STATE OF OKLAHOMA
DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE OF PROPOSED
STATE HIGHWAY

FEDERAL AID PROJECT NO. I-381(16) ; I-35-3(16) 119

U.S. 77

OKLAHOMA AND CLEVELAND COUNTIES

CONTROL SECTION NO. 55-15 (OKLAHOMA CO.)

CONTROL SECTION NO. 14-07 (CLEVELAND CO.)

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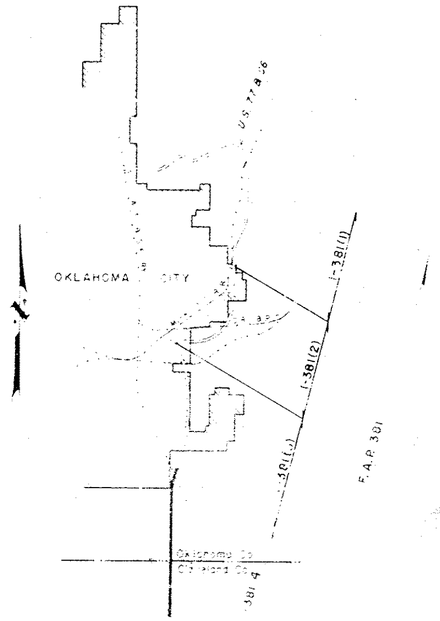
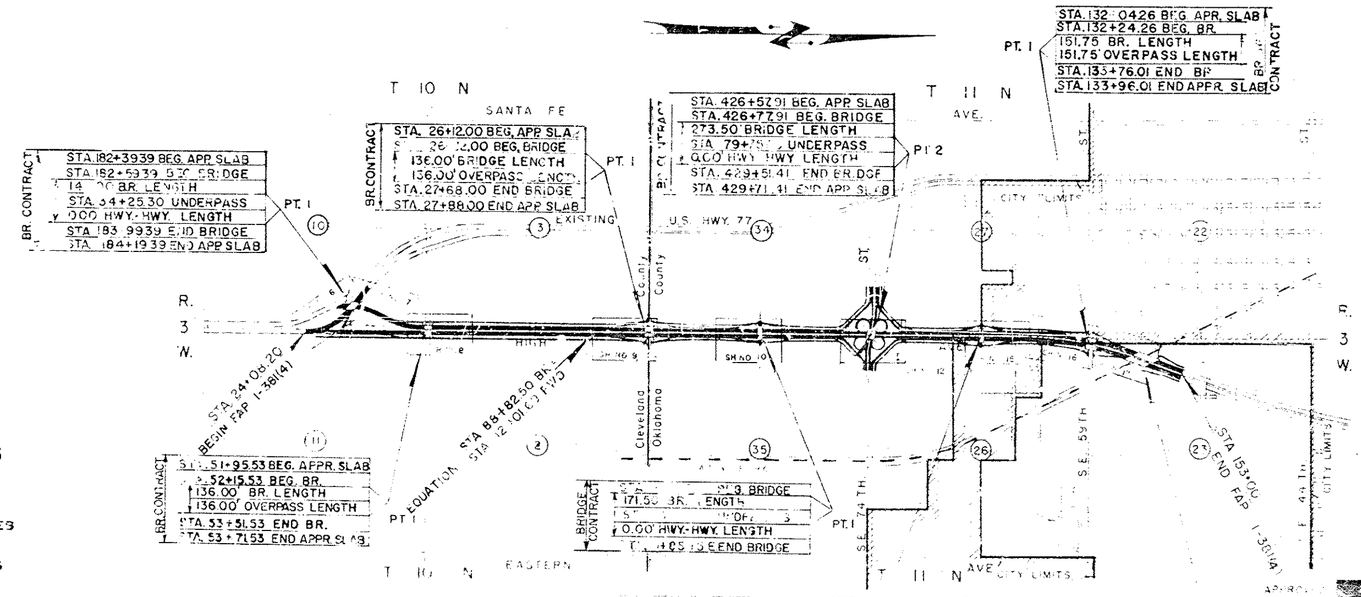
GRADE CROSSINGS	0
GRADE CROSSINGS ELIMINATED	0
BY SEPARATION OVERPASS	0
BY SEPARATION UNDERPASS	0
BY RELOCATION	0
GRADE CROSSINGS REMAINING	0



SKETCH OF PROJECT MODIFICATION



SCALES

PLAN 1" = 50'

PROFILE HOR. 1" = 50'

PROFILE VER. 1" = 5'

CROSS SECTIONS 1" = 10'

LAYOUT MAP 1" = 1750'

U.S.C.&G.S. LEVEL DATUM

BEARINGS FROM OBSERVATION ON POLARIS

CONVENTIONAL SIGNS

- PROPOSED ROAD
- RAILROADS
- RANGE & TOWNSHIP LINES
- SECTION LINES
- QUARTER SECTION LINES
- FENCES
- BASE LINE
- RIGHT OF WAY LINES
- GROUND LINES
- GRADE LINE
- TRAVELLED ROADS
- CULVERTS & BRIDGES
- TELEPHONE & TELEGRAPH
- POWER LINES
- BUILDINGS
- UNLOADING POINTS
- OIL WELLS
- RIGHT OF WAY MARKERS

DESIGN DATA

ADT (1966)	= 16,500
ADT (1986)	= 31,200
DHV	= 3700
D	= 60%
T	= 5%
V	= 60 MPH

MICROFILMED

SCALE 2 miles

ROADWAY LENGTH	0.030 MI	0.030 MI
OVERPASS LENGTH	748.25 FT	0.142 MI
PROJECT LENGTH	908.25 FT	0.172 MI

PENHAM ENGINEERING COMPANY
OKLAHOMA CITY, OKLAHOMA

APPROVED
COUNTY OF OKLAHOMA COUNTY

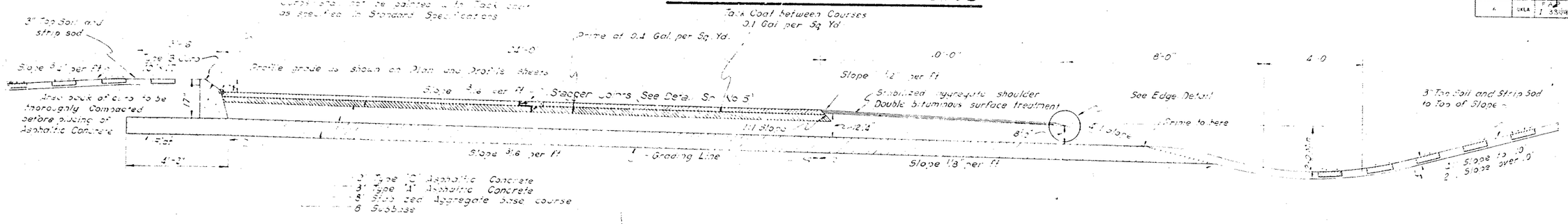
ATTEST
COUNTY CLERK (SEAL)

CHAIRMAN
BOARD OF COUNTY COMMISSIONERS

SWO 1835 (2)

TYPICAL · SECTIONS

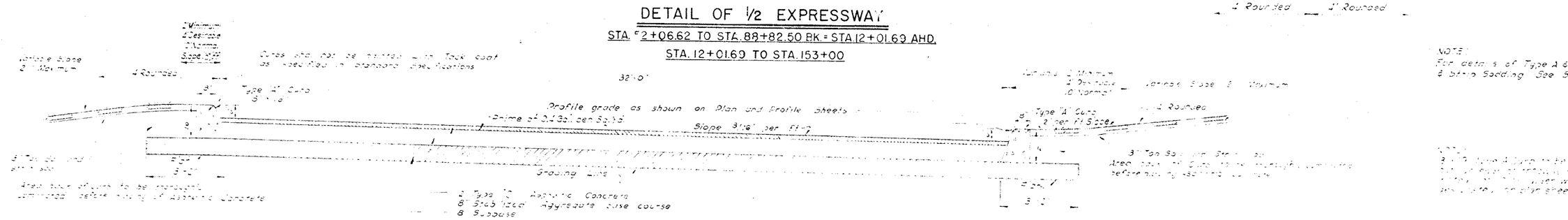
FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	OKLA.	F.A. I 35-1(28)		2	88



DETAIL OF 1/2 EXPRESSWAY

STA. 2+06.62 TO STA. 88+82.50 BK. = STA. 12+01.69 AHD.

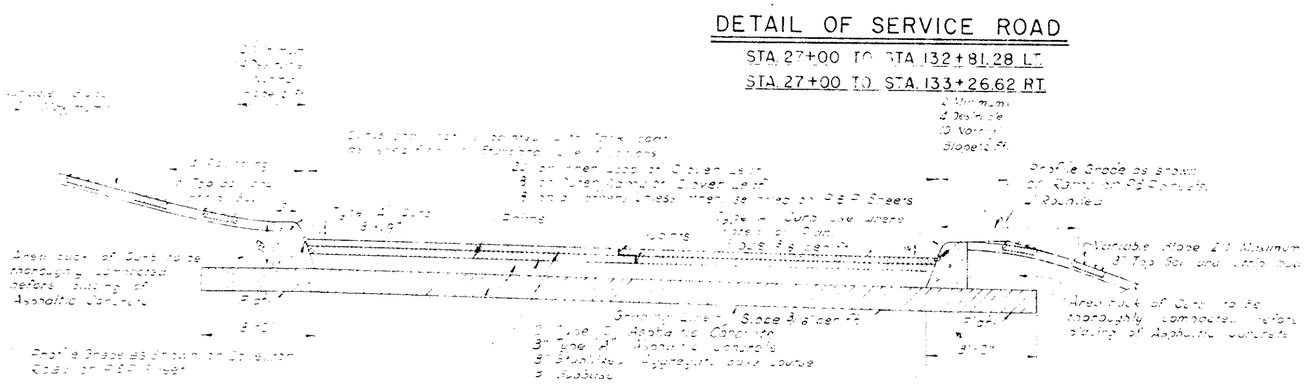
STA. 12+01.69 TO STA. 153+00



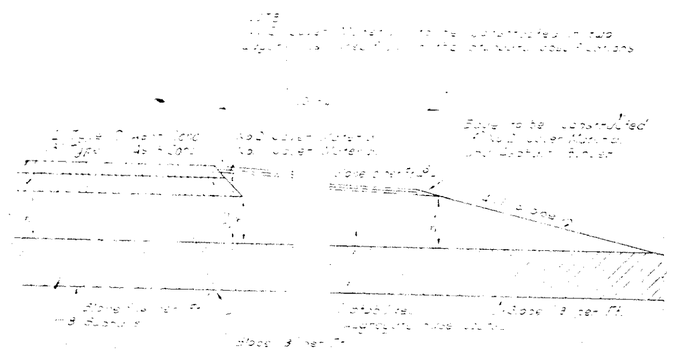
DETAIL OF SERVICE ROAD

STA. 27+00 TO STA. 132+81.28 LT.

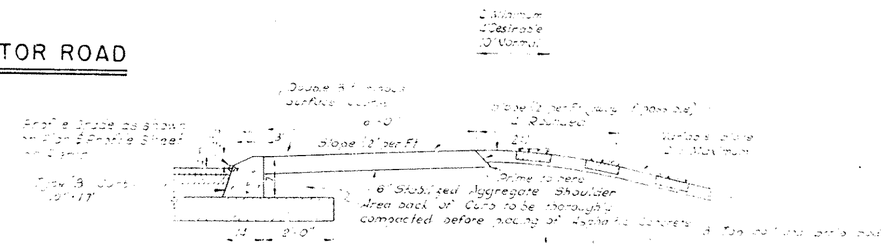
STA. 27+00 TO STA. 133+26.62 RT.



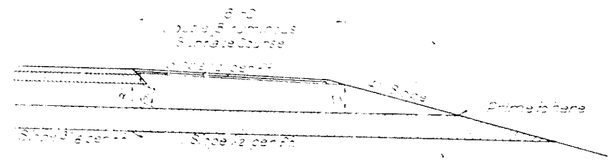
DETAIL RAMP & COLLECTOR ROAD SECTION



DETAIL OF DOUBLE BITUMINOUS SHOULDER AND 6" EDGE



DETAIL RAMP & COLLECTOR ROAD WITH SHOULDER

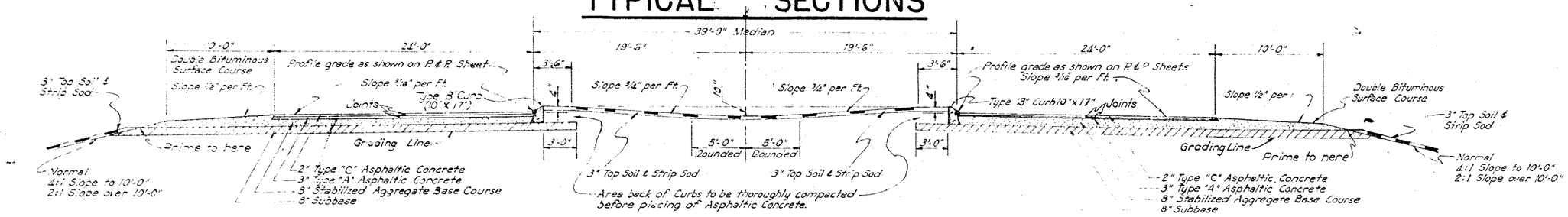


ALTERNATE DETAIL COLLECTOR ROAD WITH SHOULDER

F.A. PROJECT NO. I-35-(28) SHEET NO. 2

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	F.A.P. I-35 (6)		3	88

TYPICAL SECTIONS

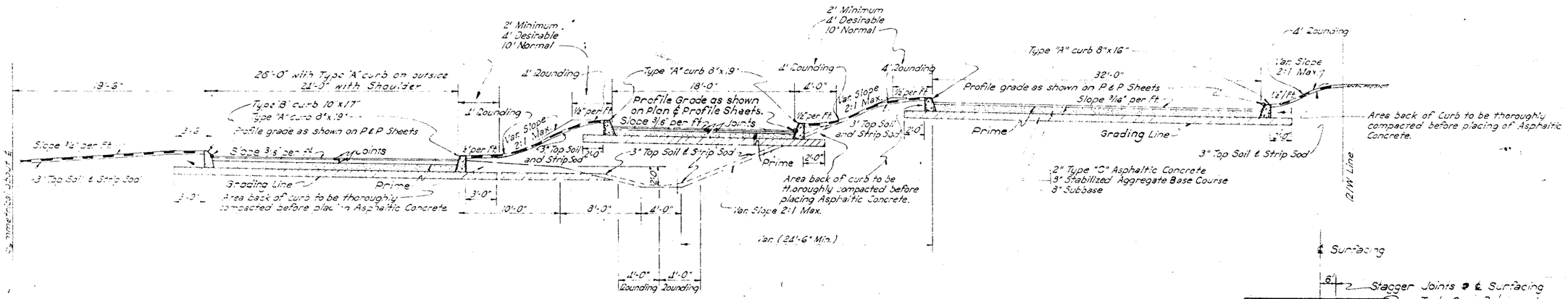


TYPICAL SURFACING SECTION OF EXPRESSWAY

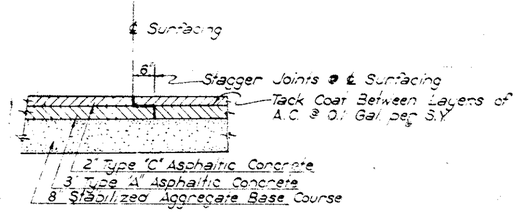
STA. 52+06.62 TO STA. 88+82.50BK = STA. 12+01.69AHD.

STA. 12+01.69 TO STA. 153+00

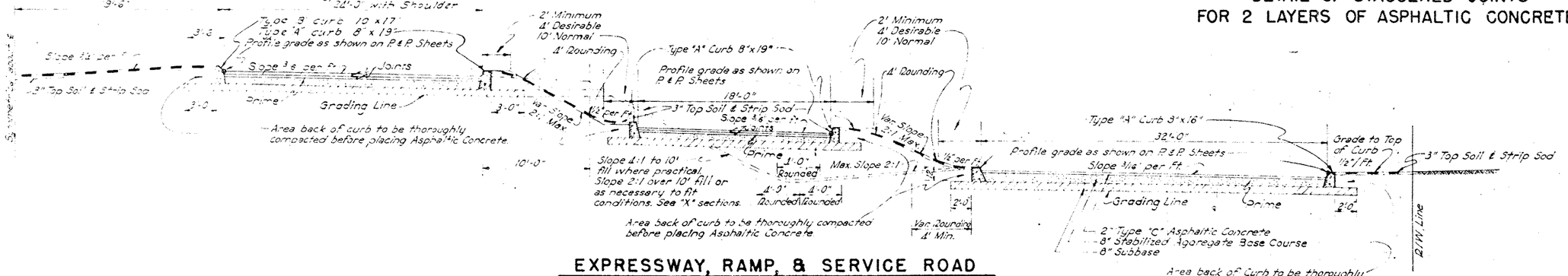
Note: 8"X 19" Type "A" Curb to be used on outside edge of freeway surfacing instead of 10' Shoulder where designated on plan sheets.



EXPRESSWAY, RAMP, & SERVICE ROAD WITH EXPRESSWAY IN CUT



DETAIL OF STAGGERED JOINTS FOR 2 LAYERS OF ASPHALTIC CONCRETE

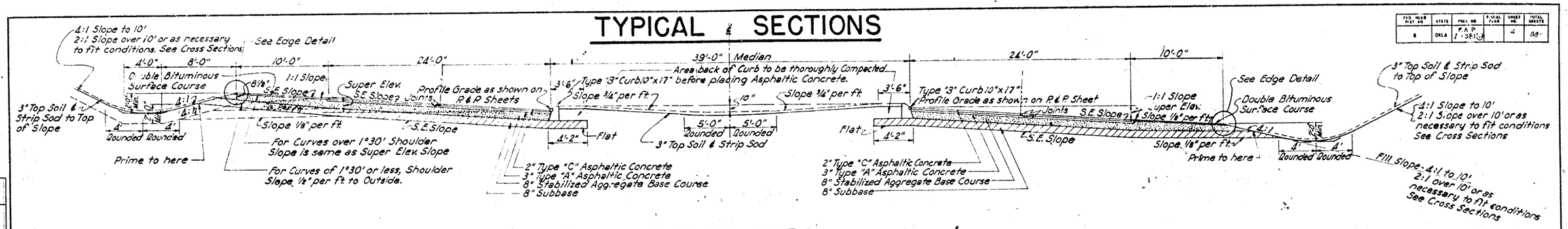


EXPRESSWAY, RAMP, & SERVICE ROAD WITH EXPRESSWAY IN FILL

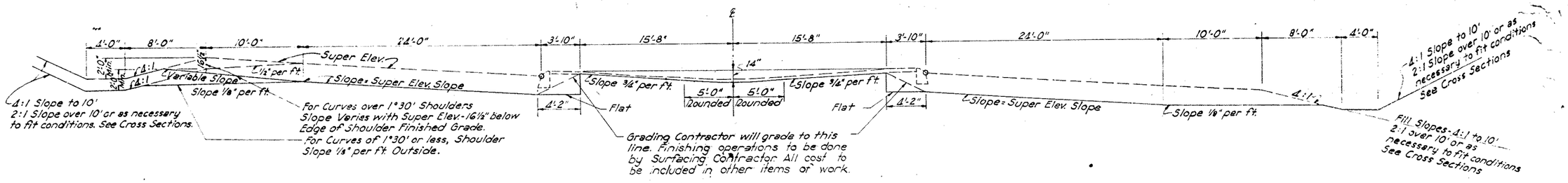
F.A. PROJECT NO. I 281 (6) SHEET NO. 3

TYPICAL SECTIONS

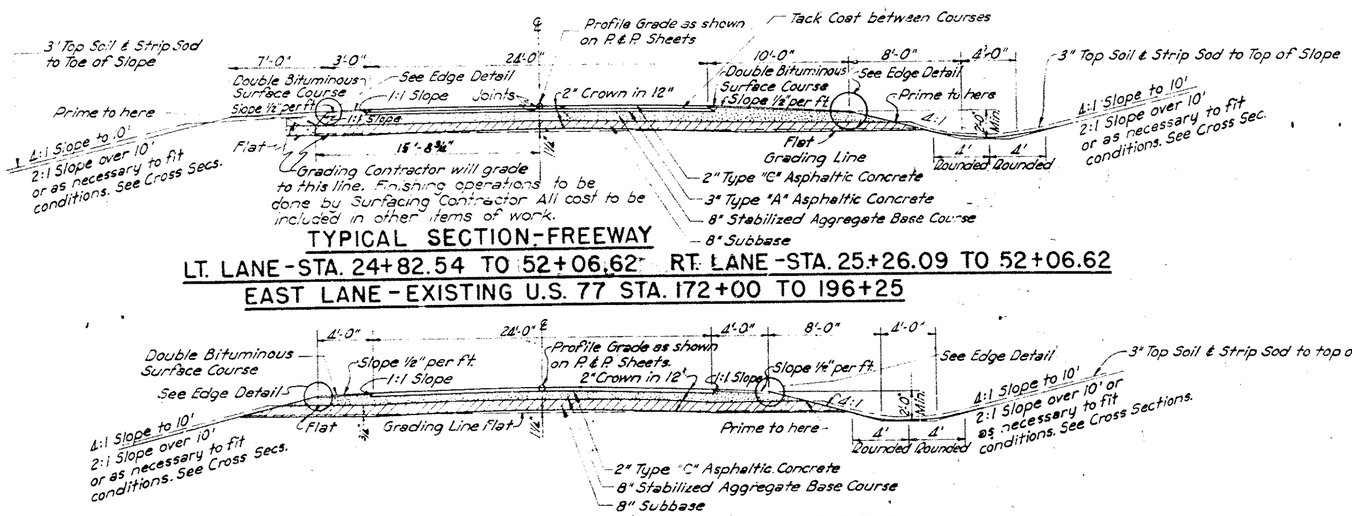
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA	F.A.P. I-381(6)		4	88



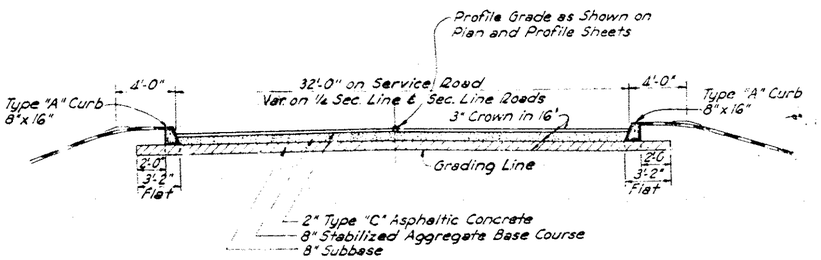
TYPICAL SURFACING SECTION
EXPRESSWAY - SUPERELEVATION



TYPICAL GRADING SECTION
EXPRESSWAY - SUPERELEVATED



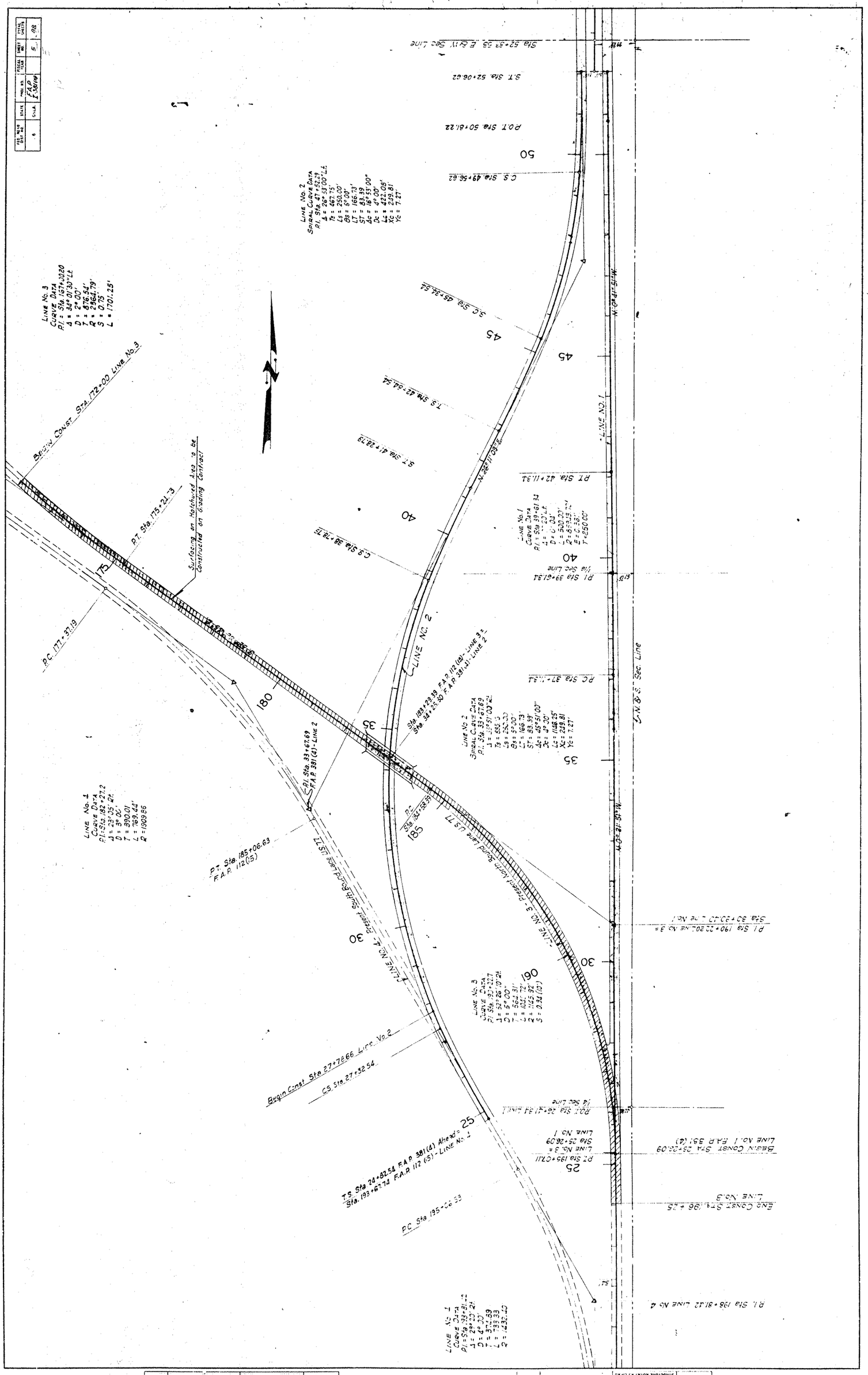
TYPICAL SECTION-FREEWAY
LT. LANE-STA. 24+82.54 TO 52+06.62 RT. LANE-STA. 25+26.09 TO 52+06.62
EAST LANE-EXISTING U.S. 77 STA. 172+00 TO 196+25



TYPICAL SECTION
STA. 142+94.85 TO STA. 153+00 RT. SERVICE ROAD
STA. 142+85.45 TO STA. 153+00 LT. SERVICE ROAD
SEC. LINE & 1/4 SEC. LINE ROADS ACROSS FREEWAY

TYPICAL SECTION-SERVICE ROAD
LEFT S.R. STA. 52+83.53 TO 88+82.50 BK.=12+01.69 AHD. 12+01.69 TO 27+00
RIGHT S.R. STA. 25+26.09 TO 88+82.50 BK.=12+01.69 AHD. 12+01.69 TO 27+00
SEC. LINE ROAD ACROSS FREEWAY AT STA. 52+83.53

F.A. PROJECT NO. I-381(6) SHEET NO. 4


FED. ROAD DIST. NO. 6
STATE ILLINOIS
PROJ. NO. F.A.P. 5-381(6)
FISCAL YEAR
SHEET NO. 5
TOTAL SHEETS 98
F.A. PROJECT NO. F-381(6) SHEET NO. 5
Sta 52+32.55 E.B.M. Sec. Line
S.T. Sta. 52+06.62
P.O.T. Sta. 50+81.22
C.S. Sta. 49+56.62
S.C. Sta. 45+34.54
T.S. Sta. 42+64.54
S.T. Sta. 41+28.19
P.T. Sta. 42+11.31
C.S. Sta. 38+78.75
P.I. Sta. 39+61.31 ¼ Sec. Line
P.C. Sta. 37+11.31
P.I. Sta. 33+67.69 F.A.P. 381(4)-Line 2
Sta. 183+23.38 F.A.P. 112(5)-Line 3 = Sta. 34+71.39 F.A.P. 381(4)-Line 2
P.C. Sta. 184+38.39
P.T. Sta. 185+06.63 F.A.P. 112(5)
Present Split Bound Lane US 77
Line No. 4 - Present Split Bound Lane US 77
Line No. 3 - Present North Bound Lane US 77
Begin Const. Sta. 172+00 Line No. 3
P.T. Sta. 175+24.3
Surfacing on Hatched Area to be Constructed on Grading Contract
P.C. 177+37.19
Begin Const. Sta. 27+72.66 Line No. 2
C.S. Sta. 27+32.54
T.S. Sta. 24+82.54 F.A.P. 381(4) Ahead = Sta. 193+67.74 F.A.P. 112(5) - Line No. 1
P.C. Sta. 195+06.53
P.I. Sta. 190+22.20 Line No. 3 = Sta. 30+30.20 Line No. 1
P.O.T. Sta. 26+41.84 Line No. 1 ¼ Sec. Line
P.T. Sta. 195+07.10 Line No. 3 = Sta. 25+26.09 Line No. 1
Begin Const. Sta. 25+26.09 Line No. 1 F.A.P. 381(4)
End Const. Sta. 196+25 Line No. 3
P.I. Sta. 198+81.42 Line No. 4
N.B. & S. Sec. Line
Line No. 1
Line No. 2
Line No. 3
Line No. 4
Spiral Curve Data
Curve Data
PLAN
PROFILE
NOTE BOOK
SURVEYED
PLOTTED
CHECKED
ALIGNMENT CHECKED
LOTTED
MT OF MAT CHECKED
STRUCTURE NOTAT'N CHKD

FED ROAD DIST NO	STATE	PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
6	OKLA	F.A.P. I-38(68)		6	88

Revised Oct. 18, 1957 (℄ Gr.)
B.- Except.

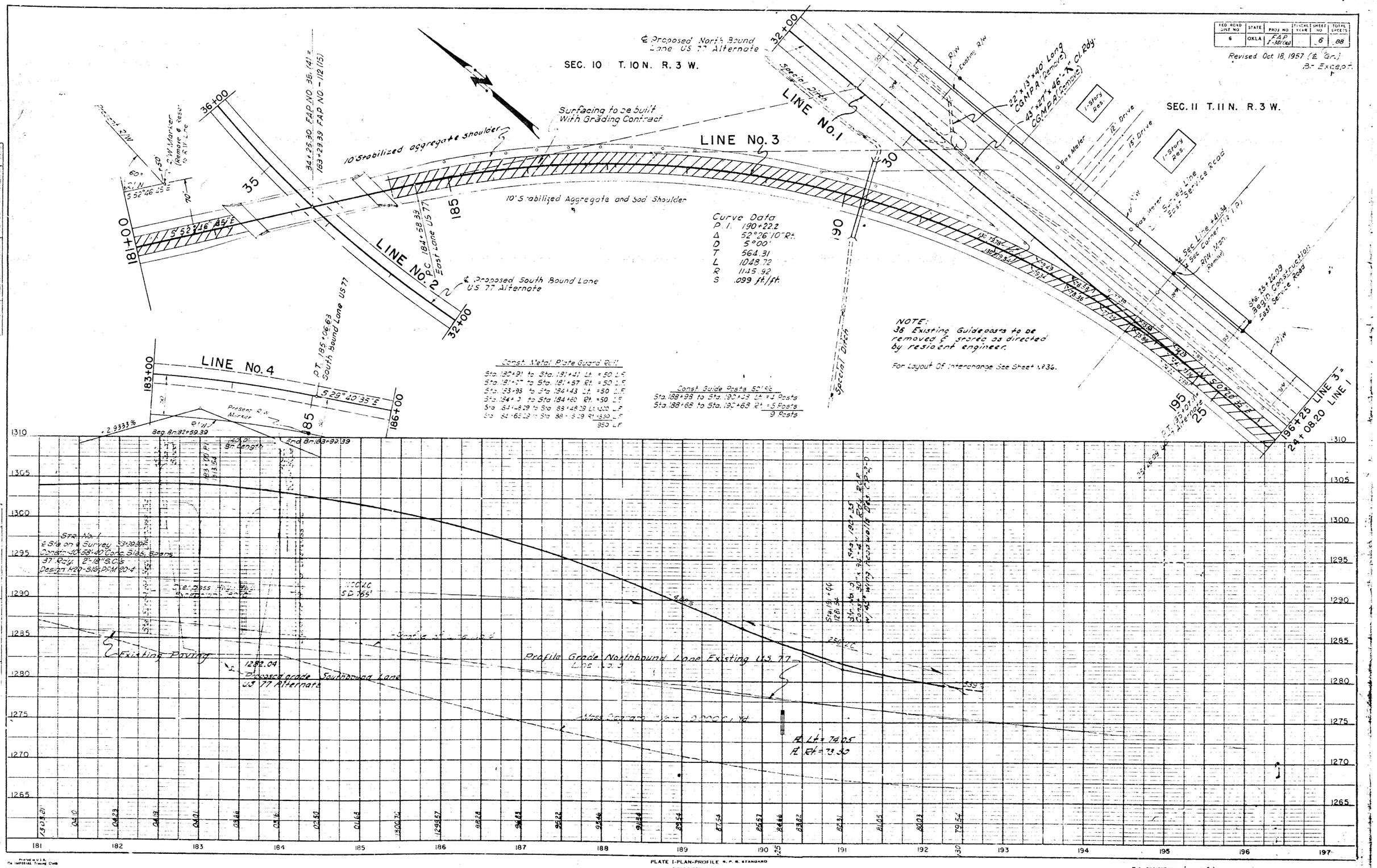


PLATE I-PLAN-PROFILE S. P. R. STANDARD

F.A. PROJECT NO. I-38(68) SHEET NO. 6

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	F.A.P. I-381(6)A	19 57	7	88

Revised Oct. 18, 1957 (D.R.)

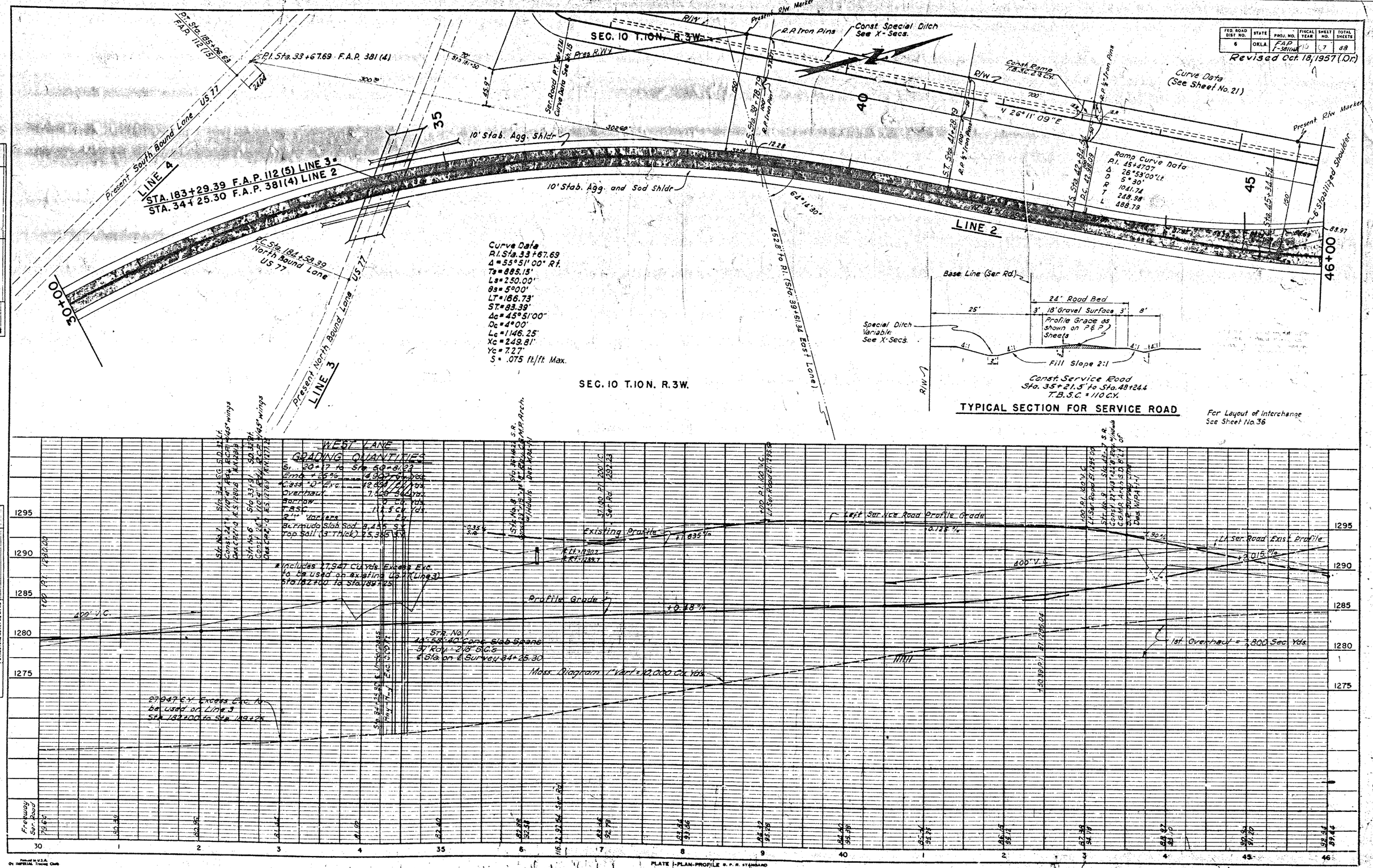
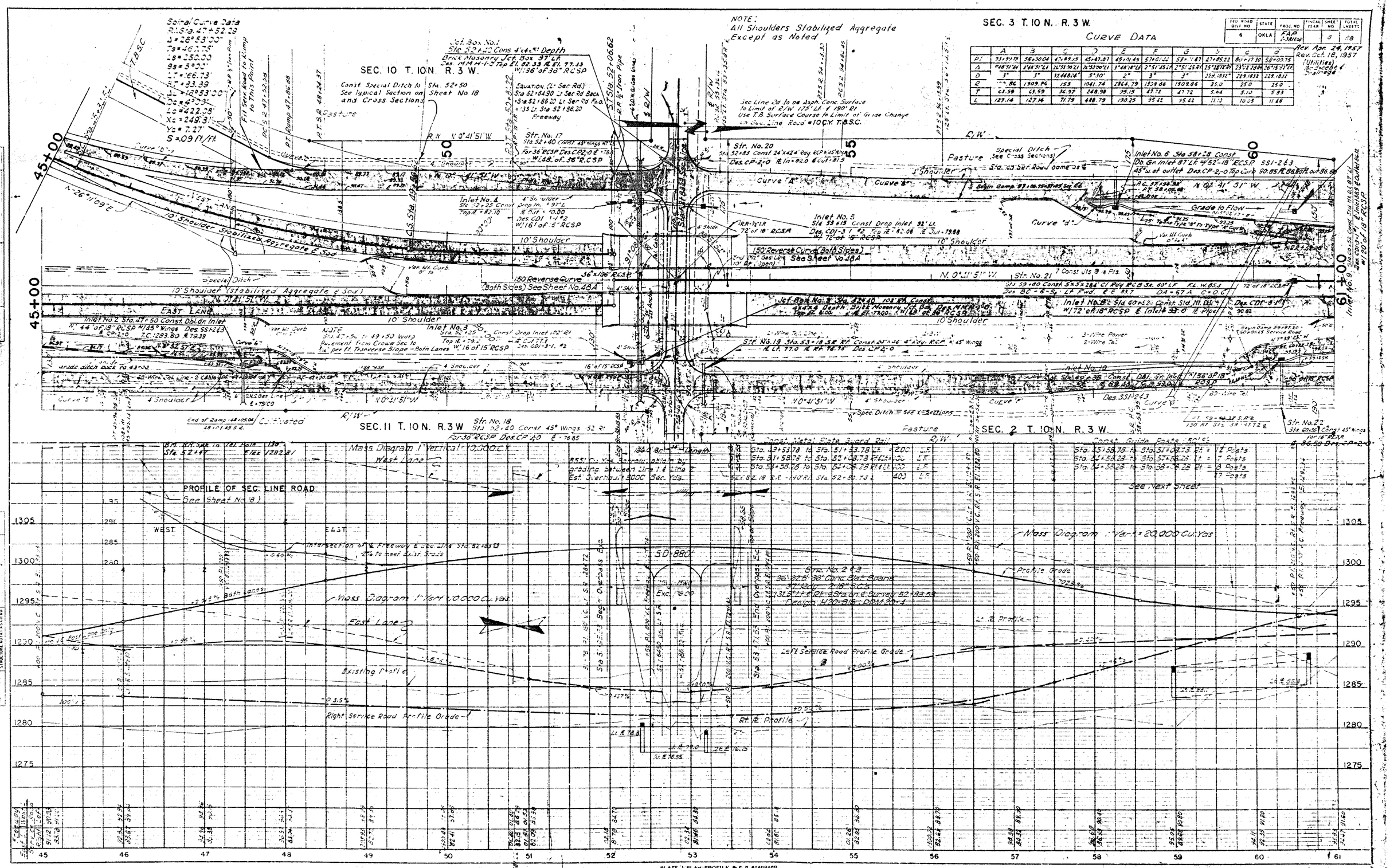


PLATE I-PLAN-PROFILE B.P.R. STANDARD

F.A. PROJECT NO. I 381(6) SHEET NO. 7



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	F.A.P. I-35(16)		9	28

Rev. Apr. 24, 1957
Rev. Oct. 18, 1957 (Utilities) & Drainage

PLATE 1-PLAN-PROFILE & P. R. STANDARD

F.A. PROJECT NO. I-35(16) SHEET NO. 9

FED ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	FAP F-381(4)		9	83

Revised Oct. 18, 1957
Revised April, 24, 1957

CONST. GUIDE POSTS
Sta. 21+75.25 to Sta. 25+25.25 Lt. 50'% = 8 Posts
Sta. 22+25.75 to Sta. 25+25.25 Rt. 50'% = 7 Posts
15 Posts

CONST. METAL PLATE GUARD RAIL
Sta. 25+75.25 to Sta. 26+25.25 Rt. ℄ Lt. = 100 L.F.
Sta. 27+74.75 to Sta. 28+24.75 Rt. ℄ Lt. 100 L.F.
200 L.F.

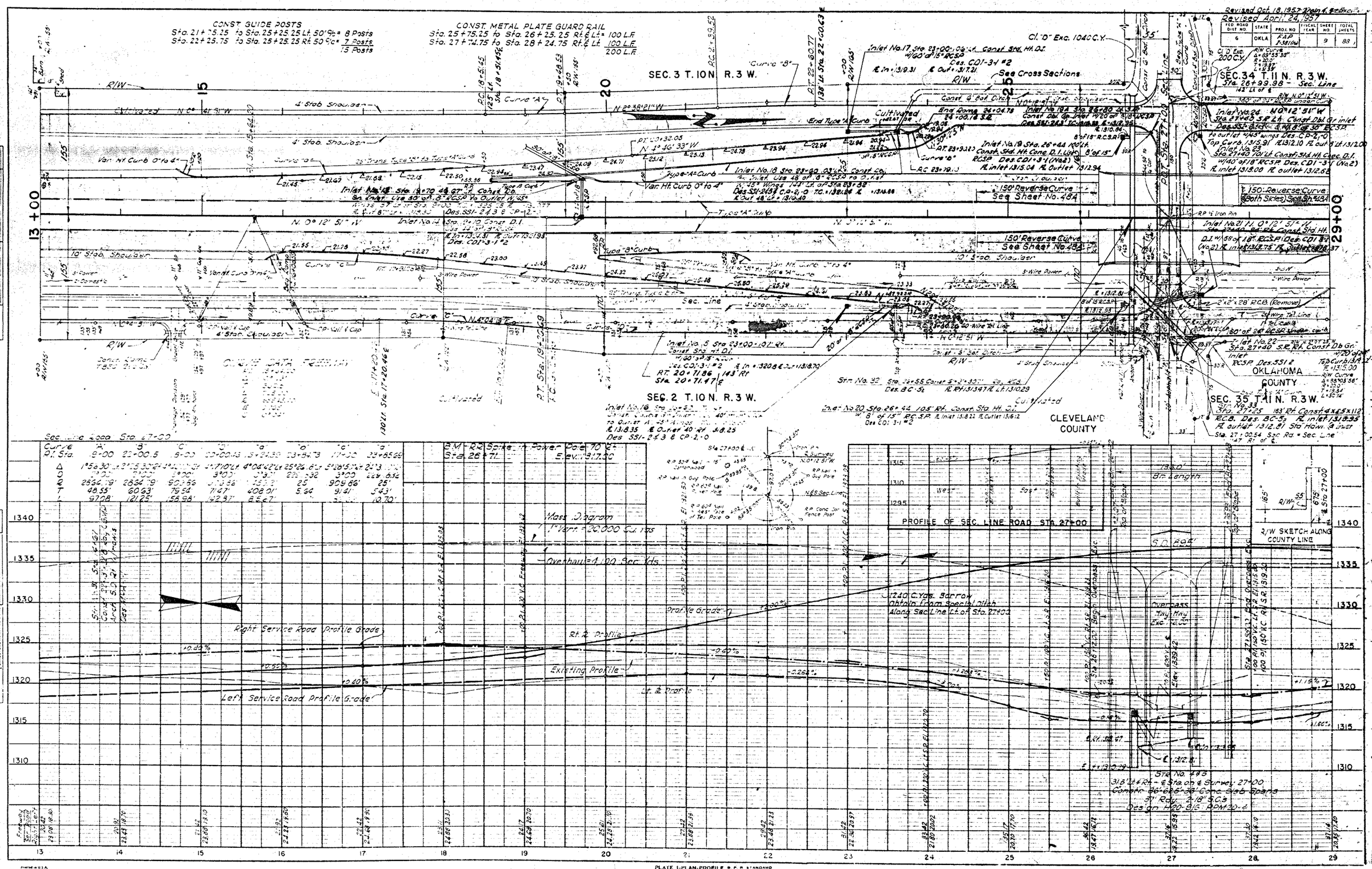
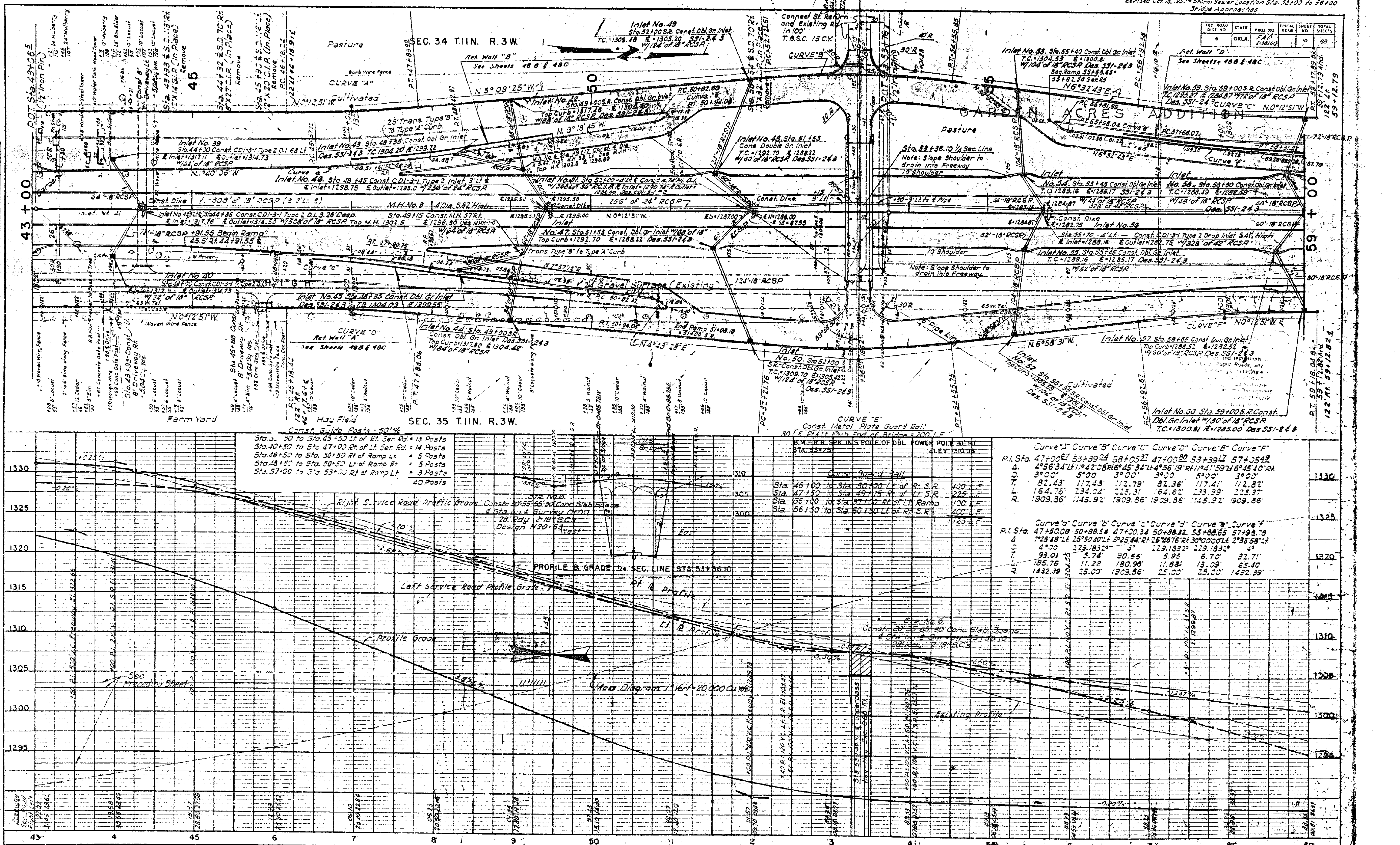


PLATE 1-PLAN-PROFILE

FA PROJECT NO. F-381 (4) SHEET NO. 9

Revised Oct. 18, 1957 – Storm Sewer Location Sta. 52+00 to 56+00 Bridge Approaches

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	FAP I-38I(6)		10	88



Const. Guide Posts – 50' c/c

Sta. 3_ 50 to Sta. 45+50 Lt. of Rt. Ser. Rd.	= 13 Posts
Sta. 40+50 to Sta. 47+00 Rt. of Lt. Ser. Rd.	= 14 Posts
Sta. 48+50 to Sta. 50+50 Rt. of Ramp Lt.	= 5 Posts
Sta. 48+50 to Sta. 50+50 Lt. of Ramp Rt.	= 5 Posts
Sta. 57+00 to Sta. 58+00 Rt. of Ramp Lt.	= 3 Posts
	40 Posts

Const. Guard Rail

Sta. 46+00 to Sta. 50+00 Lt. of Rt. S.R.	400 L.F.
Sta. 47+50 to Sta. 49+75 Rt. of Lt. S.R.	225 L.F.
Sta. 56+00 to Sta. 57+00 Rt. of Lt. Ramp	100 L.F.
Sta. 56+50 to Sta. 60+50 Lt. of Rt. S.R.	400 L.F.
	1125 L.F.

	Curve "A"	Curve "B"	Curve "C"	Curve "D"	Curve "E"	Curve "F"
P.I. Sta.	47+00.67	53+39.24	58+05.37	47+00.80	53+39.17	57+05.49
Δ	4°56'34" Lt.	11°42'08" Rt.	6°45'34" Lt.	4°56'19" Rt.	11°41'59" Lt.	6°45'40" Rt.
D.	3°00'	5°00'	3°00'	3°00'	5°00'	3°00'
T.	82.43'	117.43'	112.79'	82.36'	117.41'	112.82'
L.	164.76'	234.04'	225.31'	164.62'	233.99'	225.37'
R.	1909.86'	1145.92'	1909.86'	1909.86'	1145.92'	1909.86'

	Curve "a"	Curve "b"	Curve "c"	Curve "d"	Curve "e"	Curve "f"
P.I. Sta.	47+50.08	50+88.54	47+00.34	50+88.32	55+88.65	57+98.78
Δ	7°25'48" Lt.	25°50'40" Lt.	5°25'44" Rt.	26°46'16" Rt.	30°00'00" Lt.	2°36'58" Lt.
D.	4°00	229.1832°	3°	229.1832°	229.1832°	4°
T.	93.01	5.74'	90.55'	5.95'	6.70'	32.71'
L.	185.76	11.28	180.96'	11.68'	13.09'	65.40'
R.	1432.39	25.00'	1909.86'	25.00'	25.00'	1432.39'

PLATE 1-PLAN-PROFILE B.P.R. STANDARD

Printed in U.S.A. On IMPERIAL Tracing Cloth

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	F.A.P. I-381(16)		11	89

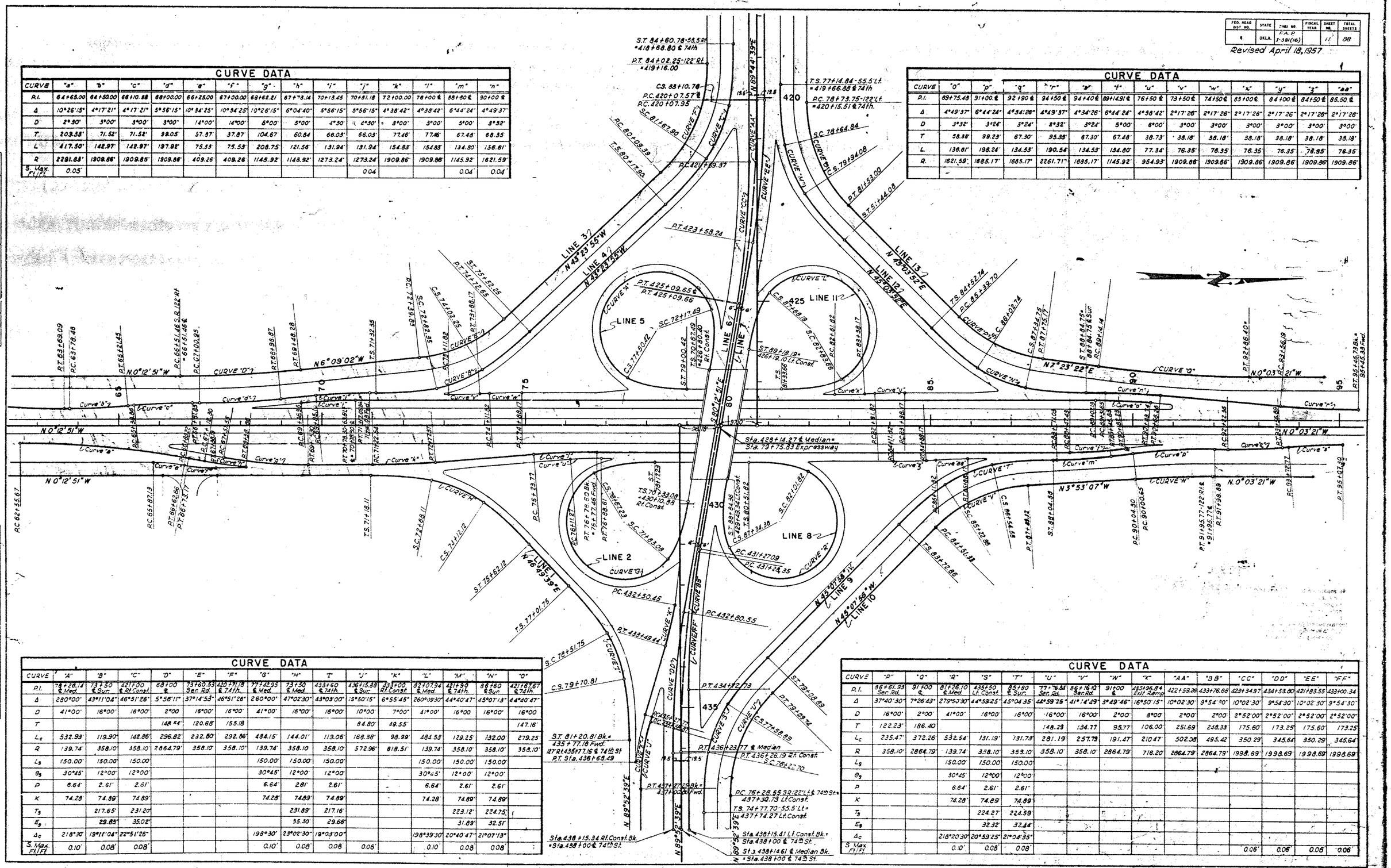
Revised April 18, 1957

CURVE DATA

CURVE	"a"	"b"	"c"	"d"	"e"	"f"	"g"	"h"	"i"	"j"	"k"	"l"	"m"	"n"
P.I.	64+65.00	64+50.00	66+10.88	68+00.00	66+25.00	67+00.00	68+62.21	67+73.14	70+13.45	70+51.18	72+00.00	76+00 ℄	88+60 ℄	90+00 ℄
Δ	10°26'15"	4°17'21"	4°17'21"	5°56'15"	10°34'25"	10°54'25"	10°26'15"	6°04'40"	5°56'15"	5°56'15"	4°38'42"	4°38'42"	6°44'24"	4°49'37"
D	2°30'	3°00'	3°00'	3°00'	14°00'	14°00'	6°00'	5°00'	4°30'	4°30'	3°00'	3°00'	5°00'	3°32'
T	203.38'	71.52'	71.52'	98.05'	57.57'	37.87'	104.67	60.84	66.03'	66.03'	77.46'	77.46'	67.48'	68.35'
L	417.50'	142.97'	142.97'	197.92'	75.53'	75.53'	208.75'	121.56'	131.94'	131.94'	154.83'	154.83'	134.80'	136.61'
R	2291.83'	1909.86'	1909.86'	1909.86'	409.26'	409.26	1145.92'	1145.92'	1273.24'	1273.24'	1909.86'	1909.86'	1145.92'	1621.59'
S. Max. Ft/Ft.	0.05'									0.04			0.04'	0.04'

CURVE DATA

CURVE	"o"	"p"	"q"	"r"	"s"	"t"	"u"	"v"	"w"	"x"	"y"	"z"	"aa"
P.I.	89+75.48	91+00 ℄	92+90 ℄	94+50 ℄	94+40 ℄	89+14.91 ℄	76+50 ℄	73+50 ℄	74+50 ℄	83+00 ℄	84+00 ℄	84+50 ℄	85.50 ℄
Δ	4°49'37"	6°44'24"	4°34'26"	4°49'37"	4°34'26"	6°44'24"	4°38'42"	2°17'26"	2°17'26"	2°17'26"	2°17'26"	2°17'26"	2°17'26"
D	3°32'	3°24'	3°24'	2°32'	3°24'	5°00'	6°00'	3°00'	3°00'	3°00'	3°00'	3°00'	3°00'
T	58.38'	99.23'	67.30'	95.38'	67.30'	67.48'	38.73'	38.18'	38.18'	38.18'	38.18'	38.18'	38.18'
L	136.81'	198.24'	134.53'	190.54'	134.53'	134.80'	77.34'	76.35'	76.35'	76.35'	76.35'	76.35'	76.35'
R	1621.59'	1885.17'	1885.17'	2261.71'	1885.17'	1145.92'	954.93'	1909.86'	1909.86'	1909.86	1909.86	1909.86'	1909.86'



CURVE DATA

CURVE	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	"J"	"K"	"L"	"M"	"N"	"O"
P.I.	78+26.14 ℄ Med.	73+50 ℄ Sur.	421+00 ℄ Rt Const.	68+00 ℄	73+60.53 Ser. Rd.	420+71.18 ℄ 74th.	77+12.95 ℄ Med.	73+50 ℄ Med.	433+60 ℄ 74th.	436+15.88 ℄ Sur.	433+00 Rt Const.	82+07.94 ℄ Med.	421+90 ℄ 74th.	86+60 ℄ Sur.	421+67.67 ℄ 74th.
Δ	280°00'	43°11'34"	46°51'26"	5°56'11"	37°14'53"	46°51'26"	260°09'30"	47°02'30"	43°03'00"	15°50'15"	6°55'45"	260°09'30"	44°40'47"	45°07'13"	44°40'47"
D	41°00'	16°00'	16°00'	2°00	16°00'	16°00'	41°00'	16°00'	16°00'	10°00'	7°00'	41°00'	16°00	16°00'	16°00
T				148.14'	120.68'	155.18				84.80'	49.55'				147.16'
L_c	532.93'	119.90'	142.86'	296.82	232.80'	292.56'	484.15'	144.01'	113.06	168.38'	98.99	484.53	129.25'	132.00'	279.25'
R	139.74'	358.10'	358.10'	2864.79'	358.10'	358.10'	139.74'	358.10	358.10'	572.96'	818.51'	139.74'	358.10'	358.10'	358.10'
L_s	150.00'	150.00'	150.00'				150.00'	150.00'	150.00'			150.00'	150.00'	150.00'	
θ_s	30°45'	12°00'	12°00'				30°45'	12°00'	12°00'			30°45'	12° 00'	12°00'	
P	6.64'	2.61'	2.61'				6.64'	2.61'	2.61'			6.64'	2.61'	2.61'	
K	74.28	74.89'	74.89'				74.28'	74.89'	74.89'			74.28'	74.89'	74.89'	
T_s		217.65'	231.20'					231.89'	217.16'				223.12'	224.75'	
E_s		29.89'	35.02'					35.30'	29.66'				31.89'	32.51'	
Δ_c	218°30'	19°11'04"	22°51'26"				198°30'	23°02'30"	19°03'00"			198°39'30'	20°40'47"	21°07'13"	
S. Max. Ft/Ft	0.10'	0.08'	0.08'				0.10'	0.08'	0.08'	0.06'		0.10'	0.08	0.08'	

CURVE DATA

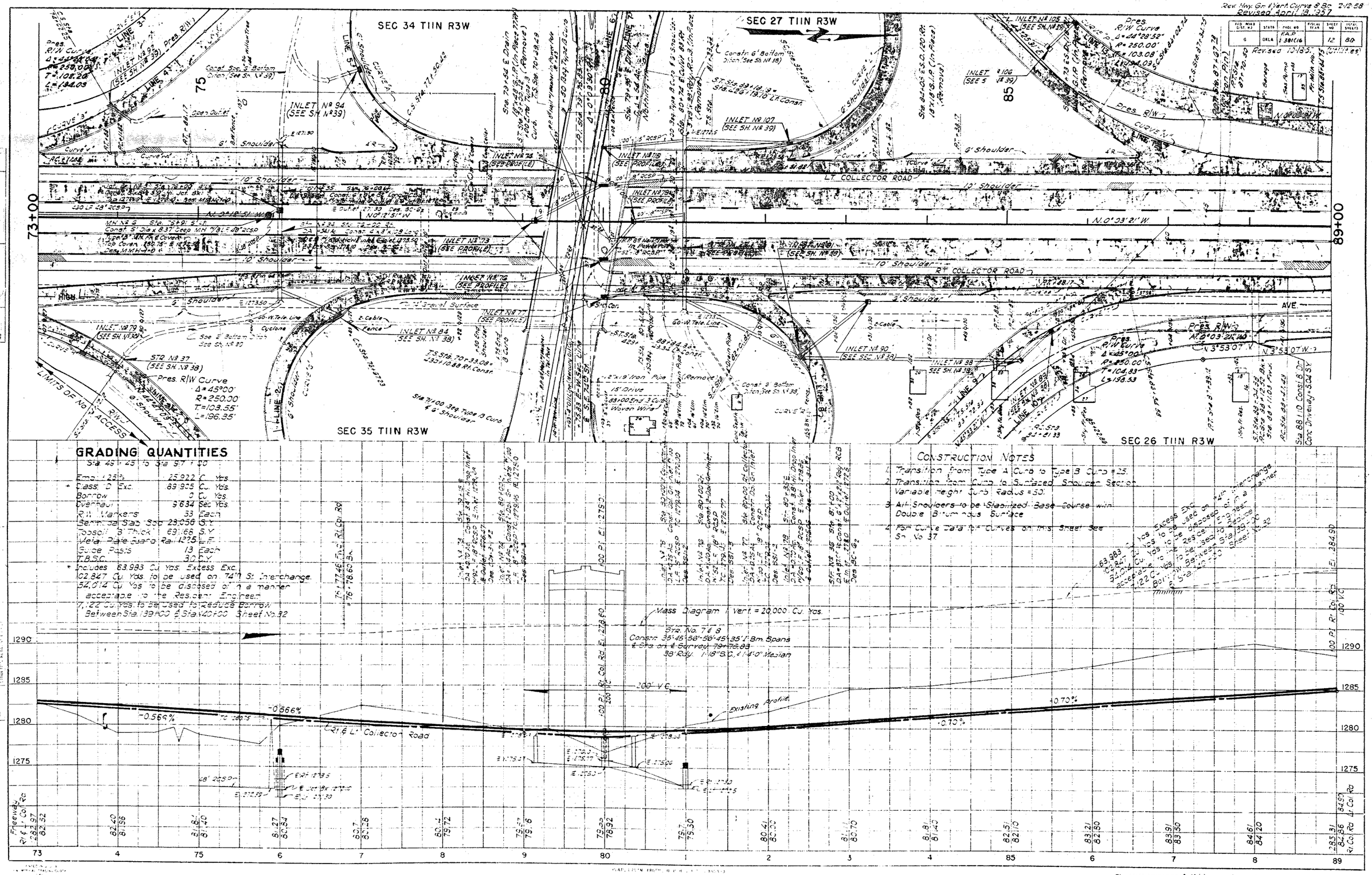
CURVE	"P"	"Q"	"R"	"S"	"T"	"U"	"V"	"W"	"X"	"AA"	"BB"	"CC"	"DD"	"EE"	"FF"
P.I.	86+61.93 Ser. Rd.	91+00 ℄	81+26.10 ℄ Med.	435+50 Lt. Const.	85+80 ℄ Sur.	77+76.88 Ser. Rd.	86+16.10 Ser. Rd.	91+00 ℄	433+96.84 Exit Ramp	422+53.26	433+76.68	423+34.97	434+53.80	421+83.55	433+00.34
Δ	37°40'30"	7°26'43"	279°50'30"	44°59'25"	45°04'35"	44°59'25"	41°14'49"	3°49'46"	16°50'15"	10°02'30"	9°54'30"	10°02'30"	9°54'30"	10°02'30"	9°54'30"
D	16°00'	2°00'	41°00'	16°00'	16°00'	16°00'	16°00'	2°00'	8°00'	2°00'	2°00'	2°52'00"	2°52'00"	2°52'00"	2°52'00"
T	122.23'	186.40'				148.29	134.77	95.77	106.00'	251.69	248.33'	175.60'	173.25'	175.60'	173.25'
L_c	235.47'	372.26'	532.54'	131.19'	131.73'	281.19'	257.79	191.47'	210.47'	502.08'	495.42'	350.29'	345.64'	350.29'	345.64'
R	358.10'	2864.79'	139.74'	358.10'	358.10'	358.10'	358.10'	2864.79'	718.20'	2864.79'	2864.79'	1998.69'	1998.69'	1998.69'	1998.69'
L_s			150.00'	150.00'	150.00'										
θ_s			30°45'	12°00'	12°00'										
P			6.64'	2.61'	2.61'										
K			74.28'	74.89'	74.89'										
T_s				224.27'	224.59										
E_s				32.32'	32.44'										
Δ_c			218°20'30'	20°59'25"	21°04'35"										
S. Max. Ft/Ft			0.10'	0.08'	0.08'							0.06'	0.06'	0.06'	0.06'

F.A. PROJECT NO. I-381(16) SHEET NO. 11

Rev. Hwy. Gr. & Vert. Curve & Bc 2-12-58
Revised April 18, 1957

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ORLA	F.A.P. I 381(16)		12	80

Rev. Sec. 10-18-5.



GRADING QUANTITIES

Sta 49+25 to Sta 97+00

Embankment	25,922 Cu. Yds.
* Class "D" Exc.	89,935 Cu. Yds.
Borrow	0 Cu. Yds.
Overhaul	9,634 Sec. Yds.
R.R. Markers	33 Each
Bituminous Slab Surf.	28,056 S.Y.
Topsoil (3" Thick)	691.66 S.Y.
Metal Plate Guard Rail	1275 L.F.
Guide Posts	13 Each
T.B.S.C.	30 C.Y.

* Includes 63,983 Cu. Yds. Excess Exc.
102,847 Cu. Yds. to be used on 74th St. Interchange.
54,014 Cu. Yds. to be disposed of in a manner acceptable to the Resident Engineer.
7,122 Cu. Yds. to be used to Reduce Borrow Between Sta. 139+00 & Sta. 140+00 Sheet No. 32

CONSTRUCTION NOTES

1. Transition from Type A Curb to Type B Curb = 25.
2. Transition from Curb to Surfaced Shoulder Section Variable Height Curb Radius = 50.
3. All Shoulders to be Stabilized Base Course with Double Bituminous Surface
4. For Curve Data for Curves on this Sheet See Sh. No. 37

Mass Diagram 1" Vert. = 20,000 Cu. Yds.

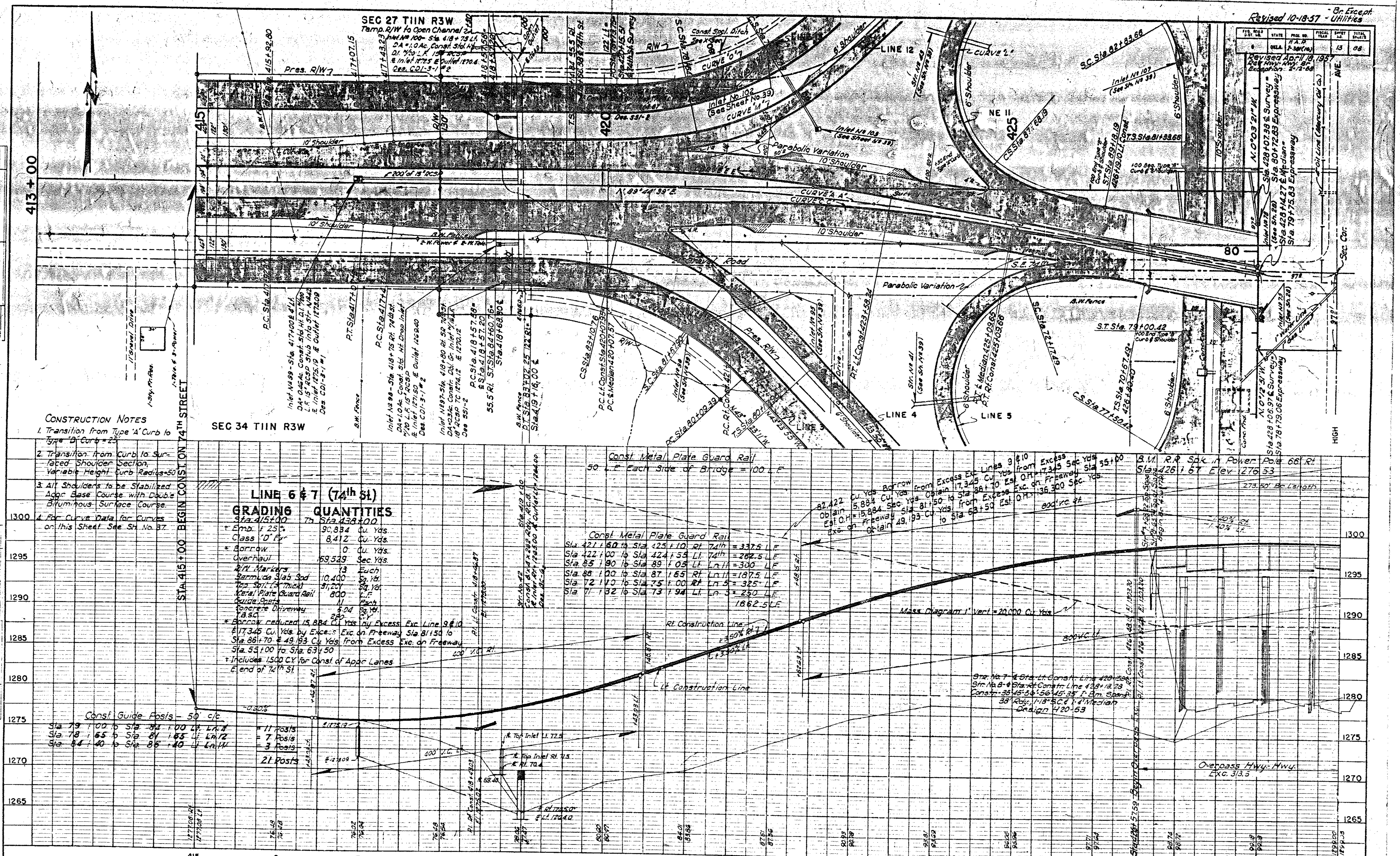
Str. No. 7 & 8
Constr. 35'-45'-56'-56'-45'-35' F. Bm. Spans
& Strs. on & Curved 79+75.83
38' Rdy. 1'-8" S.C. & 1'-4'-0" Median

FA STATE PROJECT NO. I-381(16) SHEET NO. 12

Revised 10-18-57 - Br. Except. - Utilities

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	F.A.P. I-381(16)		13	88

Revised April 18, 1957
Rstr. Hwy.-Hwy. Br. Exception 2-12-58



CONSTRUCTION NOTES

1. Transition from Type 'A' Curb to Type 'B' Curb = 25'
2. Transition from Curb to Surfaced Shoulder Section, Variable Height Curb Radius = 50'
3. All Shoulders to be Stabilized Aggr. Base Course with Double Bituminous Surface Course.
4. For Curve Data for Curves on this Sheet See Sh. No. 37

LINE 6 & 7 (74th St.)

GRADING QUANTITIES

Sta. 415+00 To Sta. 438+00

† Emb. + 25%	90,834	Cu. Yds.
Class 'D' Exc.	8,412	Cu. Yds.
* Borrow	0	Cu. Yds.
Overhaul	159,529	Sec. Yds.
R/W Markers	13	Each
Bermuda Slab Sod	10,400	Sq. Yd.
Top Soil (3" Thick)	31,201	Sq. Yd.
Metal Plate Guard Rail	800	L.F.
Guide Posts	11	Each
Concrete Driveway	5.04	Sq. Yd.
T.B.S.C.	280	C.Y.

* Borrow reduced 15,884 Cu. Yds. by Excess Exc. Line 9 & 10 & 17,345 Cu. Yds. by Excess Exc. on Freeway Sta. 81+50 to Sta. 86+70 & 49,193 Cu. Yds. from Excess Exc. on Freeway Sta. 55+00 to Sta. 63+50

† Includes 1,500 C.Y. for Const. of Appr. Lanes E. end of 74th St.

Const. Metal Plate Guard Rail

Sta. 421+60 to Sta. 425+10	Rt.	74th	= 337.5	L.F.
Sta. 422+00 to Sta. 424+55	Lt.	74th	= 262.5	L.F.
Sta. 85+90 to Sta. 89+05	Lt.	Ln. 11	= 300	L.F.
Sta. 86+00 to Sta. 87+65	Rt.	Ln. 11	= 187.5	L.F.
Sta. 72+10 to Sta. 75+00	Rt.	Ln. 5	= 325	L.F.
Sta. 71+32 to Sta. 73+94	Lt.	Ln. 5	= 250	L.F.
			1662.5	L.F.

Const. Guide Posts - 50' c/c

Sta. 79+00 to Sta. 84+00 Lt. Ln. 4	= 11 Posts
Sta. 78+65 to Sta. 81+65 Lt. Ln. 12	= 7 Posts
Sta. 84+40 to Sta. 85+40 Lt. Ln. 11	= 3 Posts
	21 Posts

PLATE 1 PLAN - PROFILE O. P. R. & R. E. STANDARD
EUGENE DIETZGEN CO.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	TOTAL PLAN	SHEET NO.	TOTAL SHEETS
6	OKLA.	F.A.P. F-38(14)		14	88

Rev. Utilities 10-18-57
Rev. 3rd Subst. 3-19-57
Rev. Rdy. widening
& Br. Appr. 10-24-57
Rev. Hwy.-Hwy. Exc. Length 2-12-58

Const. 500' Approach to Interchange.
Meet Existing Grade at Present Section Line Road. See Typical Section this Sheet.
Estimated Cl. "D" Excav. = 1500 C.Y.
(Included in 74th St. Sheet Estimate - Sheet No. 34)
T.B.S.C. = 280 C.Y.

SEC 26 T11N R3W

SEC 35 T11N R3W

CONSTRUCTION NOTES

1. Transition from Type A Curb to Type B Curb = 25'
2. Transition from Curb to Surfaced Shoulder Section, Variable Height Curb Radius = 50'
3. All Shoulders to be Stab. Agg. Base Course with Double Bituminous Surface Course.
4. For Curve Data for Curves Sheet, See Sheet No. 37.
5. Conc. Driveway Special. See Sh. No. 48

LIMITS OF NO ACCESS
Const. 5' Chain Link Fence on R/W Line

STA 438 + 00 END CONST. ℄ 74TH ST

Const. Vegi. Plate Guard Rail
Sta. 70+40 to Sta. 71+45 Rt. Lane = 100 L.F.
Sta. 86+90 to Sta. 88+23 Rt. Lane = 125 L.F.
225 L.F.

Const. Guide Posts - Sta. 70
Sta. 71+95 to Sta. 72+45 Rt. Lane = 2 Posts
Sta. 431+15 to Sta. 434+15 Rt. 74th = 6 Posts
Sta. 430+95 to Sta. 432+95 Rt. 74th = 5 Posts
13 Posts

Typical Section
Approach Lanes to Intersection

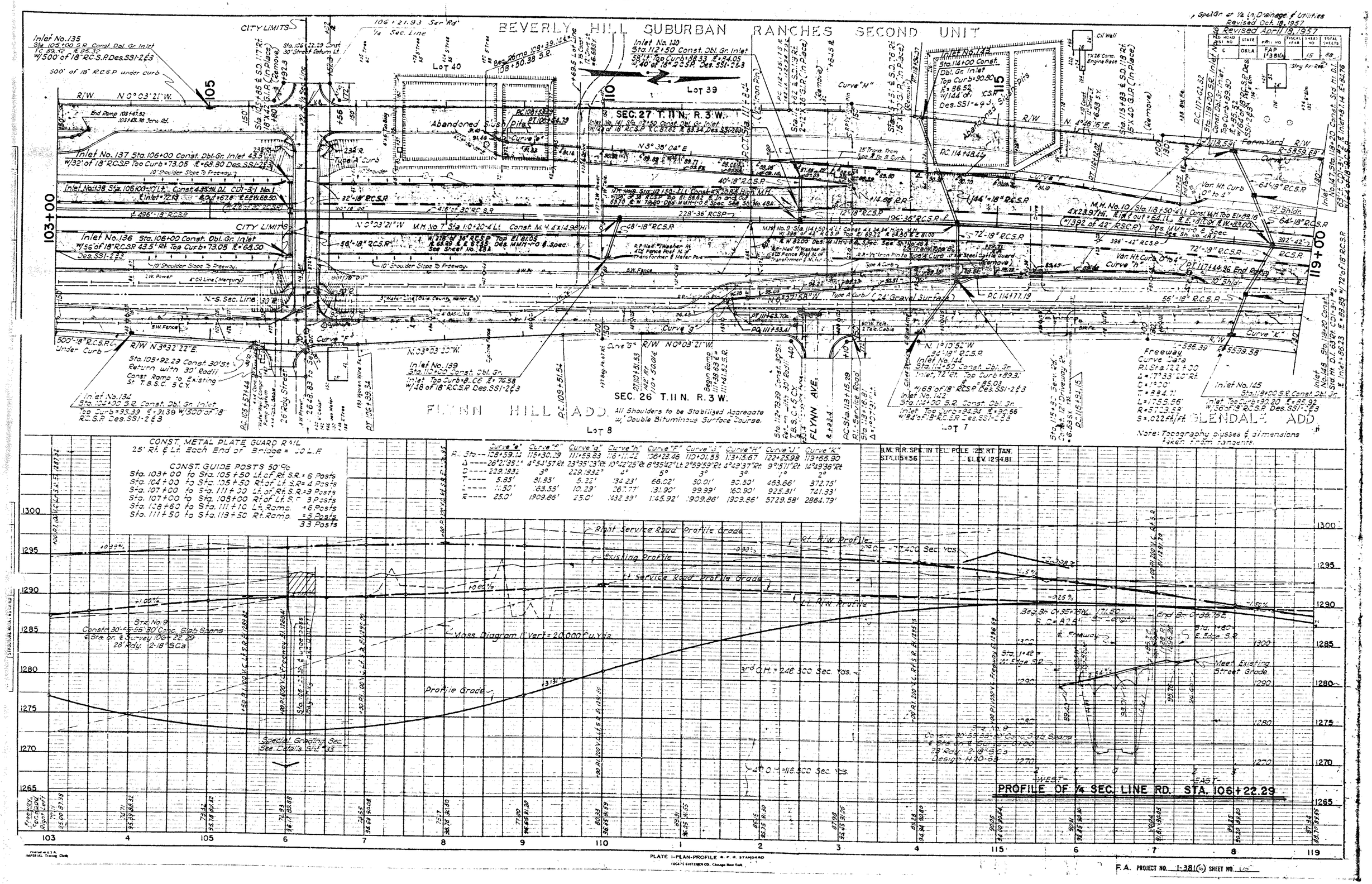
Mass Diagram - 1 Term = 20000 C.Y.

Overpass Hwy.-Hwy. Exc. 3.3.5

Sta. No. 7 - ℄ Sta. Lt. Constr. Line 428+15.84
Sta. No. 8 - ℄ Sta. Rt. Constr. Line 428+13.48
Constr. 35'-45'-56'-56'-45'-35' I-Bm. Spans
38' Rdy. 1-18' S.C. & 1-4' Median
Design H20-53

Sta. No. 34

FA PROJECT NO. F-38(14) SHEET NO. 14


BEVERLY HILL SUBURBAN RANCHES SECOND UNIT
Revised Oct. 18, 1957
Revised April 18, 1957
FLYNN HILL ADD.
GLENDALE ADD.
SEC. 27 T. 11 N. R. 3 W.
SEC. 26 T. 11 N. R. 3 W.
CITY LIMITS
Lot 40
Lot 39
Lot 8
Lot 7
Abandoned Sand Pits
Farm Yard
FLYNN AVE.
Freeway Curve Data
Note: Topography plusses & dimensions taken from tangents.
All Shoulders to be Stabilized Aggregate w/ Double Bituminous Surface Course.
CONST. METAL PLATE GUARD RAIL
25' Rt. & Lt. Each End of Bridge = 50 L.F.
CONST. GUIDE POSTS 50'c/c
Sta. 103+00 to Sta. 105+50 Lt. of Rt. S.R. = 6 Posts
Sta. 104+00 to Sta. 105+50 Rt. or Lt. S.R. = 4 Posts
Sta. 107+00 to Sta. 111+00 Lt. of Rt. S.R. = 19 Posts
Sta. 107+00 to Sta. 108+00 Rt. or Lt. S.R. = 3 Posts
Sta. 108+60 to Sta. 111+10 Lt. Ramp. = 6 Posts
Sta. 111+50 to Sta. 113+50 Rt. Ramp. = 5 Posts
33 Posts
B.M. R.R. SPIKE IN TELL POLE 125' RT. TAN. STA. 115+56 ELEV. 1294.81
Right Service Road Profile Grade
Rt. R/W Profile
Existing Profile
Lt. Service Road Profile Grade
Lt. R/W Profile
Mass Diagram 1" Vert = 20,000 Cu. Yds.
3rd O.H. = 246,300 Sec. Yds.
4th O.H. = 116,800 Sec. Yds.
Profile Grade
West Existing Street Grade
Special Grading Sec. See Details Sht. 33
PROFILE OF 1/4 SEC. LINE RD. STA. 106+22.29
PLATE 1-PLAN-PROFILE B. P. R. STANDARD
F. A. PROJECT NO. I-381(6) SHEET NO. 15

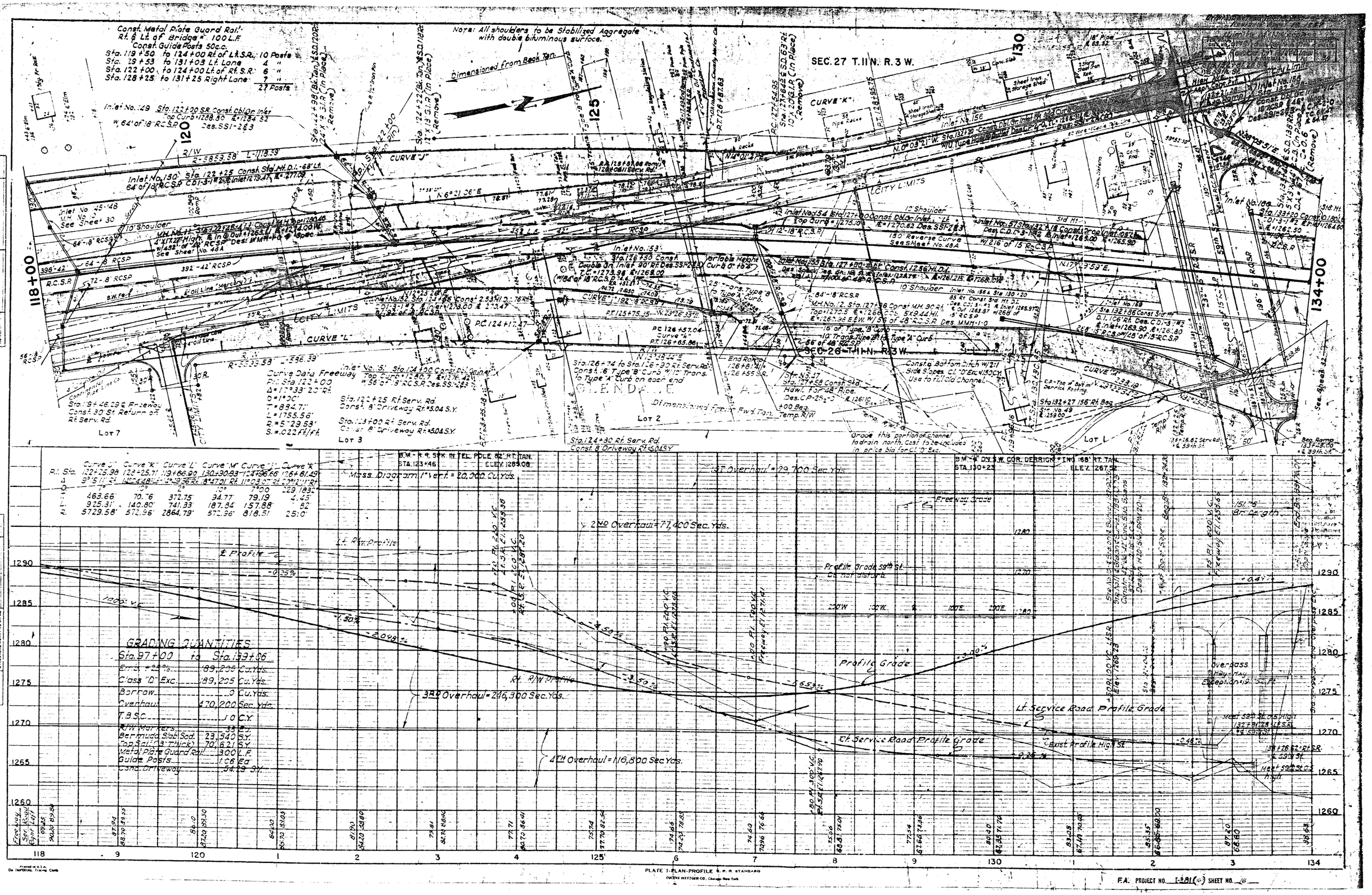
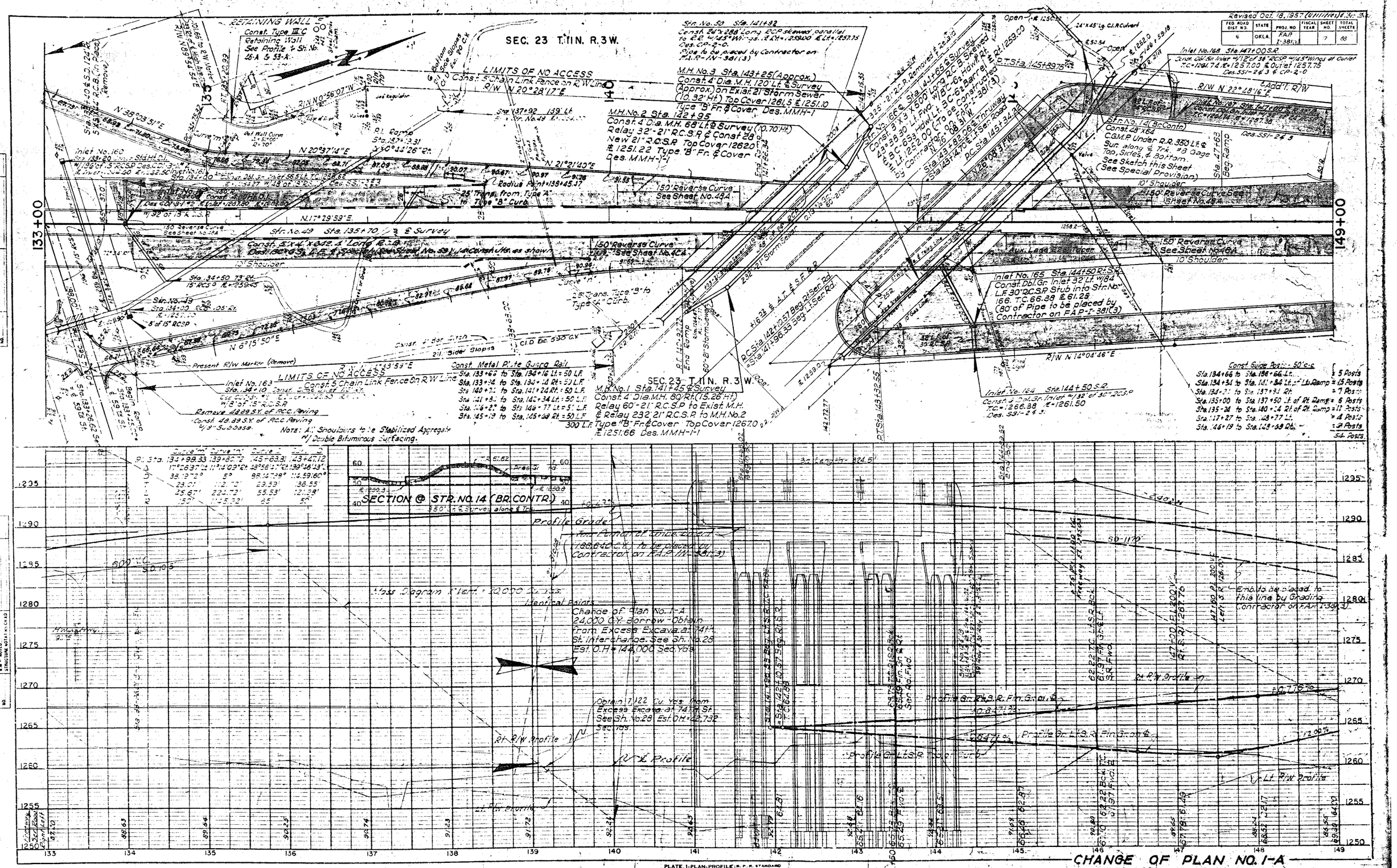


PLATE I-PLAN-PROFILE U. P. R. STANDARD

F.A. PROJECT NO. I-281(6) SHEET NO. 6



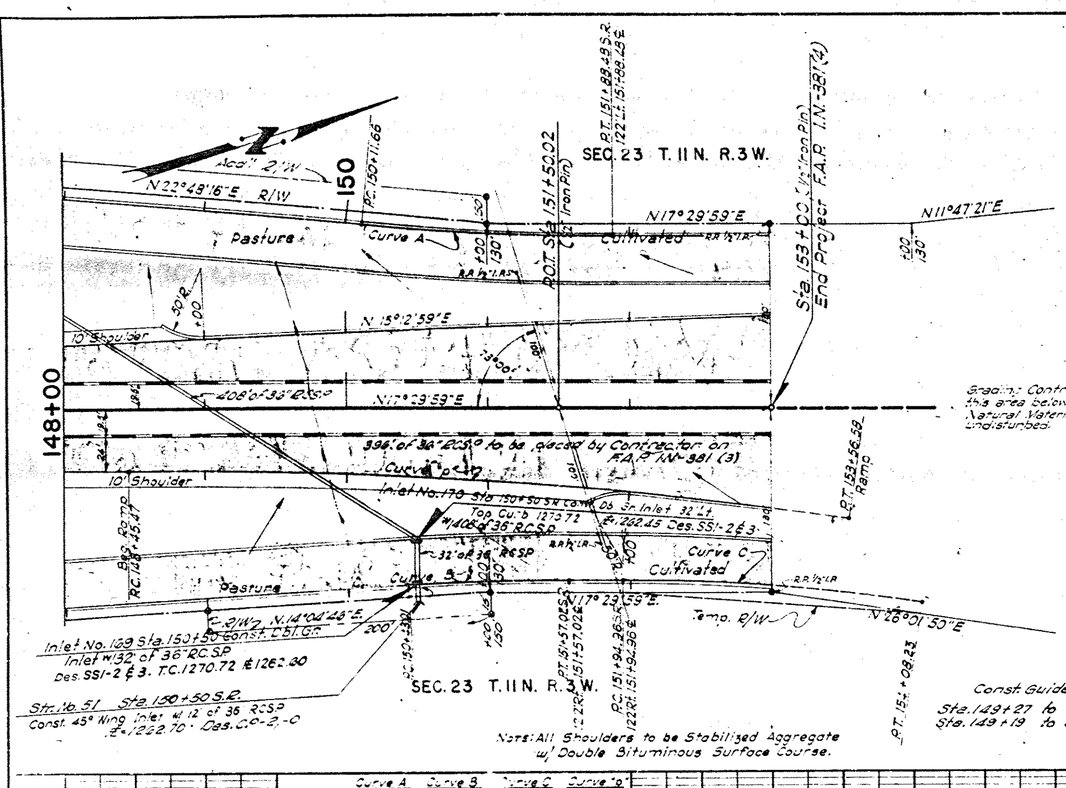
FED. ROAD DIST. NO.	STATE	PROJ. NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	F.A.P. I-381(3)		7	88

Revised Oct. 18, 1957 (Will Rev. 8-30-57)

PLATE 1-PLAN-PROFILE R. P. R. STANDARD
EUGENE DIETZGEN CO. Chicago-New York

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	F.A.P. I-381(3)		19	88

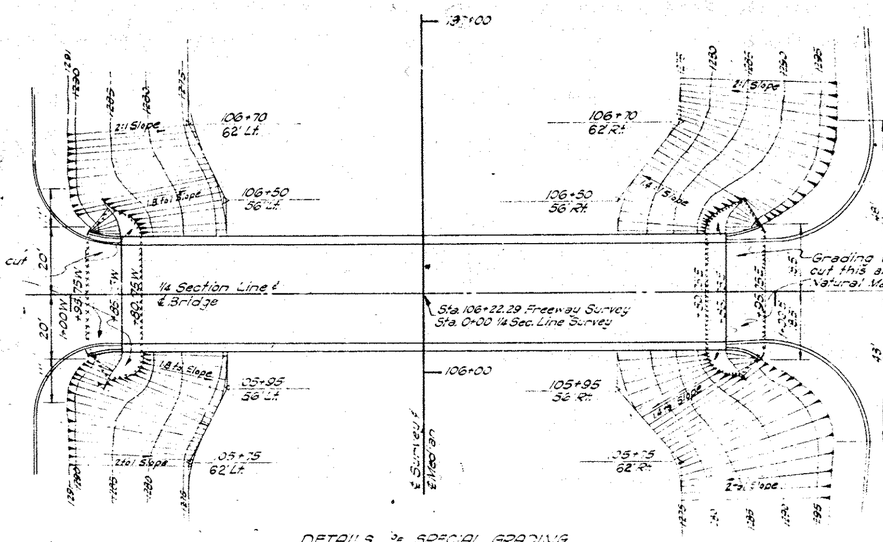
Revised Oct. 9, 1957 - Det. Spec. Grading & Abuts.



Grading Contractor shall not cut this area below Elev. 1288.50. Natural Material to remain undisturbed.

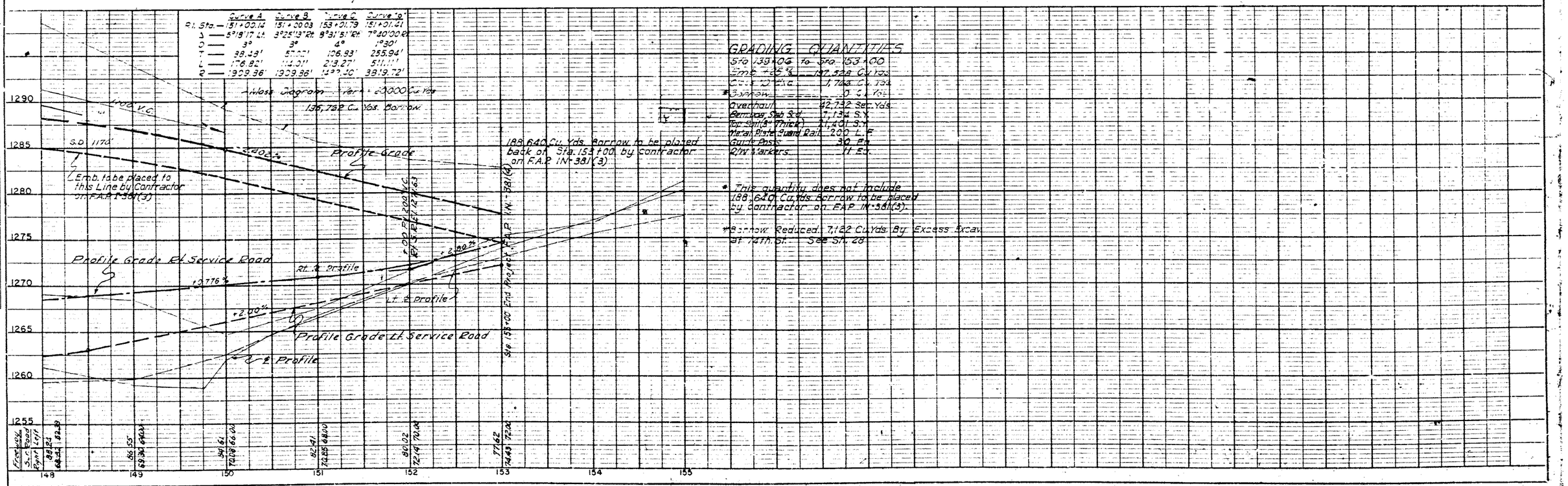
Note: All Shoulders to be Stabilized Aggregate w/ Double Bituminous Surface Course.

Const. Guide Posts 50' c/c
Sta. 149+27 to Sta. 152+77 Lt. = 8 Posts
Sta. 149+19 to Sta. 150+69 Rt. = 4 Posts
12 Posts



DETAILS OF SPECIAL GRADING AT ABUTMENTS, STRUCTURE @ ℄ STA. 106+22.29

	Curve A	Curve B	Curve C	Curve D
P.I. Sta.	151+00.14	151+00.03	153+01.79	151+01.21
Δ	5°19'17" Lt.	3°25'13" Rt.	9°31'51" Rt.	7°40'00" Rt.
D	3°	3°	4°	1°30'
T	38.23'	57.22'	106.93'	255.94'
L	176.82'	114.31'	213.27'	511.11'
R	1909.36'	1909.36'	1432.50'	3819.72'



GRADING QUANTITIES

Sta. 139+00 to Sta. 153+00

Emb. 105%	137,528 Cu. Yds.
Cut D.E.C.	1,746 Cu. Yds.
* Borrow	0 Cu. Yds.
Overhaul	42,732 Sta. Yds.
Remove Sub Std.	7,134 S.Y.
Top Soil (3" Thick)	21,401 S.Y.
Metal Plate Guard Rail	200 L.F.
Guide Posts	30 Ea.
R/W Markers	11 Ea.

* This quantity does not include 188,640 Cu. Yds. Borrow to be placed by Contractor on F.A.P. IN-381(3).

** Borrow Reduced 7,162 Cu. Yds. By Excess Excav. at 14th St. See Sta. 28

PLATE 1-PLAN-PROFILE S. P. R. STANDARD
EUGENE DIETZGEN CO., Chicago-New York

Printed in U.S.A. On IMPERIAL Tracing Cloth

F. A. PROJECT NO. I-381(3) SHEET NO. ___

NOTE BOOK NO. ___ PLOTTED CHECKED ALIGNMENT CHECKED R/W & NOTED STRUCTURE NOTES CHECKED

NOTE "INK" NO. ALIGNMENT CHECKED RT. OF WAY CHECKED

SUMMARY OF PAY QUANTITIES - BRIDGES

PAY QUANTITIES

ITEM No.	ITEM	UNIT	PT-1 STRUCTURE No. 1 40'-58'-40' Conc. Slab Span 37' Rdy. & 2-18" S.C's. ℄ Sta. on ℄ Survey 34+25.30	PT-1 STRUCTURE No. 2 36'-62.5'-36' Conc. Slab Span Lt. 37' Rdy. & 2-18" S.C's. ℄ Sta. on ℄ Survey 52+83.53	PT-1 STRUCTURE No. 3 36'-62.5'-36' Conc. Slab Span Rt. 37' Rdy. & 2-18" S.C's. ℄ Sta. on ℄ Survey 52+83.53	PT-1 STRUCTURE No. 4 36'-62.5'-36' Conc. Slab Span Lt. 37' Rdy. & 2-18" S.C's. ℄ Sta. on ℄ Survey 27+00	PT-1 STRUCTURE No. 5 36'-62.5'-36' Conc. Slab Span Rt. 37' Rdy. & 2-18" S.C's. ℄ Sta. on ℄ Survey 27+00	PT-1 STRUCTURE No. 6 30'-55-55-30' Conc. Slab Span 28' Rdy. & 2-18" S.C's. ℄ Sta. on ℄ Survey 53+36.10	PT-1 Total of Rdy. Quant. on Br. Contract PT-1 Sta. 34+25.30 to 83+92.50 0.023 Miles *
202.06d	Class "D" Excavation	C.Y.							1,400 **
308.06a	4" Sand Cushion	S.Y.							1,309
414.06c	Approach Slabs	S.Y.							1,309
501.06b	Substructure Excavation-Common	C.Y.	305	180	350	350	360	135	
501.06c	Substructure Excavation-Rock	C.Y.	27	104	88	48	19	73.7	
505.06	Steel Handrailing (Alt. No. 1)	L.F.	283.5	271.5	271.5	271.5	271.5	342.5	
509.06a	Class "A" Concrete	C.Y.	142.4	123.4	129	126.8	124.8	184.7	5.4
509.06a	Class "A" Conc. in Pier & Abut. Bases	C.Y.	33	46	46	46	46	36.9	
509.06b	Class "AA" Concrete	C.Y.	567	576.1	576.1	576.1	576.1	433.3	
511.06	Reinforcing Steel	Lbs.	114,740	89,430	90,350	89,990	89,660	87,025	675
513.06a	Corrugated Galv. Metal Pipe, 15"	L.F.							37.4
514.06d	Reinforced Concrete Piling	L.F.	480	408	440	484	484		
611.06h	Inlet Frame & Grate	Ea.							9
624.06a	6" Black Traffic Stripe	L.F.	280	272	272	272	272	171.5	560
Special	4" Concrete Slope Wall	S.Y.	353.3	320.8	328	322	325.8		
Special	Aluminum Handrailing (Alt. No. 2)	L.F.	283.5	271.5	271.5	271.5	271.5	342.5	

* Equation;
83+92.50 Bk =
12+01.69 Fwd.
**Non-Participating Item

NOTE: Contractor shall submit bids on both types of Handrailing. Type of rail will be determined by bids received.
Steel Handrailing will be listed in the proposal as Alternate No. 1 and Aluminum Handrailing as Alternate No. 2.

See special provision for maintenance of traffic and sequence of operations for Roadway and Bridges on and within the limits of Federal Aid Project No. I-381(4) Rdy.

PAY QUANTITIES

ITEM No.	ITEM	UNIT	PT-2 STRUCTURE No. 7 35'-45'-56'-56'-45'-35' I-Beam Spans Lt. 38' Rdy., 1-18" S.C. & 1-1' Med. ℄ Sta. on ℄ Survey 79+91.92	PT-2 STRUCTURE No. 8 35'-45'-56'-56'-45'-35' I-Beam Spans Rt. 38' Rdy., 1-18" S.C. & 1-1' Med. ℄ Sta. on ℄ Survey 79+69.74	PT-1 STRUCTURE No. 9 30'-55'-55'-30' Conc. Slab Span 28' Rdy. & 2-18" S.C's. ℄ Sta. on ℄ Survey 106+72.29	PT-1 STRUCTURE No. 10 42'-66'-42' Conc. Slab Span Lt. 37' Rdy. & 2-18" S.C's. ℄ Sta. on ℄ Survey 132+90.25	PT-1 STRUCTURE No. 11 42'-66'-42' Conc. Slab Span Rt. 37' Rdy. & 2-18" S.C's. Sta. on ℄ Survey 133+10.03	PT-2 STRUCTURE No. 12 40'(14'-92'-14' Cont.)-40' I-Bm Spans 30' Rdy. & 2-18" S.C.'s Lt. 315' Lt. ℄ Sta. ℄ Survey 143+30.30	PT-2 STRUCTURE No. 13 40'(14'-92'-14' Cont.)-40' I-Bm Spans 30' Rdy. & 2-18" S.C.'s Rt. 315' Rt. ℄ Sta. ℄ Survey 143+30.30	PT-2 Total of Rdy. Quant. on Br. Contract PT-2 Sta. 79+15.55 to 145+09.52 0.007 Miles
202.06d	Class "D" Excavation	C.Y.								800 **
308.06a	4" Sand Cushion	S.Y.								693.4
414.06c	Approach Slabs	S.Y.								693.4
501.06b	Substructure Excavation-Common	C.Y.	600	550	28	575	465	1,520	1,541	
501.06c	Substructure Excavation-Rock	C.Y.	41	50	83	44	39	87	92	
505.06	Steel Handrailing (Alt. No. 1)	L.F.	274.92	274.92	342.5	305	305	355.5	655.5	
506.06	Structural Steel	Lbs.	295,675	295,675				308,005	416,910	
509.06a	Class "A" Concrete	C.Y.	274.4	272.9	109	138.2	137.4	345.2	203.7	1.2
509.06a	Class "A" Conc. in Pier & Abut. Bases	C.Y.	56.4	56.4	29.5	52.2	52.2	79.2	84	
509.06b	Class "AA" Concrete	C.Y.	253.1	253.1	433.3	700.3	700.3	237	308.6	
511.06	Reinforcing Steel	Lbs.	82,785	82,600	84,910	102,550	102,550	116,505	141,935	150
513.06a	Corrugated Galv. Metal Pipe, 15"	L.F.								92
514.06d	Reinforced Concrete Piling	L.F.	378	369		561	583	670	738	
611.06h	Inlet Frame & Grate	Ea.								2
624.06a	6" Black Traffic Stripe	L.F.	547	547	171.5	303.5	303.5	324.5	649	120
Special	4" Concrete Slope Wall	S.Y.	335.6	335.6		374.2	376.3			
Special	Aluminum Handrailing (Alt. No. 2)	L.F.	274.92	274.92	342.5	305	305	355.5	655.5	
514.06a	1-18" Ø Test Pile	Ea.						2	2	
513.06a	48" Corrugated Galv. Metal Pipe ***	L.F.								64

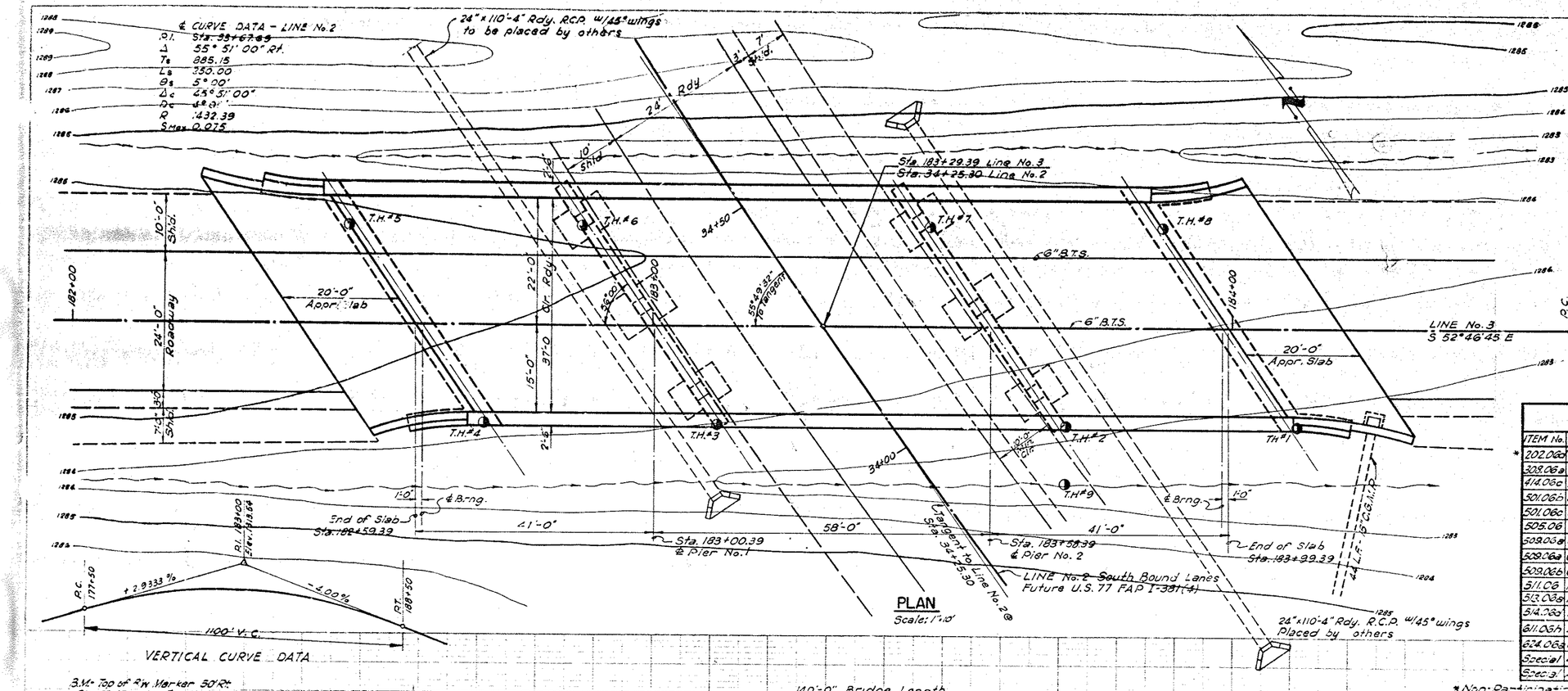
*** Refer to Sh. No. 17 for location of this item. See Special Provisions.

** Non-Participating Item

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(4)(ART-1)	20	88

℄ CURVE DATA - LINE No. 2

P.I.	Sta. 35+67.65
Δ	55° 51' 00" Rt.
T_s	885.15
L_s	350.00
θ_s	5° 00'
Δ_c	44° 51' 00"
D_c	4° 00'
R	1432.39
S.Max.	0.075



PLAN
Scale: 1" = 10'

VERTICAL CURVE DATA

B.M.- Top of R.W. Marker 50' Rt. Sta. 177+37.9 - Line #4 - Elev. 1288.58

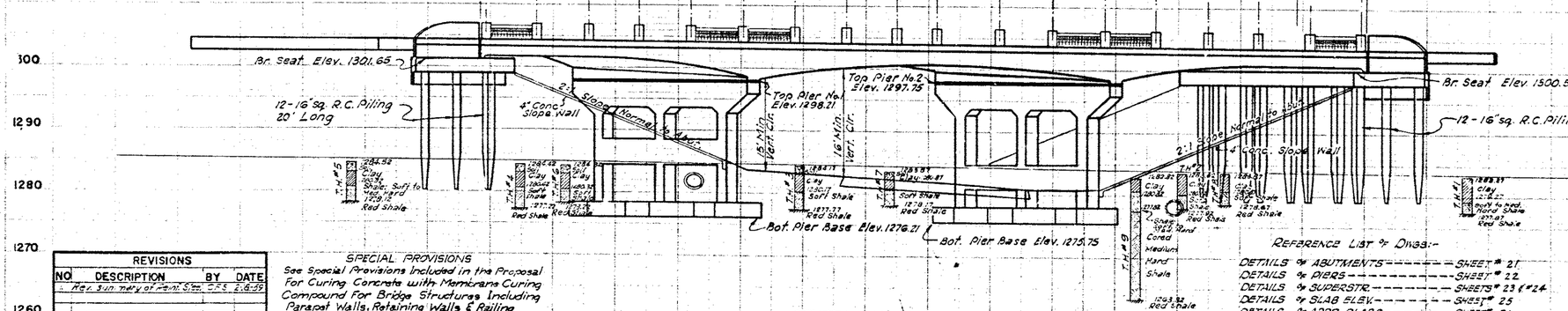
B.M.- East End of 1st Step - White Cottage 146' Rt. - Sta. 20+34 - Line #1 - Elev. 1268.49

140'-0" Bridge Length
End of Slab to End of Slab

Sta. 182+59.39 End of Slab

Sta. 183+99.39 End of Slab

10½' 8'-11½" 4 Spcs. @ 8'-3" = 33'-0" 8'-4½" 5 Spcs. @ 8'-3" = 41'-3" 8'-4½" 4 Spcs. @ 8'-3" = 33'-0" 8'-11½" 10½'



GENERAL ELEVATION
Scale: 1" = 10'

DESIGN DATA

Design Live Load H20-S16-53; PPM 20-4

Concrete	1,000 p.s.i.
Reinforcing Steel	18,000 p.s.i.

Foundation Load:

Abutments	23.2 T/pile
Piers: Direct Load	3.9 T/sq. ft.

SUMMARY OF QUANTITIES

ITEM No.	ITEM	UNIT	Abuts.	Piers	Super Struct.	Bridge	Rdy.
* 202.06a	Class "D" Excavation	C.Y.					200
308.06a	4" Sand Cushion	S.Y.					223.6
414.06a	Approach Slabs	S.Y.					223.6
501.06b	Substr. Excav. - Common	C.Y.	190	115		305	
501.06c	Substr. Excav. - Rock	C.Y.		27		27	
505.06	Steel Handrailing	L.F.			283.5	283.5	
509.05a	Class "A" Concrete	C.Y.	62.0	80.4		142.4	0.6
509.06a	Class "A" Conc. in Pier Bases	C.Y.		33.0		33.0	
509.06b	Class "AA" Concrete	C.Y.			565.0	565.0	
511.06	Reinforcing Steel	Lbs.	8770	13,130	75,760	97,710	75
513.03a	15" C.G.M. Pipe	L.F.					44
514.03a	16" ø R.C. Piling	L.F.	480			480	
611.05h	Inlet Frame & Grate	Ea.					1
624.06a	6" Black Traffic Stripe	L.F.			280	280	80
Special	4" Concrete Slope Wall	S.Y.				353.3	
Special	Aluminum Handrailing	L.F.			283.5	283.5	

* Non-Participating Item

— GENERAL NOTES —

All construction & materials shall be in accordance with the Oklahoma Standard Specifications of 1954 & Special Provisions.

All exposed concrete surfaces shall have a carborundum finish.

All reinforcing steel bars shall conform to A.S.T.M. Specifications A-305-49.

Piling shall be driven using leads of sufficient strength to control piles.

Piling shall be driven to practical refusal if above grade or to a minimum bearing of 50 tons if at or below grade.

All abutment piling shall be driven through the compacted fill. 12" ø Pilot holes shall be drilled to Elev. 1283.00 @ Abut. No. 1 and to Elev. 1282.00 @ Abut. No. 2. Than 8" ø Pilot holes to Elev. 1280.5 @ Abut. No. 1 and to Elev. 1279.5 @ Abut. No. 2. All cost of Pilot holes shall be included in the unit price bid for 16" R.C. Piling.

Contractor shall submit bids on both types handrailing. Type of rail used, will be determined by bids received.

Pier footing elevations shall not be raised and shall be lowered only if firm footing foundation material is not found at plan elevation.

REVISIONS			
NO.	DESCRIPTION	BY	DATE
1	Rev. Summary of Quant. Sheet	CFS	2-16-59

SPECIAL PROVISIONS

See Special Provisions Included in the Proposal For Curing Concrete with Membrane Curing Compound For Bridge Structures Including Parapet Walls, Retaining Walls & Railing 414-6(ac) Rev. 7-27-55.

Equipment For Driving Piles 514-1(a)
Reinforcing Steel (Axle Steel) 723-1(a) Rev. 2-21-57
Black Traffic Stripe or Black Traffic Stripe Arrow. 624-1(a) Rev. 10-18-55
Neoprene Rubber For Bearing devices.

REFERENCE LIST OF DWGS.:-

DETAILS OF ABUTMENTS	SHEET # 21
DETAILS OF PIERS	SHEET # 22
DETAILS OF SUPERSTR.	SHEETS # 23 & # 24
DETAILS OF SLAB ELEV.	SHEET # 25
DETAILS OF APPR. SLABS	SHEET # 26
DETAILS OF HANDRAILING	SHEET # 30 & 87
DETAILS OF PILING	SHEET # 27

SKEW 56°-00' RT. FWD.

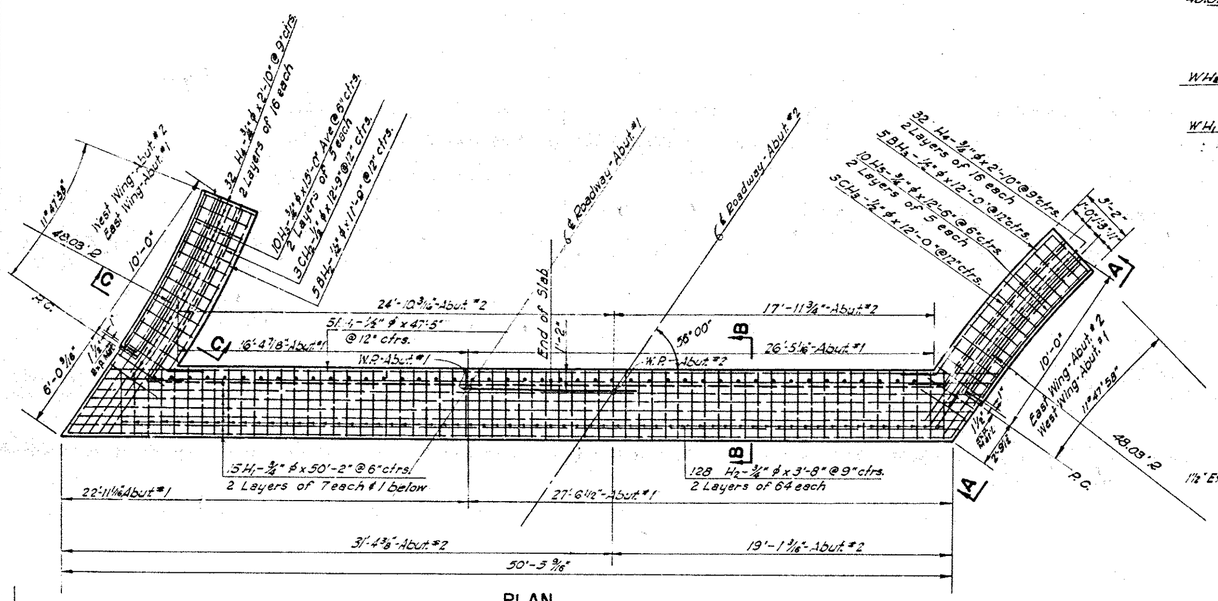
RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	J.S.	
CHECKED		
APPR'D		
SQUAD	BEVHAM	

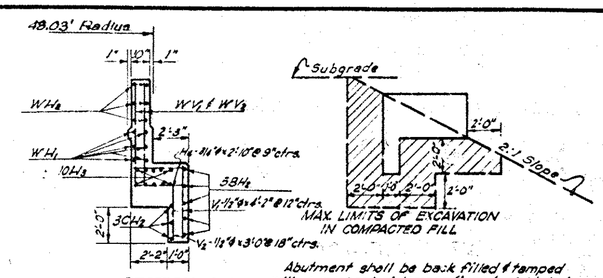
OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLA

STR. NO 1
GENERAL ELEVATION, PLAN & SUMMARY OF QUANTITIES
40'-58'-40' CONC. SLAB SPANS
37' RDY & 2-18" S.C.'s
℄ STA ON ℄ SURVEY 34+25.30
F.A. PROJ. I-381 (16) PT.-1

STATE PROJECT NO. I-381(16) PT-1 SHEET NO. 20

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-1	21	88



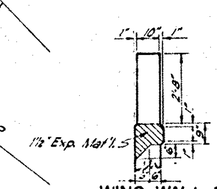


SECTION C-C

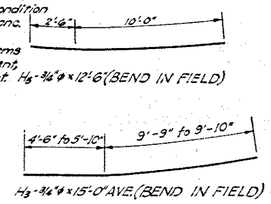
Abutment shall be back filled & tamped with a mechanical tamper (type & weight to be approved by the engineer) by the bridge contractor after abutment is completed.
All cost of backfill shall be included in the unit price bid per C.Y. for subgr. excav. common.

Contractor may excavate to the neat lines of the Abutment, and if in satisfactory condition to the Resident Engineer, he may pour conc. against the compacted fill.
If necessary contractor shall use forms on the back vertical face of the abutment, & remove the same after concrete is set.

EXCAVATION DETAILS

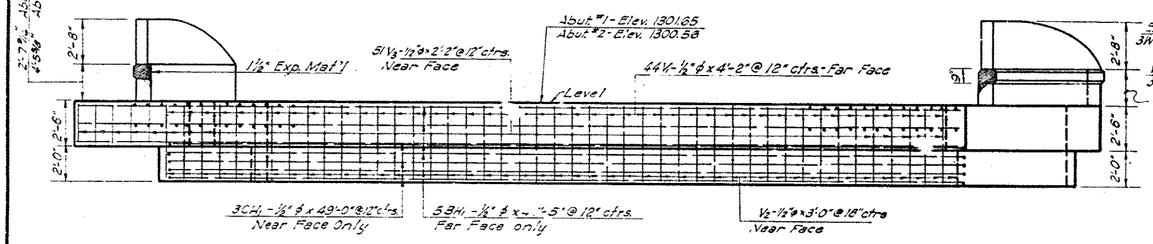


WING WALL DETAIL

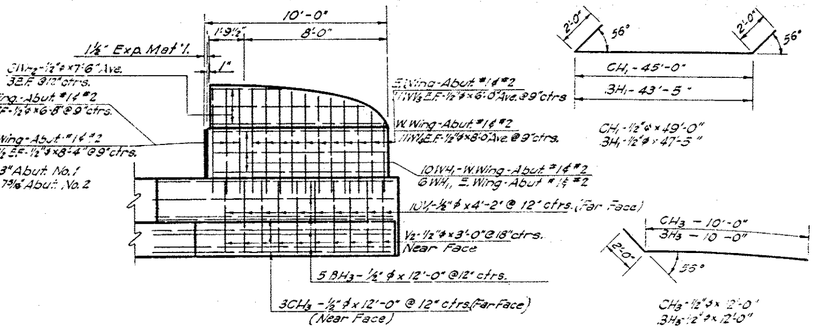


BAR LIST—ONE ABUT.

Mark	No.	Size	Form	Length
H1	15	3/4" ϕ	Str.	50'-0"
H2	128	3/4" ϕ	Str.	3'-8"
H3	10	3/4" ϕ	Bnt.	15'-0" Ave.
H4	64	3/4" ϕ	Str.	2'-10"
H5	10	3/4" ϕ	Bnt.	12'-6"
BH1	5	1/2" ϕ	Bnt.	47'-5"
BH2	5	1/2" ϕ	Bnt.	11'-9"
BH3	5	1/2" ϕ	Bnt.	12'-0"
CH1	3	1/2" ϕ	Bnt.	49'-0"
CH2	3	1/2" ϕ	Bnt.	12'-9"
CH3	3	1/2" ϕ	Bnt.	12'-0"
V1	64	1/2" ϕ	Str.	4'-2"
V2	45	1/2" ϕ	Str.	3'-0"
V3	51	1/2" ϕ	Str.	2'-2"
WH1	16	1/2" ϕ	Str.	9'-6"
V'H2	12	1/2" ϕ	Str.	7'-6" Ave.
WV1	6	1/2" ϕ	Str.	6'-8"
WV2	6	1/2" ϕ	Str.	8'-4"
WV3	22	1/2" ϕ	Str.	6'-0" Ave.
WV4	22	1/2" ϕ	Str.	8'-0" Ave.
P	24	1/2" ϕ	Bnt.	3'-8"
H'	48	3/4" ϕ	Bnt.	8'-3"



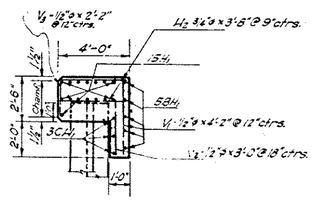
ELEVATION



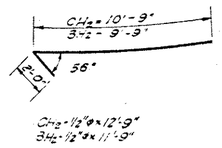
ELEVATION A-A

QUANTITIES—ONE ABUTMENT

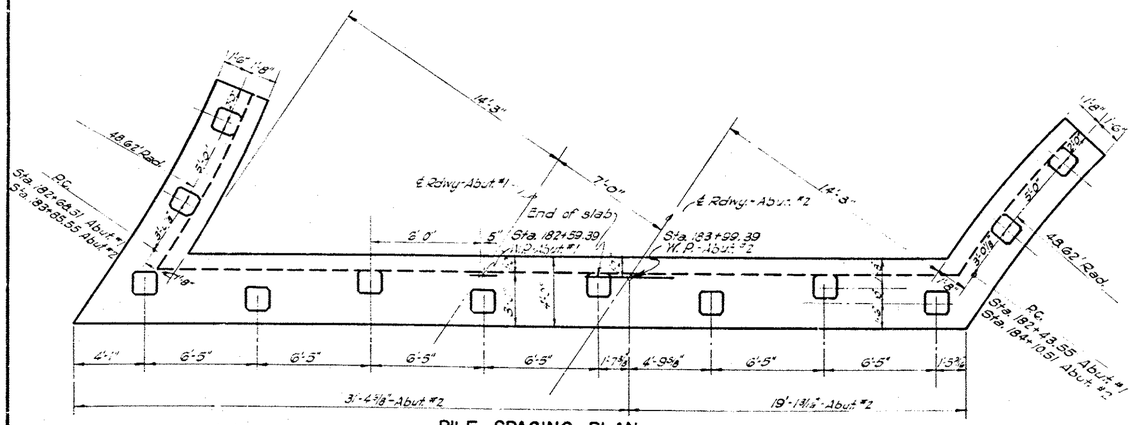
Class "A" Concrete	C.Y.	81.2
Reinforcing Steel	Lbs.	4,385
Subgrade Excav.-Common	C.Y.	25



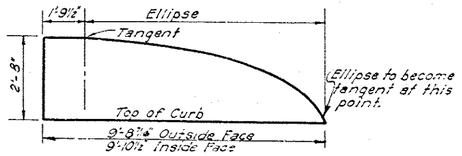
SECTION B-B



GENERAL NOTES
All construction & materials shall be in accordance with the Oklahoma Standard Specifications of 1954 & Special Provisions.
All reinforcing steel bars shall conform to A.S.T.M. Specs. A-305-49.
All exposed concrete edges shall have a 3/4" chamfer unless otherwise shown or noted.
For details of piling & D.H. bars, refer to Std. Dwg. CSD-3.



PILE SPACING PLAN

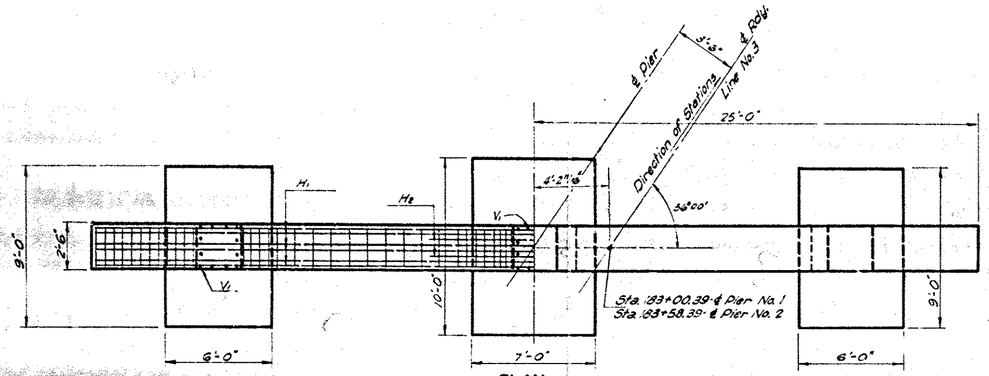


WING WALL DETAIL

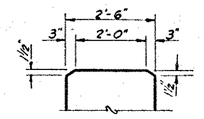
REVISIONS				RECORD			OKLAHOMA STATE HIGHWAY COMMISSION
NO.	DESCRIPTION	BY	DATE	ITEM	BY	DATE	OKLAHOMA CITY, OKLAHOMA
				DESIGN			STR. NO. 1
				DETAIL			DETAILS OF ABUTMENTS
				TRACED	DFS.		
				CHECKED	RRR	11/9/51	℄ STA. ON ℄ SURVEY 34+25.30
				APPROVED			
				SQUAD: BEN/HAM			F.A. PROJ. I-381 (16) PT-1

PROJECT NO. I-381 (16) PT-1 SHEET NO. 21

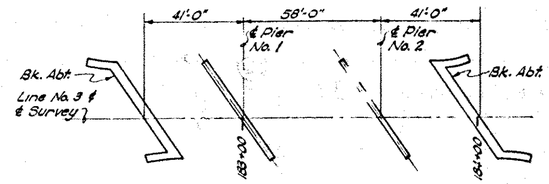
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381 (16) PT-1	22	88



PLAN

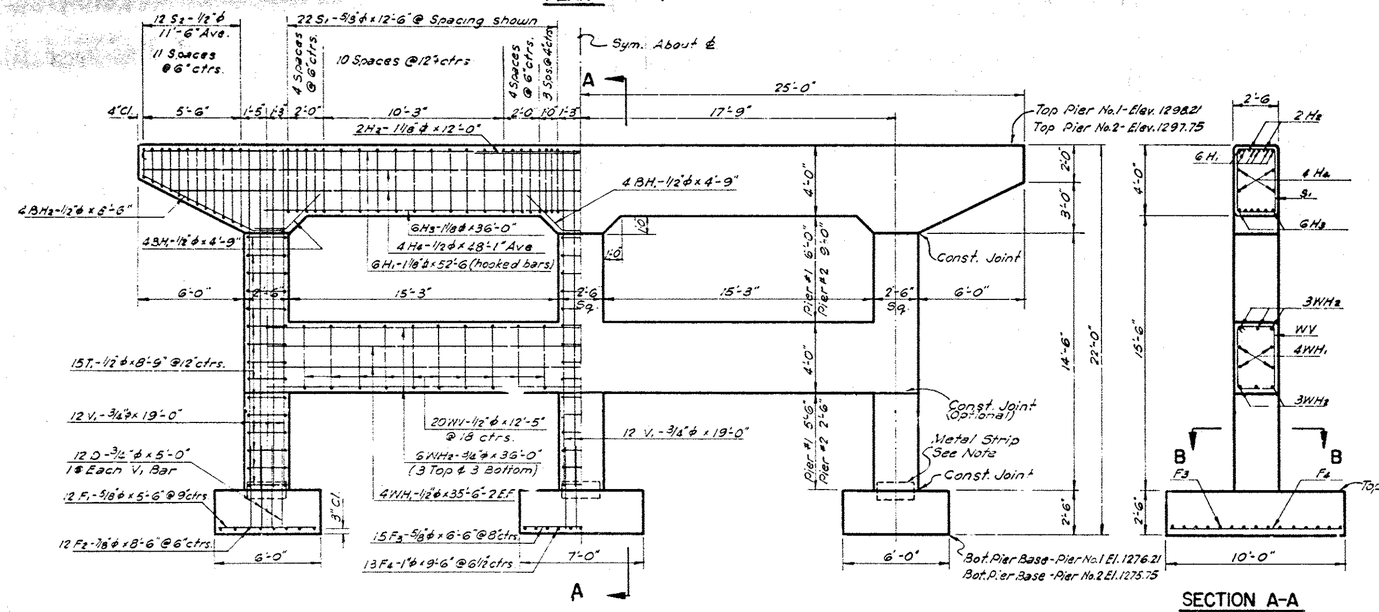


DETAIL OF PIER TOP

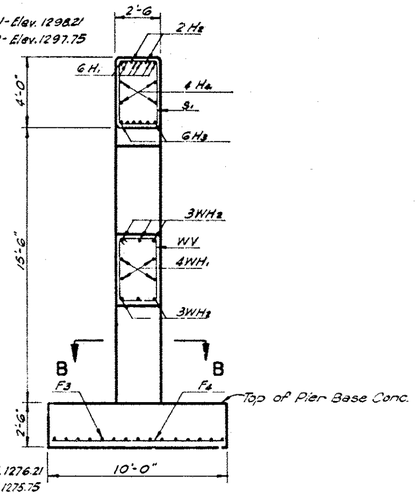


LAYOUT OF PIERS & ABUTMENTS

BAR LIST - ONE PIER				
Mark	No.	Size	Form	Length
H1	6	1⅛"ϕ	Bnt.	52'-6"
H2	2	1⅛"ϕ	Str.	12'-0"
H3	6	1⅛"ϕ	Str.	36'-0"
H4	4	½"ϕ	Str.	49'-1" Ave.
BH	10	½"ϕ	Bnt.	4'-9"
BH2	8	½"ϕ	Bnt.	8'-6"
WH1	4	½"ϕ	Str.	35'-6"
WH2	6	¾"ϕ	Str.	36'-0"
WV	20	½"ϕ	Bnt.	12'-5"
S1	44	⅝"ϕ	Bnt.	12'-6"
S2	24	½"ϕ	Bnt.	11'-6" Ave.
T1	45	½"ϕ	Bnt.	8'-9"
V1	36	¾"ϕ	Str.	19'-0"
D	36	¾"ϕ	Str.	5'-0"
F1	24	⅝"ϕ	Str.	5'-6"
F2	24	⅞"ϕ	Str.	8'-6"
F3	15	⅝"ϕ	Str.	6'-6"
F4	13	1"ϕ	Str.	9'-6"



ELEVATION



SECTION A-A

QUANTITIES - ONE PIER			
ITEM	UNIT	Pier No. 1	Pier No. 2
Reinforcing Steel	Lbs.	6,590	6,590
Class "A" Concrete	C. Y.	40.2	40.2
Class "A" Conc. in Pier Bases	C. Y.	16.5	16.5
Substr. Excav. - Common	C. Y.	80	35
Substr. Excav. - Rock	C. Y.	12	15

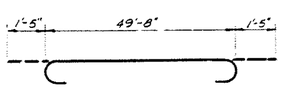
NOTES:
All reinforcing steel bars shall conform to A.S.T.M. specifications A-305-49.
All exposed edges shall have a 1½" chamfer unless otherwise noted.
All concrete shall be poured dry.

NOTE: METAL STRIP

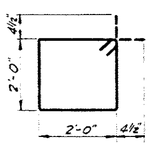
A 16 gage galvanized iron strip 12" wide shall be placed in the Construction Joint in each pier shaft as shown. Each joint in the metal strip shall be lapped 2", riveted and soldered to make it water tight. The materials shall comply with the requirements of the Oklahoma Standard Specifications of 1954 and A.A.S.H.O. Specification. Concrete shall be carefully placed so as not to crush or deform this strip. All cost of the material and the placing of Metal Strip shall be included in the unit price bid per Cubic Yard for Class "A" concrete in Pier Bases.

NOTE: PIER BASE CONCRETE

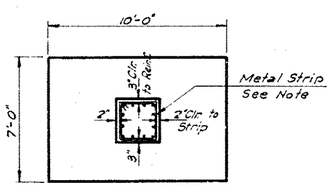
Any variation in the elevation of pier bases shall be taken care of in the shaft and any additional concrete shall be paid for as Class "A" concrete in pier bases. All cost of such variation shall be included in the unit price bid per Cubic Yard for Class "A" concrete in pier bases.



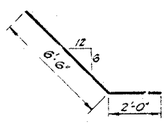
H1 - 1⅛"ϕ x 52'-6"



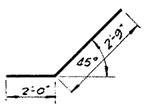
T1 - ½"ϕ x 8'-9"



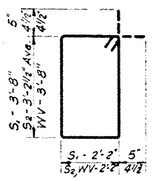
SECTION B-B



BH2 - ½"ϕ x 8'-6"



BH1 - ½"ϕ x 4'-9"



S1 - ⅝"ϕ x 12'-6"
S2 - ½"ϕ x 11'-6" Ave
WV - ½"ϕ x 12'-5

REVISIONS			
NO.	DESCRIPTION	BY	DATE
1	Revised Sol. construction to conf. to S.R.R. 5-7-58 S.R.R. Sec. 7		

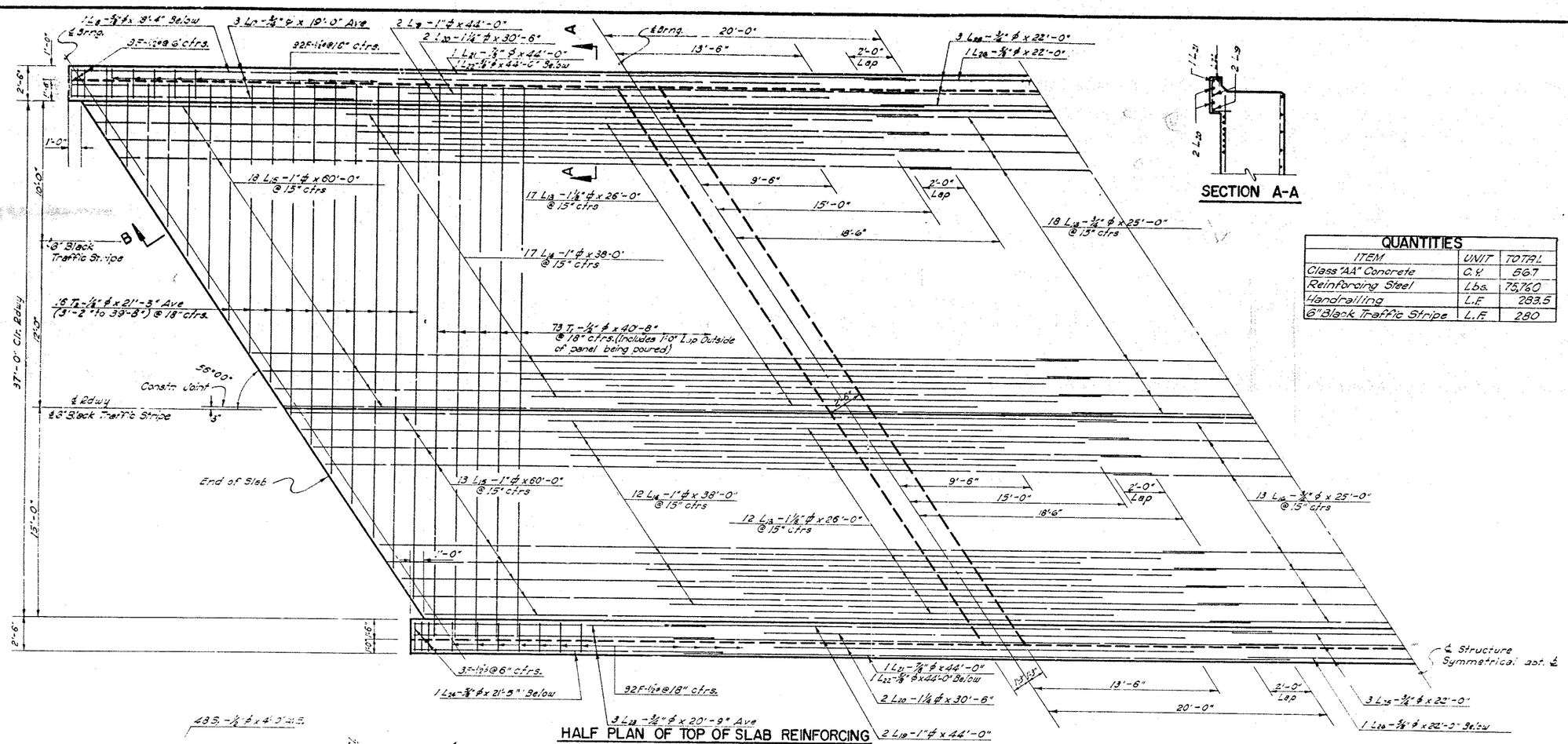
RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	I.S.	
CHECKED	R.A.R.	11-19-57
APPROVED		
SQUAD: BENHAM		

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 1
DETAILS OF PIERS
℄ STA ON ℄ SURVEY 34+25.30
F.A. PROJ. I-381 (16) PT.-1

PROJECT NO. I-381 (16) PT.-1 SHEET NO. 22

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OK.LA.	I-381(16)PT-1	23	88



QUANTITIES

ITEM	UNIT	TOTAL
Class "AA" Concrete	C.Y.	567
Reinforcing Steel	Lbs.	75,760
Handrailing	L.F.	283.5
6" Black Traffic Stripe	L.F.	280

BAR LIST - SUPERSTR

Mark	No.	Size	Form	Length
L1	62	1" ϕ	Str.	42'-0"
L2	58	7/8" ϕ	"	25'-6"
L3	58	1" ϕ	"	22'-0"
L4	4	1" ϕ	"	25'-5" Ave.
L5	4	1" ϕ	"	41'-11" Ave.
L6	4	1" ϕ	"	26'-3" Ave.
L7	4	1" ϕ	"	43'-3" Ave.
L8	31	1 1/8" ϕ	"	59'-6"
L9	29	1 1/8" ϕ	"	37'-0"
L10	29	1 1/8" ϕ	"	25'-0"
L11	4	1 1/4" ϕ	"	34'-0"
L12	4	1" ϕ	"	60'-0"
L13	58	1 1/8" ϕ	"	26'-0"
L14	58	1" ϕ	"	38'-0"
L15	62	1" ϕ	"	60'-0"
L16	31	3/4" ϕ	"	25'-0"
L17	6	3/4" ϕ	"	19'-0" Ave.
L18	2	5/8" ϕ	"	18'-4"
L19	8	1" ϕ	"	44'-0"
L20	8	1 1/8" ϕ	"	30'-6"
L21	4	7/8" ϕ	"	44'-0"
L22	4	5/8" ϕ	"	44'-0"
L23	6	3/4" ϕ	"	20'-9" Ave.
L24	2	5/8" ϕ	"	21'-5"
L25	6	3/4" ϕ	"	22'-0"
L26	2	5/8" ϕ	"	22'-0"
T1	73	1/2" ϕ	"	40'-8"
T2	32	1/2" ϕ	"	21'-5" Ave.
F	196	1/2" ϕ	Str.	4'-8"
S1	42	5/8" ϕ	Str.	40'-8"
S2	79	5/8" ϕ	Str.	40'-8"
S3	40	5/8" ϕ	Str.	21'-7" Ave.
S1	96	1/2" ϕ	Str.	41'-0" Ave.
S2	96	1/2" ϕ	Str.	7'-2" Ave.
H	10	1" ϕ	Str.	17'-11"

GENERAL NOTES

Detailed plans of falsework & forms shall be submitted to the Highway Commission & be approved by the Chief Engineer before any conc. is poured. Falsework & forms must be in place for the entire deck of one unit before any concrete in that unit is poured. All forms shall be lined with an approved form lining (Plyron, Masonite, or similar mat.) The form lining mat. shall be full size commercial panels, & joints shall be tie up, in so far as is practical. No scrap or odd sized pieces shall be used.

Provisions shall be made for adjustments of forms to correct any deformation which may occur during conc. operations.

Concrete mixer shall be of sufficient capacity to pour all conc. as indicated by the constr. joints in one continuous pour. A standby mixer shall be provided at the bridge site for emergency use, unless transit mixed conc. is used.

No construction joints other than those shown on the plans will be permitted.

Bricking the underside of the deck will not be required if a smooth & uniform finish, acceptable to the Engineer, is otherwise obtained.

A standby vibrator shall be provided at the site to take the place of any working vibrator breaking down.

Reinf. 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' ctrs.

*COPPER STRIP NOTE:
A 20 oz. Copper Waterstop shall be installed full length of the Constr. Joint. All cost of waterstop shall be included in the unit price bid per Cu. Yd. for Class "AA" Concrete.

**NEOPRENE PAD NOTE:
Neoprene Rubber Pads shall conform to the requirements of the applicable Special Provisions. Payment for furnishing & installing neoprene pads shall be included in the unit price bid per Cu. Yd. for Class "AA" Concrete.

REVISIONS			
NO.	DESCRIPTION	BY	DATE
1	Rev. Str. - 1	D.F.S.	2-6-59

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	D.F.S.	
CHECKED	R.A.R.	11/29/57
APPROVED		
SQUAD: BENHAM		

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 1

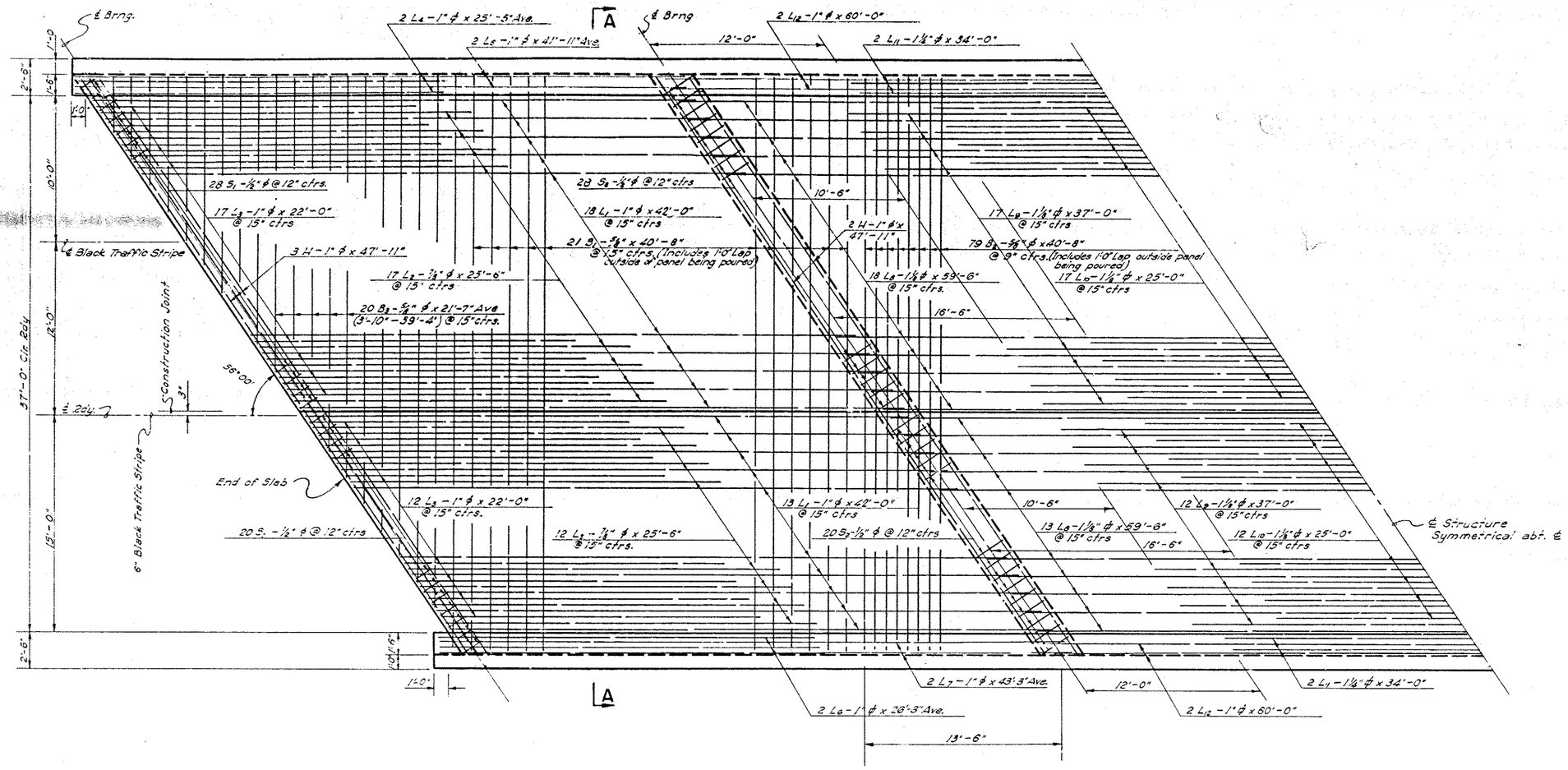
DETAILS OF SUPERSTRUCTURE

℄ STA ON ℄ SURVEY 34+25.30

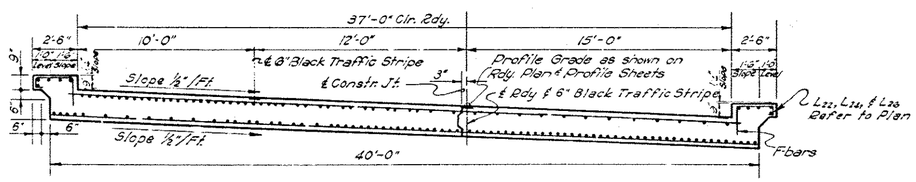
F.A. PROJ. I-381 (16) PT.-1

PROJECT NO. I-381 (16) PT-1 SHEET NO. 23

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-1	24	68



HALF PLAN OF BOTTOM OF SLAB REINFORCING



TYPICAL ROADWAY SECTION A-A

GENERAL NOTE:

Refer to Identical General Note on Index Sheet No. 23

REVISIONS				RECORD		
NO.	DESCRIPTION	BY	DATE	ITEM	BY	DATE
				DESIGN		
				DETAIL		
				TRACED	KDS	
				CHECKED	RAR	11/8/57
				APPROVED		
				SQUAD	38; HAW	

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 1

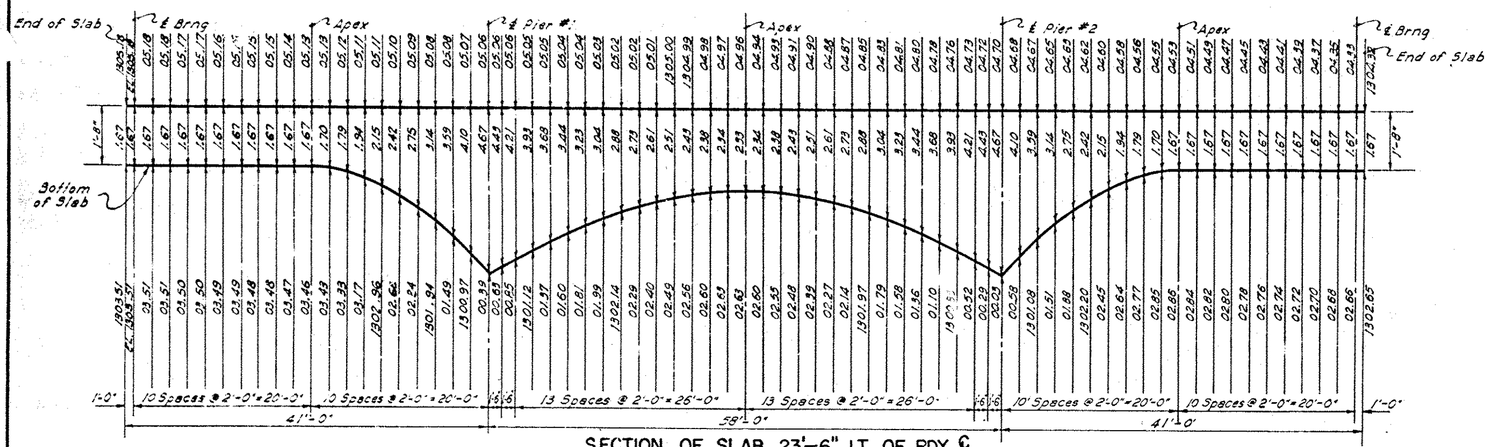
DETAILS OF SUPERSTRUCTURE

℄ STA ON ℄ SURVEY 34+25.30

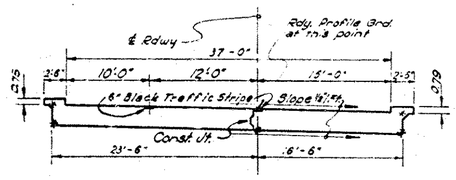
F.A. PROJ. I-381 (16)PT.-1

PROJECT NO. I-381(16)PT-1 SHEET NO. 24

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-1	25	88



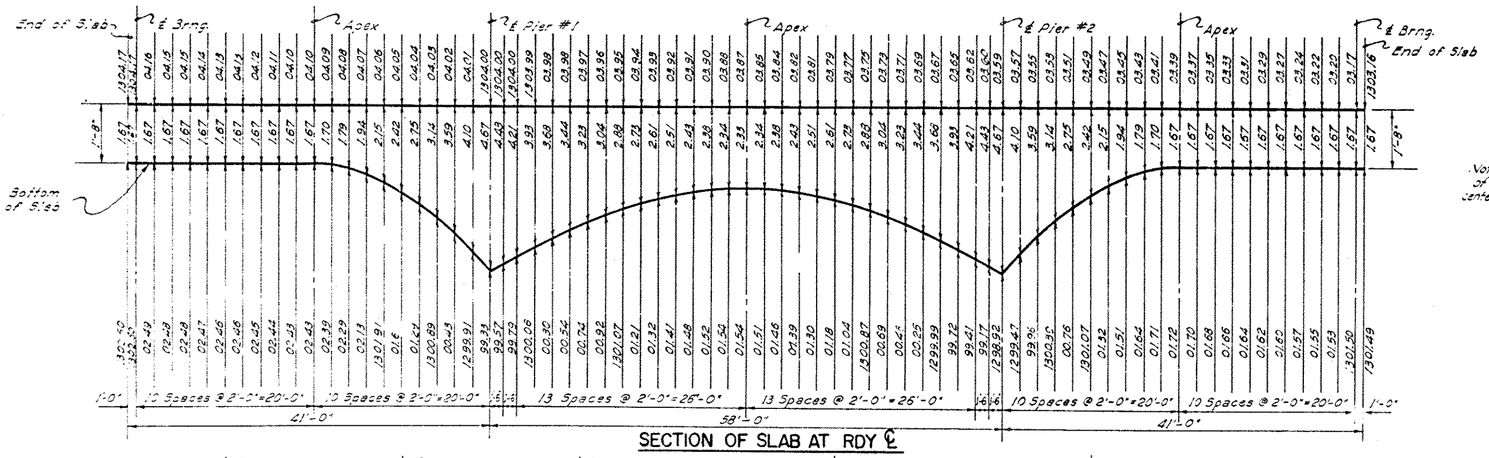
SECTION OF SLAB 23'-6" LT. OF RDY. ℄



* Points of Elevation

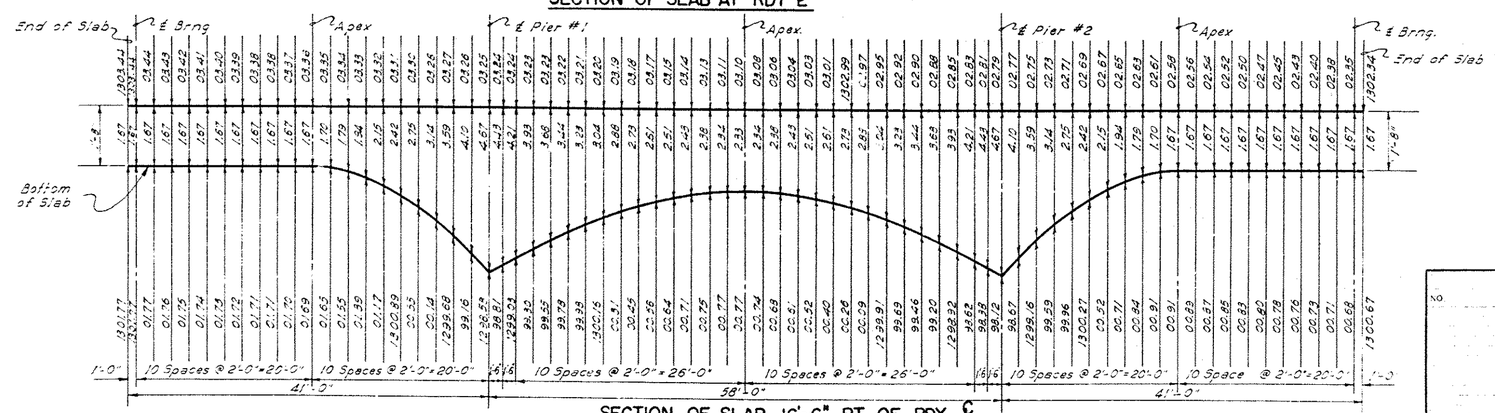
Note: For Top of Curb Elev. add 0.75' to Top of Slab Elev. at High side curb.
add 0.79' " " " " " " Low " " .

Note: Elevations & dimensions shown above are for forming Soffit Curves & top of bridge floor. Anticipated deflections due to dead load have been considered & no other allowance for these deflections shall be made.



SECTION OF SLAB AT RDY ℄

Note: Elevations shown include allowance of 3/16" for dead load deflection on center Span only.



SECTION OF SLAB 16'-6" RT. OF RDY. ℄

REVISIONS			
NO.	DESCRIPTION	BY	DATE

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	KDS	
CHECKED	RAB	
APPROVED		
SQUAD	BRVHAM	

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

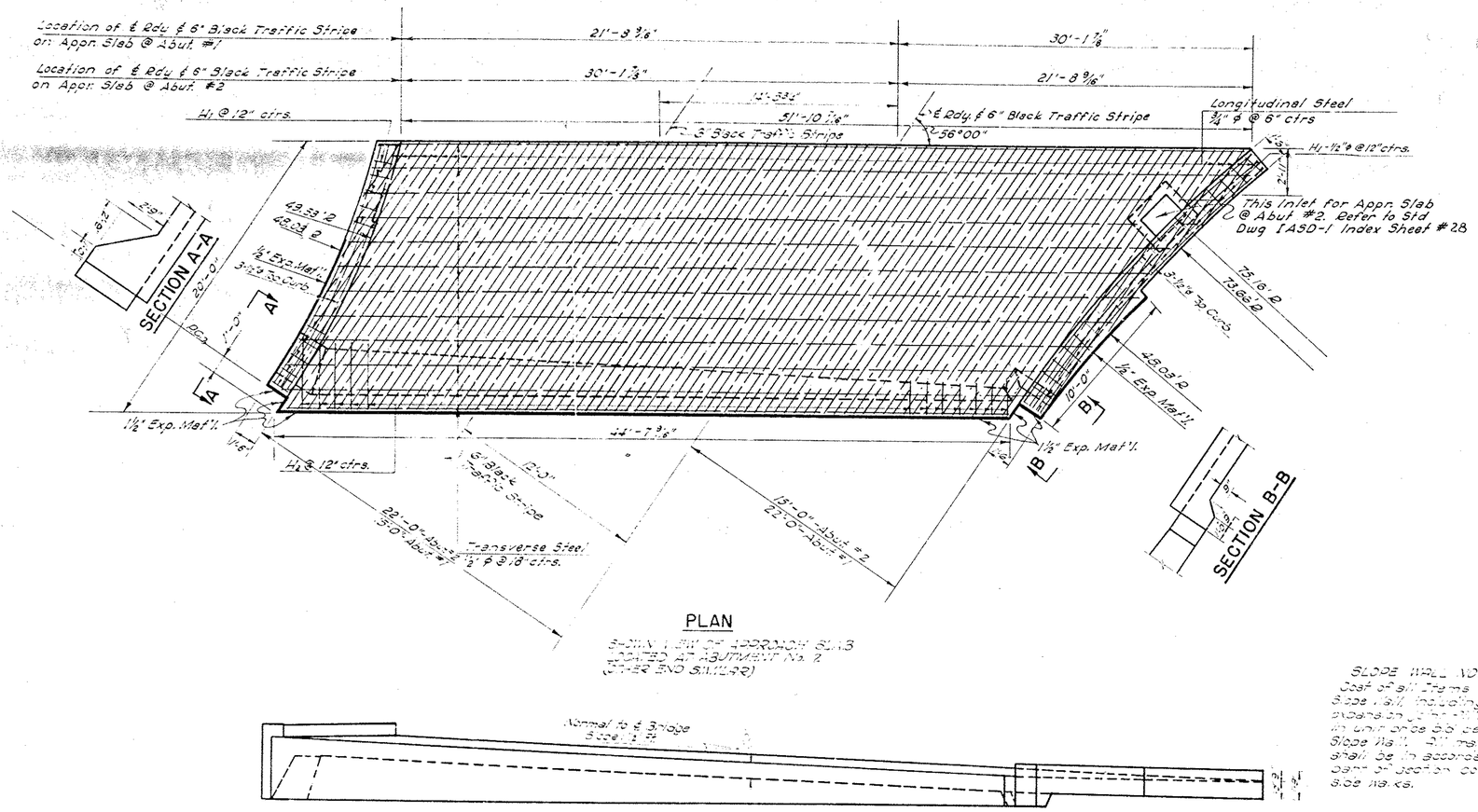
STR. NO. 1
DETAILS OF SLAB ELEVATIONS

℄ STA ON ℄ SURVEY 34+25.30

F.A. PROJ. I-381(16)PT-1

PROJECT NO. I-381(16)PT-1 SHEET NO. 25

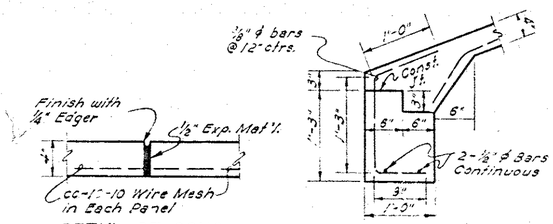
FED. ROAD DIV. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381 (16) PT-1	26	88



PLAN

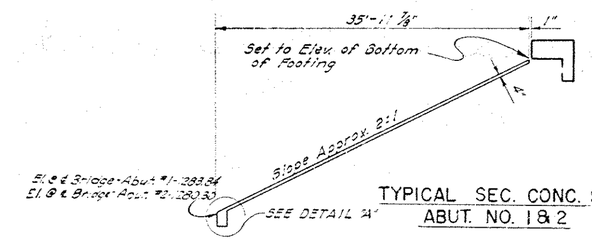
SHOWN HALF OF APPROACH SLAB LOCATED AT ABUTMENT No. 2 (OTHER END SIMILAR)

END VIEW

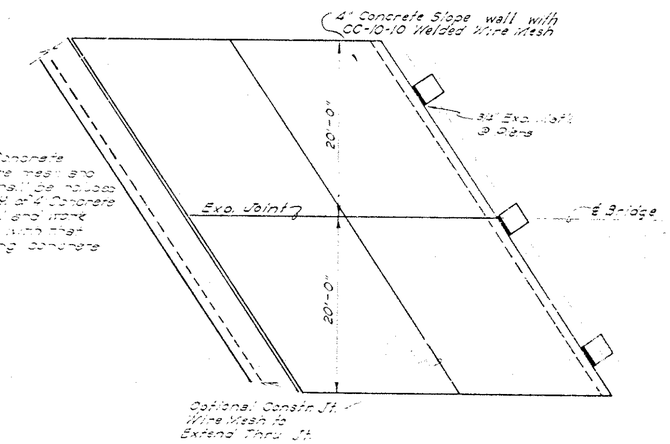


DETAIL OF CONC. SLAB JOINT

DETAIL A

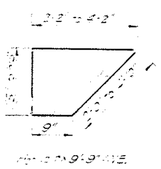


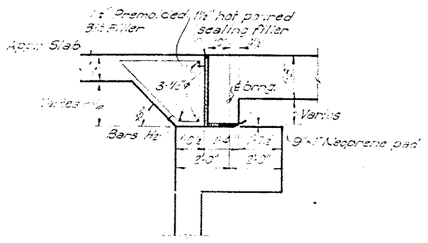
TYPICAL SEC. CONC. SLOPE WALL ABUT. NO. 1 & 2



TYPICAL PLAN OF CONC. SLOPE WALL ABUT. NO. 1 & 2

SLOPE WALL NOTE:
Cost of all items in Concrete Slope Wall including the mesh and dowels on 20'-0" high slope to be included in unit price bid per S.Y. of Concrete Slope Wall. All material and work shall be in accordance with the Dept. of Section covering Concrete Slope Walls.





SECTION OVER ABUTMENT

QUANTITIES- ONE APPROACH SLAB		
ITEM	UNIT	TOTAL
Approach Slab	S.Y.	[illegible]
Reinforcing Steel	Lbs.	3,885
6" Black Traffic Stripe	L.F.	20

* Note: Cost of Reinforcing Steel in Approach Slab shall be included in price bid per Sq. Yd. of Approach Slab.

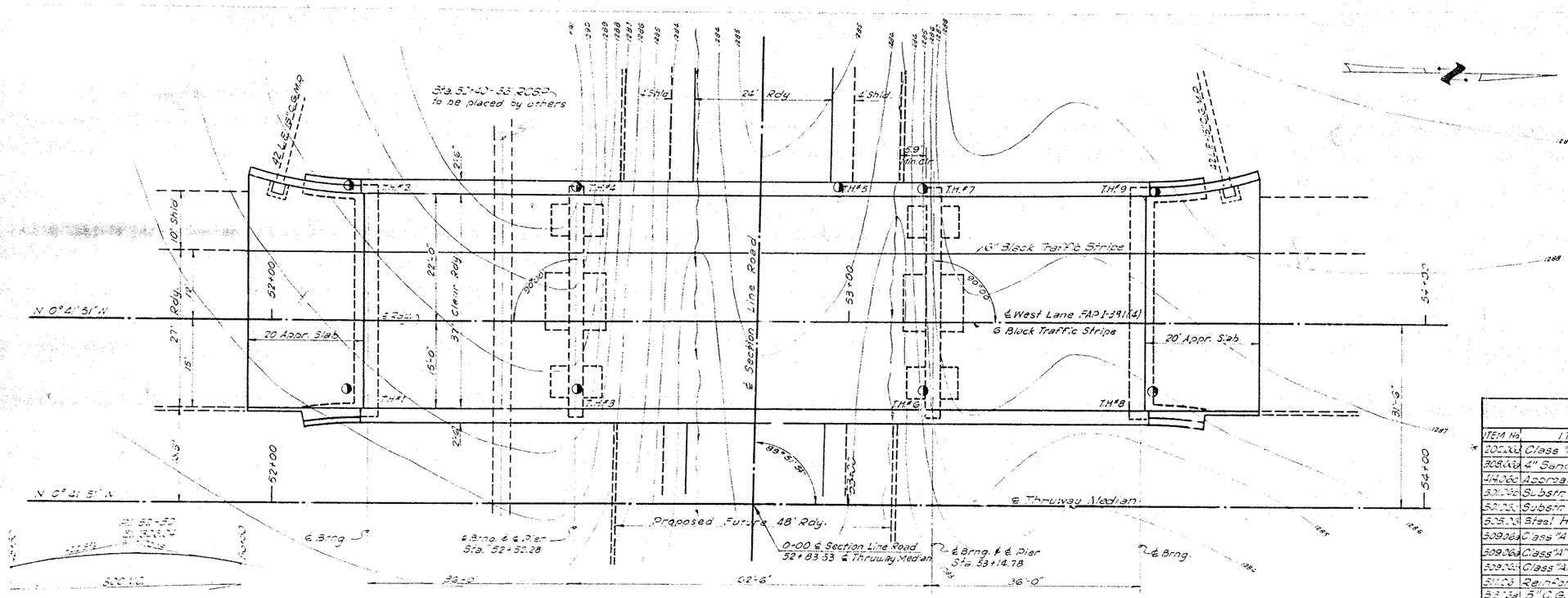
Note: Cost of Curbs on Approach Slab shall be included in price bid per S.Y. of Approach Slab.

REVISIONS			
NO.	DESCRIPTION	BY	DATE

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED		
CHECKED		
APPROVED		
SQUAD: P. HAWKINS		

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 1
DETAILS OF APPROACH SLABS
DETAILS OF SLOPE WALL
℄ STA ON ℄ SURVEY 34 + 25.30
F.A. PROJ. I-381 (16) PT-1



PLAN

Scale: 1" = 10'

VERTICAL CURVE DATA

B.M. R.R. Spike in Telephone Pole 130 Rt. Sta. 52+47 Elev. 1291.97

B.M. - R.R. Spike in Tel. Pole 38 Rt. Sta. 55+61 Elev. 1290.09

DESIGN DATA

LL: HS20-S16; PFM 20-4

Concrete	1,200 psi
Reinforcing Steel	18,000 psi
Foundation Load;	
Abutments	9 Tons
Piers: Direct Load	8 Tons

SUMMARY OF QUANTITIES

ITEM No.	ITEM	UNIT	Abuts	Piers	Superstruct.	Bridge	Rdy.
202.00	Class "D" Excavation	C.Y.					200
308.06a	4" Sand Cushion	S.Y.					180.8
414.06c	Approach Slabs	S.Y.					120.8
501.06c	Substr. Excav. - Common	C.Y.	160			160	
501.06	Substr. Excav. - Rock	C.Y.		104		104	
505.03	Steel Handrailing	L.F.			271.5	271.5	
509.06a	Class "A" Concrete	C.Y.	570	68.4		638.4	1.2
509.06a	Class "A" Conc. in Pier Bases	C.Y.		46		46	
509.06b	Class "AA" Concrete	C.Y.			378.1	378.1	
511.03	Reinforcing Steel	LBS.	7,800	4,950	68,870	89,620	630
535.13a	5" C.G.M. Pipe	L.F.					84
542.06a	16" P.R.C. Piling	L.F.	303			303	
611.03h	Inlet Frame & Grate	Ea.					2
624.03a	5" Black Traffic Stripe	L.F.			272	272	60
806a	4" Concrete Slope Wall	S.Y.				320.8	
806.3	Aluminum Telephone Ducts	L.F.			271.5	271.5	

* Non-Participating Item

GENERAL NOTES

All construction & materials shall be in accordance with the Oklahoma Standard Specifications of 1954 & Special Provisions.

All exposed concrete surfaces shall have a Carborundum Finish.

All reinforcing steel bars shall conform to A.S.T.M. Specifications A-305-43.

Piling shall be driven using leads of sufficient strength to control piles.

Piling shall be driven to practical refusal if above grade or to a minimum bearing of 50 tons if at or below grade.

All piling shall be driven through the compacted fill, 12" ø Pilot holes shall be drilled to Elev. 1295.00 @ Abut. No. 1 and Abut. No. 2. Then 8" ø Pilot holes to Elev. 1285.00 @ Abut. No. 1 and Abut. No. 2. All cost of Pilot holes shall be included in the unit price bid for 16" ø P.C. Piling.

Contractor shall submit bids on both types of handrail. The type of rail used will be determined by bids received.

Bridge bearing pedestals shall not be raised and shall be covered only with form facing. Foundation materials is not found on plan elevations.

SPECIAL PROVISIONS

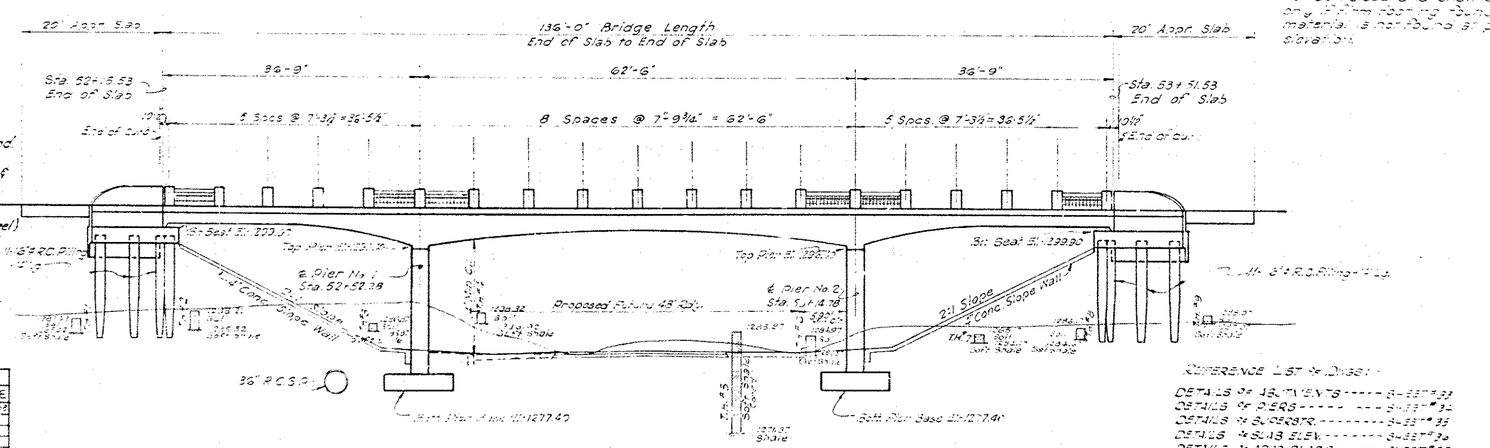
See Special Provisions included in the Proposal for Curing Conc. with Membrane Curing Compound for Bridge structures including Parapet walls, Retaining walls & Railing 414-6(a) Rev. 7-27-55

Equipment for Driving Piles 512-1(a) Reinforcing Steel, Pile Steel) 723-1(a) Rev. 2-21-57

Black Traffic Stripe on Black Traffic Stripe Paint 624-1(a) Rev. 3-9-55

Neoprene Rubber for bearing devices

REVISIONS			
NO.	DESCRIPTION	BY	DATE
1	Add Special Provisions	SFS	12-19-59



GENERAL ELEVATION

Scale: 1" = 10'

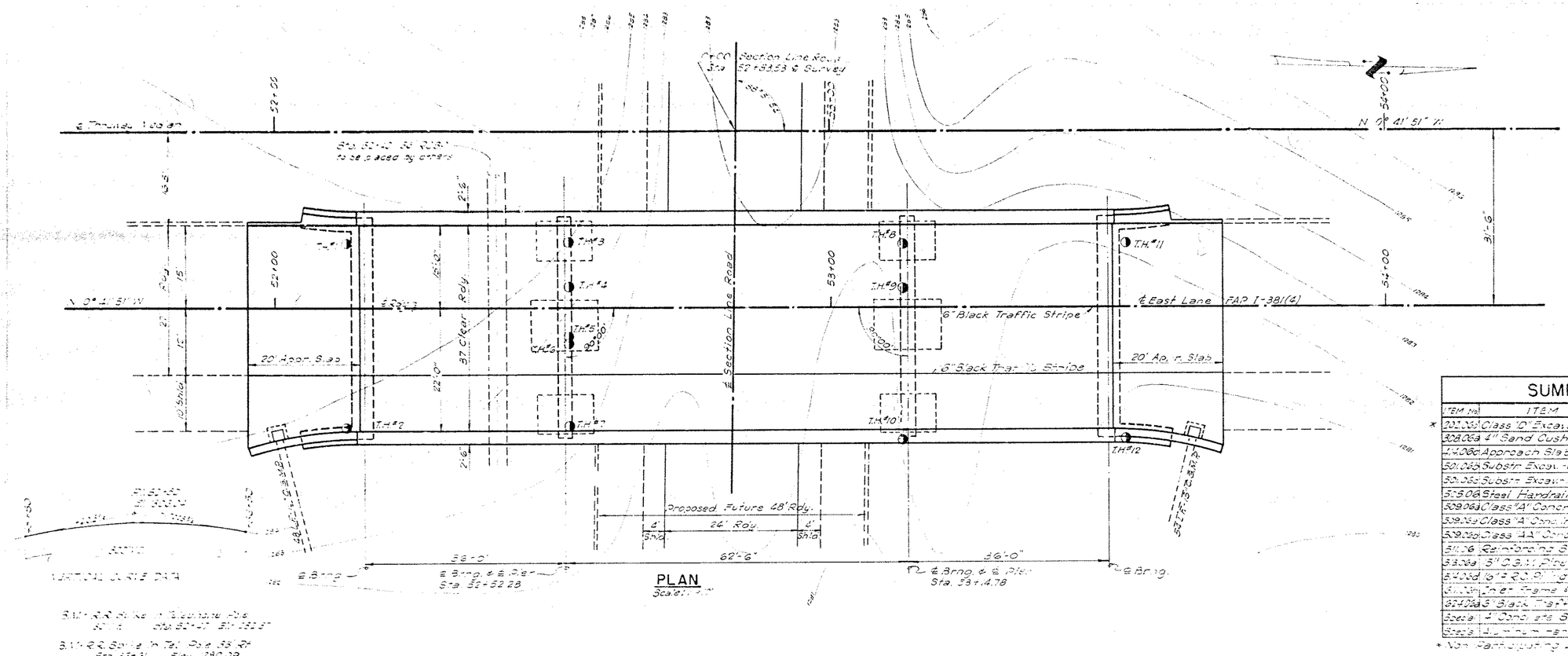
REFERENCE LIST * Dwgs.

DETAILS OF ABUTMENTS ------ S-53*22
DETAILS OF PIERS ------ S-53*31
DETAILS * SUBSTR. ------ S-53*35
DETAILS * SLAB ELEV. ------ S-53*36
DETAILS * APPR. SLABS ------ S-53*37
DETAILS * HANDRAILING ------ S-53*38 & 39
DETAILS * PLAN ------ S-53*27

RECORD	
ITEM	BY DATE
DESIGN	
DETAIL	
TRACED	
CHECKED	
APPR'D	
SQUAD	

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLA.

STR. No. 2
GENERAL ELEV., PLAN & SUMMARY OF QUANTITIES
36'-62.5'-36' CONC. SLAB SPANS
37' RDY. & 2-18" S.C.'s
℄ STA. ON ℄ SURVEY 52 + 83.53
F.A. PROJ. I-381 (16) PT.-1



DESIGN DATA

LL = HS-20-S16-33; ADT = 20-4
Concrete 1,000 psi
Reinforcing Steel 18,000 psi
Foundation Loads:
Abutments 13 Tons
Piers: Direct Load 3 Tons

SUMMARY OF QUANTITIES

ITEM No.	ITEM	UNIT	Abuts.	Piers	Superstruct.	Bridge	Rdy.
203.06b	Class "D" Excavation	C.Y.					200
308.06a	4" Sand Cushion	S.Y.					180.8
414.06a	Approach Slabs	S.Y.					180.8
501.06b	Substr. Excav.-Common	C.Y.	50	70		350	
501.06b	Substr. Excav.-Rock	C.Y.		58		58	
515.06	Steel Handrailing	L.F.			271.5	271.5	
509.06a	Class "A" Concrete	C.Y.	370	20		1290	12
509.06a	Class "A" Concrete Pier Bases	C.Y.		48		48	
509.06b	Class "AA" Concrete	C.Y.			578	578	
511.06	Reinforcing Steel	Lbs.	7800	5,880	86,970	90,850	50
533.06a	5" C.G.I. Pipe	L.F.					12
533.06d	18" R.C. Pipe	L.F.	440			440	
611.06	Inlet Frame & Grate	Ea.					2
624.06a	6" Black Traffic Stripe	L.F.			270	270	90
Special	4" Concrete Slope Wall	S.Y.				335.0	
Special	Aluminum Handrailing	L.F.			275	275	

* Non-Participating Item

GENERAL NOTES

All construction & materials shall be in accordance with the Oklahoma Standard Specifications of 1954 & Special Provisions.

All exposed concrete surface shall have a Carborundum finish.

All reinforcing steel bars shall conform to A.S.T.M. Specifications A-305-49.

Piling shall be driven using leads of sufficient strength to control piles.

Piling shall be driven to practical refusal in above grade or to a minimum bearing of 50 tons if set on below grade.

All equipment piling shall be driven through the compacted fill. (2) Pilot holes shall be drilled to Elev. 1283.0 @ Abut. No. 1 and to Elev. 1283.0 @ Abut. No. 2. Then 8" ø Pilot holes to Elev. 1284.0 @ Abut. No. 1 and to Elev. 1284.0 @ Abut. No. 2. All cost of Pilot holes shall be included in the unit price bid for the R.C. Piling.

Contractor shall submit prices on both types of reinforcing. Type of reinforcing used will be determined by price received.

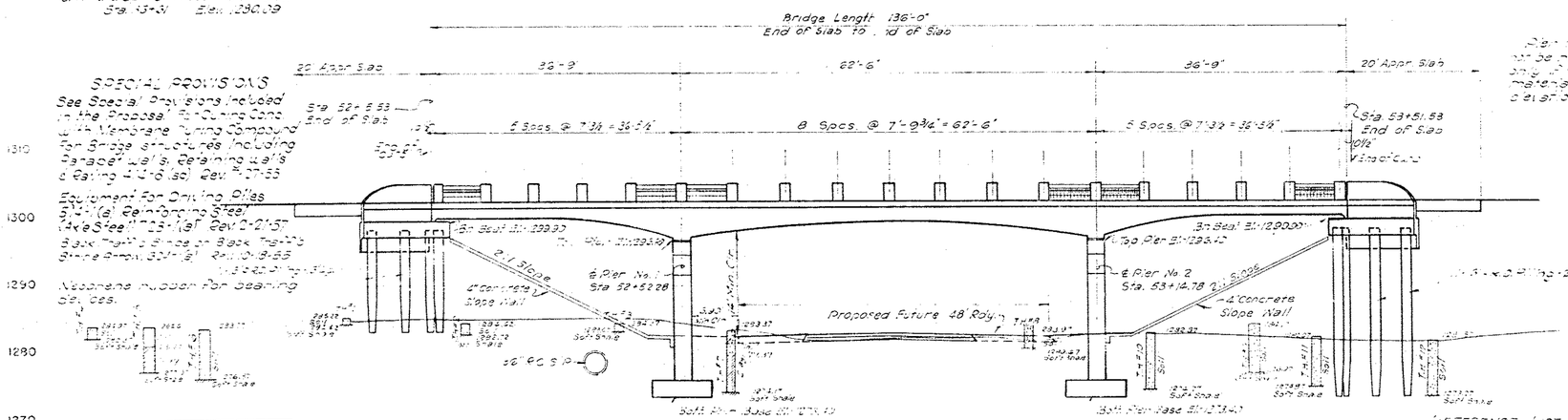
SPECIAL PROVISIONS

See Special Provisions included in the Proposal for Curing Compound with Membrane Curing Compound for Bridge Structures (Including Bridge Decks), Retaining Walls & Railing (Rev. 11-1-55)

Equipment for Driving Piles 514.01(g) Reinforcing Steel 14x14 Steel H-Piles (Rev. 2-21-57)

Black Traffic Stripe on Black Traffic Stripe (Rev. 10-18-55)

Neoprene Rubber Pad for Bearing Devices.



GENERAL ELEVATION

Scale: 1" = 10'

REVISIONS			
NO.	DESCRIPTION	BY	DATE

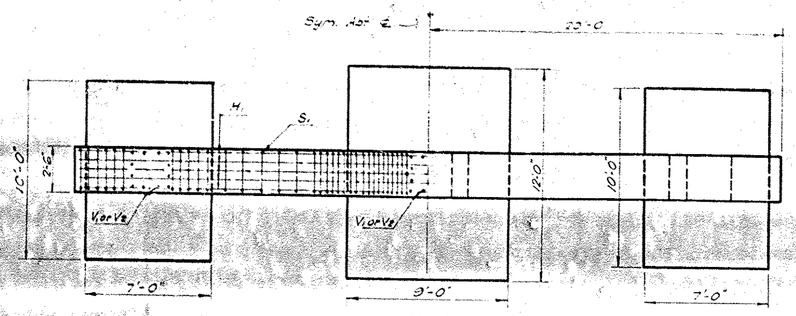
RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED		
CHECKED		
APPR'D		
SQUAD		

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLA.

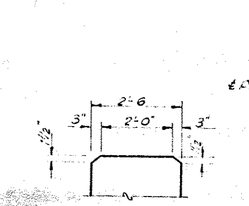
STR. No. 3

GENERAL ELEV., PLAN & SUMMARY OF QUANTITIES
36'-62.5'-36' CONC. SLAB SPANS
37' RDY. & 2-18" S.C.'s
℄ STA. ON ℄ SURVEY 52+83.53
F.A. PROJ. I-381 (16) PT-1

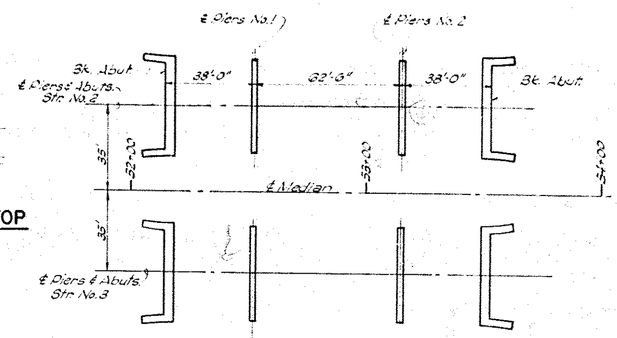
FED. ROAD SECT. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
5	OKLA.	I-381(16)PT-1	34	88



PLAN

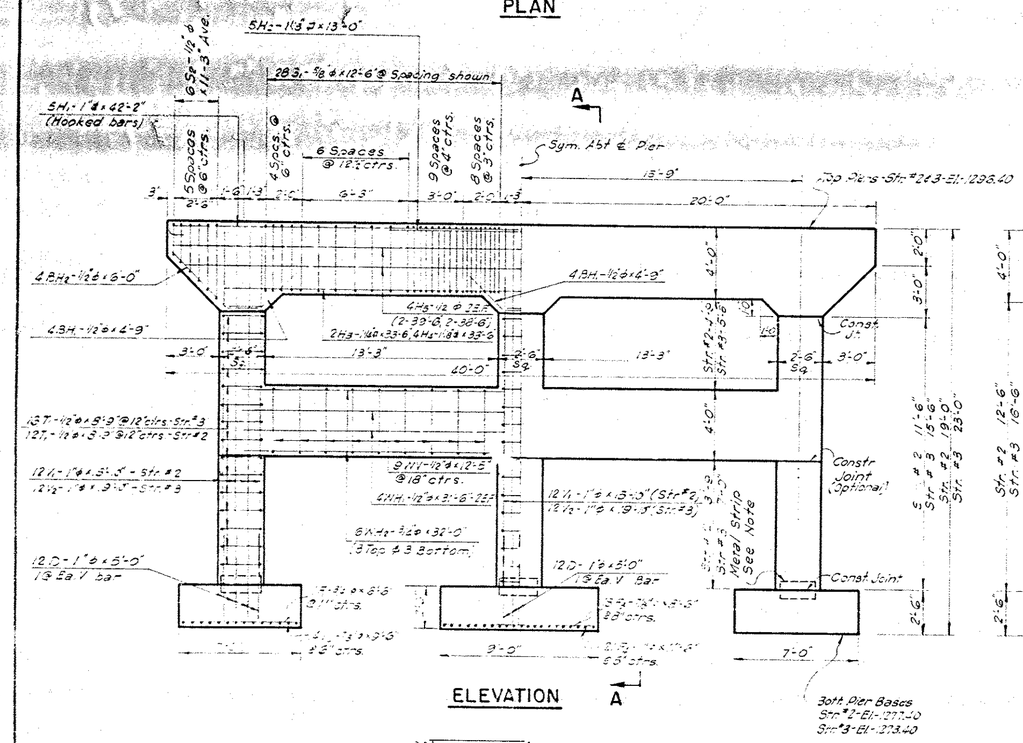


DETAIL OF PIER TOP

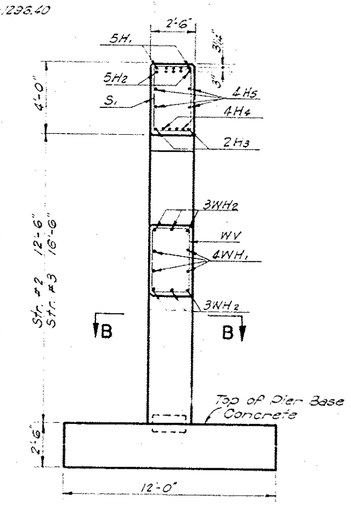


LAYOUT OF PIERS & ABUTMENTS

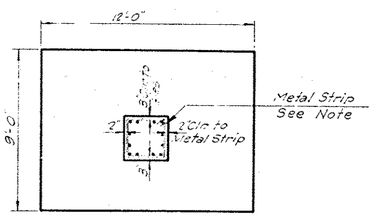
BAR LIST—ONE PIER				
Mark	No.	Size	Form	Length
H_1	5	1"φ	Bnt	42'-2"
H_2	5	1⅛"φ	Str.	13'-0"
H_3	2	1¼"φ	Str.	33'-6"
H_4	4	1⅛"φ	Str.	33'-6"
H_5	4	½"φ	Str.	39'-0" Ave.
BH_1	16	½"φ	Bnt.	4'-9"
BH_2	8	½"φ	Bnt.	6'-0"
WH_1	4	½"φ	Str.	31'-3"
WH_2	6	¾"φ	Str.	32'-0"
WV	18	½"φ	Bnt.	12'-5"
S_1	56	⅝"φ	Bnt.	12'-6"
S_2	12	½"φ	Bnt.	11'-3" Ave.
D	36	1"φ	Str.	5'-0"
F_1	22	¾"φ	Str.	6'-6"
F_2	28	⅞"φ	Str.	9'-0"
F_3	18	⅞"φ	Str.	8'-6"
F_4	21	1"φ	Str.	11'-6"
Str. # 2 / Str. #3				
V_1		36	1"φ	Str. 15'-0"
	V_2	36	1"φ	Str. 19'-10"
T_1		36	½"φ	Bnt. 5'-9"
	T_2	48	½"φ	Bnt. 3'-9"



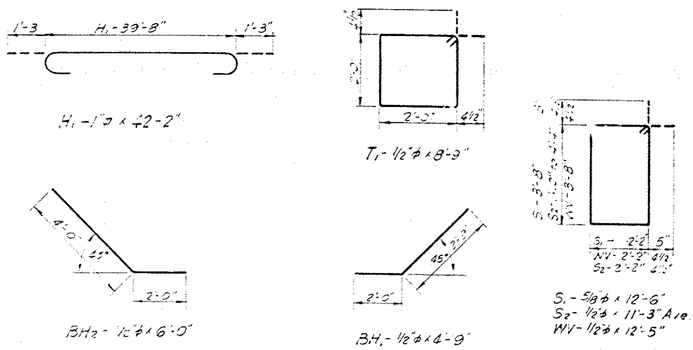
ELEVATION



SECTION A-A



SECTION B-B



NOTES:

All reinforcing steel bars shall conform to A.S.T.M. specifications A-305-49.

All exposed edges shall have a ¾" chamfer unless otherwise noted.

All concrete shall be poured dry.

NOTE: METAL STRIP & PIER BASE CONCRETE
Refer to identical notes on Detail of Piers-Index Sheet #20.

QUANTITIES—ONE PIER					
ITEM	UNIT	Str. No. 2 Pier No. 1	Str. No. 2 Pier No. 2	Str. No. 3 Pier No. 1	Str. No. 3 Pier No. 2
Reinforcing Steel	Lbs.	7450	7450	7900	7900
Class "A" Concrete	C.Y.	33.2	33.2	33.0	33.0
Class "H" Conc. in Pier Bases	C.Y.	28.0	28.0	28.0	28.0
Subst'n Excav.-Common	C.Y.	0	0	70	100
Subst'n Excav.-Rock	C.Y.	62	62	58	35

RECORD	
ITEM	BY DATE
PLACED	
TOTAL	
TRACED	J.S.
CHECKED	R.R.R. 1-15-51
APPROVED	
SQUID. B.S.W.H.A.W.	

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

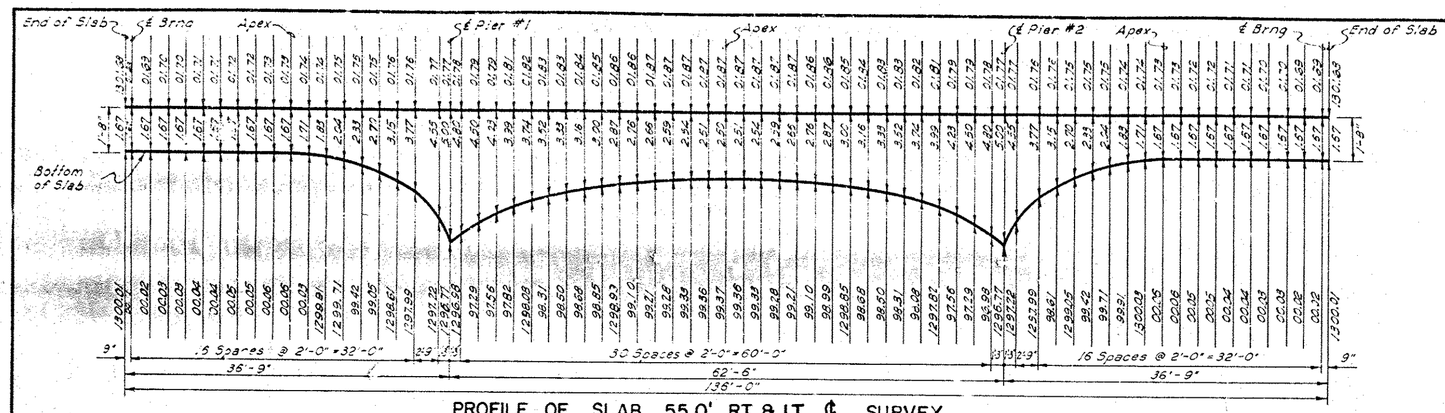
STR. NO. 2 & NO. 3
DETAILS OF PIERS

℄ STA. ON ℄ SURVEY 52+83.53

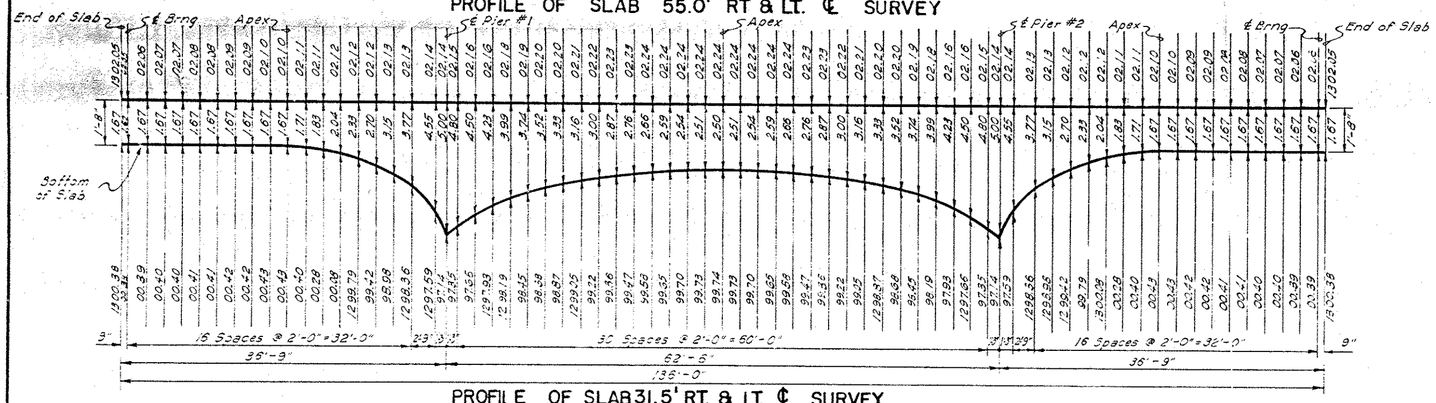
FA. PROJ. I-381 (16) PT.-1

PROJECT NO. I-381(16)PT-1 SHEET NO. 34

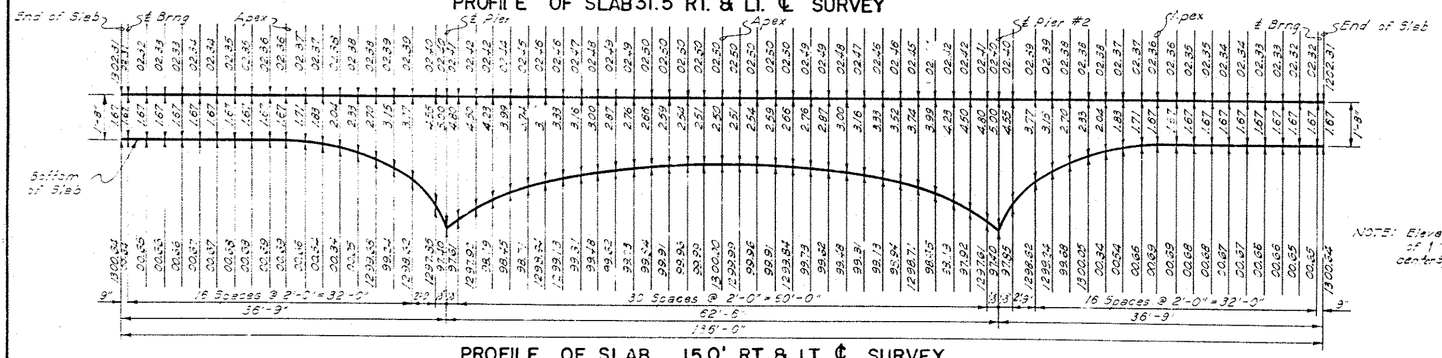
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-1	36	88



PROFILE OF SLAB 55.0' RT & LT. ℄ SURVEY

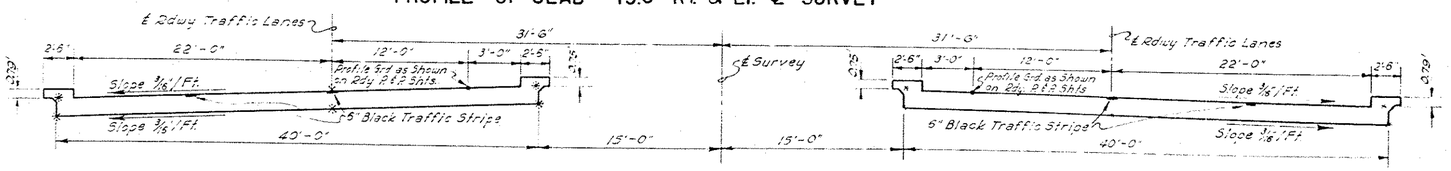


PROFILE OF SLAB 31.5' RT. & LT. ℄ SURVEY



PROFILE OF SLAB 15.0' RT. & LT. ℄ SURVEY

NOTE: Elevations shown include allowance of 1" for dead load deflection on centerspan only.



* Points of Elevation

NOTE: For top of Curb Elevation add 0.75' to top of Slab Elevation, at Median Curb.
add 0.79' " " " " " " Outside " .

NOTE: Elevations & Dimensions shown above are for forming Soffit Curves & top of Bridge Floor. Anticipated deflections due to dead load have been considered & no other allowance for these deflections shall be made.

REVISIONS			
NO	DESCRIPTION	BY	DATE

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	KDS	
CHECKED	RRR	5/57
APPROVED		
SQUAD	BENHAM	

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

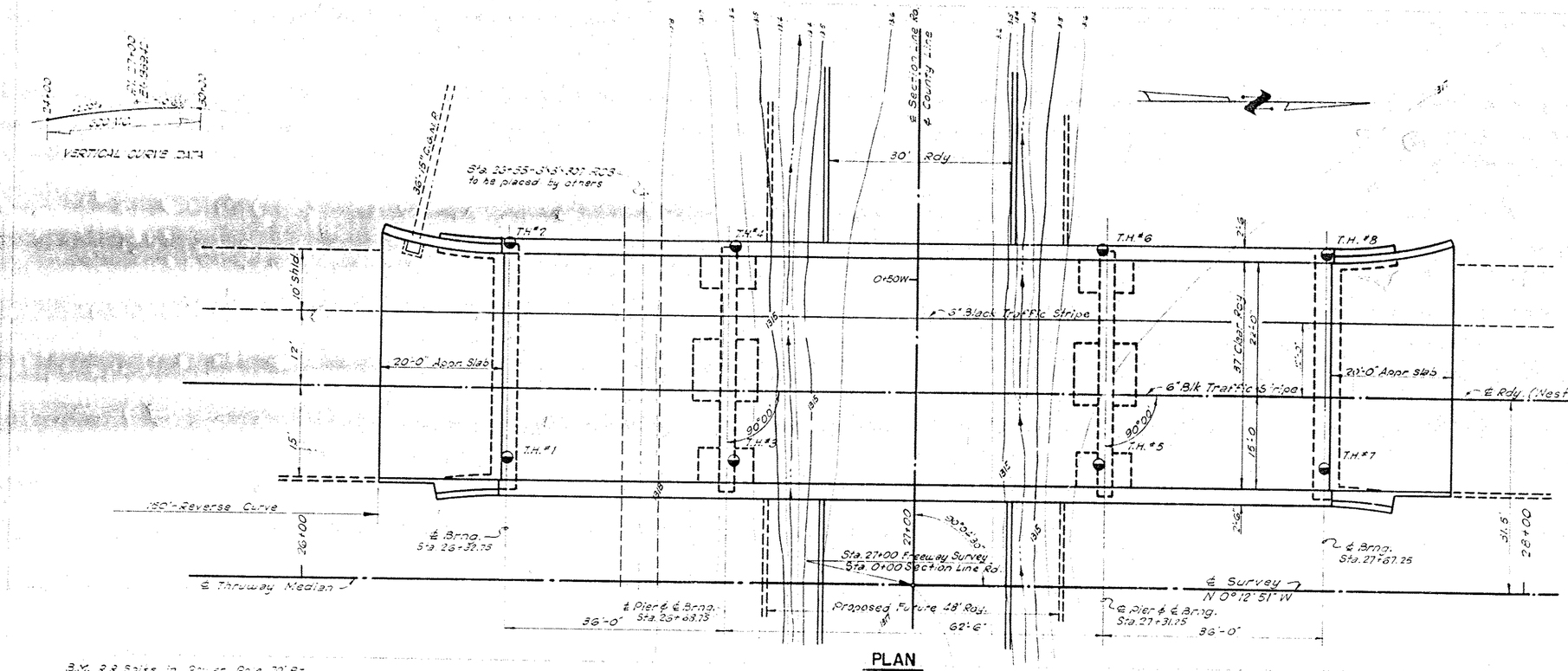
STRUCTURES NO. 2 & 3
DETAILS OF SLAB ELEVATIONS

℄ STA ON ℄ SURVEY 52 + 83.53

F.A. PROJ. I-381 (16)PT.-1

DESIGN DATA

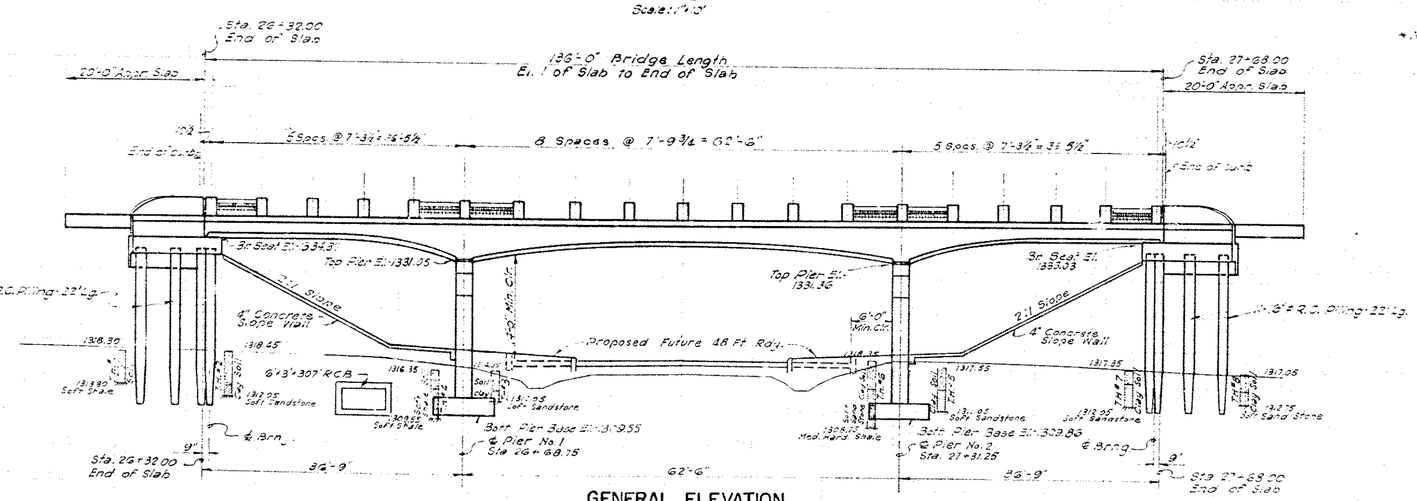
L.L.: H20-S16-53; ADM 20-4
Concrete 1,000 psi
Reinforcing Steel 18,000 psi
Foundation Loads
Abutments 13 Piles
Piers: Direct Load 37 T



PLAN

Scale: 1"=10'

B.M. R.R. Spike in Power Pole 10' Rt. Sta. 26+71 Elev. 1317.00
B.M. R.R. Spike in Power Pole 64' Rt. Sta. 27+39 Elev. 1332.36



GENERAL ELEVATION

Scale: 1"=10'

LIST OF THE SPECIAL PROVISION

See Special Provisions included in the Proposal for Curing Conc. with Membrane Curing Compound For Bridge structures including Parapet walls, Retaining walls & Railing 414-6 (a), Rev. 7-27-55
Concrete Pocket for bearing devices
Equipment For Driving Piles 514-1(a) Reinforcing Steel (Axle steel) 723-1(a) Rev. 2-21-57
Black Traffic Stripe or Black Traffic Stripe Arrow, 824-1(a) Rev. 10-8-55

REVISION			
NO	DESCRIPTION	BY	DATE
1	Add Spec. Provisions	DTS	2-9-88

REFERENCE LIST OF DRAWINGS

DETAILS OF ABUTMENTS ..... SHEET # 33
DETAILS OF PIERS ..... SHEET # 40
DETAILS OF SUPERSTR. ..... SHEET # 35
DETAILS OF SLAB SLEEVE ..... SHEET # 41
DETAILS OF DECK SLABS ..... SHEET # 37
DETAILS OF HANDRAILING ..... SHEET # 30 & 31
DETAILS OF PILING ..... SHEET # 27

SUMMARY OF QUANTITIES

ITEM No.	ITEM	UNIT	Abuts.	Piers	Super-Struct.	Bridge	Rdy.
202.06d	Class "D" Excavation	C.Y.					200
302.06a	4" Sand Cushion	S.Y.					302.8
414.06c	Approach Slabs	S.Y.					302.8
501.06b	Substr. Excav.-Common	C.Y.	180	170		350	
501.06c	Substr. Excav.-Rock	C.Y.		48		48	
505.06	Steel Handrailing	L.F.			271.5	271.5	
509.06a	Class "A" Concrete	C.Y.	510	693		1203	0.5
509.06a	Class "A" Conc. in Pier Bases	C.Y.		46		46	
509.06b	Class "AA" Concrete	C.Y.			576.1	576.1	
511.06	Reinforcing Steel	Lbs.	7,800	9,520	66,670	83,990	15
513.06a	15" C.S.M. Pipe	L.F.					36
514.06a	16" ϕ R.C. Piling	L.F.	454			454	
611.06a	Inlet Frame & Grate	Ea.					1
624.06a	3" Black Traffic Stripe	L.F.			272	272	50
Special	4" Concrete Slope Wall	S.Y.				302	
Special	Aluminum Handrailing	L.F.			271.5	271.5	

* Non-Participating Item

GENERAL NOTES

All construction & materials shall be in accordance with the Oklahoma Standard Specification of 1954 & Special Provisions.

All exposed concrete surfaces shall have a Carborundum finish.

All reinforcing steel bars shall conform to A.S.T.M. Specifications A-305-49.

Piling shall be driven using leads of sufficient strength to control piles.

Piling shall be driven to practical refusal if above grade or to a minimum bearing of 50 tons if at or below grade.

All Abutment Piling shall be driven through the compacted Fill. 12" Pilot holes shall be drilled to Elev. 1314.00 @ Abut. No. 1 and Elev. 1314.50 @ Abut. No. 2. Then 8" ϕ Pilot holes to Elev. 1311.50 @ Abut. No. 1 and to Elev. 1312.00 @ Abut. No. 2. All cost of Pilot holes shall be included in the unit price bid for 16" ϕ R.C. Piling.

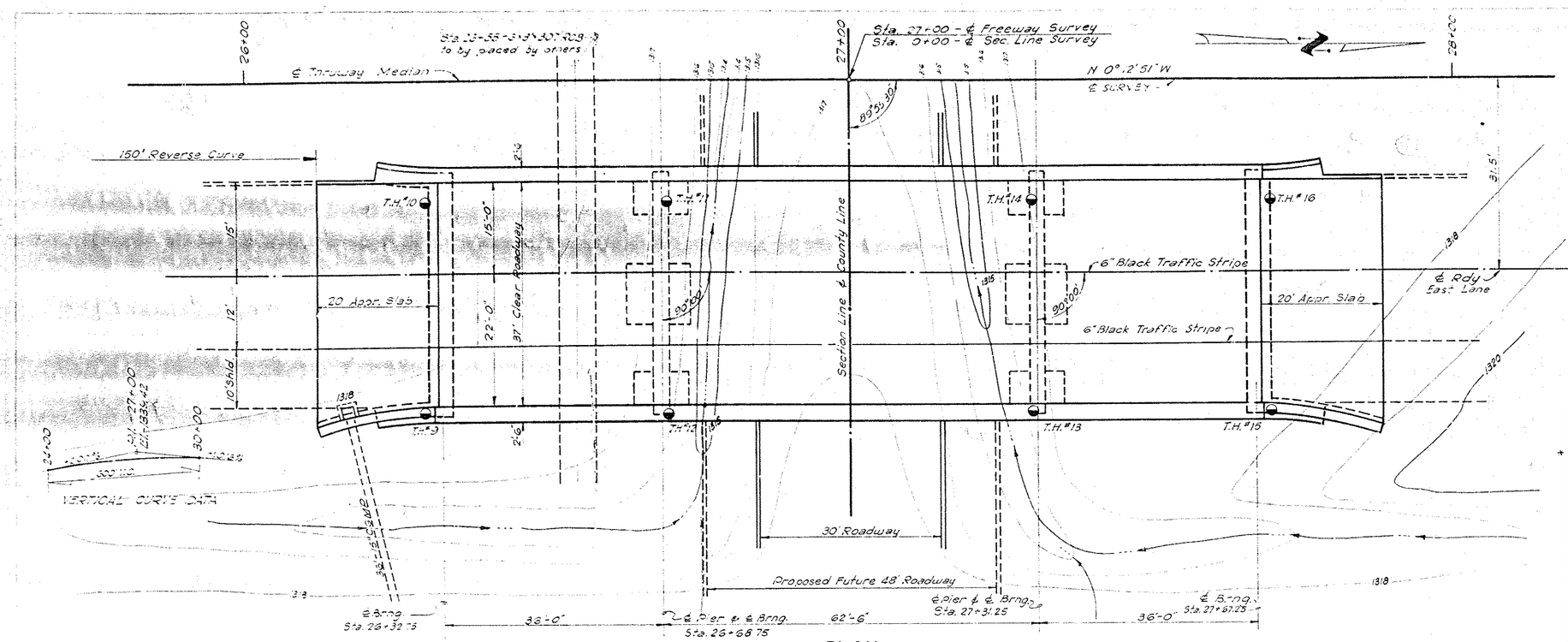
Contractor shall submit bids on both types of handrailing. Type of rail used will be determined by bids received.

Reinforcing steel bars shall not be heated and shall be bended and shall not be bended at temperatures less than 60° F.

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	JS	
CHECKED	RCB	
APPROV'D		
SQUAD: BEN-HAW		

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 4
GENERAL ELEVATION, PLAN
& SUMMARY OF QUANTITIES
36'-62.5'-36' CONC. SLAB SPANS
37' RDY. & 2-18" S.C.'s
℄ STA. ON ℄ SURVEY 27+00
F.A. PROJ. I-381 (16) PT.-1

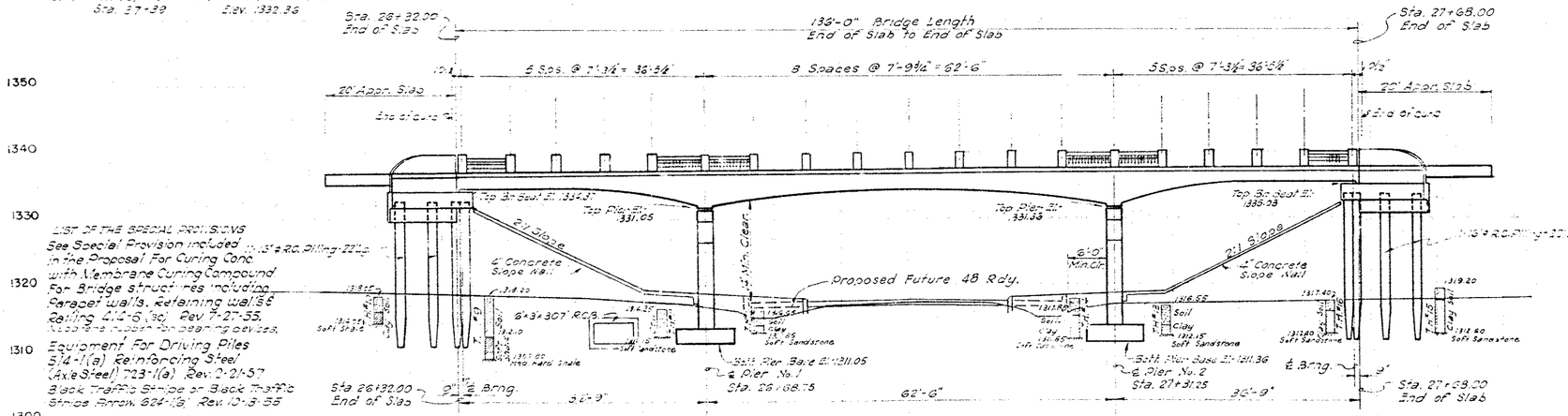


PLAN

Scale: 1" = 10'

B.M. R.R. Spike in Power Pole 70' Rt. Sta. 26+71 Elev. 1317.00

B.M. R.R. Spike in Power Pole 64' Rt. Sta. 27+39 Elev. 1332.36



GENERAL ELEVATION

Scale: 1" = 10'

LIST OF THE SPECIAL PROVISIONS

See Special Provision included in the Proposal For Curing Conc. with Membrane Curing Compound for Bridge structures including Parapet walls, Retaining walls & Railing 414-6 (a) Rev. 9-27-55.

Equipment For Driving Piles 514-1(a) Reinforcing Steel (Axle Steel) 723-1(a) Rev. 2-21-57

Black Traffic Stripe or Black Traffic Stripe Approx. 624-1(a) Rev. 10-3-55

REVISION			
NO	DESRIPTION	BY	DATE
1	70 Spl. End Spans	[illegible]	[illegible]

REFERENCE LIST & INDEX

DETAILS OF ABUTMENTS ----- SHEET # 33
DETAILS OF PIERS ----------- SHEET # 40
DETAILS OF SUPERSTR. ------- SHEET # 35
DETAILS OF SLAB SLEV. ------ SHEET # 41
DETAILS OF APPR. SLABS ------ SHEET # 37
DETAILS OF HANDRAILING ------ SHEET # 38 & 39
DETAILS OF PILING ---------- SHEET # 27

DESIGN DATA

LL. = 20-S.6-53; 20W 20 +

Concrete	1,000 psi
Reinforcing Steel	18,000 psi
Foundation Loads	
Abutments	13 Tons
Piers: Direct Load	3 T/□'

SUMMARY OF QUANTITIES

ITEM No.	ITEM	UNIT	Abuts.	Piers	Superstruct.	Bridge	Rdy.
* 202.06a	Class "D" Excavation	C.Y.					200
308.06a	4" Sand Cushion	S.Y.					180.8
414.06a	Approach Slabs	S.Y.					180.8
601.06b	Subsstn Excav.-Common	C.Y.	180	180		360	
601.06c	Subsstn Excav.-Rock	C.Y.		9		9	
605.06	Steel Handrailing	L.F.			271.5	271.5	
609.06a	Class "A" Concrete	C.Y.	57.0	67.8		124.8	0.6
609.06a	Class "A" Concr. in Pier Bases	C.Y.		46		46	
609.06b	Class "AA" Concrete	C.Y.			573.1	573.1	
611.06	Reinforcing Steel	Lbs.	7300	15,900	16,630	39,830	75
618.06a	15" C.S.M. Pipe	L.F.					36
634.06a	6" x 12" Pipe	L.F.	484			484	
811.06A	Inlet Frame & Grate	Ea.					1
822.06a & 822.06b	Black Traffic Stripe	L.F.			270	270	180
Special	4" Concrete Slope Wall	C.Y.				375.8	
Special	Aluminum Handrailing	L.F.			271.5	271.5	

* Non-Participating Item

GENERAL NOTES

All construction & materials shall be in accordance with the Oklahoma Standard Specifications of 1954 & Special Provisions.

All exposed concrete surfaces shall have a Carborundum finish.

All reinforcing steel bars shall conform to ASTM Specifications A-305-49

Piling shall be driven using leads of sufficient strength to control piling.

Piling shall be driven to practical refusal if above grade or to a minimum bearing of 50 tons if at or below grade.

All Abutment Piling shall be driven through the compacted fill. 10" Pilot holes shall be drilled to Elev. 1314.00 @ Abut. No. 1 and Elev. 1314.50 @ Abut. No. 2. Then 8" Pilot holes to Elev. 1311.50 @ Abut. No. 1 and Elev. 1312.00 @ Abut. No. 2. All cost of Pilot holes shall be included in the unit price bid for 14" R.C. Piling.

Contractor shall submit plans on both types of Handrailing (type of rail used) will be determined by plans received.

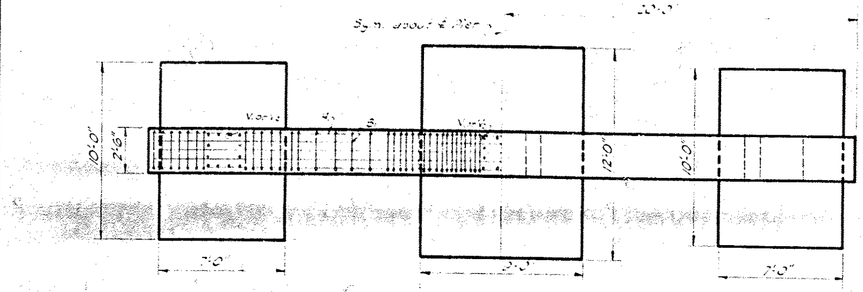
Overhanging deflections shall not be raised and shall be lowered only if from foundation material is not found at plan elevation.

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	B	
CHECKED	PRR	
APPROV'D		
SQUAD:	BEV-AW	

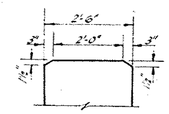
OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 5
GENERAL ELEVATION, PLAN
& SUMMARY OF QUANTITIES
36'-62.5'-36' CONC. SLAB SPANS
37' RDY. & 2-18" S.C.'s
℄ STA. ON ℄ SURVEY 27+00
F.A. PROJ. I-381 (16) PT.-1

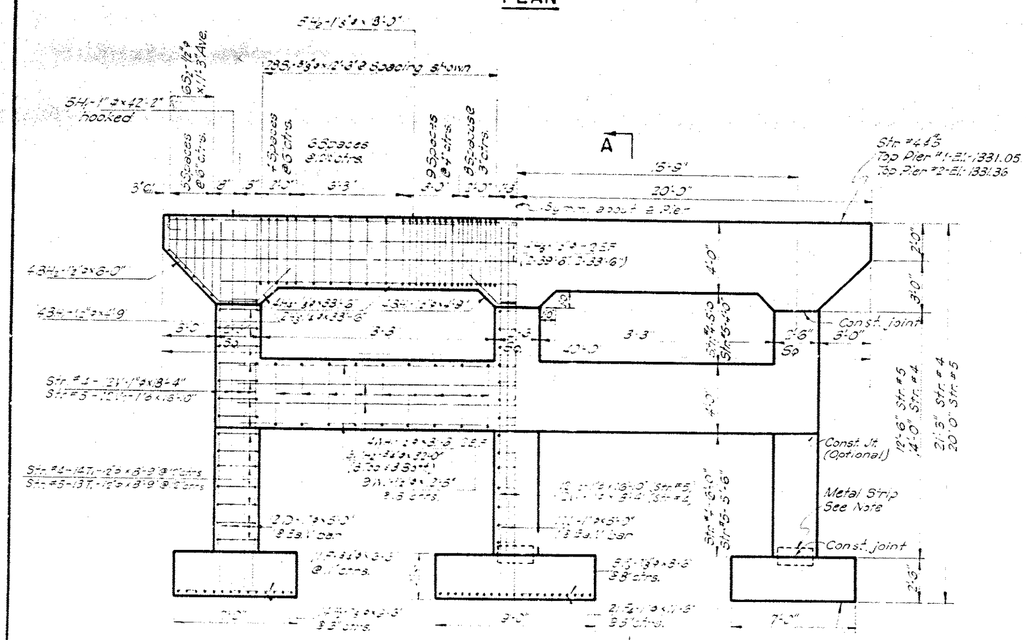
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16) PT-1	40	88



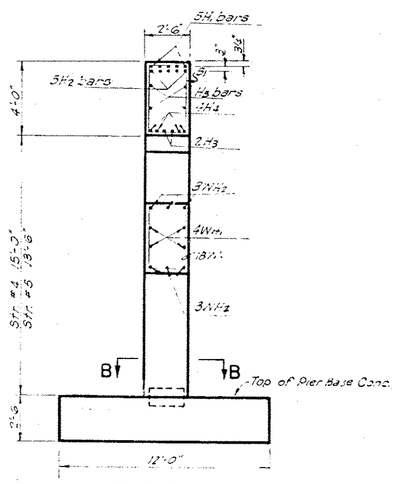
PLAN



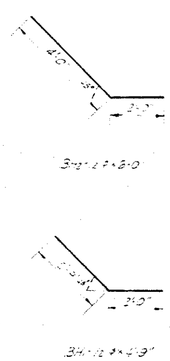
DETAIL OF PIER TOP

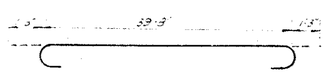


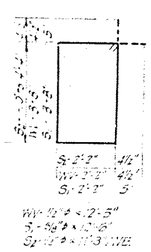
ELEVATION

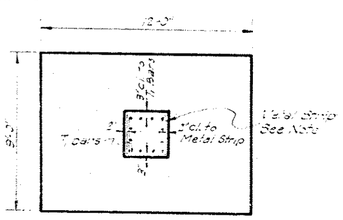


SECTION A-A









SECTION B-B

BAR LIST-ONE PIER

Mark	No.	Size	Form	Length
H_1	5	1"ø	Bnt.	42'-2"
H_2	5	1⅛"ø	Str.	13'-0"
H_3	2	1¼"ø	Str.	33'-6"
H_4	4	1⅛"ø	Str.	33'-6"
H_5	4	1½"ø	Str.	39'-0 and
BH_1	16	½"ø	Bnt.	4'-9"
BH_2	8	½"ø	Bnt.	6'-0"
WH_1	4	½"ø	Str.	31'-6"
WH_2	6	½"ø	Str.	32'-0"
WV	18	½"ø	Bnt.	12'-5"
S_1	56	⅜"ø	Bnt.	12'-6"
S_2	12	½"ø	Bnt.	11'-3 and
D	36	1"ø	Str.	5'-0"
F_1	22	¾"ø	Str.	6'-6"
F_2	28	⅞"ø	Str.	9'-6"
F_3	18	⅞"ø	Str.	8'-6"
F_4	21	1"ø	Str.	11'-6"
STR. # 4 STR. # 5				
V_1		36	1"ø	Str.	18'-2"
	V_2	36	1"ø	Str.	16'-10"
T_1		42	½"ø	Bnt.	8'-9"
	T_2	50	½"ø	Bnt.	8'-9"

QUANTITIES

ITEM	UNIT	Str. No. 4		Str. No. 5	
		Pier No. 1	Pier No. 2	Pier No. 1	Pier No. 2
Reinforcing Steel	Lbs.	7750	7750	7595	7595
Class "A" Concrete	C.Y.	34.9	34.9	33.9	33.9
Class "A" Conc. in Pier Bases	C.Y.	23.0	23.0	23.0	23.0
Substr. Excav. - Common	C.Y.	90	90	95	95
Substr. Excav. - Rock	C.Y.	21	7	13	6

NOTES:
1. Reinforcing steel bars shall conform to ASTM Specification A-615-49.
2. Chamfered edges shall have a 1" chamfer unless otherwise noted.
3. Concrete shall be poured dry.

NOTE: Metal Strip in Pier Base Concrete
Refer to identical notes on Detail of Piers - Main Sheet #20

REVISIONS			
NO.	DESCRIPTION	BY	DATE
	Revised to conform to Sum. Pier Details		

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	J.S.	
CHECKED		
APPROVED		
SQUAD		

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

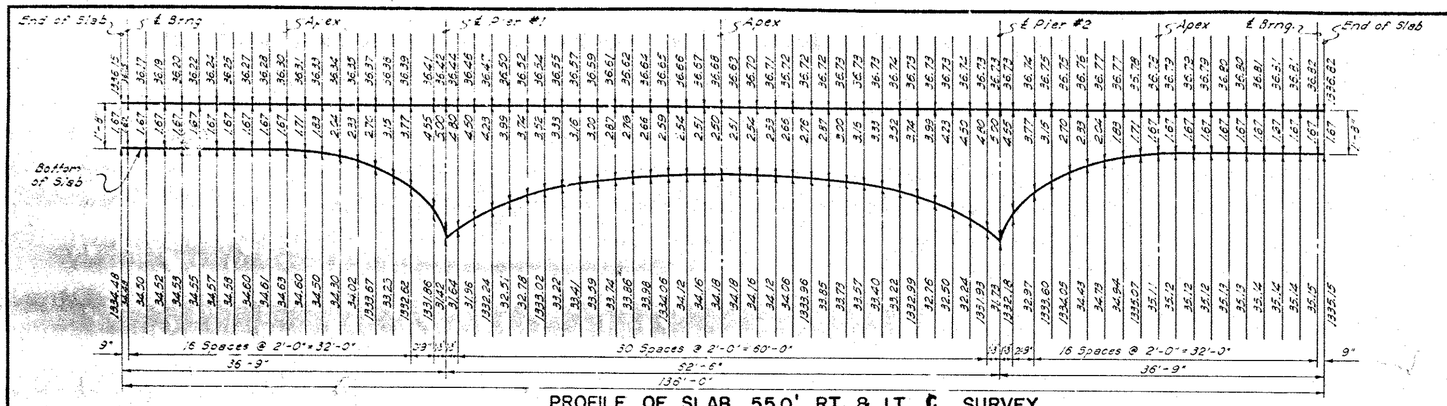
STR. NO 4 & NO. 5
DETAILS OF PIERS

℄ STA. ON ℄ SURVEY 27+00

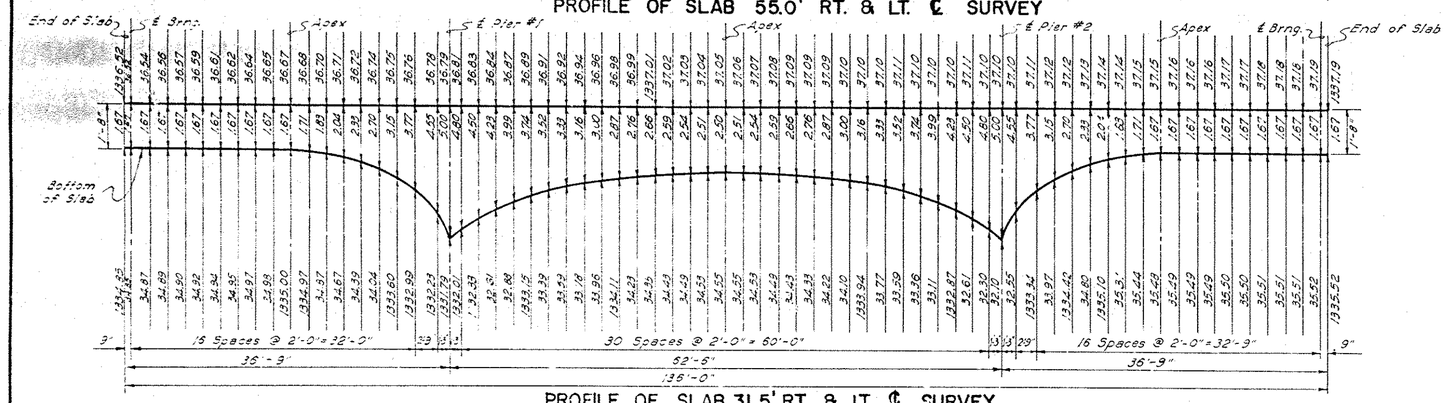
F.A. PROJ. I-381 (16) PT.-1

PROJECT NO. I-381(16) PT-1, SHEET NO. 40

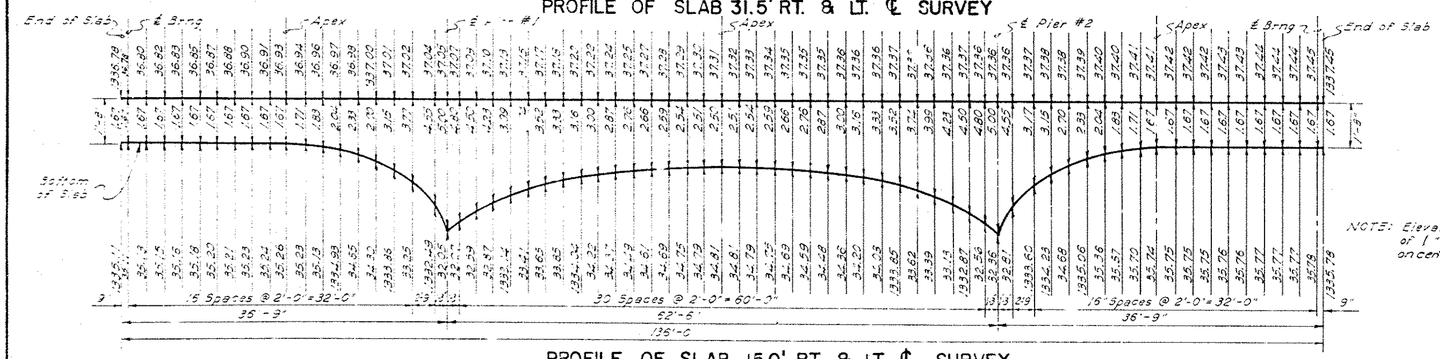
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-1	41	88



PROFILE OF SLAB 55.0' RT. & LT. ℄ SURVEY

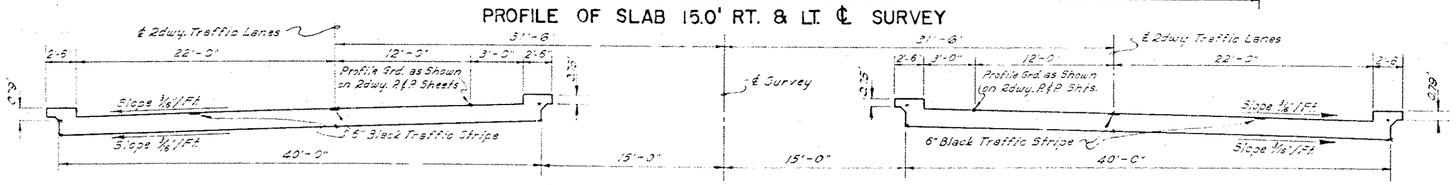


PROFILE OF SLAB 31.5' RT. & LT. ℄ SURVEY



PROFILE OF SLAB 15.0' RT. & LT. ℄ SURVEY

NOTE: Elevations shown include allowance of 1" for dead load deflection on center span only.



* Points of Elevation

NOTE: For top of Curb Elevation add 0.15' to top of Slab Elevation at Median Curb
add 0.70' " " " " " " Outside " " .

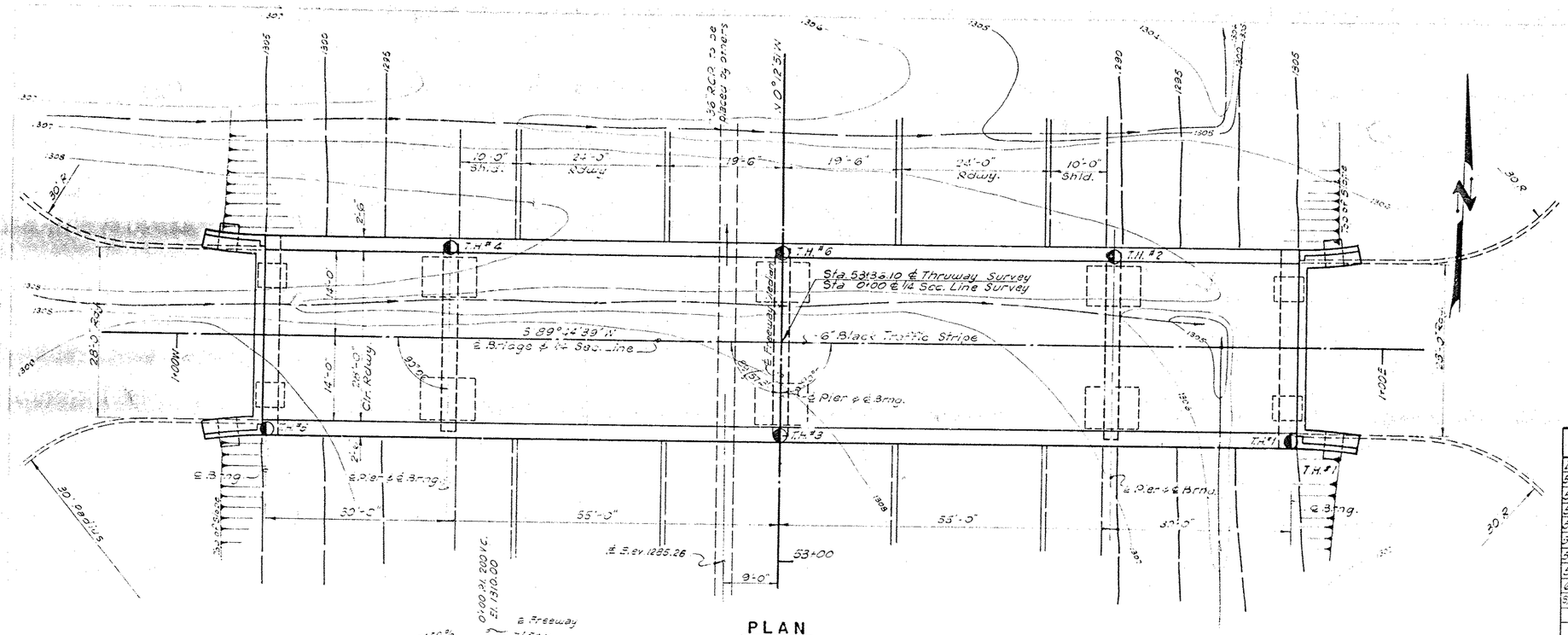
NOTE: Elevations & Dimensions shown above are for forming Soffit Curves & top of Bridge Floor. Anticipated deflections due to dead load have been considered & no other allowance for these deflections shall be made.

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

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STRUCTURES NO. 4 & 5
DETAIL OF SLAB ELEVATIONS
℄ STA. ON ℄ SURVEY 27+00
F.A. PROJ. I-381 (16) PT.-1

PROJECT NO. I-381(16)PT-1 SHEET NO. 41



PLAN

Scale: 1" = 5'

DESIGN DATA

Concrete	1,000 p.s.i.
Reinforcing Steel	18,000 p.s.i.
Design Live Load	H-20-53

Foundation Loads:

Abutments	2.61 T/sq. Ft.
Piers Direct Load	3.93 T/sq. Ft.

SUMMARY OF QUANTITIES

Item No.	ITEM	UNIT	Abuts.	Piers	Superst.	Total
501.06b	Substr. Excav. - Common	C.Y.	135			135
501.06c	Substr. Excav. - Rock	C.Y.	17	56.7		73.7
505.01	Steel - Handrailing	L.F.			342.5	342.5
509.06a	Class "A" Concrete	C.Y.	65.0	69.7		134.7
509.06a	Cl. "A" Conc. in Pier & Abut. Bases	C.Y.	7.4	29.5		36.9
509.06b	Class "AA" Concrete	C.Y.			433.3	433.3
511.06	Reinforcing Steel	Lbs.	8420	21,5	68490	97,025
624.02a	6" Black Traffic Stripe	L.F.			171.5	171.5
5 pieces	Aluminum Handrailing	L.F.			342.5	342.5

B.M.-R.R. Spike in S. Pole of abt. Power Pole 41' Rt. Sta. 53+25 Elev. 1310.26

VERTICAL CURVE DATA

℄ Freeway

+1.50% −1.50%

1+00 W 1+00 E

GENERAL NOTES

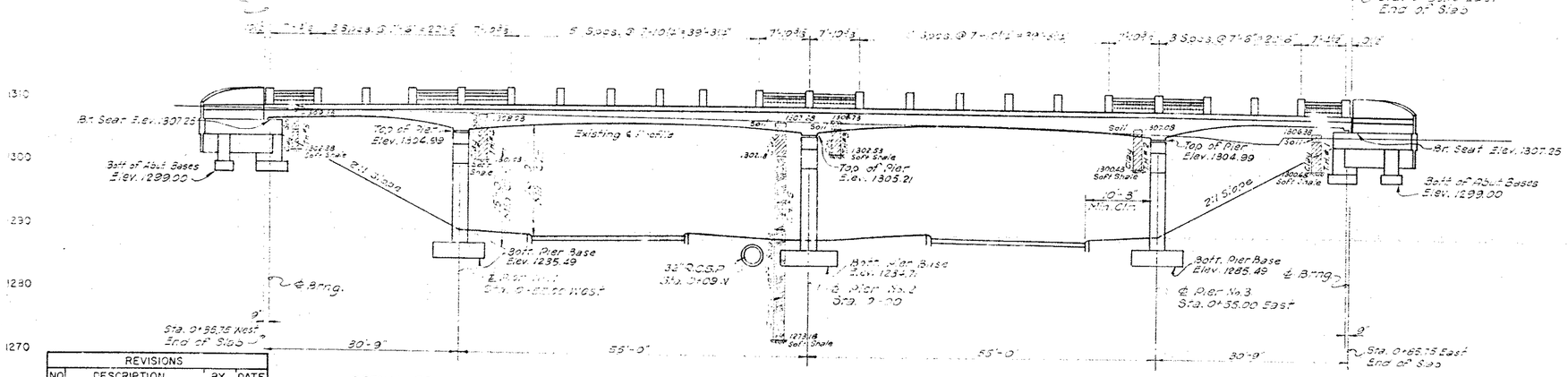
All construction & Materials shall be in accordance with the Oklahoma standard Specifications of 1954 & Special Provisions

All exposed concrete surfaces shall have a carborundum finish

All reinforcing steel bars shall conform to A.S.T.M. specifications A-305-49

Contractor shall submit bids on both types of handrailing. Type of rail used will be determined by bids received.

Pier footing elevations shown are approximate and shall be lowered only if firm footing foundation material is not found at plan elevation.



GENERAL ELEVATION

Scale: 1" = 5'

1+00 W +50 W 0+00 +50 E 1+00 E

REVISIONS			
NO.	DESCRIPTION	BY	DATE

SPECIAL PROVISIONS

See Special Provisions included in the Proposal For Curing Concrete with Membrane Curing Compound For Bridge Structures Including Parapet Walls, Retaining Walls & Railing 414-6(ac) Rev. 7-27-55

Neoprene rubber for bearing devices.

514-1(a) Reinforcing Steel (Axle Steel)
723-1(a) Rev. 2-21-57
Black Traffic Stripe or Black Traffic Stripe Arrow. 624-1(a) Rev. 10-18-55

REFERENCE LIST OF DRAWINGS

DETAILS	of	ABUTMENTS ---- SHEET #2
DETAILS	of	PIERS ---- SHEET #3
DETAILS	of	SUPERSTR. ---- SHEET #4
DETAILS	of	SLAB SLEV. ---- SHEET #5
DETAILS	of	HANDRAILING ---- SHEET #5 & #7

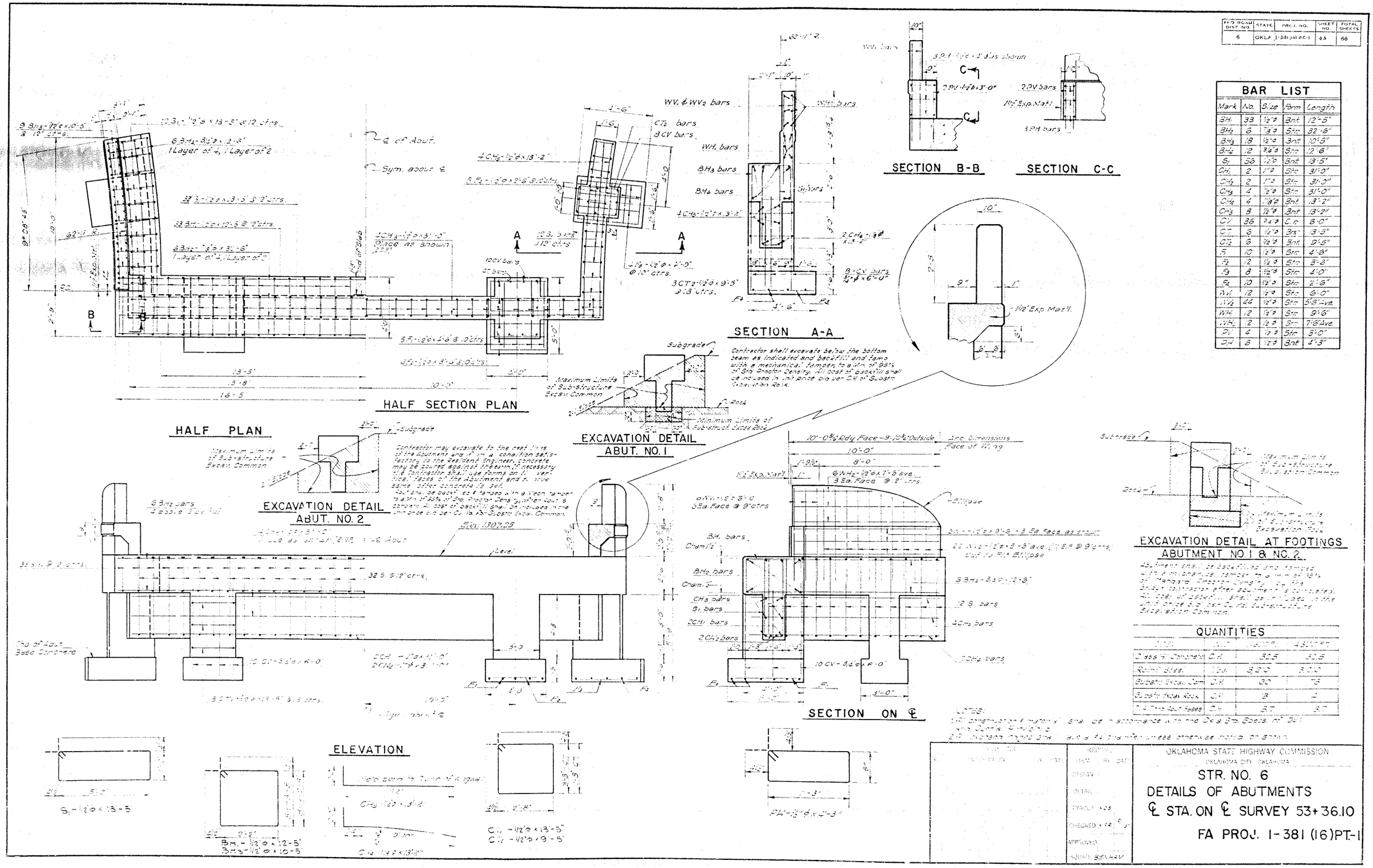
RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	J.S.	
CHECKED	R.A.B.	
APPR'D		
SQUAD:	B.E.H.-A.M.	

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLA.

STR. No. 6
GENERAL ELEV., PLAN & SUMMARY OF QUANTITIES
30'-55'-55'-30' CONC. SLAB SPANS
28' RDY & 2-18" S.C.'s
℄ STA. ON ℄ SURVEY 53+36.10
F.A. PROJ. I-381 (16) PT.-1

I-381(16) PT.-1 42

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-1	43	88



BAR LIST

Mark	No.	Size	Form	Length
BH1	33	1/2"ø	Bnt.	12'-5"
BH2	6	1/2"ø	Str.	32'-6"
BH3	18	1/2"ø	Bnt.	10'-5"
BH4	12	3/4"ø	Str.	12'-6"
S1	56	1/2"ø	Bnt.	13'-5"
CH1	2	1"ø	Str.	31'-0"
CH2	2	1"ø	Str.	31'-0"
CH3	4	1/2"ø	Str.	31'-0"
CH4	4	1 1/8"ø	Bnt.	13'-2"
CH5	8	1/2"ø	Bnt.	13'-2"
CV1	36	3/4"ø	Str.	8'-0"
CT1	6	1/2"ø	Bnt.	13'-5"
CT2	6	1/2"ø	Bnt.	9'-5"
F1	10	1/2"ø	Str.	4'-8"
F2	12	1/2"ø	Str.	3'-8"
F3	8	1/2"ø	Str.	4'-0"
F4	10	1/2"ø	Str.	2'-8"
WH1	12	1/2"ø	Str.	6'-0"
WV1	44	1/2"ø	Str.	5'-8" Ave.
WH2	12	1/2"ø	Str.	9'-6"
WV2	12	1/2"ø	Str.	7'-8" Ave.
DV1	4	1/2"ø	Str.	3'-0"
DH1	6	1/2"ø	Bnt.	4'-3"

QUANTITIES

Item	Unit	Total	Abutment
Class "A" Concrete	C.Y.	32.5	32.5
Reinf. Steel	Lbs.	3,200	3,200
Substr. Excav. Com.	C.Y.	30	15
Substr. Excav. Rock	C.Y.	8	4
Cu. Yds. Abut. Fdns.	C.Y.	37	37

NOTES:
1.) All construction & material shall be in accordance with the Okla. Std. Specs. of 1961.
2.) Concrete Mixes shall be 6.0 sk. of cement unless otherwise noted on plans.

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

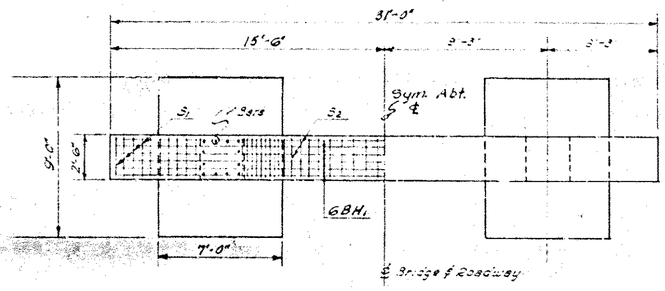
STR. NO. 6
DETAILS OF ABUTMENTS
℄ STA. ON ℄ SURVEY 53+36.10
FA PROJ. I-381 (16)PT-1

PROJECT NO. I-381(16)PT-1 SHEET NO. 43

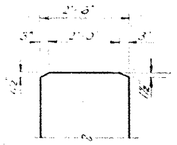
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT.1	44	88

QUANTITIES

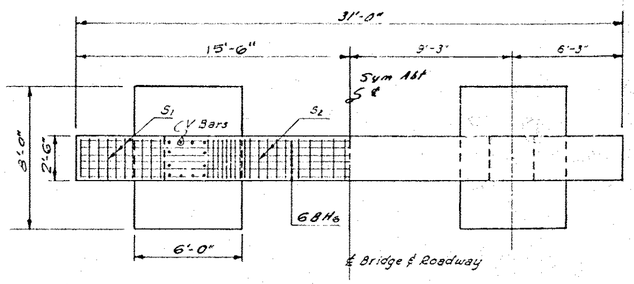
ITEM	UNIT	PIER 1	PIER 2	PIER 3
Class "A" Concrete	C.Y.	23.1	23.3	23.1
Class "A" Concrete Pier Bases	C.Y.	3.9	1.7	3.9
Reinforcing Steel	Lbs.	3700	4735	3700
Substr. Excav. Rock	C.Y.	17.9	21.1	17.9



PLAN
PIER NO. 2



DETAIL OF PIER TOP



PLAN
PIER NO. 1 & 3

BAR LIST

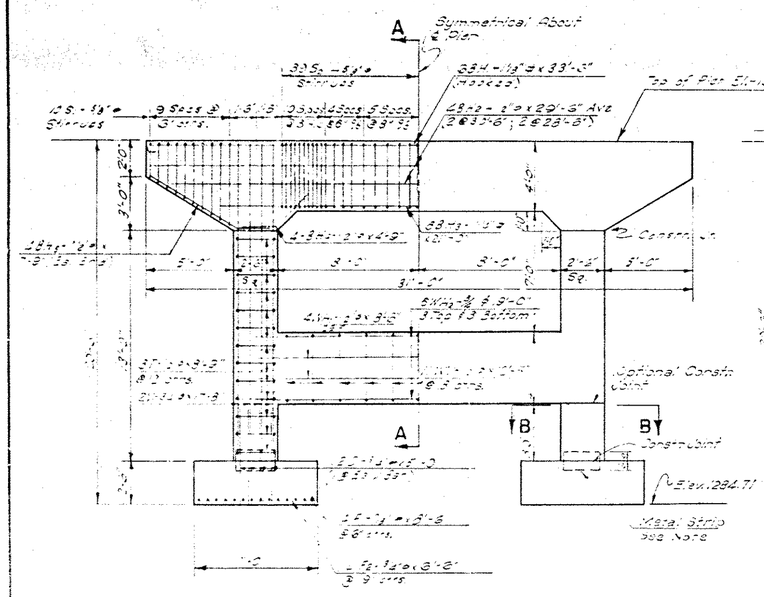
PIERS NO. 1 OR NO. 3

Mark	No.	Size	Form	Length
3H6	8	1 1/8" ø	Bnt	33'-2"
3H2	4	1/2" ø	Str	29'-6" Ave.
3H7	8	1 1/8" ø	Str	21'-0"
3H4	8	1/2" ø	Bnt	4'-9"
3H5	8	1/2" ø	Bnt	7'-9"
S1	20	5/8" ø	Bnt	11'-6" Ave.
S2	21	5/8" ø	Bnt	12'-6"
T	24	1/2" ø	Bnt	3'-9"
V1	24	1/2" ø	Str	15'-8"
D	24	3/4" ø	Str	5'-0"
V2	16	7/8" ø	Str	7'-6"
V3	20	5/8" ø	Str	5'-6"
W4	4	1" ø	Str	18'-6"
W4a	6	3/4" ø	Str	19'-0"
WV	11	1/2" ø	Bnt	12'-5"

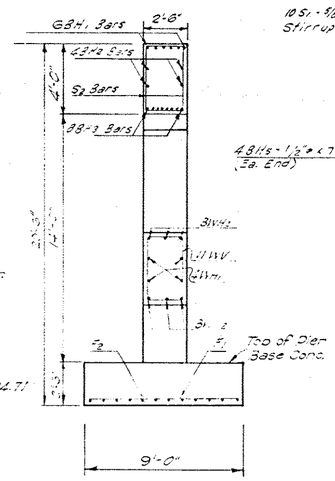
BAR LIST

PIER NO. 2

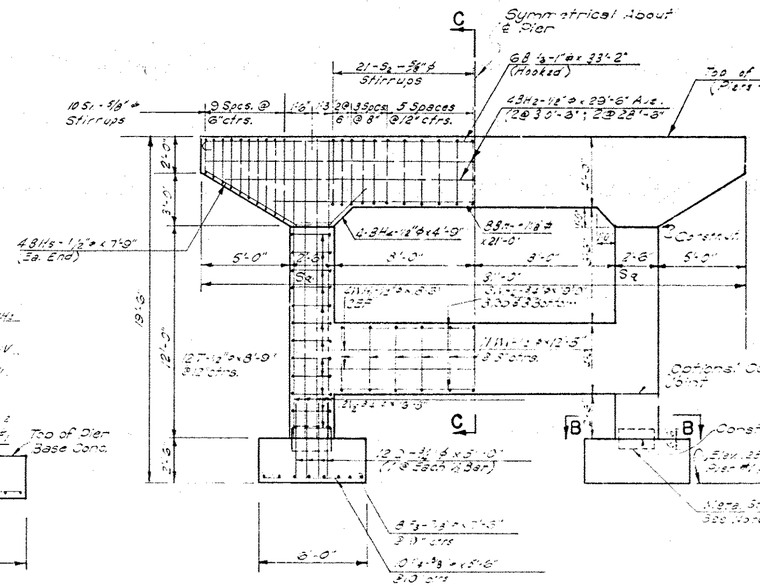
Mark	No.	Size	Form	Length
3H1	6	1 1/8" ø	Bnt	33'-6"
3H2	4	1/2" ø	Str	29'-6" Ave.
3H3	8	1 1/8" ø	Str	21'-0"
3H4	8	1/2" ø	Bnt	4'-9"
3H5	8	1/2" ø	Bnt	7'-9"
S1	20	5/8" ø	Bnt	11'-6" Ave.
S2	39	5/8" ø	Bnt	12'-6"
T	26	1/2" ø	Bnt	8'-9"
V1	24	3/4" ø	Str	17'-8"
D	24	3/4" ø	Str	5'-0"
V2	23	7/8" ø	Str	8'-6"
V3	24	3/4" ø	Str	6'-8"
W4	7	1" ø	Str	18'-6"
W4a	6	3/4" ø	Str	19'-0"
WV	11	1/2" ø	Bnt	12'-5"



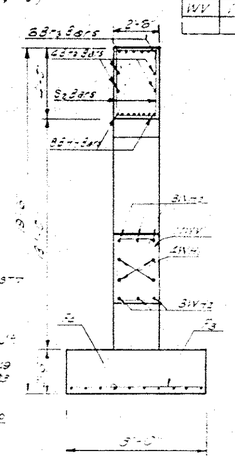
ELEVATION - PIER NO. 2



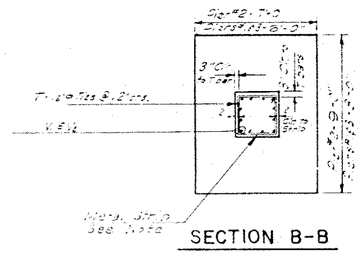
SECTION A-A



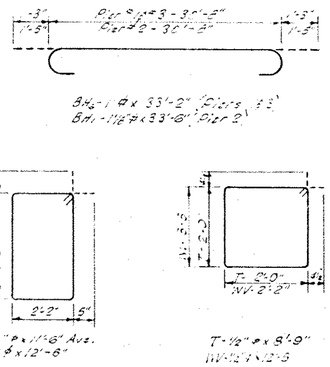
ELEVATION - PIERS NO. 1 & 3

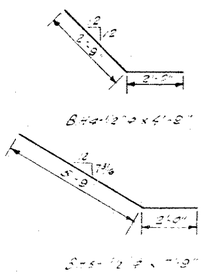


SECTION C-C



SECTION B-B





NOTES:
All reinforcing steel, bars shall conform to ASTM Specifications designation.
All exposed edges shall have a chamfer of one inch unless otherwise noted.
Concrete shall be cured only.

NOTE: METAL STRIP IN PIER BASE CONCRETE refer to identical notes on Data for Design Index Sheet No. 22.

REVISIONS				RECORD		
NO.	DESCRIPTION	BY	DATE	ITEM	BY	DATE
				DESIGN		
				DETAIL		
				TRACED K.D.S.		
				CHECKED		
				APPROVED		
				C.E. A.D. BENHAM		

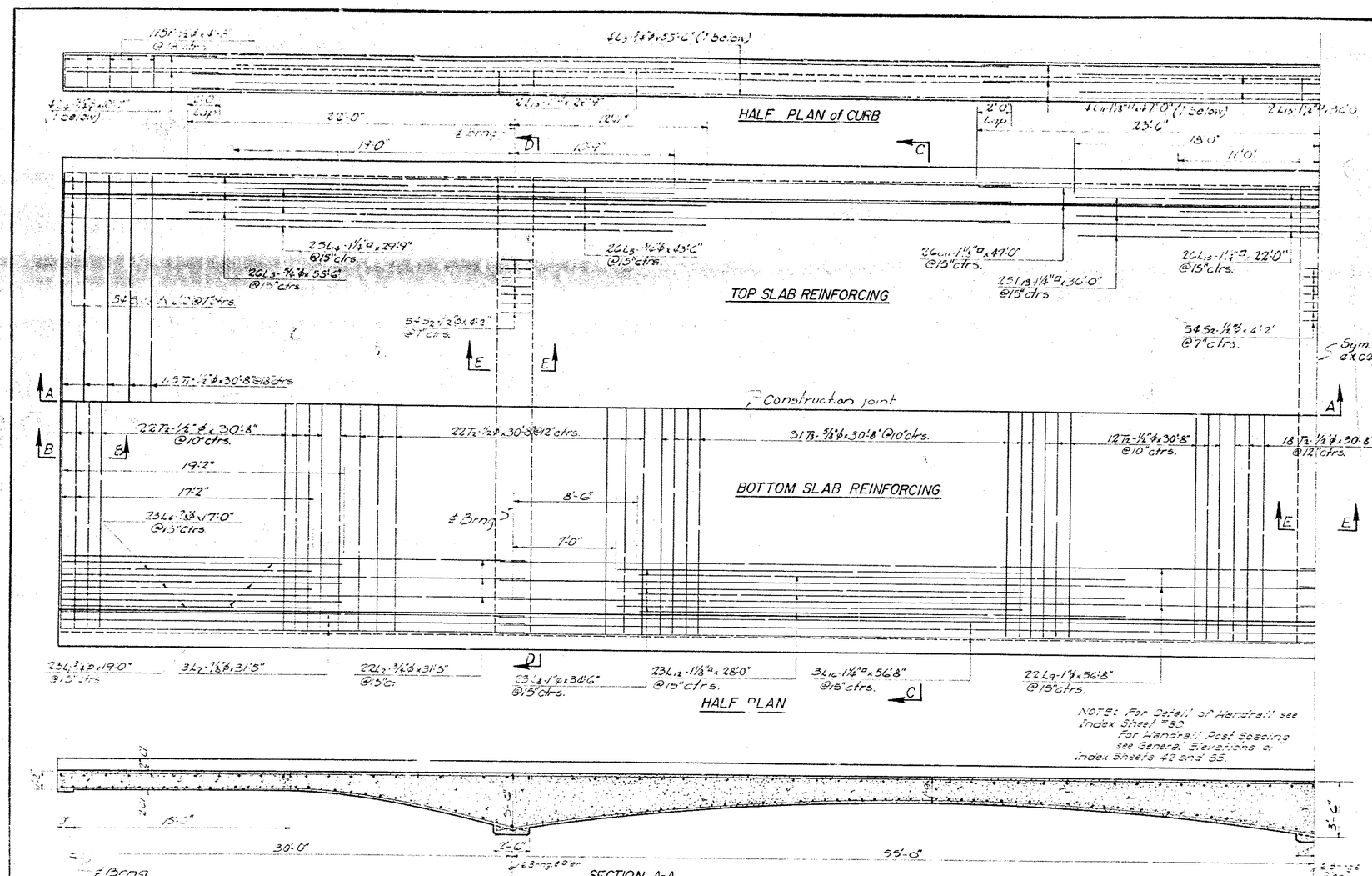
OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

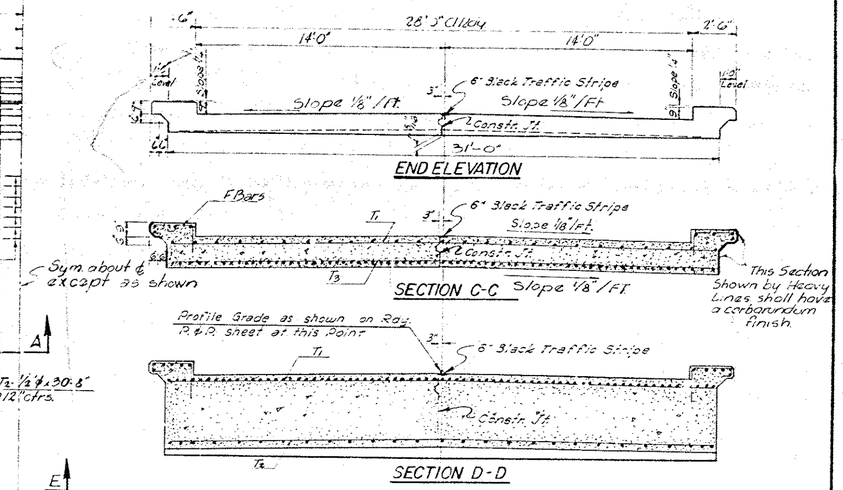
STR NO. 6
DETAILS OF PIERS
℄ STA ON ℄ SURVEY 53+36.10

FA PROJ I-381 (16) PT.-1

PROJECT NO. I-381(16)PT-1 SHEET NO. 44

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-1	45	68





—GENERAL NOTES—

Detailed plans of falsework and forms shall be submitted to the Highway Commission and be approved by the Chief Engineer before any concrete is poured. Falsework and forms must be in place for the entire deck of one unit 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 sized commercial panels and joints shall line up in so far as practical. No scrap or odd sized pieces shall be used.

Provisions shall be made for adjustment of forms to correct any deformation which may occur during concrete operations. Adequate provisions shall be made for making adjustments to forms during pouring operations.

The concrete mixer shall be of sufficient capacity to pour all concrete as indicated by the construction joints in a continuous pour. A standby mixer shall be available at the bridge site for emergency use, unless transit mixed concrete is used.

No construction joints other than those shown on the plans will be allowed.

All exposed concrete edges shall have a 3/4" chamfer unless otherwise shown. Finishing of 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 treat the edges of any working vibrator breaking down.

All reinforcing steel bars shall conform to A.S.T.M. Spec. A 305-49.

The Contractor may, at his option, and at no expense to the State, cut all transverse bars to allow for 1'-6" lap outside construction joint of the canal deck slabs.

Reinf. in bottom of slab shall be supported on approved metal slab supports. Steel in top of slab shall be supported on approved metal high chairs 3" approx. [illegible]

QUANTITIES		
Item	Unit	Total
Class "AA" Concrete	Cu. Yd.	133.3
Reinforcing Steel	Lb.	68,490
Handrailing	L.F.	342.0
6" Black Traffic Stripe	L.F.	716

BAR LIST

Mark	No.	Size	Form	Length	Mark	No.	Size	Form	Length
L1	46	3/4"ϕ	Str.	19'-0"	L15	20	1 1/4"ϕ	Str.	22'-0"
L2	44	3/4"ϕ	Str.	31'-5"	L16	12	1 3/4"ϕ	Str.	56'-8"
L3	68	3/4"ϕ	Str.	55'-6"	T1	15	1/2"ϕ	Str.	30'-8"
L4	26	3/4"ϕ	Str.	10'-9"	T2	130	1/2"ϕ	Str.	30'-8"
L5	52	3/4"ϕ	Str.	43'-6"	T3	62	5/8"ϕ	Str.	[illegible]
L6	46	7/8"ϕ	Str.	17'-0"	S1	108	1/2"ϕ	Bent	2'-0
L7	12	3/4"ϕ	Str.	31'-5"	S2	144	1/2"ϕ	Bent	4'-2
L8	46	7/8"ϕ	Str.	31'-6"	F	30	1/2"ϕ	Str.	4'-8"
L9	44	7/8"ϕ	Str.	56'-8"					
L10	3	1"ϕ	Str.	27'-9"					
L11	4	1 1/4"ϕ	Str.	47'-0"					
L12	46	1 1/8"ϕ	Str.	28'-0"					
L13	27	1 1/4"ϕ	Str.	36'-0"					
L14	30	1 1/8"ϕ	Str.	27'-9"					

Design Load H-20-S16

REVISED	
[illegible]	
[illegible]	
[illegible]	
DETAIL	
[illegible]	
[illegible]	
APPROVED	
[illegible] BENHAM	

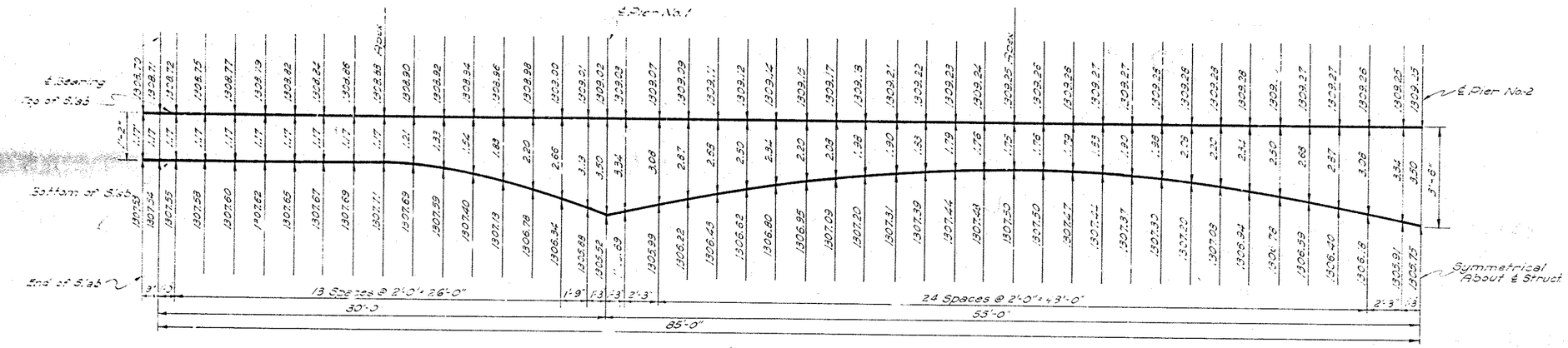
OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

DETAILS OF SUPERSTRUCTURE

STR. NO. 6
℄ STA ON ℄ SURVEY 53+36.10
STR. NO 9
℄ STA ON ℄ SURVEY 106+22.29

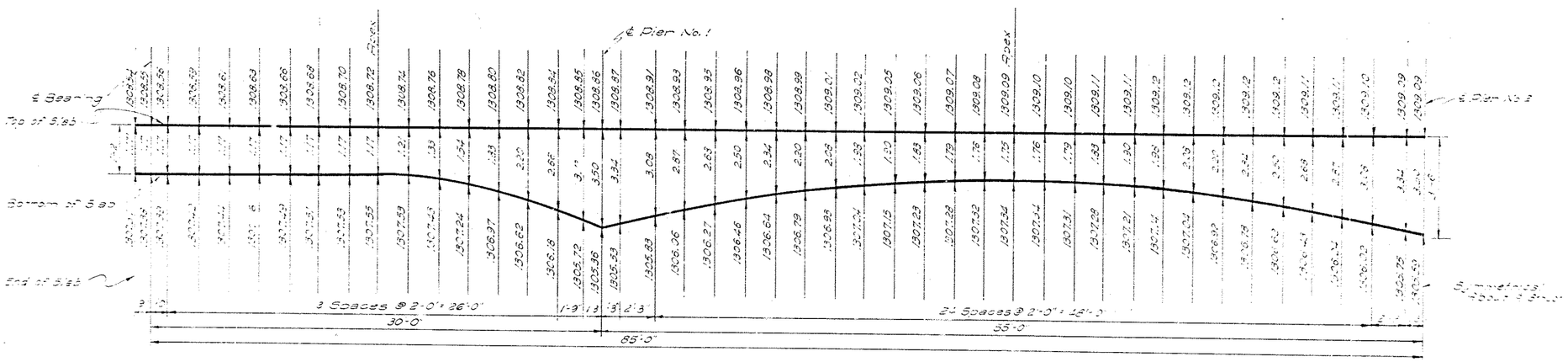
F.A. PROJ I-381 (16)PT-1

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT.-1	46	88

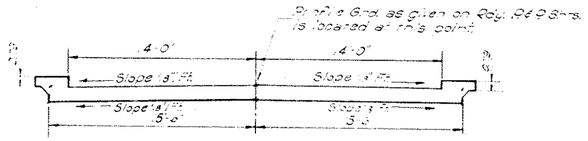


SOFFIT ELEVATIONS & SLAB DIMENSIONS AT ℄ ROADWAY

Note: Elevations shown include a allowance of 1½" for dead load deflection in 55' Span only.



SOFFIT ELEVATIONS & SLAB DIMENSIONS 15.5' LT. & RT. OF ℄ ROADWAY



* Points of Elevation

Note: For Top of Curb Elev. add 0.78' to top of slab elev.

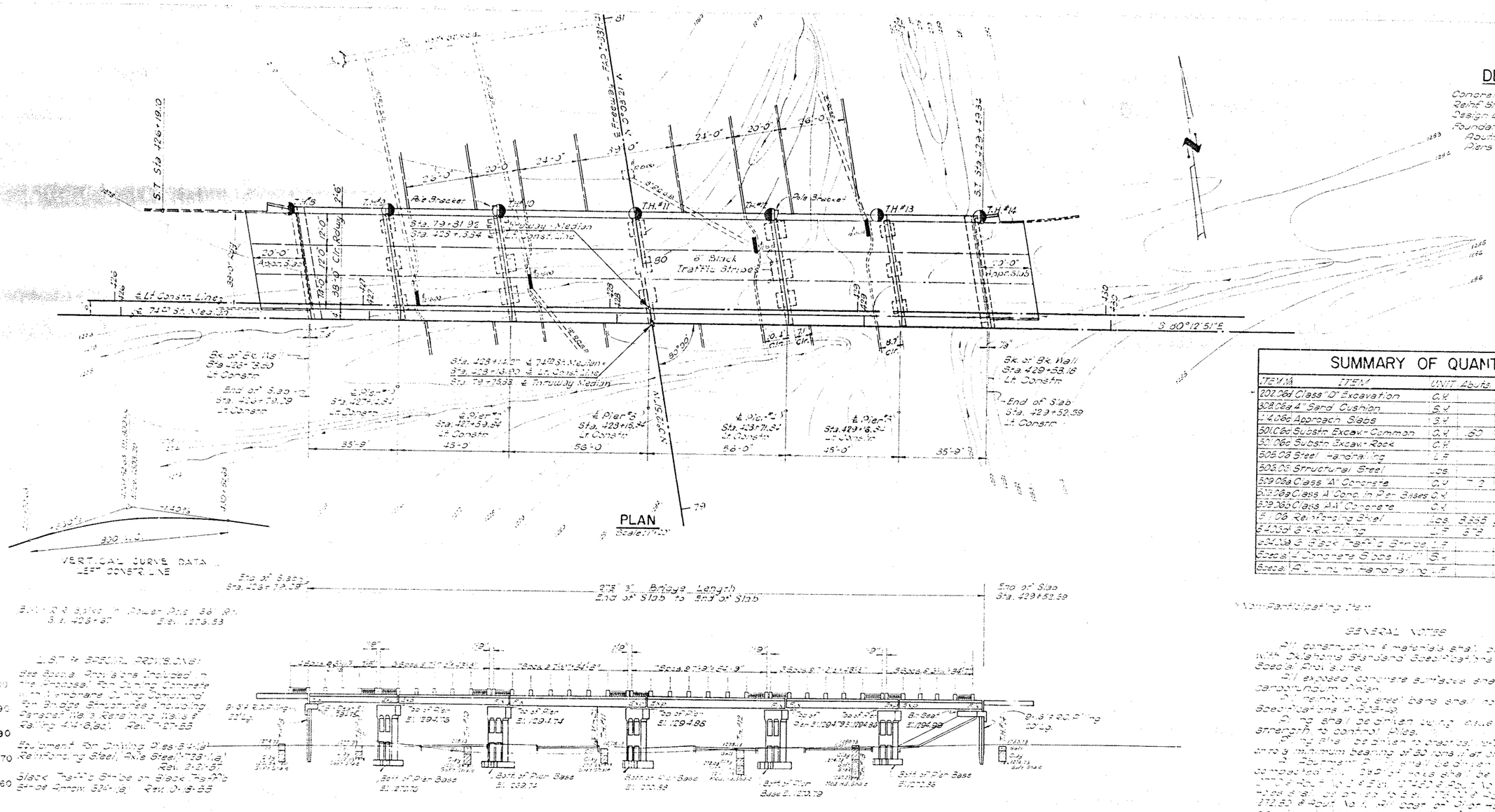
Note: Elevations & dimensions shown above are for forming Soffit Curves & top of Bridge Floor. Anticipated deflections due to dead load have been considered & no other allowance for these deflections shall be made.

NO.	DATE	REVISIONS	BY	DATE

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STRUCTURE No. 6
DETAIL OF SLAB
ELEVATIONS
℄ STA. ON ℄ SURVEY 53 + 36.10
F.A. PROJ. I-381 (16) PT.-1

PROJECT NO. I-381(16)PT.-1 SHEET NO. 46



DESIGN DATA

Concrete	4,000 psi
Reinf. Steel	18,000 psi
Design Live Load	H20-S16
Foundation Loads	
Abutments	25.4 Tons/pile
Piers	32 Tons/pile

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	Abuts.	Piers	Superstructure	Bridge Rdwy.
202.06d	Class "D" Excavation	C.Y.				600
308.06a	4" Sand Cushion	S.Y.				758
1.406c	Approach Slabs	S.Y.				758
601.06c	Substr. Excav.-Common	C.Y.	180	420	600	
601.06c	Substr. Excav.-Rock	C.Y.		21	21	
605.06	Steel Handrailing	L.F.			749	749
608.06	Structural Steel	Lbs.			38,075	38,075
609.06a	Class "A" Concrete	C.Y.	172	208.3	380.3	
609.06a	Class "A" Conc. in Pier Bases	C.Y.		63.4	63.4	
609.06b	Class "AA" Concrete	C.Y.			258	258
611.06	Reinforcing Steel	Lbs.	8,555	38,470	[illegible]	[illegible]
642.03d	6" R.C. Piling	L.F.	672			672
642.03a	6" Black Traffic Stripe	L.F.			240	240
6.6a	4" Concrete Slab	S.Y.				885.3
6.6a	Aluminum Handrailing	L.F.			749	749

* Non-Participating Item

GENERAL NOTES

All construction & materials shall be in accordance with Oklahoma Standard Specifications of Bridge Construction.

All exposed concrete surfaces shall have a carborundum finish.

Reinforcing steel bars shall conform to ASTM Specifications A-615-64.

Piling shall be driven using caps of sufficient strength to control piles.

Piling shall be driven to practical refusal, unless a single pile bearing of 30 tons after an initial grade.

Bottom of pier shall be driven through and connected to [illegible] shall be driven to rock.

[illegible] 272.53 & Point No. 1, the coat of pier noses shall be [illegible] unit price bid for 6" R.C. Piling.

Construction joint [illegible] on both sides of [illegible] of the [illegible] will be determined by [illegible] related.

LIST & SPECIAL DRAWINGS

See Special Drawings included in the Proposal for Driving Concrete Pier Columns, Driving Concrete Pier Bridge Structures, Including Parapet Walls & Railing, Wing & Railing 414-B(Sp), Rev. 1-27-65

Equipment for Driving Piles 614-(Sp) Reinforcing Steel, Pile Steel 793-(Sp) Rev. 2-21-67

Black Traffic Stripe on Black Traffic Stripe Arrow 624-(Sp) Rev. 0-16-65

REFERENCE LIST & SHEET

DETAILS & ABUTMENTS
DETAILS & PIERS
DETAILS & SUPERSTRUCTURE
DETAILS & 8" R.C. SLABS
DETAILS & HANDRAILING

REVISION			
NO.	DESCRIPTION	BY	DATE
1	Revised Sheet No. 7		
2	Revised Sheet No. 7		

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED		
CHECKED		
APPROVED		
SUPERV. ENGINEER		

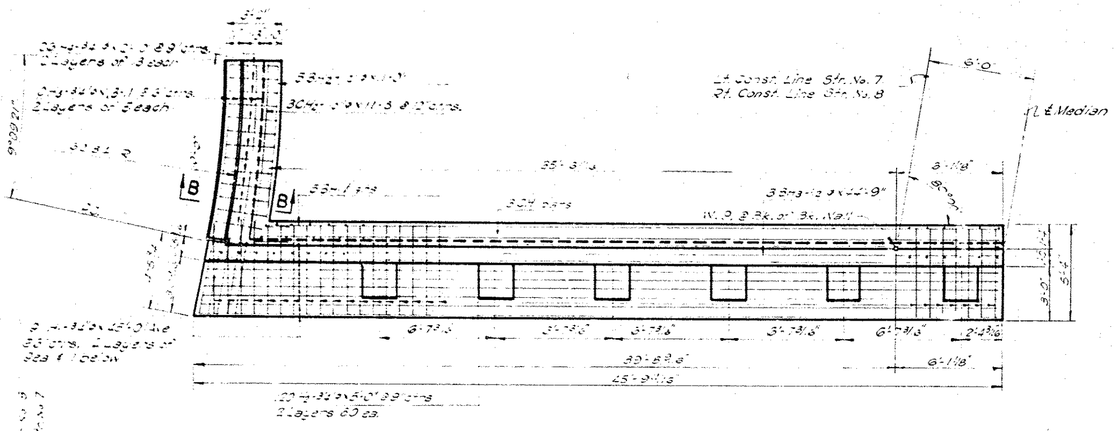
SKEW 80°-00' RT. FWD.

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 7
GENERAL ELEVATION, PLAN
& SUMMARY OF QUANTITIES
35'-45'-56'-56'-45'-35' I-BM. SPANS
38' RDY. & 1-18" S.C. & 1-4' MEDIAN
℄ STA. ON ℄ SURVEY 79+81.92
FA. PROJ. I-381 (16) PT.-2

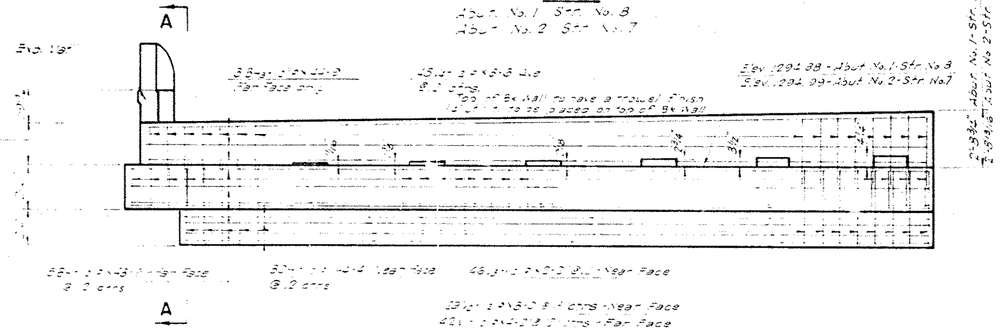
FAP [illegible] 381(16)PT. [illegible] 27

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-2	49	53

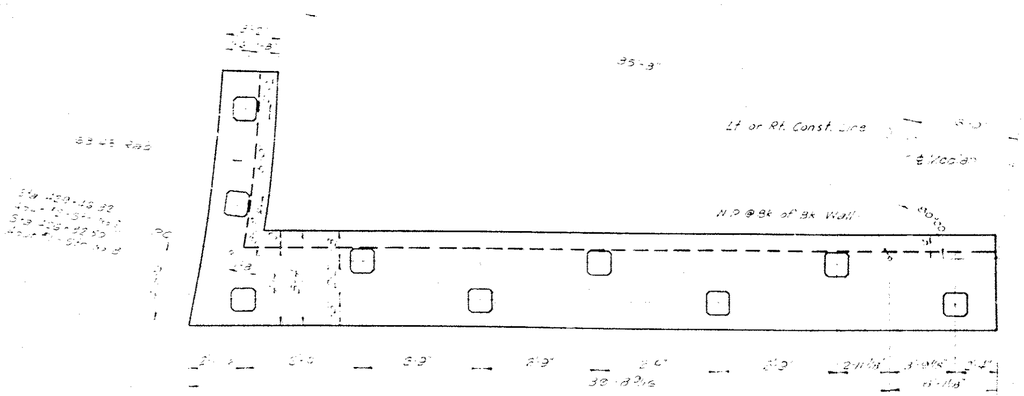


PLAN

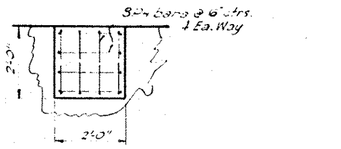
Abut. No. 1 Str. No. 8
Abut. No. 2 Str. No. 7



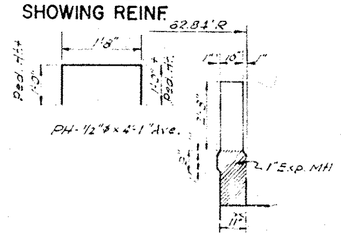
ELEVATION



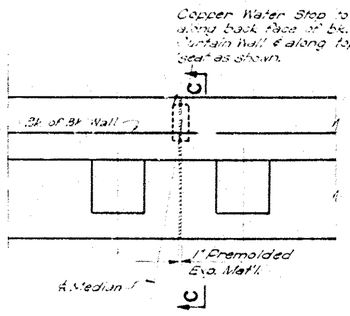
PILE SPACING PLAN



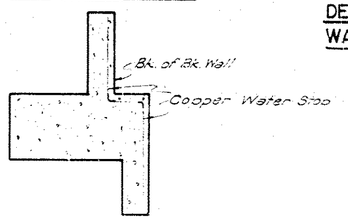
PLAN OF PED. SHOWING REINF.



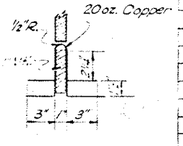
WING WALL DETAIL



PLAN OF JOINT AT ℄ OF MEDIAN



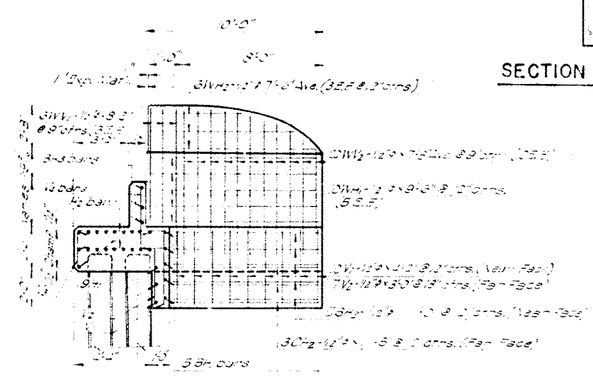
SECTION C-C



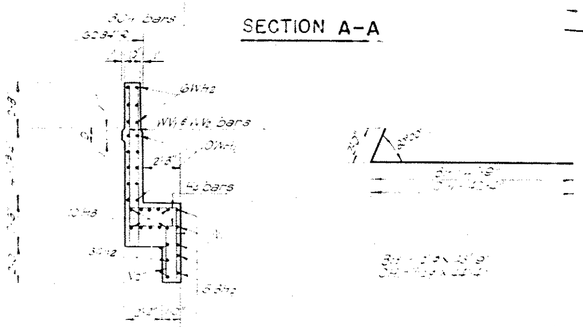
DETAIL OF WATER STOP

BAR LIST- ONE ABUT.				
Mark	No.	Size	Form	Length
H1	12	3/4"φ	Str.	45'-0" Ave.
H2	120	3/4"φ	Str.	5'-0"
H3	10	3/4"φ	Bent	3'-11" Ave.
H4	26	3/4"φ	Str.	2'-10"
1	52	1/2"φ	Str.	4'-2"
V2	38	1/2"φ	Str.	3'-0"
V3	46	1/2"φ	Str.	2'-2"
V4	45	1/2"φ	Str.	3'-6" Ave.
B1	5	1/2"φ	Bent	13'-9"
B2	5	1/2"φ	Bent	11'-0"
B3	3	1/2"φ	Str.	44'-0"
C1	3	1/2"φ	Bent	44'-0"
C2	5	1/2"φ	Bent	11'-5"
W1	9	1/2"φ	Str.	9'-6"
W2	6	1/2"φ	Str.	7'-6" Ave.
W3	6	1/2"φ	Str.	8'-2"
W3½	20	1/2"φ	Str.	7'-6" Ave.
D1	28	1/2"φ	Bent	4'-1" Ave.
D2	8	1/2"φ	Bent	3'-9"
-	68	3/4"φ	Bent	3'-9"

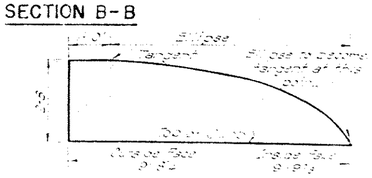
QUANTITIES- ONE ABUTMENT		
Item	Unit	Quantity
Class "A" Concrete	C.Y.	33.6
Reinforcing Steel	Lbs.	4,485
Subst. Excav. Common	C.Y.	90



SECTION A-A



SECTION B-B



WING WALL DETAIL

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

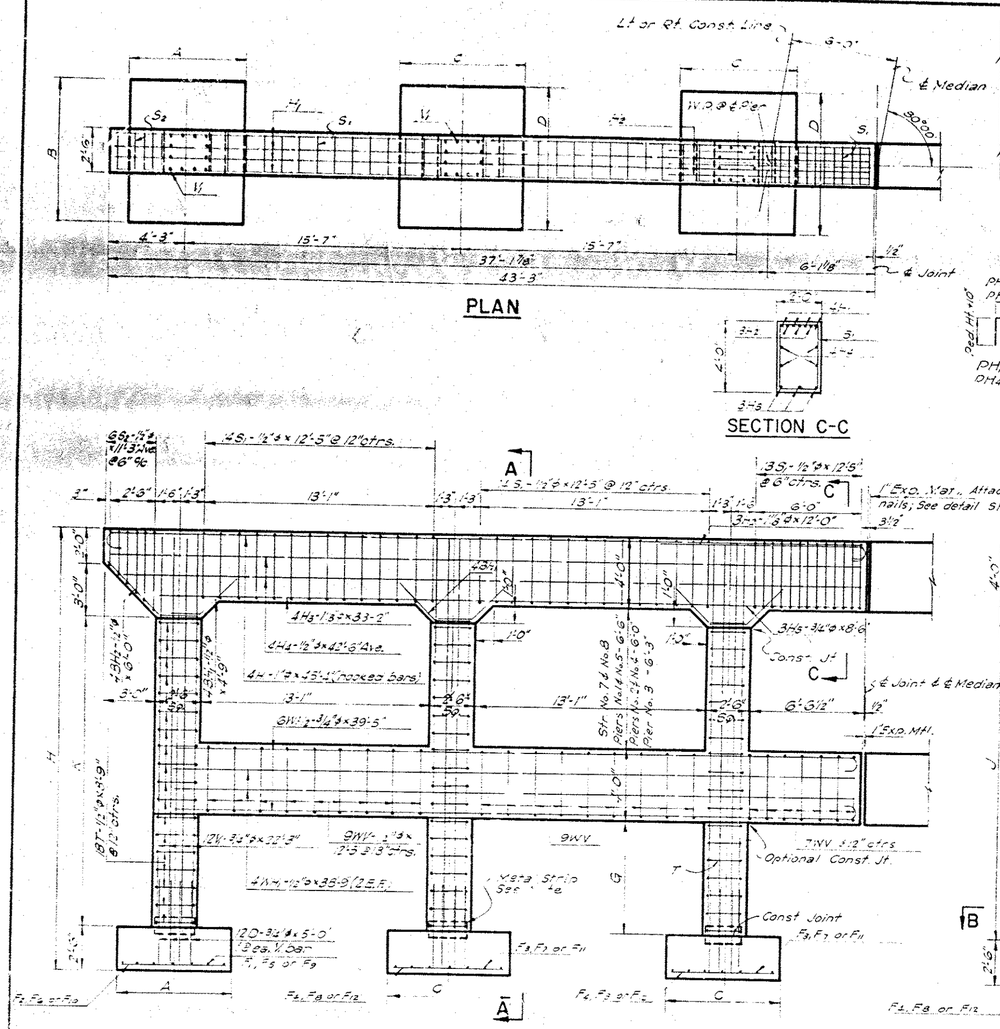
OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

DETAILS OF ABUTMENTS

ABUT. NO. 1 - STR. NO. 8
℄ STA. ON ℄ SURVEY 79+69.74
ABUT. NO. 2 - STR. NO. 7
℄ STA. ON ℄ SURVEY 79+81.92
FA. PROJ. I- 381 (16) PT.-2

FED. ROAD DIV. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-38(16)PT2	49	88

NOTE: Spacing same for all pier tops



* Pier Base Reinf. listed separately

BAR LIST - ONE PIER*

Mark	No.	Size	Form	Length
H_1	4	1"φ	Hooked	45'-4"
H_2	3	1 1/8"φ	Hooked	12'-0"
H_3	4	1 1/8"φ	Str.	33'-2"
H_4	4	1/2"φ	Str.	42'-6" Ave.
H_5	3	3/4"φ	Str.	8'-6"
BH_1	20	1/2"φ	Bnt.	4'-9"
BH_2	4	1/2"φ	Bnt.	6'-0"
WH_1	4	1/2"φ	Str.	38'-9"
WH_2	6	3/4"φ	Str.	39'-5"
WV	25	1/2"φ	Bnt.	12'-5"
S_1	41	1/2"φ	Bnt.	12'-5"
S_2	6	1/2"φ	Bnt.	11'-3" Ave.
D	36	3/4"φ	Str.	5'-0"
PH_1	39	1/2"φ	Bnt.	3'-10" Ave.
PH_2	24	1/2"φ	Bnt.	4'-10" Ave.
PH_3	4	1/2"φ	Bnt.	3'-2" Ave.
Str. #7 - Piers 4 & 5	PH_1	1/2"φ	Bnt.	3'-10" Ave.
Str. #8 - Piers 1 & 2	PH_2	1/2"φ	Bnt.	4'-10" Ave.
Str. #7 - Pier 3	PH_2	1/2"φ	Bnt.	4'-10" Ave.
Str. #8 - Pier 3	PH_4	1/2"φ	Bnt.	4'-10" Ave.
Str. #7 - Piers 1, 3 & 4	V_1	3/4"φ	Str.	21'-0"
Str. #8 - Pier 3	T	1/2"φ	Bnt.	8'-9"
Str. #7 - Pier 2	V_2	3/4"φ	Str.	22'-0"
Str. #8 - Piers 1 & 2	T	1/2"φ	Bnt.	8'-9"
Str. #7 - Pier 5	V_3	3/4"φ	Str.	19'-0"
Str. #8 - Pier 4	T	1/2"φ	Bnt.	8'-9"
Str. #8 - Pier 5	V_4	3/4"φ	Str.	17'-0"
	T	1/2"φ	Bnt.	8'-9"

NOTE: All reinforcing steel bars shall conform to ASTM Specn. A-305-49. All exposed edges shall have a 1/2" chamfer unless otherwise noted.

NOTE - METAL STRIP PIER BASE CONCRETE: Refer to identical note on Detail of Piers - Index Sh. #20

QUANTITIES - ONE PIER - STRUCTURE No. 7

PIER #1	PIER #2	PIER #3	PIER #4	PIER #5	UNIT	ITEM	UNIT	PIER #1	PIER #2	PIER #3	PIER #4	PIER #5
4,580	4,910	4,650	4,880	4,470	Lbs.	Reinforcing Steel	Lbs.	4,550	4,915	4,650	4,725	4,345
40.8	41.5	40.6	40.8	39.5	C.Y.	Class "A" Concrete	C.Y.	41.5	41.5	40.6	39.4	38.7
8.6	14.5	10.2	14.5	5.3	C.Y.	Cl. A Conc. in Pier Bases	C.Y.	8.6	14.5	10.2	14.5	5.6
35	120	75	105	55	C.Y.	Subst. Excav. - Common	C.Y.	80	115	80	65	30
9	10	7	3	—	C.Y.	Subst. Excav. - Rock	C.Y.	6	11	3	17	0

QUANTITIES - ONE PIER - STRUCTURE No. 8

PIER BASE DIMENSIONS AND REINFORCING

Str. #7 & Str. #8 Pier No.	DIMENSIONS A	B	C	D	LONGITUDINAL REINF. Mk	No.	Size	Spac.	Length	TRANSVERSE REINF. Mk	No.	Size	Spac.	Length
1 & 5	5'-0"	5'-6"			F_1	6	5/8"φ	11"	5'-0"	F_2	6	5/8"φ	12"	4'-6"
			5'-0"	6'-6"	F_3	12	5/8"φ	11"	6'-0"	F_4	4	5/8"φ	12"	4'-6"
2 & 4	6'-0"	7'-6"			F_5	10	5/8"φ	7"	7'-0"	F_6	8	5/8"φ	12"	5'-6"
			7'-0"	8'-0"	F_7	28	5/8"φ	6"	7'-6"	F_8	9	5/8"φ	11"	6'-6"
3	5'-0"	6'-6"			F_9	7	5/8"φ	9"	6'-0"	F_{10}	7	5/8"φ	12"	4'-6"
			6'-0"	6'-6"	F_{11}	16	5/8"φ	9"	6'-0"	F_{12}	4	5/8"φ	12"	5'-6"

VERTICAL DIMENSIONS

Pier No.	STRUCTURE No. 7 H	K	J	G	STRUCTURE No. 8 H	K	J	G
1	24'-0"	13'-6"	7'-6"	7'-0"	25'-0"	17'-6"	8'-6"	8'-0"
2	25'-0"	17'-6"	9'-6"	8'-6"	25'-0"	17'-0"	9'-0"	8'-0"
3	24'-0"	16'-6"	7'-6"	7'-3"	23'-0"	16'-0"	7'-6"	7'-3"
4	22'-0"	14'-6"	7'-6"	7'-6"	22'-0"	14'-6"	7'-0"	6'-0"
5	22'-0"	14'-6"	15'-6"	5'-0"	21'-0"	13'-6"	14'-6"	4'-0"

REVISIONS

NO.	DESCRIPTION	BY	DATE
1	[illegible]		
2	Revised [illegible]		

RECORD

ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	DPG	
CHECKED	RRR	
APPROVED		
SQUAD: BSV+AM		

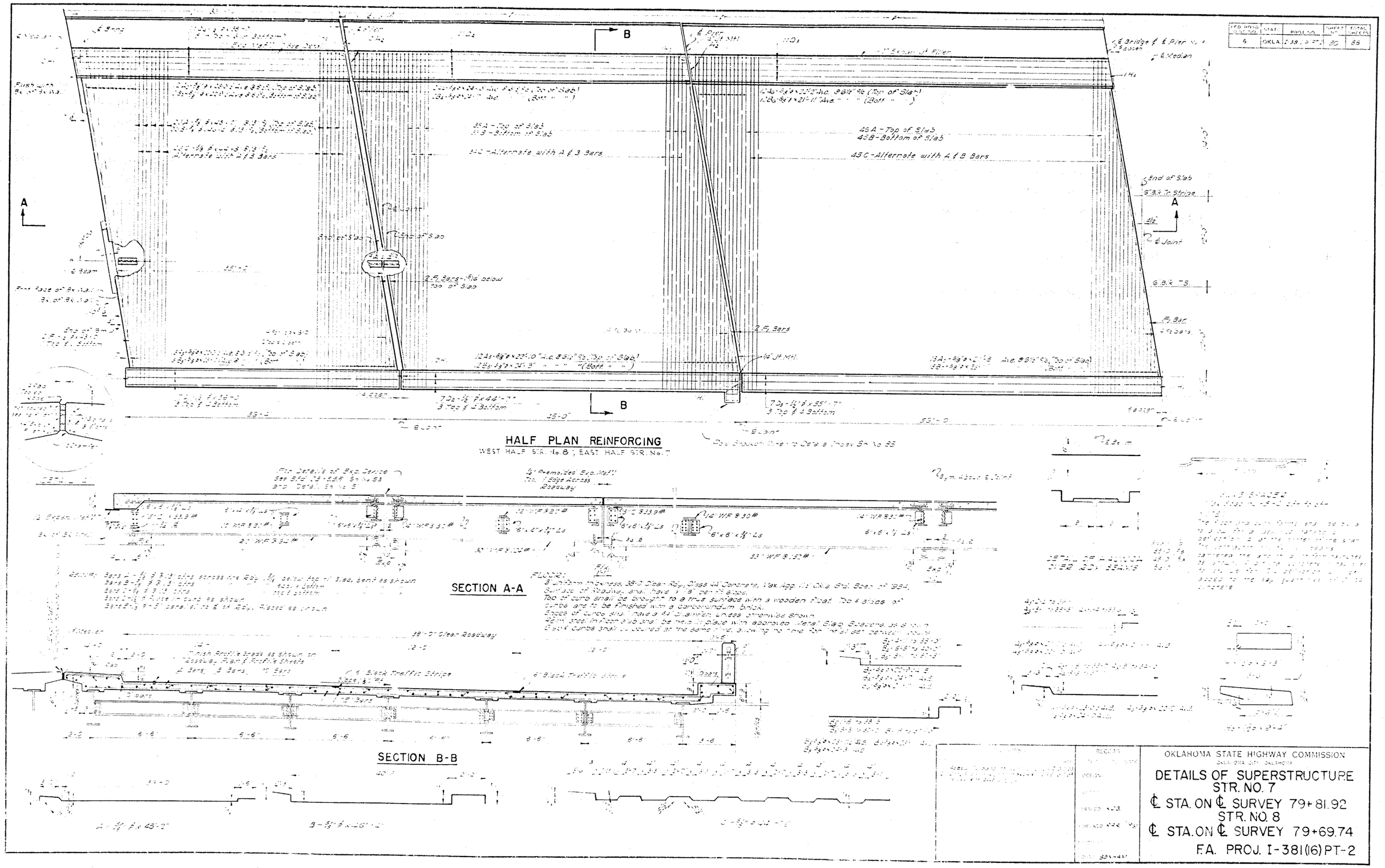
OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

DETAILS OF PIERS
STR. NO. 7
℄ STA. ON ℄ SURVEY 79+81.92
STR. NO. 8
℄ STA. ON ℄ SURVEY 79+69.74

F.A. PROJ. I-381 (16) PT.-2

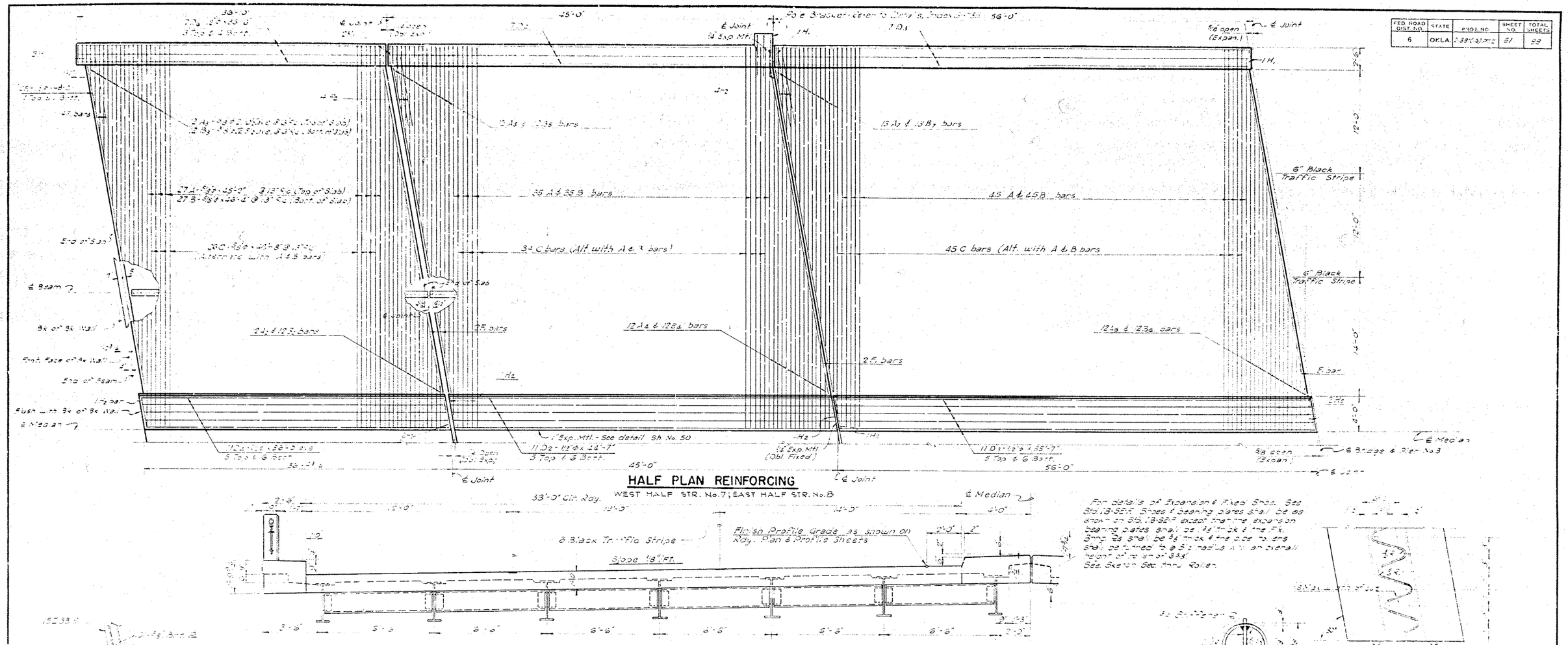
PROJECT NO. I-38(16)PT.2 SHEET NO. 49

FED. ROAD DIST. NO.	STAT.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-38.,.3 PT-1	50	88



PROJECT NO. I-38.,.3 PT-1 SHEET NO. 50

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-2	51	93

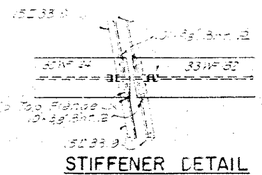


HALF PLAN REINFORCING

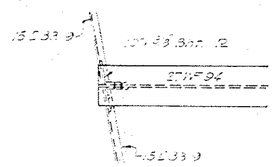
WEST HALF STR. No. 7; EAST HALF STR. No. 8

END ELEVATION

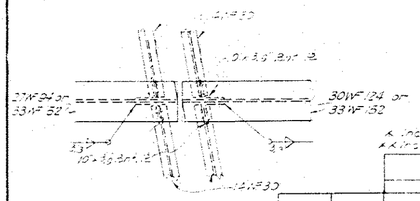
For details of Expansion & Fixed Shoe, See Std. 13-S2F. Shoes & bearing plates shall be as shown on Std. 13-S2F except the fine expansion bearing plates shall be 1/2" thick & the Fixed Shoe Std. shall be 1/2" thick & the side plates shall be formed to a 6" radius with an overall height of 1" on Std.
See Sketch Sec. thru Roller.



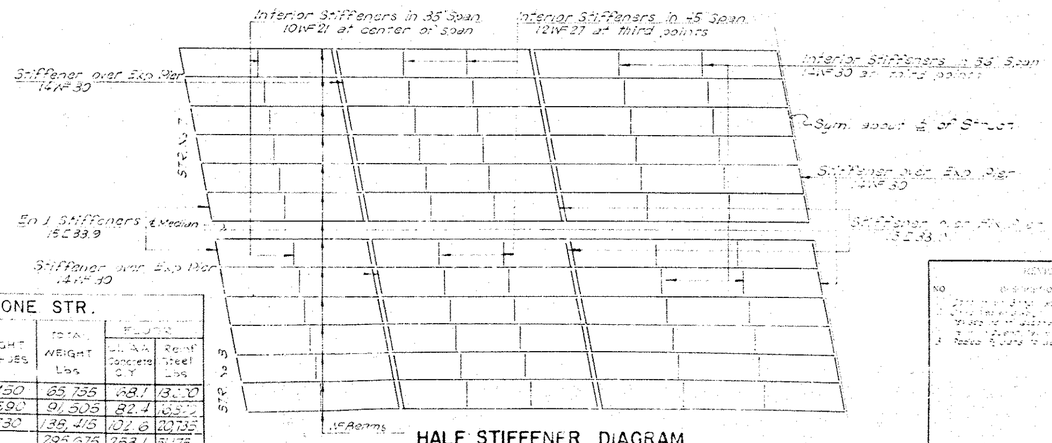
STIFFENER DETAIL OVER FIXED PIER



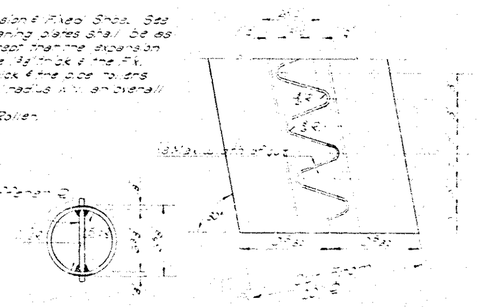
STIFFENER DETAIL AT ABUTMENTS



STIFFENER DETAIL OVER EXP. PIER



HALF STIFFENER DIAGRAM



DETAIL OF ROLLER

DETAIL OF FINGER TYPE EXPANSION PLATE

Note: Refer to Std. 13-S2F for additional details.

* Includes 9440 Lbs for 2 Exp. Devices
** Includes 4720 Lbs for 1 Exp. Device

TABLE OF QUANTITIES - ONE STR.

No. of Spans	Span Length	Beams: Size of Beams	Beams: Wt. of Beam Per Ft. Lbs	Beams: Wt. of Beam Total Lbs	Beams: Wt. of Stiffeners, Misc. Items Lbs	Beams: Weight of Shoes Lbs	Total Weight Lbs	Floor: Cu. Yds. Concrete C.Y.	Floor: Reinf. Steel Lbs
2	35'	27WF @ 94#	658	46,060	17,245 *	2,450	65,755	68.1	13,000
2	45'	30WF @ 124#	868	78,120	10,795	2,590	91,505	82.4	16,500
2	56'	33WF @ 152#	1,064	119,170	16,515 **	2,730	138,415	102.6	20,725
TOTAL							295,675	253.1	51,175

REVISIONS			
NO.	DESCRIPTION	BY	DATE
	[illegible]		

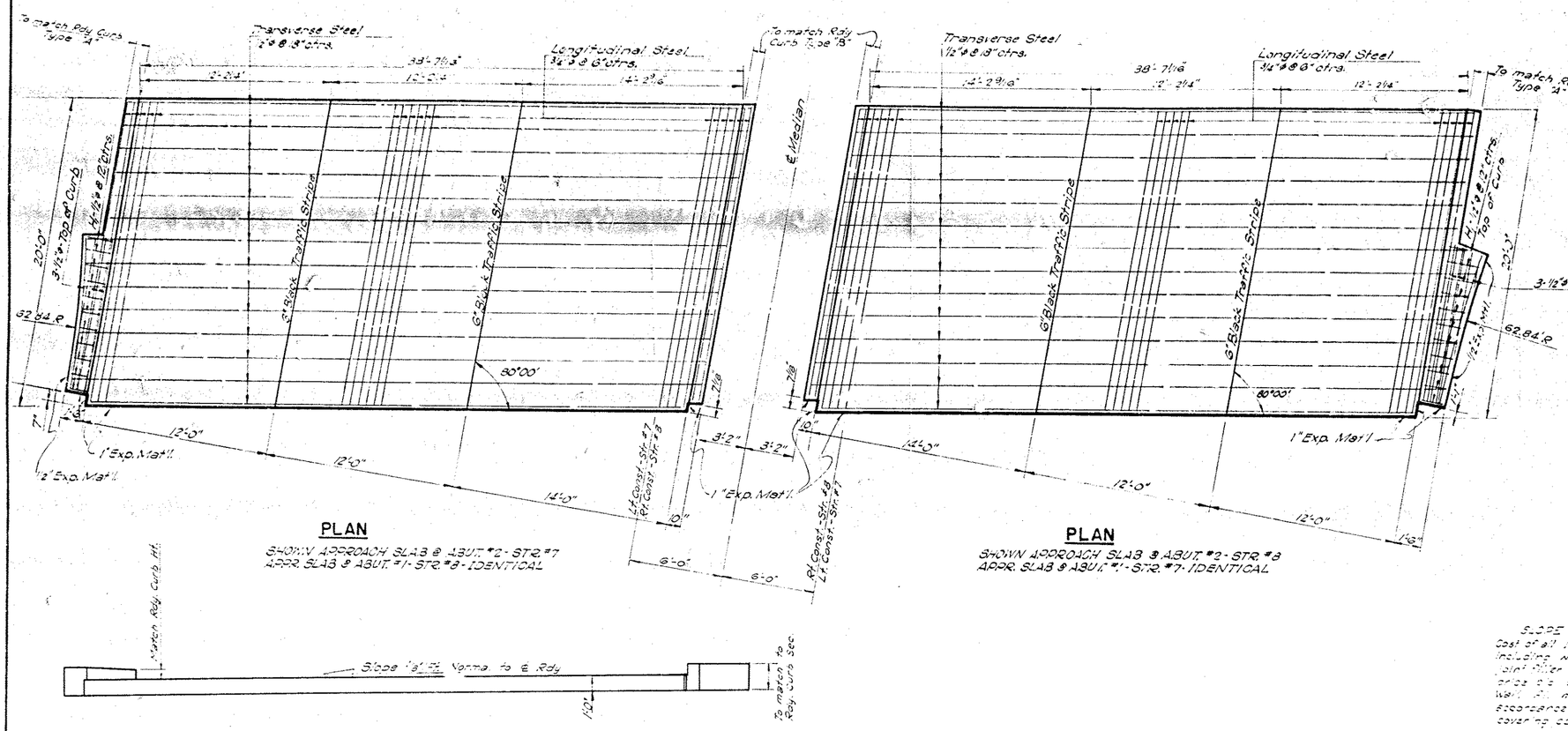
RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	J.S.	
CHECKED	[illegible]	
APPROVED		
SQUAD	BEN-HM	

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

DETAILS OF SUPERSTRUCTURE
STR. NO. 7
℄ STA. ON ℄ SURVEY 79+81.92
STR. NO. 8
℄ STA. ON ℄ SURVEY 79+69.74
F.A. PROJ. I-381 (16) PT-2

PROJECT NO. I-381(16)PT-2 SHEET NO. 51

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-2	52	88

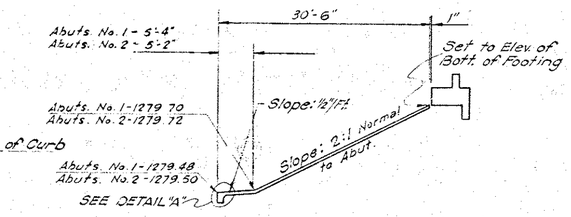


PLAN

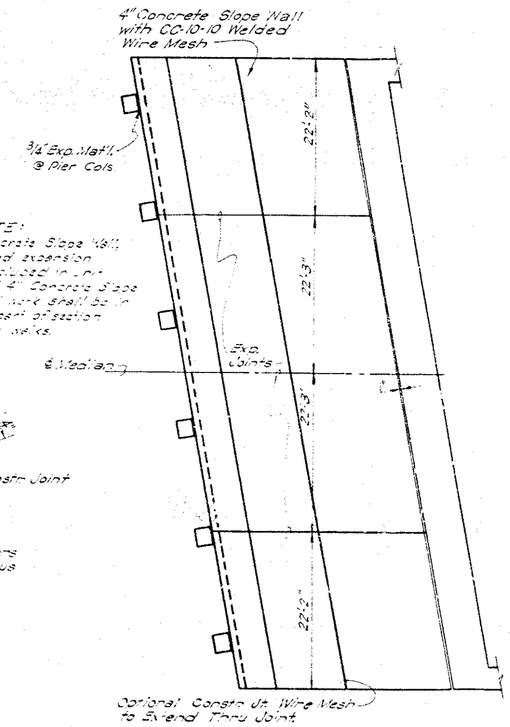
SHOWN APPROACH SLAB @ ABUT. #2 - STR. #7
APPR. SLAB @ ABUT. #1 - STR. #8 - IDENTICAL

PLAN

SHOWN APPROACH SLAB @ ABUT. #2 - STR. #8
APPR. SLAB @ ABUT. #1 - STR. #7 - IDENTICAL



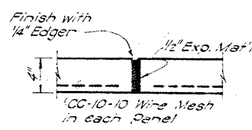
TYPICAL SECTION - CONC. SLOPE WALL



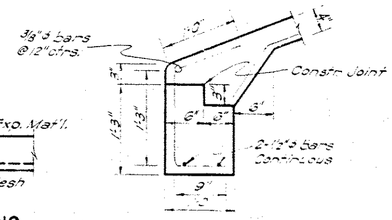
SLOPE WALL NOTE:
Cost of all items in concrete Slope Wall, including wire mesh and expansion joint filler shall be included in unit price bid per S.Y. of 4" Concrete Slope Wall. All material and work shall be in accordance with that part of section covering concrete side walks.

TYPICAL PLAN OF CONCRETE SLOPE WALL

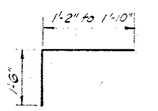
END VIEW



DETAIL OF CONC. SLAB JOINT



DETAIL "A"



H - 1/2"ϕ x 3'-0" AVE.

QUANTITIES - ONE APPROACH SLAB		
ITEM	UNIT	TOTAL
Approach Slab	S.Y.	53.4
Reinforcing Steel *	Lbs.	2,890
6" Black Traffic Stripe	L.F.	40

* NOTE: Cost of Reinforcing Steel in Approach Slabs shall be included in the price bid per Sq. Yd. of Appr. Slab.

NOTE: Cost of Curbs on Appr. Slabs shall be included in price bid per Sq. Yd. of Appr. Slab.

REVISIONS			
NO.	DESCRIPTION	BY	DATE

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED DRS		
CHECKED RRR		
APPROVED		
SQUAD. BENHAM		

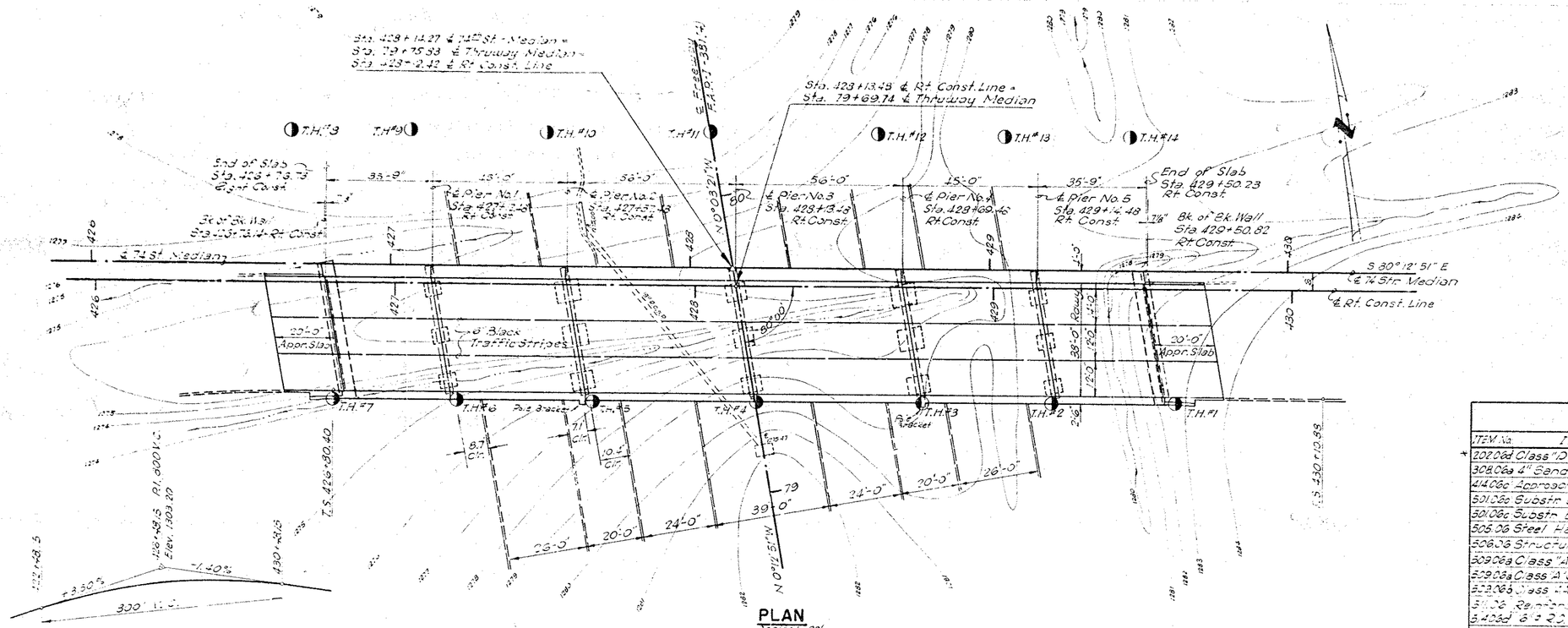
OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

DETAILS OF APPROACH SLABS
STR. NO. 7
℄ STA. ON ℄ SURVEY 79+81.92
STR. NO. 8
℄ STA. ON ℄ SURVEY 79+69.74
F.A. PROJ. I-381(16)PT-2

I-381(16)
PT. 2
54 88

DESIGN DATA

Concrete	1,000 psi
Reinf. Steel	18,000 psi
Design Live Load	H 20-S3
Foundation Loads	
Abutments	25.4 Ton/pile
Piers	3.2 Ton/sf



PLAN

Scale: 1" = 20'

VERTICAL CURVE DATA
RIGHT CONSTR. LINE

B.M. - R.R. Spike in Power Pole 6' Rt.
Sta. 428+87 Elev. 1276.13

SUMMARY OF QUANTITIES

ITEM No.	ITEM	UNIT	Abuts.	Piers	Super Struct.	Bridge	Appr.
* 202.06d	Class "D" Excavation	C.Y.					200
308.06a	4" Sand Cushion	S.Y.					173.8
414.06c	Approach Slabs	S.Y.					173.8
501.06a	Substr. Excav.-Common	C.Y.	550	550		550	
501.06c	Substr. Excav.-Rock	C.Y.		50		50	
505.06	Steel Handrailing	L.F.			274.92	274.92	
506.06	Structural Steel	Lbs.			33,535	33,535	
509.06a	Class "A" Concrete	C.Y.	110	220		110	
509.06a	Class "A" Conc. in Pier Bases	C.Y.		56.4		56.4	
509.06b	Class "AA" Concrete	C.Y.			138.1	138.1	
510.06	Reinforcing Steel	Lbs.	9355	19,325	21,910	31,610	
540.06d	6" x 20.0# Piling	L.F.	369			369	
624.06a	3 Black Traffic Stripes	L.F.			547	547	90
Special	4" Concrete Slope Wall	S.Y.				355.6	
Special	Aluminum Handrailing	L.F.			1,492	1,492	

* Non-Participating Item

GENERAL NOTES

All construction & materials shall be in accordance with the Oklahoma Standard Specifications of 1954 and Special Provisions.

All exposed concrete surfaces shall have a carborundum finish. 1310

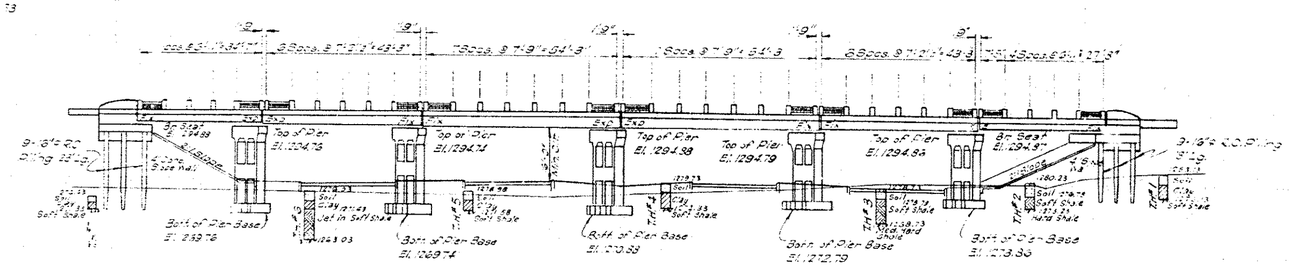
All reinforcing steel bars shall conform to ASTM Specifications A-305-49. 1300

Piling shall be driven using leads of sufficient strength to control piles. 1290

Piling shall be driven to practical refusal if above grade or to a minimum bearing of 50 tons if at or below grade.

All Abutment Piling shall be driven through the compacted fill. Pilot Holes shall be drilled to Elev. 1280 @ Abut. No. 1 & Elev. 1278.5 @ Abut. No. 2. Then drill the Pilot Holes to Elev. 1275.5 @ Abut. No. 1 & Elev. 1273.5 @ Abut. No. 2. Cost of pilot holes shall be included in the unit price bid for 6" x 20.0# Piling. 1280 1270 1260

Contractor shall submit bids on both types of reinforcing. Type of reinforcing used will be determined by bids received.



GENERAL ELEVATION

Scale: 1" = 20'

LIST OF SPECIAL PROVISIONS:

1310 See Special Provisions Included in the Proposal For Curing Concrete Elements Using Compound

1300 For Bridge Structures Including Header Walls, Retaining Walls & Piling (1-1-61 Edit.) Rev. 7-27-65

1290

280 Equipment For Driving Piles-614-(1a) Reinforcing Steel (Fixed Steel)-733-(1a) Rev. 2-21-67

1270 Black Traffic Stripe on Black Traffic Stripe Arrow. 634-(1a) Rev. 10-18-65

1260

REFERENCE LIST OF DWGS.:

DETAILS OF ABUTMENTS
DETAILS OF PIERS
DETAILS OF SUPERSTR.
DETAILS OF APPR. SLABS
DETAILS OF HANDRAILING

REVISION			
NO.	DESCRIPTION	BY	DATE
	Revised Stress Diagram		

426+00 427+00 428+00 429+00 430+00

SKEW 80°-00' RT. FWD.

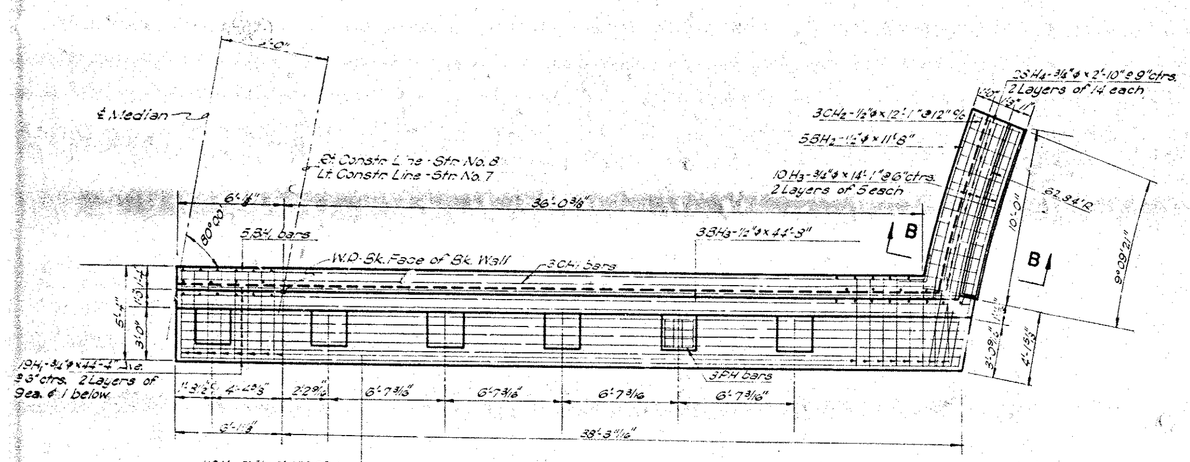
RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED		
CHECKED		
APPROV'D		
SQUAD:		

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 8
GENERAL ELEV., PLAN AND
SUMMARY OF QUANTITIES
35'-45'-56'-56'-45'-35'-I-BM SPANS
38' RDY. & 1'-18" S.C. & 1-4' MEDIAN
℄ STA. ON ℄ SURVEY 79+69.74
F.A. PROJ. I-381 (16) PT.-2

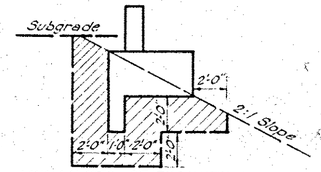
FAP I-381(16) PT. 2 54

FED. ROAD DIV. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	F-381(16)PT-2	55	99



PLAN

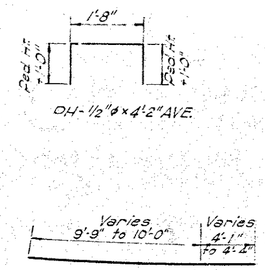
Abut No 2 - Str No 8
Abut No 1 - Str No 7



MAX. LIMITS OF EXCAVATION IN COMPACTED FILL

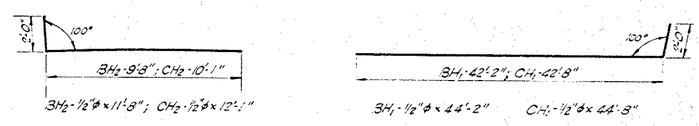
Refer to Identical Note Index Sheet No. 21

EXCAVATION DETAILS



DH - 1/2"ϕ x 4'-2" AVE.

H3 - 3/4"ϕ x 14'-1" AVE.



BH2 - 1/2"ϕ x 11'-8"; CH2 - 1/2"ϕ x 12'-1"

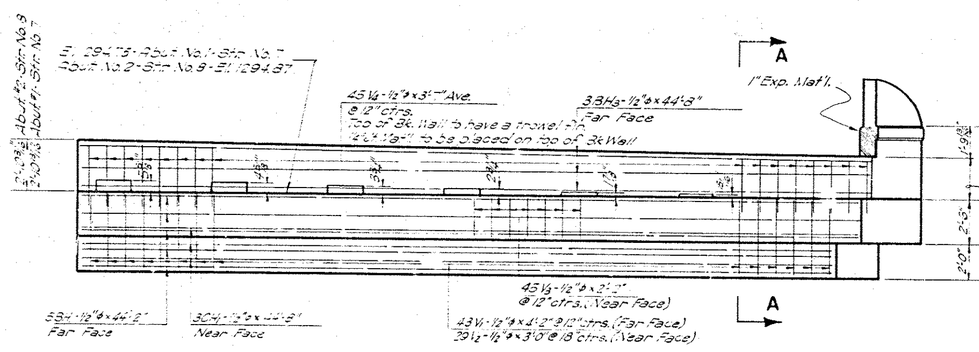
BH1 - 1/2"ϕ x 44'-2" CH1 - 1/2"ϕ x 44'-8"

BAR LIST-ONE ABUT.

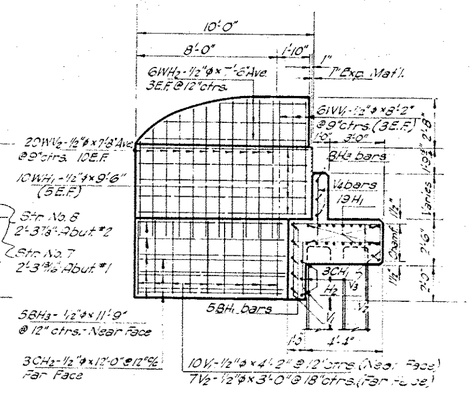
Mark	No.	Size	Form	Length
H1	19	3/4"ϕ	Str.	44'-4" Ave.
H2	118	3/4"ϕ	Str.	5'-0"
H3	10	3/4"ϕ	7'-6" Bent	14'-1" Ave.
H4	28	3/4"ϕ	Str.	2'-10"
V1	53	1/2"ϕ	Str.	4'-2"
V2	36	1/2"ϕ	Str.	3'-0"
V3	45	1/2"ϕ	Str.	2'-2"
V4	45	1/2"ϕ	Str.	3'-7" Ave.
BH1	5	1/2"ϕ	Bnt.	44'-2"
BH2	5	1/2"ϕ	Bnt.	11'-8"
BH3	3	1/2"ϕ	Str.	44'-6"
CH1	3	1/2"ϕ	Bnt.	44'-8"
CH2	3	1/2"ϕ	Bnt.	12'-1"
WH1	10	1/2"ϕ	7'-6" Bent	9'-6"
WH2	6	1/2"ϕ	7'-6" Bent	7'-6" Ave.
WV1	6	1/2"ϕ	Str.	8'-2"
WV2	20	1/2"ϕ	Str.	7'-9" Ave.
PH	48	1/2"ϕ	Bnt.	4'-2" Ave.
P	18	1/2"ϕ	Bnt.	3'-8"
H	36	3/4"ϕ	Bnt.	8'-3"

QUANTITIES-ONE ABUTMENT

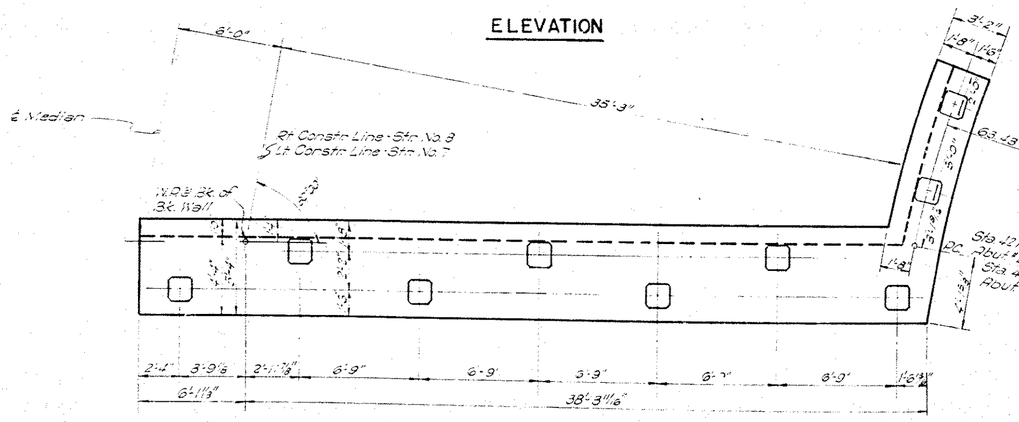
ITEM	UNIT	TOTAL
Class "A" Concrete	C.Y.	35.3
Reinf. Steel	Lbs.	4170
Substr. Excav. Common	C.Y.	90



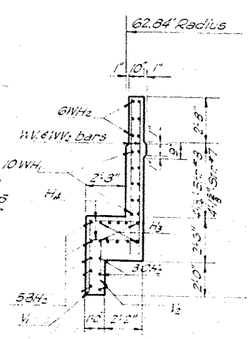
ELEVATION



SECTION A-A



PILE SPACING PLAN



SECTION B-B

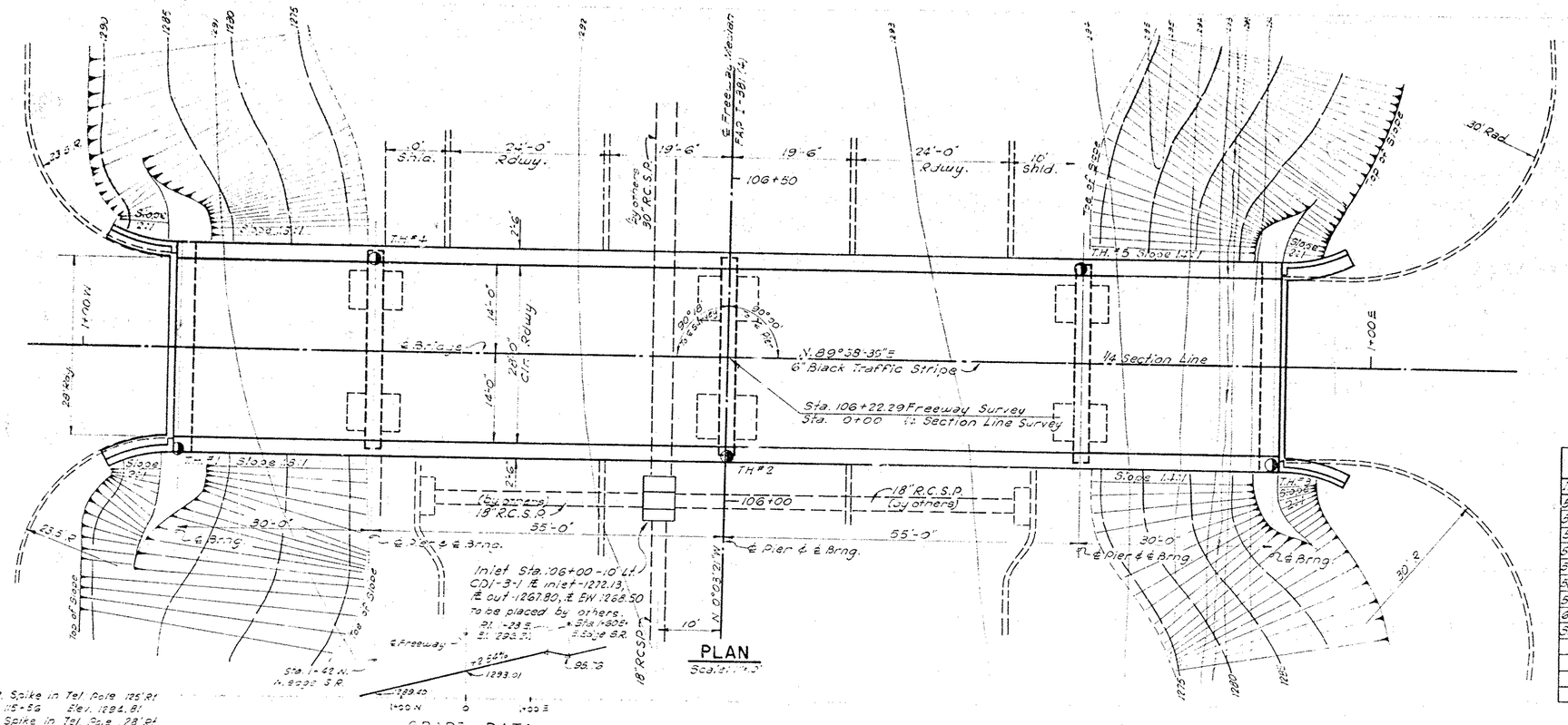
GENERAL NOTES:
All construction & materials shall be in accordance with the Oklahoma Standard Specifications of 1954 & Special Provisions.
All reinforcing steel bars shall conform to A.S.T.M. Specs. A-305-49.
All exposed concrete edges shall have a 3/4" chamfer unless otherwise shown or noted.
For details of filling P & H bars, refer to Std. Dwg. 080-3.

REVISIONS				RECORD		
NO	DESCRIPTION	BY	DATE	ITEM	BY	DATE
	Rev. Abut. 2 - Str. 8 Abut. No. 1	JHS	7-7-8	DESIGN		
				DETAIL		
				TRACED	JHS	
				CHECKED	RRR	
				APPROVED		
				SQUAD: BENHAM		

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

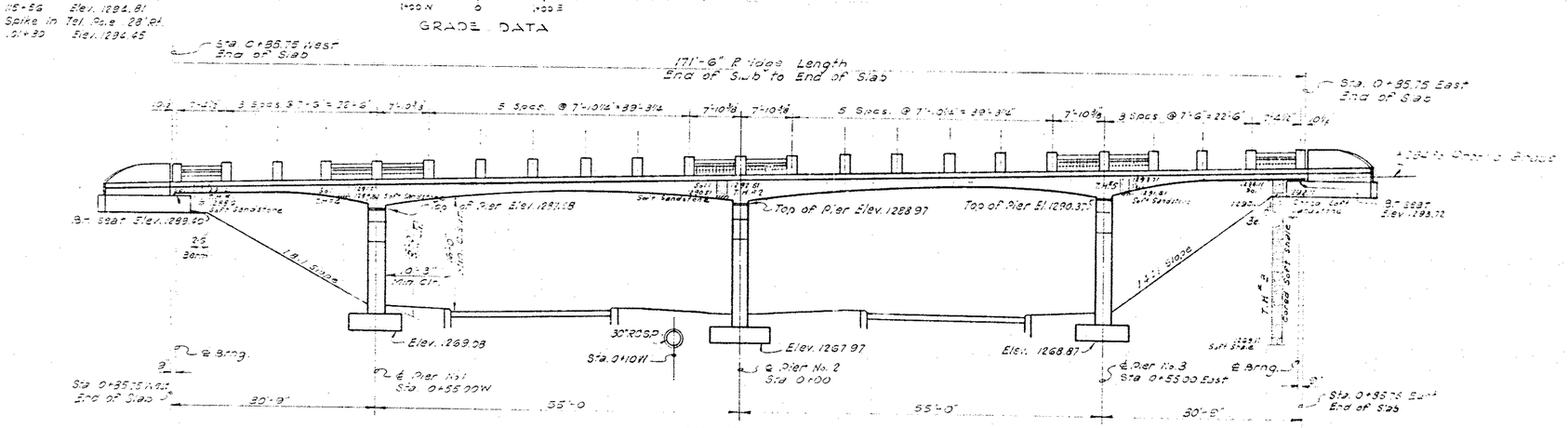
DETAILS OF ABUTMENTS
ABUT. NO. 1 - STR. NO. 7
℄ STA. ON ℄ SURVEY 79+81.92
ABUT. NO. 2 - STR. NO. 8
℄ STA. ON ℄ SURVEY 79+69.74
F.A. PROJ. I-381 (16) PT-2

PROJECT NO. F-381(16)PT2 SHEET NO. 55



PLAN

Scale 1" = 10'



GENERAL ELEVATION

Scale 1" = 10'

BM - R.R. Spike in Tel. Pole 125' Rt. Sta. 115+50 Elev. 1294.81
BM - R.R. Spike in Tel. Pole 28' Rt. Sta. 101+30 Elev. 1294.45

GRADE DATA

1+00 WEST | +50 WEST | 0+00 | +50 EAST | 1+00 EAST

I-381(16)PT-1 56 88

DESIGN DATA

Concrete	1,000 psi.
Reinforcing Steel	18,000 psi.
Design Live Load	H-20-53
Foundation Loads	
Abutments:	0.92 T/sq. Ft.
Piers Direct Load	3.96 T/sq. Ft.

SUMMARY OF QUANTITIES

ITEM No.	ITEM	UNIT	Abuts	Piers	Super Struct.	Bridge
501.06a	Substruct. Excav. - Common	C.Y.	28			28
501.06b	Substruct. Excav. - Rock	C.Y.	33	60		93
505.08	Steel Handrailing	L.F.			342.5	342.5
509.06a	Class "A" Concrete	C.Y.	39.6	70.4		110.0
509.06a	Class "A" Conc. in Pier & Abut. Bases	C.Y.		29.5		29.5
509.06b	Class "AA" Concrete	C.Y.			433.3	433.3
511.06	Reinforcing Steel	Lbs.	4200	2200	68,400	74,600
624.06a	6" Black Traffic Stripe	L.F.			175	175
506.03	Aluminum Handrailing	L.F.			342.5	342.5

GENERAL NOTES

All construction & materials shall be in accordance with the Oklahoma Standard Specifications of 1954 & Special Provisions.

All exposed concrete surfaces shall have a carborundum finish.

All reinforcing steel bars shall conform to A.S.T.M. Specifications A-305-49.

Contractor shall submit plans on both types of handrailing for approval before work is begun and be governed by the approved plan.

Pier footing & bearing shall not be taken until shall be placed only upon footing resting upon material is found to be satisfactory.

REVISIONS			
NO	DESCRIPTION	BY	DATE

SPECIAL PROVISIONS

See Special Provisions Included in the Proposal For Curing Concrete with Membrane Curing Compound For Bridge Structures Including Parapet Walls, Retaining Walls & Railing 414-6(sc) Rev. 7-27-55

Neoprene Rubber For Bearing Devices 514-1(a) Reinforcing Steel (Axle Steel) 723-1(a) Rev. 2-21-57
Black Traffic Stripe or Black Traffic Stripe Arrow. 624-1(a) Rev. 10-8-53

REFERENCE LIST OF DWGS.

DETAILS	ABUTMENTS	STRUCT. 67
DETAILS	PIERS	STRUCT. 68
DETAILS	SUPERSTR.	STRUCT. 15
DETAILS	SLAB	STRUCT. 20
DETAILS	RAILING	STRUCT. 30 & 31

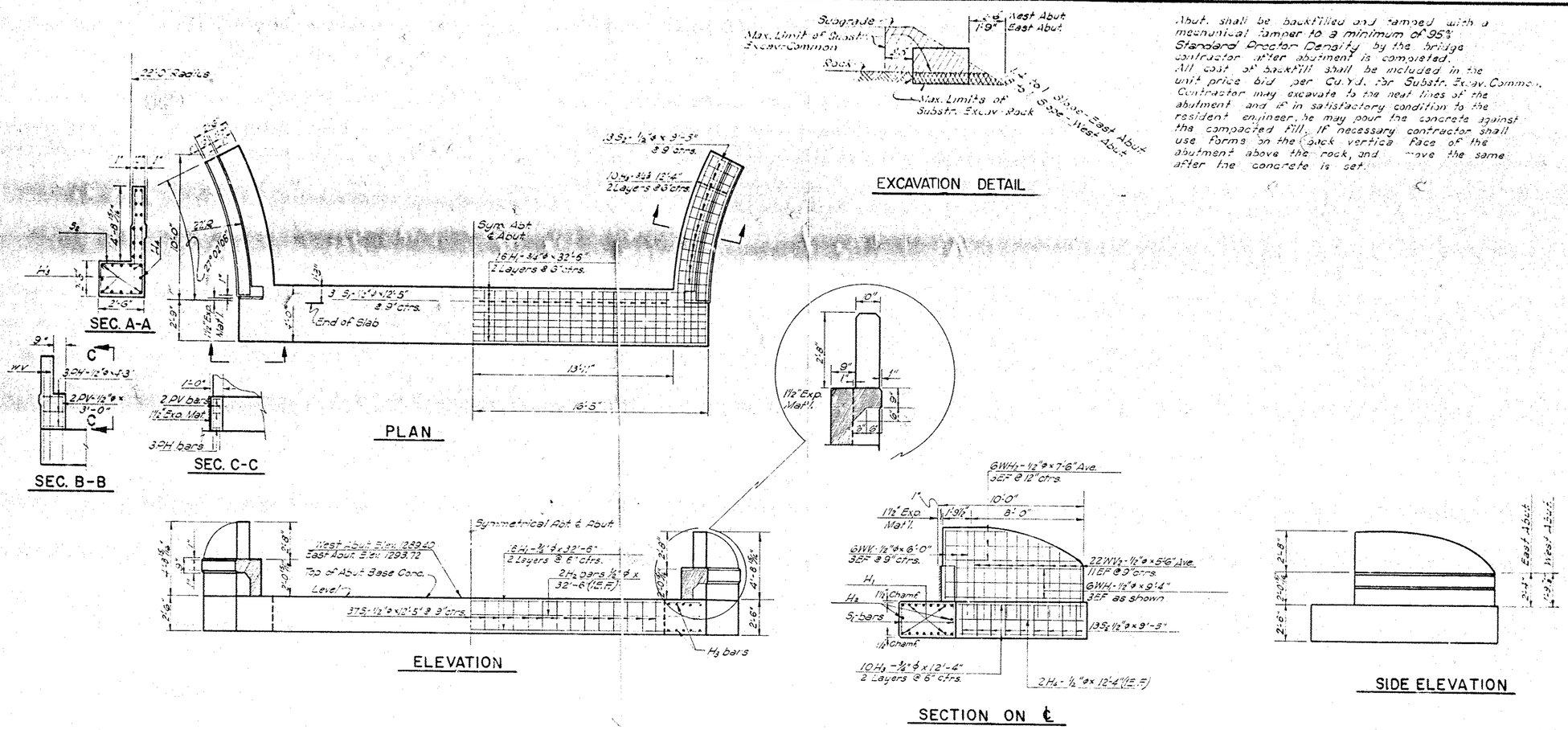
RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	J.S.	
CHECKED	R.R.R.	2-1-57
APPR'D		
SQUAD	GENHAM	

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLA.

STR. No. 9
GENERAL ELEV., PLAN & SUMMARY OF QUANTITIES
30'-55'-55'-30' CONC. SLAB SPANS
28' RDY & 2-18" S.C.'s
℄ STA. ON ℄ SURVEY 106+22.29
F.A. PROJ. I-381 (16) PT.-1

I-381(16)PT-1 56

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-1	57	88



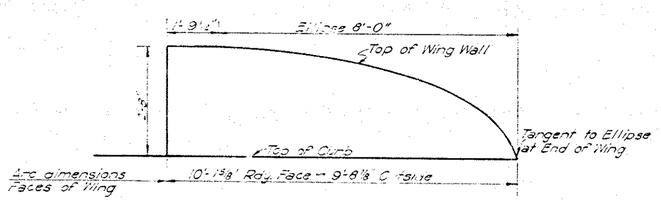
Abut. shall be backfilled and tamped with a mechanical tamper to a minimum of 95% Standard Proctor Density by the bridge contractor after abutment is completed. All cost of backfill shall be included in the unit price bid per Cu. Yd. for Substr. Excav. Common. Contractor may excavate to the neat lines of the abutment and if in satisfactory condition to the resident engineer, he may pour the concrete against the compacted fill. If necessary contractor shall use forms on the back vertical face of the abutment above the rock, and remove the same after the concrete is set.

BAR LIST

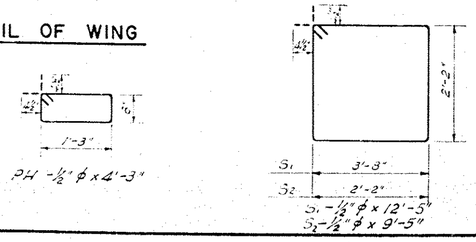
Mark	No.	Size	Form	Length
H_1	16	3/4"ϕ	Str.	32'-6"
H_2	2	1/2"ϕ	Str.	32'-6"
H_3	20	3/4"ϕ	Field Bend	12'-4"
H_4	4	1/2"ϕ	Field Bend	12'-4"
S_1	37	1/2"ϕ	Bnt.	12'-5"
S_2	26	1/2"ϕ	Bnt.	9'-5"
WH_1	12	1/2"ϕ	Field Bend	9'-4"
WH_2	12	1/2"ϕ	Field Bend	7'-6" Ave.
WV_1	12	1/2"ϕ	Str.	6'-0"
WF_1	44	1/2"ϕ	Str.	5'-6" Ave.
PH	6	1/2"ϕ	Str.	4'-3"
PV	4	1/2"ϕ	Str.	3'-0"

QUANTITIES

ITEM	UNIT	Abut. #1 (West Abut.)	Abut. #2 (East Abut.)
Cl. "A" Concrete	C.Y.	19.2	19.2
Reinf. Steel	Lbs.	2,100	2,100
Subst. Excav. Com.	C.Y.	10	18
Subst. Excav. Rock	C.Y.	8	9



DETAIL OF WING



GENERAL NOTES:
All concrete materials and work in accordance with the Oklahoma Standard Specs. of 1954 Specs. & Provisions.
All reinf. steel bars shall conform to A.S.T.M. Specs. A-305-49.
All exposed conc. edges shall have a 3/4" chamf. unless otherwise noted.

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

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 9
DETAILS OF ABUTMENTS
℄ STA ON ℄ SURVEY 106 + 22.29

F.A. PROJ. I- 381 (16)PT-1

PROJECT NO. I-381(16)PT-1 SHEET NO. 57

FED. HIGHWAY DIVI. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-1	58	88

QUANTITIES

I.T.B.M.	UNIT	P.152.1	P.152.2	P.152.3
Class "A" Concrete	C.Y.	22.6	23.3	24.0
Class "A" Conc. Pier Bases	C.Y.	5.9	11.7	8.9
Reinforcing Steel	Lbs.	3,663	4,745	3,810
Substr. Excav.- Rock	C.Y.	17	24	19

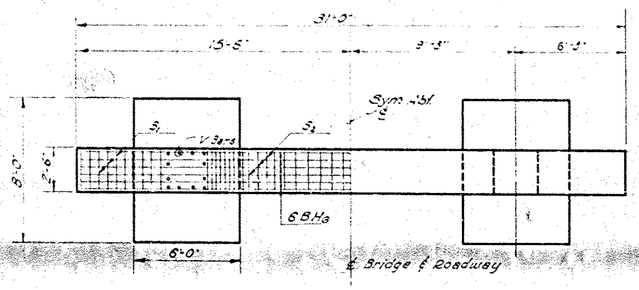
BAR LIST
PIERS NO. 1 OR NO. 3

Mark	No.	Size	Form	Length
$B.H_6$	6	1" ϕ	Bnt.	33'-2"
$B.H_4$	4	1⅛" ϕ	Str.	29'-6" Ave.
$B.H_1$	8	1⅛" ϕ	Str.	21'-0"
$B.H_4$	8	1⅛" ϕ	Bnt.	4'-9"
$B.H_5$	8	½" ϕ	Bnt.	7'-9"
S_1	20	⅝" ϕ	Bnt.	11'-6" Ave.
S_2	21	⅝" ϕ	Bnt.	12'-6"
D	24	¾" ϕ	Str.	5'-0"
	24	¾" ϕ	Str.	15'-9"
	24	¾" ϕ	Str.	18'-8"
T	24	½" ϕ	Bnt.	8'-9"
	30	½" ϕ	Bnt.	8'-9"
F_3	16	½" ϕ	Str.	7'-6"
F_2	20	⅝" ϕ	Str.	5'-6"
$W.H_1$	4	½" ϕ	Str.	18'-6"
$W.H_2$	6	¾" ϕ	Str.	19'-0"
W.V	11	½" ϕ	Bnt.	12'-5"

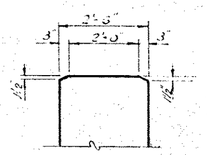
PIER No. 1	PIER No. 3
V_1	
	V_3
T	
	T

BAR LIST
PIER NO. 2

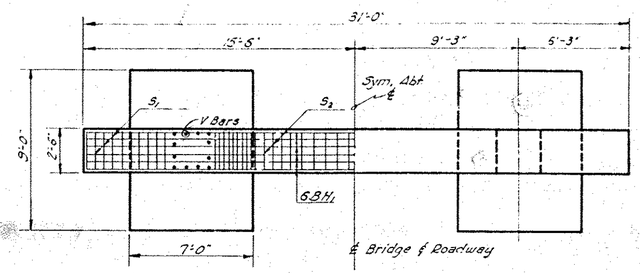
Mark	No.	Size	Form	Length
$B.H_1$	6	1⅛" ϕ	Bnt.	33'-6"
$B.H_2$	4	1⅛" ϕ	Str.	29'-6" Ave.
$B.H_3$	8	1¼" ϕ	Str.	21'-0"
$B.H_4$	8	½" ϕ	Bnt.	4'-9"
$B.H_5$	8	½" ϕ	Bnt.	7'-9"
S_1	20	⅝" ϕ	Bnt.	11'-6" Ave.
S_2	39	⅝" ϕ	Bnt.	12'-6
T	28	½" ϕ	Bnt.	8'-9"
½	24	¾" ϕ	Str.	18'-2"
D	24	¾" ϕ	Str.	5'-0"
F_1	28	⅞" ϕ	Str.	5'-6"
F_2	24	⅞" ϕ	Str.	6'-6"
$W.H_1$	4	½" ϕ	Str.	18'-6"
$W.H_2$	6	¾" ϕ	Str.	19'-0"
W.V	11	½" ϕ	Bnt.	12'-5"



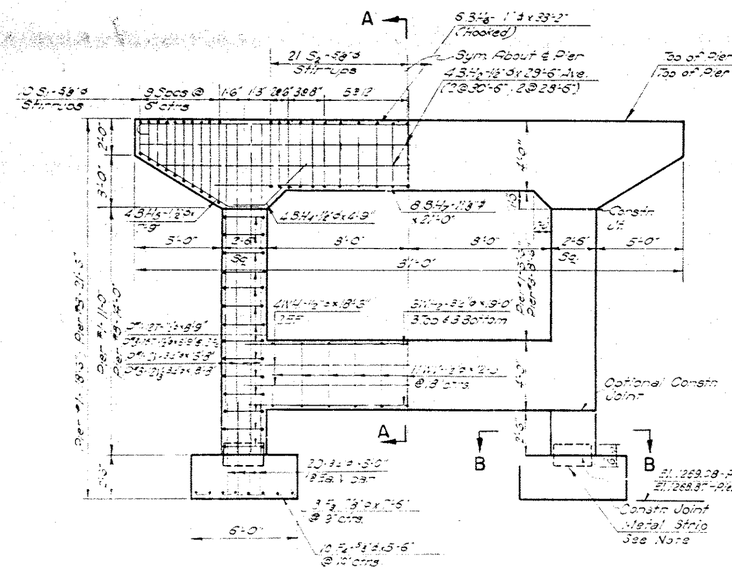
PLAN-PIER NO. 1 OR NO. 3



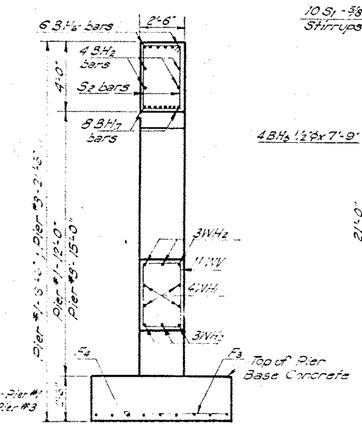
DETAIL OF PIER TOP



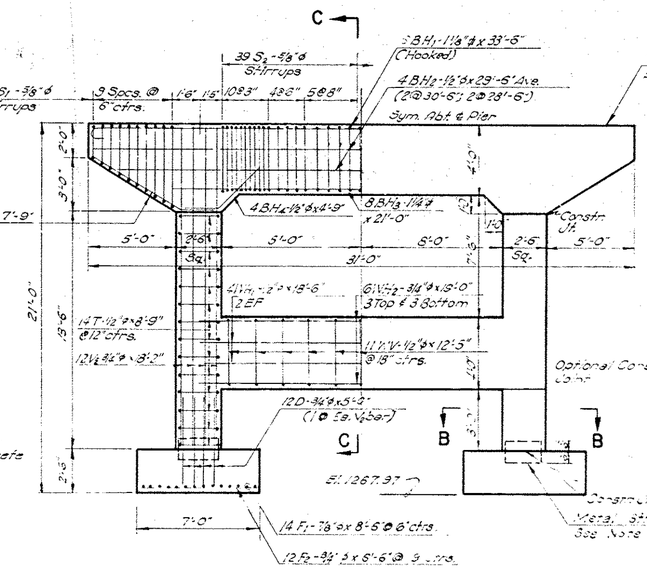
PLAN - PIER NO. 2



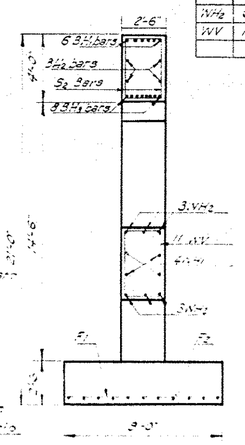
ELEVATION - PIER NO. 1 & 3



SECTION A-A

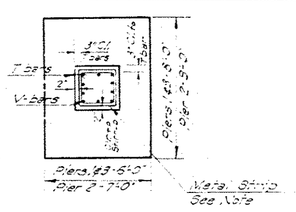


ELEVATION - PIER NO. 2

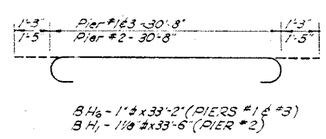


SECTION C-C

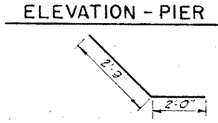
NOTES:
1) Reinforcing steel bars shall conform to ASTM Specs. A-615-61T.
2) Exposed edges shall have a ¾" chamfer unless otherwise noted.
3) Concrete shall be counted only.



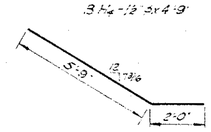
SECTION B-B



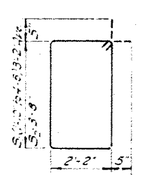
$B.H_6$ - 1" ϕ x 33'-2" (PIERS #1 & #3)
$B.H_1$ - 1⅛" ϕ x 33'-6" (PIER #2)



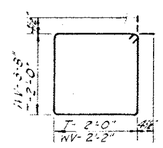
$B.H_4$ - ½" ϕ x 4'-9"



$B.H_5$ - ½" ϕ x 7'-9"



S_1 ⅝" ϕ x 11'-6" AVE.
S_2 ⅝" ϕ x 12'-6"



T - ½" ϕ x 8'-9"
W.V - ½" ϕ x 12'-5"

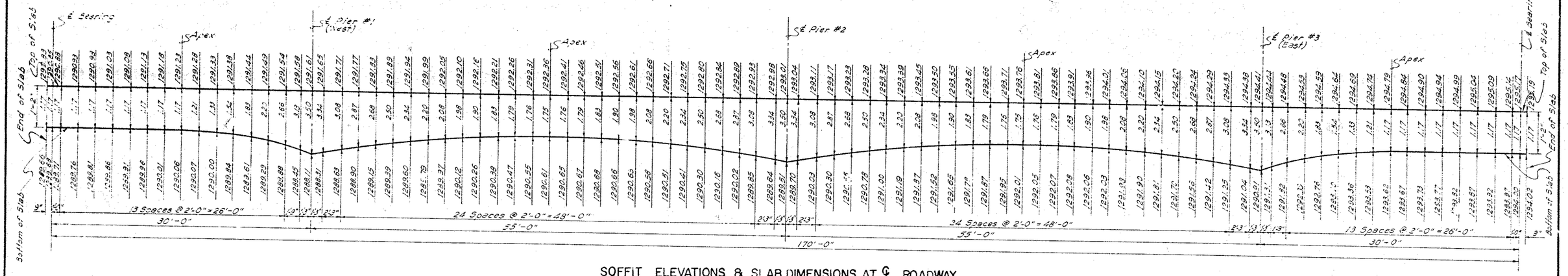
NOTE: Metal Strip & Pier Base Concrete
See "General" notes on Details of Piers - Index Sheet No. 22

REVISIONS				RECORD			
NO.	DESCRIPTION	BY	DATE	ITEM	BY	DATE	
				DESIGN			
				DETAIL			
				TRACED	K.D.S.		
				CHECKED	R.R.B.		
				APPROVED			
				SQUAD: BENHAM			

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

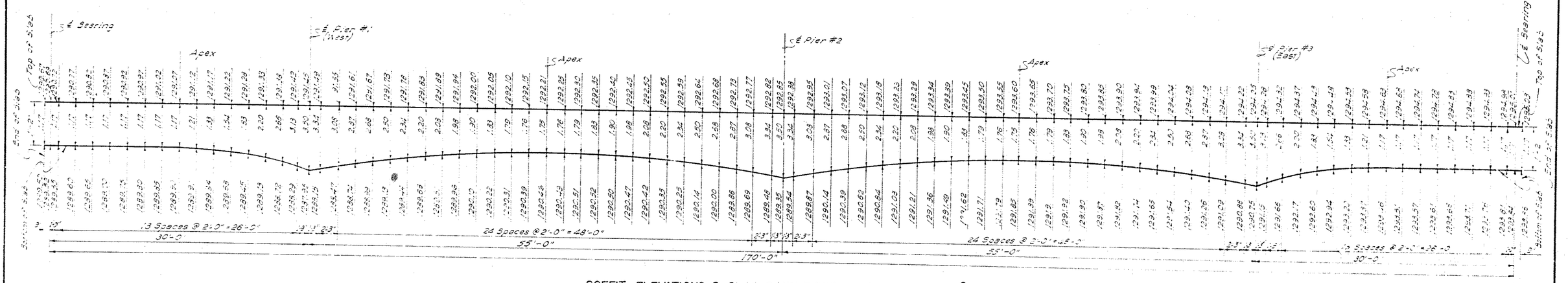
STR. NO. 9
DETAILS OF PIERS
℄ STA ON ℄ SURVEY 106+22.29
F.A. PROJ. I-381 (16) PT-1

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16) PT-1	59	88

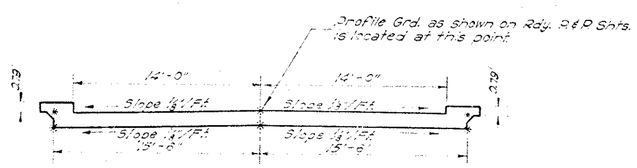


SOFFIT ELEVATIONS & SLAB DIMENSIONS AT ℄ ROADWAY

Note: Elevations shown include allowance of ½" for dead load deflection on 55' Span only.



SOFFIT ELEVATIONS & SLAB DIMENSIONS 15.5' LT. & RT. OF ℄ ROADWAY



* Points of Elevation

Note: For Top of Curb Elevation Add 0.79' to Top of Slab.

Note: Elevations and dimensions shown above are for forming Soffit Curves and Top of Bridge Floor. Anticipated deflections due to dead load have been considered and no other allowance for these deflections shall be made.

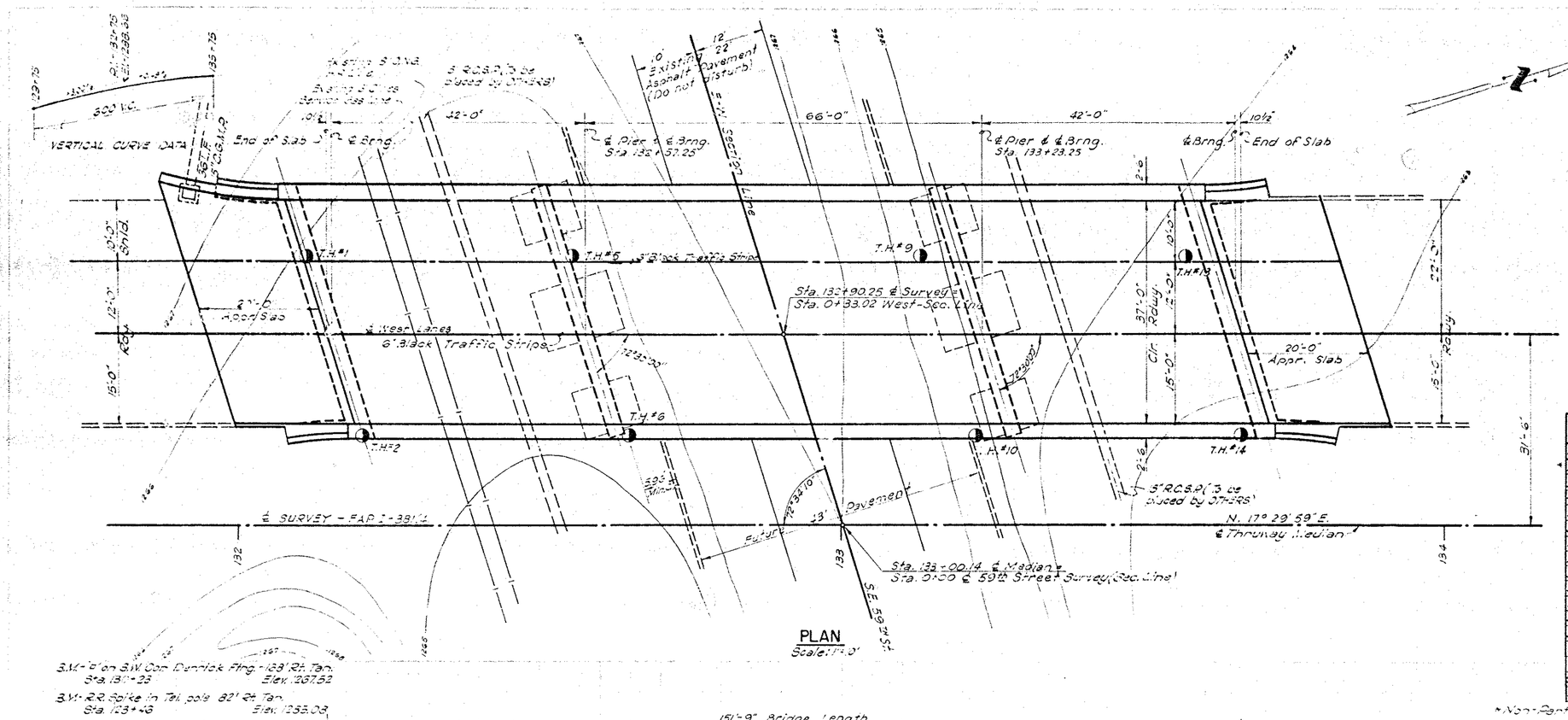
REVISIONS			
NO	DESCRIPTION	BY	DATE

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	K.D.S.	
CHECKED		
APPROVED		
SQUAD	BENNAM	

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 9
DETAIL OF SLAB ELEVATIONS
℄ STA ON ℄ SURVEY 106+22.29
F.A. PROJ. I-381 (16) PT.-1

PROJECT NO. I-381(16)PT-1 SHEET NO. 59



PLAN
Scale: 1" = 10'

GENERAL ELEVATION
Scale: 1" = 10'

DESIGN DATA

L.L. H20-S16-53; P.P.M. 20-4

Concrete	1000 psi
Reinforcing Steel	18,000 psi
Foundation Loads:	
Abutments	20.3 Tons
Piers: Direct Load	29.7 Tons

SUMMARY OF QUANTITIES

ITEM No.	ITEM	UNIT	Abuts.	Piers	Superstruct.	Bridge	Rdy.
202.06d	Class "D" Excavation	C.Y.					200
308.06a	4" Sand Cushion	S.Y.					179.5
414.06a	Approach Slabs	S.Y.					179.5
501.06b	Substr. Excav.-Common	C.Y.	90	385		575	
501.06c	Substr. Excav.-Rock	C.Y.		44		44	
505.06	Steel Handrailing	L.F.			305	305	
509.06a	Class "A" Concrete	C.Y.	59.0	79.2		138.2	0.6
509.06a	Class "A" Conc. in Pier Bases	C.Y.		52.2		52.2	
509.06b	Class "AA" Concrete	C.Y.			700.3	700.3	
511.06	Reinforcing Steel	Lbs.	7,680	20,390	85,980	114,050	75
533.06a	15" C.G.M. Pipe	L.F.					36
534.06d	16" ϕ R.C. Piling	L.F.	561			561	
611.06h	Inlet Frame & Grate	Ea.					1
624.06a	6" Black Traffic Stripe	L.F.				303.5	80
Special	4" Concrete Slope Wall	S.Y.				374.2	
Special	Aluminum Handrailing	L.F.			305	305	

*Non-Participating Item

— GENERAL NOTES —

All construction & materials shall be in accordance with the Oklahoma Standard Specifications of 1954 & Special Provisions.

All exposed concrete surfaces shall have a carborundum finish.

All reinforcing steel bars shall conform to A.S.T.M. Specifications A-305-49.

Piling shall be driven using leads of sufficient strength to control piles.

Piling shall be driven to practical refusal if above grade or to a minimum bearing of 50 tons if at or below grade.

All abutment piling shall be driven through the compacted fill. 12" ϕ Pilot holes shall be drilled to Elev. 1259.50 @ Abut. No. 1 & to Elev. 1261.00 @ Abut. No. 2. Then 8" ϕ Pilot holes to Elev. 1257.00 @ Abut. No. 1 & to Elev. 1258.50 @ Abut. No. 2. All cost of Pilot holes shall be included in the unit price bid for 16" ϕ R.C. Piling.

Contractor shall submit bids on both types of Handrailing. Type of rail used will be determined by bids received.

Pier footing excavations shall not be made and shall be changed only if firm footing foundation materials are not found at plan elevation.

SPECIAL PROVISIONS

See Special Provisions included in the Proposal For Curing Concrete with Membrane Curing Compound For Bridge Structures Including Parapet Walls, Retaining Walls and Railing 414-6 (ac) Rev. 7-27-55

Equipment For Driving Piles 514-1 (a)
Reinforcing Steel (Axis Steel) 723-1(a) Rev. 2-21-57
Black Traffic Stripe or Black Traffic Stripe Arrow 624-1(a) Rev. 10-18-56
Neoprene rubber for bearing devices.

REFERENCE LIST of DWGS.

DETAILS of ABUTMENTS	S-33 Sht. 61
DETAILS of PIERS	S-33 Sht. 62
DETAILS of SUPERSTR.	S-33 Sht. 63 & 64
DETAILS of SLAB ELEV.	S-33 Sht. 65
DETAILS of APPR. SLAB	S-33 Sht. 66
DETAILS of GUDRAILS	S-33 Sht. 70
DETAILS of HANDRAILS	S-33 Sht. 30A & 37
DETAILS of PILING	S-33 Sht. 27

Built in Standard Alignment SKEW 72°-30' RT. FWD.

REVISIONS			
NO.	DESCRIPTION	BY	DATE

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	J.S.	
CHECKED		
APPROVE		
SQUAD: SEV-HAV		

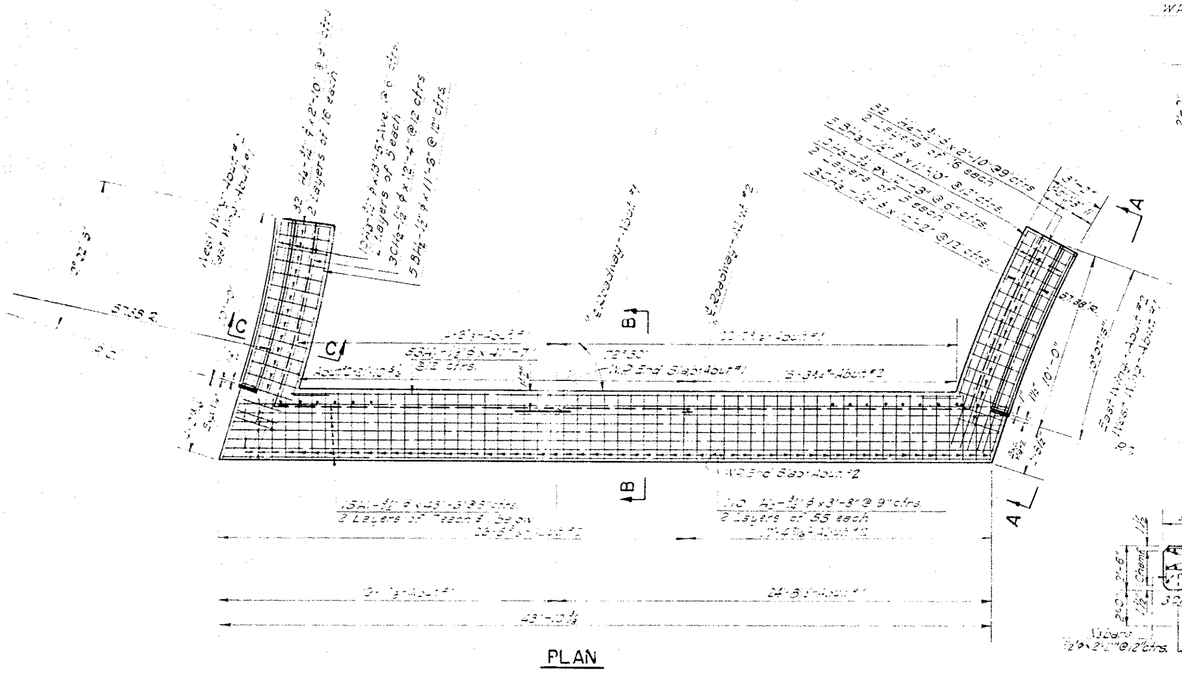
OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

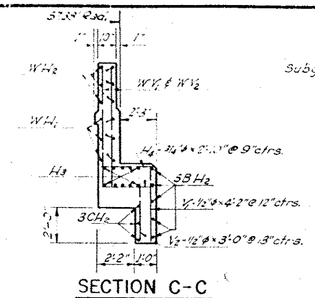
STR. NO. 10

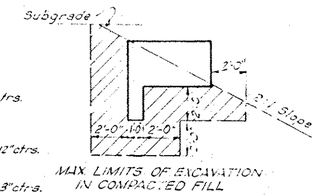
GENERAL ELEV., PLAN & SUMMARY OF QUANTITIES
42'-66'-42' CONC. SLAB SPANS
37' RDY. & 2-18' S.C.'s
℄ STA. ON ℄ SURVEY 132+90.25
F.A. PROJ. I-381 (16) PT.-1

132 +50 133 +50 134

FED. ROAD DIV. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-1	61	88

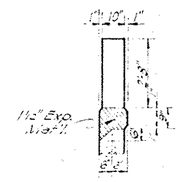


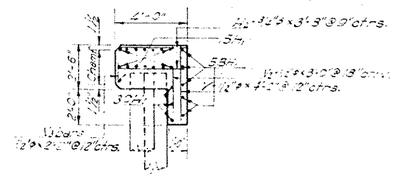


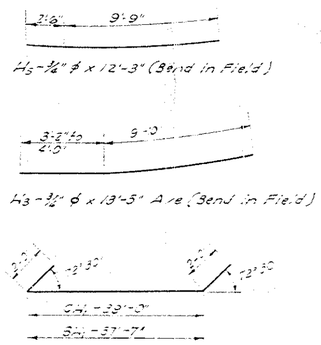


EXCAVATION DETAILS

Refer to identical note on Sheet No.







BAR LIST

Mark	No.	Size	Form	Length
H_1	15	3/4"ϕ	Str.	43'-6"
H_2	110	3/4"ϕ	Str.	3'-8"
H_3	10	3/4"ϕ	Bnt.	13'-5" Ave.
H_4	64	3/4"ϕ	Str.	2'-10"
H_5	10	3/4"ϕ	Bnt.	12'-3"
BH_1	5	1/2"ϕ	Bnt.	41'-7"
BH_2	5	1/2"ϕ	Bnt.	11'-6"
BH_3	5	1/2"ϕ	Bnt.	11'-10"
CH_1	3	1/2"ϕ	Bnt.	43'-0"
CH_2	3	1/2"ϕ	Bnt.	12'-4"
CH_3	3	1/2"ϕ	Bnt.	12'-0"
V_1	58	1/2"ϕ	Str.	4'-2"
V_2	40	1/2"ϕ	Str.	3'-0"
V_3	44	1/2"ϕ	Str.	2'-2"
WH_1	12	1/2"ϕ	Str.	9'-6"
WH_2	12	1/2"ϕ	Str.	7'-6" Ave.
WV_1	6	1/2"ϕ	Str.	7'-6"
WV_2	6	1/2"ϕ	Str.	3'-9"
WV_3	22	1/2"ϕ	Str.	7'-0" Ave.
WV_4	22	1/2"ϕ	Str.	6'-3" Ave.
[illegible]	22	1/2"ϕ	Bnt.	[illegible]
[illegible]	14	3/4"ϕ	Str.	3'-8"

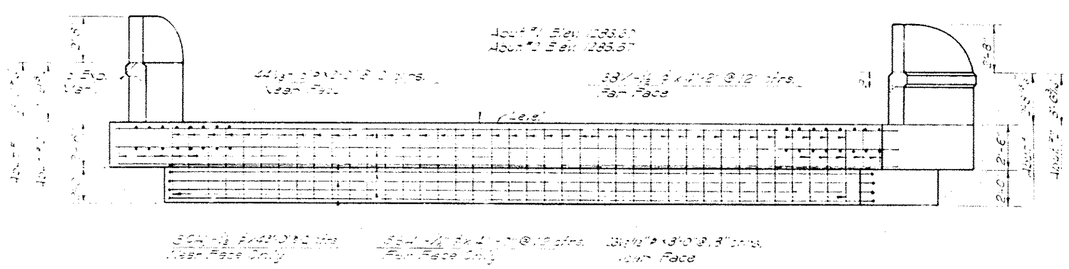
H_3 - 3/4" ϕ x 12'-3" (Bend in Field)

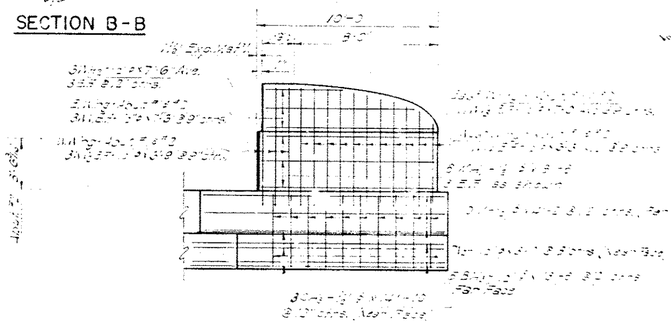
H_3 - 3/4" ϕ x 13'-5" Ave. (Bend in Field)

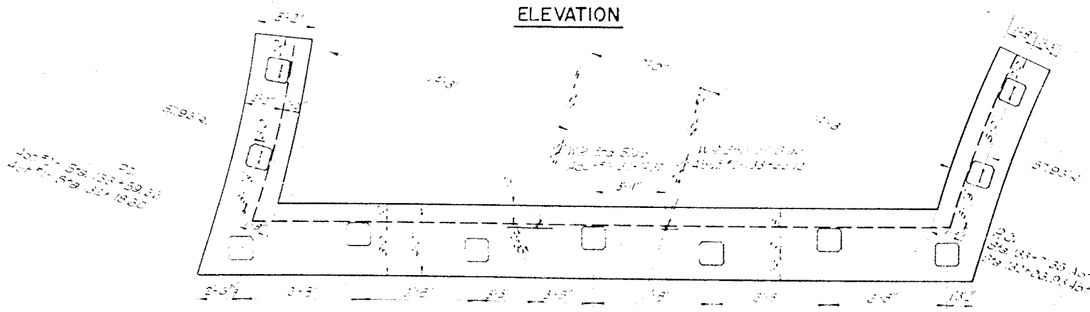
CH_1 - 1/2" ϕ x 43'-0"
BH_1 - 1/2" ϕ x 41'-7"

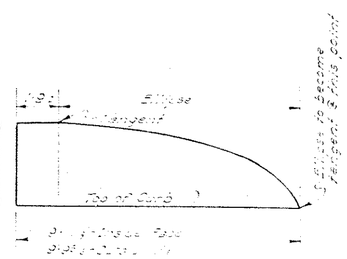
QUANTITIES - ONE ABUTMENT

[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
Bridge Slab, Common	C.Y.	95









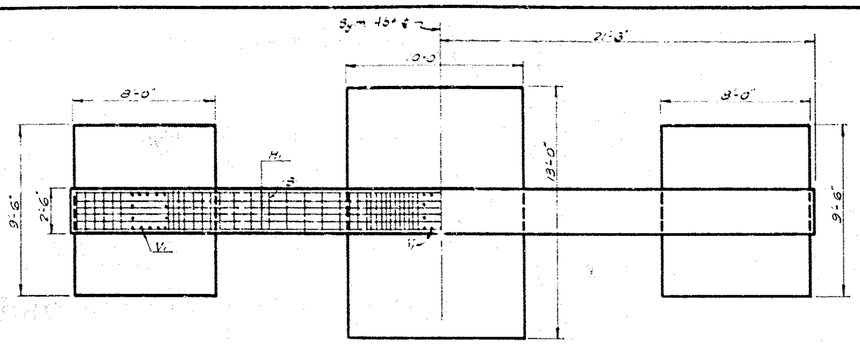
GENERAL NOTES

[illegible]

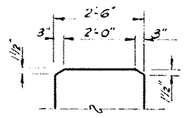
REVISIONS	RECORD	OKLAHOMA STATE HIGHWAY COMMISSION
[illegible]	[illegible]	STR. NO. 10
	DESIGN	DETAILS OF ABUTMENTS
	DETAIL	℄ STA ON ℄ SURVEY 132+90.25
	CHECKED DFS	
	CHECKED [illegible]	F.A. PROJ. I-381 (16) PT-1
	APPROVED	
	[illegible]	

PROJECT NO. I-381(16)PT-1 SHEET NO. 61

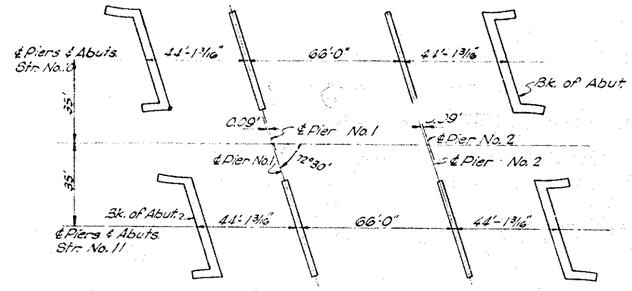
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-1	62	88



PLAN

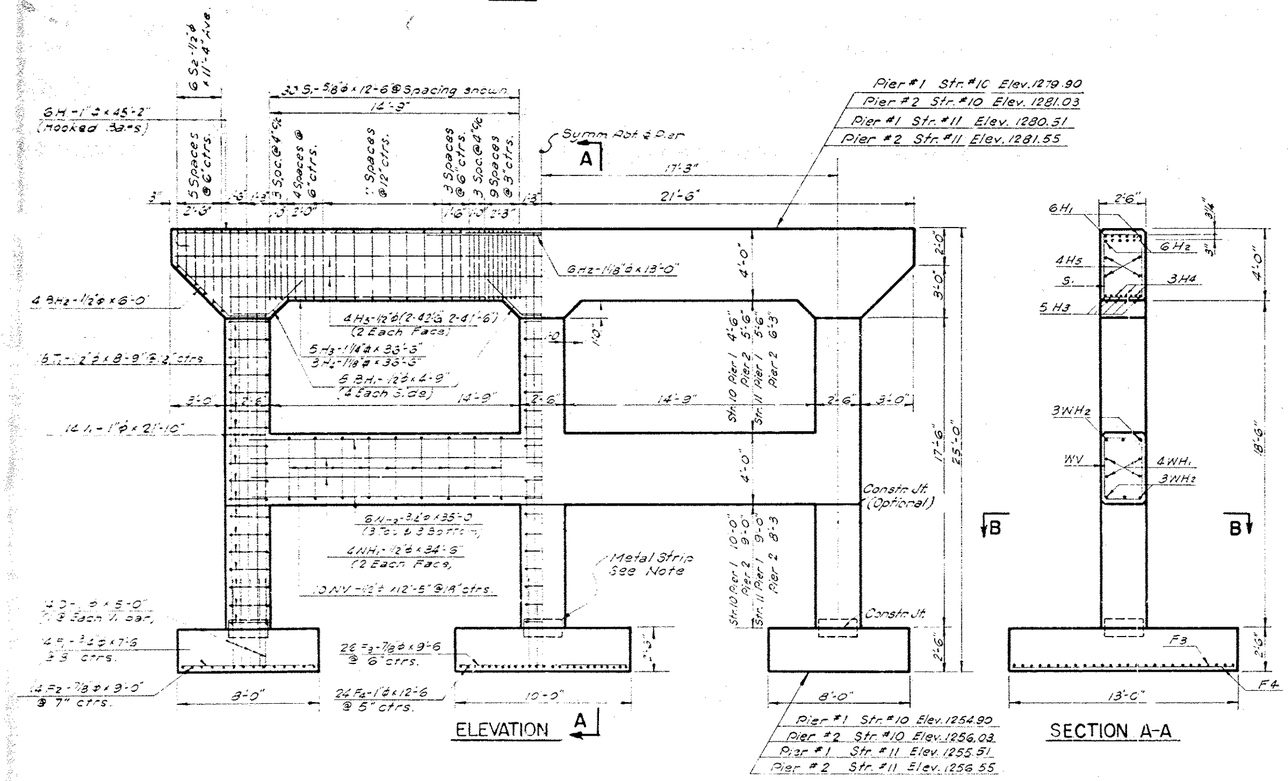


DETAIL OF PIER TOP



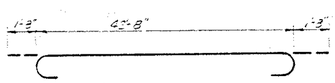
LAYOUT OF PIERS & ABUTMENTS

BAR LIST - ONE PIER				
Mark	No.	Size	Form	Length
H_1	6	1"φ	Bnt.	45'-2"
H_2	6	1 1/8"φ	Str.	13'-0"
H_3	5	1 1/8"φ	Str.	36'-6"
H_4	3	1 1/8"φ	Str.	36'-6"
H_5	4	1/2"φ	Str.	42'-0" Ave.
BH_1	16	1/2"φ	Bnt.	4'-9"
BH_2	8	1/2"φ	Bnt.	6'-0"
WH_1	4	1/2"φ	Str.	34'-6"
WH_2	6	3/4"φ	Str.	35'-0"
WV	20	1/2"φ	Bnt.	12'-5"
S_1	60	5/8"φ	Bnt.	12'-6"
S_2	12	5/8"φ	Bnt.	11'-4" Ave.
T_1	54	1/2"φ	Bnt.	8'-9"
V_1	42	1"φ	Str.	21'-10"
D	42	1"φ	Str.	5'-0"
F_1	28	3/4"φ	Str.	7'-6"
F_2	28	7/8"φ	Str.	9'-0"
F_3	26	7/8"φ	Str.	9'-6"
F_4	24	1"φ	Str.	12'-6"

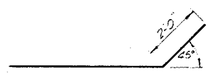


ELEVATION

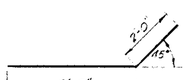
SECTION A-A



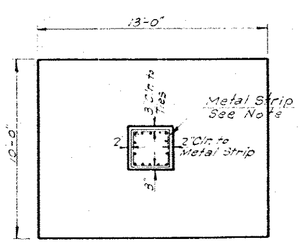
H_1 - 1"φ × 45'-2"



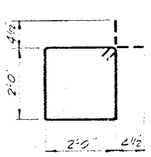
BH_1 - 1/2"φ × 4'-9"



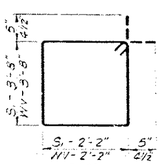
BH_2 - 1/2"φ × 6'-0"



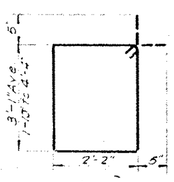
SECTION B-B



T_1 - 1/2"φ × 8'-9"



S_1 - 5/8"φ × 12'-6"
WV - 1/2"φ × 12'-5"



S_2 - 5/8"φ × 11'-4" AVE. (8'-10" to 13'-10")

NOTES:

All reinforcing steel bars shall conform to A.S.T.M. specifications A-305-49.

All exposed edges shall have a 1 1/2" chamfer unless otherwise noted.

All concrete shall be poured dry.

NOTE: METAL STRIP & PIER BASE CONCRETE

Refer to identical notes on "Details of Piers - Index Sheet 7-2".

QUANTITIES - ONE PIER					
		Str. No. 10		Str. No. 11	
ITEM	UNIT	Pier No. 1	Pier No. 2	Pier No. 1	Pier No. 2
Reinforcing Stee.	Lbs.	0.95	0.95	0.95	0.95
Class "H" Concrete	C.Y.	39.3	39.3	39.3	39.3
Class "A" Concrete (Pier Bases)	C.Y.	23.1	23.1	23.1	23.1
Substr. Excav. - Common	C.Y.	205	190	155	170
Substr. Excav. - Rock	C.Y.	20	24	20	9

REVISIONS			
NO.	DESCRIPTION	BY	DATE
	[illegible]		

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	[illegible]	
CHECKED	[illegible]	[illegible]
APPROVED		
SQUID NO.	35 W/4 A.W.	

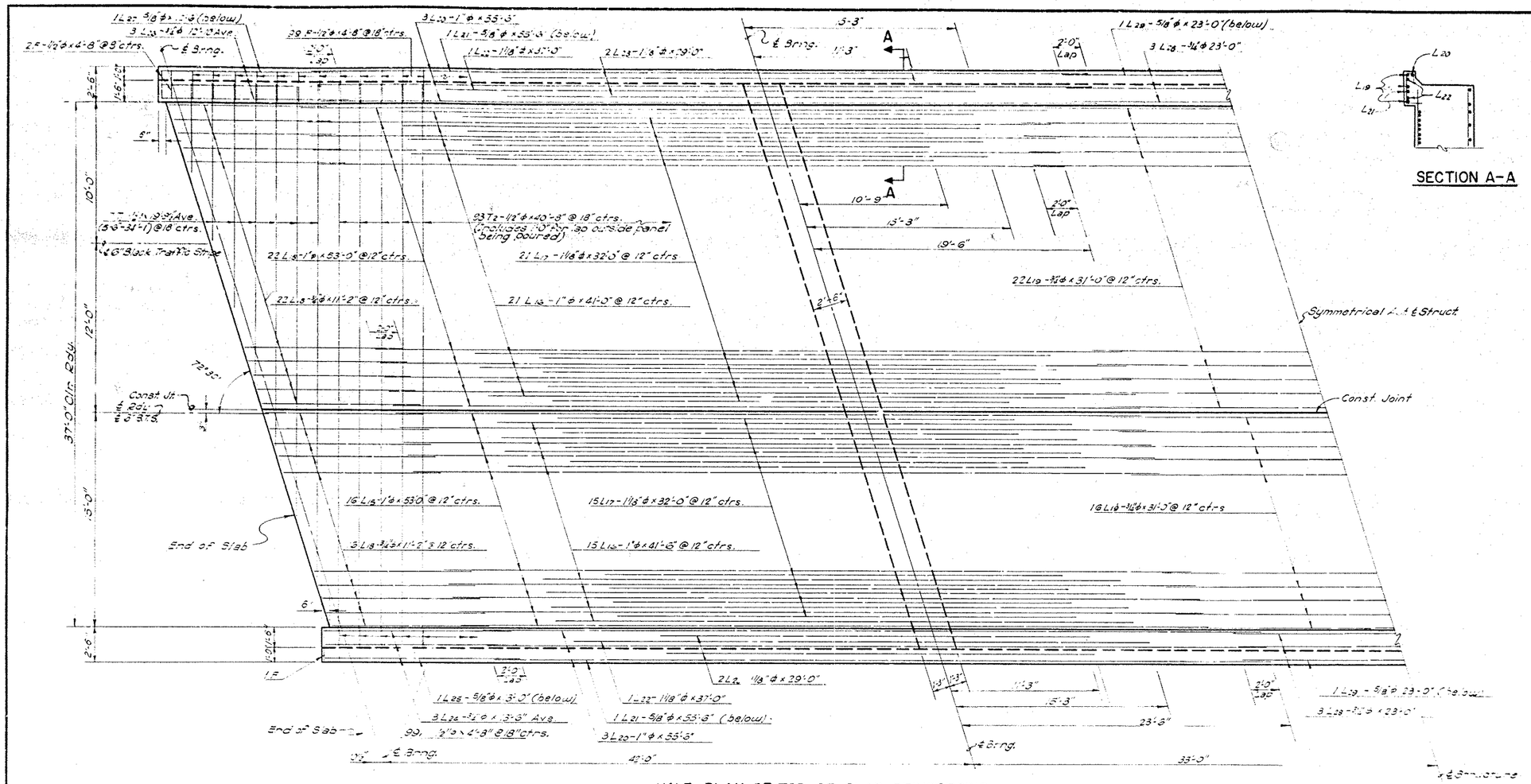
OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

DETAILS OF PIERS
STR. NO. 10
℄ STA. ON ℄ SURVEY 132+90.25
STR. NO. 11
℄ STA. ON ℄ SURVEY 133+10.03

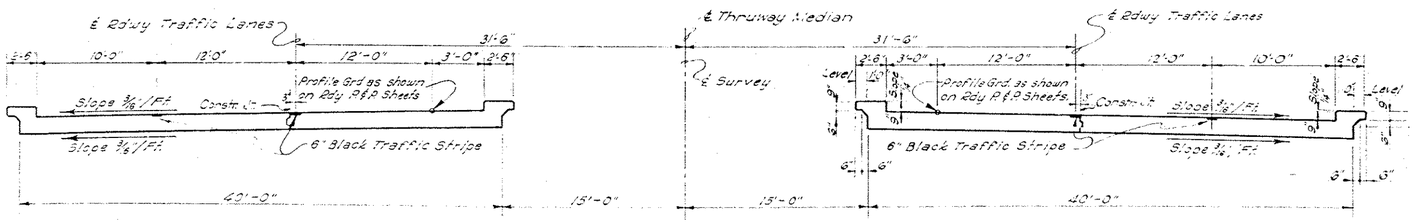
F.A. PROJ. I-381 (16)PT-1

PROJECT NO. I-381 (16) PT-1 SHEET NO. 62

FED. ROAD DIV. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-1	63	88



HALF PLAN OF TOP OF SLAB REINFORCING



TYPICAL ROADWAY SECTION

GENERAL NOTES:
Refer to Identical General Note on Index Sheet No.

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

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

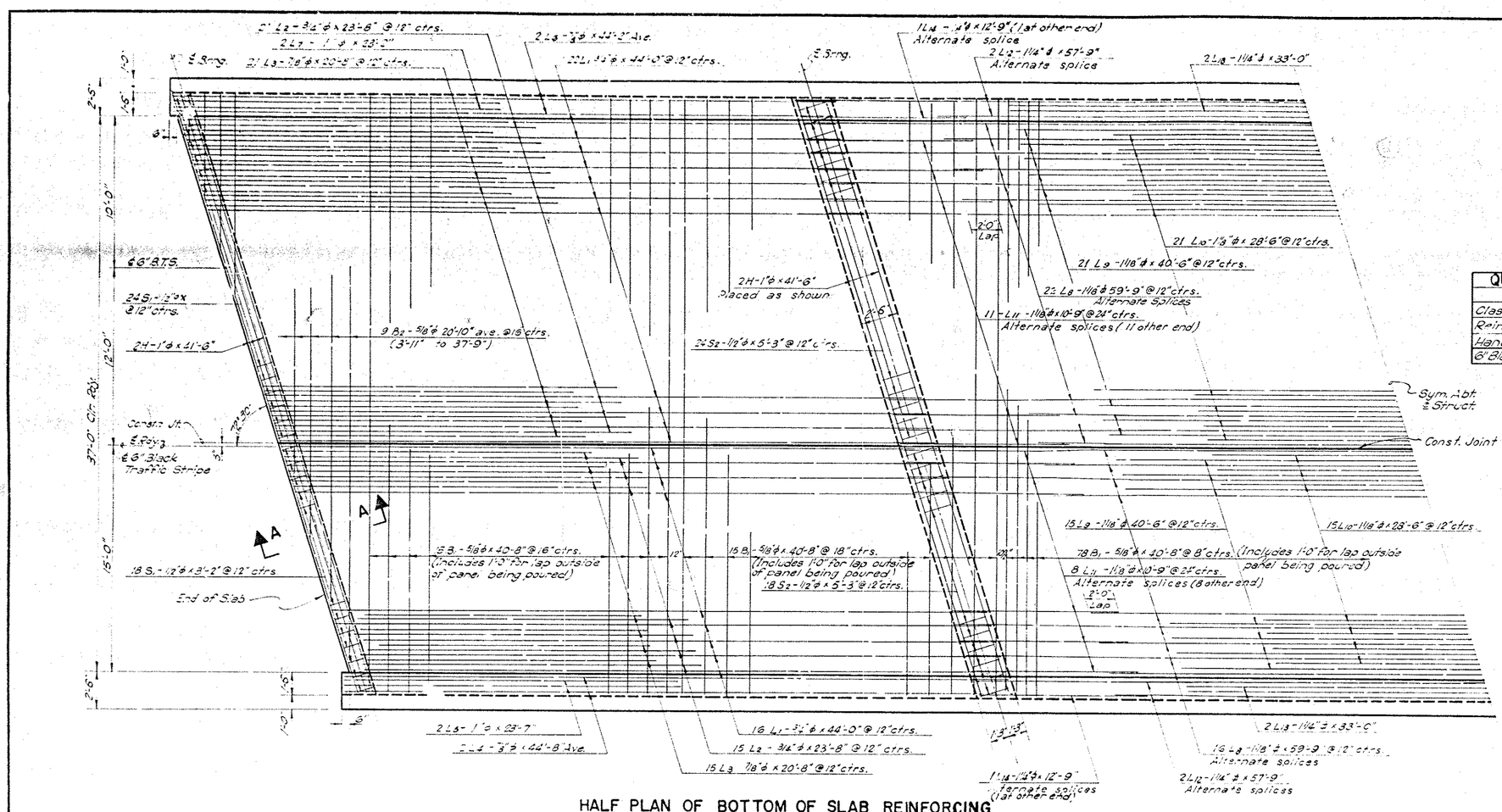
DETAILS OF SUPERSTRUCTURE

STR. NO. 10
℄ STA. ON ℄ SURVEY 132+90.25
STR. NO. 11
℄ STA. ON ℄ SURVEY 133+10.03

F.A. PROJ. I-381(16) PT-1

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381 (16) PT-1	64	88

(Revision - Deleted Pavement Fr... 2-7-91)

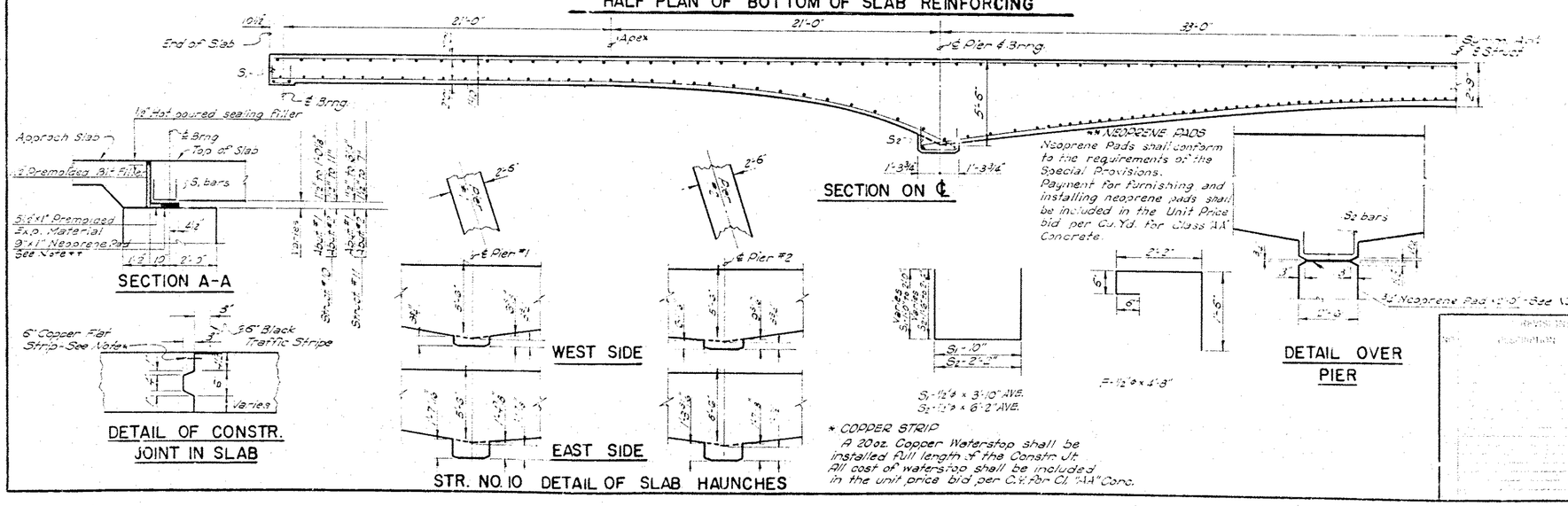


HALF PLAN OF BOTTOM OF SLAB REINFORCING

QUANTITIES - ONE STR.		
ITEM	UNIT	TOTAL
Class "AA" Concrete	C.Y.	700.3
Reinforcing Steel	Lbs.	85930
Handrailing	L.F.	305
6" Black Traffic Stripe	L.F.	303.5

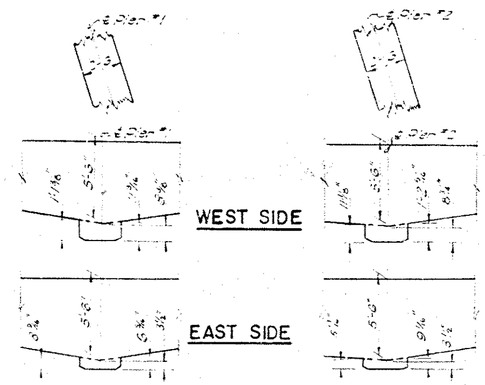
BAR LIST

Mark	No.	Size	Form	Length
L1	76	3/4"ϕ	Str.	44'-0"
L2	72	3/4"ϕ	"	23'-8"
L3	72	7/8"ϕ	"	20'-8"
L4	4	7/8"ϕ	"	44'-8" Ave.
L5	4	1"ϕ	"	23'-7"
L6	4	7/8"ϕ	"	44'-2" Ave.
L7	4	1"ϕ	"	23'-2"
L8	38	1 1/8"ϕ	"	59'-9"
L9	36	1 1/8"ϕ	"	40'-6"
L10	36	1 1/8"ϕ	"	28'-6"
L11	38	1 1/8"ϕ	"	10'-9"
L12	4	1 1/4"ϕ	"	57'-9"
L13	4	1 1/4"ϕ	"	33'-0"
L14	4	1 1/4"ϕ	"	12'-9"
L15	76	1"ϕ	"	53'-0"
L16	72	1"ϕ	"	41'-8"
L17	72	1 1/8"ϕ	"	32'-0"
L18	76	3/4"ϕ	"	11'-2"
L19	76	3/4"ϕ	"	5'-0"
L20	12	1"ϕ	"	55'-8"
L21	4	5/8"ϕ	"	55'-6"
L22	4	1"ϕ	"	37'-0"
L23	8	1 1/8"ϕ	"	29'-0"
L24	8	3/4"ϕ	"	13'-8" Ave.
L25	2	5/8"ϕ	"	13'-10"
L26	6	3/4"ϕ	"	12'-0" Ave.
L27	2	5/8"ϕ	"	12'-8"
L28	6	3/4"ϕ	"	23'-0"
L29	2	5/8"ϕ	"	23'-0"
B1	38	5/8"ϕ	"	40'-8"
B2	18	5/8"ϕ	Str.	20'-10" Ave.
S	84	1/2"ϕ	Bent	3'-0" Ave.
S1	84	1/2"ϕ	Bent	2'-2" Ave.
H	8	1"ϕ	Str.	41'-6"
T1	4	1/2"ϕ	Str.	99'-8" Ave.
T2	93	1/2"ϕ	Str.	40'-9"
P	200	1/2"ϕ	Bent	1'-8"



** NEOPRENE PADS
Neoprene Pads shall conform to the requirements of the Special Provisions.
Payment for furnishing and installing neoprene pads shall be included in the Unit Price bid per Cu. Yd. for Class "AA" Concrete.

* COPPER STRIP
A 20oz. Copper Waterstop shall be installed full length of the Constr. Jt.
All cost of waterstop shall be included in the unit price bid per C.Y. for Cl. "AA" Conc.



STR. NO. 11 - DETAIL OF SLAB HAUNCHES

REVISIONS			
NO.	DESCRIPTION	BY	DATE

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	K.D.K.	
CHECKED	2.92	9-91
APPROVED		
ROAD	BENHAM	

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

DETAILS OF SUPERSTRUCTURE

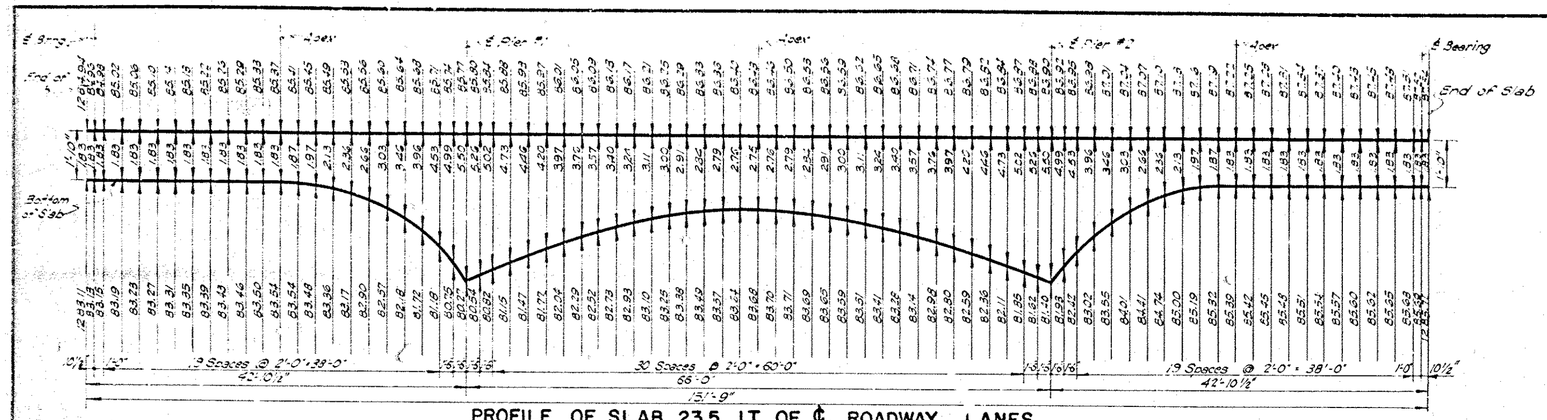
STR. NO. 10
℄ STR. ON ℄ SURVEY 132+90.25

STR. NO. 11
℄ STA. ON ℄ SURVEY 133+10.03

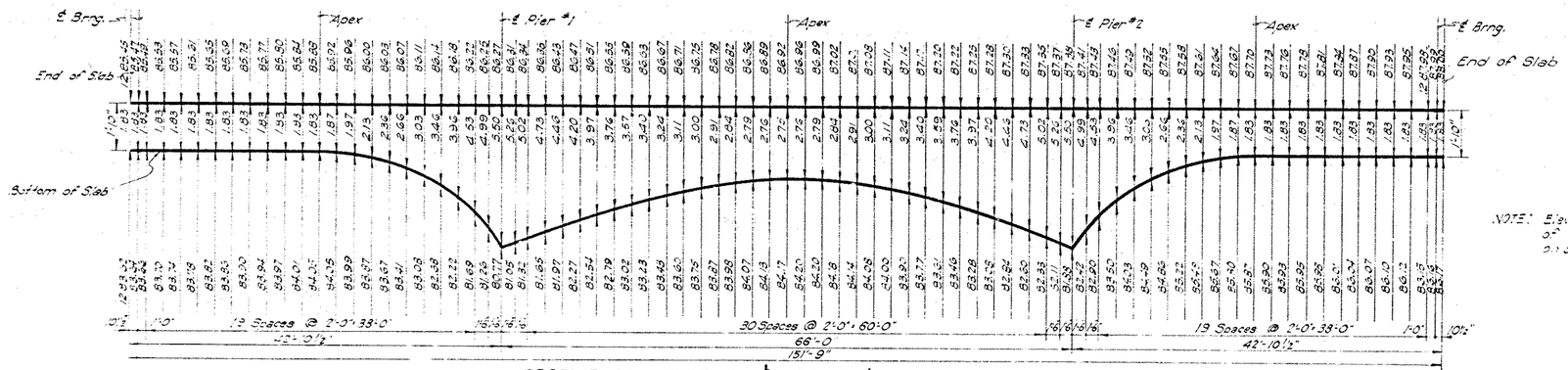
F.A. PROJ. I-381 (16) PT.-1

PROJECT NO. I-381 (16) PT.-1 SHEET NO. 64

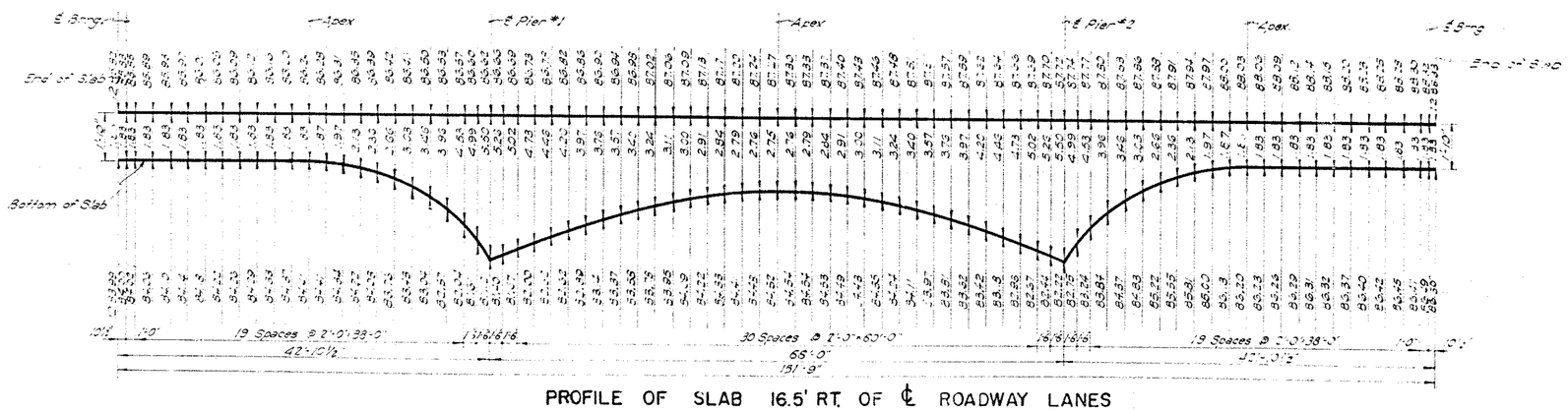
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16) PT 1	65	88



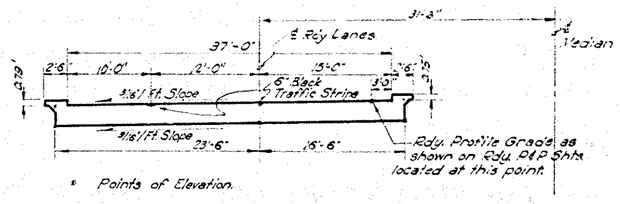
PROFILE OF SLAB 23.5 LT. OF ℄ ROADWAY LANES



PROFILE OF SLAB AT ℄ ROADWAY LANES



PROFILE OF SLAB 16.5' RT. OF ℄ ROADWAY LANES



* Points of Elevation.

NOTE: For top of Curb Elevation add 0.094 to top of Slab Elevation.
" 0.156 " " " " " "

NOTE: Elevations & Dimensions shown above are for forming Soffit Curves & Top of Bridge Floor. Anticipated deflections due to dead load have been considered & no other allowance for these deflections shall be made.

NOTE: Elevations shown include allowance of "g" for dead load deflection in span shown only.

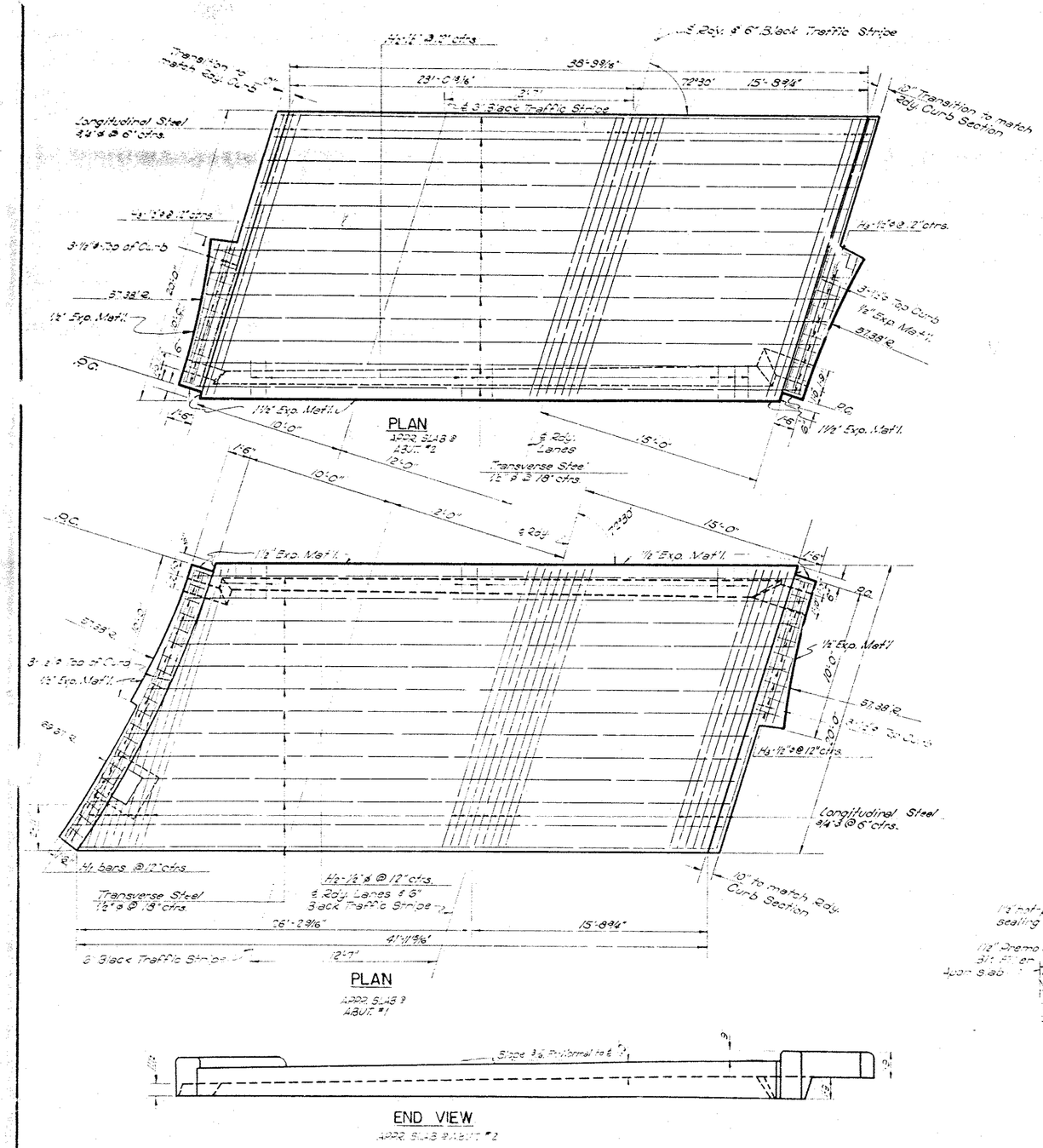
DESIGNS				RECORD		
NO	DESCRIPTION	BY	DATE	ITEM	BY	DATE
				DESIGN		
				DETAIL		
				TRACED		
				CHECKED		
				APPROVED		
				SQUAD		

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STRUCTURE NO. 10
DETAILS OF SLAB
ELEVATIONS
℄ STA. ON ℄ SURVEY 132+90.25

F.A. PROJ. I-381 (16) PT.-1

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16) PT-1	66	86

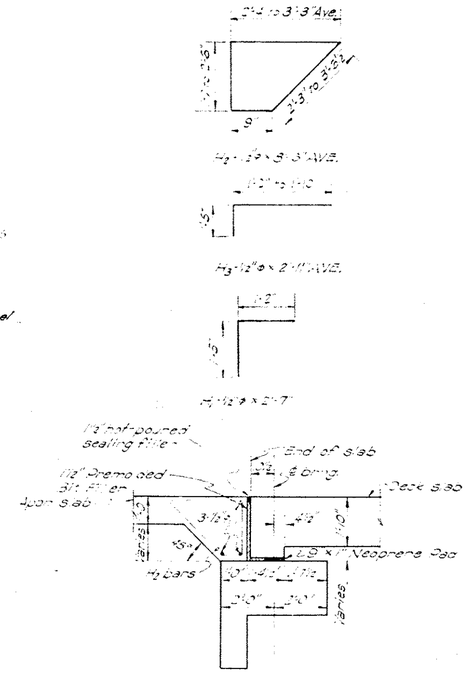


QUANTITIES- ONE APPROACH SLAB

ITEM	UNIT	TOTAL
Approach Slab	S.Y.	89.75 Ave.
* Reinforcing Steel	Lbs.	3,200
6" Black Traffic Stripe	L.F.	40

* Note: Cost of Reinforcing Steel in Approach Slab shall be included in price bid per Sq. Yd. of Approach Slab.

Note: Cost of Curbs on Approach Slab shall be included in price bid per S. Yd. of Approach Slab.

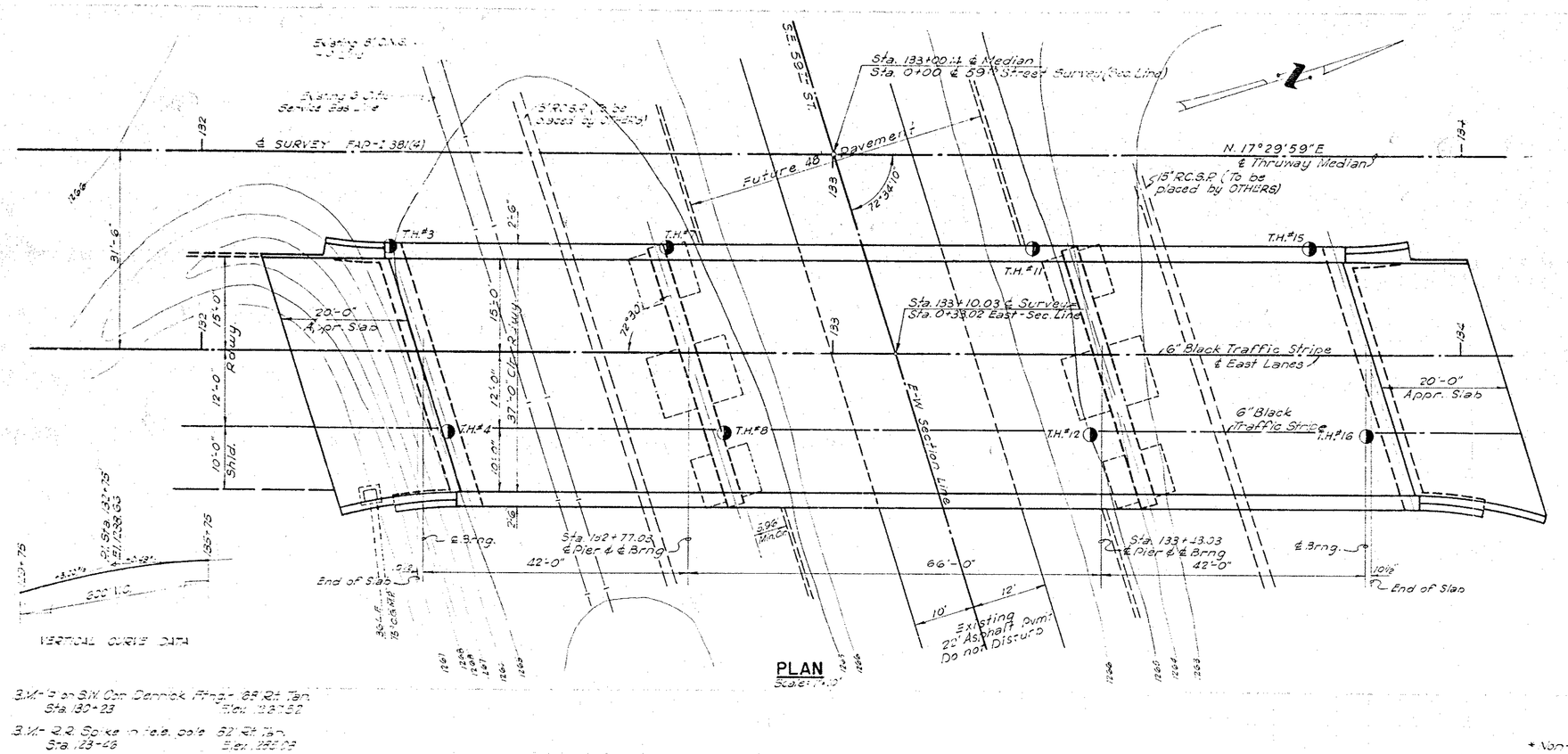


REVISIONS				RECORD		
NO.	DESCRIPTION	BY	DATE	ITEM	BY	DATE
				DESIGN		
				DETAIL		
				TRACED		
				CHECKED		
				APPROVED		
				SQUAD	BENHAM	

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

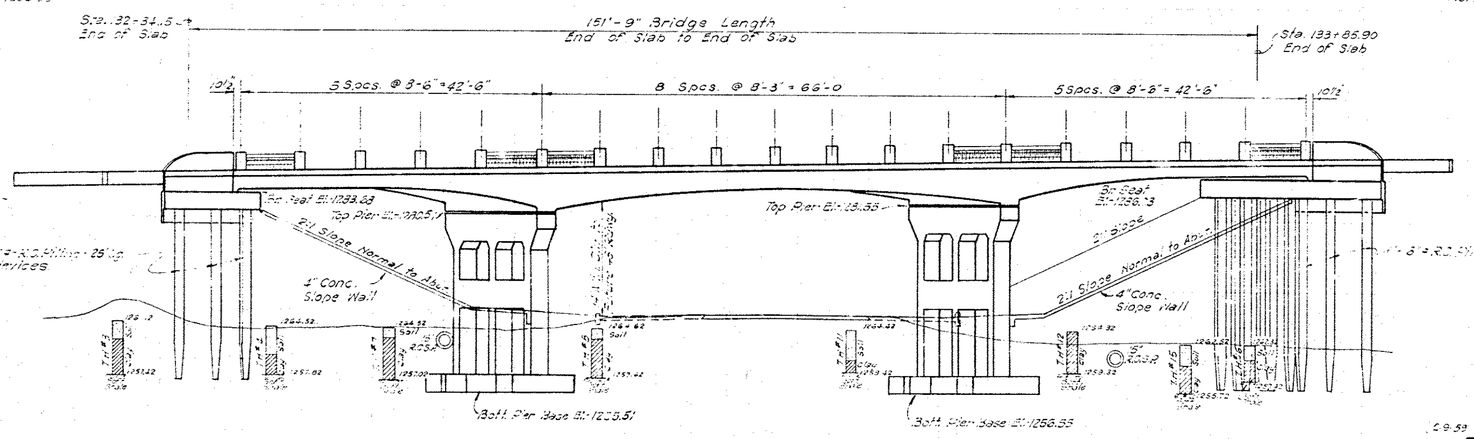
STR. NO. 10
DETAILS OF APPROACH SLABS
℄ STA. ON ℄ SURVEY 132+90.25

F.A. PROJ. I-381 (16) PT.-1



PLAN

Scale: 1"=10'



GENERAL ELEVATION

Scale: 1"=10'

LIST of SPECIAL PROVISIONS INCLUDED IN THE 2000-2041

See Special Provisions included in the Proposal for Curing Concrete with Membrane Curing Compound for Bridge Structures, including Parapet Walls, Retaining Walls & Railing 414-6(ac) Rev. 7-27-55

Equipment for Driving Piles 514-1(a) Reinforcing Steel (Axle Steel) 723-1(a) Rev. 2-21-57.

Black Traffic Stripe or Black Traffic Stripe Removal 624-1(a) Rev. 01-9-55

Neoprene Rubber Pad bearing devices

REVISION			
NO	DESCRIPTION	BY	DATE

132

133

134

[illegible] 67 88

DESIGN DATA

L.L. H20-S16-44; HS20-44

Concrete	1,000 psi
Reinforcing Steel	18,000 psi
Foundation Loads:	
Abutments	20.3 Tons
Piers: Direct Load	29.7 Tons

SUMMARY OF QUANTITIES

ITEM No.	ITEM	UNIT	Abuts.	Piers	Superstruct.	Bridge	Rdy
* 202.06a	Class "D" Excavation	C.Y.					200
308.06a	4" Sand Cushion	S.Y.					192.7
* 400.01	Approach Slabs	S.Y.					90.7
601.06b	Substr. Excav. - Common	C.Y.	90	275		465	
601.06c	Substr. Excav. - Rock	C.Y.		39		39	
605.06	Steel Handrailing	L.F.			605	605	
509.03a	Class A Concrete	C.Y.	58.2	792		874	0.3
509.06a	Class A Concr. in Pier Bases	C.Y.		82.7		82.7	
509.03b	Class "A" Concrete	C.Y.			700.8	700.8	
511.06	Reinforcing Steel	Lbs.	7980	103890	[illegible]	111150	75
543.03a	15" C.S.M. Pipe	L.F.					36
540.03a	16" R.C. Piling	L.F.	533			533	
611.03a	Inlet Frame & Grate	Ea.					1
604.03a	6" Black Traffic Stripe	L.F.				3035	30
506.01	4" Concrete Slope Wall	S.Y.				373.3	
605.01	Aluminum Handrailing	L.F.			605	605	

* Non-Participating Item

— GENERAL NOTES —

All construction & materials shall be in accordance with the Oklahoma Standard Specifications of 1954 & Special Provisions.

All exposed concrete surfaces shall have a carborundum finish.

All reinforcing steel bars shall conform to A.C.I.M. Specifications A-305-49.

Piling shall be driven using leads of sufficient strength to control piles.

Piling shall be driven to practical refusal if above grade or to a minimum bearing of 50 tons if at or below grade.

All piling shall be driven through the compacted fill. 12" ϕ Pilot holes shall be drilled to Elev. 1260.50 @ Abut. No. 1 & to Elev. 1259.50 @ Abut. No. 2. Then 8" ϕ Pilot holes to Elev. 1258.00 @ Abut. No. 1 & to Elev. 1257.00 @ Abut. No. 2. All cost of Pilot holes shall be included in the unit price bid for 16" ϕ R.C. Piling.

Contractor shall submit bids on both types of Handrailing. Type of rail used, will be determined by bids received.

Retaining elevations shall not be accepted shall be lowered only in firm bearing foundation material is not found at plan elevation.

Reference List & Detail

DETAILS	for	ABUTMENTS - - - - - S-557 # 63
DETAILS	for	PIERS - - - - - - - S-557 # 62
DETAILS	for	SUPERSTR. - - - - - S-557 # 63-64
DETAILS	for	SLAB ELEV. - - - - - S-557 # 59
DETAILS	for	4-POST SLAB - - - - - S-557 # 70
DETAILS	for	HANDRAILS - - - - - S-557 # 90, 97
DETAILS	for	PILING - - - - - - S-557 # 27

29.59 Lin. Ft. [illegible] SKEW 72°-30' RT. FWD.

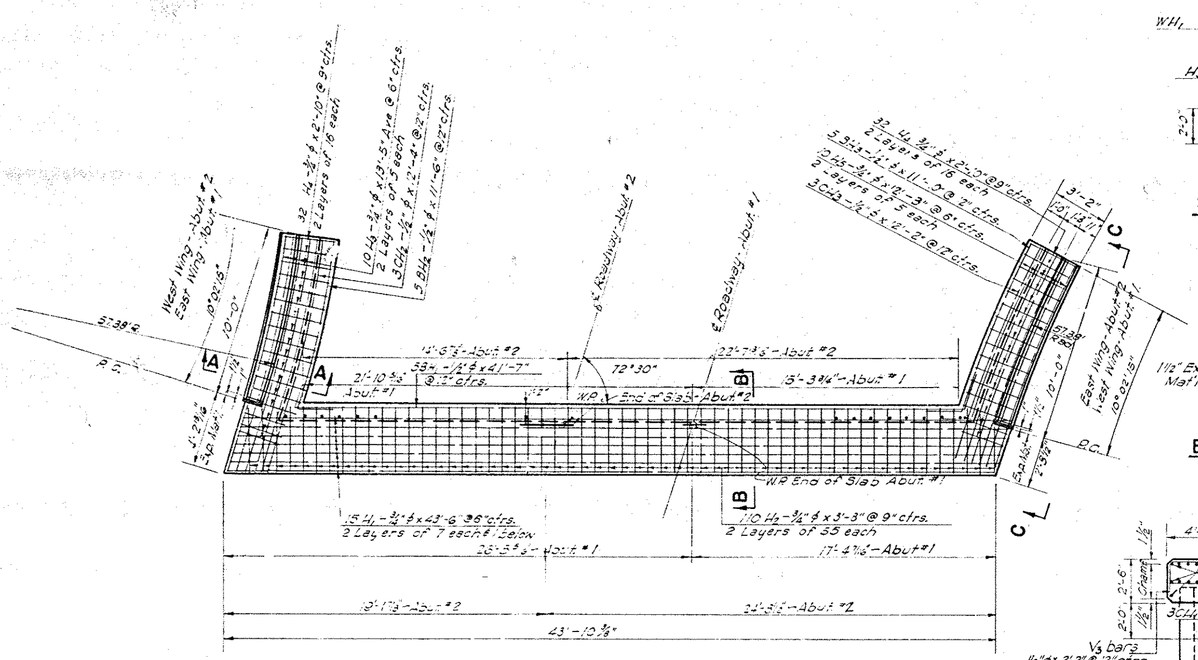
RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED		
CHECKED		
APPROVD		
SQUAD		

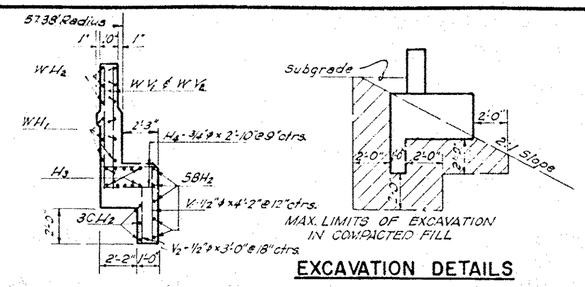
OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

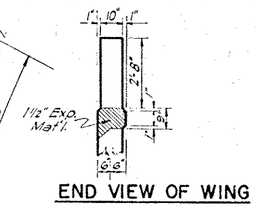
STR. NO. 11
GENERAL ELEVATION, PLAN
& SUMMARY OF QUANTITIES
42'-66'-42' CONC. SLAB SPANS
30' RDY & 2-18" S.C.'s
℄ STA. ON ℄ SURVEY 133 + 10.03
F.A. PROJ. I-381 (16) PT.-1

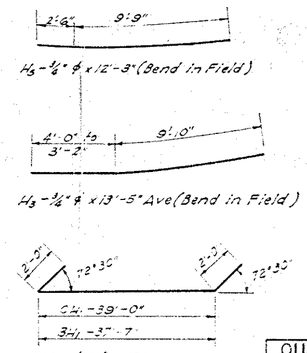
I-381(16) PT-1 67

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16) PT-1	68	88

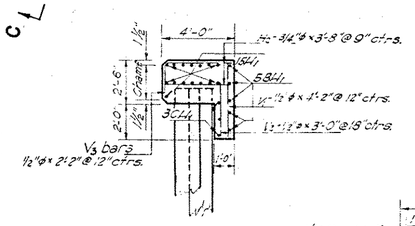


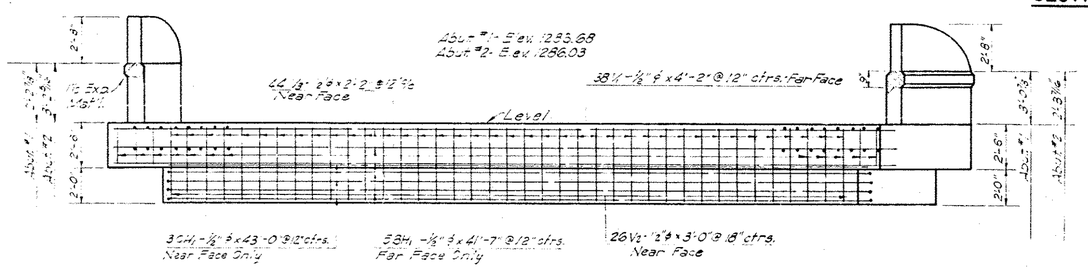


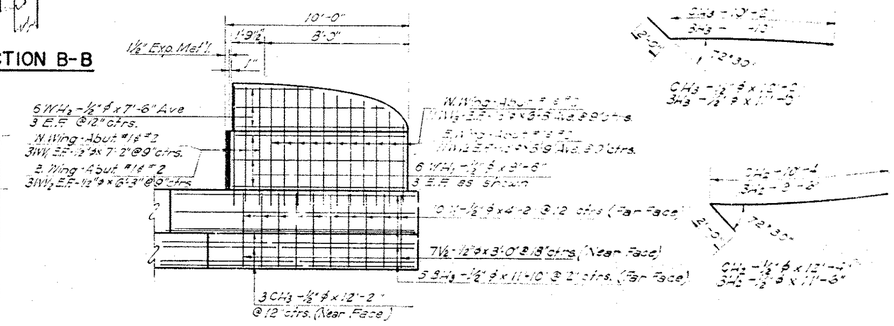




BAR LIST - ONE ABUT.				
Mark	No.	Size	Form	Length
H1	15	3/4" ϕ	Str	43'-6"
H2	110	3/4" ϕ	Str	3'-8"
H3	10	3/4" ϕ	Bnt	13'-5" Ave
H4	84	3/4" ϕ	Str	2'-10"
H5	10	3/4" ϕ	Bnt	12'-3"
BH1	5	1/2" ϕ	Bnt	41'-7"
BH2	5	1/2" ϕ	Bnt	11'-6"
BH3	5	1/2" ϕ	Bnt	11'-10"
CH1	3	1/2" ϕ	Bnt	43'-0"
CH2	3	1/2" ϕ	Bnt	12'-4"
CH3	3	1/2" ϕ	Bnt	12'-0"
V1	58	1/2" ϕ	Str	4'-2"
V2	40	1/2" ϕ	Str	3'-0"
V3	44	1/2" ϕ	Str	2'-2"
WH1	12	1/2" ϕ	Str	9'-6"
WH2	12	1/2" ϕ	Str	7'-6" Ave
WV1	6	1/2" ϕ	Str	7'-2"
WV2	6	1/2" ϕ	Str	6'-9"
WV3	22	1/2" ϕ	Str	7'-0" Ave
WV4	22	1/2" ϕ	Str	6'-3" Ave
D	22	1/2" ϕ	Bnt	3'-6"
H	44	3/4" ϕ	Bnt	3'-3"







QUANTITIES - ONE ABUTMENT		
Class A Concrete	C.Y.	291
Reinforcing Steel	LBS.	3910
Structure Excav. - Common	C.Y.	95

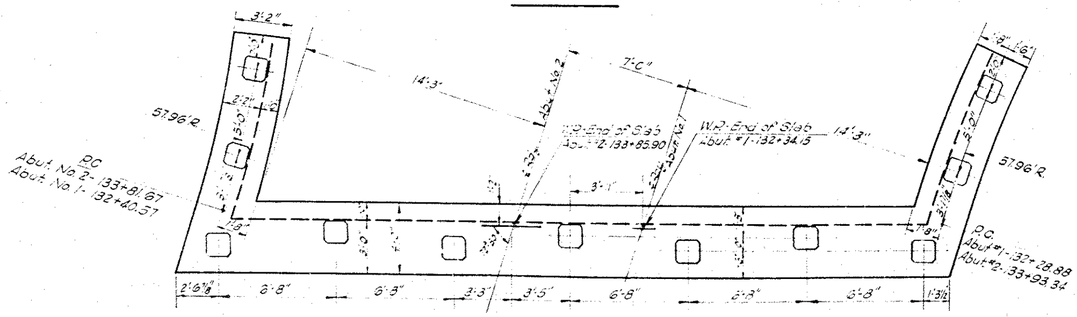
GENERAL NOTES:

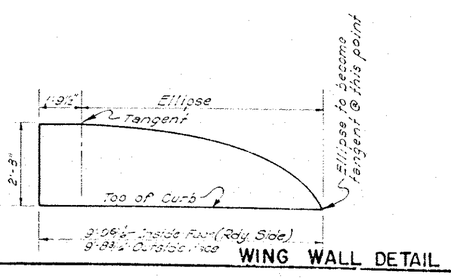
All construction & materials shall be in accordance with the Oklahoma Standard Specifications of 1954 & Special Provisions.

All reinforcing steel bars shall conform to A.S.T.M. Specs. A-305-49.

All exposed concrete edges shall have a 3/4" chamfer unless otherwise shown on plans.

For details of piling & pile bars, refer to Std. Dwg. C30-2.





REVISIONS			
NO	DESCRIPTION	BY	DATE

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED		
CHECKED		
APPROVED		
SQUAD: BENHAM		

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 11

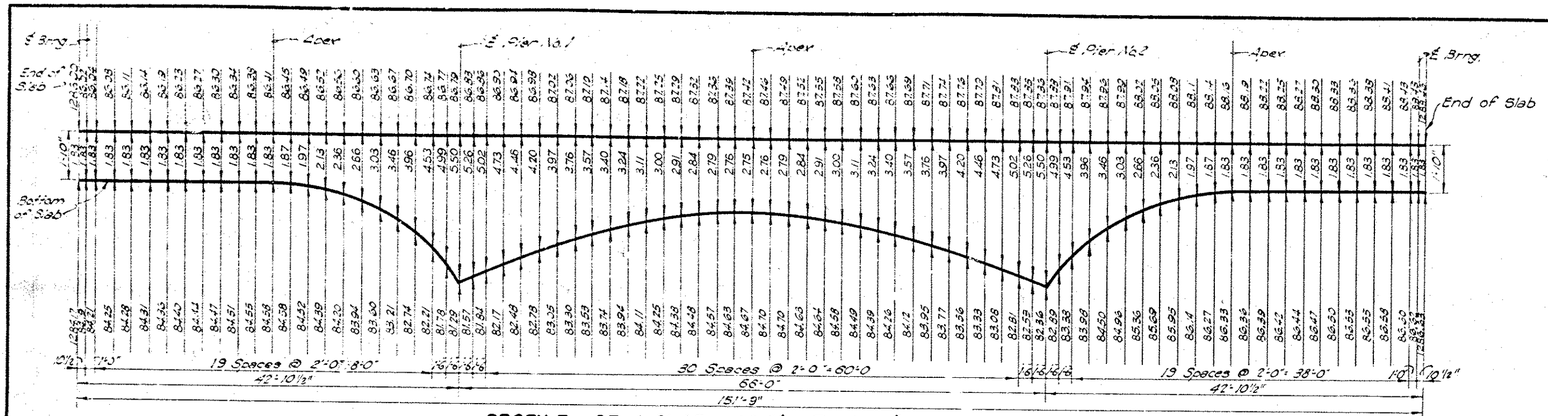
DETAILS OF ABUTMENTS

℄ STA. ON ℄ SURVEY 133+10.03

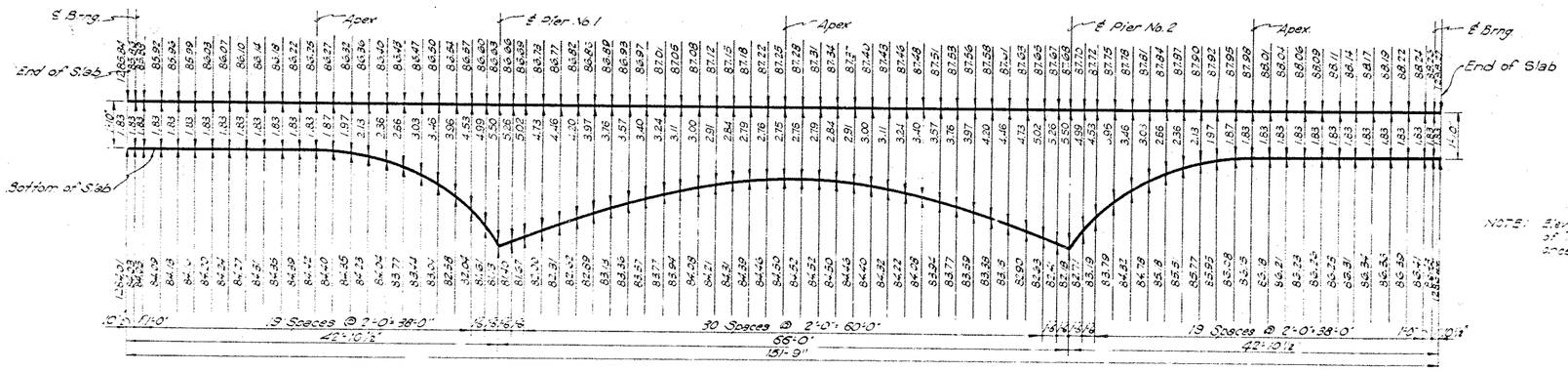
F.A. PROJ. I-381(16)PT.-1

PROJECT NO. I-381(16) PT-1 SHEET NO. 68

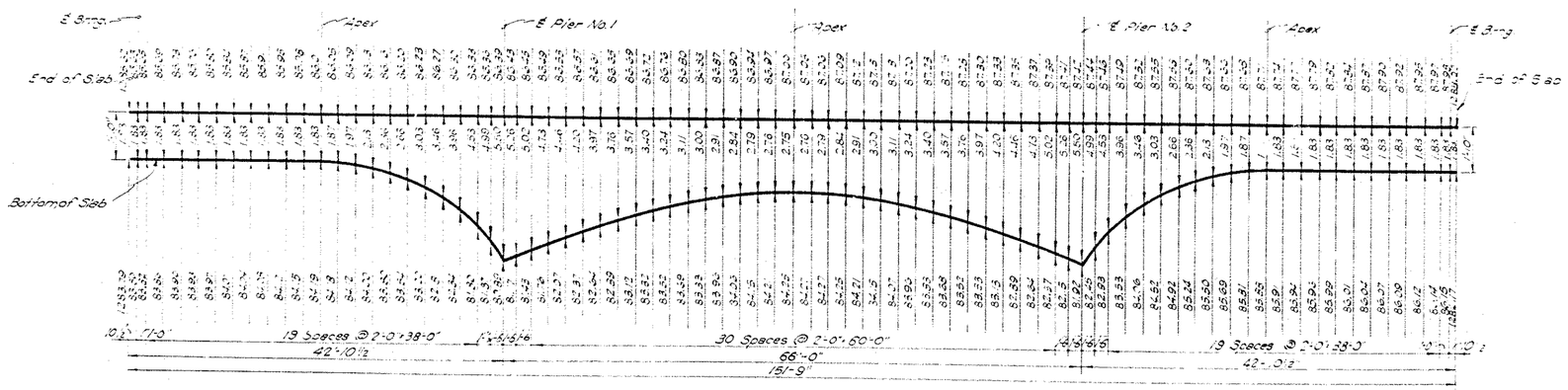
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-1	69	88



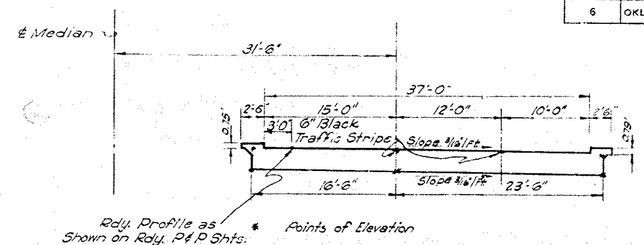
PROFILE OF SLAB 16.5' LT. OF ℄ ROADWAY LANES



PROFILE OF SLAB AT ℄ ROADWAY LANES



PROFILE OF SLAB 23.5' RT. OF ℄ ROADWAY LANES



NOTE: For top of Curb Elevation add 0.75' to top of Slab Elevation at Lt. Curb.
" 0.79' " " " " " Rt. " .

NOTE: Elevations & Dimensions shown above are for forming Soffit Curves & Top of Bridge Floor. Anticipated deflections due to dead load have been considered & no other allowance for these deflections shall be made.

NOTE: Elevations shown include allowance of '8' for dead load deflection in center span only.

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

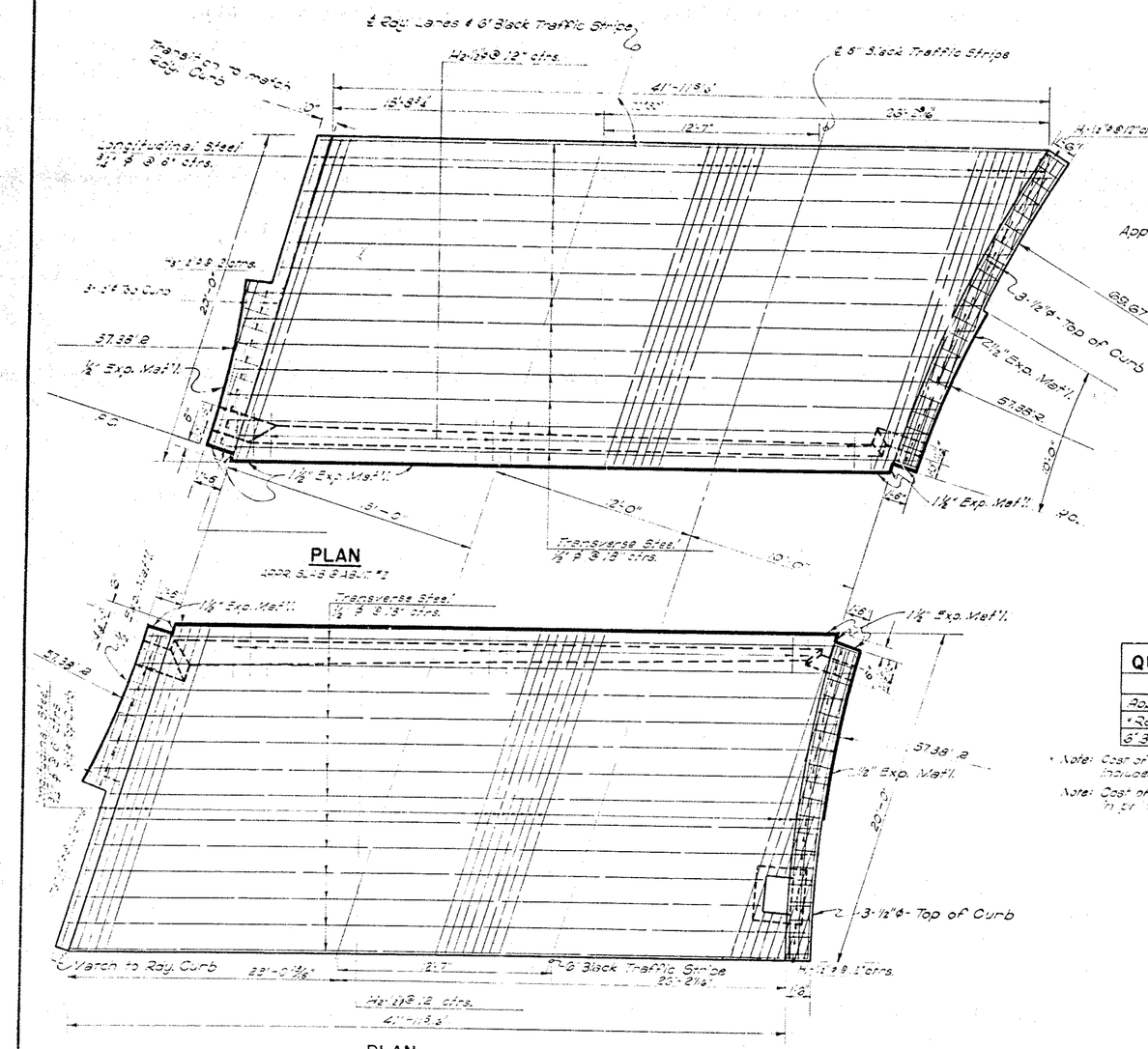
OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STRUCTURE NO. 11
DETAILS OF SLAB
ELEVATIONS
℄ STA. ON ℄ SURVEY 133+10.03

F.A. PROJ. I-381(16)PT.-1

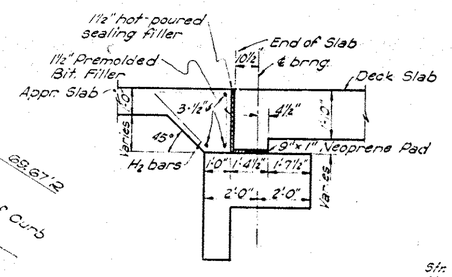
PROJECT NO. I-381(16)PT-1 SHEET NO. 69

FED ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	OKLA.	I-381(16) PT-1	70	88

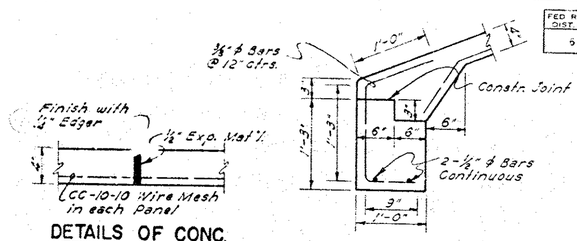


PLAN
APPR. SLAB @ ABUT. #2

PLAN
APPR. SLAB @ ABUT. #1

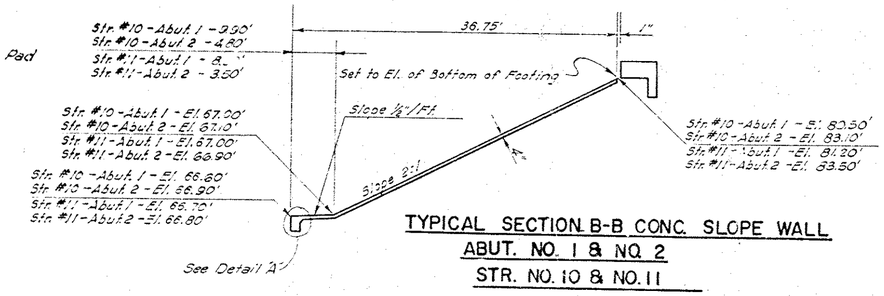


DETAIL OVER ABUTMENT

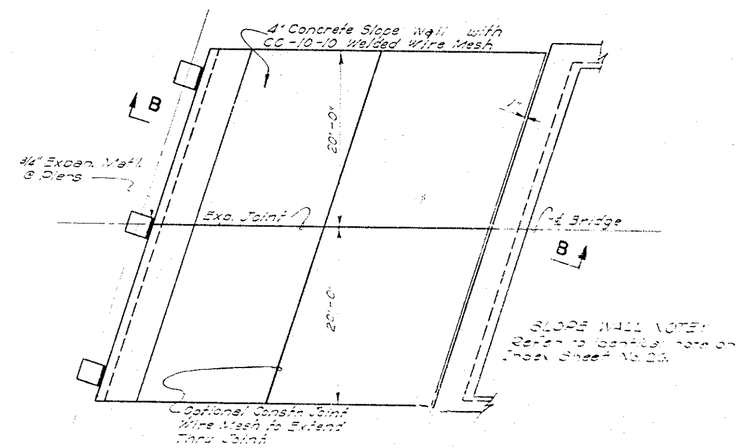


DETAILS OF CONC. SLAB JOINT

DETAIL "A"



TYPICAL SECTION B-B CONC. SLOPE WALL
ABUT. NO. 1 & NO. 2
STR. NO. 10 & NO. 11



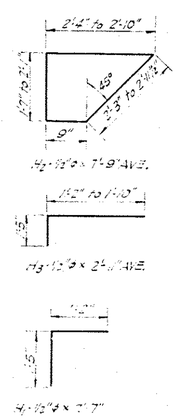
TYPICAL PLAN OF CONC. SLOPE WALL (ABUT. NO. 1 & NO. 2)
STR. NO. 10 & NO. 11

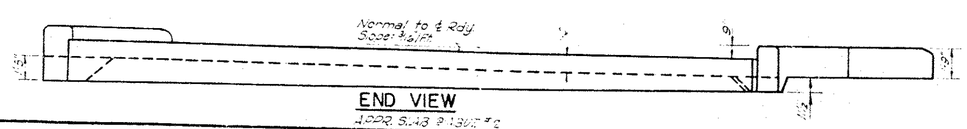
QUANTITIES - ONE APPROACH SLAB

ITEM	UNIT	TOTAL
Approach Slab	S.Y.	91.35 Ave.
* Reinforcing Steel	Lbs.	8,200
6" Black Traffic Stripe	L.F.	40

* Note: Cost of Reinforcing Steel in Approach Slab shall be included in price bid per Sq. Yd. of Approach Slab.

Note: Cost of Curbs on Approach Slab shall be included in price bid per Sq. Yd. of Approach Slab.



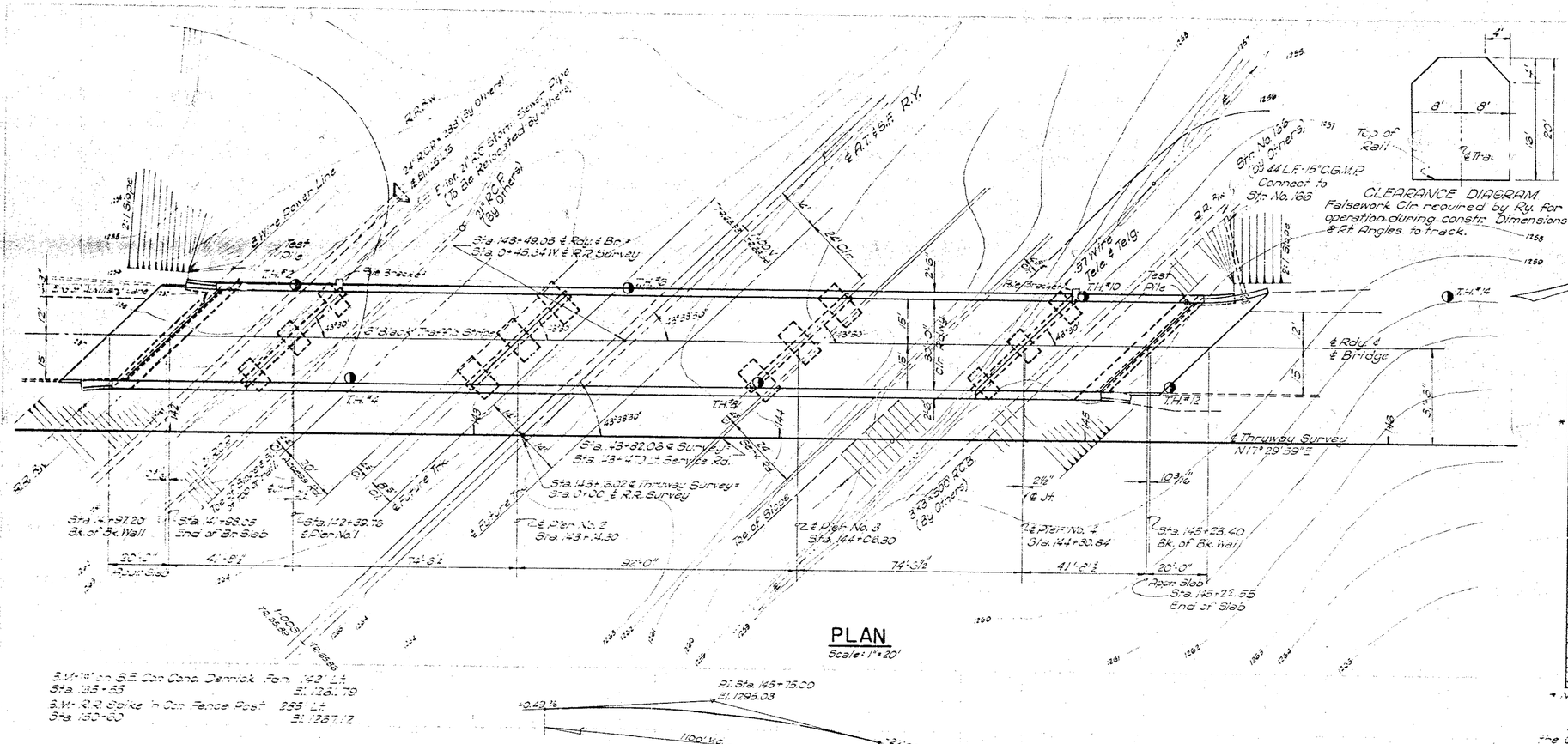


END VIEW
APPR. SLAB @ ABUT. #2

REVISIONS				RECORD		
NO	DESCRIPTION	BY	DATE	ITEM	BY	DATE
				DESIGN		
				DETAIL		
				TRACED	K.J.S.	
				CHECKED		
				APPROVED		
				SQUAD	BENHAM	

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

DETAILS OF APPR. SLABS-STR NO. 11
DETAILS OF SLOPE WALLS
STR. NO. 10
℄ STA. ON ℄ SURVEY 132+90.25
STR. NO. 11
℄ STA. ON ℄ SURVEY 133+10.03
F.A. PROJ. I-381 (16) PT.-1

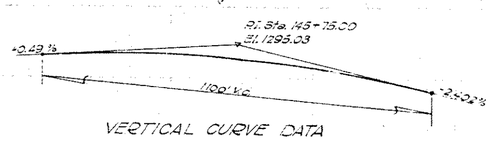


PLAN

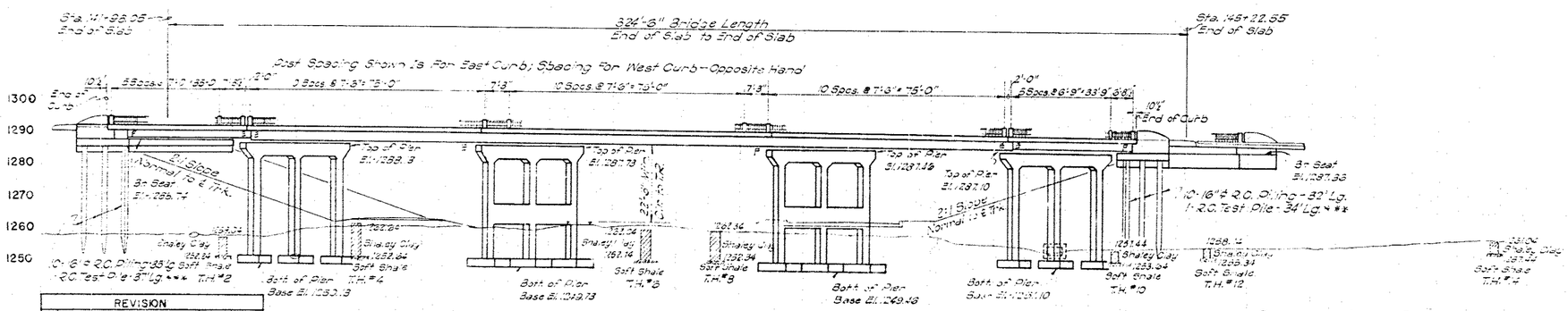
Scale: 1" = 20'

B.M. #1 In S.E. Cor. Conc. Derrick Pen. 142' Lt. Sta. 135+65 El. 1261.79

B.M. #2 R.R. Spike In Cor. Fence Post 265' Lt. Sta. 150+60 El. 1267.12



VERTICAL CURVE DATA



GENERAL ELEVATION

Scale: 1" = 20'

REVISION			
NO.	DESCRIPTION	BY	DATE

LIST & SPECIAL PROVISIONS:
See Special Provisions Included In the Proposal For Curing Concrete With Membrane Curing Compound For Bridge Structures Including Garages Walls, Retaining Walls & Railing 414-6(4c). Rev. 7-27-55

Equipment For Driving Piles - 514-1(a)
Reinforcing Steel (Axle Steel) 123-1(a) Rev. 2-21-57
Black Traffic Stripe or Black Traffic Stripe Arrow, 634-1(a) Rev. 10-8-55
High Strength Steel 160-7.5

REFERENCE LIST & DWGS.:
DETAILS & ABUTMENTS - - - - - - - - - - S-555-#73
DETAILS & PIERS - - - - - - - - - - - - S-555-#74-#76
DETAILS & SUPERSTR. - - - - - - - - - S-555-#78-#85
LAYOUT & BEAMS & STIFFENERS - - - S-555-#76
DETAILS & APPROACH SLABS - - - - - - S-555-#77

DESIGN DATA

Concrete	1,000 psi
Reinf. Steel	18,000 psi
Design Live Load	H20-S16-PPM20-4
Foundation Loads	
Abutments	29.1 ton/sq. ft.
Piers	22 ton/sq. ft.

** Refer to Sh. No. 17 for location of this item. See Spec. Provisions.

SUMMARY OF QUANTITIES

ITEM No.	ITEM	UNIT	Abuts.	Piers	Super-Struct.	TOTAL	RDY.
* 202.08a	Class "D" Unclass. Excav.	C.Y.					200
303.06a	4" Sand Cushion	S.Y.					47.6
414.06c	Approach Slabs	S.Y.					47.6
601.06b	Substr. Excav.-Common	C.Y.	220	1,300		1,520	
601.06c	Substr. Excav.-Rock	C.Y.		87		87	
605.06a	Steel Handrailing	L.F.			355.5	355.5	
606.06	Structural Steel	Lbs.			308,003	308,003	
609.06a	Class "A" Concrete	C.Y.	32.6	265.6		345.2	0.6
609.06b	Class "A" Conc. in Pier Bases	C.Y.		79.2		79.2	
609.06c	Class "AA" Concrete	C.Y.			257.0	257.0	
611.06	Reinforcing Steel	Lbs.	0.710	47,470	68,825	116,905	75
630.06a	15" C.G.M. Pipe	L.F.					44
640.06a	16" ϕ Test Pile	Ea.	2			2	
640.06a	20" ϕ Piling	L.F.	670			670	
660.06h	Inlet Frame & Grate	Ea.					1
684.06a	6" Black Traffic Stripe	L.F.			324.6	324.6	40
566.06a	Aluminum Handrailing	L.F.			355.5	355.5	
630.06a	48" C.G.M. Pipe **	L.F.					51

* Non-Participating Item

GENERAL NOTES

All construction & materials shall be in accordance with the Oklahoma Standard Specifications of 1954 and Special Provisions.

All exposed concrete surfaces shall have a carborundum finish.

All reinforcing steel shall conform to ASTM Specifications A-305-49.

Piling shall be driven using leads of sufficient strength to control piles.

Piling shall be driven to approximately refusal in solid grade or to a minimum bearing of 30 tons in soft clay or silts.

All equipment piling shall be driven through the compacted fill. 2" Pilot holes shall be drilled to natural ground line. All cost of pilot holes shall be included in the unit price bid for 16" ϕ R.C. piling.

** Test Piles must be driven in both left and right abutments at a depth about 41' or about 42' before the piling lengths for those abutts. are determined.

Connection shall be made on both types of handrailing. Type of rail used will be determined by bids received.

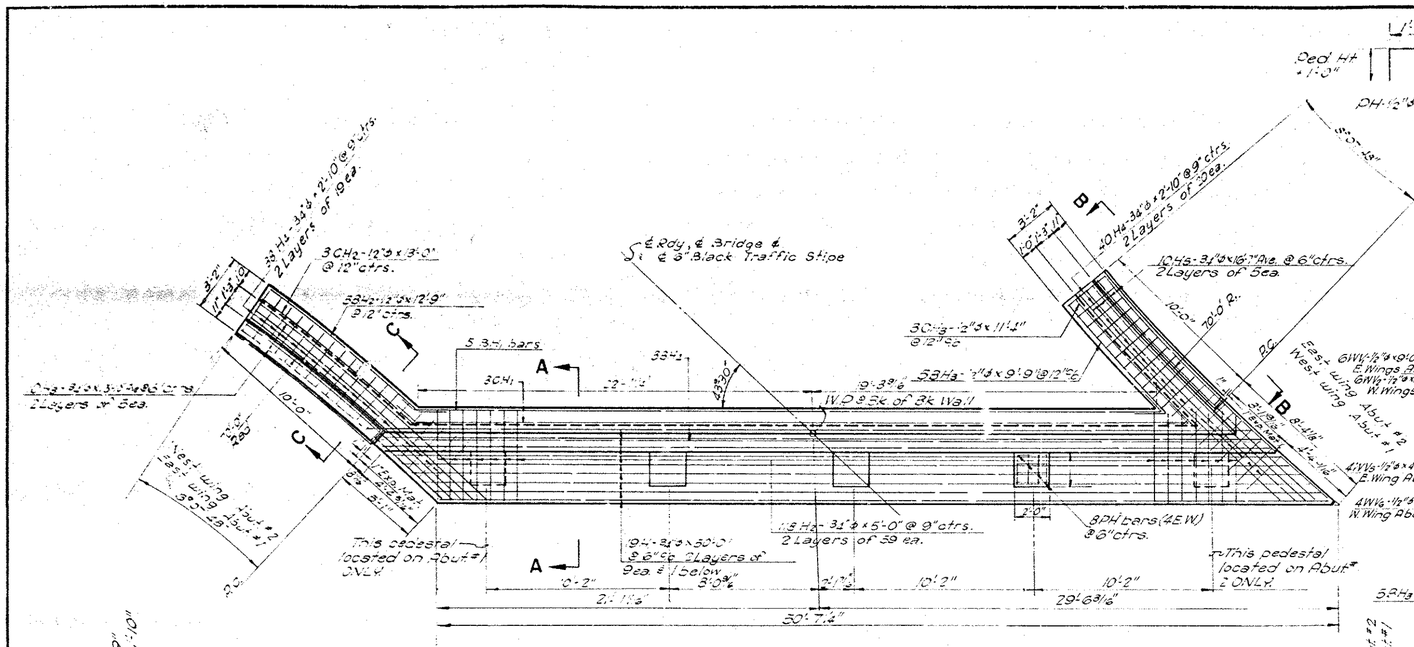
A.T. & S.F. RY. SKEW 43°-30' LT. FWD.

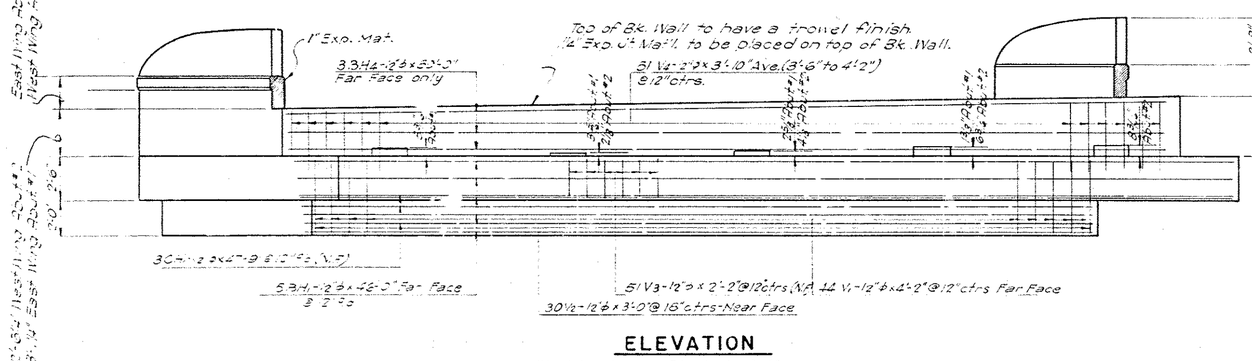
RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	DFS	
CHECKED	RHD	
APPROV'D		
SQUAD: BENHAM		

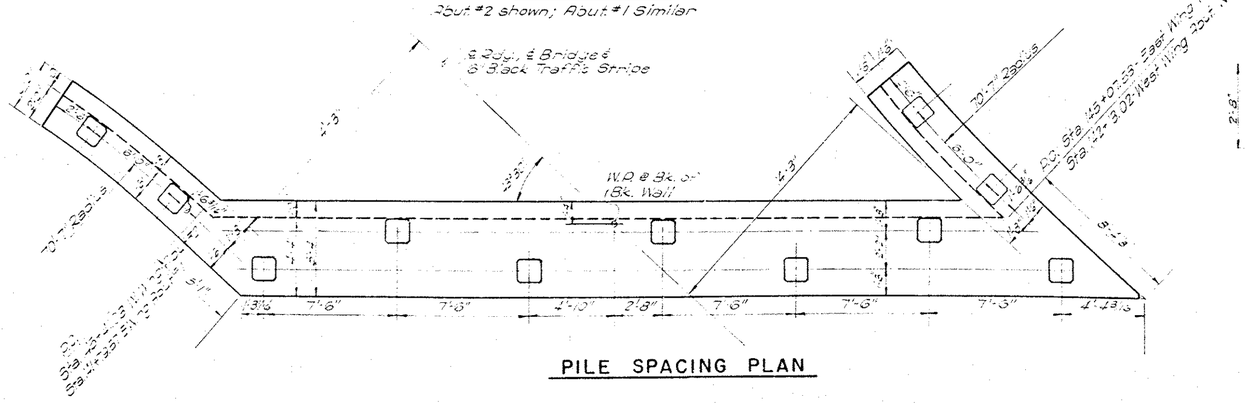
OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

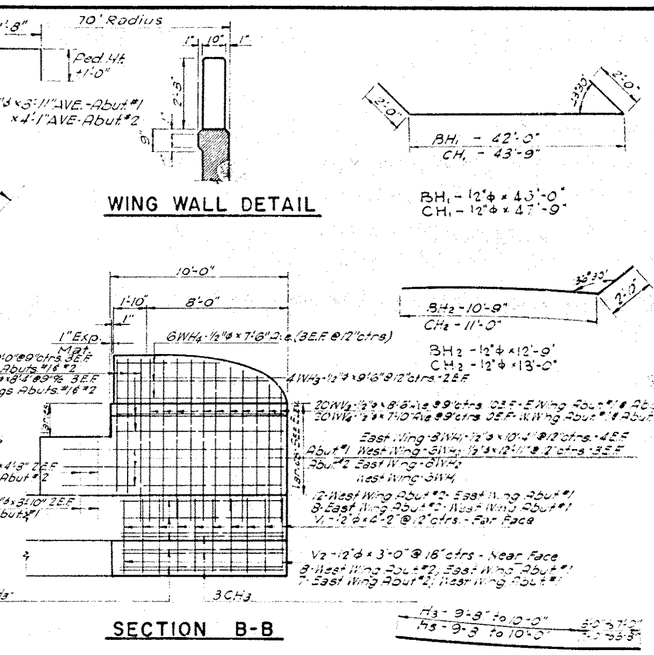
STR. NO. 12
GENERAL ELEVATION, PLAN & SUMMARY OF QUANTITIES
40'-(74'-92'-74' CONT)-40'-I-BEAM SPAN
30' RDY. & 2-18" S.C.'s
℄ STA. 143+60.30-31.5 LT. ℄ SURVEY
F.A. PROJ. I-381(16) PT. II

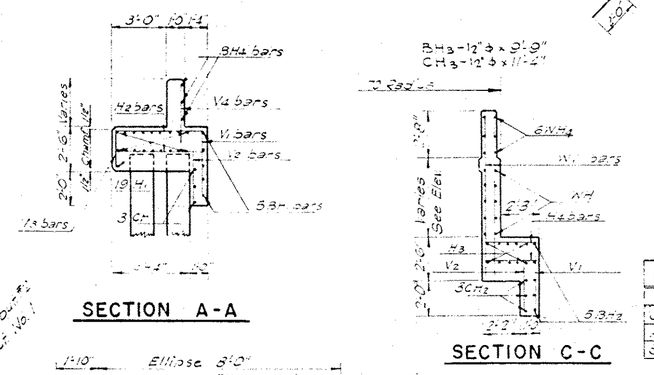
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-2	72	88

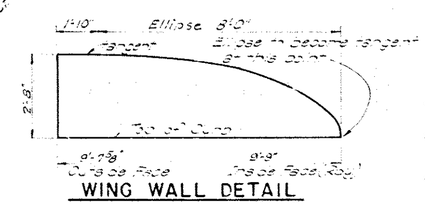


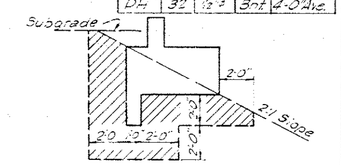












EXCAVATION DETAILS

Refer to identical note on Sheet No. 2

BAR LIST-ONE ABUT

	Mark	No.	Size	Form	Length
	H1	19	3/4"ϕ	Str.	50'-0"
	H2	118	3/4"ϕ	Str.	5'-0"
	H3	10	3/4"ϕ	2'-9 Band	15'-0" Ave.
	H4	78	3/4"ϕ	Str.	2'-10"
	H5	10	3/4"ϕ	2'-9 Band	16'-7" Ave.
	CH1	3	1/2"ϕ	Bnt.	47'-9"
	CH2	3	1/2"ϕ	Bnt.	13'-0"
	CH3	3	1/2"ϕ	Bnt.	11'-4"
	BH1	5	1/2"ϕ	Bnt.	46'-0"
	BH2	5	1/2"ϕ	Bnt.	12'-9"
	BH3	5	1/2"ϕ	Bnt.	9'-9"
	BH4	3	1/2"ϕ	Str.	50'-0
	V1	64	1/2"ϕ	Str.	4'-2"
	V2	45	1/2"ϕ	Str.	3'-0"
	V3	51	1/2"ϕ	Str.	2'-2"
	V4	51	1/2"ϕ	Str.	3'-10" Ave.
Abut #1	WH1	8	1/2"ϕ	Str.	10'-4"
	WH2	6	1/2"ϕ	Str.	12'-11"
Abut #2	WH1	6	1/2"ϕ	Str.	10'-4"
	WH2	8	1/2"ϕ	Str.	12'-11"
	WH3	8	1/2"ϕ	Str.	9'-6"
	WH4	12	1/2"ϕ	Str.	7'-6" Ave.
	WV1	6	1/2"ϕ	Str.	9'-0"
	WV2	6	1/2"ϕ	Str.	8'-4"
	WV3	20	1/2"ϕ	Str.	8'-6"
	WV4	20	1/2"ϕ	Str.	7'-10"
Abut #2	WV5	4	1/2"ϕ	Str.	4'-8"
Abut #1	WV6	4	1/2"ϕ	Str.	3'-10"
	C	22	1/2"ϕ	Bnt.	3'-8"
	H	34	3/4"ϕ	Bnt.	8'-3"
	DH	32	1/2"ϕ	Bnt.	4'-0" Ave.

QUANTITIES - ONE ABUTMENT

ITEM	UNIT	TOTAL
Class "B" Concrete	C.Y.	64.3
Reinforcing Steel	Lbs.	5,825
Substa. Excav.-Common	C.Y.	110

GENERAL NOTES:

All construction and materials shall be in accordance with the Oklahoma Standard Specifications of 1954 & Special Provisions.

All reinforcing steel bars shall conform to A.S.T.M. Specs. A-305-49.

All exposed concrete edges shall have a ¾" chamfer unless otherwise shown or noted.

For details of piling & D & H bars, refer to Std. Dwg. CSP-3.

REVISIONS			
NO.	DESCRIPTION	BY	DATE

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	DFS	
CHECKED	RAR	
APPROVED		
SQUAD	BENHAM	

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

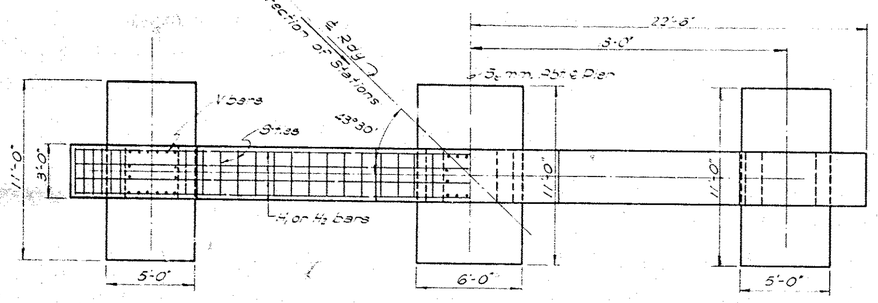
STR. NO. 12
DETAILS OF ABUTMENTS

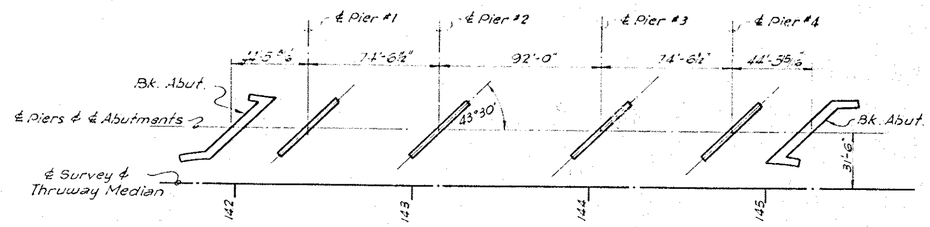
℄ STA. ON ℄ SURVEY 143+60.30

F.A. PROJ. I-381(16) PT.-2

PROJECT NO. I-381(16)PT2 SHEET NO. 72

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16) PT-2	73	88



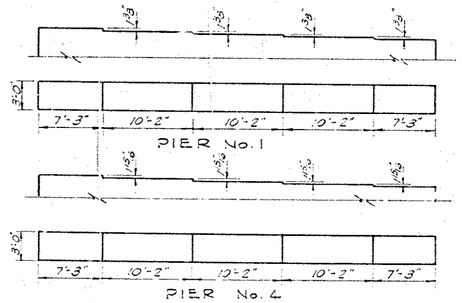


LAYOUT OF PIERS & ABUTMENTS

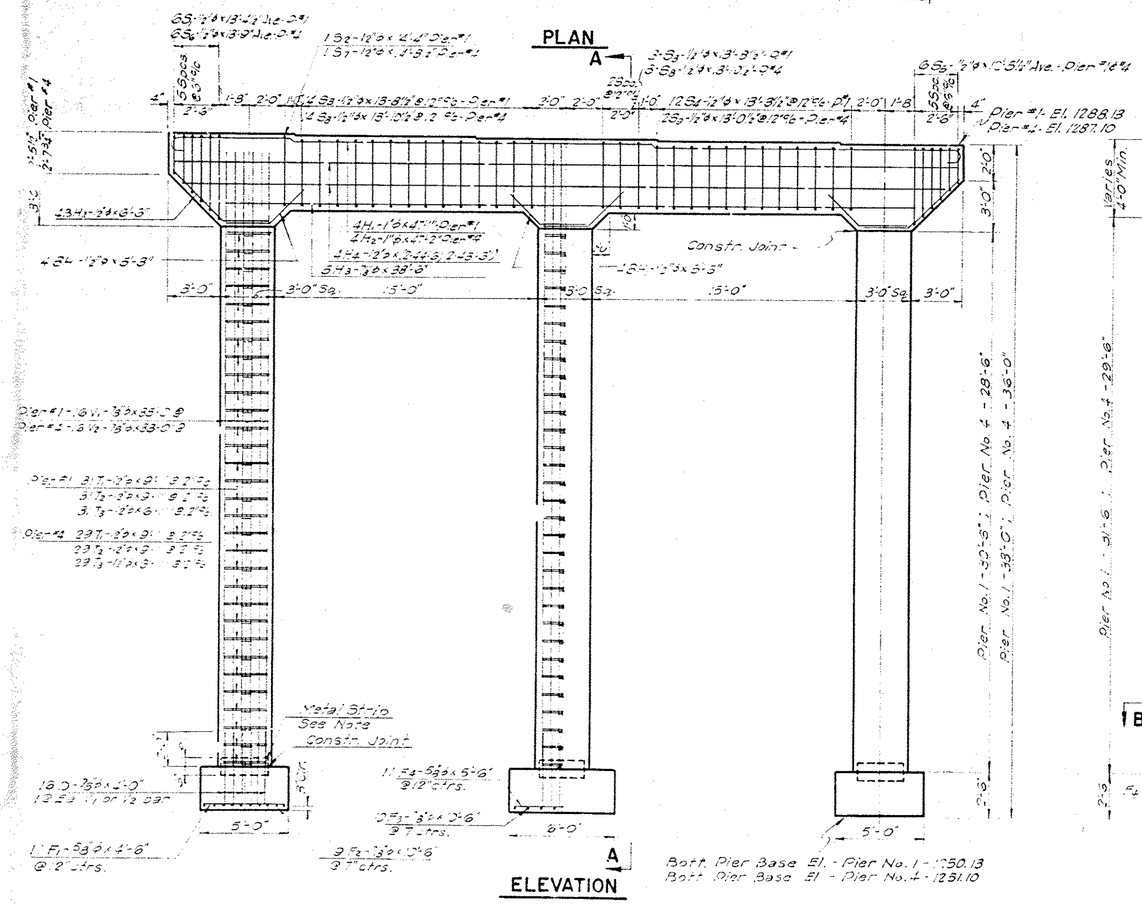
BAR LIST - ONE PIER

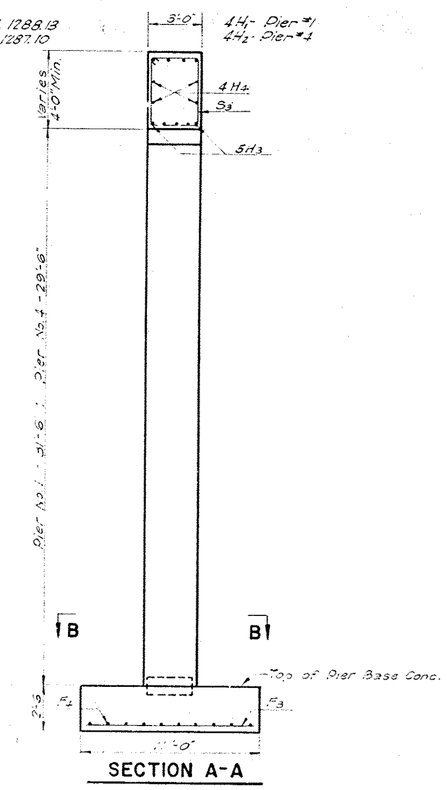
Mark	No.	Size	Form	Length
H_3	5	7/8"ϕ	Bnt	38'-6"
H_4	4	1/2"ϕ	Str	44'-0" Ave.
BH_1	16	1/2"ϕ	Bnt	5'-3"
BH_2	8	1/2"ϕ	Bnt	6'-6"
D	48	7/8"ϕ	Str	5'-0"
F_1	22	5/8"ϕ	Str	4'-6"
F_2	13	7/8"ϕ	Str	10'-6"
F_3	10	7/8"ϕ	Str	10'-6"
F_4	11	5/8"ϕ	Str	5'-6"
S_5	6	1/2"ϕ	Bnt	12'-3 1/2" Ave.
H_1		4	1"ϕ	Bnt	47'-1"
	H_2	4	1"ϕ	Bnt	47'-2"
T_1		93	1/2"ϕ	Bnt	9'-1"
T_2		93	1/2"ϕ	Bnt	9'-1"
T_3		93	1/2"ϕ	Bnt	6'-1"
	T_1	87	1/2"ϕ	Bnt	9'-1"
	T_2	87	1/2"ϕ	Bnt	9'-1"
	T_3	87	1/2"ϕ	Bnt	6'-1"
V_1		28	7/8"ϕ	Str	33'-0"
	V_2	48	7/8"ϕ	Str	33'-0"
S_1		6	1/2"ϕ	Bnt	13'-4 1/2" Ave.
S_2		7	1/2"ϕ	Bnt	14'-4"
S_3		17	1/2"ϕ	Bnt	13'-3 1/2" Dia.
S_4		12	1/2"ϕ	Bnt	13'-3 1/2" Dia.
	S_6	6	1/2"ϕ	Bnt	3'-9" Dia.
	S_7	7	1/2"ϕ	Bnt	4'-8 1/2" Dia.
	S_8	17	1/2"ϕ	Bnt	13'-0 1/2" Dia.
	S_9	12	1/2"ϕ	Bnt	13'-0 1/2" Dia.

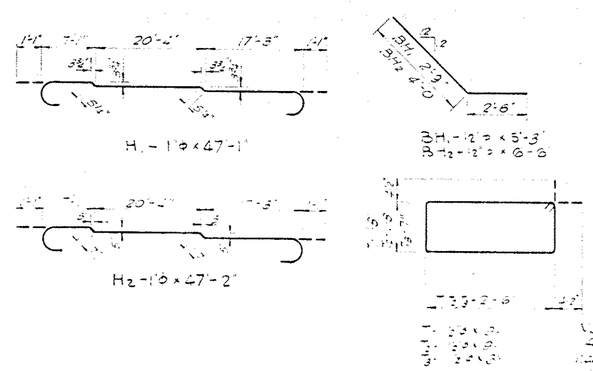
PIER #1	PIER #4				
H_1			4	1"ϕ	Bnt	47'-1"
	H_2		4	1"ϕ	Bnt	47'-2"
T_1			93	1/2"ϕ	Bnt	9'-1"
T_2			93	1/2"ϕ	Bnt	9'-1"
T_3			93	1/2"ϕ	Bnt	6'-1"
	T_1		87	1/2"ϕ	Bnt	9'-1"
	T_2		87	1/2"ϕ	Bnt	9'-1"
	T_3		87	1/2"ϕ	Bnt	6'-1"
V_1			28	7/8"ϕ	Str	33'-0"
	V_2		48	7/8"ϕ	Str	33'-0"
S_1			6	1/2"ϕ	Bnt	13'-4 1/2" Ave.
S_2			7	1/2"ϕ	Bnt	14'-4"
S_3			17	1/2"ϕ	Bnt	13'-3 1/2" Dia.
S_4			12	1/2"ϕ	Bnt	13'-3 1/2" Dia.
	S_6		6	1/2"ϕ	Bnt	3'-9" Dia.
	S_7		7	1/2"ϕ	Bnt	4'-8 1/2" Dia.
	S_8		17	1/2"ϕ	Bnt	13'-0 1/2" Dia.
	S_9		12	1/2"ϕ	Bnt	13'-0 1/2" Dia.

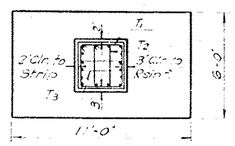


DETAILS OF PIER TOPS









SECTION B-B

QUANTITIES - ONE PIER			
ITEM	UNIT	PIER #1	PIER #4
Reinforcing Steel	Lb.	7575	7540
Class "A" Concrete	C.Y.	60.5	57
Class "A" Concrete Pier Base	C.Y.	6.3	6.3
Subsoil Excav. - Common	C.Y.	470	418
Subsoil Excav. - Rock	C.Y.	15	17

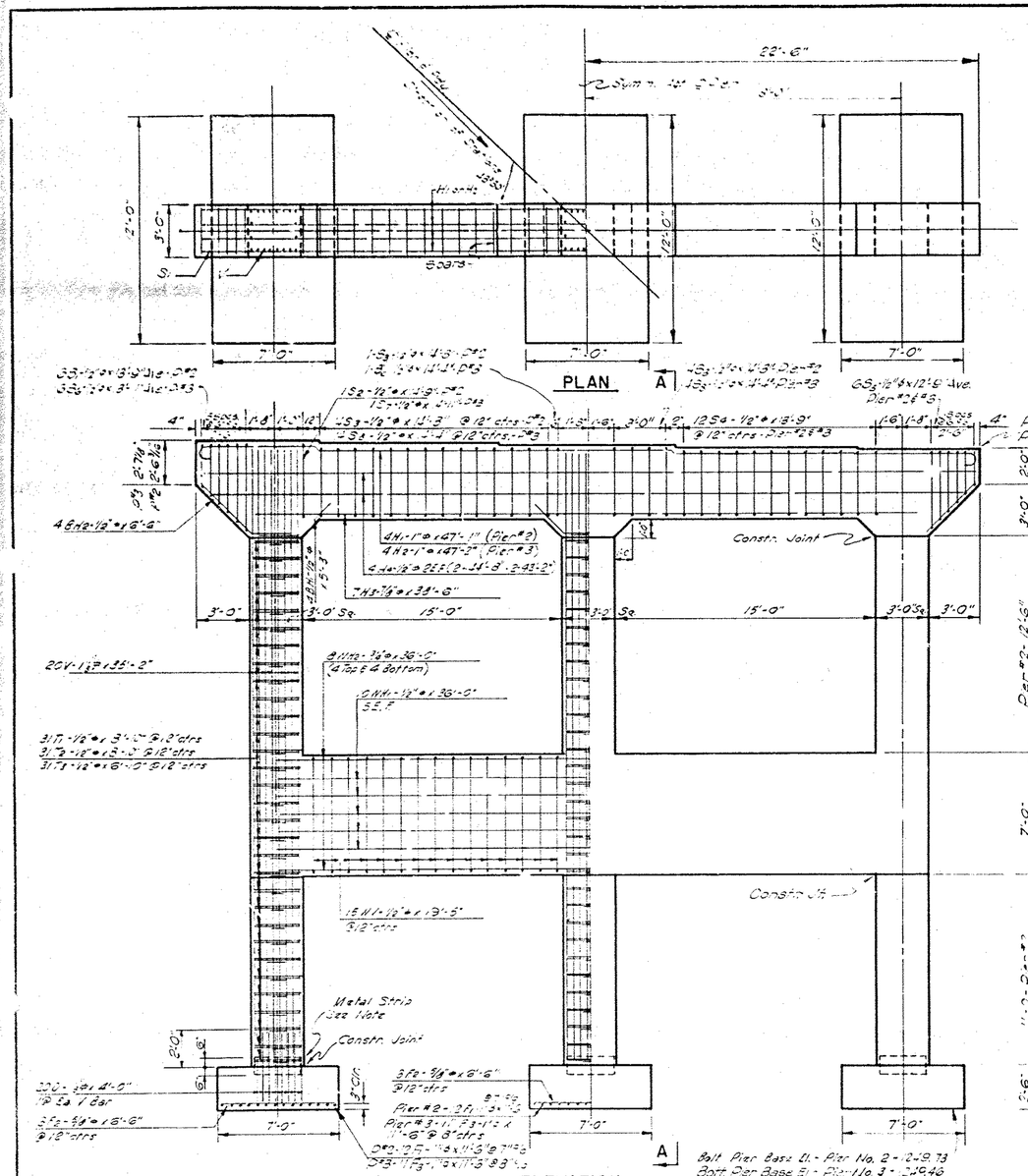
REVISIONS			
NO.	DESCRIPTION	BY	DATE

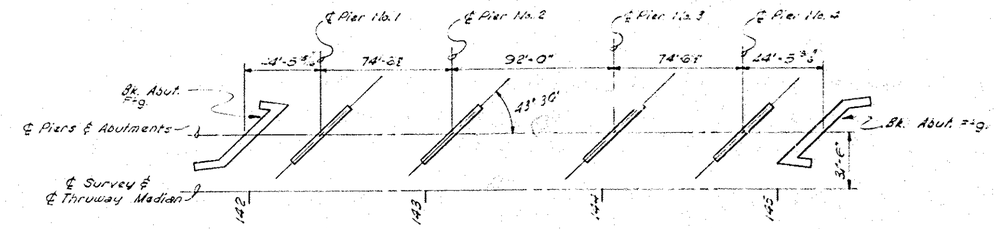
RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED J.S.		
CHECKED DRD		
APPROVED		
SQUAD BENHAM		

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 12
DETAILS OF PIERS
PIER NO. 1 & PIER NO. 4
℄ STA. ON ℄ SURVEY 143+60.30
F.A. PROJ. I-381(16) PT.-2

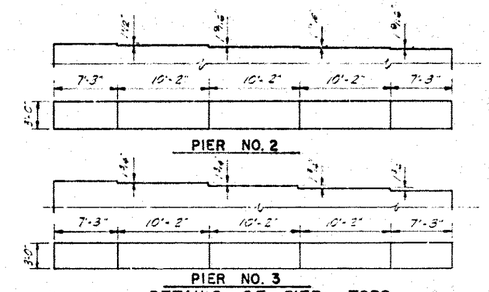
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT.2	74	88



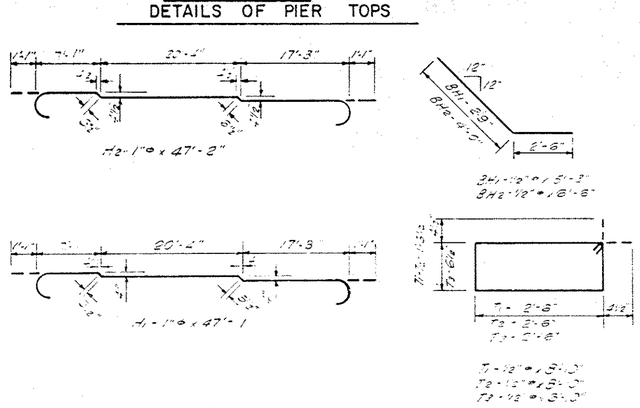


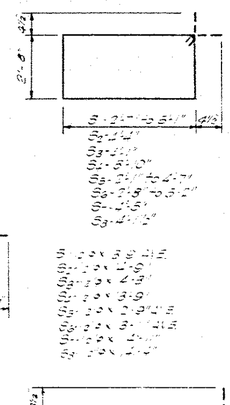
LAYOUT OF PIERS & ABUTMENTS

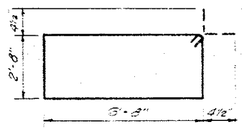
BAR LIST - ONE PIER				
Mark	No.	Size	Form	Length
F3	7	1 ϕ	Str.	38'-6"
H1	4	1/2 ϕ	Str.	43'-1" Ave.
H2	13	1/2 ϕ	Bnt.	5'-3"
H3	8	1/2 ϕ	Bnt.	6'-6"
WH1	10	1/2 ϕ	Str.	33'-0"
WH2	8	1/2 ϕ	Str.	36'-0"
WV	30	1/2 ϕ	Bnt.	19'-5"
V	60	1 ϕ	Str.	35'-2"
T1	93	1/2" ϕ	Bnt.	3'-10"
T2	93	1/2" ϕ	Bnt.	3'-10"
T3	93	1/2" ϕ	Bnt.	6'-10"
D	60	1/8" ϕ	Str.	4'-0"
S4	12	1/2" ϕ	Bnt.	13'-9"
S5	6	1/2 ϕ	Bnt.	12'-9" Ave.
PIER #2	PIER #3			
S1		6	1/2 ϕ	Bnt.	13'-9" Ave.
S2		1	1/2 ϕ	Bnt.	14'-9"
S3		19	1/2 ϕ	Bnt.	14'-3"
	S6	3	1/2 ϕ	Bnt.	13'-11" Ave.
	S7	1	1/2 ϕ	Bnt.	14'-11"
	S8	19	1/2 ϕ	Bnt.	14'-4"
F1		36	1 ϕ	Str.	11'-6"
F2	F2	39	5/8 ϕ	Str.	6'-6"
	F3	33	1" ϕ	St.	11'-6"
H1		4	1 ϕ	Bnt.	47'-1"
	H2	4	1 ϕ	Bnt.	47'-2"



DETAILS OF PIER TOPS



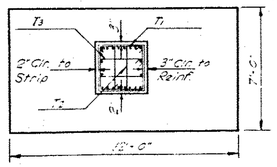




QUANTITIES - ONE PIER			
ITEM	UNIT	PIER #2	PIER #3
Reinforcing Steel	Lbs.	5,250	5,125
Class "A" Concrete	C.Y.	730	731
Class "A" Conc. in Pier Bases	C.Y.	235	235
Subst. Excav. - Common	C.Y.	90	280
Subst. Excav. - Rock	C.Y.	28	27

NOTES:
All reinforcing steel bars shall conform to A.S.T.M. Spec. P-305-49.
All exposed edges shall have a 1" chamfer unless otherwise noted.

NOTE: METAL STRIP & PIER BASE CONCRETE
Refer to identical note on Details of Piers, Under Sheet 73.



SECTION B-B

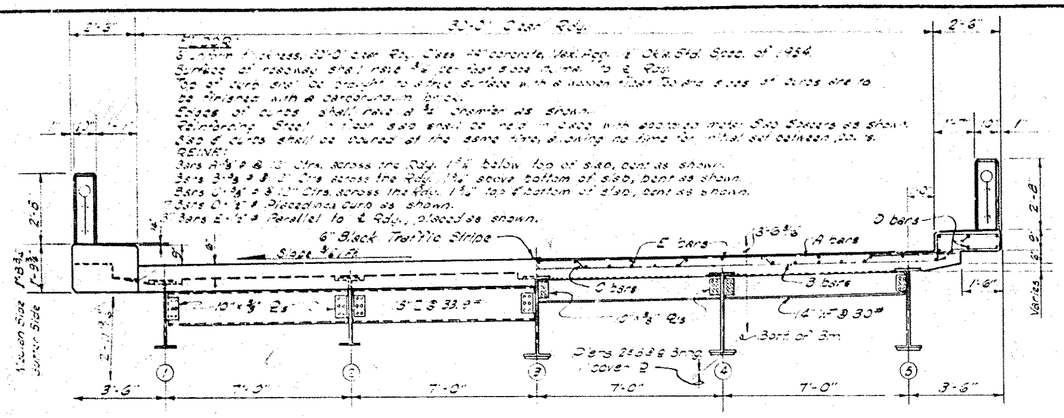
REVISIONS			
NO	DESCRIPTION	BY	DATE

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	J.H.	
CHECKED	D.R.D.	
APPROVED		
SQUAD	BEHNAM	

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

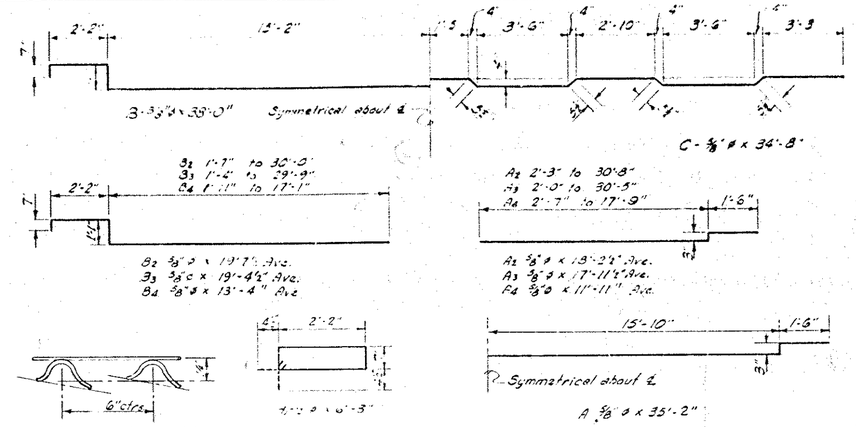
STR. NO. 12
DETAILS OF PIERS
PIER NO.2 & PIER NO.3
℄ STA. ON ℄ SURVEY 143+60.30
F.A. PROJ. I-381(16) PT.-2

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-2	75	88

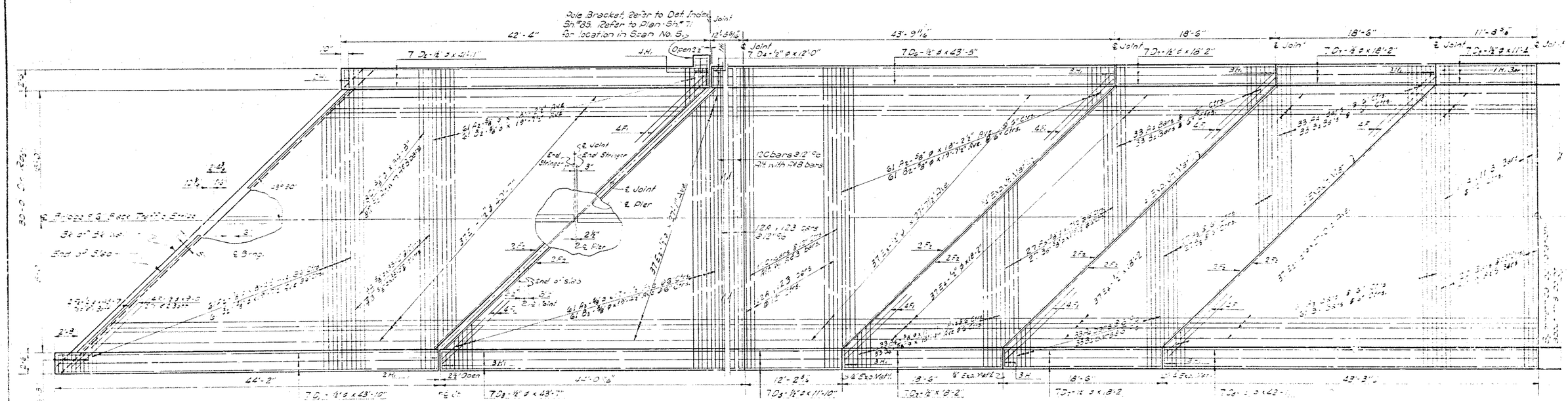


HALF END VIEW

HALF SECTION AT CONSTRUCTION JOINT



SLAB SPACERS
Max. Spacing 5'-0" ctrs.



PLAN

*Includes 35 Cu. Yds. for thickening of haunches to provide for D.L. defl. Final pay quant will be computed after floor is poured

**Includes 0 Cu. Yds. for 2 Exp. Devices.

TABLE OF QUANTITIES – ONE STR.								
		CONCRETE						FORM
NO. OF SPANS	SPAN LENGTH	3.25 SK CONC.	4.5 SK CONC.	6.5 SK CONC.	6.5 SK CONC. FOR 2 EXP. DEVICES	REINF. STEEL	TOTAL REINF. STEEL	Conventional Form	Special Form
			CU. YDS.	CU. YDS.	CU. YDS.	LBS.	LBS.	SQ. FT.	SQ. FT.
2	40'	20 1/2" ø x 1'-4"	640	18.0	37.000 **	2.000	37.000	88.0	8.000
2	44'	23 1/2" ø x 1'-4"	770	20.0					
2	90'	43 1/2" ø x 2'-0"	3.0	19.0	53.300	8.175	240.035	93.5	13.500
								93.5	21.50
TOTAL							277.035	187.0	68.500

REVISIONS			
NO.	DESCRIPTION	BY	DATE
	Shown 3 Exp. Devices on Det. Sheets 3 & 4 of 5		8-12-58

RECORD	
ITEM	BY DATE
DESIGN	
DETAIL	
TRACED	C.H.
CHECKED	A.G.D.
APPROVED	
SQUAD	BENHAM

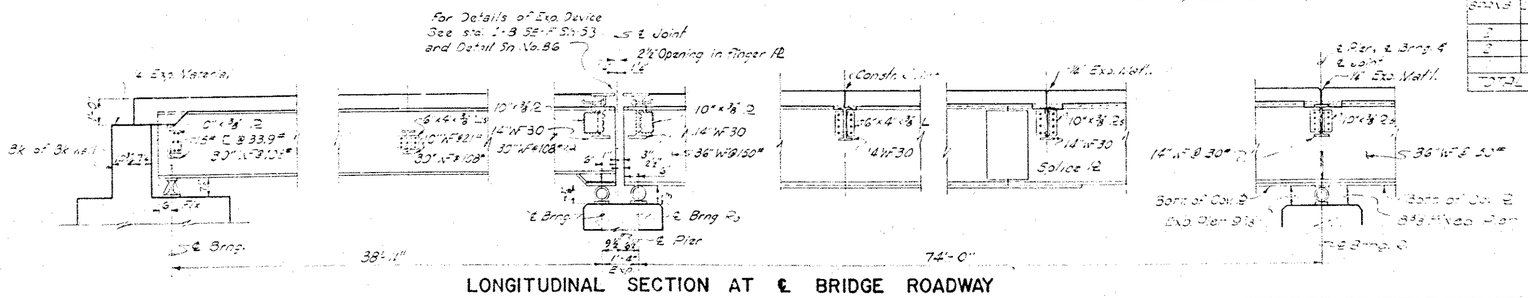
CKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 12

DETAILS OF DECK REINFORCING

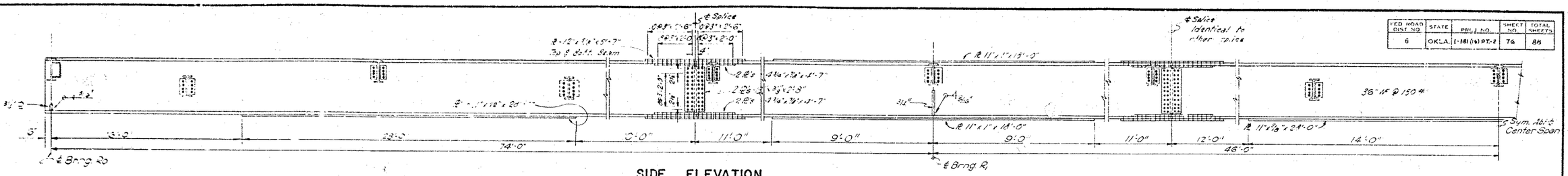
℄ STA. ON ℄ SURVEY 143+60.30

F.A. PROJ. I-381(16) PT.-2

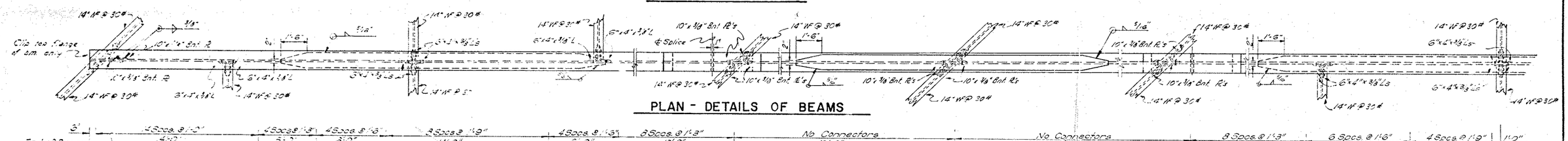


LONGITUDINAL SECTION AT ℄ BRIDGE ROADWAY

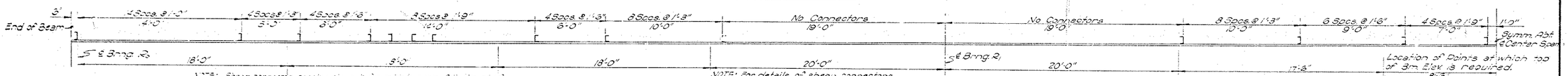
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16) PT.-2	76	88



SIDE ELEVATION

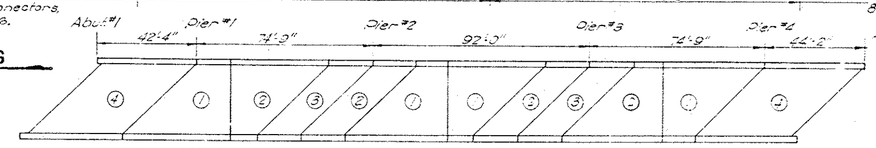


PLAN - DETAILS OF BEAMS



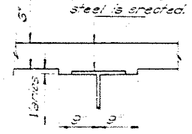
NOTE: For details of shear connectors, Refer to Index Sht. No. 88.

SHEAR CONNECTOR SPACING

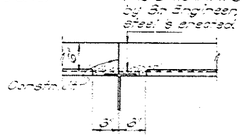


NOTE: SLAB POURING ORDER - All panels having the same number will be considered a "group" and shall be poured in the same days pouring. Groups of panels shall be poured in the order of the numbers shown. More than one group may be poured on the same day, but no group shall be started until pouring is completed for the preceding group and any group started must be completed before that pour is stopped. (The purpose of these restrictions is to insure that loading and deflection of the series of three spans may be kept by incrementally balanced about the center line of the middle span during any prefixed interval between pours.) Panels ④ may be poured either before or after panels ① ② and ③ are poured and the two panels ④ may be poured on different days.

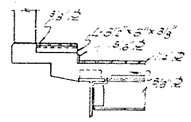
ORDER OF SLAB POURING



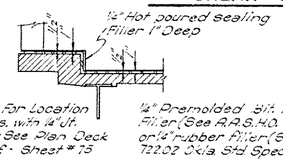
HAUNCH DETAIL FOR BEAMS



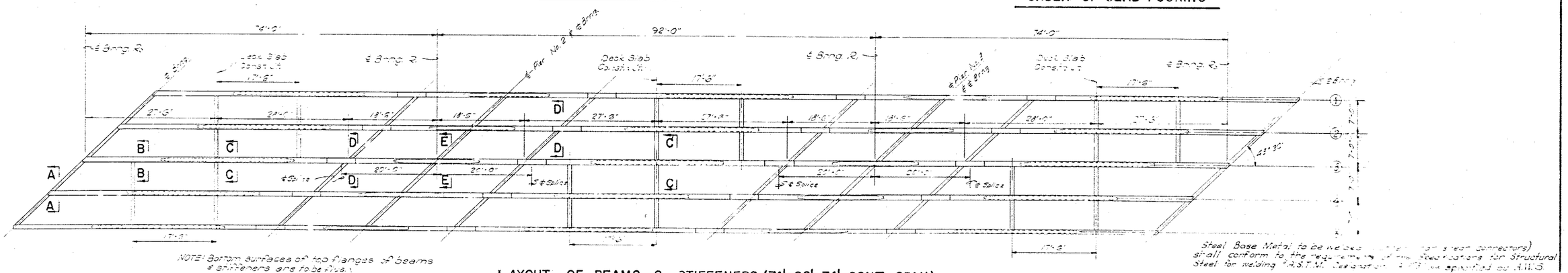
HAUNCH DETAIL FOR STIFFENERS



DETAIL AT EXP. DEVICE



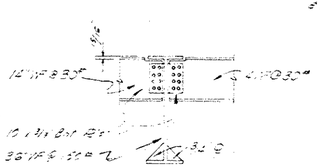
DETAIL OF CONSTR. JOINT WITH EXP. MAT'L.



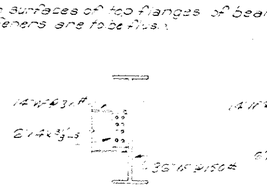
NOTE: Bottom surfaces of top flanges of beams & stiffeners are to be flush.

Steel Base Metal to be welded (including shear connectors) shall conform to the requirements of the Specifications for Structural Steel for Welding "A.S.T.M. Designation ... as specified by A.W.S.

LAYOUT OF BEAMS & STIFFENERS (74'-92'-74' CONT. SPAN)

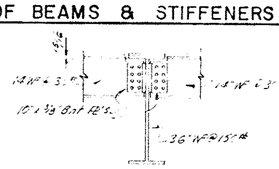


SECTION A-A

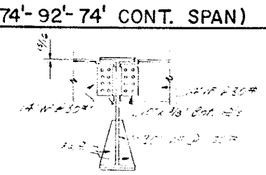


SECTION B-B

SECTION C-C



SECTION D-D



SECTION E-E

REVISIONS			
NO.	DESCRIPTION	BY	DATE
1	Deck slab reinforcing to adjustment of Exp. Joints, Sheet 75 & 76	...	2-22-58
2	Added reinforcing at top of deck slab	...	2-22-58
3	Sheet 75 - Detail of Stiff.	...	10-2-58

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	J.H.	
CHECKED		
APPROVED		
SQUAD	BENHAM	

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 12

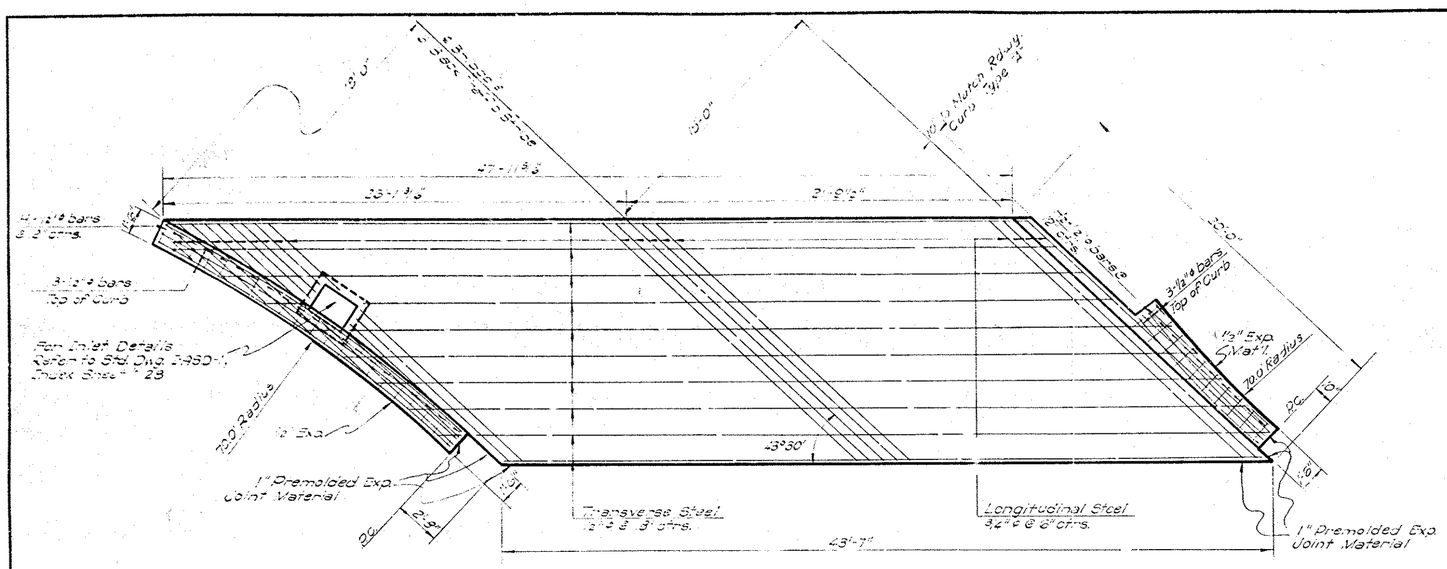
STRUCTURAL STEEL DETAILS

℄ STA. ON ℄ SURVEY 143+60.30

F.A. PROJ. I-381(16) PT.-2

PROJECT NO. I-381(16)PT.-2 SHEET NO. 76

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-38(16)PT2	77	98



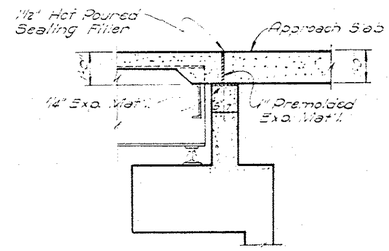
PLAN

APPR. SLAB @ ABUT. #2

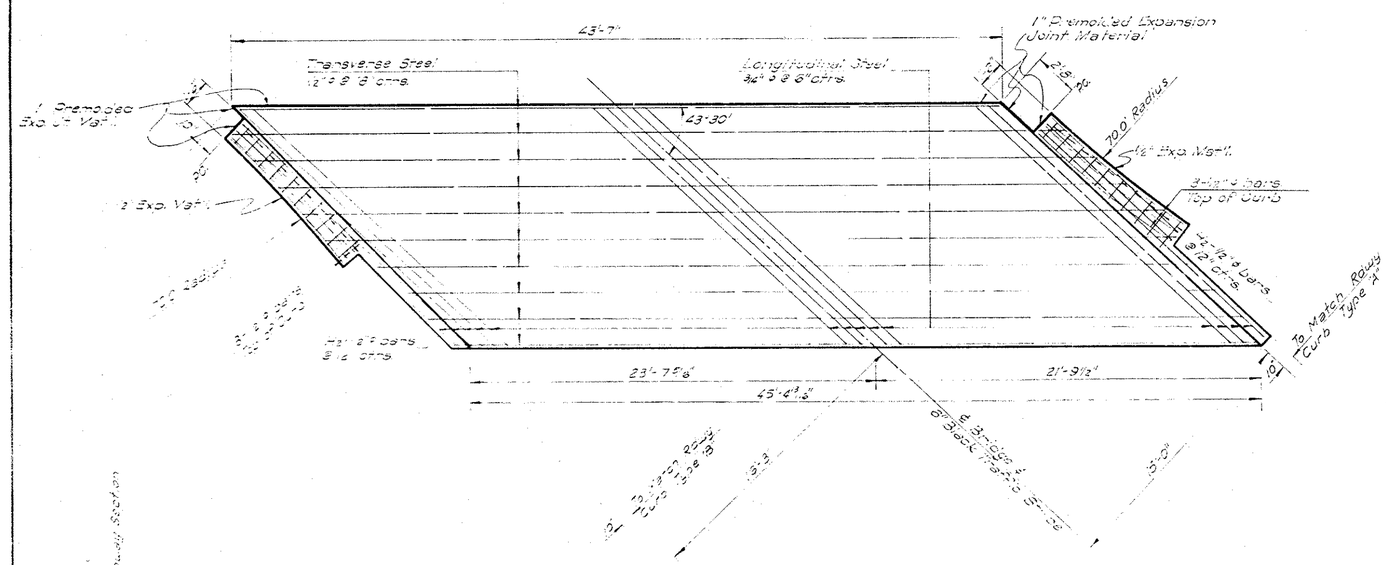
QUANTITIES - ONE APPROACH SLAB		
ITEM	UNIT	TOTAL
Approach Slab	S.Y.	73.8
* Reinforcing Steel	Lbs.	2,320
6" Black Traffic Stripe	L.F.	20

*Note: Cost of Reinforcing Steel in Appr. Slab shall be included in price bid per Sq. Yd. of Approach Slab.

Note: Cost of Curbs on Approach Slab shall be included in price bid per Sq. Yd. of Approach Slab.

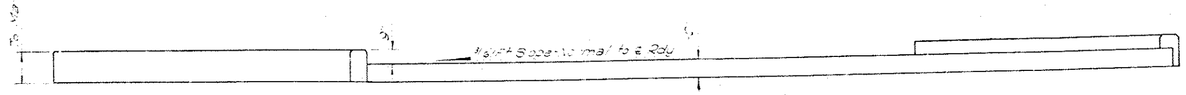


DETAIL OVER ABUTMENT



PLAN

APPR. SLAB @ ABUT. #1



END VIEW

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

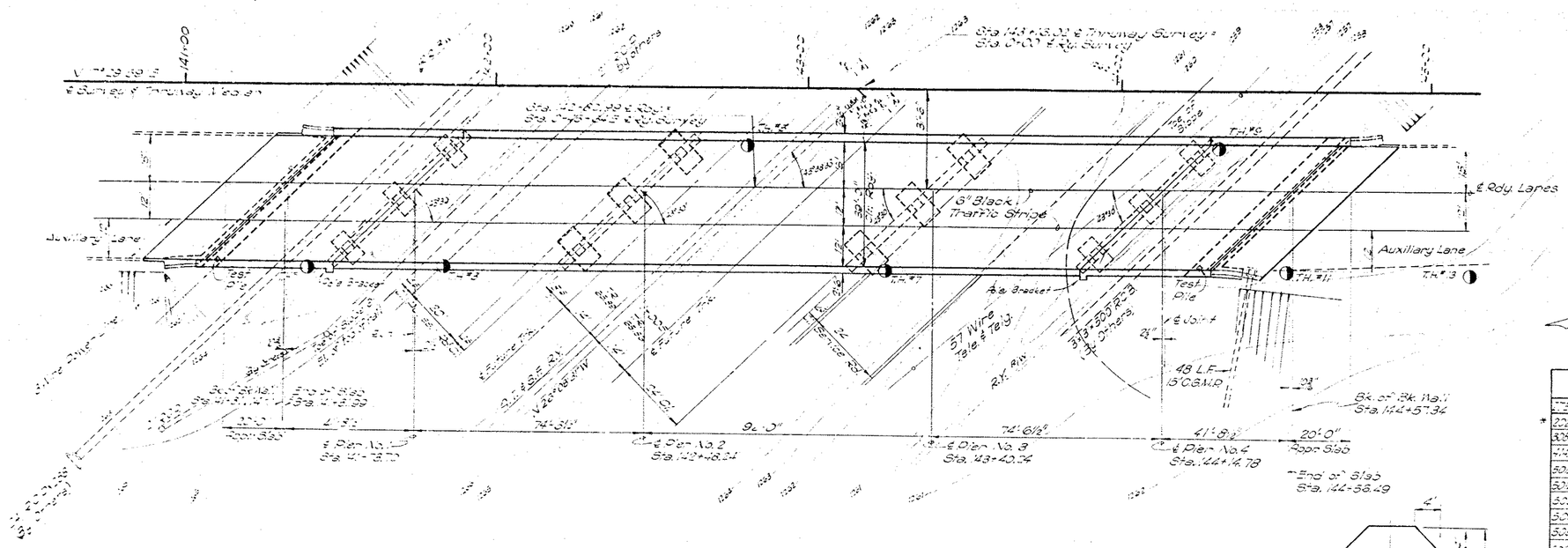
OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 12

DETAILS OF APPROACH SLABS

℄ STA. ON ℄ SURVEY 143+60.64

F.A. PROJ. I-381(16) PT-2



DESIGN DATA

Concrete	1,500 psi
Reinf. Steel	33,000 psi
Design Live Load	HS-20, 2011
Foundation Loads	
Abutments	187 tons
Piers	110 tons

SUMMARY OF QUANTITIES

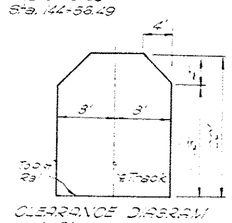
ITEM No.	ITEM	Unit	Pier No. 1	Pier No. 2	Pier No. 3	Pier No. 4	Total
* 202.06a	Class "D" Unclass. Excav.	C.Y.					200
303.06a	4" Sand Cushion	S.Y.					58.0
414.06a	Approach Slabs	S.Y.					94.0
601.06a	Subsfn Excav. - Common	C.Y.	130	113		54	
601.06c	Subsfn Excav. - Rock	C.Y.		92		92	
608.06	Steel Handrailing	L.F.			288.5	288.5	
608.06	Structural Steel	Lump				1,699.0	1,699.0
609.06	Class "D" Concrete	C.Y.	198.9	192.9		409.7	0.6
609.06a	Class "D" Conc. in Pier Bases	C.Y.		84.0		84	
609.06b	Class "D" Concrete	C.Y.			409.6	409.6	
611.06	Reinforcing Steel	Lbs.	8,039	8,160	71,880	71,886	15
613.06a	18" C.S.P. Pipe	L.F.					48
614.06a	1" Bituminous Pipe	S.Y.	2			2	
614.06b	R.C. Pipe	L.F.	104			104	
617.06h	Bridge Rdwy. Drains	Ea.					7
627.06a	6" Black Traffic Stripe	L.F.			2,420	2,420	80
630.06	Aluminum Handrailing	L.F.			288.5	288.5	

* Non-Participating Item.

PLAN

Scale: 1" = 20'

VERTICAL CURVE DATA



CLEARANCE DIAGRAM

Falsework Clr. required by Rly. for operation during constr. Dimensions are at right angles to track.

GENERAL NOTES

All construction & materials shall be in accordance with the Oklahoma State Highway Specifications of 1962 and Supplements.

All exposed concrete surfaces shall have a smooth finish.

Reinforcing steel bars shall conform to A.S.T.M. Specifications A-615-62.

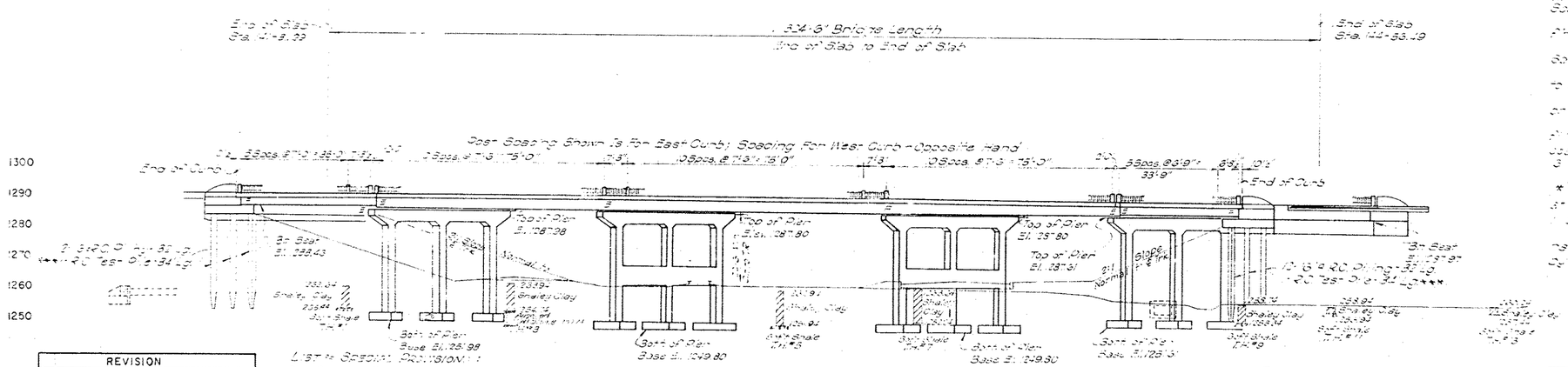
Piling shall be driven using loads of sufficient strength to damage piles.

Piling shall be driven to ground resistance equal or greater than design load at the plan pile grade.

Document all piles as driven through the concrete pier. Pile tops shall be chipped to nature grade to insure a good connection to pile cap. A pile connection to pile cap shall be made with dowels as shown on plans.

*** Test piles must be driven in both left and right southbound or single roadway in Pier No. 2. Submit the piling lengths for approval before ordering.

Contractor shall submit shop drawings of reinforcing steel for approval. Type of rail used will be determined by Shop Drawing.



GENERAL ELEVATION

Scale: 1" = 20'

REVISION			
NO.	DESCRIPTION	BY	DATE

Light Special Provisions:

See Special Provisions included in the Proposal for Curing Concrete from Highway Curing Compound, for Bridge Ornament Including Parapet Wall, Retaining Wall & Railing Wall, Rev. 11-17-65.

Equipment for Drilling Piles, Placing Reinforcing Steel, Pile Steel, Pile Caps, Rev. 11-3-61.

Black Traffic Stripe on Black Traffic Stripe Approx. 324'-(8), Rev. 10-19-65.

High Strength Steel Bolts

References List & Dwgs.:

DETAILS & ABUTMENTS
DETAILS & PIERS
DETAILS & SLOPE PROTECTION
LAYOUT & BEAM & STRUTS
DETAILS & APPROACH SLABS

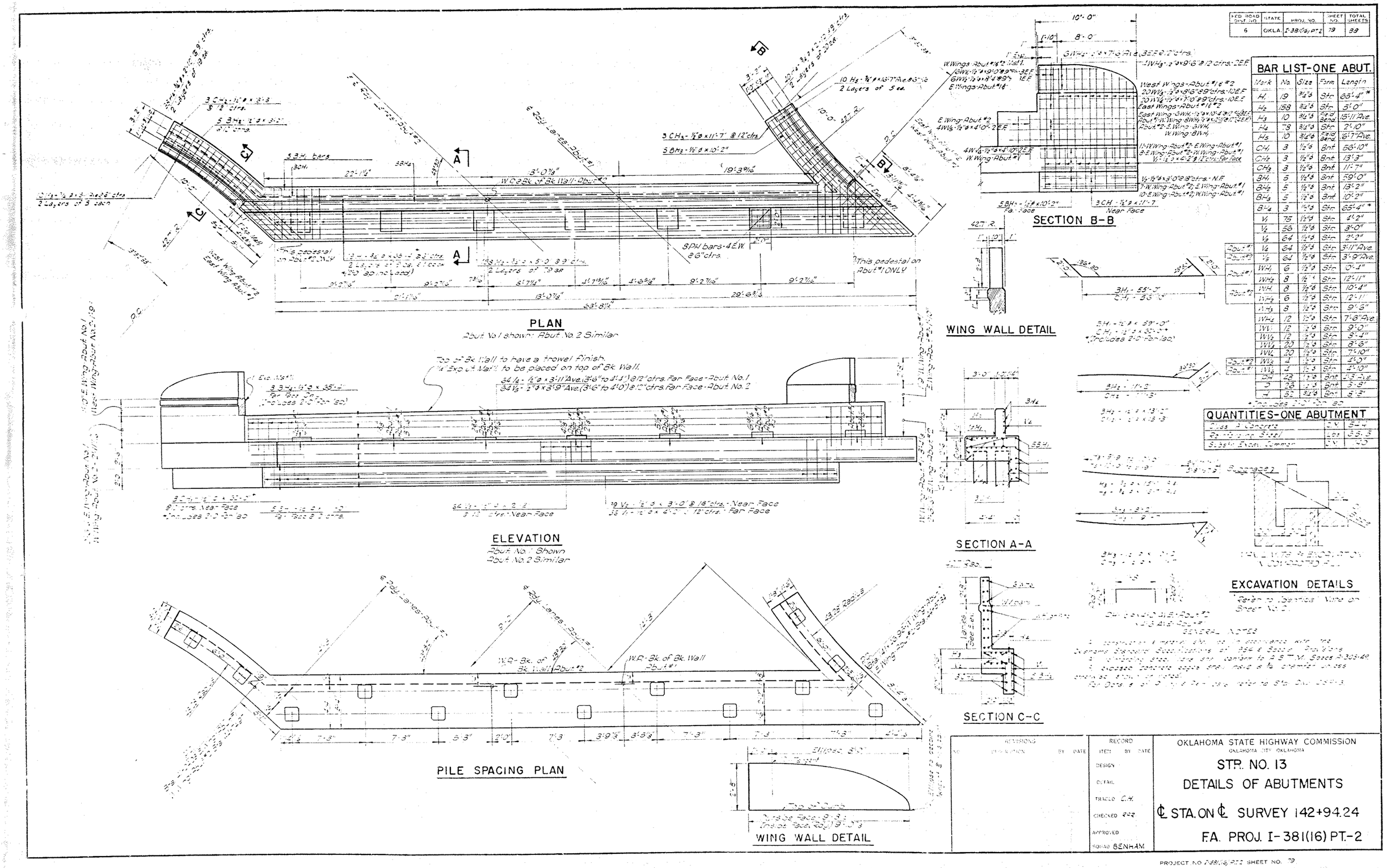
RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED		
CHECKED		
APPROVED		

A.T. & S.F. RY. SKEW 43°-30' LT. FWD.

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 13
GENERAL ELEVATION PLAN
& SUMMARY OF QUANTITIES
40'-(74'-92'-74' Cont.)-40' I-BEAM SPAN
39' RDY. & 2-18" S.C.'s
℄ STA. 142+94.24-31.5' RT. ℄ SURVEY
F.A. PROJ. I-381 (16) PT. 2

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16) PT 2	79	88



BAR LIST-ONE ABUT.

Mark	No.	Size	Form	Length
H1	19	3/4"ø	Str	65'-4"*
H2	158	3/4"ø	Str	5'-0"
H3	10	3/4"ø	Std. Bend	15'-11" Ave.
H4	18	3/4"ø	Str	2'-10"
H5	10	3/4"ø	Std. Bend	6'-7" Ave.
CH1	3	1/2"ø	Bnt	56'-10"
CH2	3	1/2"ø	Bnt	13'-3"
CH3	3	1/2"ø	Bnt	11'-7"
BH1	5	1/2"ø	Bnt	59'-0"
BH2	5	1/2"ø	Bnt	13'-2"
BH3	5	1/2"ø	Bnt	10'-2"
BH4	3	1/2"ø	Str	65'-4"*
V1	75	1/2"ø	Str	4'-2"
V2	56	1/2"ø	Str	3'-0"
V3	64	1/2"ø	Str	2'-2"
Abut. #1 V4	64	1/2"ø	Str	3'-11" Ave.
Abut. #2 V5	64	1/2"ø	Str	3'-9" Ave.
Abut. #1 WH1	6	1/2"ø	Str	0'-1"
WH2	8	1/2"ø	Str	12'-11"
WH3	8	1/2"ø	Str	10'-4"
WH4	6	1/2"ø	Str	12'-11"
WH5	8	1/2"ø	Str	9'-6"
WH6	12	1/2"ø	Str	7'-6" Ave.
WL1	12	1/2"ø	Str	9'-0"
WL2	12	1/2"ø	Str	3'-4"
WL3	20	1/2"ø	Str	8'-6"
WL4	20	1/2"ø	Str	7'-10"
Abut. #2 WL5	4	1/2"ø	Str	4'-0"
Abut. #2 WL6	4	1/2"ø	Str	4'-10"
OH	28	1/2"ø	Bnt	23'-3½"
J	26	1/2"ø	Bnt	5'-8"
K	32	3/4"ø	Bnt	6'-8"

*Includes 2'-0" for lap

QUANTITIES-ONE ABUTMENT

Class A Concrete	C.Y.	54.4
Reinforcing Steel	Lbs.	6,6.3
Substh. Excav. Common	C.Y.	20

REVISIONS				RECORD		
NO.	DESCRIPTION	BY	DATE	ITEM	BY	DATE
				DESIGN		
				DETAIL		
				TRACED C.H.		
				CHECKED RRR		
				APPROVED		
				SQUAD BENHAM		

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

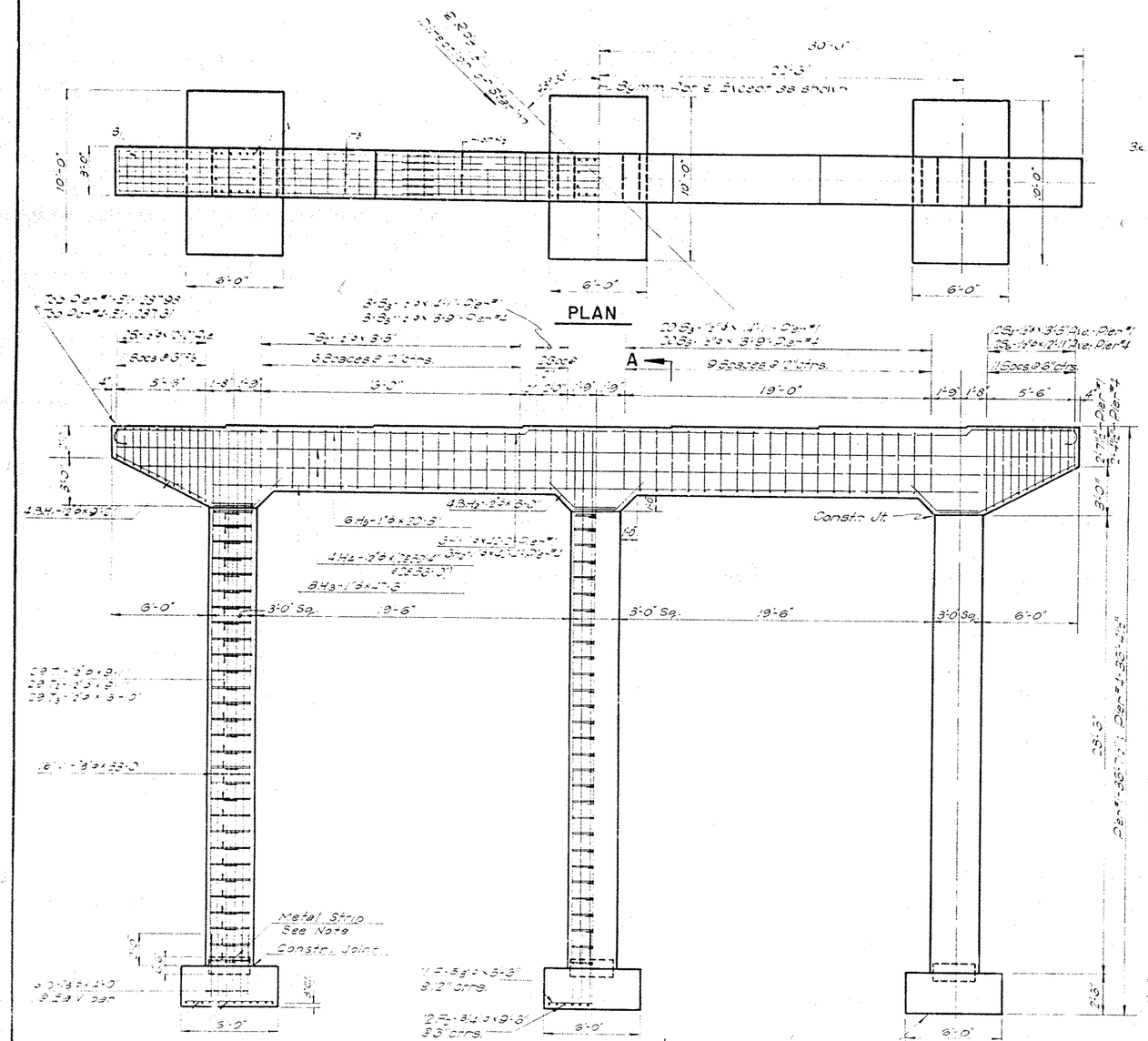
STR. NO. 13
DETAILS OF ABUTMENTS

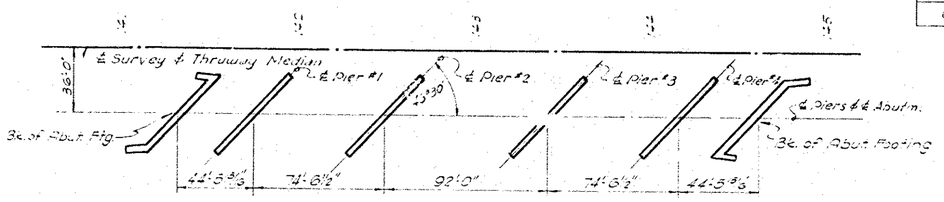
℄ STA. ON ℄ SURVEY 142+94.24

F.A. PROJ. I-381(16) PT.-2

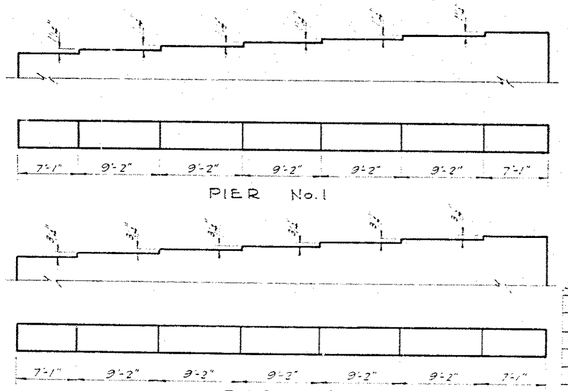
PROJECT NO. 7381(16) PT2 SHEET NO. 79

FED. ROAD LINE NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT.2	80	88





LAYOUT OF PIERS & ABUTMENTS



DETAILS OF PIER TOPS

BAR LIST - ONE PIER				
MARK	No.	SIZE	FORM	LENGTH
H_3	8	1" ϕ	Str.	47'-6"
H_4	4	1" ϕ	Str.	38'-0 1/4"
H_5	6	1" ϕ	Bent	20'-9"
B_1	8	1" ϕ	Bent	37'-2"
B_1'	16	1" ϕ	Bent	3'-0"
F	28	1" ϕ	Str.	33'-0"
T_1	37	1" ϕ	Bent	9'-1"
T_2	37	1" ϕ	Bent	9'-1"
T_3	37	1" ϕ	Bent	3'-0"
D	28	1" ϕ	Str.	11'-0"
E	28	1" ϕ	Str.	5'-5"
T_4	36	1" ϕ	Str.	9'-6"
S_1	2	1" ϕ	Bent	3'-2 3/4"
S_2	17	1" ϕ	Bent	3'-5"
S_1	28	1" ϕ	Bent	7'-1"
S_2	2	1" ϕ	Bent	3'-5 3/4"
S_2	28	1" ϕ	Str.	3'-9"
S_2	2	1" ϕ	Bent	7'-2 3/4"
	3	1" ϕ	Bent	20'-0"
T_5	6	1" ϕ	Bent	12'-4"

QUANTITIES - ONE PIER			
ITEM	UNIT	PIER #1	PIER #4
Reinforcing Steel	Lb.	6700	6700
Class "A" Concrete	C.Y.	515	54
Class "B" Concr. in Pier Base	C.Y.	37	37
Subsrf. Excav. - Common	C.Y.	70	48
Subsrf. Excav. - Rock	C.Y.	9	5

REVISIONS			
NO.	DESCRIPTION	BY	DATE

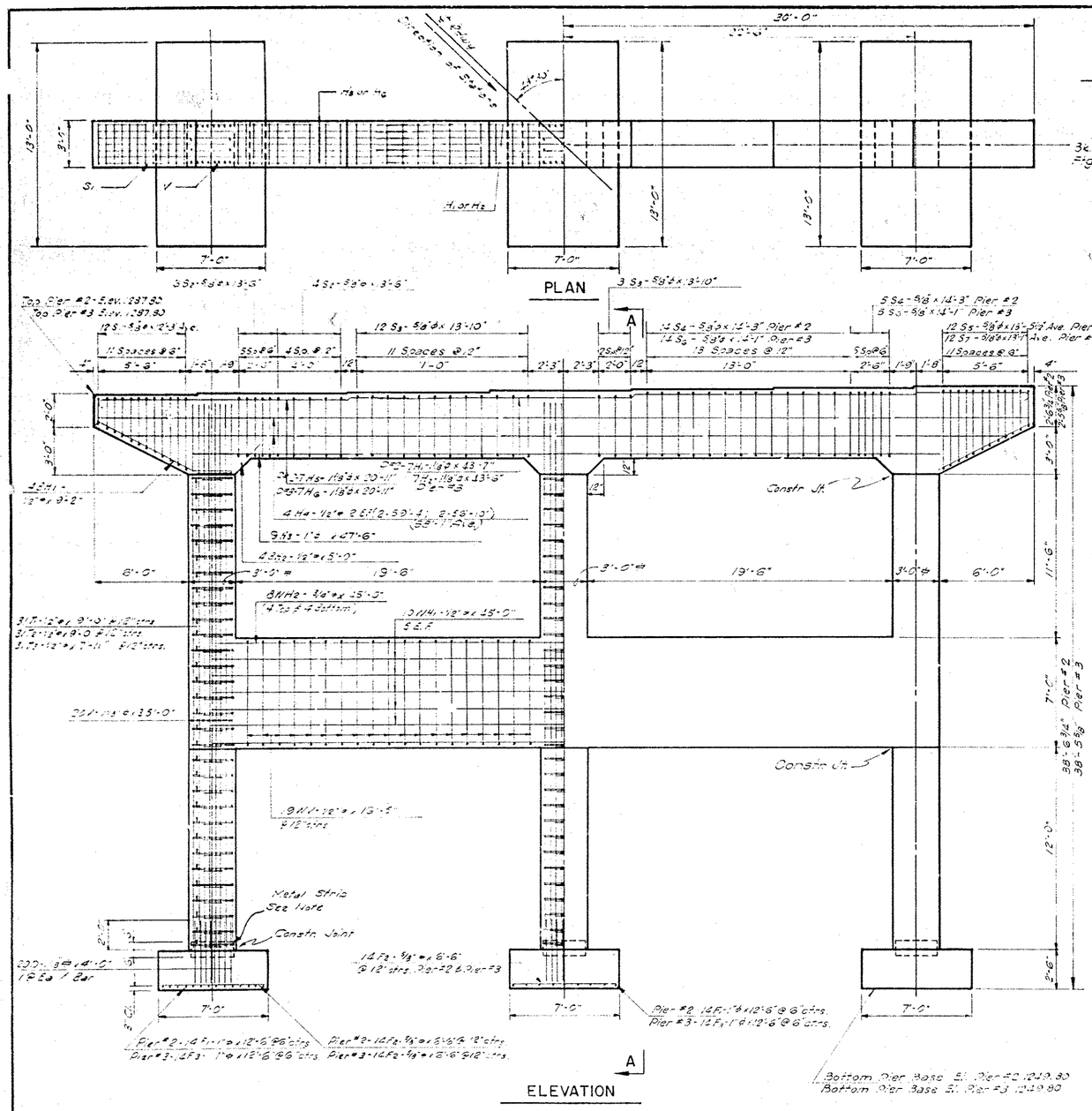
RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED		
CHECKED		
APPROVED		
SQUAD		

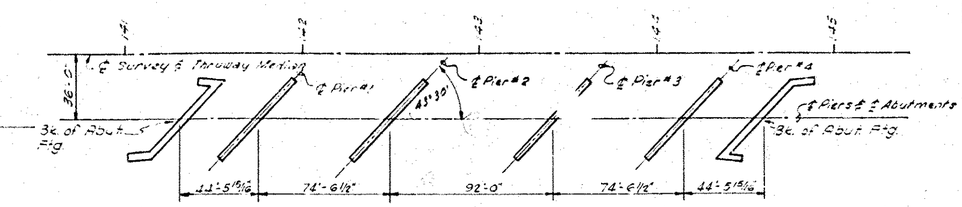
OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 13
DETAILS OF PIERS
PIER NO. 1 & PIER NO. 4
℄ STA. ON ℄ SURVEY 142+94.24
F.A. PROJ. I-381(16) PT. 2

PROJECT NO. I-381(16)PT.2 SHEET NO. 80

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-2	81	88

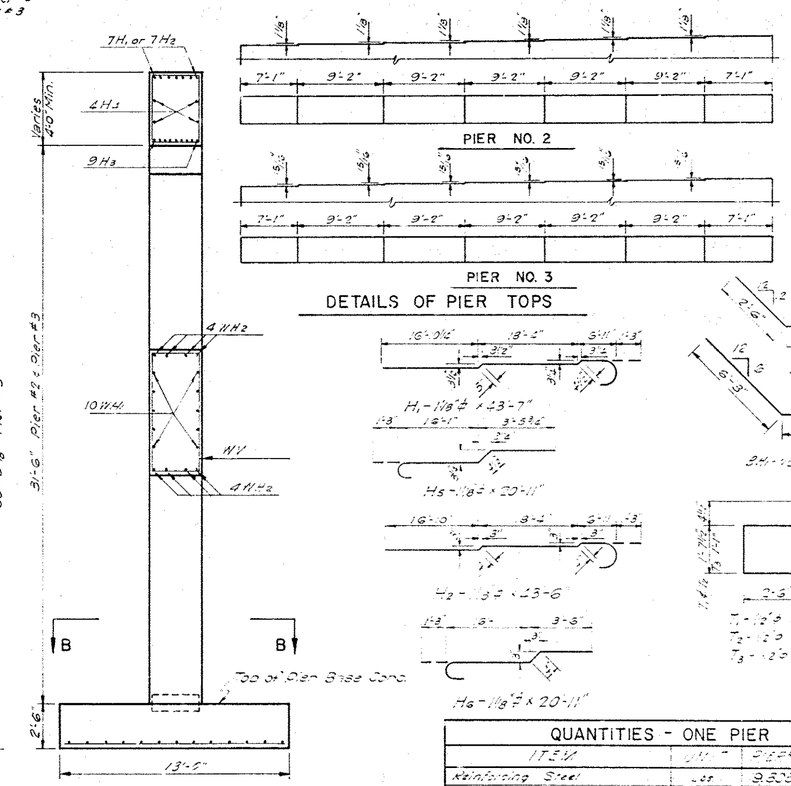


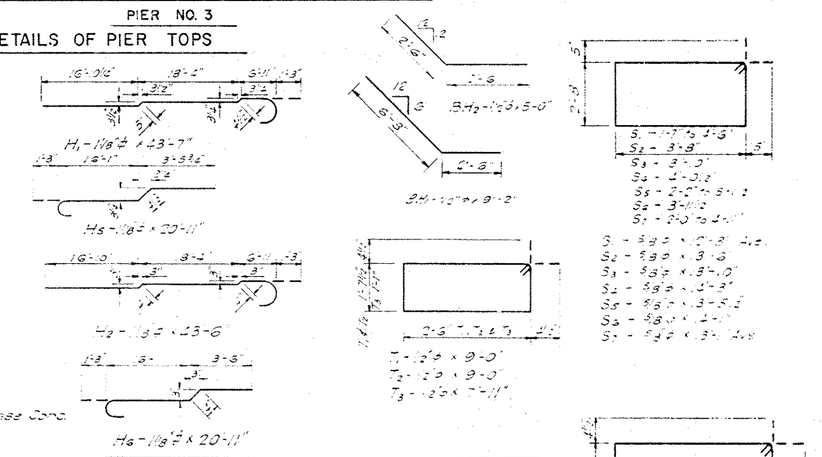


LAYOUT OF PIERS AND ABUTMENTS

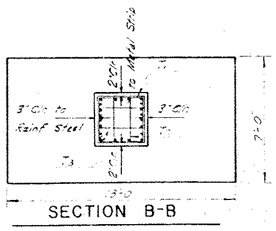
BAR LIST - ONE PIER				
MARK	No.	SIZE	FORM	LENGTH
H_3	9	1"ø	Str.	43'-6"
H_4	1	1/2"ø	Str.	38'-1" Ave.
BH_1	8	1/2"ø	Bnt.	9'-2"
BH_2	16	1/2"ø	Bnt.	5'-0"
V	80	1 3/8"ø	Str.	35'-0"
T_1	93	1/2"ø	Bnt.	5'-0"
T_2	93	1/2"ø	Bnt.	9'-0"
T_3	93	1/2"ø	Bnt.	7'-11"
D	60	1 1/8"ø	Str.	4'-0"
WH_1	10	1/2"ø	Str.	45'-0"
WH_2	8	3/4"ø	Str.	45'-0"
WV	19	1/2"ø	Bnt.	13'-5"
F_2	42	5/8"ø	Str.	8'-6"
S_1	12	5/8"ø	Bnt.	12'-3" Ave.
S_2	10	5/8"ø	Bnt.	13'-5"
S_3	15	5/8"ø	Bnt.	13'-10"
S_4	19	5/8"ø	Bnt.	14'-3"
S_5	12	5/8"ø	Bnt.	13'-5 1/2" Ave.
S_6	19	5/8"ø	Bnt.	14'-1"
S_7	12	5/8"ø	Bnt.	13'-1" Ave.
H_1	7	1 1/8"ø	Bnt.	43'-7"
H_2	7	1 1/8"ø	Bnt.	43'-6"
H_5	7	1 1/8"ø	Bnt.	20'-11"
H_6	7	1 1/8"ø	Bnt.	20'-11"
F_1	42	1"ø	Str.	12'-6"
F_3	42	1"ø	Str.	2'-6"

DIR. #2	DIR. #3			
S_4				
S_5				
	S_6			
	S_7			
H_1				
	H_2			
H_5				
	H_6			
F_1				
	F_3			





QUANTITIES - ONE PIER			
ITEM	UNIT	DIR. #2	DIR. #3
Reinforcing Steel	Lbs.	9,505	9,550
Class "A" Concrete	C.Y.	89.9	90.1
Class "A" Concrete Pier Bases	C.Y.	25.5	25.5
Subst. Excav. - Common	C.Y.	94	299
Subst. Excav. - Rock	C.Y.	33	[illegible]



NOTE:
All reinforcing steel bars shall conform to A.S.T.M. specifications A-305-49.
All exposed edges shall have a 1/2" chamfer unless otherwise noted.

NOTE: METAL STRIP AND PIER BASE CONCRETE.
Refer to identical notes on Detail of Piers - Index Sheet No. 22

REVISIONS			
NO.	DESCRIPTION	BY	DATE

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	JM	
CHECKED	DRD	
APPROVED		
SOLID	BSK	

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 13
DETAILS OF PIERS
PIER NO.2 & PIER NO.3
℄ STA. ON ℄ SURVEY 142+94.24
F.A. PROJ. I-381(16) PT.-2

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381, (16) 142-2	82	88

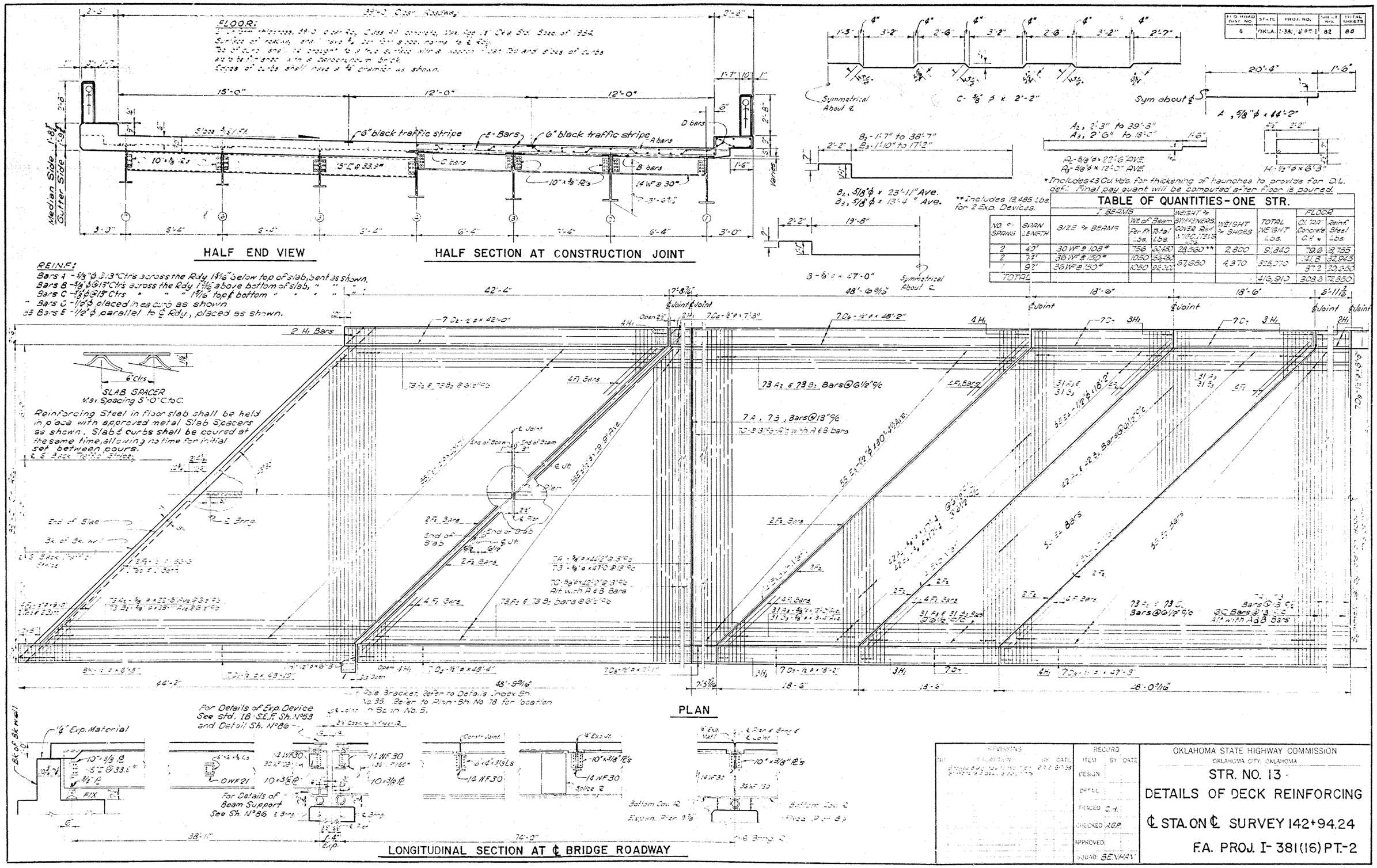


TABLE OF QUANTITIES - ONE STR.

NO. OF SPANS	SPAN LENGTH	I BEAMS: SIZE & BEAMS	Wt. of Beam Per Ft. Lbs.	Wt. of Beam Total Lbs.	WEIGHT OF STIFFENERS, COVER PLATES & NIBS, ETC. LBS.	WEIGHT OF SHOES	TOTAL WEIGHT LBS.	FLOOR: Cu. Yds. Concrete C.Y. *	FLOOR: Reinf. Steel Lbs.
2	40'	30 WF @ 108#	756	60,480	28,560 **	2,800	91,840	79.6	8,755
2	37'	36 WF @ 150#	1050	38,850	67,660	4,370	305,070	41.8	32,945
1	92'	36 WF @ 150#	1050	96,600				37.2	20,650
TOTAL							416,910	308.6	172,350

REVISIONS			
NO.	DESCRIPTION	BY	DATE
	[illegible]		

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED	C.A.	
CHECKED	A.G.P.	
APPROVED		
SQUAD	BEYHAN	

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

STR. NO. 13

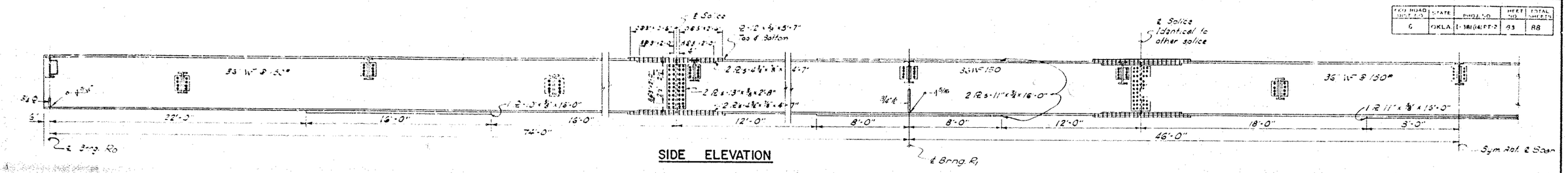
DETAILS OF DECK REINFORCING

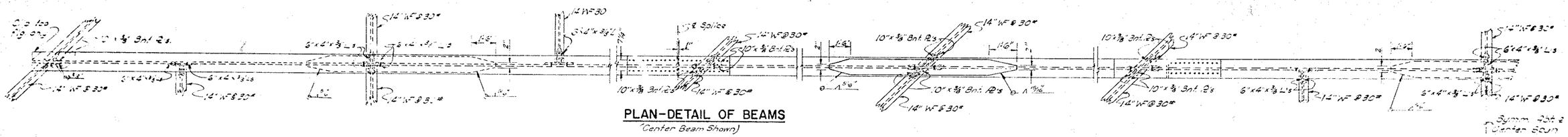
℄ STA. ON ℄ SURVEY 142+94.24

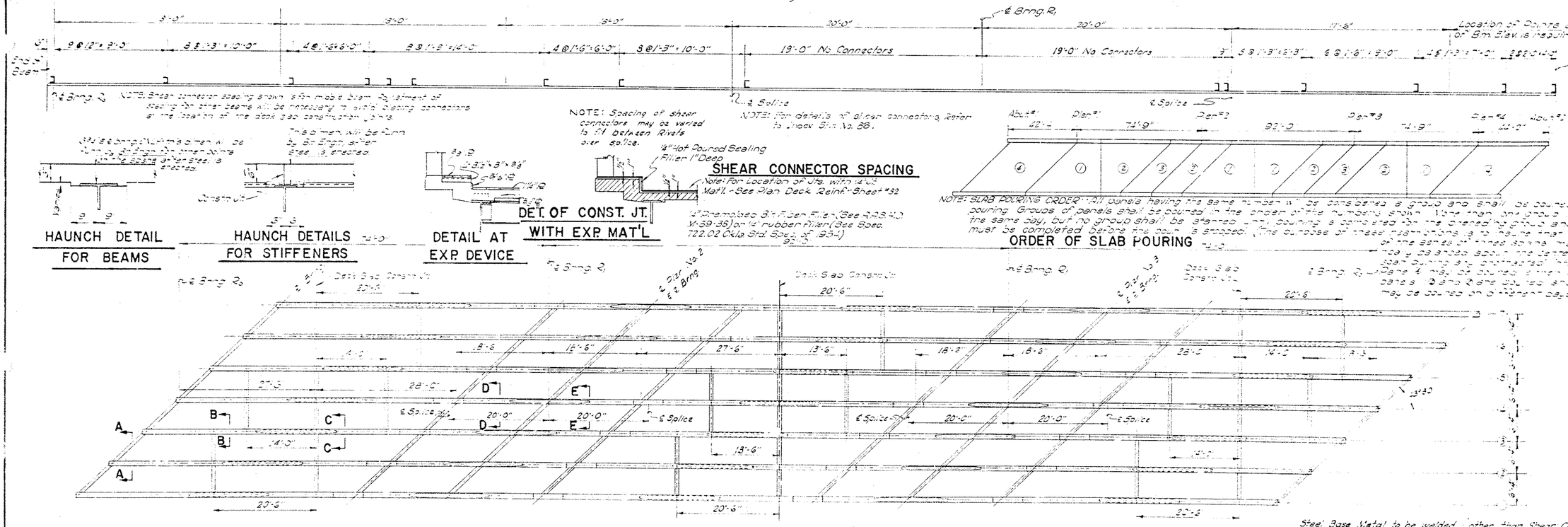
F.A. PROJ. I-381(16) PT.-2

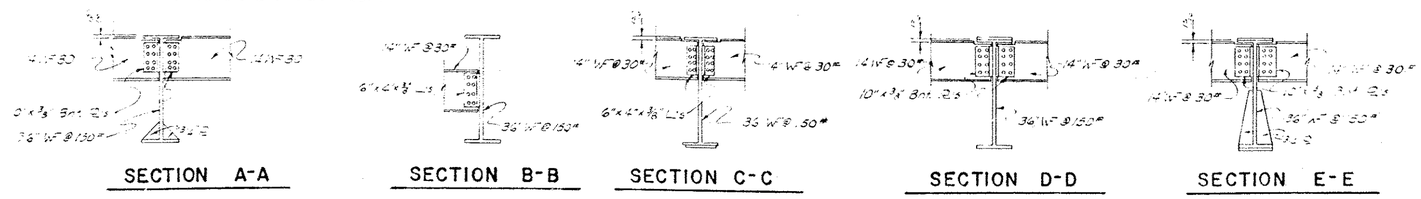
PROJECT NO. I-381(16)142-2 SHEET NO. 82

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	OKLA.	I-381(16)PT-2	83	88









REVISIONS			
NO.	DESCRIPTION	BY	DATE
1	[illegible]		
2	[illegible]		
3	Steel Grooving		

RECORD		
ITEM	BY	DATE
DESIGN		
DETAIL		
TRACED		
CHECKED		
APPROVED		
SIGNED	BEN HAM	

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

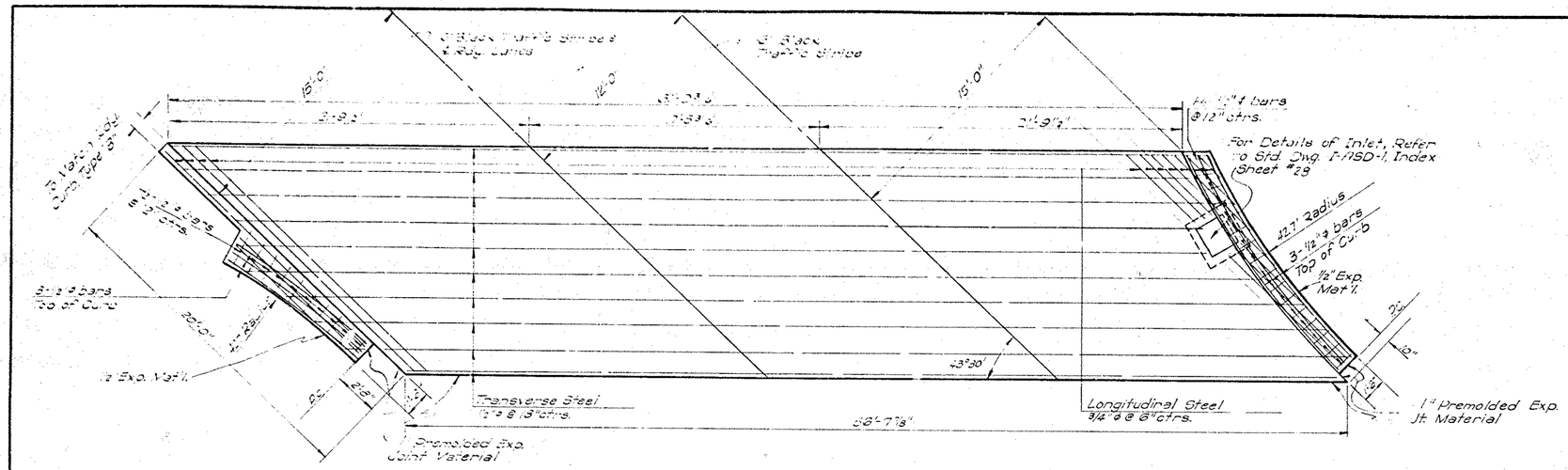
STR. NO. 13

STRUCTURAL STEEL DETAILS

℄ STA. ON ℄ SURVEY 142+94.24
F.A. PROJ. I-381(16) PT.-2

PROJECT NO. I-381(16)PT-2 SHEET NO. 83

FED. ROAD JOINT NO.	STATE	ROUTE	SHEET NO.	TOTAL SHEETS
6	OKLA.	Pub. 6/2	94	99



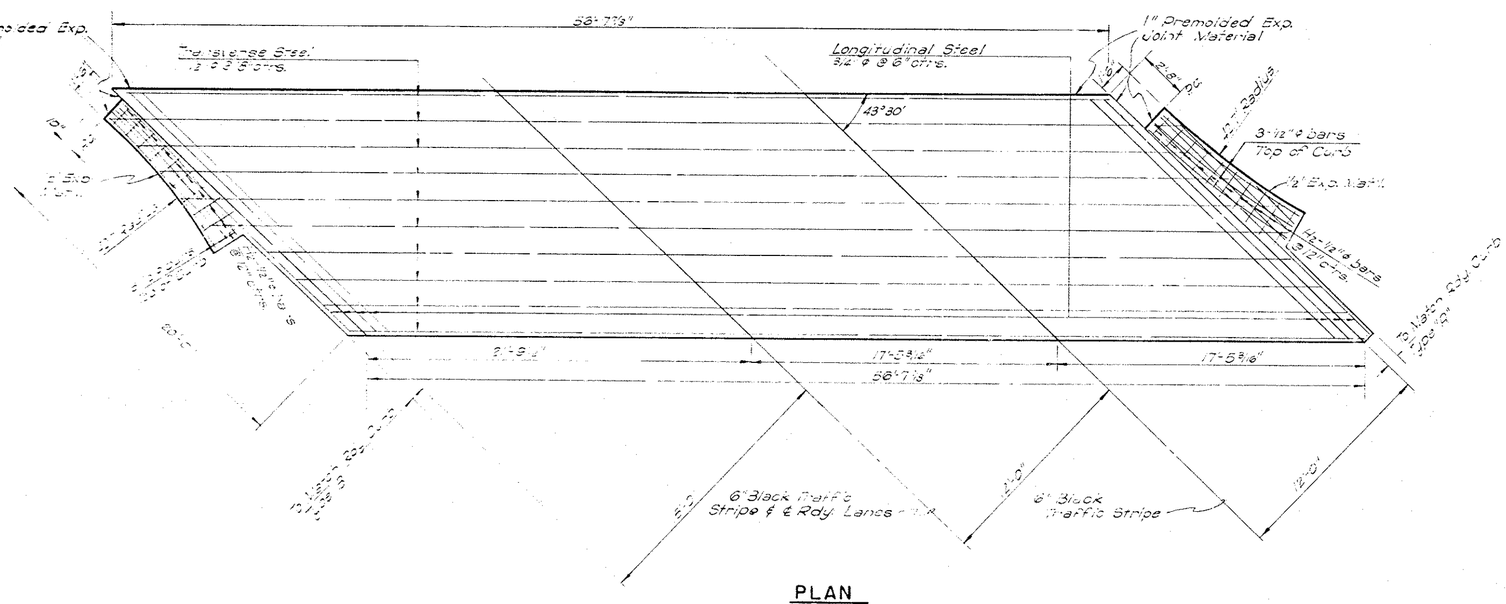
PLAN

APPR. SLAB @ ABUT. No. 2

QUANTITIES— ONE APPROACH SLAB		
ITEM	UNIT	TOTAL
Approach Slab	S.Y.	94.1
* Reinforcing Steel	Lbs.	2,995
6" Black Traffic Stripe	L.F.	40

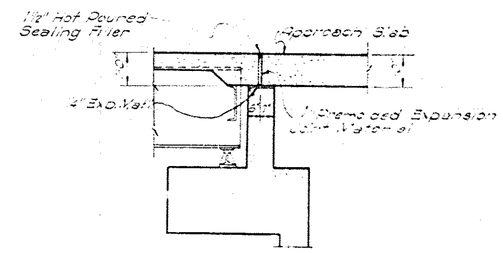
* Note: Cost of Reinforcing Steel in Appr. Slab shall be included in price bid per Sq. Yd. of Approach Slab.

Note: Cost of Curbs on Approach Slab shall be included in price bid per Sq. Yd. of Approach Slab.

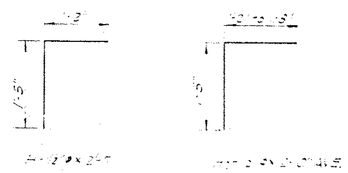


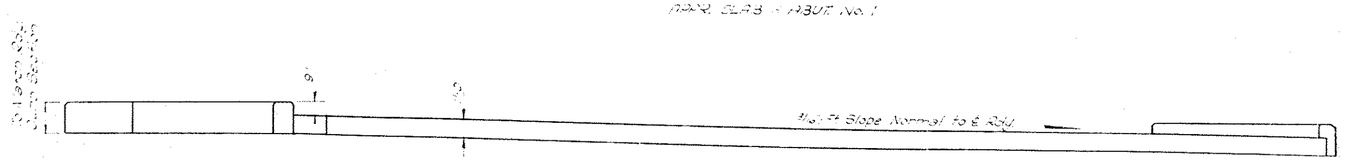
PLAN

APPR. SLAB @ ABUT. No. 1



DETAIL OVER ABUTMENTS





END VIEW

REVISIONS				RECORD		
NO.	DESCRIPTION	BY	DATE	ITEM	BY	DATE
				DESIGN		
				DETAIL		
				TRACED DFB		
				CHECKED DSD		
				APPROVED		
				ROUTE BEN-4-M		

OKLAHOMA STATE HIGHWAY COMMISSION
OKLAHOMA CITY, OKLAHOMA

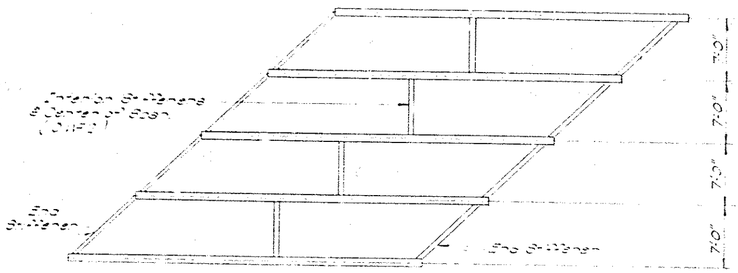
STR. NO. 13

DETAILS OF APPROACH SLABS

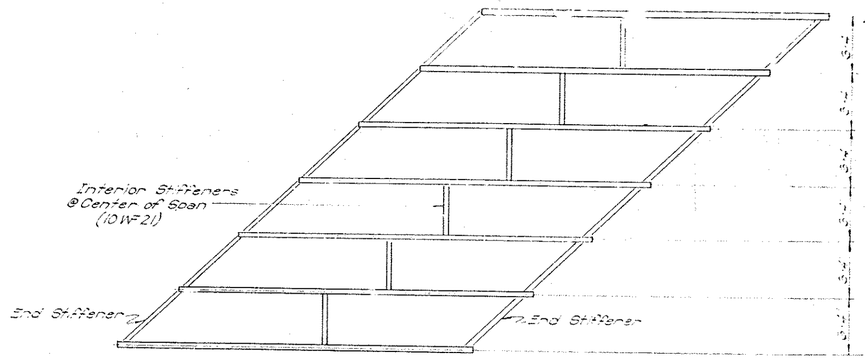
℄ STA. ON ℄ SURVEY 142+94.24

F.A. PROJ. I-381(16) PT.-2

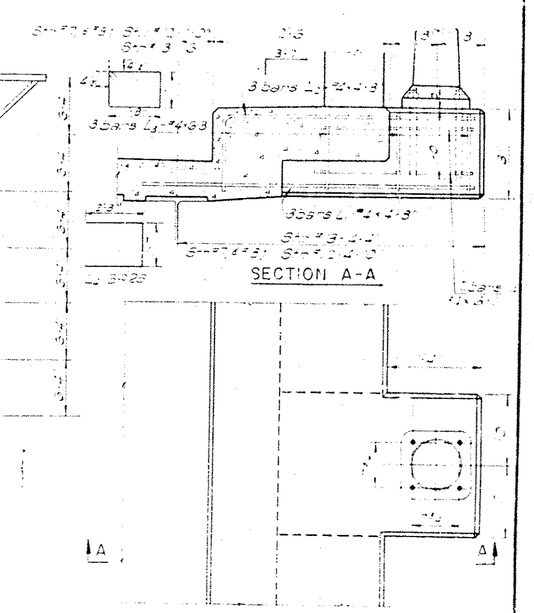
PROJECT NO. I-381(16) PT.2 SHEET NO. 94



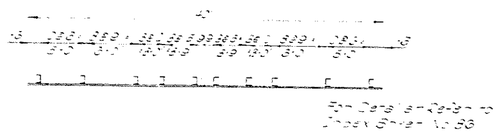
LAYOUT OF BEAMS & STIFFENERS - 40' SPAN
STR. NO. 12



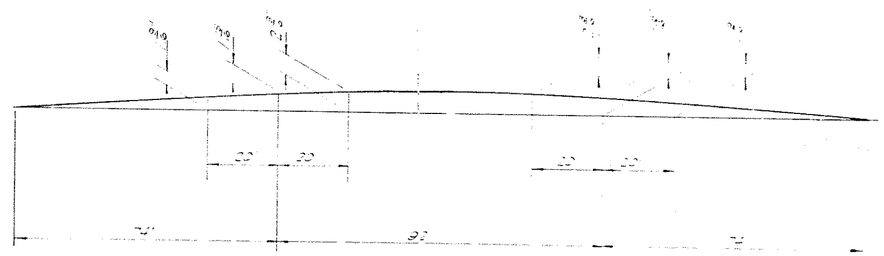
LAYOUT OF BEAMS & STIFFENERS - 40' SPAN
STR. NO. 13



PLAN

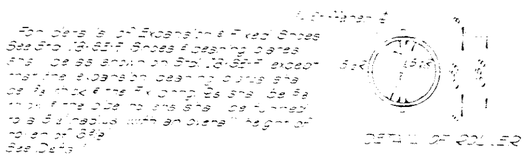


SHEAR CONNECTOR SPACING

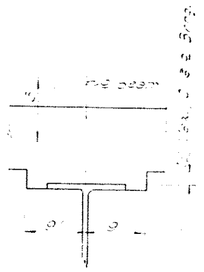


BEAM BLOCKING DIAGRAM
STR. NO. 12
STR. NO. 13

POLE BRACKET DETAILS



BEARING DETAILS - 40' SPAN
STR. NO. 12
STR. NO. 13

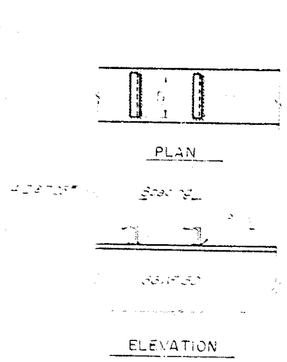


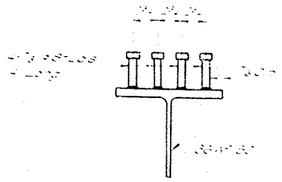
DETAIL OF HAUNCH

OKLAHOMA STATE HIGHWAY COMMISSION

STRUCTURAL STEEL DETAILS
STR. NO. 12
℄ STA. ON ℄ SURVEY 143+60.30
STR. NO. 13
℄ STA. ON ℄ SURVEY 142+94.24
F.A. PROJ. I-381(16) PT. 2

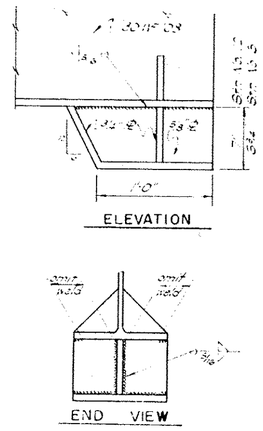
PROJECT NO. I-381(16) SHEET NO. 35



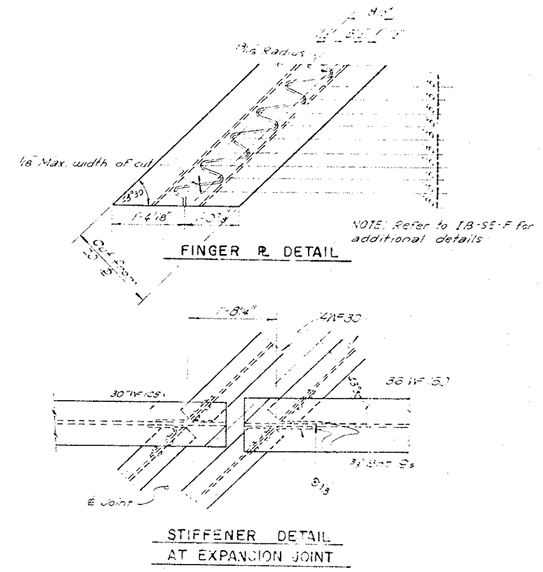


NOTE: Should the alternate shear connector shown be given a bid, the plans shall include suitable details and notes to the contractor regarding the base of the stud and the 1/2" diameter and complete deck anchorage and flange shall be obtained. It shall be the responsibility of the contractor to furnish the recommendations and make calculations in the opinion of the Engineer. Minimum shear strength shall be 20,000 lbs. minimum ultimate tensile strength shall be 60,000 psi. The price of structural steel shall be based on the weight of the original shear connector. See also each original shear connector with only a stud.

SHEAR CONNECTOR DETAILS



BEAM SUPPORT DETAILS



GENERAL NOTES

1 All construction shall conform to the Okla. Std. Spec. of 1954 and special provisions.

2 Welding E-70XX will be paid for by weight at the contract price bid for structural steel.

3 Structural steel included in this item shall not be used at the contractor for construction purposes other than as shown on the plans.

4 All rivets shall be 7/8". Rivet bolts may be used for all field connections except splices. High strength steel bolts may be used for all field connections. See special provisions included in the proposal.

5 All welding shall conform to the Okla. Std. Spec. of 1954 & the current Spec. of the American Welding Society (AWS).

6 Fabrication

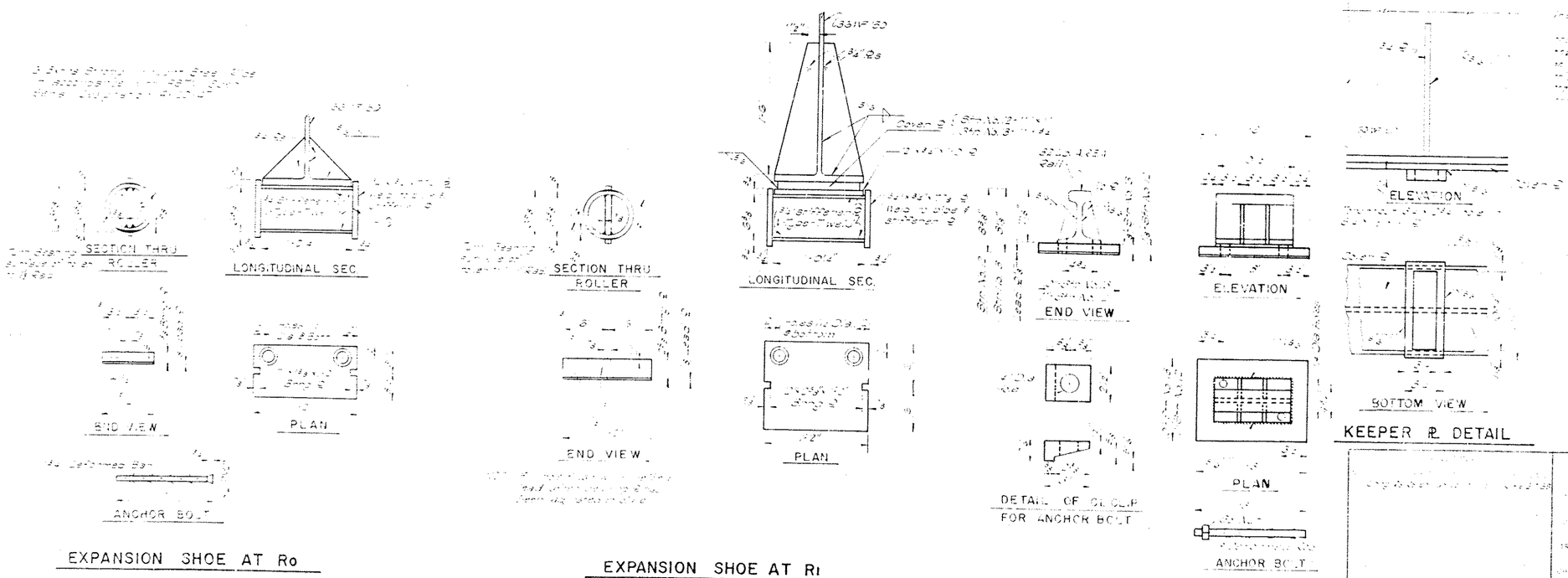
Bottom flange splices shall be substantially vertical or perpendicular to the girder web beyond the points assumed to be in a straight line. With the girder blocked up to the grade and in the top flange splice shall be made so as to bring the beams supported only at the bearings and at the splice points to the same relative elevation as shown on the Bearing Diagram with both flanges stressed and before the slab is in place so as to result in an only position.

For the purpose of this requirement, the bearing points assumed shall be set in grades of all beam lines differentiating beams and the splices in the roadway position based upon data.

All parts of the fabrication shall be a matchmark [illegible] as part of the fabrication [illegible].

7 Erection

The contractor shall support each end of beams in the vicinity of the bearing so that the girder will be at each end at the same relative elevation as shown on the Bearing Diagram and all bolted shall be installed before any temporary support is removed. [illegible] adjustment shall be made. [illegible] the beam and bearing [illegible] the contractor shall be responsible for [illegible] the cost of the work.



OKLAHOMA STATE HIGHWAY COMMISSION

STRUCTURAL STEEL DETAILS
STR. NO. 12
℄ STA. ON ℄ SURVEY 143+60.30
STR. NO. 13
℄ STA. ON ℄ SURVEY 142+94.24
F.A. PROJ. I-381(16) PT. 2

PROJECT NO. I-381(16) SHEET NO. 36