

COLORADO

STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED FEDERAL AID PROJECT NO. 267A STATE HIGHWAY NO. 12 LAS ANIMAS CO.

INDEX OF SHEETS

SHEET NO. 1
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SHEET NO. 9 TO 17 INCL.
SHEET NO. 18

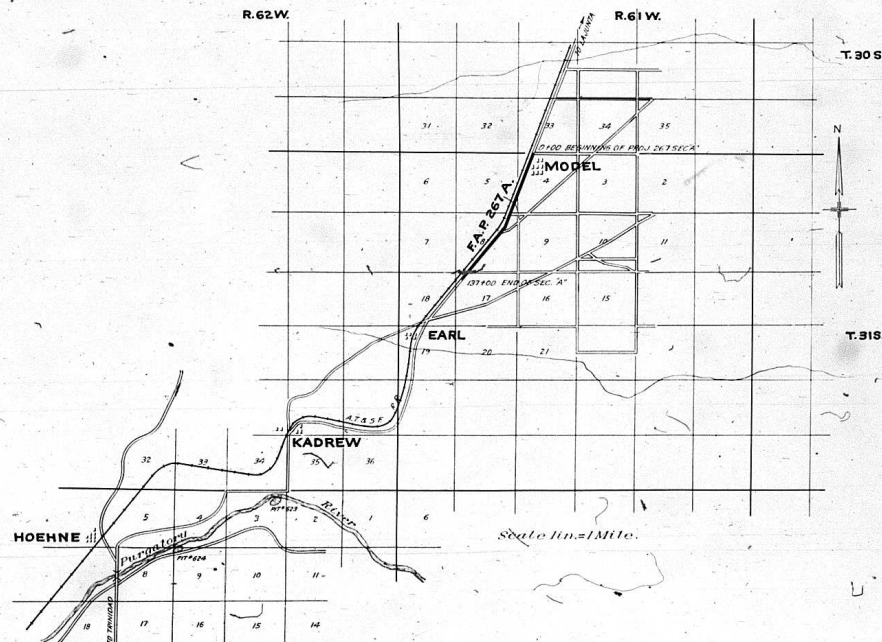
TITLE PAGE
SUMMARY
STD. BOX CULV.
STD. HD. WALLS
STD. 55' BRIDGE
CULV. EXTENSION
PLAN & PROFILE
CROSS-SECTIONS
DOUBLE BOX CULVERT

CONVENTIONAL SIGNS

SURVEY LINE
FENCE
R. OF R. LINE
RAILROAD
TEL. LINE



SCALES
ON PLAN. 1 IN. = 100 FT.
ON PROFILE 1 IN. = 100 FT. HORIZONTAL
11 IN. = 10 FT. VERTICAL
GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD
GROSS LENGTH OF PROJECT 13 700 FT. = 2.594 MI.
NET LENGTH OF PROJECT 13 700 FT. = 2.594 MI.



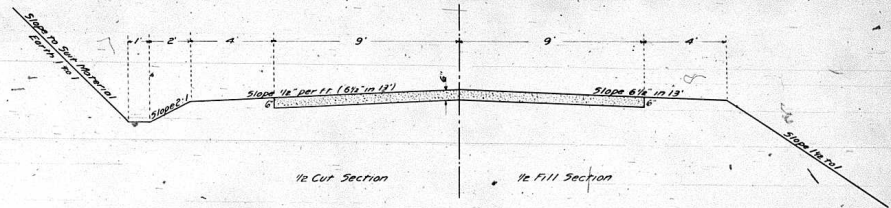
RECOMMENDED FOR APPROVAL
[Signature Line]
ASSISTANT ENGINEER
APPROVED
[Signature Line]
STATE HIGHWAY ENGINEER
RECOMMENDED FOR APPROVAL
[Signature Line]
DIST. ENCL. BUREAU PUBLIC ROADS
RECOMMENDED FOR APPROVAL
[Signature Line]
CHIEF ENCL. BUREAU PUBLIC ROADS
APPROVED
[Signature Line]
DIRECTOR BUREAU PUBLIC ROADS

TYPICAL CROSS SECTION OF IMPROVEMENT AND SUMMARY OF QUANTITIES

PROJECT NO. 100-1000
 STATE ARIZONA
 COUNTY PIMA
 DISTRICT 1
 REV. DATE 11-24-68
 BY 30125 SML
 CHECKED JAY M. ST. NAK

LIST OF STRUCTURES

STATION	STRUCTURE	CORROGATED METAL CULVERT PIPE		H.D. GALV. CONCRETE		REINFORCED STEEL (#5)	EXC. CUT	
		Lin. Ft.	18"	24"	Class A Class B	Class A Class B		
0+05	Double Box Culvert (30' x 30')				48.0		4740	
06+00	Side Drain	60			0.9			
08+30	2' x 18" Conc. Box Culvert				8.9		668	
09+00	Side Drain	110			0.9	1.1		
09+44	2' x 18" Conc. Box Culvert				8.9		668	
09+76	Side Drain	40			0.9			
09+00	Side Drain	40			0.9			
09+52	Side Drain	30			0.9			
09+62	6' x 6' x 30" Conc. Box Culvert				22.6		1967	
09+65	Side Drain	20			0.9			
09+80	2' x 18" Conc. Box Culvert				8.9		668	
09+95	24" x 36" Concrete Siphon, M.O.S.		36		10.0		951	
10+476	Extension 24" Conc. Culvert				57.0		5130	
11+425	Side Drain	40			0.9			
12+130	Side Drain	20			0.9			
13+65	Side Drain	20			0.9			
01+20	Dispersal ditch							10
03+20	Side drain	50			0.9			
50+30	Side drain	30			0.9			
100+00	18" x 18" x 30" conc. culv.				7.1		424	
40+00	Side Drain	18			0.9			
TOTALS		368	110	36	173.4	11.0	15,056	10

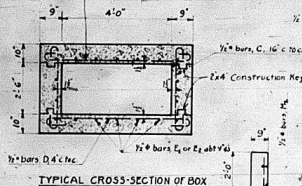


STANDARD SURFACING SECTION

SUMMARY OF QUANTITIES

ITEM	MATERIAL	UNIT	QUANTITY	CONSTRUCTION QUANTITY
1	Excavation Common	Cu. Yd.	1100	1169
2	Bottom Fill	Cu. Yd.	15,300	16,342
3	Overhaul	Sq. Yd.	100	1168
4	Gravel Surfacing	Sq. Yd.	27400	27393
5	Concrete, Class A	Cu. Yd.	1734	1734
6	Concrete, Class B	Cu. Yd.	110	110
7	Reinforcing Steel	Lbs.	15,100	15056
8	15' Corr. Metal Culvert Pipe	Lin. Ft.	350	368
9	18"	Lin. Ft.	110	110
10	24"	Lin. Ft.	36	36
11	Warning a Rolling by Train Ahead	Sq. Yd.	27400	27393

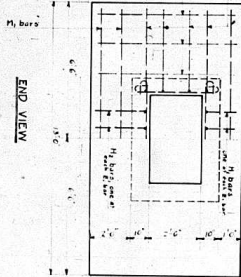
Note: $\frac{3}{8}$ " deformed bars ϕ 4" x 4" may be substituted for D bars.



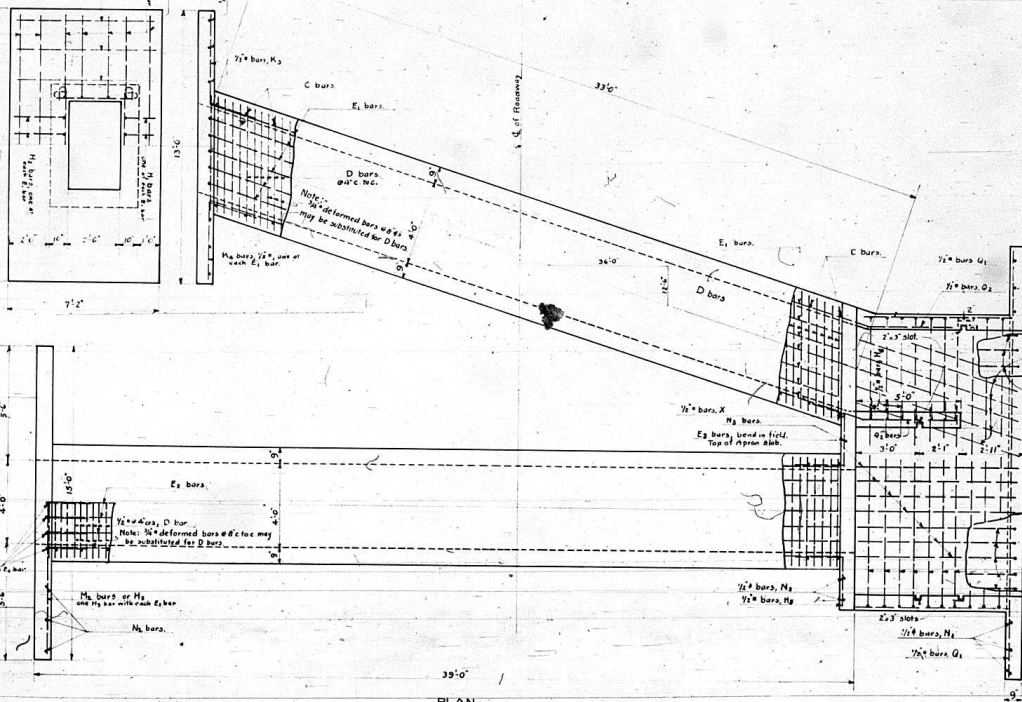
Build New Battle here

Old Spillway & Battle in place

END VIEW



SECTION A-A



General Notes.

All work to be done in accordance with the Standard Specifications of the Colorado State Highway Department.
 All concrete to be Class A (1:2:4) mix.
 All reinforcing bars to be plain round or plain square as shown.
 All walls to have forms on both sides.
 All construction joints to be thoroughly cleaned before fresh concrete is poured.
 Longitudinal bars when spliced, shall be lapped not less than 2'-1".
 Minimum distance center of bars to edge to be 17".
 Wingwalls and walls of box to be poured monolithically. Also apron and floor of box.

END ELEVATION

BAR LIST

MARK	SIZE	NUMBER	LENGTH	BENDING DIAGRAM
All dimensions are to centerline of bar.				
C	1/2"	109	4' 9"	
D	1/2"	430	4' 7"	
E	1/2"	10	7' 8"	
E ₁	1/2"	10	19' 0"	
E ₂	1/2"	13	11' 0"	
F	1/2"	4	7' 0"	
H ₁	1/2"	10	3' 5"	
H ₂	1/2"	8	4' 5"	
H ₃	1/2"	8	7' 3"	
H ₄	1/2"	18	12' 0"	
H ₅	1/2"	4	6' 3"	
H ₆	1/2"	7	7' 0"	
H ₇	1/2"	12	10' 3"	
H ₈	1/2"	7	4' 3"	
H ₉	1/2"	7	4' 0"	
H ₁₀	1/2"	4	6' 0"	
H ₁₁	1/2"	7	3' 0"	
H ₁₂	1/2"	10	6' 0"	
P	1/2"	10	12' 0"	
P ₁	1/2"	4	12' 0"	
P ₂	1/2"	3	12' 0"	
P ₃	1/2"	4	14' 0"	
P ₄	1/2"	2	20' 0"	
P ₅	1/2"	12	6' 0"	
P ₆	1/2"	6	7' 0"	
P ₇	1/2"	4	14' 0"	

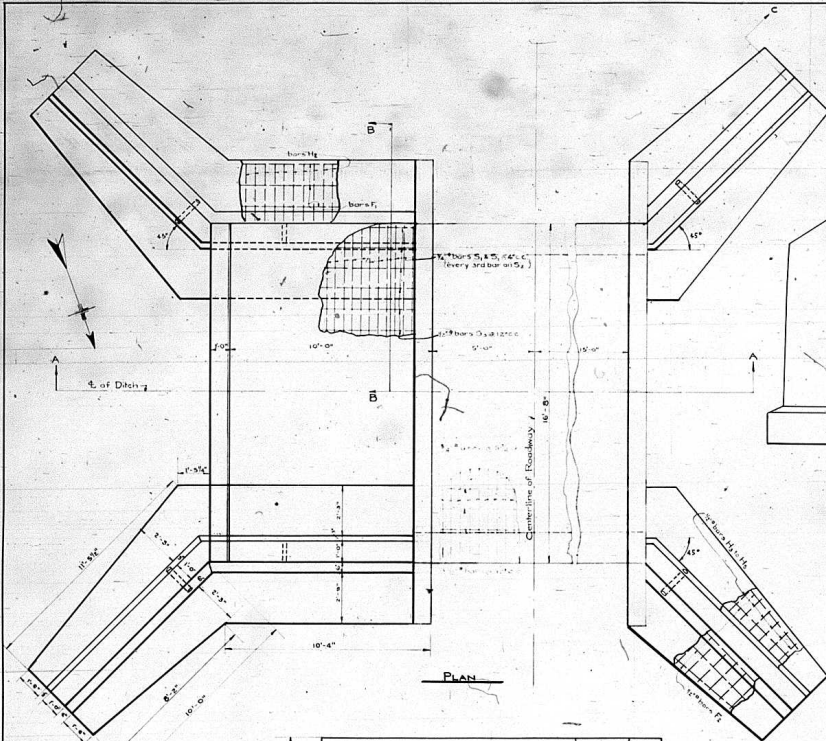
40% lineal feet of $\frac{3}{8}$ " bar @ 0.850" per foot = 348.5 lbs.
 170% lineal feet of $\frac{1}{4}$ " bar @ 0.666" per foot = 113.6 lbs.
 plus 3% overrun = 139.1 lbs.
 Total weight of steel = 474.0 lbs.

SUMMARY OF QUANTITIES

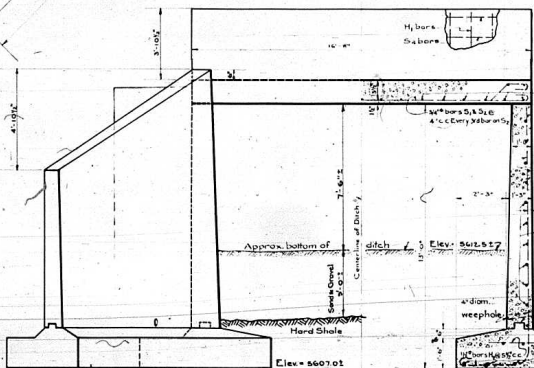
Concrete, Class A (1:2:4) 48 cu yds.
 Reinforcement (incl. 3% overrun) 4740 lbs.

LOADING - A.A.S.H.O. Live Load Class I-15

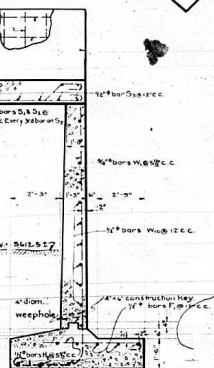
COLORADO
 STATE HIGHWAY DEPARTMENT
 DOUBLE BOX CULVERT
 Across Irrigation Ditch.
 Near Model. Sec 8 T 31 S R 61 W.
 Designed by R.S.D. Approved by H.G.S.
 Made by H.G.S. Bridge Engineer
 Checked by P.S.D. Date: 3-25-28



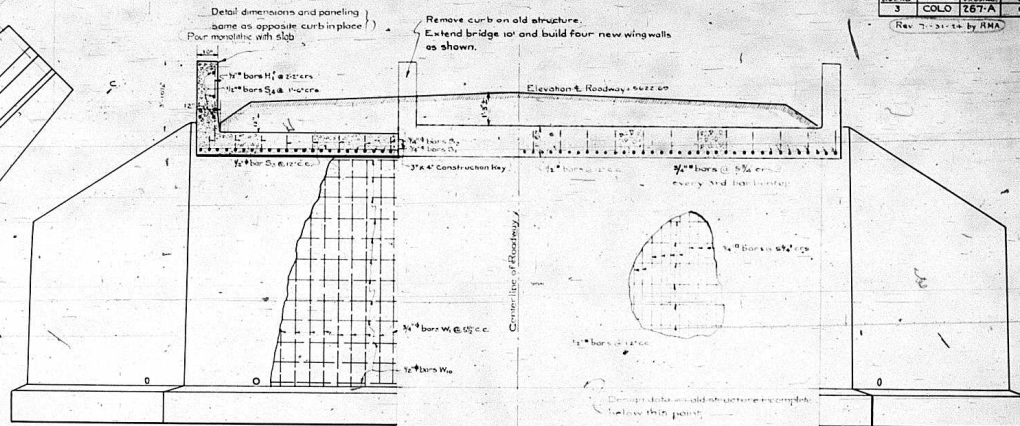
PLAN



HALF SIDE VIEW



HALF SECTION BB



SECTION A-A

GENERAL NOTES

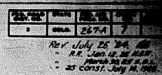
- All work shall be done in accordance with the Standard Specifications of the Colorado State Highway Department.
- All concrete shall be class "A" (1:2:4 mixture).
- All exposed surfaces shall rubbed free of form marks.
- All construction joints shall be thoroughly cleaned before fresh concrete is poured.
- All bars shall be plain round or plain square as shown.
- Light lines show outlines of old structure.
- Maximum soil pressure = 2 Tons per sq. ft.

Mark	Size	Number	Length	Bending Diagram
S ₁	3/4"	10	15'-10"	Rad - 3'
S ₂	3/4"	10	10'-0"	Rad - 3'
S ₃	3/4"	3	9'-0"	Straight
S ₄	3/4"	3	10'-0"	Straight
W ₁	3/4"	48	10'-0"	Rad - 3'
W ₂	3/4"	16	10'-0"	Rad - 3'
W ₃	3/4"	16	10'-0"	Rad - 3'
W ₄	3/4"	16	10'-0"	Rad - 3'
W ₅	3/4"	81	10'-0"	Rad - 3'
H ₁	3/4"	48	9'-0"	Rad - 3'
W ₆	3/4"	16	10'-0"	Rad - 3'
W ₇	3/4"	16	10'-0"	Rad - 3'
H ₂	3/4"	8	9'-0"	Rad - 3'
H ₃	3/4"	8	9'-0"	Rad - 3'
H ₄	3/4"	8	9'-0"	Rad - 3'
H ₅	3/4"	8	9'-0"	Rad - 3'
H ₆	3/4"	8	9'-0"	Rad - 3'
H ₇	3/4"	8	9'-0"	Rad - 3'
H ₈	3/4"	8	9'-0"	Rad - 3'
H ₉	3/4"	8	9'-0"	Rad - 3'
H ₁₀	3/4"	8	9'-0"	Rad - 3'
H ₁₁	3/4"	8	9'-0"	Rad - 3'
H ₁₂	3/4"	8	9'-0"	Rad - 3'
H ₁₃	3/4"	8	9'-0"	Rad - 3'
H ₁₄	3/4"	8	9'-0"	Rad - 3'
H ₁₅	3/4"	8	9'-0"	Rad - 3'
H ₁₆	3/4"	8	9'-0"	Rad - 3'
H ₁₇	3/4"	8	9'-0"	Rad - 3'
H ₁₈	3/4"	8	9'-0"	Rad - 3'
H ₁₉	3/4"	8	9'-0"	Rad - 3'
H ₂₀	3/4"	8	9'-0"	Rad - 3'
H ₂₁	3/4"	8	9'-0"	Rad - 3'
H ₂₂	3/4"	8	9'-0"	Rad - 3'
H ₂₃	3/4"	8	9'-0"	Rad - 3'
H ₂₄	3/4"	8	9'-0"	Rad - 3'
H ₂₅	3/4"	8	9'-0"	Rad - 3'
H ₂₆	3/4"	8	9'-0"	Rad - 3'
H ₂₇	3/4"	8	9'-0"	Rad - 3'
H ₂₈	3/4"	8	9'-0"	Rad - 3'
H ₂₉	3/4"	8	9'-0"	Rad - 3'
H ₃₀	3/4"	8	9'-0"	Rad - 3'
H ₃₁	3/4"	8	9'-0"	Rad - 3'
H ₃₂	3/4"	8	9'-0"	Rad - 3'
H ₃₃	3/4"	8	9'-0"	Rad - 3'
H ₃₄	3/4"	8	9'-0"	Rad - 3'
H ₃₅	3/4"	8	9'-0"	Rad - 3'
H ₃₆	3/4"	8	9'-0"	Rad - 3'
H ₃₇	3/4"	8	9'-0"	Rad - 3'
H ₃₈	3/4"	8	9'-0"	Rad - 3'
H ₃₉	3/4"	8	9'-0"	Rad - 3'
H ₄₀	3/4"	8	9'-0"	Rad - 3'
H ₄₁	3/4"	8	9'-0"	Rad - 3'
H ₄₂	3/4"	8	9'-0"	Rad - 3'
H ₄₃	3/4"	8	9'-0"	Rad - 3'
H ₄₄	3/4"	8	9'-0"	Rad - 3'
H ₄₅	3/4"	8	9'-0"	Rad - 3'
H ₄₆	3/4"	8	9'-0"	Rad - 3'
H ₄₇	3/4"	8	9'-0"	Rad - 3'
H ₄₈	3/4"	8	9'-0"	Rad - 3'
H ₄₉	3/4"	8	9'-0"	Rad - 3'
H ₅₀	3/4"	8	9'-0"	Rad - 3'
H ₅₁	3/4"	8	9'-0"	Rad - 3'
H ₅₂	3/4"	8	9'-0"	Rad - 3'
H ₅₃	3/4"	8	9'-0"	Rad - 3'
H ₅₄	3/4"	8	9'-0"	Rad - 3'
H ₅₅	3/4"	8	9'-0"	Rad - 3'
H ₅₆	3/4"	8	9'-0"	Rad - 3'
H ₅₇	3/4"	8	9'-0"	Rad - 3'
H ₅₈	3/4"	8	9'-0"	Rad - 3'
H ₅₉	3/4"	8	9'-0"	Rad - 3'
H ₆₀	3/4"	8	9'-0"	Rad - 3'
H ₆₁	3/4"	8	9'-0"	Rad - 3'
H ₆₂	3/4"	8	9'-0"	Rad - 3'
H ₆₃	3/4"	8	9'-0"	Rad - 3'
H ₆₄	3/4"	8	9'-0"	Rad - 3'
H ₆₅	3/4"	8	9'-0"	Rad - 3'
H ₆₆	3/4"	8	9'-0"	Rad - 3'
H ₆₇	3/4"	8	9'-0"	Rad - 3'
H ₆₈	3/4"	8	9'-0"	Rad - 3'
H ₆₉	3/4"	8	9'-0"	Rad - 3'
H ₇₀	3/4"	8	9'-0"	Rad - 3'
H ₇₁	3/4"	8	9'-0"	Rad - 3'
H ₇₂	3/4"	8	9'-0"	Rad - 3'
H ₇₃	3/4"	8	9'-0"	Rad - 3'
H ₇₄	3/4"	8	9'-0"	Rad - 3'
H ₇₅	3/4"	8	9'-0"	Rad - 3'
H ₇₆	3/4"	8	9'-0"	Rad - 3'
H ₇₇	3/4"	8	9'-0"	Rad - 3'
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H ₇₉	3/4"	8	9'-0"	Rad - 3'
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H ₉₃	3/4"	8	9'-0"	Rad - 3'
H ₉₄	3/4"	8	9'-0"	Rad - 3'
H ₉₅	3/4"	8	9'-0"	Rad - 3'
H ₉₆	3/4"	8	9'-0"	Rad - 3'
H ₉₇	3/4"	8	9'-0"	Rad - 3'
H ₉₈	3/4"	8	9'-0"	Rad - 3'
H ₉₉	3/4"	8	9'-0"	Rad - 3'
H ₁₀₀	3/4"	8	9'-0"	Rad - 3'

SUMMARY OF QUANTITIES

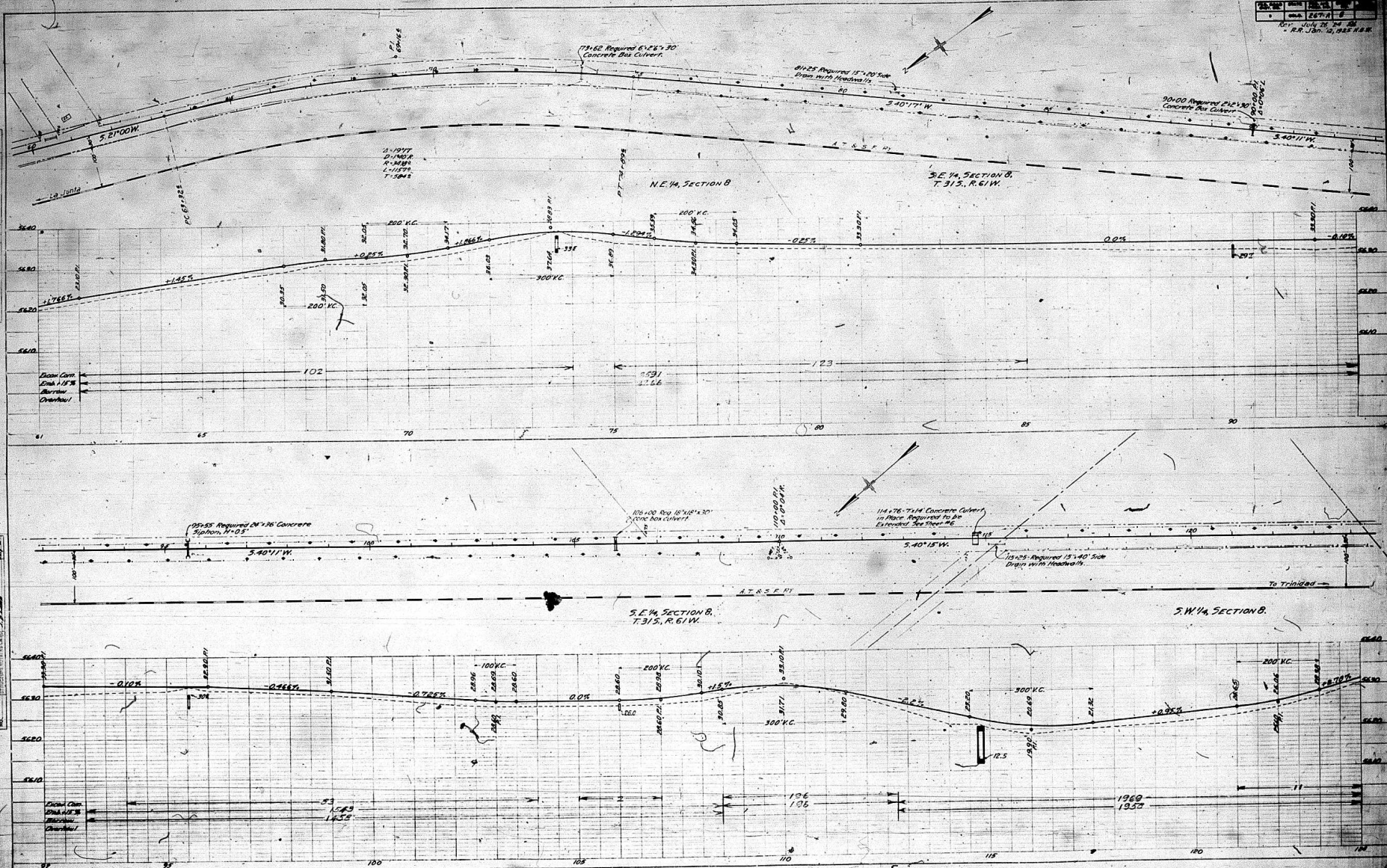
Concrete, Class "A" (1:2:4 mixture) 97 Cu Yds.
Reinforcing Steel including 350000 5150 Lbs.

COLORADO
STATE HIGHWAY DEPARTMENT
EXTENSION TO 7X14 CULVERT
IN PLACE
Across Irrigation Canal
Near Trinidad - Sec. 8 T. 15 S. R. 6 W.
Designed by R.W.J. Approved by C.E. & S.
Made by RMA Bridge Engineers
Checked by RMA Date 7-1-14



PLAN	DATE	BY	CHKD
26.7.11	S		

PROFILE	DATE	BY	CHKD
26.7.11	S		



PLAN
N.W. 1/4, SECTION 17, T. 91 S., R. 61 W.

PROFILE
DATE
BY
CHECKED
REVISIONS

