

12-15-67

# STATE OF OKLAHOMA DEPARTMENT OF HIGHWAYS

## PLAN OF PROPOSED STATE HIGHWAY

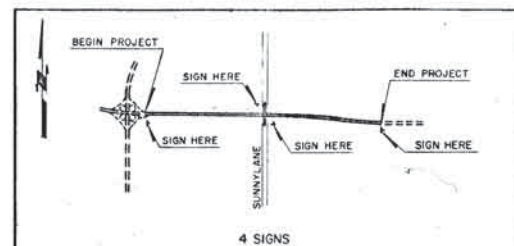
FEDERAL AID PROJECT I-240-4(86)157

GRADING, DRAINAGE AND BRIDGE

INTERSTATE ROUTE NO. 240

OKLAHOMA COUNTY

CONTROL SECTION NO. 55-65



LOCATION OF CONSTRUCTION IDENTIFICATION SIGNS  
(BY GRADING CONTRACTOR, SEE STD. C15-1)  
ESTIMATED TOTAL COST TO BE SHOWN ON THE  
CONSTRUCTION IDENTIFICATION SIGN IS THE ACTUAL  
AMOUNT OF THE GRADING, DRAINAGE AND BRIDGE  
CONTRACT PLUS AN ESTIMATED AMOUNT OF  
\$2,339,600.00 FOR SURFACING, EROSION CONTROL  
AND ALL OTHER SUBSEQUENT CONTRACTS.  
FUNDING SPLIT IS AS FOLLOWS: 10% STATE,  
90% FEDERAL.

## DESIGN DATA

ADT - 1969 = 9700  
ADT - 1989 = 25,000  
DHV = 3695  
D = 55 %  
T (DHV) = 6 %  
V = 70 MPH

## SCALES

PLAN 1" = 100'  
PROFILE HOR. 1" = 100'  
VER. 1" = 10'  
LAYOUT MAP 1" = 2,640'

LEVEL DATUM IS MEAN SEA LEVEL (U.S.C. &amp; G.S.)

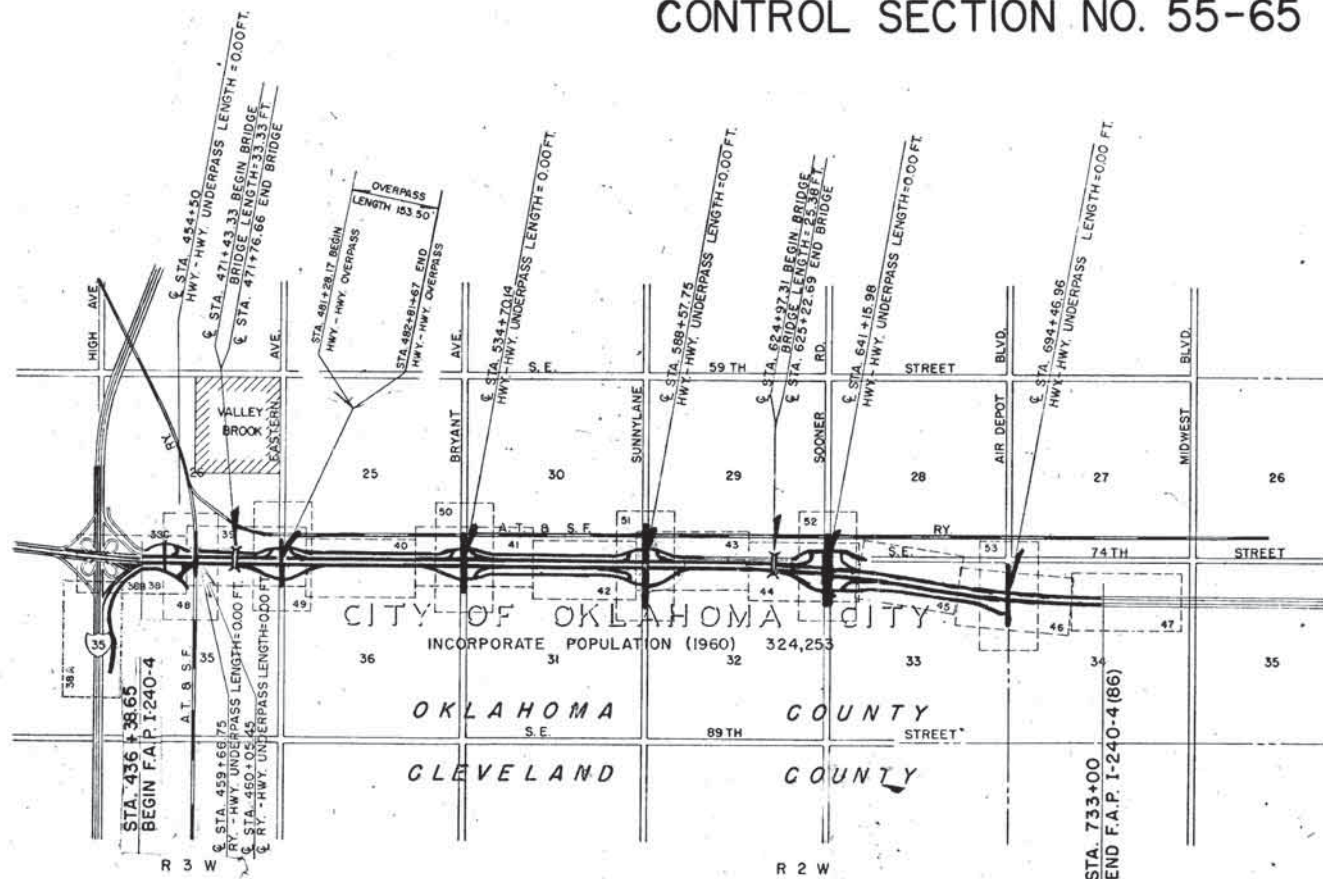
(BEARING) FROM OBSERVATION ON POLARIS

CONTROL OF ACCESS SHALL BE 8' FROM FACE OF  
FRONTAGE ROAD CURB BETWEEN FRONTAGE ROADS  
AND MAINLINE.

## CONVENTIONAL SIGNS

- PROPOSED ROAD
- RAILROADS
- RANGE & TOWNSHIP LINES
- SECTION LINES
- QUARTER SECTION LINES
- FENCES
- GROUND LINE
- EXISTING ROADS
- BASE LINE
- GRADE LINES
- TELEPHONE & TELEGRAPH
- POWER LINES
- OIL WELLS
- BUILDINGS
- DRAINAGE STRUCTURES - IN PLACE
- DRAINAGE STRUCTURES - NEW
- RIGHT-OF-WAY LINES - EXISTING
- RIGHT-OF-WAY LINES - NEW
- RIGHT-OF-WAY MARKERS - IN PLACE
- RIGHT-OF-WAY MARKERS - REMOVE & RESET
- RIGHT-OF-WAY MARKERS - NEW
- CONTROLLED ACCESS
- RIGHT-OF-WAY FENCE

1967 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION GOVERN.  
APPROVED BY FEDERAL HIGHWAY ADMINISTRATION, BUREAU OF PUBLIC ROADS, JUNE 2, 1967.  
SPECIAL PROVISIONS GOVERN OVER STANDARD SPECIFICATIONS.



ROADWAY LENGTH 29,449.14 FT. 5.577 MI.  
BRIDGE LENGTH 58.71 FT. 0.011 MI.  
OVERPASS LENGTH (HWY-HWY) 153.50 FT. 0.029 MI.  
UNDERPASS LENGTH (HWY-HWY) 0.00 FT. 0.000 MI.  
UNDERPASS LENGTH (RY-HWY) 0.00 FT. 0.000 MI.  
PROJECT LENGTH 5.617 MI.

EQUATIONS: NONE  
EXCEPTIONS: NONE

NOTE: ENTIRE PROJECT LIES WITHIN URBAN AND CITY LIMITS OF OKLAHOMA CITY, OKLAHOMA

SHEET NO. 1

2-7 (2A)

8

9-18

19-25

26

27-31

32-33

34

35

35A

36

36A

36B

37

38-38A-C

39-53-53A

54-57A-58-58A

59-60

61-64

65

66-70

71-79A

80-82

83

83A-83B

84-84A-86

87

88

89

90

91

92

93

94

95

96

97

97A

98

99

99A

100

101

102

103

104

105

106

107

108

108A

109

110

111

112

113

114

115

116

117

118

119

120

121

122

123

123A

123B

123C

123D

124

125

126

127-128

129

130

131

132

133

134

135

136

137

138

## INDEX OF SHEETS

## TITLE SHEET

## FUNCTIONAL SHEETS

## TRAFFIC VOLUME

## TYPICAL SECTIONS

## DELETED

## SUMMARY OF SURF. QUANTITIES

## SUMMARY OF DRAINAGE STRUCTURES

## DRAINAGE LAYOUT

## SUMMARY OF SHEET ESTIMATES

## SUMMARY OF PAY QUANTITIES (GRAD.)

## SUMMARY OF PAY QUANTITIES (BRIDGE)

## STD. GCN-2-18

## STD. TCD-1-0

## STD. TCD-2-1

## STD. CIS-1-2

## PLAN AND PROFILE SHEETS

## PROFILE GRADES - FRONTAGE ROADS

## AND INTERCHANGE RAMP

## MASS DIAGRAM SHEETS

## DELETED

## JOINT LAYOUTS

## SPECIAL CONSTRUCTION DETAILS

## SPECIAL CULVERT DETAILS

## STD. SSCD-1-12

## INTERCHANGE LAYOUTS

## STD. SHC-4-13

## STD. SU-EL-3-1

## STD. MD-2-22

## STD. DC-1-15

## STD. GR-2-17

## STD. GDF-1-10

## STD. RWF-3-2

## STD. ASCD-2-14

## STD. CSCD-2-13

## STD. PCD-5-2

## STD. P-7&amp;8 NR-11

## STD. JA-7 &amp; 8-11

## STD. JA-9-10

## STD. JA-9A-10

## STD. P-9NR-11

## STD. VEC-5-10

## STD. DU-1-13

## STD. SE-1-13

## STD. FHT-1-1

## STD. SSI-1-10(0.5)

## STD. SSI-1A-10(0.5)

## STD. SGF-1-11

## STD. BC-62

## STD. BC-52

## STD. BC-5A2

## STD. BC-6A2

## STD. BC-653RF

## STD. BC-654RF

## STD. BC-654LF

## STD. GPI-2-0

## STD. CP-2-0

## STD. CP-2S2-10

## STD. HEAP-1-0

## STD. MMH-1-11

## STD. MFC-1-11

## STD. CDI-1-12

## STD. CDI-2-10

## STD. SSI-2 &amp; 3-10(0.5)

## STD. SSI-2A-10(0.5)

## STD. PBD-1-2

## STD. PUD-1-10

## SLOPED &amp; GRATED WING WALLS (6:1)

## SLOPED &amp; GRATED WING WALLS (4:1)

## SPECIAL WELDED STEEL GRATES

## STD. CICI-1-0

## STD. SGF-4-0

## STD. DETAILS FOR CONCRETE SLAB BRIDGES

## SUPERSTRUCTURE DETAILS

## STD. DETAILS FOR PLATE GIRDER SPANS

## GENERAL NOTES

## SLOPE WALL DETAILS

## STR. NO. 25-PLAN &amp; ELEV.

## STR. NO. 25-PIER DETAILS

## STR. NO. 25-ABUT. DETAILS

## DELETED

## STR. NO. 25 - STR. STEEL DETAILS

## SHOE &amp; HANDRAILING DETAILS

## STR. NO. 34-PLAN &amp; ELEV.

## INDEX OF SHEETS

STR. NO. 34-PIER DETAILS  
STR. NO. 34-ABUT. DETAILS  
STR. NO. 34-SUPERSTRUCTURE DETAILS  
STR. NO. 34 & 35-ABUT., SHOE, & SLOPE WALL DETAILS  
STR. NO. 35 - PLAN & ELEV.  
STR. NO. 35-PIER DETAILS  
STR. NO. 35-ABUT. DETAILS  
STR. NO. 35-SUPERSTRUCTURE DETAILS  
STR. NO. 45-3-10x7x27' RDY. RC  
STR. NO. 54-PLAN & ELEV.  
STR. NO. 54 & 55-PIER DETAILS  
STR. NO. 54 & 55-ABUT. DETAILS  
STR. NO. 54 & 55-SUPERSTRUCTURE DETAILS  
STR. NO. 54 & 55 - SOFFIT ELEV.  
STR. NO. 54 & 55 - SLOPE WALL DETAILS  
STR. NO. 83 - PLAN & ELEV.  
STR. NO. 83-PIER DETAILS  
STR. NO. 83-ABUT. DETAILS  
STR. NO. 83-STRUCTURAL STEEL DETAILS  
STR. NO. 126-STD. BC 12 S4.LF  
STR. NO. 138 LT-PLAN & ELEV.  
STR. NO. 138RT-PLAN & ELEV.  
STR. NO. 138 LT. & RT. -PIER DETAILS  
STR. NO. 138LT. & RT. -ABUT. DETAILS  
STR. NO. 138 LT.&RT. -STRUCTURAL STEEL DETAILS  
STR. NO. 155-PLAN & ELEV.  
STR. NO. 155-PIER DETAILS  
STR. NO. 155-ABUT. DETAILS  
STR. NO. 155-STRUCTURAL STEEL DETAILS  
STR. NO. 163 LT-PLAN & ELEV.  
STR. NO. 163 RT. -PLAN & ELEV.  
STR. NO. 163 LT & RT. -PIER DETAILS  
STR. NO. 163 LT. & RT. -ABUT. DETAILS  
STR. NO. 163 LT. & RT. -STRUCTURAL STEEL DETAILS  
STD. -PTR - 1-19  
STD. -PTR-2-19  
STD. -IASD-3-4  
STD. BC-10  
STD. P-1-10  
STD. WELD-1-0  
EARTHWORK INFORMATIONAL SHEETS  
SPECIAL DETAILS-OVERHEAD SIGN STRS.  
STD. OSS-15-3  
STD. OWE-1-9  
STD. LPB-1-5

DELETED  
CROSS SECTIONS

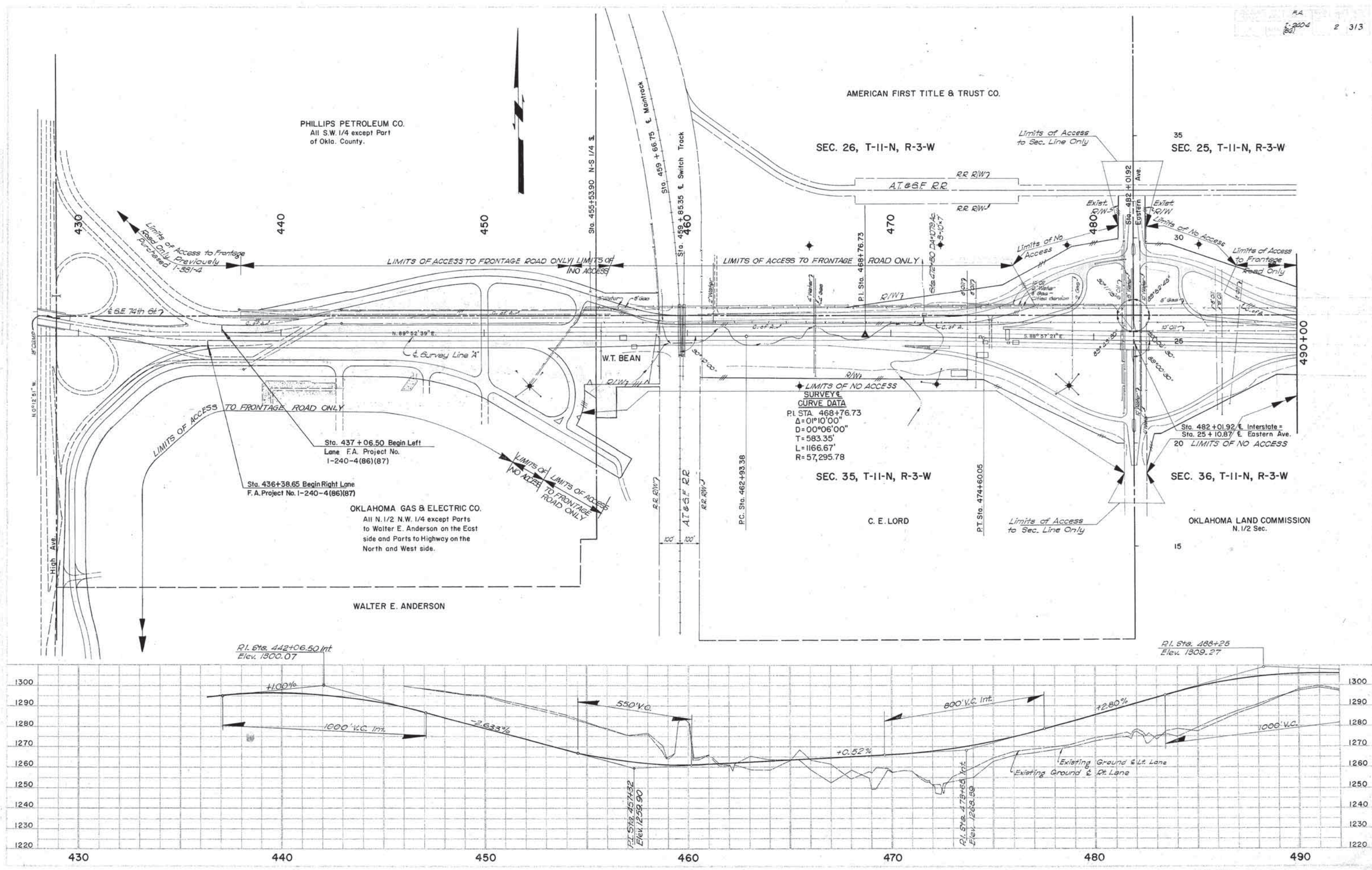
I-240-4(86)GRAD.	I-240-4(86)BR.
1-18, 26-35, 36-64, 66-125, 102-313	1, 9 15, 35A, 33, 38, 41, 43, 44, 46, 48-55, 62, 102, 126-181A

CHIEF DRAFTSMAN	
SURVEY ENGR.	G.H.C. 12-15-67
BRIDGE ENGR.	R.L.B. 12-15-67
DESIGN ENGR.	R.L.B. 12-15-67
CONSTRUCTION	E.E.F. 12-15-67
B. P. R.	
PROJECT ENGR.	PHILLIPS 12-15-67
CHECKER	
SQUAD SUPERVISOR	COINER

OKLAHOMA DEPARTMENT OF HIGHWAYS	DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION BUREAU OF PUBLIC ROADS
APPROVED	APPROVED
DATE	DATE
CHIEF ENGINEER	DIVISION ENGINEER
S.W.O. No. 2177(3)-	F.A. Project No. I-240-4(86)
	Sheet No. 1

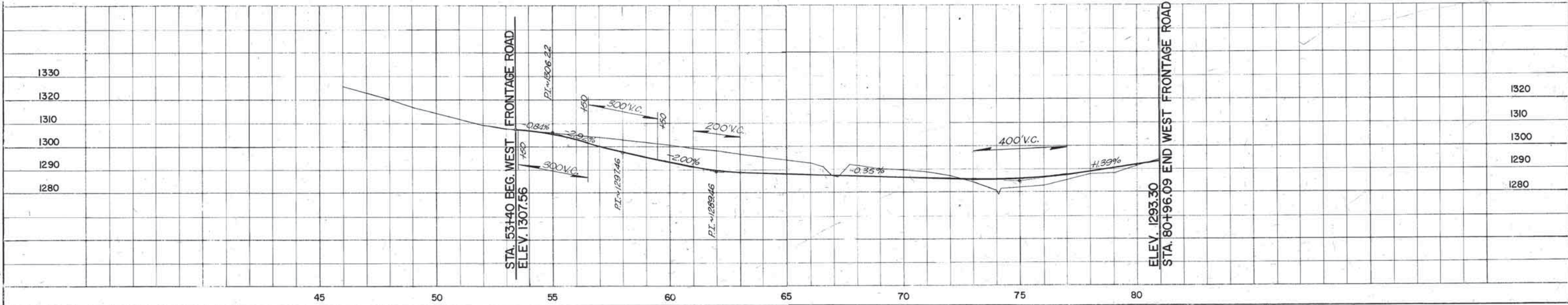
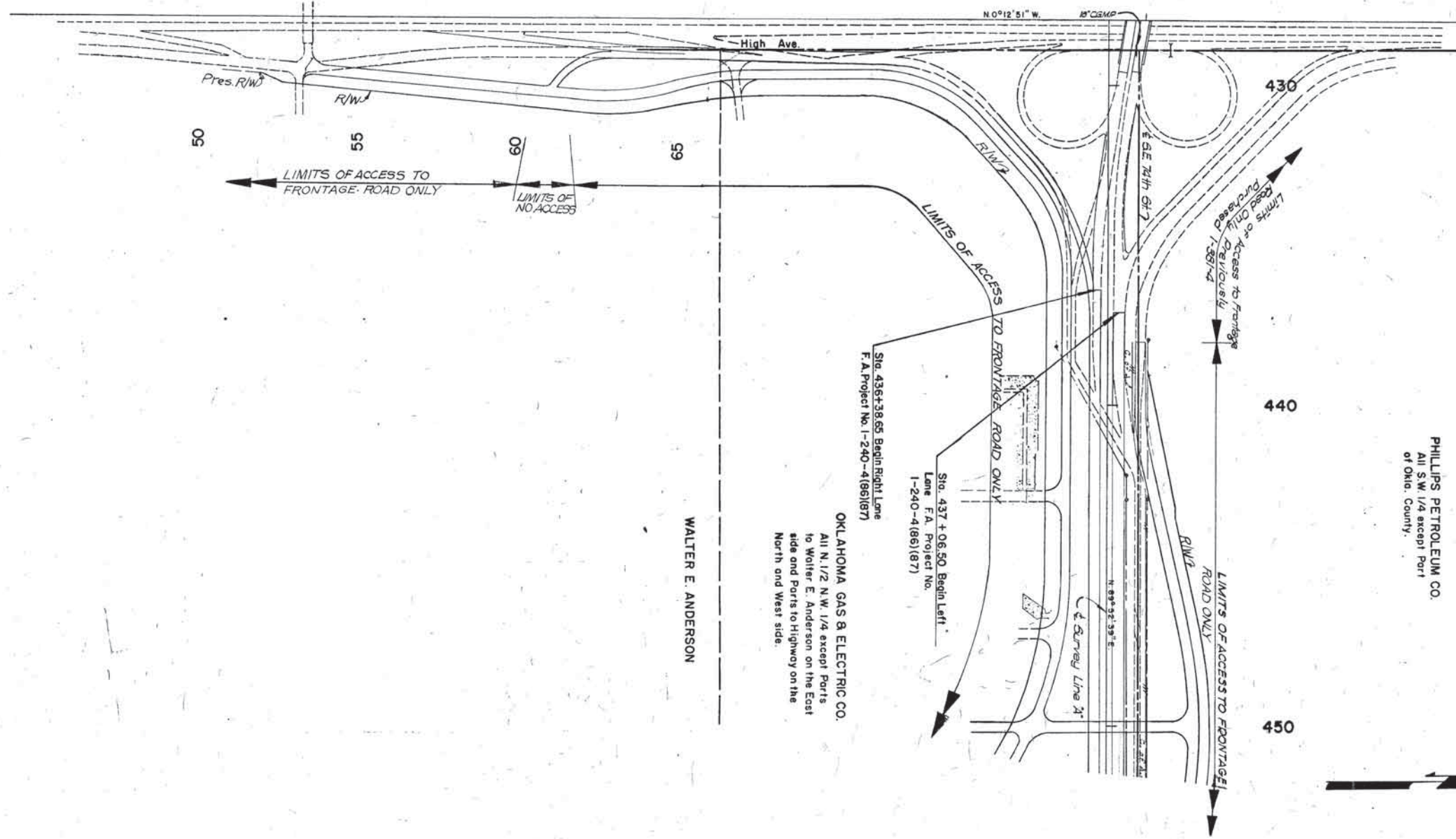
P.E. NO. I-240-4(74)157







VEH. ROAD	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	OKLA	I-240-4(86)		24	313



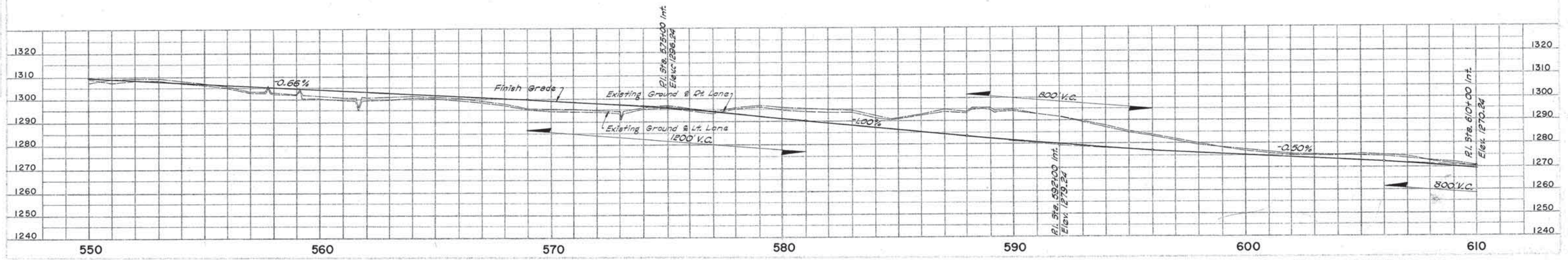
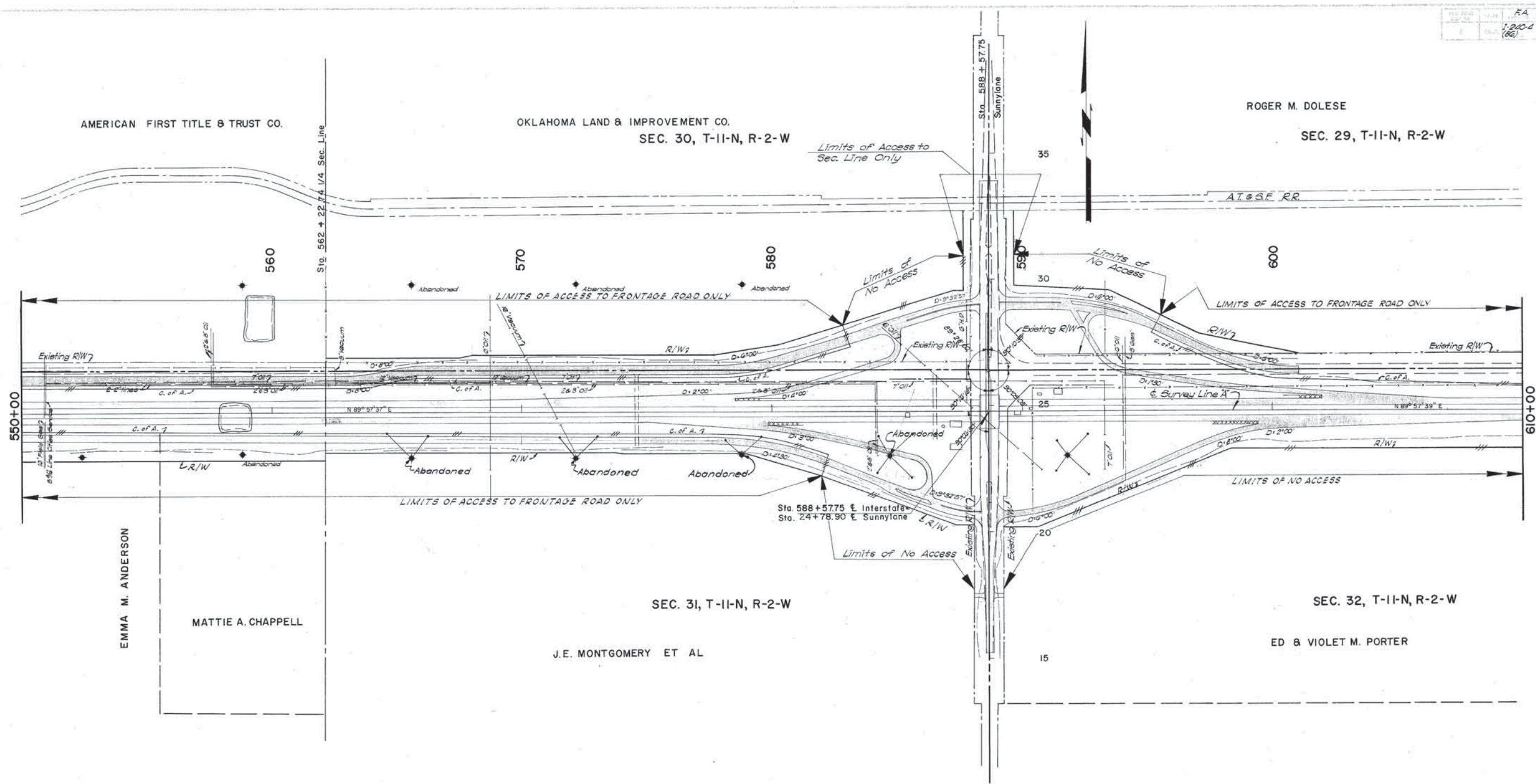
PLAN	DATE	BY
NO.		
NOTE BOOK		
ALIGNED CHECKED		
NO.		
DATE		

PROFILE	DATE	BY
NO.		
NOTE BOOK		
GRADES CHECKED		
NO.		
DATE		

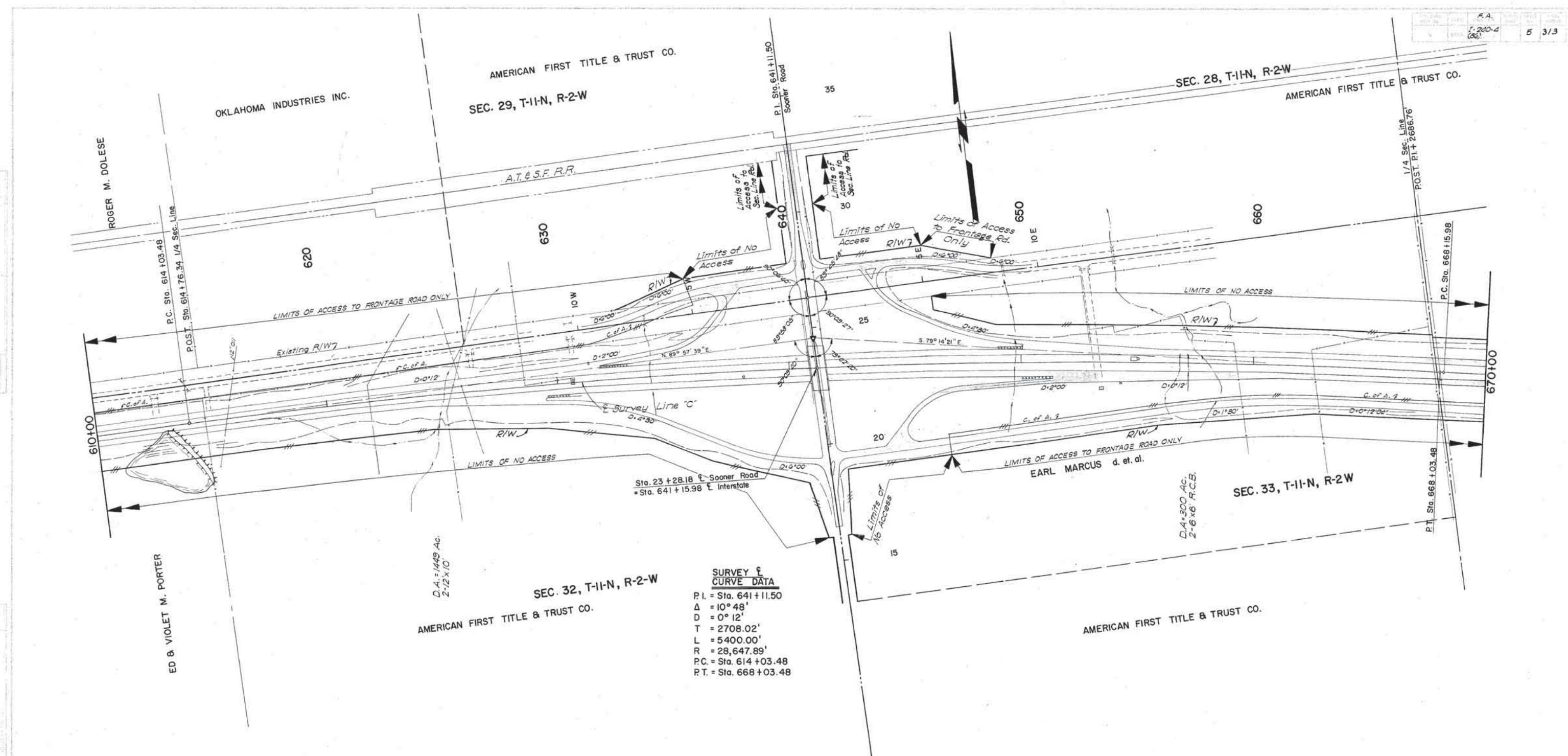






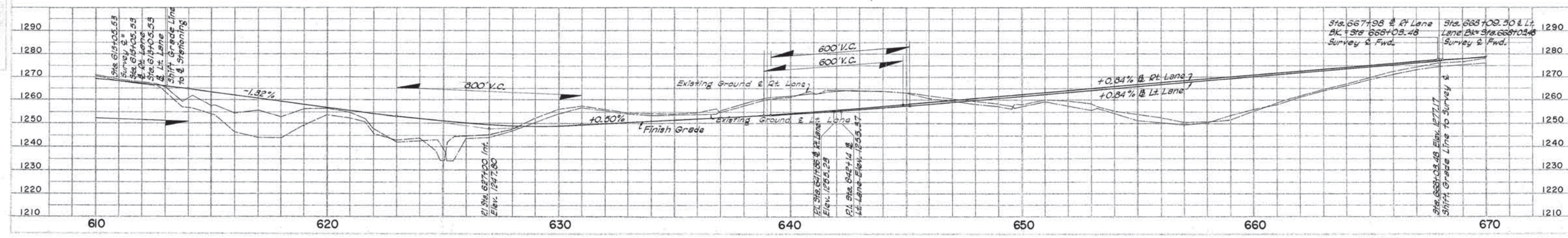




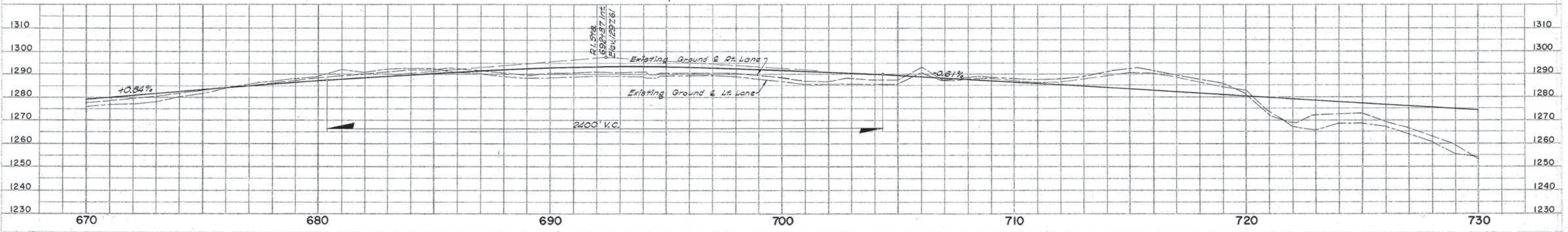
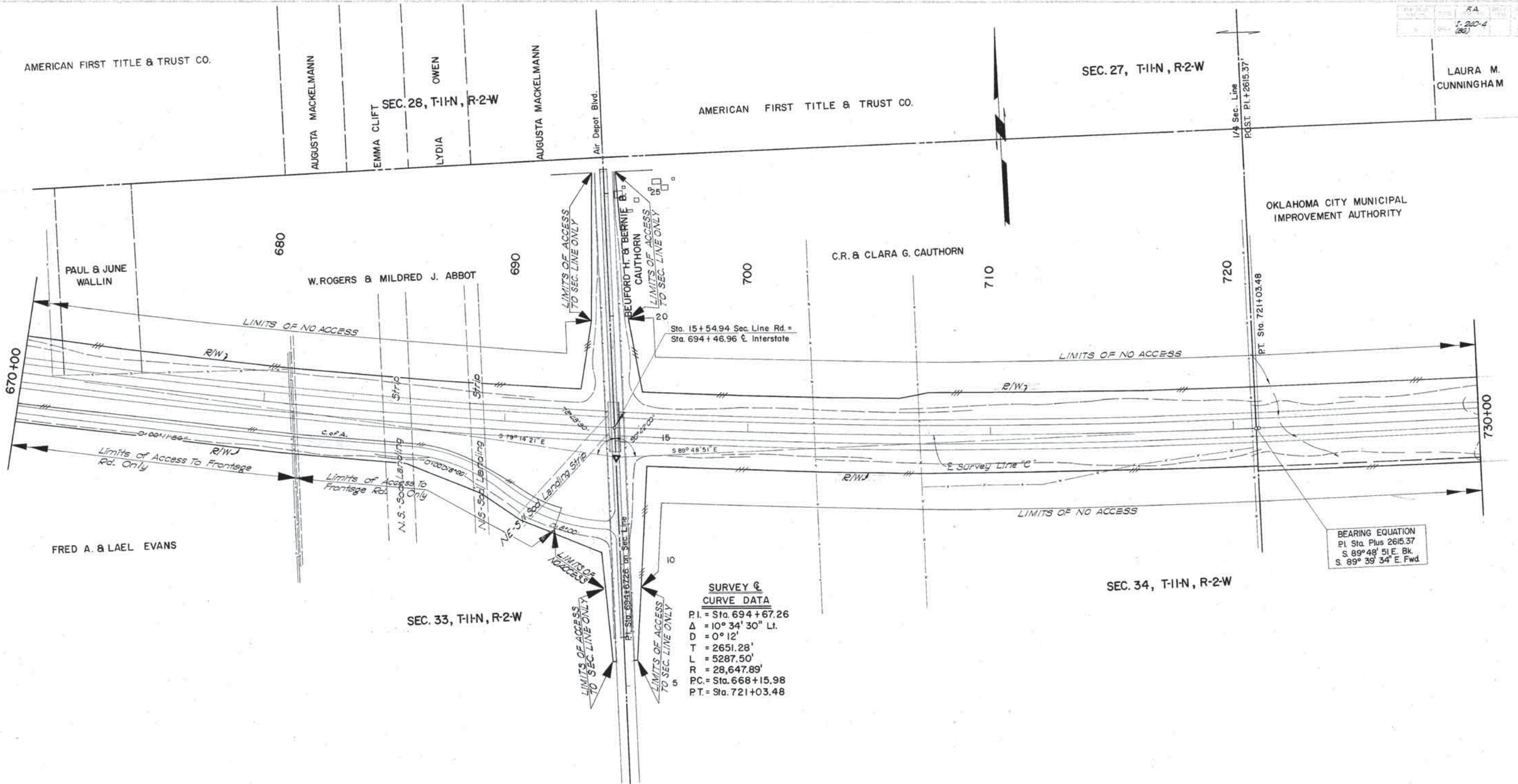


**SURVEY & CURVE DATA**

P.I.	= Sta. 641+11.50
Δ	= 10° 48'
D	= 0° 12'
T	= 2708.02'
L	= 5400.00'
R	= 28,647.89'
P.C.	= Sta. 614+03.48
P.T.	= Sta. 668+03.48





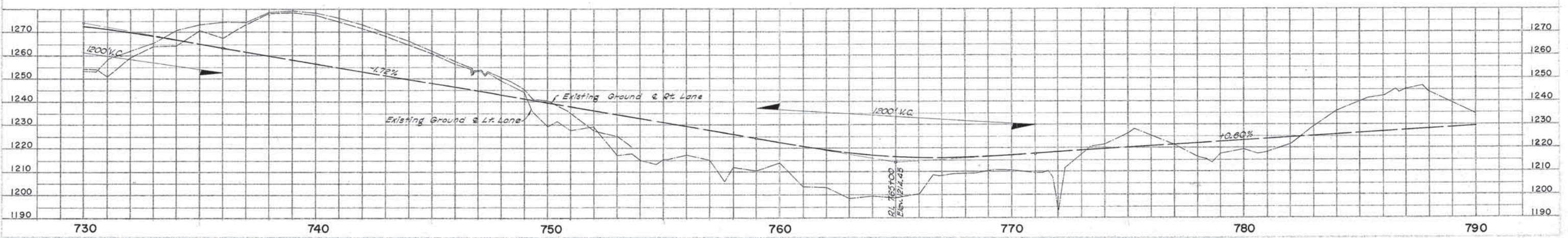
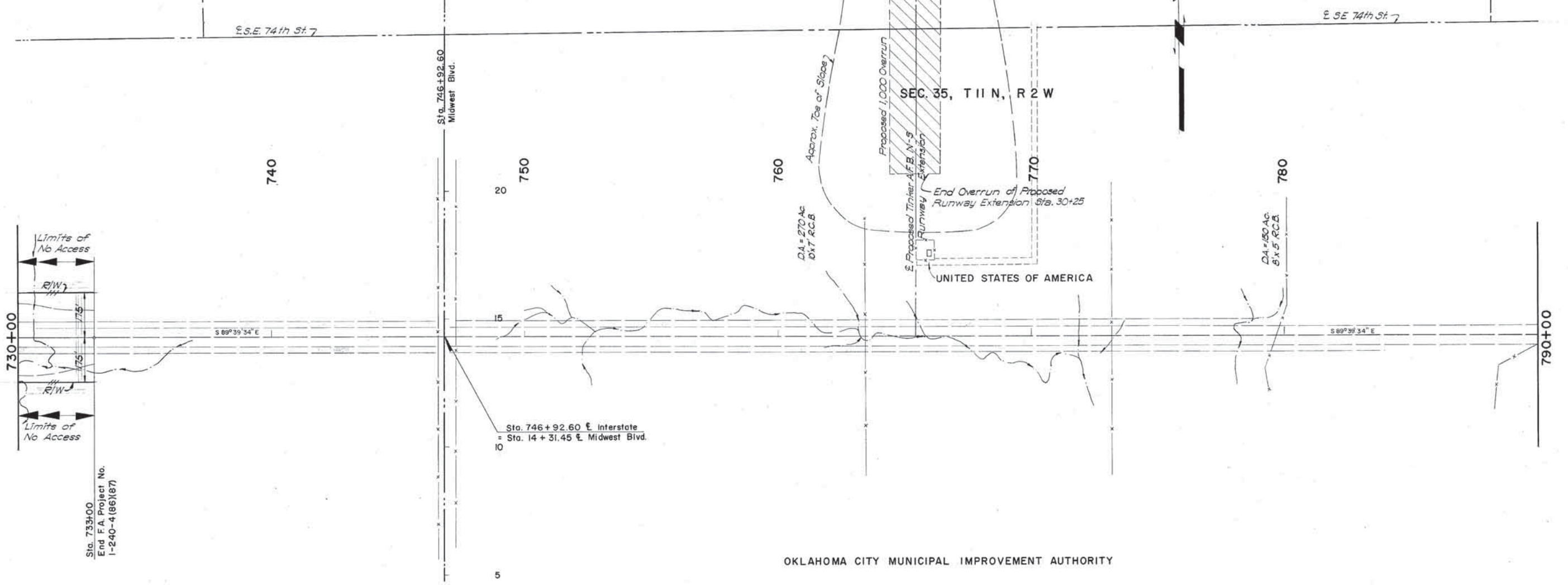




LAURA M. CUNNINGHAM

OKLAHOMA CITY MUNICIPAL IMPROVEMENT AUTHORITY

CATHOLIC CEMETARY

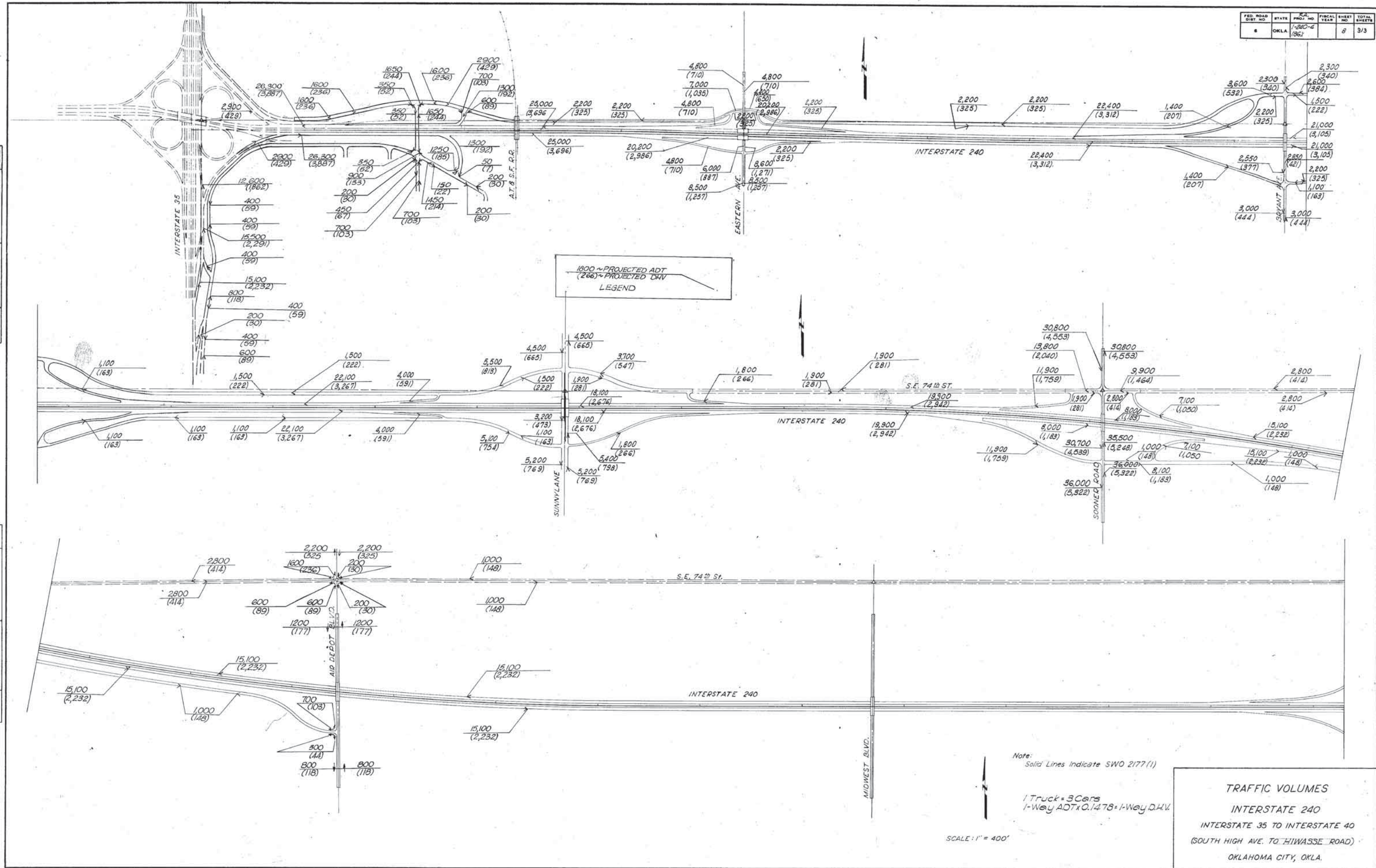




FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240-4	1967	8	3/3

PLAN	DATE
SURVEYED	
ALIGNED	
CHECKED	
BY	
NOTE BOOK	
NO.	

PROFILE	DATE
SURVEYED	
ALIGNED	
CHECKED	
BY	
NOTE BOOK	
NO.	





The grading plan view illustrates a cross-section of a road or embankment. Key features include:

- Survey Section:** A 19'-6" section at the left end.
- Shoulder:** A 4'-0" shoulder section.
- Surfacing:** A 36'-0" surfacing section.
- Slope:** A slope of 3/16" per Ft. is indicated across the main section.
- Elevation:** The elevation is noted as 1.08' Below Fin. Grade.
- Reserved Topsoil:** A note indicates "4" Reserved Topsoil See Topsoiling Note".
- Grading Section:** A 56'-6" grading section is shown at the bottom.
- Additional Dimensions:** Other dimensions include 10'-0", 8'-6", 10'-0", 4'-10", and 6'-6".
- Slopes:** Additional slopes are noted as 6:1, 2:1, and 1/2" per Ft.

The diagram illustrates a typical grading section for a road. Key features include:

- Top Surface:** A solid line representing the finished roadbed, with a total width of 35'-6" and a length of 38'-0" for the finished roadbed section.
- Subgrade:** A dashed line representing the subgrade, sloping at 3/16" per foot.
- Elevations:**
  - 0.95' Below Profile Grade (at the left edge)
  - 1.08' Below Profile Grade (at the subgrade start)
  - 1.64' Below Profile Grade (at the right edge)
  - 0.04' Below Profile Grade (at the right edge, near the 2:1 slope)
- Slopes:**
  - Approx. 6:1 (on the left side)
  - 2:1 (on the right side, near the 4" Reserve)
- Dimensions:**
  - 12'-10'-0" to 10'-6" (width of the top section)
  - 8'-6" (width of the top section)
  - 4'-10" (width of the top section)
  - 1/2' ft. (width of the top section)
- Notes:**
  - See Median Details 3'-0" This Sheet
  - 4" Reserved Topsoil See Topsoiling Note This Sheet
  - 0.22' Below Profile Grade

**TYPICAL GRADING SECTION**

4" Reserved Topsoil

Profile Grade

Station 1: STA. 438+00 TO STA. 462+93.38  
Shoulder width: 19.5' (left), 19.5' (right)

Station 2: STA. 462+93.38 TO STA. 468+76.73  
Shoulder width: Variable 19.5' to 20' (left), Variable 19.5' to 20' (right)

Station 3: STA. 468+76.73 TO STA. 614+03.48  
Shoulder width: 20' (left), 20' (right)

Station 4: STA. 614+03.48 TO STA. 668+03.48  
Shoulder width: Variable 20' to 38' (left), Variable 20' to 38' (right)

Station 5: STA. 668+03.48 TO STA. 733+00  
Shoulder width: 38' (left), 38' (right)

**TOPSOILING NOTE:**  
Reserve Topsoil Shall Be Spread Approximately  
4" Thick, First On Completed Backslopes Of  
Cut Sections And The Remainder On  
Completed Fill Slopes Or Other Priority  
Areas Located By The Engineer.  
(By Grading Contractor.)

⊗ Slope Varies Through Interchange Areas.  
For Special Grading Of These Areas See  
Cross Section Sheets.

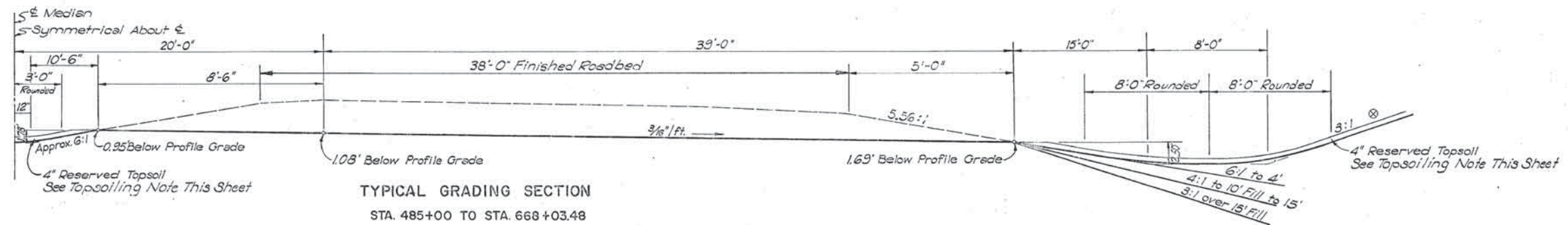
STA. 464+00 TO STA. 485+00 RT.  
STA. 478+00 TO STA. 485+00 LT.

TYPICAL SECTION

FA Project No. I-240-4(86) Sheet No. 9

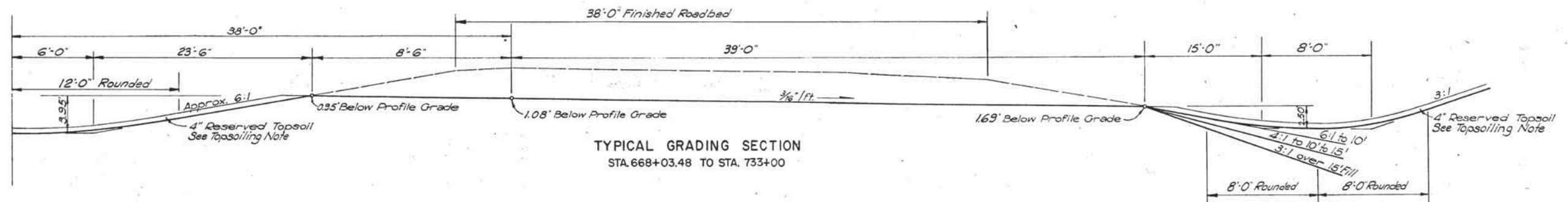


FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-240-4(86)	10	3/3	
REVISIONS					
DESCRIPTION	DATE				



NOTE: Median variable 20' to 38'  
 Sta. 614+03.48 to Sta. 668+03.48  
 See Details Sheet No. 9

\* Slope Varies Through Interchange Areas.  
 For Special Grading Of These Areas See  
 Cross Section Sheets.



TOPSOILING NOTE:  
 Reserve Topsoil Shall Be Spread Approximately  
 4" Thick, First On Completed Backslopes Of  
 Cut Sections And The Remainder On  
 Completed Fill Slopes Or Other Priority  
 Areas Located By The Engineer.  
 (By Grading Contractor.)

Design	
Drawn	
Checked	
Approved	
Squad	COINER

TYPICAL SECTION



A schematic diagram of a three-layer laminate. It consists of three horizontal rectangular layers. The top and bottom layers are labeled  $N_1$  and  $N_2$  respectively. The middle layer is labeled  $N_3$ . A vertical line with arrows at both ends, labeled  $t$ , indicates the thickness of the middle layer. A label "Tack Coat Between Layers" with an arrow points to the interface between the top and middle layers. The bottom layer is labeled "prime" with an arrow pointing to it.

4" Reserved Topsoil (By Grading Contractor)

2:1

4:1 Usual

2:1 Max.

6'-0"

1' 8"

4" Mountable Curb

3 1/2" 1/4" Super

9" PC Concrete

Profile Grade

14" High Lip Curb

6'-0"

2:1

4" Reserved Topsoil (By Grading Contractor)

4:1 Usual

2:1 Max.

19'-0"

7.44437 D<sup>2</sup>

4" Plant Mix 3/4" Base-Fine Aggr. Type

(By Grading Contractor)

To be Backfilled and Compacted  
Quantity included in Uncl. Borrow

**TYPICAL RAMP SURFACING SECTION**  
**EASTERN, BRYANT, SUNNYLANE & SOONER ROAD INTERCHANGES**

To be Backfilled and Compacted  
Quantity included in Uncl. Borrow

⊗ Slope Varies Through Interchange Areas,  
For Special Grading Of These Areas See  
Cross Section Sheets.

Are To Be Su  
Grading Co

Eastern, Bryant, Sunnylane & Sooner Road Interchanges

4" Reserved Topsoil.  
See Topsoiling Note

2:1

6'-0"

5'-4"

Sod Shldr.

8"

1 1/2" Type "C" Aggr.

3" Type "A" Aggr.

Slope 3/16" per Ft.

Fin. Grade as shown  
on Profile Sheet

2.97500'

4.08333'

8" Bit. Base - Fine Aggr. Type

12.38834'

Grade to This Line

1.04' Below  
Fin. Grade

2'-0" Comb. Curb & Gutter  
(4" Mountable Notched)

5'-4"

Sod Shldr.

2'-0" Comb. Curb & Gutter  
(4" Mountable Notched)

Slope 1/2" per Ft.

4" Reserved Topsoil  
See Topsoiling Note

4:1 Usual

See Backfill Note  
This Sheet.

See Layer Detail  
This Sheet

▲ Limits of Lime Modification (6" Deep)

22'-4"

4'-4"

4'-4"

See Std. ASCD-1

1 1/2" Type "C" Aggr.

3" Type "A" Aggr.

2 1/2"

2 1/2"

3"

8"

Tack Coat

Prime Coat to Here

(By Grading Contractor)

**TYPICAL GRADING & SURFACING SECTION**

RAMP "A"-I-35 & WEST FRONTAGE ROAD

RAMP "C"-I-35 & I-240

B Ramp

E Ramp

LAYER DETAIL  
8" BIT. BASE - FINE AGGR. TYPE

Reserve Topsoil shall be spread approximately 4" thick, first on completed backslopes of cut slopes and the remainder on completed fill slopes or other priority areas located by the Engineer. (By Grading Contractor)

THICKNESS DIMENSIONS ARE APPROXIMATE  
THE TOLERANCES OF THE GOVERNING  
SPECIFICATIONS WILL CONTROL.

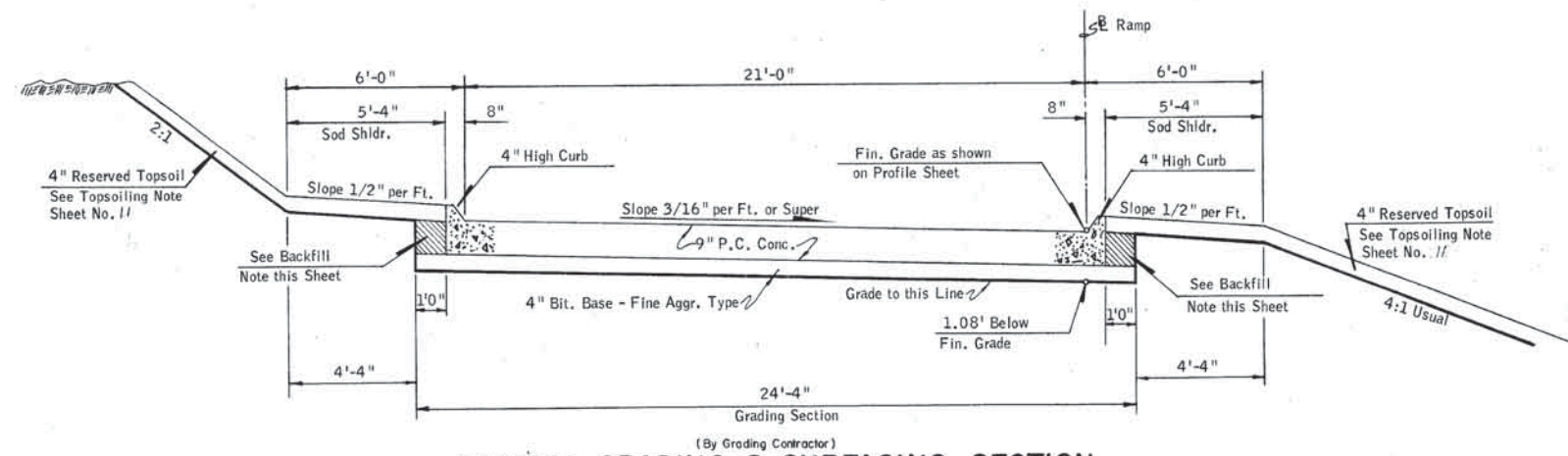
TYPICAL SECTION

FA Project No. I-240-4(86) Sheet No. 11



# TYPICAL SECTION

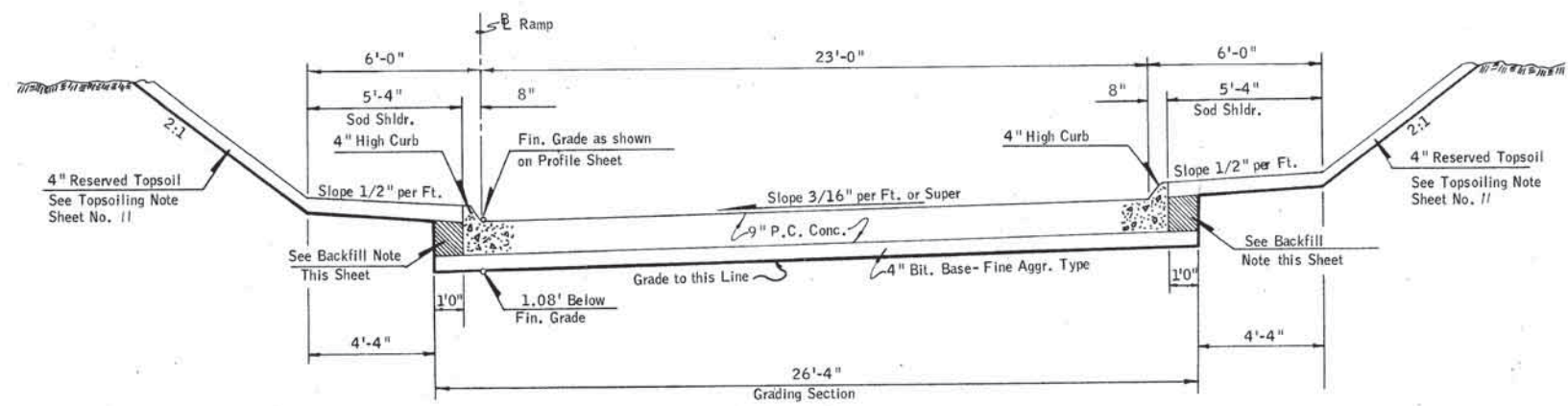
FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-240-4(86)	12	3/5
DESCRIPTION		REVISIONS		DATE
By Grad. Cont.				12/29/69



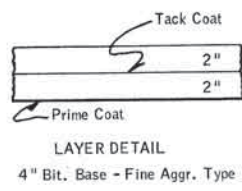
TYPICAL GRADING & SURFACING SECTION

RAMP "E" - SOUTH FRONTAGE ROAD & I-240

BACKFILL NOTE:  
This is to be Backfilled & Compacted.  
Quantity included in Unclassified Borrow.



TYPICAL GRADING & SURFACING SECTION  
RAMP "D" - NORTH FRONTAGE ROAD & I-240



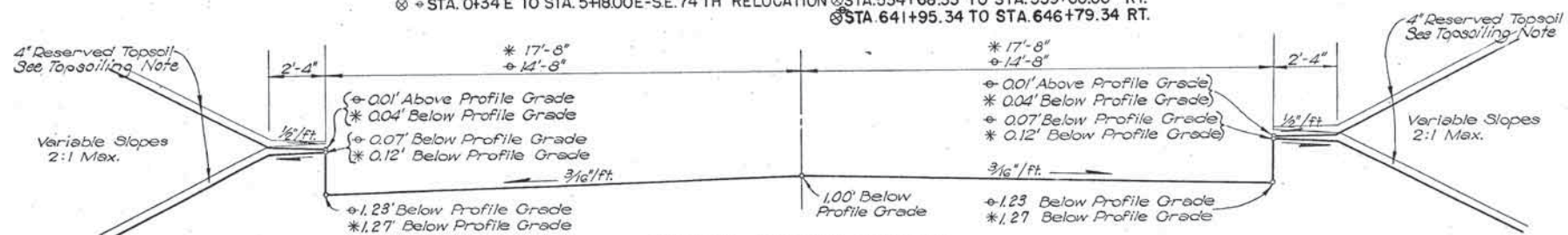
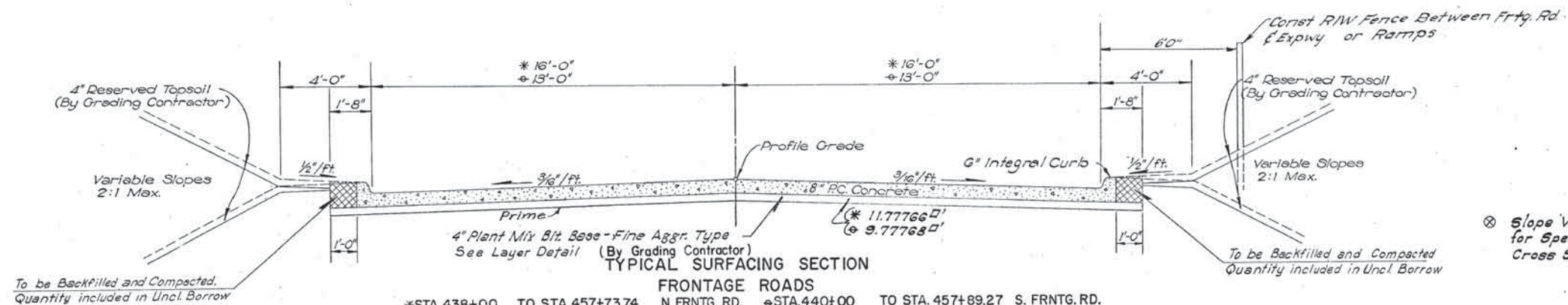
Design	
Drawn	
Checked	
Approved	
Squad	COINER

## TYPICAL SECTION

FA Project No. I-240-4(86) Sheet No. 12



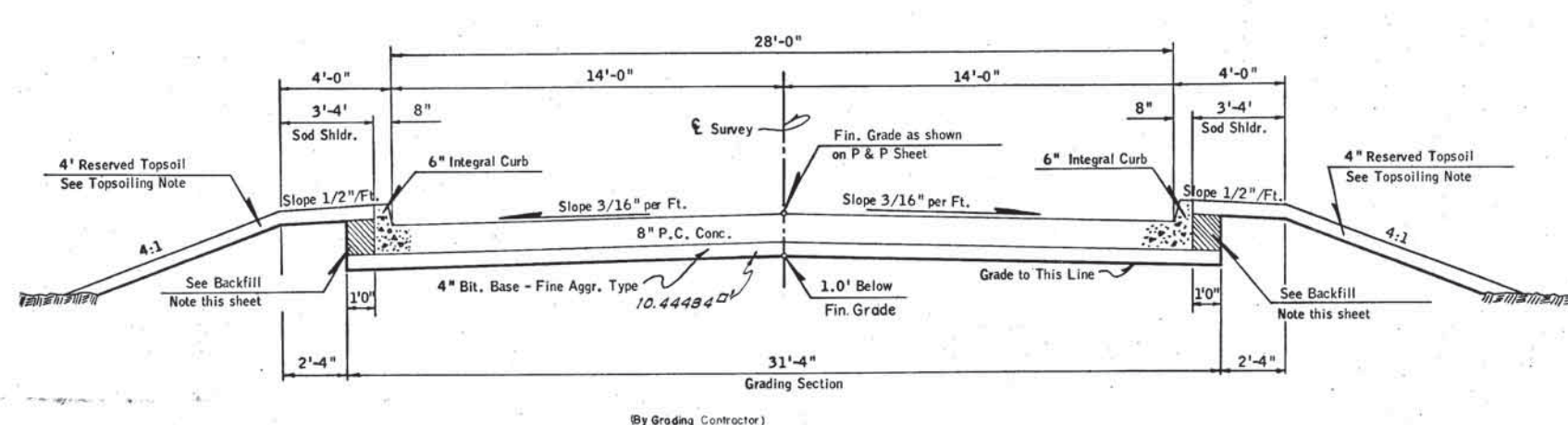
FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240-4 (86)	13	3/3	
REVISIONS					
DESCRIPTION		DATE			
By Grad Cont.		12/29/69			



\*STA. 5+8.00W TO STA. 0+34W-S.E. 74 TH RELOCATION  
 \*STA. 0+34E TO STA. 5+800E-S.E. 74 TH RELOCATION  
 \*STA. 530+60.00 TO STA. 535+04.28 LT.  
 \*STA. 534+33.28 TO STA. 539+25.00 LT.  
 \*STA. 534+68.33 TO STA. 539+60.00 RT.  
 \*STA. 641+95.34 TO STA. 646+79.34 RT.

⊗ Slope Varies through Interchange Areas, for Special Grading of these Areas see Cross Section Sheets.

**TOPSOILING NOTE:**  
 Reserve Topsoil shall be spread approximately 4" thick, first on completed backslopes of cut slopes and the remainder on completed fill slopes or other priority areas located by the Engineer. (By Grading Contractor)



**BACKFILL NOTE:**  
 This is to be Backfilled & Compacted. Quantity included in Unclassified Borrow.

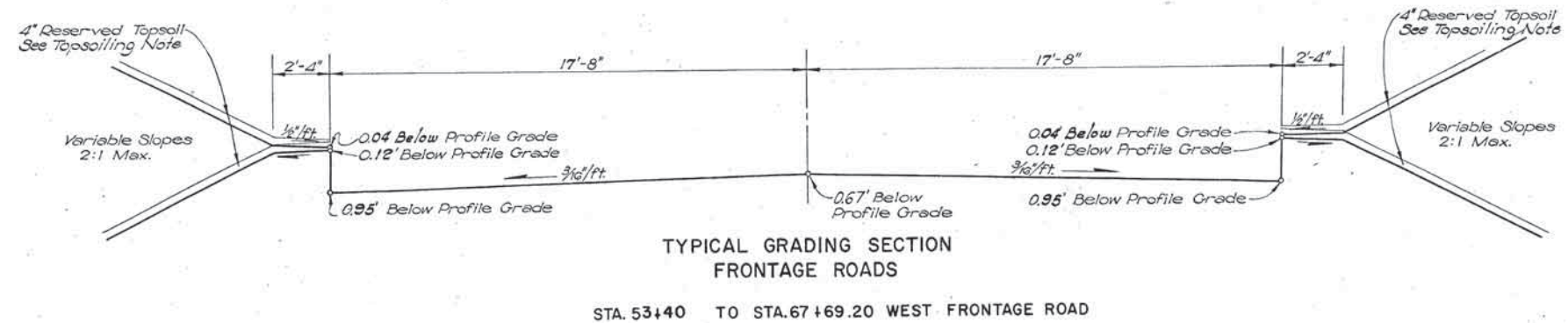
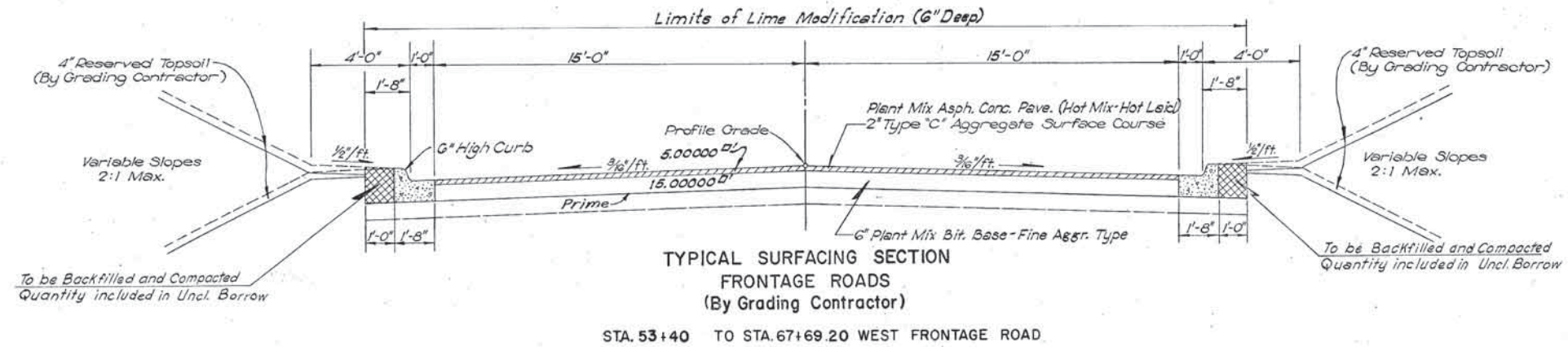
Design				
Drawn				
Checked				
Approved				
Squad				

**TYPICAL SECTIONS**

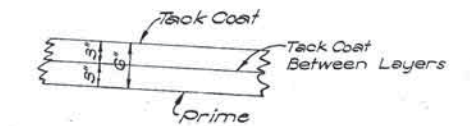
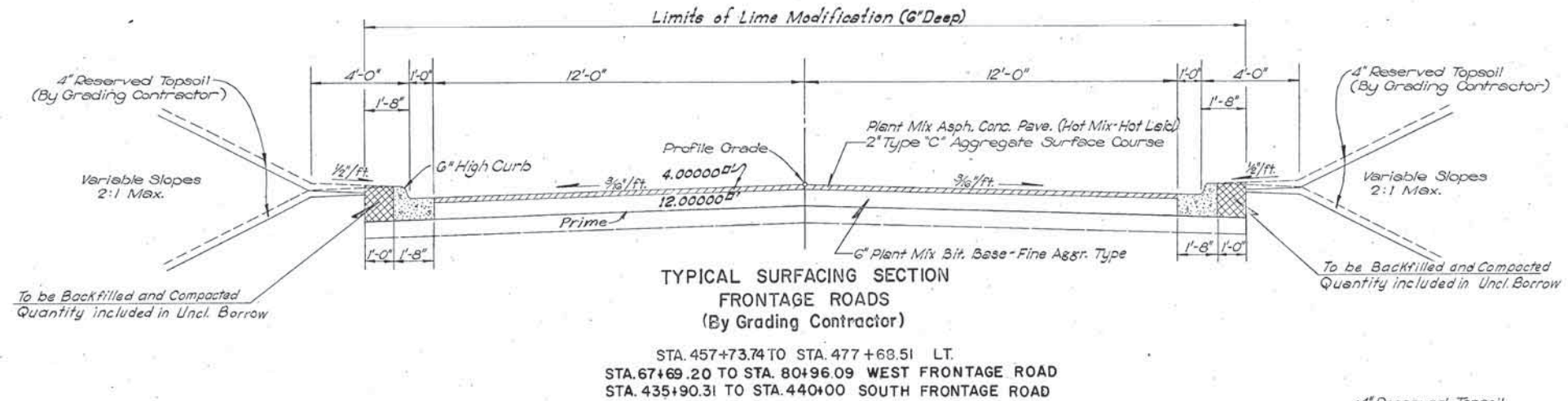
F.A. Project No. 1-240-4 (86) Sheet No. 13



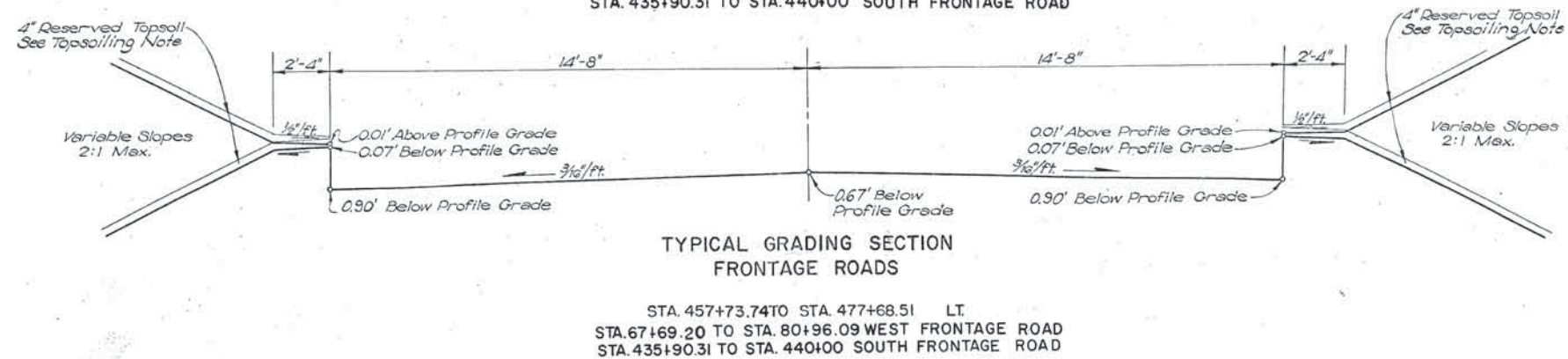
FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-240-4(86)	14	313	
REVISIONS					
DESCRIPTION	REVISIONS		DATE		



**TOPSOILING NOTE:**  
Reserve Topsoil Shall Be Spread Approximately 4" Thick, First On Completed Backslopes Of Cut Sections And The Remainder On Completed Fill Slopes Or Other Priority Areas Located By The Engineer. (By Grading Contractor.)



**LIFT DETAIL  
6" PLANT MIX BIT.  
BASE-FINE AGGR. TYPE**



**FLEXIBLE PAVEMENT NOTE**

THICKNESS DIMENSIONS ARE APPROXIMATE  
THE TOLERANCES OF THE GOVERNING  
SPECIFICATIONS WILL CONTROL.

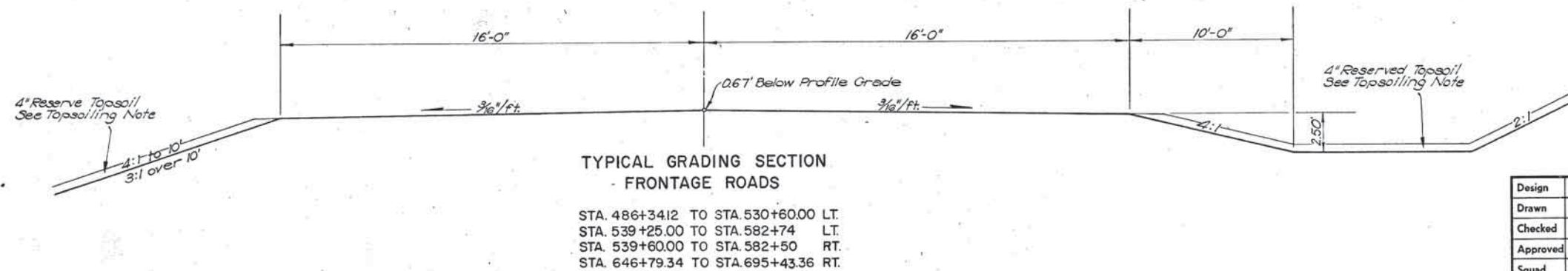
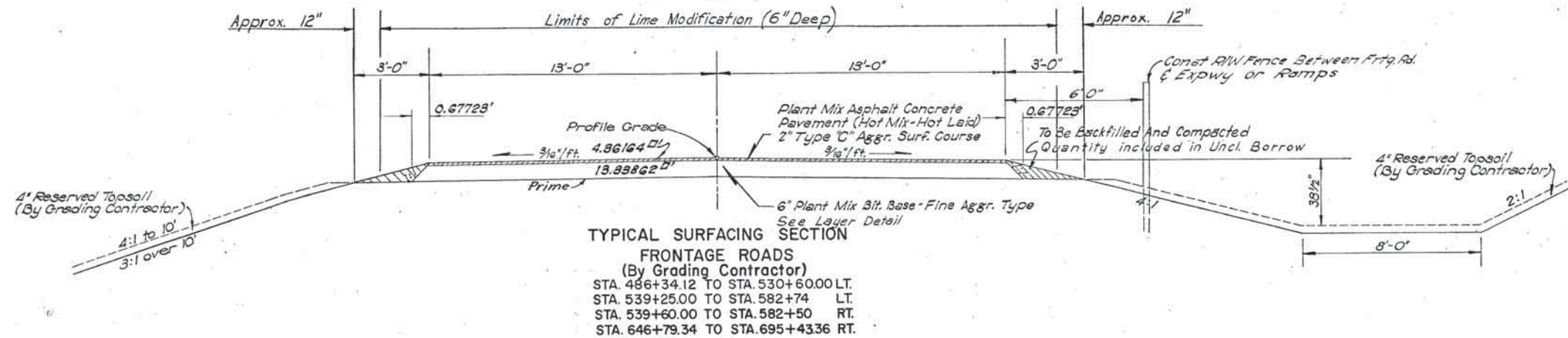
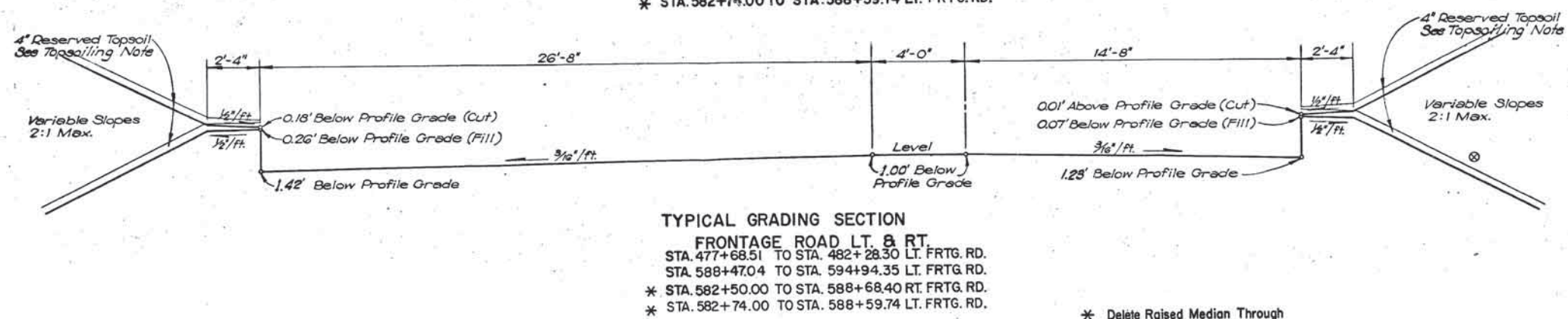
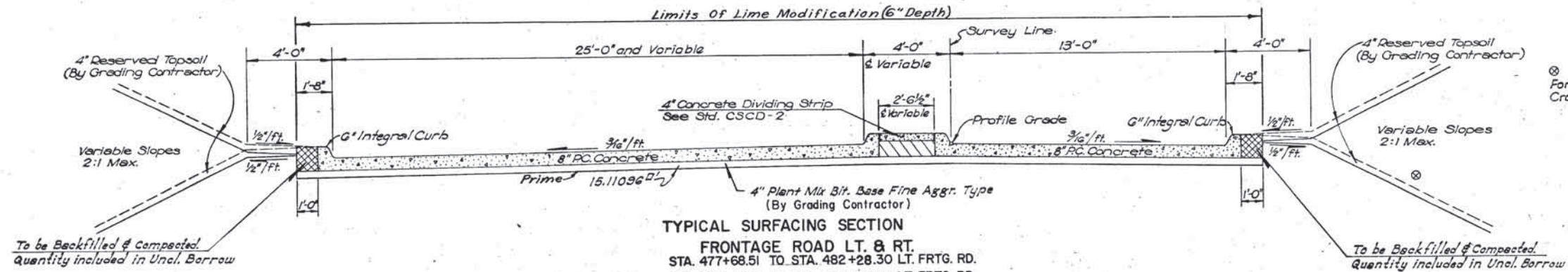
Design	
Drawn	
Checked	
Approved	
Squad	COINER

**TYPICAL SECTION**

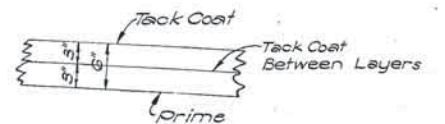
F.A. Project No. I-240-4 (86) Sheet No. 14



FED. ROAD DIST. NO.	STATE	FED. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-240-4(86)	15	3/3	
REVISIONS					
DESCRIPTION	REVISIONS		DATE		



**TOPSOILING NOTE:**  
 Reserve Topsoil Shall Be Spread Approximately 4" Thick, First On Completed Backslopes Of Cut Sections And The Remainder On Completed Fill Slopes Or Other Priority Areas Located By The Engineer. (By Grading Contractor.)



**LIFT DETAIL**  
**6" PLANT MIX BIT.**  
**BASE-FINE AGGR. TYPE**

**FLEXIBLE PAVEMENT NOTE**

THICKNESS DIMENSIONS ARE APPROXIMATE  
 THE TOLERANCES OF THE GOVERNING  
 SPECIFICATIONS WILL CONTROL.

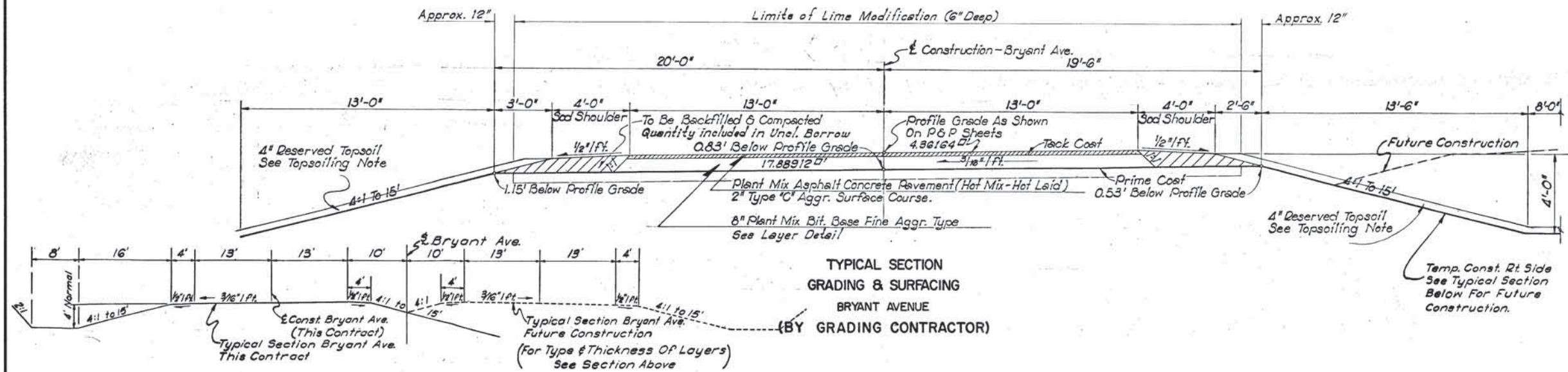
Design	
Drawn	
Checked	
Approved	
Squad	COINER

**TYPICAL SECTION**

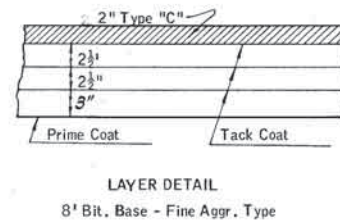
FA Project No. I-240-4(86) Sheet No. 15



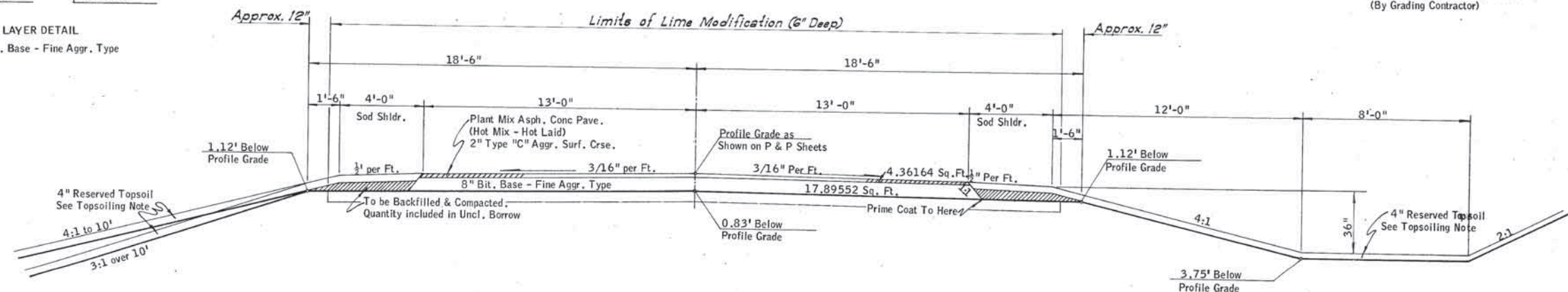
FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-240-4(86)	16	313	
REVISIONS					
DESCRIPTION	REVISIONS				DATE



**FLEXIBLE PAVEMENT NOTE**  
THICKNESS DIMENSIONS ARE APPROXIMATE  
THE TOLERANCES OF THE GOVERNING  
SPECIFICATIONS WILL CONTROL.



**TOPSOILING NOTE:**  
Reserve Topsoil Shall be Spread  
approximately 4" Thick, first on  
completed Backslopes of Cut  
Sections and the remainder on  
completed fill slopes or other priority  
areas located by the Engineers.  
(By Grading Contractor)



**TYPICAL SECTION  
GRADING & SURFACING  
AIR DEPOT BOULEVARD  
(BY GRADING CONTRACTOR)**

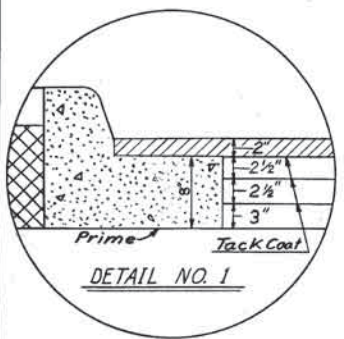
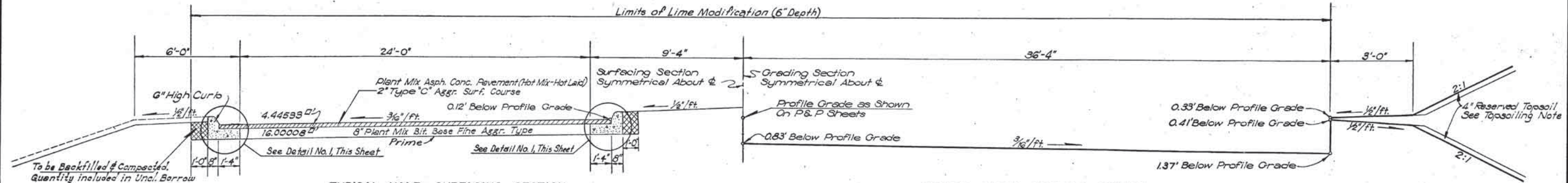
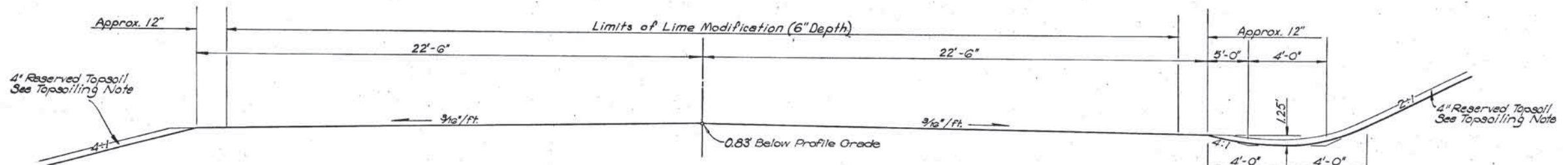
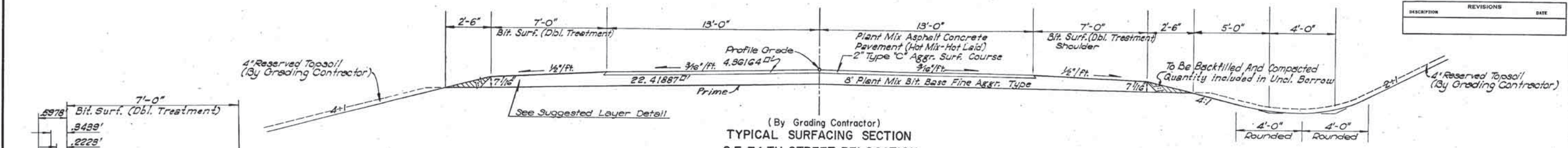
Design	
Drawn	
Checked	
Approved	
Squad	COINER

**TYPICAL SECTION**

F.A. Project No. I-240-4 (86) Sheet No. 16



FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-240-4(86)	17	3/3	
DESCRIPTION		REVISIONS		DATE	



EASTERN AVENUE, SUNNY LANE, SOONER ROAD  
(By Grading Contractor)

FLEXIBLE PAVEMENT NOTE  
THICKNESS DIMENSIONS ARE APPROXIMATE  
THE TOLERANCES OF THE GOVERNING  
SPECIFICATIONS WILL CONTROL.

TOPSOILING NOTE:  
Reserve Topsoil Shall Be Spread Approximately  
4" Thick, First On Completed Backslopes Or  
Cut Sections And The Remainder On  
Completed Fill Slopes Or Other Priority  
Areas Located By The Engineer.  
(By Grading Contractor.)

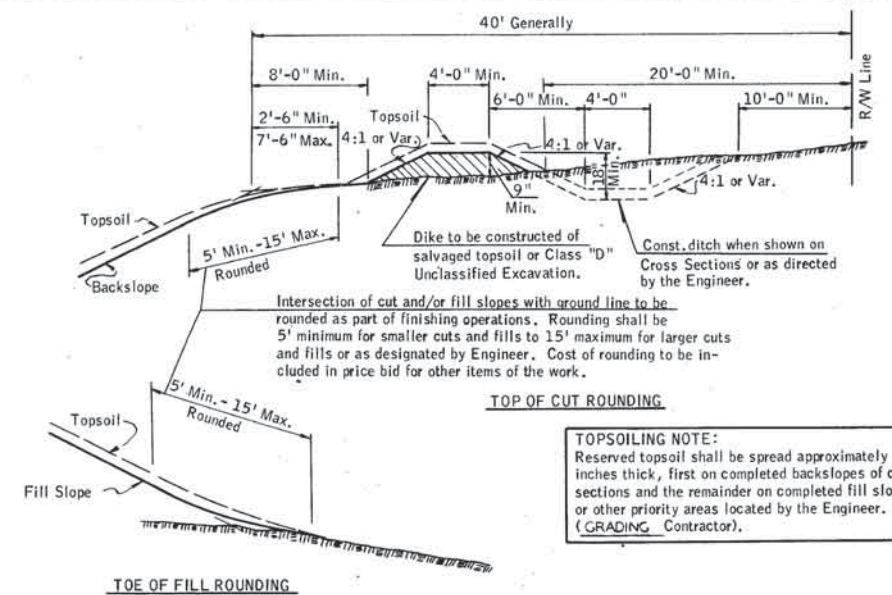
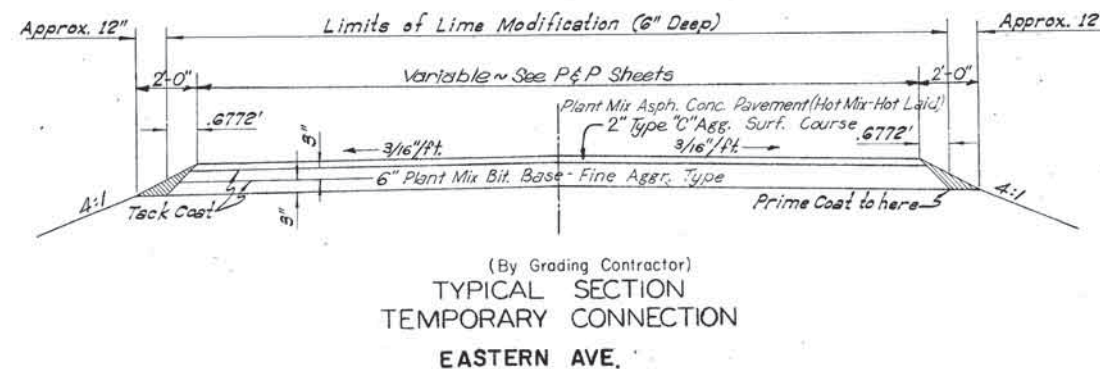
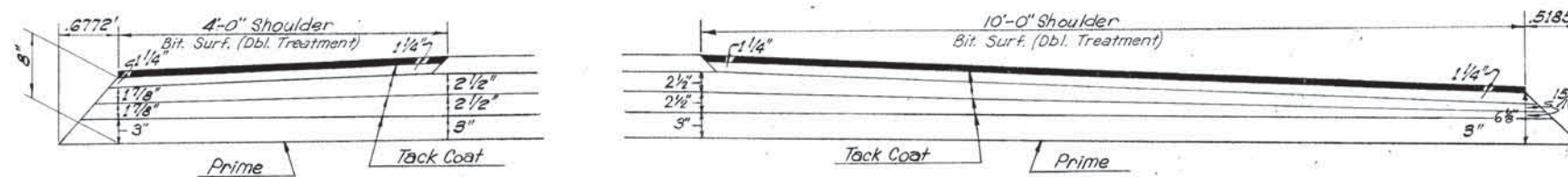
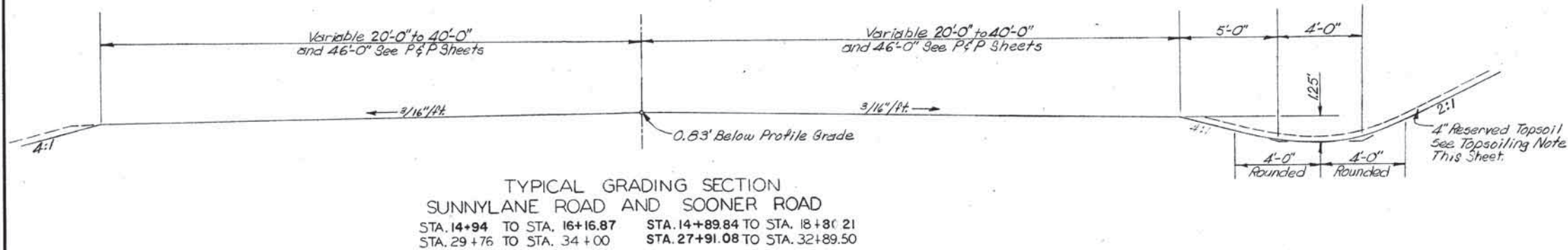
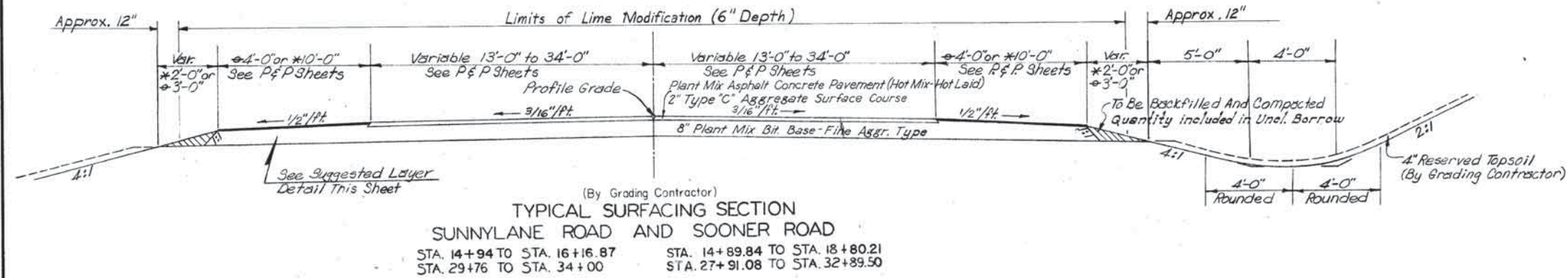
Design		
Drawn		
Checked		
Approved		
Squad	COINER	

TYPICAL SECTION

F.A. Project No. I-240-4 (86) Sheet No. 17



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	F-240-4 (96)		18	313
DESCRIPTION					
REVISIONS					
DATE					



Design	
Drawn	
Checked	
Approved	
Squad	

TYPICAL SECTIONS

F.A. Project No. F-240-4 (96) Sheet No. 18



SUMMARY OF SURFACING QUANTITIES

P & P SHEET NO.	STATION TO STATION	307.06(A) HYDRATED LIME	307.07(B) 6" LIME TREATED SUBG.	314.06(A) AGGR.	314.06(B) ASPH.	408.06 PRIME COAT	411.06(A-1) TYPE A AGGR.	411.06(A-3) TYPE C AGGR.	411.06(B) ASPH.	407.06 TACK COAT	402.06(A) BITUMINOUS BINDER	402.06(B-1) NO. 1 COVER AGGR.	402.06(B-2) NO. 2 COVER AGGR.	414.06(B)(A) 8" HES. CONC. PAV'T	414.06(A)(A) 8" P.C. CONCRETE PAV'T.	414.06(A)(A) 9" P.C. CONCRETE PAV'T.	608.06 INTEGRAL CURB (4" MOUNTABLE)	608.06 INTEGRAL CURB (6" BARRIER)	609.06(BB) 2'-0" COMB. CURB & GUTTER (NOTCHED)	609.06(BB) 2'-0" COMB. CURB & GUTTER (NOTCHED) 6" BARRIER	1'-3" COMB. CURB & GUTTER (6" BARRIER CURB)	609.06(C) CONCRETE HEADER (CURBING) 12"x18"	610.06(C)(A) 4" CONCRETE DIVIDING STRIP	610.06(C) (A) 6" CONCRETE DIVIDING STRIP	619.06(B) REMOVAL ASPHALTIC CONC. 12" DEEP	619.06(B) REMOVAL ASPHALTIC CONC. 8" DEEP	619.06(B) REMOVAL CONC. CURB	619.06(B) CONCRETE CURB REMOVAL	619.06(C) SAWING PAV'T.			
		TON	SQ. YDS.	TON	TON	GAL.	TON	TON	TON	GAL.	GAL.	CU.YDS.	CU.YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	SQ. YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.	LIN. FT.					
38A	W. Frontg. Rd. 53+40 To 30+96.09	125.9	10,360.	2345.5	109.4	2177.		885.9	56.5	871.											5525.					*7,269.		*4,710.				
38A	Ramp "A" -I-35&W. Frontg. Rd.	52.1	4,287.	1373.0	79.8	1072.	540.8	293.7	47.2	703.									2476.													
38A	Ramp "B" -I-35&W. Frontg. Rd.	6.1	499.	151.7	8.8	125.	57.9	32.8	5.1	75.									370.													
38	I-240-431+00 to 436+00			175.9	10.2	167.	58.8	33.9	5.3	76.									930.					30.56		3,052.		2,705.				
38	Ramp "C" -I-35&I-240	18.4	1,511.	447.2	26.0	378.	167.2	97.1	15.0	217.									1423.													
38B	S. Frontg. Rd. 435+90.31 to 457+89.27	16.2	1,335.	1555.6	90.4	2030.		110.9	7.1	461.				1158.	5,409.			3339.			819.								50.	1016.	70.	
38	Pole Yard Rd.			214.3	12.5	298.				60.					1,133.			544.														
38B	Ramp "E" South Frontg. Rd. & I-240			111.5	6.5	155.				31.						572.	437.															
38C	N. Frontg. Rd. 438+00 to 457+73.74			1391.3	80.9	1937.				387.					7,310.			3582.														
38C	Ramp "D" North Frontg. Rd. & I-240			43.6	2.5	61.				12.						231.	112.															
39	Lt. Frontg. Rd. 457+73.74 to 482+28.30	108.5	8,929.	1872.4	108.9	1932.		548.1	35.0	656.					2,238.			857.			4049.											
49	Eastern Ave.	128.5	10,573.	3646.4	212.0	2617.		893.8	57.1	1510.									691.	2109.		26.0	122.73									
39	Ramp Connections Eastern Ave.	18.3	1,503.	269.9	15.7	376.				75.						1382.	1094.															
39,40	Lt. Frontg. Rd. 481+89.46 to 535+04.28	193.2	16,312.	4093.5	238.0	4060.		1306.5	83.4	1449.					2,932.			881.														
40,41	Bryant Ave.	105.7	8,701.	2235.7	130.0	1605.		620.2	39.6	930.												52.0										
50	Ramp Connections Bryant Ave.	25.1	2,070.	371.6	21.6	517.				103.						1933.	1230.															
41	Lt. Frontg. Rd. 534+33.23 to 588+59.74	241.1	19,841.	4431.6	257.7	4559.		1283.8	81.9	1538.					5,107.		146.	1635.														
41-43	Rt. Frontg. Rd. 534+68.33 to 588+68.40	223.4	18,800.	4195.8	244.0	4253.		1266.4	80.8	1468.					4,001.			2106.														
41-43	Sunnylane Rd.	153.6	12,642.	4060.5	236.3	2848.		1049.1	67.0	1777.	983.	20.0	23.0						544.	2080.		140.0	134.78									
51	Detour Sunnylane Rd.			3089.8	179.7	3014.		1119.0	71.4	1118.																						
53A	Lt. Frontg. Rd. 588+47.04 to 601+00	72.3	5,946.	1486.1	86.4	1391.		178.8	11.4	595.	659.	13.0	16.0		2,591.			1771.														
43	Lt. Frontg. Rd. 9+68.66W. to 9+68.66	93.4	7,684.	2072.4	120.5	1876.		266.1	17.0	846.	981.	20.0	23.0		3,172.			1767.														
44	Sooner Rd.	126.7	10,427.	3098.2	180.2	2159.		830.1	53.0	1343.	533.	11.0	13.0						854.	1324.			122.12									
52	Ramp Connections Sooner Rd.	29.4	2,418.	434.1	25.3	604.				121.						2274.	1295.															
44	Detour Sooner Rd. East & West			782.2	45.9	763.		283.3	18.1	283.																						
44,45	Rt. Frontg. Rd. 641+95.34 to 695+43.36	217.5	18,120.	4186.2	243.4	4027.		1435.8	91.6	1506.					1,586.			916.														
45,46	Air Depot Blvd.	81.1	6,678.	1787.5	103.9	1245.		495.9	31.7	745.																						
53																																
38	Temporary Crossover 438+00			258.6	15.1	180.		69.1	4.4	108.																						
	TOTALS	2046.5	168,636.	50,182.1	2891.6	46,426.	824.7	12,100.3	879.6	19,064.0	3156.	64.0	75.0	1158.	35,479.	6392.	4314.	17,398.	7288.	5513.	10,393.	218.0	379.63	30.56	10,321.	14,376.	7,465.	1016.	70.			

\* See Const. Detail Sheet No. 71 For  
Asphaltic Conc. & Conc. Curb Removals

● See Const. Detail Sheet No. 72 For  
Asphaltic Conc. & Conc. Curb Removals

Design	
Drawn	
Checked	
Approved	
Squad	

SUMMARY OF SURFACING QUANTITIES



PER. BOARD SHEET NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	OKLA	E-240-4 (86)(87)		27	

REVISIONS	DATE
STRUCTURES	12-29-69

DRAINAGE STRUCTURES

STR NO.	P&P SHT. NO.	STATION	LOCATION	DESCRIPTION	DESIGN	DESIGN SHEET NO.	ELEVATION				NO. & LOC OF CONST. JOINTS	CLASS - "A" CONC. CU. YD. GRADING LESS THAN 50 CY EACH	50 CY OR MORE EACH	REINF. STEEL LBS. GRADING	CURB INLET		INLET CURB		CURB FRAME & GRATE EACH		STRUCTURAL EXCAV. UNCL.	1/2 GALV IRON HANDRAIL	SLAB SOD SO. YD.	MANHOLE EACH	ADD. DEPTH MAS IN MANHOLE VERT. FT.	MANHOLE FRAME COVER	R.C.P. PIPE SEWER LIN. FT.						R.C.P. ROUND (LIN. FT.) EACH					INLET FRAME & GRATE SGF-46A		PIPE ARCH SIDE DRAIN SGF-46A	CAST IRON CURB INLET		GRATES G.P.I. EACH		30" WELDED STEEL GRATES EA																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
							TOP OF CURB	TOP OF COVER	INLET ℓ	DEPTH INLET					GRADING	SURF.	GRADING	SURF.	GRADING	SURF.							15"	18"	24"	30"	36"	54"	15"	18"	24"	30"	36"	GRAD	SURF.		GRAD	SURF.	"A"	"B"																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
1	38A	55+35	West Frtg. Rd.	Rt.	Const. Dbl. Gr. Curb Inlet W/30 L.F. of 18" R.C.P.	SSI-2&3(0.5) SGF-1-11	121	1303.01	1299.80	3.21	0.43				27.62		15.17		2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													</



DRAINAGE STRUCTURES

STR. NO.	P&P SHT. NO.	STATION	LOCATION	DESCRIPTION	DESIGN	DESIGN SHEET NO.	ELEVATION				NO. & LOC OF CONST. JOINTS	CLASS "A" CONC. CU. YD. GRADING LESS THAN 50 CY EACH	CU. YD. OR MORE EACH	REINF. STEEL LBS. GRADING	CURB INLET BRICK MASONRY CU. FT.		INLET CURB LIN. FT.		SGF-1 FRAME & GRATE EACH		STRUCTURAL EXCAV. UNCL.	1/2 GALV. IRON HANDRAIL	SLAB SOD SQ. YD.	MANHOLE EACH	ADD. DEPTH MAS. IN MANHOLE VERT. FT.	MANHOLE FRAME COVER EACH	R.C.P. PIPE SEWER LIN. FT.						R.C.P. ROUND (LIN. FT.) EA.					SGF-4 FRAME AND GRATE EACH		PIPE ARCH SIDE DRAIN	CAST IRON CURB INLET EACH	GRATES G.P.I. EACH		50" WELDED STEEL GRATES EA.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
							TOP OF CURB	TOP OF COVER	INLET	DEPTH					GRADING	SURF.	GRADING	SURF.	GRADING	SURF.							15"	18"	24"	30"	36"	54"	15"	18"	24"	30"	36"	GRAD	SURF.			25x8"	GRAD		SURF.	"A"	"B"																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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23C	38C	454+40	Rt.	Const. Dbl-Gr. Curb Inlet W/118 L.F. of 18" R.C.P.	SSI-2-3-10(0.5)	121J06	1273.53	1270.32	3.21	0.43		27.62		15.17		2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								



SUMMARY SHEET

FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240-4(86)		29	500
REVISIONS					
DESCRIPTION				DATE	
STRUCTURES				12-19-69	

DRAINAGE STRUCTURES

STR. NO.	P&P SHT. NO.	STATION	LOCATION	DESCRIPTION	DESIGN	DESIGN SHEET NO.	ELEVATION			NO. & LOC. OF CONST. JOINTS.	CLASS "A" CONC. CU. YD. GRADING	REINF. STEEL LBS. BRADING	CURB INLET		INLET CURB		SGF-4 FRAME & GRATE EACH		STRUCTURAL EXCAV. UNCL.	1/2 GALV. IRON HANDRAIL	SLAB SOB SQ. YDS.	MANHOLE EACH	CICI INLET EACH	MANHOLE FRAME COVER EACH	R.C.P. PIPE SEWER LIN. FT.					R.C.P. ROUND (LIN. FT.)					C.G.M.P. ROUND LIN. FT.	GRATES G.P.I. EACH	30" SQ. WELDED STEEL GRATES EA.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
							TOP OF CURB	TOP OF COVER	INLET IL				DEPTH INLET	BRICK GRADING	MASONRY CU. FT.	SURFACING	GRADING	SURFACING							GRADING	SURFACING	18"	24"	30"	36"	48"	18"	24"	30"				36"	48"	24"	36"	48"	24"	36"	48"	24"	36"	48"	24"	36"	48"																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
56A	49	18+40	Eastern	Rt.	Const. 29"x18"x22'8" Rdy. Pipe Arch S.D. 32' Rt. w/Std. Wings	HEAP-1-0	116				1.23	42																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						</



SUMMARY SHEET

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1240-4(86)(87)	80	313	

REVISIONS		DATE
DESCRIPTION		
Structures		12-30-69
Inlet Brick Masonry		1-19-70

DRAINAGE STRUCTURES

DRAINAGE STRUCTURES																																													
STR. NO.	P&P SHT. NO.	STATION	LOCATION	DESCRIPTION	DESIGN	DESIGN SHEET NO.	ELEVATION			NO. & LOC. OF CONST. JOINTS	CLASS "A" CONC. CU. YD. GRADING LESS THAN 5.0 CY. OR 5.0 CY. EACH MORE EACH	REINF. STEEL LBS. GRADING	CURB INLET BRICK MASONRY CU. FT.		INLET CURB LIN. FT.		CURB FRAME & GRATE EACH		STRUCTURAL EXCAV. UNCL.	1/2 GALV. IRON HANDRAIL	SLAB SOB SQ. YD.	MANHOLE EACH	SGF-4 FRAME & GRATE EACH		R.C.P. PIPE SEWER LIN. FT.		R.C.P. ROUND (LIN. FT.)								CAST IRON CURB INLET EACH	CAST IRON GRATES G.P.I. EACH	SQ. WELDED STEEL GRATES EA.								
							TOP OF CURB	TOP OF COVER	INLET R.				DEPTH INLET	GRADING	SURFACING	GRADING	SURFACING	GRADING					SURFACING	GRAD.	SURF.	18"	24"	30"	36"	42"	48"	54"	18"	24"				30"	36"	42"	48"	54"	60"	66"	72"
96	59	580+86	Rt.	Const. Single Gr. Curb Inlet w/4 Add. Curb Opng. w/116 L.F. 24" RCP Stub into Str. 98	CICI-1-0	124,125	1289.27	1285.94	3.33		0.65	204	34.72	14.63					19																										
97	56	581+77	Rt.	Const. Std. Grated Pipe Inlet 30' Rt. w/44 L.F. 24" RCP & 45° Wing Lt. Stub into Str. 98	CICI-2-0	113,114	1294.30	1290.65	3.65		3.36	298							21		10						44	113								2	1								
98	59	582+00	Lt.	Const. Std. Grated Pipe Inlet 19' Lt. w/60 L.F. 30" RCP w/Spec. Hdwl.	CICI-2-0	113,114	1288.65	1285.00	3.65		5.01	578							22		10						60																		
99	59	582+80	Rt.	Const. Std. Grated Pipe Inlet 10' Rt. w/48 L.F. 24" RCP w/Spec. Hdwl.	CICI-2-0	113,114	1286.67	1283.57	3.10		3.42	421							33		10						48										2	1	4						
100				Deleted																																									
101				Deleted																																									
102				Deleted																																									
103	57	586+80	Rt.	Const. Single Gr. Curb Inlet w/1 Add. Curb Opng. w/12 L.F. 24" RCP & 45° Wing Rt.	SSI-1A-10(0.5)(A)	105,106	1296.59	1289.25	7.17		1.73	85	82.47		10.83		1		4		20																								
104	57	586+80	Lt.	Const. Single Gr. Curb Inlet w/1 Add. Curb Opng. w/4 L.F. 24" RCP & 45° Wing Lt. & 44 L.F. 24" RCP Rt. Stub into Str. 103	CICI-1-0	124,125	1296.67	1289.50	7.17		1.66	85	70.34						21		20																2								
105	43	587+60	Rt.	Const. Std. Grated Pipe Inlet w/76 L.F. 24" RCP & 45° Wings Rt.	CICI-2-0	113,114	1281.34	1278.24	3.10		2.71	247							28		10																	1	1						
106A	51	587+50	Sunnyslane	Const. 29"x18"x27' Rdy. Pipe Arch S.D. Lt. w/Std. Wings	HEAP-1-0	116					1.23	42																																	
106B	51	587+50	Sunnyslane	Const. 29"x18"x27' Rdy. Pipe Arch S.D. Rt. w/Std. Wings	HEAP-1-0	116					1.23	42																																	
106	51	587+50	Sunnyslane	Const. Single Gr. Curb Inlet 34' Rt. w/76 L.F. 18" RCP Stub into Str. 107	SSI-1-10(0.5)	104,106	1301.21	1298.00	3.21		0.25		19.19		12.50		1		5								76																		
107	51	587+60	Lt.	Const. Single Gr. Curb Inlet 34' Lt. w/21 L.F. 18" RCP w/45° Wing Lt.	SSI-1-10(0.5)	104,106	1301.99	1293.78	8.21		1.16	62	61.69		12.50		1		3		9						21																		
108	51	587+60	Sunnyslane	Const. Single Gr. Curb Inlet w/68 L.F. 18" RCP Stub into Str. 109	SSI-1-10(0.5)	104,106	1301.29	1298.00	3.29		0.25		19.87		12.50		1		19								68																		
109	51	587+60	Sunnyslane	Const. Single Gr. Curb Inlet w/16 L.F. 18" RCP & 45° Wing Rt.	SSI-1-10(0.5)	104,106	1301.29	1295.60	5.69		1.16	61	40.27		12.50		1		5		9						16																		
110	43	588+57.75	Rt.	Const. 24"x152' Long RCP S.D. 83' Rt. w/45° Wings	CP-2-0	114					2.62	170																																	
111	43	588+57.75	Lt.	Const. 24"x144' Long RCP S.D. 83' Lt. w/45° Wings	CP-2-0	114					2.62	170																																	
112	56	591+20	Lt.	Const. Single Gr. Curb Inlet w/1 Add. Opng. w/8 L.F. 24" RCP w/45° Wing Rt. Stub into Str. 113	SSI-1A-10(0.5)(A)	105,106	1294.86	1290.57	4.29		1.73	85	43.76		10.83		1		19		10						48																		
113	56	591+20	Lt.	Const. Single Gr. Curb Inlet w/1 Add. Opng. w/8 L.F. 24" RCP w/45° Wing Lt.	SSI-1A-10(0.5)(A)	105,106	1294.61	1290.32	4.29		1.73	85	43.76		10.83		1		3		10						8																		
114	59	593+00	Ramp D	Const. Single Gr. Curb Inlet w/1 Add. Curb Opng. w/12 L.F. 18" RCP w/Spec. Hdwl.	CICI-1-0	124,125	1286.91	1283.86	3.05		1.88	217	18.89	7.69					9		10						12									2		4							
115				Deleted																																									
116	59	595+50	Ramp C	Const. Single Gr. Curb Inlet w/48 L.F. 18" RCP Stub into Str. 117	CICI-1-0	124,125	1279.06	1275.86	3.20		0.25		15.30	5.31					14								48																		
117	59	596+00	Ramp E	Const. 4'x2'x78' Rdy. RCB	RC-6	107				10 1/2 Pcs.	26.24	2580							592		24																								
118	59	596+87	Ramp D	Const. Single Gr. Curb Inlet w/2 Add. Curb Opngs. w/39 L.F. 30" RCP w/Spec. Hdwl. & 10 L.F. 24" RCP Stub into Str. 119	CICI-1-0	124,125	1275.80	1270.42	5.38		4.63	524	143.04	10.10					41		24						49									3		8							
119				Deleted																																									
120				Deleted																																									
121				Deleted																																									
122	43	604+00	Rt.	Const. Std. Grated Pipe Inlet w/82 L.F. 24" RCP w/45° Wings	CICI-2-0	113,114	1270.94	1267.84	3.10		2.71	247							32		10						82										1	1							
123	43	614+32	Rt.	Const. Std. Grated Pipe Inlet w/12 L.F. 24" RCP Stub into Str. 124	CICI-2-0	113	1261.94	1258.84	3.10		1.40	162							5								12										1	1							
124	43	614+45	Rt.	Const. 5'x3'x158' Rdy. RCB w/Broken Back	RC-6, Special	107,81				3040'		72.52	7105						477		32																								
125	44	624+80	Rt.	Const. Std. Grated Pipe Inlet w/24 L.F. 18" RCP Stub into Str. 126	CICI-2-0	113	1247.87	1244.77	3.10		1.40	162							7								24										1	1							
126				See Bridge Sheets																																									
127	44	628+80	Rt.	Const. Std. Grated Pipe Inlet w/100 L.F. 24" RCP & 45° Wings	CICI-2-0	113,114	1246.95	1243.35	3.10		3.20	289							40		10						100										2	1							
128	60	630+56	Ramp B	Const. Single Gr. Curb Inlet w/8 Add. Opng. 16 L.F. 18" RCP w/Spec. Hdwl.	CICI-1-0	124,125	1247.69	1244.07	3.62		1.98	217	31.82	10.10					5		9						16										3		4						
129	60	632+30	Ramp B	Const. 30"x45'4" Rdy.																																									



FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6.	OKLA.	1-240 4(26.)	31	0

REVISIONS		DATE
DESCRIPTION		
Structures		12-30-6.
Inlet Brick Masonry		1-9-70

[illegible]

\* See Special Construction Note & Detail Sheet No. 82

Design		
Drawn		
Checked		
Approved		
Squad		

SUMMARY SHEETS  
DRAINAGE STRUCTURES

FA Project No. 1-240-4(86)187 Sheet No. 31



PLAN

DATE BY

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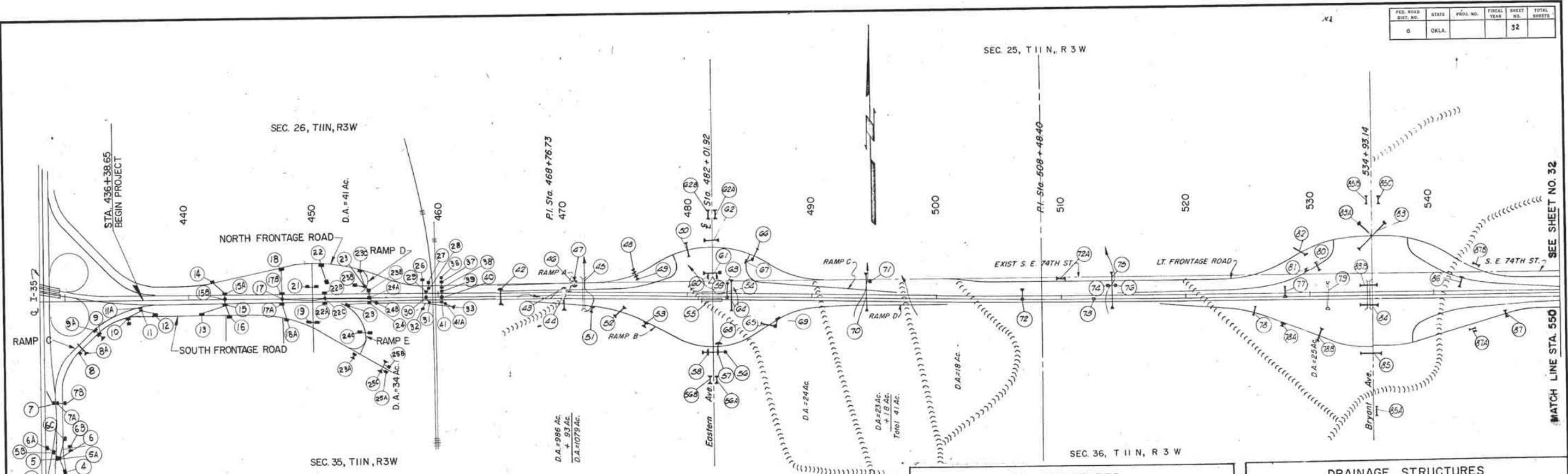
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PROFILE

DATE BY

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STORM SEWER SYSTEM									
STR. NO.	D.A. AC.	% IMP.	TOTAL D.A.	Q' AT INLET	TOTAL Q' IN SYSTEM	% GRADE PIPE	PIPE SIZE	CAP PIPE C.F.S.*	
1	0.49	90	0.49	2.45	2.45	0.33	18"	6.1	
1A	0.09	90	0.58	0.45	2.90	2.57	18"	16.8	
2	0.92	90	0.92	4.60	4.60	0.67	18"	8.7	
2A	0.14	90	1.06	0.70	5.30	8.44	18"	18.6	
2B	1.04	90	2.10	5.20	10.50	0.20	18"	4.7	
3	0.95	90	0.95	4.75	4.75	2.16	18"	15.4	
3A	0.12	90	1.07	0.60	5.35	3.22	18"	19.0	
3B	1.03	90	2.10	5.15	10.50	0.22	24"	10.6	
3C	0	0	0	12.75	0.56	15"	4.8		
3D	0.45	90	0.45	2.25	2.75	0.30	15"	3.4	
4	2.27	90	2.27	11.35	11.35	3.46	18"	19.8	
5	0.59	90	3.77	2.95	18.85	1.80	18"	14.0	
5A	0	0	0	15.90	3.75	18"	20.6		
5B	0.64	90	4.41	3.20	22.05	1.80	18"	14.0	
6	0.08	90	0.17	0.40	0.85	3.35	18"	19.4	
6A	0.21	90	4.62	1.47	23.52	1.80	18"	14.0	
6B	0.09	90	0.09	0.45	0.45	0.45	18"	7.1	
6C	0.74	90	0.74	3.70	3.70	1.51	18"	12.9	
7	0.69	90	1.35	4.83	8.91	2.42	18"	16.4	
7A	0.39	90	0.66	2.73	4.08	0.43	18"	6.9	
7B	0.27	90	0.27	1.35	1.35	6.81	18"	27.4	
8	0.23	90	0.23	1.61	1.61	21.44	18"	33.0	
9	0.15	90	0.80	0.75	4.00	0.62	24"	18.0	
9A	0.65	90	0.65	3.25	3.25	0.55	18"	7.9	
10	0.28	90	1.32	1.40	6.60	1.96	24"	31.7	
11	0.48	90	1.04	2.40	5.20	1.64	18"	13.5	
11A	0.45	90	0.45	2.25	2.25	4.25	18"	22.0	
12	0.11	90	0.11	0.55	0.55	1.65	18"	13.5	
13	0.31	90	0.31	1.55	1.55	2.24	18"	15.7	
14	2.78	90	2.78	13.90	13.90	7.42	18"	28.8	
15	0.34	90	1.59	1.68	7.93	4.85	18"	23.3	
15A	0.60	90	3.38	3.00	16.90	4.85	18"	23.3	
15B	0	0	0	24.83	1.98	24"	31.9		
16	0.94	90	0.94	4.70	4.70	7.09	18"	28.0	
17	0	0	0	48.23	2.66	30"	66.5		
17A	0.99	90	2.90	4.95	14.50	6.48	18"	27.0	
17B	0.82	90	1.78	4.10	8.90	6.48	18"	27.0	
18	0.96	90	0.96	4.80	4.80	11.25	18"	33.0	
18A	1.91	90	1.91	9.55	9.55	10.48	18"	33.0	
22	0.43	90	0.43	2.15	2.15	0.20	18"	14.7	
22A	0.63	90	0.63	3.15	3.15	6.45	18"	26.8	
22B	0.70	90	0.70	3.50	3.50	6.45	18"	26.8	
22B	0	0	0	54.88	2.29	30"	62.0		
23	1.02	90	1.02	7.14	7.14	2.84	18"	17.8	
23A	1.31	90	1.31	6.55	6.55	0.50	24"	16.0	
23B	2.66	90	2.66	13.30	13.30	25.27	24"	33.0	

STORM SEWER SYSTEM									
STR. NO.	D.A. AC.	% IMP.	TOTAL D.A.	Q' AT INLET	TOTAL Q' IN SYSTEM	% GRADE PIPE	PIPE SIZE	CAP PIPE C.F.S.*	
23C	0.57	90	0.57	2.85	2.85	5.46	18"	26.8	
23D	0	0	0	6.15	2.83	24"	38.0		
23E	1.02	90	4.25	7.14	23.29	3.53	24"	42.5	
24	0.23	90	1.25	1.15	8.29	8.73	18"	31.0	
24A	1.31	90	15.23	9.17	87.34	1.73	36"	88.0	
24B	0	0	0	95.63	1.66	42"	128.0		
25A	0.10	90	0.10	0.70	0.70	10.00	18"	33.0	
25B	0.10	90	0.10	0.70	0.70	10.00	18"	33.0	
27	0.43	90	0.43	3.01	3.01	0.87	18"	9.9	
28	0.15	90	0.58	1.05	4.06	3.07	18"	18.5	
29	1.02	90	1.60	7.14	11.20	3.73	18"	20.5	
30	0.44	90	2.04	3.08	14.28	0.77	24"	20.1	
31	0.80	90	2.84	5.60	19.88	0.78	24"	20.1	
36	8.0	100	8.0	43.0	41.0	13.75	30"	49.2	
37	0.25	90	0.25	0.79	41.8	2.66	30"	44.3	
38	0.25	90	0.25	0.79	42.6	8.4	30"	49.2	
39	0.33	90	0.33	1.3	43.9	2.59	30"	44.0	
40	0.33	90	0.33	1.3	45.2	1.20	36"	48.6	
41	0.33	90	0.33	1.3	46.5	0.50	36"	47.0	
41A	0	0	0	66.4	6.12	36"	63.0		

DRAINAGE STRUCTURES				DESCRIPTION	
STR. NO.	D.A. AC.	"C"	"Q"		
6A	63.3	1	1.70	Ext. 4'x3'x44' Rd. R.C.B. w/45° Wings	
17	0.34	1	8.10	24"x50" Rd. R.C.P. w/Spec. Hdwl.	
21	1.02	1	8.10	24"x50" Rd. R.C.P. w/Spec. Hdwl.	
25C	25.7	1	129	5'x3'x41' Rd. R.C.B. w/45° Wings	
26	2.18	1	15	24"x30" Rd. R.C.P. w/Spec. Hdwl.	
26	34.3	1	236	4'x4'x198' Rd. R.C.B. w/D.I. Lt. Spec. Jun. Box	
32	35.2	1	160	Conc. D.I. 110" Rt. w/48 L.F. 54" R.C.P.	
33	69.5	1	492	5'x5'x185.76' Long. R.C.B.	
42	0.4	90	1.59	Sn. Grate Curb Inlet w/A Opng. w/160 L.F. 24" R.C.P.	
43	0.7	90	2.38	Sn. Grate Curb Inlet w/A Opng. w/12 L.F. 24" R.C.P.	
44	0.5	1	1.59	Grated Pipe Inlet w/136 L.F. 24" R.C.P. w/45° Wings	
45	1079	1		Bridge Box (by others)	
46	0.5	90	3.18	Sn. Grate Curb Inlet w/2 Opngs. w/32 L.F. 18" R.C.P.	
47	0.5	90	3.18	Sn. Grate Curb Inlet w/2 Opngs. w/12 L.F. 18" R.C.P.	
48	0.3	90	0.79	Sn. Grate Curb Inlet w/1 Opng. w/12 L.F. & 32 L.F.	
49	0.3	90	0.79	Sn. Grate Curb Inlet w/1 Opng. w/20 L.F. 18" R.C.P.	
50	3.1	1.0		4'x4'x96' Rd. R.C.B.	
51	0.3	90	0.79	Sn. Grate Curb Inlet w/48 L.F. 18" R.C.P. w/45° Wings	
52	4.5	1		24"x48" Rd. R.C.P. w/45° Wings	
53	0.3	90	0.79	Sn. Grate Curb Inlet w/A Opng. w/16 L.F. 18" R.C.P.	
56	12	1		G.P.I. w/28 L.F. 36" R.C.P.	
56A	4.0	1		29"x18"x22" Rd. Pipe Arch S.D. w/Std. Wings	
56B	3.0	1		29"x18"x22" Rd. Pipe Arch S.D. w/Std. Wings	
57	0.75	90	2.38	Dbl. Grate Curb Inlet w/80 L.F. 36" R.C.P.	
58	0.75	90	2.38	Dbl. Grate Curb Inlet w/12 L.F. 36" R.C.P. w/45° Wings	
59	1.0	90	3.17	Sn. Grate Curb Inlet w/4 Opngs. w/36 L.F. 18" R.C.P.	
60	1.0	90	3.17	Sn. Grate Curb Inlet w/4 Opngs. w/36 L.F. 18" R.C.P.	
61	27	1		4'x3'x107' Rd. R.C.B. w/Conc. D.I. Rt.	
62	10	1		30"x94' Rd. R.C.P. w/45° Wings	
62A	3.0	1		29"x18"x22" Rd. Pipe Arch S.D. w/Std. Wings	
62B	1.0	1		29"x18"x22" Rd. Pipe Arch S.D. w/Std. Wings	
63	0.5	1	1.59	Grated Pipe Inlet w/112 L.F. 18" R.C.P. Br. Back	
64	24.5	1		4'x3'x243' Rd. R.C.B.	
65	24.0	1		4'x3'x108' Rd. R.C.B. Sk. 45° R.F. w/Conc. D.I. Rt.	
66	0.8	1		24"x58' Long. R.C.P. w/Gr. Pipe Inlet Rt. & 45° Wing Lt.	
67	0.5	90	1.59	Sn. Gr. Curb Inlet w/A Opng. w/52 L.F. 18" R.C.P.	
68	0.5	90	3.78	Sn. Gr. Curb Inlet w/A Opng. w/56 L.F. 18" R.C.P.	
69	0.5	90	3.78	Sn. Gr. Curb Inlet w/A Opng. w/32 L.F. 18" R.C.P.	
70	4.1	1		4'x4'x292' Rd. R.C.B. w/Broken back	
71	0.3	1	0.70	Grated Pipe Inlet w/8 L.F. 18" R.C.P. Stub into Str. 70	
72	0.5	1	1.59	Grated Pipe Inlet w/76 L.F. 24" R.C.P. w/45° Wing	
72A	1.0	1		29"x18"x22" Rd. Pipe Arch S.D. w/Std. Wings	
73	0.3	1	1.58	Grated Pipe Inlet w/124 L.F. 24" R.C.P. Stub into Str. 75	

DRAINAGE STRUCTURES				DESCRIPTION	
STR. NO.	D.A. AC.	"C"	"Q"		
75	140.0	1		8'x5'x290' Rd. R.C.B. w/Broken back	
76	3.0	1	0.51	ated Pipe Inlet w/12 L.F. 24" R.C.P. Stub into Str. 75	
77	0.3	1	0.79	Grated Pipe Inlet w/76 L.F. 24" R.C.P. w/45° Wing	
78	0.5	1		18"x46' Rd. R.C.P. w/Spec. Hdwl.	
78A	0.3	90	0.80	Sn. Gr. Curb Inlet w/13 L.F. 18" R.C.P. w/Spec. Hdwl.	
78B	11.0	1		36"x78' Rd. R.C.P.	
79	28.0	1		4'x3'x160' Rd. R.C.B. w/D.I. Rt.	
80	55.0	1		5'x4'x67' Rd. R.C.B.	
81	0.3	90	0.78	Sn. Gr. Curb Inlet w/16 L.F. 18" R.C.P. w/Spec. Hdwl.	
82	58.0	1		5'x4'x110.59' Cl. Rd. R.C.B. Sk. 60° w/Conc. D.I. Rt.	
83C	22.0	1		4'x3'x178.21' Cl. Rd. R.C.B. Sk. 45° w/Conc. D.I. Rt.	
83A	2.5	1	5.00	Grated Pipe Inlet w/112 L.F. 24" R.C.P. Stub into Str. 83C	
83B	5.0	1		24"x92' Long. R.C.P. S.D. w/45° Wings	
84	4.8	1		24"x101' Long. R.C.P. S.D. w/45° Wings	
85	5.5	1		30"x102' Rd. R.C.P. w/D.I. Rt. & 45° Wing Lt.	
85A	2.0	1		29"x18"x22" Rd. Pipe Arch S.D. w/Std. Wings	
85B	2.0	1		29"x18"x28" Rd. Pipe Arch S.D. w/Std. Wings	
85C	2.0	1		29"x18"x28" Rd. Pipe Arch S.D. w/Std. Wings	
86	0.25	90	0.78	Sn. Gr. Curb Inlet w/52 L.F. 18" R.C.P. w/Spec. Hdwl.	
87	2.0	1		24"x44' Rd. R.C.P. w/45° Wings	
87A	2.0	1		29"x18"x22" Rd. Pipe Arch S.D. w/Std. Wings	
87B	2.0	1		29"x18"x21' Rd. Pipe Arch S.D. w/Std. Wings	

Storm Sewer System Structures for runoff areas up to 7 acres are designed on a basis of a 5" Continuous Rainfall (5 CFS per acre), except that 7 CFS per acre was used in sump areas and on Interstate shoulder inlets so that no damage will be caused to the facility or property. Runoff for Storm Sewer Structures for acreages over 7 acres was calculated by the Burkhli-Ziegler Formula using a "C" coefficient dependent on the character of the surface drained. The size of the storm sewer pipe was obtained by use of Kutters Formula, using n=0.013 (for concrete pipe), working from cubic feet per second and pipe grade.

**DRAINAGE STRUCTURES**

The size of all structures, classified as "Drainage Structures" was determined by Talbotts Formula, using a C-coefficient dependent on the slope and character of the watershed and rainfall constant of 4".

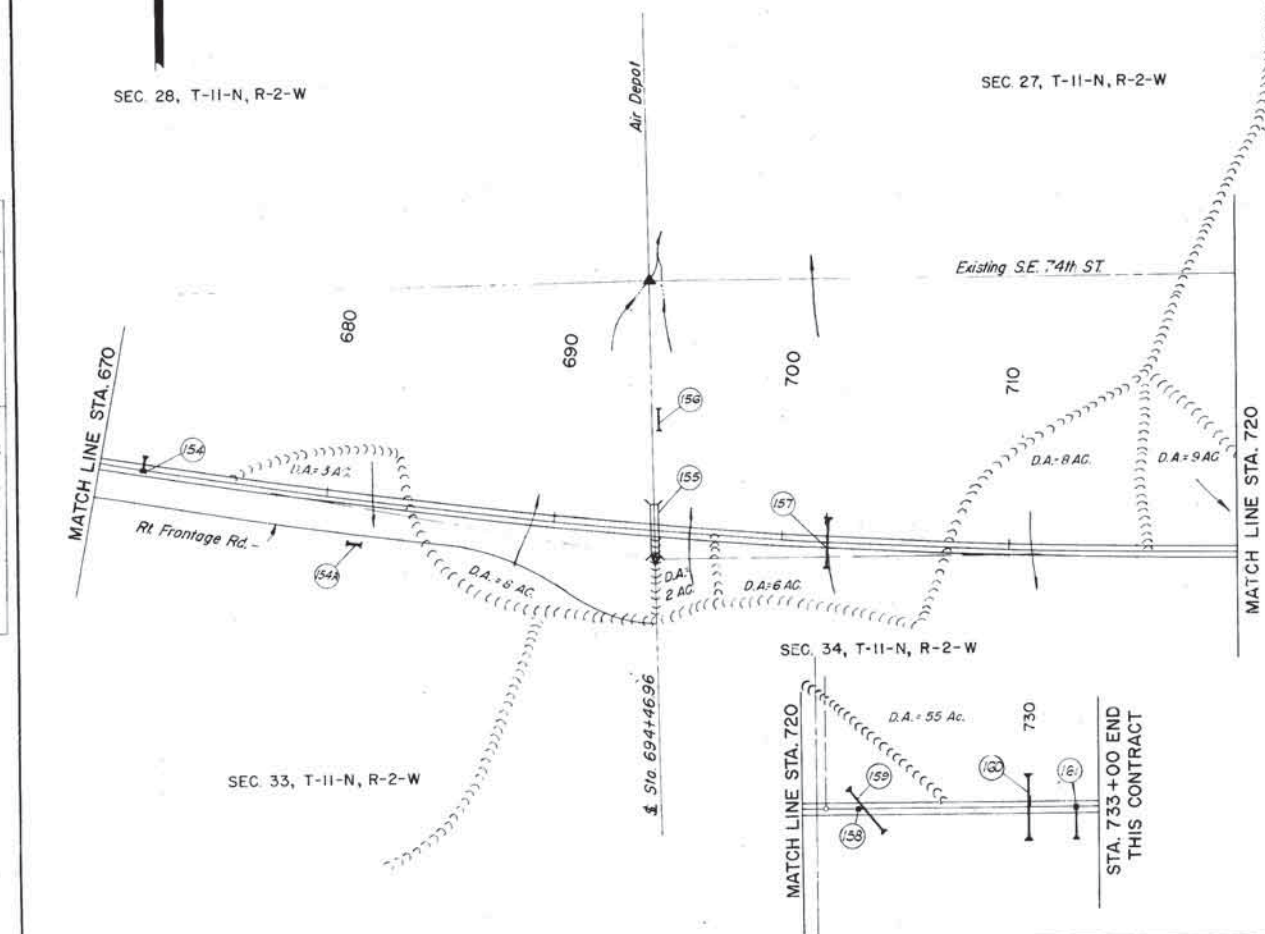
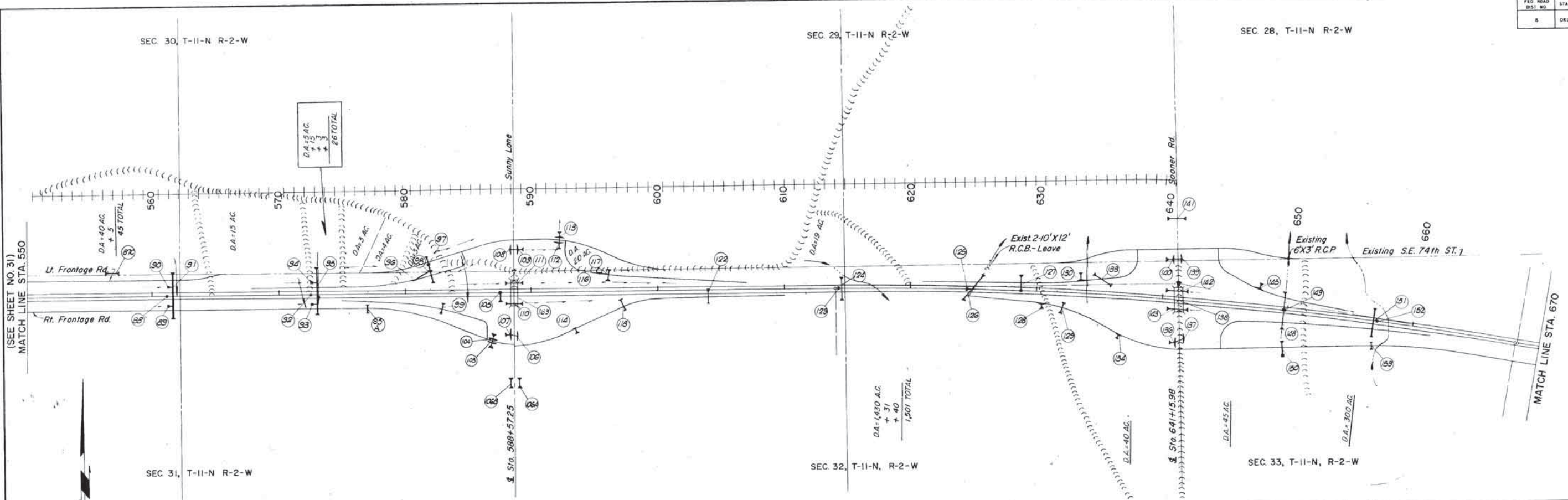
## DRAINAGE LAYOUT

SCALE: 1" = 400'



PLAN  
SHEET NO. 31  
NOTE: SEE SHEET NO. 30 FOR MATCH LINE STA. 550

PROFILE  
NOTE: SEE SHEET NO. 30 FOR MATCH LINE STA. 550



DESIGN DATA FOR INLETS									
STR. NO.	D.A. AC.	% IMP.	TOTAL D.A.	"Q" AT INLET	TOTAL "Q" IN SYSTEM	% GRADE PIPE	PIPE SIZE	CAP. PIPE C.F.S.	
96	0.90	90	3.00	9.51	9.51	0.44	24"	10.0	
98	1.50	90	1.50	4.76	4.76	1.88	24"	20.5	
99	1.50	90	2.00	6.34	6.34	0.38	24"	9.3	
101	4.00	90	1.00	1.44	1.44	1.61	30"	35.3	
102	4.25	90	1.00	1.44	1.44	1.28	30"	30.1	
103	2.25	90	2.50	7.93	7.93	0.54	24"	11.1	
104	0.25	90	2.75	8.72	8.72	0.83	24"	13.7	
106	0.25	90	0.25	0.79	0.79	9.94	18"	12.5	
107	0.25	90	0.25	0.79	0.79	7.31	18"	12.5	
108	0.25	90	0.25	0.79	0.79	0.50	18"	4.9	
109	0.25	90	0.50	1.59	1.59	0.75	18"	6.1	
112	3.0	90	3.25	10.30	10.30	0.48	24"	10.3	
113	3.25	90	3.50	11.09	11.09	0.90	24"	14.3	
114	0.25	90	0.25	0.79	0.79	0.84	18"	6.4	
116	0.25	90	0.25	0.79	0.79	4.38	18"	12.5	
119	0.50	90	0.50	1.59	1.59	0.31	24"	3.8	
121	0.50	90	0.50	1.59	1.59	0.42	24"	3.8	
128	0.75	90	0.75	2.38	2.38	1.25	18"	7.8	
130	0.75	90	0.75	2.38	2.38	1.67	18"	9.0	
134	0.25	90	0.25	0.79	0.79	1.78	24"	9.3	
136	0.25	90	2.00	6.34	6.34	1.25	24"	16.6	
137	0.25	90	1.75	5.55	5.55	0.80	24"	13.5	
139	0.25	90	0.25	0.79	0.79	5.07	18"	12.5	

DESIGN DATA FOR INLETS									
STR. NO.	D.A. AC.	% IMP.	TOTAL D.A.	"Q" AT INLET	TOTAL "Q" IN SYSTEM	% GRADE PIPE	PIPE SIZE	CAP. PIPE C.F.S.	
140	0.25	90	0.50	1.59	1.59	7.50	18"	12.5	
141	0.25	90	0.50	1.59	1.59	0.41	24"	3.8	
145	0.50	90	2.50	7.93	7.93	1.58	24"	18.9	
146	0.50	90	0.50	1.59	1.59	0.32	18"	1.1	
147	0.50	90	0.50	1.59	1.59	0.20	18"	5.4	

DRAINAGE STRUCTURES									
STR. NO.	D.A. AC.	"C"	"Q"	DESCRIPTION					
87C	4	1		29"x18"x30'8" Rdy. Pipe Arch S.D. w/Std. Wings					
88	2	1	6.34	Grated Pipe Inlet w/12 L.F. 18" R.C.P. Stub into Str. 91					
89	5	1	15.85	Grated Pipe Inlet w/12 L.F. 30" R.C.P. Stub into Str. 91					
90	5	1	15.85	Grated Pipe Inlet w/12 L.F. 30" R.C.P. Stub into Str. 91					
91	45	1		5'x4'x29'2" Rdy. R.C.B. w/Broken back					
92	1	1	3.17	Grated Pipe Inlet w/12 L.F. 18" R.C.P. Stub into Str. 95					
93	3	1	9.51	Grated Pipe Inlet w/12 L.F. 24" R.C.P. Stub into Str. 95					
94	4	1	12.68	Grated Pipe Inlet w/12 L.F. 24" R.C.P. Stub into Str. 95					
95	26	1		4'x3'x32'1" Rdy. R.C.B. w/Broken back					
95A	2	1		18'x38'4" Rdy. R.C.P. w/45° Wings					
97	3	1	28	Grated Pipe Inlet 30" Rt. w/44 L.F. 24" RCP & 45° Wing Lt. w/113 L.F. 30" RCP Rt. Stub into Str. 98					
98	1.50	1	4.76	Grated Pipe Inlet 19" Lt. w/60 L.F. 30" R.C.P. & Spec. Hdws.					
99	2.0	1	6.34	Grated Pipe Inlet 10" Rt. w/48 L.F. 24" R.C.P. w/Spec. Hdws.					
105	1	1	3.17	Grated Pipe Inlet w/76 L.F. 24" R.C.P. w/45° Wings					
106A	2	1		29"x18"x27" Rdy. Pipe Arch S.D. w/Std. Wings					
106B	2	1		29"x18"x27" Rdy. Pipe Arch S.D. w/Std. Wings					

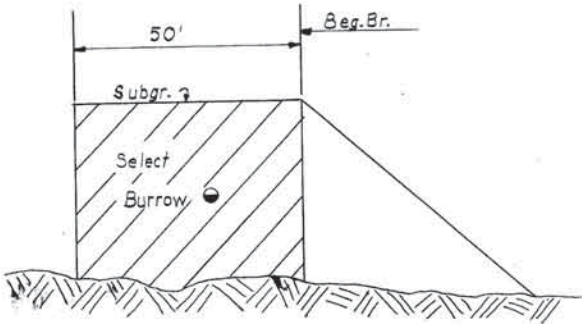
DRAINAGE STRUCTURES									
STR. NO.	D.A. AC.	"C"	"Q"	DESCRIPTION					
110	5	1		24"x150'4" Rdy. Pipe S.D. w/45° Wings					
111	10	1		24"x142'4" Rdy. Pipe S.D. w/45° Wings					
117	13	1		4'x2'x58' Rdy. R.C.B.					
118	.25	.90	.79	Sin. Gr. Curb Inlet w/B Opngs. w/39 L.F. 30" RCP					
122	2	1	6.34	Grated Pipe Inlet w/82 L.F. 24" R.C.P. & 45° Wing					
123	1	1	3.17	Grated Pipe Inlet w/12 L.F. 24" R.C.P. Stub into Str. 124					
124	31	1		5'x3'x158' Rdy. R.C.B. w/Broken back					
125	1	1	13	Grated Pipe Inlet w/24 L.F. 18" R.C.P. Stub into Str. 126					
126	1501	1		Bridge Box (by Others)					
127	5	1	15.85	Grated Pipe Inlet w/100 L.F. 24" R.C.P. w/45° Wing					
129	8	1		30'x45'4" Rdy. R.C.P. w/Spec Hdws					
133	4	1		24'x52'50" Gr. Rdy. R.C.P. Sk. 60° R.F. w/Sp Hdws.					
134A	3.8	1	20	Grated Pipe Inlet 48" Lt. w/28 L.F. 24" R.C.P. Stub into Str. 134					
141	2	1		18'x63'4" Rdy. R.C.P. w/45° Wings					
142	3	1		24'x136' Long. R.C.P. S.D. w/45° Wings					
143	3	1		24'x132' Long. R.C.P. S.D. w/45° Wings					
148	45	1		6'x3'x250' Rdy. R.C.B.					
149	4	1	12.68	Grated Pipe Inlet w/12 L.F. 18" R.C.P. Stub into Str. 148					
150	38	1		6'x3'x47' Rdy. R.C.B. w/D.I. Rt.					
151	300	1		2-8'x5'x220' Rdy. R.C.B.					
152	3	1	9.51	Grated Pipe Inlet w/12 L.F. 18" R.C.P. Stub into Str. 151					
153	496	1		8'x5'x38' Rdy. R.C.B.					
154	4	1	12.68	Grated Pipe Inlet w/102 L.F. 24" R.C.P. & 45° Wing					
154A	8	1		29'x18'x22'8" Rdy. Pipe Arch S.D. w/Std. Wings					
156	2	1		29'x18'x22'8" Rdy. Pipe Arch S.D. w/Std. Wings					
157	6	1	3.17	Grated Pipe Inlet w/96 L.F. 30" RCP & 45° Wings Lt. & Rt. L.F. 30" RCP & 45° Wings Rt.					
158	3	1	9.51	Grated Pipe Inlet w/16 L.F. 24" R.C.P. Stub into Str. 159					
159	9	1		3'x3'x30' Long. R.C.B. Sk. 50° Rt. Fwd.					
160	55	1		5'x4'x288' Rdy. R.C.B.					
161	2	1	6.34	Grated Pipe Inlet w/124 L.F. 18" R.C.P. w/45° Wing					

DRAINAGE LAYOUT  
SCALE: 1"=400'



P & P SHEET SUMMARY									
P & P SHEET NO.	STATION TO STATION	STRIP SLAB SOD	SOLID SLAB SOD	R/W FENCE TYPE II	FENCE GATES TYPE 2	GLARE DEFLECTOR FENCE TYPE II	T.B.S.C.	R/W MARKERS	CLASS "C" CONCRETE
		S.Y.	S.Y.	L.F.	EA.	L.F.	C.Y.	EA.	C.Y.
38	436+38.65 - 457+00	1,333	14,851	4,693	1	1,746		23	
39	457+00 - 489+00		1,472	4,391	1	2,145	5	4	15
40	489+00 - 521+00		260	6,686	1		10	4	46.2
41	521+00 - 553+00			6,342			10	5	13.1
42	553+00 - 585+00			6,559			12.5	11	
43	585+00 - 617+00		83	5,952				2	32.5
44	617+00 - 649+00			5,479				2	62.3
45	649+00 - 681+00		155	6,573				6	95.5
46	681+00 - 713+00			6,589			5	3	
47	713+00 - 733+00		247	4,136					47.7
49	19+00 - 32+00		30	485			20		
50	13+00 - 36+00		2,588	2,306			20	2	
51	15+13 - 34+00		730	490			10	2	
52	16+00 - 32+89.5		1,252	1,493				2	
53	7+00 - 26+00		2,530	1,285			27	4	
	TOTAL	1,333	24,198	63,459	8	3,891	119.5	70	312.3

SCHEDULE OF GUARD RAIL										
LOCATION					TREATMENT OF ENDS				TOTAL GUARD RAIL LIN. FT.	REMARKS
STATION TO STATION	LT. LANE		RT. LANE		FLARED APPROACH	90° TWIST	BRIDGE CONNECTION	TRAILING END		
	LT.	RT.	LT.	RT.						
POLE YARD ROAD										
10+18.23 - 11+18.23		X			1		1		100	
10+68.23 - 11+18.23	X				1		1		50	
13+49.81 - 14.49.81	X				1		1		100	
13+49.81 - 14+49.81		X			1		1		100	
EASTERN										
23+11.87 - 25+61.87				X	1			1	250	
24+11.87 - 26+11.87		X	X		4	4			400	2 Dbl. Anchors Required
24+61.87 - 27+11.87	X				1			1	250	
BRYANT										
20+93.47 - 23+43.47	X				1		1		250	
20+93.47 - 23+43.47		X			1		1		250	
25+65.01 - 28+65.01	X				1		1		300	
25+65.01 - 28 65.01		X			1		1		300	
SUNNYLANE										
21+07.89 - 23+57.89				X	1		1		250	
21+57.89 - 23+57.89	X						1		200	
23+07.89 - 23+57.89		X	X		2	2	2		100	Dbl. Anchor Required
25+99.91 - 28+49.91	X				1		1		250	
25+99.91 - 28+49.91			X				1	1	250	
25+99.91 - 26+49.91		X	X		2	2	2		100	Dbl. Anchor Required
SOONER ROAD										
19+68.34 - 21+93.34	X						1	1	225	
20+43.34 - 21+93.34				X	1		1		175	
21+43.34 - 21+93.34		X	X		2	2	2		100	Dbl. Anchor Required
24+67.06 - 25+17.06		X	X		2	2	2		100	Dbl. Anchor Required
24+67.06 - 26+67.06	X				1		1		200	
24+67.06 - 26+67.06				X			1	1	200	
AIR DEPOT										
12+12.21 - 14+12.21	X				1		1		200	
11+12.21 - 14+12.21		X			1		1		300	
16+97.67 - 20+97.67	X				1		1		400	
16+97.67 - 20+97.67		X			1		1		400	
TOTAL									5800	
I-35										
56+60 - 57+85				X	1			1	125	Remove & Reconstruct
TOTAL									125	



● Select Soil to be placed at Bridge ends as shown

SUMMARY OF SHEET ESTIMATES						
P & P SHEET NO.	STATION TO STATION	EMB. + 15%	UNCL. EXCAV.	SELECT BORROW	UNCL. BORROW	OVERHAUL
		C.Y.	C.Y.	C.Y.	C.Y.	SEC. YDS.
38A	57+00 To 65+36.6 Ramp "A" At I-35		24,793			
38	453+00 To 457+00 Ramp "E" I-240 at OG&E	607	4,449			
38,38A	53+40 To 80+96.09 West Fr. Rd. at I-35	3,054	30,389			
38C	435+90.31 To 458+00 South Fr. Rd. at OG&E	2,151	2,902			
38	10+77 To 14+00 Pole Yd. Road		1,337	4		
38B	438+00 To 457+74 North Fr. Rd. at OG&E	126	20,269			9,700
38,39	436+38.65 To 484+01.48	* 171,402	194,062	600		342,070
39,40	484+01.48 To 520+63.60	* 219,814	169,877	11,080		75,490
40,43	520+63.60 To 594+54.02	* 271,968	294,416	6,558		631,511
43,44	594+54.02 To 632+48.16	* 134,642	153,828	3,573		98,070
44-46	632+48.16 To 688+00	* 228,872	149+668	4,675		1,738,686
46,47	688+00 To 733+00	* 199,523	169,417	7,593	19,422	321,675
	TOTALS	*1,233,496	1,179,995*	34,079	19,422	3,217,202

\* Includes Select Borrow Quantities at Bridge Ends.  
● Uncl. Exc. Reduced by 34,079 C.Y. of Select Borrow.  
● At the Discretion of the Engineer, Uncl. Borrow may be obtained from Sta. 736+00 to Sta. 746+76 on F.A.P. No. I-240-4(88)162 as Shown on Sheets 64, 182-185 and paid for as Uncl. Excav. with Overhaul.

Design	
Drawn	
Checked	
Approved	
Squad	

SUMMARY OF SHEET ESTIMATES

F.A. Project No. I-240-4(86) Sheet No. 34



PAY QUANTITY NOTES

- (F-3) Includes 20% for Compaction.
- (F-15) Est. at 4.5% Lbs. per Sq. Yd. (6" Thick)(Soil Est. at 120 Lbs. per Cu. Ft.)
- (F-13) Est. at 94.5% of Bit. Base Bit. Base-Fine Aggr. Type Est. at 95 Lbs. per Sq.Yd. per 1" Thick.
- (F-13a) Est. at 5.5% of Bit. Base
- (F-14) Est. at 0.3 Gal. per Sq.Yd.
- (F-19) Est. at 0.7 Gal. per Sq. Yd. of Cover Area.
- (F-20) Est. at 1 Cu. Yd. per 60 Sq. Yd.
- (F-21) Est. at 1 Cu. Yd. per 70 Sq. Yds.
- (F-24) Type A Est. at 95% of Asphalt Concrete Type C Est. at 94% of Asphalt Concrete Asphalt Concrete Est. at 108 Lbs. per Sq. Yd. per 1" Thick.
- (F-24a) Est. at 5% of Asphalt Concrete (Type A Aggr.) Est. at 6% of Asphalt Concrete (Type C Aggr.)
- (F-25) Est. at 0.05 Gal. per Sq. Yd. prior to Dilution.
- (F-36) The following AASHTO Types may be used for Arch or Elliptical Pipe: Reinf. Conc. Pipe (M-206 or 207) - Corr. Galv. Metal Pipe (M-36) - Corr. Alumn. Alloy Pipe (M-196).
- (F-42) Normal superphosphate fertilizer (0-20-0), at the rate of 300 pounds per acre, shall be broadcast uniformly over the areas on which salvaged topsoil is to be placed. In order to avoid movement by wind or water, the material will be applied just prior to placement of the topsoil.
- (H-1) Est. at 30 Gal. per square yard of sodding or sprigging.
- (H-6) Est. at 80 Pounds of 10-20-10 fertilizer per 1,000 square yards of sodding and sprigging.
- (1) Includes 12.4 C.Y. for Overhead Sign Str. Base.
- (2) Includes 327 Lbs. for Overhead Sign Str. Base
- # (3) Includes 336 L.F. Non-Participating
- # (4) Includes 280 L.F. Non-Participating
- (5) Cost of 19 Type 3 Delineators to be included in price bid for "Beam Type Guard Rail (Sgl.)".
- (6) See Notes and/or Details Sheet No. 187.
- (7) IF STEEL ALTERNATE IS USED, POLES SHALL BE GALVANIZED AS PER SPECIAL PROVISION HL-5-1, 10/26/67. THE POLE AND MAST ARM ASSEMBLY SHALL PROVIDE A NOMINAL MOUNTING HEIGHT OF 40'-0" FOR THE LUMINAIRE INCLUDING A MAXIMUM MAST ARM RISE OF 5'-0".

CONSTRUCTION NOTES

For General Construction Notes, See Std. GCN-2. Only the following notes shall apply: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14, 16, 18, 20, 24, 33, 35, 38, 41. The Grading Contractor shall salvage all pipe drainage structures under Detour Road and clean and store on the R/W as directed by the Engineer. Cost to be included in other items of work.

As soon as bridges are finished on a Section Line, the Grading Contractor shall complete his work and open the section line to traffic. The Grading Contractor shall then maintain the section line road within the limits of new construction until his contract is completed.

All concrete from oil well rigging platforms within the Right-of-Way shall become the property of the Grading Contractor and disposed of by him to the satisfaction of the Engineer.

Note: Structures in Cut-Section: The grading section at Str. No. 25 shall be staked and flagged by the resident engineer in accordance with the project plans. Any over-cut by the grading contractor shall be his responsibility. Grading section shall be re-built to the satisfaction of the resident engineer. All cost of back-fill and modification to the bridge structure shall be borne by the grading contractor.

Borrow will not be measured for pavement from pits closer than 500 feet to the near right-of-way line, except by written permission of the Engineer. Any borrow pit upstream from the Center Line of the survey and within 500 feet of the Center Line of a stream must be approved by the Bridge Engineer before excavation is begun, and no borrow pit within the above limits will be approved which in the judgement of the Bridge Engineer would be detrimental to the project.

Creek and river banks shall be kept in their natural state as much as possible. The contractor shall not unduly strip existing protective vegetation in the vicinity of the stream banks and shall so conduct his operations as not to damage the banks with his equipment. No bank up or downstream shall be excavated except as provided for and as shown on the plans. No work roads shall be constructed upstream where it is necessary to cut the stream or river banks except by approval of the Bridge Engineer. Banks cut for work roads shall be located downstream and replaced by the contractor to their original shape and density. Unnecessary stripping of vegetational growth along banks in the construction area is not permitted. See special provisions included in the proposal for Prevention, Control and Abatement of Water Pollution.

This project shall be constructed without closing the existing road to local traffic and section lines to local and through traffic. See Std. Specifications and Spec. Provisions for maintenance of local and through traffic.

SYMBOLS AND LEGEND ARE DIAGRAMMATIC ONLY AND LOCATIONS SHALL BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS, BUT NO MAJOR ALTERATIONS OR RELOCATIONS WILL BE MADE WITHOUT FIRST CONSULTING WITH THE CHIEF TRAFFIC ENGINEER.

WHERE DOUBLE BRACKET ARMS ARE USED ON THE SAME POLE, THE ARMS SHALL BE POSITIONED IN SUCH A MANNER AS TO MAKE THE MOST ADVANTAGEOUS USAGE OF THE LIGHT. IN MOST CASES, THIS MEANS THE ARM WILL BE PERPENDICULAR TO THE ROADWAY BEING LIGHTED.

- (F-26) For Structures of 5.0 Cu. Yds. or more each.
- (F-27) For Structures of less than 5.0 Cu. Yds. each.
- (F-29) Est. at 10 Cu. Yds. per Sta. per Vert. Foot of Depth.
- (F-30) Includes 2% for Ground Measurement.
- (F-39) Design 1, 2, 3 or 5 shall be 8" diameter; Design 4 shall be 5" x 2-5/16" Semicircular Pipe.
- (F-43) The steeper than 6:1 cut and fill slopes on which reserved topsoil has been placed shall be covered with vegetative (hay or straw) mulch.
- (F-28) The Grading Contractor shall salvage all Pipe Drainage Structures under Detour Road and clean and store on the R/W as directed by the Engineer. Cost to be included in other items of work.

The Grading Contractor shall daylight areas between the main line and entrance ramps as shown on the plans and as directed by the Engineer.

See R/W Plans for location of Control of Access points.

All asphalt surfacing removal on S.E. 74th Street ahead of Sta. 438+00 and on Eastern, Bryant, Sunnylane and Sooner Rd. cross streets shall be included in the price bid for Unclassified Excavation.

THE CONDUCTOR MUST BE INSTALLED TO FIT EXISTING CONDITIONS AND ALL DISTURBED AREA MUST BE REPAIRED OR RESTORED TO ORIGINAL CONDITION BY THE CONTRACTOR. THERE WILL BE NO PAY ITEM FOR THIS WORK.

NO POLE OR POLE BASE SHALL BE PLACED IN FRONT OF THE GUARD RAIL. IN THE EVENT IT APPEARS NECESSARY TO PLACE A POLE IN FRONT OF THE GUARD RAIL, IT WILL BE CONSIDERED A SPECIAL CASE AND THE CHIEF TRAFFIC ENGINEER WILL BE CONSULTED WITH BEFORE THE POLE IS CONSTRUCTED.

WHERE HAND HOLE IS PROVIDED IN BREAK-AWAY BASE, HAND HOLE MAY BE DELETED FROM POLE.

PAY QUANTITIES

ITEM NUMBER	DESCRIPTION	UNIT	
202.06(C)	Uncl. Exc.	C.Y.	1,179,995.
202.06(E)	Uncl. Borrow	C.Y.	19,422.
202.06(F)	Select Borrow (F-3)	C.Y.	34,079.
204.06	Overhaul	SEC.YD.	3,217,202.
205.06	Salvaged Topsoil	C.Y.	167,730.
307.06(A)	Hydrated Lime (F-15)	TON	2,047.
307.06(B)	6" Lime Treated Subgr.	S.Y.	168,636.
314.06(A)	Aggr. (F-13)	TON	50,182.
314.06(B)	Asph. (F-13A)	TON	2,892.
402.06(A)	Bituminous Binder (F-19)	GAL.	3,156.
402.06(B-1)	No. 1 Cover Aggr. (F-21)	C.Y.	64.
402.06(B-2)	No. 2 Cover Aggr. (F-20)	C.Y.	75.
403.06(A)	Traf. Bound Surf. Cse., Type A	C.Y.	120.
407.06	Tack Coat (F-25)	GAL.	19,064.
408.06	Prime Coat (F-14)	GAL.	46,426.
411.06(A-1)	Type A Aggr. (F-24)	TON	825.
411.06(A-3)	Type C Aggr. (F-24)	TON	12,100.
411.06(B)	Asph. (F-24a)	TON	880.
414.06(A)(AE)	8" P.C. Conc. Pav't.	S.Y.	35,479.
414.06(A)(AE)	9" P.C. Conc. Pav't.	S.Y.	6,392.
414.06(B)(AE)	8" H.E.S. Conc. Pav't.	S.Y.	1,158.
501.06(A)	Structural Exc. Uncl.	C.Y.	25,176.
509.06(B)	Class A Conc. (1)(F-26)	C.Y.	2,471.
509.06(B)	Class A Conc. (Small Str.) (F-27)	C.Y.	229.
509.06(D)	Class C Conc.	C.Y.	314.
511.06	Reinforcing Steel (2)	LB.	249,913.
512.06(A)	18" R.C. Culv. Pipe, Class III	L.F.	1,200.
512.06(A)	24" R.C. Culv. Pipe, Class III	L.F.	2,667.
512.06(A)	30" R.C. Culv. Pipe, Class III	L.F.	769.
512.06(A)	36" R.C. Culv. Pipe, Class III	L.F.	224.
512.06(F)	18" CGM Pipe # (3)(F-28)	L.F.	572.
512.06(F)	30" CGM Pipe # (4)(F-28)	L.F.	280.
609.06(C)(AE)	Conc. Header Curbing(12"x18")	L.F.	218.
610.06(C)(AE)	4" Conc. Dividing Strip	S.Y.	380.
610.06(C)(AE)	6" Conc. Dividing Strip	S.Y.	31.
611.06(A)	Manhole (4' Dia.)	EA.	8.
611.06(B)	Add'l. Depth Mas. in Manhole (4' Dia.)	V.F.	5.
611.06(D)	Manhole Frame & Cover (Type B)	EA.	8.
611.06(E)	Inlet Brick Mas.	C.F.	3505.
611.06(F)	Sp. Inlet Curb	L.F.	644.
611.06(G)	Inlet Frame & Grate (SGF-1)	EA.	63.
611.06(G)	Inlet Frame & Grate (SGF-4)	EA.	29.
611.06(K)	Cast Iron Curb Inlets (CICI)	EA.	36.
612.06(F)	Inlets Rebuilt	EA.	1.
613.06(A)	15" R.C. Pipe	L.F.	64.
613.06(A)	18" R.C. Pipe	L.F.	2,852.
613.06(A)	24" R.C. Pipe	L.F.	1,072.
613.06(A)	30" R.C. Pipe	L.F.	824.
613.06(A)	36" R.C. Pipe	L.F.	196.
613.06(A)	54" R.C. Pipe	L.F.	48.
614.06(A)	Perf. Pipe Underdrain (F-39)	L.F.	4,500.
614.06(B)	Non-Perf. Pipe Underdrain (F-39)	L.F.	1,500.
614.06(C)	Pipe Underdrain Cover Mat'l. (F-29)	C.Y.	1,800.
614.06(D)	Add'l. Vert. Ft. of Depth for Pipe Underdrain Ditch over plan Depth	L.F.	200.
619.06(B)	Removal of Concrete Curb	L.F.	7,465.
619.06(B)	Removal of Conc. Driveway	S.Y.	1,016.
619.06(B)	Removal of Asph. Surf. With Asph. Base (8" Thick)	S.Y.	14,376.
619.06(B)	Removal of Asph. Surf. With Asph. Base (12" Thick)	S.Y.	10,321.
619.06(C)	Sawing Pavement	L.F.	70.
622.06(A)	1 1/2" Pipe Railing	L.F.	234.
623.06(B)	Beam Type Guard Rail (Sgl.) (5)	L.F.	5,800.
624.06(C)	Right-of-Way Fence, Type II (5' High) (F-30)	L.F.	64,728.
624.06(D)	Gates, Type II (5'x12')	EA.	3.
624A.06(D)	Rem & Reconstruct Guard Rail	L.F.	125.
625.06(B)	Right-of-Way Markers	EA.	70.
629.06(C)	3" Galv. Steel Elect. Conduit	L.F.	3,070.

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240-4080	35	315

DESCRIPTION	DATE
Revised Inlet Brick Masonry 1/19/70	
CL: 4" Conc.; Reinf. Steel; 18" R.C. Culv. Pipe; 30" R.C. Culv. Pipe; 1 1/2" Pipe Railing; 30" Welded Steel Gate 12-29-69	
Note: (F-28) 1/15/70	

PAY QUANTITIES

ITEM NUMBER	DESCRIPTION	UNIT	
629.06(D)	Pull Boxes - Type I (Traffic Signal)	EA.	20.
634.06(A)	Overhead Sign Str. (Type C-1)(Alum.)(6)	EA.	1.
638.06(B)	Glare Deflector Fence - Type 2	L.F.	3,891.
640.06	Field Office and Laboratory	EA.	1.
Sp.	29" x 18" Pipe Arch for Side Drain (F-36)	L.F.	741.
Sp.	Special Welded Steel Gate(30" Sq.)	EA.	112.
Sp.	Special Welded Steel Gate (36" Sq.)	EA.	42.
Sp.	Special Welded Steel Gate (42" Sq.)	EA.	8.
Sp.	Removal of Overhead Sign Str. (6)	EA.	1.
Sp.	Grates "A" (GPI)	EA.	46.
Sp.	Grates "B" (GPI)	EA.	36.
608.06	Integral Curb (4" Mountable)	L.F.	4,314.
608.06	Integral Curb (6" Barrier)	L.F.	17,398.
609.06(B)(AE)	1'-8" Combined Curb & Gutter (6" Barrier Curb)	L.F.	10,393.
609.06(BB)(AE)	2'-0" Combined Curb & Gutter (Notched)(4" Mountable Curb)	L.F.	7,288.
609.06(BB)(AE)	2'-0" Combined Curb & Gutter (Notched)(6" Barrier Curb)	L.F.	5,513.
626A.06(A)	Solid Slab Sodding	S.Y.	24,198.
626A.06(B)	Strip Slab Sodding	S.Y.	1,333.
626A.06(G)	Watering (H-1)	M.GAL.	383.
626D.06(A)	Vegetative Mulching (F-43)	AC.	250.
626E.06(A)	Fertilizing (10-20-10) (H-6)	TON	1.
626E.06(A)	Fertilizing (0-20-0) (F-42)	TON	37.5
629.06C	2" Galv. Steel Elect. Conduit	L.F.	230.
629.06D	Pull Box - Type I (Highway Lighting)	EA.	3.
Sp.	40'-0" Pole W/Sgl. 10'Mast Arm (Steel or Alumn.)	EA.	7.
Sp.	40'-0" Pole W/Sgl. 15' Mast Arm (Steel or Alumn.)	EA.	1.
Sp.	40'-0" Pole W/Dbl. 10' & 15' Mast Arm (Steel or Alumn.)	EA.	1.
Sp.	400 Watt Mercury Vapor Luminaires	EA.	10.
Sp.	Conc. Pole Base	EA.	23.
Sp.	Breakaway Base	EA.	9.
Sp.	1/C AWG No. 4 Direct Burial Cable	L.F.	4,845.
Sp.	1/C AWG No. 4 Bare Cable	L.F.	4,845.
Sp.	1/C AWG No. 12	L.F.	1,510.
Sp.	Trenching & Backfilling	L.F.	4,475.
Sp.	2" Plastic Conduit	L.F.	4,475.
Sp.	Removing and Resetting Light Poles	EA.	14.

Design	
Drawn	
Checked	
Approved	
Squad	

SUMMARY OF PAY QUANTITIES GRADING

F.A. Project No. 1-240-4080 Sheet No. 35



PAY QUANTITIES - BRIDGES			
DESCRIPTION Str. No. 25 Sta. 450+00.00 Sur. Line Const. 2-95' Continuous Plate Girder Spans with 28' Cl. Rdy. W/2'-6" S.W. Both Sides BRID: X205			
ITEM NO.	ITEM	UNIT	QUANTITY
202.06(F)	Select Borrow	C.Y.	180.
501.06(B)	Substr. Exc. Common	C.Y.	100.
501.06(C)	Substr. Exc. Rock	C.Y.	33.2
504.06(A)(AE)	Class AA Conc.	C.Y.	190.4
506.06(A)	Structural Steel	LB.	166,170.
509.06(B)	Class A Conc.	C.Y.	158.4
511.06	Reinforcing Steel	LB.	57,390.
614.06(AA)	6" Perf. Pipe Underdrain	L.F.	108.
640.06	Field Office & Laboratory	EA.	1.
Sp.	4" Conc. Slope Wall	S.Y.	224.6
Alternate No. 1			
505.06(D)	Alum. Handrailing (2-Rail)	L.F.	455.2
Alternate No. 2			
505.06(C)	Steel Handrailing (2-Rail)	L.F.	455.2

DESCRIPTION Str. No. 34 Sta. 459+56.75 Sur. Line Const. 30'-46.5'-61.5'-32' Conc. Rigid Frame BRID: X612			
ITEM NO.	ITEM	UNIT	QUANTITY
202.06(F)	Select Borrow	C.Y.	200.
501.06(A)	Structural Exc. Uncl.	C.Y.	3,098.
501.06(B)	Substr. Exc. Common	C.Y.	481.
501.06(C)	Substr. Exc. Rock	C.Y.	80.2
501.06(D)	Removal of Exst. Str.	L.SUM	1.
506.06(A)	Structural Steel	LB.	5,420.
509.06(A)(AE)	Class AA Conc.	C.Y.	848.9
509.06(B)	Class A Conc.	C.Y.	273.8
511.06	Reinforcing Steel	LB.	206,043.
514.06(E)Sp.	Steel Piling(10"BP42#)With Tins	L.F.	374.
606.06SP.	Waterproofing Butyl		
	Rubber Membrane	S.F.	3,020.
614.06(AA)	6" Perf. Pipe Underdrain	L.F.	100.
614.06(A)	8" Perf. Pipe Underdrain	L.F.	42.
614.06(B)	8" Non-Perf. Pipe Underdrain	L.F.	19.
614.06(C)	Pipe Underdrain Cover Mat'l.	C.Y.	18.8
Sp.	4" Conc. Slope Wall	S.Y.	251.6
Alternate No. 1			
505.06(D)	Alum. Handrailing (2-Rail)	L.F.	520.1
Alternate No. 2			
505.06(C)	Steel Handrailing (2-Rail)	L.F.	520.1

DESCRIPTION Str. No. 35 Sta. 460+05.45 Sur. Line Const. 30'-46.5'-61.5'-32' Conc. Rigid Frame BRID: X612			
ITEM NO.	ITEM	UNIT	QUANTITY
202.06(F)	Select Borrow	C.Y.	200.
501.06(A)	Structural Exc. Uncl.	C.Y.	1,944.
501.06(B)	Substr. Exc. Common	C.Y.	346.
501.06(C)	Substr. Exc. Rock	C.Y.	71.2
506.06(A)	Structural Steel	LB.	5,260.
509.06(A)(AE)	Class AA Conc.	C.Y.	799.8
509.06(B)	Class A Conc.	C.Y.	212.7
511.06	Reinforcing Steel	LB.	175,743.
514.06(E)Sp.	Steel Piling(10"BP42#)With Tins	L.F.	369.
606.06SP.	Waterproofing Butyl		
	Rubber Membrane	S.F.	2,745.
614.06(AA)	6" Perf. Pipe Underdrain	L.F.	100.
614.06(A)	8" Perf. Pipe Underdrain	L.F.	40.
614.06(B)	8" Non-Perf. Pipe Underdrain	L.F.	111.
614.06(C)	Pipe Underdrain Cover Mat'l.	C.Y.	20.4
Sp.	4" Conc. Slope Wall	S.Y.	243.8
Alternate No. 1			
505.06(D)	Alum. Handrailing (2-Rail)	L.F.	519.9
Alternate No. 2			
505.06(C)	Steel Handrailing (2-Rail)	L.F.	519.9

DESCRIPTION Str. No. 45 Sta. 471+60.00 Sur. Line Const. 3-10x7x272' Rdy. R.C. Box 142' Lt. & 130' Rt. with Std. Hdwl. & Wing Walls Des.: BC-10 & Sp. BRID: X009			
ITEM NO.	ITEM	UNIT	QUANTITY
202.06(C)	Uncl. Exc	C.Y.	5,100.
501.06(A)	Structural Exc. Uncl.	C.Y.	365.4
509.06(B)	Class A Conc.	C.Y.	994.9
511.06	Reinforcing Steel	LB.	115,450.

DESCRIPTION Str. No. 54 Sta. 482+01.92 Sur. Line Const. 30'-43'-43'-36' Cont. Conc. Slab with 38' Cl. Rdy. BRID: X206			
ITEM NO.	ITEM	UNIT	QUANTITY
202.06(F)	Select Borrow	C.Y.	200.
501.06(B)	Substr. Exc. Common	C.Y.	262.
501.06(C)	Substr. Exc. Rock	C.Y.	19.5
509.06(B)	Class A Conc.	C.Y.	158.6
504.06(A)(AE)	Class AA Conc.	C.Y.	410.4
511.06	Reinforcing Steel	LB.	87,870.
514.06(E)Sp.	Steel Piling(10"BP42#)W/O Tins	L.F.	301.
Sp.	4" Conc. Slope Wall	S.Y.	520.2
614.06(AA)	6" Perf. Pipe Underdrain	L.F.	146.
Alternate No. 1			
505.06(D)	Alum. Handrailing (1-Rail)	L.F.	335.
Alternate No. 2			
505.06(C)	Steel Handrailing (1-Rail)	L.F.	335.

DESCRIPTION Str. No. 55 Sta. 482+01.92 Sur. Line Const. 30'-43'-43'-36' Cont. Conc. Slab with 38' Cl. Rdy. BRID: X206			
ITEM NO.	ITEM	UNIT	QUANTITY
202.06(F)	Select Borrow	C.Y.	200.
501.06(B)	Substr. Exc. Common	C.Y.	157.
501.06(C)	Substr. Exc. Rock	C.Y.	25.7
509.06(B)	Class A Conc.	C.Y.	151.7
504.06(A)(AE)	Class AA Conc.	C.Y.	410.4
511.06	Reinforcing Steel	LB.	87,100.
514.06(E)Sp.	Steel Piling(10"BP42#)W/O Tins	L.F.	287.
Sp.	4" Conc. Slope Wall	S.Y.	520.2
614.06(AA)	6" Perf. Pipe Underdrain	L.F.	146.
Alternate No. 1			
505.06(D)	Alum. Handrailing (1-Rail)	L.F.	335.
Alternate No. 2			
505.06(C)	Steel Handrailing (1-Rail)	L.F.	335.

DESCRIPTION Str. No. 83 Sta. 534+70.14 Sur. Line Const. 2-100' Continuous Plate Girder Spans with 30' Cl. Rdy. W/2'-6" S.W. Both Sides BRID: X205			
ITEM NO.	ITEM	UNIT	QUANTITY
202.06(F)	Select Borrow	C.Y.	200.
501.06(B)	Substr. Exc. Common	C.Y.	231.
501.06(C)	Substr. Exc. Rock	C.Y.	6.8
504.06(A)(AE)	Class AA Conc.	C.Y.	210.2
506.06(A)	Structural Steel	LB.	169,330.
509.06(B)	Class A Conc.	C.Y.	140.4
511.06	Reinforcing Steel	LB.	68,050.
514.06(E)Sp.	Steel Piling(10"BP42#)W/O Tins	L.F.	359.
614.06(AA)	6" Perf. Pipe Underdrain	L.F.	132.
Sp.	4" Conc. Slope Wall	S.Y.	258.8
Alternate No. 1			
505.06(D)	Alum. Handrailing (2-Rail)	L.F.	470.
Alternate No. 2			
505.06(C)	Steel Handrailing (2-Rail)	L.F.	470.

DESCRIPTION Str. No. 126 Sta. 625+10.00 Skew 65 degree 22' L.F. 2-10'x12'x157.26' Rdy. R.C. Box R2.72' Lt. & 74.54' Rt. Des.: BC-1254.L.F. BRID: X009			
ITEM NO.	ITEM	UNIT	QUANTITY
202.06(C)	Uncl. Exc	C.Y.	170.
501.06(A)	Structural Exc. Uncl.	C.Y.	142.8
509.06(B)	Class A Conc.	C.Y.	613.6
511.06	Reinforcing Steel	LB.	63,040.

DESCRIPTION Str. No. 138 Lt. Sta. 641+15.98 Sur. Line Const. 34'(2-86'-6" Cont.)34' Simple Plate Girder Spans with 26' Cl. Rdy. W/2'-6" S.W. Both Sides BRID: X205			
ITEM NO.	ITEM	UNIT	QUANTITY
202.06(F)	Select Borrow	C.Y.	200.
501.06(B)	Substr. Exc. Common	C.Y.	144.
501.06(C)	Substr. Exc. Rock	C.Y.	31.8
504.06(A)(AE)	Class AA Conc.	C.Y.	219.7
506.06(A)	Structural Steel	LB.	163,940.
509.06(B)	Class A Conc.	C.Y.	133.4
511.06	Reinforcing Steel	LB.	71,390.
514.06(E)Sp.	Steel Piling(10"BP42#)W/O Tins	L.F.	222.
614.06(AA)	6" Perf. Pipe Underdrain	L.F.	120.
Sp.	4" Conc. Slope Wall	S.Y.	305.8
Alternate No. 1			
505.06(D)	Alum. Handrailing (2-Rail)	L.F.	512.5
Alternate No. 2			
505.06(C)	Steel Handrailing (2-Rail)	L.F.	512.5

DESCRIPTION Str. No. 138 Rt. Sta. 641+15.98 Sur. Line Const. 34'(2-86'-6" Cont.)34' Simple Plate Girder Spans with 26' Cl. Rdy. W/2'-6" S.W. Both Sides BRID: X205			
ITEM NO.	ITEM	UNIT	QUANTITY
202.06(F)	Select Borrow	C.Y.	200.
501.06(B)	Substr. Exc. Common	C.Y.	144.
501.06(C)	Substr. Exc. Rock	C.Y.	33.1
504.06(A)(AE)	Class AA Conc.	C.Y.	219.7
506.06(A)	Structural Steel	LB.	163,940.
509.06(B)	Class A Conc.	C.Y.	133.4
511.06	Reinforcing Steel	LB.	71,390.
514.06(E)Sp.	Steel Piling(10"BP42#)W/O Tins	L.F.	216.
614.06(AA)	6" Perf. Pipe Underdrain	L.F.	120.
Sp.	4" Conc. Slope Wall	S.Y.	305.8
Alternate No. 1			
505.06(D)	Alum. Handrailing (2-Rail)	L.F.	512.5
Alternate No. 2			
505.06(C)	Steel Handrailing (2-Rail)	L.F.	512.5

DESCRIPTION Str. No. 155 Sta. 694+46.96 Const. 34'(2-93'-14" Cont.)34' Simple Plate Girder Spans with 30' Cl. Rdy. W/2'-6" S.W. Both Sides BRID: X205			
ITEM NO.	ITEM	UNIT	QUANTITY
202.06(F)	Select Borrow	C.Y.	200.
501.06(B)	Substr. Exc. Common	C.Y.	493.
501.06(C)	Substr. Exc. Rock	C.Y.	14.4
504.06(A)(AE)	Class AA Conc.	C.Y.	269.
506.06(A)	Structural Steel	LB.	195,000.
509.06(B)	Class A Conc.	C.Y.	175.
511.06	Reinforcing Steel	LB.	89,260.
514.06(E)Sp.	Steel Piling(10"BP42#)W/O Tins	L.F.	385.
Sp.	4" Conc. Slope Wall	S.Y.	361.
Alternate No. 1			
505.06(D)	Alum. Handrailing (2-Rail)	L.F.	560.8
Alternate No. 2			
505.06(C)	Steel Handrailing (2-Rail)	L.F.	560.8

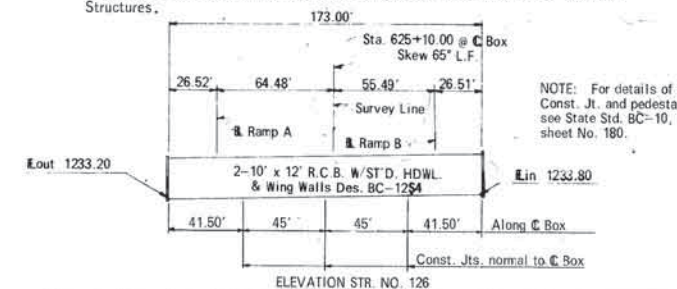
DESCRIPTION Str. No. 163 Lt. Sta. 588+57.75 Sur. Line Const. 2-101' Cont. Plate Girder Spans with 26' Cl. Rdy. W/2'-6" S.W. Both Sides BRID: X205			
ITEM NO.	ITEM	UNIT	QUANTITY
202.06(F)	Select Borrow	C.Y.	200.
501.06(B)	Substr. Exc. Common	C.Y.	82.
501.06(C)	Substr. Exc. Rock	C.Y.	28.4
504.06(A)(AE)	Class AA Conc.	C.Y.	182.8
506.06(A)	Structural Steel	LB.	163,750.
509.06(B)	Class A Conc.	C.Y.	118.
511.06	Reinforcing Steel	LB.	58,290.
516.06(A)	Drilled Shafts 18" Dia.	L.F.	15.
516.06(A)	Drilled Shafts 30" Dia.	L.F.	51.
516.06(B)	Footings Bells	C.Y.	1.8
614.06(AA)	6" Perf. Pipe Underdrain	L.F.	94.
Sp.	4" Conc. Slope Wall	S.Y.	261.7
Alternate No. 1			
505.06(D)	Alum. Handrailing (2-Rail)	L.F.	443.
Alternate No. 2			
505.06(C)	Steel Handrailing (2-Rail)	L.F.	443.

DESCRIPTION Str. No. 163 Rt. Sta. 588+57.75 Sur. Line Const. 2-101' Cont. Plate Girder Spans with 26' Cl. Rdy. W/2'-6" S.W. Both Sides BRID: X205			
ITEM NO.	ITEM	UNIT	QUANTITY
202.06(F)	Select Borrow	C.Y.	200.
501.06(B)	Substr. Exc. Common	C.Y.	82.
501.06(C)	Substr. Exc. Rock	C.Y.	26.3
504.06(A)(AE)	Class AA Conc.	C.Y.	182.8
506.06(A)	Structural Steel	LB.	163,750.
509.06(B)	Class A Conc.	C.Y.	118.
511.06	Reinforcing Steel	LB.	58,290.
516.06(A)	Drilled Shafts 18" Dia.	L.F.	17.
516.06(A)	Drilled Shafts 30" Dia.	L.F.	57.
516.06(B)	Footings Bells	C.Y.	1.8
614.06(AA)	6" Perf. Pipe Underdrain	L.F.	94.
Sp.	4" Conc. Slope Wall	S.Y.	261.7
Alternate No. 1			
505.06(D)	Alum. Handrailing (2-Rail)	L.F.	443.
Alternate No. 2			
505.06(C)	Steel Handrailing (2-Rail)	L.F.	443.

All construction and materials shall be in accordance with 1967 Oklahoma Standard Specifications for Highway Construction and Special Provisions.

Contractor may submit bids on both Steel and Aluminum Handrailing. Type of rail used will be determined by bids received. Aluminum Handrailing Types will be listed in the Proposal as Alternate No. 1. Steel Handrailing Types will be listed in the Proposal as Alternate No. 2.

Item "Removal of Existing Structure" consists of removing existing 21.2' x 40' Conc. Underpass at Sta. 460+14. The Lump Sum Price bid for removal shall be full compensation for furnishing all equipment, labor and incidentals to complete the work in accordance with Section 501.04b(2) of the Okla. Std. Specs and as directed by the Resident Engineer. The removed structure to become the property of the Contractor. See Special Provisions for Sequence of Work for AT & SF Railroad Structures.



Design	
Drawn	
Checked	G.M. 11-69
Approved	
Squad	MELLIES

SUMMARY OF PAY QUANTITIES  
BRIDGES

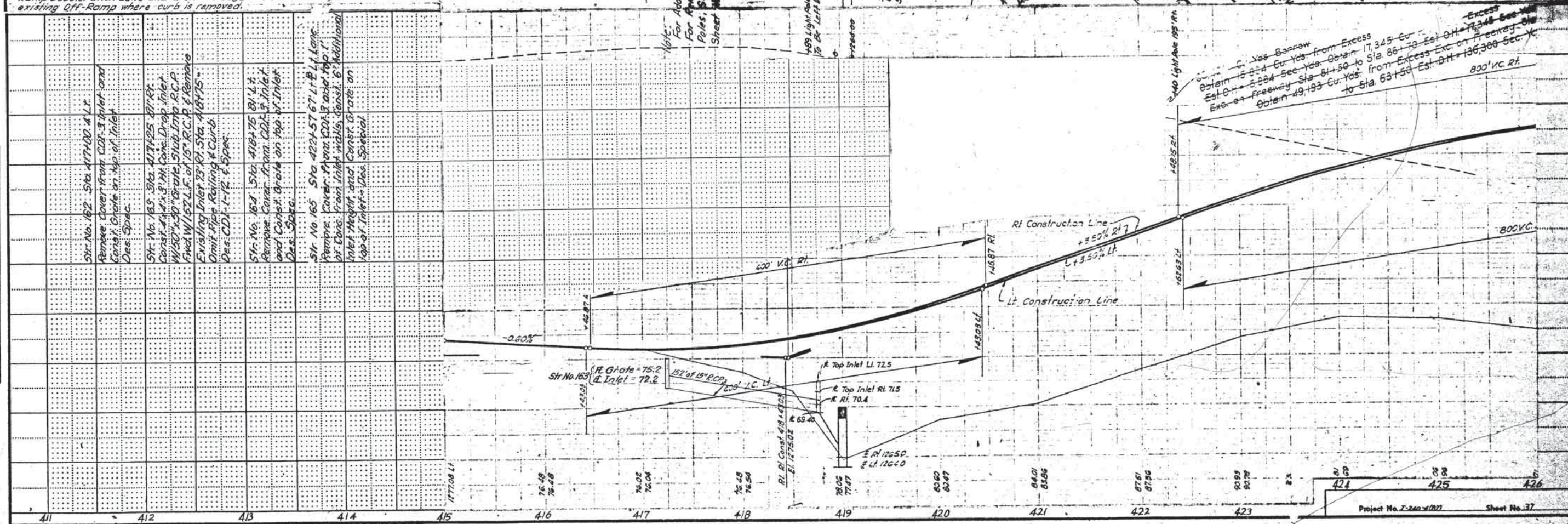
F.A. Project No. 1-240-4(86)157 Sheet No. 35A



PLAN	DATE
REVISIONS	
NO.	
NOTE BOOK	
BY	
DATE	

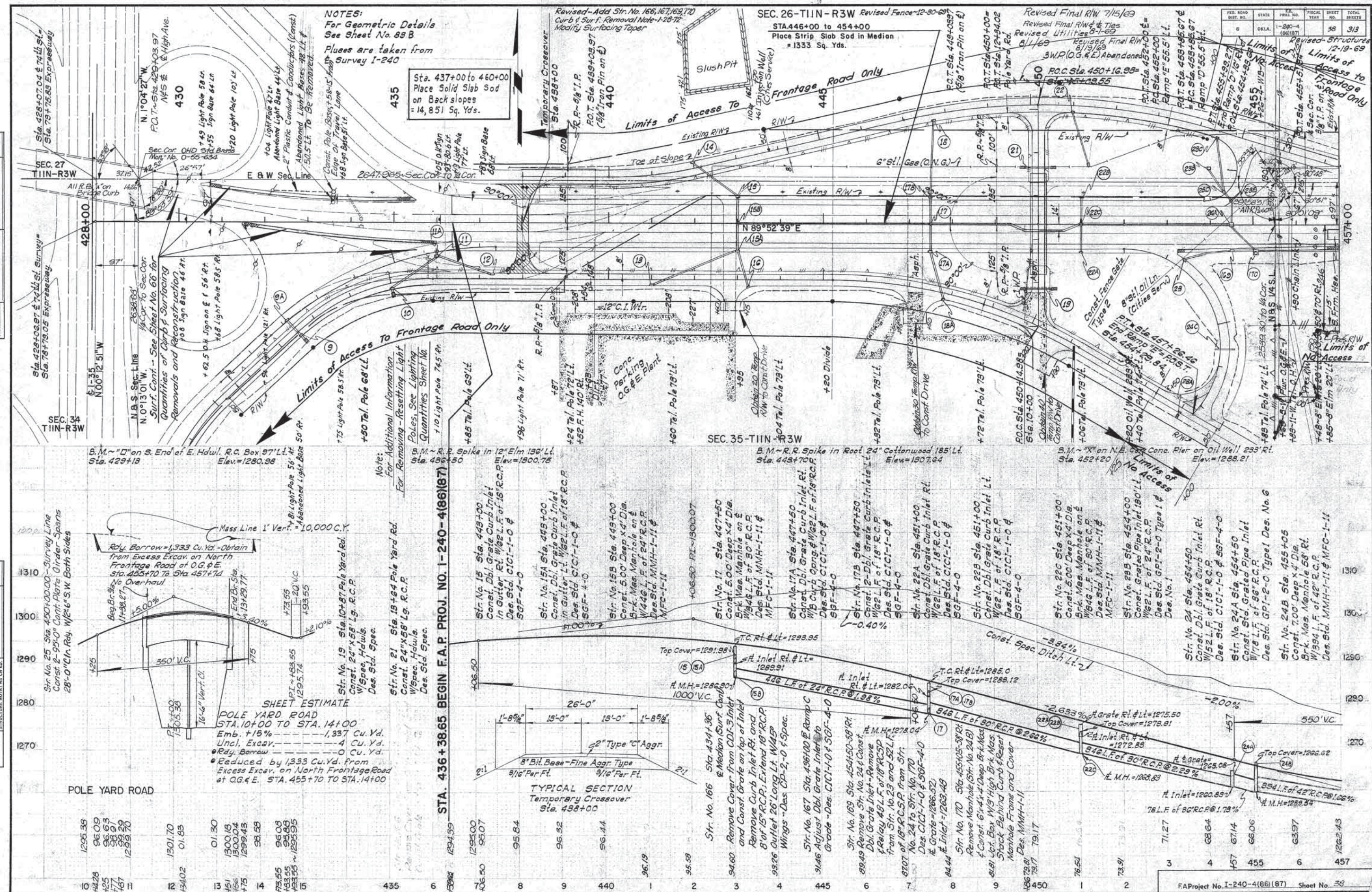
PROFILE	DATE
REVISIONS	
NO.	
NOTE BOOK	
BY	
DATE	

DETAIL OF GUARD RAIL RECONSTRUCTION  
Sta. 417+80 to Sta. 420+92.5 - Surf. Contractor shall remove and reconstruct Guard Rail with face the rail at the edge of the surf. shldr. of the new Ramp Deceleration Lane and 2' off the edge of the existing Off-Ramp where curb is removed.



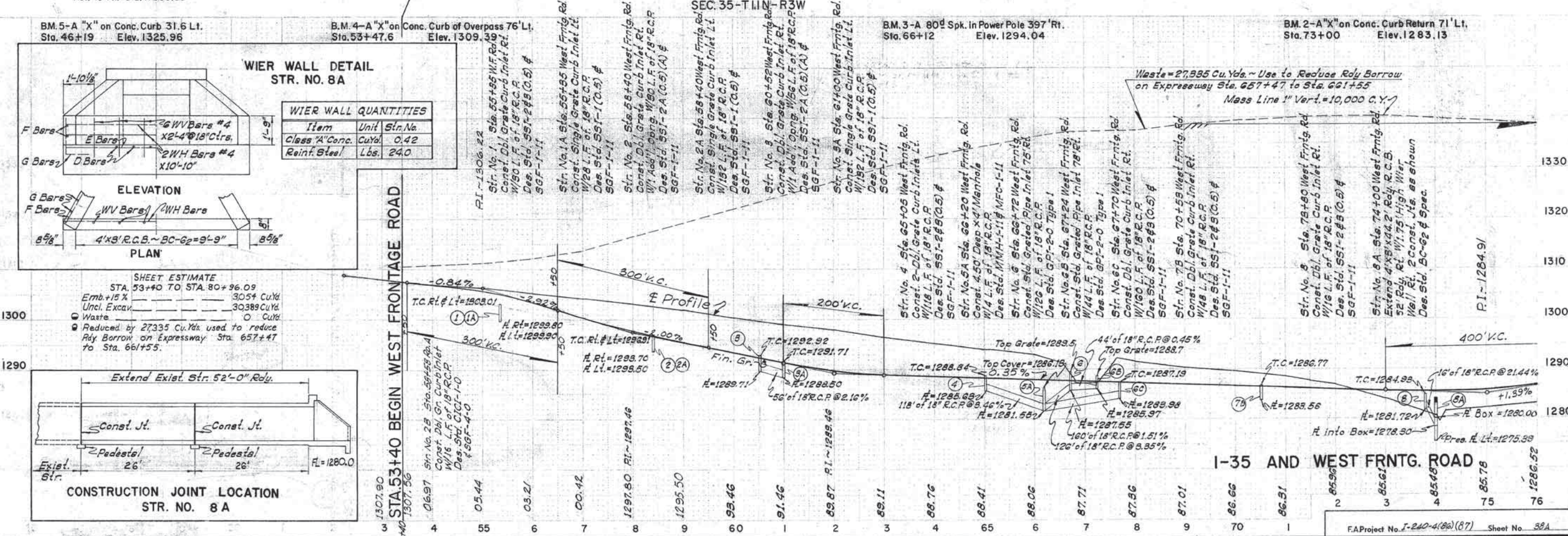


NO.					
NOTE BOOK					
SURVEYED					
PLOTTED					
GRADES CHECKED					
B. M. S. NOTED					
STRUCTURE MARKING MADE					
		BY		DATE	





1-582 734-4789  
1-582 734-5322  
1-582 (SND) 18350  
Revised-Final RW  
7-16-69  
Revised Utilities  
8/1/69  
Revised Final RW  
alston



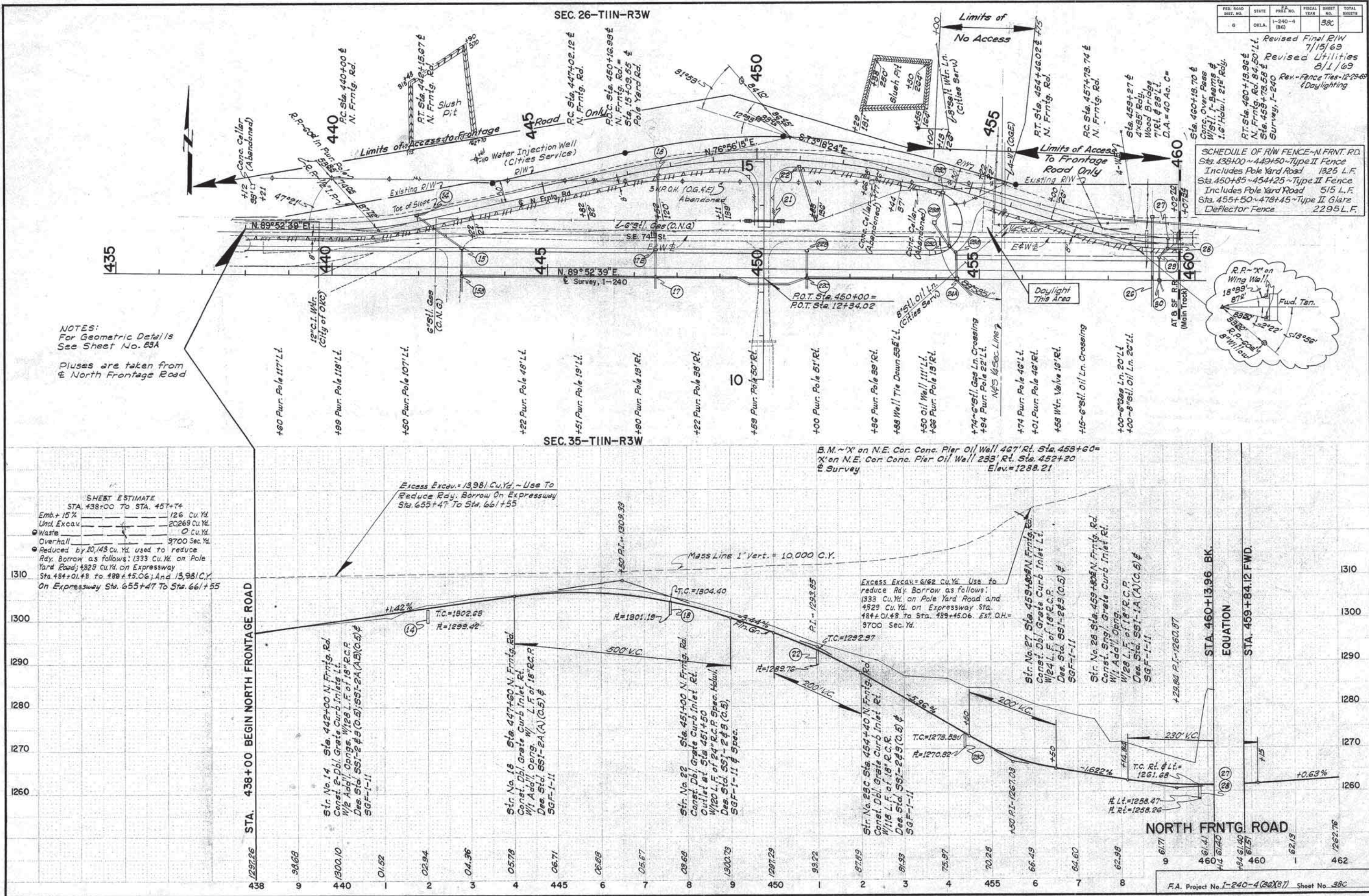




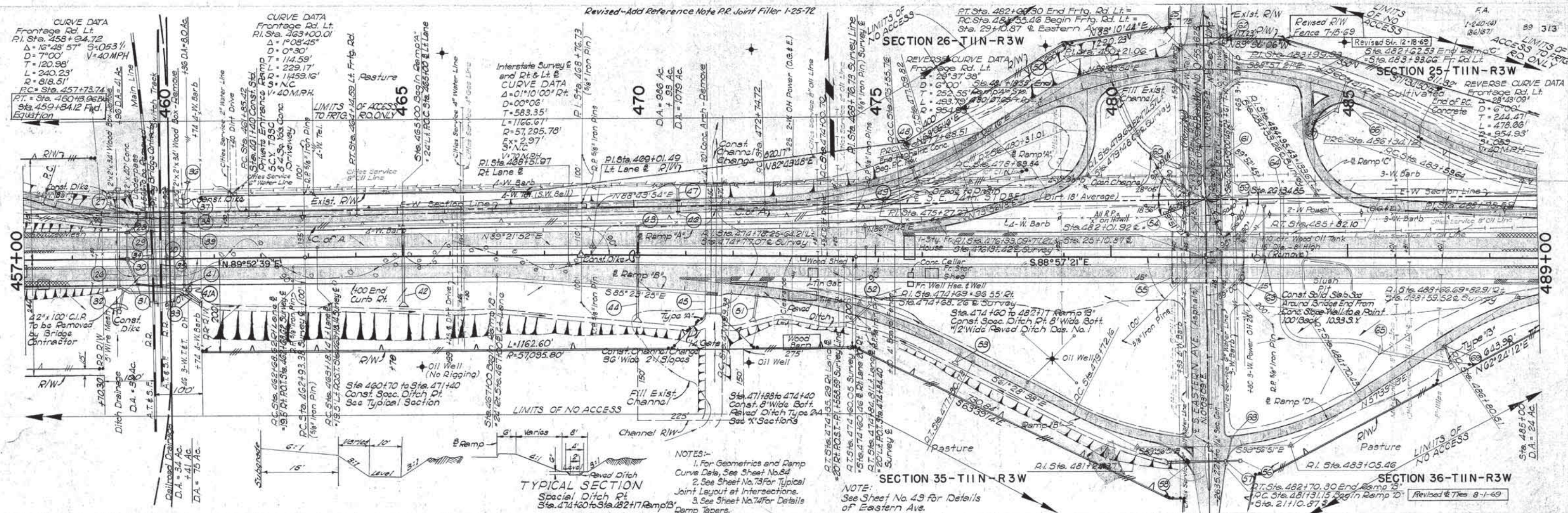


PLAN	DATE
SURVEYED	BY
NOTE BOOK	ALIGNED CHECKED
RT. OF WAY CHECKED	
NO.	

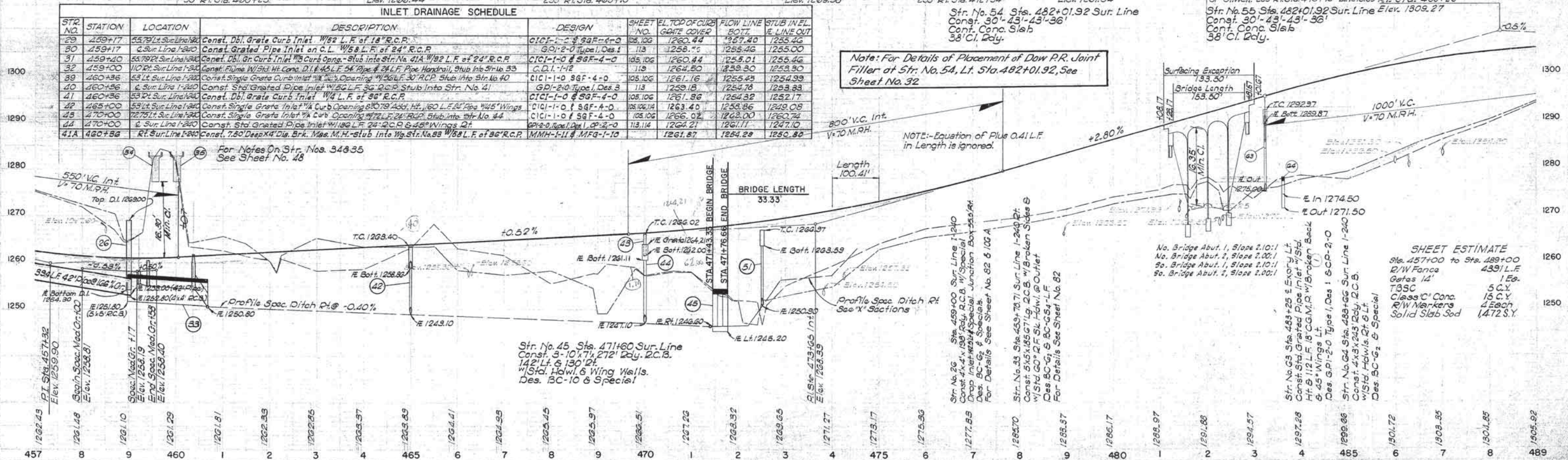
PROFILE	DATE
SURVEYED	BY
NOTE BOOK	GRADES CHECKED
B. M. NOTED	
STRUCTURE NOTATIONS CHECKED	
NO.	



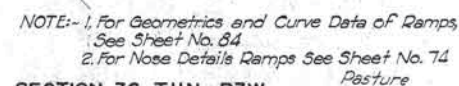




STR. NO.	STATION	LOCATION	DESCRIPTION	DESIGN	SHEET NO.	EL. TOP OF CURB GATE COVER	FLOW LINE BOTT.	STUB IN EL. E LINE OF
29	459+17	55.791 Lt. Sur. Line 1-40	Const. Dbl. Gate Curb Inlet W/5' L.F. of 18" R.C.P.	C1C1-1-0 f 5' SGF-4-0	105.100	1260.44	1257.40	1255.46
30	459+17	6 Sur. Line 1-40	Const. Grated Pipe Inlet on C.L. W/5' L.F. of 24" R.C.P.	G01-2-0 Type 1, Des 3	113	1258.75	1255.46	1255.00
31	459+00	55.792 Lt. Sur. Line 1-40	Const. Dbl. Gr. Curb Inlet W/3' Curb Opening, Stub into Str. No. 41A W/2' L.F. of 24" R.C.P.	C1C1-1-0 f 5' SGF-4-0	105.100	1260.44	1255.01	1255.46
32	459+00	110 Rt. Sur. Line 1-34	Const. Flume W/5' L.F. of 18" R.C.P. 54" Pipe 4 3/4" Fl. Pipe Handrail, Stub into Str. No. 33	G.D.I. 1-1/2	113	1264.50	1259.30	1255.30
39	460+36	53 Lt. Sur. Line 1-40	Const. Single Gate Curb Inlet W/3' Curb Opening W/26' L.F. of 30" RCP, Stub into Str. No. 40	C1C1-1-0 9' SGF-4-0	105.100	1261.16	1255.43	1254.99
40	460+36	6 Sur. Line 1-40	Const. Std. Grated Pipe Inlet W/5' L.F. of 36" RCP, Stub into Str. No. 41	G.D. 2-0 Type 1, Des 3	113	1259.18	1254.78	1253.33
41	460+36	53 Rt. Sur. Line 1-40	Const. Dbl. Gate Curb Inlet W/4' L.F. of 36" R.C.P.	C1C1-1-0 f 5' SGF-4-0	105.100	1261.86	1254.32	1252.17
42	465+00	55.793 Lt. Sur. Line 1-40	Const. Single Gate Inlet W/4' Curb Opening 8'0" x 24" H. 16' L.F. of 24" R.C.P. W/45" Wings	C1C1-1-0 f 5' SGF-4-0	105.100	1263.40	1253.86	1249.08
43	470+00	72.751 Lt. Sur. Line 1-40	Const. Single Gate Inlet W/4' Curb Opening W/21' L.F. of 24" RCP, Stub into Str. No. 44	C1C1-1-0 f 5' SGF-4-0	105.100	1266.02	1263.00	1260.74
44	470+00	6 Sur. Line 1-40	Const. Std. Grated Pipe Inlet W/18' L.F. of 24" R.C.P. of 48" Wings 2'	G.D. 2-0 Type 1, Des 3	113, 114	1264.21	1261.10	1247.10
41A	460+36	Rt. Sur. Line 1-40	Const. 750' Deep 4' Dia. Brk. Man. M.H. - Stub into Wd. Str. No. 58 W/8' L.F. of 36" R.C.P.	MMH-1-1/2 MFG-1-10		1261.87	1254.29	1260.80







B.M. - X on N.E. Corner of N.E. Pier of  
Oilwell 175 Rt. Sta. 305+80 E/Ov. 13/G. 59

Str: No. 75 Sta. 514+15 Survey Line I-240  
Const. 8' X 5' X 290' Long R.C.B. w/ Broken Back



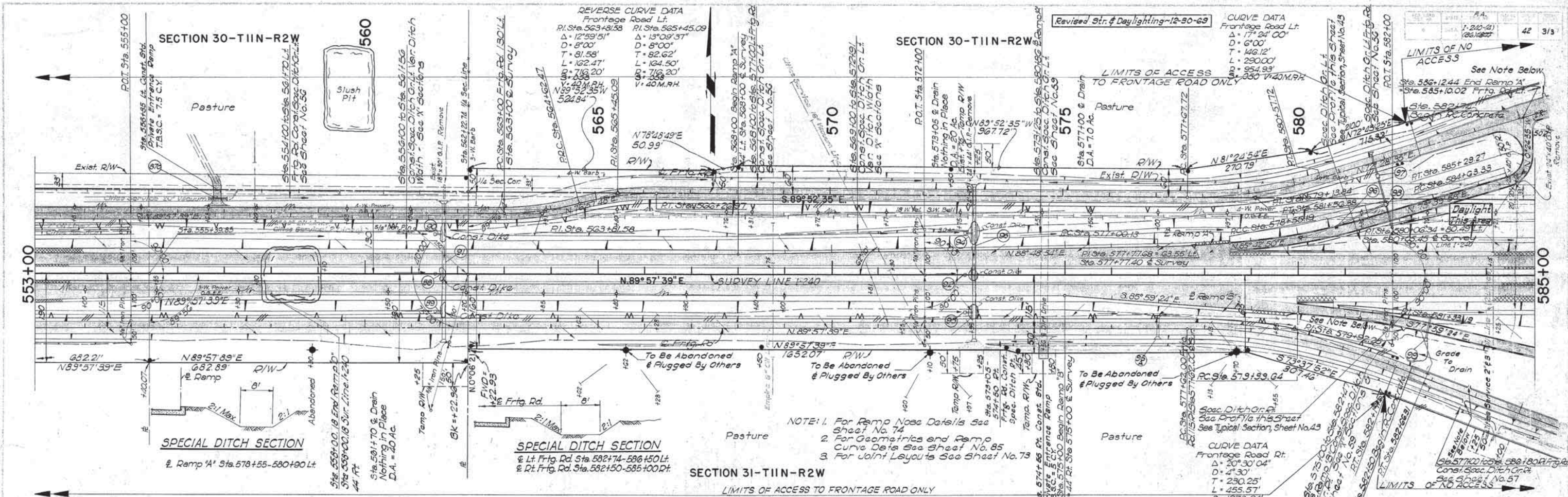






FILED	DATE
APR 19 1967	APR 19 1967
PLANNING	DESIGN
CONSTRUCTION	MAINTENANCE

FILED	DATE
APR 19 1967	APR 19 1967
PLANNING	DESIGN
CONSTRUCTION	MAINTENANCE



STN. NO.	STATION	LOCATION	DESCRIPTION	DESIGN	SHEET NO.	EL. TOP OF CURB	FLOW LINE	STUB IN EL.
90	561+56	Sur. Line 84 Lt.	Const. Std. Grated Pipe Inlet "12 L.F. 30" D.C.P. Stub Into Str. No. 91	GP12-0, Type 1, Des. 2	113	1302.35	1298.70	1298.50
89	561+56	Sur. Line 81 Lt.	Const. Std. Grated Pipe Inlet "12 L.F. 30" D.C.P. Stub Into Str. No. 91	GP12-0, Type 1, Des. 2	113	1301.31	1297.66	1298.20
88	561+56	Sur. Line 1-240	Const. Std. Grated Pipe Inlet "12 L.F. 18" D.C.P. Stub Into Str. No. 91	GP12-0, Type 1, Des. 1	113	1302.81	1299.71	1298.60
94	572+91	Sur. Line 90 Lt.	Const. Std. Grated Pipe Inlet "12 L.F. 24" D.C.P. Stub Into Str. No. 95	GP12-0, Type 1, Des. 1	113	1294.65	1291.55	1290.23
93	572+91	Sur. Line 80 Rt.	Const. Std. Grated Pipe Inlet "12 L.F. 24" D.C.P. Stub Into Str. No. 95	GP12-0, Type 1, Des. 1	113	1294.65	1291.55	1290.23
92	572+91	Sur. Line 1-240	Const. Std. Grated Pipe Inlet "12 L.F. 18" D.C.P. Stub Into Str. No. 95	GP12-0, Type 1, Des. 1	113	1295.10	1292.00	1291.00

3 M-X on N.E. Corner of N.E. Pier of Abandoned Oilwell 155 Rt. Sta. 553+00 Elev. 1301.03

3 M-X on N.E. Corner of N.E. Pier of Oilwell 155 Rt. Sta. 545+62 Elev. 1300.57

**SHEET ESTIMATE**

Sta. 553+00 to Sta. 585+00

Fence 6559 L.F.

T.B.S.C. 12.5 C.Y.

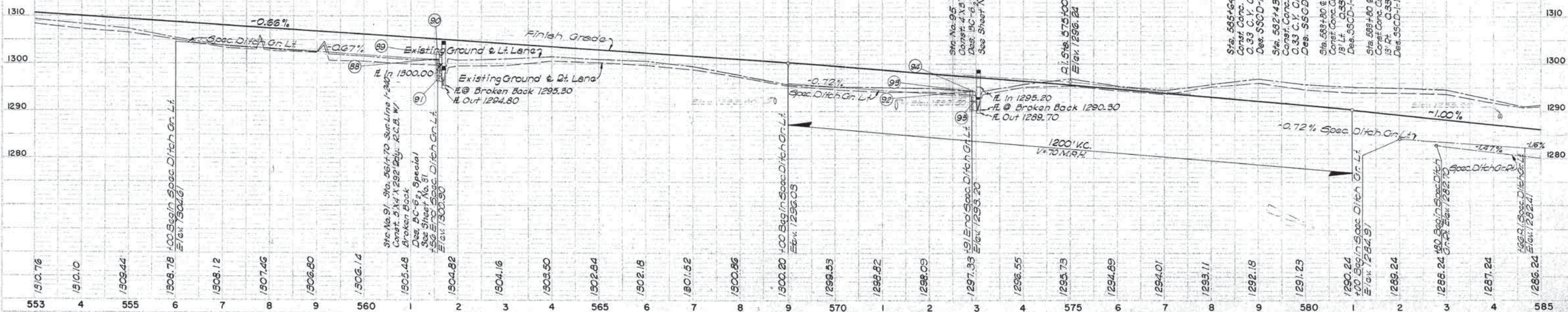
R/W Markers 11 Ea.

Sta. 555+64 E. Lt. Frt. Rd. Const. Conc. Curb Opening Des. No. 2 0.33 C.Y. C.I. "C" Conc. Des. S5CD-1-12

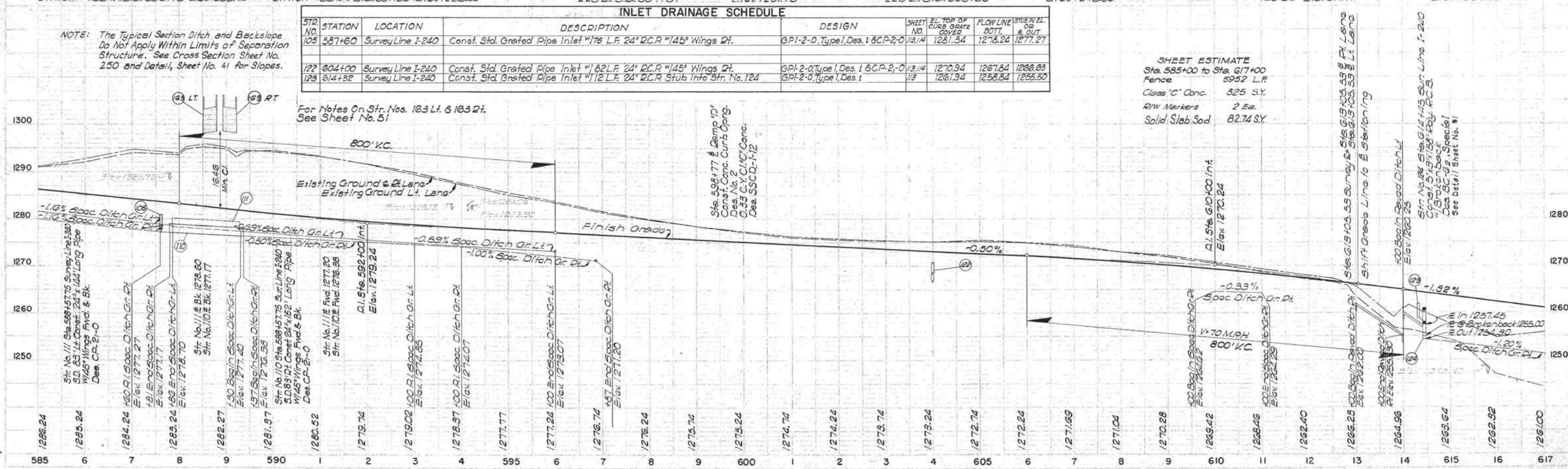
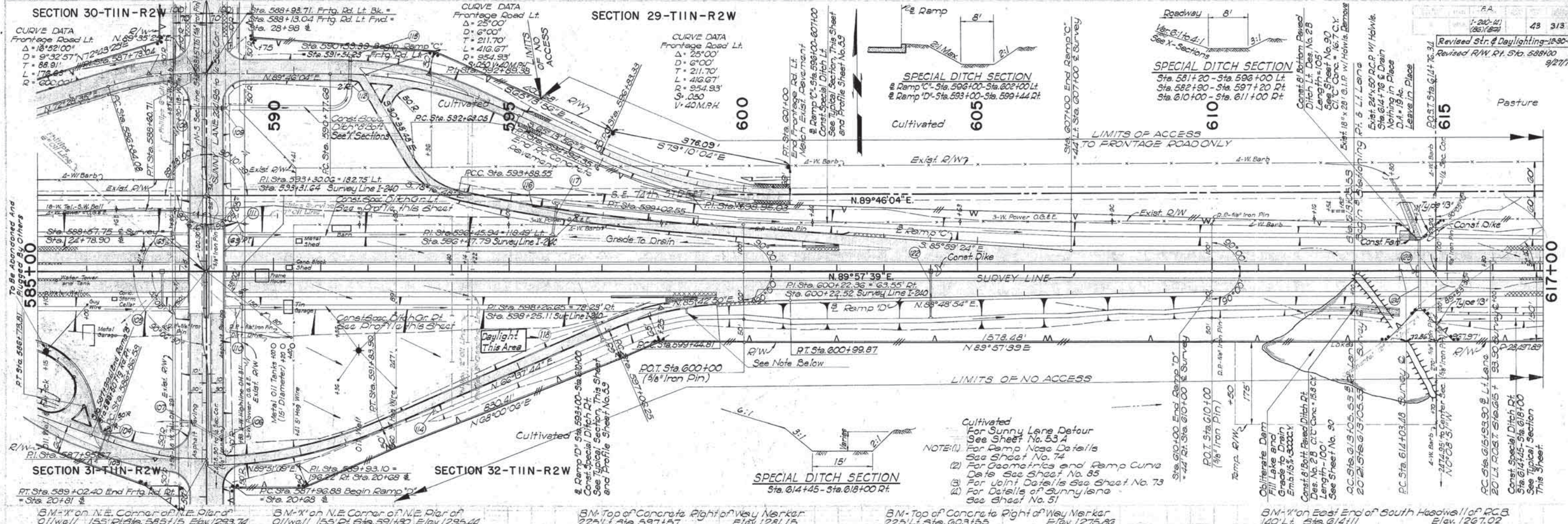
Sta. 562+49 E. Ramp 15" Const. Conc. Curb Opening Des. No. 2 0.33 C.Y. C.I. "C" Conc. Des. S5CD-1-12

Sta. 583+80 E. Lt. Frontage Rd. Const. Conc. Curb Opening Des. No. 2 0.33 C.Y. C.I. "C" Conc. Des. S5CD-1-12

Sta. 588+80 E. Rt. Frontage Rd. Const. Conc. Curb Opening Des. No. 2 0.33 C.Y. C.I. "C" Conc. Des. S5CD-1-12







INLET DRAINAGE SCHEDULE

STATION	LOCATION	DESCRIPTION	DESIGN	SHEET NO.	EL. TOP OF CURB GRATE	FLOW LINE BOT.	STUB IN EL. # OUT
105 587+60	Survey Line I-240	Const. Std. Grated Pipe Inlet w/ 176 L.F. 24" D.C.R. w/ 145" Wings Rt.	GPI-2-0, Type 1, Des. 1 6CP-2-0	1/3, 1/4	1281.34	1278.24	1277.27
122 604+00	Survey Line I-240	Const. Std. Grated Pipe Inlet w/ 182 L.F. 24" D.C.R. w/ 145" Wings Rt.	GPI-2-0, Type 1, Des. 1 6CP-2-0	1/3, 1/4	1270.94	1267.64	1266.03
123 614+32	Survey Line I-240	Const. Std. Grated Pipe Inlet w/ 112 L.F. 24" D.C.R. Stub Into Str. No. 124	GPI-2-0, Type 1, Des. 1	1/3	1261.94	1258.24	1255.50

**SHEET ESTIMATE**  
 Sta. 585+00 to Sta. 617+00  
 Fence 5952 L.F.  
 Class "C" Conc. 325 S.Y.  
 R/W Markers 2 Ea.  
 Solid Slab Sod 82.74 S.Y.

NOTE: The Typical Section Ditch and Backslope Do Not Apply Within Limits of Separation Structure. See Cross Section Sheet No. 250 and Detail, Sheet No. 41 for Slopes.

For Notes On Str. Nos. 103 Lt. & 103 Rt. See Sheet No. 51

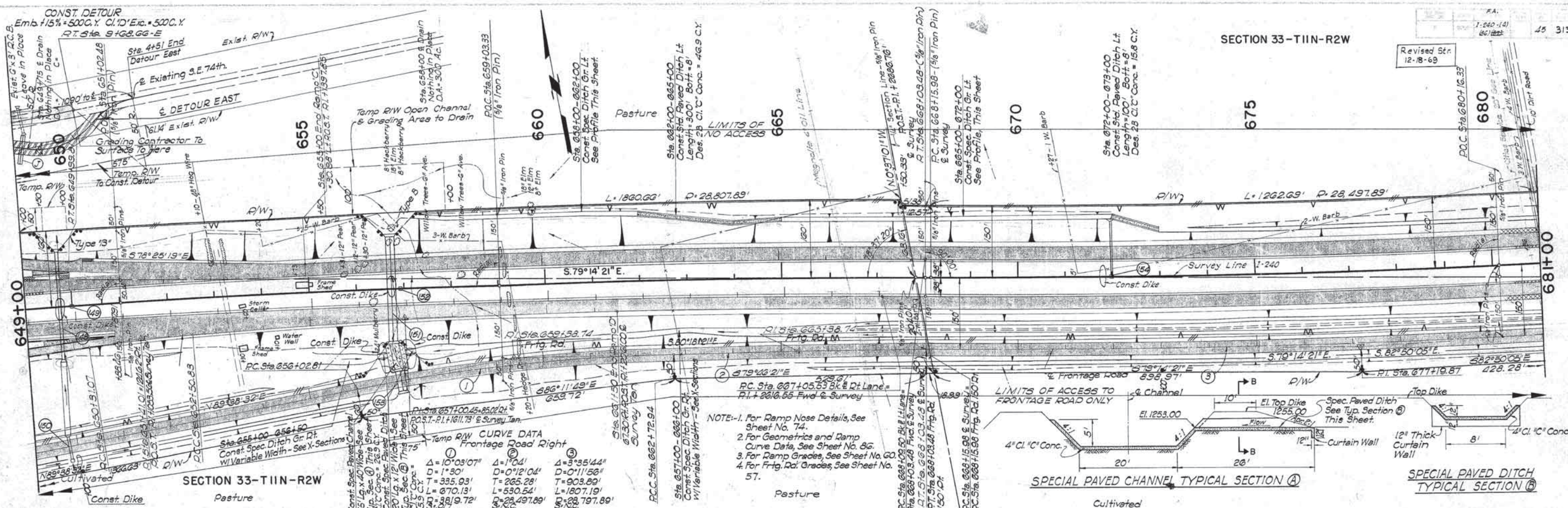
Sta. 598+77 & Ramp 10' Const. Conc. Curb Opening Des. No. 2 C.C. Conc. Des. SSCD-112

Sta. 613+05.55 Survey Ditch to 613+05.55 R/L Lane Shift Grade Line to 613+05.55 R/L Lane  
 Sta. 614+15 Survey Ditch to 614+15 R/L Lane Shift Grade Line to 614+15 R/L Lane  
 Sta. 614+15 Survey Ditch to 614+15 R/L Lane Shift Grade Line to 614+15 R/L Lane



Sta. 647+00  $\frac{1}{2}$  Ramp "D"  
Const. Conc. Curb Opening  
Des. No. 2 0.33 C.Y. Cl. "C" Conc.  
Des. SSCD-1-12





SECTION 33-TIIN-R2W

SECTION 33-TIIN-R2W

STR. NO.	STATION	LOCATION	DESCRIPTION	DESIGN	SHEET NO.	EL. TOP OF CURB	FLOW LINE	STUB IN EL.
149	649+90	Sur. Line I-240	Const. Std. Grated Pipe Inlet w/12" L.F. 18" R.C.P. Stub into Str. No. 148	GPI-2-0, Type 1, Des. 1	1/3	1257.48	1254.38	1254.00
152	650+90	Sur. Line I-240	Const. Std. Grated Pipe Inlet w/12" L.F. 18" R.C.P. Stub into Str. No. 151	GPI-2-0, Type 1, Des. 1	1/3	1263.40	1260.30	1255.77
154	672+00	Sur. Line I-240	Const. Std. Grated Pipe Inlet w/102" L.F. 24" R.C.P. w/45" Wings Lt.	GPI-2-0, Type 1, Des. 1	1/3	1276.04	1272.94	1271.70

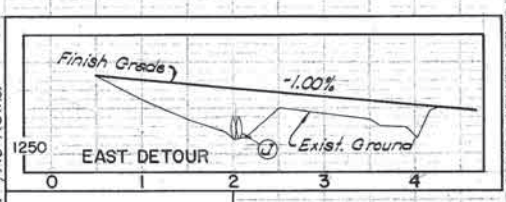
B.M. - "X" on East End of South Hdwl. R.C.B. 350' Lt. Sta. 649+50 Elev. 1256.39

B.M. - R.R. Spike in 10" Hackberry, 350' Lt. Sta. 654+00 Elev. 1248.74

B.M. - R.R. Spike in 20' Elm, 210' Lt. Sta. 661+20 Elev. 1250.25

B.M. - Top 5/8" Iron Pin in Concrete Cap 200' Lt. Sta. 668+03.48 Elev. 1271.34

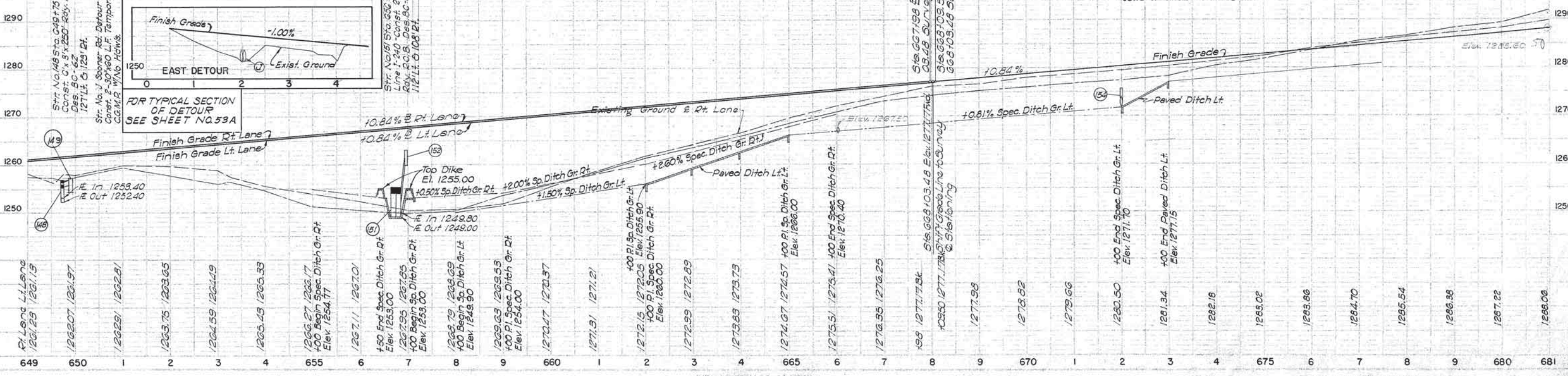
B.M. - Top 5/8" Iron Pin in Concrete Cap 200' Lt. Sta. 680+16.33 Elev. 1290.36



SPECIAL PAVED CHANNEL TYPICAL SECTION (A)

SPECIAL PAVED DITCH TYPICAL SECTION (B)

SHEET ESTIMATE  
Sta. 649+00 to Sta. 681+00  
Fence 6575 L.F.  
Class C Conc. 355 C.Y.  
R/W Markers 6 Each  
Solid Slab Sod 154.96 S.Y.



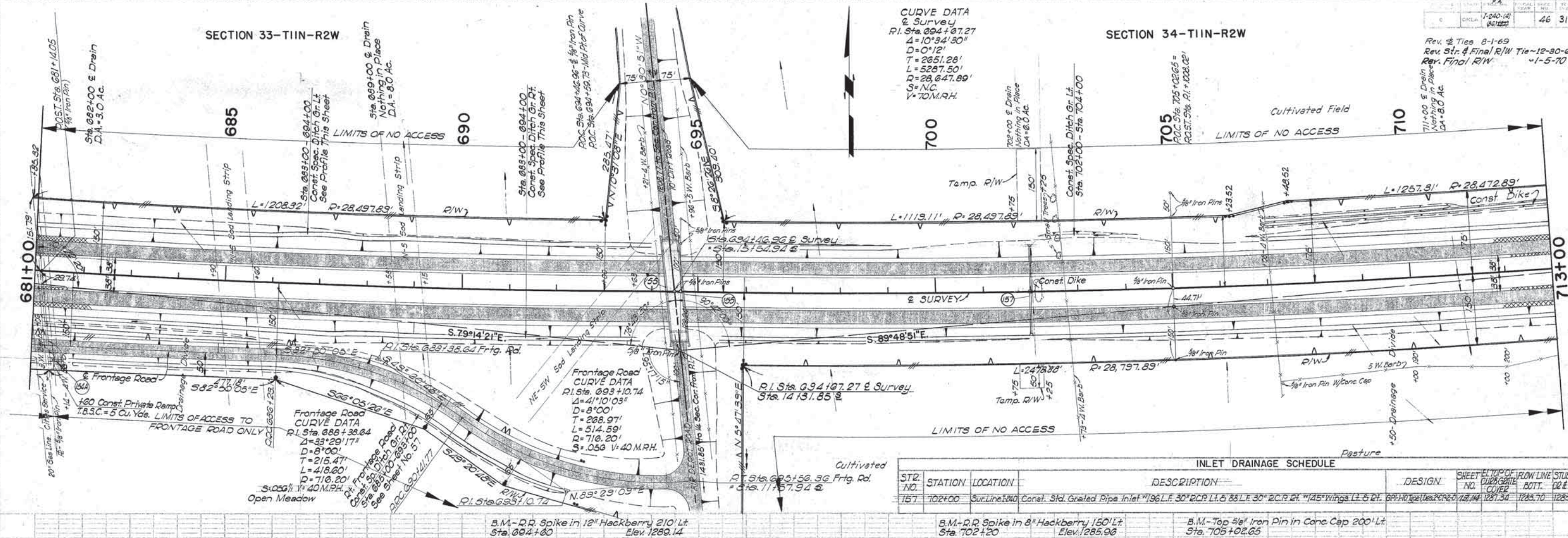


## SECTION 33-TIIN-R2W

## SECTION 34-TIIN-R2W

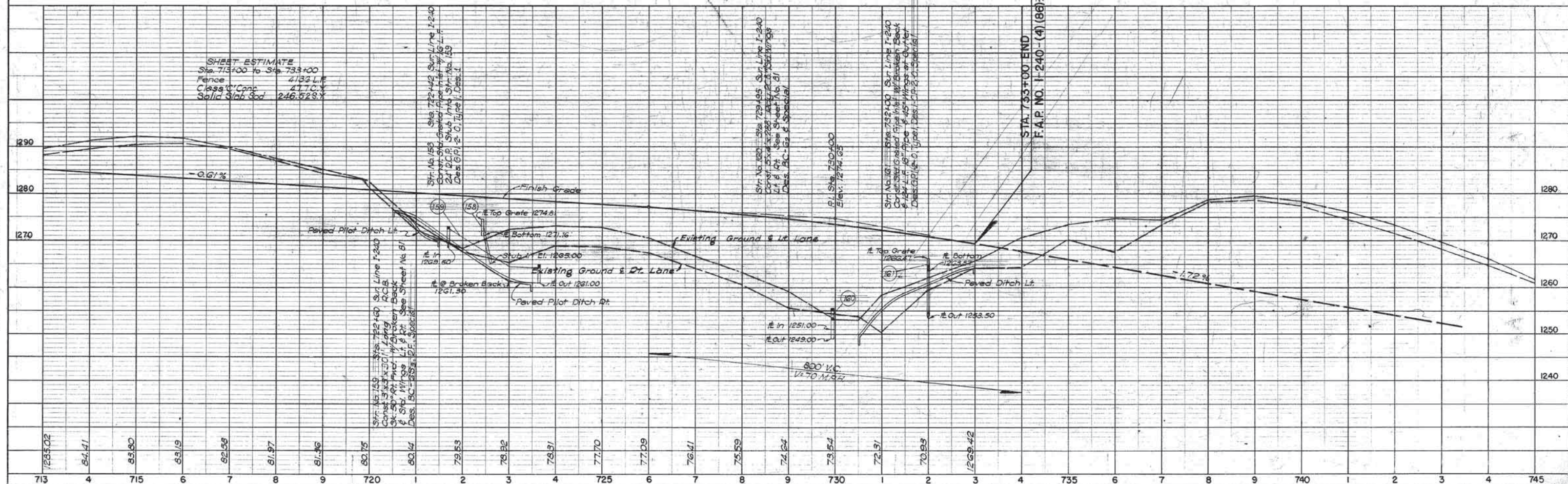
CURVE DATA  
 & Survey  
 P.I. Sta. 694+07.27  
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 $D = 0^{\circ}12'$   
 $T = 2651.28'$   
 $L = 5287.50'$   
 $P = 28,647.89'$   
 $S = N.C.$   
 $V = 70 M.R.H.$

Rev. # Ties 8-1-69  
 Rev. Str. # Final R/W Tie-12-30-69  
 Rev. Final R/W -1-5-70

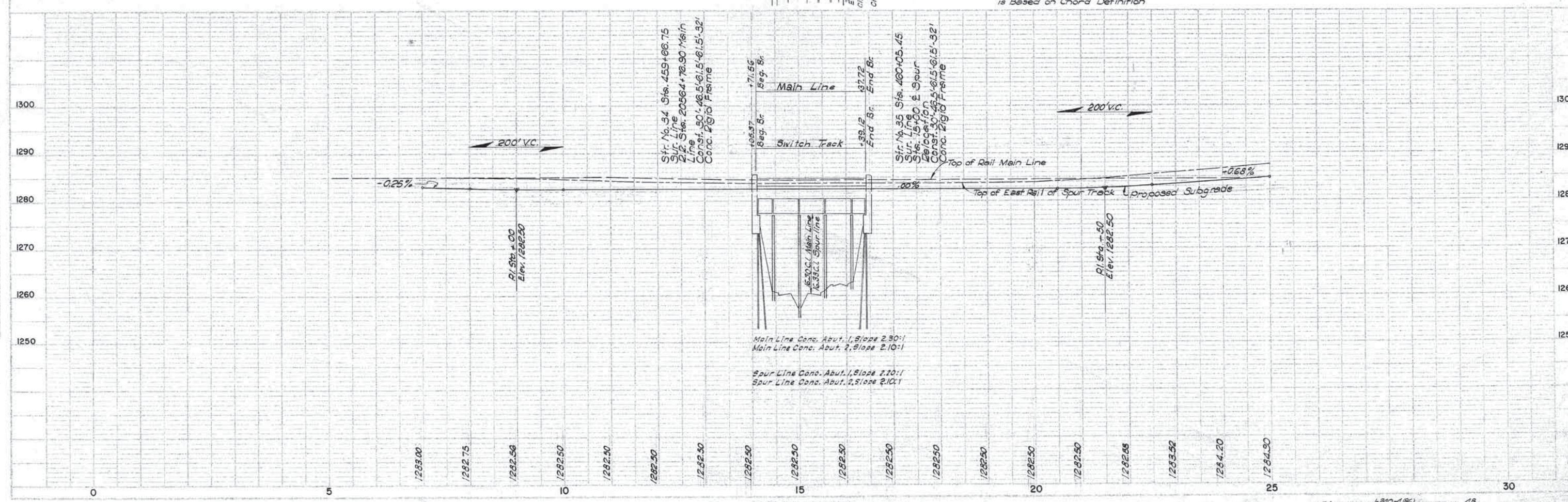


INLET DRAINAGE SCHEDULE									
STN. NO.	STATION	LOCATION	DESCRIPTION			DESIGN	SHEET NO.	EL. TOP OF FLOW LINE	STUB IN EL.
157	702+00	Sur Line 240	Const. Std. Grated Pipe Inlet	196 L.F. 30" RCP L.T. 5 88 L.F. 30" RCP R.T. 44 1/2" Wings L.T. 5 88 R.T. 44 1/2"	60' H.O. 10' Dia. 20' RCP	1/2" 1/4" 1/2" 3/4" 1" 1 1/4" 1 3/4" 2" 2 1/2" 3" 3 1/2" 4" 4 1/2" 5" 5 1/2" 6" 6 1/2" 7" 7 1/2" 8" 8 1/2" 9" 9 1/2" 10" 10 1/2" 11" 11 1/2" 12" 12 1/2" 13" 13 1/2" 14" 14 1/2" 15" 15 1/2" 16" 16 1/2" 17" 17 1/2" 18" 18 1/2" 19" 19 1/2" 20" 20 1/2" 21" 21 1/2" 22" 22 1/2" 23" 23 1/2" 24" 24 1/2" 25" 25 1/2" 26" 26 1/2" 27" 27 1/2" 28" 28 1/2" 29" 29 1/2" 30" 30 1/2" 31" 31 1/2" 32" 32 1/2" 33" 33 1/2" 34" 34 1/2" 35" 35 1/2" 36" 36 1/2" 37" 37 1/2" 38" 38 1/2" 39" 39 1/2" 40" 40 1/2" 41" 41 1/2" 42" 42 1/2" 43" 43 1/2" 44" 44 1/2" 45" 45 1/2" 46" 46 1/2" 47" 47 1/2" 48" 48 1/2" 49" 49 1/2" 50" 50 1/2" 51" 51 1/2" 52" 52 1/2" 53" 53 1/2" 54" 54 1/2" 55" 55 1/2" 56" 56 1/2" 57" 57 1/2" 58" 58 1/2" 59" 59 1/2" 60" 60 1/2" 61" 61 1/2" 62" 62 1/2" 63" 63 1/2" 64" 64 1/2" 65" 65 1/2" 66" 66 1/2" 67" 67 1/2" 68" 68 1/2" 69" 69 1/2" 70" 70 1/2" 71" 71 1/2" 72" 72 1/2" 73" 73 1/2" 74" 74 1/2" 75" 75 1/2" 76" 76 1/2" 77" 77 1/2" 78" 78 1/2" 79" 79 1/2" 80" 80 1/2" 81" 81 1/2" 82" 82 1/2" 83" 83 1/2" 84" 84 1/2" 85" 85 1/2" 86" 86 1/2" 87" 87 1/2" 88" 88 1/2" 89" 89 1/2" 90" 90 1/2" 91" 91 1/2" 92" 92 1/2" 93" 93 1/2" 94" 94 1/2" 95" 95 1/2" 96" 96 1/2" 97" 97 1/2" 98" 98 1/2" 99" 99 1/2" 100" 100 1/2" 101" 101 1/2" 102" 102 1/2" 103" 103 1/2" 104" 104 1/2" 105" 105 1/2" 106" 106 1/2" 107" 107 1/2" 108" 108 1/2" 109" 109 1/2" 110" 110 1/2" 111" 111 1/2" 112" 112 1/2" 113" 113 1/2" 114" 114 1/2" 115" 115 1/2" 116" 116 1/2" 117" 117 1/2" 118" 118 1/2" 119" 119 1/2" 120" 120 1/2" 121" 121 1/2" 122" 122 1/2" 123" 123 1/2" 124" 124 1/2" 125" 125 1/2" 126" 126 1/2" 127" 127 1/2" 128" 128 1/2" 129" 129 1/2" 130" 130 1/2" 131" 131 1/2" 132" 132 1/2" 133" 133 1/2" 134" 134 1/2" 135" 135 1/2" 136" 136 1/2" 137" 137 1/2" 138" 138 1/2" 139" 139 1/2" 140" 140 1/2" 141" 141 1/2" 142" 142 1/2" 143" 143 1/2" 144" 144 1/2" 145" 145 1/2" 146" 146 1/2" 147" 147 1/2" 148" 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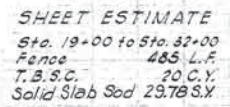








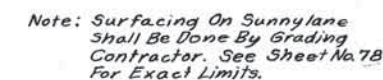
Note: Surfacing on Eastern Ave.  
shall be Done by the Grading  
Contractor. See Sheet No. 77  
For Exact Limits.









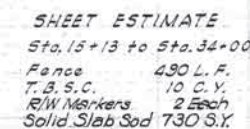


Salvage Topsoil  
Sunny Lane 40' Width x 5' Deep

S.M. ~ "X" on N.E. Conc. Pier of Oil Well 300' Lt.  
Sta. 10+60 Elev. 1288.9'

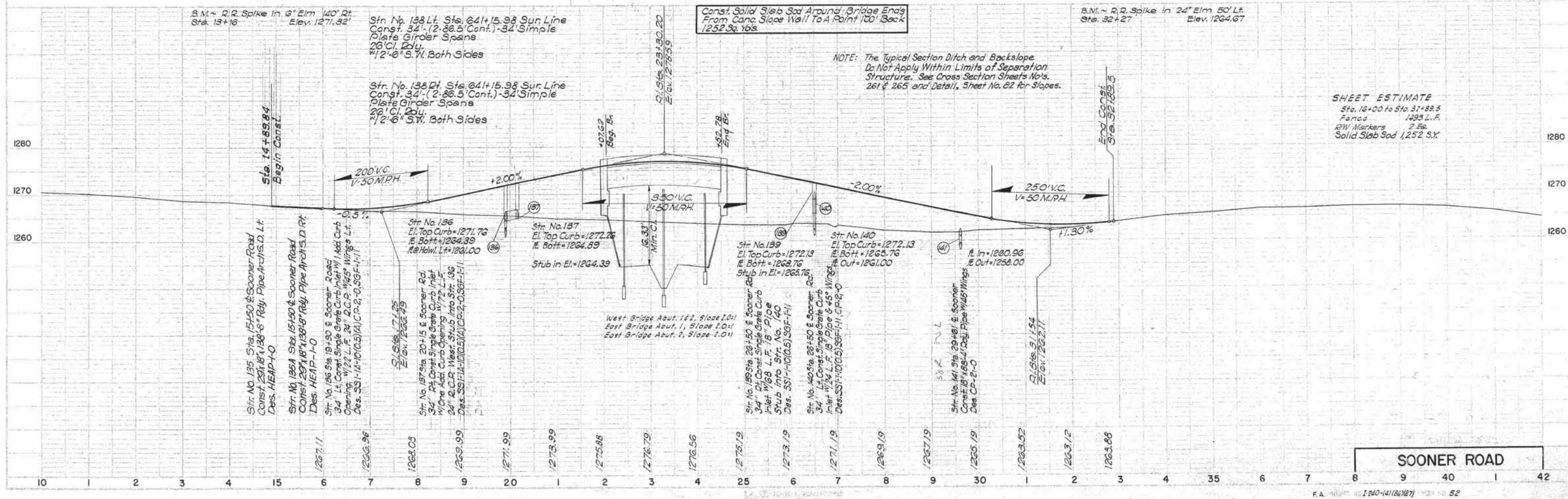
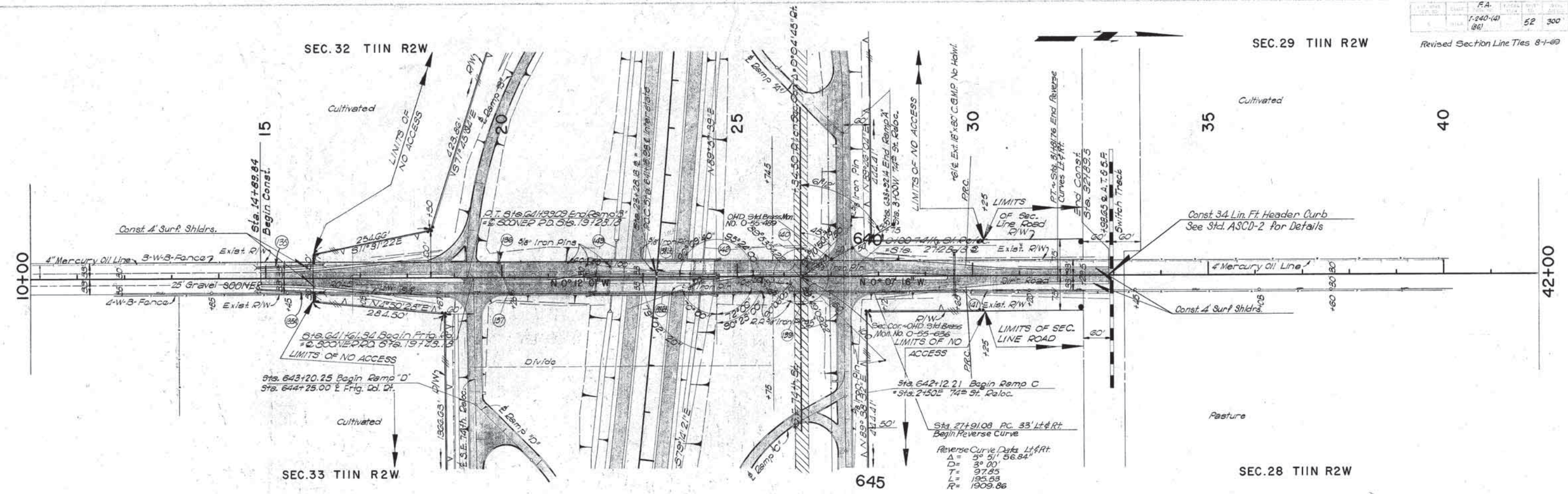
Concr. Solid Slab Sod Around Bridge Ends  
From Conc. Slope Wall To A Point 100' Back  
730 Sq. Yds.

NOTE: The Typical Section Ditch and Backslope  
Do Not Apply Within Limits of Separation  
Structure. See Cross Section Sheet No. 250  
and Detail, Sheet No. 82 for Slopes.



SUNNYLANE ROAD

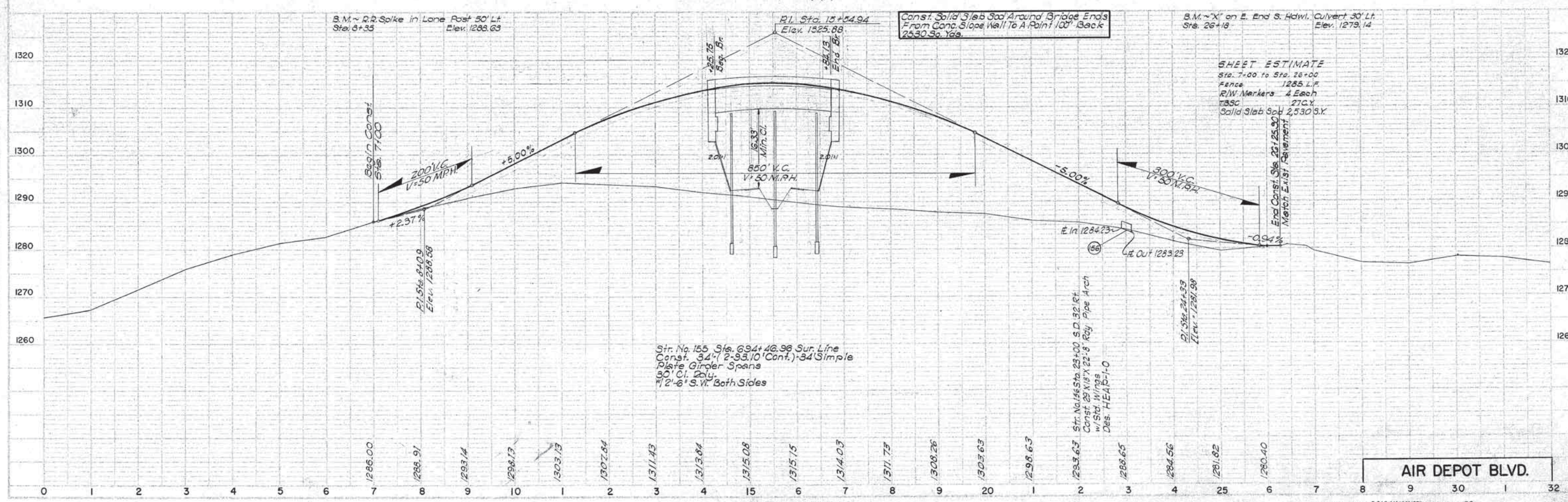
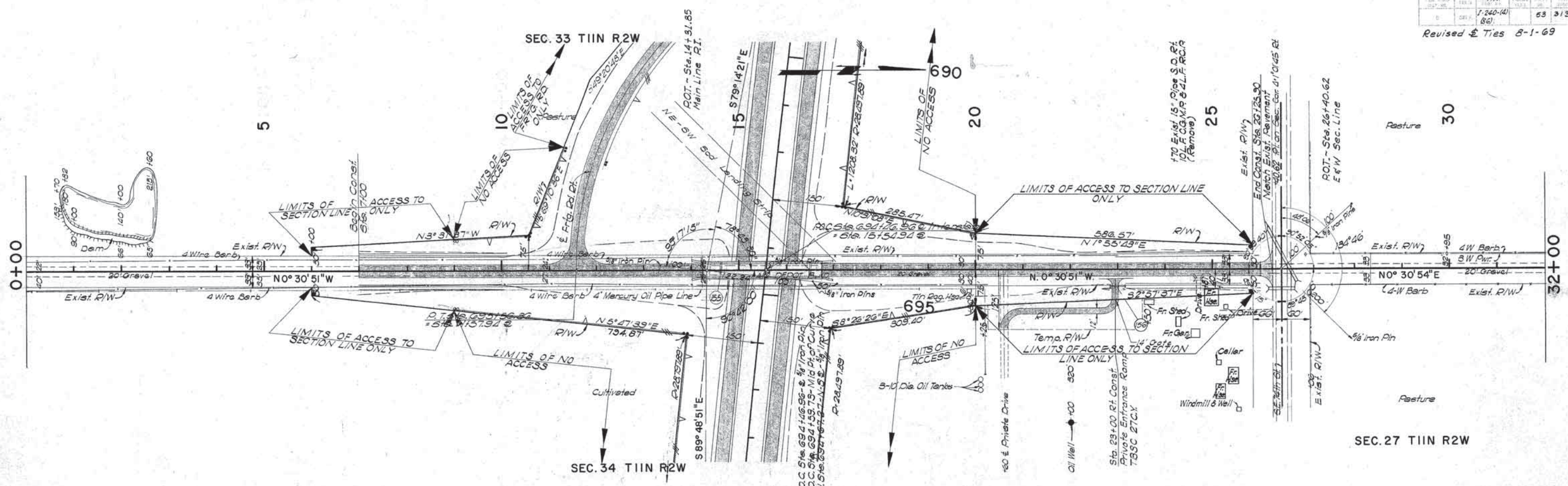




**SHEET ESTIMATE**  
Sta. 10+00 to Sta. 37+89.5  
Fence 1493 L.F.  
R/W Markers 2 Ea.  
Solid Slab Sod 1252 S.Y.

**SOONER ROAD**

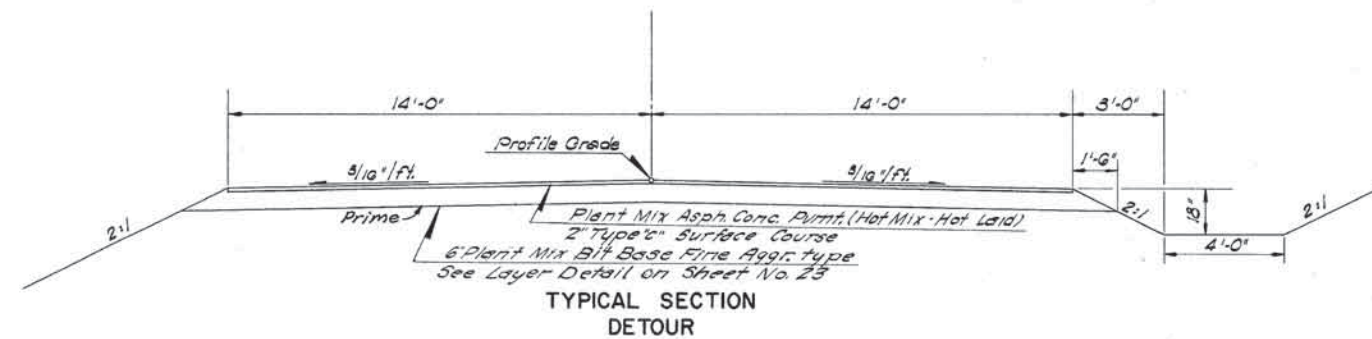




**SHEET ESTIMATE**  
 Sta. 7+00 to Sta. 26+00  
 Fence 1285 L.F.  
 R/W Markers 4 Each  
 T&S 27 C.Y.  
 Solid Slab Sub 2,530 S.Y.

**AIR DEPOT BLVD.**

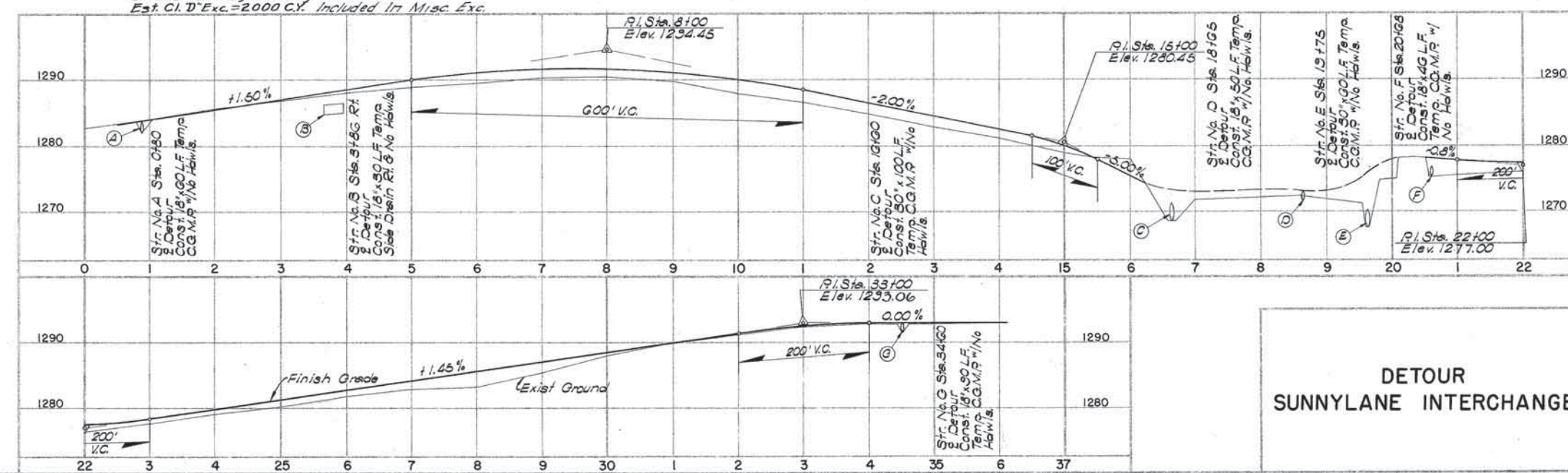


Revised-Aeph. Surf. Removal  
12-29-

TYPICAL SECTION  
DETOUR

DETOUR  
 Class "D" Exc. = 1311 C.Y.  
 Emb. + 15% = 1311 C.Y.  
 Estimated Overhaul = 1000 Sq. Yds.  
 Quantities included in SHEET ESTIMATE Sheet No. G3 (Gr. Contr.)  
 Remove And Restore Detour To Original  
 Ground Line By Grading Contractor.  
 Est. C.I.D' Exc. = 2000 C.Y. Included In Misc. Exc.

Total Removal of Asph. Surf. With  
Asph. Base (8" Thick) = 14,376 S.Y.  
(Sunnylane Detour Only)

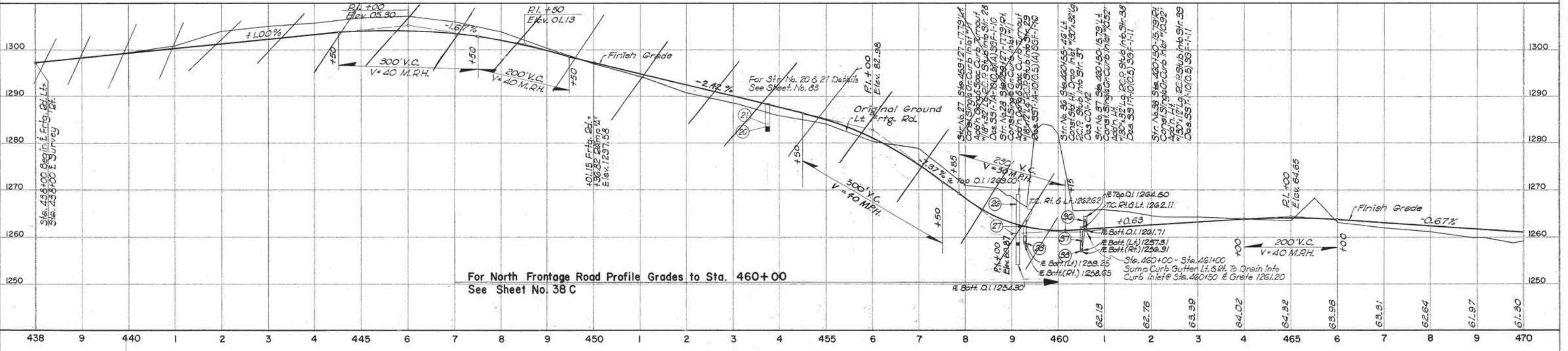


DETOUR  
SUNNYLANE INTERCHANGE

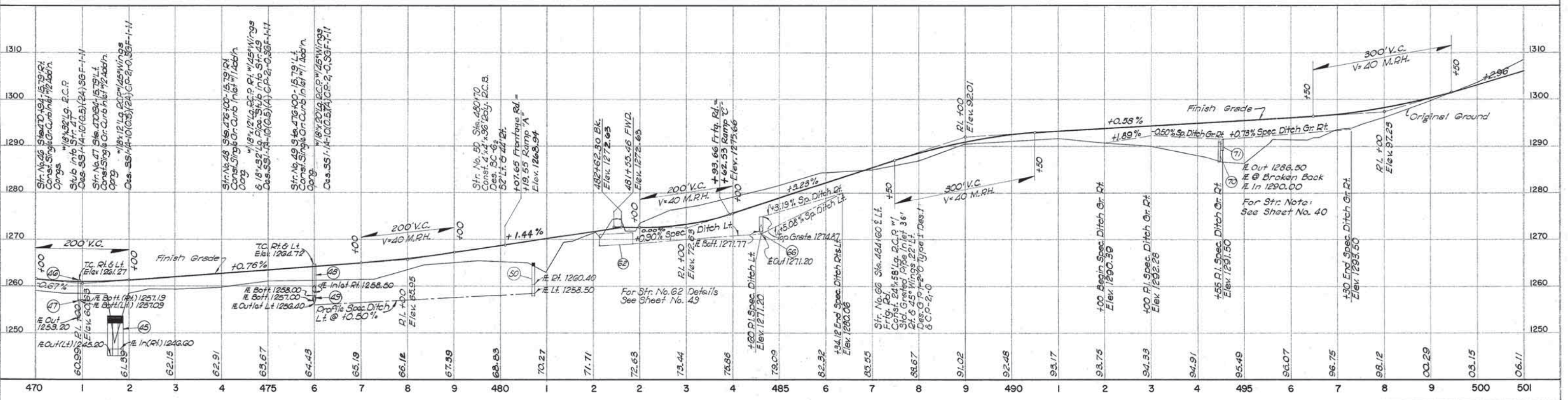


Revised Str.  
12-19-69

PLAN  
SURVEYED BY DATE  
NOTED BY DATE  
NO. OF WAY CHECKED  
NO.



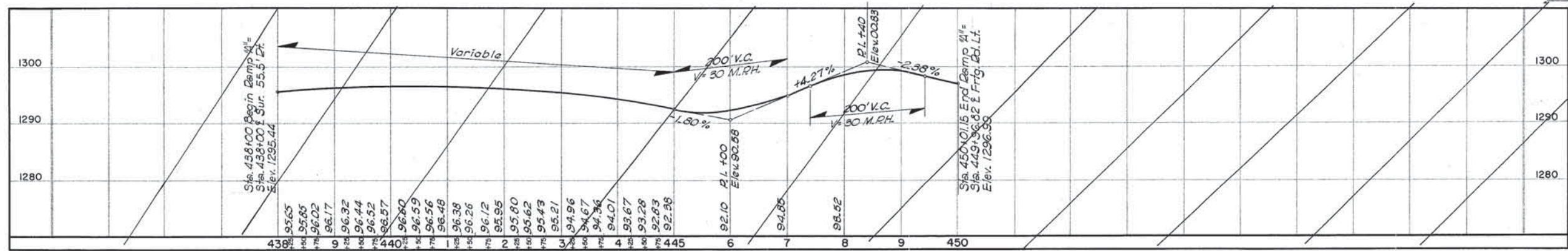
PROFILE  
SURVEYED BY DATE  
NOTED BY DATE  
NO. OF WAY CHECKED  
NO.



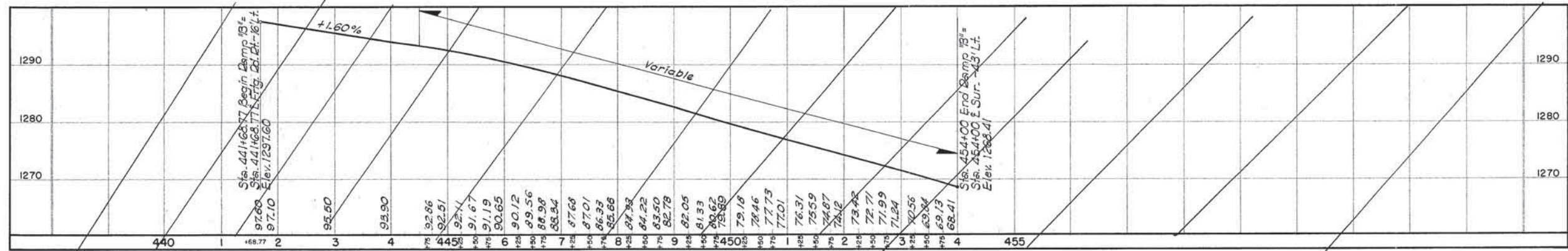
PROFILE GRADES  
LEFT FRONTAGE ROAD  
STA 438+00 TO STA 501+00



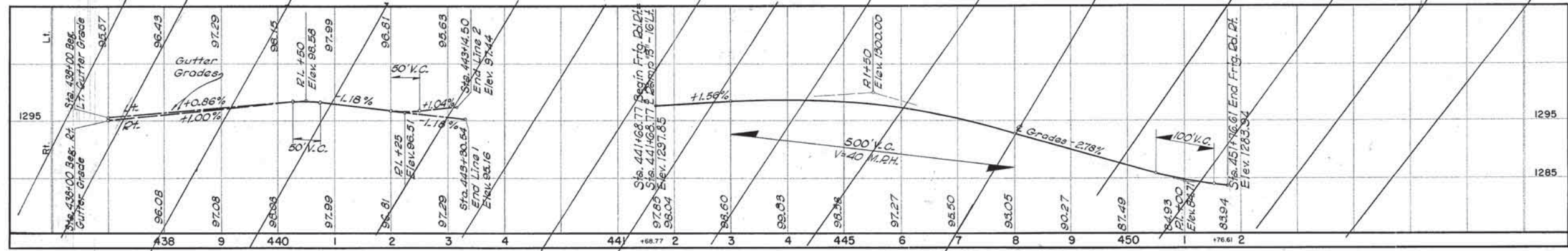
FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-20-4 (96)	55	3/3



**RAMP "A"**  
STA 438+00 LT.

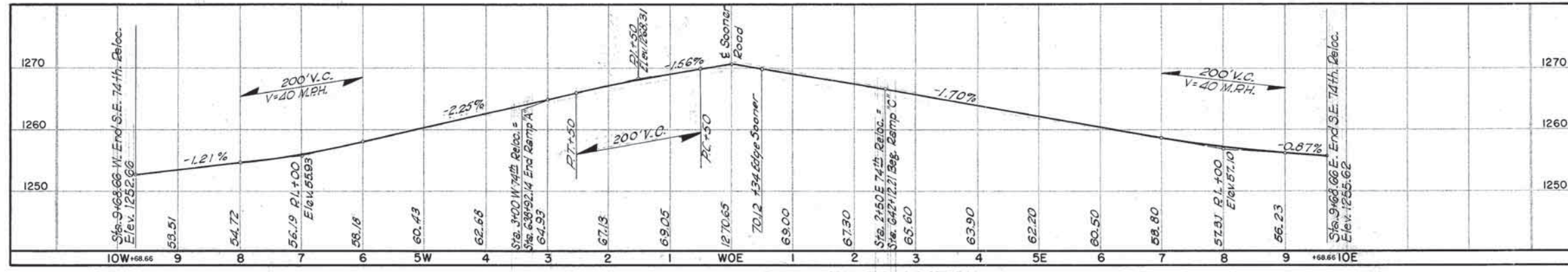


**RAMP "B"**  
STA 441+68.77 RT.



**FRONTAGE ROAD RIGHT**  
STA 438+00 TO STA 443+40

**FRONTAGE ROAD RIGHT**  
STA 441+68.77 TO STA 451+76.61



**S.E. 74th RELOCATION**  
STA 641+15.98

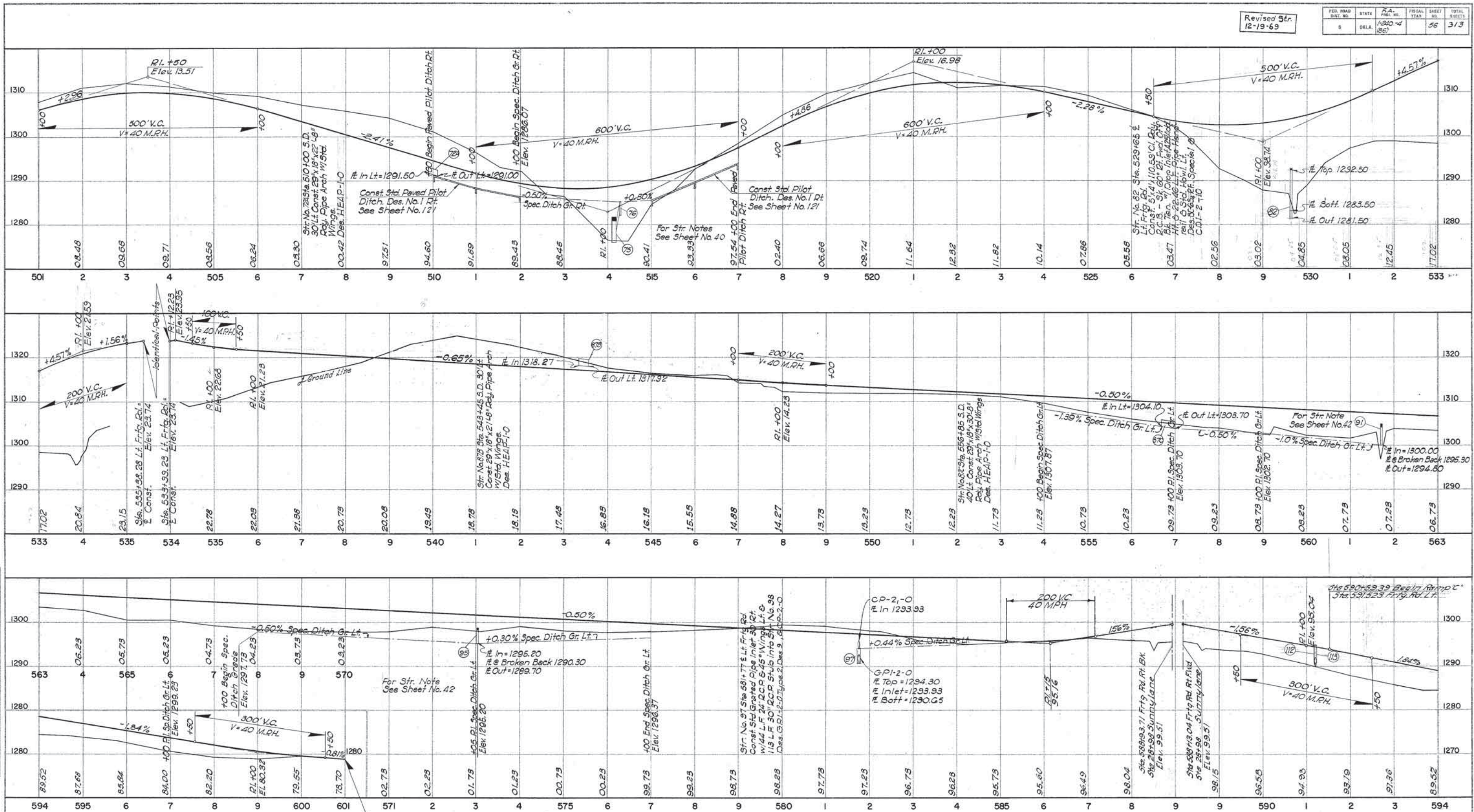
NOTE: For Storm Sewer Details See Sheets No. 38 & 83

PROFILE GRADES	
—	RAMP "A" STA 438+00 LT.
—	RAMP "B" STA 441+68.77 RT.
—	FRONTAGE ROAD RIGHT
—	STA 438+00 TO STA 451+76.61
—	S.E. 74th RELOCATION STA 641+15.98



Revised Str.  
12-19-69

FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	130-4 (86)		56	3/3



END Lt. Frt. Rd.  
& Match Exist. S.E. 74<sup>th</sup> St.  
Sta. 601+00 Elev. 1278.71

INLET DRAINAGE SCHEDULE

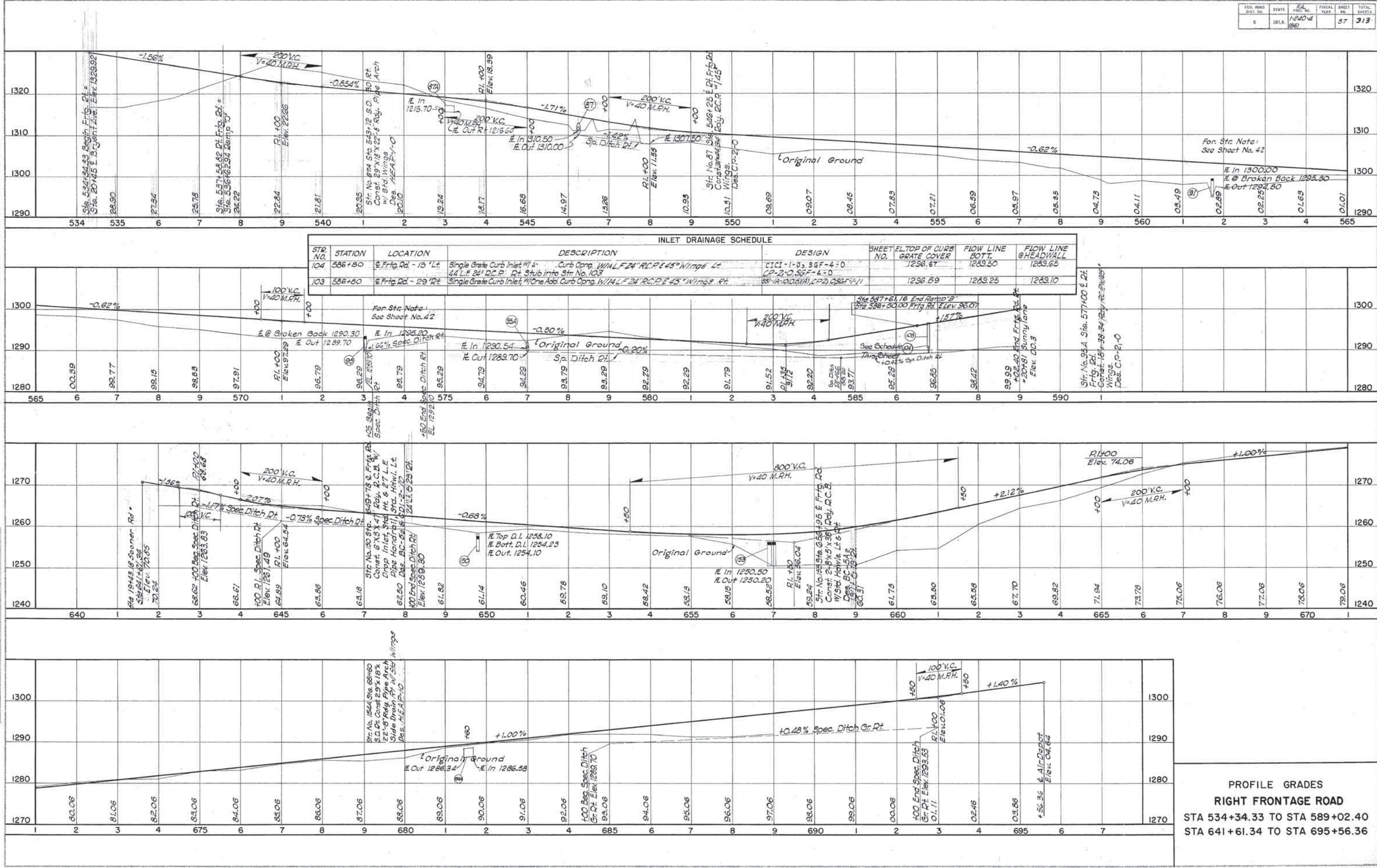
INLET DRAINAGE SCHEDULE								
Str. No.	Station	Location	Description	Design	Sheet No.	Elev. Top of Curb	Flow Line Bottom	Flow Line @ Hdw.
113	591+20	Lt. Frt. Rd. 30.78'Lt.	Single Grate Curb Inlet, w/One Add. Curb Oppg. & L.F. 24" R.C.P. 45° Wings Lt.	SSI-1A-10(0.5)(A)CP-2-0.58F-1-10	1294.61	1290.32	1290.00	
112	591+20	Lt. Frt. Rd. 14.78'Rt.	Single Grate Curb Inlet, w/One Add. Curb Oppg. & L.F. 24" R.C.P. 45° Wings Rt.	SSI-1A-10(0.5)(A)CP-2-0.58F-1-10	1294.86	1290.57	1290.80	

PROFILE GRADES  
LEFT FRONTAGE ROAD  
STA 501+00 TO STA 601+00



PLAN  
SURVISED  
NOTED  
NO. 1  
DATE  
BY  
CHECKED  
BY

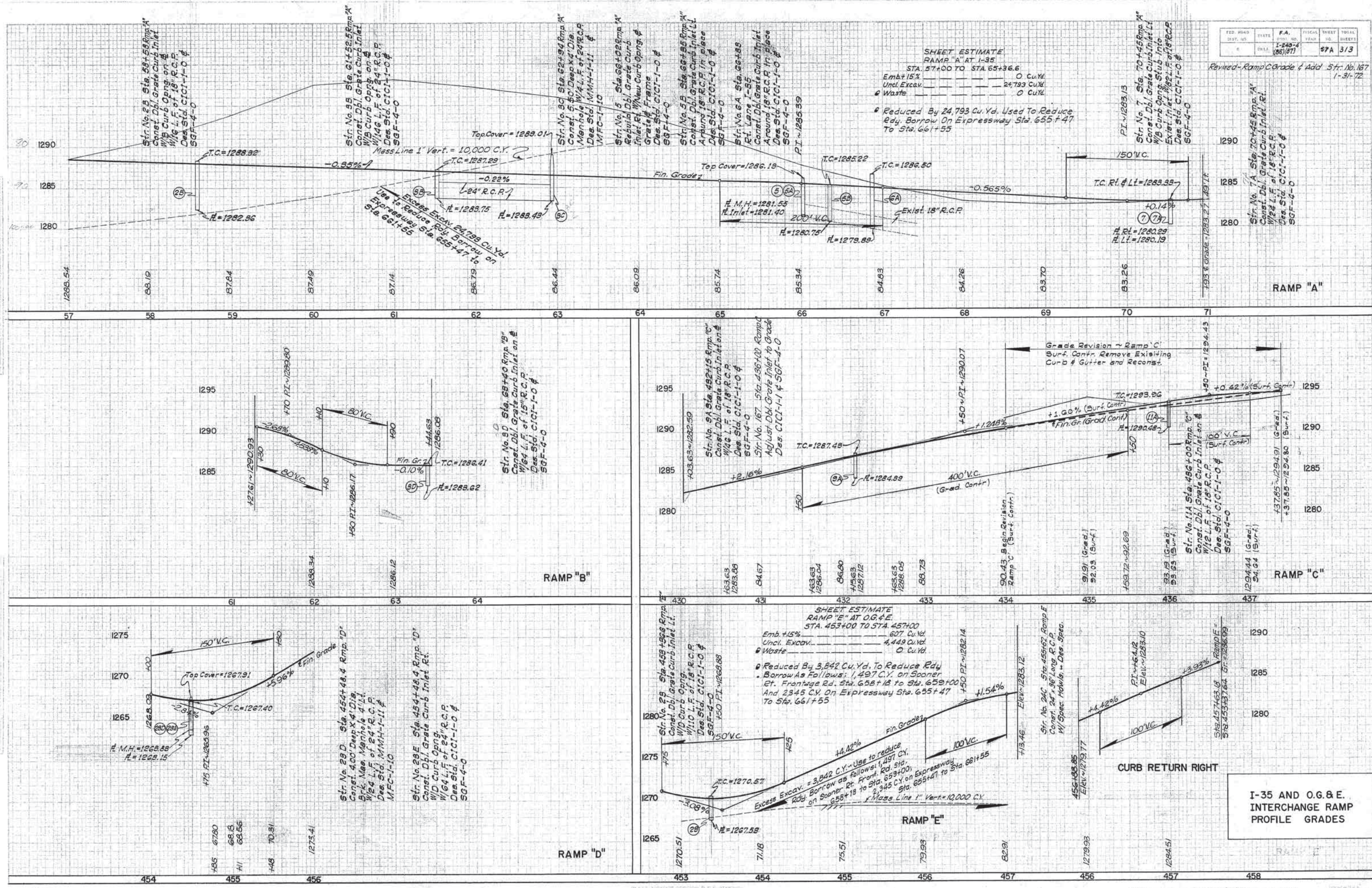
PROFILE  
SURVISED  
NOTED  
NO. 1  
DATE  
BY  
CHECKED  
BY



PROFILE GRADES  
RIGHT FRONTAGE ROAD  
STA 534+34.33 TO STA 589+02.40  
STA 641+61.34 TO STA 695+56.36



Revised - Ramp Corade & Add Sta. No. 167  
1-31-72



**SHEET ESTIMATE**  
 RAMP "A" AT I-35  
 STA. 57+00 TO STA. 65+36.6  
 Emb. +15% 0 Cu.Yd.  
 Uncl. Excav. 24,793 Cu.Yd.  
 Waste 0 Cu.Yd.  
 Reduced By 24,793 Cu.Yd. Used To Reduce  
 Edy. Borrow On Expressway Sta. 655+47  
 To Sta. 661+55

**SHEET ESTIMATE**  
 RAMP "E" AT O.G. & E.  
 STA. 453+00 TO STA. 457+00  
 Emb. +15% 607 Cu.Yd.  
 Uncl. Excav. 4,449 Cu.Yd.  
 Waste 0 Cu.Yd.  
 Reduced By 3,842 Cu.Yd. To Reduce Rdy.  
 Borrow As Follows: 1,497 C.Y. on Spooner  
 Rt. Frontage Rd. Sta. 658+18 to Sta. 659+00  
 And 2,345 C.Y. on Expressway Sta. 655+47  
 To Sta. 661+55

I-35 AND O.G. & E.  
 INTERCHANGE RAMP  
 PROFILE GRADES

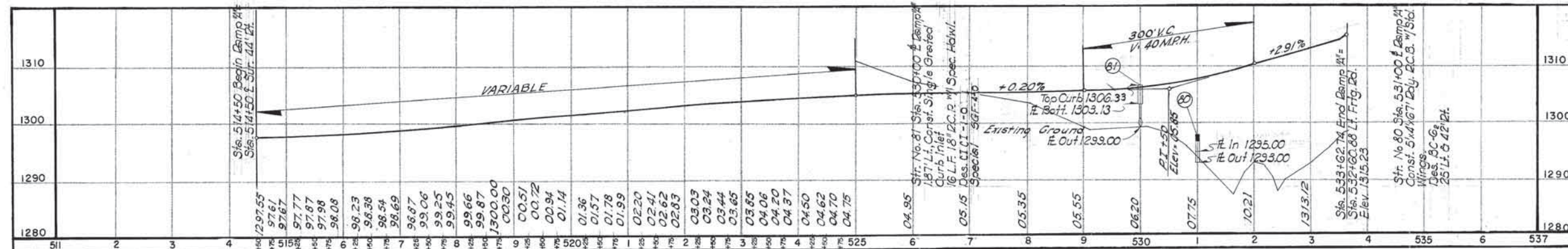
DATE  
 DESIGNED BY  
 CHECKED BY  
 APPROVED BY  
 IN CHARGE

DATE  
 DESIGNED BY  
 CHECKED BY  
 APPROVED BY  
 IN CHARGE

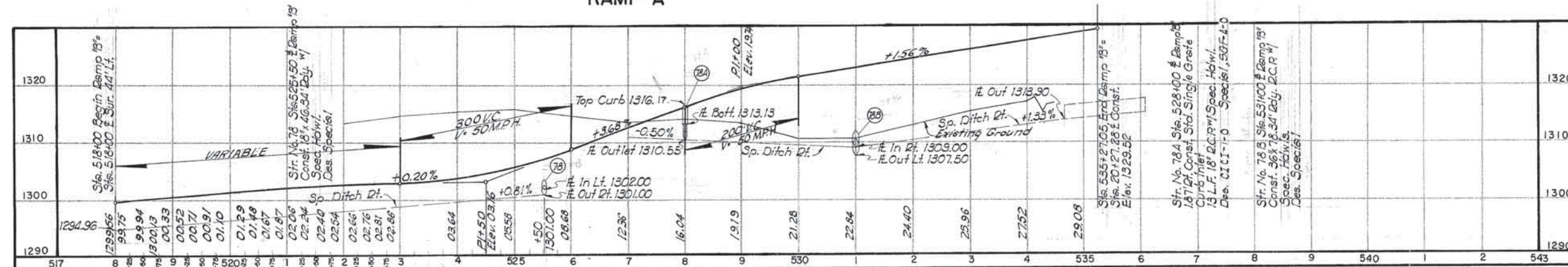




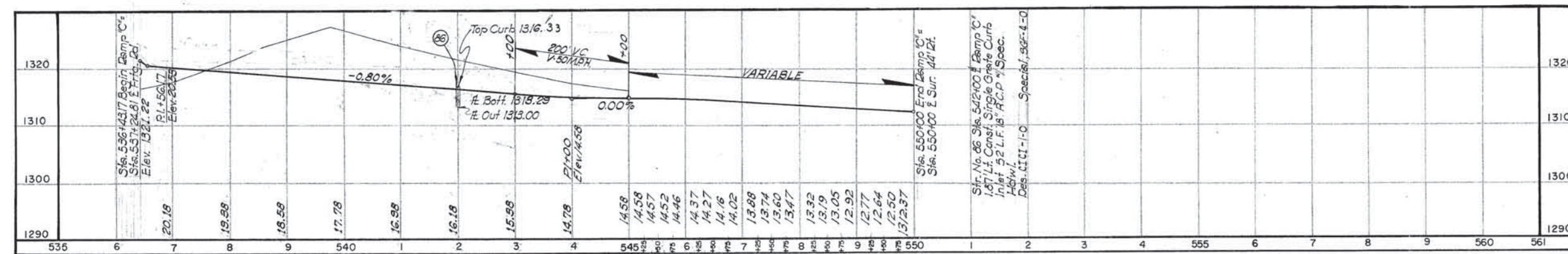




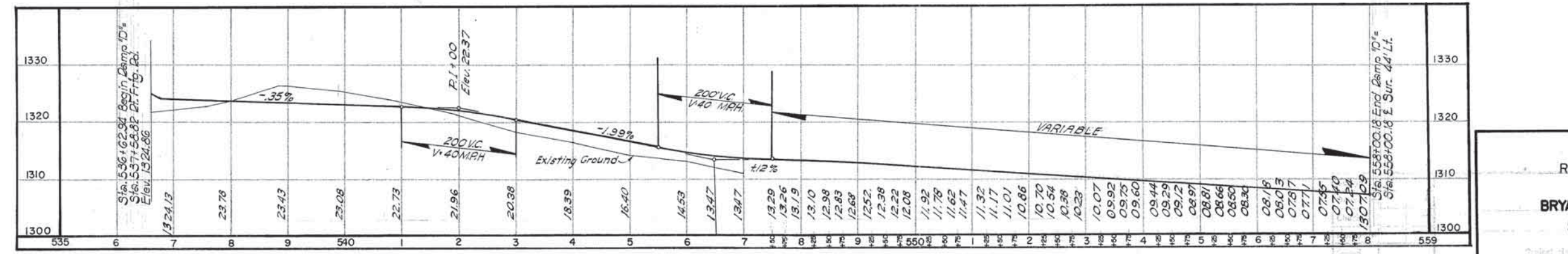
RAMP "A"



RAMP "B"



RAMP "C"

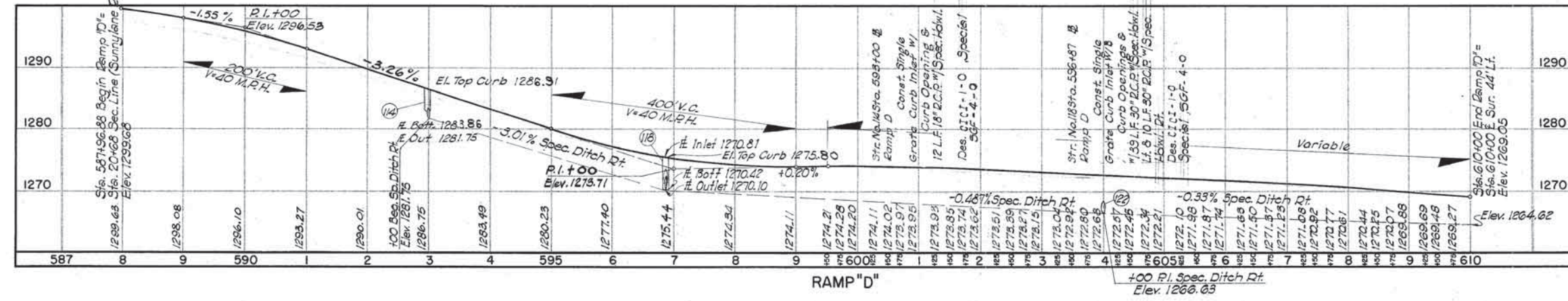
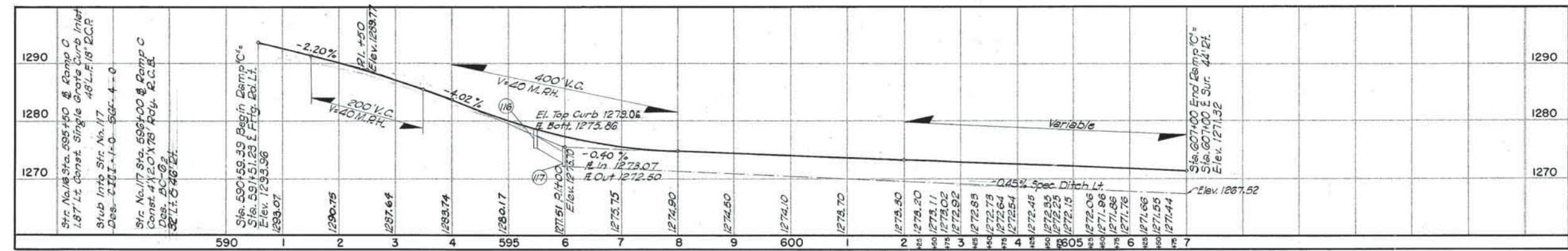
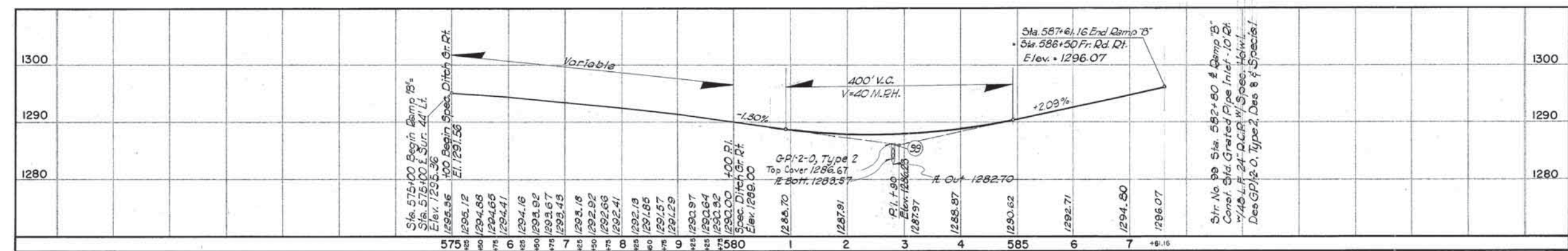
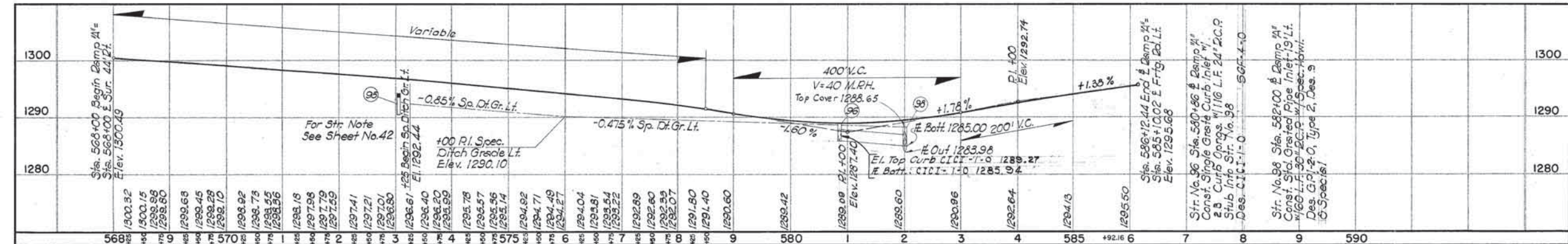


RAMP "D"

RAMP GRADES  
BRYANT INTERCHANGE  
STA. 534+70.14



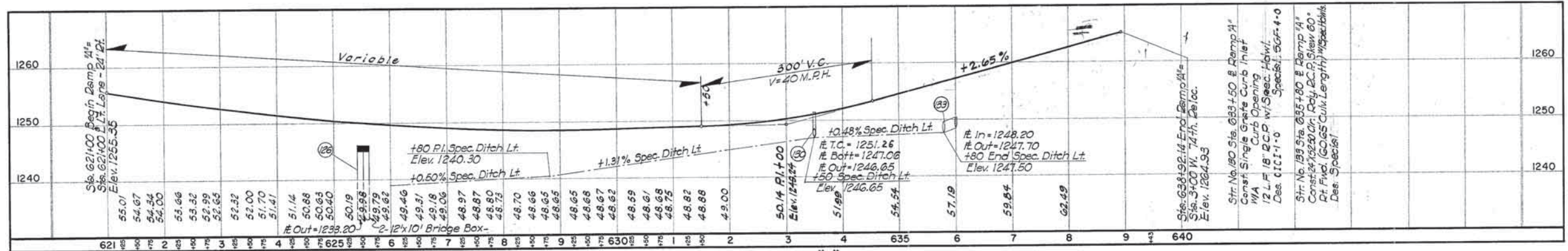
Revised Str.  
12-30-69



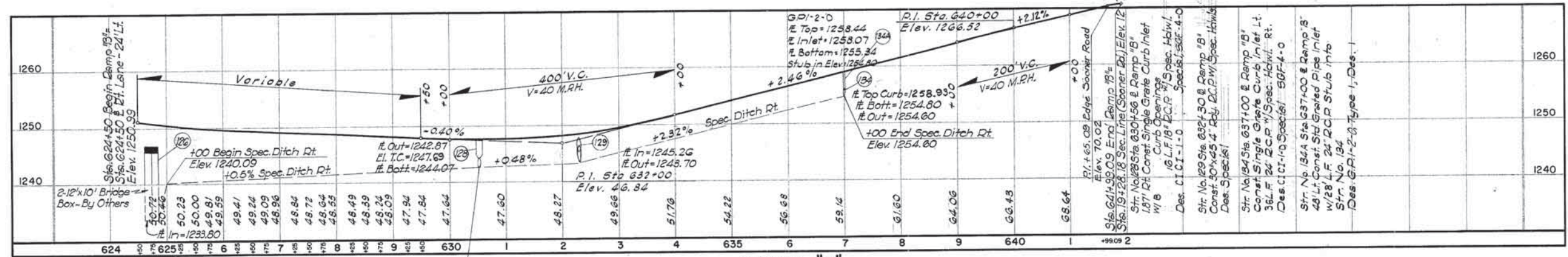
PROFILE GRADES  
RAMPS "A", "B", "C", & "D"  
SUNNYLANE INTERCHANGE  
STA 588+57.75



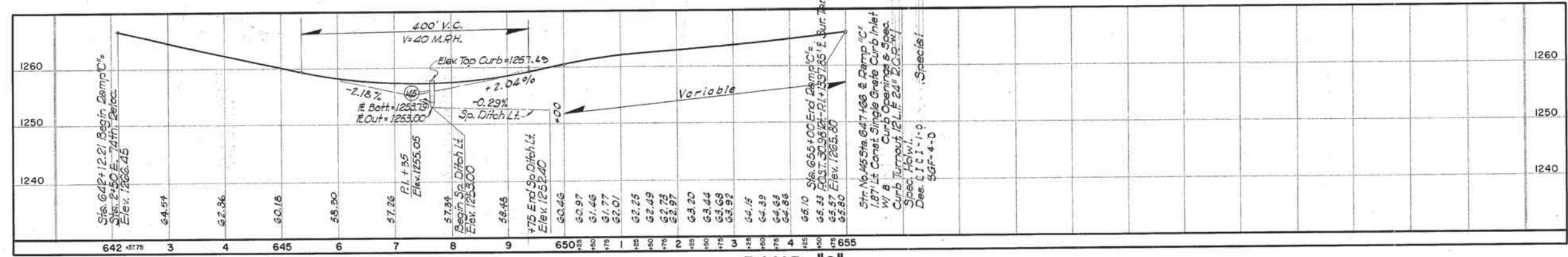
Revised Str.  
12-19-69



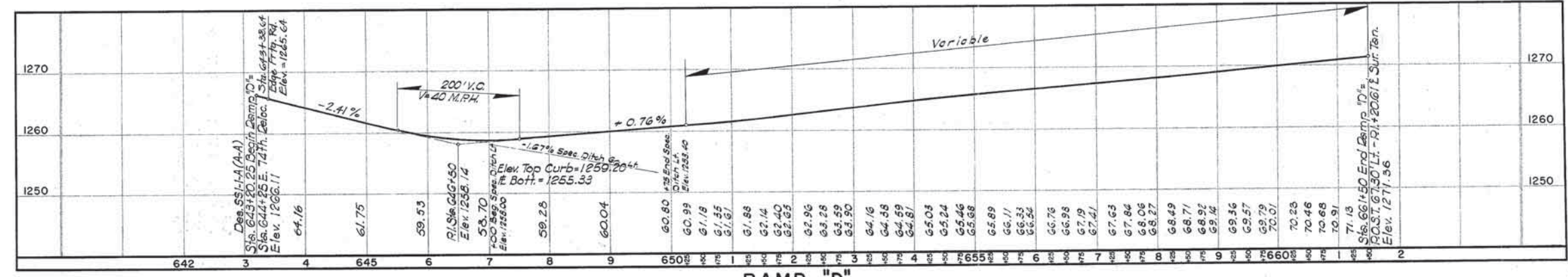
RAMP "A"



RAMP "B"



RAMP "C"

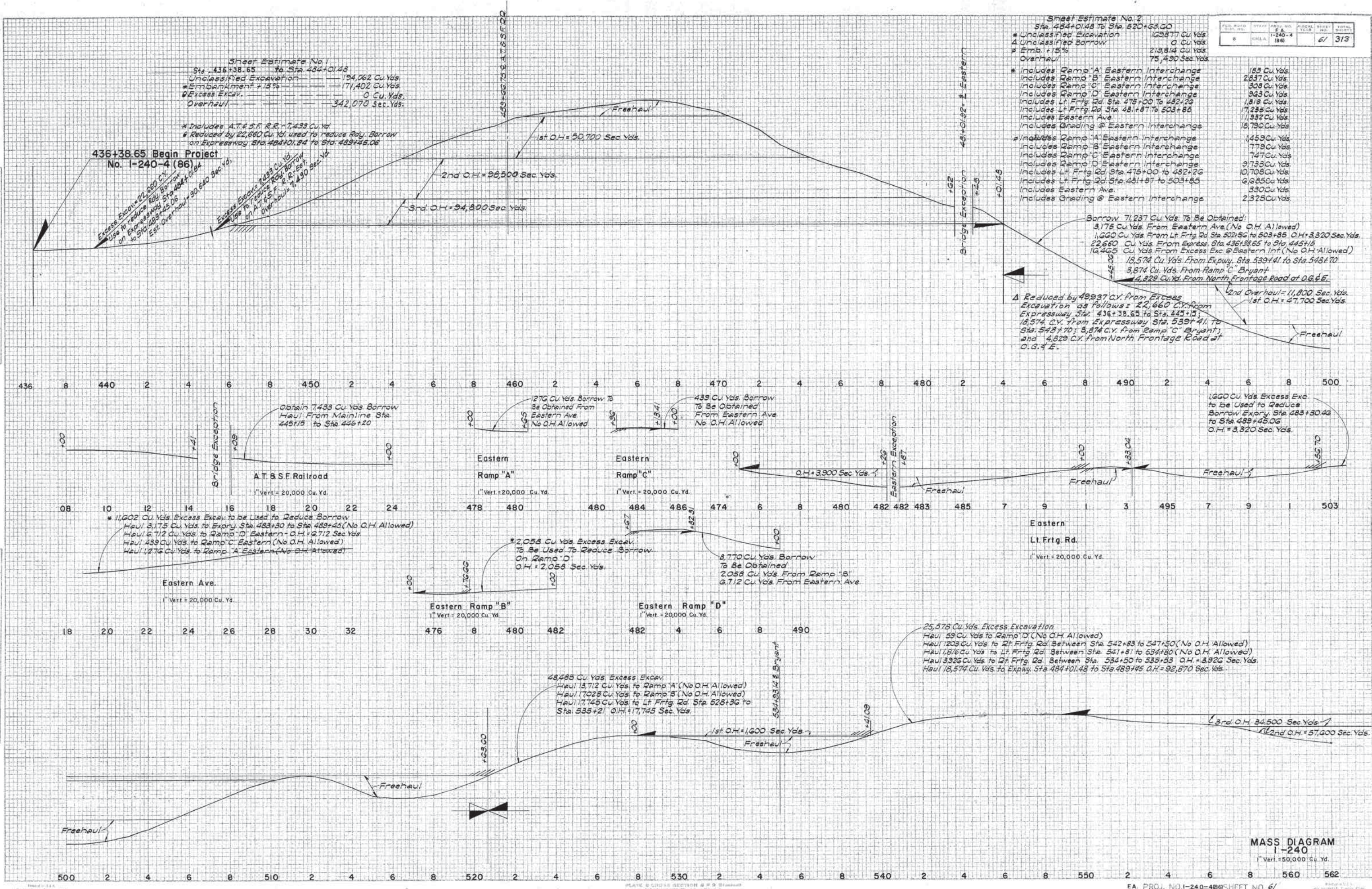


RAMP "D"

PROFILE GRADES  
RAMPS "A", "B", "C", & "D"  
SOONER ROAD INTERCHANGE  
STA 641+15.98



ORIGINAL	87	DATE
SURVEY		
PLANT		
120-LATE		
PRICE		
AREAL CHICAGO		





Sheet Estimate No. 3  
Sta. 520+63.60 to Sta. 594+54.02

FEED	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	OKLA.	1-240-4	(86)	62	313

Excess Excavation  
Unclassified Exc.  
Empl. +15%  
Overhaul

0 Cu. Yds.  
294,416 Cu. Yds.  
271,968 Cu. Yds.  
631,511 Sec. Yds.

Includes Bryant Ave.  
Includes Ramp "B" Bryant Ave.  
Includes Ramp "C" Bryant Ave.  
Includes Ramp "D" Bryant Ave.  
Includes Lt. Frtg. Rd. Sta. 525+00 to 535+21  
Includes Lt. Frtg. Rd. Sta. 534+18 to 544+00  
Includes Rt. Frtg. Rd. Sta. 534+50 to 547+50  
Includes Grading @ Bryant Interchange

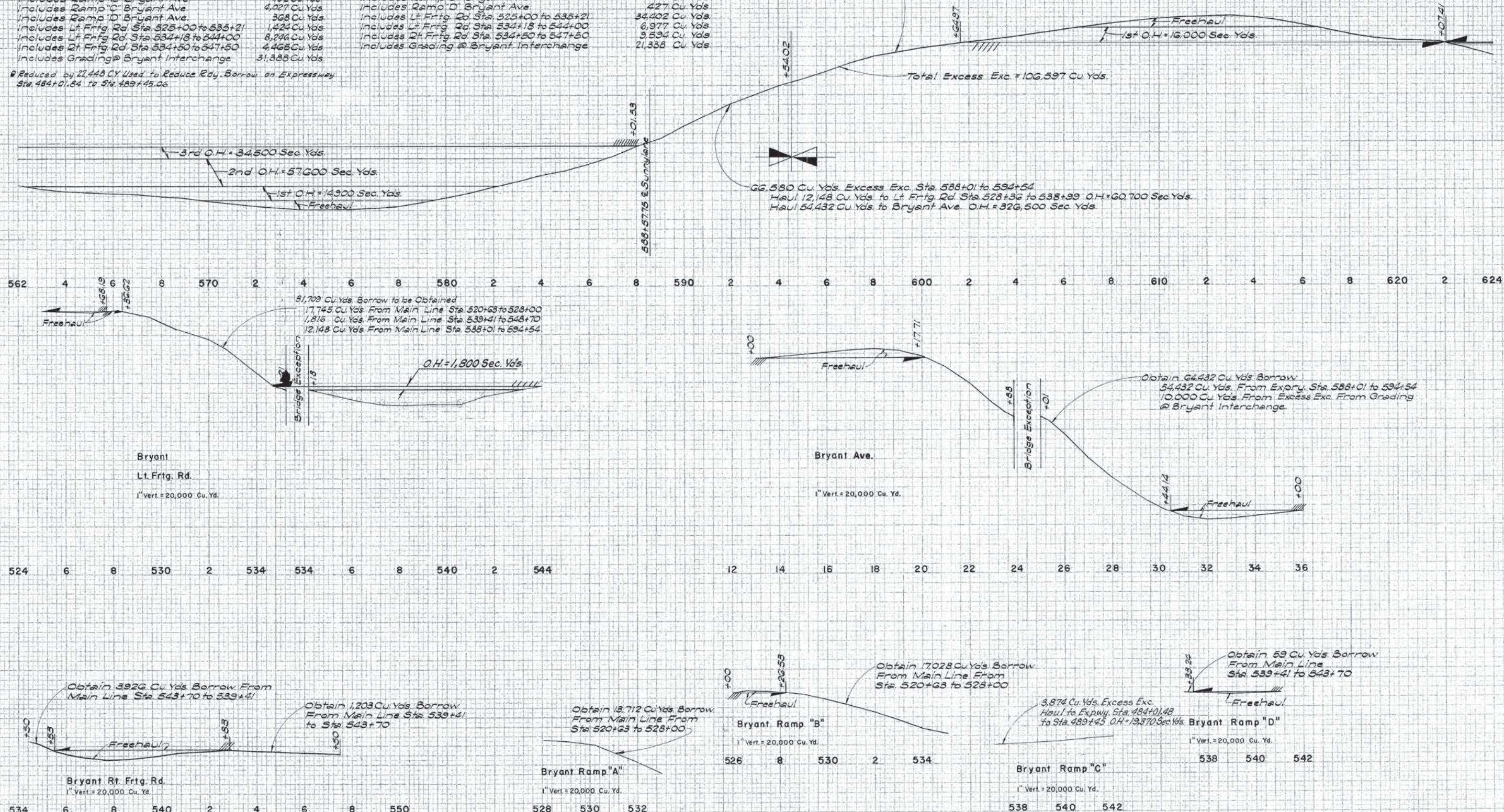
8,074 Cu. Yds.  
432 Cu. Yds.  
4,027 Cu. Yds.  
368 Cu. Yds.  
1,424 Cu. Yds.  
8,296 Cu. Yds.  
4,468 Cu. Yds.  
31,388 Cu. Yds.

Includes Bryant Ave.  
Includes Ramp "A" Bryant Ave.  
Includes Ramp "B" Bryant Ave.  
Includes Ramp "C" Bryant Ave.  
Includes Ramp "D" Bryant Ave.  
Includes Lt. Frtg. Rd. Sta. 525+00 to 535+21  
Includes Lt. Frtg. Rd. Sta. 534+18 to 544+00  
Includes Rt. Frtg. Rd. Sta. 534+50 to 547+50  
Includes Grading @ Bryant Interchange

72,506 Cu. Yds.  
13,712 Cu. Yds.  
17,430 Cu. Yds.  
733 Cu. Yds.  
427 Cu. Yds.  
34,402 Cu. Yds.  
6,977 Cu. Yds.  
9,534 Cu. Yds.  
21,338 Cu. Yds.

Reduced by 22,448 Cu. Yds. Used to Reduce Rd. Borrow on Expressway  
Sta. 484+01.84 to Sta. 489+45.06

40,017 Cu. Yds. Excess Exc. Sta. 594+54 to 601+65  
Haul 23,318 Cu. Yds. to Sunnylane Rd. O.H. = 45,636 Sec. Yds.  
Haul 6,312 Cu. Yds. to Lt. Frtg. Rd. Sta. 588+49 to 595+39 O.H. = 2,800 Sec. Yds.  
Haul 6,853 Cu. Yds. to Lt. Frtg. Rd. Sta. 585+00 to 571+85 O.H. = 25,700 Sec. Yds.  
Haul 102 Cu. Yds. to Ramp "B" O.H. = 102 Sec. Yds.  
Haul 3,432 Cu. Yds. to Rt. Frtg. Rd. Sta. 584+23 to 588+67 O.H. = 3,432 Sec. Yds.

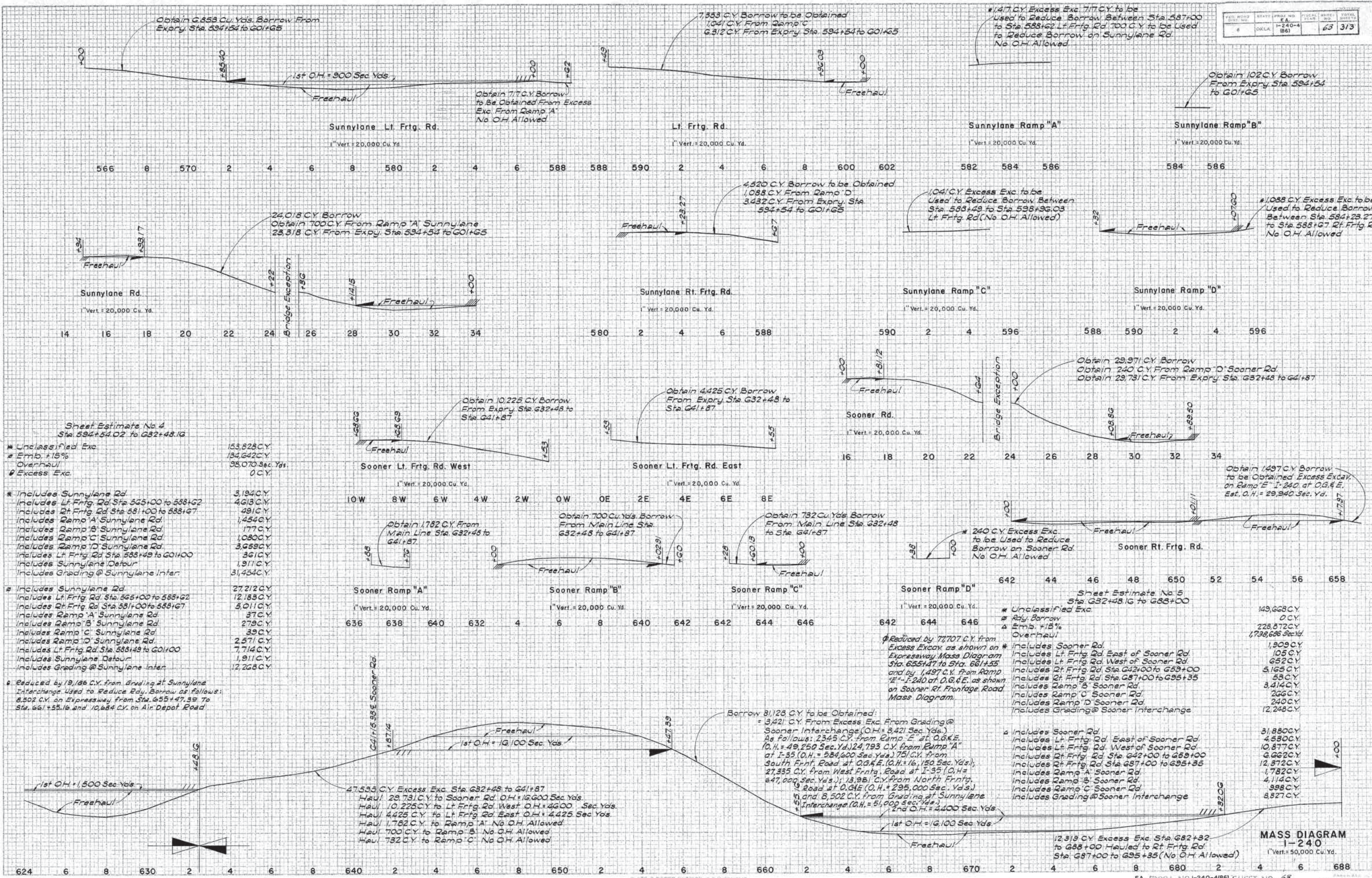




FEED NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240-4 (86)		63	313

DATE	BY
PROJECTED	PLUTER
REVISION	REVISION
DATE	BY

DATE	BY
PROJECTED	PLUTER
REVISION	REVISION
DATE	BY

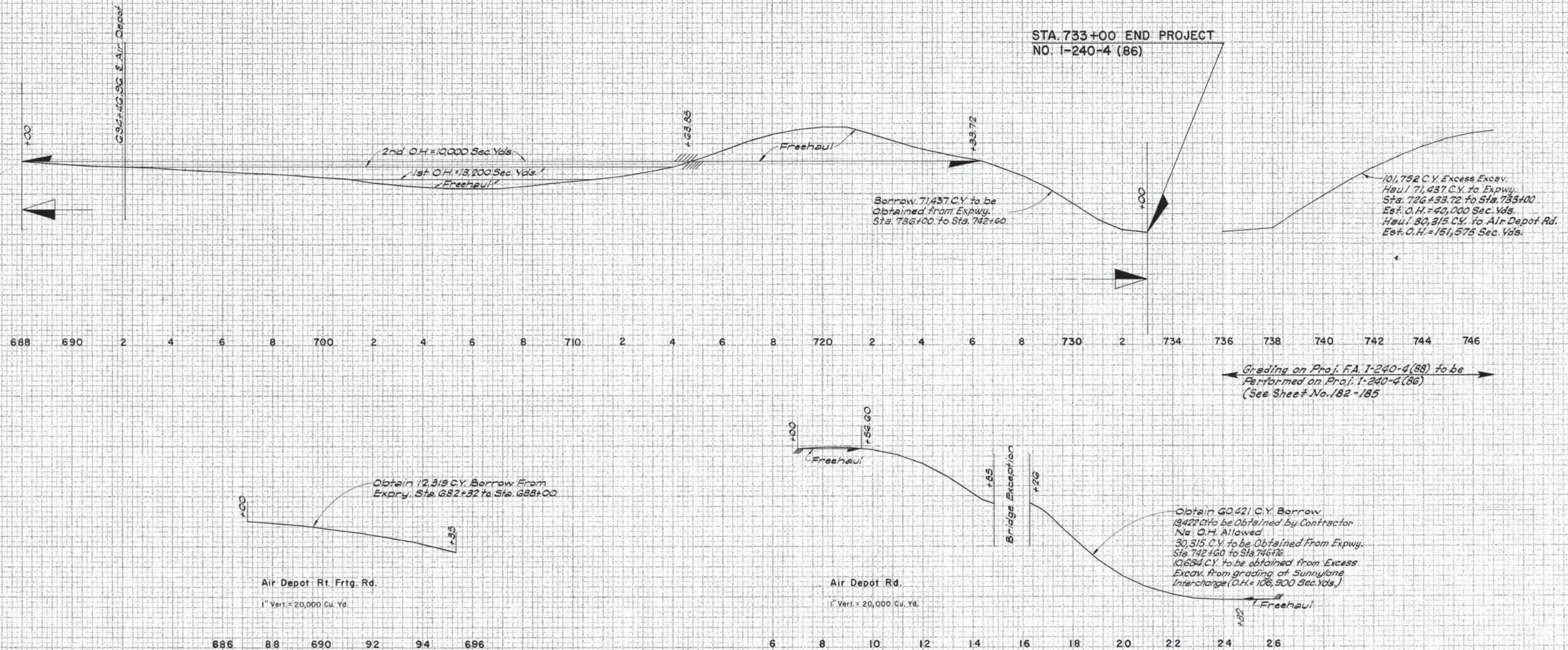




FED. ROAD DIST. NO.	STATE	PROJ. NO.	PROJ. NAME	SHEET NO.	TOTAL SHEETS
6	ONE	1-240-4 (86)		64	313

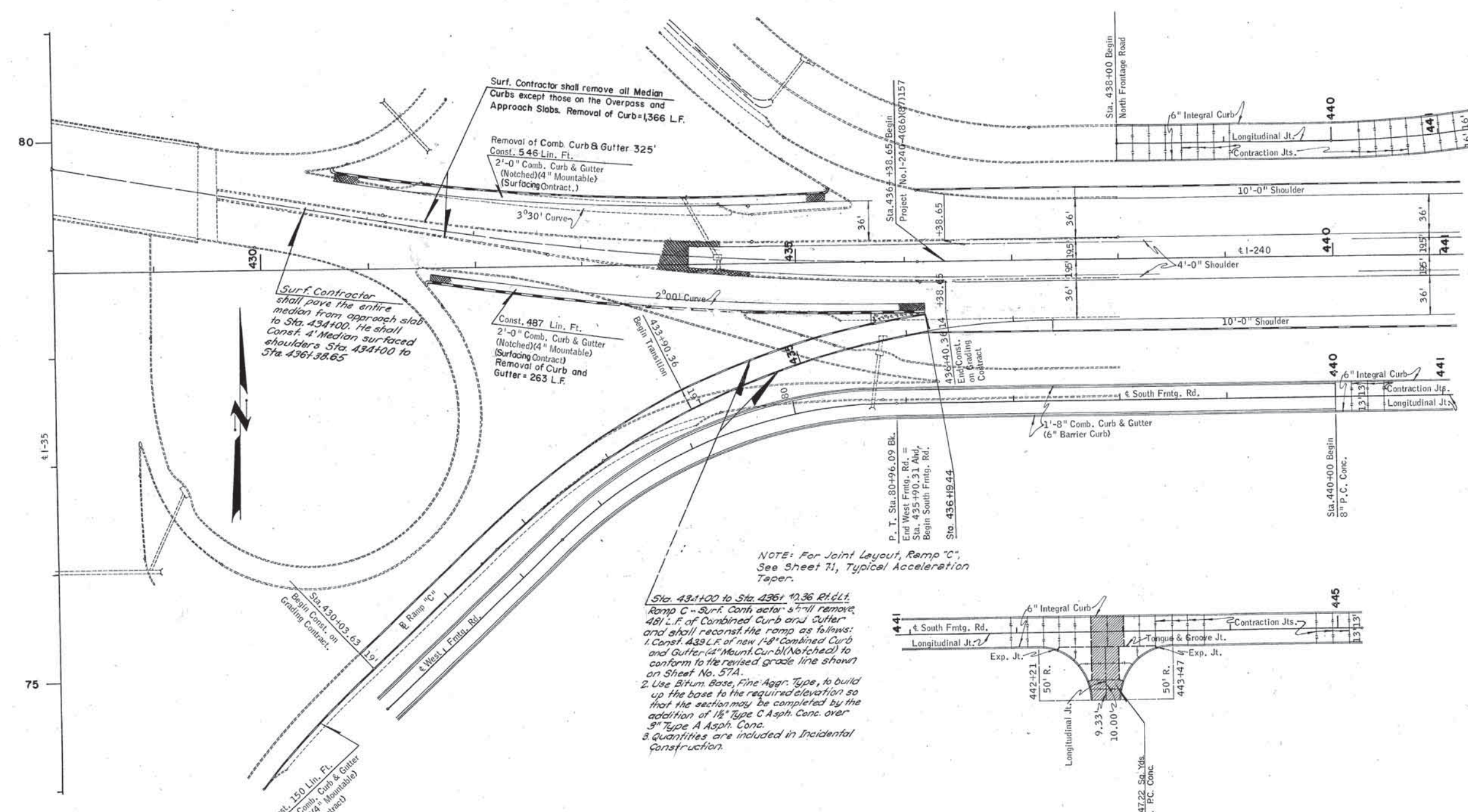
Sheet Estimate No. 3  
Sta. 688+00 to 733+00

- \* Unclassified Excav. 169,417 C.Y.
- \* Unclassified Borrow 19,422 C.Y.
- \* Emb. +15% 199,523 C.Y.
- \* Overhaul 321,673 C.Y.
- \* Includes 1492 C.Y. from Air Depot Blvd. # 101,752 C.Y.
- \* From Sta. 736+00 to Sta. 746+76 on P.A.P. No. 1-240-4(88) 162
- \* Includes Air Depot Blvd. 21,913 C.Y.
- \* Reduced by 10,684 C.Y. from Excess Excav. from grading at Sunnyside Interchange



MASS DIAGRAM  
1-240  
1" Vert. = 50,000 Cu. Yd.





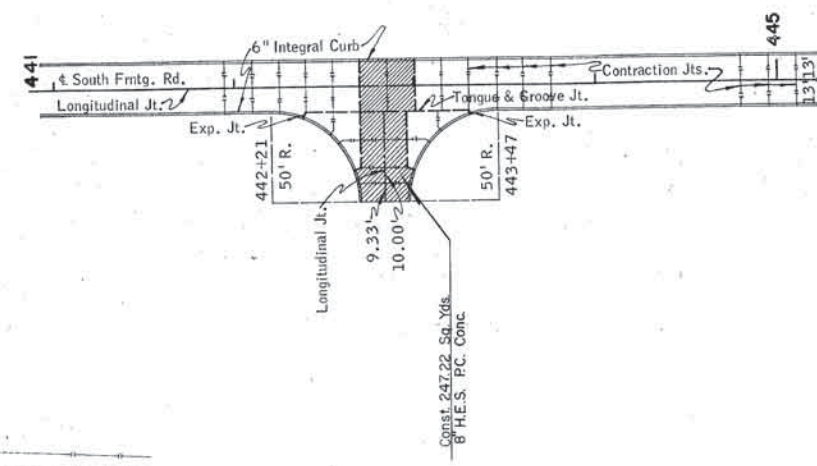
NOTE: For Joint Layout, Ramp "C", See Sheet 71, Typical Acceleration Taper.

Sta. 431+00 to Sta. 436+10.36 P.H.L.T. Ramp C - Surf. Contractor shall remove 481 L.F. of Combined Curb and Gutter and shall reconstruct the ramp as follows:  
 1. Const. 439 L.F. of new 14" Combined Curb and Gutter (4" Mountable) to conform to the revised grade line shown on Sheet No. 57A.  
 2. Use Bitum. Base, Fine Aggr. Type, to build up the base to the required elevation so that the section may be completed by the addition of 1 1/2" Type C Asph. Conc. over 3" Type A Asph. Conc.  
 3. Quantities are included in Incidental Construction.

- NOTES:
- All Contraction Joints to be Spaced 15' Center to Center unless otherwise dimensioned.
  - All dimensions are to Face of Curb unless otherwise Shown.
  - See Std. C.S.C.D. - 2 for details of Integral Curbs, Tongue & Groove Joints, Longitudinal Joints & Expansion Joints.
  - See Std. A.S.C.D. - 2 for details of 2'-0" Comb. Curb & Gutter (Notched) (4" Mountable) & 1'-8" Comb. Curb & Gutter (6" Barrier Curb).

See Sheet No. 66B for Geometric Details, & Sheet No. 71 for Ramp "C" Joint Layout.

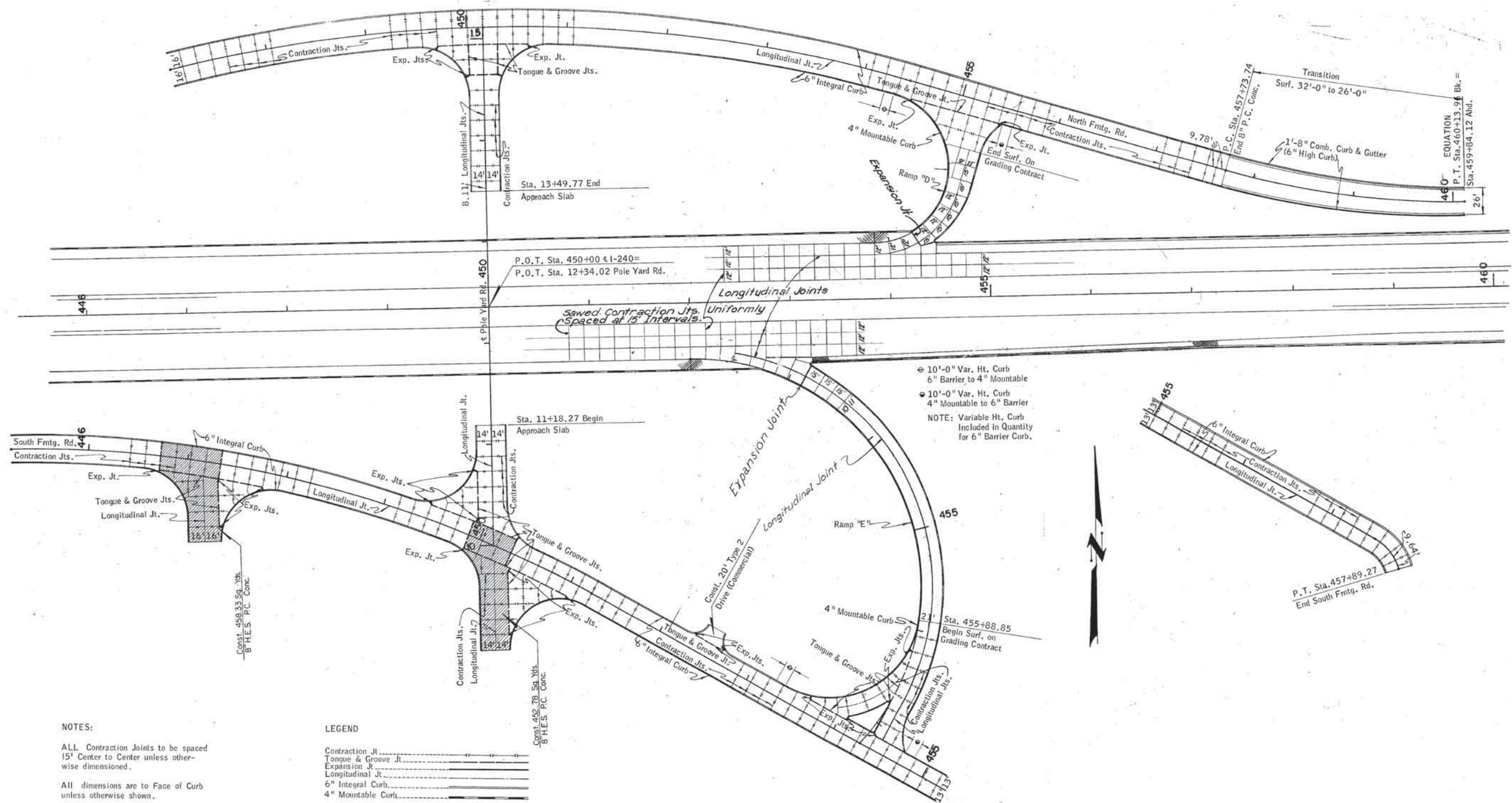
- LEGEND
- Contraction Jt.
  - Tongue & Groove Jt.
  - Expansion Jt.
  - Longitudinal Jt.
  - 6" Integral Curb
  - 1'-8" Comb. Curb & Gutter (6" Barrier Curb)
  - 2'-0" Comb. Curb & Gutter (Notched) (4" Mountable)



Design	
Drawn	
Checked	
Approved	
Squad	

# JOINT LAYOUTS I - 240 & I - 35





NOTES:

ALL Contraction Joints to be spaced 15' Center to Center unless otherwise dimensioned.

All dimensions are to Face of Curb unless otherwise shown.

See Std. C. S. C. D.-2 for details of Integral Curbs, Tongue & Groove Joints, Longitudinal Joints & Expansion Joints.

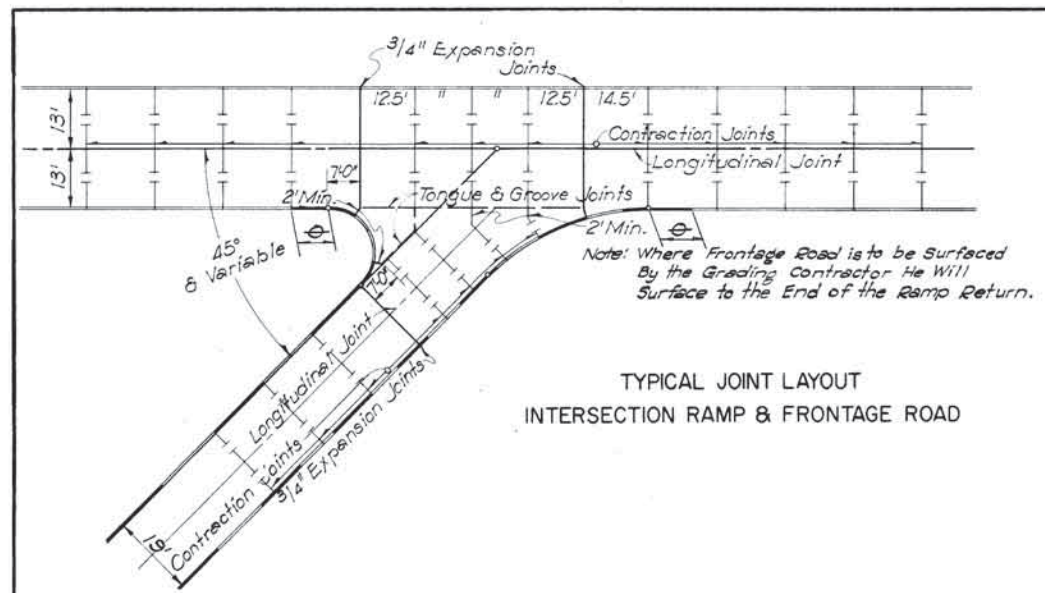
See sheet No. 66.5 for Geometric Details.

LEGEND

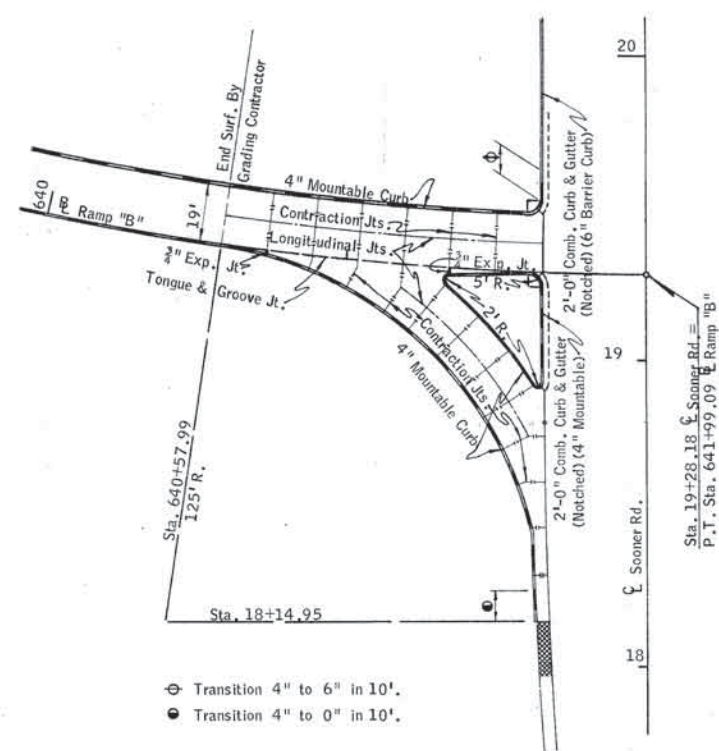
Contraction Jt.	-----
Tongue & Groove Jt.	-----
Expansion Jt.	-----
Longitudinal Jt.	-----
6" Integral Curb	-----
4" Mountable Curb	-----

Design	
Drawn	
Checked	
Approved	
Squad	

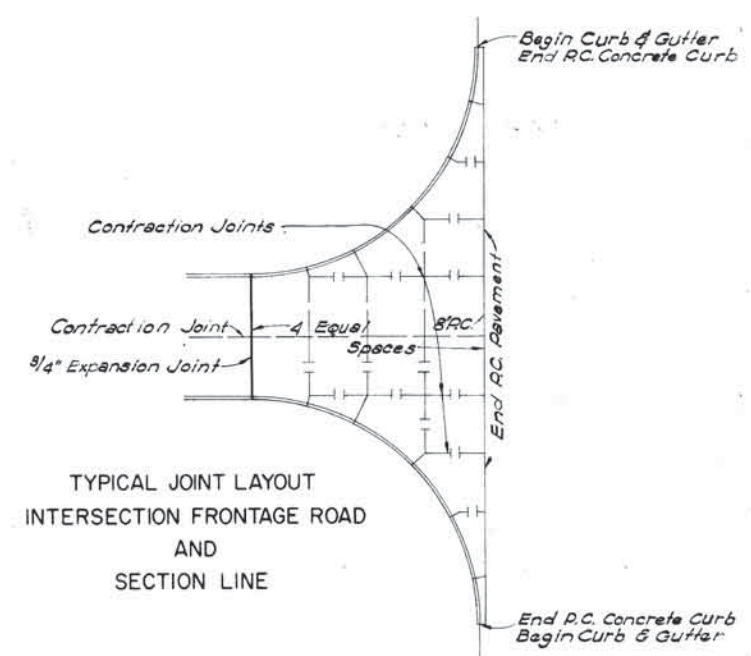




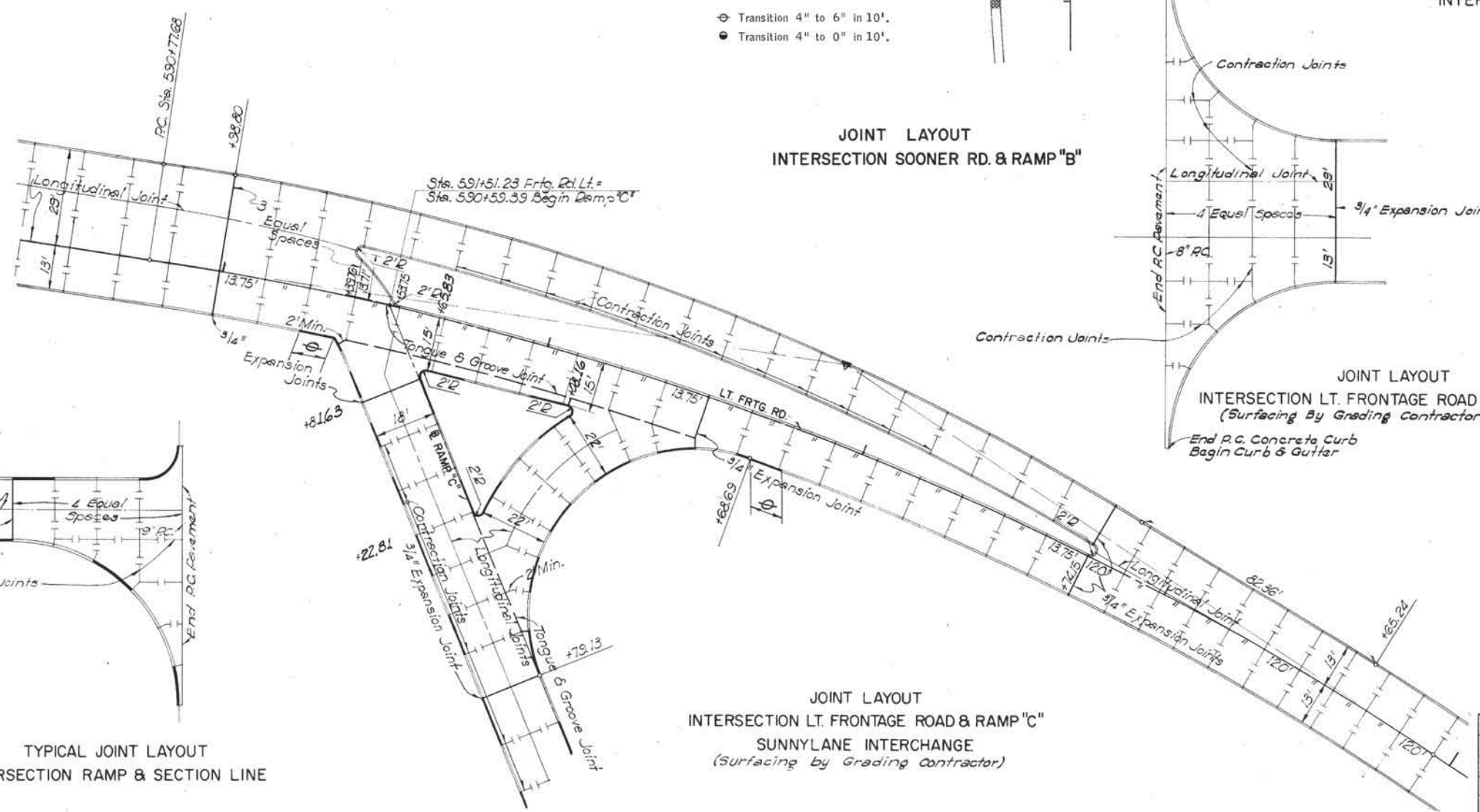
TYPICAL JOINT LAYOUT  
INTERSECTION RAMP & FRONTAGE ROAD



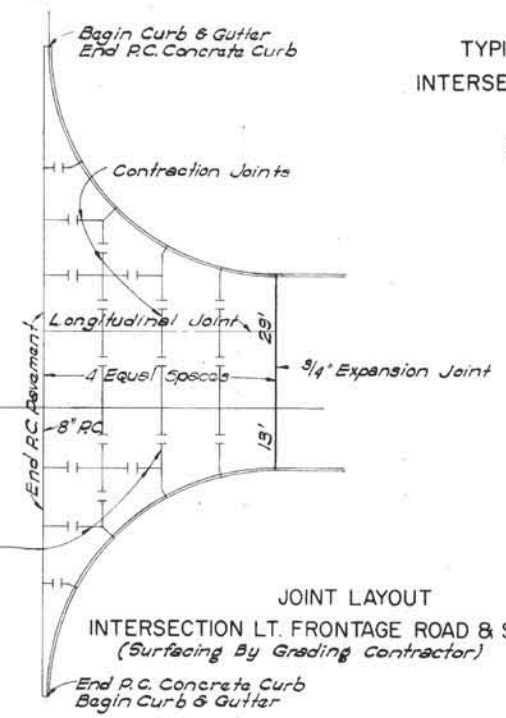
JOINT LAYOUT  
INTERSECTION SOONER RD. & RAMP "B"



TYPICAL JOINT LAYOUT  
INTERSECTION FRONTAGE ROAD  
AND  
SECTION LINE



JOINT LAYOUT  
INTERSECTION LT. FRONTAGE ROAD & RAMP "C"  
(Surfacing by Grading Contractor)



JOINT LAYOUT  
INTERSECTION LT. FRONTAGE ROAD & SUNNYLANE  
(Surfacing by Grading Contractor)

- Expansion Joint
- Longitudinal Joint
- Contraction Joint
- Tongue & Groove Joint
- Transition 4" to 6" in 10'

For 9" Concrete Pavement Details  
Not Shown See Standards:  
JA-9 For Joint Assemblies  
JA-9A " Joint Spacing  
P-9NR " 6" Integral Curb (Barrier)  
CSCD " 4" Lip Curb (Mountable)

For 7" Reinforced Concrete Pavement Details  
Not Shown See Standards:  
CSCD For 6" Integral Curb  
" Longitudinal Joint  
" Tongue & Groove Joint  
JA-768 For Expansion Joint  
P-768NR For Joint Spacing

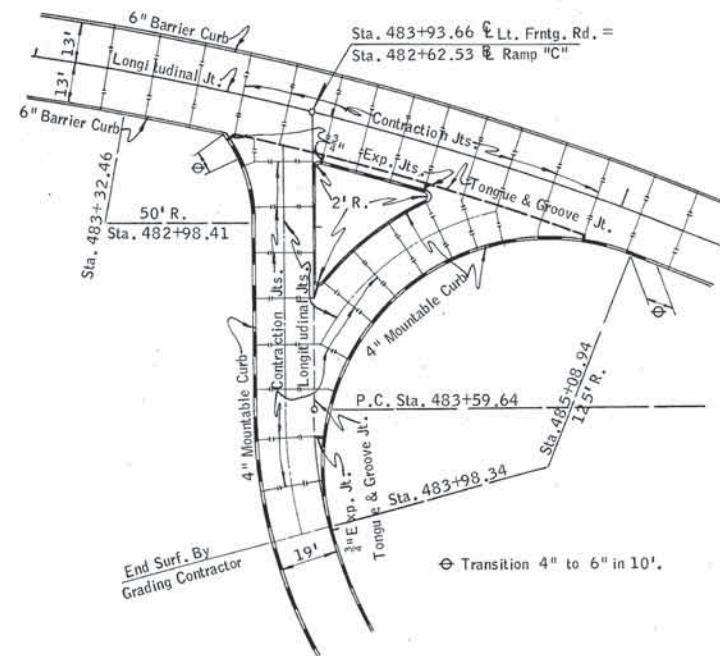
TYPICAL JOINT LAYOUT  
INTERSECTION RAMP & SECTION LINE

JOINT LAYOUT  
TYPICAL INTERSECTIONS

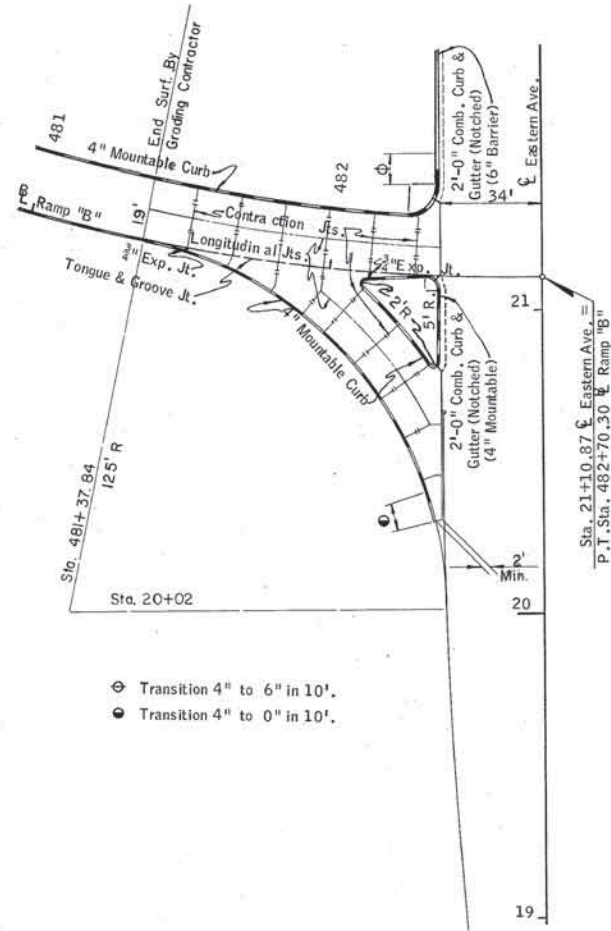
Design	
Drawn	
Checked	
Approved	
Squad	



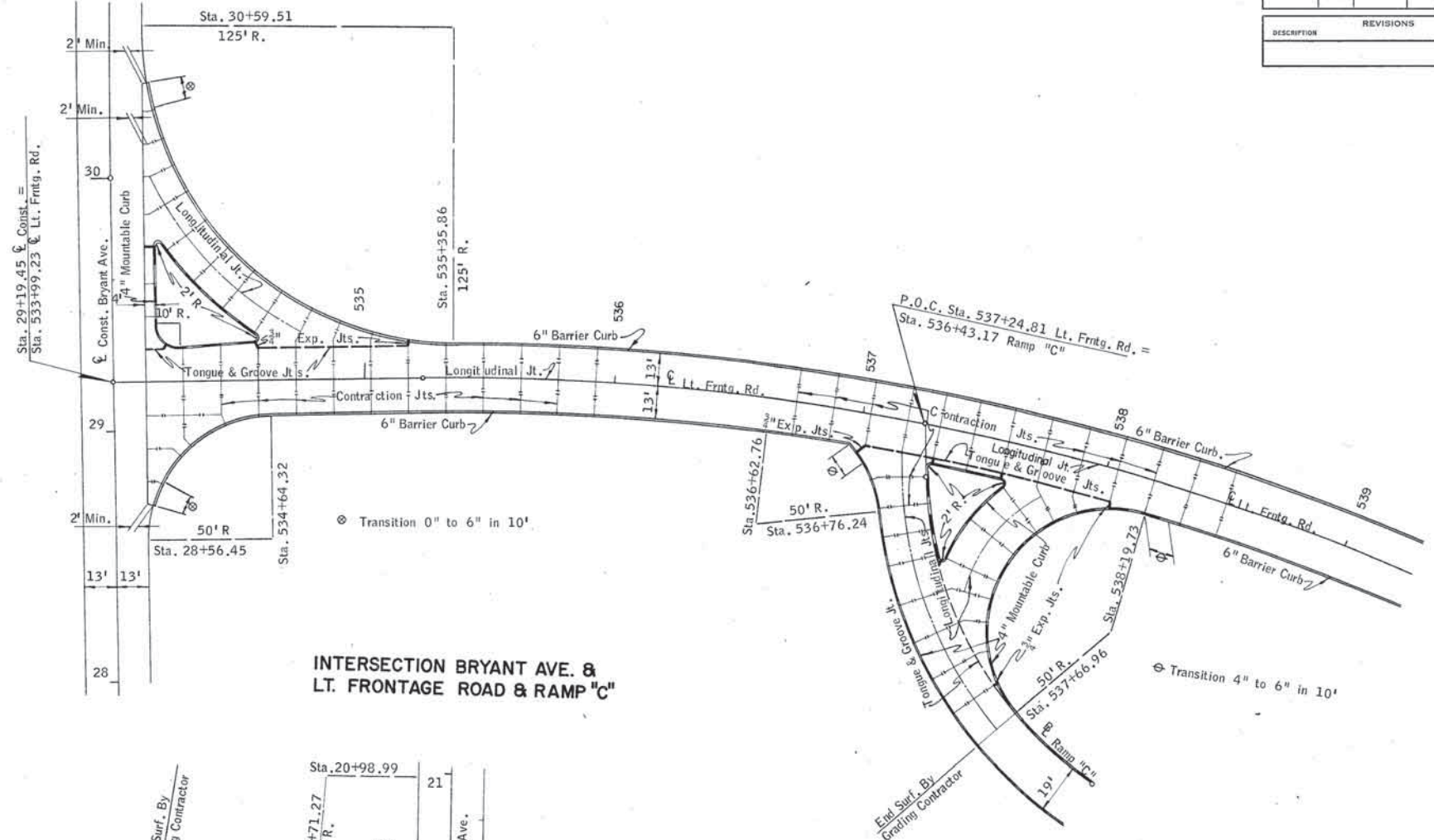
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240-4(86)	89	313	
REVISIONS					
DESCRIPTION	REVISIONS		DATE		



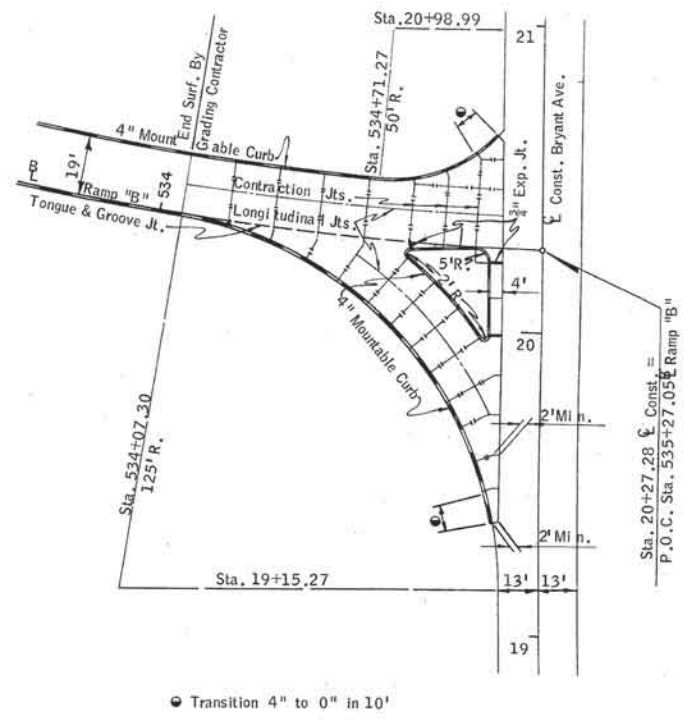
INTERSECTION LT. FRONTAGE ROAD & RAMP "C" (EASTERN AVE. INTERCHANGE)



INTERSECTION EASTERN AVE. & RAMP "B"



INTERSECTION BRYANT AVE. & LT. FRONTAGE ROAD & RAMP "C"



INTERSECTION BRYANT AVE. & RAMP "B"

LEGEND

Expansion Joint	—+—+—+—
Longitudinal Joint	—+—+—+—
Contraction Joint	—+—+—+—
Tongue & Groove Joint	—+—+—+—

Design	
Drawn	
Checked	
Approved	
Squad	

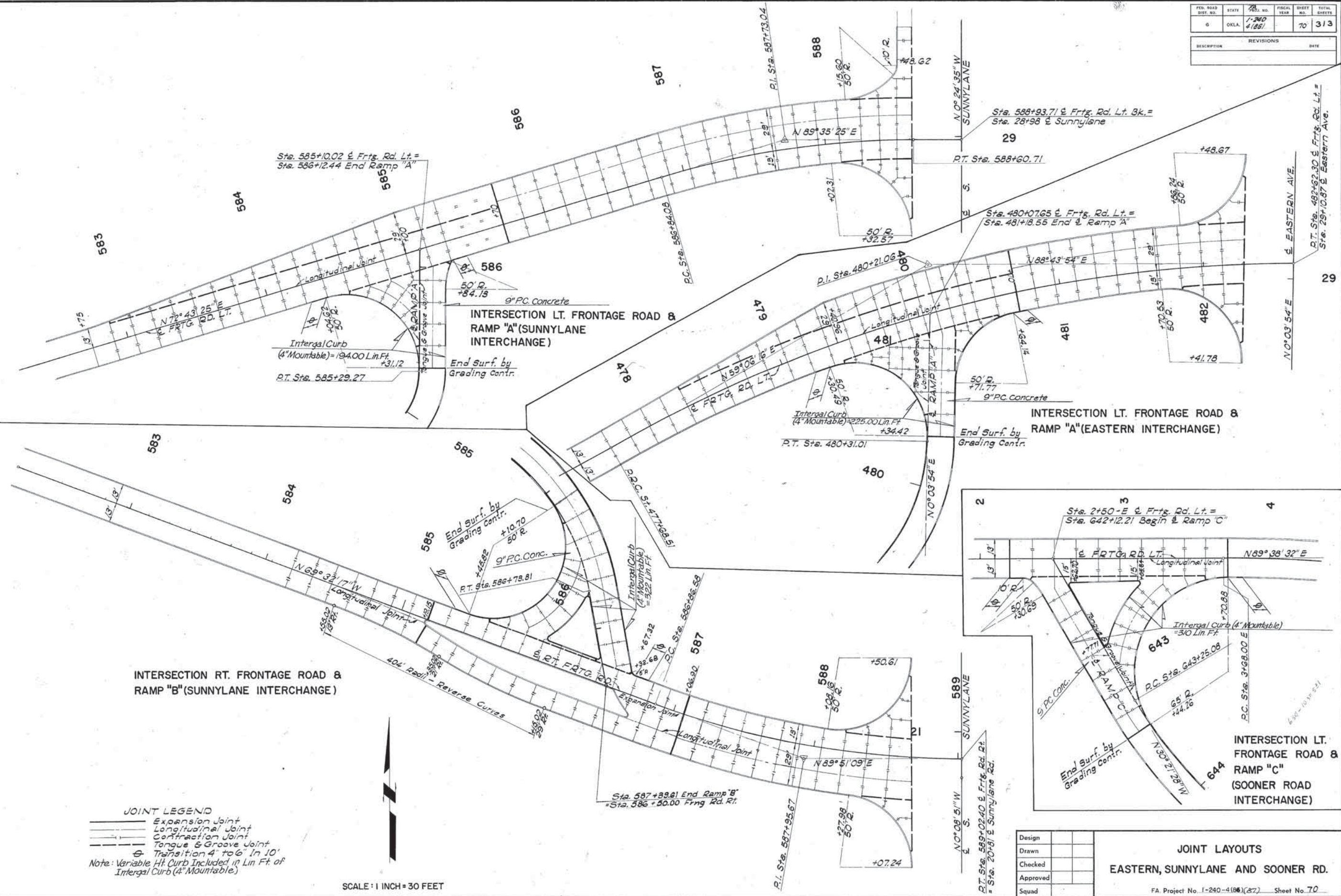
JOINT LAYOUTS  
EASTERN AVE. & BRYANT AVE.



FED. ROAD DIST. NO.	STATE	FED. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240 4(86)		70	313

REVISIONS	
DESCRIPTION	DATE



Design		
Drawn		
Checked		
Approved		
Squad		

JOINT LAYOUTS  
EASTERN, SUNNYLANE AND SOONER RD.

FA. Project No. I-240-4(86)(87) Sheet No. 70

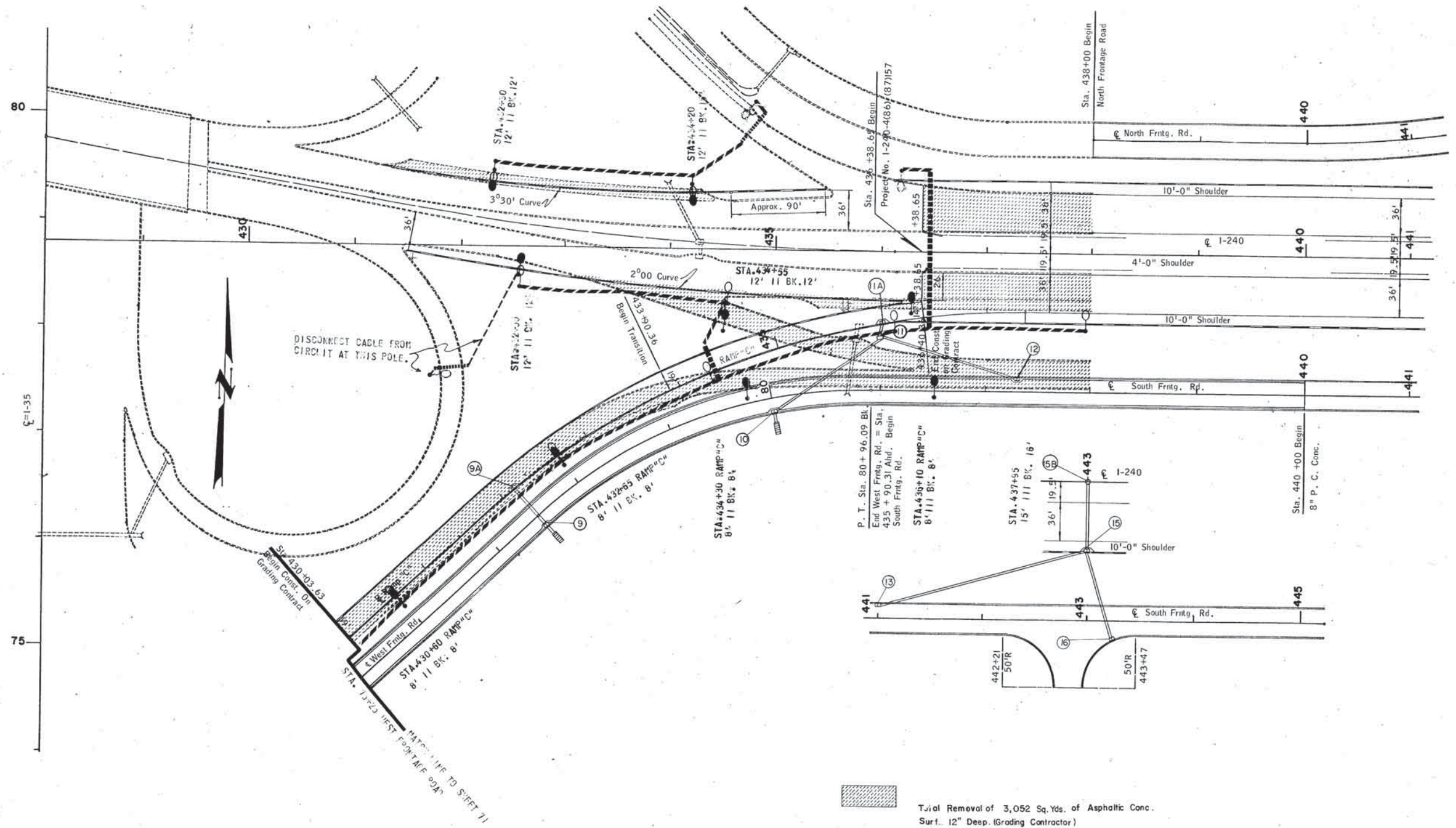






FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240-486		72	313

REVISIONS	
DESCRIPTION	DATE



Total Removal of 3,052 Sq. Yds. of Asphaltic Conc.  
Surf. 12" Deep. (Grading Contractor)

Total Removal of 2,705 Lin. Ft. of Exist.  
Conc. Curb (Grading Contractor)

SEE SHEET NO. 71 FOR LEGEND OF LIGHTING ITEMS  
AND NOTES.

Design		
Drawn		
Checked		
Approved		
Squad		

## CONSTRUCTION DETAILS

I-240 & I-35

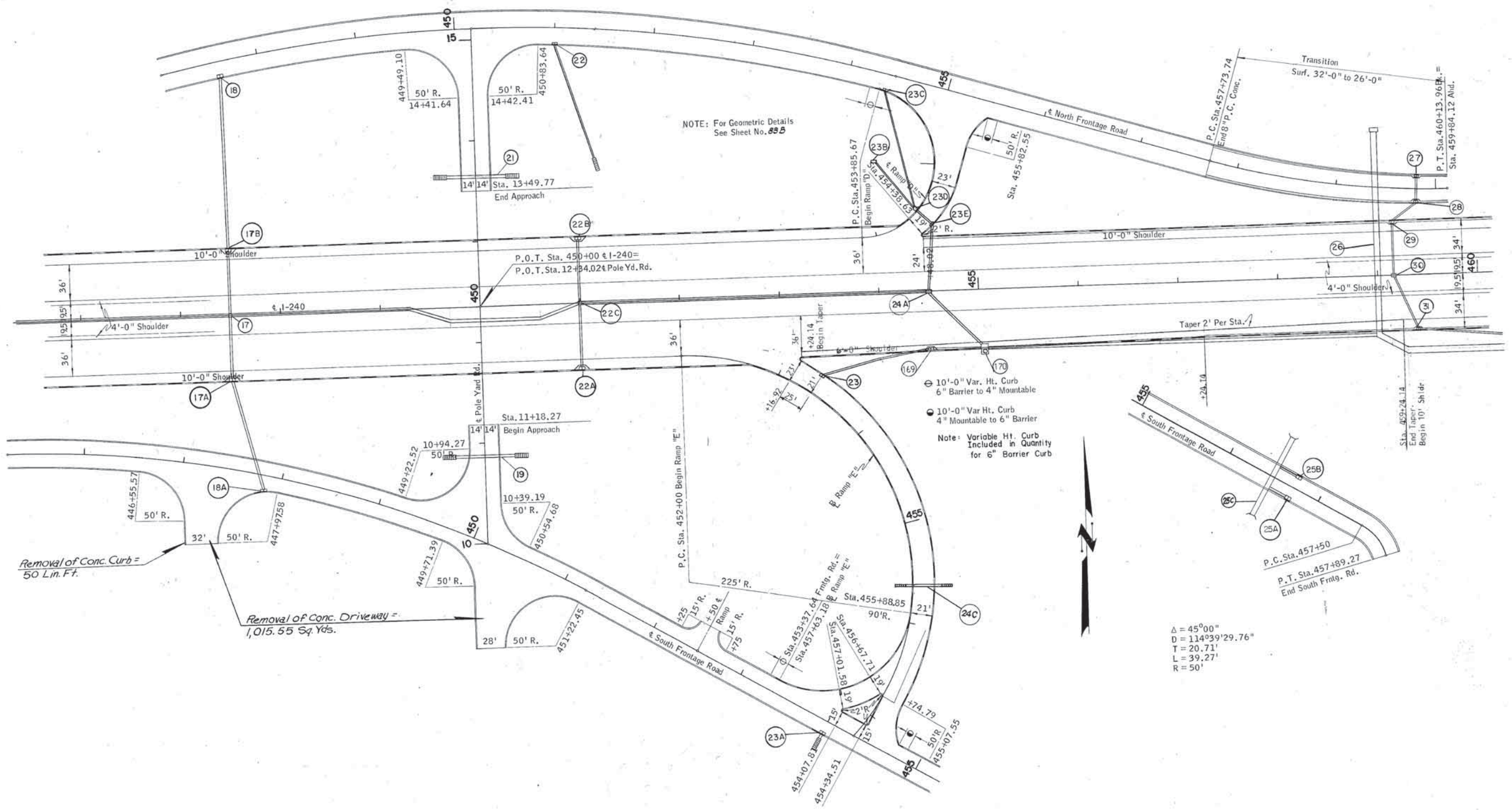
## HIGHWAY LIGHTING REVISIONS.

F. A. Project No. I-240-4(86) Sheet No. 72



FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240-488		73	133
REVISIONS					
DESCRIPTION	DATE				

Rev. Modified Surf. Taper & Add Str. No. 169 & 170. 1-28-72



Δ = 45°00"  
D = 114°39'29.76"  
T = 20.71'  
L = 39.27'  
R = 50'

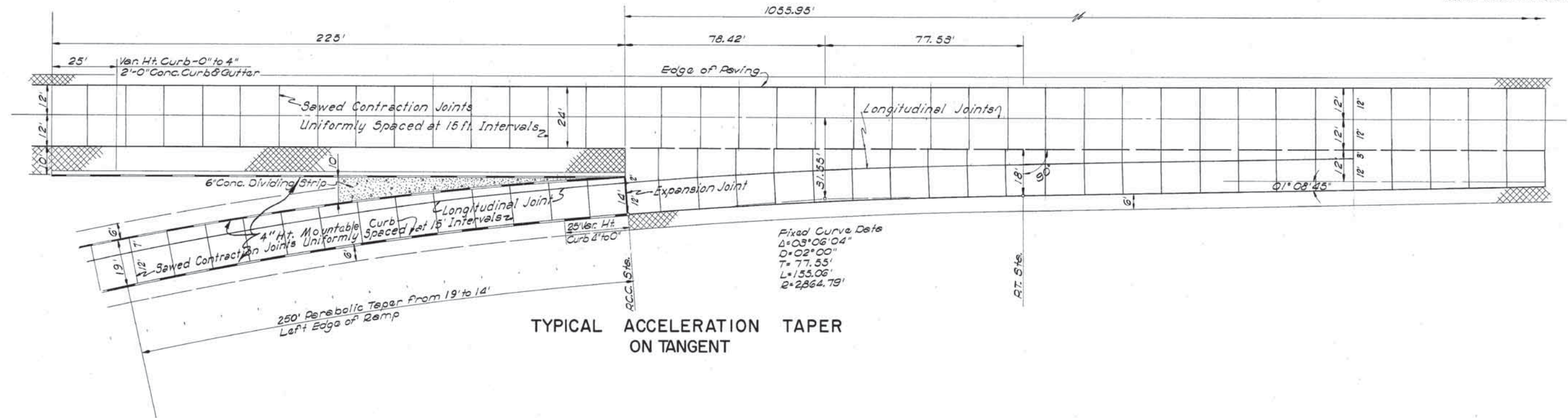
Design	
Drawn	
Checked	
Approved	
Squad	

**CONSTRUCTION DETAILS**  
**NORTH & SOUTH FRONTAGE RD.**  
F.A. Project No. 1-240-4(86)(77) Sheet No. 73

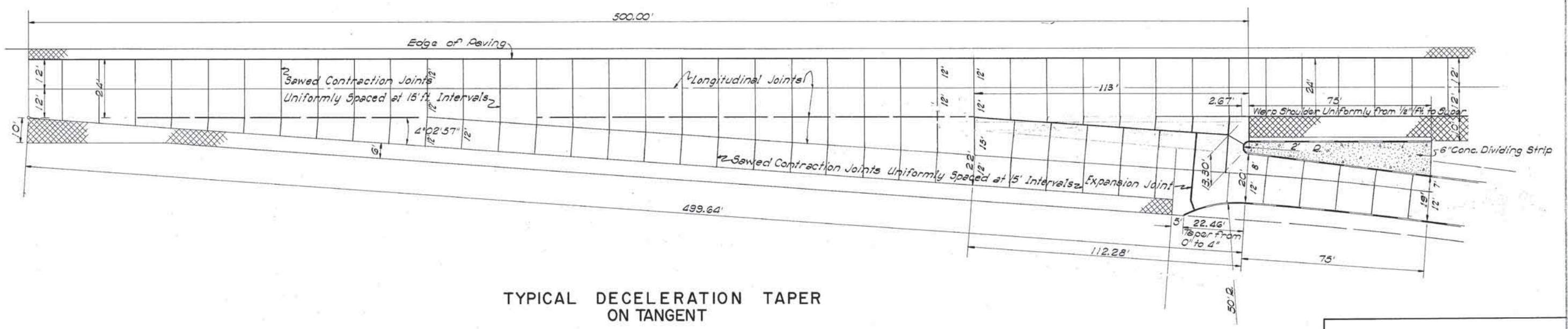


FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240-141 (86/87)		74	313

Revised "Delete Red Conc. Traffic Marker" 1-28-72



TYPICAL ACCELERATION TAPER ON TANGENT

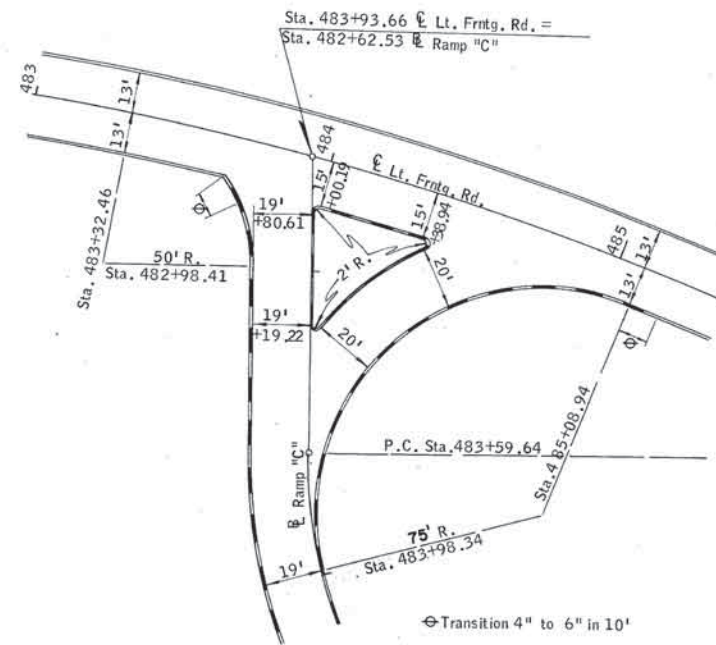


TYPICAL DECELERATION TAPER ON TANGENT

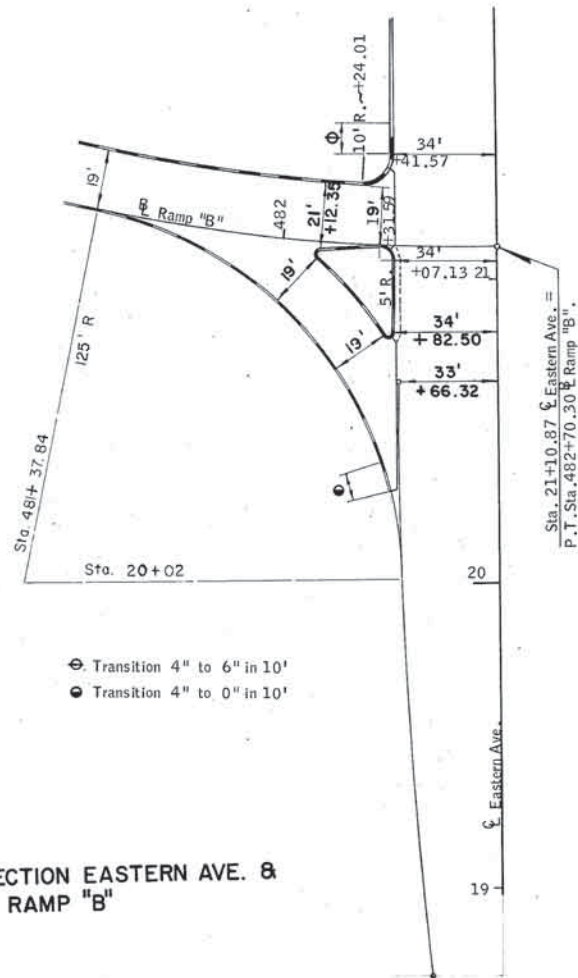
RAMP TERMINAL JOINT LAYOUT DETAILS



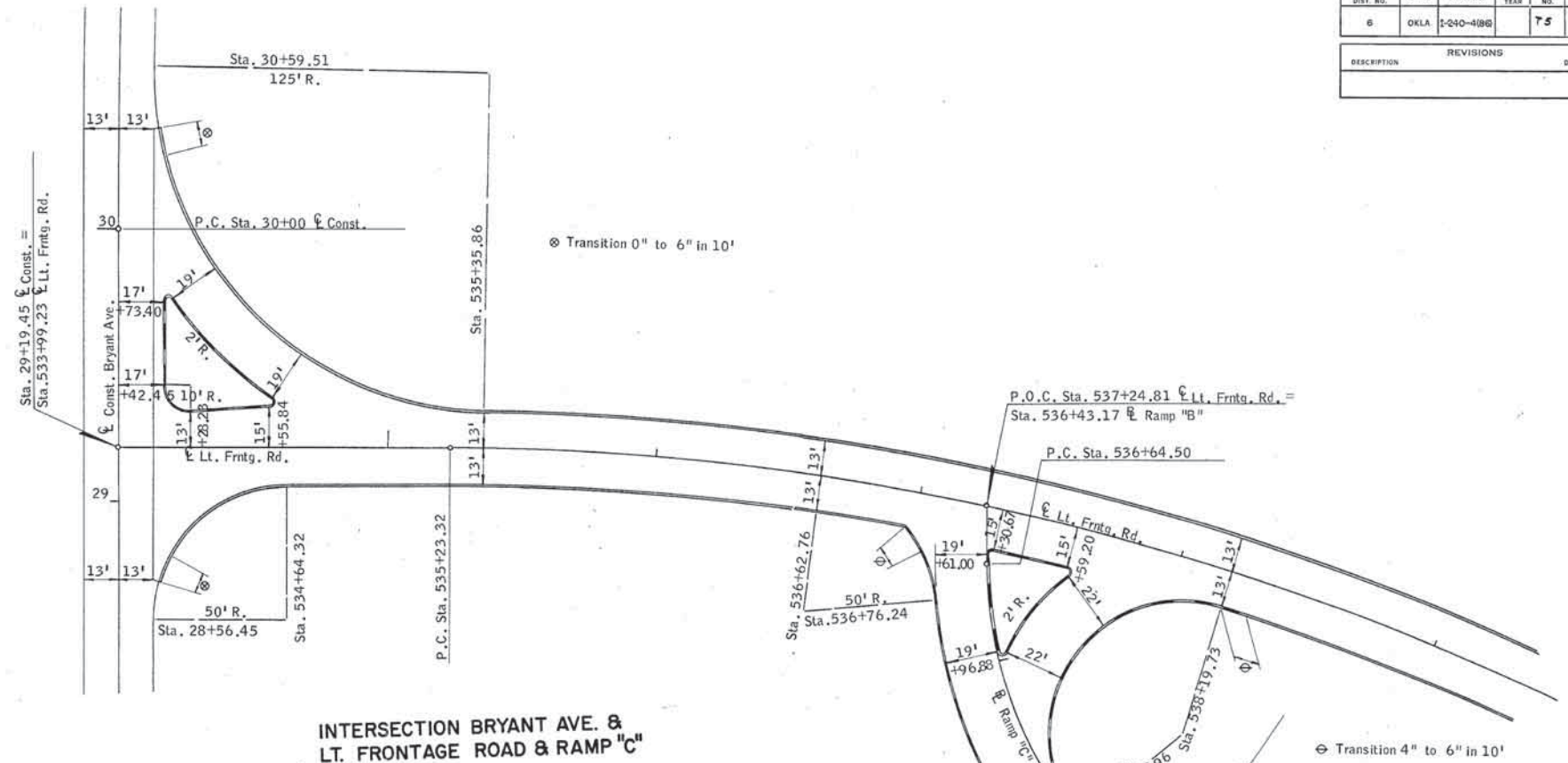
FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA	I-240-4186		75	313
DESCRIPTION		REVISIONS		DATE	



INTERSECTION LT. FRONTAGE ROAD &  
RAMP "C"(EASTERN AVE. INTERCHANGE)



INTERSECTION EASTERN AVE. &  
RAMP "B"



INTERSECTION BRYANT AVE. &  
LT. FRONTAGE ROAD & RAMP "C"

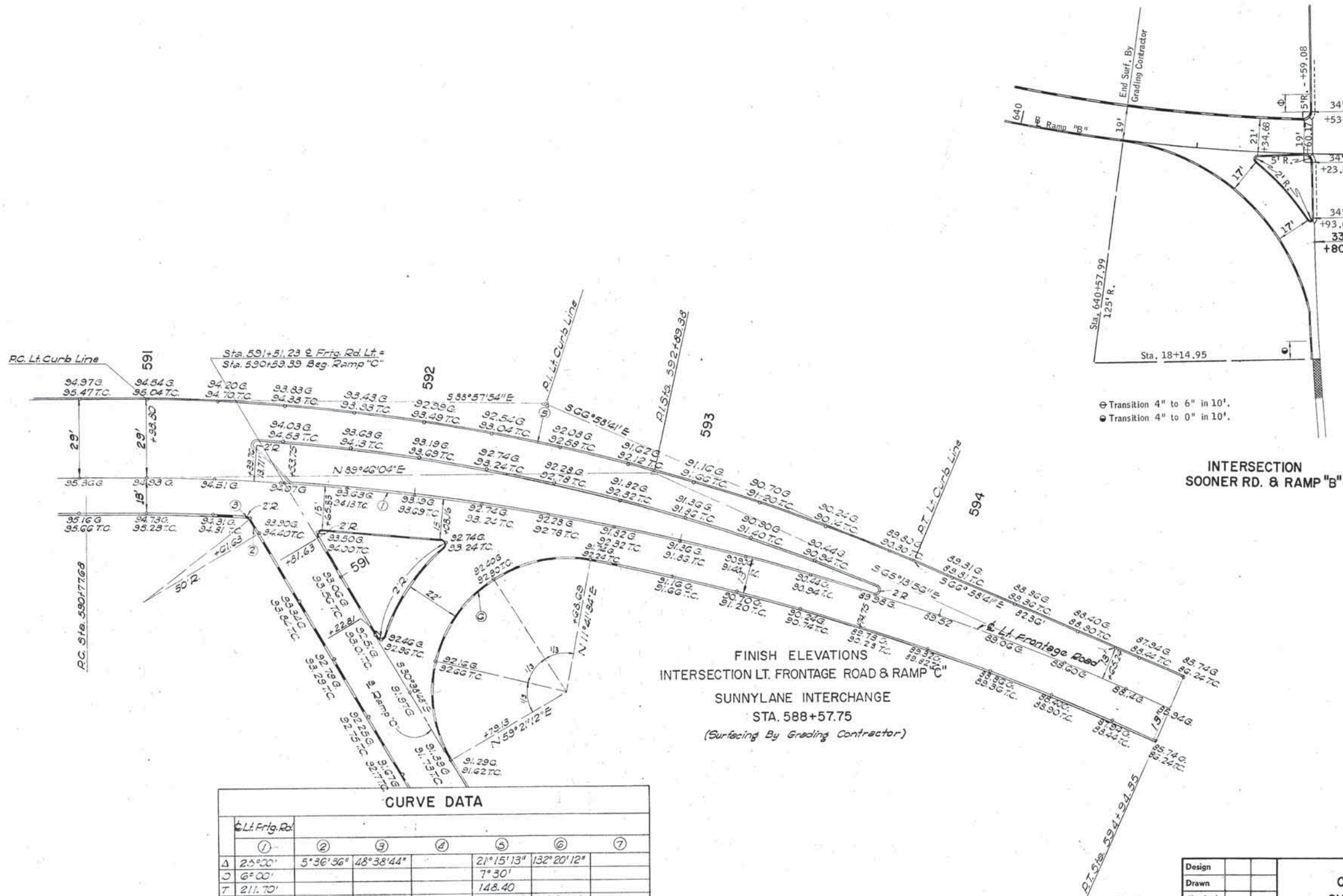


INTERSECTION BRYANT AVE. &  
RAMP "B"

Design	
Drawn	
Checked	
Approved	
Squad	

CONSTRUCTION DETAILS  
EASTERN AVE. & BRYANT AVE.



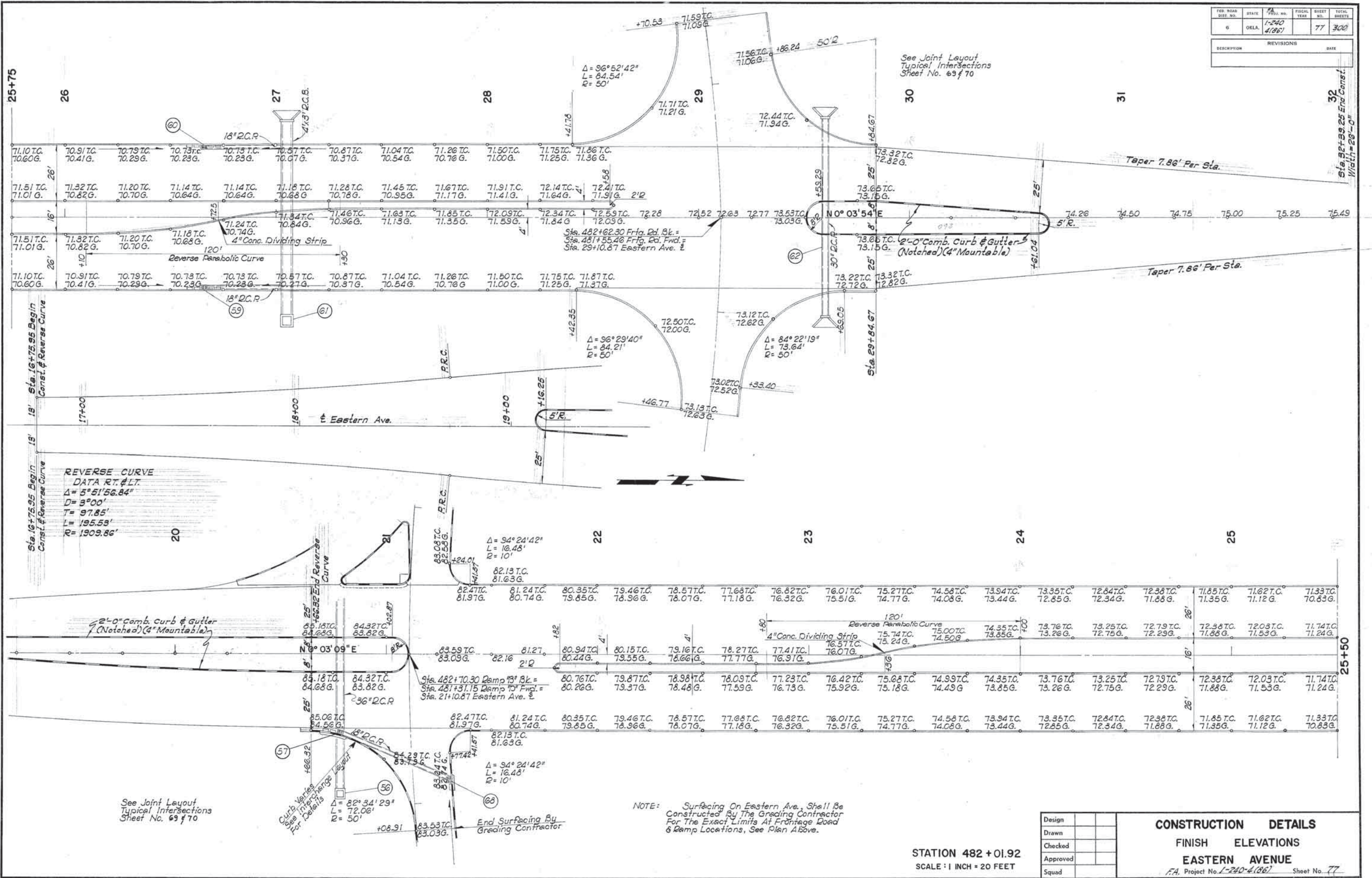


Design	
Drawn	
Checked	
Approved	
Squad	

**CONSTRUCTION DETAILS**  
**SUNNYLANE & SOONER RD.**



FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240 (1961)	77	300
REVISIONS				
DESCRIPTION	DATE			



Design	
Drawn	
Checked	
Approved	
Squad	

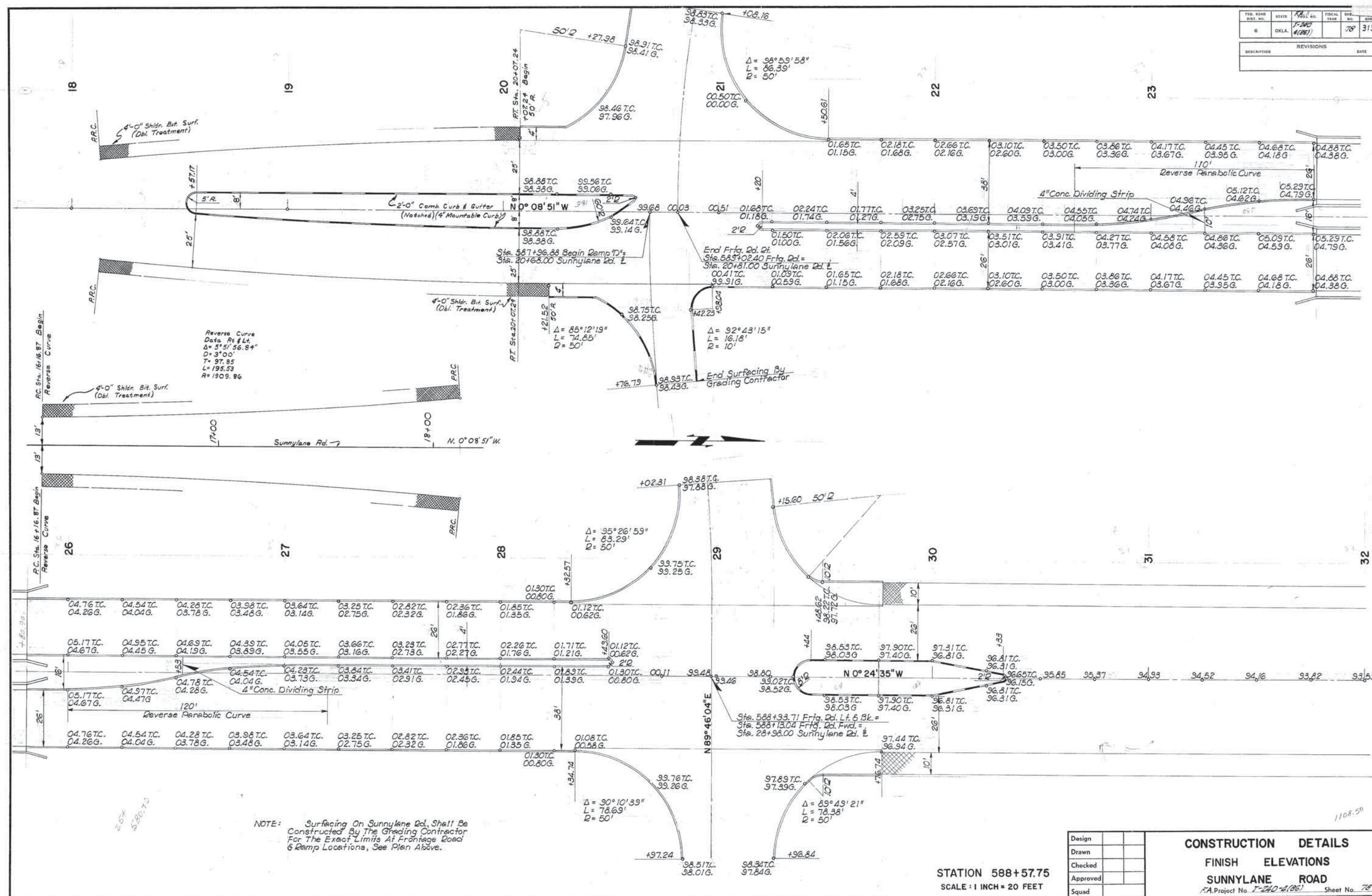
CONSTRUCTION DETAILS	
FINISH ELEVATIONS	
EASTERN AVENUE	
F.A. Project No. 1-240-4(186)	Sheet No. 77



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SIB. NO.	SHEET NO.
6	OKLA.	1-240 4(361)		78	31

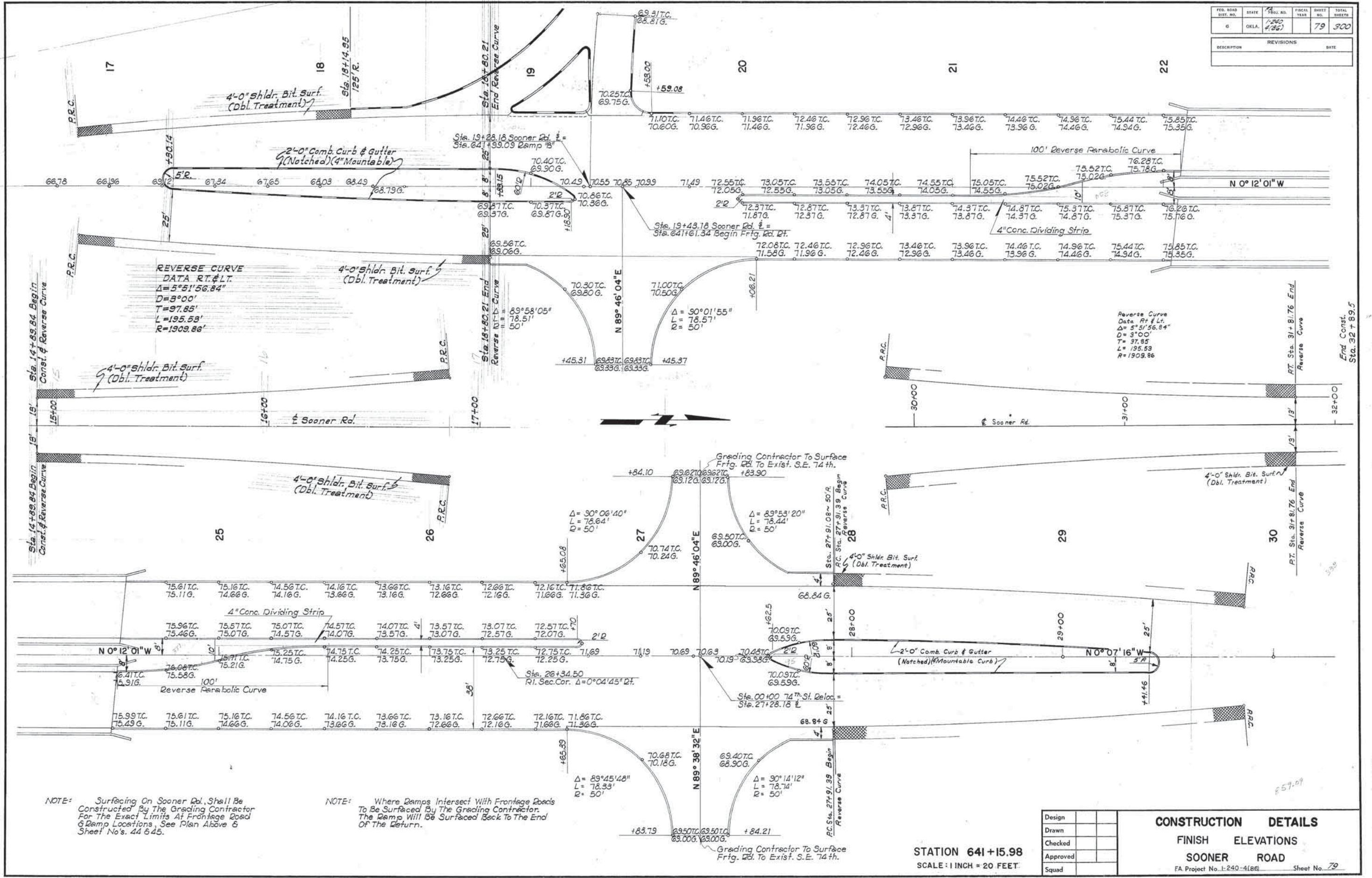
REVISIONS	
DESCRIPTION	DATE



32  
END CONST 54 54 70



FEED ROAD DIST. NO.	STATE	FA PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240 4186		79	300
REVISIONS					DATE



NOTE: Surfacing On Sooner Rd., Shall Be Constructed By The Grading Contractor For The Exact Limits At Frontage Road & Ramp Locations See Plan Above & Sheet No's. 44 & 45.

NOTE: Where Ramps Intersect With Frontage Roads To Be Surfaced By The Grading Contractor. The Ramp Will Be Surfaced Back To The End Of The Return.

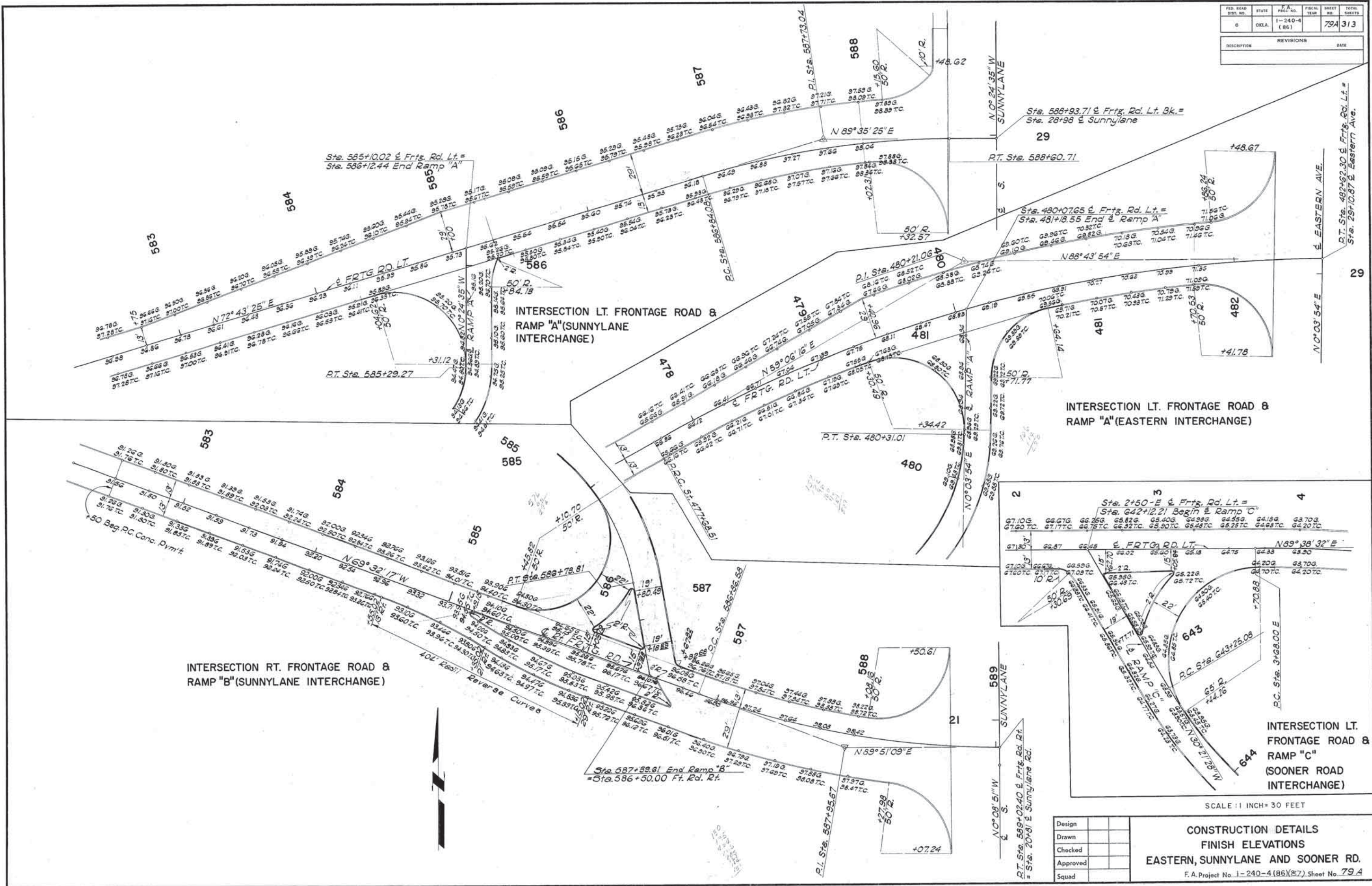
STATION 641+15.98  
SCALE: 1 INCH = 20 FEET

Design	
Drawn	
Checked	
Approved	
Squad	

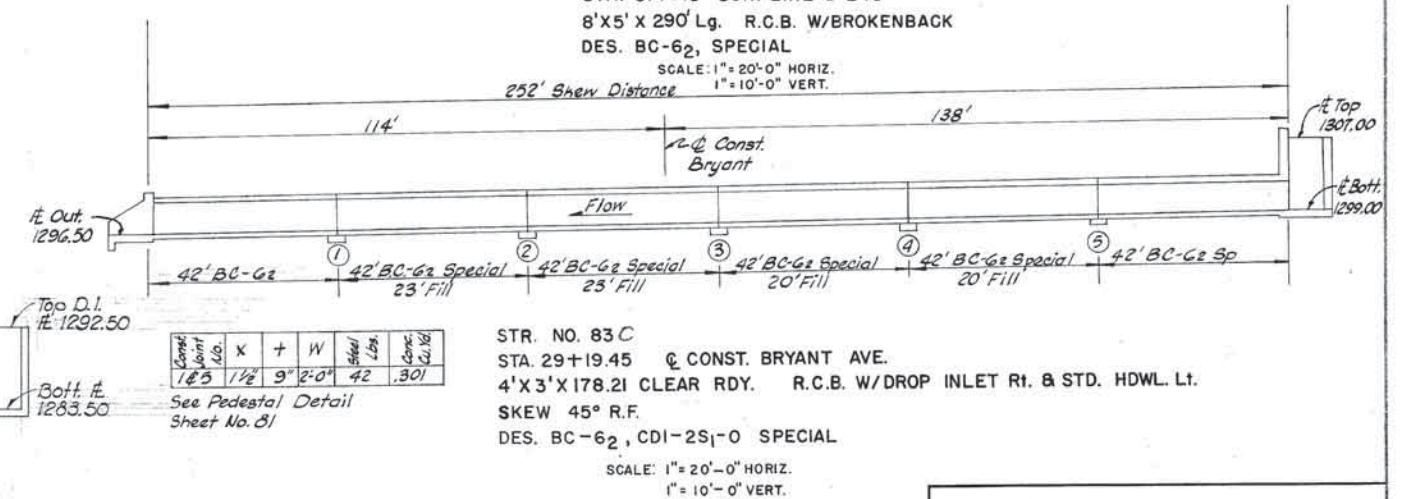
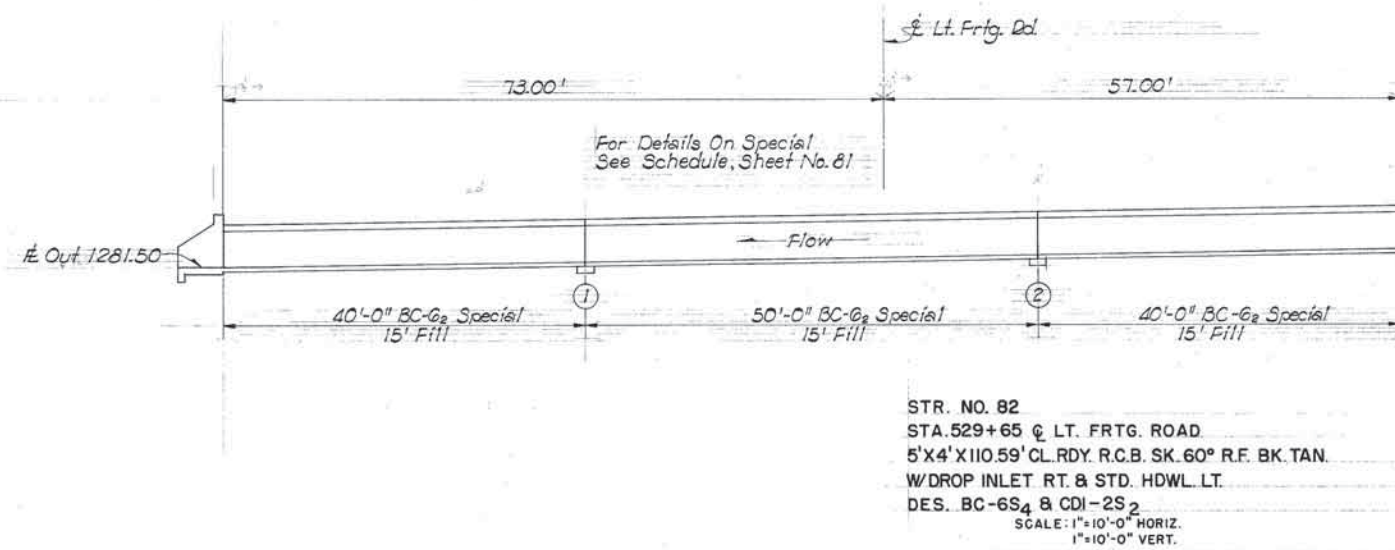
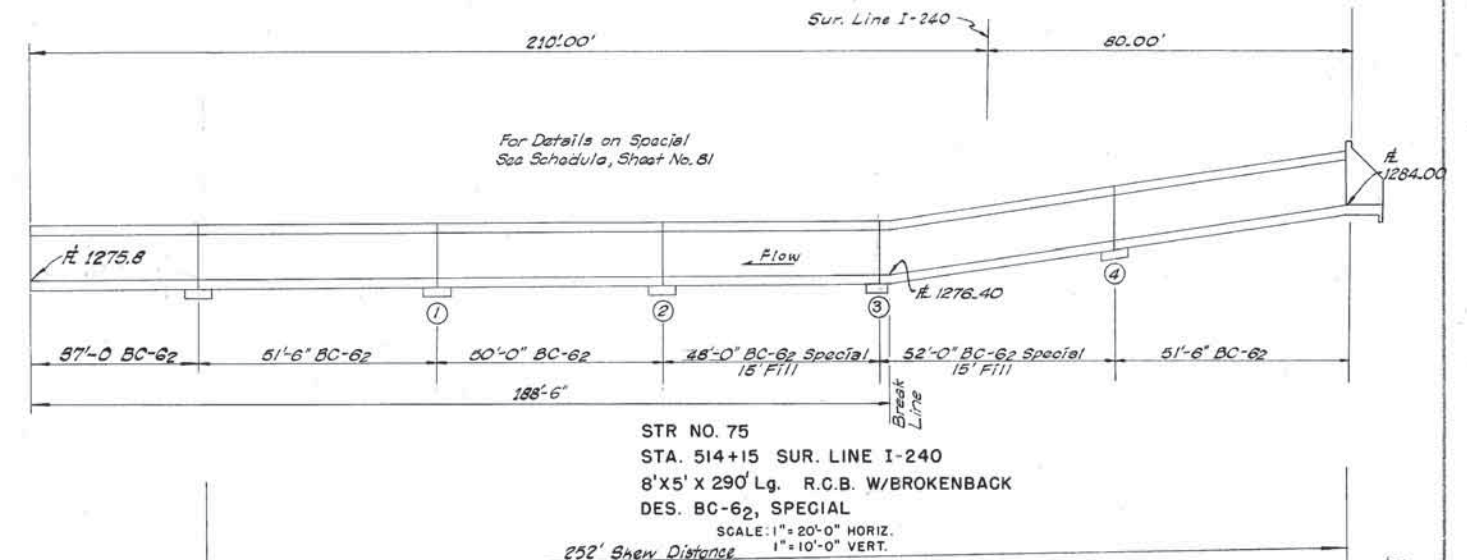
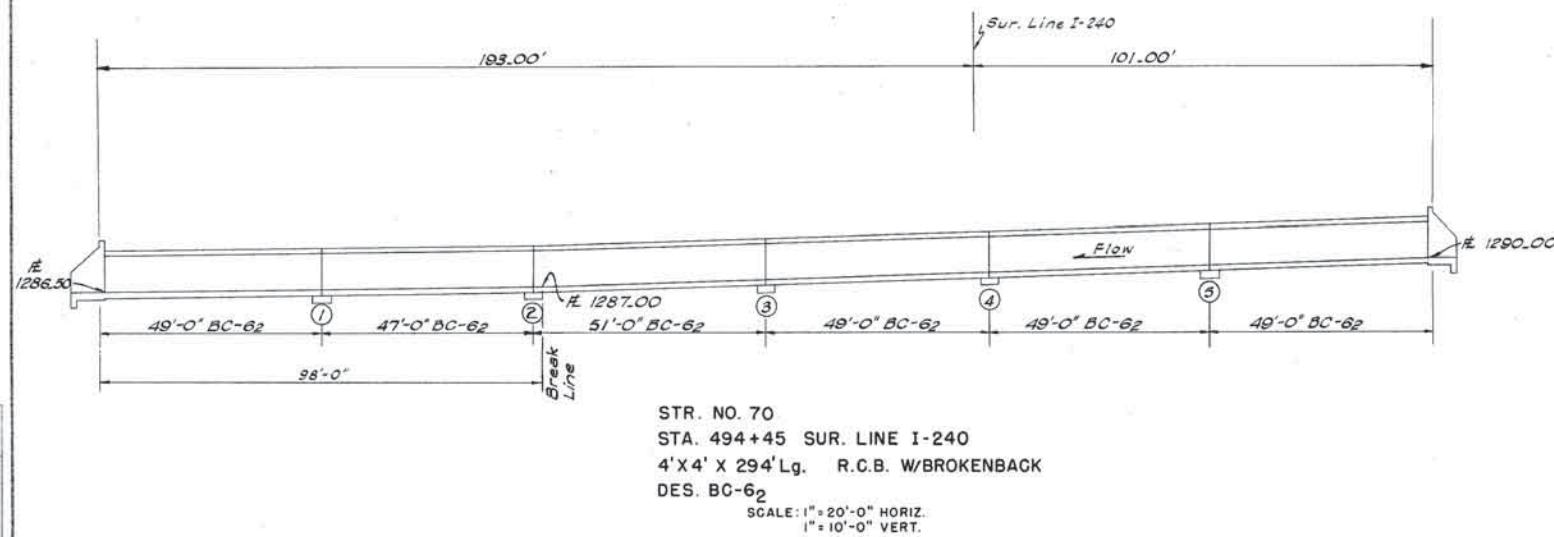
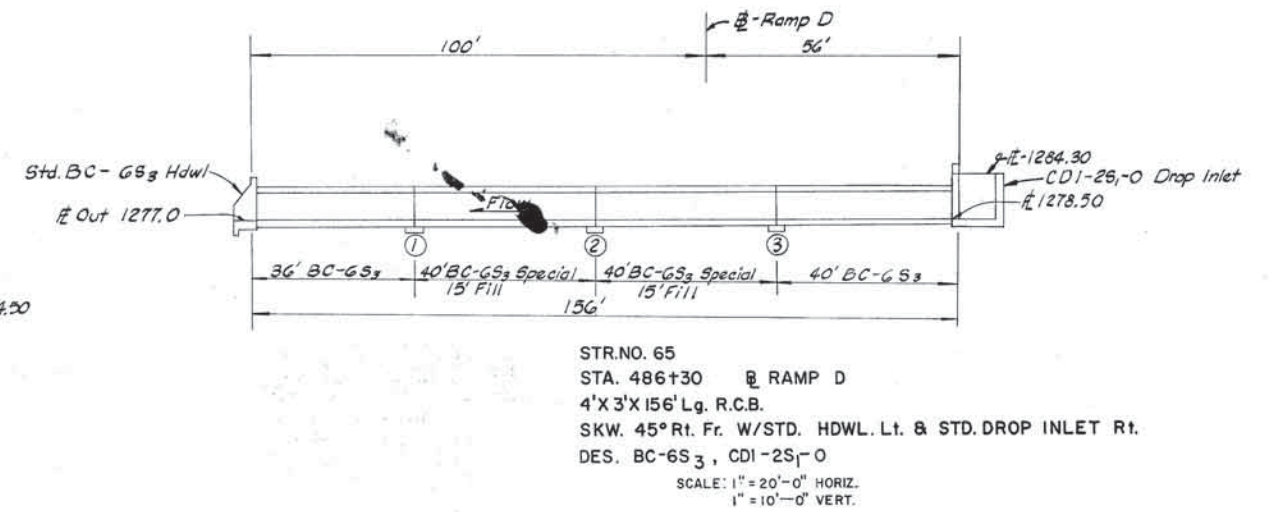
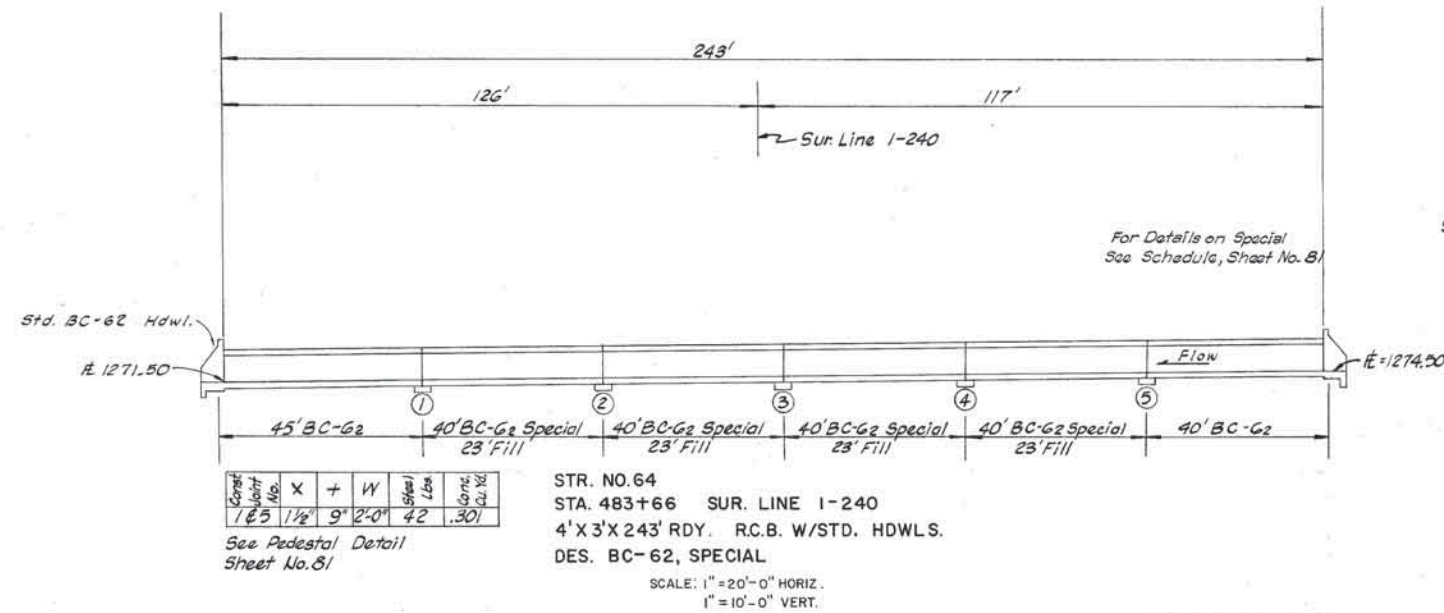
**CONSTRUCTION DETAILS**  
**FINISH ELEVATIONS**  
**SOONER ROAD**  
 FA Project No. 1-240-4186 Sheet No. 79



FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240-4 (86)	79A	313	
DESCRIPTION		REVISIONS		DATE	

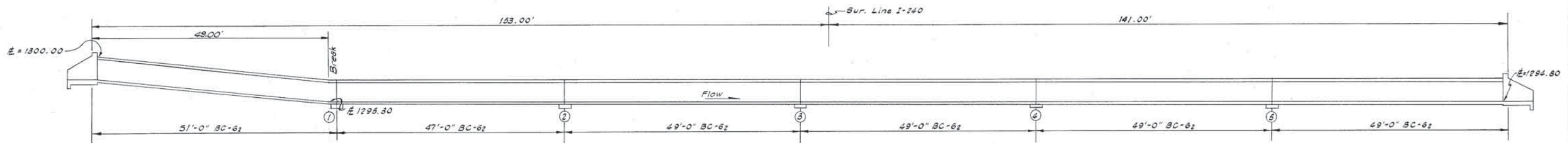




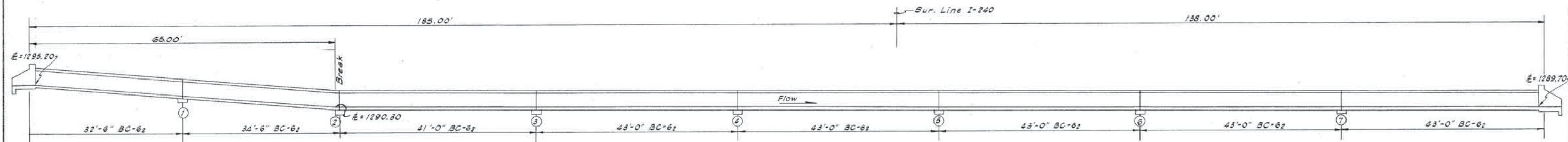


### SPECIAL CULVERT DETAILS

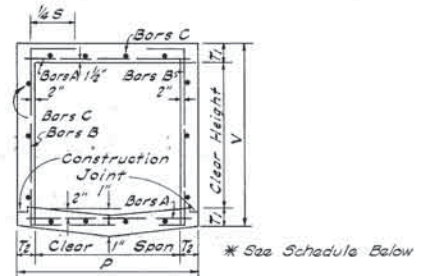




STR. NO. 91  
STA. 561+70 SUR. LINE I-240  
5'X4'X 294' Lg. R.C.B. W/BROKENBACK  
DES. BC-62



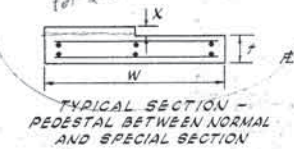
STR. NO. 95  
STA. 573+05 SUR. LINE I-240  
4'X3'X323' Lg. R.G.B. W/BROKENBACK  
DES. BC-62



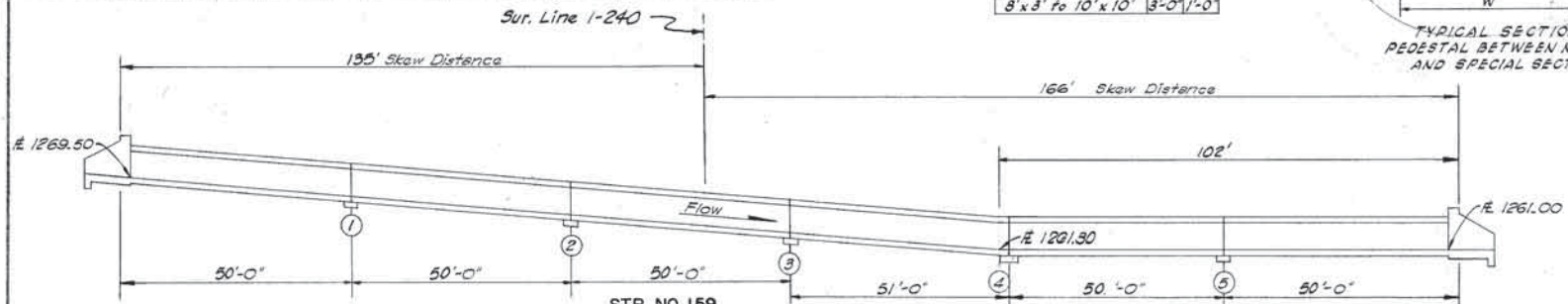
STR. SPECIAL DESIGN  
TYPICAL SECTION

* STR. SPECIAL DESIGN - SCHEDULE														
Height of Fill	Clear Span	Clear Height	Area	T <sub>1</sub>	T <sub>2</sub>	V = H x T <sub>1</sub>	P = S x T <sub>2</sub>	A'-Bars		B'-Bars		C'-Bars		Quantities
								Size	No.	Size	No.	Size	No.	
15'	8'	5'	40	12"	10"	7'-0"	9'-8"	#4@9"	20	#4@9"	20	#4@9"	20	93.40 1.026
20'	4'	4'	16	8"	8"	5'-4"	5'-4"	#4@9"	12	#4@9"	12	#4@9"	12	37.17 .460
13'	4'	3'	12	7"	6"	4'-2"	5'-0"	#4@9"	12	#4@9"	12	#4@9"	12	33.02 .328
20'	4'	3'	12	8"	6"	4'-2"	5'-0"	#4@9"	12	#4@9"	12	#4@9"	12	33.02 .328
23'	4'	3'	12	8 1/2"	6"	4'-5"	5'-0"	#4@9"	12	#4@9"	12	#4@9"	12	36.83 .374
19'	6'	4'	20	9"	8"	5'-6"	6'-4"	#4@9"	14	#4@9"	14	#4@9"	14	51.85 .549
15'	4'	3'	12	7"	6"	4'-2"	5'-0"	#4@9"	12	#4@9"	12	#4@9"	12	33.02 .328

Size of Barrel	W	T
2'x2' to 4'x4'	2'-0"	9"
5'x2' to 6'x6'	2'-6"	9"
8'x3' to 10'x10'	3'-0"	1'-0"

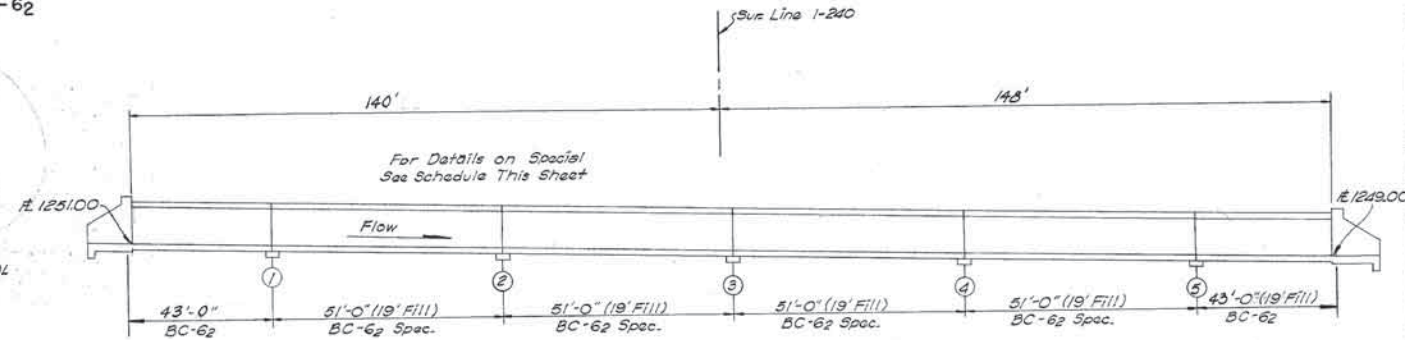


TYPICAL SECTION -  
PEDESTAL BETWEEN NORMAL  
AND SPECIAL SECTION



STR. NO. 159  
STA. 722+60 SUR. LINE I-240  
3'X3'X301' Lg. R.C.B.  
50° SKEW RT. FWD. W/BROKENBACK  
DES. BC-62, R.F. & SPECIAL

STR. NO. 124  
STA. 614+45 SUR. LINE I-240  
5'X3'X160' Lg. R.C.B. W/BROKENBACK  
DES. BC-62



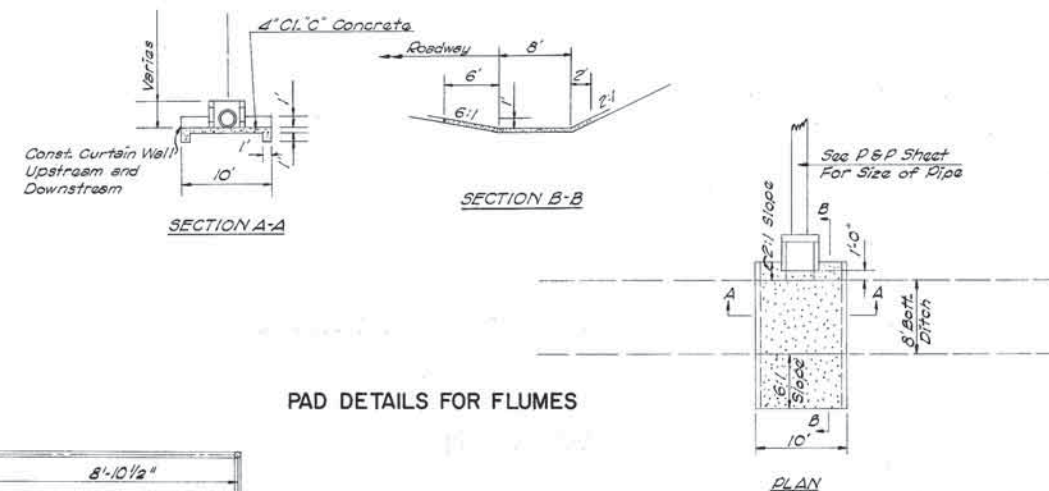
STR. NO. 160  
STA. 729+95 SUR. LINE I-240  
5'X4'X 288' RDY. R.C.B.  
DES. BC-62, SPECIAL

**SPECIAL CULVERT  
DETAILS**

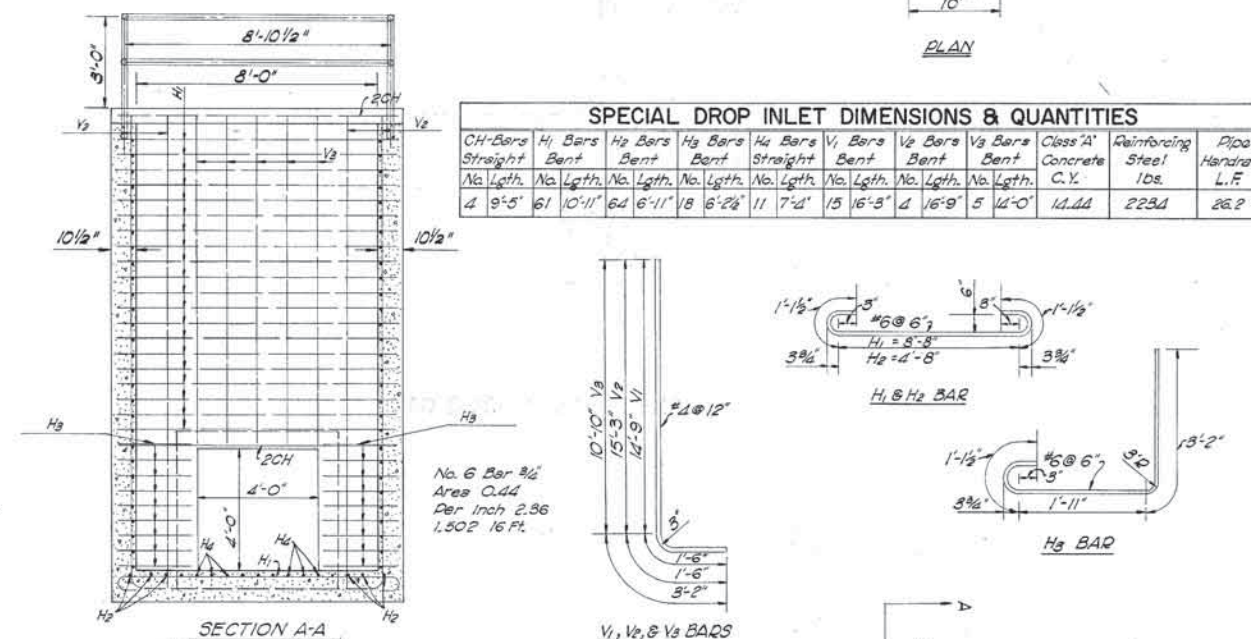
Const. Joint No.	X	Y	W	Steel	Conc.
135	1"	9"	2'-6"	63	0.46

See Pedestal Detail  
This Sheet



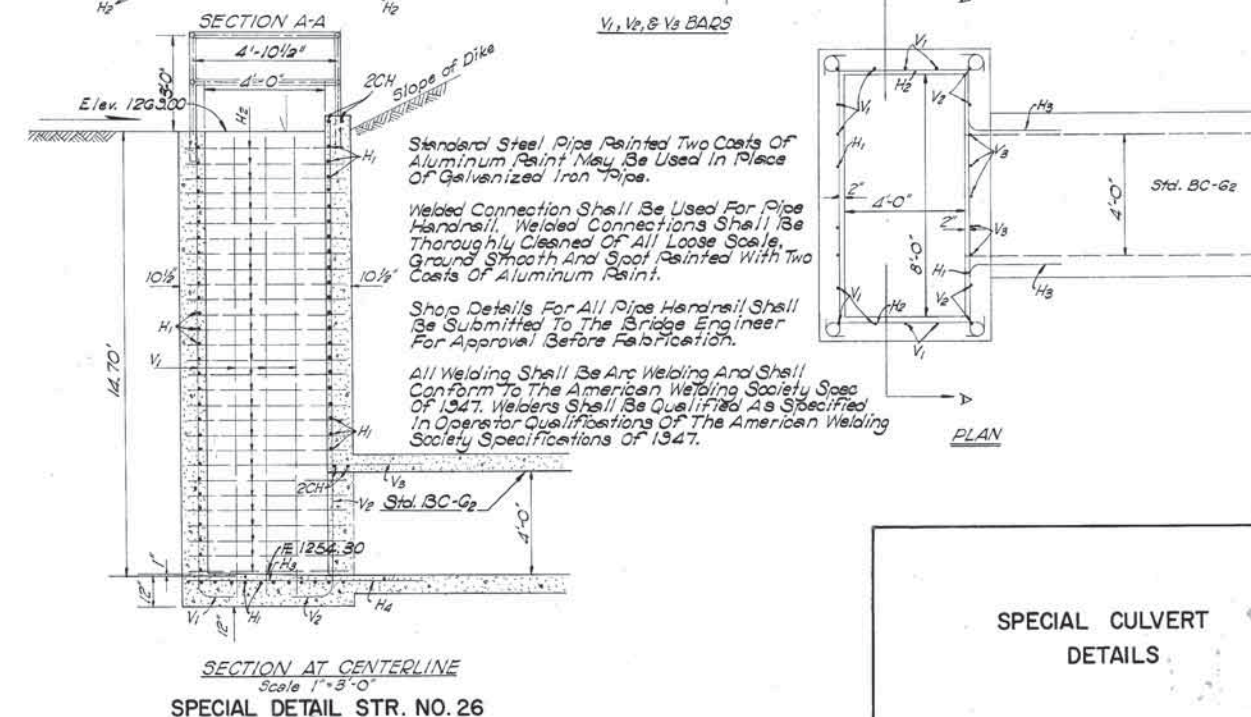


### PAD DETAILS FOR FLUMES



$B_1$  6'-0"  $1'-3"$   
 $B_2$  4x2'-5" Ave  $2'-0"$   
 $B_3$  4x2'-10" Ave  $2'-0"$   
 $B_4$  6'-0"  $1'-3"$   
 $B_5$  4x2'-5" Ave  $2'-0"$

30°  
 6'-0"  
 2'-5"  
 3'-0"  
 1'-1"



SECTION AT CENTERLINE  
Scale 1"=3'-0"

## SPECIAL CULVERT DETAILS

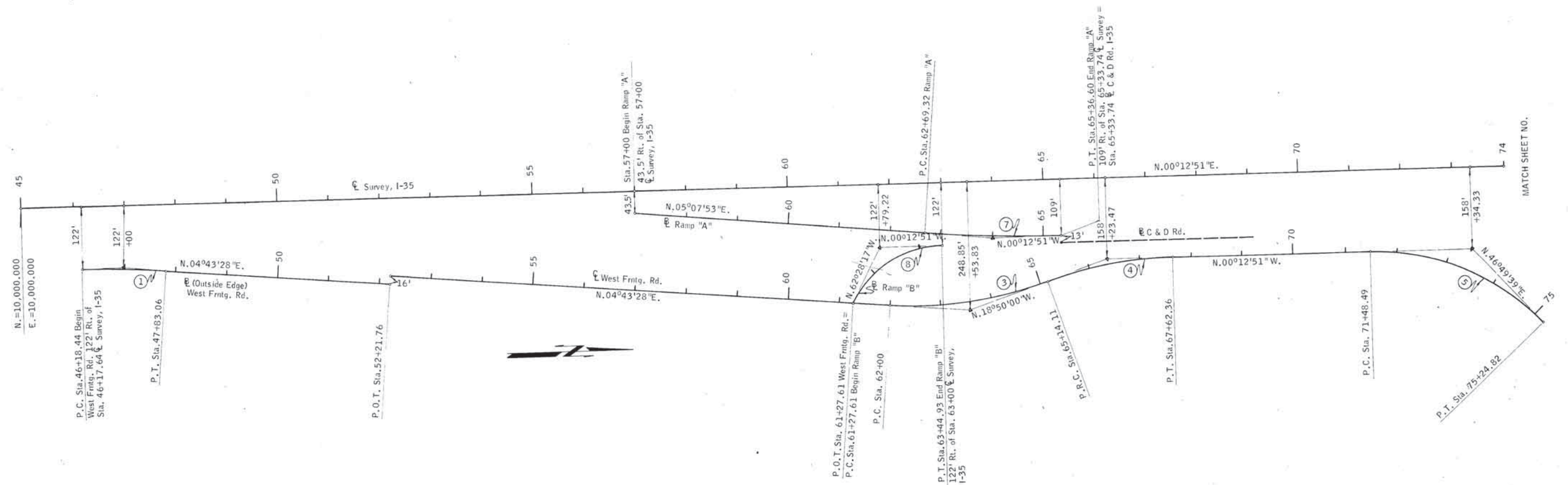


FED. ROAD DIST. NO.	STATE	F.A. PROC. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240-4 (86)		83A	313

REVISIONS	
DESCRIPTION	DATE

[illegible]

NOTES: Coordinates Shown are based on a local system with N 10,000.000 E 10,000.000 at Sta. 45+00, I-35 (I-381-4).



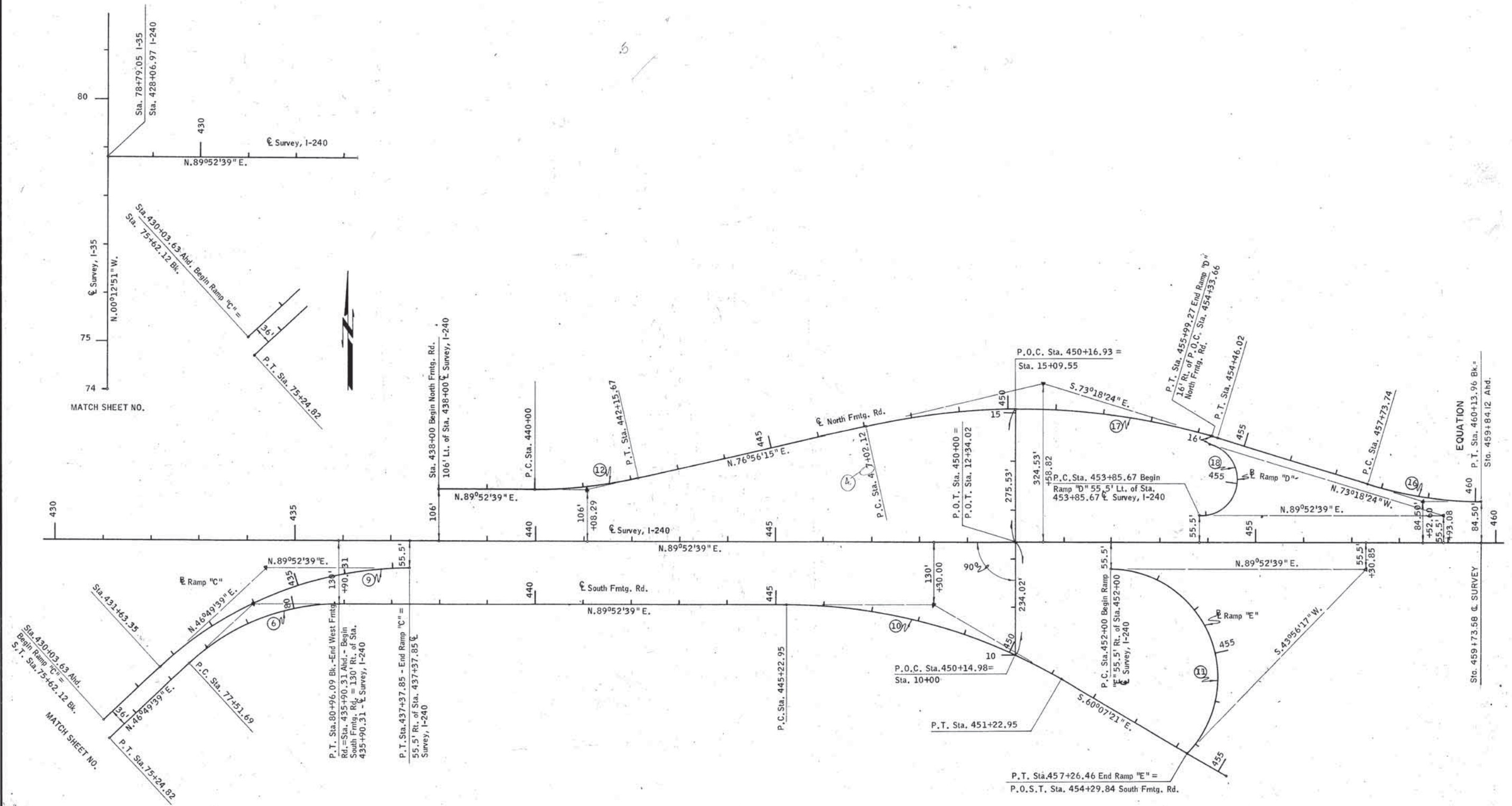
Design		
Drawn		
Checked		
Approved		
Squad		

GEOMETRIC DETAILS  
WEST FRNTG. RD.

FAProject No. I-240-4(86)(87) Sheet No. 83A



FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-240-4 (86)87		838	
REVISIONS					
DESCRIPTION					DATE



For Curve Data  
See Sheet No. 838

Design	
Drawn	
Checked	
Approved	
Squad	

## GEOMETRIC DETAILS NORTH & SOUTH FRNTG. RD.

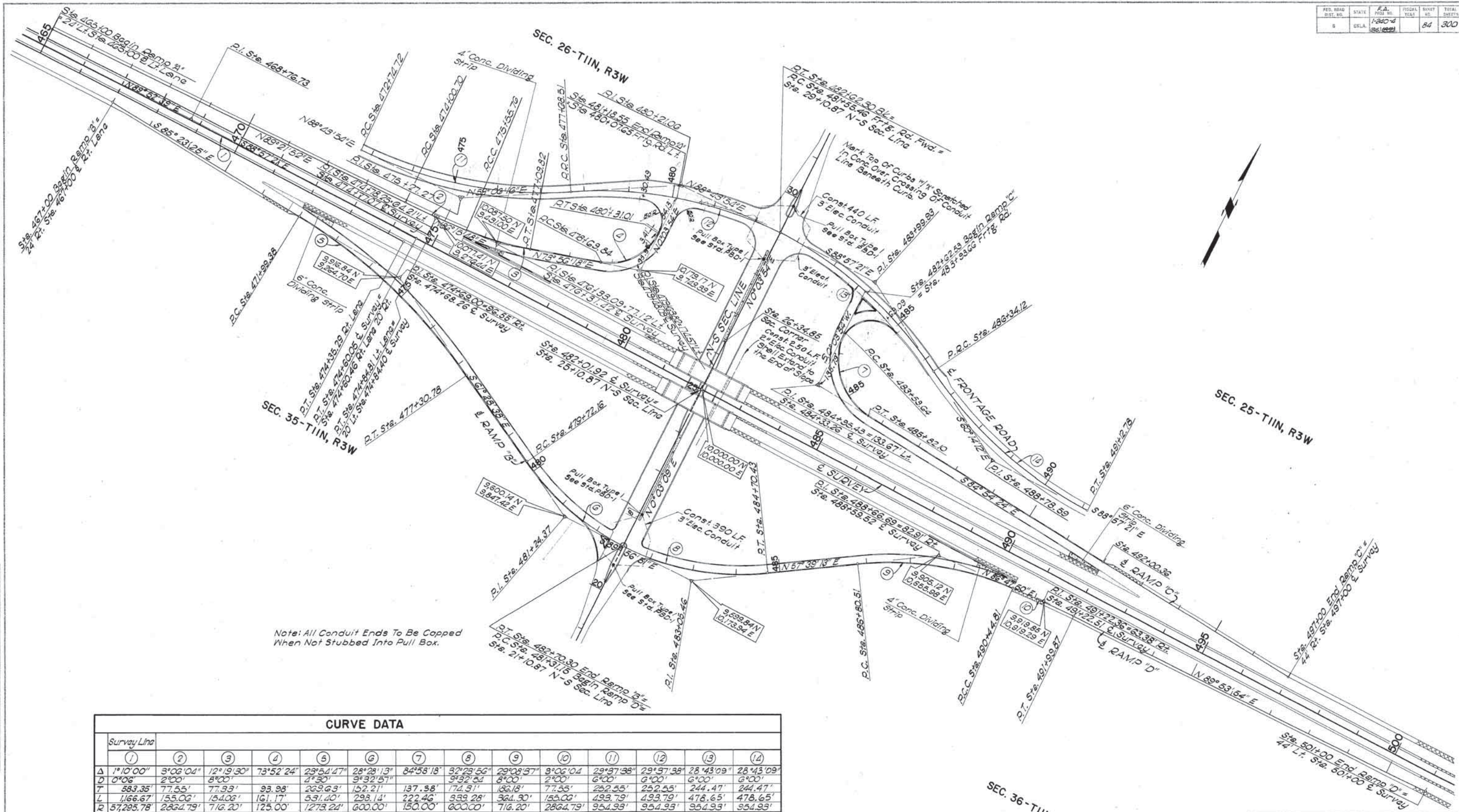
FAP Project No. I-240-4 (86) (87) Sheet No. 838



PROJ. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	DELA.	1-240-4	1961	84	300

PLAN	DATE	BY
SURVEYED NOTED ALIGNED CHECKED RT. OF WAY NO.		

PROFILE	DATE	BY
SURVEYED NOTED GRADES CHECKED STRUCTURE LOCATIONS NO.		



CURVE DATA														
Survey Line	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Δ	1°10'00"	3°06'04"	12°19'30"	73°52'24"	23°54'47"	28°28'13"	84°58'18"	32°28'56"	29°08'37"	3°06'04"	29°37'38"	29°37'38"	28°43'09"	28°43'09"
D	0°06'	2°00'	8°00'	4°30'	4°30'	3°32'51"	3°32'51"	8°00'	2°00'	6°00'	6°00'	6°00'	6°00'	6°00'
T	583.35'	77.55'	77.33'	93.98'	269.63'	152.21'	137.38'	174.31'	186.18'	77.55'	252.55'	252.55'	244.47'	244.47'
L	1,166.67'	155.06'	154.06'	161.17'	531.40'	298.14'	222.46'	339.28'	364.90'	155.06'	493.79'	493.79'	478.65'	478.65'
R	57,295.78'	2,664.79'	716.20'	125.00'	1273.24'	600.00'	150.00'	600.00'	716.20'	2864.79'	954.93'	954.93'	954.93'	954.93'

INTERCHANGE LAYOUT  
EASTERN AVE.  
STA. 482+01.92



ACCOMMODATES - 24" ROUND PIPE - 25" x 16" & 22" x 13" ARCHES & 2' x 2' R.C. BOX										BAR LIST										REQUIRES 6-30" SQ. GRATES										TOTAL LENGTH IN STR. 446'-3"	
DESIGN		BAR MARK																		TOTAL WEIGHT 298 Lb.											
6-1	A	AV	A <sub>2</sub>	BV	B <sub>2</sub>	C	D	D <sub>1</sub>	DM	DM <sub>1</sub>	DB	DB <sub>1</sub>	E	F	G	H	K	M	N*	R											
SPACING	As Shown	12" c/c	10" c/c	12" c/c	12" c/c	As Shown	As Shown	As Shown			As Shown	As Shown	17" c/c	18" c/c	17" c/c	On E of Flr.	As Shown	8 1/2" c/c	As Shown	As Shown											
NUMBER	2	12	3	24	6	4	2	2			2	2	3	11	3	1	3	6	2	2											
LENGTH EACH BAR	9'-3"	6'-8 1/2" Avg.	4'-2 1/2"	1'-6-3/8" Avg	0'-3 1/2"	16'-1"	7'-10"	5'-8"			15'-11"	13'-5"	7'-1"	2'-10"	13'-7"	15'-10"	2'-10"	0'-7"	9'-8"	2'-10"											
TOTAL LENGTH OF BAR	18'-6"	80'-9"	12'-7 1/2"	36'-9"	1'-7 1/2"	64'-4"	15'-8"	11'-4"			31'-10"	26'-10"	21'-3"	31'-2"	40'-9"	15'-10"	8'-6"	3'-6"	19'-4"	5'-8"											

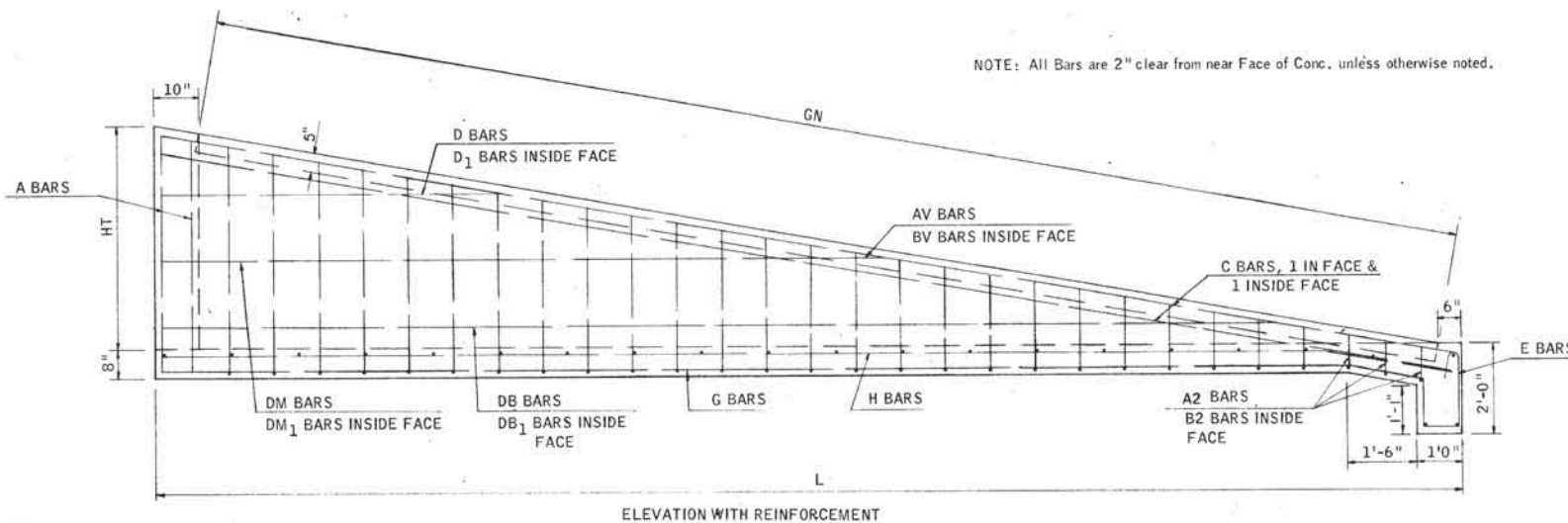
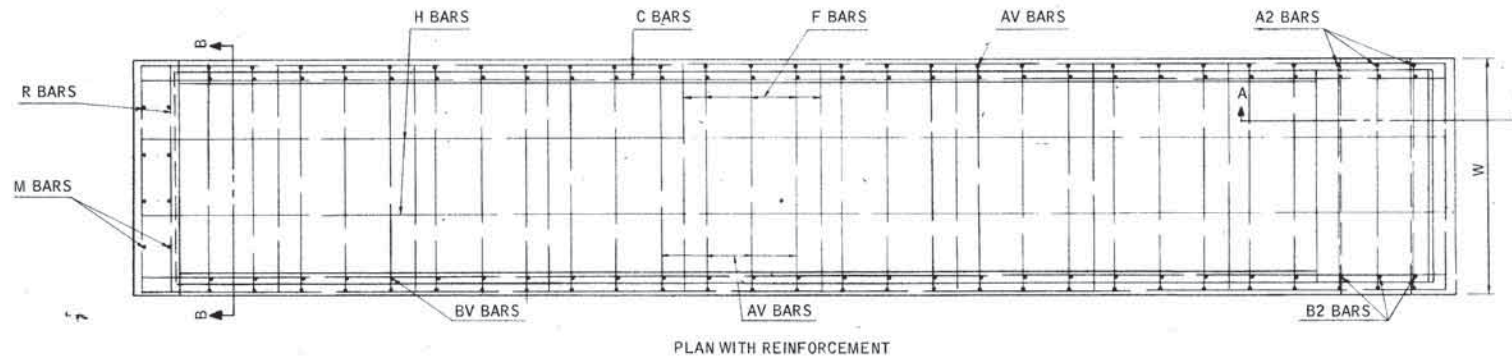
ACCOMMODATES - 30" ROUND PIPE - 29" x 18" & 30" x 19" ARCHES										BAR LIST										REQUIRES 6-36" SQ. GRATES										TOTAL LENGTH IN STR.		546'-4"		
DESIGN	BAR MARK										BAR MARK										BAR MARK										TOTAL WEIGHT		365 LB.	
6-2	A	AV	A <sub>2</sub>	BV	B <sub>2</sub>	C	D	D <sub>1</sub>	DM	DM <sub>1</sub>	DB	DB <sub>1</sub>	E	F	G	H	K	M	N *	R														
SPACING	As Shown	12" c/c	10" c/c	12" c/c	12" c/c	As Shown	As Shown	As Shown	As Shown	As Shown	As Shown	As Shown	20" c/c	18" c/c	20" c/c	On E of Flr.	As Shown	13-3/8" c/c	As Shown	As Shown	As Shown	As Shown	As Shown	As Shown										
NUMBER	2	15	3	30	6	4	2	2					2	2	3	13	3	6	2	2														
LENGTH EACH BAR	10'-9 1/2"	7'-8 1/2" Avg.	4'-8 1/2"	1'-9 1/2" Avg.	0'-3 1/2"	19'-3"	8'-0"	5'-10"					16'-0"	13'-10"	7'-1"	3'-4"	16'-7"	18'-10"	3'-4"	0'-6 1/2"	11'-5"	3'-4"												
TOTAL LENGTH OF BAR	21'-7"	115'-7 1/2"	14'-1 1/2"	53'-1 1/2"	1'-7 1/2"	77'-0"	16'-0"	11'-8"					32'-0"	27'-8"	21'-3"	43'-4"	49'-9"	18'-10"	10'-0"	3'-3"	22'-10"	6'-8"												

ACCOMMODATES - 36" ROUND PIPE - 36" x 22" & 38" x 24" ARCHES & 3' x 3' R.C. BOX										BAR LIST										REQUIRES 6-42" SQ. GRATES										TOTAL LENGTH IN STR. 655'-3"			
DESIGN		BAR MARK																		TOTAL WEIGHT 438 Lb.													
6-3	A	AV	A <sub>2</sub>	BV	B <sub>2</sub>	C	D	D <sub>1</sub>	DM	DM <sub>1</sub>	DB	DB <sub>1</sub>	E	F	G	H	K	M	N*	R													
SPACING	As Shown	12" c/c	10" c/c	12" c/c	10" c/c	As Shown	As Shown	As Shown			As Shown	As Shown	23' c/c	18" c/c	23" c/c	On E of Flr.	As Shown	9-3/8" c/c	As Shown	As Shown													
NUMBER	2	18	3	36	6	4	2	2			2	2	3	15	3	1	3	8	2	2													
LENGTH EACH BAR	12'-3"	8'-8½" Avg.	5'-2¼"	2'-0-1/8" Avg.	0'-3½"	22'-2½"	8'-0"	5'-10"			16'-0"	13'-10"	7'-1"	3'-10"	19'-6"	21'-8"	3'-10"	0'-6"	13'-3"	3'-10"													
TOTAL LENGTH OF BAR	24'-6"	156'-4½"	15'-7½"	72'-4½"	1'-7½"	88'-10"	16'-0"	11'-8"			32'-0"	27'-8"	21'-3"	57'-6"	58'-6"	21'-8"	11'-6"	4'-0"	26'-6"	7'-8"													

ACCOMMODATES - 42" ROUND PIPE - 43" x 27" & 42" x 27" ARCHES										BAR LIST										REQUIRES 6-50" SQ. GRATES										TOTAL LENGTH IN STR. 966'-10"		
DESIGN											BAR MARK																				TOTAL WEIGHT 646 Lb.	
6-4	A	AV	A <sub>2</sub>	BV	B <sub>2</sub>	C	D	D <sub>1</sub>	DM	DM <sub>1</sub>	DB	DB <sub>1</sub>	E	F	G	H	K	M	N*	R												
SPACING	As Shown	12" c/c	10" c/c	12" c/c	10" c/c	As Shown	As Shown	As Shown	As Shown	As Shown	As Shown	As Shown	18" c/c	18" c/c	18" c/c	18" c/c	As Shown	11" c/c	As Shown	As Shown												
NUMBER	2	22	3	44	6	4	2	2	2	2	2	2	2	4	17	4	2	3	8	2	2											
LENGTH EACH BAR	13'-11"	9'-10 <sup>1</sup> / <sub>2</sub> " Avg.	5'-10 <sup>1</sup> / <sub>2</sub> "	2'-3-3/8" Avg	0'-3 <sup>1</sup> / <sub>2</sub> "	26'-1"	8'-6"	6'-2"	17'-0"	14'-8"	25'-8"	23'-4"	7'-1"	4'-6"	23'-6"	25'-8"	4'-6"	0'-5 <sup>1</sup> / <sub>2</sub> "	15'-2"	4'-6"												
TOTAL LENGTH OF BAR	27'-10"	217'-8 <sup>1</sup> / <sub>2</sub> "	17'-7 <sup>1</sup> / <sub>2</sub> "	100'-4 <sup>1</sup> / <sub>2</sub> "	1'-7 <sup>1</sup> / <sub>2</sub> "	104'-4"	17'-0"	12'-4"	34'-0"	29'-4"	51'-4"	46'-8"	28'-4"	76'-6"	94'-0"	51'-4"	13'-6"	3'-8"	30'-4"	9'-0"												

ACCOMMODATES - 48" ROUND PIPE - 50" x 31" & 53" x 34" ARCHES & 4' x 4' R.C. BOX													BAR LIST					REQUIRES 6-56" SQ. GRATES					TOTAL LENGTH IN STR.		1108'-3 1/2"		
DESIGN														BAR MARK										TOTAL WEIGHT		740 Lb.	
6-5	A	AV	A <sub>2</sub>	BV	B <sub>2</sub>	C	D	D <sub>1</sub>	DM	DM <sub>1</sub>	DB	DB <sub>1</sub>	E	F	G	H	K	M	N *	R							
SPACING	As Shown	12" c/c	10" c/c	12" c/c	10" c/c	As Shown	As Shown	As Shown	As Shown	As Shown	As Shown	As Shown	20" c/c	18" c/c	20" c/c	20" c/c	As Shown	12" c/c	As Shown	As Shown							
NUMBER	2	25	3	50	6	4	2	2	2	2	2	2	4	19	4	2	3	8	2	2							
LENGTH EACH BAR	15'-7"	10'-10 1/2" Avg.	6'-4 1/2"	2'-6-3/8" Avg.	0'-3 1/2"	29'-1"	8'-6"	6'-2"	17'-0"	14'-8"	26'-0"	23'-8"	7'-1"	5'-0"	26'-6"	28'-8"	5'-0"	0'-5 1/2"	17'-0"	5'-0"							
TOTAL LENGTH OF BAR	31'-2"	272'-4 1/2"	19'-1 1/2"	126'-6 1/2"	1'-7 1/2"	116'-4"	17'-0"	12'-4"	34'-0"	29'-4"	52'-0"	47'-4"	28'-1"	95'-0"	106'-0"	57'-4"	15'-0"	3'-8"	34'-0"	10'-0"							

\* Optional Bars - To be used on Round Pipe Stubs only.



NOTE: All Bars are 2" clear from near Face of Conc. unless otherwise noted.

BAR LOCATION SCHEDULE			
BAR MARK	SHAPE	SIZE	LOCATION IN STRUCTURE
A	Bent	#4	BACK OUTSIDE VERTICAL BARS - U BEND
AV	Bent	#4	OUTSIDE VERTICAL BARS IN SLOPING WING - U BEND
A <sub>2</sub>	Bent	#4	OUTSIDE VERTICAL BARS AT FRONT - U BEND
BV	Str.	#4	INSIDE VERTICAL BARS IN SLOPING WINGS
B <sub>2</sub>	Str.	#4	INSIDE VERTICAL BARS AT FRONT OF STRUCTURE
C	Str.	#4	TOP OF SLOPING WING - LONGITUDINAL BAR (INSIDE & OUTSIDE FACES)
D	Str.	#4	OUTSIDE HORIZONTAL BAR IN WING (TOP)
D <sub>1</sub>	Str.	#4	INSIDE HORIZONTAL BAR IN WING (TOP)
DM	Str.	#4	OUTSIDE HORIZONTAL BAR IN WING (MIDDLE)
DM <sub>1</sub>	Str.	#4	INSIDE HORIZONTAL BAR IN WING (MIDDLE)
DB	Str.	#4	OUTSIDE HORIZONTAL BAR IN WING (BOTTOM)
DB <sub>1</sub>	Str.	#4	INSIDE HORIZONTAL BAR IN WING (BOTTOM)
E	Bent	#4	BAR IN CURTAIN WALL AND FLOOR AT FRONT
F	Str.	#4	TRANSVERSE HORIZONTAL BAR IN TOP OF FLOOR
G	Str.	#4	LONGITUDINAL HORIZONTAL BAR IN BOTTOM OF FLOOR
H	Str.	#4	LONGITUDINAL HORIZONTAL BAR IN TOP OF FLOOR
K	Str.	#4	TRANSVERSE HORIZONTAL BAR IN CURTAIN WALL
M	Str.	#4	VERTICAL BAR IN BACK OF STRUCTURE AT TOP
* N	Bent	#4	SPECIAL BENT BAR (OPTIONAL) AT BACK OF STRUCTURE
R	Str.	#4	TRANSVERSE HORIZONTAL BAR AT BACK TOP OF STRUCTURE



ACCOMMODATES - 24" ROUND PIPE - 25" x 16" & 22" x 13" ARCHES & 2' x 2' R.C. BOX										BAR LIST					REQUIRES 4-30" SQ. GRATES					TOTAL LENGTH IN STR.		324'-3 1/2"	
DESIGN		BAR MARK																		TOTAL WEIGHT		217 Lb.	
4-1	A	AV	A <sub>2</sub>	BV	B <sub>2</sub>	C	D	D <sub>1</sub>	DM	DM <sub>1</sub>	DB	DB <sub>1</sub>	E	F	G	H	K	M	N*	R			
SPACING	As Shown	12" c/c	10" c/c	12" c/c	10" c/c	As Shown	As Shown	As Shown			As Shown	As Shown	17" c/c	18" c/c	17" c/c	On E of Fir.	As Shown	8 1/2" c/c	As Shown	As Shown			
NUMBER	2	7	3	14	6	4	2	2			2	2	3	8	3	1	3	6	2	2			
LENGTH EACH BAR	9'-0"	6'-11" Avg.	4'-7"	1'-7"	0'-5 1/2"	10'-11 1/2"	5'-3"	3'-10"			10'-8"	9'-3"	7'-0"	2'-10"	8'-6"	10'-6"	2'-10"	0'-7"	9'-8"	2'-10"			
TOTAL LENGTH OF BAR	18'-0"	48'-5"	13'-9"	22'-9"	2'-10 1/2"	43'-10"	10'-6"	7'-8"			21'-4"	18'-6"	21'-0"	22'-8"	25'-6"	10'-6"	8'-6"	3'-6"	19'-4"	5'-8"			

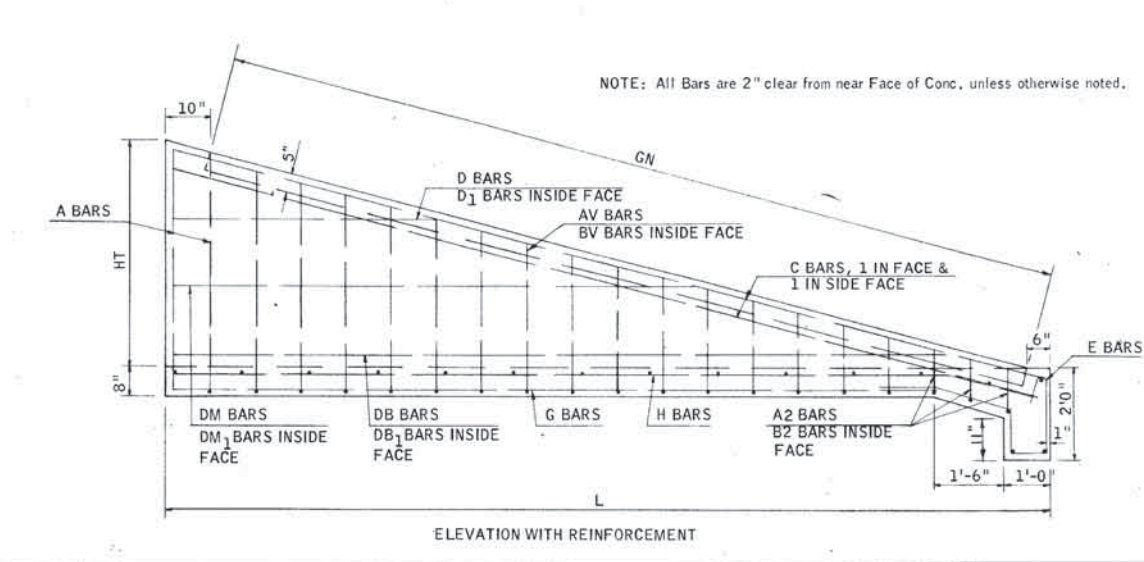
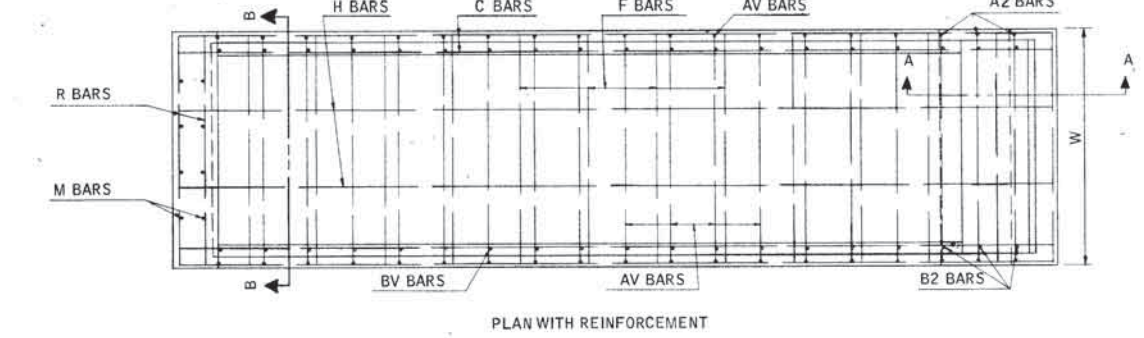
ACCOMMODATES - 30" ROUND PIPE - 29" x 18" & 30" x 19" ARCHES										BAR LIST										REQUIRES 4-36" SQ. GRATES										TOTAL LENGTH IN STR.		391'-7"	
DESIGN	BAR MARK																			TOTAL WEIGHT		262 Lb.											
4-2	A	AV	A <sub>2</sub>	BV	B <sub>2</sub>	C	D	D <sub>1</sub>	DM	DM <sub>1</sub>	DB	DB <sub>1</sub>	E	F	G	H	K	M	N*	R													
SPACING	As Shown	12" c/c	10" c/c	12" c/c	10" c/c	As Shown	As Shown	As Shown			As Shown	As Shown	20" c/c	18" c/c	20" c/c	On E. of Fir.	As Shown	13'-3/8" c/c	As Shown	As Shown													
NUMBER	2	9	3	18	6	4	2	2			2	2	3	9	3	1	3	6	2	2													
LENGTH EACH BAR	10'-8"	7'-11" Avg.	5'-1"	1'-10 1/2" Avg.	0'-5 1/2"	13'-0"	5'-3"	3'-10"			10'-8"	9'-3"	7'-0"	3'-4"	10'-4"	12'-6"	3'-4"	0'-6 1/2"	11'-5"	3'-4"													
TOTAL LENGTH OF BAR	21'-4"	71'-3"	15'-3"	33'-9"	2'-9"	52'-0"	10'-6"	7'-8"			21'-4"	18'-6"	21'-0"	30'-0"	31'-0"	12'-6"	10'-0"	3'-3"	22'-10"	6'-8"													

ACCOMMODATES - 36" ROUND PIPE - 36" x 22" & 38" x 24" ARCHES & 3' x 3' R.C. BOX										BAR LIST										REQUIRES 4-42" SQ. GRATES										TOTAL LENGTH IN STR.		468'-6"	
DESIGN		BAR MARK																		TOTAL WEIGHT		313 Lb.											
4-3	A	AV	A <sub>2</sub>	BV	B <sub>2</sub>	C	D	D <sub>1</sub>	DM	DM <sub>1</sub>	DB	DB <sub>1</sub>	E	F	G	H	K	M	N *	R													
SPACING	As Shown	12" c/c	10" c/c	12" c/c	10" c/c	As Shown	As Shown	As Shown			As Shown	As Shown	23" c/c	18" c/c	23" c/c	On E. of Flr.	As Shown	9'-3/8" c/c	As Shown	As Shown													
NUMBER	2	11	3	22	6	4	2	2			2	2	3	10	3	1	3	8	2	2													
LENGTH EACH BAR	12'-2"	8'-11" Avg.	5'-7"	2'-1 1/2" Avg.	0'-5 1/2"	15'-1"	5'-5"	3'-11"			10'-10"	9'-4"	7'-0"	3'-10"	12'-4"	14'-6"	3'-10"	0'-6"	13'-3"	3'-10"													
TOTAL LENGTH OF BAR	24'-4"	98'-1"	16'-9"	46'-9"	2'-9"	60'-4"	10'-10"	7'-10"			21'-8"	18'-8"	21'-0"	38'-4"	37'-0"	14'-6"	11'-6"	4'-0"	26'-6"	7'-8"													

ACCOMMODATES - 42" ROUND PIPE - 43" x 27" & 42" x 27" ARCHES										BAR LIST										REQUIRES 4-50" SQ. GRATES										TOTAL LENGTH IN STR.		688'-8"	
DESIGN		BAR MARK																		TOTAL WEIGHT		460 Lb.											
4-4	A	AV	A <sub>2</sub>	BV	B <sub>2</sub>	C	D	D <sub>1</sub>	DM	DM <sub>1</sub>	DB	DB <sub>1</sub>	E	F	G	H	K	M	N*	R													
SPACING	As Shown	12" c/c	10" c/c	12" c/c	10" c/c	As Shown	As Shown	As Shown	As Shown	As Shown	As Shown	As Shown	18" c/c	18" c/c	18" c/c	18" c/c	As Shown	11" c/c	As Shown	As Shown													
NUMBER	2	14	3	28	6	4	2	2	2	2	2	2	4	12	4	2	3	8	2	2													
LENGTH EACH BAR	13'-10"	10'-2 1/2" Avg.	6'-3"	2'-5 1/2" Avg.	0'-5 1/2"	17'-7 1/2"	5'-8"	4'-1"	11'-4"	9'-9"	17'-0"	15'-2"	7'-0"	4'-6"	14'-10"	17'-0"	4'-6"	0'-5 1/2"	15'-2"	4'-6"													
TOTAL LENGTH OF BAR	27'-8"	142'-11"	18'-9"	69'-3"	2'-9"	70'-6"	11'-4"	6'-2"	22'-8"	19'-6"	34'-0"	30'-4"	28'-0"	54'-0"	59'-4"	34'-0"	13'-6"	3'-8"	30'-4"	9'-0"													

ACCOMMODATES - 48" ROUND PIPE - 50" x 31" & 53" x 34" ARCHES & 4' x 4' R.C. BOX										BAR LIST								REQUIRES 4-56" SQ. GRATES								TOTAL LENGTH IN STR.				786'-4"	
DESIGN		BAR MARK																		TOTAL WEIGHT				526 Lb.							
4-5	A	AV	A <sub>2</sub>	BV	B <sub>2</sub>	C	D	D <sub>1</sub>	DM	DM <sub>1</sub>	DB	DB <sub>1</sub>	E	F	G	H	K	M	N*	R											
SPACING	As Shown	12" c/c	10" c/c	12" c/c	10" c/c	As Shown	As Shown	As Shown	As Shown	As Shown	As Shown	As Shown	20" c/c	18" c/c	20" c/c	20" c/c	As Shown	12" c/c	As Shown	As Shown											
NUMBER	2	16	3	32	6	4	2	2	2	2	2	2	4	13	4	2	3	8	2	2											
LENGTH EACH BAR	15'-4"	11'-2½" Avg.	6'-9"	2'-8½" Avg.	0'-5½"	19'-8"	5'-8"	4'-1"	11'-4"	9'-10"	17'-1"	15'-6"	7'-0"	5'-0"	16'-10"	19'-0"	5'-0"	0'-5½"	17'-0"	5'-0"											
TOTAL LENGTH OF BAR	30'-8"	179'-4"	20'-3"	86'-8"	2'-9"	78'-8"	11'-4"	8'-2"	22'-8"	19'-8"	34'-2"	31'-0"	28'-0"	65'-0"	67'-4"	38'-0"	15'-0"	3'-8"	34'-0"	10'-0"											

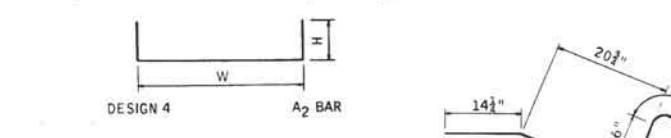
\* Optional Bars - To be used on Round Pipe Stubs only.



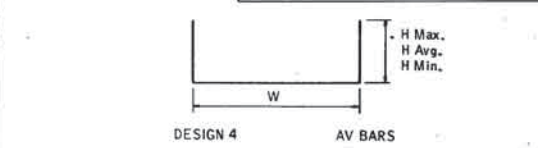
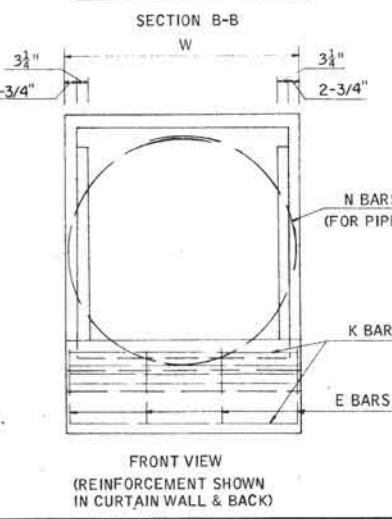
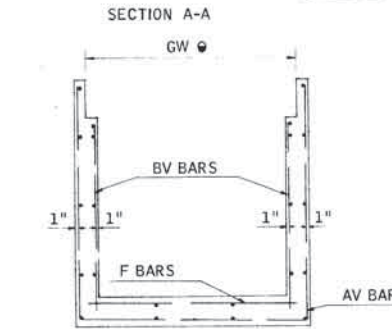
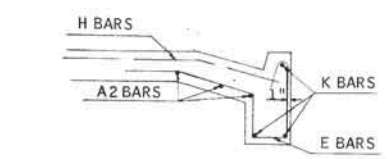
NOTE: All Bars are 2" clear from near Face of Conc. unless otherwise noted.

BAR LOCATION SCHEDULE				LOCATION IN STRUCTURE	
BAR MARK	SHAPE	SIZE			
A	Bent	#4		BACK OUTSIDE VERTICAL BARS - U BEND	
AV	Bent	#4		OUTSIDE VERTICAL BARS IN SLOPING WING - U BEND	
A <sub>2</sub>	Bent	#4		OUTSIDE VERTICAL BARS AT FRONT - U BEND	
BV	Str.	#4		INSIDE VERTICAL BARS IN SLOPING WINGS	
B <sub>2</sub>	Str.	#4		INSIDE VERTICAL BARS AT FRONT OF STRUCTURE	
C	Str.	#4		TOP OF SLOPING WING - LONGITUDINAL BAR (INSIDE & OUTSIDE FACES)	
D	Str.	#4		OUTSIDE HORIZONTAL BAR IN WING (TOP)	
D <sub>1</sub>	Str.	#4		INSIDE HORIZONTAL BAR IN WING (TOP)	
DM	Str.	#4		OUTSIDE HORIZONTAL BAR IN WING (MIDDLE)	
DM <sub>1</sub>	Str.	#4		INSIDE HORIZONTAL BAR IN WING (MIDDLE)	
DB	Str.	#4		OUTSIDE HORIZONTAL BAR IN WING (BOTTOM)	
DB <sub>1</sub>	Str.	#4		INSIDE HORIZONTAL BAR IN WING (BOTTOM)	
E	Bent	#4		BAR IN CURTAIN WALL AND FLOOR AT FRONT	
F	Str.	#4		TRANSVERSE HORIZONTAL BAR IN TOP OF FLOOR	
G	Str.	#4		LONGITUDINAL HORIZONTAL BAR IN BOTTOM OF FLOOR	
H	Str.	#4		LONGITUDINAL HORIZONTAL BAR IN TOP OF FLOOR	
K	Str.	#4		TRANSVERSE HORIZONTAL BAR IN CURTAIN WALL	
M	Str.	#4		VERTICAL BAR IN BACK OF STRUCTURE AT TOP	
N	Bent	#4		SPECIAL BENT BAR (OPTIONAL) AT BACK OF STRUCTURE	
R	Str.	#4		TRANSVERSE HORIZONTAL BAR AT BACK TOP OF STRUCTURE	

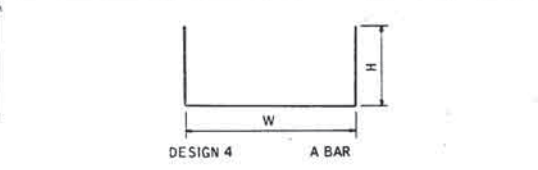
Q To be Field Bent to maintain 2" clear from top of floor at Grate Notch.  
\* Optional Bars - To be used on Round Pipe Stubs only.



DESIGN NO.	W	H	TOTAL LENGTH
4-1	2'-10"	0'-10 1/2"	4'-7"
4-2	3'-4"	0'-10 1/2"	5'-1"
4-3	3'-10"	0'-10 1/2"	5'-7"
4-4	4'-6"	0'-10 1/2"	6'-3"
4-5	5'-0"	0'-10 1/2"	6'-9"



DESIGN NO.	H MAX.	H MIN.	H AVG.	W	AVG. TOTAL LENGTH
4-1	2'-11"	1'-2"	2'-0 1/2"	2'-10"	6'-11"
4-2	3'-5"	1'-2"	2'-3 1/2"	3'-4"	7'-11"
4-3	3'-11"	1'-2"	2'-6 1/2"	3'-10"	8'-11"
4-4	4'-7"	1'-1 1/2"	2'-10 1/2"	4'-6"	10'-2 1/2"
4-5	5'-1"	1'-1 1/2"	3'-1 1/2"	5'-0"	11'-2 1/2"



DESIGN NO.	W	H	TOTAL LENGTH
4-1	2'-10"	3'-1"	9'-0"
4-2	3'-4"	3'-8"	10'-8"
4-3	3'-10"	4'-2"	12'-2"
4-4	4'-6"	4'-8"	13'-10"
4-5	5'-0"	5'-2"	15'-4"

TABLE OF INLET DIMENSIONS					GRATE NO.
DESIGN NO.	L	HT	W	GN*	
4-1	11'-0"	3'-0"	3'-0"	10'-1"	(30" Sq.)
4-2	13'-0"	3'-6"	3'-6"	12'-1"	(36" Sq.)
4-3	15'-0"	4'-0"	4'-0"	14'-1"	(42" Sq.)
4-4	17'-6"	4'-6"	4'-8"	16'-9"	(50" Sq.)
4-5	19'-6"	5'-0"	5'-2"	18'-9"	(56" Sq.)

\*Dimension GN is a minimum dimension - may be formed longer.  
Q G.W. Dimension is 1/2" greater than "Grate No." size.

CONCRETE QUANTITIES		
DESIGN NO.	CONC. C.Y.	
4-1	1.53	
4-2	2.09	
4-3	2.74	
4-4	3.67	
4-5	4.51	

BASIS OF PAYMENT		
ITEM NO.	ITEM	UNIT
509.06(B)	Class 'A' Conc.	**C.Y.
511.06	Reinforcing Steel	LB.

NOTE: Construction shall be in accordance with current Oklahoma Standard Specifications for Highway Construction.

\*\* If total Unit Volume is less than 5.0 Cu. Yds. use "Class 'A' Conc. (Small Str.)".

GENERAL NOTES  
No Edge Chamfer is required.  
Top Face shall be Carborundum rubbed.  
All rebars shall be 2" clear from nearest concrete face unless shown otherwise in the drawing.

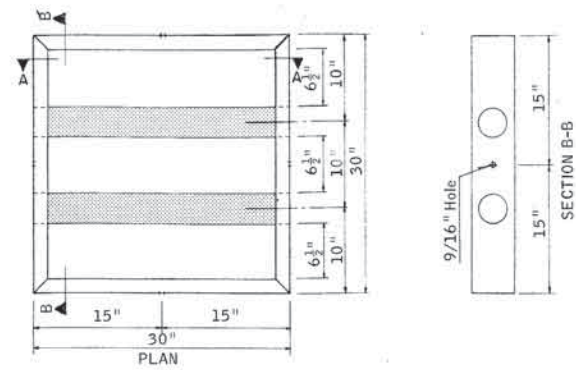
NOTE: USE IN CONJUNCTION WITH "DETAIL OF SPECIAL WELDED STEEL GRATE".

Design	CEW
Drawn	TJS
Checked	
Approved	BALL
Squad	WHITTLE

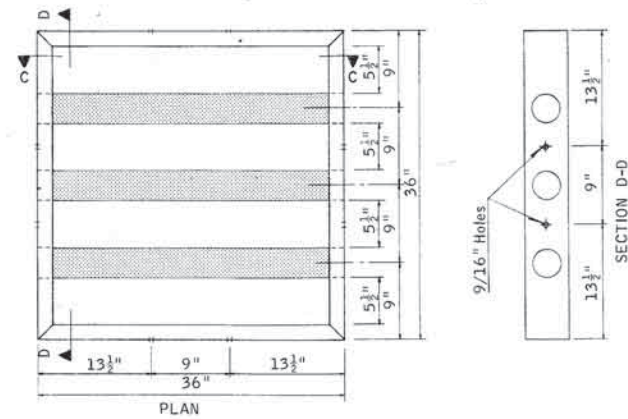
**SPECIAL DETAIL  
SLOPED & GRATED  
WING WALLS (4:1 DESIGN)**  
Project No. 2-240-4(86) Sheet No. 1230



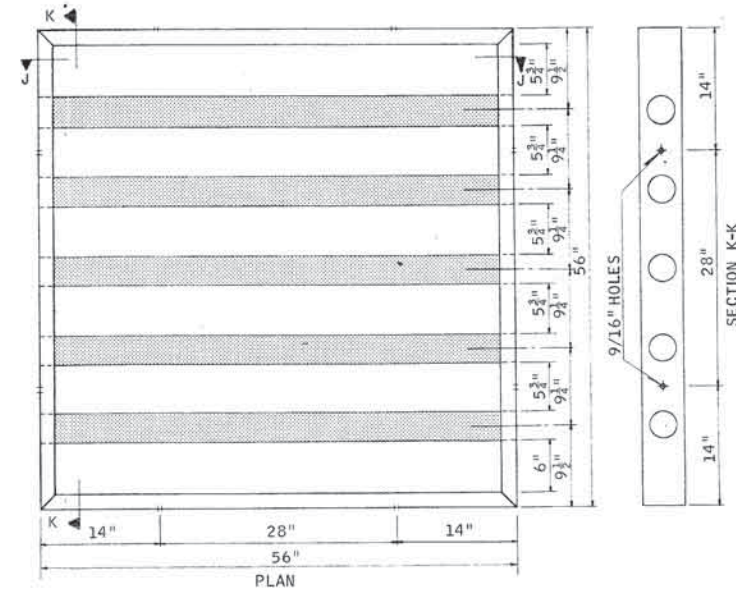
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.			230	313
REVISIONS					DATE



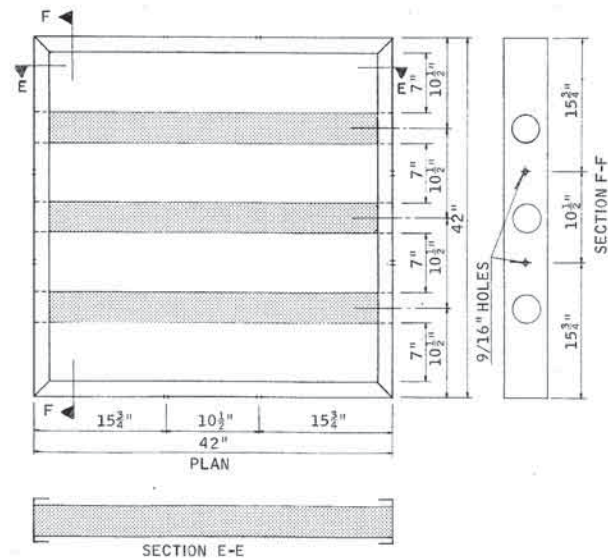
30" GRATE



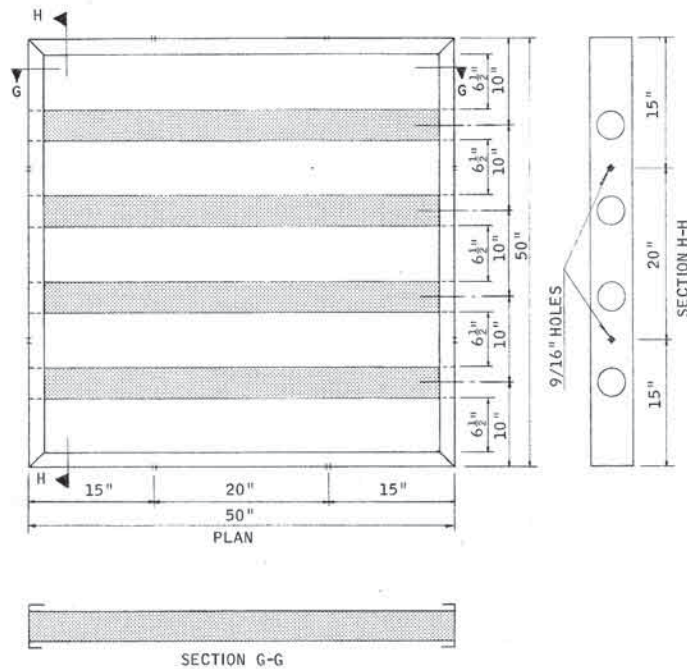
36" GRATE



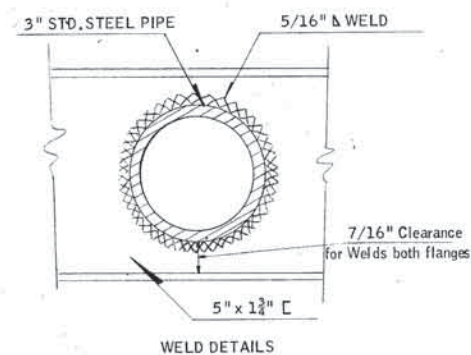
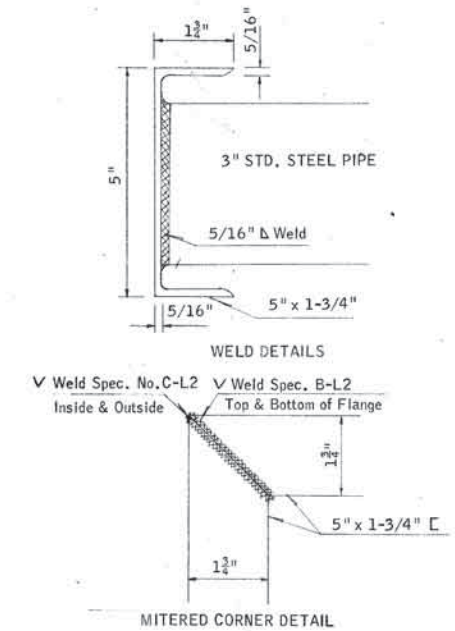
56" GRATE



42" GRATE



50" GRATE



MATERIALS FOR GRATE					
GRATE SIZE	5" x 1 1/2" C NO.	TOTAL LENGTH	3" STD. STEEL PIPE NO.	TOTAL LENGTH	STEEL EST. @ LBS. PER GRATE
30"	4	10'-0"	2	4'-11 1/4"	105
36"	4	12'-0"	3	8'-9-3/16"	148
42"	4	14'-0"	3	10'-3-3/16"	173
50"	4	16'-8"	4	16'-4 1/4"	237
56"	4	18'-8"	5	22'-11 1/4"	301

NOTE: 5" x 1 1/2" C Est. @ 6.7Lbs. per Lin. Ft.  
3" Std. Steel Pipe Est. @ 7.58 Lbs. per Lin. Ft.  
Grates estimated for unassembled materials, prior to Drilling, Welding and Galvanization. Weights do not include weight of connection or Anchor Devices.

#### GENERAL NOTES

NOTE: Connection bolts shall be 1/2-13 UNC 2A x 1 1/2 galvanized bolt and will be used with a 1/2-13 UNC 2B galvanized nut (square or hex head) with a standard 1/2" galvanized lock washer. Connection devices shall be placed in each drilled hole where sections of grates butt each other or where grates touch end and back of receiving structure. (None in sides).

Cost of connection devices shall be included in cost of grate sections.

Materials and Galvanization shall be in accordance with current specifications Sec. 721.01 & 721.02 and shall conform to the requirements of the following ASTM Specifications:

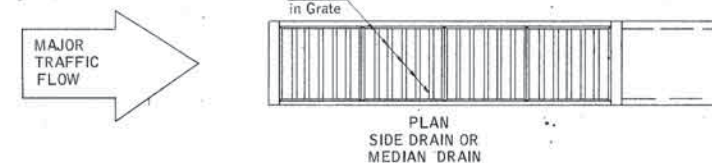
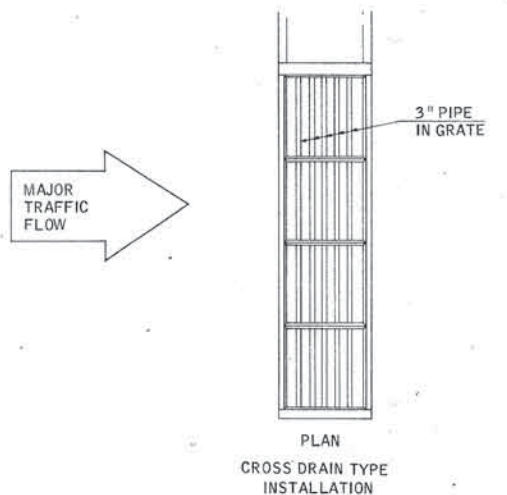
ASTM A-120 for Pipe  
ASTM A-123 for C's

If used pipe is permitted it shall conform to minimum strength requirements of new pipe of the same classification.

BASIS OF PAYMENT		
ITEM NO.	ITEM	UNIT
Special	Special Welded Steel Grate ( Sq. )	Each

NOTE: Bid for Special Welded Steel Grate shall be full compensation for all materials and labor necessary to construct (fabricate) grate and install on designated Structures.

Construction shall be in accordance with current Oklahoma Standard Specifications for Highway Construction.



Design	CEW
Drawn	TJS
Checked	
Approved	
Squid	Whittle

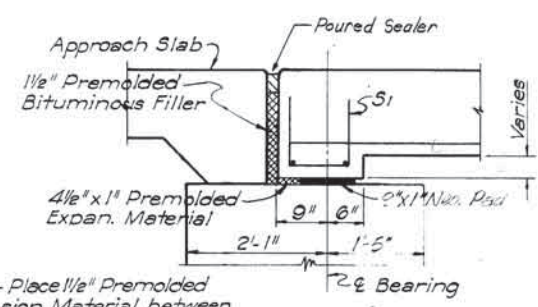
#### DETAIL OF GRATES SPECIAL WELDED STEEL GRATE

30" 36" 42" 50" & 56" SQ.

Project No. 1-240-4(26)(87) Sheet No. 123 D

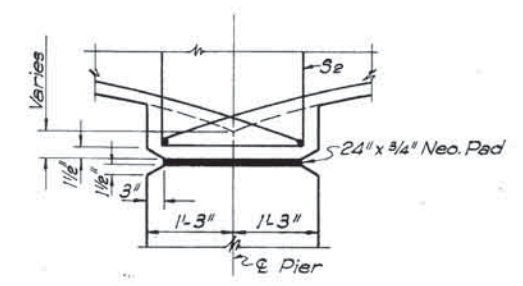


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
REVISIONS					DATE

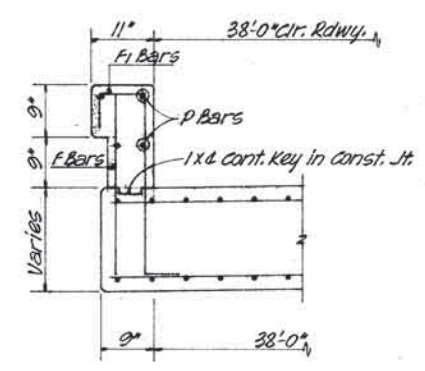


NOTE:- Place 1 1/2" Premolded Expansion Material between Wingwalls and Superstructure.  
Sec. 722.02

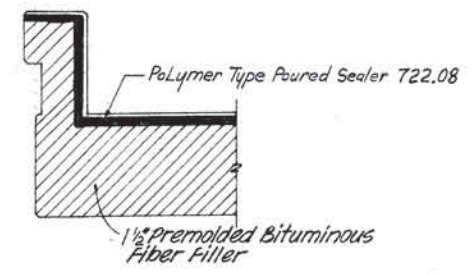
SECTION AT ABUT. END OF SLAB



SECTION AT INTERIOR PIER

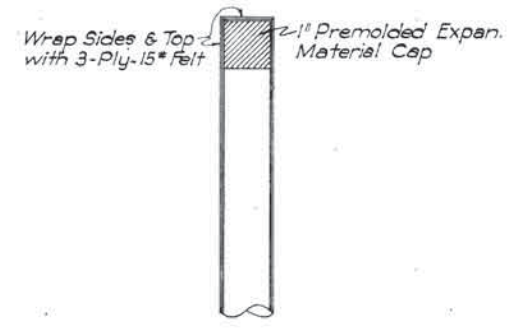


PARAPET DETAIL

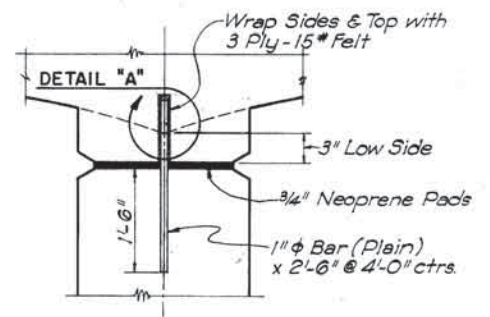


CONST. JOINT WITH EXPANSION MATERIAL

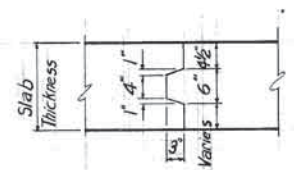
All elastomeric Neoprene pads below C.C.S. Spans to be 70 duro Hardness.



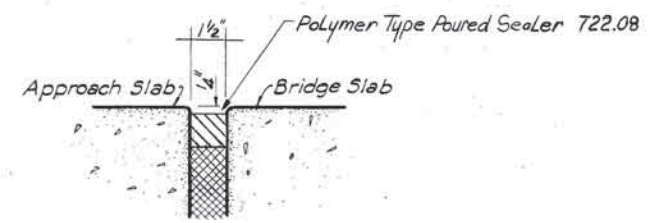
DETAIL "A"  
Portion of Dowel Bar Extending into Slab.



DETAIL OVER FIXED PIER



DETAIL OF LONGITUDINAL CONST. JOINT



DETAIL OF EXP. JOINT

### GENERAL NOTES

All Construction and Materials shall conform to the O.S.H.C. Standard Specifications of 1967 and Special Provisions included in the Proposal.  
All Concrete in Superstructure shall be Class "AA", Air-Entrained (AE) Concrete, with Water Reducing Set Retarding Admixture.  
All Reinforcing steel shall be deformed bars, cold bent with no welds. All dimensions relating to Reinforcing spacing are to centers of bars. When splicing is necessary, bars shall be lapped 25 Diameters unless otherwise noted. Dimensions for bending are out to out.  
All Reinforcing steel bars shall conform to A.S.T.M. Specifications A-15 & A-305.  
All exposed concrete shall have a Carborundum finish as required by the O.S.H.C. Specs. of 1967.  
All exposed concrete edges shall have 3/4" Chamfer unless otherwise noted.  
All Chamfer Strips shall be sized Lumber.  
Detailed plans of Falsework and Forms shall be submitted to the Highway Commission and shall be approved by the Bridge Engineer before any Concrete is poured. Falsework and Forms must be in place for each longitudinal pour before any Concrete in that unit is poured. All forms shall be lined with an approved form lining (Plywood, Masonite or similar material). The Form lining material shall be Full-Size commercial panels and Joints shall line up, in so far as practical. No scrap or odd-sized pieces shall be used. Provision shall be made for adjustment of forms to correct any deformation which may occur during Concrete operations.  
Concrete mixer shall be of sufficient capacity to pour all Concrete as indicated by the Construction Joints in one continuous pour. A Standby mixer shall be provided at the Bridge site for emergency use, unless Transit Mixed Concrete is used.  
No Construction Joints other than those shown on Plans will be allowed.  
Bricking the underside of the Deck will not be required if a smooth and uniform Finish, acceptable to the Engineer is otherwise obtained.  
A standby vibrator shall be provided at the site to take place of any working vibrator breaking down.  
The Contractor may at his option and with no expense to the Owner cut all Transverse bars to allow 1'-6" Lap outside Construction Joint of the panel being poured.  
Reinforcing in Bottom of Slab shall be supported on approved metal slab spacers.  
Steel in Top of Slab shall be supported on approved metal high chairs at approx. 4'-0" Centers.  
Payment for furnishing and installing the Neoprene Rubber Pads shall be included in the unit price bid for Class "AA"(AE) Concrete for the Superstructure.  
Backfill around all Piers and Abutments to be compacted to 95 % Std. A.A.S.H.O. Density.

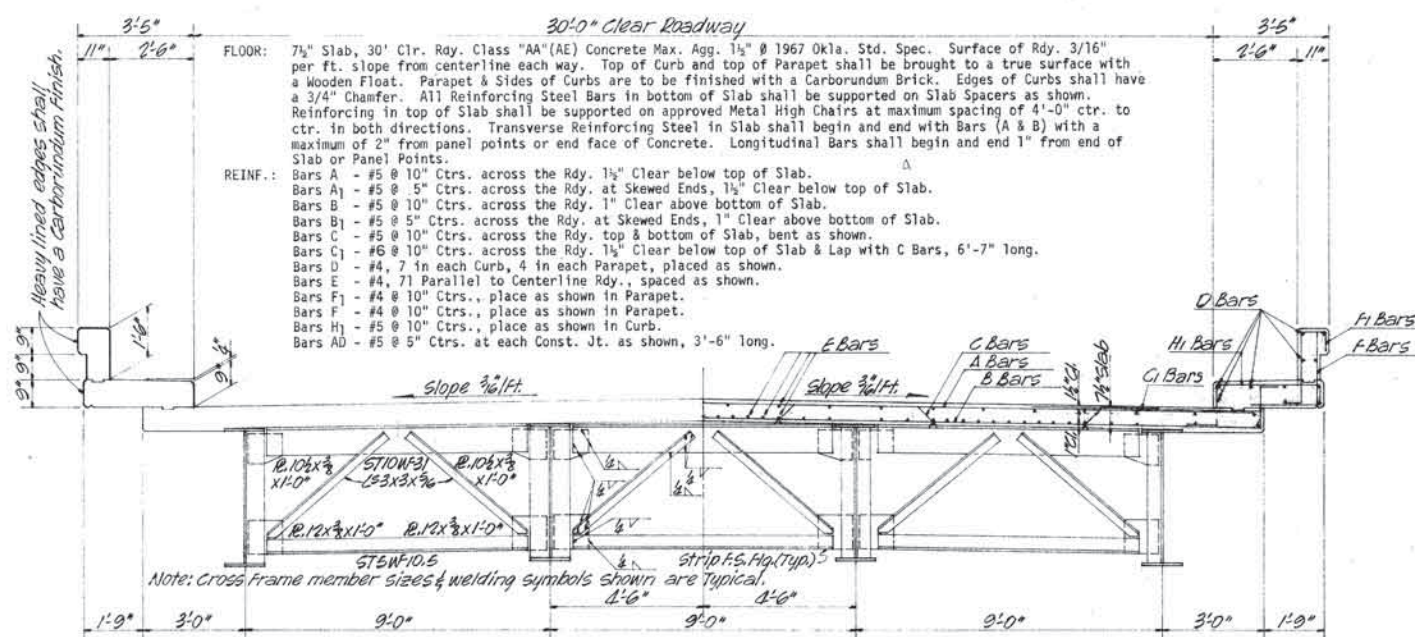
Design					
Drawn					
Checked					
Approved					
Squad					

STANDARD DETAILS FOR CONCRETE SLAB BRIDGES

Project No. 1-240-4(86)137 Sheet No. 126



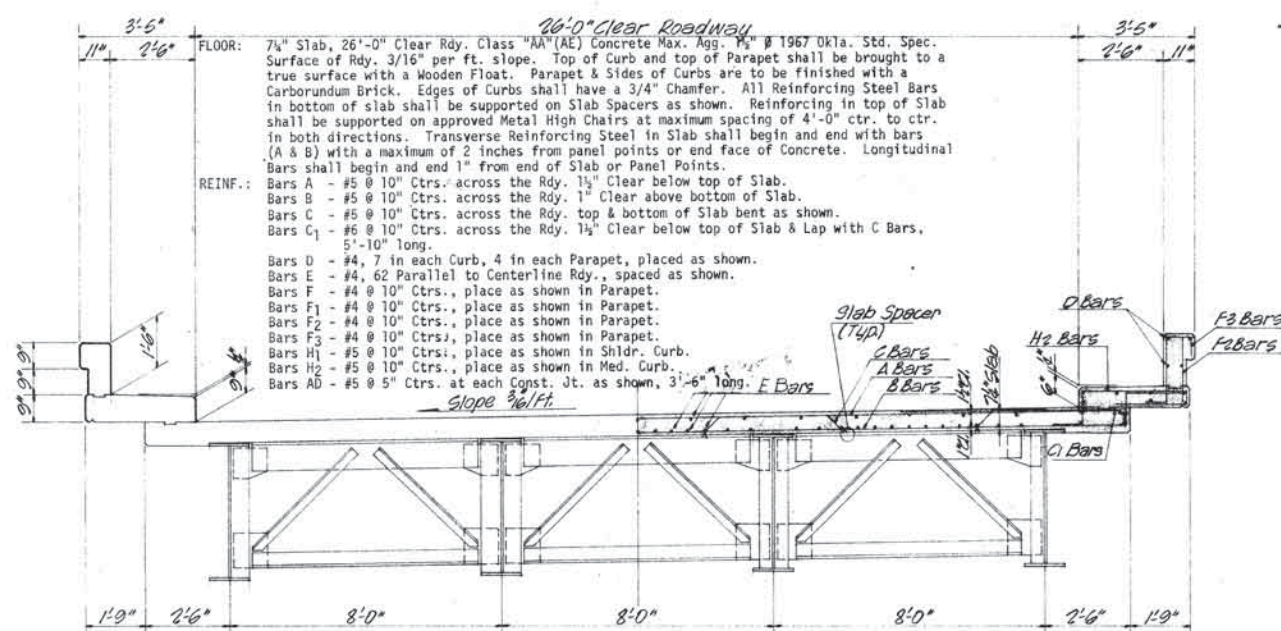
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
REVISIONS					DATE



HALF END VIEW

HALF SECTION

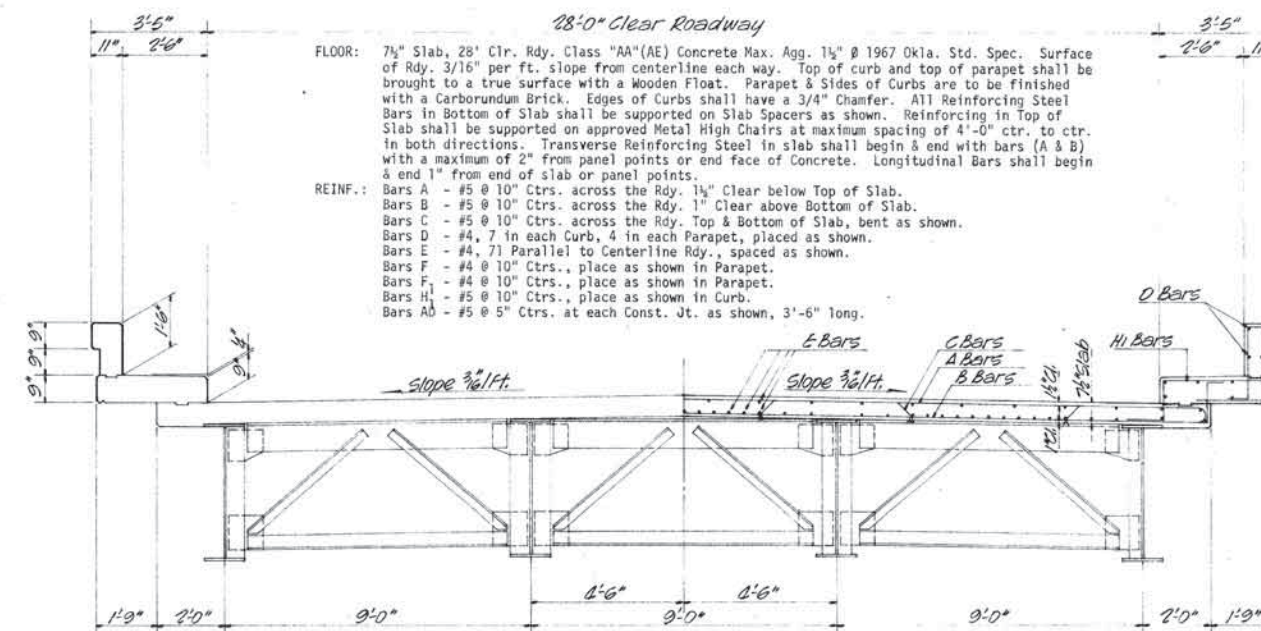
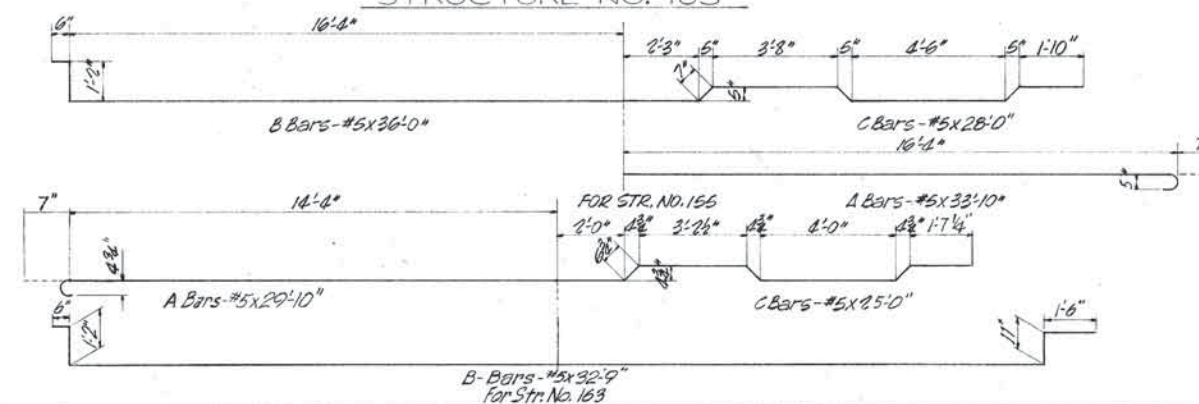
STRUCTURE NO. 155



HALF END VIEW

HALF SECTION

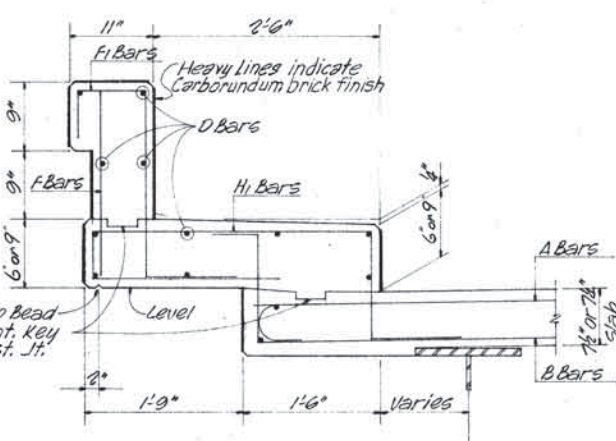
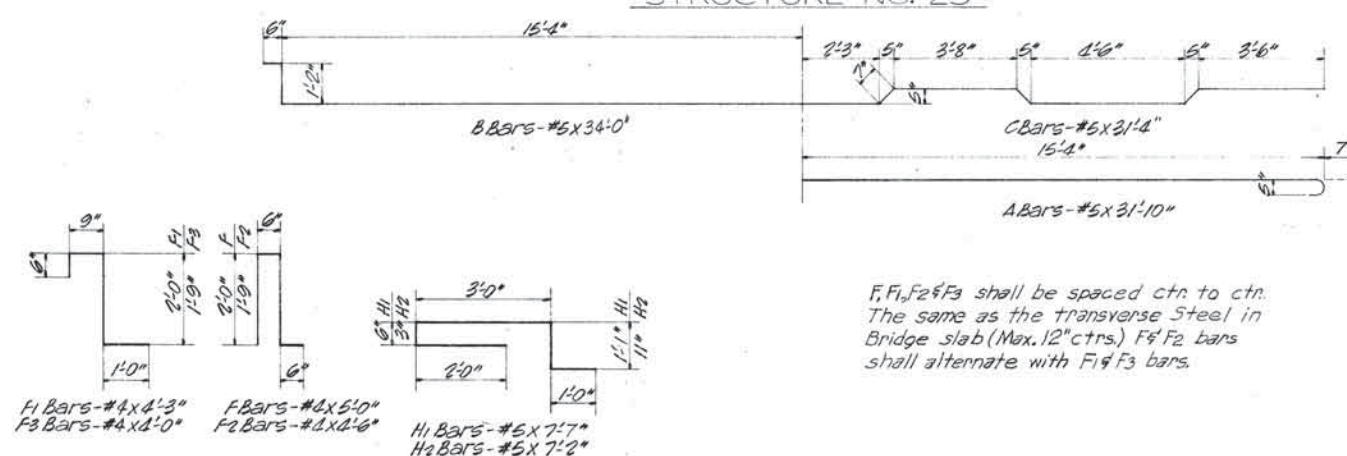
STRUCTURE NO. 163



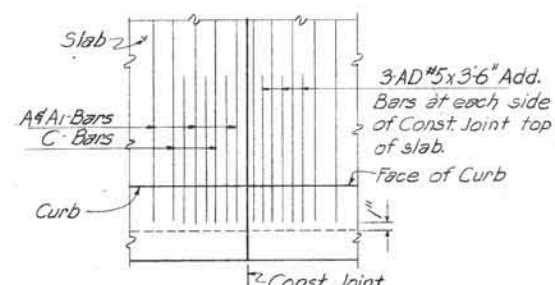
HALF END VIEW

HALF SECTION

STRUCTURE NO. 25



DETAIL OF CURB (9" Curb Shown)



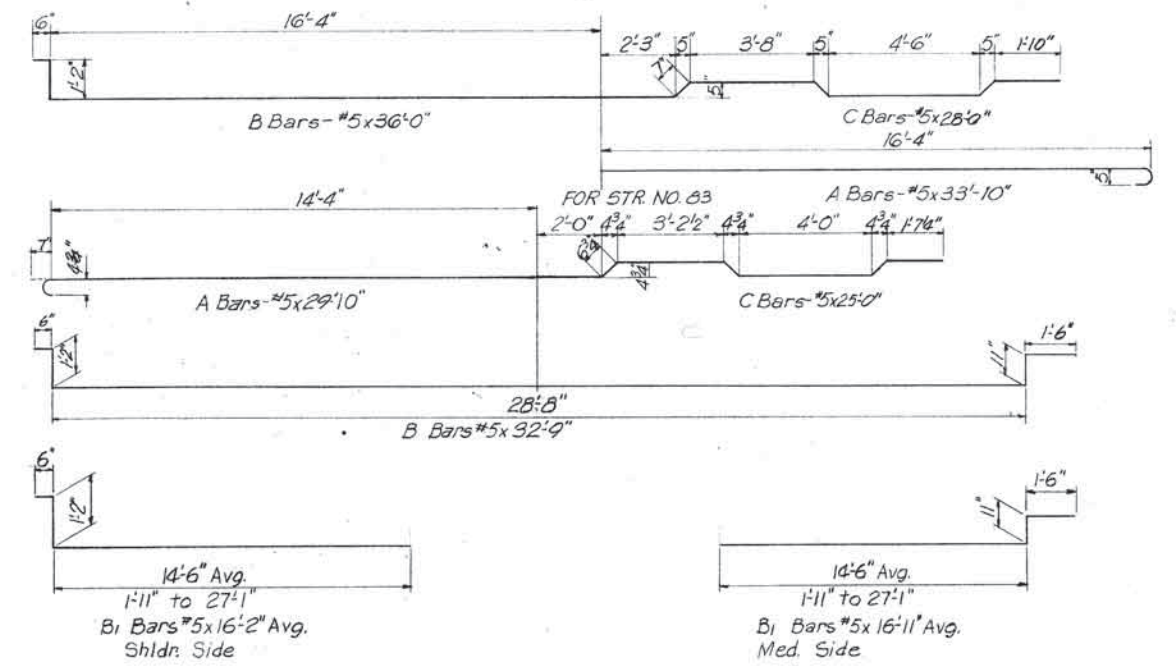
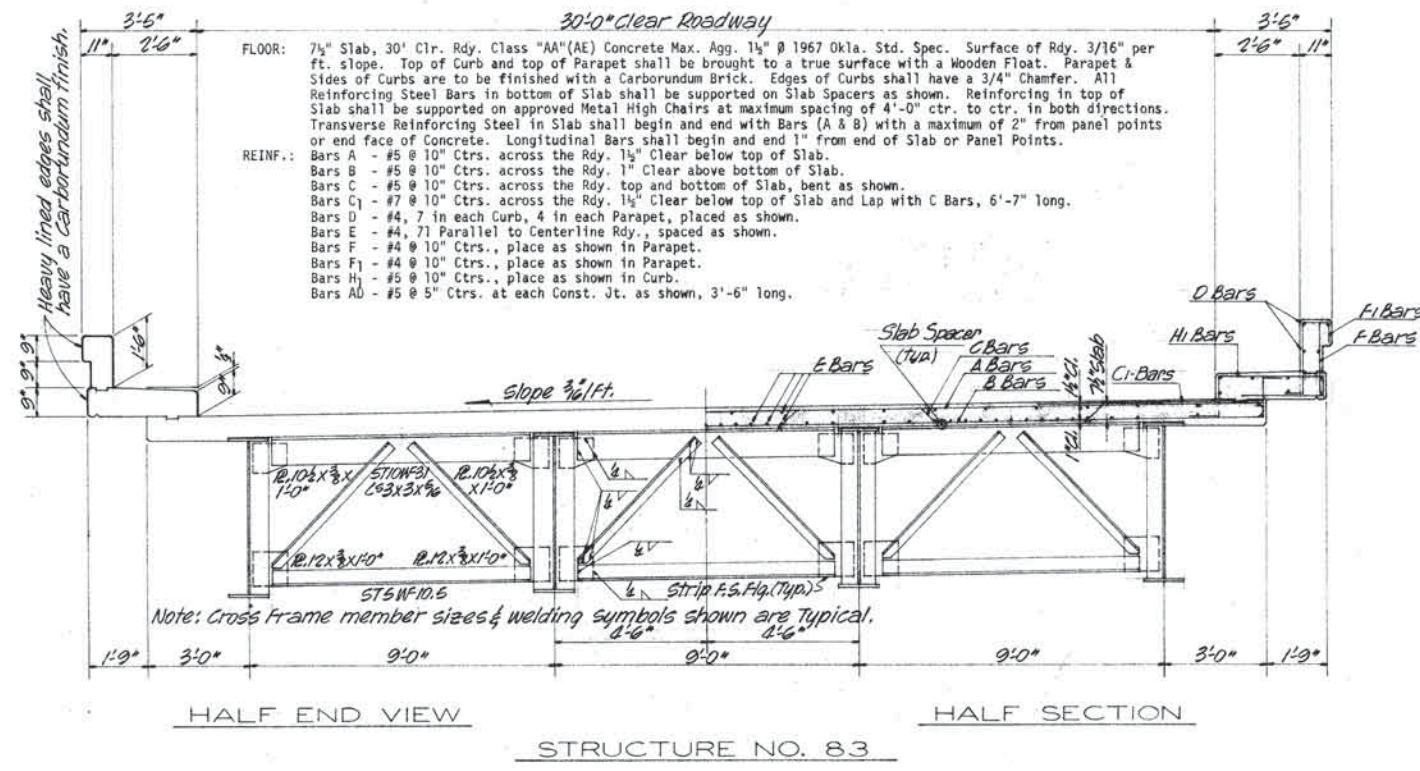
ADDITIONAL SLAB REINF (12 Bars per panel)

NOTE: For additional Reinforcing @ skewed ends & Joints, see Detail on sheet No. 129

Design		STRUCTURE NOS. 25, 155 & 163 LT. & RT.
Drawn		SUPER STRUCTURE DETAILS
Checked		
Approved		
Squad		Project No. I-240-4(86)157 Sheet No. 127

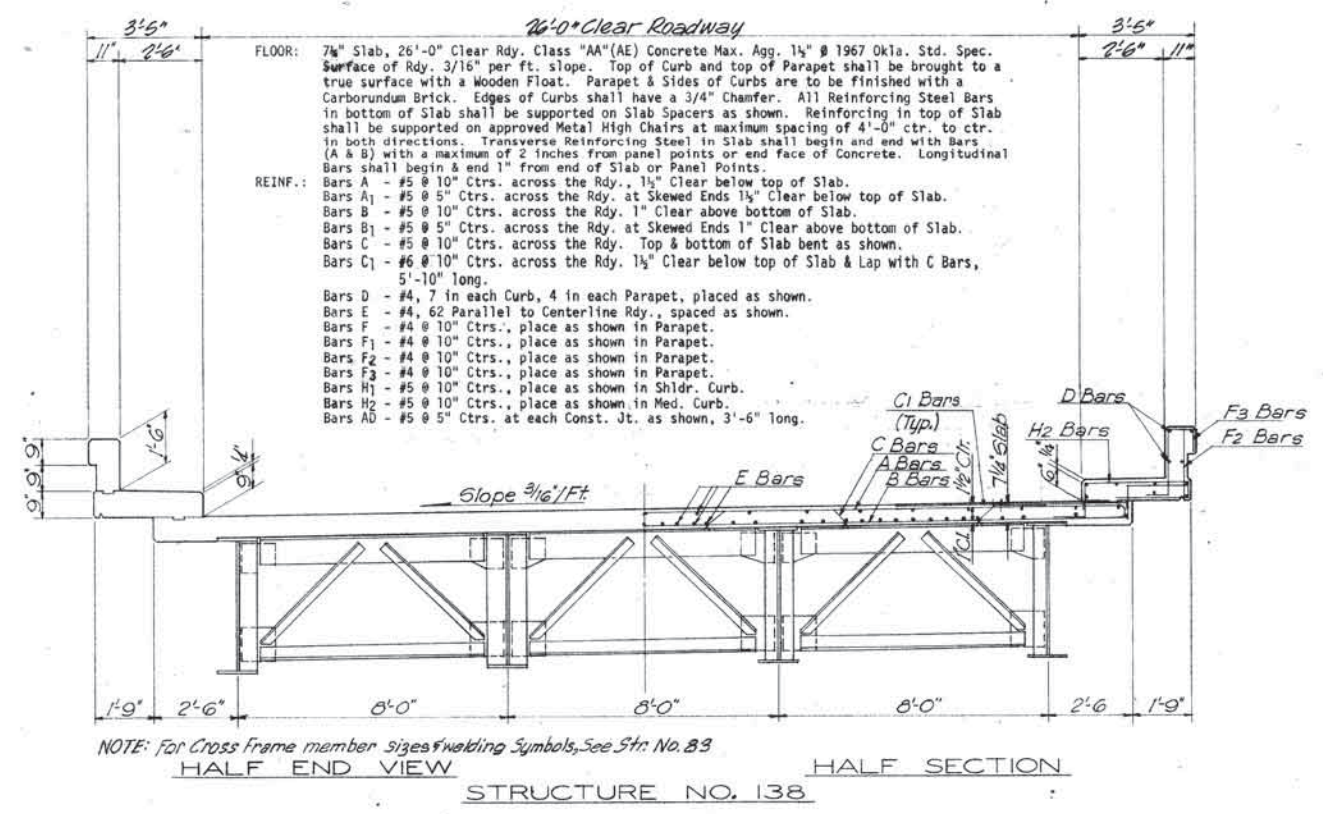


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
REVISIONS					DATE



For Str. No. 138

NOTE: For F&H bar bends, F bar spacing note, additional slab reinf. detail and detail of curb, see sheet No. 127

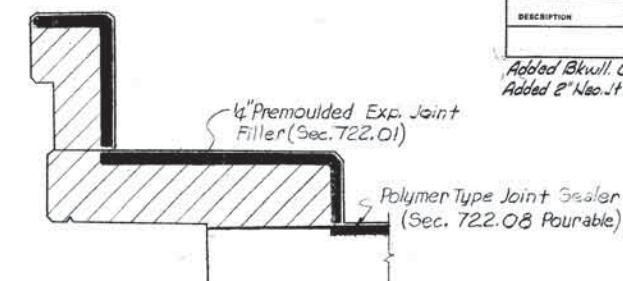
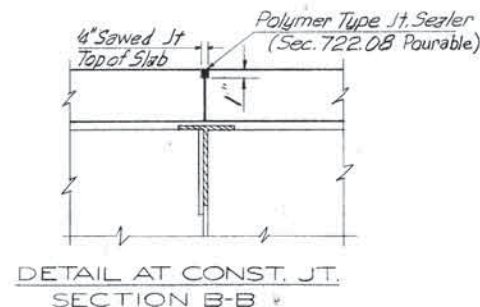
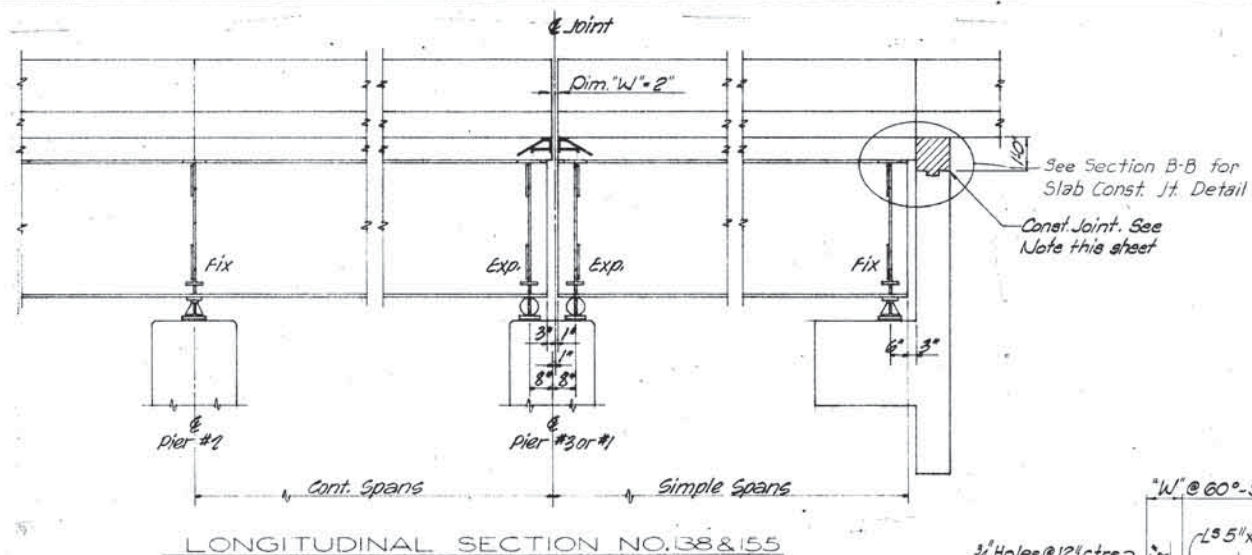


Design		STRUCTURE NOS. 83 & 138 LT. & RT.
Drawn		
Checked		SUPER STRUCTURE DETAILS
Approved		
Squad		Project No. I-240-4(86)157 Sheet No. 128



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
REVISIONS					DATE

Added Bkwall Const. Jt. & Note CM 1-19-70  
Added 2" Neo Jt Seal G.M. 1-19-70

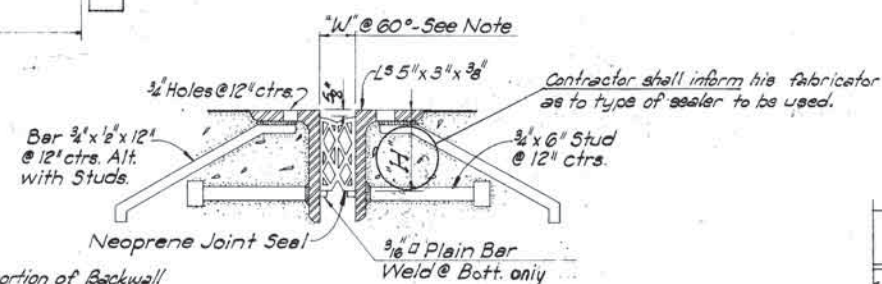
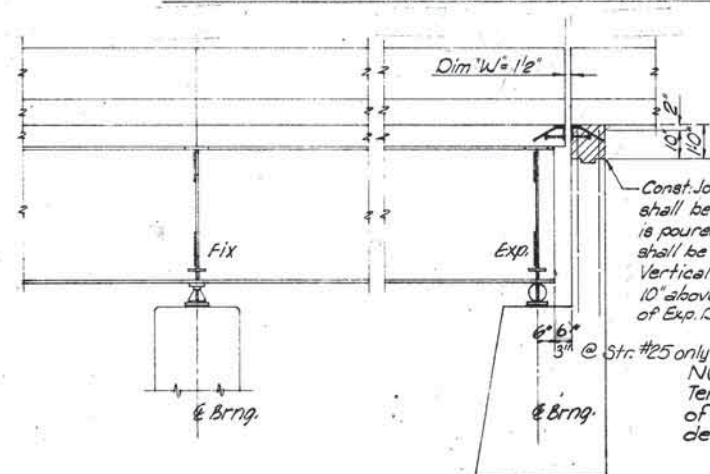


NOTE: Place Const Joints at Panel Points shown on Pouring Diagram.

#### DETAIL OF CONST. JOINT IN CURB AND PARAPET

#### CONCRETE IN HAUNCHES NOTE

The Plan Quantity for Class "AA (AE)" Concrete shown on Structural Steel Detail Sheets includes 0.2 Cu. Yd. per Girder, per 100 Lin. Ft. of Bridge, for Haunches. Haunches will be adjusted for grades, but the pay quantity for Haunches will be as shown above.



#### DETAIL OF EXP. JOINT

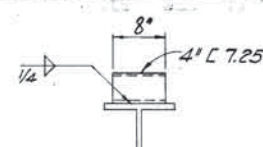
\* Min. Dim. — Force will not exceed 50 Lb./Lin. Ft.  
\*\* Max. Dim. — Force will not exceed 5 Lb./Lin. Ft.

NOTE: Expansion Joint shall be set with an opening of "W" Based on a Temp. of 60° Fah. for each 100' of Expansion to be provided for. The setting of the opening shall be increased 1/8" for each 15° the Temp. is below 60° and decreased 1/8" for each 15° the Temp. is above 60°.

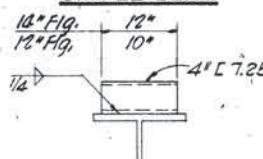
Dimension "W" Expansion Joints required as listed below.  
1" @ Strs. 25, 83, 163 L & R;  
2" @ Strs. 138 L & R, 155.



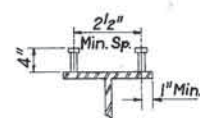
SCHEDULE OF DIMENSIONS — NEOPRENE JOINT SEALS									
Dim. "W"	TYPE "A"				TYPE "H"				Joint Limits
	Dim. A	Dim. B	Dim. H	Dim. A	Dim. B	Dim. H	Movement Category	* Min.	** Max.
1 1/2"	2 1/2"	2 3/4"	3 1/4"	2 1/2" ± 1/16"	2 5/8" ± 1/8"	3 1/8"	1 1/4"	1 1/4"	2 1/2"
2"	3"	3 1/8"	4 1/8"	3" ± 1/16"	3 1/4" ± 1/8"	3 3/4"	1 1/2"	1 1/4"	2 1/2"



#### SHEAR CONN. DETAIL SIMPLE BEAM



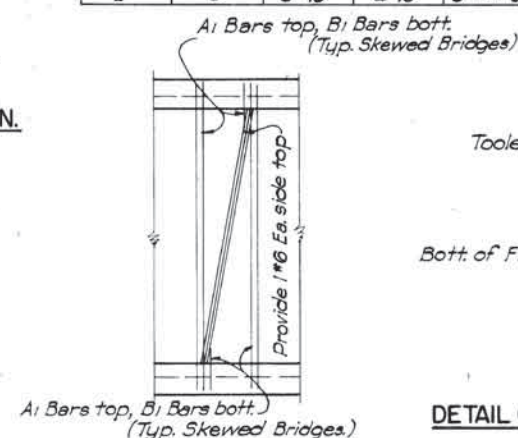
#### SHEAR CONN. DETAIL CONT. BEAM



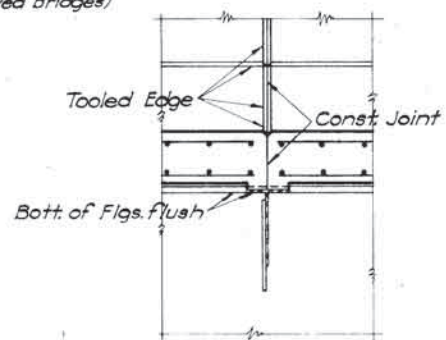
#### ALT. SHEAR CONN.

#### ALTERNATE SHEAR CONNECTORS

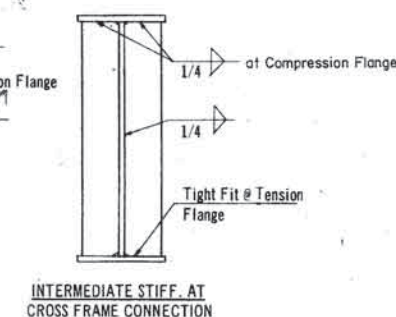
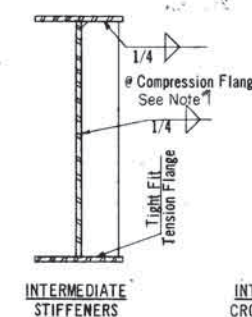
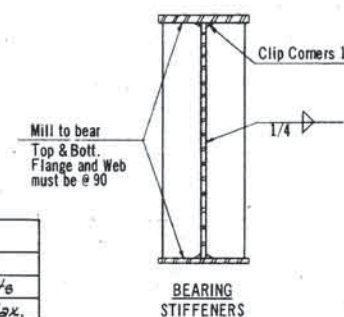
3/8" or 1/2" x 4" long end welded stud connectors, spaced to provide equivalent capacity, may be substituted for the 4" channels shown on the plans. 1" of 4" channel = 41% of 3/8" stud and 56% of 1/2" studs. Type and Spacing of shear connectors shall be shown on the shop drawings. 3/4" studs may be installed in the shop or in the field. Plan weight of Structural Steel is based on weight of channel shear connectors. Pay weight will be based on material used.



#### CONST. JOINT DETAIL AT SKEWED BRIDGES

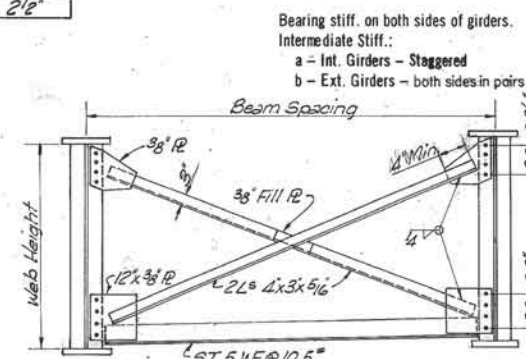


#### DETAIL OF STIFFENER AT CONST. JOINT



#### Note No. 1

On interior and exterior girders, in the areas of stress reversal shown, the stiffeners shall be in pairs continuously welded to web and tight fit at top and bottom flanges (no weld).



#### DETAIL OF INTERIOR DIAPHRAGM FOR CONTINUOUS SLAB POUR

See Note Sheet No. 130

Design	
Drawn	
Checked	
Approved	
Squad	

STANDARD DETAILS FOR PLATE GIRDER AND CONTINUOUS PLATE GIRDER SPANS

Project No. T-240-4(86)157 Sheet No. 129



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240-4 186/157		130	
DESCRIPTION		REVISIONS		DATE	

All construction and materials shall be in accordance with 1967 Oklahoma Standard Specifications for Highway Construction and Special Provisions.

Design of all structures except Strs. No. 34 and 35 are designed in accordance with AASHTO Specifications 1965 Edition and AWS Specifications.

Slope drain lengths on General Elevations are for computational purposes only. Actual length and locations will be determined in the field as directed by the Resident Engineer. Drains at ends of bridges will be measured by the square yard and paid for as 4" Conc. Slope Wall.

Wing parapets shall correspond both horizontally and vertically to the shape or curve of the bridge parapets.

Guardrail connections shall be placed in the abutment wings at locations shown on the plans. Structural steel in guardrail connections (approx. 40 lbs. ea.) is included in the structural steel quantity. All cost of material, labor, and equipment necessary to install these connections will be paid for at the unit price bid for structural steel.

Field welding of crossing reinforcing bars shall not be permitted.

Tack welding of reinforcing bars shall be prohibited in all cases.

The Bridge Contractor shall make channel excavation, as Unclassified Excavation, sufficient to construct Bridge Boxes.

Bearing area of concrete under all shoes shall be ground with a carborundum brick before placing shoes to secure full bearing of shoes on concrete.

#### ANCHOR BOLTS:

Anchor bolts shall be deformed reinforcing bars and shall be of sufficient size to produce a normal thread for size called for on the plans.

Anchor bolts may be pre-set at the time the concrete is poured. If the Contractor elects to place the anchor bolts after the concrete is poured, the setting of the anchor bolts shall be in accordance with the following procedure:

Holes of sufficient depth shall be pre-set at all anchor bolt locations. The material used to form holes shall not be oiled or greased and must be removed before the placing of the anchor bolts. Diameter of holes shall be 1/8" larger than the anchor bolts. Anchor bolts shall be set in melted sulphur or non-shrink grout before bearing plates or shoes are set in place.

After all of the structural steel has been erected and all adjustments made to the expansion device and expansion shoes to provide for temperature correction, the slotted holes in bearing plate shall be filled with melted lead before the anchor bolt nut is tightened.

#### STEEL PILING

Steel piling shall be driven to point bearing on solid foundation material at the approximate elevation shown on the plans. If practical refusal is not obtained at this elevation, driving shall continue until 100 tons bearing is obtained.

The lengths of steel piling shown on the plans are for estimating purposes only.

No separate payment will be made on Steel Piling for build-ups, re-driving, cut-offs, or splices. The length of piling remaining in place paid for at the bid price per lineal foot shall be full compensation for this item. Cut-offs of 2' or less will not be deducted from the pay length. In case the contractor chooses to furnish mill length pile and drive and cut-off to grade, two splices per pile will be allowed only on enough piling to enable him to use the major part of the cut-offs from that particular project.

When untested foreign steel piling are used, the contractor shall furnish enough extra length out of each heat for testing purposes.

#### SUBSTRUCTURE EXCAVATION COMMON:

Contractor may excavate to the neat lines of the abutment, and if in satisfactory condition to the Resident Engineer, he may pour the concrete against the compacted fill. If necessary, the Contractor shall use forms on the back vertical face of the abutment and remove the same after concrete is set. Backfilling shall be compacted to 95% standard density in accordance with Section 501.04(K) of the Standard Specifications.

#### SELECT BORROW:

Item "Select Borrow" is for placing the fill behind the bridge abutments between the wings to subgrade elevation and for material needed for shoring the fill around the abutments. The fill placed by the Bridge Contractor shall be compacted to 95% standard density in accordance with Section 202.04(C) of the Standard Specifications. The quantity of Select Borrow shown on the plans includes 40% for compaction.

#### BRIDGE FLOORS

Transverse reinforcing steel in the floor shall be a max. of 2" from end of concrete panels. All reinforcing steel bars, in top of slab, shall be supported on approved metal highchairs. The max. spacing of the metal chairs shall be 1/2 beam spacing or a max. of 4'-0" on center. Bottom layer of reinforcing steel shall be supported on continuous steel slab spacers as shown. Longitudinal Bars shall begin and end 1" from end of slab or panel points. Class AA Concrete max. agg. 1 1/2"  $\phi$ .

#### STRUCTURAL STEEL

Shop welding and lead plates will be paid for by weight at the unit price bid for Structural Steel.

All welding shall conform to the 1967 edition of the Okla. Standard Specifications and the American Welding Society and Special Provisions.

Ultrasonic, Radiographic and Magnetic Particle Inspection will be required as applicable.

All Structural Steel shall conform to ASTM A-36.

Field Splice: Bolted field splices may be used in place of welded splices. Pay weight for splice will be based on material used.

High Strength Steel Bolts shall be used for all field connections. Shop Connections may be Rivets or High Strength Steel Bolts.

The number of high strength bolts computed for payment shall be the actual number placed in the finished structure.

Payment for Web & Flange plates will be based on the nominal sizes specified on the plans. No allowance will be made for waste necessitated by girder camber curvature.

No field welding to girders will be allowed except as shown on the plans.

#### FABRICATION

All shop splices of the flange plates and the web plates shall be made before such component parts are welded in any one section. All welded flange splices, both shop and field shall be ground flush and smooth. Grinding shall be done parallel to stress.

Extension bars shall be used in making the butt welds in the flanges according to the A.W.S. Specification Section 405 (J) & 406 (L).

Ends of Girders to be spliced shall be prepared in the shop, taking into account the relative positions the adjacent section will take in the structure due to the roadway grade and alignment. For the purpose of shop inspection, the fabricator shall assemble the girders and splices in groups of at least three consecutive girder sections and two splices. All parts shall be completely match marked and a match marking diagram furnished as part of the structural steel details.

The approval of the shop drawings in no way relieves the Contractor or his fabricator of the responsibility for mistakes on the shop drawings.

#### ERECTION

Before any steel is erected, the Engineer will check the elevations of all bridge seats and, if any elevation is off more than .02 feet, the Contractor will be required to correct the bridge seat elevations under the direction of the Engineer.

Where field bolted diaphragms or crossframes are shown on the plans, the contractor shall erect at least every other crossframe or diaphragm at the time the girders are set in place with bolts or driftpins placed in 50% of the connection holes. Where field welded diaphragms or crossframes are shown on the plans, the contractor shall erect all diaphragms or crossframes as the girders are set in place by one 3/4" make up bolt at each connection point.

Structural steel in continuous girder spans may be erected without the use of falsework. Alternate field splices may be made before erection, if the girders are supported at the bearing points to the same relative elevations as they will have in the finished structure.

After a complete line of the stringers has been set in place and before any welding or permanent bolting has been started, except those splices made before erection, the Engineer will check the elevations of all splice points; and, if any elevation is off more than .02 feet from the position as shown by the blocking diagram, the Contractor will be required to adjust all splice points as nearly as practicable to the correct elevation, and if any additional bearing plates are necessary in making these adjustments, the Contractor will be required to furnish them at his expense.

After all Structural Steel has been erected the Resident Engineer will furnish the State Bridge Engineer with the profile of the tops of the girders with the elevations taken at the Panel Points. The Bridge Engineer will determine the thickening of the haunches that will be necessary to provide for variations in fabrication and erection and furnish this information to the Resident Engineer.

#### ALTERNATE METHOD OF PLACING CONCRETE (Continuous Plate Girder Spans)

The Contractor at his option may pour the complete deck for one continuous unit in lieu of the panel pouring order as shown on the plans. If the Contractor elects to use this option, a complete procedure of operation shall be submitted to the Bridge Engineer for approval.

This method of pouring will require plan changes. Diaphragms at the piers and abutments shall be left as shown to support the slab, other interior diaphragms shall be lowered. The longitudinal reinforcing will not be continuous over the pier diaphragm which shall have a 1" deep sawed joint filled with Polymer Type joint filler. Other longitudinal reinforcing shall not be spliced more than 50% at one location.

Therefore, the request for authority to pour the continuous unit must be submitted prior to approval of structural steel shop details and ordering slab reinforcing steel.

Creek and river banks shall be kept in their natural state as much as possible. The contractor shall not unduly strip existing protective vegetation in the vicinity of the stream banks and shall so conduct his operations as not to damage the banks with his equipment. No bank up or downstream shall be excavated except as provided for and as shown on the plans. No work roads shall be constructed upstream where it is necessary to cut the stream or river banks except by approval of the Bridge Engineer. Banks cut for work roads shall be located downstream and replaced by the contractor to their original shape and density. Unnecessary striping of vegetational growth along banks in the construction area is not permitted.

See special provisions included in the proposal for Prevention, Control and Abatement of Water Pollution.

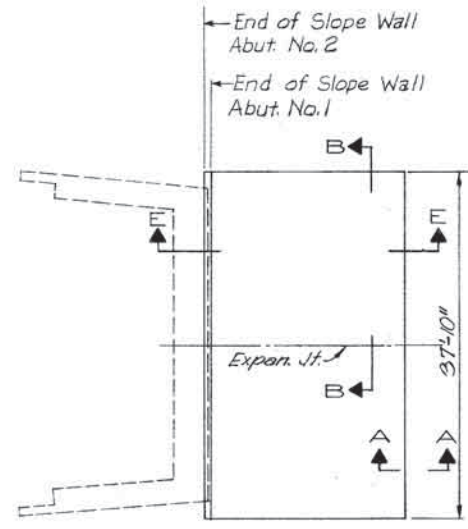
Design	
Drawn	
Checked	G.M. 11-69
Approved	
Squad	MELLIES

#### GENERAL NOTES

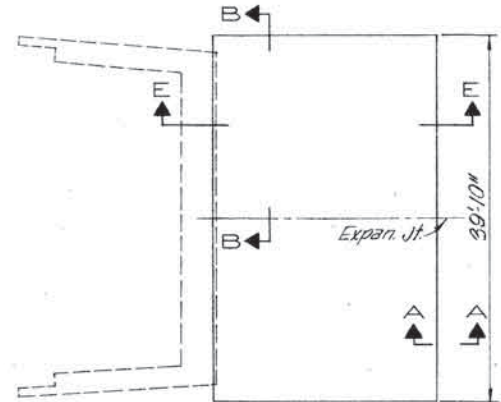
Project No. 1-240-4(86)157 Sheet No. 130



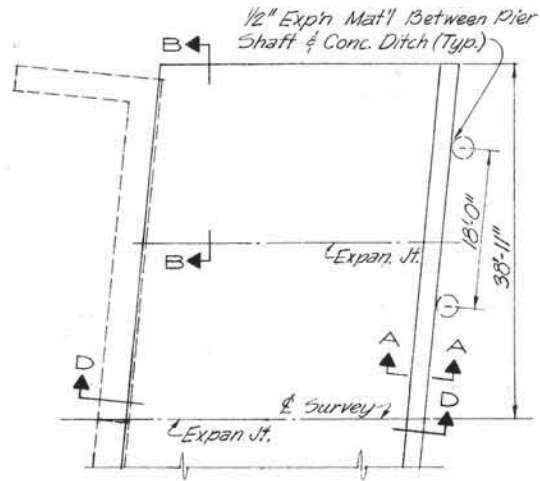
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
DESCRIPTION		REVISIONS		DATE	



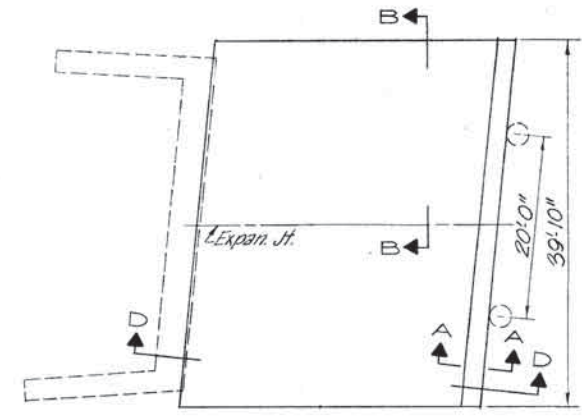
STR. NO. 25



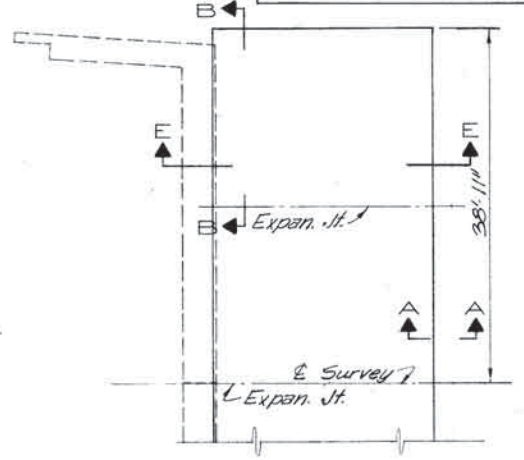
STR. NO. 83



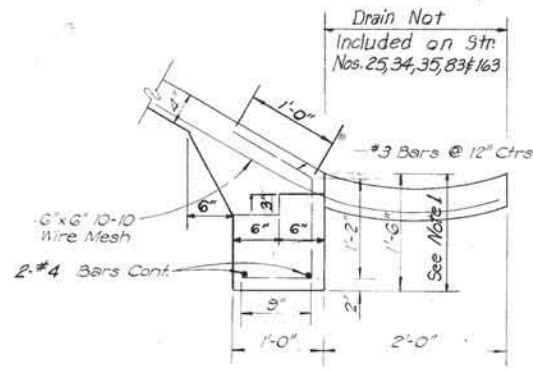
STR. NO. 138



STR. NO. 155

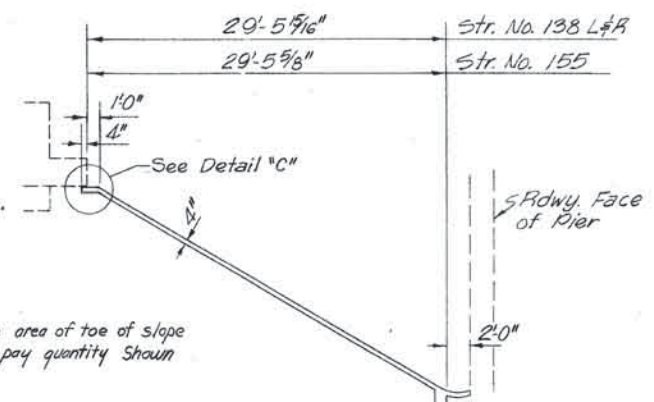


STR. NO. 163

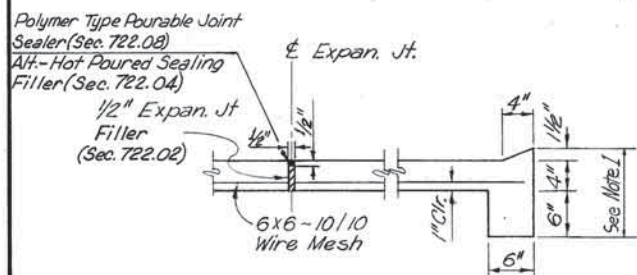


SECTION A-A

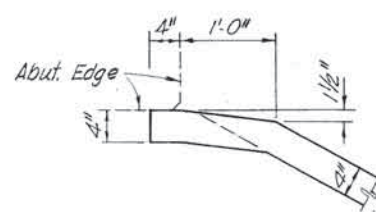
Note 1. Surface area of toe of slope wall included in pay quantity shown for slope wall.



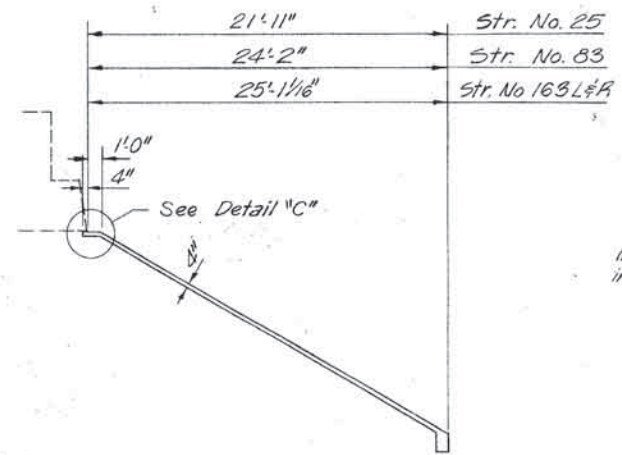
SECTION D-D



SECTION B-B



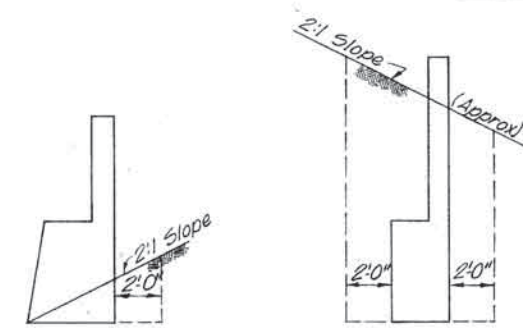
DETAIL "C"



SECTION E-E

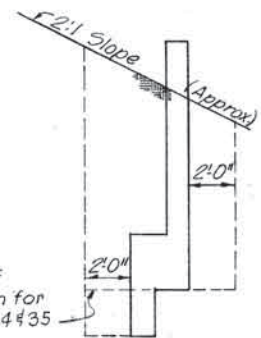
SLOPE WALL QUANTITIES (TOTAL)								
ITEM	UNIT	STR. NO. 25	STR. NO. 83	STR. NO. 138	STR. NO. 155	STR. NO. 163		
4" Concrete Slope Wall	S.Y.	224.6	258.8	305.8	305.8	313.0	261.7	261.7

NOTE: Cost of all items in Concrete Slope Wall including Wire Mesh, Reinforcing Steel, and Expansion Joint Material shall be included in the unit price bid per Sq. Yd. of 4" Concrete Slope Wall.  
All material and work shall be in accordance with that part of Sec. 610, Okla. Std. Specs. of 1967, Covering Concrete Sidewalks, See General Elevation for Pay Quantities.

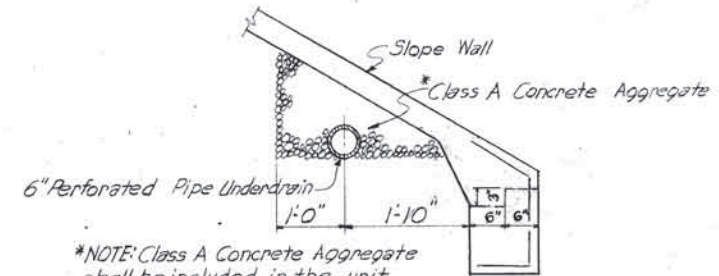


EXCAV. DIAGRAM FOR ABUTS.

For Abutment Excavation Note see Sheet No. 130.

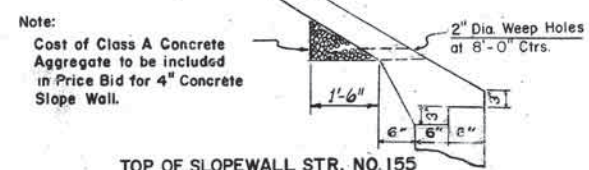


EXCAV. DIAGRAM FOR WING WALLS



\*NOTE: Class A Concrete Aggregate shall be included in the unit price bid per Lin. Ft. of 6" perforated pipe underdrain.

PERFORATED PIPE UNDERDRAIN



Note: Cost of Class A Concrete Aggregate to be included in Price Bid for 4" Concrete Slope Wall.

Design	
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Squad	

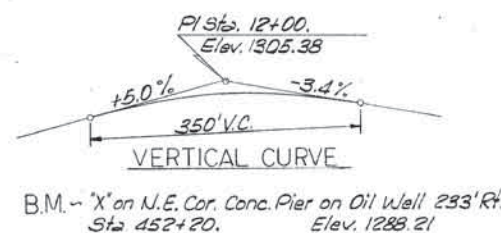
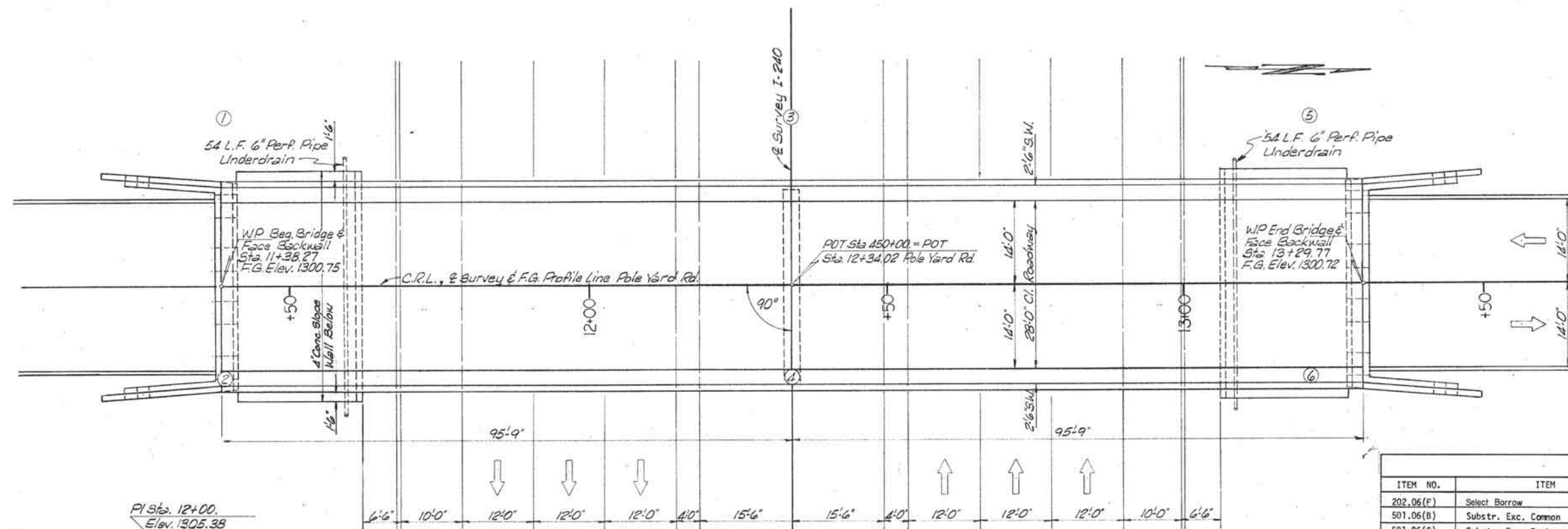
SLOPE WALL DETAILS



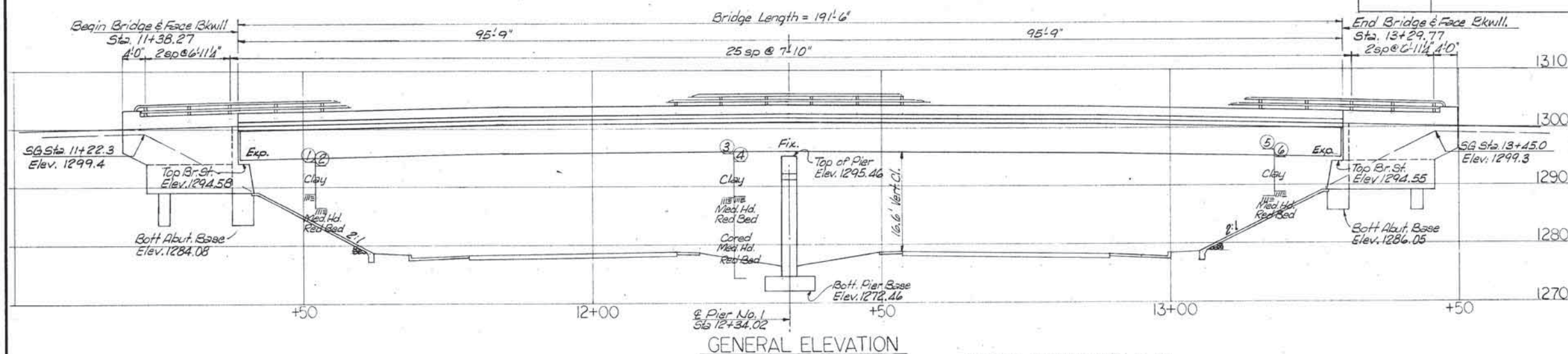
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
0	OKLA.	1-240-4(86)157	1986	132	
DESCRIPTION		REVISIONS		DATE	

**DESIGN DATA**  
Concrete Class A 1000 psi.  
Concrete Class AA 1200 psi.  
Reinforcing Steel 20000 psi.  
Structural Steel (A36) 20000 psi.  
Loading HS 20  
Design: AASHTO Specifications 1965 Edition and AWS Specifications

**FOUNDATION PRESSURES**  
Abutments 5.3 Tons/Sq. Ft.  
Piers 4.6 Tons/Sq. Ft. Direct  
6.8 Tons/Sq. Ft. Max.



SUMMARY OF QUANTITIES					
ITEM NO.	ITEM	UNIT	ABUTS.	PIERS	SUPSTR.
202.06(F)	Select Borrow	C.Y.			180
501.06(B)	Substr. Exc. Common	C.Y.	100		100
501.06(C)	Substr. Exc. Rock	C.Y.	15.8	18.0	33.2
504.06(A)(AE)	Class AA Conc.	C.Y.			190.4
505.06(C)	Steel Handrailing (2-Rail)	L.F.			455.2
505.06(D)	Alum. Handrailing (2-Rail)	L.F.			455.2
506.06(A)	Structural Steel	LB.			166,170
509.06(B)	Class A Conc.	C.Y.	126.4	32.0	158.4
511.06	Reinforcing Steel	LB.	9880	6330	41,180
614.06(AA)	6" Perf. Pipe Underdrain	L.F.			108
640.06	Field Office & Laboratory	EA.			1
Sp.	4" Conc. Slope Wall	S.Y.			284.6



For Details of Abutments See Sht. No. 134  
For Details of Pier See Sht. No. 133  
For Details of Superstructure See Shts. No. 127, 129, 130 & 136  
For Details of Slope Walls See Sht. No. 131  
For Details of Handrail See Sht. PTR-2 Sht. No. 178 & Sht. No. 137  
For Details of Expansion Devices See Sht. No. 129

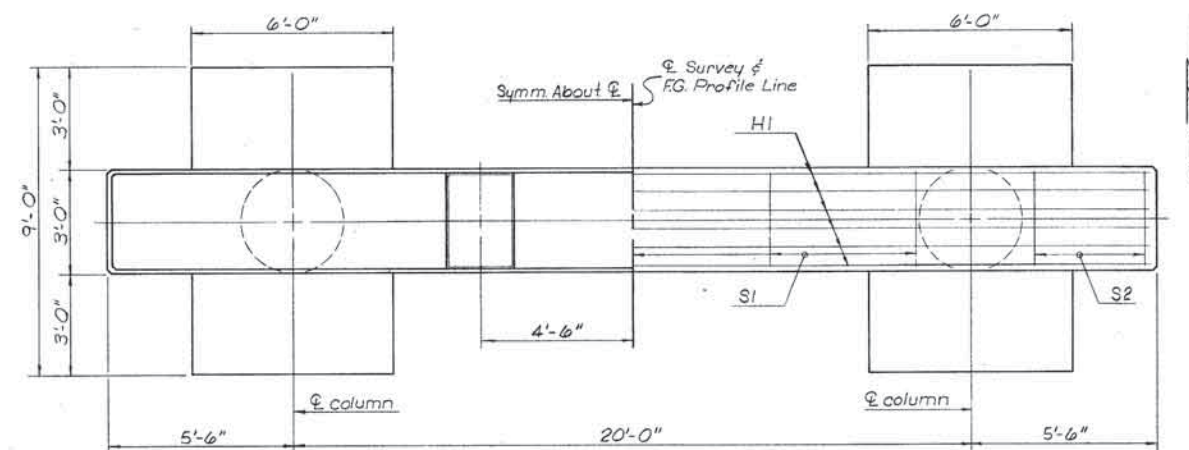
Design		
Drawn	G.M. 9-69	
Checked	T.G.H. 9-69	
Approved		
Squad	MELLIES	

STRUCTURE NO. 25 - POLE YARD ROAD  
GENERAL PLAN AND ELEVATION  
2 - 95'-0" CONTINUOUS PLATE GIRDER SPANS  
28' CL. RDY. W/2'-6" S.W. BOTH SIDES  
STA. 450+00.00 - SURVEY LINE

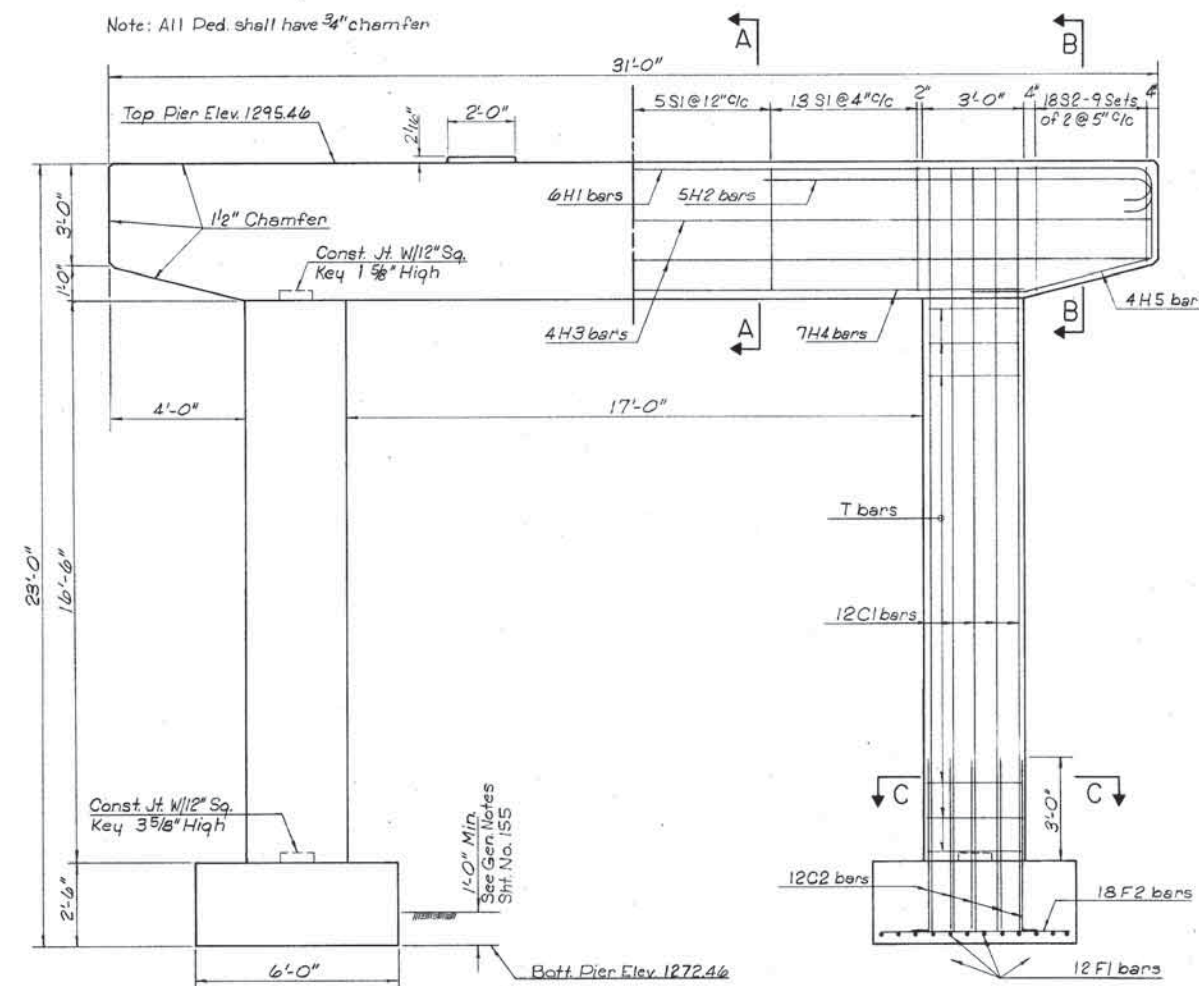
Project No. 1-240-4(86)157 Sheet No. 132



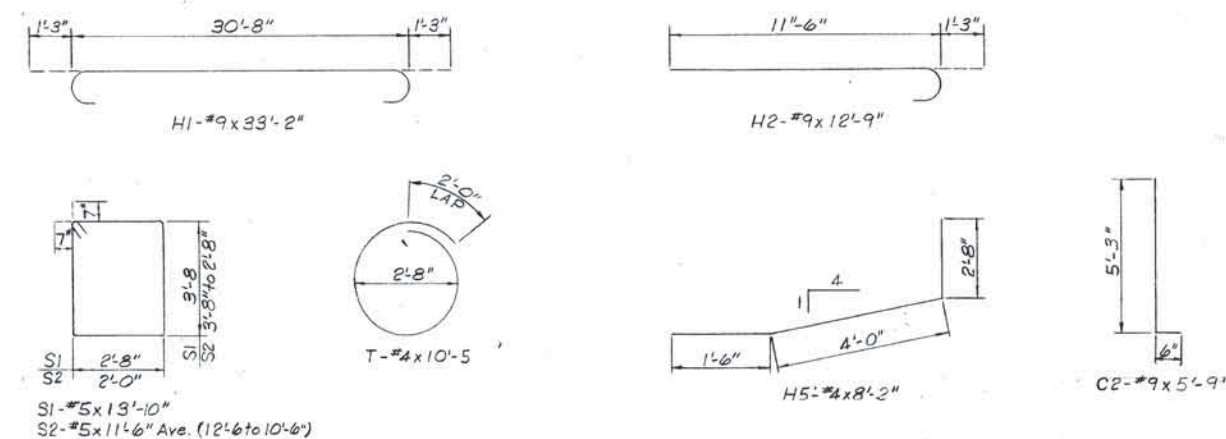
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240 4(86)157		133	
REVISIONS					DATE



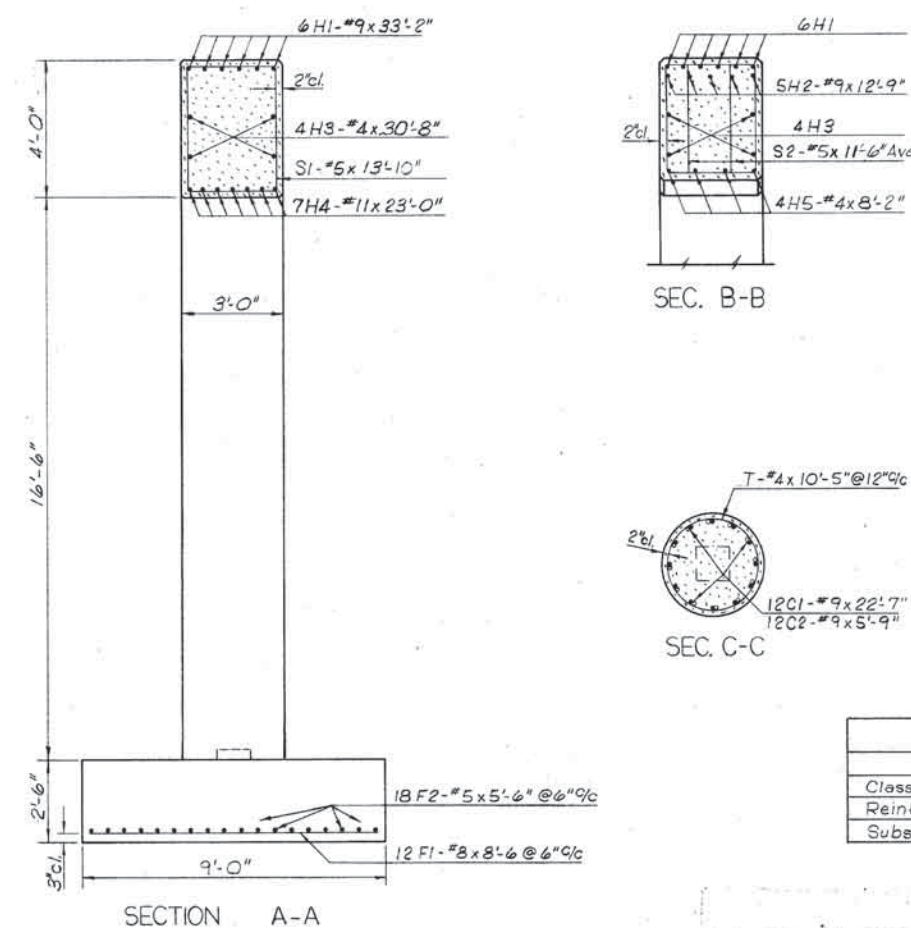
PLAN



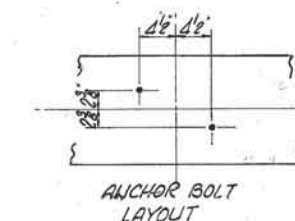
ELEVATION



BAR BEND DETAILS



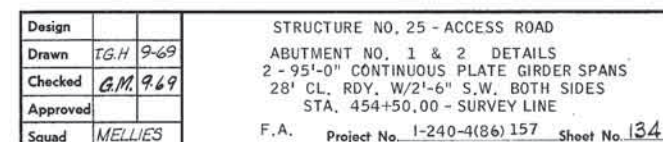
BAR LIST - ONE PIER				
MARK	NO.	SIZE	SHAPE	LENGTH
H1	6	#9	Bnt.	33'-2"
H2	10	#9	Bnt.	12'-9"
H3	4	#4	Str.	30'-8"
H4	7	#11	Str.	23'-0"
H5	8	#4	Bnt.	8'-2"
C1	24	#9	Str.	22'-7"
C2	24	#9	Bnt.	5'-9"
F1	24	#8	Str.	8'-6"
F2	36	#5	Str.	5'-6"
S1	35	#5	Bnt.	13'-10"
S2	36	#5	Bnt.	11'-6" Ave.
T	34	#4	Bnt.	10'-5"



QUANTITIES		
ITEM	UNIT	TOTAL
Class "A" Concrete	C.Y.	32.0
Reinforcing Steel	Lbs	6330
Substr. Excav. Rock	C.Y.	18.0

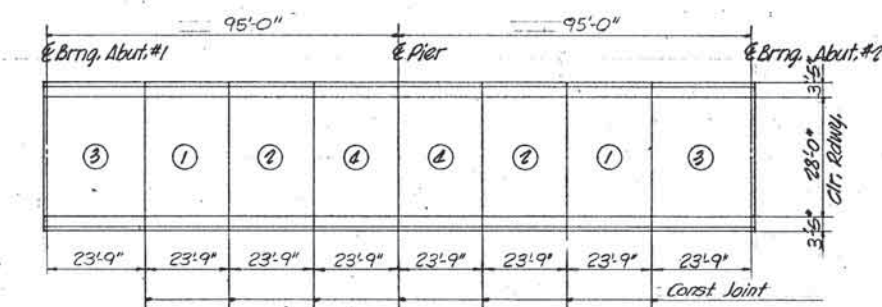
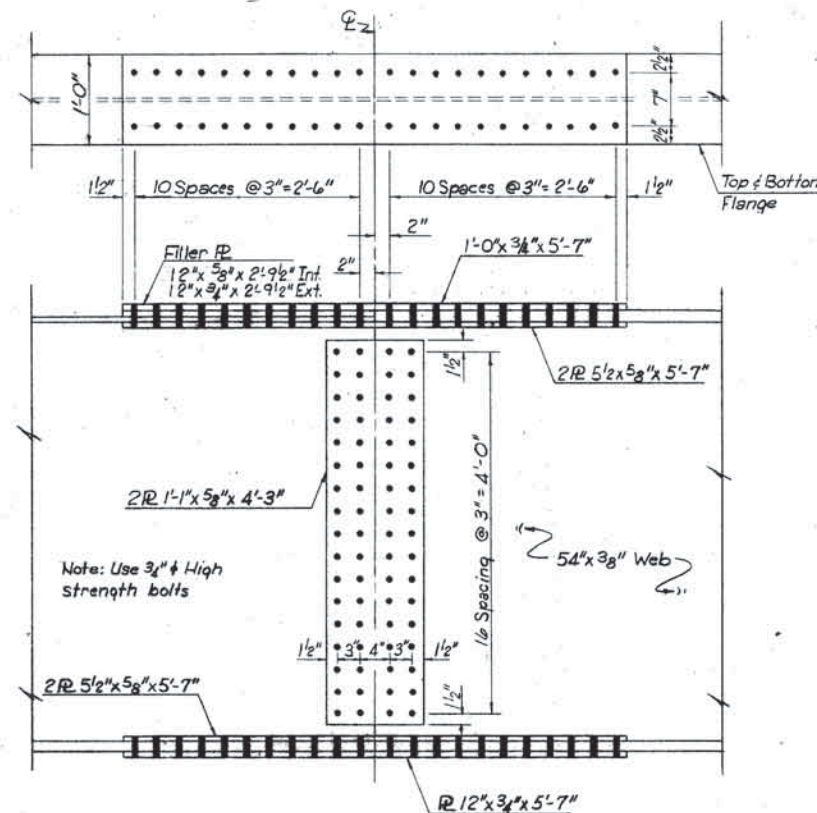
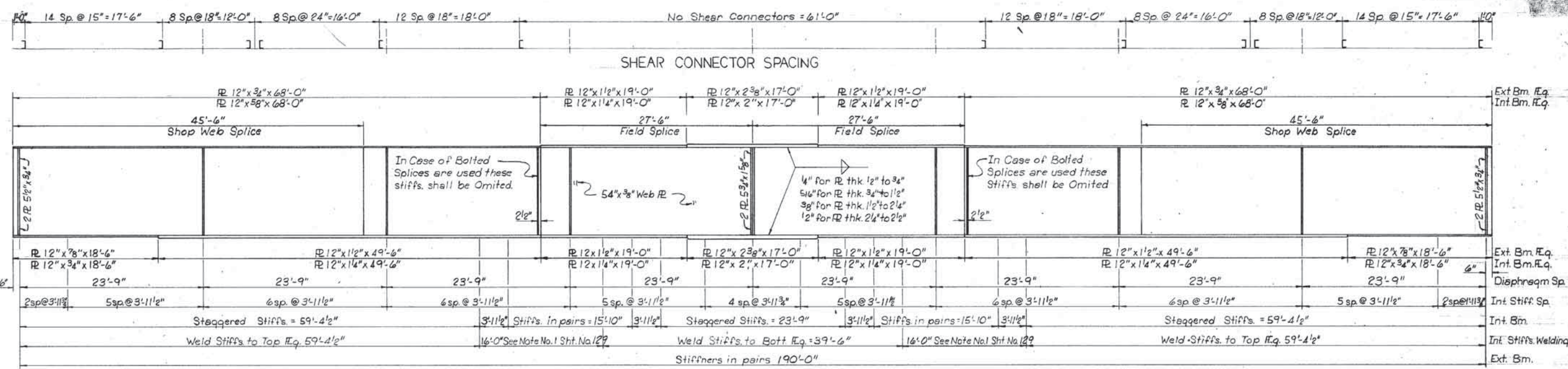
Design			STRUCTURE NO. 25 - POLE YARD ROAD PIER DETAILS 2 - 95'-0" CONTINUOUS PLATE GIRDER SPANS 28' CL. RDY. W/2'-6" S.W. BOTH SIDES STA. 450+00.00 - SURVEY LINE Project No. 1-240-4(86)157 Sheet No. 133
Drawn	MW	9-69	
Checked	T.G.H.		
Approved			
Squad	MELLIES		





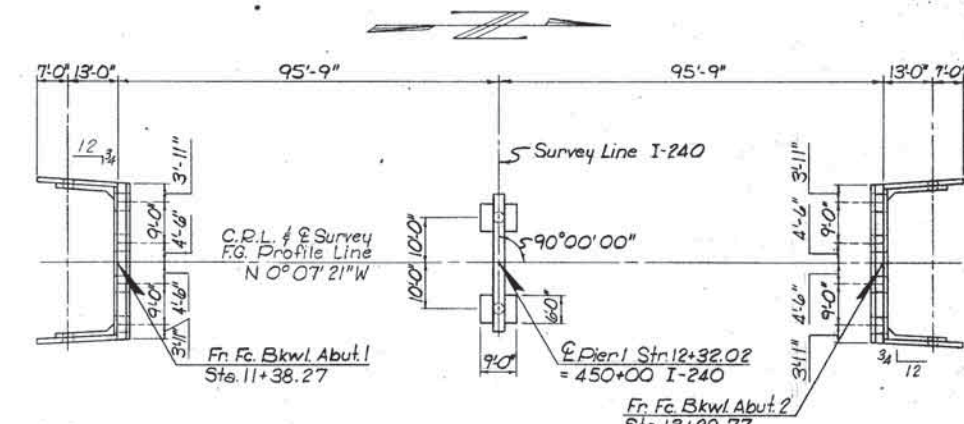
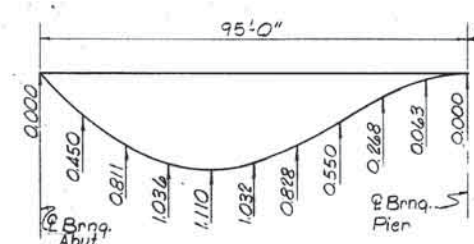
NOTE: Concrete in the footings of the Abutments shall be poured against the firm foundation (Med. Hd. Red Bed). The quantity of Class A Concrete and Substructure Excavation Rock paid for under these items shall be the amount within the neat lines of the footings as shown on these plans.





**SLAB POURING ORDER**

Panels bearing the same number will be considered a "group" and should be poured the same days pour. Panels shall be poured in order of numbering shown. More than one "group" may be poured in the same day but no "group" shall be started until pour is completed on the preceding "group". The purpose of these restrictions is to insure that loading and deflections of entire series will be kept symmetrically balanced about center line of series during any protracted intervals between pours.



SUPERSTRUCTURE QUANTITIES		
ITEM	UNIT	QUANTITY
Handrail	L.F.	455.2
Class "AA(AE)" Conc.	C.Y.	190.4
Reinf. Steel	LB.	41,180
Structural Steel	LB.	166,170

\* Note: Structural Steel Quantity includes For Optional Field Splices & 7.25 Shear Connectors.

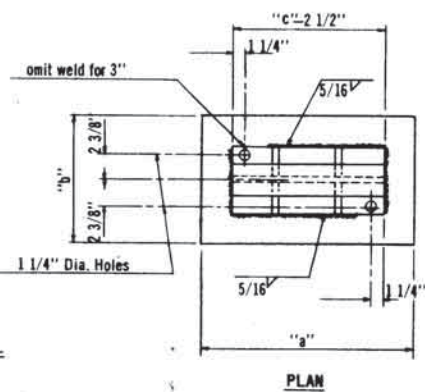
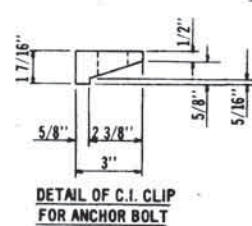
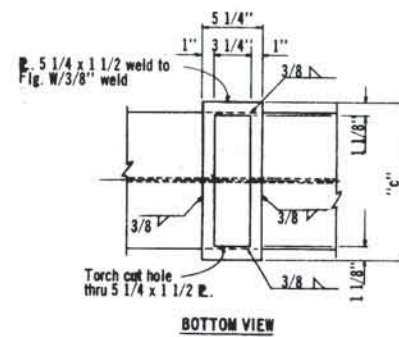
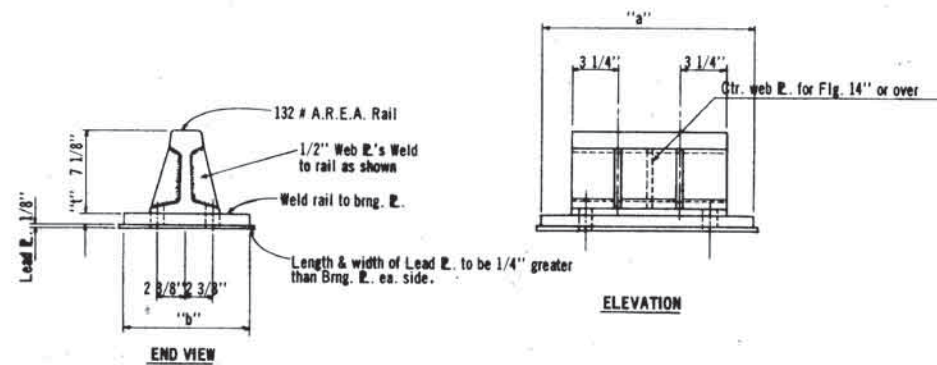
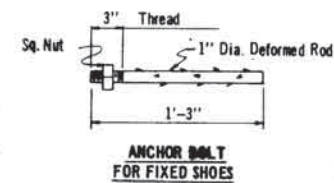
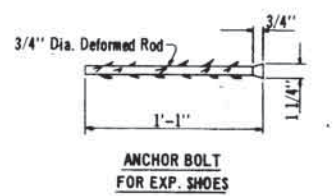
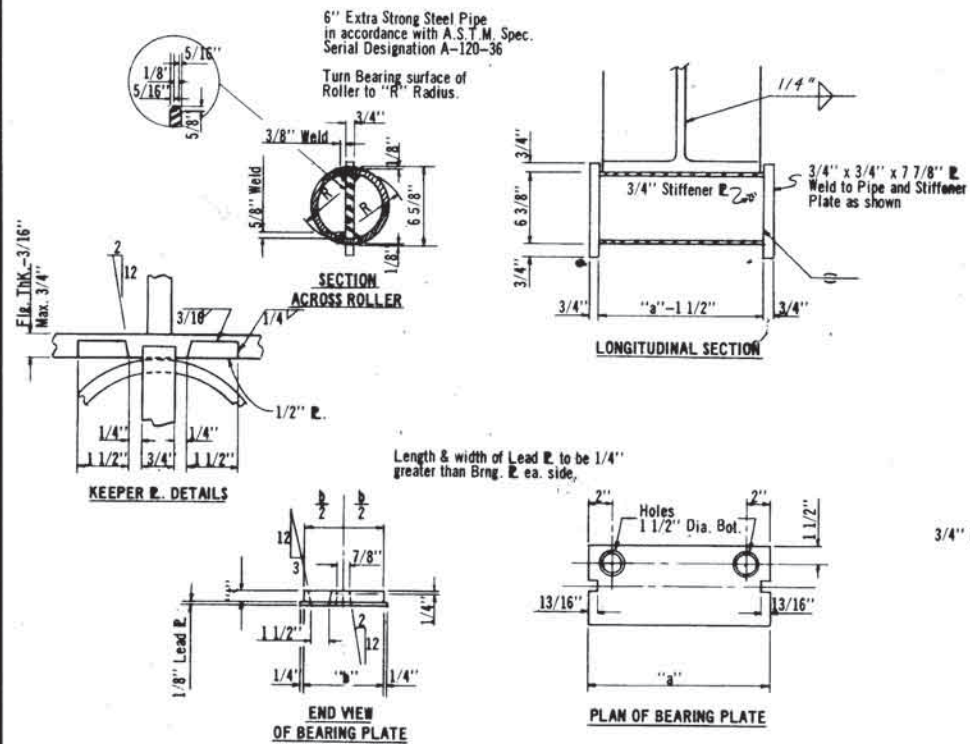
Design		
Drawn	M.W. 8-69	
Checked	S 8-69	
Approved		
Squad	MELLIES	

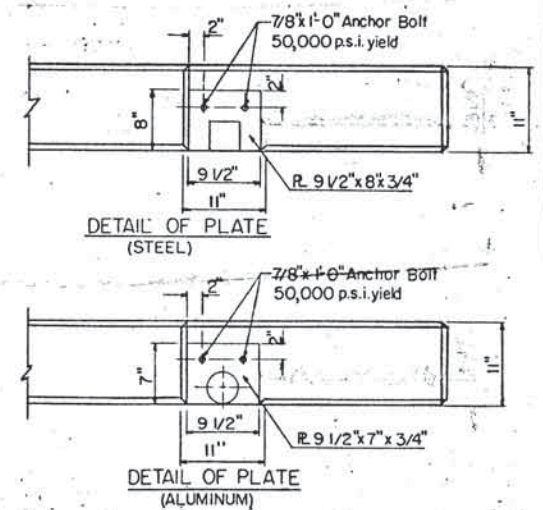
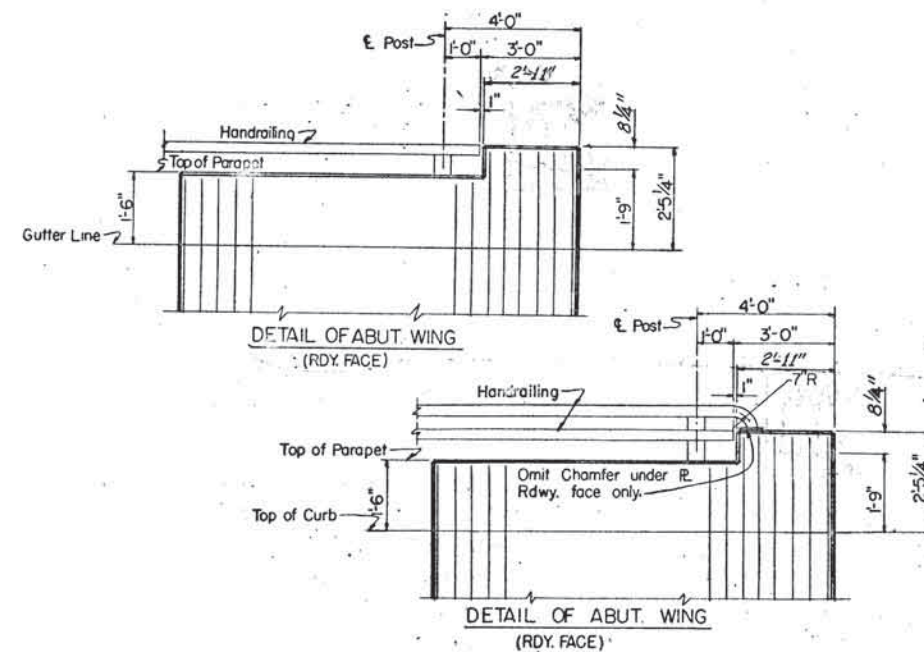
STRUCTURE NO. 25 - ACCESS ROAD	
STRUCTURAL STEEL DETAILS	
2-95'-0" CONTINUOUS PLATE GIRDER SPANS	
28'-0" CL. RDY. W/ 2'-6" S.W. BOTH SIDES	
STA. 450+00 - SURVEY LINE	
F.A. Project No. 1-240-4(86)	Sheet No. 136



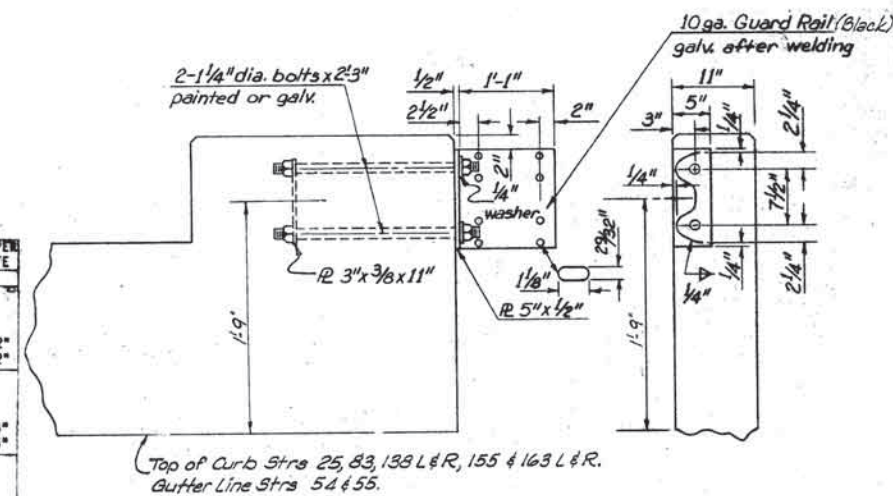
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
REVISIONS					DATE



DETAILS OF FIXED SHOES



STRUCTURE NO.	SHOE & BEARING PLATE DIMENSIONS							
	EXPANSION SHOE				FIXED SHOE			
	a	b	c	d	a	b	c	d
Str. #25								
Abut. 1 & 2	Ext. 1'-1-3/4"	8"	1-1/2"	7"	1'-10"	1'-3"	1'-2"	1'-2"
Abut. 1 & 2	Int. 1'-1-3/4"	8"	1-1/2"	7"	1'-10"	1'-3"	1'-2"	1'-2"
Pier	Ext. 1'-1-3/4"	8"	1-1/2"	7"	1'-10"	1'-3"	1'-2"	1'-2"
Pier	Int. 1'-1-3/4"	8"	1-1/2"	7"	1'-10"	1'-3"	1'-2"	1'-2"
Str. #83								
Abut. 1 & 2	Ext. 1'-1-3/4"	8"	1-1/2"	6-1/2"	1'-10"	1'-3"	1'-3/4"	1'-4"
Abut. 1 & 2	Int. 1'-1-3/4"	8"	1-1/2"	6-1/2"	1'-10"	1'-3"	1'-3/4"	1'-4"
Pier	Ext. 1'-1-3/4"	8"	1-1/2"	6-1/2"	1'-10"	1'-3"	1'-3/4"	1'-4"
Pier	Int. 1'-1-3/4"	8"	1-1/2"	6-1/2"	1'-10"	1'-3"	1'-3/4"	1'-4"
Str. #163 LT. & RT.								
Abut. 1 & 2	Ext. 1'-1-3/4"	8"	1-1/2"	6-1/2"	1'-9"	1'-2"	1'-5/8"	1'-4"
Abut. 1 & 2	Int. 1'-1-3/4"	8"	1-1/2"	6-1/2"	1'-9"	1'-2"	1'-5/8"	1'-4"
Pier	Ext. 1'-1-3/4"	8"	1-1/2"	6-1/2"	1'-9"	1'-2"	1'-5/8"	1'-4"
Pier	Int. 1'-1-3/4"	8"	1-1/2"	6-1/2"	1'-9"	1'-2"	1'-5/8"	1'-4"
Str. #138 LT. & RT.								
Abut. 1 & 2	Ext. 1'-1-3/4"	8"	1-1/2"	6-1/2"	1'-2"	8"	5/8"	1'-2"
Abut. 1 & 2	Int. 1'-1-3/4"	8"	1-1/2"	6-1/2"	1'-2"	8"	5/8"	1'-2"
Pier	Ext. 1'-1-3/4"	8"	1-1/2"	6-1/2"	1'-2"	8"	5/8"	1'-2"
Pier	Int. 1'-1-3/4"	8"	1-1/2"	6-1/2"	1'-2"	8"	5/8"	1'-2"
Str. #155								
Abut. 1 & 2	Ext. 1'-1-3/4"	8"	1-1/2"	6-1/2"	1'-2"	8"	5/8"	1'-2"
Abut. 1 & 2	Int. 1'-1-3/4"	8"	1-1/2"	6-1/2"	1'-2"	8"	5/8"	1'-2"
Pier	Ext. 1'-1-3/4"	8"	1-1/2"	6-1/2"	1'-2"	8"	5/8"	1'-2"
Pier	Int. 1'-1-3/4"	8"	1-1/2"	6-1/2"	1'-2"	8"	5/8"	1'-2"



DETAILS OF GUARDRAIL CONNECTION

Guardrail Connection assemblies required at ends of all Wings of all Abutments except Strs 34 & 35 (R.R. Strs.)

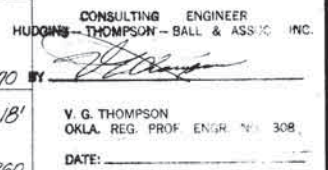
Design	
Drawn	
Checked	G.M. 9-69
Approved	
Squad	MELLIES

DETAILS OF SHOES AND DETAILS OF GUARDRAIL CONNECTION



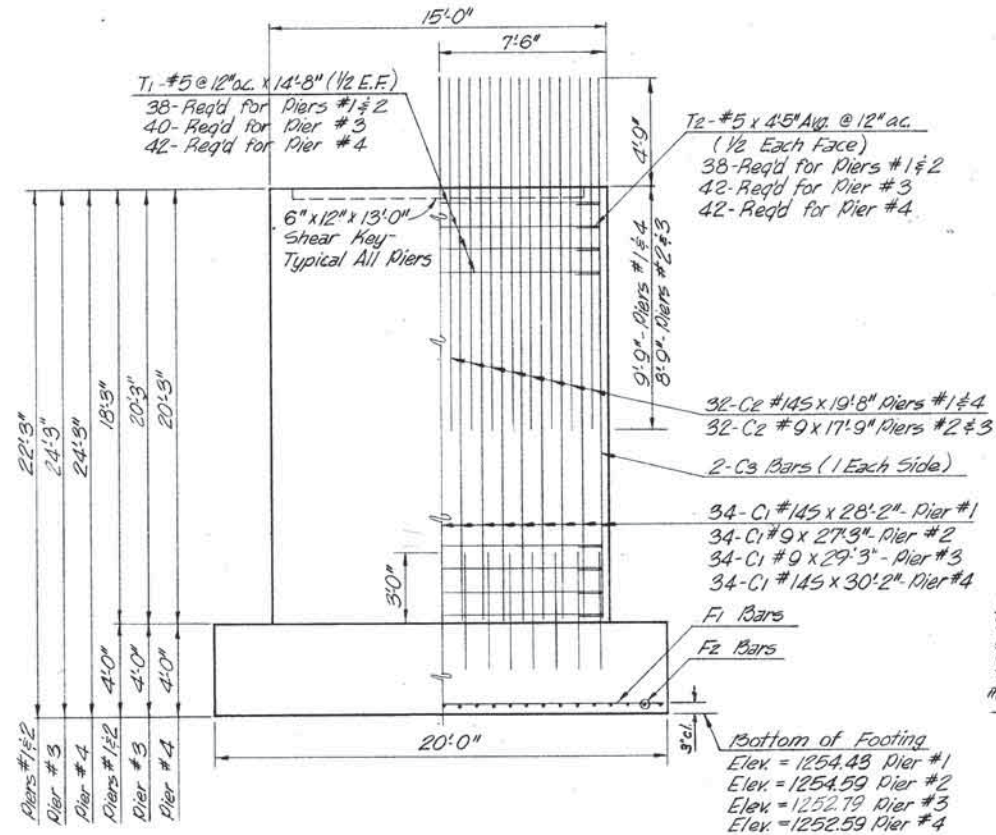
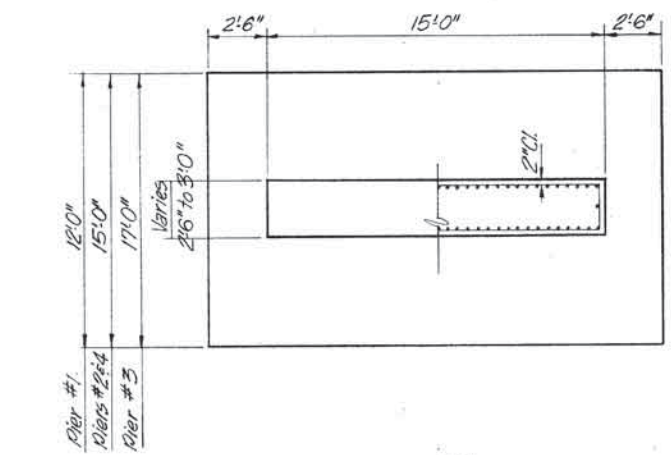


NOTE: QUANTITY SHOWN FOR STRUCTURAL  
EXC. UNCL., CLASS A CONC.  
AND REINFORCING STEEL  
INCLUDES 53 L.F. OF STANDARD  
BC-6, 5' X 5' R.C.B.

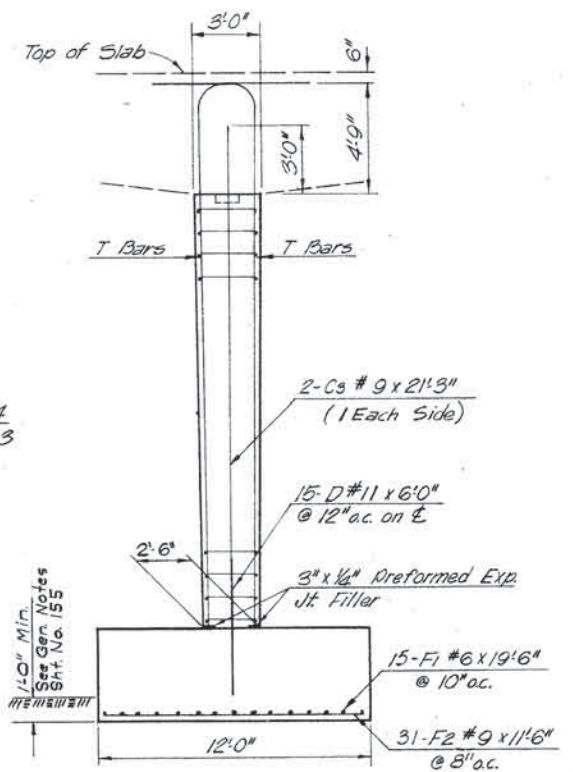


Project No. I-240-4(86)157 Sheet No. 138

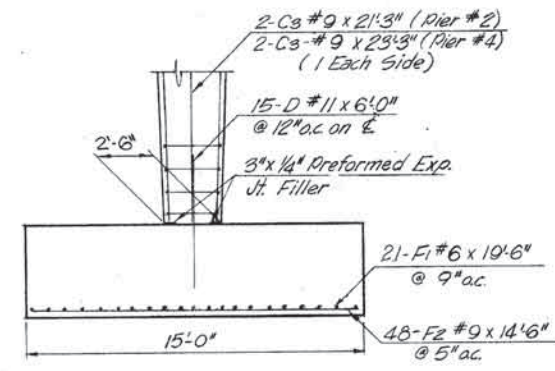




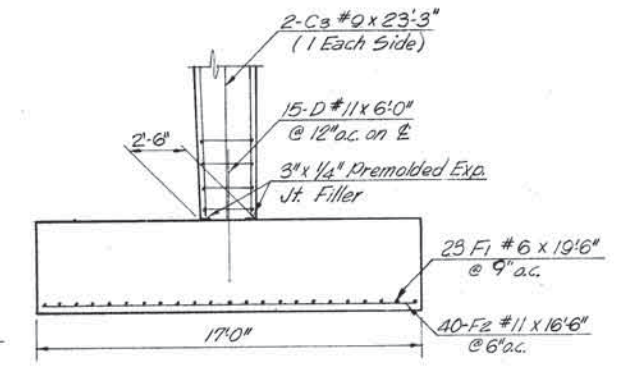
ELEVATION



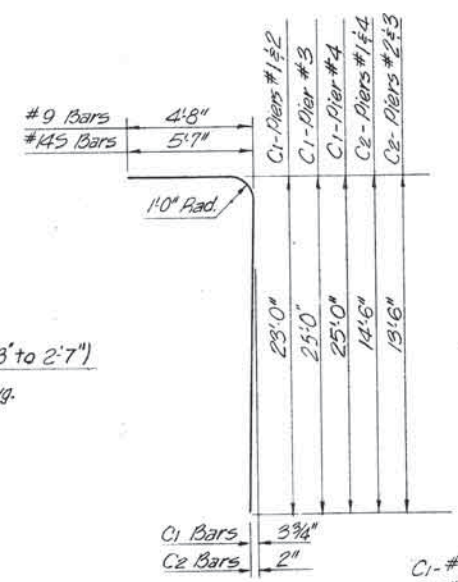
END ELEVATION  
(Pier #1)



END ELEVATION  
(Piers #2&4)



END ELEVATION  
(Pier #3)



2'5" Avg. (2'3" to 2'7")  
T2 - #5 x 4'5" Avg.

C1 - #145 x 28'2" - Pier #1  
C1 - #9 x 27'3" - Pier #2  
C1 - #9 x 29'3" - Pier #3  
C1 - #145 x 30'2" - Pier #4  
C2 - #145 x 19'8" - Piers #1&4  
C2 - #9 x 17'9" - Piers #2&3

For General Pier notes, see sheet No. 155

BAR LIST													
MARK	FORM	PIER NO. 1			PIER NO. 2			PIER NO. 3			PIER NO. 4		
		SIZE	NO.	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	LENGTH	SIZE	NO.	LENGTH
C1	Bnt.	#145	34	28'2"	#9	34	27'3"	#9	34	29'3"	#145	34	30'2"
C2	Bnt.	#145	32	19'8"	#9	32	17'9"	#9	32	17'9"	#145	32	19'8"
C3	Str.	#9	2	21'3"	#9	2	21'3"	#9	2	23'3"	#9	2	23'3"
D	Str.	#11	15	6'0"	#11	15	6'0"	#11	15	6'0"	#11	15	6'0"
F1	Str.	#6	15	19'6"	#6	21	10'6"	#6	23	10'6"	#6	20	19'6"
F2	Str.	#9	31	11'6"	#9	48	14'6"	#11	40	16'6"	#9	48	14'6"
T1	Str.	#5	38	14'8"	#5	38	14'8"	#5	42	14'8"	#5	42	14'8"
T2	Bnt.	#5	38	4'5" Avg.	#5	38	4'5" Avg.	#5	42	4'5" Avg.	#5	42	4'5" Avg.

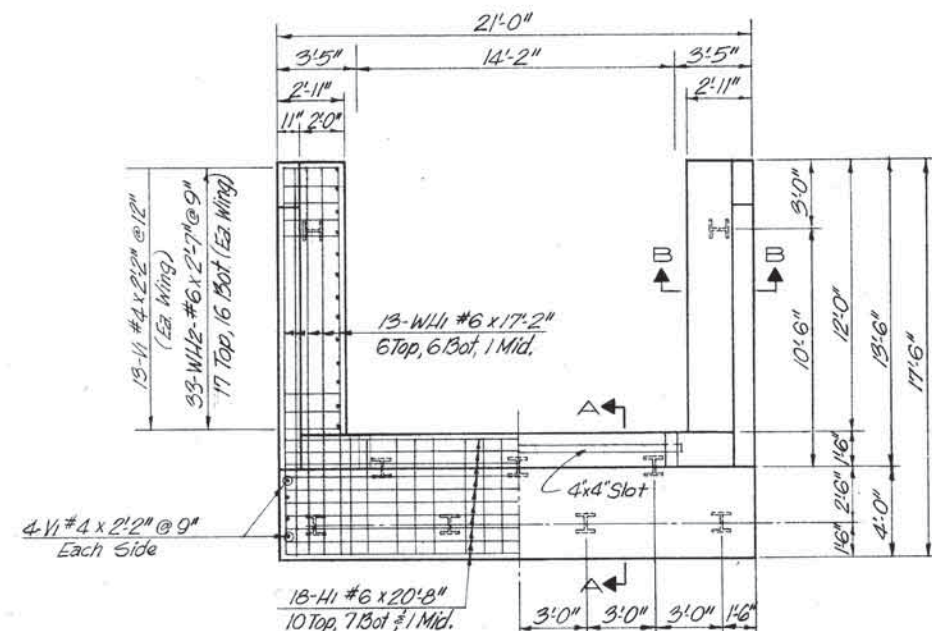
QUANTITIES					
ITEM	UNIT	PIER NO. 1	PIER NO. 2	PIER NO. 3	PIER NO. 4
Class AA(AE) Concrete (Pier Shafts)	C.Y.	27.9	27.9	30.2	30.9
Class A Concrete (Footings)	C.Y.	35.6	44.4	50.4	44.4
Reinforcing Steel	LBS.	15,170	24,400	10,960	17,090
Substr. Excav. - Common	C.Y.	106	76	57	136
Substr. Excav. - Rock	C.Y.	9.5	21.2	38.8	10.7

Design  
Drawn  
Checked  
Approved  
Squad

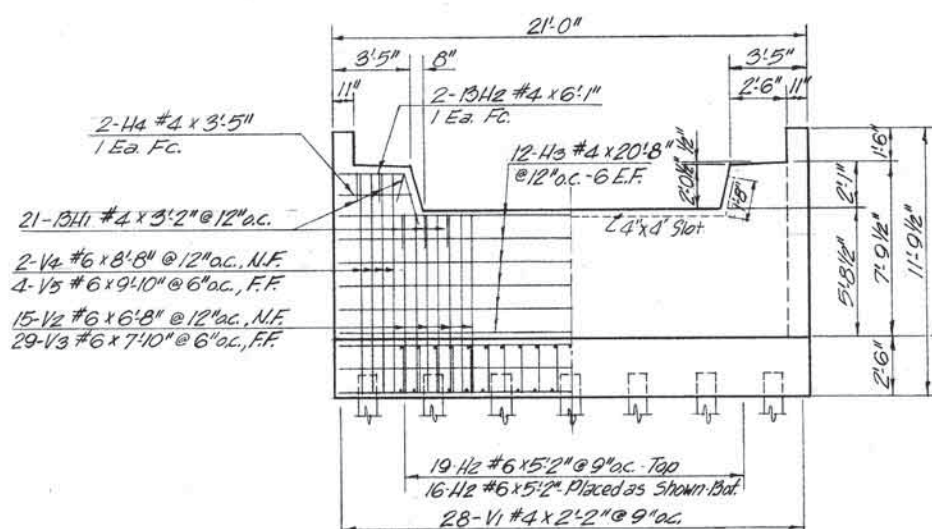
STRUCTURE NO. 34 - A.T.&S.F. R.R.  
PIER DETAILS  
30'-46.5'-61.5'-61.5'-32' CONCRETE RIGID FRAME  
R.R. STA. 20564+76.90 - MAIN LINE  
STA. 459+56.75 - SURVEY LINE  
Project No. I-240-4(86)157 Sheet No. 139



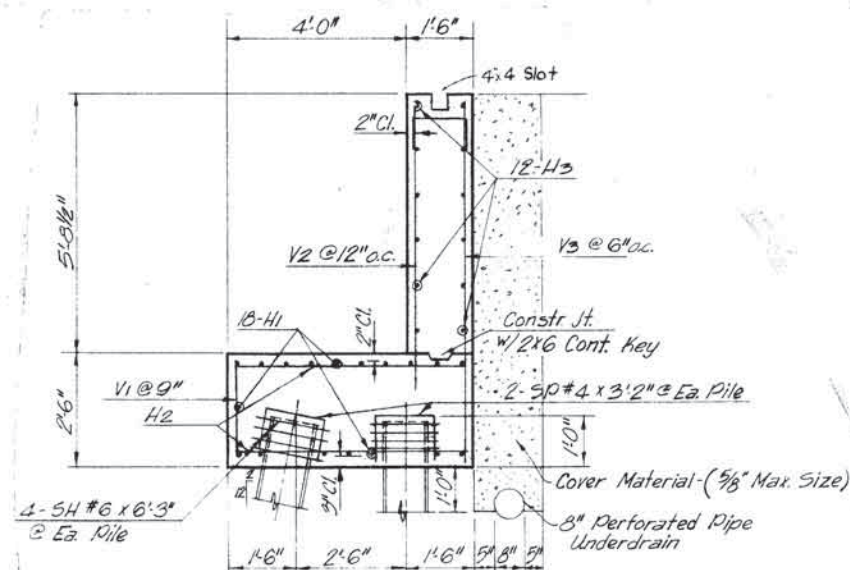
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
REVISIONS					
DESCRIPTION	DATE				



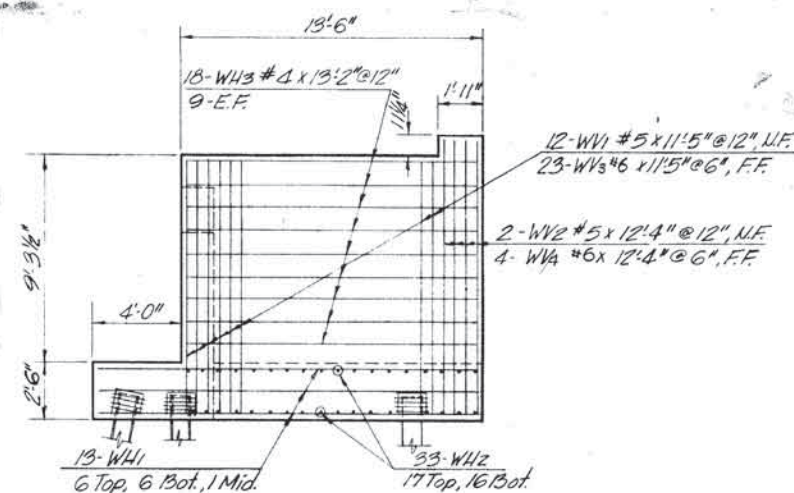
REINFORCING PLAN



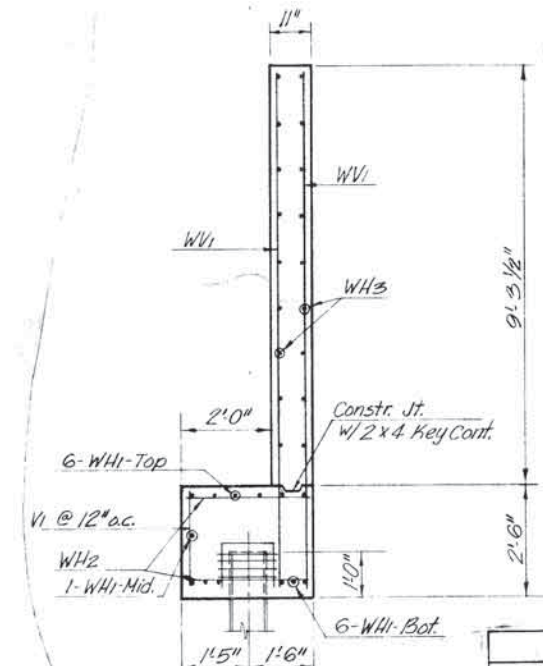
ELEVATION - ABUT. NO. 1 OR 2



SECTION A-A



ELEVATION OF WINGWALL



SECTION B-B

BAR LIST				
MARK	SIZE	NO.	FORM	LENGTH
H1	#6	18	STR.	20'-8"
H2	#6	35	STR.	5'-2"
H3	#4	12	STR.	20'-8"
H4	#4	4	STR.	3'-5"
V1	#4	62	STR.	2'-2"
V2	#6	15	STR.	6'-8"
V3	#6	29	STR.	7'-10"
V4	#6	4	STR.	8'-8"
V5	#6	8	STR.	9'-10"
WH1	#6	26	STR.	17'-2"
WH2	#6	66	STR.	2'-7"
WH3	#4	36	STR.	13'-2"
WV1	#5	24	STR.	11'-5"
WV2	#5	4	STR.	12'-4"
WV3	#6	46	STR.	11'-5"
WV4	#6	8	STR.	12'-4"
BH1	#4	21	BNT.	3'-2"
BH2	#4	4	BNT.	6'-1"
SH	#6	36	BNT.	6'-3"
SP	#4	18	BNT.	3'-2"

QUANTITIES			
ITEM	UNIT	ABUT. #1	ABUT. #2
Class "A" Concrete	C.Y.	32.5	32.5
Reinforcing Steel	LBS.	4,710	4,710
Substr. Excar. Common	C.Y.	53	53
10BP42 Piles With Tips	L.F.	176	198
Perf. Pipe Underdrain, 8"φ	L.F.	21	21
Non-Perf. Pipe Underdrain, 8"φ	L.F.	11	3
Cover Material, (3/8" Max. Size)	C.Y.	9.4	9.4

**GENERAL ABUTMENT NOTES**  
 Top of Bridge Seat to have a Trowel Finish. Place 1/2" Preformed Expansion Joint Filler (Sec. 722.01) between Superstructure and Wing Wall Ends of Superstructure.  
 For excavation diagram and notes, see sheet no. 131

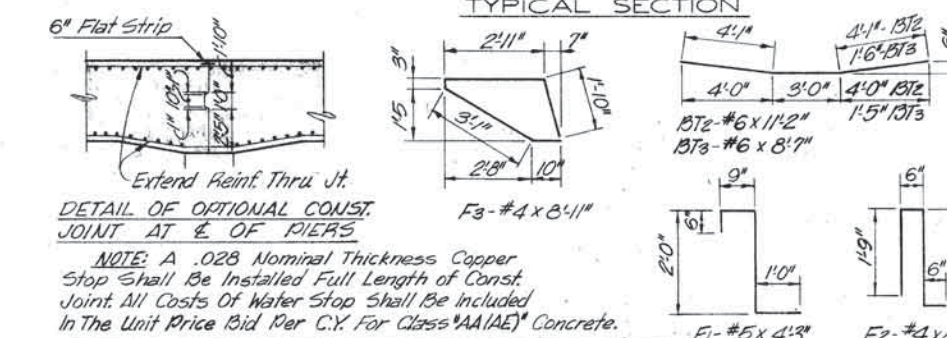
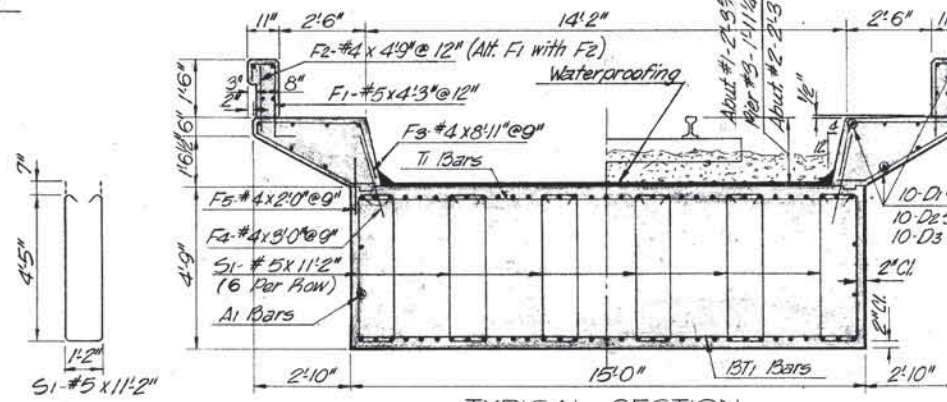
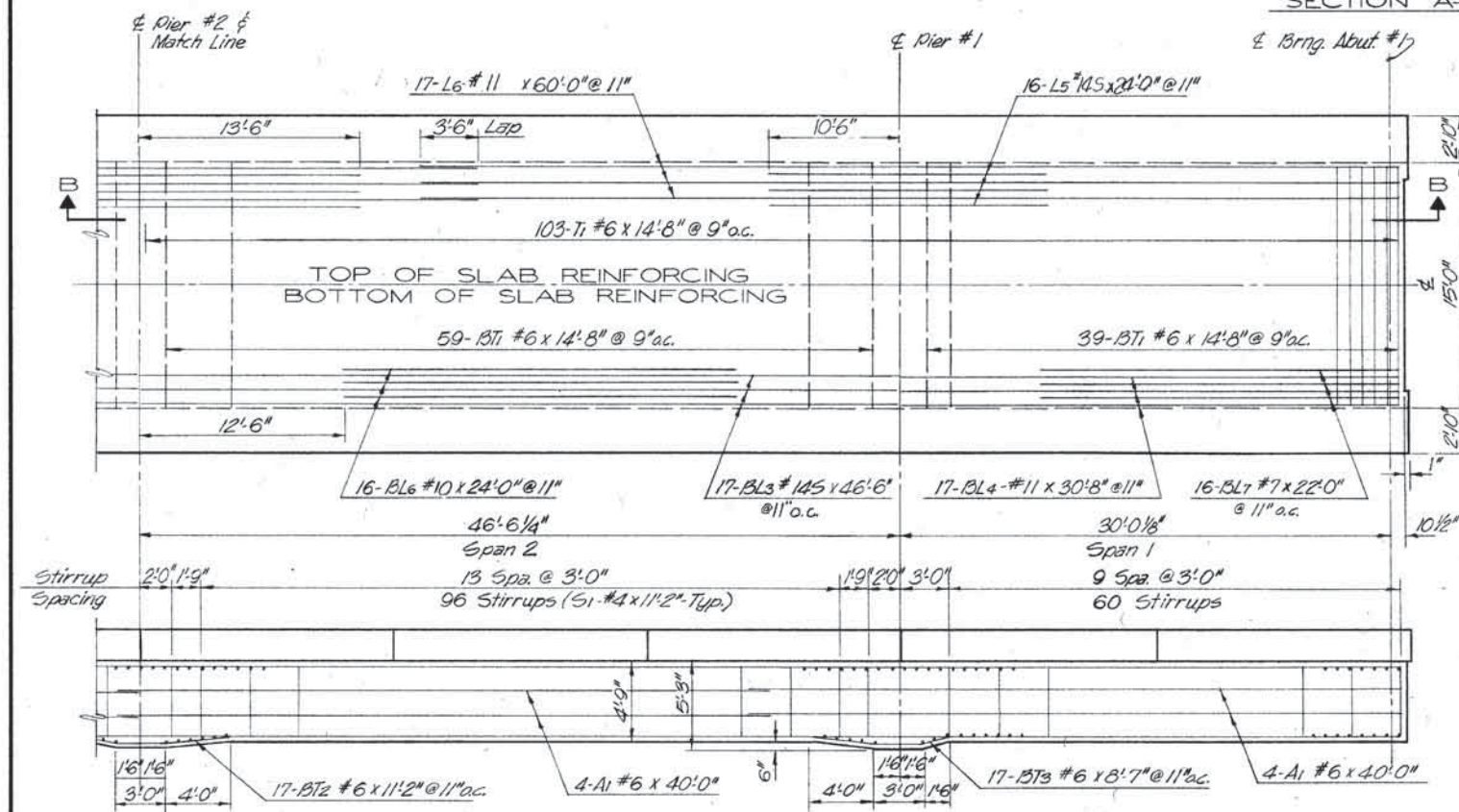
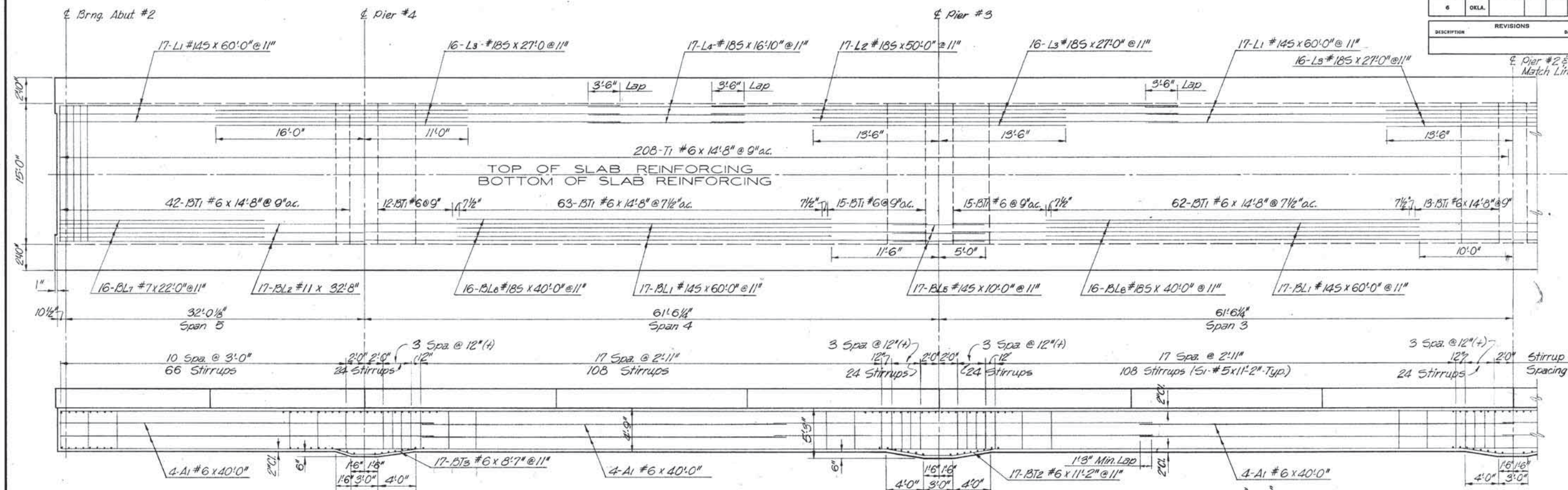
Design	Drawn	Checked	Approved	Squad

STRUCTURE NO. 34 - A.T. & S.F. R.R.  
 ABUTMENT DETAILS  
 30'-46.5'-61.5'-61.5'-32' CONCRETE RIGID FRAME  
 R.R. STA. 20564+76.90 - MAIN LINE  
 STA. 459+56.75 - SURVEY LINE

Project No. I-240-4(86)157 Sheet No. 140



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
REVISIONS					
DESCRIPTION	DATE				



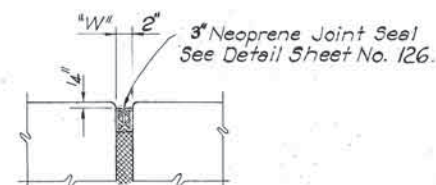
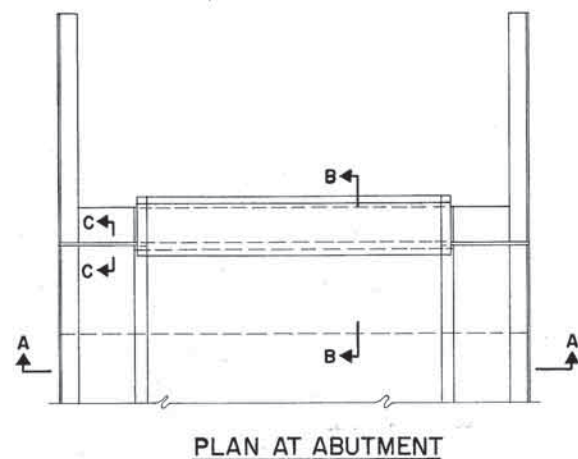
MARK	SIZE	NO	FORM	LENGTH
L1	#145	34	Str.	60'0"
L2	#185	17	Str.	50'0"
L3	#185	48	Str.	27'0"
L4	#185	17	Str.	16'10"
L5	#145	16	Str.	24'0"
BL1	#145	34	Str.	60'0"
BL2	#11	17	Str.	32'8"
BL3	#145	17	Str.	46'6"
BL4	#11	17	Str.	30'8"
BL5	#145	17	Str.	10'0"
BL6	#10	16	Str.	24'0"
BL7	#7	32	Str.	22'0"
BL8	#185	32	Str.	40'0"
D1	#4	100	Str.	15'2"
D2	#4	120	Str.	20'2"
D3	#4	40	Str.	16'2"
A1	#6	24	Str.	40'0"
F1	#5	480	Brnt.	4'3"
F2	#4	454	Brnt.	4'9"
F3	#4	638	Brnt.	8'11"
F4	#4	638	Str.	3'0"
F5	#4	638	Str.	2'0"
T1	#6	311	Str.	14'8"
BT1	#6	320	Str.	14'8"
BT2	#6	34	Brnt.	11'2"
BT3	#6	34	Brnt.	8'7"
S1	#5	534	Brnt.	11'2"
L6	#11	17	Str.	60'0"

QUANTITIES		
ITEM	UNIT	AMOUNT
Class AA(AE) Concrete	C.Y.	732.0
Reinforcing Steel	LBS.	141,350
Handrail	L.F.	520.08
Waterproofing, Butyl Rubber Membrane	S.F.	3,020

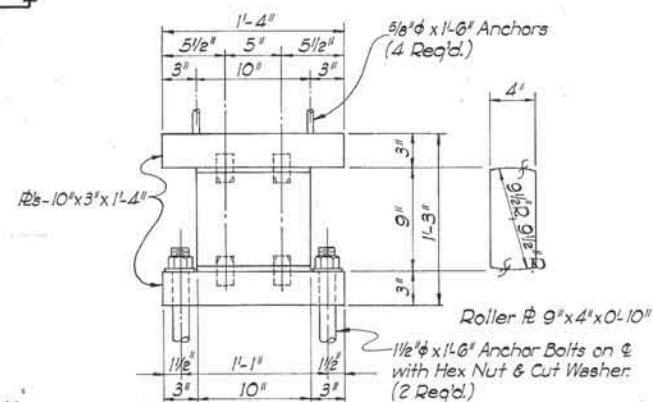
Design	
Drawn	
Checked	
Approved	
Squad	

STRUCTURE NO. 34 - A.T. & S.F. R.R.  
 SUPERSTRUCTURE DETAILS  
 30'-46.5'-61.5'-61.5'-32' CONCRETE RIGID FRAME  
 R.R. STA. 20564+76.90 - MAIN LINE  
 STA. 459+56.75 - SURVEY LINE  
 Project No. I-240-4(86)157 Sheet No. 141

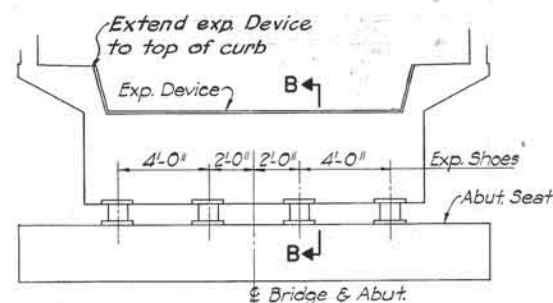




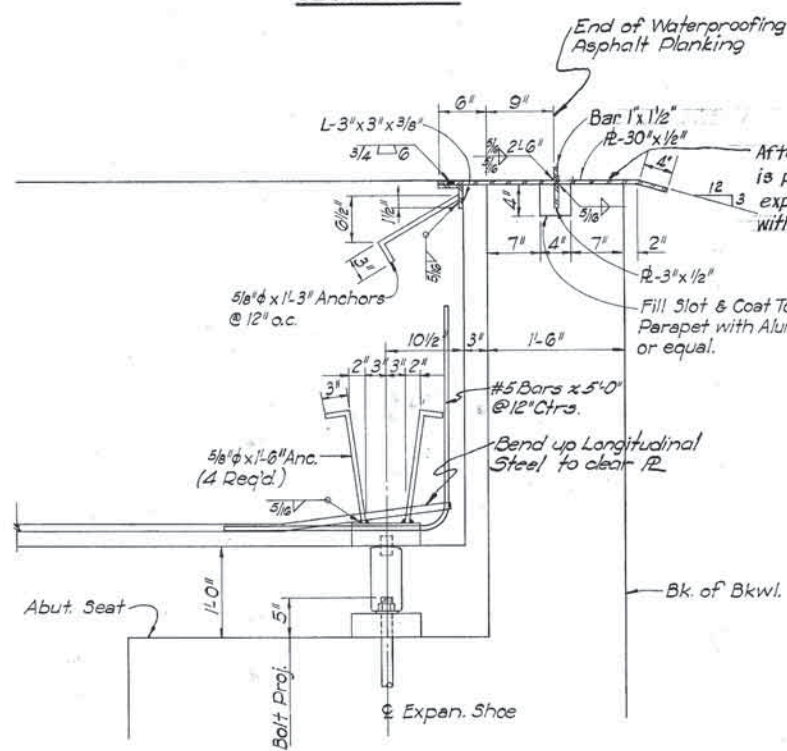
SECTION C-C



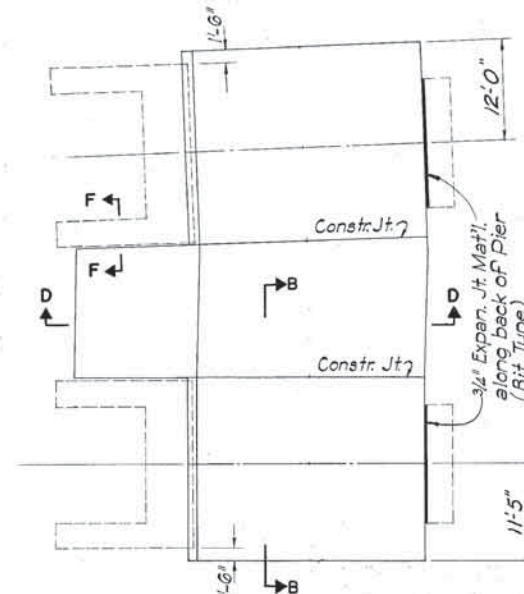
DETAIL OF EXPANSION SHOE  
(4 Reqd. Ea. Abutment)



SECTION A-A



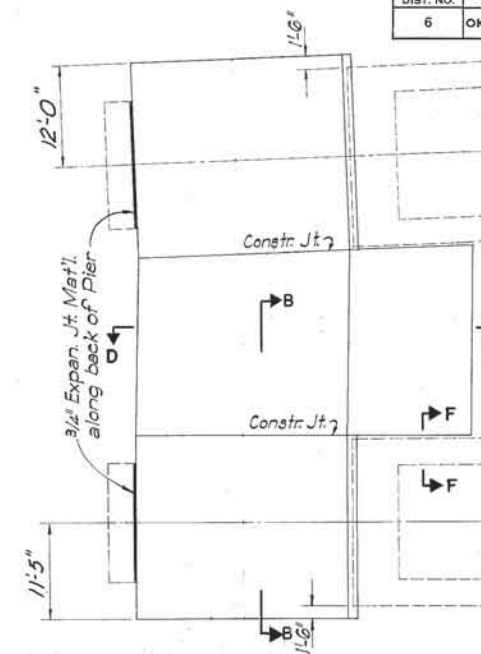
SECTION B-B



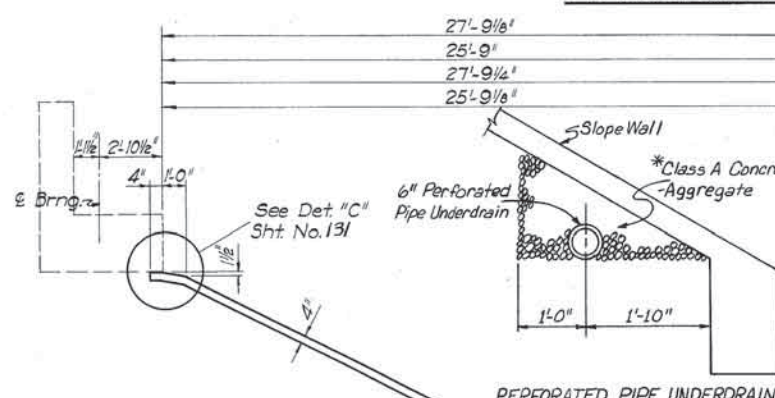
SOUTH END OF BRIDGE

NOTE: For sections through  
sloped walls, see sheet no. 131

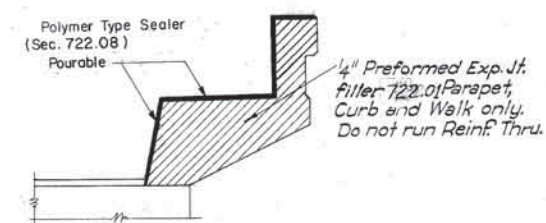
TYPICAL PLAN OF SLOPE WALLS



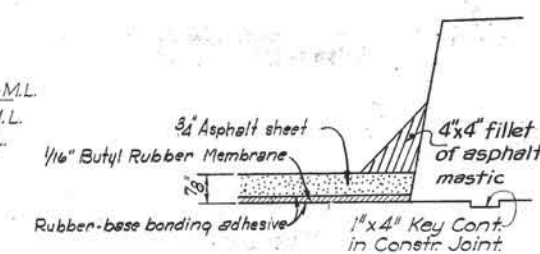
NORTH END OF BRIDGE



TYPICAL ELEVATION OF SLOPE WALL  
AT C BRIDGE



DETAIL OF CONST. JT. WITH EXPAN. MATERIAL  
Note: See P&E Sheet for Spacing



WATERPROOFING AT CURB

QUANTITIES				
ITEM	UNIT	STR. NO. 34	STR. NO. 35	
Structural Steel	Lbs.	5420	5260	

SLOPE WALL QUANTITIES				
ITEM	UNIT	STR. NO. 34	STR. NO. 35	
4" Conc. Slope Wall	S.Y.	251.6	243.8	

For Details, Sections & Notes, See Sht. No. 131

	Span #5	Span #4	Span #3	Span #2	Span #1
Brng. Abut. #2					
Pier #4					
Pier #3					
Pier #2					
Pier #1					
Brng. Abut. #1					

SPAN	1/4 Pt.	1/2 Pt.	3/4 Pt.
5	.005"	.004"	.017"
4	.190"	.290"	.156"
3	.143"	.267"	.171"
2	.018"	.059"	.042"
1	.007"	.021"	.013"

DEAD LOAD DEFLECTIONS

NOTE:--  
Set Forms high by an amount equal to the Dead Load Deflection plus the False Work Deflection.  
The Cost of all items required for installation of Neoprene shall be included in the unit price bid per Cu. Yd. for Class "AA(AE)" Concrete.

REVISIONS				RECORD			
NO.	DESCRIPTION	BY	DATE	ITEM	BY	DATE	
1	Removed Repeating Fall in Waterproofing at Curb Detail		4/10/10	DESIGN			
	Key Material Slotted from 1/2" to 3/4" thick.		4/10/10	DETAIL			
				TRACED			
				CHECKED			
				APPROVED			
				SQUAD:			

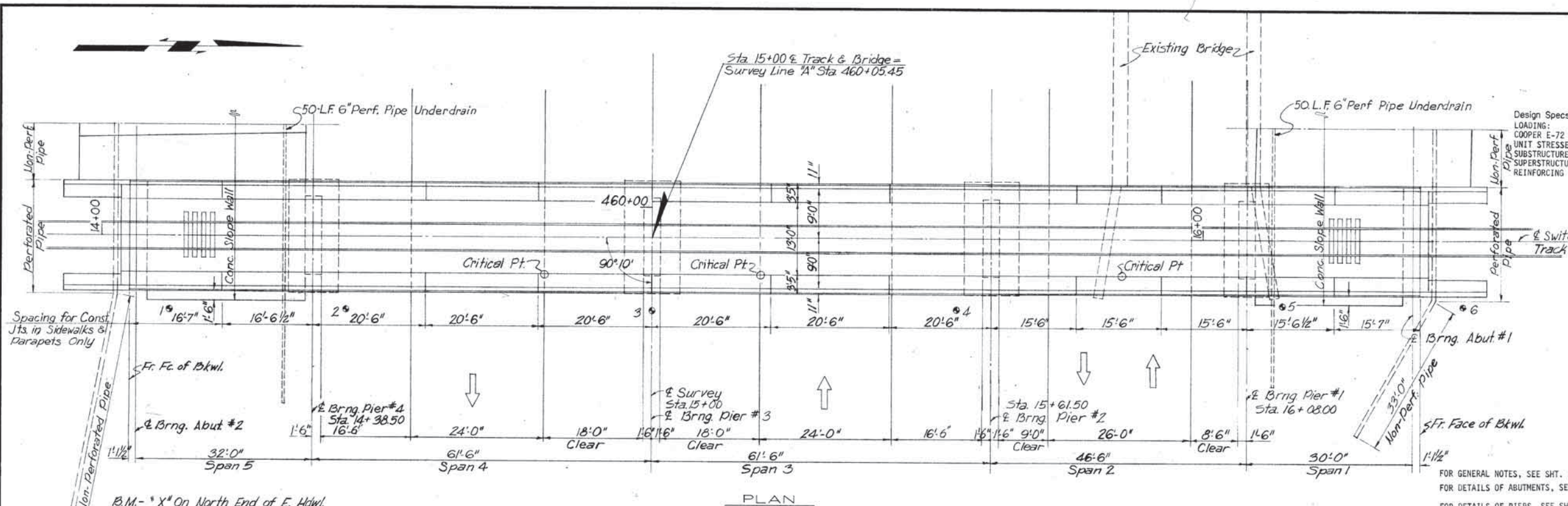
OKLAHOMA STATE HIGHWAY COMMISSION  
OKLAHOMA CITY, OKLAHOMA  
STR. NOS. 34 & 35 - A.T. & S.F. R.R.  
ABUTMENT, SHOE & SLOPE WALL DETAILS  
30'-46.5'-61.5'-61.5'-32' CONC. RIGID FRAME  
STA. 459+66.75 - SURVEY LINE 34A  
STA. 460+05.45 - SURVEY LINE 35A  
F.A.P. NO. I-240-4(86)157



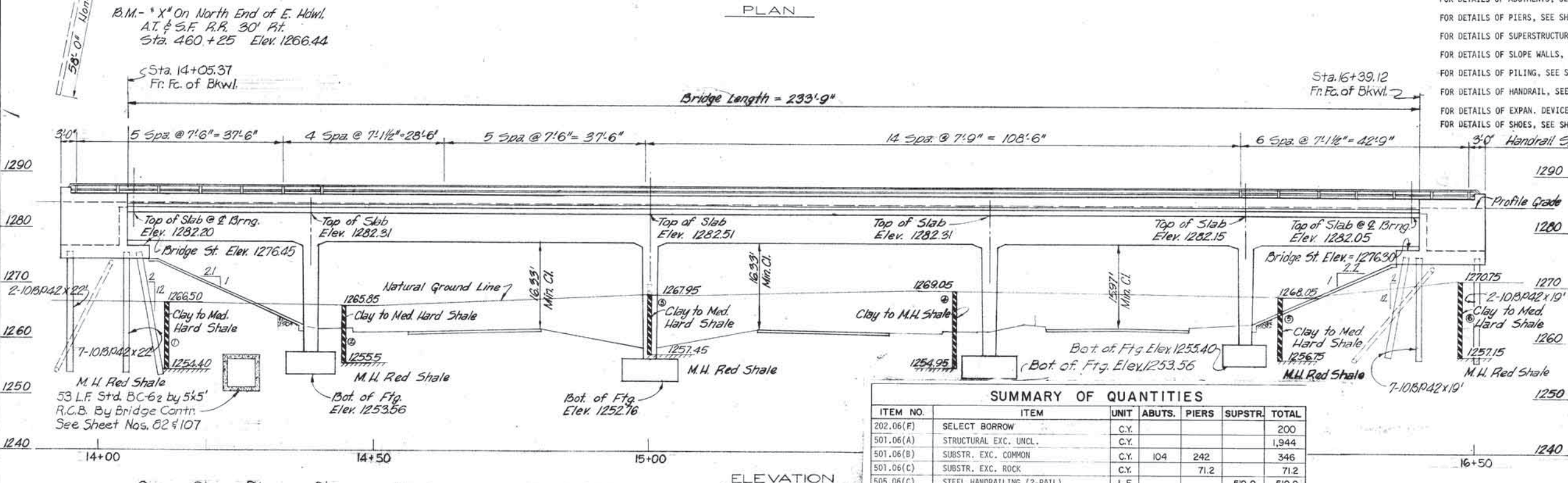
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
REVISIONS					
DESCRIPTION	REVISIONS	DATE			

**DESIGN DATA**  
 Design Specs. - AREA  
 LOADING: COOPER E-72 + A.R.E.A. CONC. BR. IMPACT A.R.E.A. 8-2-4  
 UNIT STRESSES:  
 SUBSTRUCTURE CONC.  $f_c = 1,125$  PSI  
 SUPERSTRUCTURE CONC.  $f_c = 1,350$  PSI  
 REINFORCING STEEL 20,000 PSI

**Maximum Foundation Loads**  
 Abutments: 32.4 Ton / Pile  
 Piers: 4.1 Ton / S.F. Axial



FOR GENERAL NOTES, SEE SHT. NO. 130.  
 FOR DETAILS OF ABUTMENTS, SEE SHT. NO. 145.  
 FOR DETAILS OF PIERS, SEE SHT. NO. 144.  
 FOR DETAILS OF SUPERSTRUCTURE, SEE SHT. NOS. 142 & 146.  
 FOR DETAILS OF SLOPE WALLS, SEE SHT. NO. 142.  
 FOR DETAILS OF PILING, SEE STD. PTR-2, SHT. NO. 181.  
 FOR DETAILS OF HANDRAIL, SEE STD. PTR-2, SHT. NO. 178 & SHT. NO. 137.  
 FOR DETAILS OF EXPAN. DEVICES, SEE SHT. NO. 142.  
 FOR DETAILS OF SHOES, SEE SHT. NO. 137.



SUMMARY OF QUANTITIES					
ITEM NO.	ITEM	UNIT	ABUTS.	PIERS	SUPSTR. TOTAL
202.06(F)	SELECT BORROW	C.Y.			200
501.06(A)	STRUCTURAL EXC. UNCL.	C.Y.			1,944
501.06(B)	SUBSTR. EXC. COMMON	C.Y.	104	242	346
501.06(C)	SUBSTR. EXC. ROCK	C.Y.		71.2	71.2
505.06(C)	STEEL HANDRAILING (2-RAIL)	L.F.			519.9
505.06(D)	ALUMINUM HANDRAILING (2-RAIL)	L.F.			519.9
506.06(A)	STRUCTURAL STEEL	LB.			5,260
509.06(A)(AE)	CLASS AA CONCRETE	C.Y.		109.8	799.8
509.06(B)	CLASS A CONCRETE	C.Y.	63.2	115.5	212.7
511.06	REINFORCING STEEL	LB.	9,240	43,400	175,743
514.06(E)Sp.	STEEL PILING (10"BP42#)	L.F.	369		369
606.06SP	WATERPROOFING, BUTYL RUBBER MEMBRANE	S.F.			2,745
614.06(AA)	6" PERF. PIPE UNDERDRAIN	L.F.			100
614.06(A)	8" PERF. PIPE UNDERDRAIN	L.F.	40		40
614.06(B)	8" NON-PERF. PIPE UNDERDRAIN	L.F.	III		III
614.06(C)	PIPE UNDERDRAIN COVER MAT'L.	C.Y.	20.4		20.4
SPECIAL	4" CONC. SLOPE WALL	S.Y.			243.8

NOTE: QUANTITY SHOWN FOR STRUCTURAL EXC. UNCL., CLASS 'A' CONC. AND REINFORCING STEEL INCLUDES 5' X 5' R.C.B.

All Construction and Materials shall be in accordance with the 1967 Okla. Std. Specifications for Highway Construction and Special Provisions

Design	
Drawn	
Checked	
Approved	
Squad	

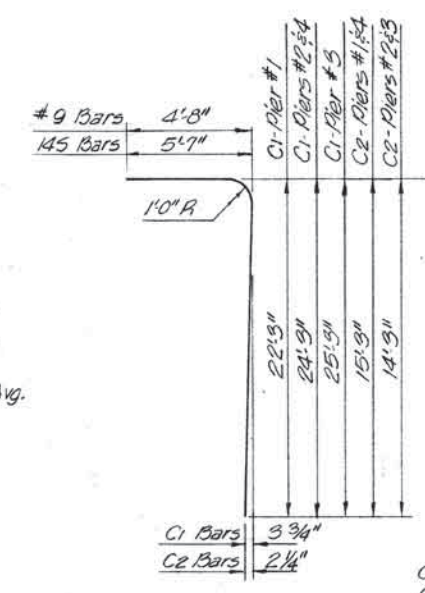
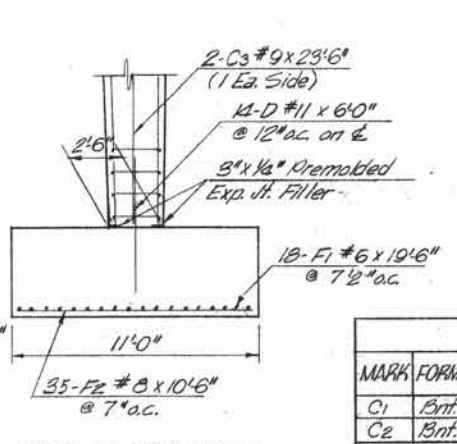
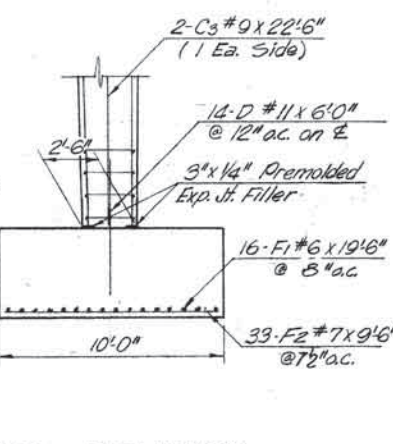
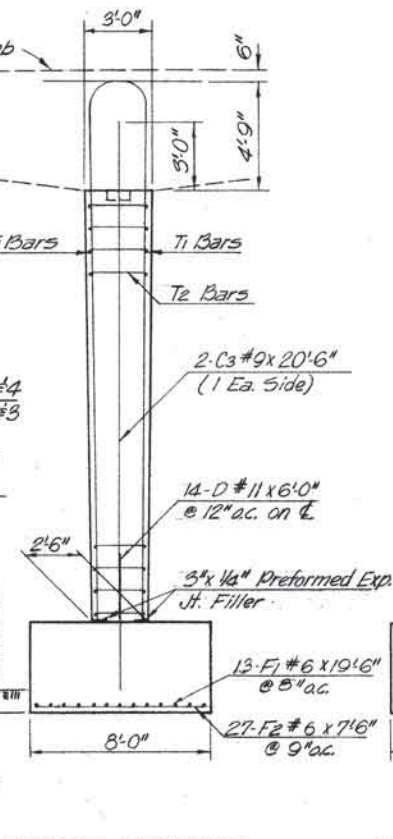
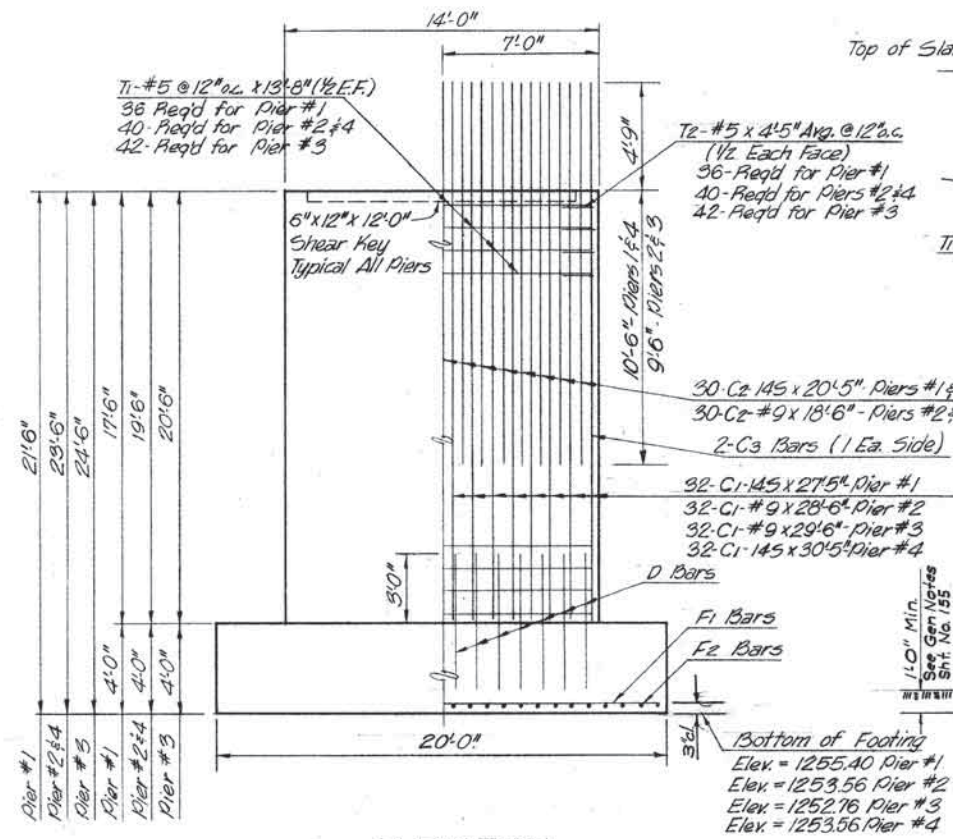
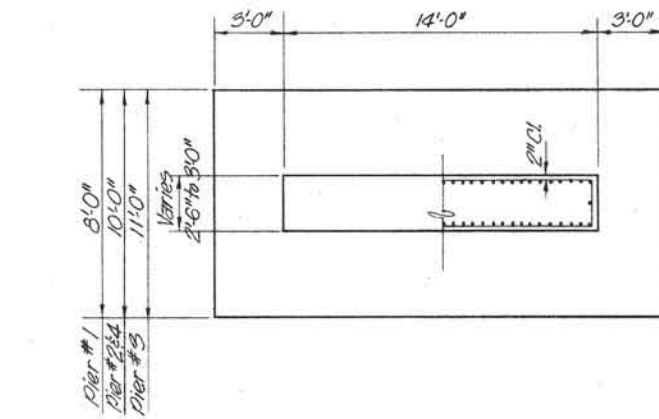
STRUCTURE NO. 35 - A.T.&S.F. R.R.  
 GENERAL PLAN AND ELEVATION  
 30'-46.5'-61.5'-61.5'-32' CONCRETE RIGID FRAME  
 R.R. STA. 15+00 - SWITCH TRACK  
 STA. 460+05.45 - SURVEY LINE

Project No. 1-240-4(86)157 Sheet No. 143

PRESENT & PROPOSED TOP RAIL PROFILE SWITCH TRACK



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
REVISIONS					
DESCRIPTION	DATE				



C1-#145 x 27'-5" - Pier #1  
C1-#9 x 28'-6" - Pier #2  
C1-#9 x 29'-6" - Pier #3  
C1-#145 x 30'-5" - Pier #4  
C2-#145 x 20'-5" - Piers #1 & 4  
C2-#9 x 18'-6" - Piers #2 & 3

BAR LIST											
MARK	FORM	PIER NO. 1	PIER NO. 2	PIER NO. 3	PIER NO. 4	MARK	FORM	PIER NO. 1	PIER NO. 2	PIER NO. 3	PIER NO. 4
C1	Bnt.	#145 32	27'-5"	#9 32	28'-6"	#9 32	29'-6"	#145 32	30'-5"		
C2	Bnt.	#145 30	20'-5"	#9 30	18'-6"	#9 30	18'-6"	#145 30	20'-5"		
C3	Str.	#9 2	20'-6"	#9 2	22'-6"	#9 2	23'-6"	#9 2	22'-6"		
D	Str.	#11 14	6'-0"	#11 14	6'-0"	#11 14	6'-0"	#11 14	6'-0"		
F1	Str.	#6 13	19'-6"	#6 16	19'-6"	#6 13	19'-6"	#6 16	19'-6"		
F2	Str.	#6 27	7'-6"	#7 33	9'-6"	#8 35	10'-6"	#7 33	9'-6"		
T1	Str.	#5 36	13'-8"	#5 40	13'-8"	#5 42	13'-8"	#5 40	13'-8"		
T2	Bnt.	#5 36	4'-5" Avg.	#5 40	4'-5" Avg.	#5 42	4'-5" Avg.	#5 40	4'-5" Avg.		

For General Pier Notes, See Sheet No. 155

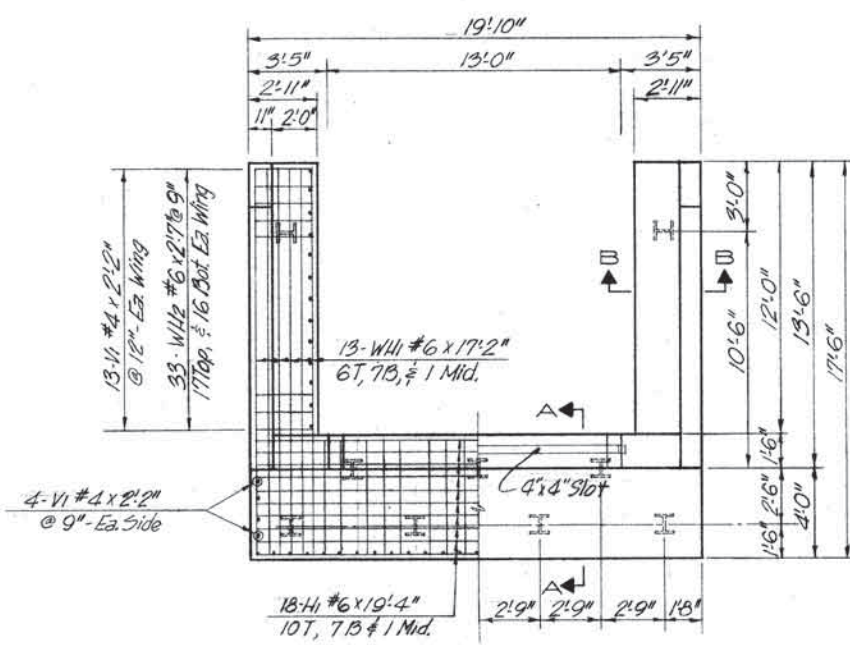
QUANTITIES					
ITEM	UNIT	PIER NO. 1	PIER NO. 2	PIER NO. 3	PIER NO. 4
Class AA (AE) Concrete	C.Y.	25.0	27.8	29.2	27.8
Class A Concrete (Footings)	C.Y.	23.7	29.6	32.6	29.6
Reinforcing Steel	LBS.	13,360	7,450	8,000	14,600
Substr. Excav. - Common	C.Y.	64	78	23	77
Substr. Excav. - Rock	C.Y.	8.0	10.3	38.2	14.7

Design					
Drawn					
Checked					
Approved					
Squad					

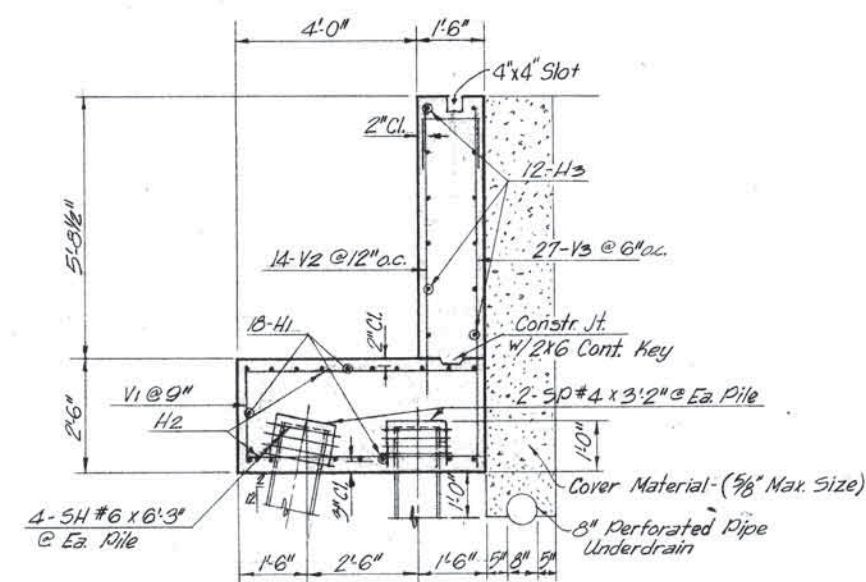
STRUCTURE NO. 35 - A.T.&S.F. R.R.  
PIER DETAILS  
30'-46.5'-61.5'-61.5'-32' CONCRETE RIGID FRAME  
R.R. STA. 15+00 - SWITCH TRACK  
STA. 46+05.45 - SURVEY LINE  
Project No. 1-240-4(86)157 Sheet No. 144



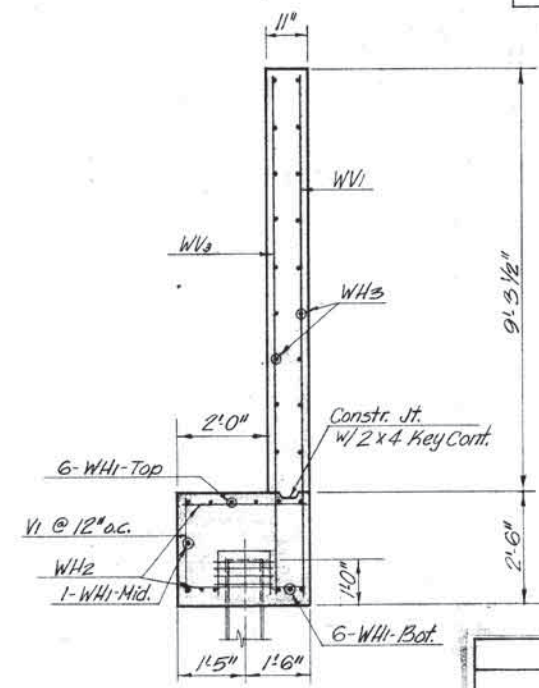
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
REVISIONS					
DESCRIPTION	DATE				



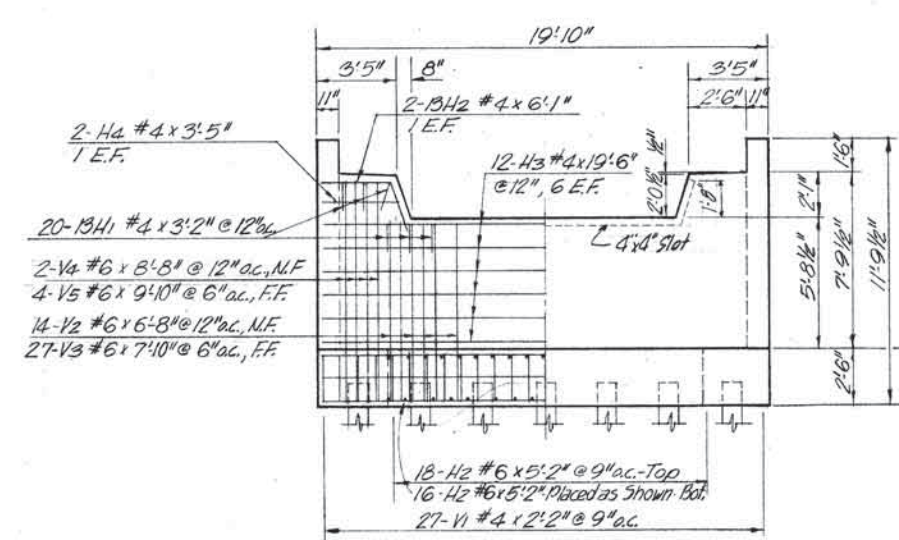
REINFORCING PLAN



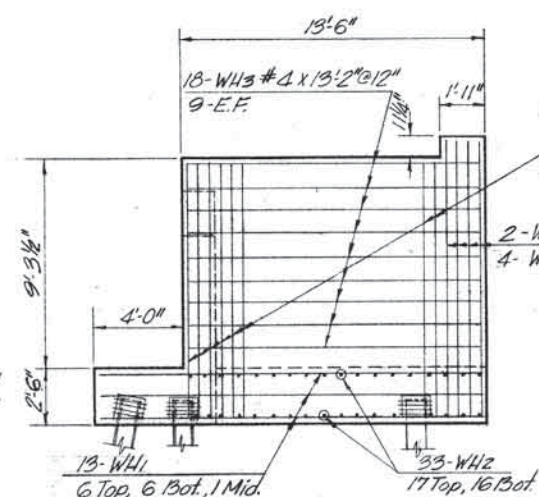
SECTION A-A



SECTION B-B

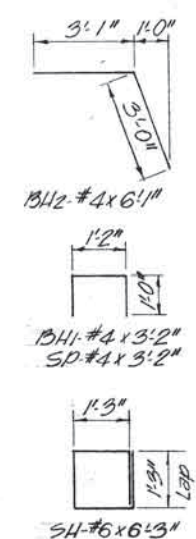


ELEVATION - ABUT. NO. 1 OR 2



ELEVATION OF WINGWALL

Top of Bridge Seat  
Elev = 1276.30 Abut. #1  
1276.45 Abut. #2



BAR LIST				
MARK	SIZE	NO.	FORM	LENGTH
H1	#6	18	STR.	19'-4"
H2	#6	34	STR.	5'-2"
H3	#4	12	STR.	19'-6"
H4	#4	4	STR.	3'-5"
V1	#4	61	STR.	2'-2"
V2	#6	14	STR.	6'-8"
V3	#6	27	STR.	7'-10"
V4	#6	4	STR.	8'-8"
V5	#6	8	STR.	9'-10"
WH1	#6	26	STR.	17'-2"
WH2	#6	66	STR.	2'-7"
WH3	#4	36	STR.	13'-2"
WV1	#5	24	STR.	11'-5"
WV2	#5	4	STR.	12'-4"
WV3	#6	46	STR.	11'-5"
WV4	#6	8	STR.	12'-4"
BH1	#4	20	BNT.	3'-2"
BH2	#4	4	BNT.	6'-1"
SH	#6	36	BNT.	6'-3"
SP	#4	18	BNT.	3'-2"

QUANTITIES				
ITEM	UNIT	ABUT #1	ABUT #2	
Class "A" Concrete	C.Y.	31.6	31.6	
Reinforcing Steel	LBS.	4620	4620	
Substr. Exca Common	C.Y.	52	52	
10 BP42 Piles With Tips	L.F.	171	198	
Perf. Pipe Underdrain, 8" φ	L.F.	20	20	
Non-Perf. Pipe Underdrain, 8" φ	L.F.	45	66	
Cover Material, (5/8" Max. Size)	C.Y.	10.2	10.2	

**GENERAL ABUTMENT NOTES**  
Top of Bridge Seat to have a Trowel Finish. Place 1 1/2" Preformed Expansion Joint Filler (722-01) between Superstructure and Wing Walls @ ends of Superstructure.  
For excavation diagram and notes, see sheet no. 131

Design		STRUCTURE NO. 35 - A.T.&S.F. R.R.
Drawn		ABUTMENT DETAILS
Checked		30'-46.5'-61.5'-61.5'-32' CONCRETE RIGID FRAME
Approved		R.R. STA. 15+00 - SWITCH TRACK
Squad		STA. 46+05.45 - SURVEY LINE
		Project No. 1-240-4(86)157 Sheet No. 145





100



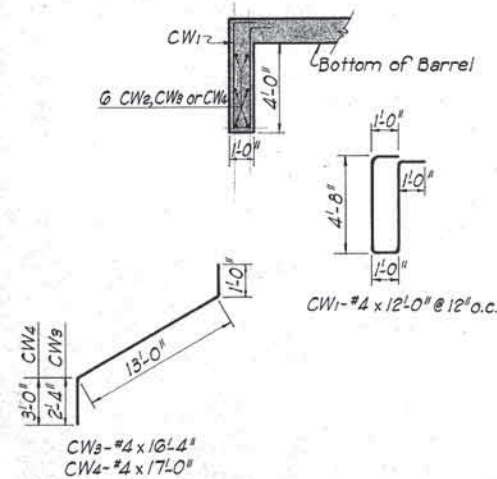
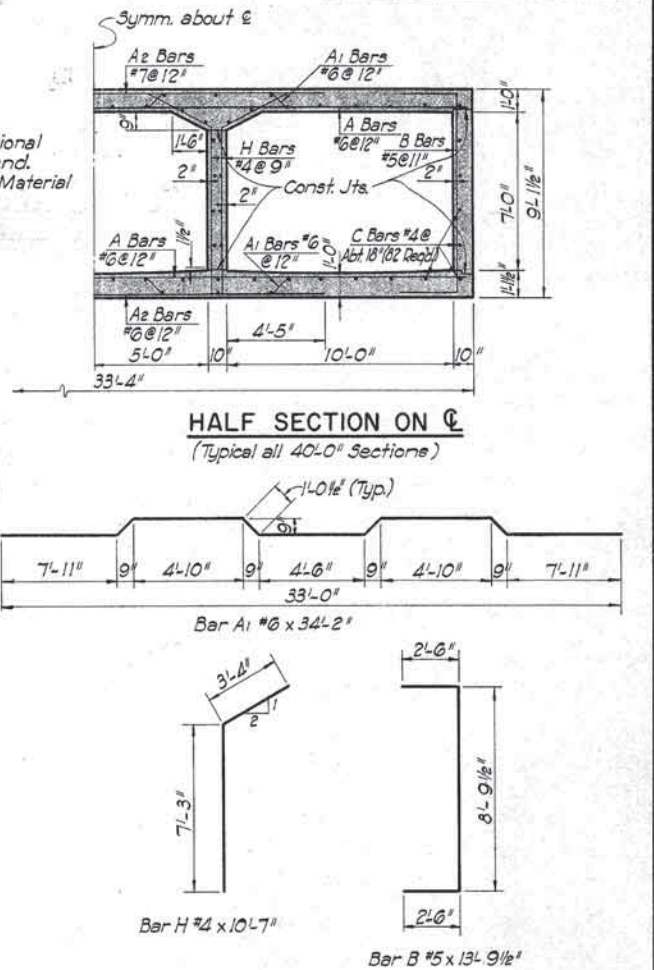
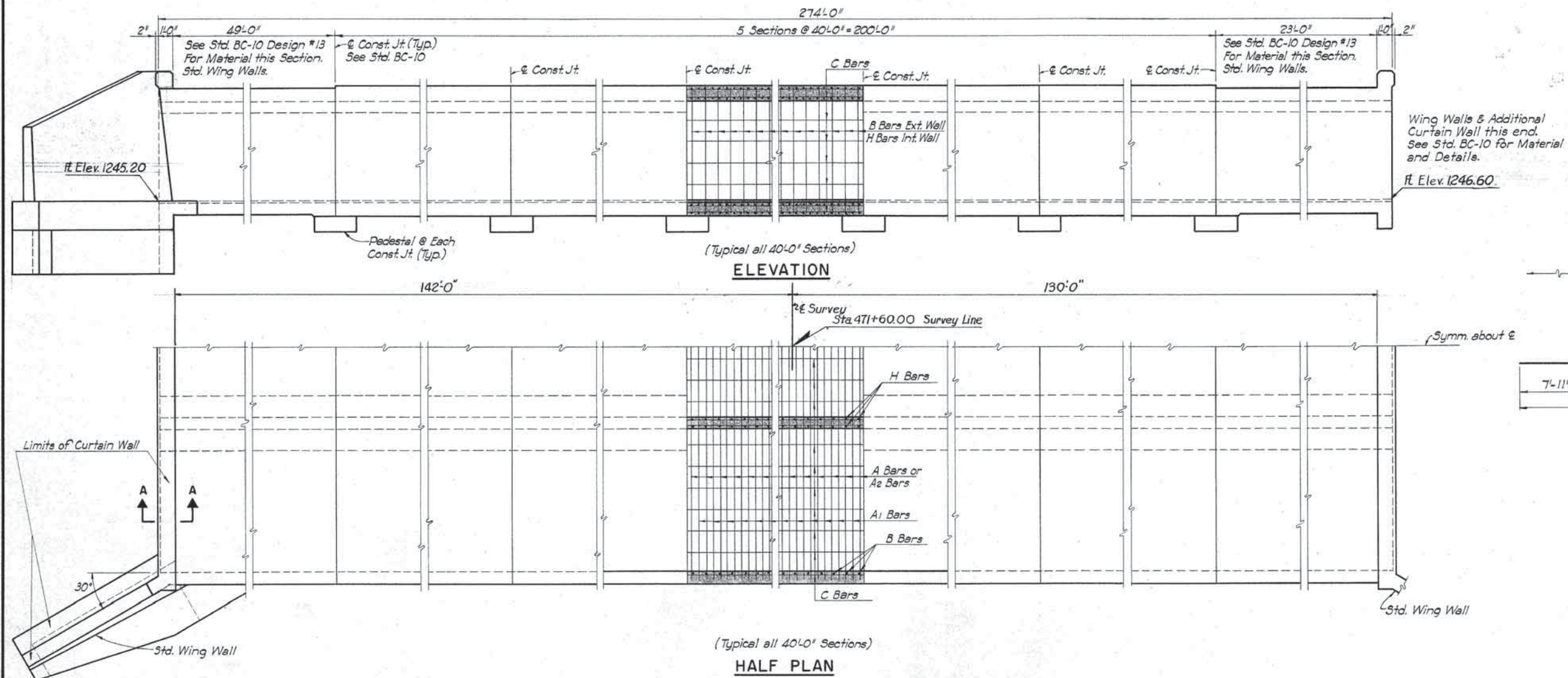
STA. 15+00 - SWITCH TRACK  
A. 460+05.45 - SURVEY LINE

T-240-4(86)157

Sheet No. 149



FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-240-4(86) 157	155	



50'-0" SECTION (1 REQ'D.)  
STD. BC-10, 2-WINGS & 1-CURB

Mark	Size	Form	No.	Length
A	#6	Str.	98	33'-0"
A1	#6	Bnt.	96	34'-0"
A2	#7	Str.	98	20'-6"
B	#4	Bnt.	134	13'-6"
C	#4	Str.	82	49'-8"
H	#4	Bnt.	268	10'-2"
D1	#4	Bnt.	2	11'-5"
D2	#4	Bnt.	24	8'-11 1/2" Ave.
CW1	#4	Bnt.	58	12'-0"
E1	#4	Bnt.	2	3'-8"
E2	#4	Bnt.	6	11'-5 1/2" Ave.
E3	#4	Bnt.	4	15'-6" Ave.
F1	#4	Str.	16	5'-3"
F2	#4	Str.	44	4'-8" Ave.
G	#4	Str.	16	12'-10"
CH1	#6	Str.	4	33'-8"
CH2	#6	Str.	2	33'-0"
CW2	#4	Str.	6	29'-8"
CW3	#4	Bnt.	6	16'-4"
CW4	#4	Bnt.	6	17'-0"

FOR ONE 40'-0" SECTION (5 REQ'D.)  
SPECIAL

Mark	Size	Form	No.	Length
A	#6	Str.	82	33'-0"
A1	#6	Bnt.	80	34'-0"
A2	#7	Str.	82	20'-6"
B	#5	Bnt.	88	13'-9 1/2"
C	#4	Str.	82	39'-8"
H	#4	Bnt.	216	10'-7"

24'-0" SECTION (1 REQ'D.)  
STD. BC-10, 2-WINGS & 1-CURB

Mark	Size	Form	No.	Length
A	#6	Str.	48	33'-0"
A1	#6	Bnt.	46	34'-0"
A2	#7	Str.	48	20'-6"
B	#4	Bnt.	64	13'-6"
C	#4	Str.	82	23'-8"
H	#4	Bnt.	128	10'-2"
D1	#4	Bnt.	2	11'-5"
D2	#4	Bnt.	24	8'-11 1/2" Ave.
CW1	#4	Bnt.	58	12'-0"
E1	#4	Bnt.	2	3'-8"
E2	#4	Bnt.	6	11'-5 1/2" Ave.
E3	#4	Bnt.	4	15'-6" Ave.
F1	#4	Str.	16	5'-3"
F2	#4	Str.	44	4'-8" Ave.
G	#4	Str.	16	12'-10"
CH1	#6	Str.	4	33'-8"
CH2	#6	Str.	2	33'-0"
CW2	#4	Str.	6	29'-8"
CW3	#4	Bnt.	6	16'-4"
CW4	#4	Bnt.	6	17'-0"

FOR ONE PEDESTAL (6 REQ'D.)  
STD. BC-10

Mark	Size	Form	No.	Length
P1	#4	Str.	134	2'-8"
P2	#4	Str.	6	33'-0"

NOTE:- See Std. BC-10 for Materials, General Notes and Details not shown on this Sheet.

	50' Section Barrel & 1 Curb	5-40' Sections Barrel	24' Section Barrel & 1 Curb	4-Std. Wing Walls	6 Pedestals	Total Quantities Complete Culvert
Reinf. Lbs.	19,715	82,757	96,17	1127	2234	115,450
Conc. C.Y.	159.9	700.4	77.6	34.8	22.2	994.9
Str. Exc. Uncl. C.Y.	59.2	277.8	28.4			365.4

REVISIONS				RECORD			
NO.	DESCRIPTION	BY	DATE	ITEM	BY	DATE	
				DESIGN			
				DETAIL			
				TRACED			
				CHECKED			
				APPROVED			
				SQUAD:			

OKLAHOMA STATE HIGHWAY COMMISSION  
OKLAHOMA CITY, OKLAHOMA

**STRUCTURE NO. 45**  
**3-10'X7'X272' RDY. R.C.B.**  
**W/STD. HDWL. & WING WALLS**  
**DESIGN BC-10 & SPECIAL**  
**STA. 471+60.00 - SURVEY LINE**  
**F.A.P. NO. I-240-4(86)157**







REV.	DATE	BY	CHKD.	APP'D.
1	10/1/86	JTB	JTB	JTB

# DESIGN DATA

Loading: H20-S16 & PPM 20-4  
Unit Stresses: Class 'A' Conc.  
Class 'AA' Conc.  
Reinforcing Steel  
 $f_c = 1000 \text{ psi}$   
 $f_c = 1200 \text{ psi}$   
 $f_y = 20,000 \text{ psi}$

Note: Approach Slabs to be constructed on Surfacing Contract by Surfacing Contractor. Quantities shown for Approach Slabs are for reference only.

\*Includes 12 S.Y. for Side Drain

## SUMMARY OF QUANTITIES

Item No.	Item	Unit	Abuts.	Piers	Supstr.	Total	Rep'l
202.06(F)	Select Borrow	C.Y.				200	
		S.Y.					
414.06(C)(A)	Appro. Slabs	S.Y.					169.4
501.06(B)	Substr. Exc. Common	C.Y.	66	91		157	
501.06(C)	Substr. Exc. Rock	C.Y.		25.7		25.7	
503.06(D)	Alum. Handrailing (I-Rail)	L.F.			335.0	335.0	
505.06(C)	Steel Handrailing (I-Rail)	L.F.			335.0	335.0	
509.06(B)	Class A Conc.	C.Y.	46.8	104.9		151.7	
504.06(A)(A)	Class AA Conc.	C.Y.			410.4	410.4	
511.06	Reinforcing Steel	Lbs.	6320	9580	71,200	87,100	
514.06(E) Sp.	Steel Piling (10' BP42")	L.F.	287			287	
* 5p.	4" Conc. Slope Wall	S.Y.				520.2	
614.06(AA)	6" Perf. Pipe Underdrain	L.F.				146	

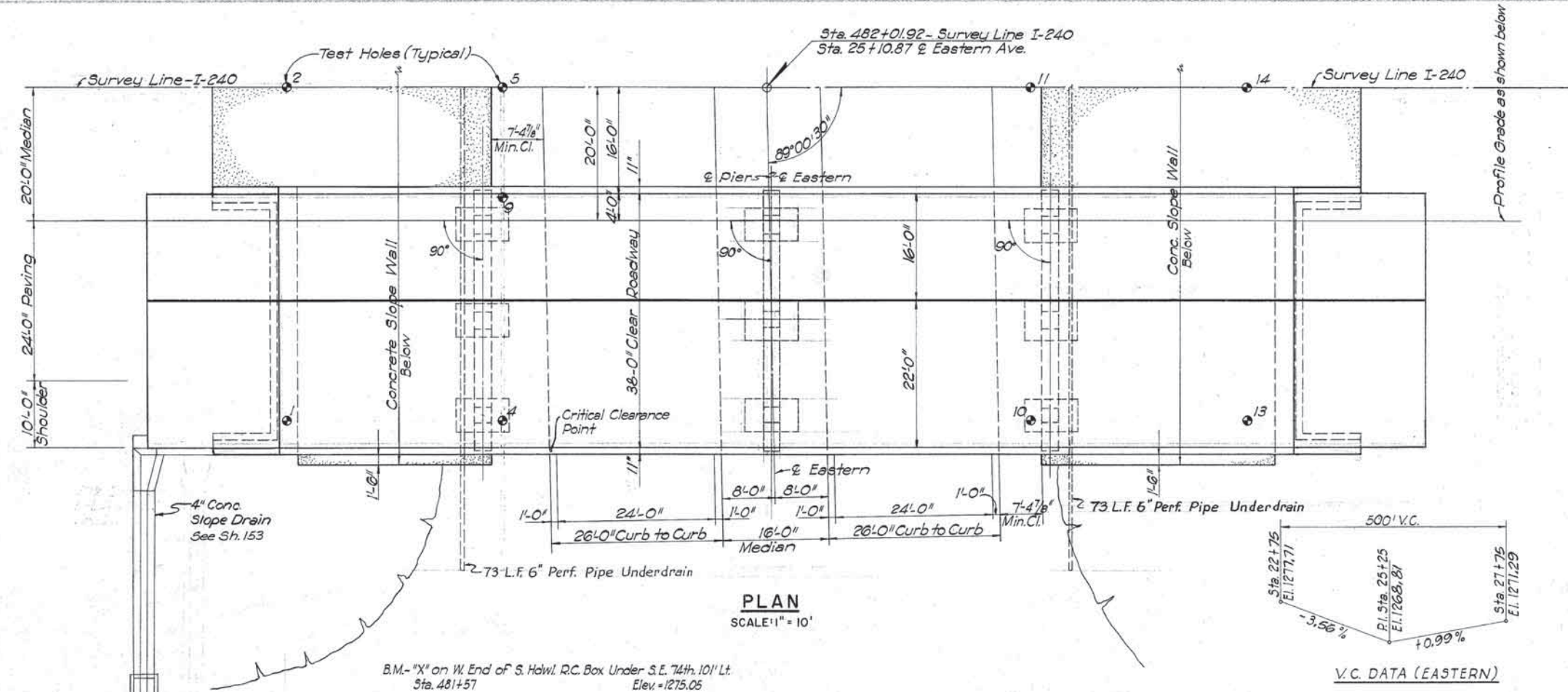
CONSULTING ENGINEER  
HUDSON THOMPSON BALL & ASSOCIATES, INC.

BY: *[Signature]*

V.G. THOMPSON  
OKLA. REG. PROF. ENG. NO. 308

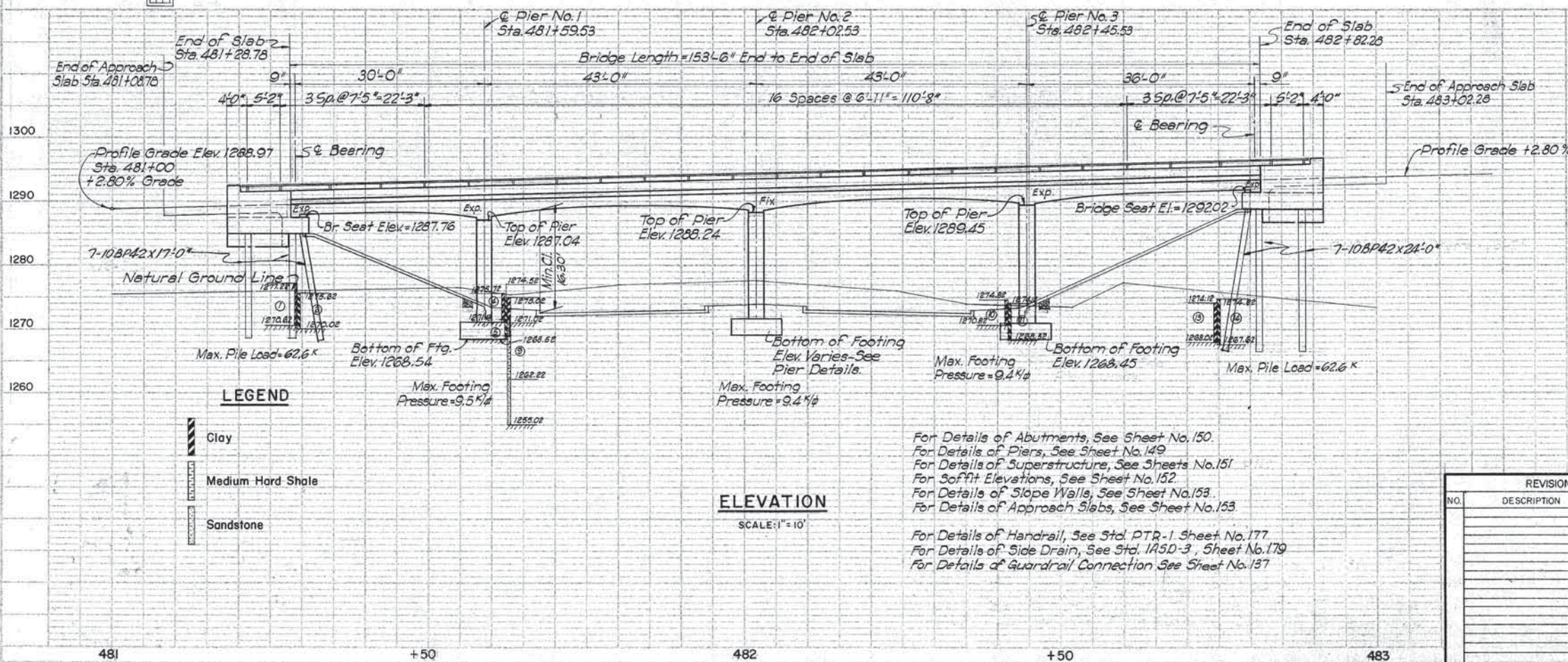
DATE: \_\_\_\_\_

For General Notes, See Sheet No. 130  
All Construction and Materials shall be in accordance with the Current Okla. Std. Specifications for Highway Construction and Special Provisions



PLAN  
SCALE: 1" = 10'

V.C. DATA (EASTERN)



ELEVATION  
SCALE: 1" = 10'

LEGEND

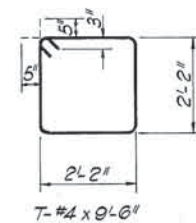
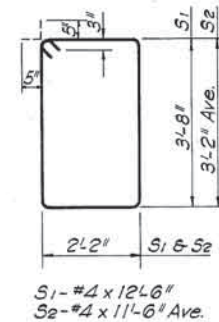
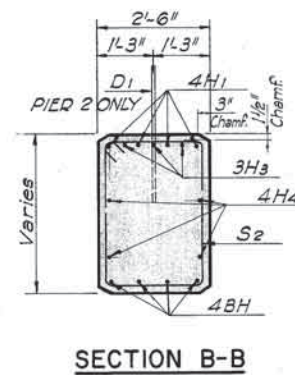
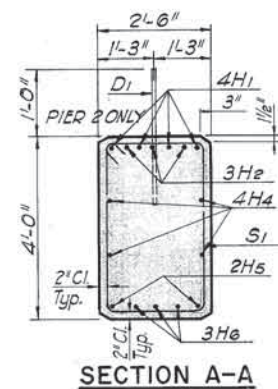
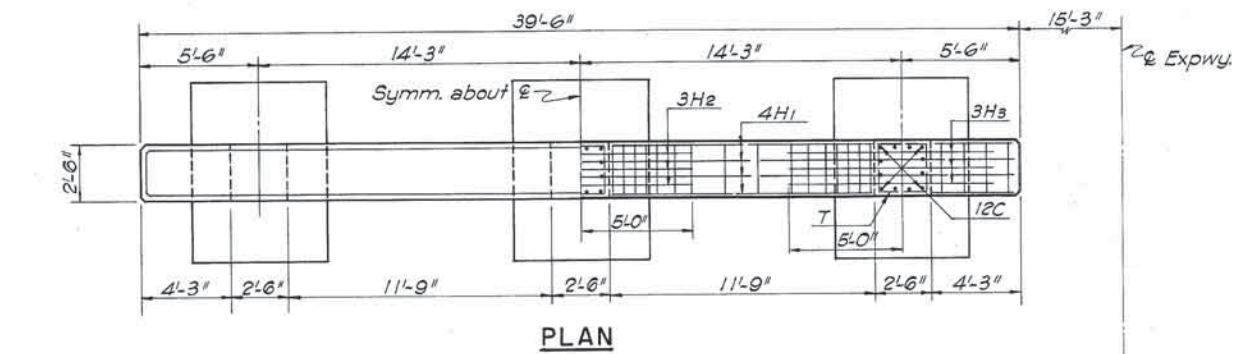
	Clay
	Medium Hard Shale
	Sandstone

For Details of Abutments, See Sheet No. 150.  
For Details of Piers, See Sheet No. 149.  
For Details of Superstructure, See Sheets No. 151.  
For Soffit Elevations, See Sheet No. 152.  
For Details of Slope Walls, See Sheet No. 153.  
For Details of Approach Slabs, See Sheet No. 153.  
For Details of Handrail, See Std. PTR-1 Sheet No. 177.  
For Details of Side Drain, See Std. IASD-3, Sheet No. 179.  
For Details of Guardrail Connection See Sheet No. 137.

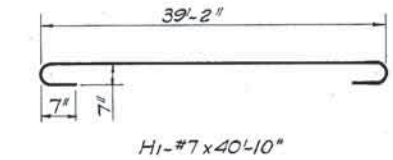
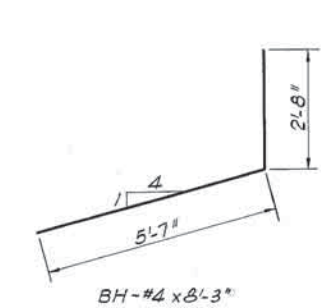
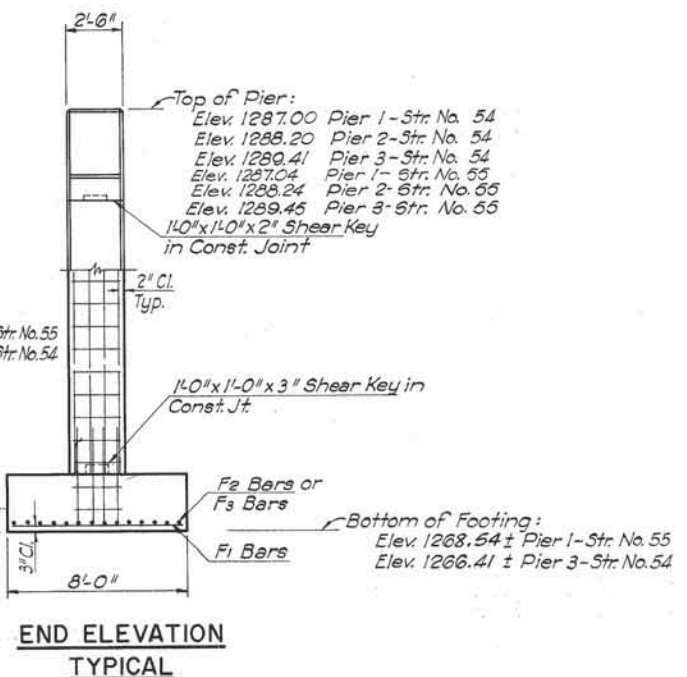
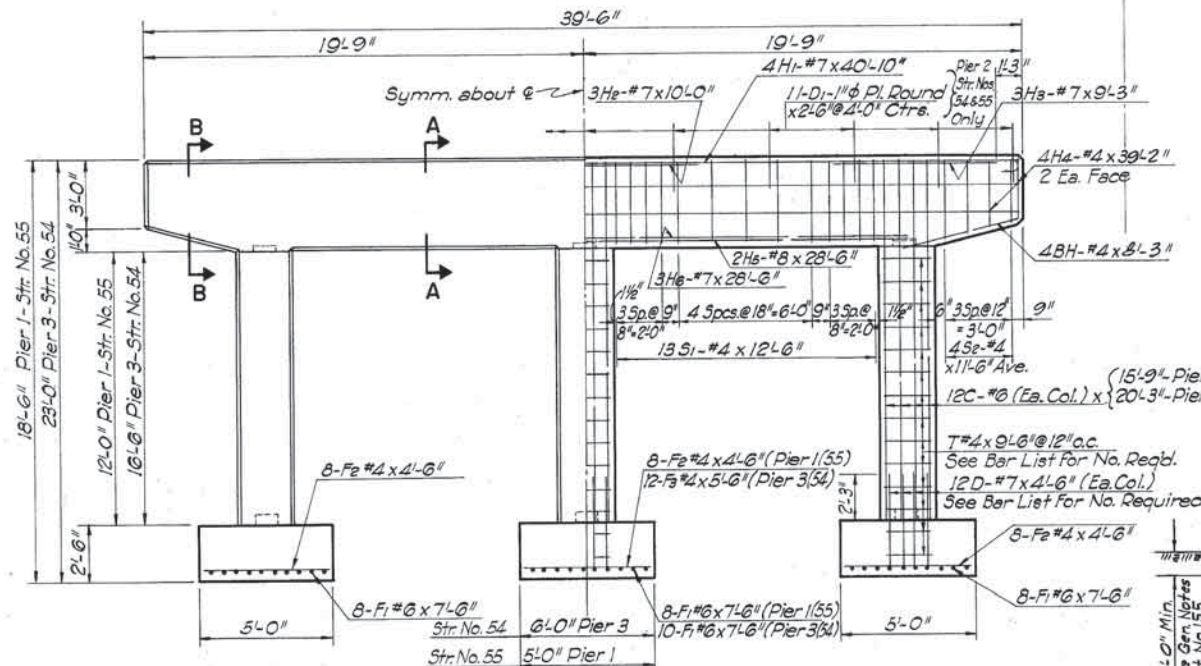
REVISIONS			RECORD	
NO.	DESCRIPTION	BY DATE	ITEM	BY DATE
			DESIGN	
			DETAIL	
			TRACED	
			CHECKED	
			APPROVED	
			SQUAD	

OKLAHOMA STATE HIGHWAY COMMISSION  
OKLAHOMA CITY, OKLAHOMA  
STR. NO. 55 EASTERN AVE.  
GENERAL PLAN & ELEVATION  
30'-43'-43'-36' CONT. CONC. SLAB  
38' CLEAR RDY.  
STA. 482+01.92 - SURVEY LINE  
F.A.P. NO. I-240-4(86)157





NOTE: - All Bar bend dimensions are out to out.

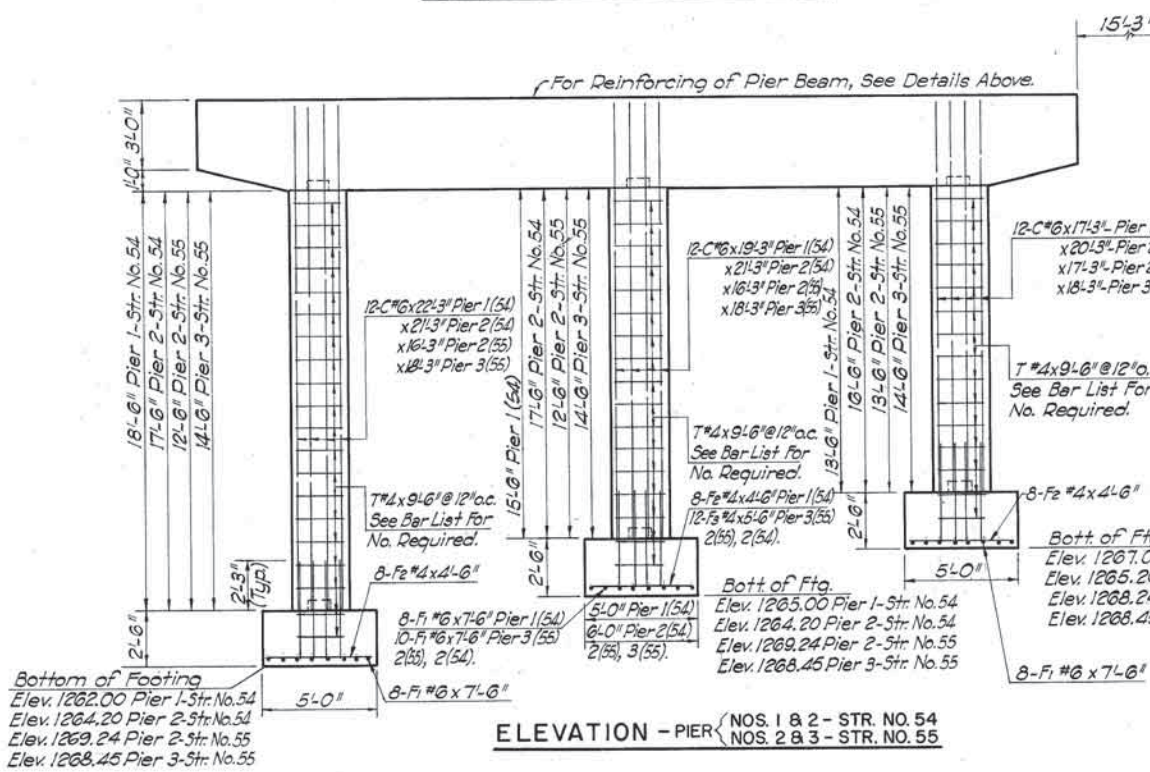


ELEVATION - PIERS  
NO. 1 STR. NO. 55  
NO. 3 STR. NO. 54

END ELEVATION  
TYPICAL

QUANTITIES						
ITEM	UNIT	PIER 1(54)	PIER 2(55)	PIER 3(54)	PIER 4(55)	PIER 5(54)
Class 'A' Concrete	C.Y.	36.3	33.7	38.0	35.0	37.5
Reinforcing Steel	Lbs.	3350	3050	3560	3240	3440
Substr. Excav. Common	C.Y.	74	26	66	27	56
Substr. Excav. Rock	C.Y.	5.9	11.1	7.6	6.5	6.0

BAR LIST													
MARK	SIZE	FORM	PIED NO.	NO. LENGTH	PIED NO.	NO. LENGTH	PIED NO.	NO. LENGTH	PIED NO.	NO. LENGTH	PIED NO.	NO. LENGTH	
			1 (54)	1 (55)	2 (54)	2 (55)	3 (54)	3 (55)					
H <sub>1</sub>	#7	Str.	4	40'-10"	4	40'-10"	4	40'-10"	4	40'-10"	4	40'-10"	
H <sub>2</sub>	#7	Str.	3	10'-0"	3	10'-0"	3	10'-0"	3	10'-0"	3	10'-0"	
H <sub>3</sub>	#7	Str.	6	9'-3"	6	9'-3"	6	9'-3"	6	9'-3"	6	9'-3"	
H <sub>4</sub>	#4	Str.	4	39'-2"	4	39'-2"	4	39'-2"	4	39'-2"	4	39'-2"	
H <sub>5</sub>	#8	Str.	2	28'-6"	2	28'-6"	2	28'-6"	2	28'-6"	2	28'-6"	
H <sub>6</sub>	#7	Str.	3	28'-6"	3	28'-6"	3	28'-6"	3	28'-6"	3	28'-6"	
BH	#4	Bnt.	8	8'-3"	8	8'-3"	8	8'-3"	8	8'-3"	8	8'-3"	
S <sub>1</sub>	#4	Bnt.	26	12'-6"	26	12'-6"	26	12'-6"	26	12'-6"	26	12'-6"	
S <sub>2</sub>	#4	Bnt.	8	11'-6" Ave.	8	11'-6" Ave.	8	11'-6" Ave.	8	11'-6" Ave.	8	11'-6" Ave.	
C	#6	Str.	36	19'-7" Ave.	36	15'-9"	36	20'-11" Ave.	36	16'-7" Ave.	36	20'-3"	
T	#4	Bnt.	55	9'-6"	42	9'-6"	59	9'-6"	46	9'-6"	51	9'-6"	
D	#7	Str.	36	4'-6"	36	4'-6"	36	4'-6"	36	4'-6"	36	4'-6"	
F <sub>1</sub>	#6	Str.	24	7'-6"	24	7'-6"	26	7'-6"	26	7'-6"	26	7'-6"	
F <sub>2</sub>	#4	Str.	24	4'-6"	24	4'-6"	16	4'-6"	16	4'-6"	16	4'-6"	
D <sub>1</sub>	1 1/4 gm.	Str.	—	—	—	11	2'-6"	11	2'-6"	—	—	—	
F <sub>3</sub>	#4	Str.	—	—	—	12	5'-6"	12	5'-6"	12	5'-6"	12	5'-6"



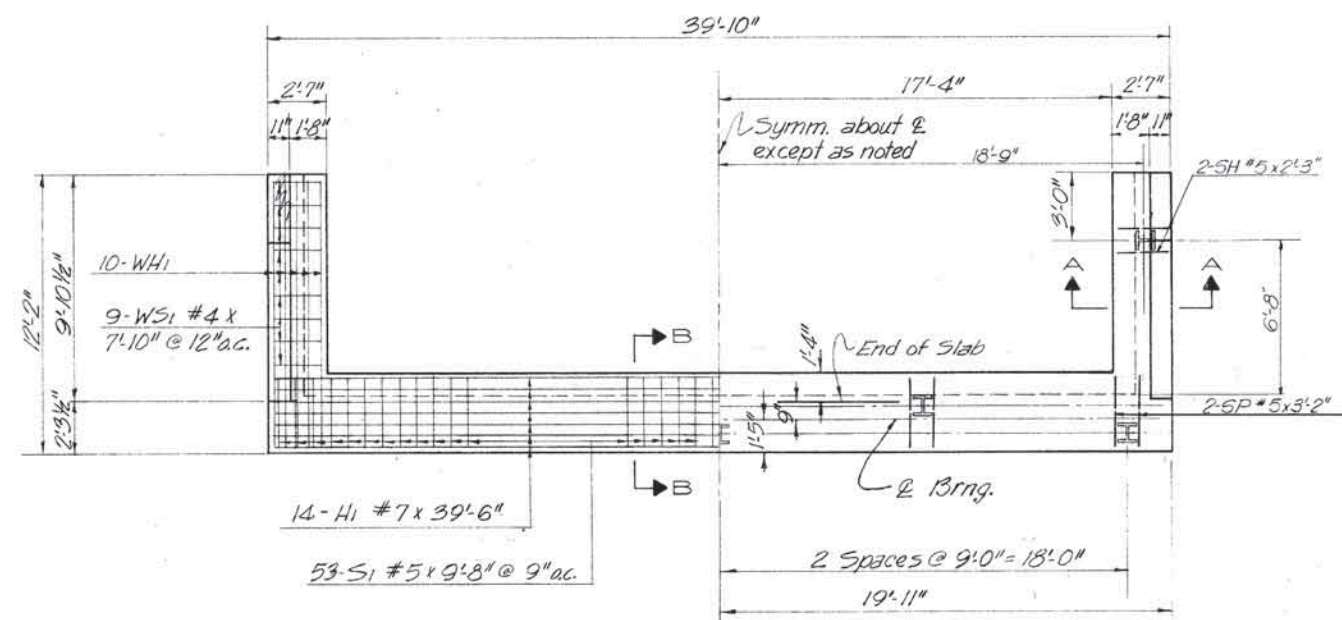
ELEVATION - PIER  
NOS. 1 & 2 - STR. NO. 54  
NOS. 2 & 3 - STR. NO. 55

For General Pier Notes & Details Not Shown Here, See Sht. Nos. 126 & 155

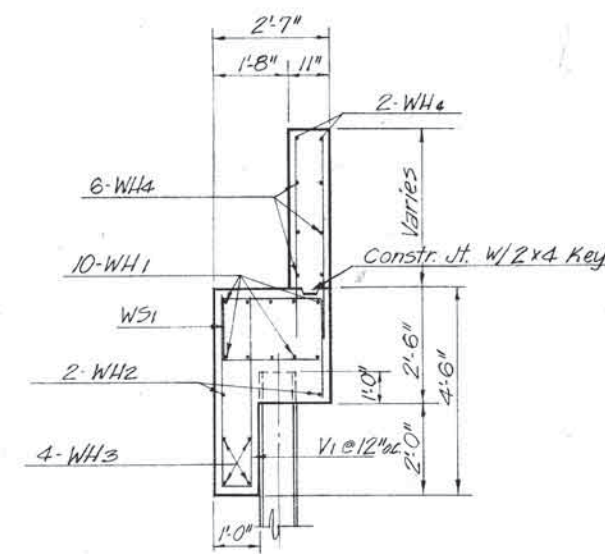
REVISIONS			RECORD			OKLAHOMA STATE HIGHWAY COMMISSION OKLAHOMA CITY, OKLAHOMA	
NO.	DESCRIPTION	BY DATE	ITEM	BY DATE			
			DESIGN			STR. NOS. 54 & 55 EASTERN AVE. PIER DETAILS 30'-43'-43'-36' CONT. CONC. SLAB F.A.P. NO. I-240-4(86)157	
			DETAIL				
			TRACED				
			CHECKED				
			APPROVED				
			SQUAD				



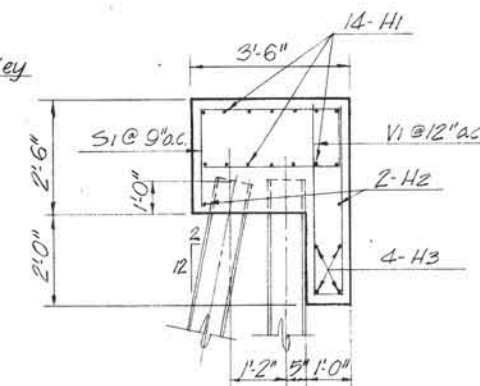
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6	OKLA.	I-240-4 (86)157		150	
REVISIONS					
DESCRIPTION		DATE			



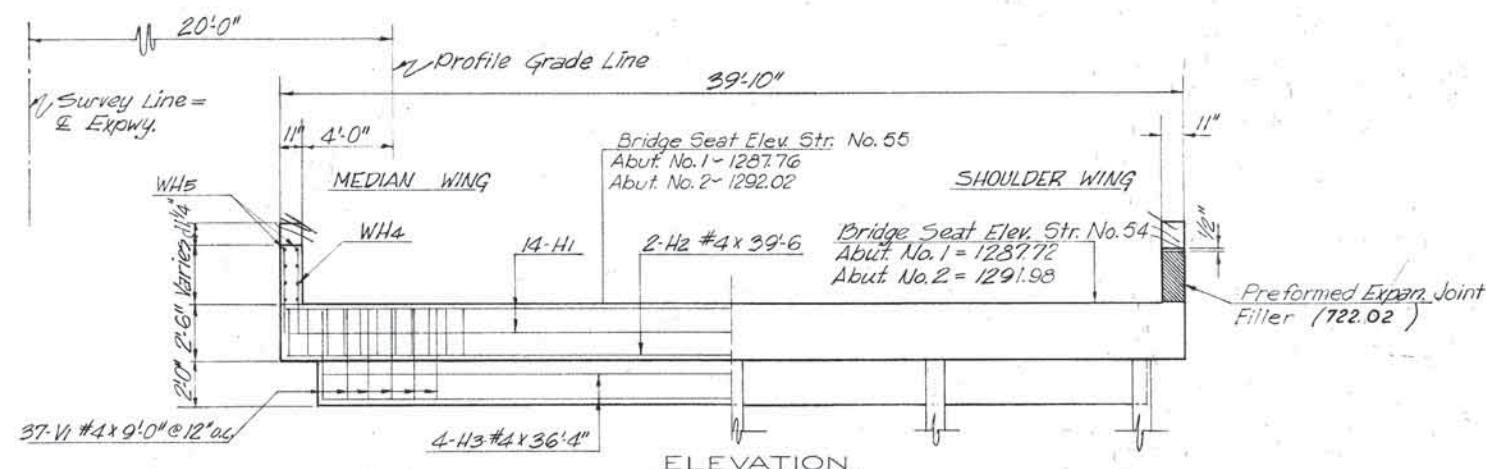
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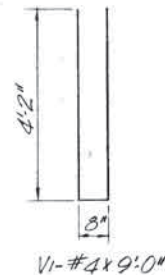
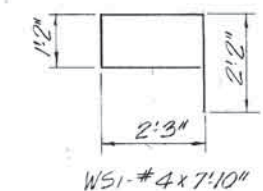
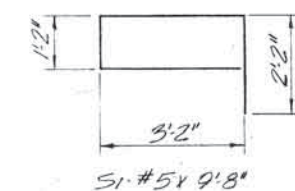
SECTION A-A



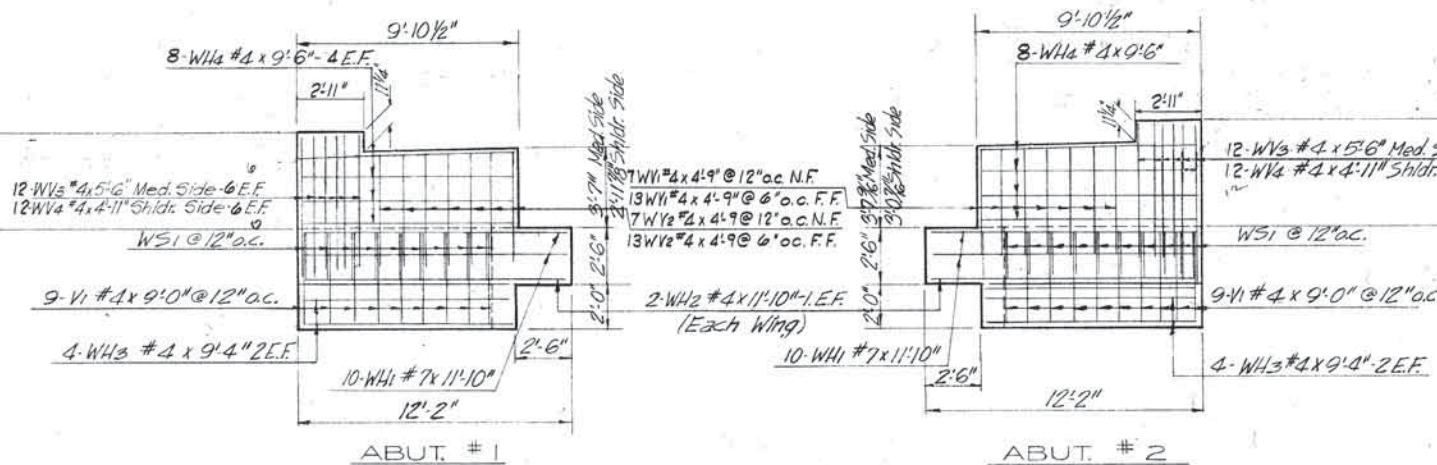
SECTION B-B



ELEVATION



BAR LIST				
MARK	SIZE	FORM	NO.	LENGTH
H1	#7	STR.	14	39'-6"
H2	#4	STR.	2	39'-6"
H3	#4	STR.	4	36'-4"
WH1	#7	STR.	20	11'-10"
WH2	#4	STR.	4	11'-10"
WH3	#4	STR.	8	9'-4"
WH4	#4	STR.	16	9'-6"
WS1	#4	STR.	40	4'-9"
WS2	#4	STR.	40	4'-9"
WS3	#4	STR.	12	5'-6"
WS4	#4	STR.	12	4'-11"
V1	#4	BNT.	55	9'-0"
WS1	#4	BNT.	18	7'-10"
S1	#5	BNT.	53	9'-8"
SP	#5	STR.	10	3'-2"
SH	#5	STR.	4	2'-3"
U	#4	BNT.	8	5'-6"
L	#4	BNT.	6	5'-7"



ABUT. #1

ABUT. #2

WINGWALL ELEVATIONS

QUANTITIES					
ITEM	UNIT	ABUT. #1/54	ABUT. #2/55	ABUT. #2/54	ABUT. #2/55
Class "A" Concrete	C.Y.	23.3	23.3	23.5	23.5
Reinforcing Steel	LBS.	3160	3160	3160	3160
Substr. Excav. Common	C.Y.	33	33	33	33
10 BP 42 Piles	L.F.	126	119	175	168

- GENERAL ABUTMENT NOTES**
- For Guardrail Connection details, refer to Sht. No. 137.
  - Top of Bridge Seat to have a Trowel Finish. Place 1 1/2" Preformed Expansion Joint Filler (722.01) between Superstructure and Wing Walls @ ends of Superstructure.
  - For Excavation Diagram & Notes see Sht. No. 131.

Design	
Drawn	
Checked	
Approved	
Squad	

STRUCTURE NO'S 54 & 55 - EASTERN AVE.  
 ABUTMENT DETAILS  
 30'- 48'- 43'- 36' CONT. CONC. SLAB  
 F.A. Project No. I-240-4(86)157 Sheet No. 150



FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	2-240-4 (86)	160	

# DESIGN DATA

Concrete:  $f_c = 1200$  psi  
Reinf. Steel:  $f_s = 20,000$  psi  
Loading: H20 S16 & PPM 20-4

NOTE: All Bar Bend Dimensions are out to out.

# BAR LIST

MARK	NO.	SIZE	FORM	LENGTH
F	304	#4	Bnt.	6'-2"
F1	312	#5	Bnt.	4'-8"
S1	136	#4	Bnt.	3'-5" Ave.
S2	204	#4	Bnt.	7'-2"
T1	299	#4	Str.	39'-2"
BL1	40	#7	Str.	31'-7"
BL2	39	#9	Str.	21'-11"
BL3	84	#6	Str.	45'-0"
BL4	78	#10	Str.	25'-0"
BL5	40	#8	Str.	37'-7"
BL6	39	#11	Str.	26'-8"
P1	8	#4	Str.	30'-5"
P2	8	#4	Str.	36'-5"
L1	42	#6	Str.	51'-0"
L2	41	#10	Str.	31'-3"
L3	40	#7	Str.	46'-2"
L4	41	#10	Str.	36'-3"
L5	34	#7	Str.	42'-6"
L6	41	#10	Str.	33'-0"
L7	34	#6	Str.	19'-6"
P3	16	#4	Str.	42'-8"
L8	0	#7	Str.	60'-0"

Note: Alt. F with F1 at 12' Begin & end each span with F1

Temporary 3"x12" Bumper Removed upon Application of Rdy Surfacing.

# QUANTITIES

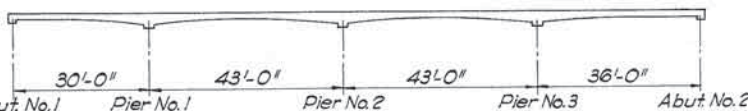
ITEM	LT. STR.	UNIT	RT. STR.
Concrete - Class "AA" (AE)	410.4	C.Y.	410.4
Reinforcing Steel	71,200	Lbs.	71,200
Handrail	335.0	Lin. Ft.	335.0

NOTE: For Additional Details and General Notes, See Sheet No. 126

OKLAHOMA STATE HIGHWAY COMMISSION  
OKLAHOMA CITY, OKLAHOMA

STR. NOS. 54 & 55 EASTERN AVE.  
SUPERSTRUCTURE DETAILS  
30'-43'-43'-36' CONT. CONC. SLAB  
F.A.P. NO. I-240-4(86)157

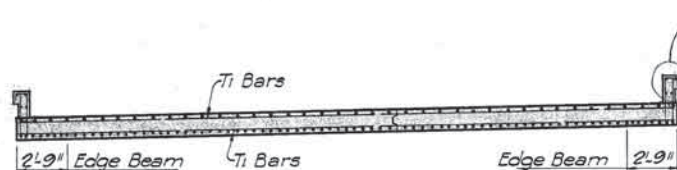
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NO.	DESCRIPTION	BY DATE	ITEM	BY DATE	
			DESIGN		
			DETAIL		
			TRACED		
			CHECKED		
			APPROVED		
			SQUAD		



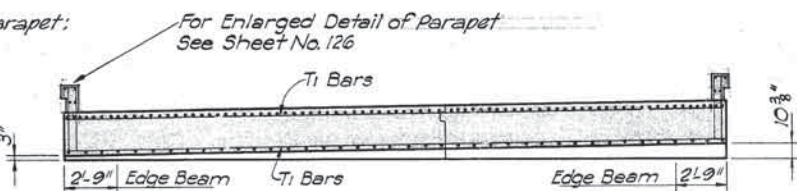
TOTAL REACTIONS					
	Abut. No. 1	Pier No. 1	Pier No. 2	Pier No. 3	Abut. No. 2
S/S Dead Load	74k	453k	477k	491k	107k
Live Load (2-Lanes)	90k	133k	135k	137k	96k
Impact	27k	40k	40k	41k	29k

S1 - #4 x 3'-5" Ave.  
S2 - #4 x 7'-2"

# SECTION B-B



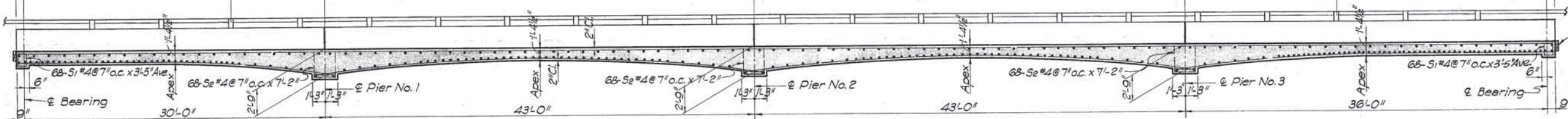
# SECTION C-C



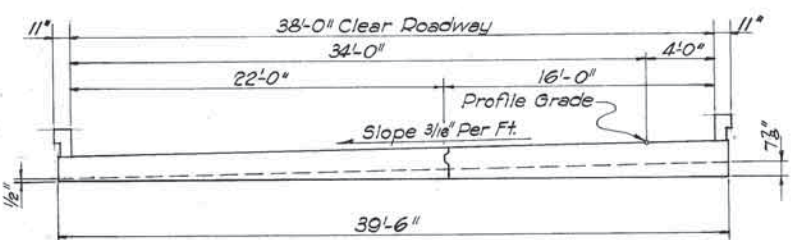
# TOP OF SLAB REINFORCING

# BOTTOM OF SLAB REINFORCING

# SECTION A-A

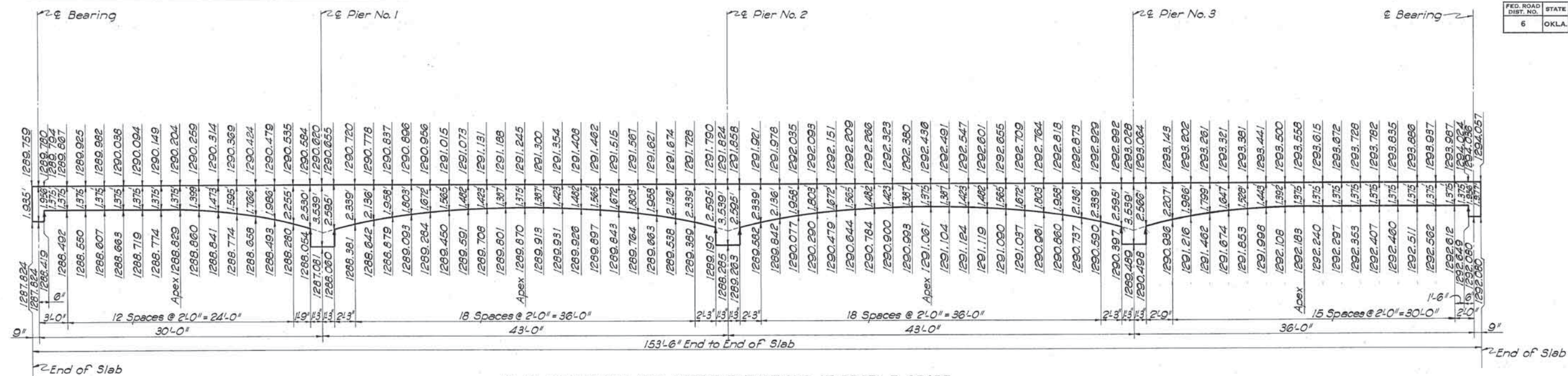


# END ELEVATION





FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-240-4(86)	151	152

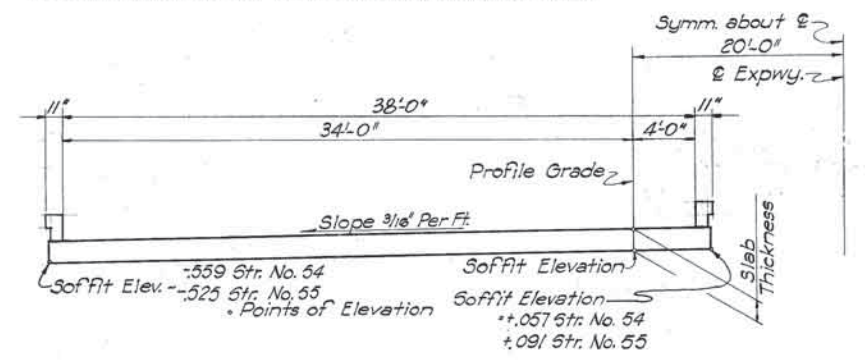


### SLAB DIMENSIONS AND SOFFIT ELEVATIONS AT PROFILE GRADE

(Above Elevations are shown as an average between the two structures. To obtain the true elevations along profile grade add 0.017' for Str. No. 55 and subtract 0.017' for Str. No. 54.)

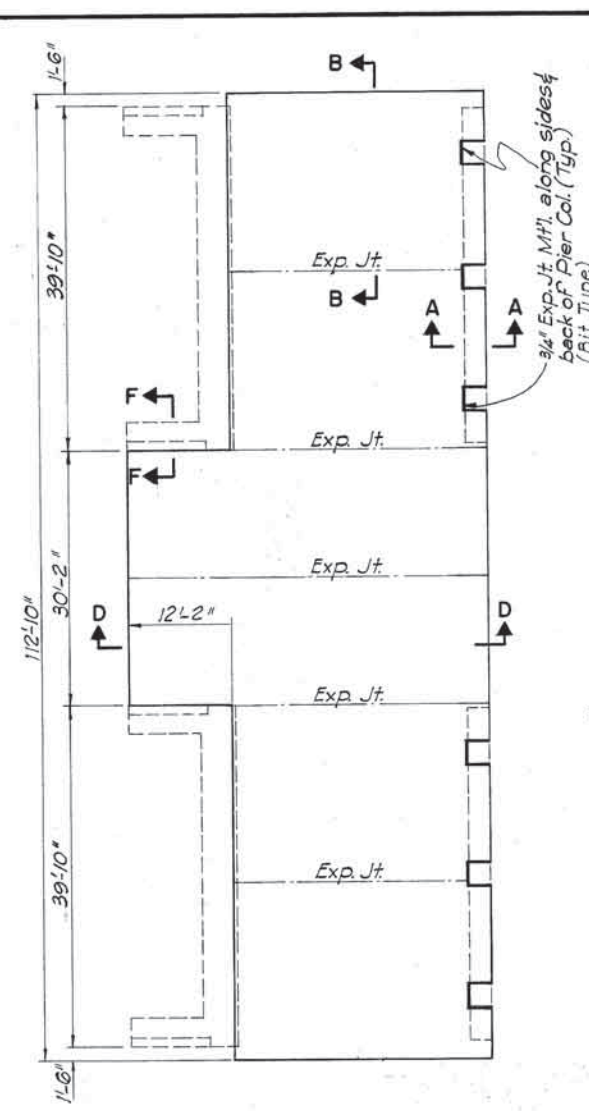
### NOTES:-

Elevations and Dimensions shown are for Forming Soffit Curves and Top of Bridge Floor. Anticipated deflections due to Dead Loads have been considered and no other allowance for these deflections shall be made.

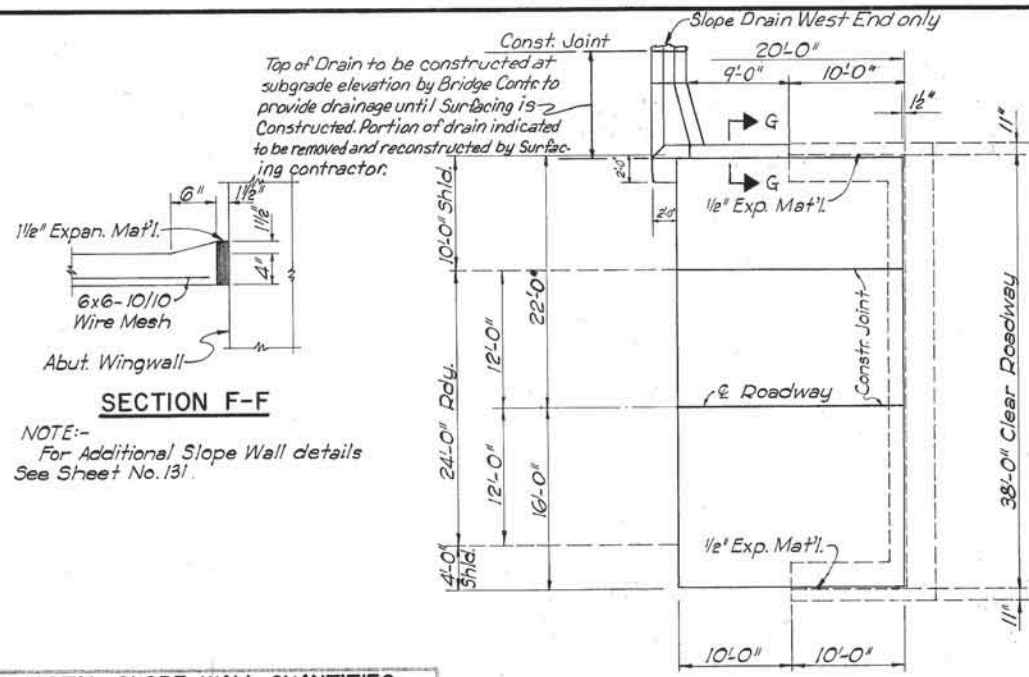


REVISIONS				RECORD				OKLAHOMA STATE HIGHWAY COMMISSION OKLAHOMA CITY, OKLAHOMA	
NO.	DESCRIPTION	BY	DATE	ITEM	BY	DATE			
				DESIGN				STR. NOS. 54 & 55 EASTERN AVE. SOFFIT ELEVATIONS 30'-43'-43'-36' CONT. CONC. SLAB F.A.P. NO. I-240-4(86)157	
				DETAIL					
				TRACED					
				CHECKED					
				APPROVED					
				SQUAD:					





TYPICAL PLAN OF SLOPE WALL



SECTION F-F

PLAN OF APPROACH SLAB

**TOTAL SLOPE WALL QUANTITIES**

* 4" Concrete Slope Wall	1016.4	S.Y.
--------------------------	--------	------

\* See Note This Sheet

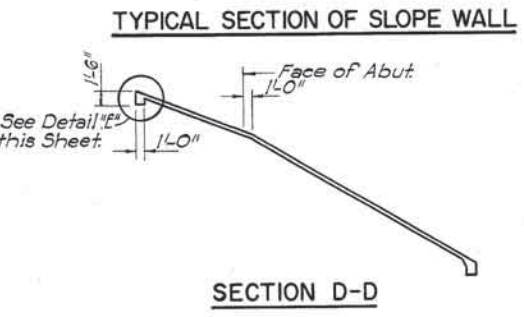
**QUANTITIES FOR ONE APPROACH SLAB**

Approach Slab (Class "A(AE)" Conc.	S.Y.	84.7
Reinforcing Steel	Lbs.	2600

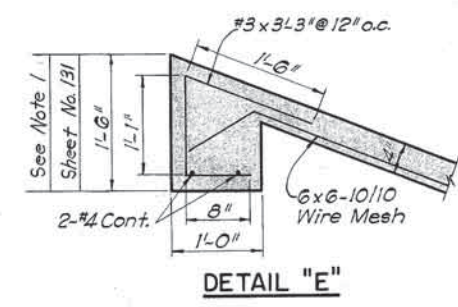
Note:-- Cost of all items in Concrete Slope wall including Wire Mesh, Reinforcing Steel and Expansion Joint Material shall be included in the unit price bid per Sq. Yd. of 4" Concrete Slope wall.

All material and work shall be in accordance with that part of Sec. 610, Okla. Std. Specs. of 1967, Covering Concrete Sidewalks, see General Elevation for Pay Quantities.

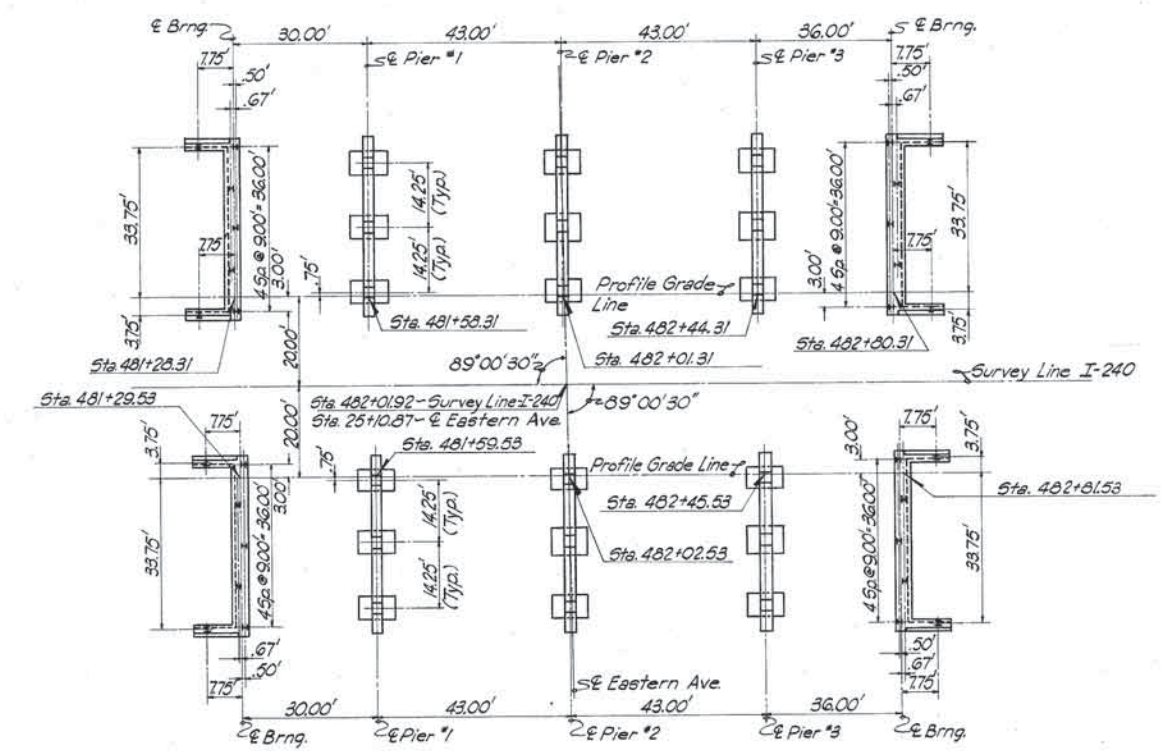
NOTE:-- Cost of Reinforcing Steel and Curbs shall be included in the unit price bid per Sq. Yd. for Approach Slab.



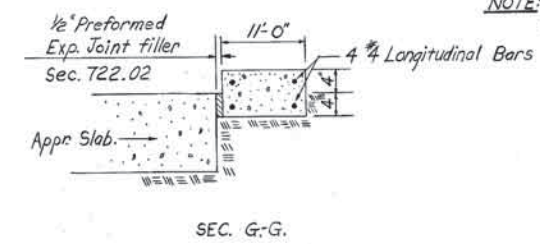
TYPICAL SECTION OF SLOPE WALL



DETAIL "E"



SUBSTRUCTURE LAYOUT  
SCALE 1"=20'



SEC. G-G.

REVISIONS				RECORD			
NO.	DESCRIPTION	BY	DATE	ITEM	BY	DATE	
				DESIGN			
				DETAIL			
				TRACED			
				CHECKED			
				APPROVED			
				SQUAD:			

OKLAHOMA STATE HIGHWAY COMMISSION  
OKLAHOMA CITY, OKLAHOMA

STR. NOS. 54 & 55 EASTERN AVE.  
SLOPE WALL DETAILS  
30'-43'-43'-36' CONT. CONC. SLAB  
F.A.P. NO. I-240-4(86)157



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				

DESCRIPTION	REVISIONS	DATE

# DESIGN DATA

LOADING:  
HS20-44  
UNIT STRESSES:  
CLASS "A" CONCRETE 1,000 PSI  
CLASS "AA" CONCRETE 1,200 PSI  
REINFORCING STEEL 20,000 PSI  
STRUCTURAL STEEL 20,000 PSI

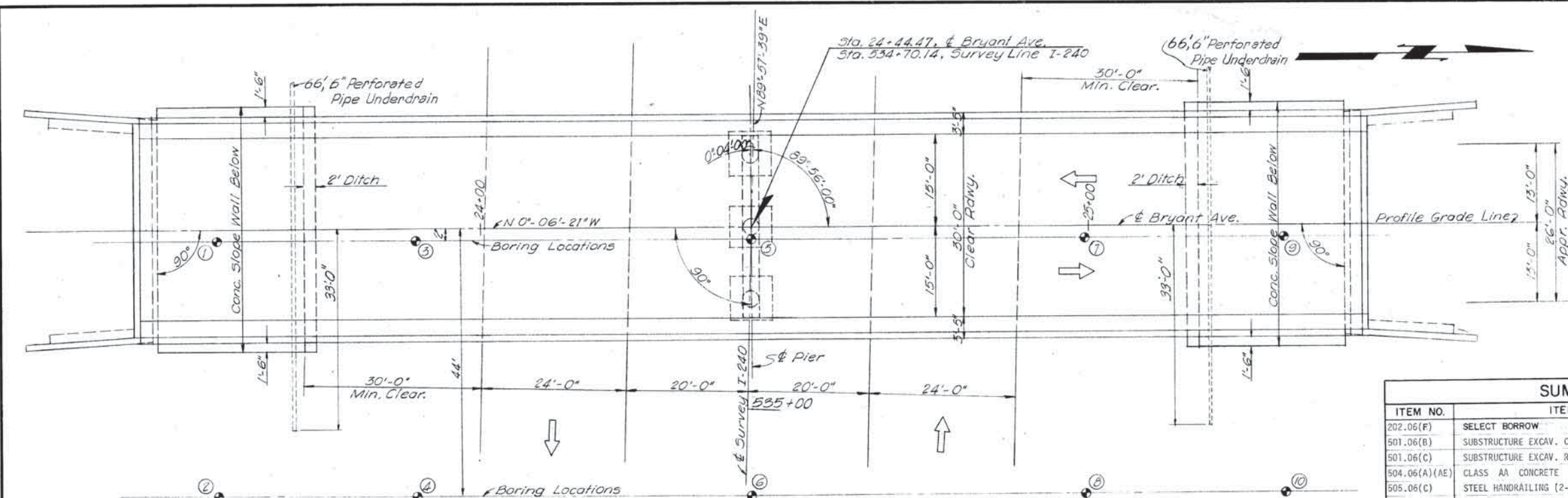
Maximum Foundation Loads:  
Abutments: 31.3 Ton/Pile  
Piers: 40 Ton/SF Axial  
6.0 Ton/SF Max.

SUMMARY OF QUANTITIES						
ITEM NO.	ITEM	UNIT	ABUTS.	PIERS	SUPSTR.	TOTAL
202.06(F)	SELECT BORROW	C.Y.				200
501.06(B)	SUBSTRUCTURE EXCAV. COMMON	C.Y.	146	85		231
501.06(C)	SUBSTRUCTURE EXCAV. ROCK	C.Y.		6.8		6.8
504.06(A)(AE)	CLASS AA CONCRETE	C.Y.			210.2	210.2
505.06(C)	STEEL HANDRAILING (2-RAIL)	L.F.			470.00	470.00
505.06(D)	ALUMINUM HANDRAILING (2-RAIL)	L.F.			470.00	470.00
506.06(A)	STRUCTURAL STEEL	L.B.			169,330	169,330
509.06(B)	CLASS A CONCRETE	C.Y.	106.4	34.0		140.4
511.06	REINFORCING STEEL	L.B.	8,340	8,200	51,510	68,050
514.06(E)Sp.	STEEL PILES (10"BP42#)	L.F.	359			359
614.06(AA)	6" PERF. PIPE UNDERDRAIN	L.F.				132
SPECIAL	4" CONCRETE SLOPE WALLS	S.Y.				258.8

\*NON-PARTICIPATING ITEM

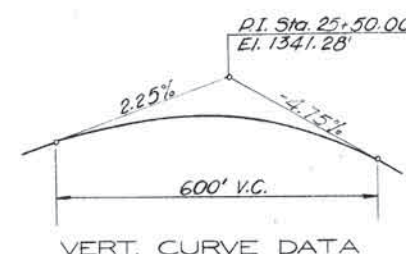
All Construction and Materials shall be in accordance with the 1967 Okla. Std. Specifications for Highway Construction and Special Provisions shown on Summary of Pay Quantities, Sheet No. 35A or shown on the plans.

FOR GENERAL NOTES, SEE SHT. NO. 130.  
FOR DETAILS OF ABUTMENTS, SEE SHT. NOS. 156 & 157.  
FOR DETAILS OF PIERS, SEE SHT. NO. 155.  
FOR DETAILS OF SUPERSTRUCTURE, SEE SHT. NOS. 128, 129, 130 & 158.  
FOR DETAILS OF SLOPE WALLS, SEE SHT. NO. 131.  
FOR DETAILS OF PILING, SEE STD. P-1, SHT. NO. 181.  
FOR DETAILS OF HANDRAIL, SEE STD. PTR-2, SHT. NO. 178 & SHT. NO. 137.  
FOR DETAILS OF EXPAN. DEVICES, SEE SHT. NO. 129.  
FOR DETAILS OF SHOES, SEE SHT. NO. 137.

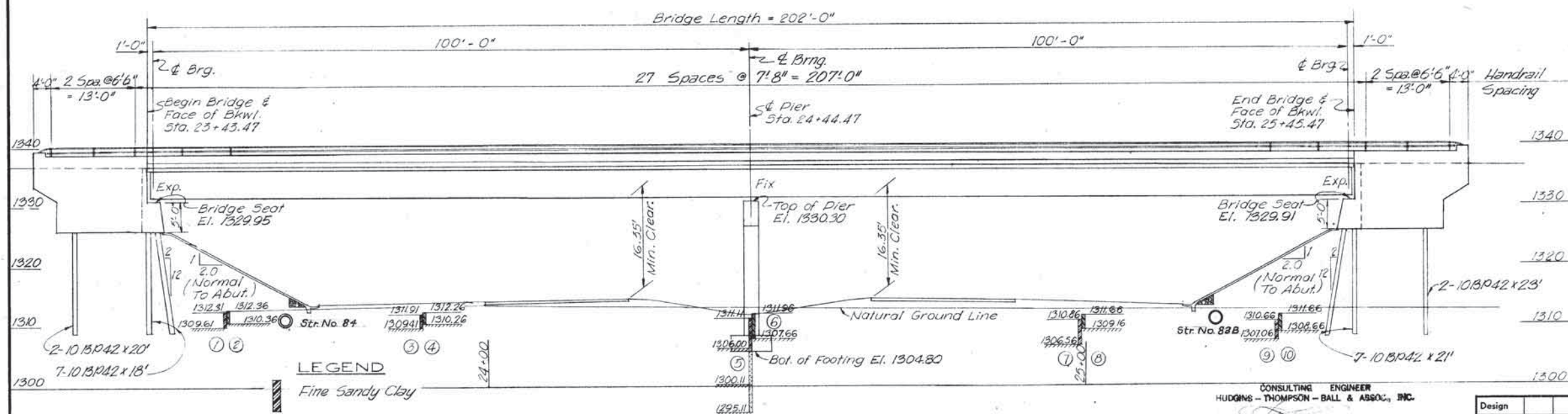


B.M. ~ "X" on N.E. Corner N.E. Pier Abandoned Oilwell  
155' Rt. Sta. 538+20 Elev. = 1327.99

PLAN  
Scale 1" = 10'-0"



VERT. CURVE DATA



# LEGEND

- Fine Sandy Clay
- Medium Hard Shale
- Soft Sandstone

ELEVATION  
Scale 1" = 10'-0"

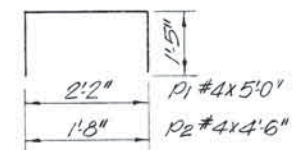
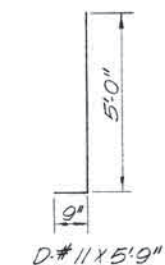
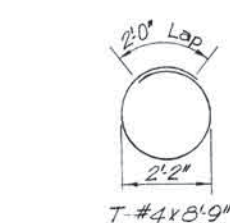
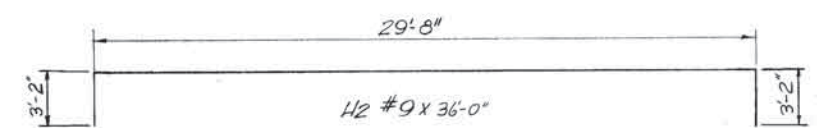
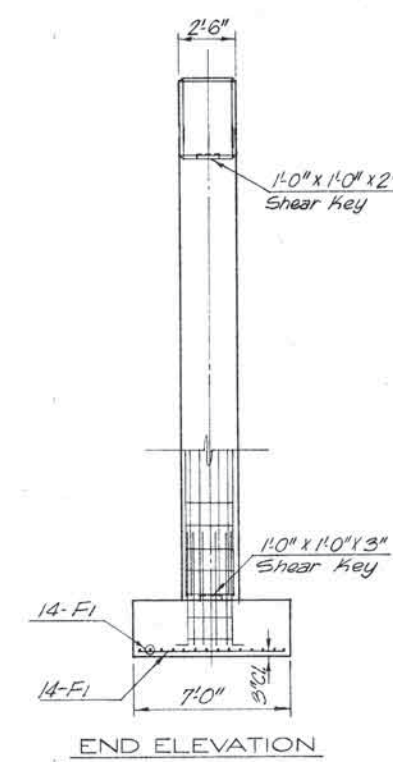
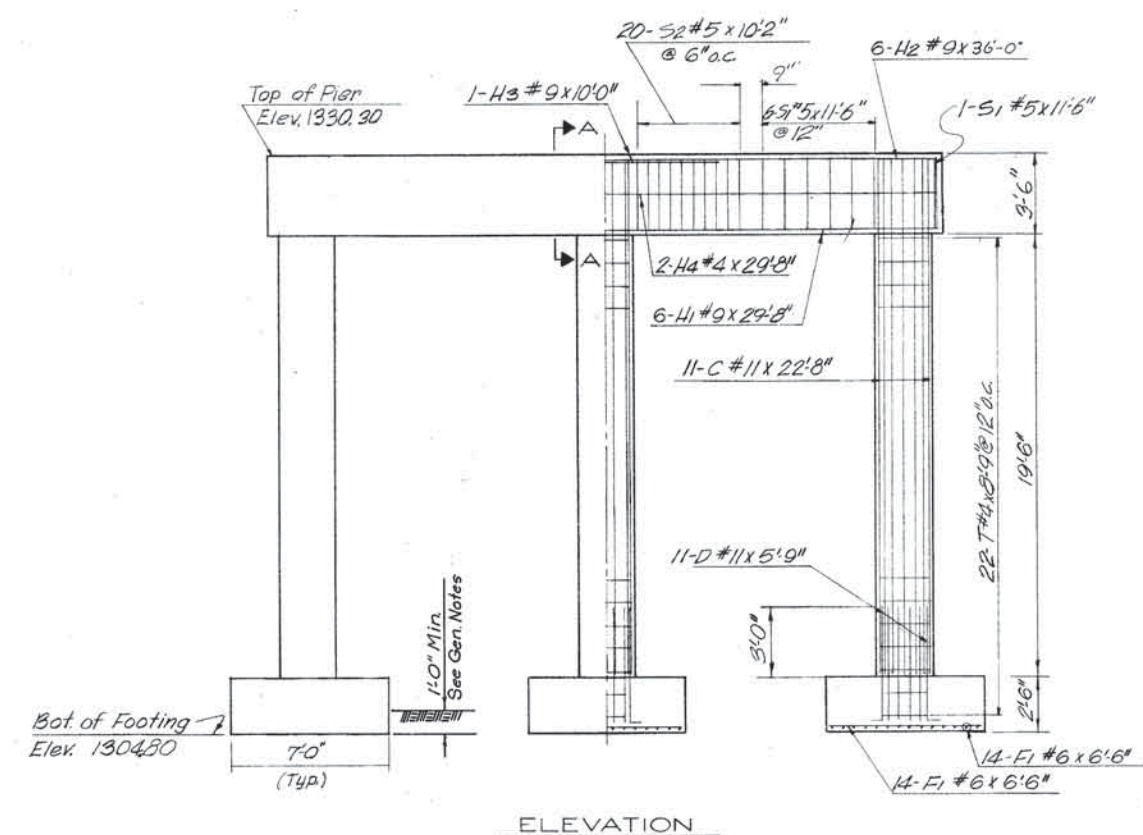
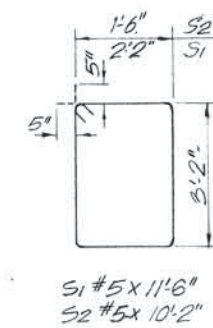
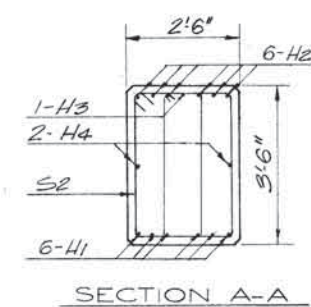
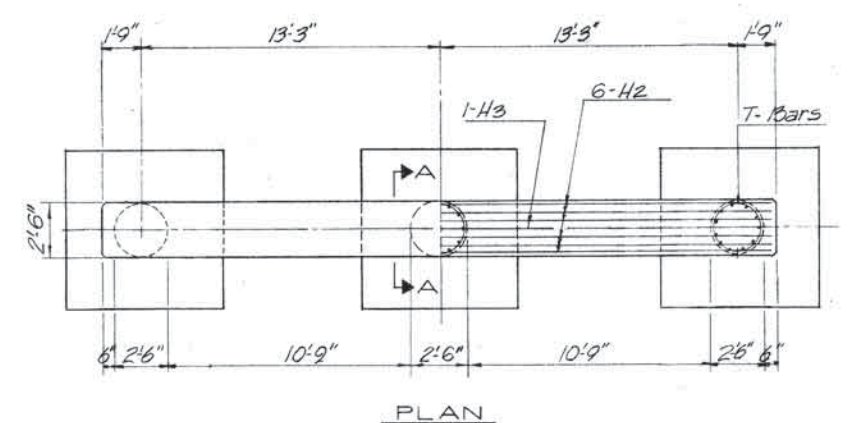
CONSULTING ENGINEER  
HUDGINS - THOMPSON - BALL & ASSOC., INC.  
BY *[Signature]*  
V. G. THOMPSON  
OKLA. REG. PROF. ENGR. NO. 308  
DATE: \_\_\_\_\_

Design	
Drawn	
Checked	
Approved	
Squad	

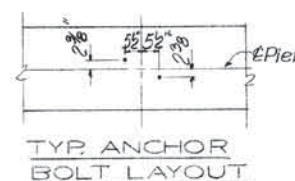
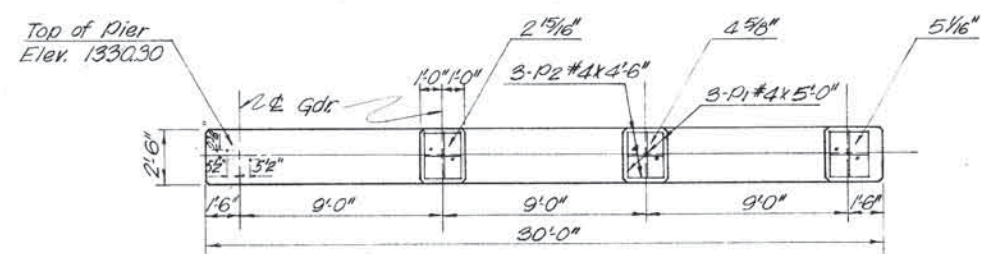
STRUCTURE NO. 83 - BRYANT  
GENERAL PLAN AND ELEVATION  
2 - 100' CONTINUOUS PLATE GIRDER SPANS  
30' CL. RDY. W/2'-6" S.W. BOTH SIDES  
STA. 534+70.14-SURVEY LINE  
Project No. 1-240-4(86)157 Sheet No. 154



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
REVISIONS					DATE
DESCRIPTION					



BAR LIST				
MARK	FORM	SIZE	NO.	LENGTH
H1	STR	#9	6	29'-8"
H2	BNT	#9	6	36'-0"
H3	STR	#9	1	10'-0"
H4	STR	#4	2	29'-8"
C	STR	#11	33	22'-8"
D	BNT	#11	33	5'-9"
T	BNT	#4	66	8'-9"
F1	STR	#6	84	6'-6"
S1	BNT	#5	16	11'-6"
S2	BNT	#5	40	10'-2"
P1	BNT	#4	9	5'-0"
P2	BNT	#4	9	4'-6"

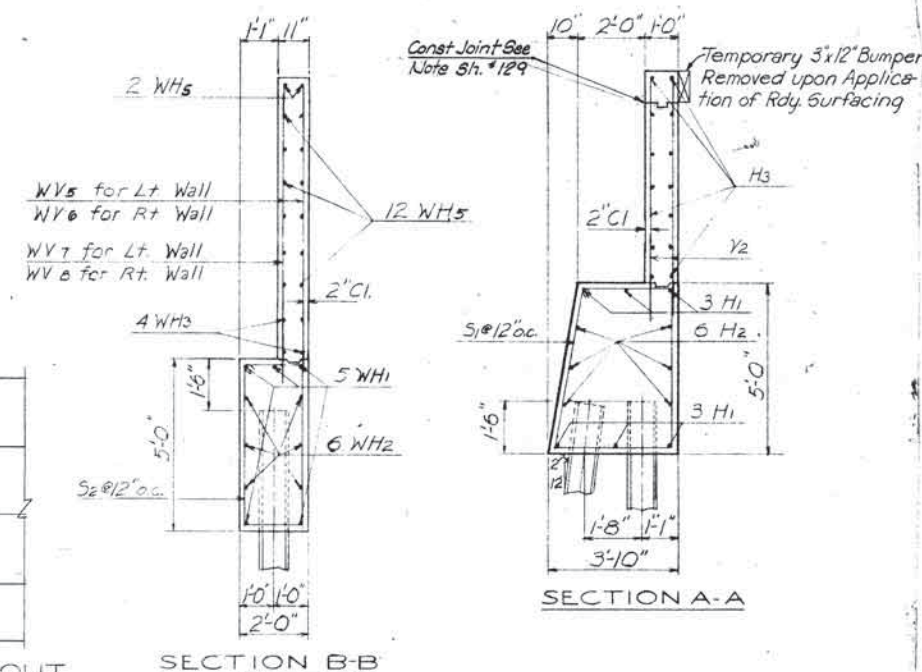
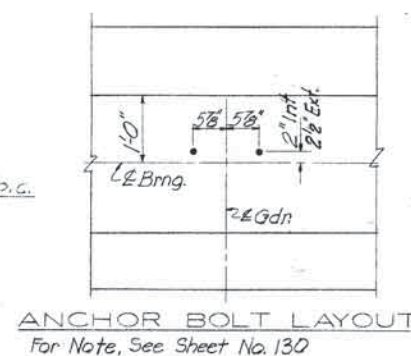
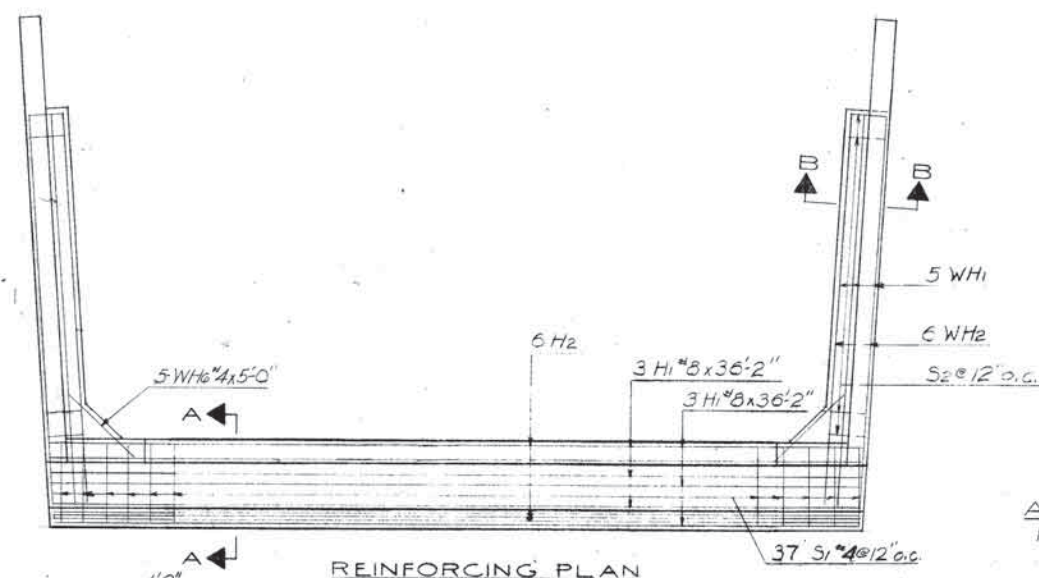
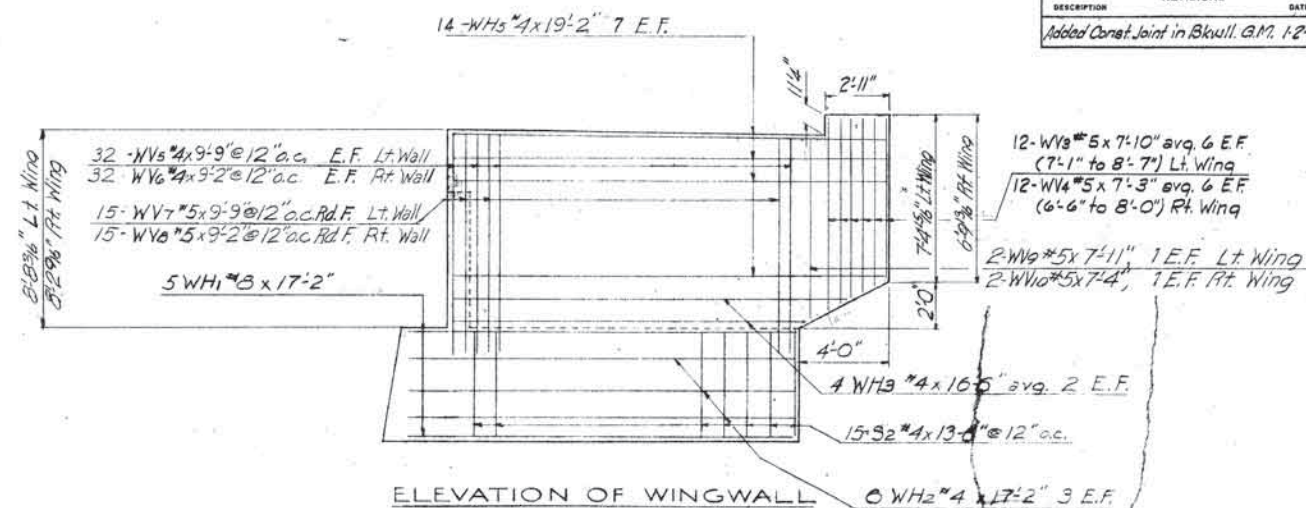
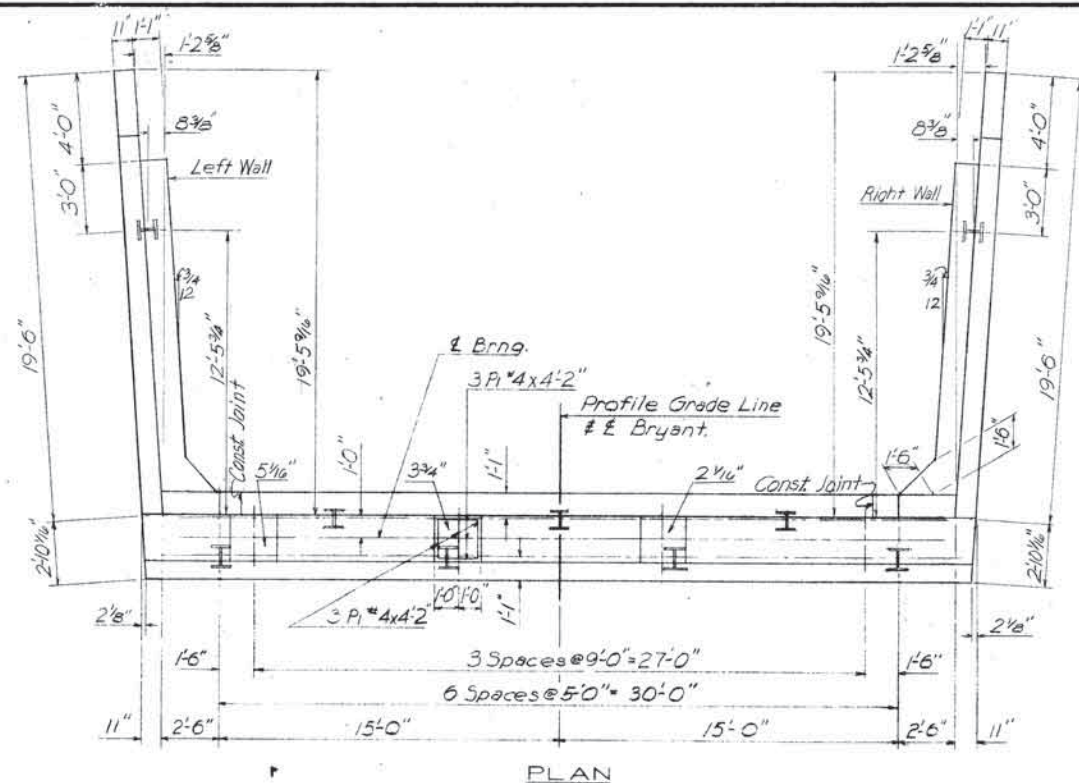


- GENERAL PIER NOTES
- All Construction and Materials shall be in accordance with the 1967 Edition of the Okla. Std. Specifications and Special Provisions.
  - All Exposed Concrete edges shall have a 1 1/2" Chamfer unless otherwise noted. Pedestals shall have a 3/4" Chamfer.
  - Elevations of Pier Footings shall not be changed except by written instructions from Resident Engineer. However, any variation required in the Pier height due to adjustment of the Elevation of the Pier Footing will be made in the height of the first lift of the Pier.
  - All Concrete shall be poured in the dry.
  - Clearance on Reinforcing Steel is 2" unless otherwise noted.
  - Concrete in the Footings of the Piers shall be poured against the Firm Foundation. The quantity of Class A Concrete and Substructure Excavation Rock paid for under these items shall be the amount within the neat lines of the Footings as shown on these Plans. Any variation in the Elevation of Pier Bases shall be taken care of in the Columns. All cost of such variation shall be included in the Unit Price Bid Per Cubic Yard for Class A Concrete.

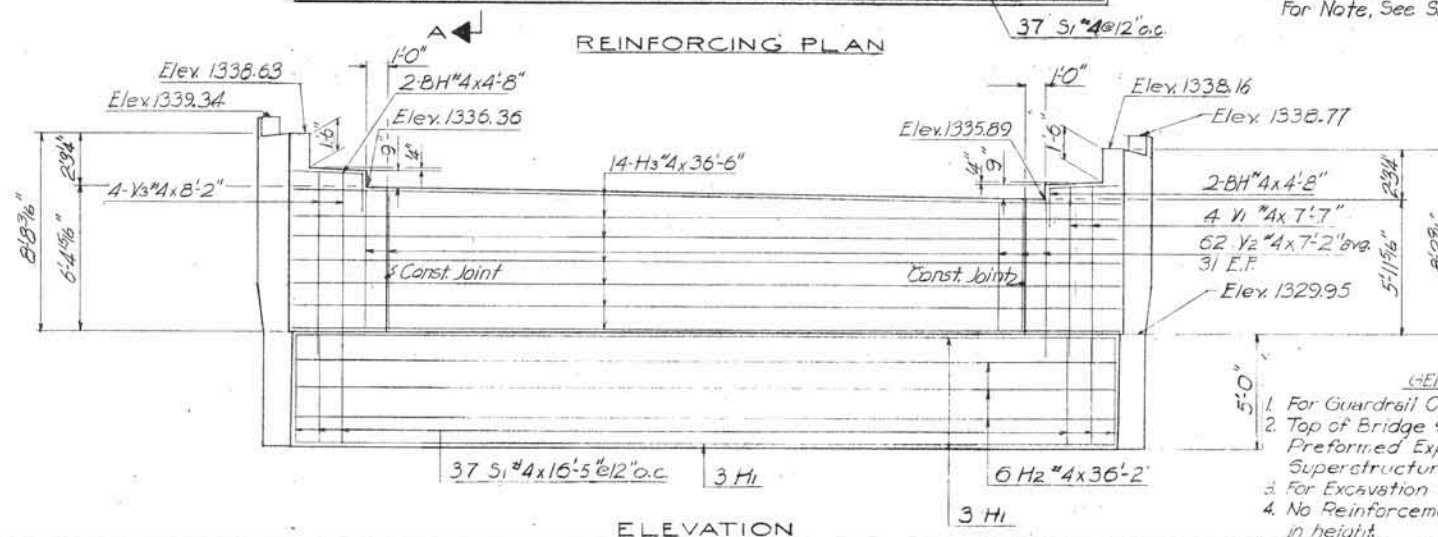
QUANTITIES		
ITEM	UNIT	TOTAL
Class "A" Concrete	C.Y.	34.0
Reinforcing Steel	LBS.	8200
Substr. Excav. Common	C.Y.	85
Substr. Excav. Rock	C.Y.	6.8

Design		STRUCTURE NO. 83 - BRYANT
Drawn		PIER DETAILS
Checked		2 - 100' CONTINUOUS PLATE GIRDER SPANS
Approved		30' CL. RDY. W/2'-6" S.W. BOTH SIDES
Squad		STA. 534+70.14-SURVEY LINE
		Project No. 1-240-4(86)157 Sheet No. 155





BAR LIST				
MARK	SIZE	FORM	NO	LENGTH
H1	#8	STR	6	36'-2"
H2	#4	STR	6	36'-2"
H3	#4	STR	14	36'-6"
BH	#4	BNT	4	4'-6"
WH1	#8	STR	10	17'-2"
WH2	#4	STR	12	17'-2"
WH3	#4	STR	8	16'-6"
WH5	#4	STR	28	19'-2"
WH6	#4	STR	10	5'-0"
WV3	#5	STR	12	7'-10" Ave
WV4	#5	STR	12	7'-3" Ave
WV5	#4	STR	32	9'-9"
WV6	#4	STR	32	9'-2"
WV7	#5	STR.	15	9'-9"
WV8	#5	STR	15	9'-2"
WV9	#5	STR	2	7'-11"
WV10	#5	STR	2	7'-4"
S1	#4	BNT	37	16'-5"
S2	#4	BNT	30	13'-6"
P1	#4	BNT	18	4'-0"
V1	#4	STR	4	7'-7"
V2	#4	STR	62	7'-2" Av
V3	#4	STR	4	8'-2"
U	#4	BNT	8	5'-6"
L	#4	BNT	6	5'-2"



- GENERAL ABUTMENT NOTES
1. For Guardrail Connection details, refer to Sht. No. **137** Pl. "4 x 4'-2"
  2. Top of Bridge Seat to have a Trowel Finish. Place  $\frac{1}{2}"$  Preformed Expansion Joint Filler (T22.01) between Superstructure and Wing Walls @ ends of Superstructure.
  3. For Excavation Diagram & Notes see Sht. No. **131**
  4. No Reinforcement required for Pedestals less than 2' in height.

QUANTITIES		
ITEM	UNIT	TOTAL
Class "A" Concrete	C.Y.	53.2
Reinforcing Steel	Lbs.	4170
Substr. Excar. Common	C.Y.	73
10 BP42 Piles W/o Tips	L.F.	166

Design		
Drawn		
Checked		
Approved		
Squad		

STRUCTURE NO. 83 - BRYANT  
ABUTMENT NO. 1 DETAILS

2 - 100' CONTINUOUS PLATE GIRDER SPANS  
30' CL. RDY. W/2'-6" S.W. BOTH SIDES  
STA. 534+70.14-SURVEY LINE

Project No. I-240-4(86)157 Sheet No. 156



Hand-drawn structural cross-section of a wall and floor assembly. The wall is shown on both sides, with vertical reinforcement bars (5 WH1 #4 x 5'-0" and 5 WH1) and horizontal reinforcement bars (6 H2 and 6 WH2). The floor slab is in the center, with vertical reinforcement bars (3 H1 #8 x 36'-2" and 3 H1 #8 x 36'-2") and horizontal reinforcement bars (S2 #12" o.c.). Section lines A-A and B-B are indicated with arrows.

[illegible]

32-WV6 4x9'-9" @ 12" o.c. E.F. Rt.

32-WV6 4x9'-2" @ 12" o.c. E.F. Lt.

15-WV7 5x9'-9" @ 12" o.c. Rd. F. Rt.

15-WV6 5x9'-2" @ 12" o.c. Rd. F. Lt.

5-WH1 8x17'-2"

7'-4 1/2" Rt. Wing

6'-9 1/2" Lt. Wing

12-WV8 5x7'-10" avg. 6 E.F. (7'-1" to 8'-7") Rt. Wing

12-WV4 5x7'-3" avg. 6 E.F. (6'-6" to 8'-0") Lt. Wing

2-WV9 5x7'-11" 1 E.F. Rt. Wing

2-WV10 5x7'-4" 1 E.F. Lt. Wing

4'-0"

4-WH3 4x16'-5" avg. 2 E.F.

15-S2 4x13'-6" @ 12" o.c.

2'-0"

Hand-drawn structural drawings of a wall section, showing two views: a side elevation and a cross-section labeled "SECTION A-A".

**Side Elevation (Left):**

- Top width: 1'-11"
- Reinforcement: 2 WVs, 12 WHs, 4 WH3, 5 WH1, 6 WH2
- Dimensions: 1'-0", 2'-0", 5'-0", 1'-6"
- Bottom width: 1'-0", 2'-0"
- Reinforcement spacing: S2 @ 12" o.c.

**Cross-section (Right):**

- Top width: 10", 2'-0", 1'-0"
- Reinforcement: H3, 3 H1, 6 H2, 3 H1
- Dimensions: 2", 1'-6", 1'-8", 1'-1", 3'-10", 5'-0"
- Reinforcement spacing: S1 @ 12" o.c.

**Annotations:**

- Const. Joint See Note Sh. No. 129
- Temporary 3" x 12" Bumpers Removed upon Application of Rdy. Surfacing

SECTION A-A

Diagram of a 4x13.6 S2 steel beam. The height is 4'-8", the width is 1'-8", and the flange thickness is 5".



GENERAL ABUTMENT NOTES:

1. For Guardrail Connection details, refer to Sht. No.137
2. Top of Bridge Seat to have a Trowel Finish. Place  $\frac{1}{2}$ "  
Preformed Expansion Joint Filler (722.01) between  
Superstructure and Wing Walls @ ends of Superstructure.
3. For Excavation Diagram & Notes see Sht. No.131
4. No Reinforcement required for Pedestals less than 2'  
in height.

QUANTITIES		
ITEM	UNIT	TOTAL
Class "A" Concrete	C.Y.	532
Reinforcing Steel	Lbs.	4170
Substr. Excav. Common	C.Y.	73
10 BP42 Piles w/o Tips	L.F.	193

Design		
Drawn		
Checked		
Approved		
Squad		

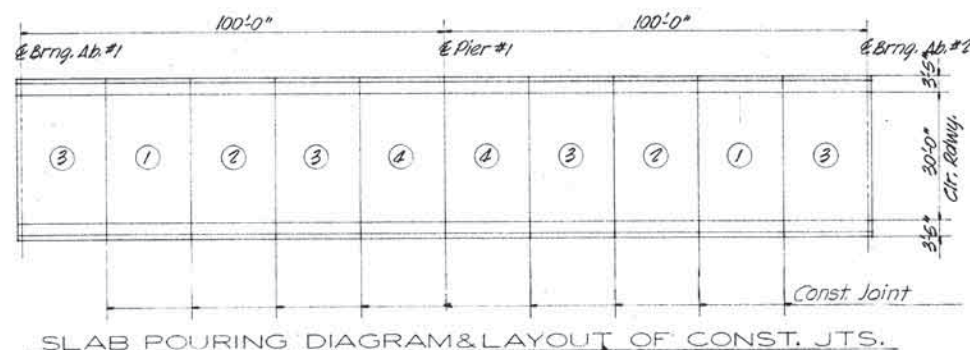
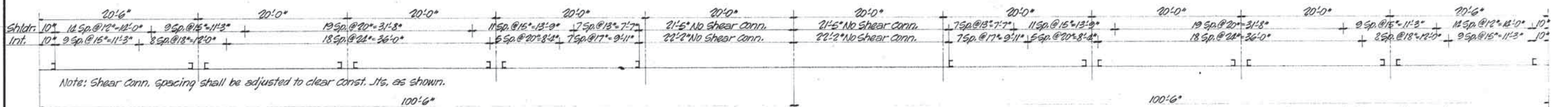
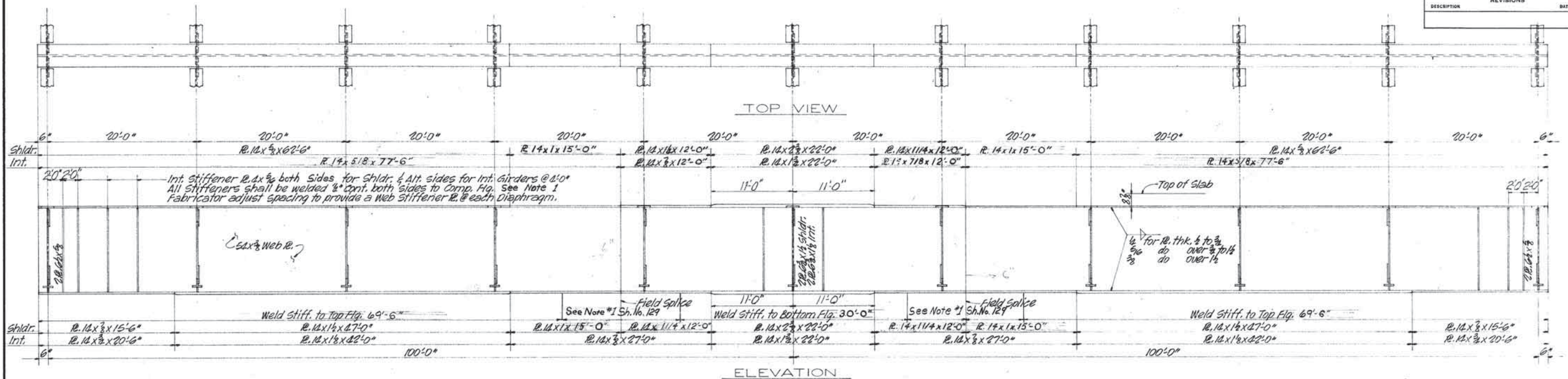
STRUCTURE NO. 83 - BRYANT  
ABUTMENT NO. 2 DETAIL:

2 - 100' CONTINUOUS PLATE GIRDER SPANS  
30' CL. RDY. W/2'-6" S.W. BOTH SIDES  
STA. 534+70.14-SURVEY LINE

Project No. I-240-4(86)157 Sheet No. 157

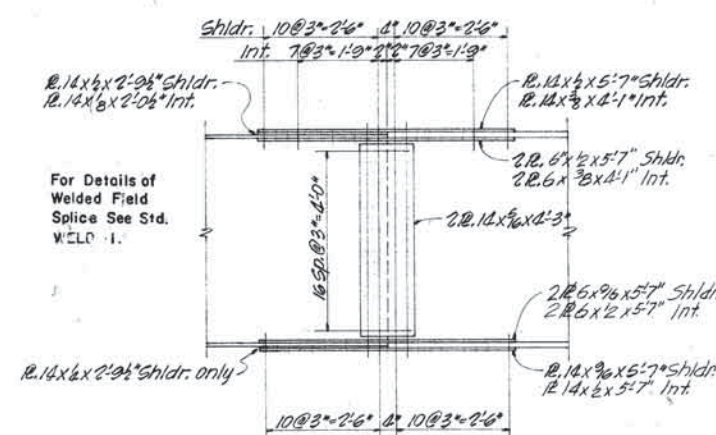


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
REVISIONS					DATE
DESCRIPTION					



### SLAB POURING ORDER

Panels bearing the same number will be considered a "group" and should be poured in the same days pour. Panels shall be poured in order of numbering shown. More than one "group" may be poured in the same day but no "group" shall be started until pour is completed on the preceding "group". The purpose of these restrictions is to insure that loading and deflections of entire series will be kept symmetrically balanced about center line of series during any protracted intervals between pours.



NOTE: Girders shown on this sheet are drawn, and dimensions shown, as if the top flange of Girders were in a truly horizontal position. No accounting has been made in this drawing for grade or camber. Shop drawings will include such adjustments as are necessary to provide for vertical curvature and dead load deflection.



NOTE: Weight of conc. alone is accountable for 88% of the total deflection. The Web R. of Girders shall be fabricated with camber for D.L. Deflection & Vertical Curve.

† See Concrete in Haunches note sheet no. 129.

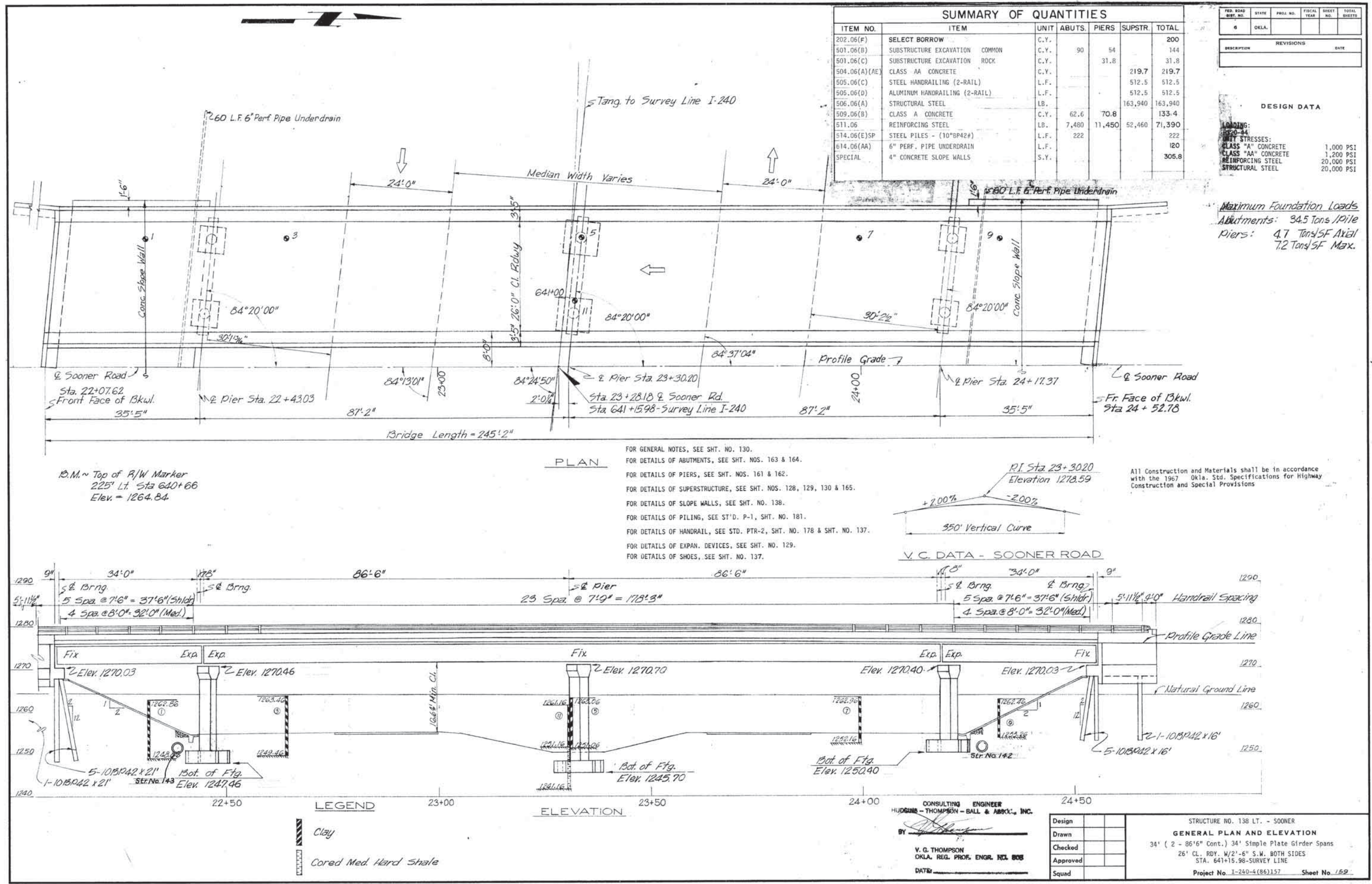
### HAUNCH DETAIL

\* The Quantity shown for Structural Steel includes 8,870# for bolted splices and 7.25 E Shear Connectors, the pay weight will be based on actual material used for bolted or welded splices.

SUPERSTRUCTURE QUANTITIES		
ITEM	UNIT	TOTAL
Handrail	Lin. Ft.	470.00
Class AA Concrete	C.Y.	210.20
Reinforcing Steel	Lbs.	51,510
Structural Steel	Lbs.	169,330

Design		STRUCTURE NO. 83 - BRYANT
Drawn		STRUCTURAL STEEL DETAILS
Checked		2 - 100' CONTINUOUS PLATE GIRDER SPANS
Approved		30' CL. RDY. W/2'-6" S.W. BOTH SIDES
Squad		STA. 534+70.14-SURVEY LINE
		Project No. I-240-4(85)157 Sheet No. 150





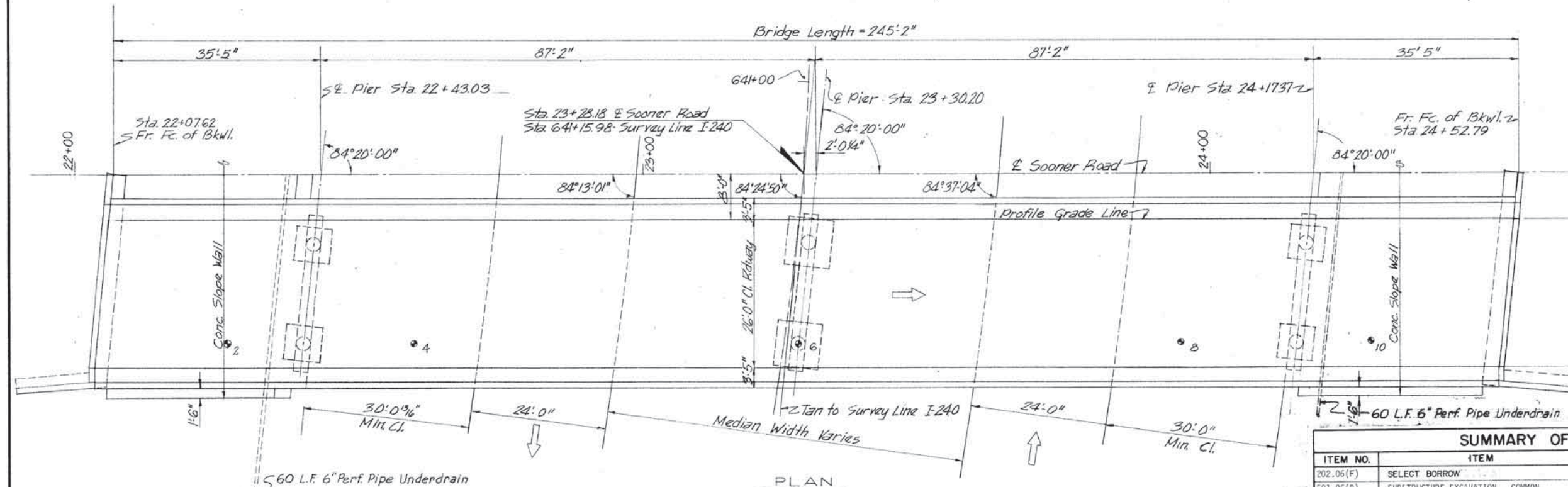


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
REVISIONS					DATE

# DESIGN DATA

LOADING:  
HS20-44  
UNIT STRESSES:  
CLASS "A" CONCRETE 1,000 PSI  
CLASS "AA" CONCRETE 1,200 PSI  
REINFORCING STEEL 20,000 PSI  
STRUCTURAL STEEL 20,000 PSI

Maximum Foundation Loads  
Abutments: 34.5 Tons/Pile  
Piers: 4.7 Tons/5F Axial  
5.7 Tons/5F Max.

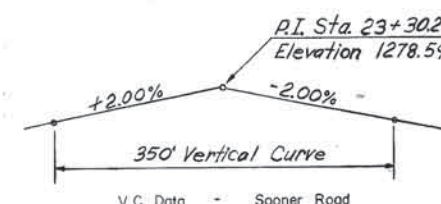


PLAN

B.M. ~ Top of P/W Marker  
225' Lt. Sta. 640+66  
Elev. = 1264.84

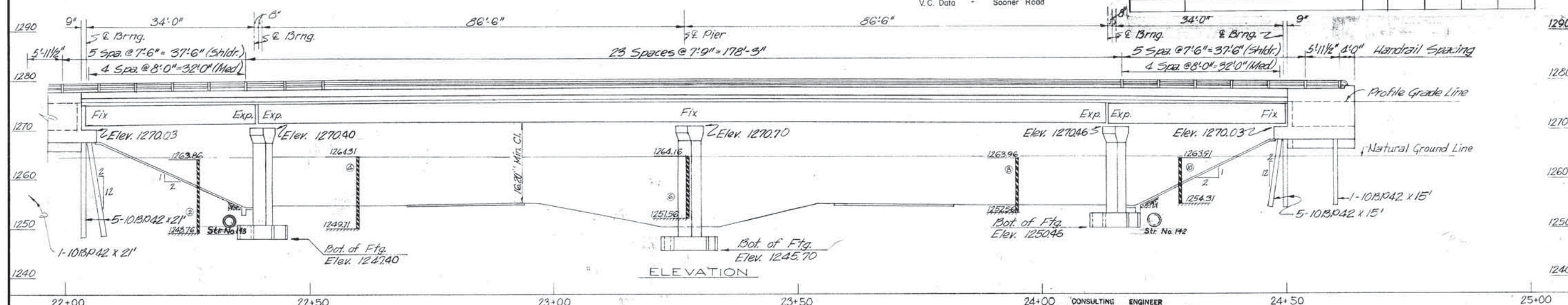
FOR GENERAL NOTES, SEE SHT. NO. 130.  
FOR DETAILS OF ABUTMENTS, SEE SHT. NOS. 163 & 164.  
FOR DETAILS OF PIERS, SEE SHT. NOS. 161 & 162.  
FOR DETAILS OF SUPERSTRUCTURE, SEE SHT. NOS. 128, 129, 130 & 165.  
FOR DETAILS OF SLOPE WALLS, SEE SHT. NO. 138.  
FOR DETAILS OF PILING, SEE STD. P-1, SHT. NO. 181.  
FOR DETAILS OF HANDRAIL, SEE STD. PTR-2, SHT. NO. 178 & SHT. NO. 137.  
FOR DETAILS OF EXPAN. DEVICES, SEE SHT. NO. 129.  
FOR DETAILS OF SHOES, SEE SHT. NO. 137.

All Construction and Materials shall be in accordance with the 1967 Okla. Std. Specifications for Highway Construction and Special Provisions



# SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	ABUTS.	PIERS	SUPSTR.	TOTAL
202.06(F)	SELECT BORROW	C.Y.				200
501.06(B)	SUBSTRUCTURE EXCAVATION - COMMON	C.Y.	90	54		144
501.06(C)	SUBSTRUCTURE EXCAVATION - ROCK	C.Y.		33.1		33.1
504.06(A)(AE)	CLASS AA CONCRETE	C.Y.			219.7	219.7
505.06(C)	STEEL HANDRAILING (2-RAIL)	L.F.			512.5	512.5
505.06(D)	ALUMINUM HANDRAILING (2-RAIL)	L.F.			512.5	512.5
506.06(A)	STRUCTURAL STEEL	LB.			163,940	163,940
509.06(B)	CLASS A CONCRETE	C.Y.	62.6	70.8		133.4
511.06	REINFORCING STEEL	LB.	7,480	11,450	52,460	71,390
514.06(E)SP	STEEL PILES (10"BP42#)	L.F.	216			216
614.06(AA)	6" PERF. PIPE UNDERDRAIN	L.F.				120
SPECIAL	4" CONCRETE SLOPE WALLS	S.Y.				305.8



ELEVATION

# LEGEND

Clay

CONSULTING ENGINEER  
HUDGINS - THOMPSON - BALL & ASSOC., INC.

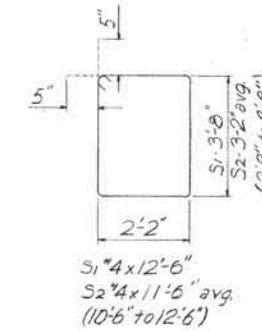
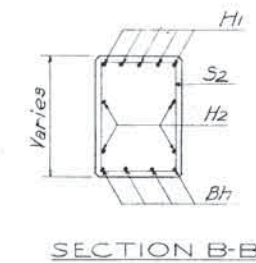
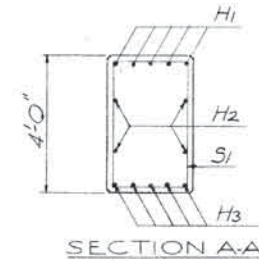
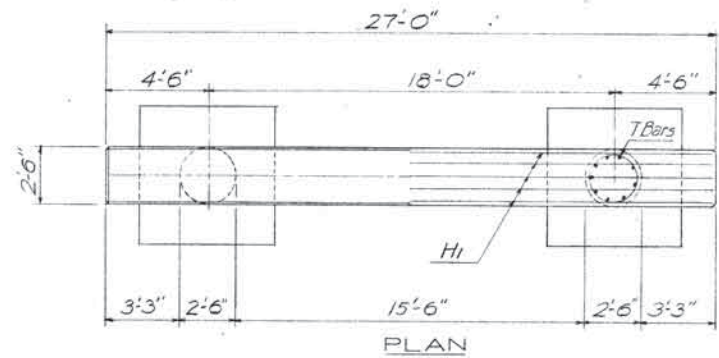
BY *[Signature]*  
V. Q. THOMPSON  
OKLA. REG. PROF. ENGR. NO. 308  
DATE: \_\_\_\_\_

Design	
Drawn	
Checked	
Approved	
Squad	

STRUCTURE NO. 138 RT. - SOONER  
GENERAL PLAN AND ELEVATION  
34' (2 - 86'-6" Cont.) 34' Simple Plate Girder Spans  
26' CL. RDY. W/2'-6" S.W. BOTH SIDES  
STA. 641+15.98-SURVEY LINE  
Project No. I-240-4(86)137 Sheet No. 160

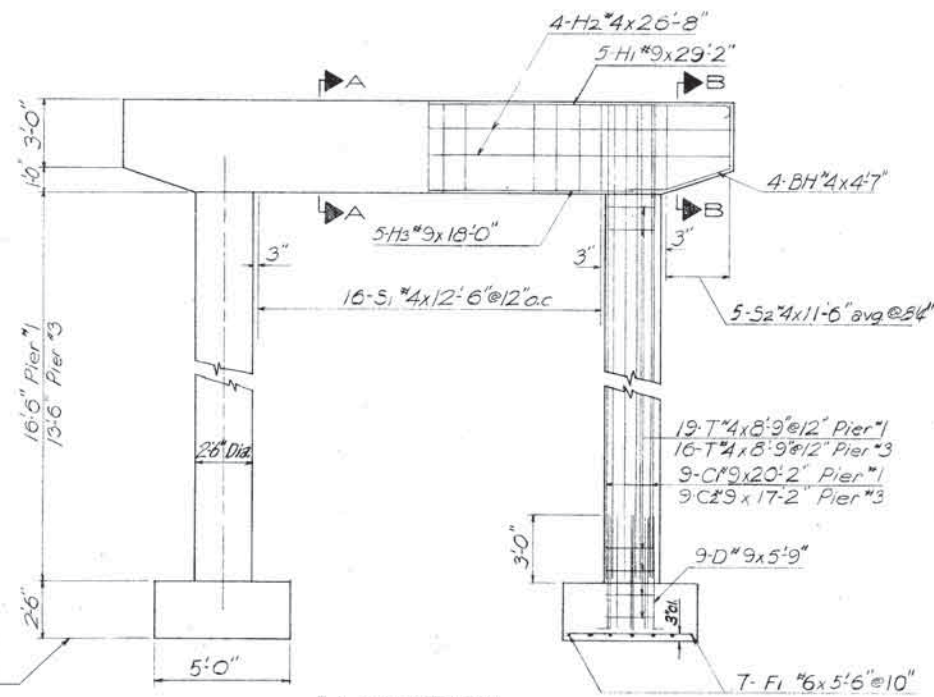


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
REVISIONS					
DESCRIPTION	REVISIONS		DATE		



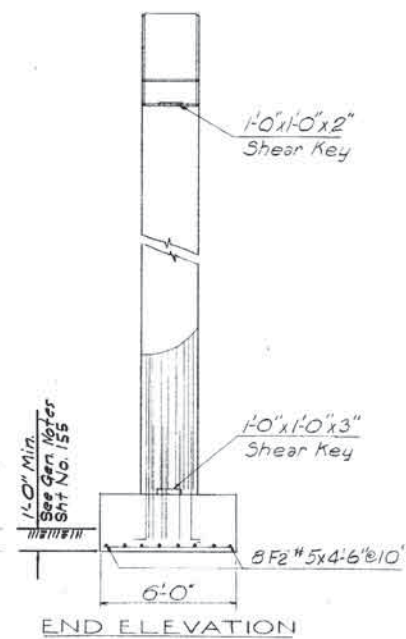
*BAR LIST FOR ONE PIER					
MARK	SIZE	FORM	NO.	LENGTH	
H1	#9	Bnt.	5	29'-2"	
H2	#4	Str.	4	26'-8"	
H3	#9	Str.	5	18'-0"	
BH	#4	Bnt.	8	4'-7"	
S1	#9	Bnt.	18	5'-9"	
S2	#4	Bnt.	16	12'-6"	
F1	#6	Str.	14	5'-6"	
P1	#4	Bnt.	6	4'-8"	
P2	#4	Bnt.	6	4'-2"	
F2	#5	Str.	16	4'-6"	

\*FOUR REQUIRED

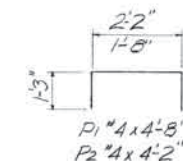
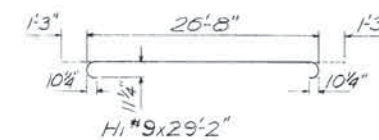
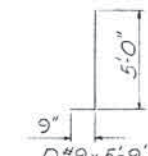
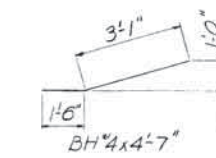


Elev. 1247.46 Pier #1 Lt.  
Elev. 1247.40 Pier #1 Rt.  
Elev. 1250.40 Pier #3 Lt.  
Elev. 1250.46 Pier #3 Rt.

ELEVATION

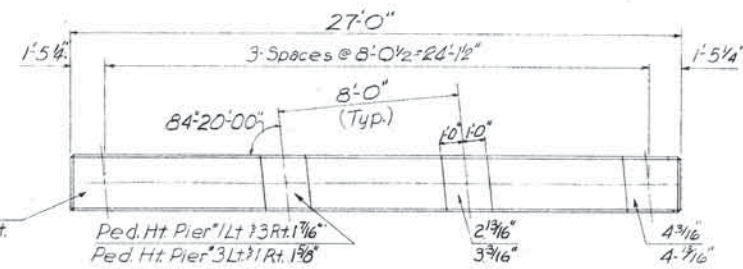


END ELEVATION



*BAR LIST PIER NO. 1 - LEFT OR RIGHT					
MARK	SIZE	FORM	NO.	LENGTH	
C1	#9	Str.	18	20'-2"	
T	#4	Bnt.	38	8'-9"	

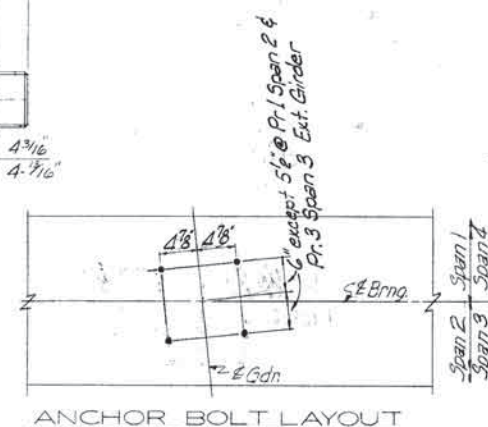
\*TWO REQUIRED



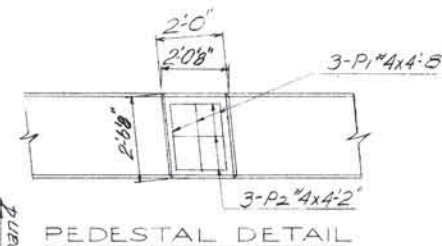
Top of Pier  
Elev. 1270.46 Pier #1 Lt. & 3 Rt.  
Elev. 1270.40 Pier #1 Rt.  
Elev. 1270.40 Pier #3 Lt.  
Elev. 1270.40 Pier #3 Lt.

Ped. Ht. Pier #1 Lt. & 3 Rt. 1'-6"  
Ped. Ht. Pier #3 Lt. & 1 Rt. 1'-6"

PEDESTAL PLAN  
(Lt. Str. Shown, Rt. Str. opp. Hand)



ANCHOR BOLT LAYOUT



PEDESTAL DETAIL

NOTE: No reinforcing is required in pedestals less than 2' in height.

*BAR LIST PIER NO. 3 - LEFT OR RIGHT					
MARK	SIZE	FORM	NO.	LENGTH	
C2	#9	Str.	18	17'-2"	
T	#4	Bnt.	32	8'-9"	

\*TWO REQUIRED

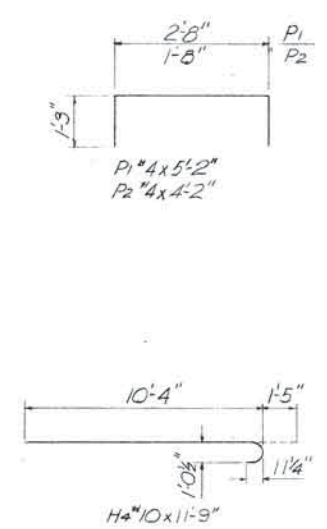
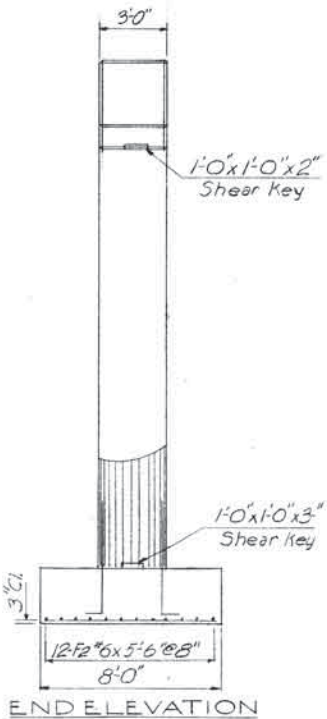
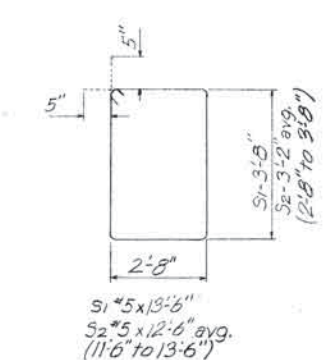
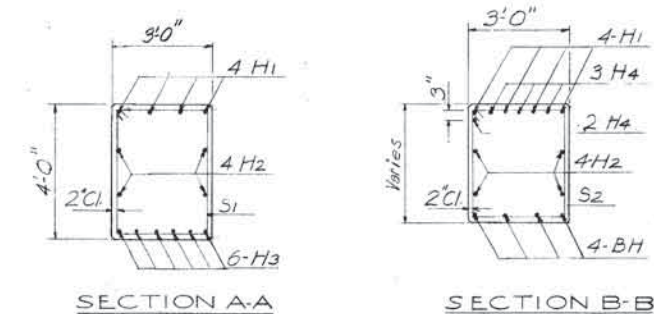
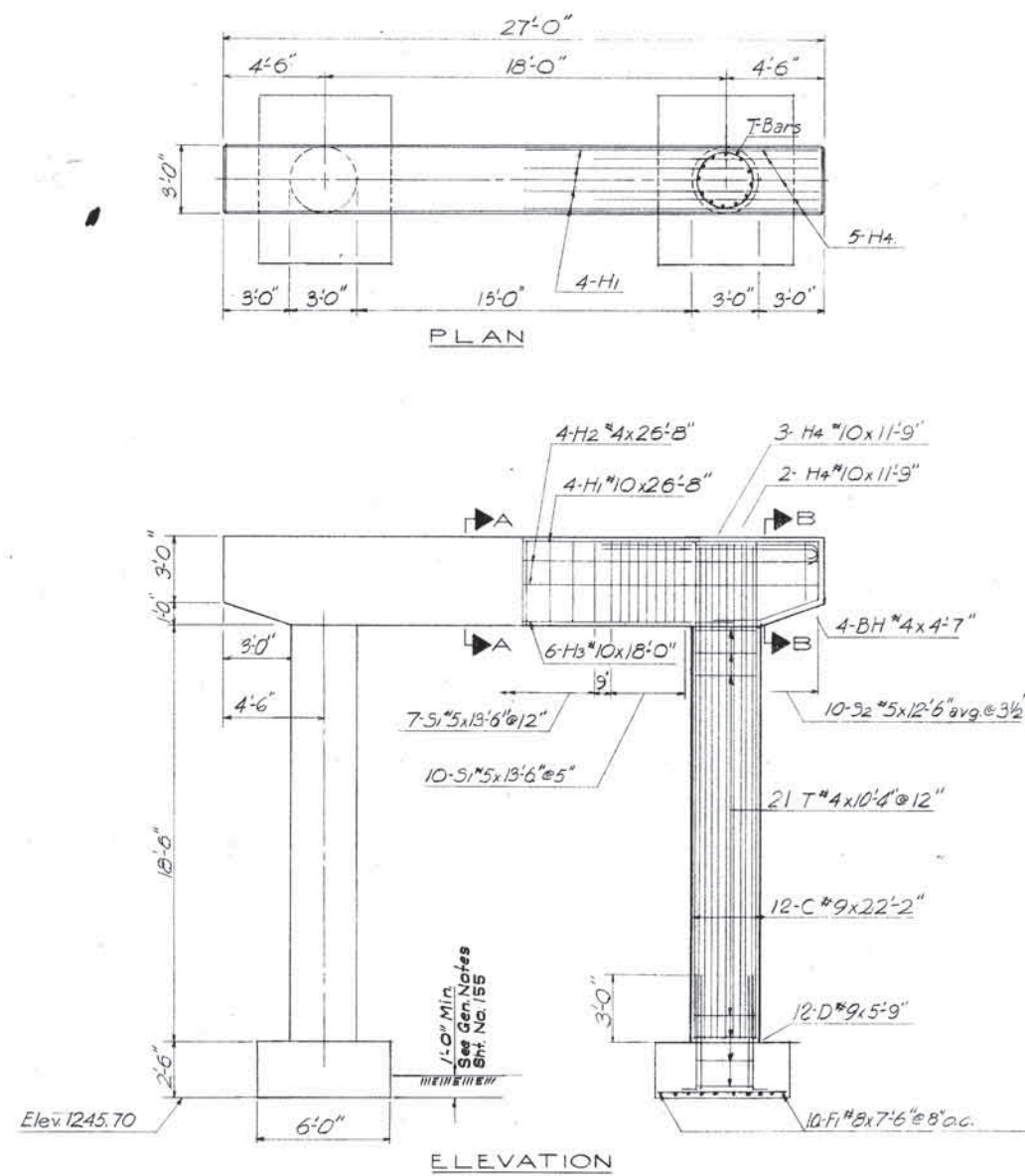
QUANTITIES						
ITEM	UNIT	Pier #1 Lt.	Pier #1 Rt.	Pier #3 Lt.	Pier #3 Rt.	
Class "A" Concrete	C.Y.	21.3	21.3	20.2	20.2	
Reinforcing Steel	Lbs.	3140	3140	2920	2920	
Substr. Excav. Common	C.Y.	4.3	4.4	11	10	
Substr. Excav. Rock	C.Y.	4.3	4.3	6.7	8.0	

For General Pier Notes, See Sheet No. 155

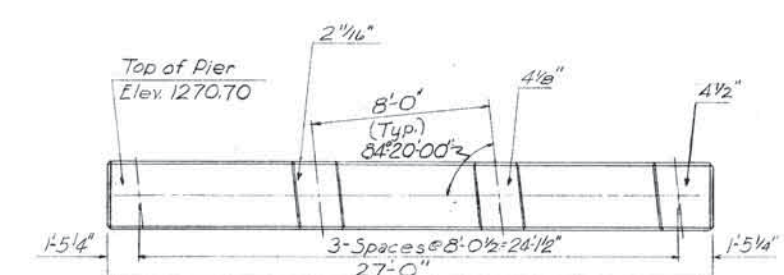
Design		STRUCTURE NOS. 138 LT. & RT. - SOONER
Drawn		PIER NOS. 1 AND 3 DETAILS
Checked		34' (2 - 86'-6" Cont.) 34' Simple Plate Girder Spans
Approved		26' CL. RDY. W/2'-6" S.W. BOTH SIDES
Squad		STA. 641+15.98-SURVEY LINE
Project No. I-240-4(86)157 Sheet No. 161		



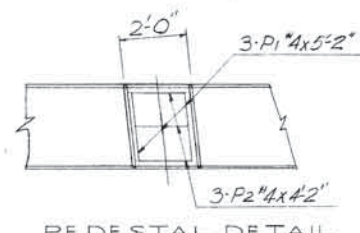
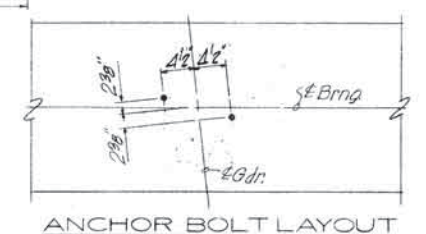
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
REVISIONS					DATE
DESCRIPTION					



BAR LIST FOR ONE PIER				
MARK	SIZE	FORM NO.	NO.	LENGTH
H1	#10	STR	4	26'-8"
H2	#4	STR	4	26'-8"
H3	#10	STR	6	18'-0"
H4	#10	BNT	10	11'-9"
BH	#4	BNT	8	4'-7"
D	#9	BNT	24	5'-9"
T	#4	STR	42	10'-4"
C	#9	STR	24	22'-2"
S1	#5	BNT	27	13'-6"
S2	#5	BNT	20	12'-6"
F1	#8	STR	20	7'-6"
F2	#6	STR	24	5'-6"
P1	#4	BNT	9	5'-2"
P2	#4	BNT	9	4'-2"



**PEDESTAL PLAN**  
(Lt. St. Shown, Rt. Str. opp. Hand)  
NOTE: No reinforcing is required in pedestals less than 2' in height



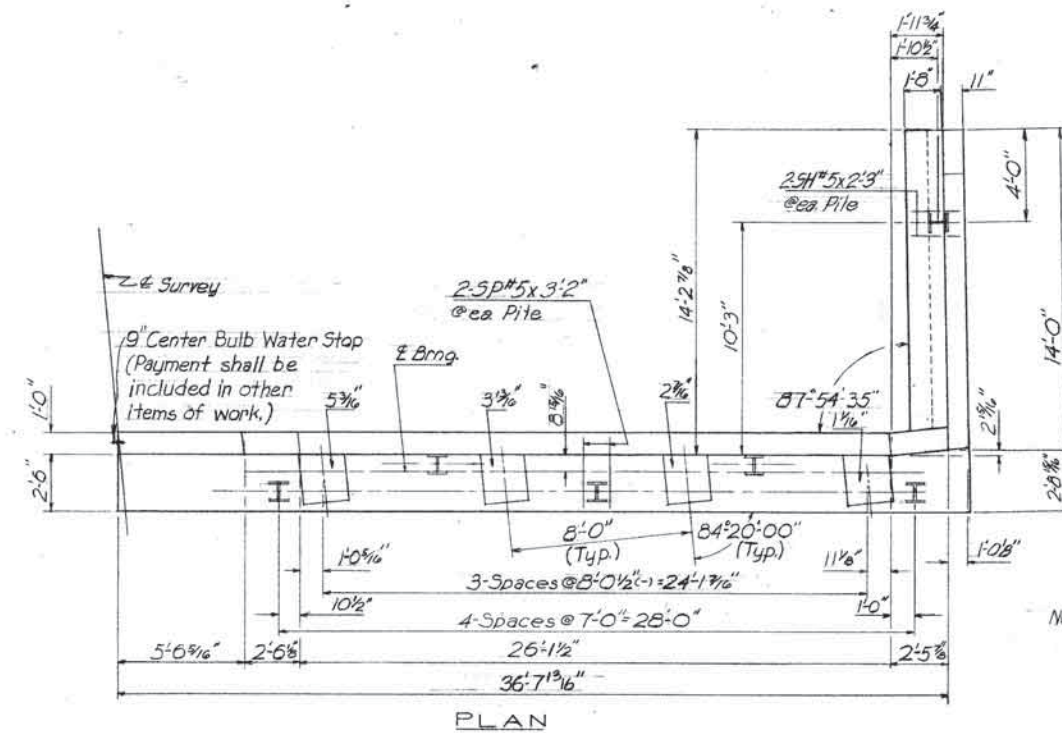
QUANTITIES			
ITEM	UNIT	Pier 2 Rt.	Pier 2 Lt.
Class "A" Concrete	C.Y.	29.9	29.9
Reinforcing Steel	Lbs.	5,390	5,390
Substr. Excav. Common	C.Y.		
Substr. Excav. Rock	C.Y.	20.8	20.8

For General Pier Notes, See Sheet No. 155

Design		STRUCTURE NOS. 138 LT. & RT. - SOONER
Drawn		PIER NO. 2 DETAILS
Checked		34' (2 - 86'-6" Cont.) 34' Simple Plate Girder Spans
Approved		26' CL. RDY. W/2'-6" S.W. BOTH SIDES
Squad		STA. 641+15.98-SURVEY LINE



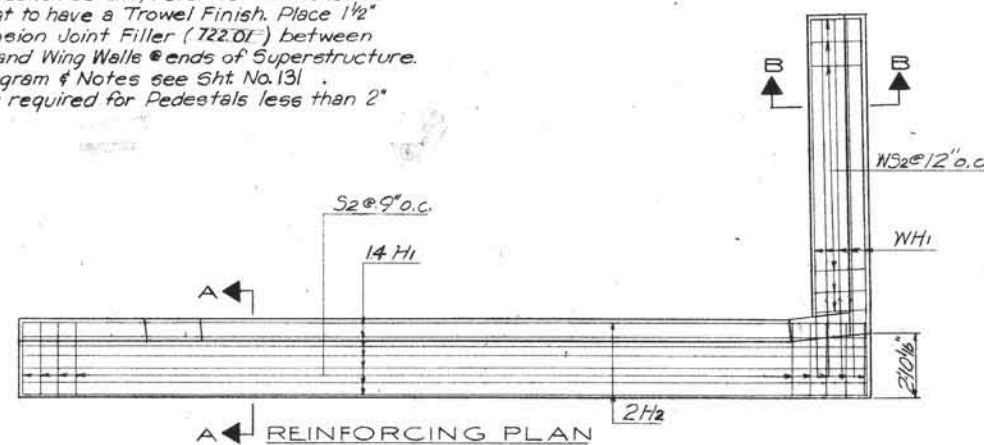
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-240-4 (86)157		163	
REVISIONS					DATE
Added Const. Jt. in Bkwall G.M. 1-8-70					



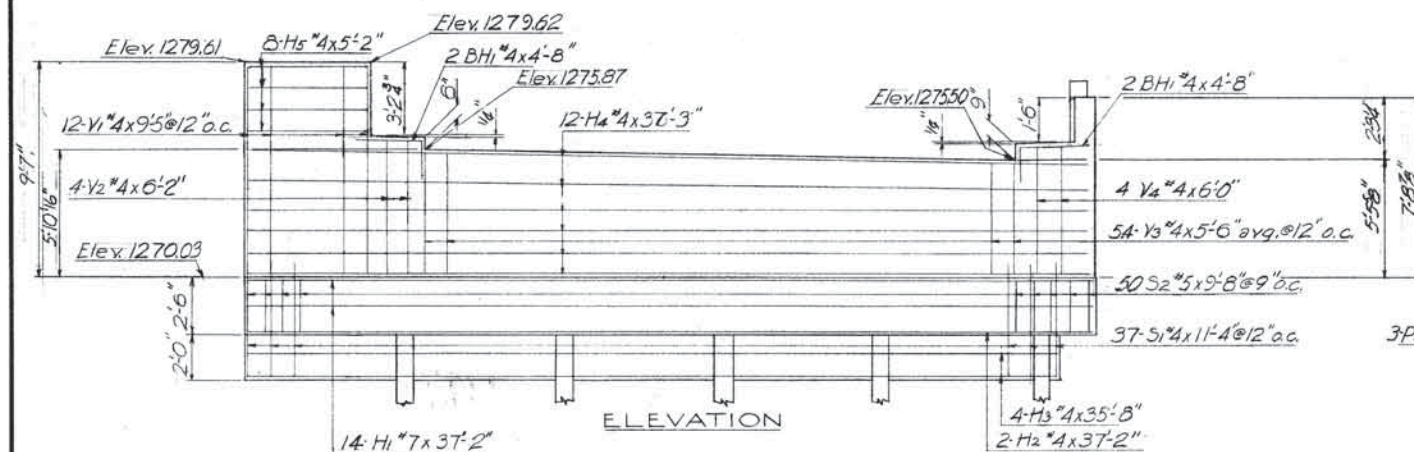
PLAN

#### GENERAL ABUTMENT NOTES

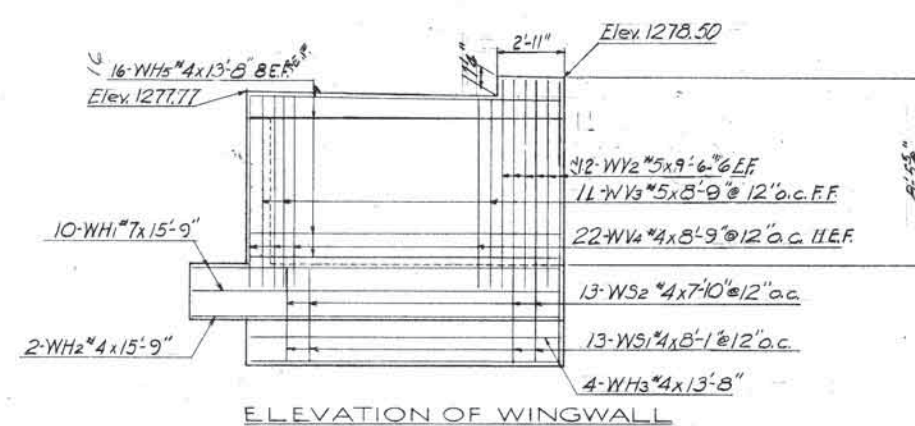
- For Guardrail Connection details, refer to Sht. No. 137.
- Top of Bridge Seat to have a Trowel Finish. Place 1 1/2" Preformed Expansion Joint Filler (722.0F) between Superstructure and Wing Wall @ ends of Superstructure.
- For Excavation Diagram & Notes see Sht. No. 131.
- No Reinforcement required for Pedestals less than 2' in height.



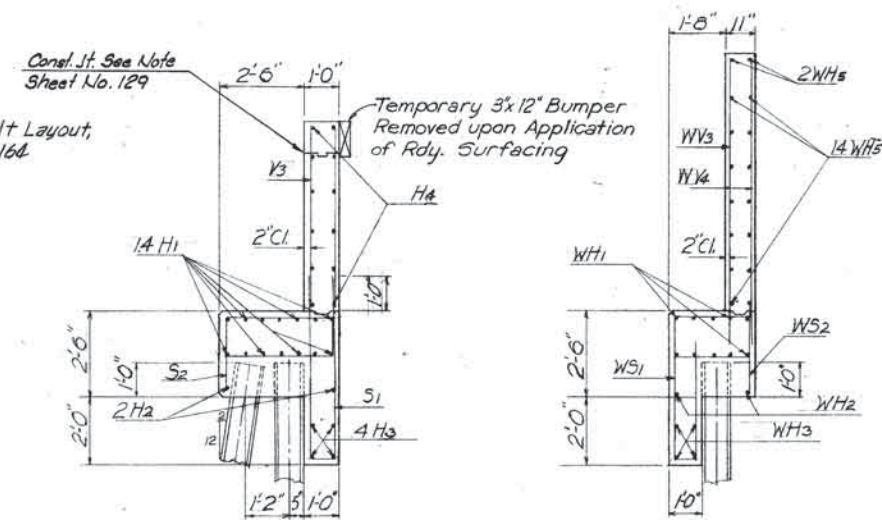
REINFORCING PLAN



ELEVATION

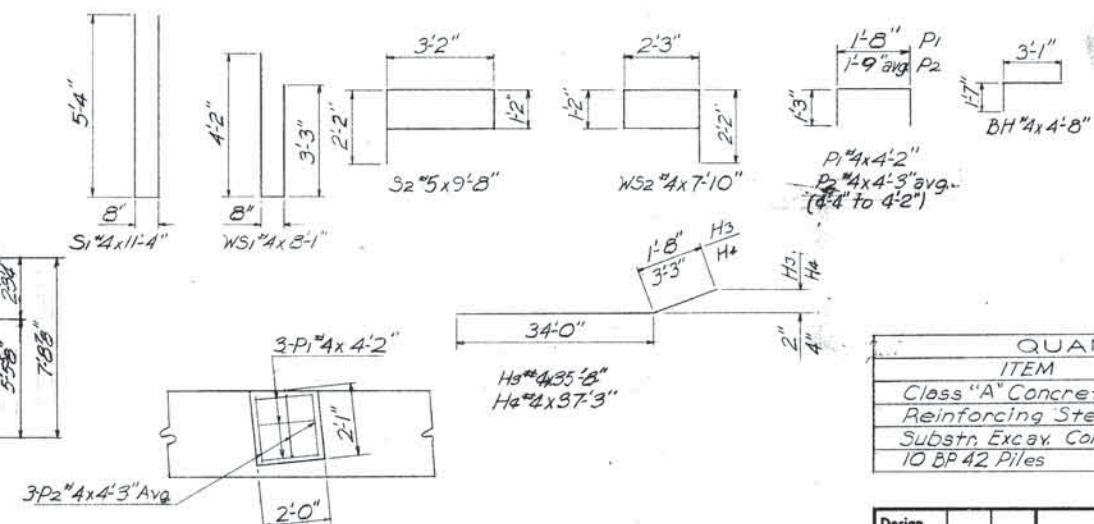


ELEVATION OF WINGWALL



SECTION A-A

SECTION B-B



PEDESTAL DETAIL

BAR LIST				
MARK	SIZE	FORM	NO	LENGTH
H1	#7	STR	14	37'-2"
H2	#4	STR	2	37'-2"
H3	#4	BNT	4	35'-8"
H4	#4	BNT	12	37'-3"
H5	#4	STR	8	5'-2"
BH1	#4	BNT	4	4'-8"
WH1	#7	STR	10	15'-9"
WH2	#4	STR	2	15'-9"
WH3	#4	STR	4	13'-8"
WH5	#4	STR	16	13'-8"
WV2	#5	STR	12	9'-6" @ 12"
WV3	#5	STR	11	8'-9"
WV4	#4	STR	22	8'-9"
V1	#4	STR	12	9'-5"
V2	#4	STR	4	6'-2"
V3	#4	STR	54	5'-5" AVG.
S1	#4	BNT	37	11'-4"
S2	#5	BNT	50	9'-8"
WS1	#4	BNT	13	8'-1"
WS2	#4	BNT	13	7'-10"
P1	#4	BNT	9	4'-2"
P2	#4	BNT	9	4'-3" AVG.
U	#4	BNT	4	5'-6"
L	#4	BNT	3	5'-7"
SH	#5	STR	2	2'-3"
SP	#5	STR	10	3'-2"
V4	#4	STR	4	6'-0"

QUANTITIES			
ITEM	UNIT	*1 Lt.	*2 Rt.
Class "A" Concrete	C.Y.	31.4	31.4
Reinforcing Steel	Lbs.	3740	3740
Substr. Excav. Common	C.Y.	45	45
10 BP 42 Piles	L.F.	126	90

Design		STRUCTURE NOS. 138 LT. & RT. - SOONER
Drawn		ABUT. NOS. 1 LT. AND 2 RT. DETAILS
Checked		34' (2 - 86'-6" Cont.) 34' Simple Plate Girder Spans
Approved		26' CL. RDY. W/2'-6" S.W. BOTH SIDES
Squad		STA. 641+15.98-SURVEY LINE
		Project No. I-240-4 (86)157 Sheet No. 163



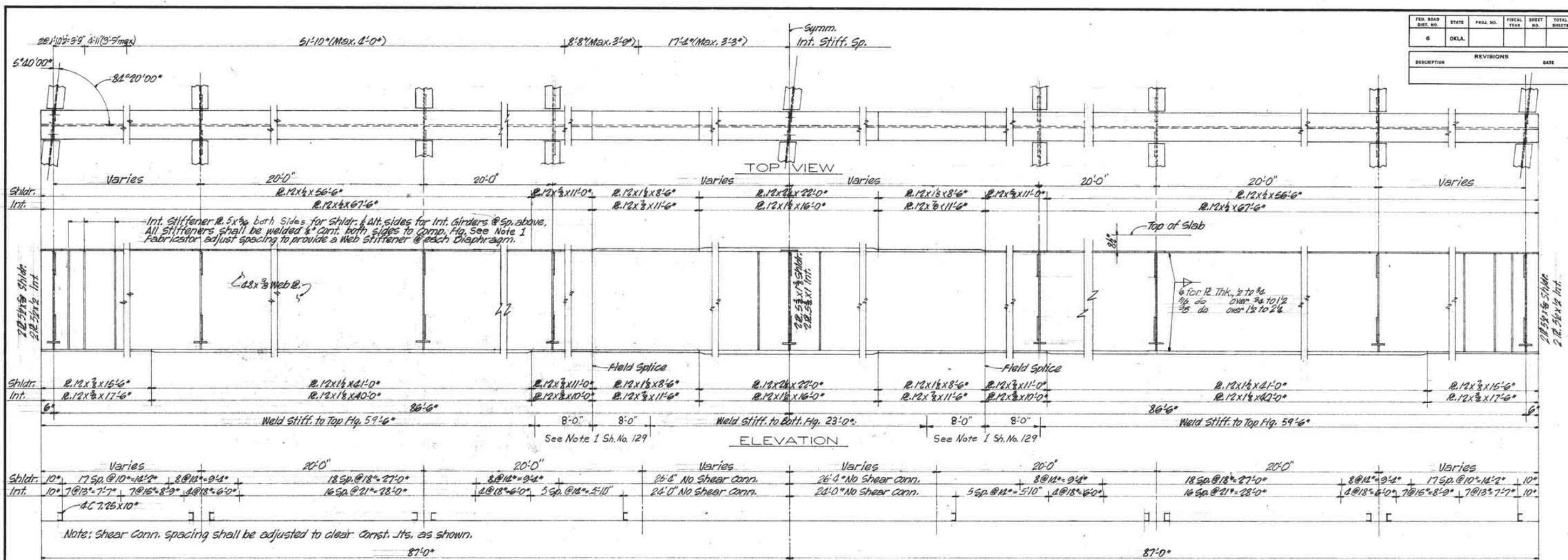


BAR LIST				
MARK	SIZE	FORM	NO.	LENGTH
H1	#7	STR	14	36'-10"
H2	#4	STR	2	36'-10"
H3	#4	BNT	4	35'-8"
H4	#4	BNT	12	37'-3"
H5	#4	STR	8	5'-2"
BH1	#4	BNT	4	4'-8"
WH1	#7	STR	10	15'-9"
WH2	#4	STR	2	15'-9"
WH3	#4	STR	4	13'-8"
WH5	#4	STR	16'	13'-8"
WV2	#5	STR	12	9'-4"
WV3	#5	STR	11	8'-9"
WV4	#4	STR	22	8'-9"
V1	#4	STR	12	9'-5"
V2	#4	STR	4	6'-2"
V3	#4	STR	54	5'-6" A
S1	#4	BNT	37	11'-4"
S2	#5	BNT	50	9'-8"
WS1	#4	BNT	13	8'-1"
WS2	#4	BNT	13	7'-10"
P1	#4	BNT	9	4'-2"
P2	#4	BNT	9	4'-3"
U	#4	BNT	4	5'-6"
L	#4	BNT	3	5'-7"
SH	#5	STR	2	2'-3"
SP	#5	STR	10	3'-2"
V4	#4	STR	4	5'-11"

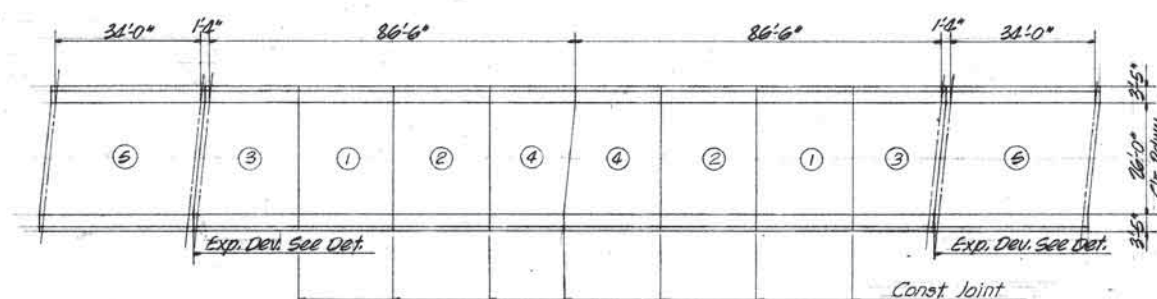
QUANTITIES			
ITEM	UNIT	*2 Lt.	*1 Rt.
Class "A" Concrete	CY	31.2	31.2
Reinforcing Steel	Lbs.	3740	3740
Substr. Excav. Common	C.Y.	45	45
10 BP 42 Piles	L.F.	96	126

Design			STRUCTURE NOS. 138 LT. & RT. - SOONER
Drawn			<b>ASBUT. NOS. 2 LT. AND 1 RT. DETAILS</b>
Checked			34' (2 - 86'-6" Cont.) 34' Simple Plate Girder Spans
Approved			26' CL. RDY. W/2'-6" S.W. BOTH SIDES
Squad			STA. 641+15.98-SURVEY LINE
			Project No. I-240-4 (86)157 Sheet No. 66





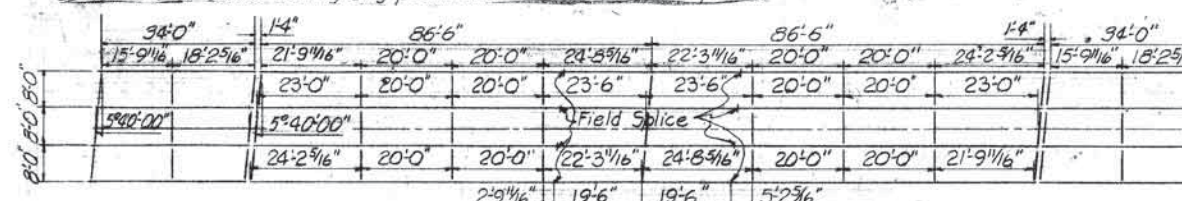
## SHEAR CONNECTOR SPACING



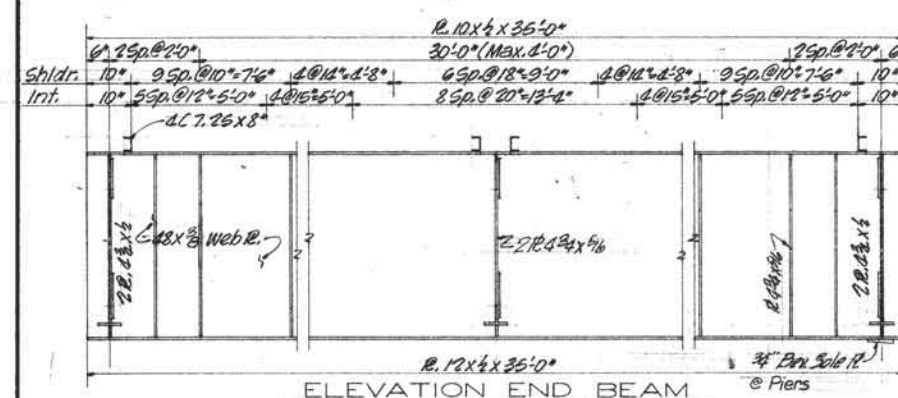
SLAB POURING DIAGRAM & LAYOUT OF CONST. JTS.

## SLAB POURING ORDER

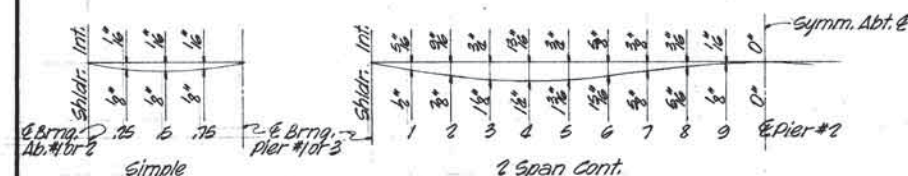
Panels bearing the same number will be considered a "group" and should be poured in the same days pour. Panels shall be poured in order of numbering shown. More than one "group" may be poured in the same day but no "group" shall be started until pour is completed on the preceding "group". The purpose of these restrictions is to insure that loading and deflections of entire series will be kept symmetrically balanced about center line of series during any protracted intervals between pours.



## STRUCTURAL STEEL LAYOUT



## ELEVATION END BEAM



## DEAD LOAD DEFLECTION DIAGRAM

Note: Weight of Conc. alone is accountable for 86% of the total Deflection. The Web & of Girders shall be fabricated with camber for D.L. Deflection/Vertical Curve.

For Details of Welded  
Field Splice See Std.  
WELD-1.

Use 3/4" High Strength Bolts

OPTIONAL FIELD SPLICE

Str. Steel Quantities includes 7925\* for Optional Field Splices & 7.25 Shear Connectors.

SUPERSTRUCTURE QUANTITIES				
	ITEM	UNIT	LT. STR.	RT. STR.
	Handrail	Lin.Ft.	512.5	512.5
†	Class "AA(AE)" Concrete	C.Y.	219.7	219.7
	Reinforcing Steel	Lbs.	52,060	52,060
*	Structural Steel	Lbs.	163,940	163,940

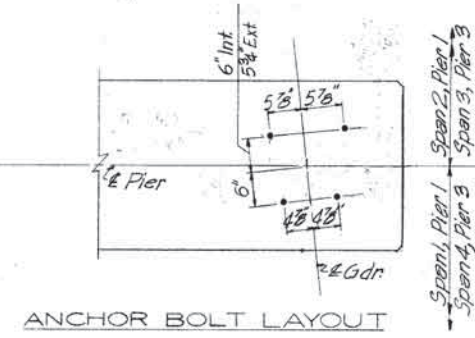
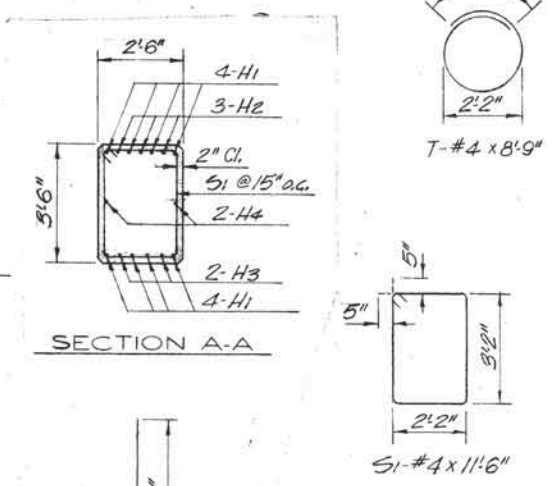
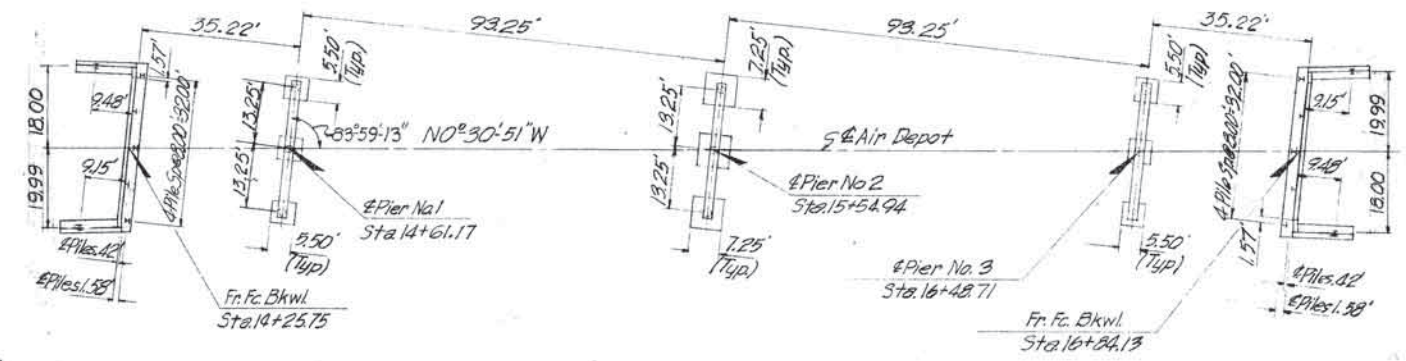
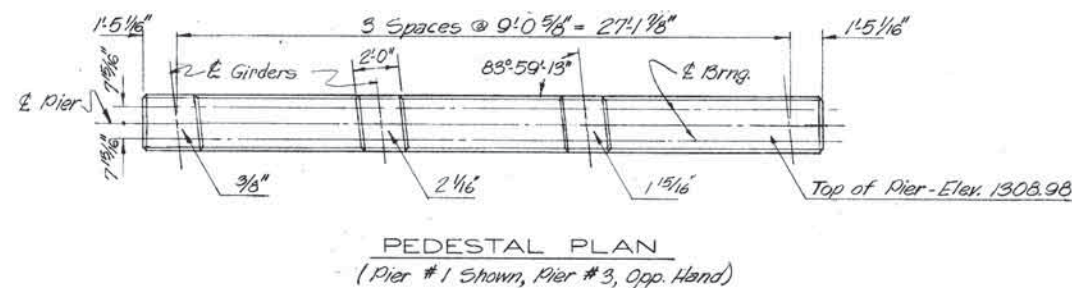
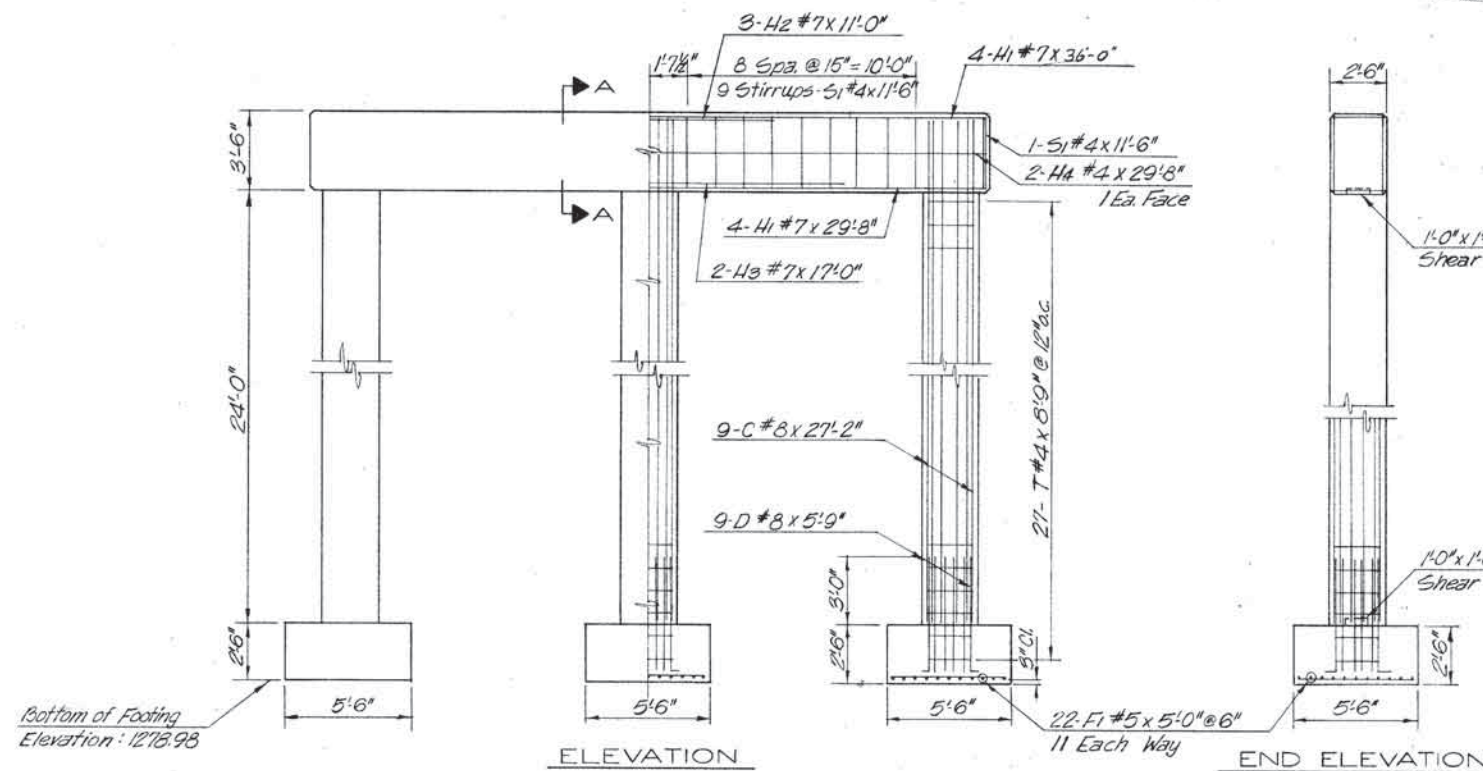
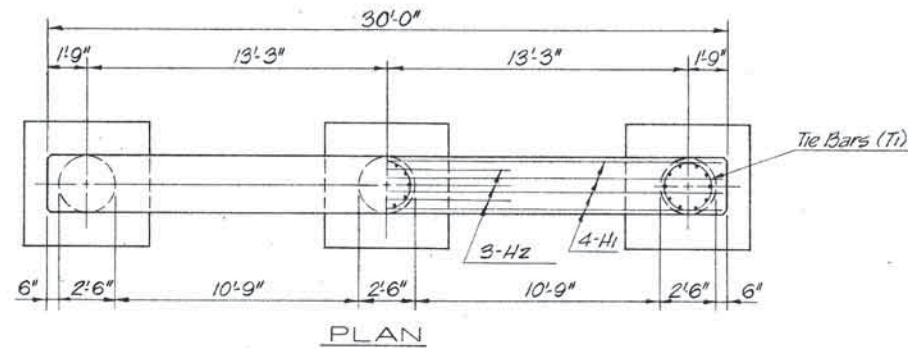
Design			STRUCTURE NOS. 138 LT. & RT. - SOONER
Drawn			STRUCTURAL STEEL DETAILS
Checked			34' (2' - 86'-6" Cont.) 34' Simple Plate Girder Spans
Approved			26' CL. RDY. W/2'-6" S.W. BOTH SIDES STA. 641+15.98-SURVEY LINE
Saud			Project No. T-240-4(86)157 Sheet No. 65







FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
REVISIONS					DATE



BAR LIST				
MARK	SIZE	NO.	FORM	LENGTH
H1	#7	8	STR	36'-0"
H2	#7	3	STR	11'-0"
H3	#7	2	STR	17'-0"
H4	#4	2	STR	29'-8"
S 1	#4	20	BNT.	11'-6"
C	#8	27	STR	27'-2"
D1	#8	27	BNT	5'-9"
T	#5	81	BNT	8'-9"
F1	#5	66	STR	5'-0"

QUANTITIES				
ITEM	UNIT	PIER NO. 1	PIER NO. 3	
Class "A" Concrete	C.Y.	31.2	31.2	
Reinforcing Steel	LBS.	4,010	4,010	
Substr. Excav. - Common	C.Y.	112	117	
Substr. Excav. - Rock	C.Y.	4.4	3.2	

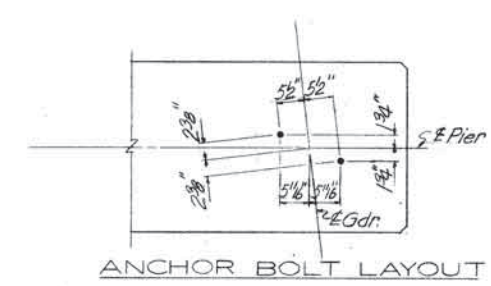
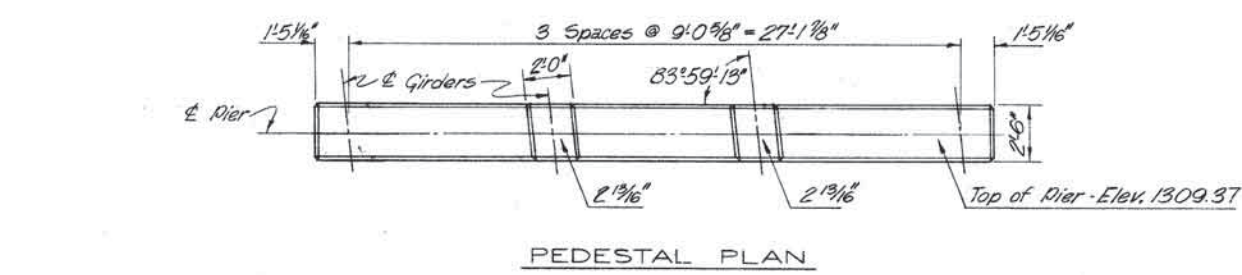
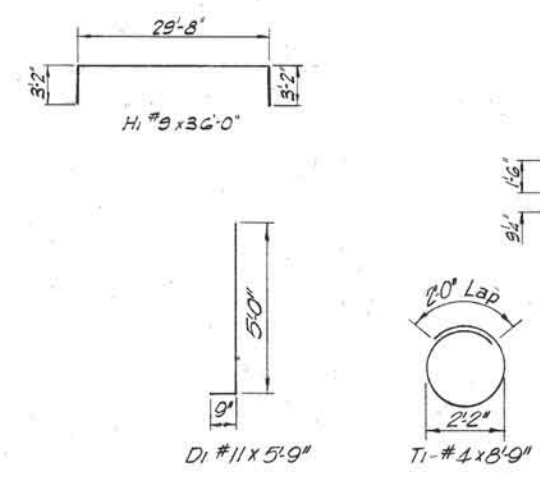
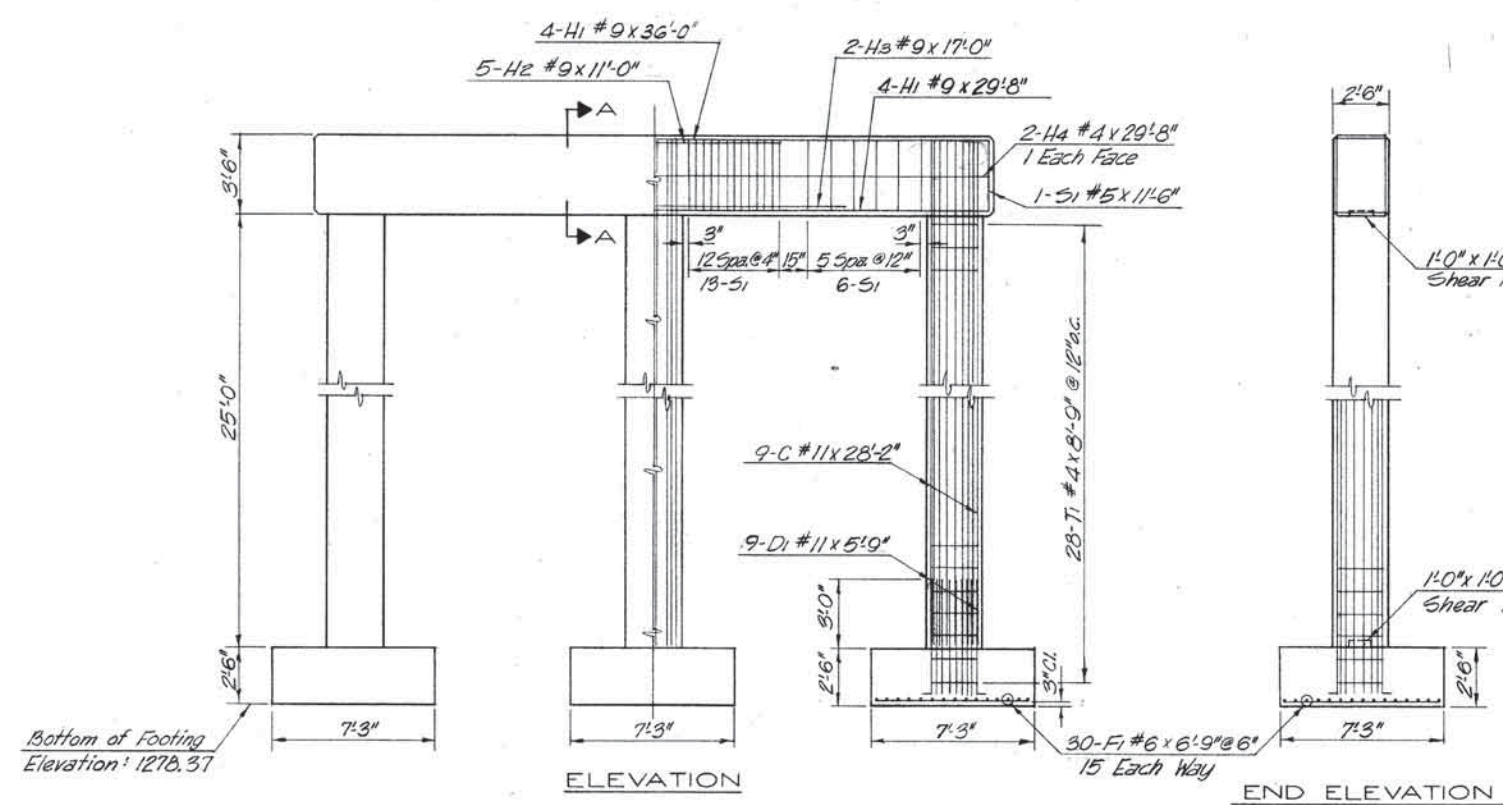
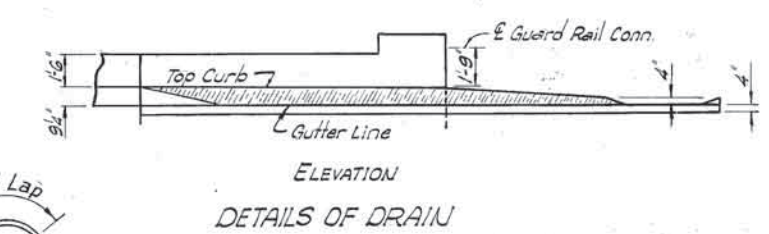
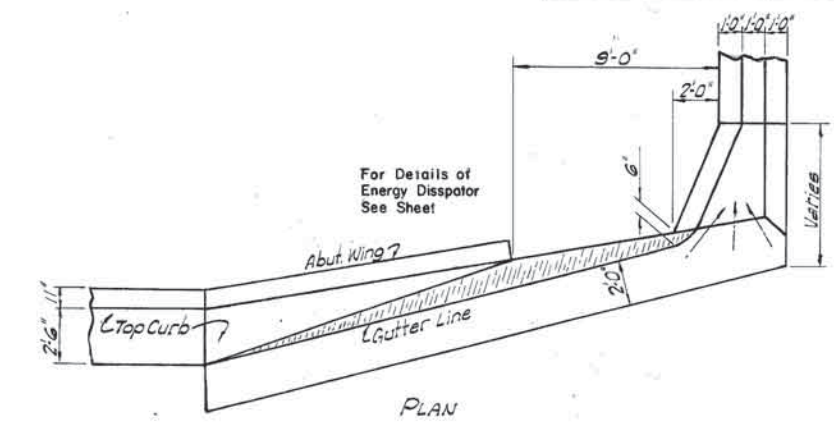
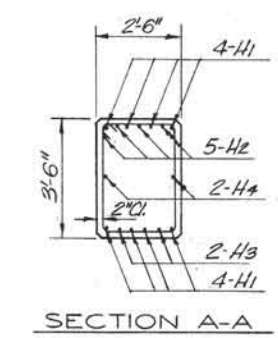
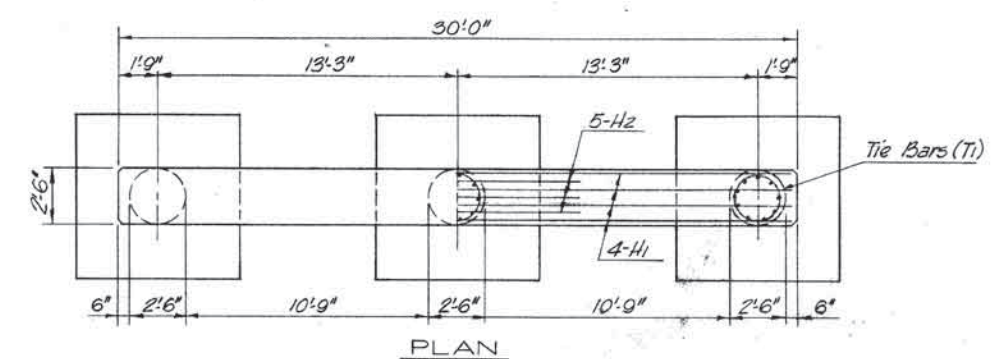
For General Pier Notes, See Sheet No. 155

Design		STRUCTURE NO. 155 - AIR DEPOT
Drawn		PIER NOS. 1 AND 3 DETAILS
Checked		34' (2 - 93'-1 1/2" Cont.) 34' Simple Plate Girder Spans
Approved		30' CLEAR ROADWAY W/2'-6" S.W. BOTH SIDES
Squad		STA. 694+46.96 - SURVEY LINE

Project No. I-240-4(86)157 Sheet No. 162



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
REVISIONS					DATE



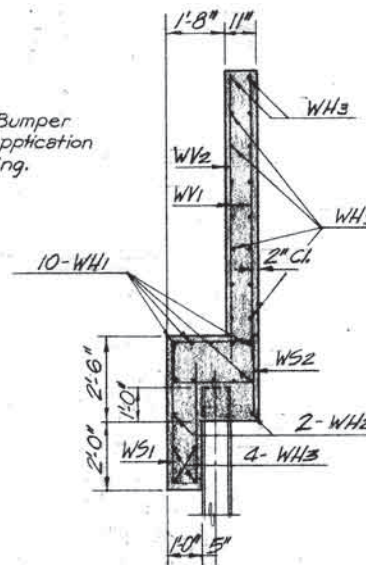
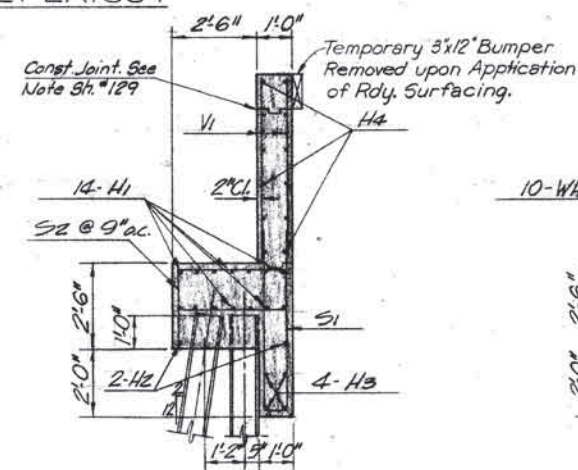
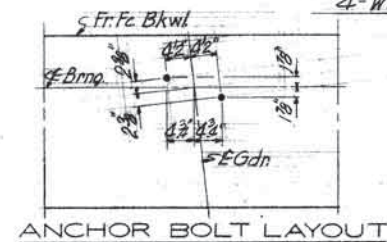
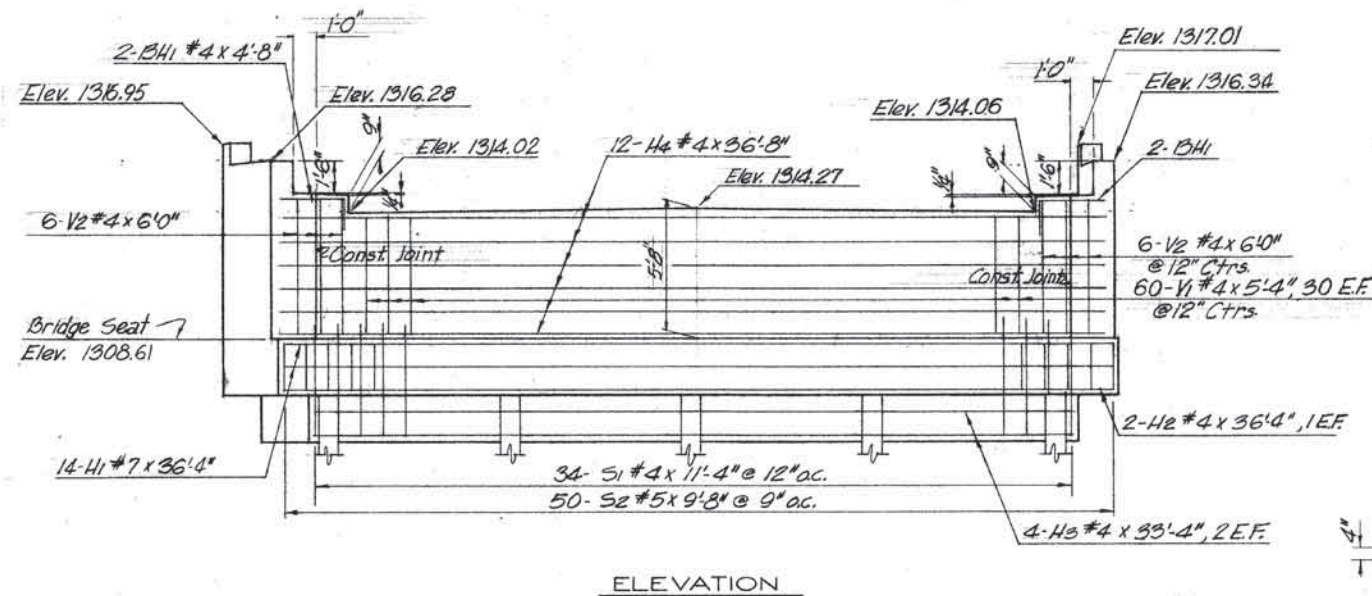
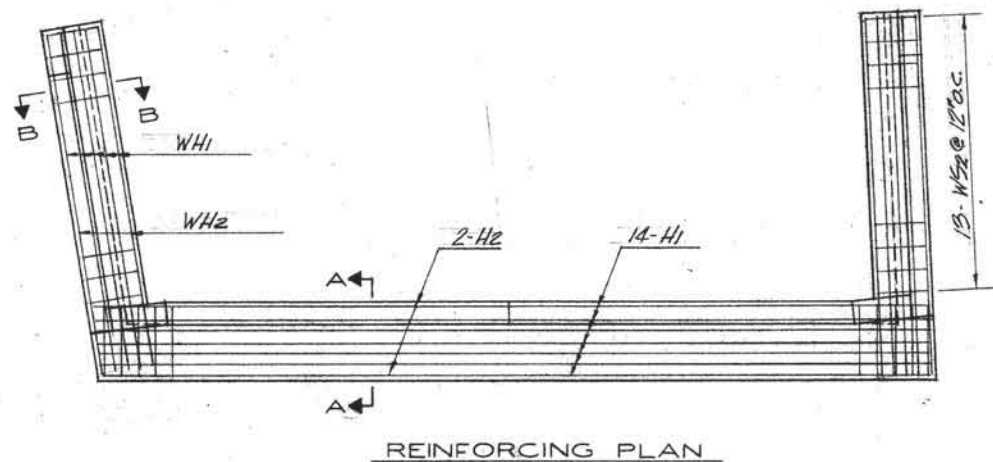
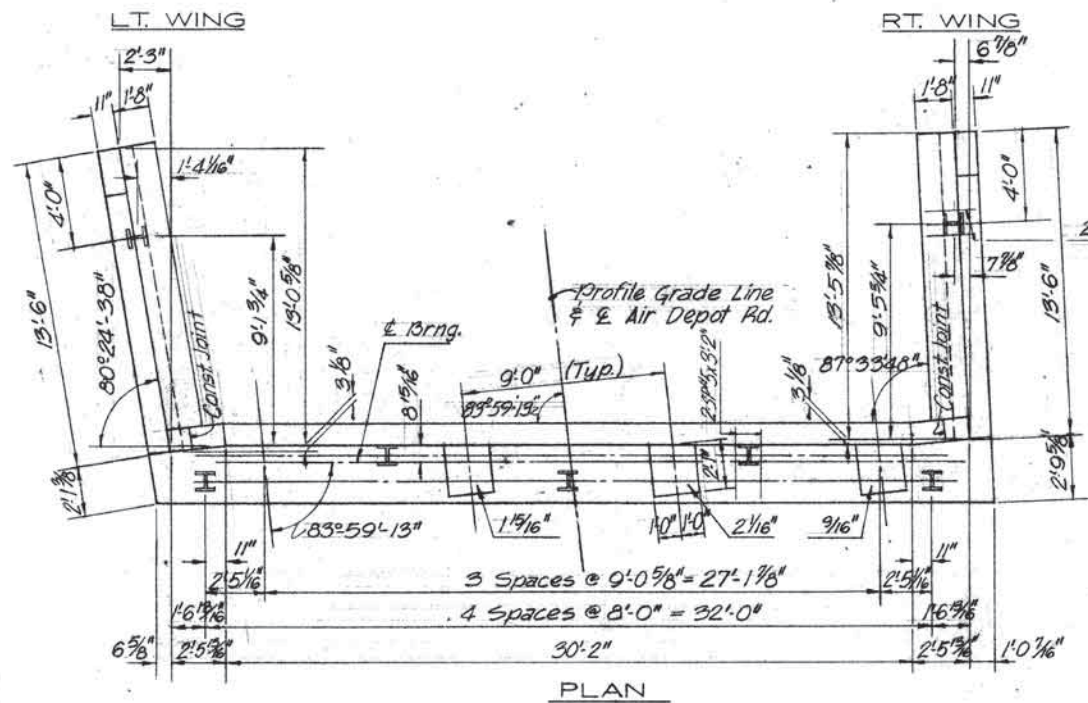
BAR LIST				
MARK	SIZE	NO.	FORM	LENGTH
H1	#9	8	BNT	36'-0"
H2	#9	5	STR	11'-0"
H3	#9	2	STR	17'-0"
H4	#4	2	STR	29'-8"
S1	#5	40	BNT	11'-6"
C	#11	27	STR	28'-2"
D1	#11	27	BNT	5'-9"
T	#4	84	BNT	8'-9"
F1	#6	90	STR	6'-9"

QUANTITIES		
ITEM	UNIT	TOTAL
Class "A" Concrete	C.Y.	38.0
Reinforcing Steel	LBS.	7,900
Substr. Excav. - Common	C.Y.	128
Substr. Excav. - Rock	C.Y.	6.8

For General Pier Notes, See Sheet No. 155

Design		STRUCTURE NO. 155 - AIR DEPOT
Drawn		PIER NO. 2 DETAILS
Checked		34' (2 - 93'-1 1/4" Cont.) 34' Simple Plate Girder Spans
Approved		30' CLEAR ROADWAY W/2'-6" S.W. BOTH SIDES
Squad		STA. 694+46.96 - SURVEY LINE
		Project No. I-240-4(86)157 Sheet No. 168



ELEVATION OF WINGWALL

SECTION A-A

SECTION B-B

BAR LIST				
	ONE SHOWN	TWO	REQUIRED	
MARK	FORM	SIZE	NO	LENGTH
H <sub>1</sub>	STR	#7	14	36'-6"
H <sub>2</sub>	STR	#4	2	36'-6"
H3	STR	#4	4	33'-4"
H4	BNT	#4	12	36'-8"
BH1	BNT	#4	4	4'-8"
V1	STR	#4	60	5'-4"
V2	STR	#4	12	6'-0"
WH1	STR	#7	20	15'-4"
WH2	STR	#4	4	15'-4"
WH3	STR	#4	40	13'-2"
WV1	STR	#4	44	8'-9"
WV3	STR	#5	24	9'-6"
WS1	BNT	#4	26	8'-1"
WS2	BNT	#4	26	7'-10"
S1	BNT	#4	34	11'-4"
S2	BNT	#5	50	9'-8"
U	BNT	4	8	5'-6"
L	BNT	4	6	5'-7"
SH	STR	5	4	2'-3"
SP	STR	5	10	3'-2"

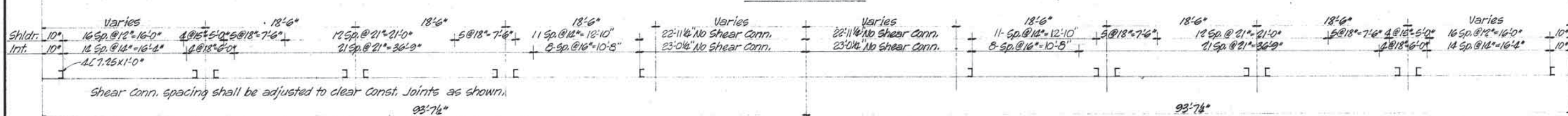
### GENERAL ABUTMENT NOTES

1. For Guardrail Connection details, refer to Sht. No. 137.
2. Top of Bridge Seat to have a Trowel Finish. Place  $1\frac{1}{2}$ "  
Preformed Expansion Joint Filler (122-01) between  
Superstructure and Wing Walls @ ends of Superstructure.
3. For Excavation Diagram & Notes see Sht. No. 131.
4. No Reinforcement required for Pedestals less than 2'  
in height.

QUANTITIES			
ITEM	UNIT	AMOUNT #1	AMOUNT #2
Reinforcing Steel	LBS	4560	4560
Class "A" Concrete	C.Y.	37.3	37.3
Substr. Excav. Common	C.Y.	68	68
10 BP42 Piles	LF	189	196

Design				STRUCTURE NO. 155 - AIR DEPOT
Drawn				ABUTMENT DETAILS
Checked			34' (2 - 93'-14" Cont.) 34' Simple Plate Girder Spans	
Approved			30' CLEAR ROADWAY W/2'-6" S.W. BOTH SIDES	
Squad			STA. 694+46.96 - SURVEY LINE	
			Project No. I-240-4(86)157	Sheet No. / 62



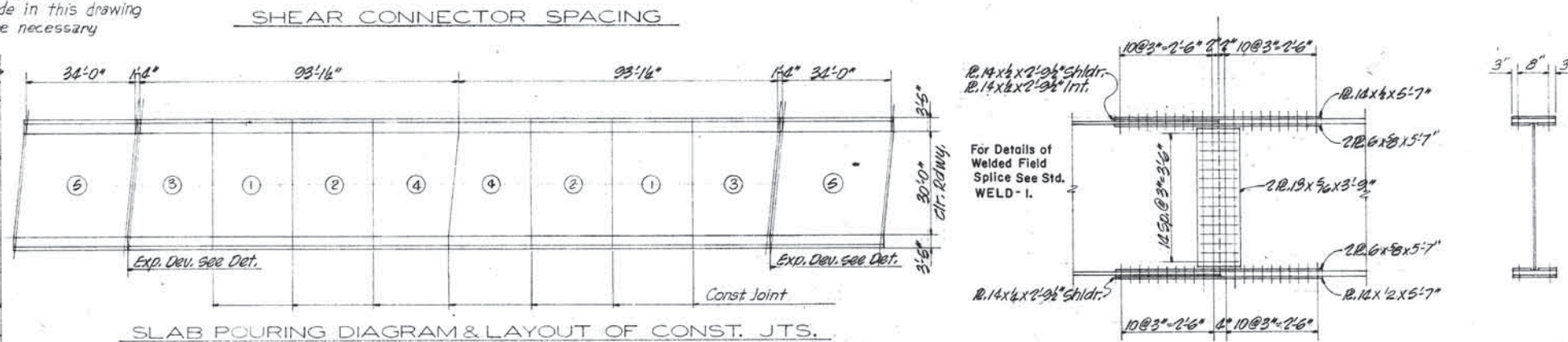


R. 10' x 2' x 35'-0"  
 30'-0" (Max. L'-0")  
 250 @ 2'-0" x 6"  
 950 @ 9'-16" x 12'-0"  
 12 @ 12" x 14"  
 950 @ 9'-16" x 9"  
 9"

210 @ 2' x 5"  
 257.25 x 8"  
 28 x 3/8 Web R.  
 2  
 2  
 12 @ 2' x 5"  
 12 @ 2' x 5"

R. 12' x 2' x 35'-0"  
 Rev. R. 6 x 3/4 @ Piers only

ELEVATION END BEAM

[illegible]

Panels bearing the same number will be considered a "group" and should be poured in the same days pour. Panels shall be poured in order of numbering shown. More than one "group" may be poured in the same day but no "group" shall be started until pour is completed on the preceding "group". The purpose of these restrictions is to insure that loading and deflections of entire series will be kept symmetrically balanced about center line of series during any protracted intervals between pourings.

SUPERSTRUCTURE QUANTITIES		
ITEM	UNIT	TOTAL
Handrail	Lin. Ft.	560.75
Class "AA(AE)" Concrete	C.Y.	270.3
Reinforcing Steel	Lbs.	64,220
Structural Steel	Lbs.	195,000

100



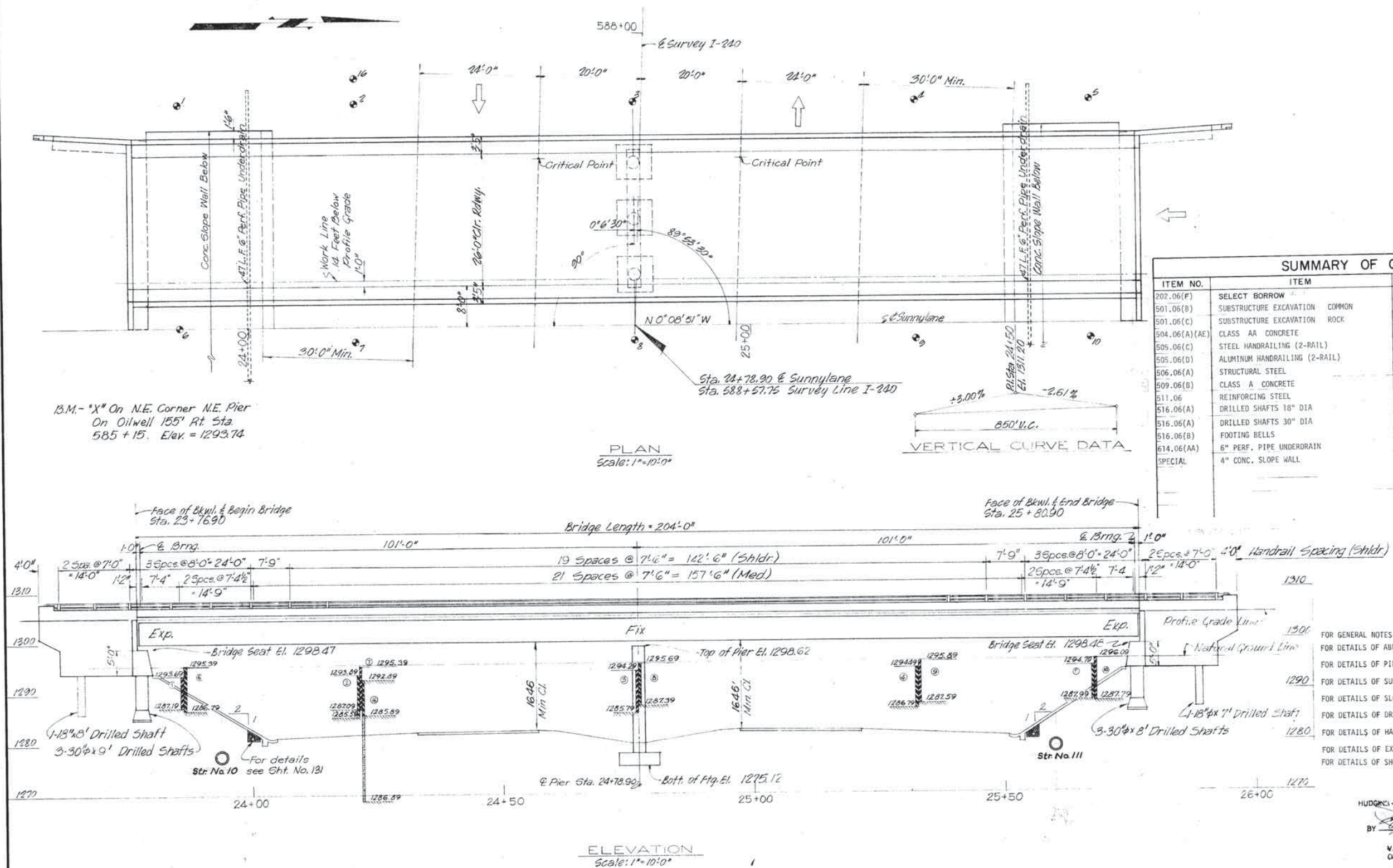
DESIGN DATA	
LOADING: HS20-44	
UNIT STRESSES:	
CLASS "A" CONCRETE	1,000 PSI
CLASS "AA" CONCRETE	1,200 PSI
REINFORCING STEEL	20,000 PSI
STRUCTURAL STEEL	20,000 PSI

Maximum Foundation Loads  
Requirements: 6.8 Tons/S.F.  
Users: 4.6 Tons/S.F. Axial  
6.4 Tons/S.F. Max.

FOR GENERAL NOTES, SEE SHT. NO. 130.  
FOR DETAILS OF ABUTMENTS, SEE SHT. NOS. 174 & 175.  
FOR DETAILS OF PIERS, SEE SHT. NO. 173.  
FOR DETAILS OF SUPERSTRUCTURE, SEE SHT. NOS. 127, 129, 130 & 176.  
FOR DETAILS OF SLOPE WALLS, SEE SHT. NO. 131.  
FOR DETAILS OF DRILLED SHAFTS, SEE SHT. NO. 174.  
FOR DETAILS OF HANDRAIL, SEE STD. PTR-2, SHT. NO. 178 & SHT. NO. 137.  
FOR DETAILS OF EXPAN. DEVICES, SEE SHT. NO. 129.  
FOR DETAILS OF SHOES, SEE SHT. NO. 137.

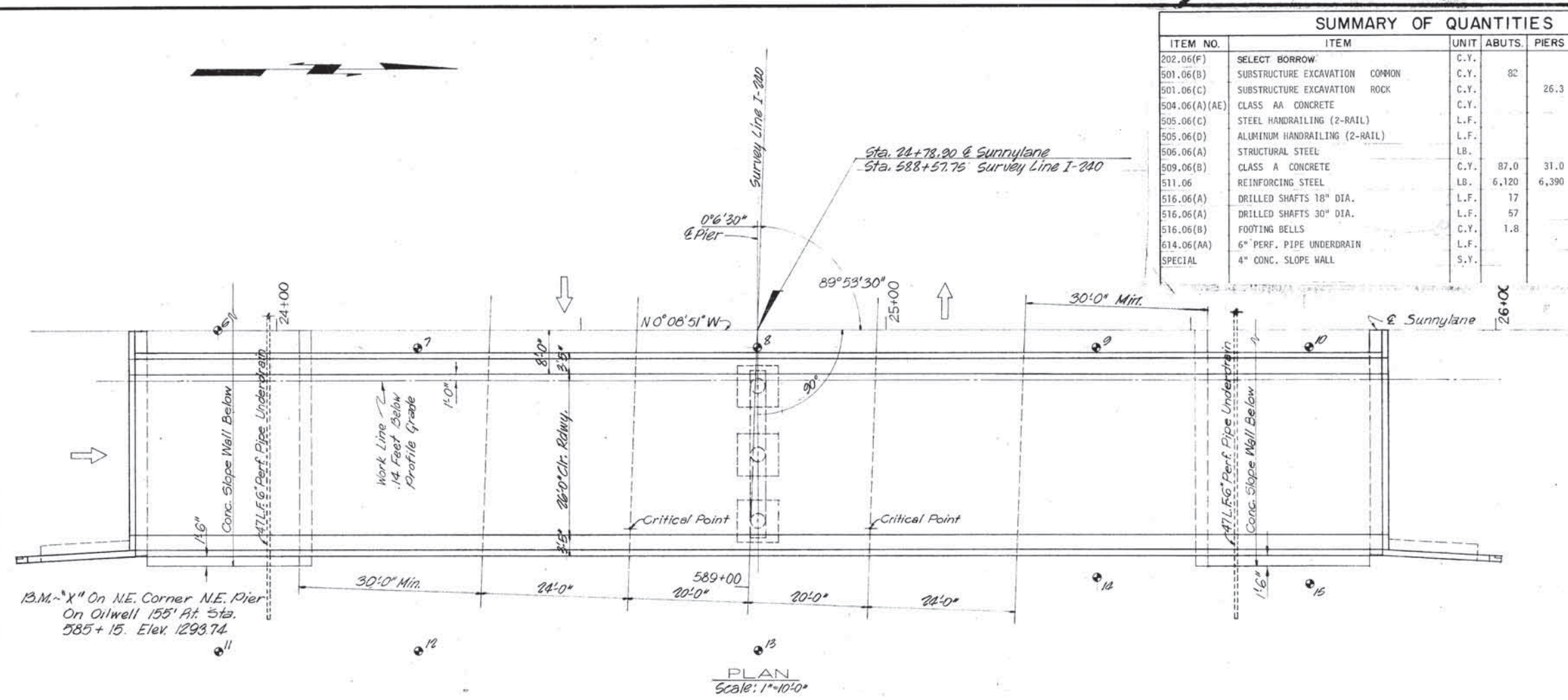
CONSULTING ENGINEER  
HUDGINS - THOMPSON - BALL & ASSOCIATES, INC.  
BY [Signature]  
V. G. THOMPSON  
OKLA. REG. PROF. ENGR. NO. 308  
DATE: \_\_\_\_\_

Design		STRUCTURE NO. 163 LT. - SUNNYLANE <b>GENERAL PLAN AND ELEVATION</b> 2-101' CONTINUOUS PLATE GIRDER SPANS 26' CLEAR ROADWAY W/2'-6" S.W. BOTH SIDES STA. 588+57.75 - SURVEY LINE  Project No. <u>I-240-4 (86)157</u> Sheet <u>1</u>
Drawn		
Checked		
Approved		
Squad		



All Construction and Materials shall be in accordance with the 1967 Okla. Std. Specifications for Highway Construction and Special Provisions





SUMMARY OF QUANTITIES						
ITEM NO.	ITEM	UNIT	ABUTS.	PIERS	SUPSTR.	TOTAL
202.06(F)	SELECT BORROW	C.Y.				200
501.06(B)	SUBSTRUCTURE EXCAVATION COMMON	C.Y.	82			82
501.06(C)	SUBSTRUCTURE EXCAVATION ROCK	C.Y.		26.3		26.3
504.06(A)(AE)	CLASS AA CONCRETE	C.Y.			182.8	182.8
505.06(C)	STEEL HANDRAILING (2-RAIL)	L.F.			443.0	443.0
505.06(D)	ALUMINUM HANDRAILING (2-RAIL)	L.F.			443.0	443.0
506.06(A)	STRUCTURAL STEEL	LB.			163,750	163,750
509.06(B)	CLASS A CONCRETE	C.Y.	87.0	31.0		118.0
511.06	REINFORCING STEEL	LB.	6,120	6,390	45,780	58,290
516.06(A)	DRILLED SHAFTS 18" DIA.	L.F.	17			17
516.06(A)	DRILLED SHAFTS 30" DIA.	L.F.	57			57
516.06(B)	FOOTING BELLS	C.Y.	1.8			1.8
614.06(AA)	6" PERF. PIPE UNDERDRAIN	L.F.				94
SPECIAL	4" CONC. SLOPE WALL	S.Y.				261.7

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				

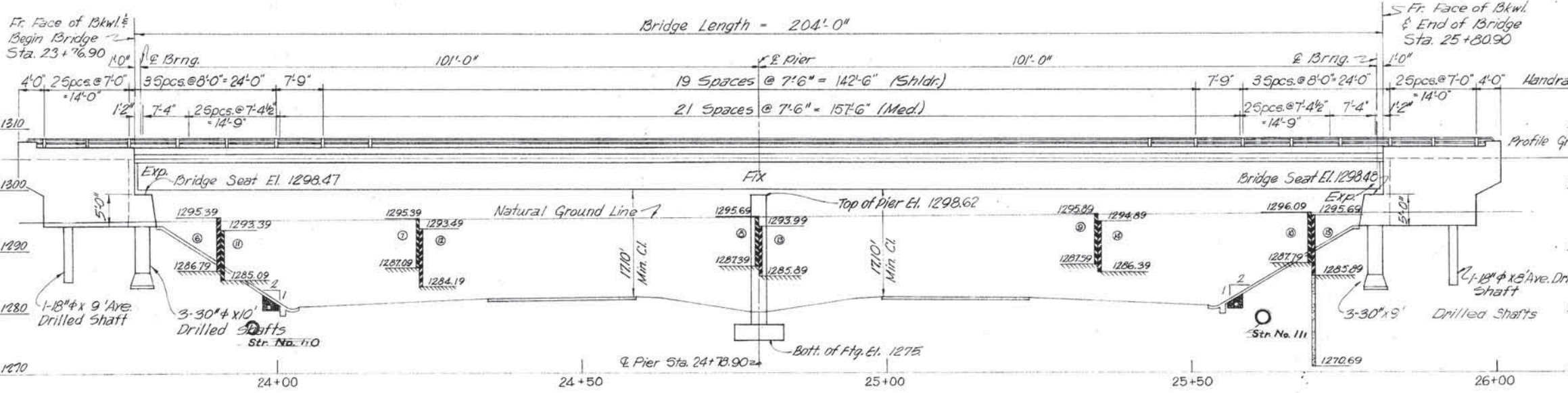
REVISIONS		DATE
DESCRIPTION		

DESIGN DATA

LOADING:  
HS20-44

UNIT STRESSES:  
CLASS "A" CONCRETE 1,000 PSI  
CLASS "AA" CONCRETE 1,200 PSI  
REINFORCING STEEL 20,000 PSI  
STRUCTURAL STEEL 20,000 PSI

Maximum Foundation Loads:  
Abutments: 6.8 Ton / Pile  
Piers: 4.4 Tons / S.F. Axial  
6.4 Tons / S.F. Max.



LEGEND

Clay to Soft Shale Sandstone

Cored Soft Shale Sandstone

ELEVATION  
Scale: 1"=10'-0"

FOR GENERAL NOTES, SEE SHT. NO. 130.  
FOR DETAILS OF ABUTMENTS, SEE SHT. NOS. 174 & 175.  
FOR DETAILS OF PIERS, SEE SHT. NO. 173.  
FOR DETAILS OF SUPERSTRUCTURE, SEE SHT. NOS. 127, 129, 130 & 176.  
FOR DETAILS OF SLOPE WALLS, SEE SHT. NO. 131.  
FOR DETAILS OF DRILLED SHAFTS, SEE SHT. NO. 174.  
FOR DETAILS OF HANDRAIL, SEE STD. PTR-2, SHT. NO. 178 & SHT. NO. 137.  
FOR DETAILS OF EXPAN. DEVICES, SEE SHT. NO. 129.  
FOR DETAILS OF SHOES, SEE SHT. NO. 137.

All Construction and Materials shall be in accordance with the 1967 Okla. Std. Specifications for Highway Construction and Special Provisions

Design	
Drawn	
Checked	
Approved	
Squad	

STRUCTURE NO. 163 RT. - SUNNYLANE  
GENERAL PLAN AND ELEVATION  
2-101' CONTINUOUS PLATE GIRDER SPANS  
26' CLEAR ROADWAY W/2'-6" S.W. BOTH SIDES  
STA. 588+57.75 - SURVEY LINE

Project No. 1-240-4 (86)157 Sheet No. 172



The elevation view shows a three-bay portal frame with the following dimensions and details:

- Overall Dimensions:**
  - Span: 27'-0"
  - Height: 24'-0"
- Bay Dimensions:**
  - Span between bays: 11'-9"
  - End bay overhang: 1'-9"
- Column Dimensions:**
  - Column width: 6"
  - Column depth: 2'-6"
- Reinforcement Details:**
  - 4-H<sub>1</sub>**: Top longitudinal bars in the columns.
  - 5-H<sub>2</sub>**: Bottom longitudinal bars in the columns.
  - Tie (T<sub>1</sub>) Bars @ 12"**: Vertical ties connecting the columns.
- Other Dimensions:**
  - Clearance from column face to reinforcement: 6"
  - Clearance between reinforcement bars: 2'-6"
  - Clearance from reinforcement to column face: 9'-3"

Technical drawing of a rectangular plate. The overall dimensions are 29" 8" in length and 3' 2" in height. The plate has a central rectangular cutout. The cutout has a width of 2' 2" and a height of 3' 2". The distance from the top edge of the plate to the top edge of the cutout is 5". The distance from the bottom edge of the plate to the bottom edge of the cutout is 5". The label "S1- #5 x 11' 6"

H1-9x36'-0"

D-#11 x 6'0"

T-#4 x 8'9"

The drawing shows a bridge pier with the following details:

- Elevation View (Left):** Shows a pier with a total height of 17'-6" and a base width of 6'-0". The base is 2'-6" high. A section line A-A is indicated.
- Plan View (Right):** Shows a rectangular pier with a width of 6'-0" and a depth of 20'-0". The base is 3'-0" high. A section line A-A is indicated.
- Reinforcement Details:**
  - Top Deck:** 4-H1 #9 x 26'-8" (top and bottom), 5-H2 #8 x 10'-0" (middle), 2-H4 #4 x 36'-0" (1 Ea. Face), 1-S1 #5 x 11'-6" (middle).
  - Vertical Pier:** 9-Spa @ 4'-0" o.c., 10-S1 #5 x 11'-6" (top), 5-Spa @ 12'-0" o.c., 6-S1 #5 x 11'-6" (bottom).
  - Base:** 9-D #11 x 20'-10" (top), 9-D #11 x 6'-0" (middle), 12-F2 #7 x 7'-0" @ 6" o.c. (bottom), 15-F1 #5 x 5'-6" @ 6" o.c. (bottom).
- Other Notes:**
  - Sym. about C-C
  - Constr. Jt. w/ 12' x 12' x 2' Key (Typ) 2-H3 #9 x 7'-0"
  - Constr. Jt. w/ 12' x 12' x 3' Key (Typ)
  - Bottom of Footing Elevation: 1275.12

2'-6"

Constr. Jt. w/  
12" 12" 2" Key

15-F1

Constr. Jt. w/  
12" 12" 3" Key

12-F2

7'-6"

3'-0"

Top of Pier  
Elevation 1298.62

Reinforcement details shown in the elevation drawing include:

- 3-D1 #4 x 5'0"
- 3-D2 #4 x 4'6"
- Bar spacing: 1'0"
- Overall dimensions: 27'0" (total length), 8'0" (segment length)
- Top of Pier Elevation: 1298.62

Diagram of a rectangular column cross-section. The total width is 2'-2" and the total height is 1'-5". The reinforcement details are as follows:

- Top reinforcement:  $D_1 - \#4 \times 5'-0"$
- Bottom reinforcement:  $D_2 - \#4 \times 4'-6"$
- Side reinforcement:  $D_3 - \#4 \times 1'-8"$

For General Pier Notes, See Sheet No. 155

Design		STRUCTURE NOS. 163 LT. & RT. - SUNNYLANE PIER DETAILS 2-101' CONTINUOUS PLATE GIRDER SPANS 26" CLEAR ROADWAY W/2'-6" S.W. BOTH SIDES STA. 588+57.75 - SURVEY LINE
Drawn		
Checked		
Approved		
Squad		
		Project No. <u>I-240-4(86)157</u> Sheet No. <u>173</u>

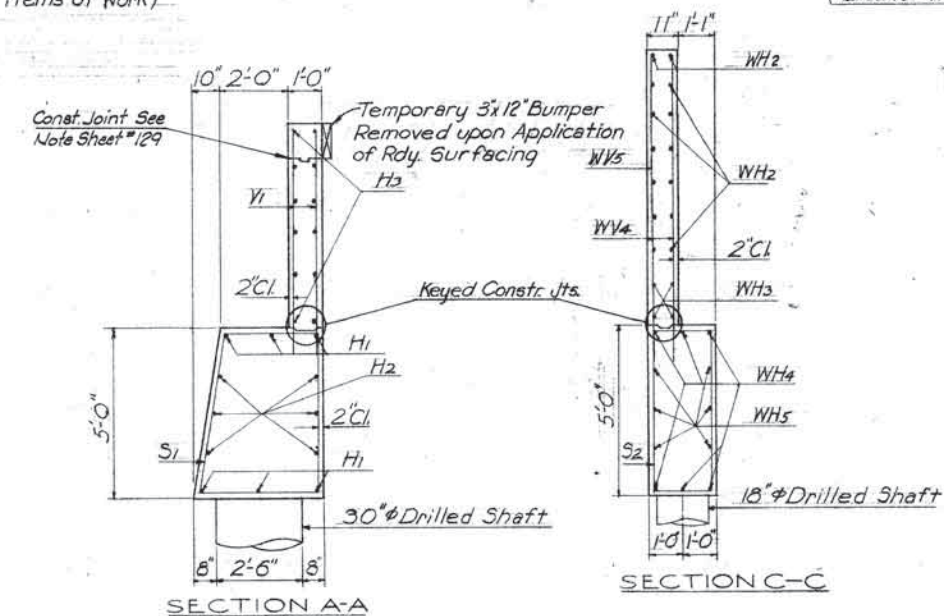
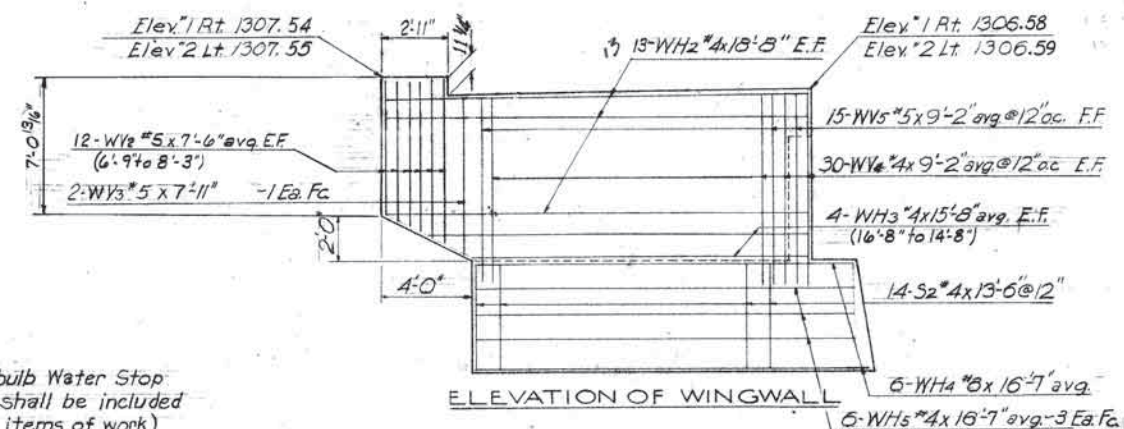
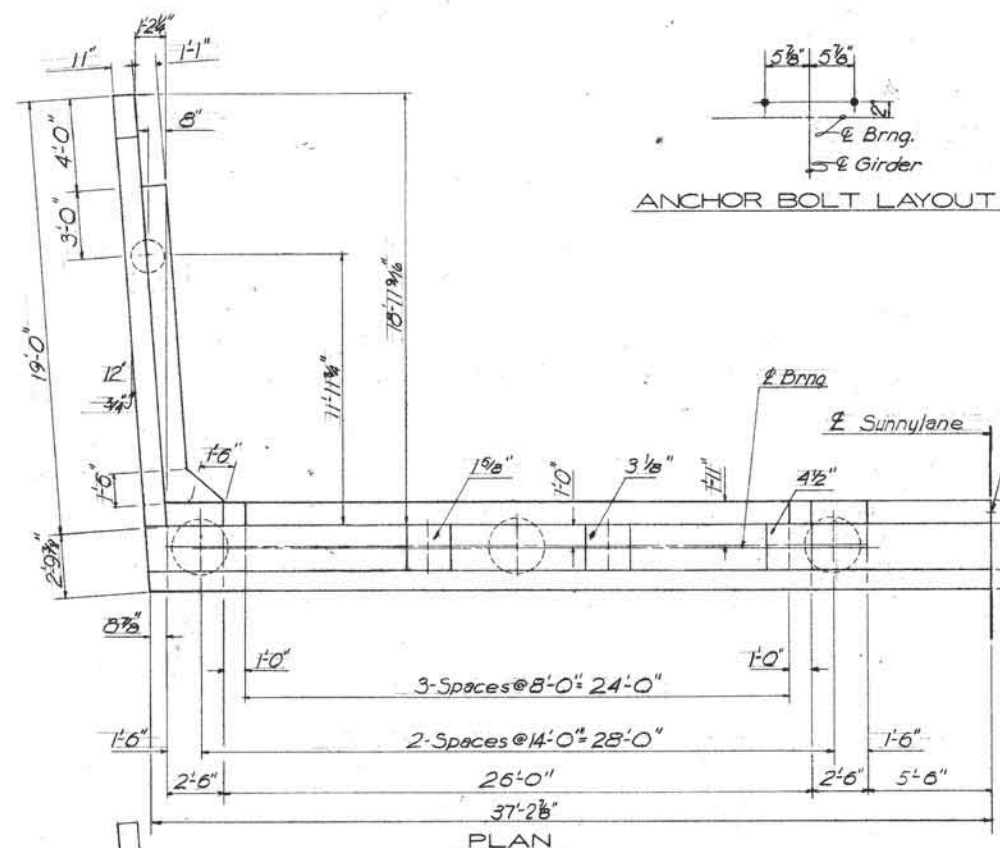




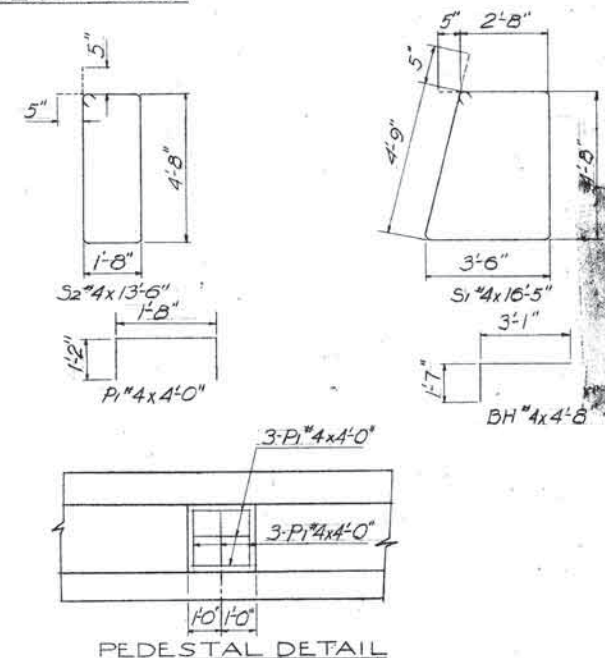
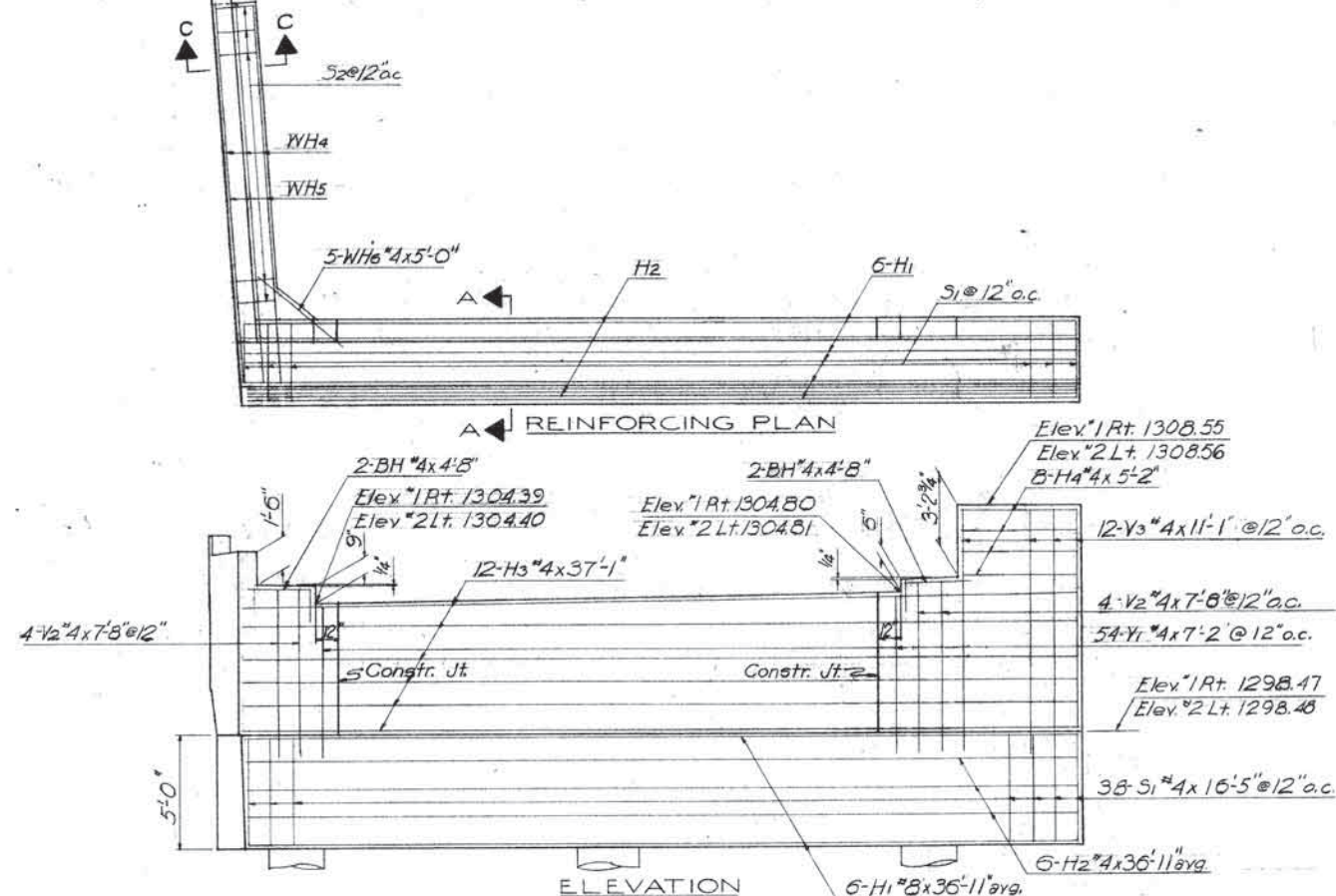


FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-240-4 (86) 157		175	

DESCRIPTION	REVISIONS	DATE
Added Const. It. in Bkwll G.M 1-2-70		



BAR LIST				
MARK	NO	SIZE	FORM	LENGTH
H1	6	8	STR	36'-11"
H2	6	4	STR	36'-11"
H3	12	4	STR	37'-1"
H4	8	4	STR	5'-2"
V1	54	4	STR	7'-2"
V2	8	4	STR	7'-8"
V3	12	4	STR	11'-1"
BH	4	4	BNT	4'-8"
G1	38	4	BNT	16'-5"
G2	14	4	BNT	13'-6"
WH2	26	4	STR	18'-8"
WH3	4	4	STR	15'-8" Avg.
WH4	6	8	STR	16'-7"
WH5	6	4	STR	16'-7"
WH6	5	4	STR	5'-0"
WV 2	12	5	STR	7'-6" Avg.
WV3	2	5	STR	7'-11"
WV4	30	4	STR	9'-2"
WV5	15	5	STR	9'-2"
P1	12	4	BNT	4'-0"
U	4	4	BNT	5'-6"
L	3	4	BNT	5'-7"



- GENERAL ABUTMENT NOTES
1. For Guardrail Connection details, refer to Sht. No.137
  2. Top of Bridge Seat to have a Trowel Finish. Place 1/2" Preformed Expansion Joint Filler (72201) between Superstructure and Wing Walls @ ends of Superstructure.
  3. For Excavation Diagram & Notes see Sht. No.131
  4. No Reinforcement required for Pedestals less than 2' in height.

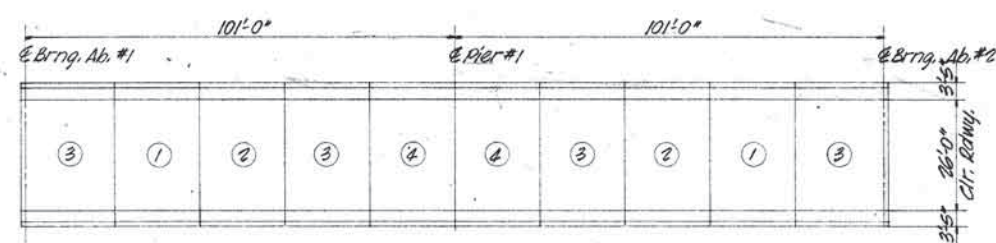
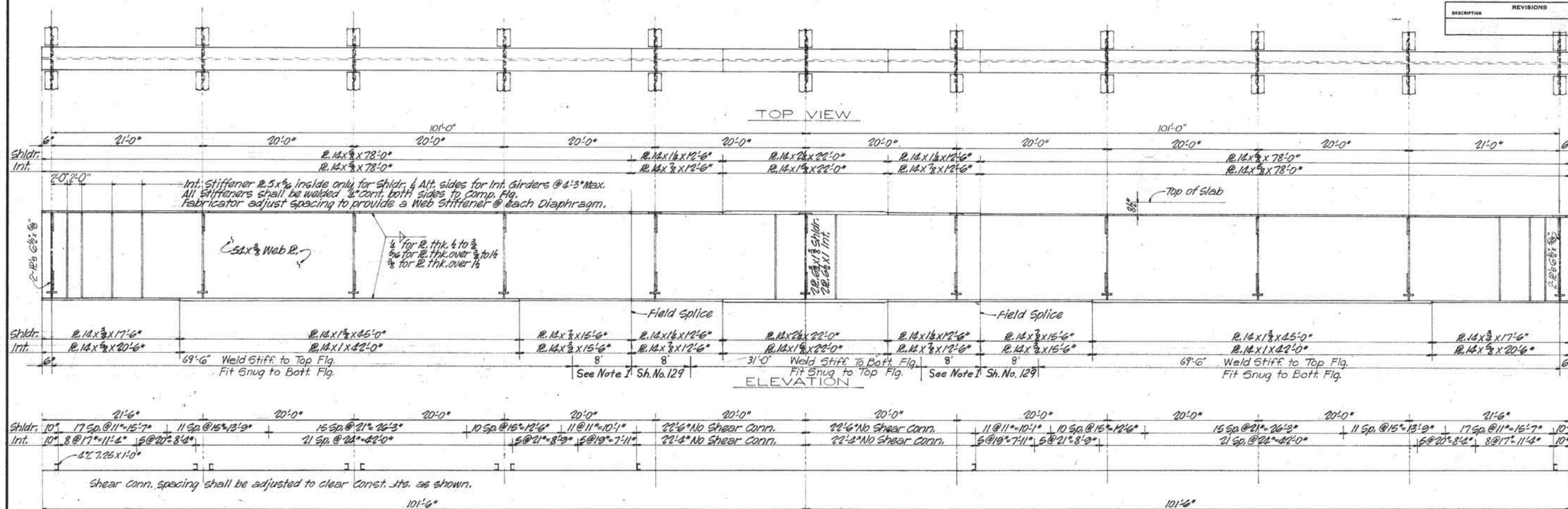
QUANTITIES			
ITEM	UNIT	'24	'19
Class "A" Concrete	CY	43.5	43.5
Reinforcing Steel	Lbs.	3060	3060
Substr. Excav. Common	CY	41	41
Drilled Shafts 18" Dia.	L.F.	7	9
Drilled Shafts 30" Dia.	L.F.	24	30
Footing Bells	CY	0.9	0.9

Design			STRUCTURE NOS. 163 LT. & RT. - SUNNYLANE ABUTMENT NOS. 2 LT. AND 1 RT. DETAILS 2-101' CONTINUOUS PLATE GIRDER SPANS 26' CLEAR ROADWAY W/2'-6" S.W. BOTH SIDES STA. 988+57.75 - SURVEY LINE
Drawn			
Checked			
Approved			
Sealed			

Project No. I-240-4(86)157 Sheet No. 175



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
REVISIONS					DATE

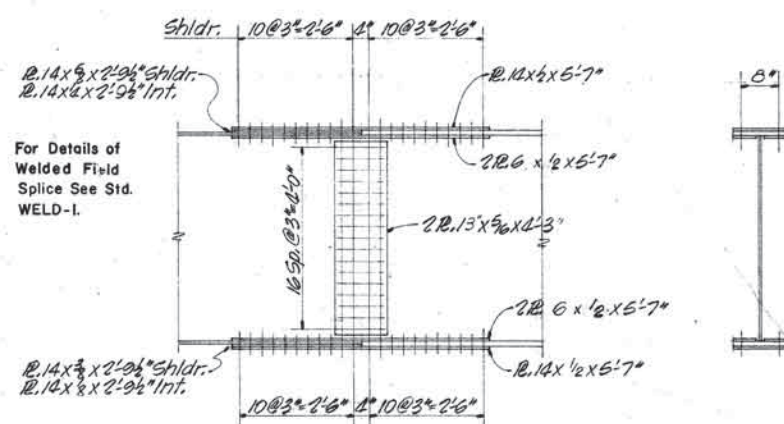


NOTE: All joints are the same. For details of joints See Sht. No. 129

Slab Pouring Order

Panels bearing the same number will be considered a "group" and should be poured in the same days pour. Panels shall be poured in order of numbering shown. More than one "group" may be poured in the same day but no "group" shall be started until pour is completed on the preceding "group". The purpose of these restrictions is to insure that loading and deflections of entire series will be kept symmetrically balanced about center line of series during any protracted intervals between pours.

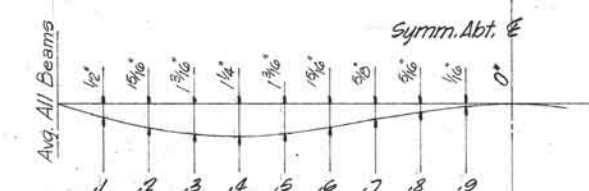
### SHEAR CONNECTOR SPACING



### OPTIONAL FIELD SPLICE

(Use 3/4" H.S. Steel Bolts)

NOTE: For Details of Shear Connectors, Intermediate Stiffeners, Brng. Stiffeners, See Sheet No. 129  
For Detail of Diaphragms, See Sheet No. 127  
For Details of Shoes, See Sheet No. 130



**DEAD LOAD DEFLECTION DIAGRAM**

Note: Weight of conc. alone is accountable for 85% of the total Deflection. The Web R. of Girders shall be fabricated with camber for D.L. Deflection & Vertical Curve.

\* See Concrete in Haunches note sheet no. 129.

SUPERSTRUCTURE QUANTITIES			
ITEM	UNIT	LT. STR.	RT. STR.
Handrail	Lin. Ft.	443.0	443.0
Class "AA(AE)" Concrete	C.Y.	132.8	132.8
Reinforcing Steel	Lbs.	45,780	45,780
Structural Steel	Lbs.	163,750	163,750

Design		
Drawn		
Checked		
Approved		
Squad		

\* Structural Steel Quantity Includes 9615' For Optional Field Splices & 7.25' Shear Connectors

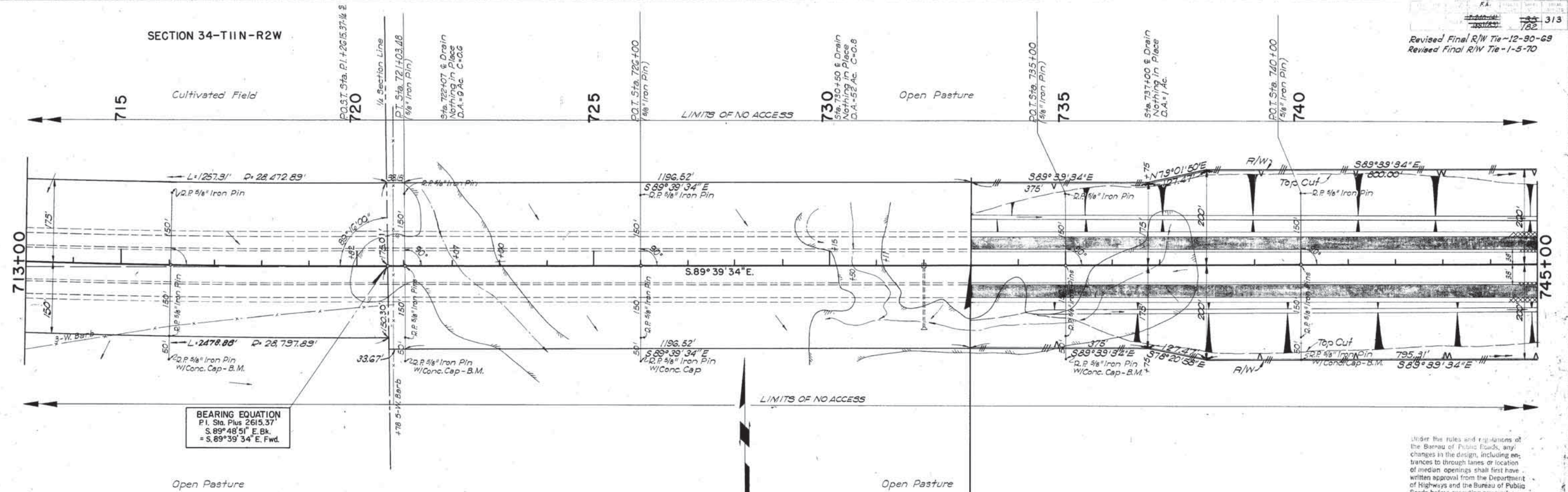


PLAN	DATE	
	BY	
	SURVEYED	
	NOTE BOOK	

PROFILE	DATE	
	BY	
	SURVEYED	
	NOTE BOOK	

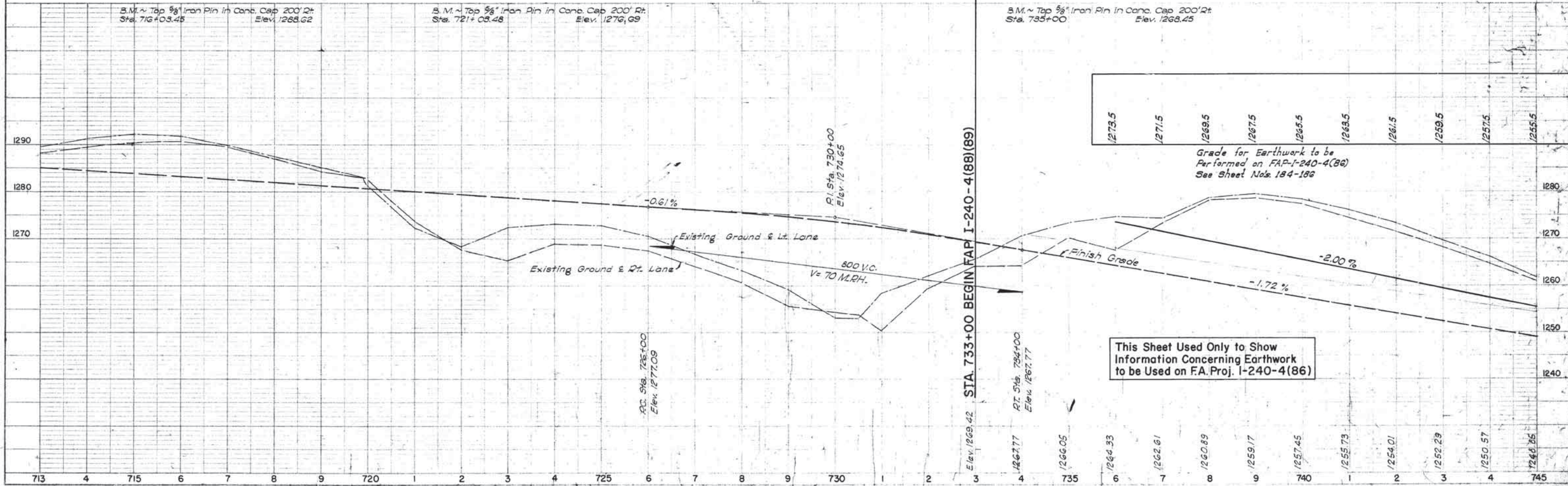
# SECTION 34-TIIN-R2W

Revised Final R/W Tie-12-90-69  
Revised Final R/W Tie-1-5-70



BEARING EQUATION  
P.I. Sta. Plus 2615.37  
S. 89° 48' 51" E. Bk.  
= S. 89° 39' 34" E. Fwd.

Under the rules and regulations of the Bureau of Public Roads, any changes in the design, including entrances to through lanes or location of median openings shall first have written approval from the Department of Highways and the Bureau of Public Roads before executing any work.

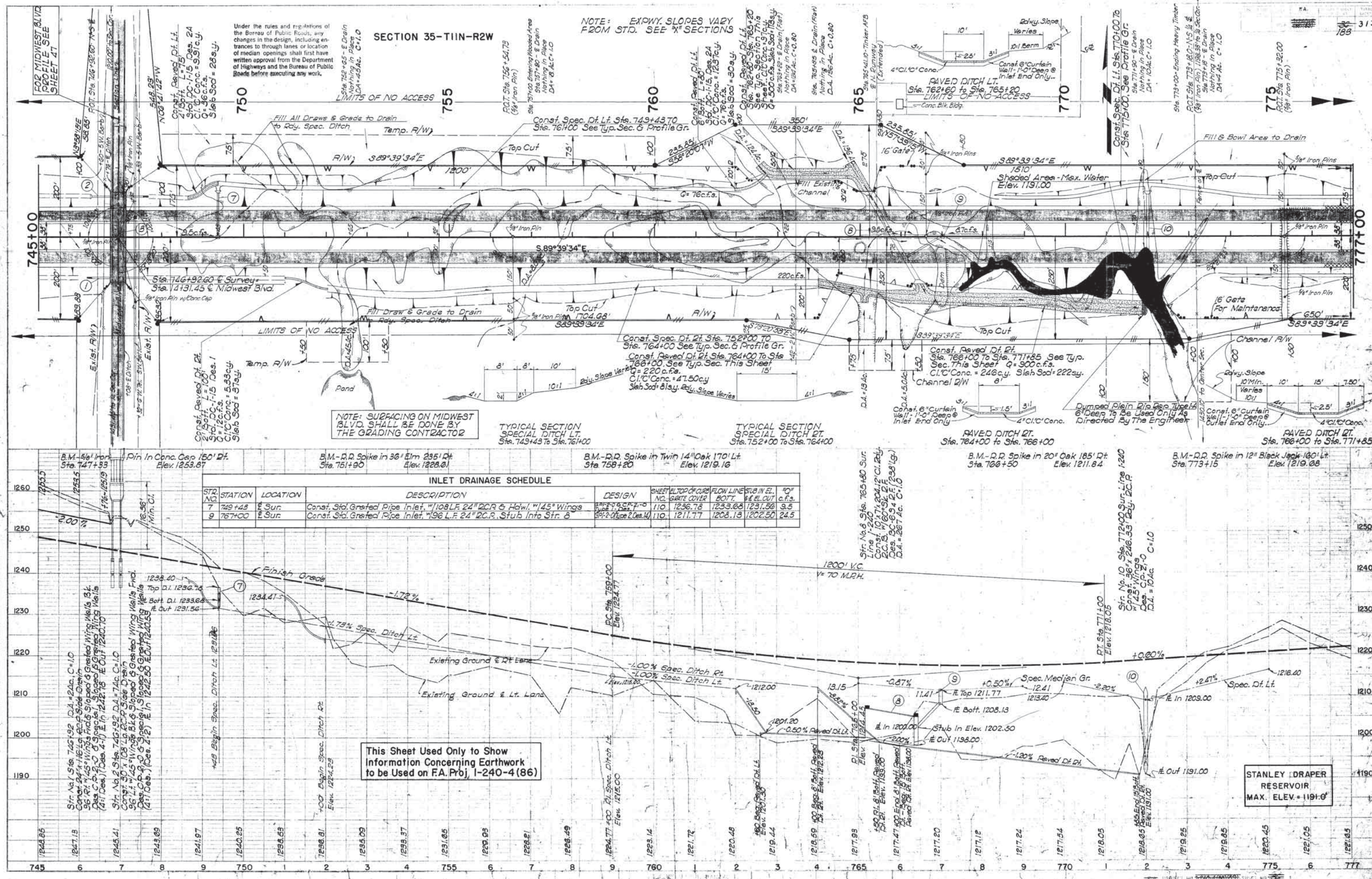


This Sheet Used Only to Show Information Concerning Earthwork to be Used on F.A. Proj. 1-240-4(86)



PLAN	DATE	
	BY	
	SURVEYED	
	NOTE BOOK	

PROFILE	DATE	
	BY	
	SURVEYED	
	NOTE BOOK	





FINAL SURVEY  
DATE: 12-12-86  
BY: J. G. Hickey  
NOTE BOOK NO. 113  
AREAS CHECKED: 113

ORIGINAL SURVEY  
DATE: 12-30-86  
BY: J. G. Hickey  
NOTE BOOK NO. 113  
AREAS CHECKED: 113

END AREA  
Sq. Ft.  
EXC. EMB.

END AREAS  
Sq. Ft.  
EXC. EMB.

VOLUMES  
Cu. Yds.  
EXC. EMB.

VOLUMES  
Cu. Yds.  
EXC. EMB.

742+00

741

740

739

738

737

736+00

Elev. 1272.5  
Prof. Gr. 1254.01

+1.0% Grade

-1.0% Grade

-1.0% Grade

-1.0% Grade

-1.0% Grade

Grade Carried 38' Rt. & Survey

Earthwork above Solid Line to be removed on F.A. Project 1-240-4(86)

Elev. 1271.6  
Prof. Gr. 1254.33

This Sheet Used Only to Show Information Concerning Earthwork to be Used on F.A. Proj. 1-240-4(86)

SCALE  
HOR 1"=10'  
VER 1"=10'



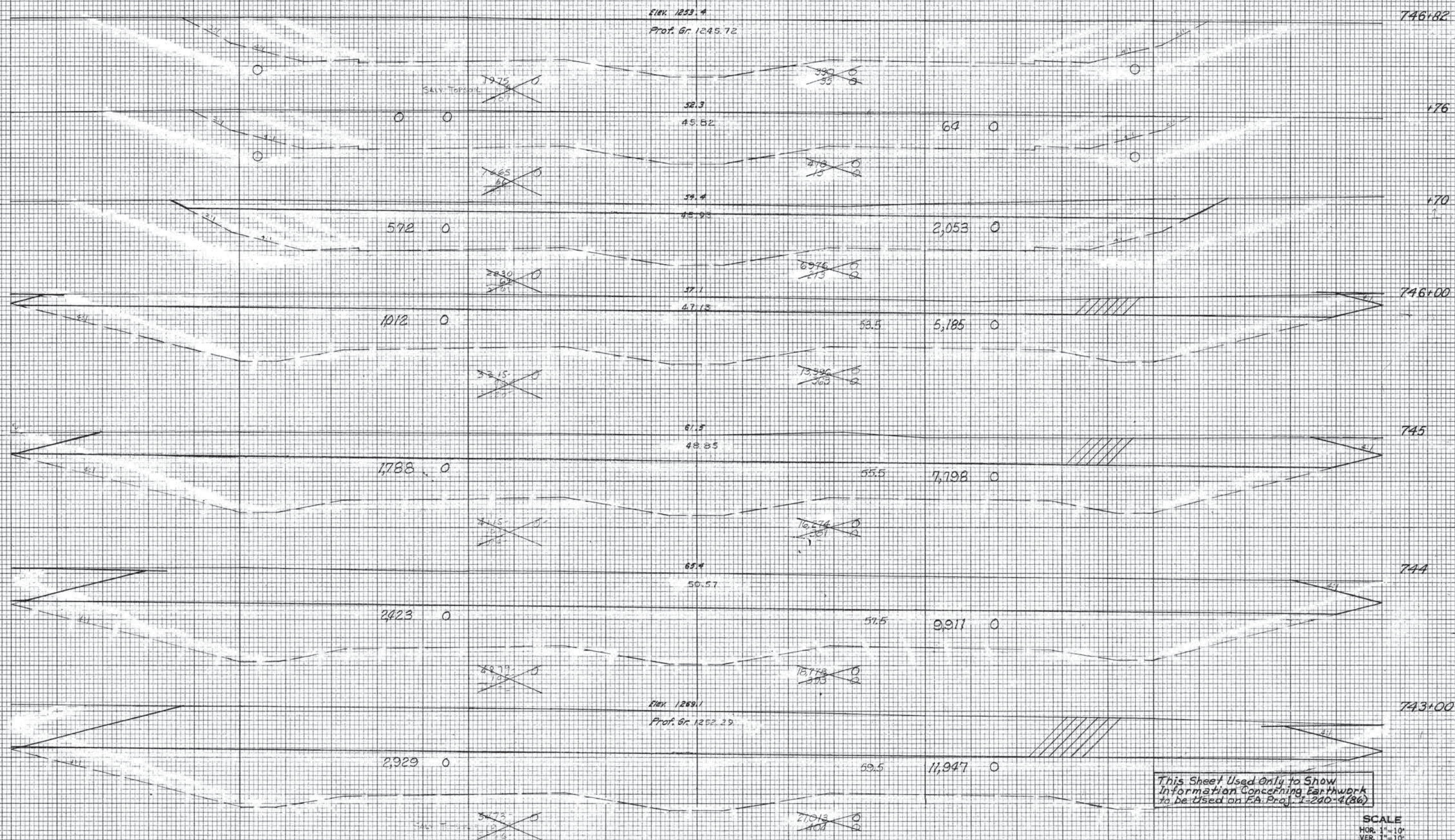
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6	OKLA.	<del>100-100</del> <del>100-100</del>		<del>100</del> 105	3/3

END AREA  
Sq. Ft.  
EXC. EMB.

END AREAS 90. FT.	
EXC.	EMB.

~~VOLUMES  
CU YDS.~~

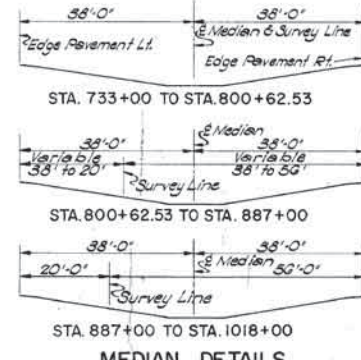
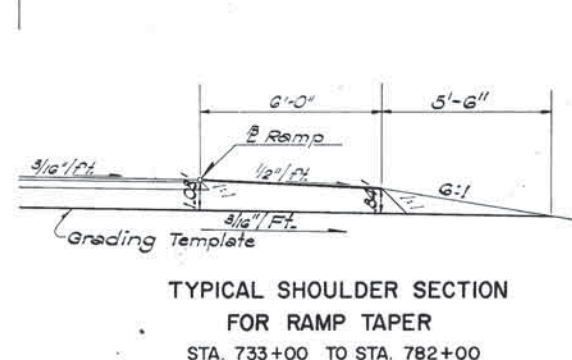
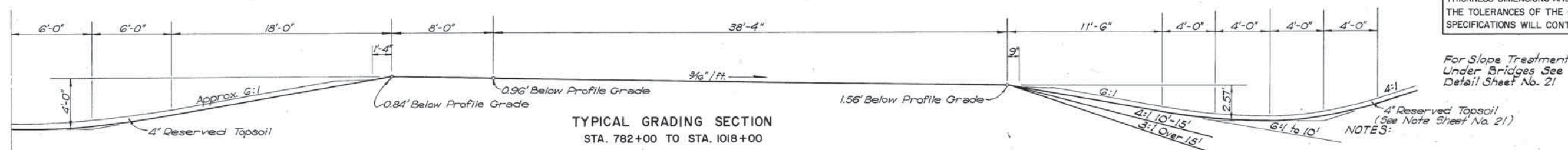
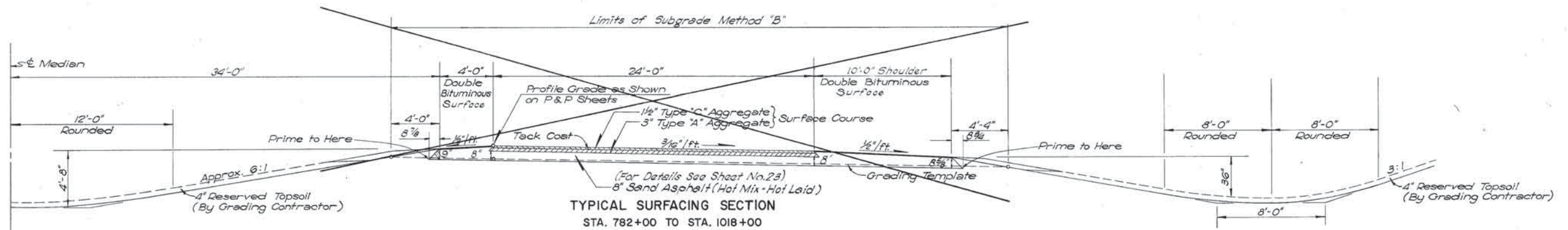
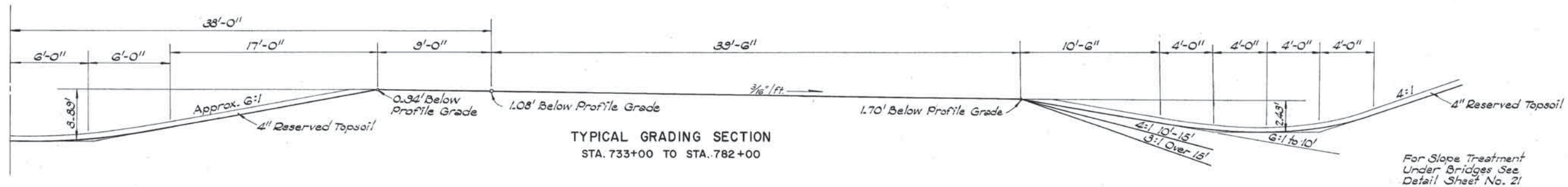
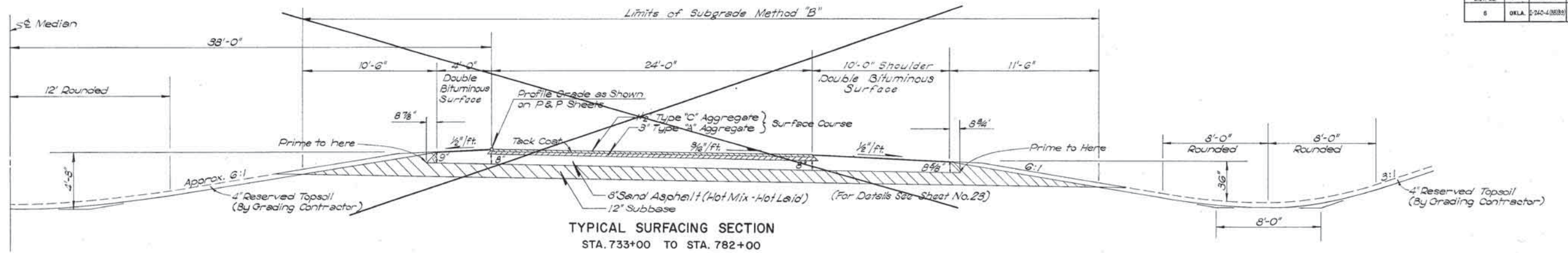
~~EXC.~~      ~~EMB.~~

[illegible]

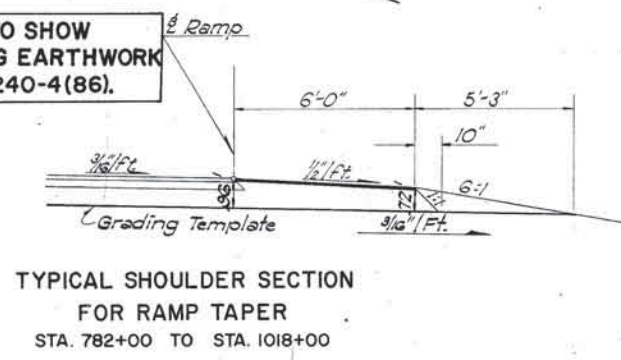
**K-E** PLATE 3, CROSS SECTION  
KEUFFEL & ESSEY CO.  
K-E CO. NO. 3453

F.A. Proj. No. 17-240-4(86) Sheet No. 185  
~~24~~ PROJ. NO. ~~17-240-4(86)~~ SHEET NO. ~~185~~





THIS SHEET USED ONLY TO SHOW INFORMATION CONCERNING EARTHWORK TO BE USED ON F.A. PROJ. 1-240-4(86).



**FLEXIBLE PAVEMENT NOTE**  
THICKNESS DIMENSIONS ARE APPROXIMATE THE TOLERANCES OF THE GOVERNING SPECIFICATIONS WILL CONTROL.

For Slope Treatment Under Bridges See Detail Sheet No. 21

The Contractor shall submit widths of laydown lanes to the Engineer for approval prior to laying Asphalt. See Sheet No. 24 For Section at Structure, Roadway in Cut.

**TYPICAL SECTIONS**



FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	E-240 (86)(81)		187	
REVISIONS					
DESCRIPTION	REVISIONS		DATE		

#### REMOVAL OF OVERHEAD SIGN STRUCTURES

TYPE "A-1" OVERHEAD SIGN STRUCTURE LOCATED AT STA. 65+65/1-35 SHALL BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE PERRY DIVISION YARD OR OTHER SITE FOR STORAGE AS DIRECTED BY THE ENGINEER.

WORK SHALL BE DONE IN SUCH MANNER AS TO PREVENT DAMAGE TO STRUCTURE, WALKWAY, LIGHTING FIXTURES, AND SIGNS DURING DISMANTLING AND ALL HANDLING THEREAFTER. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE INCURRED DURING THIS WORK EXCEPT FOR GALLING OR BREAKAGE OF ALUMINUM BOLTS AND NUTS DURING LOOSENING. THIS WORK SHALL ALSO INCLUDE THE REMOVAL OF, OR ANY PART OF, THE FOUNDATIONS AND SHALL BE DONE AS DIRECTED BY THE ENGINEER.

THE TYPE "A-1" OVERHEAD SIGN STRUCTURE, ONCE DELIVERED TO THE STORAGE SITE, SHALL NO LONGER BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL REMAIN IN STORAGE UNTIL ITS USE IS SPECIFIED ON FUTURE INTERSTATE SIGNING PROJECT.

PRICE BID FOR THIS ITEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "REMOVAL OF OVERHEAD SIGN STRUCTURE - EACH" WHICH SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS, EQUIPMENT, LABOR, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

TYPE "C-1" OVERHEAD SIGN STRUCTURE LOCATED AT STA. 57+80/1-35 SHALL BE REMOVED BY THE CONTRACTOR SUBJECT TO PROVISIONS AS STATED ABOVE EXCEPT THAT THE STRUCTURE SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR AND MAY BE STORED AT HIS OWN SITE UNTIL REMOVED FOR RE-ERECTION. SIGNS REMOVED FROM THE STRUCTURE SHALL BE DELIVERED TO THE PERRY DIVISION YARD.

PRICE BID FOR THIS ITEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "REMOVAL OF OVERHEAD SIGN STRUCTURE - EACH" WHICH SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS, EQUIPMENT, LABOR, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

#### RE-ERECTION OF OVERHEAD SIGN STRUCTURE

TYPE "C-1" OVERHEAD SIGN STRUCTURE SHALL BE RE-ERECTED AT STA. 57+80/1-35 AFTER BEING LENGTHENED ACCORDING TO DETAILS AND NOTES ON THIS SHEET. CONTRACTOR SHALL BE RESPONSIBLE FOR ASSURING THAT ORIGINAL STRUCTURE, WALKWAY, AND LIGHT FIXTURES ARE IN A SATISFACTORY STATE OF REPAIR PRIOR TO RE-ERECTION.

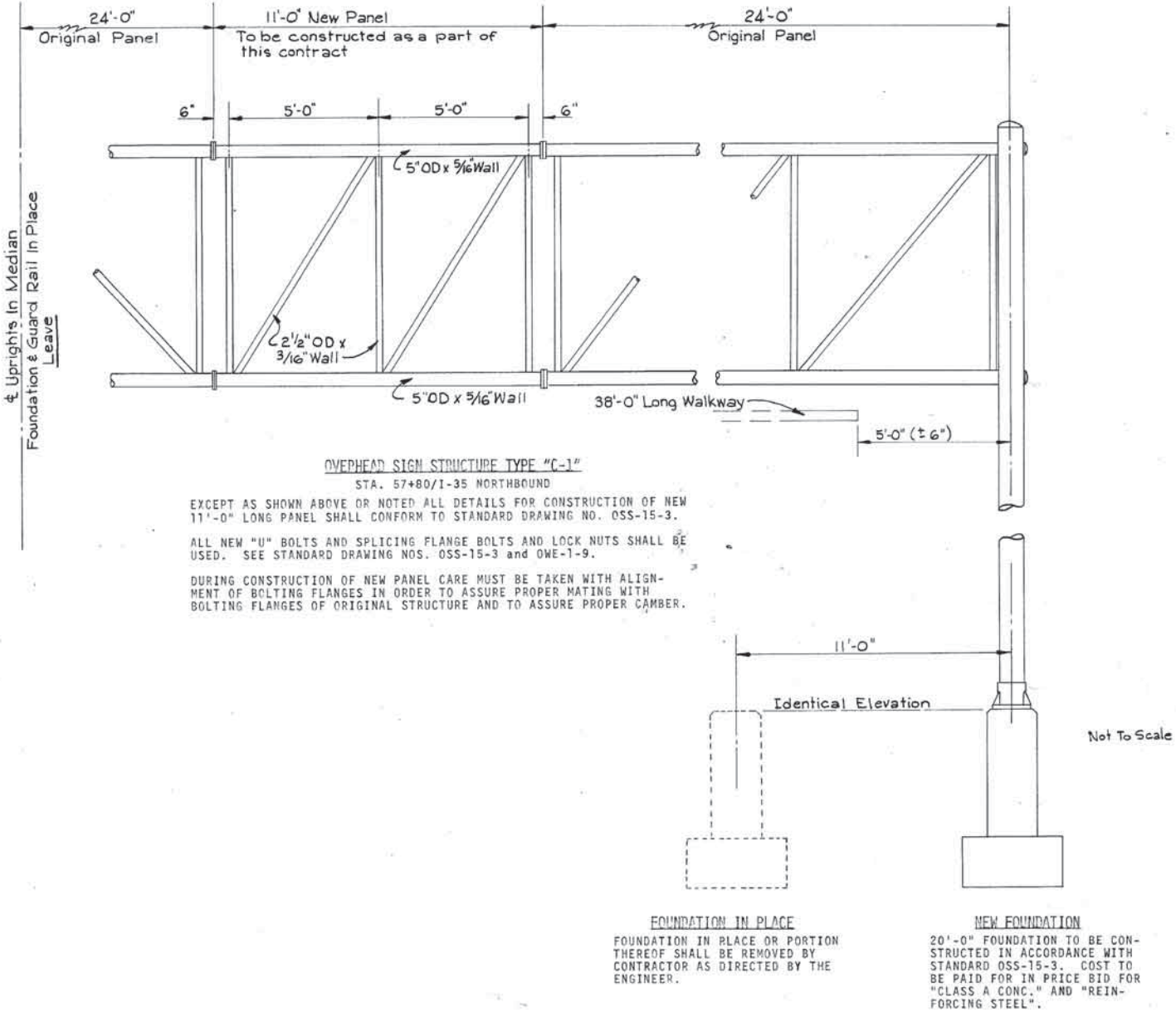
PRICE BID FOR THIS ITEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "OVERHEAD SIGN STRUCTURES (TYPE C-1)(ALUM.)" WHICH SHALL BE FULL COMPENSATION FOR REMOVAL FROM STORAGE AND DELIVERY TO LOCATION, RE-ERECTION, ELECTRICAL CONNECTIONS, FURNISHING ALL MATERIALS, EQUIPMENT, LABOR, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

#### SIGNS

SIGNS REMOVED FROM THESE STRUCTURES SHALL BECOME THE RESPONSIBILITY OF THE STATE AND SHALL BE ALTERED AND REPLACED ON STRUCTURE BY STATE FORCES.

#### GUARD RAIL

GUARD RAIL TO BE REMOVED AND/OR RE-SET IN THE VICINITY OF THESE STRUCTURES SHALL BE ACCOMPLISHED BY STATE FORCES.



Design		
Drawn	W.D.S.	12/1/69
Checked		
Approved		
Squad		

### SPECIAL DETAILS

### OVERHEAD SIGN STRUCTURES

F. A. Project No. I- 240-4 (86)(81) Sheet No. 187



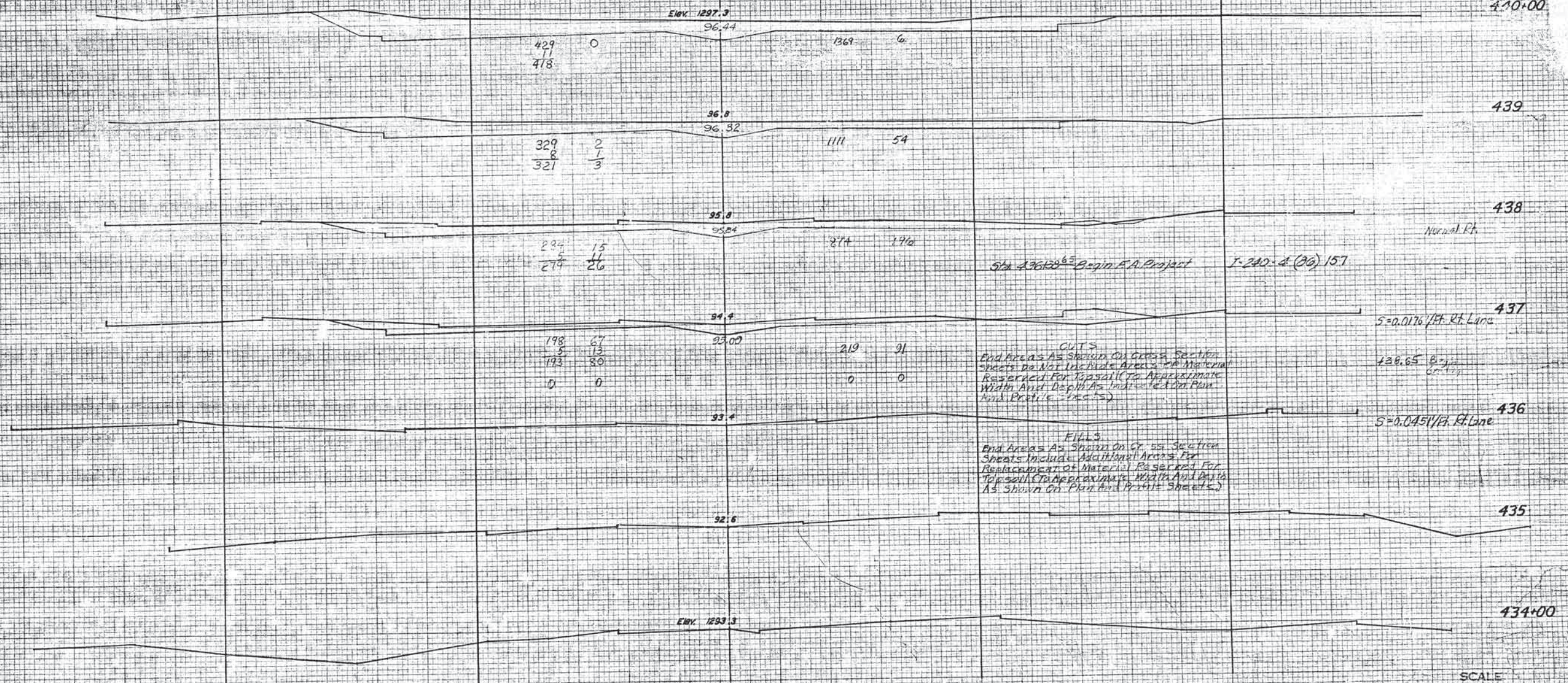
FEED ROAD	STATE	F.A.	FISCAL SHEET
DET. NO.	DATE	PROJ. NO.	YEAR
6	TXLA	1-240 4185	194

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

DATE	NO.
FINAL SURVEY	NO.
NOTE BOOK	NO.
AREA	NO.
NO.	NO.

DATE	NO.
ORIGINAL SURVEY	NO.
NOTE BOOK	NO.
AREA	NO.
NO.	NO.



CUTS  
End Areas As Shown On Cross Section  
Sheets Do Not Include Areas Of Material  
Reserved For Topsoil (To Approximate  
Width And Depth As Indicated On Plan  
And Profile Sheets)

FILL  
End Areas As Shown On Cr. Sec. Section  
Sheets Include Additional Areas For  
Replacement Of Material Reserved For  
Topsoil (To Approximate Width And Depth  
As Shown On Plan And Profile Sheets)

S=0.0176/ft. Rt. Lane

S=0.0451/ft. Rt. Lane

SCALE  
HOR. 1"=100'  
VER. 1"=10'

MICROFILMED 5-7-90  
SCALE 2 inches

F.A. PROJ. NO. 240-436 SHEET NO. 13

PLATE J, CR. SEC. SECTION



E.A. PROJ. NO 1-240 4/86 157 SHEET NO 18



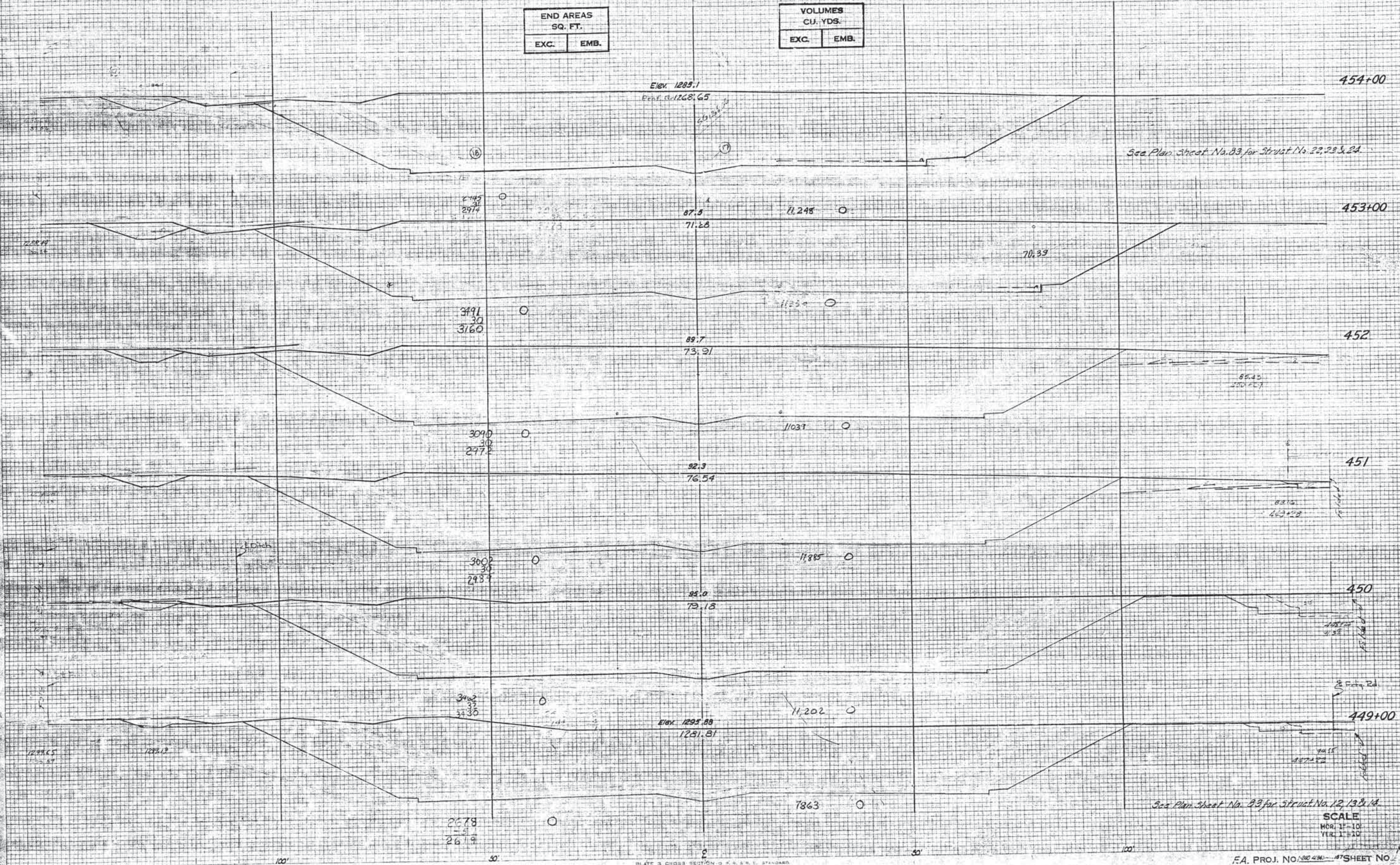
FED. ROAD DIST. NO.	STATE	FA. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240 4180		136	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

SURVEY  
 DATE  
 BY  
 CHECKED  
 NO.

ORIGINAL  
 SURVEY  
 DATE  
 BY  
 CHECKED  
 NO.

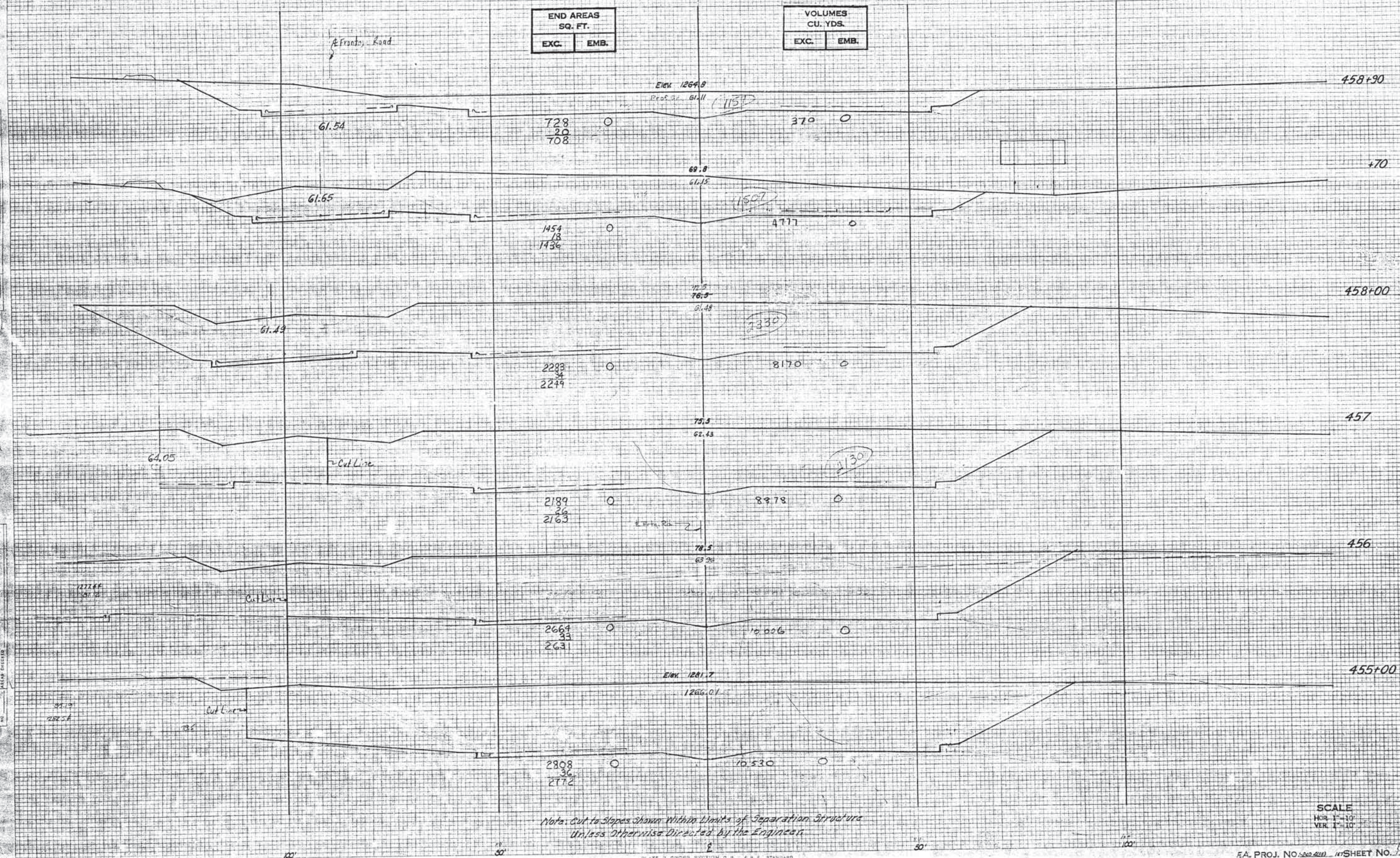




VOLUMES CU. YDS.	
EXC.	EMB.

[illegible]

ORIGINAL SURVEY	SUBMITTED	BY	DATE
FILED	RECEIVED	BY	DATE
TEMPERATURE	BY	DATE	
AREAS			



*Note: Cut to Slopes Shown Within Limits of Separation Structure Unless Otherwise Directed by the Engineer*

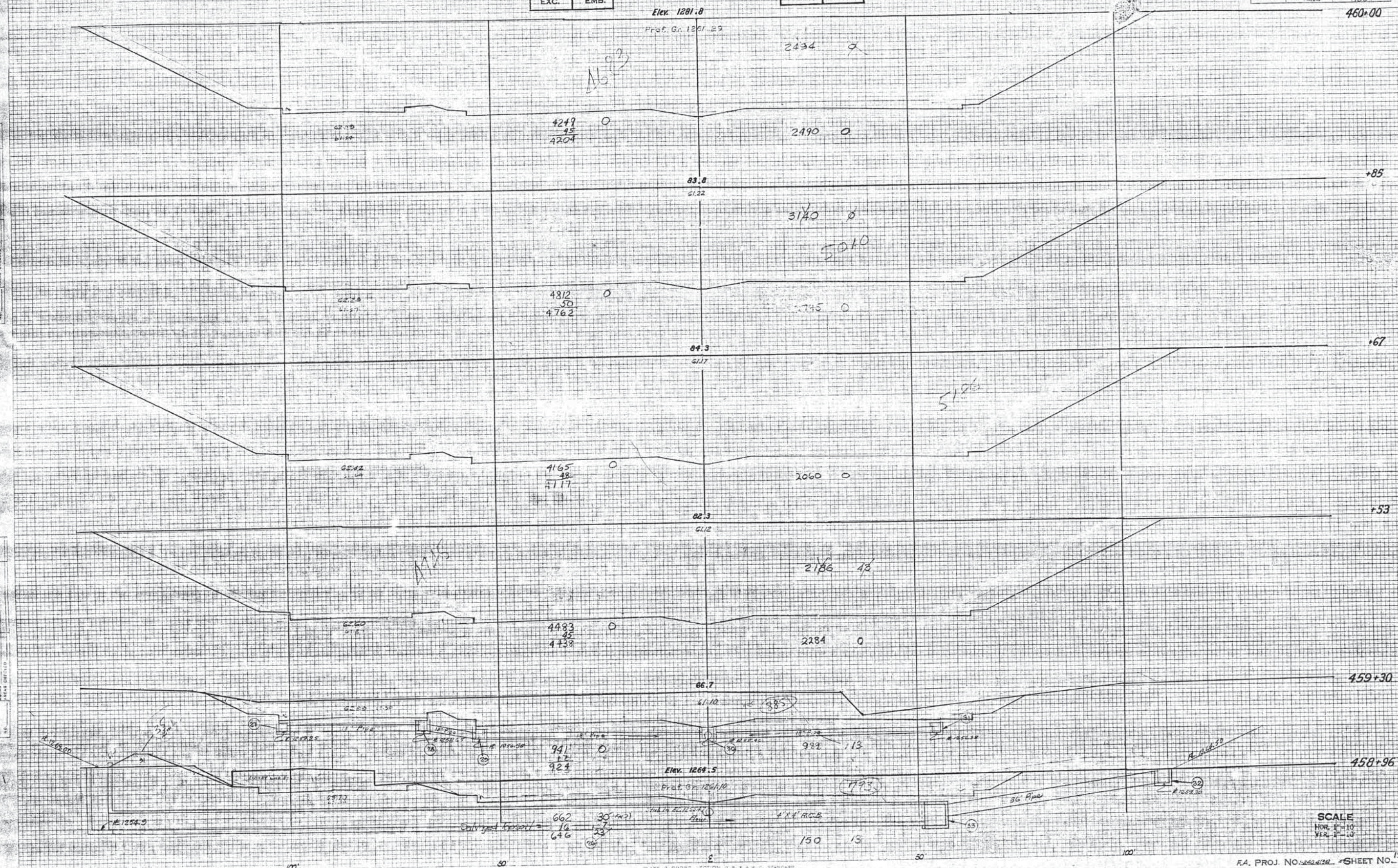
SCALE  
HOR. 1"=10'  
VER. 1"=10'

EA PROJ. NO. 250-228 167 SHEET NO. 1



VOLUMES	
CU. YDS.	
EXC.	EMB.

FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
5	OKLA.	1-240 4(86)		198	



**SCALE**  
HOR. 1" = 10'  
VER. 1" = 10'

F.A. PROJ. NO. 1-240-4(38) SHEET NO. 198



FED. ROAD DIST. NO.	STATE	EA. PROJ. NO.	SHEET NO.	TOTAL SHEETS
1-240	OKLA.	4180	139	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

Exc. Topsoil	1114	156
	61	3
	153	159

3063 322

	865	35
	67	3
	798	38

357 94

	803	382
	67	15
	752	397

564 175

	878	91
	62	9
	710	99

2053 192

	1268	70
	67	15
	711	36

2500 34

Exc. Ditch Bk	1390	3
	43	2
	1333	5

1210 27

	447	20
	20	0
	427	20

149 2

Exc. Spoil	761	0
	15	0
	746	0

2556 0

SCALE  
HOR. 1"=10'  
VER. 1"=10'



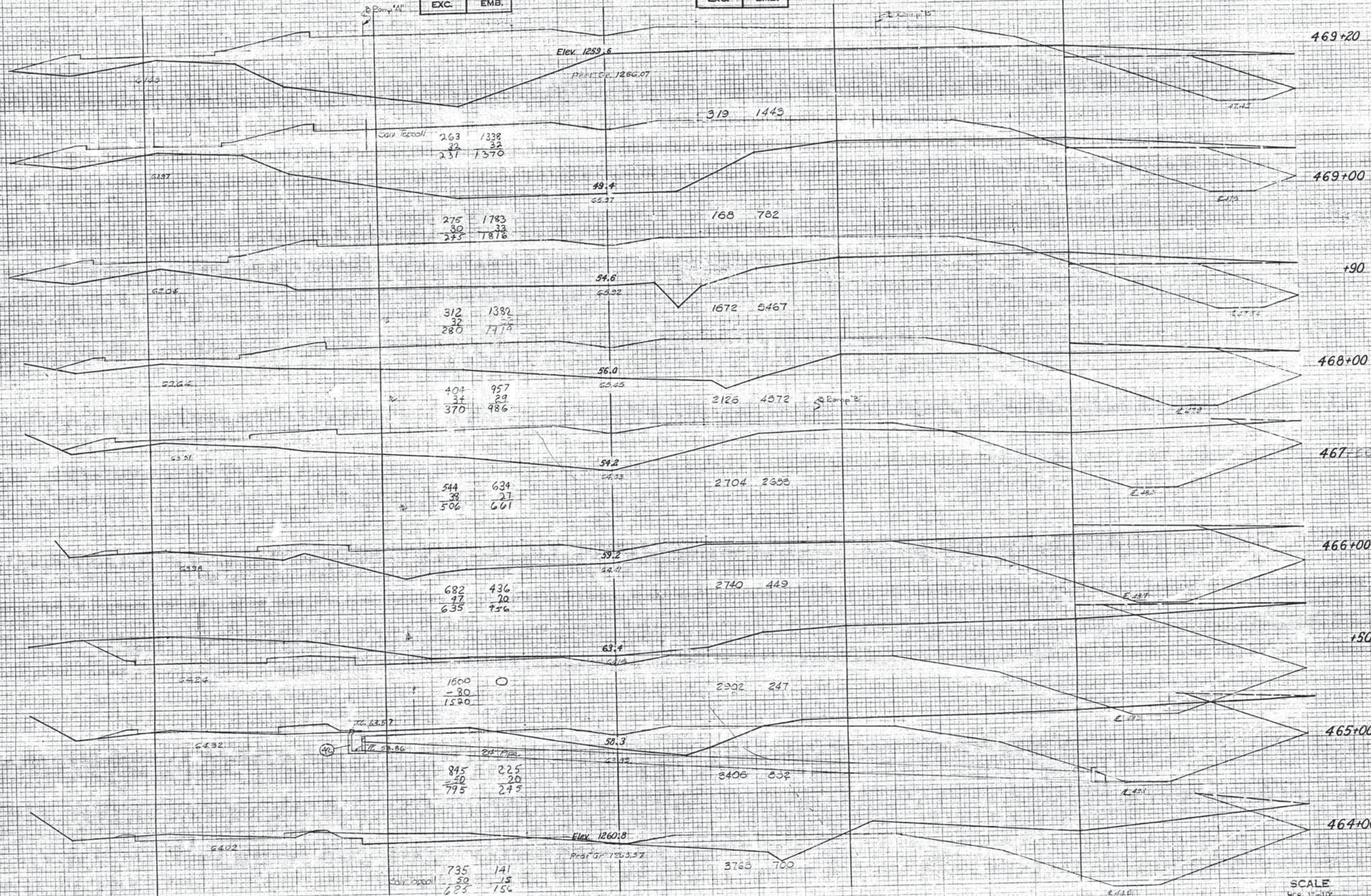
END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

PROJ. NO.	STATE	FEED NO.	FEED YEAR	SHEET NO.	TOTAL SHEETS
5	WLA	1-240	4/96	200	

FINAL SURVEY  
NOTE BOOK AREA  
NO. 1

ORIGINAL SURVEY  
NOTE BOOK AREA  
NO. 1



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



FED. ROAD DIST. NO.	STATE	EA. TOTAL NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	OKLA.	1-240	1960	201	250

END AREAS SQ. FT.	
EXC.	EMB.
70	3048
17	54
53	2974

VOLUMES CU. YDS.	
EXC.	EMB.
16	1319

Elev. 1251.6  
Prof. Gr. 1238.52

22	3097
8	56
14	2991

21	1355
----	------

90	323
75	52
	3179

61	2058
----	------

132	3577
17	56
115	3583

0	0
59	2259

145	2865
13	51
163	2916

295	5607
	52

105	2051
14	43
119	2094

241	3754
-----	------

168	2149
17	49
151	2198

308	4869
-----	------

119	1697
13	40
106	1696

114	1305
-----	------

193	1322
41	36
152	1358

674	3636
-----	------

Elev. 1259.2  
Prof. Gr. 1266.30

SCALE  
HOR. 1"=10'  
VER. 1"=10'

E.A. PROJ. NO. 1-240-438 SHEET NO. 201

PLATE 3 CROSS SECTION U.S.A. & S.E. STANDARD  
100' HORIZ. SCALE 1"=100' VERT. SCALE 1"=10'

FINAL SURVEY  
DATE  
BY  
CHECKED  
DATE  
BY  
REMARKS

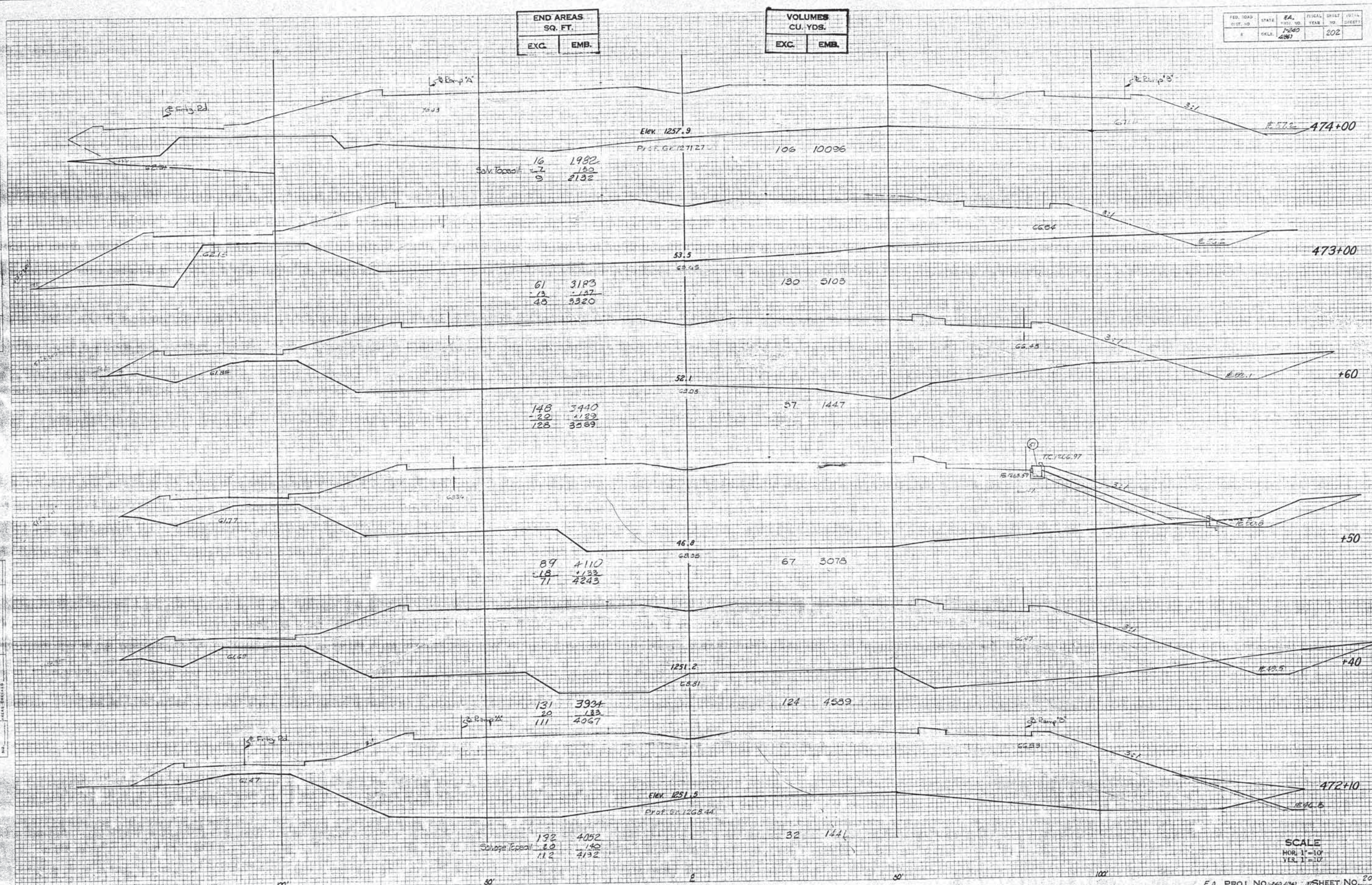
ORIGINAL SURVEY  
DATE  
BY  
CHECKED  
DATE  
BY  
REMARKS



VOLUMES CU. YDS.	
EXC.	EMB.

NO.	DATE
APRIL CHECKED	BY
AREAS	DATE
NOTE BOOK	
TEMPLATE	
PLOTTING	
SURVEYED	
FINAL SURVEY	

ORIGINAL					
SURVEY	SURVED	BY	DATE		
NOTED	PLOTTED	BY	DATE		
TEMPLATE					
NOTE BOOK					



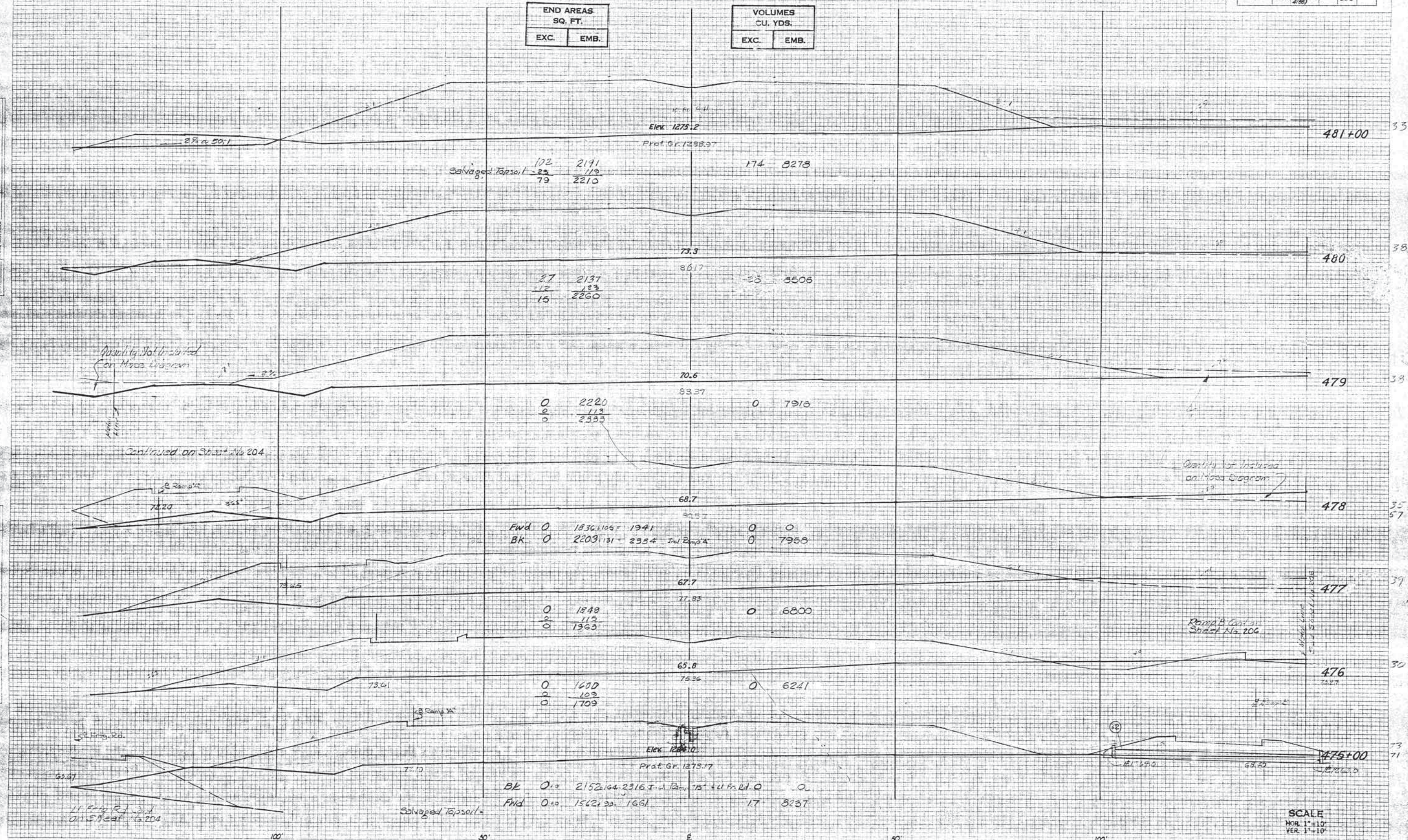
SCALE  
HOR. 1"=1  
VER. 1"=1



FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	GA.	1-240 (1961)		203	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.



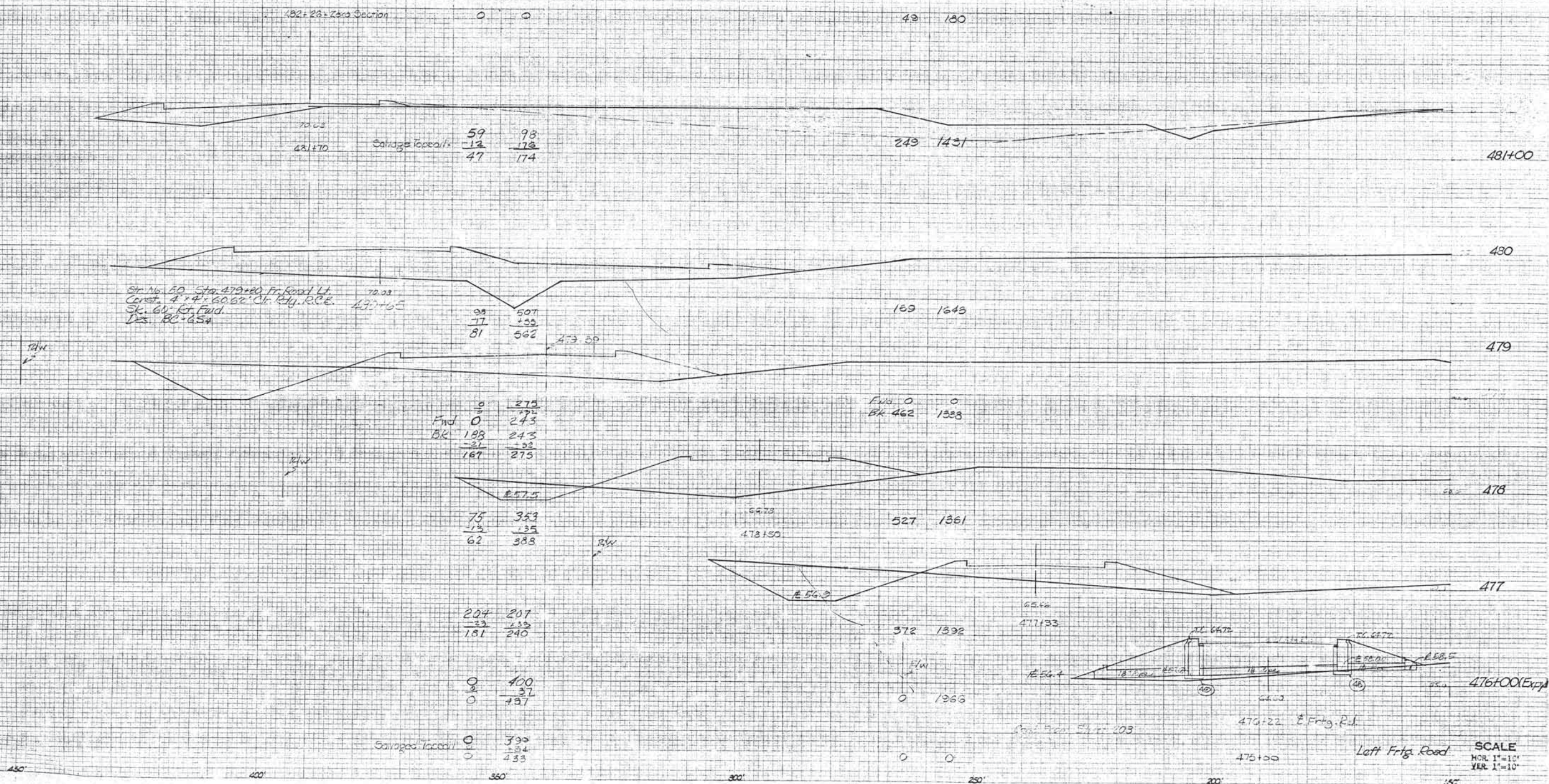
SCALE  
HOR. 1" = 10'  
VER. 1" = 10'



VOLUMES	
CU. YDS.	
EXC.	EMB.

NO.	DATE
SURVEYED PLOTTED TIME(LAP) AREAS AREAS CHECKED	DATE TIME TIME(LAP) AREAS AREAS CHECKED

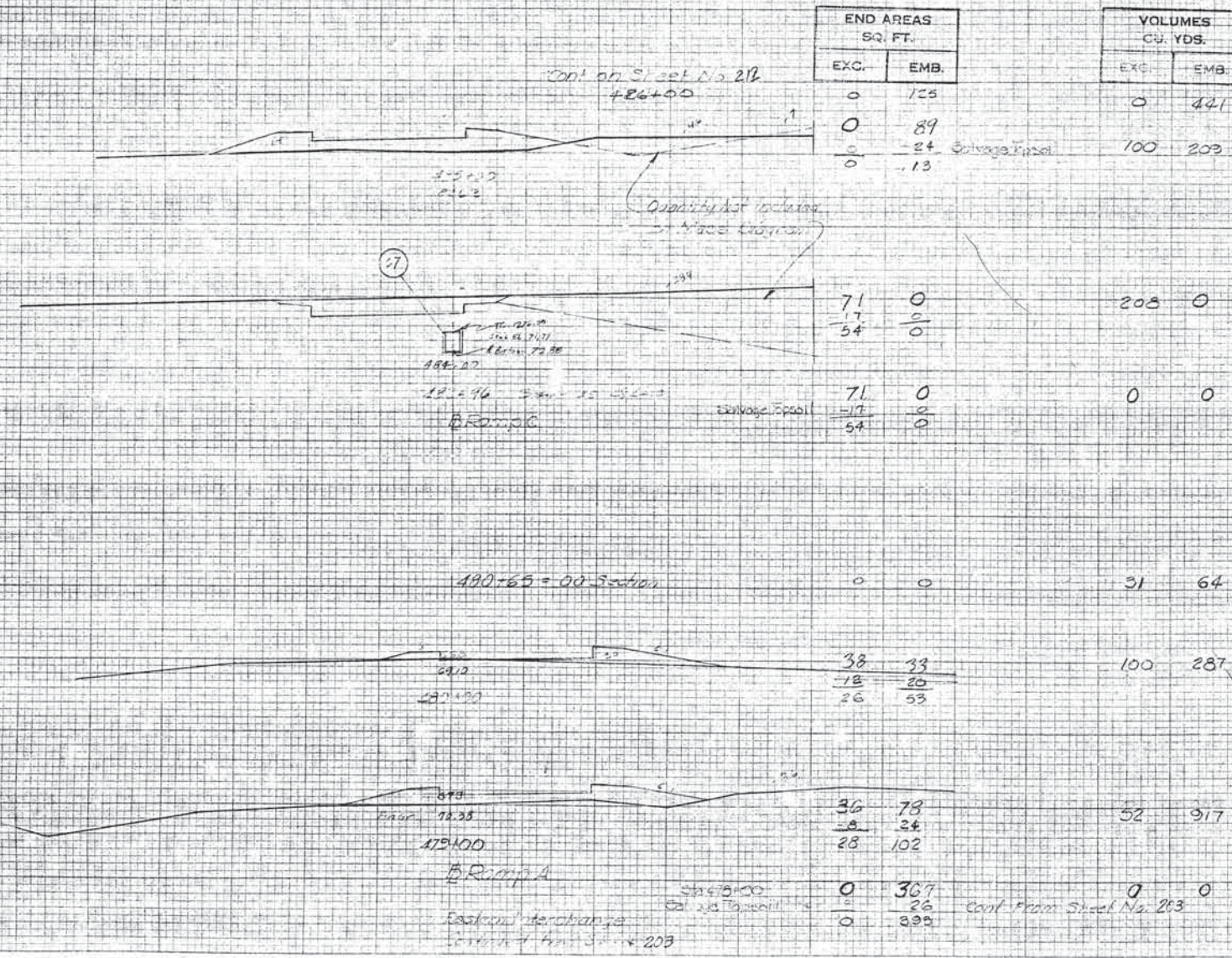
ORIGINAL SURVEY	DATE
INVESTED	DATE
PLANT	DATE
TEMPLATE	DATE
ALL CAS	DATE
AREAS UNLOADED	DATE





FINAL SURVEY  
NO. 100

ORIGINAL SURVEY  
NO. 100



Eastern Interchange

Ramp A & C

SCALE

HOR. 1"=10'

VER. 1"=10'



PER. APP'D	DATE	EA	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	08/14	100-4 (84)		206	

END AREAS SQ. FT.		VOLUMES CU. YDS.	
EXC.	EMB.	EXC.	EMB.

171	3	206	13
-32	16		
139	3		

171	3	542	26
-32	16		
139	3		

213	1	641	33
-37	15		
176	6		

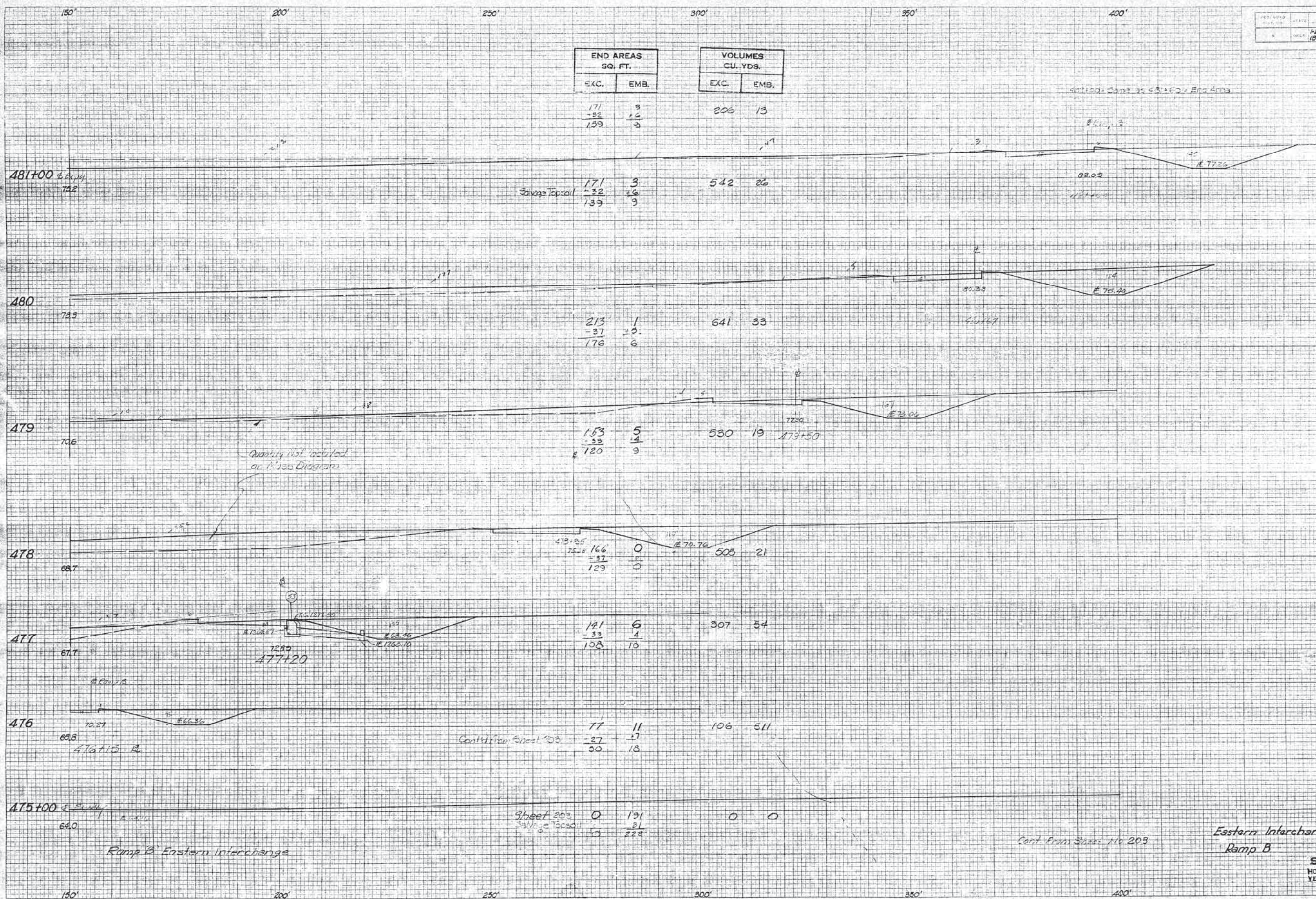
153	5	530	19
-33	4		
120	9		

166	0	505	21
-37	0		
129	0		

141	6	307	34
-33	4		
108	10		

17	11	106	511
-37	7		
50	18		

0	191	0	0
10	31		
	222		



Quantity not included  
on Mass Diagram

Continue Sheet 203

Cont. From Sheet No 203

Eastern Interchange  
Ramp B

SCALE  
HOR. 1"=10'  
VER. 1"=10'

DATE  
BY  
REVIEWED  
DATE  
BY  
NO.

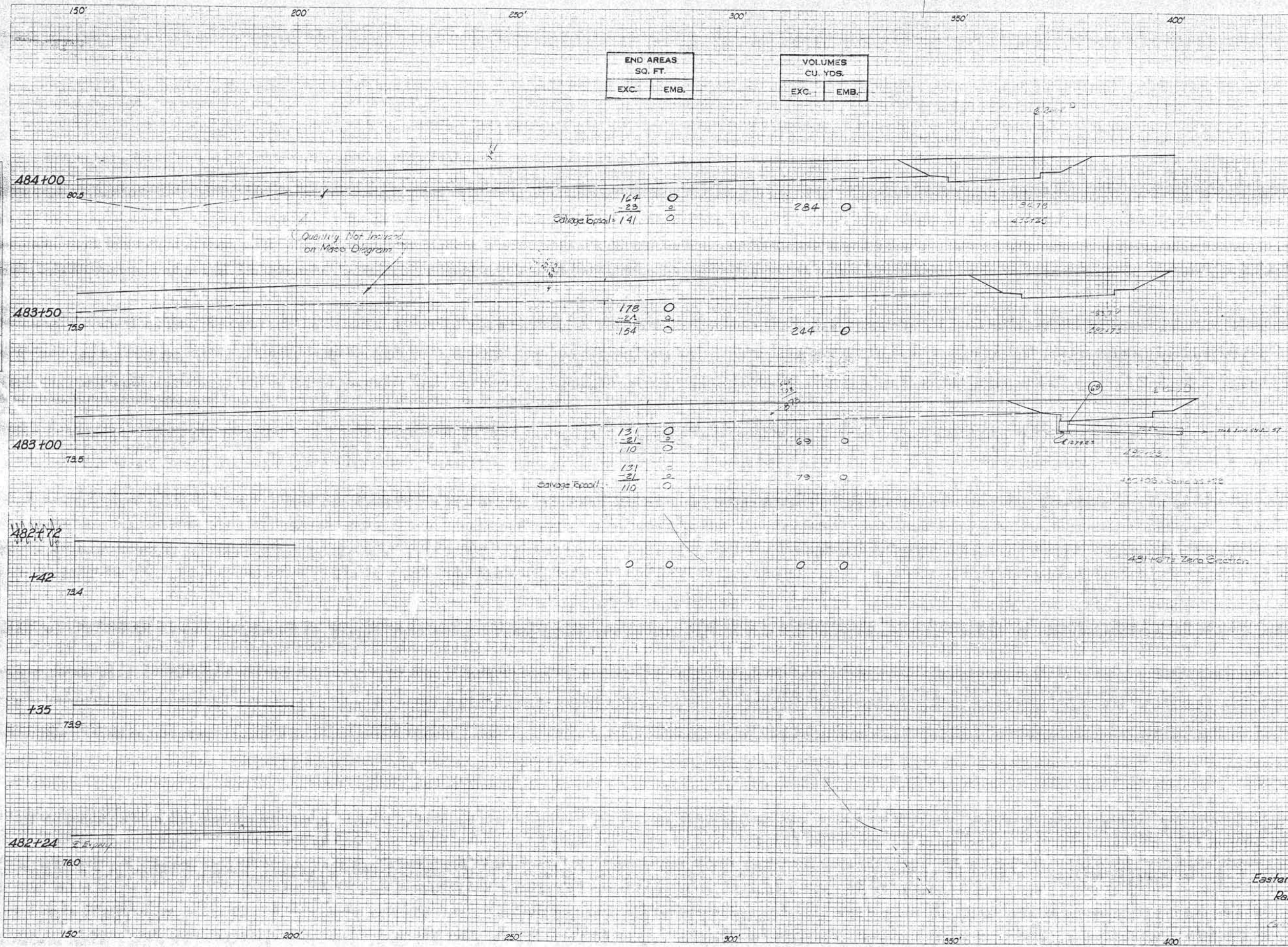
ORIGINAL  
SURVEY  
ELEVATION  
NOTE BOOK  
NO.



PLAN	SECTION	RA	TOTAL SHEET	TOTAL
6	1-240-4 (86)		207	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.



Eastern Interchange  
Ramp D

SCALE  
HOR. 1"=10'  
VER. 1"=10'

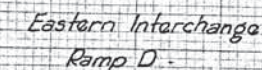
Cartesian Projection NAD 83



FINAL SURVEY	SURVEY PLOTTER	DATE	NO.	DATE
NOTE BOOK		AREAS CHECKED		
NO.		AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	NOTED		
NO. _____	TEMP. PLAT.		
	AREAS		
	AREAS CL.		

VOLUMES CU. YDS.	
EXC.	EMB.



**SCALE**  
HOR. 1"=10'  
VER. 1"=10'



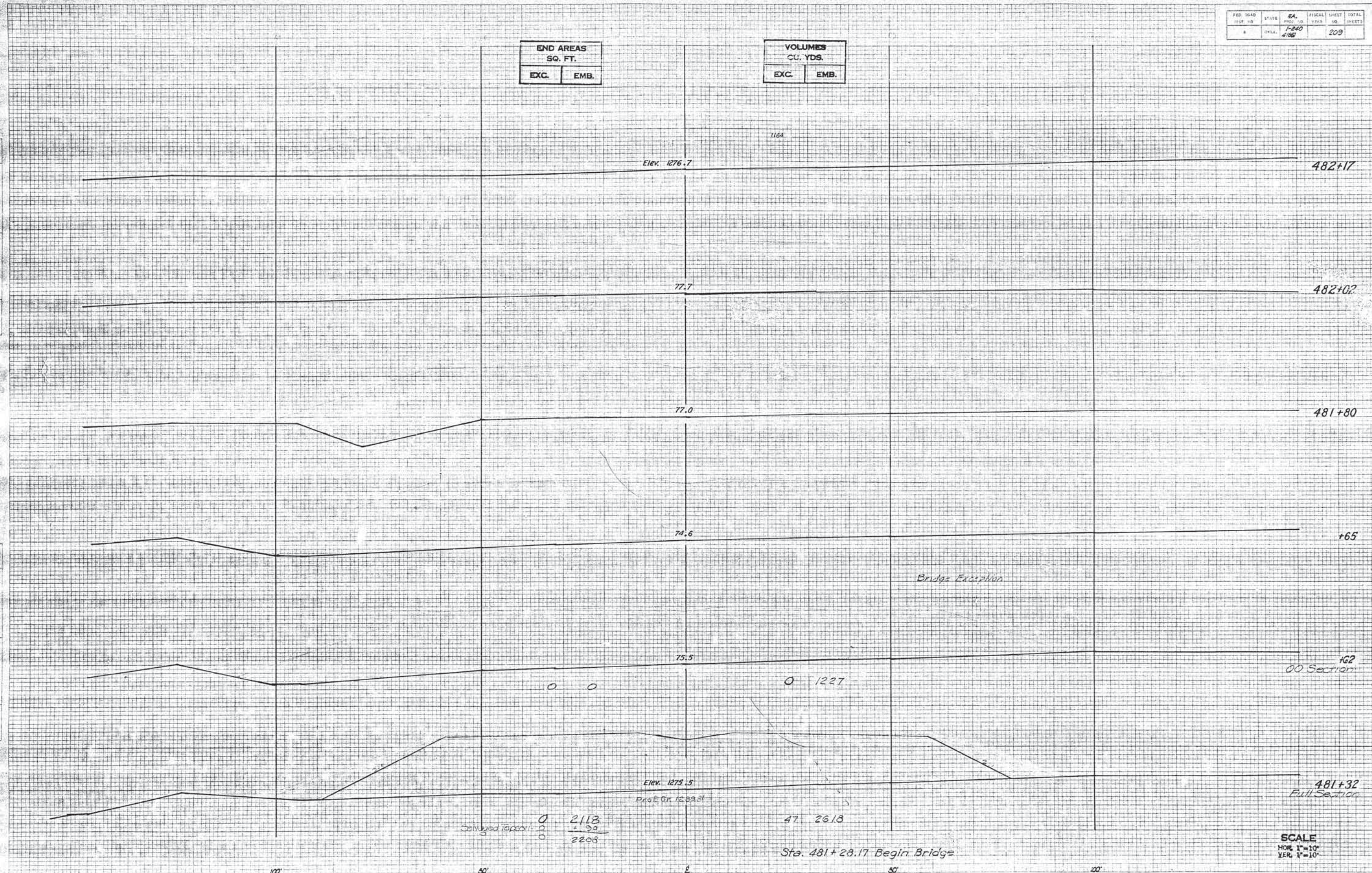
FED. ROAD DIST. NO.	STATE	EA. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240 4106		209	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

DATE	BY	CHKD.	DATE
FINAL SURVEY	REVISION	REVISION	REVISION
NOTE BOOK	REVISION	REVISION	REVISION
NO.			

DATE	BY	CHKD.	DATE
ORIGINAL SURVEY	REVISION	REVISION	REVISION
NOTE BOOK	REVISION	REVISION	REVISION
NO.			





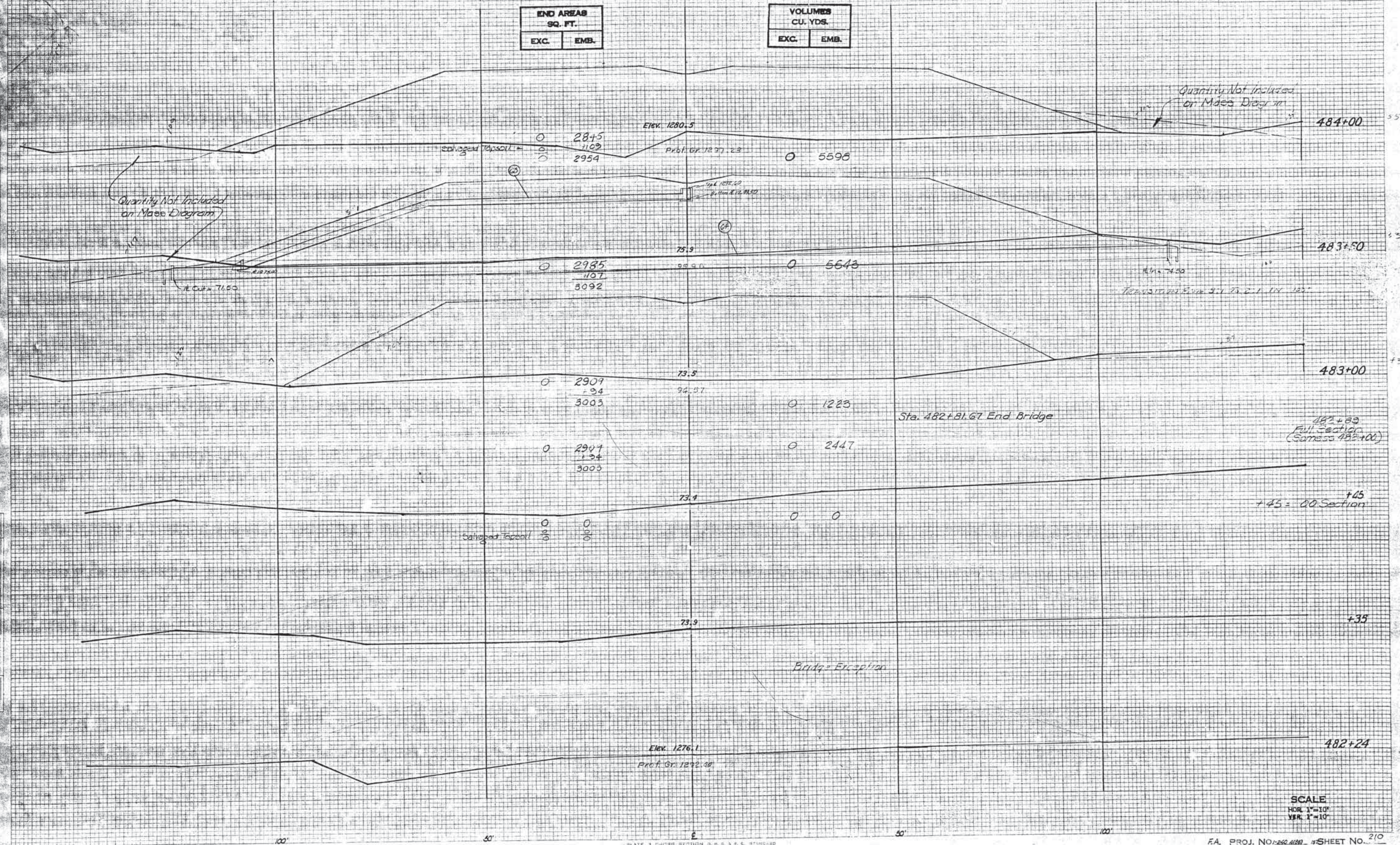
FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	DELA.	1-260 4/68		210	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

FINAL SURVEY  
CHECKED  
DATE  
BY

ORIGINAL SURVEY  
CHECKED  
DATE  
BY



SCALE  
HOR. 1"=10'  
VER. 1"=10'



END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

FINAL  
SURVEY  
NOTE BOOK  
NO.

ORIGINAL  
SURVEY  
NOTE BOOK  
NO.

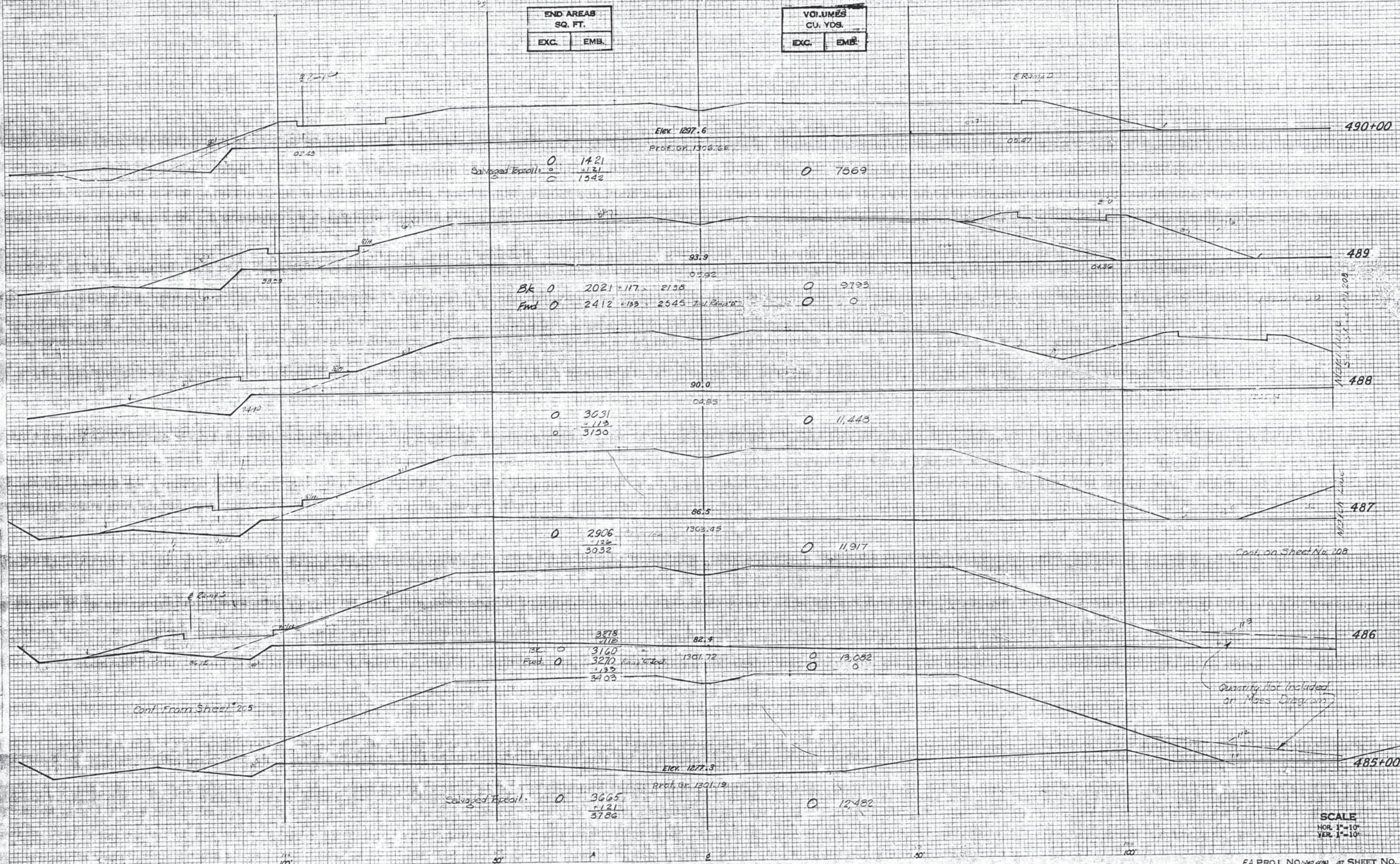


Lt. Frtg. Rd.  
SCALE  
HOR. 1"=10'  
VER. 1"=10'



FINAL SURVEY  
DATE: 12/21/64  
BY: [Signature]  
CHECKED: [Signature]  
APPROVED: [Signature]

ORIGINAL SURVEY  
DATE: 12/21/64  
BY: [Signature]  
CHECKED: [Signature]  
APPROVED: [Signature]



SCALE  
HOR. 1"=10'  
VER. 1"=10'



END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

Scavenged Soil =

366  
- 42  
314

1386

445  
- 43  
399

1231

278  
- 44  
234

1001

425  
- 51  
374  
275  
- 33  
242

896

255  
- 39  
216

976

489+00

488+00

487

486

485+00

Lt. Frtg. Rd.  
SCALE  
HOR. 1"=10'  
VER. 1"=10'



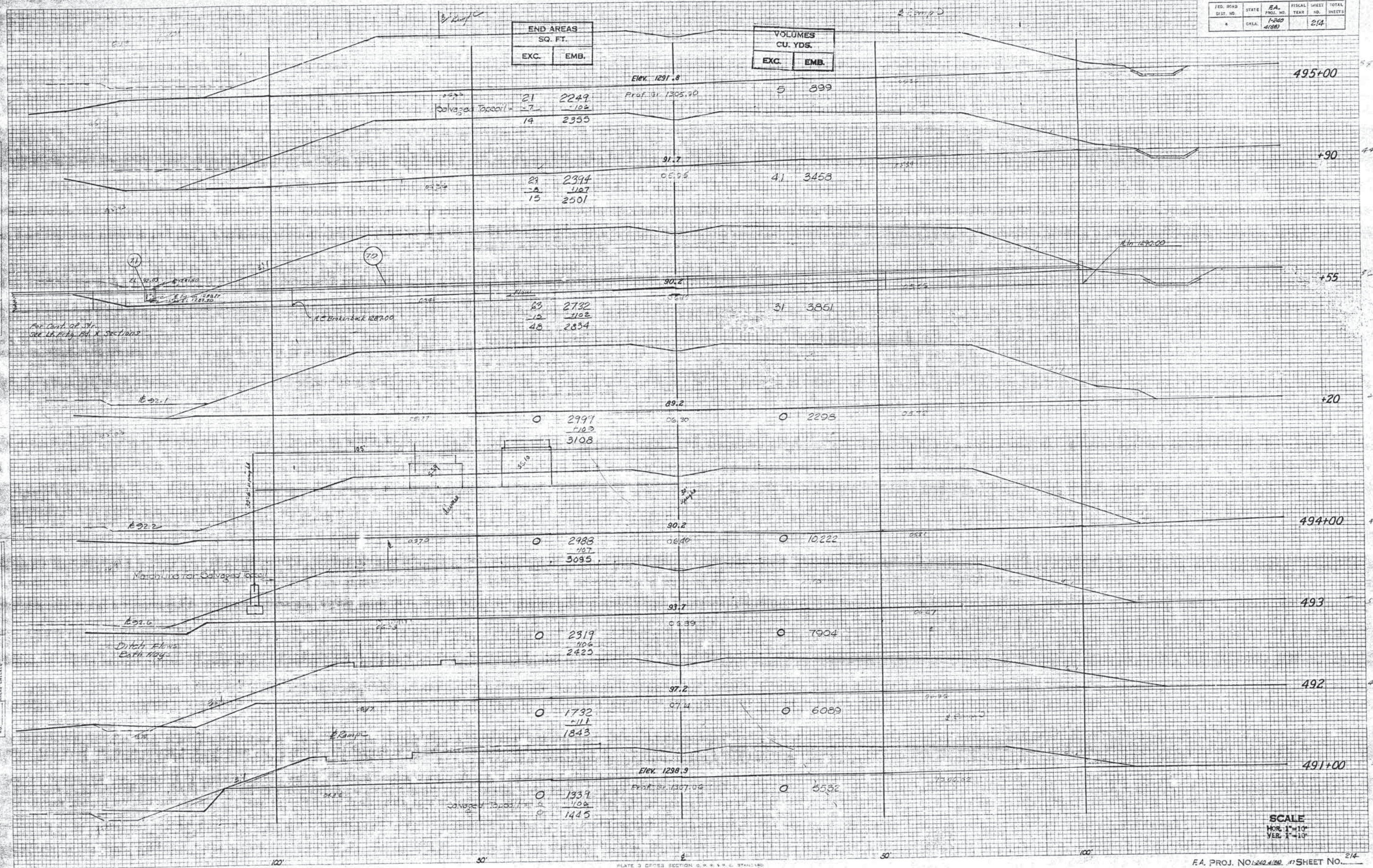
FED. ROAD DIST. NO.	STATE	EA PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240 4(88)		214	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

DATE	BY	REVIEWED	DATE	BY	REVIEWED

DATE	BY	REVIEWED	DATE	BY	REVIEWED



21	2249
-7	-102
14	2355

5	899
---	-----

29	2394
-8	-107
15	2501

41	3458
----	------

83	2732
-12	-102
48	2834

31	3851
----	------

0	2997
-103	-103
3108	3108

0	2295
---	------

0	2988
-107	-107
3095	3095

0	10222
---	-------

0	2319
-106	-106
2423	2423

0	7904
---	------

0	1732
-111	-111
1843	1843

0	6089
---	------

0	1339
-102	-102
1445	1445

0	5532
---	------

SCALE  
HOR. 1"=10'  
VER. 1"=10'

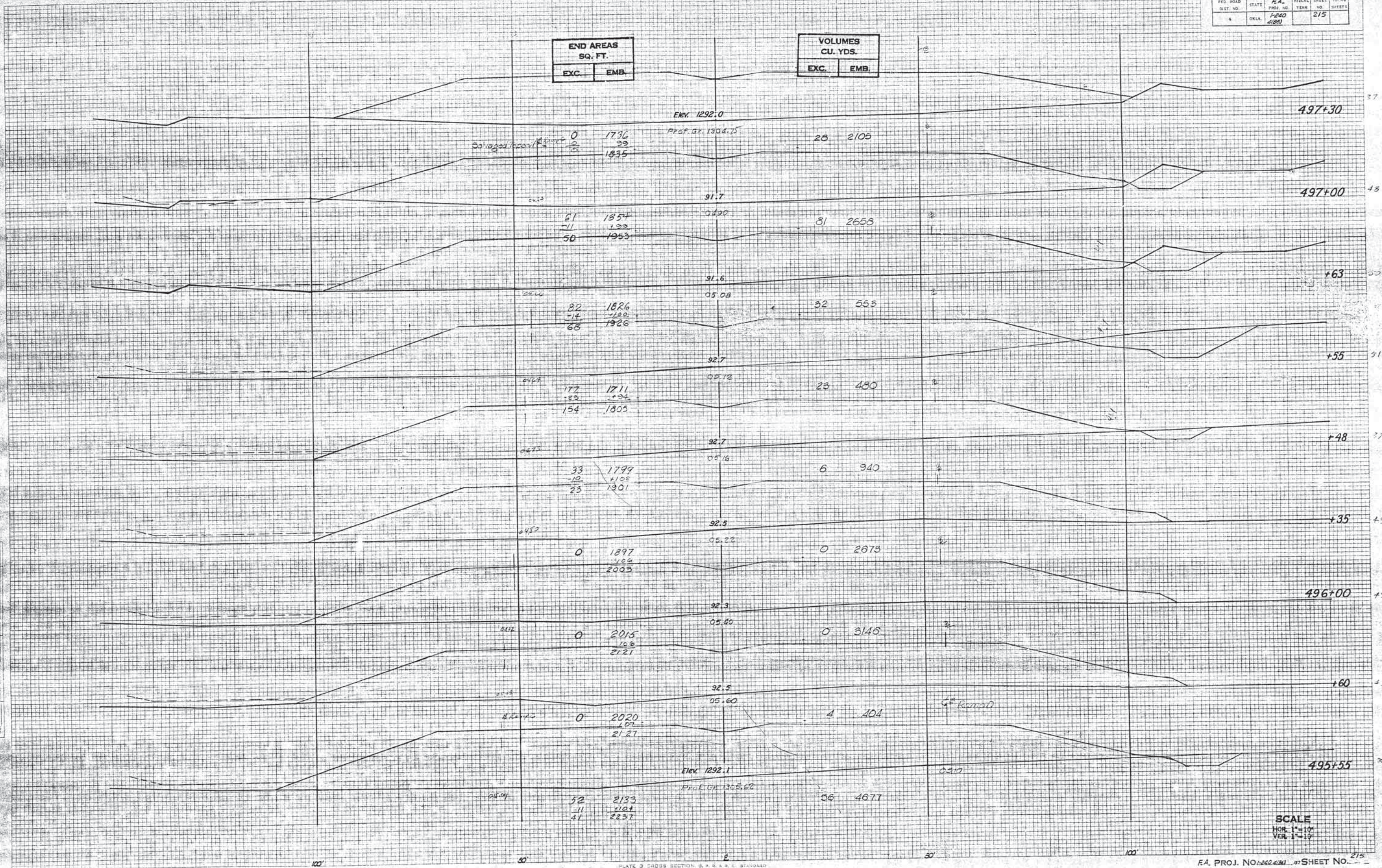


END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

FINAL SURVEY  
DATE  
BY  
CHECKED  
DATE  
BY  
NOTED  
DATE  
BY  
REMARKS

ORIGINAL SURVEY  
DATE  
BY  
CHECKED  
DATE  
BY  
NOTED  
DATE  
BY  
REMARKS



SCALE  
HOR. 1"=10'  
VER. 1"=10'

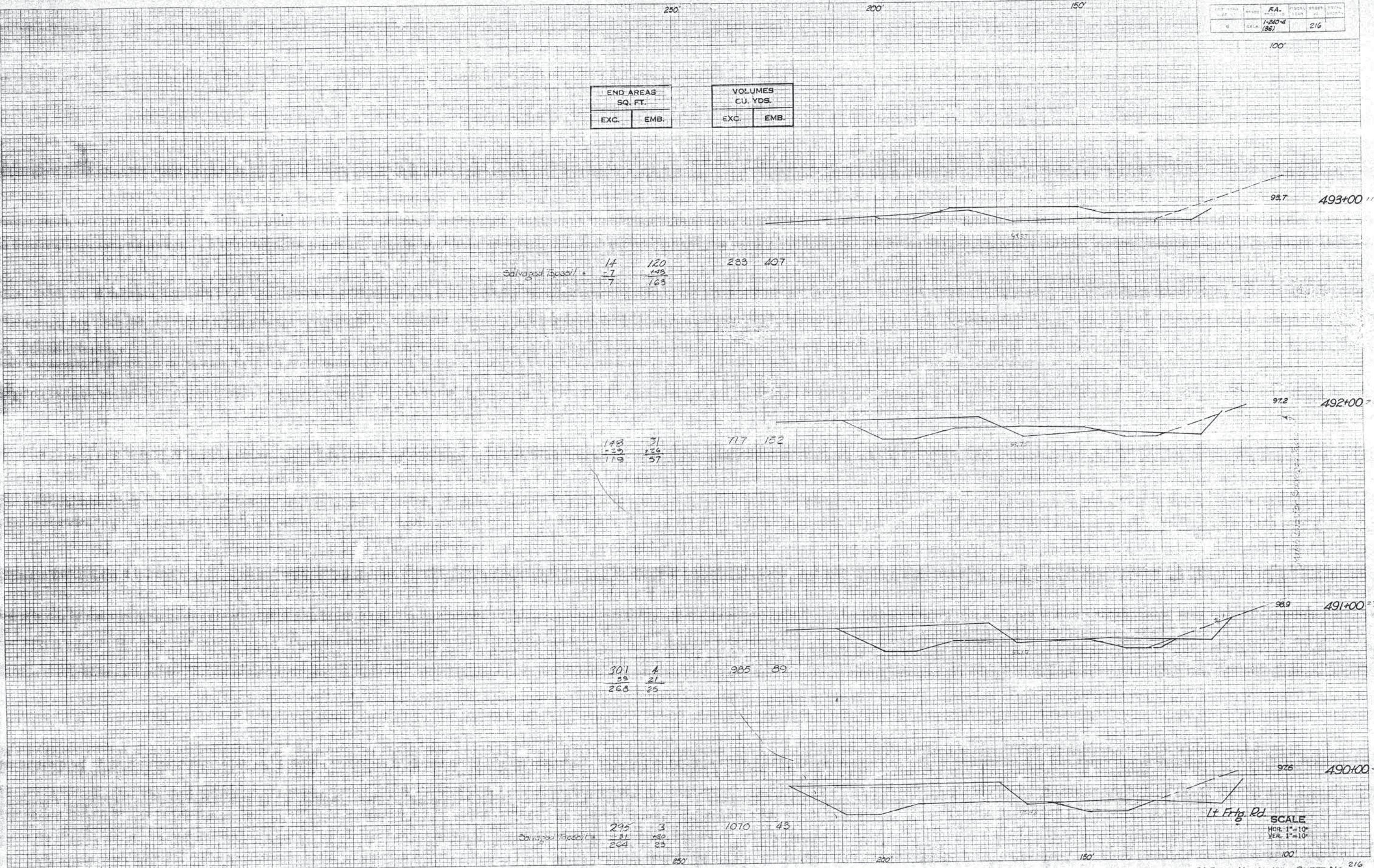


DATE	BY	FA.	SCALE	SHEET	TOTAL
1-24-46	(36)			216	

END AREAS SQ. FT.		VOLUMES CU. YDS.	
EXC.	EMB.	EXC.	EMB.

SURVEY  
 NO. 100  
 DATE 1-24-46  
 BY (36)  
 FA. 1-24-46  
 SCALE 1"=10'  
 SHEET 216

ORIGINAL  
 SURVEY  
 NO. 100  
 DATE 1-24-46  
 BY (36)  
 FA. 1-24-46  
 SCALE 1"=10'  
 SHEET 216





END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

Salvaged Topsoil

0	432
0	54
0	486

0 182

0	442
0	55
0	497

0 609

0	388
0	54
0	442

0 532

0	327
0	52
0	379

0 242

Salvaged Topsoil

0	223
0	52
0	275

13 311

SCALE  
HOR. 1"=10'  
VER. 1"=10'



7

PTS. BOLD	STATE	RA.	FISCAL YEAR	TOTAL
0	OKLA	1-240-4 (196)	218	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

DATE	BY
DESIGNED	
CHECKED	
APPROVED	
NO.	

DATE	BY
DESIGNED	
CHECKED	
APPROVED	
NO.	

Salvaged Topsoil

0 236  
0 48  
0 282

0 74

927 +55

0 245  
0 48  
0 293

0 145

927 +49

Materials for Salvaged Topsoil

0 263  
0 48  
0 311

0 402

925 +35

0 264  
0 46  
0 310

0 420

925 496+100 8

0 211  
0 46  
0 257

0 52

925 160 8

Salvaged Topsoil

0 259  
0 48  
0 307

0 808

927 495+55 9

1/4" Frt. Rd.  
SCALE  
HOR. 1"=10'  
VER. 1"=10'



END AREAS SQ. FT.		VOLUMES CU. YDS.	
EXC.	EMB.	EXC.	EMB.

FINAL  
SURVEY  
NOTE BOOK  
NO.

ORIGINAL  
SURVEY  
NOTE BOOK  
NO.

Estimated Easement =

240	0
-46	0
194	0

103	52
-20	21
83	73

85	18
-17	21
68	87

37	119
-2	29
29	148

76	131
-26	28
50	157

Sanaged Easement =

29	150
-10	22
19	169

LT Frig Rd  
SCALE  
HORIZ 1"=10'  
VERT 1"=10'



END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

Elev. 1314.1  
Prof. Gr. 1301.47

Bk 2788 8+5=13  
Fwd 2959 8+5=13 Incl. L.F. Rd.  
150  
2809

982 5  
0 0

503+85

+75

503+00

502

501

500

499

498+00

497+50

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

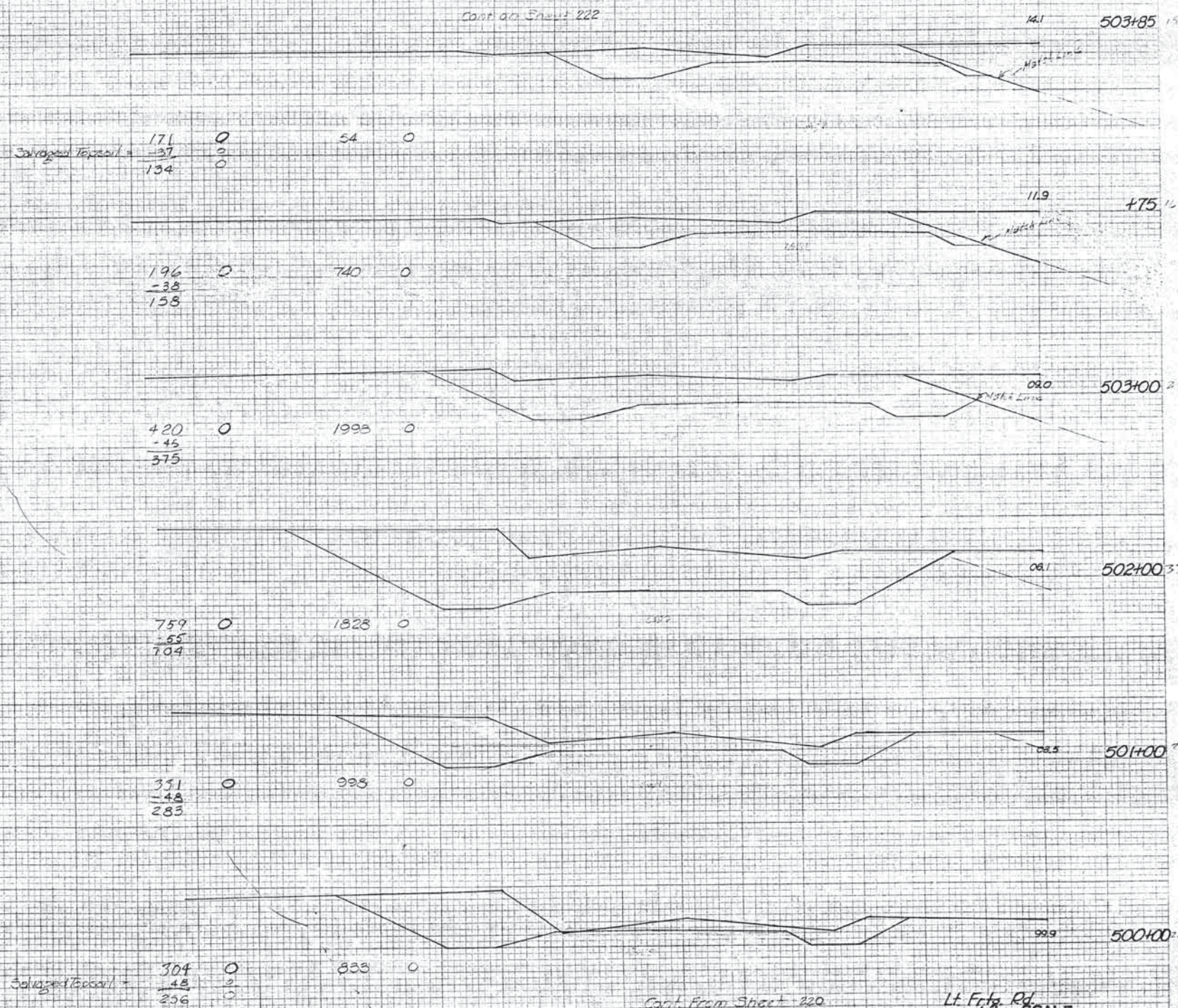
DATE  
BY  
REVIEWED  
CHECKED  
APPROVED  
NOTE BOOK  
AREA SHEETS

DATE  
BY  
REVIEWED  
CHECKED  
APPROVED  
NOTE BOOK  
AREA SHEETS



END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.



DATE  
BY  
NO.  
ORIGINAL SURVEY  
NOTES  
NO. 1110

DATE  
BY  
NO.  
ORIGINAL SURVEY  
NOTES  
NO. 1110



FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	GA	1-240	1968	222	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

Elev. 1310.9  
Prof. Gr. 1309.20

506+00

06.42

25.1

Salvaged Top Soil =  
2854 8  
157 5  
2697 13

1515 7

11.4

1300.47

505+85

06.67

2913 8  
157 5  
2756 13

1058 5

13.9

1300.22

+75

06.33

3114 8  
155 5  
2959 14

1067 5

12.7

1300.57

+65

07.13

2955 8  
155 5  
2800 14

6824 32

12.6

1300.91

505+00

28.56

3021 8  
152 5  
2869 13

10232 43

Elev. 1312.1

Prof. Gr. 1301.10

504+00

1509.71

Salvaged Top Soil =  
2801 8  
148 5  
2653 13

1518 7

SCALE  
HOR. 1"=10'  
VER. 1"=10'



END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

406	374
52	73
354	353

383	953
-----	-----

374	683
61	275
335	765

761	988
-----	-----

564	229
77	76
487	304

1270	295
------	-----

1023	8
143	7
885	15

5045	52
------	----

1923	8
143	5
1839	13

7930	50
------	----

2626	8
136	6
2470	14

9823	50
------	----

2995	8
155	5
2837	13

10,317	50
--------	----

2891	8
157	6
2734	14

10,053	50
--------	----

SCALE  
HOR. 1"=10'  
VER. 1"=10'



END AREAS SQ. FT.	
EXC.	EMB.
651	12
121	18
530	20

VOLUMES CU. YDS.	
EXC.	EMB.
1346	828

EXC. 1299.8  
PROP. GR. 1279.13

517+00

516+00

+50

515+00

+50

+45

+30

514+00

513+00

512+60

651 12  
121 18  
530 20

1346 828

133 347  
48 182  
145 427

290 853

212 409  
36 87  
176 496

277 2974

140 1941  
17 1827  
123 2068

213 4351

120 2497  
13 193  
107 2631

19 520

112 2777  
13 175  
99 2952

53 1543

120 2495  
13 193  
97 2622

113 2852

126 2395  
14 186  
112 2511

543 8343

206 1879  
25 115  
181 1994

402 2574

413 1395  
51 26  
362 1481

398 1352

EXC. 1284.8  
PROP. GR. 1297.58

SCALE  
HOR. 1"=10'  
VER. 1"=10'

PLATE 1 CROSS SECTION 3, P. 1, S. R. E. STANDARD  
100' THE PAPER-MADE AND DRAWN IN U. S. S.  
CROSS SECTION 224

F.A. PROJ. NO. 1-260-1001 SHEET NO. 224



FED. ROAD DIST. NO.	STATE	FA. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	GA.	1-240 4-186		275	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

DATE	BY	REVISION
8/22	W. H. H.	1
8/22	W. H. H.	2
8/22	W. H. H.	3
8/22	W. H. H.	4
8/22	W. H. H.	5
8/22	W. H. H.	6
8/22	W. H. H.	7
8/22	W. H. H.	8
8/22	W. H. H.	9
8/22	W. H. H.	10

DATE	BY	REVISION
8/22	W. H. H.	1
8/22	W. H. H.	2
8/22	W. H. H.	3
8/22	W. H. H.	4
8/22	W. H. H.	5
8/22	W. H. H.	6
8/22	W. H. H.	7
8/22	W. H. H.	8
8/22	W. H. H.	9
8/22	W. H. H.	10

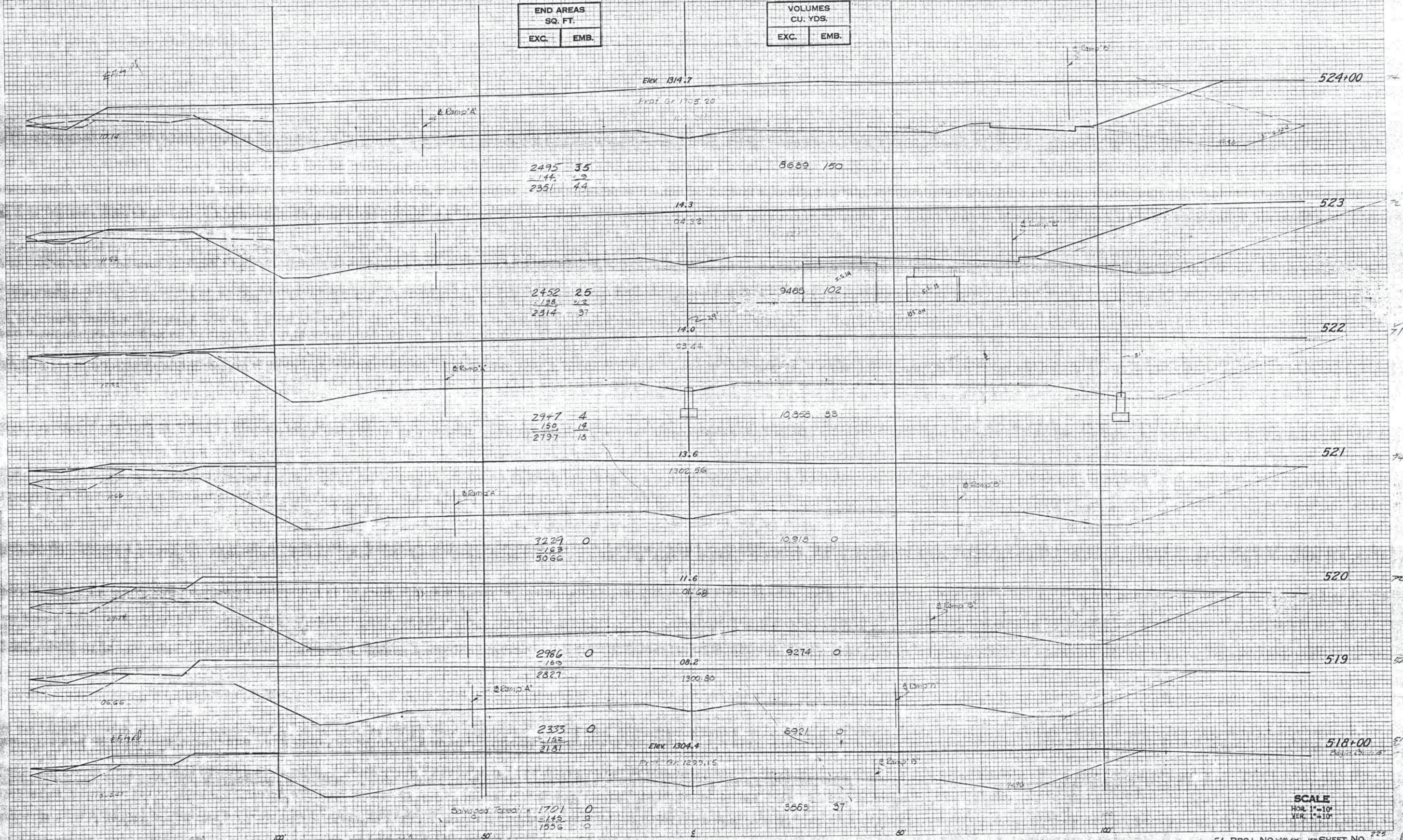


PLATE 3 CROSS SECTION G. H. R. E. STANDARD.  
1955 RAILROAD MAP AND PRINTED IN U. S. A.  
EQUALE DISTANCE 25

SCALE  
HOR. 1"=10'  
VER. 1"=10'  
FA. PROJ. NO. 1-240 4-186 SHEET NO. 275



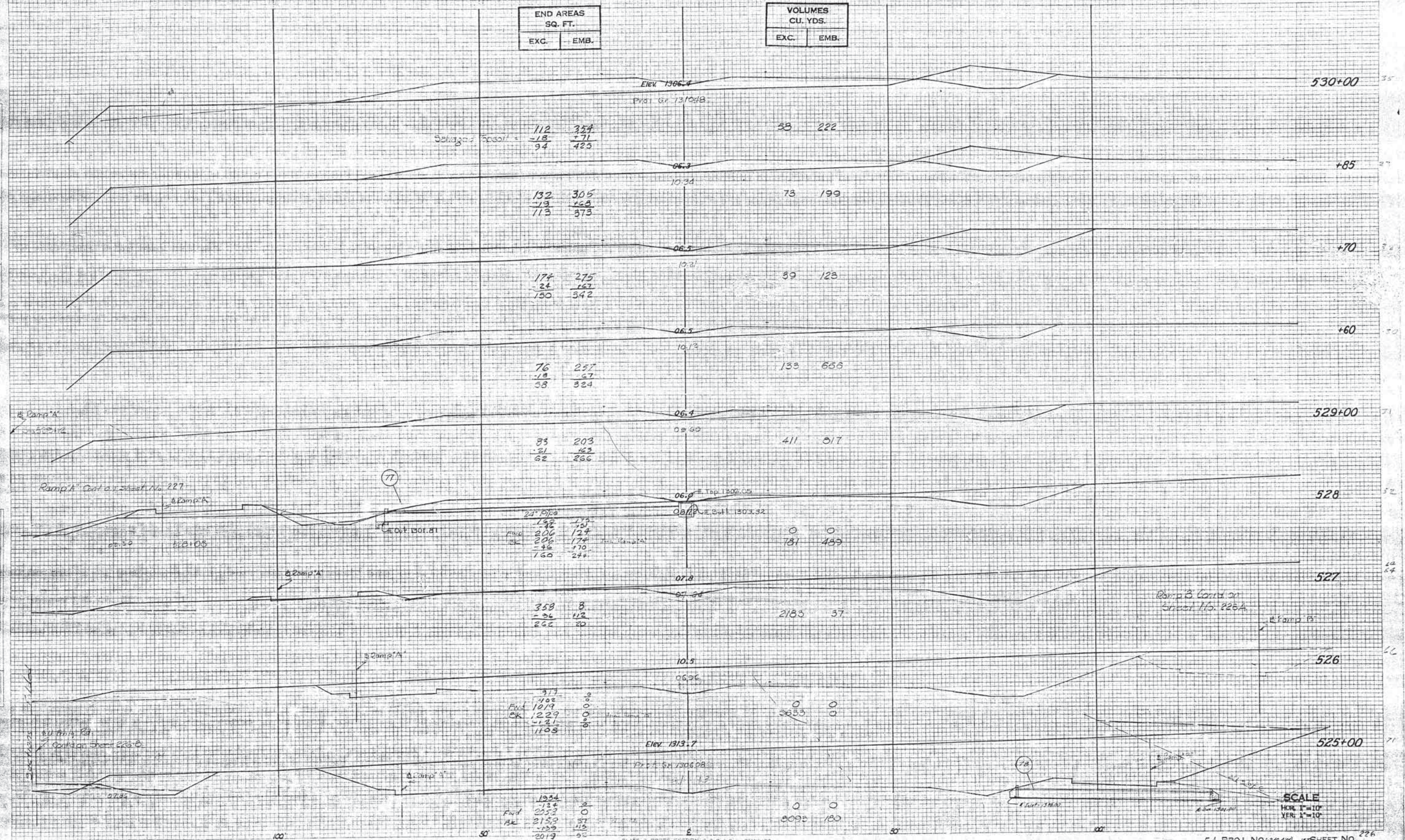
FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-260	1966	226	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

DATE	BY	REVISION
12/3/66	W. H. H.	1
12/3/66	W. H. H.	2
12/3/66	W. H. H.	3
12/3/66	W. H. H.	4
12/3/66	W. H. H.	5
12/3/66	W. H. H.	6
12/3/66	W. H. H.	7
12/3/66	W. H. H.	8
12/3/66	W. H. H.	9
12/3/66	W. H. H.	10

DATE	BY	REVISION
12/3/66	W. H. H.	1
12/3/66	W. H. H.	2
12/3/66	W. H. H.	3
12/3/66	W. H. H.	4
12/3/66	W. H. H.	5
12/3/66	W. H. H.	6
12/3/66	W. H. H.	7
12/3/66	W. H. H.	8
12/3/66	W. H. H.	9
12/3/66	W. H. H.	10



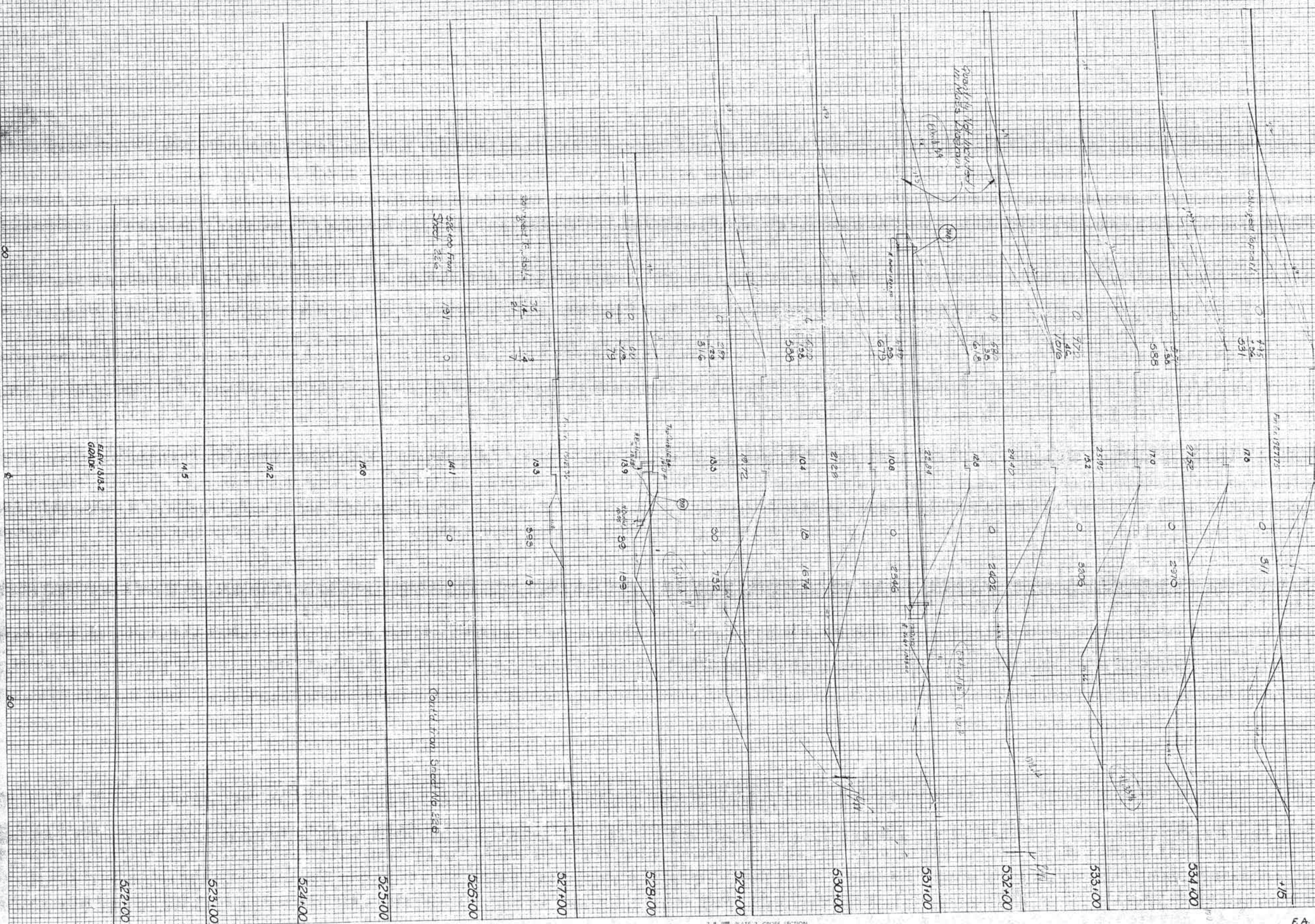


FED. ROAD DIST. NO.	STATE	FA PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ALA	1-240-4 (86)		226A	

END AREAS	
EXC.	EMB.

VOLUMES	
EXC.	EMB.

Ramp "B" - Bryant Ave



DATE 3 CROSS SECTION  
EQUIPMENT & ESSER CO.

DATE	BY	NO.

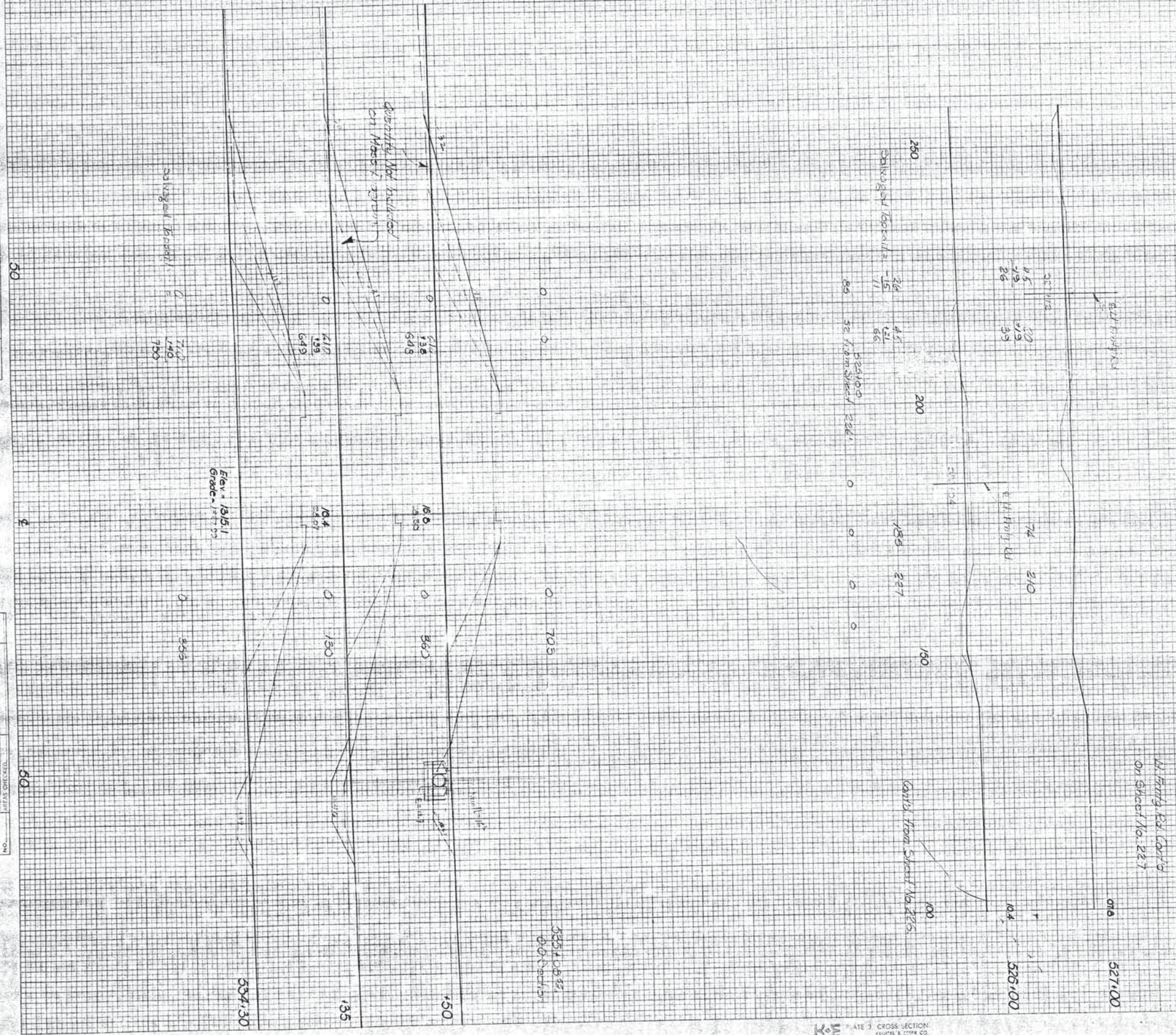
DATE	BY	NO.



END AREAS	
SO. FT.	
EXC.	EMB.

VOLUMES	
CU. YDS.	
EXC.	EMB.

Ramp B - Bryant Ave.



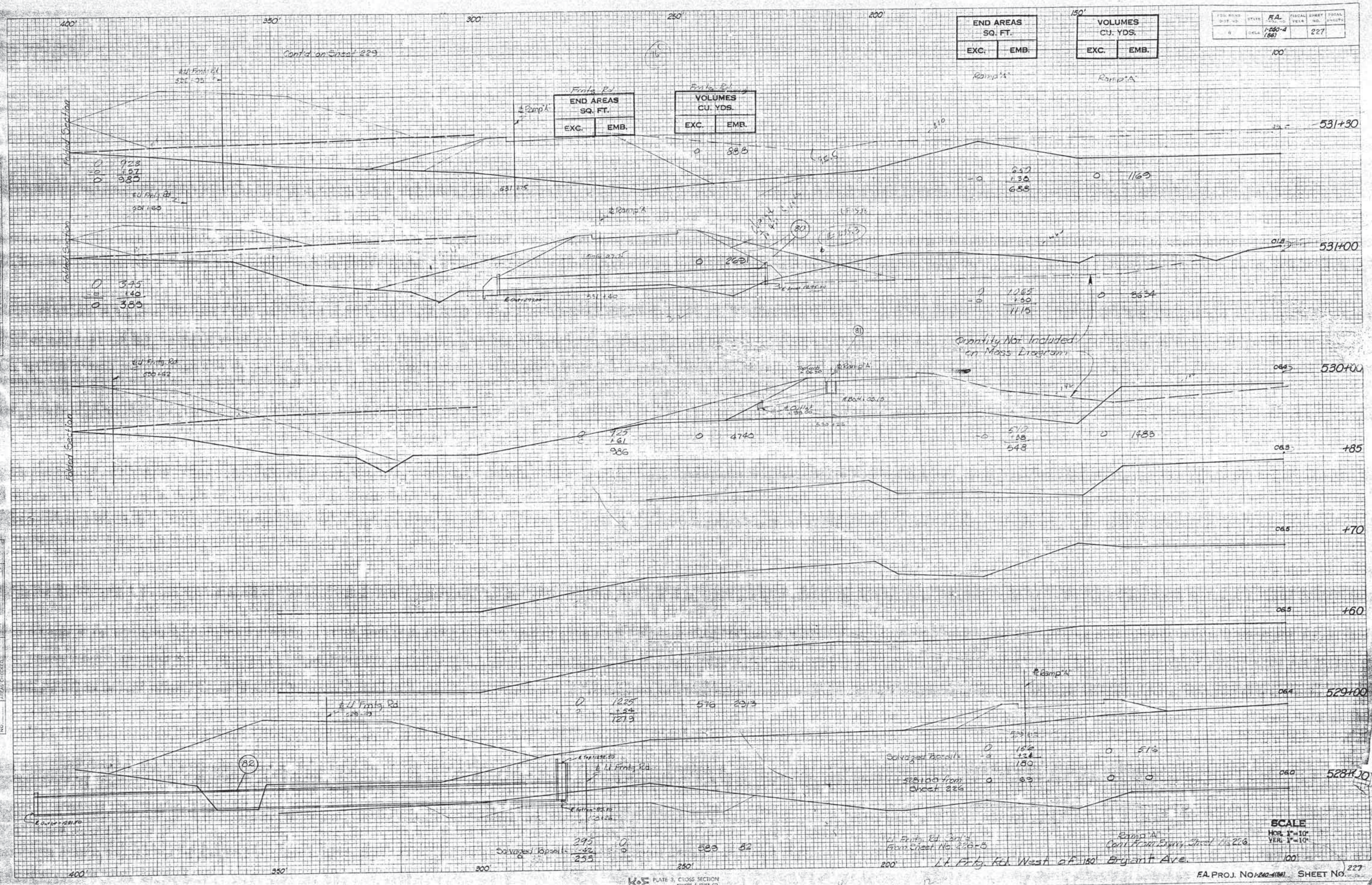
DATE	BY	NO.

DATE	BY	NO.



FINAL SURVEY  
 PLANNED  
 TEMPLATE  
 NOTE BOOK  
 NO.

ORIGINAL SURVEY  
 PLANNED  
 TEMPLATE  
 NOTE BOOK  
 NO.



END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

FED. ROAD DIST. NO.	STATE	F.A. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	DELA.	1-220-4 (186)		227	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

SCALE  
 HOR. 1"=10'  
 VER. 1"=10'

PLATE 3, CROSS SECTION  
 RESURFACING & BRIDGE CO.

F.A. PROJ. NO. 1-220-4 (186) SHEET NO. 227



FED. ROAD DIST. NO.	STATE	EA PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240 41861		228	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

Elev. 1313.6

Prof. Gr. 1314.89

Salvaged Material

NOTE: Cut to Slopes Shown Within Limits of Separation Structure Unless Otherwise Directed by the Engineer.

534+95

+80

+70

534+00

533

532+00

+50

+40

+30

531+00

Elev. 1301.8

Prof. Gr. 1311.36

Salvaged Material

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

DATE  
BY  
CHECKED  
APPROVED  
SURVEY  
NOTE BOOK  
AREA SHEET

DATE  
BY  
CHECKED  
APPROVED  
SURVEY  
NOTE BOOK  
AREA SHEET

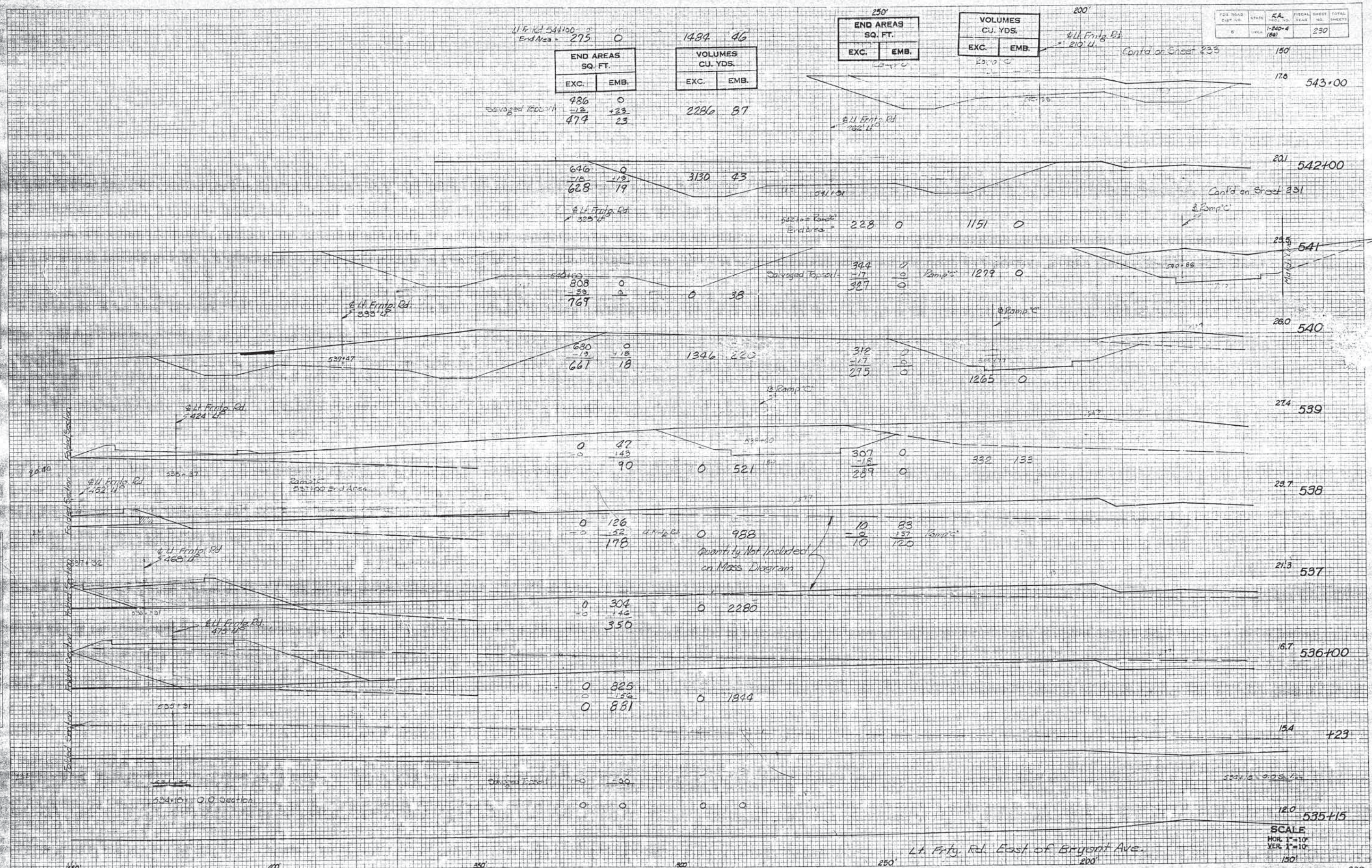






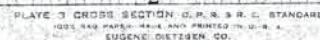
FINAL SURVEY  
DATE: 10/1/50  
BY: J. H. BROWN  
NOTES: SEE PLAN  
AREAS CHECKED: [ ]

ORIGINAL SURVEY  
DATE: 10/1/50  
BY: J. H. BROWN  
NOTES: SEE PLAN  
AREAS CHECKED: [ ]





VOLUMES CU. YDS.	
EXC.	EMB.



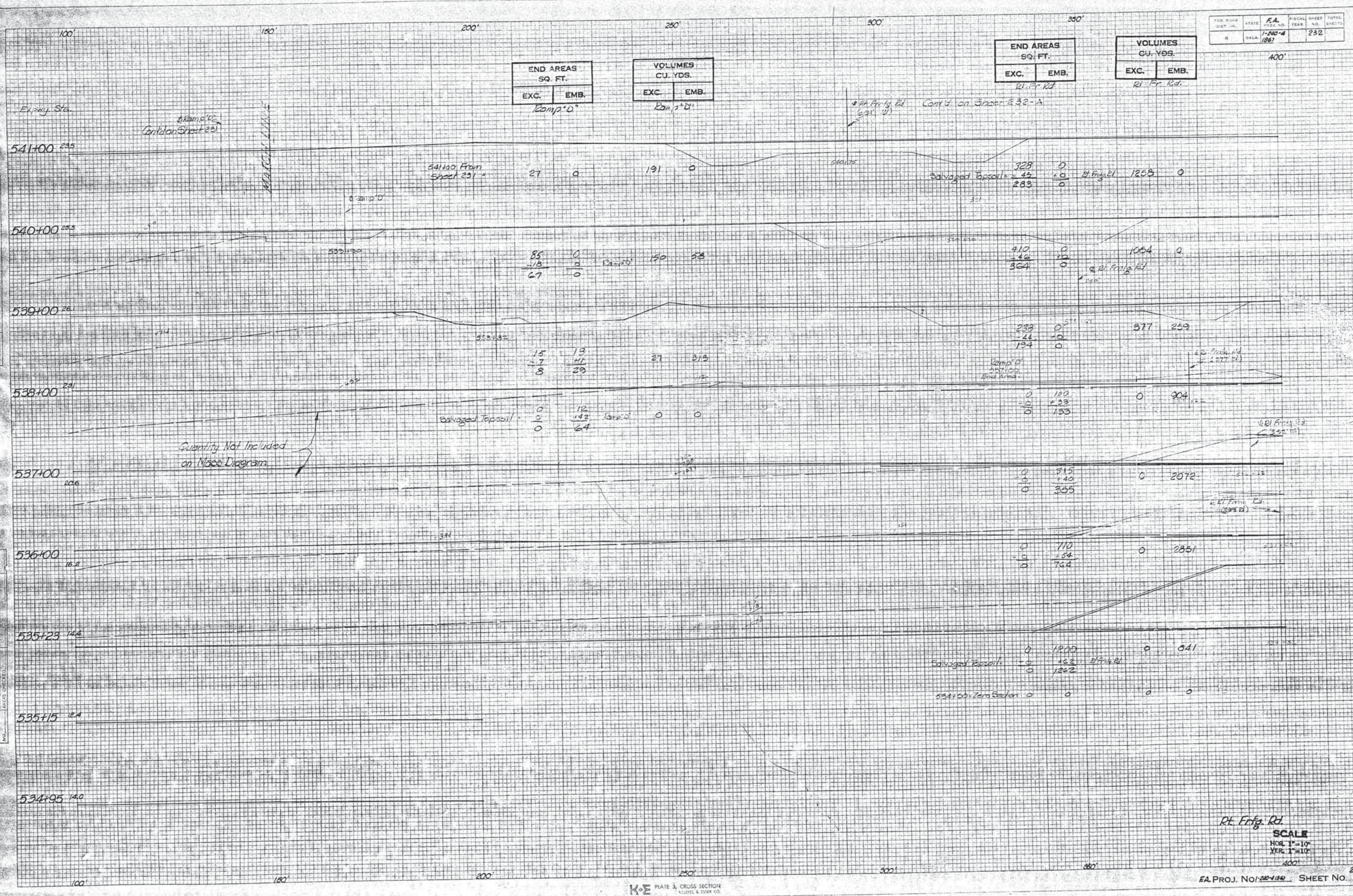
NOTE: Cut to Slopes Shown Within  
Limits of Separation Structure  
Unless Otherwise Directed  
by the Engineer.

**SCALE**  
HOR. 1"=1  
VER. 1"=1



FINAL SURVEY  
 DATE: 10/1/66  
 BY: [Signature]  
 CHECKED: [Signature]  
 NO. 100

ORIGINAL SURVEY  
 DATE: 10/1/66  
 BY: [Signature]  
 CHECKED: [Signature]  
 NO. 100



END AREAS SQ. FT.	
EXC.	EMB.
27	0

VOLUMES CU. YDS.	
EXC.	EMB.
191	0

END AREAS SQ. FT.	
EXC.	EMB.
328	0

VOLUMES CU. YDS.	
EXC.	EMB.
1258	0

FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
100	DELA.	1-140-6	1967	232	400

PL. Fr. Rd.  
 SCALE  
 HOR. 1"=10'  
 VER. 1"=10'  
 400'









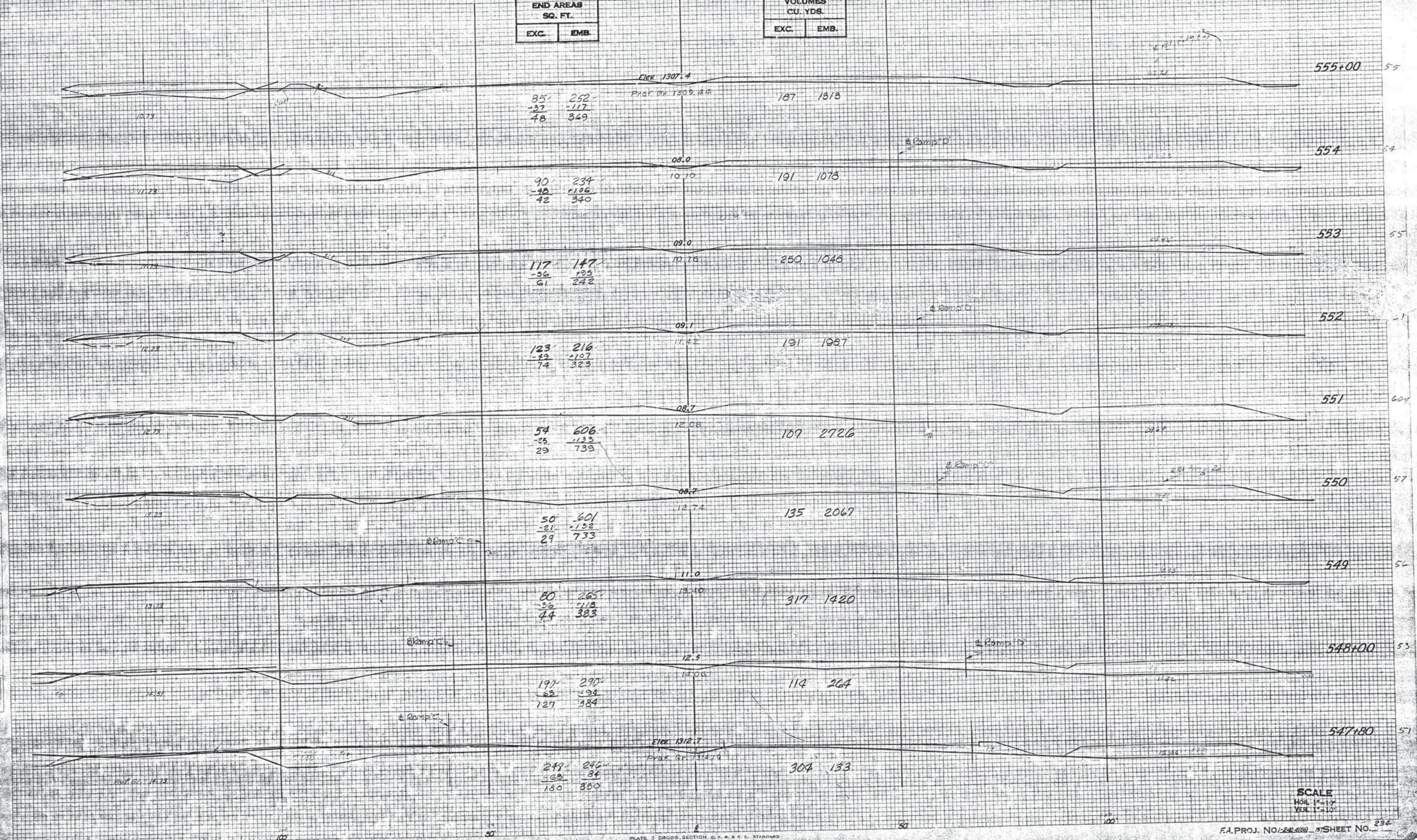


END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

DATE: 5/11/44  
BY: J. E. H. [Signature]  
CHECKED: J. E. H. [Signature]  
FINAL SURVEY  
NOTE BOOK NO. 100  
AREA CHECKED

DATE: 5/11/44  
BY: J. E. H. [Signature]  
CHECKED: J. E. H. [Signature]  
ORIGINAL SURVEY  
NOTE BOOK NO. 100  
AREA CHECKED

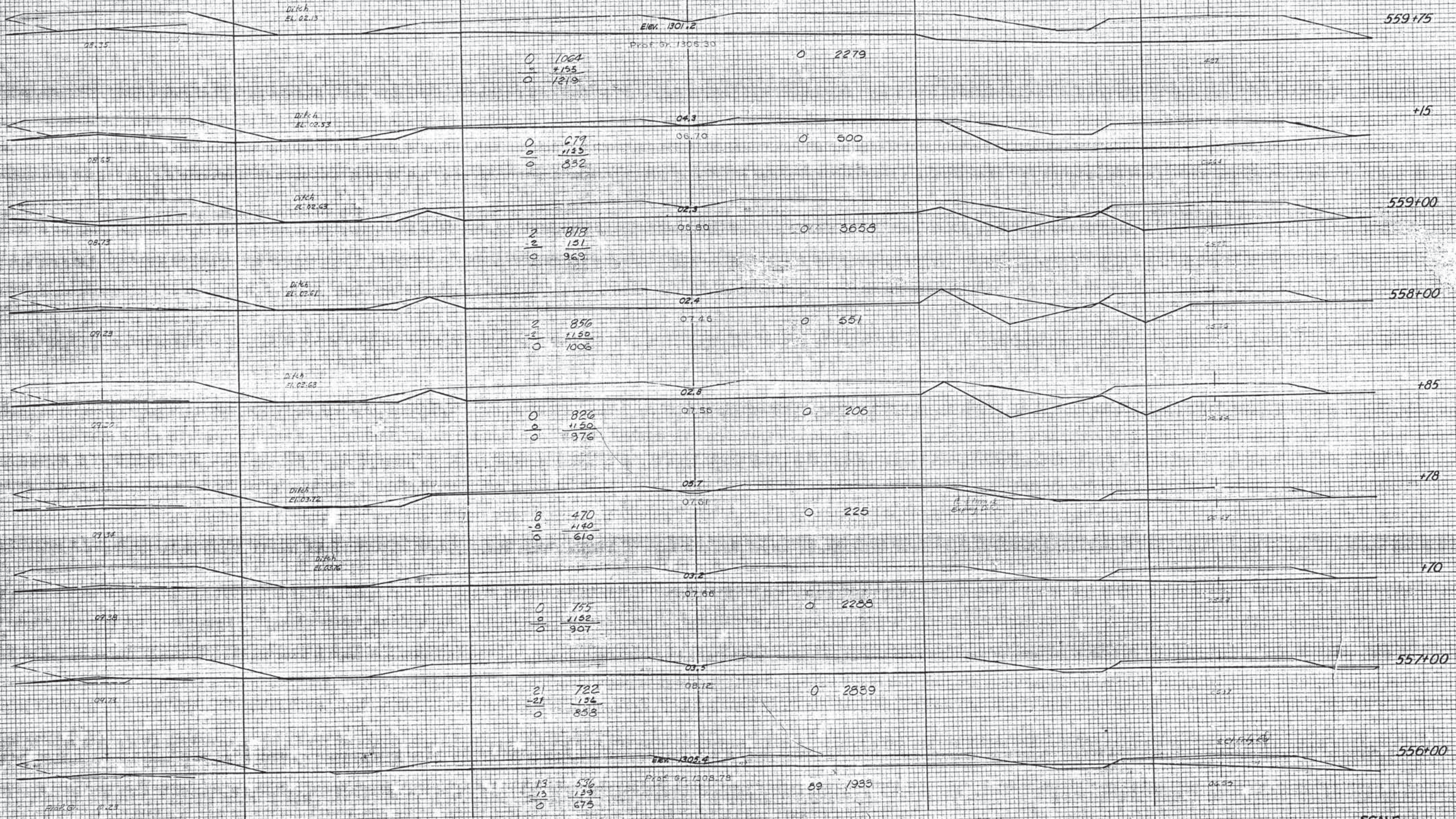


SCALE  
HOR. 1"=10'  
VER. 1"=10'



END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.



FINAL  
SURVEY  
NOTE BOOK  
NO.

ORIGINAL  
SURVEY  
NOTE BOOK  
NO.



END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

Cont on Sheet No. 238

see 1st City Rd. X-section

1st City Rd. 136.97' LT. & Exp. way

ELEV. 1300.3

Prof. Gr. 1302.84

47	205
46	173
95	132
95	334
46	163
47	442

1st City Rd.

0	0
128	1545

01.1

03.50

47	328
25	1119
22	447

52	2311
----	------

00.1

04.16

15	657
2	142
6	801

11	3472
----	------

00.3

04.82

0	924
0	139
0	1074

0	781
---	-----

1300.3

04.95

5	890
13	1155
0	1035

0	653
---	-----

05.02

1295.13

0	2326
0	1164
0	2490

0	647
---	-----

1300.3

05.08

11	864
11	1142
0	1006

0	2343
---	------

1300.1

05.48

11	954
11	1149
0	1103

0	4267
---	------

ELEV. 1301.0

Prof. Gr. 1306.14

8	1044
127	1127
0	1201

0	1120
---	------

SCALE

HOR. 1"=10'

VER. 1"=10'





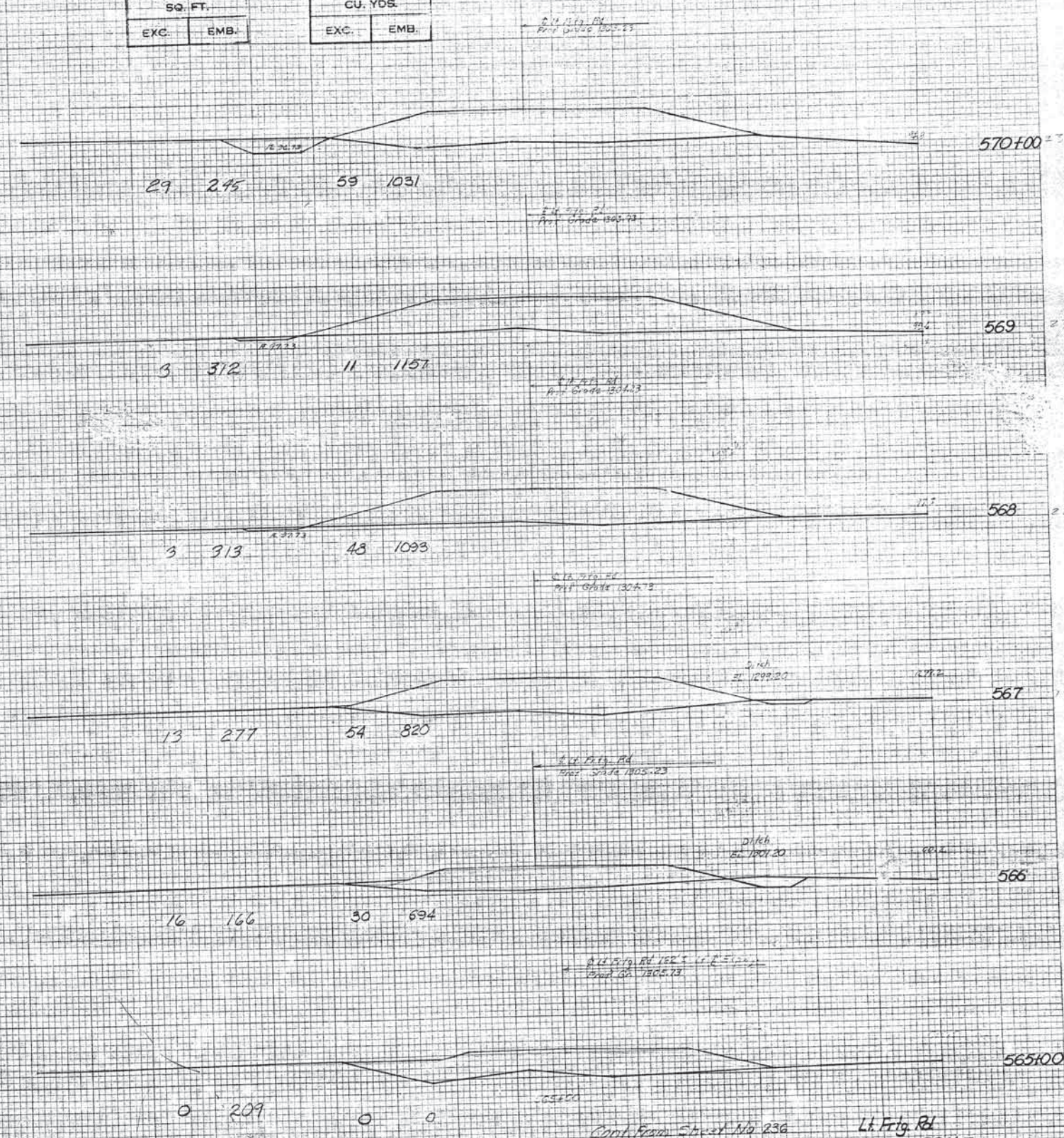


FED. ROAD DIST. NO.	STATE	F.A. DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	OKLA.	1-240-4 (86)		238	

END AREAS SQ. FT.		VOLUMES CU. YDS.	
EXC.	EMB.	EXC.	EMB.

FINAL SURVEY  
SURVEY PLAT  
NOTE BOOK  
NO. 1  
JANUARY 1960

ORIGINAL SURVEY  
SURVEY PLAT  
NOTE BOOK  
NO. 1  
JANUARY 1960



Cont. From Sheet No. 236

Li. Frig. Rd.

SCALE  
HOR. 1"=10'  
VER. 1"=10'



FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	OKLA.	1-240	4/00	239	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

DATE  
BY  
CHECKED  
REMARKS  
NO.

DATE  
BY  
CHECKED  
REMARKS  
NO.

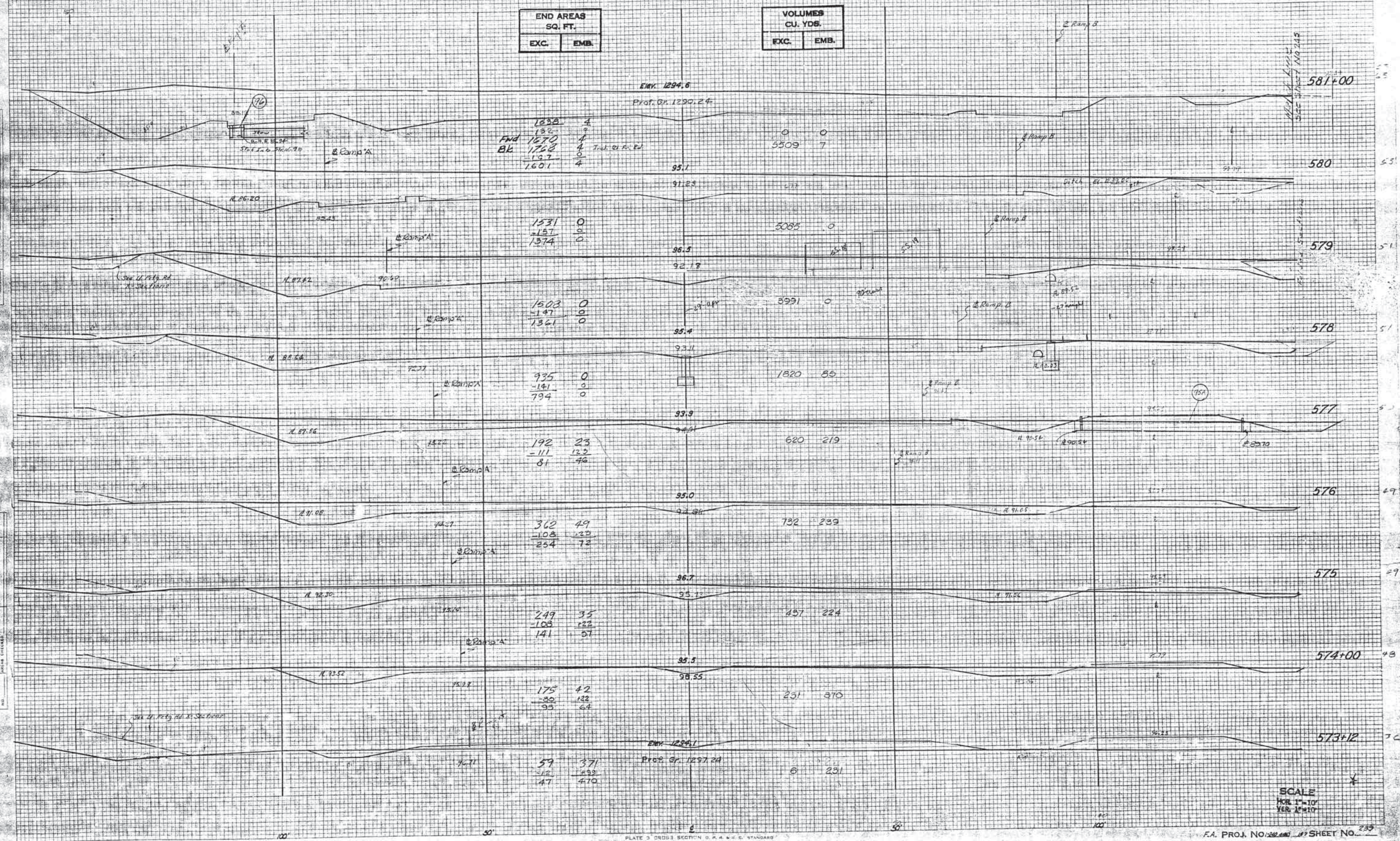


PLATE 3 CROSS SECTION O. R. & W. E. STANDARD  
100' HORIZ. SCALE AND 1" = 10' VERT. SCALE  
EUGENE THIETGEN CO.

SCALE  
HOR. 1" = 10'  
VER. 1" = 10'  
F.A. PROJ. NO. 1-240 SHEET NO. 239



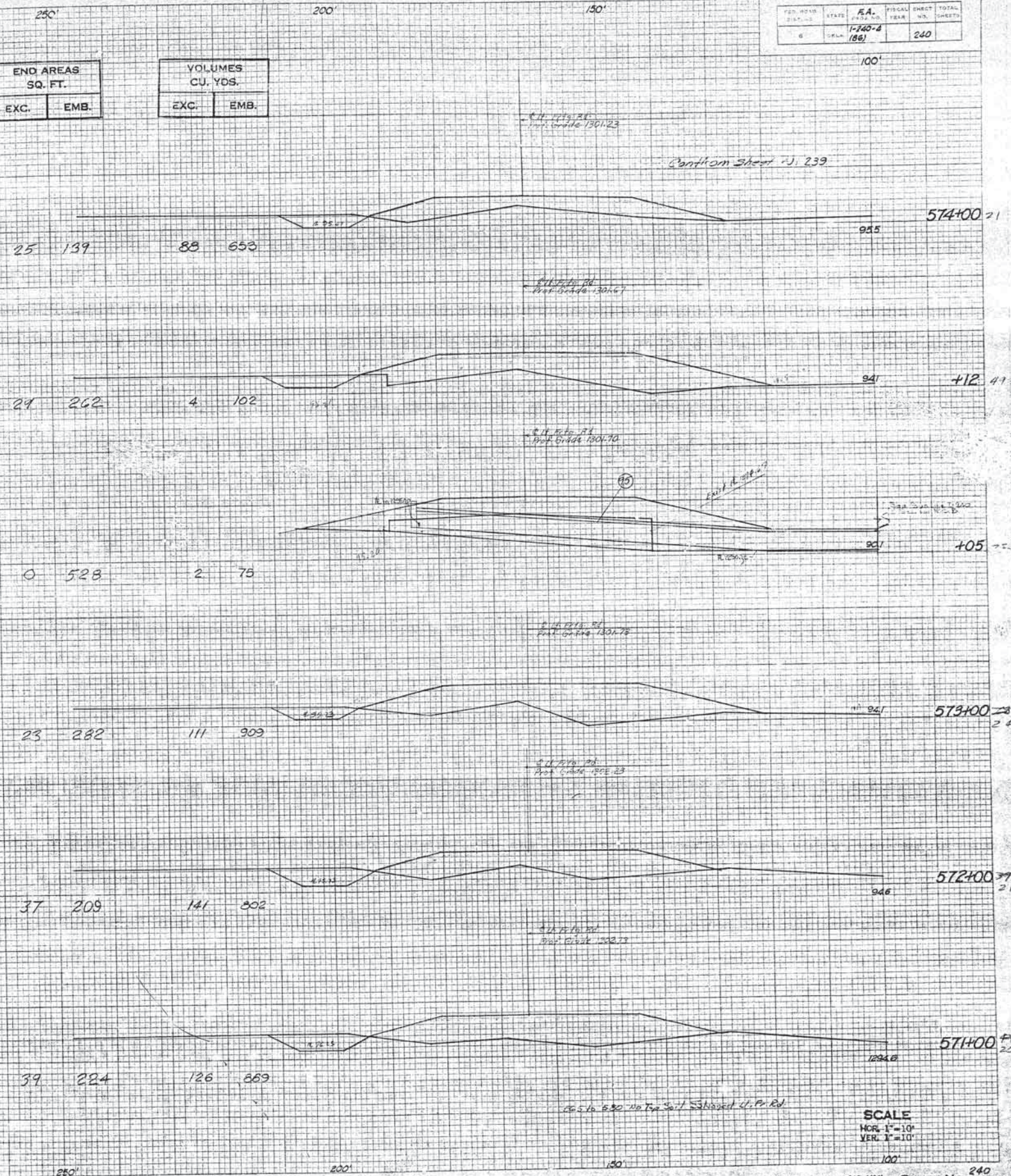
FINAL  
SURVEY  
NOTE BOOK  
NO.

ORIGINAL  
SURVEY  
NOTE BOOK  
NO.

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

FED. ROAD DIST. NO.	STATE	FA. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	FLA.	1-240-2 (186)		240	





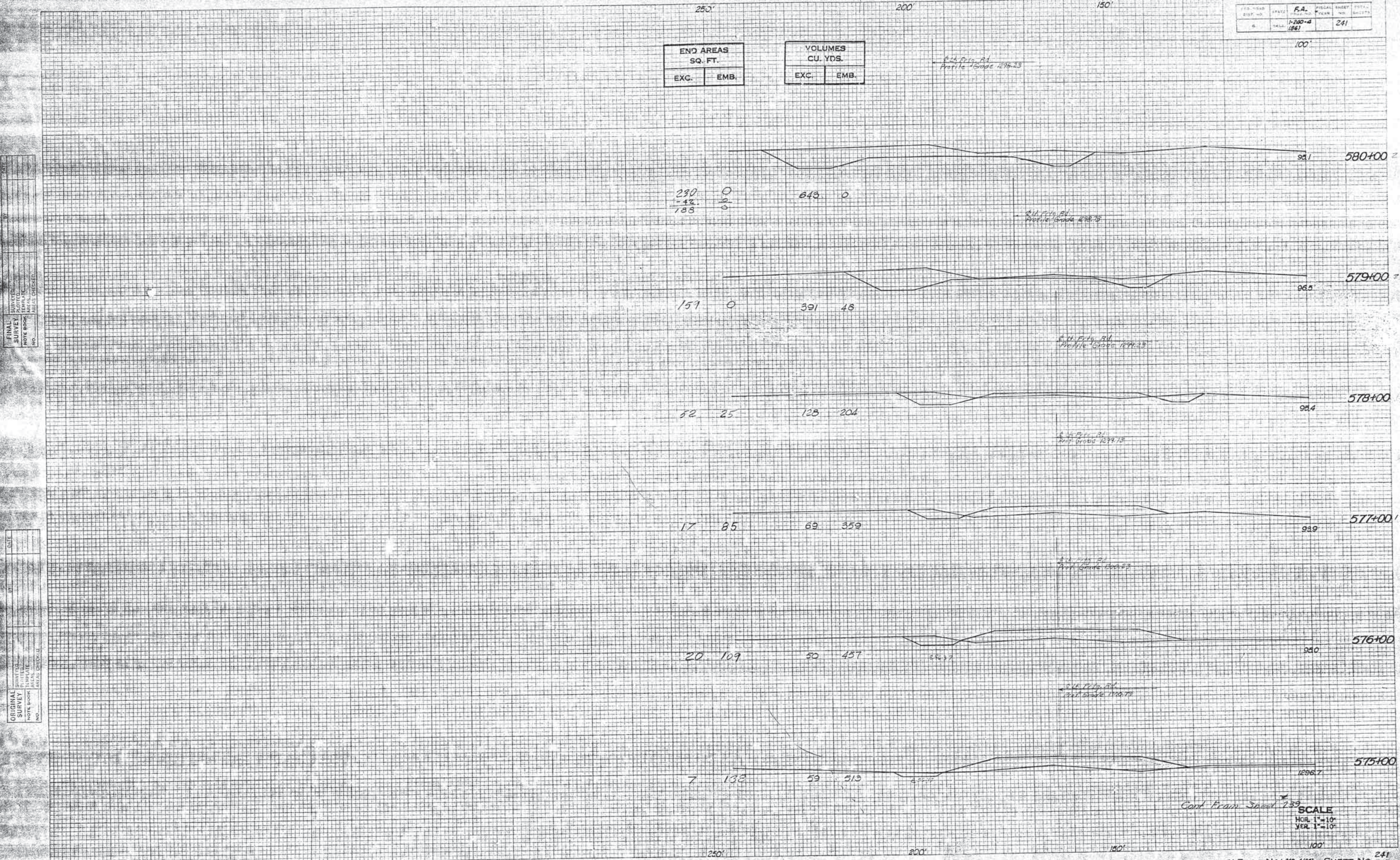
PROJ. NO.	DATE	F.A.	SCALE	SHEET NO.	TOTAL
6	1961	1-200-4	1/4"	241	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

FINAL	SURVEY	DATE	BY
NOTE BOOK	NO.		

ORIGINAL	SURVEY	DATE	BY
NOTE BOOK	NO.		





Note: Cut to Slopes Shown within Limits of Separation Structure Unless Otherwise Directed by the Engineer.  
Elev. 1293.8

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

Salvaged Topsoil =

2970	0
-197	0
2863	0

10,574 67

2982	23
-133	103
2847	36

9100 126

2196	24
-133	133
2067	35

6526 152

1577	38
-125	111
1457	49

1702 59

1961	34
-118	111
1847	45

3278 55

END 1550 0

BK 1646	0
-136	0
1510	0

Incl. Ramp B

8115 0

1931	0
-133	0
1798	0

5950 0

Salvaged Topsoil =

1437	0
-118	0
1319	0

6080 7

Quantity Not Included on Mass Diagram

Quantity Not Included on Mass Diagram

Cont on Sheet 243

Cont on Sheet No. 245

SCALE  
HOR. 1"=10'  
VER. 1"=10'

F.A. PROJ. NO. 1-840-100-5 SHEET NO. 242

PLATE 3 CROSS SECTION O. P. R. & S. E. STANDARD  
100% HAS PAPER MADE AND PRINTED IN U.S.A.  
1 CUBIC YD. = 27 CUBIC FEET

FINAL SURVEY  
DATE  
BY  
CHECKED  
DATE  
BY  
REMARKS

ORIGINAL SURVEY  
DATE  
BY  
CHECKED  
DATE  
BY  
REMARKS







REPORT NO.	STATE	F.A. PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	DELA.	1-240-A (35)		244	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

588+62.00 340  
Q.L.F. Frito Rd. Sta. 588+54  
Profile Grade 1297.17

2

0

250

588400 17

9

10

185

133

218

-4

411

Quantity Not Included  
on Mass Diagram

6. L.F. Hwy. Rd. Sta. 587.37  
Profile Grade 1895.49



1	2	3
4	5	6
7	8	9

587400

2

3

 $+3$ 

4

20

7

4. Lt. Ertz Rd. Sta. 586.931  
Profile Grade 1295.12

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----


 $586 + 100 =$ 

24

1000

Salvaged Topsoil  $\frac{163}{-31}$   
132



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

4

9

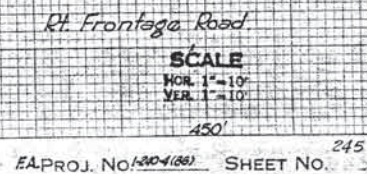
**SCALE**  
HOR. 1"=100'  
VER. 1"=10'

EAPROJ. No: 240-4361 SHEET No. 244

**K+Σ** PLATE 3, CROSS SECTION  
HELFTEL & EDDER CO.



ORIGINAL	SURVEYED	BY	DATE
	DOTTED		
NOTE BOOK	TEMPERATURE		
	WIND DIRECTION		





END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

FINAL  
SURVEY  
NO. 100

ORIGINAL  
SURVEY  
NO. 100

595+00  
From Sheet 255

180 0

602 0

Ramp C

594+00  
594+00

167 0  
-22 0  
145 0

Quantity Not Included  
On Mass Diagram

344 0

593+00

57 0  
-16 0  
41 0

102 15

592+00

35 2  
-11 16  
24 8

32 19

592+00

0 0

0 0

590+75

Ramp C Continued on Sheet 255

585+96 End Section

32 3  
-12 12  
20 6

71 21

585+00

32 3  
-12 12  
20 6

187 11

584+00

100 0  
-12 0  
88 0

Quantity Not Included  
On Mass Diagram

413 0

583+00

166 0  
-12 0  
154 0

783 0

582+00

276 0  
-12 0  
264 0

0 0

581+00

251 0

0 = Salvaged Topsoil

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

587+00 = 0.0 Feet

247 0

Quantity Not Included  
On Mass Diagram

20 0

587+00

588

584+00

188 31

585+00

586

585+00

161 143

Ramp B

584+00

585

584+00

0 0

583+00

584

583+00

0 0

582+00

583

582+00

0 0

581+00

582

581+00

0 0

580+00

581

580+00

0 0

Sunnylane Interchange  
Ramp A-B-C

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

FA PROJ. NO. 1-840-4 SHEET NO. 246



FED. ROAD DIST. NO.	STATE	F.A. NO.	SHEET NO.	TOTAL SHEETS
5	OKLA	1-240-4 (86)	247	

450'

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

589+40

942

Quantity Not Included  
on Mass Diagram

Salvaged Topsoil =  $\frac{0}{0} \frac{284}{137} \frac{321}{321}$

0 226

589+80

589+20

942

$\frac{0}{0} \frac{252}{156} \frac{283}{283}$

0 99

589+60

588+98

940

Salvaged Topsoil =  $\frac{0}{0} \frac{271}{137} \frac{308}{308}$

0 108

0 0

588+51

Sta 588+52 Zero Section

588+58

946

588+18

951

Ramp "D"  
Sunnylane

SCALE  
HOR. 1"=10'  
VER. 1"=10'

F.A. PROJ. NO. 240-4(86) SHEET NO. 247

K&E PLATE 3, CROSS SECTION  
K&E & EISEN CO.  
ABT 7052

FINAL  
SURVEY  
NOTE BOOK  
NO.

ORIGINAL  
SURVEY  
NOTE BOOK  
NO.



END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

DATE  
BY  
FINAL SURVEY PLOTTED  
NOTE BOOK NO.  
AREAS CHECKED

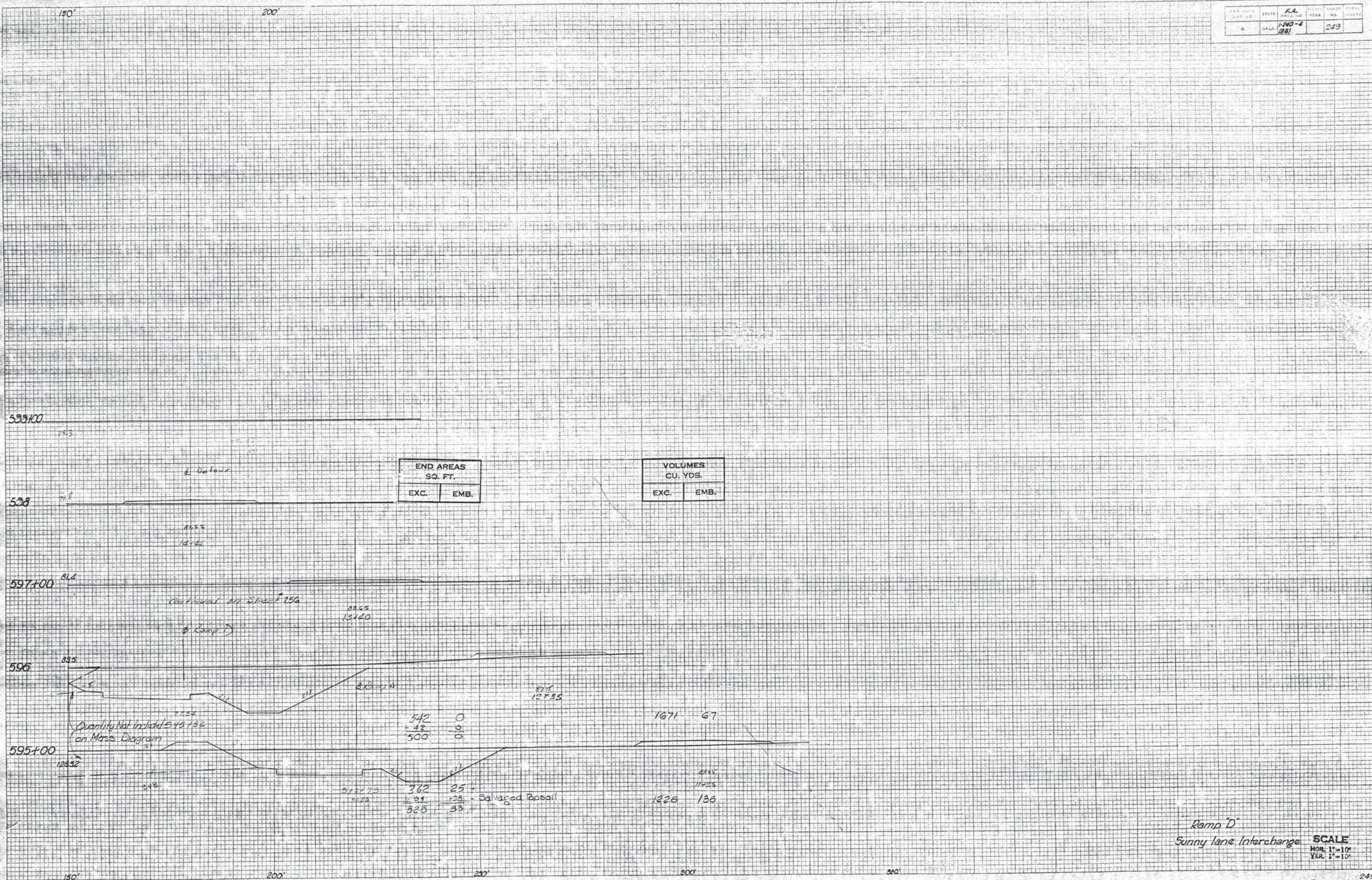
DATE  
BY  
ORIGINAL SURVEY PLOTTED  
NOTE BOOK NO.  
AREAS CHECKED





FINAL SURVEY  
NOTE BOOK  
NO.

ORIGINAL SURVEY  
NOTE BOOK  
NO.



Ramp D  
Sunny Lane Interchange  
SCALE  
HOR. 1"=10'  
VER. 1"=10'



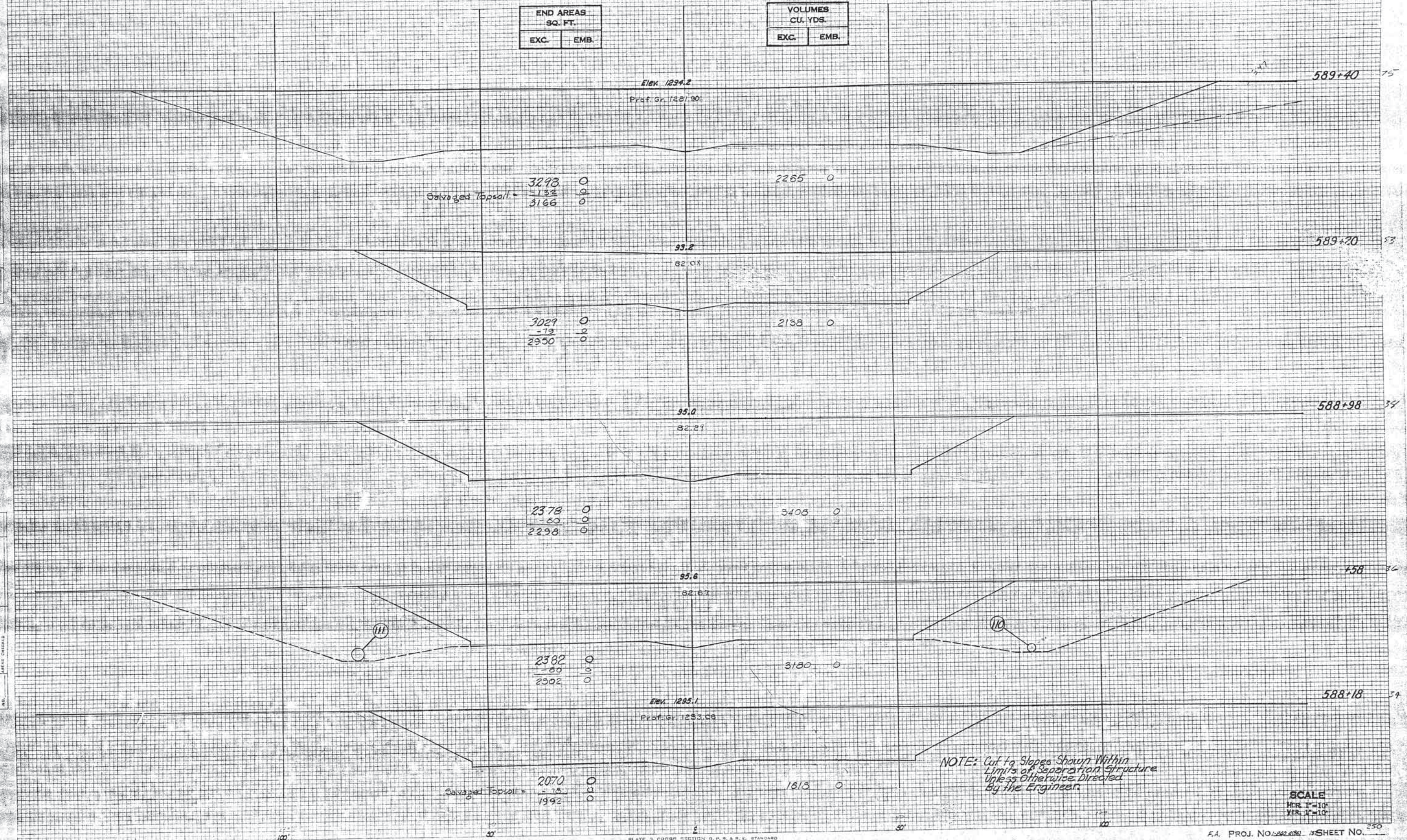
FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-260 4/661871		250	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

DATE	BY	REVISION
10/1/66	W. J. B.	1
10/1/66	W. J. B.	2
10/1/66	W. J. B.	3
10/1/66	W. J. B.	4
10/1/66	W. J. B.	5
10/1/66	W. J. B.	6
10/1/66	W. J. B.	7
10/1/66	W. J. B.	8
10/1/66	W. J. B.	9
10/1/66	W. J. B.	10

DATE	BY	REVISION
10/1/66	W. J. B.	1
10/1/66	W. J. B.	2
10/1/66	W. J. B.	3
10/1/66	W. J. B.	4
10/1/66	W. J. B.	5
10/1/66	W. J. B.	6
10/1/66	W. J. B.	7
10/1/66	W. J. B.	8
10/1/66	W. J. B.	9
10/1/66	W. J. B.	10







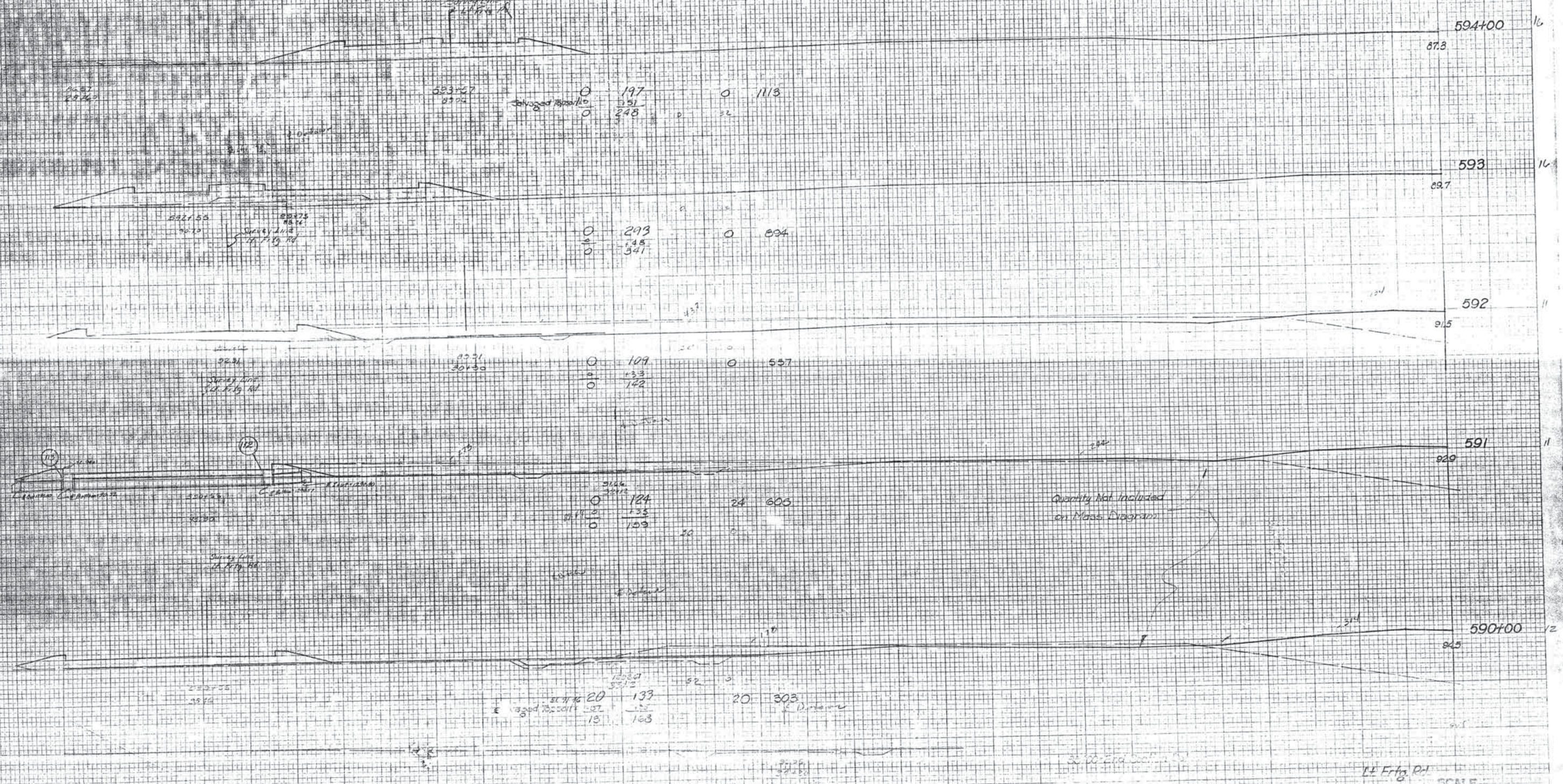


FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	DELA.	1-240-4 (66)		252	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

Cont. on Sheet No 254



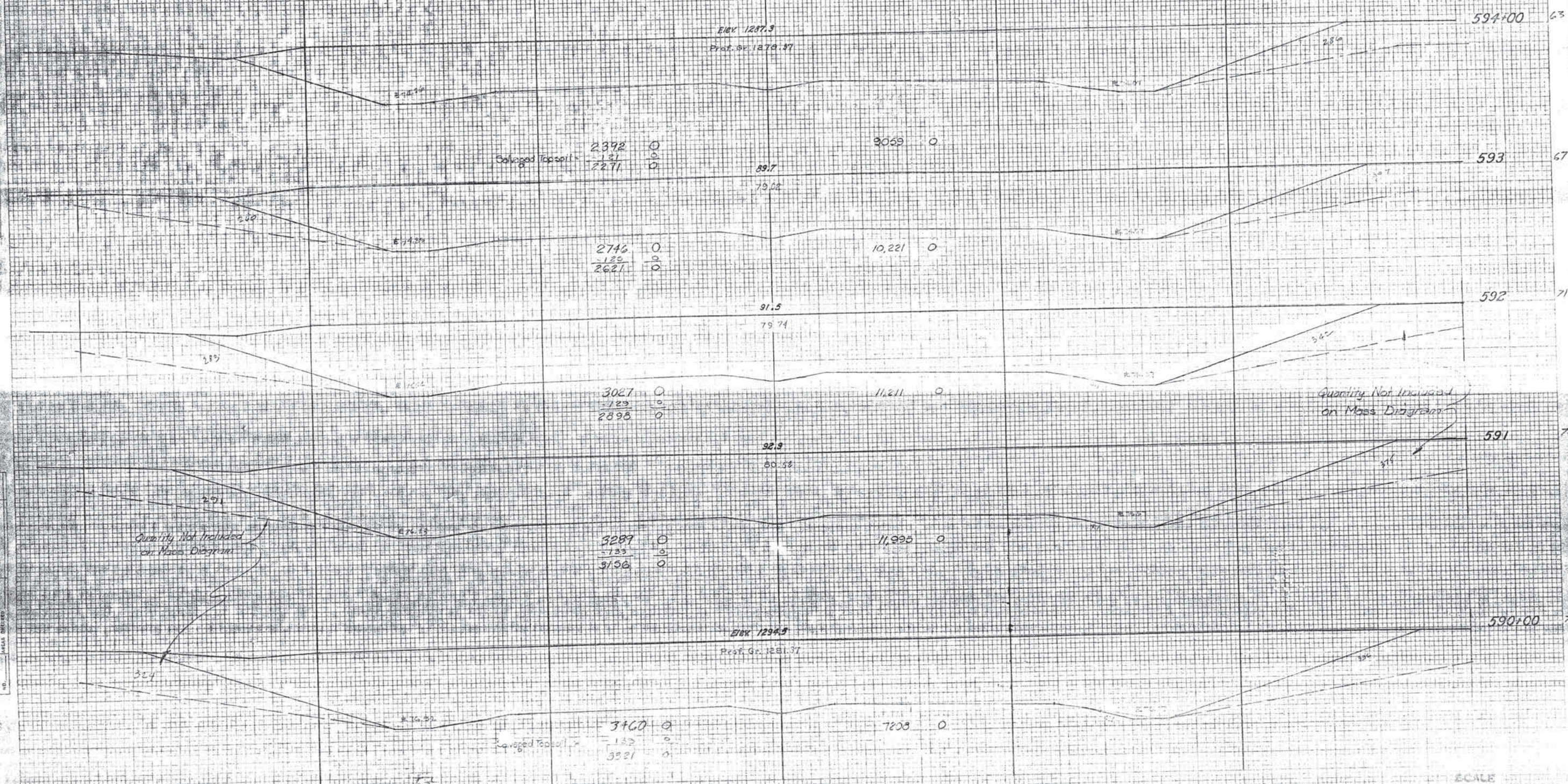


END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

ORIGINAL SURVEY  
DATE 12-27-24  
BY J. H. B. & S. M. B.  
NOTE: SEE PLAN FOR  
STATIONING

ORIGINAL SURVEY  
DATE 12-27-24  
BY J. H. B. & S. M. B.  
NOTE: SEE PLAN FOR  
STATIONING



SCALE  
1" = 10'



PROJ. NO.	STATE	F.A. DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240-4	1981	224	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

21.00 Same as 21.00

BE Only 102  
Em. Topsoil =  $\frac{37}{65}$   $\frac{1738}{2100}$  174 0

$\frac{65}{29} = \frac{56}{29}$   $\frac{1518}{0}$  67 183

$\frac{15}{7} = \frac{108}{7}$   $\frac{74}{93}$  39 414

$\frac{21}{12} = \frac{122}{104}$   $\frac{82}{104}$  23 467

$\frac{0}{0} = \frac{110}{156}$   $\frac{8318}{506135}$  0 441

$\frac{12}{0} = \frac{63}{31}$  0 361

$\frac{0}{0} = \frac{163}{138}$  0 363

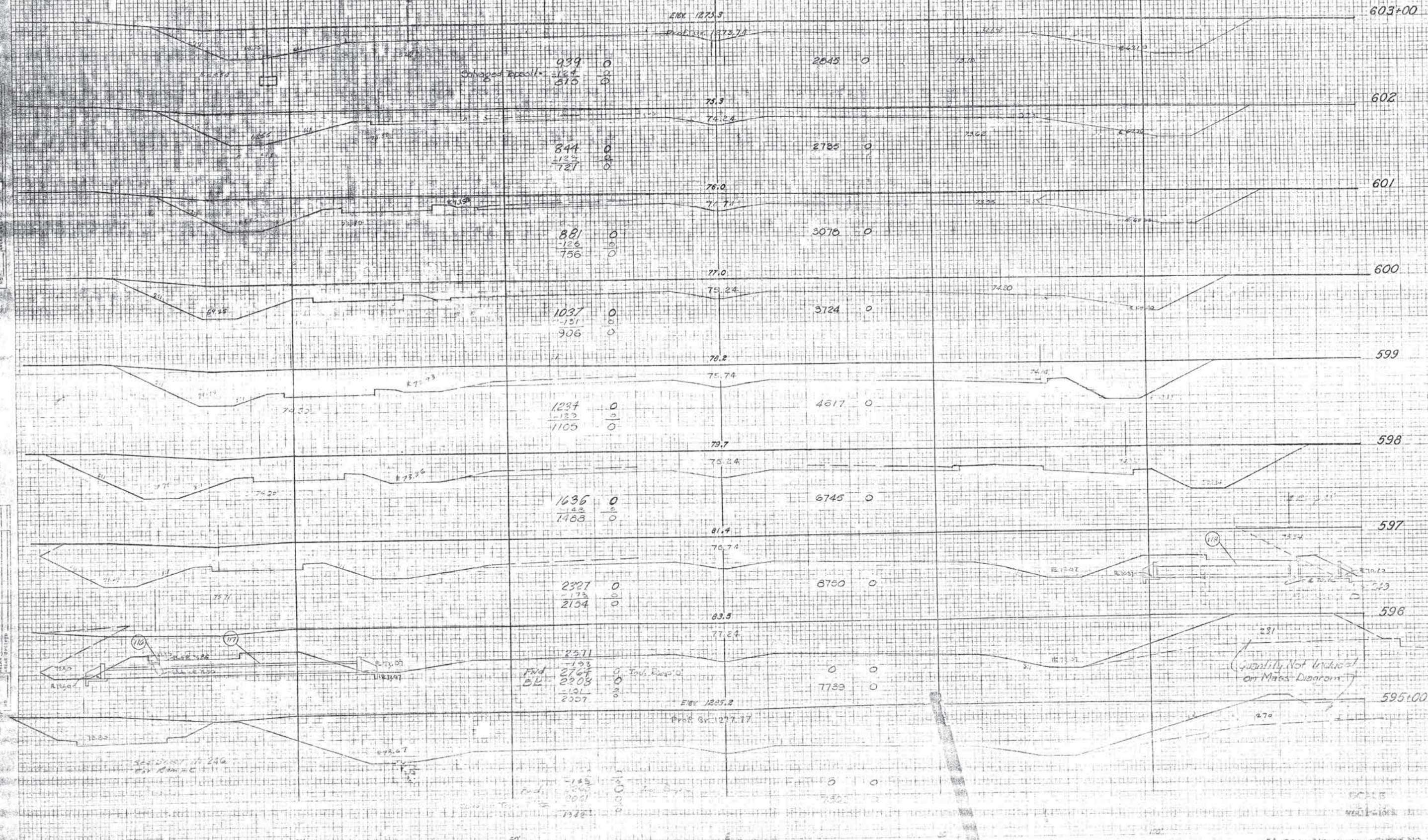
Lt. Frontage Road  
SCALE  
HORIZ. 1" = 100'  
VERT. 1" = 10'



FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240	1955	255	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.



DATE: 12-1-55  
 DRAWN BY: J. E. W. 12-1-55  
 CHECKED BY: J. E. W. 12-1-55  
 APPROVED BY: J. E. W. 12-1-55



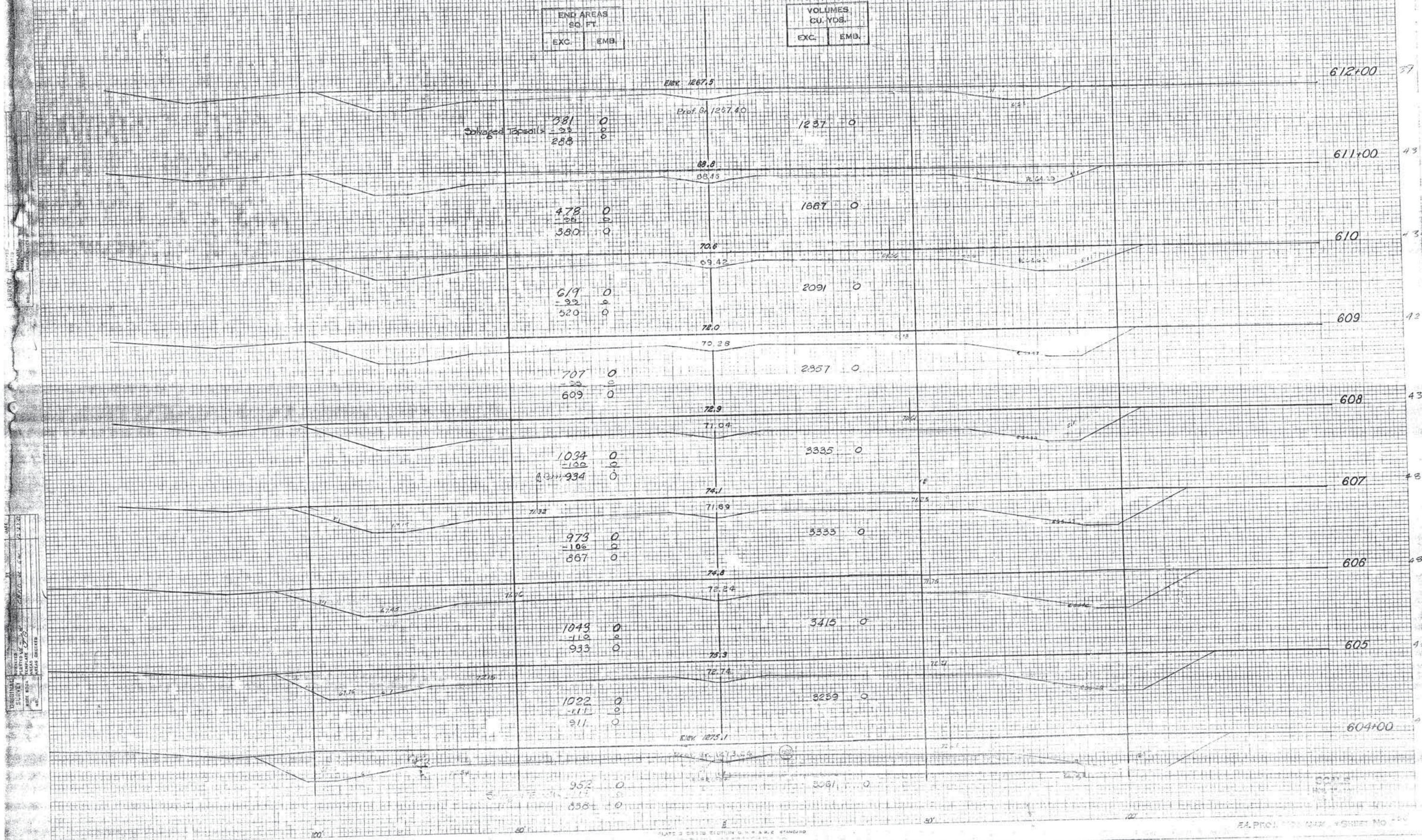
FED. ROAD DIST. NO.	STATE	EA. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240 4/80		256	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

ORIGINAL SURVEY  
 REVISIONS  
 DATE  
 BY  
 AREA SHEETS

SURVEY  
 NO.

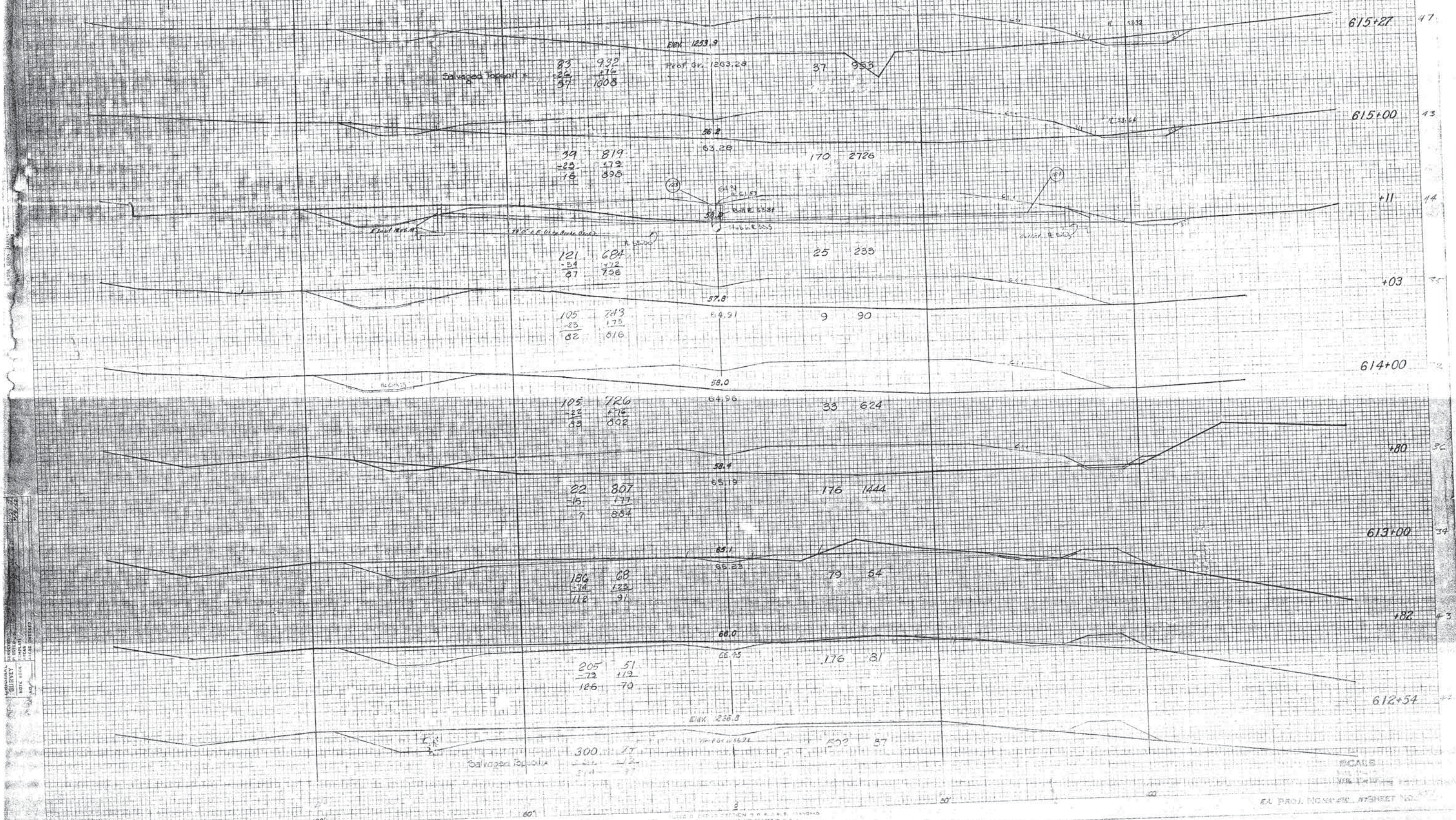




FED. ROAD DIST. NO.	STATE	F.A. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1520	4/80	257	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.



100' 50' 25' 12.5'  
 1/4" = 10' 1/8" = 20' 1/16" = 40'  
 1/32" = 80' 1/64" = 160' 1/128" = 320'



FED. ROAD DIST. NO.	STATE	EA PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-840 486		258	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

Salvaged Topsoil =  

$$\begin{array}{r} 0 \quad 1562 \\ 0 \quad 1181 \\ \hline 0 \quad 1683 \end{array}$$

$$\begin{array}{r} 0 \quad 1078 \\ 0 \quad 122 \\ \hline 0 \quad 1176 \end{array}$$

$$\begin{array}{r} 66 \quad 492 \\ -17 \quad 180 \\ \hline 49 \quad 512 \end{array}$$

$$\begin{array}{r} 168 \quad 156 \\ -42 \quad 143 \\ \hline 126 \quad 200 \end{array}$$

$$\begin{array}{r} 212 \quad 177 \\ -64 \quad 153 \\ \hline 148 \quad 256 \end{array}$$

$$\begin{array}{r} 102 \quad 857 \\ -45 \quad 152 \\ \hline 57 \quad 909 \end{array}$$

$$\begin{array}{r} 58 \quad 1161 \\ -25 \quad 181 \\ \hline 33 \quad 1242 \end{array}$$

$$\begin{array}{r} 97 \quad 1059 \\ -28 \quad 177 \\ \hline 69 \quad 1136 \end{array}$$

$$\begin{array}{r} 92 \quad 1022 \\ -63 \quad 1150 \\ \hline 29 \quad 1150 \end{array}$$

ELEV. 1242.5

Prof. Gr. 1252.08

44.1

34.40

50.9

54.90

53.7

55.12

55.2

57.04

52.2

58.36

49.2

57.68

50.8

61.00

ELEV. 1252.4

Prof. Gr. 1252.36

0 5293

34 1188

201 823

507 854

380 2157

170 3198

193 4404

254 4250

189 5920

623+00

622+00

+62

621+00

620

619

618

617

616+00

ORIGINAL SURVEY  
 DATE  
 BY  
 CHECKED  
 DATE  
 BY

SCALE 1" = 40' HORIZONTAL  
 1" = 4' VERTICAL

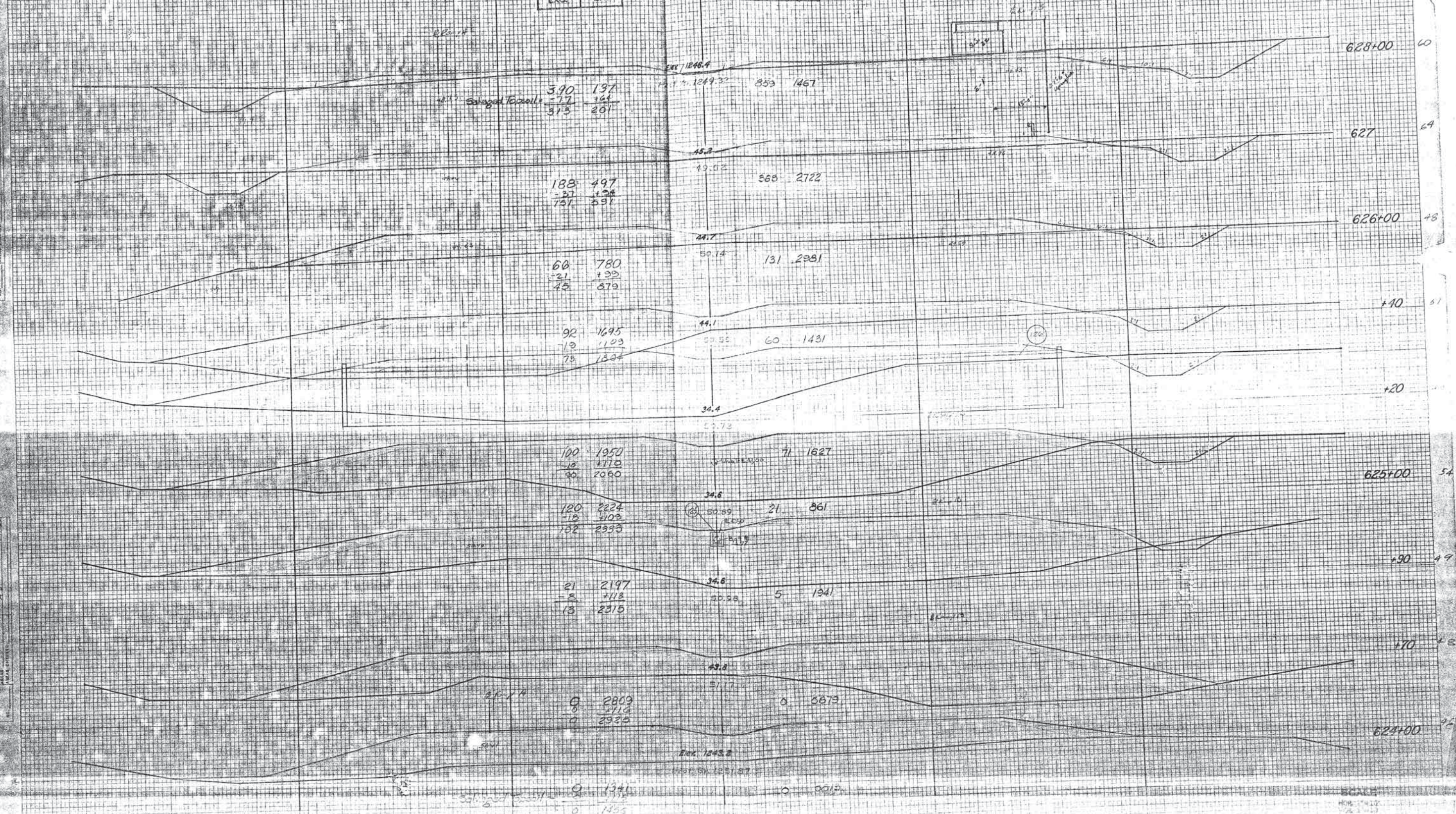
EA PROJ. NO. 1-840 486 SHEET NO. 258



FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	GA.	1-260	4-1937	259	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.



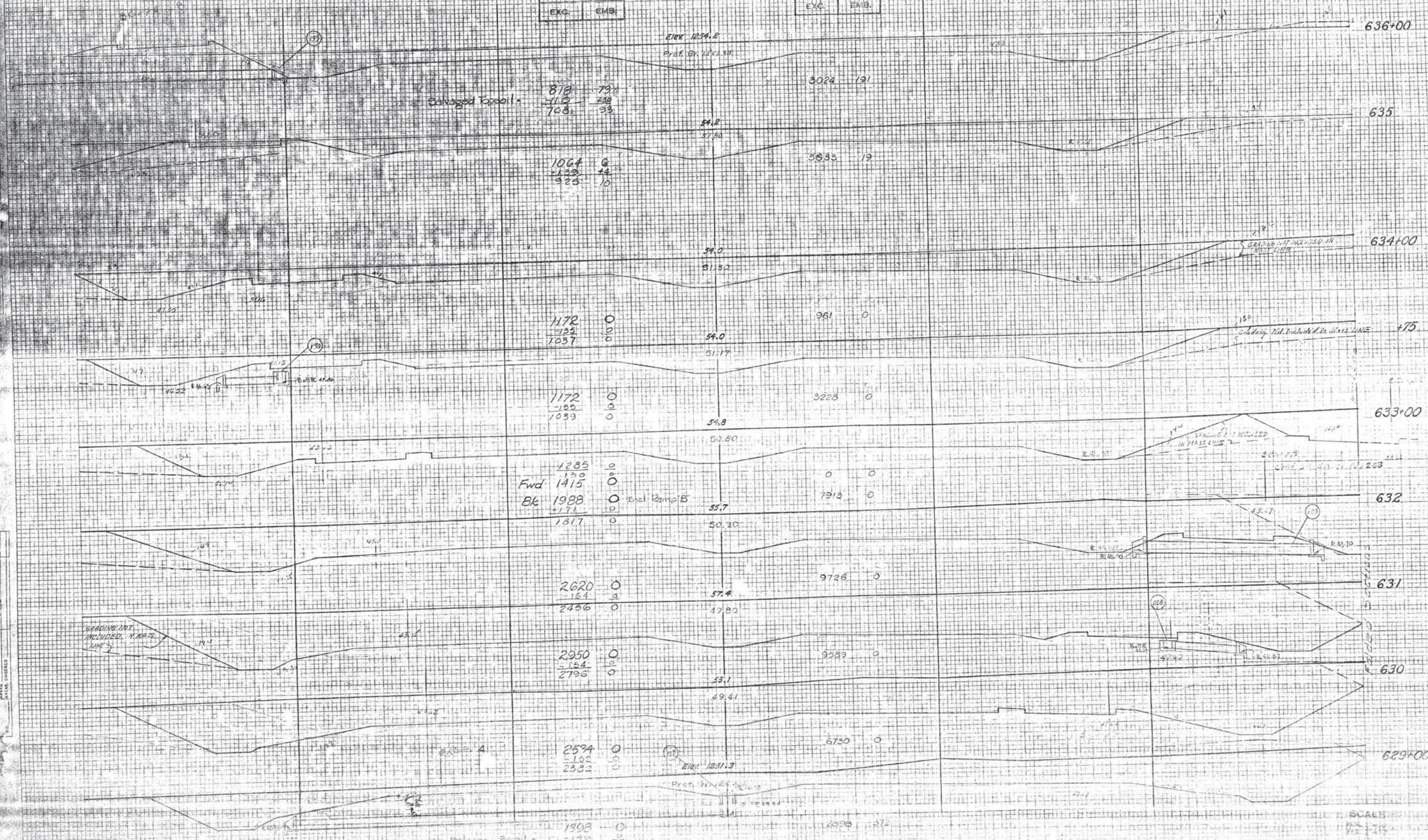


FED. ROAD DIST. NO.	STATE	EA. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-200	1966	260	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

ORIGINAL SURVEY  
 UNITED STATES  
 DEPARTMENT OF COMMERCE  
 BUREAU OF MARITIME SERVICE  
 12-10-66



Salvaged Topsoil:

818	791
112	112
708	33

1064	0
133	14
925	10

1285	0
Fwd 1415	0
Bk 1988	0
1817	0

Encl. Ramp B

2620	0
164	0
2456	0

2950	0
154	0
2796	0

2594	0
182	0
2382	0

Salvaged Topsoil:

1908	0
140	0
1252	0

SCALE  
 1" = 10'  
 1" = 10'



END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240	1960	261	

Salvaged Topsoil =  $\frac{1842}{-81} = \frac{1755}{0}$

NOTE: Cut to Slopes Shown Within Limits of Separation Structure Unless Otherwise Directed By the Engineer.

SECTIONS NOT INCLUDED IN MASS. SINE  
See Sheet No. 262  
For Points A

ORIGINAL SURVEY  
DATE 4/24/60  
BY J. L. C. JR.  
CHECKED BY J. L. C. JR.  
SCALE 1" = 40'

EA. PRO. NO. 1-240







FED. ROAD DIST. NO.	STATE	EA. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA	1-240-4 (86)		263	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

130'

641+37

61.8

E. Scorer Road  
+15.98

63.0

0	0	0	50
---	---	---	----

641+60+ Zero Section

641

0	277	0	234
0	125		
0	312		

Damaged Topsoil

+82 644

GRADING NOT UNDOULDED (H.M.) 5 LINE

640

61.6

0	262	0	317
0	125		
0	350		

639

60.2

0	270	0	377
0	137		
0	307		

638

58.5

0	193	0	606
0	135		
0	226		

637

55.7

0	12	0	502
0	124		
0	36		

636+88

Kemp O  
Scorer Road

130'



END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

636+00

635+20  
Subgrade base  
165 24  
34 122  
131 46

3201  
3202  
377 95

635

635+20

165 0  
34 0  
131 0

1032 0

634

634+12

419 0  
339 0  
380 0

532 0

633

633+35

449 0  
40 0  
403 0

1472 0

633

Cont. for 31' x 240

513 0  
41 0  
532 0

Subgrade Topical

0 0

632

632

631+00

631

ORIGINAL SURVEY PLOTTED  
NOTE BOOK AND  
NO. 1. APPROVED

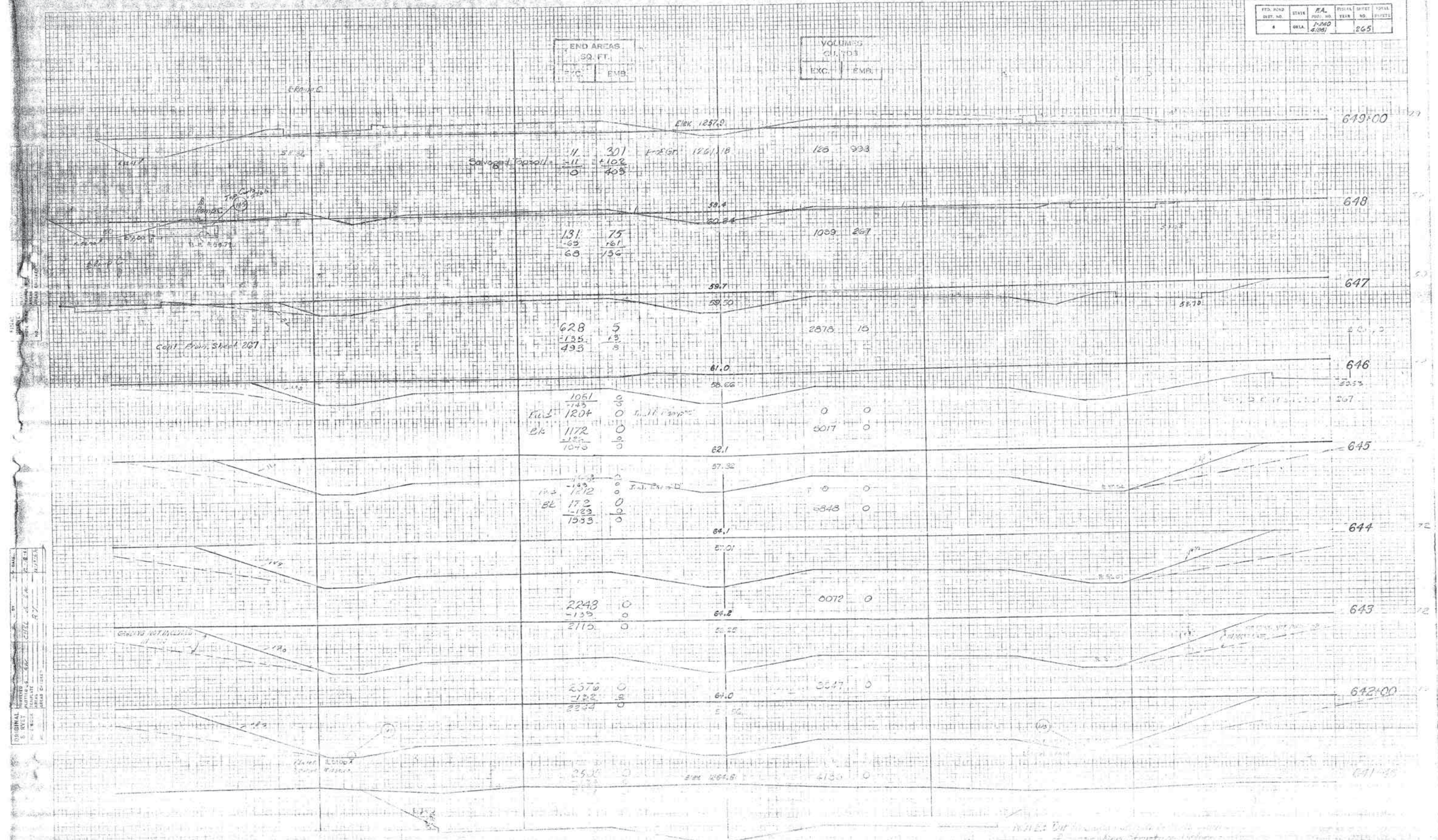
Ramp 0  
Gravel Road



FED. ROAD DIST. NO.	STATE	F.A. DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	OKLA.	1-240	1965	265	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.



DATE	BY	CHKD.	APP'D.
10-2-65	W. J. H.	W. J. H.	W. J. H.



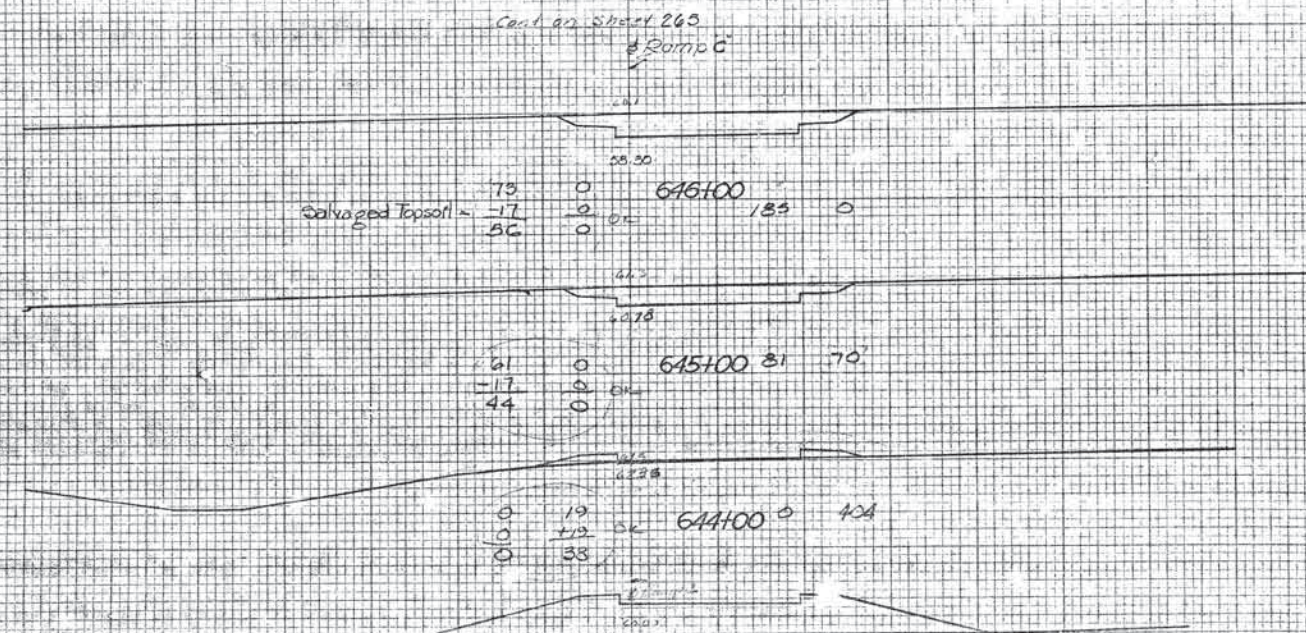




FED. ROAD DIST. NO.	STATE	R.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA	1-540-4 (85)		267	

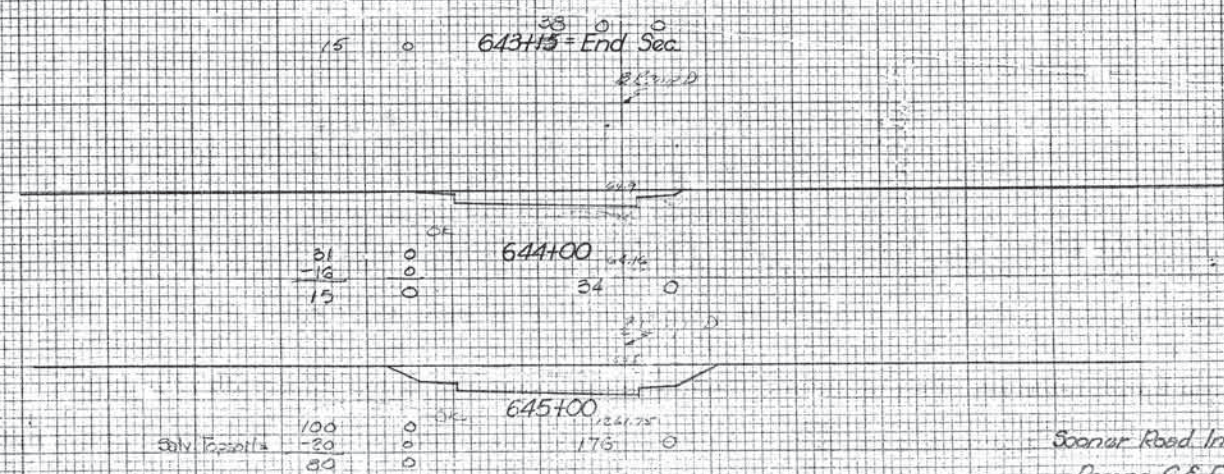
END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.



END AREAS SQ. FT.	
EXC.	EMB.

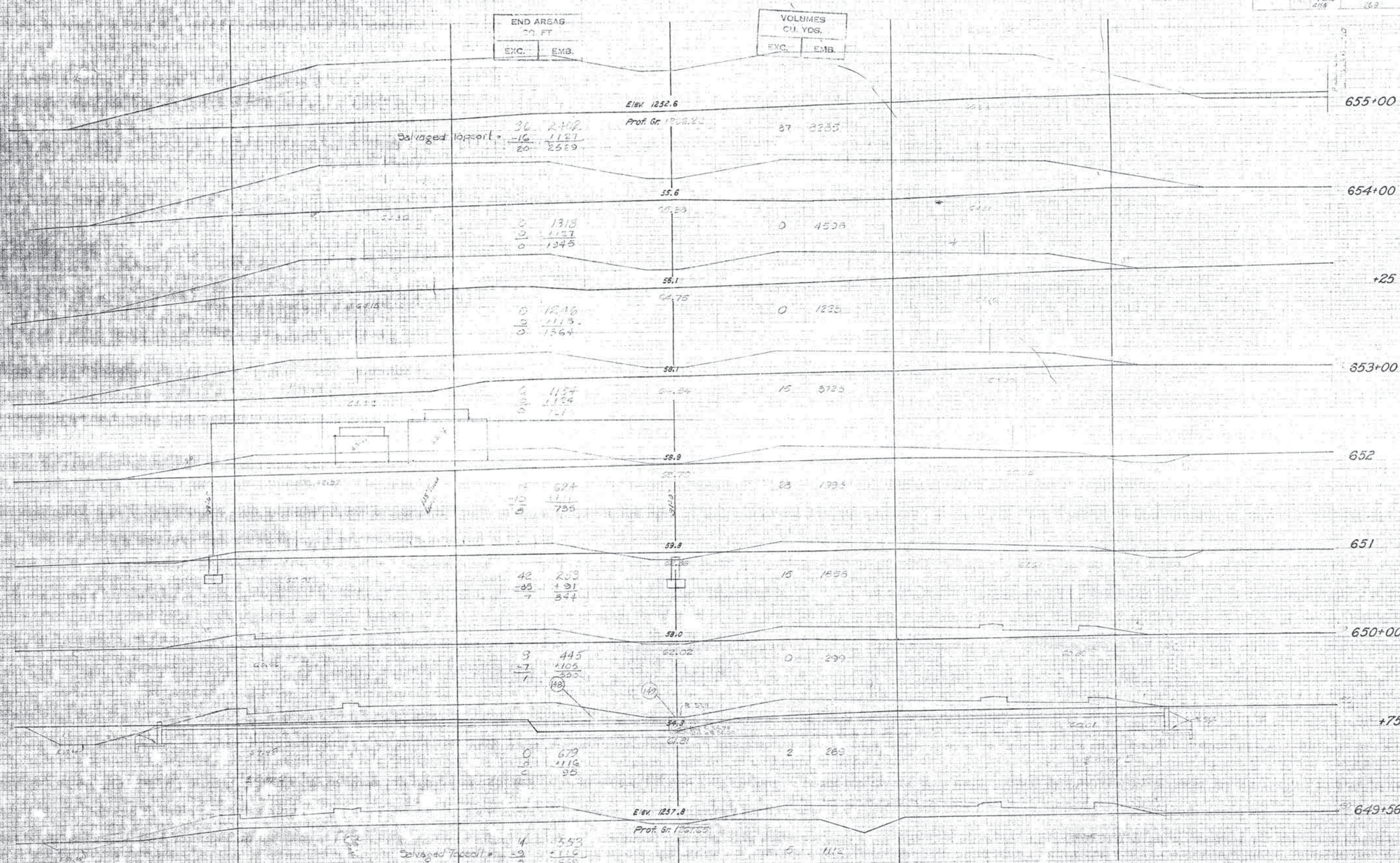
VOLUMES CU. YDS.	
EXC.	EMB.



Sooner Road Interchange  
Ramps C & D



VOLUMES	
CU. YDS.	
EXC.	EMB.



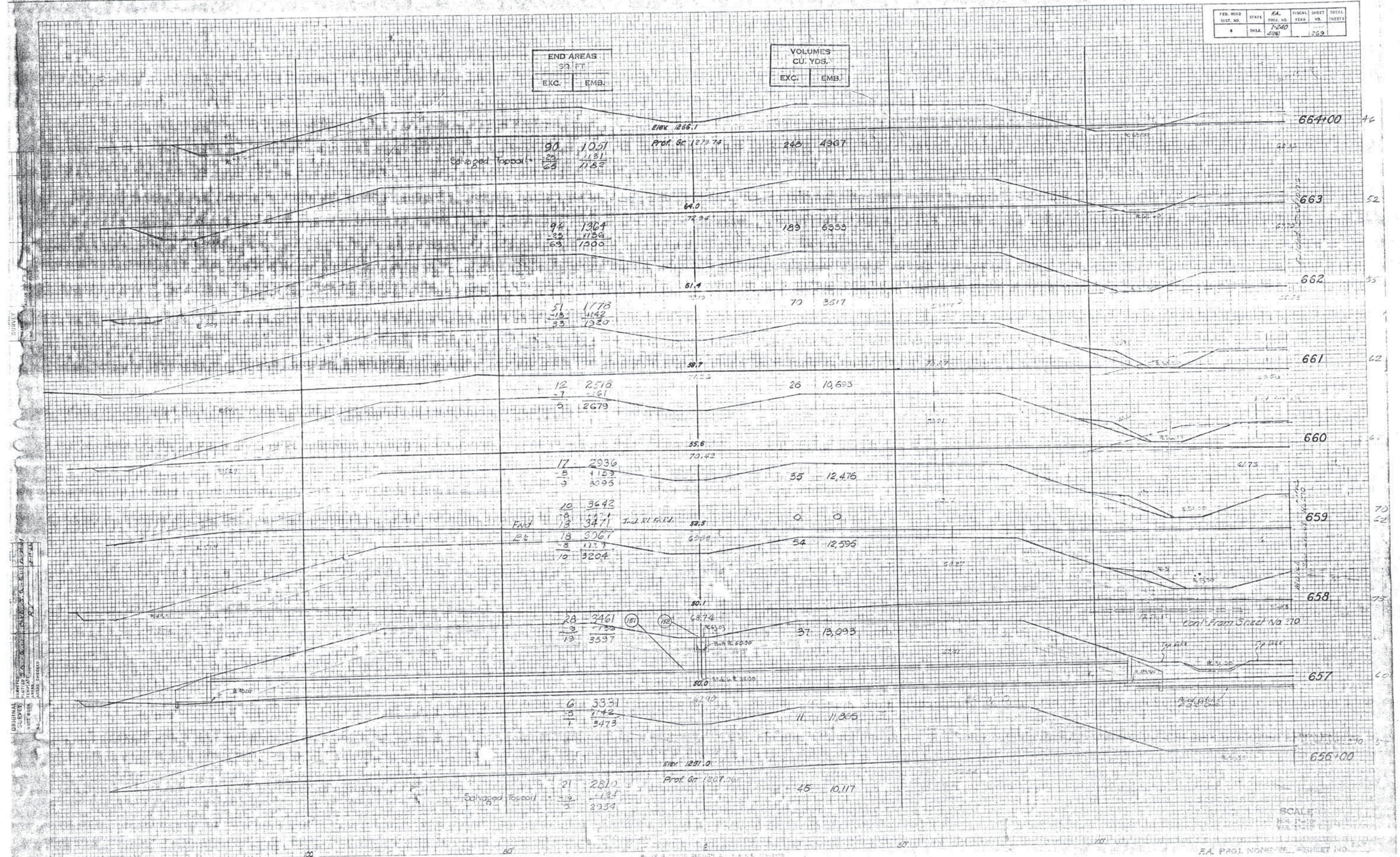
SCALE  
HOR. 1"=10'  
VER. 1"=2'



FED. ROAD DIST. NO.	STATE	FA. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1-240	OKLA.	200	1969	269	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

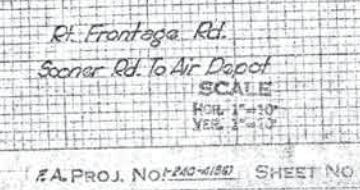


ORIGINAL SURVEY  
DATE 3-1-69  
BY J. L. B. & S. C. B.  
CHECKED BY J. L. B. & S. C. B.

SCALE  
HORIZ. 1"=100'  
VERT. 1"=10'  
FA. PROJ. NO. 200 SHEET NO. 269



END AREAS SQ. FT.		VOLUMES CU. YDS.	
EXC.	EMB.	EXC.	EMB.





FED. ROAD DIST. NO.	STATE	FEA. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240	1966	271	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU YDS.	
EXC.	EMB.

ORIGINAL SURVEY  
DATE: 12-1-65  
BY: J. G. GARDNER  
CHECKED: J. G. GARDNER  
APPROVED: J. G. GARDNER

ORIGINAL SURVEY  
DATE: 12-1-65  
BY: J. G. GARDNER  
CHECKED: J. G. GARDNER  
APPROVED: J. G. GARDNER



SCALE  
HORIZ. 1"=100'  
VERT. 1"=10'  
F.A. PROJ. NO. 1-240-1966 SHEET NO. 271



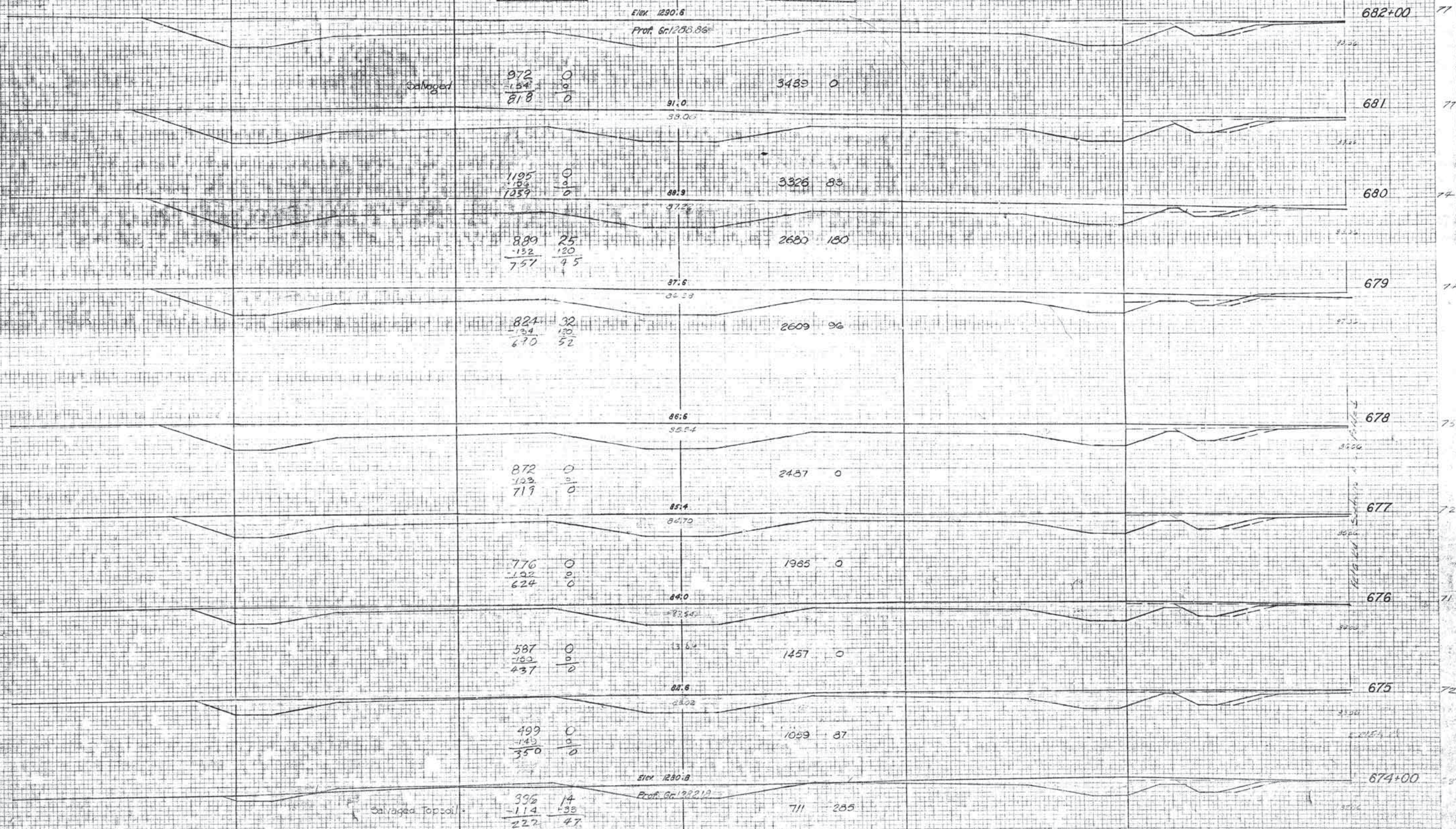
FED. ROAD DIST. NO.	STATE	RA PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	DELA.	1-240	4/86	272	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU YDS.	
EXC.	EMB.

ORIGINAL SURVEY  
 DATE: 10/2/80  
 BY: RY

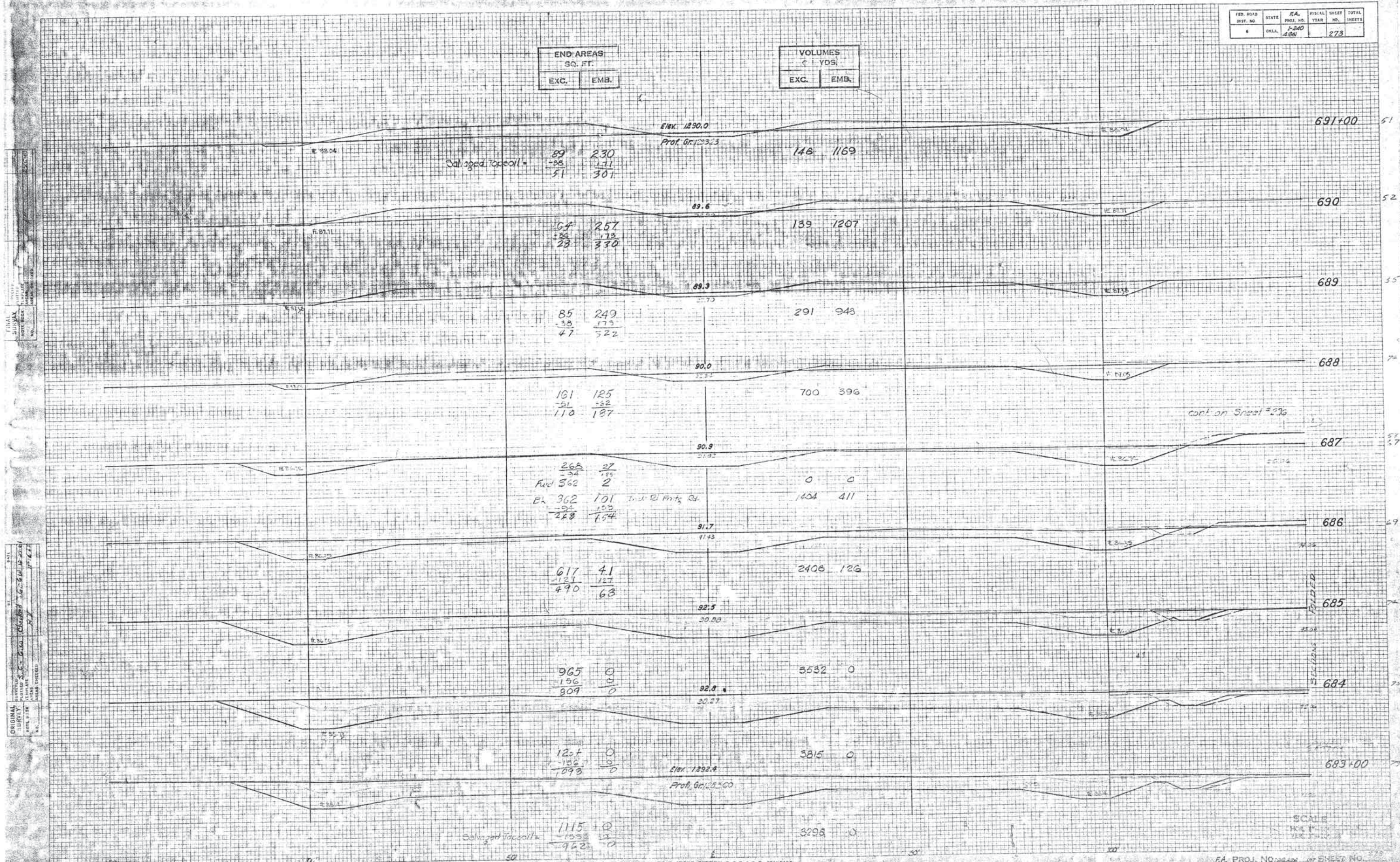
ORIGINAL SURVEY  
 DATE: 10/2/80  
 BY: RY



SCALE



VOLUMES	
C : YDS.	
EXC.	EMB.



SCALE  
1" = 100'  
1" = 100'

FA. PROJ. NO. 100-400000 SHEET NO.



END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

688+00 Zero Section  
 688+11 Full Section  
 Salvaged Topsoil

0	70
0	591
0	151
0	642

0	285
0	1022

694+00

0	591
0	151
0	642

0	2148
---	------

693

0	437
0	147
0	484

12	1624
----	------

692

13	311
-7	+10
6	351

14	1416
----	------

691

8	374
-7	+10
1	444

9	1438
---	------

690

9	264
-6	+133
3	393

12	1159
----	------

689

9	220
-6	+136
3	256

6	940
---	-----

688+00

0	184
0	+34
0	223

0	723
---	-----

0	93
0	+27

0	0
---	---

Rt. Frontage Rd.  
 Soonar Rd. to Air Depot

SCALE  
 HOR. 1"=10' H  
 VER. 1"=10' V



FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240	4-26	275	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU YDS.	
VOLUME CU YDS.	
EXC.	EMB.

Salvaged topsoil =  $\frac{50}{-22} \frac{300}{+75}$   
28 378

Elev. 289.9  
Prof. Gr. 1293.2

28 376

$\frac{42}{-15} \frac{272}{+76}$   
27 348

90.2  
9.58

6 203

$\frac{0}{-0} \frac{409}{+132}$   
0 471

88.9  
23.54

0 240

$\frac{4}{-4} \frac{+12}{+38}$   
0 500

89.2  
23.54

0 275

$\frac{0}{-0} \frac{403}{+33}$   
0 471

88.7  
23.54

12 143

$\frac{94}{-31} \frac{208}{+74}$   
63 282

90.7  
23.54

39 266

$\frac{65}{-27} \frac{323}{+73}$   
38 402

89.9  
23.54

159 1356

$\frac{78}{-30} \frac{257}{+17}$   
48 330

90.3  
23.58

200 1159

Salvaged topsoil =  $\frac{100}{-40} \frac{224}{+72}$   
60 296

Elev. 1280.3  
Prof. Gr. 1233.20

205 1106

SCALE  
HORIZ. 1"=200'  
VERT. 1"=10'

F.A. PROJ. NO. 1-240 SHEET NO. 275



FED. ROAD DIST. NO.	STATE	FA. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	OKLA.	1-240	1960	276	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

Salvaged Topsoil =

87	303
-33	178
24	381

70 1535

41	363
-27	188
14	448

26 2207

0	644
-100	
0	744

9 2703

17	613
-5	193
5	717

23 2337

18	451
-3	134
10	545

41 1624

37	294
-25	176
12	370

78 1204

63	210
-33	170
30	280

122 996

75	193
-30	160
34	268

109 1019

Salvaged Topsoil =

58	363
-30	163
23	292

94 1241



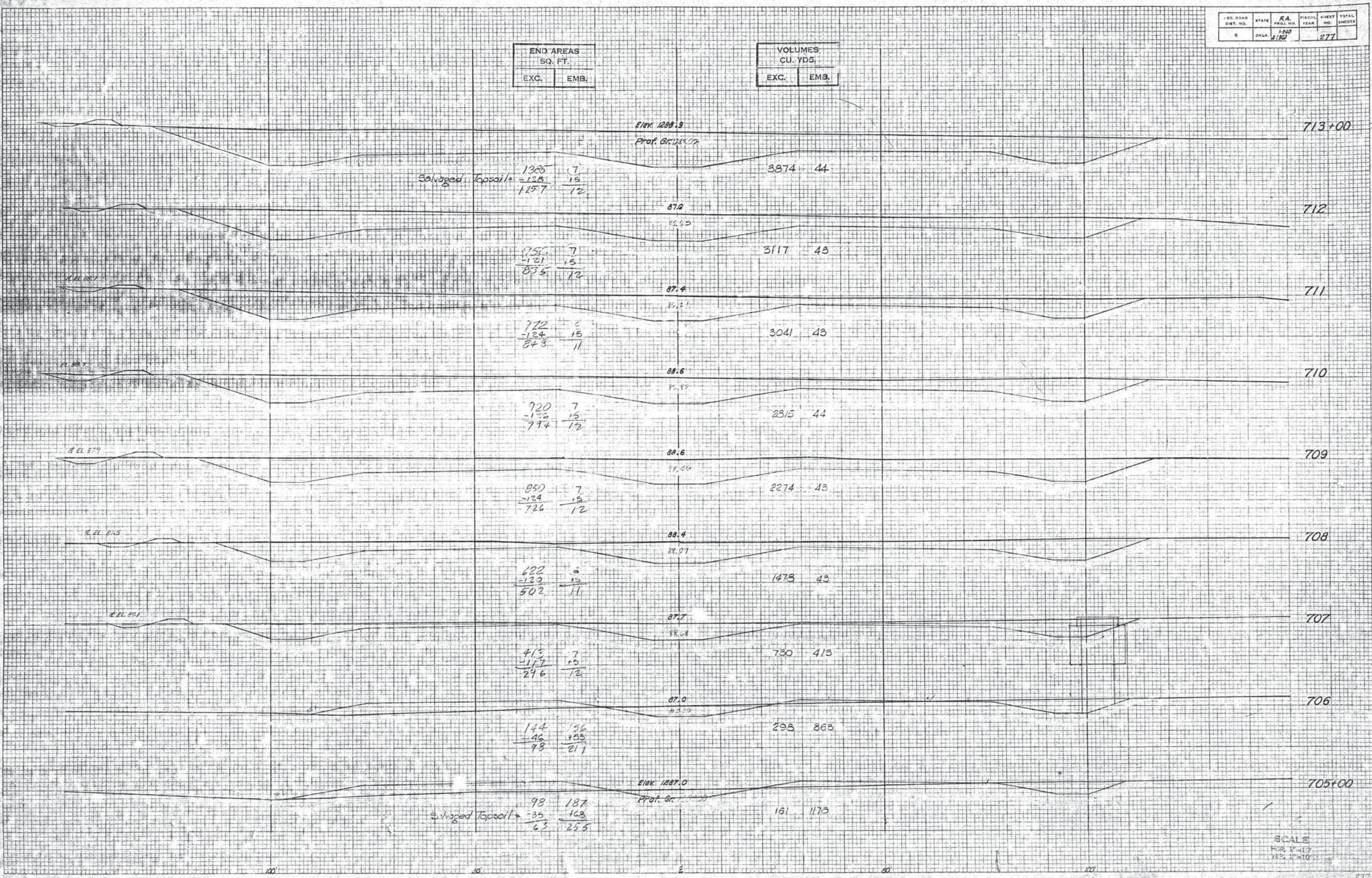
FED. ROAD DIST. NO.	STATE	FA PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA	1-50 1180		277	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

SURVEY  
 NO. 27753  
 DATE 11-1-50  
 BY J. W. BROWN  
 CHECKED BY J. W. BROWN

SURVEY  
 NO. 27753  
 DATE 11-1-50  
 BY J. W. BROWN  
 CHECKED BY J. W. BROWN



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



FED. ROAD DIST. NO.	STATE	FA PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA	1-240 4-427		278	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

ORIGINAL SURVEY  
DATE: 11-10-1916  
BY: J. H. B. & S. H. B.  
NO. 1000

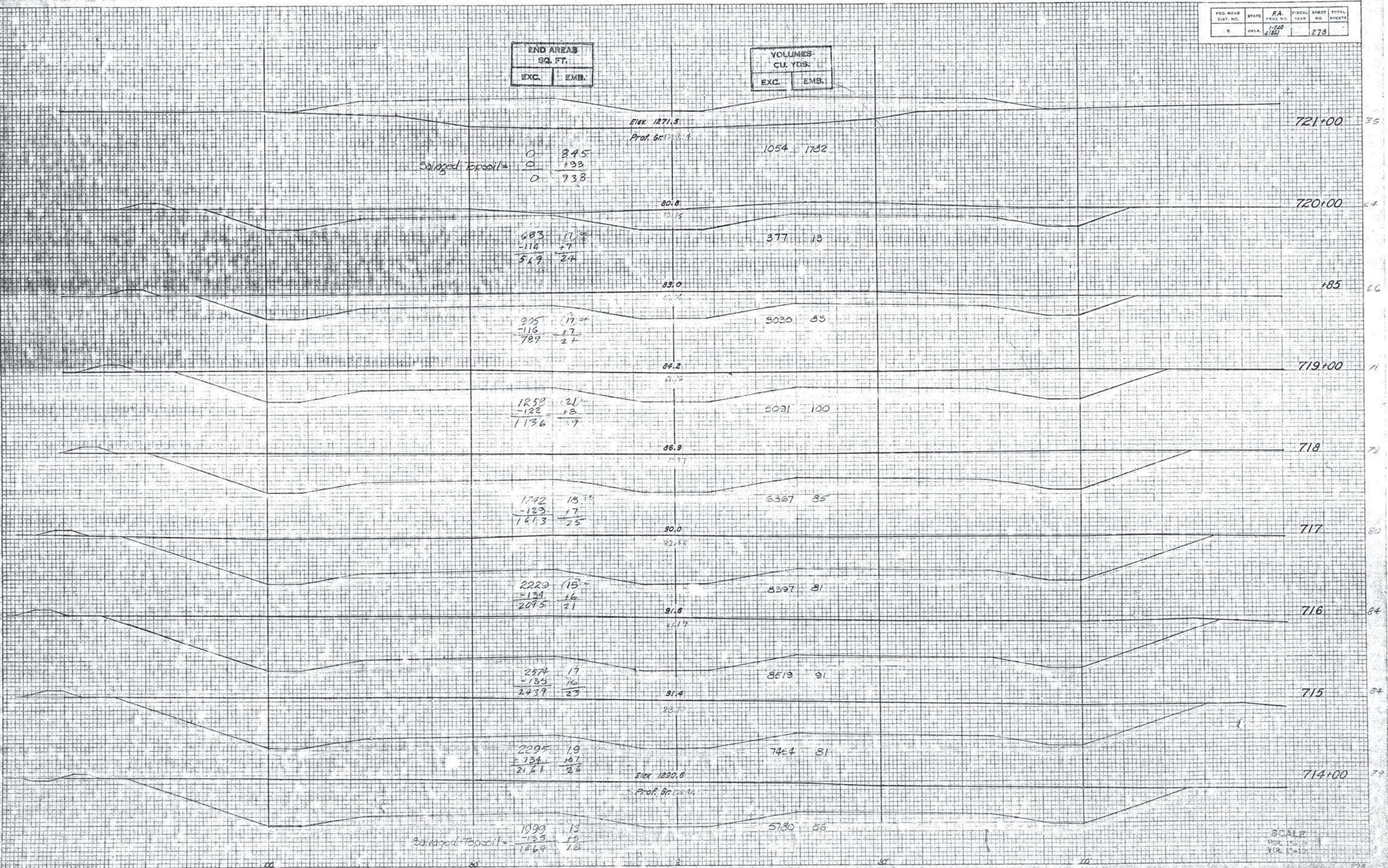


PLATE 3, CROSS SECTION  
JULY & BOYD CO.



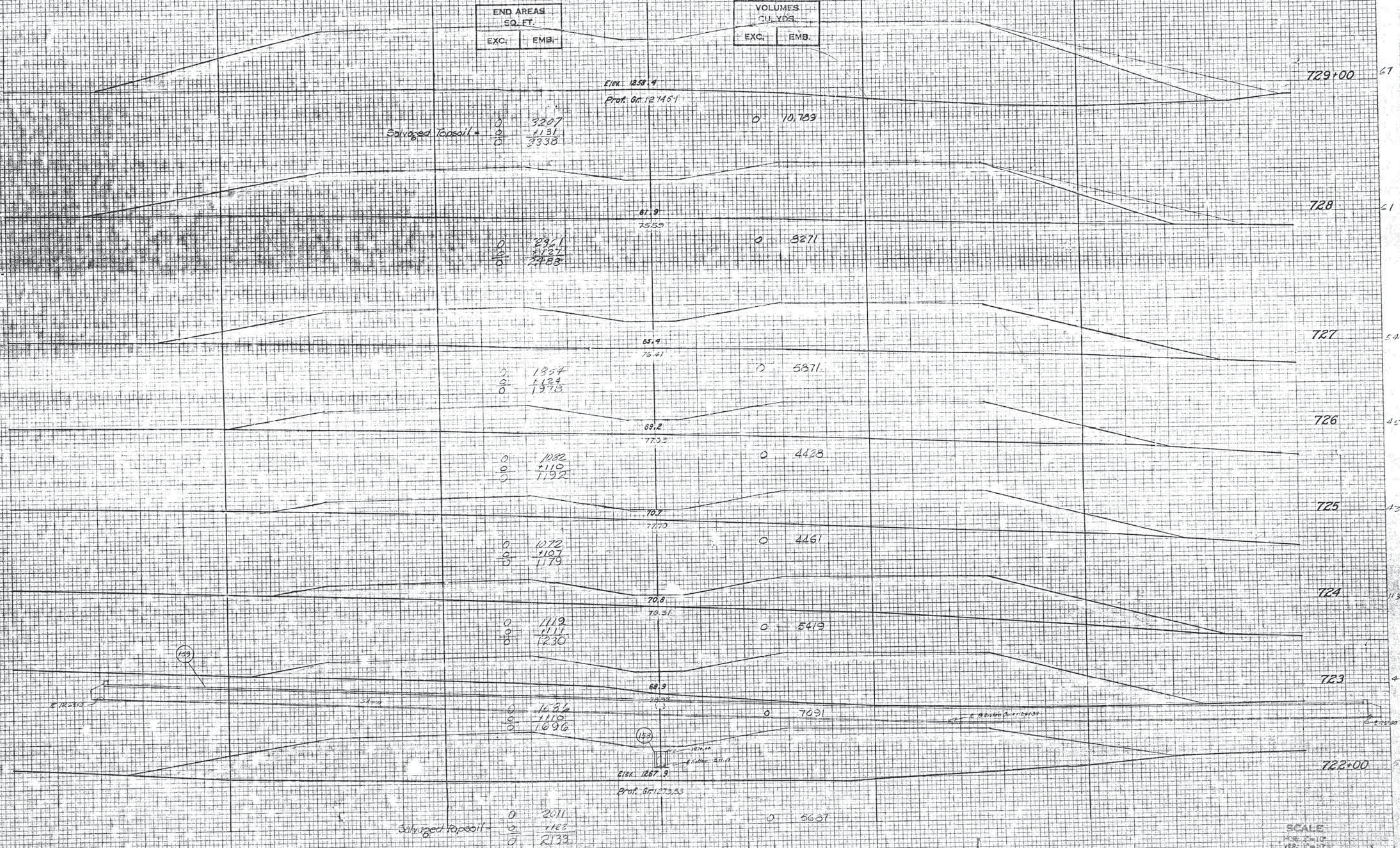
FID. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-MO 4112		279	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

FINISH SURVEY  
 BY  
 DATE  
 NO.

ORIGINAL SURVEY  
 BY  
 DATE  
 NO.

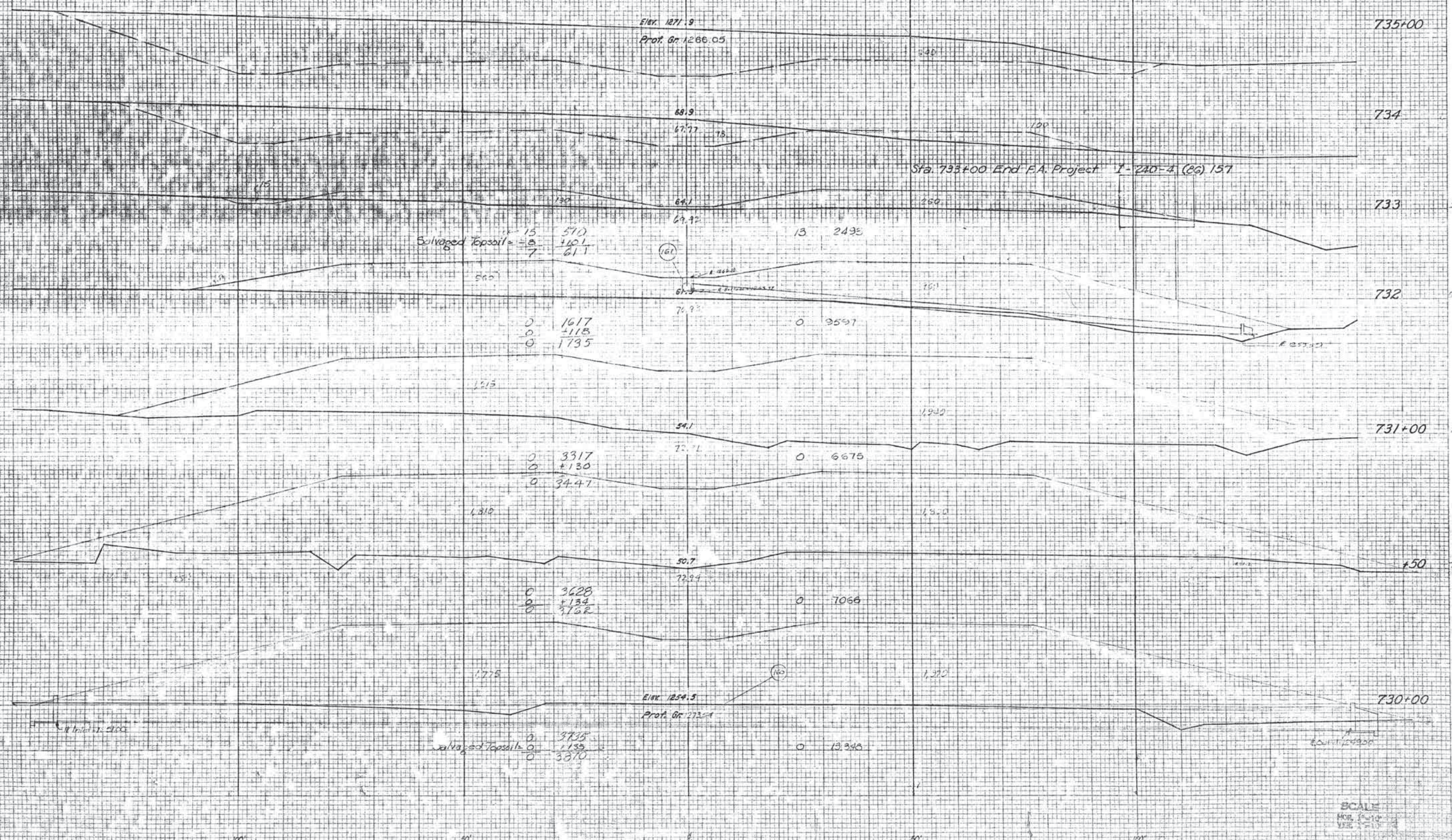




FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240-4 (86) 157	1986	280	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.



FINAL  
SURVEY  
NOTE 10/2/86

ORIGINAL  
SURVEY  
NOTE 10/2/86



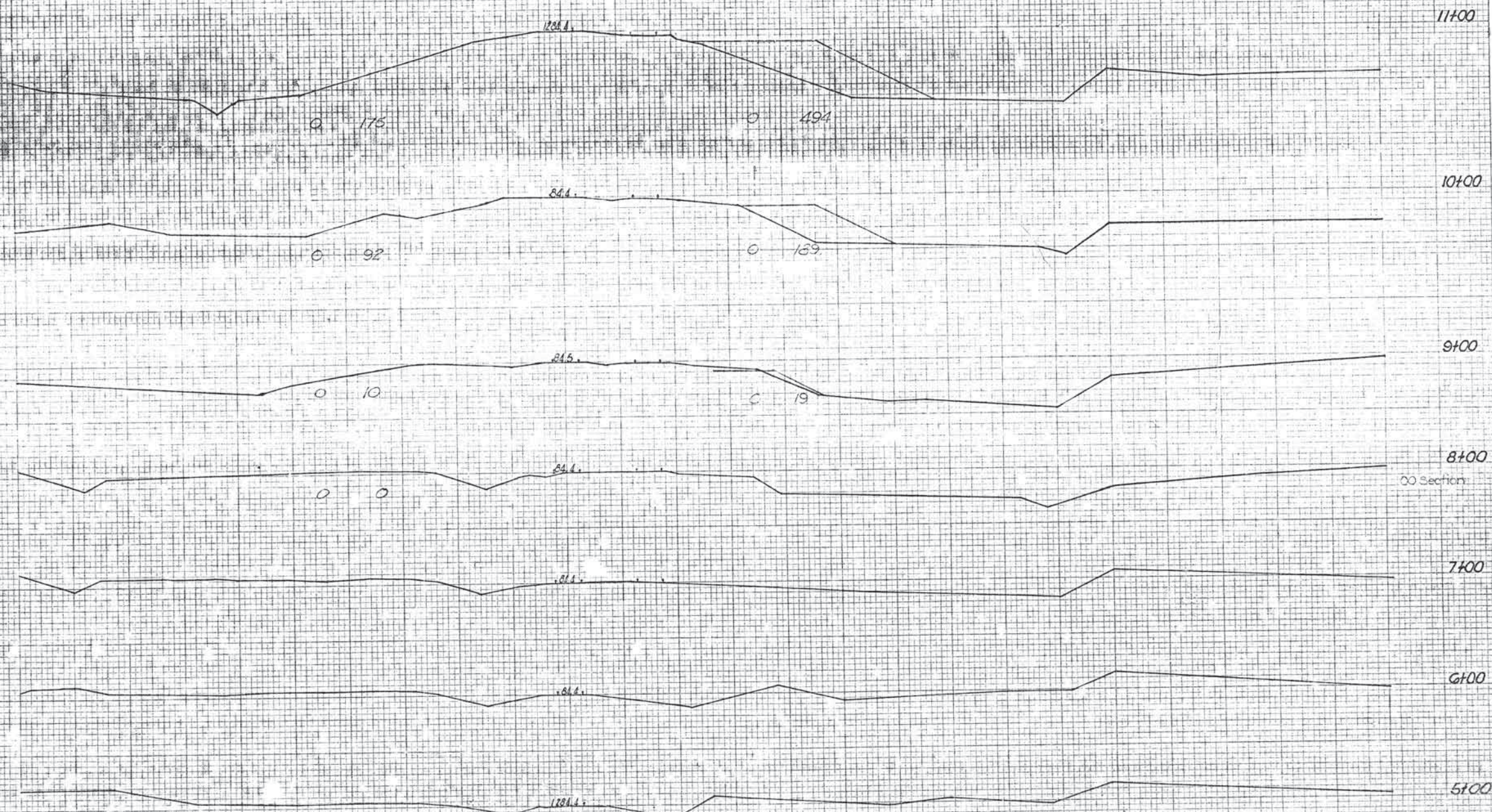
END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

ST. ROAD	STATE	FA.	FISCAL	SHEET	TOTAL
DIST. NO.		NO.	YEAR	NO.	SHEETS
6	OWLA	1-260-4 (46)		281	

ORIGINAL SURVEY  
PROTECT  
NOTE: ELEVATION  
NO. AREA OBTAINED

ORIGINAL SURVEY  
PROTECT  
NOTE: ELEVATION  
NO. AREA OBTAINED



Railroad  
SCALE  
HCB, 1"=40'  
VBB, 1"=10'



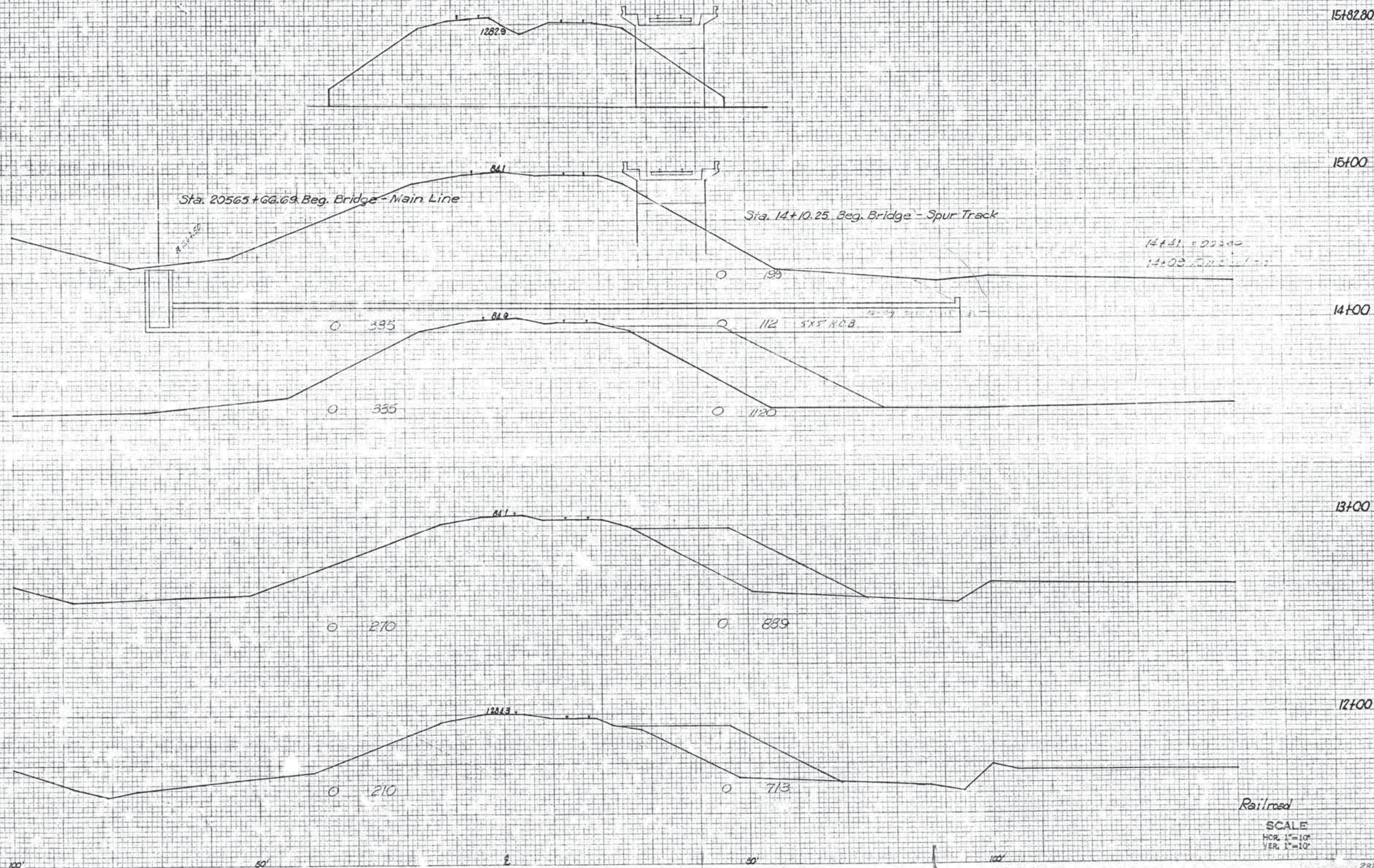
END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

FED. ROAD DIST. NO.	STATE	F.A. DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-200-4 (86)		282	

SURVEY  
 NO. 1  
 DATE 10/1/50  
 BY J. L. HARRIS  
 CHECKED BY J. L. HARRIS

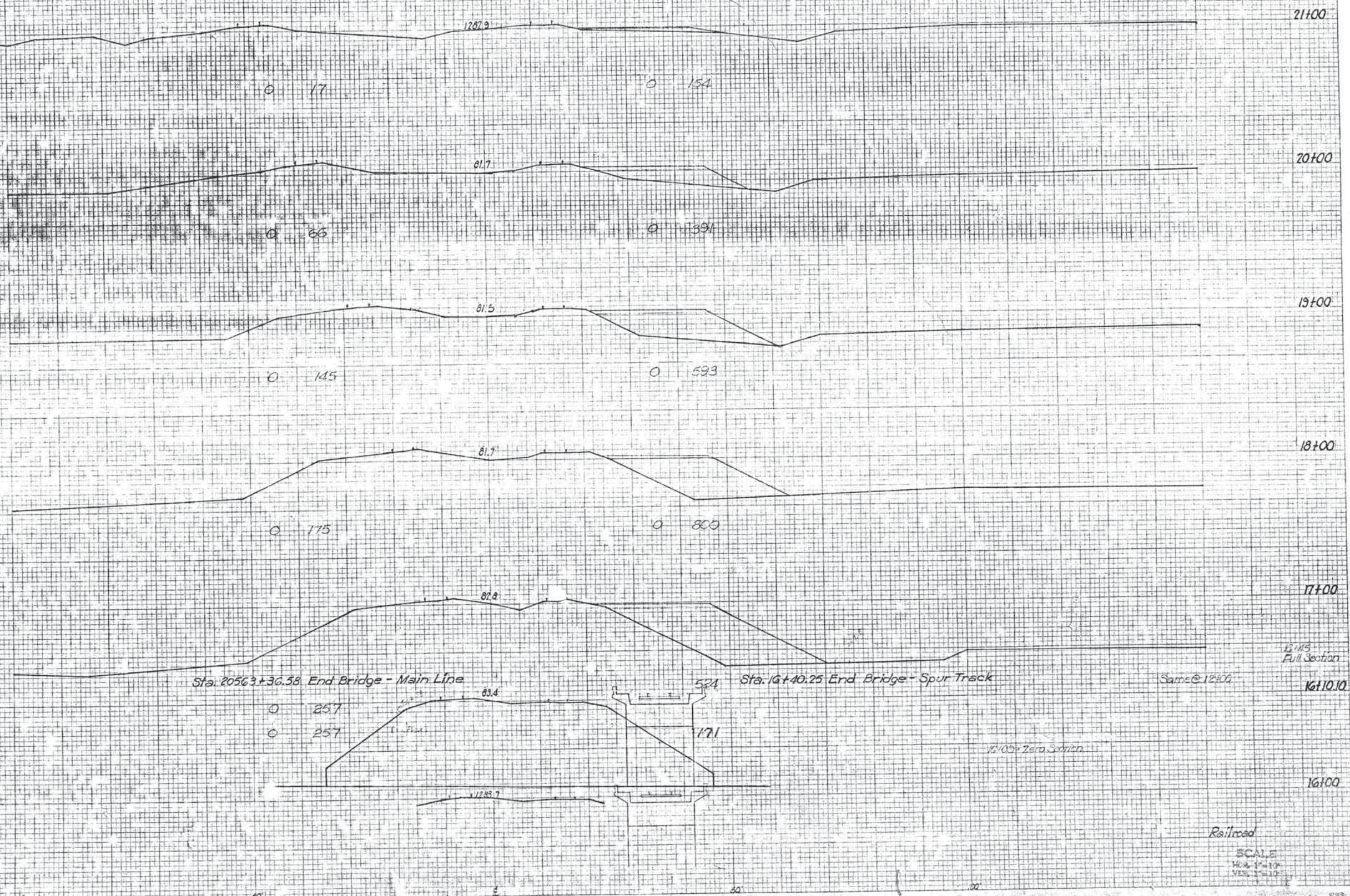
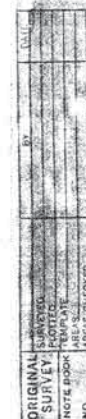
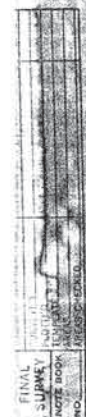
SURVEY  
 NO. 1  
 DATE 10/1/50  
 BY J. L. HARRIS  
 CHECKED BY J. L. HARRIS





VOLUMES CU. YDS.	
EXC.	EMB.

FED. ROAD DIST. NO.	STATE	F.A. PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	DELA.	1-240-4 (86)		283	



EA PROJ. NO. 1-240-4 (92) SHEET NO. 23

PLATE 3. CROSS SECTION



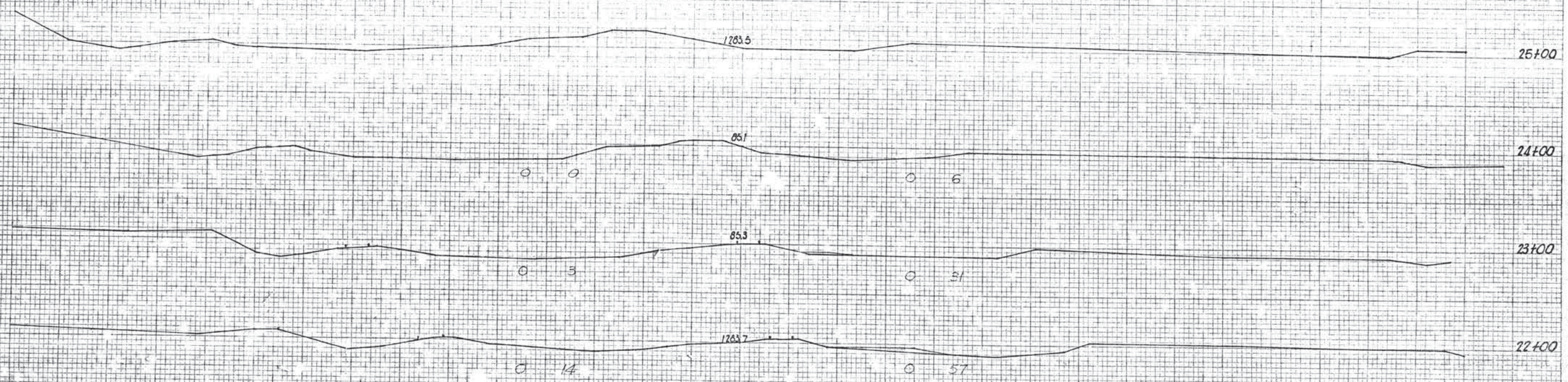
END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

FA PROJ. NO.	STATE	FA	FISCAL YEAR	TOTAL SHEET
1-240-4	OKLA.	1961	254	

DATE  
DRAWN BY  
CHECKED BY  
NO.

SURVEY BOOK  
PAGE NO.  
NO.



Railroad  
SCALE  
HORIZ. 1"=100'  
VERT. 1"=10'

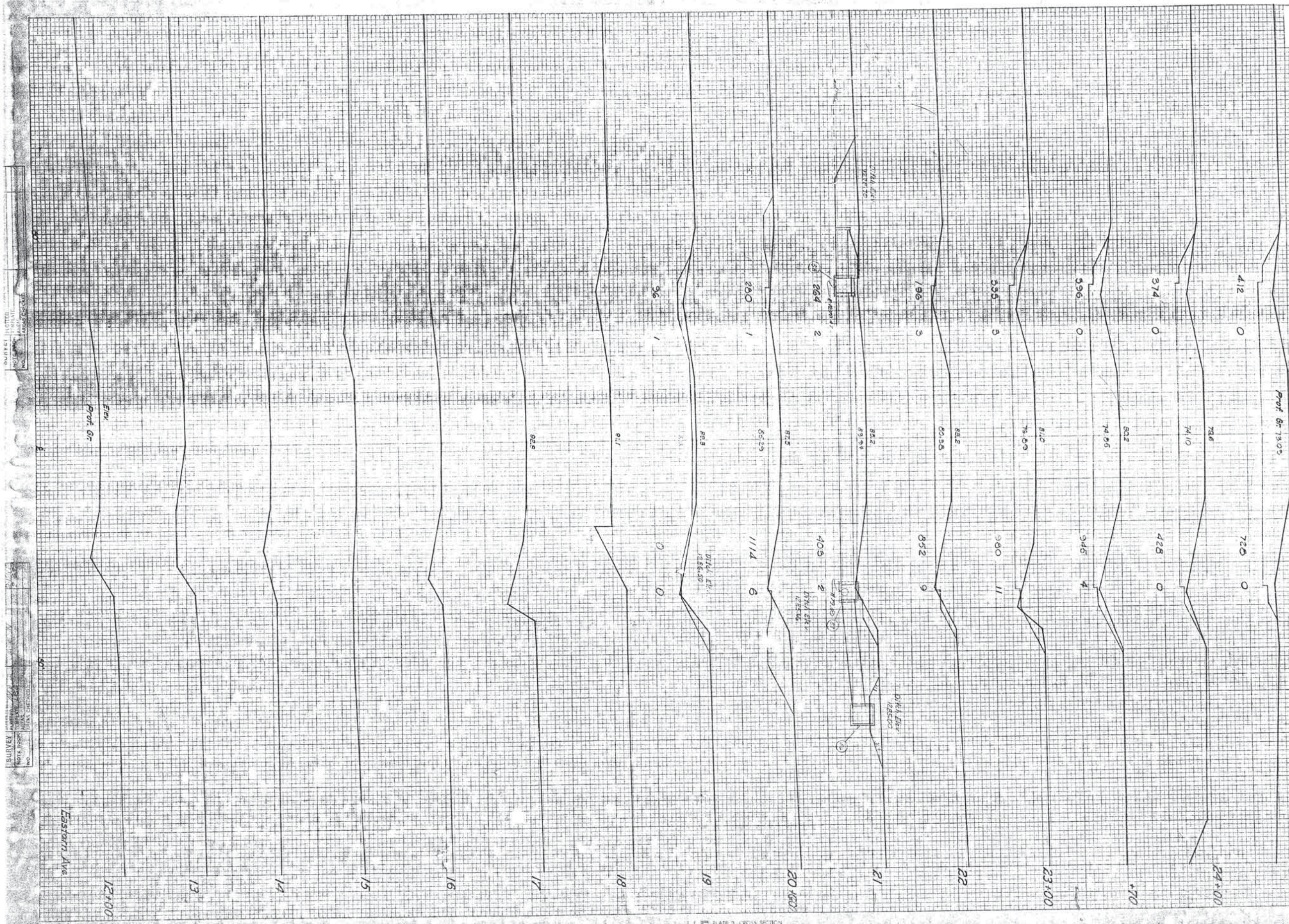


FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	CA	1951	225	

END AREAS	
EXC.	EMB.

VOLUMES	
EXC.	EMB.

Eastman Ave.  
SCALE  
HORIZ. 1" = 10'  
VERT. 1" = 10'



SURVEY NOTES  
NOT A PART OF THE CONTRACT  
NO. 1

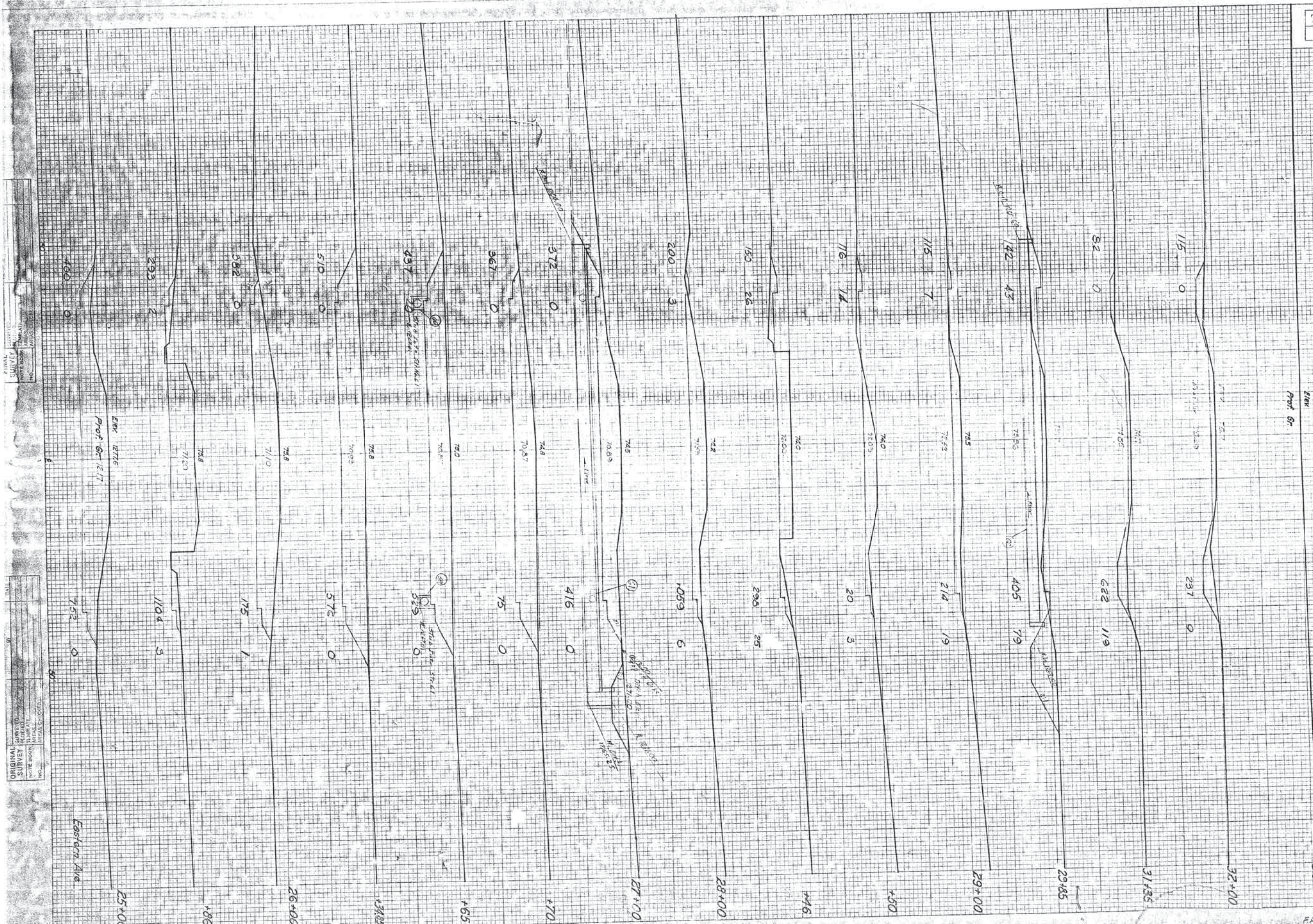
SURVEY NOTES  
NOT A PART OF THE CONTRACT  
NO. 2



FEED ROAD DIST. NO.	STATE	RA. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA	1-540	1-60	236	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU YDS.	
EXC.	EMB.



FINAL SURVEY  
NOTE BOOK  
NO.

ORIGINAL SURVEY  
NOTE BOOK  
NO.



FED. ROAD DIST. NO.	STATE	F.A. PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ALA.	1-240 41861		287	

END AREAS SQ. FT.	EXC.	EMB.
----------------------	------	------

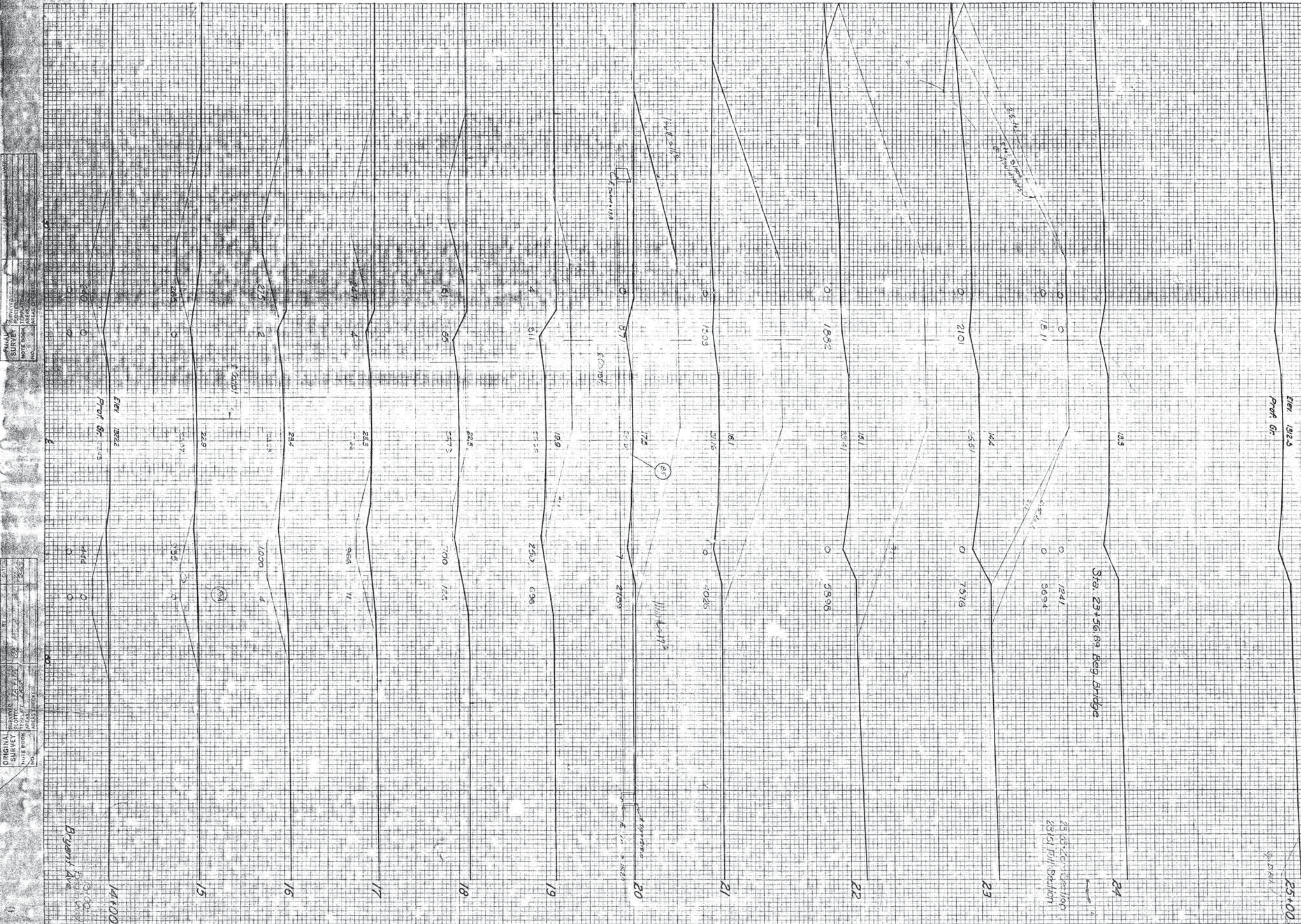
VOLUMES CU. YDS.	EXC.	EMB.
---------------------	------	------

Sta. 25+35.19 End Bridge

Bryant Ave.

SCALE  
HOR. 1"=30'  
VER. 1"=10'

FAPROJ. NO. 287 SHEET NO. 287



DATE	BY	REVISION
10/1/58	J. H. H.	1.0
10/1/58	J. H. H.	1.1
10/1/58	J. H. H.	1.2
10/1/58	J. H. H.	1.3
10/1/58	J. H. H.	1.4
10/1/58	J. H. H.	1.5
10/1/58	J. H. H.	1.6
10/1/58	J. H. H.	1.7
10/1/58	J. H. H.	1.8
10/1/58	J. H. H.	1.9
10/1/58	J. H. H.	2.0
10/1/58	J. H. H.	2.1
10/1/58	J. H. H.	2.2
10/1/58	J. H. H.	2.3
10/1/58	J. H. H.	2.4
10/1/58	J. H. H.	2.5
10/1/58	J. H. H.	2.6
10/1/58	J. H. H.	2.7
10/1/58	J. H. H.	2.8
10/1/58	J. H. H.	2.9
10/1/58	J. H. H.	3.0
10/1/58	J. H. H.	3.1
10/1/58	J. H. H.	3.2
10/1/58	J. H. H.	3.3
10/1/58	J. H. H.	3.4
10/1/58	J. H. H.	3.5
10/1/58	J. H. H.	3.6
10/1/58	J. H. H.	3.7
10/1/58	J. H. H.	3.8
10/1/58	J. H. H.	3.9
10/1/58	J. H. H.	4.0
10/1/58	J. H. H.	4.1
10/1/58	J. H. H.	4.2
10/1/58	J. H. H.	4.3
10/1/58	J. H. H.	4.4
10/1/58	J. H. H.	4.5
10/1/58	J. H. H.	4.6
10/1/58	J. H. H.	4.7
10/1/58	J. H. H.	4.8
10/1/58	J. H. H.	4.9
10/1/58	J. H. H.	5.0
10/1/58	J. H. H.	5.1
10/1/58	J. H. H.	5.2
10/1/58	J. H. H.	5.3
10/1/58	J. H. H.	5.4
10/1/58	J. H. H.	5.5
10/1/58	J. H. H.	5.6
10/1/58	J. H. H.	5.7
10/1/58	J. H. H.	5.8
10/1/58	J. H. H.	5.9
10/1/58	J. H. H.	6.0
10/1/58	J. H. H.	6.1
10/1/58	J. H. H.	6.2
10/1/58	J. H. H.	6.3
10/1/58	J. H. H.	6.4
10/1/58	J. H. H.	6.5
10/1/58	J. H. H.	6.6
10/1/58	J. H. H.	6.7
10/1/58	J. H. H.	6.8
10/1/58	J. H. H.	6.9
10/1/58	J. H. H.	7.0
10/1/58	J. H. H.	7.1
10/1/58	J. H. H.	7.2
10/1/58	J. H. H.	7.3
10/1/58	J. H. H.	7.4
10/1/58	J. H. H.	7.5
10/1/58	J. H. H.	7.6
10/1/58	J. H. H.	7.7
10/1/58	J. H. H.	7.8
10/1/58	J. H. H.	7.9
10/1/58	J. H. H.	8.0
10/1/58	J. H. H.	8.1
10/1/58	J. H. H.	8.2
10/1/58	J. H. H.	8.3
10/1/58	J. H. H.	8.4
10/1/58	J. H. H.	8.5
10/1/58	J. H. H.	8.6
10/1/58	J. H. H.	8.7
10/1/58	J. H. H.	8.8
10/1/58	J. H. H.	8.9
10/1/58	J. H. H.	9.0
10/1/58	J. H. H.	9.1
10/1/58	J. H. H.	9.2
10/1/58	J. H. H.	9.3
10/1/58	J. H. H.	9.4
10/1/58	J. H. H.	9.5
10/1/58	J. H. H.	9.6
10/1/58	J. H. H.	9.7
10/1/58	J. H. H.	9.8
10/1/58	J. H. H.	9.9
10/1/58	J. H. H.	10.0

DATE	BY	REVISION
10/1/58	J. H. H.	1.0
10/1/58	J. H. H.	1.1
10/1/58	J. H. H.	1.2
10/1/58	J. H. H.	1.3
10/1/58	J. H. H.	1.4
10/1/58	J. H. H.	1.5
10/1/58	J. H. H.	1.6
10/1/58	J. H. H.	1.7
10/1/58	J. H. H.	1.8
10/1/58	J. H. H.	1.9
10/1/58	J. H. H.	2.0
10/1/58	J. H. H.	2.1
10/1/58	J. H. H.	2.2
10/1/58	J. H. H.	2.3
10/1/58	J. H. H.	2.4
10/1/58	J. H. H.	2.5
10/1/58	J. H. H.	2.6
10/1/58	J. H. H.	2.7
10/1/58	J. H. H.	2.8
10/1/58	J. H. H.	2.9
10/1/58	J. H. H.	3.0
10/1/58	J. H. H.	3.1
10/1/58	J. H. H.	3.2
10/1/58	J. H. H.	3.3
10/1/58	J. H. H.	3.4
10/1/58	J. H. H.	3.5
10/1/58	J. H. H.	3.6
10/1/58	J. H. H.	3.7
10/1/58	J. H. H.	3.8
10/1/58	J. H. H.	3.9
10/1/58	J. H. H.	4.0
10/1/58	J. H. H.	4.1
10/1/58	J. H. H.	4.2
10/1/58	J. H. H.	4.3
10/1/58	J. H. H.	4.4
10/1/58	J. H. H.	4.5
10/1/58	J. H. H.	4.6
10/1/58	J. H. H.	4.7
10/1/58	J. H. H.	4.8
10/1/58	J. H. H.	4.9
10/1/58	J. H. H.	5.0
10/1/58	J. H. H.	5.1
10/1/58	J. H. H.	5.2
10/1/58	J. H. H.	5.3
10/1/58	J. H. H.	5.4
10/1/58	J. H. H.	5.5
10/1/58	J. H. H.	5.6
10/1/58	J. H. H.	5.7
10/1/58	J. H. H.	5.8
10/1/58	J. H. H.	5.9
10/1/58	J. H. H.	6.0
10/1/58	J. H. H.	6.1
10/1/58	J. H. H.	6.2
10/1/58	J. H. H.	6.3
10/1/58	J. H. H.	6.4
10/1/58	J. H. H.	6.5
10/1/58	J. H. H.	6.6
10/1/58	J. H. H.	6.7
10/1/58	J. H. H.	6.8
10/1/58	J. H. H.	6.9
10/1/58	J. H. H.	7.0
10/1/58	J. H. H.	7.1
10/1/58	J. H. H.	7.2
10/1/58	J. H. H.	7.3
10/1/58	J. H. H.	7.4
10/1/58	J. H. H.	7.5
10/1/58	J. H. H.	7.6
10/1/58	J. H. H.	7.7
10/1/58	J. H. H.	7.8
10/1/58	J. H. H.	7.9
10/1/58	J. H. H.	8.0
10/1/58	J. H. H.	8.1
10/1/58	J. H. H.	8.2
10/1/58	J. H. H.	8.3
10/1/58	J. H. H.	8.4
10/1/58	J. H. H.	8.5
10/1/58	J. H. H.	8.6
10/1/58	J. H. H.	8.7
10/1/58	J. H. H.	8.8
10/1/58	J. H. H.	8.9
10/1/58	J. H. H.	9.0
10/1/58	J. H. H.	9.1
10/1/58	J. H. H.	9.2
10/1/58	J. H. H.	9.3
10/1/58	J. H. H.	9.4
10/1/58	J. H. H.	9.5
10/1/58	J. H. H.	9.6
10/1/58	J. H. H.	9.7
10/1/58	J. H. H.	9.8
10/1/58	J. H. H.	9.9
10/1/58	J. H. H.	10.0

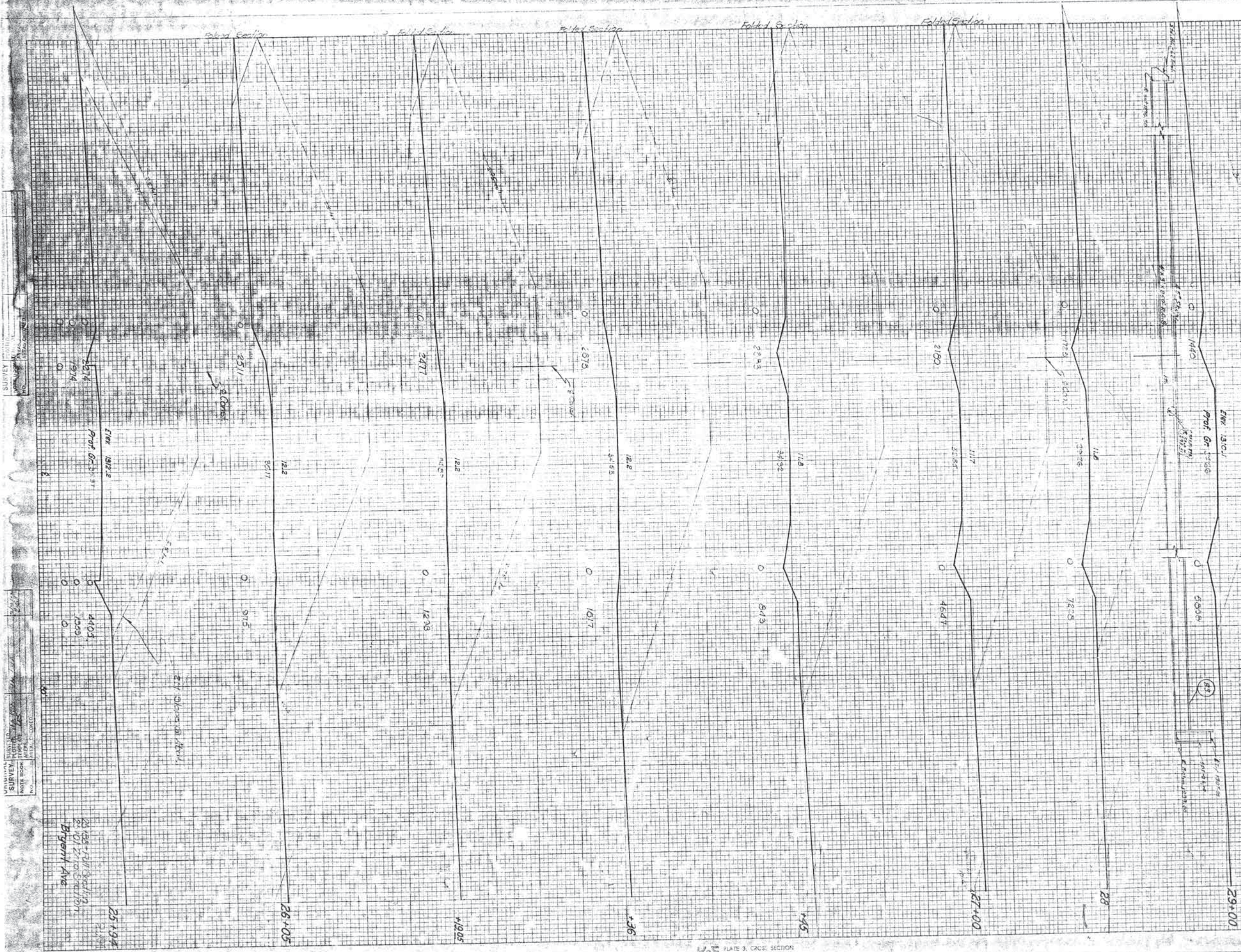


ED. ROAD DIST. NO.	STATE	FA PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	CHLA	1-240 4119		233	

END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

Bryant Ave.  
SCALE  
HORIZ. 1"=40'  
VERT. 1"=40'

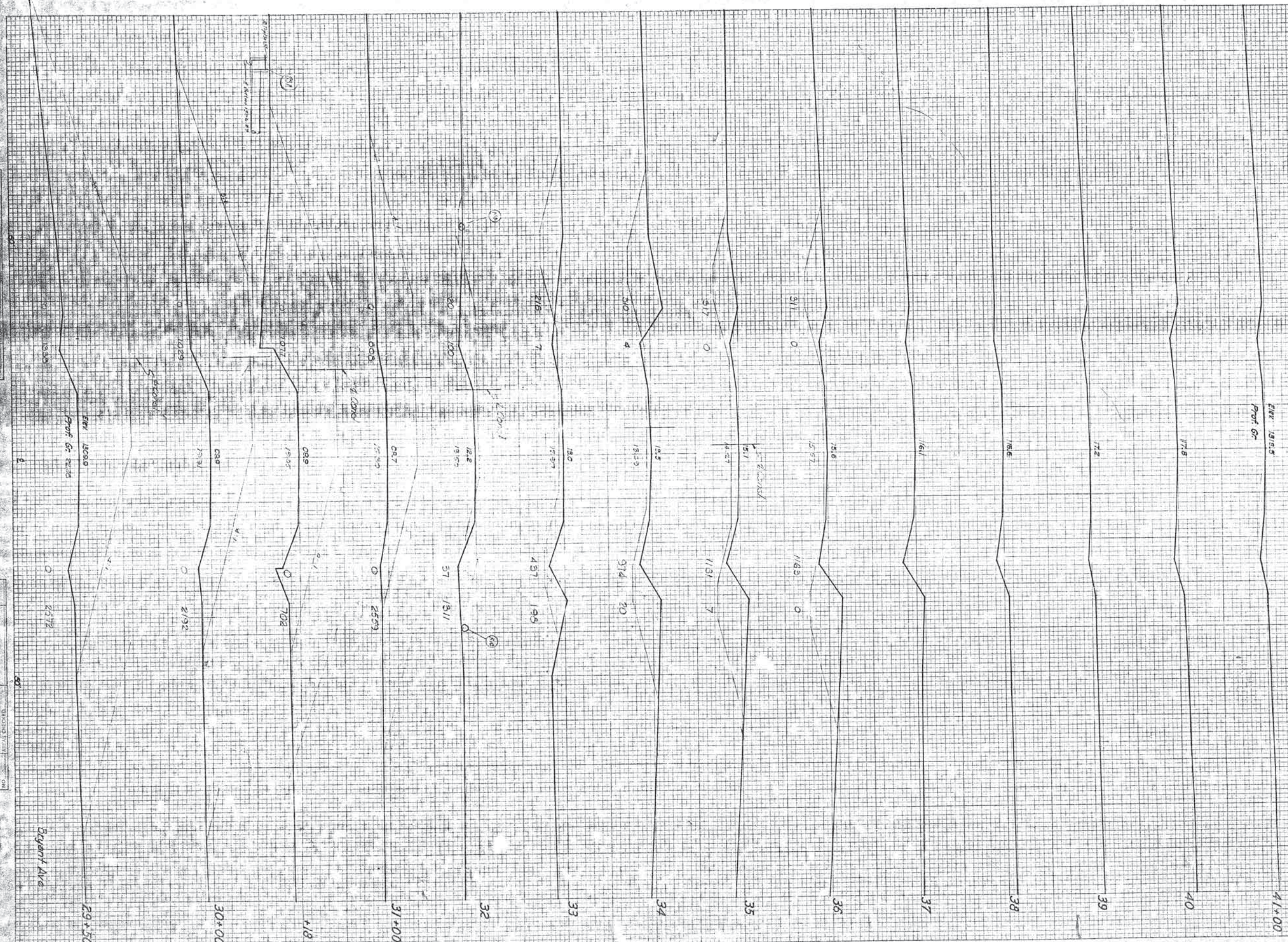




FED. ROAD DIST. NO.	STATE	FA PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
5	OKLA	1-240 4 (SG)		259	

END AREAS	
SQ. FT.	
EXC.	EMB.

EXC.		EMB.	



Bryant Ave.

SCALE  
HOR. 1"=10'  
VER. 1"=5'

FAPROJ. NO. 100-4151 SHEET NO. 1

K&E PLATE J, CROSS SECTION  
RELAY & OSCIL CO



FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-540 4.691		230	

END AREAS
EXC.
EMB.

VOLUMES
EXC.
EMB.

Sunnylane Rd.

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

FAPROJ. NO. 2221321 SHEET NO. 230

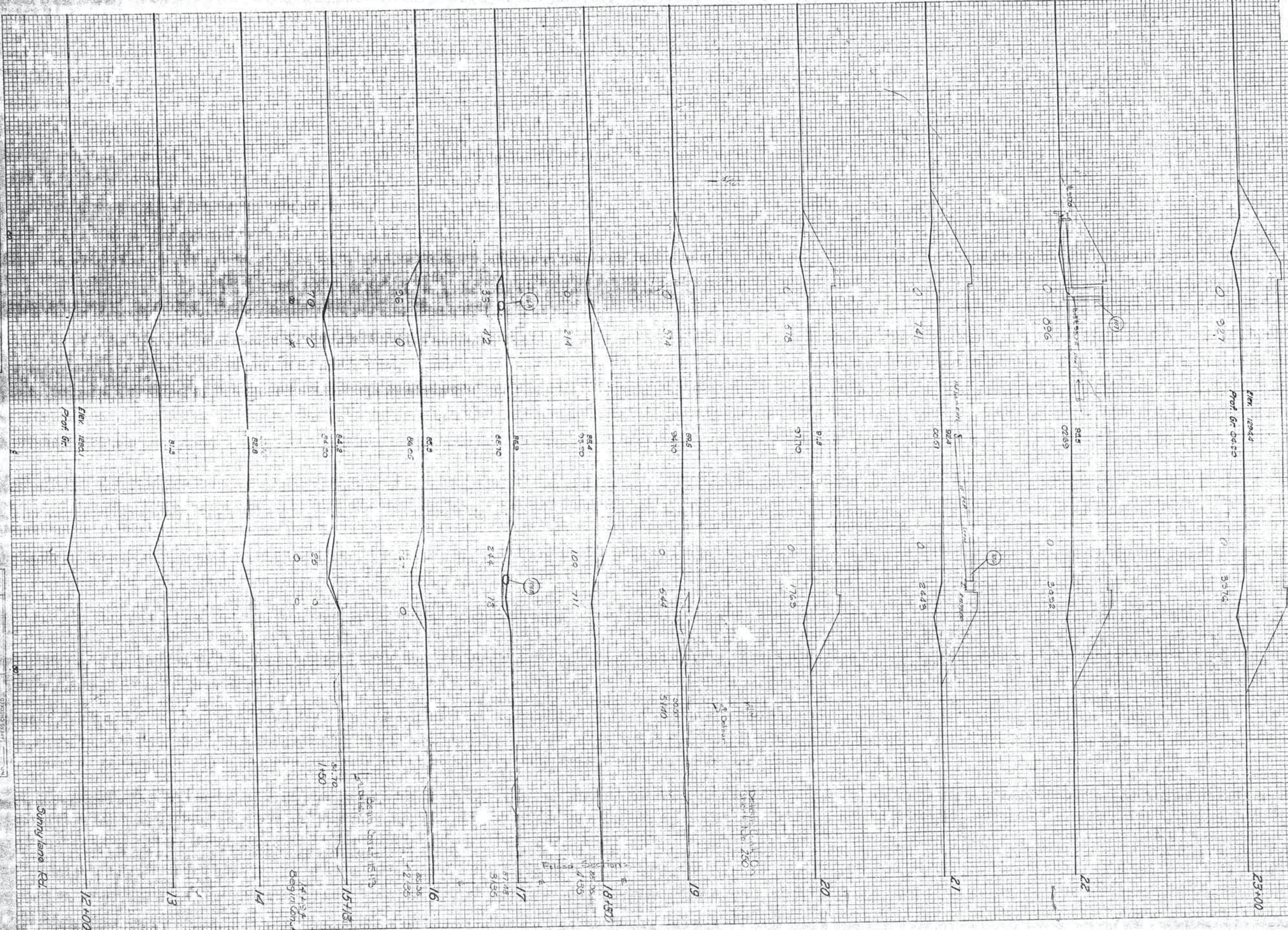


PLATE 3: CROSS SECTION  
ALL LINES 1/2" = 10'



FED. ROAD DIST. NO.	STATE	RA. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	DELA.	1500 4184		291	

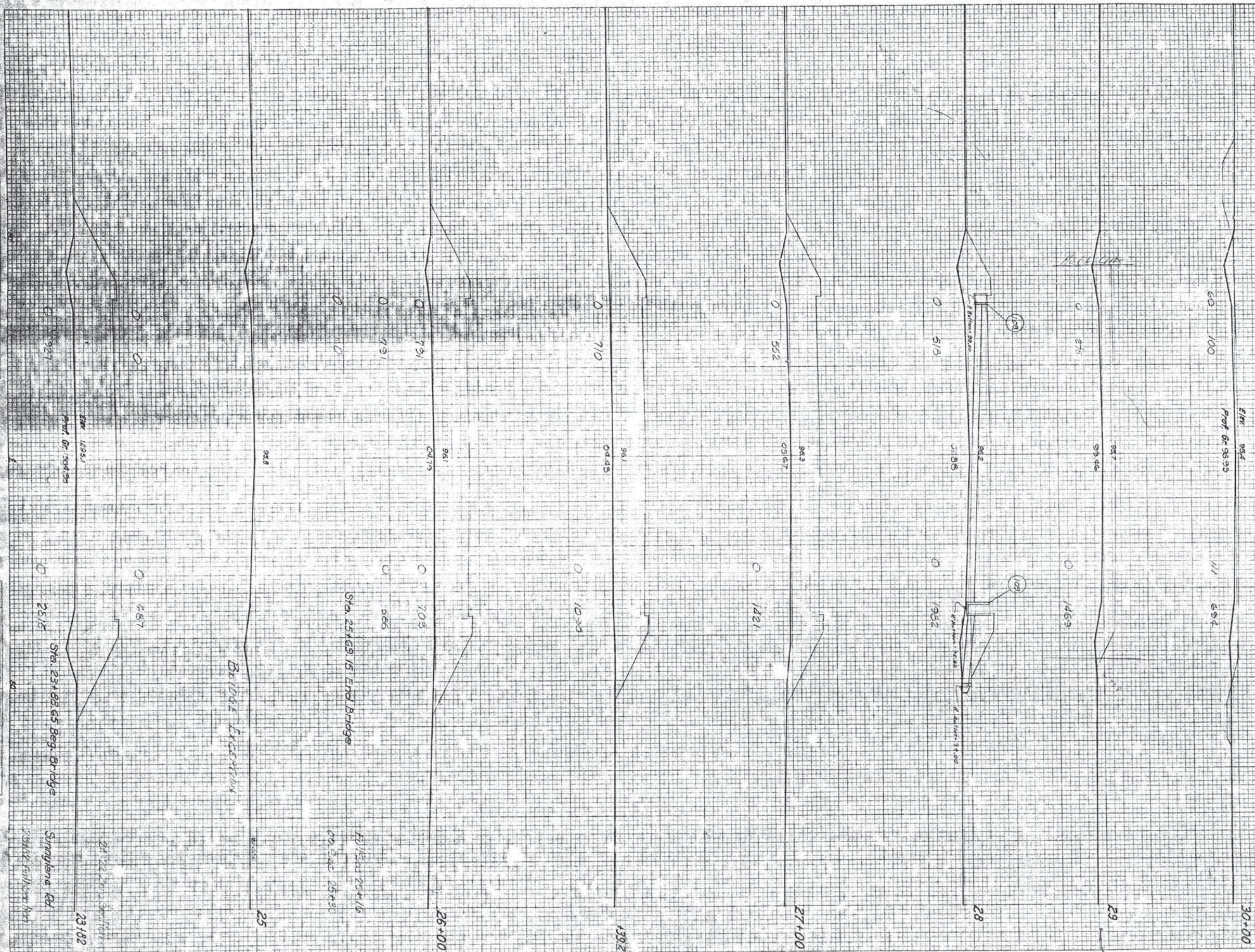
END AREAS SQ. FT.	
EXC.	EMB.

VOLUMES CU. YDS.	
EXC.	EMB.

Sunnylane Rd.

SCALE  
H.R. 1"=10'  
V.R. 1"=10'

FA PROJ. NO. 1500 4184 SHEET NO. 291

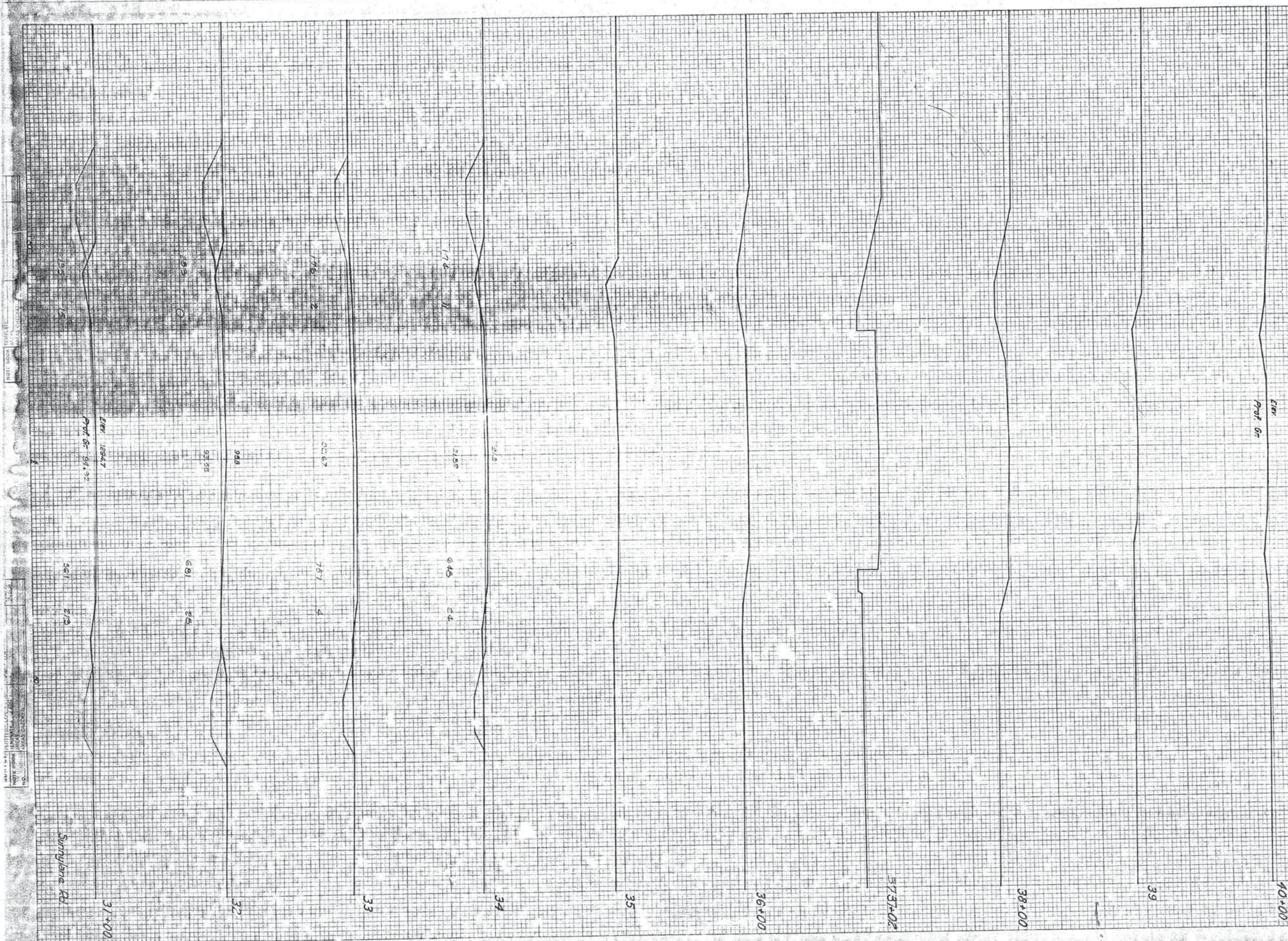




PT. NO. 10	STATE	FA. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	1-240 4-112		232	

END AREAS	
EXC.	EMB.

VOLUMES	
EXC.	EMB.



Sunnyside Rd.

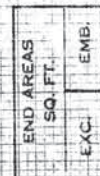
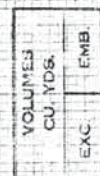
SCALE  
HOR. 1"=10'  
VER. 1"=10'

FA PROJ. NO. 1-240 SHEET NO. 232

NOTE 3. CROSS SECTION  
RELEV. 5' 1" PER 100'



FED ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
63	OKLA.	1-240-4 (86)		293	

[illegible]

t50	End Cond satisfied Avg delay = 1.2 sec
-----	---

GRADING NOT INCLUDED  
IN MASS LINE

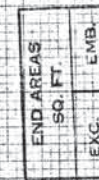
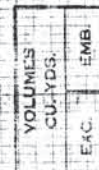
2163 = Full Section  
2153 = Zero Section

Frontage Road East  
@ Sooner Rd.

Lt. Frtg. Rd. East  
@ Sooner Rd.  
SCALE  
HOR. 1"=10'  
VER. 1"=10'



FE - ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
6	DEL.	1-240-4 (86)		294	



0108 = Full Section  
0153 = Zero Section

$$\frac{251}{251} = 1$$

GRADING NOT INCLUDED IN MASS LINE

$-10\% \text{ Slope } \rightarrow$

2000

1000

1

83% open to space Dist. 6

Lt Frontage Road West  
© Sooner Rd.  
Wagon Begin Frig Ed.

Lt Frig. Rd. West  
@ Sooner Rd.

SCALE  
HOR. 1"=10'  
VER. 1"=10'







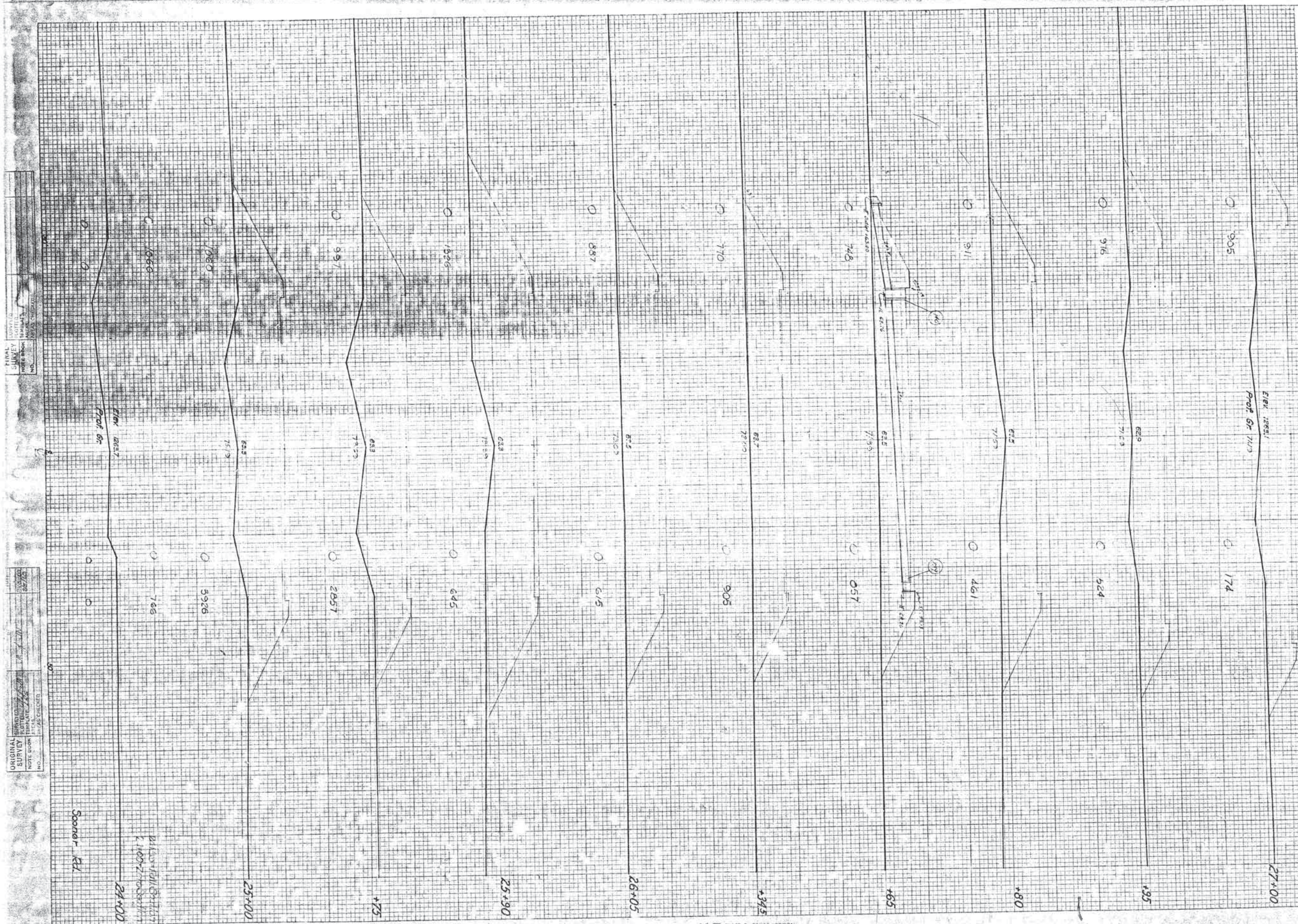
FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	OKLA.	1961	296	

END AREAS	
SO. FT.	EMB.

VOLUMES	
CU. YDS.	EMB.

Sooner Rd.  
SCALE  
HORIZ. 1"=10'  
VERT. 1"=10'

F.A. PROJ. NO. 1-20-1361 SHEET NO. 296



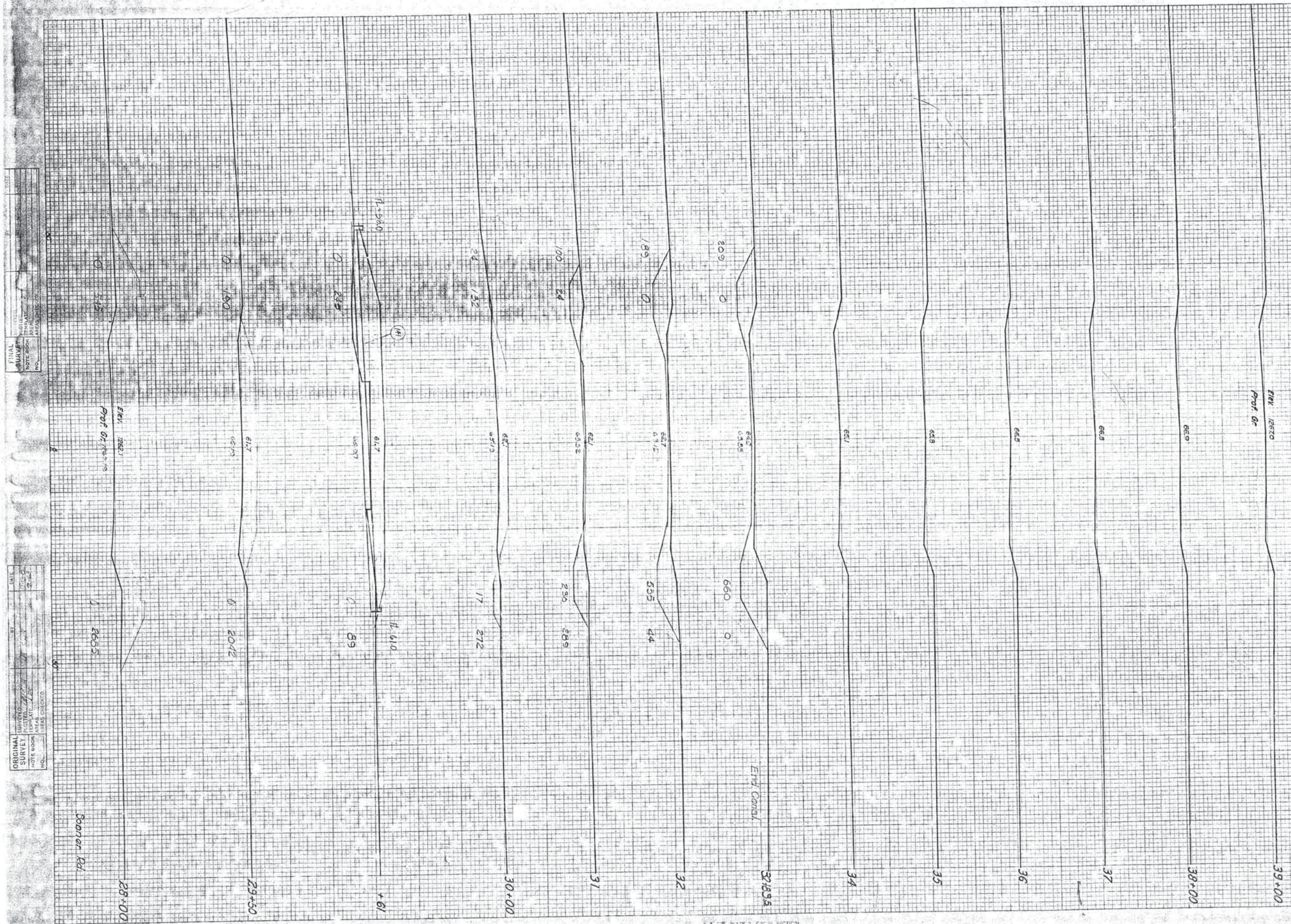


FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	GA	1-240-A (36)		297	

END AREAS	
SO. FT.	EMB.

VOLUMES	
CU. YDS.	EMB.

Sooner Rd  
SCALE  
HOR. 1"=10'  
VER. 1"=10'



DATE	BY	REVISION
12-22-52	W. J. G.	1
1-17-53	W. J. G.	2

DATE	BY	REVISION
12-22-52	W. J. G.	1
1-17-53	W. J. G.	2



FED. ROAD DIST. NO.	STATE	EA PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	ALA	1-240-4 (86)		238	

FIND AREAS	
Exc.	Emb.

VOLUMES	
Exc.	Emb.

DATE	BY	NO.
10/1/72	W. J. H.	100
DATE	BY	NO.
10/1/72	W. J. H.	100

DATE	BY	NO.
10/1/72	W. J. H.	100
DATE	BY	NO.
10/1/72	W. J. H.	100

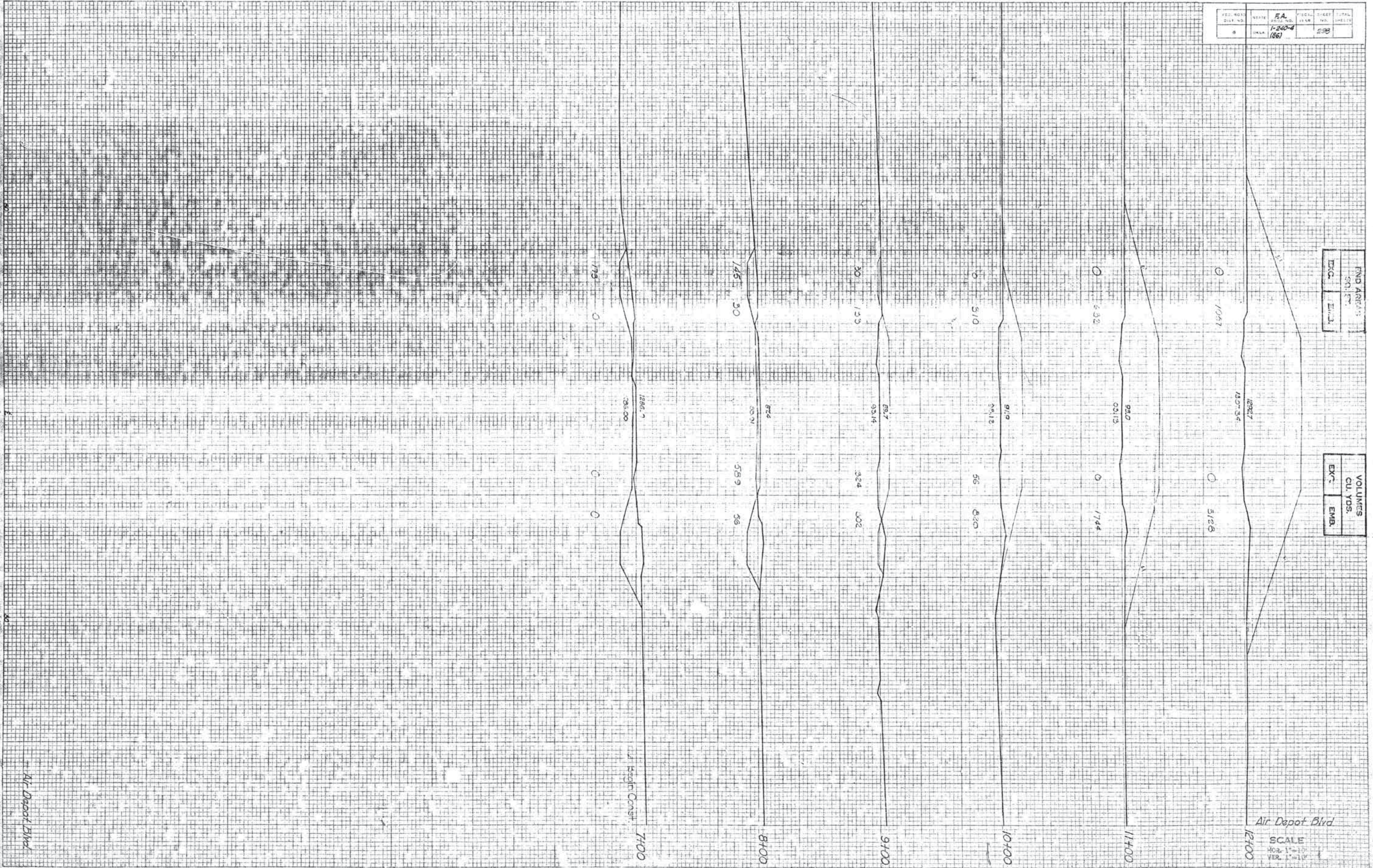


PLATE 1, CROSS SECTION  
10/1/72

EA PROJ. NO. 1-240-4 (86) SHEET NO. 238



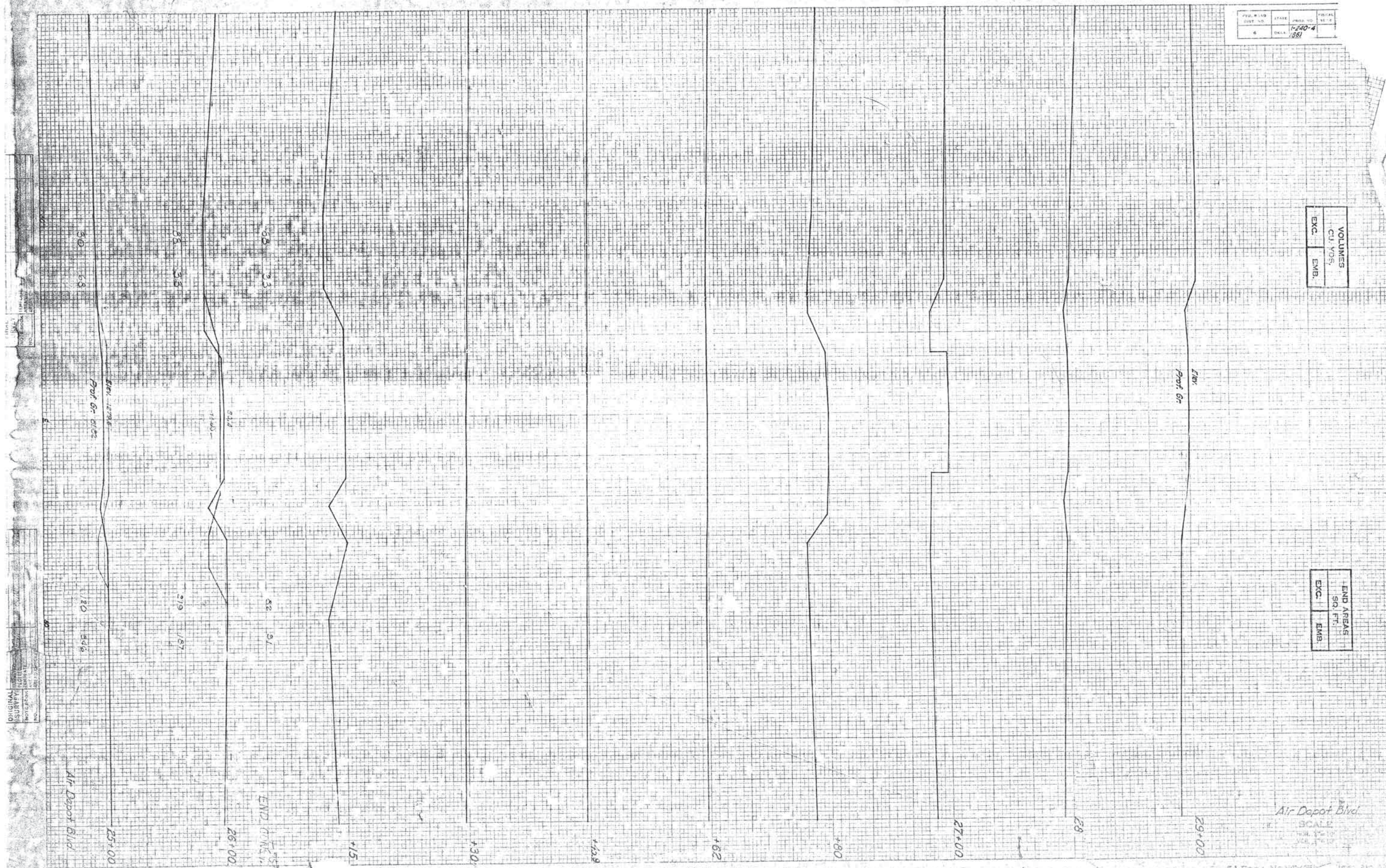




FED. ROAD DIST NO	STATE	PROJ NO	FEDERAL RD - 2
6	OKLA	1-240-4 (86)	

VOLUMES CU. YDS.	
EXC.	EMB.

END AREAS	
SQ. FT.	
EXC.	EMB.









END AREAS		VOLUMES CU. YDS.	
E.V.C.	E.M.L.	Exc.	Emb.
608 32 776	0	59+00 1302.10 1295.50	2813 0

20' Cut Line

775 32 743	0
------------------	---

20' Cut Line

593 32 561	0
------------------	---

20' Cut Line

180 -9 171	0
------------------	---

73 2 71	0
---------------	---

122 116 58	0
------------------	---

STA. 53+40 BEGIN CONST. ON WEST FRONTAGE ROAD

53+00 1307.50	0
------------------	---

52+21 1305.00	0
------------------	---

52+00 1305.10	0
------------------	---

51+00 1312.00	0
------------------	---

50+00 1314.80	0
------------------	---

49+00 1317.20	0
------------------	---

48+00 1320.20	0
------------------	---

47+83 1320.60	0
------------------	---

47+00 1322.42	0
------------------	---

46+18 1325.12	0
------------------	---

WEST FRONTAGE ROAD

Scale 1" = 10'



VOLUMES CU. YDS.		
EXC.	FILL	EMB.

END AREAS SQ. FT.		
EXC.	FILL	EMB.

S = 0.0035/Ft.

S = 0.0512/Ft.

S = 0.0611/Ft.

S = 0.0662/Ft.

S = 0.0690/Ft.

S = 0.0631/Ft.

S = 0.0662/Ft.

S = 0.0616/Ft.

S = 0.0370/Ft.

S = 0.0002/Ft.

S = 0.0061/Ft.

S = 0.0041/Ft.

S = 0.0017/Ft.

S = 0.0311/Ft.

S = 0.0008/Ft.

Normal

STA 60+00 TO 68+00 3

68+00  
1287.01  
1287.36

67+62  
1287.14  
1287.49

67+40  
1287.11  
1287.57

67+28  
1287.34  
1287.61

67+00  
1287.14  
1287.71

66+78  
1287.36  
1287.79

66+69  
1287.48  
1287.82

66+57  
1287.06  
1287.86

66+00  
1287.01  
1287.86

65+14  
1287.01  
1287.36

65+00  
1287.11  
1287.41

64+00  
1287.51  
1287.76

63+00  
1287.81  
1287.11

62+00  
1287.20  
1287.87

61+00  
1287.30  
1287.45

60+00  
1287.60  
1287.46

1287.36  
1287.36

1287.49  
1287.49

1287.57  
1287.57

1287.61  
1287.61

1287.71  
1287.71

1287.79  
1287.79

1287.82  
1287.82

1287.86  
1287.86

1287.86  
1287.86

1287.36  
1287.36

1287.41  
1287.41

1287.76  
1287.76

1287.11  
1287.11

1287.87  
1287.87

1287.45  
1287.45

1287.46  
1287.46

1287.36

1287.49

1287.57

1287.61

1287.71

1287.79

1287.82

1287.86

1287.86

1287.36

1287.41

1287.76

1287.11

1287.87

1287.45

1287.46

1287.36

1287.49

1287.57

1287.61

1287.71

1287.79

1287.82

1287.86

1287.86

1287.36

1287.41

1287.76

1287.11

1287.87

1287.45

1287.46

1287.36

1287.49

1287.57

1287.61

1287.71

1287.79

1287.82

1287.86

1287.86

1287.36

1287.41

1287.76

1287.11

1287.87

1287.45

1287.46

WEST FRONTAGE ROAD

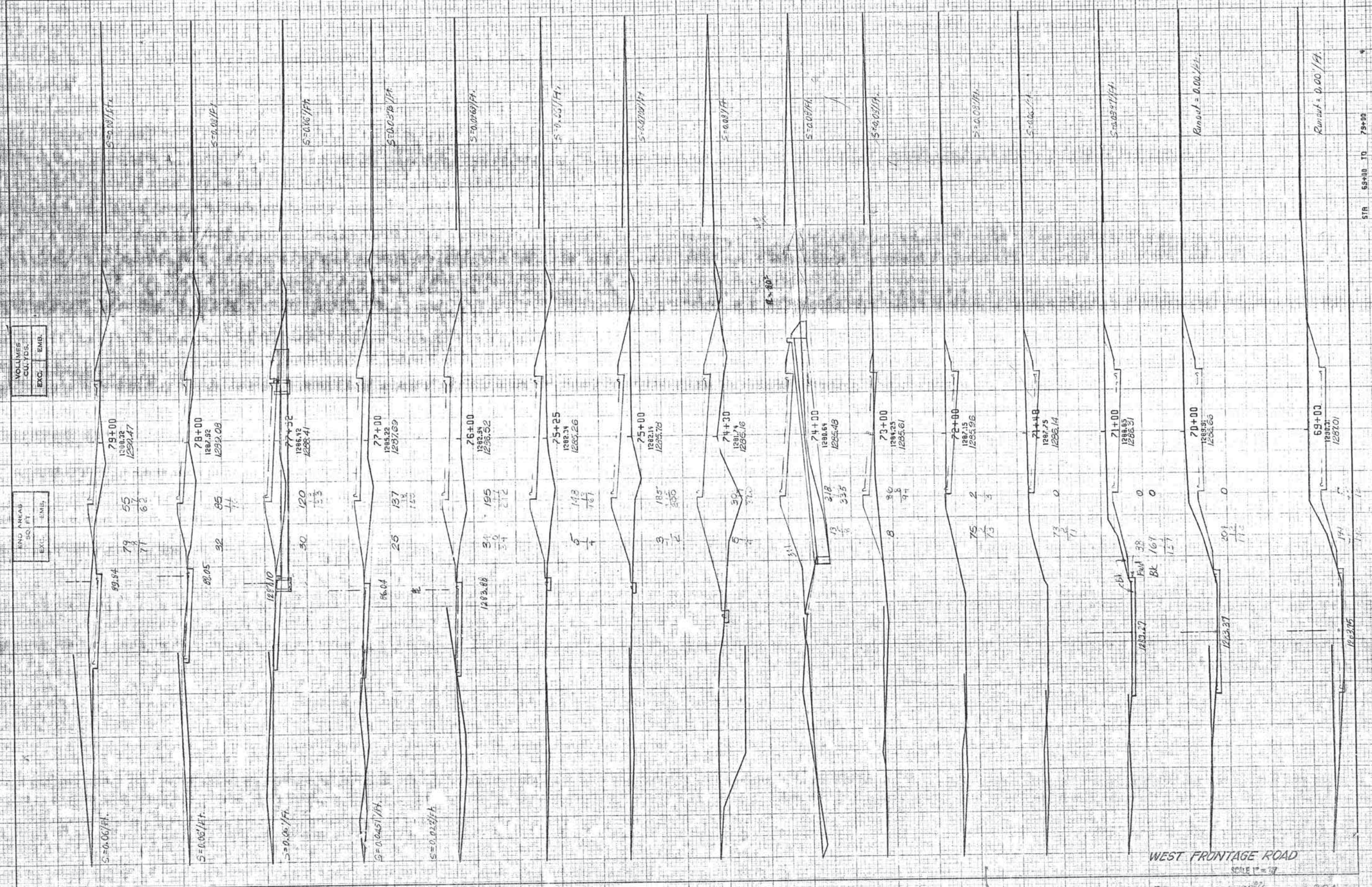
SCALE 1" = 40'

F.A. 3-6-11 NO. 1270000 SHEET NO. 303



VOLUMES CU. YDS.		
EXC.	EMB.	

ENG. AREAS SQ. FT.		
EXC.	EMB.	



WEST FRONTAGE ROAD

SCALE 1" = 10'

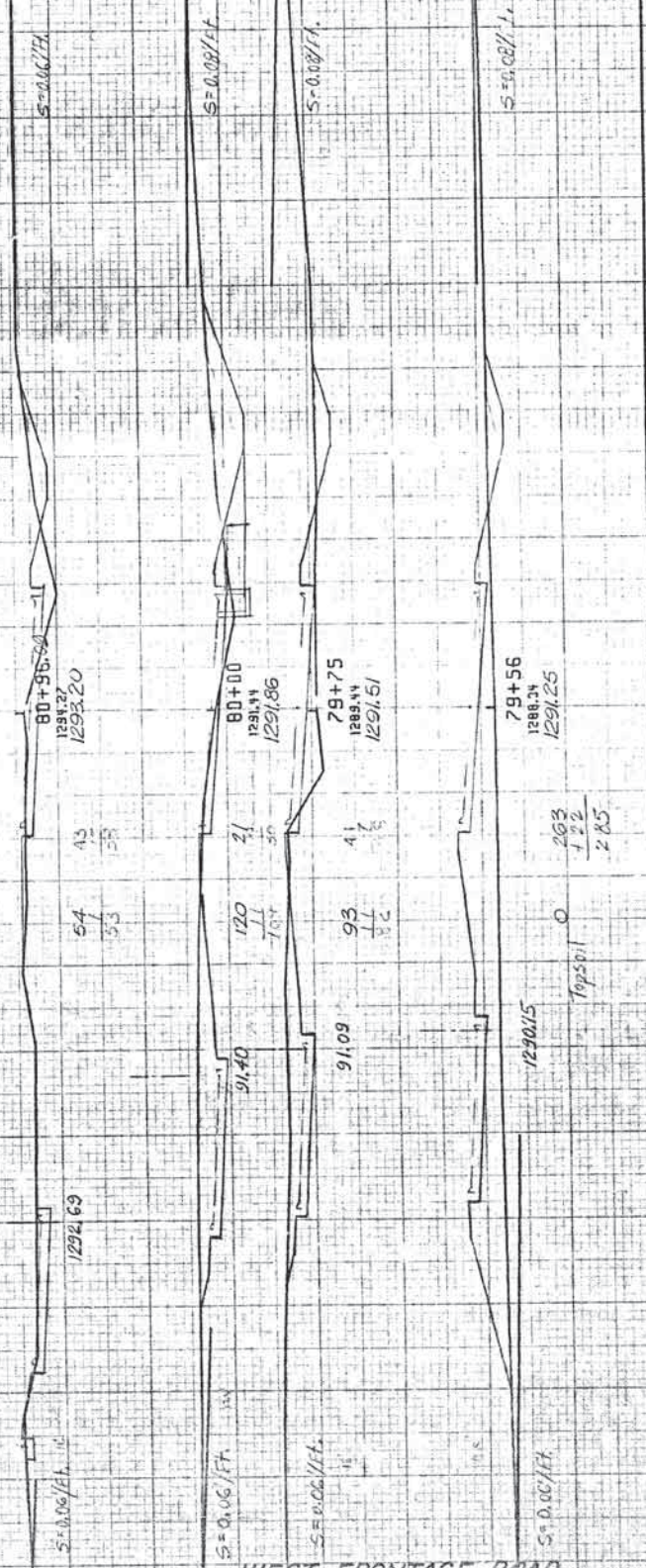
FA PROJ. NO. 101212 SHEET NO. 304

STA 69+00 TO 79+00



VOLUMES		
CU. YDS.	EXC.	EMB.

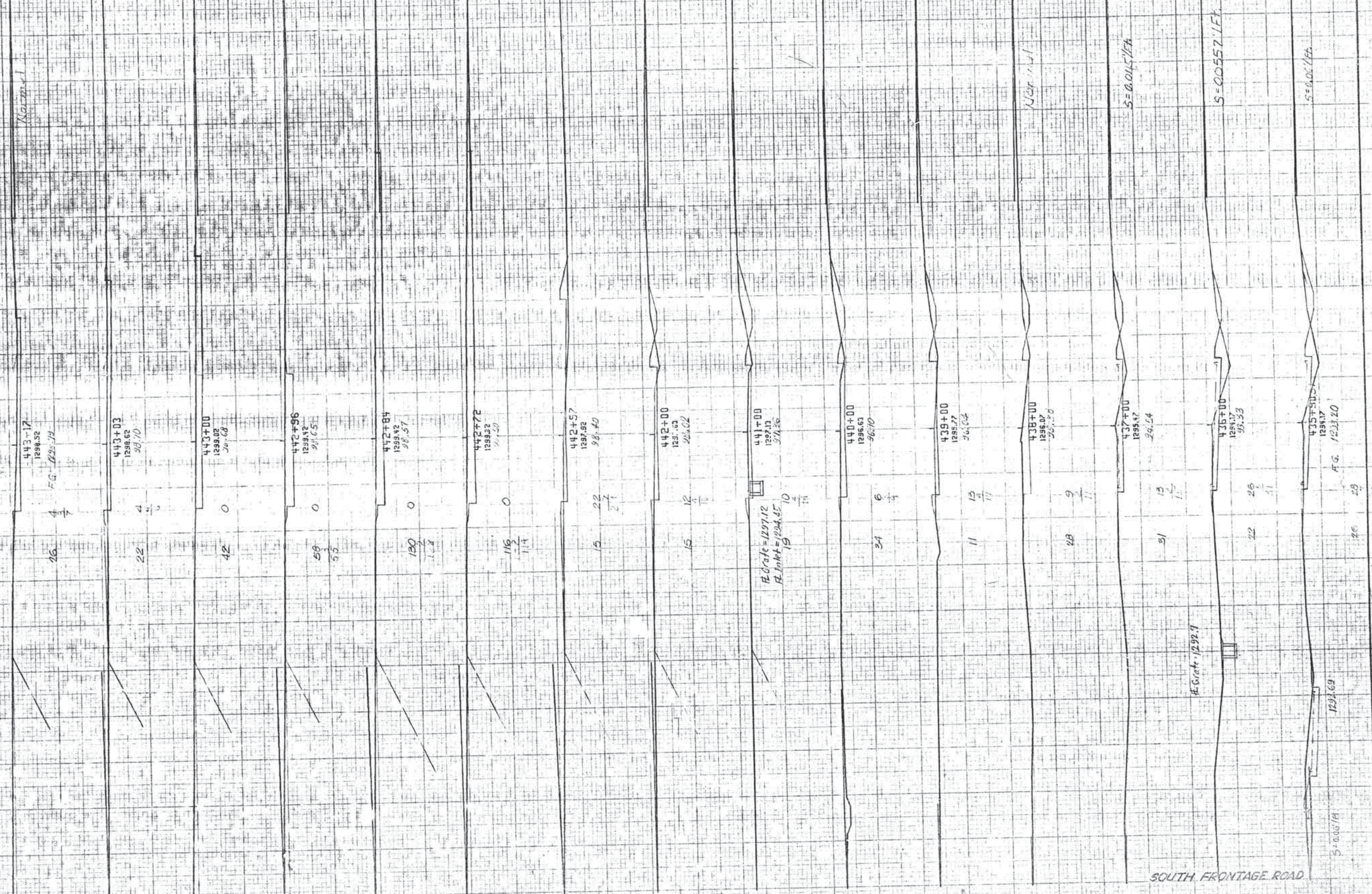
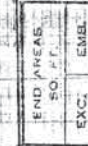
END AREAS		
SQ. FT.	EXC.	EMB.



WEST FRONTAGE ROAD  
SCALE 1" = 10'

STR 78+50 TO 80+96





SOUTH FRONTAGE ROAD

SCS: 1" = 10'

EA PROJ. NO. 122-40 SHEET NO. 306

STA 435+50 TO 443+12



VOLUMES CU YDS.		
EXC.	EMB.	

END AREAS SQ. FT.		
EXC.	EMB.	

S = 0.051/ft.

S = 0.055/ft.

S = 0.055/ft.

S = 0.055/ft.

S = 0.041/ft.

S = 0.031/ft.

Runout = 0.012/ft.

578 444+00 TO 451+00 8

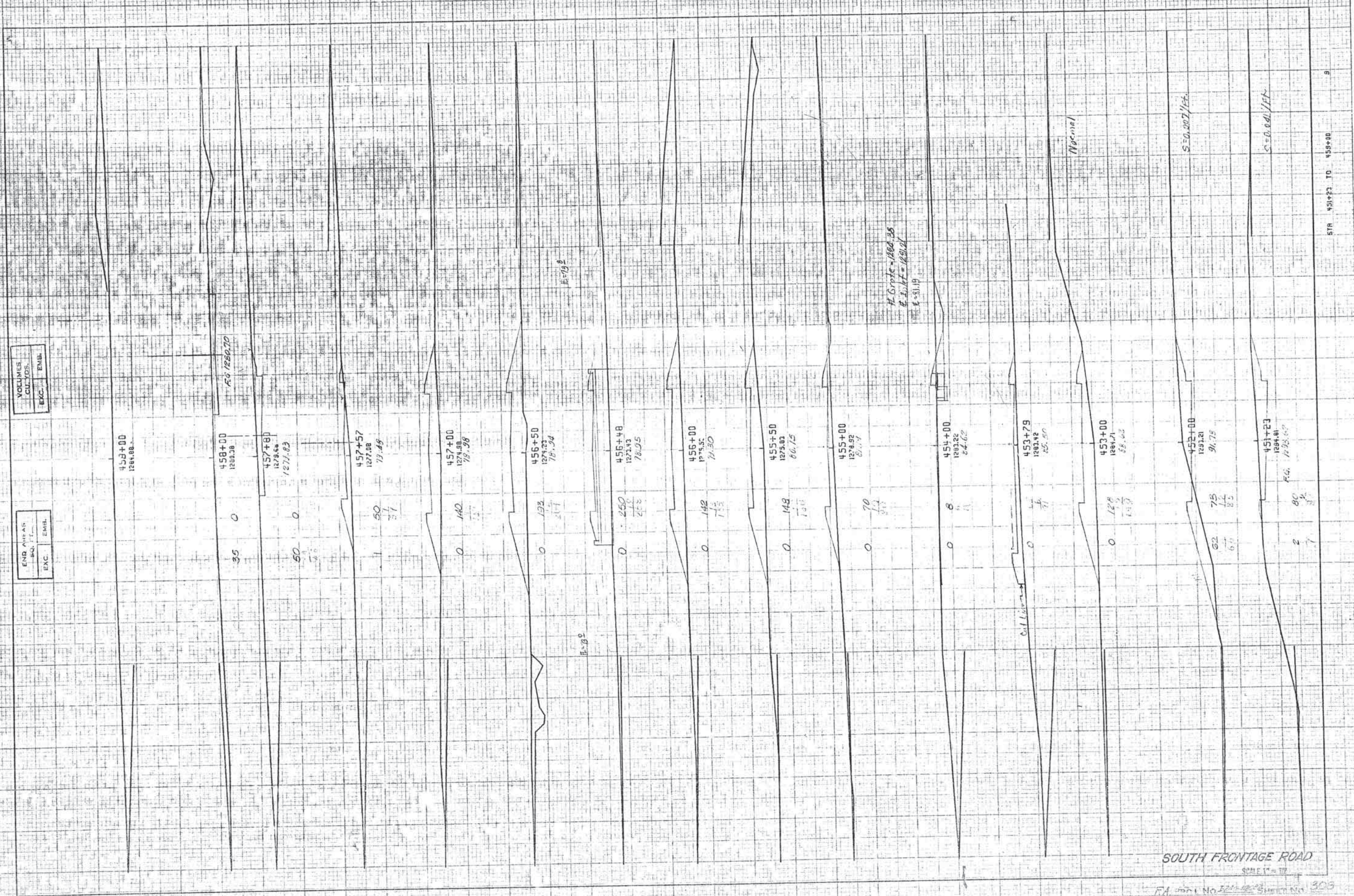
SOUTH FRONTAGE ROAD  
SCALE 1" = 10'

FA PROJ NO. 1000 SHEET NO. 397



VOLUMES		
CU YDS.		
EXC.	EMB.	

END AREA		
SQ. FT.		
EXC.	EMB.	



SOUTH FRONTAGE ROAD

SCALE 1" = 10'

FA 1001 No 121-122 SHEET NO 303

STA 451+23 TO 458+00



140

VOLUMES		
CU YDS.	EXC.	EMB.

END AREAS		
SQ. FT.	EXC.	EMB.

13+56  
1296.70  
1300.68

0 119  
112  
117

13+51  
1295.07  
1290.16

0 250  
111  
111

End Bridge  
Sta. 13+25.71

13+44  
1298.26

13+32  
1296.53

13+20  
1294.47

13+13  
1296.25

13+00  
1295.97

12+77  
1295.84

12+00  
1295.11

Bag Bridge  
Sta. 11+38.7

11+00  
1294.15  
1293.70

0 241  
111  
111

10+82  
1294.14  
1293.27

0 236  
115  
115

10+77  
1294.23  
F.G. 1294.91

0 215  
118  
118

10+00  
1294.53

9+00  
1294.73

8+52  
1294.66

POLE YARD ROAD

SCALE 1"=10'

FA. 1101, NO. 500 SHEET NO. 509

STR 8+52 TO 13+56 10



VOLUMES CU. YD.		
EXC.	EMB.	

END AREA'S SQ. FT.		
EXC.	EMB.	

15+10  
1297.97

15+00  
1297.97

14+00  
1298.07  
76 12.5% 5.6

13 1/2

15 10

POLE YARD ROAD

SCALE 1" = 10'

FA PROJ. NO. 246-12003 SHEET NO. 310

STA. 14+00 TO 15+10



VOLUMES CU. YDS.		
EXC.	EMB.	

END AREAS Sq. Ft.		
EXC.	EMB.	

457+26  
1201.07  
83

457+00  
1201.07  
1202.91  
84.63

456+75  
1279.47  
02.43  
214  
82.58

456+00  
1279.47  
120.93

455+90  
1279.47  
10.49

455+62  
1279.47  
73.25

455+40  
1279.47  
7.28

455+20  
1279.47  
7.39

455+00  
1279.47  
25.51

454+00  
1279.47  
71.19

453+00  
1279.47  
1270.51

452+00  
1279.47

RAMP E - POLE YARD YARD

FO. PROJ. NO. 2000-0000-00

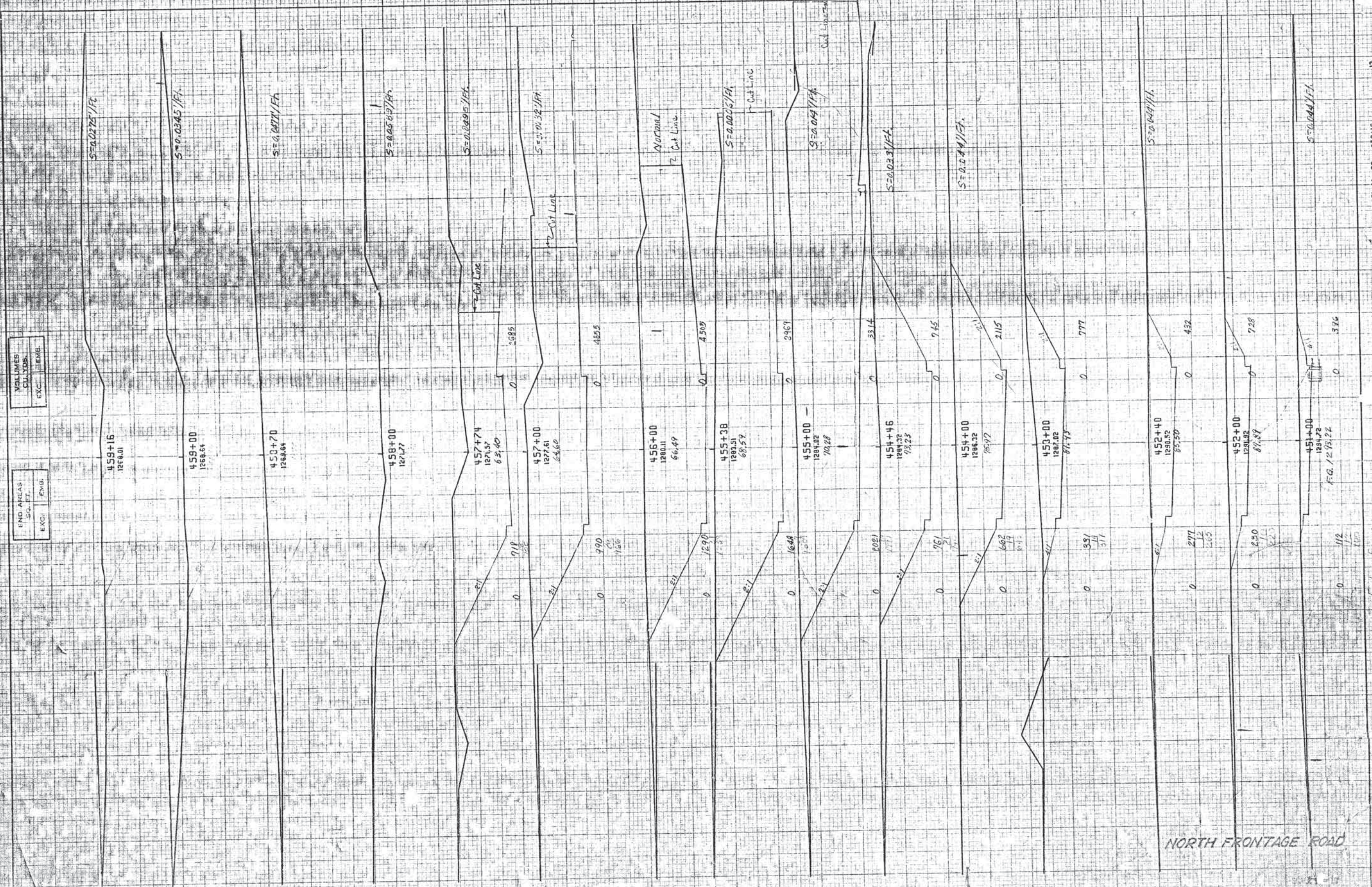






VOLUMES CUMULATIVE		
EXC.	EMB.	

UND. AREAS SQ. FT.	
EXC.	EMB.



NORTH FRONTAGE ROAD