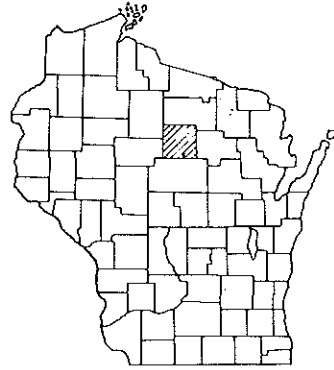


INDEX OF SHEETS

- 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

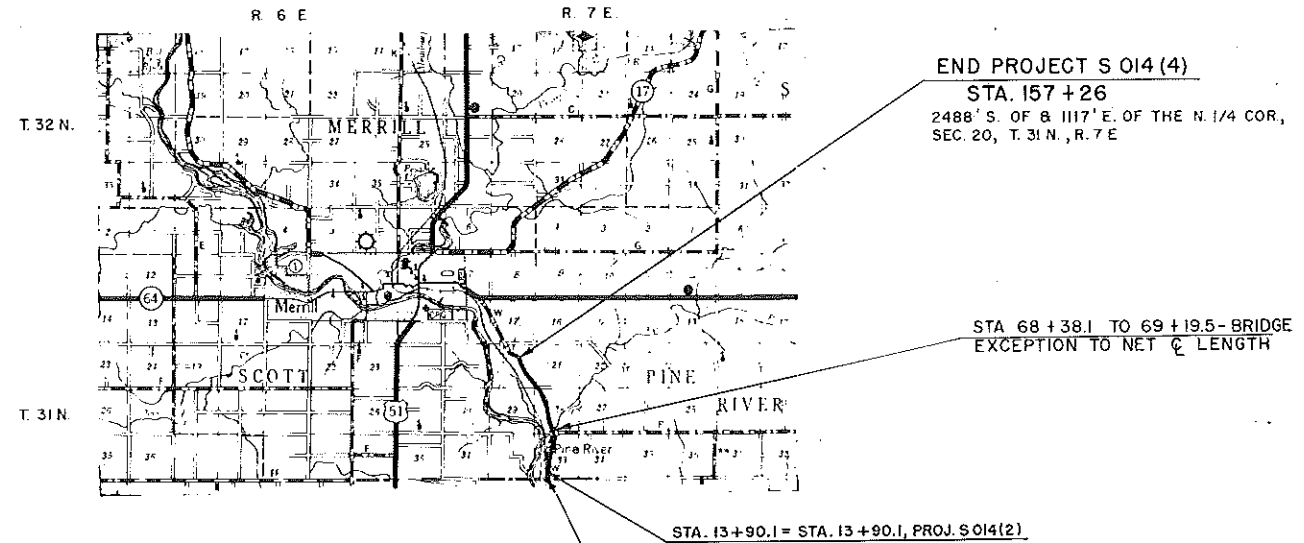
PLAN AND PROFILE OF PROPOSED
MARATHON COUNTY LINE - MERRILL ROAD
C.T.H. "W"
LINCOLN COUNTY
PROJECT S 014 (4)

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



END PROJECT S 014 (4)
STA. 157+26
2488' S. OF & 1117' E. OF THE N. 1/4 COR.,
SEC. 20, T. 31 N., R. 7 E.

STA 68+38.1 TO 69+19.5 - BRIDGE
EXCEPTION TO NET C LENGTH

STA. 13+90.1 = STA. 13+90.1, PROJ. S 014 (2)

BEGINNING OF PROJECT S 014 (4) STA. 10+00=
STA. 10+00 BEG. PROJ. S 014 (2)
1322' E. OF THE SW. COR., SEC. 33, T. 31 N., R. 7 E.

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	.....	
TRAVELED WAY OR P.E.	.....	
RAILROADS	.....	
BASE OR SURVEY LINE	.....	

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

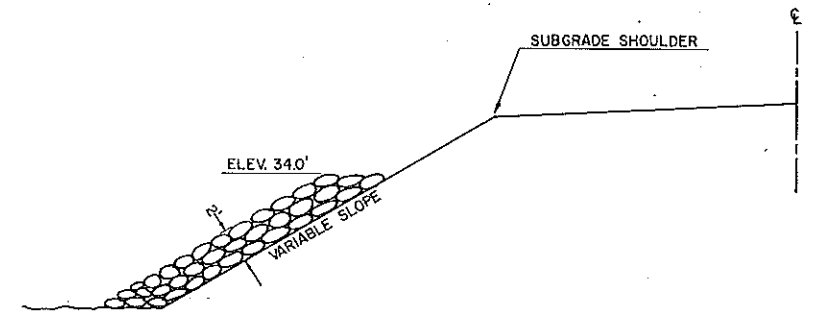
RECOMMENDED FOR APPROVAL:
DATE 12/7/64 E. J. Rydzek CHIEF DESIGNER

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

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

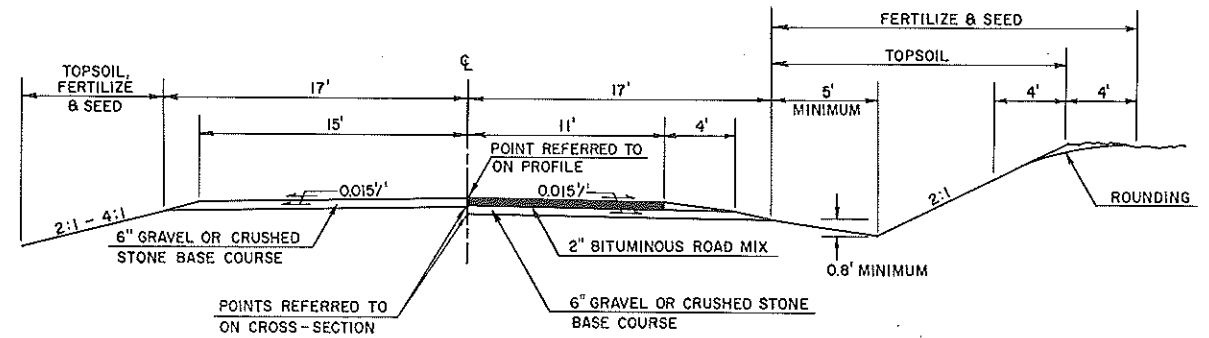
APPROVED:

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

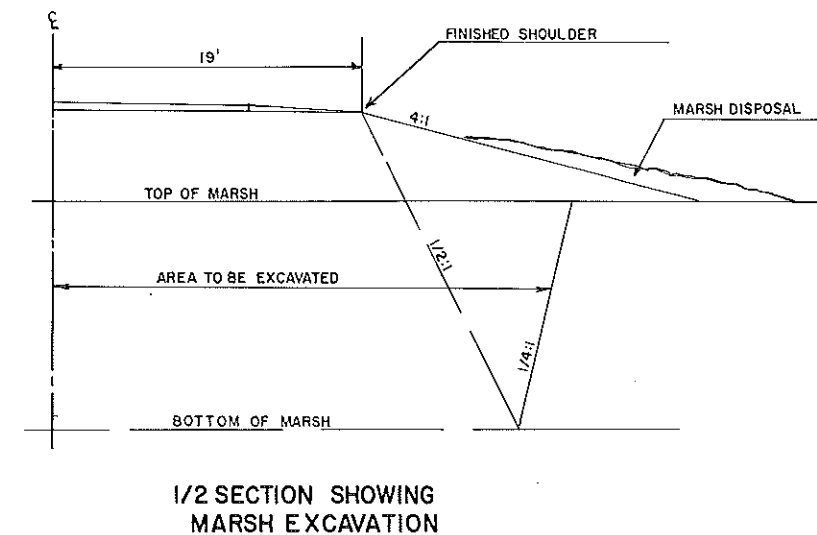
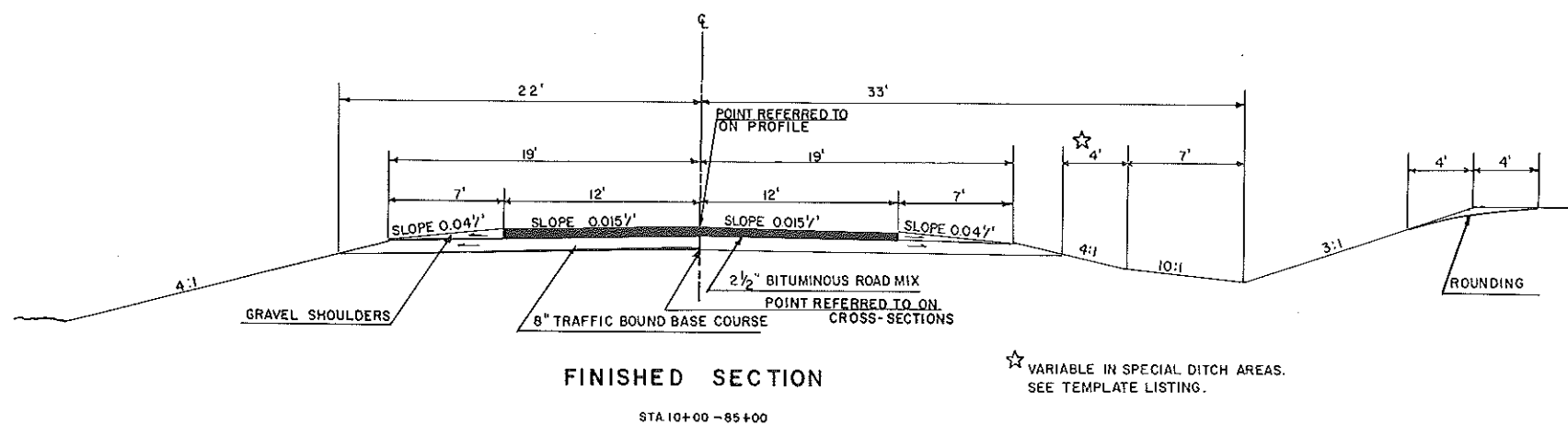
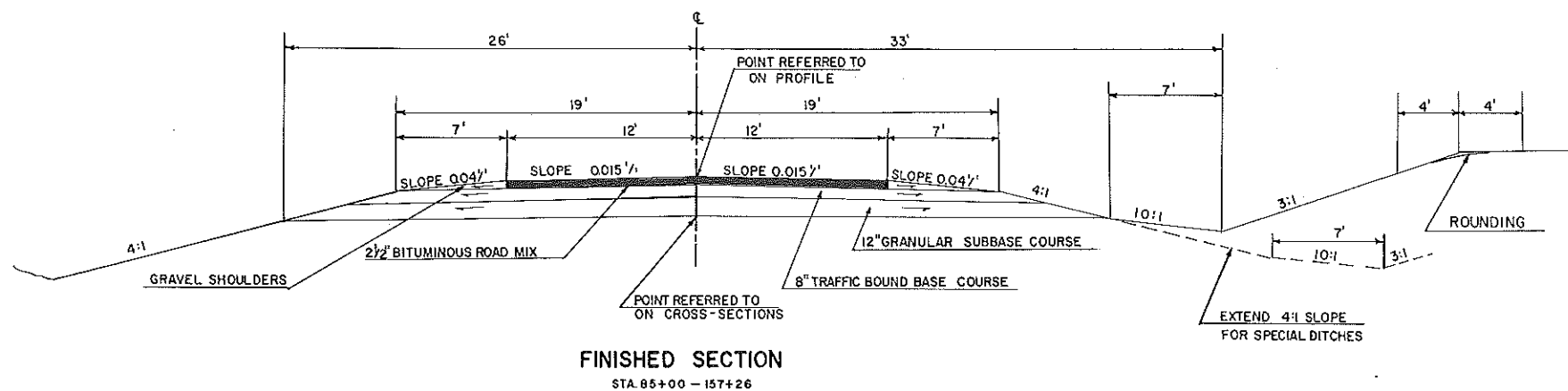
B.R. REGION	PROJECT	SHEET NO.
4	S 014(4)	3

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	SQ. YD.	CU. YD.
	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
TOTALS		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



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	
TOTALS	7.8	10	7.8	10

REMOVING GUARD RAIL

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

OBLITERATING OLD ROAD

LOCATION	STA.
28+50 - 35+00	7
150+50 - 157+50	7
TOTAL	14

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
TOTALS	102,227	3,791	987

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
TOTAL	20,400

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
TOTAL	17,000

HEAVY RIPRAP

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

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
TOTAL	324.5

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
TOTAL				1,030

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
TOTAL	79

DETAIL SUMMARY OF MISCELLANEOUS QUANTITIES

LANDMARK REFERENCE MONUMENTS

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

CULVERT PIPE

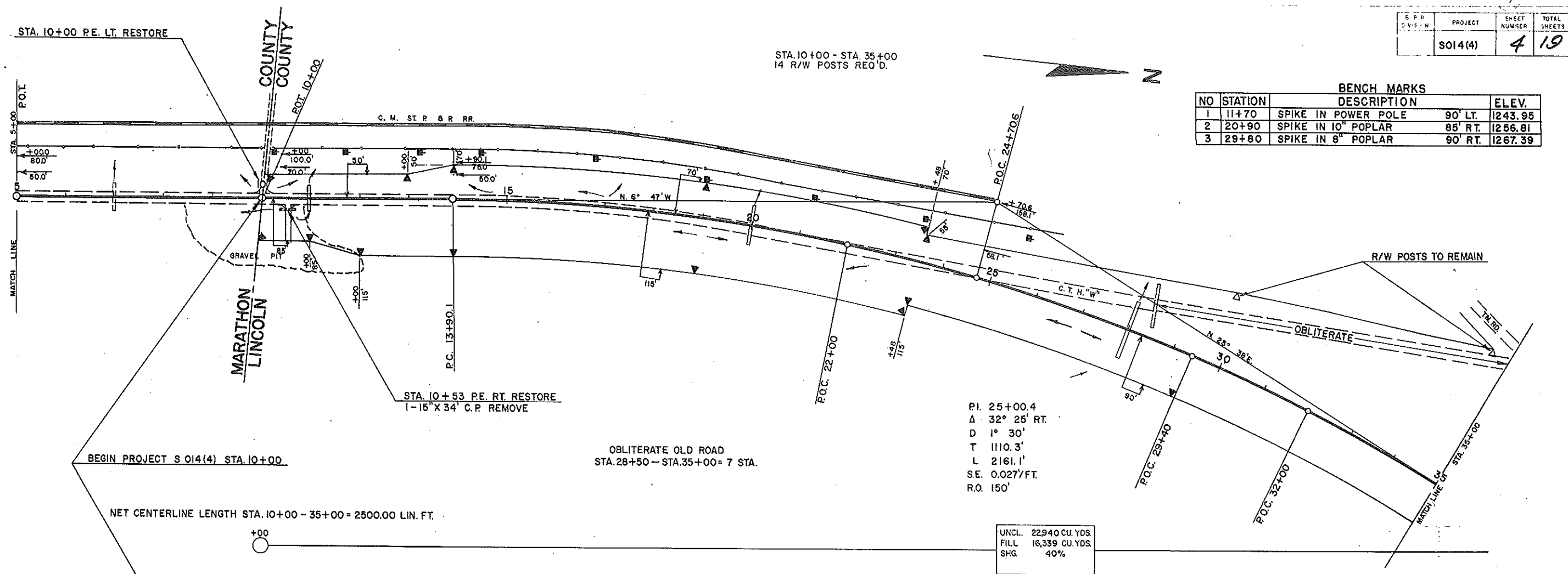
<u>STATION</u>	<u>APP.</u>	<u>LOCATION</u>		<u>CULVERT PIPE CLASS III</u>				<u>MARKER POSTS (Ea)</u>	
		<u>LT.</u>	<u>RT.</u>	<u>18"</u>	<u>24"</u>	<u>42"</u>	<u>48"</u>		
10+98		x			52			2	
20+00		x			80			2	
28+00		x					122	2	
45+00		x			64			2	
53+80		x				116		2	
65+57	"P"		x			60		2	
65+75	P.E.		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			
TOTALS					406	694	222	122	22

APRON ENDWALLS

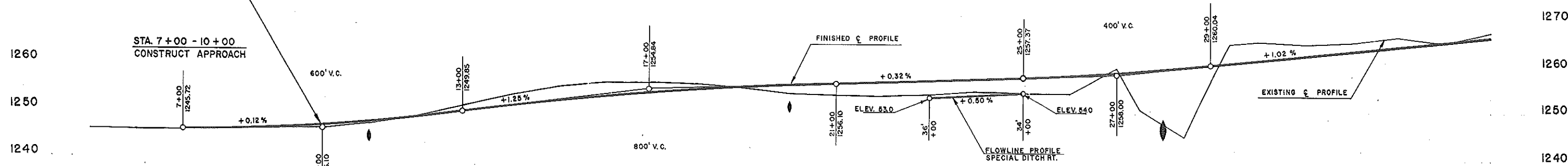
<u>SIZE:</u>	<u>18"</u>	<u>24"</u>	<u>42"</u>	<u>48"</u>
<u>NO.:</u>	28	26	4	2

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



UNCL. 22,940 CU. YDS.
 FILL 16,339 CU. YDS.
 SHG. 40%



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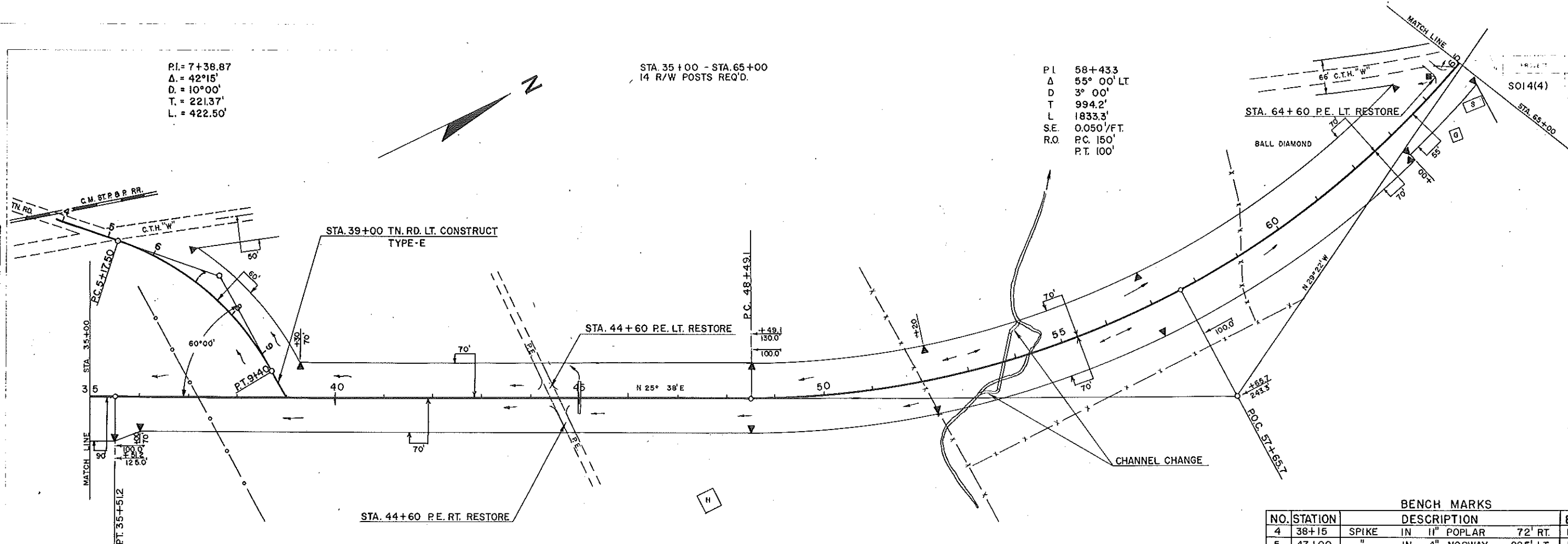
PLAN & PROFILE STA. 5+00 - 35+00

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.

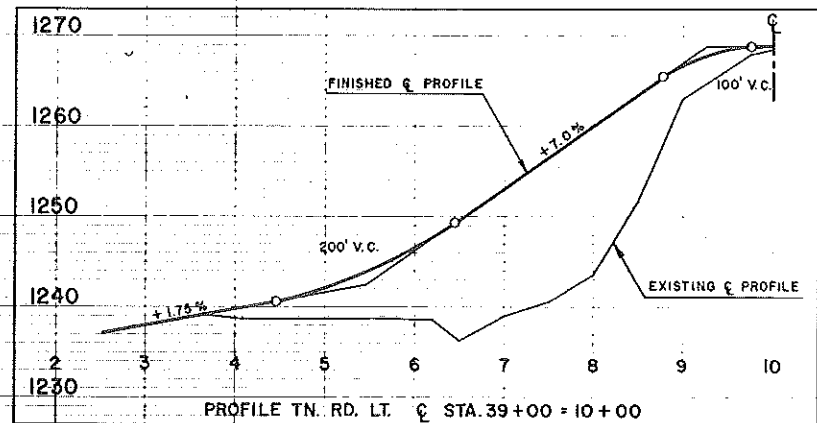
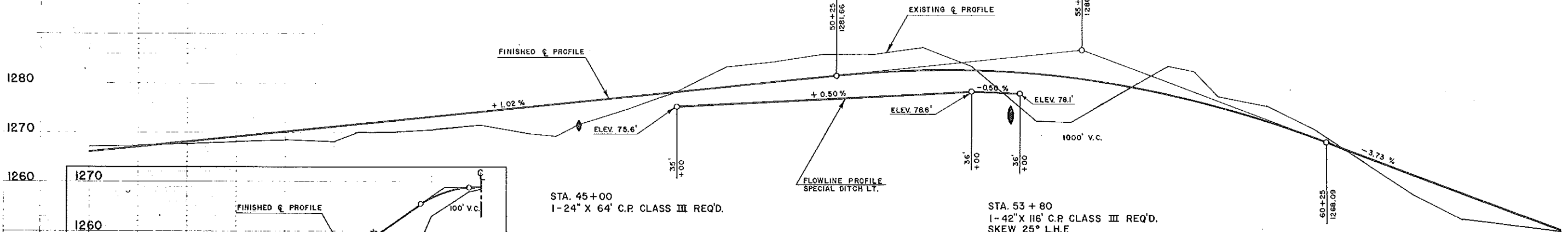
BENCH MARKS				
NO.	STATION	DESCRIPTION		EL.
4	38+15	SPIKE IN 1" POPLAR	72' RT.	12
5	47+00	" IN 4" NORWAY	225' LT.	12
6	57+00	" IN 6 POPLAR	145' LT	12

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%

ELEV.

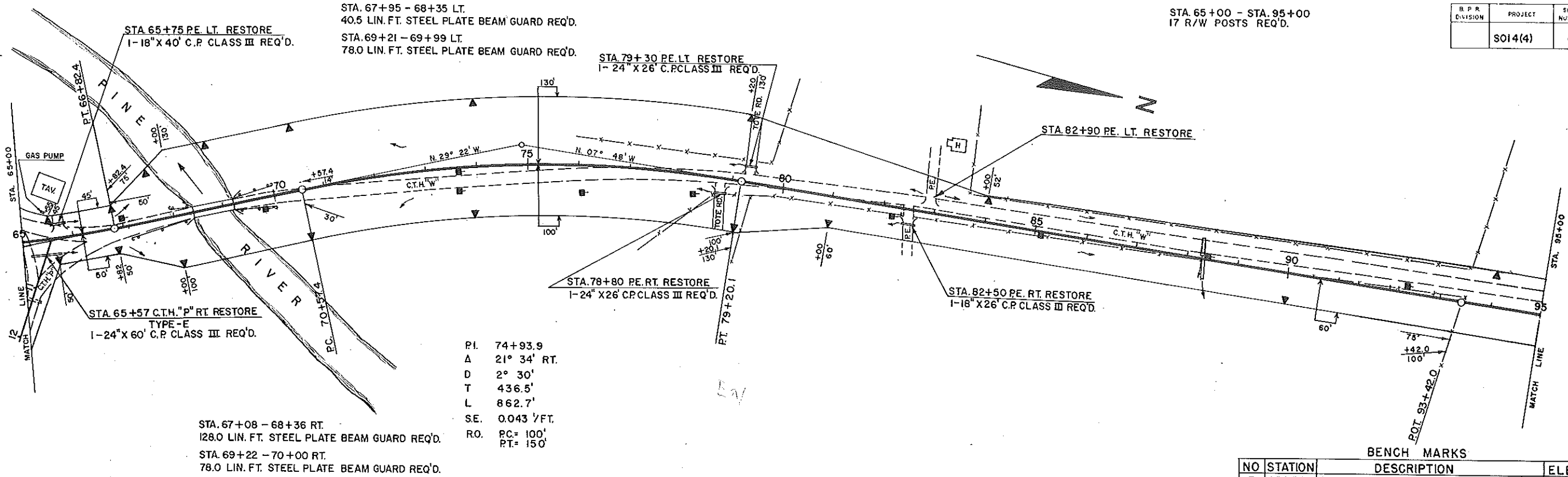


STA. 45+00
 1-24" X 64' C.P. CLASS III REQ'D.

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

35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	

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



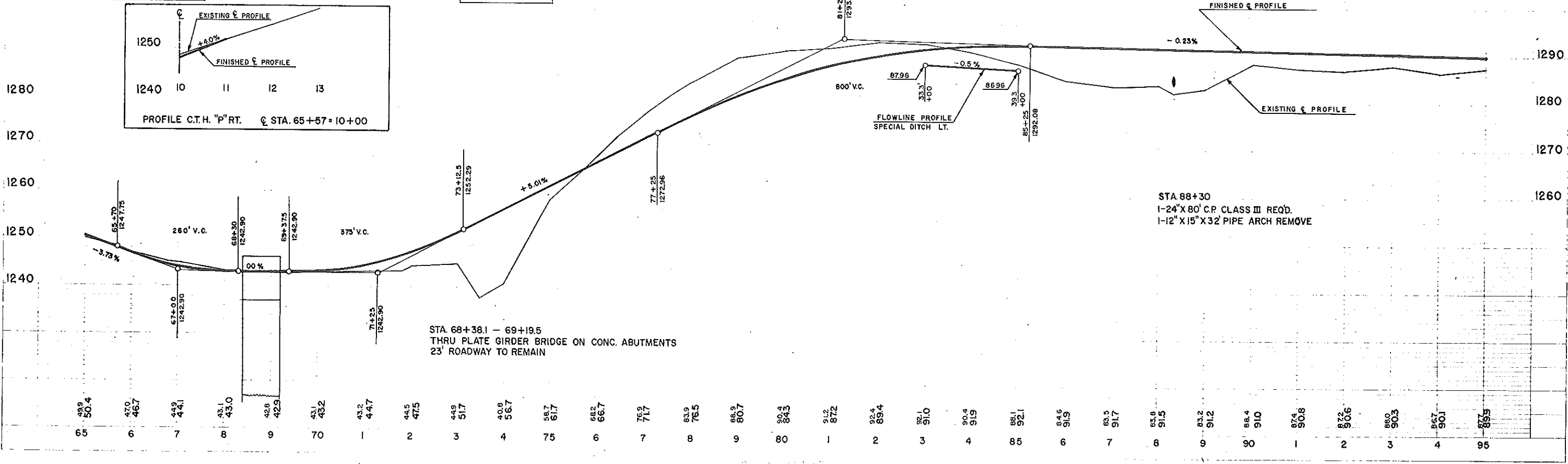
P.I. 74+93.9
 A 21° 34' RT.
 D 2° 30'
 T 436.5'
 L 862.7'
 S.E. 0.043 V/FT.
 R.O. P.C. = 100'
 RT. = 150'

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

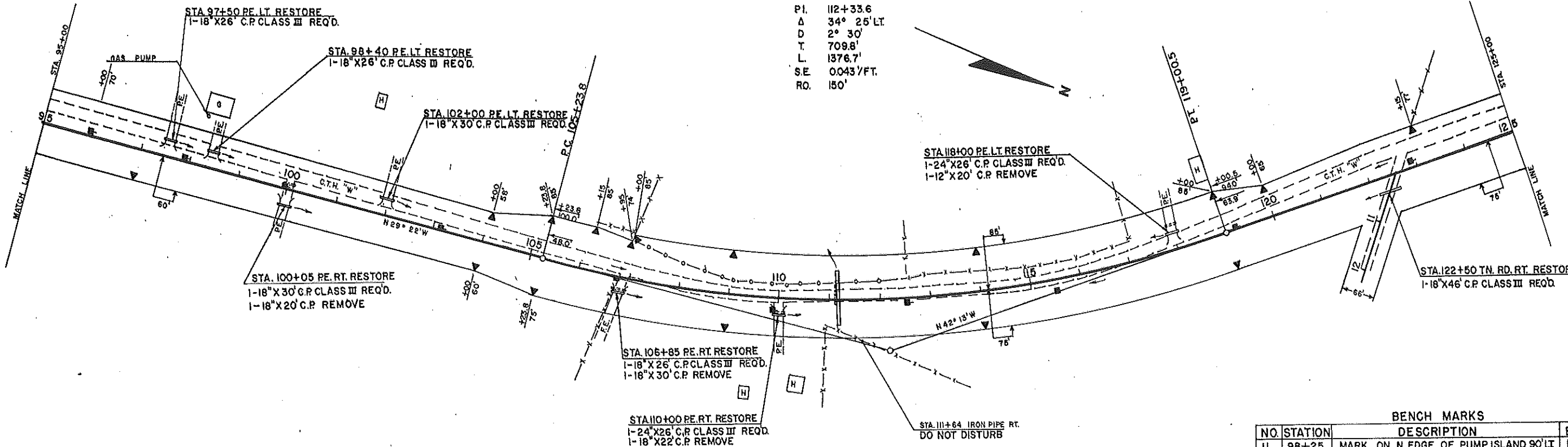
UNCL. 998 CU.YDS.	+38.1	+19.5
FILL 3427 CU.YDS.		
SHG. 35%		
BORROW 3627 CU.YDS.		



PLAN & PROFILE STA. 65+00 - 95+00

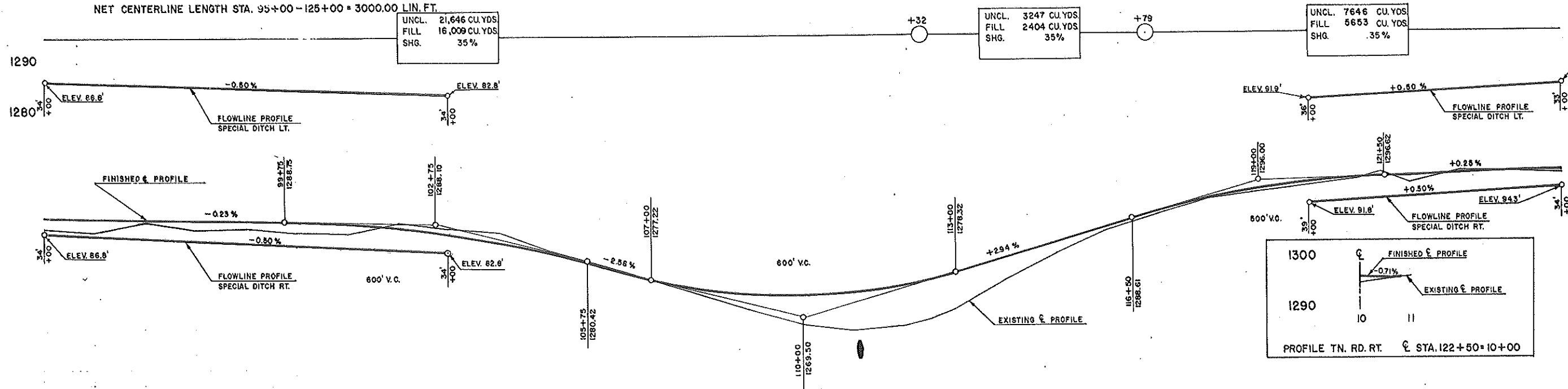
STA. 95+00 - STA. 125+00
16 R/W POSTS REQ'D.

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

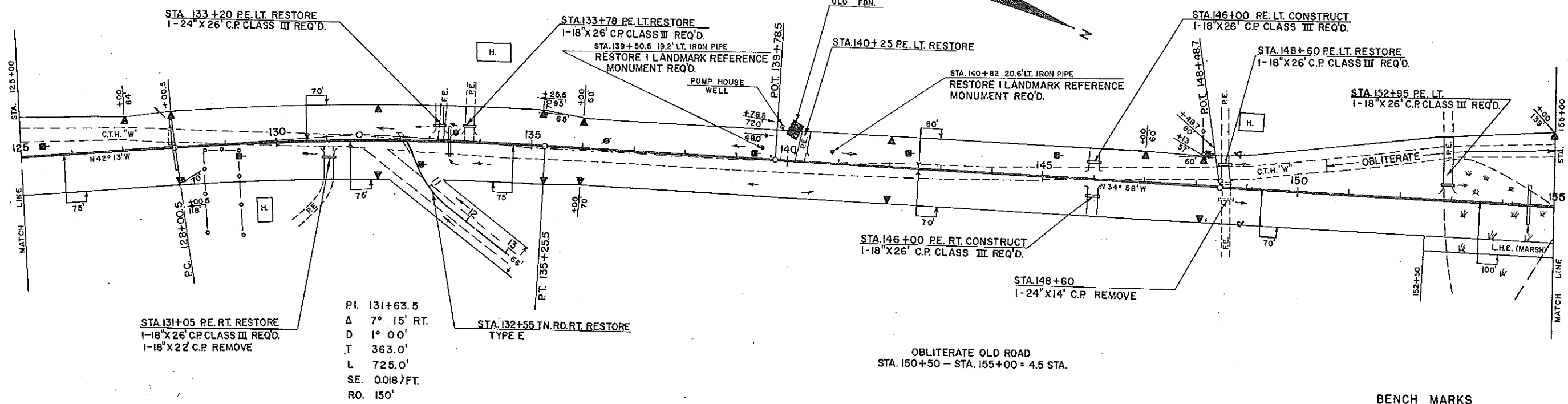
NET CENTERLINE LENGTH STA. 95+00 - 125+00 = 3000.00 LIN. FT.



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

87.7	89.0	87.4	87.8	86.8	86.6	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	89.6	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.



PI. 131+63.5
Δ 7° 15' RT.
D 1° 0' 0"
T 363.0'
L 725.0'
SE. 0.0187 FT.
RO. 150'

OBLITERATE OLD ROAD
STA. 150+50 - STA. 155+00 = 4.5 STA.

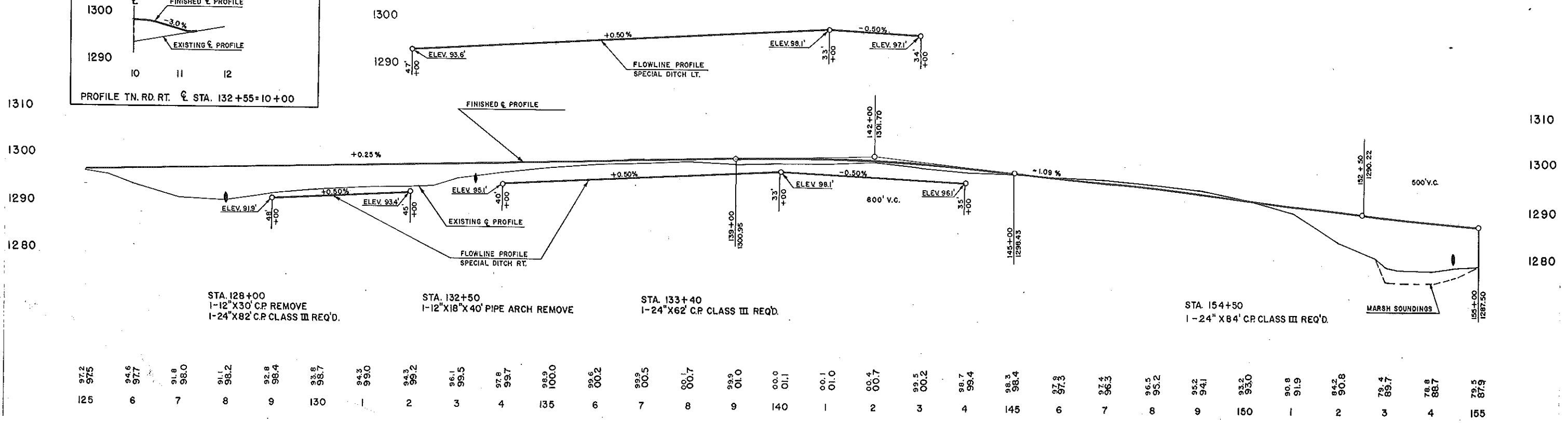
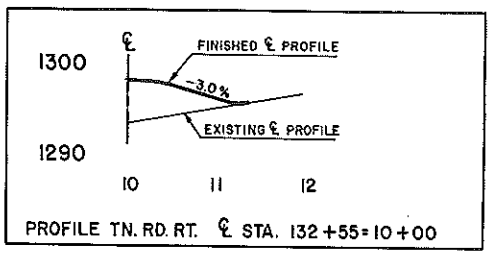
BENCH MARKS

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

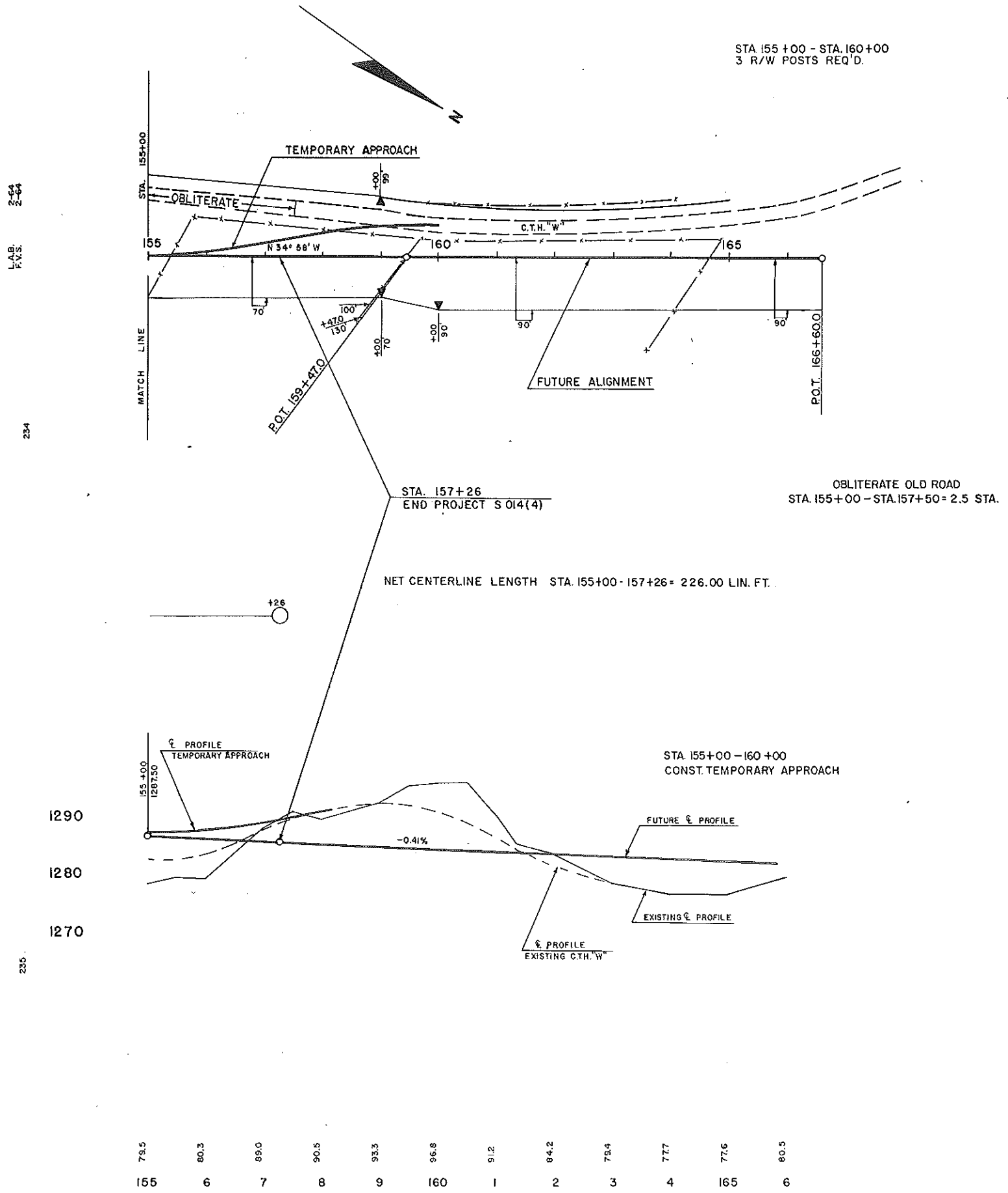
NET CENTERLINE LENGTH STA. 125+00 - STA. 155+00 = 3,000.00 LIN. FT.

+03 UNCL. 1019 CU. YDS.
FILL 738 CU. YDS.
SHG. 38%

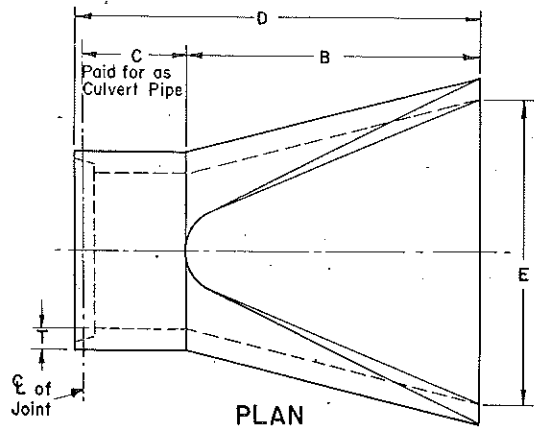
UNCL. 13,637 CU. YDS.
FILL 10,123 CU. YDS.
SHG. 35%
MARSH 987 CU. YDS.
BORROW 164 CU. YDS.



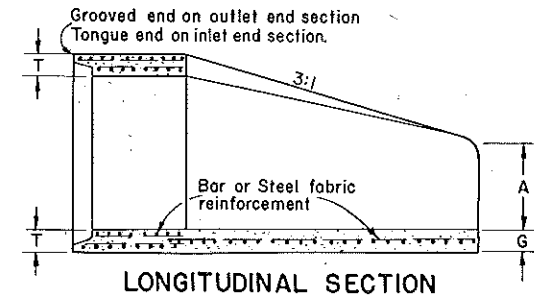
PLAN & PROFILE STA. 125+00-155+00



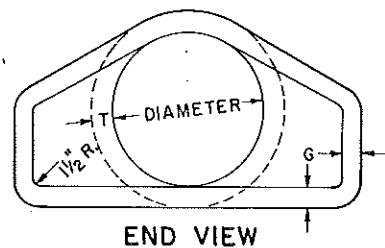
BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEVATION
17	155+00	SPIKE IN 18" POPLAR	75' RT. 1287.50
18	165+15	SPIKE IN 18" WHITE PINE	110' LT. 1287.50



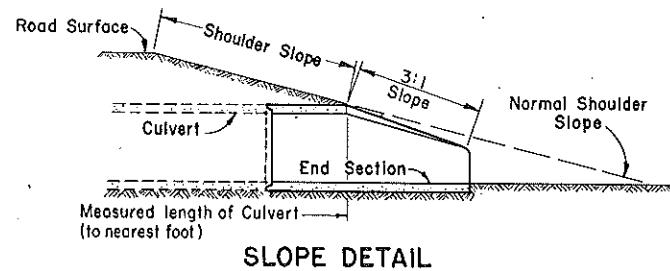
PLAN



LONGITUDINAL SECTION



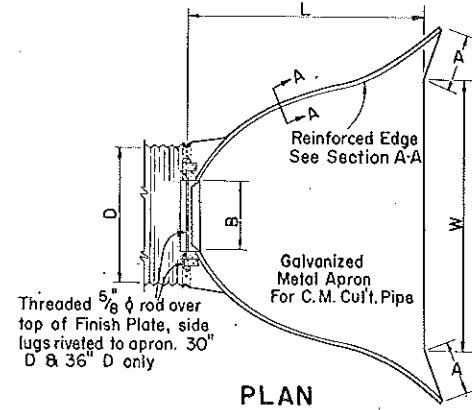
END VIEW



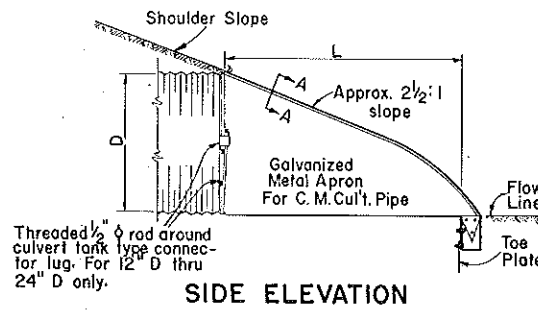
SLOPE DETAIL

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"

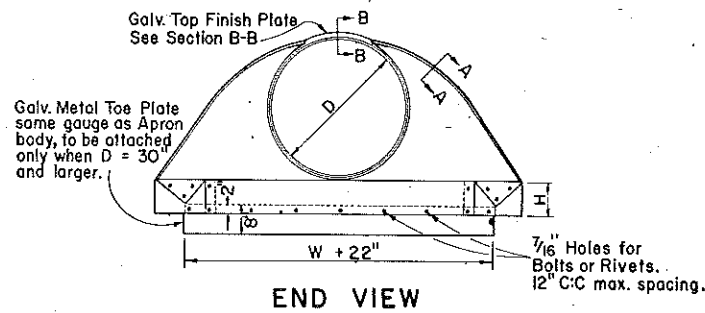
REINFORCED CONCRETE APRON ENDWALLS



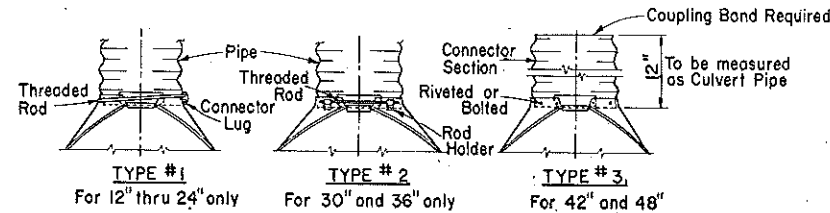
PLAN



SIDE ELEVATION



END VIEW



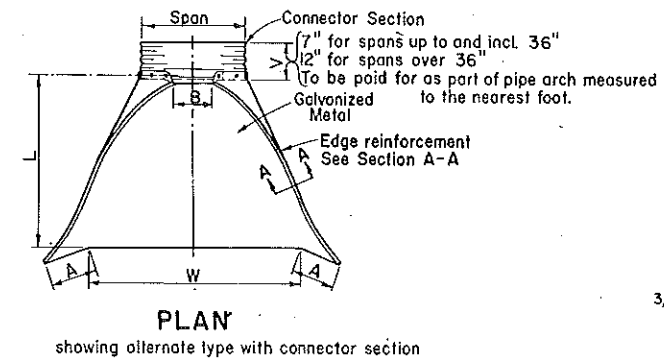
CONNECTION DETAILS

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.

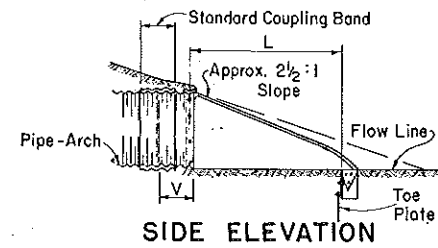
METAL APRON ENDWALLS

APRON ENDWALLS FOR CULVERT PIPE

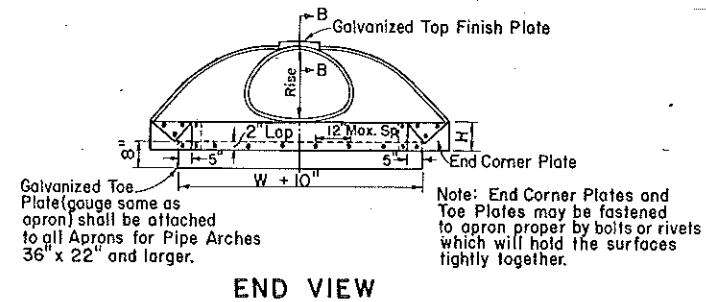


PLAN

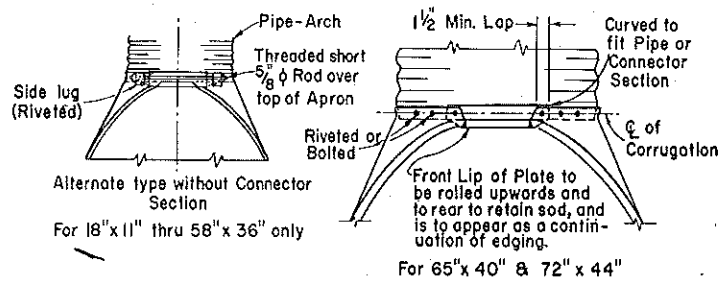
showing alternate type with connector section



SIDE ELEVATION



END VIEW



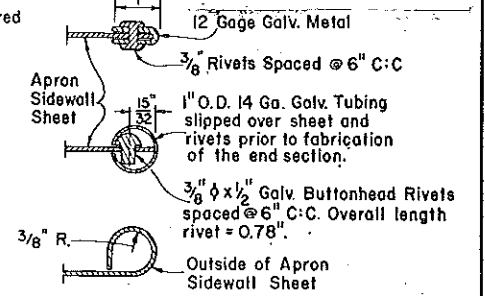
CONNECTION DETAILS

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 &	

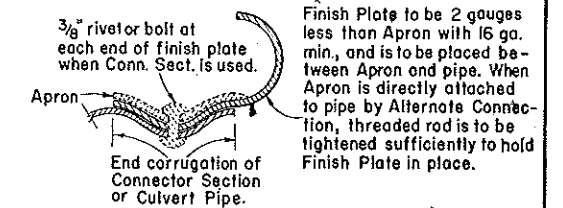
Note: All splices to be lap-riveted or bolted.

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.

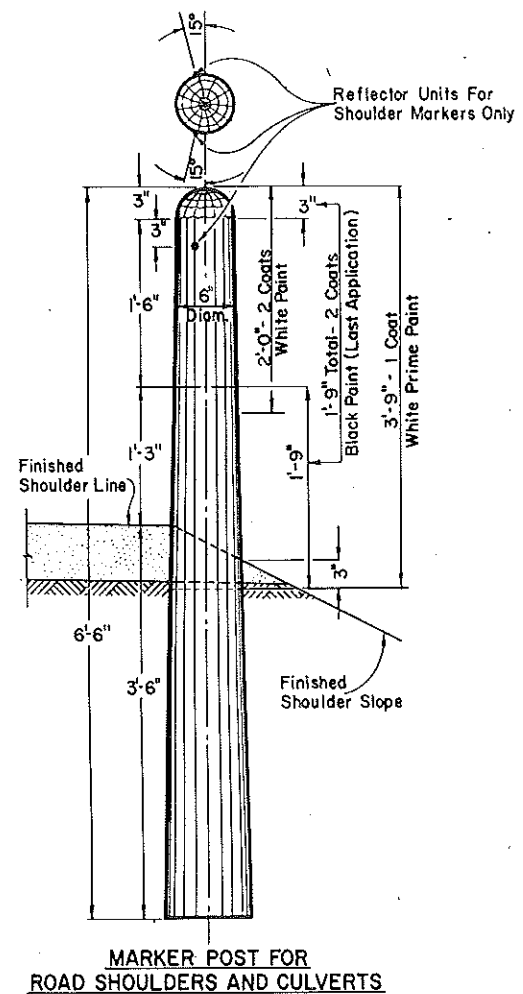
Measurement & Payment.

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.

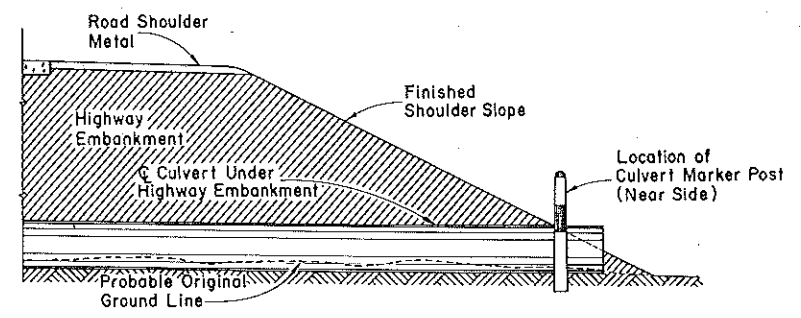
APRON ENDWALLS FOR CULVERT PIPE & PIPE ARCH

STATE HIGHWAY COMMISSION OF WISCONSIN

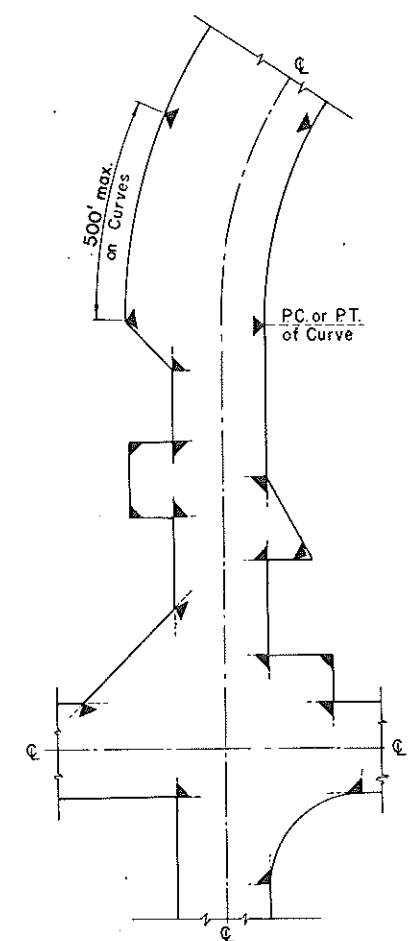
RECOMMENDED FOR APPROVAL: *J. L. Pitt*
DATE: 2-5-63
APPROVED: *E. Robertson*
DATE: 7/1/63
ENGINEER OF DESIGN
STATE HIGHWAY ENGINEER



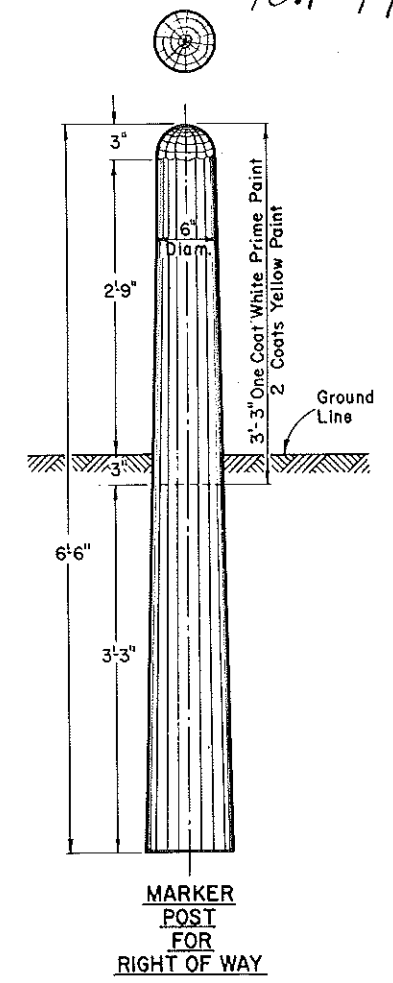
MARKER POST FOR ROAD SHOULDERS AND CULVERTS



SECTION SHOWING RELATIVE LOCATION OF MARKER POST FOR CULVERTS

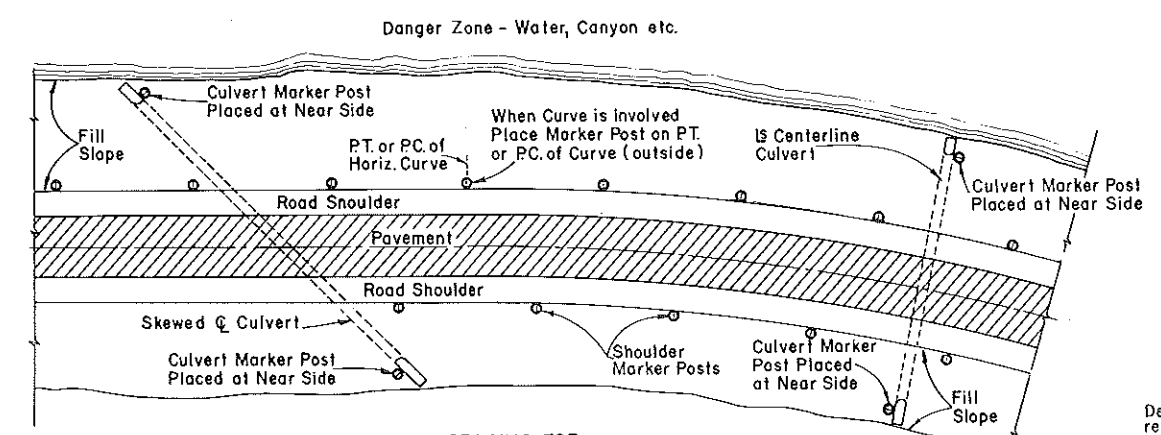


LOCATION DIAGRAM SHOWING TYPICAL LOCATIONS OF MARKER POSTS FOR RIGHT OF WAY



MARKER POST FOR RIGHT OF WAY

MARKER POST FOR RIGHT OF WAY



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

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

APPROVED: [Signature]

STATE HIGHWAY ENGINEER

PLATE NO. 7

10.2-19

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

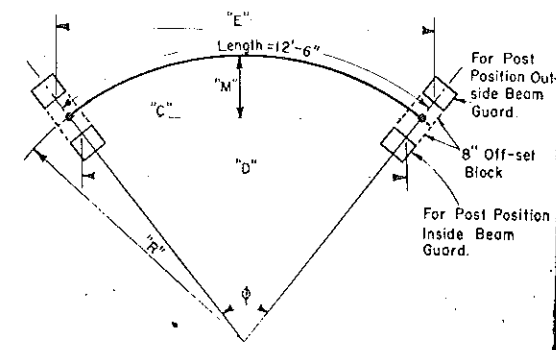
The steel plate beam element and terminal sections shall be furnished galvanized. The spelter coating of the base metal sheets shall be in accordance with A.A.S.H.O. Designation: M 36.
 The beam element may be galvanized before or after fabrication.
 Bolts, nuts, and washers shall be furnished galvanized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

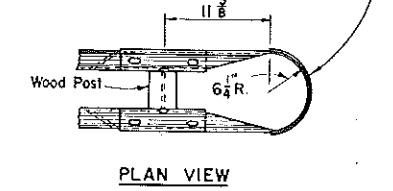
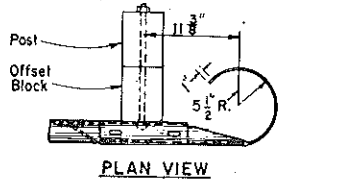
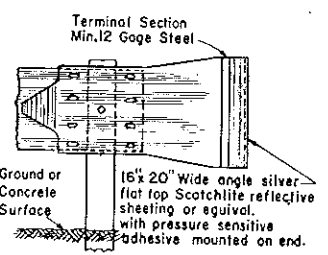
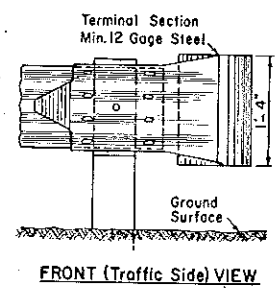
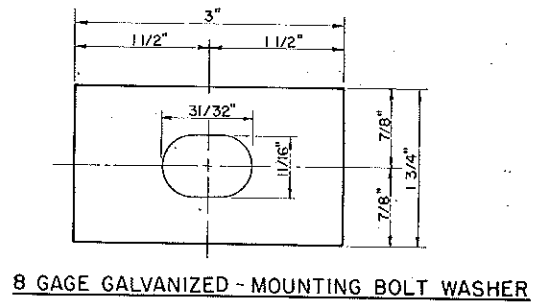
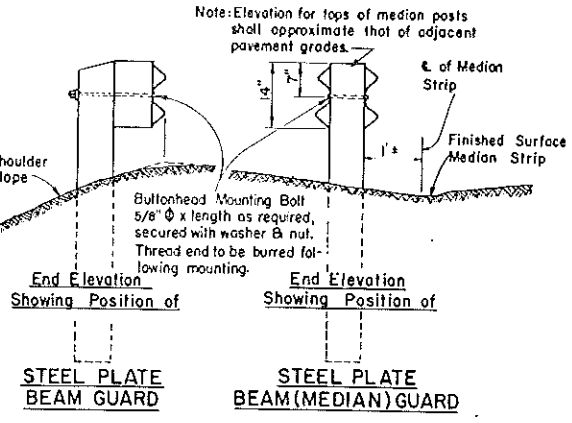
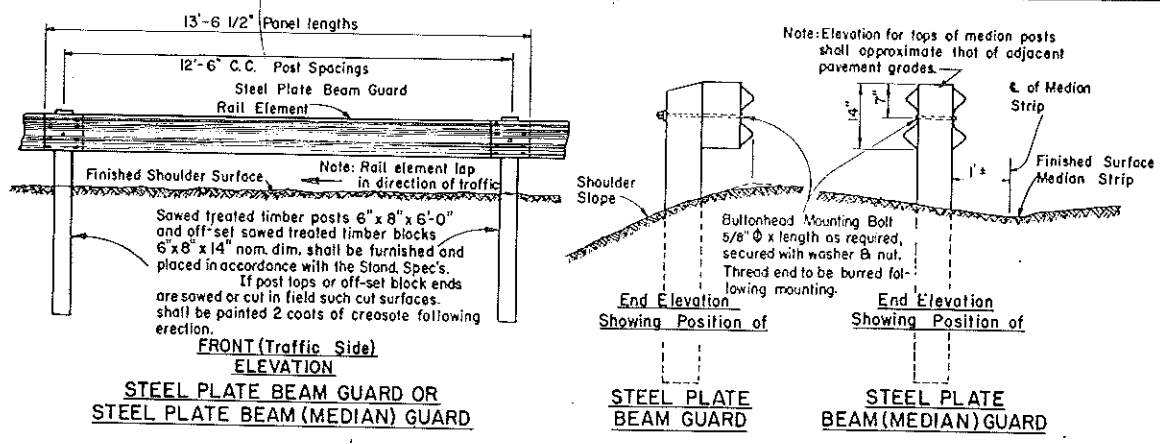
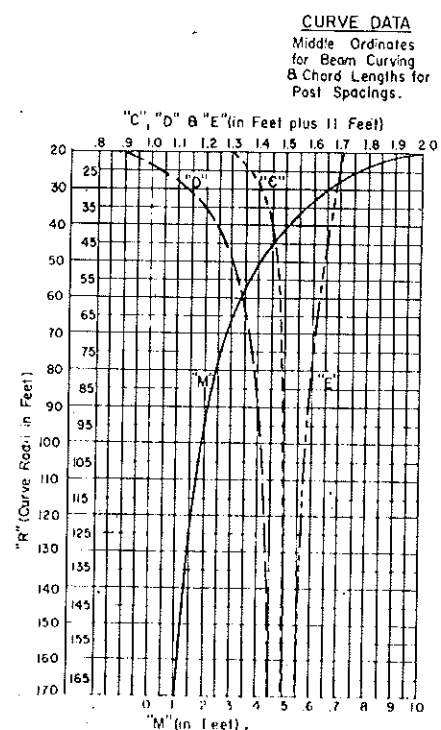
The items of Steel Plate Beam Guard and Steel Plate Beam (Median) Guard shall be measured and paid for at the contract unit price per linear foot, measured in place by length in linear feet from end to end - out to out of terminal sections, which price shall be full compensation for furnishing and placing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



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

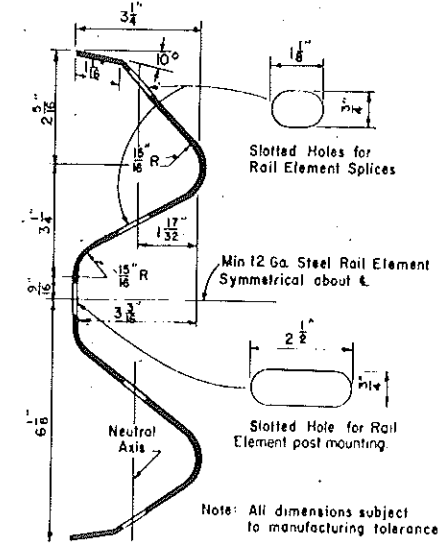
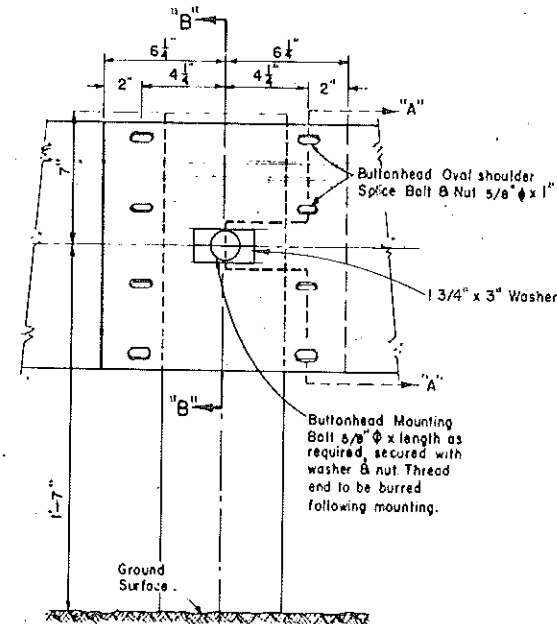
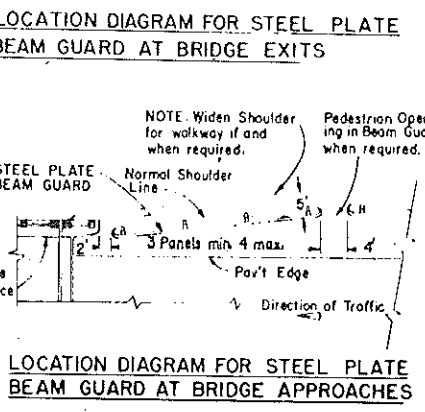
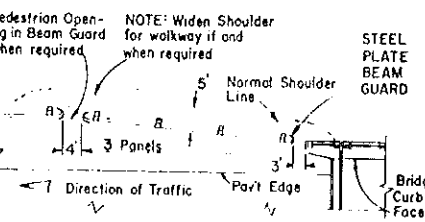
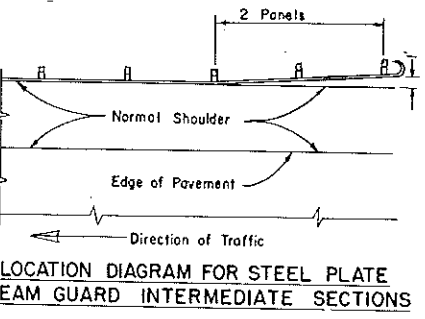
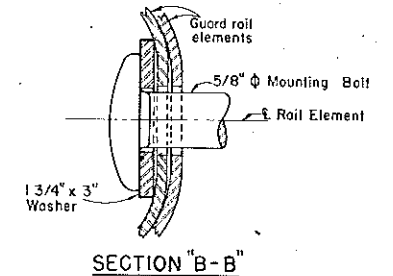
STATE HIGHWAY COMMISSION OF WISCONSIN

RECOMMENDED FOR APPROVAL:
 DATE 2-5-63
 APPROVED: J. S. Piff ENGINEER OF DESIGN
 DATE 2/4/63
 APPROVED: E. C. Rostetter STATE HIGHWAY ENGINEER

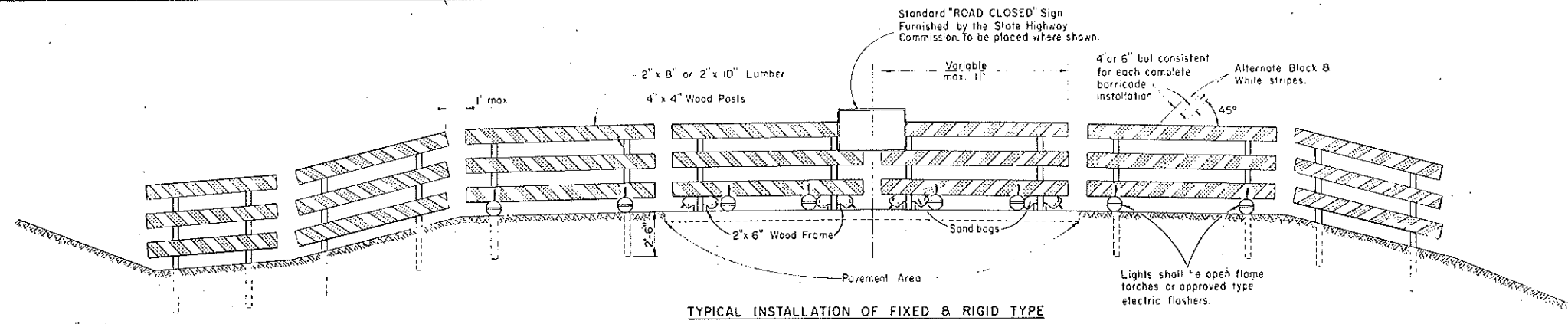


TERMINAL SECTION DETAILS FOR STEEL PLATE BEAM GUARD

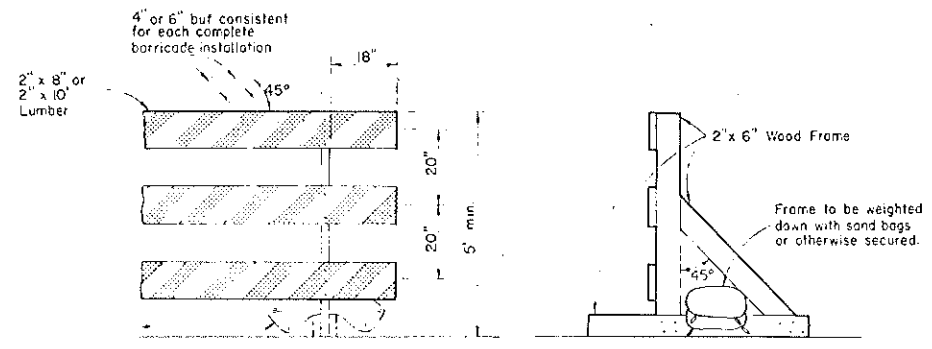
TERMINAL SECTION DETAILS FOR STEEL PLATE BEAM (MEDIAN) GUARD



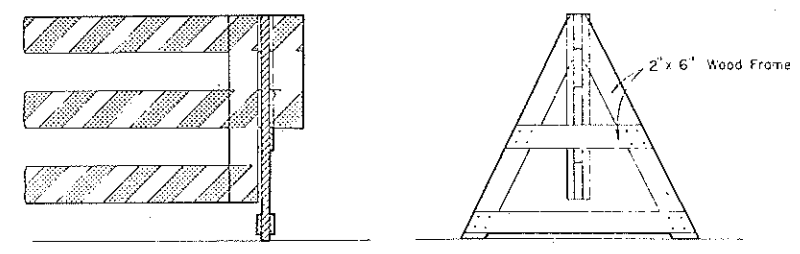
SECTION 'AA' RAIL ELEMENT SECTION (Min 12 GAGE STEEL)



TYPICAL INSTALLATION OF FIXED & RIGID TYPE

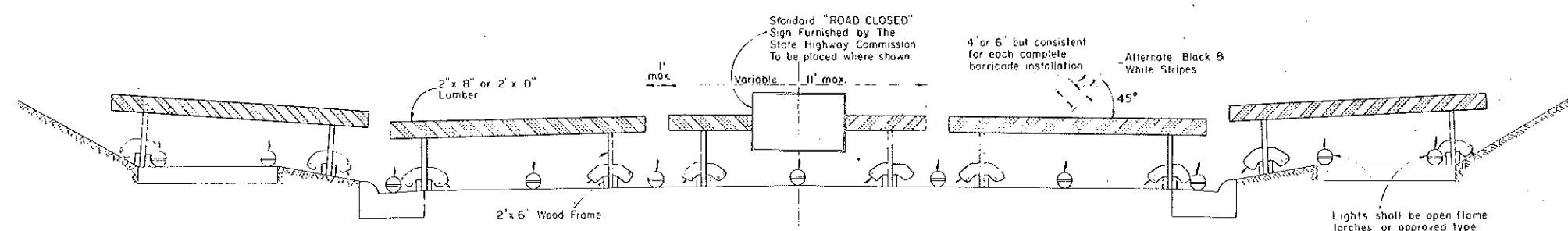


ALTERNATE TYPE INSTALLATION (RIGID)

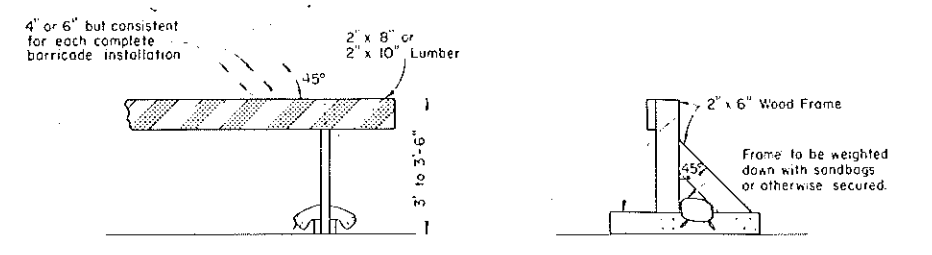


ALTERNATE TYPE INSTALLATION (DISMOUNTABLE)

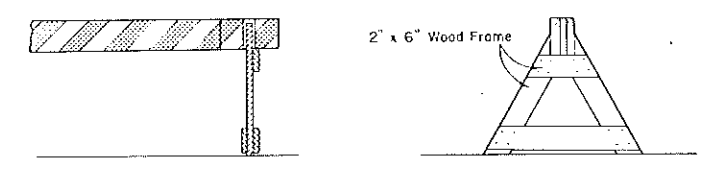
CLASS I BARRICADE



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 and maintained for 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 paint. White stripes shall be painted a prime coat of good grade followed by two coats of white "Coddit Reflective Liquid" (Minnesota Mining 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 Standard Specifications.

NOTE:

All lumber or timber dimensions shown hereon are nominal.

CONSTRUCTION BARRICADE

STATE HIGHWAY COMMISSION OF

RECOMMENDED FOR APPROVAL

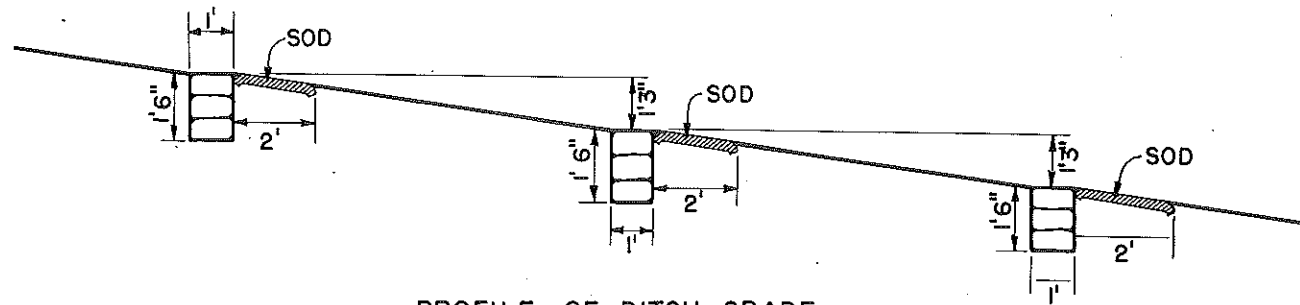
DATE 1-5-63

APPROVED

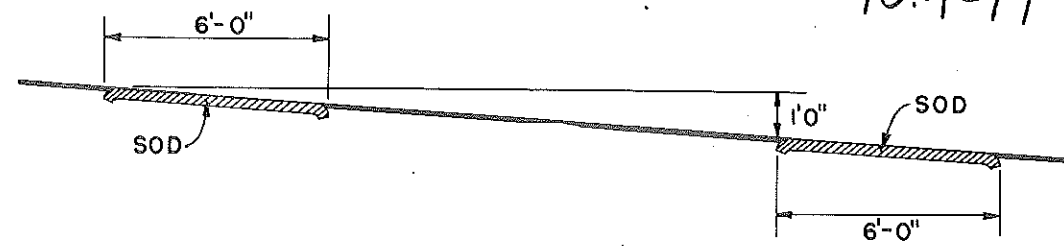
DATE 1/6/63

STATE

PLATE NO.

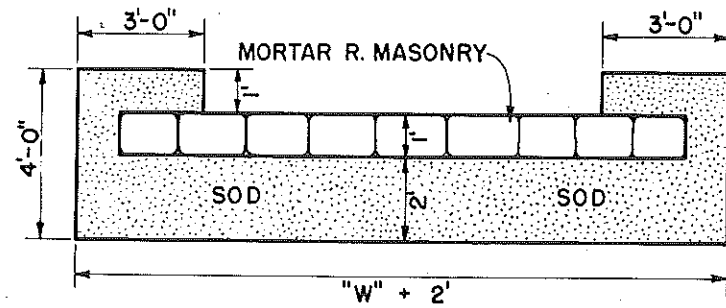


PROFILE OF DITCH GRADE

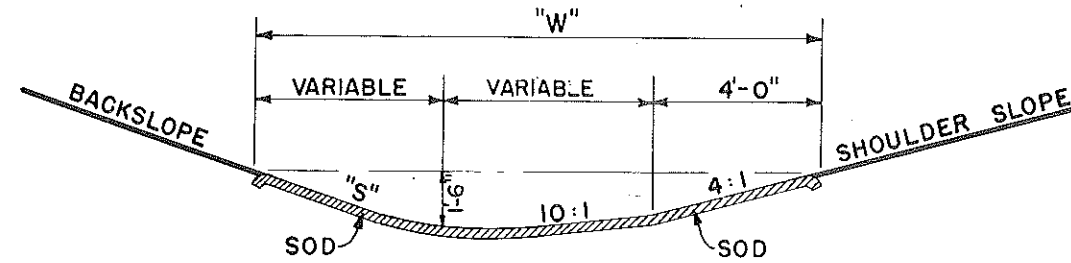


PROFILE OF DITCH GRADE

NOTE: NUMBER REQUIRED WILL BE DETERMINED BY VERTICAL SPACING.



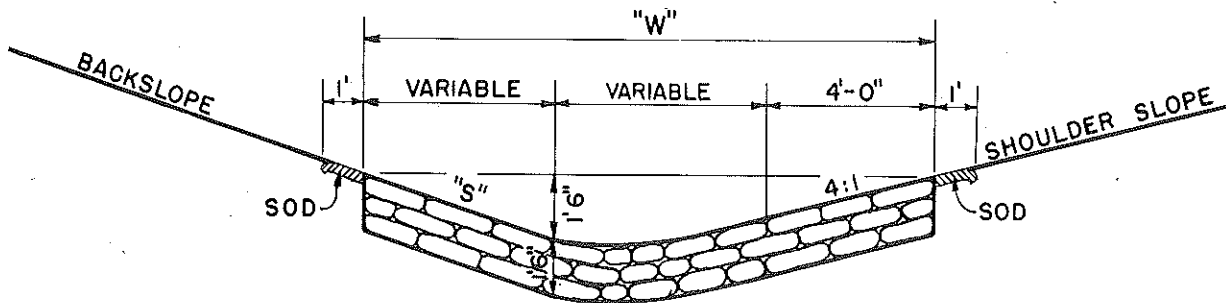
PLAN VIEW SHOWING SOD



SECTION

SOD DITCH CHECKS

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






SECTION

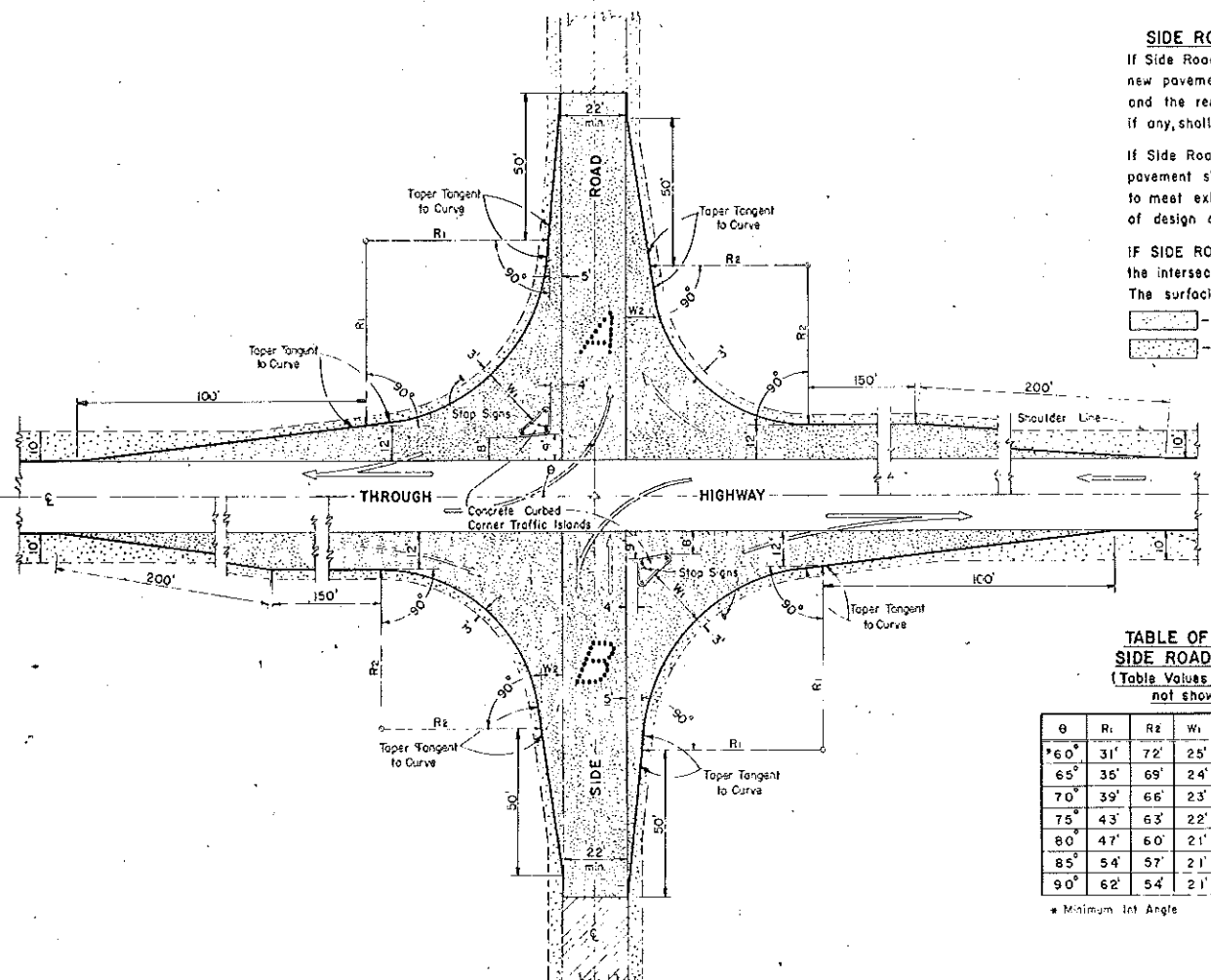
MORTAR RUBBLE MASONRY

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 ₁	R ₂	W ₁	W ₂	θ	R ₁	R ₂	W ₁	W ₂
*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

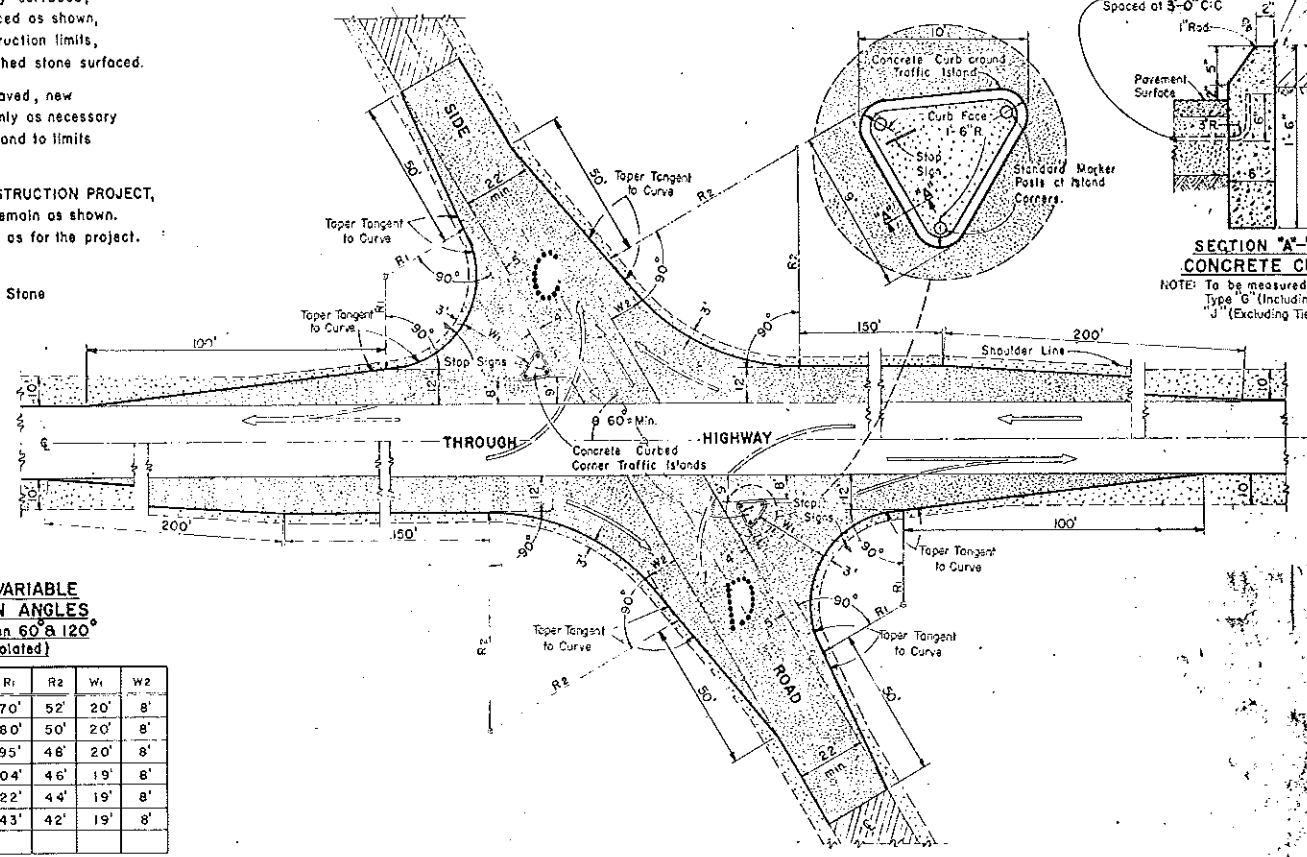


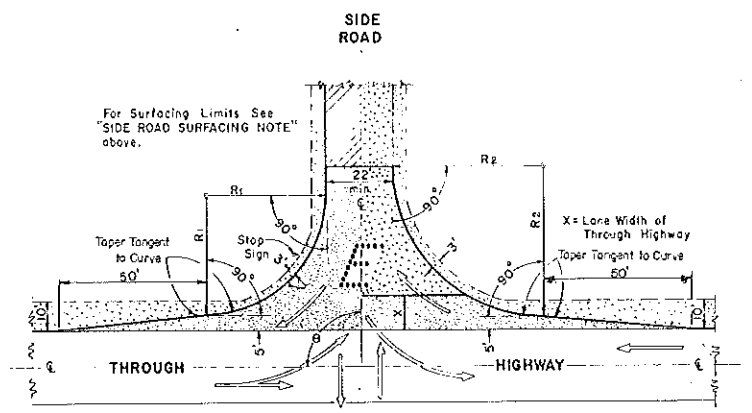
TABLE OF VALUES FOR VARIABLE SIDE ROAD INTERSECTION ANGLES
 (Table Values for Angles between 60° & 120° not shown shall be interpolated)

θ	R ₁	R ₂	θ	R ₁	R ₂
*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

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



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

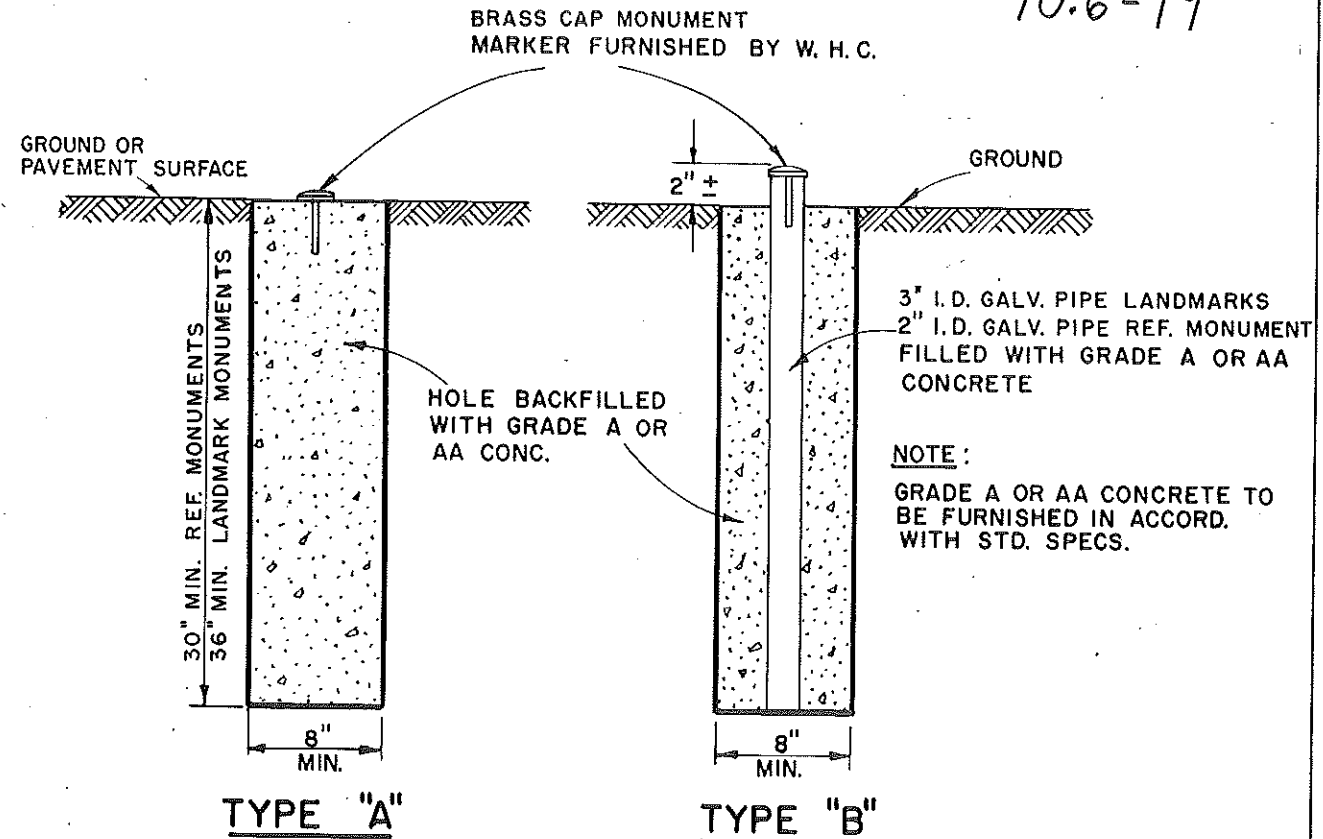
PLA

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.)



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

E. C. Rosstiers
STATE HIGHWAY ENGINEER 12-1.1.2

STATE HIGHWAY COMMISSION OF WISCONSIN

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	COMPACT M/R	MARSH AREA	ROCK AREA	MARSH CUT & FILL	ROCK VOLUME		ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME	GRASS AREA
10 00	21	7	127	92	127	92	1.350								
11 00	48	43	171	92	171	92	1.350							79-	3852
11 55			99	178	200	270	1.350							BALANCE	7900
BALANCE TOTALS															
11 55			59	142	259	412	1.350							63	11129
12 00	24	131	79	142	349	412	1.350								
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	17	2070	399	5292	1.350							4754	43887
16 00		605	2222	399	7514									6976	53601
17 00		516	2076	399	9590									9052	63213
18 00	8	299	15	1509	414	11099	1.350							10541	71951
19 00	113	32	225	613	639	11712	1.350							10850	79395

STATE HIGHWAY COMMISSION OF WISCONSIN

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	COMPACT M/R	MARSH AREA	ROCK AREA	MARSH CUT & FILL	ROCK VOLUME		ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME	GRASS AREA
19 00	113	32	675	60	1314	11772	1.350							9999	85788
20 00	252		911	60	1773	11772	1.350							8776	91555
21 00	238		906	2222	2996	11772	1.350							7593	96776
22 00	236		876		3096	11772	1.350							6830	103620
23 00	153	111	718	206	3814	11978	1.350							6604	112215
24 00	143	166	969	206	5148	11978	1.350							6553	120324
25 00	119	160	548	514	4362	12492	1.350							6536	127859
26 00	151	194	740	514	5888	12492	1.350							6736	134219
27 00	75	219	485	604	4847	13096	1.350							6272	136903
27 50	458		655	604	6543	13096	1.350							4659	140057
28 00	833		498	655	5345	13751	1.350							2807	142989
28 45	814		672	655	7215	13751	1.350							1412	146279
29 00	255	73	418	764	5763	14515	1.350							1572	148859
29 40		487	564	764	7779	14515	1.350								

STATE HIGHWAY COMMISSION OF WISCONSIN

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	COMPACT M/R	MARSH AREA	ROCK AREA	MARSH CUT & FILL	ROCK VOLUME		ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME	GRASS AREA
29 40		487	1195	74	9911	14791	1.350							2626	152854
30 00		463	1613	74	13379	14791	1.350							4121	159351
31 00		345	1372	74	10058	14717	1.350							5273	165439
32 00		277	1852	414	10099	15205	1.350							6339	171373
33 00		299	1088	414	13633	15205	1.350							7201	177043
34 00	2	169	666	202	8445	14717	1.350							7837	182232
35 00		177	1195	74	10058	14717	1.350							8438	187347
36 00		148	1613	74	13379	14791	1.350							8881	192298
37 00		91	1372	74	10099	15205	1.350							9003	194136
37 40		73	1088	414	13633	15205	1.350							9121	196744
38 00	8	44	9	130	10114	22774	1.350							9163	200806
39 00	26	25	12	130	13653	22774	1.350							BALANCE	204081
ADD VOLUME															
			276	39	16339	22940	1.350								
			373	39	22940	22940	1.350								
			5886		TN. RD. LT										
			8829												

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STATE HIGHWAY COMMISSION OF WISCONSIN
MARATHON CO-MERRILL RD CTH W PROJECT 5014/4/ EARTHWORK ESTIMATES PAGE 4

Table with columns: STA, FILL AREA, CUT AREA, FILL VOLUME, CUT VOLUME, ACCUM FILL VOLUME, ACCUM CUT VOLUME, COMPACTION FACTORS, MARSH AREA, ROCK AREA, MARSH CUT & FILL VOLUME, ROCK CUT & FILL VOLUME, ACCUM MARSH VOLUME, ACCUM ROCK VOLUME, ACCUM NET VOLUME, GRASS AREA. Includes sub-totals for stations 39 69, 40 00, 40 50, 41 00, 42 00, 43 00, 44 00, 44 50, 45 00, 46 00, 47 00.

STATE HIGHWAY COMMISSION OF WISCONSIN
MARATHON CO-MERRILL RD CTH W PROJECT 5014/4/ EARTHWORK ESTIMATES PAGE 5

Table with columns: STA, FILL AREA, CUT AREA, FILL VOLUME, CUT VOLUME, ACCUM FILL VOLUME, ACCUM CUT VOLUME, COMPACTION FACTORS, MARSH AREA, ROCK AREA, MARSH CUT & FILL VOLUME, ROCK CUT & FILL VOLUME, ACCUM MARSH VOLUME, ACCUM ROCK VOLUME, ACCUM NET VOLUME, GRASS AREA. Includes sub-totals for stations 47 00, 48 00, 49 00, 50 00, 51 00, 52 00, 52 27.

STATE HIGHWAY COMMISSION OF WISCONSIN
MARATHON CO-MERRILL RD CTH W PROJECT 5014/4/ EARTHWORK ESTIMATES PAGE 6

Table with columns: STA, FILL AREA, CUT AREA, FILL VOLUME, CUT VOLUME, ACCUM FILL VOLUME, ACCUM CUT VOLUME, COMPACTION FACTORS, MARSH AREA, ROCK AREA, MARSH CUT & FILL VOLUME, ROCK CUT & FILL VOLUME, ACCUM MARSH VOLUME, ACCUM ROCK VOLUME, ACCUM NET VOLUME, GRASS AREA. Includes sub-totals for stations 52 27, 53 00, 54 00, 54 00, 54 30, 55 00, 56 00, 57 00, 57 50, 58 00, 59 00, 59 16, 59 16, 60 00, 61 00.

STATE HIGHWAY COMMISSION OF WISCONSIN
 MARATHON CO--MERRILL RD CTH W PROJECT 5014/4/4 EARTHWORK ESTIMATES PAGE 7

STA	MARATHON CO--MERRILL RD CTH W				EARTHWORK ESTIMATES					PAGE					
	FILL AREA	CUT AREA	FILL VOLUME	CUT VOLUME	ACCM CUT VOLUME	COMPACTIION FACTORS COMMON M/R	MARSH AREA	ROCK AREA	MARSH CUT & FILL VOLUME		ROCK VOLUME	ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME	GRASS AREA
62 00	207		544 735			29250 40819	1.350 40819								
62 60					1072 1448	1448 1448								336114	
BALANCE TOTALS															
62 60			352 475		29602 41294	40819 40819	1.350 40819							475--	337644
63 00	277		710 959		30312 42253	40819 40819	1.350 40819							1434--	340841
64 00	107		207 279	61	30519 42532	40931 40931	1.350 40931							1601--	344006
65 00	5		9 12	315	30528 42544	41246 41246	1.350 41246							1298--	348359
66 00		110	27 36	276 276	30558 42580	41522 41522	1.350 41522							1058--	351699
66 82	18	72	21 28	50 50	30576 42608	41572 41572	1.350 41572							1036--	352422
67 00	46	79	1234 1666	201 201	31810 44274	41773 41773	1.350 41773							2501--	360240
68 00	620	30												3627 3627	BORROW
BALANCE TOTALS															
68 38	613	33	867 1170	44 44	32677 45444	45444 45444	1.350 45444							364480	364480

0044

STATE HIGHWAY COMMISSION OF WISCONSIN
 MARATHON CO--MERRILL RD CTH W PROJECT 5014/4/4 EARTHWORK ESTIMATES PAGE 8

STA	MARATHON CO--MERRILL RD CTH W				EARTHWORK ESTIMATES					PAGE					
	FILL AREA	CUT AREA	FILL VOLUME	CUT VOLUME	ACCM CUT VOLUME	COMPACTIION FACTORS COMMON M/R	MARSH AREA	ROCK AREA	MARSH CUT & FILL VOLUME		ROCK VOLUME	ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME	GRASS AREA
68 38	613	33	32677 45444		45444 45444										
68 38			32677 45444		45444 45444										
69 19			32677 45444		45444 45444										
69 19	783	27	899 1214	31 31	33576 46658	45475 45475	1.350 45475							1183--	368037
69 50	784	27	873 1179	53 53	34449 47837	45528 45528	1.350 45528							2309--	372561
70 00	159	30	1134 1531	104 104	35583 49568	45692 45692	1.350 45692							3736--	379651
71 00	453	26	1765 2383	63 63	37348 51751	45695 45695	1.350 45695							6056--	386486
71 80	738	17	476 643	10 10	37824 52394	45705 45705	1.350 45705							6689--	388402
72 00	549	13	1923 2596	23 23	39747 54990	45728 45728	1.350 45728							9262--	396244
73 00	490		726 980		40473 55970	45728 45728	1.350 45728							10242--	398458
73 50	295		551 744		41024 56714	45728 45728	1.350 45728							10986--	400351
74 00	301		998 1347	46 46	42022 58061	45774 45774	1.350 45774							12287--	405788
75 00	238	24	415 560	212 212	42437 58621	45986 45986	1.350 45986							12635--	409651
75 75	61	129													
BALANCE TOTALS															
78 46			9788 13215		13215 13215										
78 46			2701 58659		61460 61460									2701	446474
ADD VOLUME															
79 00		1218	3728 58659	100 100	65288 65288									6629	456599
ADD VOLUME															
80 00		795	2453 58659		67741 67741									9082	464822
81 00		529	1755 58659		69496 69496									10837	471933
82 00		419													

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STATE HIGHWAY COMMISSION OF WISCONSIN

STA	FILL AREA	CUT AREA	FILL VOLUME	CUT VOLUME	MARATHON CO-MERRILL RD CTH W PROJECT S014/4/				EARTHWORK ESTIMATES				PAGE 10	
					ACCM VOLUME	ACCUM FILL VOLUME	ACCM CUT VOLUME	COMPACTIION FACTORS COMMON M/R	MARSH AREA	ROCK AREA	MARSH CUT & FILL VOLUME	ROCK VOLUME		ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME	GRASS AREA
82 00		419		1268		42465	70764						12105	478157
83 00		266		1268		58659	70764						12544	482951
84 00	32	14	58	517	42523	71281	1.350						12010	486965
85 00	192		414	25	42937	71306	1.350						10663	491837
86 00	347		559	25	59296	71306							8758	497562
87 00	415		998		43935	71306	1.350						7874	500053
87 40	469		1347		60643	71306							6509	503954
88 00	441		1411		45346	71306	1.350						5780	505938
88 30	533		655		46001	71306	1.350						4128	510469
89 00	412		884		63432	71306							2850	515403
90 00	100		1011		47012	71306	1.350						2286	519186
91 00	127		1365		64797	71306							1714	522720
92 00	102		540		47552	71306	1.350						1392	526070
93 00	42	20	729		65526	71306								
94 00			1224		48776	71306	1.350							
95 00			1652		67178	71306								
96 00			1278		49723	71306	1.350							
97 00			947		68456	71306								
98 00			418		50141	71306	1.350							
99 00			564		69020	71306								
100 00			424		50565	71306	1.350							
101 00			572		69592	71306								
102 00			266		50831	71343	1.350							
103 00			359		69951	71343								

STATE HIGHWAY COMMISSION OF WISCONSIN

STA	FILL AREA	CUT AREA	FILL VOLUME	CUT VOLUME	MARATHON CO-MERRILL RD CTH W PROJECT S014/4/				EARTHWORK ESTIMATES				PAGE 11	
					ACCM VOLUME	ACCUM FILL VOLUME	ACCM CUT VOLUME	COMPACTIION FACTORS COMMON M/R	MARSH AREA	ROCK AREA	MARSH CUT & FILL VOLUME	ROCK VOLUME		ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME	GRASS AREA
93 00	42	20	246		51077	71380	1.350						1097	529296
94 00	91		332		70283	71380							821	532757
95 00	23	6	212		51289	71390	1.350						686	536867
96 00	40	8	286		70569	71390							813	541777
97 00	12	131	118		51407	71414	1.350						1031	547359
98 00	11	74	159		70728	71414							1184	553031
99 00	7	90	96		51503	71671	1.350						1453	558887
100 00	5	72	130		70858	71671							1831	565135
101 00	3	143	42		51615	72051	1.350						2667	571749
102 00			57		71020	72051							3827	578135
103 00			70		P.E. LT.								5124	584384
104 00			105										6322	590181
105 00			34		51719	72355	1.350							
ADD VOLUME			46		71171	72355								
ADD VOLUME			70		P.E. LT.									
99 00	7	90	23		51742	72655	1.350						1453	558887
100 00	5	72	31		71202	72655							1831	565135
101 00	3	143	14		51756	73052	1.350						2667	571749
102 00			19		71221	73052							3827	578135
103 00			5		51761	73895	1.350						5124	584384
104 00			843		71228	73895							6322	590181
105 00			7		51761	75055								
ADD VOLUME			1160		71228	75055								
ADD VOLUME			1297		51761	76352								
103 00			1297		71228	76352								
104 00			1198		51761	77550								
105 00			1198		71228	77550								

STATE HIGHWAY COMMISSION OF WISCONSIN

STA	FILL AREA	CUT AREA	FILL VOLUME	CUT VOLUME	MARATHON CO-MERRILL RD CTH W PROJECT S014/4/				EARTHWORK ESTIMATES				PAGE 12	
					ACCM VOLUME	ACCUM FILL VOLUME	ACCM CUT VOLUME	COMPACTIION FACTORS COMMON M/R	MARSH AREA	ROCK AREA	MARSH CUT & FILL VOLUME	ROCK VOLUME		ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME	GRASS AREA
105 00			1007		51761	78557							7329	595758
106 00			1007		71228	78557							8316	601875
107 00			987		51761	79544							8887	607263
108 00			987		71228	79544							8810	611422
109 00	8	70	590		51775	80134	1.350						7597	616699
110 00	83	12	590		71247	80134							4499	624819
109 00			168		51943	80284	1.350						946	634225
110 00	411		227		71474	80284							BALANCE	636779
ADD VOLUME			914		52857	80305	1.350						946	634225
111 00	769		1234		72708	80305							BALANCE	636779
ADD VOLUME			2194		55141	80305	1.350						946	634225
112 00	653		2948		75806	80305							BALANCE	636779
112 32			100		P.E. RT.								946	634225
111 00			150										BALANCE	636779
111 00	769		2632		57773	80305	1.350						946	634225
112 00	653		3553		79359	80305							BALANCE	636779
112 32			701		58474	80305	1.350						946	634225
BALANCE TOTALS			946		80305	80305							BALANCE	636779
111 00			16009		21646	21646							946	634225
112 32			286		58860	80305	1.350						946	634225
112 50	521		521		80826	80305							BALANCE	636779
113 00	336	29	793		59653	80332	1.350						946	634225
114 00	125	176	1071		81897	80332							BALANCE	636779
114 00	125	176	852		60505	80712	1.350						946	634225
114 00	125	176	1150		83047	80712							BALANCE	636779

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STATE HIGHWAY COMMISSION OF WISCONSIN

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	GRASS AREA
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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STATE HIGHWAY COMMISSION OF WISCONSIN

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	GRASS AREA
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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STA	MARATHON CO-MERRILL RD CTH W				PROJECT S014/4/				EARTHWORK ESTIMATES				PAGE 15		
	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	GRASS AREA
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															
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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STA	MARATHON CO-MERRILL RD CTH W				PROJECT 5014/4/				EARTHWORK ESTIMATES				PAGE 16			
	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 VOLUME		ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME	GRASS AREA
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	1	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									7802	847791
147 00	351		343	343	67272	97896	1.350								9145	854140
148 00	375		343	343	92220	97896									10317	860119
149 00	259		408	408	67272	98304	1.350								11056	865226
150 00	141		408	408	92220	98304									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										
			1172	1172	92220	102537										
			739	739	67272	103276	1.350									
			739	739	92220	103276										
			399	399	67272	103675	1.350									
			399	399	92220	103675										
			139	139	67806	103814	1.350									
			139	139	92941	103814										

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STA	MARATHON CO-MERRILL RD CTH W				PROJECT 5014/4/				EARTHWORK ESTIMATES				PAGE 17			
	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 VOLUME		ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME	GRASS AREA
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	11597										
155 72			317	317	102774	103814										
156 00	311		428	428	75089	103814	1.350									
ADD VOLUME																
			575	575	76405	105495	1.350									
			776	776	104550	105495										
			741	741	1000	1000	APPROACH STA 154+00 - 160+00									
			1000	1000												
157 00	368															
BALANCE TOTALS					359	76405	106018									
157 26	380		359	359	104550	106018										
BALANCE TOTALS					1633	2204										
157 26	380				2204	2204										
157 26					76405	106018										
					104550	106018										

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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 VOLUME		ACCUM MARSH VOLUME	ACCUM ROCK VOLUME	ACCUM NET VOLUME
156 00	311		681	681	76405	105495	1.350								523-	906793
ADD VOLUME			776	776	104550	105495										
			741	741	1000	1000	APPROACH STA 154+00 - 160+00									
			1000	1000												
157 00	368															
BALANCE TOTALS					987	1468										
157 26	380		987	987	76405	106018										
BALANCE TOTALS					164	164										
157 26					104550	106018										

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