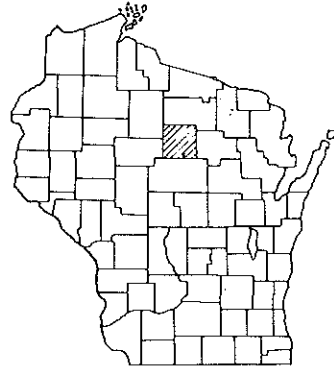


INDEX OF SHEETS

- SHEET NO. 1 TITLE
- SHEET NO. 2 & 3 TYPICAL CROSS SECTIONS
- SHEET NO. 3 ESTIMATE OF QUANTITIES
- SHEET NO. 3A-3B MISCELLANEOUS QUANTITIES
- SHEET NO. — RIGHT OF WAY PLAT
- SHEET NO. 4-9 PLAN AND PROFILE STA. 10+00 TO STA. 157+26
- SHEET NO. 10-10.6 STANDARD DETAILS
- SHEET NO. — DRAINAGE STRUCTURES
- SHEET NO. 11-19 I. B. M. COMPUTATION SHEETS



STATE OF WISCONSIN  
STATE HIGHWAY COMMISSION OF WISCONSIN

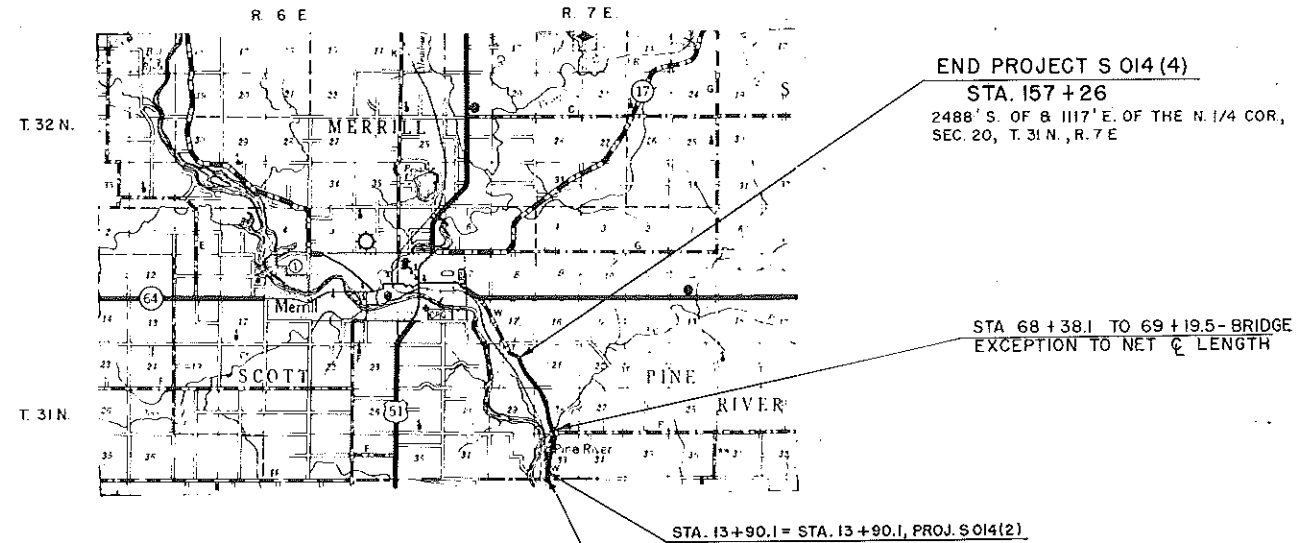
PLAN AND PROFILE OF PROPOSED  
MARATHON COUNTY LINE - MERRILL ROAD  
C.T.H. "W"  
LINCOLN COUNTY  
PROJECT S 014 (4)

COUNTY AND HIGHWAY	ROUTE AND SECTION	CLASS AND AGREEMENT		R.P.R. REGION DIVISION	SHEET NUMBER
		STATE	FEDERAL		
35.6	14.0		11.4	4 WIS.	1

PLAN 1 IN. = 100 FT.  
PROFILE HOR. 1 IN. = 100 FT. VERT. 1 IN. = 10 FT.  
CROSS SECTIONS HOR. 1 IN. = 5 FT. VERT. 1 IN. = 5 FT.

APPROVED FOR LINCOLN COUNTY  
*Francis X Fox*  
JAN 20 1965 COUNTY HIGHWAY COMMISSIONER  
Date Title

N



LAYOUT  
SCALE 2 MILES  
TOTAL NET LENGTH OF CENTERLINE = 2.774 MI.

CONVENTIONAL SIGNS

STATE LINE	.....	CULVERTS IN PLACE	.....
COUNTY LINE	.....	CULVERTS REQUIRED	.....
TOWNSHIP OR RANGE LINE	.....	DROP INLET	.....
SECTION LINE	.....	POWER POLE	.....
NEW RIGHT OF WAY LINE	.....	TELEPHONE OR TELEGRAPH POLE	.....
PRESENT RIGHT OF WAY LINE	.....	RIGHT OF WAY MARKERS	.....
WIRE FENCE { WOVEN	.....	REFERENCE STAKE FOR HUBS ONLY	.....
{ BARBED	.....	MARSH	.....
LOT LINE	.....	HEDGE	.....
CORPORATE OR CITY LIMITS	.....	TREES	.....
PROPERTY LINE	..... PL. 326		
TRAVELED WAY OR P.E.	.....		
RAILROADS	.....		
BASE OR SURVEY LINE	..... 30	GROUND ELEVATION	DATUM LINE 73.9
		GRADE ELEVATION	DATUM LINE 75.16

STATE HIGHWAY  
COMMISSION OF WISCONSIN  
MADISON, WIS.

SURVEYOR E. SEIDLER NOTE BOOK  
DIVISION COMPUTER MCNOWN M. O. CHECK  
DISTRICT CHECKER P. JOHNSON CORRECT

CORRECT:  
DATE 12/7/64 Max Juttel DISTRICT

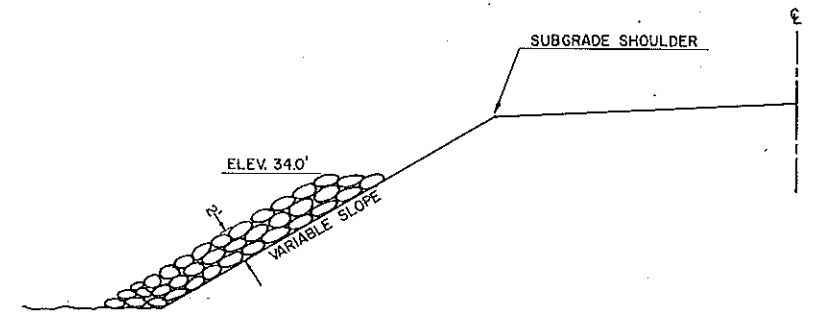
RECOMMENDED FOR APPROVAL:  
DATE 12/7/64 E. J. Rydzek CHIEF DESIGNER

APPROVED:  
DATE 1/10/65 E. C. Ross STATE HIGHWAY

DEPARTMENT OF COMMERCE  
BUREAU OF PUBLIC ROADS

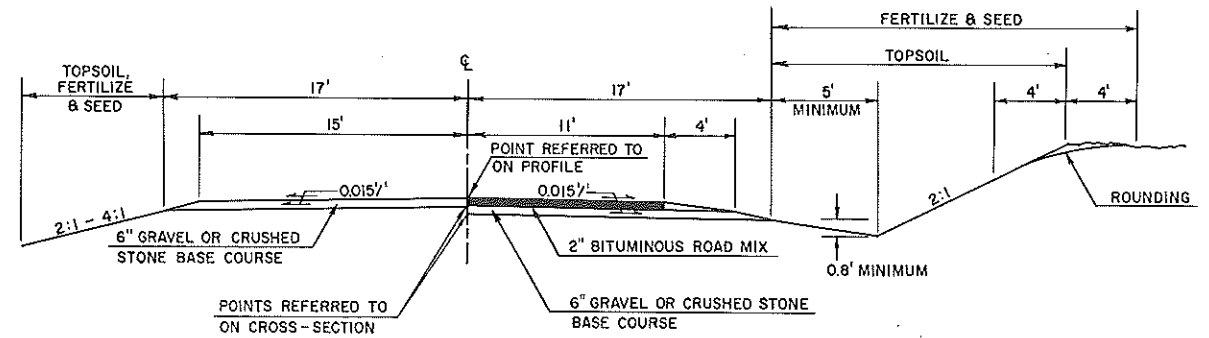
APPROVED:

PROJECT	SHEET NUMBER	TOTAL SHEETS
S 014 (4)	2	19



**1/2 SECTION SHOWING HEAVY RIPRAP**  
 STA. 67+40 - 68+35 LT.  
 STA. 69+20 - 69+90 RT.

NOTE:  
 EXACT LOCATION TO BE DETERMINED BY THE ENGINEER  
 IN THE FIELD.



**1/2 SECTION SIDE ROAD  
 GRAVEL SURFACE**  
 STA. 39+00 LT.  
 STA. 122+30 RT.  
 STA. 132+65 RT.

**1/2 SECTION SIDE ROAD  
 BITUMINOUS SURFACE**  
 STA. 65+57 RT.

# ESTIMATE OF QUANTITIES

CONTRACT NO. 1

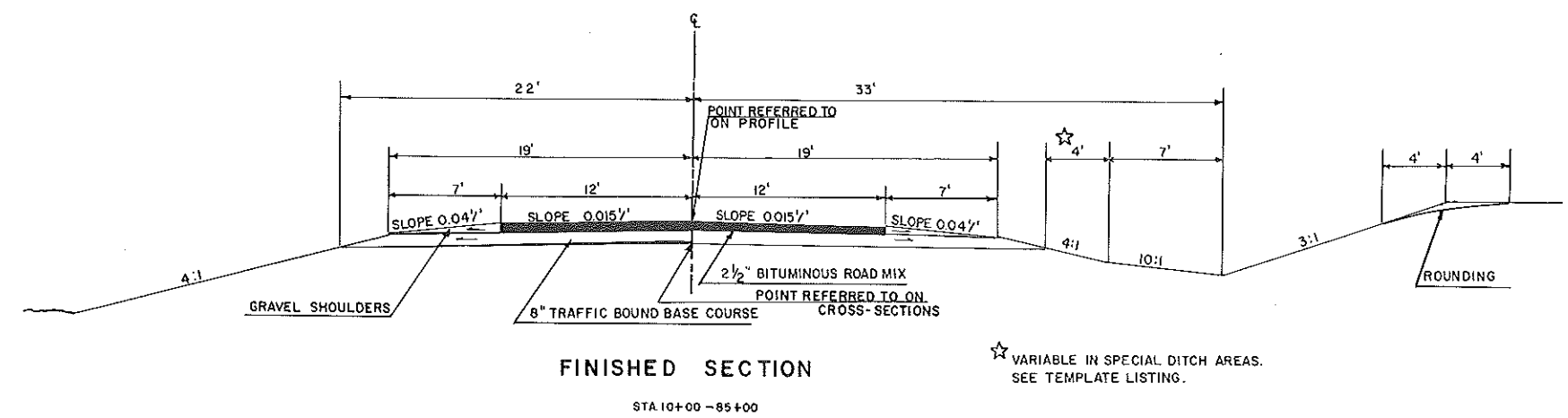
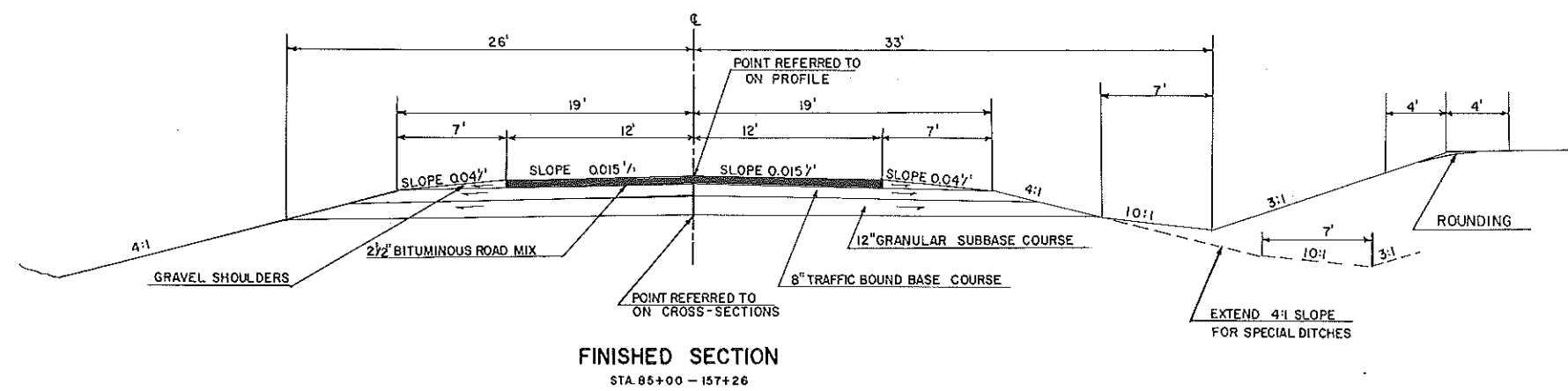
B.R. REGION	PROJECT	SHEET NO.
4	S 014(4)	3

THIS PROJECT IS TO BE EXECUTED UNDER THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE HIGHWAY COMMISSION OF WISCONSIN - EDITION OF 1963

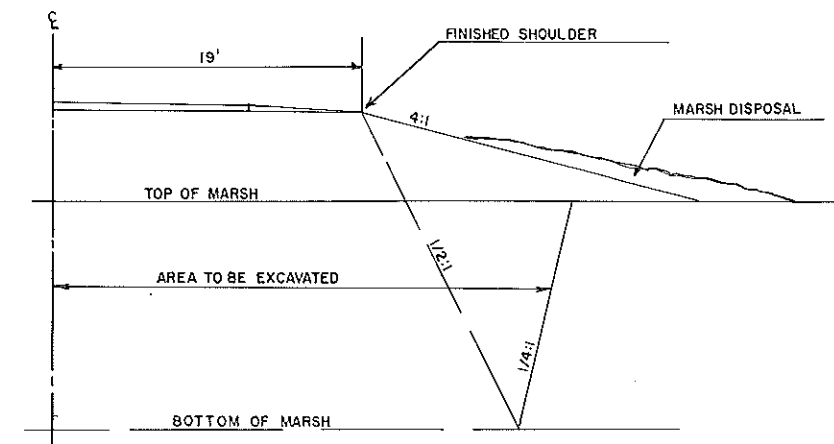
APPROVED OCTOBER 16, 1963, FEDERAL AID REQUIRED CONTRACT PROVISIONS APPROVED OCTOBER 29, 1963 AND SPECIAL PROVISIONS AS ATTACHED TO PROPOSALS.

SEC. NO.	STATION TO STATION	NET LENGTH OF CENTER LINE	CLEARING		GRUBBING		REMOVING GUARDRAIL	UNCLASSIFIED EXCAVATION	MARSH EXCAVATION	BORROW EXCAVATION	GRANULAR SUBBASE COURSE	FINISHING ROADWAY	OBLITERATING OLD ROAD	TRAFFIC BOUND BASE COURSE	BITUMINOUS ROAD MIX SURFACE	BITUMINOUS MATERIAL FOR SURFACE COURSE	AGGREGATES FOR BITUMINOUS ROAD MIX SURFACE *	CULVERT PIPE, CLASS III, 18 - INCH	CULVERT PIPE, CLASS III, 24 - INCH	CULVERT PIPE, CLASS III, 42 - INCH	CULVERT PIPE, CLASS III, 48 - INCH	APRON ENDWALLS FOR CULVERT PIPE, 18-INCH	APRON ENDWALLS FOR CULVERT PIPE, 24-INCH	APRON ENDWALLS FOR CULVERT PIPE, 42-INCH	APRON ENDWALLS FOR CULVERT PIPE, 48-INCH	STEEL PLATE BEAM GUARD	MARKER POSTS	MARKER POSTS FOR RIGHT-OF-WAY	LANDMARK REFERENCE MONUMENTS	SODDING	HEAVY RIPRAP
			UNIT	LIN. FT.	STA.	ACRE	STA.	ACRE	LIN. FT.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	LUMP SUM	STA.	CU. YD.	SQ. YD.	GAL.	CU. YD.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	EACH	EACH	LIN. FT.	EACH	EACH	EACH
	10+00-157+26	14,644.6	10	7.8	10	7.8	206	102,227	987	3,791	17,000	1	14	20,400	40,600	70,000	5,030	406	694	222	122	28	26	4	2	324.5	22	79	2	1,030	650
<b>TOTALS</b>		14,644.6	10	7.8	10	7.8	206	102,227	987	3,791	17,000	1	14	20,400	40,600	70,000	5,030	406	694	222	122	28	26	4	2	324.5	22	79	2	1,030	650

\* INCLUDES SHOULDER GRAVEL



☆ VARIABLE IN SPECIAL DITCH AREAS. SEE TEMPLATE LISTING.



### GENERAL NOTES

1. WHEN THE QUANTITY OF THE ITEMS OF THE BASE, SUBBASE OR SURFACE COURSE IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL DIRECTED BY THE ENGINEER.
2. LENGTH OF RUNOFF SHALL BE COMPUTED WITH TWO-THIRDS OF THE TOTAL RUNOFF ON THE TANGENT APPROACH AND ONE-THIRD WITHIN THE CURVE. SEE PLAN FOR RATE OF SUPERELEVATION. THE SHOULDERS SHALL BE BUILT TO FULL 2' DEPTH WITH THE EXCEPTION OF A 2' VERTICAL CURVE ON THE HIGH SIDE OF THE CURVE, CENTERED 19' FROM CENTERLINE.

### APPLICABLE STANDARD DETAIL DRAWINGS

- 6-2.6.2 APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH.
- 7-1.3.4 MARKER POST & MARKER POSTS FOR RIGHT OF WAY.
- 7-2.4.10 STEEL PLATE BEAM GUARD & STEEL BEAM MEDIAN GUARD.
- 7-4.1.4 CONSTRUCTION BARRICADE.
- 8-1.3.1 DITCH CHECKS, MORTAR RUBBLE MASONRY & SOD.
- 9-1.1.4 DESIGN AND LAYOUT DETAILS FOR SIDE ROAD AT GRADE INTERSECTION.
- 12-1.1.2 LANDMARK REFERENCE MONUMENTS.

PROJECT	SHEET NO.	TOTAL SHEETS
S 014(4)	3A	19

## DETAIL SUMMARY OF MISCELLANEOUS QUANTITIES

### CLEARING & GRUBBING

LOCATION	CLEARING		GRUBBING	
	ACRES	STA.	ACRES	STA.
10+00 - 25+00	0.4		0.8	
25+00 - 39+00	2.7		2.7	
Tn. Rd. 39+00 Lt.	0.6		0.6	
39+00 - 52+00		0		0
52+00 - 60+00	1.9		1.9	
60+00 - 66+00		0		0
66+00 - 68+00		2		2
68+00 - 69+00		0		0
69+00 - 80+00	1.5		1.5	
80+00 - 81+00		0		0
81+00 - 84+00		3		3
84+00 - 110+00		0		0
110+00 - 113+00		3		3
113+00 - 130+00		0		0
130+00 - 132+00		2		2
132+00 - 152+00		0		0
152+00 - 155+00	0.7		0.3	
155+00 - 157+26	0.0		0.0	
<b>TOTALS</b>	<b>7.8</b>	<b>10</b>	<b>7.8</b>	<b>10</b>

### REMOVING GUARD RAIL

LOCATION	LIN. FT.
Sta. 66+82 - 68+35 Rt.	153
Sta. 69+22 - 69+75 Lt.	53
<b>TOTAL</b>	<b>206</b>

### OBLITERATING OLD ROAD

LOCATION	STA.
28+50 - 35+00	7
150+50 - 157+50	7
<b>TOTAL</b>	<b>14</b>

### EXCAVATION

STA.-STA.	(CUBIC YARDS)		
	UNCLASSIFIED	BORROW	MARSH
10+00 - 39+69	22,940		
39+69 - 54+00	11,535		
54+00 - 59+16	4,896		
59+16 - 62+60	1,448		
62+60 - 68+38.1	998	3,627	
69+19.5 - 78+46	13,215		
78+46 - 112+32	21,646		
112+32 - 116+79	3,247		
116+79 - 132+03	7,646		
132+03 - 134+62	1,019		
134+62 - 157+26	13,637	1 64	987
<b>TOTALS</b>	<b>102,227</b>	<b>3,791</b>	<b>987</b>

### TRAFFIC BOUND BASE COURSE

LOCATION	CUBIC YARDS
Approach 7+00 - 10+00	375
10+00 - 68+38	7,410
69+19 - 155+00	10,900
Approach 155+00 - 160+00	600
Tn. Rd. 39+00 Lt.	425
C.T.H. "F" 65+57 Rt.	150
Tn. Rd. 132+55 Rt.	100
P.E.s	440
<b>TOTAL</b>	<b>20,400</b>

### GRANULAR SUBBASE COURSE

LOCATION	CUBIC YARDS
85+00 - 155+00	15,540
Approach 155+00 - 160+00	1,000
Tn. Rd. 132+55 Rt.	100
P.E.s	360
<b>TOTAL</b>	<b>17,000</b>

### HEAVY RIPRAP

LOCATION	CU. YDS.
67+40 - 68+35 Lt.	400
69+20 - 69+90 Rt.	250
<b>TOTAL</b>	<b>650</b>

### STEEL PLATE BEAM GUARD

LOCATION	LIN. FT.
Sta. 67+95 - 68+35 Lt.	40.5
Sta. 67+08 - 68+36 Rt.	128
Sta. 69+21 - 69+99 Lt.	78
Sta. 69+22 - 70+00 Rt.	78
<b>TOTAL</b>	<b>324.5</b>

*25 SECTIONS  
8 TERMINALS*

### SODDING

LOCATION	SIZE	CHECK	NO.	SQ. YDS.
58 - 60 L	6x15	Check	7	70
58 - 61 R			11	110
74 - 82 R			33	330
76 - 82 L			21	210
105 - 108 L			8	80
105 - 108 R			6	60
113 - 117 L			11	110
116 - 118 R			6	60
<b>TOTAL</b>				<b>1,030</b>

### MARKER POSTS FOR RIGHT OF WAY

LOCATION	NO.
Sta. 10+00 - 35+00	14
Sta. 35+00 - 65+00	14
Sta. 65+00 - 95+00	17
Sta. 95+00 - 125+00	16
Sta. 125+00 - 155+00	15
Sta. 155+00 - 160+00	3
<b>TOTAL</b>	<b>79</b>

## DETAIL SUMMARY OF MISCELLANEOUS QUANTITIES

LANDMARK REFERENCE MONUMENTS

<u>LOCATION</u>	<u>NO.</u>
Sta. 139+50 Lt.	1
Sta. 140+82 Lt.	1
<b>TOTAL</b>	<b>2</b>

CULVERT PIPE

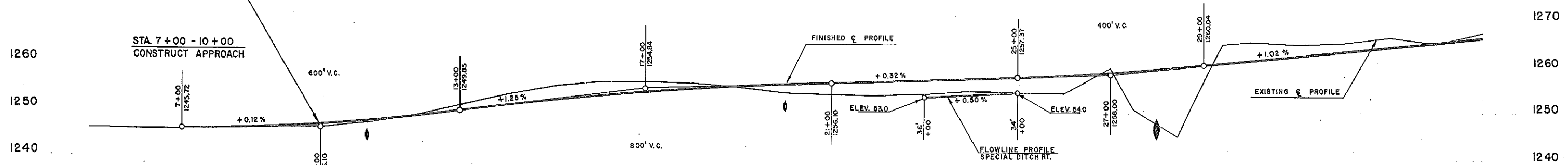
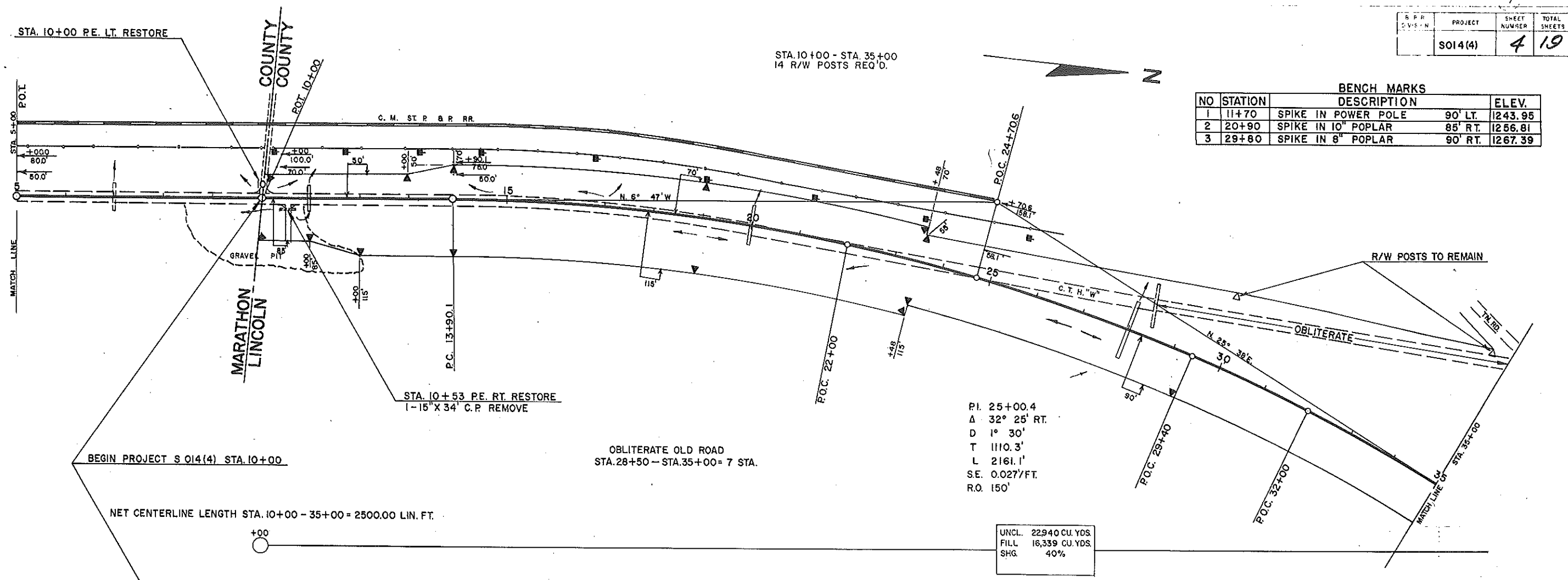
<u>STATION</u>	<u>APP.</u>	<u>LOCATION</u>		<u>CULVERT PIPE CLASS III</u>				<u>MARKER POSTS (Ea)</u>	
		<u>LT.</u>	<u>RT.</u>	<u>18"</u>	<u>24"</u>	<u>42"</u>	<u>48"</u>		
10+98		x			52			2	
20+00		x			80			2	
28+00		x					122	2	
45+00		x			64			2	
53+80		x				116		2	
65+57	"P"		x			60		2	
65+75	P.E.		x		40				
78+80	P.E.			x		26			
79+30	P.E.		x			26			
82+50	P.E.			x		26			
88+30		x				80		2	
97+50	P.E.		x			26			
98+40	P.E.		x			26			
100+05	P.E.			x		30			
102+00	P.E.		x			30			
106+85	P.E.			x		26			
110+00	P.E.			x			26		
111+10		x					106	2	
118+00	P.E.		x			26			
122+50	Tn. Rd.			x		46			
128+00		x				82		2	
131+05	P.E.			x		26			
133+20	P.E.		x			26			
133+40		x				62		2	
133+78	P.E.		x			26			
148+60	P.E.		x			26			
146+00	P.E.			x		26			
152+95	P.E.		x			26			
154+50		x				84		2	
146+00	P.E.		x			26			
<b>TOTALS</b>					406	694	222	122	22

APRON ENDWALLS

<u>SIZE:</u>	<u>18"</u>	<u>24"</u>	<u>42"</u>	<u>48"</u>
<u>NO.:</u>	28	26	4	2

R.F.R. DIVISION	PROJECT	SHEET NUMBER	TOTAL SHEETS
	SO14(4)	4	19

BENCH MARKS			
NO	STATION	DESCRIPTION	ELEV.
1	11+70	SPIKE IN POWER POLE 90' LT.	1243.95
2	20+90	SPIKE IN 10" POPLAR 85' RT.	1256.81
3	29+80	SPIKE IN 8" POPLAR 90' RT.	1267.39



STA. 10 + 98  
 1-24" X 42' C.P. REMOVE  
 1-24" X 52' C.P. CLASS III REQ'D.

STA. 20 + 00  
 1-24" X 58' C.P. REMOVE  
 1-24" X 80' C.P. CLASS III REQ'D.

STA. 28 + 00  
 1-48" X 90' C.P. REMOVE  
 1-48" X 122' C.P. CLASS III REQ'D.

5	45.8	6	45.6	7	45.7	45.7	8	45.9	46.0	9	46.1	46.3	10	46.1	46.9	1	47.0	47.7	2	48.6	48.7	3	50.8	49.9	4	53.1	51.0	15	55.0	52.1	6	56.0	53.1	7	56.0	53.9	8	55.8	54.6	9	55.1	55.2	20	55.9	55.7	1	55.5	56.1	2	53.3	56.4	3	53.9	56.7	4	54.3	57.0	25	54.1	57.4	6	54.0	57.8	7	59.5	58.3	8	47.7	59.1	9	55.3	60.0	30	65.1	61.0	1	64.5	62.1	2	65.0	63.1	3	66.1	64.1	4	64.8	65.1	35	67.1	66.1
---	------	---	------	---	------	------	---	------	------	---	------	------	----	------	------	---	------	------	---	------	------	---	------	------	---	------	------	----	------	------	---	------	------	---	------	------	---	------	------	---	------	------	----	------	------	---	------	------	---	------	------	---	------	------	---	------	------	----	------	------	---	------	------	---	------	------	---	------	------	---	------	------	----	------	------	---	------	------	---	------	------	---	------	------	---	------	------	----	------	------

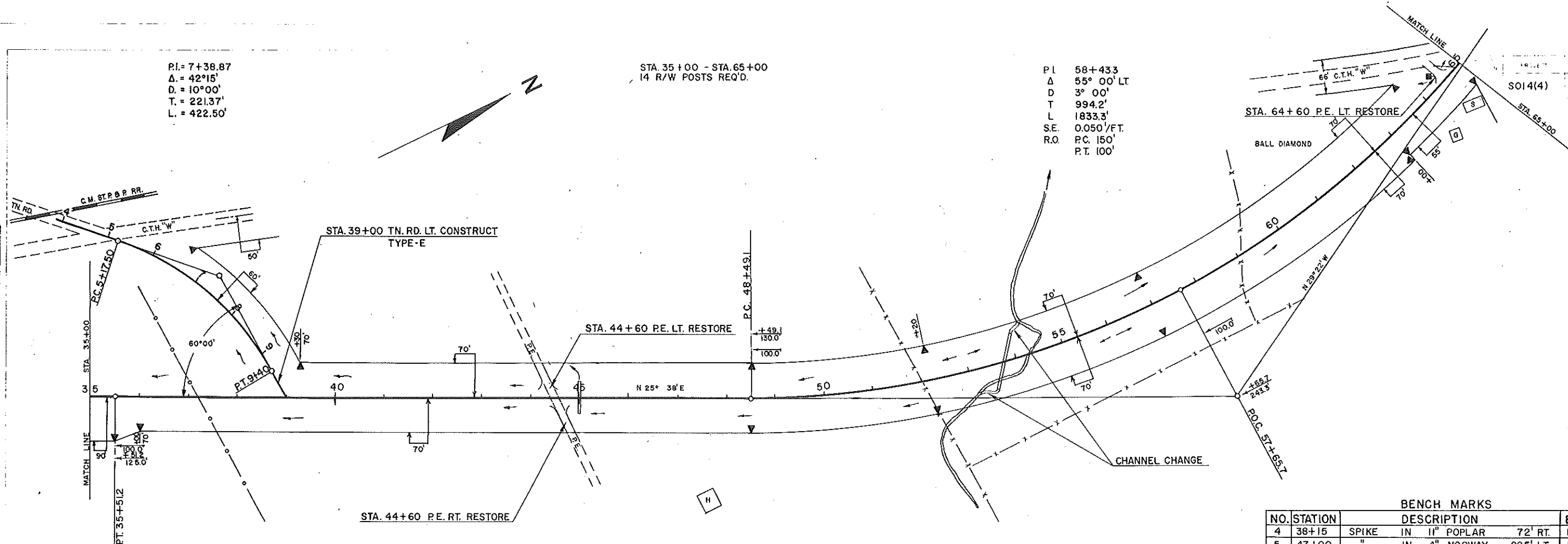
PLAN & PROFILE STA. 5+00 - 35+00

P.I. = 7+38.87  
 Δ = 42°15'  
 D = 10°00'  
 T = 221.37'  
 L = 422.50'

STA. 35+00 - STA. 65+00  
 14 R/W POSTS REQ'D.

P.I. 58+433  
 Δ 55° 00' LT  
 D 3° 00'  
 T 994.2'  
 L 1833.3'  
 SE 0.050'/FT.  
 R.O. PC. 150'  
 PT. 100'

SOI 4(4)



NET CENTERLINE LENGTH STA. 35+00 - 65+00 = 3000.00 LIN. FT.

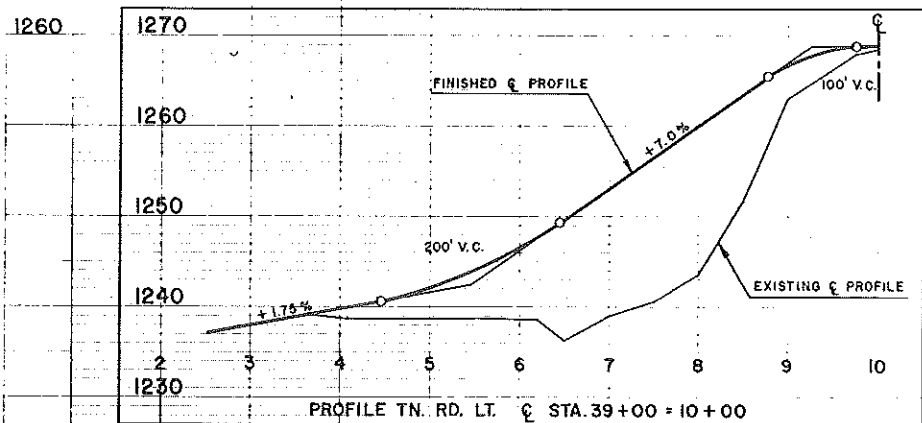
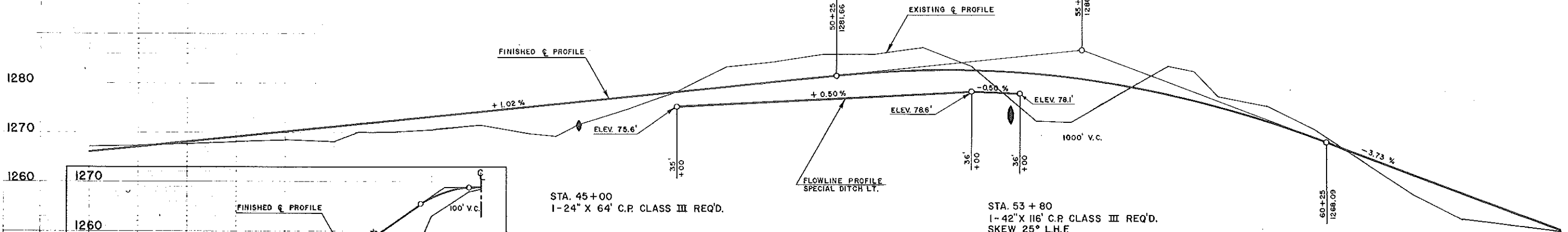
BENCH MARKS				
NO.	STATION	DESCRIPTION		EL.
4	38+15	SPIKE IN 1" POPLAR	72' RT.	12
5	47+00	" IN 4" NORWAY	225' LT.	12
6	57+00	" IN 6 POPLAR	145' LT	12

UNCL. 11,535 CU.YDS  
 FILL 8186 CU.YDS  
 SHG. 41%

UNCL. 4896 CU.YDS  
 FILL 3653 CU.YDS  
 SHG. 35%

UNCL. 1448 CU.YDS  
 FILL 1072 CU.YDS  
 SHG. 35%

11-20

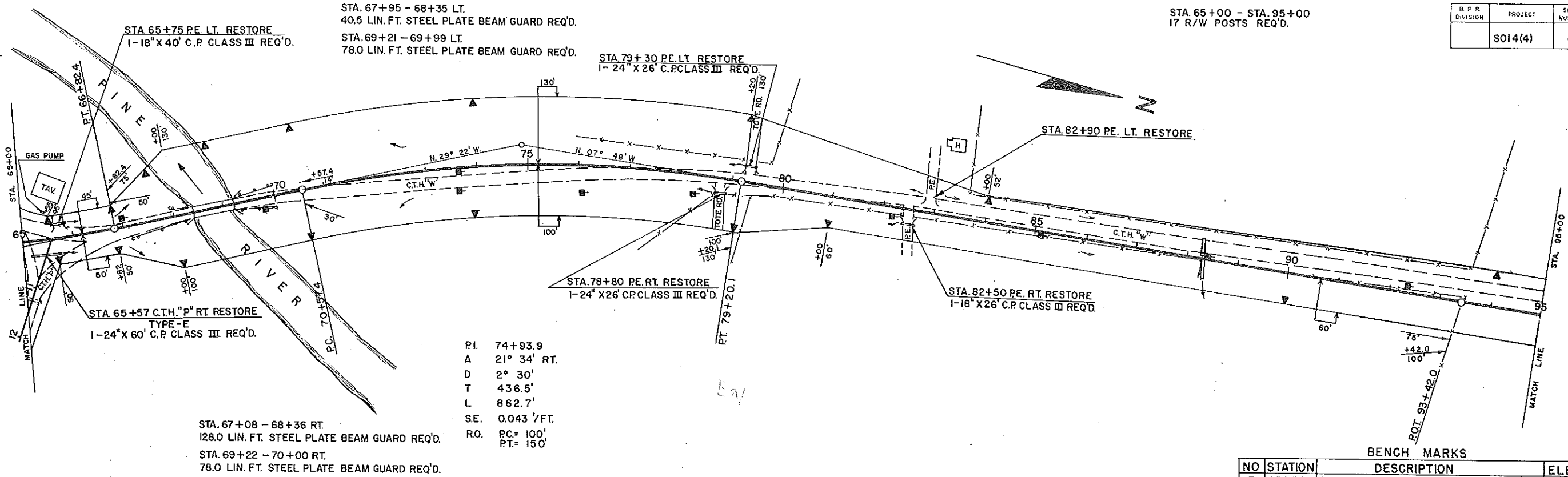


STA. 45+00  
 1-24" X 64' C.P. CLASS III REQ'D.

STA. 53+80  
 1-42" X 116' C.P. CLASS III REQ'D.  
 SKEW 25° L.H.F.

57.1	57.2	57.7	58.1	58.6	58.1	70.0	70.7	71.5	69.8	71.8	74.9	78.5	83.6	84.7	86.9	86.9	87.4	83.6	75.0	72.1	77.8	63.4	77.2	73.4	70.3	63.9	57.2	52.4	51.1	48.9
35	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	3	4	55	6	7	8	9	60	1	2	3	4	65

B.P.R. DIVISION	PROJECT	SHEET NUMBER	TOTAL SHEETS
	SO14(4)	6	19



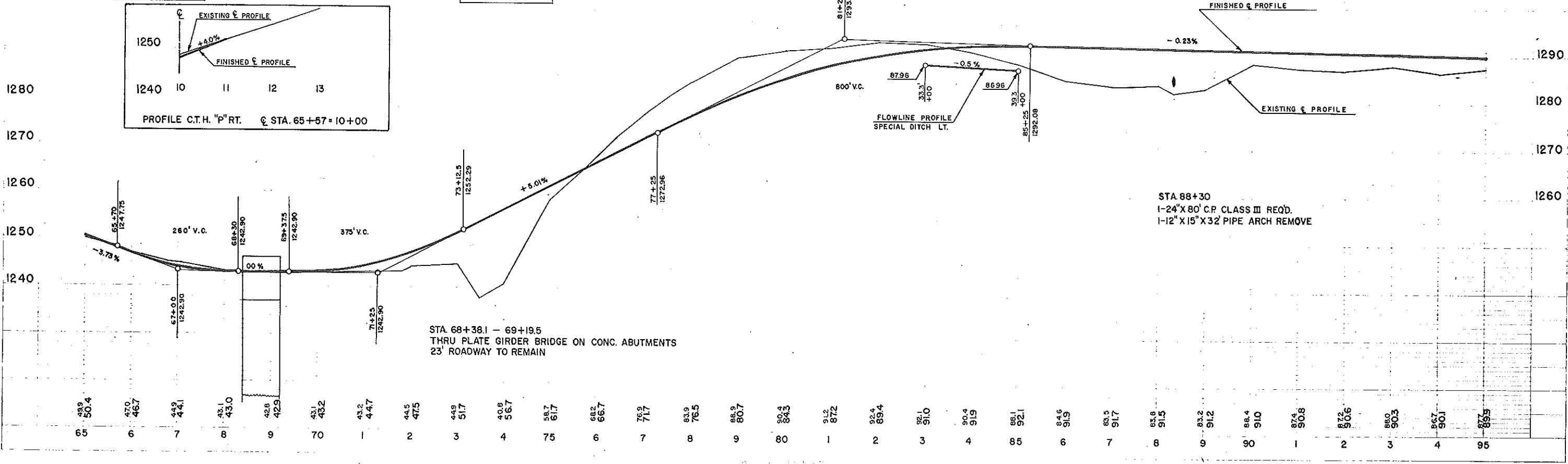
P.I. 74+93.9  
 A 21° 34' RT.  
 D 2° 30'  
 T 436.5'  
 L 862.7'  
 S.E. 0.043 V/FT.  
 R.O. P.C. = 100'  
 RT. = 150'

BENCH MARKS

NO	STATION	DESCRIPTION	ELEV.
7	65+50	N.E. CORNER ENTRANCE SLAB 75' LT.	1247.65
8	74+75	SPIKE IN 16" WHITE PINE 105' RT.	1256.34
9	82+65	SPIKE IN 16" WHITE PINE 55' LT.	1295.02
10	92+65	SPIKE IN 9" POPLAR 310' LT.	1288.88

NET CENTERLINE LENGTH STA. 65+00-95+00=2918.6 LIN. FT. DEDUCTION FROM NET CENTERLINE LENGTH 81.4' FOR BRIDGE

UNCL. 998 CU. YDS.	+38.1	+19.5
FILL 3427 CU. YDS.		
SHG. 35%		
BORROW 3627 CU. YDS.		



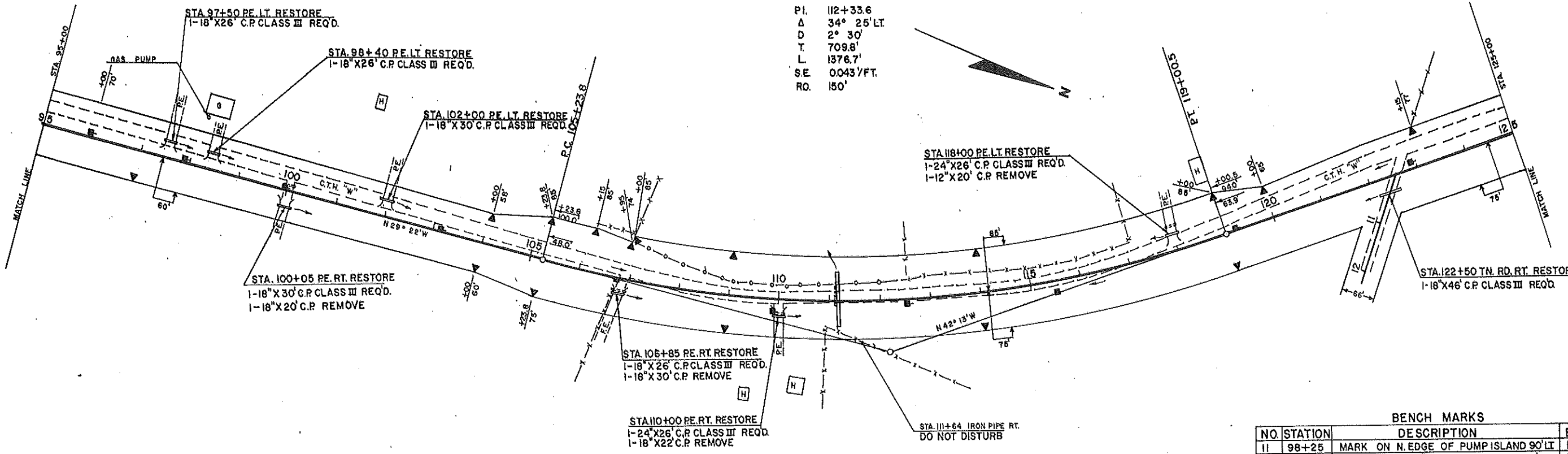
STA. 68+38.1 - 69+19.5  
 THRU PLATE GIRDER BRIDGE ON CONC. ABUTMENTS  
 23' ROADWAY TO REMAIN

STA. 88+30  
 1-24" X 80' C.P. CLASS III REQ'D.  
 1-12" X 15" X 32' PIPE ARCH REMOVE



STA. 95+00 - STA. 125+00  
16 R/W POSTS REQ'D.

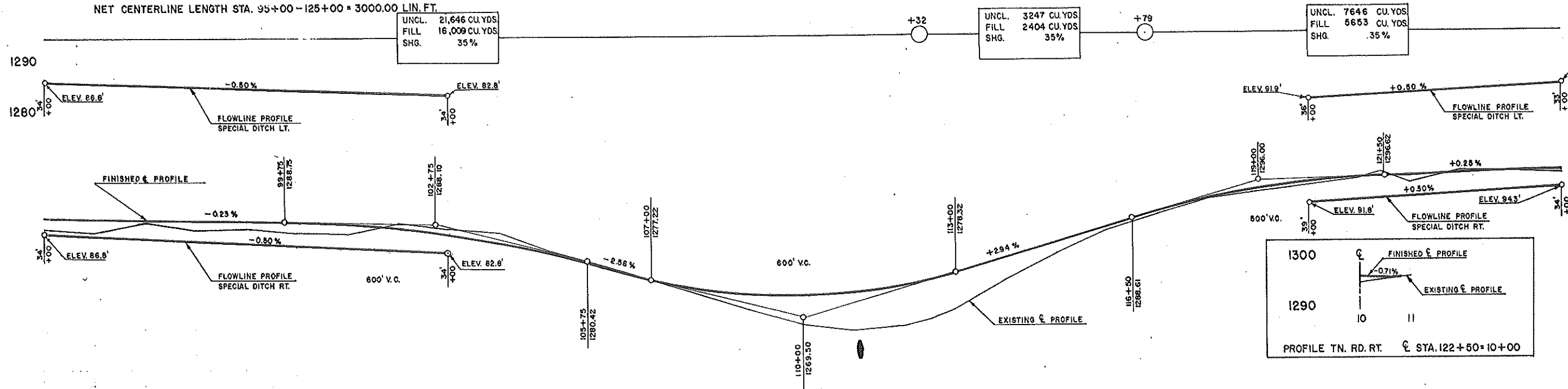
PI. 112+33.6  
Δ 34° 25' LT  
D 2° 30'  
T 709.8'  
L 1376.7'  
S.E. 0043°/FT.  
RO. 150'



**BENCH MARKS**

NO.	STATION	DESCRIPTION	ELEV.
11	98+25	MARK ON N. EDGE OF PUMP ISLAND 90' LT	121
12	107+50	SPIKE IN 18\" W PINE	65' LT. 121
13	118+60	" IN 24\" W PINE	60' LT. 121

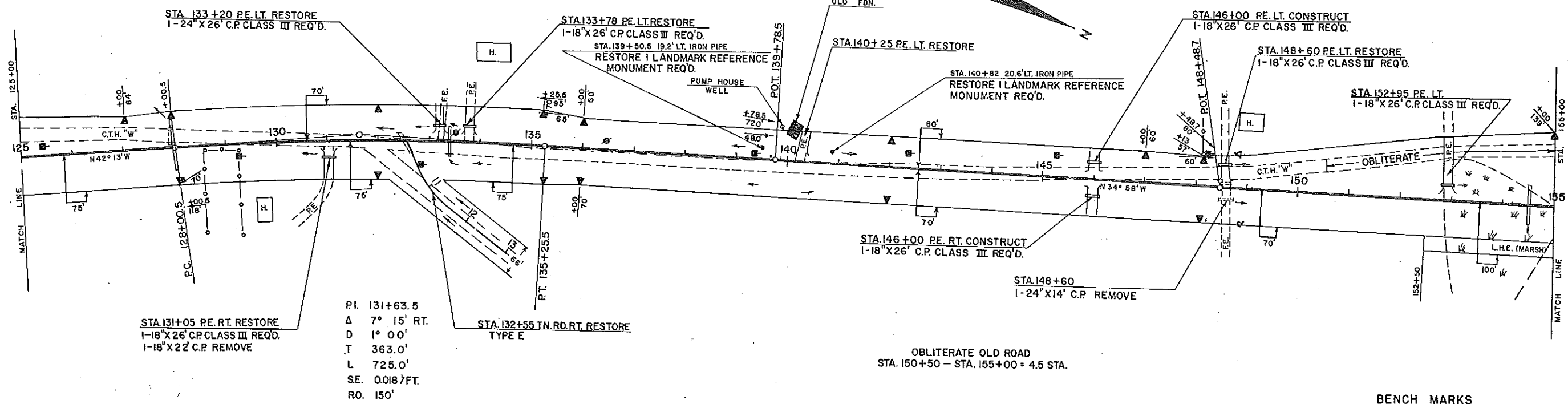
NET CENTERLINE LENGTH STA. 95+00 - 125+00 = 3000.00 LIN. FT.



STA 111+10  
1-42\"X106' C.P CLASS III REQ'D.  
1-36\"X38' C.P REMOVE

87.7	87.0	88.0	87.4	87.8	86.8	86.6	86.8	87.4	86.8	83.0	80.2	77.3	74.2	71.1	68.3	67.2	67.8	71.1	76.9	81.9	86.4	88.6	92.5	93.8	95.1	96.4	95.5	97.8	97.8	97.5
95	6	7	8	9	100	1	2	3	4	105	6	7	8	9	110	1	2	3	4	115	6	7	8	9	120	1	2	3	4	125

STA. 125+00 - STA. 155+00  
15 R/W POSTS REQ'D.



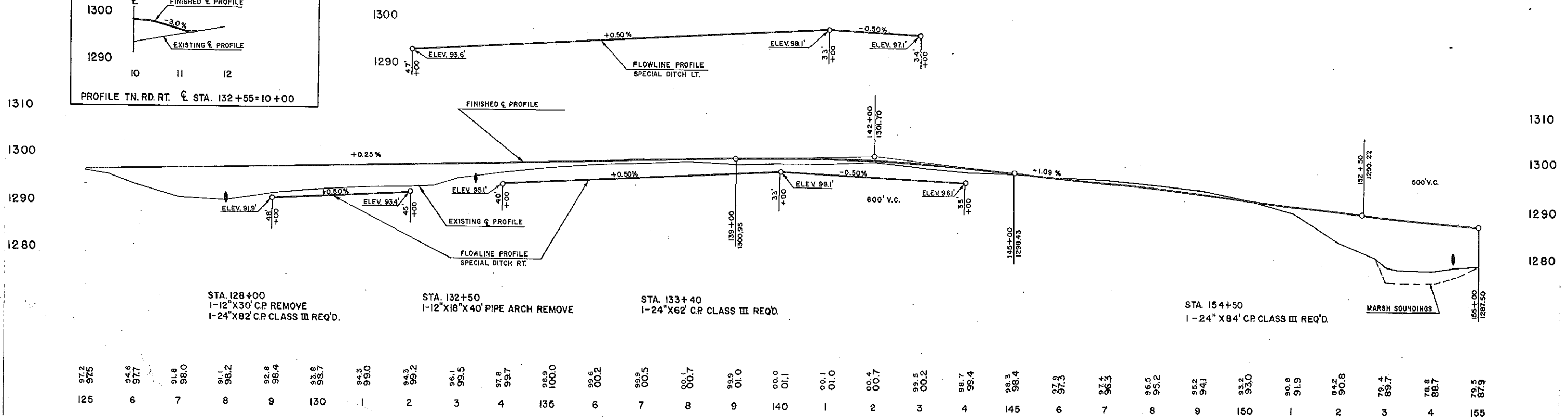
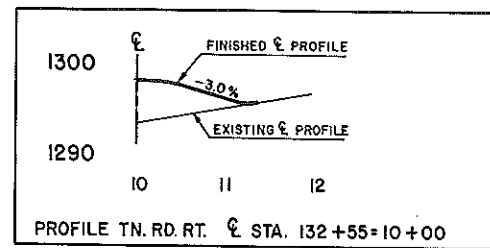
BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
14	129+80	NW. CORNER OF 1ST STEP	110' RT. 1300.53
15	139+85	S.E. CORNER FOUNDATION	60' LT. 1302.98
16	148+65	S.E. CORNER SIDEWALK	155' LT. 1298.42

NET CENTERLINE LENGTH STA. 125+00 - STA. 155+00 = 3,000.00 LIN. FT.

UNCL. 1019 CU. YDS.  
FILL 738 CU. YDS.  
SHG. 38%

UNCL. 13,637 CU. YDS.  
FILL 10,123 CU. YDS.  
SHG. 35%  
MARSH 987 CU. YDS.  
BORROW 164 CU. YDS.



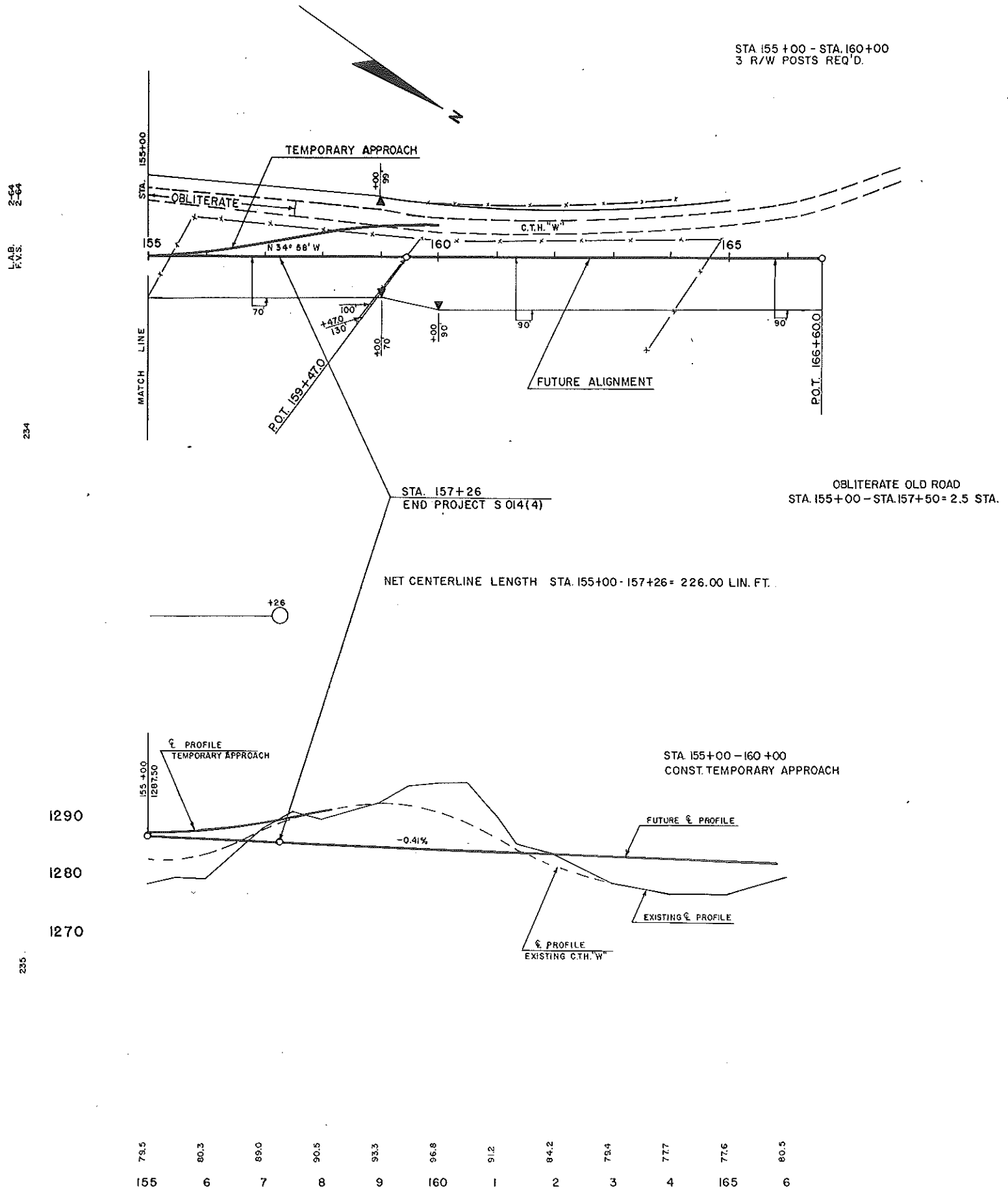
STA. 128+00  
1-12" X 30' C.P. REMOVE  
1-24" X 82' C.P. CLASS III REQ'D.

STA. 132+50  
1-12" X 18" X 40' PIPE ARCH REMOVE

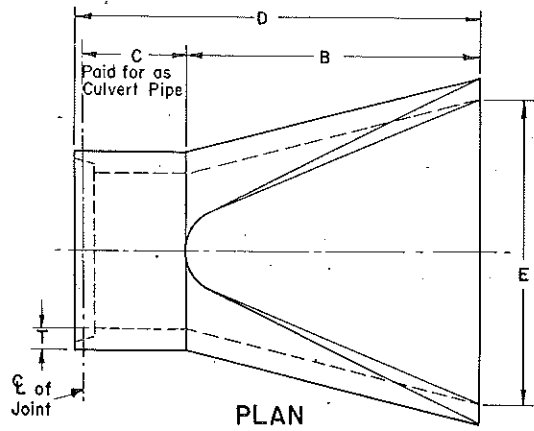
STA. 133+40  
1-24" X 62' C.P. CLASS III REQ'D.

STA. 154+50  
1-24" X 84' C.P. CLASS III REQ'D.

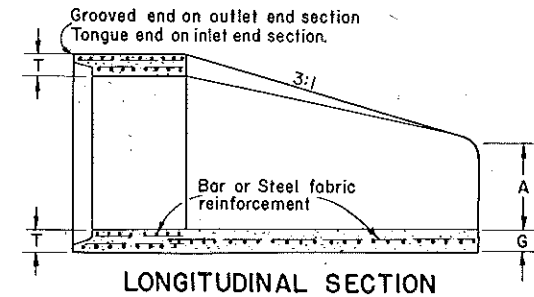
97.2	97.5	94.6	97.7	91.8	98.0	91.1	98.2	92.8	98.4	93.8	98.7	94.3	99.0	94.3	99.2	96.1	99.5	97.8	99.7	96.9	100.0	99.6	00.2	99.9	00.5	80.7	99.9	01.0	00.0	01.1	00.1	01.0	00.4	00.7	99.5	00.2	98.7	99.4	98.3	98.4	97.8	97.3	97.4	96.3	96.5	95.2	95.2	94.1	93.2	93.0	90.8	91.9	84.2	90.8	78.4	89.7	76.9	88.7	79.5	87.9
125	6	7	8	9	130	1	2	3	4	135	6	7	8	9	140	1	2	3	4	145	6	7	8	9	150	1	2	3	4	155																														



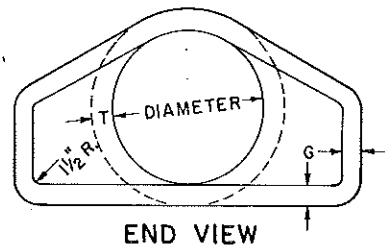
BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEVATION
17	155+00	SPIKE IN 18" POPLAR	75' RT. 1287.50
18	165+15	SPIKE IN 18" WHITE PINE	110' LT. 1287.50



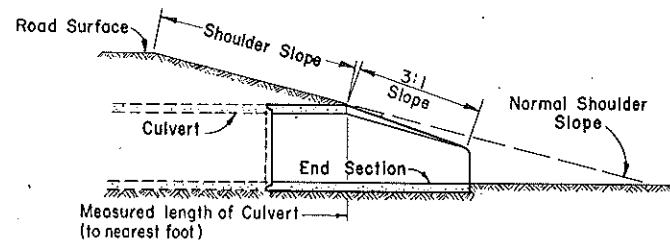
PLAN



LONGITUDINAL SECTION



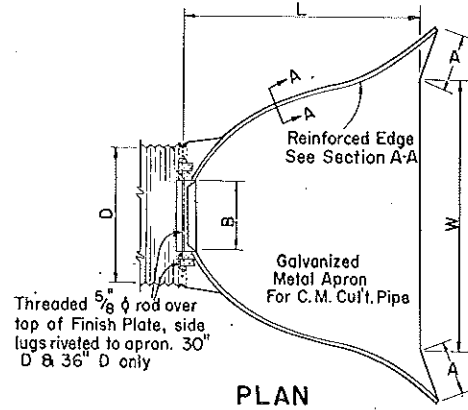
END VIEW



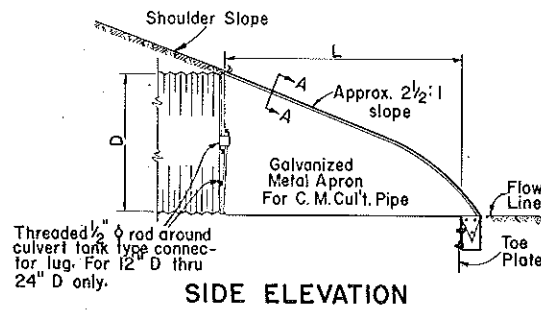
SLOPE DETAIL

DIA.	APPROX WEIGHT / SECTION	SLOPE	T	A	B	C	D	E	G
18"	990	3 to 1	2 1/2"	9"	27"	46"	73"	36"	2 1/2"
21"	1280	3 to 1	2 3/4"	9"	36"	37 1/2"	73 1/2"	42"	2 3/4"
24"	1520	3 to 1	3"	9 1/2"	43 1/2"	30"	73 1/2"	48"	3"
27"	1930	3 to 1	3 1/4"	10 1/2"	49 1/2"	24"	73 1/2"	54"	3 1/4"
30"	2190	3 to 1	3 1/2"	12"	54"	19 3/4"	73 3/4"	60"	3 1/2"
36"	4100	3 to 1	4"	15"	63"	34 3/4"	97 3/4"	72"	4"
42"	5380	3 to 1	4 1/2"	21"	63"	35"	98"	78"	4 1/2"
48"	6550	3 to 1	5"	24"	72"	26"	98"	84"	5"

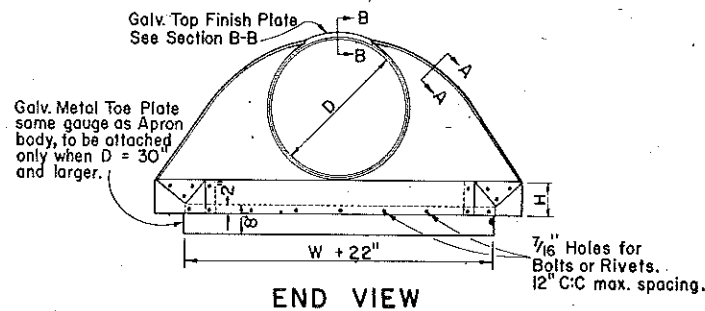
REINFORCED CONCRETE APRON ENDWALLS



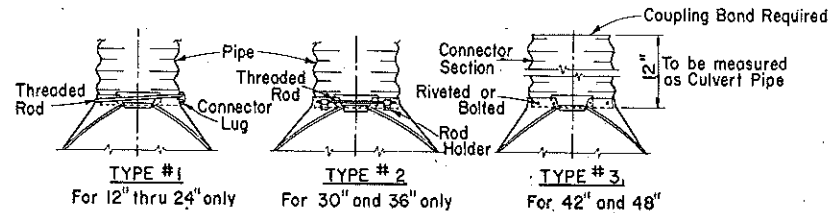
PLAN



SIDE ELEVATION



END VIEW



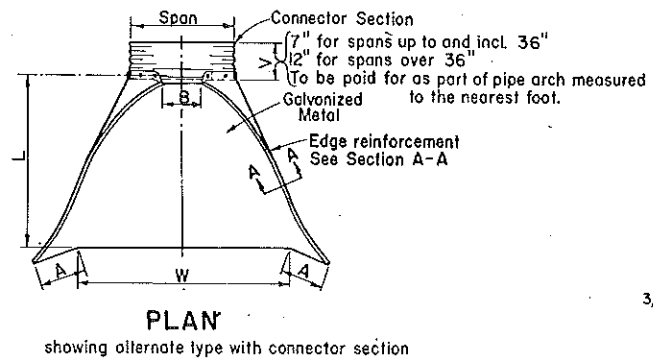
CONNECTION DETAILS

D Pipe Diam.	Metal Gauge	Dimensions					Fabrication Remarks
		A ± 1"	B Max.	H ± 1"	L ± 1/2"	W ± 2"	
18"	16	7"	9"	6"	31"	36"	1 Piece
21"	16	8 1/4"	11"	6"	36"	42"	"
24"	14	9 1/2"	12"	6"	42"	48"	"
30"	14	12"	15"	7 1/2"	52 1/2"	60"	2 Pcs. & Splice
36"	12	14"	18"	9"	63"	72"	"
42"	12	16"	21"	10 1/2"	73 1/2"	84"	"
48"	12	18"	27"	12"	84"	90"	"

Note: All splices to be lap riveted or bolted.

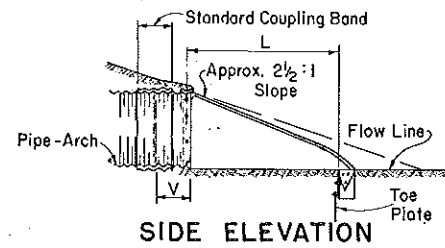
METAL APRON ENDWALLS

APRON ENDWALLS FOR CULVERT PIPE

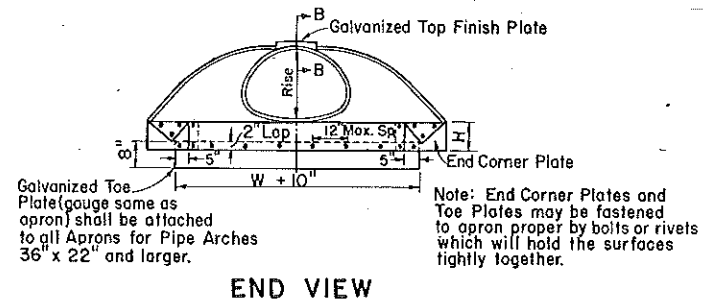


PLAN

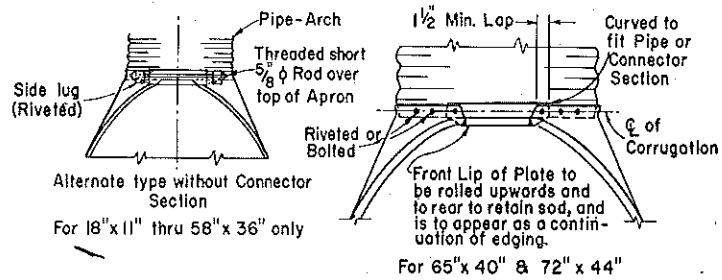
showing alternate type with connector section



SIDE ELEVATION



END VIEW



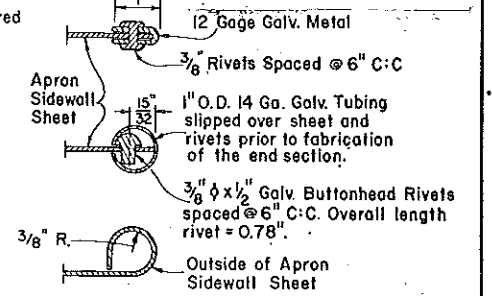
CONNECTION DETAILS

Pipe - Arch Dimensions	Span	Rise	Gauge	Dimensions					Fabrication Remarks
				A ± 1"	B Max.	H ± 1"	L ± 1/2"	W ± 2"	
18"	11"	16	4 1/2"	9"	6"	19"	30"	1 Piece	
22"	13"	16	5 1/4"	10"	6"	23"	36"	"	
25"	16"	16	6 1/4"	11 1/2"	6"	28"	42"	"	
29"	18"	14	7"	14"	6"	31 1/2"	48"	"	
36"	22"	14	8 3/4"	16"	6"	38 1/2"	60"	2 Pieces, & Splice	
43"	27"	12	10 3/4"	17 1/2"	7 5/8"	47"	75"	"	
50"	31"	12	12 1/4"	20"	9 1/8"	54"	85"	"	
58"	36"	12	14"	26"	10 5/8"	63"	96"	"	
65"	40"	12	15 3/4"	23"	10 5/8"	70"	112"	3 Pieces, 2 Splices equal distance from &	
72"	44"	10	17 1/4"	24"	12 1/8"	77"	128"	3 Pieces, 2 Splices equal distance from &	

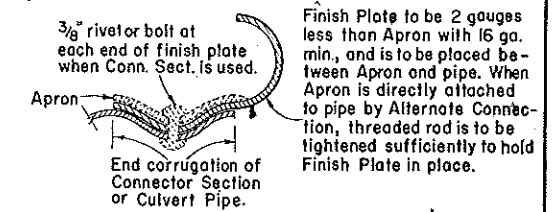
Note: All splices to be lap-riveted or bolted.

APRON ENDWALLS FOR PIPE ARCH

10-19



SECTION A-A



SECTION B-B  
TOP FINISH PLATE DETAIL

GENERAL NOTES

Details of construction not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions. Reinforced concrete apron endwalls shall conform to the pertinent requirements of the Standard AASHTO Designation: M170, Class II (Wall B). Metal apron endwalls shall conform to the pertinent requirements of the Standard AASHTO Designation: M34.

NOTE:

Variations of the dimensions and designs shown hereon will be permitted providing equivalent capacity and structural integrity are attained, and prior approval of the Engineer is obtained.

Reinf. concrete apron endwalls shall be used with concrete pipe culvert installations, and metal apron endwalls shall be used with corr. metal pipe culvert installations.

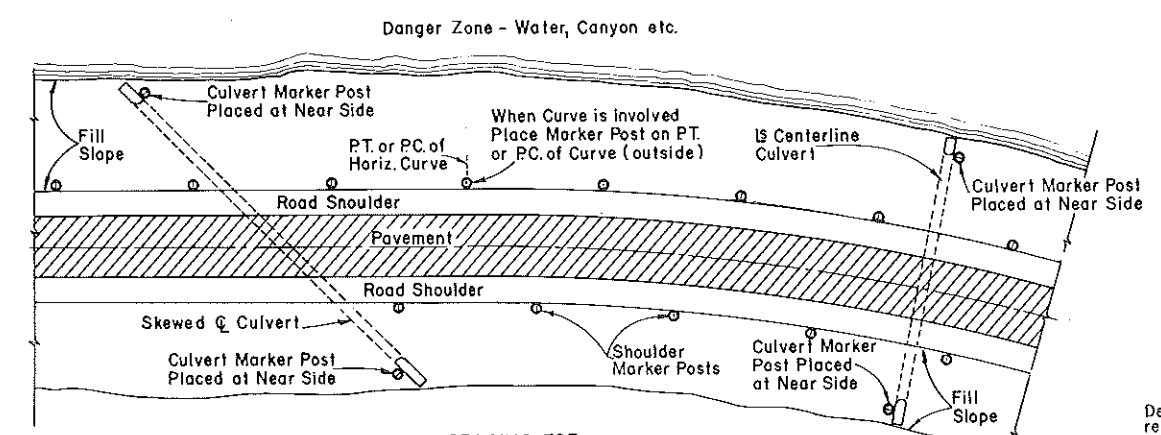
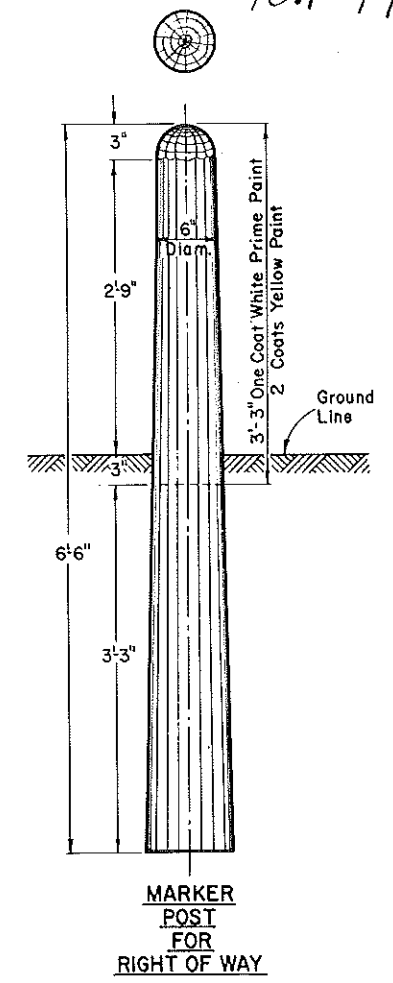
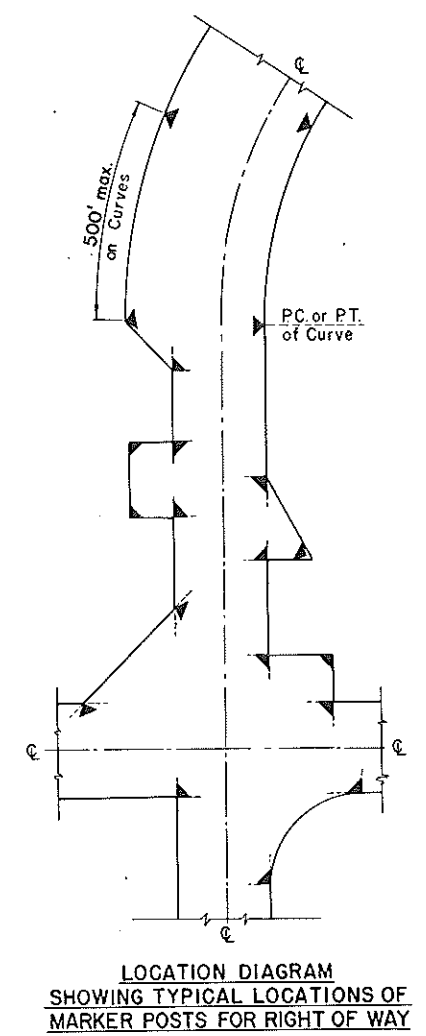
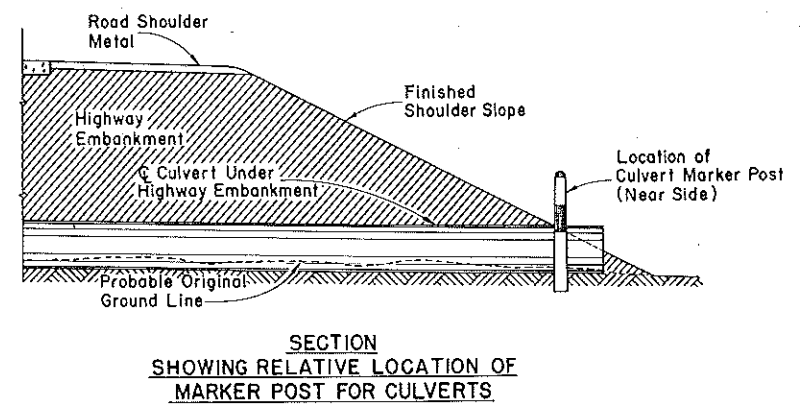
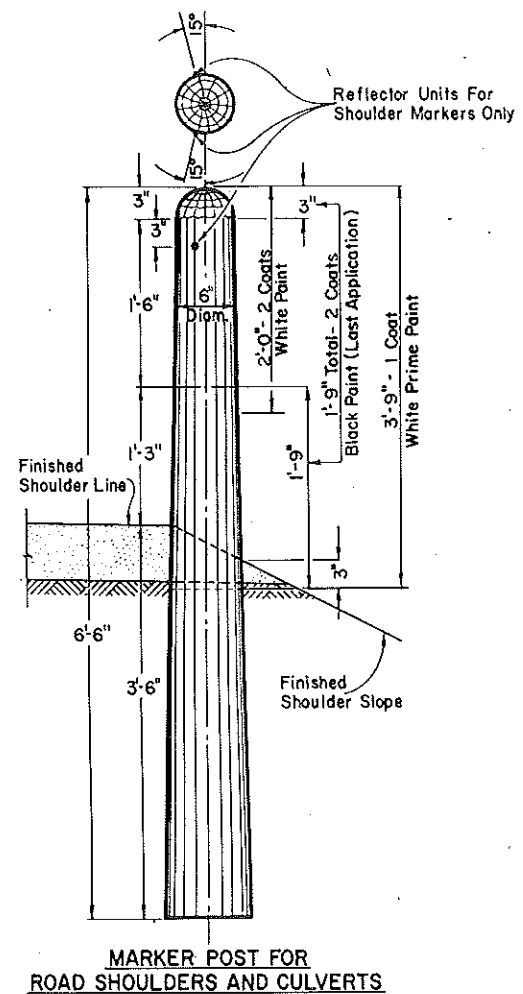
Measurement & Payment.

Apron Endwalls for Culvert Pipe or Apron Endwalls for Pipe Arches will be measured and paid for as units complete in place, at the contract unit price per each, which price shall be full compensation for all labor, tools, equipment, materials, and incidentals necessary to complete the work.

APRON ENDWALLS FOR CULVERT PIPE & PIPE ARCH

STATE HIGHWAY COMMISSION OF WISCONSIN

RECOMMENDED FOR APPROVAL: *J. L. Pitt*  
DATE: 2-5-63  
APPROVED: *E. Robertson*  
DATE: 7/6/63  
ENGINEER OF DESIGN  
STATE HIGHWAY ENGINEER



**SPACING FOR SHOULDER MARKER POSTS**  
 50' C:C for 100' to 500' Danger Zones  
 100' C:C for Over 500' Danger Zones  
**LOCATION DIAGRAM**  
 SHOWING RELATIVE LOCATIONS OF SHOULDER MARKER POSTS AND CULVERT MARKER POSTS

**MARKER POSTS FOR ROAD SHOULDERS AND CULVERTS**

**MARKER POST FOR RIGHT OF WAY**

**GENERAL NOTES**  
 Details of Construction not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.  
**MARKER POSTS FOR RIGHT OF WAY**  
 Right of Way Marker Posts shall be erected in advance of Grading Operations. Posts shall be placed at the outer limits of the Highway Right of Way, but entirely within the Right of Way and shall be so placed that the outer edge of the posts shall be tangent to the Right of Way line or lines extended. The exact location of all Right of Way Posts will be staked in the field by the Engineer.

**REFLECTOR UNITS**  
 Reflector Units shall have plastic crystal lens 7/8" in diameter. Unit assembly shall be a minimum of 7/8" in length. Reflector Units shall be furnished with flared expanding metal clips for wood mounting. Units shall be mounted in tightest fit possible and securely stayed in posts. Reflector Units shall be installed in Road Shoulder Marker Posts only.

**MARKER POSTS & MARKER POSTS FOR RIGHT OF WAY**

STATE HIGHWAY COMMISSION OF WISCONSIN

RECOMMENDED FOR APPROVAL

DATE: 2-5-63

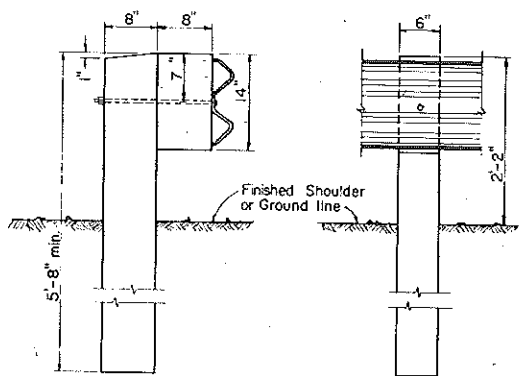
APPROVED: [Signature]

DATE: 2/6/63

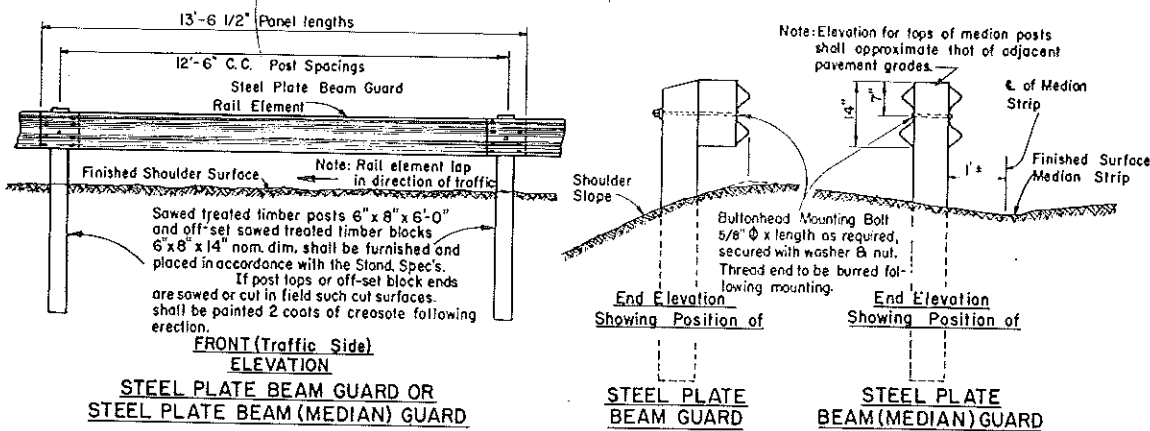
STATE HIGHWAY ENGINEER

PLATE NO. 7

10.2-19



DETAIL OF POST & OFF-SET BLOCK



GENERAL NOTES

Details of construction not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

The Steel Plate Beam Guard or (Median) Guard shall consist of steel plate made of open hearth or electric furnace steel. Plates shall be blanked to proper shape, fabricated and ready for assembly when received in the field. The plates shall be true to plan dimensions and of uniform section. Warped or deformed plates will be rejected. The edges of the plates shall be rolled or rounded so that they present no sharp edges. All connections and splices shall be formed with flat round headed bolts, or similar detail so that no appreciable projection will be presented on the road side of the guard. The rail element shall be spliced by lapping in the direction of traffic or by butt joint with splice plate. Plate ends in lap splices or plate ends and splice plate in butt splices shall make contact throughout the entire area of the splice.

TESTS

The elongation of a 2 inch specimen of the steel plate used in the rail element shall be not less than 12 percent tested in tension. The minimum tensile strength of the rail element shall, when tested in conjunction with splices and end connections, be 80,000 lbs. The rail element when loaded as a simple beam, freely supported at each end on 12'-0" centers shall support a concentrated load at span center through a flat surface 3 inches long, in accord with the following:

BEAM ELEMENT

Load	Traffic Face up		Traffic Face Down	
	Maximum Deflection	Load	Maximum Deflection	Load
1500 lb.	2.0 in.	1200 lb.	2.0 in.	
2000 lb.	3.0 in.	1600 lb.	3.0 in.	

GALVANIZED

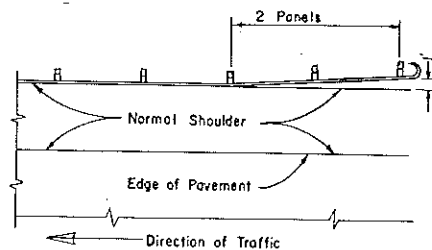
The steel plate beam element and terminal sections shall be furnished galvanized. The spelter coating of the base metal sheets shall be in accordance with A.A.S.H.O. Designation: M 36. The beam element may be galvanized before or after fabrication. Bolts, nuts, and washers shall be furnished galvanized in accordance with A.S.T.M. Designation: A153, Class C.

CIRCULAR STEEL PLATE ELEMENT

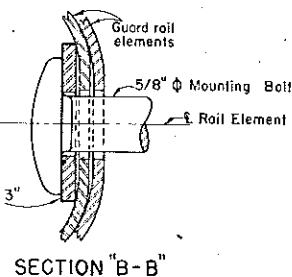
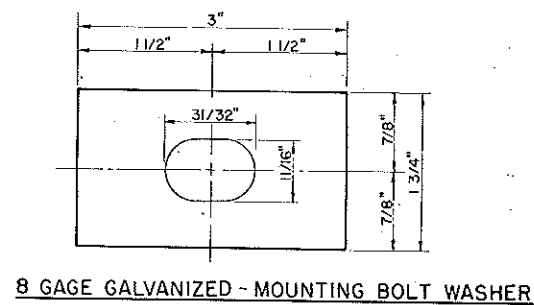
Steel plate beam elements for beam guard or (median) guard for radii of 20 ft. to 150 ft. shall be shop-curved. Steel plate beam elements shall be bent to true circular curvature, void of kinks. Kinks shall be cause for rejection. Steel plate beam elements shall have a minimum bending radius of 20 feet.

MEASUREMENT & PAYMENT

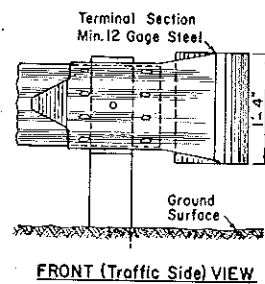
The items of Steel Plate Beam Guard and Steel Plate Beam (Median) Guard shall be measured and paid for at the contract unit price per linear foot, measured in place by length in linear feet from end to end - out to out of terminal sections, which price shall be full compensation for furnishing and placing all materials and performing all work to completion in accordance with the Stand. Spec's. the applicable Plans and Special Provisions.



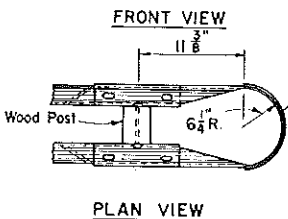
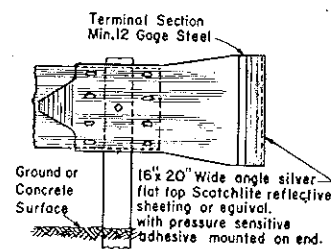
LOCATION DIAGRAM FOR STEEL PLATE BEAM GUARD INTERMEDIATE SECTIONS



SECTION "B-B"



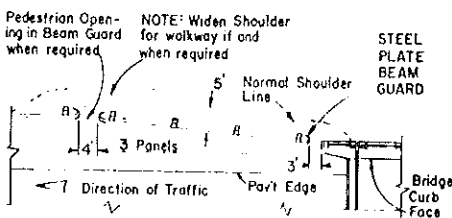
FRONT (Traffic Side) VIEW



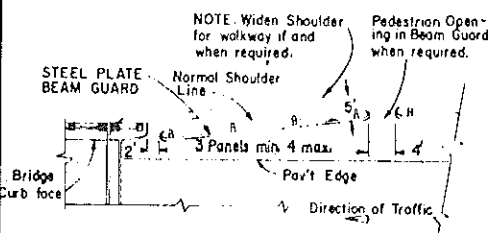
PLAN VIEW

TERMINAL SECTION DETAILS FOR STEEL PLATE BEAM GUARD

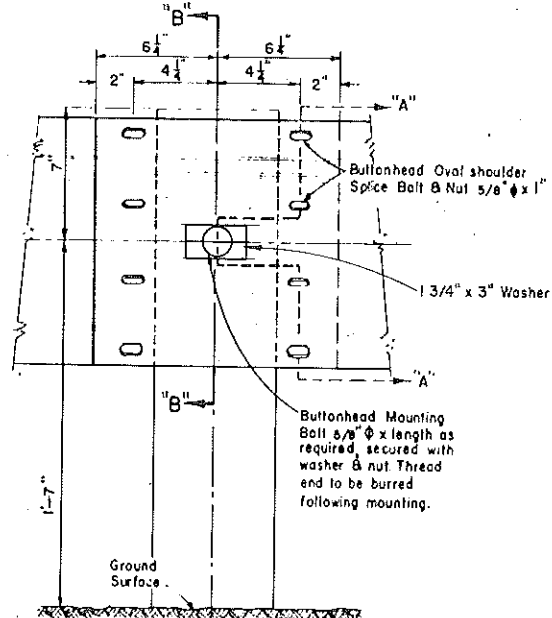
TERMINAL SECTION DETAILS FOR STEEL PLATE BEAM (MEDIAN) GUARD



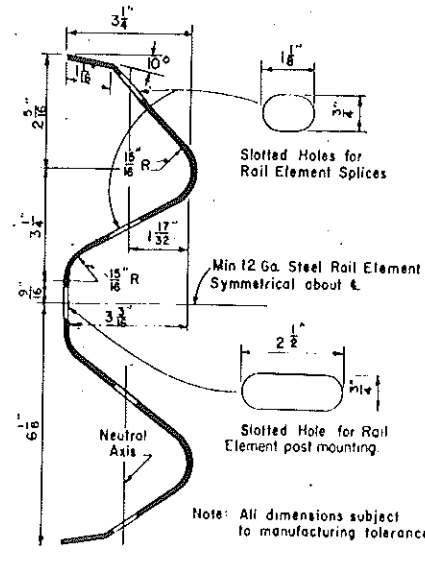
LOCATION DIAGRAM FOR STEEL PLATE BEAM GUARD AT BRIDGE EXITS



LOCATION DIAGRAM FOR STEEL PLATE BEAM GUARD AT BRIDGE APPROACHES

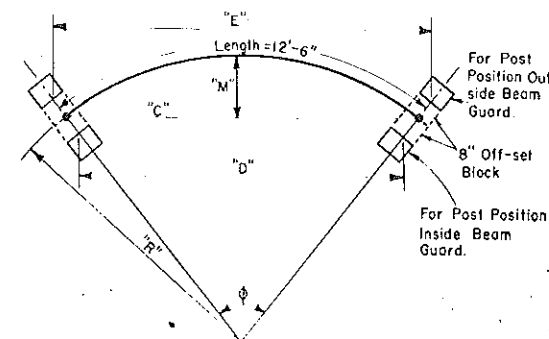
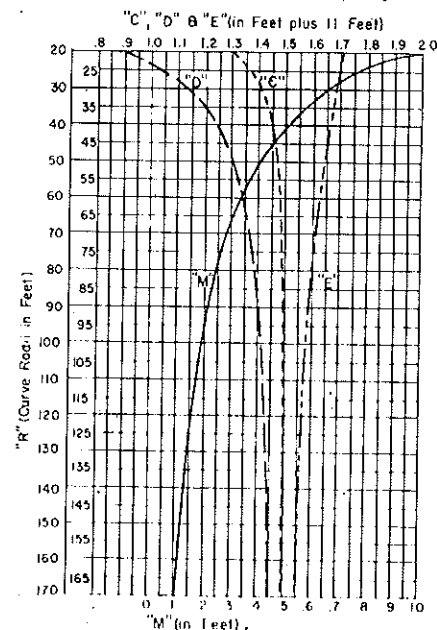


RAIL ELEMENT SPLICING & POST MOUNTING DETAILS



SECTION "AA"  
RAIL ELEMENT SECTION  
(MIN 12 GAGE STEEL)

CURVE DATA



STEEL PLATE BEAM GUARD & STEEL PLATE BEAM (MEDIAN) GUARD

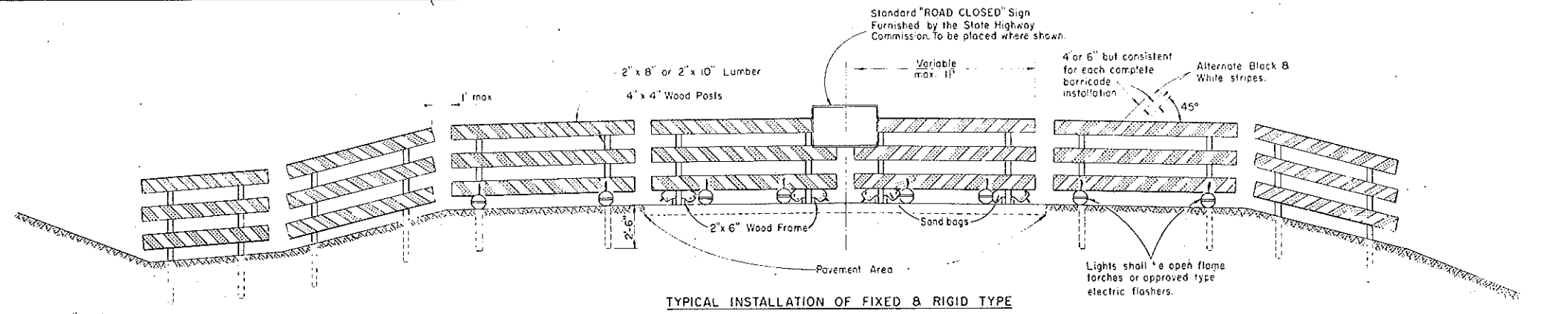
STATE HIGHWAY COMMISSION OF WISCONSIN

RECOMMENDED FOR APPROVAL:  
DATE: 2-5-63  
APPROVED:  
DATE: 2/4/63

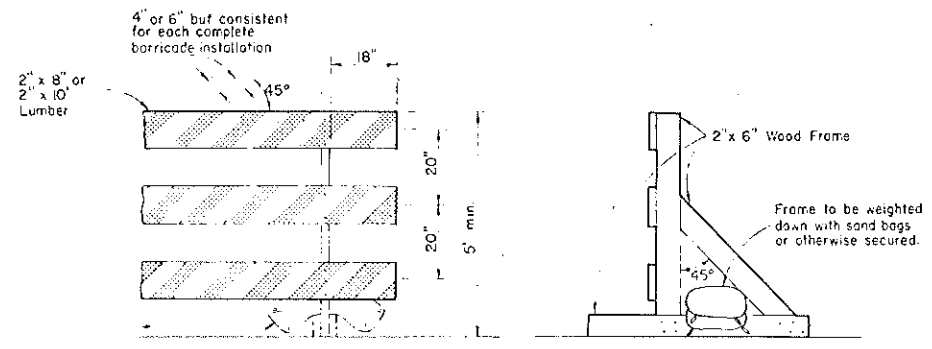
For Post Position Outside Beam Guard.  
For Post Position Inside Beam Guard.

J. J. Piff  
ENGINEER OF DESIGN

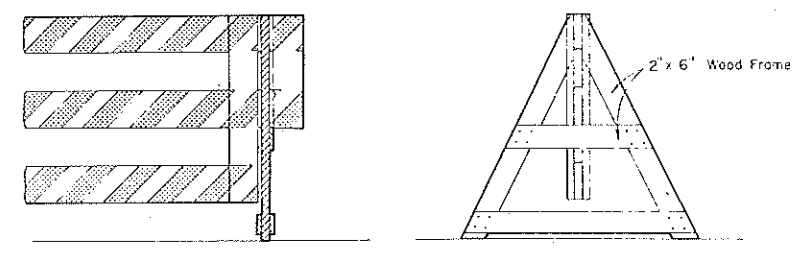
E. C. Rost  
STATE HIGHWAY ENGINEER



TYPICAL INSTALLATION OF FIXED & RIGID TYPE

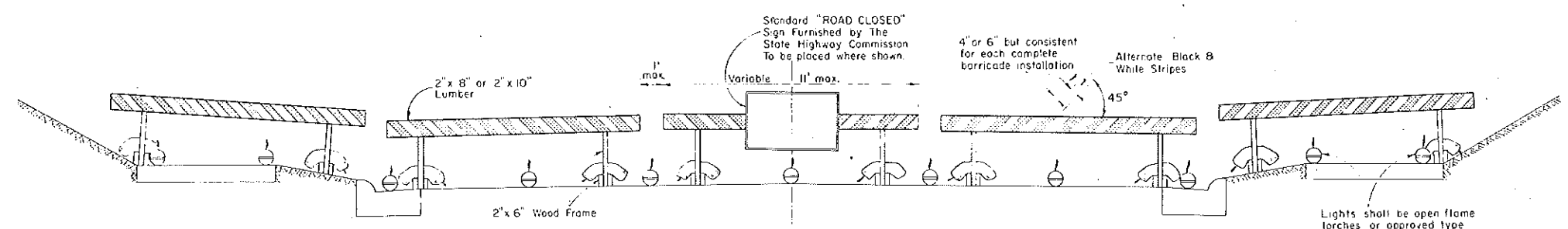


ALTERNATE TYPE INSTALLATION (RIGID)

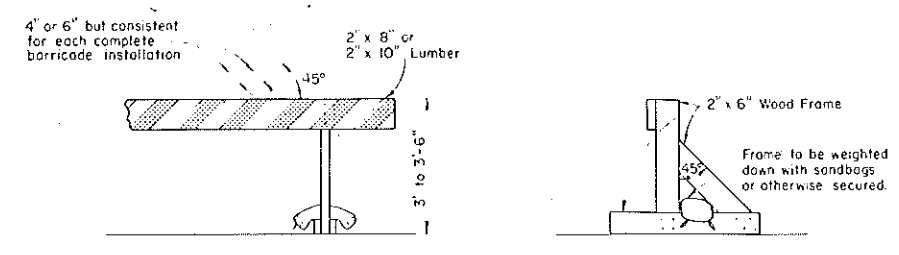


ALTERNATE TYPE INSTALLATION (DISMOUNTABLE)

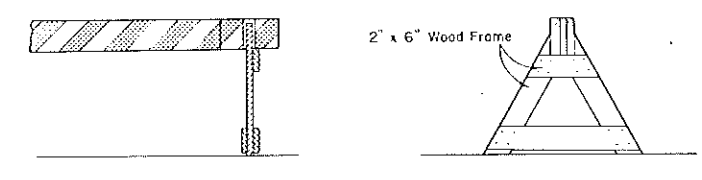
**CLASS I BARRICADE**



TYPICAL INSTALLATION OF RIGID TYPE



ALTERNATE TYPE INSTALLATION (RIGID)



ALTERNATE TYPE INSTALLATION (DISMOUNTABLE)

**CLASS II BARRICADE**

**GENERAL NOTES:**

The Contractor shall construct, place and maintain barricades as shown on this drawing and as required by the Standard Specifications for the duration of the project at all points of highway closure. Barricades shall be painted as shown hereon and structurally maintained for maximum effectiveness at all times, for the duration of the respective project.

**CLASS I BARRICADE**

Shall be used at points of closure where road is closed to traffic. Portable sections of barricade shall be provided when necessary for equipment or other authorized vehicles only.

**CLASS II BARRICADE**

May be used only where the hazard to traffic is relatively small and for the more or less continuous delimiting of a restricted roadway, or for daytime use.

**LUMBER & FABRICATION**

Lumber shall be of a grade structurally sound and sufficiently supported to support and maintain the purpose and intent of a barricade. The fabrication of the barricade shall be in accord with good working practices.

**PAINTING**

Barricades shall be painted as shown hereon in alternate black and white stripes. Black stripes shall be painted with weather resistant black paint. White stripes shall be painted a prime coat of good grade white primer followed by two coats of white "Coddit Reflective Liquid" (Minnesota Mining & Chemical Co.) or equivalent, or reflective sheeting wide angle, flat top "Scotch-lite" (Minnesota Mining Co.) or equivalent.

**DIRECTION OF DIAGONAL STRIPES**

Where a barricade extends entirely across the roadway and no provision is made for vehicle access, the stripes shall slope downward toward the highway. Where vehicle access is permitted, the stripes shall slope in the direction toward which vehicles must turn in detouring. Where both right and left turns are provided for, the stripes shall slope downward in both directions from the center.

**MEASUREMENT & PAYMENT**

All barricades, unless otherwise provided for in the plans and specifications shall be furnished, placed, and maintained as noted. No additional compensation will be allowed but shall be included in the price bid for other items.

**NOTE:**

Lighting devices for barricades shall conform to the requirements of the Standard Specifications.

**NOTE:**

All lumber or timber dimensions shown hereon are nominal.

**CONSTRUCTION BARRICADE**

STATE HIGHWAY COMMISSION OF

RECOMMENDED FOR APPROVAL

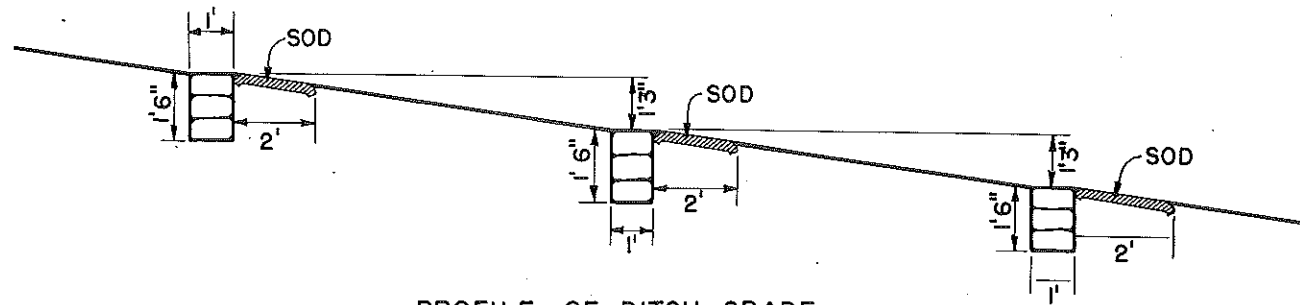
DATE 1-5-63

APPROVED

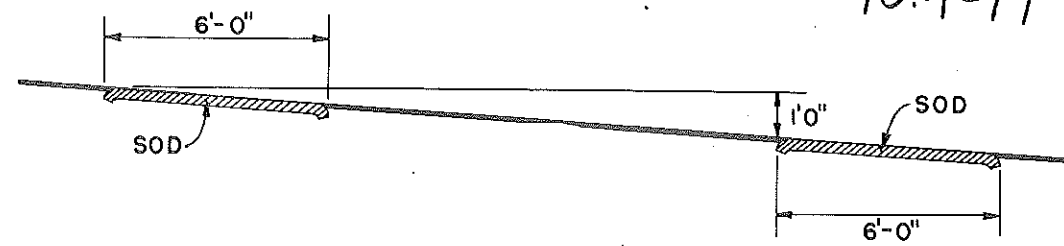
DATE 1/6/63

STATE

PLATE NO.

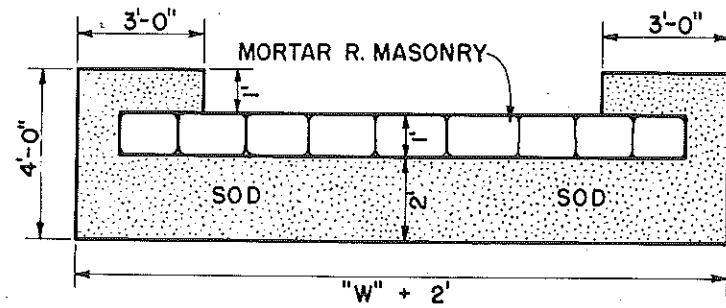


PROFILE OF DITCH GRADE

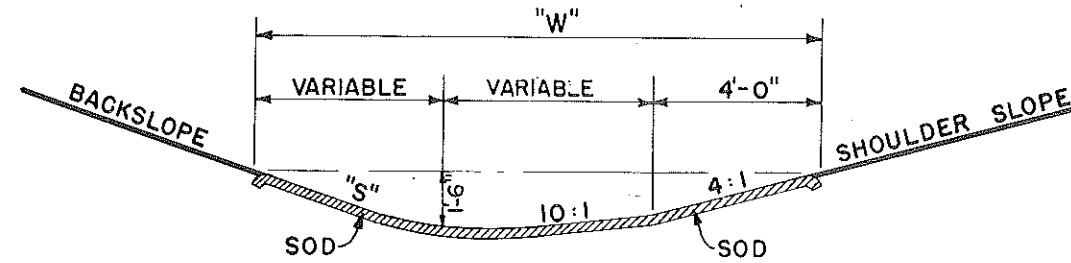


PROFILE OF DITCH GRADE

NOTE: NUMBER REQUIRED WILL BE DETERMINED BY VERTICAL SPACING.



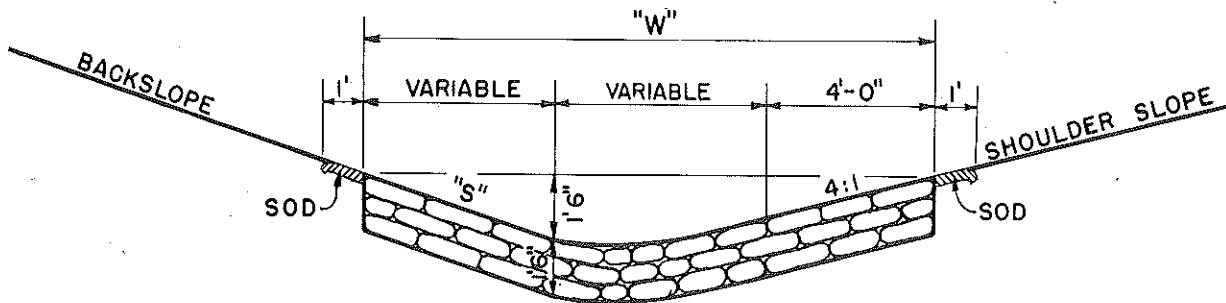
PLAN VIEW SHOWING SOD



SECTION

SOD DITCH CHECKS

QUANTITIES		
"S"	"W"	EACH SQ. YD.
2:1	12'	8
3:1	13.5'	9
4:1	15'	10






SECTION

MORTAR RUBBLE MASONRY

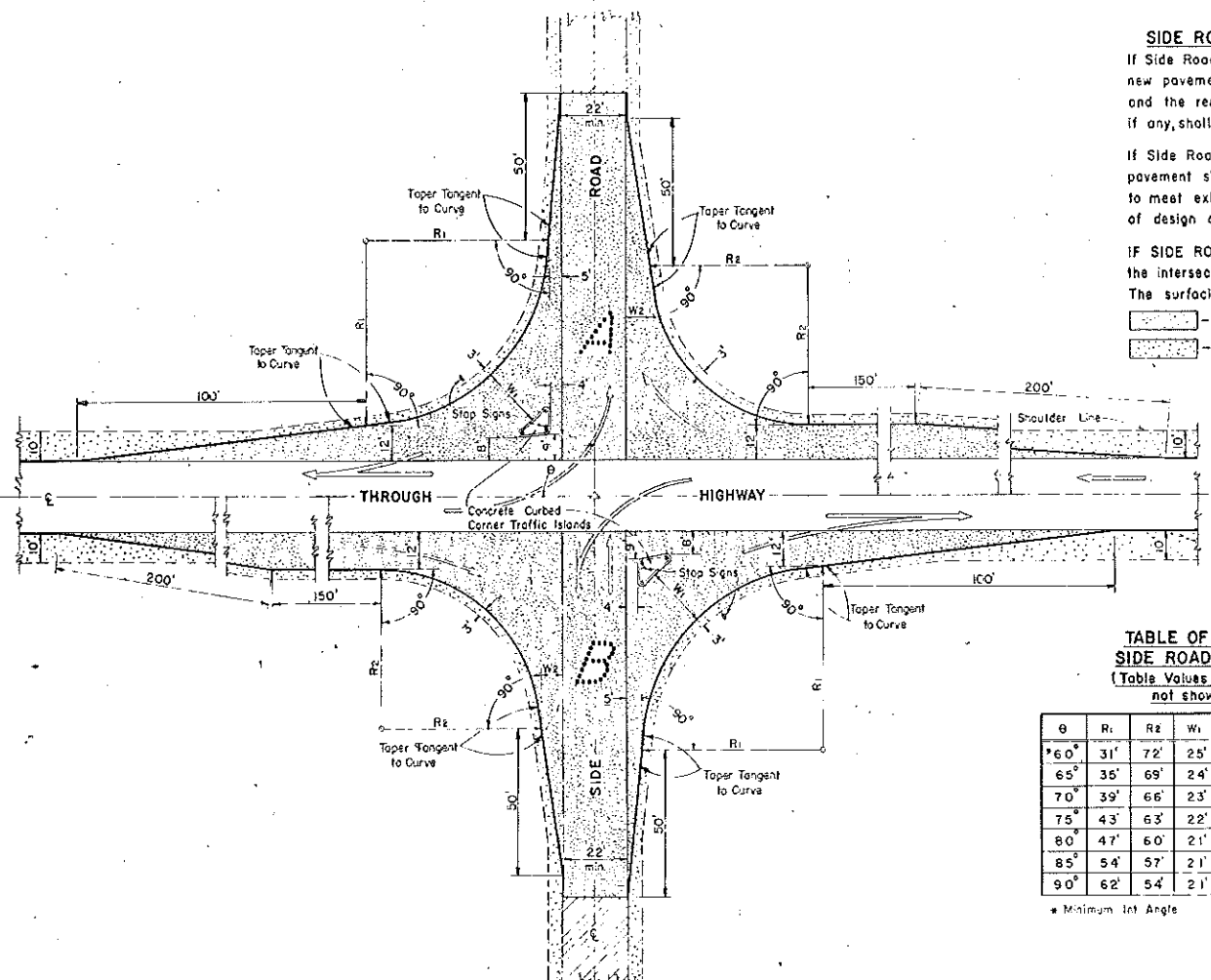
QUANTITIES			
"S"	"W"	SOD SQ. YD.	EACH CU. YD.
2:1	12'	4.0	0.67
3:1	13.5'	4.33	0.75
4:1	15'	4.67	0.83

CONSTRUCTION NOTES

DETAILS OF CONSTRUCTION NOT SHOWN SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DITCH CHECKS	
MORTAR RUBBLE MASONRY & SOD	
STATE HIGHWAY COMMISSION OF WISC.	
RECOMMENDED FOR APPROVAL:	
 DESIGN ENGINEER	
 CONSTRUCTION ENGINEER	
DATE:	
APPROVED:	
DRAWN DIV. 9	
CHECKED	 STATE HIGHWAY ENGINEER 8-1.3.1





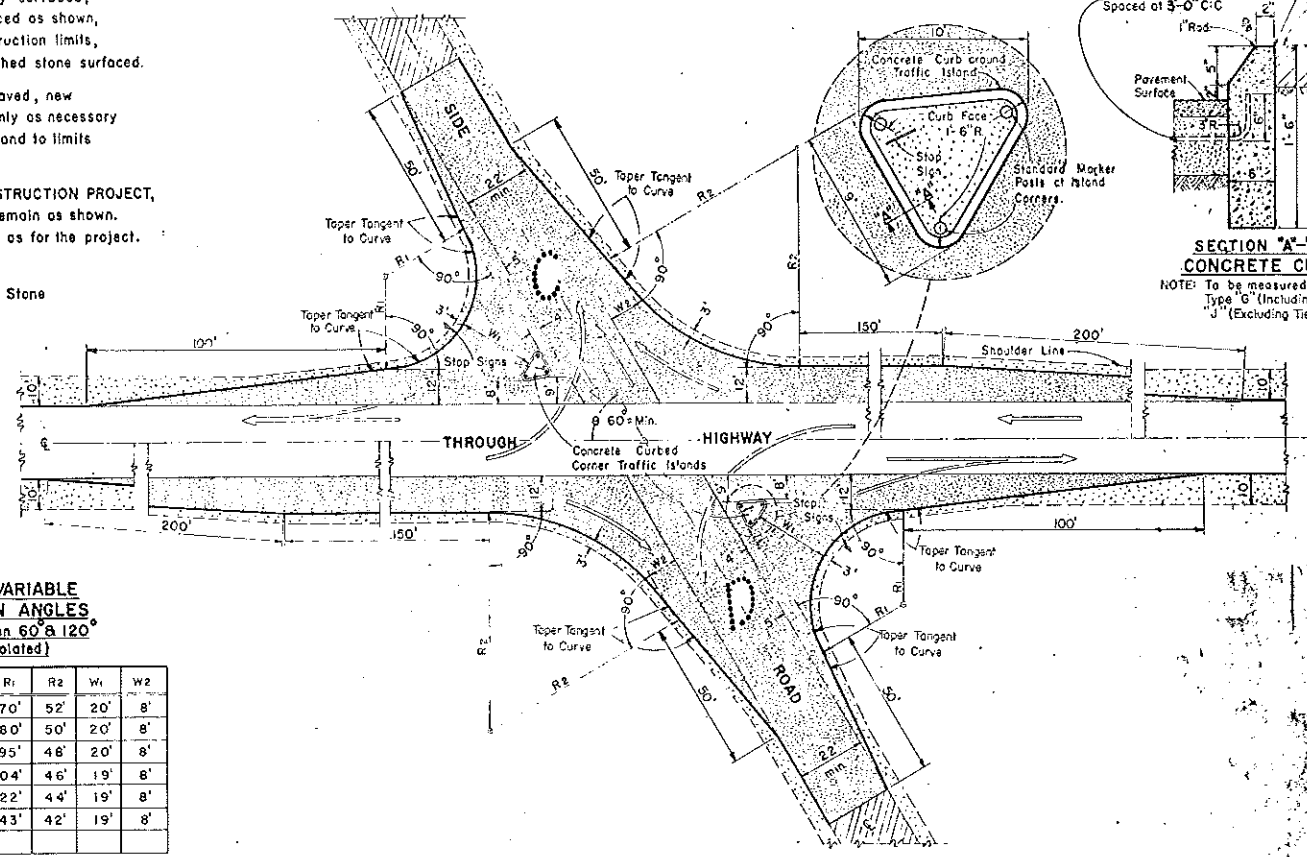
**SIDE ROAD SURFACING NOTE**  
 If Side Road is not presently surfaced, new pavement shall be placed as shown, and the remainder to construction limits, if any, shall be gravel or crushed stone surfaced.  
 If Side Road is presently paved, new pavement shall be placed only as necessary to meet existing pavement, and to limits of design as shown.  
 IF SIDE ROAD IS THE CONSTRUCTION PROJECT, the intersection geometrics remain as shown. The surfacing shall be same as for the project.

- Pavement  
 - Gravel or Crushed Stone

**TABLE OF VALUES FOR VARIABLE SIDE ROAD INTERSECTION ANGLES**  
 (Table Values for Angles between 60° & 120° not shown shall be interpolated)

θ	R <sub>1</sub>	R <sub>2</sub>	W <sub>1</sub>	W <sub>2</sub>	θ	R <sub>1</sub>	R <sub>2</sub>	W <sub>1</sub>	W <sub>2</sub>
*60°	31'	72'	25'	10'	95°	70'	52'	20'	8'
65°	35'	69'	24'	9'	100°	80'	50'	20'	8'
70°	39'	66'	23'	8'	105°	95'	48'	20'	8'
75°	43'	63'	22'	8'	110°	104'	46'	19'	8'
80°	47'	60'	21'	8'	115°	122'	44'	19'	8'
85°	54'	57'	21'	8'	*120°	143'	42'	19'	8'
90°	62'	54'	21'	8'					

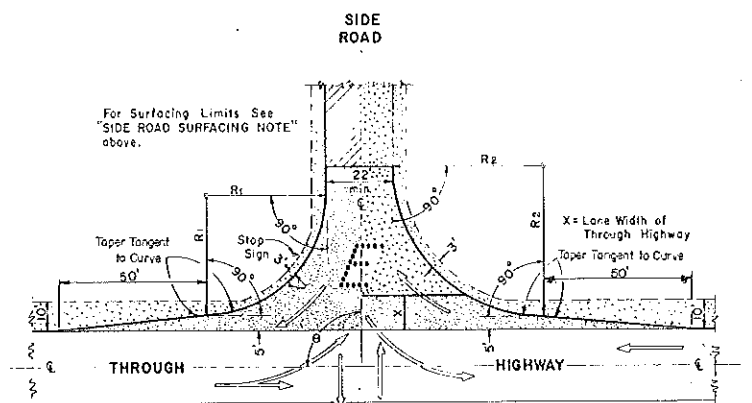
\* Minimum Int. Angle      \*\* Maximum Int. Angle



**SECTION "A-A" CONCRETE CURB**  
 NOTE: To be measured on Type "G" (Including "J" (Excluding Tie Bars))  
 #4, 2'-0" Det. Tie Bars Spaced at 3'-0" C/C

**MAJOR SIDE ROAD INTERSECTION DESIGN DETAILS**

To be used only when current ADT on Through Highway is 1500 or over, and on Side Road is Over 200



**TABLE OF VALUES FOR VARIABLE SIDE ROAD INTERSECTION ANGLES**  
 (Table Values for Angles between 60° & 120° not shown shall be interpolated)

θ	R <sub>1</sub>	R <sub>2</sub>	θ	R <sub>1</sub>	R <sub>2</sub>
*60°	40'	50'	95°	45'	49'
65°	40'	50'	100°	50'	48'
70°	40'	50'	105°	55'	47'
75°	40'	50'	110°	60'	46'
80°	40'	50'	115°	65'	45'
85°	40'	50'	**120°	70'	44'
90°	40'	50'			

\* Minimum Int. Angle      \*\* Maximum Int. Angle

**MINOR SIDE ROAD INTERSECTION DESIGN DETAILS**

To be used when current ADT on Through Highway is Less than 1500 or on Side Road is Less than 200

**GENERAL NOTES**  
 Designs "A", "B", "C", "D" or "E" may be used interchangeably in combination or separately on any one complete intersection design depending upon Traffic Volume, Intersection Type, and Surfacing of each approach road.

Details on this drawing are for Design Only, and not applicable to Construction Conditions, as shown elsewhere on this drawing.

**DESIGN & LAYOUT DETAIL**  
**SIDE ROAD AT GRADE INTERSECTIONS**  
 (RURAL IN CHARACTER)

STATE HIGHWAY COMMISSION OF [State]

RECOMMENDED FOR APPROVAL

DATE: 2-5-63

APPROVED: [Signature]

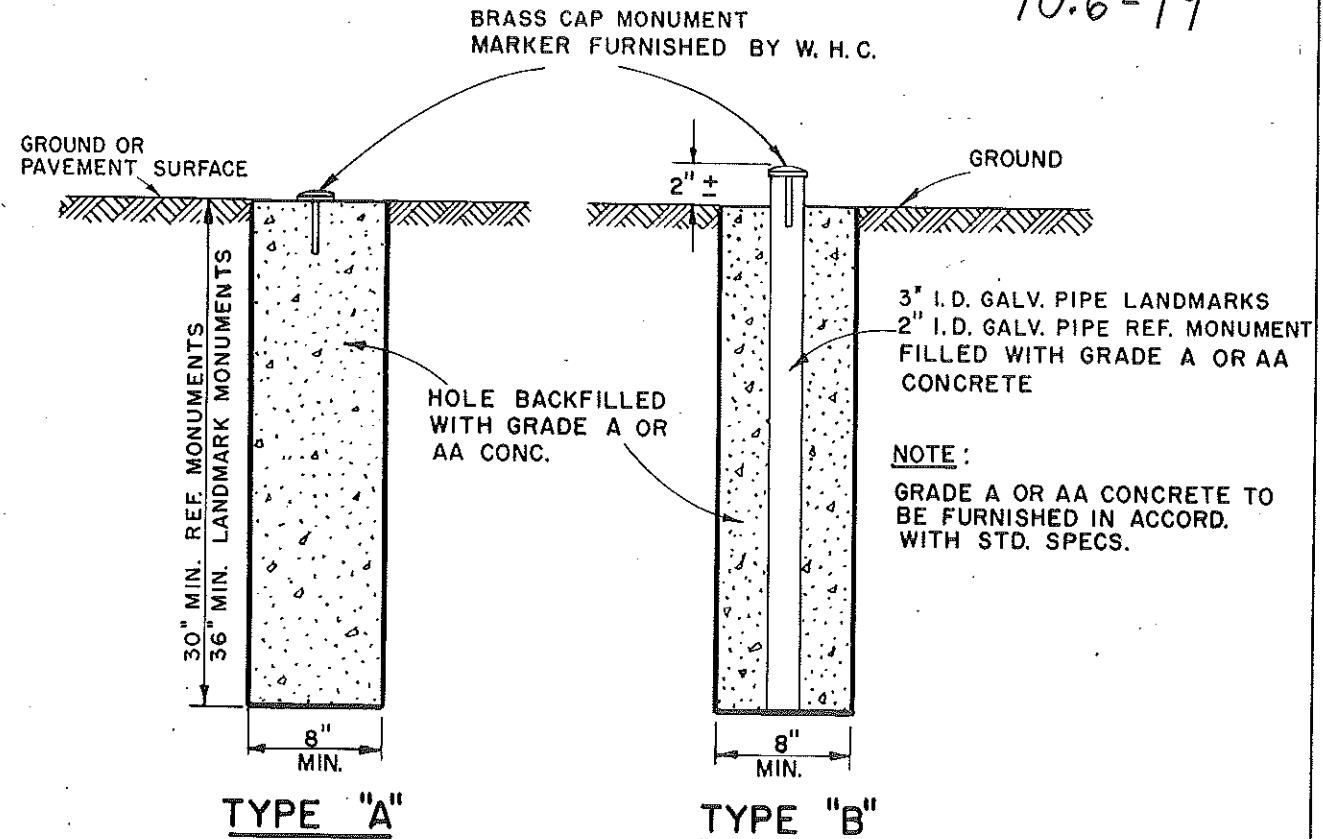
DATE: 2/6/63

REF  
E 1/4 COR.  
SEC + 35  
T22N-R6W  
69.7'N

T25N R17E  
S23 | S24  
S26 | S25  
1961

REF  
E 1/4 COR.  
+  
S35T22NR6W  
89.87'N.

BRASS  
MONUMENT MARKER  
(FURNISHED TO CONTRACTOR  
WITHOUT COST.)



NOTE:  
GRADE A OR AA CONCRETE TO  
BE FURNISHED IN ACCORD.  
WITH STD. SPECS.

GENERAL NOTES  
MONUMENT CONSTRUCTION SHOWN HEREON CONFORMS TO WISCONSIN STATUTES, SECTIONS 59.635 AND 60.37 BRASS MONUMENT MARKER TO BE FURNISHED AND PROPERLY STAMPED BY WIS. HIGHWAY COMM. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. MONUMENTS CONFORMING TO EITHER TYPE A OR TYPE B AS SHOWN HEREON TO BE PLACED WHERE AND AS DIRECTED BY THE ENGINEER.

MEASUREMENT AND PAYMENT -  
LANDMARK REFERENCE MONUMENTS SHALL BE MEASURED AND PAID FOR AS COMPLETED UNITS IN PLACE, WHICH PRICE SHALL INCLUDE FURNISHING AND PLACING OF CONCRETE, PIPE, EXCAVATION AND DISPOSITION THEREOF, PLACEMENT OF BRASS MARKER AND SITE RESTORATION.

LANDMARK  
REFERENCE MONUMENTS

STATE HIGHWAY COMMISSION OF WISCONSIN  
RECOMMENDED FOR APPROVAL:

2-5-63  
DATE  
APPROVED: *J. J. Pelt*  
ENGINEER OF DESIGN

7/6/63  
DATE  
APPROVED: *E. C. Rosstiers*  
STATE HIGHWAY ENGINEER 12-1.1.2

STATE HIGHWAY COMMISSION OF WISCONSIN

MARATHON CO-MERRILL RD CTH W PROJECT 5014/4/7

64252

TEMPLATE LISTING

PAGE 1

STA	LT INTERCEPT	SLOPE	LT F LINE	LT IN DTCH	LT SHLD PT	R/L	RT SHLD PT	RT INDTCH	RT F LINE	SLOPE	RT INTERCEPT
10 00	1244.08	28.6	45.73	22.0	1246.06	45.73	22.0	44.65	26.3	3.00	1245.27
11 00	1243.28	35.0	46.52	22.0	1246.85	46.52	22.0	45.44	26.3	3.00	1250.14
12 00	1242.94	40.2	47.48	22.0	1247.81	47.48	22.0	46.40	26.3	3.00	1265.01
13 00	1244.01	42.5	49.01	22.5	1248.97	48.64	22.0	47.56	26.3	3.00	1270.40
14 00	1243.81	49.4	50.59	22.3	1250.15	49.71	22.2	48.63	26.5	3.00	1271.11
15 00	1250.22	31.8	50.74	26.5	1251.23	50.63	22.5	49.55	26.8	3.00	1270.54
16 00	1252.17	37.0	51.70	26.5	1252.19	51.59	22.5	50.51	26.8	3.00	1270.44
17 00	1253.09	37.2	51.84	33.5	1253.03	52.43	22.5	51.35	26.8	3.00	1269.86
18 00	1250.91	35.9	54.34	22.2	1253.75	53.15	22.5	52.07	26.8	3.00	1266.99
19 00	1245.36	60.6	54.95	22.2	1254.36	53.76	22.5	52.68	26.8	3.00	1255.57
20 00	1246.12	59.5	55.44	22.2	1254.85	54.25	22.5			4.00	1250.46
21 00	1247.21	56.6	55.81	22.2	1255.22	54.62	22.5			4.00	1251.12
22 00	1247.96	54.9	56.13	22.2	1255.54	54.94	22.5			4.00	1252.63
23 00	1252.10	39.6	56.45	22.2	1255.86	55.26	22.5	53.71	28.7	3.00	1269.10
24 00	1252.81	38.0	56.76	22.2	1256.17	55.57	22.5	54.22	27.9	3.00	1269.08
25 00	1253.03	38.4	57.08	22.2	1256.49	55.89	22.5	54.71	27.2	3.00	1267.89
26 00	1254.15	35.5	57.48	22.2	1256.89	56.29	22.5	55.21	26.8	3.00	1267.59
27 00	1254.74	35.5	58.06	22.2	1257.47	56.87	22.5	55.79	26.8	3.00	1262.61
27 50	1254.55	37.7	58.42	22.2	1257.83	57.23	22.5			4.00	1249.76
28 00	1254.10	41.0	58.82	22.2	1258.23	57.63	22.5			4.00	1245.89

STATE HIGHWAY COMMISSION OF WISCONSIN

MARATHON CO-MERRILL RD CTH W PROJECT 5014/4/4

64252

TEMPLATE LISTING

PAGE 2

STA	LT INTERCEPT	SLOPE	LT F LINE	LT IN DTCH	LT SHLD PT	R/L	RT SHLD PT	RT INDTCH	RT F LINE	SLOPE	RT INTERCEPT
28 45	1253.35	45.7	59.21	22.2	1258.62	58.02	22.5			4.00	1251.51
29 00	1253.07	48.9	59.75	22.2	1259.16	58.56	22.5	57.48	26.8	3.00	1262.53
29 40	1261.59	43.1	60.15	22.2	1259.56	58.96	22.5	57.88	26.8	3.00	1265.77
30 00	1263.55	47.3	60.76	22.2	1260.17	59.57	22.5	58.49	26.8	3.00	1265.31
31 00	1264.50	47.0	61.78	22.2	1261.19	60.59	22.5	59.51	26.8	3.00	1265.11
32 00	1264.84	45.0	62.80	22.2	1262.21	61.61	22.5	60.53	26.8	3.00	1265.53
33 00	1265.26	43.2	62.74	26.5	1263.23	62.63	22.5	61.55	26.8	3.00	1267.42
34 00	1264.27	37.1	63.75	26.5	1264.24	63.64	22.5	62.56	26.8	3.00	1268.36
35 00	1265.68	38.3	64.77	26.5	1265.26	64.66	22.5	63.58	26.8	3.00	1267.94
36 00	1267.32	41.6	65.40	26.7	1266.28	65.95	22.0	64.87	26.3	3.00	1268.87
37 00	1267.58	40.3	66.02	26.5	1267.30	67.12	21.4	66.04	25.7	3.00	1268.70
37 40	1267.01	37.6	66.29	26.3	1267.70	67.37	22.0	66.29	26.3	3.00	1269.02
38 00	1267.13	36.1	66.90	26.3	1268.31	67.98	22.0	66.90	26.3	3.00	1269.03
39 00	1267.90	35.3	67.92	26.3	1269.33	69.00	22.0	67.92	26.3	3.00	1269.41
40 00	1261.69	55.3	70.02	22.0	1270.35	70.02	22.0	68.94	26.3	3.00	1269.35
40 50	1269.18	34.6	69.45	26.3	1270.86	70.53	22.0	69.45	26.3	3.00	1271.01
41 00	1269.87	35.1	71.04	22.0	1271.37	71.04	22.0	69.96	26.3	3.00	1271.54
42 00	1270.13	29.7	72.06	22.0	1272.39	72.06	22.0	70.98	26.3	3.00	1272.43
43 00	1266.49	48.3	73.07	22.0	1273.40	73.07	22.0	71.99	26.3	3.00	1272.98
44 00	1264.75	59.4	74.09	22.0	1274.42	74.09	22.0	73.01	26.3	3.00	1272.72

STATE HIGHWAY COMMISSION OF WISCONSIN

MARATHON CO-MERRILL RD CTH W

64252

TEMPLATE LISTING

PAGE 3

STA	LT INTERCEPT	SLOPE	LT F LINE	LT IN DTCH	LT SHLD PT	R/L	RT SHLD PT	RT INDTCH	RT F LINE	SLOPE	RT INTERCEPT
44 50	1265.75	57.4	74.60	22.0	1274.93	74.60	22.0			4.00	1271.29
45 00	1268.41	48.8	75.11	22.0	1275.44	75.11	22.0	74.03	26.3	3.00	1274.27
46 00	1272.80	35.3	76.13	22.0	1276.46	76.13	22.0	75.05	26.3	3.00	1279.91
47 00	1275.92	26.9	77.14	22.0	1277.47	77.14	22.0	76.06	26.3	3.00	1284.04
48 00	1279.99	46.3	76.77	27.5	1278.49	78.86	22.3	77.78	26.6	3.00	1286.00
49 00	1282.34	52.1	77.26	27.7	1279.51	80.60	21.9	79.52	26.2	3.00	1286.95
50 00	1283.45	56.0	77.76	29.8	1280.53	81.62	21.9	80.54	26.2	3.00	1287.46
51 00	1283.47	56.1	78.26	31.3	1281.41	82.50	21.9	81.42	26.2	3.00	1288.23
52 00	1284.72	58.0	78.76	31.0	1281.83	82.92	21.9	81.84	26.2	3.00	1285.95
53 00	1284.64	54.1	79.26	28.8	1281.78	82.87	21.9			4.00	1274.55
54 00	1281.90	47.2	78.76	28.7	1281.26	82.35	21.9			4.00	1273.60
54 30	1272.87	51.2	79.83	23.4	1281.00	82.09	21.9			4.00	1273.22
55 00	1271.61	53.3	79.09	23.4	1280.26	81.35	21.9			4.00	1273.39
56 00	1277.40	39.4	75.83	34.7	1278.78	79.87	21.9			4.00	1277.41
57 00	1278.46	48.5	74.58	27.7	1276.83	77.92	21.9	76.84	26.2	3.00	1286.04
57 50	1277.81	50.0	73.43	27.7	1275.68	76.77	21.9	75.69	26.2	3.00	1283.57
58 00	1276.23	49.0	72.16	27.7	1274.41	75.50	21.9	74.42	26.2	3.00	1281.52
59 00	1271.74	44.3	68.56	34.7	1271.51	72.60	21.9	71.52	26.2	3.00	1280.22
60 00	1266.83	39.7	65.17	34.7	1268.12	69.21	21.9	68.13	26.2	3.00	1274.22
61 00	1260.84	33.0	63.24	23.4	1264.41	65.50	21.9	64.42	26.2	3.00	1266.38

8924

5014(4) 11-19



## STATE HIGHWAY COMMISSION OF WISCONSIN

0700

PAGE 7

TEMPLATE LISTING

PROJECT S014/4/

MARATHON CO-MERRILL RD CTH W

STA	LT INTERCEPT	SLOPE	LT F LINE	LT IN DTCH	LT SHLD PT	R/L	RI SHLD PT	RT INDITCH	RT F LINE	SLOPE	RT INTERCEPT
112 00	1264.86	59.7	4.00	72.76	28.1	1273.97	75.06	25.4	4.00	1263.99	69.7
112 50	1271.34	38.3	4.00	73.89	28.1	1275.10	76.19	25.4	4.00	1267.11	61.7
113 00	1280.33	52.5	3.00	74.54	35.1	1276.45	77.54	25.4	4.00	1273.58	41.3
114 00	1287.92	66.4	3.00	77.49	35.1	1279.40	80.49	25.4	4.00	1279.37	29.9
115 00	1294.71	78.0	3.00	80.43	35.1	1282.34	83.43	25.4	3.00	1283.25	34.0
115 50	1293.82	70.9	3.00	81.90	35.1	1283.81	84.90	25.4	3.00	1288.13	44.2
116 00	1293.28	64.8	3.00	83.38	35.1	1285.29	86.38	25.4	3.00	1289.86	45.0
117 00	1292.83	54.9	3.00	86.25	35.1	1288.16	89.25	25.4	3.00	1292.26	43.5
118 00	1295.03	54.2	3.00	88.66	35.1	1290.57	91.66	25.4	3.00	1293.96	41.4
119 00	1293.48	41.8	3.00	90.94	34.2	1292.43	93.17	25.7	3.00	1295.68	50.8
120 00	1294.78	45.0	3.00	91.89	36.4	1293.76	93.76	26.5	3.00	1296.60	53.2
121 00	1295.84	48.0	3.00	92.38	37.6	1294.55	94.16	26.3	3.00	1296.14	49.8
121 40	1296.35	48.7	3.00	92.59	37.4	1294.71	94.32	26.3	3.00	1296.74	50.7
122 00	1296.90	48.8	3.00	92.89	36.8	1294.86	94.47	26.3	3.00	1295.26	44.8
123 00	1297.80	49.1	3.00	93.39	35.8	1295.11	94.72	26.3	3.00	1297.45	48.9
124 00	1297.43	45.4	3.00	93.89	34.8	1295.36	94.97	26.3	3.00	1297.46	46.4
125 00	1296.41	39.9	3.00	94.39	33.8	1295.61	95.22	26.3	3.00	1297.87	45.1
125 50	1295.55	36.0	3.00	94.64	33.3	1295.73	95.34	26.3	3.00	1297.25	41.1
126 00	1294.42	30.8	4.00	95.54	26.3	1295.85	95.46	26.3	3.00	1295.05	34.2
127 00	1292.14	42.4	4.00	96.10	26.5	1296.10	95.71	26.3	4.00	1290.61	46.7

## STATE HIGHWAY COMMISSION OF WISCONSIN

PAGE 8

TEMPLATE LISTING

PROJECT S014/4/

MARATHON CO-MERRILL RD CTH W

64252

STA	LT INTERCEPT	SLOPE	LT F LINE	LT IN DTCH	LT SHLD PT	R/L	RI SHLD PT	RT INDITCH	RT F LINE	SLOPE	RT INTERCEPT
128 00	1289.93	53.1	4.00	96.66	26.2	1296.35	95.96	26.3	4.00	1291.61	43.7
129 00	1289.82	55.0	4.00	97.07	26.0	1296.60	96.13	26.4	3.00	1296.08	60.1
130 00	1292.48	45.4	4.00	97.32	26.0	1296.85	96.38	26.4	3.00	1298.57	65.0
131 00	1291.73	49.3	4.00	97.56	26.0	1297.09	96.62	26.4	3.00	1296.03	54.9
132 00	1295.12	51.5	3.00	93.61	47.0	1297.34	96.87	26.4	3.00	1293.63	45.2
132 50	1298.04	59.2	3.00	93.84	46.6	1297.47	97.00	26.4	4.00	1295.31	33.2
133 00	1297.81	57.1	3.00	94.11	46.0	1297.59	97.12	26.4	4.00	1295.19	34.1
134 00	1298.67	57.2	3.00	94.61	45.0	1297.84	97.37	26.4	3.00	1298.71	50.6
135 00	1299.33	56.5	3.00	95.09	43.8	1298.08	97.69	26.3	3.00	1300.14	52.6
136 00	1298.62	50.8	3.00	95.61	41.8	1298.33	97.94	26.3	3.00	1301.05	52.8
137 00	1299.95	51.2	3.00	96.10	39.6	1298.58	98.40	25.4	3.00	1300.75	49.3
138 00	1299.80	47.5	3.00	96.59	37.9	1298.83	98.44	26.3	3.00	1301.11	48.0
139 00	1300.38	46.8	3.00	97.09	36.9	1299.08	98.69	26.3	3.00	1300.56	43.8
140 00	1301.81	48.1	3.00	97.59	35.4	1299.21	98.82	26.3	3.00	1300.49	40.6
141 00	1300.47	40.6	3.00	98.03	33.3	1299.12	98.73	26.3	3.00	1300.57	43.9
142 00	1300.03	41.1	3.00	97.59	33.8	1298.81	98.42	26.3	3.00	1303.44	54.9
143 00	1298.07	36.7	3.00	97.09	33.7	1298.28	97.89	26.3	3.00	1300.95	48.8
144 00	1297.78	37.3	3.00	96.44	33.3	1297.53	97.14	26.3	3.00	1298.77	42.8
145 00	1297.69	40.0	3.00	95.45	33.3	1296.54	96.15	26.3	3.00	1298.71	43.1
146 00	1297.55	42.9	3.00	94.36	33.3	1295.45	95.06	26.3	3.00	1298.52	45.8

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TEMPLATE LISTING

PROJECT S014/4/

MARATHON CO-MERRILL RD CTH W

64252

STA	LT INTERCEPT	SLOPE	LT F LINE	LT IN DTCH	LT SHLD PT	R/L	RI SHLD PT	RT INDITCH	RT F LINE	SLOPE	RT INTERCEPT
147 00	1298.12	47.9	3.00	93.27	33.3	1294.36	93.97	26.3	3.00	1298.75	49.7
148 00	1297.50	49.3	3.00	92.18	33.3	1293.27	92.88	26.3	3.00	1297.53	49.4
149 00	1294.68	44.1	3.00	91.08	33.3	1292.17	91.78	26.3	3.00	1295.33	46.0
150 00	1291.32	37.3	3.00	89.99	33.3	1291.08	90.69	26.3	3.00	1292.98	42.3
151 00	1289.70	35.6	3.00	88.90	33.3	1289.99	89.60	26.3	3.00	1290.46	38.0
152 00	1284.62	41.9	4.00	88.51	26.3	1288.90	88.51	26.3	4.00	1284.93	40.6
152 85	1282.15	48.0	4.00	87.59	26.3	1287.98	87.59	26.3	4.00	1280.97	52.8
153 00	1280.56	53.8	4.00	87.43	26.3	1287.82	87.43	26.3	4.00	1279.17	59.3
MARSH	1279.99	30.3	.25	79.61	30.2	1276.44			.25	1279.95	33.7
153 25	1280.17	54.4	4.00	87.18	26.3	1287.57	87.18	26.3	4.00	1278.99	59.1
MARSH	1279.48	31.7	.25	77.36	31.2	1275.77			.25	1278.83	32.8
154 00	1280.09	51.8	4.00	86.47	26.3	1286.86	86.47	26.3	4.00	1278.77	57.1
MARSH	1279.53	31.3	.25	77.48	30.8	1276.27			.25	1278.77	32.0
154 50	1280.03	50.4	4.00	86.05	26.3	1286.44	86.05	26.3	4.00	1279.49	52.5
MARSH	1279.60	29.8	.25	79.30	29.7	1277.07			.25	1279.32	31.2
155 00	1279.83	49.6	4.00	85.66	26.3	1286.05	85.66	26.3	4.00	1280.54	46.8
155 50	1281.39	42.3	4.00	85.29	26.3	1285.68	85.29	26.3	4.00	1281.13	43.0
156 00	1281.71	39.4	4.00	84.98	26.3	1285.37	84.98	26.3	4.00	1281.05	42.0
157 00	1290.02	52.2	3.00	83.73	33.3	1284.82	83.73	33.3	3.00	1287.21	43.8
157 26	1290.03	52.6	3.00	83.61	33.3	1284.70	83.61	33.3	3.00	1287.20	44.1

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STA	64252		MARATHON CO-MERRILL RD CTH W		PROJECT S014/4/		EARTHWORK ESTIMATES					PAGE 1			
	FILL AREA	CUT AREA	FILL VOLUME	CUT VOLUME	ACCU FILL VOLUME	ACCU CUT VOLUME	COMPACTION FACTORS	MARSH AREA	ROCK AREA	MARSH CUT & FILL	ROCK VOLUME		ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME
10 00	21	7	127	92	127	92	1.350							79-	3852
11 00	48	43	171	92	171	92									
11 55			99	178	200	270								BALANCE	7900
BALANCE TOTALS			200	270	270	270									
11 55			59	142	259	412	1.350							63	11129
12 00	24	131	79	142	349	412									
13 00	17	433	75	1042	334	1454	1.350							1004	21623
14 00	9	523	48	1768	382	3222	1.350							2707	33167
15 00		595	65	1768	515	3222								4754	43887
16 00		605	17	2070	399	5292	1.350							6976	53601
17 00		516	23	2070	538	5292								9052	63213
18 00	8	299	2222	399	399	7514								10541	71951
19 00	113	32	2222	538	538	7514								10850	79395
			2076	399	399	9590									
			2076	538	538	9590									

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STA	64252		MARATHON CO-MERRILL RD CTH W		PROJECT S014/4/		EARTHWORK ESTIMATES					PAGE 2			
	FILL AREA	CUT AREA	FILL VOLUME	CUT VOLUME	ACCU FILL VOLUME	ACCU CUT VOLUME	COMPACTION FACTORS	MARSH AREA	ROCK AREA	MARSH CUT & FILL	ROCK VOLUME		ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME
19 00	113	32	675	60	1314	11772	1.350							9999	85788
20 00	252		911	60	1773	11772								8776	91555
21 00	238		906		2220	11772	1.350							7593	96776
22 00	236		1223		2996	11772								6830	103620
23 00	153	111	876		3096	11772	1.350							6604	112215
24 00	143	166	1183		4179	11772								6553	120324
25 00	119	160	718	206	3814	11978	1.350							6536	127859
26 00	151	194	969	206	5148	11978								6736	134219
27 00	75	219	548	514	4362	12492	1.350							6272	136903
28 00	833		740	514	5888	12492								4659	140057
29 00	255	73	485	604	4847	13096	1.350							2807	142989
29 40	458	487	655	604	6543	13096								1412	146279
			498	655	5345	13751	1.350							1572	148859
			672	655	7215	13751									
			418	764	5763	14515	1.350								
			564	764	7779	14515									
			493	202	6256	14717	1.350								
			666	202	8445	14717									
			1195		7451	14717	1.350								
			1613		10058	14717									
			1372		8823	14717	1.350								
			1852		11910	14717									
			1088	74	9911	14791	1.350								
			1469	74	13379	14791									
			188	414	10099	15205	1.350								
			254	414	13633	15205									

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STA	64252		MARATHON CO-MERRILL RD CTH W		PROJECT S014/4/		EARTHWORK ESTIMATES					PAGE 3			
	FILL AREA	CUT AREA	FILL VOLUME	CUT VOLUME	ACCU FILL VOLUME	ACCU CUT VOLUME	COMPACTION FACTORS	MARSH AREA	ROCK AREA	MARSH CUT & FILL	ROCK VOLUME		ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME
29 40		487	1054	1054	10099	16259								2626	152854
30 00		463	1495	1495	10099	17754								4121	159351
31 00		345	1152	1152	10099	18906								5273	165439
32 00		277	1066	1066	10099	19972								6339	171373
33 00		299	1066	1066	13633	19972								7201	177043
34 00	2	169	3	866	10102	20838	1.350							7837	182232
35 00		177	3	866	13637	20838								8438	187347
36 00		148	3	640	10105	22522	1.350							8881	192298
37 00		91	3	640	10105	22522								9003	194136
38 00	8	44	4	640	13641	22644	1.350							9121	196744
39 00	26	25	4	640	13641	22644								9163	200806
ADD VOLUME			276	39	16339	22940	1.350							BALANCE	204081
			373	39	22940	22940									
			5886		8829										
			8829												

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MARATHON CO-MERRILL RD CTH W PROJECT 5014/4/ EARTHWORK ESTIMATES												PAGE 4			
STA	FILL AREA	CUT AREA	FILL VOLUME	CUT VOLUME	ACCU FILL VOLUME	ACCU CUT VOLUME	COMPACTION FACTORS	MARSH AREA	ROCK AREA	MARSH CUT & FILL VOLUME	ROCK VOLUME	ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME	GRASS AREA
64252	BALANCE TOTALS														
39 69			123	17	19076	22957	1.350							4070-	205535
ADD VOLUME			166	17	27027	22957									
			2614												
			3921												
40 00	190	5	205	26	19281	22983	1.350							4321-	207896
			277	26	27304	22983									
40 50	32	23	73	42	19354	23025	1.350							4378-	209862
			99	42	27403	23025									
41 00	47	22	211	72	19565	23097	1.350							4591-	213460
			285	72	27688	23097									
42 00	67	17	388	52	19953	23149	1.350							5063-	217584
			524	52	28212	23149									
43 00	142	11	875	21	20828	23170	1.350							6223-	222944
			1181	21	29393	23170									
44 00	330		700		21528	23170	1.350							7168-	225777
			945		30338	23170									
44 50	426		601	2	22729	23172	1.350							8877-	228380
			811	2	32049	23172									
ADD VOLUME			900												
					PE. LT/RT										
45 00	223	3	553	109	23282	23281	1.350							9515-	233229
			747	109	32796	23281									
46 00	76	57	151	460	23433	23741	1.350							9259-	238209
			204	460	33000	23741									
47 00	5	192													

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MARATHON CO-MERRILL RD CTH W PROJECT 5014/4/ EARTHWORK ESTIMATES												PAGE 5			
STA	FILL AREA	CUT AREA	FILL VOLUME	CUT VOLUME	ACCU FILL VOLUME	ACCU CUT VOLUME	COMPACTION FACTORS	MARSH AREA	ROCK AREA	MARSH CUT & FILL VOLUME	ROCK VOLUME	ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME	GRASS AREA
64252	BALANCE TOTALS														
47 00	5	192	10	1263	23443	25004	1.350							8010-	244275
			14	1263	33014	25004									
48 00		491	1877	23443	26881	26881								6133-	251459
			1877	33014	26881										
49 00		523	1999	23443	28880	28880								4134-	258885
			1999	33014	28880										
50 00		556	1952	23443	30832	30832								2182-	266422
			1952	33014	30832										
51 00		498	1875	23443	32707	32707								307-	273620
			1875	33014	32707										
52 00		515	46	369	23489	33076	1.350							BALANCE	275566
			62	369	33076	33076									
52 27					7150	10136									
BALANCE TOTALS					10136	10136									
52 27			119	966	23608	34042	1.350							805	280667
			161	966	33237	34042									
53 00	89	206	903	433	24511	34475	1.350							19	287625
			1219	433	34456	34475									
54 00	398	28	14		24525	34475	1.350							BALANCE	287678
			19		34475	34475									
54 00					1036	1399									
BALANCE TOTALS					1399	1399									

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MARATHON CO-MERRILL RD CTH W PROJECT 5014/4/ EARTHWORK ESTIMATES												PAGE 6			
STA	FILL AREA	CUT AREA	FILL VOLUME	CUT VOLUME	ACCU FILL VOLUME	ACCU CUT VOLUME	COMPACTION FACTORS	MARSH AREA	ROCK AREA	MARSH CUT & FILL VOLUME	ROCK VOLUME	ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME	GRASS AREA
64252	BALANCE TOTALS														
54 00			552	15	25177	34590	1.350							730-	289644
			745	15	35320	34590									
ADD VOLUME			100	100	CHANNEL CHANGE	53880	MASTE								
54 30	621		1595		26772	34590	1.350							2883-	294570
			2153		37475	34590									
55 00	610		1268	27	28040	34617	1.350							4568-	299713
			1712	27	39185	34617									
56 00	75	15	138	1161	28178	35778	1.350							3593-	305125
			186	1161	39371	35778									
57 00		612	1124		28178	36902								2469-	308807
			1124		39371	36902									
57 50		602	886		28178	37788								1583-	312336
			886		39371	37788									
58 00		356	1399		28178	39187								184-	319229
			1399		39371	39187									
59 00		400	184		28178	39371								BALANCE	320237
			184		39371	39371									
59 16					3653	4896									
BALANCE TOTALS					4896	4896									
59 16			962		28178	40333								962	325505
			962		39371	40333									
60 00		219	72	446	28250	40779	1.350							1311	330133
			97	446	39468	40779									
61 00	39	22	456	40	28706	40819	1.350							735	333746
			616	40	40084	40819									

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STA	MARATHON CO-MERRILL RD CTH W		PROJECT 5014/4/		EARTHWORK ESTIMATES				PAGE 7		
	FILL AREA	CUT AREA	ACCUM FILL VOLUME	CUT VOLUME	ACCM CUT VOLUME COMMON M/R	MARSH AREA	ROCK AREA	ACCUM MARSH VOLUME		ACCUM ROCK VOLUME	GRASS AREA
62 00	207		544		29250	40819	1.350				336114
62 60			735		40819	40819					
BALANCE TOTALS											
62 60					1072	1448					
63 00	277		352		29602	40819	1.350			475-	337644
64 00	107		475		41294	40819					
65 00	5	61	710		30312	40819	1.350			1434-	340841
66 00			959		42253	40819					
66 00	5	61	207	112	30519	40931	1.350			1601-	344006
66 00	5	61	279	112	42532	40931					
66 00	18	72	9	315	30528	41246	1.350			1298-	348359
66 82			12	315	42544	41246					
67 00	46	79	27	276	30555	41522	1.350			1058-	351699
67 00	46	79	36	276	42580	41522					
67 00	46	79	21	50	30576	41572	1.350			1036-	352422
67 00	46	79	28	50	42608	41572					
68 00	620	30	1234	201	31810	41773	1.350			2501-	360240
68 00	620	30	1666	201	44274	41773				3627	BORROW
68 38	613	33	867	44	32677	45444	1.350				
68 38	613	33	1170	44	45444	45444					
BALANCE TOTALS											
68 38	613	33			3427	4625					364480
68 38	613	33			4625	4625					

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STA	MARATHON CO-MERRILL RD CTH W		PROJECT 5014/4/		EARTHWORK ESTIMATES				PAGE 8		
	FILL AREA	CUT AREA	ACCUM FILL VOLUME	CUT VOLUME	ACCM CUT VOLUME COMMON M/R	MARSH AREA	ROCK AREA	ACCUM MARSH VOLUME		ACCUM ROCK VOLUME	GRASS AREA
68 38	613	33	32677		45444		1.350				364480
68 38	613	33	45444		45444						
69 19			32677		45444						364480
69 19			45444		45444						
69 19	783	27	899	31	33576	45475	1.350			1183-	368037
69 50	784	27	1214	31	46658	45475					
70 00	159	30	873	53	34449	45528	1.350			2309-	372561
70 00	159	30	1179	53	47837	45528					
71 00	453	26	1134	104	35583	45682	1.350			3736-	379651
71 00	453	26	1531	104	49568	45682					
71 80	738	17	1765	63	37348	45695	1.350			6056-	386486
71 80	738	17	2383	63	51751	45695					
72 00	549	13	476	10	37824	45705	1.350			6689-	388402
72 00	549	13	643	10	52394	45705					
73 00	490		1923	23	39747	45728	1.350			9262-	396244
73 00	490		2596	23	54990	45728					
73 50	295		726		40473	45728	1.350			10242-	398458
73 50	295		980		55970	45728					
74 00	301		551		41024	45728	1.350			10986-	400351
74 00	301		744		56714	45728					
75 00	238	24	998	46	42022	45774	1.350			12287-	405788
75 00	238	24	1347	46	58061	45774					
75 75	61	129	415	212	42437	45986	1.350			12635-	409651
75 75	61	129	560	212	58621	45986					

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STA	MARATHON CO-MERRILL RD CTH W		PROJECT 5014/4/		EARTHWORK ESTIMATES				PAGE 9		
	FILL AREA	CUT AREA	ACCUM FILL VOLUME	CUT VOLUME	ACCM CUT VOLUME COMMON M/R	MARSH AREA	ROCK AREA	ACCUM MARSH VOLUME		ACCUM ROCK VOLUME	GRASS AREA
75 75	61	129	28	519	42465	46505	1.350			12154-	411913
75 75	61	129	38	519	58659	46505					
76 35			1603		42465	48108				10551-	416747
76 35			980		58659	48108					
77 00			3207		42465	51315				7344-	425231
77 00			3207		58659	51315					
77 60			2819		42465	54134				4525-	433676
77 60			2819		58659	54134					
78 00			2136		42465	56270				2389-	439683
78 00			2136		58659	56270					
78 00			2389		42465	58659					
78 00			2389		58659	58659					
BALANCE TOTALS											
78 46			9788		13215	13215					445689
78 46			13215		13215						
ADD VOLUME											
79 00		1218	2701		42465	61460				2701	446474
79 00		1218	2701		58659	61460					
79 00		1218	100		P.E. RT.						
79 00		1218	100								
ADD VOLUME											
80 00		795	3728		42465	65288				6629	456599
80 00		795	3728		58659	65288					
80 00		795	100		P.E. LT.						
80 00		795	100								
81 00		529	2453		42465	67741				9082	464822
81 00		529	2453		58659	67741					
82 00		419	1755		42465	69496				10837	471933
82 00		419	1755		58659	69496					

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STA	MARATHON CO-MERRILL RD CTH W				PROJECT S014/4/				EARTHWORK ESTIMATES				PAGE 13		
	FILL AREA	CUT AREA	FILL VOLUME	CUT VOLUME	ACCU FILL VOLUME	ACCU CUT VOLUME	COMPACTION COMMON M/R	MARSH AREA	ROCK AREA	MARSH CUT & FILL	ROCK VOLUME	ACCUM MARSH VOLUME		ACCUM ROCK VOLUME	ACCUM NET VOLUME
114 00	125	176	303 409	931 931	60808 83456	81643 81643	1.350							1813-	653917
115 00	39	327	50 68	564 564	60858 83524	82207 82207	1.350							1317-	657797
115 50	15	283	16 22	541 541	60874 83546	82748 82748	1.350							798-	661627
116 00	3	302	4 6	804 804	60878 83552	83552 83552	1.350							BALANCE	667058
116 79					2404 3247	3247 3247									
BALANCE TOTALS															
116 79			1	204	60879	83756	1.350							203	668440
117 00		243	1	204	83553	83756								1030	674533
118 00		204		827 827	60879 83553	84583 84583								1731	680413
119 00		175		701 701	60879 83553	85284 85284								2410	686506
120 00		192		679 679	60879 83553	85963 85963								3175	692870
121 00		221		765 765	60879 83553	86728 86728								3544	695442
121 40		278		369 369	60879 83553	87097 87097								4012	699161
122 00		144		468 468	60879 83553	87565 87565									

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STA	MARATHON CO-MERRILL RD CTH W				PROJECT S014/4/				EARTHWORK ESTIMATES				PAGE 14		
	FILL AREA	CUT AREA	FILL VOLUME	CUT VOLUME	ACCU FILL VOLUME	ACCU CUT VOLUME	COMPACTION COMMON M/R	MARSH AREA	ROCK AREA	MARSH CUT & FILL	ROCK VOLUME	ACCUM MARSH VOLUME		ACCUM ROCK VOLUME	ACCUM NET VOLUME
122 00		144		806 806	60879 83553	88371 88371								4818	705276
123 00		292		942 942	60879 83553	89313 89313								5760	711312
124 00		217		683 683	60879 83553	89996 89996								6443	716744
125 00		152		224 224	60879 83553	90220 90220	1.350							6667	719145
125 50	1	91	57 77	84 84	60936 83630	90304 90304	1.350							6674	721040
126 00	61		673 909		61609 84539	90304 90304	1.350							5765	725243
127 00	303		1222 1650		62831 86189	90304 90304	1.350							4115	730909
128 00	357		1187 1602	104 104	64018 87791	90408 90408	1.350							2617	737889
129 00	284	56	855 1154	376 376	64873 88945	90784 90784	1.350							1839	745596
130 00	178	147	744 1004	333 333	65617 89949	91117 91117	1.350							1168	752746
131 00	224	34	795 1073	77 77	66512 91172	91194 91194	1.350							22	759278
ADD VOLUME			100 150		P.E. RT.										
132 00	206	8	19 26	4 4	66531 91198	91198 91198	1.350							BALANCE	759462
132 03															

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	FILL AREA	CUT AREA	FILL VOLUME	CUT VOLUME	ACCU FILL VOLUME	ACCU CUT VOLUME	COMPACTION COMMON M/R	MARSH AREA	ROCK AREA	MARSH CUT & FILL	ROCK VOLUME	ACCUM MARSH VOLUME		ACCUM ROCK VOLUME	ACCUM NET VOLUME
132 03			292 394 150 225	59 59	66973 91817	91257 91257	1.350							335-	762074
ADD VOLUME					TN. RD. RT.										
132 50	130	61	177 239	116 116	67150 92056	91373 91373	1.350							683-	764880
133 00	62	65	117 158	410 410	67267 92214	91783 91783	1.350							431-	771290
134 00	2	157	2 3	434 434	67269 92217	92217 92217	1.350							BALANCE	775897
134 62															
BALANCE TOTALS					738 1019	1019 1019									
134 62			1 1	256 256	67270 92218	92473 92473	1.350							255	778622
135 00		216		743 743	67270 92218	93216 93216								998	785770
136 00		186		733 733	67270 92218	93949 93949								1731	792534
137 00		210		704 704	67270 92218	94653 94653								2435	798916
138 00		170		594 594	67270 92218	95247 95247								3029	804788
139 00		151													

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	FILL AREA	CUT AREA	FILL VOLUME	CUT VOLUME	ACCU FILL VOLUME	ACCU CUT VOLUME	COMPACTION FACTORS COMMON	M/R	MARSH AREA	ROCK AREA	MARSH CUT & FILL	ROCK CUT & FILL		ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME
139 00	151		577	577	67270	95824									3606	810283
140 00	161		577	577	92218	95824									4137	815491
141 00	126		531	531	67270	96355									4757	821136
142 00	209		531	531	92218	96355									5334	826926
143 00	104		620	620	67270	96975									5676	831944
144 00	82		620	620	92218	96975									6084	836754
145 00	139		578	578	67271	97553	1.350								6747	841927
146 00	219		578	578	92219	97553	1.350								7802	847791
147 00	351		343	343	67272	97896	1.350								9145	854140
148 00	375		343	343	92220	97896	1.350								10317	860119
149 00	259		408	408	67272	98304	1.350								11056	865226
150 00	141		408	408	92220	98304	1.350								11455	869620
151 00	75		663	663	67272	98967									10873	874035
152 00	289		663	663	92220	98967										
			1055	1055	67272	100022										
			1055	1055	92220	100022										
			1343	1343	67272	101365										
			1343	1343	92220	101365										
			1172	1172	67272	102537										
			739	739	67272	103276	1.350									
			739	739	92220	103276	1.350									
			399	399	67272	103675	1.350									
			399	399	92220	103675	1.350									
			139	139	67806	103814	1.350									
			139	139	92941	103814	1.350									

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	FILL AREA	CUT AREA	FILL VOLUME	CUT VOLUME	ACCU FILL VOLUME	ACCU CUT VOLUME	COMPACTION FACTORS COMMON	M/R	MARSH AREA	ROCK AREA	MARSH CUT & FILL	ROCK CUT & FILL		ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME
152 00	289		1240	1240	69046	103814	1.350								9199	878814
152 85	500		1674	1674	94615	103814									8697	879889
153 00	640		316	316	69362	103814	1.350								7617	881841
153 25	694		427	427	95042	103814	1.100	181							4484	887537
154 00	616		617	617	69979	103814	1.350								2706	891065
154 50	537		833	833	95875	103814	1.100	178							1329	894273
155 00	459		1820	1820	71799	103814	1.350								358	897040
155 50	318		2457	2457	98332	103814	1.100	150							BALANCE	898133
155 72			1067	1067	72866	103814	1.350									
			1440	1440	99772	103814	1.100	96								
			922	922	73788	103814	1.350									
			1245	1245	101017	103814	1.100									
			719	719	74507	103814	1.350									
			971	971	101988	103814										
			265	265	74772	103814	1.350									
			358	358	102346	103814										
BALANCE TOTALS			7503	7503	11597	11597										
155 72			10129	10129	10129	11597										
155 72			75089	75089	103814	1.350										
156 00	311		428	428	102774	103814										
BALANCE TOTALS			7503	7503	11597	11597										
155 72			10129	10129	10129	11597										
155 72			75089	75089	103814	1.350										
156 00	311		428	428	102774	103814										

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STA	MARATHON CO-MERRILL RD CTH W				PROJECT 5014/4/				EARTHWORK ESTIMATES				PAGE 18			
	FILL AREA	CUT AREA	FILL VOLUME	CUT VOLUME	ACCU FILL VOLUME	ACCU CUT VOLUME	COMPACTION FACTORS COMMON	M/R	MARSH AREA	ROCK AREA	MARSH CUT & FILL	ROCK CUT & FILL		ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME
156 00	311		575	575	76405	105495	1.350								523-	906793
ADD VOLUME			776	776	104550	105495										
			741	741	1000	1000	1600.00									
			1000	1000	1000	1000										
157 00	368		359	359	76405	106018										
157 26	380		359	359	104550	106018										
BALANCE TOTALS			1633	1633	2204	2204										
157 26	380		76405	76405	106018	106018										
157 26			104550	104550	106018	106018										

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