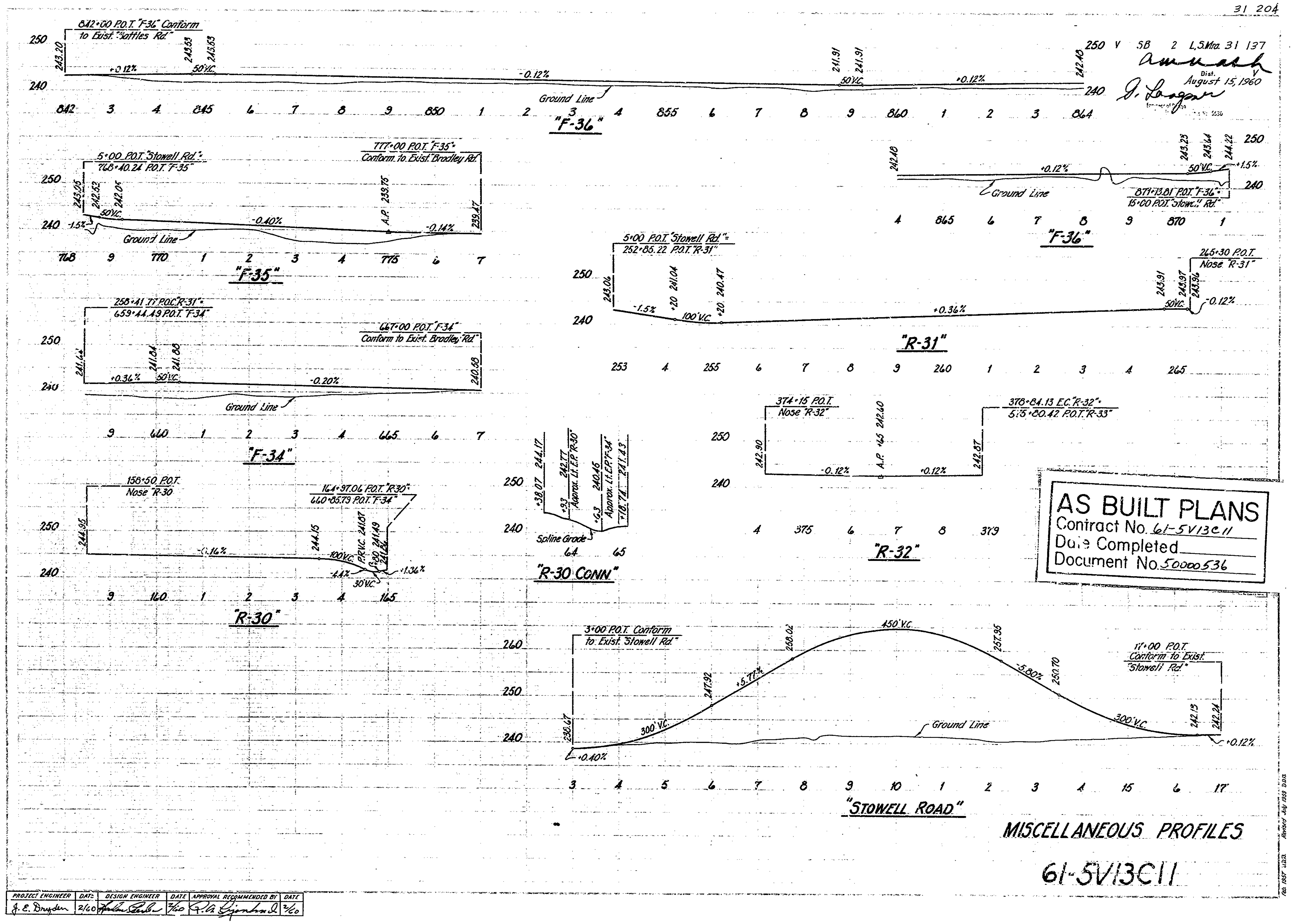

29 204
V SB 2 L 29 137
August 15, 1950
"R-12"
"R-12 CONN."
"R-20"
"F-17"
"F-17"
600' V.C.
400' V.C.
P.R.V.C. 380.74
-0.24%
-6.2%
-2.16%
364.02
358.46
394.83
91+25 P.O.C. "R-12"
300' V.C.
200' V.C.
150' V.C.
-2.20%
-2.00%
+3.52%
P.R.V.C. 414.12
-3.834%
180' V.C.
-9.00%
Ground Line
P.R.V.C. 384.50
520' V.C.
460' V.C.
+6.10%
-5.32%
Property Line
371.30
+10 378.26
20 392.12
+80 395.06
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
MISCELLANEOUS PROFILES
61-5V13C11
PROJECT ENGINEER
DATE
DESIGN ENGINEER
DATE
APPROVAL RECOMMENDED BY
DATE
J. E. Dryden

29

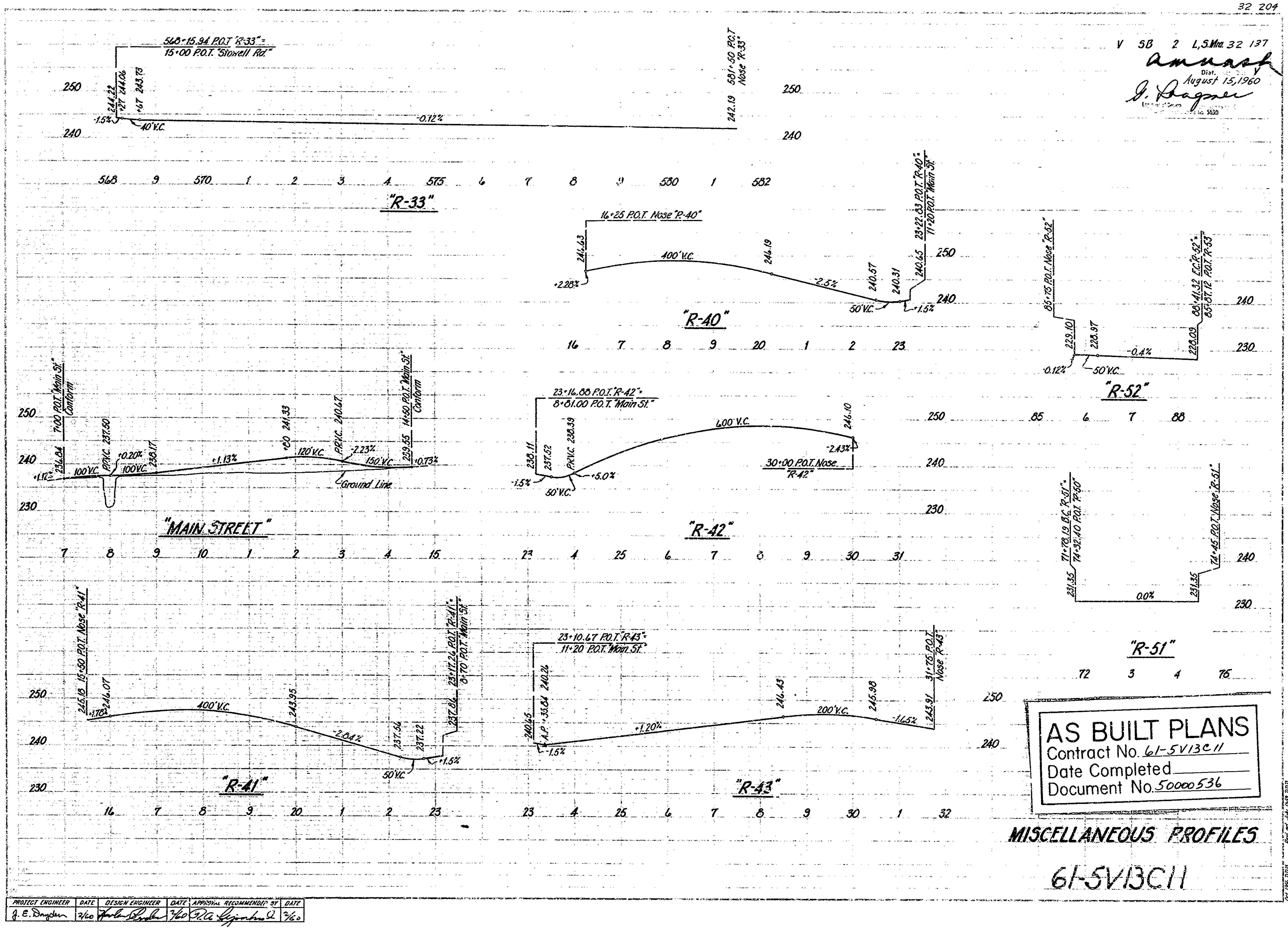


30 204
V SB 2 L 30 137
August 15, 1960
"F-24"
Spline Grade
Ground Line
"F-24"
Ground Line
"R-21"
"F-26"
Ground Line
"R-22"
"F-25"
Ground Line
205+50 P.O.T. "F-25" Conform to Bradley Rd.
220+00 P.O.T. "F-26" Conform to Exist. Bradley Rd.
"R-23"
"BETTERAVIA ROAD"
Ground Line
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
MISCELLANEOUS PROFILES
61-5V13C11
PROJECT ENGINEER
DATE
DESIGN ENGINEER
DATE
APPROVAL RECOMMENDED BY
DATE
J. E. Drydin

30

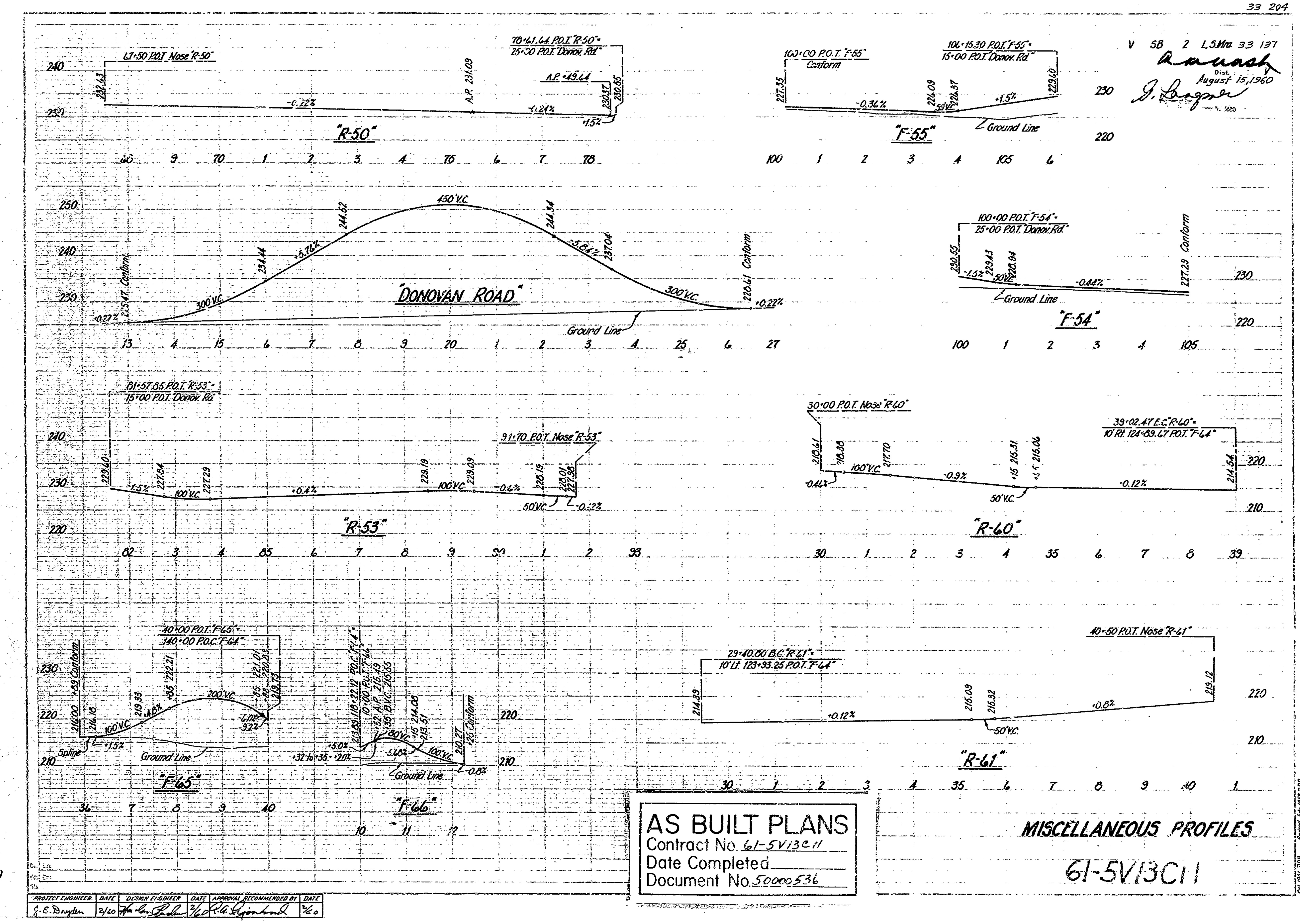

31 204
250 V SB 2 L.S.Mo. 31 137
Dist.
August 15, 1960
842+00 P.O.T. "F-36" Conform to Exist. "Saffles Rd."
-0.12%
+0.12%
50'V.C.
Ground Line
"F-36"
5+00 P.O.T. "Stowell Rd." = 768+40.24 P.O.T. "F-35"
777+00 P.O.T. "F-35" Conform. to Exist. Bradley Rd.
-0.40%
-0.14%
"F-35"
871+13.81 P.O.T. "F-36" = 15+00 P.O.T. "Stowell Rd."
5+00 P.O.T. "Stowell Rd." = 252+85.22 P.O.T. "R-31"
265+30 P.O.T. Nose "R-31"
+0.34%
100'V.C.
"R-31"
258+41.77 P.O.C. "R-31" = 659+44.49 P.O.T. "F-34"
667+00 P.O.T. "F-34" Conform to Exist. Bradley Rd.
-0.20%
"F-34"
374+15 P.O.T. Nose "R-32"
378+84.13 E.C. "R-32" = 515+80.42 P.O.T. "R-33"
-0.12%
+0.12%
"R-32"
156+50 P.O.T. Nose "R-30"
164+97.06 P.O.T. "R-30" = 660+65.73 P.O.T. "F-34"
"R-30"
Spline Grade
"R-30 CONN"
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
3+00 P.O.T. Conform to Exist. Stowell Rd.
17+00 P.O.T. Conform to Exist. Stowell Rd.
450'V.C.
300'V.C.
+5.77%
-5.80%
-0.40%
+0.12%
"STOWELL ROAD"
MISCELLANEOUS PROFILES
61-5V13C11
PROJECT ENGINEER | DATE | DESIGN ENGINEER | DATE | APPROVAL RECOMMENDED BY | DATE
J. E. Dryden | 2/60 | 2/60 | 2/60

31



32 204
V 5B 2 L.S.Ma 32 137
August 15, 1960
568+15.94 P.O.T. "R-33" = 15+00 P.O.T. "Stowell Rd."
581+50 P.O.T. Nose "R-33"
-0.12%
40' V.C.
"R-33"
16+25 P.O.T. Nose "R-40"
23+22.83 P.O.T. "R-40" = 11+20 P.O.T. "Main St."
400' V.C.
-2.5%
50' V.C.
"R-40"
"R-52"
-0.4%
50' V.C.
"MAIN STREET"
7+00 P.O.T. "Main St." Conform
14+50 P.O.T. "Main St." Conform
100' V.C.
120' V.C.
150' V.C.
+1.13%
-2.23%
Ground Line
23+14.88 P.O.T. "R-42" = 8+81.00 P.O.T. "Main St."
600' V.C.
30+00 P.O.T. Nose "R-42"
"R-42"
"R-51"
0.0%
15+80 P.O.T. Nose "R-41"
23+17.26 P.O.T. "R-41" = 8+70 P.O.T. "Main St."
400' V.C.
-2.04%
50' V.C.
"R-41"
23+10.47 P.O.T. "R-43" = 11+20 P.O.T. "Main St."
31+75 P.O.T. Nose "R-43"
+1.20%
200' V.C.
-1.65%
"R-43"
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
MISCELLANEOUS PROFILES
61-5V13C11
PROJECT ENGINEER | DATE | DESIGN ENGINEER | DATE | APPROVAL RECOMMENDED BY | DATE

V SB 2 L.S.Ma. 33 137


"R-50"
67+50 P.O.T. Nose "R-50"
78+61.64 P.O.T. "R-50" = 25+30 P.O.T. "Donov. Rd."
A.P. 231.09
A.P. +49.64
-0.22%
+1.24%
-1.5%
"DONOVAN ROAD"
450' V.C.
300' V.C.
300' V.C.
+5.76%
-5.64%
+0.22%
-0.22%
Ground Line
Conform
"R-53"
81+57.85 P.O.T. "R-53" = 15+00 P.O.T. "Donov. Rd."
91+70 P.O.T. Nose "R-53"
100' V.C.
100' V.C.
50' V.C.
-1.5%
+0.4%
-0.4%
"F-65"
40+00 P.O.T. "F-65" = 140+00 P.O.C. "F-64"
100' V.C.
200' V.C.
Ground Line
Spline
"F-66"
Ground Line
Conform
"F-55"
100+00 P.O.T. "F-55" Conform
106+15.30 P.O.T. "F-55" = 15+00 P.O.T. "Donov. Rd."
-0.36%
+1.5%
50' V.C.
Ground Line
"F-54"
100+00 P.O.T. "F-54" = 25+00 P.O.T. "Donov. Rd."
-1.5%
-0.44%
50' V.C.
Ground Line
Conform
"R-60"
30+00 P.O.T. Nose "R-60"
39+02.47 E.C. "R-60" = 10' Rt. 124+89.47 P.O.T. "F-64"
100' V.C.
-0.9%
-0.12%
50' V.C.
"R-61"
29+40.00 B.C. "R-61" = 10' Lt. 123+33.25 P.O.T. "F-64"
40+50 P.O.T. Nose "R-61"
+0.12%
+0.8%
50' V.C.
MISCELLANEOUS PROFILES
61-5V13C11

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

33

6

V 58;510 2 L;F 34 137

Dist. August 15, 1960

"N. BROADWAY"

"F-64"

"R-63"

"F-64"

"R-62"

"WINEMAN ROAD"

"F-71"

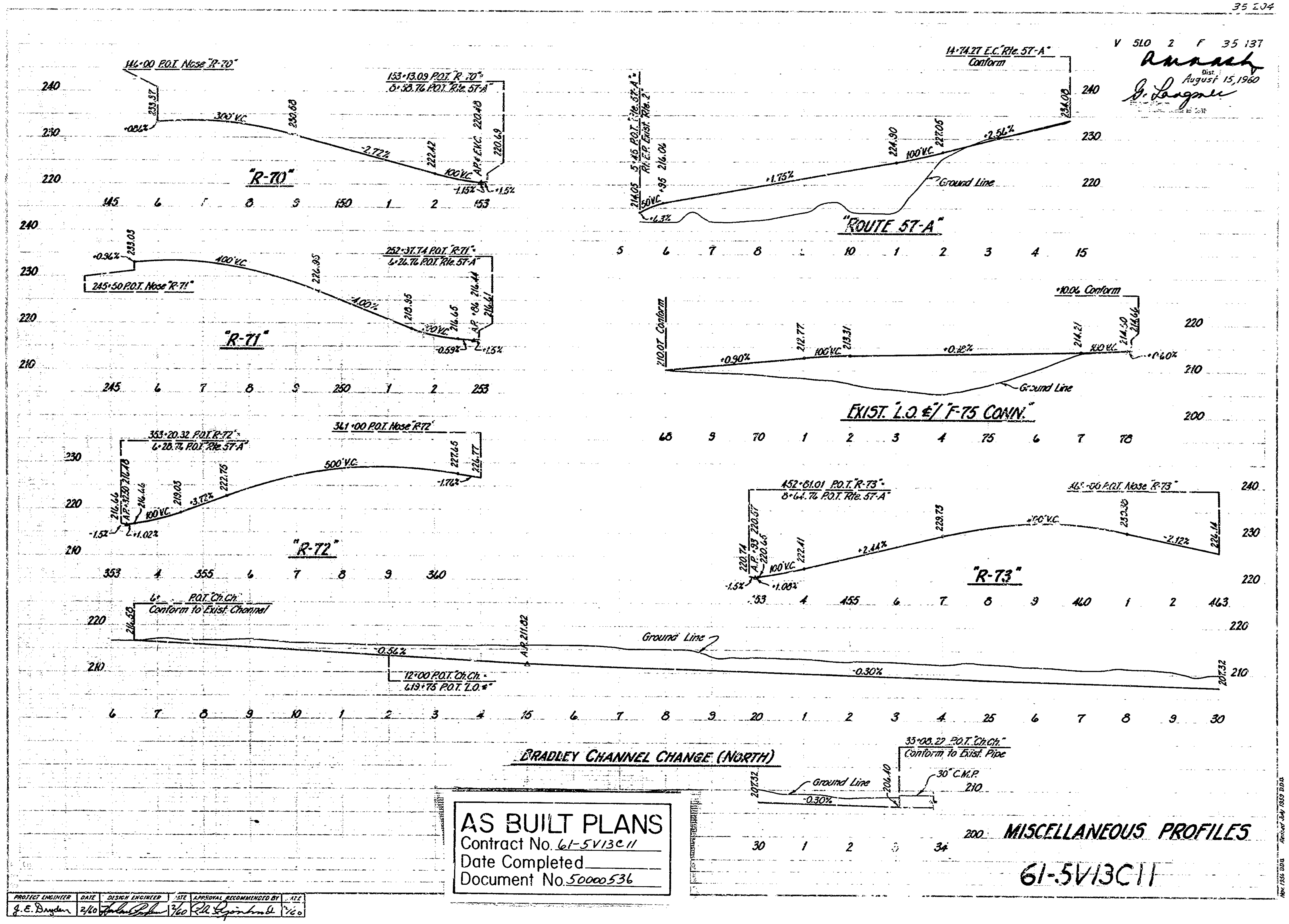
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

MISCELLANEOUS PROFILES

61-5V13CH

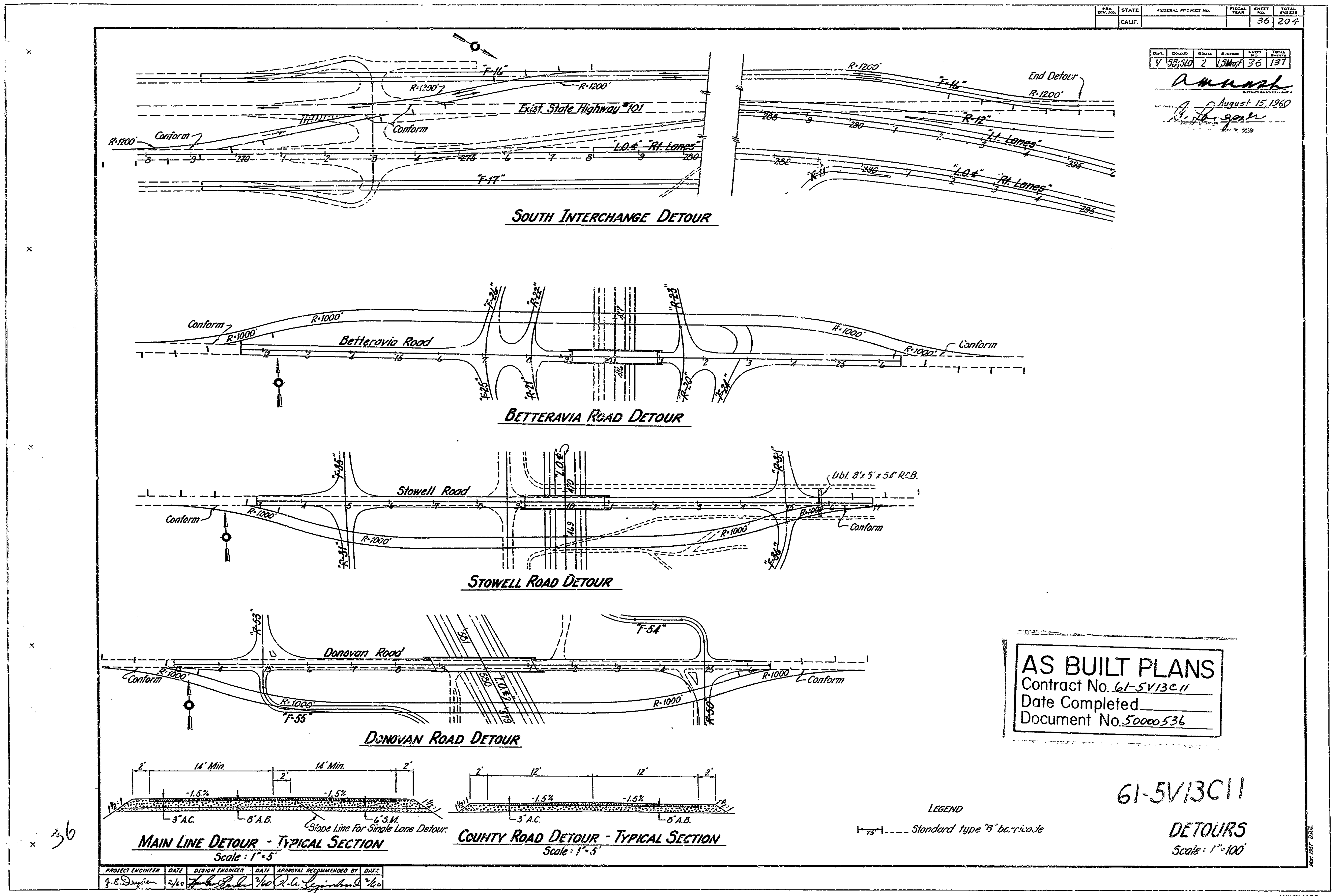
39

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dreyer	2/60		2/60		3/60



V 5LO 2 F 35 137
August 15, 1960
"R-70"
146+00 P.O.T. Nose "R-70"
153+13.09 P.O.T. "R-70" = 6+38.76 P.O.T. Rte. 57-A"
300' V.C.
-2.72%
100' V.C.
"R-71"
245+50 P.O.T. Nose "R-71"
252+37.74 P.O.T. "R-71" = 6+26.76 P.O.T. Rte. 57-A"
400' V.C.
-4.00%
"R-72"
353+20.32 P.O.T. "R-72" = 6+28.76 P.O.T. Rte. 57-A"
361+00 P.O.T. Nose "R-72"
500' V.C.
"ROUTE 57-A"
14+74.27 E.C. "Rte. 57-A" Conform
+1.75%
+2.56%
100' V.C.
Ground Line
EXIST. "L.O. ℄" / "F-75 CONN."
+10.06 Conform
"R-73"
452+81.01 P.O.T. "R-73" = 6+64.76 P.O.T. Rte. 57-A"
+2.44%
-2.12%
BRADLEY CHANNEL CHANGE (NORTH)
12+00 P.O.T. Ch.Ch. = 619+75 P.O.T. "L.O. ℄"
Conform to Exist. Channel
-0.56%
-0.30%
Ground Line
33+08.27 P.O.T. "Ch.Ch." Conform to Exist. Pipe
30" C.M.P.
MISCELLANEOUS PROFILES
61-5V13C11
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

35



CALIF. 36 204
V SB;SLO 2 36 137
August 15, 1960
SOUTH INTERCHANGE DETOUR
Exist State Highway #101
"F-16"
"F-17"
R-1200'
Conform
End Detour
"R-12"
"Lt. Lanes"
"L.O.⊄" "Rt. Lanes"
BETTERAVIA ROAD DETOUR
Betteravia Road
R-1000'
Conform
STOWELL ROAD DETOUR
Stowell Road
Dbl. 8'x 5' x 54' R.C.B.
DONOVAN ROAD DETOUR
Donovan Road
"F-54"
"F-55"
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
MAIN LINE DETOUR - TYPICAL SECTION
Scale: 1" = 5'
14' Min.
-1.5%
3" A.C.
8" A.B.
6" S.M.
Slope Line For Single Lane Detour
COUNTY ROAD DETOUR - TYPICAL SECTION
Scale: 1" = 5'
12'
-1.5%
3" A.C.
6" A.B.
LEGEND
Standard type "B" barricade
61-5V13C11
DETOURS
Scale: 1" = 100'

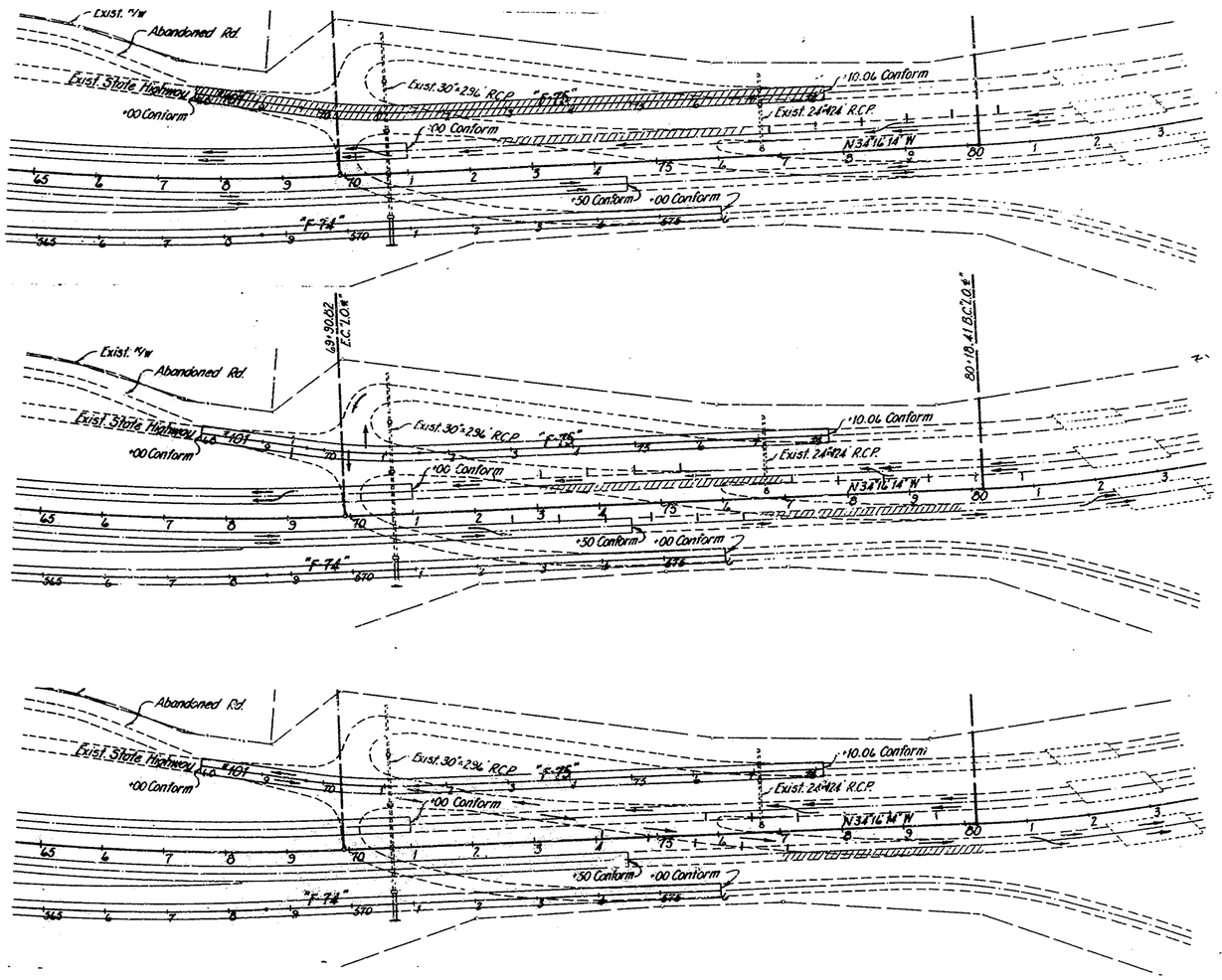
36

B.P.R. DIV. No.	STATE	FEDERAL PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
	CALIF.			37	204

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
V	SLO	2	F	37	137

August 15, 1960

Director of Public Works



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

LEGEND
Work to be done
Standard Type 'B' barricade

Note: Stages in order of construction.

61-5V13C11
DETOURS
NORTH END
Scale: 1"=100'

Design Dept.	Initial	Date
Designed		
Traced		
Checked		
Supervised By		

× 37

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY:	DATE
J. E. Brayden	2/60		2/60	Director of Public Works	2/60

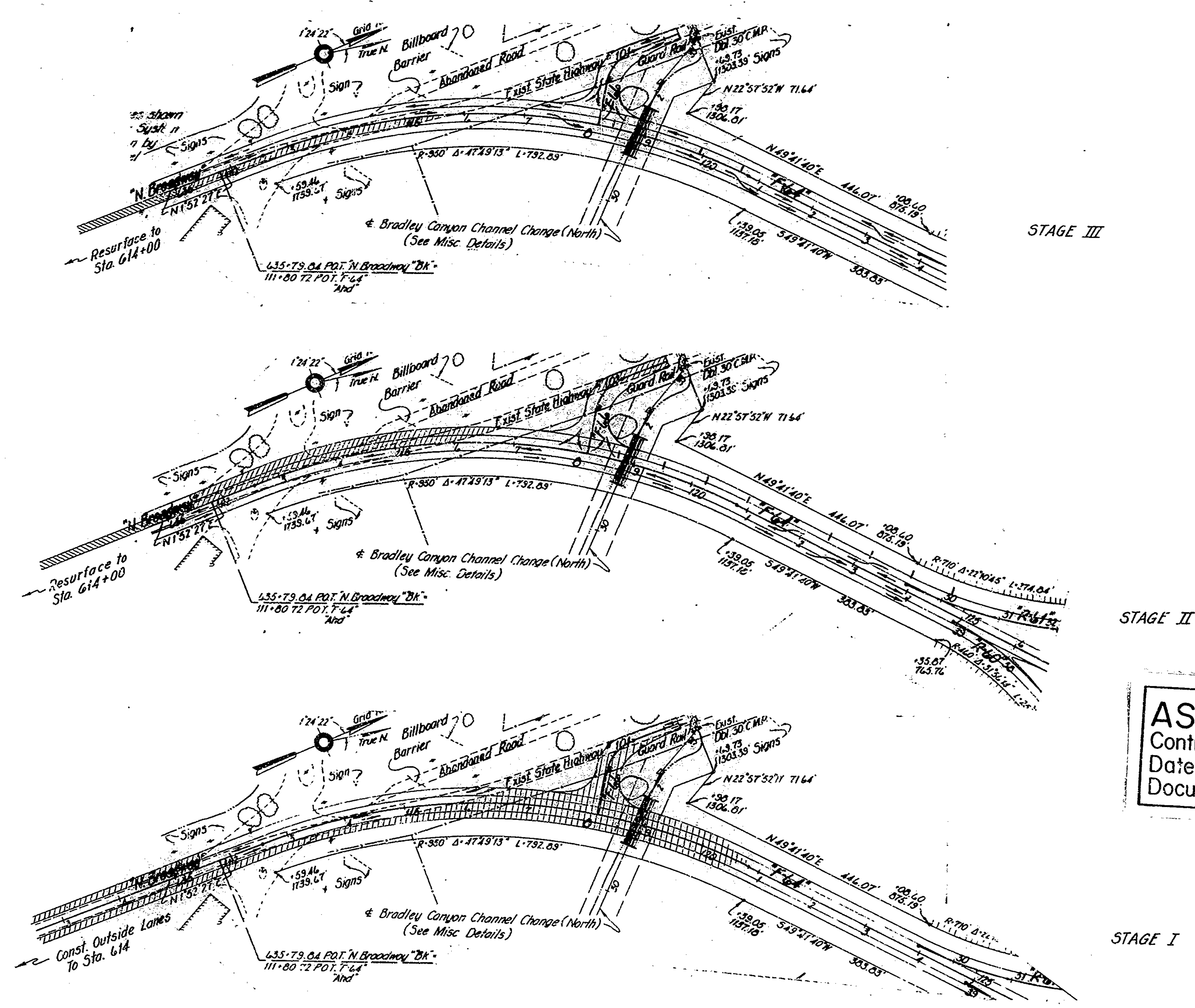
May 1950 B.P.R.

Form WH-23 PC

FED. RD. DIV. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			38	204

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB	2	L	38	137

August 15, 1960



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

Note:- Stages in order of construction.

LEGEND

Work to be done

Standard type "B" barricade

61-5V13C11

DETOURS

NORTH BROADWAY

Scale : 1" = 100'

Design Dept.	Initial	Date
Designed		
Traced		
Checked		
Supervised By		

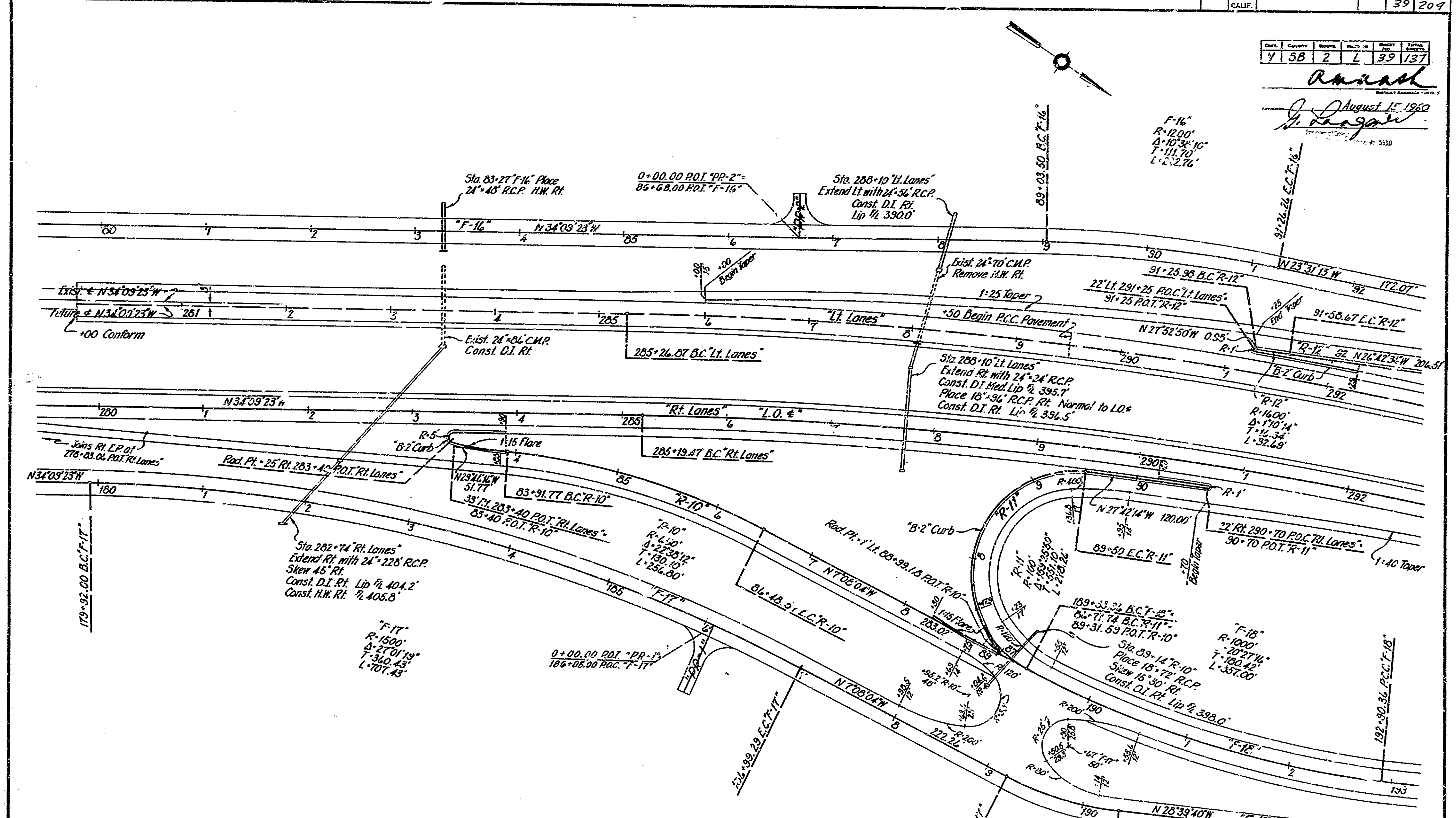
38

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60		2/60		2/60

STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
CALIF.			39	204

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB	2	L	39	137

August 1, 1960



AS BUILT PLANS	
Contract No.	61-5V13C11
Date Completed	
Document No.	50000536

61-5V13C11

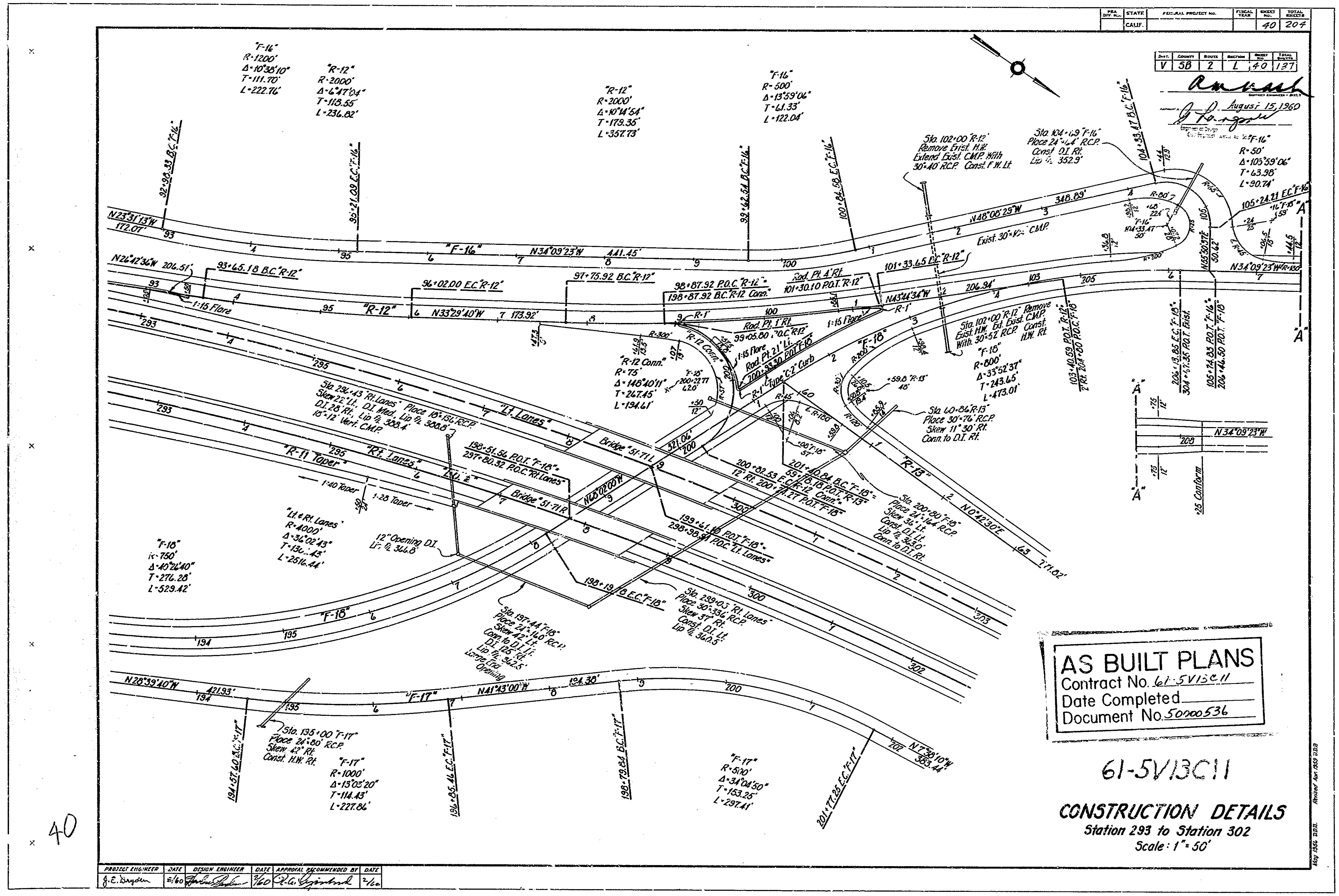
CONSTRUCTION DETAILS

Station 280 to Station 292

Scale: 1" = 50'

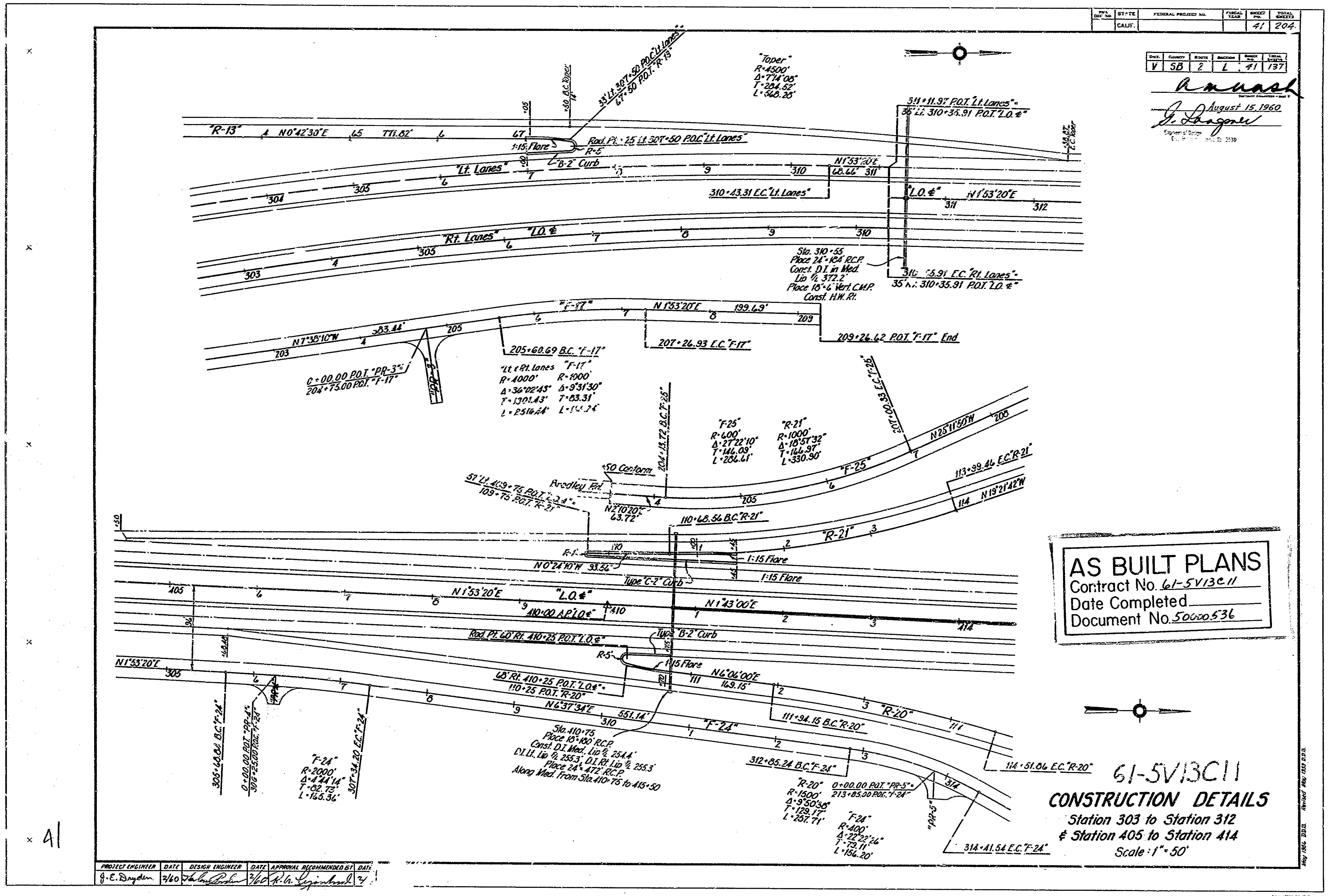
PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Baydon	2/60	[signature]	2/60	R. A. [signature]	2/60

39



CALIF.
40
204
V
5B
2
L
40
137
August 15, 1960
"F-16"
R-1200'
Δ-10°38'10"
T-111.70'
L-222.76'
"R-12"
R-2000'
Δ-6°47'04"
T-118.55'
L-236.82'
"R-12"
R-2000'
Δ-10°14'54"
T-179.35'
L-357.73'
"F-16"
R-500'
Δ-13°59'04"
T-61.33'
L-122.04'
N23°31'13"W
172.07'
N26°42'36"W 206.51'
"F-16"
N34°09'23"W 441.45'
N48°00'29"W 348.89'
"R-12"
N33°29'40"W 173.92'
Exist. 30" C.M.P.
"F-18"
"R-13"
"R-11 Taper"
"Rt. Lanes"
"Lt. Lanes"
Bridge 51-71 L
Bridge 51-71 R
"F-17"
N20°39'40"W 421.93'
N41°43'00"W
"F-17"
R-1000'
Δ-13°05'20"
T-114.43'
L-227.64'
"F-17"
R-500'
Δ-34°04'50"
T-153.25'
L-297.41'
"F-18"
R-750'
Δ-40°26'40"
T-276.28'
L-529.42'
"F-18"
R-800'
Δ-33°52'37"
T-243.65'
L-473.01'
"F-16"
R-50'
Δ-105°59'06"
T-63.38'
L-90.74'
"R-12 Conn."
R-75'
Δ-148°40'11"
T-247.45'
L-194.61'
N34°09'23"W
"A"
"A"
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
61-5V13C11
CONSTRUCTION DETAILS
Station 293 to Station 302
Scale: 1" = 50'
PROJECT ENGINEER
DATE
DESIGN ENGINEER
DATE
APPROVAL RECOMMENDED BY
DATE

40



CALIF. 41 204
V SB 2 L 41 137
August 15, 1960
"Taper" R=4500' Δ=7°14'05" T=284.52' L=568.28'
311+11.97 P.O.T. "Lt. Lanes" = 35' Lt. 310+35.91 P.O.T. "L.O. ¢"
"R-13" N0°42'30"E 771.82'
1:15 Flare
Rad. Pt. 25' Lt. 307+50 P.O.C. "Lt. Lanes"
R-5'
"B-2" Curb
"Lt. Lanes"
N1°53'20"E
310+43.31 E.C. "Lt. Lanes"
"L.O. ¢" N1°53'20"E
"Rt. Lanes" "L.O. ¢"
Sta. 310+55 Place 24" x 164' R.C.P. Const. D.I. in Med. Lip ½ 372.2' Place 16" x 6' Vert. C.M.P. Const. H.W. Rt.
310+35.91 E.C. "Rt. Lanes" = 35' Rt. 310+35.91 P.O.T. "L.O. ¢"
"F-17" N1°53'20"E 199.69'
N7°35'10"W 383.44'
205+60.69 B.C. "F-17"
207+26.93 E.C. "F-17"
209+26.62 P.O.T. "F-17" End
0+00.00 P.O.T. "PR-3" = 204+75.00 P.O.T. "F-17"
"Lt. & Rt. Lanes" R=4000' Δ=36°02'45" T=1301.43' L=2516.24'
"F-17" R=1000' Δ=9°31'30" T=83.31' L=166.24'
"F-25" R=600' Δ=27°22'10" T=146.09' L=286.61'
"R-21" R=1000' Δ=18°55'32" T=166.97' L=330.30'
204+15.72 B.C. "F-25"
207+00.33 E.C. "F-25"
N25°11'50"W
113+99.46 E.C. "R-21"
N19°21'42"W
+50 Conform
Bradley Rd.
57' Lt. 409+75 P.O.T. "L.O. ¢" = 109+75 P.O.T. "R-21"
N2°10'20" 63.72'
110+68.54 B.C. "R-21"
"R-21"
1:15 Flare
N0°24'10"W 33.56'
Type "C-2" Curb
1:15 Flare
N1°53'20"E "L.O. ¢"
410+00 A.P. "L.O. ¢"
N1°43'00"E
Rad. Pt. 40' Rt. 410+25 P.O.T. "L.O. ¢"
Type "B-2" Curb
R-5'
1:15 Flare
N1°53'20"E
68' Rt. 410+25 P.O.T. "L.O. ¢" = 110+25 P.O.T. "R-20"
N6°06'00"E 169.15'
N6°37'34"E 551.14'
111+34.15 B.C. "R-20"
"R-20"
"F-24"
Sta. 410+75 Place 18" x 180' R.C.P. Const. D.I. Med. Lip ½ 254.4' D.I. Lt. Lip ½ 255.3' D.I. Rt. Lip ½ 255.5' Place 24" x 472' R.C.P. Along Med. From Sta. 410+75 to 415+50
305+68.86 B.C. "F-24"
0+00.00 P.O.T. "PR-4" = 306+25.00 P.O.T. "F-24"
307+34.20 E.C. "F-24"
"F-24" R=2000' Δ=4°44'14" T=82.73' L=165.36'
312+85.24 B.C. "F-24"
"R-20" R=1500' Δ=9°50'38" T=129.17' L=257.71'
0+00.00 P.O.T. "PR-5" = 213+85.00 P.O.C. "F-24"
"F-24" R=400' Δ=22°22'26" T=79.11' L=156.20'
114+51.86 E.C. "R-20"
314+41.64 E.C. "F-24"
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
61-5V13C11
CONSTRUCTION DETAILS
Station 303 to Station 312
¢ Station 405 to Station 414
Scale: 1" = 50'
PROJECT ENGINEER J. E. Dryden DATE 2/60 DESIGN ENGINEER DATE 2/60 APPROVAL RECOMMENDED BY R. A. DATE

× 41

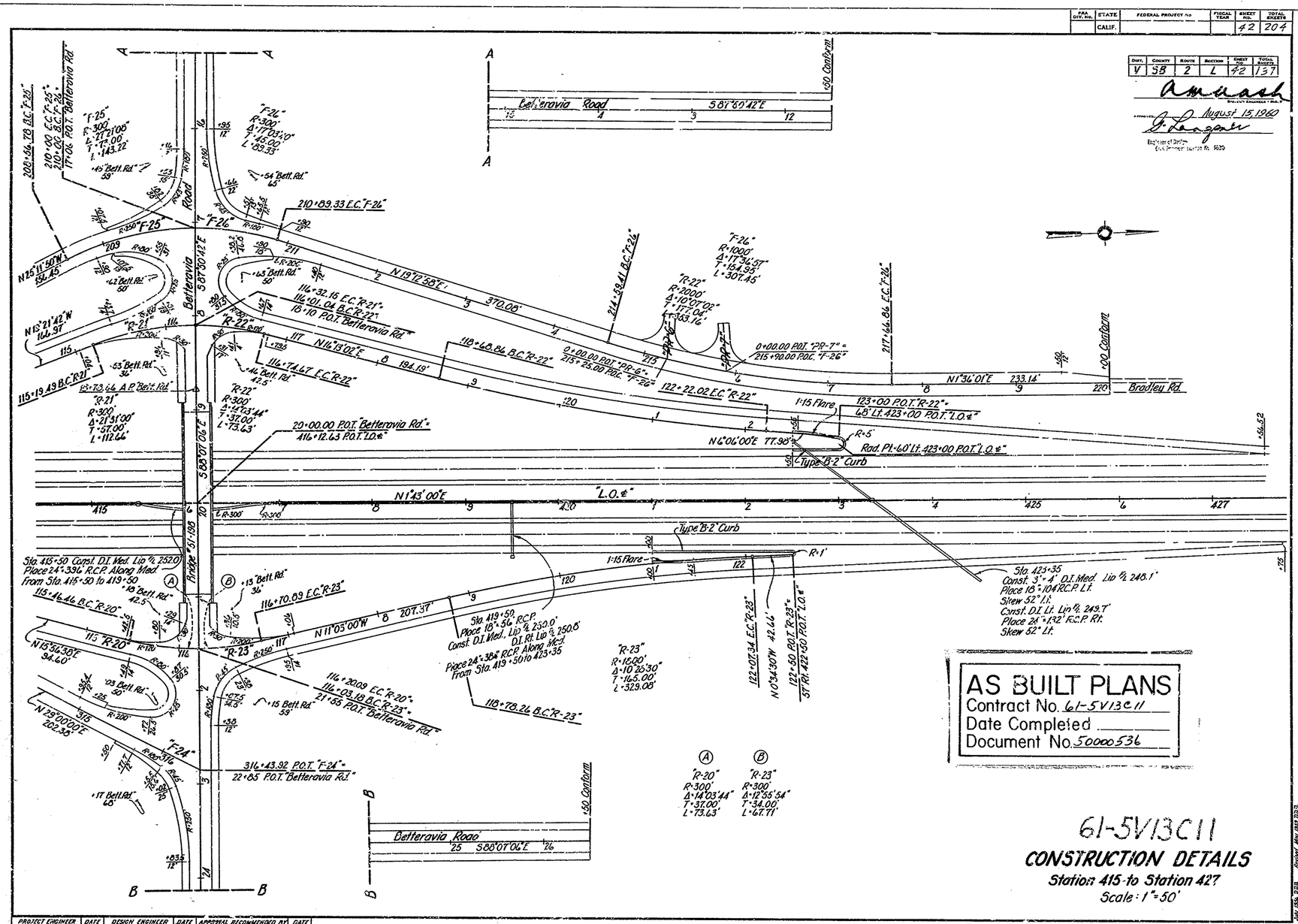
FHA DIV. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			42	204

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB	2	L	42	157

ENGINEER'S SEAL

August 15, 1960

Registered Civil Engineer



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed _____
Document No. 50000536

61-5V13C11

CONSTRUCTION DETAILS

Station 415 to Station 427

Scale: 1" = 50'

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Snyder	2/60		2/60		2/60

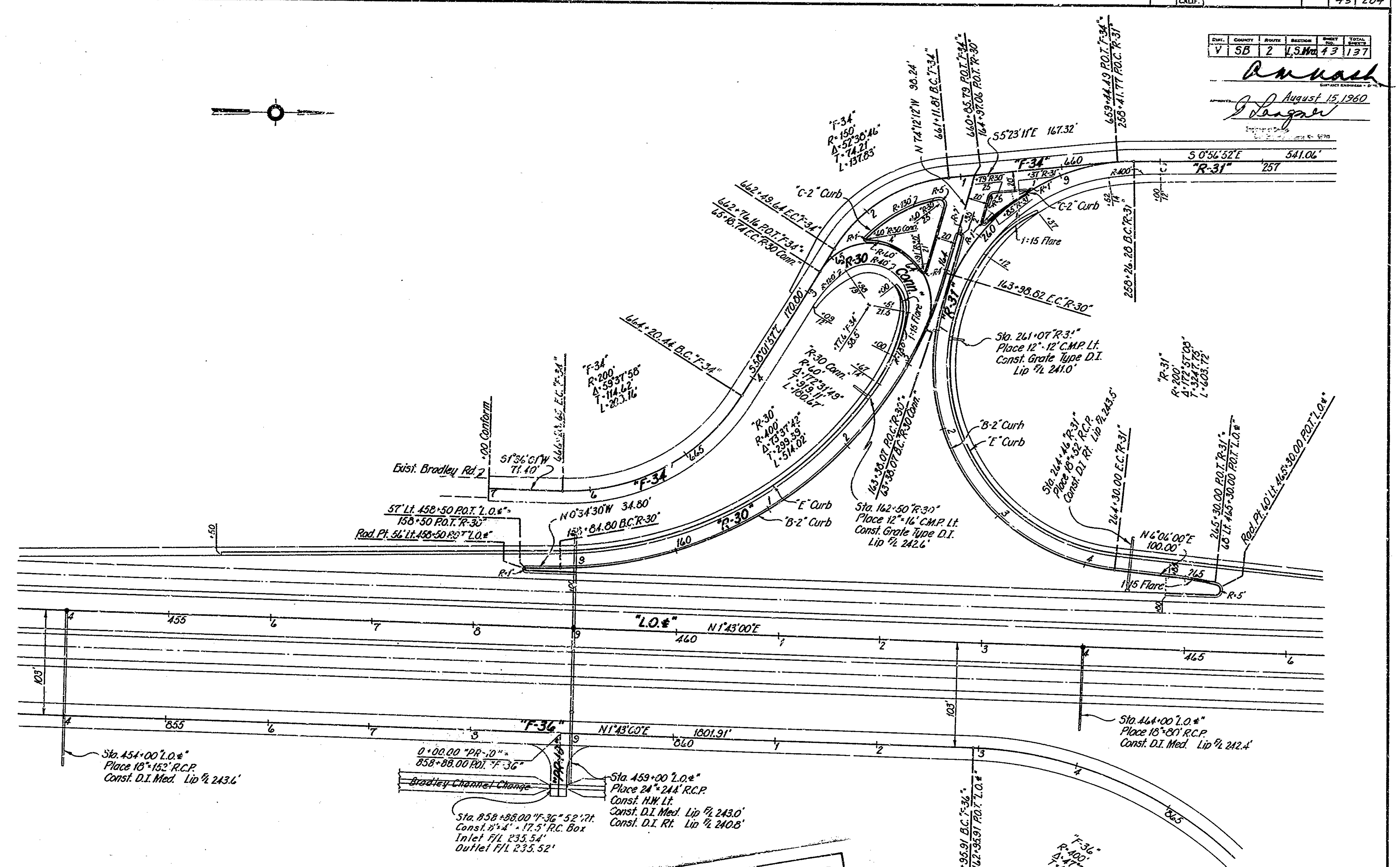
42

Form WH-23 P.C.

B.P.R. DIST. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			43	204

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB	2	L,S.Ma	43	137

August 15, 1960



61-5V13C11

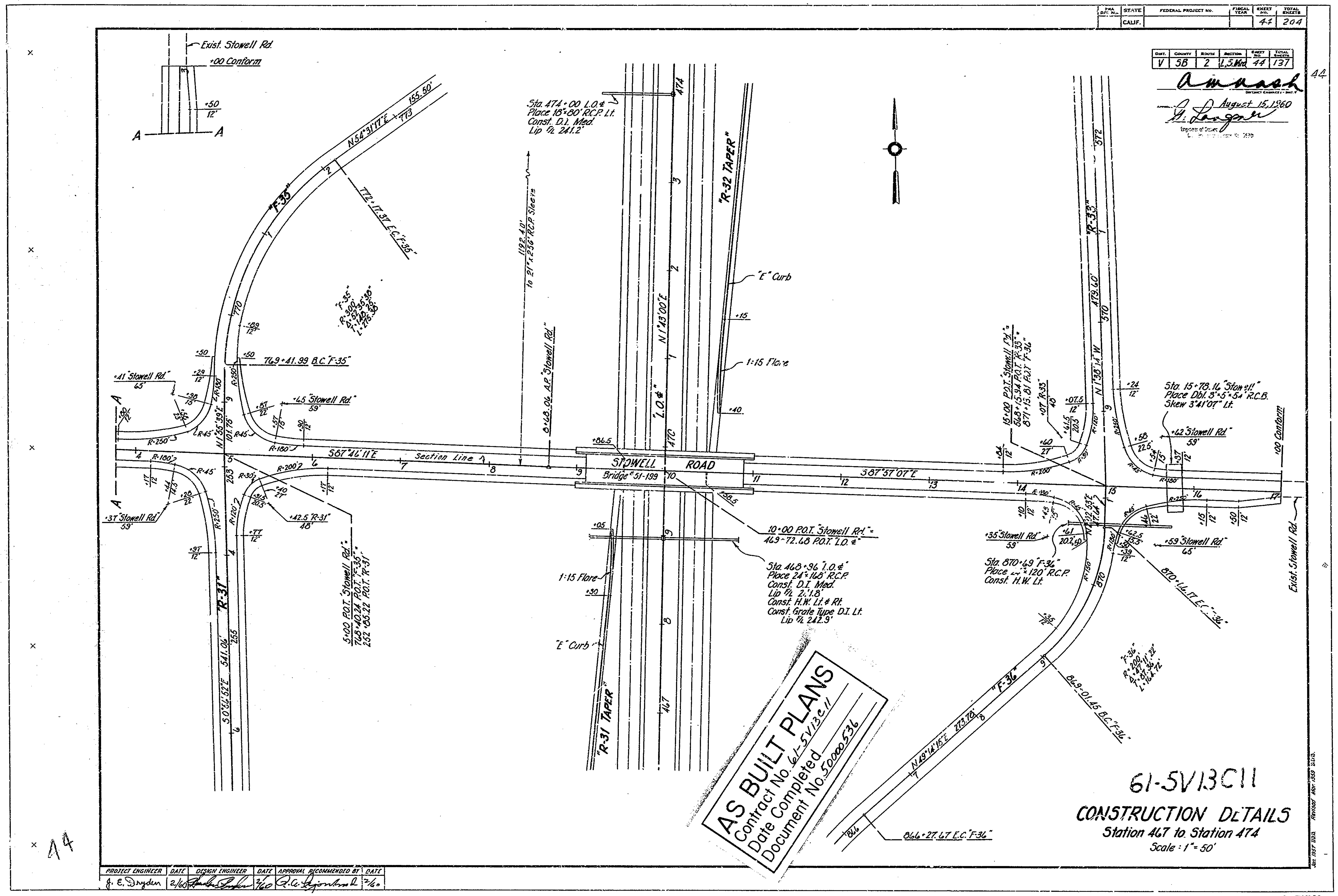
CONSTRUCTION DETAILS

Station 454 to Station 466

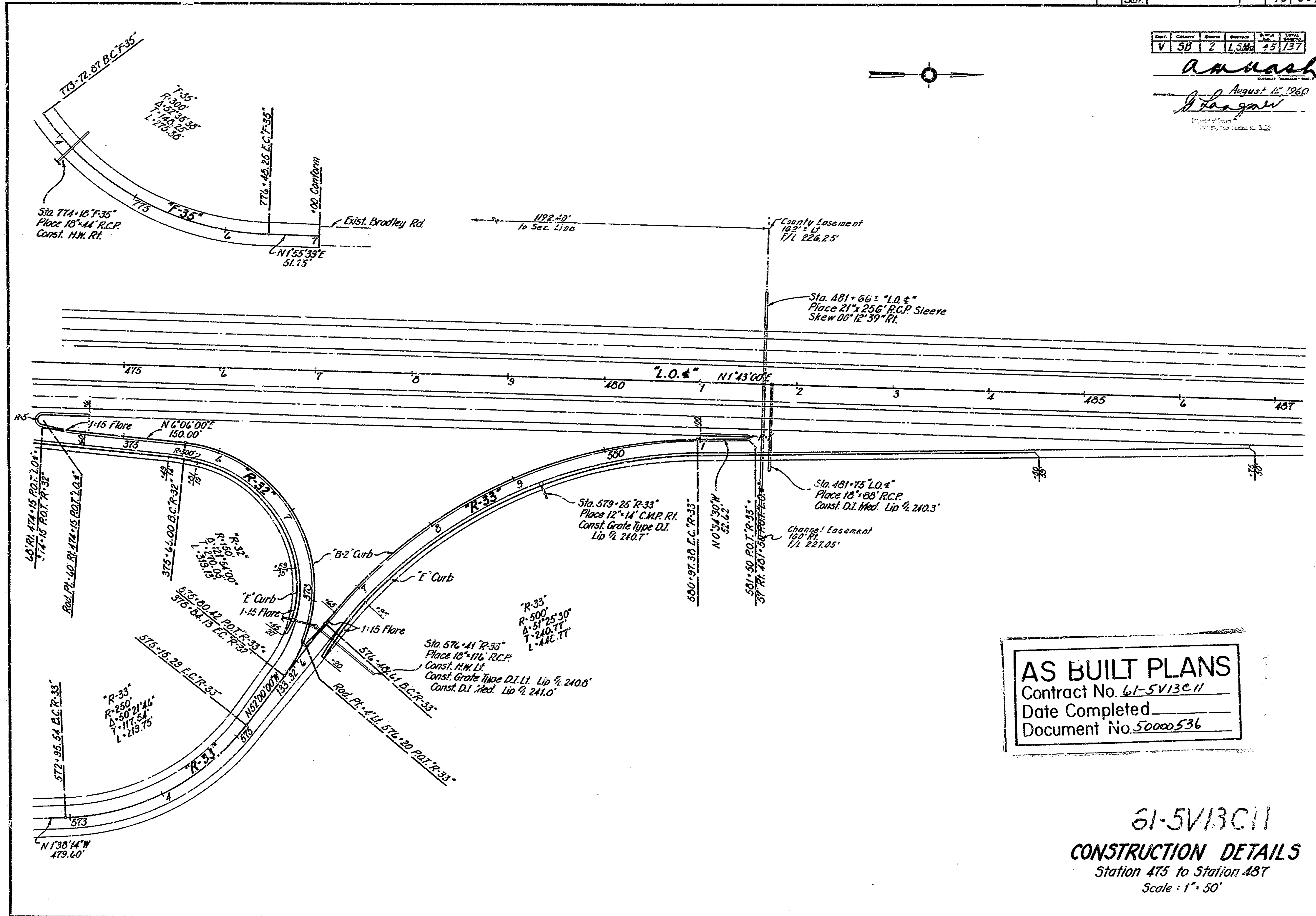
Scale: 1" = 50'

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	[signature]	2/60	R. A. [signature]	2/60

43



STATE CALIF. SHEET 44 TOTAL SHEETS 204
DIST. V COUNTY SB ROUTE 2 SECTION 1.5 SHEET 44 TOTAL SHEETS 137
August 15, 1960
Exist. Stowell Rd.
+00 Conform
A — A
N54°31'17"E 155.50'
"F-35"
772+17.37 E.C. "F-35"
Sta. 474+00 L.O.¢
Place 18"±80' R.C.P. Lt.
Const. D.I. Med.
Lip ℄ 241.2'
"R-32 TAPER"
"E" Curb
1:15 Flare
N1°43'00"E
"L.O.¢"
769+41.99 B.C. "F-35"
+41 "Stowell Rd." 65'
+45 "Stowell Rd." 59'
+37 "Stowell Rd." 59'
S67°46'11"E
Section Line
STOWELL ROAD
Bridge No. 51-199
S87°57'07"E
10+00 P.O.T. "Stowell Rd." = 469+72.48 P.O.T. "L.O.¢"
Sta. 468+36 "L.O.¢"
Place 24"±148' R.C.P.
Const. D.I. Med.
Const. H.W. Lt. & Rt.
Const. Grate Type D.I. Lt.
Lip ℄ 242.9'
5+00 P.O.T. "Stowell Rd." = 768+40.24 P.O.T. "F-35" = 252+83.22 P.O.T. "R-31"
"R-31"
S0°36'52"E 341.06'
"R-31 TAPER"
"E" Curb
15+00 P.O.T. "Stowell Rd." = 868+15.94 P.O.T. "R-33" = 871+15.81 P.O.T. "F-36"
"R-33"
N1°38'14"W 419.60
Sta. 15+78.16 "Stowell"
Place Dbl. 5'×5'×54' R.C.B.
Skew 3°41'07" Lt.
+62 "Stowell Rd." 59'
+00 Conform
Exist. Stowell Rd.
+35 "Stowell Rd." 59'
+59 "Stowell Rd." 65'
Sta. 870+49 "F-36"
Place 24"±120' R.C.P.
Const. H.W. Lt.
870+16.17 E.C. "F-36"
"F-36"
869+01.45 B.C. "F-36"
N49°16'15"E 273.70
866+27.67 E.C. "F-36"
AS BUILT PLANS
Contract No 61-5V13C11
Date Completed
Document No 50000536
61-5V13C11
CONSTRUCTION DETAILS
Station 467 to Station 474
Scale: 1" = 50'
PROJECT ENGINEER J. E. Dryden DATE 2/60
DESIGN ENGINEER DATE 2/60
APPROVAL RECOMMENDED BY DATE 2/60



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

CONSTRUCTION DETAILS
Station 475 to Station 487
Scale : 1" = 50'

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	[signature]	2/60	R. A. [signature]	2/60

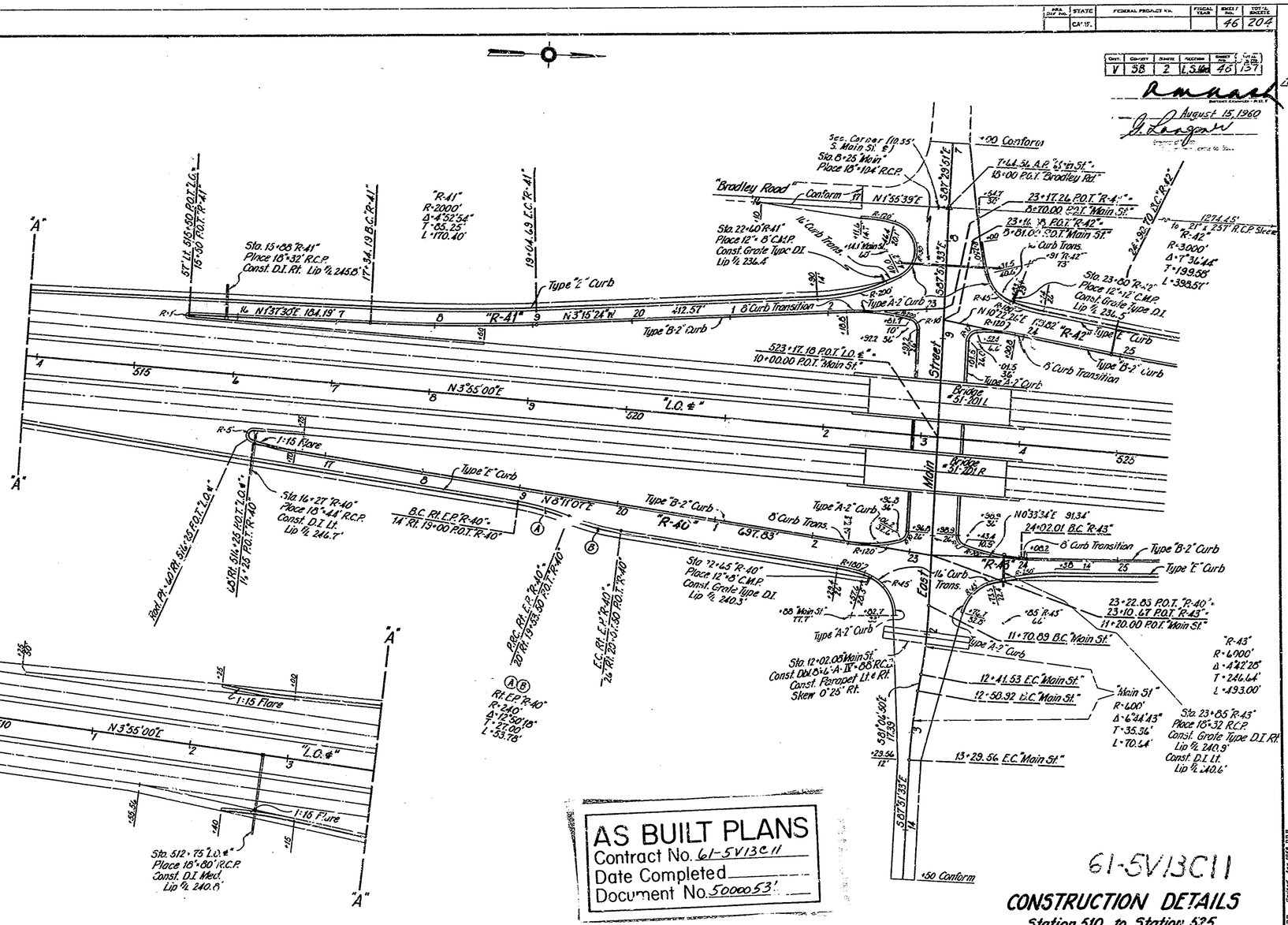
A5

FED. RD. DIV. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			46	204

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	58	2	L,S.Mo	46	137

Amnach
District Engineer – Dist. V

August 15, 1960
G. Langner



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 5000053

61-5V13C11

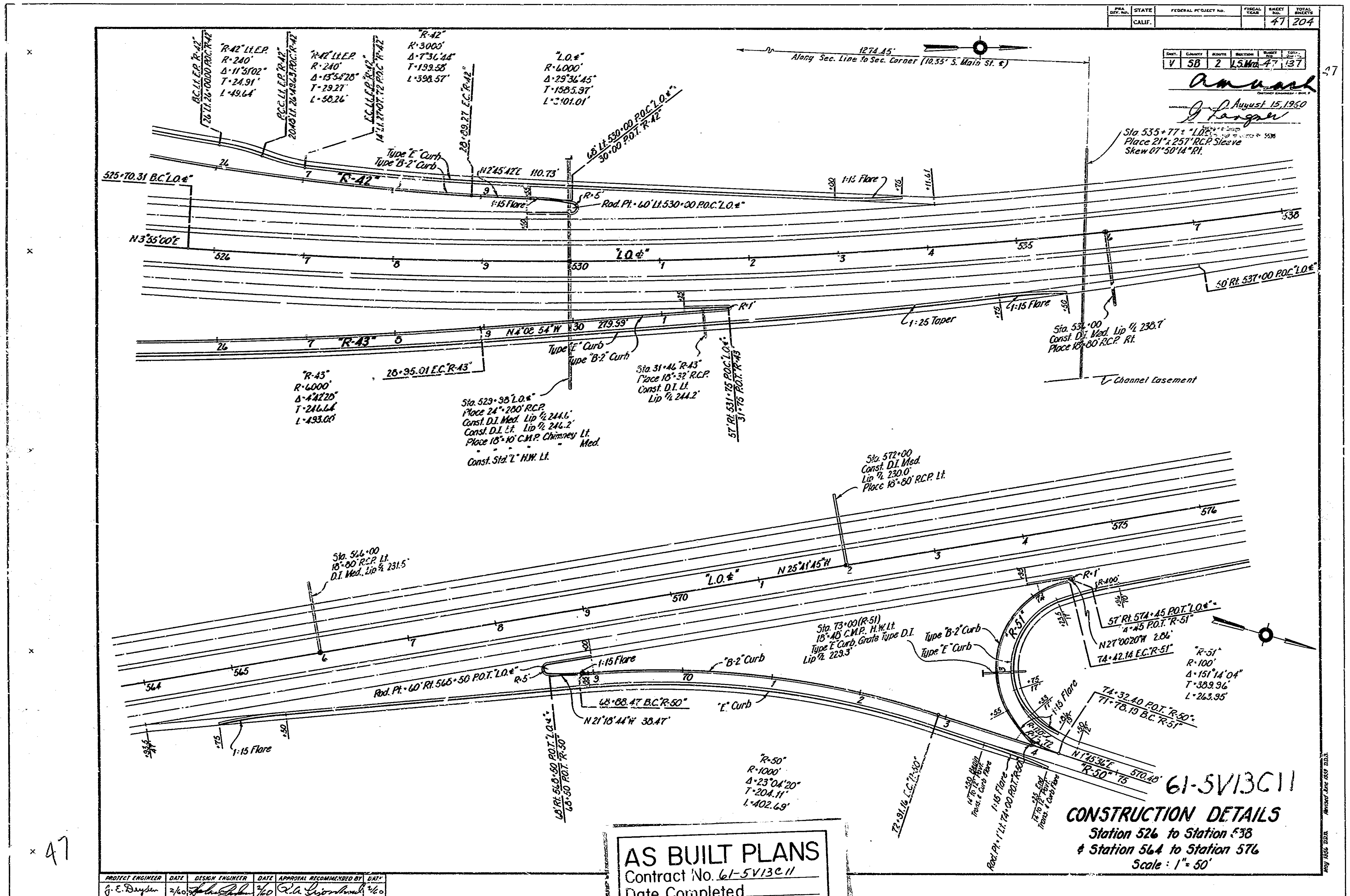
CONSTRUCTION DETAILS

Station 510 to Station 525
Scale : 1" = 50'

May 1956 D.D.B. Revised Apr. 1959 D.D.B.

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryder	2/60		2/60	R. A.	2/60

Form WH-23 P.C.



STATE CALIF. 47 204
V SB 2 LSMtn 47 137
August 15, 1960
1274.45'
Along Sec. Line to Sec. Corner (10.55' S. Main St. ¢)
"R-42" Lt. E.P.
R=240'
Δ=11°5'02"
T=24.91'
L=49.64'
"R-42" Lt. E.P.
R=240'
Δ=13°54'28"
T=29.27'
L=58.26'
"R-42"
R=3000'
Δ=7°36'44"
T=199.58
L=398.57'
"L.O.¢"
R=6000'
Δ=29°36'45"
T=1585.97'
L=3101.01'
Sta. 535+77± "L.O.¢"
Place 21"x 257' R.C.P. Sleeve
Skew 07°50'14" Rt.
Type "E" Curb
Type "B-2" Curb
N12°45'42"E 110.73'
525+70.31 B.C. "L.O.¢"
N3°55'00"E
"R-42"
1:15 Flare
R=5'
Rod. Pt. = 60' Lt. 530+00 P.O.C. "L.O.¢"
68' Lt. 530+00 P.O.C. "L.O.¢" = 30+00 P.O.T. "R-42"
"L.O.¢"
1:15 Flare
1:25 Taper
50' Rt. 537+00 P.O.C. "L.O.¢"
R=1'
N4°02'54"W 279.59'
"R-43"
Type "E" Curb
Type "B-2" Curb
28+35.01 E.C. "R-43"
Sta. 536+00
Const. D.I. Med. Lip El. 238.7'
Place 18"-80' R.C.P. Rt.
¢ Channel Easement
"R-43"
R=6000'
Δ=4°42'20"
T=246.64
L=493.03'
Sta. 529+38 "L.O.¢"
Place 24"-280' R.C.P.
Const. D.I. Med. Lip El. 244.6'
Const. D.I. Lt. Lip El. 244.2'
Place 18"-10' C.M.P. Chimney Lt. Med.
Const. Std. "L" H.W. Lt.
Sta. 31+46 "R-43"
Place 18"-32' R.C.P.
Const. D.I. Lt. Lip El. 244.2'
57' Rt. 531+75 P.O.C. "L.O.¢" = 31+75 P.O.T. "R-43"
Sta. 572+00
Const. D.I. Med.
Lip El. 230.0'
Place 18"-80' R.C.P. Lt.
Sta. 566+00
18"-80' R.C.P. Lt.
D.I. Med. Lip El. 231.5'
"L.O.¢"
N25°41'45"W
Sta. 73+00 (R-51)
18"-40' C.M.P. H.W. Lt.
Type "E" Curb, Grate Type D.I.
Lip El. 223.3'
Type "B-2" Curb
Type "E" Curb
"R-51"
R=400'
R=1'
57' Rt. 574+45 P.O.T. "L.O.¢" = 74+45 P.O.T. "R-51"
N27°00'20"W 2.86'
74+42.14 E.C. "R-51"
"R-51"
R=100'
Δ=151°14'04"
T=383.96'
L=263.95'
74+32.40 P.O.T. "R-50" = 71+78.19 B.C. "R-51"
Rod. Pt. = 60' Rt. 565+50 P.O.T. "L.O.¢"
R=5'
1:15 Flare
"B-2" Curb
"E" Curb
68+88.47 B.C. "R-50"
N21°18'44"W 38.47'
68' Rt. 568+50 P.O.T. "L.O.¢" = 68+50 P.O.T. "R-50"
1:15 Flare
1:15 Flare
N1°45'34"E
"R-50" 570.48'
"R-50"
R=1000'
Δ=23°04'20"
T=204.11'
L=402.69'
72+91.16 E.C. "R-50"
Rod. Pt. = 1' Lt. 74+00 P.O.T. "R-50"
61-5V13C11
CONSTRUCTION DETAILS
Station 526 to Station 538
¢ Station 564 to Station 576
Scale: 1" = 50'
PROJECT ENGINEER | DATE | DESIGN ENGINEER | DATE | APPROVAL RECOMMENDED BY | DATE
J. E. Bryden 2/60 2/60 2/60

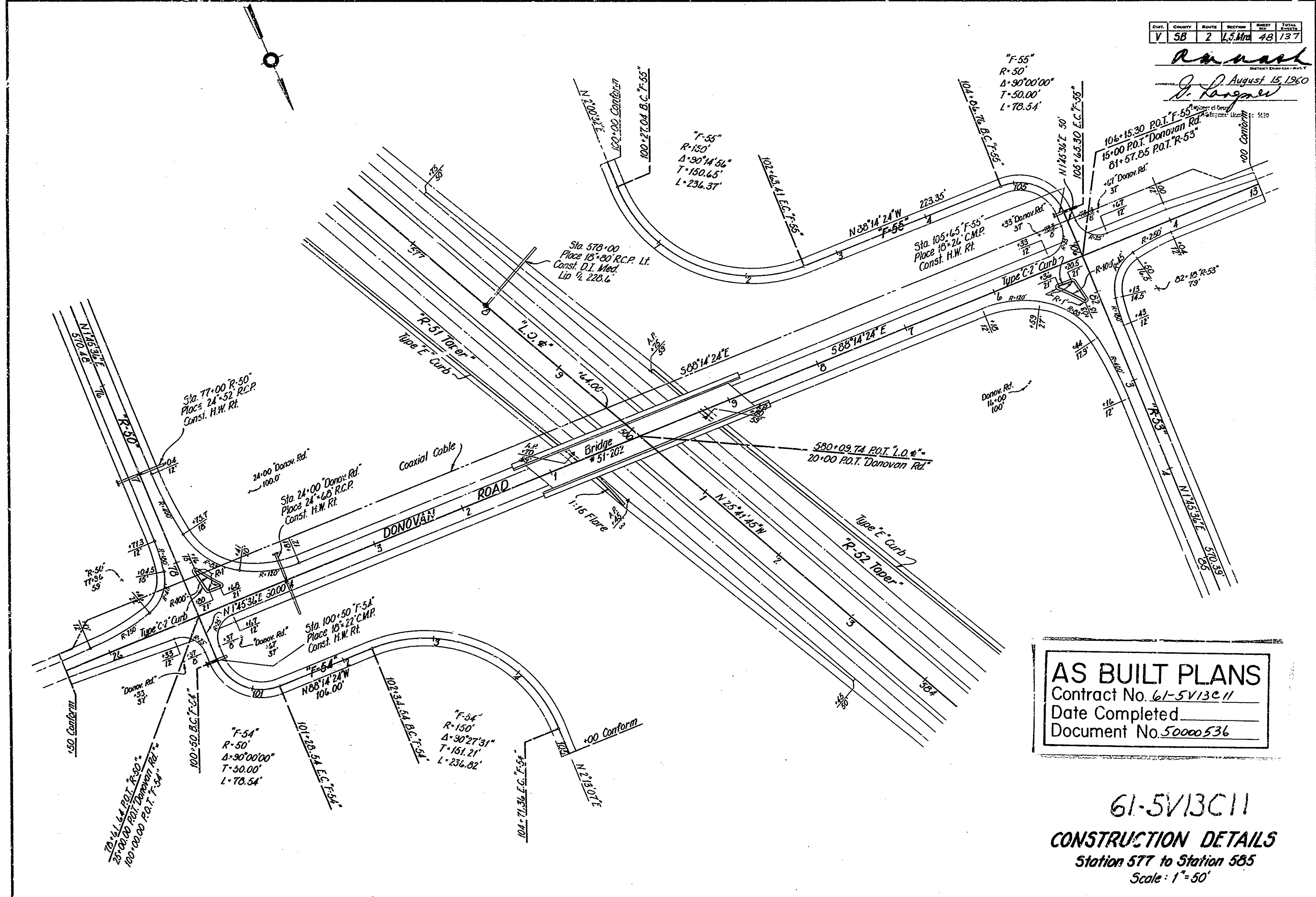
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

47

STATE	SHEET NO.	TOTAL SHEETS
CALIF.	18	204

Dist.	County	Route	Section	Sheet No.	Total Sheets
V	SB	2	L.S.Mrd	48	137

Approved August 15, 1960



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

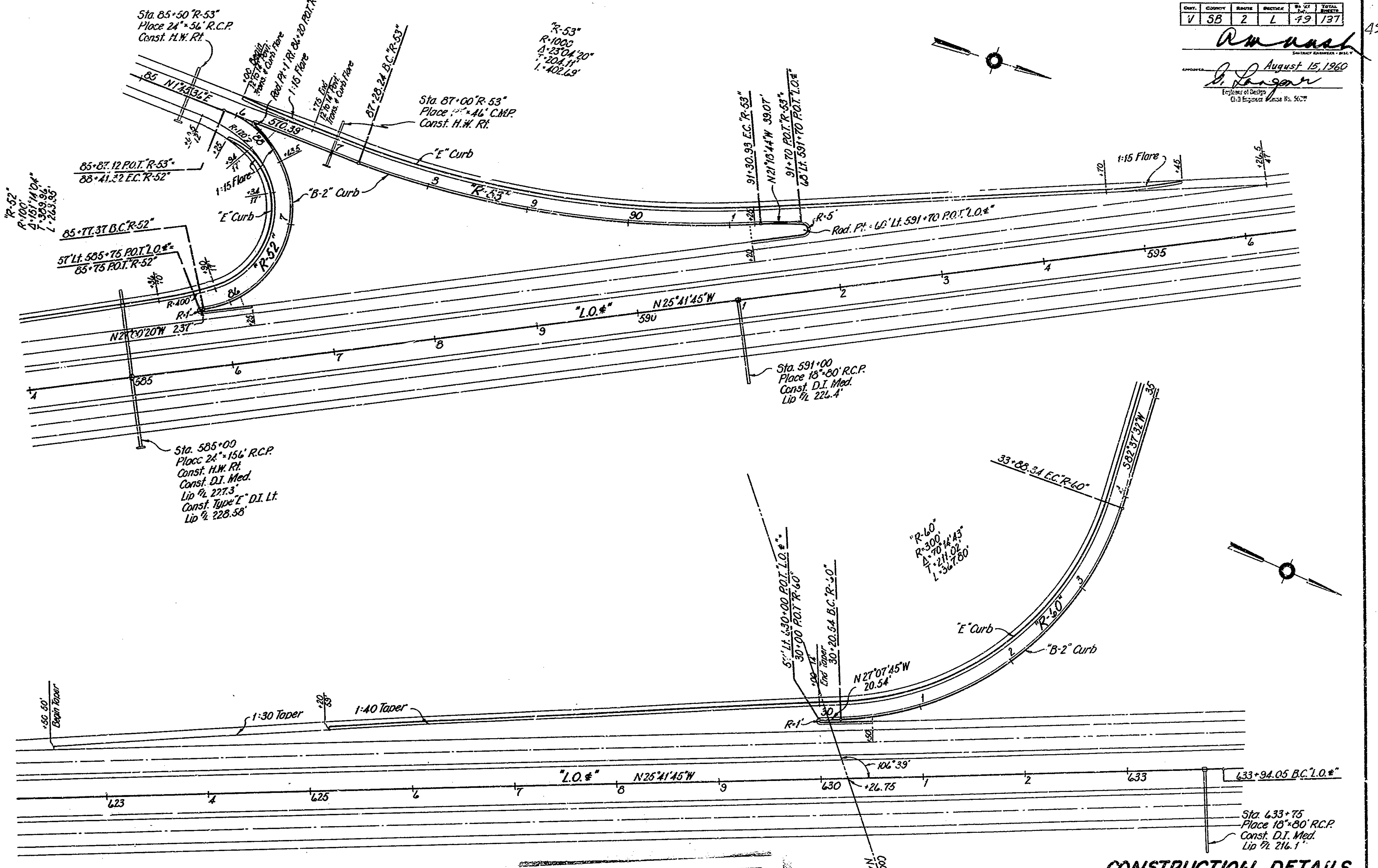
CONSTRUCTION DETAILS
Station 577 to Station 585
Scale: 1" = 50'

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	[signature]	2/60	[signature]	2/60

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB	2	L	49	137

STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
CALIF.			49	204

August 15, 1960



Sta. 85+50 "R-53"
Place 24"×56' R.C.P.
Const. H.W. Rt.
"R-53"
R=1000
Δ=23°04'20"
T=204.11
L=402.69
Sta. 87+00 "R-53"
Place 24"×46' C.M.P.
Const. H.W. Rt.
"E" Curb
"B-2" Curb
1:15 Flare
"R-52"
R=100'
Δ=151°14'04"
85+87.12 P.O.T. "R-53"=
88+41.22 E.C. "R-52"
85+77.37 B.C. "R-52"
5' Lt. 585+75 P.O.T. "L.O.¢"=
85+75 P.O.T. "R-52"
"L.O.¢"
N25°41'45"W
Sta. 591+00
Place 18"×80' R.C.P.
Const. D.I. Med.
Sta. 585+00
Place 24"×156' R.C.P.
Const. H.W. Rt.
Const. D.I. Med.
Const. Type "E" D.I. Lt.
Rad. Pt. 1.6' Lt. 591+70 P.O.T. "L.O.¢"
"R-60"
R=300
Δ=70°14'43"
T=211.03
L=367.80
33+88.34 E.C. "R-60"
S82°37'32"W
"E" Curb
"B-2" Curb
N27°07'45"W
20.54'
1:30 Taper
1:40 Taper
Begin Taper
End Taper
104°39'
Coaxial Cable
433+94.05 B.C. "L.O.¢"
Sta. 433+75
Place 18"×80' R.C.P.
Const. D.I. Med.

CONSTRUCTION DETAILS

Station 585 to Station 596

¢ Station 623 to Station 633

Scale : 1" = 50'

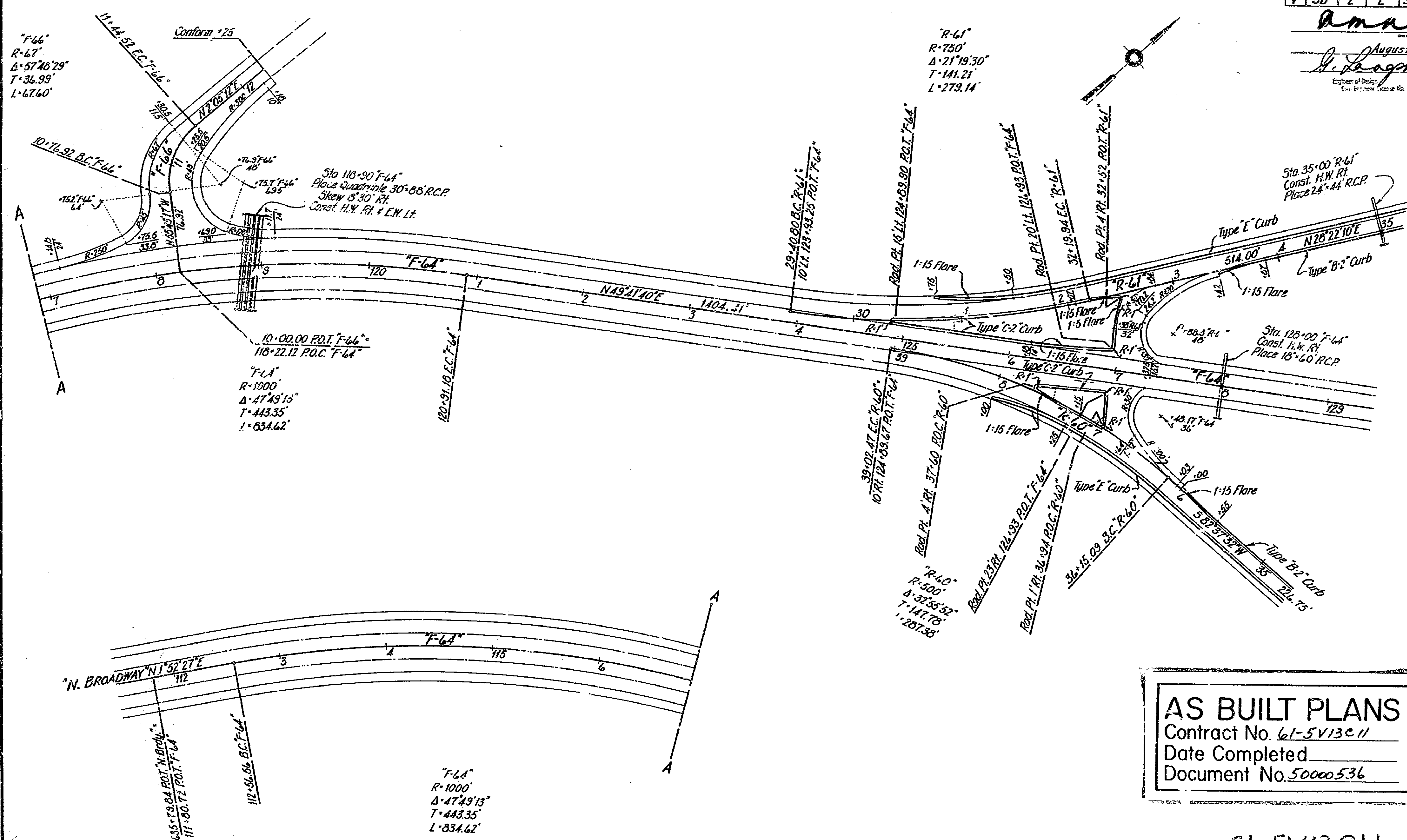
61-5V13C11

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	[signature]	2/60	G. A. Lyonhead	2/60

49

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
V	SB	2	L	50	137

August 15, 1960



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

CONSTRUCTION DETAILS

Station 112 "F-64" to Station 129 "F-64"

Scale: 1" = 50'

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	[signature]	2/60	R. A. [signature]	2/60

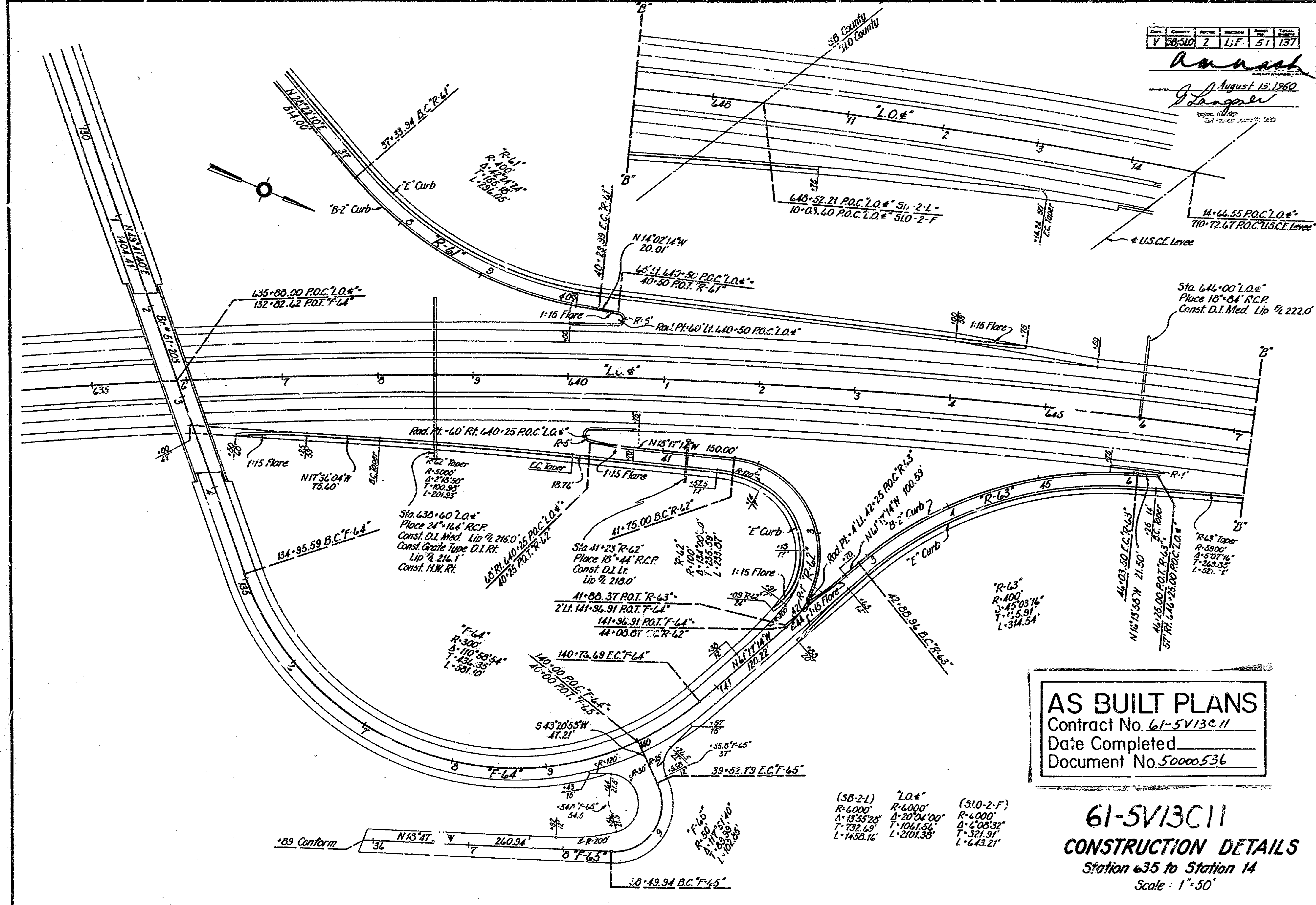
50

STATE	FEDERAL PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
CALIF.			51	204

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
V	SB;SLO	2	L;F	51	137

51

August 15, 1960



SB County
SLO County
"L.O.₵"
"B"
648+52.21 P.O.C. "L.O.₵" SB-2-L = 10+03.60 P.O.C. "L.O.₵" SLO-2-F
14+66.55 P.O.C. "L.O.₵" = 710+72.67 P.O.C. U.S.C.E. Levee
₵ U.S.C.E. Levee
"R-61" R=400' T=166.10' L=290.05'
37+33.94 B.C. "R-61"
"E" Curb
"B-2" Curb
N 14°02'14"W 20.01'
635+88.00 P.O.C. "L.O.₵" = 132+82.62 P.O.T. "F-64"
1:15 Flare
Sta. 646+00 "L.O.₵" Place 18"+84' R.C.P. Const. D.I. Med. Lip El. 222.0'
Rad. Pt. +60' Rt. 640+25 P.O.C. "L.O.₵"
N15°11'14"W 150.00'
"R-62" Taper R=5000' T=100.95' L=201.33'
Sta. 638+60 "L.O.₵" Place 24"+144' R.C.P. Const. D.I. Med. Lip El. 215.0 Const. Grate Type D.I. Rt. Lip El. 214.1' Const. H.W. Rt.
41+75.00 B.C. "R-62"
Sta. 41+23 "R-62" Place 18"+44' R.C.P. Const. D.I. Lt. Lip El. 218.0'
41+88.37 P.O.T. "R-63" = 2' Lt. 141+36.91 P.O.T. "F-64"
141+96.91 P.O.T. "F-64" = 44+08.07 E.C. "R-62"
134+95.59 B.C. "F-64"
"F-64" R=300' Δ=110°59'54" T=434.35' L=581.10'
140+76.69 E.C. "F-64"
S43°20'55"W 47.21'
"R-63" R=400' Δ=45°03'16" T=165.91' L=314.54'
42+08.96 B.C. "R-63"
N16°13'58"W 21.50'
"R-63" Taper R=5000'
39+53.79 E.C. "F-65"
+89 Conform
N18°47' 240.94'
38+49.94 B.C. "F-65"
"F-65"
(SB-2-L) R=6000' Δ=13°55'25" T=732.69' L=1458.16'
"L.O.₵" R=6000' Δ=20°04'00" T=1061.56' L=2101.38'
(SLO-2-F) R=6000' Δ=6°08'32" T=321.91' L=643.21'

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

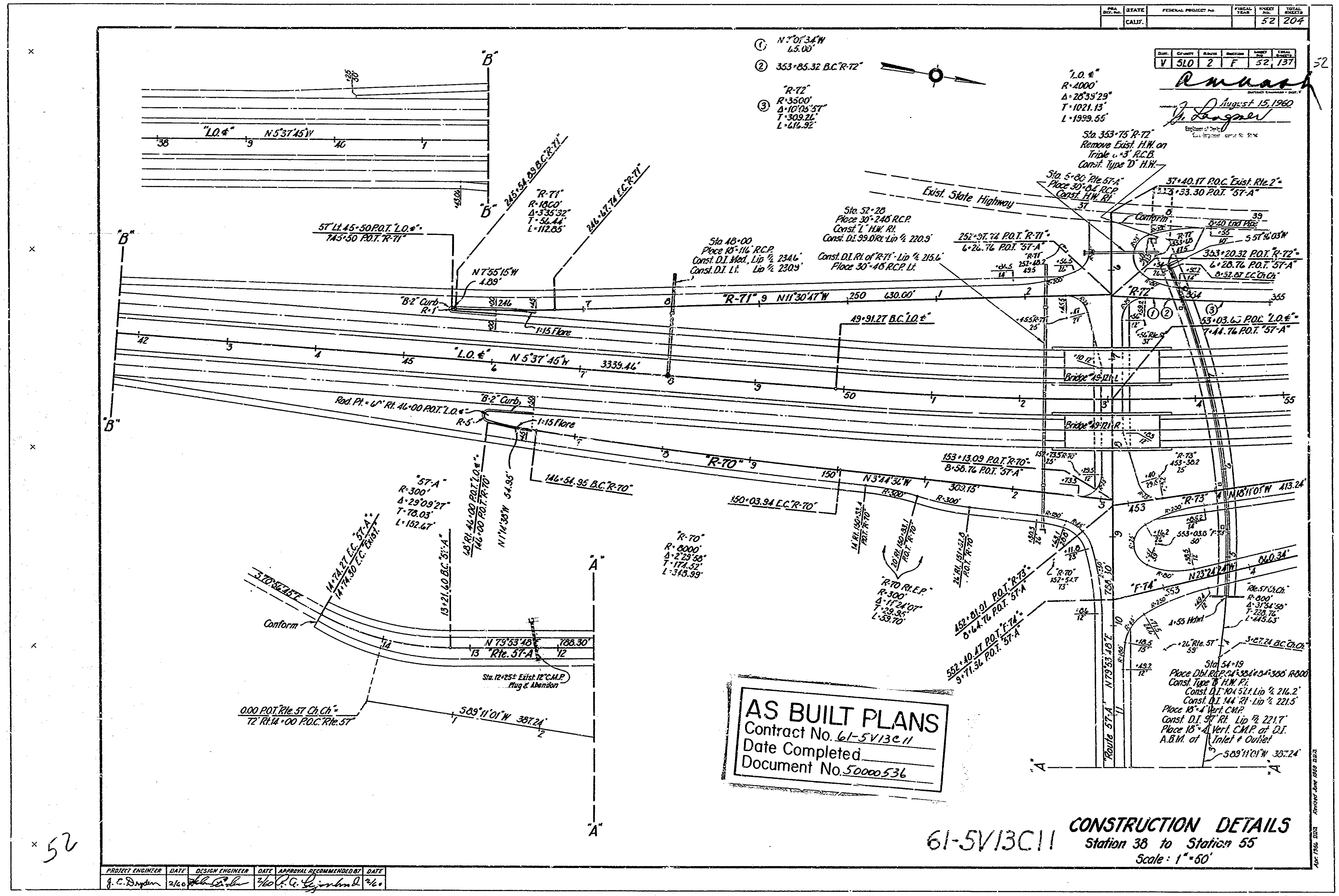
CONSTRUCTION DETAILS

Station 635 to Station 14

Scale : 1"=50'

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	[illegible]	2/60	H. G. [illegible]	2/60

51

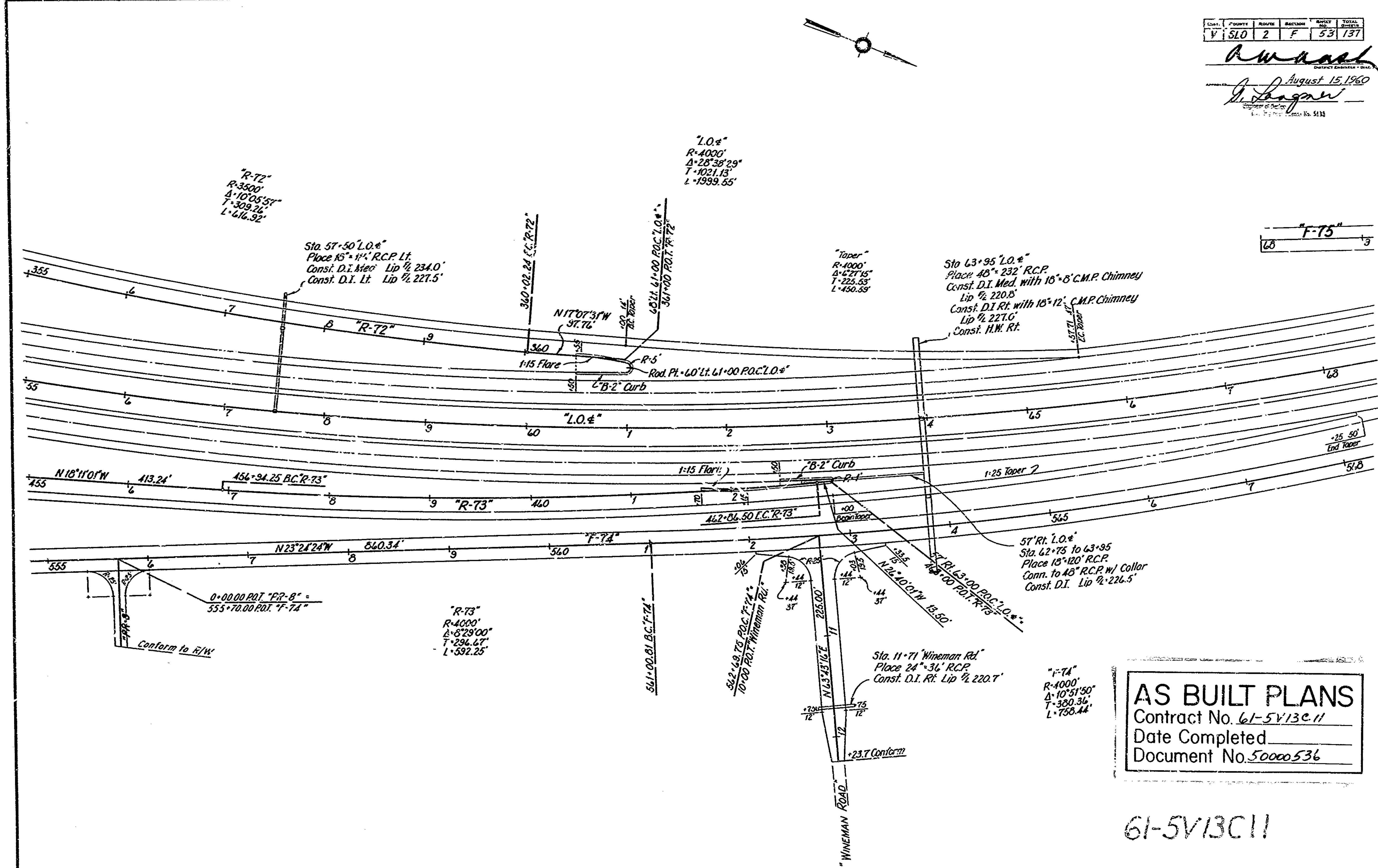


CALIF. 52 204
V SLO 2 F 52 137
August 15, 1960
"L.O.℄" N 5°37'45"W
"R-71" N 11°30'47"W 250 630.00'
"L.O.℄" N 5°37'45"W 3339.46'
"R-70" N 3°44'36"W 303.15'
Exist. State Highway
Bridge 49-121 L
Bridge 49-121 R
"B-2" Curb
1:15 Flare
Rte. 57-A N 73°53'48"E 188.30'
S 89°11'01"W 387.24'
Route 57-A N 29°53'48"E
Conform
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
61-5V13C11
CONSTRUCTION DETAILS
Station 38 to Station 55
Scale: 1" = 50'
PROJECT ENGINEER J. C. Dryden DATE 2/60
DESIGN ENGINEER DATE 2/60
APPROVAL RECOMMENDED BY DATE 2/60

52

Dist.	County	Route	Section	Sheet No.	Total Sheets
V	SLO	2	F	53	137

August 15, 1960



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

CONSTRUCTION DETAILS
Station 55 to Station 68
Scale: 1" = 50'

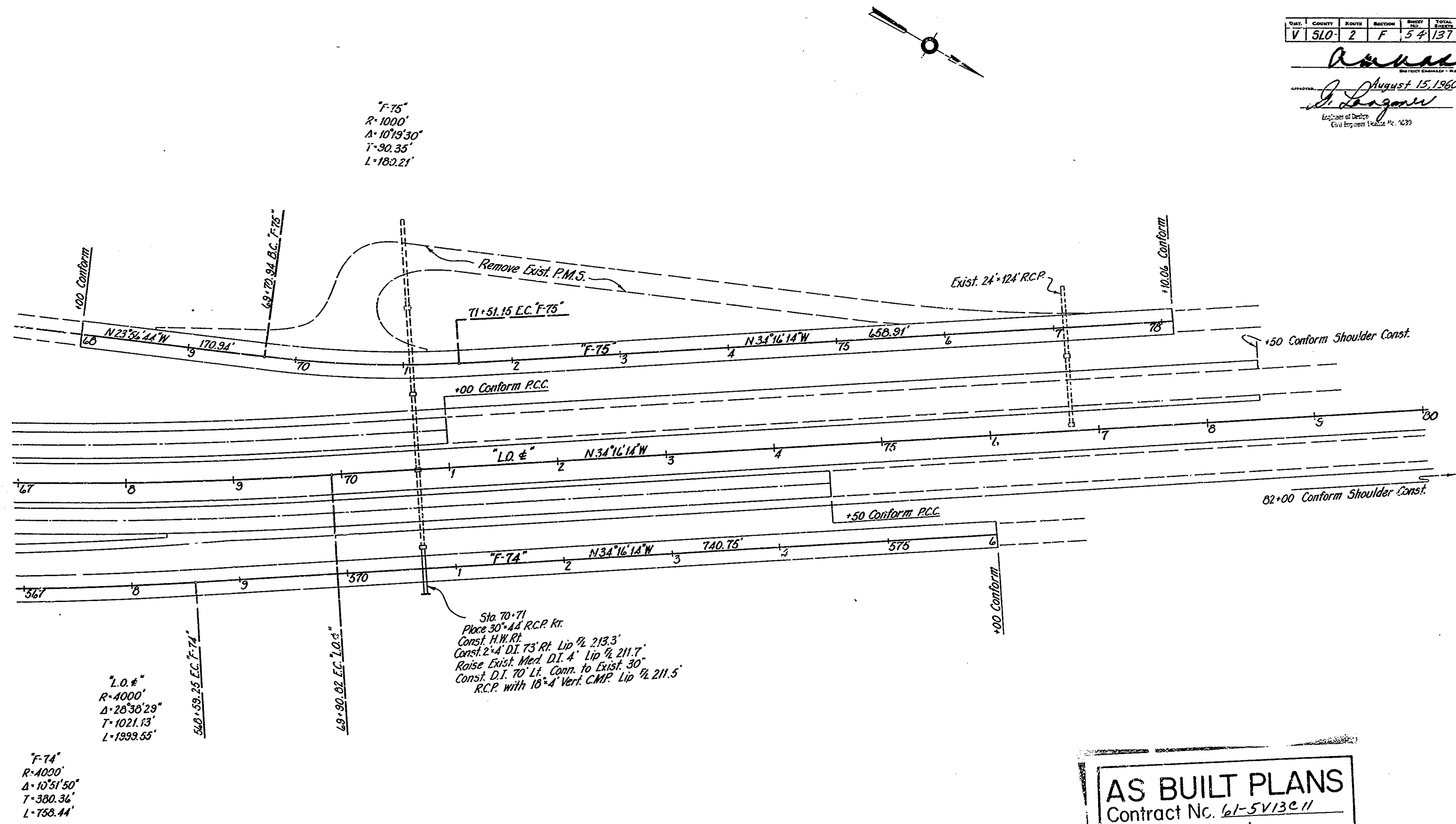
Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
J. E. Dryden	2/60	[signature]	2/60	[signature]	2/60

53

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SLO	2	F	54	137

STATE	FEDERAL PROJECT No.	SHEET No.	TOTAL SHEETS
CALIF.		54	204

APPROVED: August 15, 1960



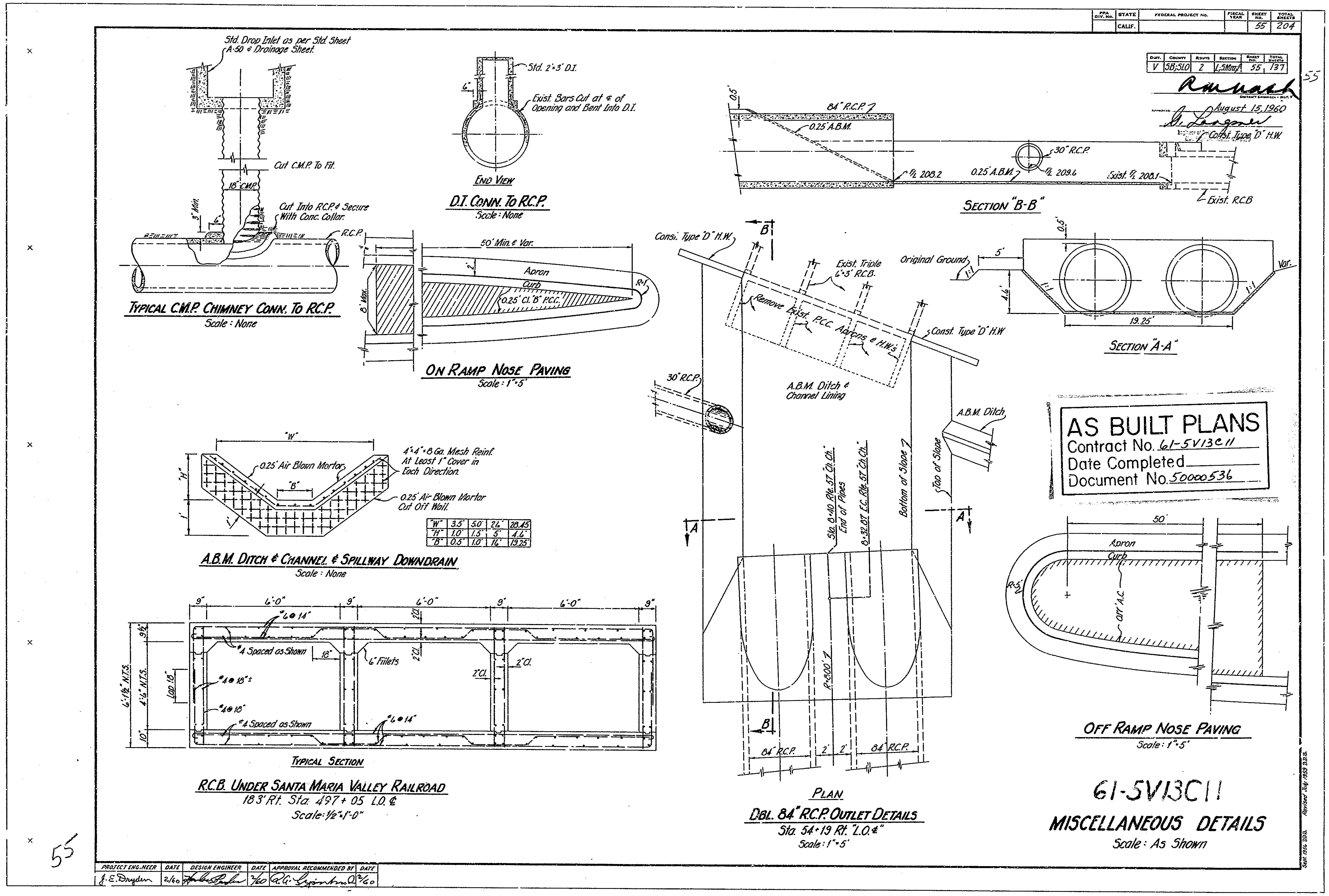
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

CONSTRUCTION DETAILS
Station 67 to Station 80
Scale: 1" = 50'

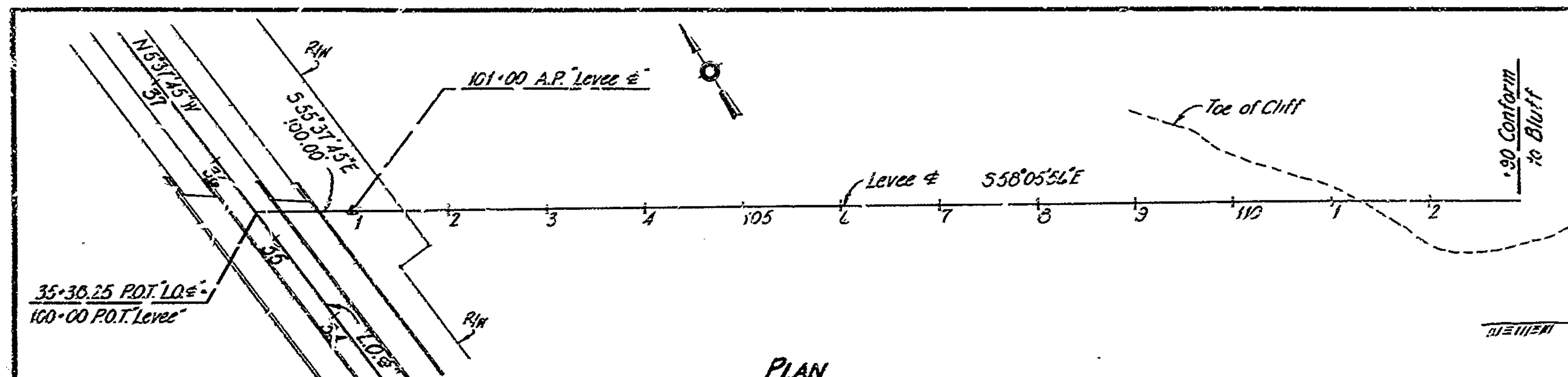
PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	[signature]	2/60	R. A. [signature]	2/60

54

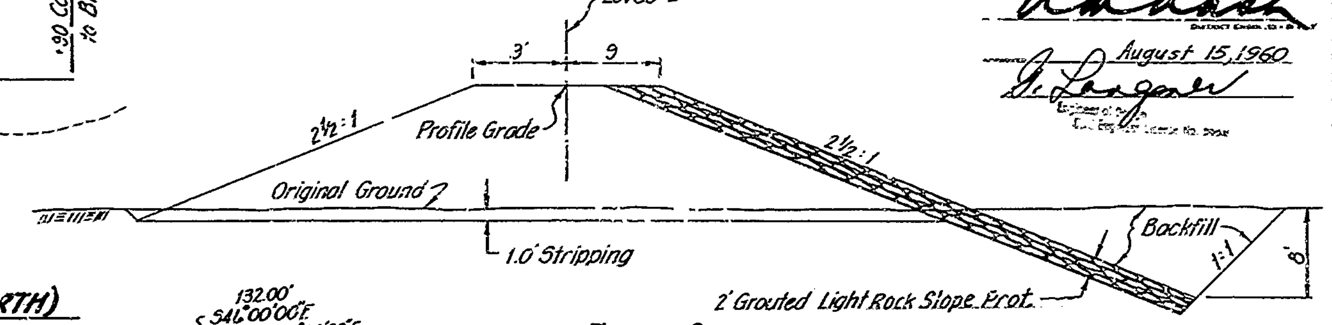


CALIF. 55 204
V SB;SLO 2 L,SM,a,f 55 137
August 15, 1960
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
Std. Drop Inlet as per Std. Sheet A-50 & Drainage Sheet.
Cut C.M.P. To Fit.
18" C.M.P.
Cut Into R.C.P. & Secure With Conc. Collar.
R.C.P.
TYPICAL C.M.P. CHIMNEY CONN. TO R.C.P.
Scale: None
Std. 2'x3' D.I.
Exist. Bars Cut at ¢ of Opening and Bent Into D.I.
END VIEW
D.I. CONN. TO R.C.P.
Scale: None
50' Min. & Var.
Apron
Curb
0.25' Cl. "B" P.C.C.
ON RAMP NOSE PAVING
Scale: 1"=5'
84" R.C.P.
0.25' A.B.M.
30" R.C.P.
Exist. R.C.B.
Const. Type "D" H.W.
SECTION "B-B"
Exist. Triple 6'x3' R.C.B.
Remove Exist. P.C.C. Aprons & H.W.'s
A.B.M. Ditch & Channel Lining
A.B.M. Ditch
Bottom of Slope
Top of Slope
End of Piles
Original Ground
19.25'
SECTION "A-A"
"W"
0.25' Air Blown Mortar
4"x4"x8 Ga. Mesh Reinf. At Least 1" Cover in Each Direction.
0.25' Air Blown Mortar Cut Off Wall
"W" 3.5' 5.0' 7.4' 28.45
"H" 1.0' 1.5' 5' 4.6'
"B" 0.5' 1.0' 1.4' 19.25'
A.B.M. DITCH & CHANNEL & SPILLWAY DOWNDRAIN
Scale: None
#4 Spaced as Shown
6" Fillets
#6 @ 14"
TYPICAL SECTION
R.C.B. UNDER SANTA MARIA VALLEY RAILROAD
183' Rt. Sta. 497+05 L.O.¢
Scale: 1/2"=1'-0"
84" R.C.P.
PLAN
DBL. 84" R.C.P. OUTLET DETAILS
Sta. 54+19 Rt. "L.O.¢"
Scale: 1"=5'
Apron
Curb
OFF RAMP NOSE PAVING
Scale: 1"=5'
61-5V13C11
MISCELLANEOUS DETAILS
Scale: As Shown
PROJECT ENGINEER
DATE
DESIGN ENGINEER
APPROVAL RECOMMENDED BY
J. E. Dryden
2/60

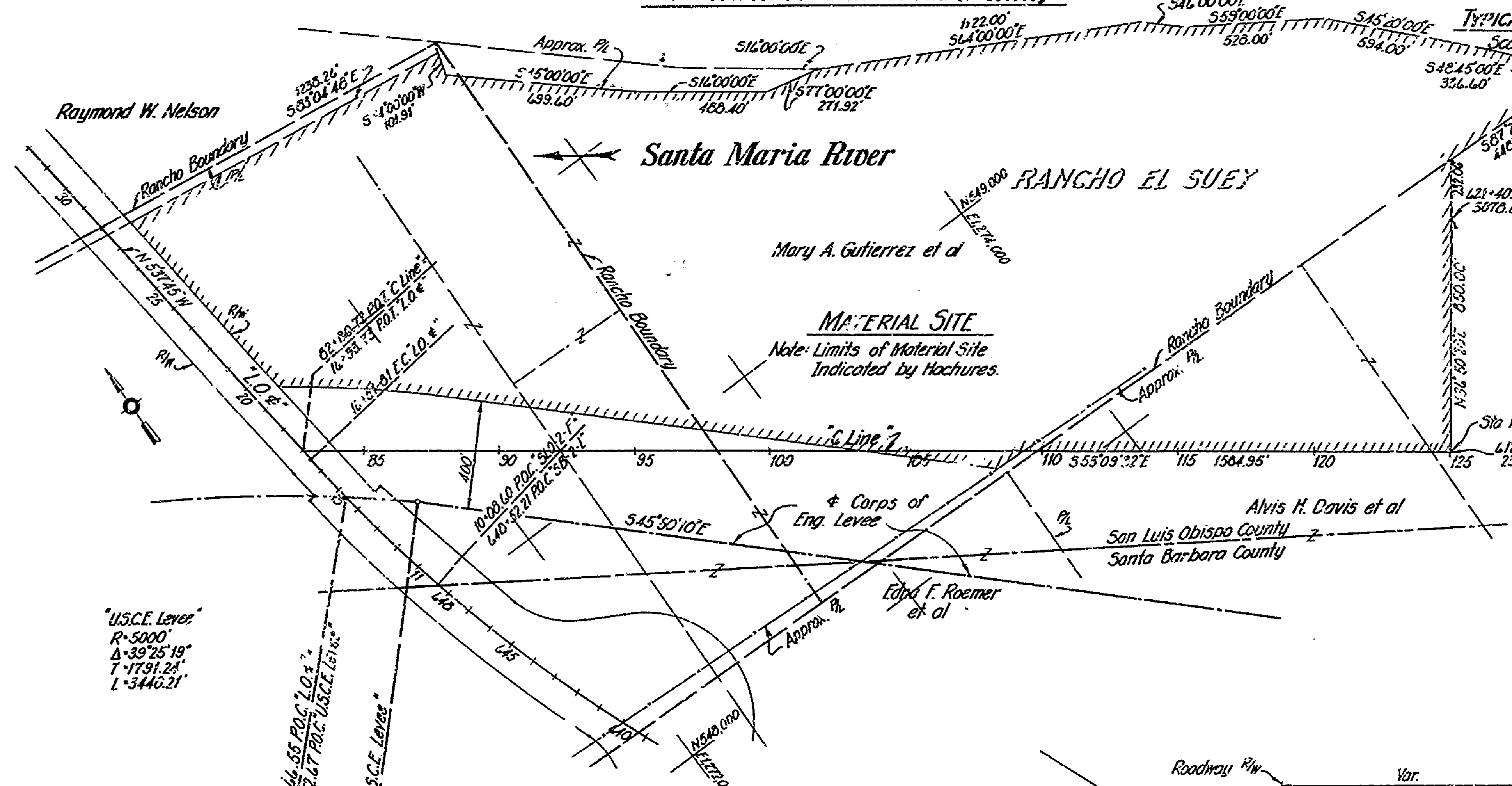
August 15, 1960



PLAN
Scale: 1" = 100'

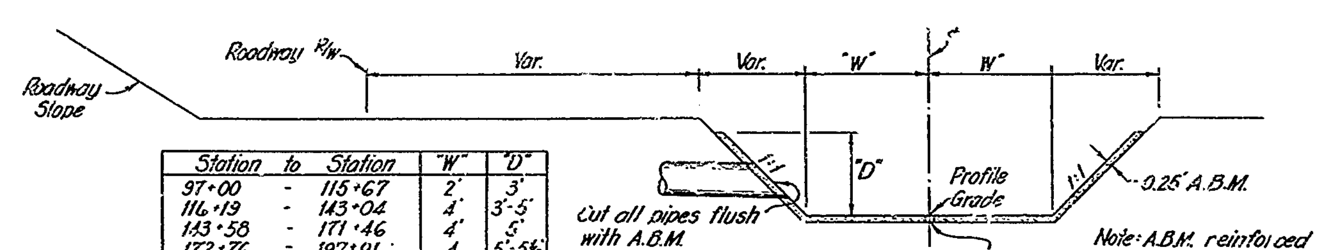


TYPICAL SECTION
Scale: 1" = 10'



MATERIAL SITE
Scale: 1" = 300'

Station	to	Station	"W"	"D"
97+00	-	115+67	2'	3'
116+19	-	143+04	4'	3'-5'
143+58	-	171+46	4'	5'
172+76	-	197+91	4	5'-5½'
198+79	-	223+47.20	4'	5½'



Note: A.B.M. reinforced with 4"x4"x8 Ga. mesh at least 1" cover in each direction.

BRADLEY CHANNEL (SOUTH)
Scale: 1" = 5'

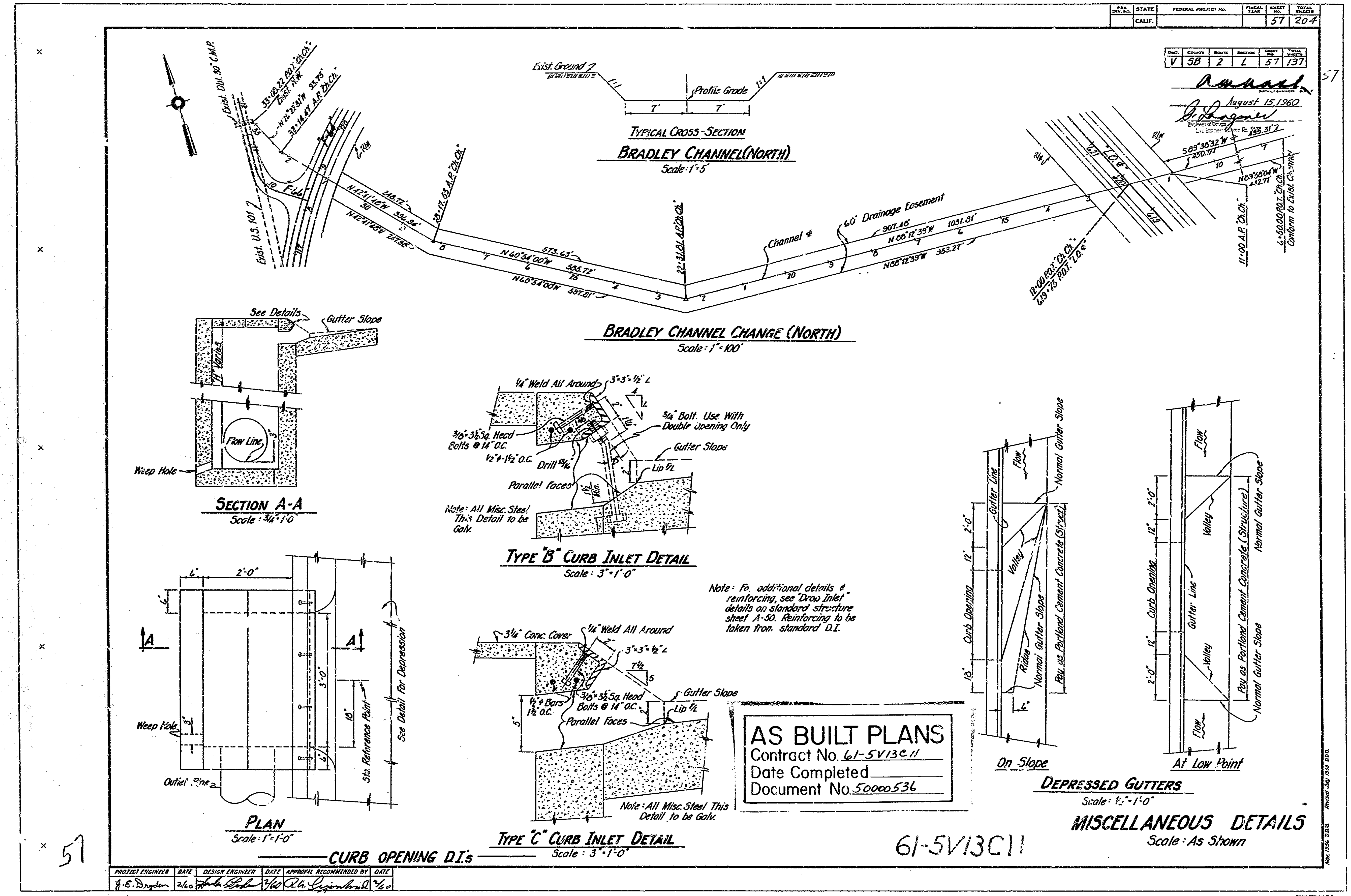
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

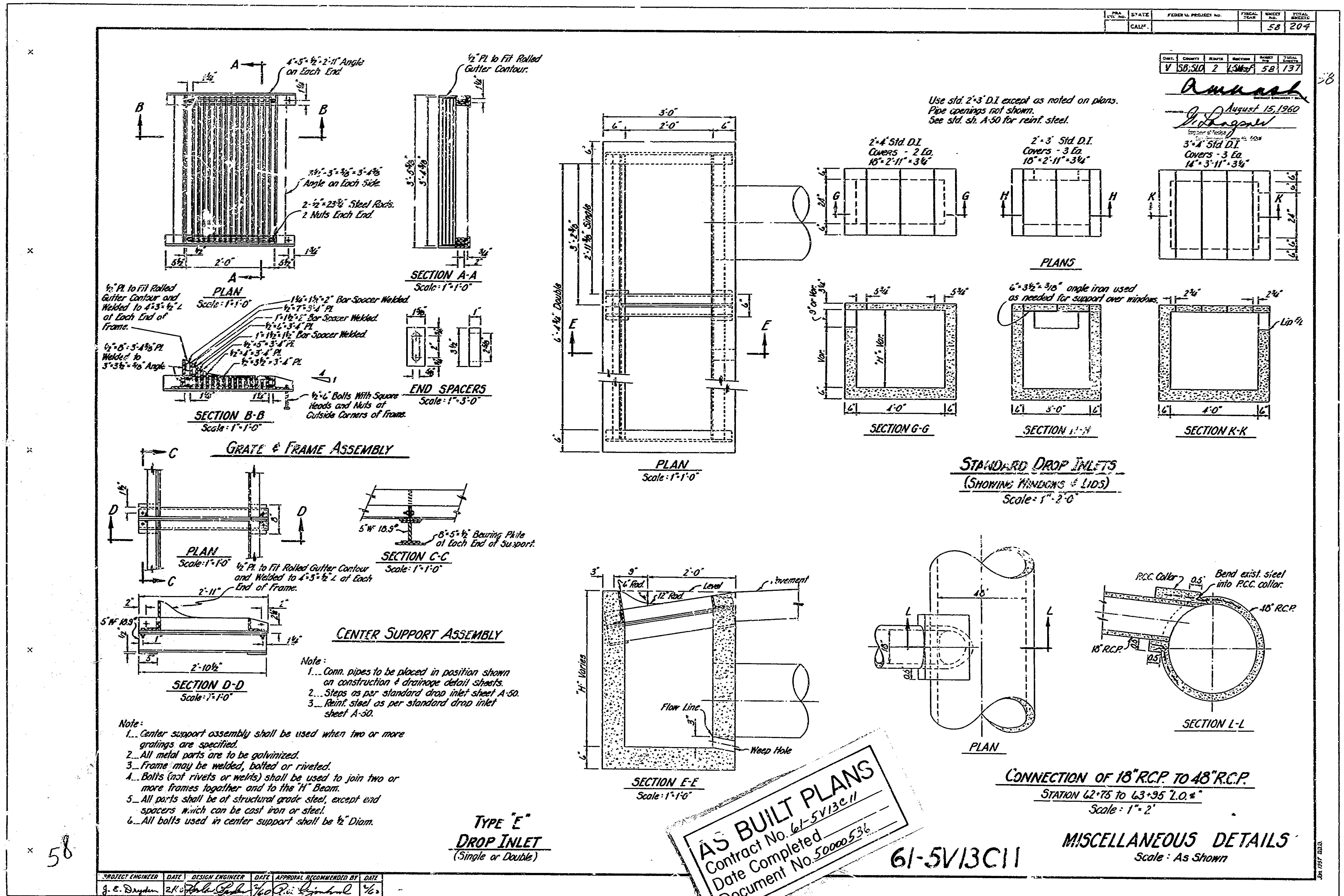
MISCELLANEOUS DETAILS
Scale: As Shown

Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
J. E. Dryden	2/60		2/60		2/60

56



STATE CALIF. 57 204
V SB 2 L 57 137
August 15, 1960
Exist. Ground
Profile Grade
1:1
7'
TYPICAL CROSS-SECTION
BRADLEY CHANNEL (NORTH)
Scale: 1" = 5'
Exist. U.S. 101
Exist. DDI. 30" C.M.P.
N42°41'45"W
N60°34'00"W
573.63'
N 68°12'39"W
1031.81'
907.46'
353.27'
Channel ℄
60' Drainage Easement
Conform to Exist. Channel
BRADLEY CHANNEL CHANGE (NORTH)
Scale: 1" = 100'
See Details
Gutter Slope
H Varies
Flow Line
Weep Hole
SECTION A-A
Scale: 3/4" = 1'-0"
1/4" Weld All Around
3"x3"x1/2" L
3/4" Bolt. Use With Double Opening Only
Gutter Slope
Lip 1/2
3/8"x3 1/2" Sq. Head Bolts @ 14" O.C.
1/2"x1 1/2" O.C.
Drill 13/16
Parallel Faces
Note: All Misc. Steel This Detail to be Galv.
TYPE "B" CURB INLET DETAIL
Scale: 3" = 1'-0"
Note: For additional details & reinforcing, see "Drop Inlet" details on standard structure sheet A-50. Reinforcing to be taken from standard D.I.
2'-0"
3'-0"
Weep Hole
Outlet Pipe
Sta. Reference Point
See Detail For Depression
PLAN
Scale: 1" = 1'-0"
3 1/4" Conc. Cover
1/4" Weld All Around
3"x3"x1/2" L
3/8"x3 1/2" Sq. Head Bolts @ 14" O.C.
1/2" ∅ Bars 1 1/2" O.C.
Parallel Faces
Gutter Slope
Lip 1/2
Note: All Misc. Steel This Detail to be Galv.
TYPE "C" CURB INLET DETAIL
Scale: 3" = 1'-0"
CURB OPENING D.I.'s
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
61-5V13C11
Flow
Gutter Line
Normal Gutter Slope
Curb Opening
Valley
Ridge
Pay as Portland Cement Concrete (Street)
Pay as Portland Cement Concrete (Structure)
On Slope
At Low Point
DEPRESSED GUTTERS
Scale: 1/2" = 1'-0"
MISCELLANEOUS DETAILS
Scale: As Shown
PROJECT ENGINEER | DATE | DESIGN ENGINEER | DATE | APPROVAL RECOMMENDED BY | DATE



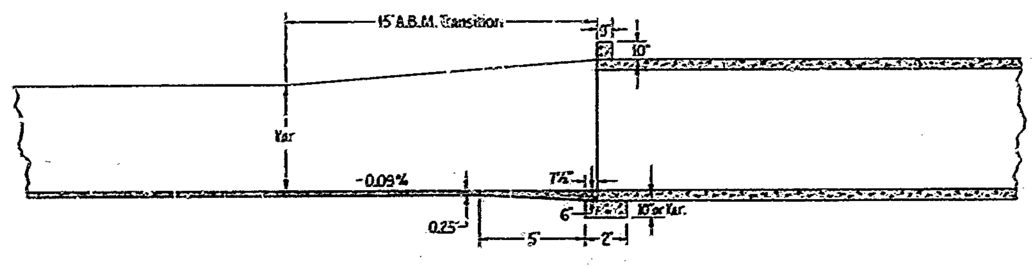
STATE CALIF. FEDERAL PROJECT No. 58 204
V SB,SLO 2 58 137
August 15, 1960
Use std. 2'x3' D.I. except as noted on plans.
Pipe openings not shown.
See std. sh. A-50 for reinf. steel.
2'x4' Std. D.I. Covers - 2 Ea. 16"x2'-11"x3¼"
2'x3' Std. D.I. Covers - 3 Ea. 16"x2'-11"x3¼"
3'x4' Std. D.I. Covers - 3 Ea. 14"x3'-11"x3¼"
PLANS
SECTION G-G
SECTION H-H
SECTION K-K
STANDARD DROP INLETS
(SHOWING WINDOWS & LIDS)
Scale: 1"=2'-0"
PLAN
SECTION A-A
SECTION B-B
END SPACERS
GRATE & FRAME ASSEMBLY
SECTION C-C
SECTION D-D
CENTER SUPPORT ASSEMBLY
Note:
1... Conn. pipes to be placed in position shown on construction & drainage detail sheets.
2... Steps as per standard drop inlet sheet A-50.
3... Reinf. steel as per standard drop inlet sheet A-50.
Note:
1... Center support assembly shall be used when two or more gratings are specified.
2... All metal parts are to be galvanized.
3... Frame may be welded, bolted or riveted.
4... Bolts (not rivets or welds) shall be used to join two or more frames together and to the "H" Beam.
5... All parts shall be of structural grade steel, except end spacers which can be cast iron or steel.
6... All bolts used in center support shall be ½" Diam.
SECTION E-E
TYPE "E" DROP INLET
(Single or Double)
SECTION L-L
CONNECTION OF 18" R.C.P. TO 48" R.C.P.
STATION 62+75 to 63+35 "L.O."
Scale: 1"=2'
MISCELLANEOUS DETAILS
Scale: As Shown
61-5V13C11
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
PROJECT ENGINEER J. E. Dryden
DESIGN ENGINEER
APPROVAL RECOMMENDED BY

58

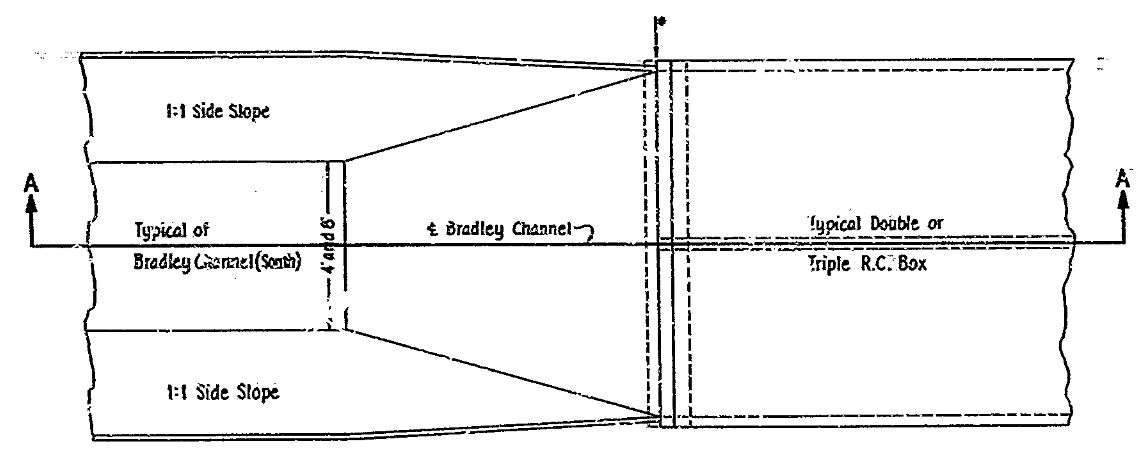
B.P.R. DIV. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			59	204

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB	2	L	59	137

August 15, 1960



SECTION A-A



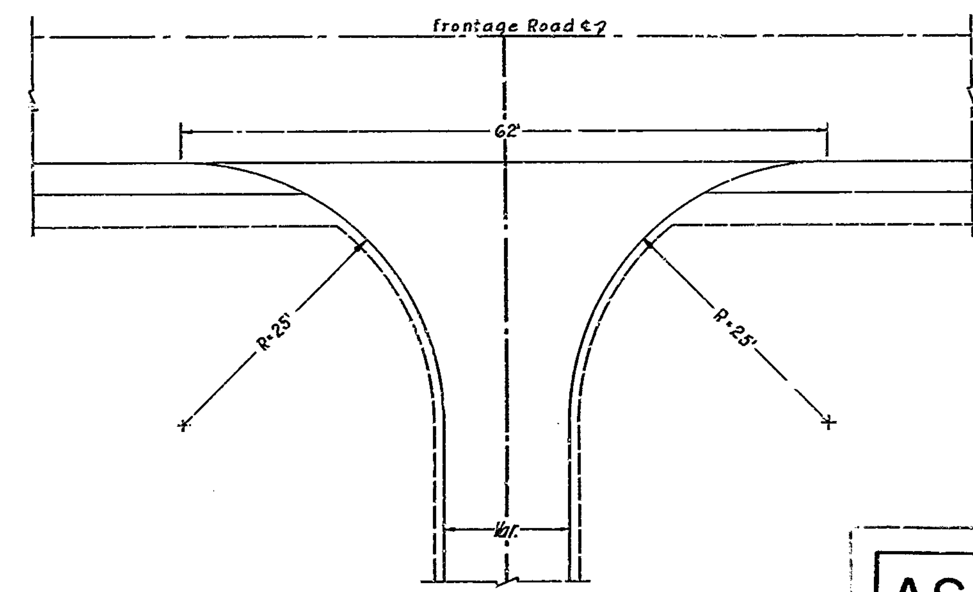
PLAN VIEW
TYPICAL A.B.M. TRANSITION
BRADLEY CHANNEL (SOUTH)
Scale 1" = 5'-0"

* Stations at which transitions occur.

a. 116 + 19	1'3 + 67	d. 143 + 58	143 + 04
b. 119 + 05	119 + 23	e. 172 + 76	171 + 46
c. 130 + 82	131 + 00	f. 198 + 79	197 + 91

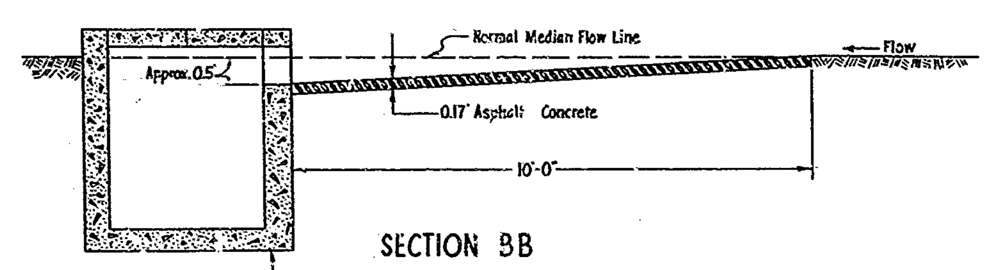
DRAINAGE STRUCTURES OCCURRING AT ABOVE TRANSITIONS

Station	Item
a. 843 + 78 "F-36"	Const. 8' x 3.5' x 52' R.C.B.
b. 847 + 11 "F-36" 52' Rt.	Const. 8' x 4' x 17.5' R.C.B.
c. 858 + 88 "F-36" 52' Rt.	Const. 8' x 4' x 17.5' R.C.B.
d. 15 + 78.16 Stowell	Const. Dbl. 8' x 5' x 54' R.C.B.
e. 497 + 05 L.O. ℄ 183' Rt.	Const. Triple 8' x 4.5 - Spec - IV x 130' R.C.B.
f. 12 + 02.06 Main St.	Const. Dbl. 8' x 6' - A - IV x 88' R.C.B.

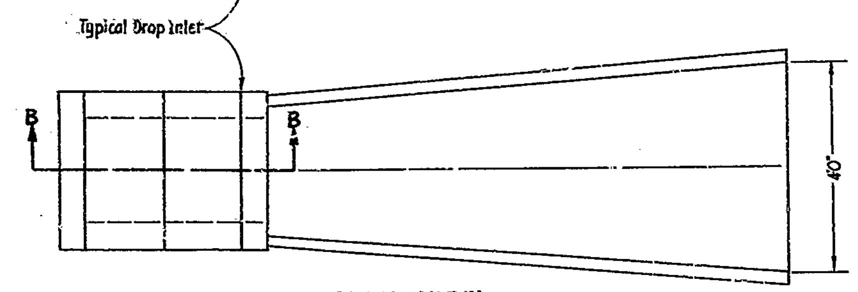


PRIVATE ROAD CONNECTIONS
PR 1 to 10
Scale 1" = 10'-0"

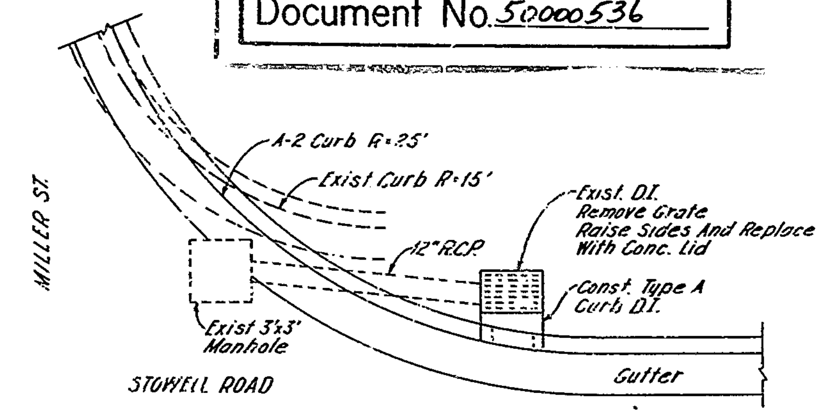
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536



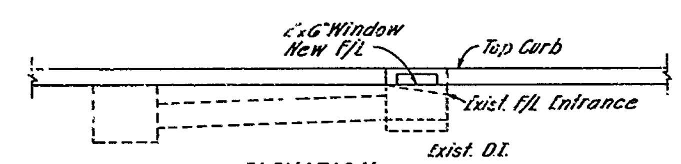
SECTION BB



PLAN VIEW
A.C. APRONS FOR MEDIAN D.I.s
Scale 1" = 2'-0"



PLAN



ELEVATION

DROP INLET
Sta. 120 + 34 Stowell Rd.
Scale: 1" = 5'

61-5V13C11

MISCELLANEOUS DETAILS
Scale: As Shown

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	[signature]	2/60	R. A. [signature]	2/60

59

STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
CALIF			60	204

* Payment included in Class "A" Concrete (Minor Structures) - ~~See Special Provisions~~
** Final Pay Quantity - ~~See Special Provisions~~

DIST	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB	2	L	60	137

60

DRAINAGE STRUCTURES

August 15, 1960

STATIONING	LINE	DESCRIPTION	C.M.P. 12-16 Ga. L.F.	C.M.P. 18-16 Ga. L.F.	C.M.P. 24-14 Ga. L.F.	R.C.P. 18" III L.F.	R.C.P. 21" III L.F.	R.C.P. 24" III L.F.	R.C.P. 30" III L.F.	R.C.P. 36" III L.F.	R.C.P. 48" III L.F.	R.C.P. 84" III L.F.	Structure Excavation C.Y.	Structure Backfill C.Y.	Ditch Excav. C.Y.	Class "A" P.C.C. C.Y.	Class "A"** P.C.C. Min Str C.Y.	Bar Reinf. Steel Lbs.	Misc. Iron & Steel Lbs.	Gr. Grate Type "E" Ea.	Standard Drop Inlet Windows No.	Standard Drop Inlet Windows Size	Standard Drop Inlet H Ft.	A.C. Paving S.Y.	Culvert Markers Plain Ea.	Culvert Markers Reflectorized Ea.
77+32	F-16	Place 36"x44' R.C.P. Ditch Outlet								44			18.7	16.8	3.0											
		Const. Std. H.W. Rt.											*	*			1.95	*							2	
277+30	Rt. Lane ℄	Remove H.Wall on Exist. 36"x100' R.C.P.																								
		Const. Std. 2'x3' D.I. 30' Rt. of Rt. Lane ℄											*	*			0.91	*	20		1	2'0"x5'0"	4.3'	4.5	2	
		Extend Rt. of D.I. with 36"x76' R.C.P. Skew 35° Rt.								76			54.8	32.2												
		Const. Std. H.W. Rt.											*	*			1.82	*								
83+27	F-16	Place 24"x48' R.C.P. Ditch Inlet						48					19.3	12.2	0.5											
		Const. Std. H.W. Rt.											*	*			1.20	*							2	
282+74	Rt. Lane ℄	Place 24"x228' R.C.P. Skew 45° Rt. Ditch Inlet						228					134.2	97.9	0.5										3	1
		Attach R.C.P. to Exist. D.I. Med.														0.15										
		Const. Std. 2'x3' D.I. Rt.											*	*			[illegible]	*	24		1	2'0"x0'9"	5.7'	4.5		
		Const. Std. H.W. Rt.											*	*			1.11	*								
288+10	Lt. Lane ℄	Const. Std. 2'x3' D.I. Lt. on Exist. 24"x70' C.M.P.											*	*			1.41	*	24		1	2'0"x0'9"	5.5'	4.5		
		Extend Lt. with 24"x56' R.C.P.						56					25.3	16.3												
		Remove H.W. on Exist. C.M.P. Rt.																								1
		Const. P.C.C. Collar Rt.																								
		Extend Rt. with 24"x24' R.C.P.											*	*			0.34	*								
		Const. Std. 2'x3' D.I. Med.						24					9.1	5.8											1	
		Place 18"x96' R.C.P. Rt.											*	*			1.82	*	27		1	2'0"x0'9"	7.2	4.5	1	
		Const. Std. 2'x3' D.I. Rt.					96						43.3	34.3												
													*	*			0.96	*	1		2	2'0"x0'9"	3.2	9.0		
89+14	R-10	Place 18"x72' R.C.P. Skew 15°30' Rt. Ditch Outlet				72							41.5	34.1	3.0											
		Const. Std. 2'x3' D.I. Rt.																							2	
													*	*			0.96	*	11		2	2'0"x0'9"	3.2	4.5		
195+00	F-17	Place 24"x80' R.C.P. Skew 42° Rt.						80					35.8	23.0												
		Const. Std. H.W. Rt.											*	*			1.10	*							2	
296+43	Rt. Lane ℄	Place 18"x136' R.C.P. Skew 22° Lt.				136							34.8	31.4												
		Const. Std. 2'x3' D.I. Med.																							1	1
		Const. Std. 2'x3' D.I. 28' Rt.											*	*			1.02	*	11		1	2'0"x0'9"	3.3	4.5		
		Place 18"x12' C.M.P. Chimney 28' Rt.		12									*	*			0.73	*	11		1	2'0"x0'9"	2.0			
		Const. Std. P.C.C. Collar 28' Rt.												3.5												
		Const. Std. 2'x3' D.I. 86' Rt.											*	*			0.03	*								
													*	*			1.00	*	11		1	2'0"x1'0"	3.8			
197+44	F-18	Place 24"x160' R.C.P. Skew 42° Lt., Connect to D.I. 86' Rt. 296+43						160					90.4	64.1												
		Const. Std. 3'x4' D.I. 125' Rt.																							2	1
													*	*			1.52	*	67		2	2'0"x1'0"	4.3			
299+05	Rt. Lane ℄	Place 30"x336' R.C.P. Skew 37° Rt., Connect to D.I. Rt. at 197+44 F-18							336				299.0	218.2												
		Const. Std. 3'x4' D.I. Lt.											*	*			2.56	*	30		2	2'0"x0'9"	7.8			
60+86	R-13	Place 30"x76' R.C.P. Skew 11°30' Rt., Connect to D.I. Rt. at 299+05 Rt. Lane ℄							76				32.1	26.7											2	
200+80	F-18	Place 24"x164' R.C.P. Skew 36° Lt., Connect to D.I. Rt. at 299+05 Rt. Lane ℄						164					75.3	48.8												
		Const. Std. 2'x3' D.I. Lt.											*	*			1.11	*	20		2	2'0"x0'9"	4.0	4.5	1	
102+05	R-12	Remove Exist. H.Wall																								
		Const. Std. P.C.C. Collar																								
		Extend Rt. with 30"x52' R.C.P.											*	*			0.40	*								
		Const. Std. H.Wall Rt.							52				20.5	17.2												
		Remove Exist. E.Wall											*	*			1.52	*								
		Const. Std. P.C.C. Collar											*	*			[illegible]	*								
		Extend Lt. with 30"x40' R.C.P.							40				15.8	13.2												
		Const. Std. E.Wall Lt.											*	*			1.52	*								

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

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61-5V13C11

QUANTITY SUMMARY

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	[signature]	2/60	A. A. [signature]	2/60

DIST	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB	2	L	61	137

STATE	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
CALIF.		61	204

61

* Payment included in Class 'A' Concrete (Minor Structures) - ~~See Special Provisions~~
** Final Pay Quantity - ~~See Special Provisions~~

DRAINAGE STRUCTURES

A. M. Nash, District Engineer
Approved: G. Langner, Engineer of Design, August 15, 1960

STATIONING	LINE	DESCRIPTION	C.M.P. 12"-16 Ga. L.F.	C.M.P. 18"-16 Ga. L.F.	C.M.P. 24"-14 Ga. L.F.	R.C.P. 18" III L.F.	R.C.P. 21" III L.F.	R.C.P. 24" III L.F.	R.C.P. 30" III L.F.	R.C.P. 36" III L.F.	R.C.P. 48" III L.F.	R.C.P. 84" III L.F.	Structure Excavation C.Y.	Structure Backfill C.Y.	Ditch Excav. C.Y.	Class "A" P.C.C. C.Y.	Class "A"** P.C.C. Min Str C.Y.	Bar Reinf. Steel Lbs.	Misc. Iron & Steel Lbs.	Fr Grate Type "E" Ea	Standard Drop Inlet Windows No	Standard Drop Inlet Windows Size	Standard Drop Inlet H Ft.	A.C. Paving S.Y.	Culvert Markers Plain Ea	Culvert Markers Reflectorized Ea.
104+65	F-16	Place 24"x64' R.C.P.						64					27.5	17.6											2	
		Const. Std. 2'x3' D.I. Rt.											*	*			1.00	*	17		2	2'-0"x0'-9"	3.5	4.5		
310+55	LO ℄	Place 24"x184' R.C.P.						184					84.9	54.7											2	1
		Const. Std. 2'x3' D.I. Med.											*	*			0.73	*	11		1	2'-0"x0'-9"	2.0	4.5		
		Place 18"x6' C.M.P. Chimney		6										1.7												
		Const. P.C.C. Collar											*	*			0.03	*								
		Const. Std. H.W. Rt.											*	*			1.20	*								
319+13	LO ℄	Place 24"x160' R.C.P. Skew 21°30' Rt.						160					71.2	45.5											2	1
		Const. Std. 2'x3' D.I. Med.											*	*			0.73	*	11		1	2'-0"x0'-9"	2.0	4.5		
		Place 18"x2' C.M.P. Chimney		2																						
		Const. P.C.C. Collar											*	*			0.03	*								
		Const. Std. H.W. Rt.											*	*			1.20	*								
335+70	LO ℄	Place 24"x160' R.C.P.						160					72.2	30.8											2	1
		Const. Std. 2'x3' D.I. Med.											*	*			1.08	*	20		1	2'-0"x0'-9"	4.0			
		Const. Std. 2'x3' D.I. Rt. - One Side Opening ; One End Opening											*	*			1.11	*	55		2	2'-0"x0'-9"	4.0	4.5		
343+10	LO ℄	Place 24"x176' R.C.P. Skew 21° Rt.						176					81.9	52.7											1	2
		Const. Std. 2'x3' D.I. Med.											*	*			0.73	*	11		1	2'-0"x0'-9"	2.0	4.5		
		Place 18"x6' C.M.P. Chimney		6										1.7												
		Const. P.C.C. Collar											*	*			0.05	*								
		Const. Std. H.W. Rt.											*	*			1.20	*								
350+40	LO ℄	Place 18"x64' R.C.P. Ditch Outlet				64							26.0	18.1	16										1	1
		Const. Std. 2'x3' D.I. Med.											*	*			1.06	*	17		1	2'-0"x0'-9"	3.5	4.5		
361+10	LO ℄	Place 18"x64' R.C.P. Lt. Ditch Outlet				64							25.6	19.5	28										2	
		Const. Std. 2'x3' D.I. Med.											*	*			0.90	*	11		1	2'-0"x0'-9"	2.6			
		Const. Std. S.W. Lt.											*	*			0.91	*								
365+52	LO ℄	Place 24"x220' R.C.P. Skew 31° Rt.						220					105.4	62.2											1	2
		Const. Std. 2'x3' D.I. Med.											*	*			0.73	*	11		1	2'-0"x0'-9"	2.0	4.5		
		Place 18"x12' C.M.P. Chimney		12										3.9												
		Const. P.C.C. Collar											*	*			0.03	*								
		Const. Std. H.W. Rt.											*	*			1.20	*								
365+52	[illegible] Lt. of LO ℄	Place 24"x32' C.M.P. Ditch Inlet & Outlet			32								11.5	7.9	9											
		Const. Std. H.W. Rt.											*	*			1.20	*								
373+00	LO ℄	Place 18"x80' R.C.P. Lt.				80							20.5	17.1											1	1
		Const. Std. 2'x3' D.I. Med.											*	*			0.93	*	11		1	2'-0"x0'-9"	2.9	4.5		
379+00	LO ℄	Place 18"x80' R.C.P. Lt.				80							20.5	17.1											1	1
		Const. Std. 2'x3' D.I. Med.											*	*			0.95	*	11		1	2'-0"x0'-9"	3.0	4.5		
385+00	LO ℄	Place 18"x80' R.C.P. Lt.				80							20.5	17.1											1	1
		Const. Std. 2'x3' D.I. Med.											*	*			0.95	*	11		1	2'-0"x0'-9"	3.0	4.5		
391+00	LO ℄	Place Quad 24"x160' R.C.P.						640					218.0	108.4											1	2
		Const. Std. 2'x3' D.I. Med.											*	*			1.39	*	24		1	2'-0"x0'-9"	5.4	4.5		
		Const. Std. Multiple H.W. Rt. Length = 17.7'											*	*			2.33	*								
291+56	F-24	Place Dbl. 24"x44' R.C.P.						88					28.5	15.2											2	
		Const. Std. Dbl. H.W. Rt.											*	*			1.57	*								
306+00	LO ℄	Place 18"x80' R.C.P. Lt.						80					25.8	16.0											2	
		Const. Std. 2'x3' D.I. Med.											*	*			0.95	*	11		1	2'-0"x0'-9"	3.0	4.5		

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
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61-5V13C11

QUANTITY SUMMARY

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	[illegible]	3/60	H. A. Lyman	3/60

61

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* Required included in Class "A" Concrete (Minor Structures) - ~~See Special Provisions~~
** Final Pay Quantity - ~~See Special Provisions~~

DRAINAGE STRUCTURES

August 15, 1960

STATIONING	LINE	DESCRIPTION	C.M.P. 12"-16 Ga L.F.	C.M.P. 18"-16 Ga L.F.	C.M.P. 24"-14 Ga L.F.	R.C.P. 18" III L.F.	R.C.P. 21" III L.F.	R.C.P. 24" III L.F.	R.C.P. 30" III L.F.	R.C.P. 36" III L.F.	R.C.P. 48" III L.F.	R.C.P. 84" III L.F.	Structure Excavation C.Y.	Structure Backfill C.Y.	Ditch Excav. C.Y.	Class "A" P.C.C. C.Y.	Class "A"** P.C.C. Min. Str. C.Y.	Bar Reinf. Steel lbs.	Misc. Iron & Steel lbs.	Fr. Grate Type "E" Ea.	Standard Drop Inlet Windows No.	Standard Drop Inlet Windows Size	Standard Drop Inlet H Ft.	Paving S.Y.	Culvert Markers Plain Ea.	Culvert Markers Reflectorized Ea.
410+75	L.O.℄	Place 18"x180' R.C.P.				180							74.4	56.9											1	2
		Const. Std. 2'x3' D.I. Lt.											*	*			0.92	*	11		2	2'0"x0'9"	3.0	4.5		
		Const. Std. 2'x3' D.I. Rt.											*	*			0.92	*	11		2	2'0"x0'9"	3.0	4.5		
		Const. Std. 3x4 D.I. Med.											*	*			1.46	*	17		1	3'0"x1'0"	3.6	4.5		
410+75-415+50	L.O.℄	Place 24"x472' R.C.P. Along Med.						472					223.7	144.0												
415+50	L.O.℄	Const. Std. 2'x3' D.I. Med.											*	*			0.95	*	52		1	2'0"x0'9"	3.4	4.5	1	
415+50-419+50	L.O.℄	Place 24"x396' R.C.P. Along Med.						396					187.9	121.0												
419+50	L.O.℄	Place 18"x56' R.C.P. Rt.				56							22.2	16.8											1	1
		Const. Std. 3'x4' D.I. Med.											*	*			1.39	*	17		1	2'0"x0'9"	3.4	4.5		
		Const. Std. 2'x3' D.I. Rt.											*	*			0.92	*	11		2	2'0"x0'9"	3.0	4.5		
419+50-423+35	L.O.℄	Place 24"x384' R.C.P. Along Med.						384					193.0	128.5												
423+35	L.O.℄	Place 18"x104 R.C.P. Lt. Skew 52° Lt.				104							52.2	42.6											1	2
		Place 24"x132' R.C.P. Rt. Skew 52° Lt.						132					80.2	61.0												
		Const. Std. 3'x4' D.I. Med.											*	*			1.26	*	17		1	2'0"x0'9"	3.4	4.5		
		Const. Std. 2'x3' D.I. Lt.											*	*			1.12	*	20		1	2'0"x0'9"	4.0	4.5		
430+00	L.O.℄	Place 18"x80' R.C.P. Rt. Ditch Outlet				80							25.5	17.8	2										1	1
		Const. Std. 2'x3' D.I. Med.											*	*			0.95	*	11		1	2'0"x0'9"	3.0	4.5		
436+00	L.O.℄	Place 18"x80' R.C.P. Rt. Ditch Outlet				80							25.2	17.5	2										1	1
		Const. Std. 2'x3' D.I. Med.											*	*			0.95	*	11		1	2'0"x0'9"	3.0	4.5		
442+00	L.O.℄	Place 18"x80' R.C.P. Rt. Ditch Outlet				80							25.5	17.8	2										1	1
		Const. Std. 2'x3' D.I. Med.											*	*			0.95	*	11		1	2'0"x0'9"	3.0	4.		
843+78	F-36	Const. Std. 8'x3.5'x52' R.C. Box Skew 37° 11' Lt.											128.4	55.3		32.11		5850							2	
445+00	L.O.℄	Place 18"x152' R.C.P. Rt.				152							47.6	33.2											2	
		Const. Std. 2'x3' D.I. Med.											*	*			0.95	*	11		1	2'0"x0'9"	3.0	4.5		
454+00	L.O.℄	Place 18"x152' R.C.P. Rt.				152							49.6	34.6											2	
		Const. Std. 2'x3' D.I. Med.											*	*			0.95	*	11		1	2'0"x0'9"	3.0	4.5		
459+00	L.O.℄	Place 24"x244' R.C.P. Ditch Inlet						244					137.5	98.4	4										2	1
		Const. Std. H.W. Lt.											*	*			1.20	*								
		Const. Std. 2'x3' D.I. Med.											*	*			1.57	*	27		1	2'0"x0'9"	6.2	4.5		
		Const. Std. 2'x3' D.I. Rt.											*	*			1.17	*	20		1	2'0"x0'9"	4.4			
162+50	R-30	Place 12"x16' C.M.P. Lt. Ditch Outlet	16										2.4	1.9											1	
		Const. Std. Type "E" Curb D.I.											*	*			0.85	*	575	1	1		3.0			
261+07	R-31	Place 12"x12' C.M.P. Lt.	12										2.0	1.5											1	
		Const. Std. Type "E" Curb D.I.											*	*			0.72	*	575	1	1		2.4			
464+00	L.O.℄	Place 18"x80' R.C.P. Rt.				80							14.8	17.3											1	1
		Const. Std. 2'x3' D.I. Med.											*	*			0.95	*	11		1	2'0"x0'9"	3.0	4.5		
264+46	R-31	Place 18"x[illegible]' R.C.P. Ditch Outlet				52							18.0	13.0	2										1	1
		Const. Std. 2'x3' D.I. 18' Rt.											*	*			1.36	*	24		2	2'0"x0'9"	5.0	9.0		
847+11	F-36	Const. 8'x4'x17.5' R.C. Box 52' Rt.											42.0	8.0		12.05		2051								
858+88	F-36	Const. 8'x4'x17.5' R.C. Box 52' Rt.											42.0	8.0		12.05		2051								

AS BUILT PLANS
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61-5V13C11

QUANTITY SUMMARY

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J.E. Dryden	2/60	[signature]	2/60	[signature]	2/60

62

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB	2	L	63	137

M & R DIV. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			63	204

63

DRAINAGE STRUCTURES

* Payment included in Class 'A' Concrete (Minor Structures) ~~- See Special Provisions~~

** Final Pay Quantity ~~- See Special Provisions~~

APPROVED August 15, 1960
Engineer of Design

STATION & LINE	DESCRIPTION	C.M.P. 12"-16 Ga L.F.	C.M.P. 18"-16 Ga L.F.	C.M.P. 24"-14 Ga L.F.	R.C.P. 18" III L.F.	R.C.P. 21" III L.F.	R.C.P. 24" III L.F.	R.C.P. 30" III L.F.	R.C.P. 36" III L.F.	R.C.P. 48" III L.F.	R.C.P. 84" III L.F.	Structure Excavation C.Y.	Structure Backfill C.Y.	Ditch Excav. C.Y.	Class 'A' R.C.C. C.Y.	Class 'A'** R.C.C. Fin. Sr. C.Y.	Box Reinf. Steel Lbs.	Misc. Iron & Steel Lbs.	Ft. Grate Type 'E' Ea.	Standard Drop Inlet Windows No.	Standard Drop Inlet Windows Size	Standard Drop Inlet H Ft.	Misc.	A.C. Paving S.Y.	Culvert Markers Plain Ea.	Culvert Markers Reflectored Ea.
468+95 L.O.¢	Place 24"x168' R.C.P.						168					73.9	47.6												3	
	Const. Std. 2'x3' D.I. Med											•	•			1.35	•	24		1	2'0"x0'9"	5.2		4.5		
	Const. Std. Type "E" Curb D.I. Lt.											•	•			1.35	•	593	1			5.7				
	Const. Std. B.W. Lt.											•	•			1.20	•									
	Const. Std. E.W. Rt.											•	•			1.20	•									
870+69 F-36	Place 24"x120' R.C.P.						120					94.5	74.8												2	
	Const. Std. B.W. Lt.											•	•			1.20	•									
15+78.16 Stowell	Const. Dbl. 8'x5'x54' R.C. Box Skew 3°41'07" Lt.											314.0	64.0		69.75		912.5								2	
474+00 L.O.¢	Place 18"x80' R.C.P. Lt.				80							24.8	17.3												1	1
	Const. Std. 2'x3' D.I. Med.											•	•			0.95	•	11		1	2'0"x0'9"	3.0		4.5		
774+18 F-35	Place 18"x44' R.C.P.				44							12.9	9.0												2	
	Const. Std. B.W. Rt.											•	•			0.91	•									
576+41 R-33	Place 18"x 44' R.C.P. Skew 23°Lt. Ditch Inlet				116							34.8	24.4	1.0											1	2
	Const. Std. B.W. Lt.											•	•			0.91	•									
	Const. Std. Type "E" Curb D.I. Lt.											•	•			0.99	•	580	1			4.0				
	Const. Std. 2'x3' D.I. Med.											•	•			1.36	•	24		1	2'0"x1'3"	5.0		4.5		
579+25 R-33	Place 12"x 14' C.M.P. Rt. Ditch Outlet	14										1.8	1.5	6.0											1	
	Const. Std. Type "E" Curb D.I.											•	•			0.85	•	575	1			3.0				
481+66 L.O.¢	Place 21"x256' R.C.P. Sleeve, Skew 0°12'39" Rt.					256						441.8	407.4												1	1
481+75 L.O.¢	Place 18"x 88' R.C.P. Rt.				88							28.3	19.8												1	1
	Const. Std. 2'x3' D.I. Med.											•	•			0.92	•	11		2	2'0"x0'9"	3.0		9.0		
468+00 L.O.¢	Place 18"x 64' R.C.P. Rt				64							20.7	14.5												1	1
	Const. Std. 2'x3' D.I. Med.											•	•			0.95	•	11		1	2'0"x0'9"	3.0		4.5		
495+45 L.O.¢	Place 24"x272' R.C.P. Ditch Inlet and Outlet						272					125.0	79.8	6.0											2	
	Const. Std. "L" H.W. Lt., W=5.0											•	•			1.23	•									
497+05 185Str. L.O.¢	Const. Triple 6'x4.5'x Spec - IV = 130' RCB.											764.6	144.8		236.14		34200								1	
505+50 L.O.¢	Place 18"x 64' R.C.P. Rt.				64							21.4	14.9												1	1
	Const. Std. 2'x3' D.I. Med.											•	•			0.95	•	11		1	2'0"x0'9"	3.0		4.5		
508+25 L.O.¢	Place 21"x 302' R.C.P. Sleeve, Skew 1°59'21" Lt.					302						615.0	573.2													2
512+75 L.O.¢	Place 18"x 80' R.C.P. Rt.				80							26.3	18.4												1	1
	Const. Std. 2'x3' D.I. Med											•	•			0.92	•	11		2	2'0"x0'9"	3.0		9.0		
15+88 R-41	Place 18"x 32' R.C.P.				32							9.9	6.9													2
	Const. Std. "B-2" Curb Opening D.I. Rt.											•	•			2.06	•	63		1		4.5				
16+27 R-40	Place 18"x 44' R.C.P.				44							13.3	9.3													2
	Const. Std. "B-2" Curb Opening D.I. Lt.											•	•			2.06	•	63		1		4.5				
22+65 R-40	Place 12"x 8' C.M.P.	8										1.0	0.8												1	
	Const. Std. Type "E" Curb D.I.											•	•			0.85	•	575	1			3.0				
22+60 R-41	Place 12"x 8' C.M.P.	8										1.1	0.9												1	
	Const. Std. Type "E" Curb D.I. Ditch Outlet											•	•			0.85	•	575	1			3.0				
12+02.08 Main St.	Const. Double 8'x6'-A-IV = 88' RCB.											618.0	185.0		116.31		14800								2	
8+25 Main St.	Place 18"x 104' R.C.P. Ditch Inlet and Outlet				104							45.2	34.6	2.0											2	
120+32 Stowell Widening	Const. Type "A" Curb D.I. Lt. Connect To And Raise Exist. D.I.											1.7	1.0		0.64		50	30								

61-5V13C11

QUANTITY SUMMARY

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 500000536

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	[signature]	2/60	[signature]	2/60

63

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D.P.R. DIV. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			54	204

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB	2	L	64	137

64

* Payment includes in Class 'A' Concrete (Minor Structures) - ~~Earthquake Reinforcement~~

** Reinforcing Quantity - ~~Earthquake Reinforcement~~

DRAINAGE STRUCTURES

August 15, 1960

STATION	LINE	DESCRIPTION	C.M.P. 12"-16 Ga L.F.	C.M.P. 18"-36 Ga L.F.	C.M.P. 24"-54 Ga L.F.	R.C.P. 15" III L.F.	R.C.P. 21" III L.F.	R.C.P. 24" III L.F.	R.C.P. 30" III L.F.	R.C.P. 36" III L.F.	R.C.P. 48" III L.F.	R.C.P. 84" III L.F.	Structure Excavation C.Y.	Structure Backfill C.Y.	Ditch Excav. C.Y.	Class "A" P.C.C. C.Y.	Class "A" P.C.C. Fin. Sfc. S.F.	Bar Reinf. Steel Lbs.	Misc. Iron & Steel Lbs.	Ft. Slotted Type "E" Ea.	Standard Drop Inlet Windows No.	Standard Drop Inlet Windows Size	Standard Drop Inlet Ht. Ft.	A.C. Paving S.Y.	Culvert Markers Plain Ea.	Culvert Markers Reflectored Ea.
23+60	R-42	Place 12"x12" C.M.P. Ditch Outlet	12										20.8	17.8	1											1
		Const. Std. Type "E" Curb D.I.											•	•			0.86	•	575	1			3.0			
23+85	R-43	Place 18"x 32" R.C.P. Ditch Outlet				32							8.9	6.2												2
		Const. Std. B-2 Curb Opening D.I. Lt.											•	•	2		1.92	•	62	1	20x09		4.0			
		Const. Std. Type "E" Curb F.E. Rt.											•	•			1.06	•	588	1			4.3			
529+58	L.O.E.	Place 24"x 280' R.C.P.					280						210.0	258.4											1	2
		Const. Std. 2'x3' D.I. Med.											•	•			0.73	•	11	1	20x09		2.0	4.5		
		Const. Std. B-2 Curb Opening D.I. Lt.											•	•			1.75	•	49	1			3.0			
		Place 18"x 60' C.M.P. Chimney Med.		10										2.9												
		Const. Std. R.C.C. Collar											•	•			0.93	•								
		Place 18"x 10' C.M.P. Chimney Lt.		10										2.9												
		Const. Std. R.C.C. Collar											•	•			0.03	•								
		Const. Std. "E" Skew Lt. W=40'											•	•			1.38	•								
38+46	R-43	Place 18"x 32' R.C.P.				32							9.9	6.9												2
		Const. Std. B-2 Curb Opening D.I. Lt.											•	•			1.95	•	62	1			4.0			
535+77	L.O.E.	Place 21"x 257' RCP Sleeve, Skew 7°50'16" Rt					257						529.3	494.8											1	1
536+00	L.O.E.	Place 18"x 80' R.C.P. Rt				80							24.3	18.4											1	1
		Const. Std. 2'x3' D.I. Med.											•	•			0.95	•	11	1	20x09		3.0	4.5		
542+00	L.O.E.	Place 18"x 120' R.C.P. Rt.				120							52.3	40.2											1	1
		Const. Std. 2'x3' D.I. Med.											•	•			0.95	•	11	1	20x09		3.0	4.5		
548+00	L.O.E.	Place 18"x 80' R.C.P. Rt.				80							25.7	17.9											1	1
		Const. Std. 2'x3' D.I. Med.											•	•			0.95	•	11	1	20x09		3.0	4.5		
551+15	L.O.E.	Place 21"x 196' R.C.P. Sleeve Skew 21° 15' Rt.					196						82.0	55.4												2
554+00	L.O.E.	Place 18"x 80' R.C.P. Lt.				80							25.5	17.8											1	1
		Const. 2'x3' D.I. Med.											•	•			0.95	•	11	1	20x09		3.0	4.5		
560+00	L.O.E.	Place 18"x 80' C.M.P. Lt.				80							25.2	17.5											1	1
		Const. 2'x3' D.I. Med.											•	•			0.95	•	11	1	20x09		3.0	4.5		
562+38	L.O.E.	Place 21"x 204' RCP Sleeve, Skew 28° Rt.					204						423.9	396.5												2
566+00	L.O.E.	Place 18"x 80 R.C.P. Lt.				80							25.3	17.7											1	1
		Const. Std. 2'x3' D.I. Med.											•	•			0.95	•	11	1	20x09		3.0	4.5		
572+00	L.O.E.	Place 18"x 80' R.C.P. Lt.				80							25.2	17.5											1	1
		Const. Std. 2'x3' D.I. Med.											•	•			0.95	•	11	1	20x09		3.0	4.5		
73+00	R-53	Place 15"x 48' C.M.P.		48									10.4	7.8												2
		Const. R.W. Lt.											•	•			0.91	•								
		Const. Std. Type "E" Curb D.I. Rt.											•	•			0.73	•	575	1			2.5			
77+00	R-50	Place 24"x 52' R.C.P.						52					21.6	14.4												2
		Const. Std. R.W. Rt.											•	•			1.20	•								
100+50	F-54	Place 15"x 22' C.M.P.		22									4.7	3.5												2
		Const. Std. R.W. Rt.											•	•			0.91	•								
576+00	L.O.E.	Place 18"x 80' R.C.P. Lt. Ditch Outlet				80							25.9	18.0	2										1	1
		Const. Std. 2'x3' D.I. Med.											•	•			0.88	•	11	1	20x09		2.7	4.5		
24+00	Donovan	Place 24"x 68 R.C.P.						68					31.0	18.3												2
		Const. Std. R.W. Rt.											•	•			1.20	•								

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J.E. Drayson	2/60	[signature]	2/60	[signature]	2/60

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

QUANTITY SUMMARY

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* Payment included in Class "A" Concrete (Minor Structures) - ~~See Special Provisions~~
** Final Pay Quantity - ~~See Special Provisions~~

Dist.	County	Route	Section	Sheet No.	Total Sheets
V	58	2	L	65	137

65

District Engineer Dist. V

Approved August 15, 1960

Engineer of Design

DRAINAGE STRUCTURES

Stationing	Line	Description	C.M.P. 12"-16 Ga. L.F.	C.M.P. 18"-16 Ga. L.F.	C.M.P. 24"-14 Ga. L.F.	R.C.P. 18" III L.F.	R.C.P. 21" III L.F.	R.C.P. 24" III L.F.	R.C.P. 30" III L.F.	R.C.P. 36" III L.F.	R.C.P. 48" III L.F.	R.C.P. 84" III L.F.	Structure Excavation C.Y.	Structure Backfill C.Y.	Ditch Excav. C.Y.	Class "A" P.C.C. C.Y.	Class "A"** P.C.C. Min. Str. C.Y.	Bar Reinf. Steel Lbs.	Misc. Iron & Steel Lbs.	Tr. Grate Type "E" Ea.	Standard Drop Inlet Windows No.	Standard Drop Inlet Windows Size	Standard Drop Inlet H Ft.	A.C. Paving S.Y.	Culvert Markers Plain Ea.	Culvert Markers Reflectorized Ea.
505+65	F-55	Place 18" x 26' C.M.P.		26									5.7	4.3											2	
		Const. Std. H.W. Rt.											*	*			0.91	*								
585+00	LO ℄	Place 24" x 156' R.C.P.						156					67.0	42.8											1	2
		Const. Std. H.W. Rt.											*	*			1.20	*								
		Const. Std. 2'x3' D.I. Med.											*	*			1.08	*	20		1	2'-0"x0'-9"	4.0	4.5		
		Const. Std. Type "E" Curb D.I.											*	*			1.19	*	590	1			5.0			
85+50	R-53	Place 24" x 56' R.C.P.						56					24.8	16.0												2
		Const. Std. H.W. Rt.											*	*			1.20	*								
87+00	R-53	Place 18" x 46' C.M.P.		46									11.1	8.3												2
		Const. Std. H.W. Rt.											*	*			0.91	*								
591+00	LO ℄	Place 18" x 80' R.C.P. Rt. Ditch Outlet				80							26.8	17.3	2.0										1	1
		Const. Std. 2'x3' D.I. Med.											*	*			0.88	*	11		1	2'-0"x0'-9"	2.7	4.5		
598+00	LO ℄	Place 24" x 152' R.C.P. Rt.						152					68.0	43.2											1	2
		Const. Std. 2'x3' D.I. Med.											*	*			1.30	*	24		1	2'-0"x0'-9"	5.0	4.5		
		Const. Std. H.W. Rt.											*	*			1.20	*								
605+00	LO ℄	Place 18" x 80' R.C.P. Lt.				80							25.0	17.4											2	
		Const. Std. 2'x3' D.I. Med.											*	*			0.95	*	11		1	2'-0"x0'-9"	3.0	4.5		
600+00	LO ℄	Place 18" x 80' R.C.P. Rt.				80							28.3	21.1											1	1
		Const. Std. 2'x3' D.I. Med.											*	*			0.95	*	11		1	2'-0"x0'-9"	3.0	4.5		
616+25	LO ℄	Place 18" x 108' R.C.P. Rt. Skew 40° Lt. Ditch Outlet				108							36.2	25.3	100.0										1	1
		Const. Std. 2'x3' D.I. Med.											*	*			0.92	*	11		2	2'-0"x0'-9"	3.0	9.0		
619+75	LO ℄	Const. Std. Dbl. 6'x3'x146' R.C.B.											358.0	52.0		117.64		1582.5							1	2
		Const. Std. 2'x3' D.I. Med.											*	*			0.77	*	11		1	2'-0"x0'-9"	2.2	4.5		
635+75	LO ℄	Place 18" x 80' R.C.P. Rt.				80							25.5	17.8											1	1
		Const. Std. 2'x3' D.I. Med.											*	*			0.95	*	11		1	2'-0"x0'-9"	3.0	4.5		
128+00	F-64	Place 18" x 60' R.C.P.				60							19.7	13.7											2	
		Const. Std. H.W. Rt.											*	*			0.91	*								
35+00	R-61	Place 24" x 44' R.C.P.						44					18.8	12.1											1	1
		Const. Std. H.W. Rt.											*	*			1.21	*								
638+60	LO ℄	Place 24" x 164' R.C.P. Ditch Inlet						164					72.5	46.7	1.0										2	1
		Const. Std. 2'x3' D.I. Med.											*	*			0.94	*	17		2	2'-0"x0'-9"	3.5	9.0		
		Const. Std. Type "E" Curb D.I. Rt.											*	*			0.80	*	584	1			3.6			
		Const. Std. H.W. Rt.											*	*			1.20	*								
41+23	R-62	Place 18" x 44' R.C.P.				44							14.0	9.8											1	1
		Const. Std. 2'x3' D.I. Lt.											*	*			1.36	*	24		2	2'-0"x0'-9"	5.0	9.0		
646+00	LO ℄	Place 18" x 84' R.C.P. Lt.				84							27.4	19.1											2	
		Const. Std. 2'x3' D.I. Med.											*	*			0.95	*	11		1	2'-0"x0'-9"	3.0	4.5		
118+90	F-64	Place Quad 30" x 88' R.C.P. Skew 8°30' Rt.							352				182.2	96.5											1	1
		Const. Std. H.W. Rt. Length = 22.63'											*	*			3.35	*								
		Const. Std. E.W. Lt. Length = 22.63'											*	*			3.35	*								

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

QUANTITY SUMMARY

Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
G. E. Dryden	2/60	[signature]	2/60	R. G. [signature]	2/60

GRW JULY, 1959

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B.P.R. Div. No.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			66	204

* Payment included in Class 'A' Concrete (Minor Structures) - ~~See Special Provisions~~
** Final Pay Quantity - ~~See Special Provisions~~

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SLO	2	F	66	137

66

DRAINAGE STRUCTURES

August 15, 1960

STATIONING	LINE	DESCRIPTION	C.M.P. 12"-16 Ga L.F.	C.M.P. 18"-16 Ga L.F.	C.M.P. 24"-14 Ga L.F.	R.C.P. 18" III L.F.	R.C.P. 21" III L.F.	R.C.P. 24" III L.F.	R.C.P. 30" III L.F.	R.C.P. 36" III L.F.	R.C.P. 48" III L.F.	R.C.P. 84" II L.F.	Structure Excavation C.Y.	Structure Backfill C.Y.	Ditch Excav. C.Y.	Class 'A' P.C.C. C.Y.	Class 'A'** P.C.C. Min Sh. C.Y.	Bar Reinf. Steel Lbs.	Misc. Iron & Steel Lbs.	Ft. State Type 'E' E	Standard Drop Inlet Windows No.	Standard Drop Inlet Windows Size	Standard Drop Inlet H Ft.	A.C. Paving S.Y.	Culvert Markers Plain Ea.	Culvert Markers Reflitized Ea.
625+00	N.Broadway	Remove Exist. F.W. and H.W.																								2	
		Extend Lt. with 18"x8' C.M.P.		8									1.1	0.8													
		Const. Std. F.W.											*	*			0.91	*									
		Extend Rt. with 18"x8' C.M.P. Ditch Inlet		8									1.1	0.8	2.0												
		Const. Std. H.W.											*	*			0.91	*									
37+00	L.O.E.	Place 15"x 72' R.C.P. Lt.				72							23.1	16.1												1	1
		Const. Std. 2'x3' D.I. Med.											*	*			0.92	*	11		2	2'0"x0'9"	3.0	9.0			
48+00	L.O.E.	Place 18"x 116' R.C.P. Lt.				116							50.3	39.4												2	1
		Const. 2'x3' D.I. Med.											*	*			0.95	*	11		1	2'0"x0'9"	3.0	4.5			
		Const. 2'x3' D.I. Lt.											*	*			0.92	*	11		1	2'0"x0'9"	3.0				
52+28	L.O.E.	Place 30"x 248' R.C.P.							248				111.0	93.6												2	
		Const. Std. 2'x4' D.I. Rt.											*	*			2.04	*	27		1	2'0"x0'9"	7.0	4.5			
		Const. "L" H.W. Rt. W=4.0											*	*			1.68	*									
252+25	R 71	Place 30"x48' R.C.P.							48				19.8	16.6												2	
		Const. Std. 2'x4' D.I. Rt.											*	*			1.23	*	20		2	2'0"x0'9"	4.0				
5+80	Rte. 57 A	Place 30"x 84' R.C.P., Ditch Inlet							84				37.2	36.9	1.0											2	
		Const. Std. H.W. Rt.											*	*			1.52	*									
353+75	R-72	Const. H.W. Extension on Exist. Box														3.20		60								1	
54+19	L.O.E.	Place Double R.C.P. 24"x 364' & 84"x 385' Radius = 800'										772	788.0	1256.0												4	
		Const. Type "B" H.W. Rt.											37.6	46.7		19.53		1107									
		Const. Std. 2'x3' D.I. 145' Rt.											*	*			0.70	*	11		2	2'0"x0'9"	2.0	9.0			
		Place 18"x 4' C.M.P. Chimney	4											0.4													
		Const. Std. P.C.C. Collar											*	*			0.03	*									
		Const. Std. 2'x3' D.I. 91' Rt.											*	*			0.73	*	11		1	2'0"x0'9"	2.0	4.5			
		Place 18"x 4' C.M.P. Chimney		4										0.4													
		Const. Std. P.C.C. Collar											*	*			0.03	*									
		Const. 2'x3' D.I. 104.5' Lt.											0	0		0.53		82			2	2'0"x0'9"	2.1	4.5			
57+50	L.O.E.	Place 18"x 116' R.C.P. Lt.				116							57.0	46.0												3	
		Const. Std. 2'x3' D.I. Med.											*	*			0.95	*	11		1	2'0"x0'9"	3.0	4.5			
		Const. Std. 2'x3' D.I. Lt.											*	*			1.03	*	17		1	2'0"x0'9"	3.5				
11+71	Wineman	Place 24"x 36' P.C.P.								36			16.4	10.5												2	
		Const. Std. 2'x3' D.I. Rt.											*	*			1.03	*	17		1	2'0"x0'9"	3.5	8.1			
62+75 - 63+95	L.O.E. 57 Rt.	Place 15"x 120' R.C.P.				120							39.6	27.9												1	
		Const. P.C.C. Collar														0.26											
		Const. "B-2" Curb Opening D.I.											*	*			1.73	*	47		1		3.0				

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11
QUANTITY SUMMARY

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
G.E. Dryden	2/60		2/60		2/60

F.P.R. Div. No.	State	Federal Project No.	Fiscal Year	Sheet No.	Total Sheets
	CALIF.			67	204

• Payment included in Class "A" Concrete (Minor Structures) - ~~See Special Provisions~~
• • Final Pay Quantity - ~~See Special Provisions~~

Dist.	County	Route	Section	Sheet No.	Total Sheets
V	SLO	2	F	67	137

67

August 15, 1960

Engineer of Design

DRAINAGE STRUCTURES

Stationing	Line	Description	C.M.P. 12"-16 Ga. L.F.	C.M.P. 18"-16 Ga. L.F.	C.M.P. 24"-14 Ga. L.F.	R.C.P. 18" III L.F.	R.C.P. 21" III L.F.	R.C.P. 24" III L.F.	R.C.P. 30 III L.F.	R.C.P. 36" III L.F.	R.C.P. 48" III L.F.	R.C.P. 84" III L.F.	Structure Excavation C.Y.	Structure Backfill C.Y.	Ditch Excav. C.Y.	Class "A" P.C.C. C.Y.	Class "A" ** P.C.C. Min. Str. C.Y.	Bar Reinf. Steel Lbs.	Misc. Iron & Steel Lbs.	Fr Grate Type "E" Ea.	Standard Drop Inlet Windows No.	Standard Drop Inlet Windows Size	Standard Drop Inlet H Ft.	A.C. Paving S.Y.	Culvert Markers Plain Ea.	Culvert Markers Reflectorized Ea.
63+95	L.A. ℄	Place 48" x 232' R.C.P.									232		140.0	145.8											2	2
		Const. Std. H.W. Rt.											*	*			275	*								
		Const. Std. 2'x3' D.I. 93' Rt.											*	*			0.73	*	11		1	2'0"x0'9"	2.0	4.5		
		Place 18" x 12' C.M.P. Chimney		12										3.2												
		Const. Std. P.C.C. Collar											*	*			0.03	*								
		Const. Std. 2'x3' D.I. Med.											*	*			0.73	*	11		1	2'0"x0'9"	2.0	4.5		
		Place 18" x 8' C.M.P. Chimney		8										22												
		Const. Std. P.C.C. Collar											*	*			0.03	*								
70+71	L.A. ℄	Place 30" x 44' R.C.P. Lt.							44				19.7	16.5											2	
		Const. Std. 2'x4' D.I. Rt.											*	*			2.43	*	30		1	2'0"x0'9"	6.5	4.5		
		Const. Std. H.W. Rt.											*	*			1.52	*								
		Extend Exist. D.I. at Med.												1.0		0.50		130	20		2	2'0"x0'9"	4.0	9.0		
		Const. Std. 2'x3' D.I. Lt.											*	*			0.70	*	11		2	2'0"x0'9"	2.0	9.0		
		Place 13" x 4' Chimney		4										0.4												
		Const. Std. P.C.C. Collar											*	*			0.03	*								
		Total	70	248	32	4112	1311	5708	1280	120	232	772	10525.1	7522.3	198	621.06	172.36	85,331	8750					395.1	153	93

OVERSIDE DRAINS, ENTRANCE TAPERS, SLIP JOINTS & PIPE ANCHORS

Station	Line	Location Lt.	Location Rt.	8" C.M.P. 16 Ga. L.F.	Entrance Tapers Each	Slip Joints Each	Pipe Anchors Each
181+50	F-17		x	10	1	1	1
83+75	F-16	x		4	"	—	—
196+00	F-17	x		28	"	1	2
203+20	F-18		x	34	"	"	"
103+50	F-16	x		68	"	"	4
89+15	R-10		x	2	"	—	—
384+90	Main Line	x		22	"	1	1
390+00	" "	x		22	"	"	"
430+00	" "	x		16	"	"	"
430+04	" "		x	"	"	"	"
436+00	" "	x		"	"	"	—
104+90	F-16		x	2	"	—	—
436+04	Main Line		x	16	"	1	1
442+00	" "	x		"	"	"	"
442+04	" "		x	"	"	"	"
448+00	" "	x		"	"	"	"
448+04	" "		x	"	"	"	"
452+00	" "	x		"	"	"	"
454+04	" "		x	12	"	"	"
459+04	" "		x	16	"	"	"
464+04	" "		x	"	"	"	"
474+04	" "	x		"	"	"	"
480+00	" "	x		"	"	"	"
486+00	" "	x		18	"	"	"
490+00	" "		x	38	"	"	2
495+00	" "	x		62	"	"	3

Station	Line	Location Lt.	Location Rt.	8" C.M.P. 16 G.A. L.F.	Entr. Tapers Each	Slip Joints Each	Pipe Anchors Each
503+00	Main Line	x		48	1	1	3
503+00	" "		x	"	"	"	"
509+00	" "	x		18	"	"	1
509+00	" "		x	"	"	"	"
525+50	" "		x	22	"	"	"
529+60	" "	x		2	"	—	—
553+00	" "	x		16	"	1	1
559+00	" "	x		"	"	"	"
565+00	" "	x		24	"	"	2
570+00	" "	x		22	"	"	1
10+70	" "		x	24	"	"	2
36+50	" "		x	44	"	"	3
37+00	" "	x		12	"	"	1
252+45	R-71	x		10	"	"	"
152+80	R-70		x	6	"	"	"
552+70	F-74		x	20	"	"	"
353+80	R-72	x		4	"	—	—
11+70	Winc. Rd.	x		"	"	—	—
			Total	888	44	38	54

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

QUANTITY SUMMARY

Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
J. E. Dryden	2/60		2/60	G. A.	2/60

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PRA DIV. No.	STATE	FEDERAL PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
	CALIF.			68	204

A.B.M. DITCH, CHANNEL & SPILLWAY D.D. LINING

Station to Station	Linear Ft. Lt.	Linear Ft. L.O.¢	Linear Ft. Rt.	Type	Top Width Ft.	Exc. Ditch Cu.Yds.	A.B.M. Sq.Yds.	Wire Mesh Sq.Yds.	Str. Exc. Cu.Yds.	Str. Bkfl. Cu.Yds.
277+54 "Exist."	20			D&C Lining	5.0	5	15	15	0.22	0.18
179+75 "F-17"			15	S.D.D. "	3.5	2	7	7	0.15	0.12
189+40-197+20 "F-18"	715			D&C. "	3.5	83	350	350	0.15	0.12
197+10 "F-18"	10			S.D.D. "	3.5	1	5	5	-	-
192+45-197+70 "F-17"			540	D&C. "	3.5	62	264	264	0.15	0.12
194+00-198+55 "F-17"	465			D&C. "	3.5	55	227	227	-	-
298+35-300+60			235	S.D.D. "	3.5	27	115	115	-	-
74+80 "F-16"	10			D&C. "	3.5	1	5	5	0.15	0.12
97+40-101+80 "F-16"	430			D&C. "	3.5	49	210	210	0.15	0.12
101+80-104+50 "F-16"	310			D&C. "	5.0	69	218	218	0.22	0.18
101+80 "F-16"	20			S.D.D. "	3.5	2	10	10	-	-
104+69 "F-16"	65			S.D.D. "	3.5	7	32	32	0.15	0.12
98+50 "F-16"			20	S.D.D. "	3.5	2	10	10	0.15	0.12
98+45 "R-12"	55			S.D.D. "	3.5	6	27	27	0.15	0.12
96+60 "R-12"-200+60 "F-18"			310	S.D.D. "	3.5	36	152	152	-	-
207+00 "F-18"			20	S.D.D. "	3.5	2	10	10	0.15	0.12
60+80-61+25 "R-13"			45	D&C. "	3.5	5	22	22	0.15	0.12
61+00 "R-13"	90			D&C. "	5.0	20	64	64	0.22	0.18
61+00-62+35 "R-13"	140			D&C. "	3.5	16	69	69	0.15	0.12
204+60 "F-17"			15	S.D.D. "	3.5	2	7	7	0.15	0.12
206+60 "F-17"			15	S.D.D. "	3.5	2	7	7	0.15	0.12
311+40			40	S.D.D. "	3.5	5	20	20	0.15	0.12
312+00	30			S.D.D. "	3.5	3	15	15	0.15	0.12
317+80			35	S.D.D. "	3.5	4	17	17	0.15	0.12
320+25	45			S.D.D. "	3.5	5	22	22	0.15	0.12
324+40			90	S.D.D. "	3.5	10	45	45	0.31	0.24
328+00-335+70			800	D&C. "	3.5	92	391	391	0.15	0.12
335+10-335+70		60		D&C. "	3.5	7	30	30	0.15	0.12
332+75	45			S.D.D. "	3.5	5	22	22	0.15	0.12
335+90	45			S.D.D. "	3.5	5	22	22	0.15	0.12
340+20	35			S.D.D. "	3.5	4	17	17	0.15	0.12
339+30-342+80			360	D&C. "	3.5	41	177	177	0.31	0.24
345+15	50			S.D.D. "	3.5	6	25	25	0.15	0.12
343+70			35	S.D.D. "	3.5	4	17	17	0.15	0.12
349+70			35	S.D.D. "	3.5	4	17	17	0.15	0.12
350+85	35			S.D.D. "	3.5	4	17	17	0.15	0.12
354+00-361+10		710		D&C. "	3.5	82	348	348	0.15	0.12
362+25			30	S.D.D. "	3.5	3	15	15	0.15	0.12
360+80	50			S.D.D. "	3.5	6	25	25	0.15	0.12
361+10	25			S.D.D. "	3.5	3	12	12	0.15	0.12
361+20-366+15	500			D&C. "	3.5	58	245	245	0.15	0.12
366+00			30	S.D.D. "	3.5	3	15	15	0.15	0.12
367+80	30			S.D.D. "	3.5	3	15	15	0.15	0.12
376+25	40			S.D.D. "	3.5	5	20	20	0.15	0.12
387+00			35	S.D.D. "	3.5	4	17	17	0.15	0.12
392+30			30	S.D.D. "	3.5	3	15	15	0.15	0.12
395+15	55			S.D.D. "	3.5	6	27	27	0.15	0.12
208+00 "F-25"	15			S.D.D. "	3.5	2	7	7	0.15	0.12
14+00 "Betteravia"			15	S.D.D. "	3.5	2	7	7	0.15	0.12
14+00 "Betteravia"	15			S.D.D. "	3.5	2	7	7	0.15	0.12
212+00 "F-26"	10			S.D.D. "	3.5	1	5	5	0.15	0.12
314+50 "F-24"			15	S.D.D. "	3.5	2	7	7	0.15	0.12
24+50 "Betteravia"			15	S.D.D. "	3.5	2	7	7	0.15	0.12
24+00 "Betteravia"	15			S.D.D. "	3.5	2	7	7	0.15	0.12
116+50 "R-23"			15	S.D.D. "	3.5	2	7	7	0.15	0.12
422+90-425+00			225	D&C. "	5.0	51	160	160	0.44	0.36
423+90			30	S.D.D. "	3.5	3	15	15	-	-
424+50			5	S.D.D. "	3.5	1	2	2	-	-
455+50	25			S.D.D. "	3.5	3	12	12	0.15	0.12
470+40			20	S.D.D. "	3.5	2	10	10	0.15	0.12

Project Engineer	Date	Design Engineer	Date	Approval Recommended by	Date
J. E. Dayden	2/60	[signature]	2/60	R. A. Sjostrand	2/60

A.B.M. DITCH, CHANNEL & SPILLWAY D.D. LINING (CONTINUED)

Station to Station	Linear Ft. Lt.	Linear Ft. L.O.¢	Linear Ft. Rt.	Type	Top Width Ft.	Exc. Ditch Cu.Yds.	A.B.M. Sq.Yds.	Wire Mesh Sq.Yds.	Str. Exc. Cu.Yds.	Str. Bkfl. Cu.Yds.
259+37 "R-31"	20			S.D.D. Lining	3.5	2	10	10	0.15	0.12
5+60 "Stowell"	15			S.D.D. "	3.5	2	7	7	0.15	0.12
5+60 "Stowell"			15	S.D.D. "	3.5	2	7	7	0.15	0.12
870+10 "F-36"	25			S.D.D. "	3.5	3	12	12	0.15	0.12
14+45 "Stowell"	10			S.D.D. "	3.5	1	5	5	0.15	0.12
14+45 "Stowell"			10	S.D.D. "	3.5	1	5	5	0.15	0.12
15+85-16+30 "Stowell"			50	D&C. "	5.0	11	36	36	0.22	0.18
15+85-16+30 "Stowell"	50			D&C. "	5.0	11	36	36	0.22	0.18
15+78 "Stowell"	25			D&C. "	25.0	7	83	83	0.36	0.83
15+78 "Stowell"			25	D&C. "	18.5	6	67	67	0.83	0.67
484+50			25	S.D.D. "	3.5	3	12	12	0.15	0.12
488+00			30	S.D.D. "	3.5	3	12	12	0.15	0.12
505+50			35	S.D.D. "	3.5	4	17	17	0.15	0.12
512+40			30	S.D.D. "	3.5	3	15	15	0.15	0.12
512+25	30			S.D.D. "	3.5	3	15	15	0.15	0.12
516+25			25	S.D.D. "	3.5	3	12	12	-	-
529+60	10			S.D.D. "	3.5	1	5	5	0.15	0.12
Bradley Channel (South)				D&C. "	Var.	*38,800	29,318	29,318		
533+75	30			S.D.D. "	3.5	3	15	15	0.15	0.12
12+11-12+36 Main			25	D&C. "	5.0	6	18	18	0.22	0.18
535+50			30	S.D.D. "	3.5	3	15	15	0.15	0.12
564+75			20	S.D.D. "	3.5	2	10	10	0.15	0.12
74+25 "R-50"			25	S.D.D. "	3.5	3	12	12	0.15	0.12
576+00	40			S.D.D. "	3.5	5	20	20	0.15	0.12
24+10 "Donovan"			20	S.D.D. "	3.5	2	10	10	0.15	0.12
24+40 "Donovan"	15			S.D.D. "	3.5	2	8	8	0.15	0.12
580+55			30	S.D.D. "	3.5	3	15	15	0.15	0.12
15+30 "Donovan"			15	S.D.D. "	3.5	2	8	8	0.15	0.12
15+55 "Donovan"	20			S.D.D. "	3.5	2	10	10	0.15	0.12
86+00 "R-53"			10	S.D.D. "	3.5	1	5	5	0.15	0.12
86+00 "R-53"	10			S.D.D. "	3.5	1	5	5	0.15	0.12
595+45	40			S.D.D. "	3.5	5	20	20	0.15	0.12
38+00 "R-60"	15			S.D.D. "	3.5	2	8	8	0.15	0.12
616+90			35	S.D.D. "	3.5	4	17	17	0.15	0.12
127+75 "F-64"	15			S.D.D. "	3.5	2	8	8	0.15	0.12
128+00 "F-64"			20	S.D.D. "	3.5	2	10	10	0.15	0.12
30+75 "R-61"	15			S.D.D. "	3.5	2	7	7	0.15	0.12
140+00 "F-64"	15			S.D.D. "	3.5	2	7	7	0.15	0.12
41+90 "R-62"	25			S.D.D. "	3.5	3	12	12	0.15	0.12
617+75	35			S.D.D. "	3.5	4	17	17	0.15	0.12
43+90 "R-63"			30	S.D.D. "	3.5	6	25	25	0.15	0.12
37+00	55			S.D.D. "	5.0	12	40	40	0.45	0.36
247+80 "R-71"	70			S.D.D. "	3.5	8	35	35	0.15	0.12
48+10	20			S.D.D. "	3.5	2	10	10	-	-
252+00 "R-71"			20	S.D.D. "	3.5	2	10	10	-	-
252+40 "R-71"			20	S.D.D. "	3.5	2	10	10	-	-
252+25-252+70 "R-71"	50			D&C. "	5.0	11	35	35	-	-
150+85-152+40 "R-70"			190	D&C. "	5.0	42	134	134	0.22	0.16
152+20 "R-70"			25	S.D.D. "	3.5	3	12	12	-	-
353+75 "R-72"	34			D&C. "	28.5	-	97	97	-	-
354+25 "R-72"			25	S.D.D. "	3.5	3	12	12	-	-
357+00-357+85 "R-72"	100			D&C. "	3.5	12	49	49	0.31	0.24
57+25	40			S.D.D. "	3.5	5	20	20	-	-
553+35 "F-74"			20	D&C. "	3.5	2	11	11	0.31	0.24
553+65 "F-74"			40	D&C. "	26.0	-	138	138	1.60	1.40
553+70-556+00 "F-74"			235	D&C. "	3.5	27	115	115	0.15	0.12
11+70 "Wineman"	15			S.D.D. "	3.5	2	8	8	0.15	0.12
64+00-64+80	100			S.D.D. "	3.5	12	49	49	0.15	0.12
563+95-565+05 "F-74"			130	S.D.D. "	3.5	15	64	64	0.15	0.12
67+35	30			S.D.D. "	3.5	3	15	15	0.15	0.12
569+60-570+50 "F-74"			100	S.D.D. "	3.5	12	49	49	0.15	0.12
571+30 "F-74"			15	S.D.D. "	3.5	2	8	8	0.15	0.12
Total						1212	34,564	34,564	20.41	16.52

FREEWAY FENCE TYPE "CL-6"

Station to Station	Length Lt.	Length Rt.	Location
272+50 - 302+40	3200'		Between "F-16," "L.O.¢" & "R-12"
272+50 - 288+77		1660'	Between "L.O.¢", "R-10" & "F-17"
289+84 - 390+00		10029'	Lt. of "F-17," & Rt. of "L.O.¢"
303+12 - 415+50	11445'		Lt. of "R-13," "L.O.¢" & "R-21"
332+50 - 350+00		1750'	Rt. of "L.O.¢"
390+00 - 415+30		2535'	Between "L.O.¢", "R-20" & "F-24"
416+75 - 461+50	4590'		Between "L.O.¢" & "Bradley Rd."
416+75 - 470+50		5340'	Between "L.O.¢" & "F-36"
461+25 - 469+45	910'		Rt. of "R-31"
5+45 "Stowell" - 9+10 "Stowell"	395'		Rt. of "Stowell"
11+00 "Stowell" - 14+50		395'	Lt. of "Stowell"
469+00 - 522+80	5320'		Lt. of "L.O.¢" & "R-41"
471+00 - 522+75		5325'	Rt. of "R-33," "L.O.¢" & "R-40"
523+50 - 577+04		5480'	Rt. of "R-43," "L.O.¢" & "R-50"
523+63 - 580+30	5660'		Lt. of "R-42," "L.O.¢" & "R-52"
580+90 - 583+35	400'		Lt. of "Donovan Rd."
576+70 - 579+30		410'	Rt. of "Donovan Rd."
579+85 - 619+30		3970'	Rt. of "L.O.¢"
583+14 - 619+90	3700'		Lt. of "R-53" & "L.O.¢"
619+50 - 640+08		2450'	Rt. of "L.O.¢" & "F-64"
620+10 - 634+36	1820'		Lt. of "L.O.¢" & "R-60"
115+00 "F-64" - 124+30 "F-64"		1000'	Rt. of "F-64"
119+50 "F-64" - 123+93 "F-64"	580'		Lt. of "F-64"
634+08 - 15+00	2025 / 355		Lt. of "R-61" & "L.O.¢"
640+08 - 14+20		940 / 290	Rt. of "R-63" & "L.O.¢"
36+00 - 39+00	325'		Lt. of "L.O.¢" on Bench
35+00 - 37+00		270'	Rt. of "L.O.¢"
48+00 - 52+32	425'		Lt. of "R-71"
53+40 - 74+00		2070'	Rt. of "R-73" & "L.O.¢"
53+80 - 77+00	2420'		Lt. of "R-72" & "L.O.¢"
Total	43,670	43,905	

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed ______
Document No. 50000536

5 STRAND BARBED WIRE (TYPE "BW")

Station to Station	Length Lt.	Length Rt.	Location
279+70 - 309+60		2950'	Rt. of "F-17" Prop. Fc.
281+90 - 296+14	1415'		Lt. of "F-16" " "
296+60 - 303+56	755'		Lt. of "F-16" " "
403+40 - 415+70		1640'	Rt. of "F-24" Prop. Fc.
416+50 - 416+75		475'	Lt. of "Betteravia" " "
523+30 - 547+80		2670'	Rt. of Brad. Ch. (So.) " "
37+00 - 51+60		1682'	Rt. of "L.O.¢" & "R-70" Fwy. Fc.
51+60 - 52+75		328'	Rt. of "Rte. 57" Prop. Fc.
39+00 - 48+00	1080'		Lt. of "L.O.¢" & "R-71" Fwy. Fc.
53+30 - 62+80		1370'	Rt. of "F-74" Prop. Fc.
63+20 - 66+50		490'	Rt. of "F-74" " "
TOTAL	3,250'	11,605'	

*See Ditches & Channels Summary

Dist.	County	Route	Section	Sheet No.	Total Sheets
V	SB, SLO	2	LSM, A	68	137

[signature] District Engineer – Dist. V

[signature] August 15, 1960

GUIDE MARKERS

Type A	Type E	Type F	Type G	Type H
88	34	313	423	13

REFLECTOR MARKERS

J	K
13	18

CLEARANCE MARKERS

L	M
32	18

SURVEY MON. MARKERS

27

ROADWAY EXCAV. SUMMARY

Item	Cu. Yds.
Layout Sheets, COG, Toe of Fill	1,647,751
Local Borrow	261,512
Selected Material	48,970
Total	1,958,233

OVERHAUL SUMMARY

Item	Sta. Yds. O.H.
From Mass Diagram	136,237,268
Total	136,237,268

14' PROPERTY FC. GATES

Station	Location Lt.	Location Rt.
285+60 ±		1
286+50 ±	1	
305+00 ±		1
406+30 ±		1
413+72 ±		1
309+60 ±		1
Total	6	

61-5V13C11

QUANTITY SUMMARY

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District Engineer — August 15, 1960

CLASS "B" P.C.C. CURBS

Station to Station	Type	Length Lin. Ft.	P.C.C. Cu. Yds.	P.C.C. Pav. Cu. Yds.	A.C. Pav. Sq. Yds.
83+40 "R-10" - 83+90 "R-10"	"B-2"	117	7.22		73
88+30 "R-10" - 90+70 "R-11"	"B-2"	490	30.24	0.86	
91+25 "R-12" - 93+50 "R-12"	"B-2"	323	19.93	2.08	
99+06 "R-12" - 101+30 "R-12" (Island)	"C-2"	517	33.38	1.72	
67+00 "R-13" - 67+50 "R-13"	"B-2"	117	7.22		73
110+25 "R-20" - 110+75 "R-20"	"B-2"	117	7.22		73
109+75 "R-21" - 111+45 "R-21"	"B-2"	344	21.23	4.72	
122+50 "R-22" - 123+00 "R-22"	"B-2"	117	7.22		73
121+00 "R-23" - 122+50 "R-23"	"B-2"	304	18.76	4.17	
455+50 "L.O.¢" - 64+00 "R-30 Conn."	"E"	850	56.62		
158+50 "R-30" - 164+35 "R-30"	"B-2"	639	39.43	0.81	
163+91 "R-30" - 164+60 "R-30" (Island)	"C-2"	232	14.98	0.87	
163+35 "R-30" - 164+35 "R-30" Ramp Separation Paving				4.77	
164+35 "R-30" - 225+30 "R-31"	"B-2"	596	36.78		73
259+37 "R-31" - 259+85 "R-31" (Island)	"C-2"	126	8.14	0.16	48
259+37 "R-31" - 469+05 "L.O.¢"	"E"	968	64.48		
470+40 "L.O.¢" - 378+45 "R-32"	"E"	805	53.66		
374+15 "R-32" - 378+45 "R-32"	"B-2"	497	30.67	0.75	73
576+20 "R-33" - 581+50 "R-33"	"B-2"	587	36.22	0.46	
576+20 "R-33" - 484+50 "L.O.¢"	"E"	830	55.29		
512+40 "L.O.¢" - 22+73 "R-40"	"E"	1033	68.81		
22+73 "R-40" - 11+83 "Main"	"A-2"	37	2.36		
16+75 "R-40" - 22+33 "R-40"	"B-2"	674	41.59		73
22+33 "R-40" - 22+23 "R-41"	"A-2"	338	21.56		
515+50 "L.O.¢" - 518+50 "L.O.¢"	"B-2"	300	18.51	2.43	
512+25 "L.O.¢" - 22+69 "R-41"	"E"	1044	69.54		
22+69 "R-41" - 17+12 "Bradley"	"A-2"	110	7.02		
15+50 "R-41" - 22+23 "R-41"	"B-2"	677	41.78		
8+00 "Main" - 23+75 "R-42"	"A-2"	67	4.27		
23+75 "R-42" - 533+75 "L.O.¢"	"E"	1000	66.61		
23+36 "R-42" - 30+00 "R-42"	"B-2"	680	41.97		73
23+36 "R-42" - 24+04 "R-43"	"A-2"	321	20.48		
11+77 "Main" - 23+76 "R-43"	"A-2"	50	3.19		
23+76 "R-43" - 534+50 "L.O.¢"	"E"	1074	71.54	0.81	
24+04 "R-43" - 31+75 "R-43"	"B-2"	825	50.31		
564+75 "L.O.¢" - 74+25 "R-50"	"E"	950	63.28		
68+50 "R-50" - 74+00 "R-50"	"B-2"	617	38.08		73
72+16 "R-51" - 74+45 "R-51"	"B-2"	296	18.27	1.59	
71+86 "R-51" - 580+45 "L.O.¢"	"E"	809	53.89		
24+68 "Donov." - 24+80 "Donov." (Island)	"C-2"	67	4.38	1.30	
15+20 "Donov." - 15+36 "Donov." (Island)	"C-2"	73	4.71	1.30	
579+75 "L.O.¢" - 88+25 "R-52"	"E"	818	54.49		
85+75 "R-52" - 88+10 "R-52"	"B-2"	292	18.02	1.53	
86+20 "R-53" - 91+70 "R-53"	"B-2"	617	38.08	0.63	73
86+00 "R-53" - 595+45 "L.O.¢"	"E"	945	62.95		
625+20 "L.O.¢" - 38+00 "R-60"	"E"	1246	83.00		
30+00 "R-60" - 36+00 "R-60"	"B-2"	654	40.36	0.81	
36+94 "R-60" - 37+61 "R-60" (Island)	"C-2"	166	10.72	0.79	109
124+90 "F-64" - 32+52 "R-61" (Island)	"C-2"	476	30.74	1.89	
30+75 "R-61" - 644+75 "L.O.¢"	"E"	1400	93.25		
33+40 "R-61" - 40+50 "R-61"	"B-2"	777	47.95		73
636+50 "L.O.¢" - 44+09 "R-62"	"E"	759	50.56		
40+25 "R-62" - 42+25 "R-63"	"B-2"	417	25.73	0.63	73
42+25 "R-63" - 46+25 "R-63"	"B-2"	454	28.02	0.94	
41+88 "R-63" - 10+75 "L.O.¢"	"E"	731	48.69		
146+00 "R-70" - 146+50 "R-70"	"B-2"	117	7.22		73
245+50 "R-71" - 246+45 "R-71"	"B-2"	147	9.07	0.81	
360+50 "R-72" - 361+00 "R-72"	"B-2"	117	7.22		73
461+70 "R-73" - 463+00 "R-73"	"B-2"	184	11.35	0.73	
Total			1928.86	38.17	1179

Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
J.E. Dryden	2/60	[signature]	2/60	[signature]	2/60

METAL BEAM GUARD RAIL

Station to Station	Lt.	Med.	Rt.	Remarks
87+05 "R-11" - 89+50 "R-11"	253'			Lt. of "R-11"
295+40 "Rt. Lanes" - 296+55 "Rt. Lanes"			116'	Rt. of Rt. Lanes
297+10 "Rt. Lanes"		66'		Med.
299+10 "Rt. Lanes"		54'		Med.
104+45 "F-16" - 105+70 "F-16"	191'			Lt. of "F-16"
115+00 "R-21" - 19+05 "Bett."			154'	Rt. of "R-21" to Rt. of "Bett."
21+[illegible] "Bett." - 117+60 "R-23"	166'			Lt. of "Bett." to Lt. of "R-23"
843+35 "F-36" - 843+90 "F-36"	54'			Lt. of "F-36"
8+35 "Stowell" - 9+00 "Stowell"			66'	Rt. of "Stowell"
11+00 "Stowell" - 11+65 "Stowell"	66'			Lt. of "Stowell"
495+90 "L.O.¢"		29'		Med.
498+20 "L.O.¢"		29'		Med.
522+25 "L.O.¢"		29'		Med.
524+05 "L.O.¢"		29'		Med.
72+15 "R-51" - 74+25 "R-51"	217'			Lt. of "R-51"
18+15 "Donov." - 18+80 "Donov."			66'	Rt. of "Donov."
21+20 "Donov." - 21+85 "Donov."	66'			Lt. of "Donov."
85+90 "R-52" - 88+00 "R-52"			217'	Rt. of "R-52"
130+85 "F-64" - 131+75 "F-64"			91'	Rt. of "F-64"
134+00 "F-64" - 154+90 "F-64"	91'			Lt. of "F-64"
10+60 "F-66" - 11+40 "F-66"			116'	
133+90 "F-64" - 139+40 "F-64"			604'	Rt. of "F-64"
38+50 "F-65" - 39+60 "F-65"			129'	Rt. of "F-65"
41+70 "R-62" - 43+70 "R-62"	204'			Lt. of "R-62"
13+10 "L.O.¢" - 14+00 "L.O.¢"			91'	Rt. of "Rt. Lanes"
13+75 "L.O.¢" - 14+30 "L.O.¢"	54'			Lt. of "Rt. Lanes"
14+50 "L.O.¢"		54'		"Med."
35+65 "L.O.¢"		54'		Med.
35+80 "L.O.¢" - 36+35 "L.O.¢"			54'	Rt. of "Rt. Lanes"
36+00 "L.O.¢" - 36+90 "L.O.¢"	91'			Lt. of "Lt. Lanes"
52+35 "L.O.¢"		29'		Med.
53+70 "L.O.¢"		29'		Med.
5+30 "57-A"			29'	Barrier for Exist. Rte. 2
Guard Rail for Signs				
283+75 "L.O.¢"			84'	In Off-Ramp Nose
516+60 "L.O.¢"			84'	" " "
529+65 "L.O.¢"	84'			" " "
640+15 "L.O.¢"			84'	" " "
46+75 "L.O.¢"			84'	" " "
60+65 "L.O.¢"	84'			" " "
Total	4092'			

PREP. EXC. SLOPES (EROSION CONTROL) & RDS. AREAS (RDS. DEV.)

Roadside Developement Median Exc. S.Y.	Erosion Control Exc. Slopes S.Y.	Emb. Area Emb. Slopes S.Y.	Straw No Straw in Median Area Tons	Fertilizer Tons	Seed Lbs.
81,200	106,700	233,000	351.72	30.58	14,054

RAMPS, FRONTAGE ROADS, STREETS & CONNECTIONS

Min. Aggr. (A.C.) Tons	Pav. Asph. (A.C.) Tons	Min. Aggr. (P.M.C.T.B.) Tons	Cem. Bbls.	A.S. Tons	A.B. Tons	Liq. Asph. SC-2 (Pr. Ct.) Tons	MC-2 (Cur. Sl.) Tons	Asph. Emul. Pen. Type (Pt. Bdr.) Tons	Asph. Emul. Pen. Type M. S.C. Tons	Asph. Emul. Mix Type Fog Sl. Tons	Screenings Tons	Mix & Compact R.M.S. Sq. Yds.	MC-3 R.M.S. Tons
29,176	1604.41	30,125	6408	31,473	35,537	105.43	106.65	87.18	103.41	26.65	1356	3033	28.7

DETOURS

Timber Barricades Type "B" Each	Min. Agg. A.C. Tons	Pav. Asph. A.C. Tons	Liq. Asph. SC-2 Prime Ct. Tons	Asph. Emul. (Pen. Type) Pt. Bndr. Tons	A.B. Tons	A.S. Tons
65	2001	110.06	13.79	2.84	7162	1609

DITCHES & CHANNELS

Station to Station	Location	Ditch Exc. Cu. Yds.	Rdy. Exc. Cu. Yds.
425+00 "L.O.¢" - 548+00± "L.O.¢"	Rt.	38,800	
6+50.00 "Ch. Sta." - 33+08.22 "Ch. Sta."	¢		4944
3+50± "Rte. 57-A" - 14+00± "Rte. 57-A"	Lt		875
	Total	38,800	5819

DITCH EXCAVATION SUMMARY

Item	Cu. Yds.
A.B.M. Ditch Channel & Spillway D.D. Lining	1212
Interception Ditches	929
Ditches & Channels	38,800
Drainage Structures	198
Total	41,139

PAV'T. REINF. STRUCT. APPROACHES

Station	Mats	Lbs. Reinf. Steel
297+80 P.O.C. "L"	8	5136
497+00 P.O.T. "L"	8	3552
523+17 P.O.T. "L"	8	3552
53+04 P.O.C. "F"	8	3552
TOTAL	32	15,792

LIGHT ROCK SLOPE PROTECTION

Station to Station	Rock Cu. Yds.	Struct. Exc. Cu. Yds.
Lt. of 39+55± "L.O.¢" - 100+00 "Levee" (Under Br.)	1891	1811
100+00 - 113+00 "Levee"	5402	6475
Total	7293	8286

A.C. GUTTERS

Min. Agg. Gutters Tons	Paving Asph. Tons	Asph. Emul. Pen. Type Tons	Liquid Asph. Pr. SC-2 Tons	Square Yards	Linear Feet
140	9.11	1.55	1.50	395.1	3040

A.C. DIKES

Linear Feet	Min. Agg. A.C. Tons	Pav. Asph. A.C. Tons	Asph. Emul. Pen. Type Sl. Ct. Tons	Asph. Emul. Pen. Type Tk. Ct. Tons	Prime Coat SC-2 Tons
9,500	500	32.50	2.38	0.65	1.60

SIGN STRUCT. QUANTITIES

Str. Exc. C.Y.	Str. Bkfl. C.Y.	Cl. "A" P.C.C. C.Y.	Bar Reinf. Steel Lbs.	Guard Rail	Steel Sign Struct. Lbs.
197.0	132.0	66.5	4330	(See Above)	75,095

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11
QUANTITY SUMMARY

Dist. No.	State	Federal Project No.	Fiscal Year	Sheet No.	Total Sheets
	CALIF.			70	204

To accompany plans dated August 15, 1960

Dist.	County	Route	Section	Sheet No.	Total Sheets
V	SLO	2	LSMra,F	70	137

Approval Recommended (signature) Assistant State Highway Engineer
Approved October 28, 1949
(signature) State Highway Engineer Civil Engr. License No. 2084

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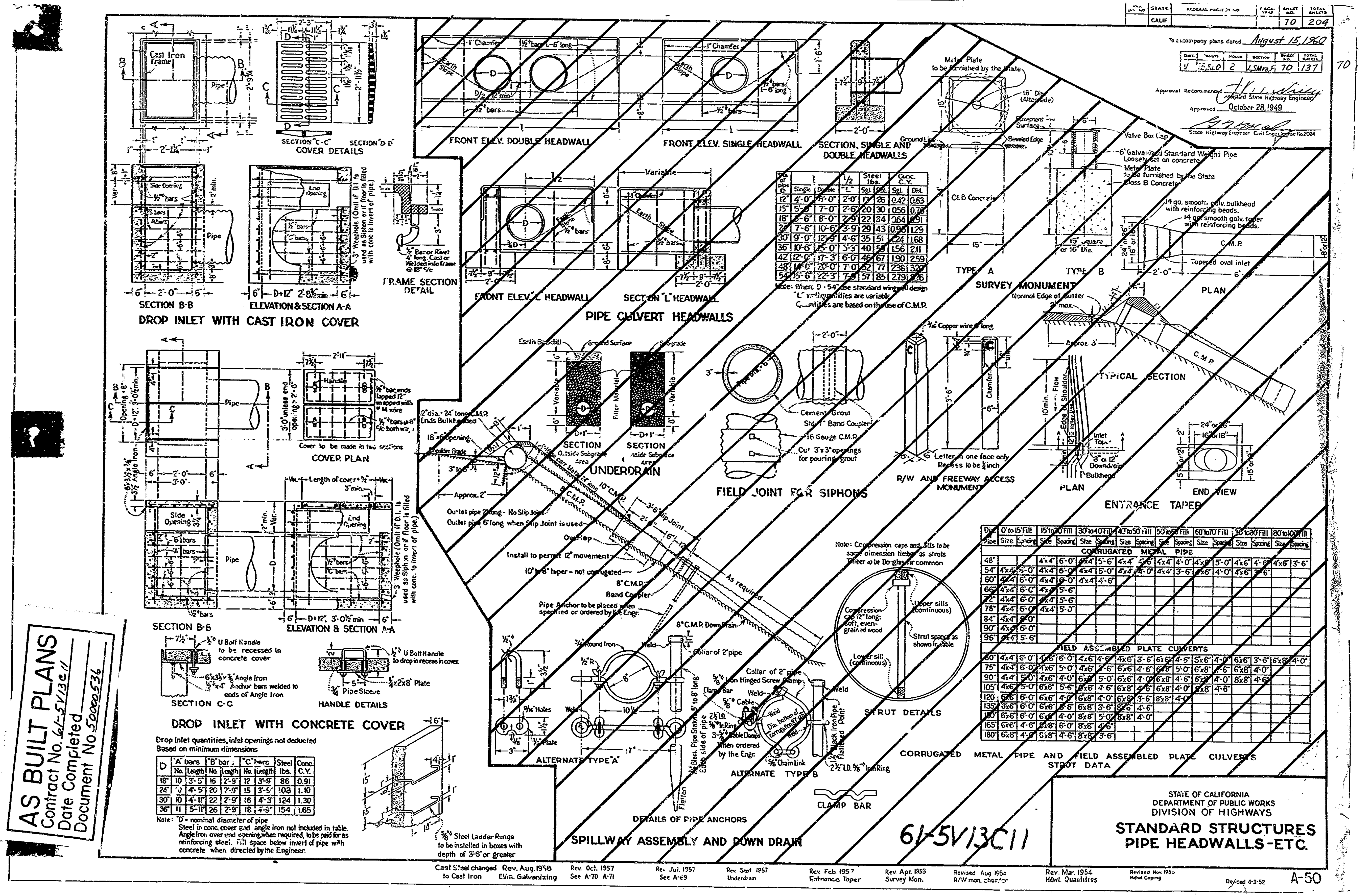

Dia. of pipe D	l Single	l Double	l/2 "L"	Steel lbs. Sgl.	Steel lbs. Dbl.	Conc. C.Y. Sgl.	Conc. C.Y. Dbl.
12"	4'-0"	6'-0"	2'-0"	17	26	0.42	0.63
15"	5'-0"	7'-0"	2'-6"	20	30	0.56	0.78
18"	5'-6"	8'-0"	2'-9"	22	34	0.64	0.91
24"	7'-6"	10'-6"	3'-9"	29	43	0.96	1.29
30"	9'-0"	12'-9"	4'-6"	35	51	1.24	1.68
36"	10'-6"	15'-0"	5'-3"	40	58	1.56	2.11
42"	12'-0"	17'-3"	6'-0"	46	67	1.90	2.59
48"	14'-0"	20'-0"	7'-0"	52	77	2.36	3.20
54"	15'-6"	22'-3"	7'-9"	57	85	2.79	3.76

Note: When D > 54" use standard wingwall design. "L" and quantities are variable. Quantities are based on the use of C.M.P.

Drop Inlet quantities, inlet openings not deducted
Based on minimum dimensions

D	"A" bars No.	"A" bars Length	"B" bars No.	"B" bars Length	"C" bars No.	"C" bars Length	Steel lbs.	Conc. C.Y.
18"	10	3'-5"	16	2'-9"	12	3'-9"	86	0.91
24"	10	4'-5"	20	2'-9"	15	3'-9"	108	1.10
30"	10	4'-11"	22	2'-9"	16	4'-3"	124	1.30
36"	11	5'-11"	26	2'-9"	18	4'-5"	154	1.65

Note: "D" = nominal diameter of pipe. Steel in conc. cover and angle iron not included in table. Angle iron over end opening, when required, to be paid for as reinforcing steel. Fill space below invert of pipe with concrete when directed by the Engineer.

CORRUGATED METAL PIPE AND FIELD ASSEMBLED PLATE CULVERTS STRUT DATA

Dia. of Pipe	0' to 15' Fill Size	Spacing	15' to 30' Fill Size	Spacing	30' to 40' Fill Size	Spacing	40' to 50' Fill Size	Spacing	50' to 60' Fill Size	Spacing	60' to 70' Fill Size	Spacing	70' to 80' Fill Size	Spacing	80' to 100' Fill Size	Spacing
CORRUGATED METAL PIPE																
48"			4x4	6'-0"	4x4	5'-6"	4x4	4'-6"	4x4	4'-0"	4x6	5'-0"	4x6	4'-6"	4x6	3'-6"
54"	4x4	5'-0"	4x4	6'-0"	4x4	5'-0"	4x4	4'-0"	4x4	3'-6"	4x6	4'-0"	4x6	3'-6"		
60"	4x4	6'-0"	4x4	6'-0"	4x4	4'-6"										
66"	4x4	6'-0"	4x4	5'-6"												
72"	4x4	6'-0"	4x4	5'-6"												
78"	4x4	6'-0"	4x4	5'-0"												
84"	4x4	6'-0"														
90"	4x4	6'-0"														
96"	4x4	5'-6"														
FIELD ASSEMBLED PLATE CULVERTS																
60"	4x4	6'-0"	4x6	6'-0"	4x6	4'-6"	4x6	3'-6"	6x6	4'-6"	6x6	4'-0"	6x6	3'-6"	6x8	4'-0"
75"	4x4	6'-0"	4x6	5'-0"	4x6	3'-6"	6x6	4'-6"	6x8	5'-0"	6x8	4'-6"	6x8	4'-0"		
90"	4x4	5'-0"	4x6	4'-0"	6x8	5'-0"	6x6	4'-0"	6x8	4'-6"	6x8	4'-0"	8x8	4'-6"		
105"	4x6	5'-0"	6x6	5'-6"	6x6	4'-6"	6x8	4'-6"	6x8	4'-0"	8x8	4'-6"				
120"	6x6	6'-0"	6x6	4'-0"	6x8	4'-0"	6x8	3'-6"	8x8	4'-0"						
135"	6x6	6'-0"	6x6	3'-6"	6x8	3'-6"	8x8	4'-6"								
150"	6x6	6'-0"	6x8	4'-0"	8x8	5'-0"	8x8	4'-0"								
165"	6x6	4'-6"	8x8	6'-0"	8x8	4'-6"										
180"	6x8	4'-0"	8x8	4'-6"	8x8	3'-6"										

61-5V13C11

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD STRUCTURES
PIPE HEADWALLS-ETC.

Cast Steel changed to Cast Iron Rev. Aug. 1958 Elim. Galvanizing | Rev. Oct. 1957 See A-70 A-71 | Rev. Jul. 1957 See A-69 | Rev. Sept. 1957 Underdrain | Rev. Feb. 1957 Entrance Taper | Rev. Apr. 1955 Survey Mon. | Revised Aug. 1956 R/W mon. chamfer | Rev. Mar. 1954 Hdwl. Quantities | Revised Nov. 1950 Hdwl. Coping | Revised 4-3-52

A-50

STATE				
CALIF			71	204

To Accompany Plans Dated August 15, 1960

V	SB,SLO	2	L,SMra	71	137

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Eugene Mitchell
BRIDGE ENGINEER STRUCTURAL ENGINEER
LICENSE 509

APPROVED October 10, 1952

STATE HIGHWAY ENGINEER
CIV'L ENGINEER LICENSE 2084

SPAN	2'		3'			4'					
HEIGHT	1'6	2'	2'	3'		2'	3'		4'		
STRENGTH CLASSIFICATION	A	A	A	A	B	A	A	B	A	B	C
Conc. Top Slab T_1	6½	6½	6½	6½	8	7	7	8	7	8	9
Conc. Bottom Slab T_2	6½	6½	6½	6½	8	7	7	8	7	8	9
Conc. Sidewalls T_3	6	6	6	6	6	6	6	6	6	6	6
Reinforcing Steel a Size: Bar #	4	4	4	4	4	4	4	5	4	5	5
Reinforcing Steel a Spacing	4½	4½	4½	4½	3½	4	4	5½	4	5½	4½
Reinforcing Steel a Length	3-8	3-8	4-8	4-8	4-8	5-8	5-8	5-9	5-8	5-9	5-9
"d" Dist. Bars Top Slab - No. of	3	3	4	4	3	5	5	4	5	5	4
"d" Dist. Bars Bot. Slab - No. of	1	1	3	3	3	3	3	4	3	4	4
"e" Bars Spacing	18	18	18	18	12	16	18	18	18	12	9
Spacers Number	6	6	6	6		6	6		8		
Quan. Concrete: C.Y. per Lin. Ft.	0.18	0.20	0.24	0.27	0.30	0.29	0.33	0.36	0.37	0.40	0.43
Quan. Reinf'g: Lbs. " " "	22	22	28	29	35	35	36	39	38	44	52
Hydraulics Area A	3	4	6	9		8	12		16		
Hydraulic Radius R	.43	.50	.60	.75		.67	.86		1.00		
Neutral Slope %	.83	.91	.73	.82		.64	0.70		0.77		
Head Factor K	1.30	1.07	.85	.65		.75	0.55		0.45		
Entrance Capacity Q_{10}	11	17	26	48		35	64		99		
Design Discharge Q_{100}	18	28	43	79		58	107		163		
Max. Cover=F Case II or VIII	60		31	31	51	21	21	30	21	30	40
Max. Cover=F Case IV	100		100	100		32	32	100	32	100	
Max. Cover=F Case VI	32		18	18	28	13	13	18	13	18	23

SPAN	5'											
HEIGHT	2'		3'		4'				5'			
STRENGTH CLASSIFICATION	A	B	A	B	A	B	C	D	A	B	C	D
Conc. Top Slab T_1	7½	8	7½	8	7½	8	9½	11	7½	8	9½	11
Conc. Bottom Slab T_2	5½	8	6½	8	6½	8	9½	11¼	6½	8	9½	11¼
Conc. Sidewalls T_3	6	6	6	6	6	6	6	6	6	6	6	6
Reinforcing Steel a Size: Bar #	5	5	5	5	5	5	5	6	5	5	5	6
Reinforcing Steel a Spacing	6	5½	6	5½	6	5½	4½	5½	6	5½	4½	5½
Reinforcing Steel a Length	6-9	6-9	6-9	6-9	6-9	5-9	6-9	6-10	6-9	6-9	6-9	6-10
"d" Dist. Bars Top Slab - No. of	5	4	5	4	5	4	4	5	5	5	4	5
"d" Dist. Bars Bot. Slab - No. of	4	4	4	4	4	4	4	5	4	4	4	5
"e" Bars Spacing	18	18	18	18	18	18	12	9	18	12	7	5½
Spacers Number	6		8		10				10			
Quan. Concrete: C.Y. per Lin. Ft.	0.34	0.37	0.37	0.41	0.41	0.45	0.50	0.56	0.45	0.48	0.54	0.60
Quan. Reinf'g: Lbs. " " "	41	43	43	45	45	47	57	68	46	52	64	78
Hydraulics Area A	10		15		20				25			
Hydraulic Radius R	0.71		0.94		1.11				1.25			
Neutral Slope %	0.59		0.62		0.67				0.73			
Head Factor K	0.69		0.49		0.39				0.34			
Entrance Capacity Q_{10}	43		80		123				172			
Design Discharge Q_{100}	71		132		203				284			
Max. Cover=F Case II or VIII	12	21	12	21	11	19	30	40	10	19	30	40
Max. Cover=F Case IV	12	27	12	27	11	25	65	100	10	23	60	100
Max. Cover=F Case VI	9	13	9	13	8	12	18	23	8	12	18	23

SPAN	6'																				
HEIGHT	2'		3'		4'			5'				6'					7'				
STRENGTH CLASSIFICATION	A	B	A	B	A	B	C	A	B	C	D	A	B	C	D	E	A	B	C	D	E
Conc. Top Slab T_1	8¼	8¼	8¼	8¼	8¼	8¼	9½	8¼	8¼	9½	12	8¼	8¼	9½	12	13	8¼	8¼	9½	12	13
Conc. Bottom Slab T_2	7	8	7	8	7	8	10	7	8	10	12	7	8	10	12	13	7	8	10	12	13
Conc. Sidewalls T_3	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6½	7½	6	6	6	7	8
Reinforcing Steel a Size: Bar #	5	5	5	5	5	5	7	5	5	7	7	5	5	7	7	7	5	5	7	7	7
Reinforcing Steel a Spacing	5½	5½	5½	5½	5½	5½	7½	5½	5½	7½	7	5½	5½	7½	7	6½	5½	5½	7½	7	6½
Reinforcing Steel a Length	7-9	7-9	7-9	7-9	7-9	7-9	8-1	7-9	7-9	8-1	8-1	7-9	7-9	8-1	8-2	8-2	7-9	7-9	8-1	8-1	8-2
"d" Dist. Bars Top Slab - No. of	6	4	6	4	6	4	5	6	4	5	5	6	4	5	5	6	6	4	5	5	6
"d" Dist. Bars Bot. Slab - No. of	4	4	4	4	4	4	5	4	4	5	5	4	4	5	5	6	4	4	5	5	6
"e" Bars Spacing	18		18		18			18	12	12	7	15	11	7	5	6	9	7	5	4½	4
Spacers Number	6		8		10			12				12					14				
Quan. Concrete: C.Y. per Lin. Ft.	0.41	0.43	0.44	0.47	0.48	0.50	0.57	0.52	0.54	0.61	0.71	0.56	0.58	0.65	0.76	0.86	0.59	0.62	0.68	0.84	0.94
Quan. Reinf'g: Lbs. " " "	49	47	51	50	53	52	71	55	57	76	87	57	59	84	96	98	65	69	96	102	114
Hydraulics Area A	12		18		24			30				36					42				
Hydraulic Radius R	0.75		1.00		1.20			1.36				1.50					1.62				
Neutral Slope %	0.53		0.56		0.59			0.62				0.66					0.71				
Head Factor K	0.645		0.450		0.358			0.305				0.271					0.247				
Entrance Capacity Q_{10}	52		96		148			207				272					343				
Design Discharge Q_{100}	86		159		244			341				448					565				
Max. Cover=F Case II or VIII	7	14	7	14	7	14	20	6	13	19	31	6	13	19	31	38	6	13	19	31	38
Max. Cover=F Case IV	7	15	7	15	7	15	25	6	13	23	60	6	13	23	60	100	6	13	23	60	100
Max. Cover=F Case VI	6	10	6	10	6	10	14	5	10	13	19	5	10	13	19	23	5	10	13	19	23

Bar numbers denote nominal diameters of round bars in eighths of an inch (Bar #6 = ¾"φ)

Note: For boxes of height less than that shown in table, use next greater table height slabs, wall dimensions and reinforcing steel, and make necessary changes in bar lengths, number of spacers and quantities.

SPAN	7'												
HEIGHT	3'		4'		5'			6'			7'		
STRENGTH CLASSIFICATION	A	B	A	B	A	B	C	A	B	C	A	B	C
Conc. Top Slab T_1	7½	9	7½	9	7½	9	10	7½	9	10	7½	9	10
Conc. Bottom Slab T_2	7½	8½	7½	8½	7½	8½	10	7½	8½	10	7½	8½	10
Conc. Sidewalls T_3	6	7	6	7	6	7½	9	6	7½	9	6	7½	9
Reinforcing Steel a Size: Bar #	5	5	5	5	5	5	6	5	5	6	5	5	6
Reinforcing Steel a Spacing	12	10	12	10	12	10	12	12	10	12	12	10	12
Reinforcing Steel a Length	7-9	7-11	7-9	7-11	7-9	8-0	8-3	7-9	8-0	8-3	7-9	8-0	8-3
Reinforcing Steel b Size: Bar #	5	5	5	5	5	5	6	5	5	6	5	5	6
Reinforcing Steel b Spacing	12	10	12	10	12	10	12	12	10	12	12	10	12
Reinforcing Steel b Length	12-2	12-5	12-2	12-5	12-2	12-6	13-7	12-2	12-6	13-7	12-2	12-6	13-7
Reinforcing Steel c Size: Bar #	5	5	5	5	5	5	6	5	5	6	5	5	6
Reinforcing Steel c Spacing	12	10	12	10	12	10	12	12	10	12	12	10	12
Reinforcing Steel c Length	12-8	13-0	13-8	14-0	14-8	15-0	15-9	15-8	16-0	16-9	16-8	17-0	17-9
"d" Dist. Bars Top Slab - No. of	5	5	5	5	5	5	6	5	5	6	5	5	6
"d" Dist. Bars Bot. Slab - No. of	4	5	4	5	4	5	6	4	5	6	4	5	6
"e" Bars Spacing	18	18	18	18	18	18	18	18	18	18	18	18	18
Spacers Number	26		30		30			34			38		
Quan. Concrete: C.Y. per Lin. Ft.	0.49	0.58	0.52	0.62	0.56	0.68	0.80	0.60	0.73	0.86	0.64	0.77	0.91
Quan. Reinf'g: Lbs. " " "	95	111	100	117	104	121	147	109	127	153	115	133	160
Hydraulics Area A	21		28		35			42			49		
Hydraulic Radius R	1.05		1.27		1.46			1.62			1.75		
Neutral Slope %	0.52		0.54		0.57			0.61			0.64		
Head Factor K	0.423		0.332		0.281			0.247			0.224		
Entrance Capacity Q_{10}	112		173		241			317			400		
Design Discharge Q_{100}	185		285		398			523			659		
Max. Cover=F Case II or VIII	12	20	12	20	11	19	26	11	19	26	11	19	26
Max. Cover=F Case IV	12	24	12	24	11	23	37	11	23	37	11	23	37
Max. Cover=F Case VI	10	14	10	14	9	13	17	9	13	17	9	13	17

SPAN	8'																
HEIGHT	3'		4'		5'		6'			7'				8'			
STRENGTH CLASSIFICATION	A	B	A	B	A	B	A	B	C	A	B	C	D	A	B	C	D
Conc. Top Slab T_1	7¾	8½	7¾	8½	7¾	8½	7¾	8½	10	7¾	8½	10	12	7¾	8½	10	12
Conc. Bottom Slab T_2	7¼	10¼	7¼	10¼	7¼	10¼	7¼	10¼	11¾	7¼	10¼	11¾	13	7¼	10¼	11¾	13
Conc. Sidewalls T_3	7		7		7		7½	7½	9¼	7½	7½	9¼	11½	7½	7½	9¼	11½
Reinforcing Steel a Size: Bar #	5	5	5	5	5	5	5	5	6	5	5	6	7	5	5	6	7
Reinforcing Steel a Spacing	12	10	12	10	12	10	12	10	12	12	10	12	14	12	10	12	14
Reinforcing Steel a Length	8-11	8-11	8-11	8-11	8-11	8-11	9-0	9-0	9-3	9-0	9-0	9-3	9-8	9-0	9-0	9-3	9-8
Reinforcing Steel b Size: Bar #	5	5	5	5	5	5	5	5	6	5	5	6	7	5	5	6	7
Reinforcing Steel b Spacing	12	10	12	10	12	10	12	10	12	12	10	12	14	12	10	12	14
Reinforcing Steel b Length	13-4	13-5	13-4	13-5	13-4	13-5	13-5	13-6	14-7	13-5	13-6	14-7	16-2	13-5	13-6	14-7	16-2
Reinforcing Steel c Size: Bar #	5	5	5	5	5	5	5	5	6	5	5	6	7	5	5	6	7
Reinforcing Steel c Spacing	12	10	12	10	12	10	12	10	12	12	10	12	14	12	10	12	14
Reinforcing Steel c Length	13-10	14-2	14-10	15-2	15-10	16-2	16-11	17-3	17-11	17-11	18-3	18-11	19-8	18-11	19-3	19-11	20-8
"d" Dist. Bars Top Slab - No. of	6	6	6	6	6	6	6	6	7	6	6	7	8	6	6	7	8
"d" Dist. Bars Bot. Slab - No. of	5	6	5	6	5	6	5	6	7	5	6	7	8	5	6	7	8
"e" Bars Spacing	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Spacers Number	26		30		30		34			38				42			
Quan. Concrete: C.Y. per Lin. Ft.	0.56	0.66	0.60	0.71	0.64	0.75	0.71	0.81	0.98	0.76	0.87	1.04	1.27	0.80	0.91	1.12	1.34
Quan. Reinf'g: Lbs. " " "	103	121	109	127	112	130	118	137	164	124	143	171	203	129	149	177	210
Hydraulics Area A	24		32		40		48			56				64			
Hydraulic Radius R	1.09		1.33		1.54		1.71			1.87				2.00			
Neutral Slope %	0.50		0.52		0.54		[illegible]			0.59				0.62			
Head Factor K	0.404		0.314		0.262		0.229			0.206				0.189			
Entrance Capacity Q_{10}	123		197		276		362			457				558			
Design Discharge Q_{100}	212		326		455		597			753				921			
Max. Cover=F Case II or VIII	9	17	9	17	9	17	8	16	23	8	16	23	32	8	16	23	32
Max. Cover=F Case IV	8	18	8	18	8	18	7	18	30	7	18	30	59	7	18	30	59
Max. Cover=F Case VI	8	12	8	12	8	12	7	12	16	7	12	16	21	7	12	16	21

SPAN	10'																
HEIGHT	4'		5'		6'		7'		8'			9'			10'		
STRENGTH CLASSIFICATION	A	B	A	B	A	B	A	B	A	B	C	A	B	C	A	B	C
Conc. Top Slab T_1	8¾	9½	8¾	9½	8¾	9½	8¾	9½	8¾	9½	12	8¾	9½	12	8¾	9½	12
Conc. Bottom Slab T_2	8½	10¾	8½	10¾	8½	10¾	8½	10¾	8½	10¾	13	8½	10¾	13	8½	10¾	13
Conc. Sidewalls T_3	8	10	8	10	8	10	8	10	8	10	12	8	10	12	8	10	12
Reinforcing Steel a Size: Bar #	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Reinforcing Steel a Spacing	15	12	15	12	15	12	15	12	15	12	10	15	12	10	15	12	10
Reinforcing Steel a Length	11-1	11-5	11-1	11-5	11-1	11-5	11-1	11-5	11-1	11-5	11-9	11-1	11-5	11-9	11-1	11-5	11-9
Reinforcing Steel b Size: Bar #	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Reinforcing Steel b Spacing	15	12	15	12	15	12	15	12	15	12	10	15	12	10	15	12	10
Reinforcing Steel b Length	16-4	16-8	16-4	16-8	16-4	16-8	16-4	16-8	16-4	16-8	17-2	16-4	16-8	17-2	16-4	16-8	17-2
Reinforcing Steel c Size: Bar #	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Reinforcing Steel c Spacing	15	12	15	12	15	12	15	12	15	12	10	15	12	10	15	12	10
Reinforcing Steel c Length	17-3	17-11	18-3	18-11	19-3	19-11	20-3	20-11	21-3	21-11	22-8	22-3	22-11	23-8	23-3	23-11	24-8
"d" Dist. Bars Top Slab - No. of	8	8	8	8	8	8	8	8	8	8	9	8	8	9	8	8	9
"d" Dist. Bars Bot. Slab - No. of	7	8	7	8	7	8	7	8	7	8	9	7	8	9	7	8	9
"e" Bars Spacing	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Spacers Number	32		36		40		40		44			48			48		
Quan. Concrete: C.Y. per Lin. Ft.	0.81	0.98	0.87	1.04	0.91	1.10	0.96	1.16	1.01	1.23	1.52	1.06	1.29	1.60	1.11	1.35	1.67
Quan. Reinf'g: Lbs. " " "	143	175	149	182	155	188	158	192	165	199	236	171	205	243	174	209	248
Hydraulics Area A	40		50		60		70		80			90			100		
Hydraulic Radius R	1.43		1.67		1.88		2.06		2.22			2.37			2.50		
Neutral Slope %	0.47		0.49		0.51		0.52		0.54			0.56			0.58		
Head Factor K	0.288		0.238		0.205		0.183		0.165			0.153			0.143		
Entrance Capacity Q_{10}	247		345		453		571		698			834			975		
Design Discharge Q_{100}	407		568		747		941		1150			1380			1610		
Max. Cover=F Case II or VIII	6	15	6	15	6	15	5	15	5	15	22	5	15	22	5	15	22
Max. Cover=F Case IV	6	16	6	16	6	16	5	16	5	16	30	5	16	30	5	16	30
Max. Cover=F Case VI	5	12	5	12	5	12	5	12	5	12	15	5	12	15	5	12	15

SPAN	12'														
HEIGHT	6'		7'		8'		9'			10'			12'		
STRENGTH CLASSIFICATION	A	B	A	B	A	B	A	B	C	A	B	C	A	B	C
Conc. Top Slab T_1	10	11½	10	11½	10	11½	10	11½	13¼	10	11½	13¼	10	11½	13¼
Conc. Bottom Slab T_2	10	12½	10	12½	10	12½	10	12½	14½	10	12½	14½	10	12½	14½
Conc. Sidewalls T_3	9½	11½	9½	11½	9½	11½	9½	11½	13½	9½	11½	13½	9½	11½	13½
Reinforcing Steel a Size: Bar #	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Reinforcing Steel a Spacing	18	15	18	15	18	15	18	15	12	18	15	12	18	15	12
Reinforcing Steel a Length	13-3	13-7	13-3	13-7	13-3	13-7	13-3	13-7	14-0	13-3	13-7	14-0	13-3	13-7	14-0
Reinforcing Steel b Size: Bar #	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Reinforcing Steel b Spacing	18	15	18	15	18	15	18	15	12	18	15	12	18	15	12
Reinforcing Steel b Length	19-8	20-2	19-8	20-2	19-8	20-2	19-8	20-2	20-8	19-8	20-2	20-8	19-8	20-2	20-8
Reinforcing Steel c Size: Bar #	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Reinforcing Steel c Spacing	18	15	18	15	18	15	18	15	12	18	15	12	18	15	12
Reinforcing Steel c Length	21-9	22-7	22-9	23-7	23-9	24-7	24-9	25-7	26-3	25-9	26-7	27-3	26-9	28-7	29-3
"d" Dist. Bars Top Slab - No. of	10	10	10	10	10	10	10	10	11	10	10	11	10	10	11
"d" Dist. Bars Bot. Slab - No. of	8	10	8	10	8	10	8	10	11	8	10	11	8	10	11
"e" Bars Spacing	18	18	18	18	18	18	18	18	18	18	18	18	18	18	16
Spacers Number	46		46		50		50			54			62		
Quan. Concrete: C.Y. per Lin. Ft.	1.20	1.47	1.26	1.54	1.33	1.61	1.37	1.68	1.98	1.43	1.75	2.07	1.54	1.90	2.23
Quan. Reinf'g: Lbs. " " "	197	235	201	239	207	246	211	250	307	218	257	314	228	271	329
Hydraulics Area A	72		84		96		108			120			144		
Hydraulic Radius R	2.00		2.21		2.40		2.57			2.73			3.00		
Neutral Slope %	0.46		0.48		0.49		0.51			0.52			0.55		
Head Factor K	0.189		0.167		0.151		0.138			0.128			0.114		
Entrance Capacity Q_{10}	543		686		838		1000			1170			1540		
Design Discharge Q_{100}	896		1130		1380		1650			1930			2540		
Max. Cover=F Case II or VIII	4	12	4	12	4	12	4	12	18	4	12	18	4	12	18
Max. Cover=F Case IV	4	12	4	12	4	12	4	12	19	4	12	19	4	12	19
Max. Cover=F Case VI	3	10	3	10	3	10	3	10	15	3	10	15	3	10	15

ALTERNATIVE "FLAT" INVERT

ALTERNATIVE "V" INVERT

ALTERNATIVE "TRAPEZOIDAL" INVERT

TYPICAL SECTION 2' TO 6' SPANS

TYPICAL SECTION 7' TO 12' SPANS

TOP SLAB FILLET									
S (Ft)	2	3	4	5	6	7	8	10	12
Fillet (In)	2	2	2	3	4	4	5	6	7

61-5V13C11

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD SINGLE BOX CULVERTS

SCALE	BRIDGE	FILE	DRAWING

1-9-56: Revised, Sloped Invert

A-56

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

71

FHWA Div. No.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF			72	204

To Accompany Plans Dated August 15, 1960

Dist	County	Route	Section	Sheet No.	Total Sheets
V	SB, SLO	2	L, SM, E	72	137

72

Bridge Engineer — Structural Engineer — License 509

Approved October 10, 1952

State Highway Engineer — Civil Engineer License 2084

Span 4

SPAN	4										
HEIGHT	2			3				4			
STRENGTH CLASSIFICATION	A	B	C	A	B	C	D	A	B	C	D
Conc. Top Slab T_1	6½	6½	7¼	6½	6½	7¼	8½	6½	6½	7¼	8½
Conc. Bottom Slab T_2	6	7	8½	6	7	8½	9½	6	7	8½	9½
Conc. Sidewalls T_3	6	6	6	6	6	6	6	6	6	6	6
Reinforcing Steel "a" Size: Bar #	5	5	4	5	5	4	4	5	5	4	4
"a" Spacing	14	14	12	14	14	12	10	14	14	12	10
"a" Length	10-3	10-3	10-2	10-3	10-3	10-2	10-2	10-3	10-3	10-2	10-2
"b" Size: Bar #	5	5	5	5	5	5	5	5	5	5	5
"b" Spacing	14	14	12	14	14	12	10	14	14	12	10
"b" Length	9-6	9-6	9-7	9-6	9-6	9-7	9-8	9-6	9-6	9-7	9-8
"c" Size: Bar #	5	5	5	5	5	5	5	5	5	5	5
"c" Spacing	14	14	12	14	14	12	10	14	14	12	10
"c" Length	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6
"d" Dist Bars Top Slab - No. of	6	6	6	6	6	6	6	6	6	6	6
"d" Dist Bars Bot. Slab - No. of	6	6	6	6	6	6	6	6	6	6	6
"e" Bars Size: Bar #	4	4	4	4	4	4	4	4	4	4	4
"e" Bars Spacing	18	18	18	18	18	18	18	18	18	15	10
Spacers Number	19			22				25			
Quan. Concrete: C.Y. per Lin. Ft.	0.48	0.51	0.57	0.53	0.57	0.63	0.70	0.59	0.62	0.68	0.75
Quan. Reinf.: Lbs. " " "	68	68	68	72	72	72	80	75	75	75	87
Hydraulics Area A	16			24				32			
Hydraulic Radius R	0.67			0.86				1.00			
Neutral Slope %	0.64			0.70				0.77			
Head Factor k	0.75			0.55				0.45			
Entrance Capacity Q_{10}	70			128				198			
Design Discharge Q_{100}	116			214				326			
Max Cover F Case II or VIII	5	15	24	5	15	24	34	5	15	24	34
Case IV	5	16	32	5	16	32	65	5	16	32	65
Case VI	5	12	17	5	12	17	23	5	12	17	23

Span 5

SPAN	5													
HEIGHT	2			3			4				5			
STRENGTH CLASSIFICATION	A	B	C	A	B	C	A	B	C	D	A	B	C	D
Conc. Top Slab T_1	7	7	8½	7	7	8½	7	7	8½	10¼	7	7	8½	10¼
Conc. Bottom Slab T_2	6½	8½	10	6½	8½	10	6½	8½	10	11¼	6½	8½	10	11¼
Conc. Sidewalls T_3	6	6	6	6	6	6	6	6	6	6	6	6	6	6
"a" Size: Bar #	5	5	4	5	5	4	5	5	4	5	5	5	4	5
"a" Spacing	13	12	10	13	12	10	13	12	10	12	13	12	10	12
"a" Length	12-3	12-3	12-2	12-3	12-3	12-2	12-3	12-3	12-2	12-3	12-3	12-3	12-2	12-3
"b" Size: Bar #	5	5	5	5	5	5	5	5	5	6	5	5	5	6
"b" Spacing	13	12	10	13	12	10	13	12	10	12	13	12	10	12
"b" Length	11-7	11-7	11-8	11-7	11-7	11-8	11-7	11-7	11-8	11-9	11-7	11-7	11-8	11-9
"c" Size: Bar #	5	5	5	5	5	5	5	5	5	6	5	5	5	6
"c" Spacing	13	12	10	13	12	10	13	12	10	12	13	12	10	12
"c" Length	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6
"d" Dist Bars Top Slab - No. of	8	6	6	8	6	6	8	6	6	8	8	6	6	8
"d" Dist Bars Bot. Slab - No. of	6	6	6	6	6	6	6	6	6	8	6	6	6	8
"e" Bars Size: Bar #	4	4	4	4	4	4	4	4	4	4	4	4	4	4
"e" Bars Spacing	18	18	18	18	18	18	18	18	15	10	18	15	9	7
Spacers Number	19			22			25				25			
Concrete: C.Y. per Lin. Ft.	0.59	0.66	0.77	0.65	0.72	0.83	0.71	0.78	0.88	0.99	0.76	0.83	0.94	1.04
Reinf.: Lbs. " " "	82	86	87	85	90	91	90	93	95	116	90	95	101	123
Area A	20			30			40				50			
Hydraulic Radius R	0.71			0.94			1.11				1.25			
Neutral Slope %	0.59			0.62			0.67				0.73			
Head Factor k	0.69			0.49			0.39				0.34			
Entrance Capacity Q_{10}	86			160			246				344			
Design Discharge Q_{100}	142			264			406				568			
Max Cover F Case II or VIII	4	14	24	4	14	24	4	14	24	34	4	14	24	34
Case IV	4	15	32	4	15	32	4	15	32	65	4	15	32	65
Case VI	4	11	17	4	11	17	4	11	17	22	4	11	17	22

Span 6

SPAN	6													
HEIGHT	3			4			5				6			
STRENGTH CLASSIFICATION	A	B	C	A	B	C	A	B	C	D	A	B	C	D
Conc. Top Slab T_1	7½	8	10	7½	8	10	7½	8	10	11½	7½	8	10	11½
Conc. Bottom Slab T_2	6¾	9¼	11	6¾	9¼	11	6¾	9¼	11	12½	6¾	9¼	11	12½
Conc. Sidewalls T_3	6	6	6	6	6	6	6	6	6	6	6	6	6	7
"a" Size: Bar #	5	4	4	5	4	4	5	4	4	5	5	4	4	5
"a" Spacing	12	11	9	12	11	9	12	11	9	10	12	11	9	10
"a" Length	14-3	14-2	14-2	14-3	14-2	14-2	14-[illegible]	14-2	14-2	14-3	14-3	14-2	14-2	14-6
"b" Size: Bar #	5	5	5	5	5	5	5	5	5	6	5	5	5	6
"b" Spacing	12	11	9	12	11	9	12	11	9	10	12	11	9	10
"b" Length	13-7	13-8	13-9	13-7	13-8	13-9	13-7	13-8	13-9	13-10	13-7	13-8	13-9	14-1
"c" Size: Bar #	5	5	5	5	5	5	5	5	5	6	5	5	5	6
"c" Spacing	12	11	9	12	11	9	12	11	9	10	12	11	9	10
"c" Length	6-6	6-6	6-6	6-6	6-6	6-6	6-6	6-6	6-6	6-6	6-6	6-6	[illegible]	6-7
"d" Dist Bars Top Slab - No. of	10	8	8	10	8	8	10	8	8	8	10	8	8	8
"d" Dist Bars Bot. Slab - No. of	8	8	8	8	8	8	8	8	8	8	8	8	8	8
"e" Bars Size: Bar #	4	4	4	4	4	4	[illegible]	4	4	5	4	4	5	5
"e" Bars Spacing	18	18	18	18	18	[illegible]	[illegible]	15	9	12	18	9	9	8
Spacers Number	26			29			32				32			
Concrete: C.Y. per Lin. Ft.	0.77	0.89	1.05	0.83	0.95	[illegible]	[illegible]	1.00	1.16	1.29	0.94	1.06	1.22	[illegible]
Reinf.: Lbs. " " "	107	100	116	110	104	12[illegible]	113	108	128	158	113	114	137	170
Area A	36			48			60				72			
Hydraulic Radius R	1.00			1.20			1.33				1.50			
Neutral Slope %	0.56			0.59			0.62				0.66			
Head Factor k	0.450			0.358			0.305				0.271			
Entrance Capacity Q_{10}	192			296			414				544			
Design Discharge Q_{100}	318			488			682				896			
Max Cover F Case II or VIII	4	14	23	4	14	23	4	14	23	32	4	14	23	32
Case IV	4	15	28	4	15	28	4	15	28	47	4	15	28	47
Case VI	4	12	17	4	12	17	4	12	17	23	4	12	17	23

Span 8

SPAN	8																
HEIGHT	4			5			6			7				8			
STRENGTH CLASSIFICATION	A	B	C	A	B	C	A	B	C	A	B	C	D	A	B	C	D
Conc. Top Slab T_1	8½	9½	11½	8½	9½	11½	8½	9½	11½	8½	9½	11½	13½	8½	9½	11½	13½
Conc. Bottom Slab T_2	9	10¾	12¾	9	10¾	12¾	9	10¾	12¾	9	10¾	12¾	14½	9	10¾	12¾	14½
Conc. Sidewalls T_3	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7½
"a" Size: Bar #	5	5	5	5	5	5	5	5	5	5	5	5	6	5	5	5	6
"a" Spacing	10	12	10	10	12	10	10	12	10	10	12	10	12	10	12	10	12
"a" Length	18-3	18-3	18-3	18-3	18-3	18-3	18-3	18-3	18-3	18-6	18-6	18-6	18-7	18-6	18-6	18-6	18-8
"b" Size: Bar #	5	6	6	5	6	6	5	6	6	5	6	6	7	5	6	6	7
"b" Spacing	10	12	10	10	12	10	10	12	10	10	12	10	12	10	12	10	12
"b" Length	17-8	17-8	17-10	17-8	17-8	17-10	17-8	17-8	17-10	17-11	17-11	18-1	18-2	17-11	17-11	18-1	18-3
"c" Size: Bar #	5	6	6	5	6	6	5	6	6	5	6	6	7	5	6	6	7
"c" Spacing	10	12	10	10	12	10	10	12	10	10	12	10	12	10	12	10	12
"c" Length	8-6	8-6	8-6	8-6	8-6	8-6	8-6	8-6	8-6	8-7	8-7	8-7	8-7	8-7	8-7	8-7	8-7
"d" Dist Bars Top Slab - No. of	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
"d" Dist Bars Bot. Slab - No. of	10	12	12	10	12	12	10	12	12	10	12	12	12	10	12	12	12
"e" Bars Size: Bar #	4	4	4	4	4	4	4	4	5	4	4	5	5	4	5	6	6
"e" Bars Spacing	18	18	18	18	18	12	18	12	12	18	10	11	9	12	11	10	8
Spacers Number	34			37			40			40				43			
Concrete: C.Y. per Lin. Ft.	1.18	1.32	1.54	1.24	1.38	1.60	1.29	1.43	1.65	1.42	1.57	1.79	2.00	1.48	1.63	1.85	2.13
Reinf.: Lbs. " " "	155	162	186	159	166	194	162	173	203	155	178	209	237	172	188	226	260
Area A	64			80			96			112				128			
Hydraulic Radius R	1.33			1.54			1.71			1.87				2.00			
Neutral Slope %	0.52			0.54			0.56			0.59				0.62			
Head Factor k	0.314			0.262			0.229			0.206				0.189			
Entrance Capacity Q_{10}	394			552			724			914				1116			
Design Discharge Q_{100}	652			910			1194			1506				1842			
Max Cover F Case II or VIII	4	11	18	4	11	18	4	11	18	3	10	17	24	3	10	17	24
Case IV	4	11	19	4	11	19	4	11	19	3	10	18	28	3	10	18	28
Case VI	4	10	16	4	10	16	4	10	16	3	9	15	19	3	9	15	19

Bar numbers denote nominal diameters of round bars in eighths of an inch.

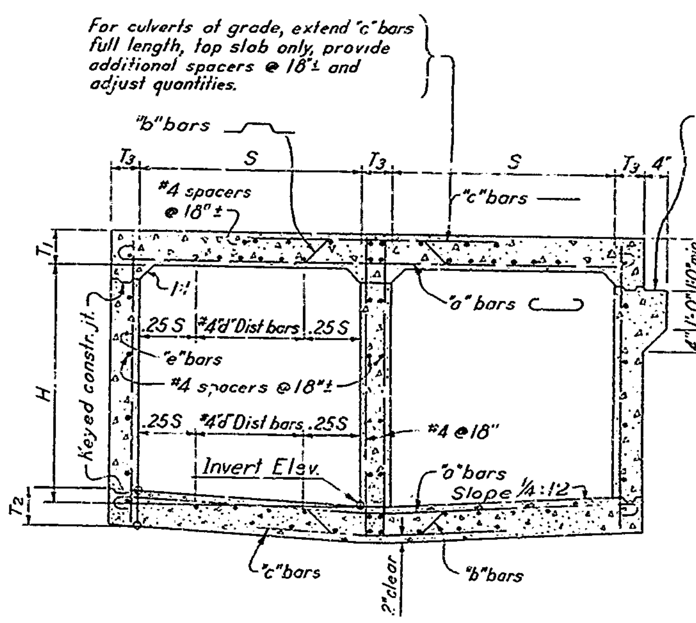
Note: For boxes of height less than that shown in table, use next greater table height slabs, wall dimensions and reinforcing steel, and make necessary changes in bar lengths, number of spacers and quantities.

Span 10

SPAN	10																
HEIGHT	5			6			7			8				10			
STRENGTH CLASSIFICATION	A	B	C	A	B	C	A	B	C	A	B	C	D	A	B	C	D
Conc. Top Slab T_1	9½	11½	14½	9½	11½	14½	9½	11½	14½	9½	11½	14½	17	9½	11½	14½	17
Conc. Bottom Slab T_2	9½	13¼	16¼	9½	13¼	16¼	9½	13¼	16¼	10	13¼	16¼	18	10	13¼	16¼	18
Conc. Sidewalls T_3	6	6	6	6	6	6	7	7	7	8	8	8	8	8	8	9	10
"a" Size: Bar #	5	5	6	5	5	6	5	5	6	5	5	6	6	5	5	6	6
"a" Spacing	12	10	11	12	10	11	12	10	11	12	10	11	12	12	10	11	12
"a" Length	22-3	22-3	22-4	22-3	22-3	22-4	22-6	22-6	22-7	22-9	22-9	22-10	22-10	22-9	22-9	23-1	23-4
"b" Size: Bar #	6	6	7	6	6	7	6	6	7	6	6	7	8	6	6	7	8
"b" Spacing	12	10	11	12	10	11	12	10	11	12	10	11	12	12	10	11	12
"b" Length	21-8	21-10	22-0	21-8	21-10	22-0	21-11	22-1	22-3	22-2	22-4	22-6	22-8	22-2	22-4	22-9	23-2
"c" Size: Bar #	6	6	7	6	6	7	6	6	7	6	6	7	8	6	6	7	8
"c" Spacing	12	10	11	12	10	11	12	10	11	12	10	11	12	12	10	11	12
"c" Length	10-6	10-6	10-6	10-6	10-6	10-6	10-7	10-7	10-7	10-8	10-8	10-8	10-8	10-8	10-8	10-9	10-10
"d" Dist Bars Top Slab - No. of	14	14	16	14	14	16	14	14	16	14	14	16	18	14	14	16	18
"d" Dist Bars Bot. Slab - No. of	12	14	16	12	14	16	12	14	16	12	14	16	18	12	14	16	18
"e" Bars Size: Bar #	4	4	4	4	4	5	4	4	5	4	5	6	6	5	6	7	7
"e" Bars Spacing	18	18	11	18	12	11	18	10	11	12	11	11	9	12	10	11	10
Spacers Number	44			44			47			56				60			
Concrete: C.Y. per Lin. Ft.	1.55	1.92	2.33	1.61	1.99	2.39	1.74	2.13	2.53	1.94	2.29	2.70	2.99	2.09	2.44	2.96	3.37
Reinf.: Lbs. " " "	198	229	262	200	234	291	205	242	298	221	263	324	360	237	287	352	388
Area A	100			120			140			160				200			
Hydraulic Radius R	1.67			1.88			2.06			2.22				2.50			
Neutral Slope %	0.49			0.51			0.52			0.54				0.58			
Head Factor k	0.238			0.205			0.183			0.165				0.143			
Entrance Capacity Q_{10}	690			906			1142			1396				1952			
Design Discharge Q_{100}	1136			1494			1882			2300				3220			
Max Cover F Case II or VIII	3	11	19	3	11	19	3	10	18	3	10	18	25	3	10	16	25
Case IV	3	10	20	3	10	20	3	9	19	3	9	19	29	3	9	19	29
Case VI	3	10	17	3	10	17	3	9	16	3	9	16	21	3	9	16	21

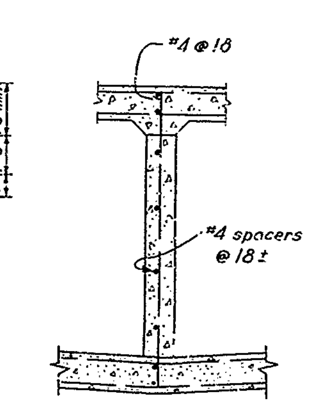
Span 12

SPAN	12																				
HEIGHT	6			7			8			9				10				12			
STRENGTH CLASSIFICATION	A	B	C	A	B	C	A	B	C	A	B	C	D	A	B	C	D	A	B	C	D
Conc. Top Slab T_1	11	14	16½	11	14	16½	11	14	16½	11	14	16½	19	11	14	16½	19	11	14	16½	19
Conc. Bottom Slab T_2	11¼	15	18	11¼	15	18	11½	15	18	11½	15½	18	21½	11¾	15½	18	21½	11¾	15½	18	21½
Conc. Sidewalls T_3	6	6	6	7	7	7	8	8	8	9	9	9	9	9	9	10	12	9	9	10	12
"a" Size: Bar #	5	5	6	5	5	6	5	5	6	5	5	6	6	5	5	6	6	5	5	6	6
"a" Spacing	11	11	12	11	11	12	10	11	12	10	11	12	10	10	11	12	10	10	11	12	10
"a" Length	26-3	26-3	26-[illegible]	26-6	26-6	26-8	26-9	26-9	26-11	27-0	27-0	27-2	27-2	27-0	27-0	27-5	27-11	27-0	27-0	27-5	27-11
"b" Size: Bar #	6	7	8	6	7	8	6	7	8	6	7	8	8	6	7	8	8	6	7	8	8
"b" Spacing	11	11	12	11	11	12	10	11	12	10	11	12	10	10	11	12	10	10	11	12	10
"b" Length	25-10	26-0	26-2	26-0	26-3	26-5	26-4	26-6	26-8	26-7	26-9	26-11	27-0	26-7	26-9	27-2	27-9	26-7	26-9	27-2	27-9
"c" Size: Bar #	6	7	8	6	7	8	6	7	8	6	7	8	8	6	7	8	8	6	7	8	8
"c" Spacing	11	11	12	11	11	12	10	11	12	10	11	12	10	10	11	12	10	10	11	12	10
"c" Length	12-6	12-6	12-6	12-7	12-7	12-7	12-8	12-8	12-8	12-9	12-9	12-9	12-9	12-9	12-9	12-10	13-0	12-9	12-9	12-10	13-0
"d" Dist Bars Top Slab - No. of	16	18	20	16	18	20	16	18	20	16	18	20	24	16	18	20	24	16	18	20	24
"d" Dist Bars Bot. Slab - No. of	14	18	20	14	18	20	14	18	20	14	18	20	24	14	18	20	24	14	18	20	24
"e" Bars Size: Bar #	4	4	5	4	4	5	4	5	6	4	5	6	7	5	6	7	7	5	7	8	8
"e" Bars Spacing	18	12	12	18	10	12	16	11	12	12	12	11	11	12	12	12	12	11	12	12	10
Spacers Number	48			48			60			60				64				72			
Concrete: C.Y. per Lin. Ft.	2.11	2.64	3.11	2.23	2.78	3.22	2.43	2.95	3.39	2.60	3.16	3.57	4.06	2.70	3.24	3.77	4.51	2.87	3.41	3.96	4.73
Reinf.: Lbs. " " "	247	301	366	250	308	373	285	331	399	293	334	408	489	306	351	428	502	321	380	462	552
Area A	144			168			192			216				240				288			
Hydraulic Radius R	2.00			2.21			2.40			2.57				2.73				3.00			
Neutral Slope %	0.46			0.48			0.49			0.51				0.52				0.56			
Head Factor k	0.189			0.167			0.151			0.138				0.128				0.114			
Entrance Capacity Q_{10}	1086			1372			1676			2000				2340				3080			
Design Discharge Q_{100}	1792			2260			2760			3300				3860				5080			
Max Cover F Case II or VIII	3	11	17	3	11	17	2	10	16	2	10	16	25	2	10	16	25	2	10	16	25
Case IV	3	10	17	3	10	17	2	9	16	2	9	16	27	2	9	16	27	2	9	16	27
Case VI	3	10	16	3	10	16	2	9	15	2	9	15	21	2	9	15	21	2	9	15	21



TYPICAL SECTION

(Showing reinforcement for interior walls 8" and over)



Reinforcement for interior walls under 8"

TOP SLAB FILLETS					
S (in feet)	4	5	6	8	10	12
Fillet (inches)	2	3	4	5	6	7

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD DOUBLE BOX CULVERTS

Scale	Bridge	File	Drawing

1-9-56: Revised, Sloped Invert

A-57

72

DIST. DIV. NO	STATE	FEDERAL PROJECT NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
	CALIF.			73	204

To Accompany Plans Dated August 15, 1960

DIST.	COUNTY	RTE	SECTION	SHEET NO	TOTAL SHEETS
V	SB, SLO	2	F, SM, a, F	73	137

Stewart Mitchell
BRIDGE ENGINEER — STRUCTURAL ENGINEER LICENSE 309

APPROVED October 10, 1952

G T McCoy
STATE HIGHWAY ENGINEER — CIVIL ENGINEER LICENSE 2884

73

GENERAL NOTES

DESIGN NOTES

SPECIFICATIONS: A.A.S.H.O. dated 1953 with subsequent modifications and Bridge Department Supplement dated 1953.

LOADS: Live Load = one H20-S16-44 truck with 30% impact for all cover depths. Neglect live load when on single spans cover is more than 8' and exceeds span or on multiple spans cover exceeds distance between faces of exterior walls. Culverts at grade treated as bridge, with wheel load on invert slab distributed over 7.0' transversely and breadth of culvert longitudinally. Live load distributed thru fill as follows:- Transverse spread = 1.2 + 1.6F; longitudinal spread = 1.5 + 1.5F. Earth load of 120 lbs. per cu. ft. and an equivalent fluid pressure of 36 lbs. per cu. ft. (both reduced 30% for balanced design) and modified for bedding and backfill conditions.

UNIT STRESSES: f_s = 20,000 psi; f_c = 1,000 psi; n = 10; u = 300 psi; v = 90 psi. Reinforcement to be round deformed bars. Embedment is 1½ Dia. clear, min 1", except as noted. Hooks shall conform to Manual of Standard Practice, A.C.I. Backing for hooks is 4 diameters. Bar splices to be 20 diameters, unless noted. Deformations shall conform to A.S.T.M. A-305-49. Distribution "d" bars; Cover "0" to span length, top slab = $\frac{100}{\sqrt{S}}$, max. 50%. Cover "0" to span length, bottom slab = $\frac{50}{\sqrt{S}}$, min. 25%. Cover exceeding span length, top and bottom slabs = 25%.

CONSTRUCTION NOTES

SPECIFICATIONS: Standard Specifications, Division of Highways, and Special Provisions accompanying plans.

MAXIMUM COVER: Strength Classification should be reviewed in the field after foundation is exposed. If excavation discloses foundation materials different than presumed for design, the design should be reviewed to determine the necessity of ①—Stronger culvert section; ②—Improvement of bedding and/or ③—Method "B" backfill, (see Standard Specifications), except vertical faces of trench shall not be more than 1' outside dimensions of the structure.)

EXPANSION JOINTS: None in invert slab. Under cover less than span length, place ½" exp. jt. material in top slab and side walls in dividing strip or outside shoulder. Under cover more than span length, place expansion joints in top slab and side-walls only at 30'± ctrs., and additional joints, as directed by the Engineer, at locations of change of foundation material.

CONSTRUCTION LOADS: Construction loads heavier than legal loads not permited until concrete has reached a strength of 3000 psi and structure strutted and cushioned as directed by Engineer.

LOCATION NOTES

HYDRAULICS: If slope of natural channel exceeds "neutral slope" of culvert entrance capacity for 10-yr. flood (Q_{10}) will usually determine size. Otherwise compute total head = $(\frac{Q_{100}}{8A})^2(1.05 + \frac{kL}{100})$, where "k" is head factor, "L" is length of culvert and Q_{100} the 100-yr. flood, and compare with allowable head. Tabulated elements are for full nominal section.

MAXIMUM COVER: Allowable depends on bedding and backfill. Use:
CASE II-For construction in trench on hard foundation.
CASE IV-For construction in trench on yielding foundation; also if Method "B" backfill is used.
CASE VI-For construction on hard foundation.
CASE VIII- For construction on yielding foundation also on hard foundation if Method "B" backfill is used.
For further information on Cases see "California Culvert Practice"

LOCATION NOTES CONT'D

DESIGNATION: Show on plans as Span x Height-Strength Classification-Case x Length: thus 4x4-A-VIII x 60, followed by alternatives.

ALTERNATIVES: Invert will be sloped unless "Trapezoidal Invert", "Flat Invert" or "V-Invert" is included in designation. Ends of culvert will be rounded unless "Square Ends" are designated. Parapet on culverts with over 2' cover will be 1'-0" unless "___ft. parapet" is designated. Such designations may be different for inlet and outlet ends.

QUANTITIES: Quantities are for estimating only. They are for the alternate flat invert slab and do not include splices in longitudinal bars nor concrete and reinforcing for special coverage. Lengths of "b" and "b₁" bars are same. Vary bending of "b₁" bars to suit bottom slab.

SPECIAL COVERAGE: Where culverts are constructed adjacent to salt water, thickness of concrete shall be increased to provide 2" coverage between steel and exposed surfaces. Where scour is anticipated, thickness of bottom slab shall be increased to provide 2" minimum coverage between steel and exposed surface.

USE OF STANDARD PLAN

"STRENGTH CLASSIFICATION", symbolized by the letters "A, B, C," etc., at the top of the data table is merely a convenient designation for a particular structural section for a culvert of any given opening. It is dictated by two factors, (1) the method of bedding and backfill, and, (2) the cover or depth of fill over the top slab. For convenience, bedding and backfill conditions are grouped into "Cases" II, IV, VI, VIII, which are illustrated by sketches and described in the "Location Notes." With little or no information on soil conditions, assume Case II or VIII.

EXAMPLES

AS DESIGNER: It has been determined by hydraulic study, or other reasons, a std. 10'x 8' culvert 60' long is required, to be constructed in the open (no trench) on a yielding foundation and under 13' cover.

Procedure:-From the sketches of Cases and Location Notes it is found bedding and backfill conditions conform to Case VIII. Enter the table at the 3rd line from the bottom (Case II or VIII) and select the 2nd column under the 8' row where cover depths to 14' are allowed. Move to the top of this column, where the required "Strength Classification" indicated by the letter "B" will be found. Final designation: Std. 10'x 8'-B-VIII x 60'.

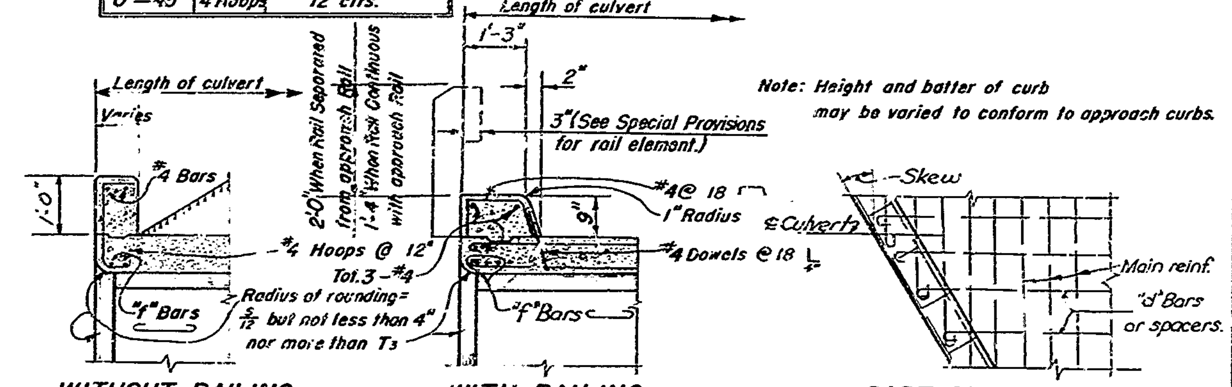
AS RESIDENT ENGINEER: It is discovered in making the excavation for the above culvert, that the foundation is hard, instead of yielding as expected, and that compacted backfill will be used. From information on the standard plans it is ascertained this situation to be Case VI, which for a 13' cover requires Strength Classification "C". Accordingly, Change Order should be initiated calling for a Std. 10'x8'-C-VI x60'.

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

SKEWED PARAPETS									
Skew Angle	Span		3	4	5	6	8	10	12
0°-15°	"f" Bars	BAR NO.	4	4	5	6	6	7	8
		NO. OF BARS	2	2	2	2	3	3	3
16°-30°		BAR NO.	4	4	5	6	7	8	8
		NO. OF BARS	2	3	3	3	3	3	3
31°-45°		BAR NO.	4	4	6	6	7	8	8
		NO. OF BARS	3	3	3	3	3	3	3
0°-45°	#4 Hoops		12" ctrs.						

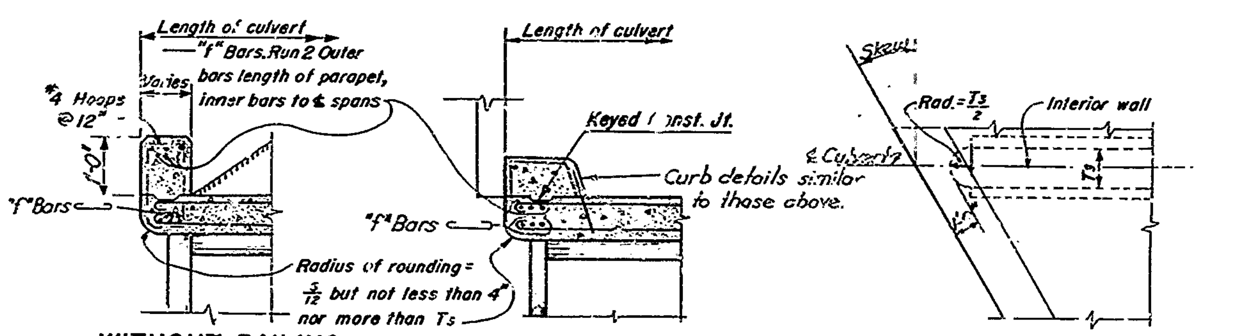
Bar numbers denote nominal diameters of round bars in eighths of an inch. (Bar #6 = 3/4" φ)

Note: Height and batter of curb may be varied to conform to approach curbs.



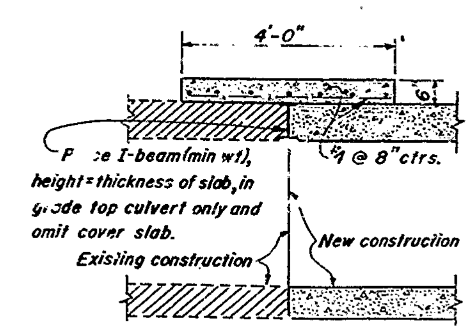
WITHOUT RAILING — WITH RAILING — PART PLAN - SKEWED

PARAPET DETAILS FOR SINGLE SPAN CULVERTS

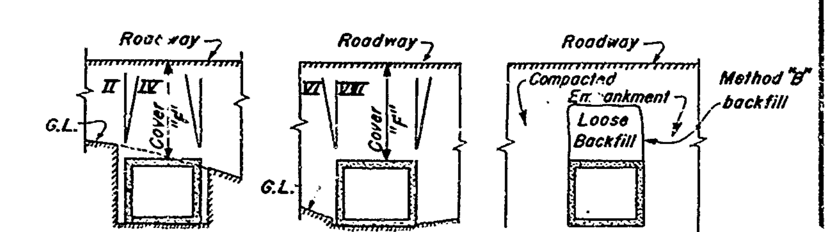


WITHOUT RAILING — WITH RAILING — PART PLAN - SKEWED

PARAPET DETAILS FOR MULTIPLE SPAN CULVERTS



CULVERT EXTENSION



IN TRENCH — CASE II or IV
ON SUBGRADE — CASE VI or VIII
UNDER LOOSE BACKFILL — CASE IV or VIII

BEDDING AND BACKFILL

61-5V13C11

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD BOX CULVERTS

MISCELLANEOUS DETAILS

SCALE	BRIDGE NO.	FILE ~~XS-1-24~~	DRAWING

Revised 10-?-? Deleted Std Spec ? Revised 1-9-56, Railing Details

XS-1-29 A-59

13

STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
CALIF.			74	204

To accompany plans dated August 15, 1960

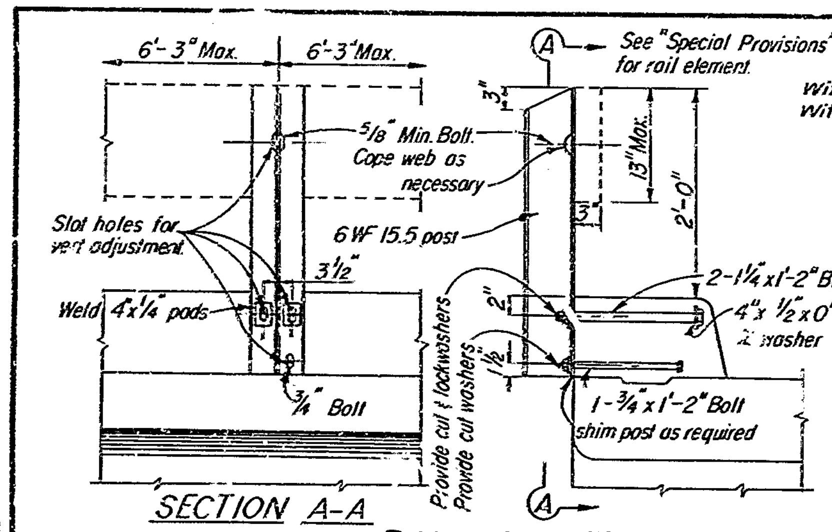
DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB, SLO	2	L, SMra, F	74	137

BRIDGE ENGINEER — STRUCTURAL ENGINEER License No. 509

October 10, 1952

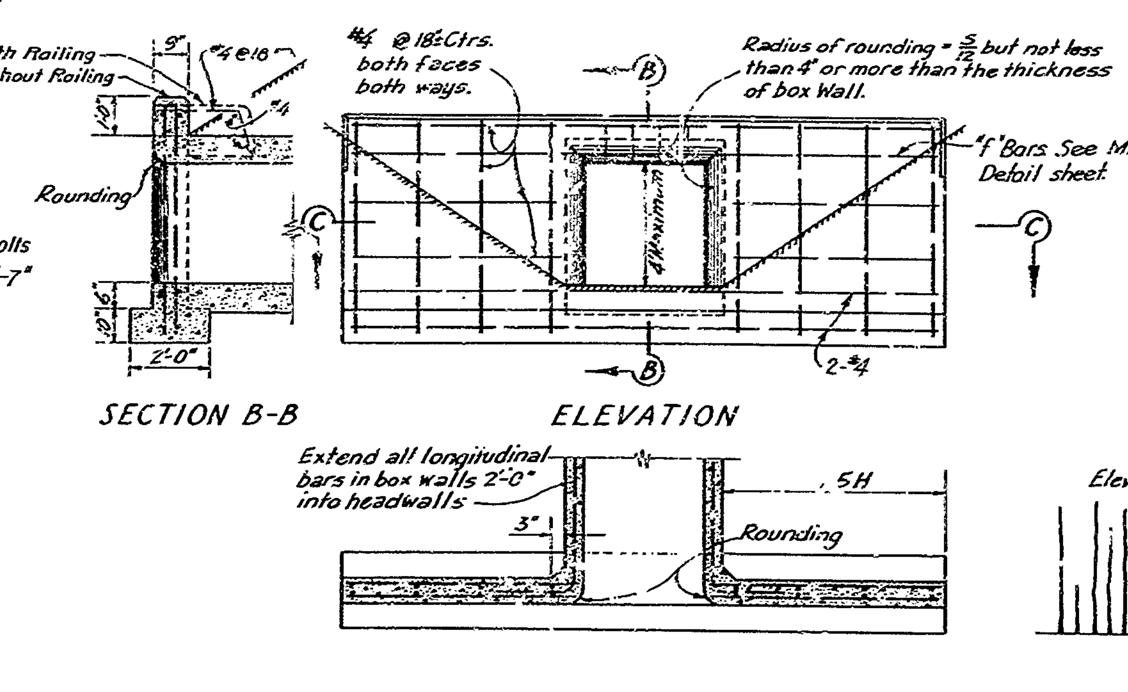
STATE HIGHWAY ENGINEER — Civil Engineer – License 2084

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536



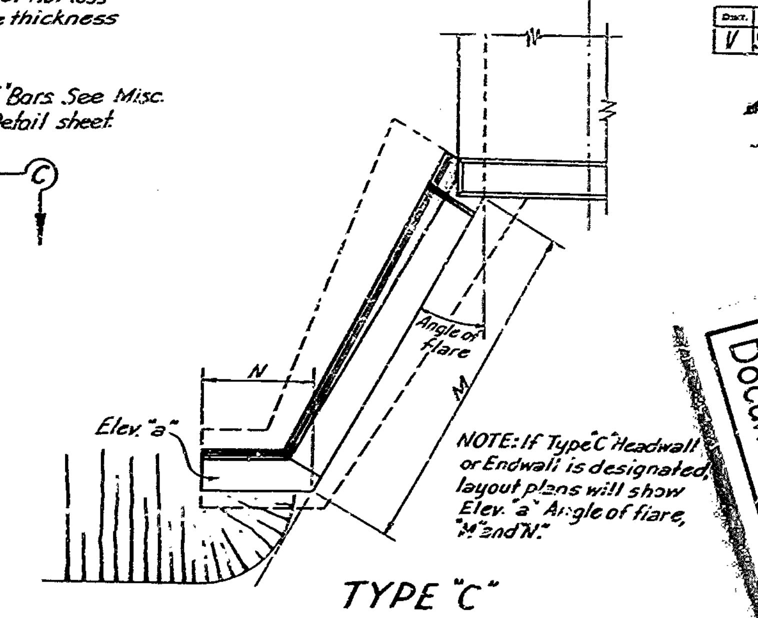
RAILING DETAILS
Scale: 1" = 1'-0"

TABLE OF REINFORCING STEEL TYPE "E" WALLS									
"H" FOR "l" BARS / "h" FOR "k" BARS		3	4	5	6	7	8	10	12
"k" Bars	Bar No.	#4	#4	#5	#5	#5	#5	#5	#5
	Spacing	12	8	10	9	8	7	6	5
"l" Bars	Bar No.	#5	#5	#6	#6	#7	#7	#7	#7
	Number	2	2	3	3	3	3	3	3

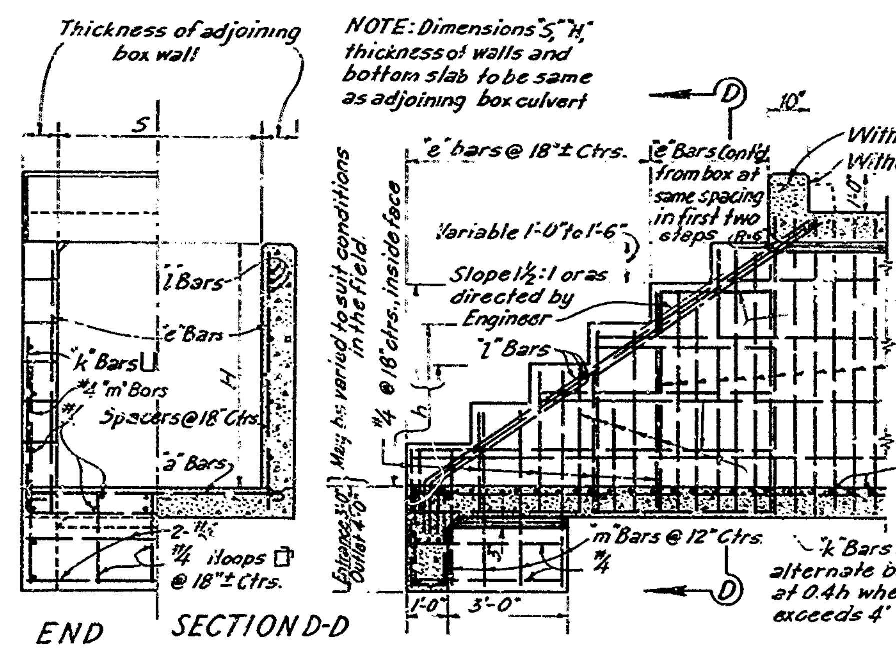


SECTION C-C

TYPE "D"
(STRAIGHT HEADWALL & ENDWALLS)

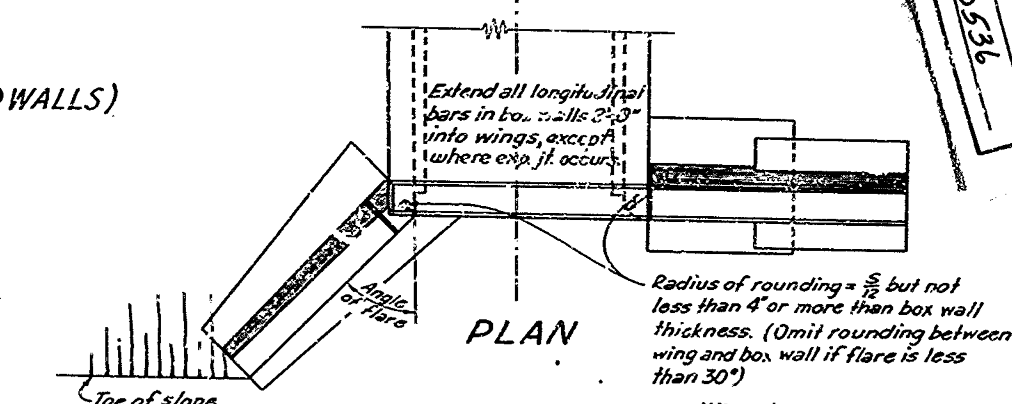


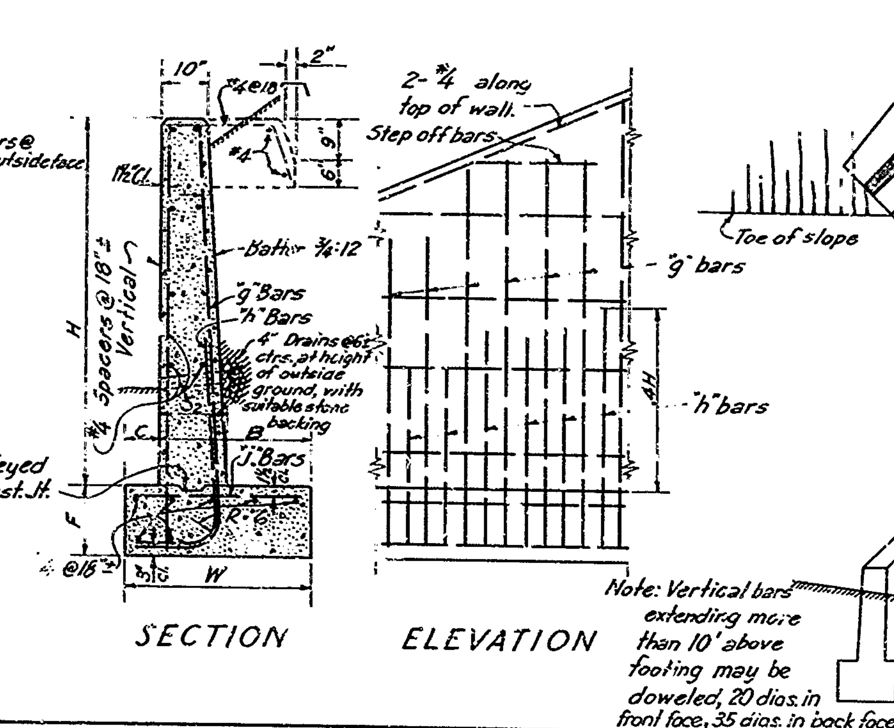
TYPE "C"

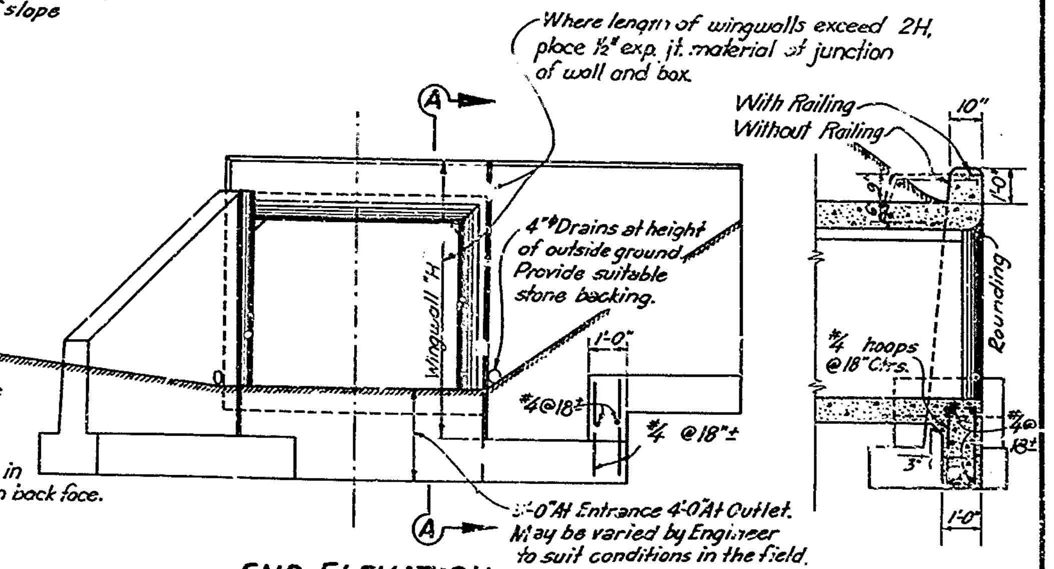


TYPE "E"
(STEPPED HEADWALL OR ENDWALL)

May be used where future extension of culvert is necessary
If used on spans 7' to 12', it must be removed when culvert is extended.







TYPE "A" TYPE "B"
(FLARED OR STRAIGHT WING HEADWALLS & ENDWALLS)

NOTES

DESIGN NOTES:

Earth load of 100#/cu.ft. and an equivalent fluid pressure of 30#/cu.ft.
Wingwalls designed for 2' surcharge.
Unit stresses: f_s=20,000 #/□"; f_c=1000 #/□"; n=10.
Maximum soil pressure = 1 1/2 tons per sq.ft.
All reinforcing steel round deformed bars, conforming to A-305-49.
Hooks shall conform to Manual of Std. Practice, A.C.I. Backing for hooked bars 4 diameters. Embedment is 1 1/2 dia. clear, min. 1", unless noted.

CONSTRUCTION NOTES:

Standard Specifications and the Special Provisions accompanying plans.
Elevations, length, and angle of flare of walls may be varied by the Engineer to suit conditions encountered in the field.

REINFORCED CONCRETE WING HEADWALLS & ENDWALLS													
H	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'	16'
W	3'-3"	3'-9"	4'-3"	4'-9"	5'-3"	5'-9"	6'-3"	6'-9"	7'-3"	7'-9"	8'-3"	8'-9"	9'-3"
C	9"	11"	1'-1"	1'-3"	1'-5"	1'-7"	1'-9"	1'-11"	2'-1"	2'-3"	2'-5"	2'-7"	2'-9"
B	2'-6"	2'-10"	3'-2"	3'-6"	3'-10"	4'-2"	4'-6"	4'-10"	5'-2"	5'-6"	5'-10"	6'-2"	6'-6"
F	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-2"	1'-4"	1'-4"	1'-4"	1'-4"
S_2	1-1	1-1 3/4	1-2 1/2	1-3 1/4	1-4	1-4 3/4	1-5 1/2	1-6 1/4	1-7	1-7 3/4	1-8 1/2	1-9 1/4	1-10
"g" Bars	#4@12	#4@12	#4@12	#4@12	#4@10	#4@8	#4@7	#5@16	#5@14	#6@16	#6@14	#6@12	#6@11
"h" Bars	–	–	–	–	–	–	–	#5@16	#5@14	#6@16	#6@14	#6@12	#6@11
"j" Bars	#4@12	#4@12	#4@12	#4@12	#4@10	#4@8	#4@7	#5@8	#5@7	#6@8	#6@7	#6@6	#6@5 1/2
Conc. C.Y./ft.	.28	.35	.41	.48	.55	.62	.70	.75	.85	.98	1.07	1.15	1.25
Steel lb/ft.	18	19	22	25	30	36	42	49	57	70	84	99	112

Note: Bar numbers denote nominal diameters of round bars in eighths of an inch (Bar #6 = 3/4")

61-5V13C11

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD REINFORCED CONCRETE CULVERT HEADWALLS & ENDWALLS

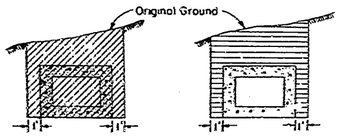
SCALE	BRIDGE NO.	FILE ~~XS-4-15~~	DR

Revised 12-54 Deleted Std. Spec. Notes.
Rev. 7-12-54; Date Eliminated
Revised: 1-3-56; Railing Details

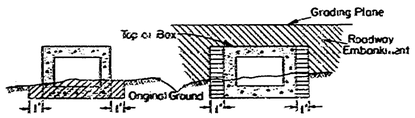
XS-4-19 A-60

D.P.R. DIST. NO.	STATE	FEDERAL PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
	CALIF.			75	204

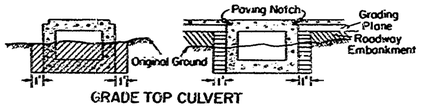
EXCAVATION BACKFILL



CULVERT IN TRENCH

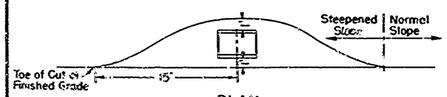


CULVERT IN EMBANKMENT



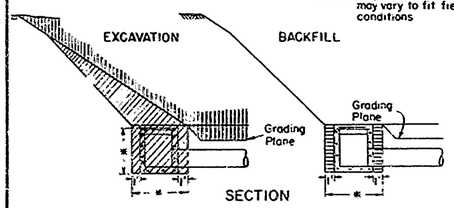
GRADE TOP CULVERT

BOX CULVERTS



PLAN

NOTE: Slopes and dimensions may vary to fit field conditions

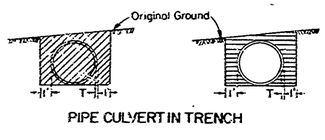


SECTION

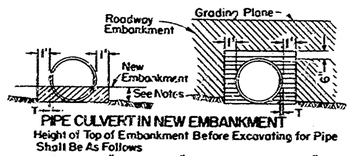
RECESSES AT CULVERT INLETS

* When concrete is being paid for as Class A Concrete (Minor Structure) the cost of Excavation and Backfill is included in the price paid for Class A Concrete (Minor Structure.)

EXCAVATION BACKFILL



PIPE CULVERT IN TRENCH



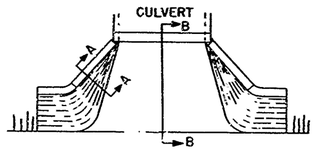
PIPE CULVERT IN NEW EMBANKMENT

Height of Top of Embankment Before Excavating for Pipe Shall Be As Follows

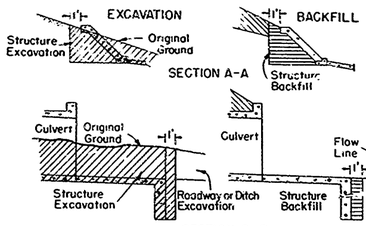
For pipe 24" dia. or less: 6" above top of pipe, or 30" max.
For C.M.P. over 24" to 90" dia.: 30" above bottom of pipe.
For C.M.P. over 90" dia.: 1/3 point of dia. above bottom of pipe.
For R.C.P. over 24" dia.: 30" above bottom of pipe.
For field assembled plate culvert: 1/3 point of dia. above bottom of pipe. Structure Backfill 6" above top of pipe.
For payment quantities excavation and backfill concrete pipe T = min. wall thickness as shown in A.A.S.H.O. M170 for Class III Pipe, Wall A
For C.M.P. T = 0.00

PIPE CULVERTS, RODS & DEADMEN

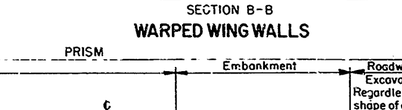
Except Underdrains & Overside Drains



PLAN OF WARPED WINGWALL



SECTION A-A



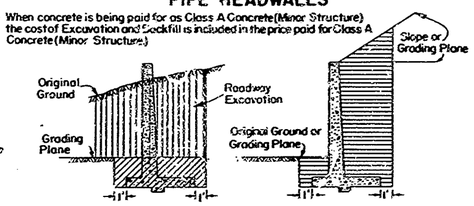
SECTION B-B

WARPED WING WALLS

EXCAVATION BACKFILL

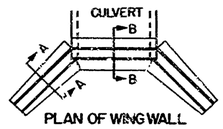
PIPE HEADWALLS

* When concrete is being paid for as Class A Concrete (Minor Structure) the cost of Excavation and Backfill is included in the price paid for Class A Concrete (Minor Structure.)

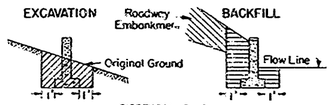


RETAINING WALLS

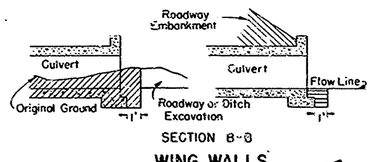
Note: If no roadway excavation is involved at the wall Structure excavation will be measured from the original ground



PLAN OF WING WALL

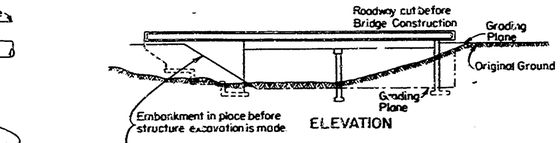


SECTION A-A

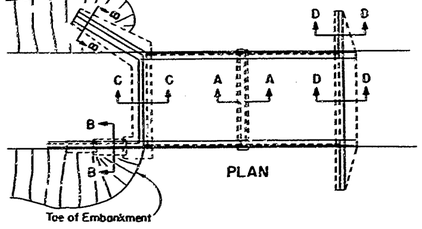


SECTION B-B

WING WALLS

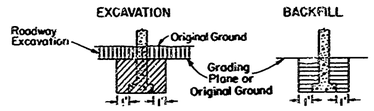


ELEVATION



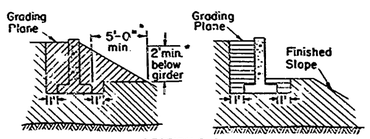
PLAN

EXCAVATION BACKFILL



SECTION A-A

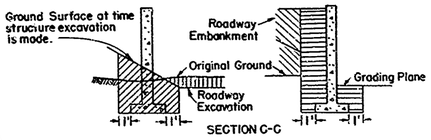
When bridge piers are in water course, quality and compaction requirements for backfill will be waived and full compensation for backfilling the excavation will be considered as included in the price paid for structure excavation.



* or as shown on details

SECTION C-C

ABUTMENT IN EMBANKMENT



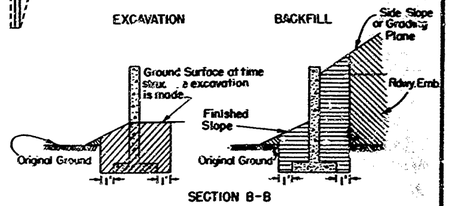
SECTION C-C

ABUTMENT IN ORIGINAL GROUND

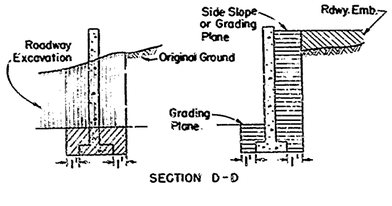
NOTE: If no roadway excavation is involved at bridge Structure excavation will be measured from the original ground.

BRIDGE PIERS, ABUTMENTS & ADJOINING WING WALLS

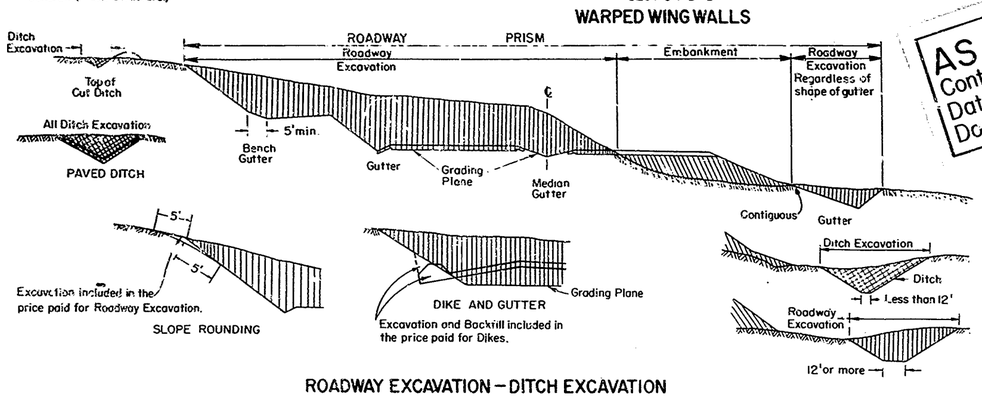
EXCAVATION BACKFILL



SECTION B-B

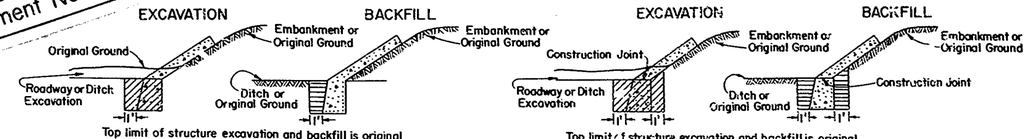


SECTION D-D



ROADWAY EXCAVATION – DITCH EXCAVATION

EXCAVATION BACKFILL EXCAVATION BACKFILL



Top limit of structure excavation and backfill is original ground if ditch is not excavated.

MONOLITHIC CONCRETE SLOPE PROTECTION

Top limit of structure excavation and backfill is original ground if ditch is not excavated.

CONCRETE SLOPE PROTECTION

LEGEND

- Structure Excavation
- Structure Backfill
- Ditch Excavation
- Roadway Excavation
- Roadway Embankment
- Original Ground

61-5V13C11

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

EXCAVATION AND BACKFILL A62-3

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50020536

To accompany plans dated August 15, 1960

DISTRICT	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
V	SB, SD	2	4.5 Mile F	7	137

Approval Recommended

Assistant State Highway Engineer – Bridges

Assistant State Highway Engineer – Operations

Approved June 30, 1960

State Highway Engineer
Civil Engineer License No. 5945

75

75

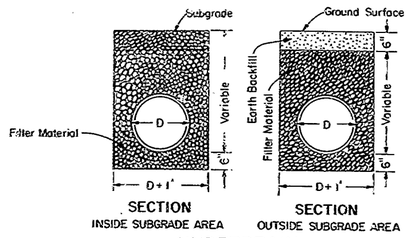
2

FHA DIT. NO.	STATE	FADERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			76	204

To Accompany Plan Dated August 15, 1960

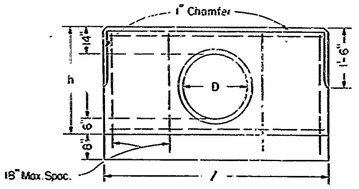
DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB, SLO	2	L.S.Map	76	137

76

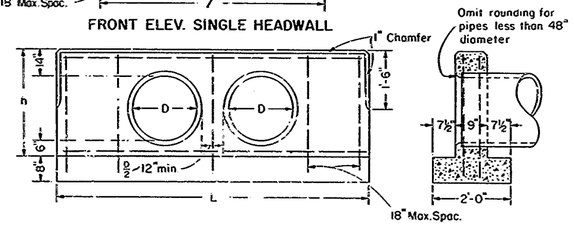


SECTION INSIDE SUBGRADE AREA — SECTION OUTSIDE SUBGRADE AREA

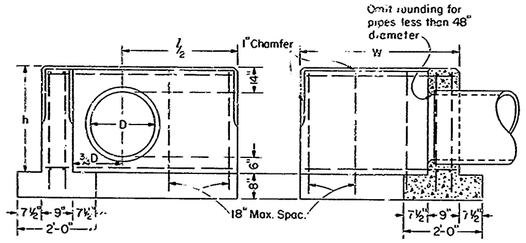
UNDERDRAIN



FRONT ELEV. SINGLE HEADWALL



FRONT ELEV. DOUBLE HEADWALL — SECTION, SINGLE & DOUBLE HEADWALLS



FRONT ELEV. "L" HEADWALL — SECTION "L" HEADWALL

D in.	h ft.-in.	l ft.-in.	Single Vert. bars	Single Steel lbs.	Single Conc. C.Y.	Double L ft.-in.	Double Vert. bars	Double Steel lbs.	Double Conc. C.Y.
12	2-8	5-0	8	28	0.60	7-0	10	38	0.82
15	2-11	6-0	12	41	0.75	8-6	14	52	1.04
18	3-2	7-0	12	46	0.91	9-6	14	57	1.21
21	3-5	7-6	12	49	1.02	10-6	14	62	1.38
24	3-8	8-6	12	54	1.20	11-6	14	67	1.57
27	3-11	9-6	16	70	1.39	13-0	18	85	1.84
30	4-2	10-0	16	74	1.52	14-0	18	91	2.04
33	4-5	11-0	16	79	1.73	15-0	18	96	2.25
36	4-8	12-0	16	85	1.95	16-6	18	103	2.56
39	4-11	12-6	16	89	2.09	17-6	20	116	2.79
42	5-2	13-6	16	94	2.34	18-6	20	122	3.03
45	5-5	14-6	20	115	2.60	20-0	26	153	3.38
48	5-8	15-0	20	119	2.75	21-0	26	160	3.64
51	5-11	16-0	20	125	3.03	22-6	26	168	4.02
54	6-2	17-0	20	131	3.31	23-6	26	175	4.30

Use headwall tables for concrete pipe and for C.M.P.
No deduction made in quantities for variations in thickness of pipe walls.
All reinforcing steel #4 bars.

STRAIGHT HEADWALLS

D in.	h ft.-in.	l/2 ft.-in.	Length of W 2'-0" to 3'-4"	3'-5" to 4'-10"	4'-11" to 6'-4"	6'-5" to 7'-10"	7'-11" to 9'-4"	Conc. C.Y.
			Number of Vertical Bars 6	8	10	12	14	
			Steel lbs.					
12	2-8	2-6	28+3W	32+3W				0.38+0.12W
15	2-11	3-0	36+3W	41+3W				0.48+0.13W
18	3-2	3-6	40+3W	45+3W				0.59+0.14W
21	3-5	3-9	43+3W	48+3W				0.66+0.14W
24	3-8	4-3	47+3W	52+3W	58+3W			0.78+0.15W
27	3-11	4-9	57+3W	62+3W	68+3W			0.91+0.16W
30	4-2	5-0	60+3W	66+3W	73+3W	78+3W		1.00+0.17W
33	4-5	5-6	64+3W	71+3W	77+3W	83+3W		1.13+0.17W
36	4-8	6-0	68+3W	75+3W	82+3W	88+3W	95+3W	1.28+0.18W
39	4-11	6-3		79+3W	86+3W	93+3W	100+3W	1.39+0.19W
42	5-2	6-9		83+3W	91+3W	98+3W	106+3W	1.54+0.19W
45	5-5	7-3			103+3W	111+3W	119+3W	1.71+0.20W
48	5-8	7-6			108+3W	116+3W	124+3W	1.82+0.21W
51	5-11	8-0				121+3W	130+3W	2.00+0.21W
54	6-2	8-6				127+3W	136+3W	2.18+0.22W

"L" HEADWALLS

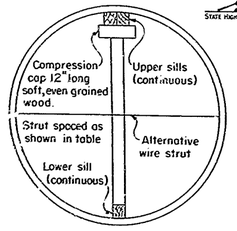
PIPE CULVERT HEADWALLS

Note: Compression caps and sills to be same dimension timber as struts. Timber for struts and sills shall be Douglas Fir common.

J. A. Legarra
ENGINEER OF DESIGN

APPROVED July 10, 1957

STATE HIGHWAY ENGINEER — Civil Engineer License No. 2004



STRUT DETAILS

SPACING IN FEET OF TIMBER STRUTS FOR CORR METAL AND FIELD ASSEMBLED PLATE PIPE

PIPE DIA.	STRUT SIZE	HEIGHT OF FILL IN FEET 0-20	30	40	50	60	70	80	100
48"	4 x 4		5.0	3.5					
	4 x 6		6.0	5.0	4.0	3.5	3.0		
	6 x 6				6.0	5.0	4.5	4.0	3.5
	6 x 8							6.0	5.0
60	4 x 4	6.0	4.0	3.0					
	4 x 6		6.0	4.5	3.5	3.0			
	6 x 6				5.5	4.5	4.0	3.5	3.0
	6 x 8						5.5	4.5	4.0
72	4 x 4	5.0	3.0						
	4 x 6	6.0	5.0	3.5	3.0				
	6 x 6			6.0	4.5	4.0	3.5	3.0	3.0
	6 x 8					5.0	4.5	4.0	3.5
84	6 x 6	6.0	6.0	5.0	4.0	3.5	3.0		
	6 x 8				5.0	4.5	4.0	3.5	3.0
	8 x 8							4.5	3.5
96	6 x 6	6.0	5.5	4.5	3.5	3.0			
	6 x 8			5.5	4.5	4.0	3.5	3.0	
	8 x 8						4.5	4.0	3.0
108	6 x 6	6.0	5.0	3.5	3.0				
	6 x 8		6.0	5.0	4.0	3.5	3.0		
	8 x 8					4.5	4.0	3.5	
120	6 x 6	6.0	4.0	3.0					
	6 x 8	6.0	5.5	4.0	3.5	3.0			
	8 x 8				5.0	4.0	3.5	3.0	
132	6 x 6	5.0	3.5						
	6 x 8	6.0	4.5	3.5	3.0				
	8 x 8			5.5	4.5	4.0	3.5	3.0	
144	6 x 6	4.5	3.0						
	6 x 8	5.5	4.0	3.0					
	8 x 8			5.0	4.0	3.5	3.0		
156	6 x 8	4.5	3.0						
	8 x 8		6.0	4.5	3.5	3.0			
168	6 x 8	3.5							
	8 x 8	6.0	5.0	4.0	3.0				
180	6 x 8	3.0							
	8 x 8	6.0	4.5	3.5					

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PIPE CULVERTS AND HEADWALLS

61-5V13C11

Rev. 11-22-57
Round to inside of pipe

A-69

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 500a536

76

B.P.R. DIV. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF			77	204

To accompany plans dated August 15, 1960

DISTRICT	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB,SLO	2	L,SM Tra,F	77	137

77

APPROVAL RECOMMENDED

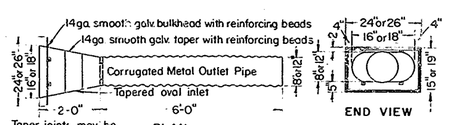
Engineer of Design
Civil Engineer License No. 5630

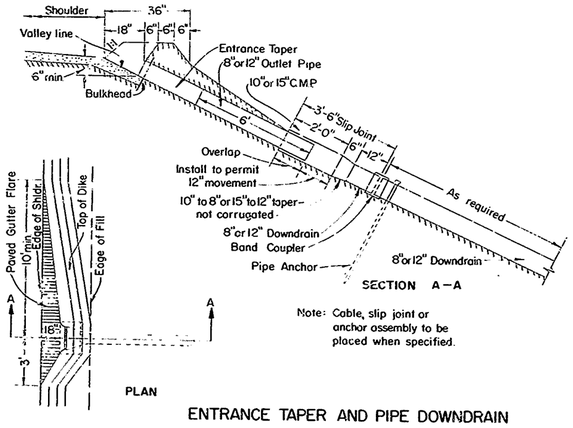
Approved November 19, 1959

J. W. Vickrey
State Highway Engineer
Civil Engineer License No. 3098

BY:
Deputy State Highway Engineer
Civil Engineer License No. 5345

ENTRANCE TAPER

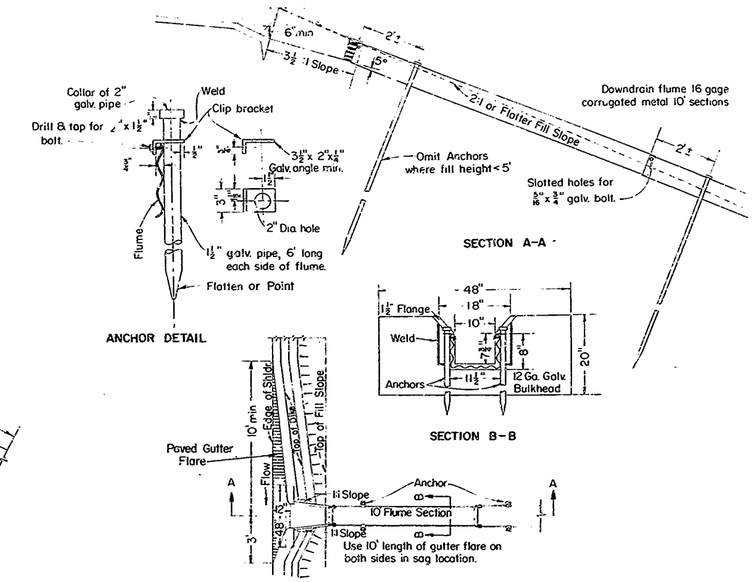




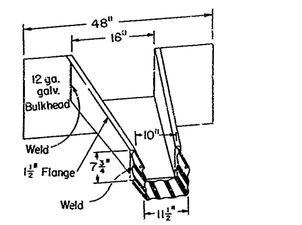
Note: Cable, slip joint or anchor assembly to be placed when specified.

ENTRANCE TAPER AND PIPE DOWNDRAIN

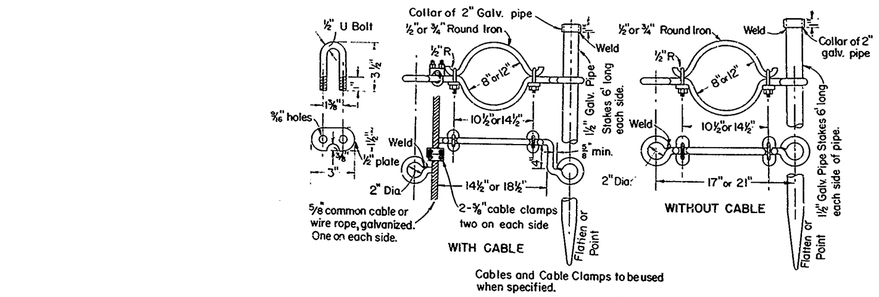
Use 10' length of gutter flare on both sides in sag location.



TAPERED INLET AND FLUME DOWNDRAIN

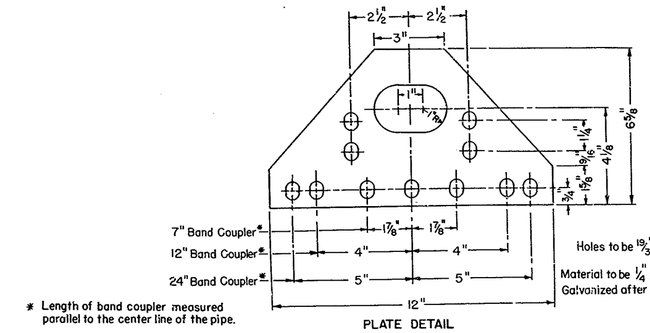


TAPERED INLET



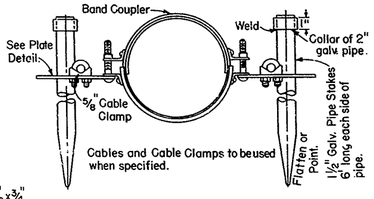
Cables and Cable Clamps to be used when specified.

ANCHOR ASSEMBLY ALTERNATIVE A



Holes to be 19/32"x¾".

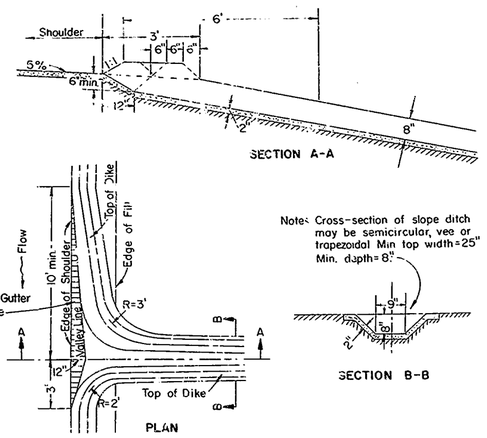
Material to be ¼" plate Galvanized after fabrication.



Cables and Cable Clamps to be used when specified.

ANCHOR ASSEMBLY ALTERNATIVE B

For payment purposes; an Anchor Assembly shall include two Pipe Stakes. All Pipe Stakes to be galvanized after fabrication.



ASPHALT CONCRETE SPILLWAY

to be used on fill slopes flatter than 2:1 Use 10' length of gutter on both sides in a sag location.

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

61-5V13C11 OVERSIDE DRAINS A70-1

F.H.A. DIV. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			78	204

To accompany plans dated *August 15, 1960*

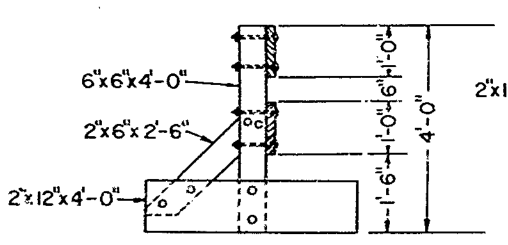
DISTRICT	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB,SLO	2	L,SMra,F	78	137

78

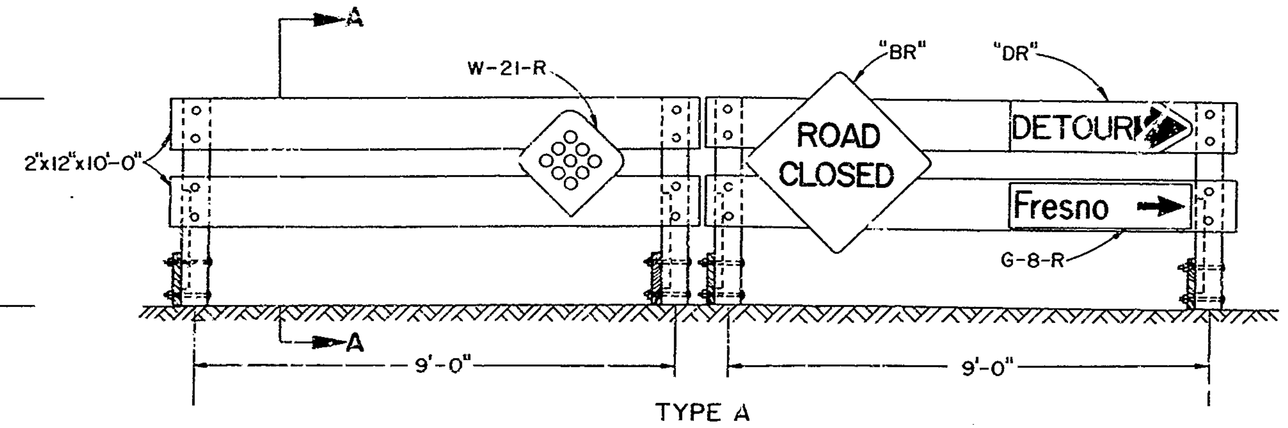
Approval Recommended *[signature]* Engineer of Design

Approved *January 26, 1959*

[signature] State Highway Engineer Civil Engr. License No. 2084

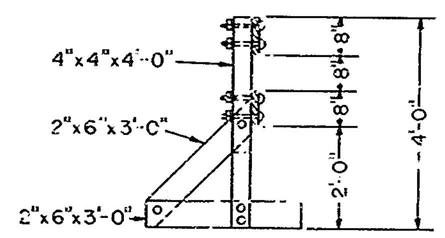


SECTION A-A

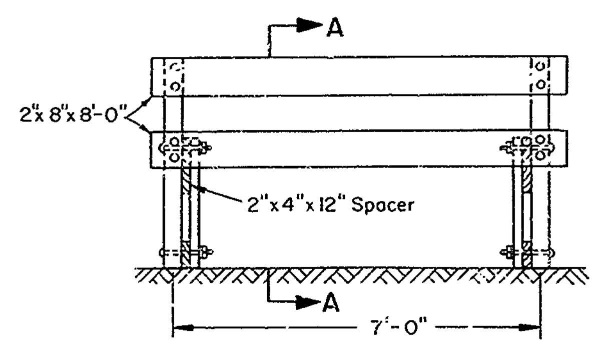


NOTE: Signs to be furnished by State
All timber to be S4S
Use 1/2" Carriage Bolts with cut washers and nuts.

TYPE A
TIMBER BARRICADES
10' SECTIONS
SCALE 1" = 2'

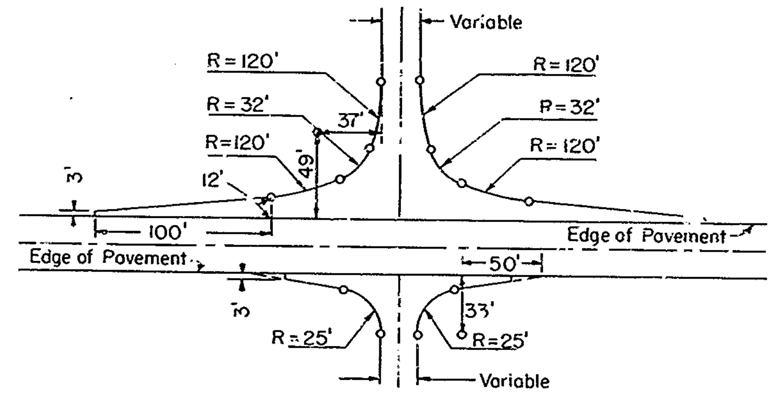


SECTION A-A

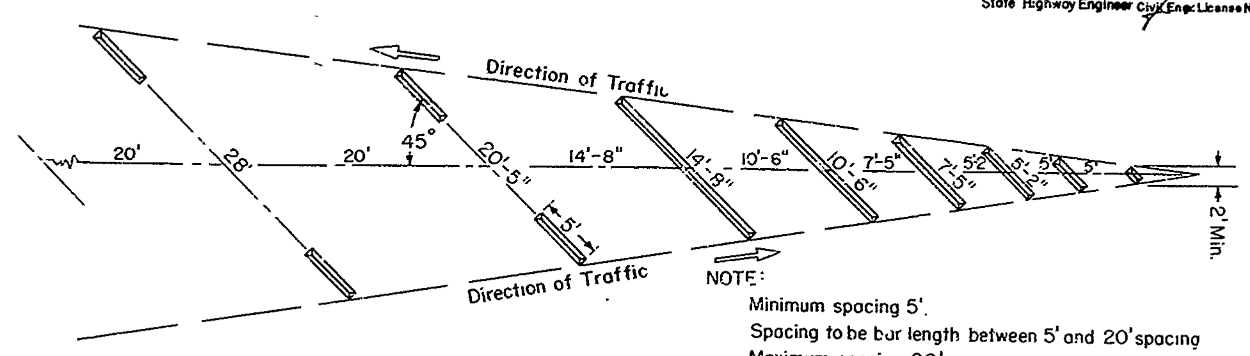


TYPE B
TIMBER BARRICADE
8' SECTION
SCALE 1" = 2'

PUBLIC ROAD INTERSECTION

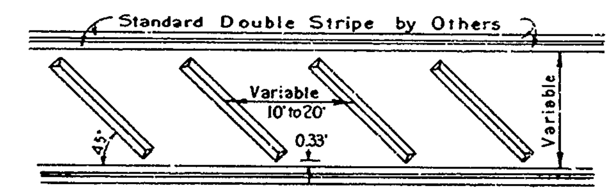


PRIVATE ROAD INTERSECTION

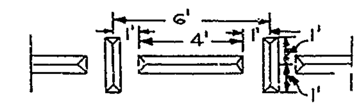


NOTE:
Minimum spacing 5'.
Spacing to be bar length between 5' and 20' spacing
Maximum spacing 20'
When length is 15' or more a 5' bar shall be used at each end

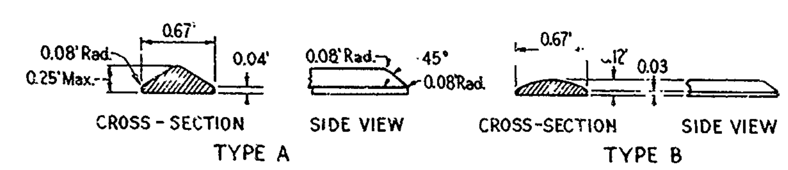
TRANSITION 2 TO 4 LANE



DIAGONAL RAISED BARS



T-TRAFFIC BARS



RAISED TRAFFIC BARS

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

61-5V13C11

TIMBER BARRICADES
AND RAISED TRAFFIC BARS
A73 REV.

78

DIST.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			79	204

To accompany plans dated August 15, 1960

DISTRICT	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB	SLO	2 SM 12.F	79	137

APPROVAL RECOMMENDED

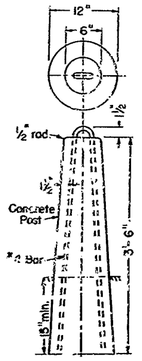
ENGINEER OF DESIGN — CIVIL ENGINEER LICENSE NO. 5630

TRAFFIC ENGINEER — CIVIL ENGINEER LICENSE NO. 21429

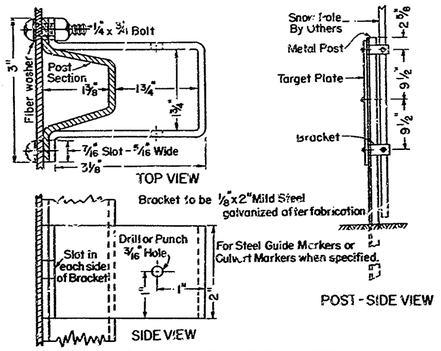
APPROVED December 16, 1959

STATE HIGHWAY ENGINEER — CIVIL ENGINEER LICENSE NO. 5945

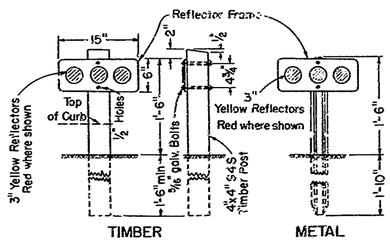
79



BARRIER POST

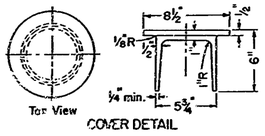


SNOW POLE BRACKET

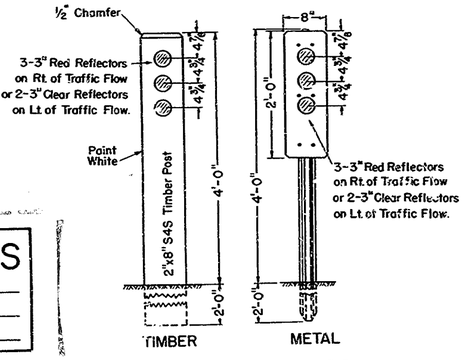


HORIZONTAL REFLECTOR MARKERS W61R

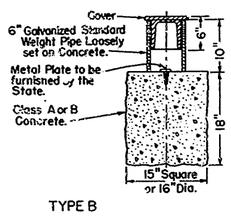
Use type specified or as shown on plan summary.



COVER DETAIL

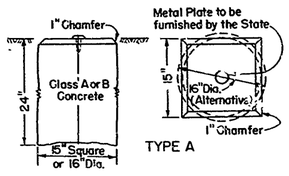


CLEARANCE MARKERS



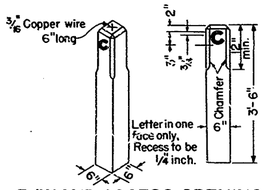
TYPE B

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

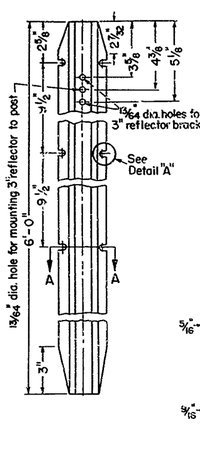


TYPE A

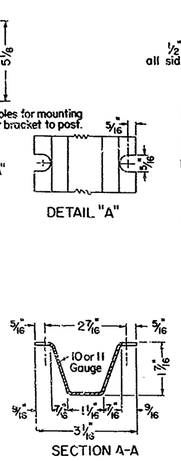
SURVEY MONUMENTS



R/W AND ACCESS OPENING MONUMENTS

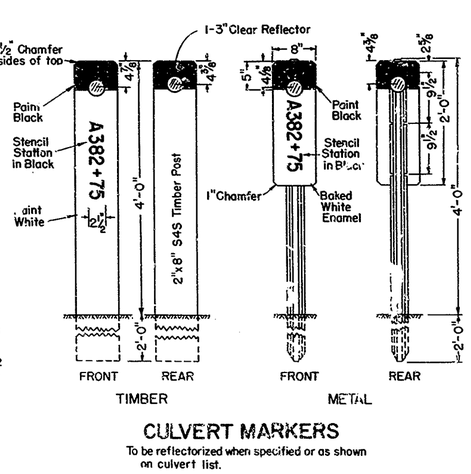


METAL MARKER POST



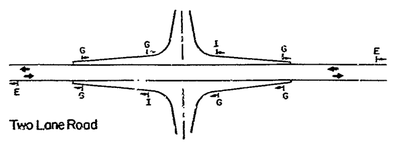
SECTION A-A

DETAIL "A"

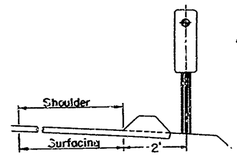


CULVERT MARKERS

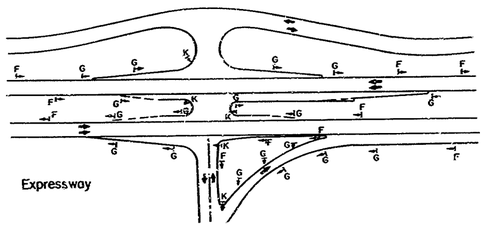
To be reflectorized when specified or as shown on culvert list.



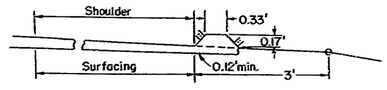
DELINEATION OF ROAD INTERSECTIONS



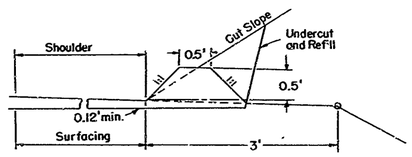
GUIDE MARKER AT DIKE



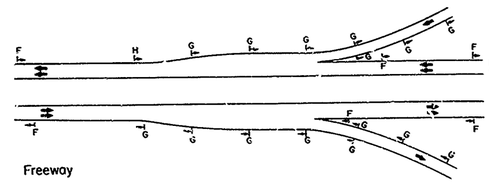
DELINEATION OF TRAFFIC ISLANDS



0.17' DIKE



0.5' DIKE

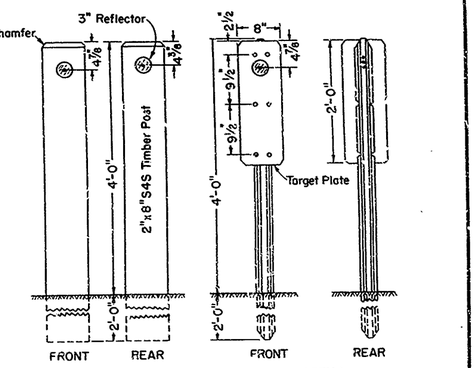


Single 3" Clear Reflectors continuously on right of through roadways and on outside of curves 200' spacings on tangent sections and standard spacing on curves as directed by the Engineer. – Type F

Double 3" Yellow Reflectors on right of acceleration and deceleration lanes and tangent ramp sections at 100' spacings and on outside of ramp curves at standard spacing as directed by the Engineer. – Type G

Triple 3" Yellow Reflectors at end of acceleration lane – Type H

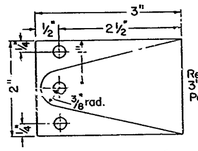
DELINEATION OF RAMPS



GUIDE MARKERS

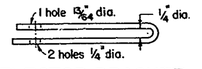
Use type specified or as shown on plan summary

GUIDE MARKERS			
	REFLECTORS		
Type	Color	Front	Back
A		None	None
E	Clear	1-3"	1-3"
F	Clear	1-3"	None
G	Yellow	2-3"	None
H	Yellow	3-3"	None
I	Yellow	2-3"	1-3"
Horizontal Reflector Markers W61R			
J	Red	3-3"	None
K	Yellow	3-3"	None
Clearance Markers			
L	Red	3-3"	None
M	Clear	2-3"	None



Reflector bracket used to mount 3" reflector to back of Guide Marker Post on curves.

Material – Aluminum 0.1" thick (3003H14 Alloy)



REFLECTOR BRACKET

61-5V13C11

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

DIKES AND MARKERS A74-2

D.P.A. Civ. No.	STATE	FEDERAL PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
	CALIF.			80	709

To Accompany Plans Dated August 15, 1960

DISTRICT	COUNTY	ROUTE	SECTION	Sheet No.	Total Sheets
V	SB SLO	2	L.S.Mtce.F	80	137

APPROVAL RECOMMENDED

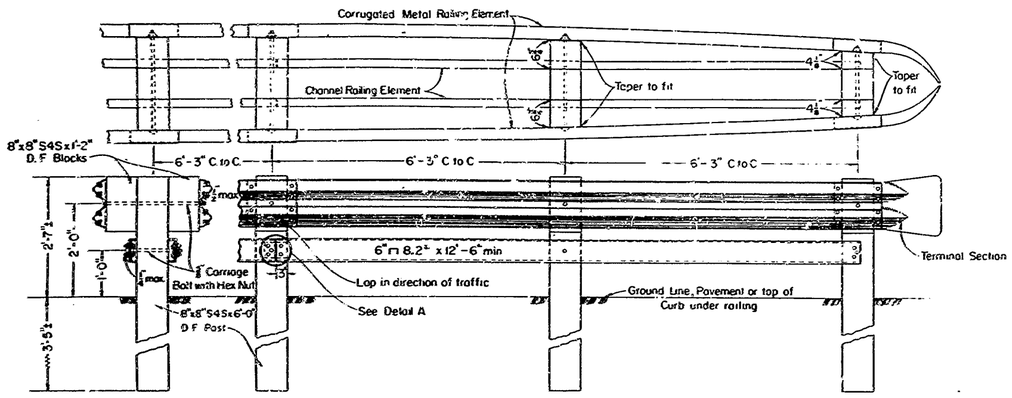
ENGINEER OF DESIGN — CIVIL ENGINEER LICENSE NO. 5630

TRAFFIC ENGINEER — CIVIL ENGINEER LICENSE NO. 5429

APPROVED December 16, 1959

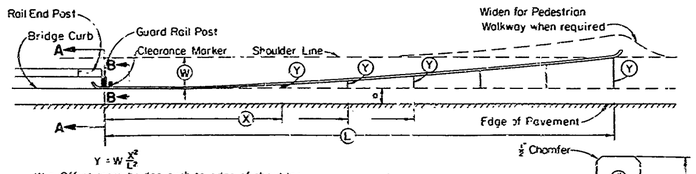
STATE HIGHWAY ENGINEER — CIVIL ENGINEER LICENSE NO.

80



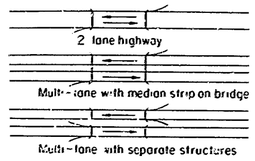
All nuts shown to be hex and placed on outside except rail splice bolts

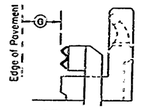
DOUBLE BLOCKED-OUT METAL BEAM BARRIER



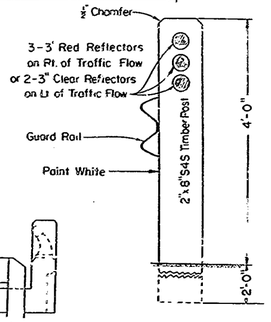
$Y = W\frac{X^2}{L^2}$

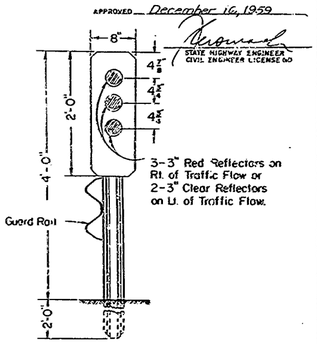
W = Offset from bridge curb to edge of shoulder
L = Length of guard rail
X = Distance from beginning of guard rail at bridge
Y = Offset at each post
Offset from edge of pavement = Y + a
(a) = Offset from pavement edge to top of bridge curb face





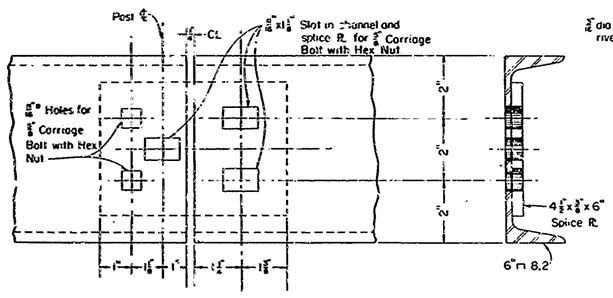
SECTION A-A
Offset mounting on curb at end of bridge



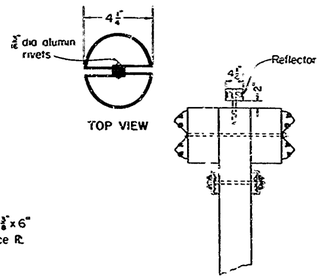


CLEARANCE MARKER SEC. B-B
Type L = With Red Reflectors
Type M = With Clear Reflectors

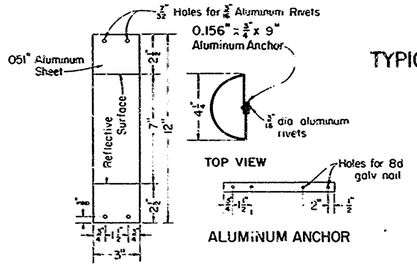
TYPICAL INSTALLATION OF METAL GUARD RAILING AT BRIDGES



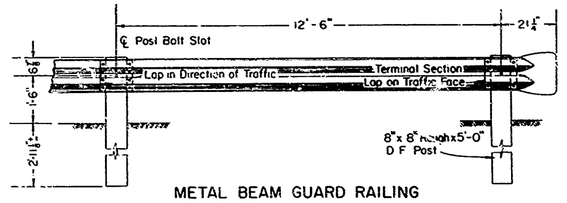
DETAIL "A" OF BOTTOM RAIL SPLICE
(Rail Splices to occur at Posts only)



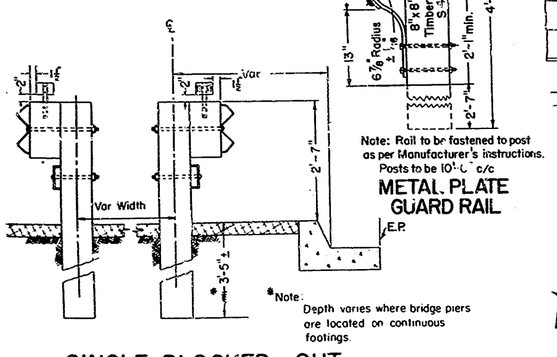
REFLECTOR ASSEMBLY
ON BLOCKED-OUT METAL BEAM BARRIER



REFLECTOR ASSEMBLY



METAL BEAM GUARD RAILING

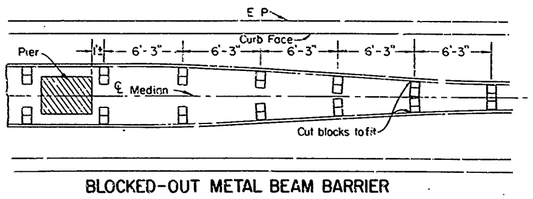


Note: Rail to be fastened to post as per Manufacturer's instructions. Posts to be 10'-6" c/c

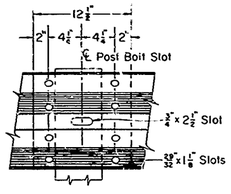
METAL PLATE GUARD RAIL

*Note: Depth varies where bridge piers are located on continuous footings.

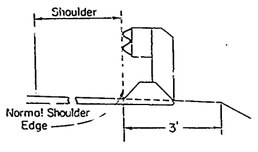
SINGLE BLOCKED-OUT METAL BEAM BARRIER



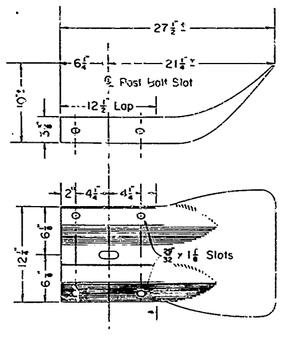
BLOCKED-OUT METAL BEAM BARRIER
PLAN AT BRIDGE PIERS



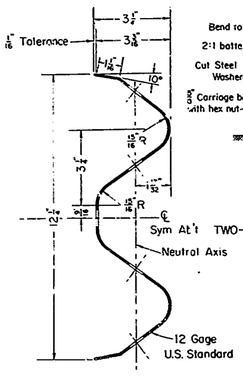
RAIL SPLICE
All nuts shall be hexagonal



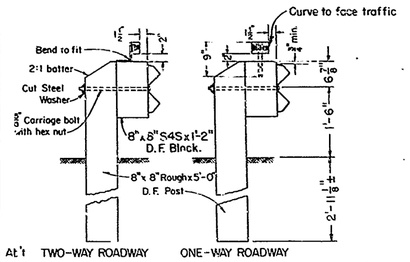
METAL GUARD RAILING AT DIKE
(For Dike Detail see Standard Plan A74)



TERMINAL SECTION



SECTION THRU RAIL ELEMENT



METAL BEAM 61-5V13C11
GUARD RAILING

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

GUARD RAILING & BARRIER RAILING A77-2

80

B.P.R. DOC.NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			81	274

To accompany plans dated August 15, 1960

DISTRICT	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB,SLO	2	L SMra;F	81	137

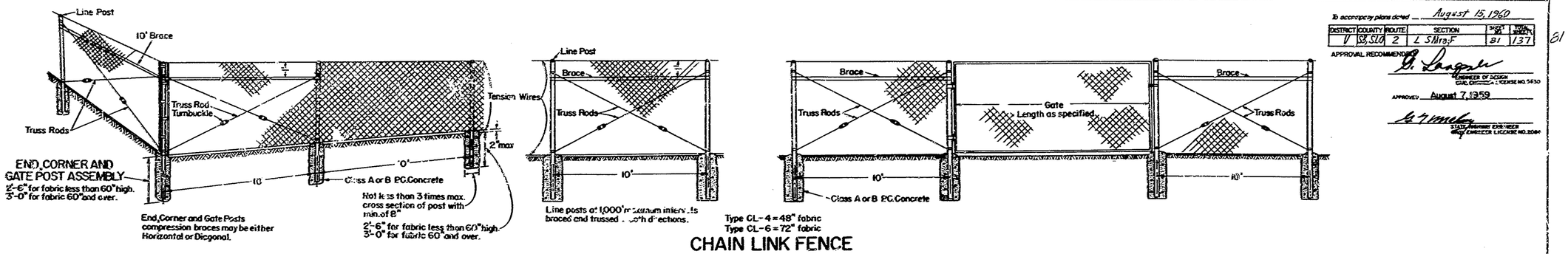
61

APPROVAL RECOMMENDED

ENGINEER OF DESIGN
CIVIL ENGINEER LICENSE NO. 5430

APPROVED August 7, 1959

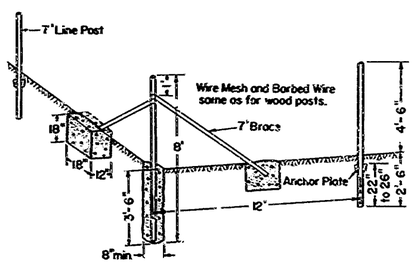
STATE HIGHWAY ENGINEER
CIVIL ENGINEER LICENSE NO. 20864



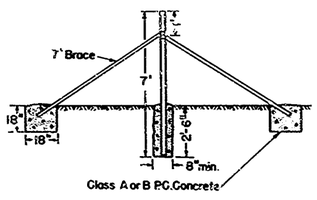
Type CL-4 = 48" fabric
Type CL-6 = 72" fabric

CHAIN LINK FENCE

FREEWAY OR PROPERTY

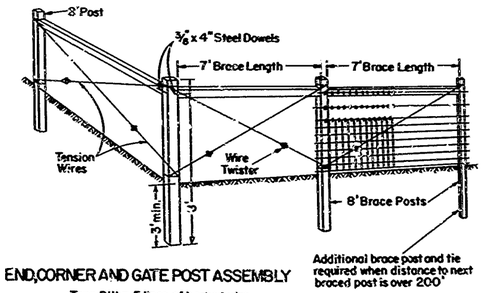


END, CORNER AND GATE POST ASSEMBLY



PULL POST ASSEMBLY
at 500' maximum intervals

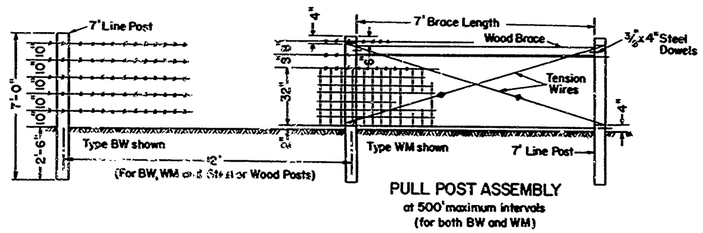
METAL POST INSTALLATION



END, CORNER AND GATE POST ASSEMBLY

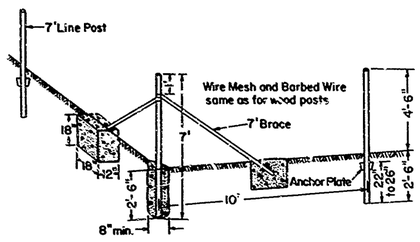
Type BW = 5 lines of barbed wire.
Type WM = Wire mesh and 3 lines of barbed wire.

FREEWAY FENCE

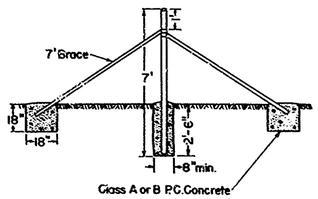


PULL POST ASSEMBLY
at 500' maximum intervals
(for both BW and WM)

WOOD POST INSTALLATION

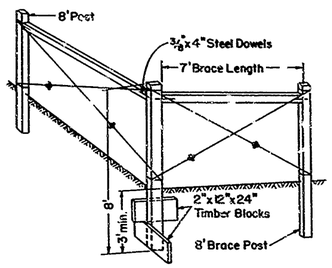


END, CORNER AND GATE POST ASSEMBLY



PULL POST ASSEMBLY
at 500' maximum intervals

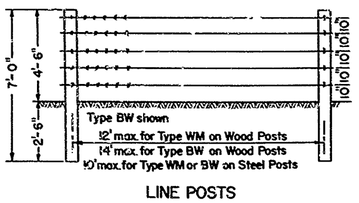
METAL POST INSTALLATION



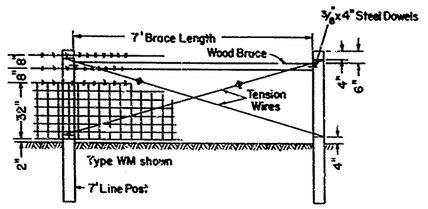
END, CORNER AND GATE POST ASSEMBLY

Type BW = 5 lines of barbed wire.
Type WM = Wire mesh and 3 lines of barbed wire.

PROPERTY FENCE

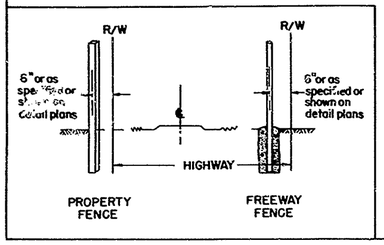


LINE POSTS



PULL POST ASSEMBLY
at 1,000' maximum intervals
(for both BW and WM)

WOOD POST INSTALLATION



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD FENCES

A78

D.P.R. DIV. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			82	204

To accompany Plans dated August 15, 1960

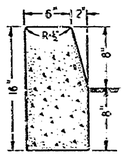
Note: Types B3, C3, D3 Superimposed on existing pavement

DISTRICT	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB, SLO	2	L, SM PM F	82	137

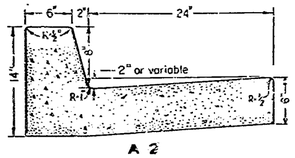
82

Approval Recommended G. Langsner
Engineer of Design
Civil Engineer License No. 5630

Approved March 3, 1960
State Highway Engineer
Civil Engineer License No. 2084

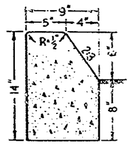


A1

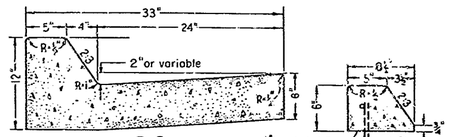


A2

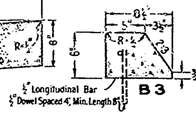
TYPE A



B1

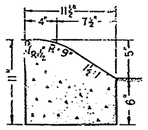


B2

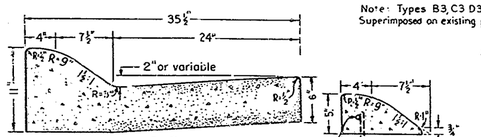


B3

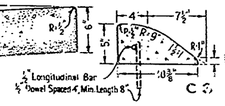
TYPE B



C1

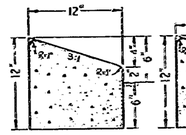


C2

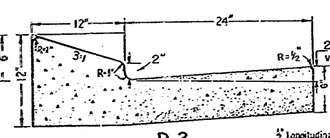


C3

TYPE C

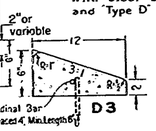


D1



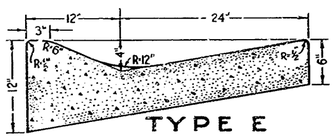
D2

Note: Curb faces to be scored transversely with steel brushes on "Type C" and "Type D"

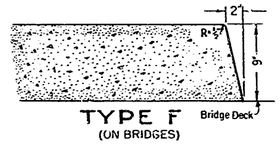


D3

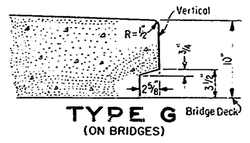
TYPE D



TYPE E



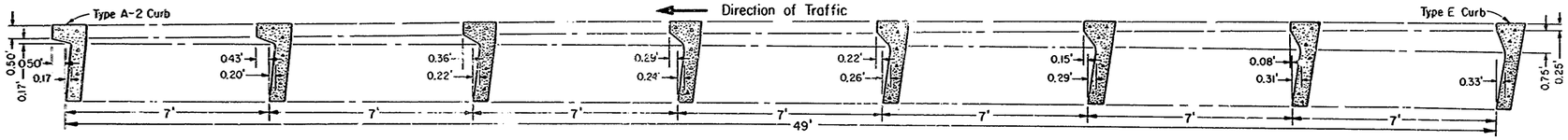
TYPE F (ON BRIDGES) Bridge Deck



TYPE G (ON BRIDGES) Bridge Deck

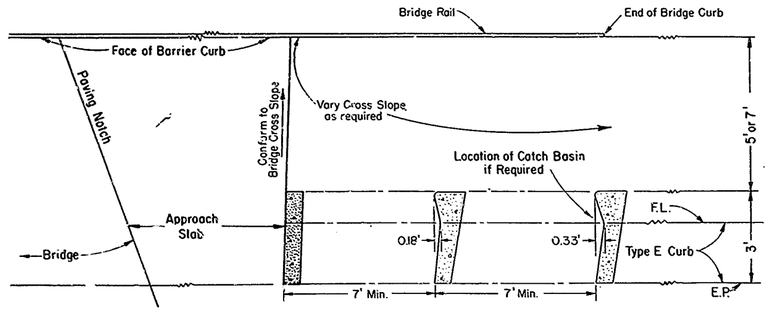
CURB QUANTITIES

Type	C.Y. Per Lin. Ft.	Type	C.Y. Per Lin. Ft.
A1	0.03084	C2	0.06457
A2	0.06379	C3	0.00965
B1	0.02930	D1	0.03073
B2	0.06171	D2	0.06782
B3	0.01074	D3	0.01223
C1	0.02752	E	0.06661

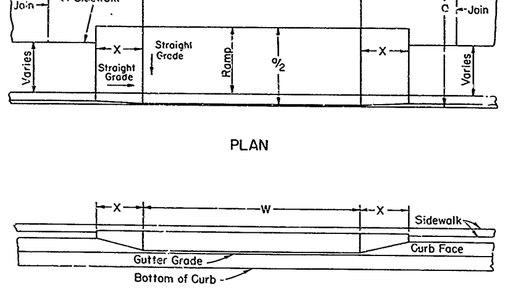


STANDARD CURB TRANSITION - TYPE E TO TYPE A-2

Note: Straight Line Transition in Flow Line and Top of Curb unless otherwise ordered by Engineer.

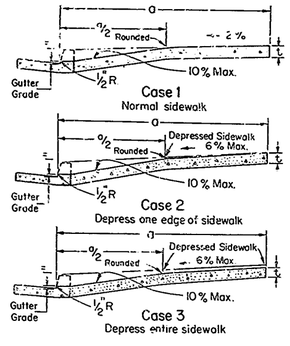


FLOW LINE TRANSITION - TYPE E AT STRUCTURE



PLAN

ELEVATION

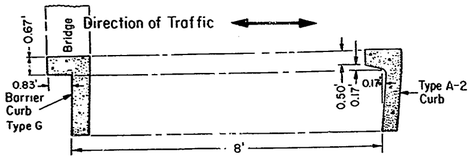


SECTIONS

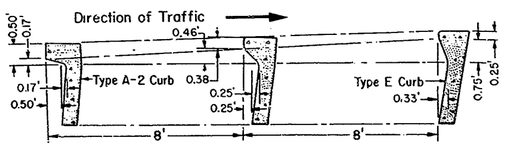
NOTES:

1. - Case 1 normally applies
2. - Use Case 2 when ramp slopes would exceed 10% in Case 1.
3. - Use Case 3 when sidewalk slope would exceed 6% in Case 2. Longitudinal slope of warped area adjacent to driveway shall not vary more than 6% from the longitudinal grade line of the sidewalk.
4. - X=3'-0" except for curb heights over 10" where 4:1 slopes shall be used on curb slope.
5. - Sidewalk and ramp thickness "t" at driveway shall be 4" for residential and 6" for commercial.
6. - Difference in slope of the driveway ramp and the slope of a line between the gutter and a point on the roadway 5 feet from the gutter line shall not exceed 15%. Reduce driveway ramp slope, not gutter slope, where required.

DRIVEWAYS



CURB TRANSITION - TYPE A-2 TO TYPE G



CURB TRANSITION - TYPE A-2 TO TYPE E (See Note)

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD CURBS AND DRIVEWAYS

92

D.P.A. DIV. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			83	204

Electrical Plans, Sheet 1

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB	2	L	83	137

83

August 15, 1960

120/240volt service point. Photo-electric control type III to be mounted on service pole.

ILLUMINATED SIGN (1)

120 volt service point. Photo-electric control type I to be mounted on Std. B-2

EXISTING P.G.&E. LINE

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

LEGEND

- No. 3½ pull box.
- 1½" dia. conduit.
- Electrolier. Mast arm length as shown.
- Illuminated Sign.
- Soffit Light. (Donovan Road O.C.)

61-5V13C11

NOTE: For service, see Sheet No. 5

NOTE: THIS PLAN ACCURATE FOR LIGHTING ONLY

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J.E. Dryden	2/60		2/60		2/60

ELECTRICAL SYSTEMS
4 MILES SOUTH OF SANTA MARIA
TO HOURIHAN GRADE

SOUTH SANTA MARIA U.C. 5QN249

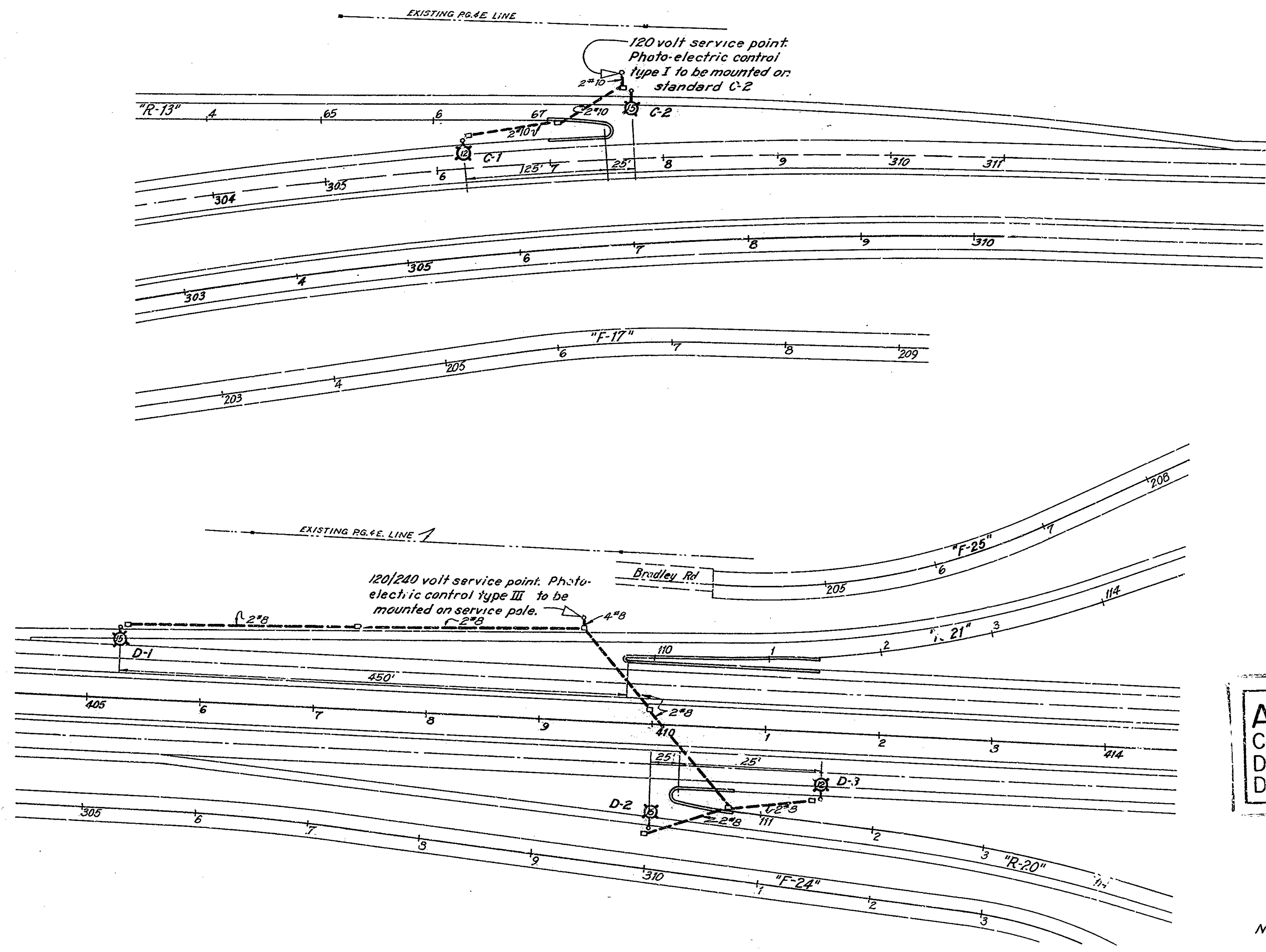
STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
CALIF.			84	204

Electrical Plans Sheet 2

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB	2	L	84	137

84

August 15, 1960



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

NOTE: For service, see Sheet No.5

61-5V13C11

ELECTRICAL SYSTEMS

FOUR MILES SOUTH OF SANTA MARIA TO HOURIHAN GRADE

NOTE: THIS PLAN ACCURATE FOR LIGHTING ONLY

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	[signature]	2/60	[signature]	2/60

SO.-SMra O.C. AND BETTERAVIA ROAD O.C.

5QV249

84

B.P.R. DIV. NO.	STATE	FEDERAL PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
	CALIF.			85	204

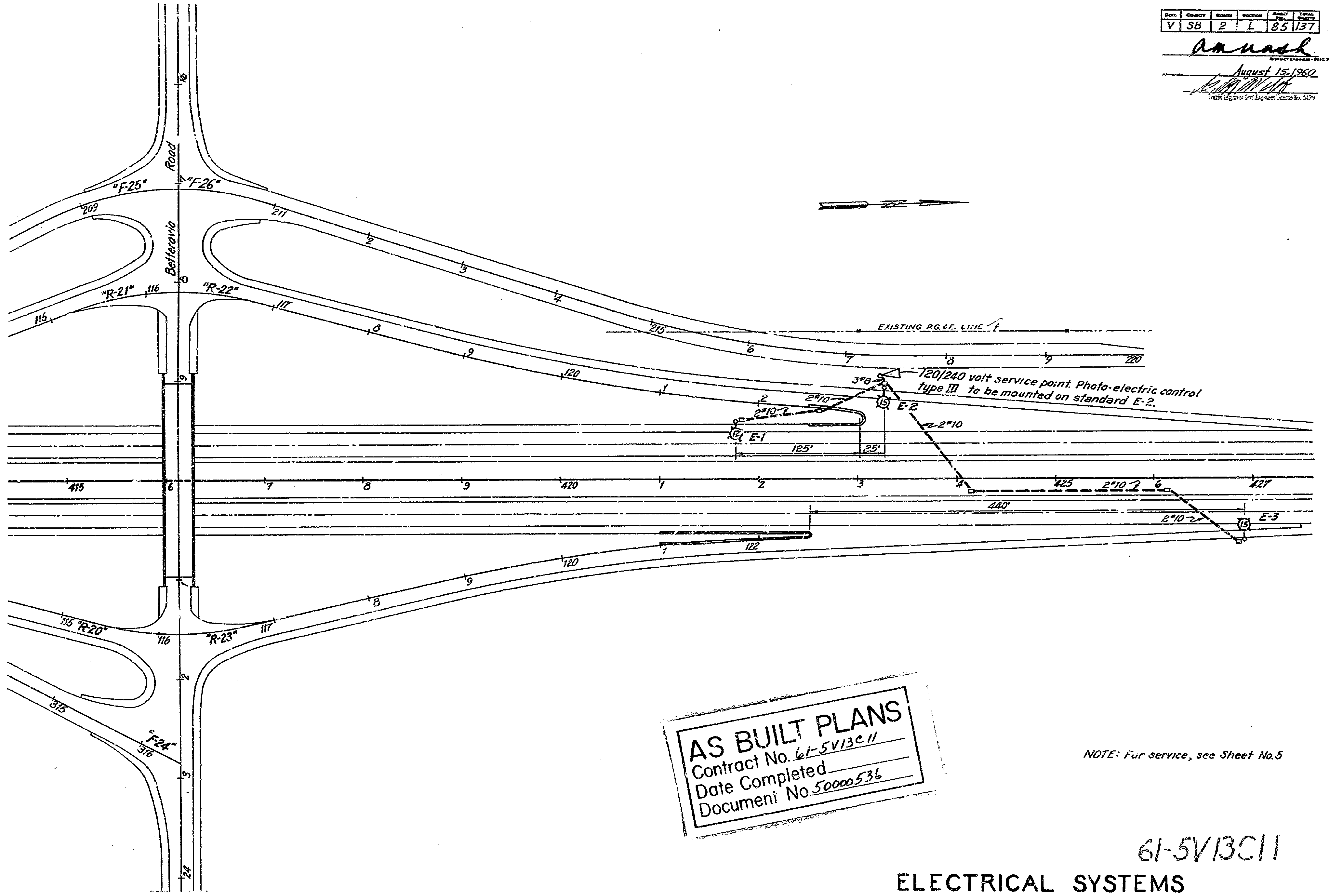
Electrical Plans Sheet No. 3

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
V	SB	2	L	85	137

85

DISTRICT ENGINEER - DIST. V

APPROVED August 15, 1960



NOTE: For service, see Sheet No. 5

61-5V13C11

ELECTRICAL SYSTEMS

FOUR MILES SOUTH OF SANTA MARIA TO HOURIHAN GRADE

NOTE: THIS PLAN ACCURATE FOR LIGHTING ONLY

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dayden	2/60	[illegible]	2/60	R. A. [illegible]	2/60

BETTERAVIA ROAD U.C.

5QV 249

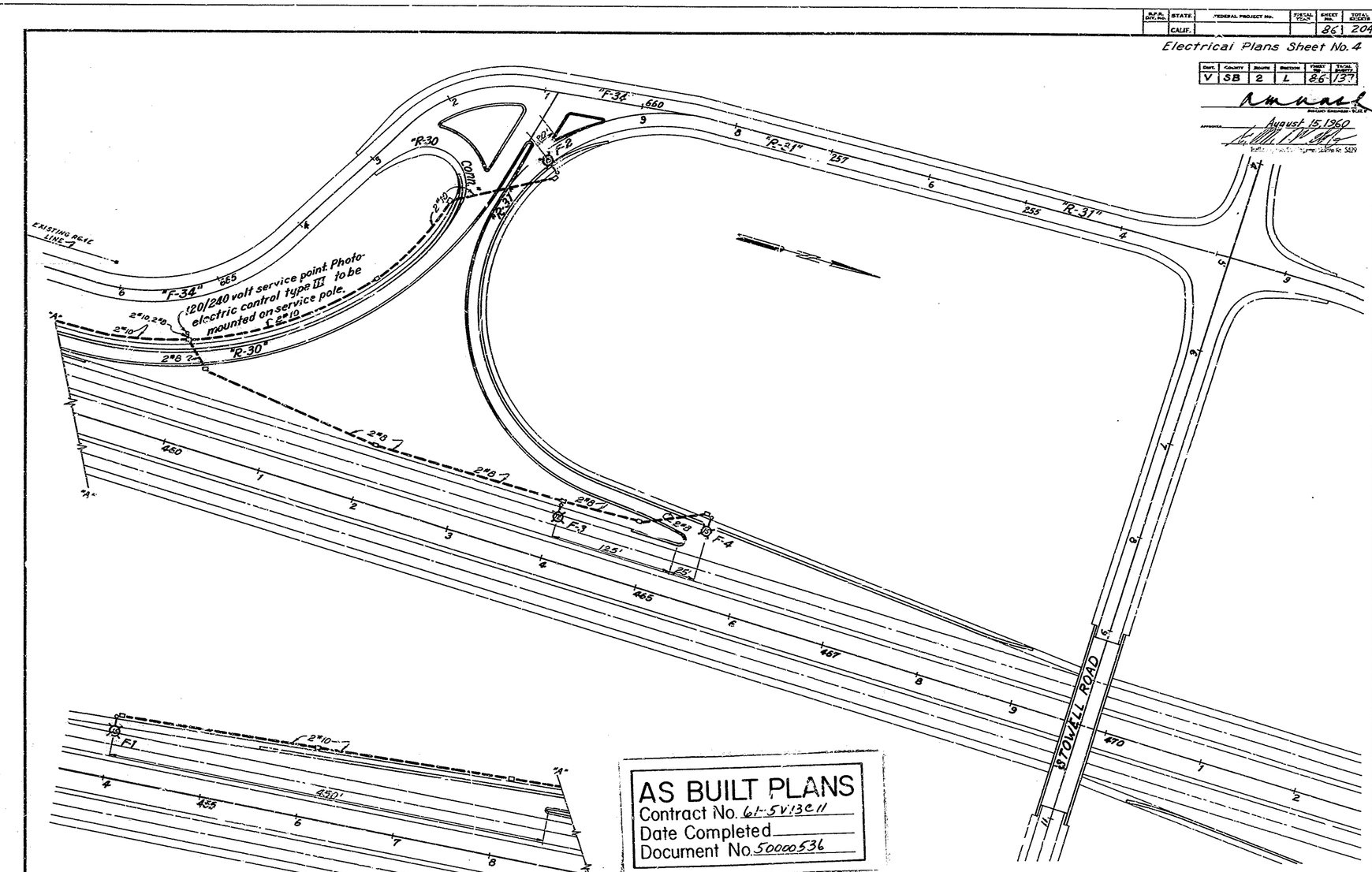
B.P.R. DIV. NO.	STATE	FEDERAL PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
	CALIF.			86	204

Electrical Plans Sheet No. 4

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
V	SB	2	L	86	137

86

August 15, 1960



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

NOTE: For service, see Sheet No. 5

NOTE: THIS PLAN ACCURATE FOR LIGHTING ONLY

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E Snyder	7/60		7/60		7/29

ELECTRICAL SYSTEMS

FOUR MILES SOUTH OF SANTA MARIA TO HOURIHAN GRADE

STOWELL ROAD O.C. 5QV 249

86

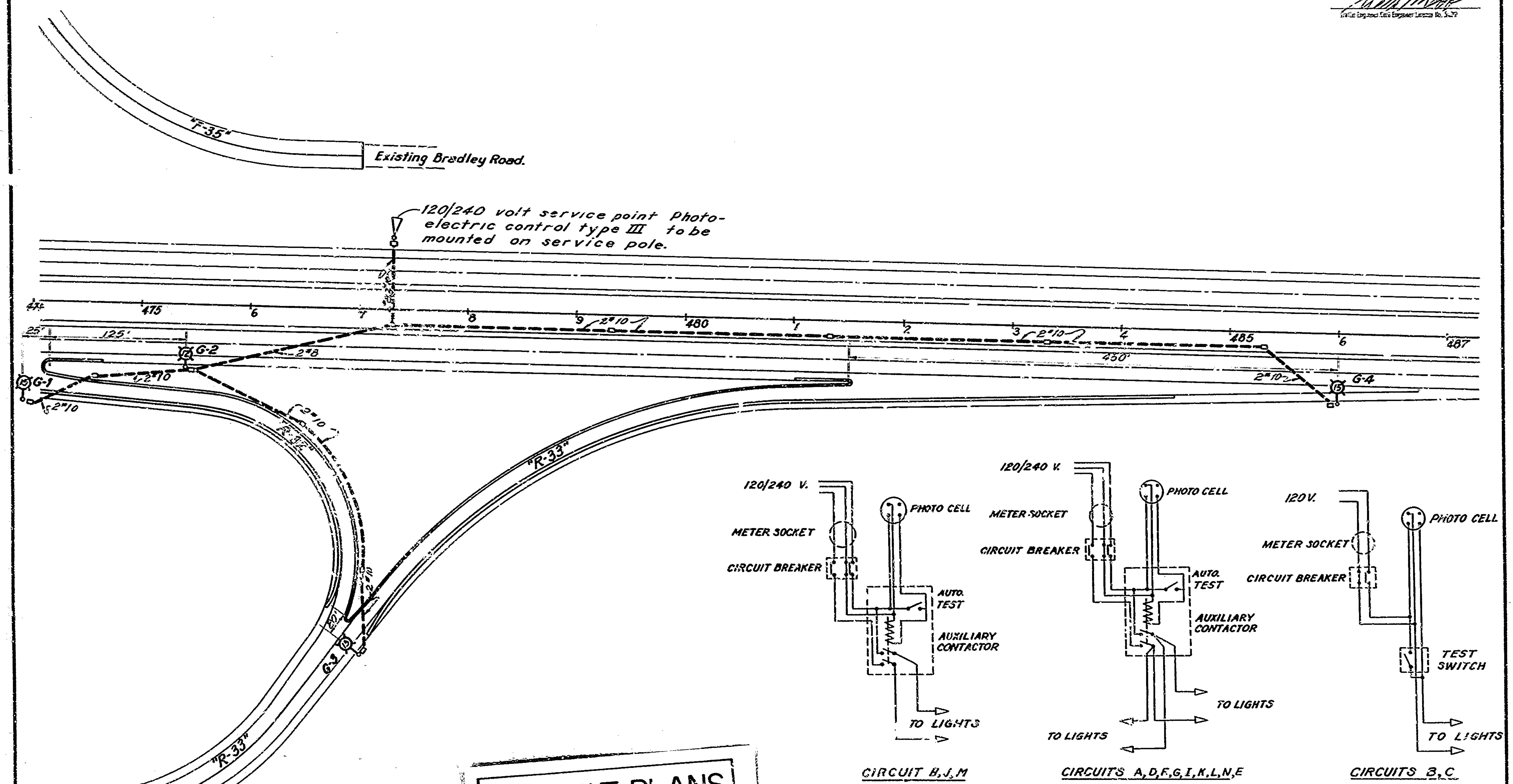
STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
CALIF.			87	204

Electrical Plans Sheet 15

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB	2	L,SMa	87	137

87

August 15, 1960



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

ELECTRICAL SYSTEMS

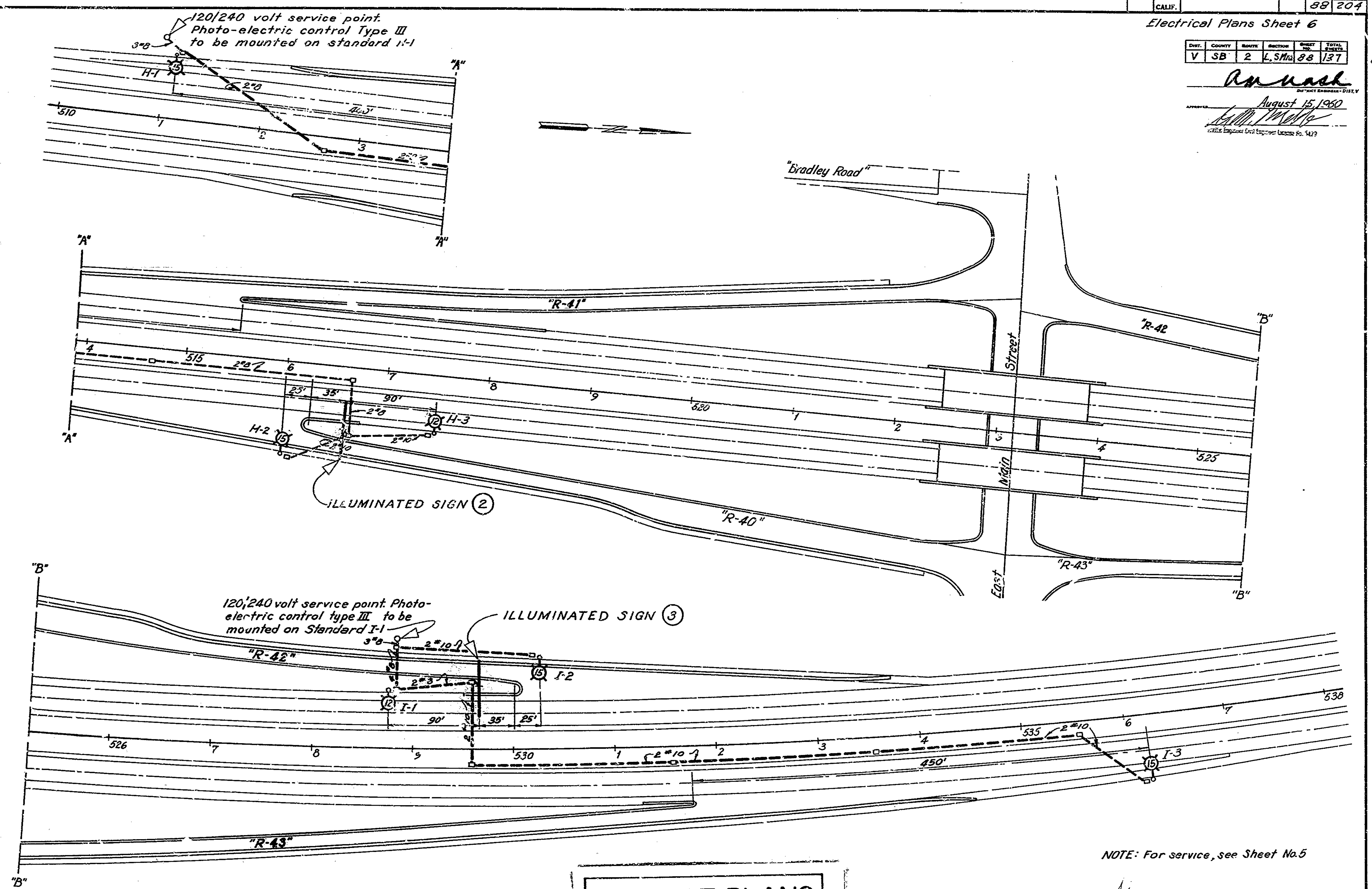
4 MILES SOUTH OF SANTA MARIA
TO HOURIHAN GRADE

STOWELL ROAD O.C.

NOTE: THIS PLAN ACCURATE FOR LIGHTING ONLY

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL	DATE
J.E. Dryden	2/60	[signature]	2/60	R.A. Lejonhud	2/60

87



Electrical Plans Sheet 6

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB	2	L.S.Ma.	88	137

August 15, 1960

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

ELECTRICAL SYSTEMS
4 MILES SOUTH OF SANTA MARIA
TO HOURIHAN GRADE

MAIN STREET U.C. 5QV249

NOTE: THIS PLAN ACCURATE FOR LIGHTING ONLY

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	[signature]	2/60	R. A. [signature]	2/60

B.P.R. DIV. NO.	STATE	FEDERAL PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
	CALIF.			89	209

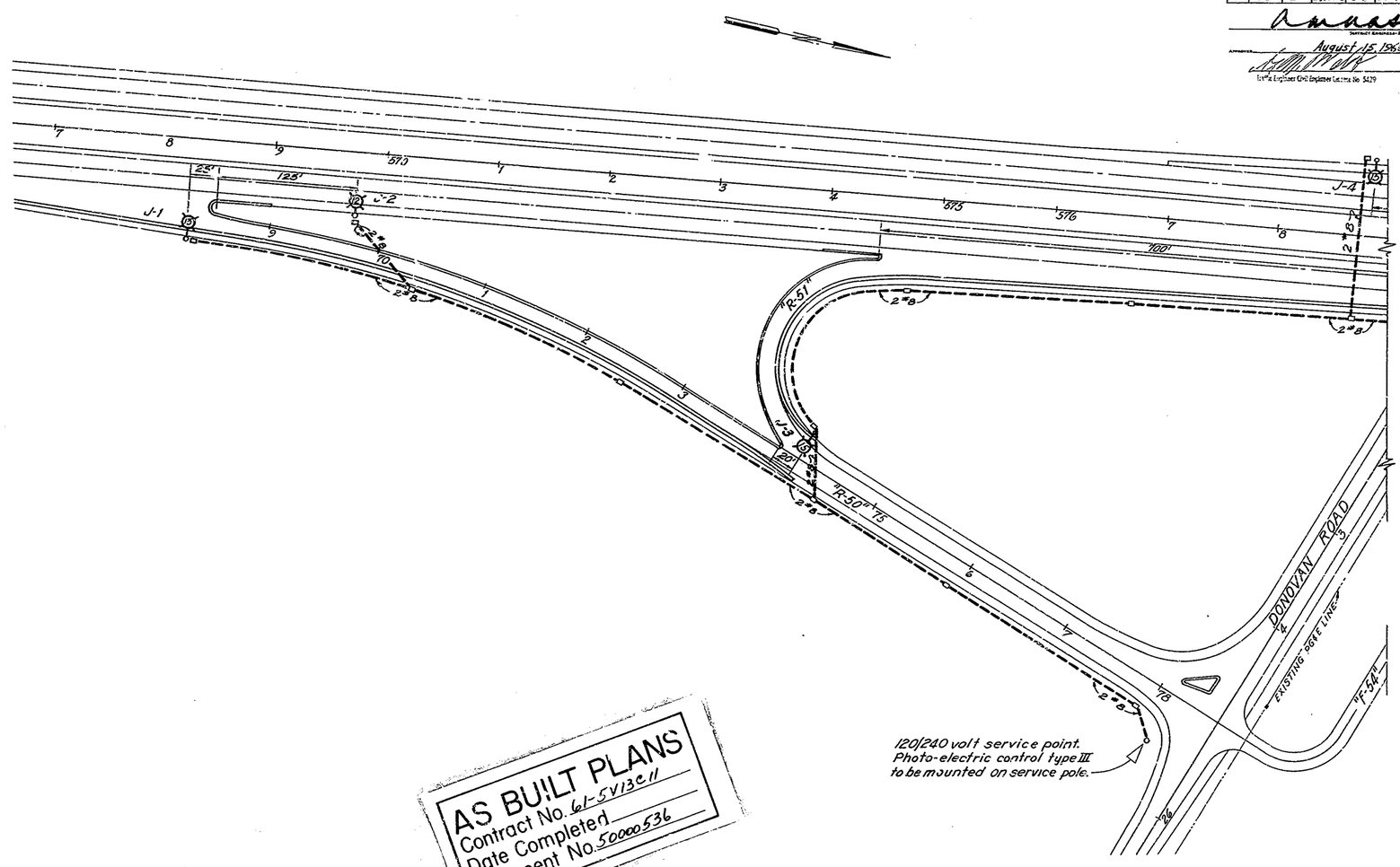
Electrical Plans, Sheet 7

DIST.	COUNTY	ROUTE	KM/POST	SHEET NO.	TOTAL SHEETS
V	SB	2	1.5/14.6	89	137

89

August 15, 1960

State Engineer Civil Engineer License No. 5429



NOTE: For service, see Sheet No. 5

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

89

NOTE: THIS PLAN ACCURATE FOR LIGHTING ONLY

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60		2/60		2/60

61-5V13C11

ELECTRICAL SYSTEMS

4 MILES SOUTH OF SANTA MARIA TO HOURIHAN GRADE

DONOVAN ROAD O.C.

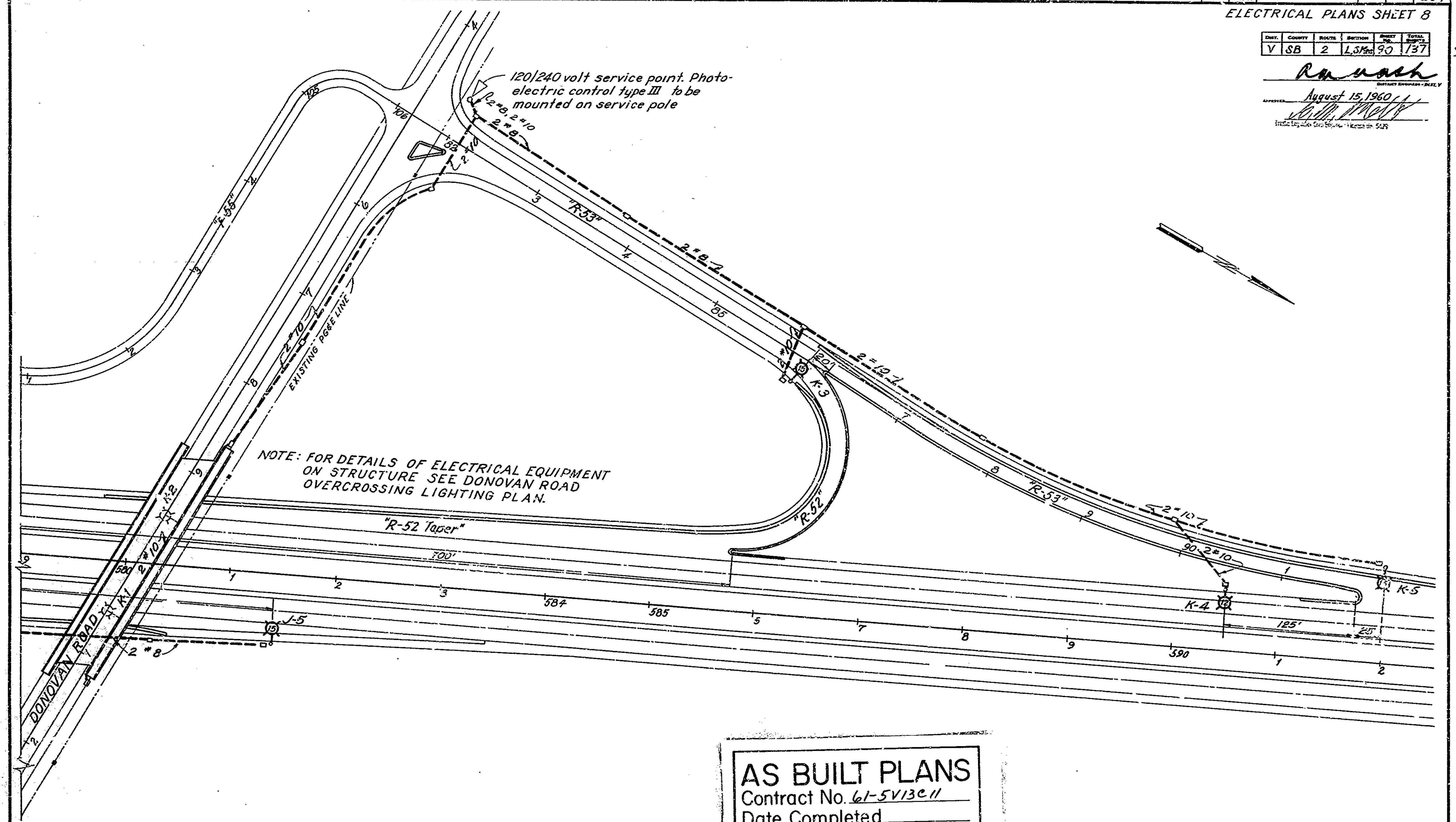
5 Qu 249

FED. RD. DIV. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			90	204

ELECTRICAL PLANS SHEET 8

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB	2	L,SMar	90	137

August 15, 1960



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

NOTE: For service, see Sheet No.5

61-5V13C11

ELECTRICAL SYSTEMS
4 MILES SOUTH OF SANTA MARIA TO HOURIHAN GRADE

NOTE: THIS PLAN ACCURATE FOR LIGHTING ONLY

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	[illegible]	2/60	[illegible]	2/60

DONOVAN ROAD O.C.

5QU249

90

R.F.D. DIST. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			91	204

ELECTRICAL PLANS SHEET 9

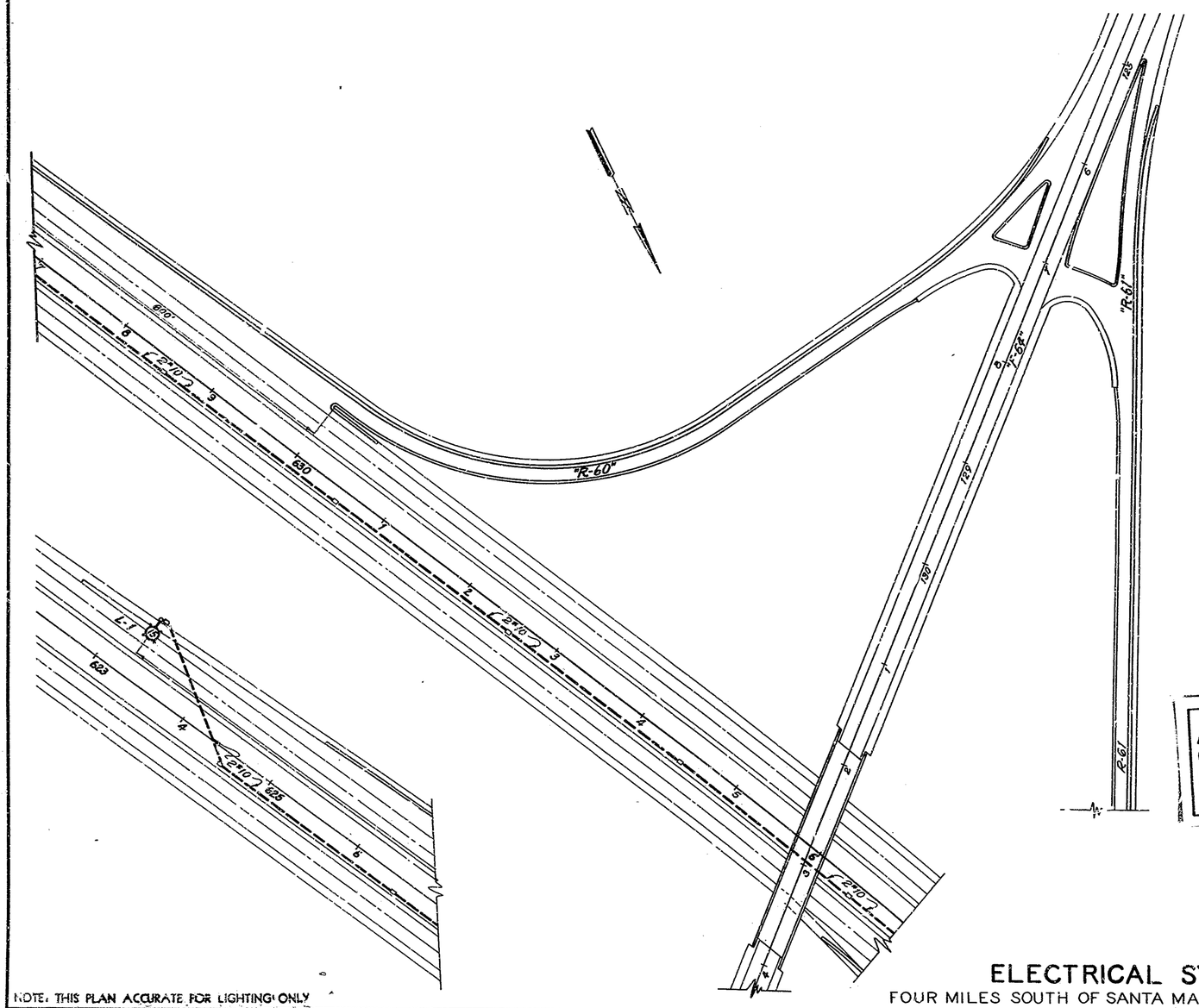
DIST.	COUNTY	ROUTE	SECTION	PHASE	TO SH. NO.
V	SB	2		91	137

91

A. M. Nash
DISTRICT ENGINEER, DIST. V

August 15, 1960

Traffic Engineer (or) Engineer License No. 5456



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

NOTE: For service, see Sheet No. 5

61-5V13C11

NOTE: THIS PLAN ACCURATE FOR LIGHTING ONLY

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Snyder	2/60		2/60		2/60

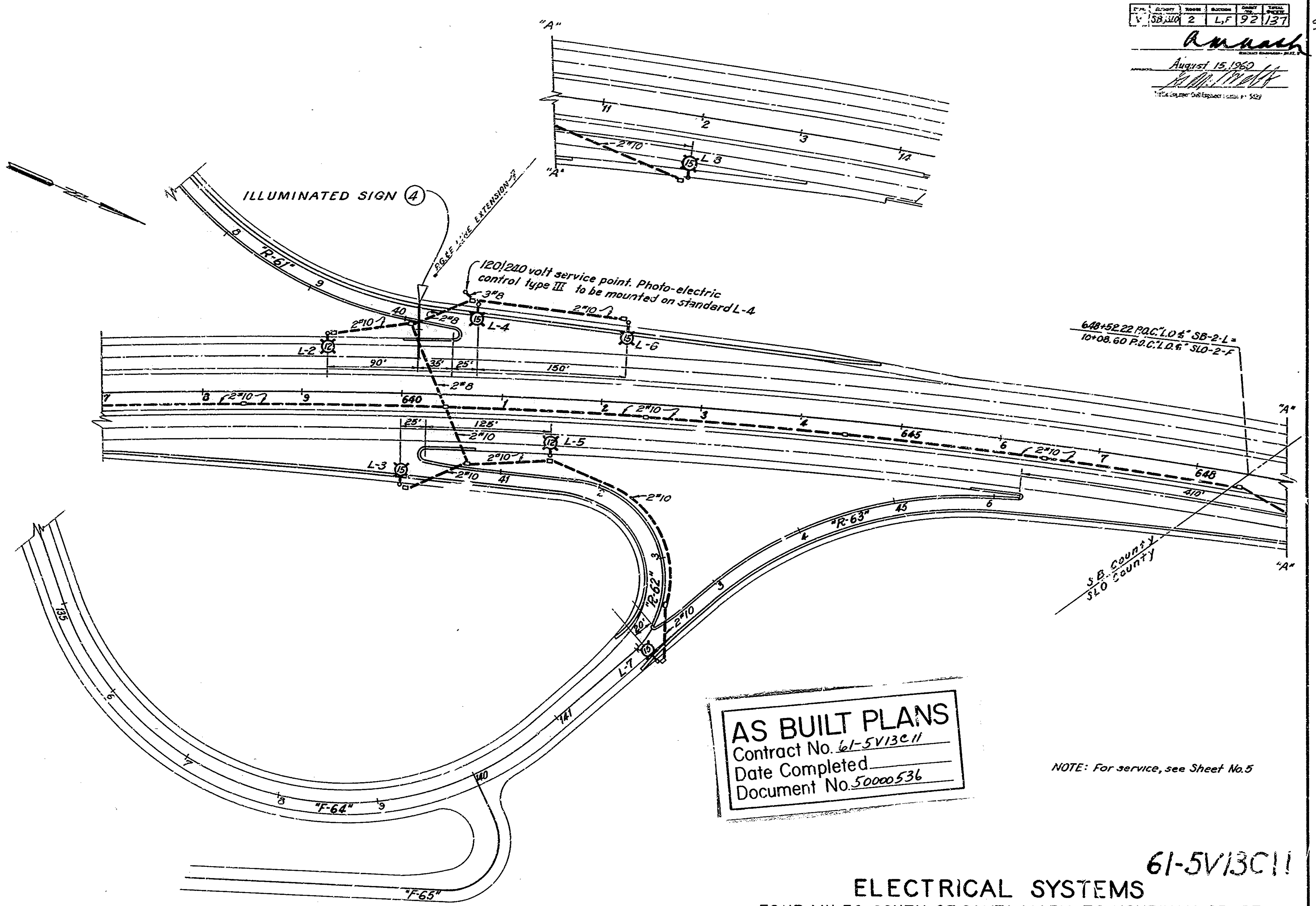
ELECTRICAL SYSTEMS

FOUR MILES SOUTH OF SANTA MARIA TO HOURIHAN GRADE

NORTH SANTA MARIA O.C. 50V249

91

9



August 15, 1960

AS BUILT PLANS

Contract No. 61-5V13C11

Date Completed

Document No. 50000536

NOTE: For service, see Sheet No. 5

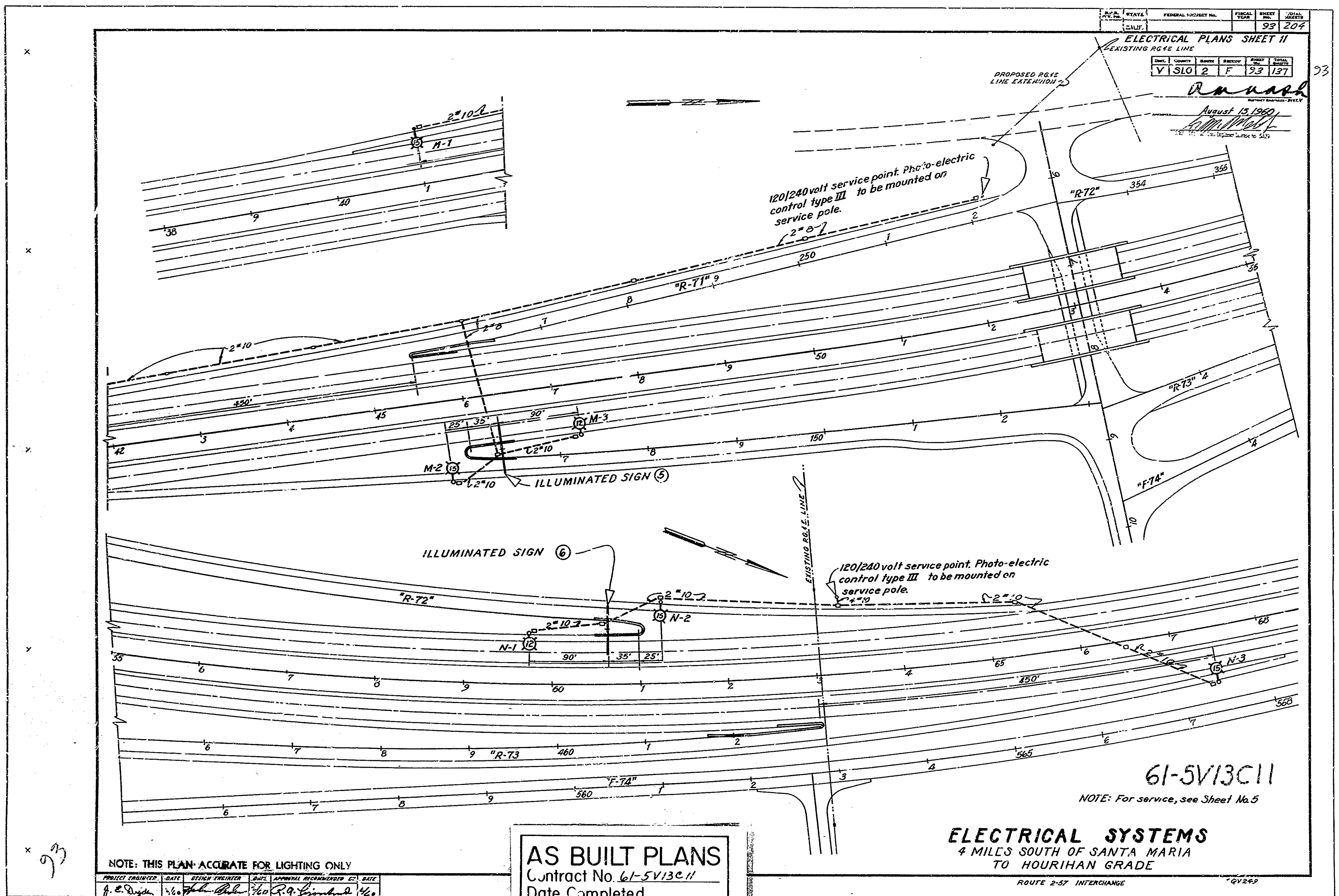
61-5V13C11

ELECTRICAL SYSTEMS

FOUR MILES SOUTH OF SANTA MARIA TO HOURIHAN GRADE

NOTE: THIS PLAN ACCURATE FOR LIGHTING ONLY

NORTH SANTA MARIA O.C. 5QV249



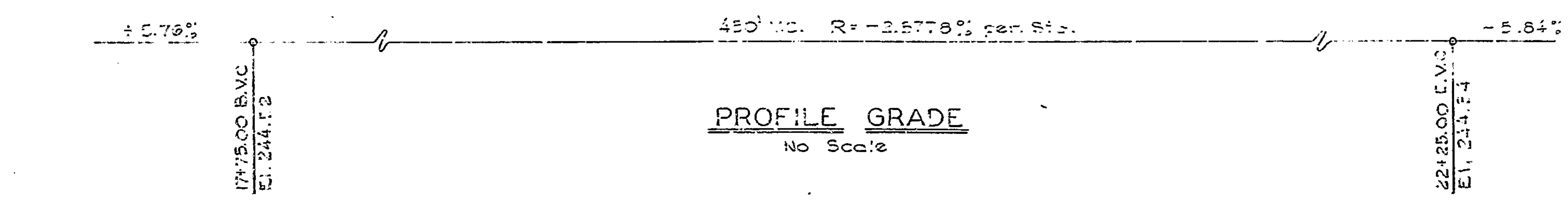
ELECTRICAL PLANS SHEET 11
V SLO 2 F 93 137
93 204
August 15, 1960
PROPOSED POLE LINE EXTENSION
EXISTING POLE LINE
120/240 volt service point. Photo-electric control type III to be mounted on service pole.
"R-71"
"R-72"
"R-73"
"F-74"
M-1
M-2
M-3
ILLUMINATED SIGN ⑤
ILLUMINATED SIGN ⑥
N-1
N-2
N-3
EXISTING POLE LINE
120/240 volt service point. Photo-electric control type III to be mounted on service pole.
61-5V13C11
NOTE: For service, see Sheet No. 5
ELECTRICAL SYSTEMS
4 MILES SOUTH OF SANTA MARIA
TO HOURIHAN GRADE
ROUTE 2-57 INTERCHANGE
NOTE: THIS PLAN ACCURATE FOR LIGHTING ONLY

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

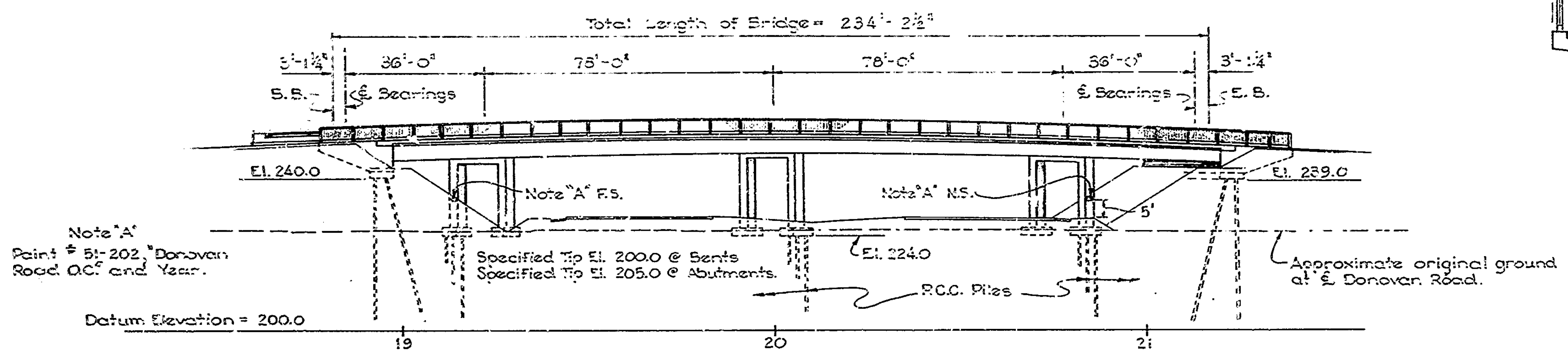
FED. ROAD DIV. NO.	STATE	F. A. PROJECT NO.	SHEET NO.	TOTAL SHEETS
7	CALIF.		94	204

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	S.B.	2	L	94	137

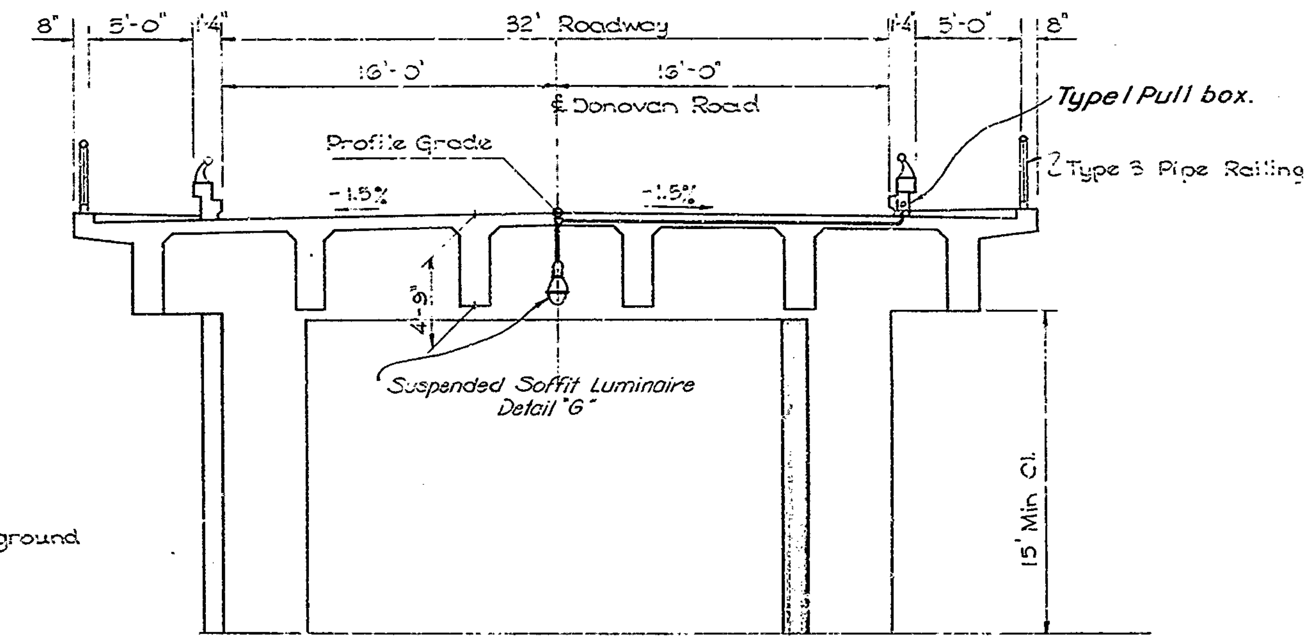
District Engineer - District V
August 15, 1960



PROFILE GRADE
No Scale



ELEVATION
Scale: 1" = 20'

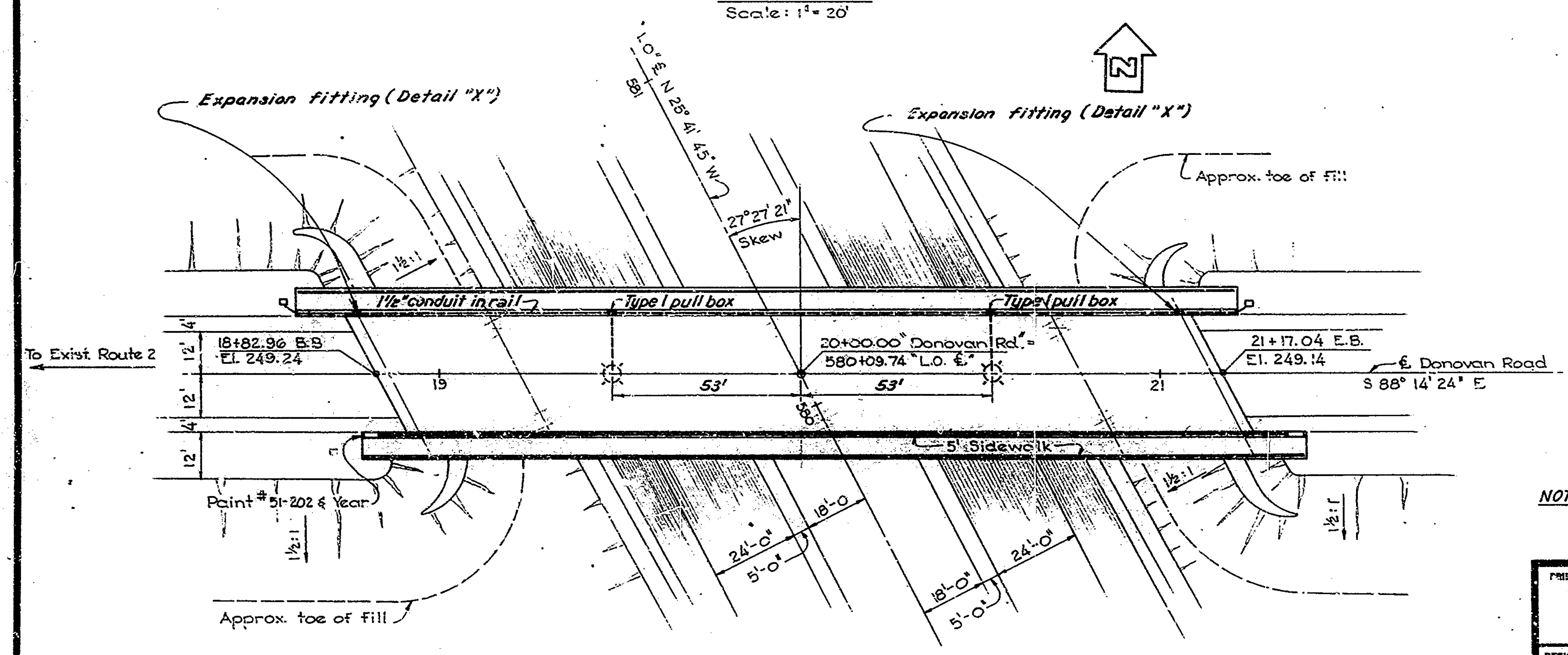


TYPICAL SECTION
Scale: 1" = 5'

LEGEND. This Sheet

Suspended Soffit Luminaire, Detail "G"

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536



PLAN
Scale: 1" = 20'

Live Loading H20-S16-44

NOTE: THIS PLAN ACCURATE FOR LIGHTING ONLY.

61-5V13C11

BRIDGE DEPARTMENT
DESIGN SECTION 9
Project Designer
Chief Designer

DESIGN	By	Checked
DETAILS	By Bradford 5-55	Checked
QUANTITIES	By	Checked
SPECIFICATIONS	By	

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

DONOVAN ROAD OVERCROSSING
LOCATED ADJACENT TO THE NORTH CITY LIMITS OF SANTA MARIA IN SANTA BARBARA COUNTY

LIGHTING PLAN

SCALE AS NOTED | BRIDGE 51-202 | FILE | DRAWING

Disregard prints bearing earlier numbers → PREL. DRAWING NO. P-4704 27

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Drydon	2/60		2/60		2/60

F.A.S. DIST. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF			95	204

DIST	COUNTY	ROUTE	SECTION	SHEET NO	TOTAL SHEETS
V	SB,SLO	2	L,SMria,F	95	137

95

APPROVED January 9, 1959

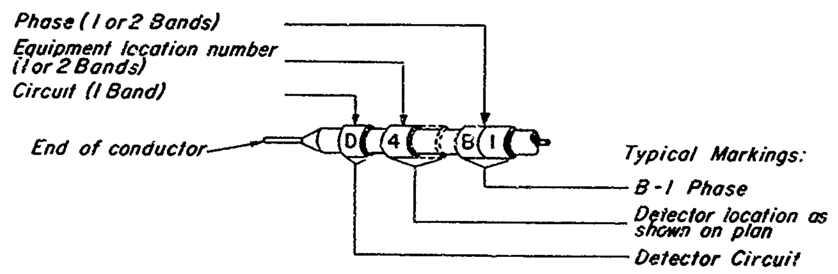
TRAFFIC ENGINEER, CIVIL ENGINEER LICENSE NO. 5429

TO ACCOMPANY PLANS DATED August 15, 1960

SYMBOLS

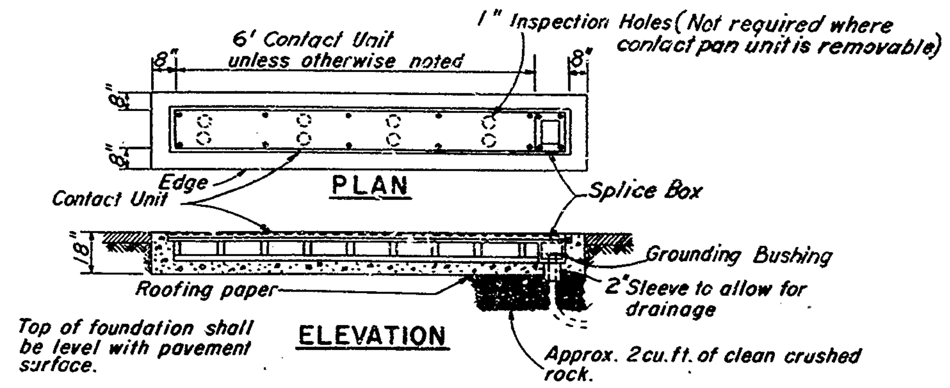
PROPOSED / EXISTING

- Signal conduit
- Lighting conduit
- Pull box
- Non-directional pressure detector
- Non-directional magnetic detector
- Directional pressure detector
- Controller
- Traffic signal, each arrow one-way three color (on Type 1-A standard unless otherwise specified)
- Traffic signal one way three-color with backplate (on Type 1-A standard unless otherwise specified)
- Traffic signal one way three-color with green arrow (on 7' Type I standard unless otherwise specified) (Red and yellow louvered)
- Walk-Wait pedestrian signal (7' Type I standard unless otherwise specified)
- Pedestrian signal, 2-color head (on 7' Type I unless otherwise specified)
- Mast arm traffic signal (with backplate) (on Type II standard)
- Electrolier, mast arm type with mast arm traffic signal with backplate (Type III standard)
- Electrolier, mast arm type (Type X standard)
- Electrolier, upright type
- Pedestrian push button
- Pedestrian push button on post
- Power pole
- Telephone pole
- Fire hydrant
- Flashing beacon, one-way
- Traffic signal with all colors louvered
- Overhead conductor



TYPICAL BANDING OF CONDUCTOR ENDS

NO SCALE



PRESSURE DETECTOR

NO SCALE

INSTALLATION NOTES

CONDUIT

1. Unless otherwise indicated, service and detector runs and conduit into sign structure foundations shal' ~ 1 inch and all other conduit shall be 1½ inch.
2. Conduit shall b[illegible] [illegible]led 18" minimun below curb grade in sidewalk areas and 36" mini[illegible] [illegible]w grade or finished surface in all other areas, except that conduit [illegible] [illegible]ed within curbed dividing strips constructed on existing pavement may be laid on and secured to the pavement.
3. Conduit runs parallel to curbs shall be placed adjacent to back of curb, except where in conflict with existing facilities.
4. Existing underground conduit to be incorporated into new systems shall be cleaned with a mandrel and blown out with compressed air.
5. Conduit terminating in standards and pedestals shall extend 2" max. above finished top of foundation and shall slope toward the handhole.
6. Conduit entering controller cabinets shall be sealed with paraffin or other approved sealing compound.
7. Service risers shall be terminated with a service head or shall be sealed to prevent the entrance of water, as approved by the serving utility.

PULL BOXES

1. Pull boxes shall be No.5 except as indicated.
2. Pull boxes shown in the vicinity of curbs shall be placed adjacent to back of curb, except when in conflict with existing facilities.
3. Top of pull boxes shall be level with curb or sidewalk grade or 1" above surrounding ground when no finished grade is established.
4. Pull boxes shown adjacent to standards shall be installed against but not on roadway side of foundation.

CONDUCTORS AND WIRING

1. Signal neutral shall be a separate #10 AWG conductor.
2. Conductors between ballasts or transformers and luminaires shall be #10AWG, 600volt
3. Conductors between series-to-multiple transformers and sign fixture ballasts shall be #10AWG, 600 volt.
4. Number of conductors indicated in signal system conduit includes three #14 AWG spares.
5. Conductors shall be identified with bands.
6. Underground conductors to signals shall be run without splice, except that where existing signals are being modified, signal conductors may be spliced where indicated.
7. Neutral conductors may be spliced in pull boxes.
8. Two feet of slack shall be provided in each conductor in each pull box.
9. A separate conductor, other than neutral, shall be run from each detector to controller cabinet.
10. Connection to each terminal of a pedestrian push button shall be by a single conductor. Splices shall be made in nearest pull box.
11. Color coding for wiring to pedestrian signals shall be as specified for corresponding vehicular green and red indications.
12. One side of secondary circuit of series-to-multiple transformers shall be grounded. On structures the grounding electrode shall be the conduit system. Off structures, it shall be a 1/2" X 8' ground rod installed through bottom of pull box.

SIGNAL EQUIPMENT

1. Pressure detectors shall be 6 feet long, non-directional, unless otherwise indicated.
2. Detector position dimensions refer to contact unit.
3. Top of detector foundation shall be level with pavement surface.
4. Detector contact unit surface shall be level with rim of frame or no more than 1/8 inch higher. If low, unit shall be raised using one-piece, galvanized, sheet metal shims with dimensions the same as the bottom surface of the contact unit.
5. Vehicular and pedestrian signal mountings shall be oriented so as to provide maximum horizontal clearance to adjacent roadway.

ELECTROLIERS

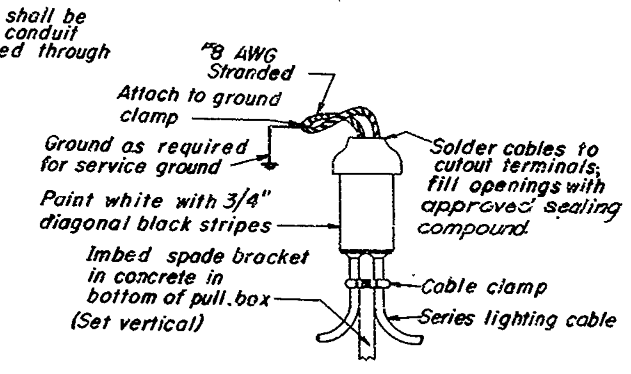
1. A Mercury-vapor lamp ballast shall be installed in a pull box adjacent to each electrolier, except as indicated.

FOUNDATIONS

1. Top of foundations for standards (before grouting) shall be level with top of curb in curbed areas or 6 inches above surrounding grade in other areas.
2. Except as indicated, standards shall be installed with 2 foot clearance to face of curb, edge of shoulder, back of dikes, and back of ditches.

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed ________
Document No. 50000536

61-5V13C11



GROUNDING CUTOUT

Use only when specified

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD DETAILS NO. 4
TRAFFIC SIGNAL AND HIGHWAY LIGHTING INSTALLATIONS

SCALE AS NOTED | REV. DATE 7-15-59 | DRAWING NO. F

ES-4-1

95

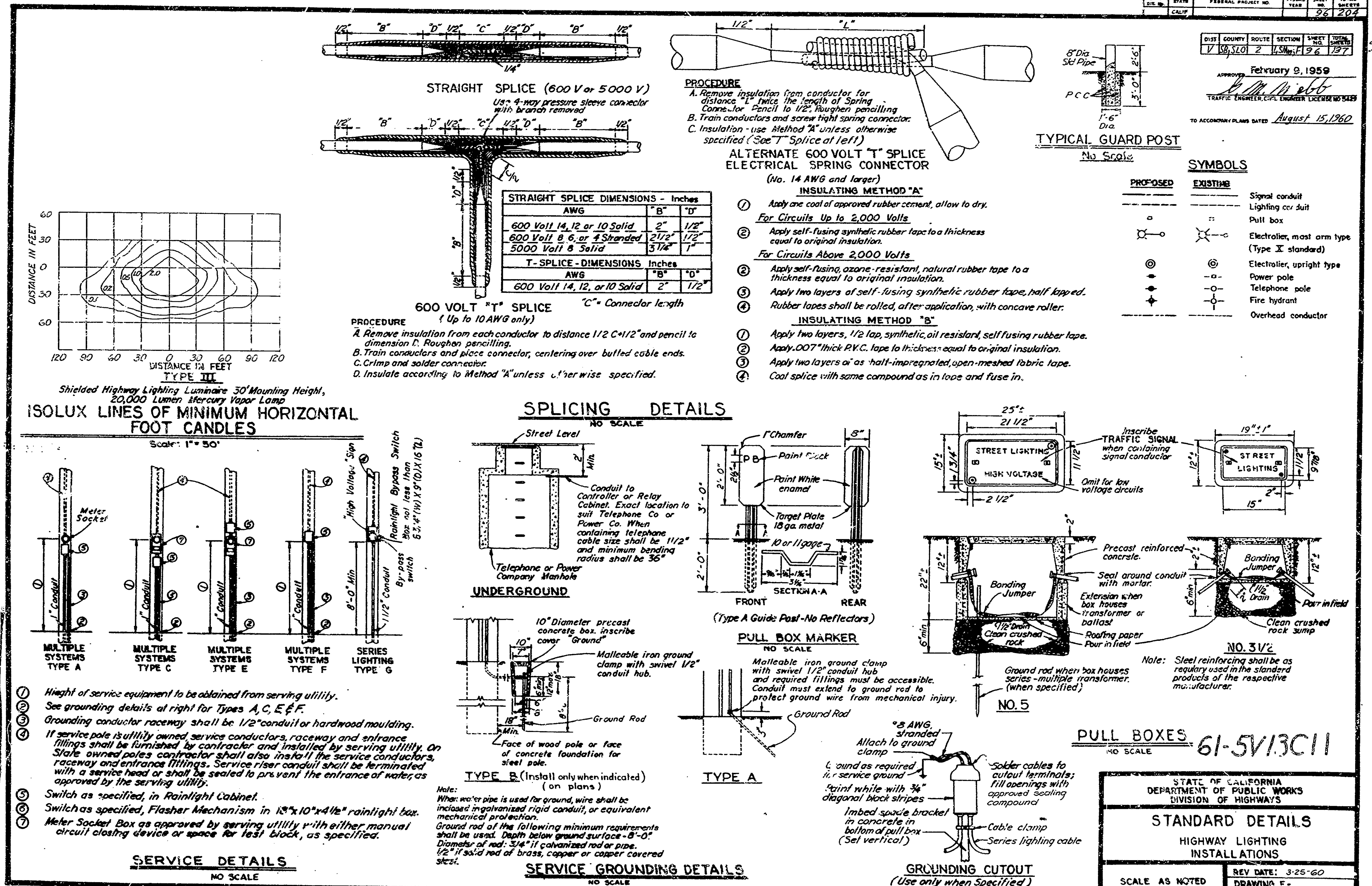
DIST	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB, SLO	2	LSM, F	96	137

96

APPROVED February 9, 1959

TRAFFIC ENGINEER, CIVIL ENGINEER LICENSE NO 5429

TO ACCOMPANY PLANS DATED August 15, 1960



STRAIGHT SPLICE DIMENSIONS - Inches		
AWG	"B"	"D"
600 Volt 14, 12 or 10 Solid	2"	1/2"
600 Volt 8, 6, or 4 Stranded	2 1/2"	1/2"
5000 Volt 8 Solid	3 1/4"	1"
T-SPLICE-DIMENSIONS Inches		
AWG	"B"	"D"
600 Volt 14, 12, or 10 Solid	2"	1/2"

PROCEDURE (600 Volt "T" Splice)

A. Remove insulation from each conductor to distance 1/2 C+1/2" and pencil to dimension D. Roughen pencilling.
B. Train conductors and place connector, centering over butted cable ends.
C. Crimp and solder connector.
D. Insulate according to Method "A" unless otherwise specified.

PROCEDURE (Alternate 600 Volt "T" Splice)

A. Remove insulation from conductor for distance "L" twice the length of Spring Connector. Pencil to 1/2". Roughen pencilling.
B. Train conductors and screw tight spring connector.
C. Insulation - use Method "A" unless otherwise specified (See "T" Splice at left)

INSULATING METHOD "A"

(1) Apply one coat of approved rubber cement, allow to dry.

For Circuits Up to 2,000 Volts

(2) Apply self-fusing synthetic rubber tape to a thickness equal to original insulation.

For Circuits Above 2,000 Volts

(2) Apply self-fusing, ozone-resistant, natural rubber tape to a thickness equal to original insulation.
(3) Apply two layers of self-fusing synthetic rubber tape, half lapped.
(4) Rubber tapes shall be rolled, after application, with concave roller.

INSULATING METHOD "B"

(1) Apply two layers, 1/2 lap, synthetic, oil resistant, self fusing rubber tape.
(2) Apply .007" thick P.V.C. tape to thickness equal to original insulation.
(3) Apply two layers of as half-impregnated, open-meshed fabric tape.
(4) Coat splice with same compound as in tape and fuse in.

SPLICING DETAILS

NO SCALE

SYMBOLS

PROPOSED	EXISTING	
		Signal conduit
		Lighting conduit
		Pull box
		Electrolier, mast arm type (Type X standard)
		Electrolier, upright type
		Power pole
		Telephone pole
		Fire hydrant
		Overhead conductor

(1) Hieght of service equipment to be obtained from serving utility.
(2) See grounding details at right for Types A, C, E & F.
(3) Grounding conductor raceway shall be 1/2" conduit or hardwood moulding.
(4) If service pole is utility owned, service conductors, raceway and entrance fittings shall be furnished by contractor and installed by serving utility. On State owned poles contractor shall also install the service conductors, raceway and entrance fittings. Service riser conduit shall be terminated with a service head or shall be sealed to prevent the entrance of water, as approved by the serving utility.
(5) Switch as specified, in Raintight Cabinet.
(6) Switch as specified, Flasher Mechanism in 18"x10"x4 1/2" raintight box.
(7) Meter Socket Box as approved by serving utility with either manual circuit closing device or space for test block, as specified.

SERVICE DETAILS

NO SCALE

Note:
When water pipe is used for ground, wire shall be inclosed in galvanized rigid conduit, or equivalent mechanical protection.
Ground rod of the following minimum requirements shall be used. Depth below ground surface - 8'-0".
Diameter of rod: 3/4" if galvanized rod or pipe. 1/2" if solid rod of brass, copper or copper covered steel.

SERVICE GROUNDING DETAILS

NO SCALE

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD DETAILS
HIGHWAY LIGHTING
INSTALLATIONS

SCALE AS NOTED	REV DATE: 3-25-60
	DRAWING E-

GEL 2-9-59

ES-5-1

96

B.P.R. Dist. No.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF			97	204

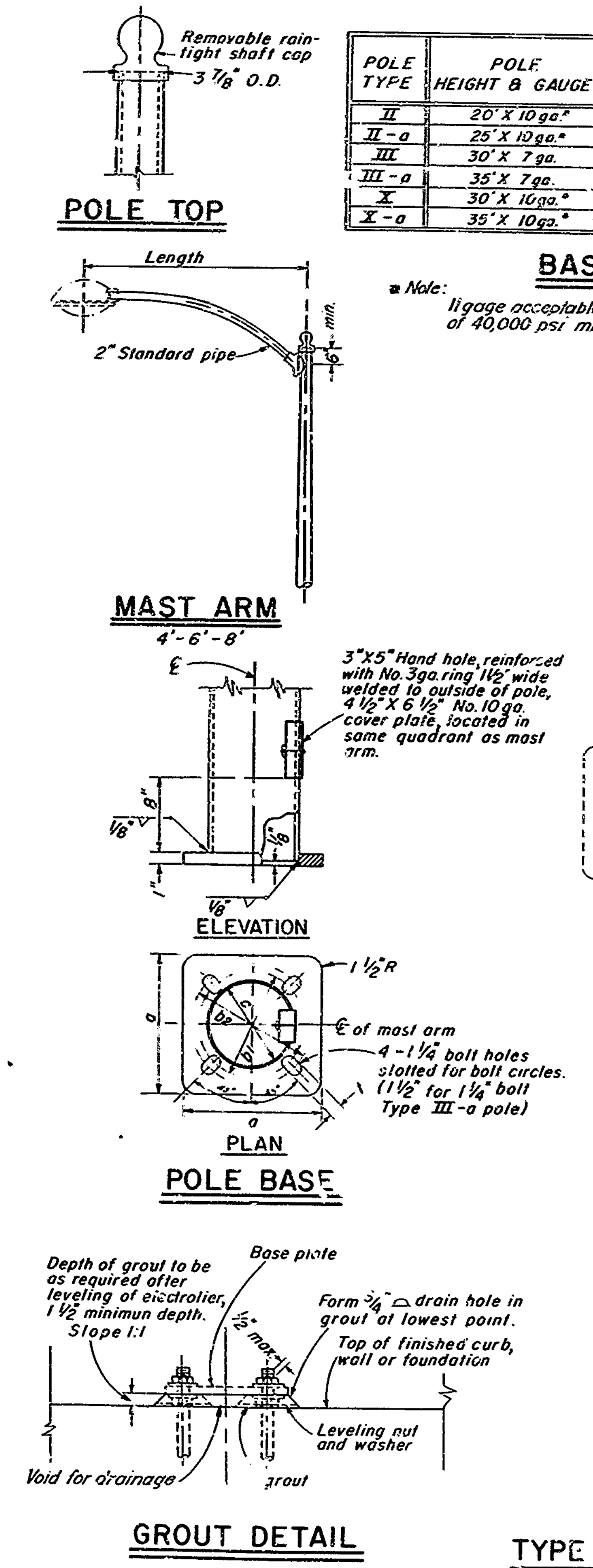
DIST	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SL,S.O	2	L,SM,a,F	97	137

97

APPROVED December 3, 1958

TRAFFIC ENGINEER, CIVIL ENGINEER LICENSE NO. 5429

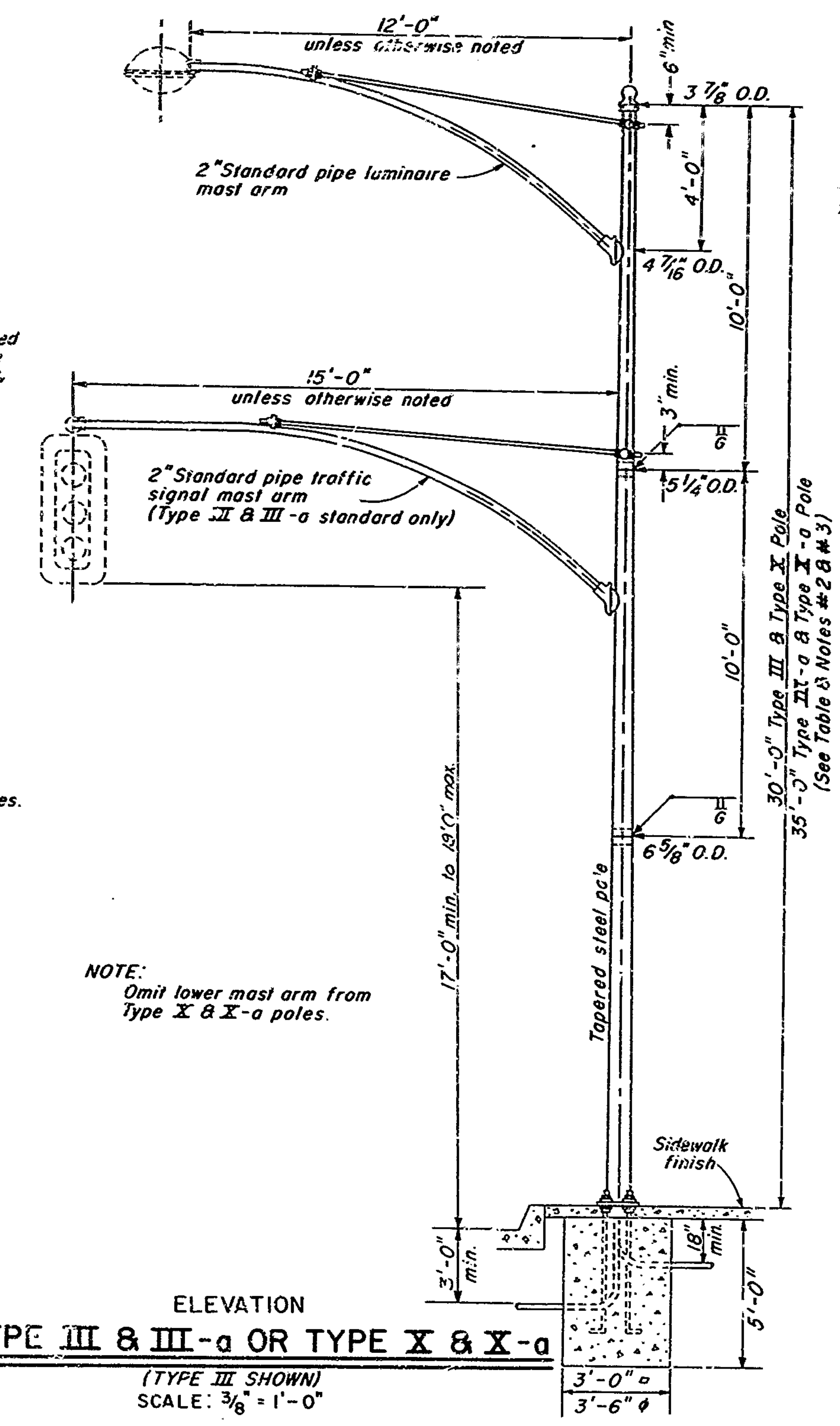
TO ACCOMPANY PLANS DATED August 15, 1960



POLE TYPE	POLE HEIGHT & GAUGE	POLE BASE DIAMETER "c"	BASE PLATE DIMENSIONS "a"	BASE PLATE DIMENSIONS "b1"	BASE PLATE DIMENSIONS "b2"	BASE PL. SLOT SIZE "f"	ANCHOR BOLTS DIMENSIONS	ANCHOR BOLTS BOLT CIRCLE DIAMETER
II	20' X 10 ga.*	6 5/8"	11 1/2"	9 1/2"	11 1/2"	1 1/4"	1" X 36"	9 1/2"
II-a	25' X 10 ga.*	7 5/16"	11 1/2"	9 1/2"	11 1/2"	1 1/4"	1" X 36"	10"
III	30' X 7 ga.	8"	11 1/2"	9 1/2"	11 1/2"	1 3/8"	1 1/8" X 40"	11"
III-a	35' X 7 ga.	8 11/16"	13 1/2"	11"	12 1/2"	1 1/2"	1 1/4" X 44"	11 1/2"
X	30' X 10 ga.*	8"	11 1/2"	9 1/2"	11 1/2"	1 1/4"	1" X 36"	11"
X-a	35' X 10 ga.*	8 11/16"	13 1/2"	11"	12 1/2"	1 1/4"	1" X 36"	11 1/2"

BASE AND ANCHOR BOLT SCHEDULE

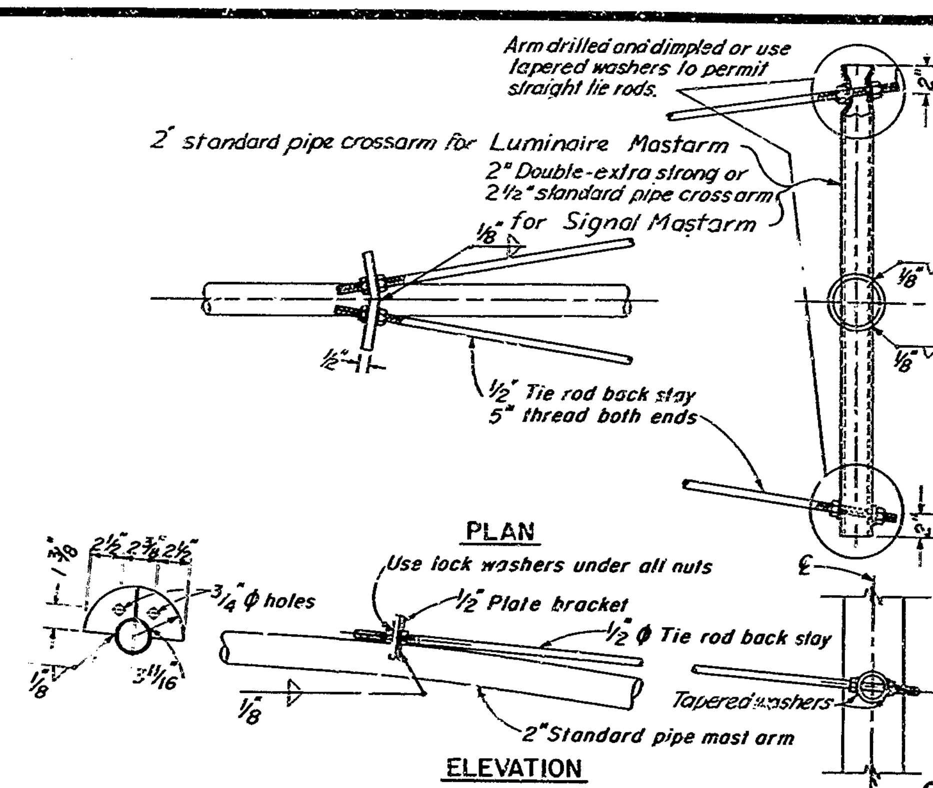
* Note: 11 gage acceptable if fabricated from sheet steel of 40,000 psi minimum yield.



ELEVATION

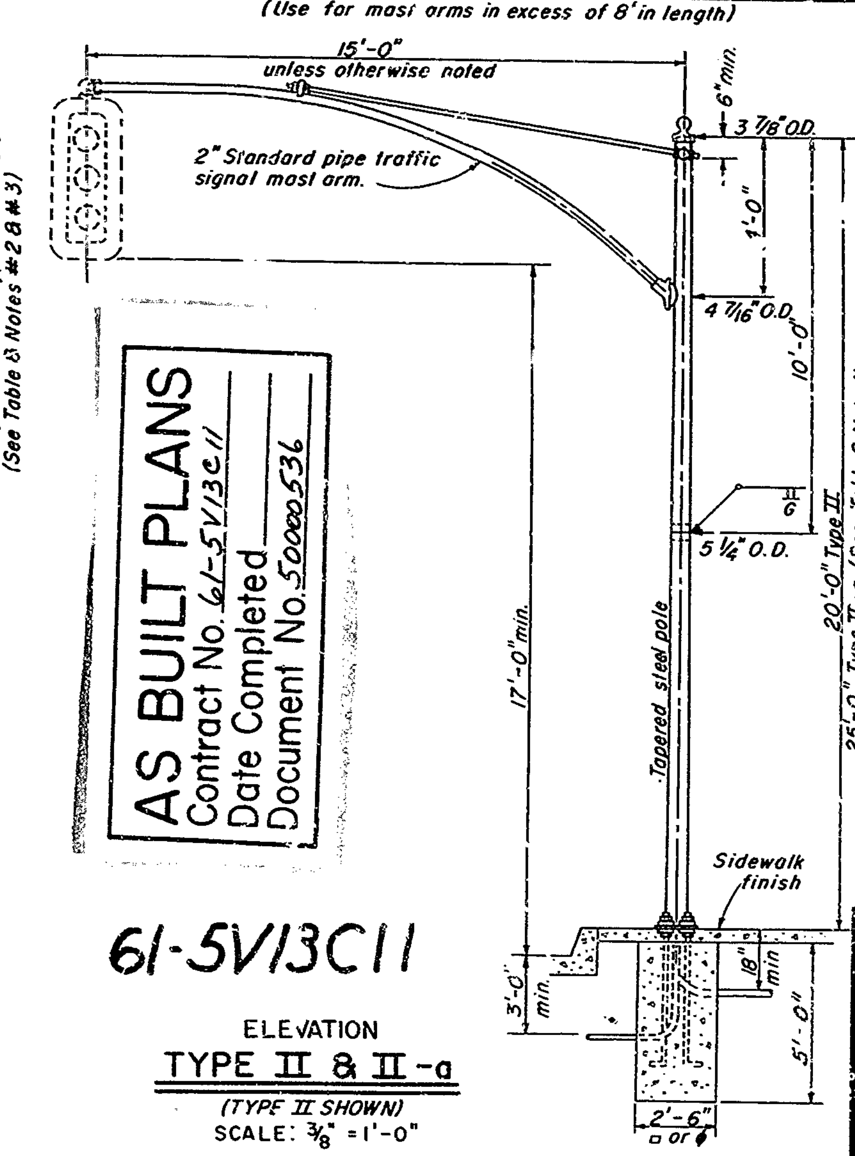
TYPE III & III-a OR TYPE X & X-a

(TYPE III SHOWN)
SCALE: 3/8" = 1'-0"



MAST ARM TIE RODS AND CROSS ARM

(Use for mast arms in excess of 8' in length)

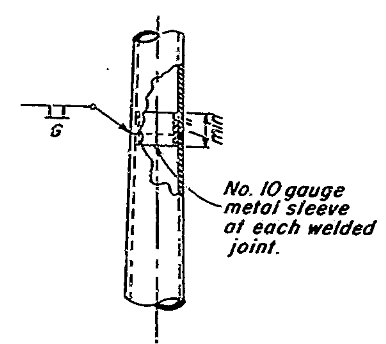


61-5V13C11

ELEVATION

TYPE II & II-a

(TYPE II SHOWN)
SCALE: 3/8" = 1'-0"



POLE SPLICE

CALIF - TYPE STANDARDS

GENERAL AND INSTALLATION NOTES

1. All shafts and mast arms shall be galvanized. Bolts, screws, nuts, washers and tie rods shall be galv. or cadmium plated.
2. The lower 5' length of a 35' Type III-a pole shall consist of a 5' - #7 gage tapered section (8" O.D. to 8 11/16" O.D.) butt welded to the lower end of a 30' Type III pole
3. The lower 5' length of a 35' Type X-a pole shall consist of a 5' - #10 gage tapered section (8" O.D. to 8 11/16" O.D.) butt welded to the lower end of a 30' Type X pole.
4. The lower 5' length of a 25' Type II-a pole shall consist of a 5' - #10 gage tapered section (6 5/8 O.D. to 7 5/16 O.D.) butt welded to the lower end of a 20' Type II pole.

MAST ARMS

1. Luminaire mast arms shall be so curved that when mastarm is fastened to pole the luminaire end shall not be below top of pole or more than 1'-6" above.
2. The last 3" of the mast arm shall be straight and shall be horizontal with luminaire or traffic signal attached.
3. Connection between mast arm and pole shall be made by means of a raintight socket of a design permitting simple removal of the mast arm and providing a chased outlet for electrical conductors.

ANCHOR BOLTS

1. Each standard shall be supplied with 4 anchor bolts.
2. Each anchor bolt shall be provided with 6" of thread and a 4"-90° bend and shall be furnished with two nuts and two washers Washers shall be 5/16" X 2 1/2" O.
3. Threads may be cut or rolled. Bolts shall be galvanized or plated after threads are formed.
4. One anchor bolt shall be bonded to conduit.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

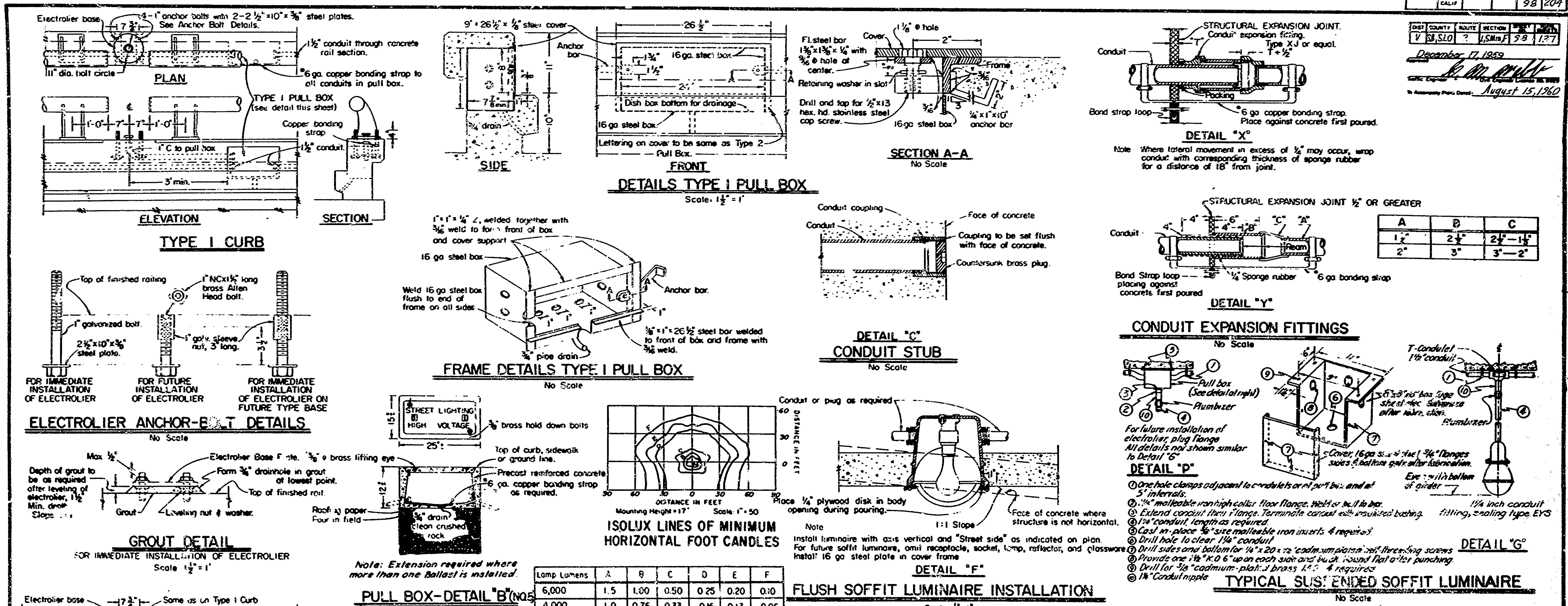
STANDARDS

CALIFORNIA TYPE
20 ft., 25 ft., 30 ft., 35 ft., Pole Heights

SCALE AS NOTED | REV. DATE: | DRAWING E-

ES-6-1

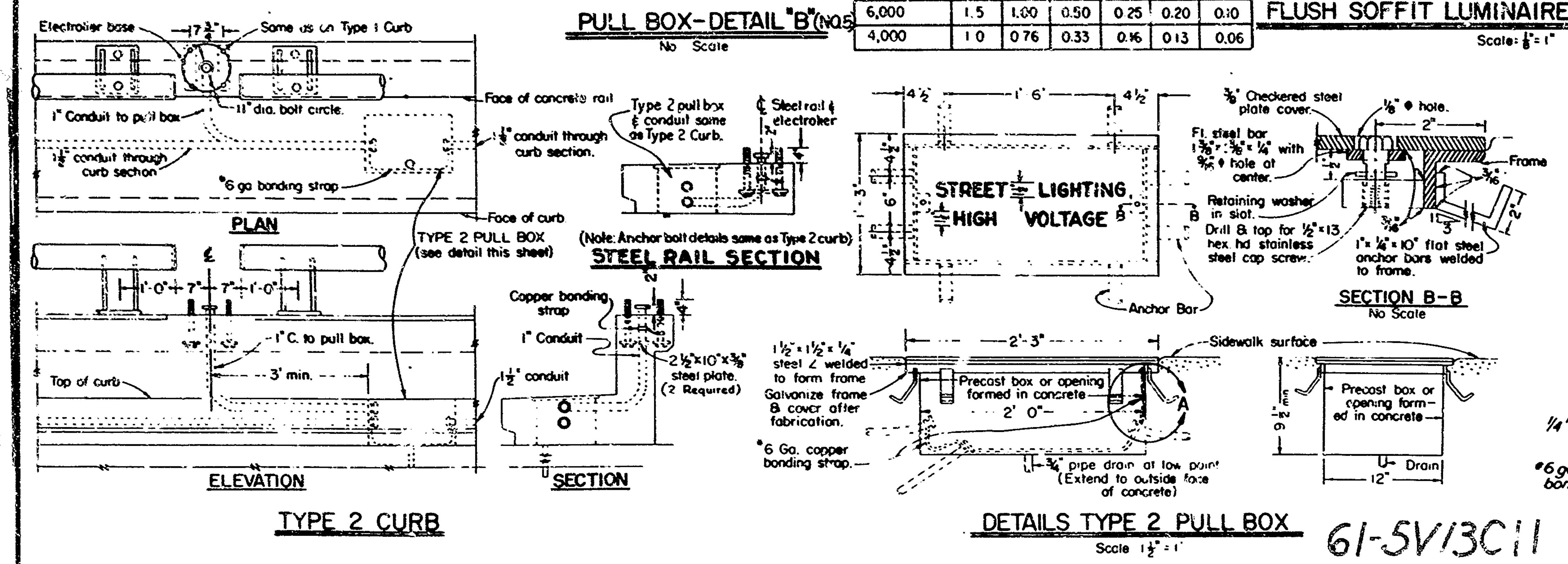
97

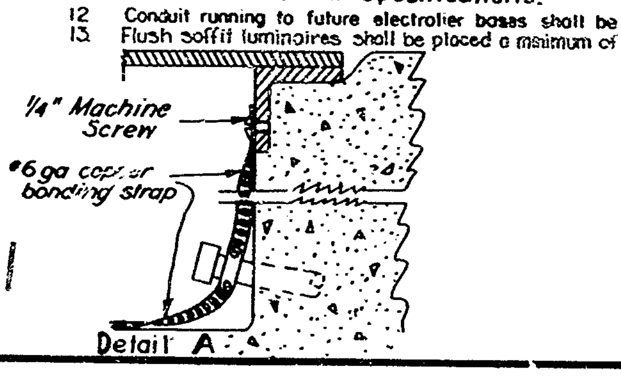


Lamp Lumens	A	B	C	D	E	F
6,000	1.5	1.00	0.50	0.25	0.20	0.10
4,000	1.0	0.76	0.33	0.16	0.13	0.06

GENERAL NOTES

1. Electroliers shall be placed a minimum of 4 feet from expansion joints.
2. Anchor bolts shall be held in position by means of suitable templates. Deviation from true position, vertical and height, shall not exceed 1/16". Nuts and threaded end of anchor bolts shall be galvanized or cadmium plated. Threads shall accept standard nuts without requiring use of tools or removal of protective galvanizing or plating.
3. Lighting conduits for electroliers and other conduits near the girder slab shall be laid within railing or curb sections, or laid below the girder slab when necessary.
4. Exposed conduits shall run either parallel or at right angles to the superstructure girders.
5. Where necessary to clear utilities, the conduit shall be carried over the utility ducts in long conduit sweeps.
6. Conduits shall terminate close to the ends at the pull box as specified in order to provide maximum clear space in box.
7. Conduit expansion fittings shall be installed wherever conduit crosses structure expansion joints of ½" or more.
8. Conduit expansion fittings shall be placed approx. parallel to the superstructure girders. One shall be placed at each structure expansion joint
9. All conduit shall be 1½" except as noted.
10. Metal pull boxes and frames shall be galvanized after fabrication.
11. Detailed shop drawings for metal pull boxes shall be submitted in accordance with the provisions of Section 55, of the Standard Specifications.
12. Conduit running to future electrolier bases shall be terminated per Detail "C".
13. Flush soffit luminaires shall be placed a minimum of 2 feet from the inside surface of girders and 1 foot from the inside surface of diaphragms.





TYPICAL BRIDGE ELECTROLIER BASE AND PULL BOX DETAILS

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

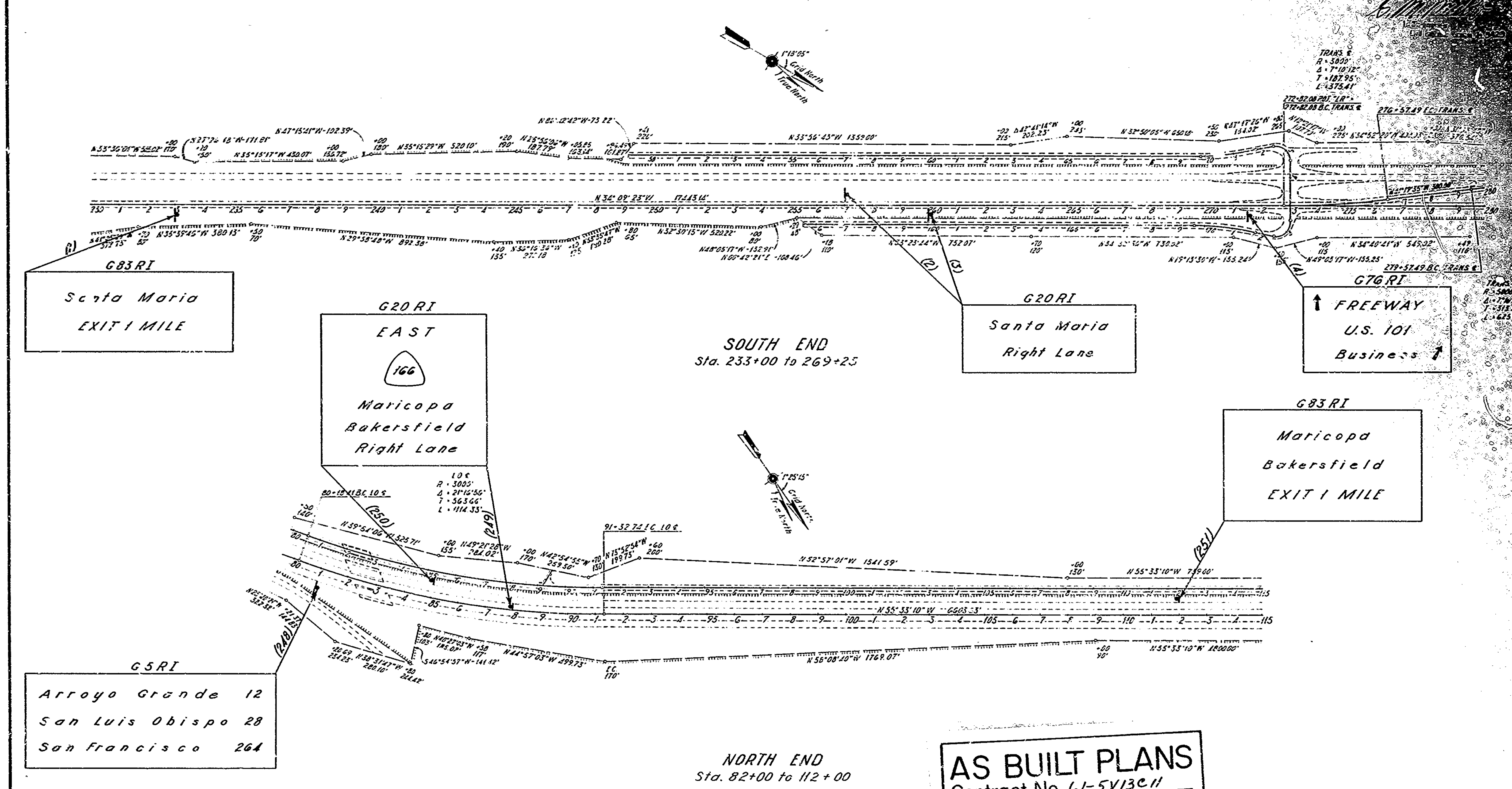
STANDARD LIGHTING DETAILS-BRIDGE

REVISED: 6-20-60

ES7-3

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

98



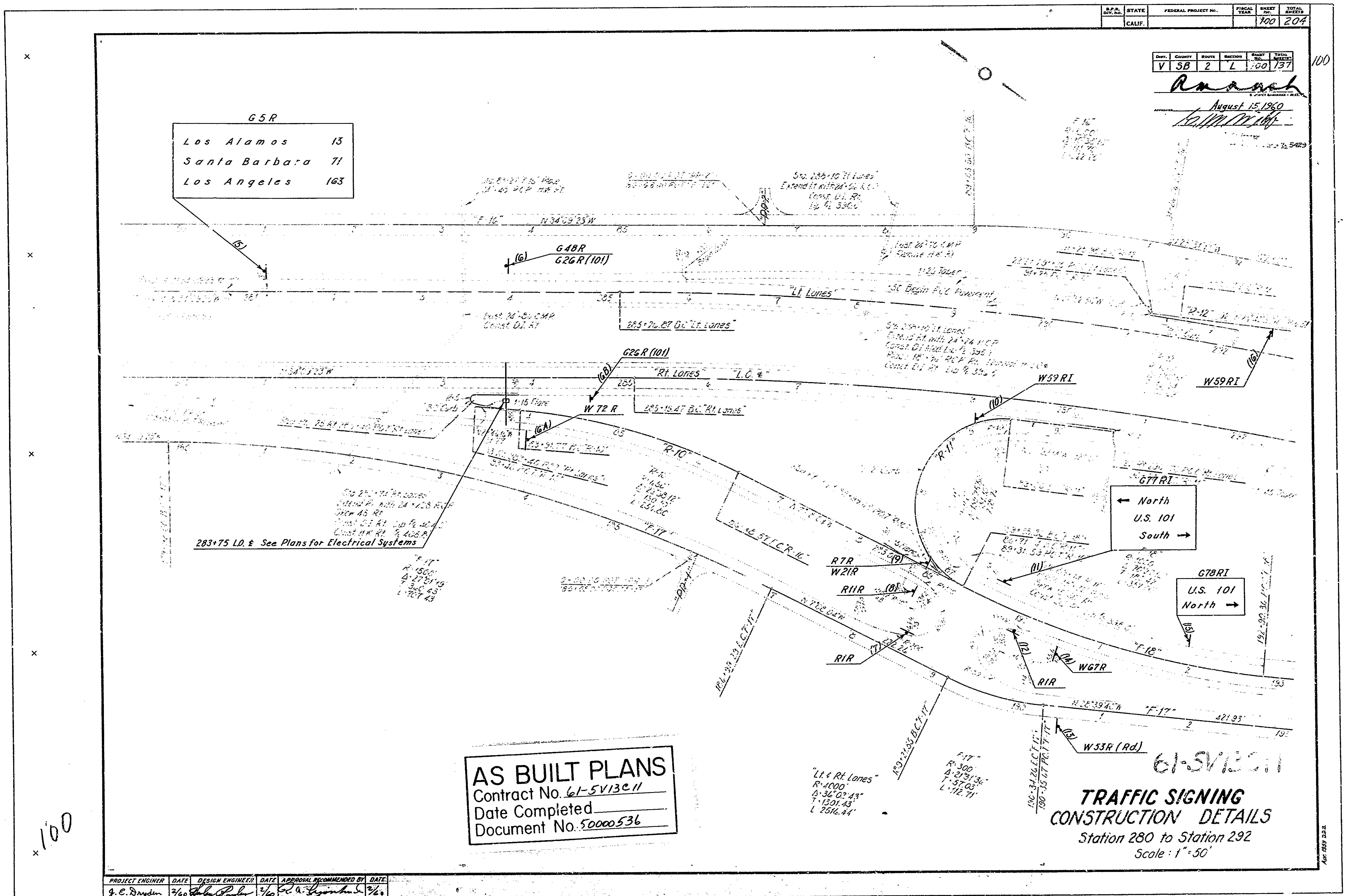
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

TRAFFIC SIGNING
PROJECT LIMIT EXTENSIONS
Scale: 1" = 200'

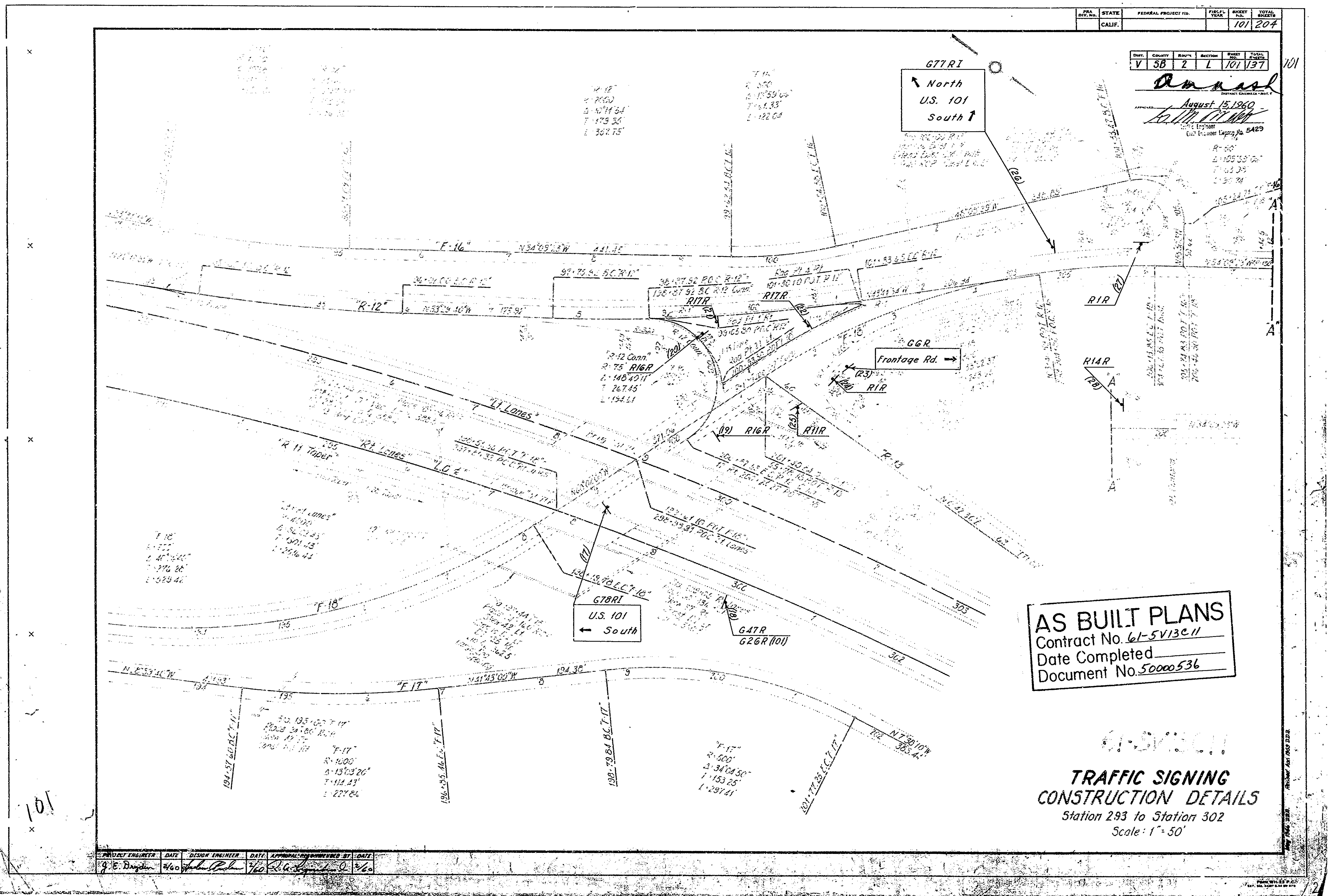
DISTRICT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dayden	2/60	[illegible]	2/60	[illegible]	2/60

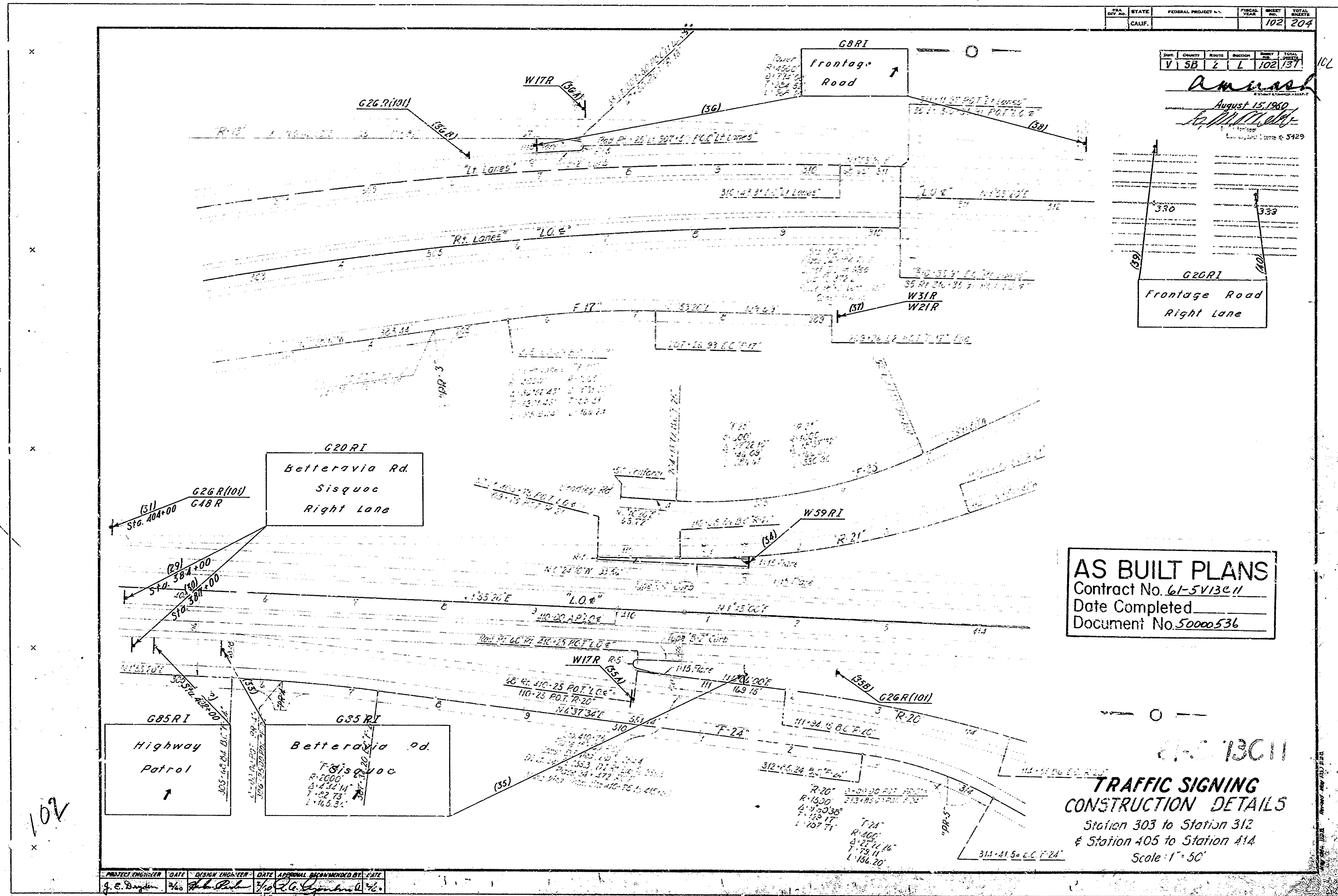
99



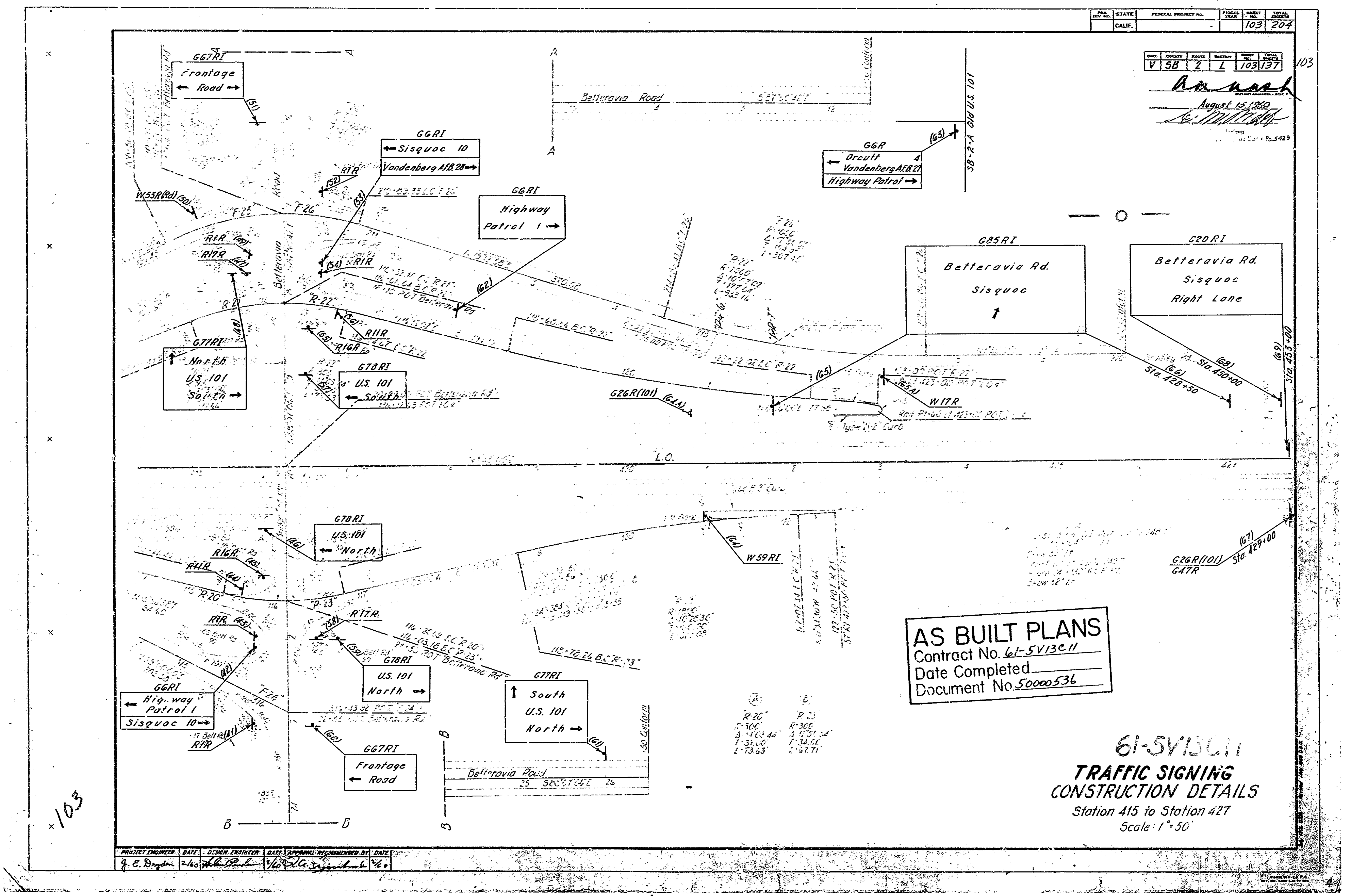
CALIF.
100 204
V SB 2 L 100 137
August 15, 1960
G5R
Los Alamos 13
Santa Barbara 71
Los Angeles 163
G48R
G26R (101)
"Lt Lanes"
"Rt Lanes"
"R-10"
"R-11"
"R-12"
"F-16"
"F-17"
"F-18"
W72 R
W59 RI
G77 RI
← North
U.S. 101
South →
G78 RI
U.S. 101
North →
R7R
W21R
R11R
R1R
W67R
W53R (Rd)
283+75 L.D. ℄ See Plans for Electrical Systems
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
61-5V13C11
TRAFFIC SIGNING
CONSTRUCTION DETAILS
Station 280 to Station 292
Scale: 1" = 50'
PROJECT ENGINEER
J. C. Dryden
DATE 2/60
DESIGN ENGINEER
DATE 2/60
APPROVAL RECOMMENDED BY
DATE 2/60

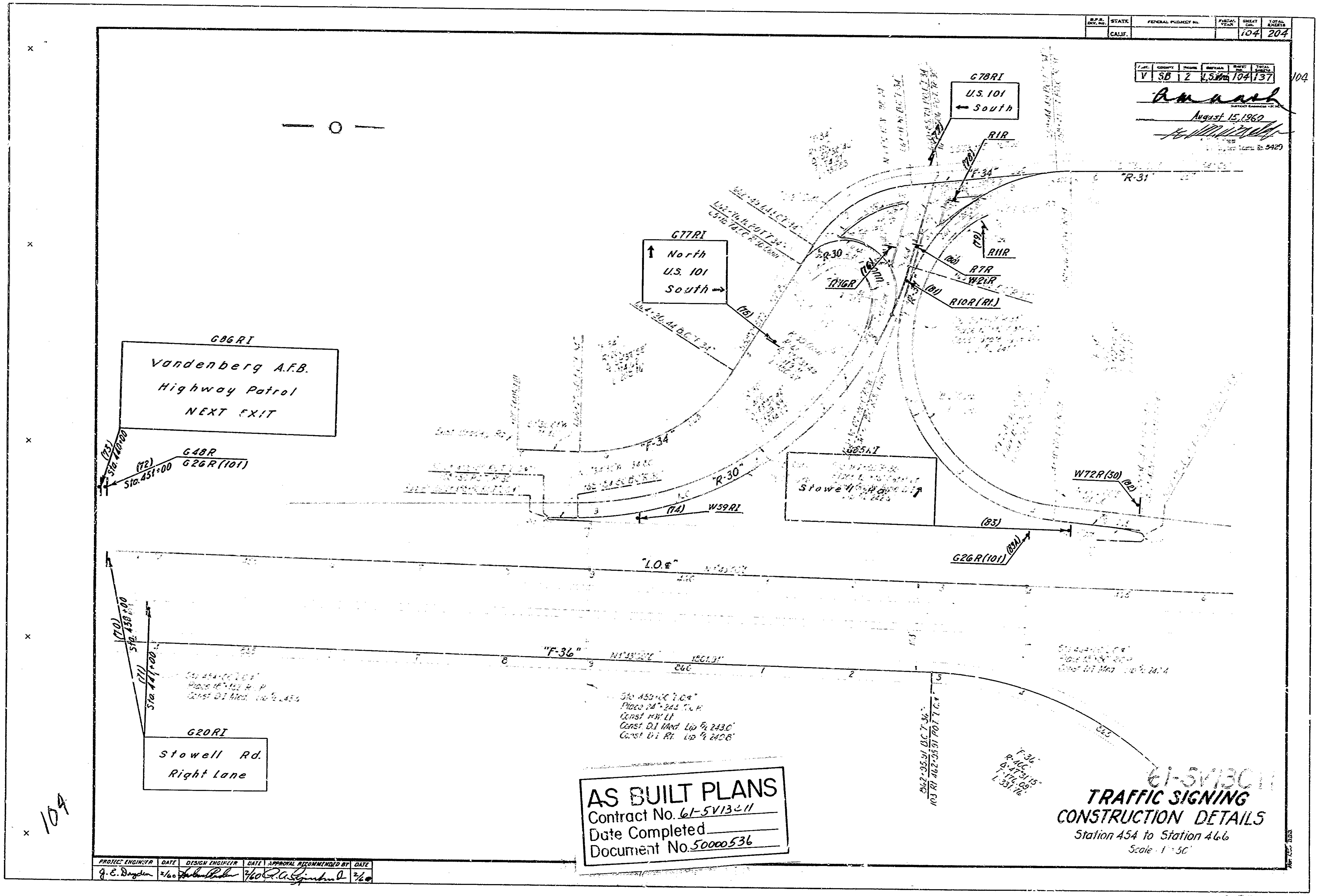
100


CALIF.
101
204
V
SB
2
L
101
137
August 15, 1960
G77 RI
North
U.S. 101
South
G6R
Frontage Rd.
R1R
R14R
R16R
R17R
R19R
R11R
G78 RI
U.S. 101
South
G47R
G26R (101)
"F-16"
"R-12"
"F-18"
"F-17"
"Lt Lanes"
"Rt Lanes"
"R-11 Taper"
"R-13"
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
TRAFFIC SIGNING
CONSTRUCTION DETAILS
Station 293 to Station 302
Scale: 1" = 50'



STATE CALIF.
SHEET NO. 102 TOTAL SHEETS 204
V SB 2 L 102 137
August 15, 1960
Frontage Road
G8R1
W17R (36A)
G2G R(101)
(36)
(38)
"Lt Lanes"
"Rt Lanes"
"L.O.¢"
W31R
W21R
(37)
G2GR1
Frontage Road Right Lane
(39)
(40)
330
333
G20R1
Betteravia Rd. Sisquoc Right Lane
(31)
Sta. 404+00
G2G R(101)
G48R
(29)
Sta. 384+00
(30)
W59R1
(34)
"R-21"
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
W17R (35A)
(35B)
G2GR(101)
"R-20"
"F-24"
G85R1
Highway Patrol
G35R1
Betteravia Rd. Sisquoc
(33)
(35)
TRAFFIC SIGNING
CONSTRUCTION DETAILS
Station 303 to Station 312
¢ Station 405 to Station 414
Scale 1" = 50'
PROJECT ENGINEER J. E. Dayden
DESIGN ENGINEER
APPROVAL RECOMMENDED BY
102


CALIF. 103 204
V SB 2 L 103 137
August 15, 1960
G67R1
Frontage Road
G6R1
Sisquoc 10
Vandenberg AFB 28
G6R1
Highway Patrol 1
G6R
Orcutt 4
Vandenberg AFB 21
Highway Patrol
SB-2-A Old U.S. 101
Betteravia Road
Betteravia Road
G85R1
Betteravia Rd.
Sisquoc
S20R1
Betteravia Rd.
Sisquoc
Right Lane
W53R(Rd)
R1R
R17R
R11R
R16R
G77R1
North
U.S. 101
South
G78R1
U.S. 101
South
G26R(101)
W17R
Sta. 428+50
Sta. 450+00
Sta. 453+00
L.O.
G78R1
U.S. 101
North
W59R1
G26R(101)
G47R
Sta. 429+00
G78R1
U.S. 101
North
G77R1
South
U.S. 101
North
G6R1
Highway Patrol 1
Sisquoc 10
G67R1
Frontage Road
Betteravia Road
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
61-5V13C11
TRAFFIC SIGNING
CONSTRUCTION DETAILS
Station 415 to Station 427
Scale: 1" = 50'
J. E. Dryden



CALIF. 104 204
V SB Z LSm 104 137
August 15, 1960
G78RI
U.S. 101
← South
R1R
"F-34"
"R-31"
G77RI
↑ North
U.S. 101
South →
R11R
R7R
W21R
R10R(R1)
R19GR
"R-30"
G86RI
Vandenberg A.F.B.
Highway Patrol
NEXT EXIT
G48R
G2GR(101)
Sta. 451+00
Sta. 450+00
"F-34"
"R-30"
G85RI
Stowell Rd.
W59RI
W72R(50)
G2GR(101)
"L.O ℄"
"F-36"
Sta. 438+00
Sta. 447+00
G20RI
Stowell Rd.
Right Lane
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
61-5V13C11
TRAFFIC SIGNING
CONSTRUCTION DETAILS
Station 454 to Station 466
Scale 1" = 50'
J. E. Dayden 2/60

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB	2	1.5 Mile	105	137

105

August 15, 1960

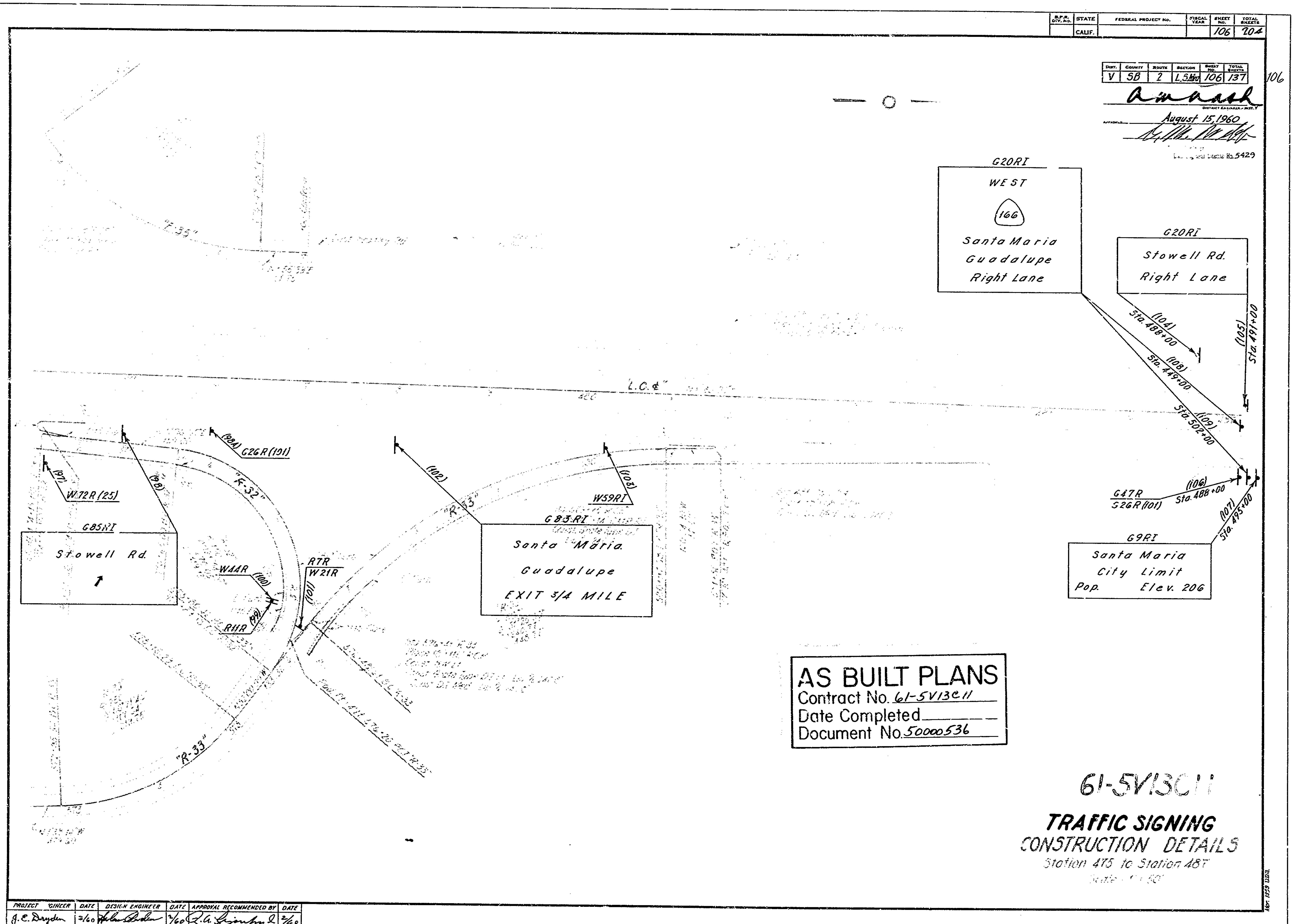
License No 5429

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. C. Dryden	7/60		7/60	L. C. Symmonds	7/60

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

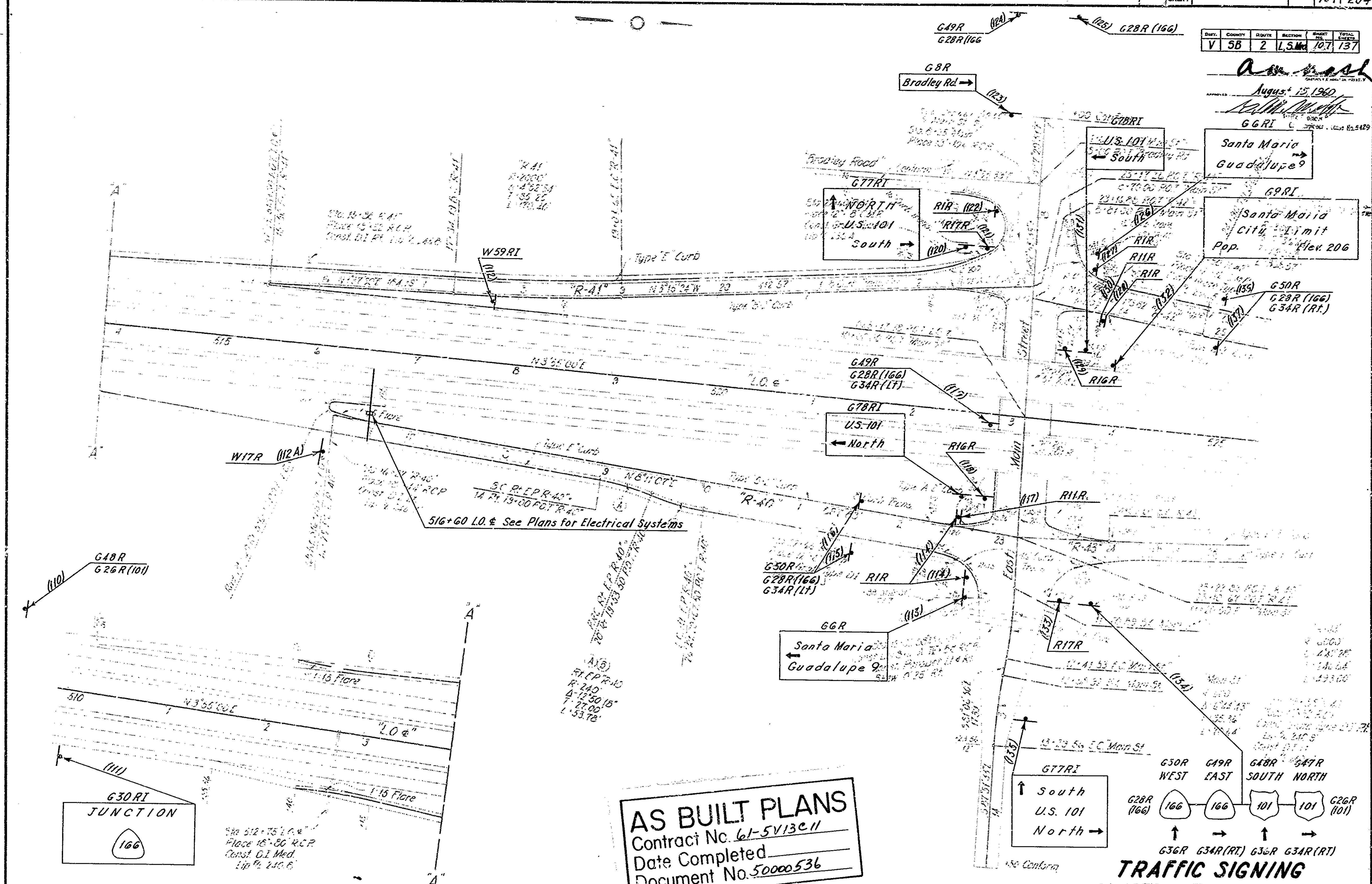
TRAFFIC SIGNING
CONSTRUCTION DETAILS
Station 467 to Station 474
Scale 1" = 50'

105



CALIF.
106
204
V
5B
2
106
137
August 15, 1960
G20RI
WEST
166
Santa Maria
Guadalupe
Right Lane
G20RI
Stowell Rd.
Right Lane
(104) Sta. 488+00
(108) Sta. 449+00
(109) Sta. 502+00
(105) Sta. 491+00
"L.C.¢"
G47R
S26R(101)
(106) Sta. 488+00
(107) Sta. 495+00
G9RI
Santa Maria
City Limit
Pop. Elev. 206
(97)
W72R (25)
(98)
(98A) G26R(191)
"R-32"
G85RI
Stowell Rd.
W44R
(100)
(99)
R11R
R7R
W21R
(101)
(102)
"R-33"
(103)
W59RI
G83RI
Santa Maria
Guadalupe
EXIT 3/4 MILE
"R-33"
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
61-5V13C11
TRAFFIC SIGNING
CONSTRUCTION DETAILS
Station 475 to Station 487
J. C. Dryden 2/60
2/60
2/60

106



G49R
G28R(166)
G28R (166)
G8R
Bradley Rd.
G18RI
U.S. 101
South
G6RI
Santa Maria
Guadalupe 9
G9RI
Santa Maria
City Limit
Pop.
Elev. 206
G77RI
NORTH
U.S. 101
South
R1R
R17R
R11R
R16R
G50R
G28R (166)
G34R (Rt.)
W59RI
"R-41"
N3°55'00"E
"L.O. ¢"
G49R
G28R(166)
G34R(Lt)
G78RI
U.S. 101
North
W17R
516+60 L.O. ¢ See Plans for Electrical Systems
G48R
G26R(101)
G50R
G28R(166)
G34R(Lt)
G6R
Santa Maria
Guadalupe 9
R17R
"R-40"
"R-43"
G30RI
JUNCTION
166
G77RI
South
U.S. 101
North
G30R WEST
G49R EAST
G48R SOUTH
G47R NORTH
G28R (166)
G26R (101)
G36R
G34R(RT)
G36R
G34R(RT)
"A"
"A'"

TRAFFIC SIGNING

CONSTRUCTION DETAILS

Station 510 to Station 525

Scale: 1" = 50'

Dist.	County	Route	Section	Sheet No.	Total Sheets
V	SB	2	LSM	107	137

State	Federal Project No.	Fiscal Year	Sheet No.	Total Sheets
CALIF.			107	204

August 15, 1960

Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
J. E. Dryden	2/60		2/60	T. G.	3/60

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

107

FED. AID DIV. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			108	204

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB	2	1.5 Mrd	108	137

108

August 15, 1960

529+65 L.O.E. See Plans for Electrical Systems

35+77 = "L.O.E." 5429

W17R (144A)

"R-42"

L.O.E.

"R-43"

(144) W59RI

G47R
G2GR (101)
G49R
G28R (166)
(152) (151) Sta. 530+00

G9RI
Santa Maria
City Limit
Pop. Elev. 206

G83RI
Santa Maria
Guadalupe
EXIT 1 MILE
(149)

G48R
G2GR (101)
G28R (166)
G50R
(150)

G20RI
WEST
166
Santa Maria
Guadalupe
Right Lane

(140) Sta. 550+00
(141) Sta. 555+00

(143B) G26R

W17R (143A)

(142) Sta. 563+75

(138) Sta. 545+00
(139) Sta. 546+00

G20RT
Donovan Road
Right Lane

G85RI
Donovan Road
R 100'
Δ 23°04'20"
T 204.11'
L 402.08'

W59RI (148)

R7R
W21R (147)

R51

R 30' TYP.

W44R (160)

(159)

R11R

61-5V13C11

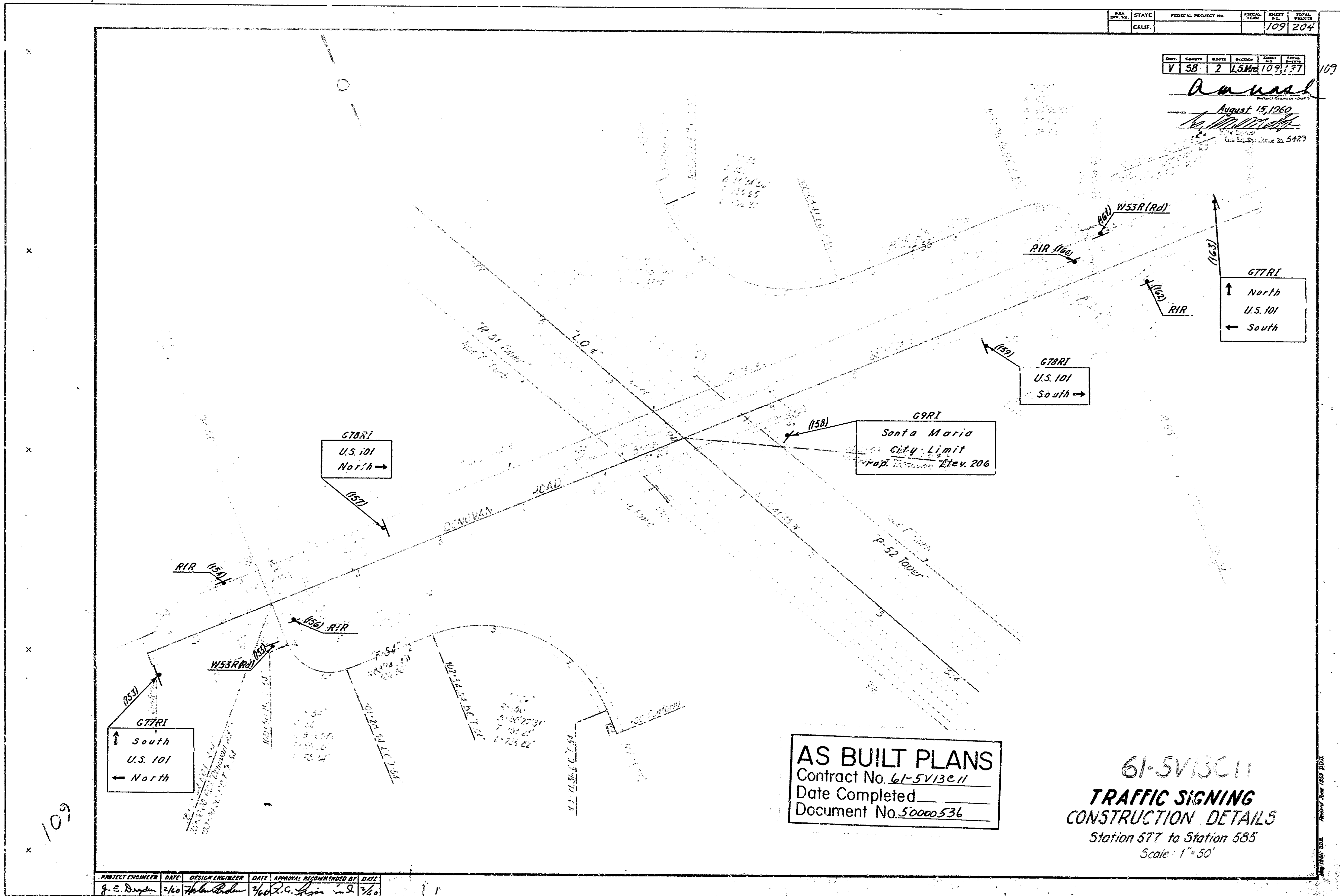
TRAFFIC SIGNING CONSTRUCTION DETAILS

Station 526 to Station 538
& Station 564 to Station 576
Scale 1" = 50'

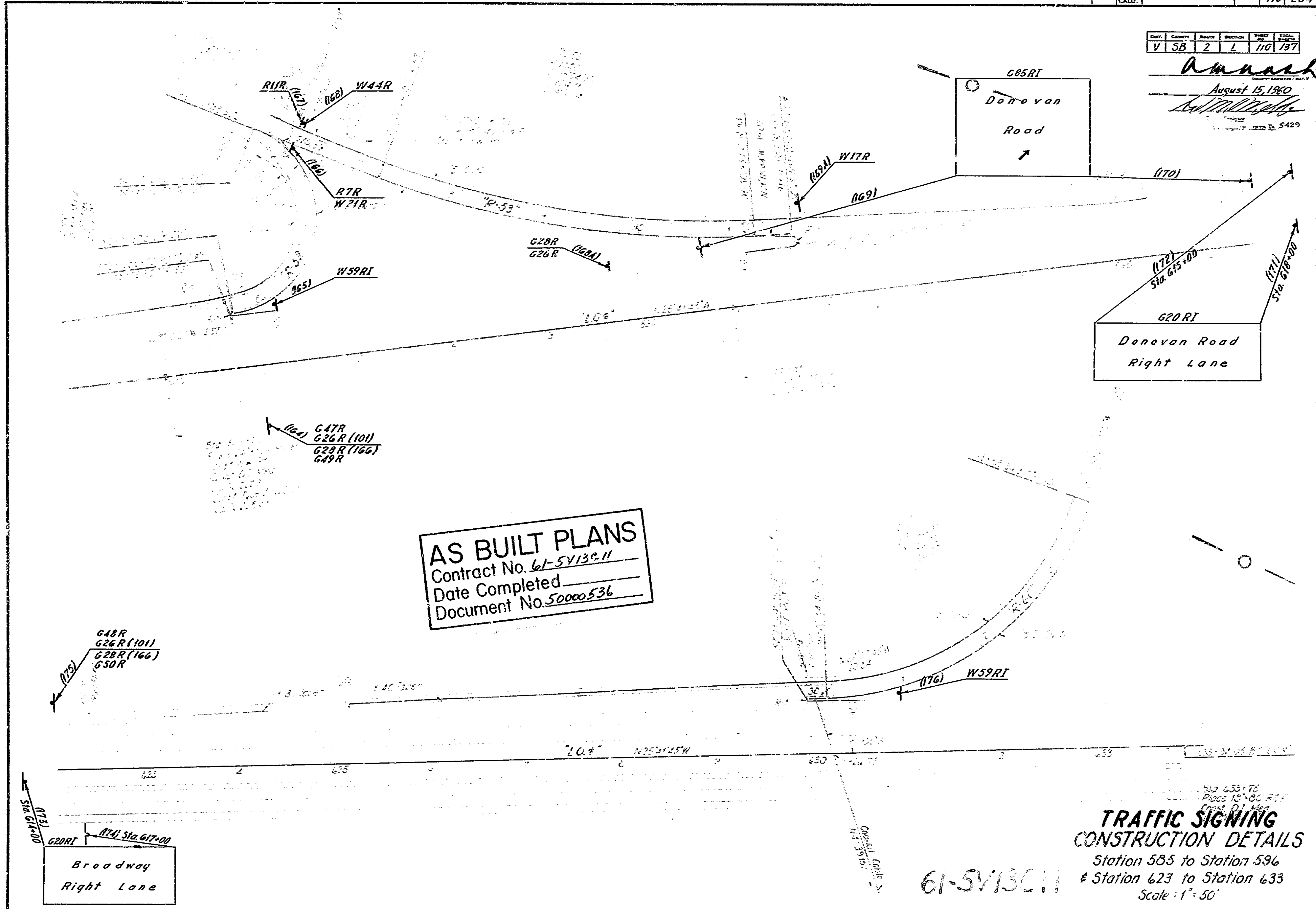
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 20005536

108

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60		2/60		2/60



CALIF.
109 204
V SB 2 1.5Mn 109 137
August 15, 1960
W53R(Rd) (161)
R1R (160)
(163)
G77R1
North
U.S. 101
South
(162) R1R
(159)
G78R1
U.S. 101
South
G9R1
Santa Maria
City Limit
Pop. Elev. 206
(158)
G78R1
U.S. 101
North
(157)
DONOVAN ROAD
P-52 Tower
R1R (154)
(156) R1R
W53R(Rd) (155)
(153)
G77R1
South
U.S. 101
North
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
61-5V13C11
TRAFFIC SIGNING
CONSTRUCTION DETAILS
Station 577 to Station 585
Scale: 1" = 50'
PROJECT ENGINEER
DATE
DESIGN ENGINEER
DATE
APPROVAL RECOMMENDED BY
DATE
109



AS BUILT PLANS
Contract No. 61-5Y13C11
Date Completed
Document No. 50000536

TRAFFIC SIGNING
CONSTRUCTION DETAILS

Station 585 to Station 596
¢ Station 623 to Station 633
Scale: 1" = 50'

61-5Y13C11

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J.E. Dryden	2/60	[signature]	2/60	A. L. [signature]	2/60

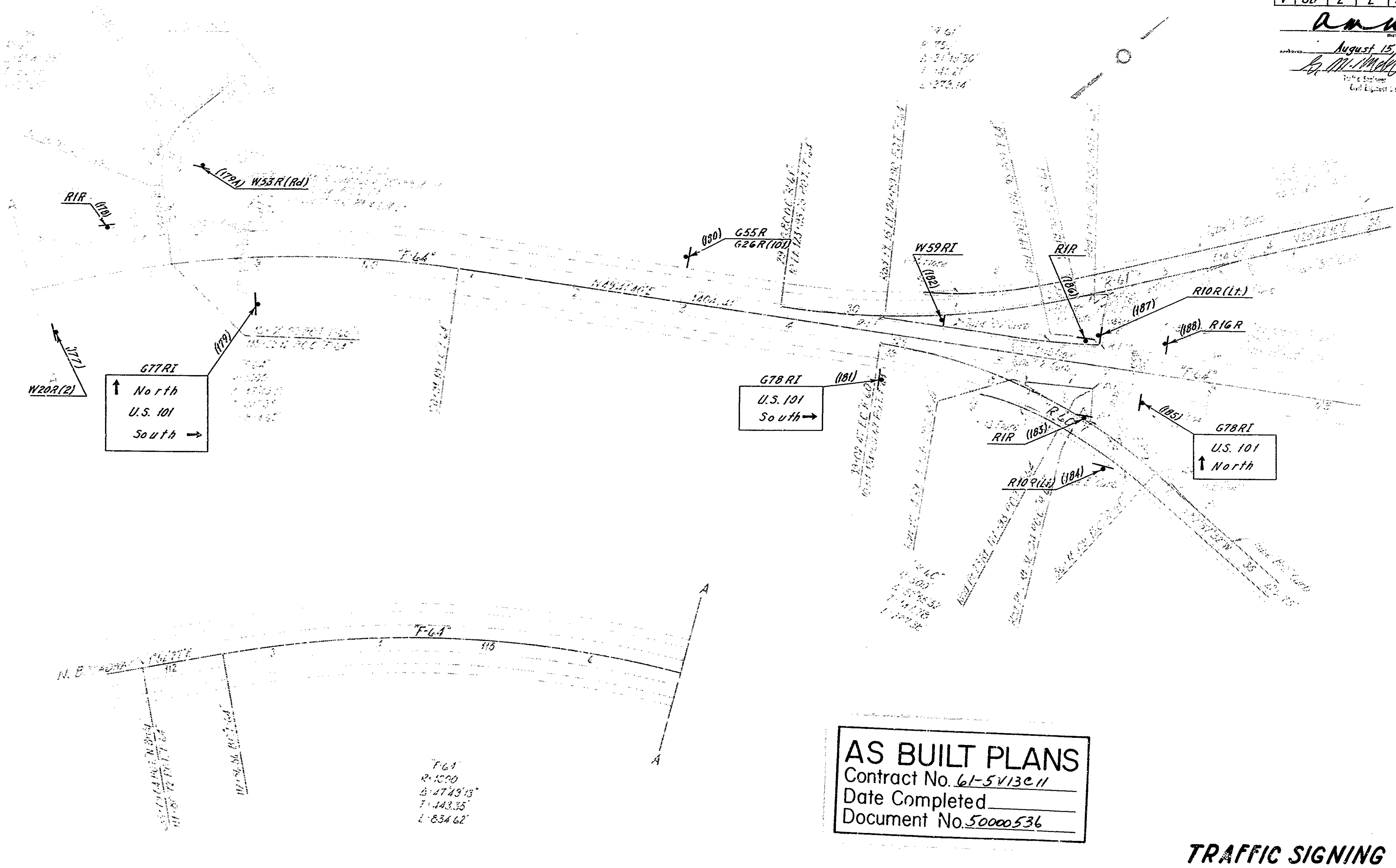
STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
CALIF.		110	204

110

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
V	SB	2	L	111	137

PRA DIV. NO.	STATE	FEDERAL PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
	CALIF.			111	204

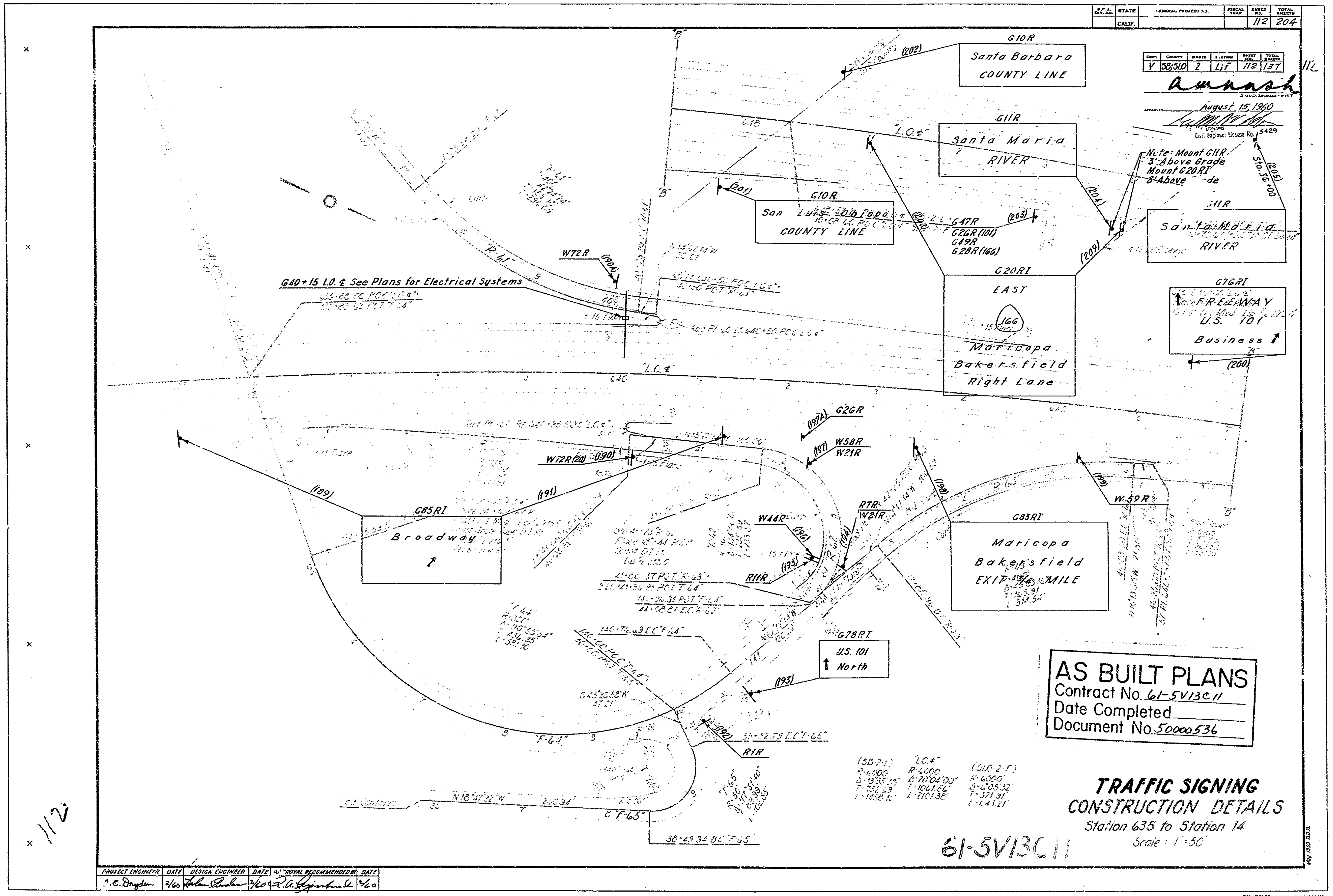
August 15, 1960



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed ________
Document No. 50000536

TRAFFIC SIGNING
CONSTRUCTION DETAILS
Station 112 "F-64" to Station 129 "F-64"
Scale: 1" = 50'

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	[illegible]	2/60	R. A. [illegible]	2/60

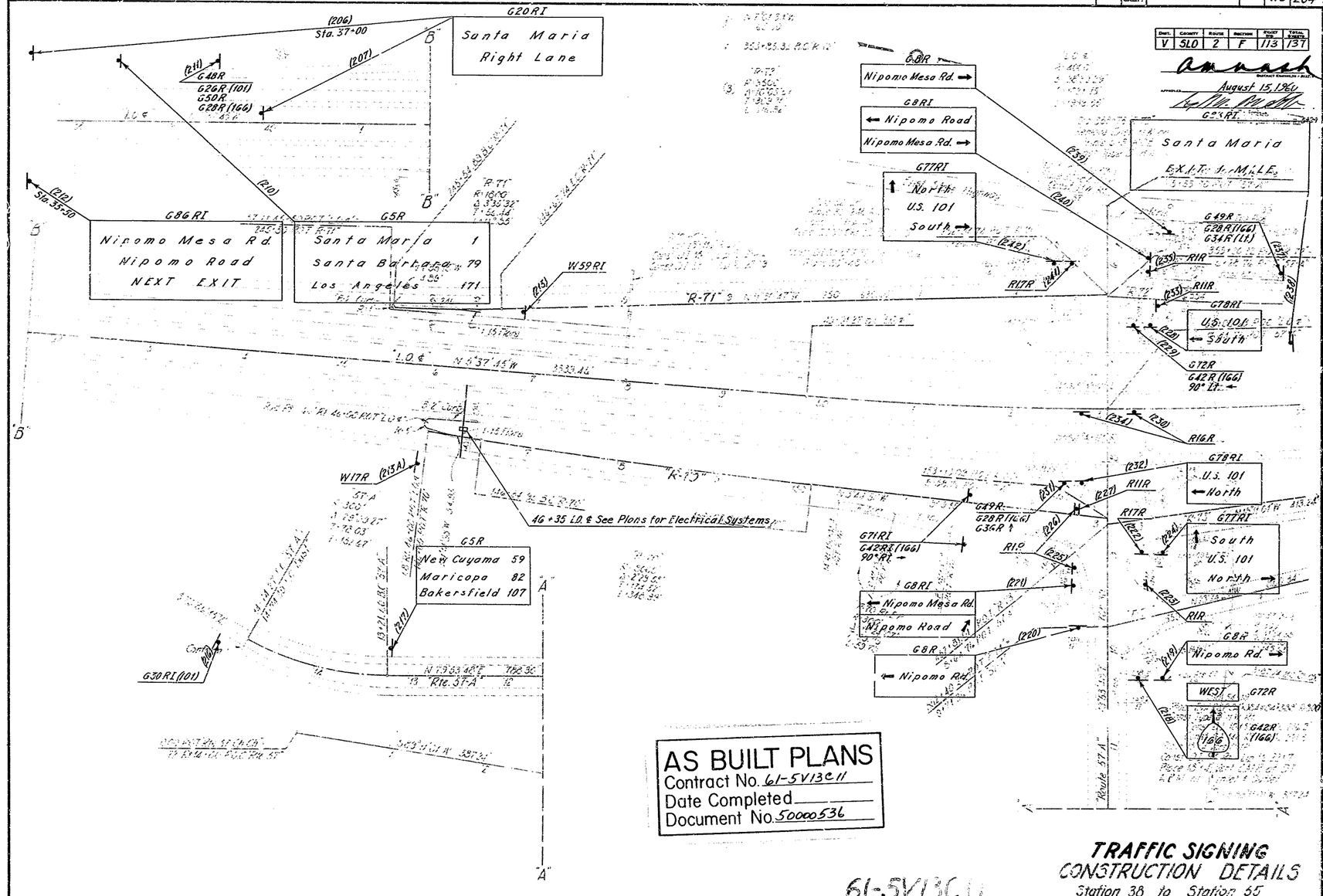

STATE CALIF. FEDERAL PROJECT NO. SHEET NO. 112 TOTAL SHEETS 204
V SB;SLO 2 L;F 112 137
August 15, 1960
Note: Mount G11R 3' Above Grade Mount G20RI 8' Above Grade
G10R Santa Barbara COUNTY LINE
G11R Santa Maria RIVER
G10R San Luis Obispo COUNTY LINE
G47R G26R(101) G49R G28R(166)
G20RI EAST 166 Maricopa Bakersfield Right Lane
G11R Santa Maria RIVER
G76RI FREEWAY U.S. 101 Business
G40+15 L.O. ¢ See Plans for Electrical Systems
W72R
G85RI Broadway
W72R(20)
G26R
W58R W21R
W44R
R7R W21R
R11R
G83RI Maricopa Bakersfield EXIT 1/4 MILE
W59R
G78RI U.S. 101 North
R1R
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
TRAFFIC SIGNING
CONSTRUCTION DETAILS
Station 635 to Station 14
Scale: 1"=50'
61-5V13C11
PROJECT ENGINEER DATE DESIGN ENGINEER DATE APPROVAL RECOMMENDED BY DATE
2/60 2/60 2/60
13
112

NO. DIST. NO.	STATE	FEDERAL PROJECT NO.	FISC. YR. YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			113	204

DIST.	COUNTY	ROUTE	SECTION	POST MILE	TOTAL SHEETS
V	SLO	2	F	113	137

113

August 15, 1960



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

TRAFFIC SIGNING
CONSTRUCTION DETAILS
Station 38 to Station 55
Scale: 1" = 60'

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60		2/60		3/60

113

14

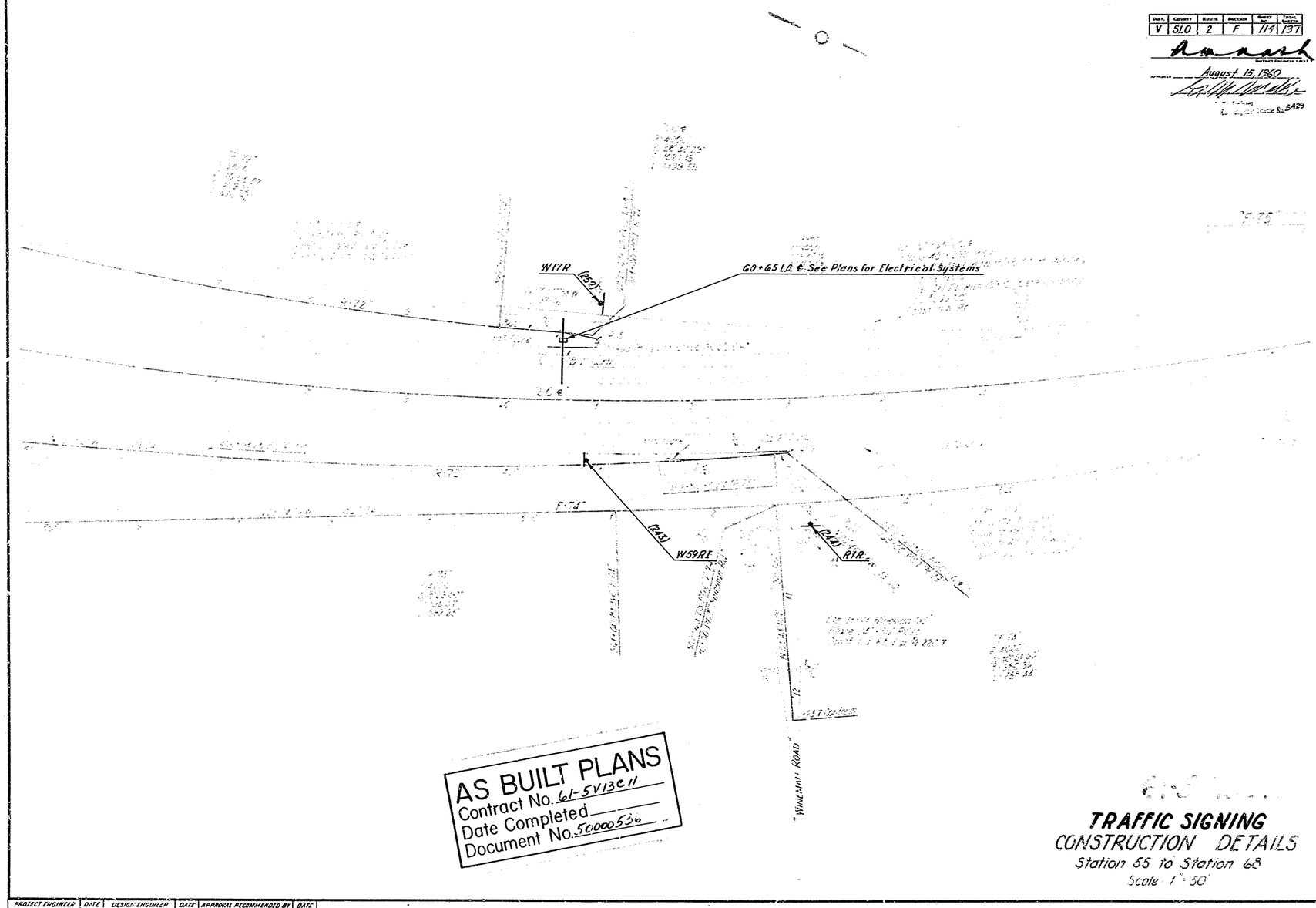
B.P.R. Dist. No.	STATE	FEDERAL PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
	CALIF.			114	204

Dist.	County	Route	Section	Sheet No.	Total Sheets
V	SLO	2	F	114	137

114

August 15, 1960

Registered Civil Engineer No. 5429



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 500005536

TRAFFIC SIGNING CONSTRUCTION DETAILS

Station 55 to Station 68

Scale 1" = 50'

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60		2/60		3/60

114

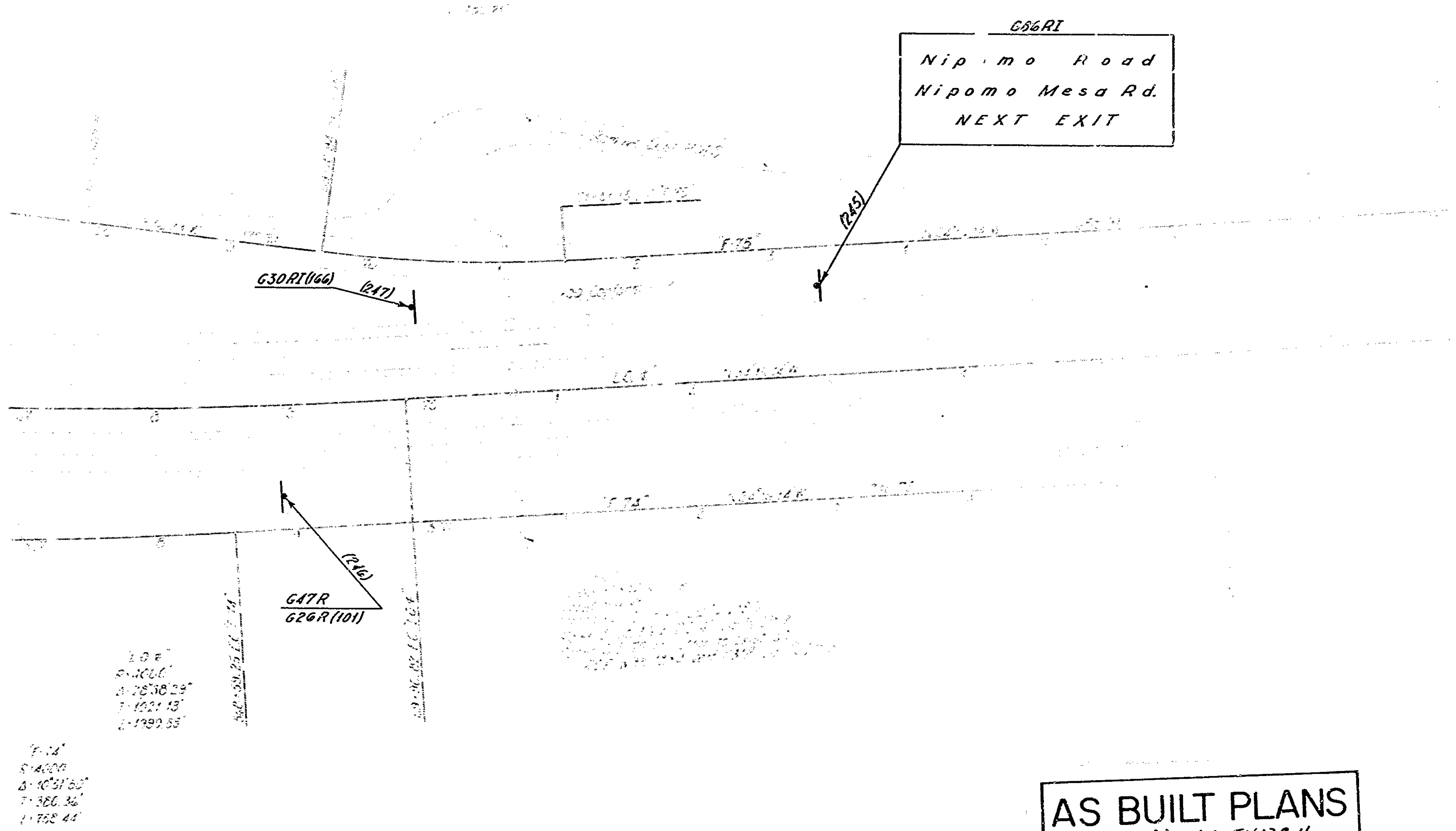
June 1959 D.B.S.

15

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SLO	2	F	115	137

STATE	SHEET NO.	TOTAL SHEETS
CALIF.	115	204

August 15, 1960



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

TRAFFIC SIGNING

CONSTRUCTION DETAILS

Station 67 to Station 80

Scale 1" = 50'

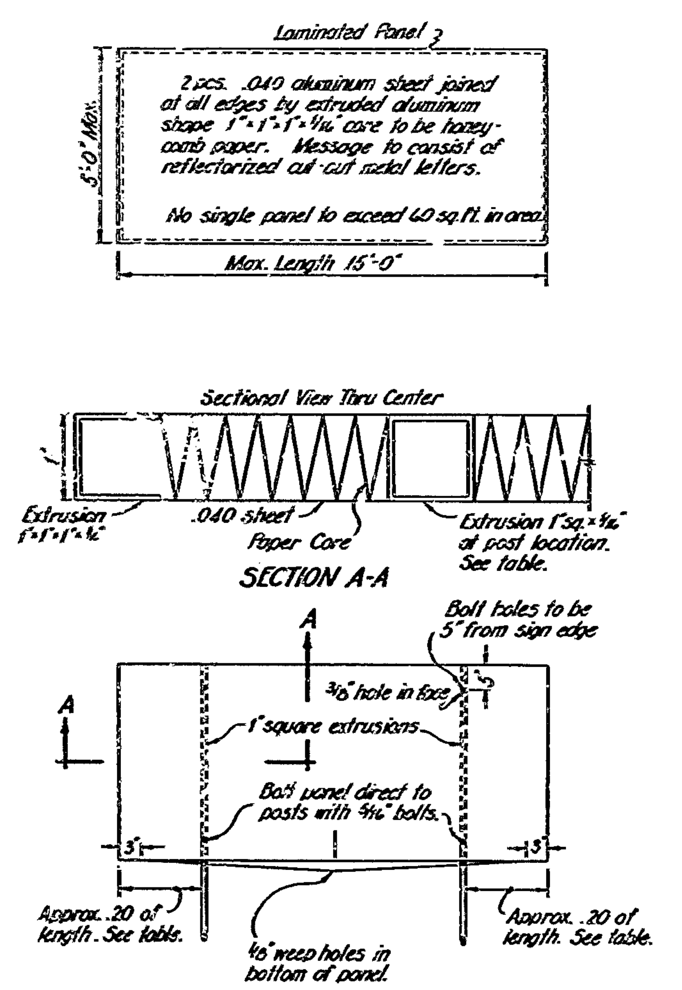
61-5V13C11

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	[illegible]	2/60	[illegible]	2/60

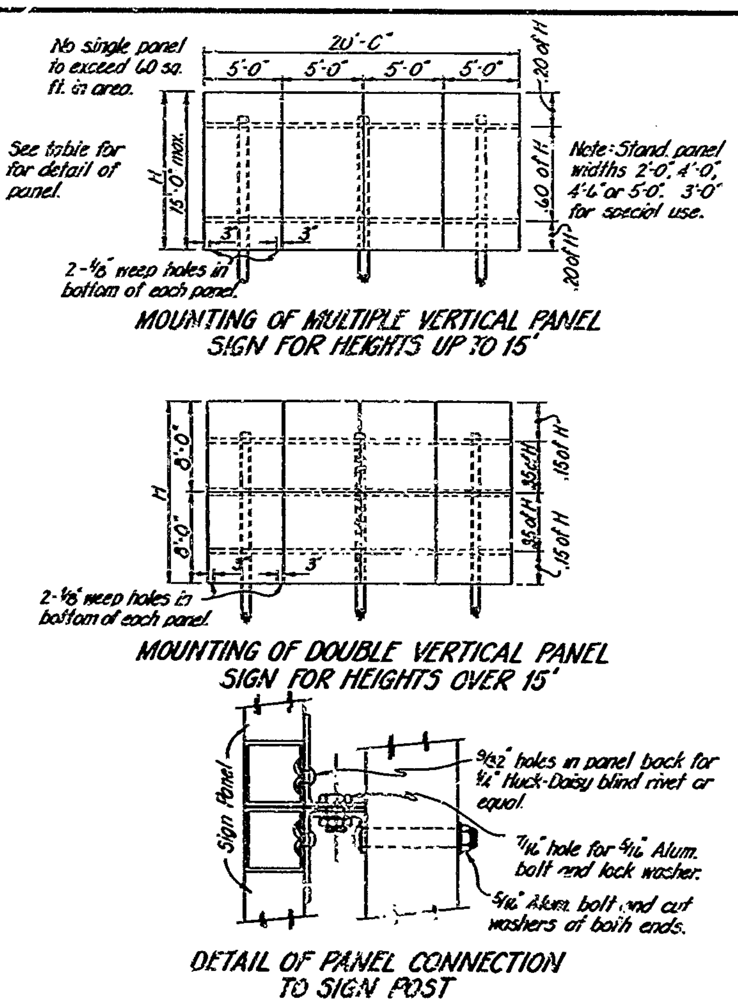
115

August 15, 1960

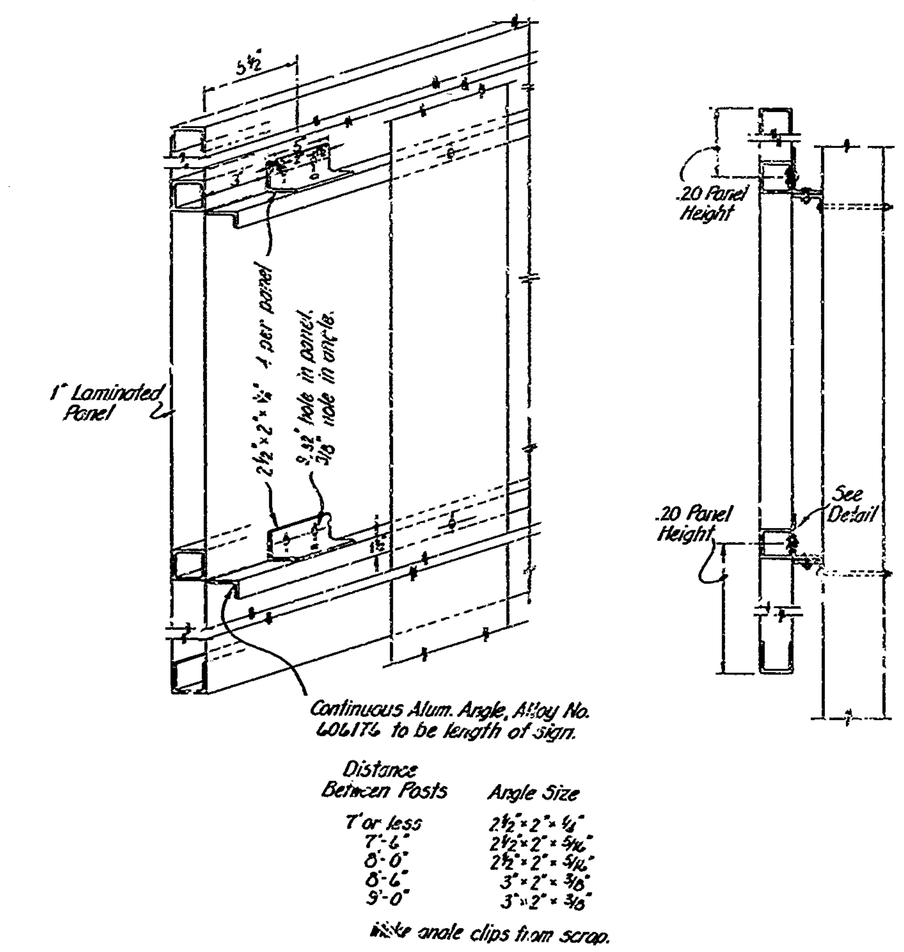
5429



SINGLE HORIZONTAL PANEL FOR ALUMINUM SIGNS



MULTIPLE VERTICAL PANELS FOR ALUMINUM SIGNS



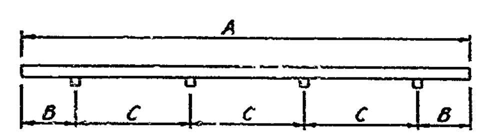
METHOD OF INSTALLING VERTICAL PANELS

Steel Notes:

1. All steel pipes will be hot-dipped galvanized after fabrication.
2. Size of pipe is American Institute of Steel Construction Specifications.
3. Top of pipe will be capped with 1/4" plate.
4. Apply aluminum impregnated calking compound between contact surfaces of aluminum and steel.
5. One splice permitted in pipe under 40' in length. Two splices for over 40' in length.

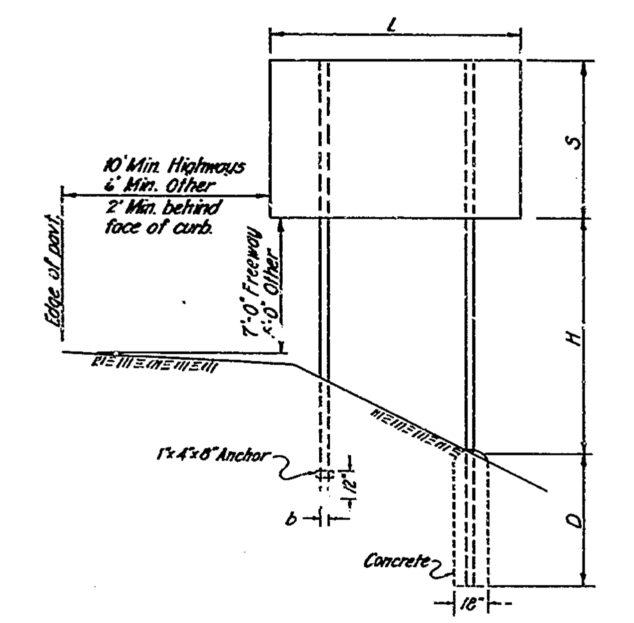
Length of Sign A	Type of Panel	No. Posts	Overhang B	Post Spacing C
0 to 4'-4"	Horizontal	1	-	-
4'-4" to 5'-0"	"	2	None	Var.
5'-6"	"	"	12"	3'-6"
6'-0"	"	"	12"	4'-0"
6'-6"	"	"	15"	4'-0"
7'-0"	"	"	15"	4'-6"
7'-6"	"	"	18"	4'-6"
8'-0"	"	"	18"	5'-0"
8'-6"	"	"	20"	5'-2"
9'-0"	"	"	22"	5'-4"
9'-6"	"	"	23"	5'-8"
10'-0"	"	"	24"	6'-0"
10'-6"	"	"	24"	6'-6"
11'-0"	"	"	24"	7'-0"
11'-6"	"	"	27"	7'-0"
12'-0"	"	"	30"	7'-0"
12'-6"	"	"	30"	7'-6"
13'-0"	"	"	30"	8'-0"
13'-6"	"	"	30"	8'-6"
14'-0"	"	"	30"	9'-0"
14'-6"	"	"	36"	8'-6"
15'-0"	"	"	36"	9'-0"
16'-0"	Vertical	3	24"	6'-0"
18'-0"	"	"	24"	7'-0"
20'-0"	"	"	30"	7'-6"
22'-0"	"	"	36"	8'-0"
24'-0"	"	"	36"	9'-0"
26'-0"	"	4	30"	7'-0"
28'-0"	"	"	24"	8'-0"
30'-0"	"	"	36"	8'-0"
32'-0"	"	"	36"	8'-8"

POST SPACING TABLE FOR LAMINATED PANEL SIGNS



Length of Sign A	Type of Panel	No. Posts	Overhang B	Post Spacing C
0 to 4'-4"	Horizontal	1	-	-
4'-4" to 5'-0"	"	2	None	Var.
5'-0"	"	"	None	4'-8"
5'-6"	"	"	3"	5'-0"
6'-0"	"	"	6"	5'-0"
6'-6"	"	"	9"	5'-0"
7'-0"	"	"	12"	5'-0"
7'-6"	"	"	15"	5'-0"
8'-0"	"	"	12"	6'-0"
8'-6"	"	"	15"	6'-0"
9'-0"	"	"	12"	7'-0"
9'-6"	"	"	15"	7'-0"
10'-0"	"	"	12"	8'-0"

POST SPACING TABLE FOR SINGLE SHEET METAL SIGNS



SIGN INSTALLATION

H Max. Ft.	S Max. Ft.	D (b=4") Ft.	D (b=6") Ft.	D (b=18) Encl. in Conc. Ft.
6	2	4	4	-
	4	6	5	-
	6	7.5	6.5	4.5
	8	9	7.5	5
	10		8	6
7	2	5	4	-
	4	7	5.5	4
	6	8	7	5
	8	9	8	5.5
	10	-	9	6
9	2	5.5	4.5	3
	4	7.5	6	4
	6	9	7.5	5
	8		8.5	6
	10	-	-	6.5
11	2	6	5	3
	4	7.5	6.5	4.5
	6	9	8	5.5
	8	-	9	6
	10	-	-	7
13	2	6	5	3.5
	4	8	7	4.5
	6		8	5.5
	8	-	9	6
	10	-	-	7

TABLE FOR MINIMUM DEPTH OF POST
(Based on length [L] of 5.0 ft. per post)

H Ft.	S Ft.	Pipe Size in (lb/ft.)	D (b=var.) Ft.	D (b=18") Encl. in Conc. Ft.
7	6	6 (18.97)	7	5
	8	8 (24.7)	8	6
	10	8 (28.55)	9	7
	12	10 (31.20)	9	7.5
9	6	8 (24.70)	7	5.5
	8	8 (24.70)	8	6.5
	10	10 (31.20)	8	7.0
	12	10 (31.20)	9	8.0
11	6	8 (24.70)	7	5.5
	8	8 (28.55)	8	6.5
	10	10 (31.20)	8	7.
	12	10 (40.48)	9	8
13	6	8 (24.70)	8	6
	8	10 (31.20)	8	7
	10	10 (31.20)	9	7.5
	12	10 (40.48)	10	8
15	6	8 (24.70)	8	6.5
	8	10 (31.20)	8	7
	10	10 (34.24)	9	7.5
	12	12 (43.77)	10	8
17	6	8 (28.55)	8	7
	8	10 (31.20)	9	7
	10	10 (40.48)	10	8
	12	12 (43.77)	10	8

TABLE FOR STEEL POST DESIGN
(Based on length [L] of 7.5 ft. per post.)

General Notes:

1. Concrete, structure excavation and backfill, mounting of sign to be included in price paid for installing posts.
2. Depth table is for average soil conditions. Extreme soft or hard ground will require greater or less depth as determined by the Engineer.
3. Sign panels to be furnished by the State.
4. Hardware except aluminum angles for joists to be furnished by the state.
5. The location of signs are subject to revision by the Engineer.
6. All wood posts to be treated const. grade Douglas fir or better according to section 83-1.02A of the Standard Specifications.
7. Concrete incased posts are not to be used next to roadway.

61-5V13C11

MISCELLANEOUS DETAILS

Scale: None

Dec. 1959 D.D.B.

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J.E. Dryden	2/60	[signature]	7/60	[signature]	7/60

115

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB, SLO	2	LSM,A	117	137

117

Approved August 15,1960

TRAFFIC SIGNS

C = Post Encased In Concrete
* F.T.B. = Facing Traffic Bound
** Class "B" P.C.C. included in price paid for installing sign posts. See misc. detail sheet.

WEIGHTS OF STEEL PIPE

DIA. IN.	CODE	SIZE LBS. PER FT.
6	H	18.97
8	L	24.70
8	H	28.55
10	L	31.20
10	M	34.24
10	H	40.48
12	L	43.77

CODE NO.	*F.T.B.	STATION	LOCATION LT.	LOCATION RT.	SIGN SIZE LENGTH IN.	SIGN SIZE HEIGHT IN.	PANELS	POSTS SIZE	POSTS LENGTHS FT.	POSTS LENGTHS FT.	POSTS LENGTHS FT.	POSTS TOTAL BD. FT.	JOISTS NO.-SIZE-LENGTH IN. FT.	JOISTS ALUM. LBS.	STEEL POSTS LBS.	**CLASS "B" P.C.C. C.Y.
G83RI	N	233+00 "RL¢"		30'	186	72	Vert.	6×8	22	22C	24C	272	2-2½×2×¼-15½	40.0		0.66
G20RI	N	257+00 "RL¢"	24'		156	60	Vert.	6×8	20	22		168	2-2½×2×5/16-13	41.3		
G20RI	N	260+00 "RL¢"		29'	156	60	Vert.	6×8	22	22C		176	2-2½×2×5/16-13	41.3		0.33
G76RI	N	271+50 "RL¢"		25'	132	76	Vert.	6×8	24	24C		192	2-2½×2×¼-11	28.4		0.33
G5RI	S	281+25 "LL¢"	31'		204	84	Vert.	4×10	24 22C	24C	28C	333	2-2½×2×¼-17	43.9		1.08
G26R	N	284+70 "RL¢"		23'	28	24		Place on Light Standard								
W72R	N	34+00 "R-10"		24'	48	60		4×6	20			40				
G48R	S	284+00 "LL¢"	24'		26	10		4×4	18			24				
G26R	S	Placed Above G48R			28	24										
W59RI	N	289+25 "RL¢"		25'	48	48		4×6	20			40				
W59RI	S	292+65 "LL¢"	25'		48	48		4×6	20			40				
R7R	S	88+85 "R-10"	2'		30	30		4×4	14			19				
W21R	S	Placed Below R7R			18	18										
R11R	S	88+85 "R-10"		24'	36	36		4×4	14			19				
G77RI	W	189+75 "F-18"	24'		96	72	Vert.	6×6	20	20		120	2-2½×2×¼-8	20.6		
R1R	W	190+05 "F-18"		24'	30	30		4×4	14			19				
W67R	N	190+55 "F-18"		23'	67	40	Horiz.	4×6	16	16		64				
G78RI	S	192+00 "F-18"	24'		78	42	Horiz.	4×6	18	16		68				
R1R	E	188+60 "F-17"	24'		30	30		4×4	14			19				
W53R	N	190+55 "F-17"		20'	36	25		4×4	12			16				
G47R	N	300+00 "RL¢"		24'	26	10		4×4	18			24				
G26R	N	Placed Above G47R			28	24										
G78RI	W	199+00 "F-18"		24'	78	42	Horiz.	4×6	16	14		60				
R16R	W	200+55 "F-18"		22'	30	30		4×4	12			16				
R17R	E	202+15 "F-18"	22'		26	30		4×4	12			16				
G77RI	E	205+00 "F-18"	24'		96	72	Vert.	6×6	20	22		126	2-2½×2×¼-8	20.6		
R1R	E	205+90 "F-18"	23'		30	30		4×4	12			16				
R1R	S	60+45 "R-13"	35'		30	30		4×4	14			19				
R11R	S	60+30 "R-13"		8'	36	36		4×4	14			19				
G6R	S	60+50 "R-13"	45'		108	24	Horiz.	4×4	14	14		37				
R17R	E	99+65 "R-12"		2'	26	30		4×4	12			16				
R16R	S	199+50 "R-12 Conn"	2'		30	30		4×4	12			16				
G26R	S	306+25 "LL¢"	23'		28	24		Place on Light Standard								
R14R	S	207+65 "F-18"	22'		36	24		4×4	14			19				
G8RI	S	307+00 "LL¢"	27'		120	54	Horiz.	6×6	20	20		120				
G8RI	S	312+50 "LO¢"	62'		120	54	Horiz.	6×6	20	20		120				
G20RI	S	330+00 "LO¢"	63'		144	54	Horiz.	4×8	22	18		107				
G20RI	S	333+00 "LO¢"	12'		144	54	Horiz.	4×8	22	22		117				
W17R	S	67+60 "R-13"	24'		36	36		4×4	14			19				
W31R	N	209+30 "F-17"	¢		24	24		4×4	14			19				
W21R	N	Placed Below W31R			18	18										
G20RI	N	384+00 "LO¢"		10'	176	82	Vert.	6×8	20C	20C	22	248	2-2½×2×¼-14⅔	37.9		0.66
G20RI	N	387+00 "LO¢"		65'	176	82	Vert.	4×10	24	24C	26C	246	2-2½×2×¼-14⅔	37.9		0.72
G85RI	N	402+00 "LO¢"		63'	142	102	Vert.	6×8	26	24C	24C	296	2-2½×2×¼-11⅚	30.5		0.66
G48R	S	404+00 "LO¢"	59'		26	10		4×4	16			21				
G26R	S	404+00 "LO¢"	59'		28	24		Place with G48R								
G85RI	N	405+50 "LO¢"		66'	208	102	Vert.	4×10	26 22C	24C	26C	327	2-2½×2×¼-17⅓	44.7		1.08
G85RI	N	411+45 "LO¢"		66'	208	102	Vert.	6×8	26 22C	22C	22C	368	2-2½×2×¼-17⅓	44.7		0.99
W59RI	S	411+45 "LO¢"	60'		48	48		4×6	20			40				
G26R	N	412+50 "LO¢"		58'	28	24		4×4	14			19				
W59RI	N	421+00 "LO¢"		60'	48	48		4×6	22			44				
W17RI	N	110+22 "R-20"		26'	36	36		4×4	16			21				
G85RI	S	421+80 "LO¢"	66'		208	102	Vert.	6×8	26 22C	22C	22C	368	2-2½×2×¼-17⅓	44.7		0.99
G85RI	S	428+50 "LO¢"	68'		208	102	Vert.	4×10	26 22C	24C	24C	320	2-2½×2×¼-17⅓	44.7		1.08
G26R	N	429+00 "LO¢"		59'	28	24		4×4	16			21				
G47R	N	429+00 "LO¢"		59'				Place with G26R								
G20RI	S	450+00 "LO¢"	65'		176	82	Vert.	6×8	24	22C	24C	280	2-2½×2×¼-14⅔	37.8		0.66
G20RI	S	453+00 "LO¢"	10'		176	82	Vert.	6×8	22C	20C	22	256	2-2½×2×¼-14⅔	37.8		0.66
W17R	S	123+10 "R-22"	26'		36	36		4×4	16			21				
G6R	W	10+50 "Bett."	27'		114	42	Horiz.	4×6	18	18		72				
G67RI	E	16+00 "Bett."		26'	84	42	Horiz.	4×6	16	18		68				
G26R	S	420+85 "LO¢"	58'		28	24		4×4	14			19				
R1R	S	210+42 "F-26"	24'		30	30		4×4	14			19				
W53R	S	209+00 "F-25"	20'		36	25		4×4	14			19				
R1R	N	17+55 "Bett."		40'	30	30		4×4	14			19				
G6RI	S	17+65 "Bett."	43'		114	42	Horiz.	4×6	16	16		64				
R1R	S	17+75 "Bett."	43'		30	30		4×4	14			19				

CODE NO.	*F.T.B.	STATION	LOCATION LT.	LOCATION RT.	SIGN SIZE LENGTH IN.	SIGN SIZE HEIGHT IN.	PANELS	POSTS SIZE	POSTS LENGTHS FT.	POSTS LENGTHS FT.	POSTS LENGTHS FT.	POSTS TOTAL BD. FT.	JOISTS NO.-SIZE-LENGTH INS. FT.	JOISTS ALUM. LBS.	STEEL POSTS LBS.	**CLASS "B" P.C.C. C.Y.
R17R	E	17+75 "Bett."		44'	26	30		4×4	14			19				
G77RI	E	17+75 "Bett."		61'	96	72	Vert.	6×6	18	18		108	2-2½×2×¼-8	20.6		
R11R	N	116+65 "R-22"		6'	36	36		4×4	14			19				
G6RI	S	118+00 "R-22"	28'		100	50	Horiz.	6×6	18	22		80				
R16R	W	18+40 "Bett."	22'		30	30		4×4	16			21				
G78RI	W	18+95 "Bett."	24'		78	42	Horiz.	4×6	16	20		72				
G78RI	E	20+75 "Bett."		22'	78	42		4×6	10	8	8	52				
R16R	W	21+25 "Bett."		22'	30	30		4×4	14			19				
R11R	N	115+70 "R-20"	7'		36	36		4×4	12			16				
R1R	N	21+95 "Bett."		40'	30	30		4×4	14			19				
R17R	W	22+00 "Bett."	27'		26	30		4×4	14			19				
G78RI	W	22+00 "Bett."	41'		78	42	Horiz.	4×6	22	24		92				
G6RI	N	22+10 "Bett."		40'	108	42	Horiz.	4×6	16	16		64				
R1R	N	23+00 "Bett."		40'	30	30		4×4	14			19				
G67RI	W	23+00 "Bett."	24'		84	42	Horiz.	4×6	16	18		68				
G77RI	W	26+00 "Bett."	24'		96	72	Vert.	6×6	20	22		126	2-2½×2×¼-8	20.6		
G20RI	N	438+00 "LO¢"		12'	142	60	Horiz.	4×8	18C	22		107				0.29
G86RI	S	440+00 "LO¢"	68'		248	100	Vert.	1-8L, 2-10L	25.6	29.3	33.1		2-2½×2×5/16-20⅔	65.7	2579	
G20RI	N	441+00 "LO¢"		63'	142	60	Horiz.	6×8	22	22C		176				0.30
G48R	S	451+00 "LO¢"	59'		26	10		4×4	18			24				
G26R	S	Placed Below G48R			28	24										
G26R	S	464+00 "LO¢"			28	24		Place on Light Standard								
W59RI	S	459+50 "LO¢"	60'		48	48		4×6	20			40				
G45RI	S	464+50 "LO¢"	65'		170	78	Vert.	6×8	22	22	22	264	2-2½×2×¼-14⅙	36.6		
W72R	S	265+25 "R-31"	24'		48	66		6×6	18			54				
G77RI	W	663+75 "F-34"	22'		96	72	Vert.	6×6	20	20		120	2-2½×2×¼-8	20.6		
R10R(R1)	E	163+80 "R-30"		2'	40	12		4×4	10			13				
R16R	E	164+10 "R-30"	22'		30	30		4×4	14			19				
R7R	E	164+25 "R-30"		2'	30	30		4×4	16			21				
W21R	E	Placed Below R7R			18	18										
R11R	S	259+50 "R-31"	24'		36	36		4×4	14			19				
R1R	W	164+80 "R-30"		22'	30	30		4×4	12			16				
G78RI	S	660+85 "F-34"		24'	78	42	Horiz.	4×6	16	18		68				
G85RI	N	469+00 "LO¢"		65'	170	78	Vert.	6×8	24	22C	22C	272	2-2½×2×¼-14⅙	36.6		0.60
G85RI	S	471+00 "LO¢"	65'		170	78	Vert.	6×8	24	22C	22C	272	2-2½×2×¼-14⅙	36.6		0.60
G77RI	E	3+00 "Stow."		24'	96	72	Vert.	6×6	20	22		126	2-2½×2×¼-8	20.6		
G77RI	S	4+50 "Stow."	45'		96	72	Vert.	6×6	22	22		132	2-2½×2×½-8	20.6		
R1R	S	4+65 "Stow."	45'		30	30		4×4	16			21				
R1R	N	5+40 "Stow."		43'	30	30		4×4	18			24				
G78RI	N	5+57 "Stow."		43'	78	42	Horiz.	4×6	18	18		72				
G78RI	W	6+40 "Stow."	24'		78	42	Horiz.	4×6	16	18		68				
G78RI	E	13+60 "Stow."		24'	78	42	Horiz.	4×6	16	18		68				
R1R	S	14+60 "Stow."	42'		30	30		4×4	14			19				
R1R	N	15+40 "Stow."		33'	30	30		4×4	14			19				
G77RI	N	15+60 "Stow."		33'	96	72	Vert.	6×6	20	20		120	2-2½×2×¼-8	20.6		
G77RI	W	16+45 "Stow."	24'		96	72	Vert.	6×6	20	22		126	2-2½×2×¼-8	20.6		
G26R	N	476+00 "LO¢"		58'	28	24		4×4	14			19				
W72R	N	374+20 "R-32"		24'	48	60		4×6	18			36				
G85RI	N	475+00 "LO¢"		65'	170	78	Vert.	6×8	22	22	22	264	2-2½×2×¼-14⅙	36.6		
G83RI	N	478+00 "LO¢"		65'	186	100	Vert.	6×8	24 22C	22C	24C	368	2-2½×2×¼-15½	40.0		0.90
W44R	E	378+00 "R-32"		26'	53	30		6×6	16			48				
R11R	W	Placed Opposite W44R			36	36										
R7R	W	576+37 "R-33"	2'		30	30		4×4	16			21				
W21R	W	Placed Below R7R			18	18										
W59RI	N	480+30 "LO¢"		60'	48	48		4×6	20			40				
G20RI	S	488+00 "LO¢"	63'		142	60	Horiz.	6×8	22	22C		176				0.30
G47R	N	488+00 "LO¢"		59'	26	10		4×4	18			24				
G26R	N	Placed Below G47R			28	24										
G20RI	S	491+00 "LO¢"	12'		142	60	Horiz.	4×8	18C	22		107				0.29
G9RI	N	495+00 "LO¢"		64'	156	60	Vert.	6×8	22	22C		176	2-2½×2×5/16-13	41.3		0.30
G20RI	N	499+00 "LO¢"		11'	156	136	Vert.	2-10L	28.7	27.8			2-2½×2×5/16-13	41.3	1763	
G20RI	N	502+00 "LO¢"		64'	156	136	Vert.	1-10L, 1-10H	29.3	33.3			2-2½×2×5/16-13	41.3	2262	

61-5V13C11

QUANTITY SUMMARY

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J.E. Dryden	2/60	[signature]	2/60	[signature]	2/60

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DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB,SLO	2	LSM-[illegible]	118	137

STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
CALIF.			118	204

118

TRAFFIC SIGNS

WEIGHTS OF STEEL PIPE

Dia. in.	Code	Size lbs. per ft.
6	H	18.97
8	L	24.70
8	H	28.55
10	L	31.20
10	M	34.24
10	H	40.48
12	L	43.77

C - Post Encased in Concrete.
* F.T.B. - facing Traffic Bound
** Class "B" P.C.C. included in price paid for installing sign posts. See misc. detail sheet.

(signature) District Engineer - Dist. V
Approved August 15, 1960
(signature)

CODE NO.	*F.T.B.	STATION	LOCATION LT.	LOCATION RT.	SIGN SIZE LENGTH IN.	SIGN SIZE HEIGHT IN.	PANELS	POSTS SIZE	POSTS LENGTHS FT.	POSTS LENGTHS FT.	POSTS LENGTHS FT.	POSTS TOTAL BD. FT.	JOISTS NO-SIZE-LENGTH INS. FT.	JOISTS ALUM. LBS.	STEEL POSTS LBS.	**CLASS "B" P.C.C. C.Y.
G48R	S	509+50 "L.O.¢"	59'		26	10		4×4	18							
G26R	S	Placed Below G48R			28	24										
G30RI	N	510+00 "L.O.¢"		63'	132	60	Horiz.	6×8	22	22C		176				0.30
W59RI	S	517+75 "L.O.¢"	60'		48	48		4×6	20			40				
G49R	E	6+00 "Main"		28'	26	10		4×4	14			19				
G28R	E	Placed Below G49R			28	25										
G28R	W	6+00 "Main"	28'		28	25		4×4	14			19				
G8R	E	7+00 "Main"		30'	76	16	Horiz.	4×4	14	14		37				
R1R	N	7+95 "Main"		43'	30	30		4×4	14			19				
R17R	E	8+35 "Main"		50'	26	30		4×4	12			16				
G77RI	E	8+35 "Main"		70	96	72	Vert.	4×8	24	24		128	2-2½×2×¼-8	20.6		
G6RI	S	8+35 "Main"	65		108	48	Horiz.	4×6	20	20		80				
R1R	S	8+50 "Main"	65		30	30		4×4	14			19				
W17R	N	16+20 "R-40"	24		36	36		4×4	16			21				
G50R	S	25+08 "R-42"	36		26	10		4×4	16			21				
G28R	S	Placed Below G50R			28	25										
G34R	S	Placed Below G28R			26	14										
G50R	S	25+08 "R-42"		2'	26	10		4×4	16			21				
G28R	S	Placed Below G50R			28	25										
G34R	S	Placed Below G28R			26	14										
R11R	N	23+93 "R-42"		2'	36	36		4×4	12			16				
R1R	S	Place Opposite R11R			30	30										
R16R	W	9+30 "Main"	28'		30	30		4×4	12			16				
G78RI	W	9+30 "Main"	39'		78	42		4×6	16	16		64				
G9RI	S	524+00 "L.O.¢"	64'		156	60	Vert.	4×10	24	24C		160	2-2½×2×5/16-13	41.3		0.34
G49R	E	10+10 "Main"		28'	26	10		4×4	16			21				
G28R	E	Placed Below G49R			28	25										
G34R	E	Placed Below G28R			26	14										
R16R	E	10+85 "Main"		28'	30	30		4×4	14			19				
G78RI	E	10+85 "Main"		40'	78	42	Horiz.	4×6	16	16		64				
R1R	N	11+65 "Main"		50'	30	30		4×4	14			19				
G50R	N	21+50 "R-40"		36'	26	10		4×4	16			21				
G28R	N	Placed Below G50R			28	25										
G34R	N	Placed Below G28R			26	14										
R11R	S	22+62 "R-40"	4'		36	36		4×4	14			19				
R1R	N	Place Opposite R11R			30	30										
G50R	N	21+50 "R-42"	2'		26	10		4×4	14			19				
G28R	N	Placed Below G50R			28	25										
G34R	N	Placed Below G28R			26	14										
R17R	W	11+80 "Main"	42'		26	30		4×4	14			19				
G28R	W	11+80 "Main"	58'		28	25	}									
G28R	↓	↓	↓		28	25										
G26R	↓	↓	↓		28	24										
G26R	↓	↓	↓		28	24										
G50R	↓	↓	↓		26	10										
G49R	↓	↓	↓		26	10		6×8	20			80	3-2½×2×¼-10			
G48R	↓	↓	↓		26	10										
G47R	↓	↓	↓		26	10										
G36R	↓	↓	↓		14	14										
G34R(RI)	↓	↓	↓		26	14										
G36R	↓	↓	↓		14	14										
G34R(RI)	W	11+80 "Main"	58'		26	14	}									
G6R	N	11+85 "Main"		52'	108	48	Horiz.	4×6	18	18		72				
G77RI	W	13+00 "Main"	30'		96	72	Vert.	6×6	20	20		120	2-2½×2×¼-8	20.6		
W59RI	N	530+00 "L.O.¢"		60'	48	48		4×6	20			40				
G47R	N	538+00 "L.O.¢"		59'	26	10		4×6	20			40				
G26R	N	Placed Below G47R			28	24										
G49R	N	Placed Next To G47R			26	10										
G28R	N	Placed Below G49R			28	25										
W17R	S	30+10 "R-42"	25'		36	36		4×4	16			21				

CODE NO.	*F.T.B.	STATION	LOCATION LT.	LOCATION RT.	SIGN SIZE LENGTH IN.	SIGN SIZE HEIGHT IN.	PANELS	POSTS SIZE	POSTS LENGTHS FT.	POSTS LENGTHS FT.	POSTS LENGTHS FT.	POSTS TOTAL BD. FT.	JOISTS NO-SIZE-LENGTH INS. FT.	JOISTS ALUM. LBS.	STEEL POSTS LBS.	**CLASS "B" P.C.C. C.Y.
G20RI	N	543+00 "L.O.¢"		10'	174	60	Vert.	6×8	20C	22		168	2-3×2×3/8-14½	61.2		0.30
G20RI	N	546+00 "L.O.¢"		65'	174	60	Vert.	6×8	22	20C		168	2-3×2×3/8-14½	61.2		0.30
G9RI	N	550+00 "L.O.¢"		64'	156	60	Vert.	6×8	22	20C		168	2-2½×2×5/16-13	41.3		0.30
G20RI	S	550+00 "L.O.¢"	64'		156	136	Vert.	1-10L, 1-10H	29.8	34.8			2-2½×2×5/16-13	41.3	2338	
G20RI	S	553+00 "L.O.¢"	11'		156	136	Vert.	3-10L	28.0	28.7	27.8		2-2½×2×5/16-13	41.3	1763	
G26R	N	569+75 "L.O.¢"		58'	28	24		Place on Light Standard								
W17R	N	68+40 "R-50"		24'	36	36		4×4	14			19				
G85RI	N	563+75 "L.O.¢"		63'	140	102	Vert.	6×8	26	24C	24C	296	2-2½×2×¼-11⅔	30.1		0.60
G85RI	N	569+10 "L.O.¢"		63'	140	102	Vert.	6×8	26	22C	22C	280	2-2½×2×¼-11⅔	30.1		0.60
W59RI	N	574+00 "L.O.¢"		60'	48	48		4×6	22			44				
W44R	N	73+85 "R-50"		25'	53	30		4×6	16			32				
R11R	S	Placed Opposite W44R			36	36										
R7R	S	73+89 R-50	2'		30	30		4×4	16			21				
W21R	S	Place Below R7R			18	18										
G83RI	S	575+00 "L.O.¢"	65'		186	100	Vert.	6×8	24 22C	24C	24C	376	2-2½×2×¼-15½	40.0		0.90
G26R	S	576+00 "L.O.¢"	59'		28	24	}	4×6	18			24				
G28R	S	Place Beside G26R			28	25										
G48R	S	576+00 "L.O.¢"			28	24		Place Above G26R								
G50R	S	576+00 "L.O.¢"	59'		26	10	}	Place Above G28R								
G77RI	W	13+50 "Donov."		22'	96	72	Vert.	6×6	18	18		108	2-2½×2×¼-8	20.6		
R1R	S	14+55 "Donov."	30'		30	30		4×4	14			19				
W53R	S	14+80 "Donov."		35'	36	25		4×4	14			19				
G9RI	S	581+00 "L.O.¢"	77'		156	60	Vert.	6×6	20	16		108	2-2½×2×5/16-13	41.3		
R1R	N	15+20 "Donov."		22'	30	30		4×4	14			19				
G73RI	E	16+50 "Donov."	24'		78	42	Horiz.	4×6	14	16		60				
G78RI	W	23+50 "Donov."		24'	78	42	Horiz.	4×6	14	16		60				
R1R	S	24+83 "Donov."	27'		30	30		4×4	14			19				
W53R	N	25+15 "Donov."	43'		36	25		4×4	14			19				
W59RI	S	586+20 "L.O.¢"	60'		48	48		4×6	20			40				
R1R	N	25+40 "Donov."		40'	30	30		4×4	14			19				
G77RI	E	26+50 "Donov."	24'		96	72	Vert.	6×6	18	20		114	2-2½×2×¼-8	20.6		
G26R	N	586+00 "L.O.¢"		59'	28	24	}	4×6	18			36				
G28R	N	Placed Below G26R			28	25										
G47R	N	586+00 "L.O.¢"		59'	26	10		Place Above G26R								
G49R	N	586+00 "L.O.¢"		59'	26	10	}	Place Above G28R								
R7R	N	86+33 "R-53"		2'	30	30		4×4	16			21				
W21R	N	Placed Below R7R			18	18										
R11R	N	86+37 "R-53"	21'		36	36		4×6	16			32				
W44R	S	Placed Opposite R11R			53	30										
G85RI	S	590+70 "L.O.¢"	63'		140	102	Vert.	6×8	26	22C	22C	280	2-2½×2×¼-11⅔	30.1		0.60
G28R	S	589+75 "L.O.¢"	60'		28	25		4×6	16			32				
G26R	S	589+75 "L.O.¢"			28	24		Place Above G28R								
G85RI	S	596+55 "L.O.¢"	63'		140	102	Vert.	6×8	26	22C	24C	288	2-2½×2×¼-11⅔	30.1		0.60
G20RI	N	614+00 "L.O.¢"		12'	138	60	Horiz.	4×8	18C	20		103				0.30
G20RI	S	615+00 "L.O.¢"	65'		174	60	Vert.	6×8	22	22C	24C	272	2-2½×2×¼-14½	37.4		0.63
G20RI	N	617+00 "L.O.¢"		63'	138	60	Horiz.	6×8	22	20C		168				0.30
W17R	S	91+80 "R-53"	24'		36	36		4×4	18			24				
G20RI	S	618+00 "L.O.¢"	10'		174	60	Vert.	6×6	22	20	20	186	2-2½×2×¼-14½	37.4		
G26R	S	622+00 "L.O.¢"	60'		28	24	}	4×6	18			60				
G28R	S	Placed Beside G26R			28	25										
G48R		622+00 "L.O.¢"	1'		26	10		Place Above G26R								
G50R		622+00 "L.O.¢"			26	10	}	Place Above G28R								
W59RI	S	630+75 "L.O.¢"	60'		48	48		4×6	20			40				
R1R	E	117+70 "F-64"	42'		30	30		4×4	14			19				
G77RI	N	119+00 "F-64"		36'	36	72	Vert.	6×6	18	20		114	2-2½×2×¼-8	20.6		
W53R	W	11+00 "F-66"		32'	36	25		4×4	14			19				
G55R	S	123+00 "F-64"	34'		26	10		4×4	14			19				
G26R	S	Placed Below G55R			28	24										
W20R	N	117+00 "F-64"		34'	36	36		4×4	16			21				
G78RI	N	124+90 "F-64"		36'	78	42	Horiz.	4×6	16	18		68				
W59RI	S	125+32 "F-64"	17'		48	48		4×6	18			36				
R1R	E	126+90 "F-64"		49'	30	30		4×4	12			16				
R10R	E	36+60 "R-60"	23'		40	12		4×4	12			16				
R1R	E	126+81 "F-64"	21'		30	30		4×4	12			16				
R10R	S	126+94 "F-64"	23'		40	12		4×4	12			16				
G78RI	N	127+40 "F-64"		36	78	42	Horiz.	4×6	16	18		68				
R16R	S	127+55 "F-64"	22'		30	30		4×4	14			19				
G85RI	N	635+00 "L.O.¢"		64'	158	78	Vert.	6×8	24	22C	24C	280	2-2½×2×¼-13⅓	34.4		0.63
G85RI	N	640+90 "L.O.¢"		64'	158	78	Vert.	4×8	24	20C	20C	171	2-2½×2×¼-13⅓	34.4		0.60

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

QUANTITY SUMMARY

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Snyder	2/60	(signature)	2/60	G. L. [illegible]	2/60

118

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB, SLO	2	L.S.Mar	119	137

119

A M Nash
DISTRICT ENGINEER

August 15, 1960

License No. 5429

WEIGHTS OF STEEL PIPE		
DIA. IN	CODE	SIZE LBS. PER FT.
6	H	18.97
8	L	24.70
8	H	28.55
10	L	31.20
10	M	34.24
10	H	40.48
12	L	43.77

TRAFFIC SIGNS

C = Post Encased In Concrete
• FTB = Facing Traffic Bound
•• Class "B" PCC included in price paid for installing sign posts. See misc. detail sheet.

CODE NO.	•F.T.B.	STATION	LOCATION LT.	LOCATION RT.	SIGN SIZE LENGTH IN.	SIGN SIZE HEIGHT IN.	PANELS	POSTS SIZE	POSTS LENGTHS FT.	POSTS LENGTHS FT.	POSTS LENGTHS FT.	TOTAL BD. FT.	JOISTS NO.-SIZE-LENGTH INS. FT.	JOISTS ALUM. LBS.	STEEL POSTS LBS.	••CLASS "B" P.C.C. C.Y.
G26R	N	642+25"LO.¢"		58'	28	24		4×4	12			16				
R1R	W	140+22"F-64"		27'	30	30		4×4	14			19				
G78RI	N	140+75"F-64"		24'	78	42	Horiz.	4×6	16	18		68				
R7R	W	42+43"R-63"	2'		30	30		4×4	16			21				
W21R	W	Placed Below R7R			18	18										
W72R	W	40+25"R-62"		24'	48	60		4×6	18			36				
R11R	W	43+55"R-62"		25'	36	36		4×6	16			32				
W44R	E	Placed Opposite R11R			53	30										
W58R	N	42+30"R-62"	3'		30	15		4×4	14			19				
W21R	N	Placed Below W58R			18	18										
G63RI	N	643+50"LO.¢"		65'	178	100	Vert.	2-8L	243	249			2-3×2×3/8-14 5/6	62.6	1217	
W59R	N	645+40"LO.¢"		60'	48	48	Vert.	4×6	20			40				
G76RI	S	646+50"LO.¢"	63'		132	76		4×10	24	24C		160	2-2½×2×¼-11	28.4		0.36
G10	N	647+77"LO.¢"		59'	36	18		4×4	14			19				
G10	S	10+66"LO.¢"	59'		36	18		4×4	14			19				
W72R	S	40+00"R-61"	24'		48	60		4×6	18			36				
G20RI	N	11+00"LO.¢"		11'	148	136	Vert.	2-10L	28.7	27.9			2-2½×2×5/16-12⅓	39.2	1768	
G47R	N	13+50"LO.¢"		62'	26	10		4×6	18			36	2-2½×2×¼-5	12.9		
G26R	N	Placed Below G47R			28	24										
G49R	N	Placed Beside G47R			26	10										
G28R	N	Placed Below G49R			28	25										
G11	N	13+88"LO.¢"		59'	36	15		4×4	14			19				
G20RI	N	14+00"LO.¢"		64'	148	136	Vert.	1-10L,1-10H	29.5	34.0			2-2½×2×5/16-12⅓	39.2	2299	
G86RI	N	35+50"LO.¢"		66'	202	82	Vert.	4×10	26 24C	26C	28C	346	2-2½×2×¼-16 5/6	43.4		1.08
G11	S	36+00"LO.¢"	59'		36	15		4×4	14			19				
G20RI	S	37+00"LO.¢"	64'		156	60	Vert.	4×10	24	24C		160	2-2½×2×5/16-13	41.3		0.36
G5RI	S	38+50"LO.¢"	66'		204	84	Vert.	4×10	24 24C	26C	28C	340	2-2½×2×¼-17	43.9		1.08
G48R	S	39+50"LO.¢"	59'		26	10		4×6	24			48				
G26R	S	Placed Below G48R			28	24										
G50R	S	Placed Below G26R			26	10										
G28R	S	Placed Below G50R			28	25										
G20RI	S	40+00"LO.¢"	11'		156	60	Vert.	6×8	18C	20		152	2-2½×2×5/16-13	41.3		0.33
W59RI	S	46+90"LO.¢"	60'		48	48		4×6	22			44				
G8R	W	5+77"57-A"	40'		120	24	Horiz.	4×6	14	16		60				
W17R	N	146+00"R-70"		24'	36	36		4×4	16			21				
G8RI	S	5+88"57-A"	45'		120	48	Horiz.	4×6	18	18		72				
R17R	E	5+95"57-A"		36'	26	30		4×4	14			19				
G83RI	S	55+00"LO.¢"	65		186	72	Vert.	4×10	24	22C	26C	240	2-2½×2×¼-15½	40.0		0.72
G77RI	E	5+95"57-A"		43'	96	72	Vert.	4×8	24	22C		123	2-2½×2×¼-8	20.6		0.30
R1R	S	6+04"57-A"	45'		30	30		4×4	14			19				
R11R	N	6+39"57-A"	50'		36	36		4×4	14			19				
G72R	W	6+60"57-A"	23'		54	18	Horiz.	4×6	18	18		72				
G42R	W	Placed Below G72R			54	54										
G78RI	W	6+60"57-A"	32'		78	42	Horiz.	4×6	20	22		84				
R16R	W	7+45"57-A"	22'		30	30		4×4	14			19				
R16R	E	7+45"57-A"		22'	30	30		4×4	14			19				
G78RI	E	8+20"57-A"		24'	78	42	Horiz.	4×6	16	18		68				
G49R	E	8+20"57-A"		32'	26	10		4×4	20			27				
G28R	E	Placed Below G49R			28	25										
G36R	E	Placed Below G28R			14	14										
G71RI	N	151+66"R-70"	7'		54	18	Horiz.	4×6	18	16		68				
G42RI	N	Placed Below G71RI			54	54										
G71RI	N	151+66"R-70"		37'	54	18	Horiz.	4×6	18	16		68				
G42RI	N	Placed Below G71R			54	54										
R1R	N	152+83"R-70"	6'		30	30		4×4	14			19				
R11R	S	Placed Opposite R1R			36	36										
R17R	W	8+89"57-A"	36'		26	30		4×4	14			19				
G77RI	W	8+92"57-A"	58'		96	72	Vert.	6×6	18	18		108	2-2½×2×¼-8	20.6		
R1R	N	9+09"57-A"		37'	30	30		4×4	14			19				
G8RI	N	9+27"57-A"		37'	120	48	Horiz.	4×6	16	16		64				
R1R	S	9+27"57-A"	41'		30	30		4×4	14			19				

CODE NO.	•F.T.B.	STATION	LOCATION LT.	LOCATION RT.	SIGN SIZE LENGTH IN.	SIGN SIZE HEIGHT IN.	PANELS	POSTS SIZE	POSTS LENGTHS FT.	POSTS LENGTHS FT.	POSTS LENGTHS FT.	TOTAL BD. FT.	JOISTS NO.-SIZE-LENGTH INS. FT.	JOISTS ALUM. LBS.	STEEL POSTS LBS.	••CLASS "B" P.C.C. C.Y.
G8R	E	9+69"57-A"		21'	104	24	Horiz.	4×4	14	16		40				
G72R	W	10+25"57-A"	23'		54	18	Horiz.	4×6	16	18		68				
G42R	W	Placed Below G72R			54	54										
G8R	W	10+25"57-A"	31'		104	24	Horiz.	4×4	20	22		56				
G5R	E	13+20"57-A"		26'	118	60	Horiz.	4×6	16	16		64				
G30RI	W	15+00"57-A"	23'		78	52	Horiz.	4×6	16	18		68				
W17R	S	361+10"R-72"	24'		36	36		4×4	16			21				
W59RI	N	60+90"LO.¢"		60'	48	48		4×6	18			36				
R1R	W	563+00"F-74"		23'	30	30		4×4	14			19				
G47R	N	69+00"LO.¢"		59'	26	10		4×4	16			21				
G26R	N	Placed Below G47R			28	24										
G30RI	S	70+00"LO.¢"	63'		132	60	Horiz.	4×8	22	22C		118				0.29
G86RI	S	73+00"LO.¢"	65'		202	82	Vert.	6×8	24	22C	24	280	2-2½×2×¼-16 5/6	43.4		0.33
G5RI	N	81+00"LO.¢"		67'	226	84	Vert.	2-8L,2-10L	24.0	27.5	31C		2-2½×2×5/16-18 5/6	59.9	2418	
G20RI	S	85+00"LO.¢"	64'		148	136	Vert.	10L,10H	29.6	31.6			2-2½×2×5/16-12⅓	39.2	2203	
G20RI	S	88+00"LO.¢"	12'		148	136	Vert.	2-10L	28.5	27.8			2-2½×2×5/16-12⅓	39.2	1757	
G83RI	S	112+00"LO.¢"	65'		178	100	Vert.	8L,8H	25.6	27.6			2-3×2×3/8-14 5/6	62.6	1420	
									140 One Wood Post	79 Two Wood Post	21 Three Wood Post					
										9 Two Steel Post	9 Four Wood Post					
									4 Mount on Light Standard		3 Three Steel Post					
		Total										19,878		25306	23787	25.63

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

119

61-5V13C11 **QUANTITY SUMMARY**

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Bryden	2/60		2/60	R. A. Lyon	3/60

To accompany plans dated August 15, 1960

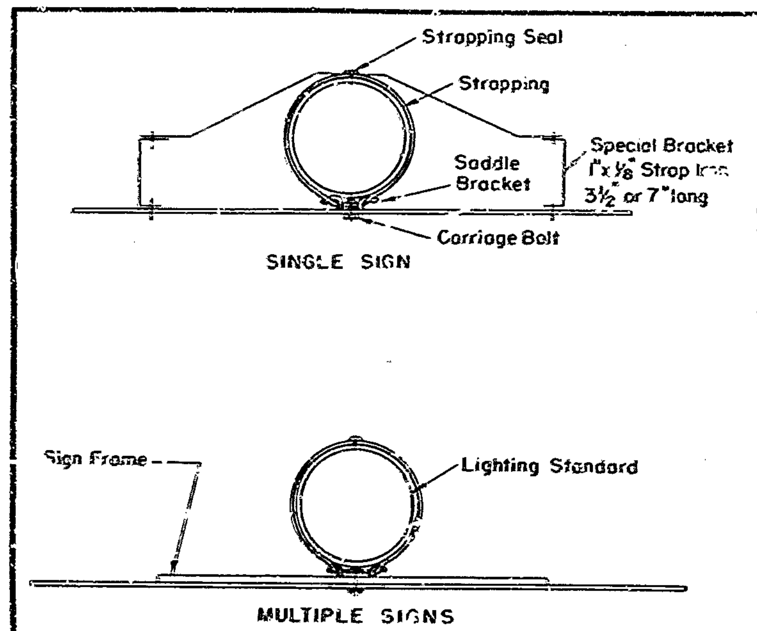
DISTRICT	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB,SLO	2	L,SMra;F	120	137

APPROVAL RECOMMENDED

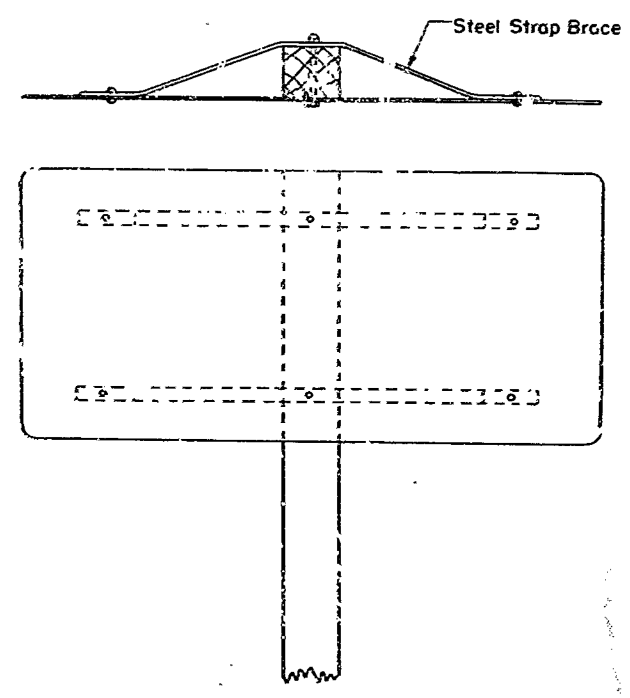
E. M. Webb
Traffic Engineer
Civil Engineer License No 5429

Approved February 19, 1960
State Highway Engineer
Civil Engineer License No. 5945

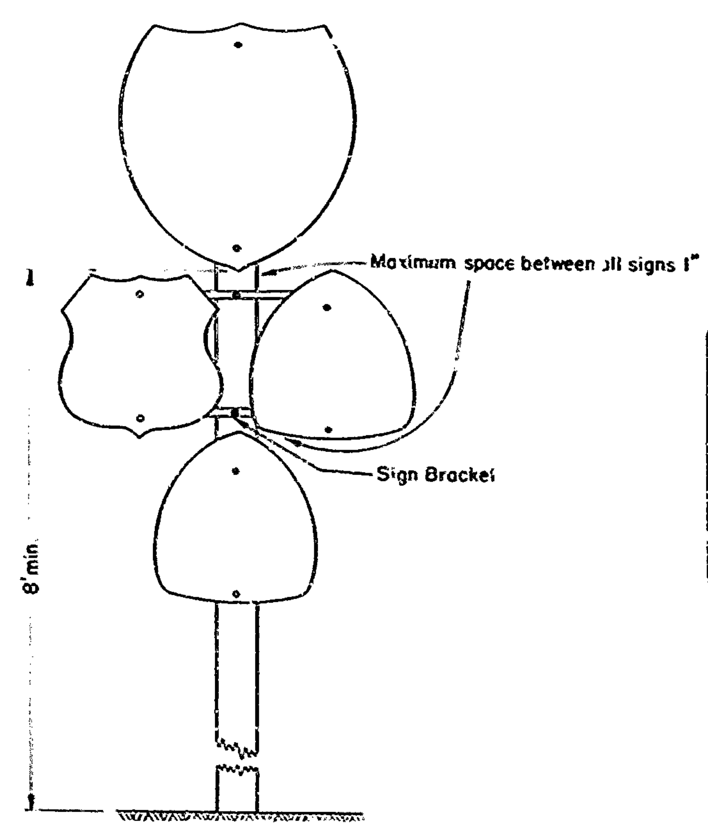
120



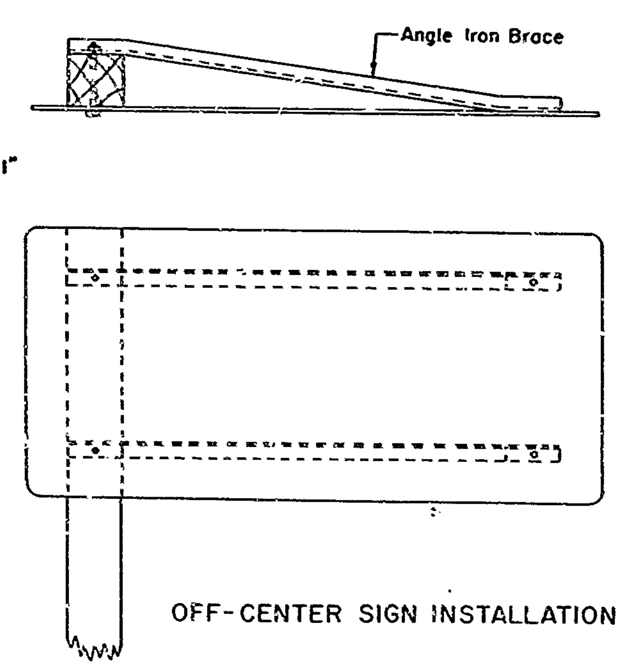
INSTALLATION ON LIGHTING STANDARD



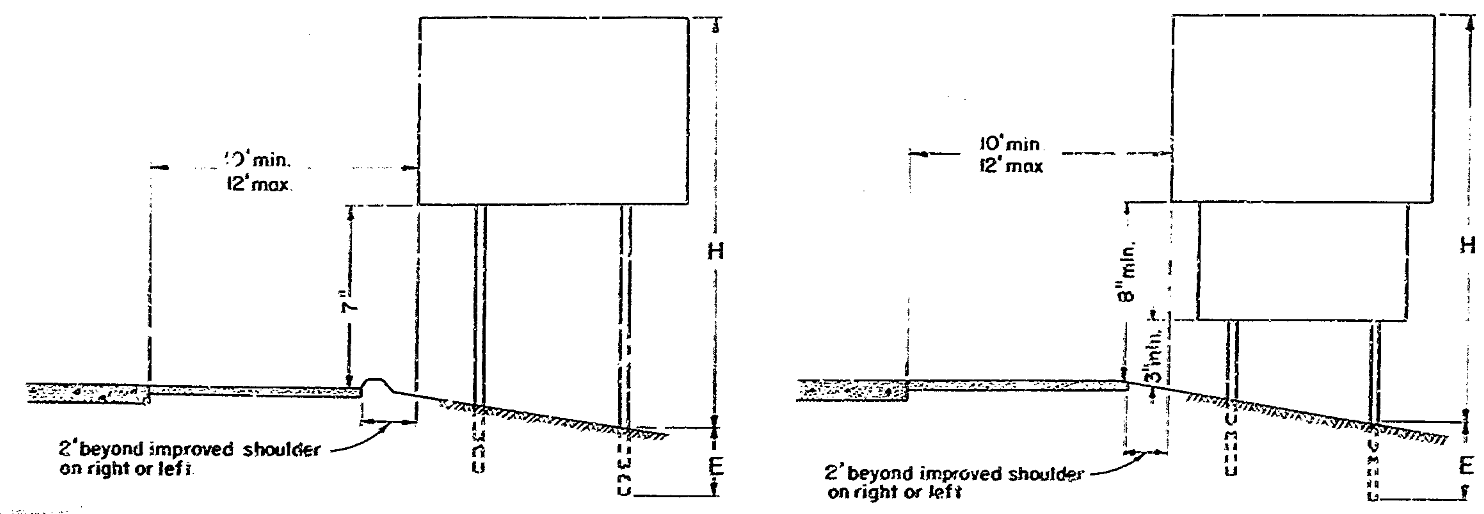
BALANCED SIGN INSTALLATION



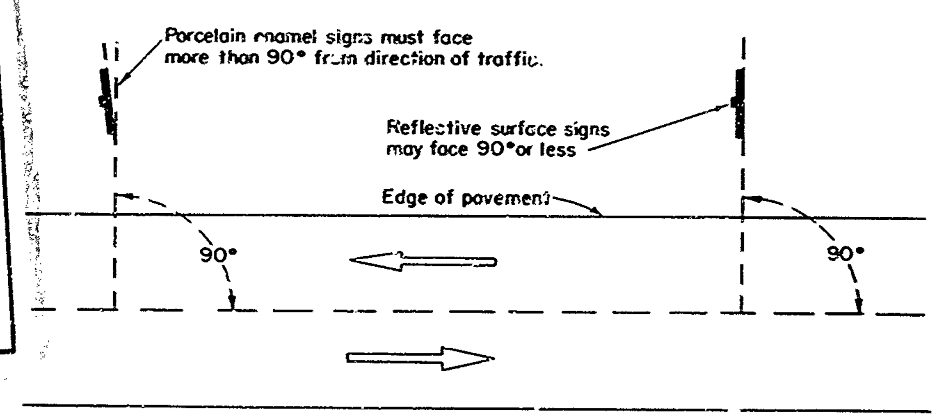
MULTIPLE INSTALLATION



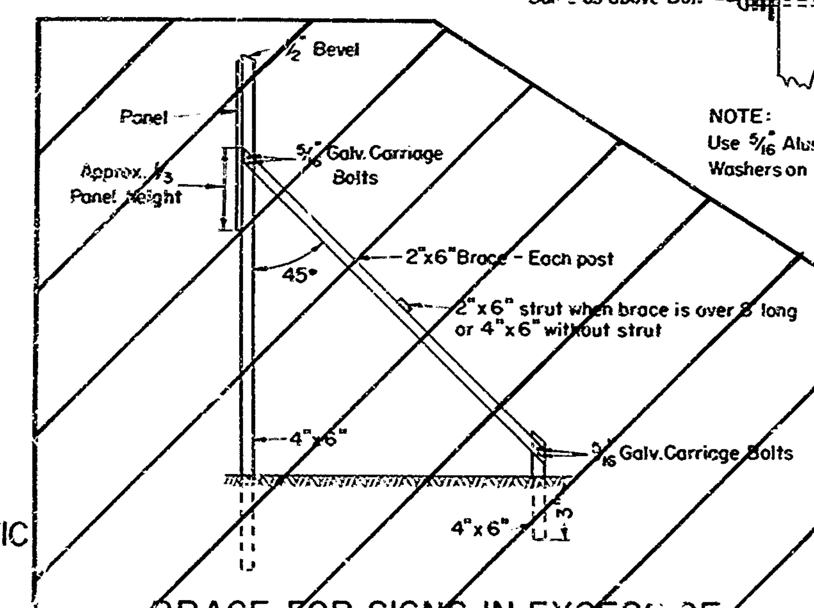
OFF-CENTER SIGN INSTALLATION



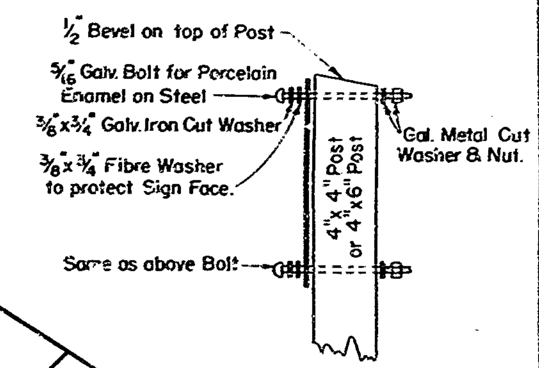
FREEWAY AND EXPRESSWAY LOCATIONS
(INCLUDING INTERSTATE ROUTES)



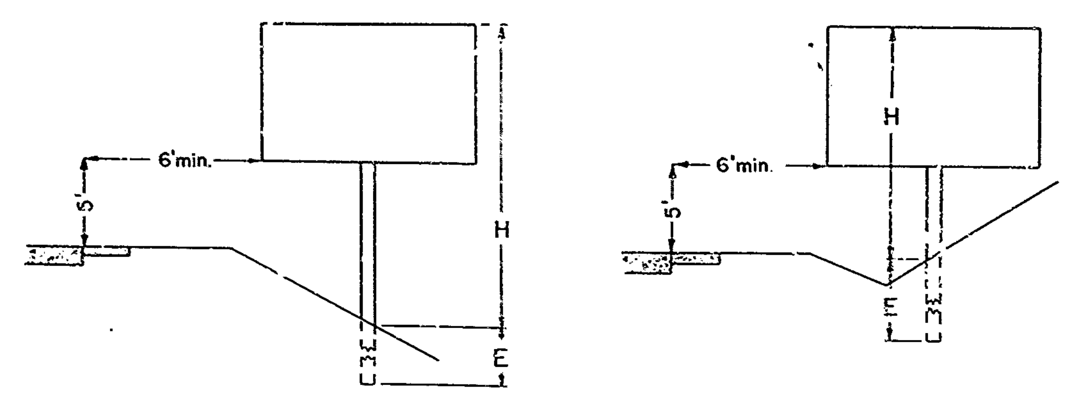
POSITION WITH RELATION TO DIRECTION OF TRAFFIC



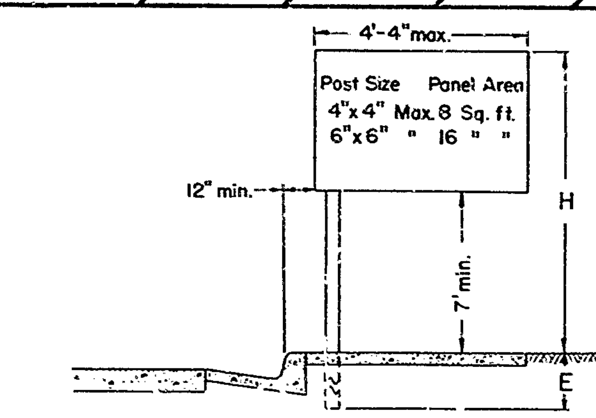
BRACE FOR SIGNS IN EXCESS OF H=10' & 30 SQUARE FOOT PANEL



NOTE:
Use 5/16" Aluminum Bolts and Washers on Aluminum Signs.

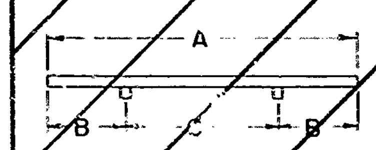


RURAL LOCATIONS



SIDEWALK LOCATIONS

NOTE: Lateral distance to sign edge should be 2' beyond the improved shoulder. The distance from the pavement must allow sufficent clearance for trucks or wide vehicles to park clear of pavement.



POST SPACING TABLE

Length of Sign A	Type of Panel	No. Posts	Overhang B	Post Spacing C
4'-6"	Horizontal	2	None	4'-2"
5'-0"	"	2	"	4'-8"
5'-6"	"	2	3"	5'-0"
6'-0"	"	2	6"	5'-0"
6'-6"	"	2	9"	5'-0"
7'-0"	"	2	12"	5'-0"
7'-6"	"	2	15"	5'-0"
8'-0"	"	2	12"	6'-0"
8'-6"	"	2	15"	6'-0"
9'-0"	"	2	12"	7'-0"
9'-6"	"	2	15"	7'-0"
10'-0"	"	2	12"	8'-0"

SIGN		No. of Posts		H					
Length	Square Feet Panel Area			6'	8'	10'	12'	14'	16'
Max. 4'-4"	Max. 8 Sq. ft.	1	Post Size	4"x4"	4"x4"	4"x6"	4"x6"	4"x6"	4"x6"
			E	3.0'	3.0'	3.5'	3.5'	3.5'	3.5'
4'-4" to 10'	8 to 16	1	Post Size	4"x4	4"x6"	4"x6"	4"x6"	6"x6"	6"x6"
			E	3.5'	3.5'	3.5'	4.0'	4.0'	4.0'
4'-4" to 10'	8 to 16	2	Post Size	4"x4"	4"x4"	4"x6"	4"x6"	4"x6"	4"x6"
			E	3.5'	3.5'	4.0'	4.0'	4.0'	4.0'
4'-4" to 10'	16 to 30	2	Post Size	4"x6"	4"x6"	4"x6"	6"x6"	6"x6"	6"x6"
			E	3.5'	4.0'	4.0'	4.5'	5.0'	5.0'
4'-4" to 10'	30 to 60	2	Post Size	4"x6"	4"x6"	4"x6"	4"x6"	4"x6"	4"x6"
			E	4.0'	4.0'	3.0'	3.0'	3.5'	3.5'

Use braces for post below and right of this line.

NOTES

1. All sign panels and mounting hardware to be furnished by State.
2. Exact size and location of sign posts to be determined by the Engineer.
3. All lumber to be S4S
4. When using 4"x6" post place 6" side normal to sign.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

61-5V13C11

TYPICAL INSTALLATION DETAILS

ROADSIDE SIGNS MAX. L=10' WOOD POSTS S42

120

Fed. Road Div. No.	State	Proj.	Fiscal Year	Sheet No.	Total Sheets
7	CALIF.			121	204

Dist.	County	Route	Section	Sheet No.	Total Sheets
V	SB,SLO	2	L.SMmF	121	137

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DISTRICT ENGINEER - DIST V

DATE APPROVED August 15, 1960

Traffic Engineer Civil Engineer License No. 5029

Sign No.	Station	Dimensions "W"	"L"

TABLE IV
BALANCED "BUTTERFLY"
SINGLE - FACED

Sign No.	Station	Dimensions "W"	"L"

TABLE IV
BALANCED "BUTTERFLY"
DOUBLE - FACED

Sign No.	Station	Dimensions "W"	"L"	"L_1"	"P_1"	"L_2"	"P_2"
1	283+75	80"	56'	30'	28'	26'	20'
2	516+60	80"	60'	30'	32'	30'	26'
3	529+35	80"	58'	30'	26'	28'	26'
4	640+15	80"	56'	30'	32'	26'	20'
5	46+35	80"	58'	30'	28'	28'	26'
6	60+65	80"	60'	30'	32'	30'	26'

TABLE IV
UNBALANCED "BUTTERFLY"

Sign No.	Station	Dimensions "W"	"L"	"P"

TABLE IV
FULL CANTILEVER

Sign No.	Station	Post Type	"h"	Elevations Elev."a"	Elev."b"	Elev."c"
1	283+75	VI	16'-9"	421.22	404.47	398.97
3	529+65	VI	17'-0"	265.[illegible]	248.20	242.40
4	640+15	VI	16'-6"	236.40	219.90	214.40
5	46+35	VI	16'-9"	251.55	234.80	229.20

TABLE V
POST — TYPES I THRU VII
("BUTTERFLY" & FULL CANTILEVER TYPE)

Sign No.	Station	Post Type	"h"	Elevations Elev."a"	Elev."b"	Elev."c"
2	516+60	IV-S	17'-0"	265.4	248.4	242.9
6	60+65	IV-S	17'-3"	245.8	228.5	222.9

TABLE V
POST — TYPES I-S THRU VII-S
("BUTTERFLY" TYPE)

Sign No.	Station	Sign Frame Size	No. Req'd.
1	283+75	28' x 80"	1
1	283+75	20' x 80"	1
2	516+60	32' x 80"	1
2	516+60	26' x 80"	1
3	529+05	26' x 80"	1
3	529+65	26' x 80"	1
4	640+15	32' x 80"	1
4	640+15	20' x 80"	1
5	46+35	28' x 80"	1
5	46+35	26' x 80"	1
6	60+65	32' x 80"	1
6	60+65	26' x 80"	1

REMOVABLE SIGN PANEL FRAMES
"BUTTERFLY" AND FULL CANTILEVER TYPES

BRIDGE DEPARTMENT
··· DESIGN SECTION ···
Project Designer: Francisco A. Rossa 7/57
Chief Designer: Hisong

DESIGN	By	Checked
DETAILS	By JoAnn P. Becker 7/57	Checked F.A. Rossa 7/57
QUANTITIES	By	Checked
SPECIFICATIONS	By	Plans and Specs. Compared

Approval Recommended by ______ Engineer of Bridges ______ Civil and Structural Engr. License No.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD OVERHEAD SIGNS
BUTTERFLY AND FULL CANTILEVER TYPES
SIGN DATA — SHEET # 1

SCALE | BRIDGE | XS-18-41 FILE | DRAWING

PREL. DRAWING No. P-

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J.E. Dryden	2/60	[illegible]	2/60	[illegible]	2/60

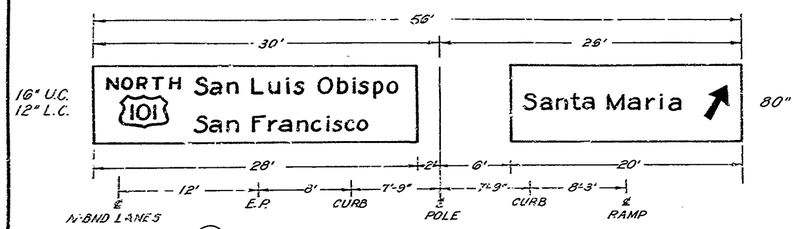
REVISION	
[illegible]	

121

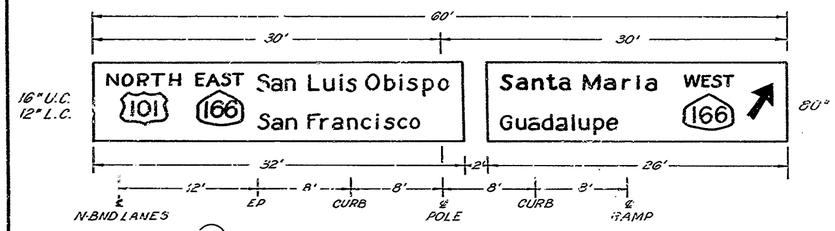
DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB,SLO	2	L,SMra	122	137

August 15, 1960

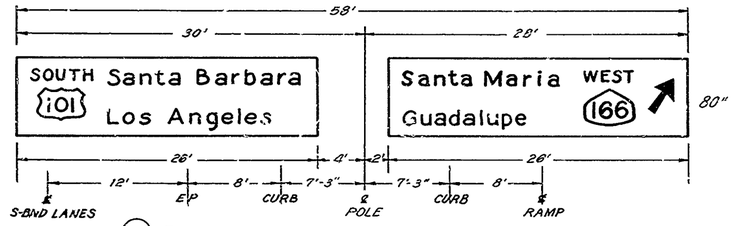
Traffic Engineer, State Engineer License No. 5429



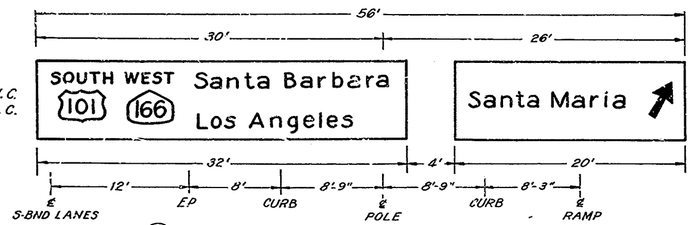
(1) Face NBT Sta. 283+75 Rt., 3[illegible] watts



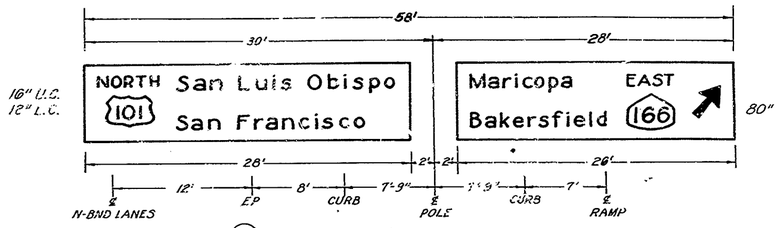
(2) Face NBT Sta. 516+60 Rt, 1179 watts



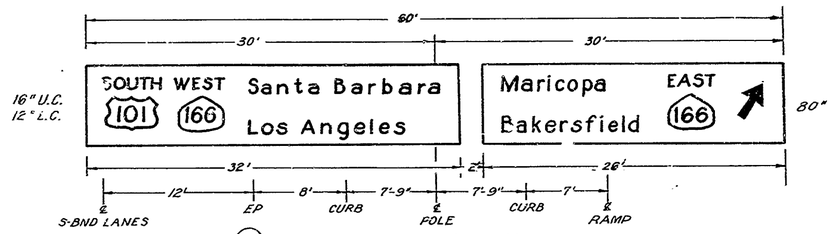
(3) Face SBT Sta. 529+65 Lt., 1048 watts



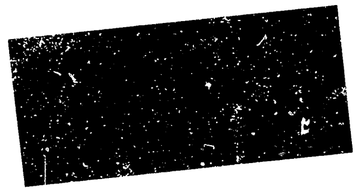
(4) Face SBT Sta. 640+15 Lt., 1048 watts.



(5) Face NBT Sta. 46+35 Rt, 1048 watts.



(6) Face SBT Sta. 60+65 Lt, 1179 watts.



INDEX OF OVERHEAD SIGN STRUCTURAL PLANS

SIGN DATA SHEET NO. 1

OVERHEAD SIGN FORMAT AND QUANTITIES SHEET.

S-1 INSTRUCTIONS AND EXAMPLES (BUTTERFLY AND FULL CANTILEVER SIGNS).
S-5 UNBALANCED BUTTERFLY SIGN FRAMES.
S-7 POST TYPE SELECTION-UNBALANCED BUTTERFLY SIGN FRAMES 80"THRU120"
S-8 JOINT AND MISCELLANEOUS DETAILS (BUTTERFLY AND CANTILEVER).
S-9 FRAME JUNCTURE DETAILS (BUTTERFLY AND CANTILEVER).
S-10 POST TYPES I THRU VII (BUTTERFLY AND CANTILEVER).
S-11 POST TYPES 1-5 THRU VII-5

S-20 REMOVABLE SIGN PANEL FRAMES #1.
S-21 REMOVABLE SIGN PANEL FRAMES #2.
S-22 STANDARD WALKWAY DETAILS #1.
S-23 STANDARD WALKWAY DETAILS #2.
S-24 WALKWAY SAFETY RAILING DETAILS.
S-25 WALKWAY MOUNTED BALLAST BOX.
ES-8 FLUORESCENT SIGN LIGHTING EQUIPMENT.
S-76 STANDARD GUARD RAIL PROTECTION.

SIGN STRUCTURE QUANTITIES

Sign No.	Station	Str. Exc. C.Y.	Str. Bfl. C.Y.	Class "A" P.C.C. C.Y.	Bar. Reinf. Steel Lbs.	Guard Rail Lin. Ft.
1	283+75	34.5	23.0	11.75	675	86
2	516+60	29.5	20.0	9.75	815	86
3	529+65	34.5	23.0	11.75	675	86
4	640+15	34.5	23.0	11.75	675	86
5	46+35	34.5	23.0	11.75	675	86
6	60+65	29.5	20.0	9.75	815	86

NOTE: DO NOT SCALE. 61-5R13-11

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

OVERHEAD SIGN FORMAT AND QUANTITIES SHEET

V-SB; SLO-2-L,SMra; F
Between 4 Mi. South of Santa Maria and Hourihan Grade

sav249

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
J. E. Dryden	2/60	[signature]	2/60	R. A. Lyonhard	2/60

122

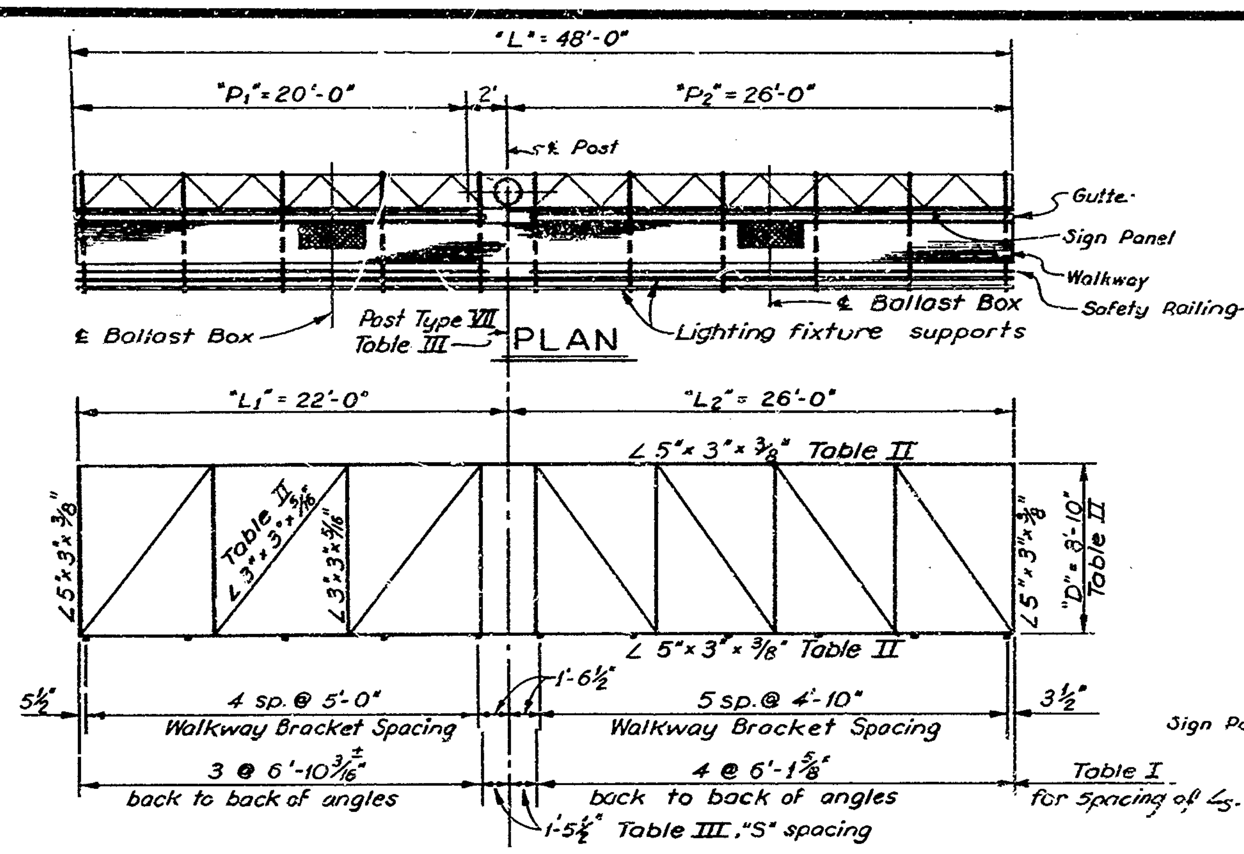
FED. ROAD DIV. No.	STATE	PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	CALIF.			123	204

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
V	SB,SLO	2	L.S. Mon.	123	137

To accompany plans dated August 15, 1960

REVISION #1
Added Double-Faced

REVISION #2
Detailed Deleted

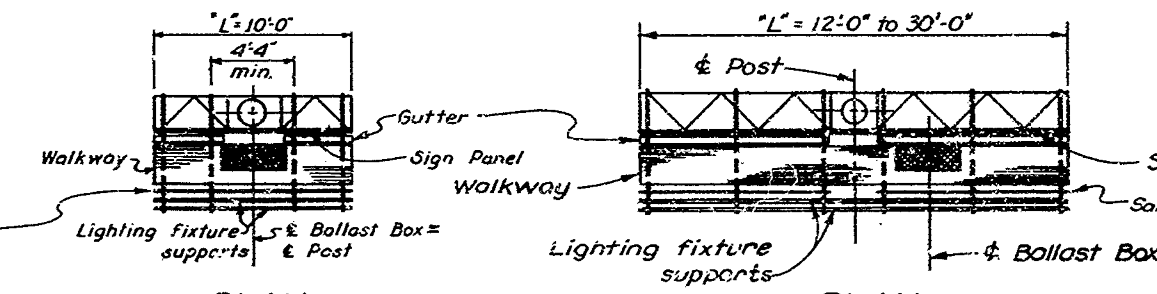


UNBALANCED BUTTERFLY

EXAMPLE NO. 1

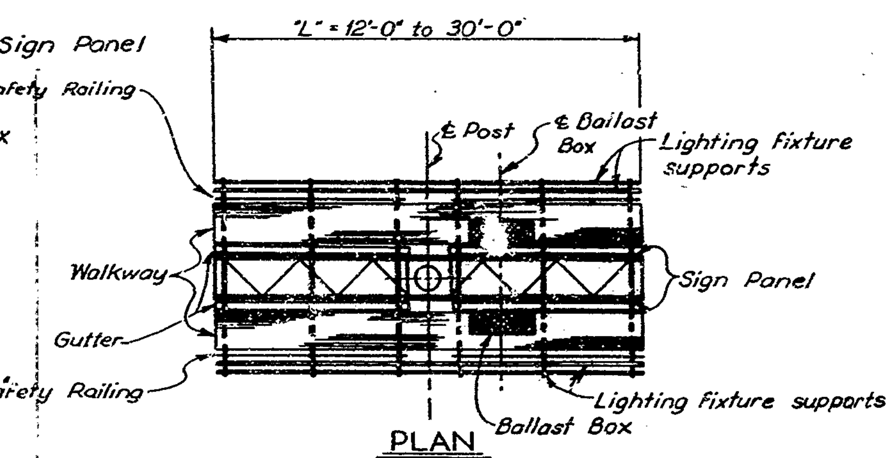
Sign No.	Station	"W"	"L"	"L1"	P_1	L_2	P_2
10	20+00	100"	48'-0"	22'-0"	20'-0"	26'-0"	26'-0"

TABLE NO. IV
SIGN DATA



10' BALANCED BUTTERFLY   12' TO 30' BALANCED BUTTERFLY

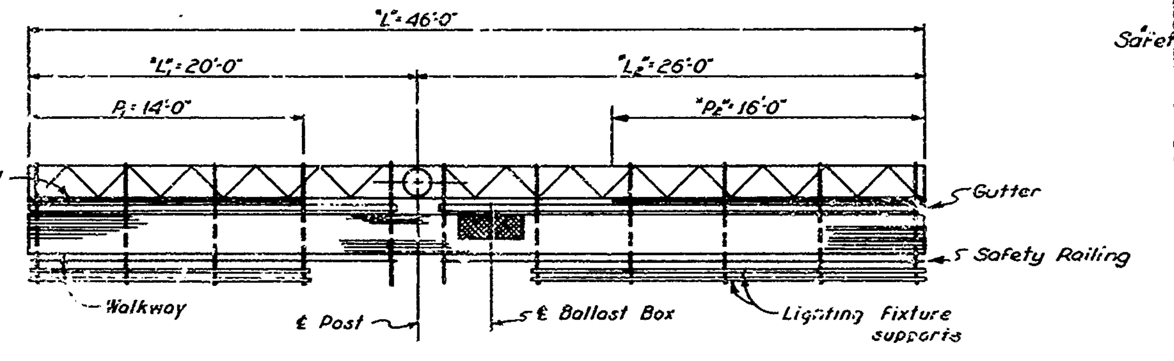
EXAMPLE NO. 4



PLAN

12' TO 30' BALANCED BUTTERFLY DOUBLE-FACED SIGN

EXAMPLE NO. 6



PLAN

UNBALANCED BUTTERFLY

EXAMPLE NO. 5

Sign No.	Station	"W"	"L"	"L1"	"P1"	"L2"	"P2"
14	50+00	100"	46'	20'	14'	26'	16'

TABLE NO. IV
SIGN DATA

INSTRUCTIONS TO FABRICATOR

LAYOUT

SEE TABLE IV ON SIGN DATA SHEETS, SMALL SIGN SKETCH, AND TABLES I, II AND III, ON PLANS. SEE EXAMPLE NO. 1, THIS SHEET.

SELECTION OF STRUCTURAL MEMBERS

FOLLOW DIRECTIONS AS SHOWN ON "BALANCED, [redacted], UNBALANCED, AND/OR FULL CANTILEVER SIGN FRAMES" SHEETS. SEE EXAMPLE NO. 1.

DETAILS

REFER TO THE FOLLOWING SHEETS FOR DETAILS NOT SHOWN ON THE PLAN SHEETS:

1. POST SHEET OR SHEETS
2. JOINT AND MISCELLANEOUS DETAILS
3. FRAME JUNCTURE DETAILS
4. WALKWAY DETAILS NO. 1 AND NO. 2
5. WALKWAY SAFETY RAILING DETAILS
6. REMOVABLE SIGN PANEL FRAMES #1 AND #2.
7. WALKWAY MOUNTED BALLAST BOX
8. SIGN DATA SHEETS

BALLAST BOXES

FOR NUMBER OF BALLAST BOXES REQUIRED SEE TABLE VII ON THIS SHEET.

FULL CANTILEVER SIGNS - LOCATE BALLAST BOX IN WALKWAY BRACKET SPACE NEAREST TO CENTER OF SIGN PANEL. SEE EXAMPLES NO. 2 AND NO. 3.

UNBALANCED BUTTERFLY SIGNS ------------ WHERE TWO BALLAST BOXES ARE REQUIRED, MOUNT BALLAST BOXES IN WALKWAY BRACKET SPACE NEAREST TO CENTER OF EACH SIGN PANEL. SEE EXAMPLE NO. 1. WHERE ONLY ONE BALLAST BOX IS REQUIRED PLACE THE BALLAST BOX IN THE WALKWAY BRACKET SPACE ADJACENT TO THE POST AND ON THE SIDE WITH THE LARGER SIGN PANEL. SEE EXAMPLE NO. 5.

BALANCED BUTTERFLY SIGNS - ON TEN FOOT SIGNS LOCATE BALLAST BOX AT CENTER OF SIGN. SEE EXAMPLE NO. 4. ON ALL OTHERS THE BALLAST BOX MAY BE LOCATED ADJACENT TO AND ON EITHER SIDE OF THE POST. SEE EXAMPLE 4.

WALKWAY BRACKETS

THE MINIMUM WALKWAY BRACKET SPACING WHERE BALLAST BOXES ARE LOCATED SHALL NOT BE LESS THAN 4'-4". SPACE ALL OTHERS TO SUIT, MAINTAINING UNIFORM SPACING WHERE POSSIBLE. MAXIMUM SPACING SHALL NOT EXCEED 5'-6". SEE EXAMPLE NO. 4.

LIGHTING FIXTURE SUPPORTS

WHERE DISTANCE FROM WALKWAY BRACKET TO END OF SIGN PANEL EXCEEDS 16" INCHES, EXTEND SUPPORTS TO NEXT WALKWAY BRACKET. SEE EXAMPLE NO. 3.

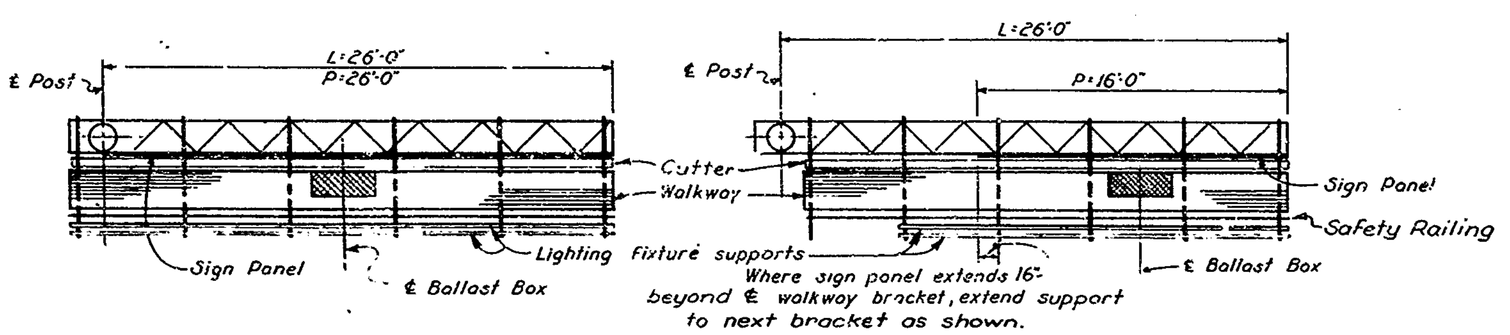
NOTE:

SIGNS ARE SHOWN AND DIMENSIONED LOOKING IN THE DIRECTION OF TRAFFIC. DOUBLE-FACED SIGNS ARE SHOWN AND DIMENSIONED LOOKING AHEAD ALONG STATIONING.

SAFETY RAILING:

ON BUTTERFLY TYP. SIGNS 12' AND OVER, END SAFETY RAILING AT WALKWAY BRACKETS ADJACENT TO POST. SEE EXAMPLES NO. 1, 4, 5 AND 6.

EXAMPLES SHOWN ON THIS SHEET ARE FOR ILLUSTRATIVE PURPOSES ONLY AND ARE NOT A PART OF THE CONTRACT.



PLAN   PLAN

EXAMPLE NO. 2   EXAMPLE NO. 3

FULL CANTILEVER

Sign	Station	"W"	"L"	"P"
11	30+00 Rt.	100"	26' Rt.	26'
12	31+00 Rt.	100"	26' Rt.	16'

TABLE NO. IV
SIGN DATA

Note:
Right cantilever shown. Direction of cantilever is noted in column "L" of Table IV.

No. Ballast Boxes	Total Panel Length "P" or "P1"+"P2"	
	"W" 40"-70"	"W" 80"-120"
1	10'-60'	10'-30'
2	—	32'-60'

TABLE NO. VII

NUMBER OF BALLAST BOXES

Note: Table based upon maximum of 4 ballasts per box.

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

BRIDGE DEPARTMENT
··· DESIGN SECTION ···
Project Designer: F.A. Rose 1/57
Chief Designer: [illegible]

DESIGN	By [illegible]	Checked F.A. Rose 1/57
DETAILS	By [illegible] 2-57	Checked F.A. Rose 1/57
QUANTITIES	By	Checked
SPECIFICATIONS	By	

Approved Recommended by [illegible]

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

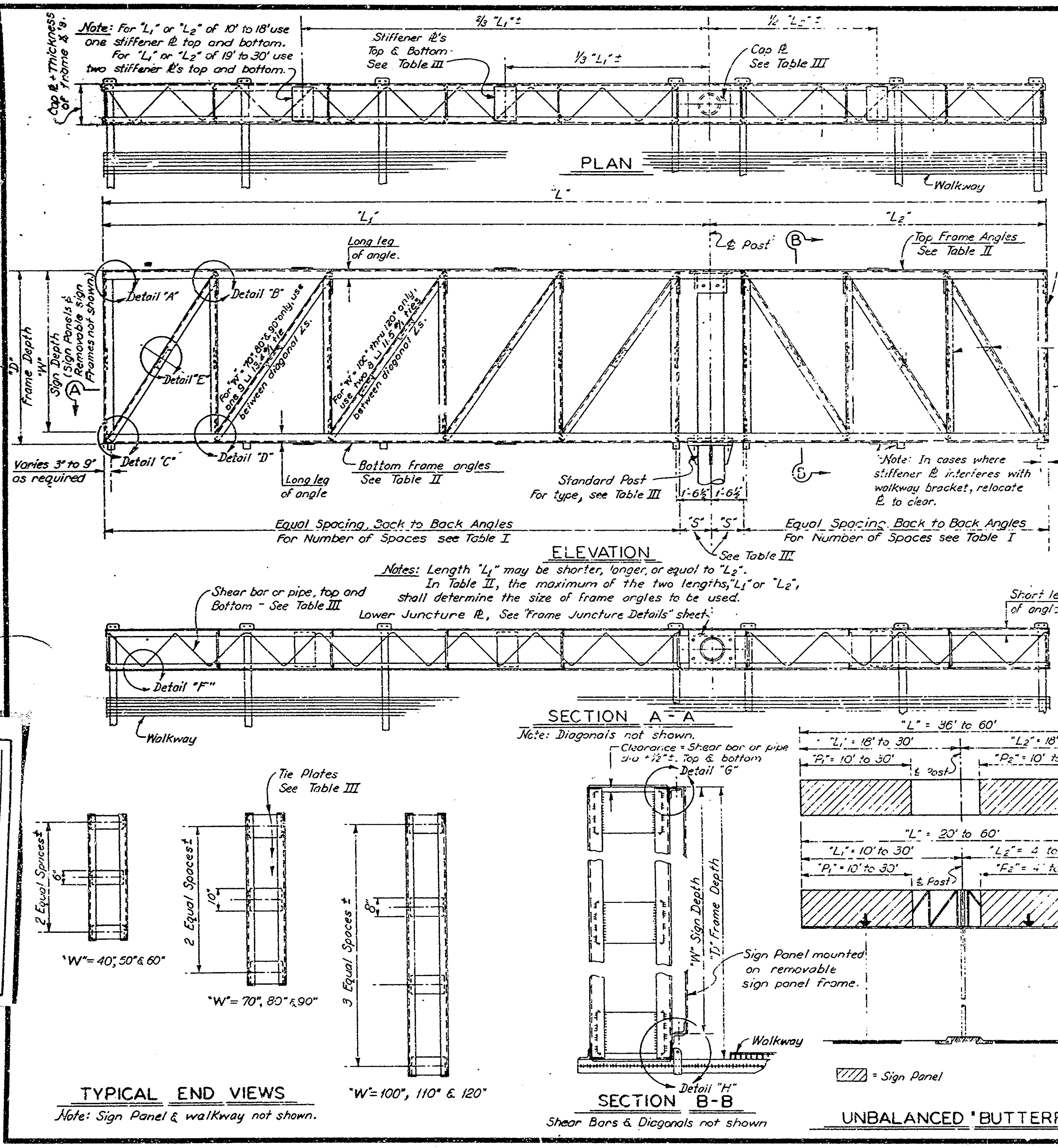
STANDARD OVERHEAD SIGNS
("BUTTERFLY" AND FULL CANTILEVER TYPE)
INSTRUCTIONS AND EXAMPLES

SCALE NONE | BRIDGE | FILE XS-18-17 | DRAWING

PREL. DRAWING No. P-

S1

123



Note: End verticals to be same size as top frame ∠s

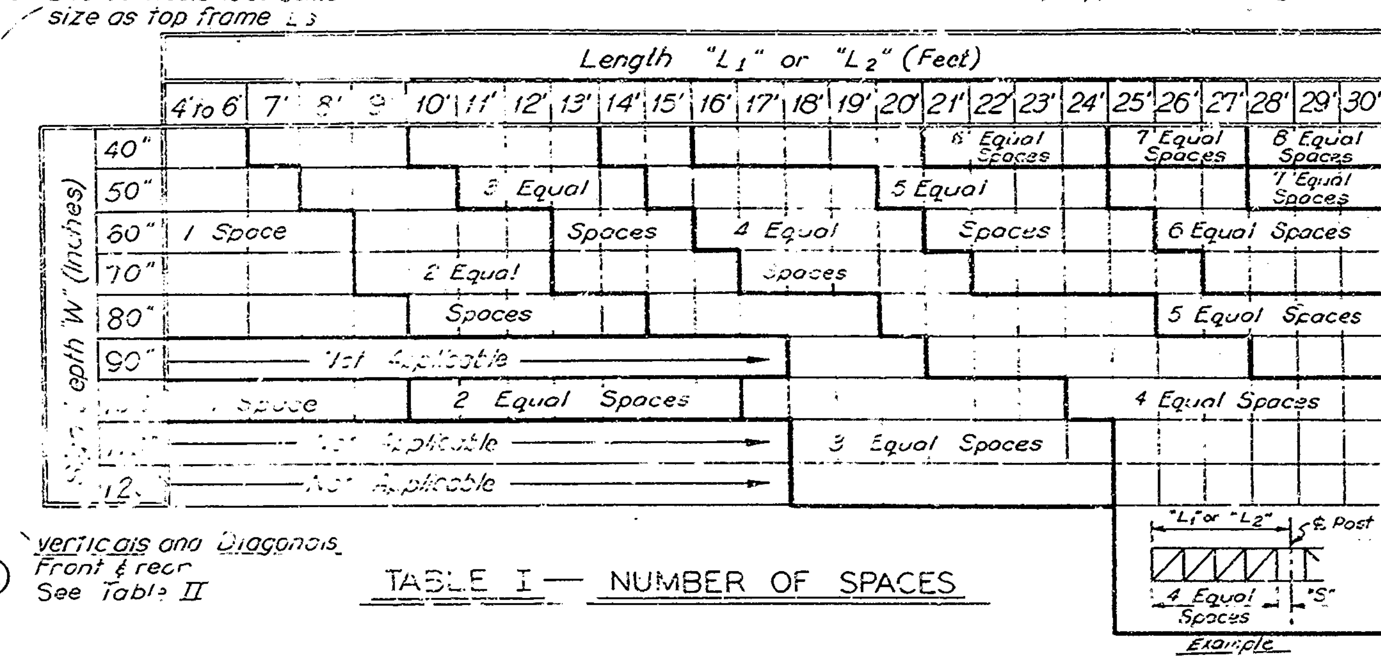


TABLE I — NUMBER OF SPACES

Verticals and Diagonals Front & rear See Table II

Varies 3" to 9" as required.

Notes:
1. For Details "A" thru "H" and "General Notes" see "Joint and Miscellaneous Details" sheet.
2. For post, shear bars, ℄ sizes and "S" spacing, see "Table III — Post Type Selection" sheets.
3. For Sign Panel Frames see "Removable Sign Panel Frames" sheets.
4. For connection of frame to post see "Frame Juncture Details" sheet.
5. For Walkway see "Standard Walkway Details #1 and #2" sheets.
6. For number and location of ballast boxes, typical walkway arrangement, special instructions and examples, see "Instructions and Examples" sheet.

Sign Depth "W"	Frame Depth "D"	Maximum Length "L1" or "L2"	Frame Angles Top ∠	Frame Angles Bottom ∠	Interior Angles Verticals & Diagonals
40"	3'-10"	4' to 25'	3" x 3" x 5/16"	4" x 3" x 5/16"	2½" x 2½" x ¼"
		26' to 30'	3½" x 3" x 5/16"	4" x 3" x 5/16"	2½" x 2½" x ¼"
50"	4'-8"	4' to 25'	3" x 3" x 5/16"	4" x 3" x 5/16"	2½" x 2½" x ¼"
		26' to 30'	3½" x 3" x 5/16"	4" x 3" x 5/16"	3" x 3" x ¼"
60"	[illegible]	4' to 20'	3" x 3" x 5/16"	4" x 3" x 5/16"	2½" x 2½" x ¼"
		21' to 25'	3½" x 3" x 5/16"	4" x 3" x 5/16"	3" x 3" x ¼"
		26' to 30'	4" x 3" x 5/16"	4" x 3" x 5/16"	3" x 3" x ¼"
70"	6'-4"	4' to 20'	3" x 3" x 5/16"	4" x 3" x 5/16"	2½" x 2½" x ¼"
		21' to 25'	3½" x 3" x 5/16"	4" x 3" x 5/16"	3" x 3" x ¼"
		26' to 30'	4" x 3" x 5/16"	4" x 3" x 5/16"	3" x 3" x ¼"
80"	7'-2"	4' to 20'	3" x 3" x 5/16"	5" x 3" x 5/16"	3" x 3" x ¼"
		21' to 25'	4" x 3" x 5/16"	5" x 3" x 5/16"	3" x 3" x ¼"
		26' to 30'	5" x 3" x 5/16"	5" x 3" x 5/16"	3" x 3" x ¼"
90"	8'-0"	18' to 20'	3" x 3" x 5/16"	5" x 3" x 5/16"	[illegible]
		21' to 25'	4" x 3" x 5/16"	5" x 3" x 5/16"	3" x 3" x ¼"
		26' to 30'	5" x 3" x 5/16"	5" x 3" x 5/16"	3" x 3" x 5/16"
100"	8'-10"	4' to 15'	3" x 3" x 5/16"	5" x 3" x 5/16"	3" x 3" x ¼"
		16' to 20'	3½" x 3" x 5/16"	5" x 3" x 5/16"	3" x 3" x ¼"
		21' to 25'	4" x 3" x 5/16"	5" x 3" x 5/16"	3" x 3" x ¼"
		26' to 30'	5" x 3" x 3/8"	5" x 3" x 3/8"	3" x 3" x 5/16"
110"	9'-8"	16' to 20'	3½" x 3" x 5/16"	5" x 3" x 5/16"	3" x 3" x ¼"
		21' to 25'	4" x 3" x 5/16"	5" x 3" x 5/16"	3" x 3" x ¼"
		26' to 30'	5" x 3" x 3/8"	5" x 3" x 3/8"	3" x 3" x 5/16"
120"	10'-6"	18' to 20'	3½" x 3" x 5/16"	5" x 3" x 5/16"	3" x 3" x ¼"
		21' to 25'	5" x 3" x 5/16"	5" x 3" x 5/16"	3" x 3" x 5/16"
		26' to 30'	5" x 3½" x 3/8"	5" x 3½" x 3/8"	3½" x 3½" x 5/16"

TABLE II — FRAME ANGLE SELECTION

61-5V13C11

Dist.	County	Route	Section	Sheet No.	Total Sheets
V	SB, SLO	2	L.SMdF	124	137

Fed. Road Div. No.	State	Proj. No.	Fiscal Year	Sheet No.	Total Sheets
7	Calif			124	204

To accompany plans dated August 15, 1960

Bridge Engineer — Civil Engineer — License

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

BRIDGE DEPARTMENT
··· DESIGN SECTION ···
Project Designer F.A. Rosse 1/57
Chief Designer Geo. W. Smith

DESIGN	By F.A. Rosse 11/56	Checked [illegible]
DETAILS	By JoAnn R. Becker 11/56	Checked [illegible]
QUANTITIES	By	Checked
SPECIFICATIONS	By	Plans and Specs Compared
Approval Recommended by	[illegible] Engineer of Design	Civil and Structural Engr. License No. 5439

Revised Dec 2? 1958

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD OVERHEAD SIGNS

UNBALANCED "BUTTERFLY" SIGN FRAMES

SCALE NONE | BRIDGE —— | FILE XS-18-10 | DRAWING

PREL. DRAWING No P-

124

129

To accompany plans dated August 15, 1960

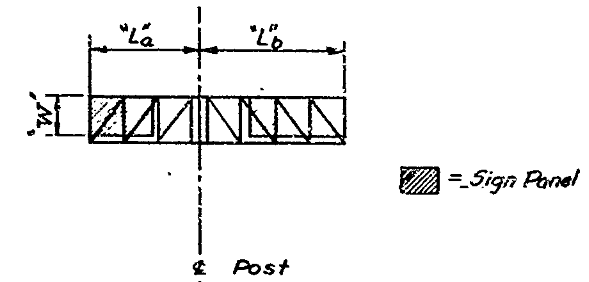
REV. ON: Deleted "Offset"

"W" = 80" SIGN DEPTH

"La"	"Lb"	Post Type	Plate Size Cap	Stiffener & Tie P's	"S" Spacing	Shear Bar or Pipe
4' to 9'	27'-30'	V	1'-11"×1'-11"×7/8"	10"×3/8"	1'-3½"	½"P @ 60"
	18'-26'	IV	1'-9"×1'-9"×3/4"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
	10'-17'	III	1'-8"×1'-8"×3/4"	10"×5/16"	1'-2"	5/8"ϕ @ 60"
10'	10'	I-S	1'-3½"×1'-3½"×5/8"	10"×5/16"	1'-½"	½"ϕ @ 60"
11'	26'-30'	V	1'-11"×1'-11"×7/8"	10"×3/8"	1'-3½"	½"P @ 60"
11'	18'-25'	IV	1'-9"×1'-9"×3/4"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
11'	12'-17'	III	1'-8"×1'-8"×3/4"	10"×5/16"	1'-2"	5/8"ϕ @ 60"
11'	11'	II-S	1'-6"×1'-6"×3/4"	10"×5/16"	1'-1"	5/8"ϕ @ 45"
12'	25'-30'	V	1'-11"×1'-11"×7/8"	10"×3/8"	1'-3½"	½"P @ 60"
12'	17'-24'	IV	1'-9"×1'-9"×3/4"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
12'	13'-16'	III	1'-8"×1'-8"×3/4"	10"×5/16"	1'-2"	5/8"ϕ @ 60"
12'	12'	II-S	1'-6"×1'-6"×3/4"	10"×5/16"	1'-1"	5/8"ϕ @ 45"
13'	24'-30'	V	1'-11"×1'-11"×7/8"	10"×3/8"	1'-3½"	½"P @ 60"
13'	16'-23'	IV	1'-9"×1'-9"×3/4"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
13'	14'-15'	III	1'-8"×1'-8"×3/4"	10"×5/16"	1'-2"	5/8"ϕ @ 60"
13'	13'	II-S	1'-6"×1'-6"×3/4"	10"×5/16"	1'-1"	5/8"ϕ @ 45"
14'	23'-30'	V	1'-11"×1'-11"×7/8"	10"×3/8"	1'-3½"	½"P @ 60"
14'	15'-22'	IV	1'-9"×1'-9"×3/4"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
14'	14'	II-S	1'-6"×1'-6"×3/4"	10"×5/16"	1'-1"	5/8"ϕ @ 60"
15'	23'-30'	V	1'-11"×1'-11"×7/8"	10"×3/8"	1'-3½"	½"P @ 60"
15'	16'-22'	IV	1'-9"×1'-9"×3/4"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
15'	15'	II-S	1'-6"×1'-6"×3/4"	10"×5/16"	1'-1"	5/8"ϕ @ 60"
16'	27'-30'	V	1'-11"×1'-11"×7/8"	10"×3/8"	1'-3½"	½"P @ 60"
16'	17'-26'	IV	1'-9"×1'-9"×[illegible]	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
16'	16'	III-S	1'-8"×1'-8"×[illegible]	[illegible]	1'-2"	[illegible]"ϕ @ 60"
17'	30'	VI	2'-1"×2'-1"×7/8"	10"×[illegible]	1'-4½"	½"P @ 60"
17'	21'-29'	V	1'-11"×1'-11"×7/8"	10"×3/8"	1'-3½"	½"P @ 60"
17'	18'-20'	IV	1'-9"×1'-9"×3/4"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
17'	17'	III-S	1'-8"×1'-8"×3/4"	10"×5/16"	1'-2"	5/8"ϕ @ 60"
18'	29'-30'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 60"
18'	19'-28'	V	1'-11"×1'-11"×7/8"	10"×3/8"	1'-3½"	½"P @ 60"
18'	18'	III-S	1'-8"×1'-8"×3/4"	10"×5/16"	1'-2"	3/4"ϕ @ 60"
19'	29'-30'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 60"
19'	20'-28'	V	1'-11"×1'-11"×7/8"	10"×3/8"	1'-3½"	½"P @ 60"
19'	19'	III-S	1'-8"×1'-8"×3/4"	10"×5/16"	1'-2"	3/4"ϕ @ 60"
20'	28'-30'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 60"
20'	21'-27'	V	1'-11"×1'-11"×7/8"	10"×3/8"	1'-3½"	3/4"ϕ @ 60"
20'	20'	III-S	1'-8"×1'-8"×3/4"	10"×5/16"	1'-2"	3/4"ϕ @ 60"
21'	27'-30'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 60"
21'	23'-26'	V	1'-11"×1'-11"×7/8"	10"×3/8"	1'-3½"	3/4"ϕ @ 60"
21'	21'-22'	III-S	1'-8"×1'-8"×3/4"	10"×5/16"	1'-2"	3/4"ϕ @ 60"
22'	26'-30'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 60"
22'	24'-25'	V	1'-11"×1'-11"×3/4"	10"×3/8"	1'-3½"	3/4"ϕ @ 60"
22'	22'-23'	III-S	1'-8"×1'-8"×3/4"	10"×5/16"	1'-2"	3/4"ϕ @ 60"
23'	25'-30'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 60"
23'	23'-24'	IV-S	1'-9"×1'-9"×3/4"	10"×5/16"	1'-2½"	3/4"ϕ @ 50"
24'	25'-30'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 60"
24'	24'-25'	IV-S	1'-9"×1'-9"×3/4"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
25'	27'-30'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 60"
25'	25'-26'	IV-S	1'-9"×1'-9"×7/8"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
26'	28'-30'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 60"
26'	26'-27'	IV-S	1'-9"×1'-9"×7/8"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
27'	29'-30'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 50"
27'	27'-28'	IV-S	1'-9"×1'-9"×7/8"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
28'	30'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 60"
28'	28'-29'	IV-S	1'-9"×1'-9"×7/8"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
29'	29'-30'	IV-S	1'-9"×1'-9"×7/8"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
30'	30'	IV-S	1'-9"×1'-9"×7/8"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"

"W" = 90" SIGN DEPTH

"La"	"Lb"	Post Type	Plate Size Cap	Stiffener & Tie P's	"S" Spacing	Shear Bar or Pipe
18'	24'-30'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 60"
18'	19'-23'	V	1'-11"×1'-11"×3/4"	10"×3/8"	1'-3½"	3/4"ϕ @ 60"
18'	18'	III-S	1'-8"×1'-8"×3/4"	10"×5/16"	1'-2"	3/4"ϕ @ 60"
19'	23'-30'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 60"
19'	20'-22'	V	1'-11"×1'-11"×3/4"	10"×3/8"	1'-3½"	3/4"ϕ @ 60"
19'	19'	III-S	1'-8"×1'-8"×3/4"	10"×5/16"	1'-2"	3/4"ϕ @ 60"
20'	22'-30'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 60"
20'	21'	V	1'-11"×1'-11"×3/4"	10"×3/8"	1'-3½"	3/4"ϕ @ 60"
20'	20'	III-S	1'-8"×1'-8"×3/4"	10"×5/16"	1'-2"	3/4"ϕ @ 60"
21'	22'-30'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 60"
21'	21'	IV-S	1'-9"×1'-9"×3/4"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
22'	30'	VII	2'-3"×2'-3"×7/8"	10"×7/16"	1'-5½"	½"P @ 60"
22'	24'-29'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 60"
22'	22'-23'	IV-S	1'-9"×1'-9"×3/4"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
23'	29'-30'	VII	2'-3"×2'-3"×7/8"	10"×7/16"	1'-5½"	½"P @ 60"
23'	25'-28'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 60"
23'	23'-24'	IV-S	1'-9"×1'-9"×3/4"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
24'	29'-30'	VII	2'-3"×2'-3"×7/8"	10"×7/16"	1'-5½"	½"P @ 60"
24'	26'-28'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 60"
24'	24'-25'	IV-S	1'-9"×1'-9"×3/4"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
25'	28'-30'	VII	2'-3"×2'-3"×7/8"	10"×7/16"	1'-5½"	½"P @ 60"
25'	27'	VI	2'-1"×2'-1"×7/8"	10"×3/8"	1'-4½"	½"P @ 60"
25'	25'-26'	IV-S	1'-9"×1'-9"×7/8"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
26'	28'-30'	VII	2'-3"×2'-3"×7/8"	10"×7/16"	1'-5½"	½"P @ 60"
26'	26'-27'	IV-S	1'-9"×1'-9"×7/8"	10"×5/16"	1'-2½"	3/4"ϕ @ 60"
27'	29'-30'	VII	2'-3"×2'-3"×7/8"	10"×7/16"	1'-5½"	½"P @ 60"
27'	27'-28'	V-S	1'-11"×1'-11"×7/8"	10"×3/8"	1'-3½"	½"P @ 60"
28'	30'	VII	2'-3"×2'-3"×7/8"	10"×7/16"	1'-5½"	½"P @ 60"
28'	28'-29'	V-S	1'-11"×1'-11"×7/8"	10"×3/8"	1'-3½"	½"P @ 60"
29'	29'-30'	V-S	1'-11"×1'-11"×7/8"	10"×3/8"	1'-3½"	½"P @ 60"
30'	30'	V-S	1'-11"×1'-11"×7/8"	10"×3/8"	1'-3½"	½"P @ 60"



Notes:
1. Enter tables with "La", the shorter frame side, and find "Lb" the corresponding longer frame side. "La" may correspond to either "L1" or "L2" as found in "Unbalanced Butterfly Sign Frames" Sheet and Table IV on "Sign Data" sheets.
2. "ϕ" denotes round solid bar. "P" denotes Double - Extra Strong Pipe.
3. For Post & Footing Details see "Posts - Type I-S thru VII-S" & "Post - Types I thru VII" sheets.

"W" = 100" SIGN DEPTH

"La"	"Lb"	Post Type	Plate Size Cap	Stiffener & Tie P's	"S" Spacing	Shear Bar or Pipe
4' to 9'	26'-30'	VI	2'-1"×2'-1"×7/8"	8"×3/8"	1'-4½"	½"P @ 60"
	19'-25'	V	1'-11"×1'-11"×3/4"	8"×3/8"	1'-3½"	½"P @ 60"
	10'-18'	IV	1'-9"×1'-9"×3/4"	8"×5/16"	1'-2½"	3/4"ϕ @ 60"
10'	10'	II-S	1'-6"×1'-6"×3/4"	8"×5/16"	1'-1"	5/8"ϕ @ 60"
11'	25'-30'	VI	2'-1"×2'-1"×7/8"	8"×3/8"	1'-4½"	½"P @ 60"
11'	19'-24'	V	1'-11"×1'-11"×3/4"	8"×3/8"	1'-3½"	½"P @ 60"
11'	12'-18'	IV	1'-9"×1'-9"×3/4"	8"×5/16"	1'-2½"	3/4"ϕ @ 60"
11'	11'	II-S	1'-6"×1'-6"×3/4"	8"×5/16"	1'-1"	5/8"ϕ @ 60"
12'	25'-30'	VI	2'-1"×2'-1"×7/8"	8"×3/8"	1'-4½"	½"P @ 60"
12'	18'-24'	V	1'-11"×1'-11"×3/4"	8"×3/8"	1'-3½"	½"P @ 60"
12'	13'-17'	IV	1'-9"×1'-9"×3/4"	8"×5/16"	1'-2½"	3/4"ϕ @ 60"
12'	12'	II-S	1'-6"×1'-6"×3/4"	8"×5/16"	1'-1"	5/8"ϕ @ 60"
13'	24'-30'	VI	2'-1"×2'-1"×7/8"	8"×3/8"	1'-4½"	½"P @ 60"
13'	17'-23'	V	1'-11"×1'-11"×3/4"	8"×3/8"	1'-3½"	½"P @ 60"
13'	14'-16'	IV	1'-9"×1'-9"×3/4"	8"×5/16"	1'-2½"	3/4"ϕ @ 60"
13'	13'	III-S	1'-8"×1'-8"×3/4"	8"×5/16"	1'-2"	5/8"ϕ @ 60"
14'	23'-30'	VI	2'-1"×2'-1"×7/8"	8"×3/8"	1'-4½"	½"P @ 60"
14'	15'-22'	V	1'-11"×1'-11"×3/4"	8"×3/8"	1'-3½"	3/4"ϕ @ 60"
14'	14'	III-S	1'-8"×1'-8"×3/4"	8"×5/16"	1'-2"	5/8"ϕ @ 60"
15'	23'-30'	VI	2'-1"×2'-1"×7/8"	8"×3/8"	1'-4½"	½"P @ 60"
15'	16'-22'	V	1'-11"×1'-11"×3/4"	8"×3/8"	1'-3½"	3/4"ϕ @ 60"
15'	15'	III-S	1'-8"×1'-8"×3/4"	8"×5/16"	1'-2"	3/4"ϕ @ 60"
16'	30'	VII	2'-3"×2'-3"×7/8"	8"×7/16"	1'-5½"	3/4"P @ 60"
16'	22'-29'	VI	2'-1"×2'-1"×7/8"	8"×3/8"	1'-4½"	½"P @ 60"
16'	17'-21'	V	1'-11"×1'-11"×3/4"	8"×3/8"	1'-3½"	3/4"ϕ @ 60"
16'	16'	III-S	1'-8"×1'-8"×3/4"	8"×5/16"	1'-2"	3/4"ϕ @ 60"
17'	29'-30'	VII	2'-3"×2'-3"×7/8"	8"×7/16"	1'-5½"	3/4"P @ 60"
17'	21'-28'	VI	2'-1"×2'-1"×7/8"	8"×3/8"	1'-4½"	½"P @ 60"
17'	18'-20'	V	1'-11"×1'-11"×3/4"	8"×3/8"	1'-3½"	3/4"ϕ @ 60"
17'	17'	III-S	1'-8"×1'-8"×3/4"	8"×5/16"	1'-2"	[illegible]"ϕ @ 60"
18'	28'-30'	VII	2'-3"×2'-3"×7/8"	8"×7/16"	1'-5½"	3/4"P @ 60"
18'	19'-27'	VI	2'-1"×2'-1"×7/8"	8"×7/16	1'-4½"	½"P @ 60"
18'	18'	III-S	1'-8"×1'-8"×3/4"	8"×5/16"	1'-2"	3/4"ϕ @ 60"
19'	28'-30'	VII	2'-3"×2'-3"×7/8"	8"×7/16"	1'-5½"	[illegible]"P @ 60"
19'	20'-27'	VI	2'-1"×2'-1"×7/8"	8"×3/8"	1'-4½"	½"P @ 60"
19'	19'	IV-S	1'-9"×1'-9"×3/4"	8"×5/16"	1'-2½"	3/4"ϕ @ 60"
20'	27'-30'	VII	2'-3"×2'-3"×7/8"	8"×7/16"	1'-5½"	3/4"P @ 60"
20'	21'-26'	VI	2'-1"×2'-1"×7/8"	8"×3/8"	1'-4½"	½"P @ 60"
20'	20'	IV-S	1'-9"×1'-9"×3/4"	8"×5/16"	1'-2½"	3/4"ϕ @ 60"
21'	26'-30'	VII	2'-3"×2'-3"×7/8"	8"×7/16"	1'-5½"	3/4"P @ 60"
21'	22'-25'	VI	2'-1"×2'-1"×3/4"	8"×3/8"	1'-4½"	½"P @ 60"
21'	21'	IV-S	1'-9"×1'-9"×3/4"	8"×5/16"	1'-2½"	3/4"ϕ @ 60"
22'	25'-30'	VII	2'-3"×2'-3"×7/8"	8"×7/16"	1'-5½"	3/4"P @ 60"
22'	23'-24'	VI	2'-1"×2'-1"×3/4"	8"×3/8"	1'-4½"	½"P @ 60"
22'	22'	IV-S	1'-9"×1'-9"×3/4"	8"×5/16"	1'-2½"	3/4"ϕ @ 60"
23'	25'-30'	VII	2'-3"×2'-3"×7/8"	8"×7/16"	1'-5½"	3/4"P @ 60"
23'	23'-24'	IV-S	1'-9"×1'-9"×3/4"	8"×5/16"	1'-2½"	3/4"ϕ @ 60"
24'	26'-30'	VII	2'-3"×2'-3"×7/8"	8"×7/16"	1'-5½"	3/4"P @ 60"
24'	24'-25'	V-S	1'-11"×1'-11"×3/4"	8"×3/8"	1'-3½"	½"P @ 60"
25'	27'-30'	VII	2'-3"×2'-3"×7/8"	8"×7/16"	1'-5½"	3/4"P @ 60"
25'	25'-26'	V-S	1'-11"×1'-11"×7/8"	8"×3/8"	1'-3½"	½"P @ 60"
26'	28'-30'	VII	2'-3"×2'-3"×7/8"	8"×7/16"	1'-5½"	3/4"P @ 60"
26'	26'-27'	V-S	1'-11"×1'-11"×7/8"	8"×3/8"	1'-3½"	½"P @ 60"
27'	29'-30'	VII	2'-3"×2'-3"×7/8"	8"×7/16"	1'-5½"	3/4"P @ 60"
27'	27'-28'	V-S	1'-11"×1'-11"×7/8"	8"×3/8"	1'-3½"	½"P @ 60"
28'	30'	VII	2'-3"×2'-3"×7/8"	8"×7/16"	1'-5½"	3/4"P @ 60"
28'	28'-29'	V-S	1'-11"×1'-11"×7/8"	8"×3/8"	1'-3½"	½"P @ 60"
29'	29'-30'	V-S	1'-11"×1'-11"×7/8"	8"×3/8"	1'-3½"	½"P @ 60"
30'	30'	V-S	1'-11"×1'-11"×7/8"	8"×3/8"	1'-3½"	½"P @ 60"

"W" = 110" SIGN DEPTH

"La"	"Lb"	Post Type	Plate Size Cap	Stiffener & Tie P's	"S" Spacing	Shear Bar or Pipe
18'	24'-30'	VII	2'-3"×2'-3"×1"	8"×7/16"	1'-5½"	3/4"P @ 60"
18'	19'-23'	VI	2'-1"×2'-1"×7/8"	8"×3/8"	1'-4½"	½"P @ 60"
18'	18'	IV-S	1'-9"×1'-9"×3/4"	8"×5/16"	1'-2½"	3/4"ϕ @ 60"
19'	23'-30'	VII	2'-3"×2'-3"×1"	8"×7/16"	1'-5½"	3/4"P @ 60"
19'	20'-22'	VI	2'-1"×2'-1"×7/8"	8"×3/8"	1'-4½"	½"P @ 60"
19'	19'	IV-S	1'-9"×1'-9"×3/4"	8"×5/16"	1'-2½"	3/4"ϕ @ 60"
20'	22'-30'	VII	2'-3"×2'-3"×1"	8"×7/16"	1'-5½"	3/4"P @ 60"
20'	21'	VI	2'-1"×2'-1"×7/8"	8"×3/8"	1'-4½"	½"P @ 60"
20'	20'	IV-S	1'-9"×1'-9"×3/4"	8"×5/16"	1'-2½"	3/4"ϕ @ 60"
21'	22'-30'	VII	2'-3"×2'-3"×1"	8"×7/16"	1'-5½"	3/4"P @ 60"
21'	21'	IV-S	1'-9"×1'-9"×3/4"	8"×5/16"	1'-2½"	3/4"ϕ @ 60"
22'	24'-30'	VII	2'-3"×2'-3"×1"	8"×7/16"	1'-5½"	3/4"P @ 60"
22'	22'-23'	V-S	1'-11"×1'-11"×7/8"	8"×3/8"	1'-3½"	½"P @ 60"
23'	25'-30'	VII	2'-3"×2'-3"×1"	8"×7/16"	1'-5½"	3/4"P @ 60"
23'	23'-24'	V-S	1'-11"×1'-11"×7/8"	8"×3/8"	1'-3½"	½"P @ 60"
24'	26'-30'	VII	2'-3"×2'-3"×1"	8"×7/16"	1'-5½"	3/4"P @ 60"
24'	24'-25'	V-S	1'-11"×1'-11"×7/8"	8"×3/8"	1'-3½"	½"P @ 60"
25'	27'-30'	VII	2'-3"×2'-3"×1"	8"×7/16"	1'-5½"	3/4"P @ 60"
25'	25'-26'	V-S	1'-11"×1'-11"×7/8"	8"×3/8"	1'-3½"	½"P @ 60"
26'	28'-30'	VII	2'-3"×2'-3"×1"	8"×7/16"	1'-5½"	3/4"P @ 60"
26'	26'-27'	V-S	1'-11"×1'-11"×7/8"	8"×3/8"	1'-3½"	½"P @ 60"
27'	29'-30'	VII	2'-3"×2'-3"×1"	8"×7/16"	1'-5½"	3/4"P @ 60"
27'	27'-28'	VI-S	2'-1"×2'-1"×1"	8"×3/8"	1'-4½"	3/4"P @ 60"
28'	28'-30'	VI-S	2'-1"×2'-1"×1"	8"×3/8"	1'-4½"	3/4"P @ 60"
29'	29'-30'	VI-S	2'-1"×2'-1"×1"	8"×3/8"	1'-4½"	3/4"P @ 60"
30'	30'	VI-S	2'-1"×2'-1"×1"	8"×3/8"	1'-4½"	3/4"P @ 60"

"W" = 120" SIGN DEPTH

"La"	"Lb"	Post Type	Plate Size Cap	Stiffener & Tie P's	"S" Spacing	Shear Bar or Pipe
18'	19'-30'	VII	2'-4"×2'-4"×1"	8"×7/16"	1'-6"	3/4"P @ 60"
18'	18'	IV-S	1'-9"×1'-9"×3/4"	8"×5/16"	1'-2½"	3/4"ϕ @ 60"
19'	20'-30'	VII	2'-4"×2'-4"×1"	8"×7/16"	1'-6"	3/4"P @ 60"
19'	19'	IV-S	1'-9"×1'-9"×3/4"	8"×5/16"	1'-2½"	3/4"ϕ @ 60"
20'	21'-30'	VII	2'-4"×2'-4"×1"	8"×7/16"	1'-6"	3/4"P @ 60"
20'	20'	IV-S	1'-9"×1'-9"×3/4"	8"×5/16"	1'-2½"	3/4"ϕ @ 60"
21'	22'-30'	VII	2'-4"×2'-4"×1"	8"×7/16"	1'-6"	3/4"P @ 60"
21'	21'	V-S	1'-11"×1'-11"×7/8"	8"×3/8"	1'-3½"	½"P @ 60"
22'	23'-30'	VII	2'-4"×2'-4"×1"	8"×7/16"	1'-6"	3/4"P @ 60"
22'	22'	V-S	1'-11"×1'-11"×7/8"	8"×3/8"	1'-3½"	½"P @ 60"
23'	24'-30'	VII	2'-4"×2'-4"×1"	8"×7/16"	1'-6"	3/4"P @ 60"
23'	23'	V-S	1'-11"×1'-11"×7/8"	8"×3/8"	1'-3½"	½"P @ 60"
24'	25'-30'	VII	2'-4"×2'-4"×1"	8"×7/16"	1'-6"	3/4"P @ 60"
24'	24'	V-S	1'-11"×1'-11"×7/8"	8"×3/8"	1'-3½"	½"P @ 60"
25'	26'-30'	VII	2'-4"×2'-4"×1"	8"×7/16"	1'-6"	3/4"P @ 60"
25'	25'	V-S	1'-11"×1'-11"×7/8"	8"×3/8"	1'-3½"	½"P @ 60"
26'	29'-30'	VII-S	2'-4"×2'-4"×1"	8"×7/16"	1'-6"	3/4"P @ 60"
26'	28'	VI-S	2'-2"×2'-2"×1"	8"×3/8"	1'-5"	3/4"P @ 60"
26'	26'-27'	VI-S	2'-2"×2'-2"×1"	8"×3/8"	1'-5"	3/4"P @ 60"
27'	29'-30'	VII-S	2'-4"×2'-4"×1"	8"×7/16"	1'-6"	3/4"P @ 60"
27'	27'-28'	VI-S	2'-2"×2'-2"×1"	8"×3/8"	1'-5"	3/4"P @ 60"
28'	30'	VII-S	2'-4"×2'-4"×1"	8"×7/16"	1'-6"	3/4"P @ 60"
28'	28'-29'	VI-S	2'-2"×2'-2"×1"	8"×3/8"	1'-5"	3/4"P @ 60"
29'	29'-30'	VI-S	2'-2"×2'-2"×1"	8"×3/8"	1'-5"	3/4"P @ 60"
30'	30'	VI-S	2'-2"×2'-2"×1"	8"×3/8"	1'-5"	3/4"P @ 60"

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

BRIDGE DEPARTMENT
··· DESIGN SECTION ···
Project Designer F. A. Rossi 1/57
Chief Designer Geo. W. Smith

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD OVERHEAD SIGNS
TABLE III - POST TYPE SELECTION
80" THRU 120"
UNBALANCED "BUTTERFLY" SIGNS

SCALE NONE | BRIDGE | FILE XS-18-12 | DRAWING

Revised Dec. 26, 1958

PREL. DRAWING No. P-

S7R

125

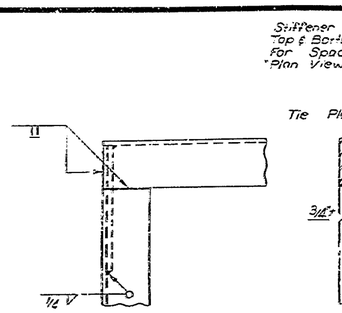
REVISION	DATE	APPROVED
Added Lug Connection Detail	2-26-62	
Revised Detail "H"	7-23-62	
Revised Detail "H"	8-15-62	

FED. ROAD SYS. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CALIF.			126	204

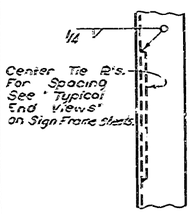
DIST.	COUNTY	ROUTE	SECTION	PROJECT NO.	TOTAL SHEETS
V	SB,SLO	2	4.1/19.8 F	126	137

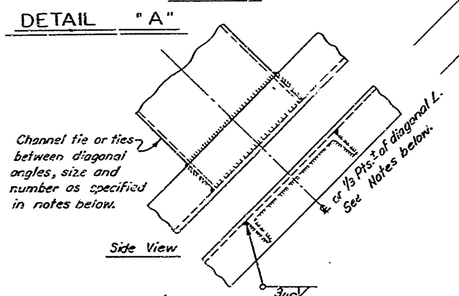
To accompany plans dated August 15, 1960

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50002536



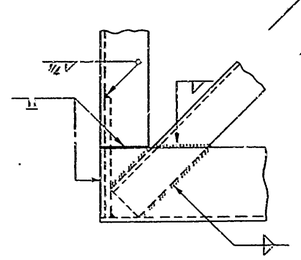
DETAIL "A"



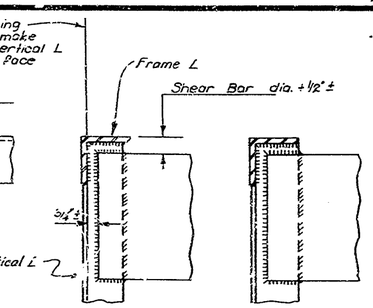


DETAIL "E"

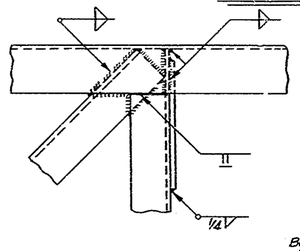
Notes:
1. For "W" = 40", 50" & 60" - No ties between diagonals.
2. For "W" = 70", 80" & 90" - One 9Lx13.4#/ft tie located at ℄± of diagonals.
3. For "W" = 100", 110" & 120" - Two 8Lx11.5#/ft ties located at 1/3± Pts. of diagonals.



DETAIL "C"

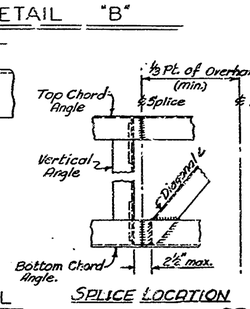


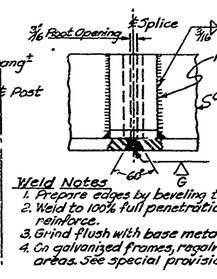
DETAIL "B"



DETAIL "B" OPTIONAL

Note: Diagonal not shown
Side View



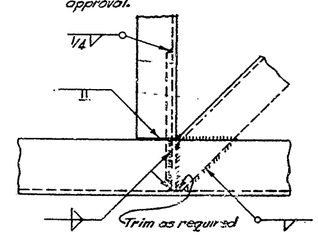


Weld Notes
1. Prepare edges by beveling to L shown.
2. Weld to 100% full penetration and reinforce.
3. Grind flush with base metal.
4. On galvanized frames, regalv welded areas. See special provisions.

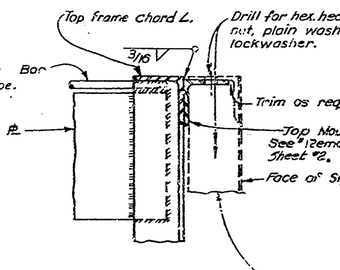
SPLICE LOCATION

SPLICE DETAILS

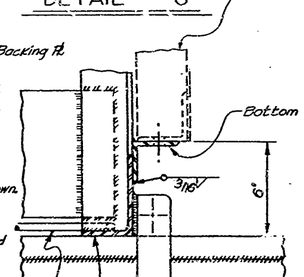
Note: Continuous chord member desired--Splice only where necessary. Alternate splice details are subject to Engineer's approval.



DETAIL "D"



DETAIL "G"



Note:
When 4" x 3" frame chord L is used on bottom, increase the typical 2½" vertical leg of Mounting Clip L to 3" as shown below. All others same as specified in "Removable Sign Panel Frames" Sheets.

DETAIL "H"

GENERAL NOTES

SPECIFICATIONS:
DESIGN: A.A.S.H.O. DATED 1953 WITH SUBSEQUENT REVISIONS AND MODIFICATIONS.

CONSTRUCTION: STANDARD SPECIFICATIONS, DIVISION OF HIGHWAYS, AND THE SPECIAL PROVISIONS.

LOADING:
WIND LOADING: 30 P.S.F. NORMAL TO FRAME AREA.
WALKWAY LOADING: DEAD LOAD + 300# CONCENTRATED LIVE LOAD + 30% LIVE LOAD IMPACT.

UNIT STRESSES:
STRUCTURAL STEEL: F_s = 18,000 P.S.I.
REINFORCED CONCRETE: F_c = 20,000 P.S.I.
F_s = 1,200 P.S.I., N = 10
FOOTING SOIL PRESSURE: 1-1/4 TONS/SQ. FT.
ALLOWABLE UNIT STRESSES DUE TO WIND LOAD OR WIND LOAD IN COMBINATION WITH OTHER FORCES, ARE INCREASED 33-1/3%.

MINIMUM CLEARANCE: VERTICAL ROADWAY CLEARANCE 17'-0"
REINFORCEMENT EMBEDMENT IS CLEAR TO OUTSIDE OF BAR AND IS 2" TO MAIN REINFORCEMENT, EXCEPT AS NOTED.

WELDING: ALL WELDING CONTINUOUS UNLESS OTHERWISE SHOWN ON THE PLANS. ALL WELDING TO BE DONE IN ACCORDANCE WITH THE A.W.S. SPECIFICATIONS DATED 1956.

NOTE: FOR ELECTRICAL DETAILS SEE "LUMINAIRE AND LIGHTING STANDARDS" SHEET AND LIGHTING PLANS.

GENERAL NOTES, CONT'D.

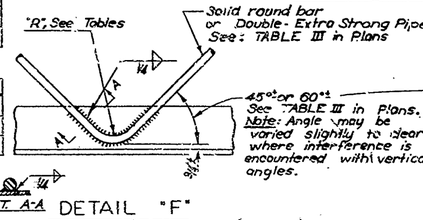
MATERIALS:
BARS, PLATES, SHAPES, AND ANCHOR BOLT ASSEMBLIES TO BE STRUCTURAL STEEL A.S.T.M. DESIGNATION "A-7". SHEET TO BE CARBON STEEL SHEETS, A.S.T.M. DESIGNATION "A-245", GRADE "C".
PIPE POSTS TO BE WELDED AND SEAMLESS STEEL PIPE, A.S.T.M. DESIGNATION "A-53", GRADE "B". PIPE POSTS FABRICATED FROM A-7 STEEL WILL BE ACCEPTED.

FINISH:
FOR SURFACE TREATMENT OF EXPOSED METAL SURFACES NOT SHOWN TO BE FURNISHED GALVANIZED SEE THE SPECIAL PROVISIONS.

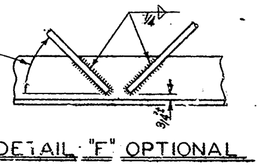
Shear Bar	Radius "R"
½"ϕ	1¼"±
⅝"ϕ	1½"±
¾"ϕ	2"±

Shear Pipe	Radius "R"
½" @ 1.71#/ft.	2"±
¾" @ 2.44#/ft.	2½"±

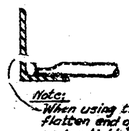
TYPICAL JOINT DETAILS



SECT. A-A DETAIL "F" TYPICAL



DETAIL "F" OPTIONAL



61-5V13C11

Note: Sign Panel Mounting clip angles and walkway brackets not shown.

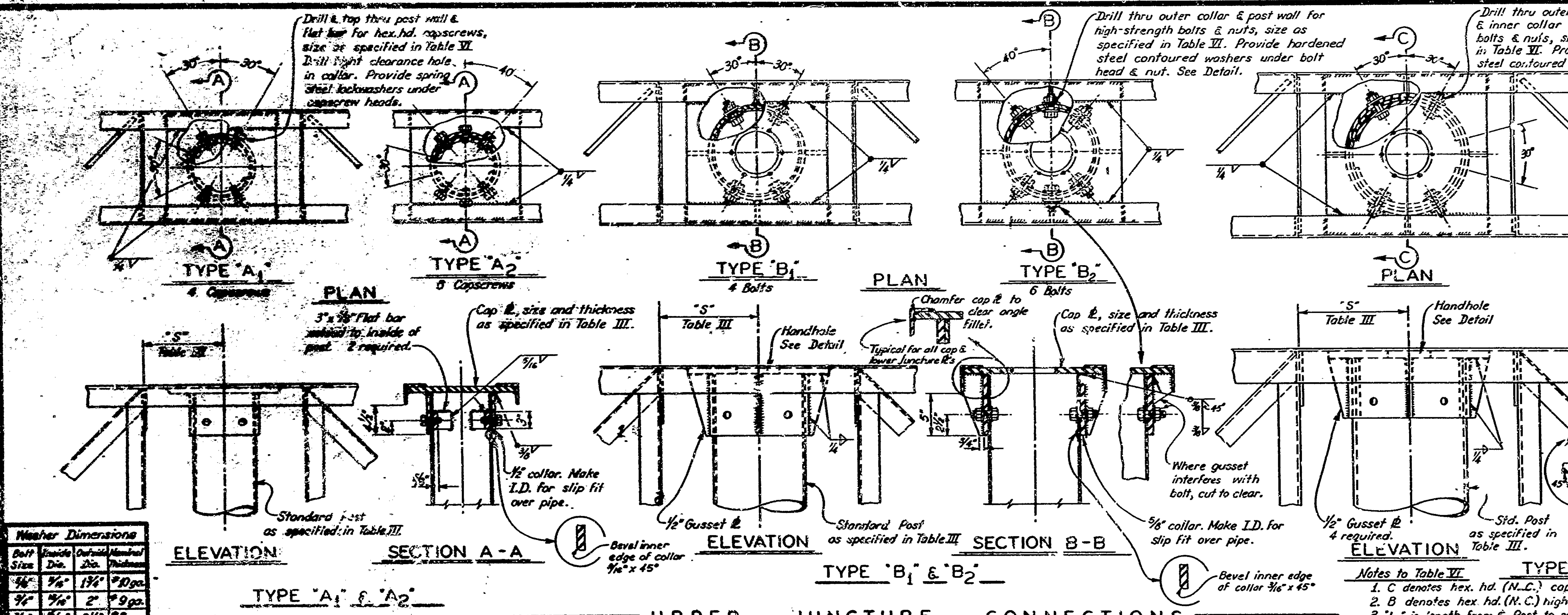
BRIDGE DEPARTMENT	DESIGN SECTION	STATE OF CALIFORNIA
Project Designer: H.D. Cooke 1/67		STANDARDS, OVERHEAD SIGNS (BUTTERFLY AND FULL CANTILEVER TYPES)
Chief Designer: Marvin Sanders		JOINT ASSY. & SIGN PANEL DETAILS
DESIGN: H.D. Cooke 1/67	Noted:	
DETAILS: R.D. Holguin 1/67	Approved:	
QUANTITIES:	Dated:	
SPECIFICATIONS:		
Approved for the Director:		

126

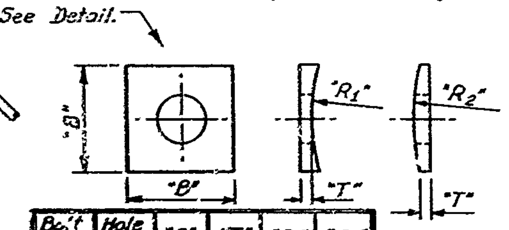
FED. ROAD DIV. No.	STATE	PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	CALIF.			127	204

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
V	SB, SLO	2	LSM, P, F	127	137

To accompany plans dated August 15, 1960



Washer Dimensions			
Bolt Size	Inside Dia.	Outside Dia.	Nominal Thickness
5/8"	11/16"	1 3/4"	#10 ga.
3/4"	13/16"	2"	#9 ga.
7/8"	15/16"	2 1/4"	#8 ga.
1"	1 1/16"	2 1/2"	#8 ga.
1 1/8"	1 1/4"	2 3/4"	#8 ga.
1 1/4"	1 3/8"	3"	#8 ga.



Bolt Size	Hole Dia.	"B"	"T"	"R_1"	"R_2"
5/8"	11/16"	1 3/4	1/4"	Grind or mach. to fit	Grind or mach. to fit
3/4"	13/16"	2"	1/4"		
7/8"	15/16"	2 1/4"	5/16"		
1"	1 1/16"	2 1/2"	5/16"		
1 1/8"	1 1/4"	2 3/4"	5/16"		

Note: Material and hardness as specified in A.S.T.M. Designation A325.

CONTOURED WASHERS

For Type "B_1", "B_2" & "C" Upper Juncture Connections.

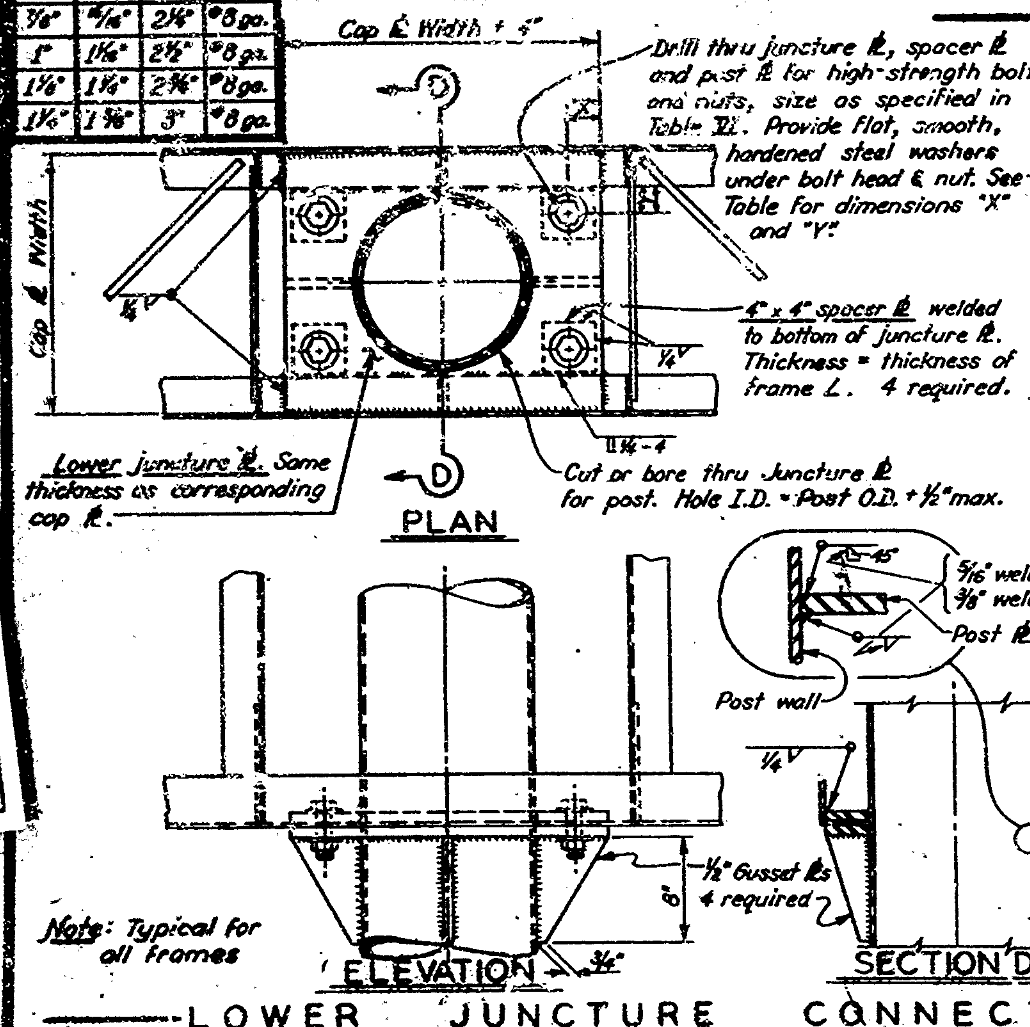
Notes to Table VI

1. C denotes hex. hd. (N.C.) capscrew
2. B denotes hex. hd. (N.C.) high-strength bolt and nut.
3. "L_B" is length from ℄ Post to end of Frame and corresponds to "L_B" in Table III for Unbalanced Signs, "L" for Full Cantilever signs, and "L/2" for Balanced Signs.

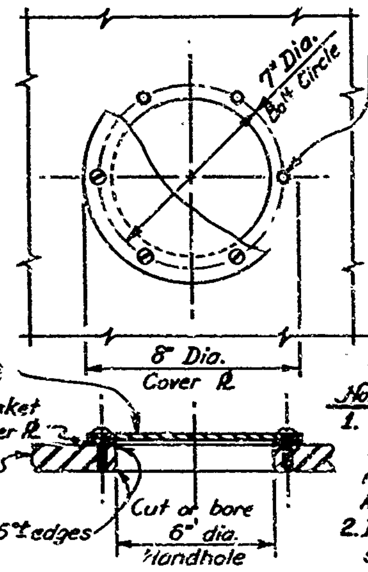
UPPER JUNCTURE CONNECTIONS

	Post Type	"L_B" = 5' to 10' Upper Juncture Type	Upper Juncture	Lower Juncture	"L_B" = 11' to 15' Upper Juncture Type	Upper Juncture	Lower Juncture	"L_B" = 16' to 20' Upper Juncture Type	Upper Juncture	Lower Juncture	"L_B" = 21' to 25' Upper Juncture Type	Upper Juncture	Lower Juncture	"L_B" = 26' to 30' Upper Juncture Type	Upper Juncture	Lower Juncture
			Bolt or screw dia.			Bolt or screw dia.			Bolt or screw dia.			Bolt or screw dia.			Bolt or screw dia.	
Sign Depth "W" 40" thru 60"	I or I-S	"A_1"	3/4" C	5/8" B	"A_2"	7/8" C	5/8" B	"A_1"	3/4" C	5/8" B						
	II or II-S				"A_1"	3/4" C	5/8" B	"A_2"	1" C	3/4" B	"A_2"	1 1/8" C	7/8" B	"A_2"	7/8" C	5/8" B
	III or III-S				"B_1"	5/8" B	5/8" B	"B_1"	7/8" B	7/8" B	"B_2"	1" B	1" B	"B_2"	1 1/8" B	1 1/8" B
	IV or IV-S							"B_1"	5/8" B	5/8" B	"B_1"	1" B	1" B	"B_2"	1 1/8" B	1 1/8" B
	V or V-S													"B_1"	1" B	1" B
Sign Depth "W" 70" thru 90"	I or I-S	"A_1"	3/4" C	5/8" B	"A_1"	3/4" C	5/8" B									
	II or II-S	"A_1"	3/4" C	5/8" B	"A_2"	7/8" C	3/4" B	"A_2"	1" C	3/4" B						
	III or III-S				"B_1"	5/8" B	5/8" B	"B_2"	7/8" B	7/8" B	"B_2"	1" B	1" B	"B_2"	1 1/8" B	1 1/8" B
	IV or IV-S				"B_1"	3/4" B	3/4" B	"B_1"	7/8" B	7/8" B	"B_2"	1" B	1" B	"C"	1 1/8" B	1 1/8" B
	V or V-S							"B_1"	3/4" B	3/4" B	"B_2"	7/8" B	7/8" B	"C"	1 1/8" B	1 1/8" B
	VI or VI-S										"B_1"	7/8" B	7/8" B	"B_2"	1" B	1" B
	VII or VII-S													"B_2"	7/8" B	7/8" B
Sign Depth "W" 100" thru 120"	I or I-S	"A_1"	3/4" C	5/8" B												
	II or II-S	"A_1"	3/4" C	5/8" B	"A_1"	3/4" C	5/8" B									
	III or III-S				"B_2"	3/4" B	3/4" B	"B_2"	1" B	1" B						
	IV or IV-S				"B_1"	3/4" B	3/4" B	"B_2"	1" B	1" B	"B_2"	1 1/8" B	1 1/8" B			
	V or V-S				"B_1"	3/4" B	3/4" B	"B_2"	3/4" B	3/4" B	"B_2"	1 1/8 B	1 1/8" B	"C"	1 1/8" B	1 1/4" B
	VI or VI-S							"B_1"	3/4" B	3/4" B	"B_2"	7/8 B	7/8" B	"C"	1 1/8" B	1 1/4" B
	VII or VII-S							"B_1"	3/4" B	3/4" B	"B_1"	7/8" B	7/8" B	[illegible]	1" B	1" B

TABLE VI — JUNCTURE TYPE SELECTION (See Notes Above)



Post Type	DIMENSIONS "X"	"Y"
I or I-S	2 1/4"	1 1/2"
II or II-S	2 1/4"	1 3/4"
III or III-S	2 1/2"	2"
IV or IV-S	2 3/4"	2"
V or V-S	3"	2"
VI or VI-S	3"	2"
VII or VII-S	3"	2"



HANDHOLE DETAILS

Typical for Types "B_1", "B_2" & "C"

Bolt Size	Req'd Bolt Tension	Equivalent Torque
5/8"	17,250 lbs.	180 lb.-ft.
3/4"	25,600 lbs.	320 lb.-ft.
7/8"	32,400 lbs.	470 lb.-ft.
1"	42,500 lbs.	710 lb.-ft.
1 1/8"	50,800 lbs.	960 lb.-ft.
1 1/4"	64,500 lbs.	1,350 lb.-ft.

BOLT TENSION & TORQUE VALUES

Notes:

1. All high-strength bolt, nut and washer material shall conform to requirements as specified in A.S.T.M. Designation: A 325.
2. Drilled holes for high-strength bolts shall not exceed nominal bolt dia. by more than 1/16" max.
3. All nuts shall be tightened to give the bolt tension values listed in table above. Nuts shall be in motion when torque is measured.
4. Contact surfaces between high-strength bolt head & nut shall be free of paint, dirt, oil, loose scale, burrs, pits & other defects that would interfere with the development of friction between parts.
5. Bottom of frame to be level.
6. All bolts, nuts, capscrews and washers shall be cadmium plated.
7. In all cases, sign frame shall be supported at top of post. Bearing surface of top of post shall be finished true.
8. At lower juncture connection, shims shall be used where any clearance exists between bottom of frame and post plate prior to tightening of bolts in lower connection.

LOWER JUNCTURE CONNECTION

61-5V13C11

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

BRIDGE DEPARTMENT
... DESIGN SECTION ...
Project Designer: Ferruccio A. Rossa 3/57
Chief Designer: Geo. W. Smith

DESIGN	By F.A. Rossa 1/57	Checked Louis J. Mlecek 3/57
DETAILS	By JoAnn P. Becker 1-	Checked Louis J. Mlecek 3/57
QUANTITIES	By	Checked
SPECIFICATIONS	By	Plans and Specs. Compared

Approval Recommended by Geo. W. Smith, Engineer of Design. Civil and Structural Engr. License No. 6178

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD OVERHEAD SIGNS (BUTTERFLY AND FULL CANTILEVER TYPE)

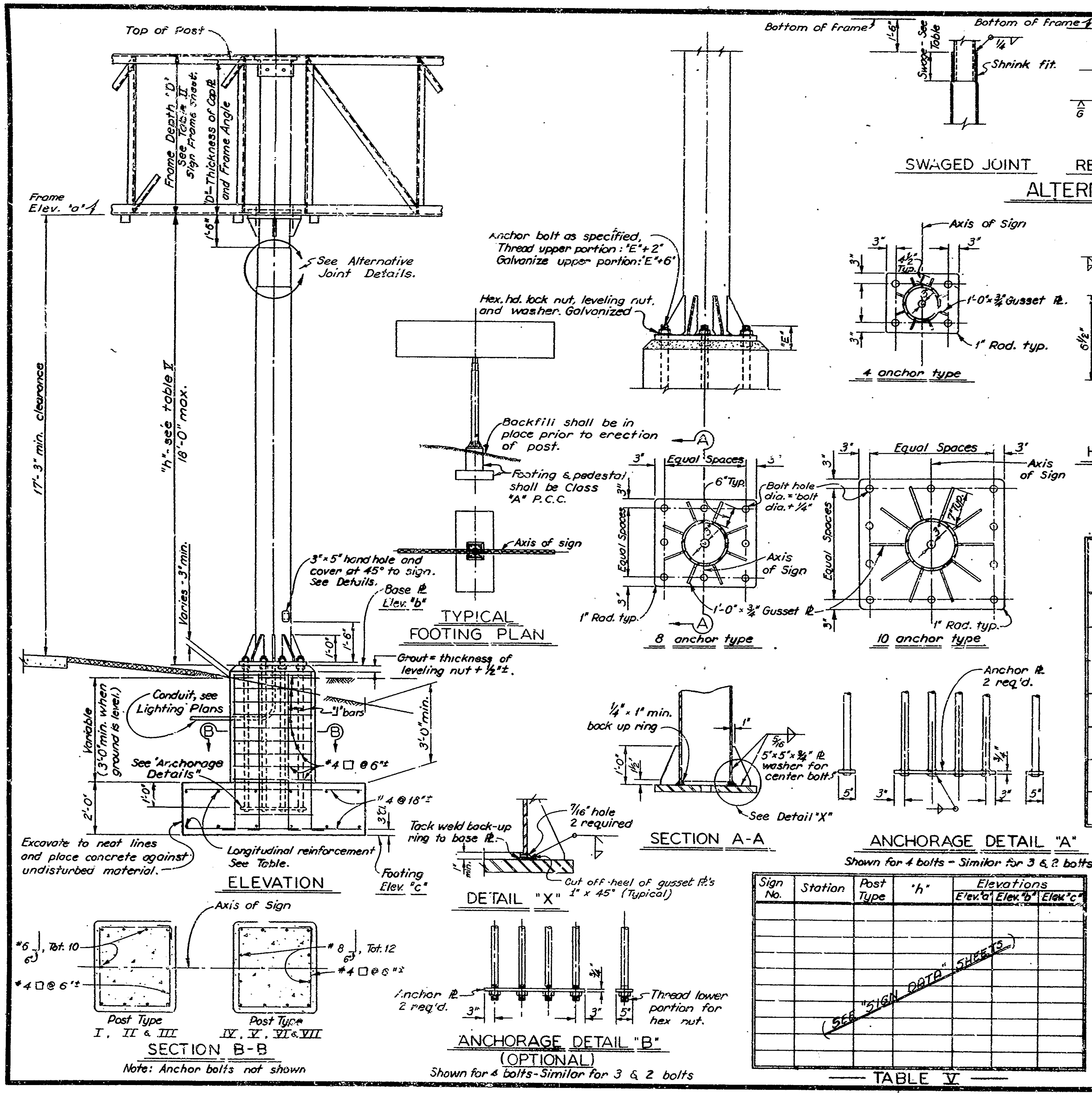
FRAME JUNCTURE DETAILS

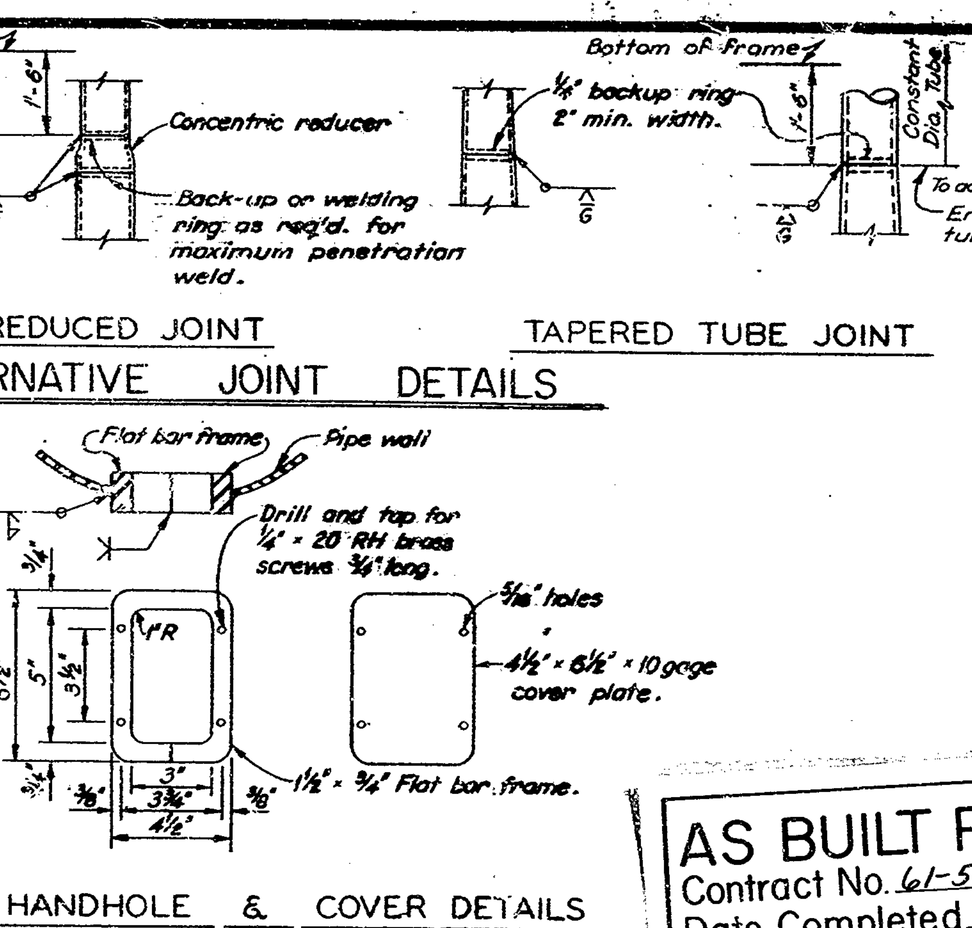
SCALE: NONE | BRIDGE — | FILE XS-18-14 | DRAWING

PREL. DRAWING No. P-

S9

127





AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

Post Type	Pipe Sizes: Base Section	Pipe Sizes: Upper Section	Swaged Length	Dimension "E"	Base Plate Size (Note #4)	Anchor Bolts	Pedestal Size (Note #4)	Footing Size (Note #4)	Longitudinal Footing Reinforcement: Top	Longitudinal Footing Reinforcement: Bottom
I	10" Std. @ 40.48	8" Std. @ 28.55	1'-0"	8"	1'-10" × 1'-8" × 1½"	4 - 2"φ	2'-5" × 2'-3"	5'-0" × 9'-0"	6-#4 bars	6-#4 bars
II	12" Std. @ 49.50	10" Std. @ 34.24	1'-0"	7½"	2'-4" × 2'-1" × 1½"	8 - 1¾"φ	2'-11" × 2'-8"	6'-0" × 10'-0"	6-#4 bars	6-#4 bars
III	14" O.D. @ 72.09	12" Std. @ 43.77	1'-6"	8½"	2'-7" × 2'-3" × 1¾"	8 - 2"φ	3'-2" × 2'-10"	7'-0" × 12'-0"	6-#5 bars	6-#5 bars
IV	16" O.D. @ 82.77	14" O.D. @ 54.57	1'-6"	8½"	3'-1" × 2'-9" × 2"	10 - 2"φ	3'-8" × 3'-4"	7'-0" × 13'-0"	6-#5 bars	6-#5 bars
V	18" O.D. @ 93.45	16" O.D. @ 62.58	1'-6"	8½"	3'-3" × 3'-0" × 1¾"	10 - 2"φ	3'-10" × 3'-7"	8'-0" × 14'-0"	7-#5 bars	7-#6 bars
VI	20" O.D. @ 104.13	18" O.D. @ 70.59	2'-0"	8½"	3'-3" × 3'-0" × 2"	10 - 2"φ	3'-10" × 3'-7"	9'-0" × 15'-0"	6-#6 bars	6-#7 bars
VII	24" O.D. @ 125.49	20" O.D. @ 78.60	2'-0"	10"	3'-7" × 3'-3" × 2½"	10 - 2¼"φ	4'-3" × 3'-11"	10'-0" × 17'-0"	7-#6 bars	7-#8 bars

Notes:

1. Tapered tube of equivalent size and thickness may be substituted for pipe post.
2. For reinforcement, embedment is clear to outside of bar and is 2" to main reinforcement, except as noted.
3. For "General Notes" see "Joint and Miscellaneous Details" sheet.
4. Base Plates, Pedestals, & Footings, longer sides shall be normal to the axis of sign.

61-5V13C11

BRIDGE DEPARTMENT
DESIGN SECTION
Project Designer F.A. Rossa, 1/57
Chief Designer Geo. W. Smith

	By	Checked
DESIGN	Wieg & Rossa 12/56	Louis J. Mlsna 1/57
DETAILS	F.A. Siguiera 1-57	Louis J. Mlsna 1/57
QUANTITIES		
SPECIFICATIONS		

Approval Recommended by [signature] Civil and Structural Engr. License No. 5435

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

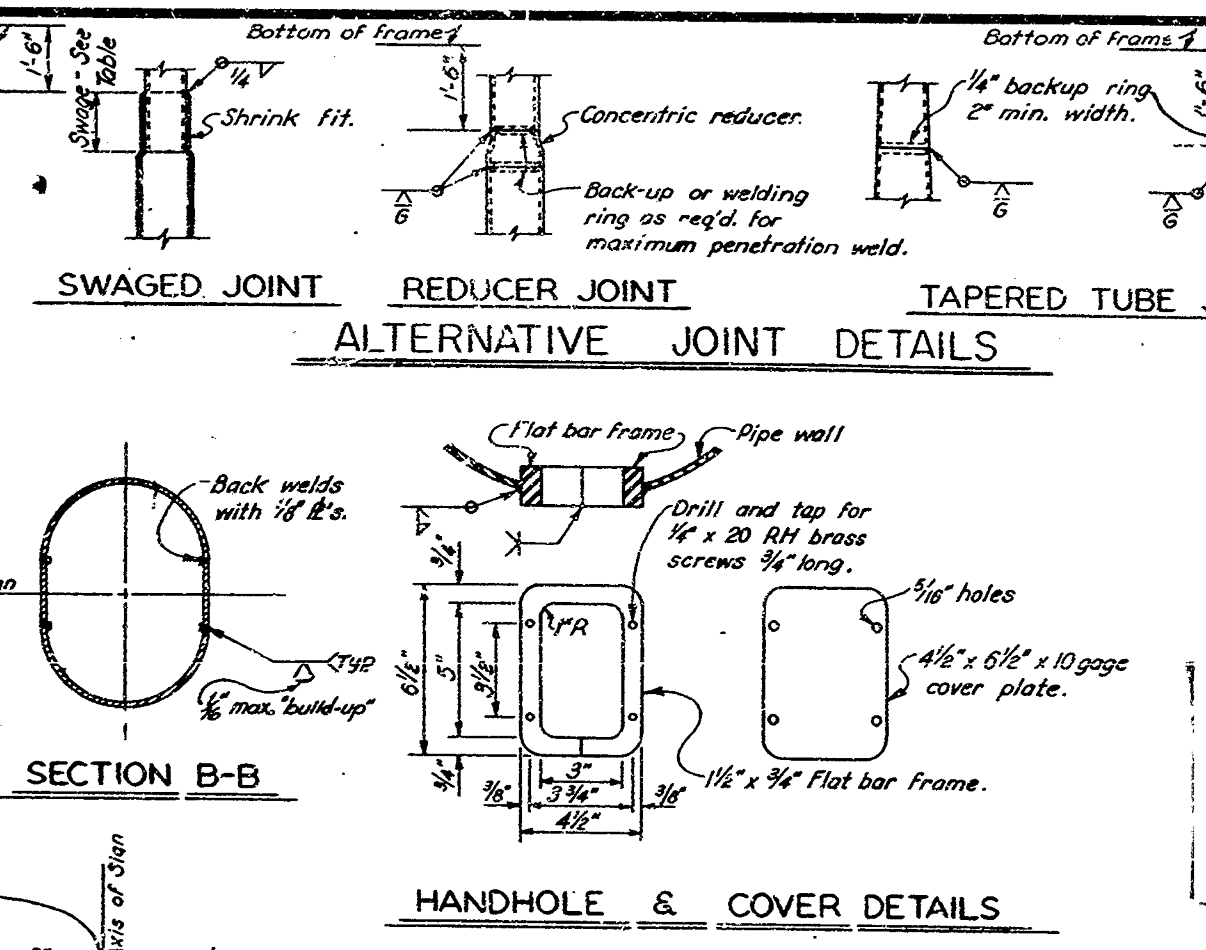
STANDARD OVERHEAD SIGNS
("BUTTERFLY" & FULL CANTILEVER TYPE)
POST — TYPES I THRU VII

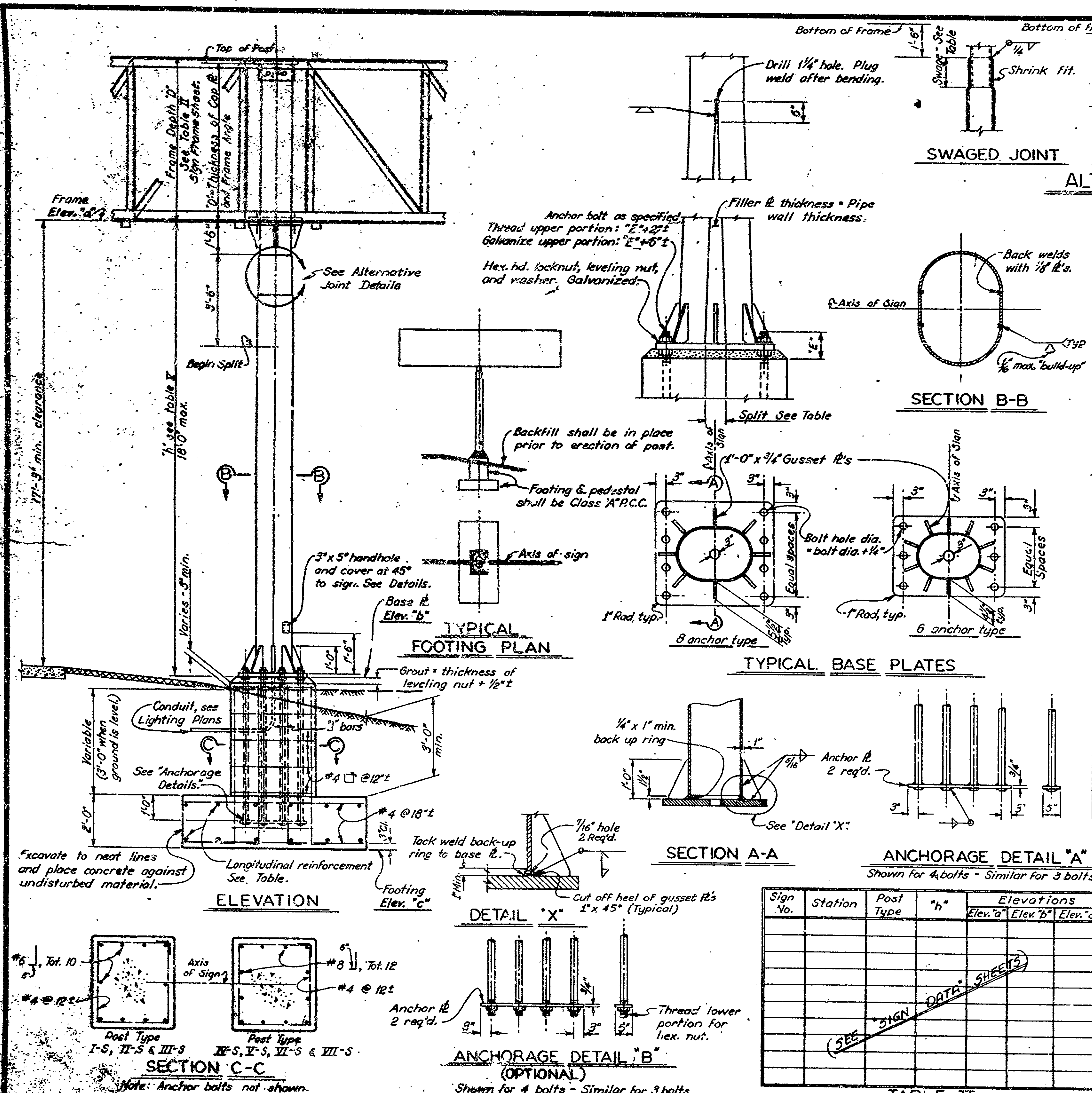
SCALE NONE | BRIDGE | FILE XS-18-15 | DRAWING

PREL. DRAWING No. P-

S10

To accompany plans dated August 15, 1960





Sign No.	Station	Post Type	"h"	Elev. "a"	Elev. "b"	Elev. "c"
(SEE "SIGN DATA" SHEETS)						

TABLE V

Post Type	Pipe Sizes: Base Section	Pipe Sizes: Upper Section	Swaged Length	Dimension "E"	Split	Base Plate Size (Note #4)	Anchor Bolts	Pedestal Size (Note #4)	Footing Size (Note #4)	Longitudinal Footing Reinforcement: Top	Longitudinal Footing Reinforcement: Bottom
I-S	10" Std. @ 40.48	8" Std. @ 28.55	1'-0"	6 1/2"	4"	2'-1" x 1'-9" x 1 1/2"	6 - 1 1/2" ϕ	2'-7" x 2'-3"	5'-0" x 10'-0"	5-#4 bars	5-#6 bars
II-S	12" Std. @ 49.56	10" Std. @ 34.24	1'-0"	7 1/2"	5"	2'-5" x 1'-11" x 1 1/2"	6 - 1 3/4" ϕ	3'-0" x 2'-5"	6'-0" x 11'-0"	6-#4 bars	6-#7 bars
III-S	14" O.D. @ 72.09	12" Std. @ 43.77	1'-6"	8 1/2"	5"	2'-9" x 2'-0" x 2"	6 - 2" ϕ	3'-4" x 2'-7"	7'-0" x 13'-0"	7-#4 bars	7-#8 bars
IV-S	16" O.D. @ 82.77	14" O.D. @ 54.57	1'-6"	8 1/2"	6"	2'-11" x 2'-7" x 2"	8 - 2" ϕ	3'-6" x 3'-2"	8'-0" x 14'-0"	8-#5 bars	8-#9 bars
V-S	18" O.D. @ 93.45	16" O.D. @ 62.58	1'-6"	8 1/2"	7"	3'-1" x 2'-9" x 2"	8 - 2" ϕ	3'-8" x 3'-4"	8'-0" x 16'-0"	8-#5 bars	8-#9 bars
VI-S	20" O.D. @ 104.13	18" O.D. @ 70.59	2'-0"	8 1/2"	8"	3'-5" x 2'-9" x 2"	8 - 2" ϕ	4'-0" x 3'-4"	9'-0" x 17'-0"	9-#5 bars	9-#10 bars
VII-S	24" O.D. @ 125.49	20" O.D. @ 78.60	2'-0"	9 1/2"	8"	3'-9" x 3'-3" x 2"	8 - 2 1/4" ϕ	4'-5" x 3'-11"	10'-0" x 18'-0"	10-#6 bars	10-#11 bars

Notes:
1. Tapered tube of equivalent size and thickness may be substituted for pipe post.
2. For reinforcement, embedment is clear to outside of bar and is 2" to main reinforcement, except as noted.
3. For "General Notes" see "Joint and Miscellaneous Details" sheet.
4. Base Plates, Pedestals, & Footings, longer sides shall be normal to the axis of sign.

Dist.	County	Route	Section	Sheet No.	Total Sheets
V	SB, SLO	2		129	137

To accompany plans dated August 15, 1960

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

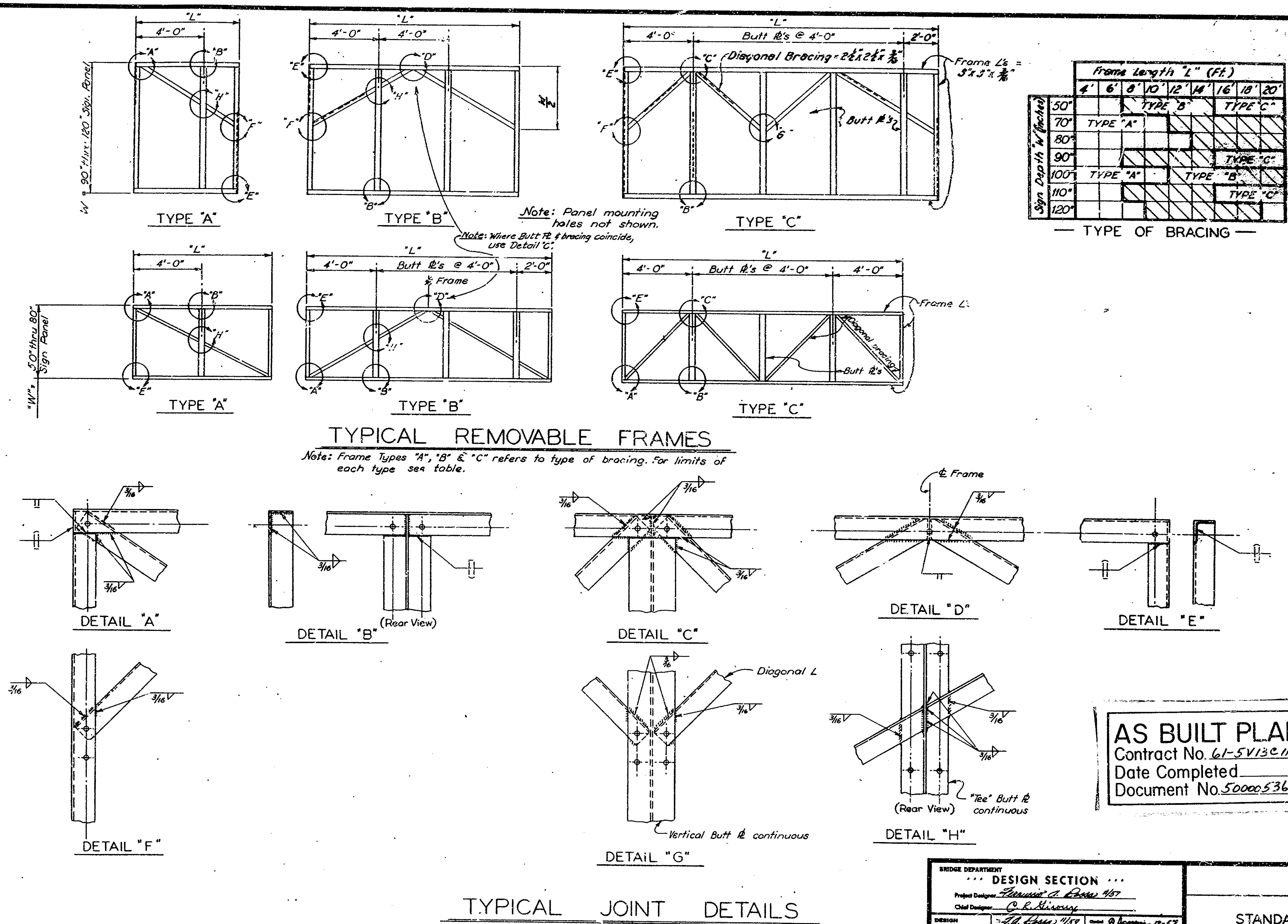
BRIDGE DEPARTMENT
··· DESIGN SECTION ···

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD OVERHEAD SIGNS
"BUTTERFLY" TYPE
POST — TYPES I-S THRU VII-S

SCALE NONE
XS-18-16

S11



DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
V	SB, SLO	2	LSM Va; F	130	137

FED. ROAD DIV. No.	STATE	FED. AID PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	CALIF.			130	204

Date Approved: August 15, 1960

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

BRIDGE DEPARTMENT
*** DESIGN SECTION ***
Project Designer
Chief Designer

DESIGN	4/57	Checked	12-57
DETAILS	By JoAnn Becker 3/57	Checked	4/57
QUANTITIES	By	Checked	
SPECIFICATIONS	By	Plans and Specs. Compared	

Approval Recommended by — Engineer of Design

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD OVERHEAD SIGNS
REMOVABLE SIGN PANEL FRAMES

SCALE: NONE | BRIDGE | FILE XB-12-44 | DRAWING

PREL. DRAWING No. P-

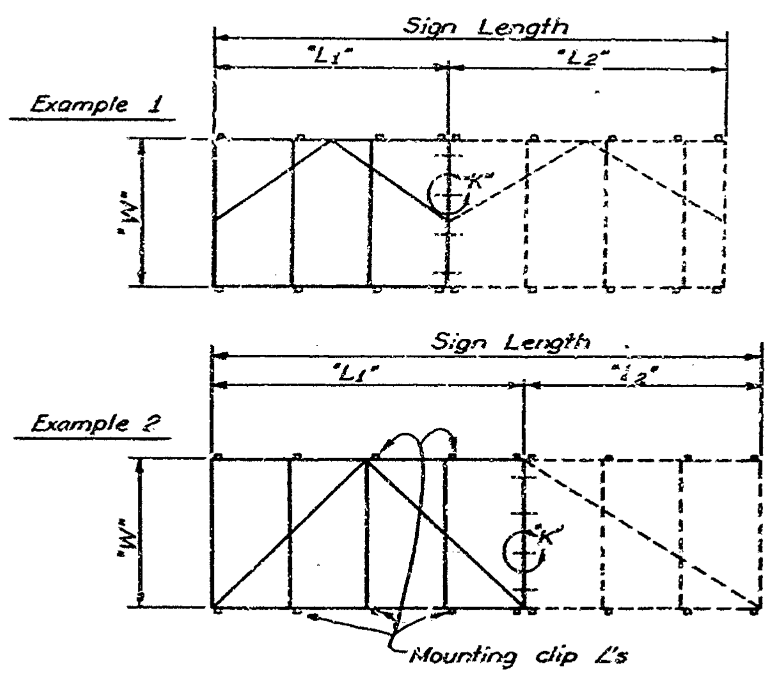
S20

130

FED. ROAD DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CALIF.			131	204

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB, SLO	2		131	137

August 15, 1960



SIGNS GREATER THAN 20'-0"

No Scale

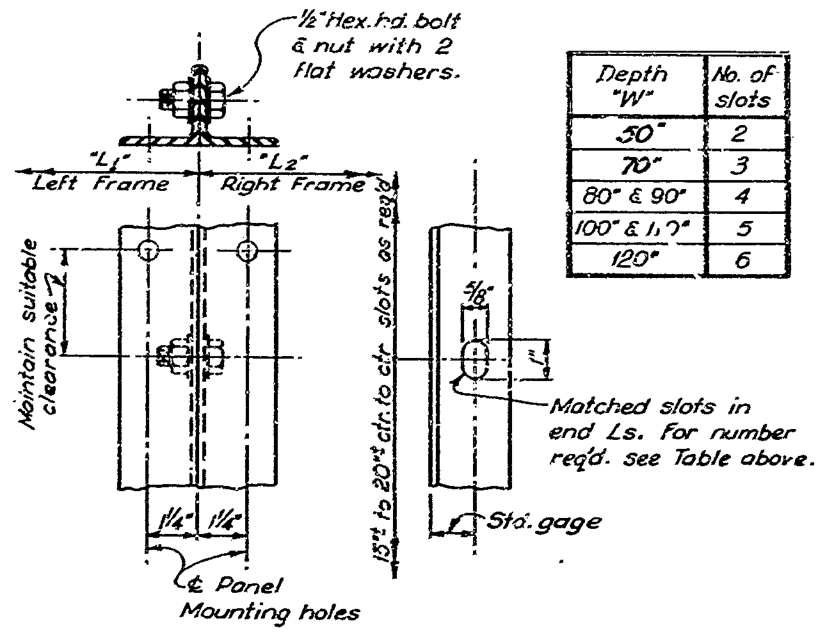
SIGN LENGTH	"L1"	"L2"
22'-0"	12'	10'
24'-0"	12'	12'
26'-0"	12'	14'
28'-0"	16'	12'
30'-0"	16'	14'
32'-0"	16'	16'
34'-0"	16'	18'
36'-0"	20'	16'
38'-0"	20'	18'
40'-0"	20'	20'

NOTES:

FRAMES FOR SIGNS GREATER THAN 20'-0" IN LENGTH SHALL BE FABRICATED IN TWO SECTIONS WITH LEFT SECTION A MULTIPLE OF 4'-0" IN LENGTH. SEE TABLE ABOVE.

SECTIONS SHALL BE HOISTED INTO PLACE INDIVIDUALLY AND BOLTED TOGETHER AS PER DETAIL "K" PRIOR TO TIGHTENING OF MOUNTING CLIP BOLTS.

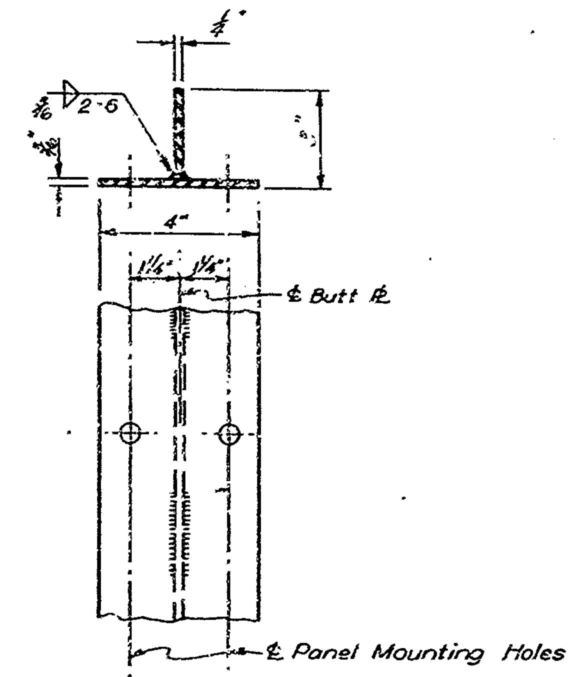
BOLTING TWO SECTIONS TOGETHER AND HOISTING SIMULTANEOUSLY WILL NOT BE PERMITTED.



DETAIL "K"

No Scale

Depth "W"	No. of slots
50"	2
70"	3
80" & 90"	4
100" & 110"	5
120"	6

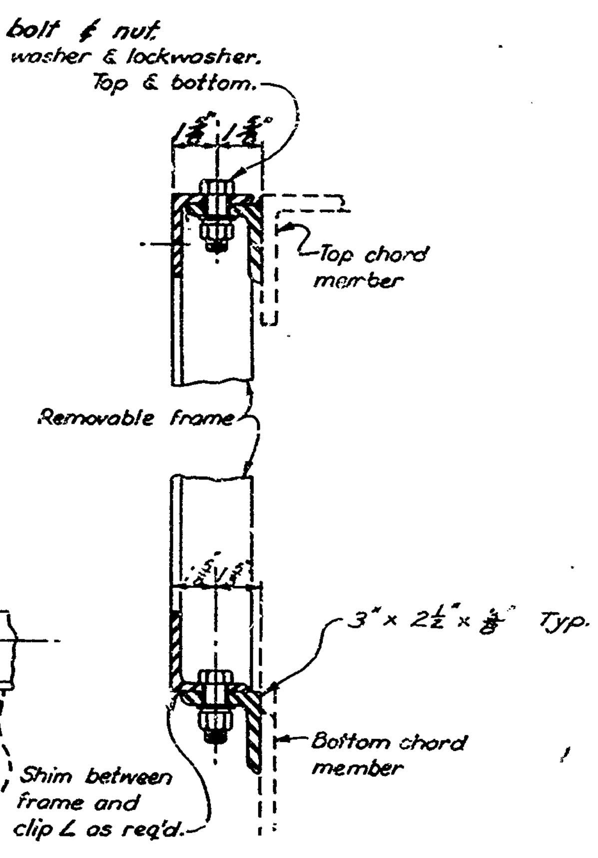


BUTT PLATE DETAILS

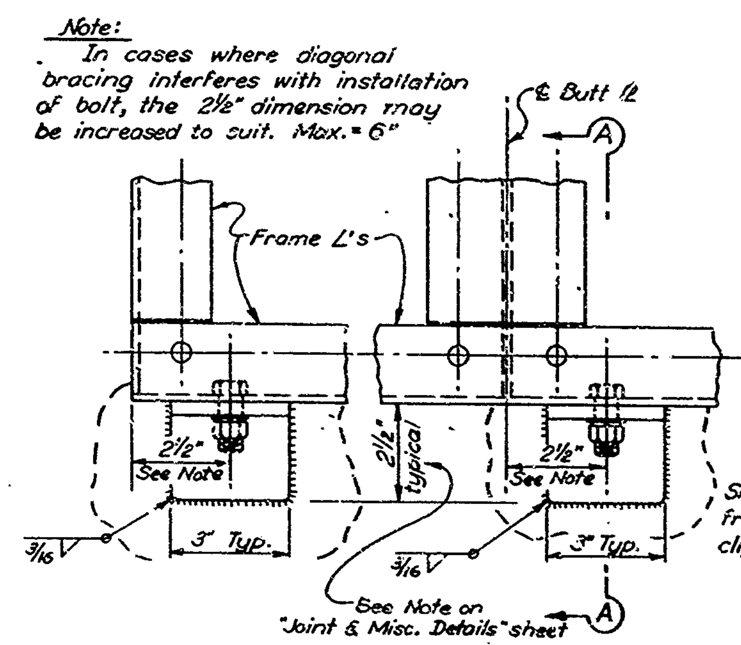
No Scale

NOTES:

1. FRAMES SHALL BE ALL-WELDED CONSTRUCTION.
2. 1/2" PANEL MOUNTING HOLES SHALL BE DRILLED BY TEMPLATE. SIGN PANEL MAY BE CONSIDERED A TEMPLATE.
3. DRILLED AND TAPPED HOLES (1/4"-20 N.C.) MAY BE USED WHERE INTERFERENCE DUE TO WELDS OR STRUCTURAL MEMBERS IS ENCOUNTERED.
4. FRAMES SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION.
5. VERT. BUTT PLATES SHALL BE PLACED ON 4'-0" CENTERS STARTING FROM LEFT EDGE OF SIGN FRAME.
6. BUTT PLATE FACES SHALL BE FLUSH [redacted] WITH FACES OF FRAME ANGLES.
7. MOUNTING CLIP ANGLES SHALL BE LOCATED SUCH AS TO ALLOW THE TOP AND BOTTOM FRAME ANGLES OF THE REMOVABLE SIGN PANEL FRAME TO LIE ON A STRAIGHT HORIZONTAL LINE.
8. HOLES FOR MOUNTING REMOVABLE SIGN PANEL FRAME SHALL BE SHOP-DRILLED ON ASSEMBLY TO MATCH.
9. FOR SIGNS GREATER THAN 20'-0" IN LENGTH SEE DETAILS.



SECTION A-A

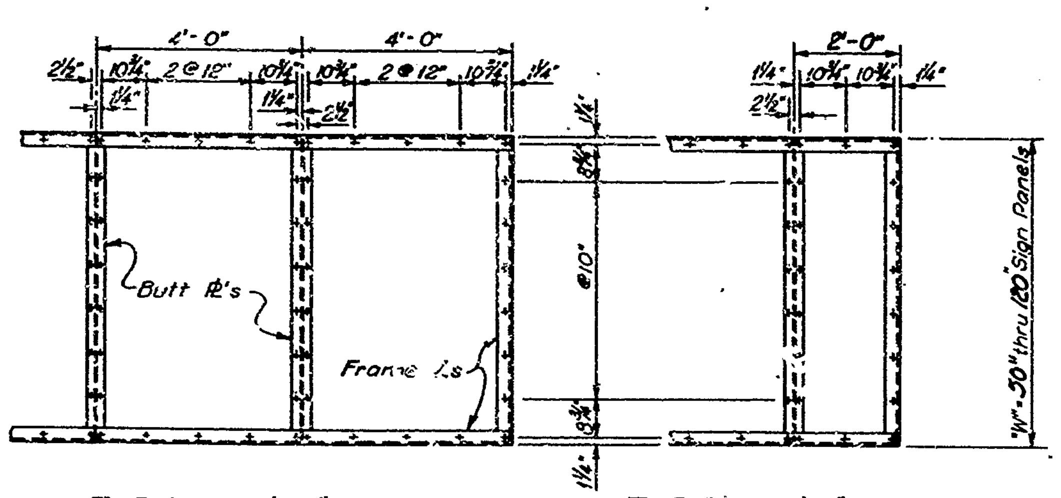


AT FRAME END

AT BUTT ℄

FRAME MOUNTING DETAILS

No Scale



TYPICAL 4'-0" PANEL

TYPICAL 2'-0" PANEL

Note: All holes ½" diameter
Diagonal bracing not shown.

MOUNTING HOLE SPACING FOR SIGN PANEL & FRAME

Scale: ½" = 1'-0"

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

BRIDGE DEPARTMENT
··· DESIGN SECTION ···

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD OVERHEAD SIGNS

REMOVABLE SIGN PANEL FRAMES #2

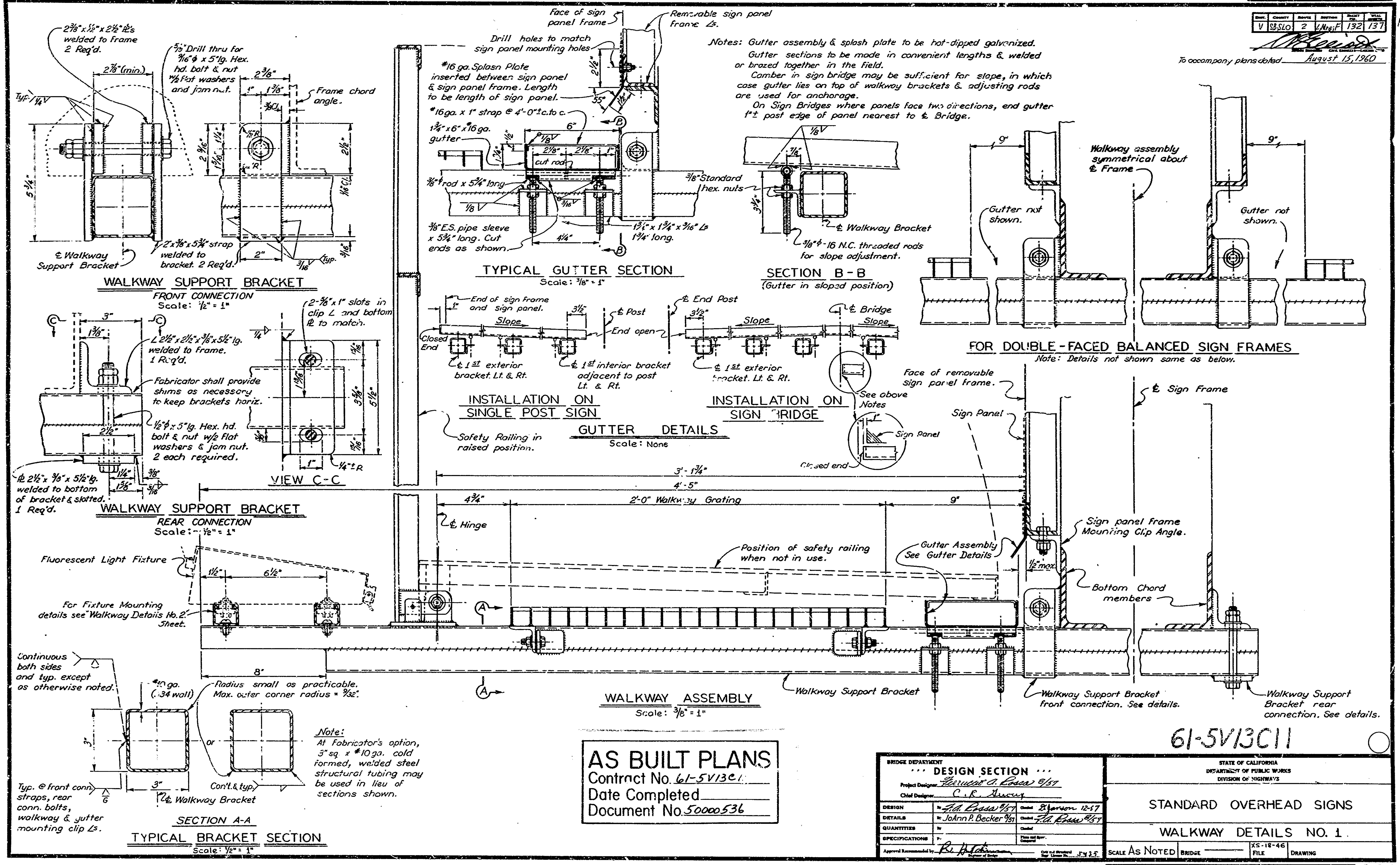
SCALE: As Noted

PREL. DRAWING No. P-

S21

131

To accompany plans dated August 15, 1960


Notes: Gutter assembly & splash plate to be hot-dipped galvanized.
Gutter sections to be made in convenient lengths & welded or brazed together in the field.
Camber in sign bridge may be sufficient for slope, in which case gutter lies on top of walkway brackets & adjusting rods are used for anchorage.
On Sign Bridges where panels face two directions, end gutter 1"± past edge of panel nearest to ℄ Bridge.
WALKWAY SUPPORT BRACKET
FRONT CONNECTION
Scale: ½" = 1"
WALKWAY SUPPORT BRACKET
REAR CONNECTION
Scale: ½" = 1"
VIEW C-C
TYPICAL GUTTER SECTION
Scale: ⅜" = 1"
SECTION B-B
(Gutter in sloped position)
INSTALLATION ON SINGLE POST SIGN
INSTALLATION ON SIGN BRIDGE
GUTTER DETAILS
Scale: None
FOR DOUBLE-FACED BALANCED SIGN FRAMES
Note: Details not shown same as below.
WALKWAY ASSEMBLY
Scale: ⅜" = 1"
SECTION A-A
TYPICAL BRACKET SECTION
Scale: ½" = 1"
Note: At Fabricator's option, 3" sq. x #10 ga. cold formed, welded steel structural tubing may be used in lieu of sections shown.
Fluorescent Light Fixture
For Fixture Mounting details see "Walkway Details No. 2" Sheet.
Position of safety railing when not in use.
Gutter Assembly See Gutter Details
Sign panel Frame Mounting Clip Angle.
Bottom Chord members
Walkway Support Bracket
Walkway Support Bracket front connection. See details.
Walkway Support Bracket rear connection. See details.
2'-0" Walkway Grating
Safety Railing in raised position.
Walkway assembly symmetrical about ℄ Frame
Gutter not shown.
℄ Sign Frame
Sign Panel
Face of removable sign panel frame.

61-5V13C11

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

BRIDGE DEPARTMENT — DESIGN SECTION	
Project Designer	Ferruccio A. Rossi 8/57
Chief Designer	C. R. Gray
Design	F.A. Rossi 8/57 — Checked: Bjorson 12-57
Details	JoAnn P. Becker 9/57 — Checked: F.A. Rossi 8/57
Quantities	
Specifications	

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

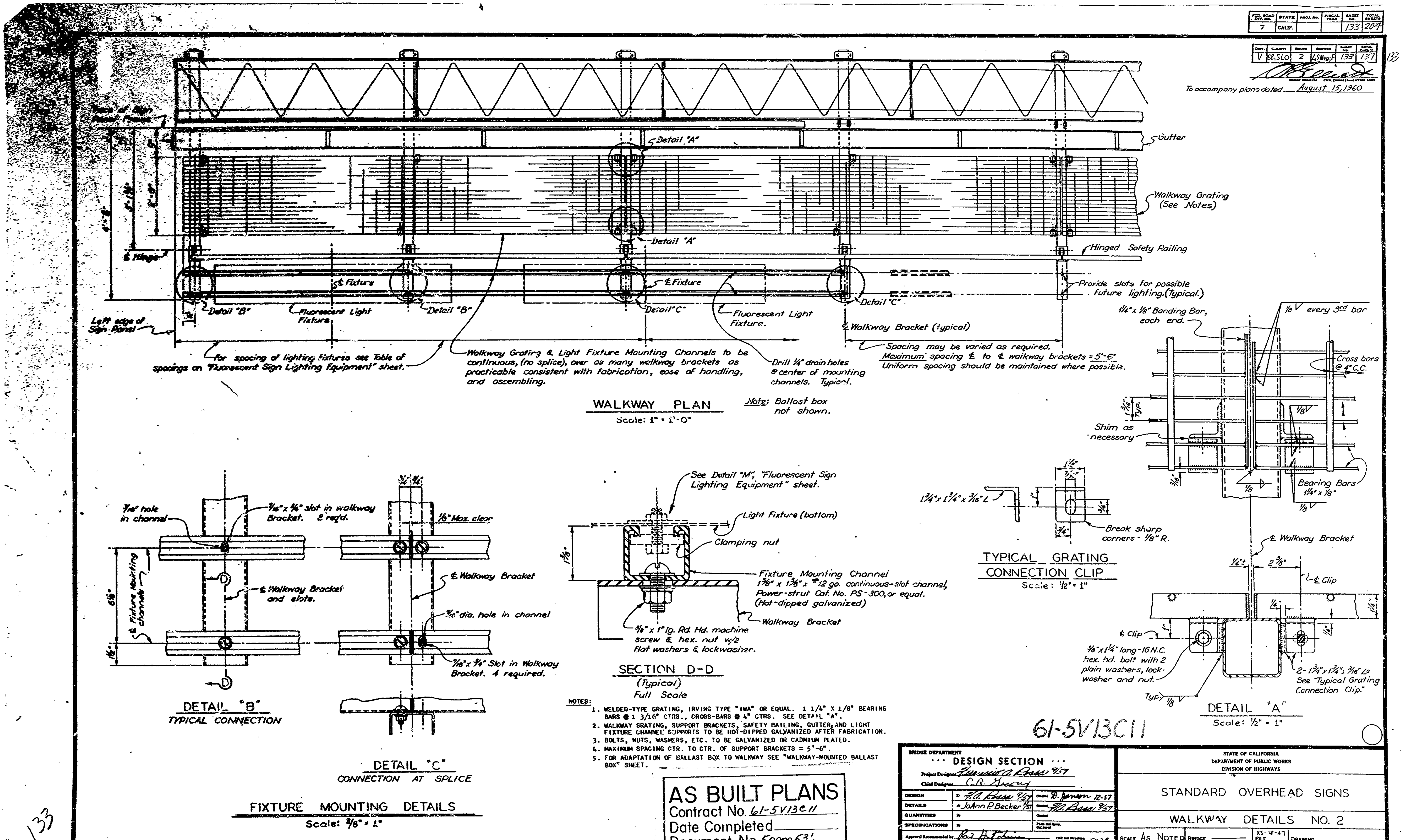
STANDARD OVERHEAD SIGNS

WALKWAY DETAILS NO. 1

SCALE As Noted — XS-18-46

PREL. DRAWING No. P- S22

132



NOTES:

1. WELDED-TYPE GRATING, IRVING TYPE "IWA" OR EQUAL. 1 1/4" X 1/8" BEARING BARS @ 1 3/16" CTRS., CROSS-BARS @ 4" CTRS. SEE DETAIL "A".
2. WALKWAY GRATING, SUPPORT BRACKETS, SAFETY RAILING, GUTTER, AND LIGHT FIXTURE CHANNEL SUPPORTS TO BE HOT-DIPPED GALVANIZED AFTER FABRICATION.
3. BOLTS, NUTS, WASHERS, ETC. TO BE GALVANIZED OR CADMIUM PLATED.
4. MAXIMUM SPACING CTR. TO CTR. OF SUPPORT BRACKETS = 5'-6".
5. FOR ADAPTATION OF BALLAST BOX TO WALKWAY SEE "WALKWAY-MOUNTED BALLAST BOX" SHEET.

61-5V13C11

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 5000053

To accompany plans dated August 15, 1960

BRIDGE DEPARTMENT
··· DESIGN SECTION ···
Project Designer Francis A. Rossi 9/57
Chief Designer C. R. Gruey

DESIGN	By F.A. Rossi 9/57	Checked D. Jenson 12-57
DETAILS	By JoAnn P. Becker 9/57	Checked F.A. Rossi 9/57
QUANTITIES	By	Checked
SPECIFICATIONS	By	Plans and Specs. Compared

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD OVERHEAD SIGNS

WALKWAY DETAILS NO. 2

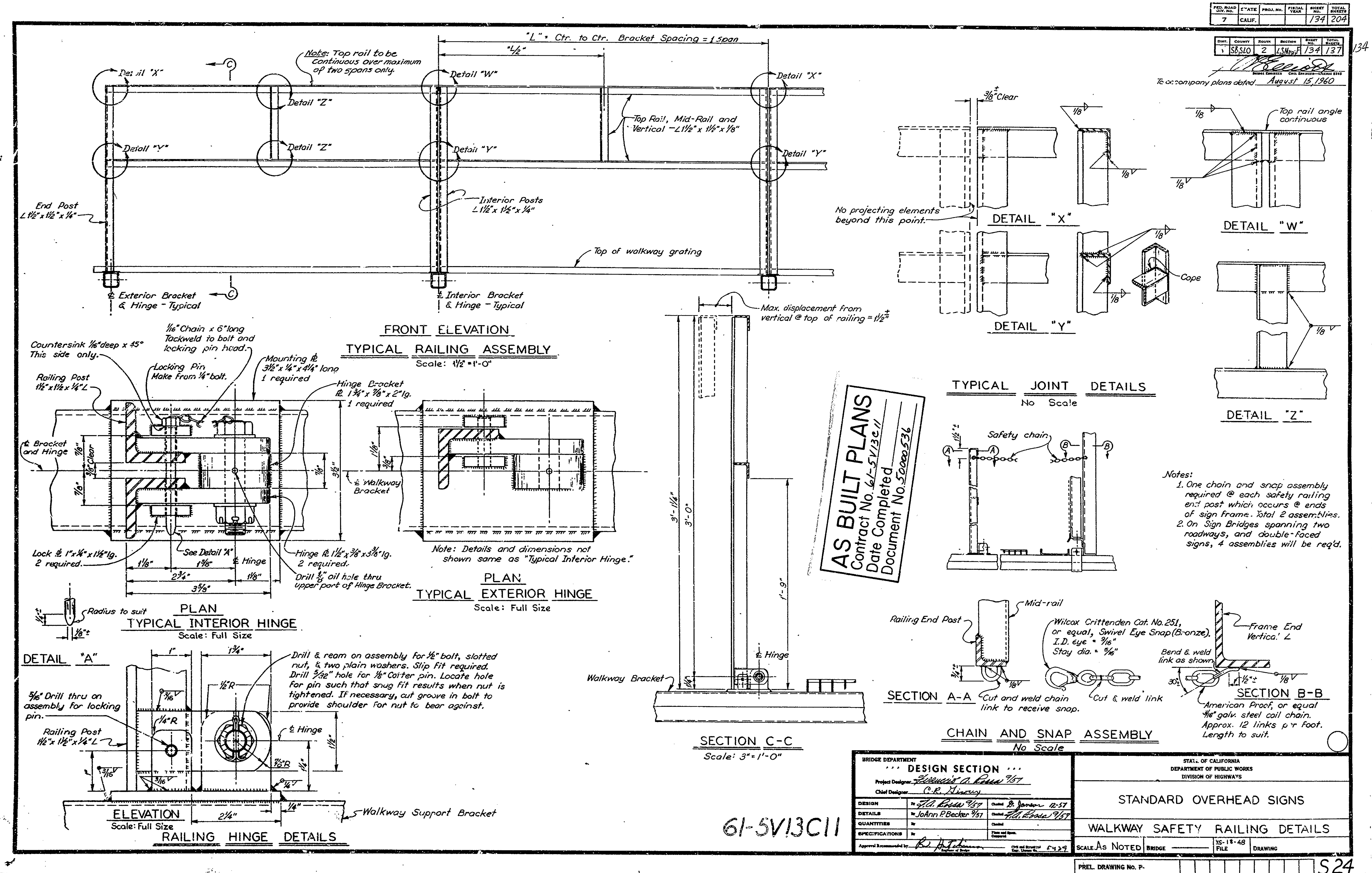
SCALE As Noted | BRIDGE — | FILE XS-18-47 | DRAWING

PREL. DRAWING NO. P-

S23

FED. ROAD DIV. No.	STATE	PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	CALIF.			133	207

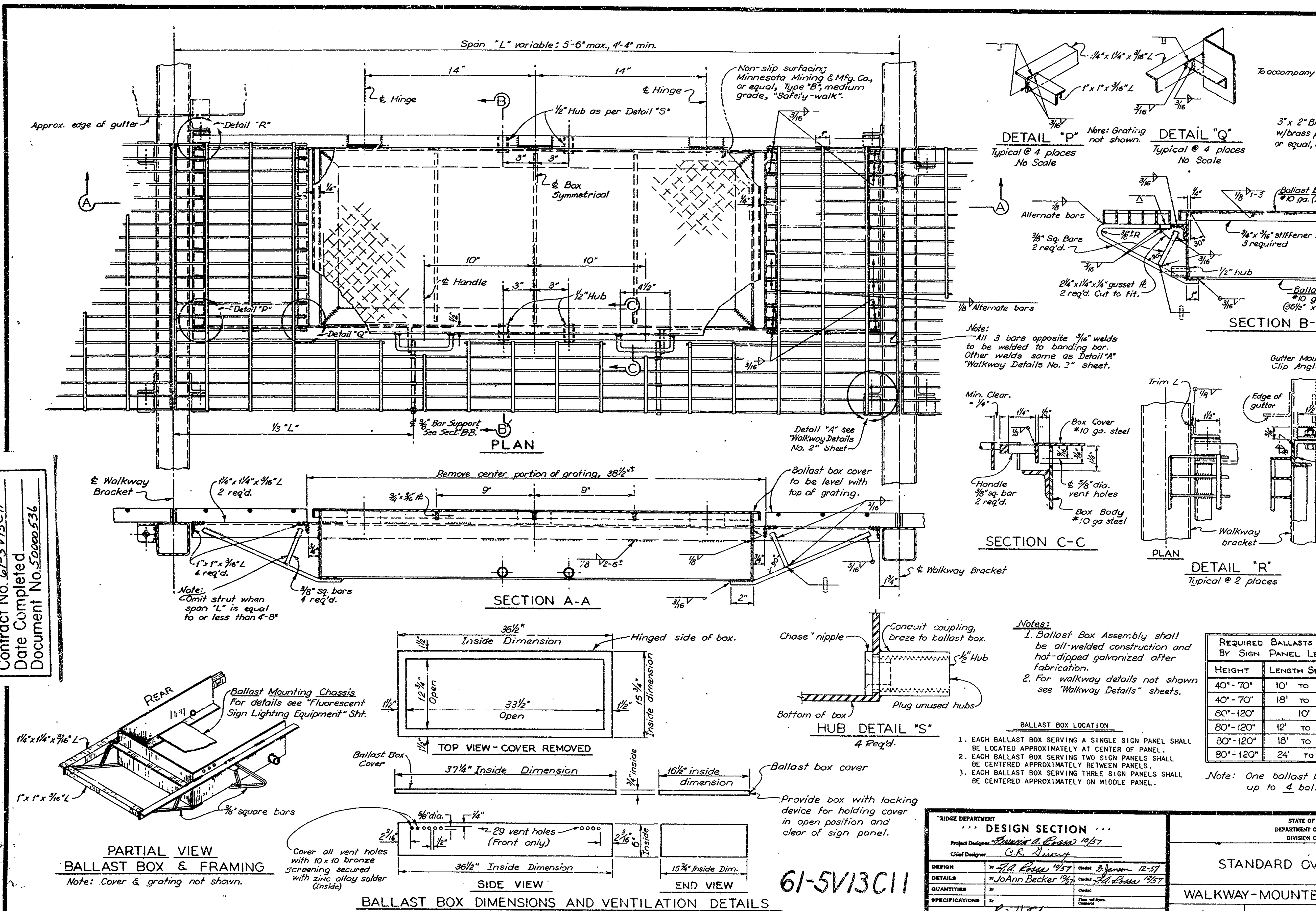
DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
V	SB,SLO	2		133	137


FED. ROAD DIV. NO. 7 | STATE CALIF. | SHEET NO. 134 | TOTAL SHEETS 204
SB,SLO | 2 | 134 | 137
To accompany plans dated August 15, 1960
"L" = Ctr. to Ctr. Bracket Spacing = 1 span
"L/2"
Note: Top rail to be continuous over maximum of two spans only.
Detail "X"
Detail "Z"
Detail "W"
Detail "Y"
Top Rail, Mid-Rail and Vertical – ∠1½" x 1½" x ⅛"
Interior Posts ∠1½" x 1½" x ¼"
End Post ∠1½" x 1½" x ¼"
Top of walkway grating
℄ Exterior Bracket & Hinge – Typical
℄ Interior Bracket & Hinge – Typical
FRONT ELEVATION
TYPICAL RAILING ASSEMBLY
Scale: 1½" = 1'-0"
⅛" Chain x 6" long Tackweld to bolt and locking pin head.
Countersink 1/16" deep x 45° This side only.
Locking Pin Make from ¼" bolt.
Mounting ℞ 3½" x ¼" x 4¼" long 1 required
Hinge Bracket ℞ 1¾" x ⅜" x 2" lg. 1 required
Railing Post 1½" x 1½" x ¼" ∠
℄ Bracket and Hinge
℄ Walkway Bracket
Lock ℞ 1" x ¼" x 1½" lg. 2 required.
See Detail "A"
℄ Hinge
Hinge ℞ 1½" x ⅜" x 3⅛" lg. 2 required.
Drill ⅛" oil hole thru upper part of Hinge Bracket.
PLAN
TYPICAL INTERIOR HINGE
Scale: Full Size
Note: Details and dimensions not shown same as "Typical Interior Hinge."
PLAN
TYPICAL EXTERIOR HINGE
Scale: Full Size
Radius to suit
DETAIL "A"
Drill & ream on assembly for ½" bolt, slotted nut, & two plain washers. Slip fit required. Drill 5/32" hole for ⅛" Cotter pin. Locate hole for pin such that snug fit results when nut is tightened. If necessary, cut groove in bolt to provide shoulder for nut to bear against.
5/16" Drill thru on assembly for locking pin.
Railing Post 1½" x 1½" x ¼" ∠
Walkway Support Bracket
ELEVATION
Scale: Full Size
RAILING HINGE DETAILS
Max. displacement from vertical @ top of railing = 1½" ±
Walkway Bracket
℄ Hinge
SECTION C-C
Scale: 3" = 1'-0"
AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536
61-5V13C11
⅜" Clear
No projecting elements beyond this point.
DETAIL "X"
DETAIL "Y"
Cope
Top rail angle continuous
DETAIL "W"
DETAIL "Z"
TYPICAL JOINT DETAILS
No Scale
Safety chain
Notes:
1. One chain and snap assembly required @ each safety railing end post which occurs @ ends of sign frame. Total 2 assemblies.
2. On Sign Bridges spanning two roadways, and double-faced signs, 4 assemblies will be req'd.
Railing End Post
Mid-rail
Wilcox Crittenden Cat. No. 251, or equal, Swivel Eye Snap (Bronze). I.D. eye = 9/16" Stay dia. = 5/16"
Frame End Vertical ∠
Bend & weld link as shown
SECTION A-A
Cut and weld chain link to receive snap.
Cut & weld link
SECTION B-B
American Proof, or equal 5/16" galv. steel coil chain. Approx. 12 links per foot. Length to suit.
CHAIN AND SNAP ASSEMBLY
No Scale
BRIDGE DEPARTMENT
DESIGN SECTION
STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
STANDARD OVERHEAD SIGNS
WALKWAY SAFETY RAILING DETAILS
DETAILS JoAnn P. Becker 9/57
SCALE As Noted
PREL. DRAWING No. P-
S 24

FED. ROAD DIV. No.	STATE	PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	CALIF.			135	204

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
V	SB,SLO	2	L,SH,tef	135	137

To accompany plans dated August 15, 1960



AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
Document No. 50000536

61-5V13C11

Notes:
1. Ballast Box Assembly shall be all-welded construction and hot-dipped galvanized after fabrication.
2. For walkway details not shown see "Walkway Details" sheets.

BALLAST BOX LOCATION

1. EACH BALLAST BOX SERVING A SINGLE SIGN PANEL SHALL BE LOCATED APPROXIMATELY AT CENTER OF PANEL.
2. EACH BALLAST BOX SERVING TWO SIGN PANELS SHALL BE CENTERED APPROXIMATELY BETWEEN PANELS.
3. EACH BALLAST BOX SERVING THREE SIGN PANELS SHALL BE CENTERED APPROXIMATELY ON MIDDLE PANEL.

REQUIRED BALLASTS AS DETERMINED BY SIGN PANEL LENGTHS & HEIGHTS

HEIGHT	LENGTH SERVED — NO. BALLASTS
40"-70"	10' TO 16' — 1
40"-70"	18' TO 30' — 2
80"-120"	10' — 1
80"-120"	12' TO 16' — 2
80"-120"	18' TO 22' — 3
80"-120"	24' TO 30' — 4

Note: One ballast box accommodates up to 4 ballasts.

BRIDGE DEPARTMENT
... DESIGN SECTION ...
Project Designer Francis A. Rossa 10/57
Chief Designer C.R. Sinay

	By	Checked
DESIGN	F.A. Rossa 10/57	D. Janson 12-57
DETAILS	JoAnn Becker 10/57	F.A. Rossa 12/57
QUANTITIES		
SPECIFICATIONS		Plans and specs. Compared

Approval Recommended by [signature] Engineer of Design — Civil and Structural Engr. License No. 5429

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD OVERHEAD SIGNS

WALKWAY-MOUNTED BALLAST BOX

SCALE NONE | BRIDGE — | FILE XS-18-49 | DRAWING

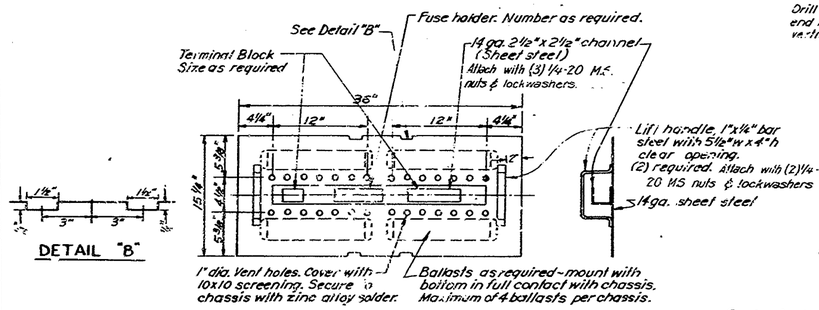
PREL. DRAWING No. P-

S25

DIST	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SBS.LO	2	LSM to F	136	137

136

APPROVED _____
TRAFFIC ENGINEER, CIVIL ZNGR LIC. NO. 5429
TO ACCOMPANY PLANS DATED August 15, 1960



BALLAST MOUNTING CHASSIS

No Scale

BALLAST NOTES

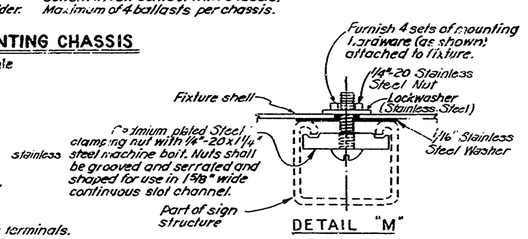
Each ballast shall be fused with a 1¼"x ¼" slow-blow glass tube fuse - 2½ amp for 2-lamp ballast and 1 amp for 1-lamp ballast.

Ballasts shall be rated at 300 ma.

Ballasts shall be secured by 8-32 machine screw studs, soldered to chassis with nuts and lockwashers.

Fuseholders shall have insulating base and screw terminals.

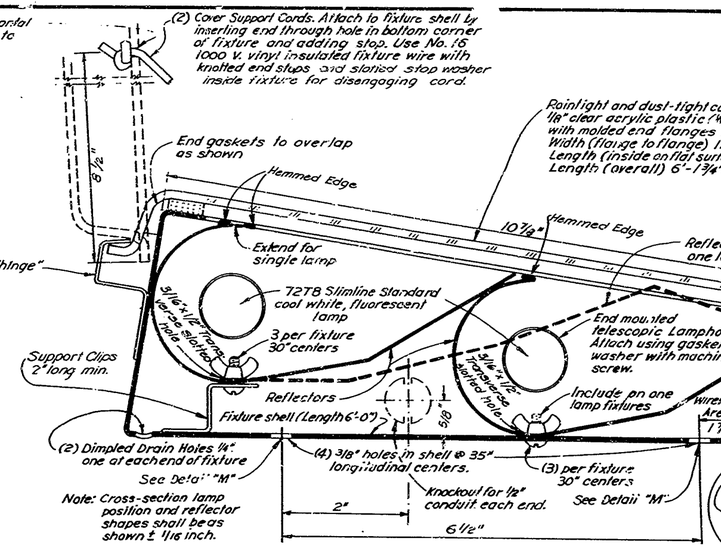
For number and location of ballast boxes see sign structure plan titled "Walkway Mounted Ballast Box".



FIXTURE MOUNTING ON CONTINUOUS SLOT CHANNEL

Full Scale

Drill hole in horizontal end flange close to vertical flange.



SECTION - LIGHTING FIXTURE

Full Scale

FIXTURE NOTES

Two lamp fixtures shall be used for signs over 70" in vertical dimension. One lamp fixtures for 70" signs and smaller.

Lighting fixtures shall be fabricated of 0.064" clad 3003 H-14 aluminum, unless otherwise indicated. Machine screw parts and lockwashers for fixture shall be aluminum, unless otherwise indicated.

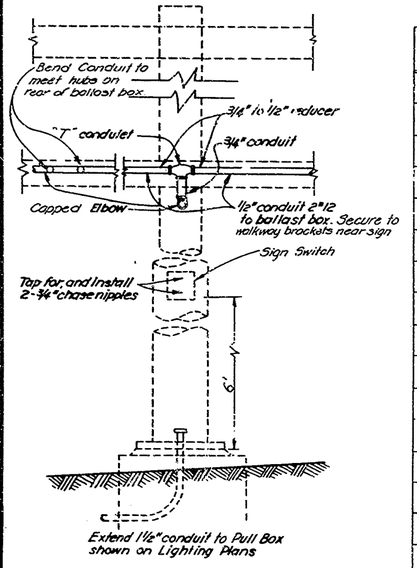
Reflectors shall be made of 0.020" (min.) thickness aluminum with specular finish, and shall be 69" long. The finish shall be at least equivalent to that of Alcoa Alzak Type 2 Lighting Sheet in degree of specularity, corrosion and abrasion resistance and ease of cleaning. Reflectors shall be easily removable for cleaning without need for permanently distorting the reflector shape. Acceptable reflector materials will be ① Alcoa Alzak Type 1 Lighting Sheet, or equal, ② Alcoa Alzak Type 2 Lighting Sheet, or equal, ③ "Mylar" plastic film with specular metallized backing bonded to sheet aluminum (Dynasyl or equal).

Machine screws shall be 8-32 with nuts and lockwashers (except as noted).

Manufacturer shall submit five copies of shop drawings to the Engineer for approval prior to fabrication if fixtures have not previously been approved.

For method of mounting fluorescent fixtures see Walkways plan titled "Walkway Details No. 2".

After fabrication metal parts shall be thoroughly cleaned and degreased and shall have a well finished appearance. Painting will not be required.



TYPICAL WIRING AND SIGN SWITCH INSTALLATION DETAILS

No Scale

LIGHTING FIXTURE DATA

LENGTH OF PANEL (FEET)	HEIGHT OF PANEL (INCHES)	NUMBER OF FIXTURES	NUMBER OF LAMPS	CONSECUTIVE SPACING FROM LEFT EDGE OF PANEL TO CENTER OF FIXTURES (INCHES)
10	40 - 70	1	1	60
	80 - 120		2	
12	40 - 70	2	2	36,5,74
	80 - 120		4	
14	40 - 70	2	2	42,84
	80 - 120		4	
16	40 - 70	2	2	47.5, 97
	80 - 120		4	
18	40 - 70	3	3	36.5, 74 74
	80 - 120		6	
20	40 - 70	3	3	40,80,80
	80 - 120		6	
22	40 - 70	3	3	44,88,88
	80 - 120		6	
24	40 - 70	4	4	36.5, 74,74,74
	80 - 120		8	
26	40 - 70	4	4	39, 78,78,78
	80 - 120		8	
28	40 - 70	4	4	42,84,84,84
	80 - 120		8	
30	40 - 70	4	4	45, 90,90,90
	80 - 120		8	
32	40 - 70	5	5	38, 77,77,77,77
	80 - 120		10	
34	40 - 70	5	5	42,81,81,81,81
	80 - 120		10	
36	40 - 70	5	5	44,86,86,86,86
	80 - 120		10	
38	40 - 70	6	6	38,76,76,76,76,76
	80 - 120		12	
40	40 - 70	6	6	40,80,80,80,80,80
	80 - 120		12	

TRANSFORMER AND LOAD DATA

TOTAL NUMBER OF LAMPS	SM TRANSFORMER MINIMUM SIZE (VA)	SIGN * LOAD (WATTS)
1	75	70
2	150	131
3	225	201
4	300	262
5	375	332
6	450	393
7	525	463
8	600	524
9	750	594
10	750	655
11	900	725
12	900	786
13	1050	856
14	1050	917
15	1200	987
16	1200	1048
17	1350	1118
18	1350	1179
19	1500	1249
20	1500	1310

Notes
For sign structure with 21 or more lamps the load shall be split into two ballast box groups with separate switching supplied independently from two SM transformers in separate pull boxes.
See Sign Format Sheet for size of pan.
Use one SM transformer for each sign structure unless otherwise indicated or required.
Use two 2-lamp ballasts wherever possible.
Input to ballasts (90% pf) average 75 VA per lamp.
*Does not include SM transformer losses which are approximately 10% of load.

TYPICAL FIXTURE WIRING DIAGRAM

WIRING NOTES

Wiring between ballast box and nearest fixture and between fixtures shall be run in ½" liquid-tight flexible conduit. Flexible conduit shall be secured to nearest walkway structural member bracket using galvanized bonding strap and brass machine screws.

Ballasts and terminal boards shall be marked with legible symbols, conductors shall be tagged and their identification marked on the corresponding terminal on the terminal board as shown on the Typical Fixture Wiring-Wiring Diagram.
See Special Provisions for additional specifications.

GENERAL NOTE - METALS

Where steel is indicated part shall be hot-dip galvanized after fabrication. Where sheet steel is indicated, part shall be fabricated from hot-dipped galvanized sheet steel. After fabrication, edges and flaws in galvanizing shall be cleaned and painted with two coats of Mil. Spec. Mil-P-21035. Other metal parts shall be made of bronze, phosphor bronze, brass, copper beryllium, or AISI Type 316 Stainless steel unless otherwise noted

AS BUILT PLANS
Contract No. 61-5V13C.11
Date Completed _____
Document No. 50000536

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

FLUORESCENT SIGN LIGHTING EQUIPMENT

Scale as Noted | REVISED: 5-27-60 NEM | DRAWING NO. E-

61-5V13C11

ES-8-3-V

FED. ROAD DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.			137	204

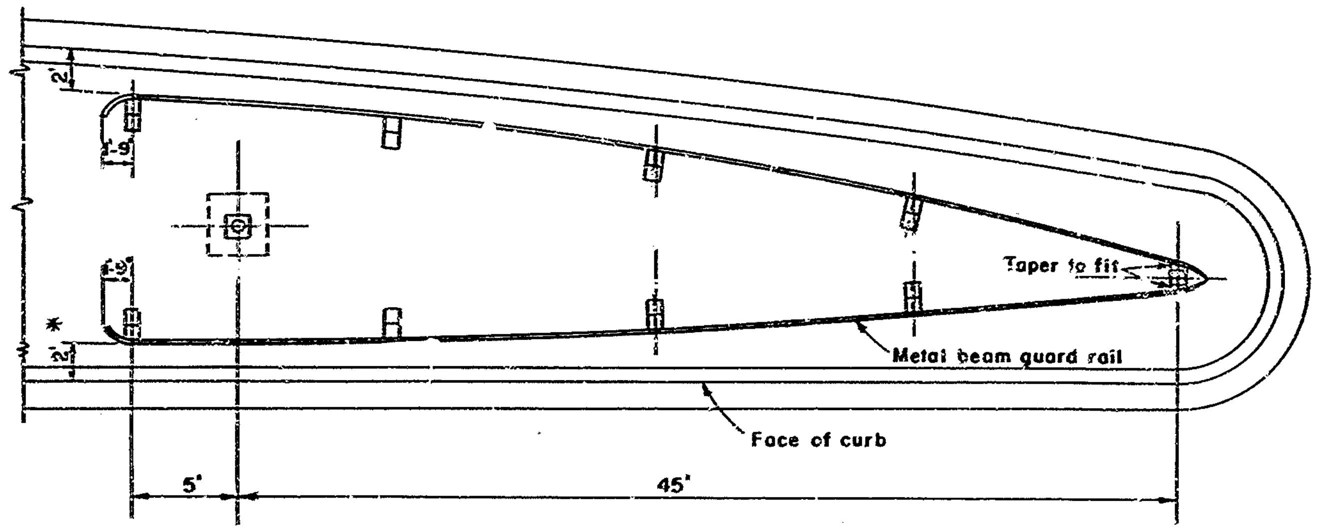
DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
V	SB, SLO	2	LSMra;F	137	137

137

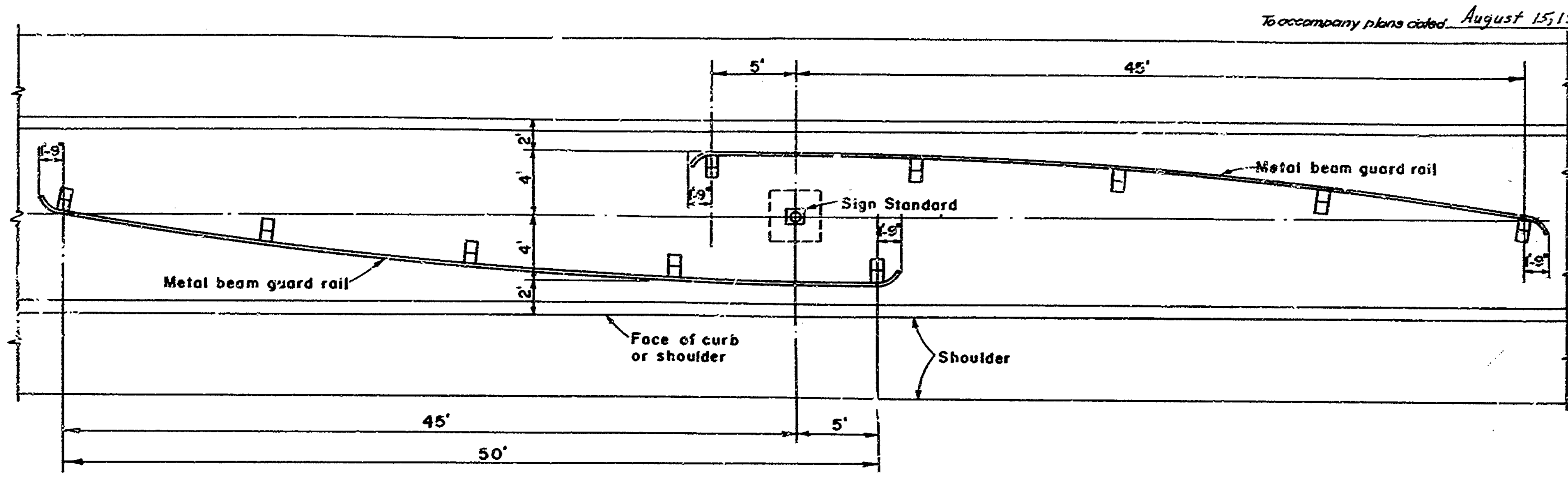
CIVIL ENGINEER - LICENSE 5429

DATE APPROVED 11-24-59

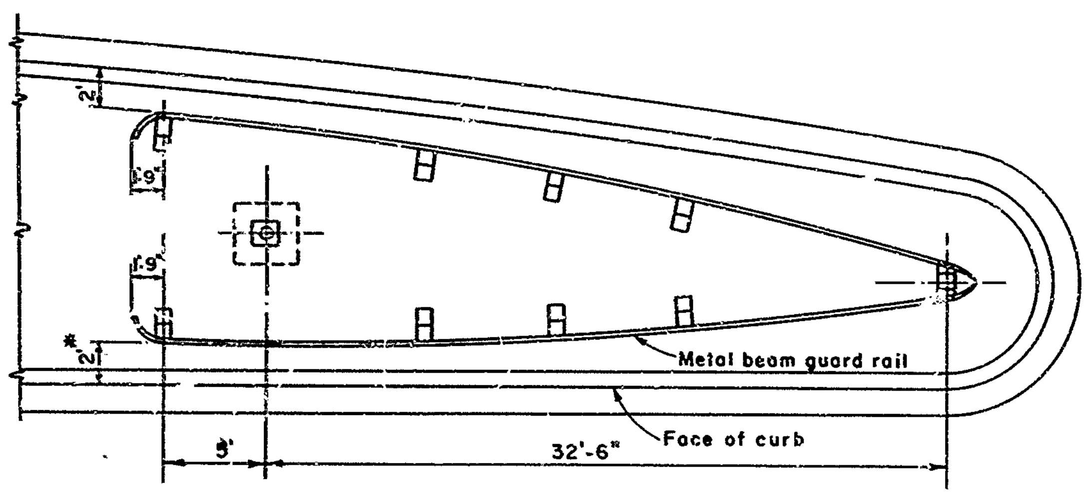
To accompany plans dated August 15, 1960



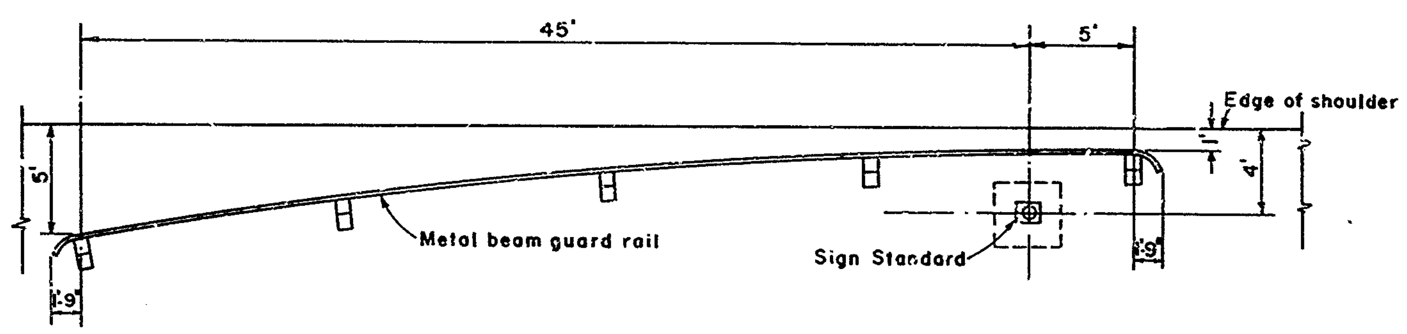
STANDARD
GORE INSTALLATION



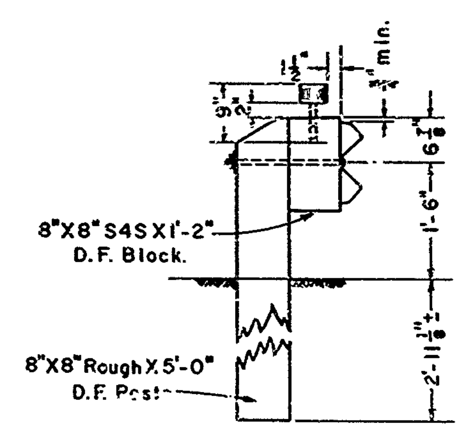
MEDIAN INSTALLATION



OPTIONAL
GORE INSTALLATION



SHOULDER INSTALLATION



ONE - WAY ROADWAY

METAL BEAM GUARD RAILING

Note:
Offset distances as shown are desired minimum, may be adjusted to suit individual cases.

* Where there is a full shoulder between edge of pavement and curb, guard rail may be flush with face of curb as directed by Engineer.

AS BUILT PLANS
Contract No. 61-5V13C11
Date Completed
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STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD GUARD RAIL PROTECTION FOR OVERHEAD SIGNS

SCALE 1" = 5' | FILE | DRAWING

61-5V13C11

137

S 26-1