

PLANS SYMBOLS

- STATE LINE
- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- RIGHT-OF-WAY LINE
- SLOPE EASEMENT
- PRESENT RIGHT-OF-WAY LINE
- CONTROL OF ACCESS LINE
- PROPERTY LINE (Except Land Lines)
- VACATED PLATTED PROPERTY
- CORPORATE OR CITY LIMITS
- TRUNK HIGHWAY CENTER LINE
- RETAINING WALL
- RAILROAD
- RAILROAD RIGHT-OF-WAY LINE
- RIVER OR CREEK
- DRY RUN
- DRAINAGE DITCH
- DRAIN TILE
- CULVERT
- DROP INLET
- GUARD RAIL
- BARBED WIRE FENCE
- WOVEN WIRE FENCE
- CHAIN LINK FENCE
- RAILROAD SNOW FENCE
- STONE WALL OR FENCE
- HEDGE
- RAILROAD CROSSING SIGN
- RAILROAD CROSSING BELL
- ELECTRIC WARNING SIGN
- CROSSING GATE
- MEANDER CORNER
- SPRINGS
- MARSH

- TIMBER ORCHARD
- BRUSH NURSERY
- CATCH BASIN
- FIRE HYDRANT
- CATTLE GUARD
- OVERPASS (Highway Over)
- UNDERPASS (Highway Under)
- BRIDGE
- BUILDING (One Story Frame)
- F - FRAME S - STONE B - BRICK
- C - CONCRETE T - TILE ST - STUCCO
- IRON PIPE OR ROD
- MONUMENT (STONE, CONCRETE, OR METAL)
- WOODEN HUB
- GRAVEL PIT
- SAND PIT
- BORROW PIT
- ROCK QUARRY

UTILITIES SYMBOLS

- POWER POLE LINE
- TELEPHONE OR TELEGRAPH POLE LINE
- JOINT TELEPHONE AND POWER ON POWER POLES
- ON TELEPHONE POLES
- ANCHOR
- STEEL TOWER
- STREET LIGHT
- PEDESTAL (TELEPHONE CABLE TERMINAL)
- GAS MAIN
- WATER MAIN
- CONDUIT
- TELEPHONE CABLE IN CONDUIT
- ELECTRIC CABLE IN CONDUIT
- TELEPHONE MANHOLE
- ELECTRIC MANHOLE
- BURIED TELEPHONE CABLE
- BURIED ELECTRIC CABLE
- AERIAL TELEPHONE CABLE
- SEWER (SANITARY OR STORM)
- SEWER MANHOLE

SCALES

- PLAN 50'
- PROFILE 10'
- INDEX MAP 2.56 MI
- CROSS SECTION 10'

MINNESOTA DEPARTMENT OF TRANSPORTATION

ANOKA COUNTY

CONSTRUCTION PLAN FOR STORM SEWER, GRADING, BASE & BITUMINOUS PAVING, BRIDGE CONSTRUCTION

LOCATED ON CR. 116 RUM RIVER CROSSING BETWEEN T.H. # 47 AND C.S.A.H. # 7 (Geographic Description)

COUNTY PROJECT NO. 85-05-116 FROM TO (Legal Description)
 COUNTY PROJECT NO. 88-09-116

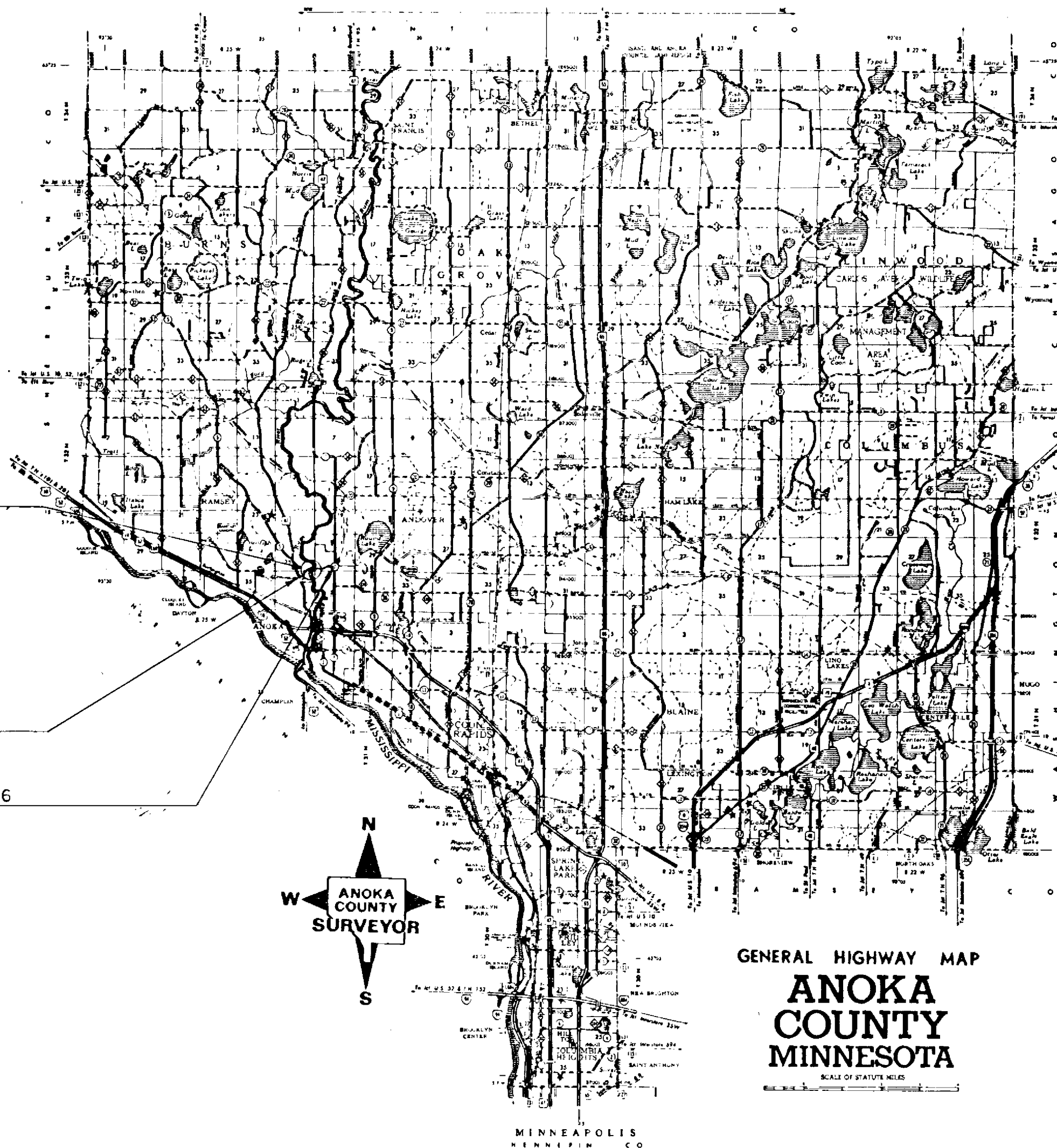
STATE AID PROJ. NO. STATE AID PROJ. NO.

GROSS LENGTH	5277.000	FEET	0.999	MILES	GROSS LENGTH	FEET	MILES
BRIDGES-LENGTH	724.990	FEET	0.137	MILES	BRIDGES-LENGTH	FEET	MILES
EXCEPTIONS-LENGTH	724.990	FEET	0.137	MILES	EXCEPTIONS-LENGTH	FEET	MILES
NET LENGTH	4522.010	FEET	0.862	MILES	NET LENGTH	FEET	MILES

PROJECT LOCATION C.P. 88-09-116
 BRIDGE NO. - 02545
 BRIDGE NO. - 02546
 BRIDGE NO. - 96834

BEGIN PROJECT C.P. 85-05-116
 STA. 99+37

END PROJECT C.P. 85-05-116
 STA. 152+14



MINN. PROJ. NO.
 MINN. PROJ. NO.

GOVERNING SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

INDEX

SHEET NO. 1	TITLE SHEET
" 2	STATEMENT ESTIMATED QUANTITIES
" 3	TYPICAL DETAILS
" 4	CONCRETE DETAILS & MISC. DETAILS
" 5	GUARD RAIL DETAILS
" 6	PLANTING DETAILS
" 7	DRAINAGE CHART
" 8-9	STORM DETAILS
" 10	SUPERELEVATION CHART
" 11-12	MITIGATION POND DETAILS
" 13-16	PLAN & PROFILE SHEETS
" 17-21	WATERMAIN DETAILS
" 22-32	CROSS SECTION SHEETS
C.P. 85-05-116	" 1A-46A BRIDGE NO. 02545
"	" 1B-36B BRIDGE NO. 02546
C.P. 88-09-116	" 1C-10C BRIDGE NO. 96834

THIS PLAN CONTAINS 124 SHEETS

DESIGN DESIGNATION

ΣN18 20 /
 R Value
 ADT () =
 Proj. ADT (2010) = 19,150
 Proj. HCADT (2010) = 1,004
 Soil Factor A3 50%
 9 Ton Design
 Shoulder Width 10'

Design Speed 40 MPH
 Based on STOPPING Sight Distance
 Height of eye 3.5' Height of object 0.5'
 Design Speed not achieved at:
 STA. TO STA. MPH
 STA. TO STA. MPH
 STA. TO STA. MPH

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 DATE 9/29/89 REG. NO. 6549 ENGR. *Lawrence K. Lund*
 COUNTY Anoka

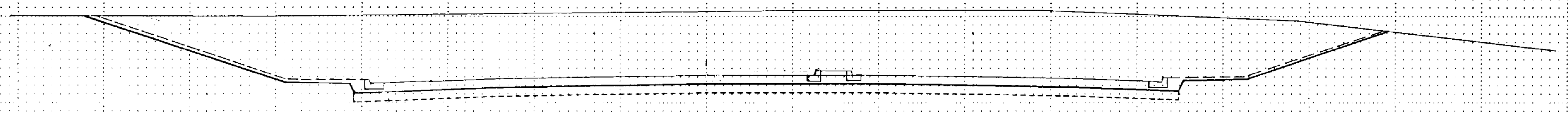
Recommended for Approval 19
 DISTRICT STATE AID ENGINEER
 Recommended for Approval 19
 STATE AID PLANS AND SPECS ENGINEER
 Approved 19
 STATE AID ENGINEER

DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 APPROVED
 DIVISION ADMINISTRATOR DATE

STATE AID PROJ. NO.
 STATE PROJ. NO. C.P. 85-05-116, C.P. 88-09-116 SHEET NO. 1 OF 32 SHEETS

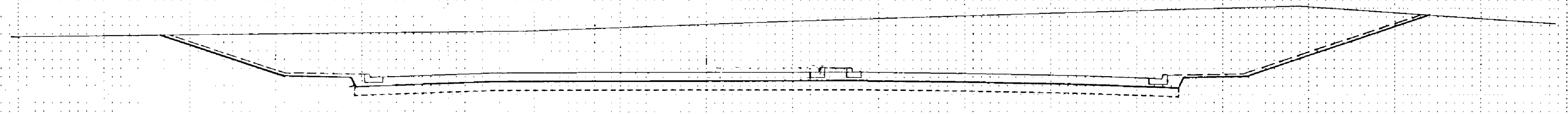
EXCAVATION		EMBANKMENT	
SUB-TOTALS	CUYDS.	CUYDS.	SUB-TOTALS

880.47 147+00 872.04



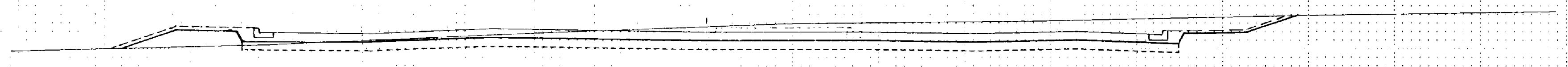
3589 0

878.03 146+00 871.42



1957 20

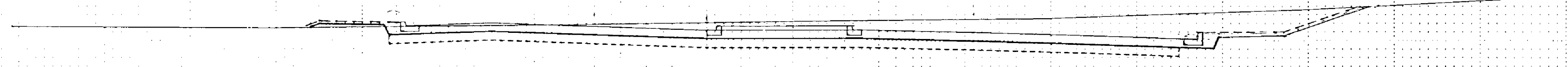
872.4299 145+00 870.75



828 41

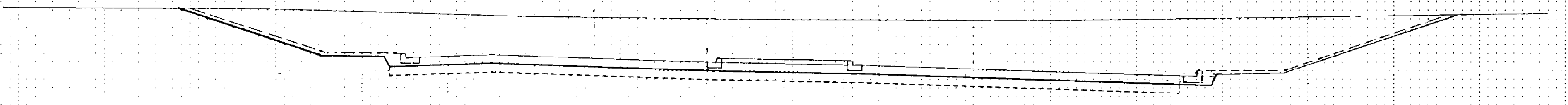
+63 ξ - PARK ENT. (FUTURE)

871.94 144+00 870.01



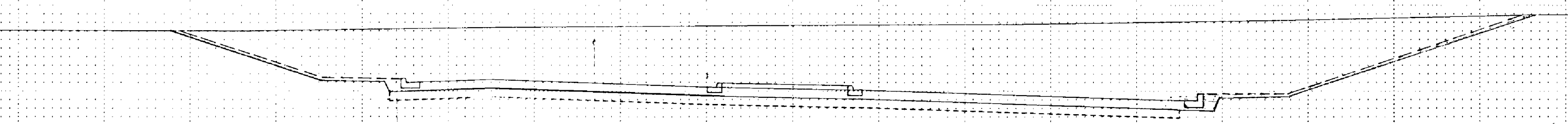
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875.8666 143+00 869.78



3604 0

877.42 142+00 869.24

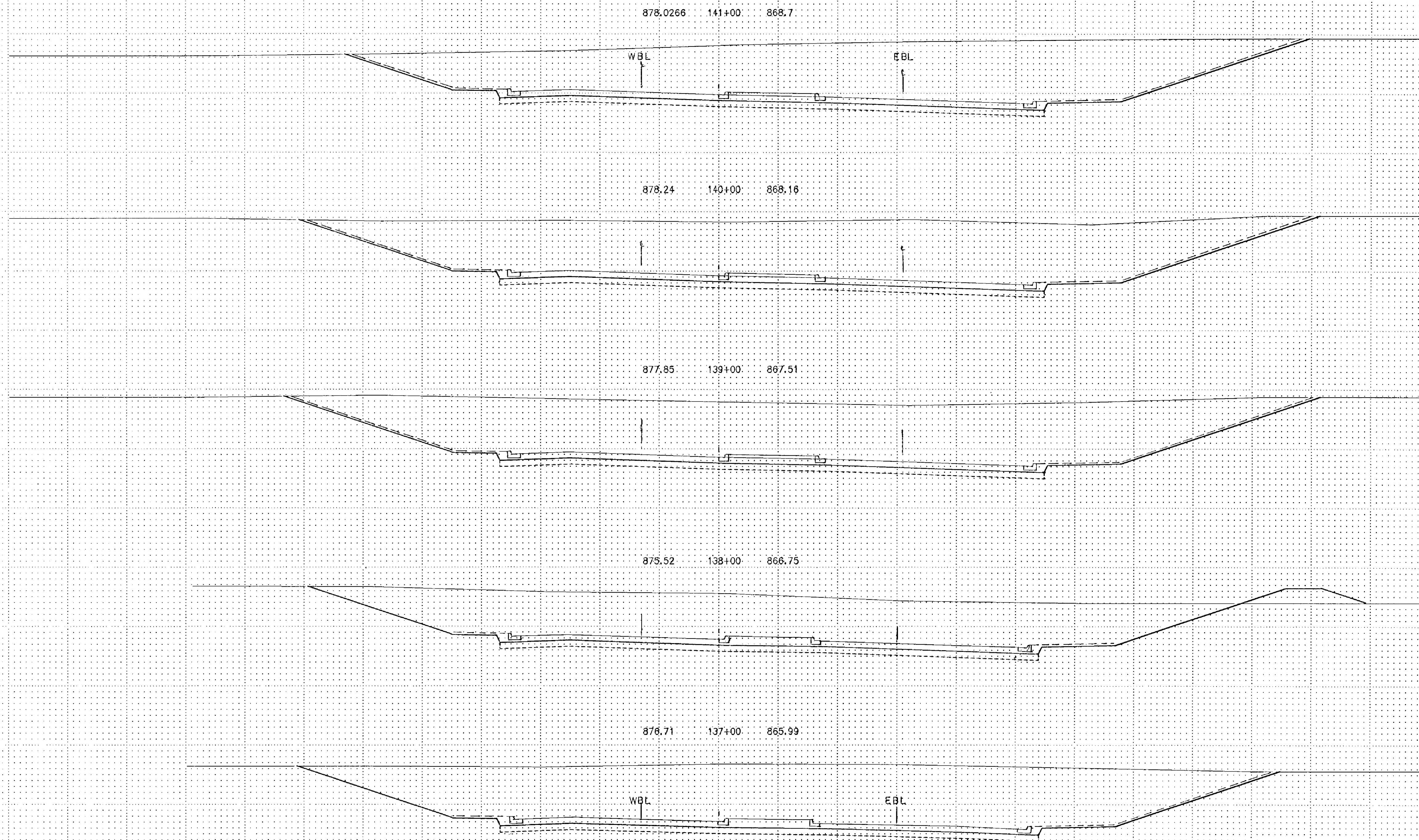


4500 0

STA. 142+00 TO STA. 147+00

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS



5997

0

5856

0

4820

78

4620

78

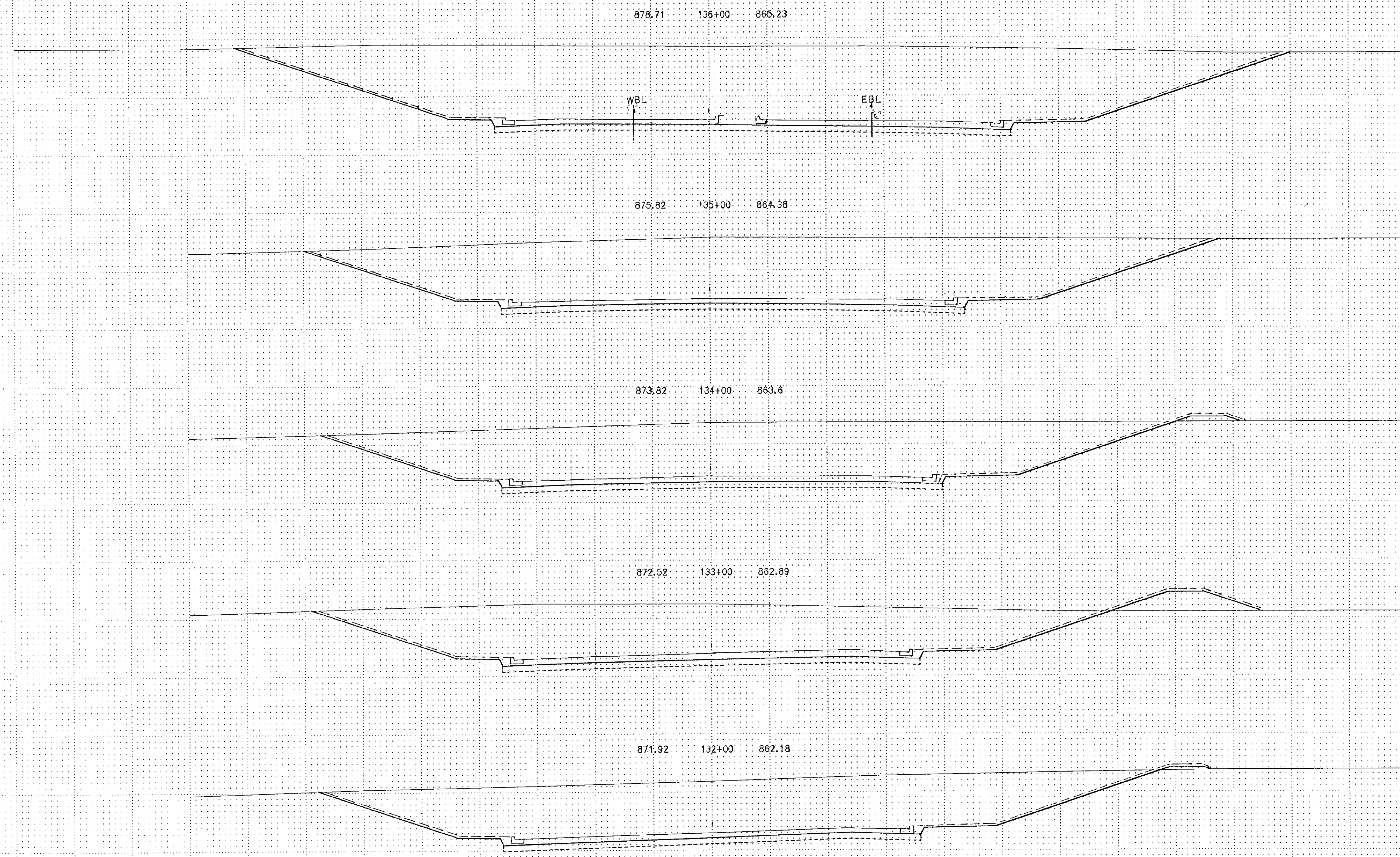
6244

0

STA. 137+00 TO STA. 141+00

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS



6250 0

4854 20

4154 135

4039 126

4863 20

STA 132+00 TO STA 136+00

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS

875.02 131+00 862.52

875.62 130+00 863.17

876.86 129+00 863.82

875.06 128+00 864.47

877.76 127+00 865.12

876.26 126+00 865.77

5661 15

5715 30

5115 144

5030 94

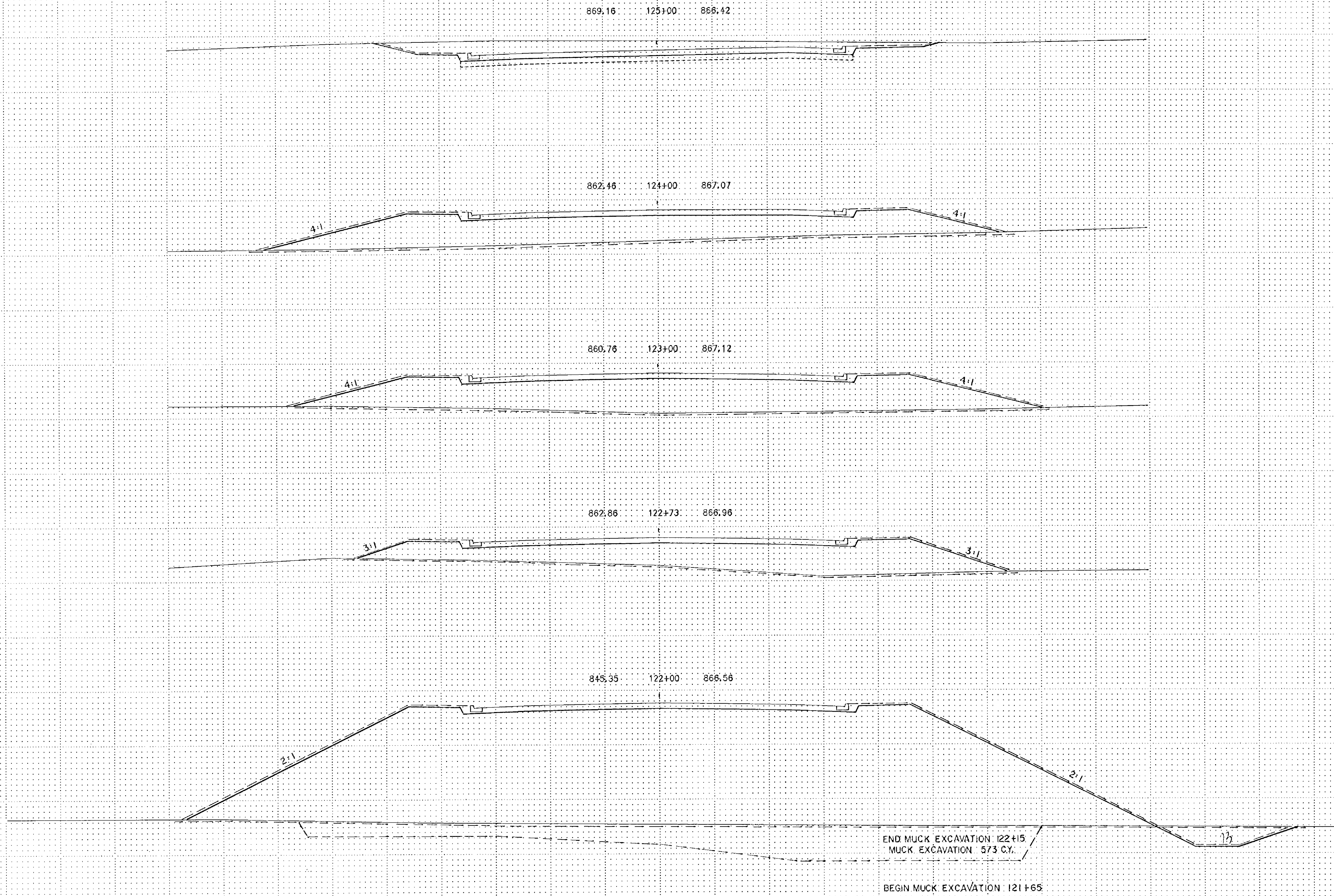
4944 0

2656 0

STA. 126+00 TO STA. 131+00

EXCAVATION EMBANKMENT

SUB-TOTALS CUYDS. CUYDS. SUB-TOTALS



507 1661

126 2324

32 594

188 1573

31 2134

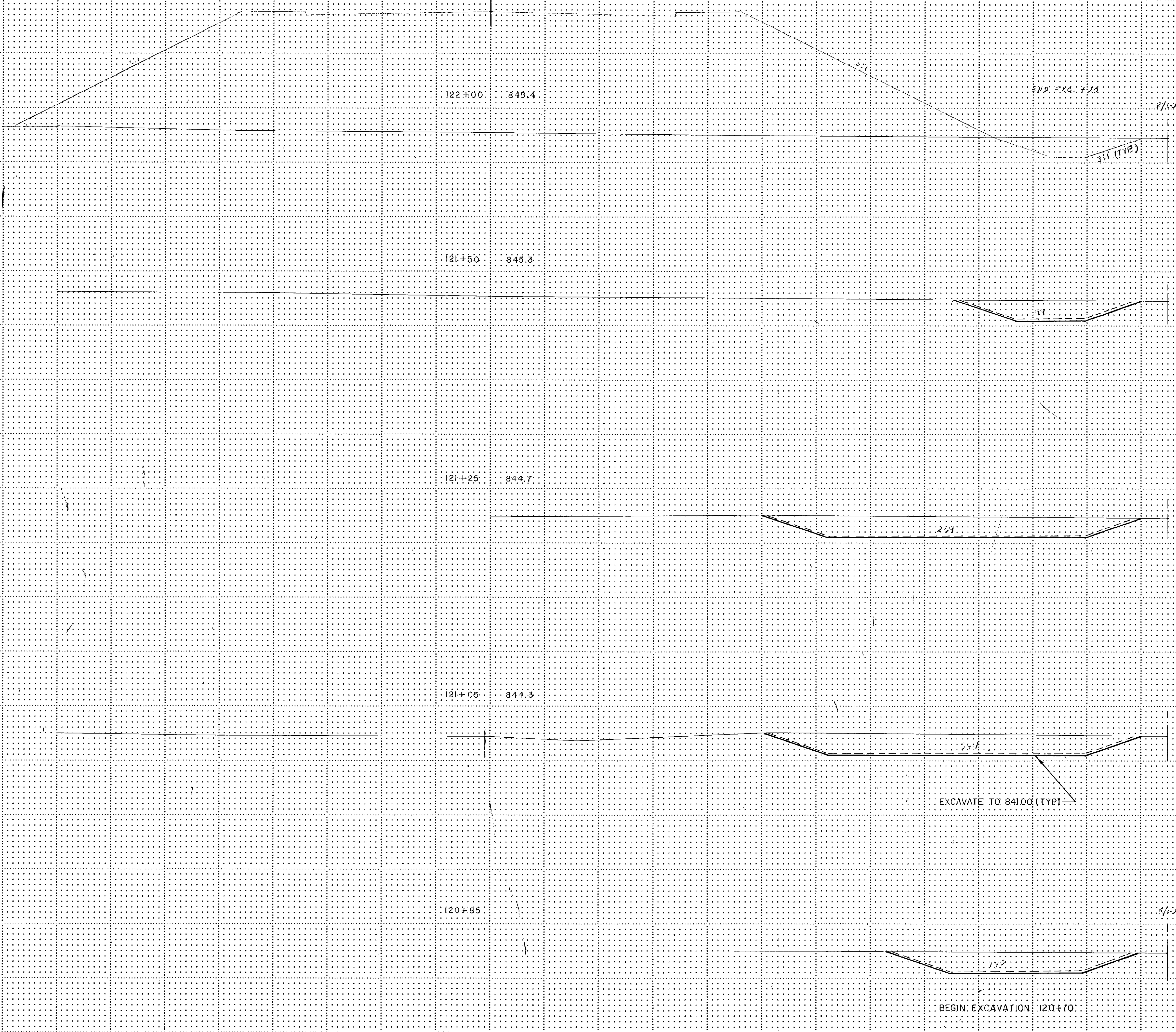
STA. 122+00 TO STA. 125+00

TRUAX ENGINEERING, INC. 11/87

EXCAVATION EMBANKMENT

SUB-TOTALS: CU.YDS. CU.YDS. SUB-TOTALS

TOTAL MUCK EMB. 6,110.4



26.0

196.0

144.0

168.0

135.0

39.0

PONDING AREA RT. 120+75 TO 122+25

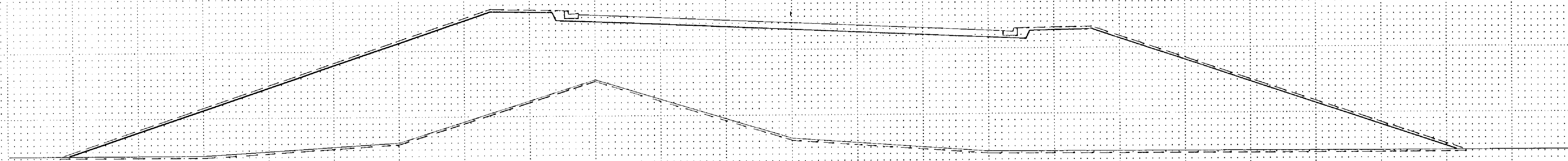
ILLUSTRATION NOT TO SCALE UNLESS OTHERWISE NOTED

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. SUB-TOTALS CU.YDS.

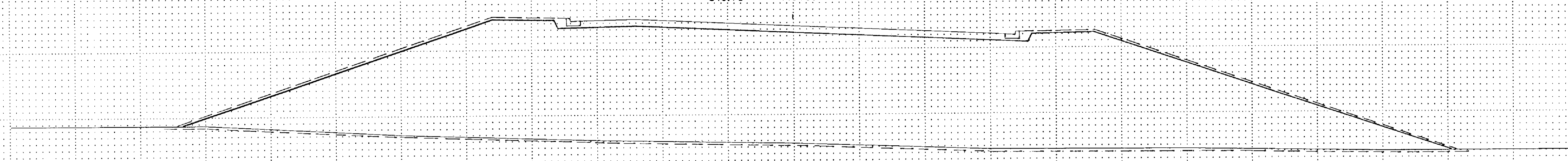
BEGIN BRIDGE 116+41

846.65 116+00 863.2



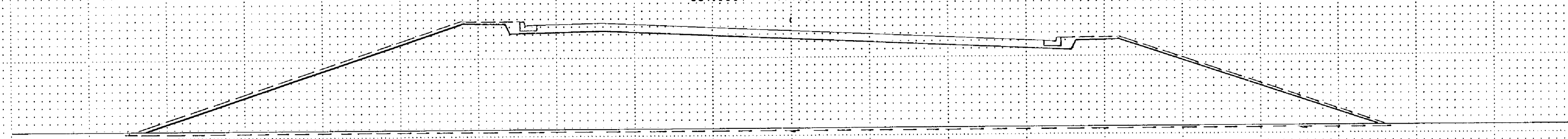
187 9457

845.75 115+00 862.64



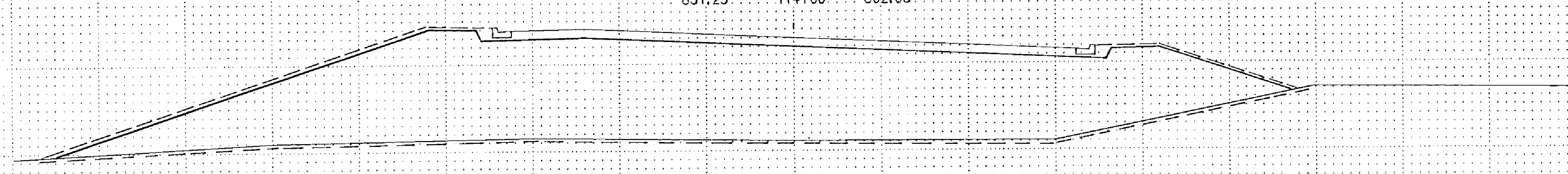
30 1338

851.0501 114+82 862.53



115 4446

851.25 114+00 862.08



128 4218

STA 114+00 TO STA 116+00

12/20/85 11:00 AM

EXCAVATION EMBANKMENT

SUB-TOTALS: CU.YDS. CU.YDS. SUB-TOTALS

PLANTING AREA FOR
SPRUCE, ASH, LOCUST
(SEE PLAN SHEET
NO. 6 OF 32 SHEETS)

PLANTING AREAS FOR
LOW SHRUBS (TYPICAL)

851.85 113+00 861.52

852.85 112+00 860.96

853.92 111+00 860.4

853.22 110+00 859.84

853.02 109+00 859.28

PLANTING AREA FOR:
SPRUCE, ASH, LOCUST
(SEE PLAN SHEET
NO. 6 OF 32 SHEETS)

145 4118

145 3632

142 3203

143 3250

325 3288

STA: 109+00 TO: STA: 113+00

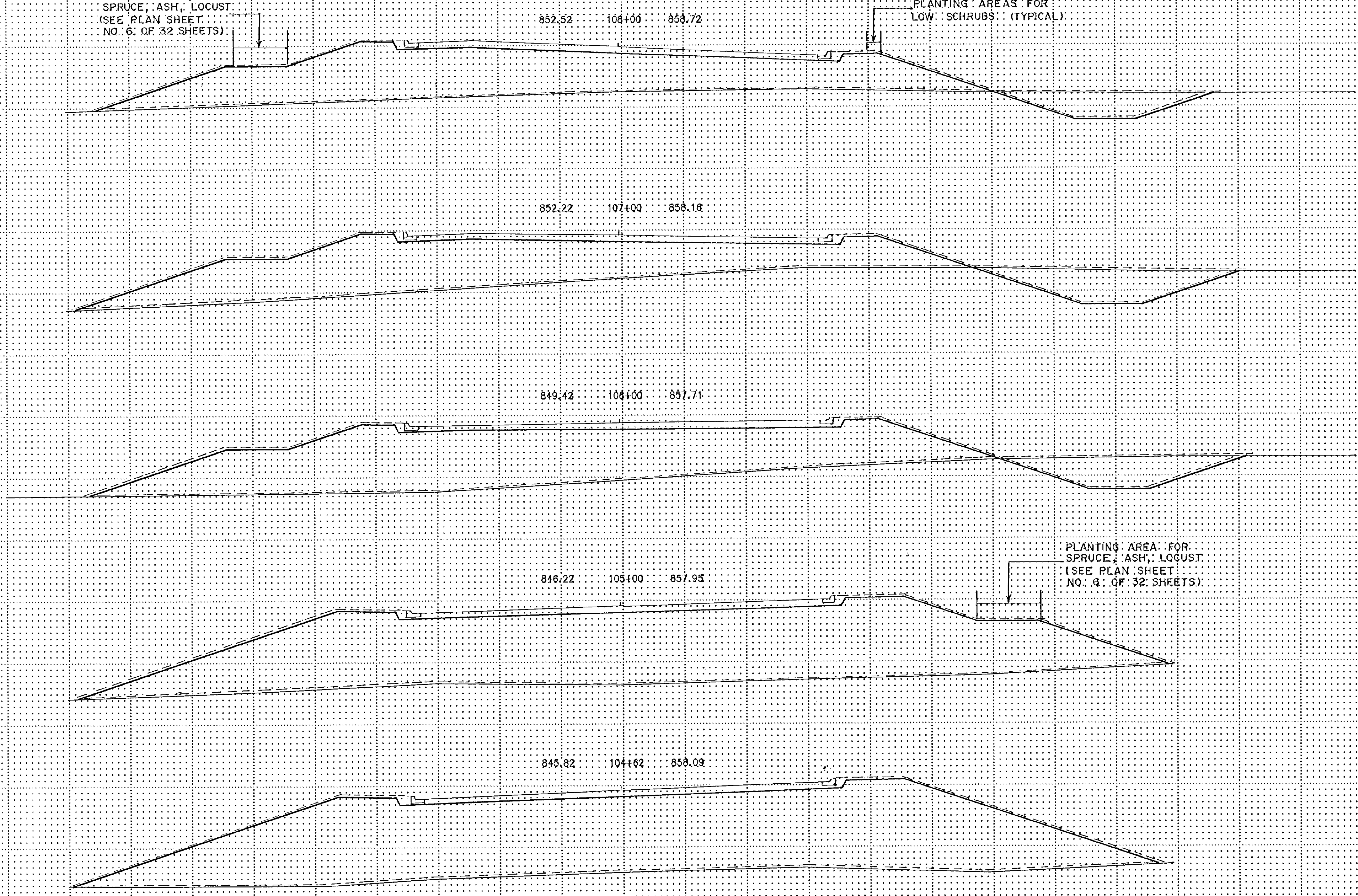
REVISED: 5-3-83

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS

PLANTING AREA FOR
SPRUCE, ASH, LOCUST
(SEE PLAN SHEET
NO. 6 OF 32 SHEETS)

PLANTING AREAS FOR
LOW SHRUBS (TYPICAL)



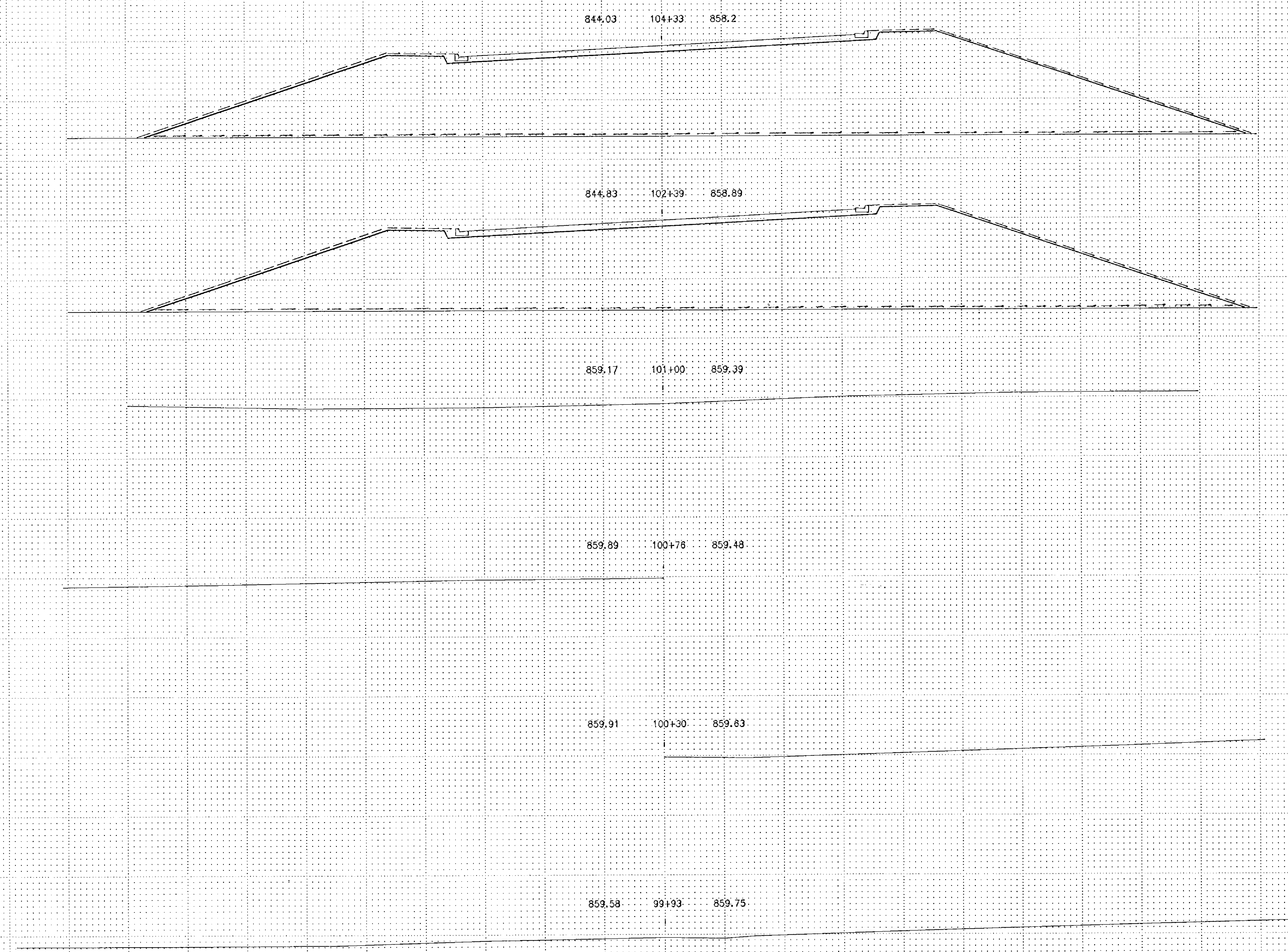
PLANTING AREA FOR
SPRUCE, ASH, LOCUST
(SEE PLAN SHEET
NO. 4 OF 32 SHEETS)

STA 104+62 TO STA 108+00

REVISED 5-5-89

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS



103+93 END BRIDGE

43 2136

102+87 BEGIN BRIDGE

84 3717

STA. 99+93 TO STA. 104+33

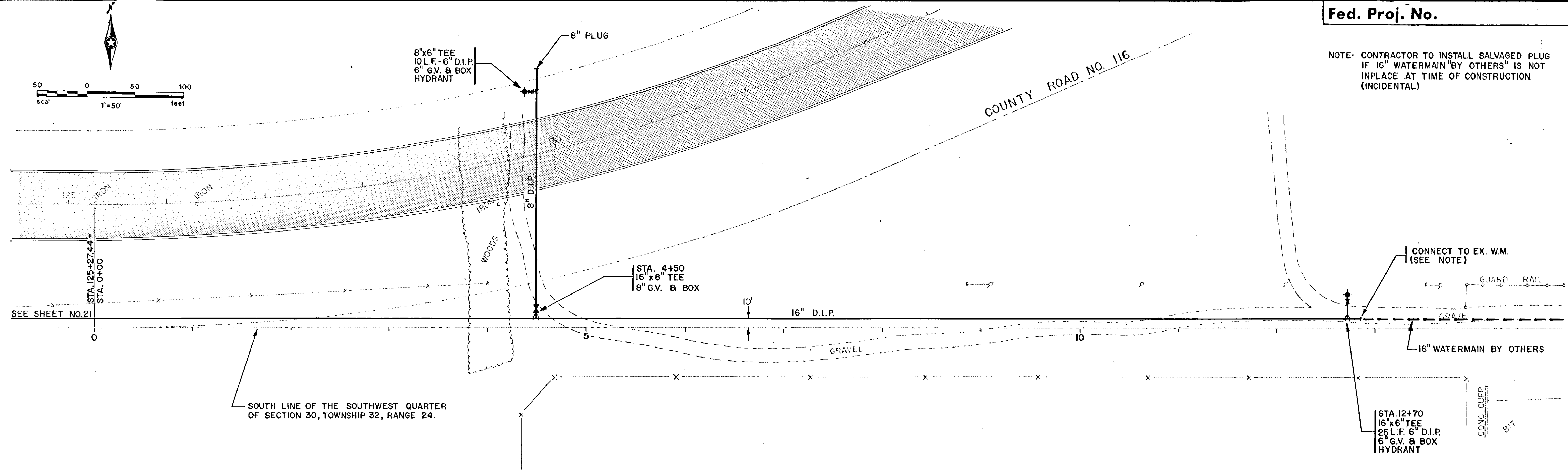
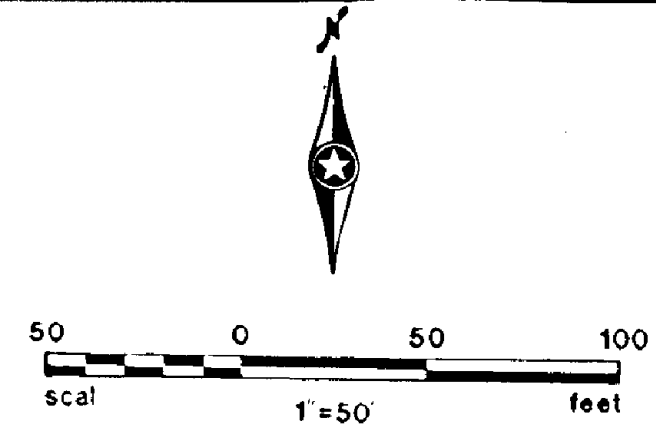
State Proj. No.

CP 65-05-116

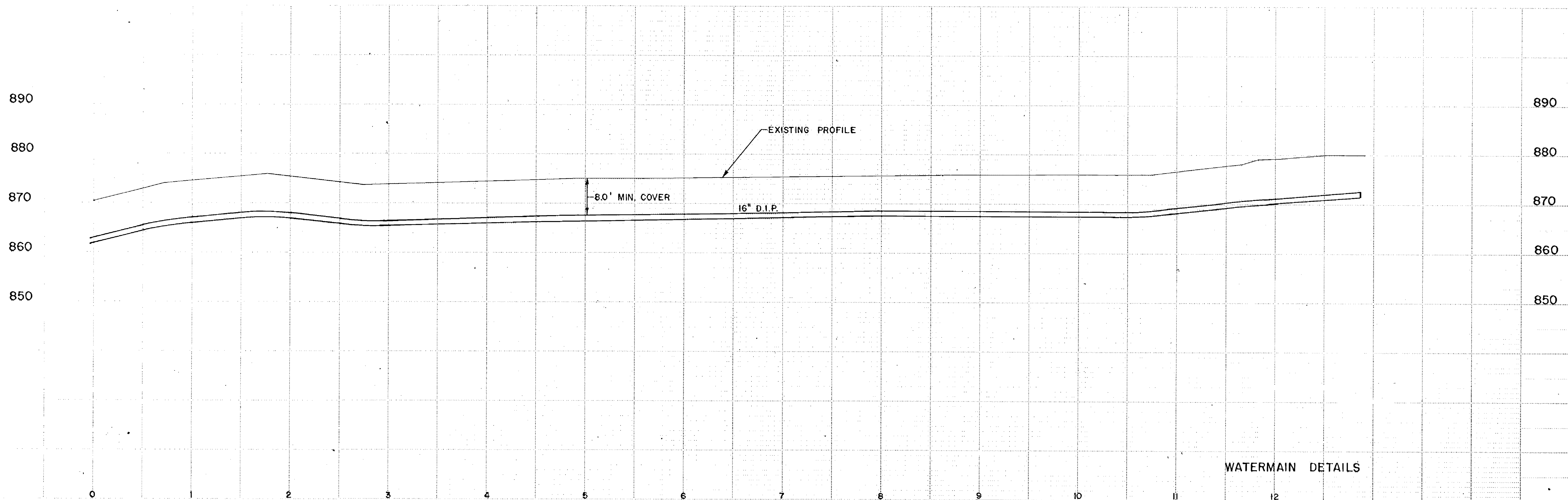
Sheet No. 22 of 32 Sheets

Number 201 each section 100' 1" 1/2

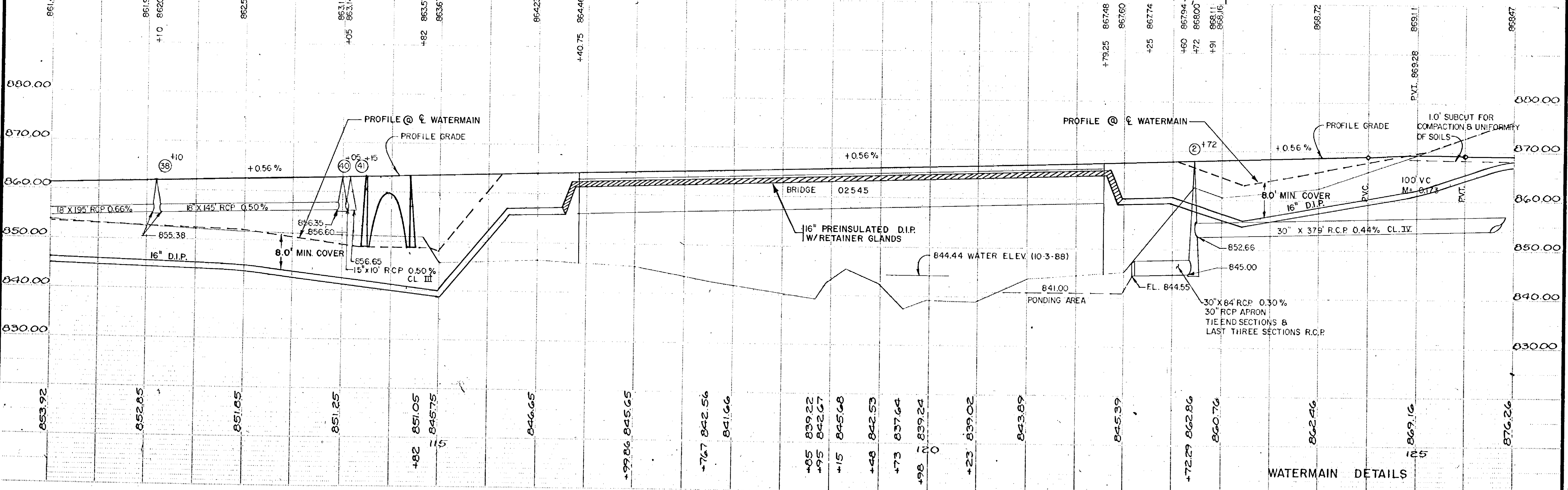
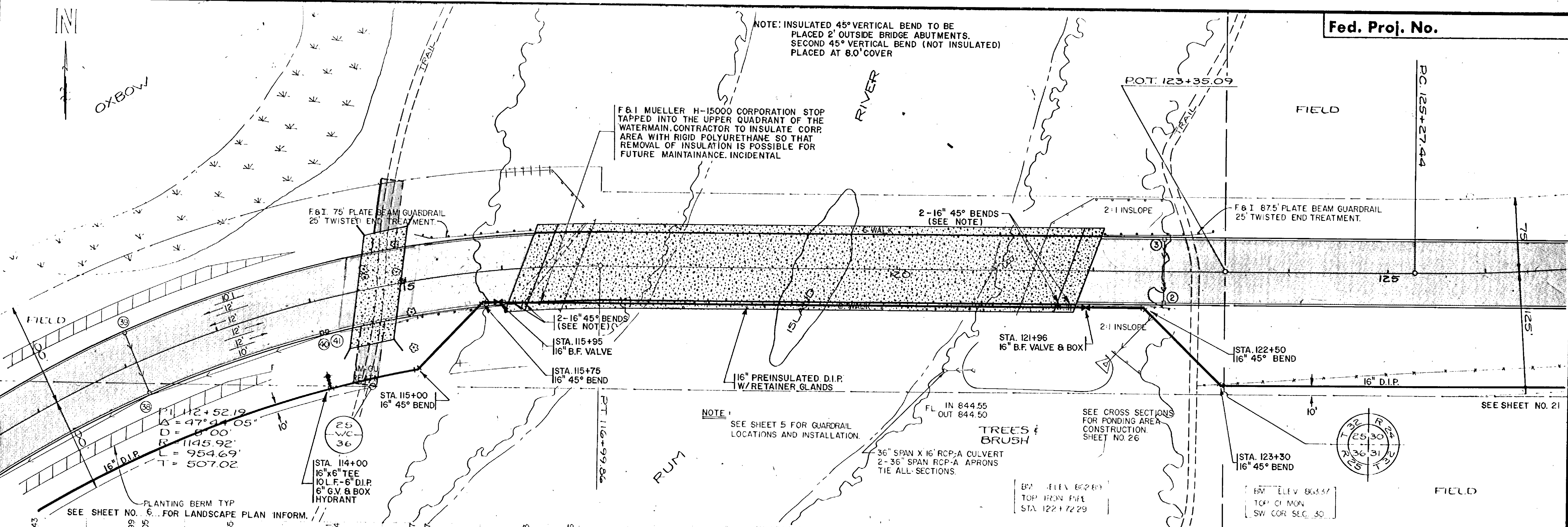
NOTE: CONTRACTOR TO INSTALL SALVAGED PLUG IF 16" WATERMAIN "BY OTHERS" IS NOT IN PLACE AT TIME OF CONSTRUCTION. (INCIDENTAL)



SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 30, TOWNSHIP 32, RANGE 24.



WATERMAIN DETAILS



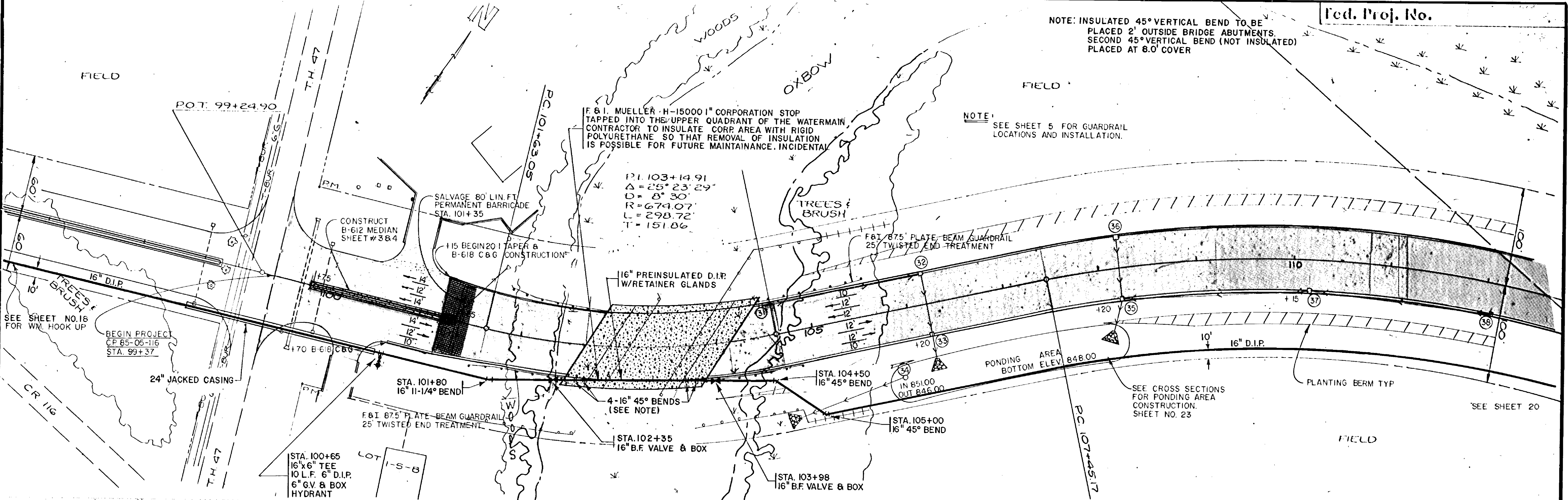
Copy Equipment Form #7 4/8135

NOTE: INSULATED 45° VERTICAL BEND TO BE PLACED 2' OUTSIDE BRIDGE ABUTMENTS. SECOND 45° VERTICAL BEND (NOT INSULATED) PLACED AT 8.0' COVER

NOTE: SEE SHEET 5 FOR GUARDRAIL LOCATIONS AND INSTALLATION.

F. & I. MUELLER - H-15000 I" CORPORATION STOP TAPPED INTO THE UPPER QUADRANT OF THE WATERMAIN. CONTRACTOR TO INSULATE CORP AREA WITH RIGID POLYURETHANE SO THAT REMOVAL OF INSULATION IS POSSIBLE FOR FUTURE MAINTAINANCE. INCIDENTAL

P.I. 103+14.91
Δ = 25° 23' 29"
D = 8° 30'
R = 674.07'
L = 298.72'
T = 151.86'



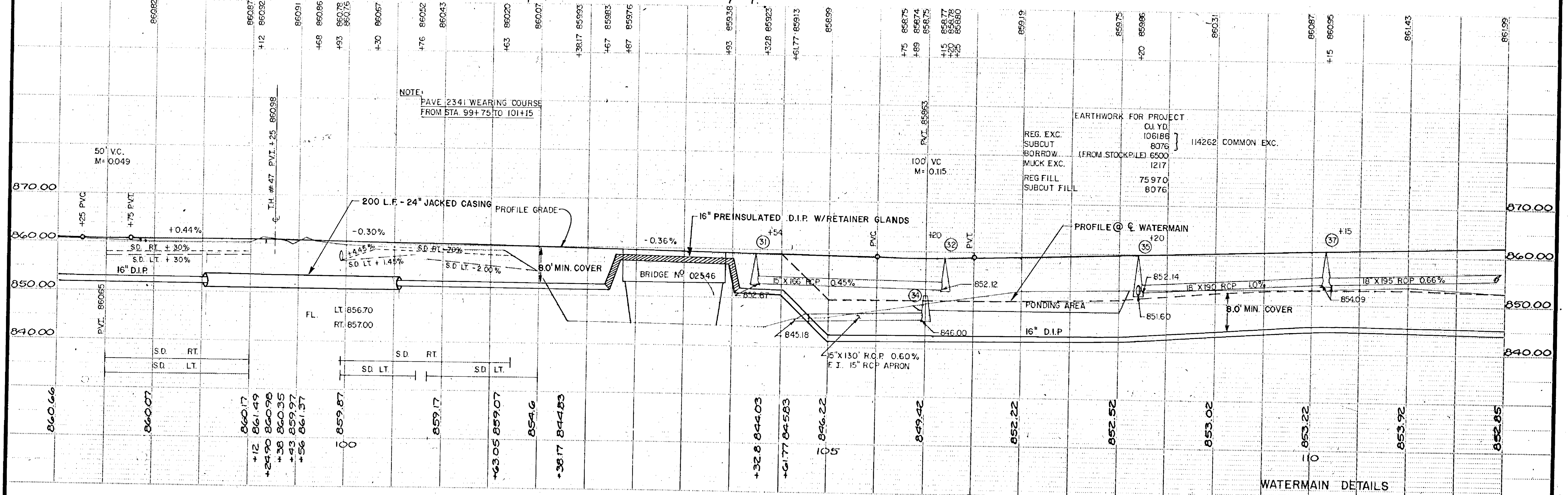
STA. 100+65
16" x 6" TEE
10 L.F. 6" D.I.P.
6" C.V. & BOX
HYDRANT

LOT 1-S-B

STA. 103+98
16" B.F. VALVE & BOX

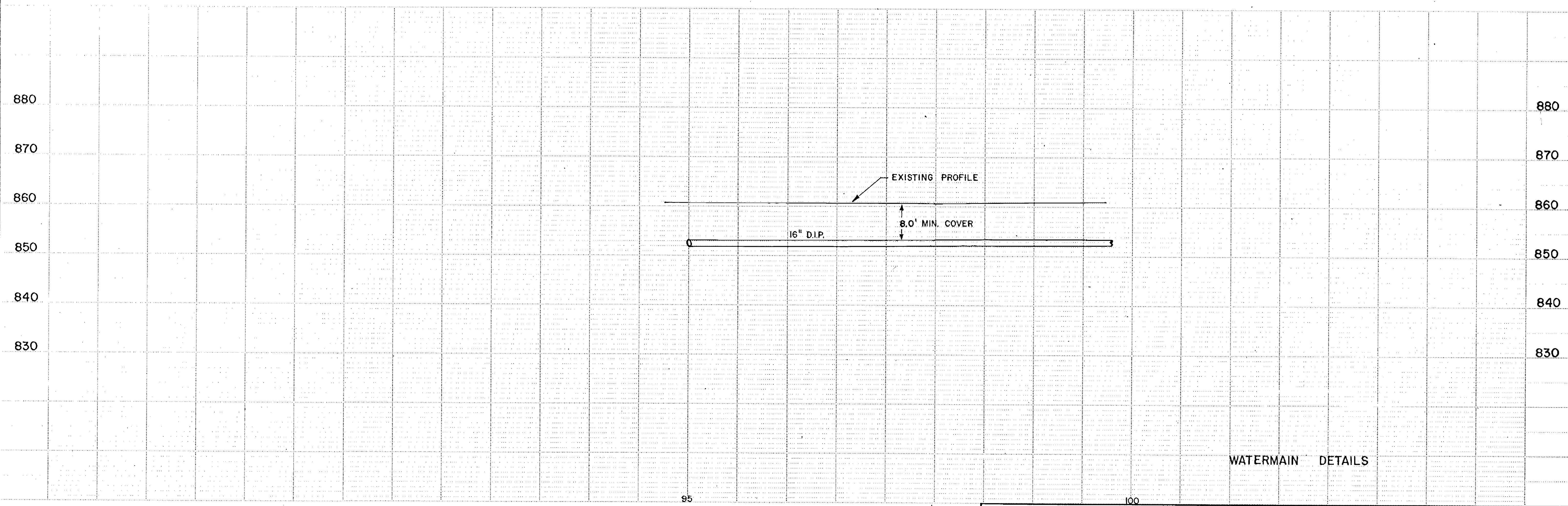
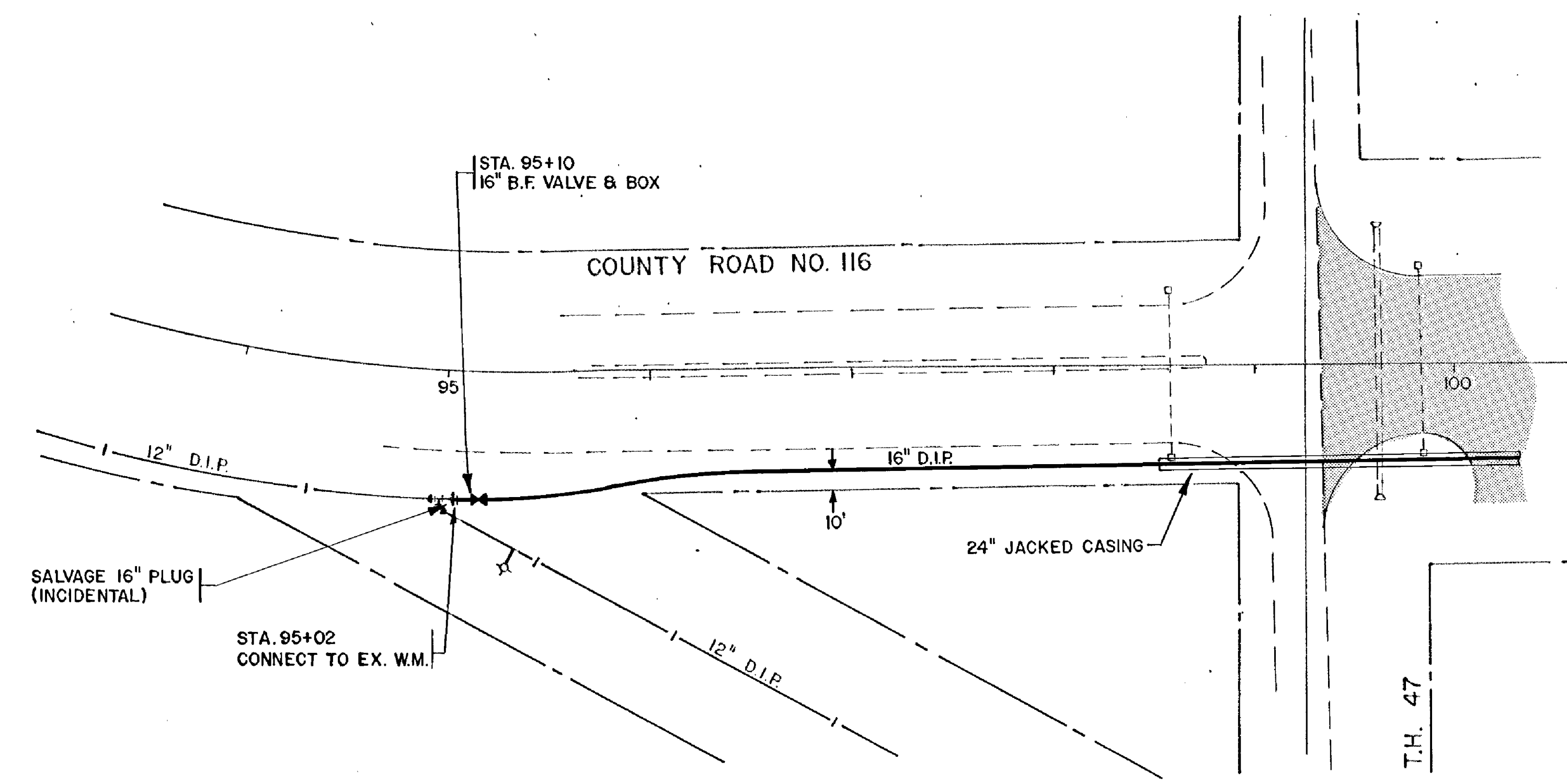
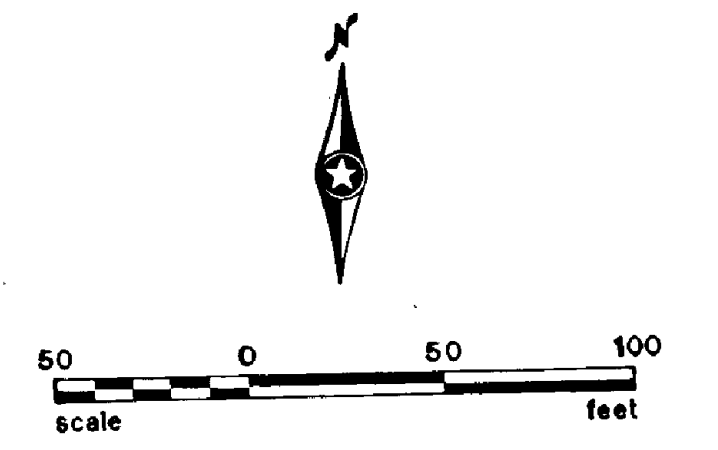
NOTE: PAVE 2341 WEARING COURSE FROM STA. 99+75 TO 101+15

EARTHWORK FOR PROJECT	
REG. EXC.	CU. YD. 106188
SUBCUT	8076
BORROW	(FROM STOCKPILE) 6500
MUCK EXC.	1217
REG. FILL	75970
SUBCUT FILL	8076
114262 COMMON EXC.	



WATERMAIN DETAILS

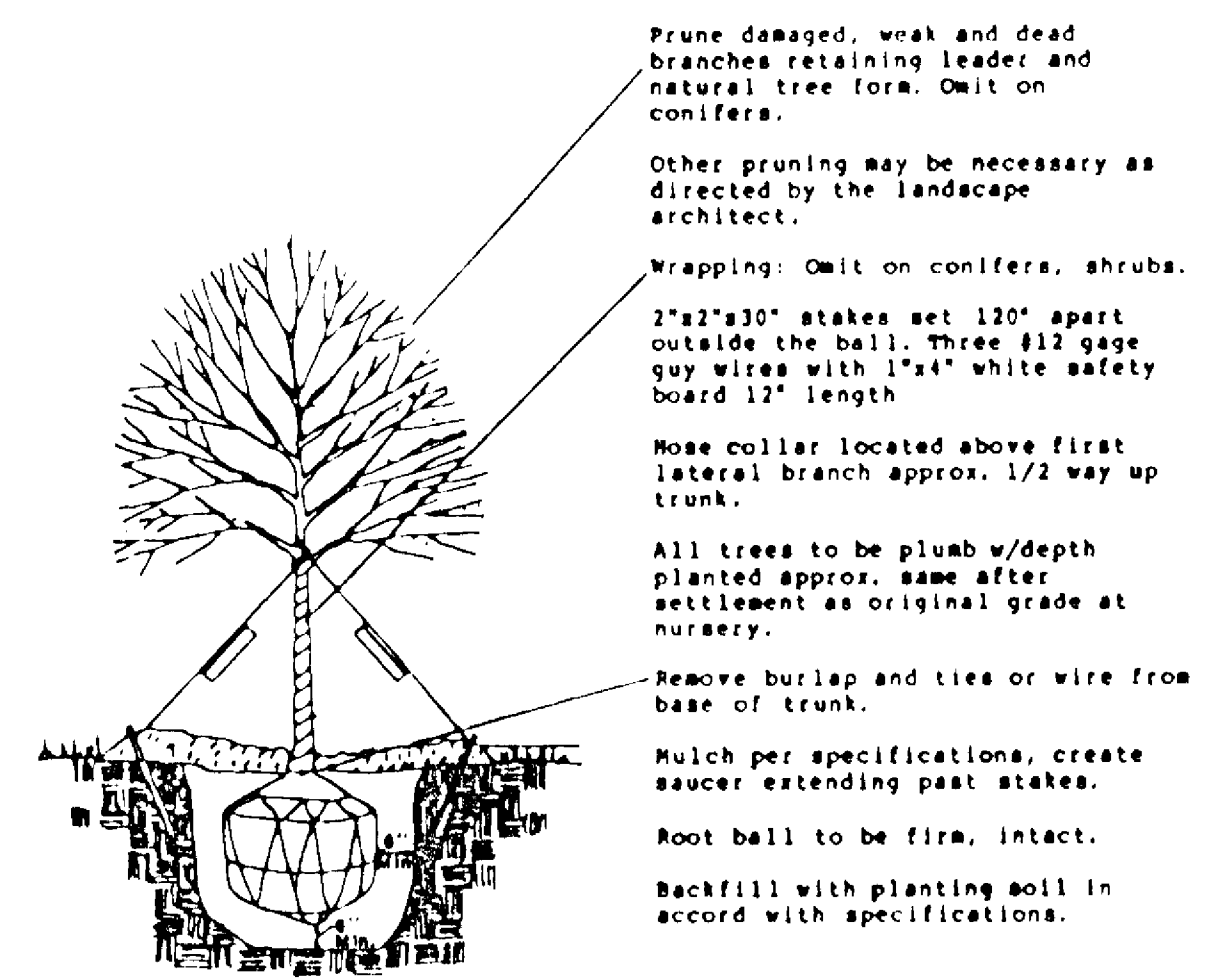
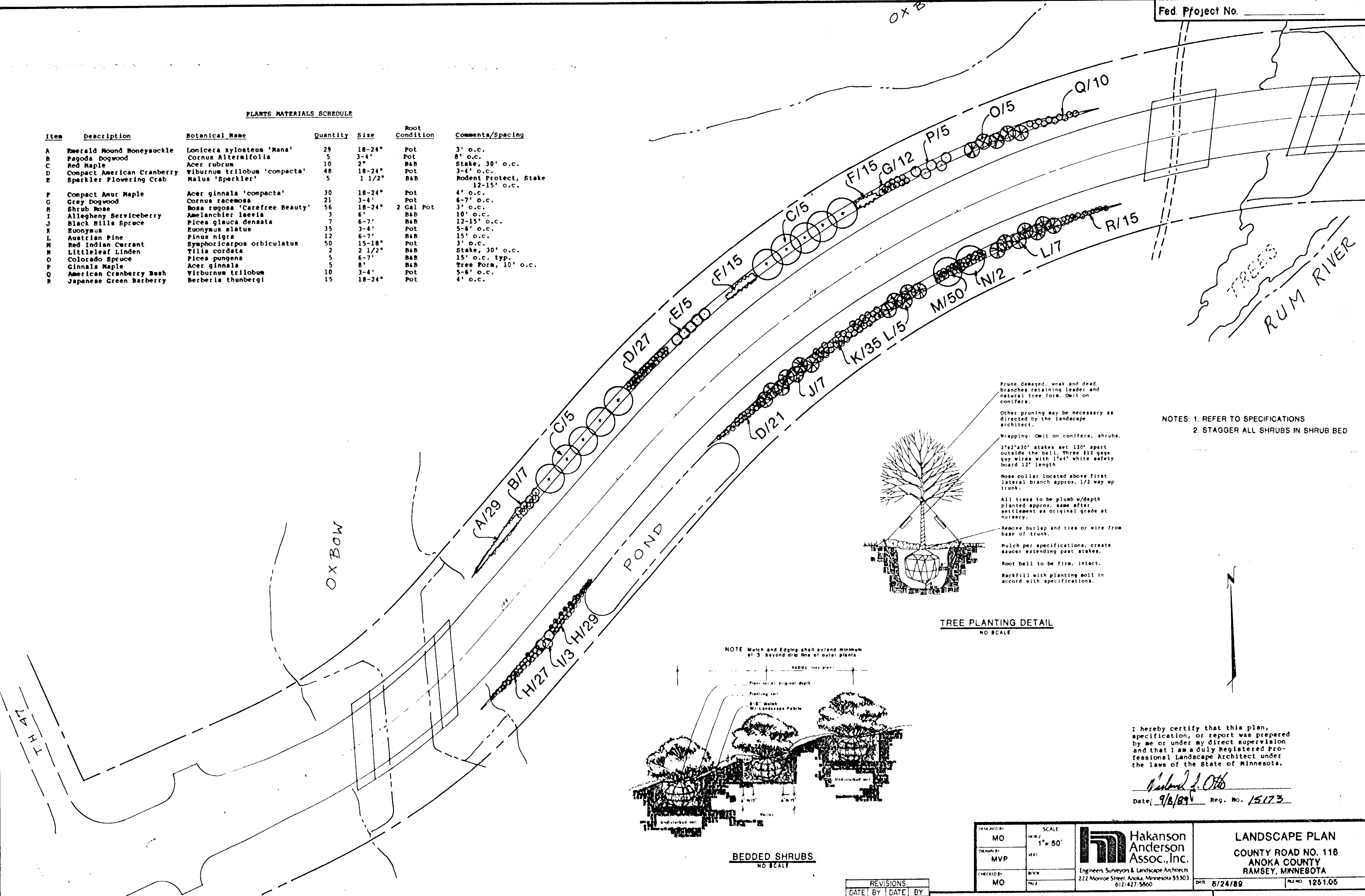
City Engineer's Office 8/1/85



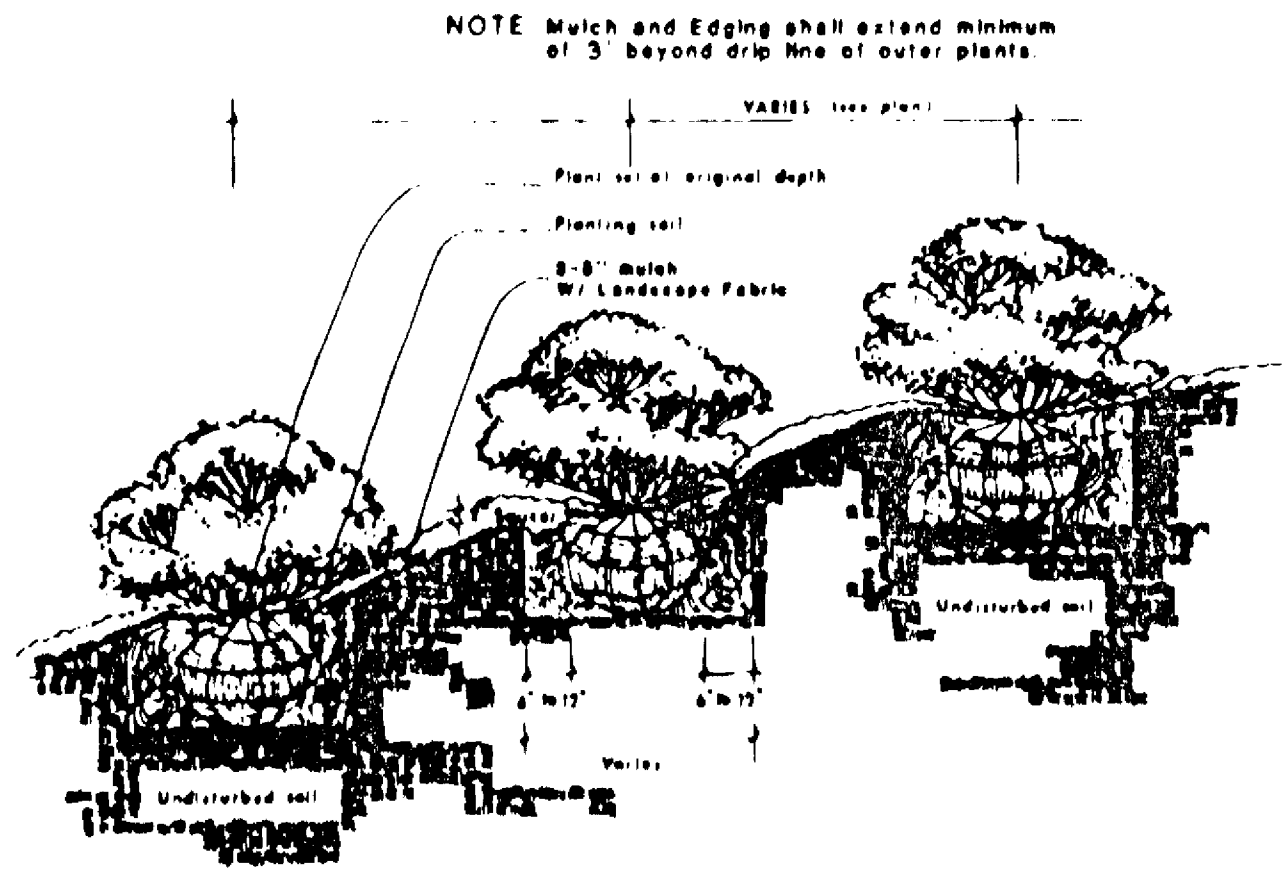
WATERMAIN DETAILS

PLANTS MATERIALS SCHEDULE

Item	Description	Botanical Name	Quantity	Size	Root Condition	Comments/Spacing
A	Emerald Mound Honeysuckle	Lonicera xylosteum 'Nana'	29	18-24"	Pot	3' o.c.
B	Pagoda Dogwood	Cornus Alternifolia	5	3-4'	Pot	8' o.c.
C	Red Maple	Acer rubrum	10	2"	B&B	Stake, 30' o.c.
D	Compact American Cranberry	Viburnum trilobum 'compacta'	48	18-24"	Pot	3-4' o.c.
E	Sparkler Flowering Crab	Malus 'Sparkler'	5	1 1/2"	B&B	Rodent Protect, Stake 12-15' o.c.
F	Compact Amur Maple	Acer ginnala 'compacta'	30	18-24"	Pot	4' o.c.
G	Grey Dogwood	Cornus racemosa	21	3-4'	Pot	6-7' o.c.
H	Shrub Rose	Rosa rugosa 'Carefree Beauty'	56	18-24"	2 Gal Pot	3' o.c.
I	Allegheny Serviceberry	Amelanchier laevis	3	6'	B&B	10' o.c.
J	Black Hills Spruce	Picea glauca densata	7	6-7'	B&B	12-15' o.c.
K	Euonymus	Euonymus alatus	35	3-4'	Pot	5-6' o.c.
L	Austrian Pine	Pinus nigra	12	6-7'	B&B	15' o.c.
M	Red Indian Currant	Symphoricarpos orbiculatus	50	15-18"	Pot	3' o.c.
N	Littleleaf Linden	Tilia cordata	2	2 1/2"	B&B	Stake, 30' o.c.
O	Colorado Spruce	Picea pungens	5	6-7'	B&B	15' o.c. typ.
P	Ginnala Maple	Acer ginnala	5	8'	B&B	Tree Form, 10' o.c.
Q	American Cranberry Bush	Viburnum trilobum	10	3-4'	Pot	5-6' o.c.
R	Japanese Green Barberry	Berberis thunbergii	15	18-24"	Pot	4' o.c.



TREE PLANTING DETAIL
NO SCALE



BEDDED SHRUBS
NO SCALE

- NOTES: 1. REFER TO SPECIFICATIONS
2. STAGGER ALL SHRUBS IN SHRUB BED

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Landscape Architect under the laws of the State of Minnesota.
Richard J. Otto
Date: 9/8/89 Reg. No. 15173

REVISIONS			
DATE	BY	DATE	BY

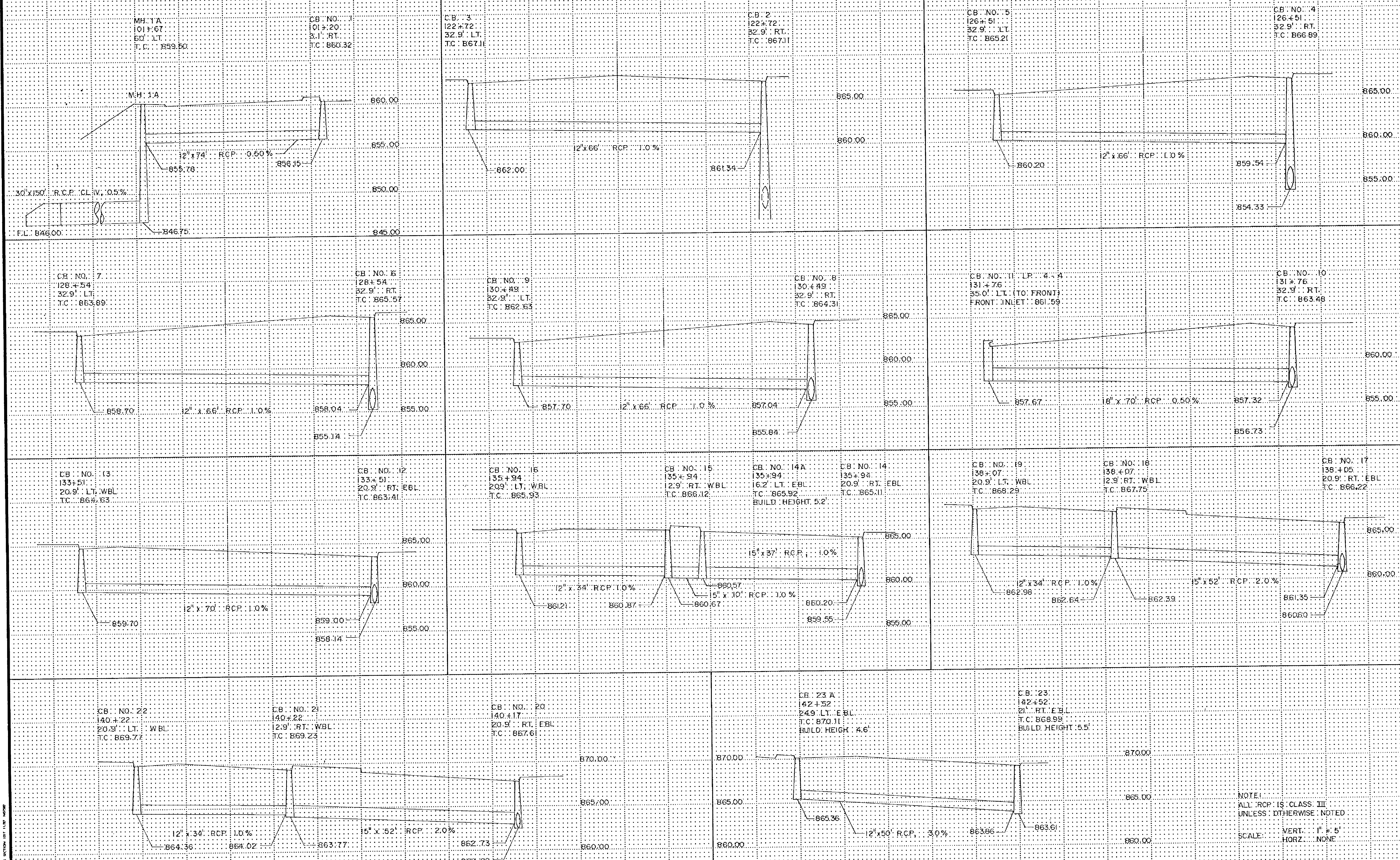
S.A.P. S.P. C.P. 85-05-116

DESIGNED BY	MO	SCALE	1" = 50'
DRAWN BY	MVP		
CHECKED BY	MO		

Hakanson Anderson Assoc., Inc.
Engineers, Surveyors & Landscape Architects
222 Monroe Street, Anoka, Minnesota 55303
612/427-5860

LANDSCAPE PLAN
COUNTY ROAD NO. 116
ANOKA COUNTY
RAMSEY, MINNESOTA
DATE: 8/24/89 FILE NO: 1261.05

STORM SEWER



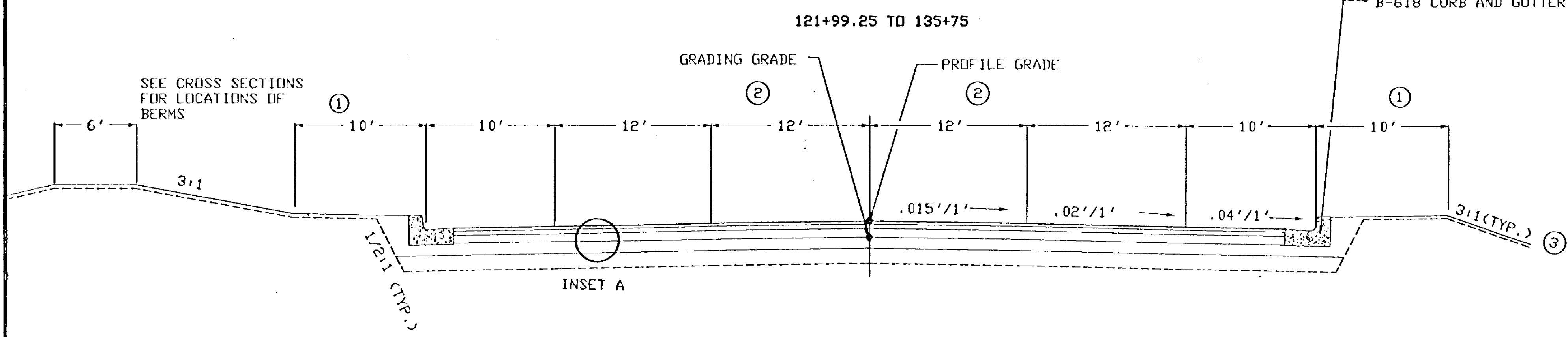
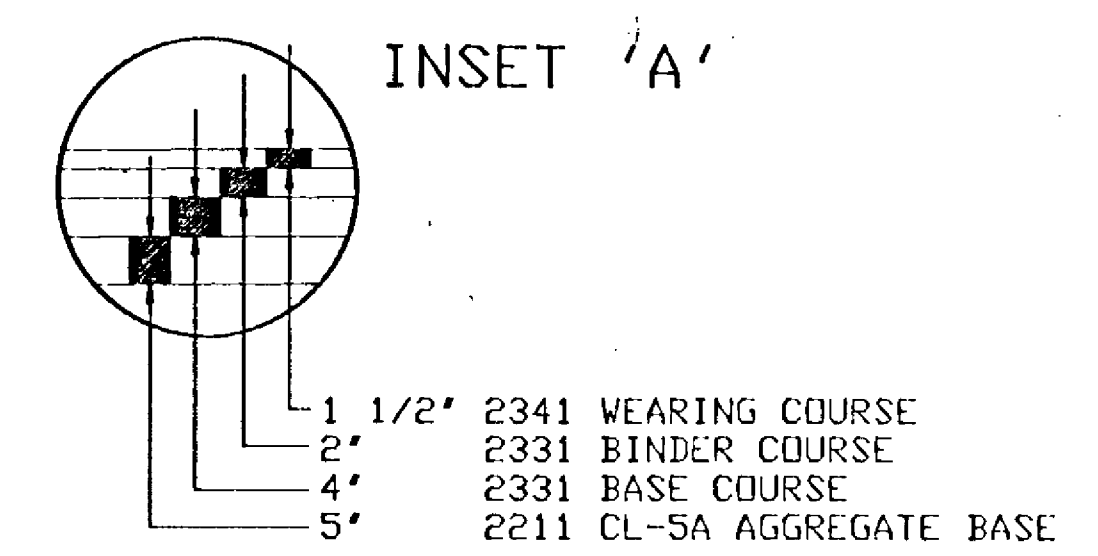
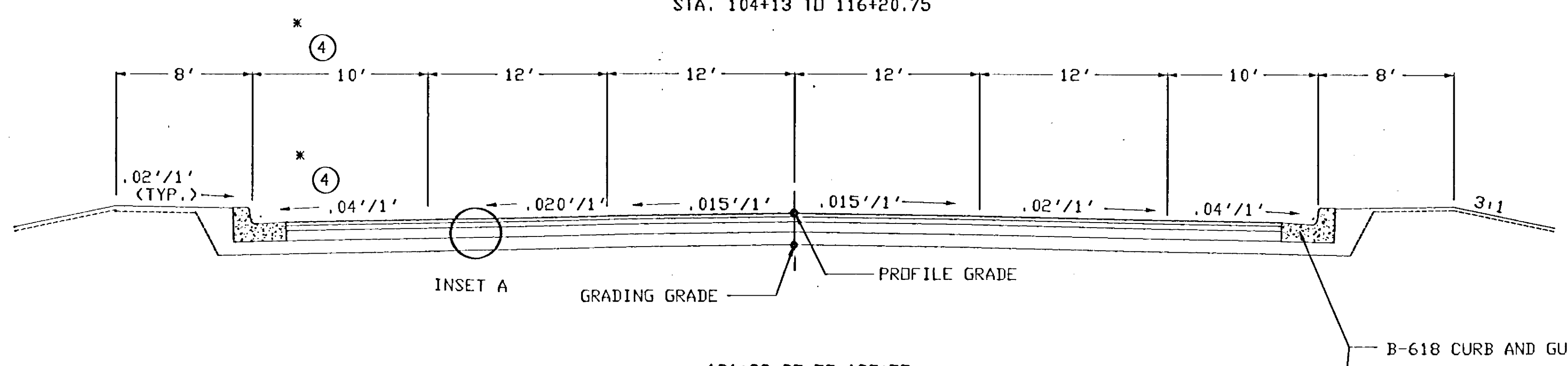
NOTE:
ALL RCP IS CLASS III
UNLESS OTHERWISE NOTED

SCALE: VERT. 1" = 5'
HORZ. NONE

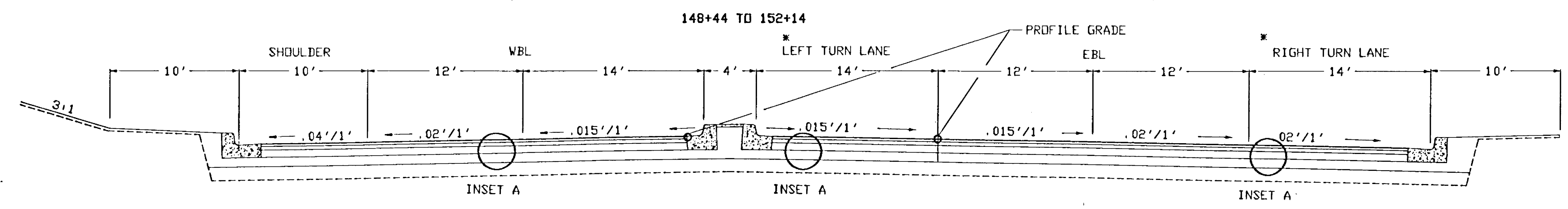
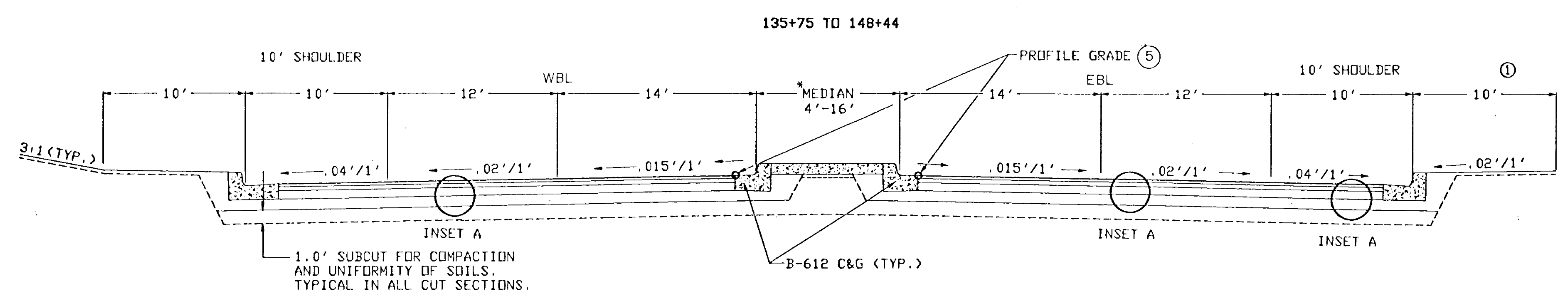
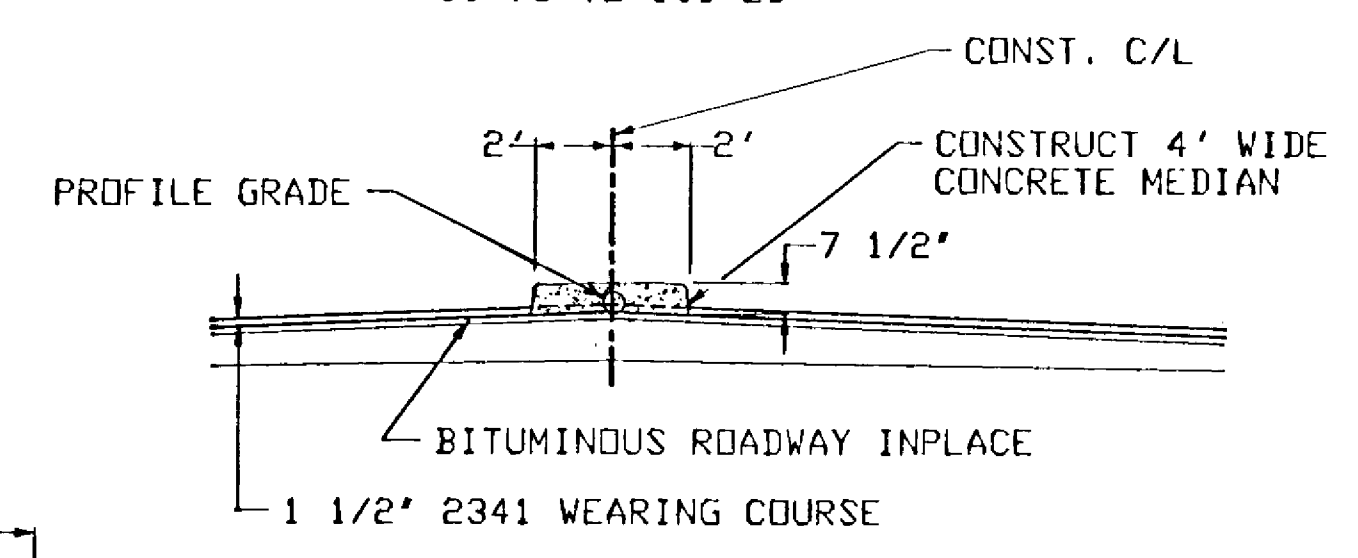
TYPICAL SECTIONS
 STA. 101+15 TO 102+67
 STA. 104+13 TO 116+20.75

NOTE: EXCEPTIONS FOR BRIDGES

- ① 12' IN GUARDRAIL APPROACHES (SEE CROSS SECTIONS)
15' RIGHT SIDE ONLY STA. 125+00 TO STA. 144+00
 - ② VARIABLE WIDTH STA. 132+44 TO STA. 135+75
 - ③ 2:1 SLOPES AT BRIDGE APPROACH STA. 122+00 TO STA. 123+00
 - * ④ 10' TO 14' IN RIGHT TURN LANES @ .025'/1'
 - ⑤ PROFILE GRADE CARRIED AT 12' IN ALL LEFT TURN LANES
EBL OR WBL. STA. 135+75 TO 152+14
- * SEE PLAN SHEET FOR
TURN LANE LOCATION

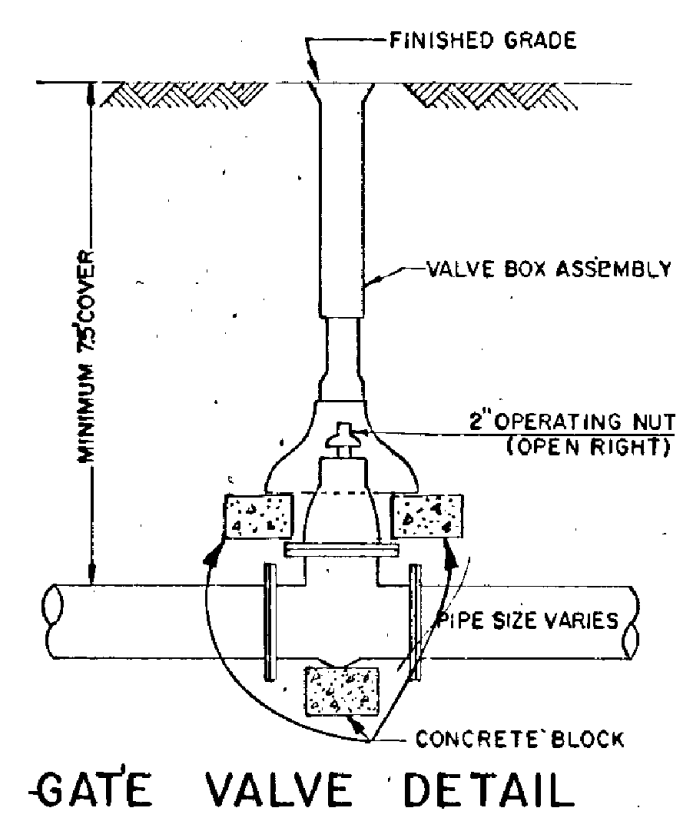


CONCRETE MEDIAN DETAIL
 99+75 TO 101+25

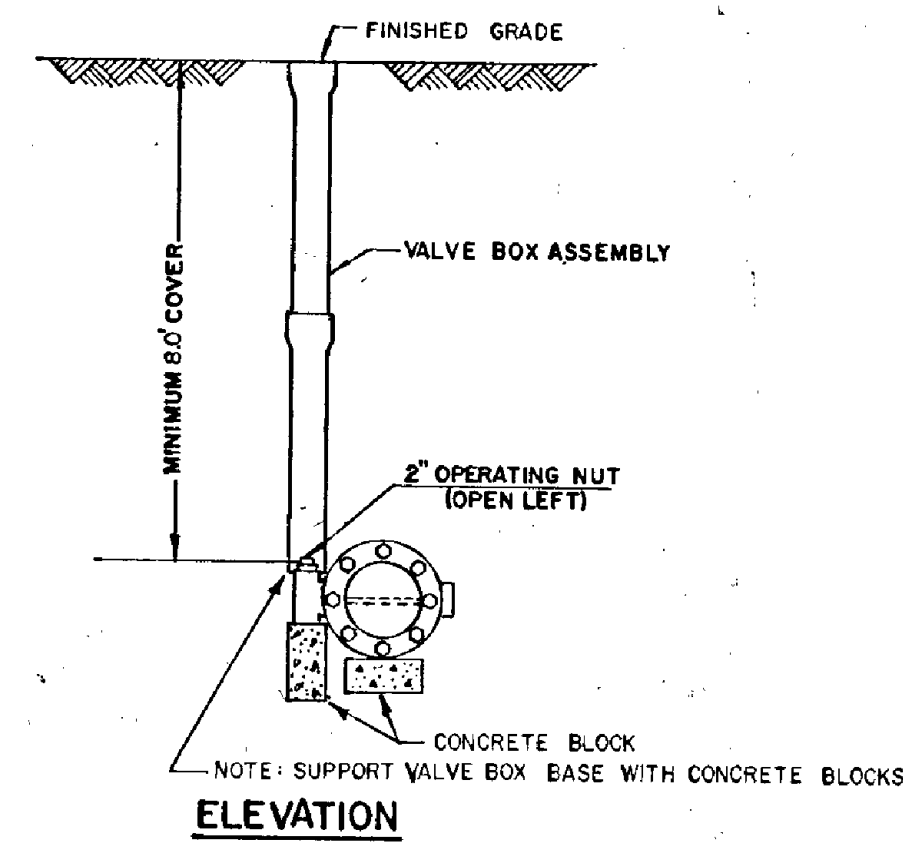


REVISIONS			
DATE	BY	DATE	BY

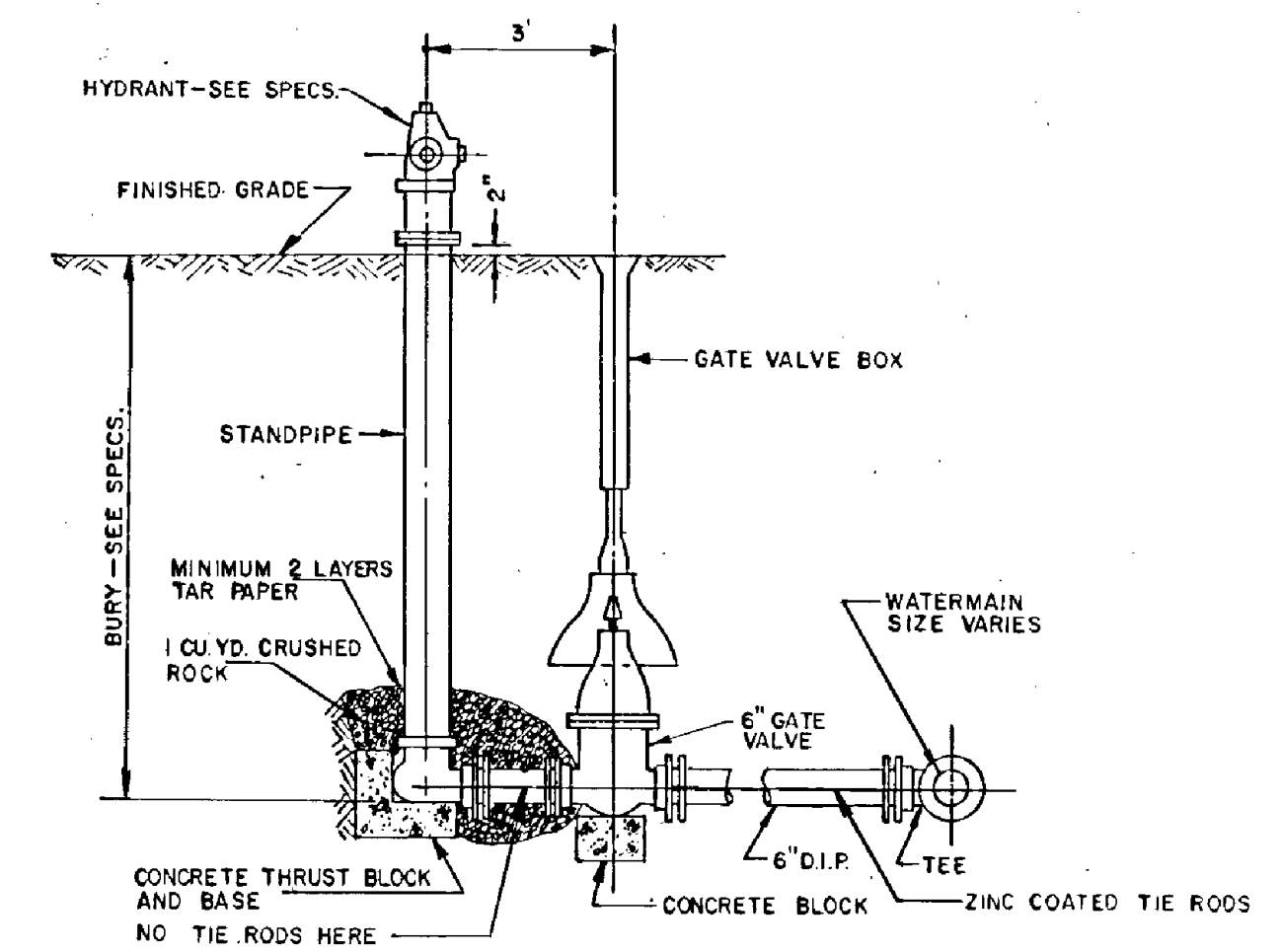
S.A.P. _____ S.P. _____ C.P. 65-05-116



GATE VALVE DETAIL

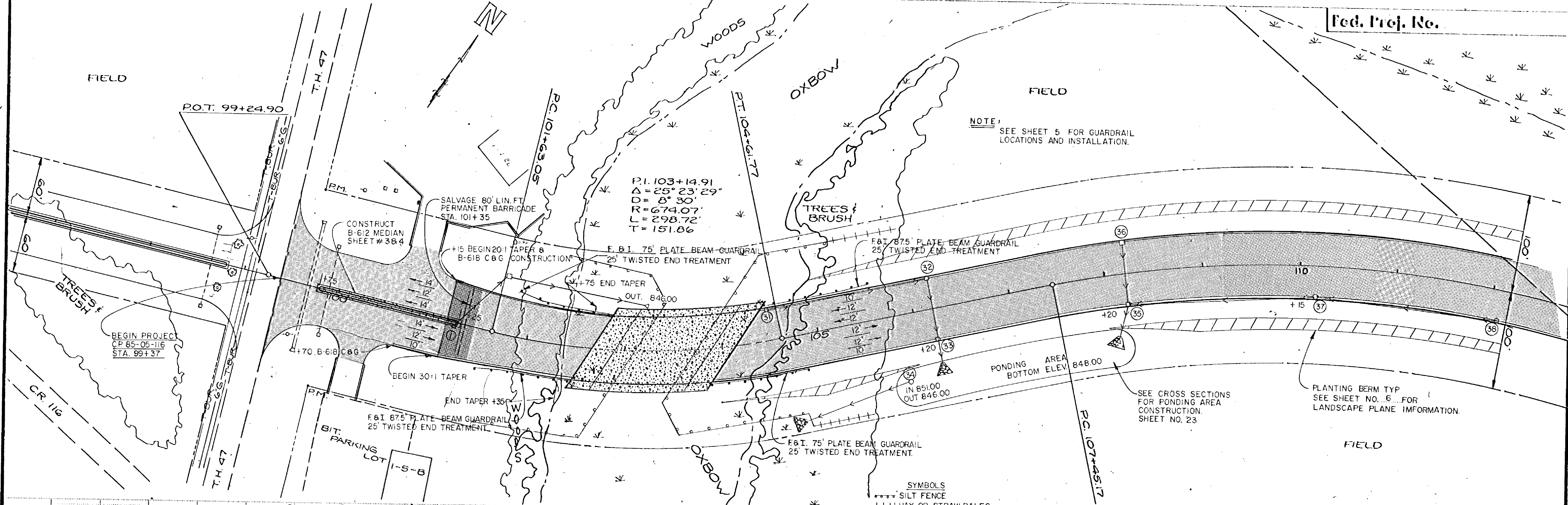


TYPICAL BUTTERFLY VALVE & BOX INSTALLATION



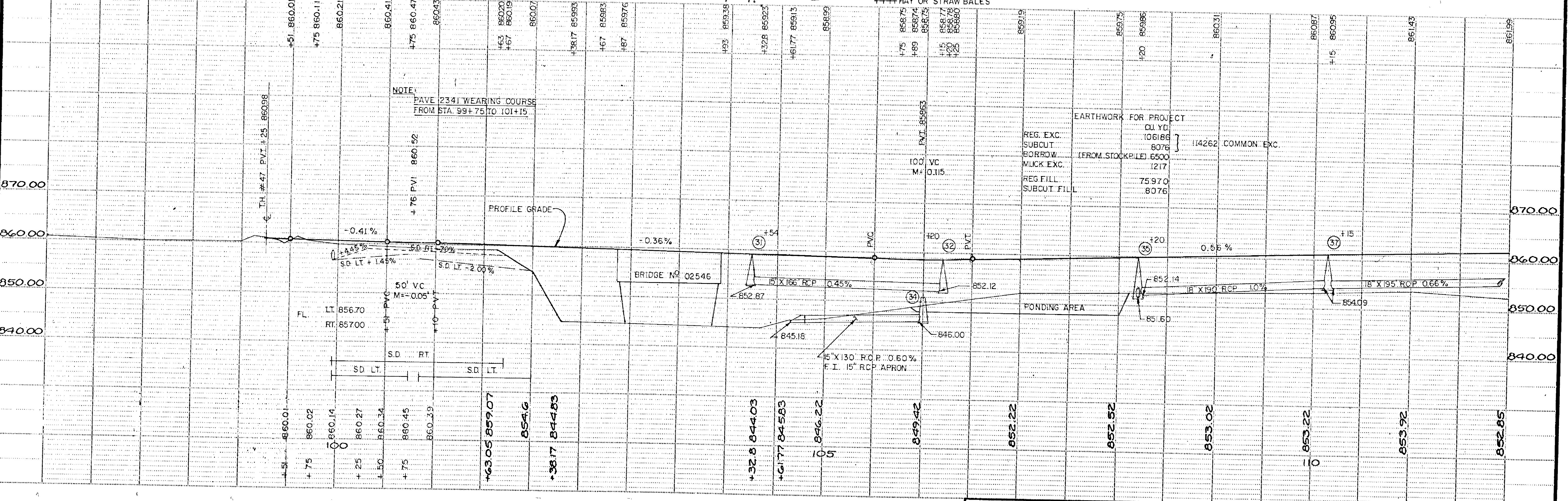
HYDRANT & GATE VALVE INSTALLATION

WATERMAIN DETAILS



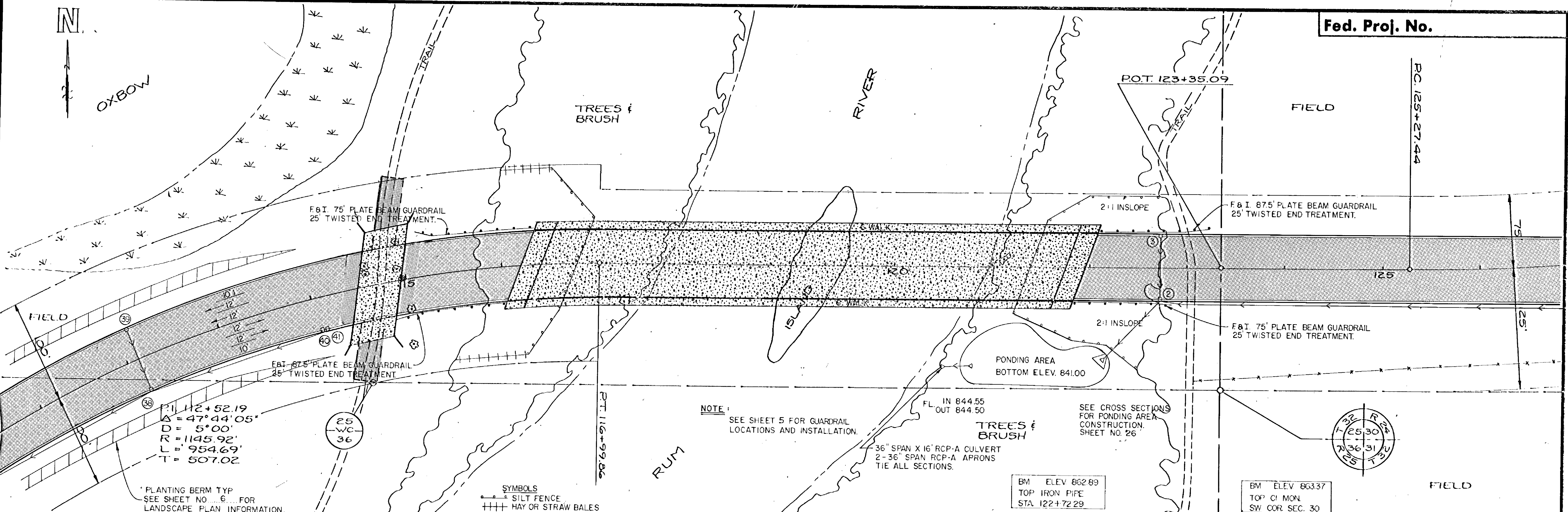
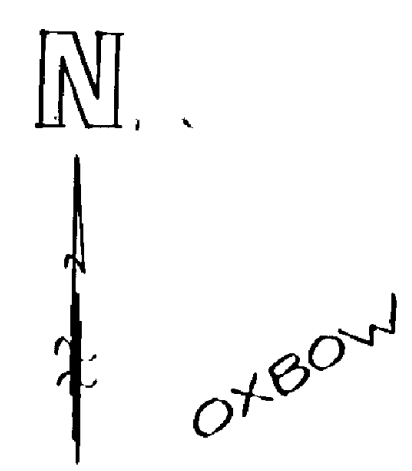
NOTE: SEE SHEET 5 FOR GUARDRAIL LOCATIONS AND INSTALLATION.

SYMBOLS
 --- SILT FENCE
 +++ HAY OR STRAW BALES



Clear Requirements Form 87 (8/81)

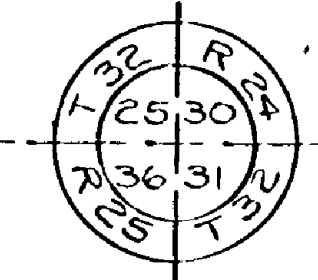
PC 125+27.44



P: 112+52.19
 $\Delta = 47^\circ 44' 05''$
 $D = 5^\circ 00'$
 $R = 1145.92'$
 $L = 954.69'$
 $T = 507.02'$

NOTE: SEE SHEET 5 FOR GUARDRAIL LOCATIONS AND INSTALLATION.

SEE CROSS SECTIONS FOR PONDING AREA CONSTRUCTION. SHEET NO. 26

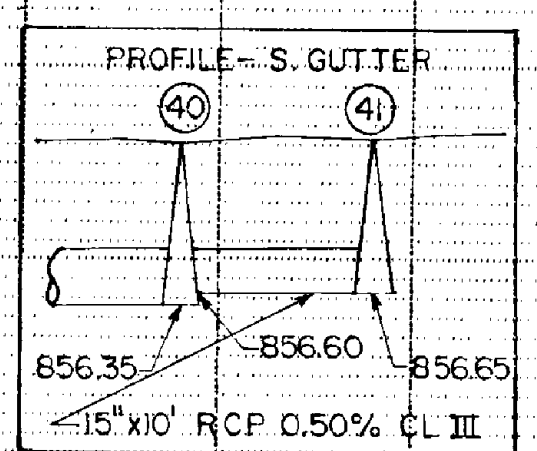
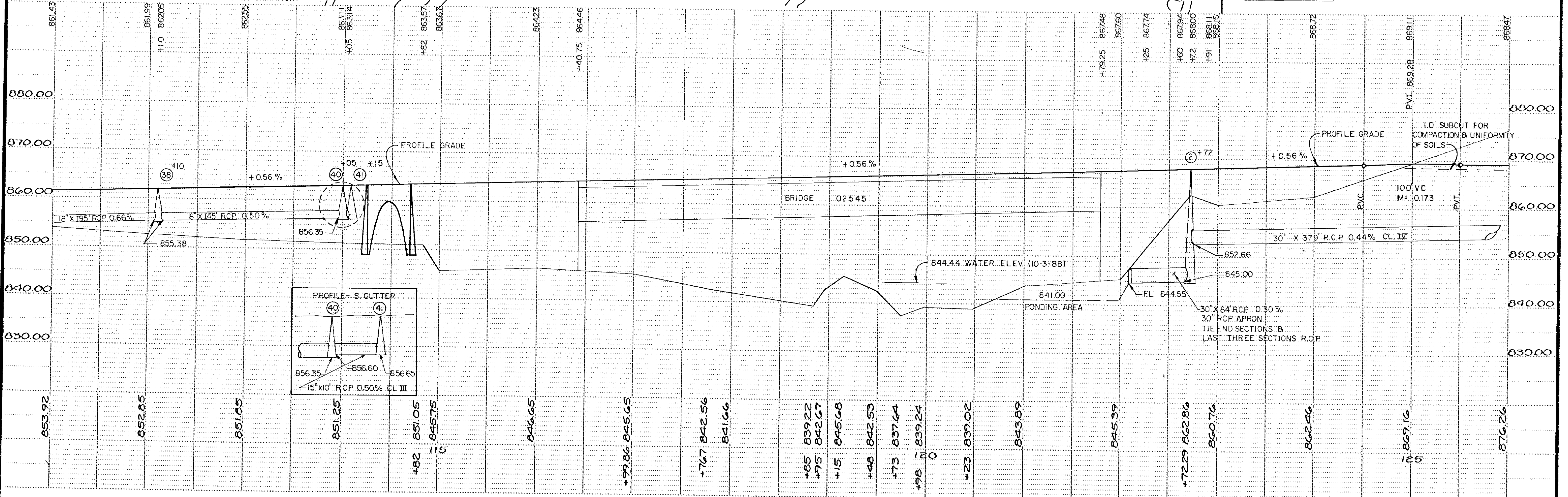


PLANTING BERM TYP SEE SHEET NO. 6 FOR LANDSCAPE PLAN INFORMATION.

SYMBOLS
 - - - SILT FENCE
 |||| HAY OR STRAW BALES

BM ELEV 862.89
 TOP IRON PIPE
 STA. 122+72.29

BM ELEV 863.37
 TOP CI MON
 SW COR. SEC. 30



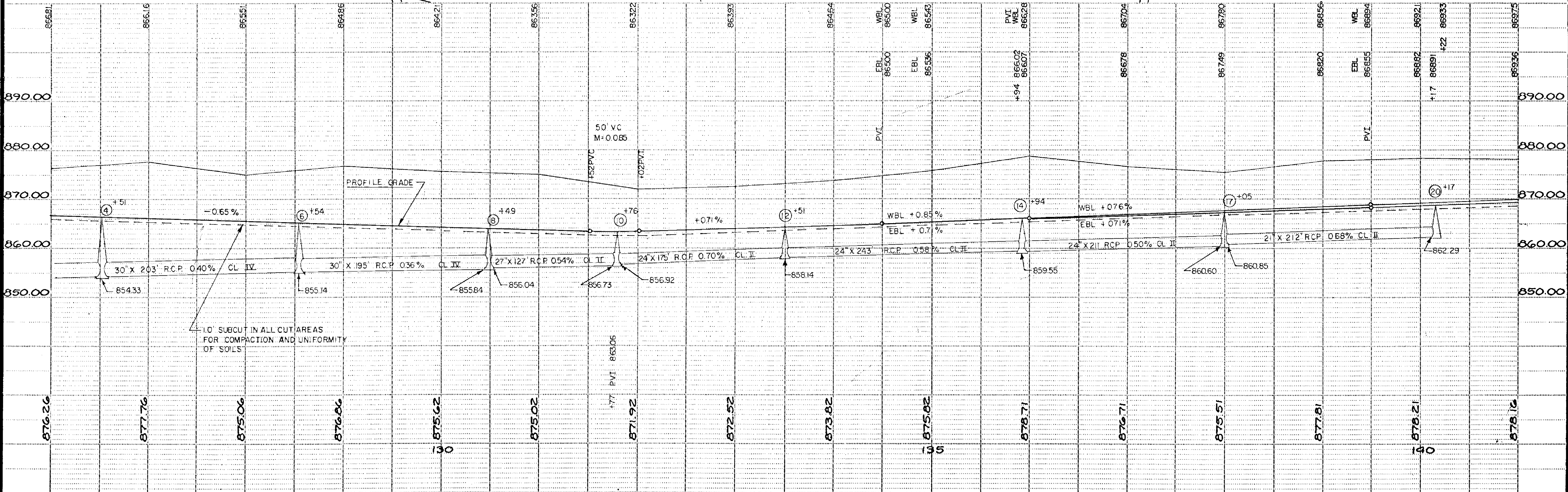
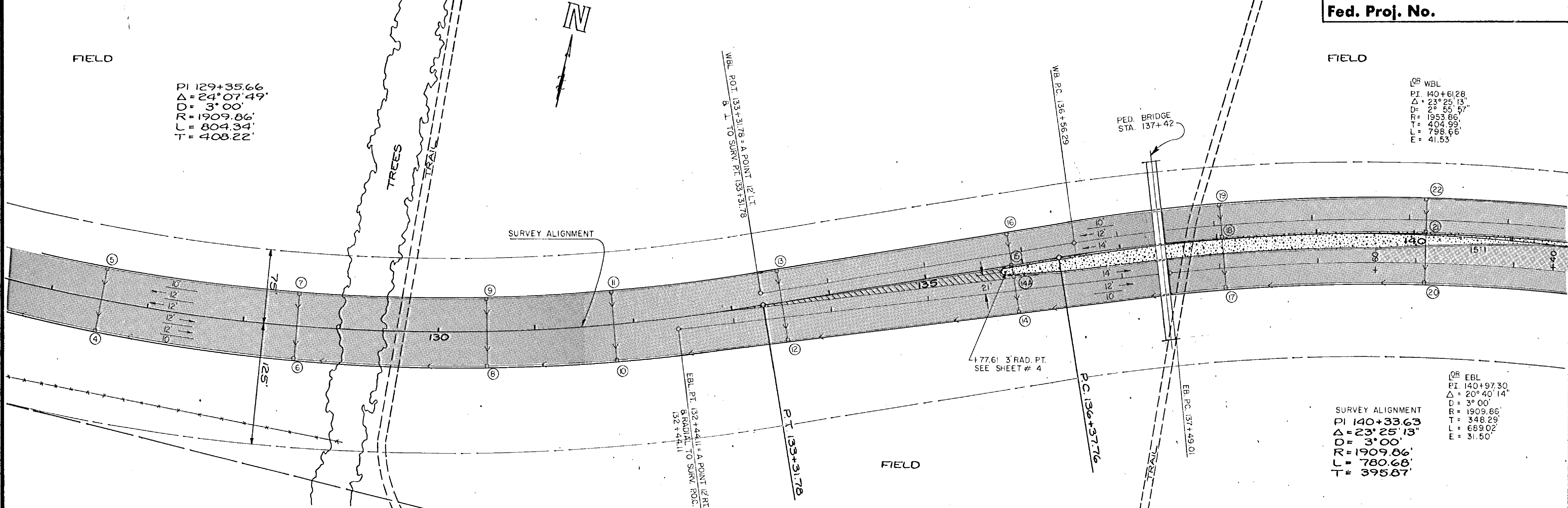
FIELD

FIELD

PI 129+35.66
 $\Delta = 24^\circ 07' 49''$
 D = 3' 00"
 R = 1909.86'
 L = 804.34'
 T = 408.22'

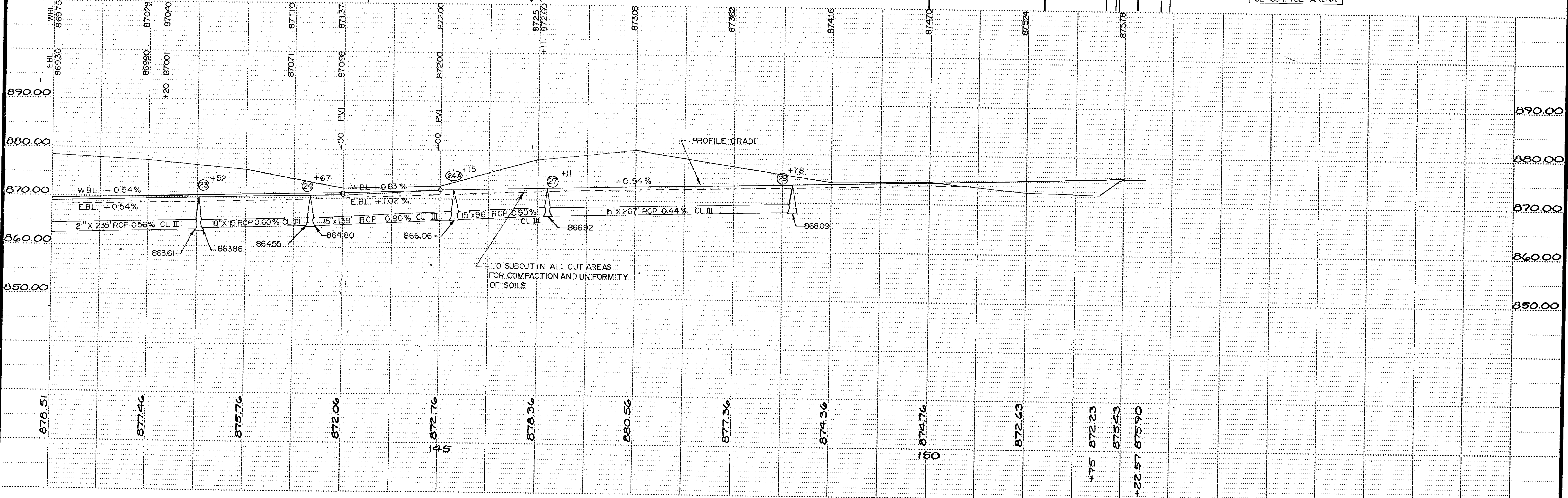
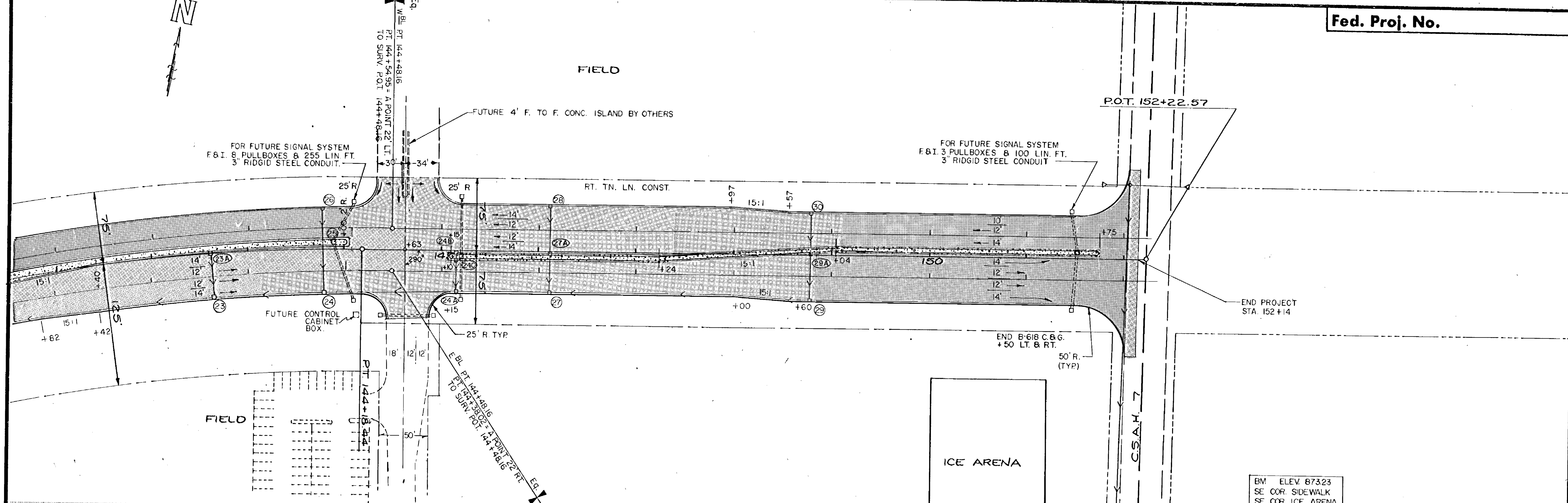
OR WBL
 PI 140+61.28
 $\Delta = 23^\circ 25' 13''$
 D = 3' 00"
 R = 1953.86'
 L = 404.99'
 T = 798.66'
 E = 41.53'

OR EBL
 PI 140+97.30
 $\Delta = 20^\circ 40' 14''$
 D = 3' 00"
 R = 1909.86'
 L = 348.29'
 T = 689.02'
 E = 31.50'



City Engineer Form #2 5/1/53

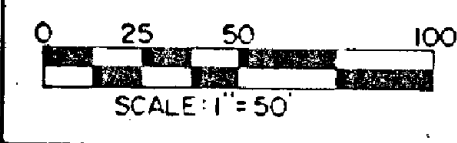
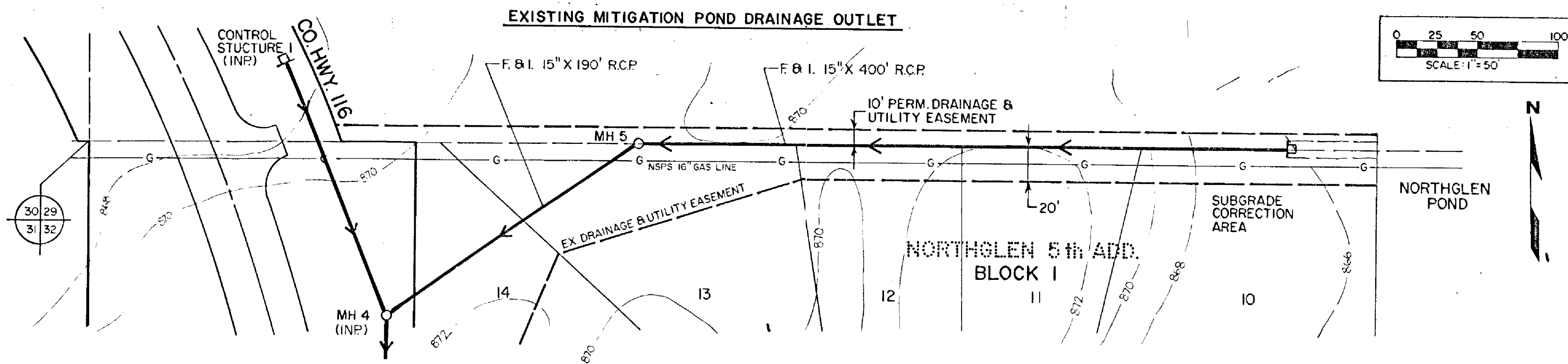
FIELD



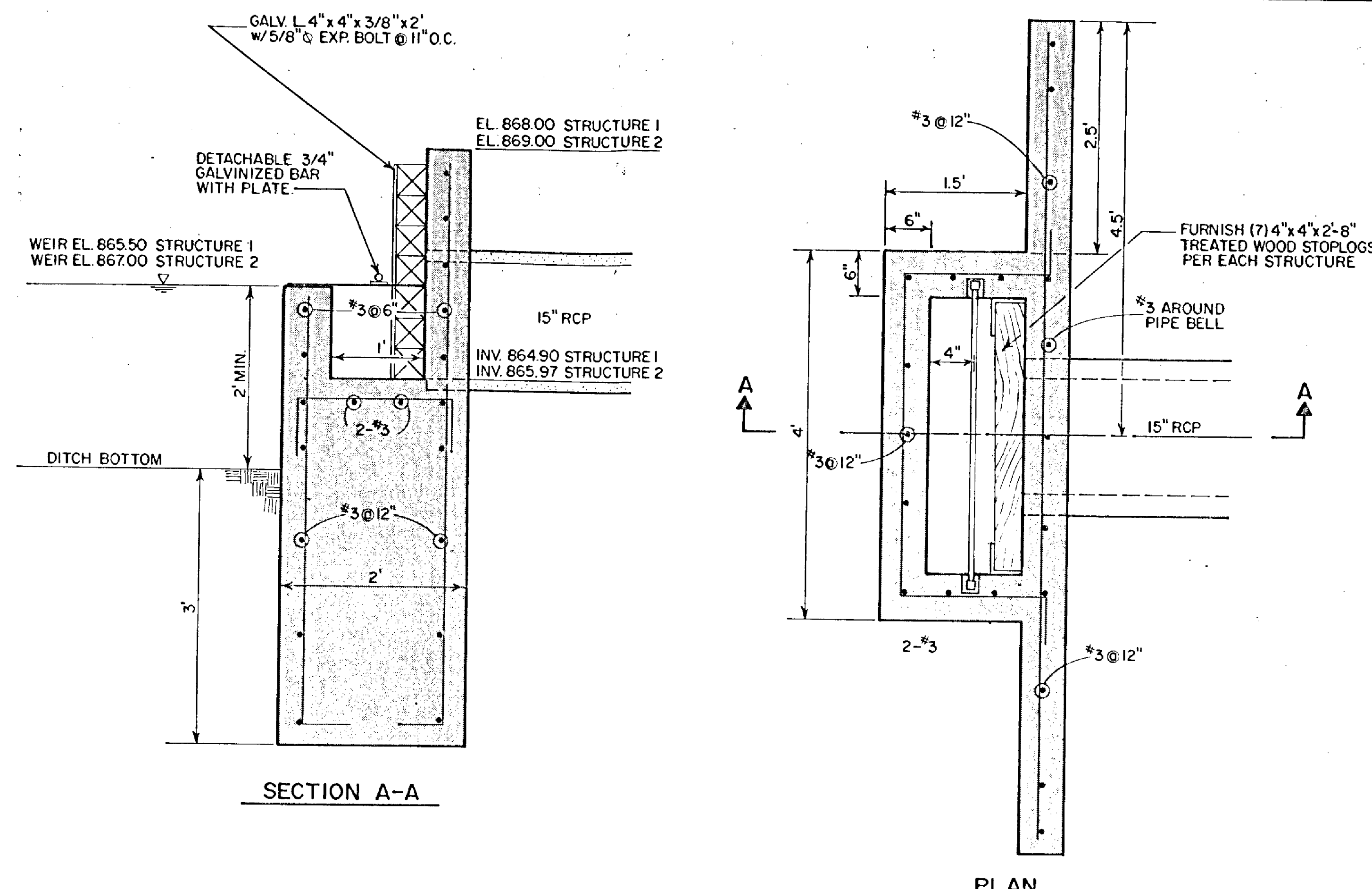
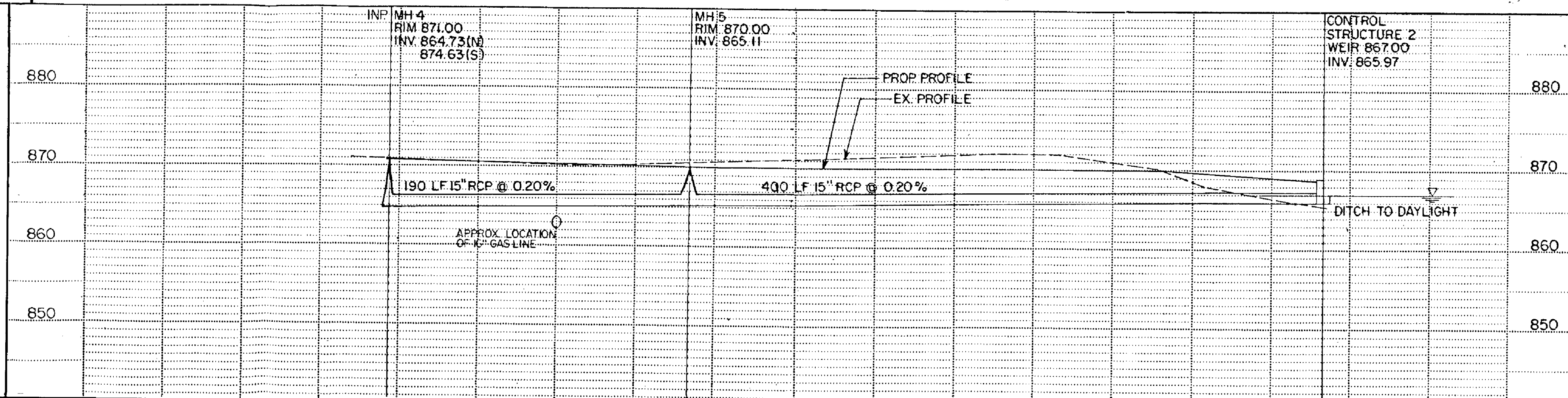
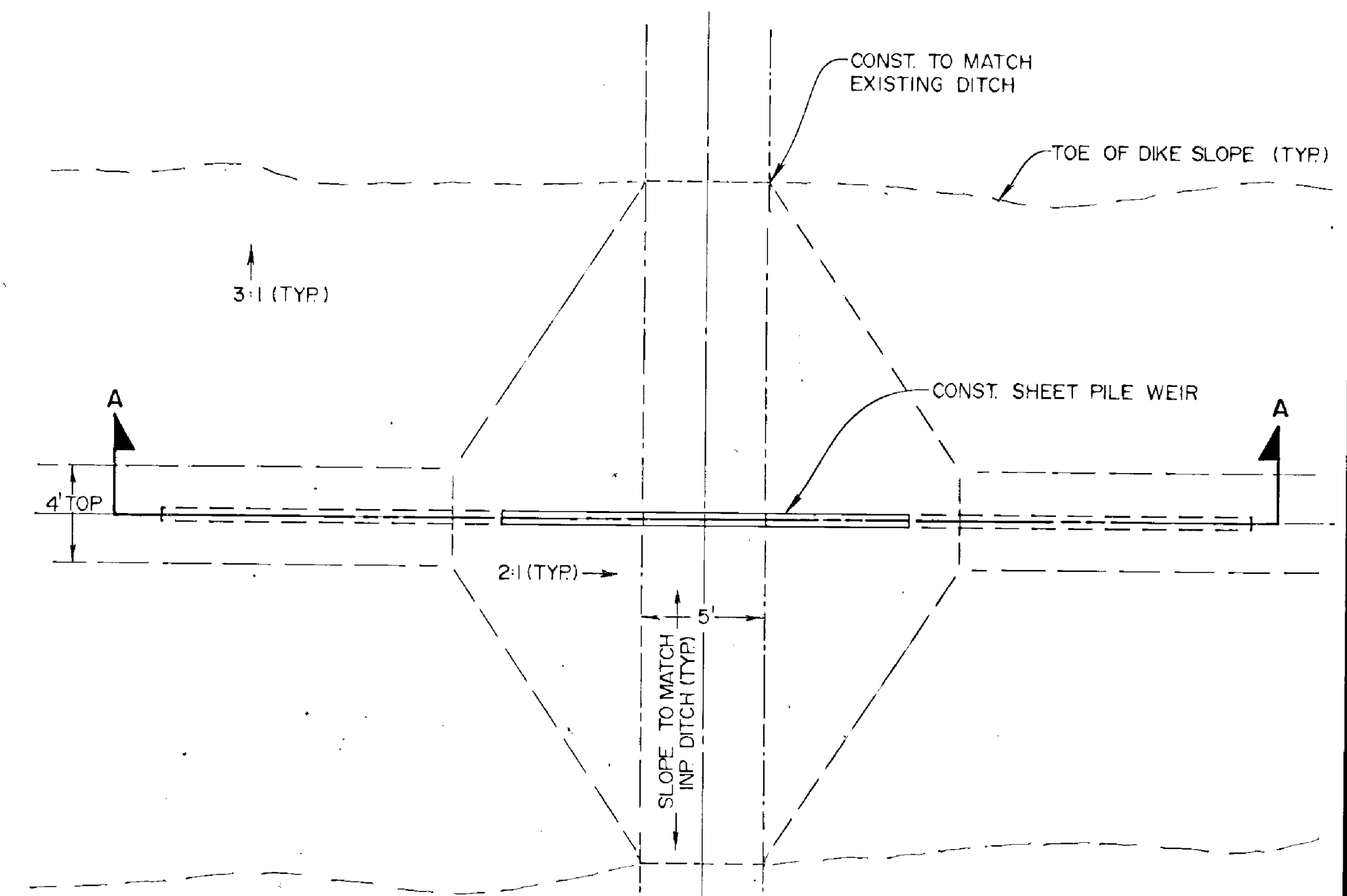
BM ELEV. 873.23
SE COR. SIDEWALK
SE COR. ICE ARENA

Comp. Equipment Form 87 5/81/3

REV. A10 14 21 75 PLAN VIEW 1-25-75 AUC.

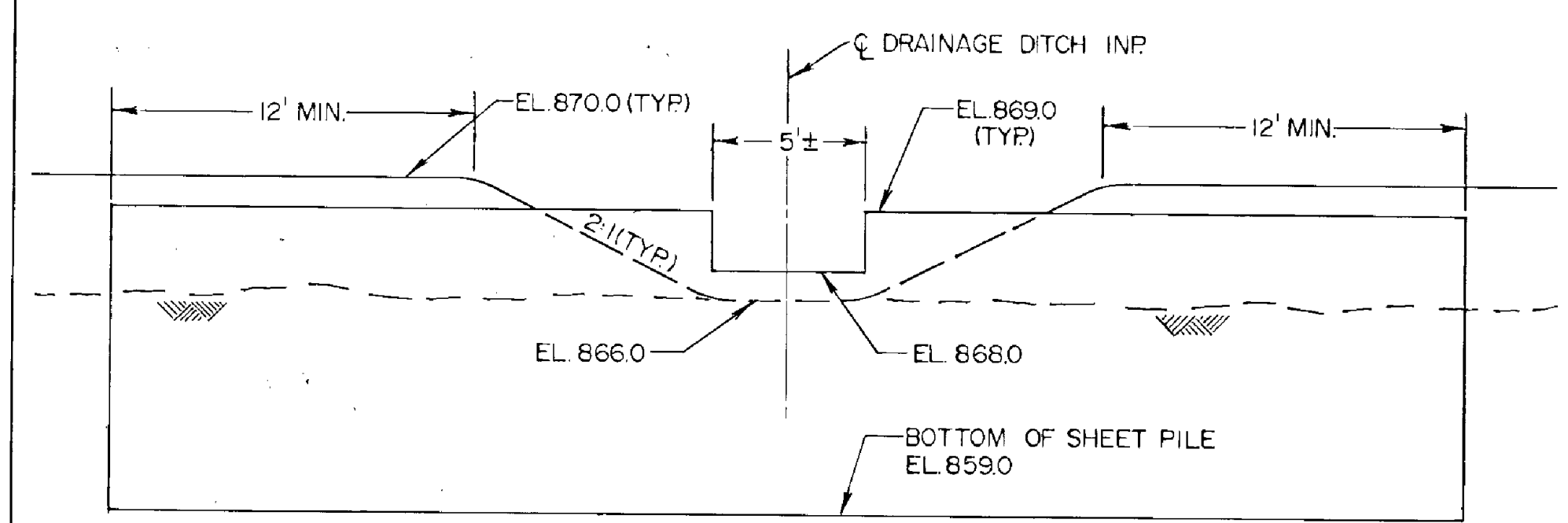
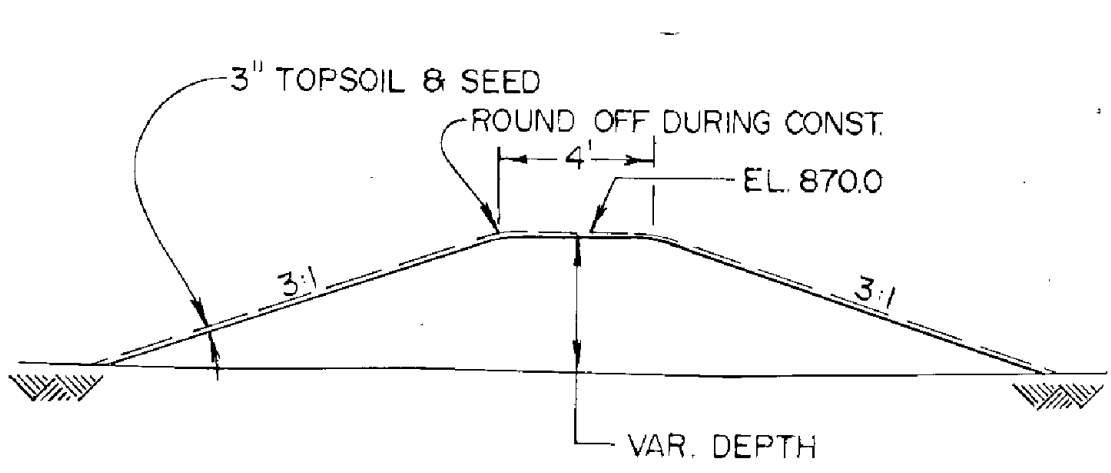


DIKE WEIR CONSTRUCTION DETAILS



DETAILS OF EXISTING CONTROL STRUCTURES NO. 1 & 2

TYPICAL DIKE SECTION CONSTRUCTION



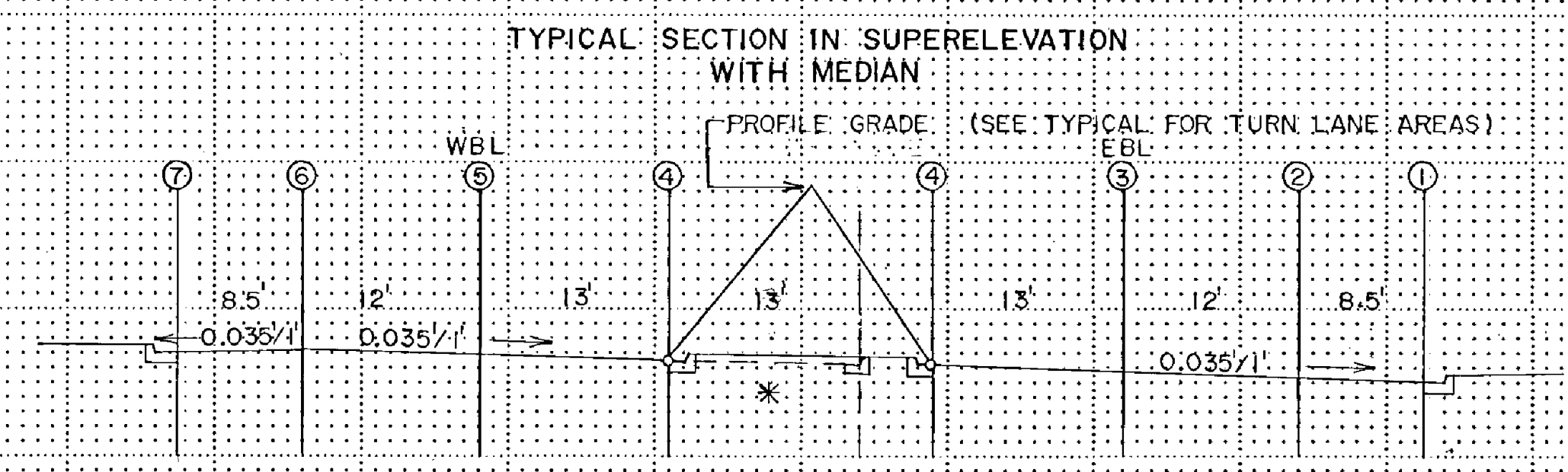
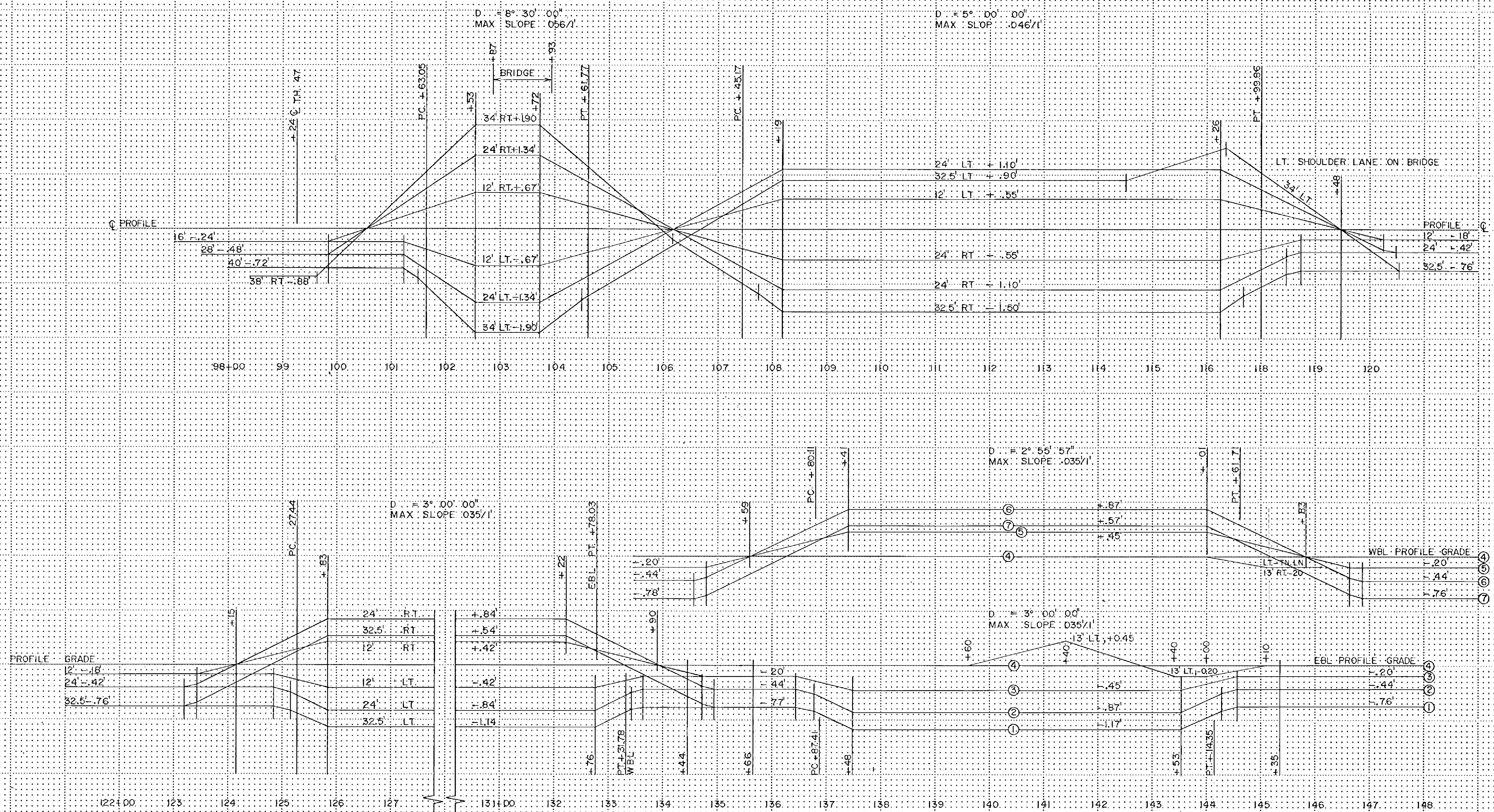
SECTION A-A

CONSTRUCTION DETAILS

REVISIONS			
DATE	BY	DATE	BY

S.A.P. _____ S.P. _____ C.P. 85-03-116

SUPERELEVATION (40 MPH DESIGN SPEED)



* APPLY NORMAL SUPER SLOPE IN TURN LANE CONSTRUCTION

DRAINAGE CHART

FURNISH AND INSTALL

STRUCT. NO.	STA.	LDC.	REMARKS	MH OR CB	DESIGN	PAY HT. LIN. FT.	GROUTED RIPRAP 15' DEEP	GRANULAR FILTER 7.5' DEEP	TOP CASTING	OUTLET	DRAINS TO	F & I CAST. ASSEM.	12" RCP CL III	15" RCP CL III	18" RCP CL III	21" RCP CL II	24" RCP CL II	27" RCP CL II	30" RCP CL IV	36" SPAN RCP-A	STRUCT. NO.					
1	101+20	3.1' RT.	F. & I. 12' R.C.P. APRON	CB	C DR G	4.0			860.32	856.15	DITCH	B	74'								1					
2	122+72	32.9' RT.	F. & I. 30' R.C.P. APRON	CB	F	21.9	8.3 CY	4.1 CY	867.11	845.00	POND	B									2					
3	122+72	32.9' LT.		CB	C DR G	4.9			867.11	862.00	CB 2	B	66'							84'	3					
4	126+51	32.9' RT.		CB	A DR F	12.4			866.89	854.33	CB 2	B									4					
5	126+51	32.9' LT.		CB	C DR G	4.8			865.21	860.20	CB 4	B	66'								379'	4				
6	128+54	32.9' RT.		CB	A DR F	10.3			865.57	855.14	CB 4	B									203'	5				
7	128+54	32.9' LT.		CB	C DR G	5.0			863.89	858.70	CB 6	B	66'									6				
8	130+49	32.9' RT.		CB	A DR F	8.3			864.31	855.84	CB 6	B										7				
9	130+49	32.9' LT.		CB	C DR G	4.8			862.63	857.70	CB 8	B	66'									195'	8			
10	131+81	32.9' RT.		CB	A DR F	6.6			863.48	856.73	CB 8	B										9				
11	131+81	35.0' LT.	(TO FRONT OF STRUCTURE) (1) GUTTER INLET ELEV.	CB	LP 4-4			(1)	861.59	857.67	CB 10	B			70'						127'	10				
12	133+51	20.9' RT. EBL		CB	C DR G	5.1			863.41	858.14	CB 10	B										11				
13	133+51	20.9' RT. WBL		CB	C DR G	4.8			864.63	859.70	CB 12	B	70'									175'	12			
14	135+94	20.9' RT. EBL		CB	C DR G	5.4			865.11	859.55	CB 12	B										243'	13			
15	135+94	20.9' RT. WBL		CB	C DR G	5.3			866.12	860.70	CB 14	B											14			
16	135+94	20.9' LT. WBL		CB	C DR G	4.5			865.93	861.21	CB 15	B	34'		10'								15			
17	138+05	20.9' LT. EBL		CB	C DR G	5.4			866.22	860.60	CB 14	B										211'	16			
18	138+07	12.9' RT. WBL		CB	C DR G	5.2			867.75	862.39	CB 17	B											17			
19	138+07	20.9' LT. WBL		CB	C DR G	5.1			868.29	862.98	CB 18	B	34'		52'								18			
20	140+17	20.9' LT. EBL		CB	C DR G	5.1			867.61	862.29	CB 17	B										212'	19			
21	140+22	12.9' RT. WBL		CB	C DR G	5.3			869.23	863.77	CB 20	B											20			
22	140+22	20.9' LT. WBL		CB	C DR G	5.2			869.77	864.36	CB 21	B	34'		52'								21			
23	142+52	21.0' RT. EBL		MH	C DR G	5.5			868.99	863.61	CB 20	A											22			
24	143+67	20.9' RT. EBL		CB	C DR G	4.9			869.58	864.55	MH 23	B										235'	23			
24A	145+15	20.9' RT. WBL	TURN LN. STRUCT. - SET NORMAL SUPER SLOPE	CB	C DR G	4.5			870.93	866.06	CB 24	B											115'	24		
24B	145+15	24.9' RT. EBL		CB	C DR G	4.7			871.52	866.71	CB 24A	B			139'									24A		
25	142+83	12.9' RT. WBL		CB	C DR G	5.5			870.97	865.32	CB 24	B											6'	24B		
26	143+83	20.9' LT. WBL		CB	C DR G	5.4			871.51	865.91	CB 25	B	34'		52'									25		
27	146+11	20.9' LT. EBL		CB	C DR G	4.6			871.65	866.92	CB 24A	B											96'	26		
28	146+11	20.9' LT. WBL		CB	C DR G	4.2			871.95	867.60	CB 27	B												27		
29	148+78	24.9' RT. EBL		CB	C DR G	5.0			873.24	868.09	CB 27	B	50'		267'									28		
30	148+78	20.9' LT. WBL		CB	C DR G	4.2			873.13	868.79	CB 29	B												29		
31	104+54	32.9' LT.		CB	C DR G	4.7			857.75	852.87	CB 32	B	43'											30		
32	106+20	32.9' LT.		CB	A DR F	6.1			858.35	852.12	CB 33	B											166'	31		
33	106+20	32.9' RT.	F & I 15' R.C.P. APRON	CB	A DR F	6.9	2.9 CY	1.4 CY	858.44	851.38	POND	B											66'	32		
34	106+00	70.0' RT.	F & I 15' R.C.P. APRON	CB	C DR G	5.1	2.9 CY	1.4 CY	851.00	846.00	PD. OUT.	C											26'	33		
35	108+20	32.9' RT.	F & I 18' R.C.P. APRON	CB	A DR F	6.5	3.6 CY	1.8 CY	858.23	851.60	POND	B											130'	34		
36	108+20	32.9' LT.		CB	C DR G	5.0			860.63	855.50	CB 35	B	66'											24'	35	
37	110+15	32.9' RT.		CB	C DR G	5.1			859.32	854.09	CB 35	B												195'	36	
38	112+10	32.9' RT.		CB	C DR G	4.9			860.42	855.38	CB 37	B												195'	37	
39	112+10	32.9' LT.		CB	C DR G	4.8			862.82	857.86	CB 38	B	66'												38	
40	114+05	32.9' RT.		CB	C DR G	5.0			861.51	856.35	CB 38	B												195'	39	
41	114+15	32.9' RT.		CB	C DR G	4.8			861.57	856.65	CB 40	B												10'	40	
	120+60	100' RT.	OUTLET FROM PONDING AREA TO RIVER. F & I 2 - 36' R.C.P. -A, APRONS																						16'	41
TOTAL						246.8	17.7	8.7					852'	1143'	794'	447'	629'	127'	861'	16'						

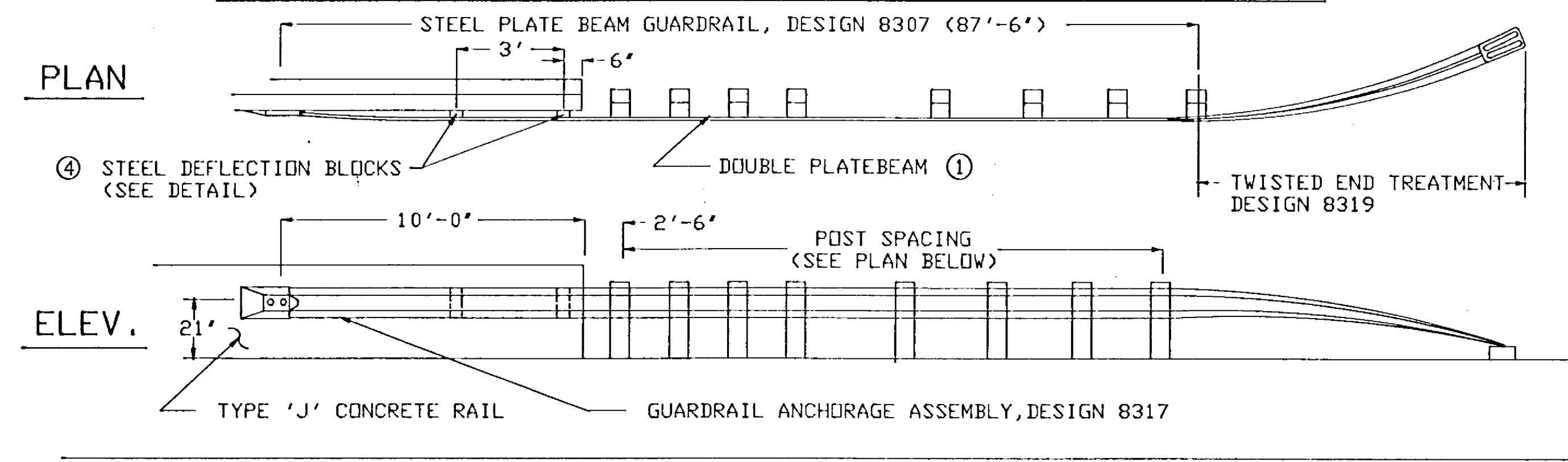
14A	135+94	16.2' LT. EBL		CB	C DR G	5.2			865.92	860.57	CB 14	B													14A	
23A	142+52	24.9' LT. EBL		CB	C DR G	4.6			870.11	865.36	CB 23	B	50'		37'											23A
24C	145+15	12.9' LT. EBL		CB	C DR G	5.1			871.92	866.65	CB 24A	B			34'											24C
29A	148+78	23.17' LT. EBL		CB	C DR G	5.0			873.74	868.58	CB 29	B	47'													29A
1A	101+67	60' LT.	F & I. 1-30" RCP APRON	MH	A OR F	12.8			859.50	846.75	OXBOW	A													150'	1A
27A	146+11			CB	C DR G	4.9			872.37	867.37	CB 27	B	40													27A
REV. TOTAL						284.4	17.7	8.7					906'	1143'	794'	447'	629'	127'	1011'	16'						

REV. 4-19-90 BY

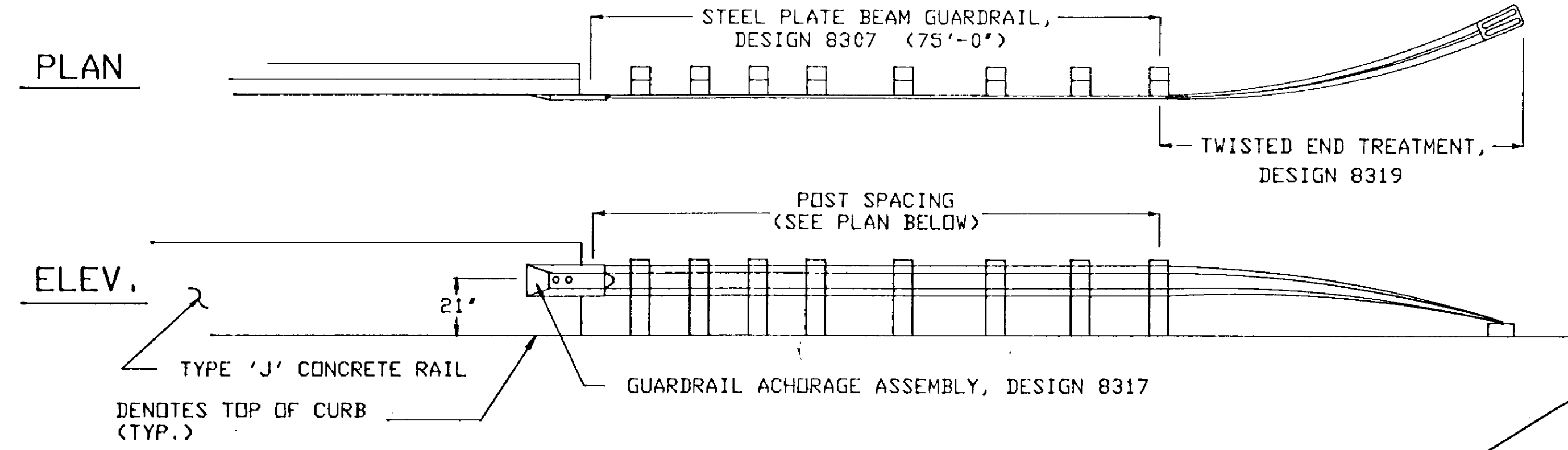
REVISIONS			
DATE	BY	DATE	BY
1-27-90	SK		

S.A.P. S.P. C.P. 85-05-116

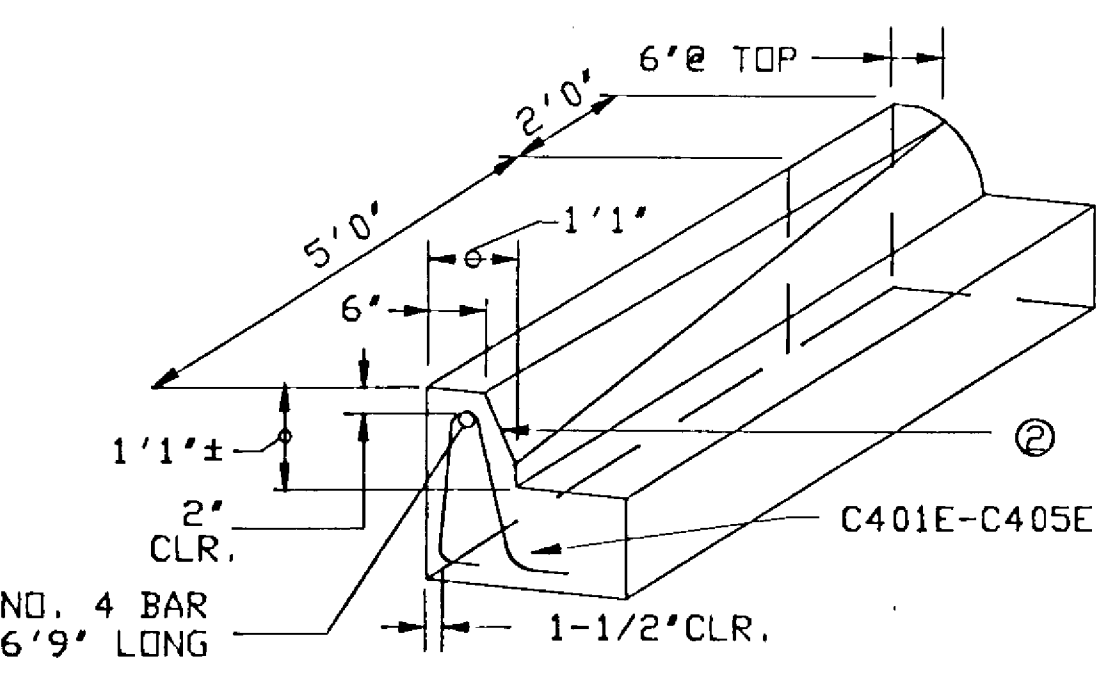
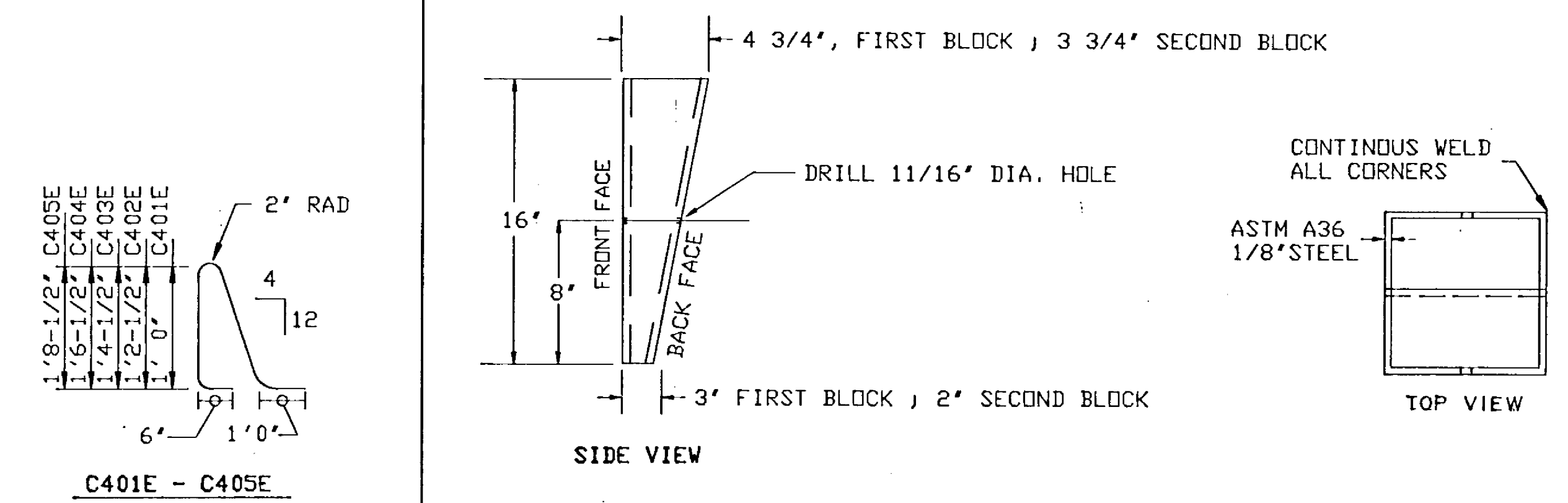
GUARDRAIL DETAILS - APPROACH END OF BRIDGE



GUARDRAIL DETAILS - OFF END OF BRIDGE



DEFLECTION BLOCK DETAIL



CURB TRANSITION DETAIL

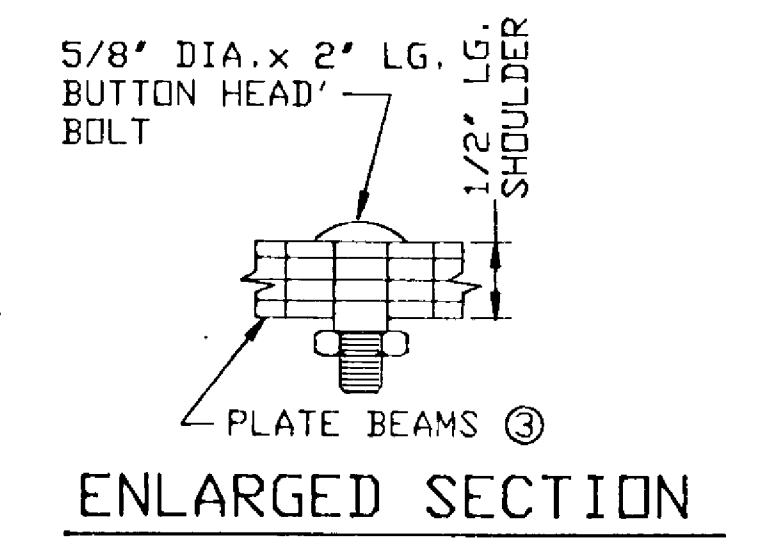
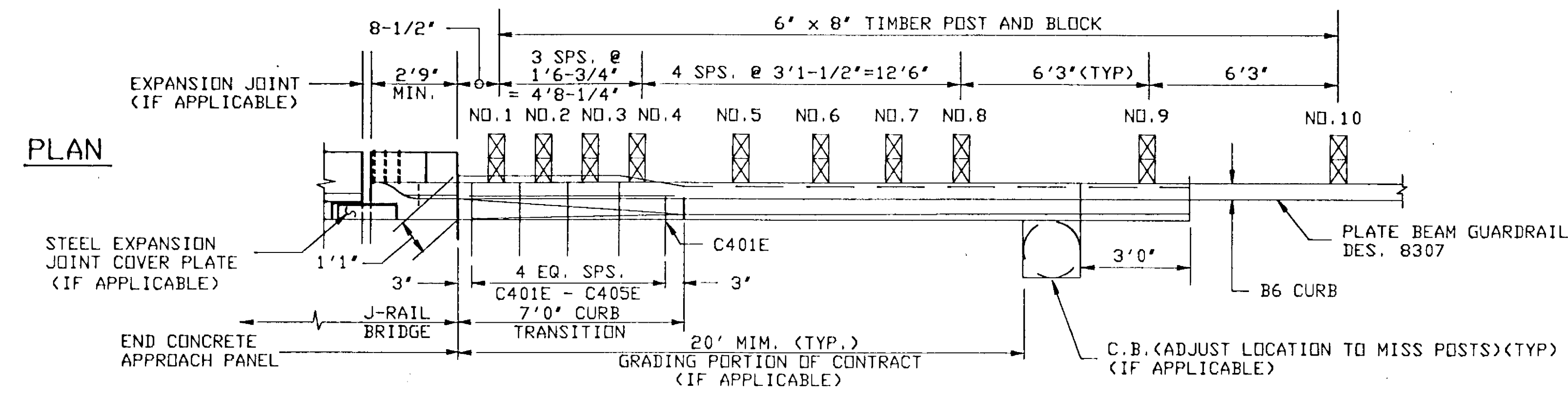
LOCATION FOR PLATE BEAM GUARDRAIL

STATION	LOC.	REMARKS	LIN. FT.
102+12	TO 102+87	LT. OFF END OF BRIDGE	75'
101+62	TO 102+50	RT. APPROACH END OF BRIDGE	87.5'
104+33	TO 105+21	LT. APPROACH END OF BRIDGE	87.5'
103+93	TO 104+68	RT. OFF END OF BRIDGE	75'
112+97	TO 113+85	RT. APPROACH END OF BRIDGE	87.5'
113+10	TO 113+85	LT. OFF END OF BRIDGE	75'
121+87	TO 122+62	RT. OFF END OF BRIDGE	75'
122+11	TO 123+99	LT. APPROACH END OF BRIDGE	87.5'
TOTAL			650.0

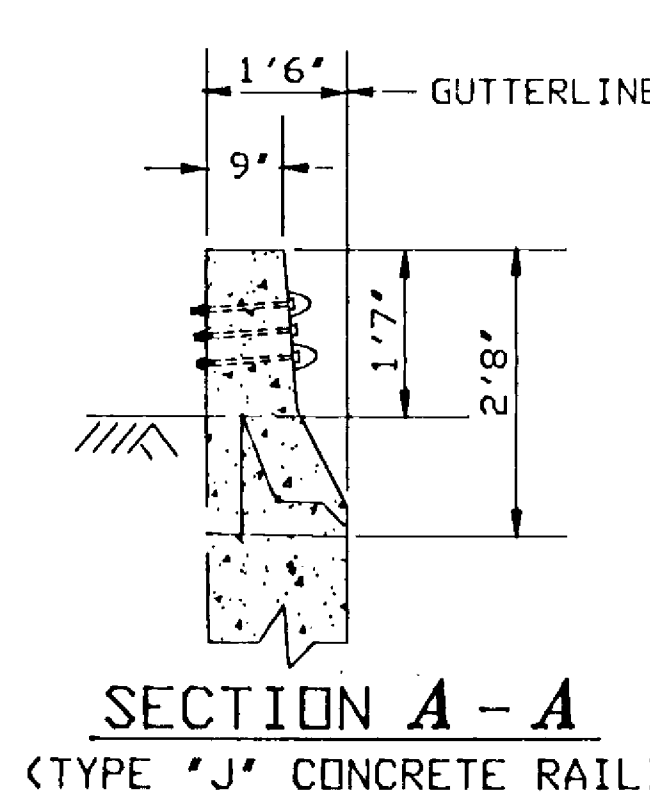
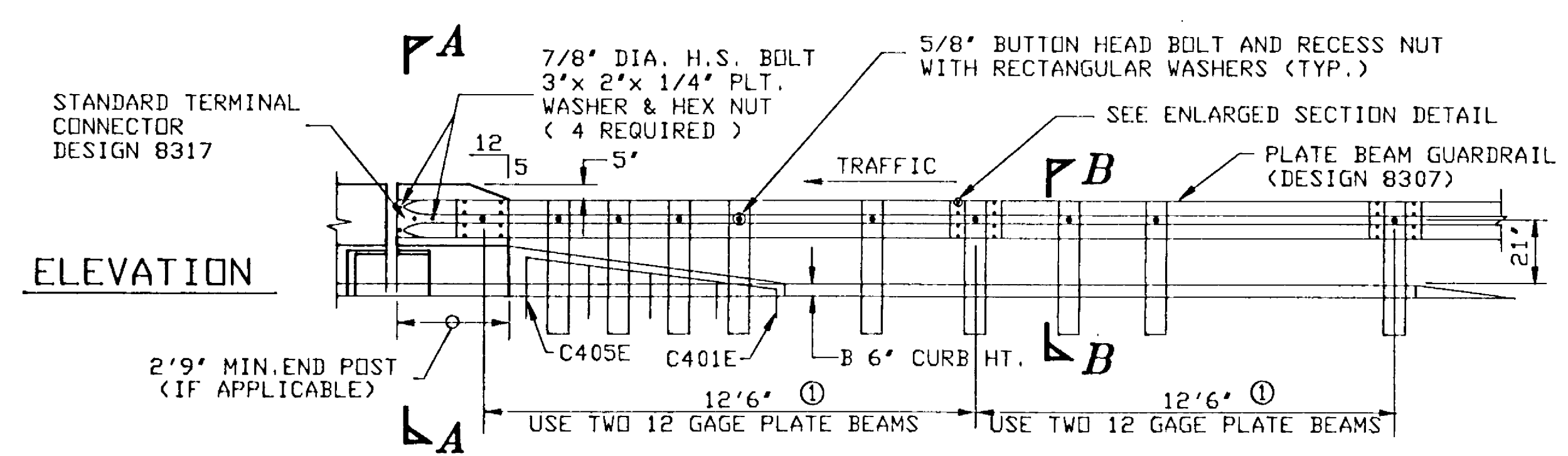
NOTE: F. & I. 25' TWISTED END TREATMENT AT EACH LOCATION.

CONSTRUCTION NOTES

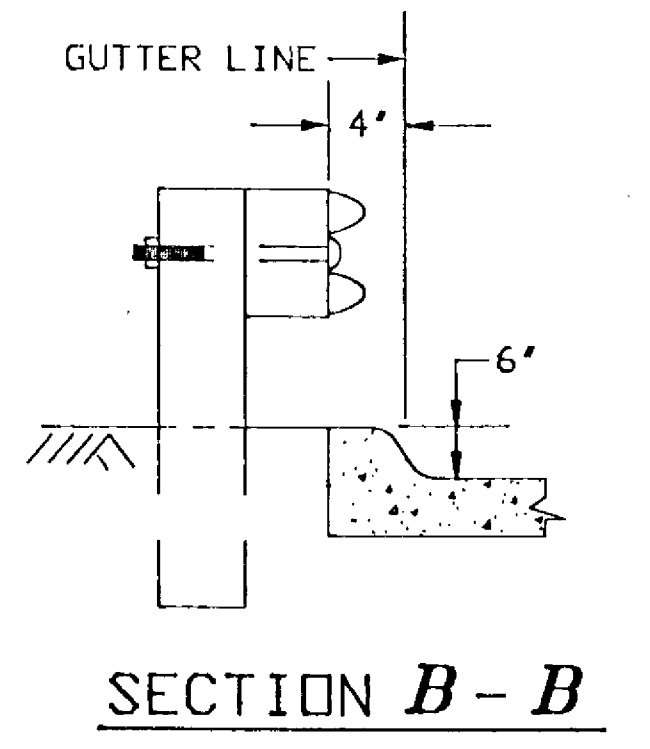
- DOUBLE PLATE BEAM GUARDRAIL IS TO BE USED FOR THE FIRST 37.5' ON THE APPROACH END OF THE BRIDGE. THE SEGMENT OF DOUBLE PLATE BEAM GUARDRAIL WILL BE INCLUDED WITH AND PAID FOR AS 37.5 LIN. FT., OF TRAFFIC BARRIER, DESIGN 8307, AND NO ADDITIONAL COMPENSATION SHALL BE MADE.
- END OF TRANSITION TO MATCH BRIDGE RAIL SURFACE.
- USE AT SPLICED LOCATIONS, WHEN TWO OR MORE ARE LAPPED TOGETHER.
- THE TWO STEEL DEFLECTION BLOCKS, AS SHOWN IN THE PLANS, 3' AND 2' RESPECTIVELY, SHALL BE CONSTRUCTED OF ASTM 1/8" A36 OR BETTER GRADE STEEL AND FASTENED TO THE GUARDRAIL USING 5/8" BUTTON HEAD BOLTS. THE TWO BLOCKS SHALL BE FABRICATED (TAPERED) SO THAT THE PLATE BEAM IS VERTICAL WHEN IT IS FASTENED TO THE 'J' TYPE CONCRETE RAIL (SEE DETAIL). THE CONTRACTOR MAY ALTER THE SHAPE OF THE DEFLECTION BLOCKS, UPON APPROVAL OF THE ENGINEER. THE COST OF FURNISHING AND INSTALLING THE DEFLECTION BLOCKS AS SHOWN ON THE PLAN SHALL BE INCLUDED IN THE BID PRICE FOR TRAFFIC BARRIER, LINEAR FOOT, AND NO ADDITIONAL COMPENSATION SHALL BE MADE.



ENLARGED SECTION



SECTION A-A
(TYPE 'J' CONCRETE RAIL)



SECTION B-B

GUARDRAIL DETAILS

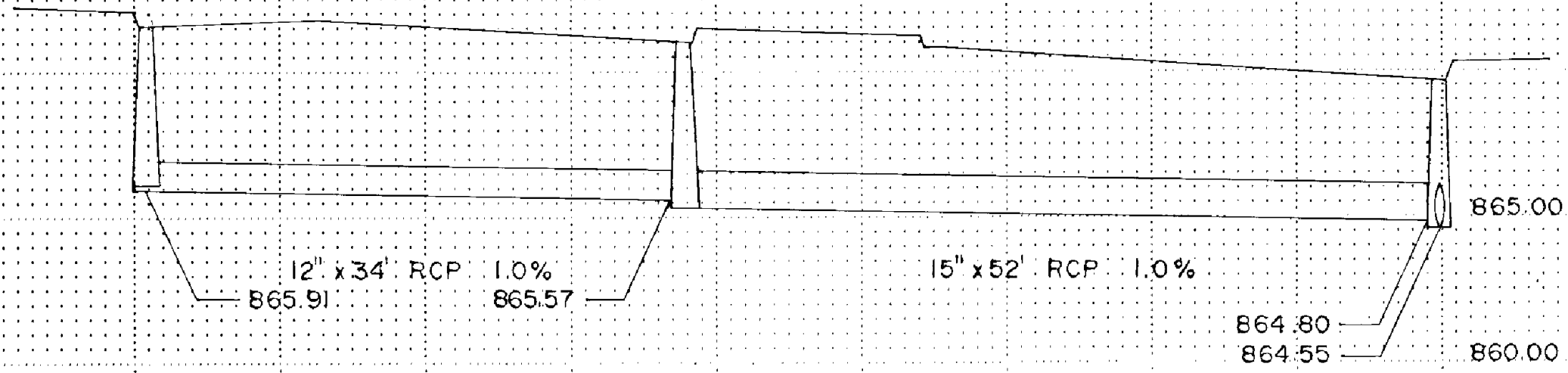
REVISIONS			
DATE	BY	DATE	BY

STORM SEWER

CB NO. 26
143+83
20.9' LT. WBL
TC 871.51

CB NO. 25
143+83
12.9' RT. WBL
TC 870.97

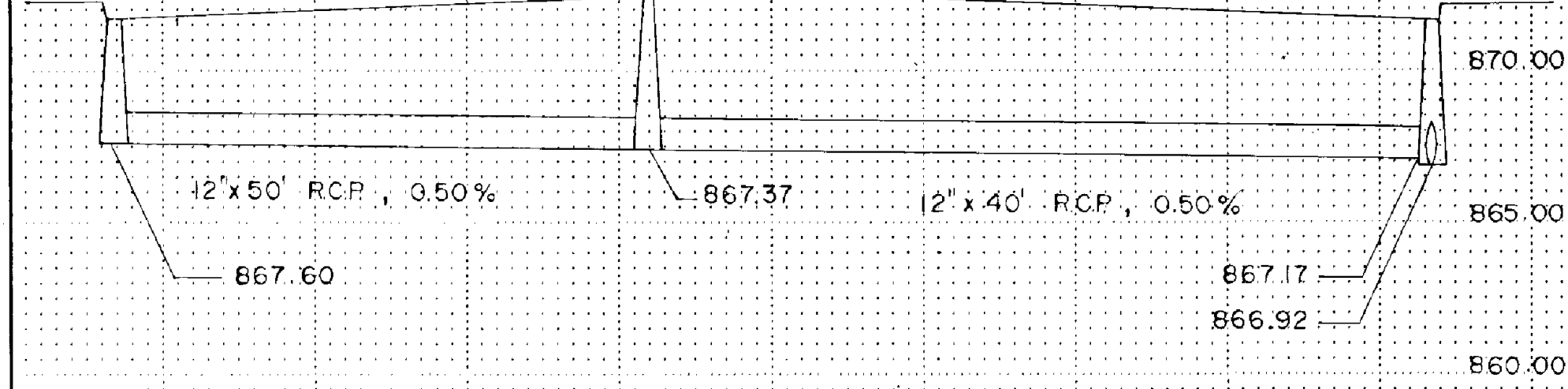
CB NO. 24
143+67
20.9' RT. EBL
TC 869.58



CB NO. 28
146+11
24.9' LT. WBL
TC 871.95

CB NO. 27A
146+11
24.9' RT. WBL
TC 872.37

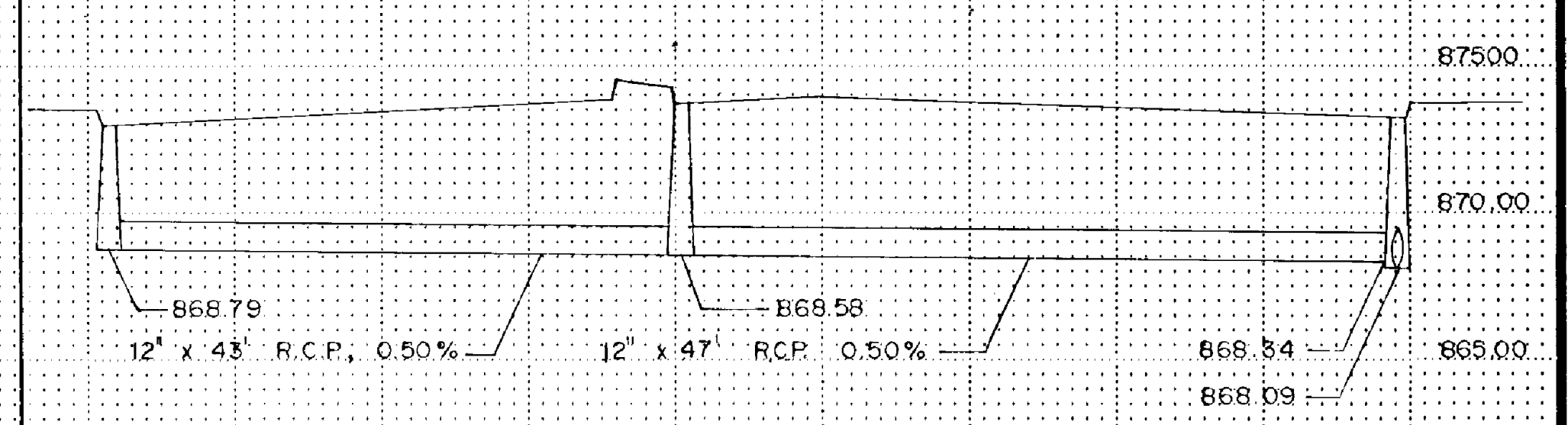
CB NO. 27
146+11
20.9' RT. EBL
TC 871.65



CB NO. 30
148+78
20.9' LT. WBL
TC 873.13

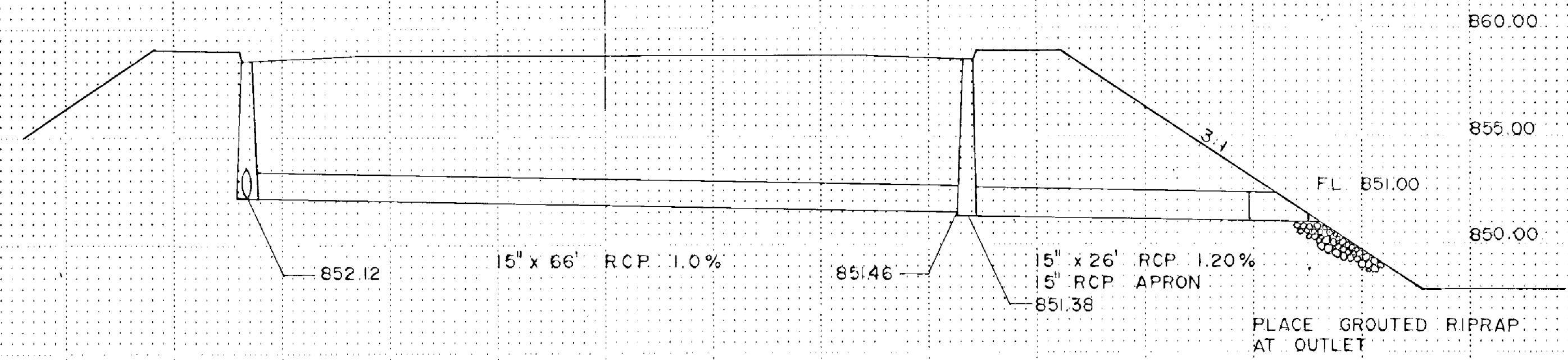
CB NO. 29A
148+78
23.17' LT. EBL
TC 873.74

CB NO. 29
148+78
24.9' RT. EBL
TC 873.24



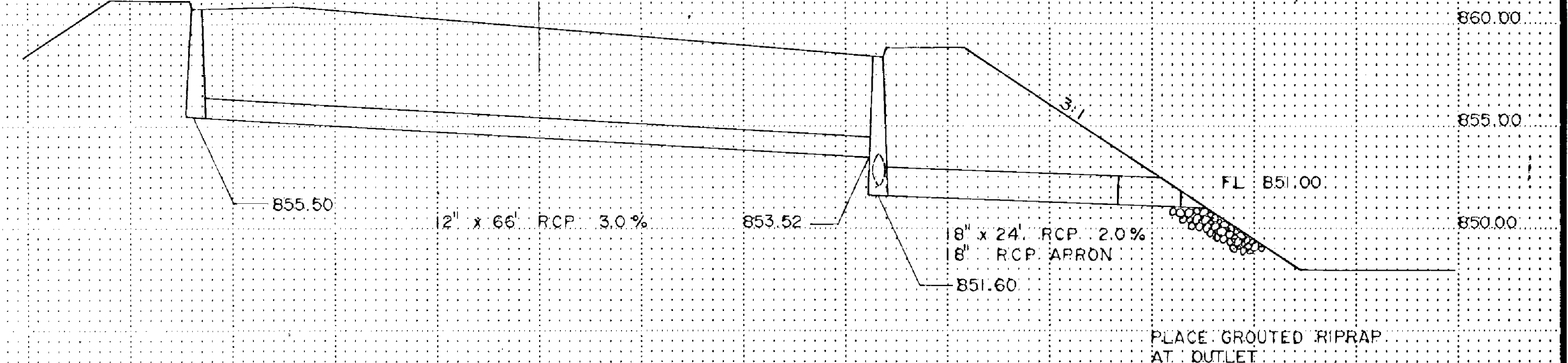
CB NO. 32
106+20
32.9' LT.
TC 858.35

CB NO. 33
106+20
32.9' RT.
TC 858.44



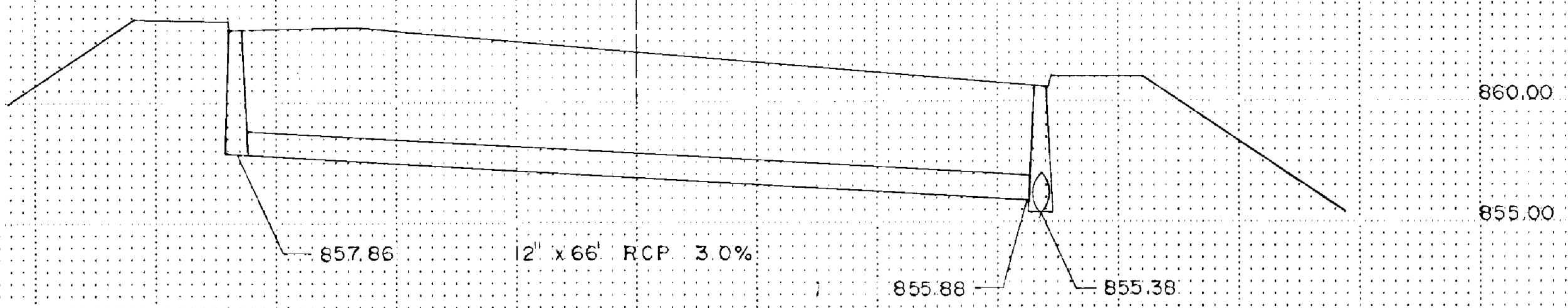
CB NO. 36
108+20
32.9' LT.
TC 860.63

CB NO. 35
108+20
32.9' RT.
TC 858.23



CB NO. 39
112+10
32.9' LT.
TC 862.82

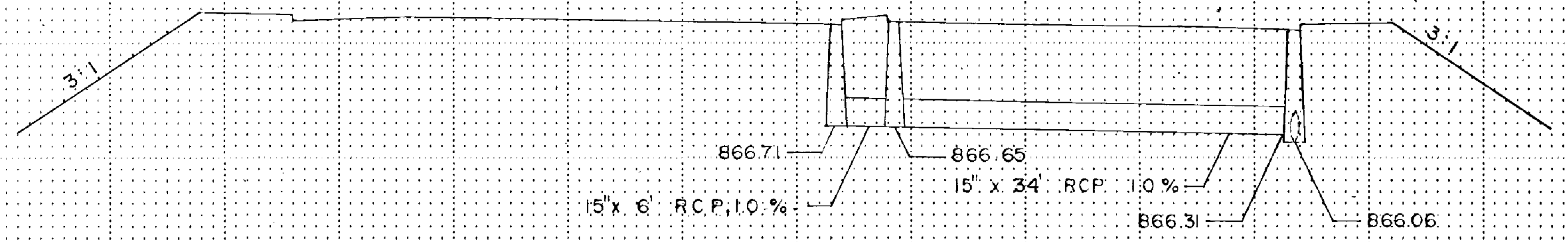
CB NO. 38
112+10
32.9' RT.
TC 860.42



CB NO. 24B
145+15
24.9' RT. WBL
TC 871.52

CB NO. 24C
145+15
12.9' LT. EBL
TC 871.92

CB NO. 24A
145+15
20.9' RT. EBL
TC 870.93

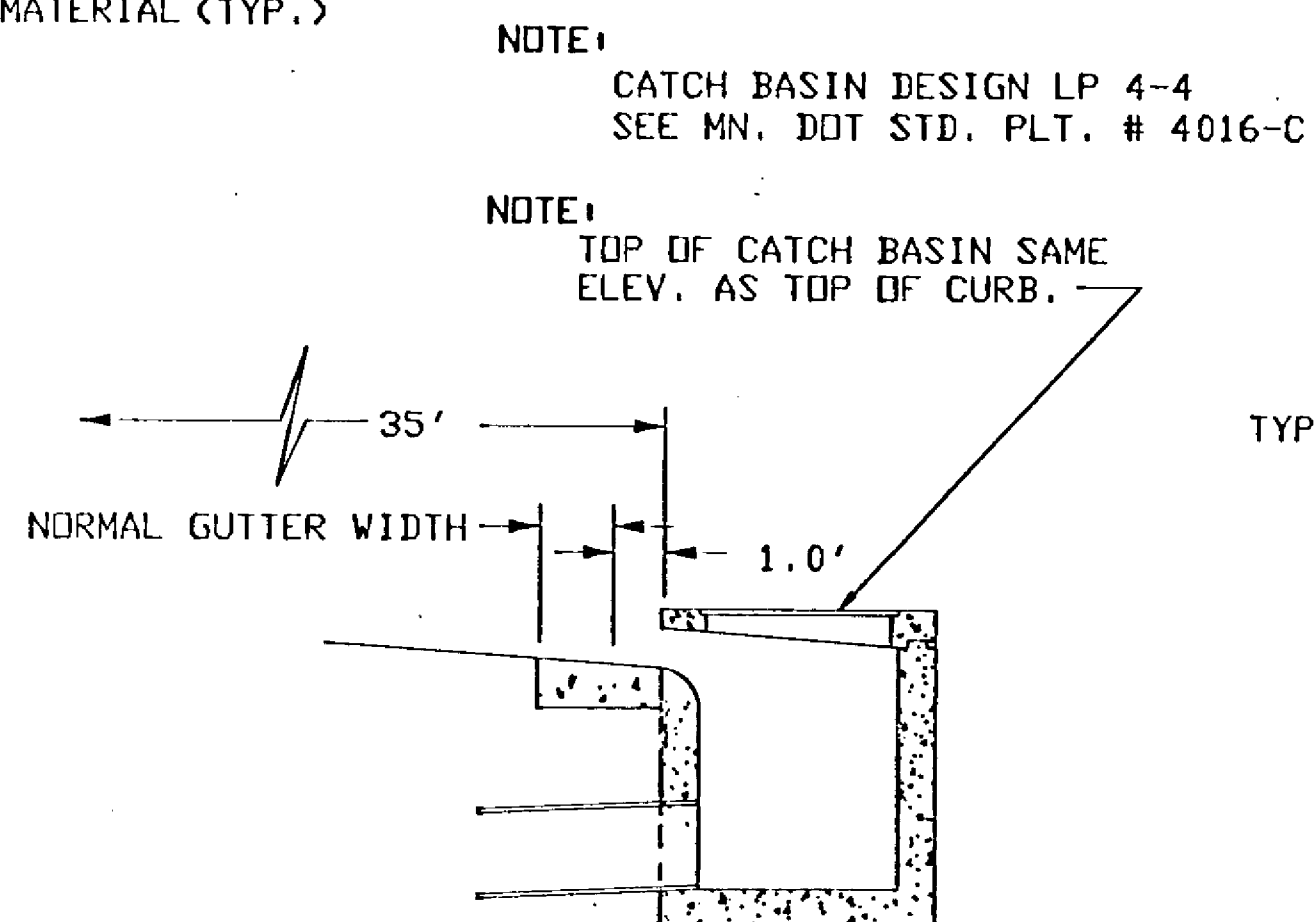
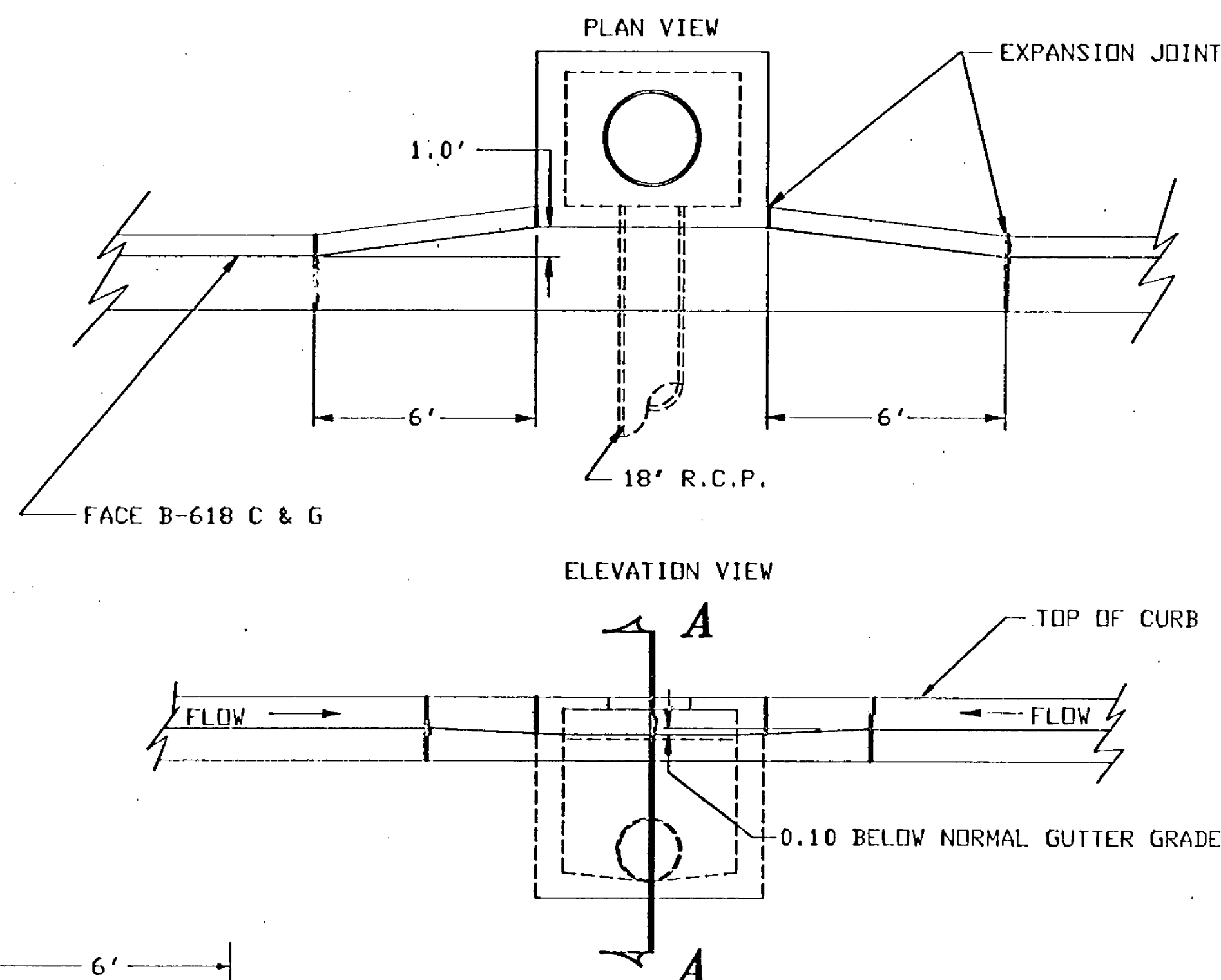


NOTE
ALL RCP IS CLASS. III
UNLESS OTHERWISE NOTED
SCALE VERT. 1" = 5'
HORZ. NONE

M

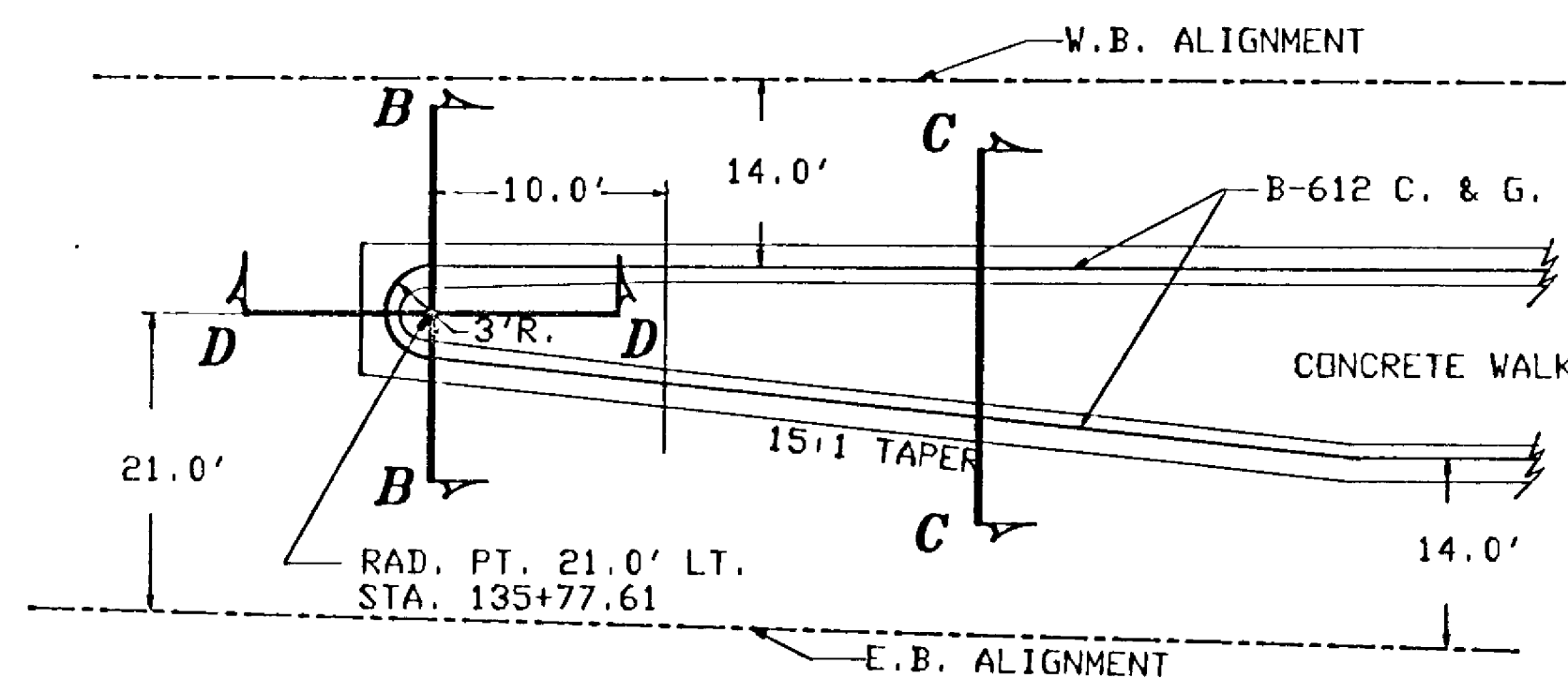
INSTALLATION DETAIL

CURB OPENING CATCH BASIN
DESIGN LP 4016 4-4

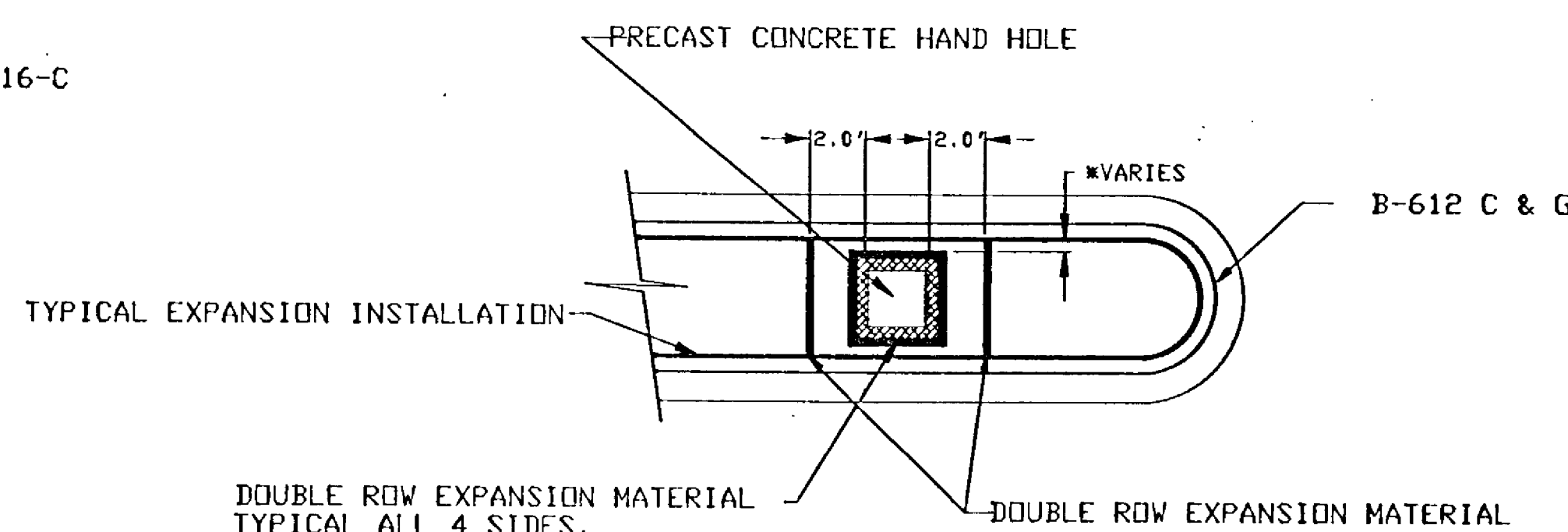


SECTION A-A

MEDIAN NOSE DETAIL



EXPANSION MATERIAL PLACEMENT FOR PRECAST HANDHOLES

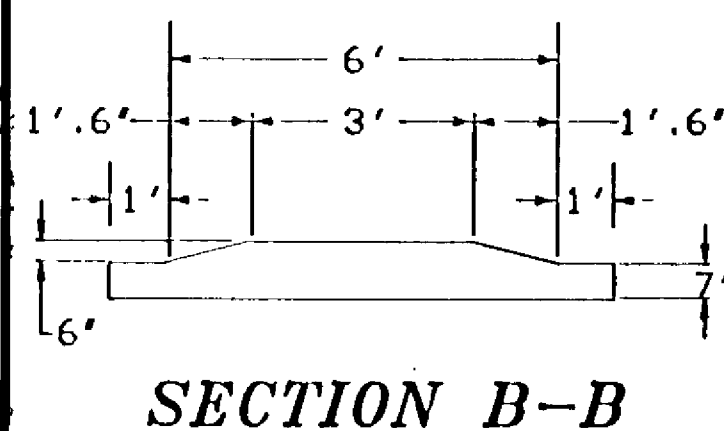


* DIMENSION VARIES DEPENDING ON ISLAND WIDTH OR PLACEMENT OF HANDHOLE OTHER THAN IN AN ISLAND.

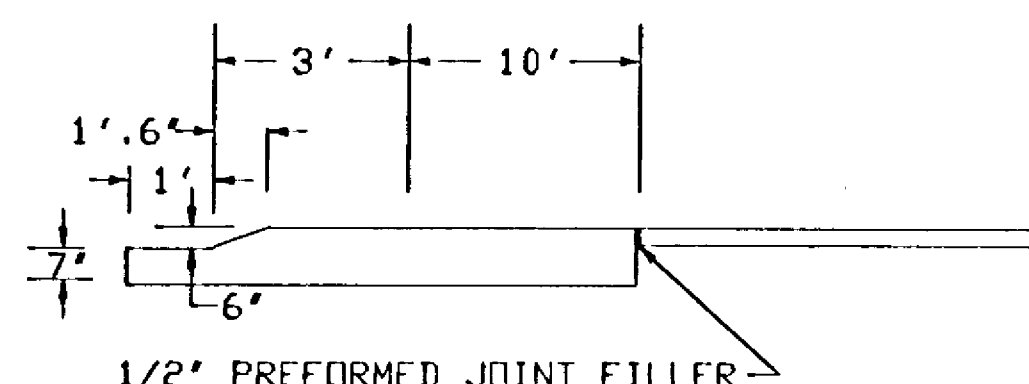
SAWING BITUMINOUS PAVEMENT		
STATION	LOC.	LIN. FT.
101+15	C/L XING	80
152+14	C/L XING	212
TOTAL		292

CASTING ASSEMBLIES			
ASSEMBLY	ITEM	CASTING NO.	QUANTITY
A	FRAME COVER	700-7	1
	FRAME	712	
B	FRAME CURB BOX	801	41
	GRATE	810	
C	FRAME	821-B	1
	GRATE	700-7	
		721	

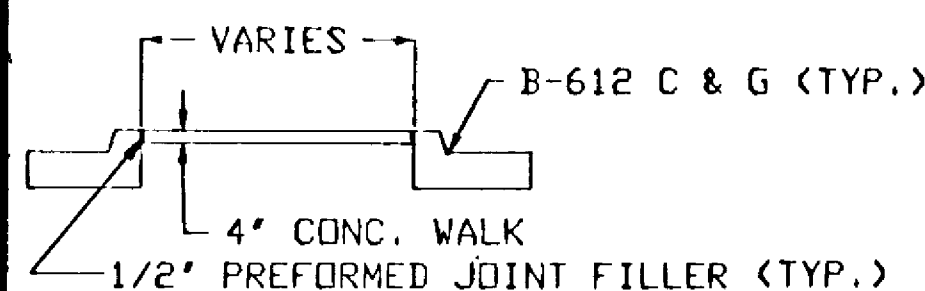
EROSION CONTROL			
STATION TO STATION	LOC.	HAY/STRAW BALES EACH	SILT FENCE LIN. FT.
102+35 TO 103+30	LT.		170
102+00 TO 103+05	RT.		160
103+40 TO 104+75	RT.		245
104+75 TO 105+45	RT.	22	
103+75 TO 105+30	LT.		190
105+30 TO 106+00	LT.	23	
115+25 TO 116+10	RT.	28	
116+10 TO 116+75	RT.		110
116+00 TO 116+50	LT.	17	
116+50 TO 116+85	LT.		115
121+25 TO 122+30	RT.		185
121+40 TO 122+35	LT.		135
TOTAL		90	1310



SECTION B-B



SECTION C-C



SECTION D-D

REMOVE BITUMINOUS PAVEMENT		
STATION	LOCATION	SQ. YD.
101+15 TO 101+25	LT. & RT.	89
152+04 TO 152+14	LT. & RT.	212
TOTAL		302

SODDING			
STATION TO STATION	LOC.	SQ. YDS	REMARKS
101+45 TO 102+67	RT.	849	BLVD., SLOPES & DITCH
100+90 TO 102+67	LT.	624	BLVD., SLOPES & DITCH
104+13 TO 116+21	LT./RT.	2684	BLVD.
121+99 TO 152+00	LT./RT.	7725	BLVD.
TOTAL		11882	

CURB AND GUTTER, WALKS, MEDIANS						
STATION TO STATION	LOC.	4' CONC. WALK SQ. FT.	B-612 C&G LIN. FT.	B-618 C&G LIN. FT.	CONC. MEDIAN SQ. YD.	CONC. MEDIAN NOSE, SPL. EACH
99+75 TO 101+25	C/L				68	
100+70 TO 102+67	RT.				197	
101+15 TO 102+67	LT.				152	
104+13 TO 116+21	LT. & RT.				1945	
121+99 TO 151+50	LT. & RT.				5915	
135+74 TO 135+88	MEDIAN					1
EB 135+00 TO 151+77	MEDIAN		850			
EB 144+48 TO 151+77	MEDIAN		659			
WB 135+88 TO 144+55	MEDIAN		867			
WB 144+48 TO 151+77	MEDIAN		659			
EB 135+88 TO 136+38	MEDIAN	378				
EB 136+38 TO 137+49	MEDIAN	1380				
EB 137+49 TO 147+00	MEDIAN	9444				1
147+00 TO 148+44	MEDIAN	1247				
148+44 TO 151+75	MEDIAN	880				
TOTALS		13329	3035	8209	68	

CLEAR AND GRUBBING					
STATION TO STATION	LOC.	CLEARING		GRUBBING	
		TREE	ACRE	TREE	ACRE
101+89 TO 102+70	LT. & RT.		0.40		0.40
104+40 TO 105+77	LT. & RT.		0.60		0.60
114+59	13' LT.	1		1	
114+60	19' LT.	1		1	
114+91	12' LT.	1		1	
114+94	39' LT.	1		1	
114+95	C/L	1		1	
115+00	66' RT.	1		1	
115+02	31' RT.	1		1	
115+75 TO 117+60	LT. & RT.		0.85		0.85
121+00 TO 122+80	LT. & RT.		1.00		1.00
129+00 TO 129+45	LT. & RT.		0.25		0.25
TOTAL		7	3.10	7	3.10

REVISIONS			
DATE	BY	DATE	BY

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO	ITEM	UNIT	EST. QTY.
2021.501	MOBILIZATION	LUMP SUM	1
2031.501	FIELD OFFICE, TYPE 'D'	EACH	1
2101.501	CLEARING	ACRE	3.1
2101.502	CLEARING	TREE	7
2101.506	GRUBBING	ACRE	3.1
2101.507	GRUBBING	TREE	7
2104.505	REMOVE BITUMINOUS PAVEMENT	SQ. YD.	302
2104.513	SAVING BITUMINOUS PAVEMENT	LIN. FT.	292
2104.521	SALVAGE BARRICADES	LIN. FT.	80
2105.501	COMMON EXCAVATION (P)	CU. YD.	114262
2105.505	MUCK EXCAVATION	CU. YD.	1217
2105.521	GRANULAR BORROW (EV) FROM STOCKPILE	CU. YD.	6500
2105.521	GRANULAR BORROW (EV)	CU. YD.	2000
① 2130.501	WATER	M GAL	100
2211.503	AGGREGATE BASE PLACED, CLASS 5A (P)	CU. YD.	5194
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	598
2331.510	BINDER COURSE MIXTURE	TON	3769
2331.514	BASE COURSE MIXTURE	TON	7498
⑦ 2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	182
⑥ 2341.508	WEARING COURSE MIXTURE	TON	3151
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	5072
2501.515	12' RC PIPE APRON	EACH	1
2501.515	15' RC PIPE APRON	EACH	2
2501.515	18' RC PIPE APRON	EACH	1
2501.515	30' RC PIPE APRON	EACH	1
2501.525	36' SPAN RC PIPE ARCH APRON	EACH	2
2501.565	36' SPAN RC PIPE ARCH CULVERT DES. 3006F	LIN. FT.	16
2503.541	12' RC PIPE SEWER, DESIGN 3006F CL-3	LIN. FT.	852
2503.541	15' RC PIPE SEWER, DESIGN 3006F CL-3	LIN. FT.	1143
2503.541	18' RC PIPE SEWER, DESIGN 3006F CL-3	LIN. FT.	794
2503.541	21' RC PIPE SEWER, DESIGN 3006F	LIN. FT.	447
2503.541	24' RC PIPE SEWER, DESIGN 3006F	LIN. FT.	629
2503.541	27' RC PIPE SEWER, DESIGN 3006F	LIN. FT.	127
2503.541	30' RC PIPE SEWER, DESIGN 3006F CL-4	LIN. FT.	861
2506.506	CONSTRUCT MANHOLES, DESIGN C OR G	LIN. FT.	5.5
2506.507	CONSTRUCT CATCH BASINS, DESIGN A OR F	LIN. FT.	79
2506.507	CONSTRUCT CATCH BASINS, DESIGN C OR G	LIN. FT.	167.8
2506.509	CONSTRUCT CATCH BASINS, DESIGN 4016 4-4	EACH	1
2506.516	CASTING ASSEMBLIES	EACH	43
2511.507	GROUTED RIPRAP	CU. YD.	18
2511.511	GRANULAR FILTER	CU. YD.	9
② 2521.501	4' CONCRETE WALK	SQ. FT.	13329
② 2531.501	CONCRETE CURB AND GUTTER, DESIGN B-612	LIN. FT.	3035
③ 2531.501	CONCRETE CURB AND GUTTER, DESIGN B-618	LIN. FT.	8209
2531.503	CONCRETE MEDIAN	SQ. YD.	68
④ 0531.602	CONCRETE MEDIAN NOSE, SPECIAL	EACH	2
④ 2545.521	3' RIGID STEEL CONDUIT	LIN. FT.	355
2545.553	PULL BOXES	EACH	11
2554.501	TRAFFIC BARRIER, DESIGN B 8307	LIN. FT.	650
2554.521	ANCHORAGE ASSEMBLIES, DESIGN 8318C	EACH	8
2554.523	TWISTED END TREATMENT	EACH	8
0571.610	FURNISH & PLANT LANDSCAPING	LUMP SUM	1
2573.501	BALE CHECK	EACH	90
2573.502	SILT FENCE, HEAVY DUTY	LIN. FT.	1310
2575.501	SEEDING (P)	ACRE	7.2
2575.502	SEED, MIXTURE 500	POUND	360
2575.505	SODDING, (TYPE EROSION CONTROL) (P)	SQ. YD.	11882
⑤ 2575.511	MULCH MATERIAL, TYPE 1	TON	14.0
⑤ 2575.511	MULCH MATERIAL, TYPE 4 (TYPE 1)	TON	0.30
⑤ 2575.511	MULCH MATERIAL, TYPE 4 (TYPE 5)	TON	0.05
2575.519	DISC ANCHORING	ACRE	7.0
2575.531	COMMERCIAL FERTILIZER, ANALYSIS 10-10-10	TON	2.40
2580.501	TEMPORARY LANE MARKING	RD. STA.	612

STATEMENT OF EST. QUAN. - WATERMAIN CONST.

ITEM NO	ITEM	UNIT	EST. QTY.
0504.602	16" BUTTERFLY VALVE	EACH	5
0504.602	6" GATE VALVE	EACH	4
0504.602	HYDRANT	EACH	4
0504.602	CONNECT TO EXISTING WATERMAIN	EACH	2
0504.603	16" D.I.P. WATERMAIN	LIN. FT.	3740
0504.603	16" D.I.P. PREINSULATED WATERMAIN	LIN. FT.	690
0504.603	8" D.I.P. WATERMAIN	LIN. FT.	255
0504.603	6" D.I.P. WATERMAIN	LIN. FT.	55
0504.603	24" STEEL CASING (JACKED)	LIN. FT.	200
0504.603	POLYETHYLENE ENCASEMENT	LIN. FT.	500
0504.620	FITTINGS	POUND	6780
2104.523	SALVAGE 16" PLUGS	EACH	2

SEE SHEET NO. II FOR MITIGATION POND ESTIMATED QUANTITIES
 SEE SHEET NO. IA FOR BRIDGE NO. 02545 ESTIMATED QUANTITIES
 SEE SHEET NO. IB FOR BRIDGE NO. 02546 ESTIMATED QUANTITIES
 SEE SHEET NO. IC FOR BRIDGE NO. 96834 ESTIMATED QUANTITIES

- ① FOR DUST CONTROL AS DIRECTED BY THE ENGINEER
- ② FOR MEDIAN CONSTRUCTION- INCLUDES 168 SF FOR ADDITIONAL DEPTH (8") AT MEDIAN SIGN LOCATIONS.
- ③ FOR MEDIAN CONSTRUCTION 99+75 TO 101+25
- ④ FOR FUTURE SIGNALS AT C.S.A.H. #7
- ⑤ FOR MULCHING SLOPES STEEPER THAN 3:1
- ⑥ INCLUDES 147 TONS FOR 2" THICK PAVING ON PARK ROAD STA. 114+46.
- ⑦ INCLUDES 8 TONS FOR PARK ROAD PAVING.

SPECIAL DETAILS

THE CONTRACTOR SHALL REMOVE SUFFICIENT TOPSOIL MATERIAL WITHIN THE EXCAVATION AREAS AND AREAS ON WHICH EMBANKMENT WILL BE PLACED, STOCKPILE IF NECESSARY, AND USE IT FOR TOPSOIL COVERING ON NEW SLOPES AND BOULEVARDS TO PROVIDE A MINIMUM COVER OF THREE INCHES. SALVAGING AND REPLACING TOPSOIL SHALL BE CONSIDERED AS INCIDENTAL TO COMMON EXCAVATION.

MUCK MATERIAL STOCKPILED ADJACENT TO EXCAVATION AREAS SHALL BE REMOVED PRIOR TO COMPLETION OF GRADING OPERATIONS AND AREAS RESTORED TO APPROXIMATELY THE ORIGINAL ELEVATIONS.

EXCAVATED MUCK MATERIAL SHALL BE USED AS TOPSOIL COVERING AND SPREAD UNIFORMLY ON NEW SLOPES. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO MUCK EXCAVATION.

STOCKPILED MATERIAL LOCATED WEST OF T.H. #47 SHALL BE USED FOR EMBANKMENT CONSTRUCTION OR FOR CONSTRUCTING HAUL ROADS TO THE BRIDGE CONSTRUCTION SITES. PAYMENT FOR USING STOCKPILED MATERIAL SHALL BE COMPENSATED FOR BY THE CUBIC YARD UNDER ITEM 2105.521 GRANULAR BORROW (EV). HAUL ROADS CONSTRUCTED SHALL BE REMOVED BY CONTRACTOR AS INCIDENTAL TO EMBANKMENT CONSTRUCTION AND NO DIRECT COMPENSATION SHALL BE MADE THEREFOR.

BASIS OF PLANNED QUANTITIES

2331	PLANT MIXED BASE AND BINDER COURSE BITUMINOUS MIXTURE 110 LBS./SQ. YD. PER 1" THICKNESS BITUMINOUS MATERIAL FOR MIXTURE 5.3% BY WEIGHT
2341	PLANT MIXED WEARING COURSE BITUMINOUS MIXTURE 110 LBS./SQ. YD. PER 1" THICKNESS BITUMINOUS MATERIAL FOR MIXTURE 5.8% BY WEIGHT
2357	BITUMINOUS MATERIAL FOR TACK COAT 0.05 GALLON PER. SQ. YD.
2575	MULCH MATERIAL, TYPE-1 2 TON PER ACRE
2575	COMMERCIAL FERTILIZER, ANALYSIS 10-10-10 500 LBS./ACRE ON ALL SEED AND SOD AREAS
2575	ROADSIDE SEEDING BASED ON HORIZONTAL MEASUREMENT PLUS 10% SEED MIXTURE NO. 500, @ 50 LBS. PER ACRE.

STANDARD PLATES

PLATE NO.	DESCRIPTION
0005 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000 K	REINFORCED CONCRETE PIPE
3006 F	GASKET JOINT FOR R.C. PIPE
3014 J	REINFORCED CONCRETE PIPE ARCH DETAIL
3100 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE-ARCH
3133 B	RIPRAP AT R.C. OUTLETS
3145 E	CONCRETE PIPE TIES
4000 I	MANHOLE OR CATCH BASIN
4002 E	MANHOLE OR CATCH BASIN
4005 K	MANHOLE OR CATCH BASIN
4006 K	MANHOLE OR CATCH BASIN
4010 G	CONCRETE SHORT CONE AND ADJUSTING RING
4011 D	PRECAST CONCRETE BASE
4016 C	CURB OPENING CATCH BASIN
4101 C	RING CASTING FOR MANHOLE OR CATCH BASIN
4110 D	COVER CASTING FOR MANHOLE
4126 E	CATCH BASIN FRAME CASTING
4149 C	GRATE CASTING FOR CATCH BASIN
4161 F	CURB BOX CASTING FOR CATCH BASIN
4180 H	MANHOLE OR CATCH BASIN STEP
7036 C	PEDESTRIAN CURB RAMP
7100 F	CONCRETE CURB AND GUTTERS
7110 E	CURB AND GUTTER CONSTRUCTION AT CATCH BASINS
7111 G	INSTALLATION AND REINFORCEMENT OF CATCH BASIN CASTINGS
8000 I	STANDARD BARRICADES
8117 F	PRECAST CONCRETE HANDHOLE OR PULLBOX
8307 N	STEEL PLATE BEAM GUARDRAIL
8317 D	GUARDRAIL ANCHORAGE ASSEMBLY FOR BRIDGES
8319 G	TWISTED END TREATMENT
9102 C	SODDING AT PIPE CULVERT ENDS

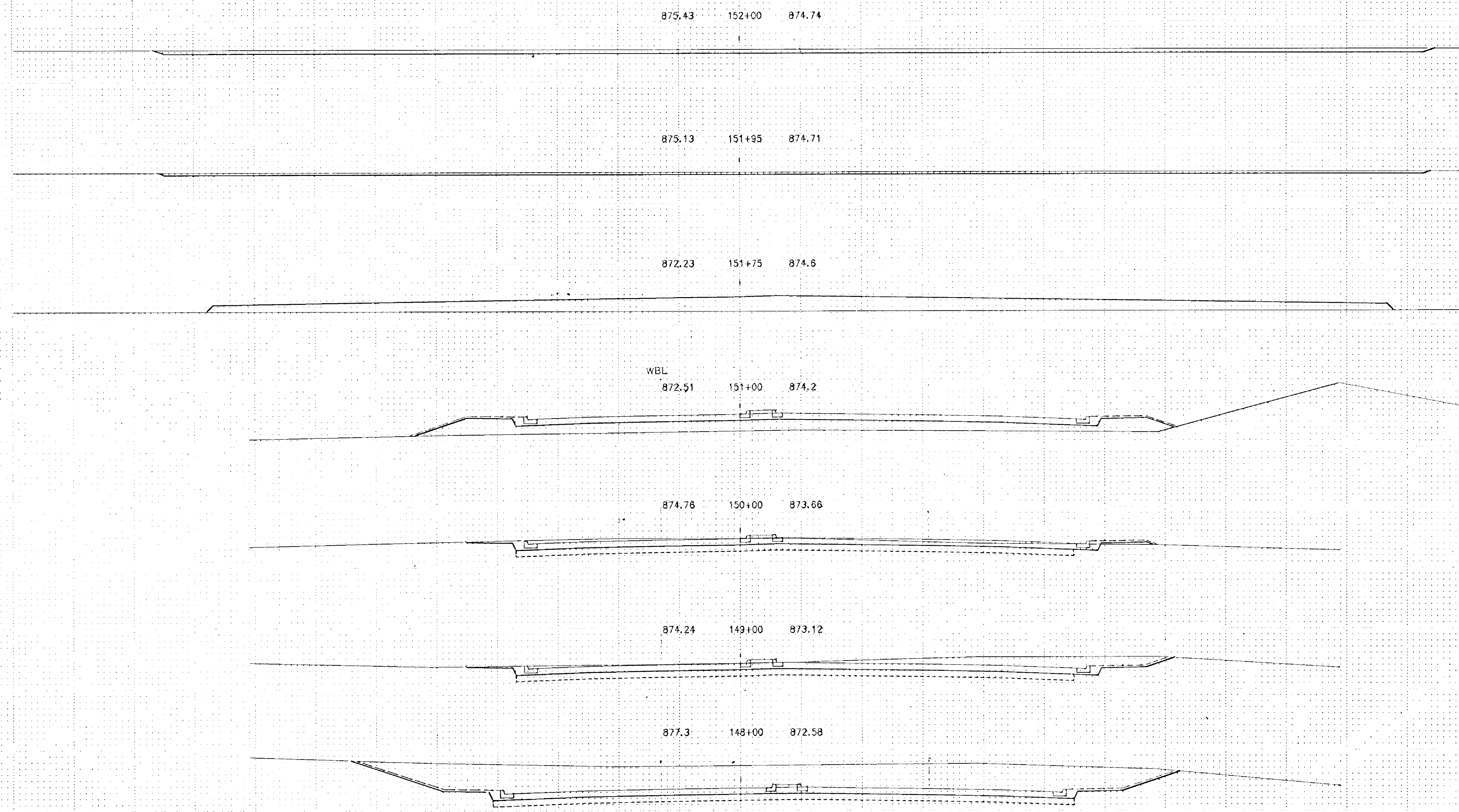
SEE BRIDGE PLANS FOR ADDITIONAL STANDARD PLATES

REVISIONS			
DATE	BY	DATE	BY
1-29-90	AKC		

S.A.P. _____ S.P. _____ C.P. 85-05-116

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS



EXCAVATION	EMBANKMENT
22	0
51	196
111	269
248	435
530	7
1422	0
3044	12

STA. 148+00 TO STA. 152+00