

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

F-675 (6)

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-675 (6)

1
308

TUSCARAWAS COUNTY
TUS-250-17.23

LIMITED ACCESS - This improvement is especially designed for through traffic and has been declared a limited access highway or freeway by action of the Director of Highways in accordance with the provisions of Section 5511.02 of the Revised Code of Ohio.

1965 SPECIFICATIONS

TUS-250-17.23
MILL AND GOSHEN TOWNSHIPS
VILLAGE OF MIDVALE
TUSCARAWAS COUNTY
GRADE SEPARATION WITH THE BALTIMORE AND OHIO RAILROAD CO.

CONVENTIONAL SIGNS

State Line	
County Line	
Township Line	
Section Line	
Center Line	
Corporation Line	
Fence Line	
Guard Rail (existing)	
Guard Rail (proposed)	
Railroad Line	
Poles	
Trees and Stumps	
Drain Pipe	
Property Line	
Right of Way without Limited Access	
Existing Right of Way	
Right of Way with Limited Access	
Right of Way Limited Access Only	

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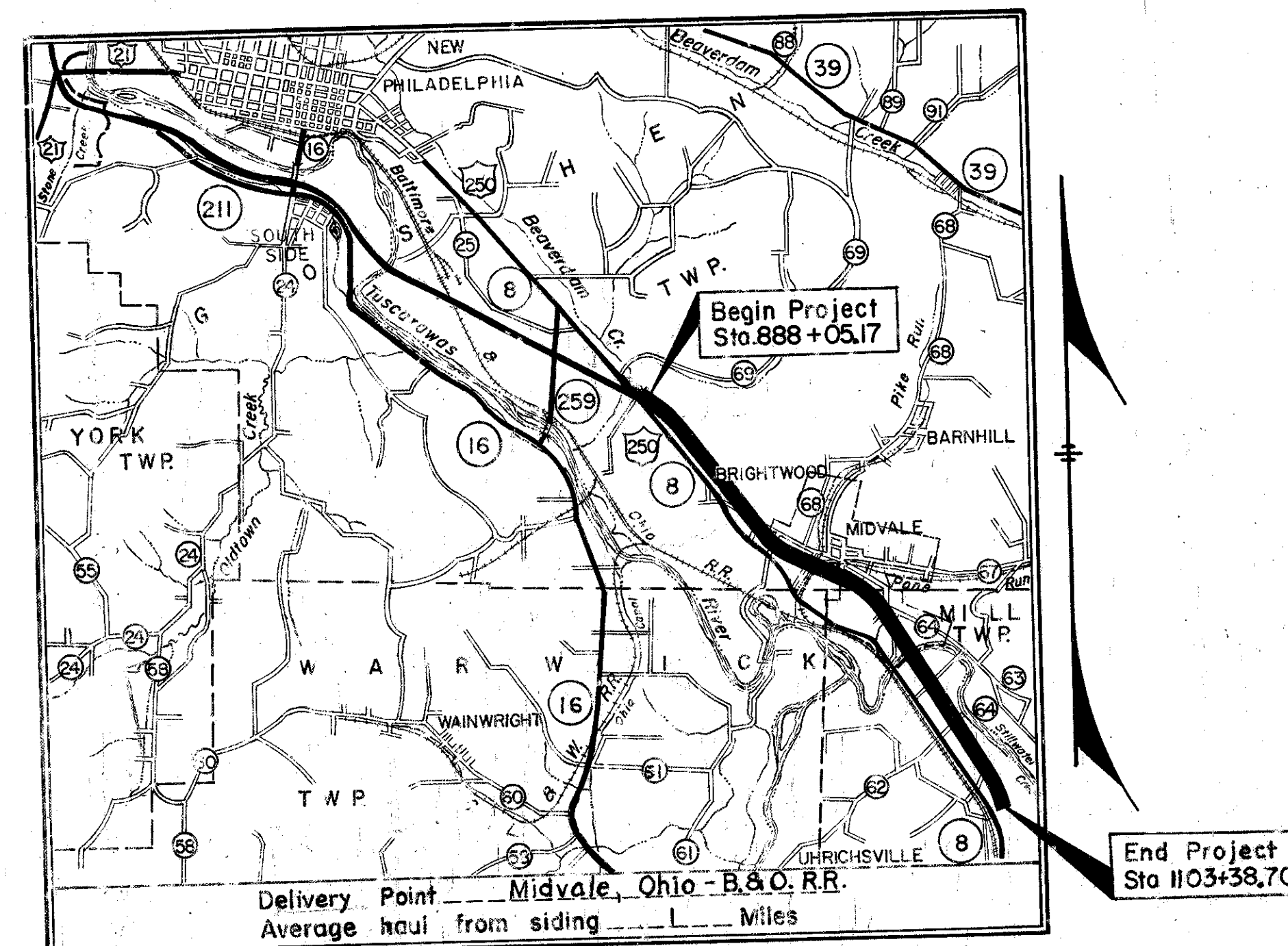
LINE DATA

Begin Project - Sta. 888+05.17	
End Project - Sta. 1103+38.70	
Net Length of Project - 21,533.53 Lin. Ft. or 4.078 Mi.	
Add. For Approaches	
County Road 68 Ext. Lt. & Rt. Sta. 972+79.20 =	1020.21 L.F.
County Road 64	1030.00 L.F.
Township Road 286	1645.00 L.F.
847+75 To 888+05.17	4030.17 L.F.
1103+38.70 To 1103+50	11.30 L.F.
	7736.68 L.F.
Deduct For Beaverdam Creek Bridge	155.50 L.F.
878+90.44 To 880+45.94	7581.18 L.F.
Net Length of Work	29,114.71 L.F. = 5.514 Mi.

Prepared By:	GANNETT FLEMING CORDDRY & CARPENTER	HARRISBURG, PA.
File No.	TUSCARAWAS COUNTY	TUS-250-17.23
Date of Letting		19
Contract No.		

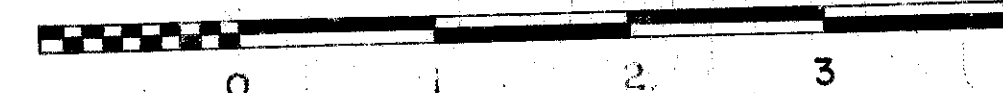
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Sheet No. 257 revised 8-11-67 EDL



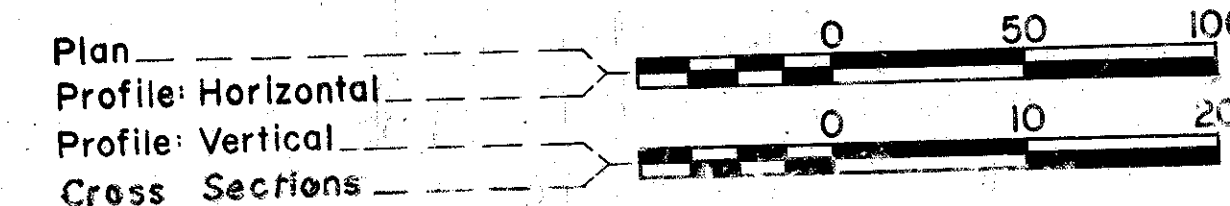
LOCATION MAP

SCALE OF MILES



Portion to be improved
State Roads
Other Roads

SCALE



*STANDARD DRAWINGS							
BP-1	6-1-65	F-2	6-1-65	AS-1-54	8-10-65	SD-1-63 (Sh. 234)	11-12-63
BP-2	6-1-65	F-3	6-1-65	SP-53	6-30-61	SD-2-64	11-25-64
BP-3	6-1-65	FA-1	6-1-65	CB-2-54-2-6	6-1-65	FSB-1-62	1-15-63
BP-4	6-1-65	FA-2	6-1-65	MC-7	3-1-66	BR-1-65	11-24-65
BP-5	6-1-65	HW-E	6-1-65			CSB-2-63 (Sh. 164)	11-12-63
BP-6	6-1-65	CB-2-2A-B	6-1-65				
BP-7	1-1-66	CB-2-3-2-4	6-1-65				
MC-1	6-1-65	CB-8	6-1-65				
MC-3	5-1-66	GR-1	6-1-65				
MC-4	6-1-65	GR-2A	9-1-65				
MC-5	6-1-65	GR-5B	6-1-65				
MC-6	6-1-65	GR-6	6-1-65				
F-1	6-1-65	L-1	6-1-65				

* See Sheet No. 18 for Legend showing the 1963 Standard Drawings and Supplemental Specifications which have been superseded by the 1965 Standard Drawings and Supplemental Specifications shown in this table.

* Supplemental Specifications			
801	9-2-65	1001	3-21-66
806	3-3-66		
808	2-7-66		
811	3-29-65		
814	3-16-66		
815	8-6-65		
816	8-6-65		
825	4-22-65		

The standard specifications of the State of Ohio, Department of Highways, including changes and supplemental specifications listed in the proposal shall govern this improvement.

The right of way for this improvement will be provided by the State of Ohio.

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that provisions for the maintenance and safety of traffic will be as set forth on these plans and estimates.

Approved: Carl W. Nelson
Date: 1-5-66 Division Deputy Director

Approved: C. H. Altwater
Date: 7-26-66 Engineer of Bridges

Approved: R. R. Eickert
Date: 7-27-66 Engineer of Location & Design

Approved: R. E. Shultz
Date: 7-27-66 Deputy Director of Design & Construction

Approved: _____
Date: _____ Deputy Director of Right of Way

Approved: R. W. Wilson
Date: 7-29-66 Deputy Director of Planning & Programming

Approved: _____
Date: _____ First Assistant Director

Approved: J. E. Nash
Date: 7/29/66 Director of Highways

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER

DATE

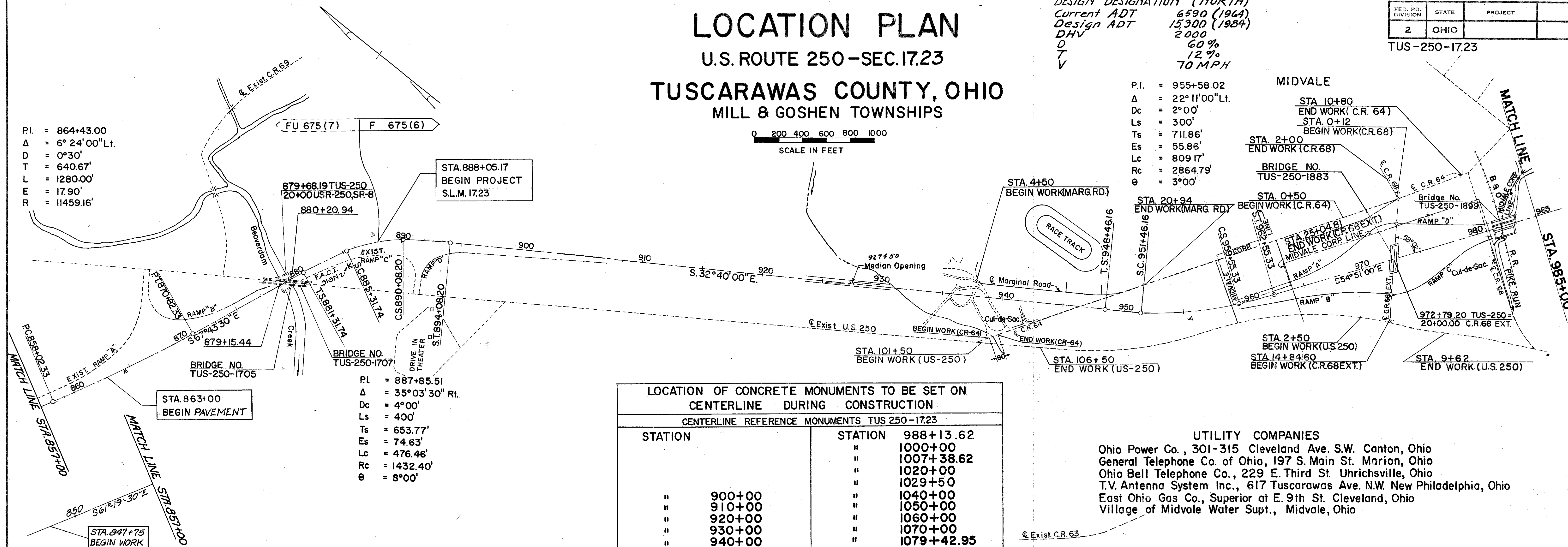
LOCATION PLAN
U.S. ROUTE 250-SEC.17.23
TUSCARAWAS COUNTY, OHIO
MILL & GOSHEN TOWNSHIPS

DESIGN DESIGNATION (NORTH)	
Current ADT	6590 (1964)
Design ADT	15,300 (1984)
DHV	2000
D	60%
T	12%
V	70 MPH

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TUS-250-17.23

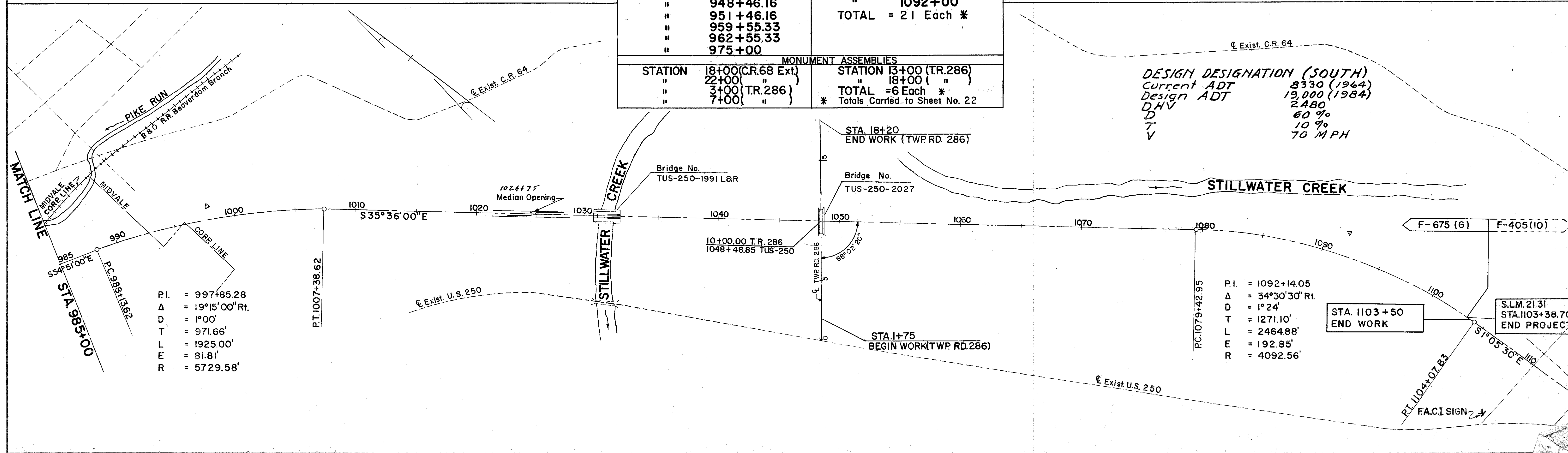
2



LOCATION OF CONCRETE MONUMENTS TO BE SET ON CENTERLINE DURING CONSTRUCTION	
CENTERLINE REFERENCE MONUMENTS TUS 250-1723	
STATION	STATION 988+13.62
	" 1000+00
	" 1007+38.62
	" 1020+00
	" 1029+50
" 900+00	" 1040+00
" 910+00	" 1050+00
" 920+00	" 1060+00
" 930+00	" 1070+00
" 940+00	" 1079+42.95
" 948+46.16	" 1092+00
" 951+46.16	TOTAL = 21 Each *
" 959+55.33	
" 962+55.33	
" 975+00	
MONUMENT ASSEMBLIES	
STATION 18+00(CR.68 Ext)	STATION 13+00 (TR.286)
" 22+00(")	" 18+00(")
" 3+00 (TR.286)	TOTAL = 6 Each *
" 7+00(")	* Totals Carried to Sheet No. 22

UTILITY COMPANIES

Ohio Power Co., 301-315 Cleveland Ave. S.W. Canton, Ohio
General Telephone Co. of Ohio, 197 S. Main St. Marion, Ohio
Ohio Bell Telephone Co., 229 E. Third St. Uhrichsville, Ohio
T.V. Antenna System Inc., 617 Tuscarawas Ave. N.W. New Philadelphia, Ohio
East Ohio Gas Co., Superior at E. 9th St. Cleveland, Ohio
Village of Midvale Water Supt., Midvale, Ohio

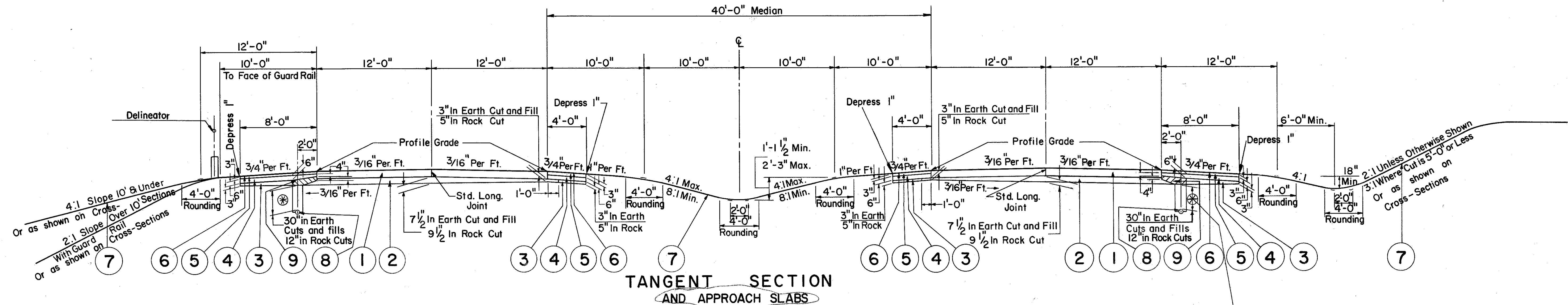


TYPICAL SECTIONS

TYPE T-71

SCALE: $\frac{3}{16}'' = 1'-0''$

CONSTRUCTION TYPE CODE 7221



GENERAL NOTE

Grading "A" or "B" as per plan is to be used under the slab and out to the underdrain or to one foot beyond the pavement edge where no underdrain is provided. Regular I-22 is to be used in the shoulder areas beyond the drains.

TANGENT SECTION			SUPERELEVATED SECTION		
STA. 871+95.33 TO STA. 878+90.44	695.11 L.F.	LEFT LANE NO GRADING	STA. 863+00.00 TO STA. 871+95.33	895.33 L.F.	LEFT LANE NO GRADING
STA. 880+45.94 TO STA. 880+56.74	10.80 L.F.	LEFT LANE NO GRADING	STA. 880+56.74 TO STA. 888+05.17	748.43 L.F.	LEFT LANE NO GRADING
STA. 895+17.50 TO STA. 896+68.00	150.50 L.F.	LEFT AND RIGHT LANE NO GRADING	STA. 888+05.17 TO STA. 895+17.50	712.33 L.F.	LEFT AND RIGHT LANE NO GRADING
STA. 896+68.00 TO STA. 947+32.50	5064.50 L.F.		STA. 947+32.50 TO STA. 963+69.00	1636.50 L.F.	
STA. 963+69.00 TO STA. 980+87.67	1718.67 L.F.		STA. 963+69.00 TO STA. 1008+88.62	2238.62 L.F.	
STA. 983+48.33 TO STA. 986+50.00	301.67 L.F.	RIGHT LANE	STA. 1008+88.62 TO STA. 1077+36.94	2601.76 L.F.	
STA. 986+50.00 TO STA. 986+50.00	263.42 L.F.	LEFT LANE	TOTAL	1460.76 L.F.	LEFT LANE NO GRADING
STA. 1008+88.62 TO STA. 1029+44.68	2056.06 L.F.			712.33 L.F.	RIGHT LANE NO GRADING
STA. 1029+44.68 TO STA. 1077+36.94	4529.62 L.F.			4840.38 L.F.	
TOTAL	856.41 L.F.	LEFT LANE NO GRADING			
	13,632.27 L.F.	LEFT LANE			
	150.50 L.F.	RIGHT LANE NO GRADING			
	13,670.52 L.F.	RIGHT LANE			

NOTE: Bridge, Sta. 878+90.44 To Sta. 880+45.94 Constructed With TUS-250-12.72.

Note:

All Underdrain Normal Depth (30") except as follows:

In Deep Earth Cuts (50")

Sta. 951+05 - Sta. 954+00 Lt.

Sta. 960+05 - Sta. 963+75 Lt.

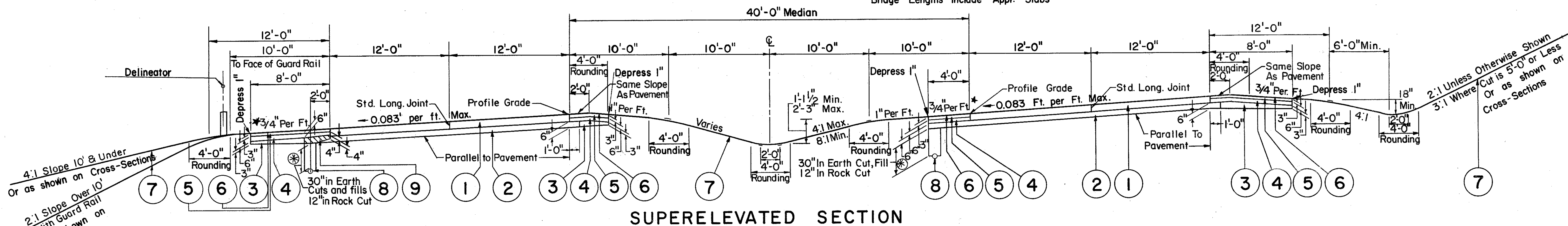
Sta. 9+55 - Sta. 19+88 Lt. & Rt. Ramp "A" @ Midvale

Sta. 0+40 - Sta. 7+70 Lt. & Rt. Ramp "D" @ Midvale

In Rock Cuts (12")

Sta. 984+25 - Sta. 1008+00 Lt.

Sta. 983+25 - Sta. 1008+00 Rt.



SUPERELEVATED SECTION

LEGEND:

- 1 Item T-71 - 9" Reinforced Portland Cement Concrete Pavement.
- 2 Item I-22 - Subbase, Grading "A" or "B", as per plan (See General Notes)
- 3 Item I-22 - Subbase, Regular Grading
- 4 Item B-19 - Aggregate Base Course
- 5 Item B-21 - Water proofed Aggregate Base Course, as per plan. See Note in Proposal.
- 6 Item T-31 - Bituminous Surface Treatment using .008 Cu.Yds. No.6 Aggregate per Sq. Yd. and 0.25 gallon Bituminous Material per Sq. Yd. (See note in proposal.)
- 7 Item L-9 - Seeding and Protecting (See General Notes)
- 8 Item I-1 - 6" Pipe, Class I-3
- 9 Item Special - Drainage Connection, using No.6 Aggregate (See note in proposal.)

For Typical Section for Speed Change Lanes see Sheet 4

NOTE:

★ Except where pavement slope is greater than 3/4" per Ft., then same slope as pavement.

* 3" Thickness adjacent to Main Roadway Pavement and 6" Thickness (2-3" courses) adjacent to Speed Change Lanes and Ramps. (Where 6" Thickness is used, a compensating reduction has been applied to the Aggregate Base Course.)

+ Thickness shown is designed thickness as described in Section B-21.01.

SEQUENCE OF OPERATIONS: (1) Install pipe underdrain on outside shoulder. Installation of shallow underdrain in median may be deferred until 4.51 is placed. (2) Place subbase out to outside edge of underdrain or to one foot beyond edge of pavement where no underdrain is present. (3) Construct 4.51. (4) Remove subbase and any contaminated backfill over drain and replace with No.8 aggregate as shown by ⑤. (5) Complete shoulder construction.

TYPICAL SECTIONS

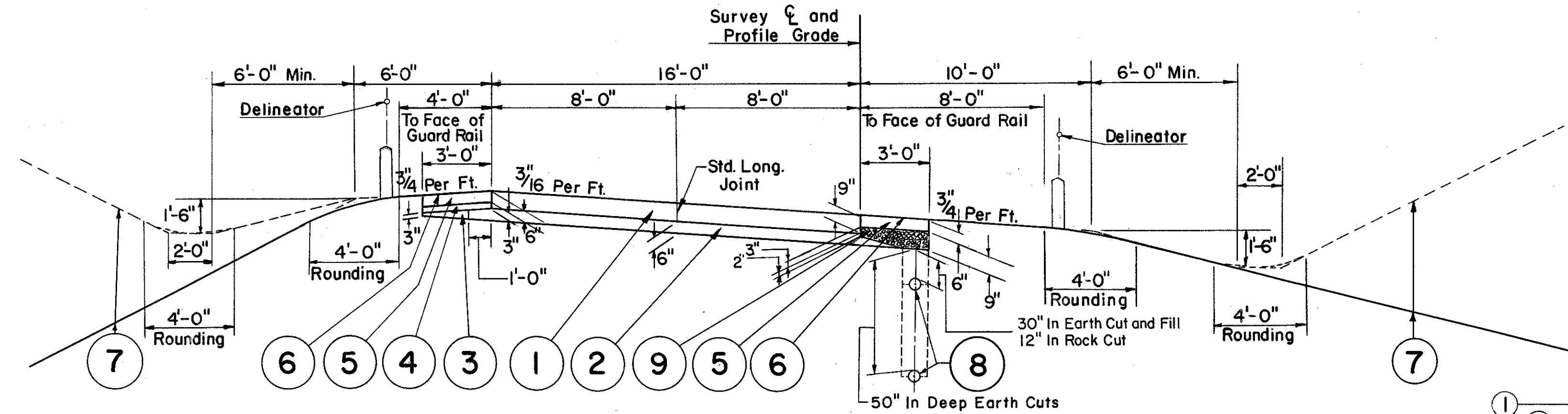
TYPE T-71

SCALE: $\frac{1}{4}'' = 1'-0''$

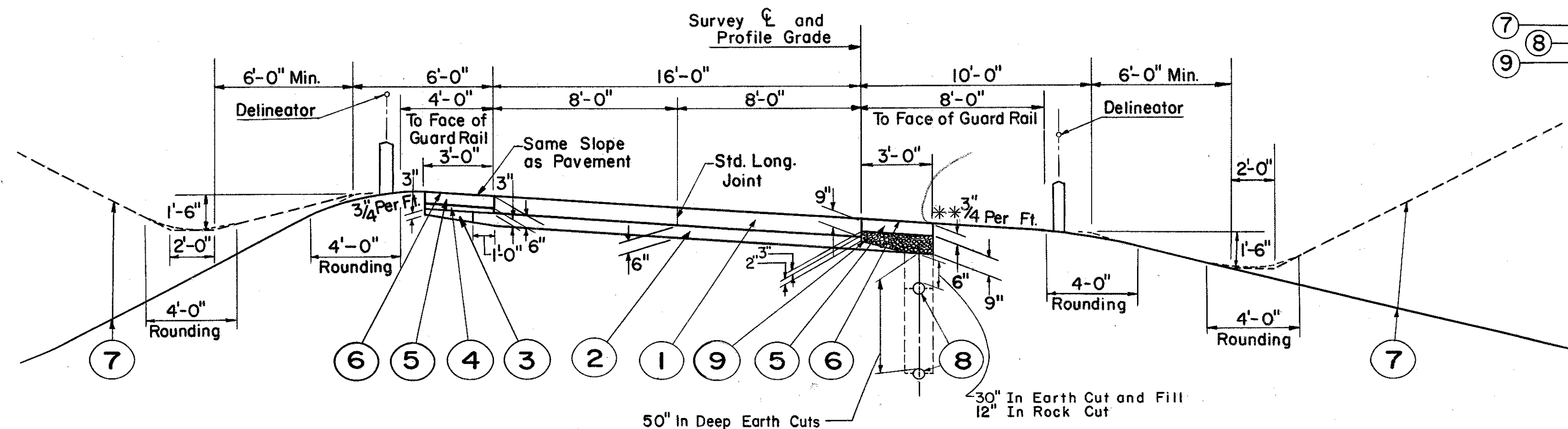
FED. RD. DIVISION	STATE	PROJECT
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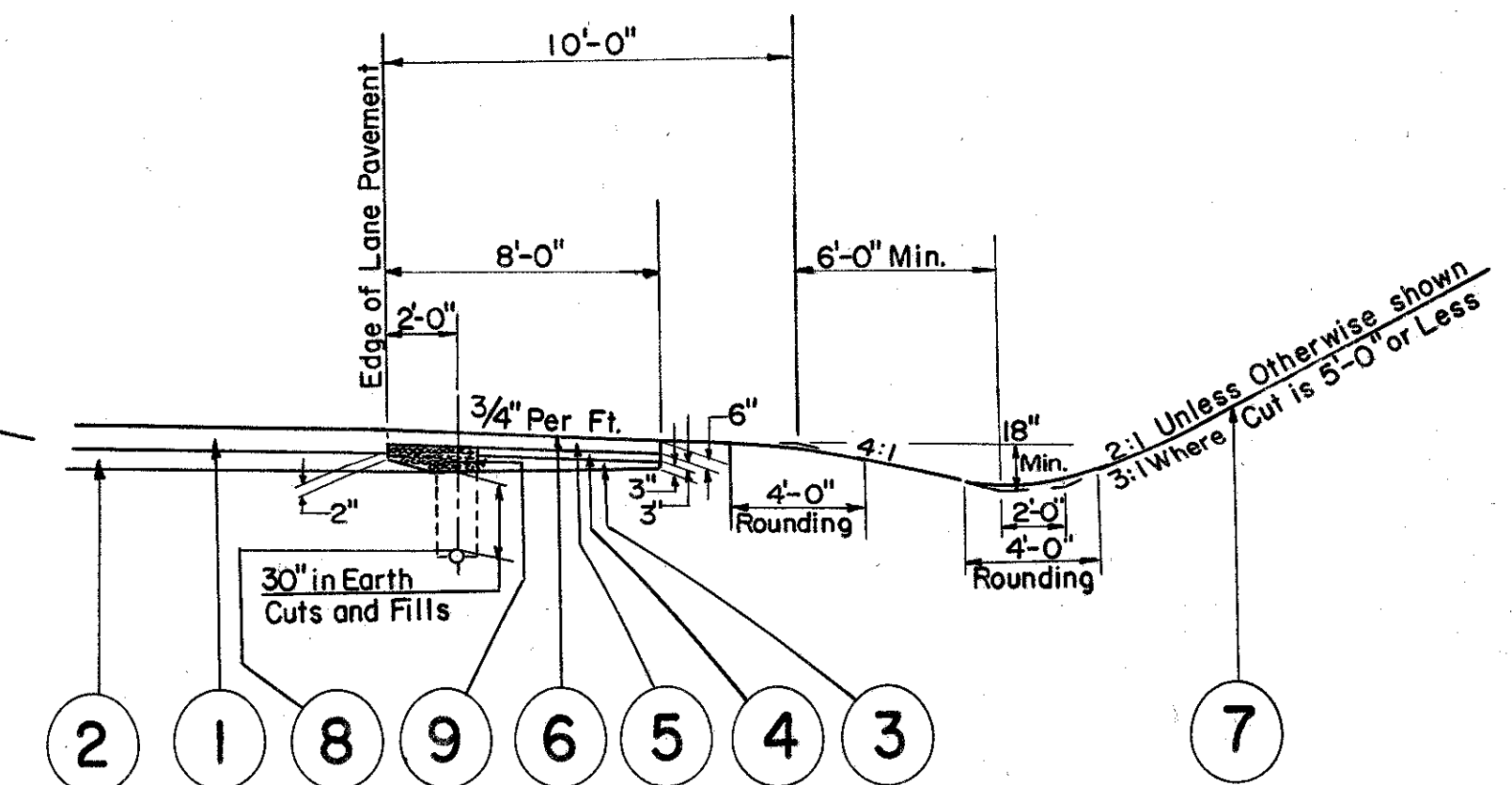


TANGENT SECTION
RAMPS A, B, C & D MIDVALE INTERCHANGE



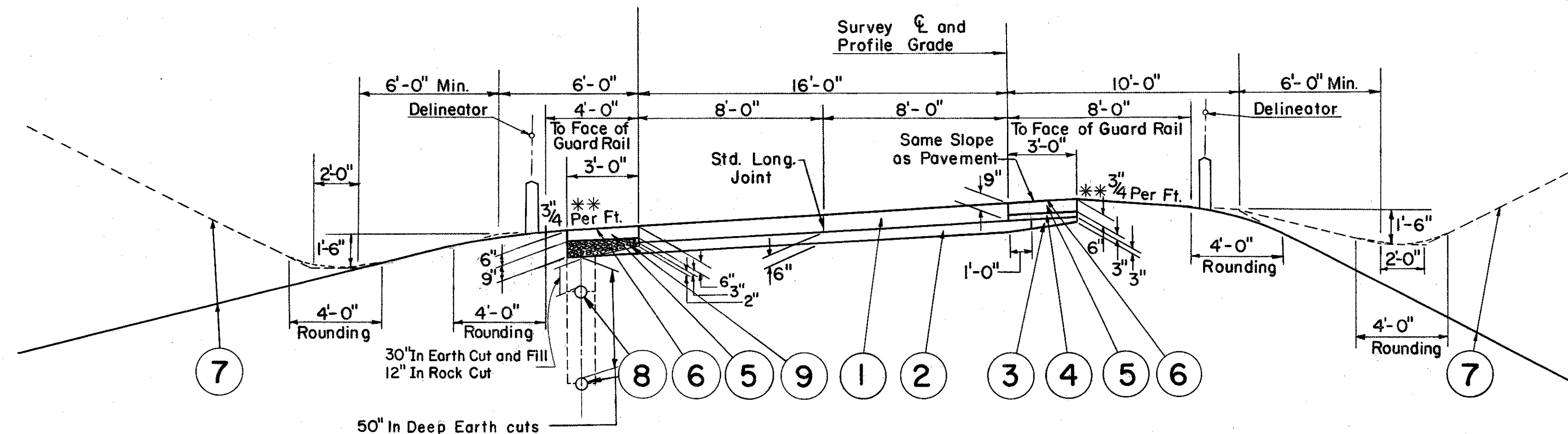
SUPERELEVATED SECTION
RAMPS A, B, C & D MIDVALE INTERCHANGE
RAMPS B & D U.S.R. 250, S.R. 8 INTERCHANGE

- LEGEND**
- ① Item T-71- 9" Reinforced Portland Cement Concrete Pavement
 - ② Item I -22- Subbase, Grading "A" or "B", as per plan (See General Notes)
 - ③ Item I -22- Subbase, Regular Grading
 - ④ Item B-19- Aggregate Base Course
 - ⑤ +, * Item B-21- Waterproofed Aggregate Base Course, as per plan. See Note in Proposal.
 - ⑥ Item T-31- Bituminous Surface Treatment using .008 Cu. Yds. No. 6 Aggregate per Sq. Yd. and 0.25 gallon Bituminous Material per Sq. Yd. (See note in proposal.)
 - ⑦ Item L-9 - Seeding and Protecting (See General Notes)
 - ⑧ Item I-1 - 6" Pipe, Class I-3
 - ⑨ Item Special Drainage Connection, No. 6 Aggregate (See note in proposal)



TYPICAL PART SECTION
SPEED CHANGE LANES

SCALE: $\frac{3}{16}'' = 1'-0''$



SUPERELEVATED SECTION
RAMPS A & C MIDVALE INTERCHANGE

NOTES:

See Sheet 3 For Limiting Stations of different Depth Underdrains
Fill Slopes - 4:1 10' & Under, 2:1 Over 10' with Guard Rail
Cut Slopes - 3:1 Where 5' or Less, 2:1 Unless otherwise shown.

* Opposite as shown.

** Except where pavement slope is greater than $\frac{3}{4}$ per Ft., then same slope as pavement.

* 3" Thickness adjacent to Main Roadway Pavement and 6" Thickness (2-3 courses) adjacent to Speed Change Lanes and Ramps. (Where 6" Thickness is used, a compensating reduction has been applied to the Aggregate Base Course.)

+ Thickness shown is designed thickness as described in Section B-21.01.

TYPICAL SECTIONS

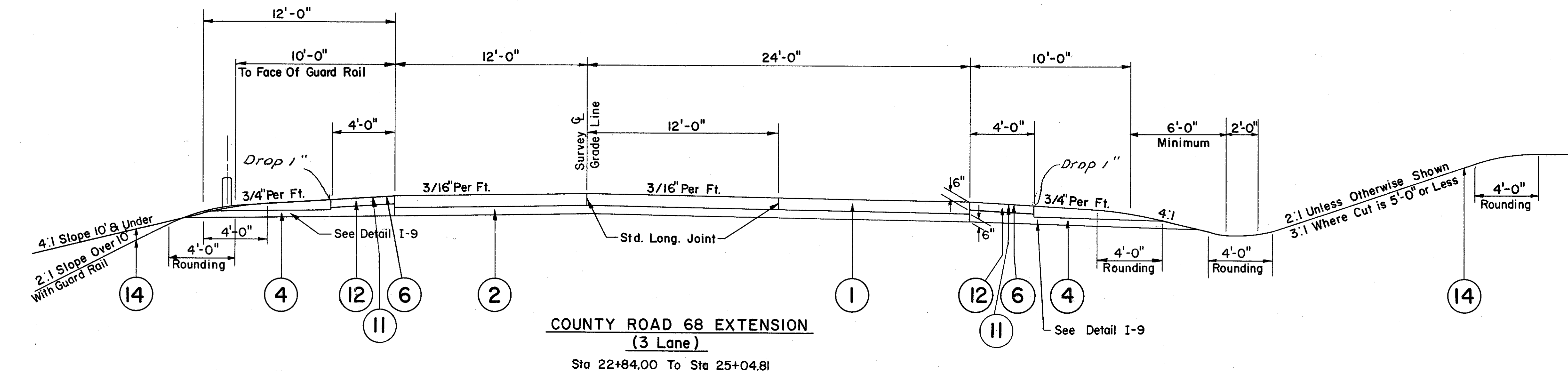
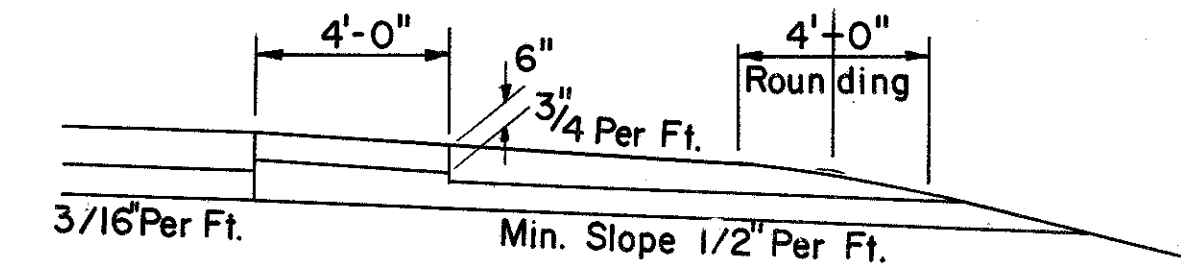
TYPE T-71

SCALE: 1/4" = 1'-0"

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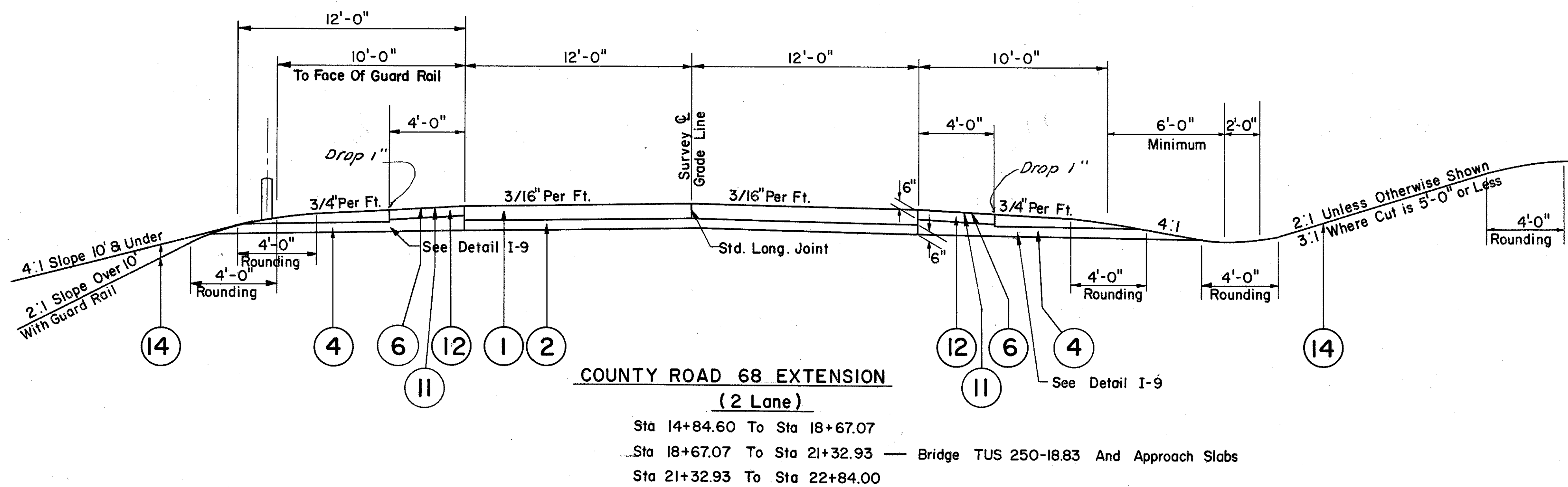
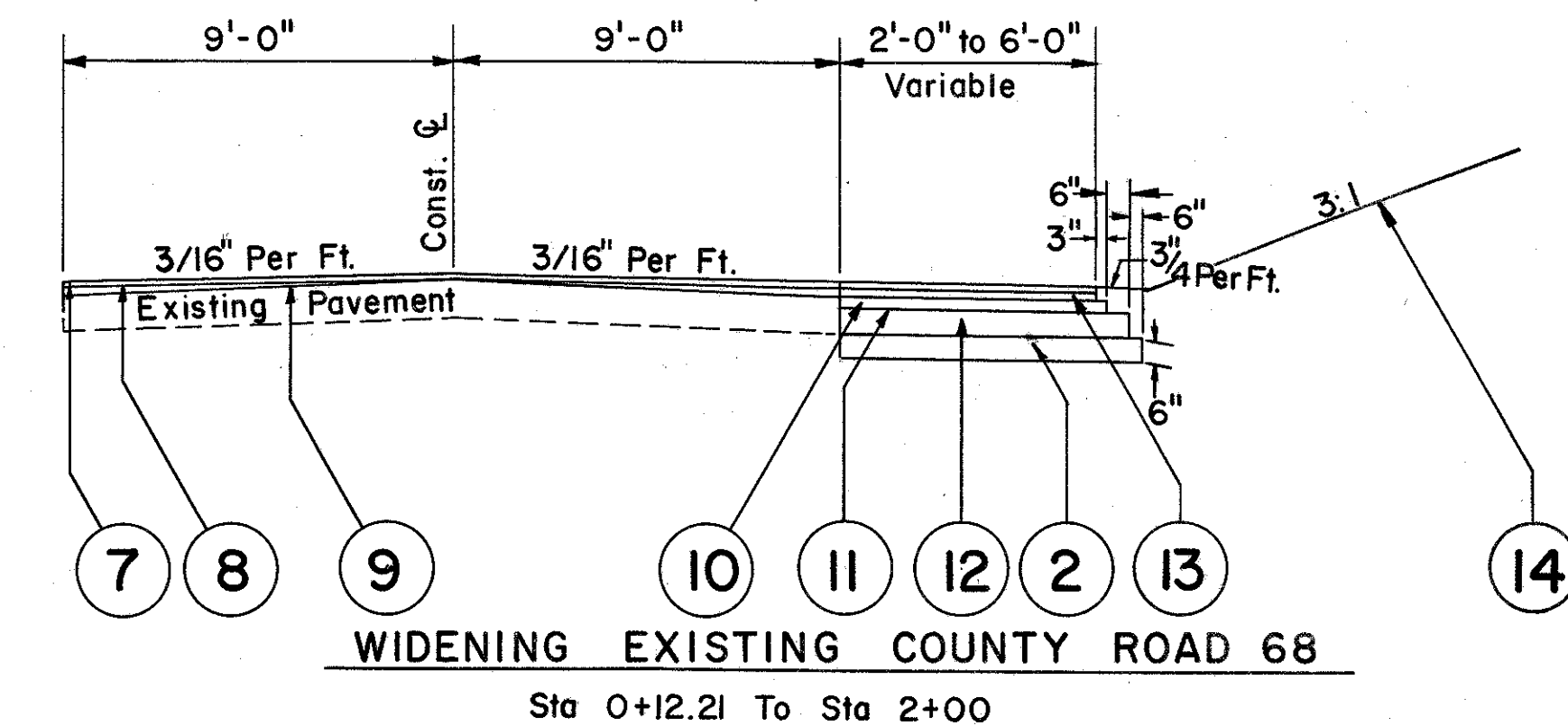
TUS-250-17.23

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NOTE:

In lieu of Section 605.05 of the specifications the Aggregate Drains shall be constructed prior to the construction of the Aggregate Berms.



- LEGEND**
- 1 Item T-71 - 9" Reinforced Portland Cement Concrete Pavement.
 - 2 Item I-22 - Subbase, Regular Grading
 - 4 Item I-9 - Stone Underdrains No. 2
 - 6 Item T-31 - Bituminous Surface Treatment using .008 Cu. Yds. No. 6 Aggregate per Sq. Yd. and 0.30 Gal. Bituminous Material Sec. M-5.7, RT-8 or RT-9, or Sec. M-5.2, RC3 per Sq. Yd.
 - 7 Item T-35 - 1 1/4" Asphaltic Concrete Surface Course Type "C" (70-85)

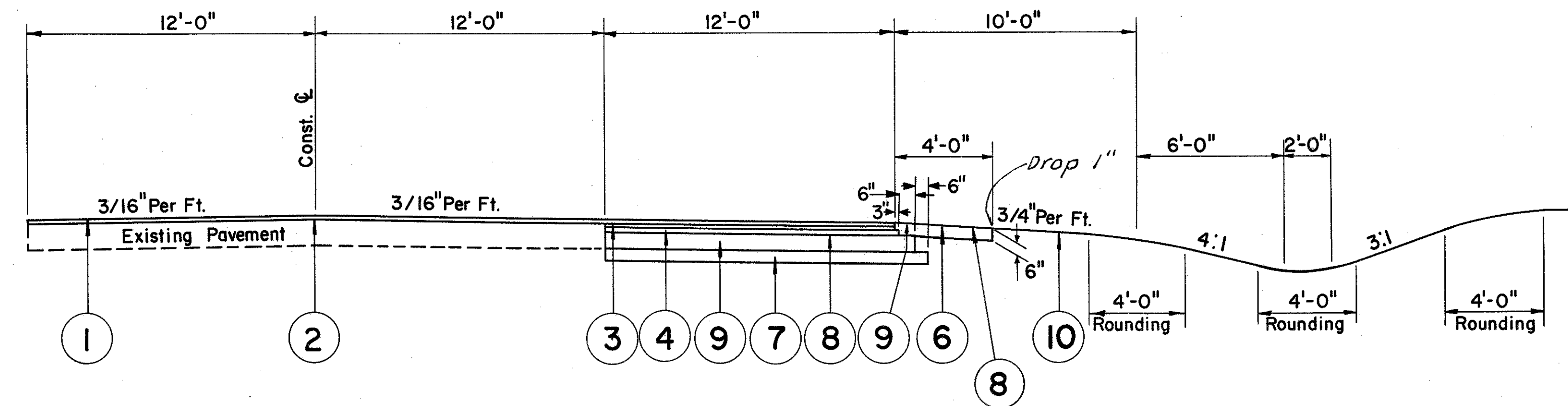
- 8 Item B-35 - Asphaltic Concrete Pre-Leveling Course (0" Min. thickness) (70-85)
- 9 Item T-30 - Bituminous Tack Coat; Sec. M-5.5, MS-2 or RS-1; or Sec. M-5.2, RC-3 as per Sec. T-30.02 applied at the rate of 0.10 Gal. per Sq. Yd.
- 10 Item B-35 - 3" Asphaltic Concrete Base Course (70-85)
- 11 Item T-30 - Bituminous Prime Coat; Sec. 5.7, RT-2 or RT-3 applied at the rate of 0.4 Gal. per Sq. Yd.
- 12 Item B-19 - 8" Aggregate Base Course
- 13 Item B-35 - 1 3/4" Asphaltic Concrete Leveling Course (70-85)
- 14 Item L-9 - Seeding and Protecting

TYPICAL SECTIONS TYPE AS SHOWN SCALE : 1/4" = 1'-0"

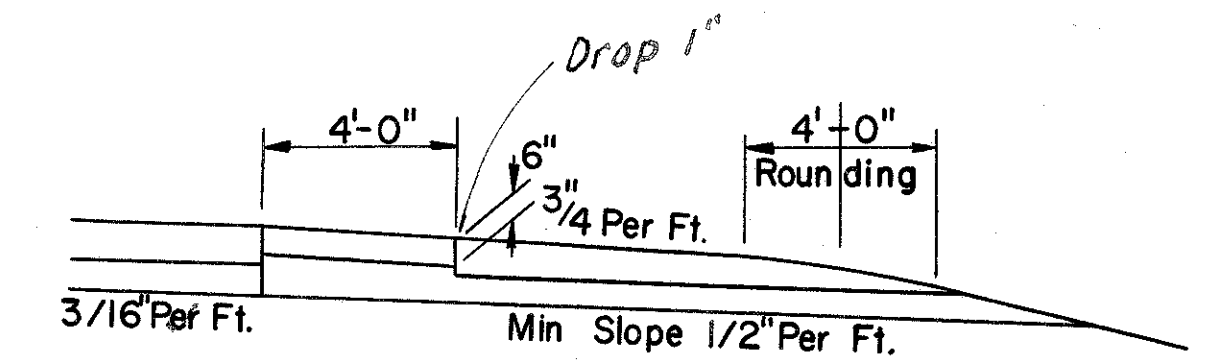
FED. RD. DIVISION	STATE	PROJECT
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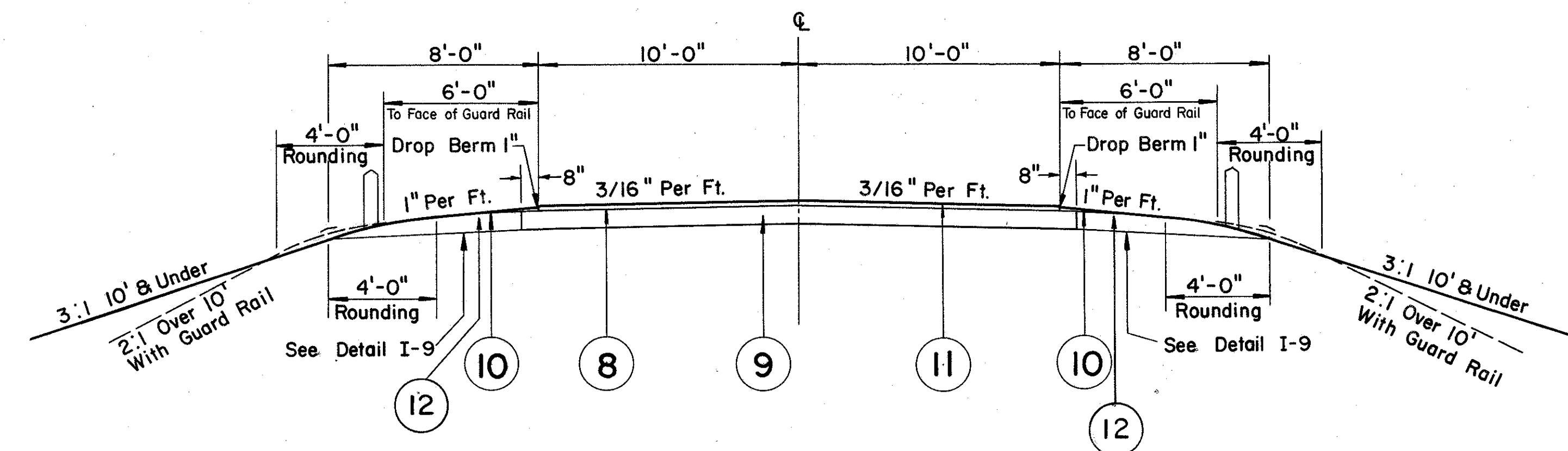
COUNTY ROAD 64
Sta 0+50 To Sta 10+80



DETAIL OF ITEM I-9

NOTE:

In lieu of Section 605.05 of the specifications the Aggregate Drains shall be constructed prior to the construction of the Aggregate Berms.



TOWNSHIP ROAD 286
Sta 1+75 To Sta 8+74.50
Sta 8+74.50 To Sta 11+25.50 - Bridge TUS 250-2027 and Approach Slabs
Sta 11+25.50 To Sta 18+20

LEGEND

- 1 Item T-35 - 1 1/4" Asphaltic Concrete Surface Course Type "C" (70-85)
- 2 Item T-30 - Bituminous Tack Coat Sec. M-5.5, MS-2 or RS-1; or Sec. M-5.2, RC-3 as per Sec. T-30.02 applied at the rate of 0.10 Gal. per Sq. Yd.
- 3 Item B-35 - 1 3/4" Asphaltic Concrete Leveling Course (70-85)
- 4 Item B-35 - 3" Asphaltic Concrete Base Course (70-85)

- 6 Item T-31 - Bituminous Surface Treatment using .008 Cu. Yds. No. 6 aggregate per Sq. Yd. and 0.30 Gal. Bituminous Material Sec. M-5.7 RT-8 or RT-9; or Sec. M-5.2, RC-3 per Sq. Yd.
- 7 Item I-22 - 6" Subbase, Regular Grading
- 8 Item T-30 - Bituminous Prime Coat Sec. M-5.7 RT-2 or RT-3 applied at the rate of 0.4 Gal. per Sq. Yd.
- 9 Item B-19 - 8" Aggregate Base Course
- 10 Item L-9 - Seeding and Protecting (See General Note)
- 11 Item T-35 - 1 1/2" Asphaltic Concrete Surface Course Type "A" (85-100)
- 12 Item I-9 - Stone Underdrains No. 2

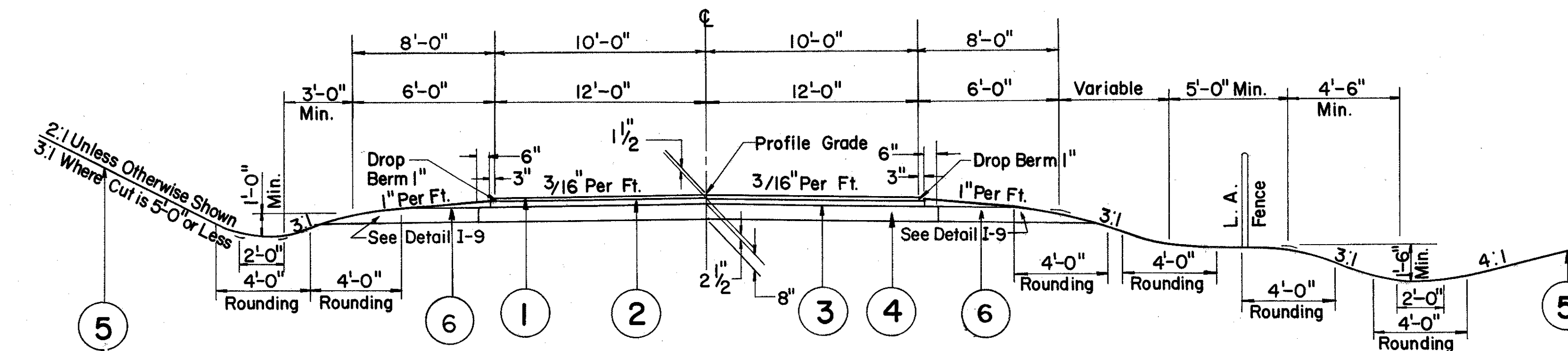
TYPICAL SECTIONS TYPE AS SHOWN

SCALE: $\frac{1}{4}'' = 1'-0''$

FED. RD. DIVISION	STATE	PROJECT
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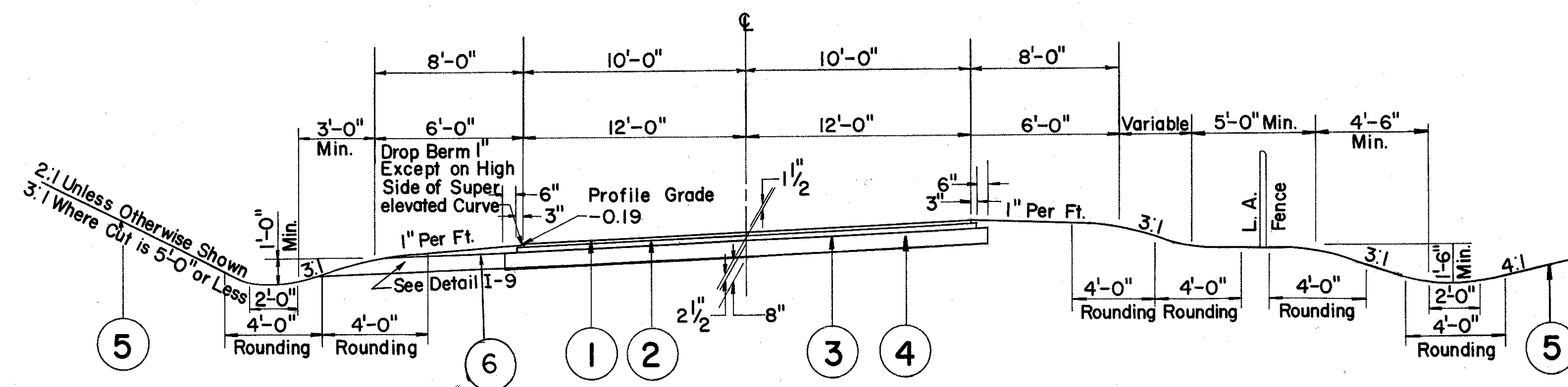
TUS-250-17.23

7



TANGENT SECTION

STA. 7+71.87 TO STA. 11+58.14 20' Pavement & 8' Shoulders
" 18+67.70 " " 19+50.00 24' " " 6' "



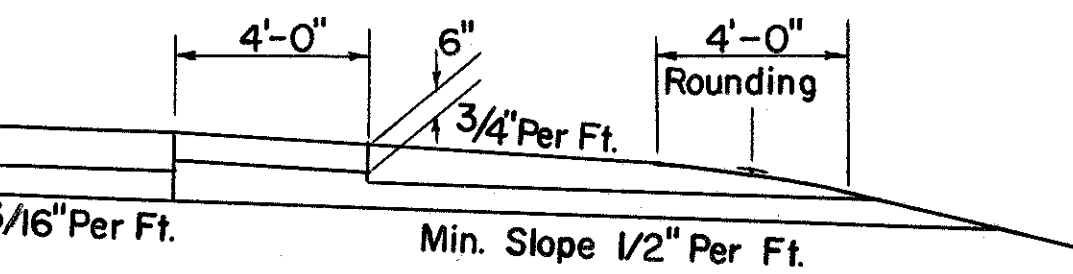
SUPERELEVATED SECTION

MARGINAL ROAD

STA. 4+50.00 TO STA. 7+71.87 20' Pavement & 8' Shoulders
" 11+58.14 " " 11+63.00 20' " " 8' "
" 11+63.00 " " 12+72.00 Trans. 20' Pav't, 8' Shoulder to 24' Pav't & 6' Shoulder
" 12+72.00 " " 18+67.70 24' Pavement & 6' Shoulders

LEGEND:

- ★ ① — Item T-35 $\frac{1}{2}''$ Asphaltic Concrete Surface Course, Type "A" (85-100)
- ★ ② — Item B-35 $2\frac{1}{2}''$ Asphaltic Concrete Leveling Course, (85-100) 2 - $1\frac{1}{4}''$ Courses
- ③ — Item T-30 Bituminous Prime Coat; Sec M-5.7, RT-2 or RT-3 applied at the rate of 0.40 Gal. per Sq. Yd.
- ④ — Item B-19 8" Aggregate Base Course
- ⑤ — Item L-9 Seeding and Protecting
- ⑥ — Item I-9 Stone Underdrains No. 2



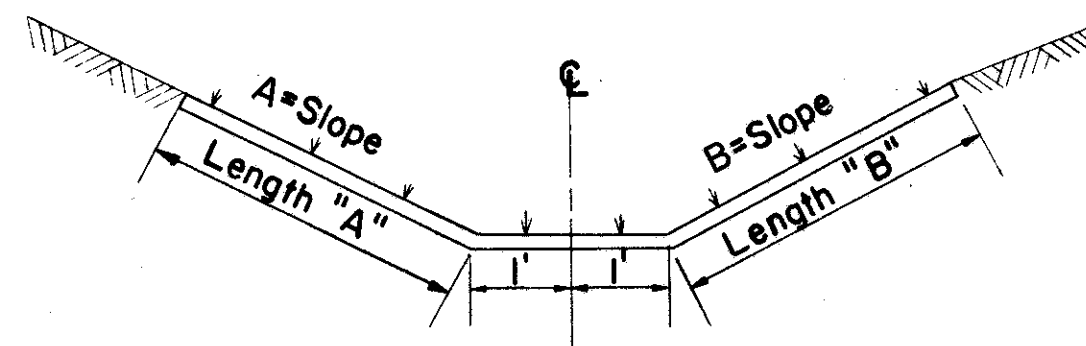
DETAIL OF ITEM I-9

NOTE:

In lieu of Section 605.05 of the specifications the Aggregate Drains shall be constructed prior to the construction of the Aggregate Berms.

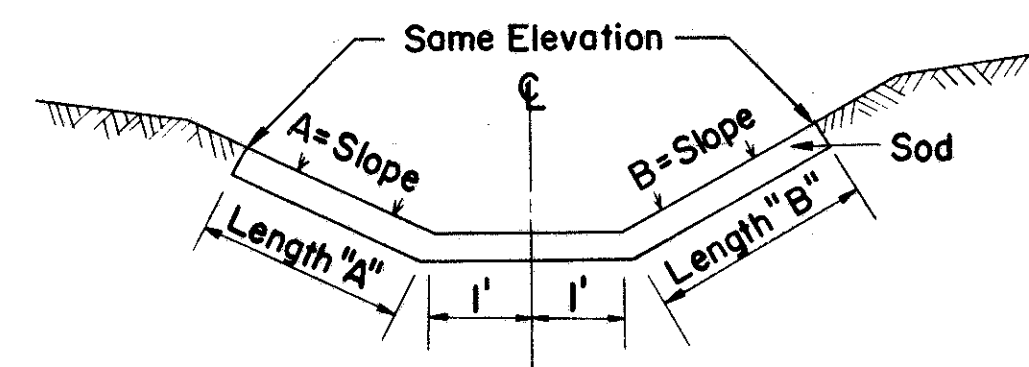
NOTE:

★ Thicknesses shown are designed as described in Sect. T-35.01 and Sect. B-35.01.



JUTE MATTING TABLE				
Slopes	A	B	Bottom Width	Total
4:1	4:1	2'-10"	2'-10"	7'-8"
5:1	5:1	2'-10"	2'-10"	7'-8"
5:1	6:1	2'-7"	3'-1"	7'-8"
6:1	6:1	2'-10"	2'-10"	7'-8"
7:1	7:1	2'-10"	2'-10"	7'-8"
8:1	7:1	3'-0"	2'-8"	7'-8"
8:1	8:1	2'-10"	2'-10"	7'-8"

JUTE MATTING DETAIL



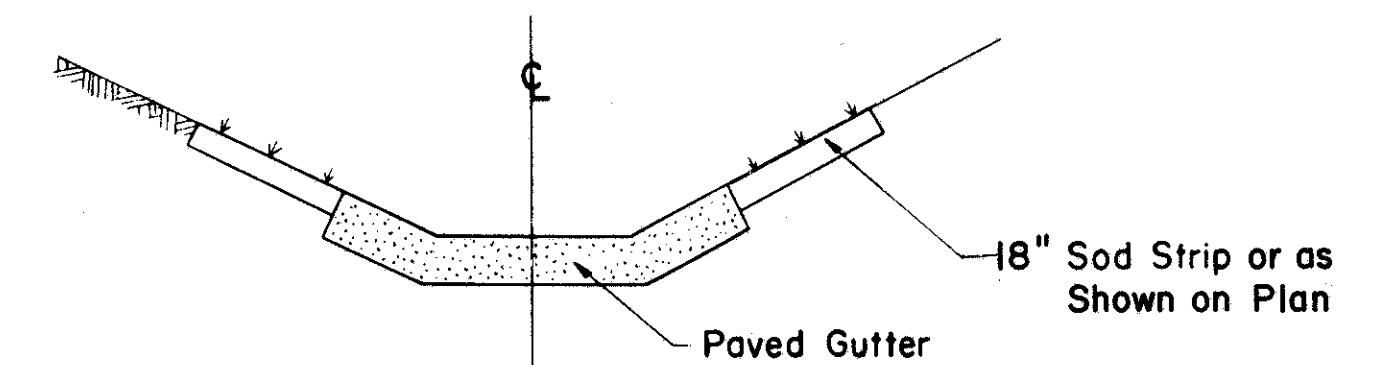
SOD TABLE					
Slopes	A	B	Bottom Width	Total	
2:1	2:1	2'-0"	2'-0"	2'-0"	6'-0"
2:1	3:1	1'-7"	2'-5"	2'-0"	6'-0"
2:1	4:1	1'-4"	2'-8"	2'-0"	6'-0"
3:1	4:1	1'-9"	2'-3"	2'-0"	6'-0"

SOD DETAIL

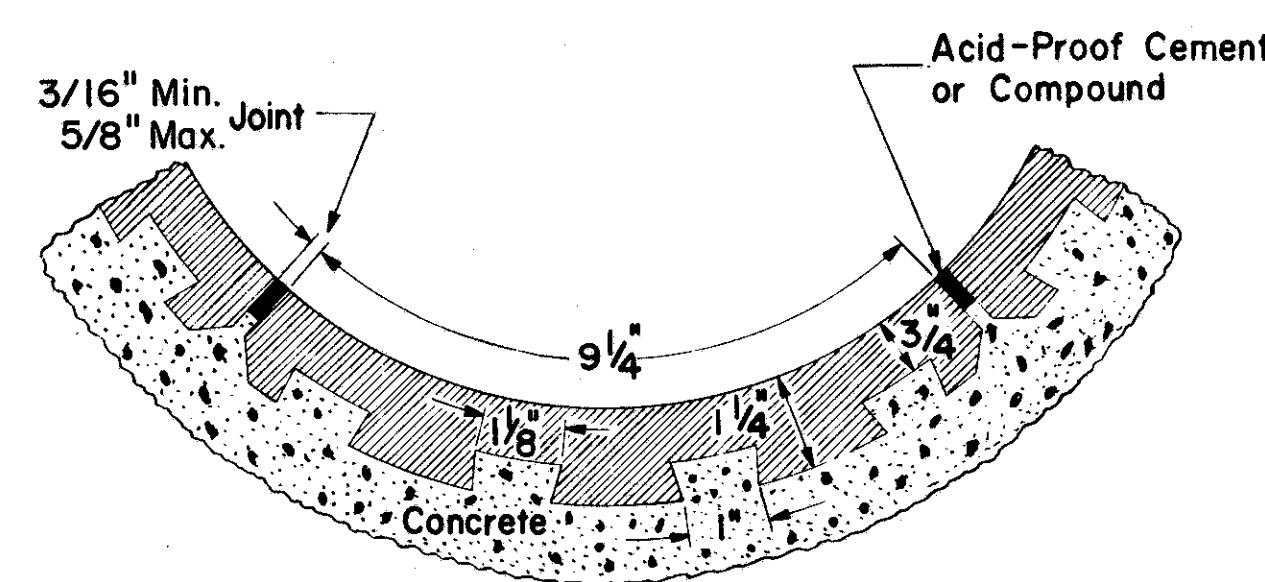
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

TUS-250-17.23

8

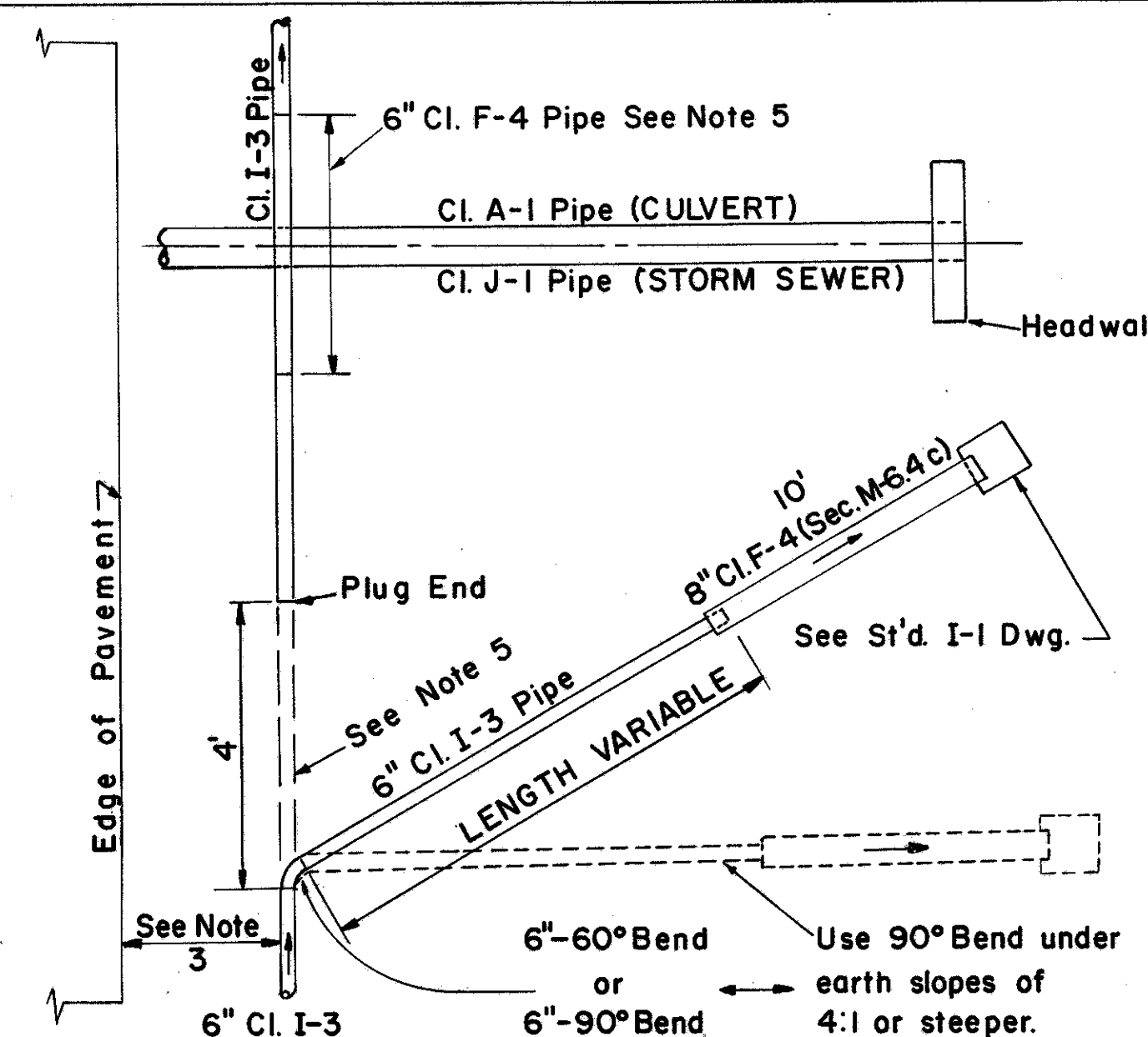


PAVED GUTTER DETAIL WITH 18" SOD STRIP

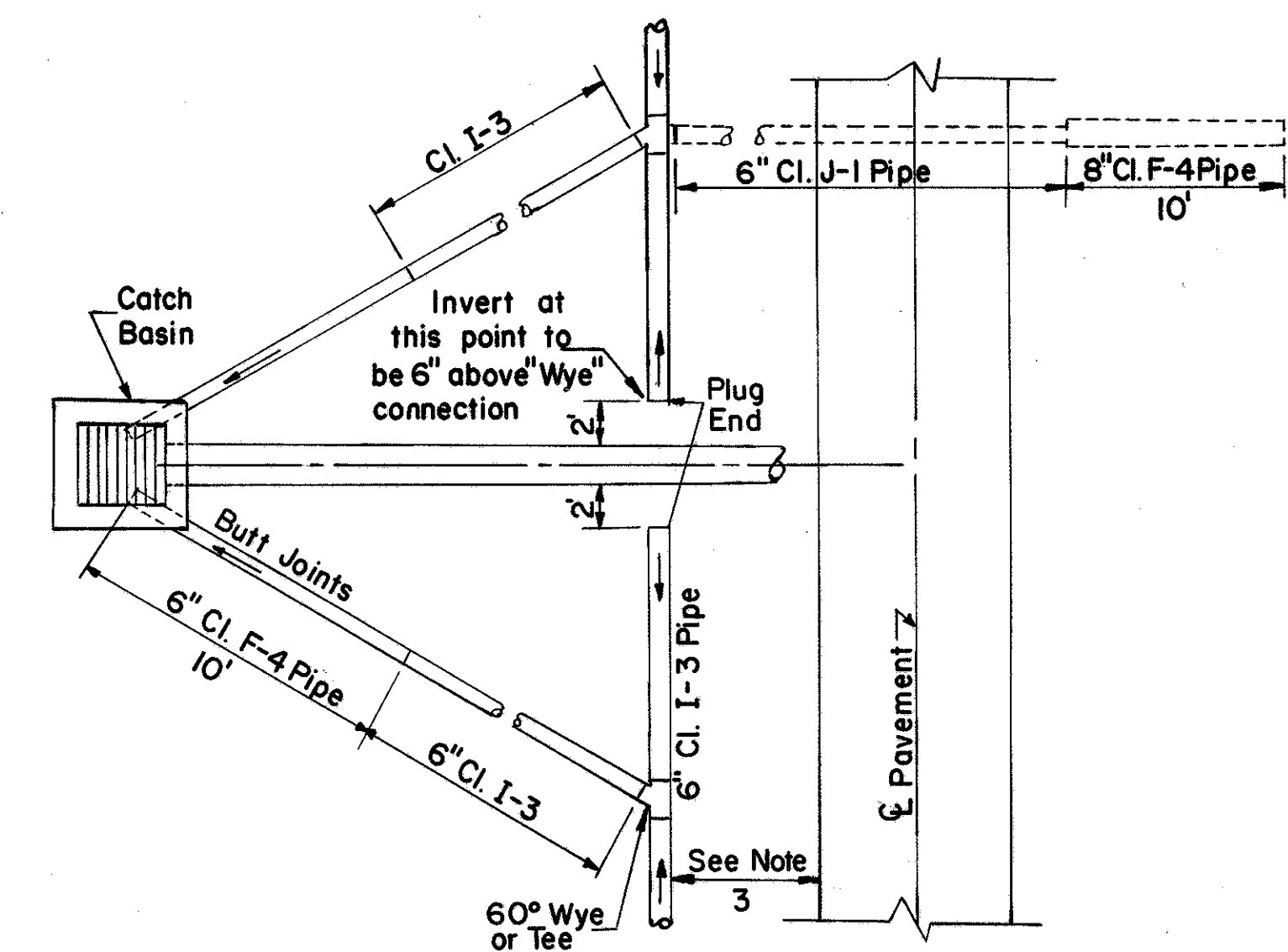


NOTE: Liner plates to be in bottom 1/3 of pipe. See note in proposal.

DETAIL OF PLACEMENT OF VITRIFIED LINER PLATES IN CIRCULAR CULVERT



DETAIL "A"

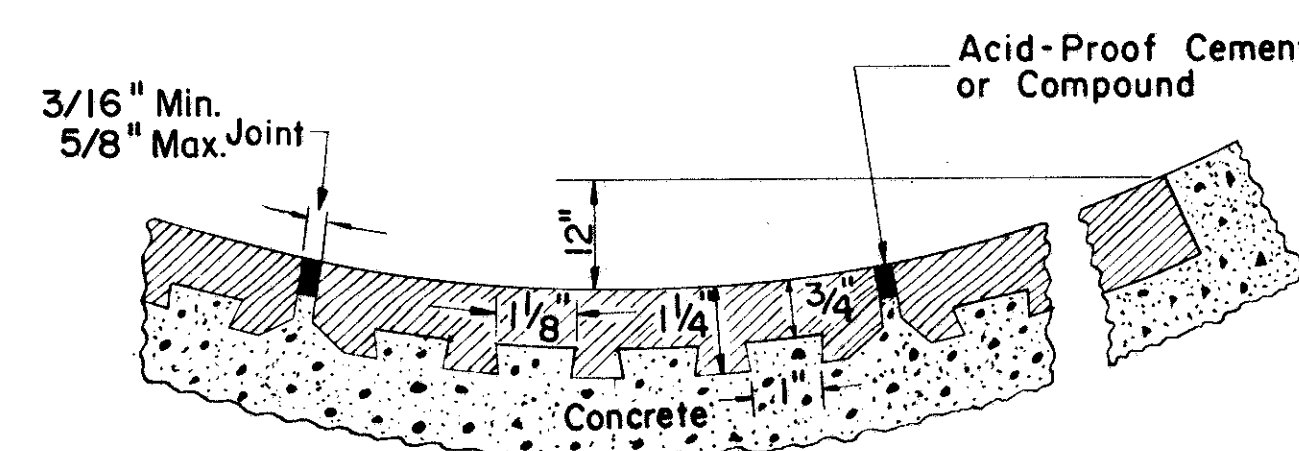


DETAIL "B"

NOTES

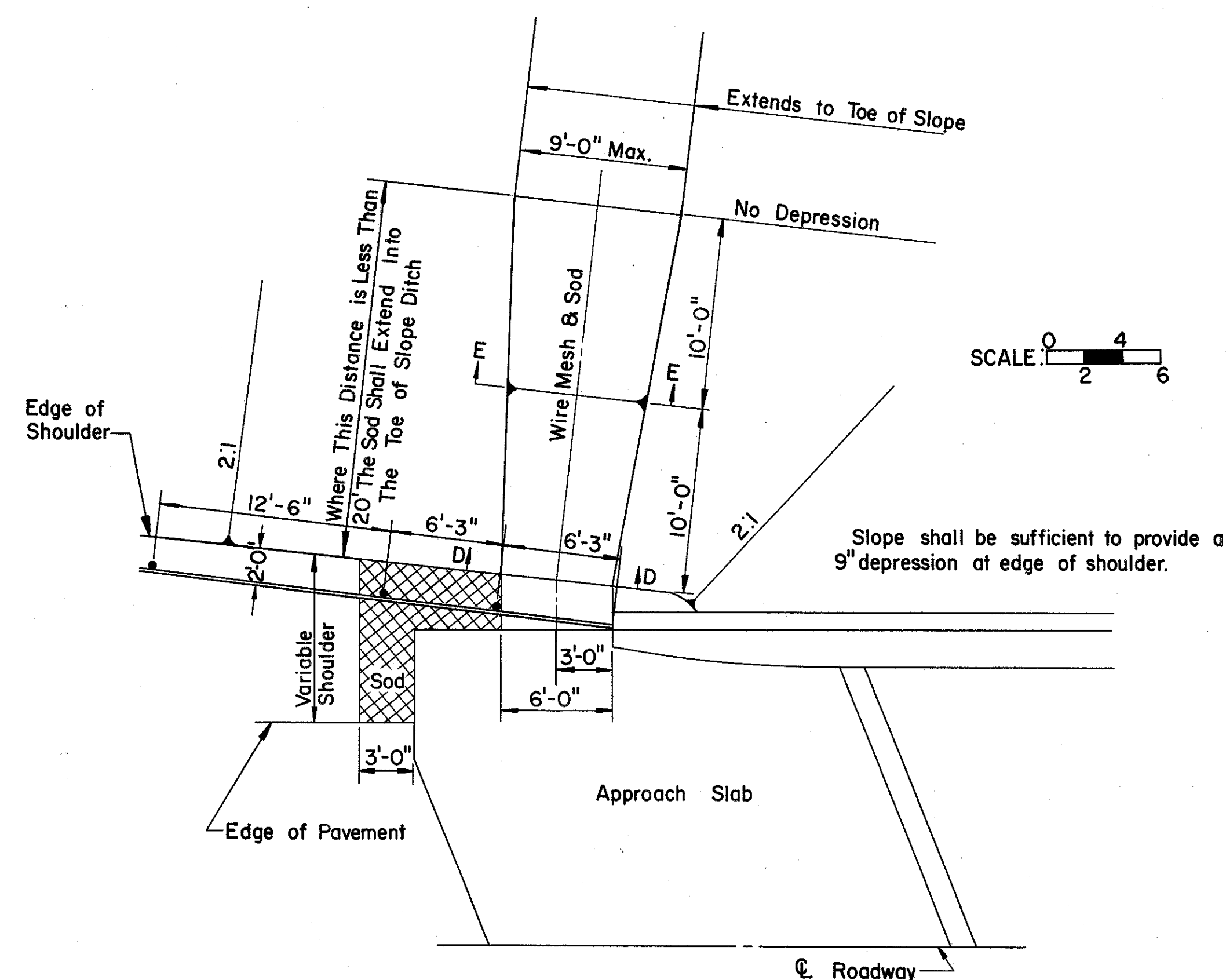
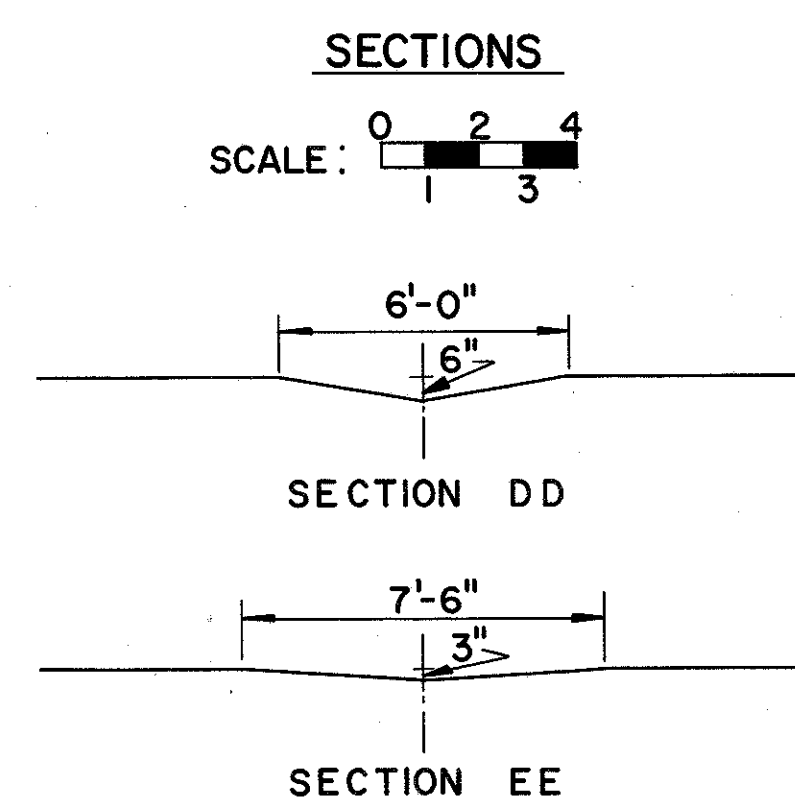
- Details shall be modified as median width and shape will require.
- The distance of underdrain lines from the edge of pavement shall be taken from the approved typical section.
- The advantages of matching the crown of pipes in the catch basin should be considered.
- When it is desirable to continue the underdrain across a transverse line such as in detail "A" a minimum 10' length of 6" class F-4 pipe is provided to span the trench.

TYPICAL DETAILS OF UNDERDRAIN OUTLETS

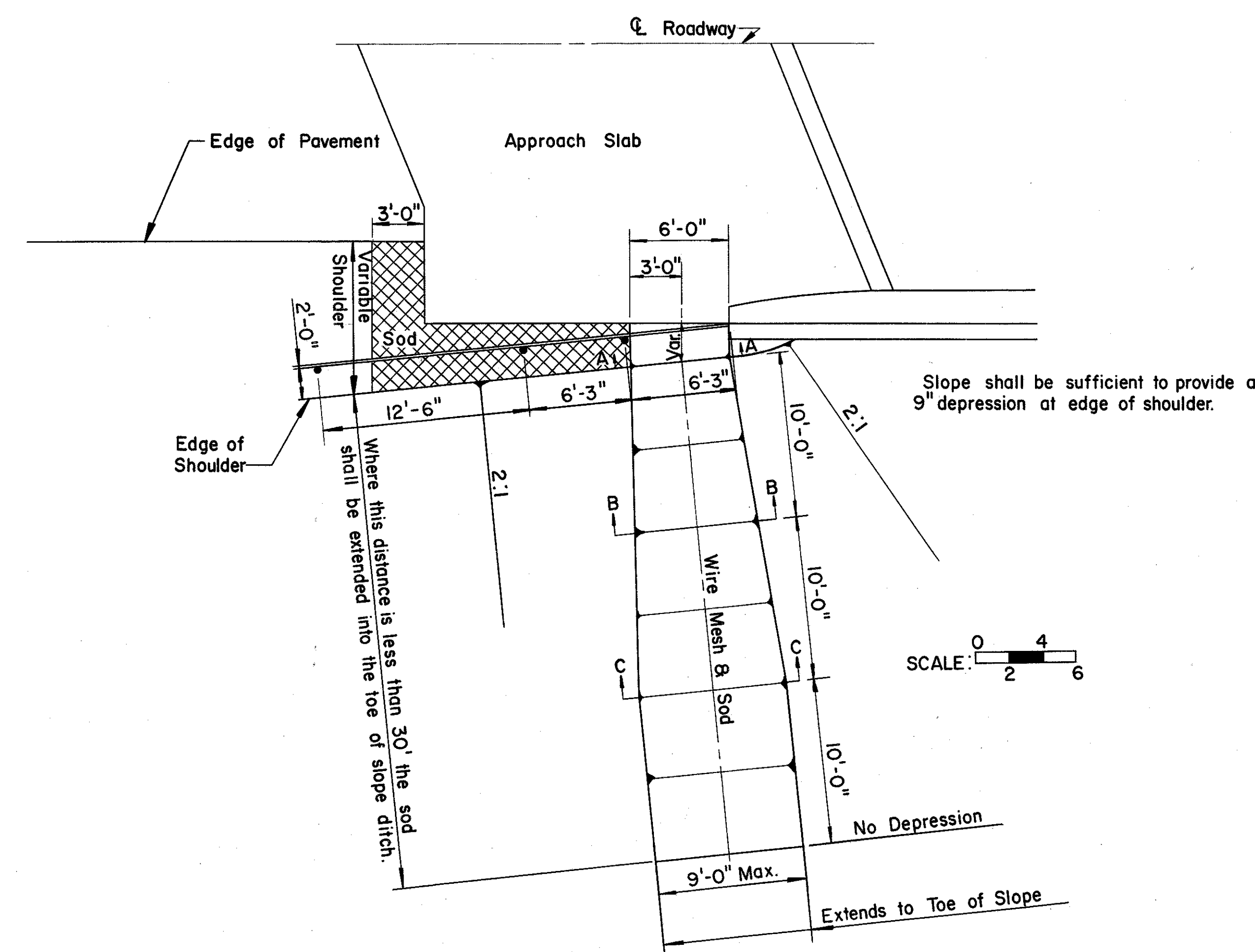


NOTE: Total length of liner plate to give 12" depth protection. See note in proposal.

DETAIL OF PLACEMENT OF VITRIFIED LINER PLATES IN ELLIPTICAL CULVERT

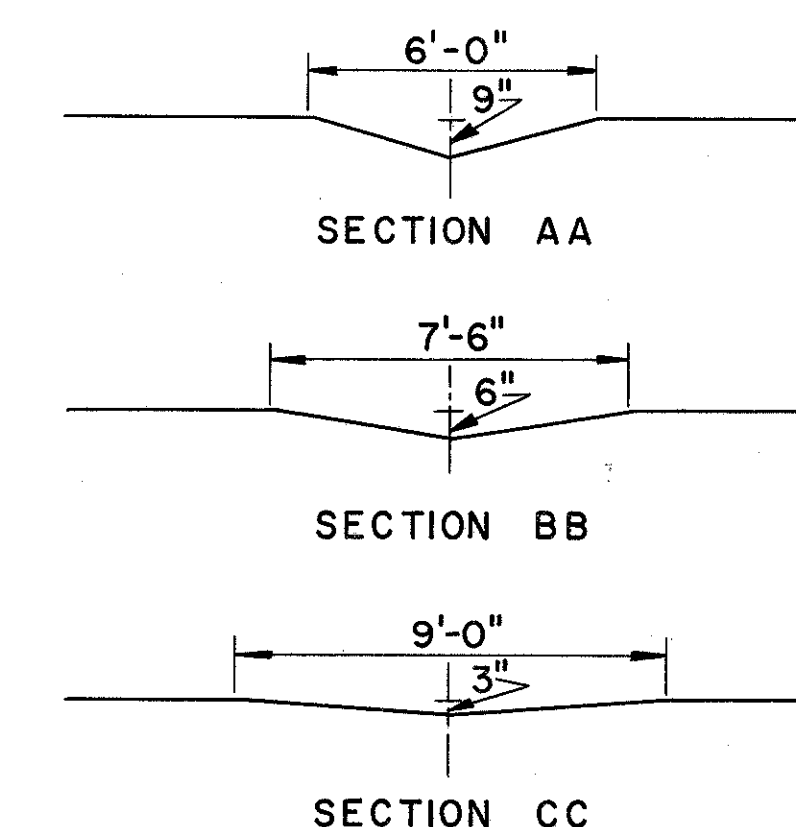


LOCATION		Spec. Berm & Slope Prot Sq. Yd.	Total Sq. Yd.	Carried to Sheet
TUS-250-1883	FRONT	28		
	REAR	40		
W. BOUND	FRONT	34		
	REAR	35	137	171
TUS-250-2027	FRONT	63		
	REAR	82		
W. BOUND	FRONT	66		
	REAR	74	285	189



SECTIONS

SCALE: 0 2 4
1 3



NOTE
DO NOT USE THIS SHEET
EXCEPT FOR QUANTITIES.
SEE STANDARD DRAWING
MC-7.

SPECIAL BERM AND SLOPE PROTECTION

Prior to placement of sod in the berm and slope, galvanized poultry fence shall be placed on the finished grade in strands which shall be at right angles to the direction of flow, each strand shall be staked securely on top and bottom with stakes placed at four foot intervals and alternated in rows four feet apart.

Stakes shall be 1"x1"x8" wood stakes and shall be placed perpendicular to the ground and flush with the finished grade.

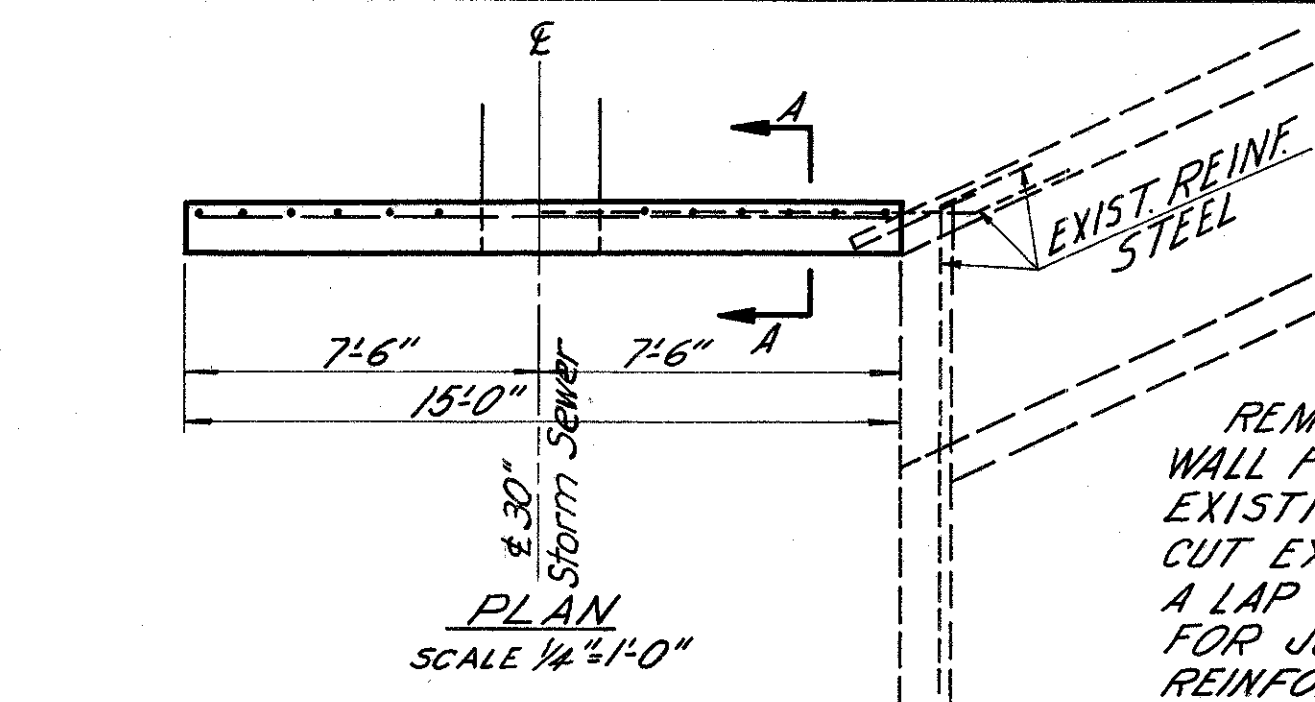
The fence shall be straight line poultry fence or equivalent with strand width of four feet having a two inch mesh and all wires No. 20 gauge.

The strands of fencing shall be fastened together at twelve inch intervals by means of hog rings.

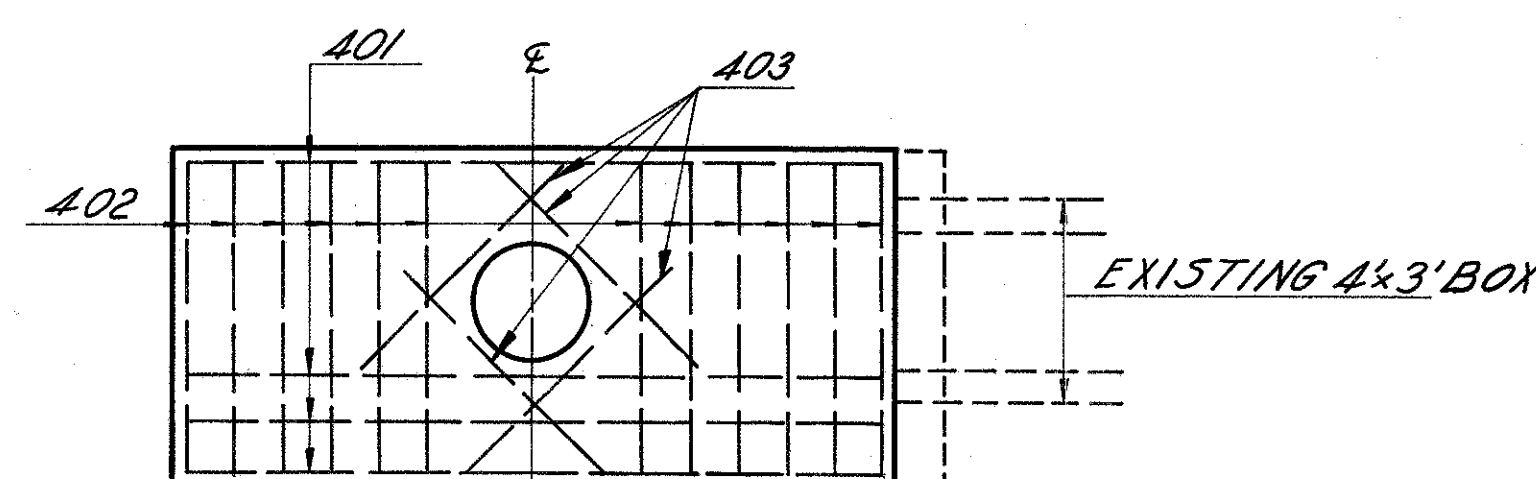
The fence shall be secured to the wood stakes by metal staples.

Sod shall be laid in accordance with the construction and materials specifications section L-10.07.

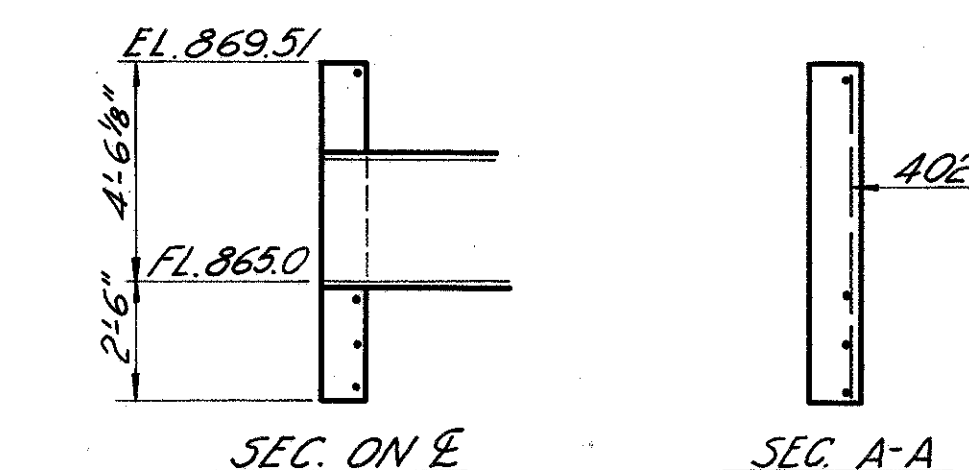
Payment for all the above shall be included in the unit price bid for item L-10 Sodding for Special Berm and Slope Protection.



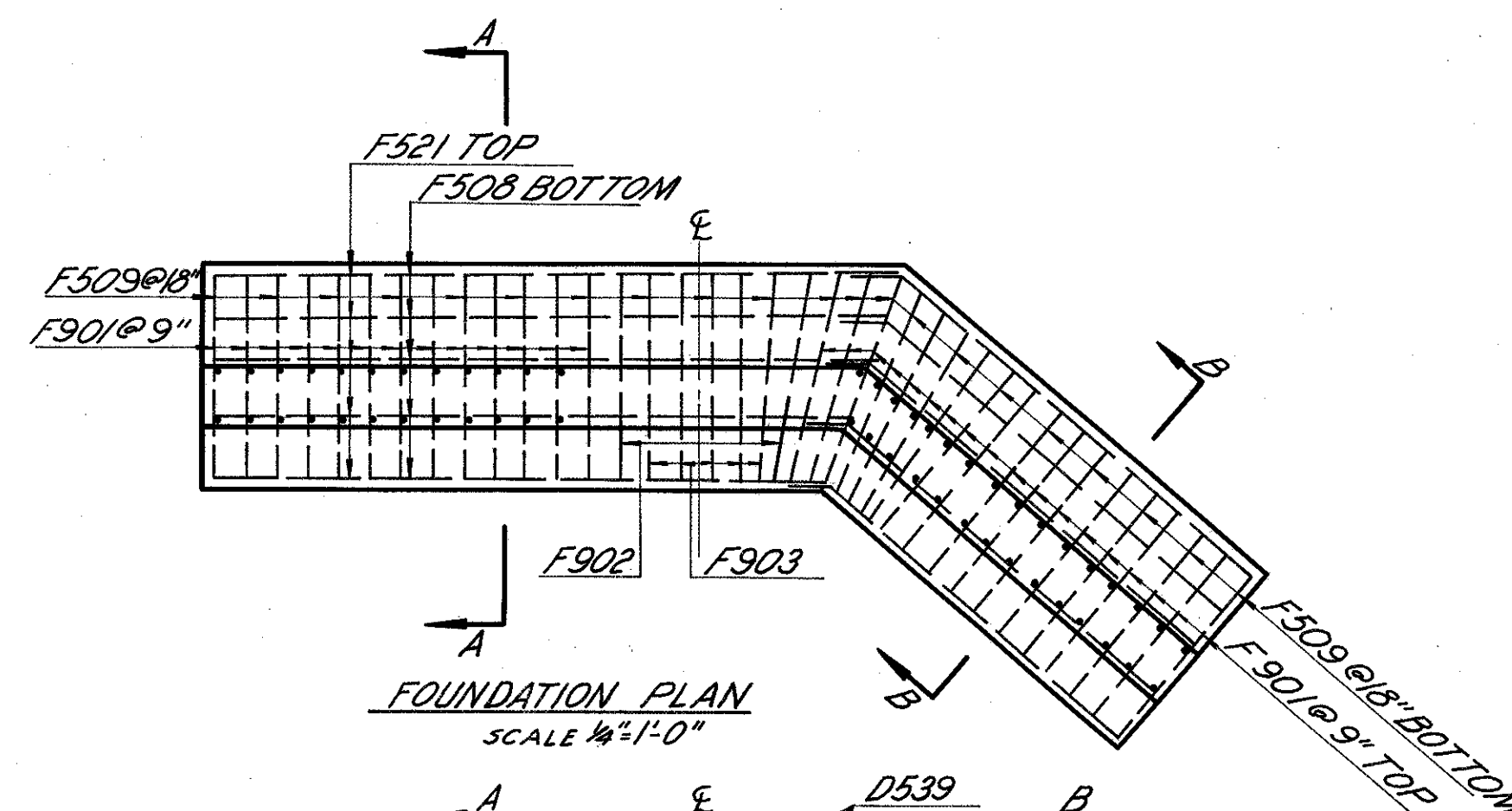
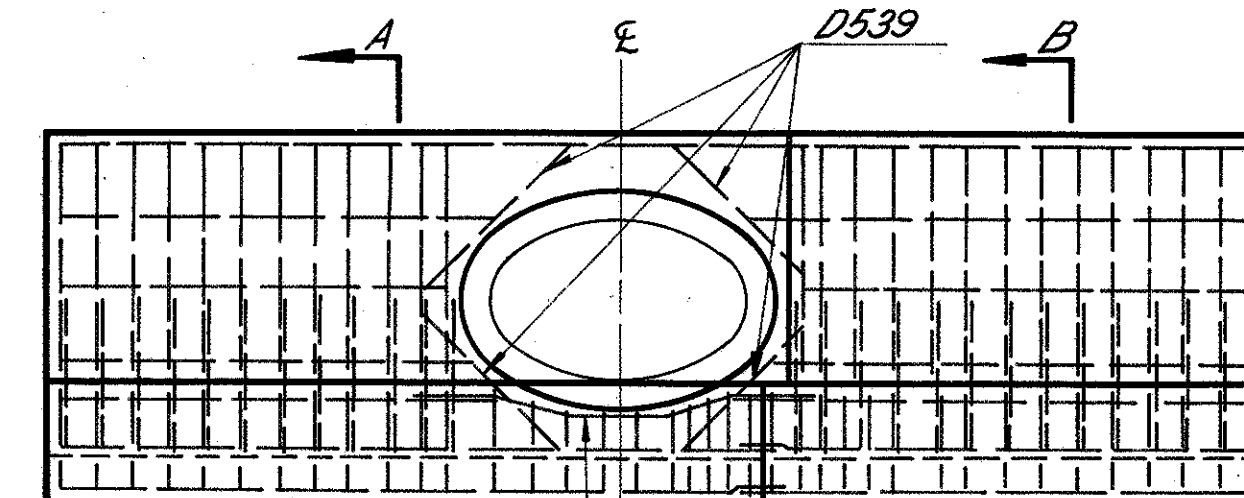
REMOVE OLD MASONRY WING WALL FLUSH WITH FACE OF EXISTING 4'x3' BOX HEADWALL. CUT EXISTING STEEL SO THAT A LAP OF 24" WILL BE PROVIDED FOR JOINING NEW HORIZONTAL REINFORCING STEEL.



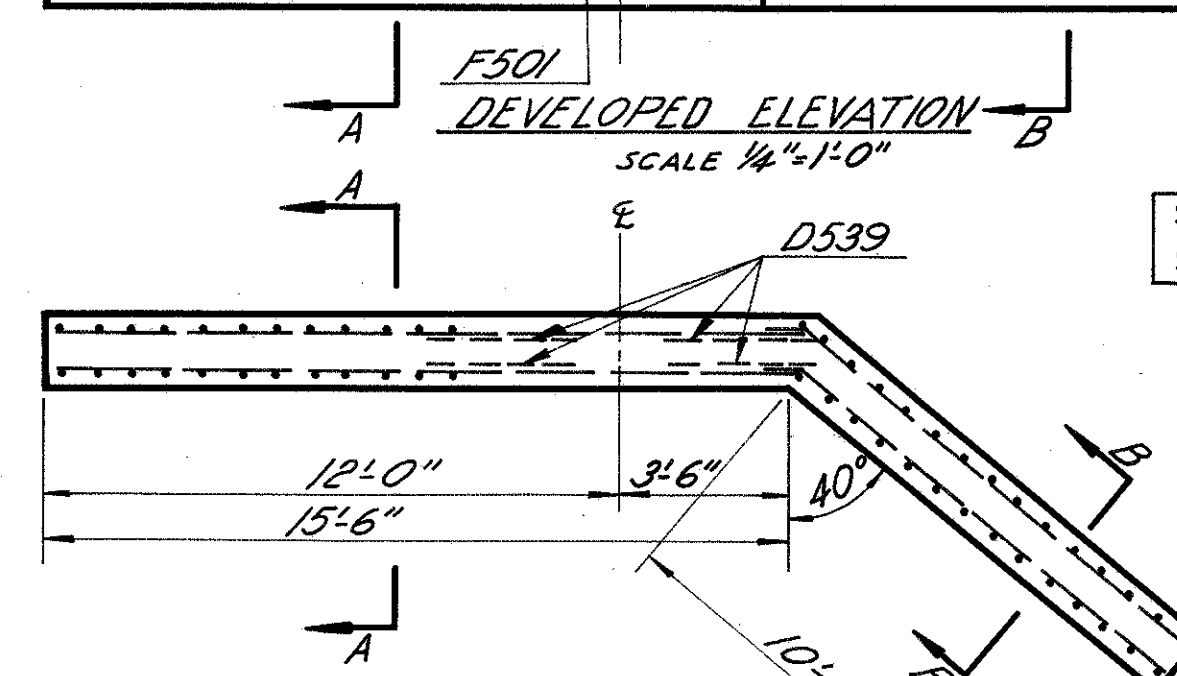
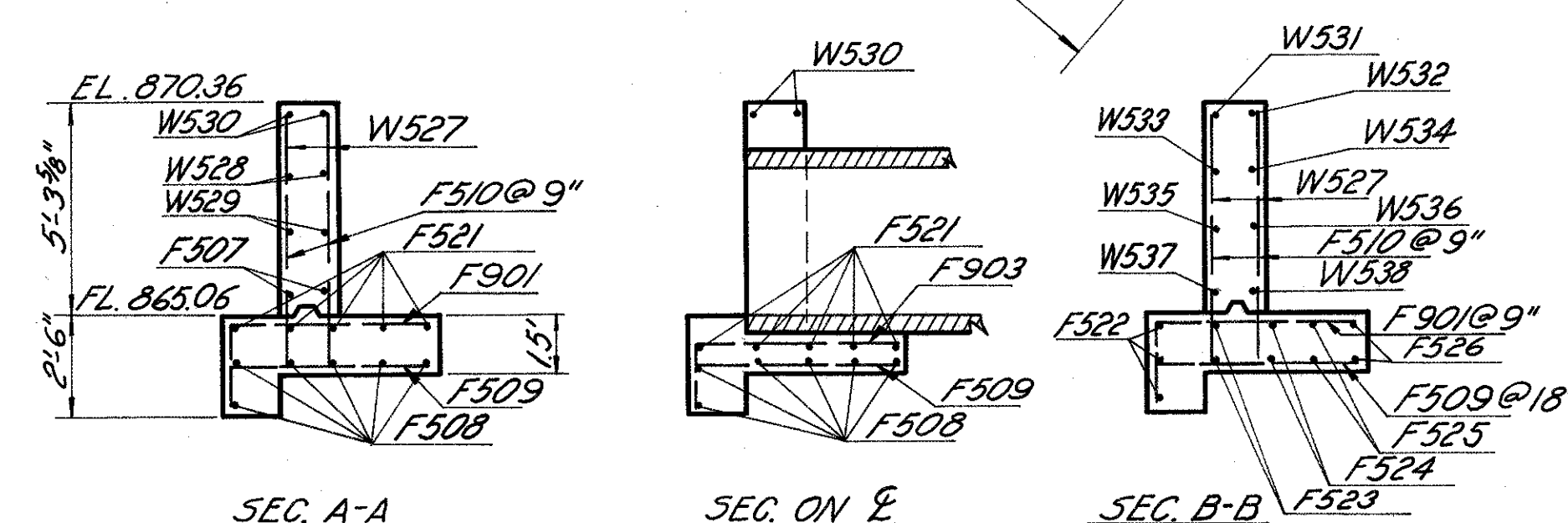
See Culvert 28-SS
Sheet No. 203



INLET HEADWALL FOR 30" STORM SEWER
STA. 10+38

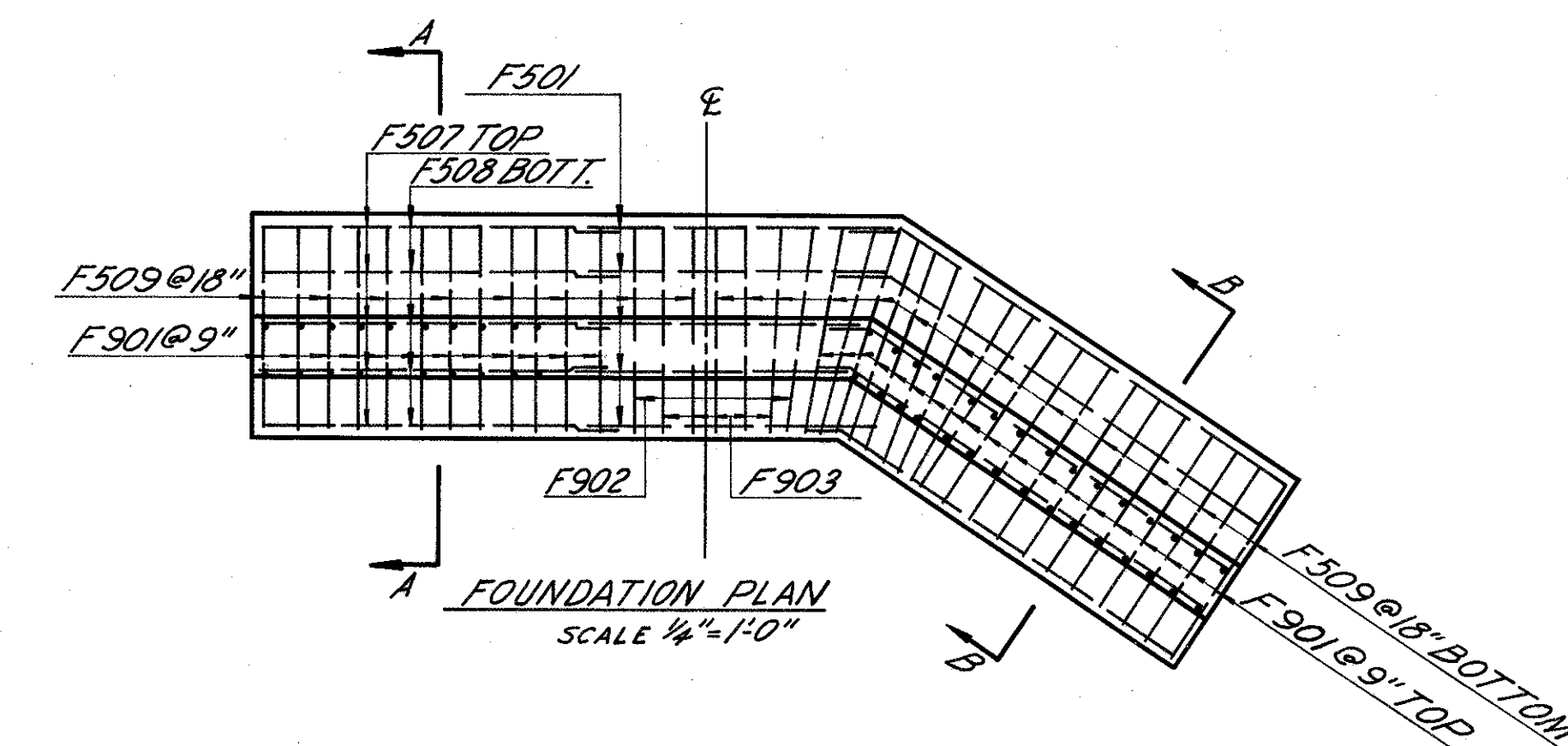
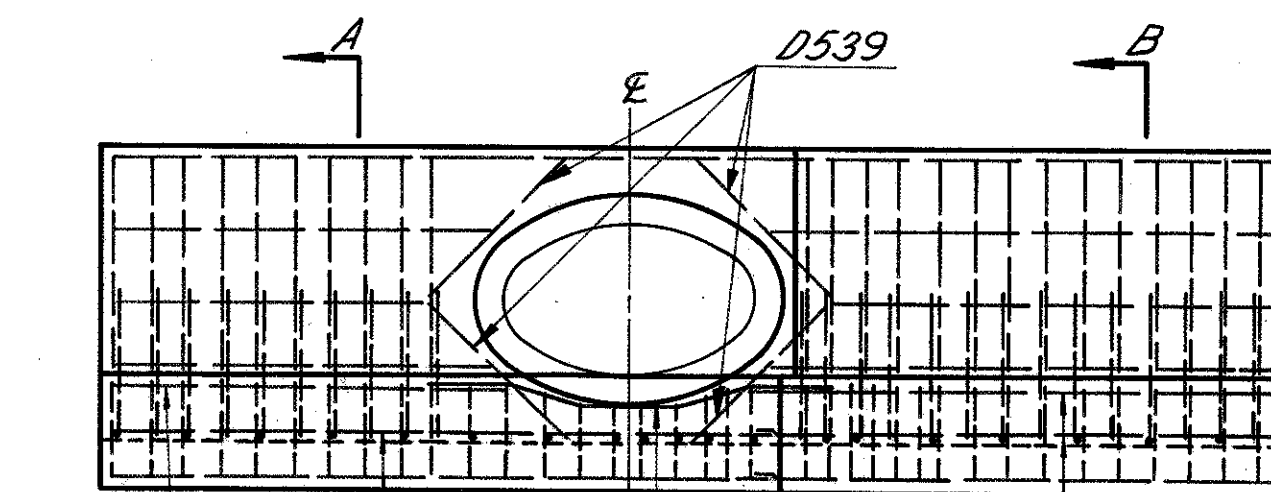


See Culvert 15-S
Sheet No. 203

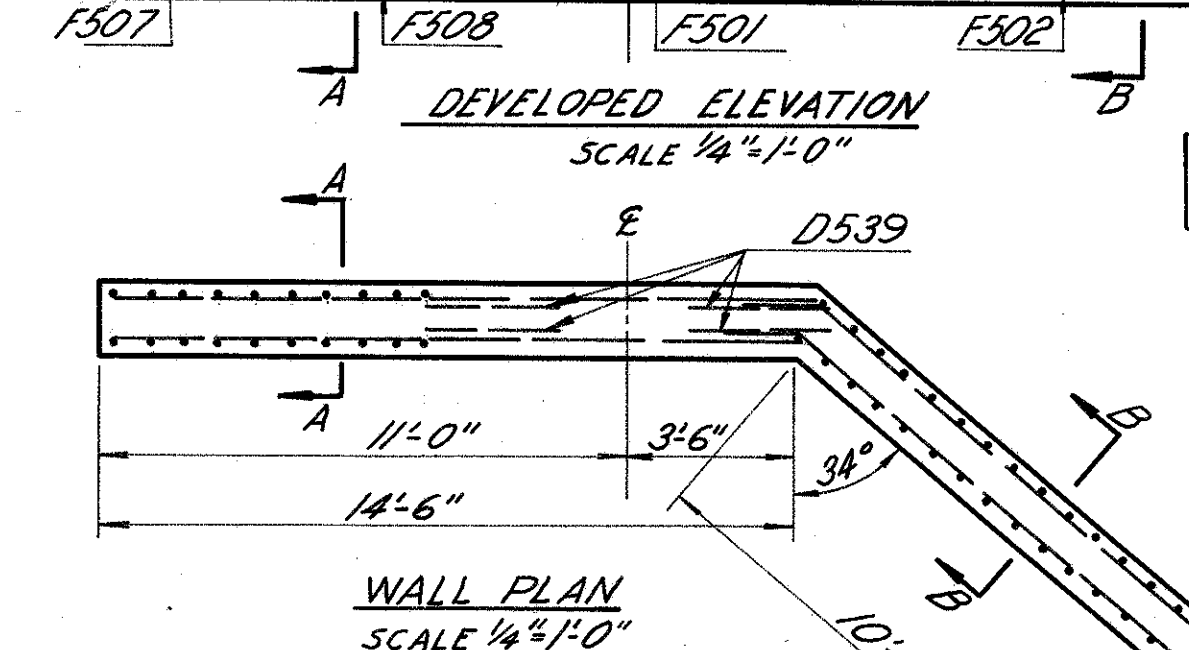
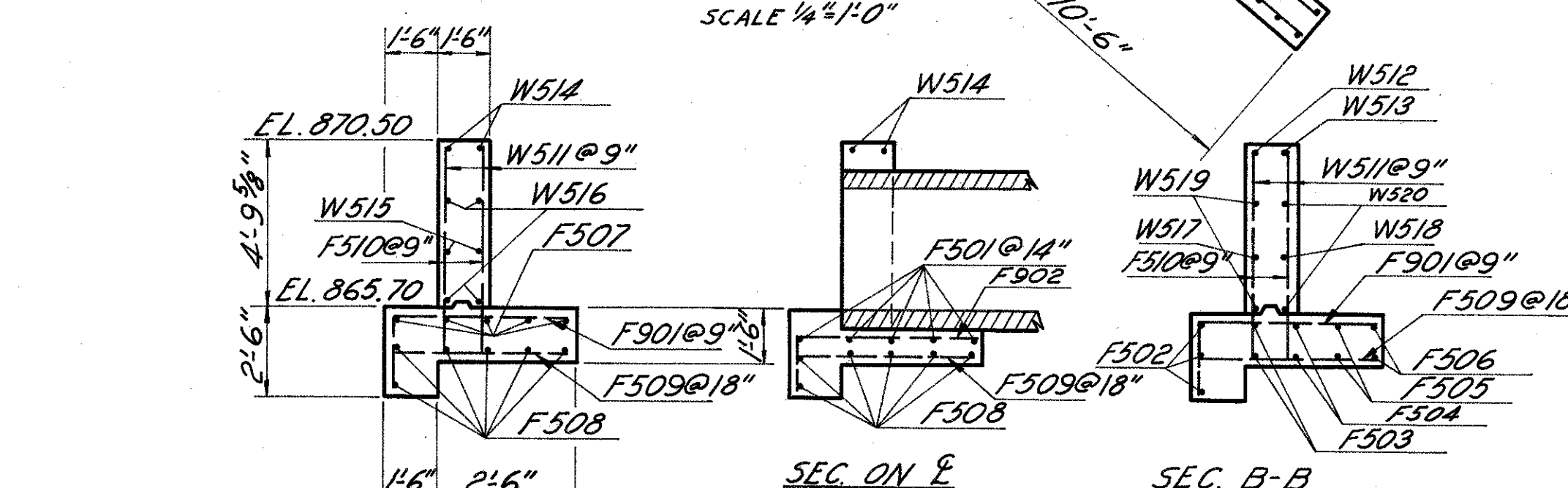


OUTLET HEADWALL FOR 68"x43" PIPE CULVERT
STA. 14+43

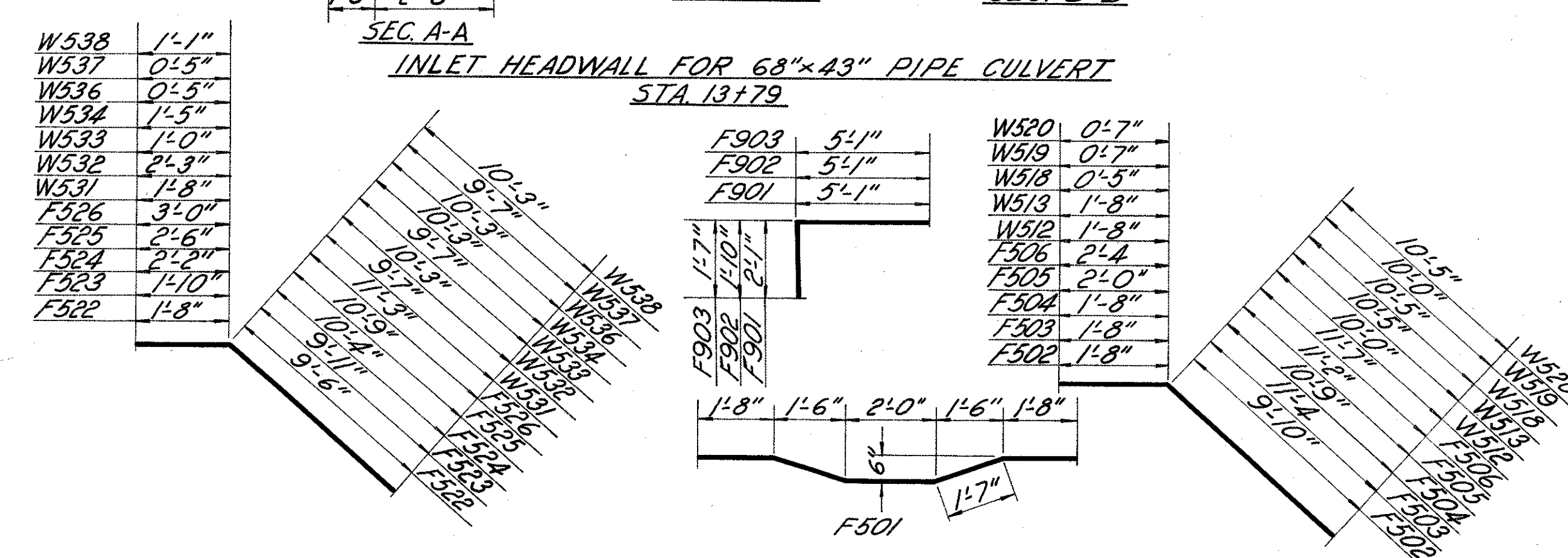
ESTIMATED QUANTITIES			
	INLET 68"x43" PIPE	OUTLET 68"x43" PIPE	INLET 30" STORM SEW
CONC. REMOVAL	31.4 C.Y.		2.4 C.Y.
CONC. CLASS "C"	14.7 C.Y.	15.7 C.Y.	3.6 C.Y.
REINF. STEEL	1911 LB.	1960 LB.	109 LB.



See Culvert 15-S
Sheet No. 203



INLET HEADWALL FOR 68"x43" PIPE CULVERT
STA. 13+79

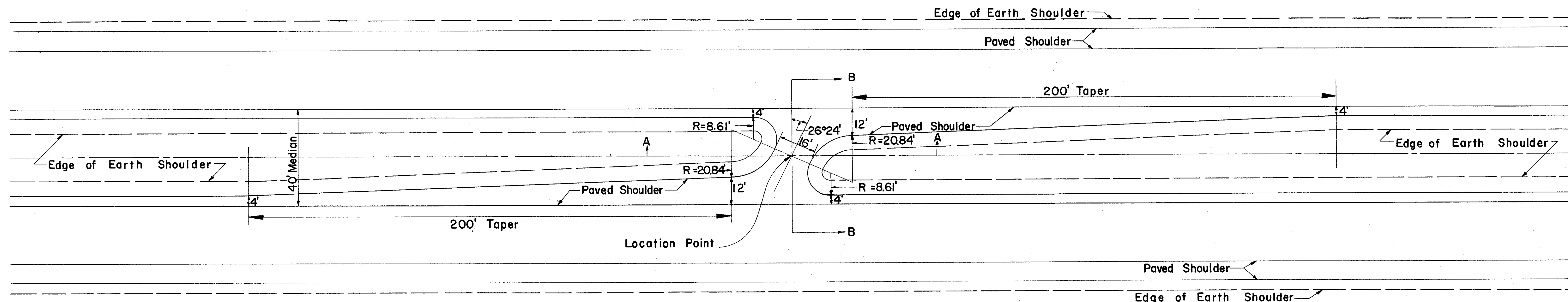


U-TURN MEDIAN OPENINGS

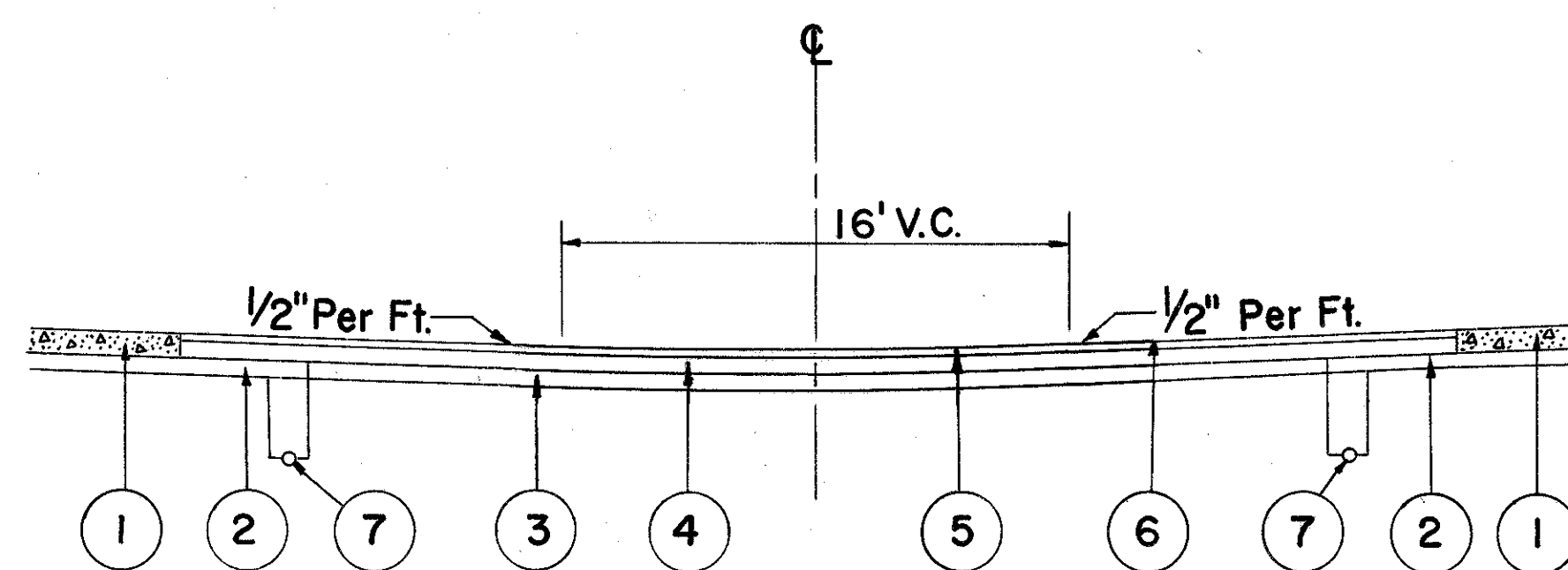
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TUS-250-17.23

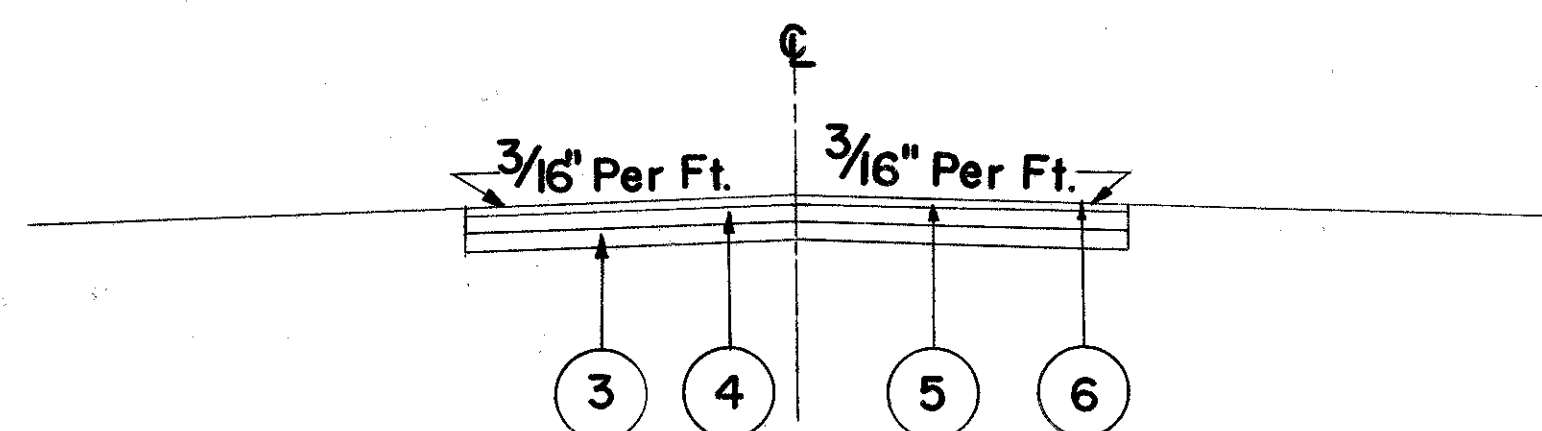
12



PLAN
Scale: 1" = 20'



SECTION B-B
Scale: $\frac{3}{16}" = 1' - 0"$



SECTION A-A
Scale: $\frac{3}{16}" = 1' - 0"$

ESTIMATED QUANTITIES *	
I-22-6" Subbase, Regular Grading	46 C.Y.
B-19-6" Aggregate Base Course	46 C.Y.
B-21-3" Waterproofed Aggregate Base Course	23 C.Y.
T-31 Bituminous Material	69 Gals.
T-31 Aggregate	3 C.Y.
E-1 Compacted Subgrade	276 S.Y.

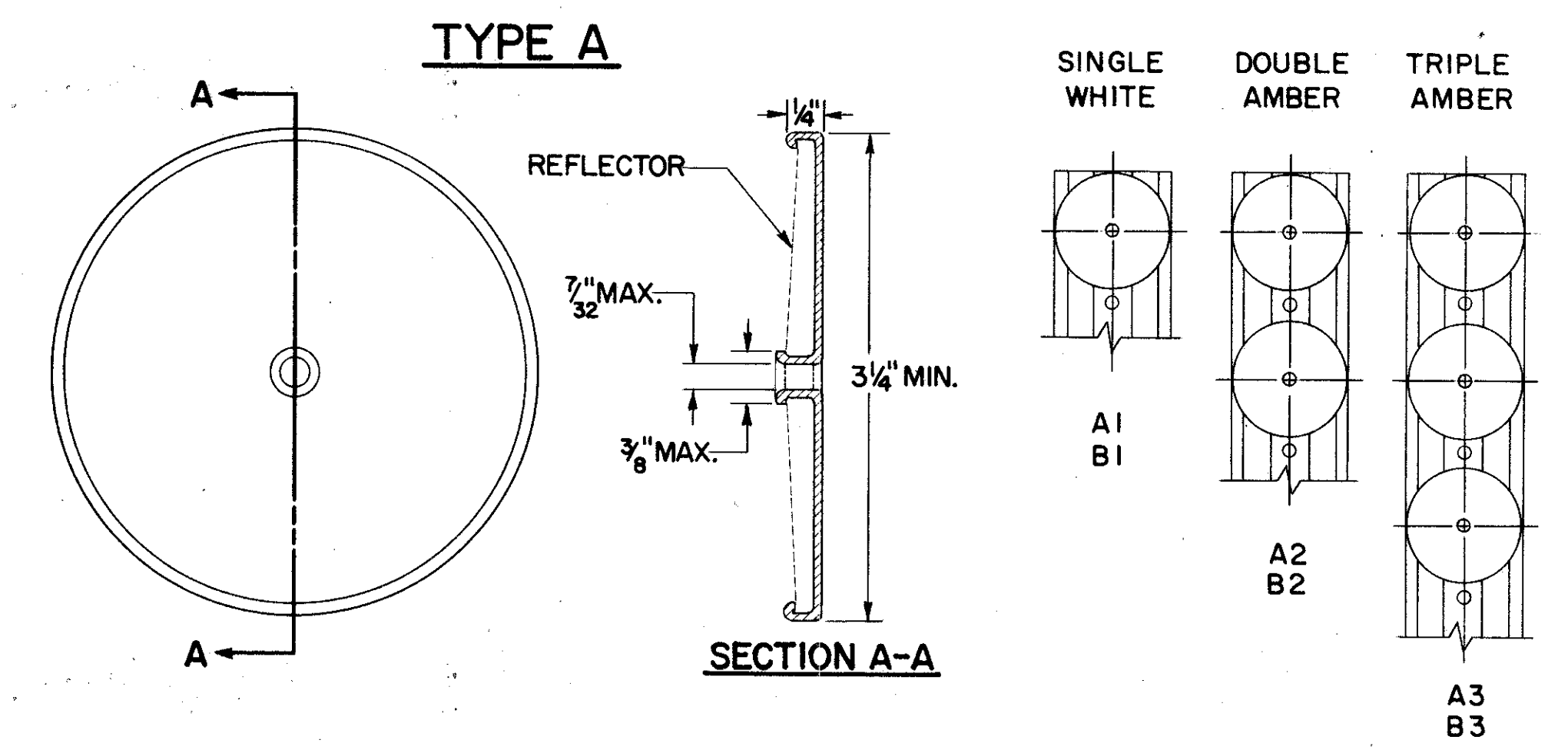
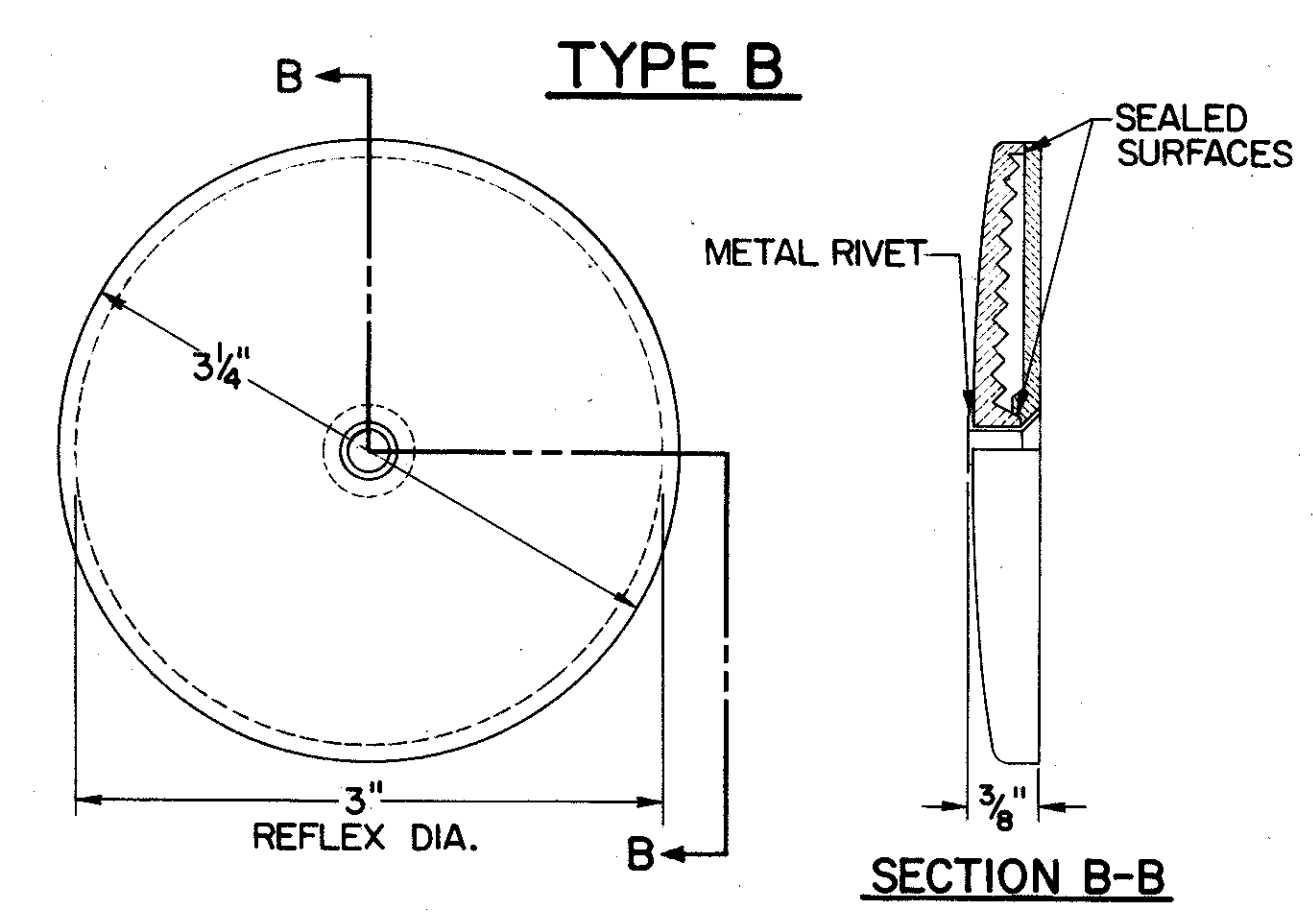
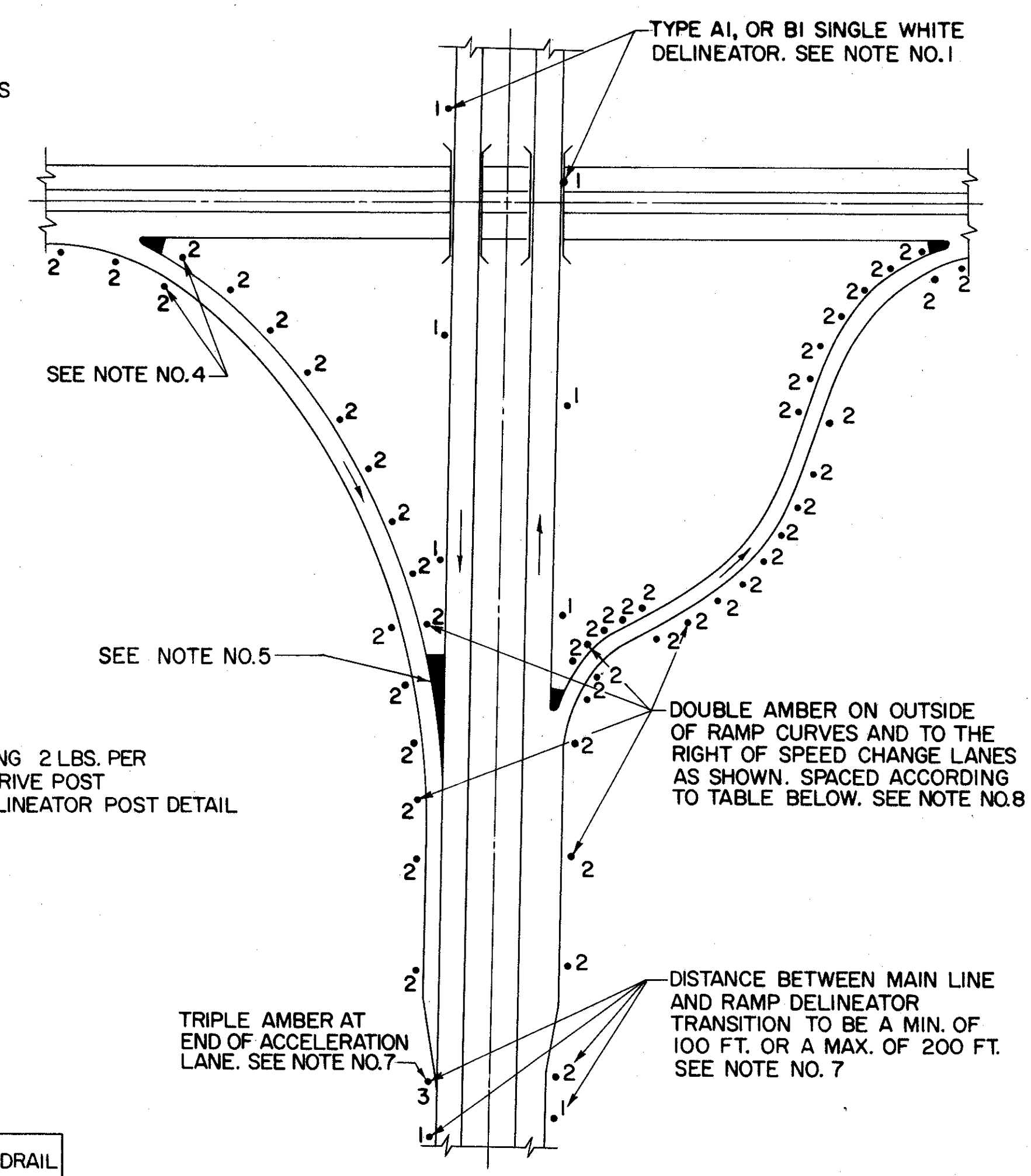
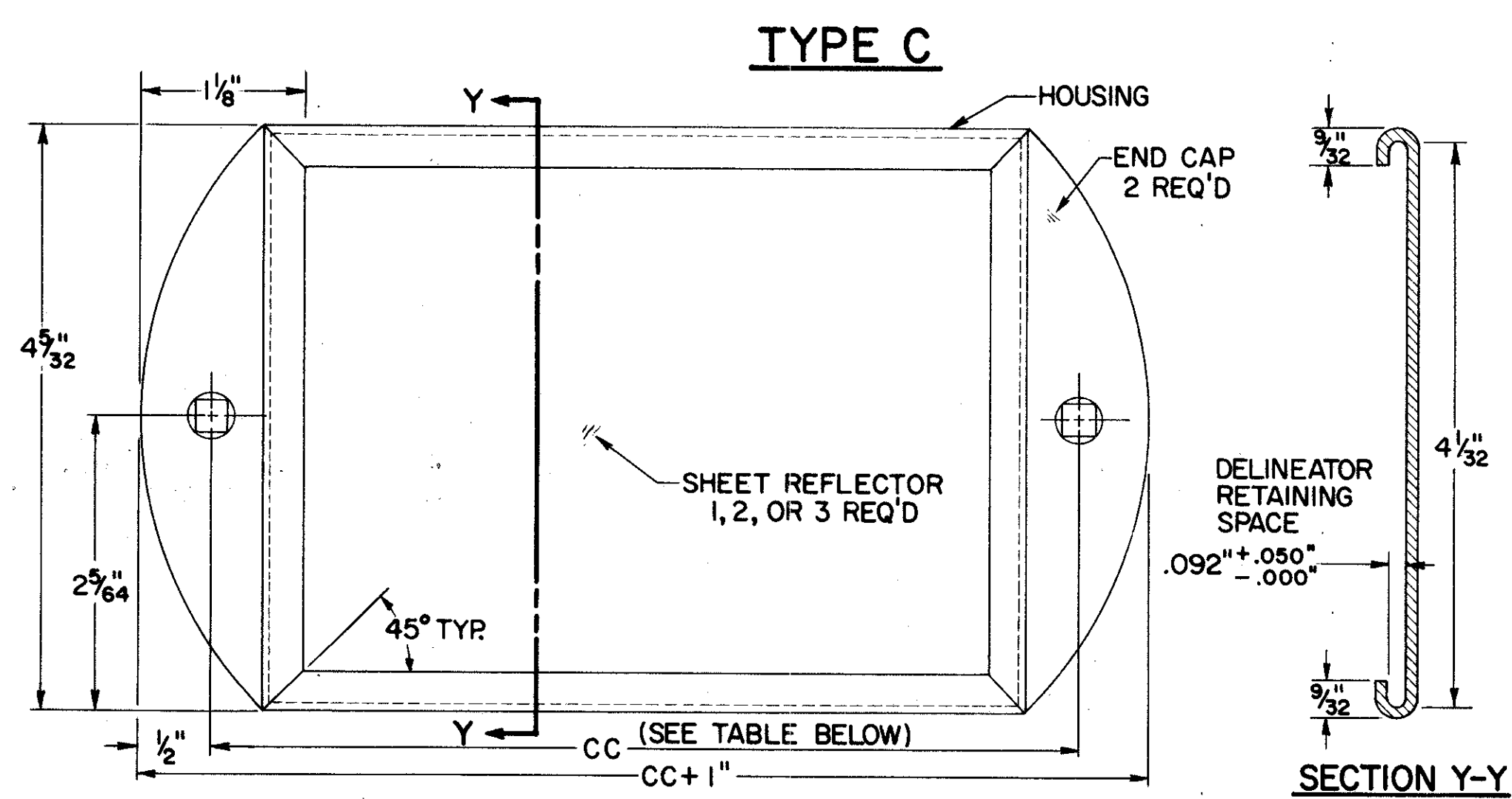
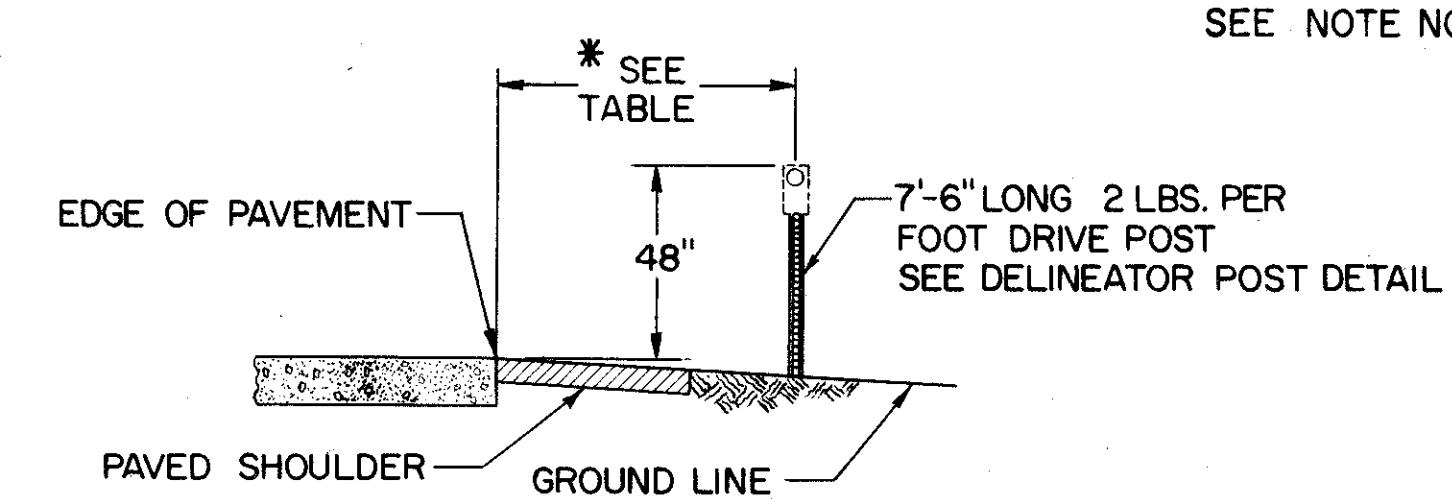
*NOTE: These Quantities for One U-Turn Median

- LEGEND-
- ① Item T-71-9" Reinforced Portland Cement Concrete Pavement
 - ② Item I-22-6" Subbase, Grading "A" or "B", as per plan (See General Notes)
 - ③ Item I-22-6" Subbase, Regular Grading
 - ④ Item B-19-6" Aggregate Base Course
 - ⑤ Item B-21-3" Waterproofed Aggregate Base Course, as per plan
 - (See note in proposal.)
 - ⑥ Item T-31 - Bituminous Surface Treatment using .008 Cu. Yds. No. 6 Aggregate per Sq. Yd. and 0.25 gallon Bituminous Material per Sq. Yd. (See note in proposal)
 - ⑦ Item I-1 - 6" Pipe, Class I-3

TUS-250-17.23

NOTES

- TYPE A1 OR B1 DELINEATORS ON THE RIGHT OF THE THROUGH ROADWAY ARE TO BE SPACED AT 200 FT. INTERVALS THROUGHOUT, REGARDLESS OF CURVES, BEGINNING AT STA. +00, +25, +50, OR +75.
- DELINEATORS SHALL BE FURNISHED AND ERECTED IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION NO. 620, 4-5-65.
- PAYMENT FOR SUPPORTS (DRIVEPOST OR BRACKET) SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR "ITEM 620 DELINEATORS".
- WHEN CROSSING FROM LEFT TO RIGHT OR FROM RIGHT TO LEFT ON THE RAMPS THE DELINEATORS AT THE POINT OF CROSSOVER ARE TO BE AT THE SAME STATION ON EACH SIDE.
- NO DELINEATORS ARE TO BE PLACED IN PAVED BERM.
- WHEN RADII OF CURVE ON RAMPS REQUIRE 100' SPACING THE DELINEATORS SHALL BE PLACED ON THE RIGHT IN RELATION TO THE FLOW OF TRAFFIC.
- RAMP DELINEATOR AT END OF ACCELERATION & BEGINNING OF DECELERATION LANES TO BE A MAXIMUM OF 5' FROM POINT OF TANGENCY AT MAIN LINE.
- ALL RAMP DELINEATORS SHALL BE PLACED TO THE NEAREST 5' INCREMENTS, SUCH AS +05, +10, +15, +20 AND SO ON.



LATERAL PLACEMENT OF DELINEATORS

* TABLE

TYPE DELINEATOR	NO GUARDRAIL	GUARDRAIL
SINGLE WHITE	12'-6"	6" OUTSIDE
DOUBLE AMBER RIGHT SIDE	** 8'-6"	6" OUTSIDE
DOUBLE AMBER LEFT SIDE	4'-6"	6" OUTSIDE
TRIPLE AMBER	12'-6"	6" OUTSIDE

** THIS DIMENSION SHALL VARY ON SPEED CHANGE LANES TO MAINTAIN MINIMUM DISTANCE OF 2'-6" FROM EDGE OF PAVED SHOULDER.

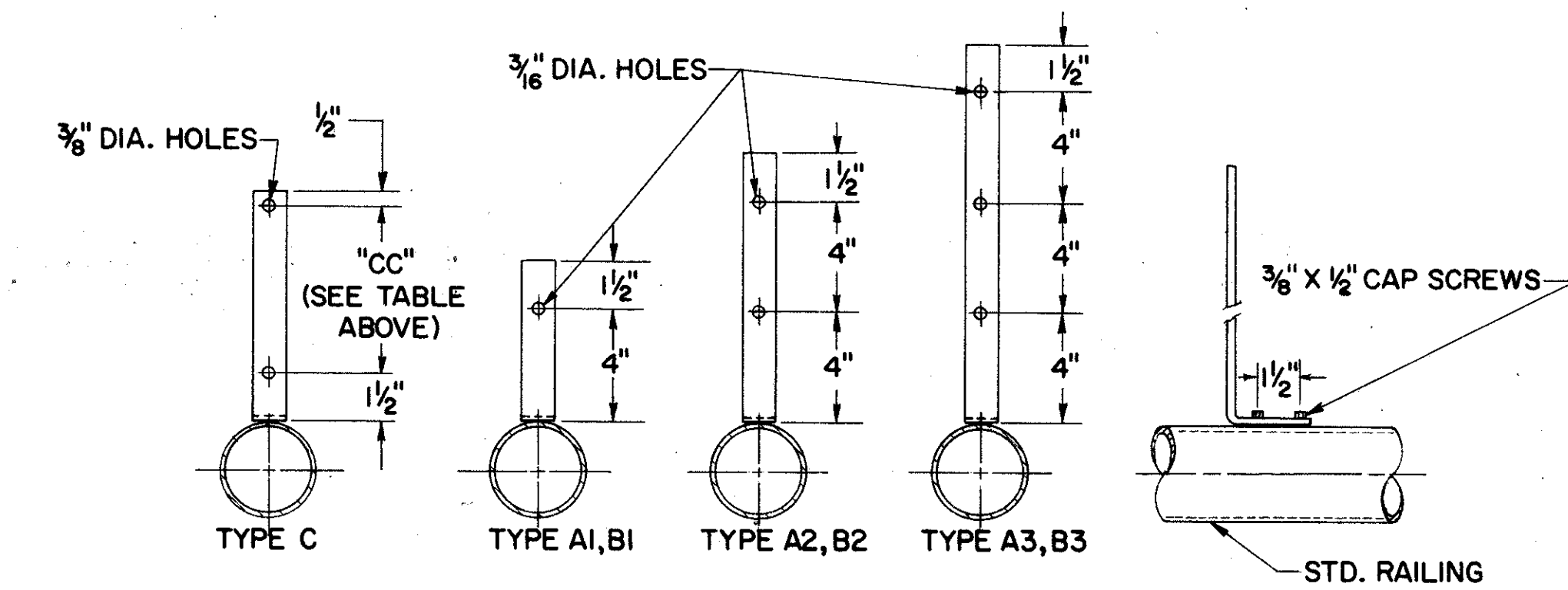
TYPICAL DELINEATOR PLACEMENT

DELINEATOR SPACING ON RAMP HORIZONTAL CURVES

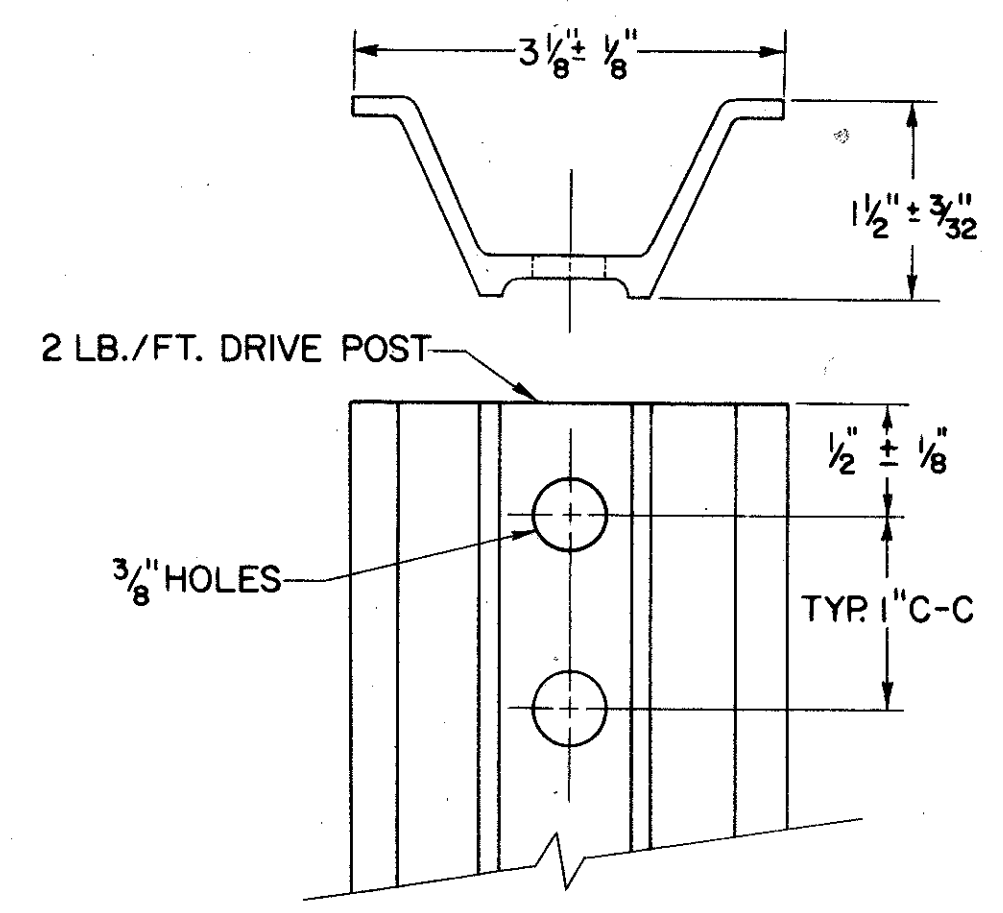
RADII, FT.		SPACING ON CURVE	* TRANSITION SPACING	
FROM	TO			
TANGENT	1,801	100'	100'	100'
1,800	1,401	80'	100'	100'
1,400	1,001	70'	100'	100'
1,000	751	60'	100'	100'
750	551	50'	80'	100'
550	326	40'	70'	100'
325		30'	60'	100'

* SUCH AS 40' TO 70' TO 100' OR 100' TO 80' TO 50' OR ANY OTHER COMBINATION SHOWN ABOVE.

ALL BRACKETS 1/4" x 1/4" STAINLESS STEEL



BRIDGE RAIL BRACKET



DELINEATOR POST

FOR SUMMARY OF DELINEATORS SEE SHEET NO. 21

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

DELINEATOR
DETAILS

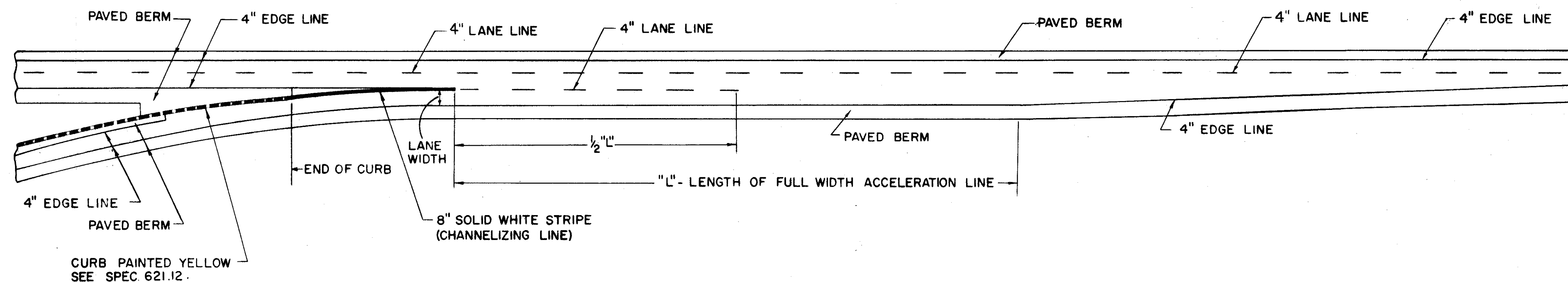
620

DATE
9-25-62
5-24-65

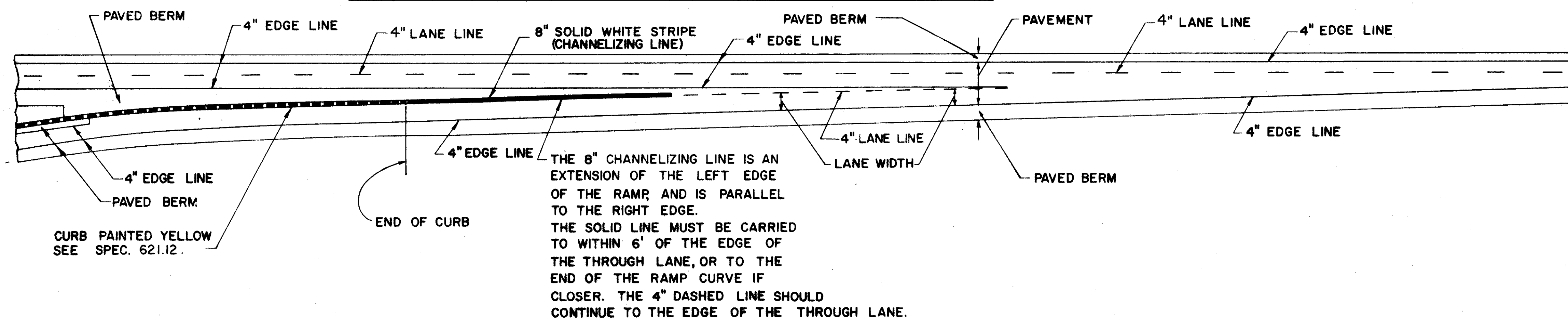
APPROVED *Robert Elmer*
ENGINEER OF TRAFFIC

TUS-250-17.23

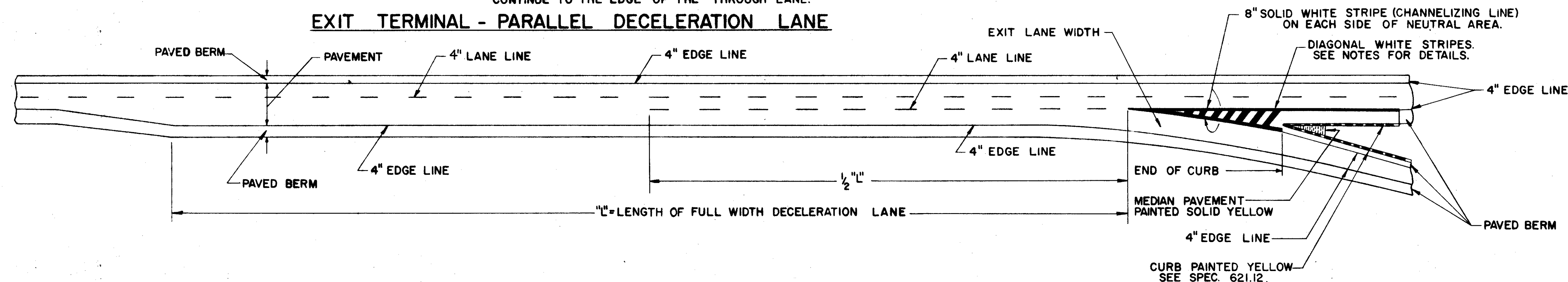
ENTRANCE TERMINAL - PARALLEL ACCELERATION LANE



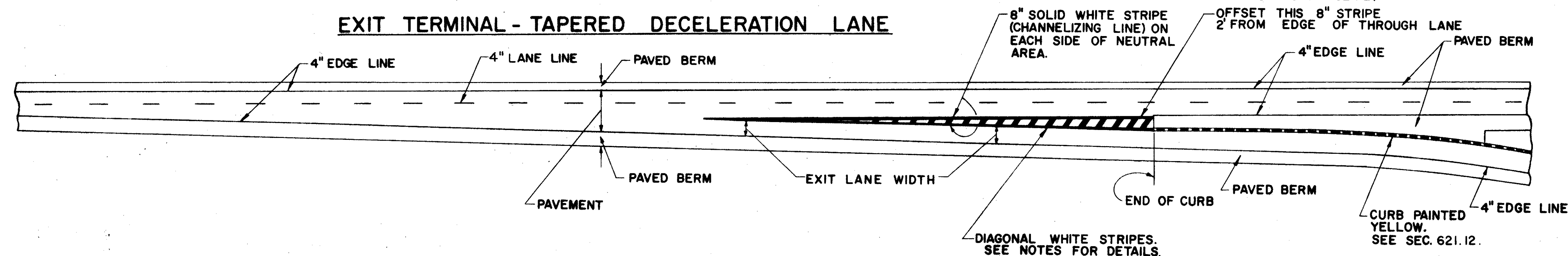
ENTRANCE TERMINAL - TAPERED ACCELERATION LANE



EXIT TERMINAL - PARALLEL DECELERATION LANE



EXIT TERMINAL - TAPERED DECELERATION LANE



NOTES

EDGE LINES SHALL BE PLACED IN THE LOCATIONS
AS SHOWN TO CONFORM TO SUPPLEMENTAL SPECIFICATION
No. 621 AND DEFINED IN SECTION 621.06.

LANE LINES SHALL BE PLACED IN THE LOCATIONS AS SHOWN TO CONFORM TO ~~SUPPLEMENTAL~~ SPECIFICATION No. 621 AND DEFINED IN SECTION 621.07.

CHANNELIZING LINES SHALL BE CONTINUOUS WHITE BEADED STRIPES 8" IN WIDTH PLACED IN THE LOCATIONS AS SHOWN TO CONFORM TO ~~SUPPLEMENTAL~~ SPECIFICATION No. 621 AND DEFINED IN SECTION 621.09.

DIAGONAL STRIPES IN EXIT RAMP MARKINGS SHALL BE 2' WIDE WHITE BEADED STRIPES SET AT A 45° ANGLE TO THE CENTER LINE OF THE THROUGH PAVEMENT AND SLANTED IN THE DIRECTION OF THE FLOW OF TRAFFIC ON SAID PAVEMENT. SPACE BETWEEN THE 2' DIAGONAL STRIPES SHALL BE 6' AS MEASURED PARALLEL TO THE CENTER LINE OF THE THROUGH PAVEMENT. PAINT ON THE DIAGONAL STRIPES SHALL BE APPLIED AT THE RATE OF ONE GALLON TO EACH 100 SQUARE FEET AND GLASS BEADS SHALL BE APPLIED AT THE RATE OF SIX POUNDS PER GALLON OF PAINT. DIAGONAL WHITE STRIPES SHALL BE PLACED BETWEEN THE TWO 8" WHITE CHANNELIZING LINES AT EXIT RAMPS AS SHOWN TO CONFORM TO SUPPLEMENTAL SPECIFICATION No. 621 AND DEFINED IN SECTION 621.11.

FOR SUMMARY OF PAVEMENT MARKINGS SEE SHEET NO. 226

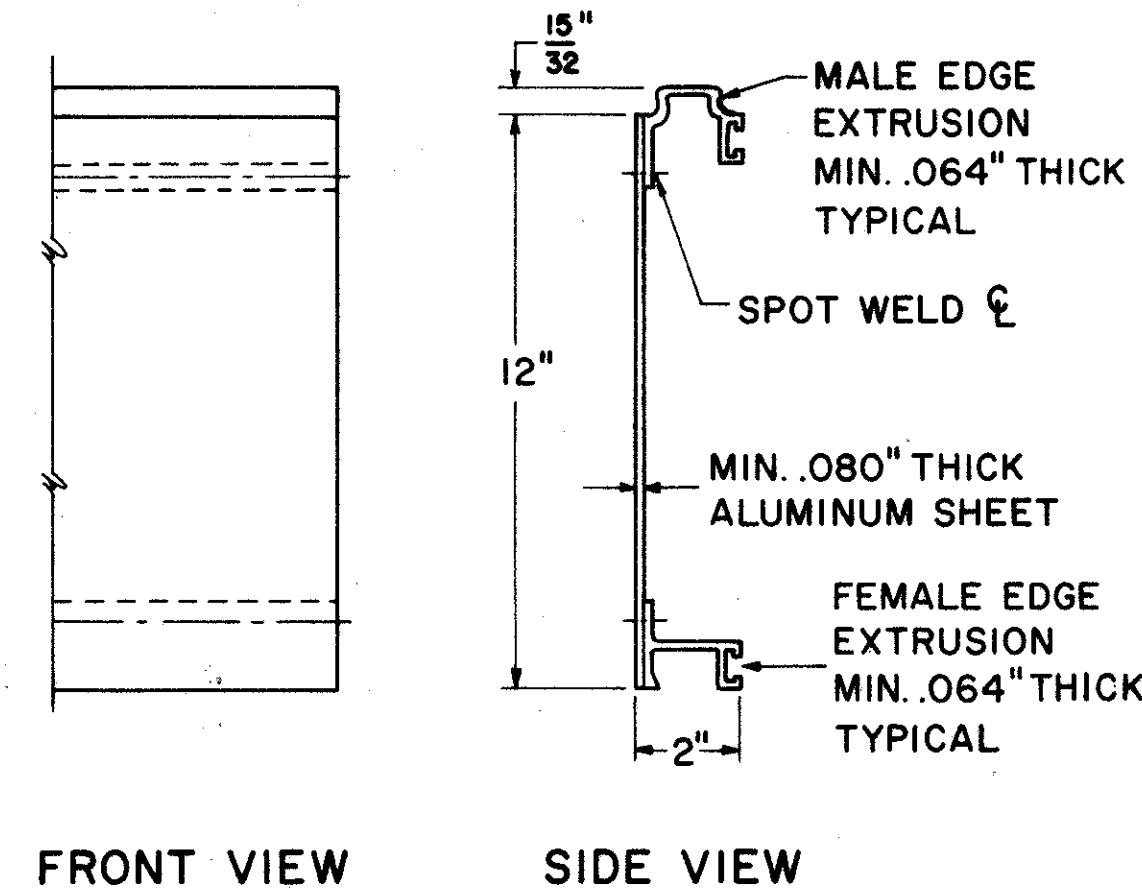
BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

PAVEMENT MARKING 621

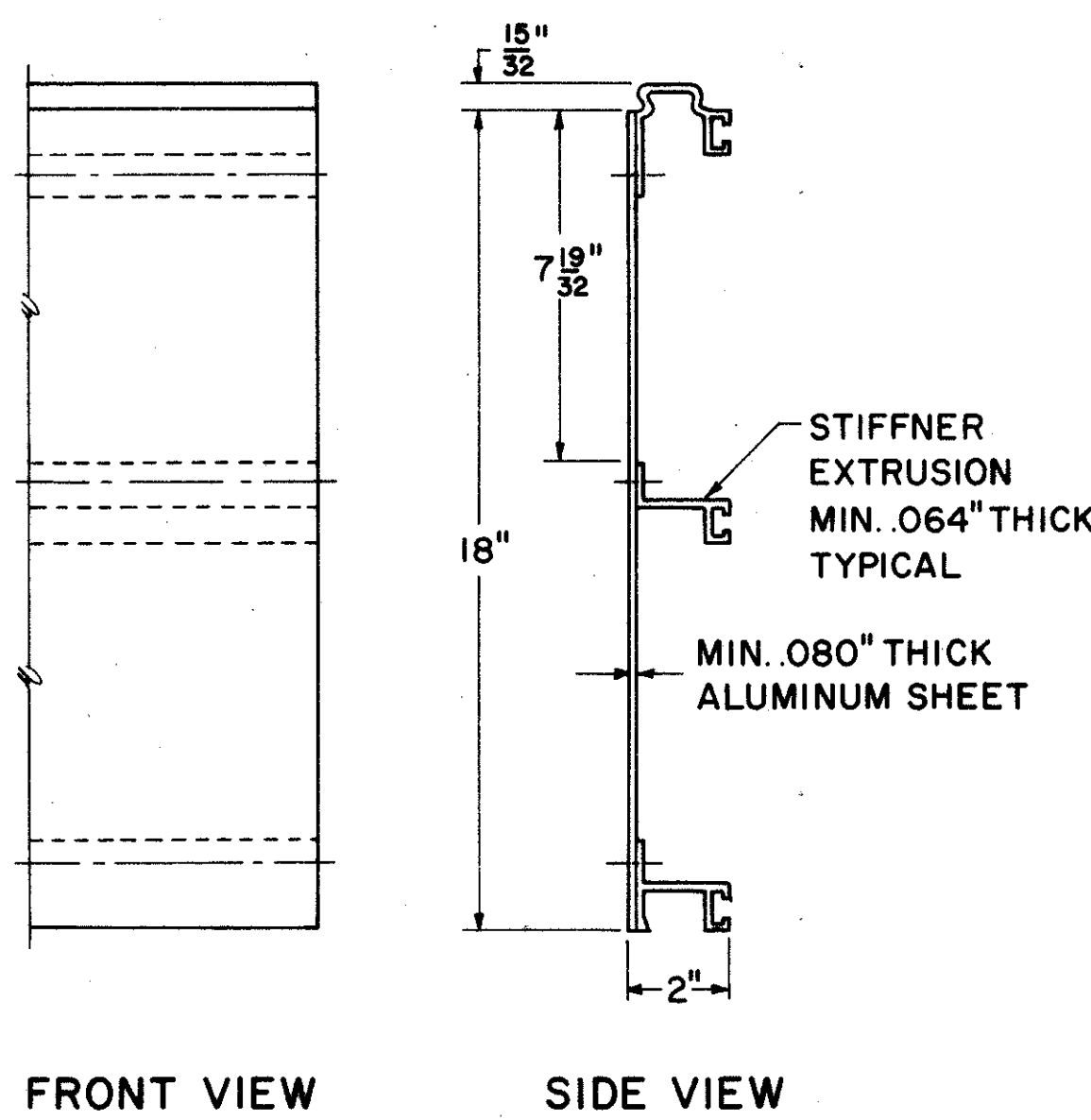
DATE
7-17-61
4-6-62
5-24-65

APPROVED Robert C. Lower
ENGINEER OF TRAFFIC

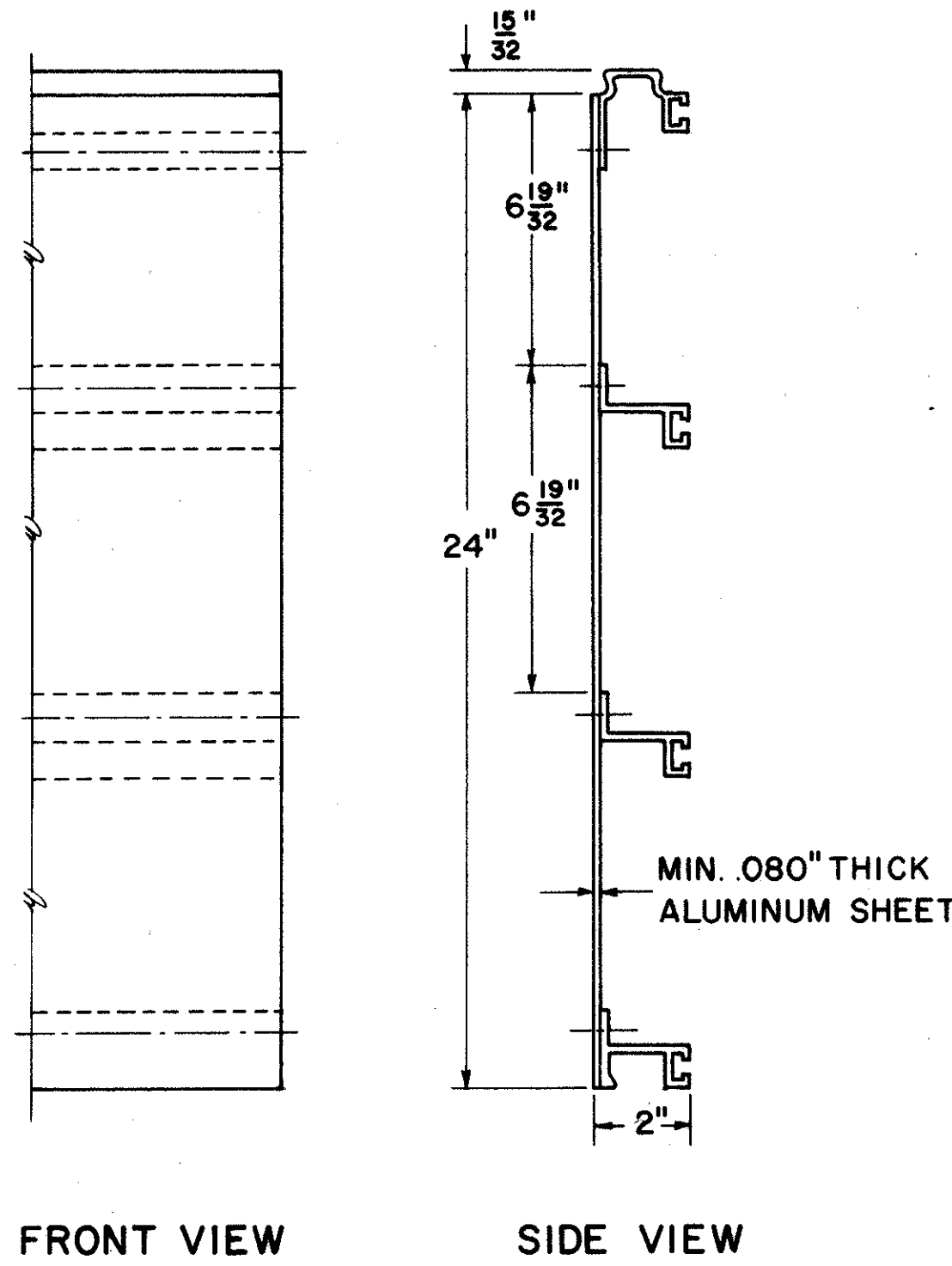
12" EXTRUSHEET PANEL



18" EXTRUSHEET PANEL



24" EXTRUSHEET PANEL



NOTES:

EXTRUSHEET PANELS SHALL BE ALUMINUM; SPOT WELDING AND ALL MATERIALS SHALL CONFORM WITH SUPPLEMENTAL SPECIFICATION I-128.

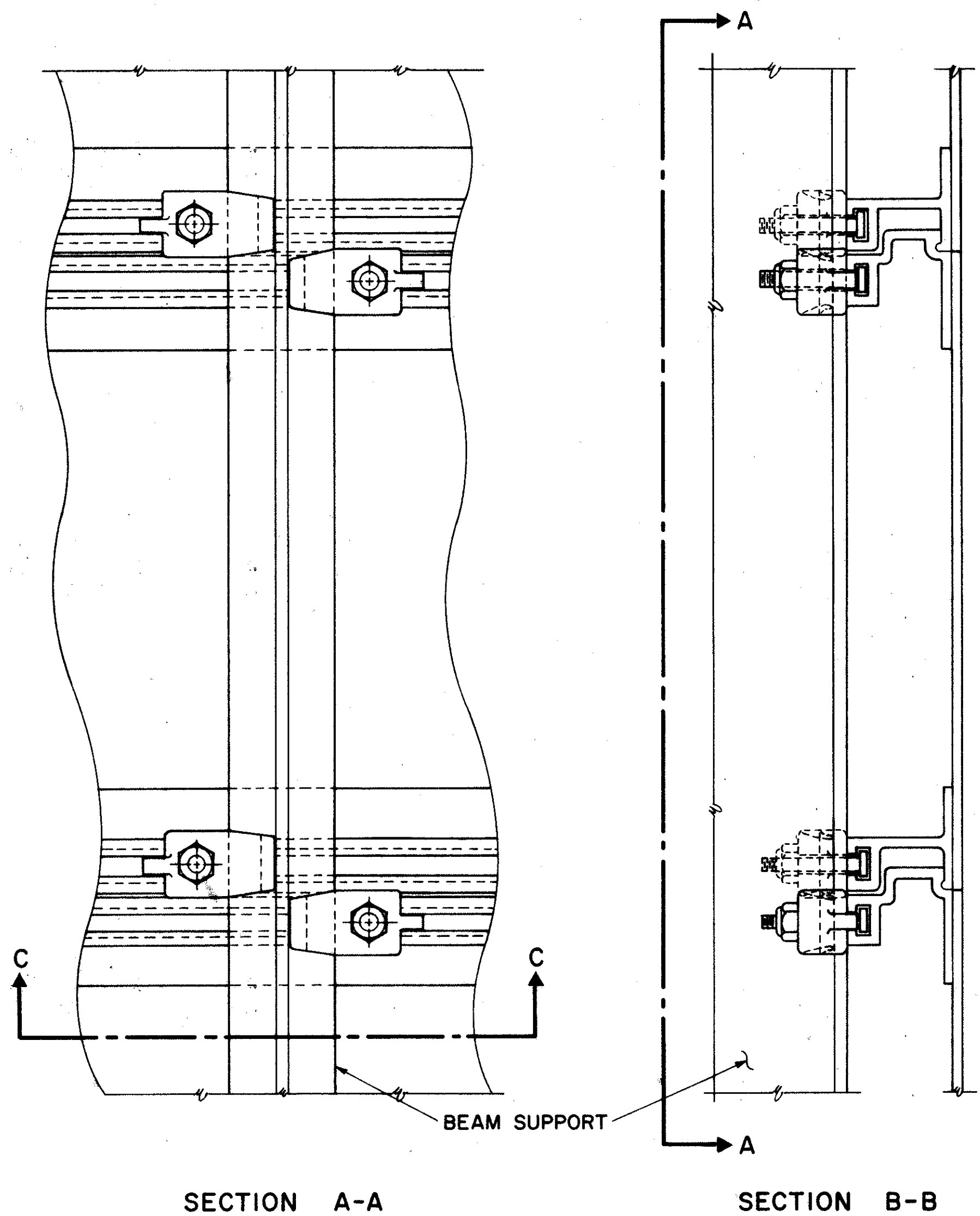
COMBINATIONS OF 12", 18", AND 24" PANELS ARE USED TO ATTAIN REQUIRED SIGN HEIGHT.

INDIVIDUAL PANELS SHALL BE THE SAME LENGTH AS THE HORIZONTAL LENGTH OF SIGN WITH NO SPLICES.

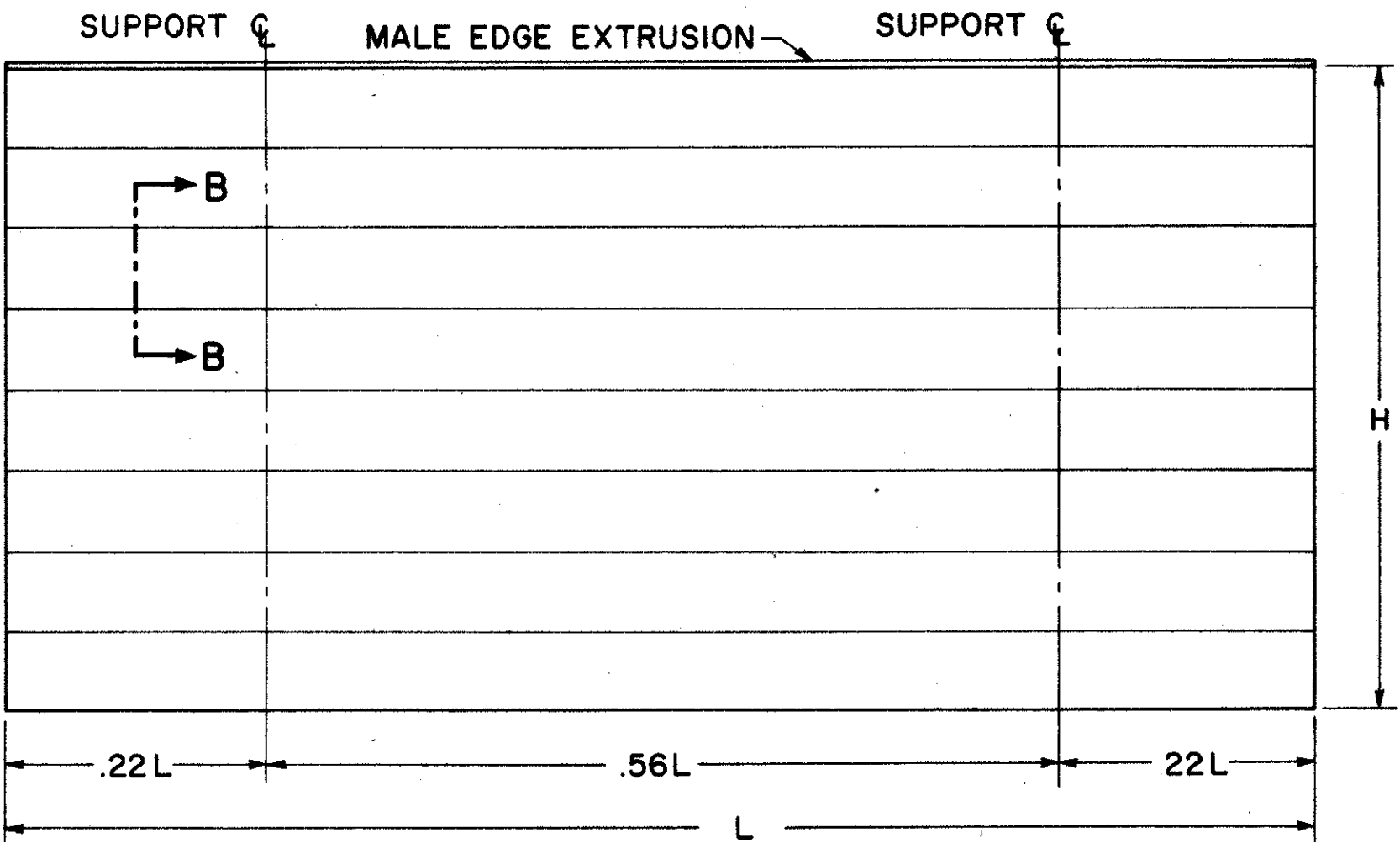
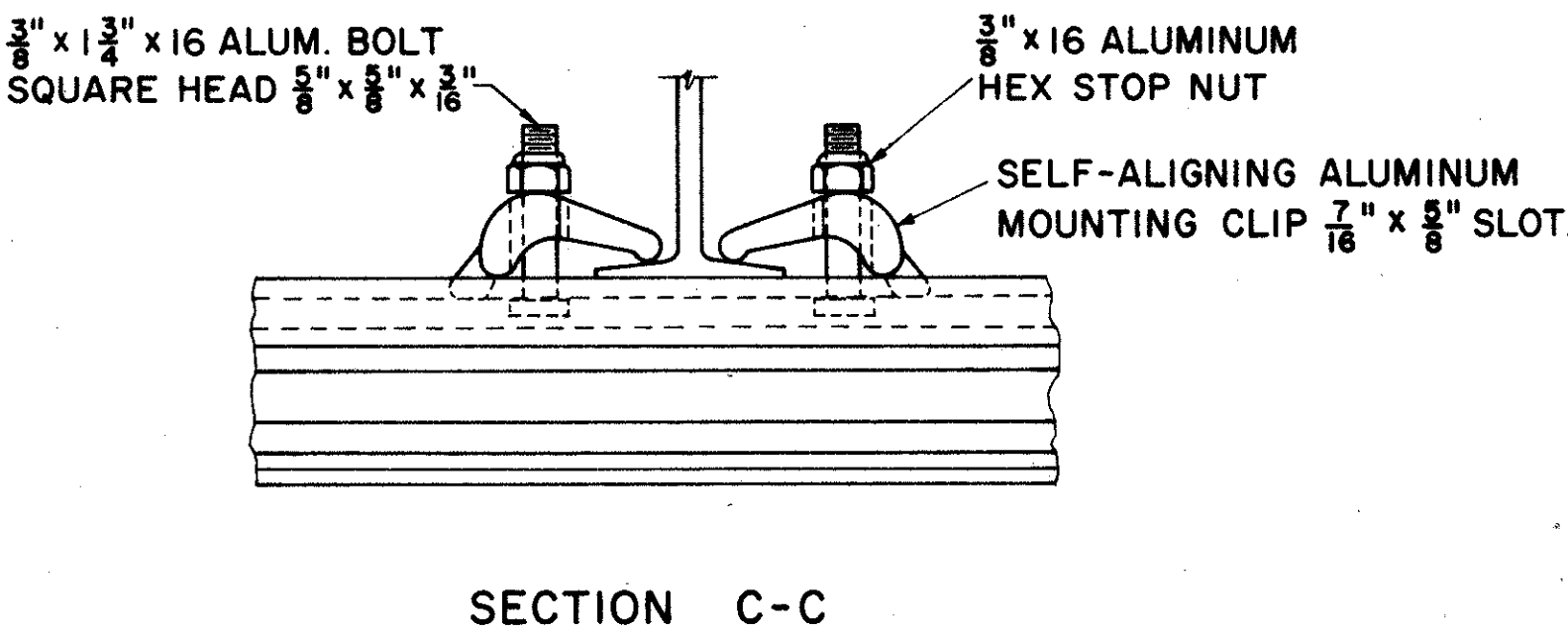
PANELS SHALL BE INTERLOCKED AND ERECTED WITH THE MALE EXTRUSION LOCATED AT THE TOP EDGE OF THE SIGN.

EXTRUSHEET PANELS SHALL BE FASTENED TO EACH VERTICAL SUPPORT MEMBER WITH MOUNTING CLIPS; ALTERNATELY AT EACH HORIZONTAL EXTRUSION; BOTH SIDES AT EACH JOINT, AND ON BOTH SIDES AT TOP AND BOTTOM EDGE OF SIGN.

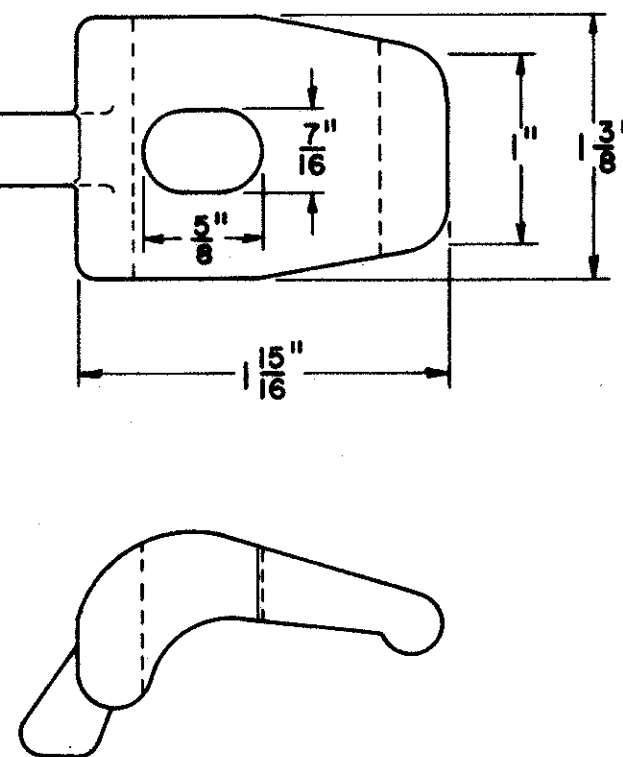
THE PANELS SHALL BE DESIGNED TO WITHSTAND A WIND LOAD OF 35 POUNDS PER SQUARE FOOT.



GENERAL ARRANGEMENT



CLIP DETAIL



SPOT WELDS

PANEL SIZE	MAXIMUM SPOT WELD SPACING CENTER TO CENTER	BETWN ROWS
12 INCH	4 INCH	10 INCH
18 & 24 INCH	4 INCH	8 INCH

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OHIO DEPARTMENT OF HIGHWAYS

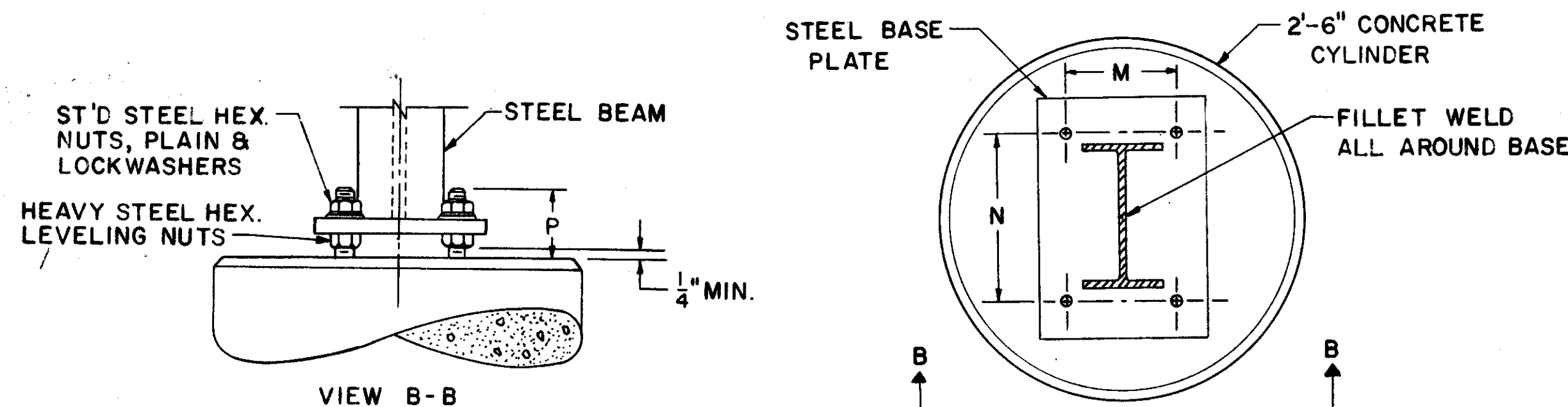
ALUMINUM
EXTRUSHEET
PANEL SIGN

ECD

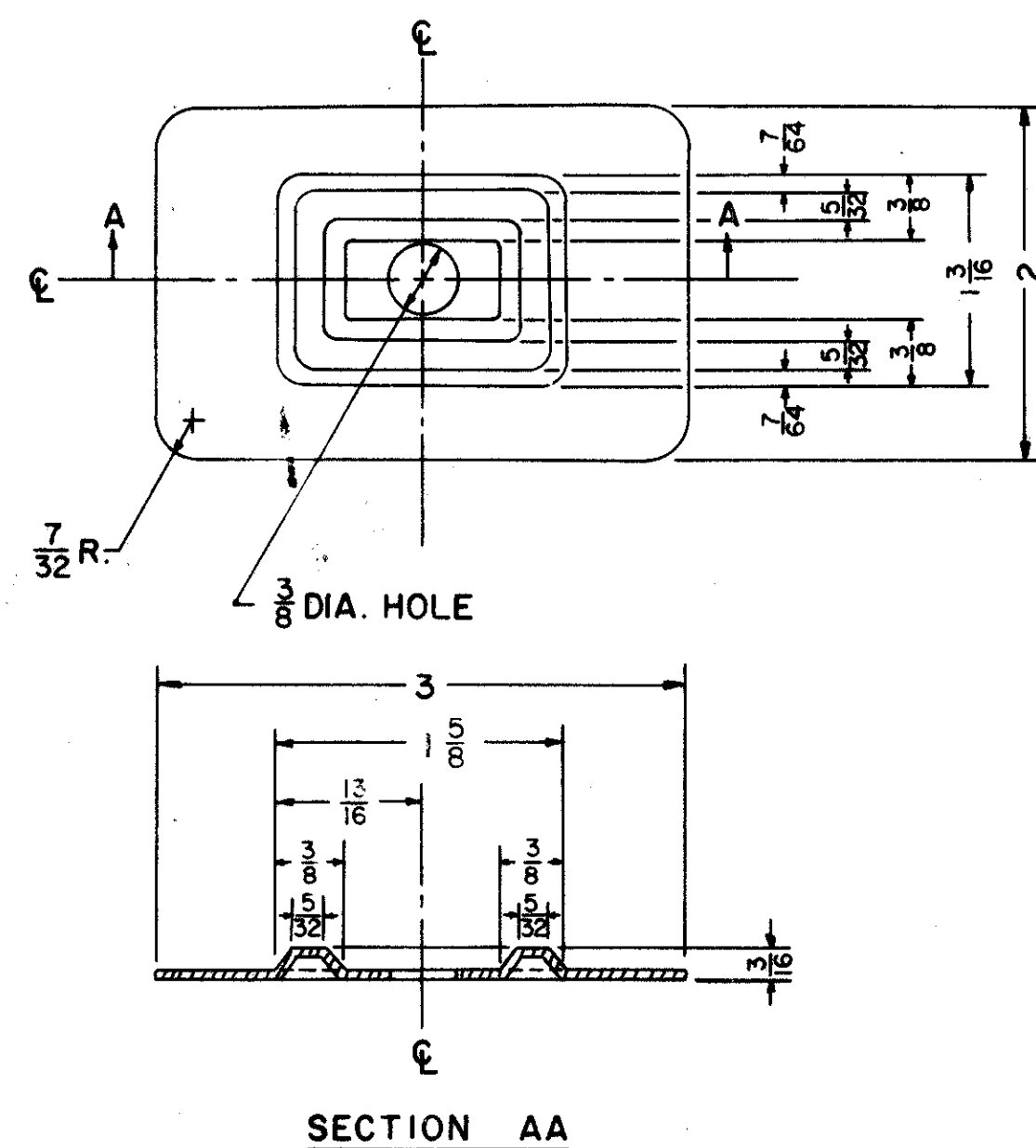
APPROVED *John C. Taylor*
ENGINEER OF TRAFFIC

DATE
9-25-63
5-19-64

BEAM SIZE	ANCHOR BOLTS DIA. LENGTH	BASE PLATE	HOLE SIZE	DIM. M	DIM. N	DIM. P	WELD SIZE	DIM. H	DIM. W	CU. YDS. FOR 2 POST	MARK	TYPE	NO.	LENGTH	WEIGHT FOR POST
10 B11.5	3/4" 3'-0"	7/8" x 6" x 18"	7/8"	3 1/2"	14"	3 1/2"	1/4"	5.25'	2'-6"	1.9	401	101	6	7'-6"	45
10 B17	1" 3'-6"	7/8" x 6" x 18"	1 1/8"	3 3/4"	14"	4 1/4"	1/4"	6.0'	2'-6"	2.2	401	101	7	7'-6"	52
12 B22	1" 4'-0"	1" x 9" x 19"	1 1/8"	5 1/2"	15"	4 1/4"	1/4"	6.75'	2'-6"	2.5	401	101	8	7'-6"	61
12 WF27	1 1/4" 4'-0"	1" x 9" x 19"	1 3/8"	5 1/2"	15"	5 1/4"	1/4"	8.0'	2'-6"	2.9	401	101	9	7'-6"	94
14 WF30	1 1/4" 4'-0"	1" x 11" x 20"	1 3/8"	7 1/2"	16"	5 1/4"	5/16"	8.25'	2'-6"	3.0	502	STR.	8	8'-6"	101
14 WF34	1 1/4" 4'-0"	1" x 12" x 22"	1 3/8"	9"	16"	5 1/4"	5/16"	9.0'	2'-6"	3.3	401	101	10	7'-6"	103
16 WF36	1 1/2" 5'-0"	1 1/4" x 14" x 23"	1 5/8"	10"	19"	6"	5/16"	9.75'	2'-6"	3.5	503	STR.	8	8'-6"	145
16 WF40	1 1/2" 5'-6"	1 1/4" x 14" x 24"	1 5/8"	10"	20"	6"	5/16"	10.0'	2'-6"	3.6	401	101	11	7'-6"	148
16 WF45	1 1/2" 6'-0"	1 1/4" x 14" x 24"	1 5/8"	10"	20"	6"	5/16"	10.5'	2'-6"	3.8	602	STR.	8	9'-6"	155
18 WF50	1 3/4" 7'-6"	1 1/2" x 14" x 26"	1 7/8"	10"	22"	6 3/4"	5/16"	11.5'	2'-6"	4.2	603	STR.	8	10'-0"	164
											401	101	12	7'-6"	
											604	STR.	8	10'-6"	

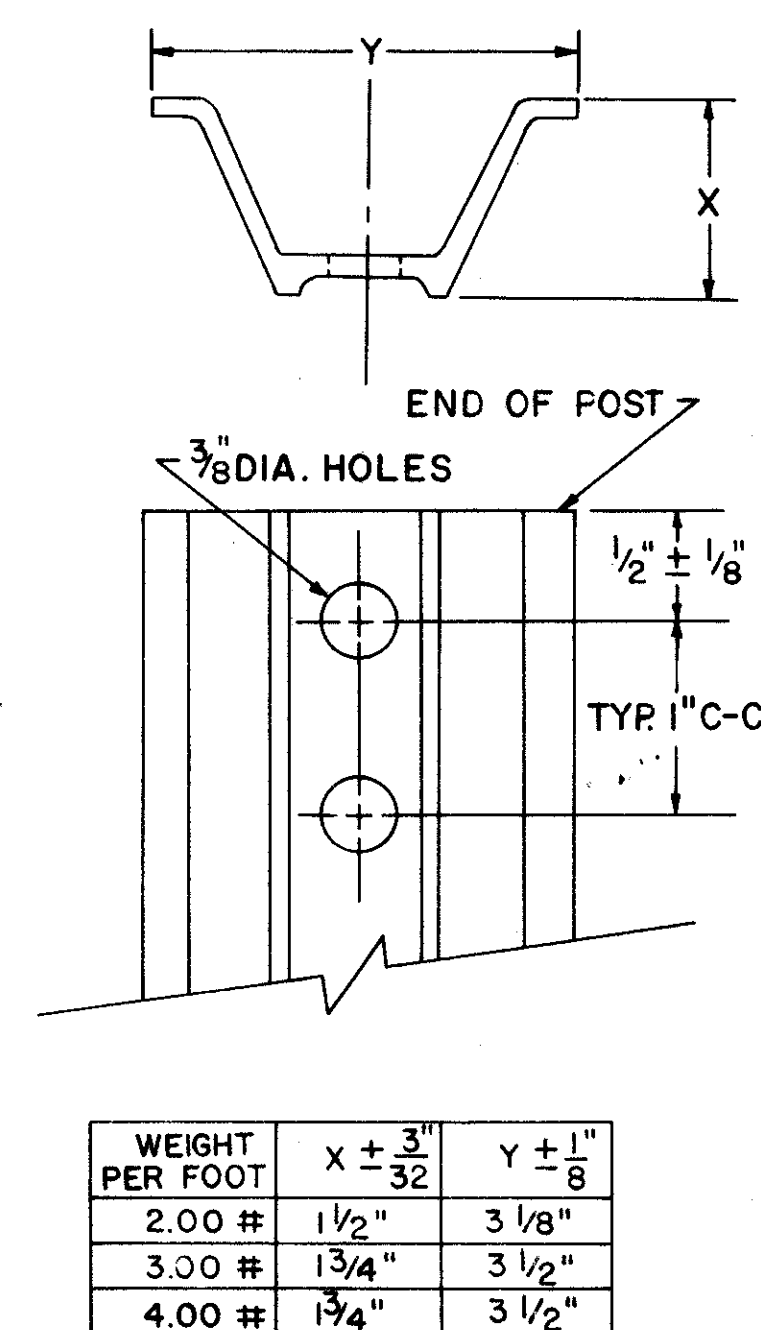


ALTERNATE ANCHOR BASE DETAILS

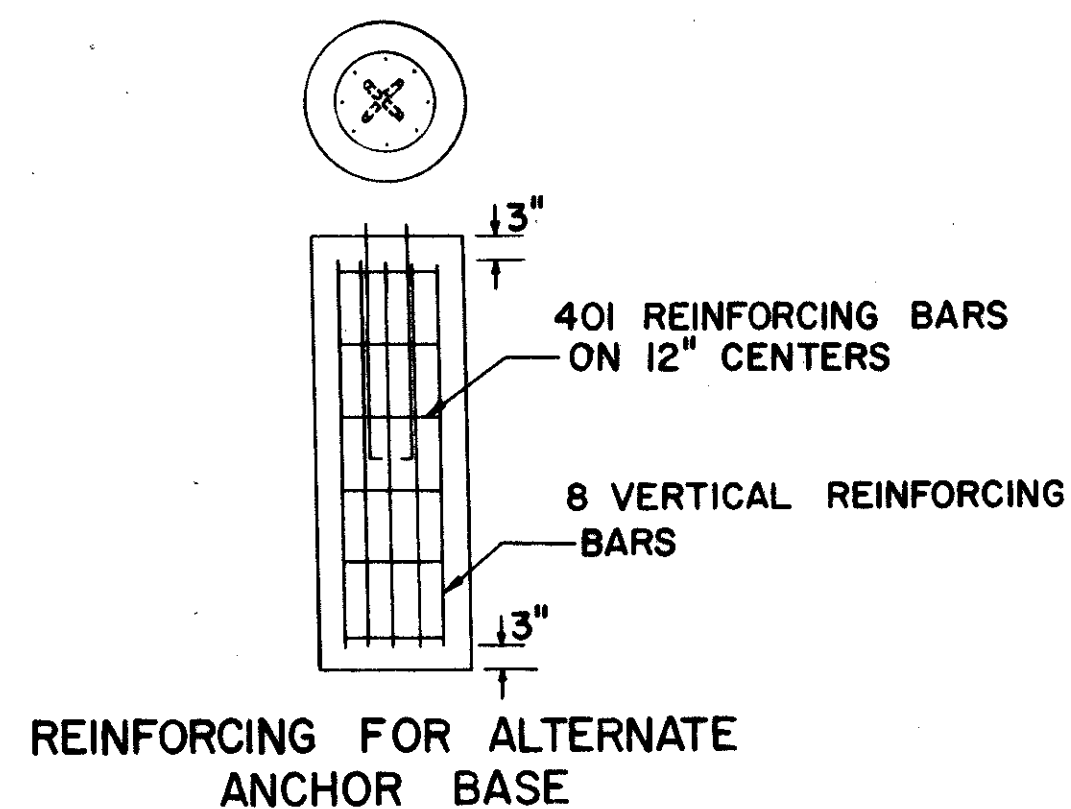


NOTE:
THE PLATE IS SYMMETRICAL ABOUT EITHER CENTERLINE.
METAL SHALL BE 16 GAUGE STEEL.
ALL DIMENSIONS ARE IN INCHES.

BEARING PLATE DETAIL



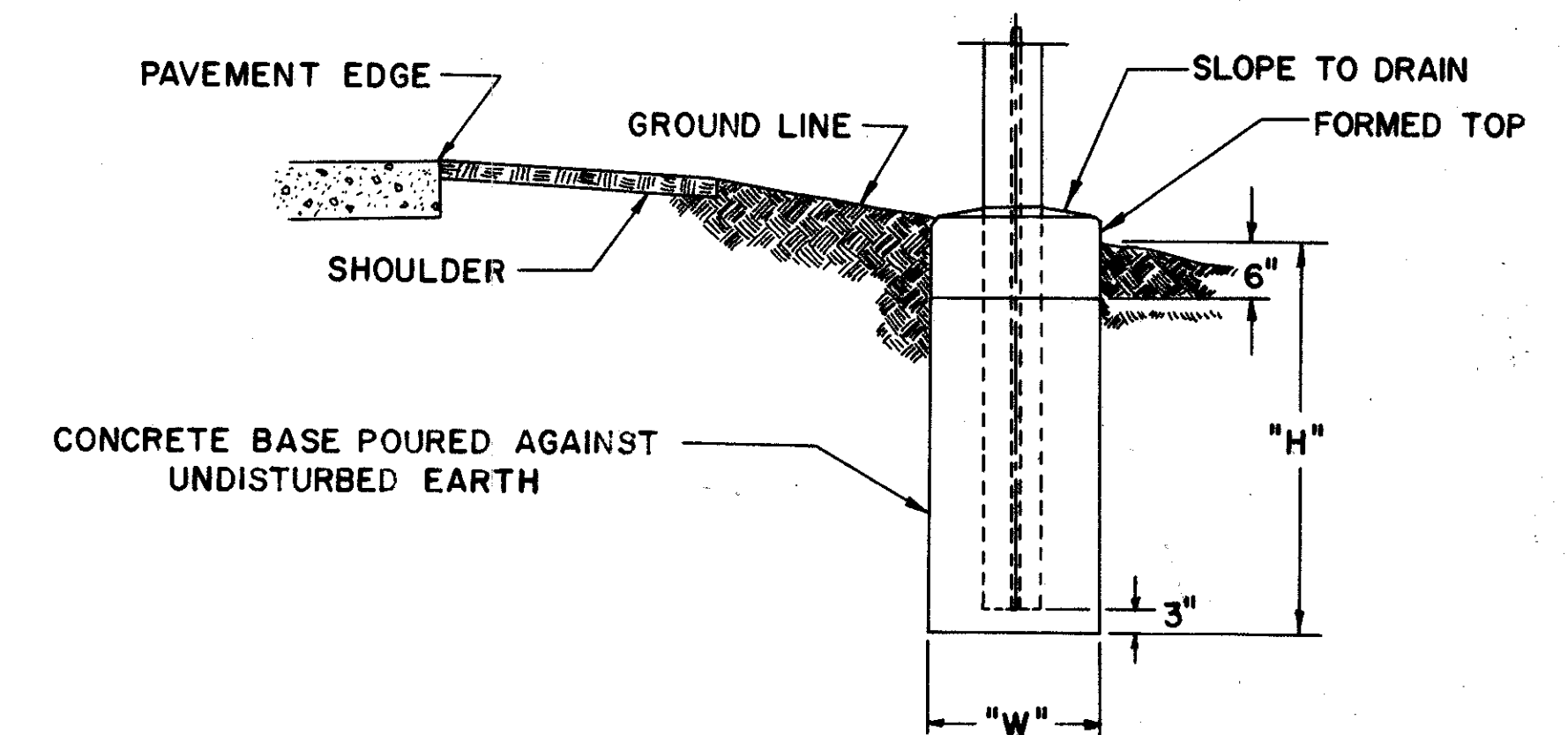
DRIVE POST DETAILS



REINFORCING FOR ALTERNATE ANCHOR BASE

BEAM SIZE	DIM. W	DIM. H	CU. YDS. CONC. 2 POST
4# POST	1'-0"	4.0'	0.2
4# BEAM	1'-0"	4.0'	0.2
8# BEAM	1'-0"	4.0'	0.2
6 B 8.5	1'-0"	4.0'	0.2
10 B 11.5	2'-6"	5.25'	1.9
10 B 17	2'-6"	6.0'	2.2
12 B 22	2'-6"	6.75'	2.5
12 WF 27	2'-6"	8.0'	2.9
14 WF 30	2'-6"	8.25'	3.0
14 WF 34	2'-6"	9.0'	3.3
16 WF 36	2'-6"	9.75'	3.5
16 WF 40	2'-6"	10.0'	3.6
16 WF 45	2'-6"	10.5'	3.8
18 WF 50	2'-6"	11.5'	4.2

FOUNDATION DETAILS FOR EMBEDDED POSTS AND BEAMS



NOTES

PLAN QUANTITIES FOR POSTS AND STRUCTURAL SUPPORTS ARE BASED UPON THE "FOUNDATION DETAILS FOR EMBEDDED POSTS AND BEAMS".

IF THE CONTRACTOR ELECTS TO USE THE METHOD SHOWN FOR "ALTERNATE ANCHOR BASE DETAILS", THE PLAN QUANTITY OF EMBEDDED BEAM ONLY WILL BE ALLOWED IN EXCHANGE AND FULL PAYMENT FOR THE BASE PLATE, ANCHOR BOLTS AND REINFORCING STEEL.

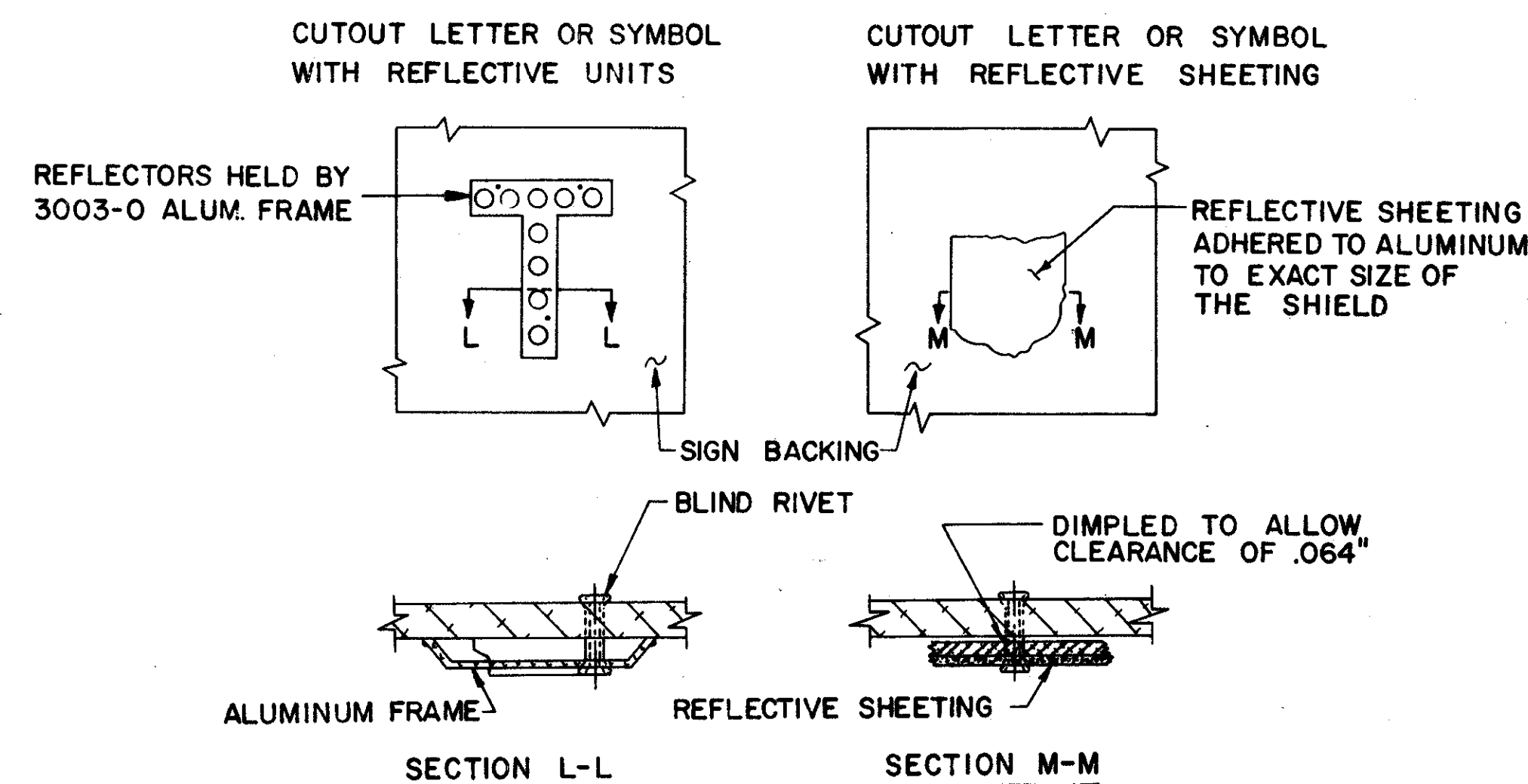
WHERE ANCHOR BASES ARE USED, THE BEAM SIZE SHALL DETERMINE THE ANCHOR BOLT AND BASE PLATE SIZE.

DEMOUNTABLE UNITS SHALL BE ATTACHED TO THE ALUMINUM PANELS WITH ALUMINUM BLIND RIVETS. CARE SHALL BE TAKEN TO INSURE THAT ALL SEGMENTS OF EACH LETTER OR SYMBOL ARE SECURELY AFFIXED TO THE BACKING. LETTERS CONTAINING REFLECTIVE UNITS SHALL BE FASTENED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

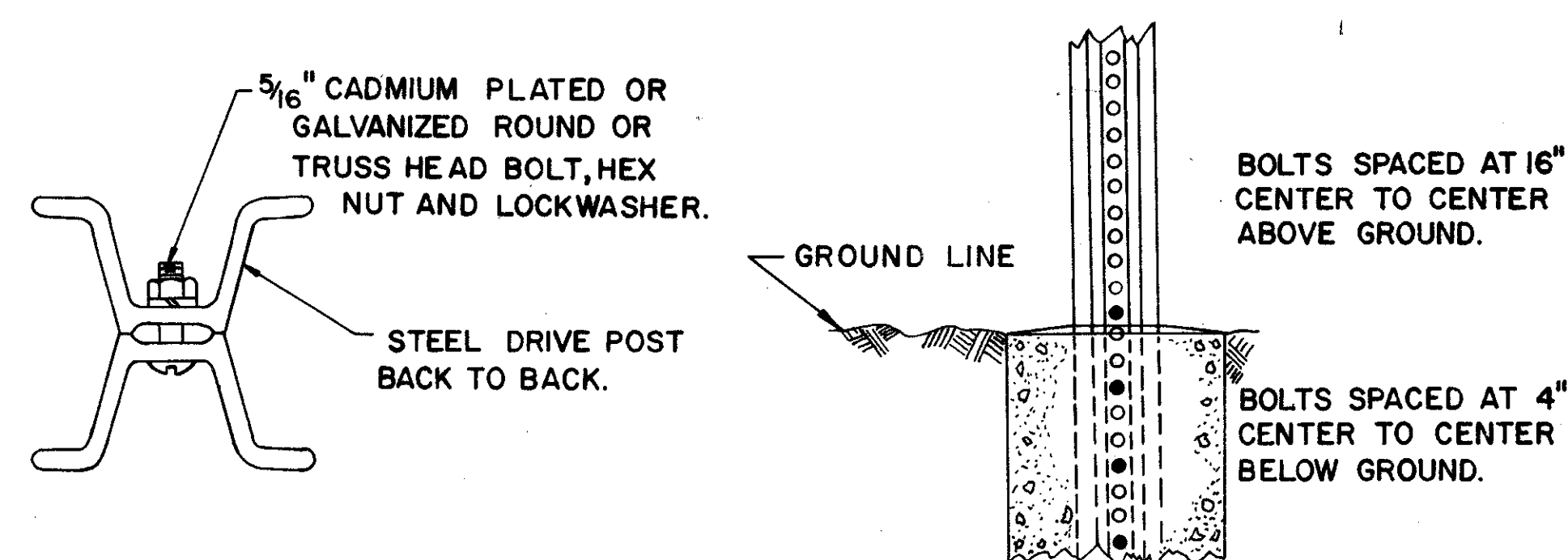
DEMOUNTABLE MARKERS OR SHIELDS SHALL BE SECURELY AFFIXED TO THE BACKING UTILIZING THE HOLES AS LOCATED ON SHEET.

IN LIEU OF THE .040" THICK FRAME SPECIFIED IN SUPPLEMENTAL SPECIFICATION 1-128, THE FRAMES FOR THE REFLECTIVE UNITS IN THE SIGN OUTLINES ONLY, MAY BE .032" THICK ALUMINUM. (A.S.T.M. B209G311A-T6).

For Signing Quantities
See Sheet 226



DEMOUNTABLE LETTERS & SYMBOLS

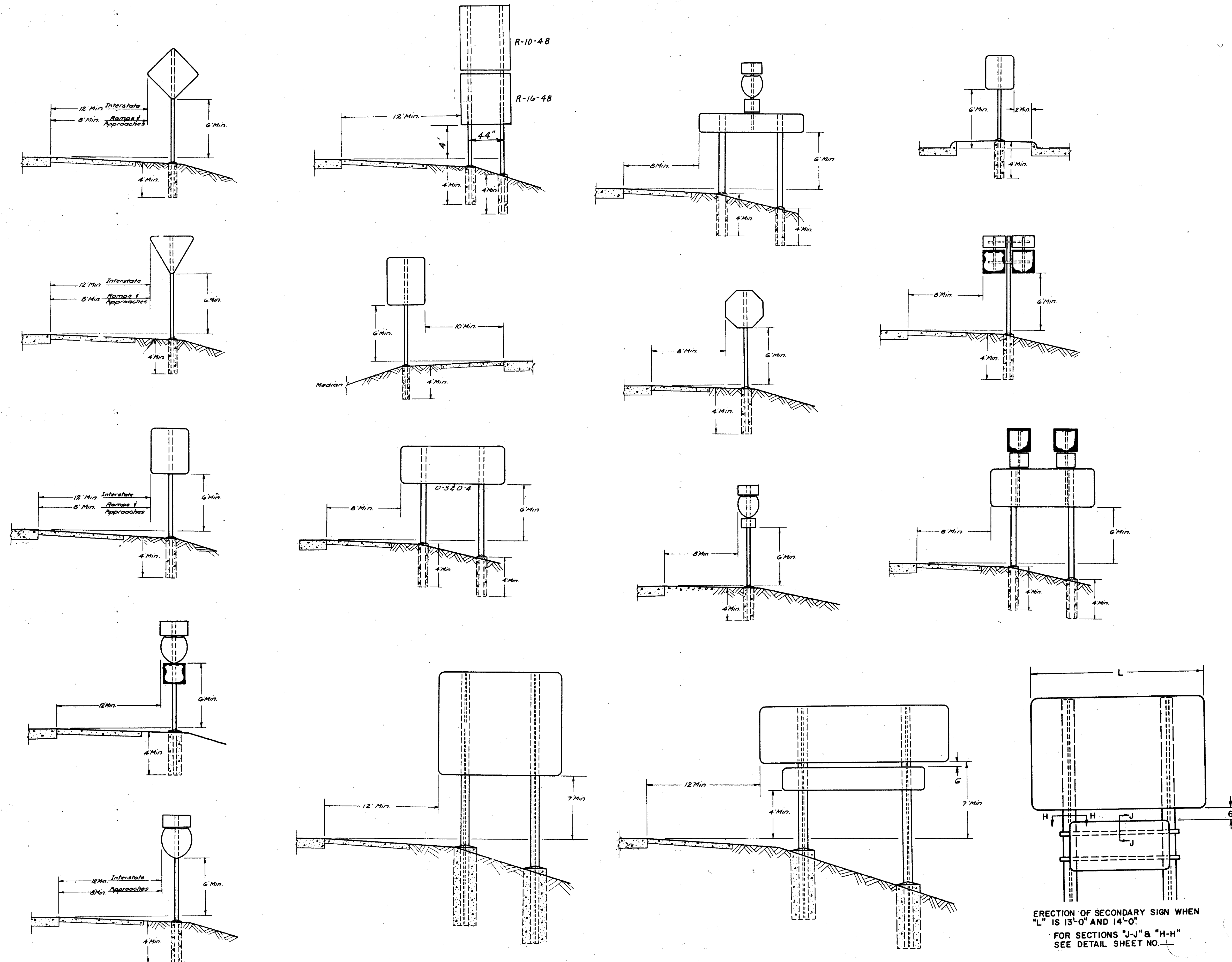


4# AND 6# BEAM DETAILS

BUREAU OF TRAFFIC OHIO DEPARTMENT OF HIGHWAYS	
MISCELLANEOUS SIGNING ITEMS	MSI
APPROVED _____ ENGINEER OF TRAFFIC	DATE 10-29-63 8-19-64

NOTES

1. BOLT HOLE LOCATIONS ARE INDICATED ON THE SIGN DESIGN SHEETS NO. _____.
2. HORIZONTAL BACK BRACING SHALL ALWAYS BE MOUNTED ON THE FRONT FLANGE OF THE SUPPORT EXCEPT WHERE SIGNS ARE MOUNTED BACK TO BACK. BACK BRACING SHALL NEVER EXTEND ABOVE TOP EDGE OF UPPERMOST SIGN PLATE AND SHALL BE ATTACHED TO SUPPORTS USING 5/16" GALVANIZED STEEL BOLTS.
3. SCREWS, NUTS, AND WASHERS FOR SIGN ERECTION SHALL BE ALUMINUM EXCEPT AS ABOVE NOTED. 5/16" TRUSS HEAD SLOTTED MACHINE SCREWS WITH HEXAGON NUTS SHALL BE USED. WASHERS SHALL BE 1/2" WASHERS USED ON THE SIGN FACE ONLY.
4. SIGN INSTALLATIONS SHALL BE PLACED SO THAT SUPPORTS ARE NOT PLACED IN DRAINAGE DITCHES.
5. HORIZONTAL CLEARANCES SHOWN PERTAIN TO NON-CURBED SECTIONS. SECTIONS WITH AN UNMOUNTABLE CURB SHALL HAVE A HORIZONTAL CLEARANCE OF 2' 0" MINIMUM FROM THE CURB FACE TO THE SIGN EDGE. ALL SIGNS SHALL BE ERECTED BEHIND EXISTING GUARD RAIL UNLESS OTHERWISE SPECIFIED ON PLANS OR BY THE ENGINEER.
6. VERTICAL AND HORIZONTAL CLEARANCE BETWEEN SIGNS ON ONE ASSEMBLY SHALL BE A MAXIMUM OF 2".
7. GALVANIZED STEEL BEARING PLATES SHALL BE INCLUDED BETWEEN ALL SHEET ALUMINUM SIGNS ATTACHED TO VERTICAL SUPPORTS AT EACH BOLT LOCATION. SEE SHEET 16 FOR BEARING PLATE DETAIL.



ERECTION OF SECONDARY SIGN WHEN
"L" IS 13'-0" AND 14'-0"
FOR SECTIONS "J-J" & "H-H"
SEE DETAIL SHEET NO. _____

GENERAL NOTES

MAINTAINING TRAFFIC

THE CONSTRUCTION OF THIS PROJECT WILL AFFECT THE TRAFFIC ON EX-ISTING U.S.R. 250 AND THE CROSS TRAFFIC ON CO. RD. 64, CO. RD. 68 AND TWP. RD. 286.

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON EXISTING U.S.R. 250. DURING CONSTRUCTION OF THE 30" PIPE CULVERT AT STA. 106+45.42 ON EX-ISTING U.S.R. 250, TWO WAY TRAFFIC SHALL BE MAINTAINED FOR A MAXIMUM PERIOD OF FIVE CALENDAR DAYS, BY PART WIDTH CONSTRUCTION AND TEMPORARY ROADWAYS ON THE BERMS.

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON CO. RD. 64 UNTIL CO. RD. 68 EXTENSION IS CONSTRUCTED AND OPEN TO TRAFFIC, EXCEPT THAT ONE WAY TRAFFIC WILL BE PERMITTED ON CO. RD. 64 FOR A MAXIMUM PERIOD OF FIVE CALENDAR DAYS DURING CONSTRUCTION OF THE 68"x43" PIPE CULVERTS AT THE INTERSECTION OF CO. RD. 64 WITH EXISTING U.S.R. 250 AND FOR A MAXIMUM PERIOD OF FIVE CALENDAR DAYS DURING CONSTRUCTION OF THE TWIN 30" PIPE CULVERTS AT MARGINAL ROAD STA. 19+40. ONE WAY TRAFFIC WILL ALSO BE PER-MITTED ON CO. RD. 64 AND CO. RD. 68 FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLET-ED ASPHALT. CONCRETE COURSES, DURING PAVING OPERATIONS WHERE CONSTRU-CTION OVERLAPS EXISTING PAVEMENT.

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON TWP. RD. 286 INCLUDING THE TIME DURING THE PLACING AND SETTLEMENT OF THE EMBANK-MENT AT THIS LOCATION, EXCEPT THAT FOR A PERIOD BETWEEN THE DATES OF MAY 15 TO SEPTEMBER 15 TWP. RD. 286 MAY BE CLOSED TO TRAFFIC WHILE THE BRIDGE IS BEING CONSTRUCTED. THE CONTRACTOR SHALL SO ARRANGE HIS WORK THAT ALL CONSTRUCTION SHALL BE COMPLETED AND THIS ROAD RE-OPENED TO TRAFFIC DURING THIS INTERVAL. A TEMPORARY DETOUR WILL BE PROVIDED OVER OTHER COUNTY ROADS, BY THE COUNTY, DURING THE PERMITTED TIME OF CLOSURE ON TWP. RD. 286.

ACCESS TO THE COAL WASHING TIPPLE AND RACE TRACK SHALL BE MAINTAIN-ED FROM CO. RD. 64 AT ALL TIMES UNTIL THE MARGINAL ROAD IS CONSTRUCTED AND IN OPERATION.

ALL HAULING OPERATIONS ALONG EXISTING ROADS SHALL BE SUBJECT TO LOAD LIMITS ON HIGHWAYS AND BRIDGES AS OUTLINED IN CHAPTERS 5577 AND 5591 OF THE REVISED CODE OF OHIO. HOWEVER, THE CONTRACTOR SHALL BE PER-MITTED TO CROSS EXISTING U.S.R. 250 AT ONE POINT WITH OVER SIZE AND OVER-LOADED VEHICLES, PROVIDING THE CONTRACTOR PROTECTS THE EXISTING PAVEMENT AT THE POINT OF CROSSING WITH PROTECTIVE MATS OR OTHER SUITABLE MEANS OF PROTECTION SATISFACTORY TO THE ENGINEER. THIS POINT OF CROSSING IS TO BE DETERMINED BY THE ENGINEER. AND SHALL NOT EXCEED FORTY (40) FEET WIDTH. THE CONTRACTOR SHALL FURNISH FLAGMEN, LIGHTS AND SIGNS AT THE POINT OF CROSSING FOR PROTECTION OF THE TRAVELING PUBLIC. WHEN THE POINT OF CROSSING IS NO LONGER NEEDED, THE CONTRACTOR SHALL COMPLETELY RE-MOVE. THE PROTECTIVE COVERING AND REPAIR ANY DAMAGE TO THE EXISTING PAVEMENT AND BERMS, TO THE SATISFACTION OF THE ENGINEER.

TEMPORARY ROADWAYS SHALL BE SURFACED WITH 410 AGGREGATE, TREATED WITH 616 CALCIUM CHLORIDE AND THE SURFACE MAINTAINED DAILY IN A MANNER SATISFACTORY TO THE ENGINEER. TWO WAY TRAFFIC LANES SHALL BE SURFACED WITH AGGREGATE AT LEAST (20) FEET WIDE AND ONE WAY TRAFFIC LANES SHALL HAVE THE SURFACING AGGREGATE NOT LESS THAN (12) FEET WIDE. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE IN THE MAINTENANCE OF TRAFFIC.

410 TRAFFIC COMPACTED SURFACE, TYPE A OR B	450 CU. YDS.
410 TRAFFIC COMPACTED SURFACE, TYPE C	1350 CU. YDS.
616 WATER	700 M. GALS.
616 CALCIUM CHLORIDE	65 TONS.

PAYMENT FOR ALL OF THE ABOVE, EXCEPT FOR 410 TRAFFIC COMPACTED SURFACE, 616 WATER, AND 616 CALCIUM CHLORIDE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

ROUNDING OF CORNERS SHOWN ON CROSS-SECTIONS

THE ROUNDED CORNERS SHOWN ON STANDARD DRAWING MC-1 APPLY TO ALL CROSS SECTIONS, EVEN THOUGH OTHERWISE SHOWN ON THESE PLANS.

FIELD OFFICE

THE CONTRACTOR SHALL, IN ADDITION TO THE REQUIREMENTS OF 105.152, PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 500 SQUARE FEET OF FLOOR SPACE. THE CONTRACTOR SHALL HAVE A TELEPHONE.

INSTALLED AND MAINTAINED IN THIS FIELD OFFICE DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL ALSO PROVIDE AND MAINTAIN SANITARY PROVISIONS AS PER 107.06. ALL OF THE ABOVE IS INCLUDED IN THE LUMP SUM PRICE BID FOR FIELD OFFICE.

DESIGN SPEED

THE GEOMETRICS OF THIS PROJECT HAVE BEEN PLANNED FOR A DESIGN SPEED OF 70 MILES PER HOUR.

UNDERGROUND UTILITIES

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RE-CORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE STATE OF OHIO DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS.

CONSTRUCTION LAYOUT STAKES

SEE NOTE IN PROPOSAL DESCRIBING THE WORK INCLUDED IN THIS LUMP SUM PAY ITEM.

SUPERELEVATION

SUPERELEVATED CURVES SHALL BE BUILT WITHOUT CROWN. THE CROWN SHALL BE WORKED OUT OF THE PAVEMENT IN THE PORTION BETWEEN THE BE-GINNING OF THE TRANSITION AND THE POINT WHERE THE SUPERELEVATION EQ-UALS TWICE THE CROWN.

CONTRACTORS MAINTENANCE RESPONSIBILITY

ON THIS PROJECT, THE CONTRACTOR'S RESPONSIBILITY FOR MAINTAINANCE OF THE EXISTING PAVEMENT PER ITEM 614 SHALL BE LIMITED TO THOSE POR-TIONS OF THE EXISTING PAVEMENT LYING WITHIN THE PROPOSED WORK LIMITS.

FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS

THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND SUBSEQUENTLY RE-MOVE FEDERAL AID CONSTRUCTION SIGNS AT EACH OF THE FOLLOWING LOCAT-IONS.

1. TO THE RIGHT OF APPROXIMATE STATION 885 OF RELOCATED U.S.R. 250.
2. TO THE RIGHT OF APPROXIMATE STA. 1110+00 TUS 250-17.23, ADJACENT TO AND ON THE NORTH SIDE OF EXISTING U.S.R. 250.

SIGN DETAILS SHALL BE AS SPECIFIED ON STANDARD DRAWING FACI-1 CODE N-55(1) 120 (2). THE SIGNS SHALL BE ERECTED IN ACCORDANCE WITH STANDARD DRAWING FACI 2. ADDITIONAL REQUIREMENTS SHALL BE IN ACCORD-ANCE WITH NOTES IN THE PROPOSAL.

NON-RIGID PAVEMENT REMOVAL

REMOVAL AND DISPOSAL OF EXISTING NON-RIGID PAVEMENT, UNLESS OTH-ERWISE INDICATED ON THESE PLANS, SHALL BE MEASURED AND PAID FOR AS ITEM 203 EXCAVATION.

PAVEMENT REMOVAL OUTSIDE NORMAL CONSTRUCTION LIMITS

THE EXISTING PAVEMENT SHALL BE REMOVED AND DISPOSED OF. THE OLD ROADWAY SHALL BE GRADED TO THE LEVEL OF THE SURROUNDING GROUND, THE OLD DITCHES FILLED AND THE DISTURBED AREAS SLOPED TO DRAIN AND LEFT IN A NEAT CONDITION READY FOR SEEDING.

SEEDING SHALL BE MEASURED AND PAID FOR IN ACCORD-ANCE WITH ITEM 659, SEEDING AND MULCHING. ALL OTHER WORK REQUIRED SHALL BE MEASURED AND PAID FOR AT THE UNIT PRICE BID FOR ITEM 203 EXCAVATION INCLUDING EMBANKMENT CONSTRUCTION, AS PER PLAN.

STANDARD DRAWING LEGEND			
1965	1963	1965	1963
BP-1	B-T-70-71	CB2-2A4B	I-8C.B.2-2A4B
BP-2	B-T-71-R	CB2-3424	I-8C.B.2-3424
BP-3	L.J. N#1	CB-8	I-8C.B. N#8
BP-4	T.J.	GR-1	I-15 N#1
BP-5	T-35	GR-2A	I-15 N#2-A
BP-6	DR-1	GR-5B	I-15 N#5-B
BP-7	I-12	GR-6	I-15 N#6
MC-1	RI-1	L-1	L-1
MC-3	G-707	AS-1-54	AS-1-54
MC-4	I-1	SP-53	SP-53
MC-5	I-14G	CB2-5424	I-8C.B.2-5424
MC-6	I-21-23		
F-1	F-1		
F-2	F-2		
F-3	F-3		
FACI-1	FACI-1		
FACI-2	FACI-2		
HW-E	HW-E		

SUPPLEMENTAL SPECIFICATION LEGEND	
1965	1963
801	CE-101.04
807	T-335
808	S-101
811	S-307
814	I-124
815	I-128
816	I-129

REMOVAL OF TREES AND STUMPS

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THE PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM, 201, CLEARING AND GRUBBING, EXCEPT THAT THOSE TREES FOR WHICH PRO-TECTION AND PRESERVATION WORK IS INDICATED ELSEWHERE IN THESE PLANS SHALL NOT BE REMOVED.

THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. OF TREES	NO. OF STUMPS
18"	312	4
30"	51	1
48"	9	0
60"	0	0

THE ABOVE ESTIMATE IS APPROXIMATE AND THE STATE OF OHIO RE-SERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS OUTSIDE OF THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT OF WAY AND/OR EASE-MENT LINES. PAYMENT FOR THE REMOVAL OF THESE ADDITIONAL TREES OR STUMPS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201 CLEARING AND GRUBBING.

CENTERLINE REFERENCE MONUMENTS AS PER PLAN

MONUMENTS SHALL BE CONSTRUCTED OF CLASS "C" CONCRETE, CAST IN PLACE IN A CIRCULAR HOLE EIGHT (8) INCHES IN DIAMETER AND FORTY-FOUR (44) INCHES IN DEPTH. TOP OF THE CONCRETE SHALL BE FINISHED AT A DEPTH OF TWO (2) INCHES BELOW THE GROUND LEVEL AND THE UPPER SIX (6) INCH PORTION OF THE CONCRETE SHALL BE FORMED. A ONE HALF (1/2) INCH STEEL ROD SIX (6) INCHES LONG SHALL BE EMBEDDED IN THE WET CONCRETE AS DIRECTED BY THE ENGINEER TO MARK THE CENTERLINE AND STATION. FOR LOCATIONS, SEE SHEET NO. 2.

SETTLEMENT PLATFORMS FOR FILL AT T.R. 286

DESCRIPTION THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY MATERIALS FOR THE CONSTRUCTION, PLACING AND MAINTAINING OF SETTLEMENT PLATFORMS AS DETAILED ON THE PLANS AND AT THE LOCATIONS, INDICATED UNDER PARAGRAPH 2 OF "PROCEDURE FOR CONSTRUCTION OF FILL TOWNSHIP ROAD 286" AT THE OPTION AND EXPENSE OF THE CONTRACTOR. ADDITIONAL PLAT-FORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER.

MATERIALS LUMBER FOR THE BASE SHALL BE 1" NOM. T.&G. SOUND LUMBER PIPE SHALL BE 2-1/2" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE, 36"x36"x1/8", MAY BE FURNISHED INSTEAD OF LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHOD THE 3'x3' PLATFORM SHALL CONFORM WITH THE DETAILS SHOWN ON THE PLANS. THE PLATFORM SHALL BE CAREFULLY SET AND LEVELED. THE PIPES, FIRMLY SECURED BY FLANGES TO THE PLAT-FORMS, SHALL BE KEPT PLUMB. IF THE PLATFORMS OR PIPES ARE DISTURBED DURING CONSTRUCTION THEY SHALL BE RESTORED TO THEIR PROPER CON-DITION. PIPES SHALL BE MARKED AT INTERVALS BY THE CONTRACTOR TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL AND SETTLEMENT. THE

CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE SETTLEMENT PLATFORMS HAVE BEEN DISTURBED OR DAMAGED UNTIL THE NECESSARY MAINTENANCE OR REPLACEMENT HAS BEEN PERFORMED.

PRIOR TO PAVING, THE SETTLEMENT PLATFORM EXTENSION SHALL BE CUT OFF TWO (2) FEET BELOW THE TOP OF THE FINISHED SURFACE OF THE SUB-GRADE OR TOP SOILED SURFACE, WHICH EVER IS APPLICABLE.

METHOD OF MEASUREMENT THE AMOUNT TO BE INCLUDED UNDER THE ITEM OF SETTLEMENT PLATFORMS SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED AND ACCEPTED, AS CALLED FOR ON THE PLANS OR DIRECTED BY THE ENGINEER. NO PAYMENT WILL BE MADE FOR SETTLEMENT PLATFORMS WHICH ARE DISPLACED OR DESTROYED BY THE CONTRACTOR'S OPER-ATIONS DURING CONSTRUCTION.

BASIS OF PAYMENT SETTLEMENT PLATFORMS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "SETTLEMENT PLATFORMS" WHICH PRICE SHALL INCLUDE FURNISHING AND INSTALLING, INCLUDING ALL MATERIALS, EQUIPMENT, TOOLS AND LABOR INCIDENTAL THERETO AND MAINTAINING AND REPLACING THEM SUBSE-QUENTLY, IF DEEMED NECESSARY BY THE ENGINEER, AND BURNING AND REMOV-ING EXTENSIONS AS DIRECTED BY THE ENGINEER.

READINGS ON THE PLATFORMS SHALL BE MADE BY THE HIGHWAY DEPART-MENT DIVISION CONSTRUCTION PERSONNEL.

PROCEDURE FOR CONSTRUCTION OF FILL TOWNSHIP ROAD 286

1. EXCAVATE TO ELEVATION 838.0 AN AREA DEFINED BY STATION AND OFFSET FROM CENTERLINE OF SURVEY OF TOWNSHIP ROAD 286 AS FOLLOWS: STATION 8+50 TO STATION 11+50 AND THIRTY (30) FEET EACH SIDE OF CENTERLINE.
2. CONSTRUCT THREE SETTLEMENT PLATFORMS PLACED AS FOLLOWS: STATION 8+85, 15 FEET LEFT; STATION 10+00, 0 FEET; STATION 11+15, 15 FEET RIGHT.
3. PLACE AND COMPACT EMBANKMENTS FOR BOTH TUS 250-17.23 AND TOWNSHIP ROAD 286 IN ACCORDANCE WITH PERTINENT CONSTRUCT-ION SPECIFICATIONS EXCEPT THAT THE EMBANKMENT FOR THE TOWNSHIP ROAD 286 SHALL BE CONTINUOUS ACROSS PROPOSED TUS 250-17.23 UP TO THE LEVEL OF SUBGRADE AT THE ABUTMENTS.
4. PROVIDE A MINIMUM WAITING PERIOD OF SIX MONTHS DURING WHICH READINGS WILL BE TAKEN ON THE SETTLEMENT PLATFORMS TO DETERMINE AMOUNT AND RATE OF SETTLEMENT.
5. REMOVAL OF EMBANKMENT BETWEEN BRIDGE LIMITS AND THE COMMENCEMENT OF WORK ON SUBSTRUCTURE UNITS SHALL DEPEND UPON RESULTS OBTAINED FROM THE SETTLEMENT PLATFORMS AND SHALL NOT BE STARTED UNTIL AUTHORIZED BY THE DIRECTOR. THE PLACEMENT AND REMOVAL OF THE EMBANKMENT BETWEEN THE STRUCTURE SPILL THRU SLOPES, EXCLUSIVE OF STRUCTURE EXCAVATION, IS INCLUDED IN THE ROADWAY EXCAVATION AND BORROW QUANTITIES.
6. EXCAVATE FOR ABUTMENT AND PIER FOOTINGS.

FILL IN STANDING WATER-STATIONS 1047+00 TO 1055+00 AND T.R. 286 STA. 7+00 TO 9+50

GRANULAR MATERIAL OR ROCK SHALL BE USED TO START THE FILL IN AREAS OF STANDING WATER. THE GRANULAR MATERIAL OR ROCK MAY BE PLACED BY THE METHOD OF END DUMPING TO A LEVEL 2 FT. ABOVE THE WATER SURFACE. PAYMENT FOR GRANULAR MATERIAL OR ROCK USED IN THESE AREAS SHALL BE MADE AT THE PRICE BID FOR ITEM 203 EXCAVATION AND/OR 203 BORROW, WHERE END DUMPING IS PERMITTED NORMAL CLEARING AND GRUBBING SHALL BE PERFORMED BUT REQUIREMENTS OF 201.04 FOR SCALPING AND COMPACTION OF THE FOUNDATION SHALL BE WAIVED.

COAL IN SUBGRADE

COAL MAY BE ENCOUNTERED IN SUBGRADE IN THE VICINITY OF STATION 984+00 AND POSSIBLY AT OTHER LOCATIONS ON THIS PROJECT. WHERE COAL IS ENCOUNTERED, IT SHALL BE EXCAVATED TO A DEPTH OF 2 FT. BELOW THE BOTTOM OF THE SUBBASE UNDER THE PAVEMENT AND PAVED SHOULDERS AND SHALL BE REPLACED WITH APPROVED EMBANKMENT MATERIAL.

CONNECTIONS TO EXISTING PIPE

AT PLACES WHERE THE PLANS PROVIDE FOR PROPOSED PIPE TO BE CONNECTED TO EXISTING PIPE, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE HE STARTS TO LAY THE PROPOSED PIPE. THE COST OF THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT 603 CONDUIT ITEM.

GENERAL NOTES (CONT'D)

RIGHT-OF-WAY PARCEL NO 131 WL

The area contained in parcel No 131 WL will not be available to the Contractor to perform work within the limits of this parcel until July 1, 1967.

SEEDING

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN LINES TEN (10) FEET OUTSIDE THE WORK LIMITS, AS SHOWN ON THE CROSS SECTIONS, OR TO THE RIGHT OF WAY LINE IF SUCH LINE IS LESS THAN TEN (10) FEET FROM THE WORK LIMITS, EXCEPT AS NOTED BELOW:

- (A) STATION 863+00 TO 897+00, 6 FEET EACH SIDE OF THE NEW PAVEMENT
- (B) RAMPS "B" AND "C" OF USR 250-8 INTERCHANGE - 6 FEET EACH SIDE OF PAVEMENT IN NEW CONSTRUCTION.
- (C) SEEDING WITHIN THE CONSTRUCTION LIMITS ONLY
- | | |
|--------------------|---------------|
| (1) MARGINAL ROAD | 4+50 TO 20+94 |
| (2) COUNTY ROAD 64 | 0+50 TO 10+80 |
| (3) COUNTY ROAD 68 | 0+12 TO 2+00 |
| (4) USR 250 | 2+50 TO 9+62 |
| (5) T.R. 286 | 1+75 TO 18+20 |

ITEM 203 PROOF ROLLING

AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE IN PROOF ROLLING OF SUBGRADE FOR THE MAINLINE AND RAMP PAVEMENTS, AND FOR PAVED SHOULDERS, IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 801.

ESTIMATED QUANTITIES

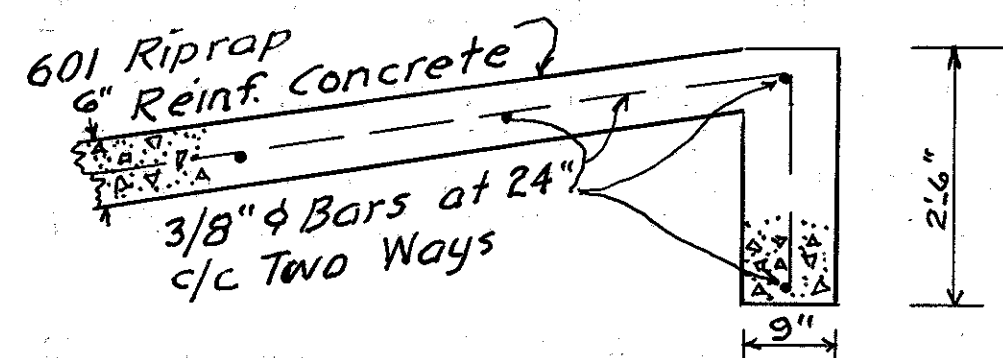
Specific locations and usage of estimated quantities set up on this plan to be used "as directed by the Engineer" shall be made a matter of record by incorporation into the final change order governing completion of this project.

None of these quantities shall be ordered by the Contractor until authorized by the Engineer.

STEPS IN DEEP CATCH BASINS

ALL CATCH BASINS 6 FEET DEEP OR GREATER SHALL HAVE STEPS. THE STEPS SHALL BE BUILT IN ACCORDANCE WITH STANDARD DRAWING MH-1. THE PRICE OF ALL MATERIAL AND WORK FOR BUILDING THESE STEPS SHALL BE INCLUDED IN THE BID PRICE PER EACH OF THE CATCH BASINS.

CUT-OFF WALL FOR RIPRAP



DETAIL OF CUT OFF WALL

THE CUT OFF WALLS FOR "ITEM 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB AS PER PLAN" SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR THIS ITEM.

EROSION CONTROL

ITEMS 601 ARE PROVIDED IN THESE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

SPRING DRAINS, AS PER PLAN

See Sheet 10 for details of this item.

COOPERATION NOTE

The city of Uhrichsville is proposing to lay an eight (8) inch sanitary sewer across the limited access right-of-way with city's force at station 1050±. This sewer will be placed after the highway contract has been awarded. The Contractor for this project shall cooperate with city's forces by permitting this sewer to be laid & trench backfilled prior to beginning earthwork operations in this area. Any costs incurred shall be included in item 203.

MAINTENANCE OF SEWER FLOWS

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO MAINTAIN AT ALL TIMES SEWER FLOWS THROUGH EXISTING FACILITIES TO REMAIN IN PLACE AND THROUGH EXISTING FACILITIES TO BE REPLACED UNTIL NEW FACILITIES ARE COMPLETED AND PLACED IN USE.

PAYMENT FOR ANY ADDITIONAL COSTS INVOLVED IN MAINTAINING THESE FLOWS BY PUMPING OR BY ANY OTHER MEANS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE RESPECTIVE ITEMS OF 603 CONDUIT.

404 EXTRA MATERIAL FOR CORRECTING SURFACE IRREGULARITIES

EXTRA MATERIAL HAS BEEN PROVIDED TO FILL MAJOR DEPRESSIONS, ETC., IN THE PAVEMENT TO BE RESURFACED, AND SHALL BE PLACED WHERE AND AS DIRECTED BY THE ENGINEER.

CONTRACTION AND EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN EXPANSION AND CONTRACTION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES AND THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS SHALL IN ALL CASES BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWINGS AND THE SPECIFICATIONS.

ITEM SPECIAL CLEANING & DISPOSING OF SEPTIC TANKS

This item shall include cleaning, backfilling and removing all or any portion of existing septic tanks as required. All septic tanks lying within the proposed right-of-way limits shall be cleaned and emptied. Material removed from these tanks shall be classified as unsuitable and disposed of outside the right-of-way or easement lines.

When the septic tanks are located above the finished pavement or ground lines, they shall be entirely removed and disposed of in accordance with item 202.

When the tanks are located below the finished pavement or ground lines, the tops of the tanks shall be removed & the walls shall be removed to a depth of three (3) feet below the finished subgrade or ground lines. The removed material shall be disposed of as explained above. The tanks shall be backfilled with suitable soil or granular material in accordance with item 203.

This item shall be paid for at the unit price bid per each for "Item Special Cleaning and Disposing of Septic Tanks" which price and payment shall constitute full compensation for cleaning, removing and disposing of excess materials, for backfilling and for all labor, tools, equipment and incidentals necessary to complete this item including incidental excavation.

REMOVAL OF EXISTING PIPE

THE REMOVAL OF ALL EXISTING PIPE DRAINS WHICH WOULD NORMALLY BE REMOVED IN VARIOUS EXCAVATION ITEMS SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICES BID FOR THE RESPECTIVE EXCAVATION ITEMS, UNLESS OTHERWISE ITEMIZED IN THE PLANS

ITEM 310 SUBBASE, GRADING A OR B AS PER PLAN

MATERIAL FOR THIS ITEM SHALL MEET THE REQUIREMENTS OF GRADING A OR B OF SECTION 310.02 EXCEPT THAT FOR EITHER GRADING, NO MORE THAN 10% OF THE MATERIAL SHALL PASS A NO. 200 SIEVE AFTER ALL OPERATIONS OF PLACING AND COMPACTING HAVE BEEN COMPLETED.

PRIVY VAULTS

Privy vaults shall be cleaned and removed or filled as conditions require and included for payment in unit price bid for Item 203 Excavation.

PLAN CONVERSION TO 1965 SPECIFICATIONS

THE DESIGN AND PLANS FOR THIS PROJECT WERE PREPARED ON THE BASIS OF THE 1963 CONSTRUCTION AND MATERIAL SPECIFICATIONS OF THE STATE OF OHIO. THE PROJECT WILL BE SOLD AND CONSTRUCTED UNDER THE 1965 CONSTRUCTION AND MATERIAL SPECIFICATIONS.

TO ACCOMPLISH THIS, NEW SUMMARY SHEETS 21A AND 21B HAVE BEEN INSERTED IN THE PLANS AND CROSS-REFERENCED TO THE ORIGINAL SUMMARY SHEETS, TO CONVERT THE BID ITEMS SHOWN FOR THE 1963 SPECIFICATIONS TO BID ITEMS AS DEFINED IN THE 1965 SPECIFICATIONS. THE GENERAL NOTE SHEETS AND THE TITLE SHEET HAVE ALSO BEEN REVISED TO REFLECT THE REQUIREMENTS OF THE 1965 SPECIFICATIONS.

THE BRIDGE PLANS CONFORM COMPLETELY TO 1965 SPECIFICATIONS. THE BALANCE OF THE DETAILS AS SHOWN IN THESE PLANS ARE BASED ON 1963 SPECIFICATIONS.

ITEM 603 ENCASEMENT CONDUIT TYPE A, AS PER PLAN

THIS ITEM SHALL CONSIST OF ENCASING WITH CORRUGATED METAL PIPE, THE WATER MAIN CROSSING THE PROPOSED HIGHWAY LOCATED AT STA. 948+37. MATERIAL FURNISHED FOR THIS ITEM SHALL BE BITUMINOUS COATED GALVANIZED CORRUGATED METAL NESTABLE PIPE AS MANUFACTURED BY ARMCO DRAINAGE AND METAL PRODUCTS, INC. OR CULVERT DIVISION OF THE REPUBLIC STEEL CORPORATION, OR AN APPROVED EQUAL. THE MINIMUM GAUGE SHALL BE 12. THE PIPE AND COATING SHALL MEET THE APPROPRIATE MATERIAL REQUIREMENTS OF 707.04 EXCEPT THAT THE PIPE SECTIONS SHALL BE HELD TOGETHER BY STITCHES, BOLTS OR OTHER METAL FASTENER IN ACCORDANCE WITH RECOMMENDATIONS AND DETAILS OF THE MANUFACTURER.

LENGTH OF PIPE SECTIONS AND BASE METAL COMPOSITION OF THE FASTENING DEVICE SHALL ALSO BE IN ACCORDANCE WITH DETAILS OF THE MANUFACTURER.

THE WORK OF INSTALLING THE ENCASEMENT PIPE SHALL BE SO EXECUTED THAT A MINIMUM LENGTH OF THE WATER LINE SHALL BE UNSUPPORTED AT ANY ONE TIME.

THE WATER MAIN SHALL BE SUPPORTED WITHIN THE ENCASEMENT PIPE BY BLOCKING OR BRACING APPROVED BY THE ENGINEER. THE ENDS OF THE ENCASEMENT PIPE SHALL BE SEALED BY BRICK AND MORTAR, FLAT STONE, CONCRETE OR SOME OTHER SUITABLE MEANS APPROVED BY THE ENGINEER.

PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN UNIT PRICE BID FOR THE ENCASEMENT CONDUIT ITEM 603.

ITEM 605 AGGREGATE DRAINS

AGGREGATE DRAINS, WHERE CALLED FOR UNDER RIGID TYPE PAVEMENT, SHALL BE PLACED AT THE PAVEMENT JOINTS AT INTERVALS NOT TO EXCEED SIXTY (60) FEET ON EACH SIDE OF NORMAL CROWNED SECTIONS AND AT THIRTY (30) FOOT INTERVALS ON THE LOW SIDE OF SUPERELEVATED SECTIONS.

WHERE CALLED FOR UNDER FLEXIBLE TYPE PAVEMENT AGGREGATE DRAINS SHALL BE PLACED AT FIFTY (50) FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS AND AT TWENTY-FIVE (25) FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS, EXCEPT WHERE ITEM 605 PIPE UNDEDRAINS HAVE BEEN PROVIDED.

SIGN SUPPORT SYMBOLS

- SIGNS WITH ONE SUPPORT ⊥
- SIGNS WITH TWO SUPPORTS ⊥⊥
- SIGNS WITH THREE SUPPORTS ⊥⊥⊥
- SIGNS BACK TO BACK ON ONE SUPPORT ⊥

IDENTIFICATION OF TRAFFIC SIGNS

IDENTIFICATION OF ALL TRAFFIC SIGNS IS BY CODE NUMBER. NUMBERS REFER TO THE SIGN DESIGN BEARING THE SAME NUMBER.

ORIENTATION OF SIGN FACES

SIGNS SHALL BE ERECTED SO THAT THE FACE OF THE SIGN IS VERTICAL AND AT RIGHT ANGLE TO THE CENTER OF THE LANE WHICH THE SIGN SERVES EXCEPT WHERE OTHERWISE NOTED. WHEN LANES DIVIDE AND ON SHARP HORIZONTAL CURVES, SIGN FACES SHALL BE PLACED PERPENDICULAR TO THE TANGENT POINT OF THE CURVE AT THE STATION LOCATION, SO AS TO BE MOST EFFECTIVE BOTH DAY AND NIGHT.

ITEM DESCRIPTIONS

Descriptions of pay items for this project shall be as designated on sheets 21A & 21B and shall supersede any item description shown otherwise throughout these plans.

GALVANIZED SUPPORTS

THE STRUCTURAL STEEL BEAM SUPPORTS INCLUDING THE 2" PB, 3" AND 3" PB DRIVE POSTS SHALL BE GALVANIZED (AFTER PUNCHING) IN ACCORDANCE WITH ASTM A-123. ALL BOLTS, NUTS, PLAIN AND LOCKWASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-53, EXCEPT WHERE ALUMINUM OR STAINLESS STEEL IS REQUIRED. DELINEATOR DRIVE POSTS SHALL BE GALVANIZED.

STRUCTURAL SIGN SUPPORT QUANTITIES

QUANTITIES FOR ITEM 816 STRUCTURAL BEAM SUPPORTS APPEARING IN THE SUMMARY TABLES ARE APPROXIMATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT SUPPORT LENGTHS PRIOR TO FABRICATION AND GALVANIZING OF SUPPORTS. DETAILS FOR PLAN QUANTITIES AND ALTERNATE DETAILS ARE SHOWN ON SHEET NO. 16 (MS-1).

816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS

PAYMENT FOR THIS ITEM SHALL BE BASED ON PLAN DIMENSIONS (OR DIMENSIONS AS MODIFIED BY THE ENGINEER) IN LIEU OF PLAN QUANTITIES AS SPECIFIED IN SUPPLEMENTAL SPECIFICATION 816. PAYMENT FOR REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR FOUNDATIONS.

TRAFFIC SIGN ERECTION

THE CONTRACTOR SHALL ERECT SIGN PANELS FURNISHED BY OTHERS AS NOTED ON THE SCHEMATIC SIGNING LAYOUT SHEET NO. 225. THE PANELS SHALL BE MOUNTED ON THE BRACKETS OR BEAM SUPPORTS PROVIDED IN THE PLANS.

A SCHEDULE FOR SIGN ERECTION SHALL BE SUBMITTED TO THE DIVISION TRAFFIC ENGINEER AND THE BUREAU OF TRAFFIC, 450 EAST TOWN STREET, COLUMBUS, OHIO, 60 CALENDAR DAYS PRIOR TO THE START OF ANY SCHEDULED ERECTION WORK. THE SCHEDULE SHALL INCLUDE PROPOSED DATES, TIME, SIGN NUMBERS AND DELIVERY POINT.

THE PRICE BID PER SQUARE FOOT FOR ITEM 815 SIGN ERECTION BY TYPE, AS PER PLAN, SHALL INCLUDE ALL NECESSARY EQUIPMENT, MANPOWER, AND TOOLS TO ERECT THE SIGNS NOTED. ALL SIGN MATERIAL AND ACCESSORIES WILL BE FURNISHED AND TRANSPORTED TO A DESIGNATED DELIVERY POINT, ON OR NEAR THE SUBJECT PROJECT, BY OTHERS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE HANDLING AND STORAGE OF THE SIGN PANELS AND ACCESSORIES FROM THE TIME OF ARRIVAL AT THE DELIVERY POINT.

ANY UNUSED MATERIALS SHALL BE RETURNED TO THE STATE HIGHWAY GARAGE IN TUSCARAWAS COUNTY AT NEW PHILADELPHIA, OHIO.

FARM DRAINS

All farm drains which are encountered during construction shall be provided with unobstructed outlets under the direction of the Engineer. Existing collectors which are located below the roadway ditch elevations and which cross the roadway shall be replaced within the right-of-way limits by Item 603 Conduit, Type B with Class B Bedding, one commercial size larger than the existing conduit.

Existing collectors and isolated farm drains which are encountered above the elevation of the roadway ditches shall be outletted into the roadway ditch by 603 Type F Conduit. The optimum outlet elevation shall be, if possible, one foot above the flowline elevation of the ditch. Lateral tile fields which cross the roadway shall be intercepted by 603 Type E Conduit and carried in a longitudinal direction to adequate outlet or roadway crossing.

The location, type, size and grade of required replacements shall be determined by the Engineer during construction and payment shall be made on final measurements.

The following estimated quantities have been included in the General Summary for the work noted above:

Item 603 6" Conduit, Type B with Class B Bedding 200 Lin. Ft.

Item 603 6" Conduit, Type E 400 Lin. Ft.

Item 603 8" Conduit, Type F 40 Lin. Ft.

And necessary Pipe Specials which shall be included for payment in the pertinent conduit item.

None of the above materials shall be ordered by the Contractor until requested by the Engineer.

CALCULATIONS

*100 % STATE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

20

BEGIN PROJECT STA. 888+05.17
END PROJECT - STA. 1103+38.70
NET LENGTH OF PROJECT = 21,533.53 Lin. Ft.

WESTBOUND LANE STA. 863+00 TO STA. 888+05.17 = 2,505.17 Lin. Ft.
Deduct for Bridges & Approach Slabs = 155.50 Lin. Ft.
NET LENGTH OF TWO LANE PAVEMENT = 2,349.67 Lin. Ft.
4 LANE PAVEMENT STA. 888+05.17 TO STA. 1103+38.70 = 21,533.53 Lin. Ft.
Deduct for Bridges & Approach Slabs = 542.43 Lin. Ft.
NET LENGTH OF 4 LANE PAVEMENT = 20,991.10 Lin. Ft.

T-71-9" REINFORCED CONCRETE PAVEMENT
2,349.67 x 24÷9 = 6,266 Sq. Yds.
20,991.10 x 48÷9 = 111,953 Sq. Yds.
Ramp "B" & Exit Lane U.S.R. 250, S.R.8 Int. (See Sheet No. 142) = 2,093 Sq. Yds.
Ramp "D" & Ent. Lane U.S.R. 250, S.R.8 Int. (See Sheet No. 144) = 2,370 Sq. Yds.
Entrance & Exit Lanes - Midvale Int. (See Sheet No. 156) = 2,868 Sq. Yds.
Ramp "A" - Midvale Int. (See Sheet No. 157) = 1,993 Sq. Yds.
Ramp "B" - Midvale Int. (See Sheet No. 161) = 1,870 Sq. Yds.
Ramp "C" - Midvale Int. (See Sheet No. 164) = 1,885 Sq. Yds.
Ramp "D" - Midvale Int. (See Sheet No. 167) = 1,320 Sq. Yds.
Entrance & Exit Lanes - Midvale Int. (See Sheet No. 170) = 2,018 Sq. Yds.
County Road 68 Extension (See Sheet No. 171) = 2,629 Sq. Yds.

TOTAL T-71 PAVEMENT = 137,265 Sq. Yds.

STATION		SIDE	PAVED SHOULDERS								STATION		Item Spec. Drain. Conn. No.6 Aggr. C.Y.	REMARKS
			T-31 Aggr. C.Y.	T-31 Bituminous Material GAL	B-21 Waterproofed Aggr. Base Crs C.Y.	B-19 Aggr. Base Crs. C.Y.	I-22 Subbase Grading A or B C.Y.	I-22 Subbase Reg. Grading C.Y.						
863+00	871+46 W.B.	L.T.	6	189	63	119	36	56	863+00	871+42 W.B.	WB.	35		
878+46	878+90.44 W.B.	L.T.	1	10	3	6	2	3	878+46	878+90 W.B.	WB.	2		
880+45.94	954+20 W.B.	L.T.	52	1639	546	1043	345	599	880+48	881+46 W.B.	WB.	5		
964+20	978+41.32 W.B.	L.T.	11	350	117	221	76	116	893+95	954+20 W.B.	WB.	296		
987+42	1029+80.65 W.B.	L.T.	30	942	314	610	158	396	965+45	978+41.32 W.B.	WB.	64		
1031+93.29	1103+38.70 W.B.	L.T.	51	1588	529	1021	295	638	1008+00	1029+55 W.B.	WB.	107		
									1032+48	1078+00 W.B.	WB.	227		
863+00	878+90.44 W.B.	R.T.	6	177	59	118	22	59						
880+45.94	981+8.03 W.B.	R.T.	36	1119	373	746	166	264	888+70	895+41 E.B.	E.B.	32		
983+66.94	1029+74.67 W.B.	R.T.	16	512	171	341	175	72	907+02.96	948+80 E.B.	E.B.	207		
1031+87.31	1103+38.70 W.B.	R.T.	25	795	265	530	225	126	964+10	979+61 E.B.	E.B.	77		
									993+27.95	1029+35 E.B.	E.B.	170		
888+05.17	981+07.31 E.B.	L.T.	33	1034	345	689	167	225	1031+96	1103+38.70 E.B.	E.B.	339		
983+17.97	1029+64.69 E.B.	L.T.	17	516	172	344	64	176						
1031+77.33	1103+38.70 E.B.	L.T.	25	796	265	530	89	246						
888+05.17	897+02.96 E.B.	R.T.	8	235	78	149	45	74						
907+02.96	955+10.00 E.B.	R.T.	34	1068	356	678	234	387						
964+10	981+00.88 E.B.	R.T.	13	410	137	260	91	136						
993+27.95	1029+58.71 E.B.	R.T.	26	807	269	513	180	263						
1031+71.35	1103+38.70 E.B.	R.T.	51	1593	531	1003	362	520						
Ramp "B" & Exit Lane - U.S.R. 250, S.R.8 Int.			7	220	146	45	99	58				76	See Sheet No. 142	
Ramp "D" & Ent. Lane - U.S.R. 250, S.R.8 Int.			10	319	213	67	132	94				105	See Sheet No. 144	
Ent. & Exit Lanes - Midvale Int.			13	397	265	106	89	158				68	See Sheet No. 156	
Ramp "A" - Midvale Int.			6	176	117	32	99	31				71	See Sheet No. 157	
Ramp "B" - Midvale Int.			5	156	104	26	93	24				68	See Sheet No. 161	
Ramp "C" - Midvale Int.			5	167	112	27	94	29				66	See Sheet No. 164	
Ramp "D" - Midvale Int.			4	105	70	18	63	16				45	See Sheet No. 167	
Ent. & Exit Lanes - Midvale Int.			11	346	230	77	130	124				103	See Sheet No. 170	
TOTALS				502	15,666	5850	9319	3531	4890			2163		

T-31 AGGREGATE
County Road 68 Extension (See Sheet No. 171) = 5 Cu. Yds.
TOTAL T-31 AGGREGATE (TUS 250-17.23) = 5 Cu. Yds.
*County Road 64 (See Sheet No. 176) = 3 Cu. Yds.
TOTAL T-31 AGGREGATE (Co. Rd. 64) = 3 Cu. Yds.*

T-31 BITUMINOUS MATERIAL
County Road 68 Extension = 181 Gals. - See Typ. Sec. Sh. 5
TOTAL T-31 BITUMINOUS MATERIAL (TUS 250-17.23) = 181 Gals.
*County Road 64 = 97 Gals. - See Typ. Sec. Sh. 6
TOTAL T-31 BITUMINOUS MATERIAL (Co. Rd. 64) = 97 Gals.*

T-35 ASPHALTIC CONCRETE SURFACE TYPE A (85-100)
Marginal Road (See Sheet No. 147) = 152 Cu. Yds.
Township Road 286 (See Sheet No. 188) = 129 Cu. Yds.
TOTAL T-35 TYPE A (85-100) (TUS-250-17.23) = 281 Cu. Yds.

T-35 ASPHALTIC CONCRETE SURFACE TYPE C (70-85)
*County Road 64 = 130 Cu. Yds.
*County Road 68 (See Sheet No. 176) = 32 Cu. Yds.
TOTAL T-35 TYPE C (70-85) (Co. Rd. 64 & Co. Rd. 68) = 162 Cu. Yds.*

B-35 ASPHALTIC CONCRETE BASE (70-85)
*County Road 64 = 106 Cu. Yds.
*County Road 68 = 46 Cu. Yds.
TOTAL B-35 BASE (70-85) (Co. Rd. 64 & Co. Rd. 68) = 152 Cu. Yds.*

B-35 ASPHALTIC CONCRETE LEVELING (85-100)
Marginal Road = 260 Cu. Yds.
TOTAL B-35 LEVELING (85-100) (TUS-250-17.23) = 260 Cu. Yds.

B-35 ASPHALTIC CONCRETE LEVELING (70-85)
*County Road 64 = 119 Cu. Yds.
*County Road 68 = 49 Cu. Yds.
TOTAL B-35 LEVELING (70-85) (Co. Rd. 64 & Co. Rd. 68) = 168 Cu. Yds.*

B-19 AGGREGATE BASE COURSE
Marginal Road = 869 Cu. Yds.
County Road 68 Extension = 134 Cu. Yds.
Township Road 286 = 734 Cu. Yds.
TOTAL B-19 AGGREGATE (TUS-250-17.23) = 1737 Cu. Yds.
*County Road 64 = 282 Cu. Yds.
*County Road 68 = 127 Cu. Yds.
TOTAL B-19 AGGREGATE (Co. Rd. 64 & Co. Rd. 68) = 409 Cu. Yds.*

T-30 BITUMINOUS PRIME COAT
Marginal Road = 1497 Gals.
County Road 68 Extension = 241 Gals.
Township Road 286 = 1239 Gals.
TOTAL T-30 PRIME (TUS-250-17.23) = 2977 Gals.
*County Road 64 = 504 Gals.
*County Road 68 = 221 Gals.
TOTAL T-30 PRIME (Co. Rd. 64 & Co. Rd. 68) = 725 Gals.*

T-30 BITUMINOUS TACK COAT
*County Road 64 = 262 Gals.
*County Road 68 = 38 Gals.
TOTAL T-30 TACK (Co. Rd. 64 & Co. Rd. 68) = 300 Gals.*

EARTHWORK & SEEDING									
STATION		Excavation	Chan. Excav.	Embankment	Dumped Rock			Seeding	Fertilizer
FROM	TO	Cu. Yds.	Cu. Yds.	Cu. Yds.	Cu. Yds.			Sq. Yds.	Tons
847+75	878+90.44	3,551	—	8,870	—			13,756	1.24
880+45.94	981+65	93,502	—	205,218	—			186,883	16.82
982+75	1030+17	739,040	—	240,919	—			116,784	10.51
1031+60	1103+38.70	23,243	—	449,670	—			146,360	13.17
Channel Exc. - Sh. 23		3,717							
Sub Total TUS-250-17.23		863,053	—	904,677	—			463,783	41.74
*County Road 64		1,619	—	52	—			3,251	0.29
*County Road 68		57	—	0	—			400	0.04
*Sub Total Co. Rd. 64 & Co. Rd. 68		1,676	—	52	—			3,651	0.33
TOTALS		864,729	—	904,729	—			467,434	42.07

Borrow : TUS-250-17.23 = 904,729 + 10% = 995,202 - 864,729 = 130,473 Cu. Yds.

I-22 SUBBASE (REGULAR GRADING) * 100 % STATE

County Road 68 Extension = 460 Cu.Yds.
Township Road 286 (Under Approach Slabs) = 25 Cu.Yds.
TOTAL I-22 SUBBASE (REGULAR GRADING) (TUS-250-17.23) 485 Cu.Yds.
* County Road 64 = 161 Cu.Yds.
* County Road 68 = 96 Cu.Yds.

TOTAL I-22 SUBBASE (REGULAR GRADING) (Co.Rd.64 & Co.Rd.68) 257 Cu.Yds. *

I-22 SUBBASE (GRADING A or B) - Under Pavement & Approach Slabs (Excepting Appr. Slabs for Beaverdam Creek Br.)

TUS-250-17.23: Westbound Lanes = 10,920 C.Y., Eastbound Lanes = 9,874 C.Y. Sub-Total = 20,794 C.Y.

U.S.R.250, S.R.8 Int.: Ramp B = 157 C.Y., Exit Lane = 212 C.Y., Escape Lane = 28 C.Y.

Ramp D = 162 C.Y., Entrance Lane = 289 C.Y. Sub-Total = 848 C.Y.

Midvale Int.: Ent. Lane = 256 C.Y., Ramp A = 339 C.Y., Exit Lane = 265 C.Y., Ramp B = 289 C.Y.,

Escape Lane = 28 C.Y., Ramp C = 321 C.Y., Ent. Lane = 276 C.Y., Ramp D = 198 C.Y.,

Exit Lane = 218 C.Y., Escape Lane = 28 C.Y. Sub-Total = 2,218 C.Y.

TOTAL I-22 SUBBASE (GRADING A or B) (TUS-250-17.23) 23,860 Cu.Yds.

E-I COMPACTED SUBGRADE

TUS-250, Ramps, Ent. & Exit Lanes, & Paved Shoulders = 197,301 Sq.Yds.

Marginal Road = 3,659 Sq.Yds.

County Road 68 Extension = 2,629 Sq.Yds.

Township Road 286 = 3,244 Sq.Yds.

TOTAL E-I COMPACTED SUBGRADE (TUS-250-17.23) 206,833 Sq.Yds.

* County Road 64 = 847 Sq.Yds.

* County Road 68 = 44 Sq.Yds.

TOTAL E-I COMPACTED SUBGRADE (Co.Rd.64 & Co.Rd.68) 891 Sq.Yds. *

I-9 STONE UNDERDRAINS NO.2

Marginal Road (Estimated) = 352 Lin.Ft.

County Road 68 Extension (Estimated) = 367 Lin.Ft.

Township Road 286 (Estimated) = 410 Lin.Ft.

TOTAL I-9 STONE UNDERDRAINS NO.2 (TUS-250-17.23) (Estimated) 1129 Lin.Ft.

E-9 TREE REMOVAL (See Sheet No.18) TOTAL (TUS-250-17.23) Lump Sum

E-II WATER (Quantities X 5 ÷ 1000 = M Gals.)

	TUS-250-17.23	Marginal Road	County Road 68 Ext.	Township Road 286
Embankment	811,233 = 4,056 M-Gal.	3,713 = 19 M-Gal.	13,516 = 68 M-Gal.	76,215 = 381 M-Gal.
B-19 Aggregate	9,319 = 47 M-Gal.	869 = 4 M-Gal.	134 = 1 M-Gal.	734 = 4 M-Gal.
I-22 Subbase	32,281 = 161 M-Gal.	0 = 0 M-Gal.	460 = 2 M-Gal.	25 = 1 M-Gal.
SUB-TOTALS	4,264 M-Gal.	23 M-Gal.	71 M-Gal.	386 M-Gal.

TOTAL E-II WATER (TUS-250-17.23) 4,744 M-Gals.

	* County Road 64	* County Road 68
Embankment	52 = 1 M-Gal.	0 = 0 M-Gal.
B-19 Aggregate	282 = 1 M-Gal.	127 = 1 M-Gal.
I-22 Subbase	161 = 1 M-Gal.	96 = 1 M-Gal.
* SUB-TOTALS	3 M-Gal.	2 M-Gal.

TOTAL E-II WATER (Co.Rd.64 & Co.Rd.68) 5 M-Gals. *

I-4 DUST CONTROL

Water (Estimated) TOTAL (TUS-250-17.23) 700 M-Gals.

Calcium (Estimated) TOTAL (TUS-250-17.23) 65 Tons

CE-101.04 COMPACTION USING HEAVY PNEUMATIC TIRED ROLLER

TOTAL CE-101.04 (TUS-250-17.23) (197,301 ÷ 2000) 99 Hrs.

I-25 WOVEN WIRE FENCE, TYPE 47

From Sheet No.	Lin.Ft.
288	1,225
289	1,602
290	1,600
291	1,084
297	684
298	932
301	1,074
302	400
303	2,094
304	3,270
305	3,203
306	3,201
307	3,194
308	679

TOTAL I-25 WOVEN WIRE FENCE, TYPE 47 (TUS-250-17.23) = 24,242 Lin.Ft.

288 293

TOTAL I-25 WOVEN WIRE FENCE, TYPE 47 (USR 250, SR8) = 293 Lin.Ft. *

I-26 CHAIN LINK FENCE

From Sheet No.	Lin.Ft.
288	807
289	1,615
290	1,602
291	2,123
295	3,080
297	1,519
298	568

TOTAL I-26 CHAIN LINK FENCE (TUS-250-17.23) = 11,314 Lin.Ft.

297 296

TOTAL I-26 CHAIN LINK FENCE (U.S.R.250, S.R.8) = 296 Lin.Ft. *

REMOVAL OF BUILDINGS			TYPE CODE 7221	
ITEM	PARCEL NO.	DESCRIPTION		
202	LUMP 123-WL	REMOVAL: 1 One Story Block Residence		
202	LUMP 127-WL	REMOVAL: 1 Tile Garage		
202	LUMP 128-WL	REMOVAL: 1 Frame Barn, 1 Brick Building		
202	LUMP 135-WL	REMOVAL: 1 Two Story Frame Residence, 1 One Story Frame Commercial Building		
202	LUMP 138-WL	REMOVAL: 1 Two Story Frame Residence, 1 Frame Garage		
202	LUMP 141-WL	REMOVAL: 1 One Story Frame Residence		
202	LUMP 142-WL	REMOVAL: 1 One Story Brick Residence		
202	LUMP 144-WL	REMOVAL: 1 Two Story Frame Residence		
202	LUMP 145-WL	REMOVAL: 1 One and one-half Story Frame Residence, 1 Frame Garage		
202	LUMP 146-WL	REMOVAL: 1 Two Story Frame Residence, 1 Frame Barn, 1 Two Car Frame Garage, 1 Frame Shed.		
202	LUMP 147-WL	REMOVAL: 1 Two Story Frame Residence		
202	LUMP 148-WL	REMOVAL: 1 Tile Building, 1 Tile Garage, 1 Shed		
202	LUMP 150-WL	REMOVAL: 1 Brick Church		
202	LUMP 153-WL	REMOVAL: 1 One and one-half story frame Residence, 1 Concrete Block Garage.		
202	LUMP 158-WL	REMOVAL: 1 One and one-half Story Frame Residence		
202	LUMP 159-WL	REMOVAL: 1 Frame Barn and Silo, Two Frame Sheds.		
202	LUMP 162-WL	REMOVAL: 1 Frame Shed, 1 Frame Privy		
202	LUMP 165-WL	REMOVAL: 1 One and one-half Story Frame Residence, 1 Frame Garage, 1 Tile Shed.		
202	LUMP 171-WL-WA	REMOVAL: 1 Brick Kiln, 1 One Story Brick Shed		
202	LUMP 173-WL-WA	REMOVAL: 1 One and one-half Story Concrete Block Barn, 1 One story Frame Residence with attached Frame Garage, Two frame Sheds		
202	LUMP 174-WL-WA	REMOVAL: 1 One Story Frame Residence, 1 One Story Block Building, 1 Block and Frame Barn, 1 Silo, 1 One Story Frame Shed, 1 Brick and Frame Corn Crib		
202	LUMP 177-WL	REMOVAL: 1 Two Story Frame and Brick Residence, Three Chicken Houses.		

I-10 DUMPED ROCK CHANNEL PROTECTION

From Sheet No.	Cu.Yds.
290	16.6
291	25.7
295	21.0
298	4.3
303	21.2
304	7.0
305	10.3
306	11.6

TOTAL I-10 DUMPED ROCK CHANNEL PROTECTION (TUS-250-17.23) = 117.7 Cu.Yds.

Note: Omit barbed wire for Type 1 & Type 2 stream & ditch crossings where Chain Link Fence is used. Use 118

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

TUS-250-17.23

21

I-127 DELINEATORS

TUS-250 MAIN LINE

SIDE	STATION		SPACING (Ft.)	POST
	FROM	TO		
Lt.	863+00	871+00	200	5
Rt.	888+50	894+50	200	4
Rt.	964+50	978+50	200	8
Lt.	967+00	977+00	200	6

TOTAL 23

U.S.R.250, S.R.8 INTERCHANGE

SIDE	STATION		SPACING (Ft.)	POST	
	FROM	TO		C-2	C-3
Ramp "B"	Rt.	1+60	4+60	30	11
	Rt.	4+90	5+45	55	2
	Rt.	6+00	6+80	80	2
	Lt.	6+80	10+00	80	5
Ramp "D"	Lt.	10+80	13+80	100	4
	Lt.	1+10	3+80	30	10
	Lt.	4+35	5+95	80	3
	Rt.	5+95	7+55	80	3
Rt.	Rt.	8+55	16+55	100	9
	Rt.	17+55	—	—	1

TOTALS 49 1

MIDVALE INTERCHANGE

SIDE	STATION		SPACING (Ft.)	POST	
	FROM	TO		C-2	C-3
Ramp "A"	Lt.	0+00	—	—	1
	Lt.	1+00	10+00	100	10
	Lt.	10+80	12+40	80	3
	Rt.	12+40	14+80	80	4
Ramp "B"	Lt.	14+80	17+80	100	4
	Lt.	18+40	19+30	30	4
Ramp "B"	Rt.	0+00	16+00	100	17
	Rt.	0+75	2+25	30	6
Ramp "C"	Rt.	2+85	4+45	80	3
	Lt.	4+45	7+65	80	5
	Rt.	7+65	9+25	80	3
	Rt.	M981+25	M982+25	100	2
* Ramp "D"	Rt.	M983+25	M992+25	100	10
	Rt.	M993+25	—	—	1
	Rt.	1+25	2+25	100	2
	Rt.	3+25	4+85	80	3
* Lt.	Lt.	4+85	7+25	80	4
	Lt.	8+05	8+85	80	2
	Lt.	9+85	—	—	1
	Lt.	10+85	13+85	100	4

TOTALS 82 2

GRAND TOTALS

A-1 Posts = 23

C-2 Posts = 131

C-3 Posts = 3

* 5 Ea. C-2 Bracket Mounted

CALCULATIONS

1965 SPECIFICATIONS GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TUS-250-17.23

21A

ITEM	100 % STATE	CODE Y005	CODE 7221	GRAND TOTAL	UNIT	DESCRIPTION	From Sh. 142.22, 23, 24 & 25 Line 142
~ ROADWAY ~							
201			LUMP	LUMP	LUMP	CLEARING AND GRUBBING	14
202			LUMP	LUMP	LUMP	EXISTING STRUCTURES REMOVED	182
202			3	3	CU.YDS.	PORTIONS OF EXISTING STRUCTURES REMOVED	179
202	50		196	246	LIN.FT.	PIPE REMOVED, 15" AND UNDER	20
202			635	635	LIN.FT.	PIPE REMOVED, OVER 15"	21
202	3			3	EACH	CATCH BASINS REMOVED	175
203	1,676		863,053	864,729	CU.YDS.	EXCAVATION INCLUDING EMBANKMENT CONSTRUCTION, AS PER PLAN	1475
203			130,473	130,473	CU.YDS.	BORROW	8
203	891		207,385	208,276	SQ.YDS.	SUBGRADE PREPARATION	2
203	3		4,688	4,691	M.GALS.	WATER	17
203			99	99	HOURS	PROOF ROLLING	69
410			450	450	CU.YDS.	TRAFFIC COMPACTED SURFACE, TYPE A or B	251
410			1,350	1,350	CU.YDS.	TRAFFIC COMPACTED SURFACE, TYPE C	252
604			6	6	EACH	STANDARD MONUMENT ASSEMBLIES	29
604			21	21	EACH	CENTERLINE REFERENCE MONUMENTS, AS PER PLAN	28
606			16,475.0	16,475.0	LIN.FT.	GUARD RAIL, TYPE 4	31
606			312.50	312.50	LIN.FT.	GUARD RAIL, TYPE 4, BARRIER DESIGN	32
607	293		24,242	24,535	LIN.FT.	FENCE, TYPE 47, AS PER PLAN	34
607	296		11,314	11,610	LIN.FT.	FENCE, TYPE CL	35
616			700	700	M.GALS.	WATER	24
616			65	65	TONS	CALCIUM CHLORIDE	25
620			23	23	EACH	MONO-DIRECTIONAL DELINEATORS, TYPE A-1, POST MOUNTED	45
620			131	131	EACH	MONO-DIRECTIONAL DELINEATORS, TYPE C-2, POST MOUNTED	46
620			3	3	EACH	MONO-DIRECTIONAL DELINEATORS, TYPE C-3, POST MOUNTED	47
620			5	5	EACH	MONO-DIRECTIONAL DELINEATORS, TYPE C-2, BRACKET MOUNTED	48
621	0.03		3.34	3.37	MILES	4" LANE LINES AND CENTER LINES	37
621	0.63		19.15	19.78	MILES	EDGE LINES	38
621			2102	2102	LIN.FT.	CHANNELIZING LINES	40
621	0.29			0.29	MILES	BARRIER LINES	43
621			LUMP	LUMP	LUMP	CURB AND ISLAND MARKING	41
621			LUMP	LUMP	LUMP	BROAD TRANSVERSE STRIPES	42
659	0.33	41.74		42.07	TONS	COMMERCIAL FERTILIZER (12-12-12)	58
659	1.64	208.71		210.35	TONS	AGRICULTURAL LIMING	59
659	3651	463,783		467,434	SQ.YDS.	SEEDING AND MULCHING	57
660		1,845		1,845	SQ.YDS.	SODDING	62
660		422		422	SQ.YDS.	SODDING FOR SPECIAL BERM AND SLOPE PROTECTION, AS PER PLAN	63
667		3,199		3,199	SQ.YDS.	JUTE MATTING	66
816			106	106	LIN.FT.	STRUCTURAL SUPPORTS, 4 LB. BEAM, AS PER PLAN	49
816			57	57	LIN.FT.	STEEL DRIVE POST, 3 LB. PER FOOT	50
816			422	422	LIN.FT.	STRUCTURAL SUPPORTS, 6 LB. BEAM, AS PER PLAN	51
816			122	122	LIN.FT.	STRUCTURAL SUPPORTS STEEL BEAM 10B11.5	52
816			133	133	LIN.FT.	STRUCTURAL SUPPORTS STEEL BEAM 10B17	53
816			54	54	LIN.FT.	STRUCTURAL SUPPORTS STEEL BEAM 12 WF 27	54
816			18.9	18.9	CU.YDS.	CONCRETE FOR GROUND MOUNTED SIGN SUPPORT FOUNDATIONS, AS PER PLAN	55
815			1,014	1,014	SQ.FT.	SIGN ERECTION, AS PER PLAN	56

ITEM	100 % STATE	CODE Y005	CODE 7221	GRAND TOTAL	UNIT	DESCRIPTION	From Sh. 142.22, 23, 24 & 25 Line 142
~ ROADWAY (CONT.) ~							
SPEC.			3	3	EACH	SETTLEMENT PLATFORMS	71
Spec.			12	12	Each	Cleaning and Disposing of Septic Tanks	Sh. 19
607			950	950	LIN.FT.	Woven Wire Fence, Type 47, Removed and Rebuilt, as per plan -	Sh. 25A
~ DRAINAGE ~							
601		27		27	SQ.YDS.	RIPRAP, USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN	169
601		825		825	CU.YDS.	DUMPED ROCK CHANNEL PROTECTION	168
601		875		875	LIN.FT.	PAVED GUTTER, STANDARD TYPE 1-2	172
601		50		50	LIN.FT.	PAVED GUTTER, STANDARD TYPE 3	173
602			57.8	57.8	CU.YDS.	CONCRETE MASONRY	143
603			424	424	LIN.FT.	6" CONDUIT, TYPE B WITH CLASS B BEDDING	83
603			100	100	LIN.FT.	6" CONDUIT, TYPE F	79
603			400	400	LIN.FT.	6" CONDUIT, TYPE E	84
603	762			762	LIN.FT.	8" CONDUIT, TYPE C 706.01 E.S., 706.02, or 706.08 E.S. with Class B Bedding	87
603			802	802	LIN.FT.	8" CONDUIT, TYPE F	88 & 89
603			244	244	LIN.FT.	12" CONDUIT, TYPE A WITH CLASS B BEDDING, 706.02 CLASS IV	91
603			776	776	LIN.FT.	12" CONDUIT, TYPE B WITH CLASS B BEDDING	94 & 95
603	96			96	LIN.FT.	12" CONDUIT, TYPE B WITH CLASS B BEDDING, 706.08	92
603			52	52	LIN.FT.	12" CONDUIT, TYPE F	93
603			910	910	LIN.FT.	15" CONDUIT, TYPE B WITH CLASS B BEDDING	99
603			540	540	LIN.FT.	15" CONDUIT, TYPE C WITH CLASS B BEDDING	97
603			166	166	LIN.FT.	15" CONDUIT, TYPE F	98
603	32			32	LIN.FT.	15" CONDUIT, TYPE D	100
603			50	50	LIN.FT.	18" CONDUIT, TYPE A WITH CLASS B BEDDING, 706.08	103
603			124	124	LIN.FT.	18" CONDUIT, TYPE B WITH CLASS B BEDDING	102
603			62	62	LIN.FT.	21" CONDUIT, TYPE B WITH CLASS B BEDDING	106
603			164	164	LIN.FT.	21" CONDUIT, TYPE C WITH CLASS B BEDDING	107
603			148	148	LIN.FT.	24" CONDUIT, TYPE A WITH CLASS B BEDDING, 706.08	110
603			178	178	LIN.FT.	24" CONDUIT, TYPE A WITH CLASS B BEDDING, 707.05 GAGE 14	111
603			168	168	LIN.FT.	24" CONDUIT, TYPE D, 706.08	112
603			52	52	LIN.FT.	24" CONDUIT, TYPE C WITH CLASS B BEDDING, 706.08	113
603			158	158	LIN.FT.	27" CONDUIT, TYPE A WITH CLASS B BEDDING, 706.08 or 706.02 WITH 1/2 VITRIFIED LINERS, AS PER 706.05	115
603			182	182	LIN.FT.	30" CONDUIT, TYPE A WITH CLASS B BEDDING, 706.08 or 706.02 WITH 1/2 VITRIFIED LINERS, AS PER 706.05	119
603			390	390	LIN.FT.	30" CONDUIT, TYPE A WITH CLASS B BEDDING, 706.02 CLASS III or 706.08	120
603			72	72	LIN.FT.	30" CONDUIT, TYPE A WITH CLASS B BEDDING, 706.08	121
603			202	202	LIN.FT.	30" CONDUIT, TYPE A WITH CLASS B BEDDING, 706.02 CLASS III	122
603			108	108	LIN.FT.	30" CONDUIT, TYPE B WITH CLASS B BEDDING, 706.02 CLASS III or 706.08	125
603			288	288	LIN.FT.	30" CONDUIT, TYPE C WITH CLASS B BEDDING	123
603			502	502	LIN.FT.	30" CONDUIT, TYPE C WITH CLASS B BEDDING, 706.08	124
603			152	152	LIN.FT.	36" CONDUIT, TYPE A WITH CLASS B BEDDING, 706.08 or 706.02 WITH 1/2 VITRIFIED LINERS, AS PER 706.05	128
603			170	170	LIN.FT.	36" CONDUIT, TYPE A WITH CLASS B BEDDING, 706.02 CLASS III or 706.08	131
603			192	192	LIN.FT.	42" CONDUIT, TYPE A WITH CLASS B BEDDING, 706.02 CLASS III	134
603	190			190	LIN.FT.	48" ENCASMENT CONDUIT, TYPE A, 707.04, 12 Gage, As per plan, with Class B Bedding	205
603			4	4	LIN.FT.	48" CONDUIT, TYPE C WITH CLASS B BEDDING, 706.02	135
603			166	166	LIN.FT.	60" CONDUIT, TYPE A WITH CLASS B BEDDING, 706.02 WITH 1/2 VITRIFIED LINERS, AS PER 706.05	137
603			64	64	LIN.FT.	68"x43" CONDUIT, TYPE A WITH CLASS B BEDDING, 706.04 CLASS HE III WITH VITRIFIED LINERS, AS PER 706.05	140

GENERAL SUMMARY

1965 SPECIFICATIONS
GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

21-B

TUS-250-17.23

ITEM	100% STATE	CODE 7221	GRAND TOTAL	UNIT	DESCRIPTION	From Sh 18, 22, 23 24 & 25 Line 18
~ DRAINAGE (CONT.) ~						
604	2	3	5	EACH	STANDARD NO. 2-2A CATCH BASINS	157
604	1		1	EACH	STANDARD NO. 2-2B CATCH BASINS, MODIFIED, AS PER PLAN	158
604		2	2	EACH	STANDARD NO. 2-3 CATCH BASINS	159
604		1	1	EACH	STANDARD NO. 2-4 CATCH BASIN	160
604		25	25	EACH	STANDARD NO. 8 CATCH BASINS	161
604		1	1	EACH	STANDARD NO. 2-6 CATCH BASIN, MODIFIED, AS PER PLAN	162
605		60	60	LIN. FT.	6" UNCLASSIFIED PIPE UNDERDRAIN, 707.06 or 707.12, AS PER PLAN	78
605		4,871	4,871	LIN. FT.	6" UNCLASSIFIED PIPE UNDERDRAIN, 707.06 or 707.12	82
605		41,214	41,214	LIN. FT.	6" SHALLOW PIPE UNDERDRAIN	80
605		2,518	2,518	LIN. FT.	6" DEEP PIPE UNDERDRAIN	81
605		1,129	1,129	LIN. FT.	AGGREGATE DRAINS	165
605		9	9	LIN. FT.	AGGREGATE DRAINS FOR SPRINGS, AS PER PLAN	164
~ WATER LINES ~						
814	2		2	EACH	8" GATE VALVES AND BOXES CLASS 250	192
814	1		1	EACH	4" GATE VALVE AND BOX CLASS 150	193
814	419		419	LIN. FT.	8" WATER MAIN, CLASS 22, MECHANICAL JOINT, CAST IRON	187, 194
814	636		636	LIN. FT.	6" WATER MAIN, CLASS 22, MECHANICAL JOINT, CAST IRON	188, 195
814	158		158	LIN. FT.	4" WATER MAIN, CLASS 22, MECHANICAL JOINT, CAST IRON	189, 196
814	204		204	LIN. FT.	3" WATER MAIN, CLASS 22, MECHANICAL JOINT, CAST IRON	190, 197
814	96		96	LIN. FT.	3/4" SERVICE BRANCH, GALVANIZED	191, 198
814	72		72	LIN. FT.	8" WATER MAIN REMOVED AND RELAID	201
814	30		30	LIN. FT.	6" WATER MAIN REMOVED AND RELAID	202
814	4		4	EACH	FIRE HYDRANT MOVED AND RESET	199
814	1		1	EACH	3/4" WATER METER REMOVED AND RESET	200
814	2		2	EACH	SERVICE BOXES ADJUSTED TO GRADE	207
~ PAVEMENT ~						
301		5,896	5,896	CU. YDS.	BITUMINOUS AGGREGATE BASE, 702.01 (85-100) or 702.09 RT-12, AS PER PLAN.	223
302	152	7	159	CU. YDS.	ASPHALT CONCRETE (70-85)	226
304	435	11,417	11,852	CU. YDS.	AGGREGATE BASE	220
304	2	36	58	M-GALS.	WATER	17
310	257	5,482	5,739	CU. YDS.	SUBBASE	247
310		27,391	27,391	CU. YDS.	SUBBASE, GRADING A or B AS PER PLAN	248
402		260	260	CU. YDS.	ASPHALT CONCRETE (85-100)	229
402	168	4	172	CU. YDS.	ASPHALT CONCRETE (70-85)	232
404		328	328	CU. YDS.	ASPHALT CONCRETE (85-100)	263
404	170	3	173	CU. YDS.	ASPHALT CONCRETE (70-85)	266

ITEM	100% STATE	CODE 7221	CODE Y005	GRAND TOTAL	UNIT	DESCRIPTION	From Sh 18, 22, 23 24 & 25 Line 18
~ PAVEMENT (CONT.) ~							
407	300			300	GALS.	TACK COAT, 702.04 MS-2 or RS-1; or 702.02 RC-70 or RC-250	256
408	791	3,465		4,256	GALS.	BITUMINOUS PRIME COAT, 702.09 RT-2 or RT-3	255
409	97	181		278	Gal.	Seal Coat- Bituminous Material, 702.09, RT-9 or RT-10; or 702.02, MC-800 or MC-3000.	257
409		15,804		15,804	GALS.	SEAL COAT BITUMINOUS MATERIAL, AS PER PLAN	259
409	3	513		516	CU. YDS.	SEAL COAT COVER AGGREGATE, NO. 8	260
451		137,265		137,265	SQ. YDS.	9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT	269
609		446		446	LIN. FT.	CONCRETE CURB STANDARD TYPE 6	239
609		341		341	LIN. FT.	CONCRETE CURB STANDARD TYPE 7	240
609		454		454	LIN. FT.	CONCRETE CURB STANDARD TYPE 8	241
611		1,053		1,053	SQ. YDS.	REINFORCED CONCRETE APPROACH SLABS (7'-13")	235
612		64		64	SQ. YDS.	CONCRETE MEDIAN	244
SPEC		2,163		2,163	CU. YDS.	DRAINAGE CONNECTION USING NO. 8 AGGREGATE	272
614	LUMP	LUMP	LUMP	LUMP	LUMP	MAINTAINING TRAFFIC	283
	LUMP	LUMP	LUMP	LUMP	LUMP	CONSTRUCTION LAYOUT STAKES	285
	LUMP	LUMP	LUMP	LUMP	LUMP	FIELD OFFICE	287
						REMOVAL OF BUILDINGS - SEE SHEET NO. 21	290
STRUCTURES OVER 20' SPAN							
						BRIDGE NO. TUS-250-1883, FOR QUANTITIES - SEE SHEET NO.	237 277
						BRIDGE NO. TUS-250-1899, L&R, FOR QUANTITIES - SEE SHEET NO.	245 278
						BRIDGE NO. TUS-250-1991, L&R, FOR QUANTITIES - SEE SHEET NO.	265 279
						BRIDGE NO. TUS-250-2027, FOR QUANTITIES - SEE SHEET NO.	271 280

GENERAL SUMMARY

1963 SPECIFICATIONS

TUS-250-17.23

CODE 7221 * CODE Y-005

[illegible]

1963 SPECIFICATIONS

TUS-250-17.23

CODE 7221

[illegible]

Cross checked

GENERAL SUMMARY

1963 SPECIFICATIONS

24

**** CODE Y-005**

FROM SHEET NO.

ITEM	FEDERAL PART
------	-----------------

AL	100 % STATE PART
----	------------------------

	GRAND TOTAL
--	----------------

UNIT

DESCRIPTION

[illegible]

(DRAINAGE CONTINUED)

6" PIPE , SPECIALS CLASS I-3

Not carried forward to
1965 Specification Summary ;
- included for payment in the
price bid for the pipe of
which they become a part.

15" PIPE , SPECIALS CLASS F-4

STANDARD NO. 2-2A CATCH BASIN

STANDARD NO. 2-2B CATCH BASIN (MODIFIED) AS PER PLAN

STANDARD NO. 2-3	CATCH BASIN
------------------	-------------

STANDARD NO. 2-4	CATCH BASIN
------------------	-------------

STANDARD NO. 8	CATCH BASIN
STANDARD NO. 8	CATCH BASIN

STANDARD NO. 2-6 CATCH BASIN (MODIFIED) AS PER PLAN

STONE UNDERDRAIN NO. 1 FOR SPRING DRAINS
--

STONE UNDERDRAIN NO.2

DUMPED ROCK CHANNEL PROTECTION

6" REINFORCED CONCRETE RIPRAP, AS PER PLAN

STANDARD TYPE I PAVED GUTTER

STANDARD TYPE 3 PAVED GUTTER

CATCH BASINS ABANDONED

REMOVAL OF PORTION OF EXISTING STRUCTURE
--

REMOVAL OF EXISTING STRUCTURE

WATER LINES

8" PIPE SPECIALS CLASS D CAST IRON

6"	PIPE SPECIALS CLASS D CAST IRON
----	---------------------------------

4" PIPE SPECIALS CLASS D CAST IRON

3" PIPE SPECIALS CLASS D CAST IRON

3/4" PIPE SPECIALS GALVANIZED

8"	GATE VALVE & BOX FOR CLASS 250
4"	GATE VALVE & BOX FOR CLASS 150

4"	GATE VALVE & BOX FOR CLASS 150
8"	CLASS 250 MECHANICAL JOINT PIPE

8"	CLASS 250 MECHANICAL JOINT PIPE
6"	CLASS 150 MECHANICAL JOINT PIPE

6"	CLASS 150 MECHANICAL JOINT PIPE
4"	CLASS 150 MECHANICAL JOINT PIPE

4"	CLASS 150 MECHANICAL JOINT PIPE
3"	CLASS 150 MECHANICAL JOINT PIPE

3" CLASS 150 MECHANICAL JOINT PIPE
3/4" GALVANIZED PIPE

3/4 GALVANIZED PIPE
RELOCATE FIRE HYDRANT

RELOCATE FIRE HYDRANT
RELOCATE 3/4" WATER METER

RELOCATE 3/4" WATER METER
RELAY EXISTING 8" WATER LINE

RELAY EXISTING 8" WATER LINE
RELAY EXISTING 6" WATER LINE

48" ENCASEMENT PIPE CLASS C-1 SEC M-64(c) 12 GA.

SERVICE BOXES ADJUSTED TO GRADE

1963 SPECIFICATIONS

GENERAL SUMMARY

1963 SPECIFICATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TUS-250-17.23

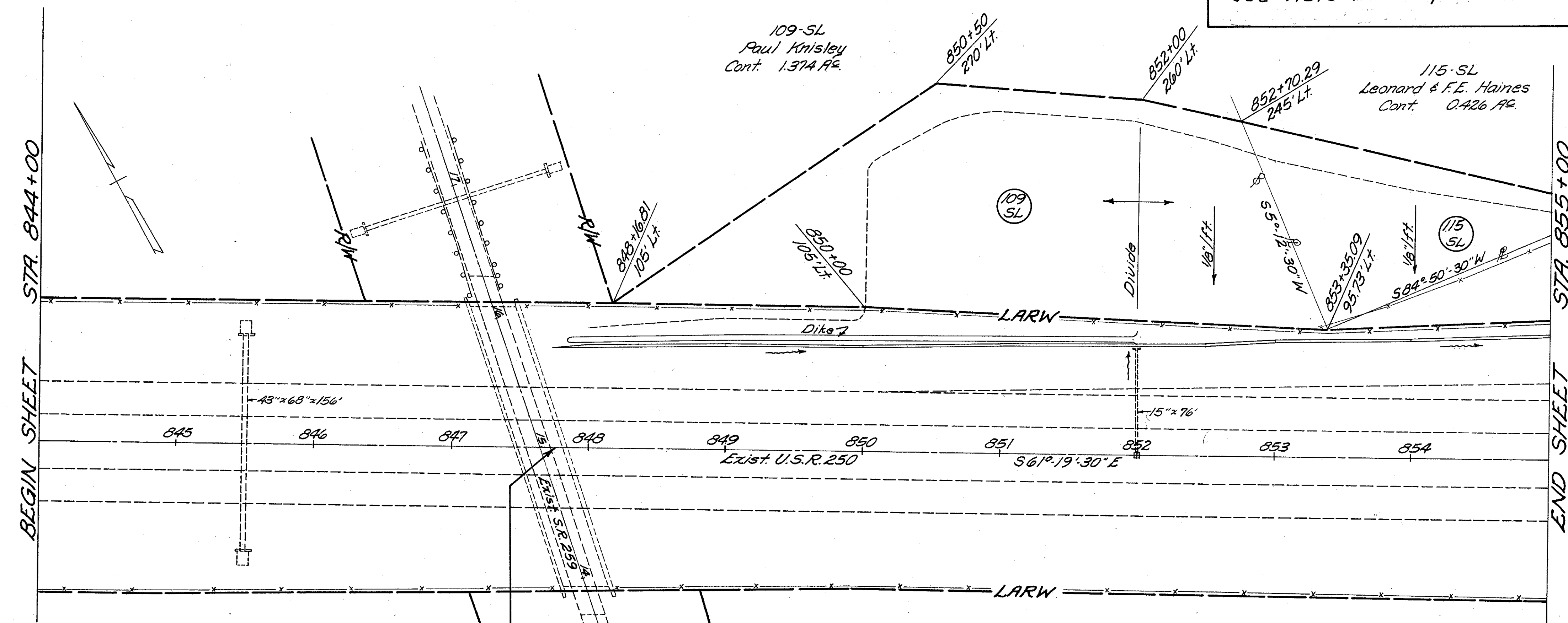
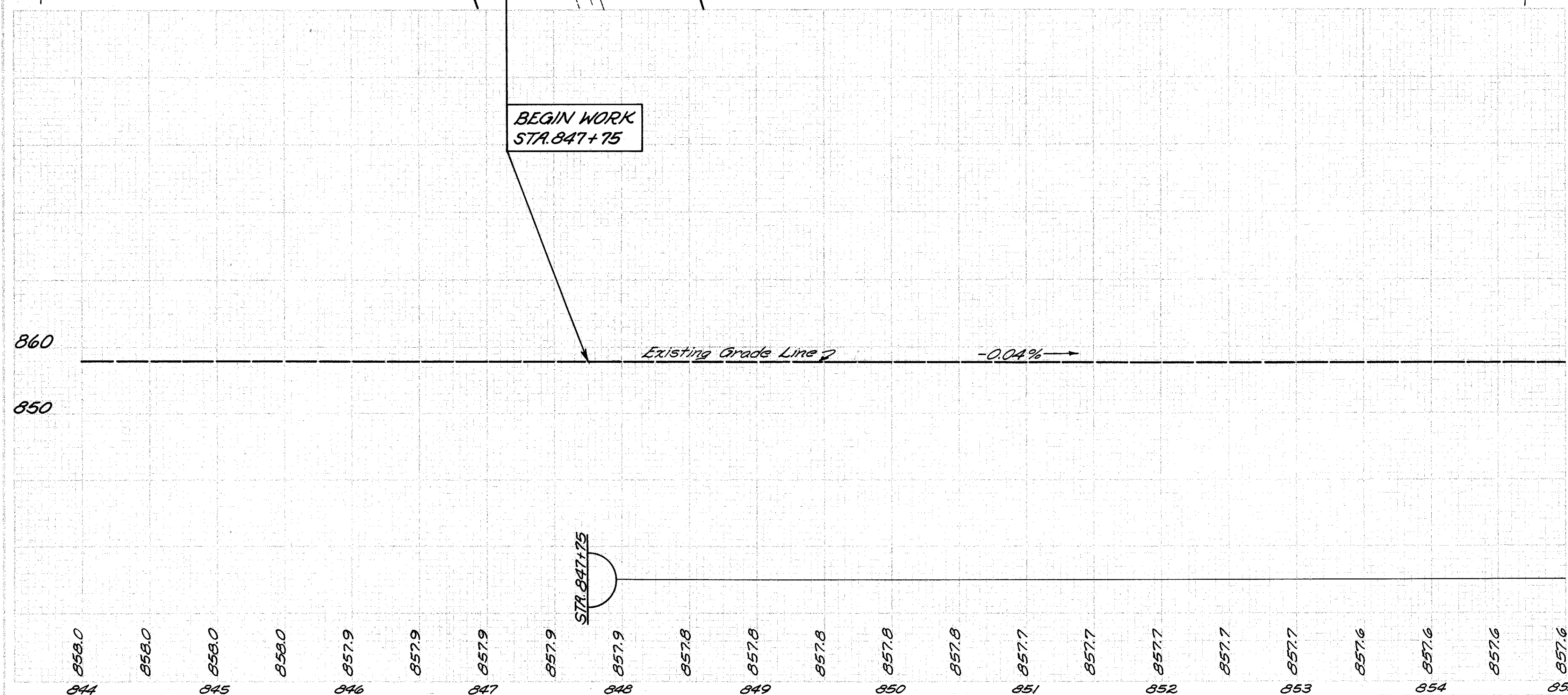
25

CODE 7221

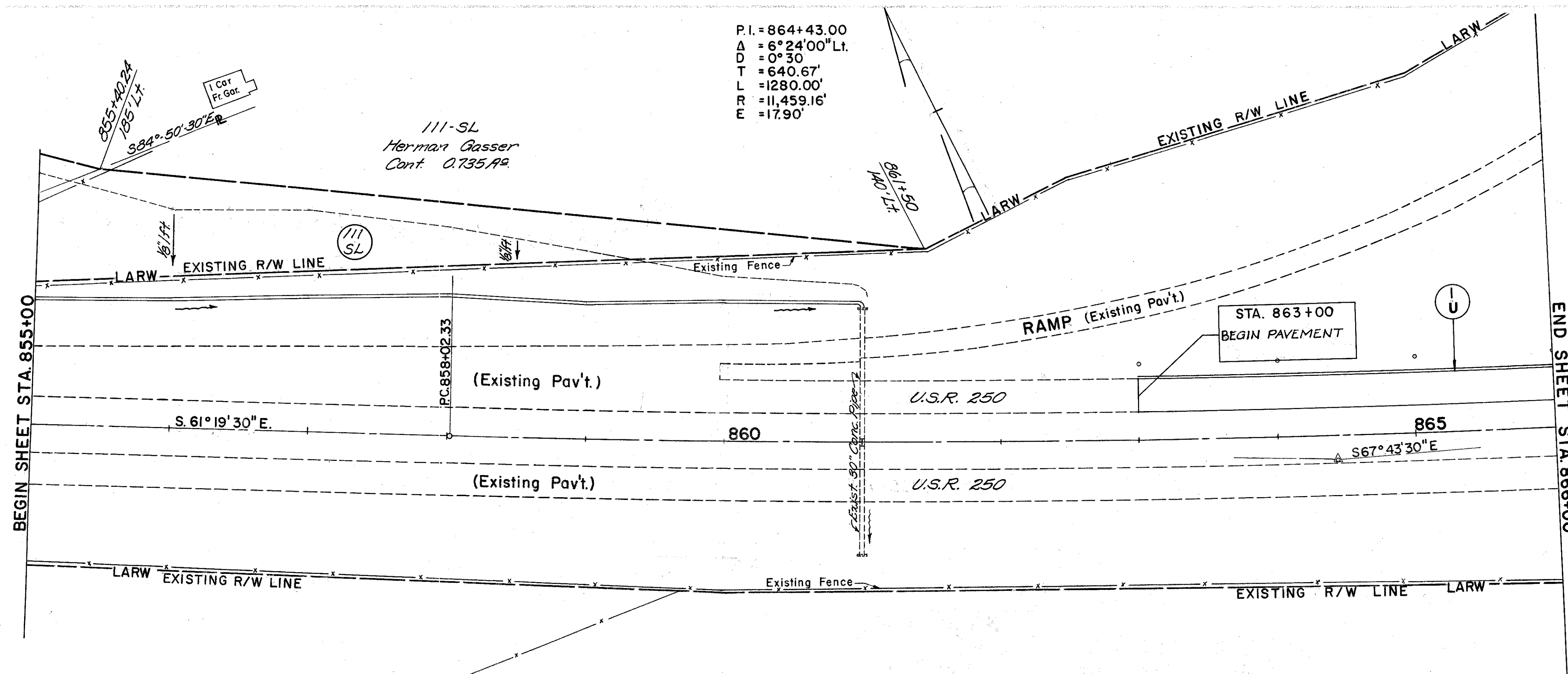
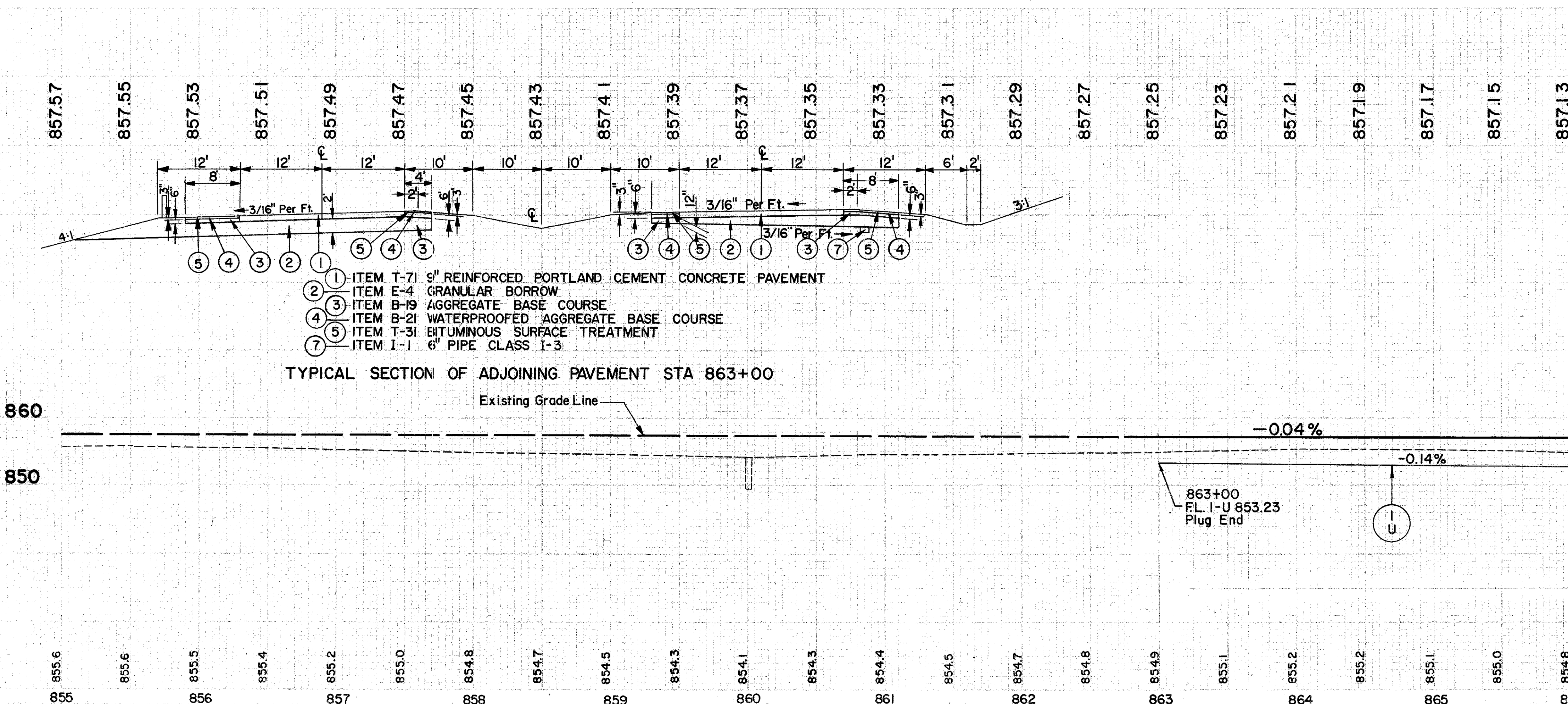
[illegible]

GENERAL SUMMARY

NOTE: The right of way fence on the left from Sta. 850+00 to Sta. 859+50 shall be dismantled to permit grading in this area. After the grading is completed, the fence shall be reconstructed at the existing location.

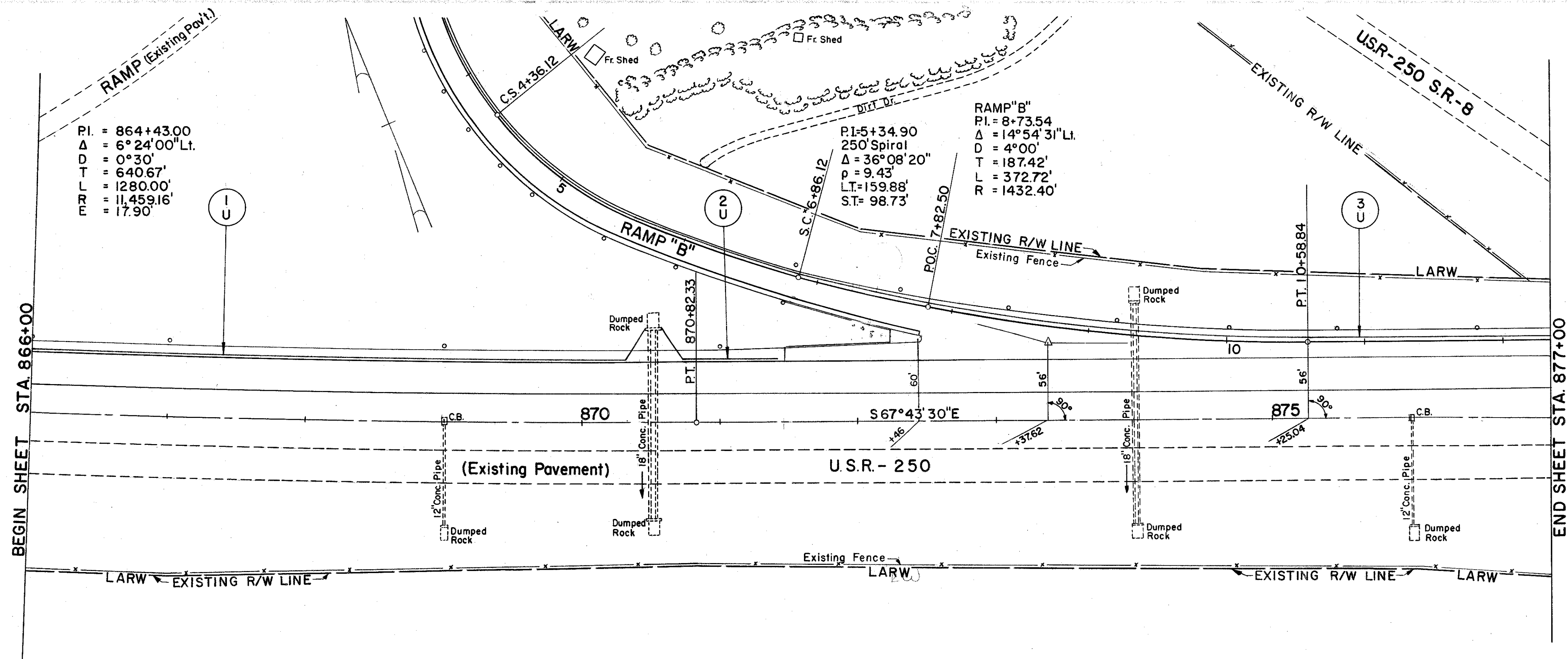


TUS-250-17.23

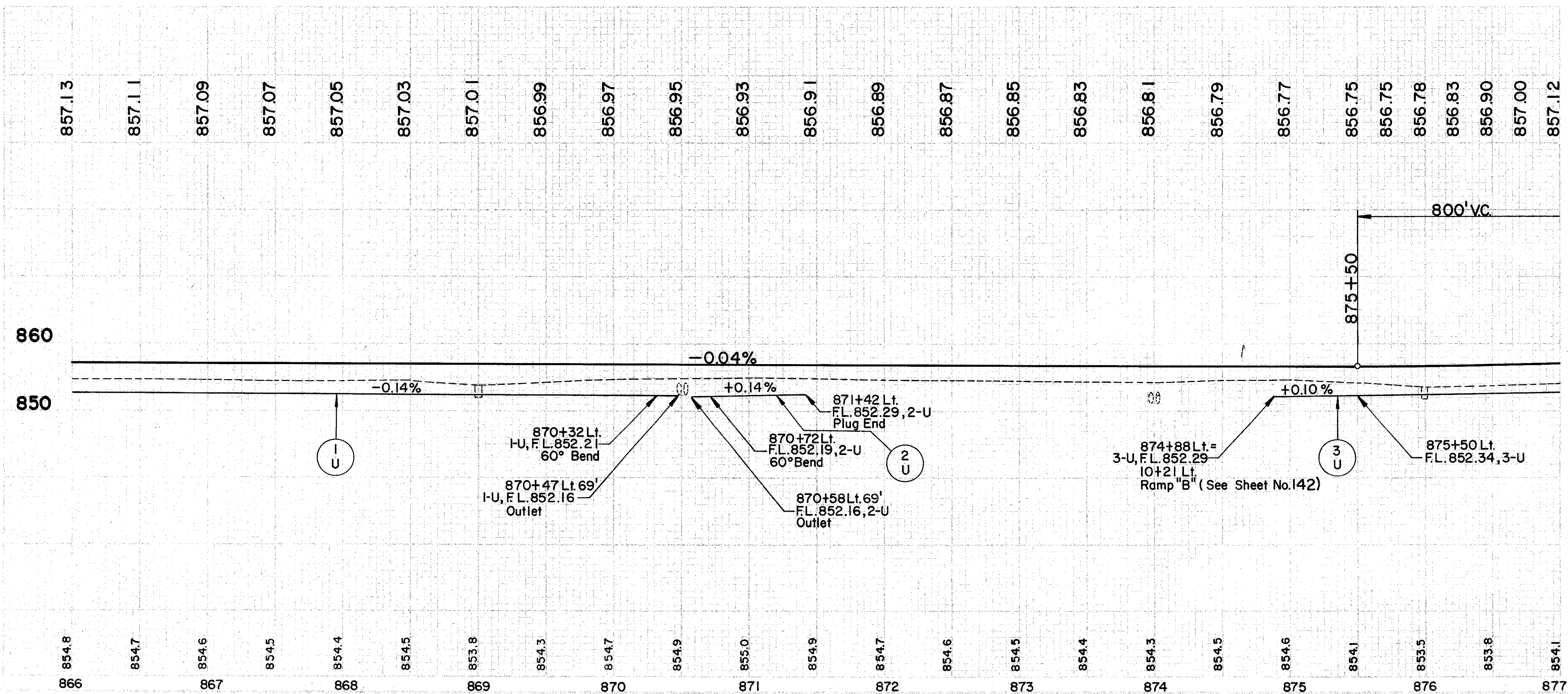


ESTIMATED QUANTITIES

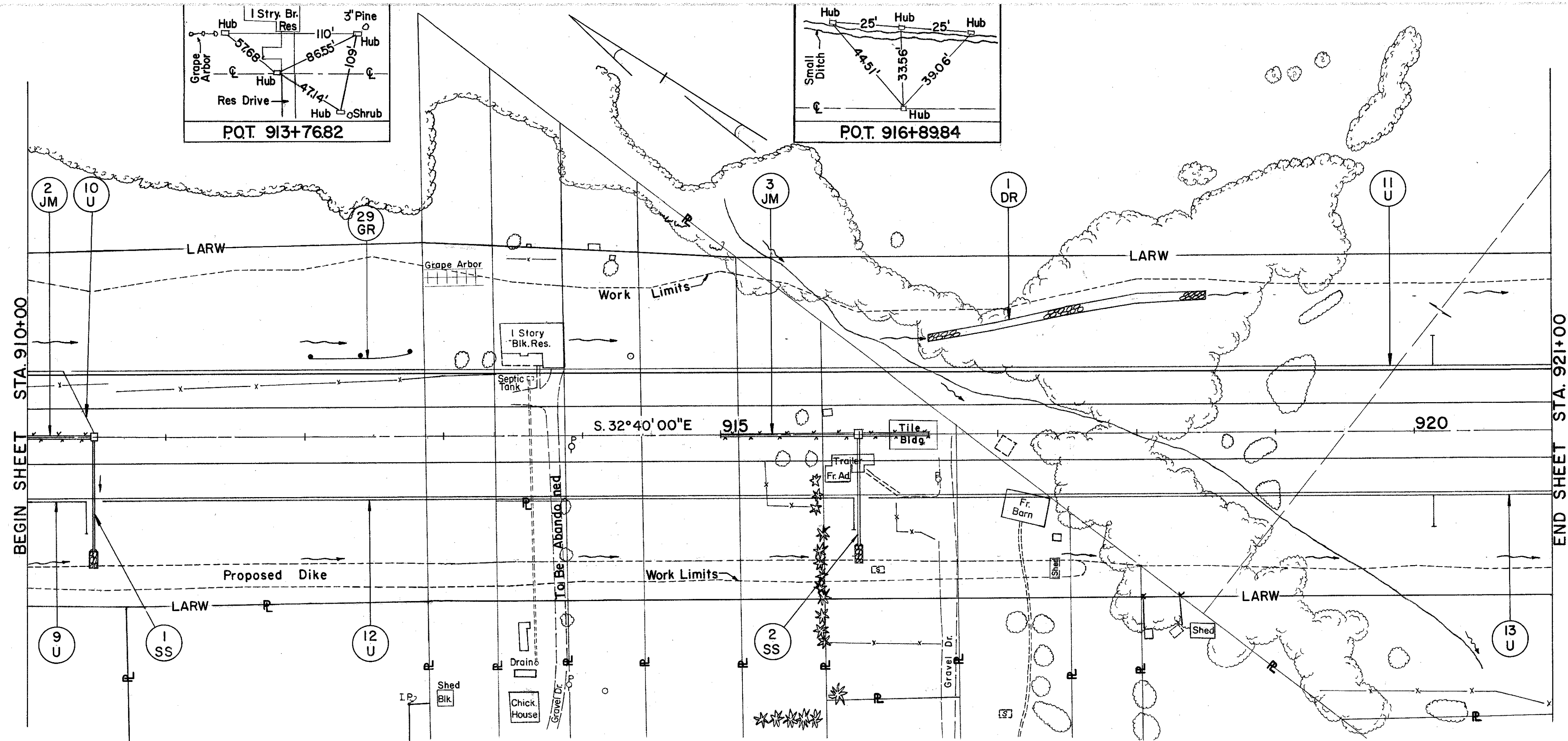
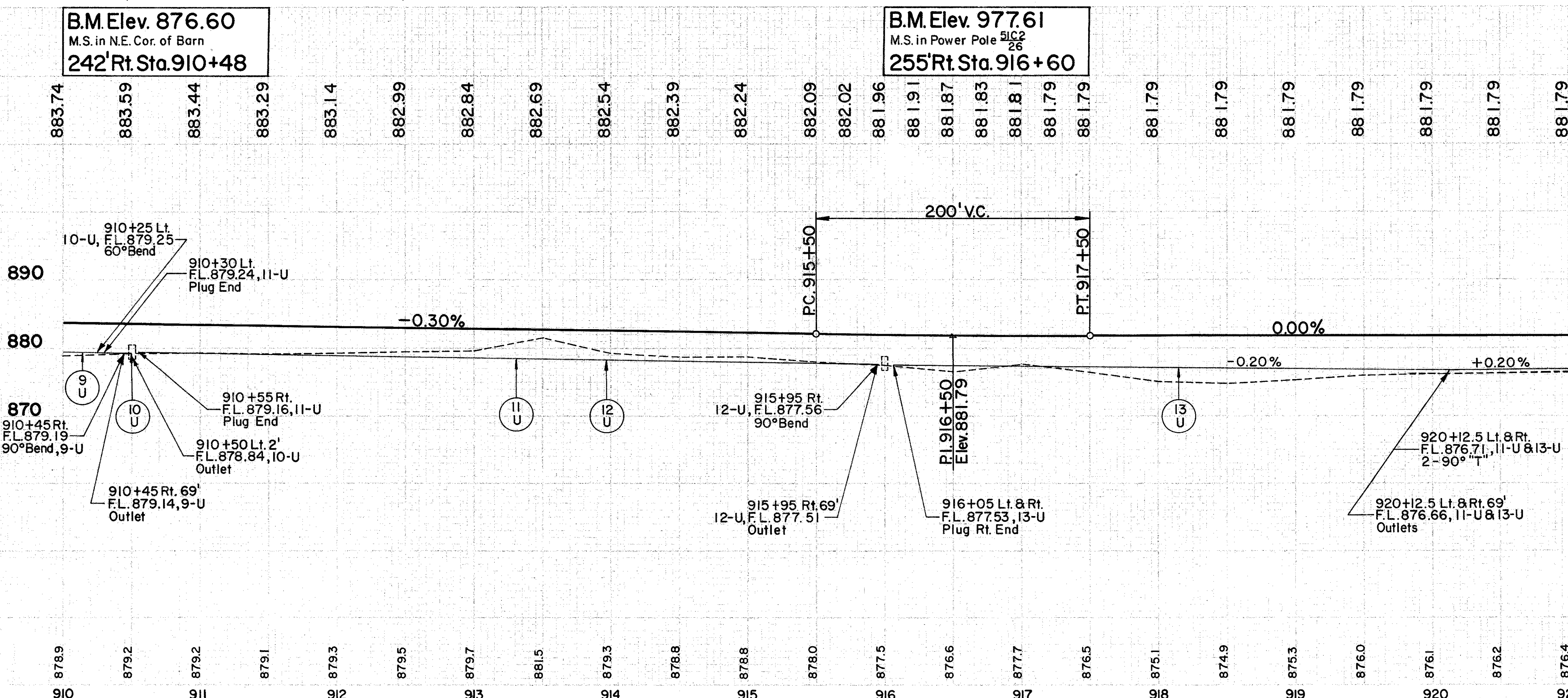
I-U 863+00 - 866+00 Lt.



For Ramp "B" Plan and Profile
See Sheet No.142

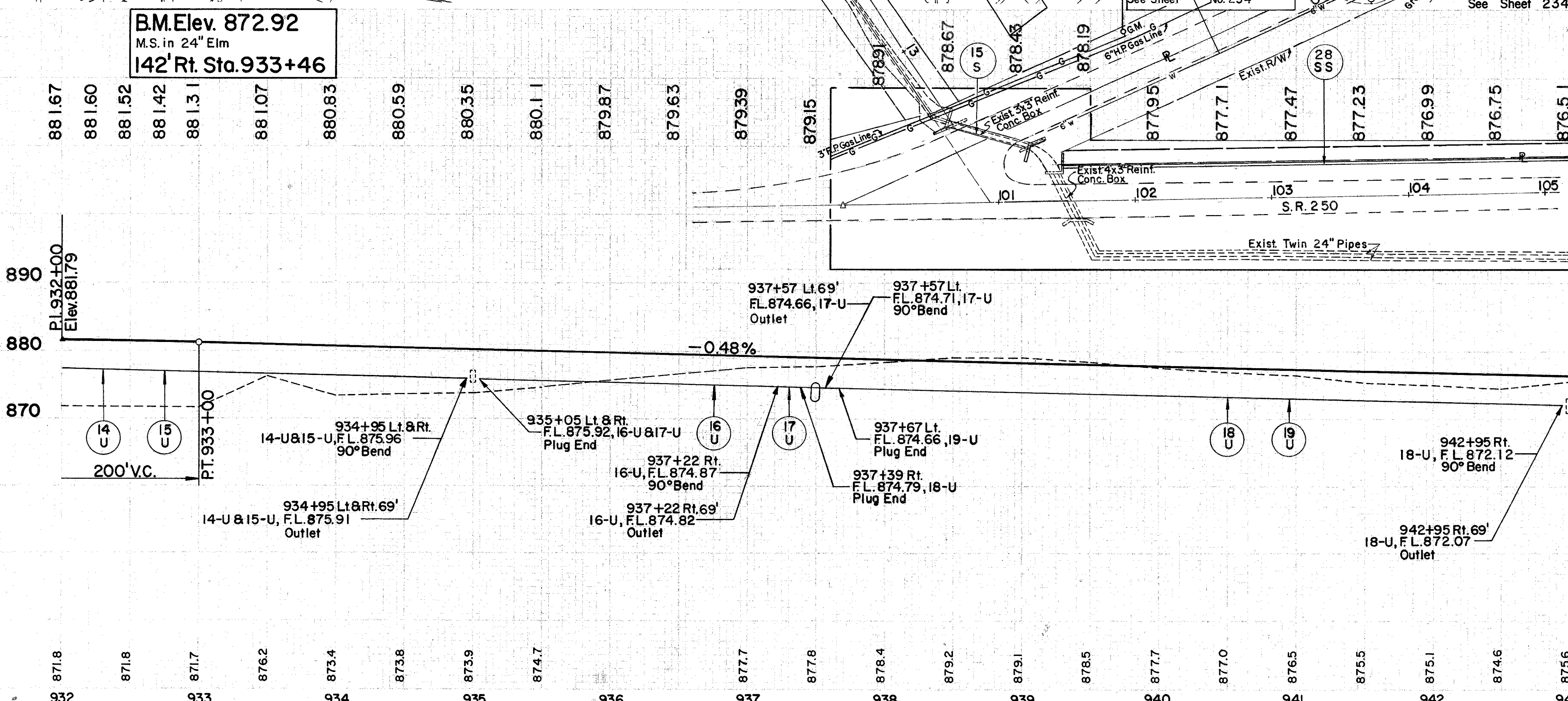


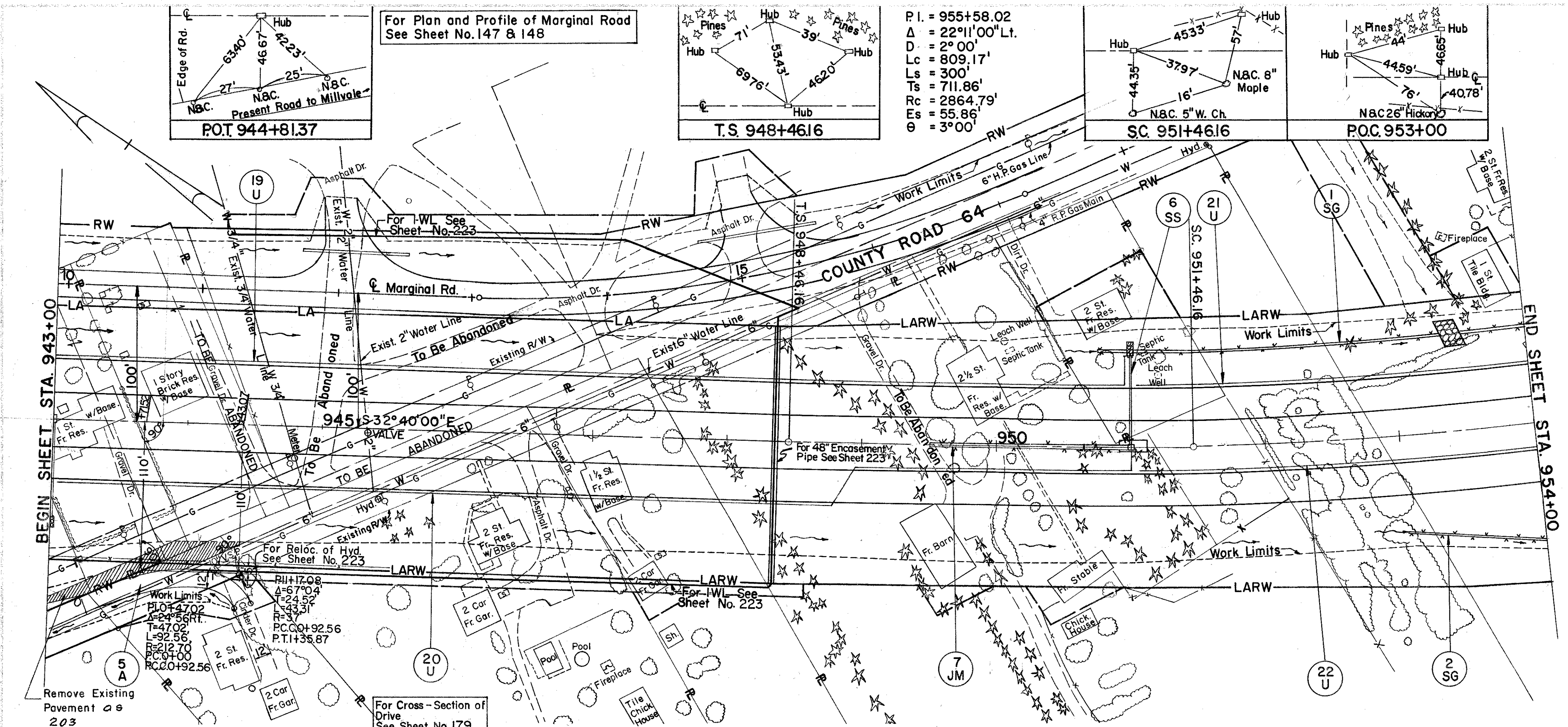
ESTIMATED QUANTITIES		GUARD RAIL STD. L.F.	
1-U	866+00-870+47	LT	LT
2-U	870+58-871+42	LT	LT
3-U	874+88-877+00	LT	LT

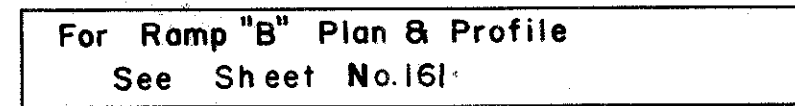


ESTIMATED	QUANTITIES	1-2	1-8	1-10	1-15	1-20
		MASONRY	C.BASIN	DUMPED	GUARD	JUTE
		C.Y.	NO.8	ROCK	RAIL	MATTING
				STD.	STD.	S.Y.
				L.F.	L.F.	
1-DR	916 + 50 - 918 + 50	LT.				
29GR	912 + 03 - 912 + 78	LT.				
2-JM	910 + 00 - 910 + 50					
3-JM	915 + 00 - 916 + 50					
1-SS	910 + 50	RT.				
2-SS	916 + 00	RT.				
9-U	910 + 00 - 910 + 45	RT.				
10-U	910 + 00 - 910 + 50	LT.				
11-U	910 + 30 - 921 + 00	LT.				
12-U	910 + 30 - 915 + 95	RT.				
13-U	916 + 05 - 921 + 00	RT.				

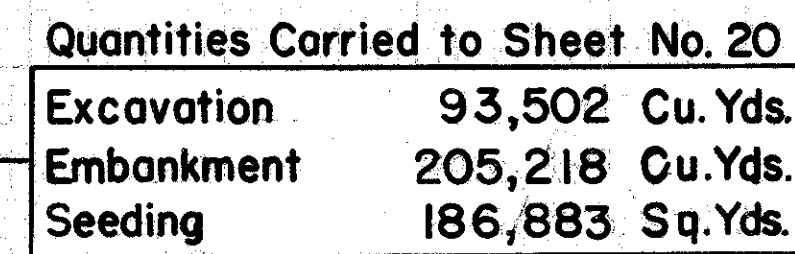
PLAN & PROFILE STA 910+00 TO STA.921+00

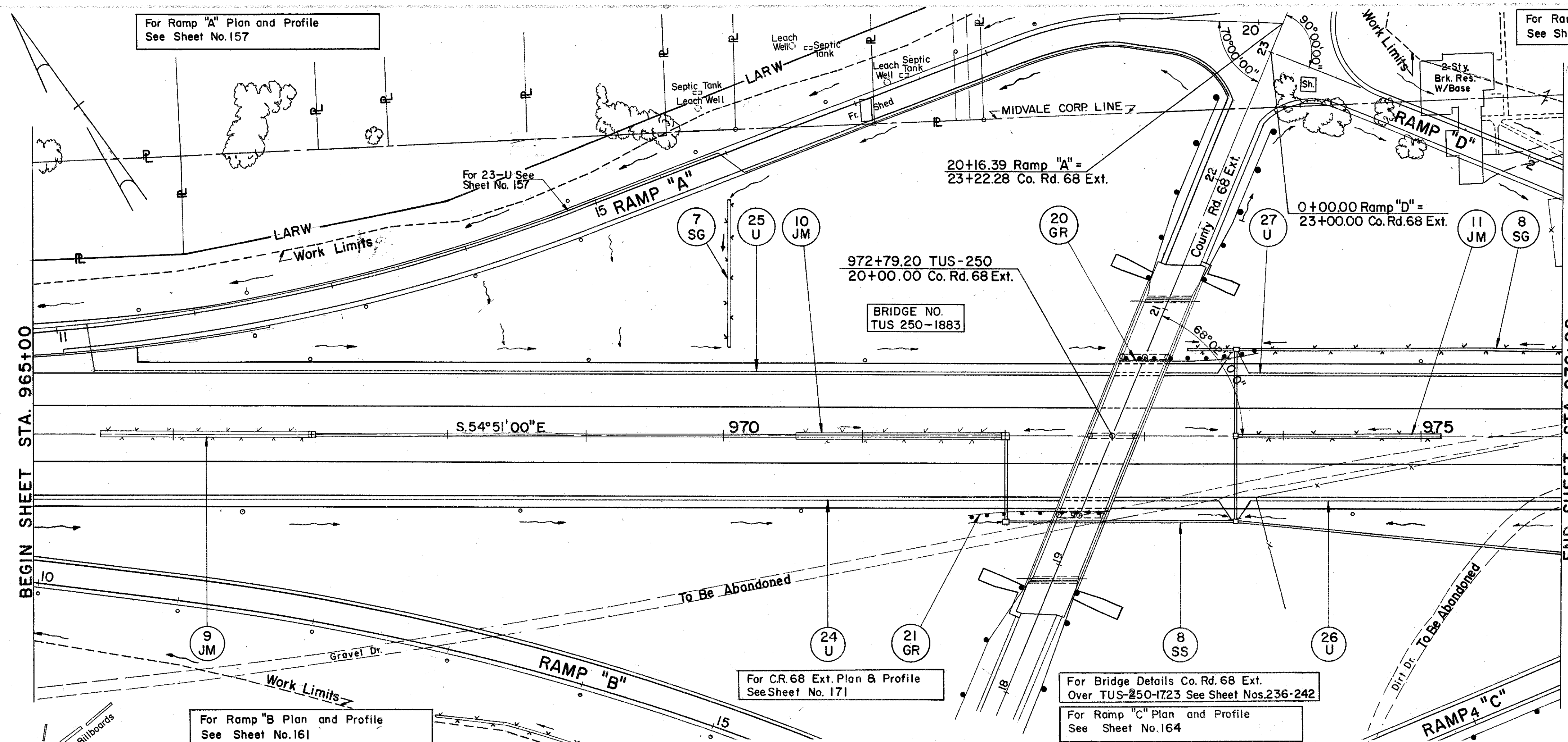
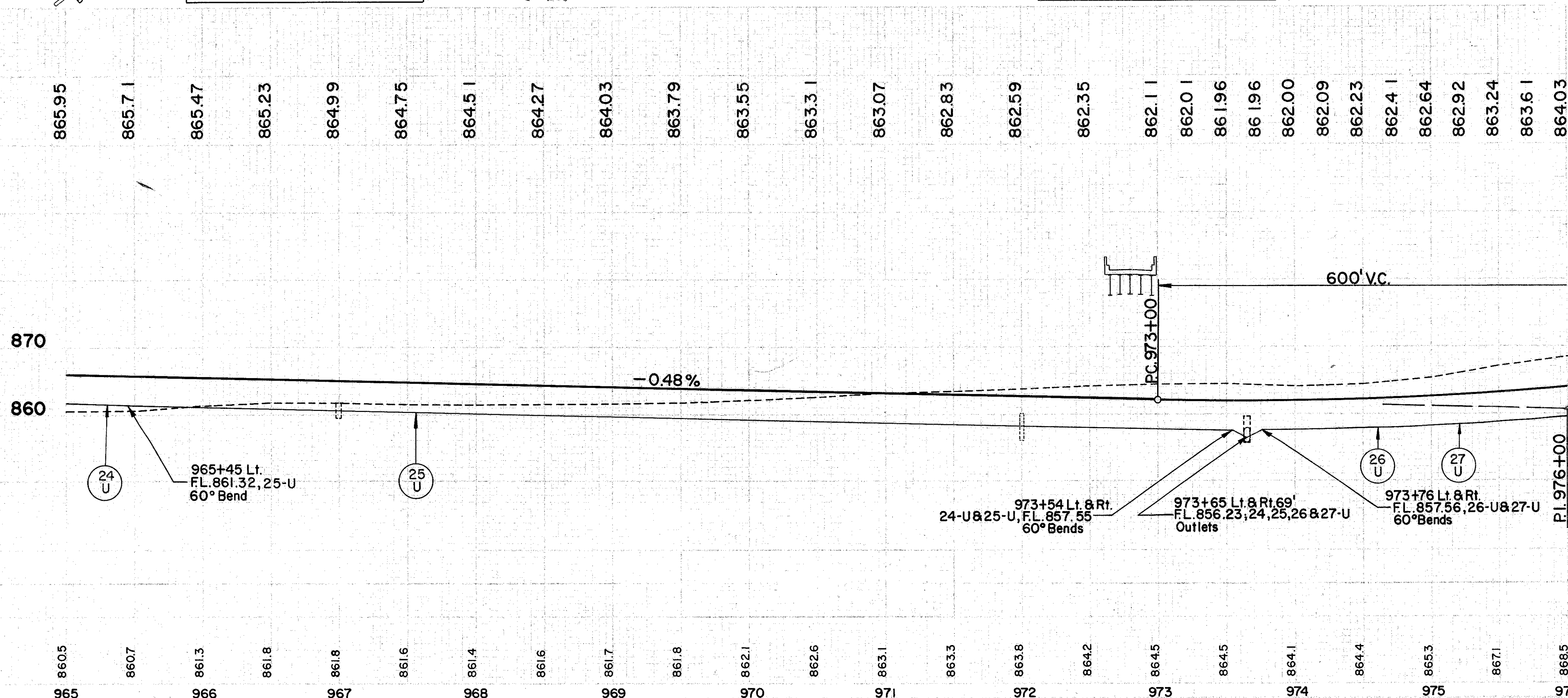
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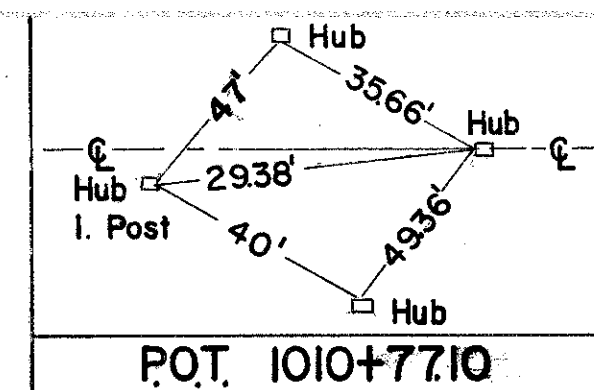
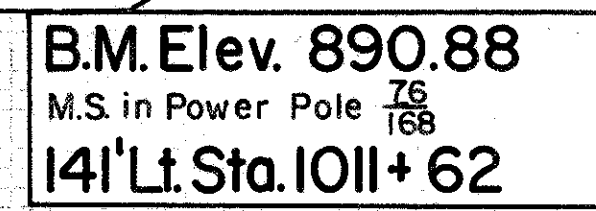
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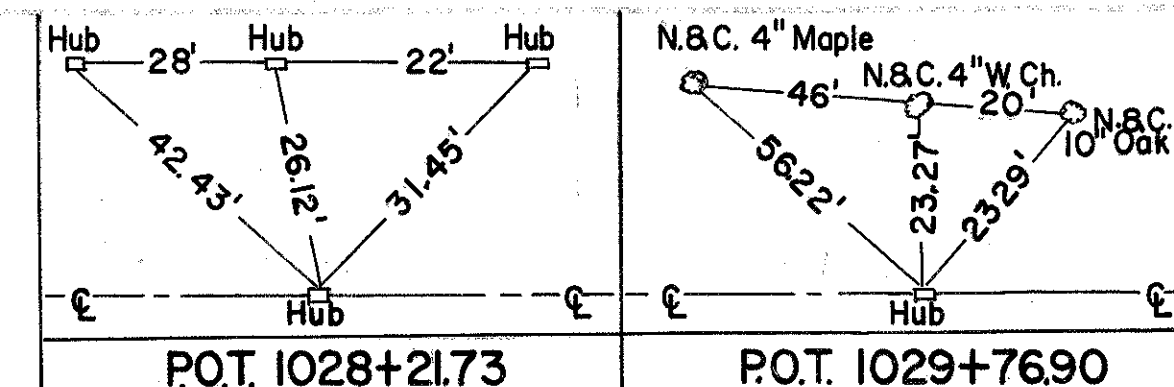
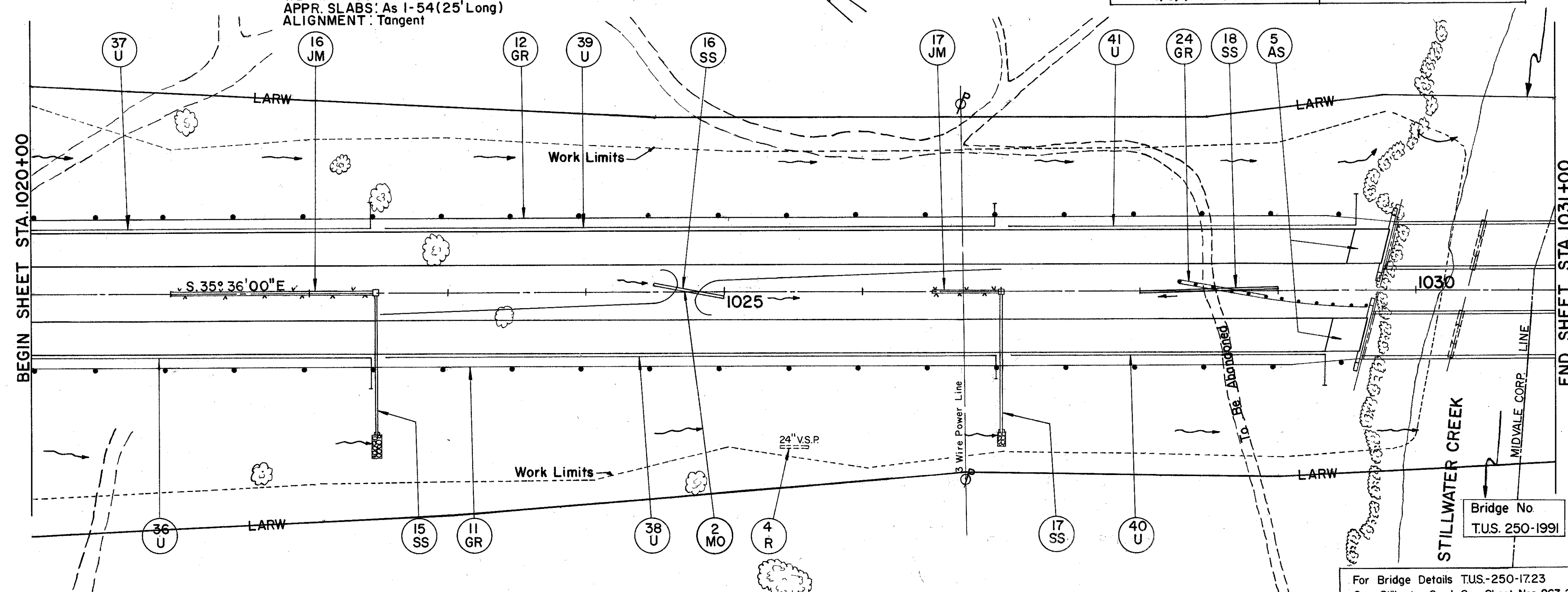
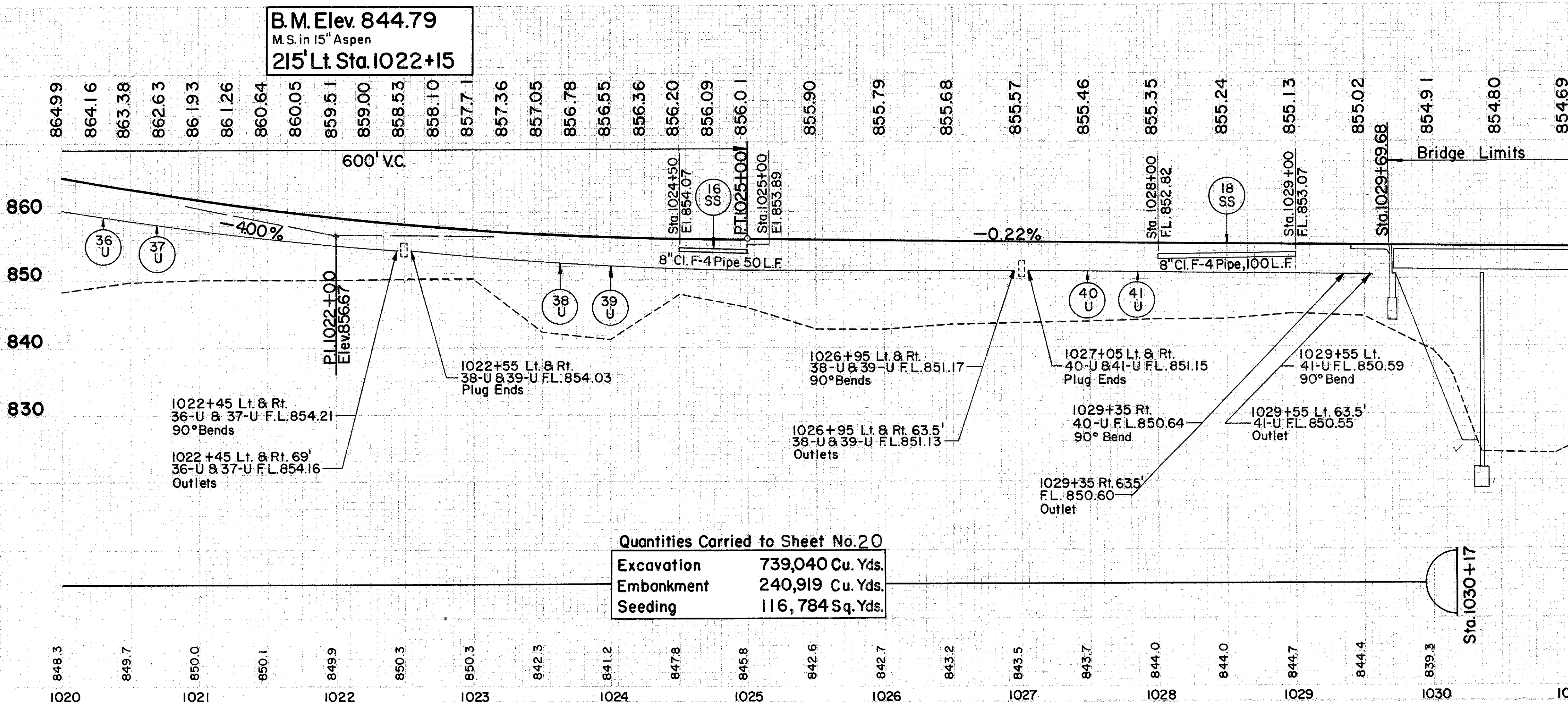
B.M. Elev. 866.36
M.S. in Tele. Pole 252-26
180' Rt. Sta. 964+00

[illegible]

[illegible]

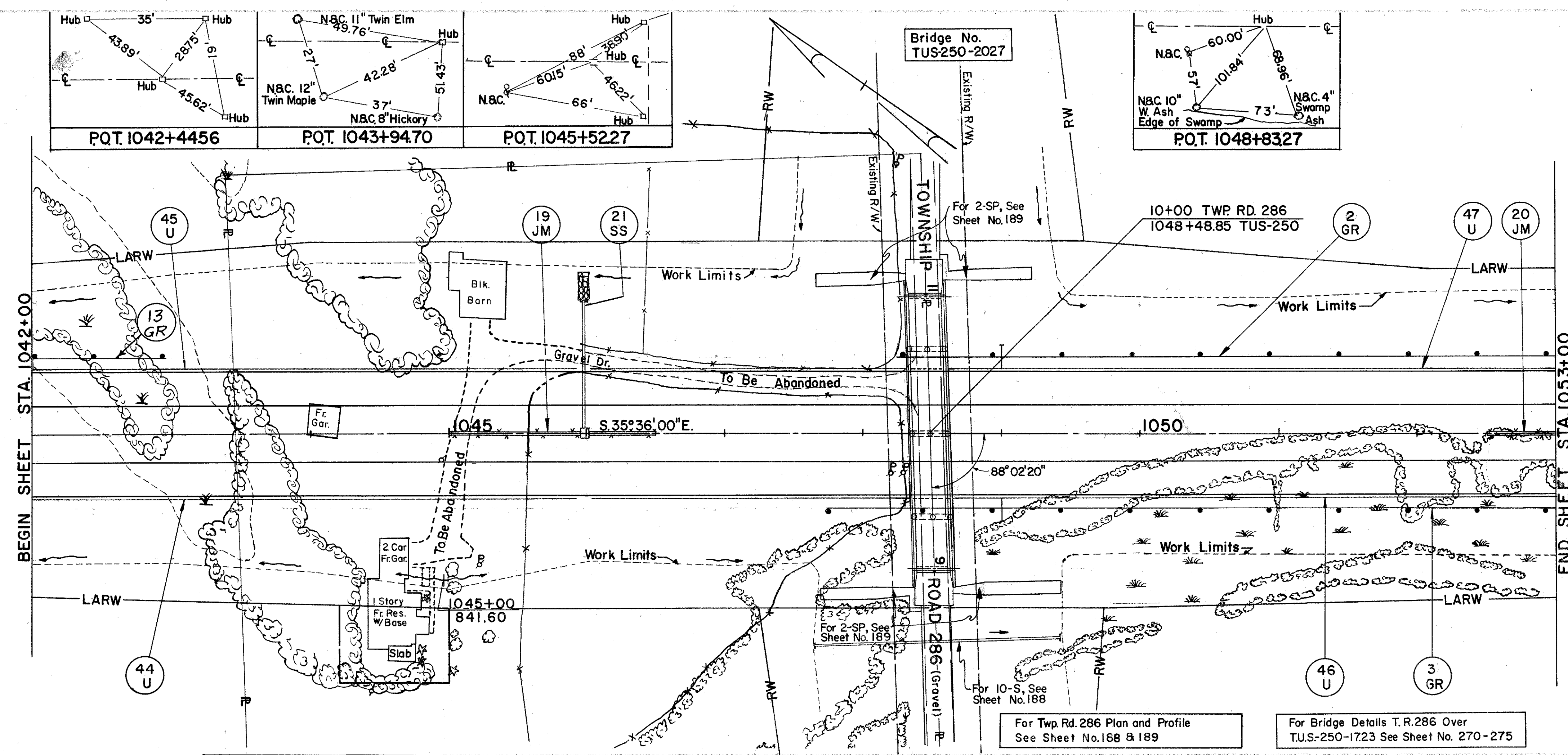
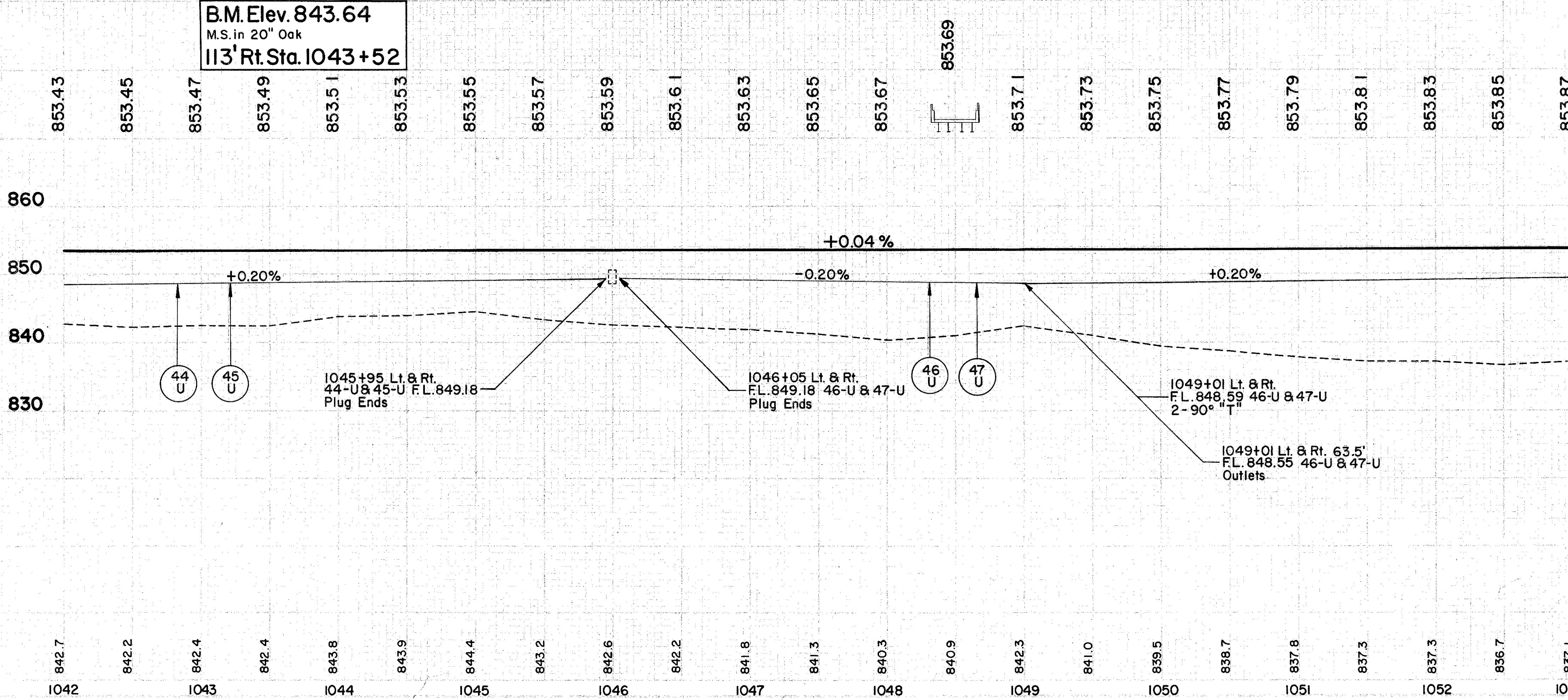
PLAN & PROFILE STA.1009+00 TO STA.1020+00

PROPOSED STRUCTURE
TUS-250-19 91 Lt.&Rt.
TYPE: Continuous Steel Beam with Reinforced
Concrete Deck and Substructure
SPANS: 64'-0" 80'-0" 64'-0" 6" Bearings
ROADWAY: 2x 30'-0" 1/2 2'-0" Safety Curbs
LOAD FREQUENCY: C.F. 2000 (57)
SKEW: 14° L.F.
WEARING SURFACE: 1" Monolithic Concrete
APPR. SLABS: As I-54 (25' Long)
ALIGNMENT: Tangent



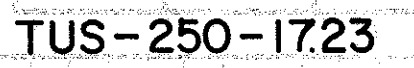
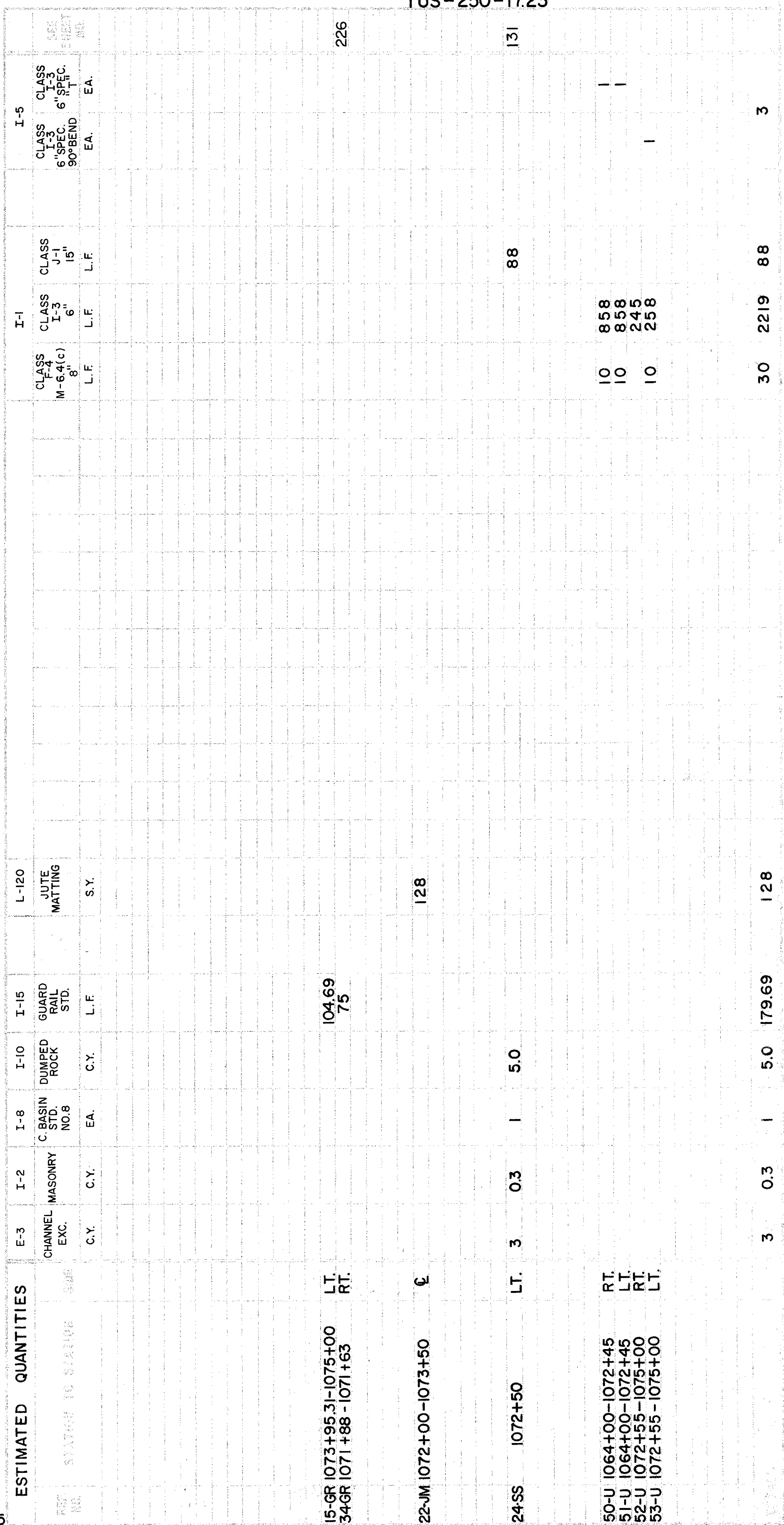
ESTIMATED QUANTITIES										TUS-250-17.23									
</																			

TUS-250-1723



ESTIMATED QUANTITIES																			
ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL	ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL	ITEM	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL	ITEM	DESCRIPTION
5-A	3+17	LT.				16-GR	4+96.5 - 8+84	LT.				17-GR	4+96.5 - 8+84	LT.				18-GR	11+13 - 14+88
7-AS	8+99.50	L&R				19-GR	11+13 - 14+88	LT.				20-JM	1045+00 - 1046+50	RT.				21-SS	1046+50 - 1053+00
8-AS	11+00.50	L&R				22-SS	1046+50 - 1053+00	LT.				23-SS	1046+50 - 1053+00	RT.				24-SS	1046+50 - 1053+00
16-GR	4+96.5 - 8+84	LT.				25-SS	1046+50 - 1053+00	LT.				26-SS	1046+50 - 1053+00	RT.				27-SS	1046+50 - 1053+00
13-GR	1042+00 - 1042+97	LT.				28-SS	1046+50 - 1053+00	LT.				29-SS	1046+50 - 1053+00	RT.				30-SS	1046+50 - 1053+00
2-GR	1048+25 - 1053+00	RT.				31-SS	1046+50 - 1053+00	LT.				32-SS	1046+50 - 1053+00	RT.				33-SS	1046+50 - 1053+00
3-GR	1047+75 - 1053+00	RT.				34-SS	1046+50 - 1053+00	LT.				35-SS	1046+50 - 1053+00	RT.				36-SS	1046+50 - 1053+00
17-GR	4+96.5 - 8+84	LT.				37-SS	1046+50 - 1053+00	LT.				38-SS	1046+50 - 1053+00	RT.				39-SS	1046+50 - 1053+00
18-GR	11+13 - 14+88	LT.				40-SS	1046+50 - 1053+00	LT.				41-SS	1046+50 - 1053+00	RT.				42-SS	1046+50 - 1053+00
19-GR	11+13 - 14+88	LT.				43-SS	1046+50 - 1053+00	LT.				44-SS	1046+50 - 1053+00	RT.				45-SS	1046+50 - 1053+00
19-JM	1045+00 - 1046+50	RT.				46-SS	1046+50 - 1053+00	LT.				47-SS	1046+50 - 1053+00	RT.				48-SS	1046+50 - 1053+00
20-JM	1052+50 - 1053+00	RT.				49-SS	1046+50 - 1053+00	LT.				50-SS	1046+50 - 1053+00	RT.				51-SS	1046+50 - 1053+00
10-S	8+50	LT.				52-SS	1046+50 - 1053+00	LT.				53-SS	1046+50 - 1053+00	RT.				54-SS	1046+50 - 1053+00
11-S	16+50	LT.				55-SS	1046+50 - 1053+00	LT.				56-SS	1046+50 - 1053+00	RT.				57-SS	1046+50 - 1053+00
21-SS	1046+50	LT.				58-SS	1046+50 - 1053+00	LT.				59-SS	1046+50 - 1053+00	RT.				60-SS	1046+50 - 1053+00
2-SP	10+00	L&R				61-SS	1046+50 - 1053+00	LT.				62-SS	1046+50 - 1053+00	RT.				63-SS	1046+50 - 1053+00
44-U	1042+00 - 1045+95	RT.				64-SS	1046+50 - 1053+00	LT.				65-SS	1046+50 - 1053+00	RT.				66-SS	1046+50 - 1053+00
45-U	1042+00 - 1045+95	RT.				67-SS	1046+50 - 1053+00	LT.				68-SS	1046+50 - 1053+00	RT.				69-SS	1046+50 - 1053+00
46-U	1046+05 - 1048+95	RT.				70-SS	1046+50 - 1053+00	LT.				71-SS	1046+50 - 1053+00	RT.				72-SS	1046+50 - 1053+00
47-U	1046+05 - 1053+00	RT.				73-SS	1046+50 - 1053+00	LT.				74-SS	1046+50 - 1053+00	RT.				75-SS	1046+50 - 1053+00

PLAN & PROFILE STA.1042+00 TO STA.1053+00

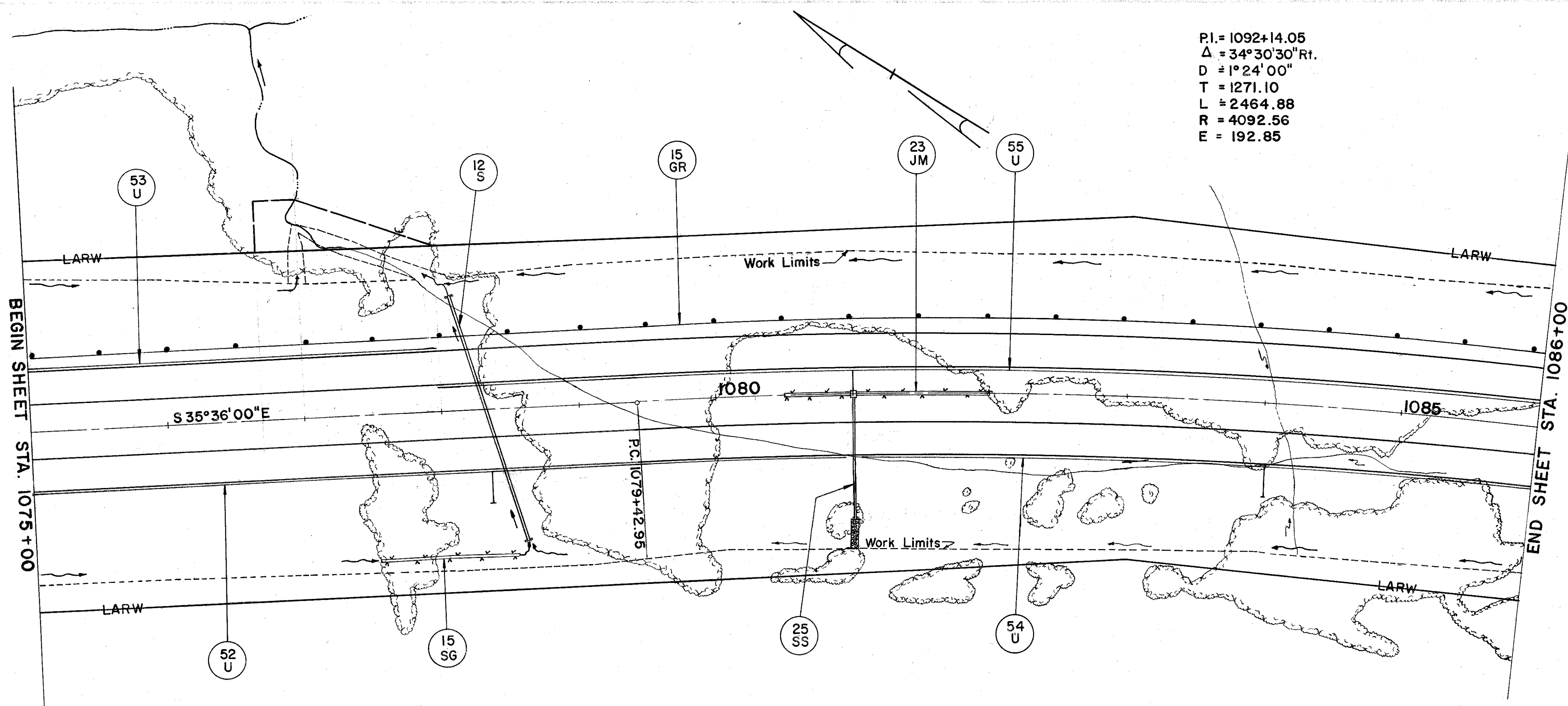


TUS-250-17.23

PI. = 1092+14.05
 $\Delta = 34^\circ 30' 30''$ Rt.
 $D = 1^\circ 24' 00''$
 $T = 1271.10$
 $L = 2464.88$
 $R = 4092.56$
 $E = 192.85$

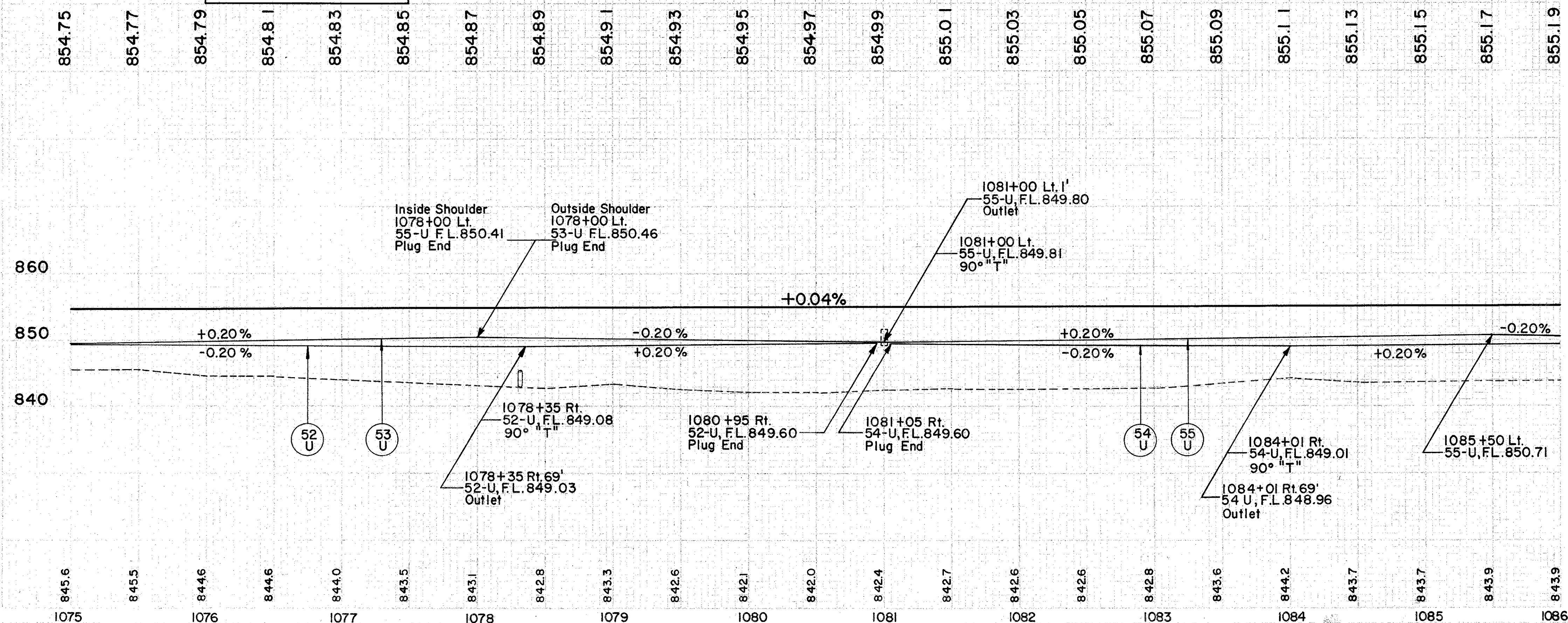
BEGIN SHEET STA. 1075+00

END SHEET STA. 1086+00



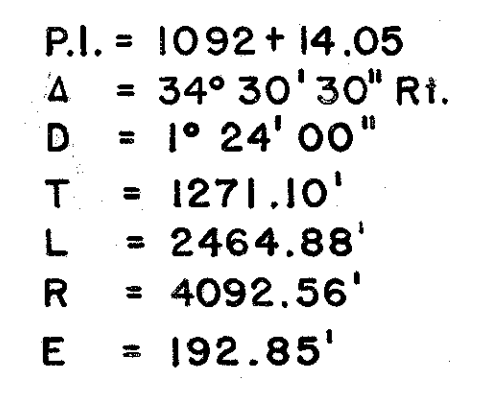
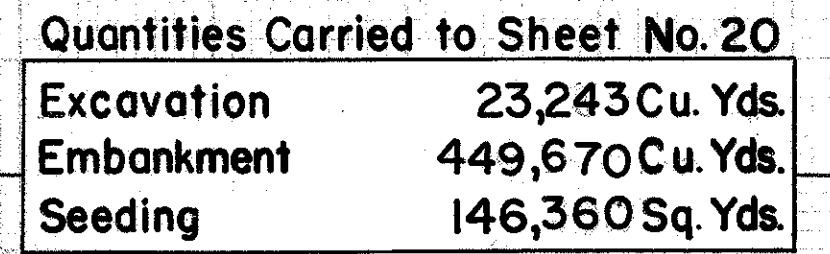
TUS-250-2083

B.M. Elev. 846.74
 M.S. in 30' Elm
 170' Lt. Sta. 1076+74



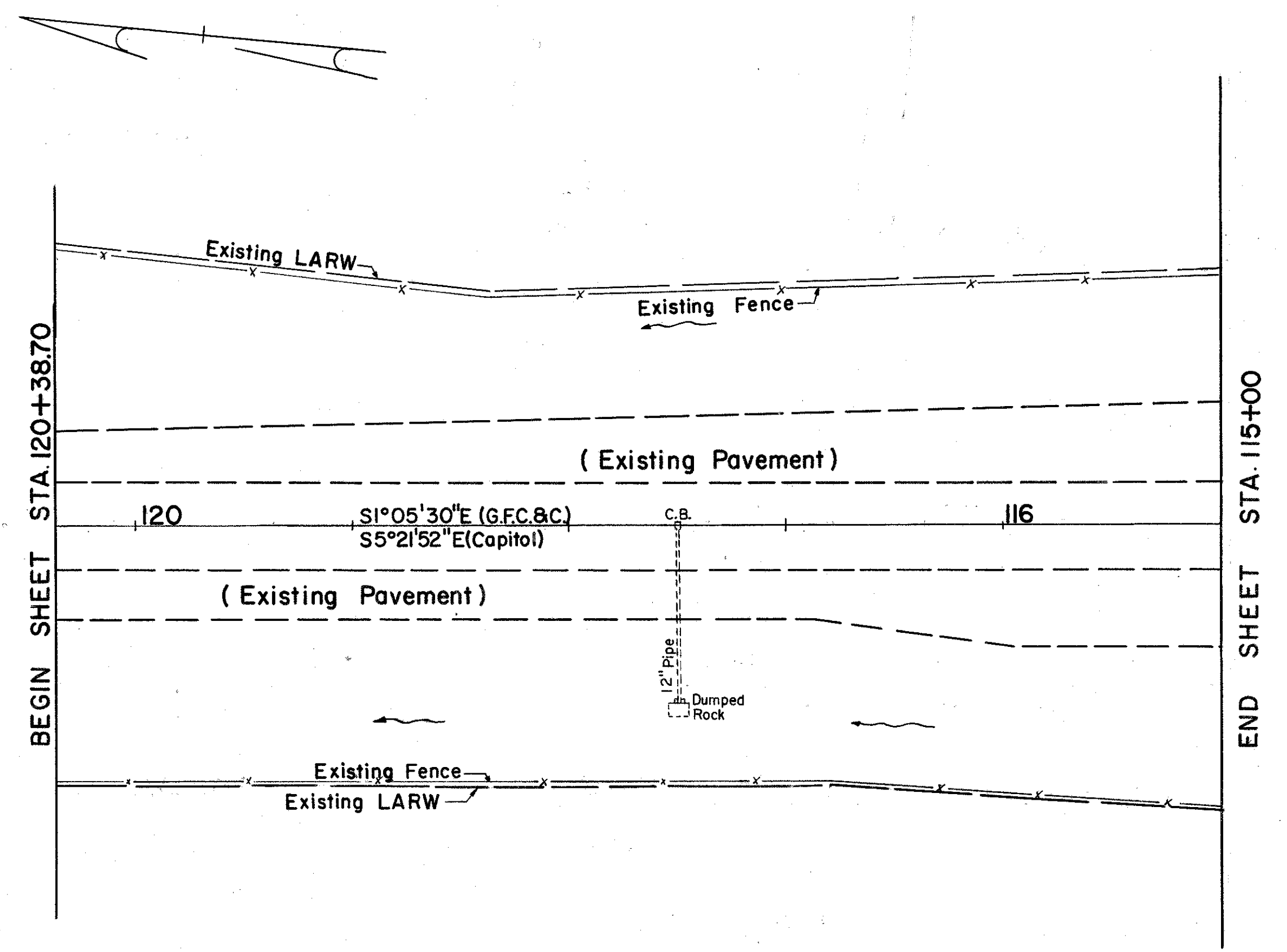
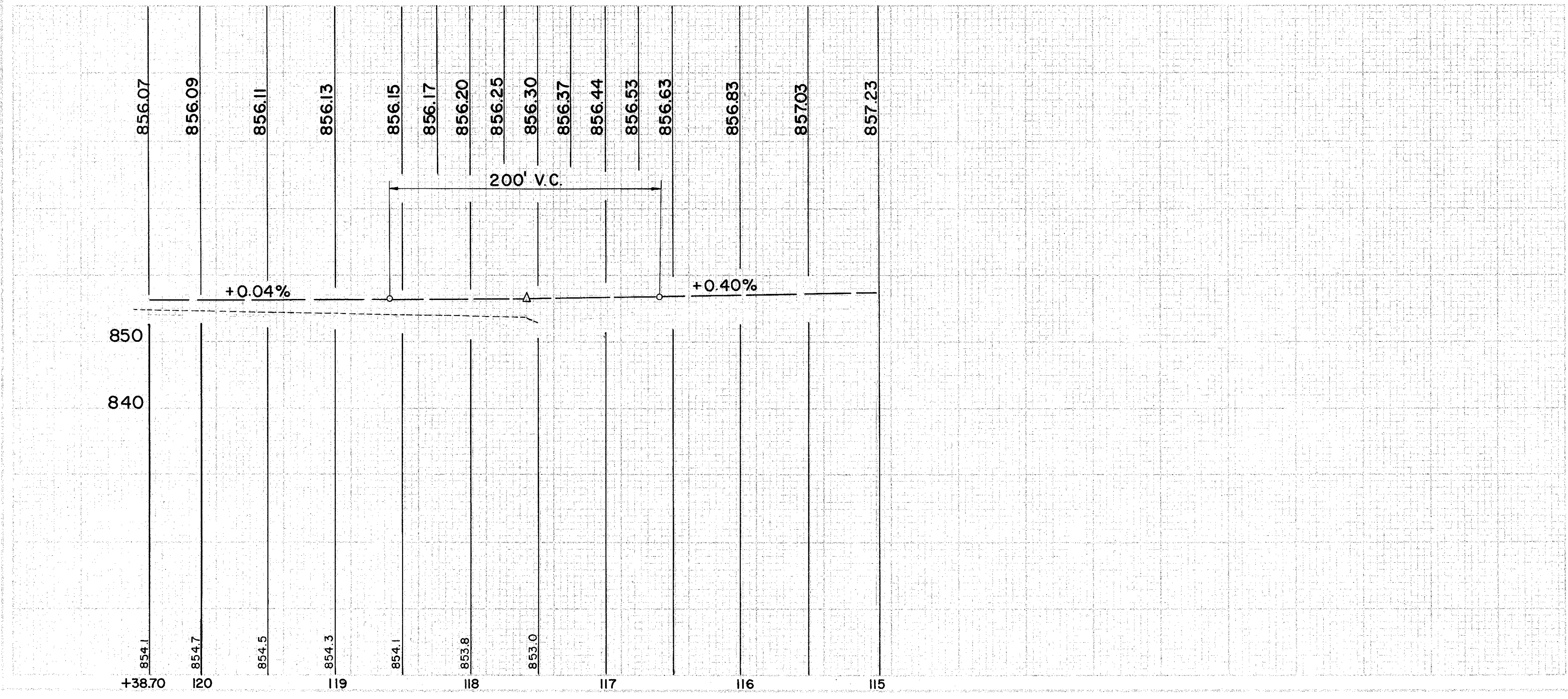
ESTIMATED QUANTITIES	STATION	ITEM	E-3				I-2				I-8				I-10				I-15				L-10				I-5			
			CH	EX	C.Y.	EA	CH	EX	C.Y.	EA	CH	EX	C.Y.	EA	CH	EX	C.Y.	EA	CH	EX	C.Y.	EA	CH	EX	C.Y.	EA	CH	EX	C.Y.	EA
15-GR	1075+00 - 1086+00	LT.																												
23-JM	1080+50 - 1082+00	Q																												
12-S	1078+30	Q			57	1.0																								
15-SG	1077+50 - 1078+50	RT																												
25-SS	1081+00	RT				0.3																								
52-U	1075+00 - 1080+95	RT																												
53-U	1075+00 - 1078+00	LT																												
54-U	1081+05 - 1086+00	RT																												
55-U	1078+00 - 1086+00	RT																												

PLAN & PROFILE STA. 1075+00 TO STA. 1086+00



PLAN & PROFILE STA.1086+00 TO STA.1097+00

TUS-250-17.23



ESTIMATED QUANTITIES

SEE STATION TO STATION

CURVE TABLES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

50

TUS-250-17.23

T.S. 881+31.74 S.C. 885+31.74		D.C. 4°-00' Rt. Max. Super 2.00'		C.S. 890+08.20 S.T. 894+08.20	
Left Pair Lanes		Station	Profile Grade	Right Pair Lanes	
Left Edge	℄			℄	Right Edge
860.85	861.04	880+25	860.85	861.04	860.85
861.30	861.49	+50	861.30	861.49	861.30
861.42	861.61	+56.74	861.42	861.61	861.42
861.83	861.97	+75	861.78	861.92	861.73
862.39	862.47	881+00	862.28	862.36	862.17
862.97	862.99	+25	862.80	862.82	862.63
863.11	863.10	+30	862.91	862.91	862.72
863.14	863.14	T.S. +31.74	862.95	862.95	862.76
863.62	863.54	+50	863.35	863.27	863.08
864.28	864.08	+73.73	863.89	863.70	863.51
864.31	864.11	+75	863.92	863.73	863.53
865.02	864.77	882+00	864.52	864.27	864.02
865.75	865.45	+25	865.14	864.84	864.53
866.51	866.15	+50	865.78	865.42	865.05
867.29	866.87	+75	866.45	866.03	865.61
868.09	867.62	883+00	867.14	866.67	866.19
868.91	868.38	+25	867.85	867.32	866.79
869.77	869.18	+50	868.59	868.00	867.41
870.63	869.98	+75	869.34	868.70	868.05
871.49	870.79	884+00	870.09	869.39	868.69
872.35	871.60	+25	870.84	870.08	869.32
873.22	872.40	+50	871.59	870.78	869.96
874.07	873.20	+75	872.33	871.46	870.59
874.90	873.98	885+00	873.06	872.14	871.22
875.69	874.72	+25	873.76	872.82	871.87
875.89	874.92	S.C. +31.74	873.95	872.99	872.02
876.44	875.45	+50	874.45	873.48	872.50
877.13	876.13	+75	875.13	874.13	873.14
877.46	876.46	+87.5	875.46	874.46	873.46
877.79	876.79	886+00	875.79	874.79	873.79
878.42	877.42	+25	876.42	875.42	874.42
879.04	878.04	+50	877.04	876.04	875.04
879.64	878.64	+75	877.64	876.64	875.64
880.23	879.23	887+00	878.23	877.23	876.23
880.80	879.80	+25	878.80	877.80	876.80
881.35	880.35	+50	879.35	878.35	877.35
881.89	880.89	+75	879.89	878.89	877.89
882.41	881.41	888+00	880.41	879.41	878.41
882.91	881.91	+25	880.91	879.91	878.91
883.39	882.39	+50	881.39	880.39	879.39
883.86	882.86	+75	881.86	880.86	879.86
884.31	883.31	889+00	882.31	881.31	880.31
884.74	883.74	+25	882.74	881.74	880.74
885.15	884.15	+50	883.15	882.15	881.15
885.25	884.25	+56	883.25	882.25	881.25
885.54	884.55	+75	883.55	882.56	881.57
885.88	884.91	890+00	883.93	882.96	881.98
885.99	885.03	C.S. +08.20	884.06	883.09	882.12
886.18	885.24	+25	884.29	883.35	882.40
886.45	885.55	+50	884.64	883.74	882.83
886.50	885.64	+60	884.77	883.84	882.92
886.68	885.83	+75	884.97	884.12	883.27
886.87	886.07	891+00	885.28	884.49	883.70
887.05	886.31	+25	885.58	884.85	884.11
887.21	886.53	+50	885.85	885.17	884.49

CONTINUED IN NEXT COLUMN AT RIGHT

D.C. 4°-00' Rt. Max. Super 2.00'		D.C. 2°-00' Lt. Max. Super 1.54'	
Left Pair Lanes		Left Pair Lanes	
Left Edge	℄	Left Edge	℄
887.37	886.75	891+75	886.12
887.49	886.93	892+00	886.36
887.61	887.10	+25	886.59
887.70	887.25	+50	886.79
887.78	887.38	+75	886.99
887.84	887.50	893+00	887.16
887.89	887.60	+25	887.32
887.90	887.68	+50	887.45
887.91	887.72	+66.21	887.53
887.92	887.77	+75	887.58
887.93	887.87	894+00	887.68
887.93	887.91	S.T. +08.20	887.72
887.91	887.96	+25	887.77
887.91	888.03	+50	887.84
887.92	888.09	+75	887.90
887.93	888.10	+83.20	887.91
887.95	888.12	895+00	887.93
887.96	888.14	+17.5	887.95
887.96	888.15	+25	887.96
887.95	888.14	+50	887.95

T.S. 948+46.16 S.C. 951+46.16		D.C. 2°-00' Lt. Max. Super 1.54'		C.S. 959+55.33 S.T. 962+55.33	
Left Pair Lanes		Station	Profile Grade	Right Pair Lanes	
Left Edge	℄			℄	Right Edge
874.47	874.66	947+25	874.47	874.66	874.47
874.43	874.62	+32.5	874.43	874.62	874.43
874.34	874.53	+50	874.35	874.54	874.36
874.22	874.41	+711.6	874.25	874.44	874.29
874.20	874.39	+75	874.23	874.42	874.28
874.04	874.23	948+00	874.11	874.30	874.20
873.84	874.03	+25	873.99	874.18	874.12
873.70	873.89	T.S. +46.16	873.89	874.08	874.08
873.66	873.85	+50	873.87	874.06	874.08
873.43	873.62	+75	873.75	873.94	874.07
873.31	873.50	+88.38	873.69	873.88	874.07
873.20	873.41	949+00	873.63	873.85	874.06
872.97	873.24	+25	873.51	873.78	874.05
872.73	873.06	+50	873.39	873.72	874.05
872.50	872.88	+75	873.27	873.66	874.04
872.27	872.71	950+00	873.15	873.59	874.03
872.04	872.53	+25	873.03	873.55	874.02
871.80	872.35	+50	872.91	873.47	874.02
871.57	872.18	+75	872.79	873.40	874.01
871.34	872.00	951+00	872.67	873.34	874.00
871.20	871.90	+15	872.60	873.30	873.99
871.11	871.83	+25	872.55	873.27	873.99
870.95	871.70	S.C. +46.16	872.45	873.19	873.93
870.91	871.67	+50	872.43	873.18	873.92
870.76	871.53	+75	872.31	873.07	873.83

CONTINUED IN NEXT COLUMN AT RIGHT

D.C. 2°-00' Lt. Max. Super 1.54'		D.C. 1°-00' Rt. Max. Super 0.77	
Left Pair Lanes		Station	Profile Grade
Left Edge	℄		
870.76	871.53	951+77.5	872.30
870.65	871.42	952+00	872.19
870.53	871.30	+25	872.07
870.41	871.18	+50	871.95
870.29	871.06	+75	871.83
870.17	870.94	953+00	871.71
870.05	870.82	+25	871.59
869.93	870.70	+50	871.47
869.81	870.58	+75	871.35
869.69	870.46	954+00	871.23
869.57	870.34	+25	871.11
869.45	870.22	+50	870.99
869.33	870.10	+75	870.87
869.21	869.98	955+00	870.75
869.09	869.86	+25	870.63
868.97	869.74	+50	870.51
868.85	869.62	+75	870.39
868.73	869.50	956+00	870.27
868.61	869.38	+25	870.15
868.49	869.26	+50	870.03
868.37	869.14	+75	869.91
868.25	869.02	957+00	869.79
868.13	868.90	+25	869.67
868.01	868.78	+50	869.55
867.89	868.66	+75	869.43
867.77	868.54	958+00	869.31
867.65	868.42	+25	869.19
867.53	868.30	+50	869.07
867.41	868.18	+75	868.95
867.29	868.06	959+00	868.83
867.17	867.94	+25	868.71
867.08	867.83	+50	868.59
867.06	867.81	C.S. +55.33	868.56
867.02	867.74	+75	868.47
867.02	867.70	+86	868.42
867.01	867.68	960+00	868.35
867.00	867.61	+25	868.23
867.00	867.55	+50	868.11
866.99	867.49	+75	867.99
866.98	867.42	961+00	867.87
866.97	867.36	+25	867.75
866.96	867.30	+50	867.63
866.95	867.23	+75	867.51
866.95	867.17	962+00	867.39
866.95	867.14	+130.9	867.33
866.94	867.13	+25	867.27
866.94	867.13	+50	867.15
866.93	867.12	S.T. +55.33	867.12
866.89	867.08	+75	867.03
866.83	867.02	963+00	866.91
866.75	866.94	+25	866.79
866.73	866.92	+30.33	866.76
866.65	866.84	+50	866.67
866.58	866.77	+69	866.58
866.55	866.74	+75	866.55

P.C.988+13.62		D C 1°-00'.RT. Max.Super 0.77		P.T.1007+ 38.62	
Left Pair Lanes		Station	Profile Grade	Right Pair Lanes	
Left Edge	℄			℄	Right Edge
900.67	900.86	986+00	900.67	900.86	900.67
901.67	901.86	+25	901.67	901.86	901.67
902.67	902.86	+50	902.67	902.86	902.67
903.22	903.40	+63.62	903.21	903.39	903.20
903.71	903.86	+75	903.67	903.82	903.63
904.76	904.86	987+00	904.67	904.77	904.58
905.83	905.86	+25	905.67	905.70	905.51
906.40	906.40	+38.62	906.21	906.21	906.02
906.90	906.86	+50	906.67	906.63	906.44
908.00	907.86	+75	907.67	907.53	907.34
908.56	908.37	+87.77	908.18	907.99	907.80
909.10	908.89	988+00	908.67	908.46	908.24
909.69	909.45	PC+13.62	909.21	908.97	908.73
910.19	909.93	+25	909.67	909.41	909.15
910.84	910.56	+40	910.27	909.97	909.66
911.29	910.98	+50	910.67	910.36	910.05
912.36	912.01	+75	911.66	911.31	910.96
912.92	912.56	+88.62	912.19	911.83	911.46
913.37	913.00	989+00	912.62	912.25	911.87
914.33	913.95	+25	913.56	913.18	912.79
914.79	914.41	+37.5	914.02	913.64	913.25
915.24	914.86	+50	914.47	914.09	913.70
916.13	915.75	+75	915.36	914.98	914.59
916.99	916.61	990+00	916.22	915.84	915.45
917.83	917.45	+25	917.06	916.68	916.29
918.64	918.26	+50	917.87	917.49	917.10
919.43	919.05	+75	918.66	918.28	917.89
920.19	919.81	991+00	919.42	919.04	918.65
920.93	920.55	+25	920.16	919.78	919.39
921.64	921.26	+50	920.87	920.49	920.10
922.33	921.95	+75	921.56	921.18	920.79
922.99	922.61	992+00	922.22	921.84	921.45
923.63	923.25	+25	922.86	922.48	922.09
924.24	923.86	+50	923.47	923.09	922.70
924.83	924.45	+75	924.06	923.68	923.29
925.39	925.01	993+00	924.62	924.24	923.85
925.93	925.55	+25	925.16	924.78	924.39
926.44	926.06	+50	925.67	925.29	924.90
926.93	926.55	+75	926.16	925.78	925.39
927.39	927.01	994+00	926.62	926.24	925.85
927.83	927.45	+25	927.06	926.68	926.29
928.24	927.86	+50	927.47	927.09	926.70
928.63	928.25	+75	927.86	927.48	927.09
928.99	928.61	995+00	928.22	927.84	927.45
929.33	928.95	+25	928.56	928.18	927.79
929.64	929.26	+50	928.87	928.49	928.10
929.93	929.55	+75	929.16	928.78	928.39
930.19	929.81	996+00	929.42	929.04	928.65
930.43	930.05	+25	929.66	929.28	928.89
930.64	930.26	+50	929.87	929.49	929.10
930.83	930.45	+75	930.06	929.68	929.29
930.99	930.61	997+00	930.22	929.84	929.45
931.13	930.75	+25	930.36	929.98	929.59
931.24	930.86	+50	930.47	930.09	929.70
931.33	930.95	+75	930.56	930.18	929.79
CONTINUED ON SHEET NO.48					

CURVE TABLES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

51

TUS-250-17.23

D.C. 1°-00' RT. Max. Super 0.77 CONTINUED FROM SHEET NO. 47					
Left Pair Lanes		Station	Profile Grade	Right Pair Lanes	
Left Edge	℄			℄	Right Edge
931.39	931.01	998+00	930.62	930.24	929.85
931.43	931.05	+25	930.66	930.28	929.89
931.44	931.06	+50	930.67	930.29	929.90
931.43	931.05	+75	930.66	930.28	929.89
931.39	931.01	999+00	930.62	930.24	929.85
931.33	930.95	+25	930.56	930.18	929.79
931.24	930.86	+50	930.47	930.09	929.70
931.13	930.75	+75	930.36	929.98	929.59
930.99	930.61	1000+00	930.22	929.84	929.45
930.83	930.45	+25	930.06	929.68	929.29
930.64	930.26	+50	929.87	929.49	929.10
930.43	930.05	+75	929.66	929.28	928.89
930.19	929.81	1001+00	929.42	929.04	928.65
929.93	929.55	+25	929.16	928.78	928.39
929.64	929.26	+50	928.87	928.49	928.10
929.33	928.95	+75	928.56	928.18	927.79
928.99	928.61	1002+00	928.22	927.84	927.45
928.63	928.25	+25	927.86	927.48	927.09
928.24	927.86	+50	927.47	927.09	926.70
927.83	927.45	+75	927.06	926.68	926.29
927.39	927.01	1003+00	926.62	926.24	925.85
926.93	926.55	+25	926.16	925.78	925.39
926.44	926.06	+50	925.67	925.29	924.90
925.93	925.55	+75	925.16	924.78	924.39
925.39	925.01	1004+00	924.62	924.24	923.85
924.83	924.45	+25	924.06	923.68	923.29
924.24	923.86	+50	923.47	923.09	922.70
923.63	923.25	+75	922.86	922.48	922.09
922.99	922.61	1005+00	922.22	921.84	921.45
922.33	921.95	+25	921.56	921.18	920.79
921.64	921.26	+50	920.87	920.49	920.10
920.93	920.55	+75	920.16	919.78	919.39
920.19	919.81	1006+00	919.42	919.04	918.65
919.43	919.05	+25	918.66	918.27	917.89
918.61	918.24	+50	917.87	917.50	917.12
918.12	917.78	+6362	917.41	917.07	916.69
917.75	917.41	+75	917.06	916.71	916.35
916.85	916.54	1007+00	916.22	915.92	915.61
915.89	915.63	+25	915.36	915.00	914.83
915.52	915.27	+35	915.01	914.77	914.52
915.36	915.12	P.T.+3862	914.88	914.64	914.40
914.91	914.69	+50	914.47	914.25	914.03
914.36	914.17	+6362	913.98	913.79	913.60
913.90	913.75	+75	913.56	913.41	913.22
912.86	912.81	1008+00	912.62	912.57	912.38
912.26	912.29	+1362	912.10	912.07	911.88
911.82	911.81	+25	911.66	911.69	911.50
910.77	910.86	+50	910.67	910.76	910.57
909.70	909.86	+75	909.67	909.83	909.64
909.13	909.32	+8862	909.13	909.32	909.13
908.67	908.86	1009+00	908.67	908.86	908.67
907.67	907.86	+25	907.67	907.86	907.67

P.C. 1079 + 42.95 D.C. 1°24' RT. Max. Super 1.08 P.T. 1104 + 07.83					
Left Pair Lanes		Station	Profile Grade	Right Pair Lanes	
Left Edge	℄			℄	Right Edge
854.83	855.02	1077+00	854.83	855.02	854.83
854.84	855.03	+25	854.84	855.03	854.84
854.84	855.03	+3695	854.84	855.03	854.84
854.88	855.04	+50	854.85	855.01	854.82
854.96	855.05	+75	854.86	854.95	854.76
855.02	855.06	1078+00	854.87	854.91	854.72
855.06	855.06	+1195	854.87	854.87	854.68
855.12	855.07	+25	854.88	854.83	854.64
855.24	855.08	+50	854.89	854.73	854.54
855.35	855.13	+75	854.90	854.68	854.45
855.46	855.19	1079+00	854.91	854.64	854.36
855.57	855.25	+25	854.92	854.60	854.27
855.66	855.30	PC+4295	854.93	854.57	854.20
855.69	855.31	+50	854.93	854.55	854.17
855.80	855.37	+75	854.94	854.51	854.08
855.91	855.43	1080+00	854.95	854.48	854.00
855.97	855.48	+25	854.96	854.46	853.95
855.99	855.48	+2795	854.96	854.46	853.94
856.04	855.51	+50	854.97	854.44	853.91
856.06	855.52	+64	854.98	854.44	853.90
856.06	855.52	+75	854.98	854.44	853.90
856.07	855.53	1081+00	854.99	854.45	853.91
856.08	855.54	+25	855.00	854.46	853.92
856.09	855.55	+50	855.01	854.47	853.93
856.10	855.56	+75	855.02	854.48	853.94
856.11	855.57	1082+00	855.03	854.49	853.95
856.12	855.58	+25	855.04	854.50	853.96
856.13	855.59	+50	855.05	854.51	853.97
856.14	855.60	+75	855.06	854.52	853.98
856.15	855.61	1083+00	855.07	854.53	853.99
856.16	855.62	+25	855.08	854.54	854.00
856.17	855.63	+50	855.09	854.55	854.01
856.18	855.64	+75	855.10	854.56	854.02
856.19	855.65	1084+00	855.11	854.57	854.03
856.20	855.66	+25	855.12	854.58	854.04
856.21	855.67	+50	855.13	854.59	854.05
856.22	855.68	+75	855.14	854.60	854.06
856.23	855.69	1085+00	855.15	854.61	854.07
856.24	855.70	+25	855.16	854.62	854.08
856.25	855.71	+50	855.17	854.63	854.09
856.26	855.72	+75	855.18	854.64	854.10
856.27	855.73	1086+00	855.19	854.65	854.11
856.28	855.74	+25	855.20	854.66	854.12
856.29	855.75	+50	855.21	854.67	854.13
856.30	855.76	+75	855.22	854.68	854.14
856.31	855.77	1087+00	855.23	854.69	854.15
856.32	855.78	+25	855.24	854.70	854.16
856.33	855.79	+50	855.25	854.71	854.17
856.34	855.80	+75	855.26	854.72	854.18
856.35	855.81	1088+00	855.27	854.73	854.19
856.36	855.82	+25	855.28	854.74	854.20
856.37	855.83	+50	855.29	854.75	854.21
856.38	855.84	+75	855.30	854.76	854.22
856.39	855.85	1089+00	855.31	854.77	854.23
856.40	855.86	+25	855.32	854.78	854.24
856.41	855.87	+50	855.33	854.79	854.25
856.42	855.88	+75	855.34	854.80	854.26
856.43	855.89	1090+00	855.35	854.81	854.27
856.44	855.90	+25	855.36	854.82	854.28
856.45	855.91	+50	855.37	854.83	854.29

CONTINUED IN NEXT COLUMN AT RIGHT

D.C. 1°-24 RT.			Max. Super 1.08		
CONTINUED FROM COLUMN AT LEFT					
Left Pair Lanes		Station	Profile Grade	Right Pair Lanes	
Left Edge	℄			℄	Right Edge
856.46	855.92	+75	855.38	854.84	854.30
856.47	855.93	1091+00	855.39	854.85	854.31
856.48	855.94	+25	855.40	854.86	854.32
856.49	855.95	+50	855.41	854.87	854.33
856.50	855.96	+75	855.42	854.88	854.34
856.51	855.97	1092+00	855.43	854.89	854.35
856.52	855.98	+25	855.44	854.90	854.36
856.53	855.99	+50	855.45	854.91	854.37
856.54	856.00	+75	855.46	854.92	854.38
856.55	856.01	1093+00	855.47	854.93	854.39
856.56	856.02	+25	855.48	854.94	854.40
856.57	856.03	+50	855.49	854.95	854.41
856.58	856.04	+75	855.50	854.96	854.42
856.59	856.05	1094+00	855.51	854.97	854.43
856.60	856.06	+25	855.52	854.98	854.44
856.61	856.07	+50	855.53	854.99	854.45
856.62	856.08	+75	855.54	855.00	854.46
856.63	856.09	1095+00	855.55	855.01	854.47
856.64	856.10	+25	855.56	855.02	854.48
856.65	856.11	+50	855.57	855.03	854.49
856.66	856.12	+75	855.58	855.04	854.50
856.67	856.13	1096+00	855.59	855.05	854.51
856.68	856.14	+25	855.60	855.06	854.52
856.69	856.15	+50	855.61	855.07	854.53
856.70	856.16	+75	855.62	855.08	854.54
856.71	856.17	1097+00	855.63	855.09	854.55
856.72	856.18	+25	855.64	855.10	854.56
856.73	856.19	+50	855.65	855.11	854.57
856.74	856.20	+75	855.66	855.12	854.58
856.75	856.21	1098+00	855.67	855.13	854.59
856.76	856.22	+25	855.68	855.14	854.60
856.77	856.23	+50	855.69	855.15	854.61
856.78	856.24	+75	855.70	855.16	854.62
856.79	856.25	1099+00	855.71	855.17	854.63
856.80	856.26	+25	855.72	855.18	854.64
856.81	856.27	+50	855.73	855.19	854.65
856.82	856.28	+75	855.74	855.20	854.66
856.83	856.29	1100+00	855.75	855.21	854.67
856.84	856.30	+25	855.76	855.22	854.68
856.85	856.31	+50	855.77	855.23	854.69
856.86	856.32	+75	855.78	855.24	854.70
856.87	856.33	1101+00	855.79	855.25	854.71
856.88	856.34	+25	855.80	855.26	854.72
856.89	856.35	+50	855.81	855.27	854.73
856.90	856.36	+75	855.82	855.28	854.74
856.91	856.37	1102+00	855.83	855.29	854.75
856.92	856.38	+25	855.84	855.30	854.76
856.93	856.39	+50	855.85	855.31	854.77
856.94	856.40	+75	855.86	855.32	854.78
856.94	856.40	+86	855.86	855.32	854.78
856.93	856.40	1103+00	855.87	855.33	854.80
856.89	856.39	+2283	855.88	855.36	854.85
856.88	856.38	+25	855.88	855.37	854.86
856.86	856.38	+3870	855.89	855.39	854.89
856.83	855.36	+50	855.89	855.41	854.94
CONTINUED IN NEXT COLUMN AT RIGHT					

CURVE TABLES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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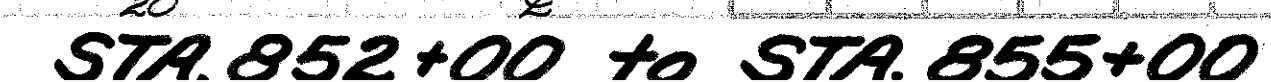
TUS-250-17.23

D.C. 0°-30' L.T. Max. Super 0.38 CONTINUED FROM SHEET NO.48					
Left Pair Lanes		Station	Profile Grade	Right Pair Lanes	
Left Edge	℄			℄	Right Edge
856.87	857.06	863+00	857.25	857.44	857.63
856.86	857.05	+25	857.24	857.43	857.62
856.85	857.04	+50	857.23	857.42	857.61
856.84	857.03	+75	857.22	857.41	857.60
856.83	857.02	864+00	857.21	857.40	857.59
856.82	857.01	+25	857.20	857.39	857.58
856.81	857.00	+50	857.19	857.38	857.57
856.80	856.99	+75	857.18	857.37	857.56
856.79	856.98	865+00	857.17	857.36	857.55
856.78	856.97	+25	857.16	857.35	857.54
856.77	856.96	+50	857.15	857.34	857.53
856.76	856.95	+75	857.14	857.33	857.52
856.75	856.94	866+00	857.13	857.32	857.51
856.74	856.93	+25	857.12	857.31	857.50
856.73	856.92	+50	857.11	857.30	857.49
856.72	856.91	+75	857.10	857.29	857.48
856.71	856.90	867+00	857.09	857.28	857.47
856.70	856.89	+25	857.08	857.27	857.46
856.69	856.88	+50	857.07	857.26	857.45
856.68	856.87	+75	857.06	857.25	857.44
856.67	856.86	868+00	857.05	857.24	857.43
856.66	856.85	+25	857.04	857.23	857.42
856.65	856.84	+40	857.03	857.22	857.41
856.65	856.84	+50	857.03	857.22	857.41
856.64	856.83	+75	857.02	857.21	857.40
856.63	856.82	869+00	857.01	857.20	857.39
856.62	856.81	+25	857.00	857.19	857.38
856.61	856.80	+50	856.99	857.18	857.37
856.60	856.79	+75	856.98	857.17	857.36
856.59	856.78	870+00	856.97	857.16	857.35
856.58	856.77	+25	856.96	857.15	857.34
856.57	856.76	+50	856.95	857.14	857.33
856.57	856.76	+52	856.95	857.14	857.33
856.58	856.77	+65	856.94	857.13	857.29
856.59	856.78	+75	856.94	857.13	857.29
856.60	856.79	P.T. +8233	856.94	857.13	857.28
856.65	856.84	871+00	856.93	857.12	857.21
856.73	856.92	+2033	856.92	857.11	857.11
856.77	856.96	+25	856.92	857.11	857.10
856.80	856.99	+50	856.91	857.10	857.02
856.85	857.04	+75	856.90	857.08	856.95
856.89	857.08	+9533	856.89	857.08	856.89
856.89	857.08	872+00	856.89	857.08	856.89

Seeding	End Area	Cu. Yds.
Width	S. Y. Cut	Exc. Emb.
1778	0	1324
149	0	165
950	0	34
22	0	19
256	0	80
24	0	24
250	9	52
21	5	4
29	2	2
0	0	0

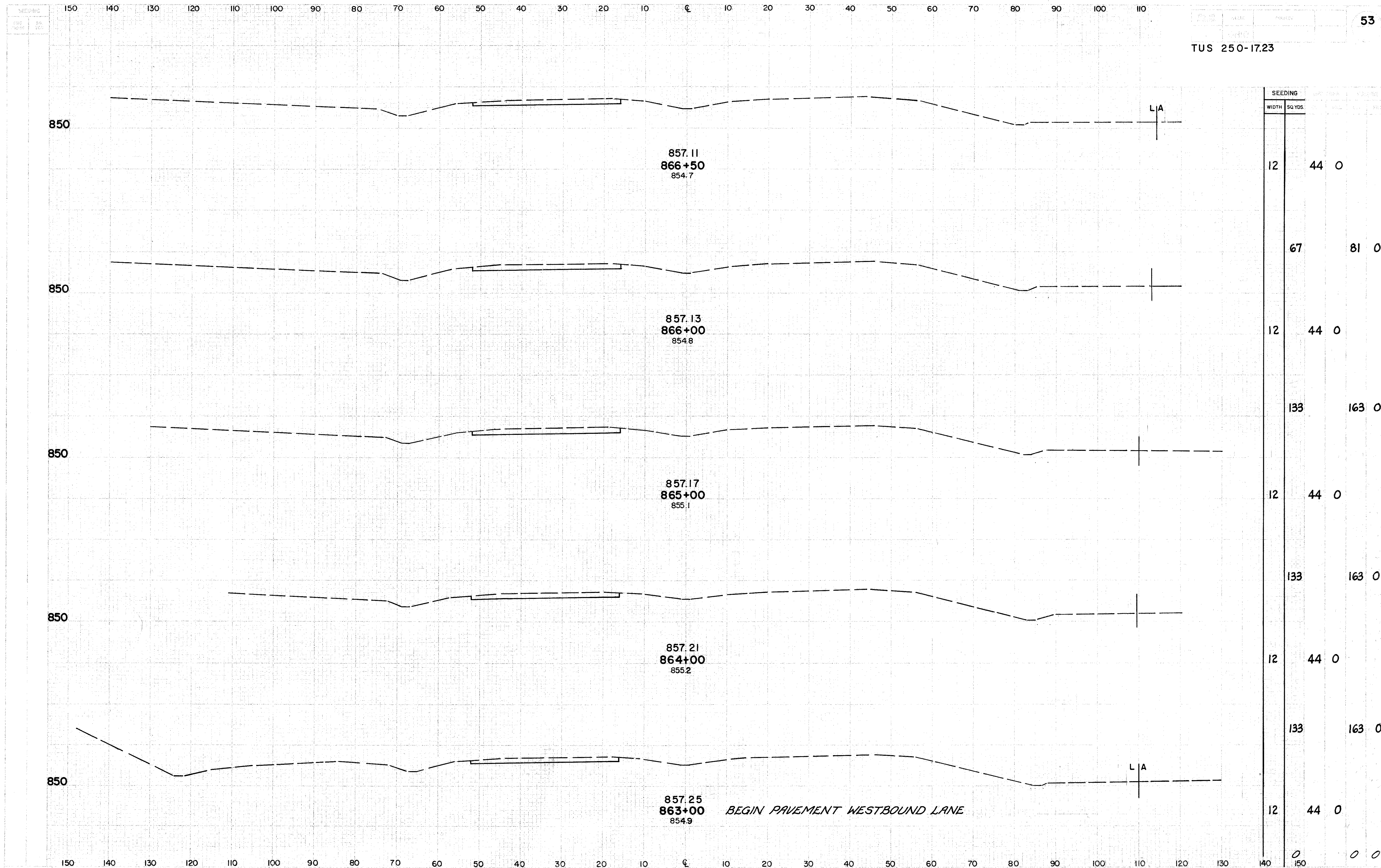
ZERO EARTHWORK

STA. 847+75 to STA. 851+00





TUS 250-17.23



150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

SEEDING
DATE
BY

850

857.01
869+00
853.8

LA

850

857.03
868+40
854.3

850

857.05
868+00
854.4

850

857.09
867+00
854.6

SEEDING		L.S. 402+		P.S. 500+	
WIDTH	SQ. YDS.	sq.	ft.	sq.	ft.

12 44 0

80 98 0

12 44 0

53 65 0

12 44 0

133 163 0

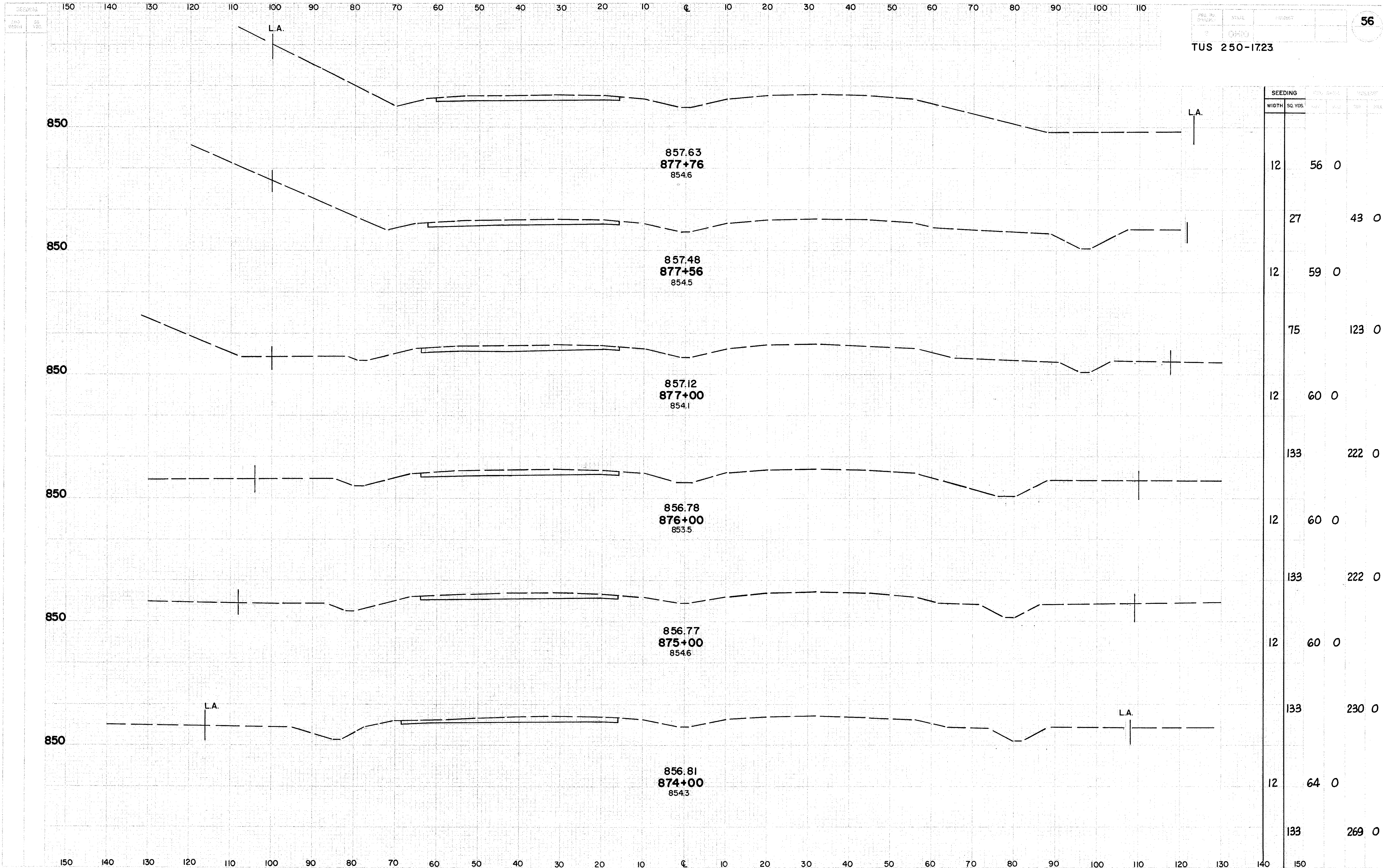
12 44 0

67 81 0

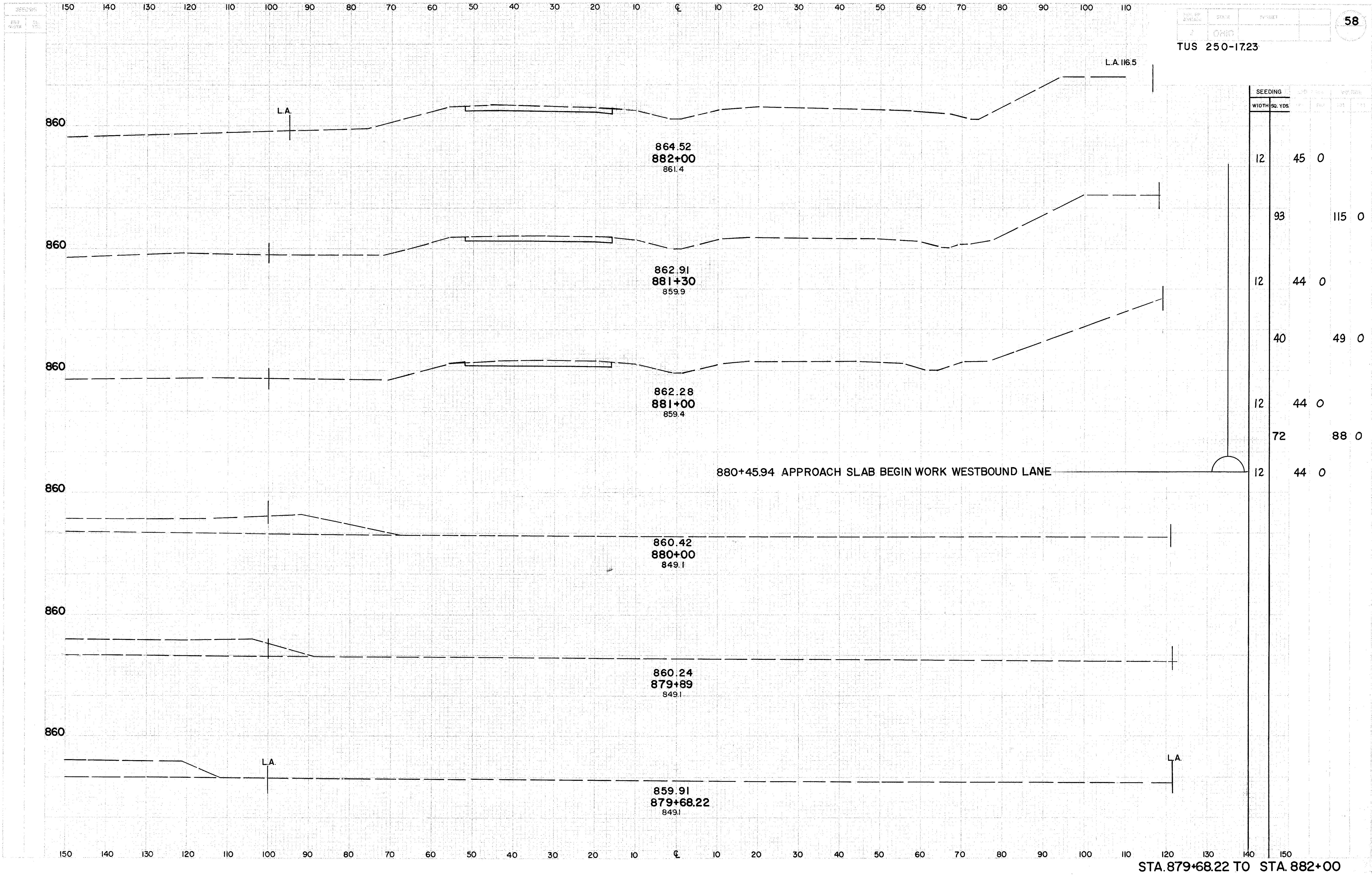
STA. 867+00 TO STA. 869+00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150



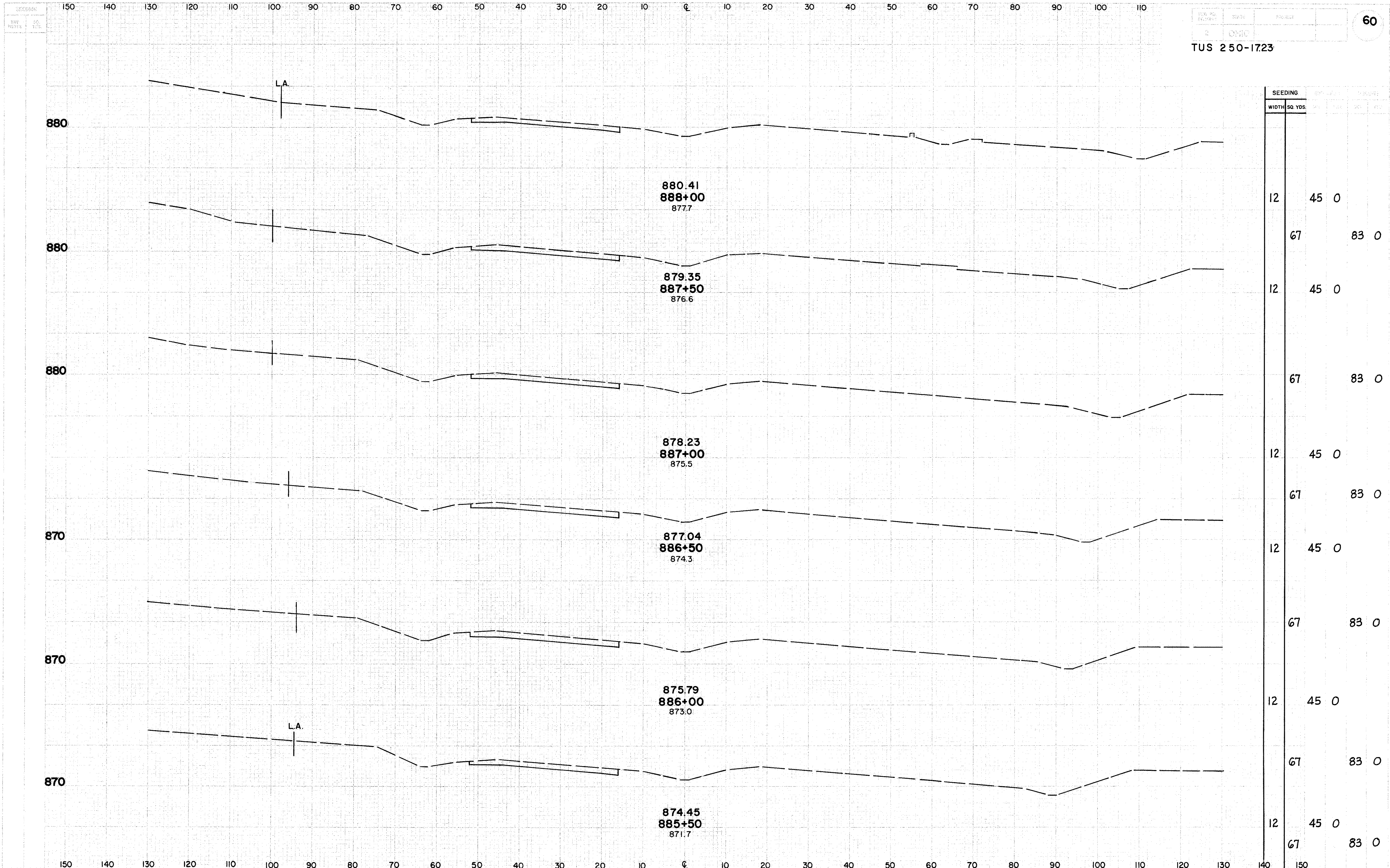


STA. 874+00 TO STA. 877+76

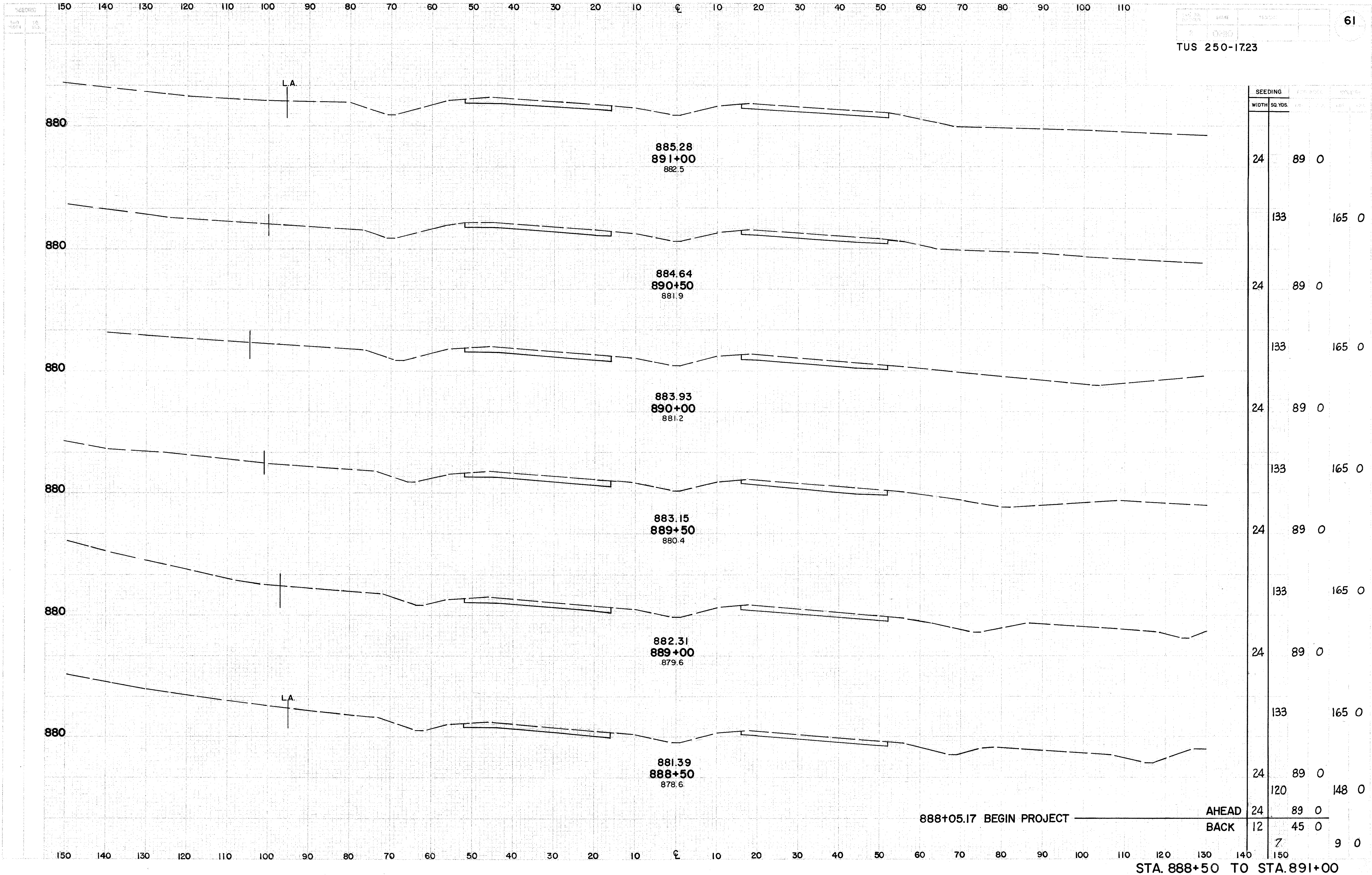


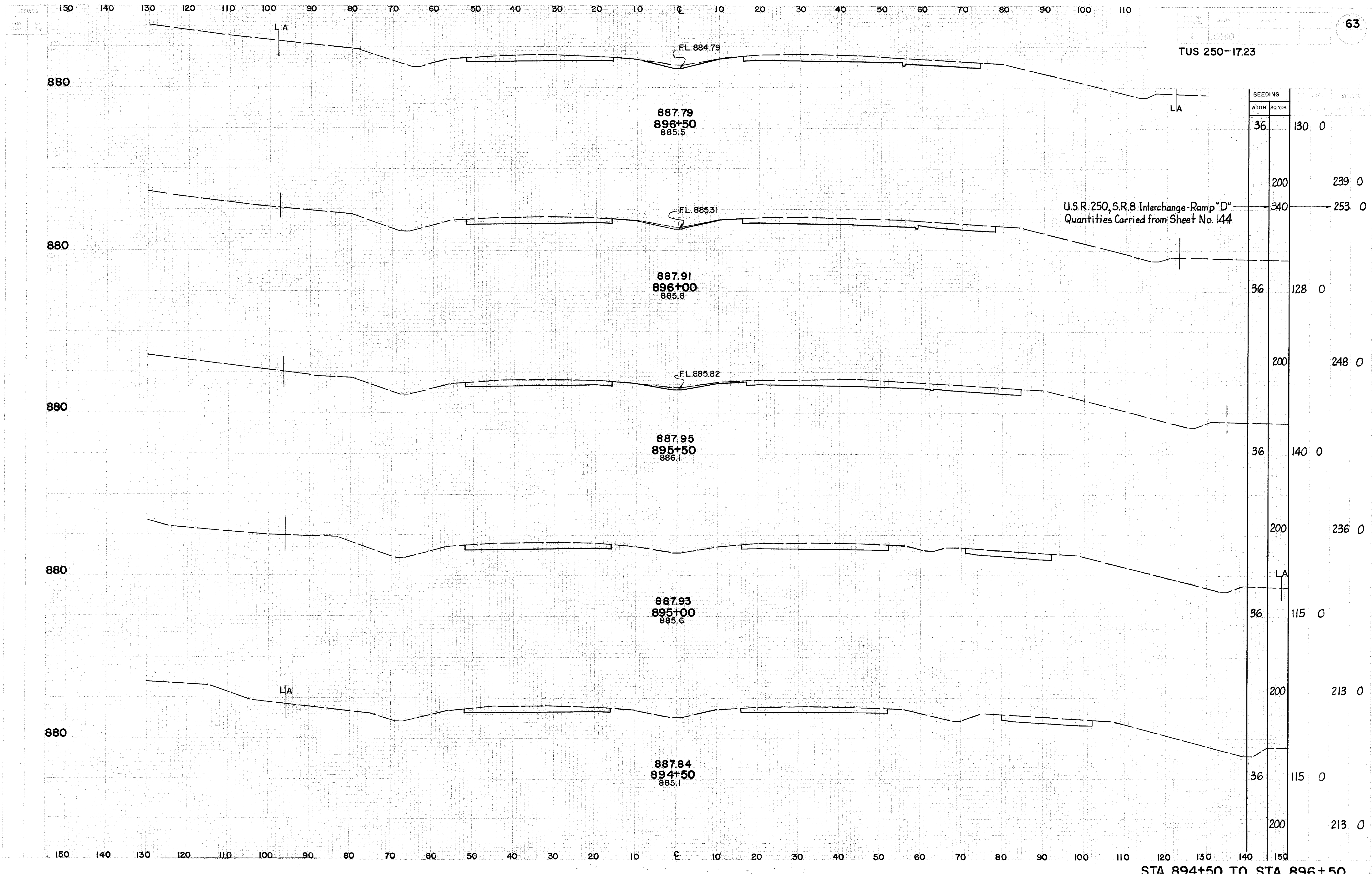
TUS 250-1723

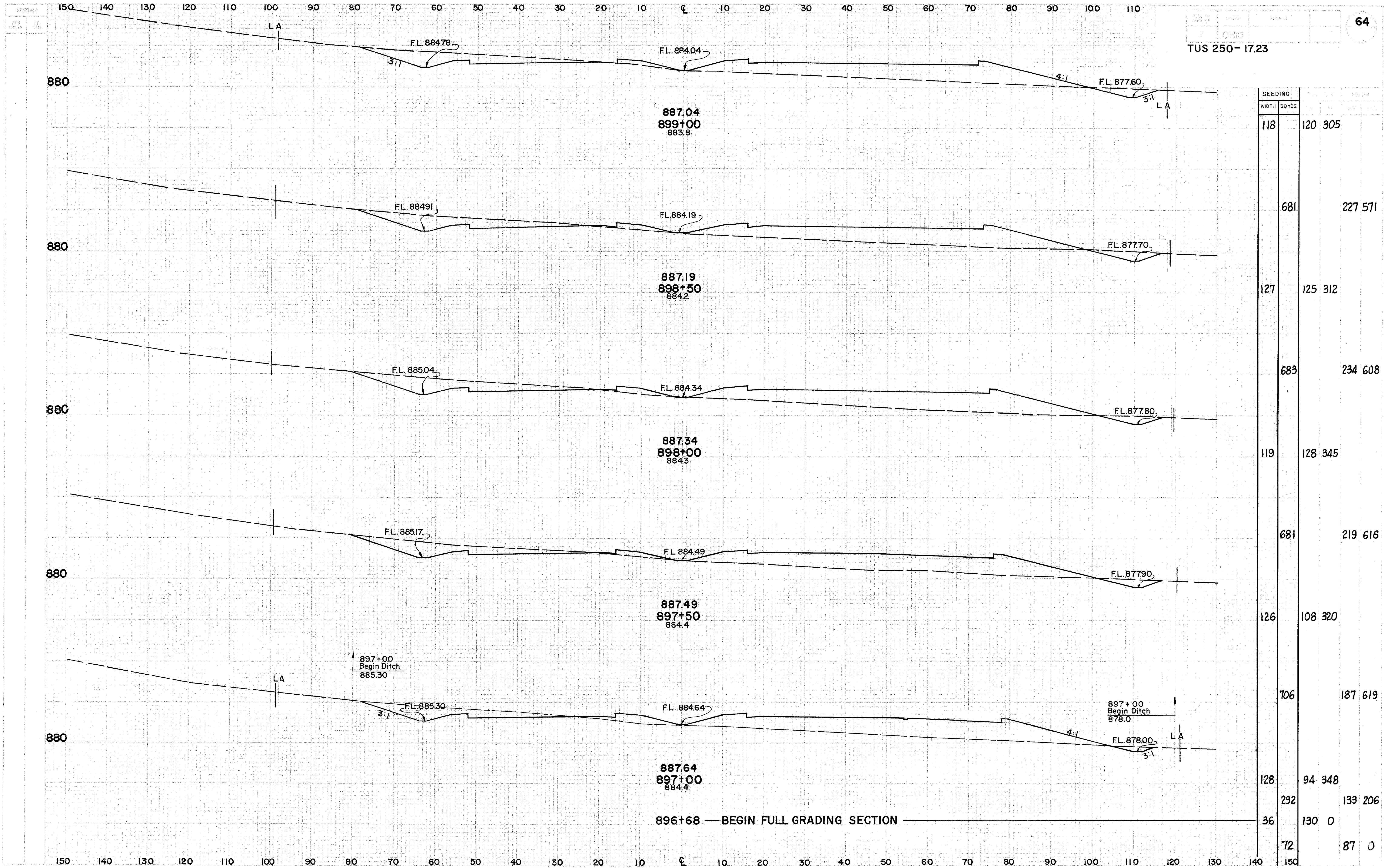




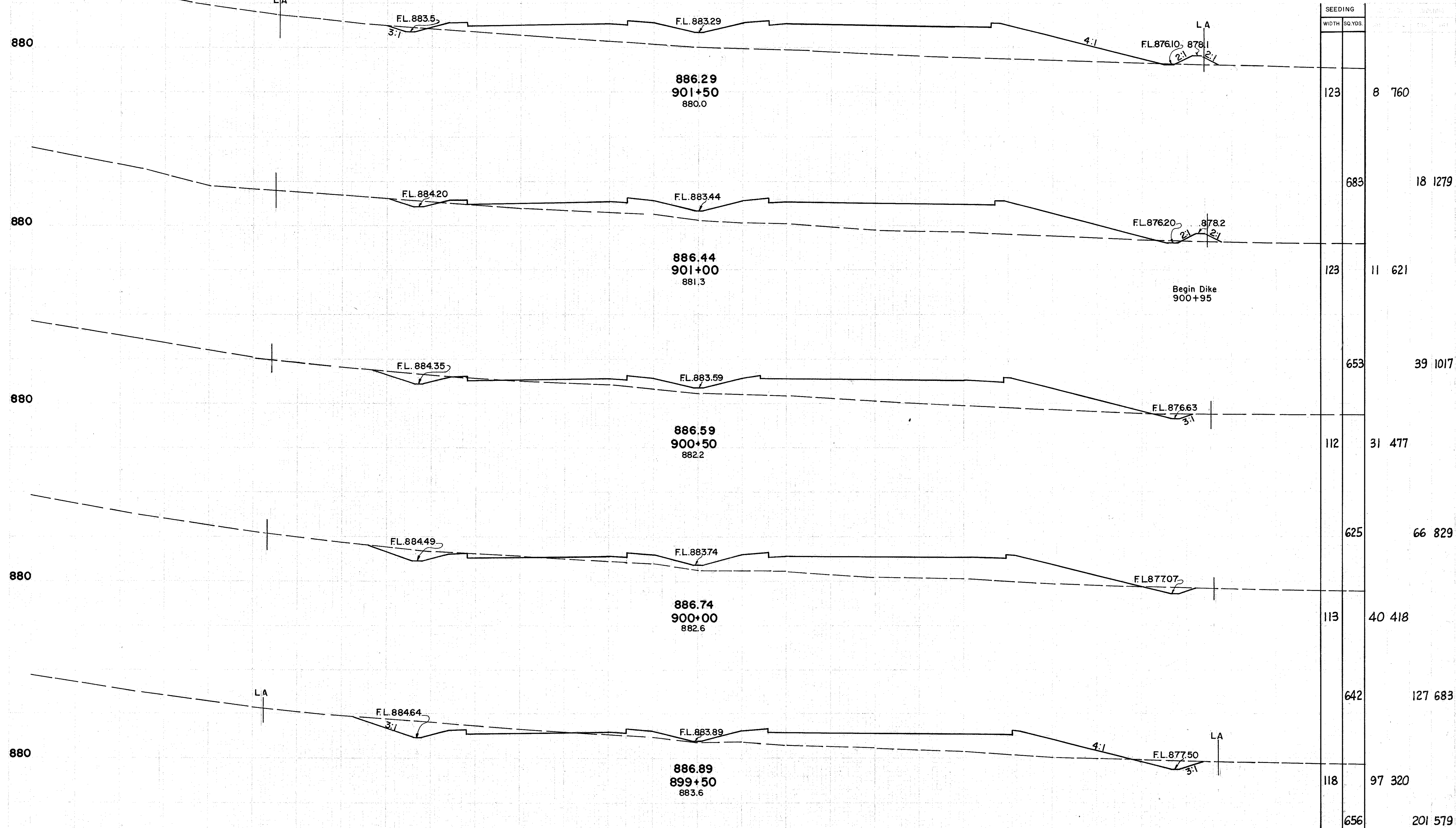
STA 885+50 TO STA.888+00





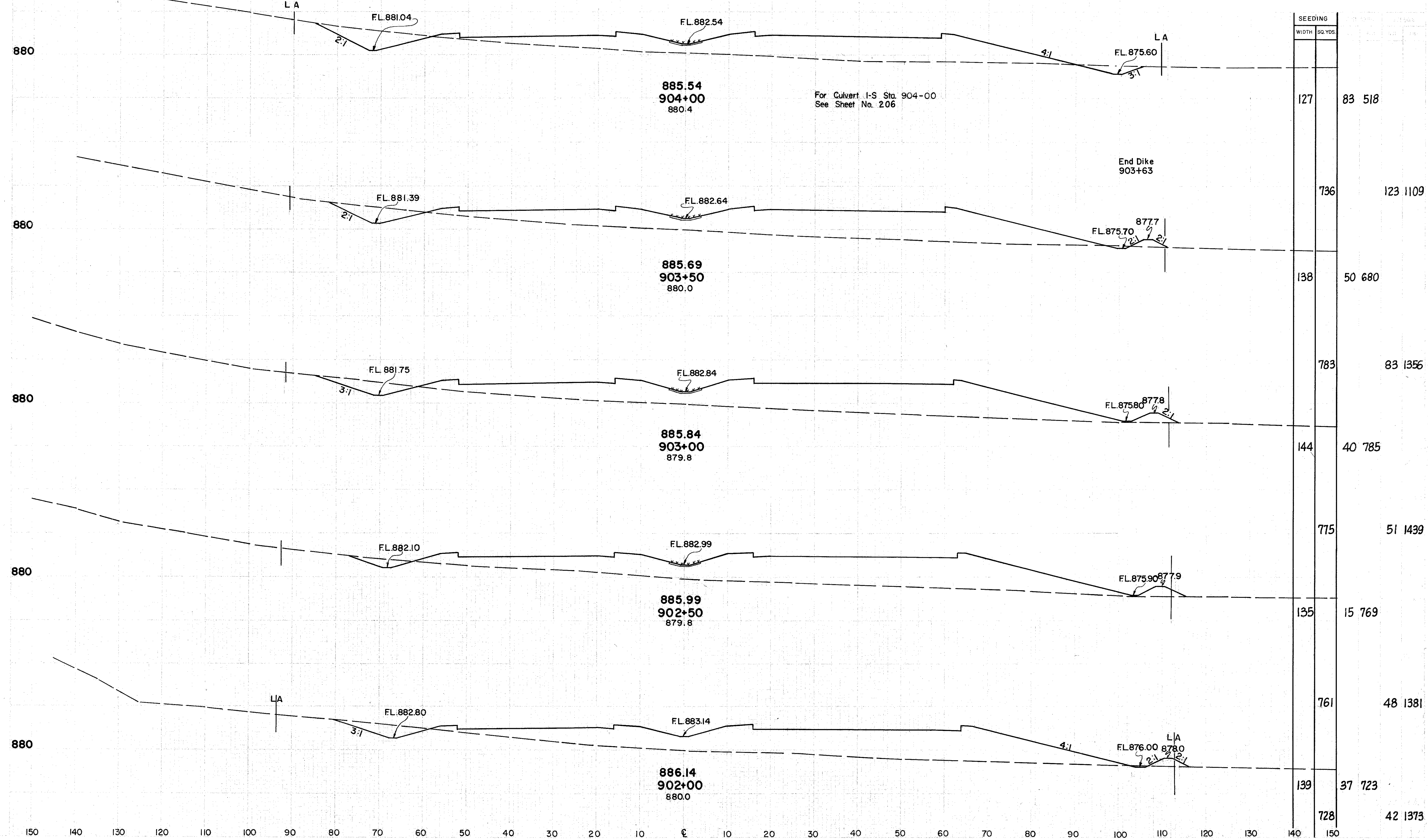


TUS 250-1723



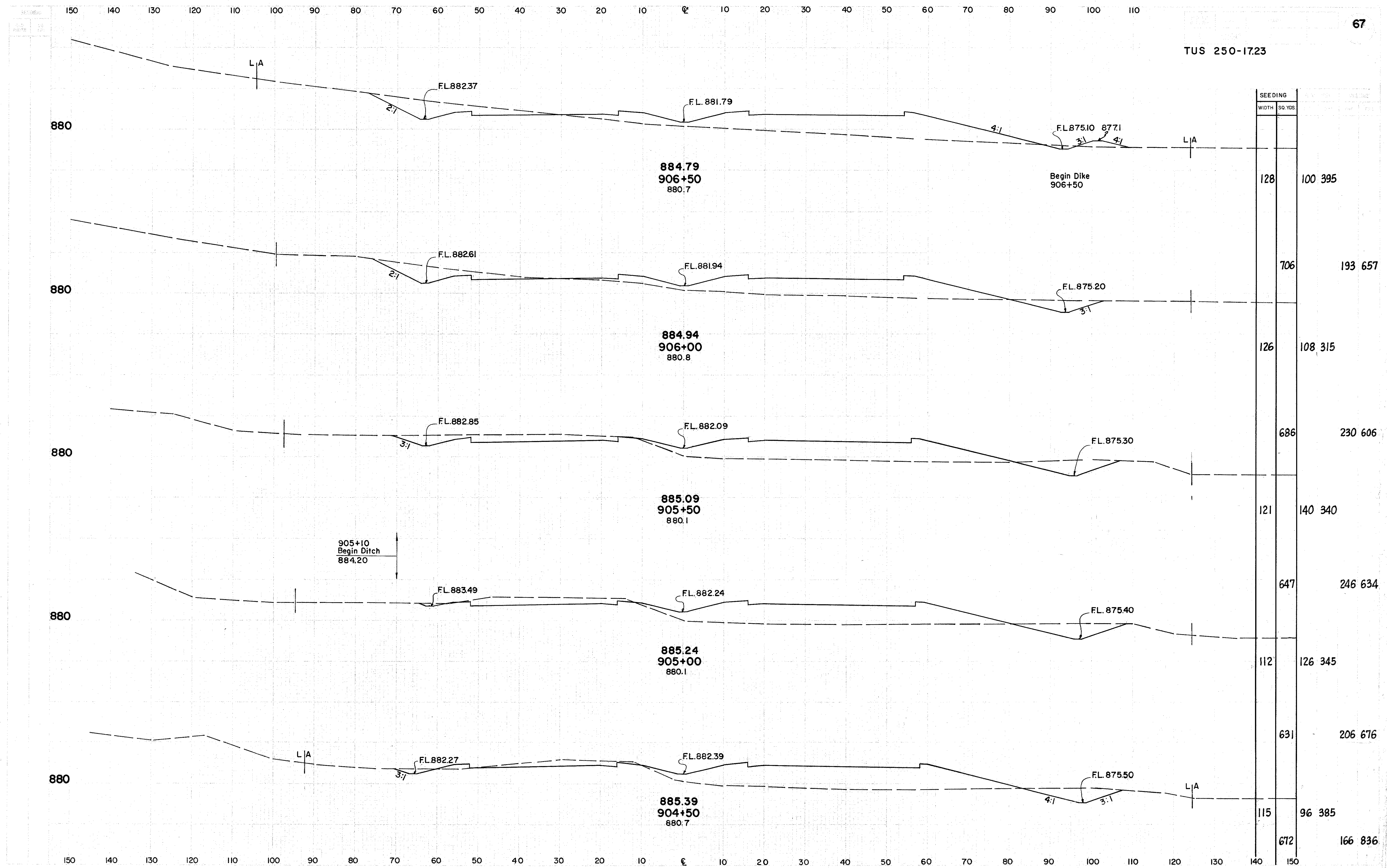
STA. 899+50 TO STA. 901+50

TUS 250-1723

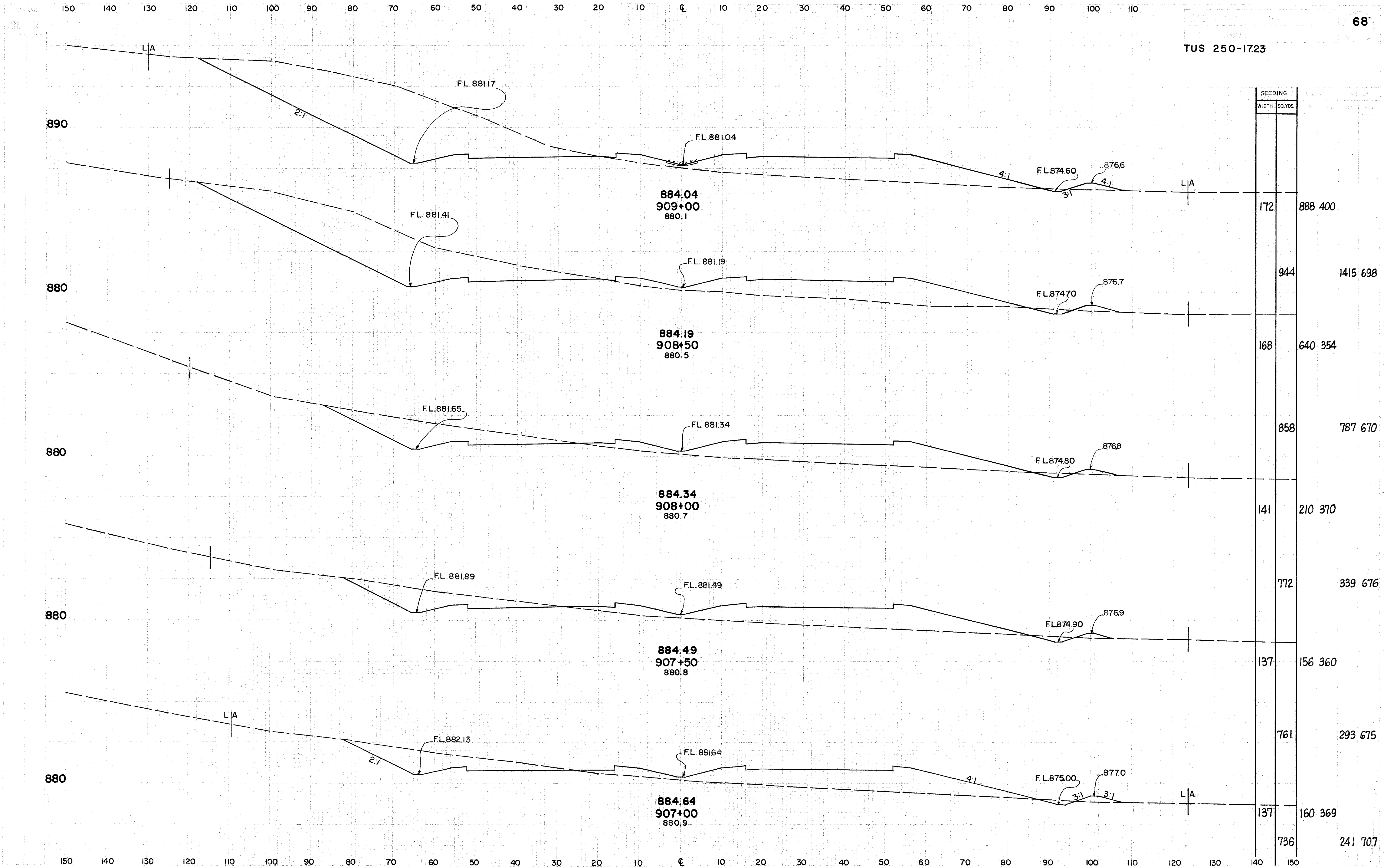


STA. 902+00 TO STA. 904+00

TUS 250-17.23



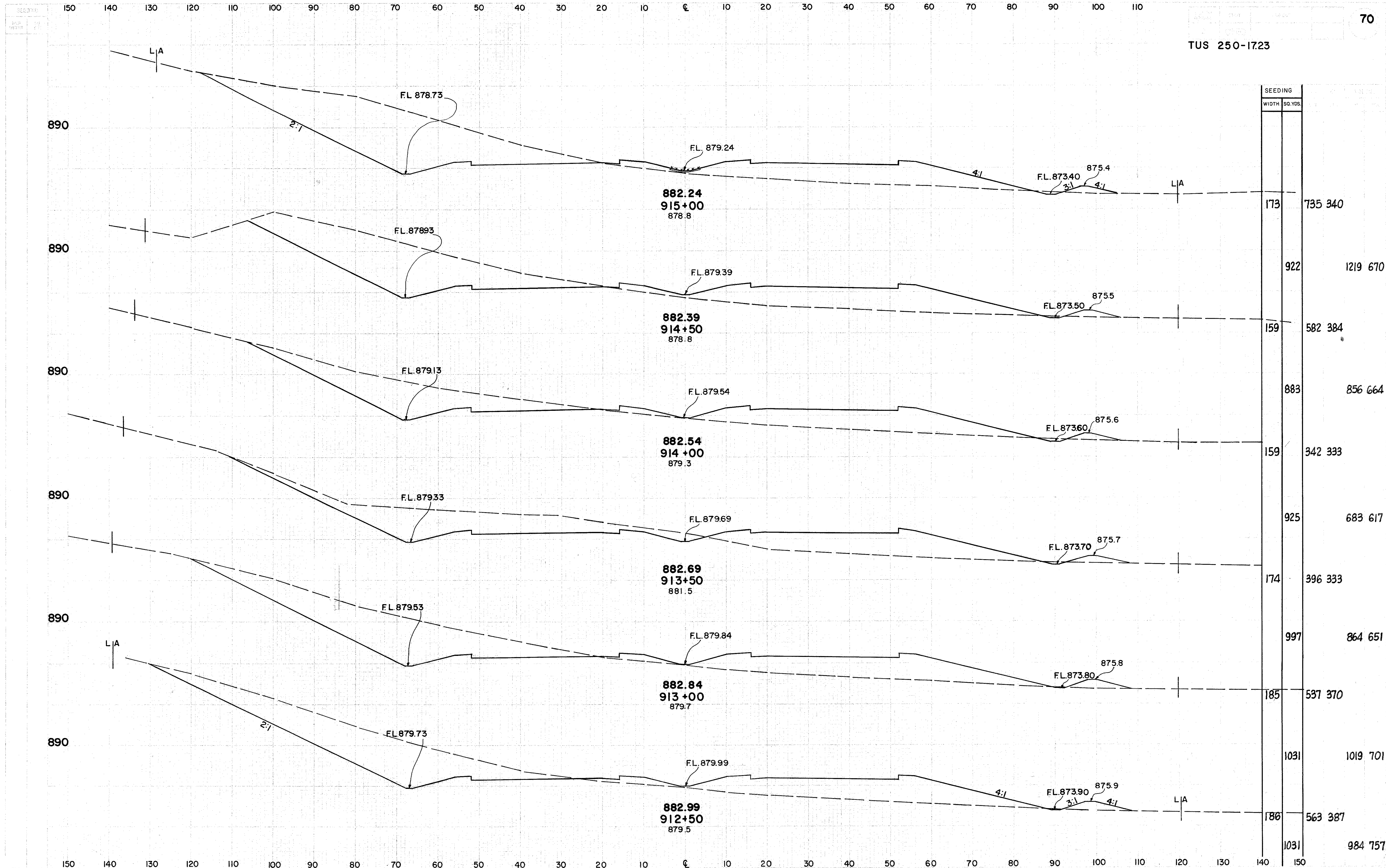
STA. 904+50 TO STA. 906+50



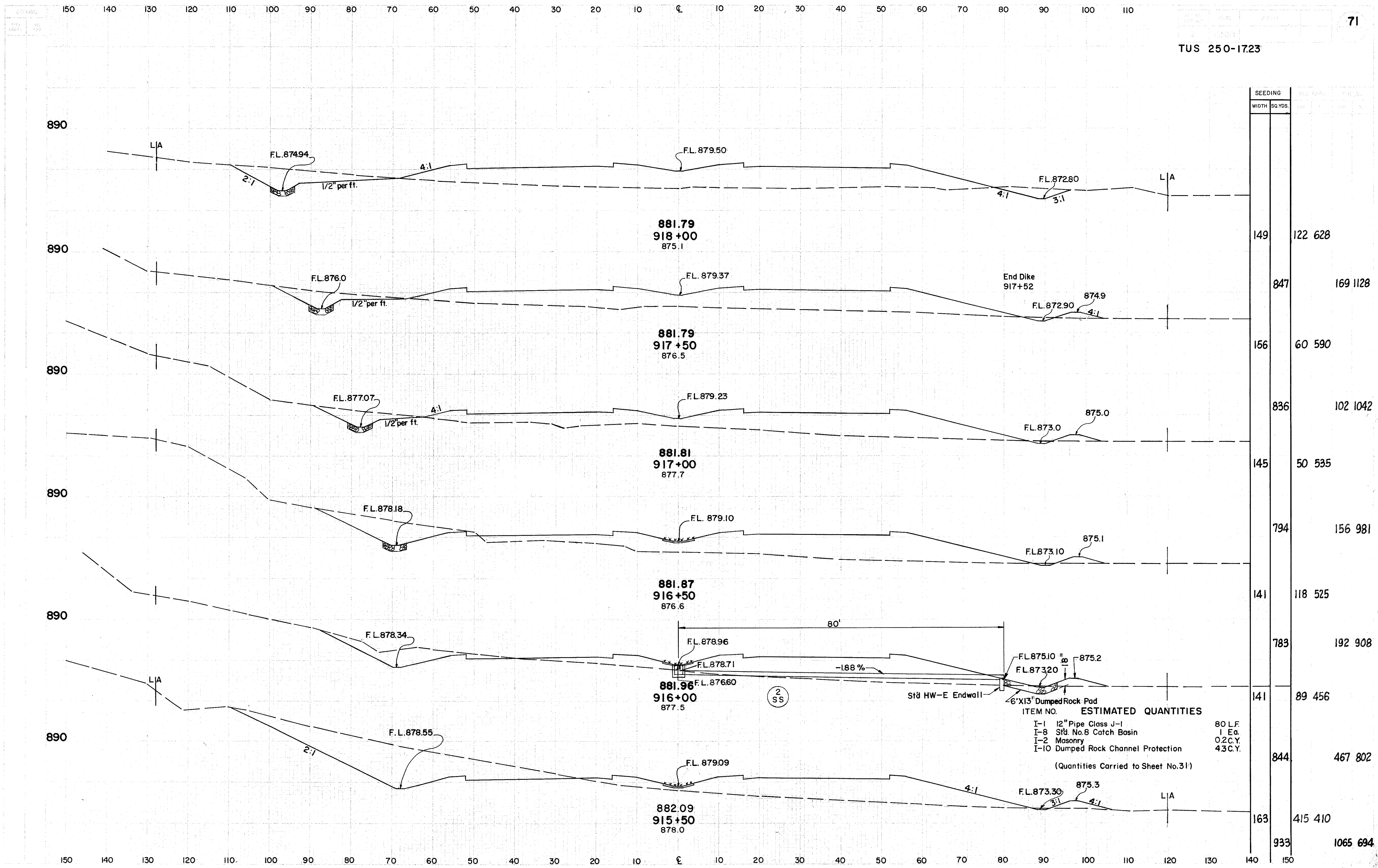
TUS 250-1723



TUS 250-1723



STA. 912+50 TO STA. 915+00

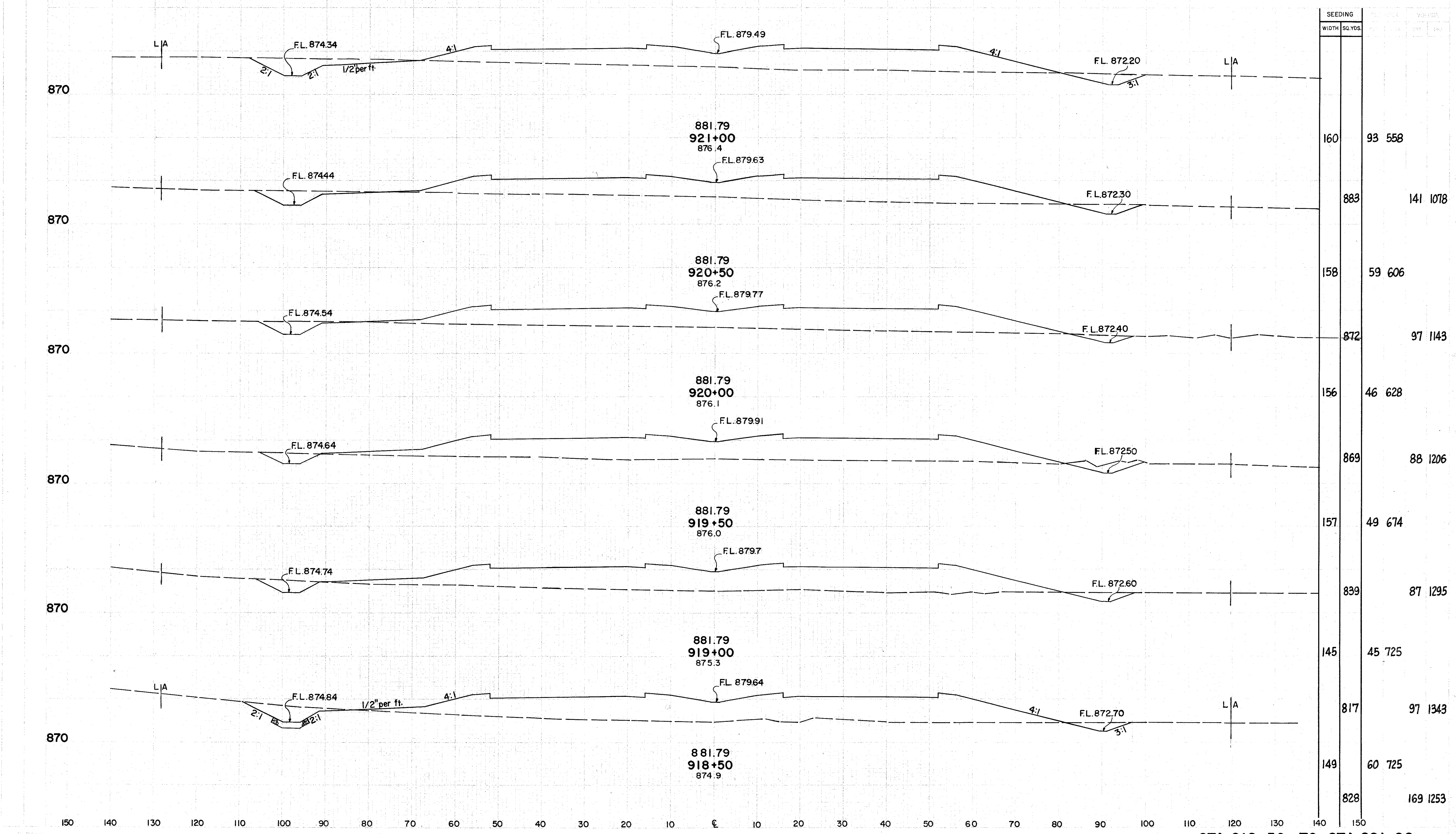


SEEDING		SQ. YDS.
WIDTH		
149	122	628
847	169	1128
156	60	590
836	102	1042
145	50	535
794	156	981
141	118	525
783	192	908
141	89	456
844	467	802
163	415	410
933	1065	694

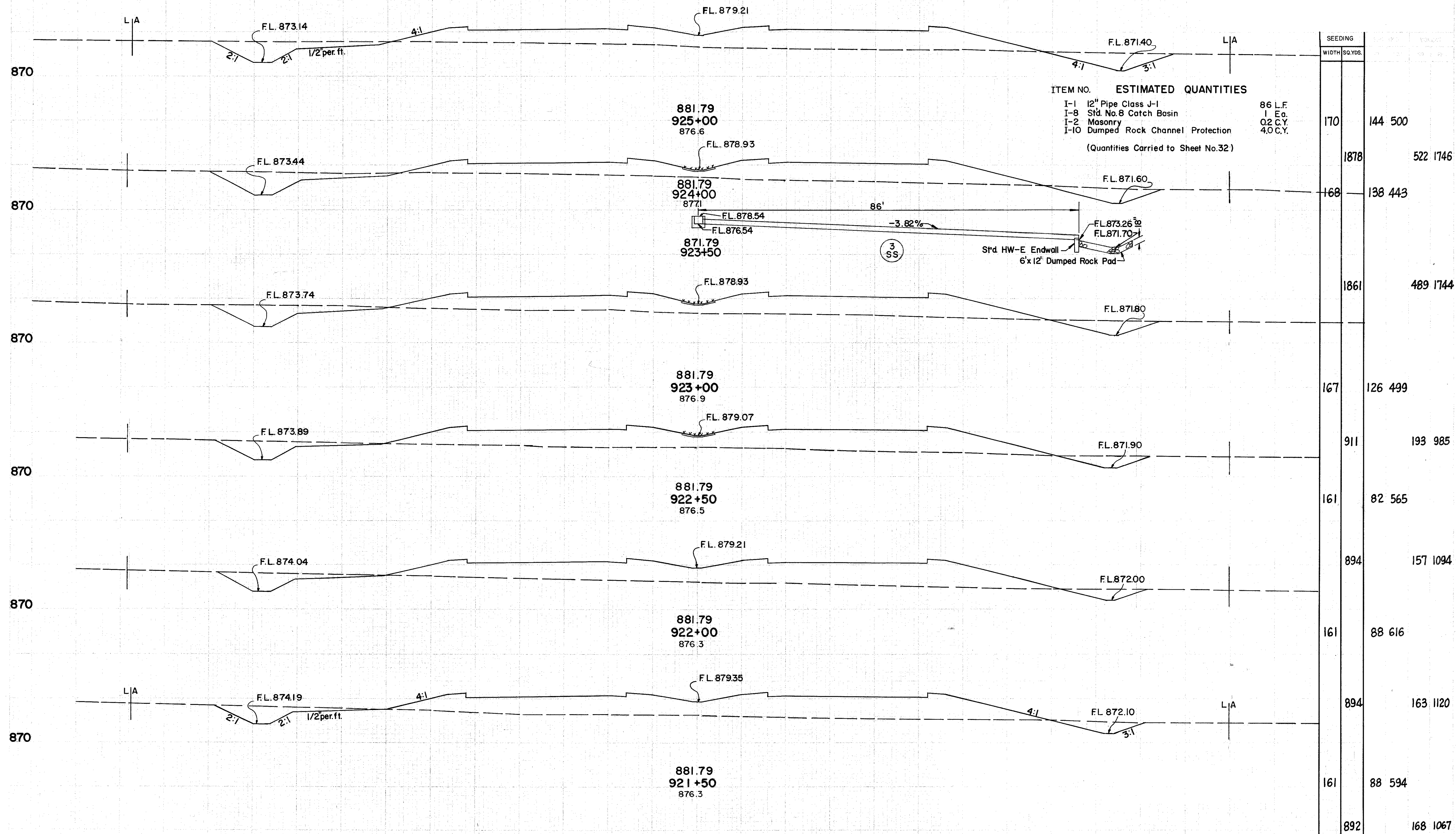
ESTIMATED QUANTITIES

I-1	12" Pipe Class J-1	80 L.F.
I-8	Std. No. 8 Catch Basin	1 Ea.
I-2	Masonry	0.2 C.Y.
I-10	Dumped Rock Channel Protection	4.3 C.Y.

(Quantities Carried to Sheet No. 31)

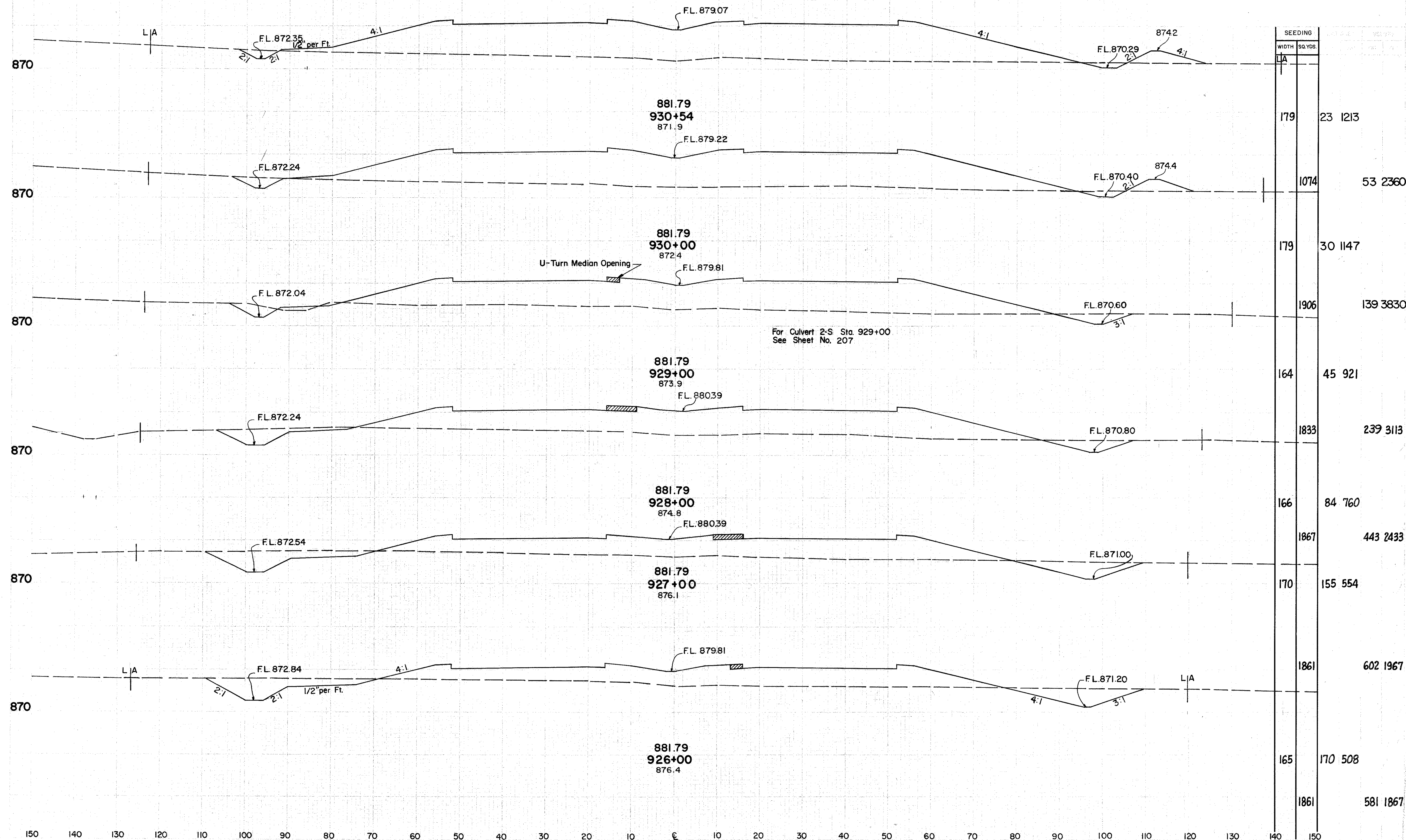


TUS 250-1723

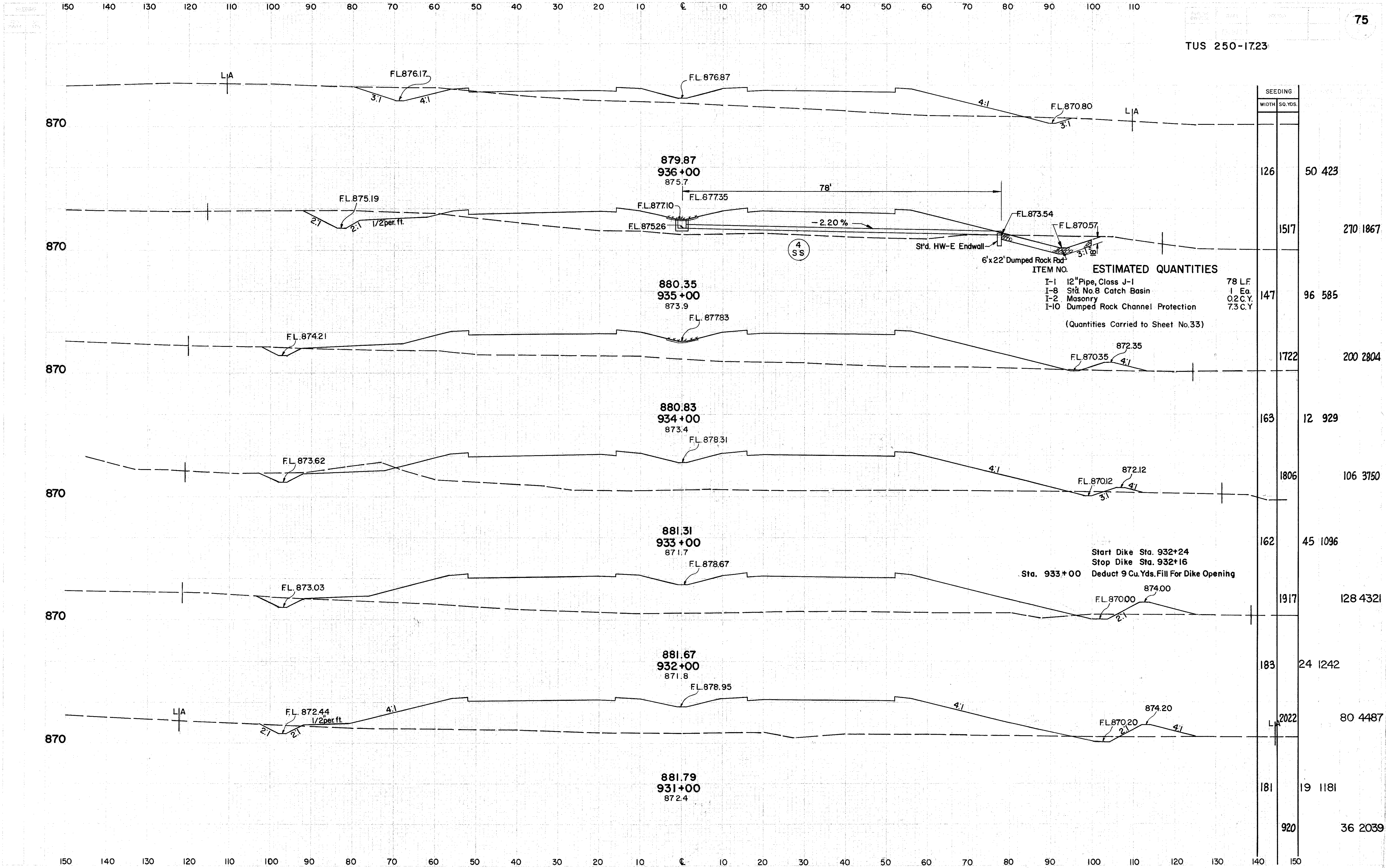


STA. 921+50 TO STA. 925+00

TUS 250-1723

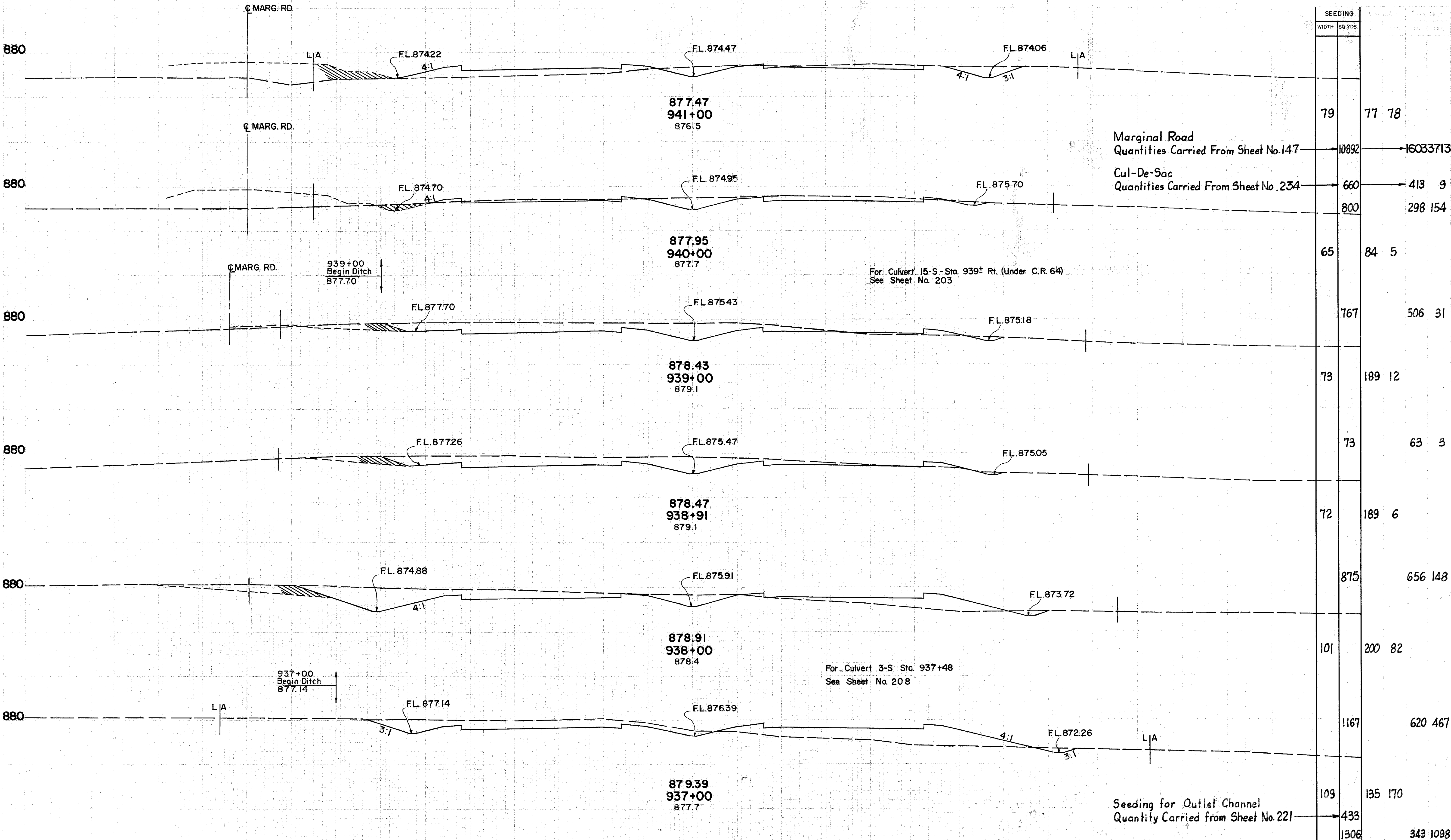


STA. 926+00 TO STA. 930+54



TUS 250-1723

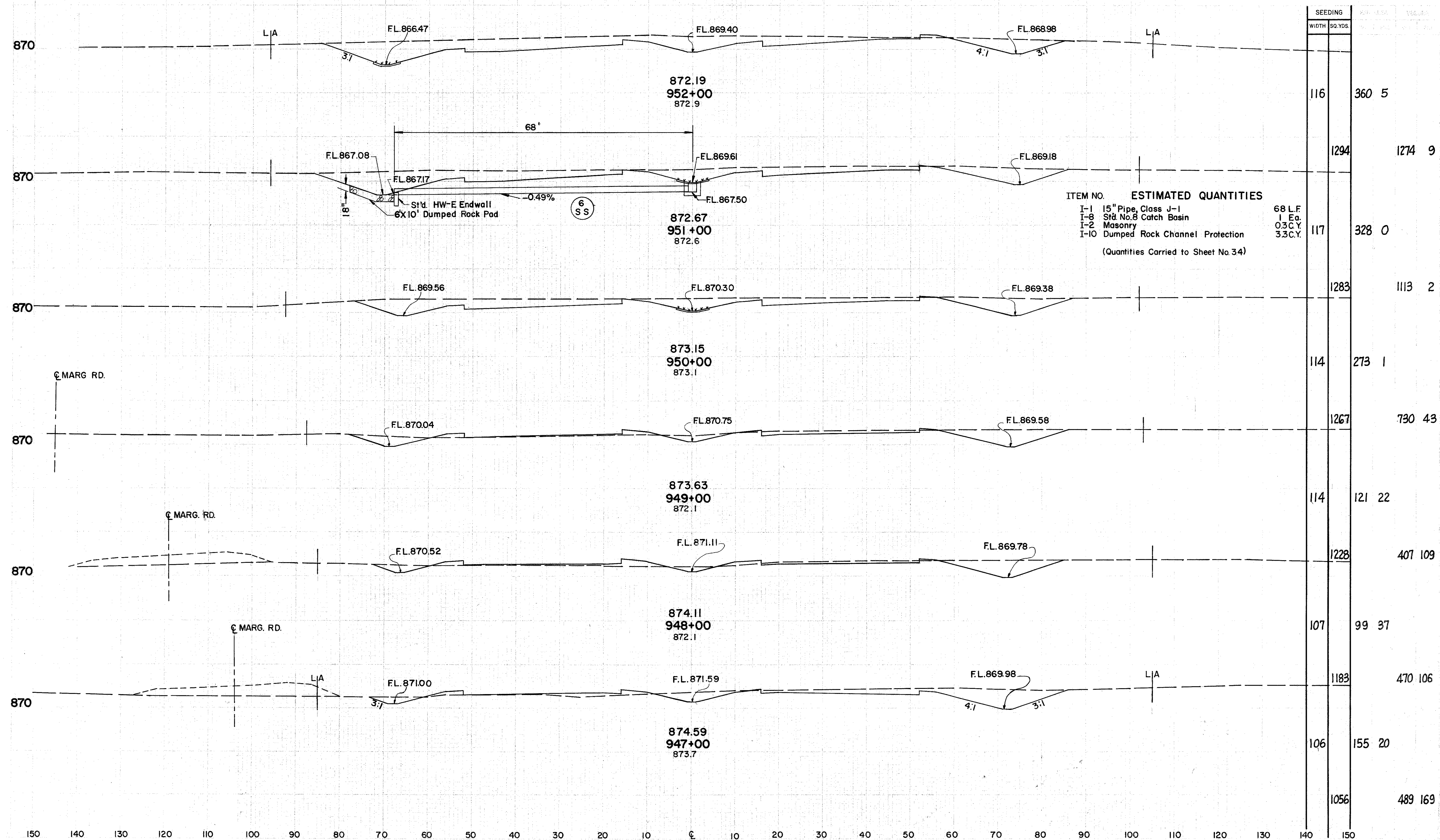
For 28-SS -Sta. 939± To Sta. 943± Rt.
Along U.S.R. 250
See Sheet No. 203



STA. 937+00 TO STA. 941+00

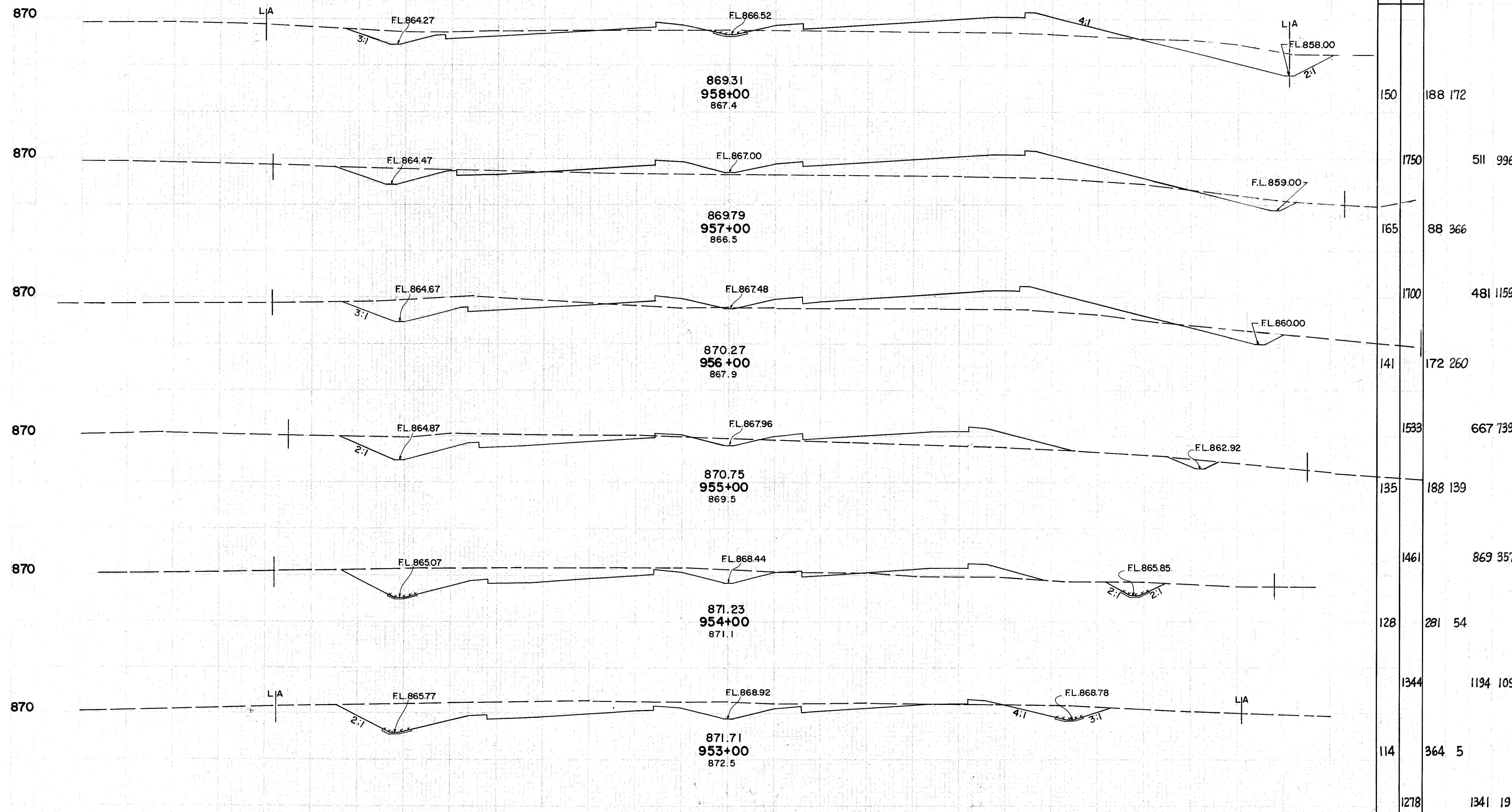


TUS 250-1723

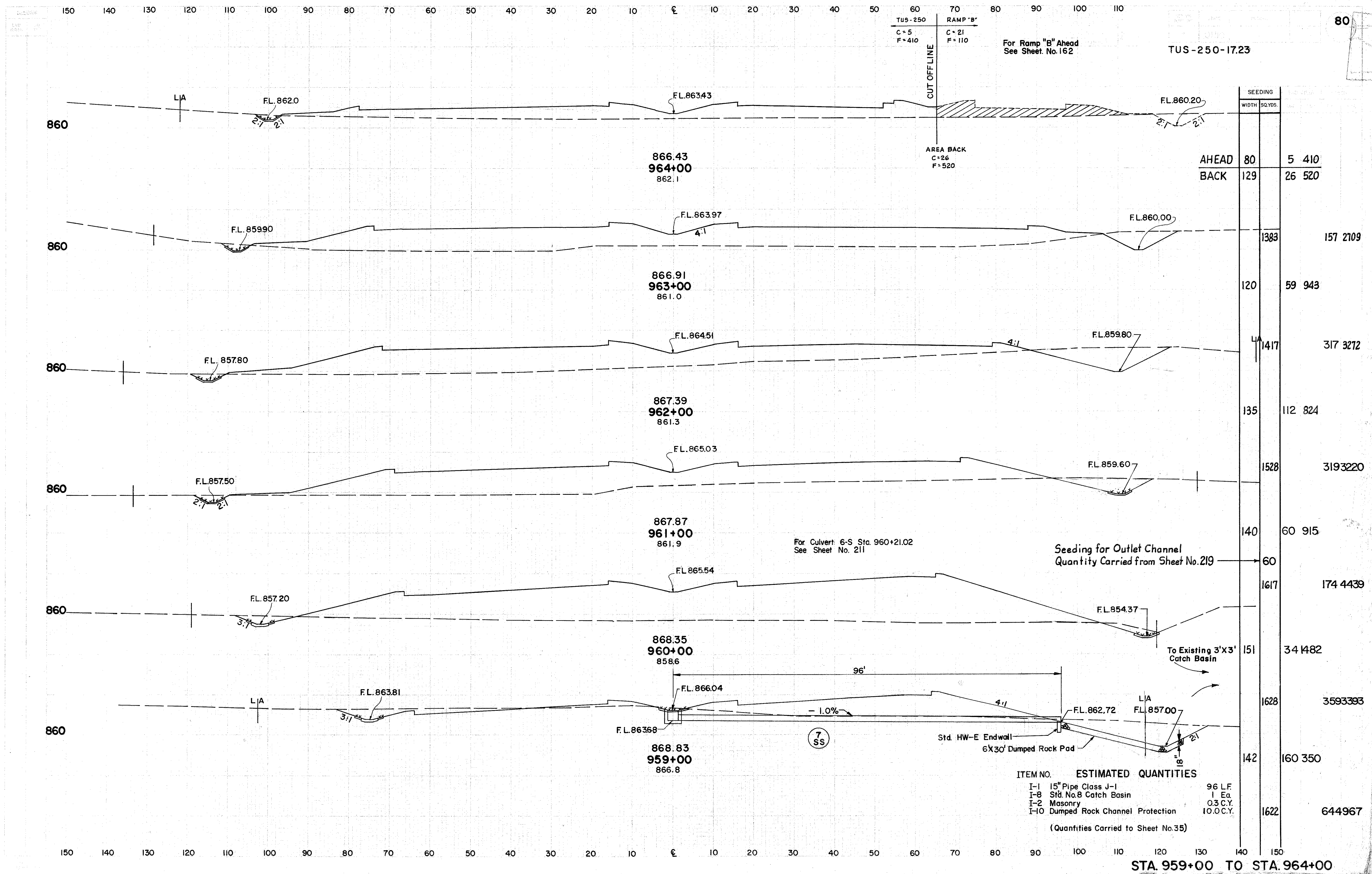


STA 947+00 TO STA. 952+00

TUS 250-17.23

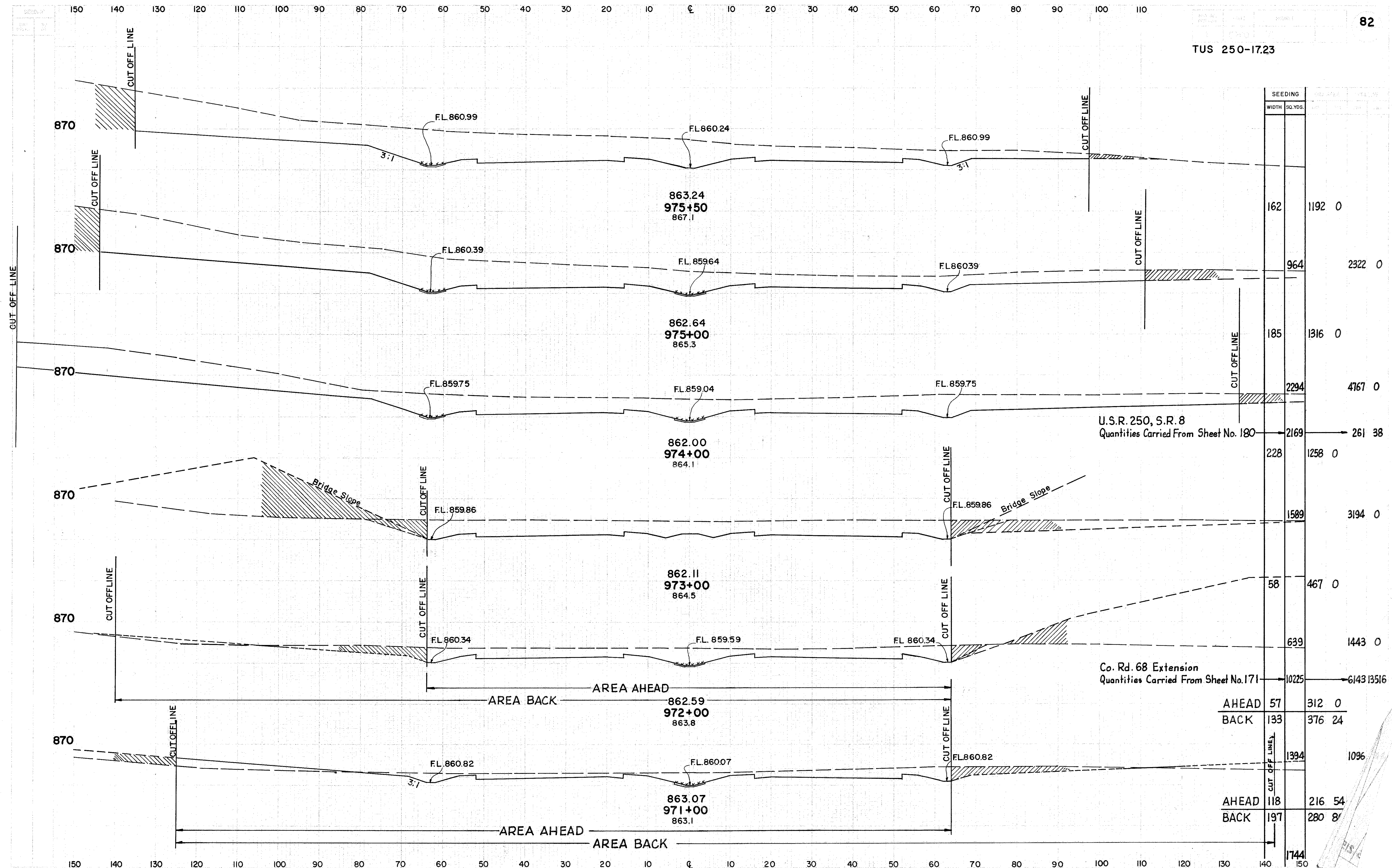


STA. 953+00 TO STA. 958+00



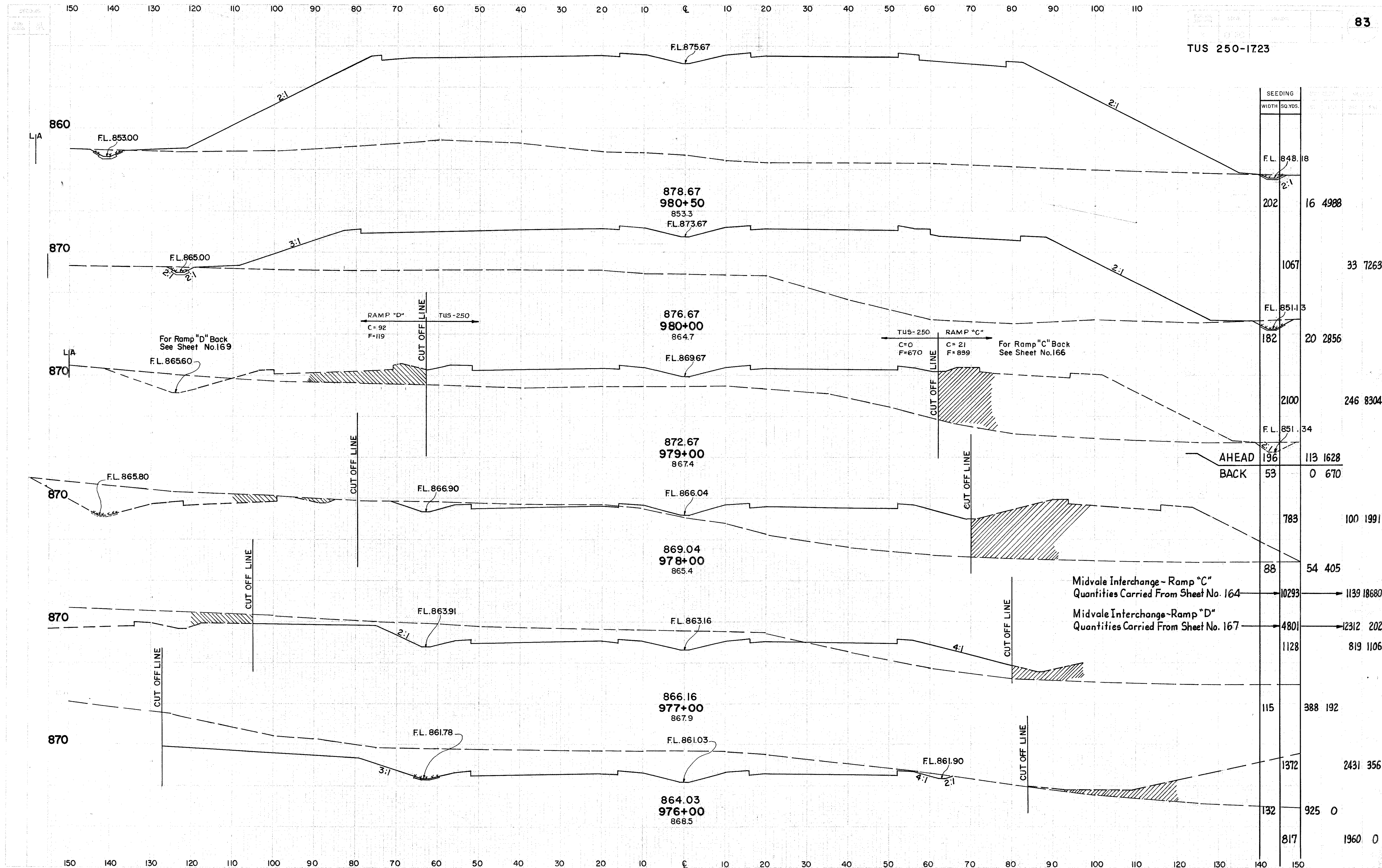


TUS 250-17.23



STA 971+00 TO STA 975

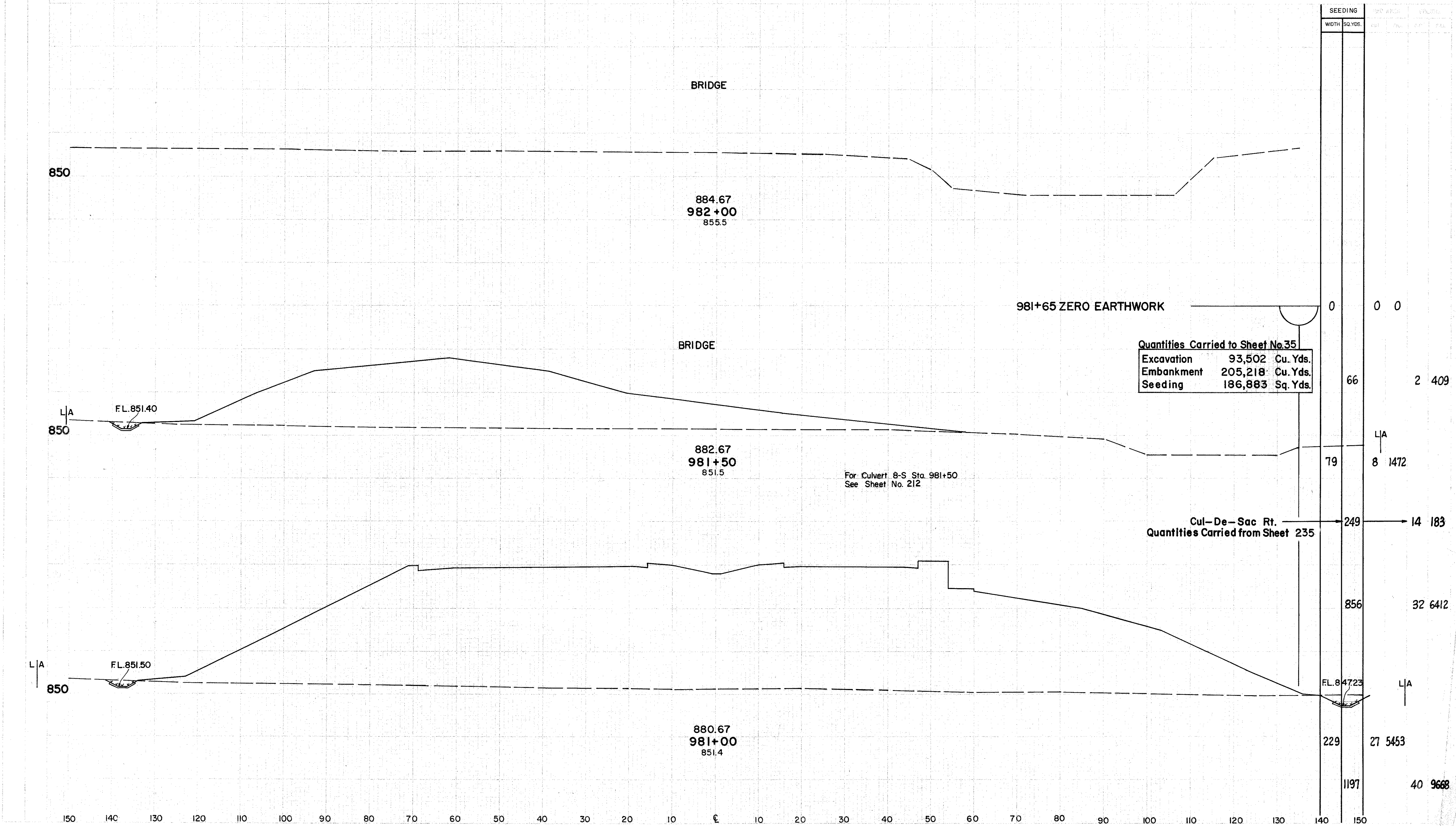
TUS 250-1723

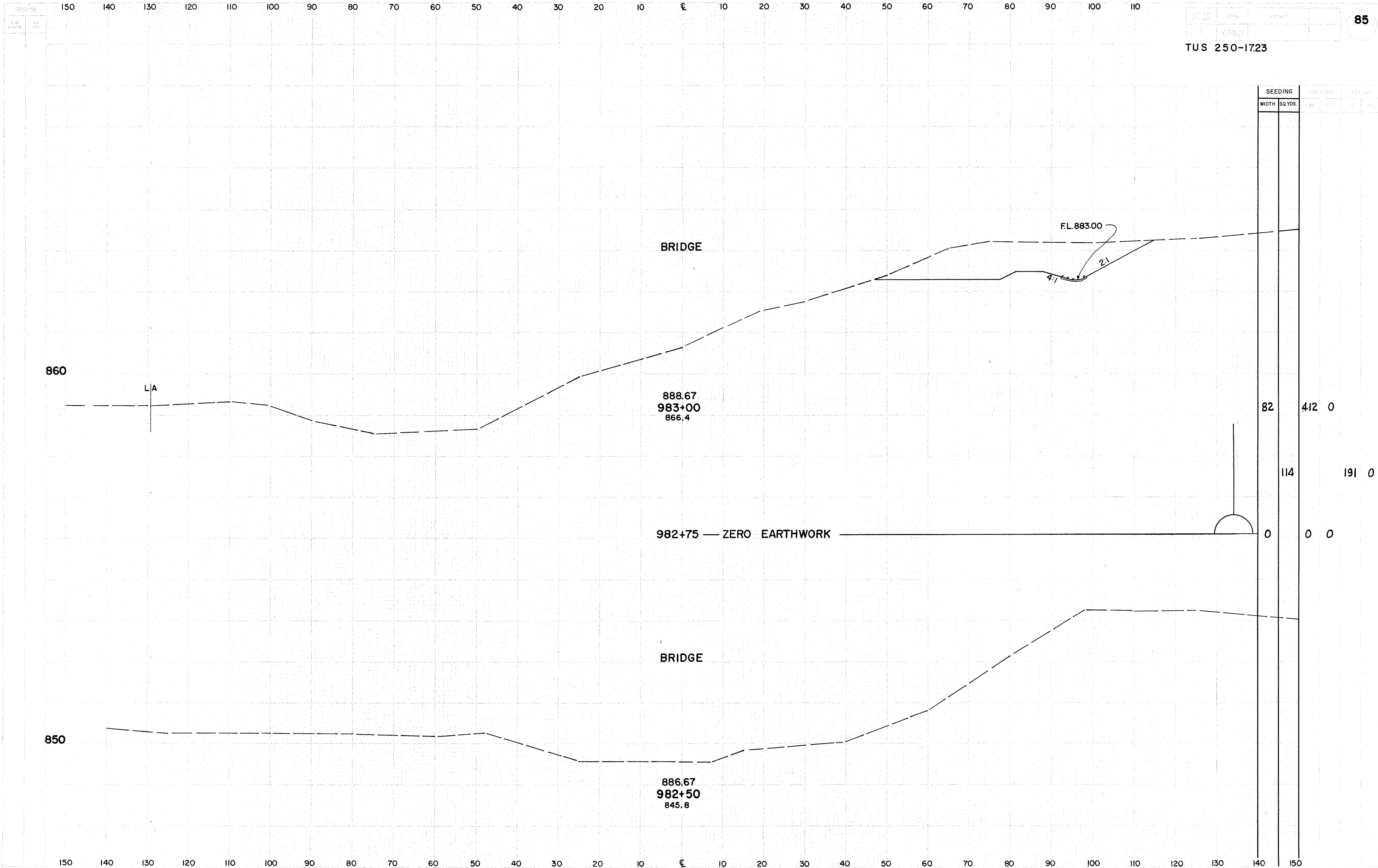


STA. 976+00 TO STA. 980+50

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

TUS 250-1723

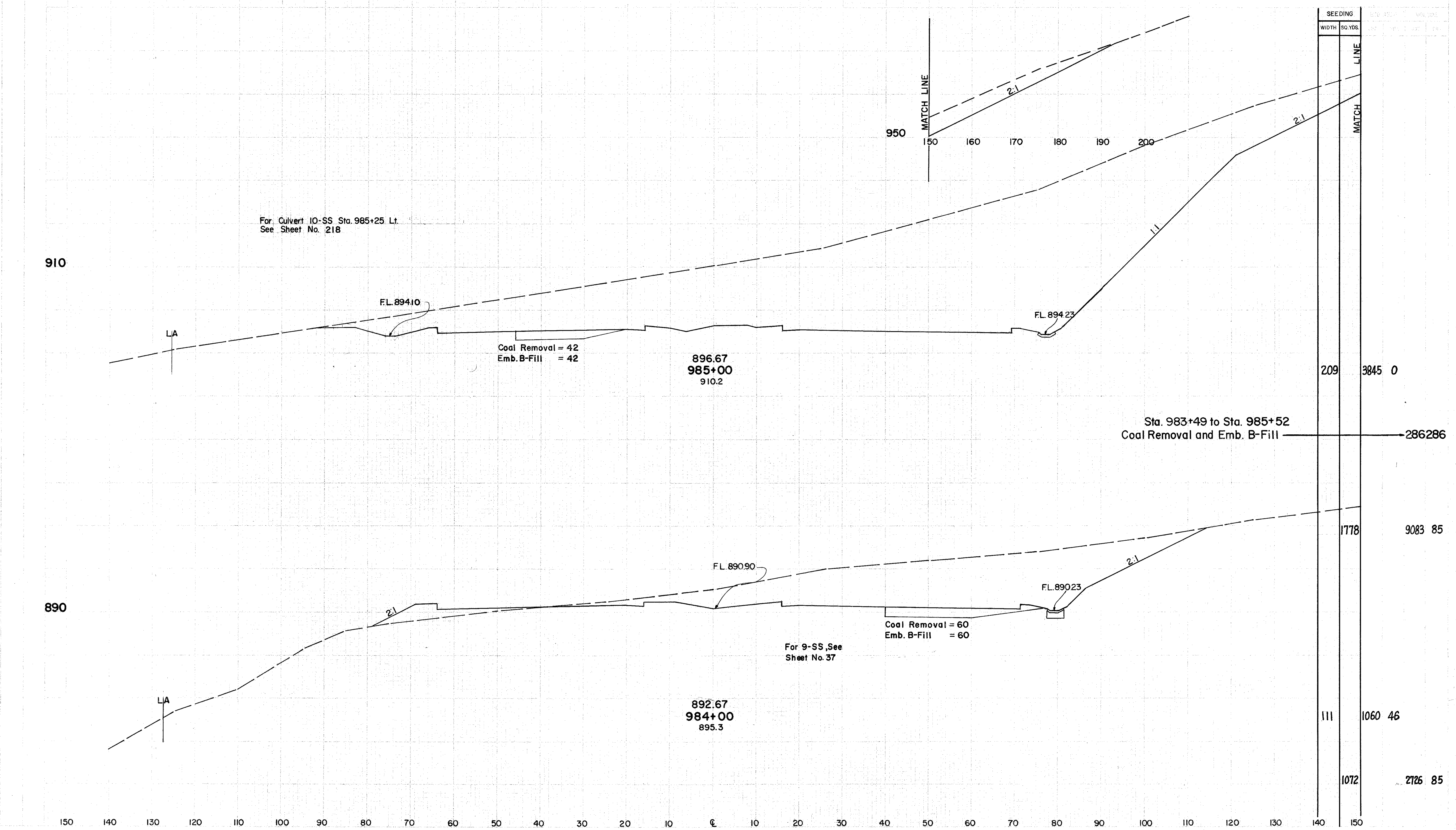




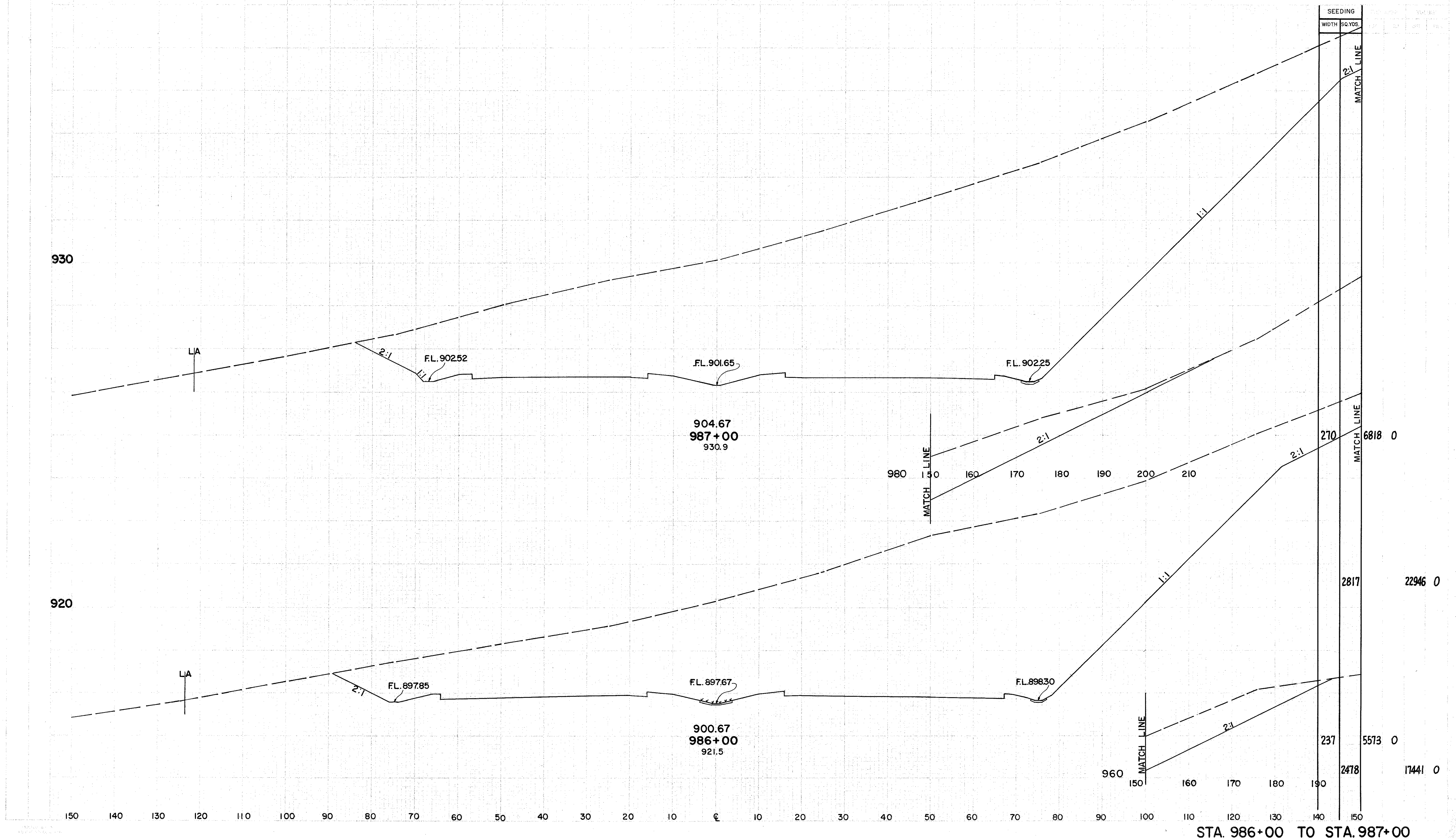
TUS 250-1723

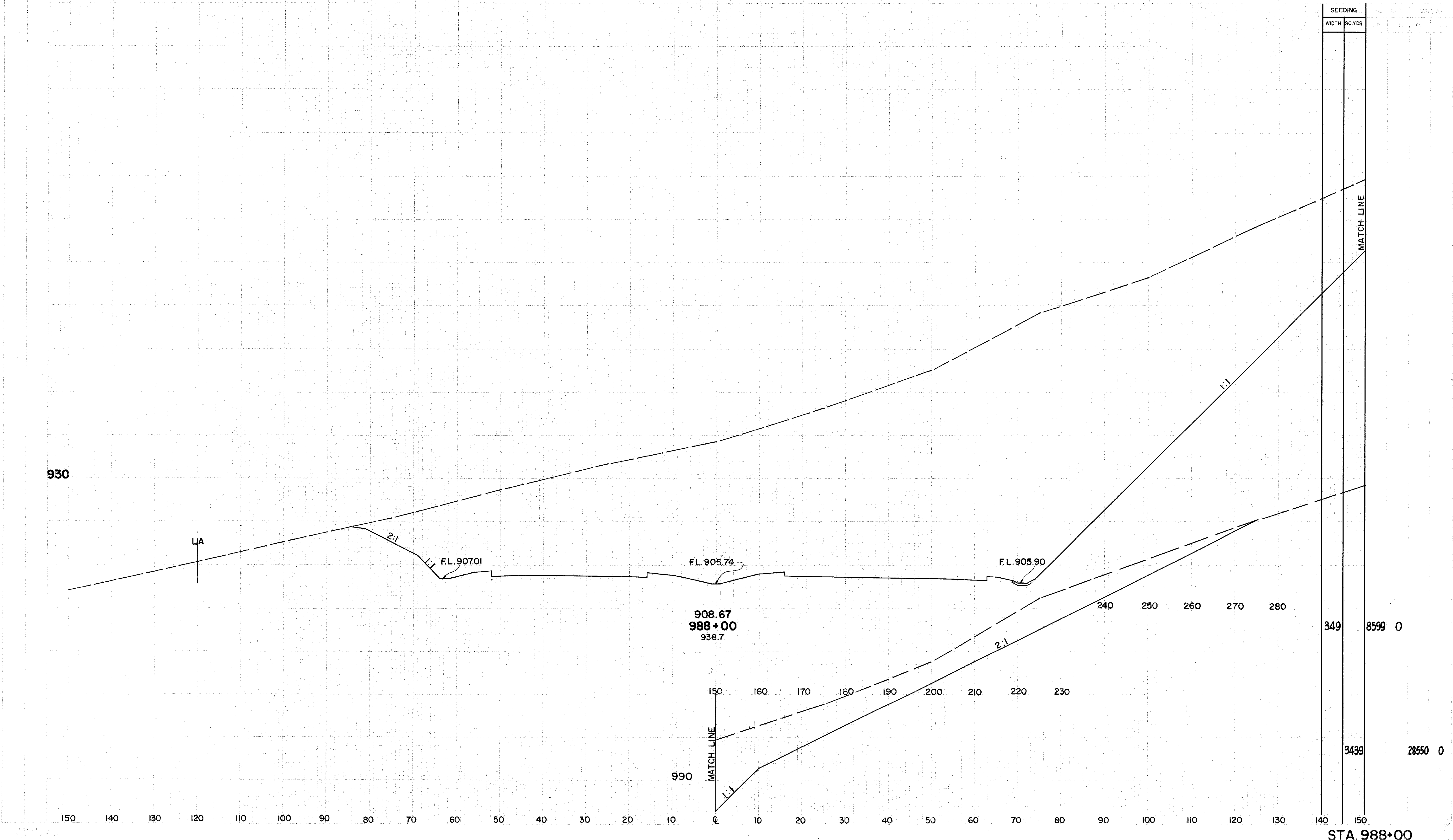
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

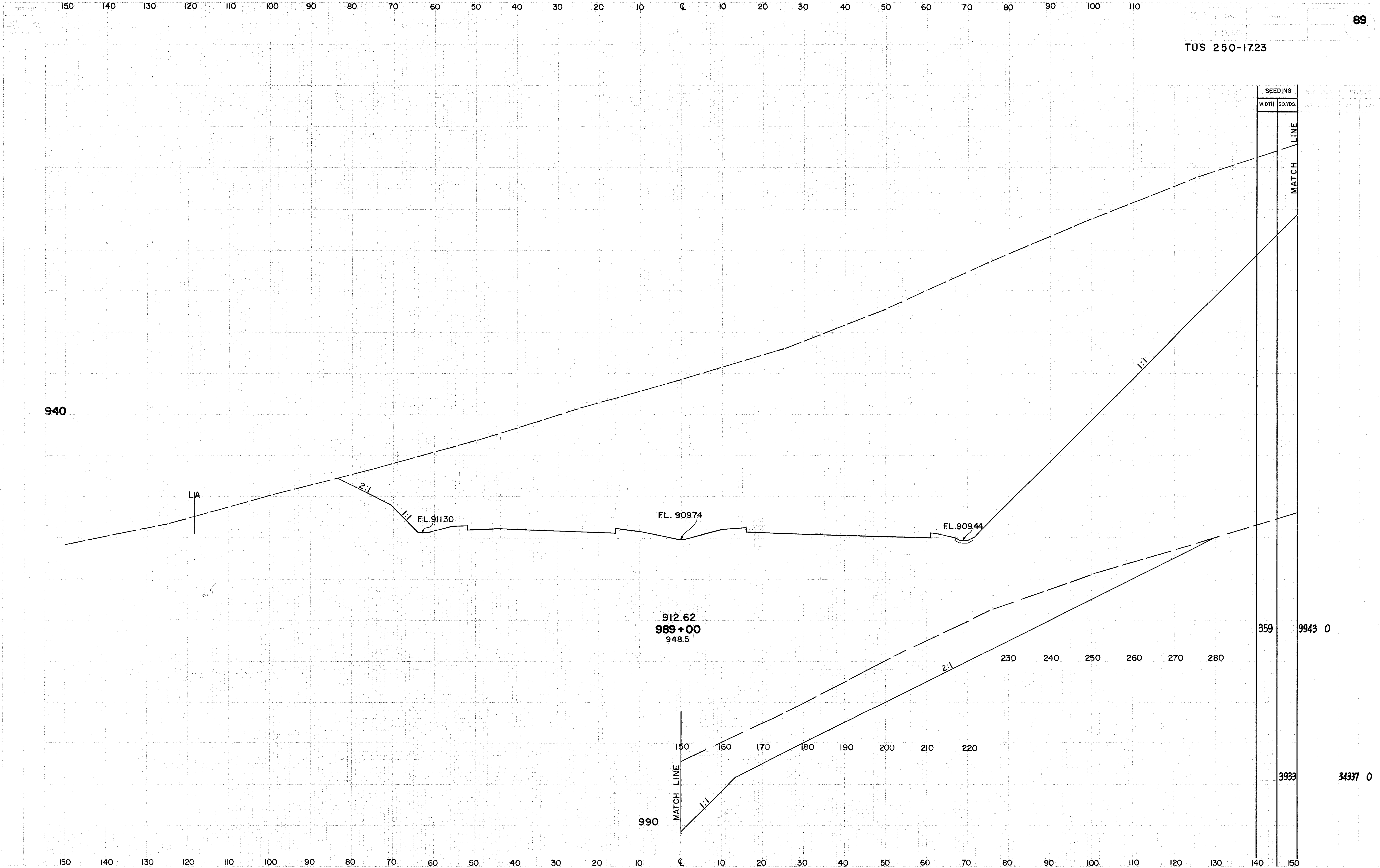
TUS 250-1723



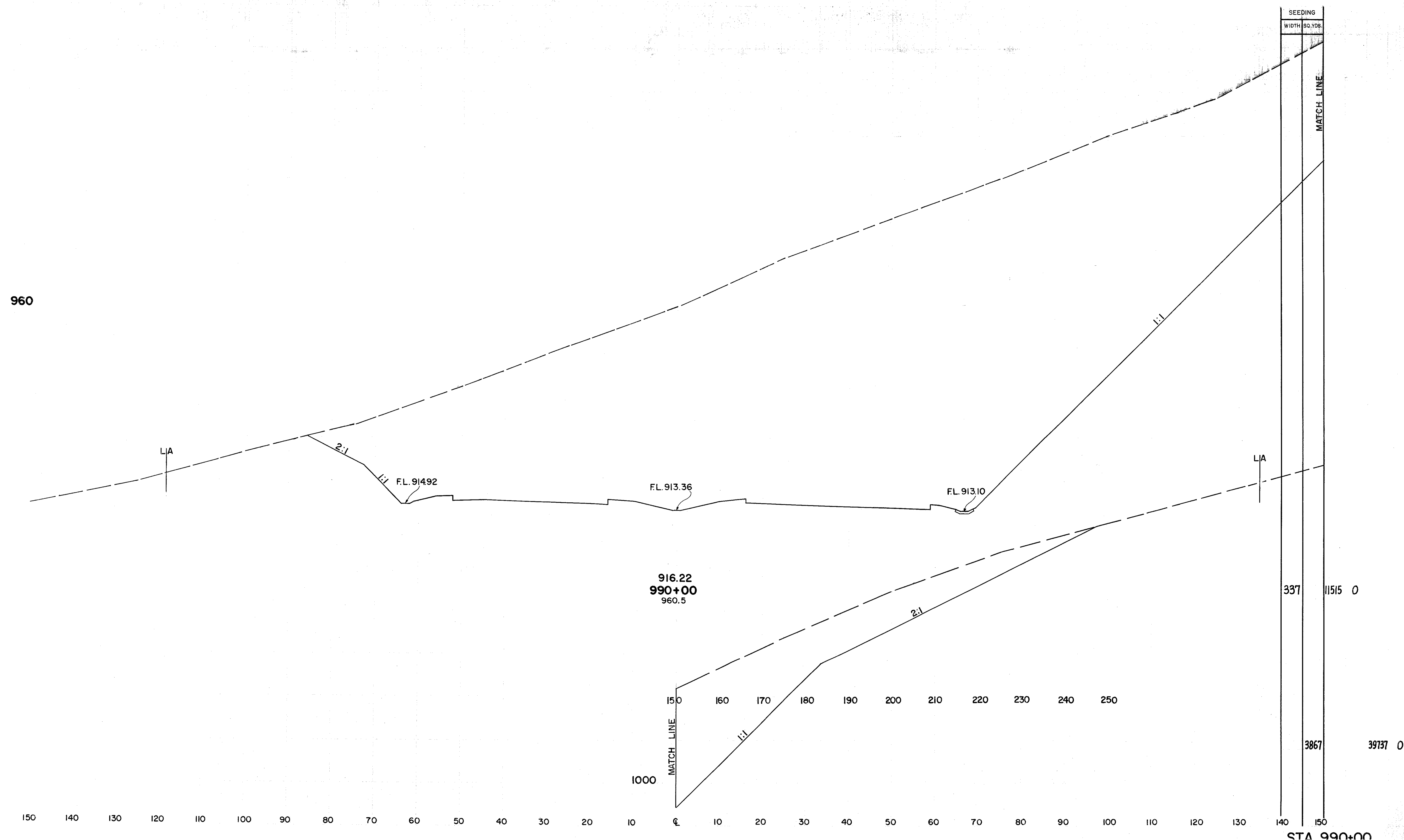
TUS 250-17.23

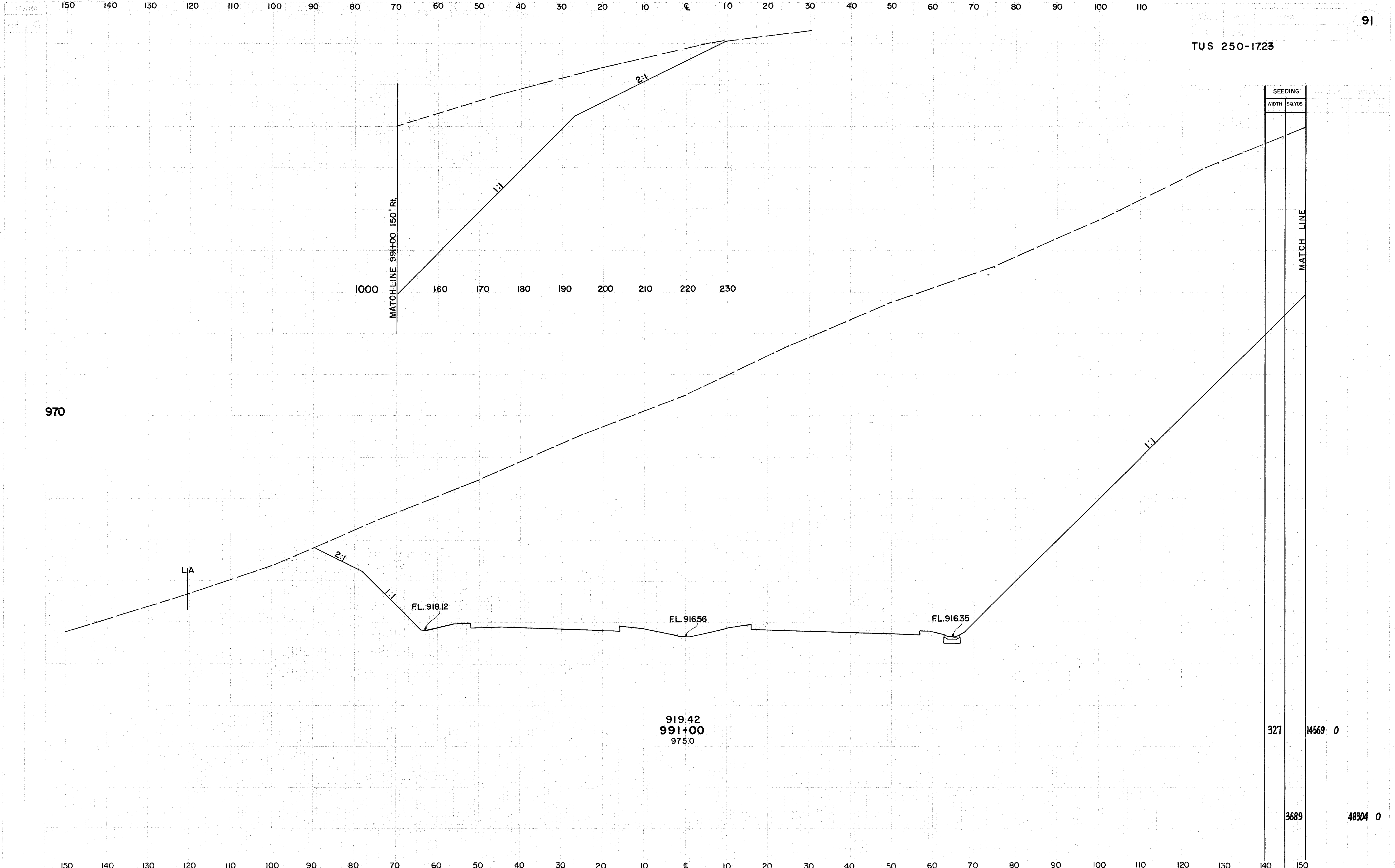






TUS 250-1723



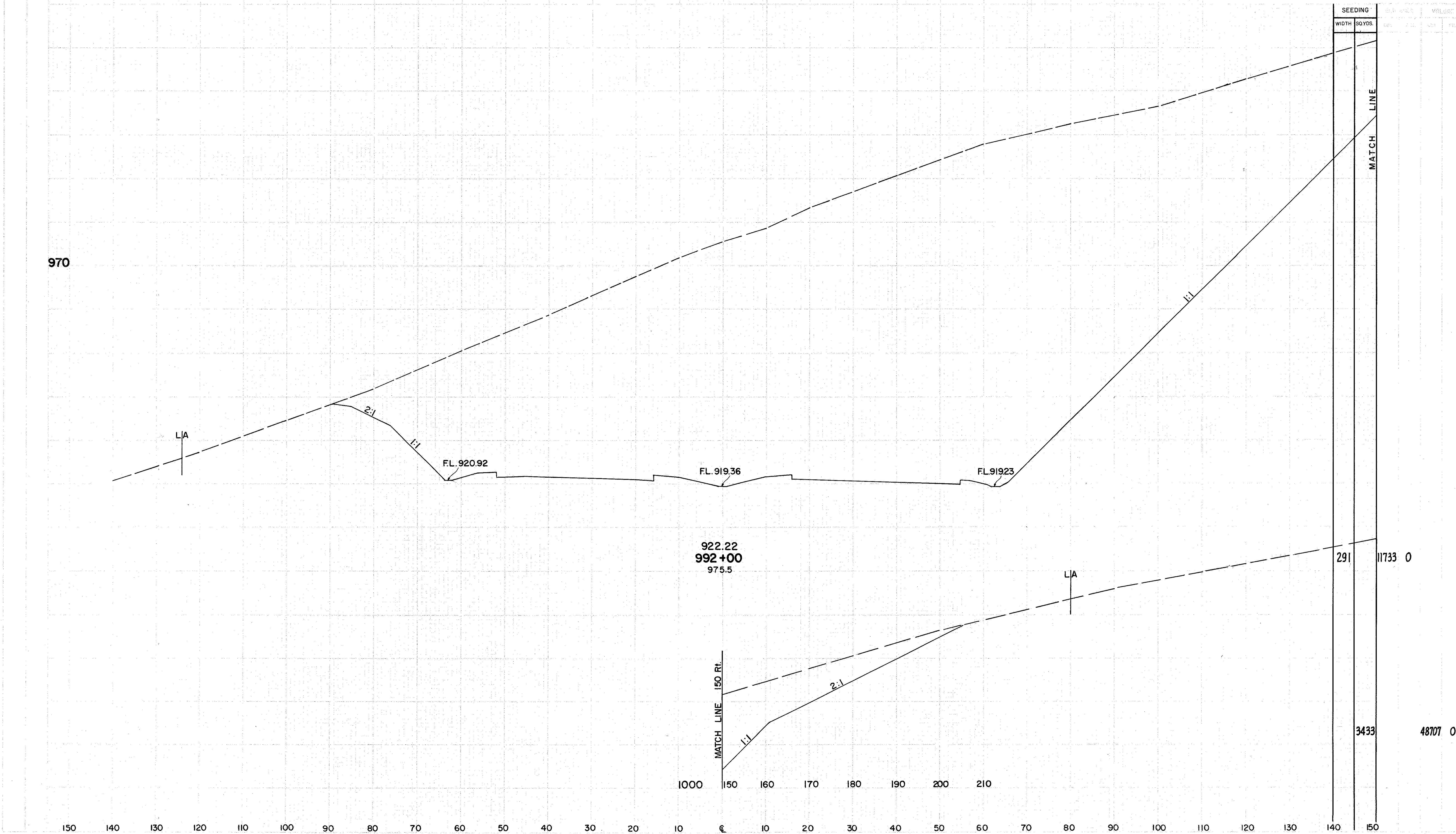


TUS 250-1723

919.42
991+00
975.0

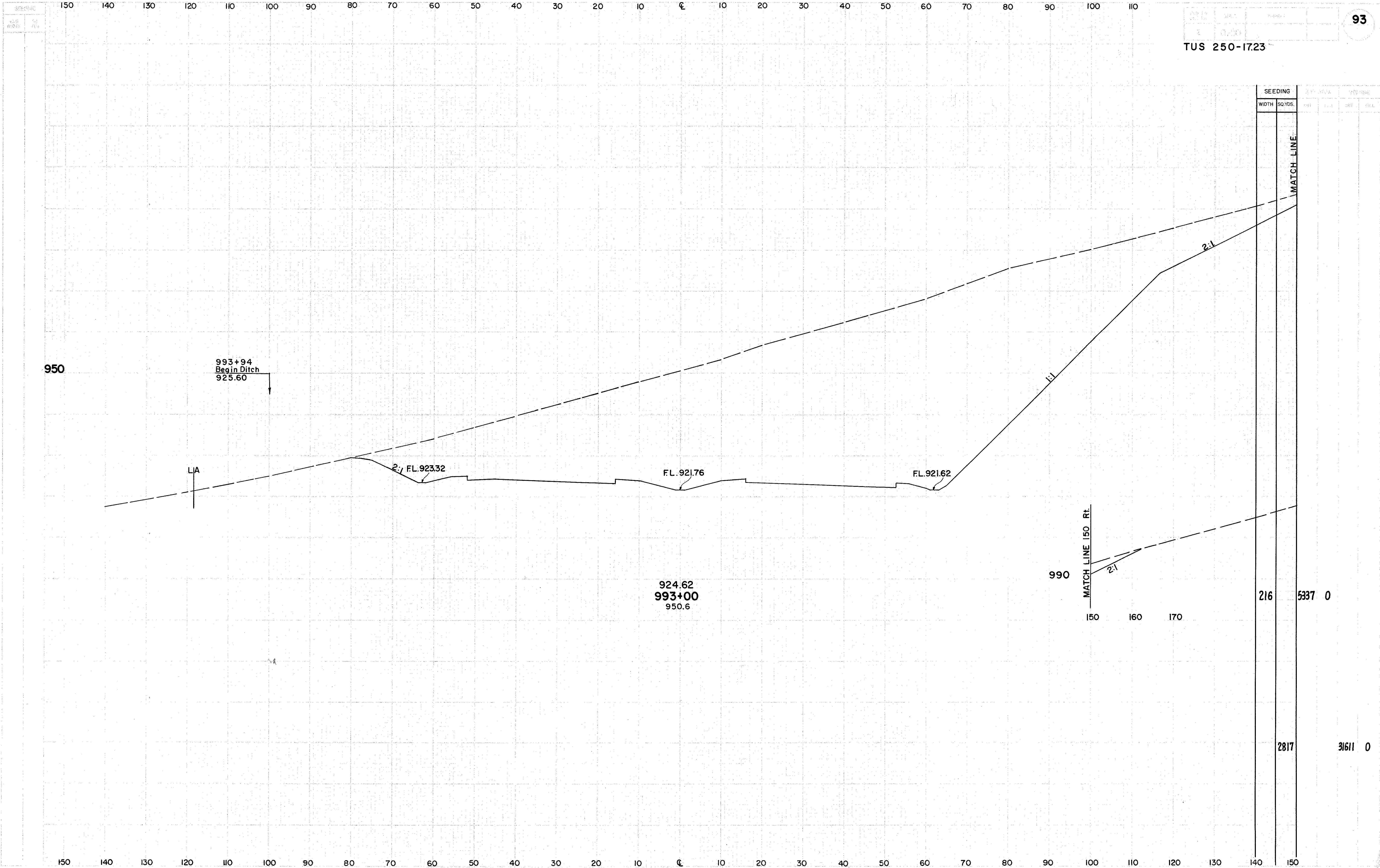
STA. 991+00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 100

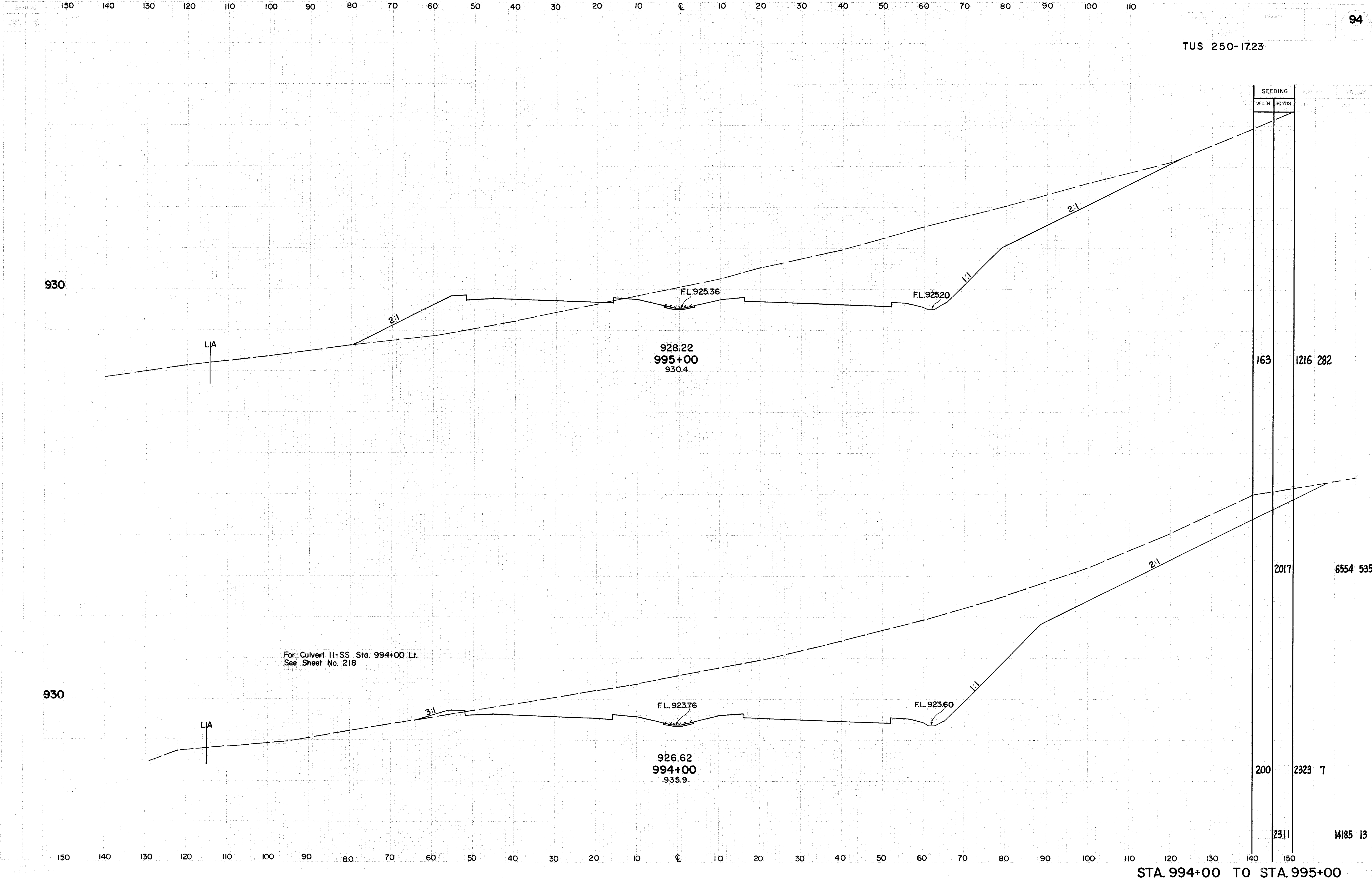


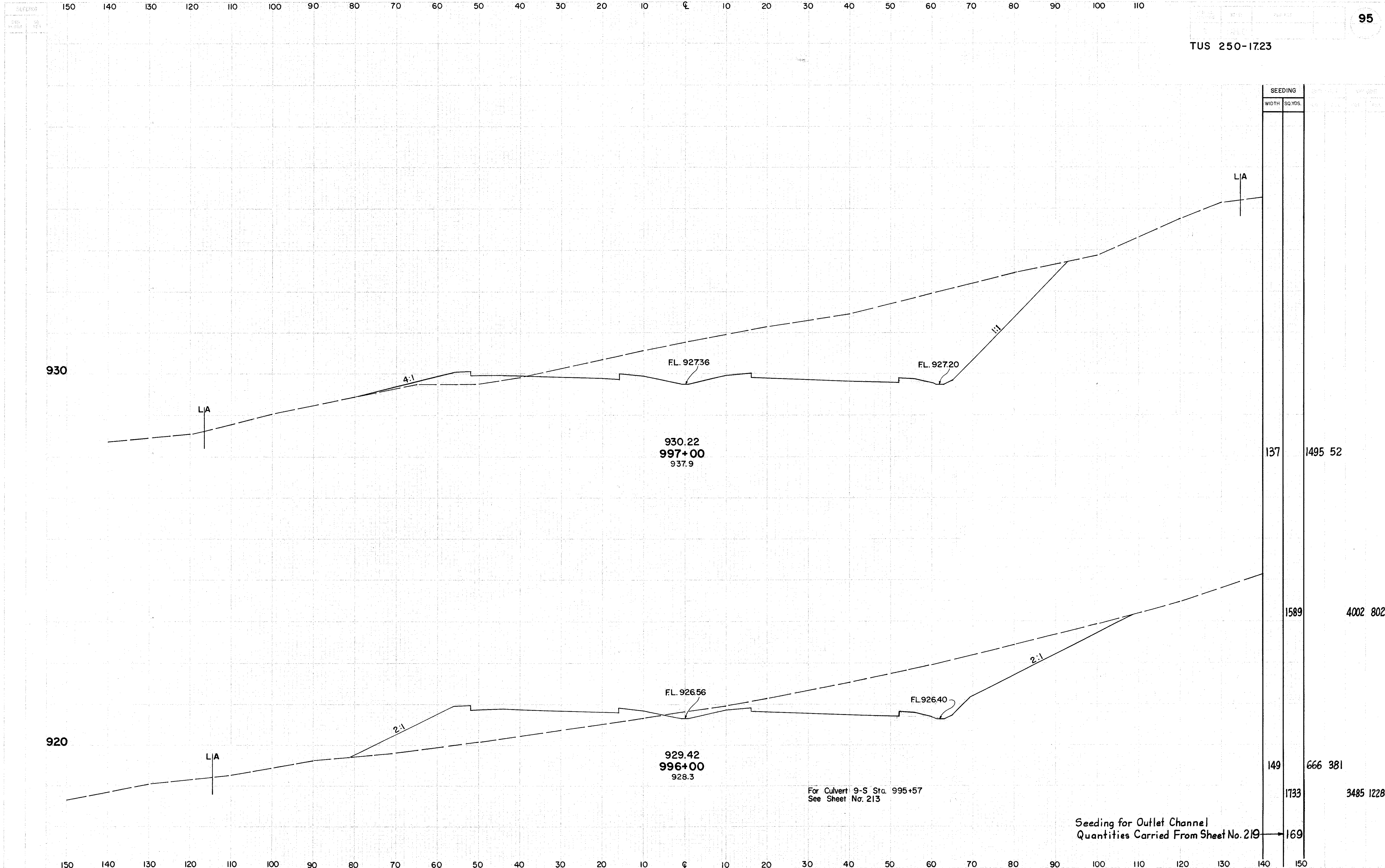
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 100

STA. 992+00



TUS 250-1723





TUS 250-1723

95

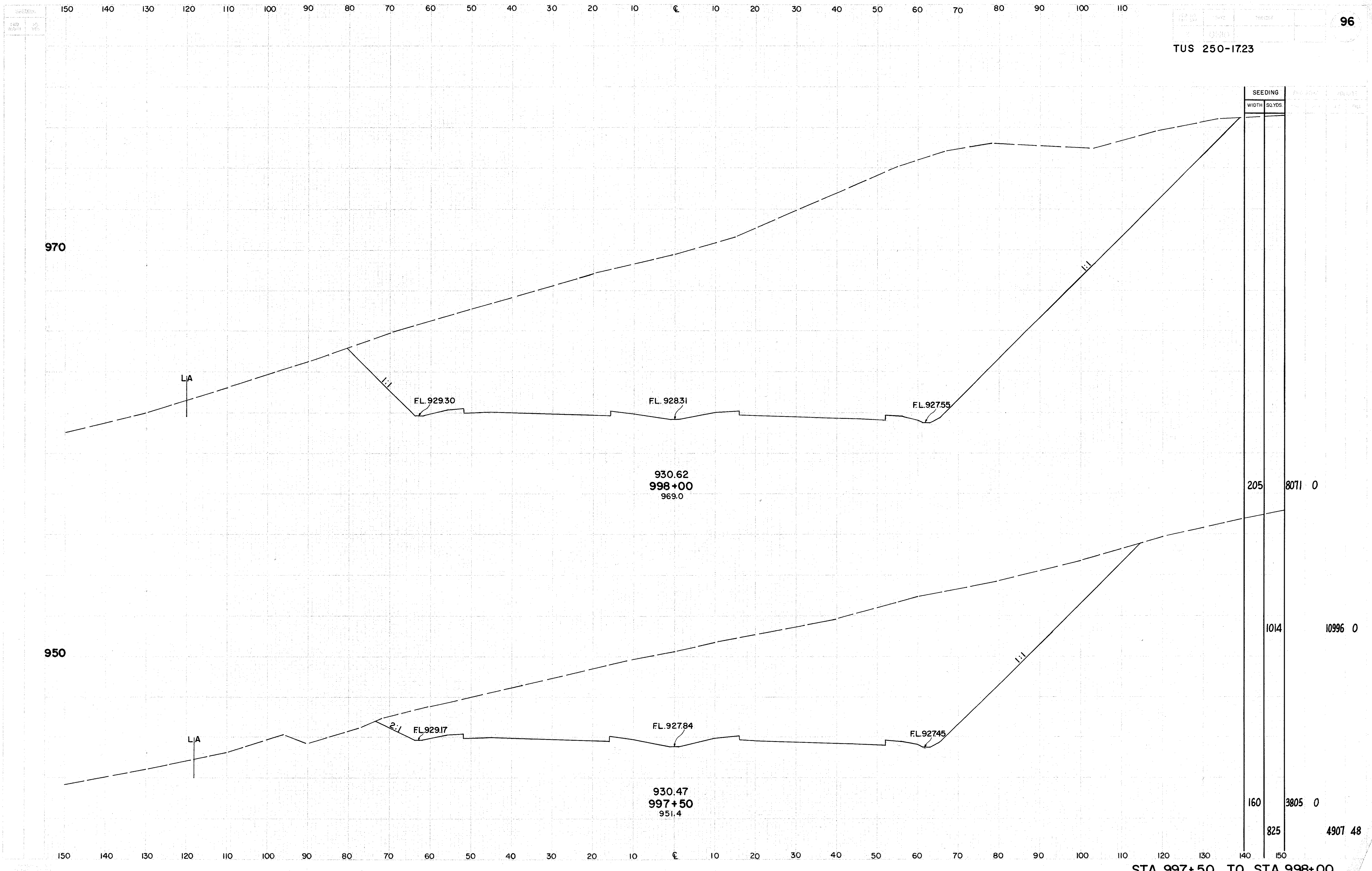
930.22
997+00
937.9

929.42
996+00
928.3

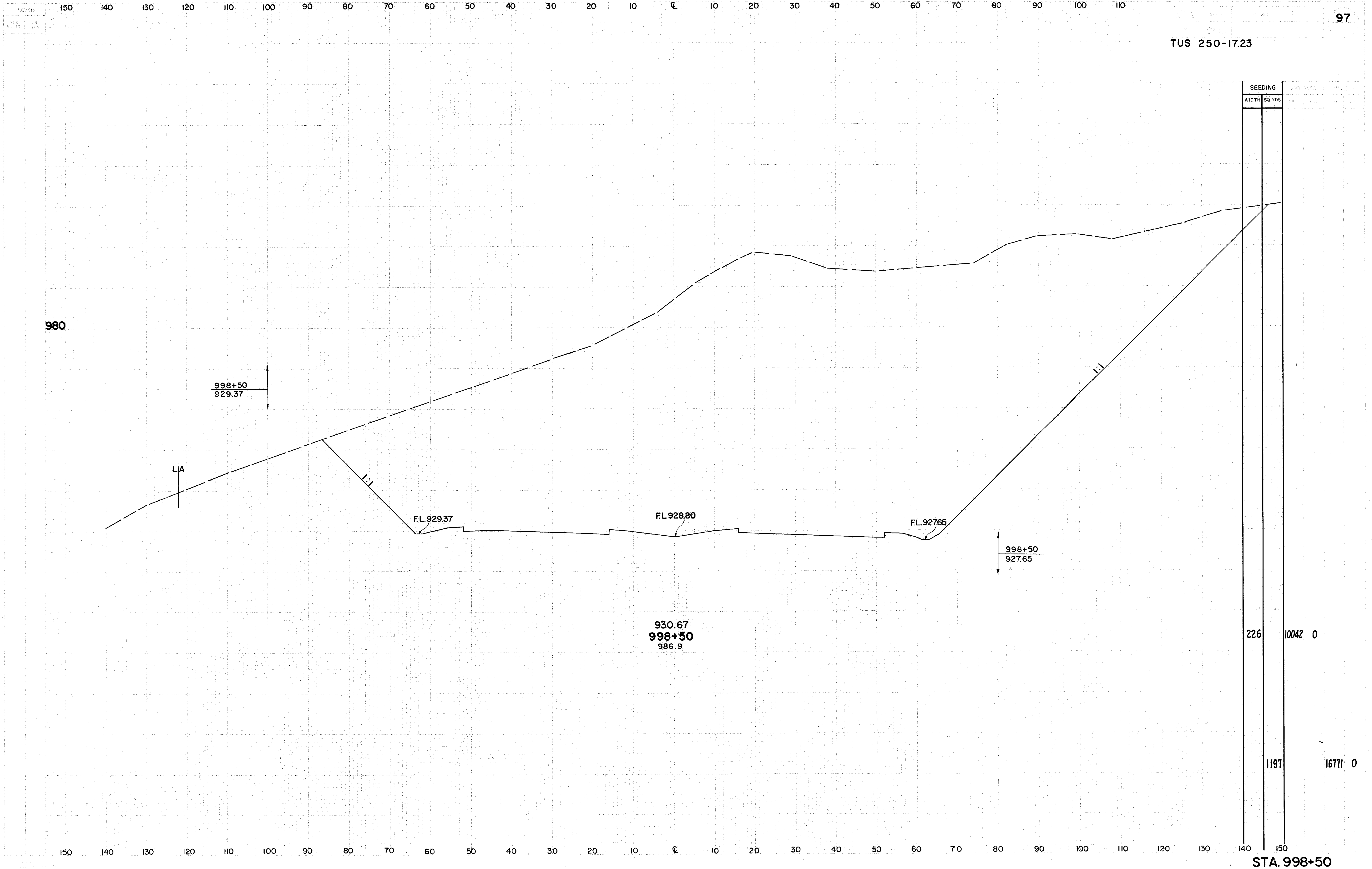
For Culvert 9-S Sta. 995+57
See Sheet No. 213

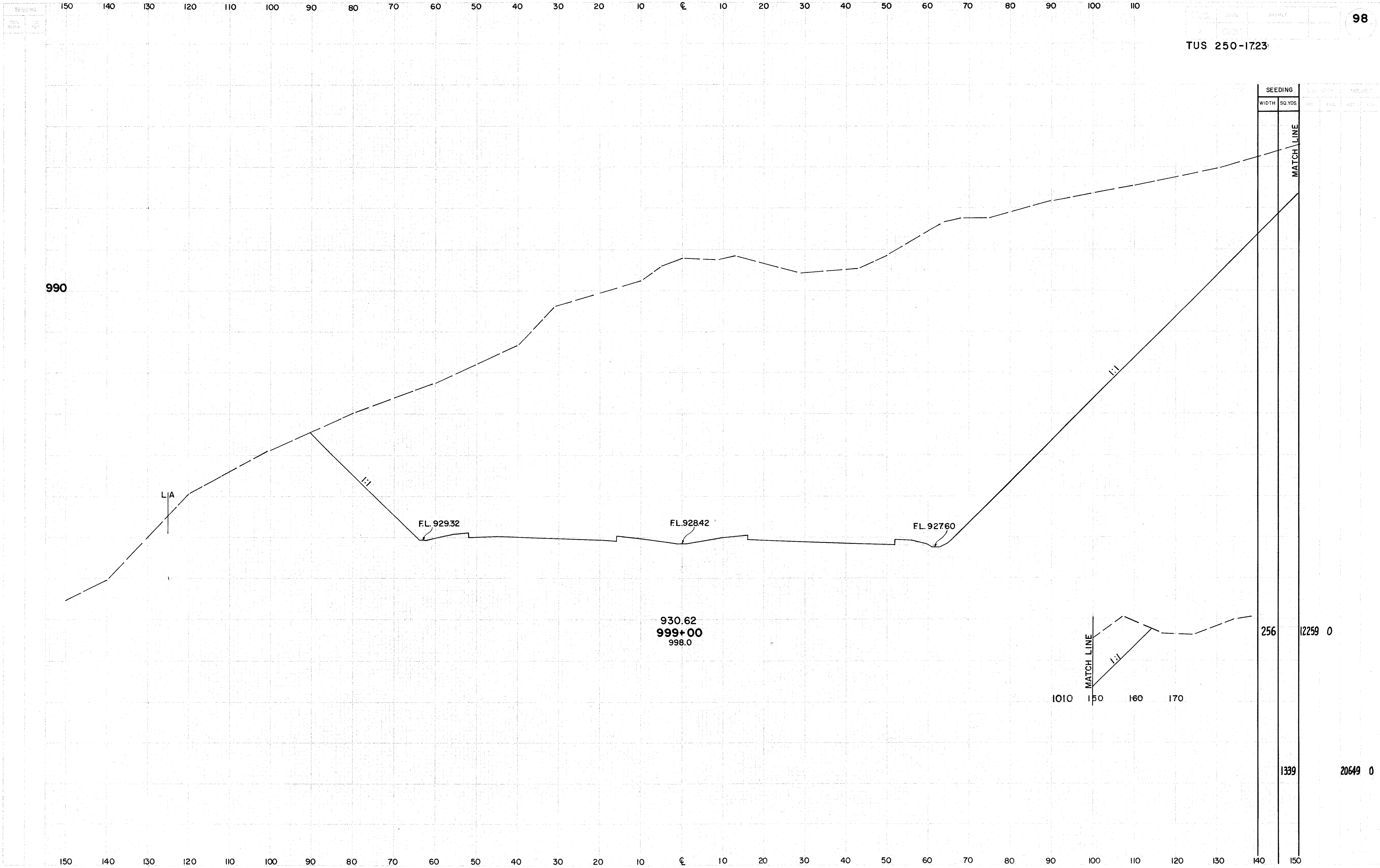
Seeding for Outlet Channel
Quantities Carried From Sheet No. 219

STA. 996+00 TO STA. 997+00



TUS 250-1723





TUS 250-1723

98

990

L/A

FL 92932

FL 92842

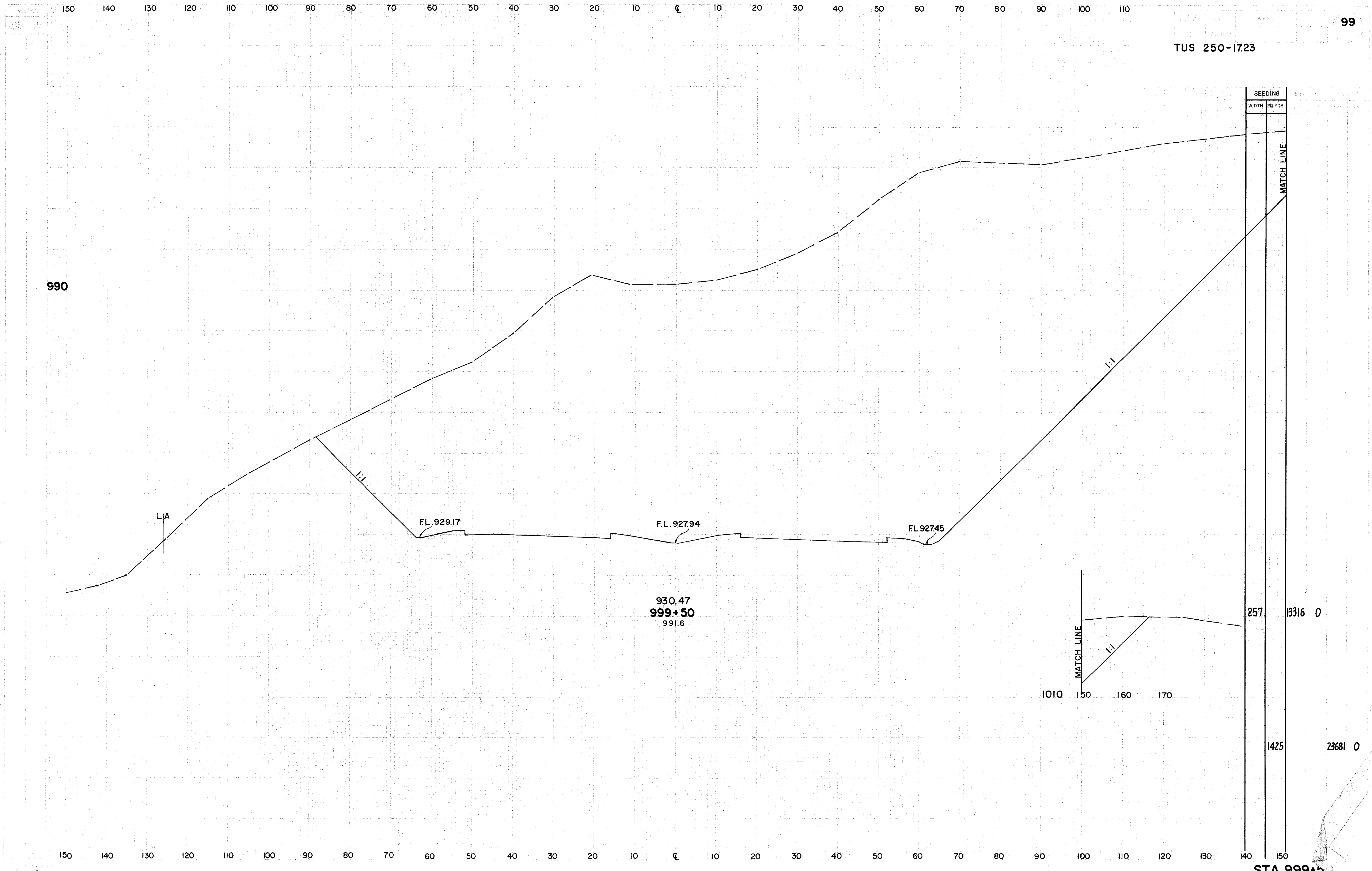
FL 92760

930.62
999+00
998.0

1010 150 160 170
MATCH LINE
1:1
256 12259 0

1339 20649 0

STA. 999+00



TUS 250-1723

TUS 250-1723

SEEDING	
WIDTH	SQ.YDS.

MATCH LINE

990

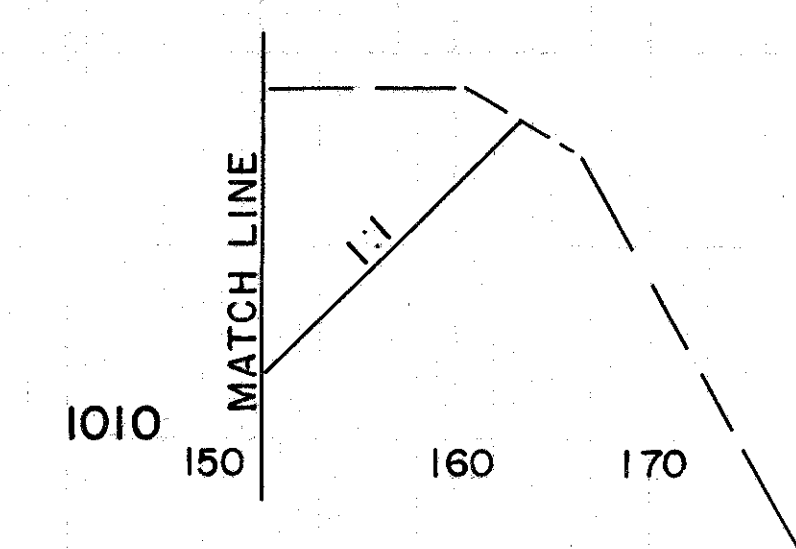
L/A

FL. 928.92

FL. 927.36

FL. 927.20

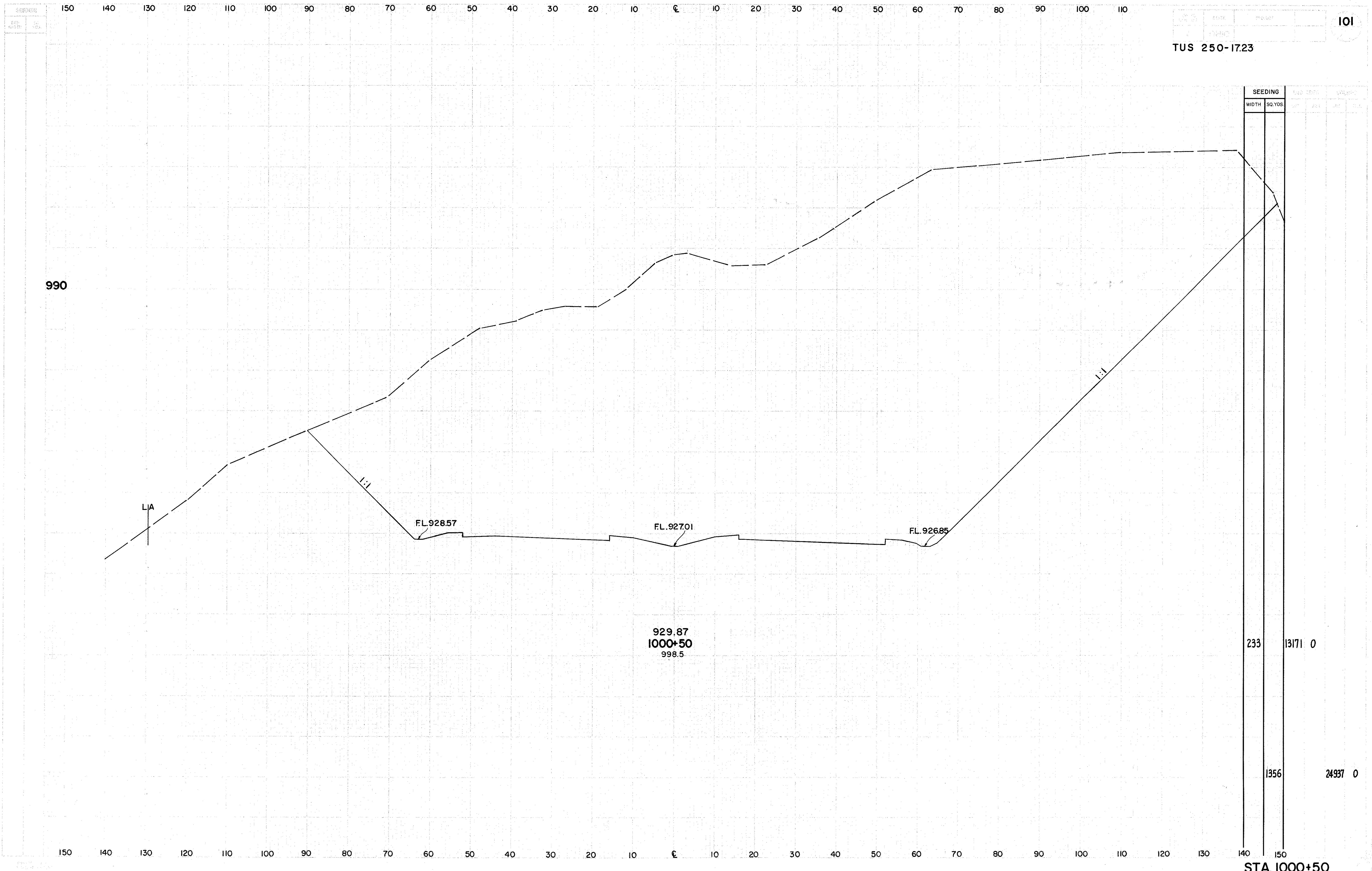
930.22
1000+00
989.3



255 13761 0

1422 25011 0

STA. 1000+00



150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

990

L/A

FL 928.12

FL 926.56

FL 926.40

929.42
1001+00
990.6

1:1

SEEDING	
WIDTH	SQ. YDS

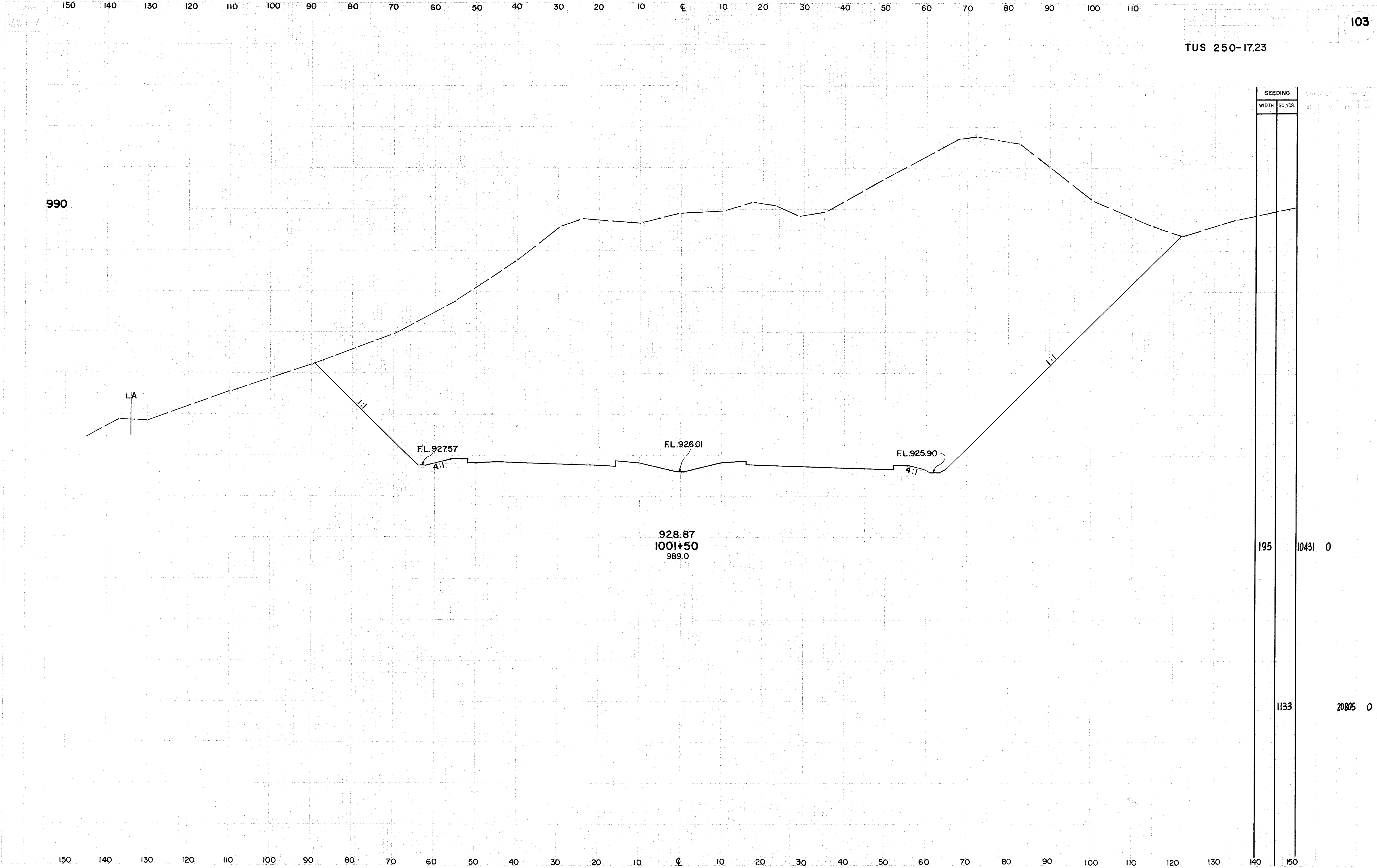
213

12038 0

1239

23342 0

STA. 1001+00



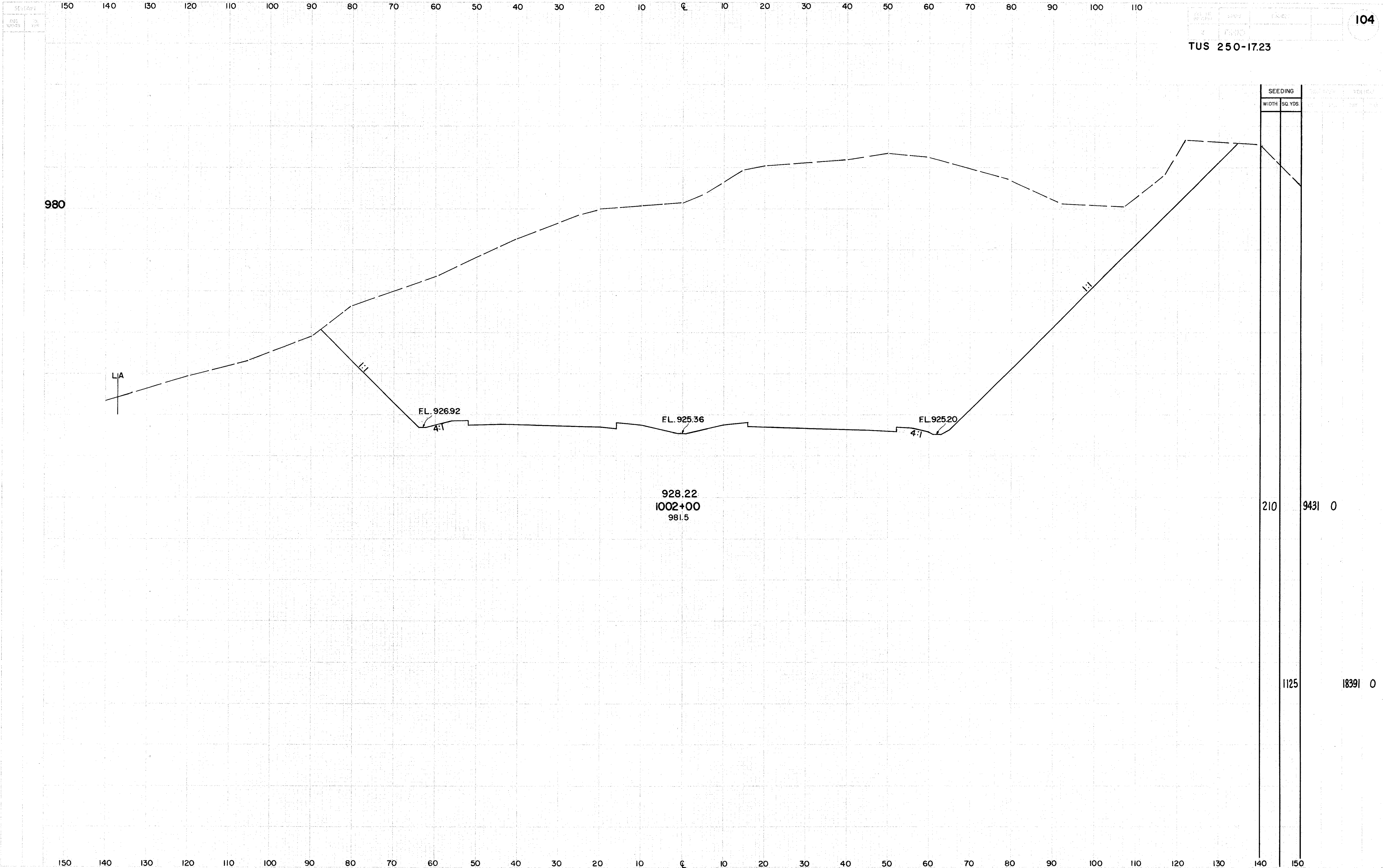
TUS 250-17.23

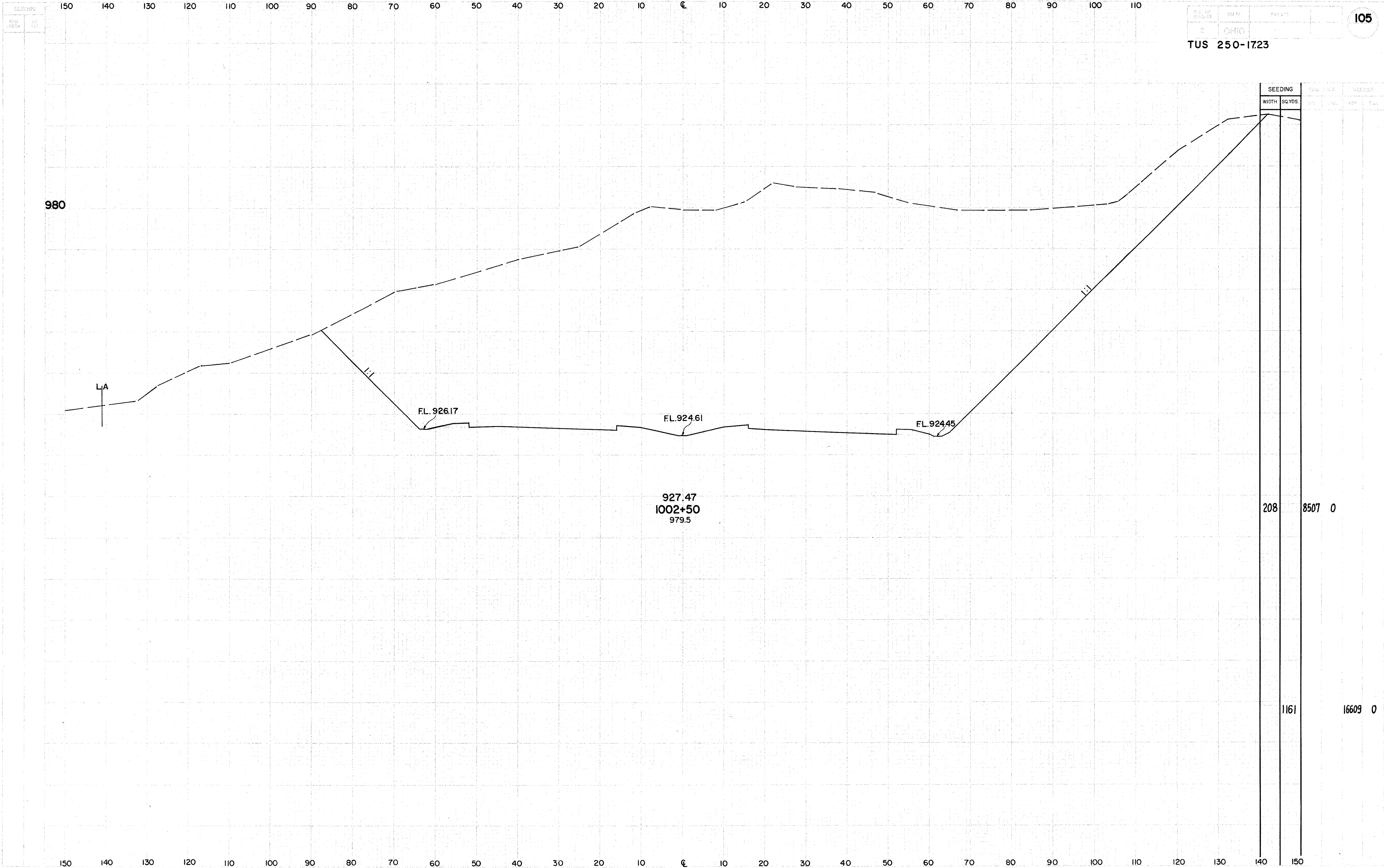
103

SEEDING	
WIDTH	SQ. YDS.

195	10431	0
1133		20805 0

STA. 1001+50





TUS 250-1723

105

927.47
1002+50
979.5

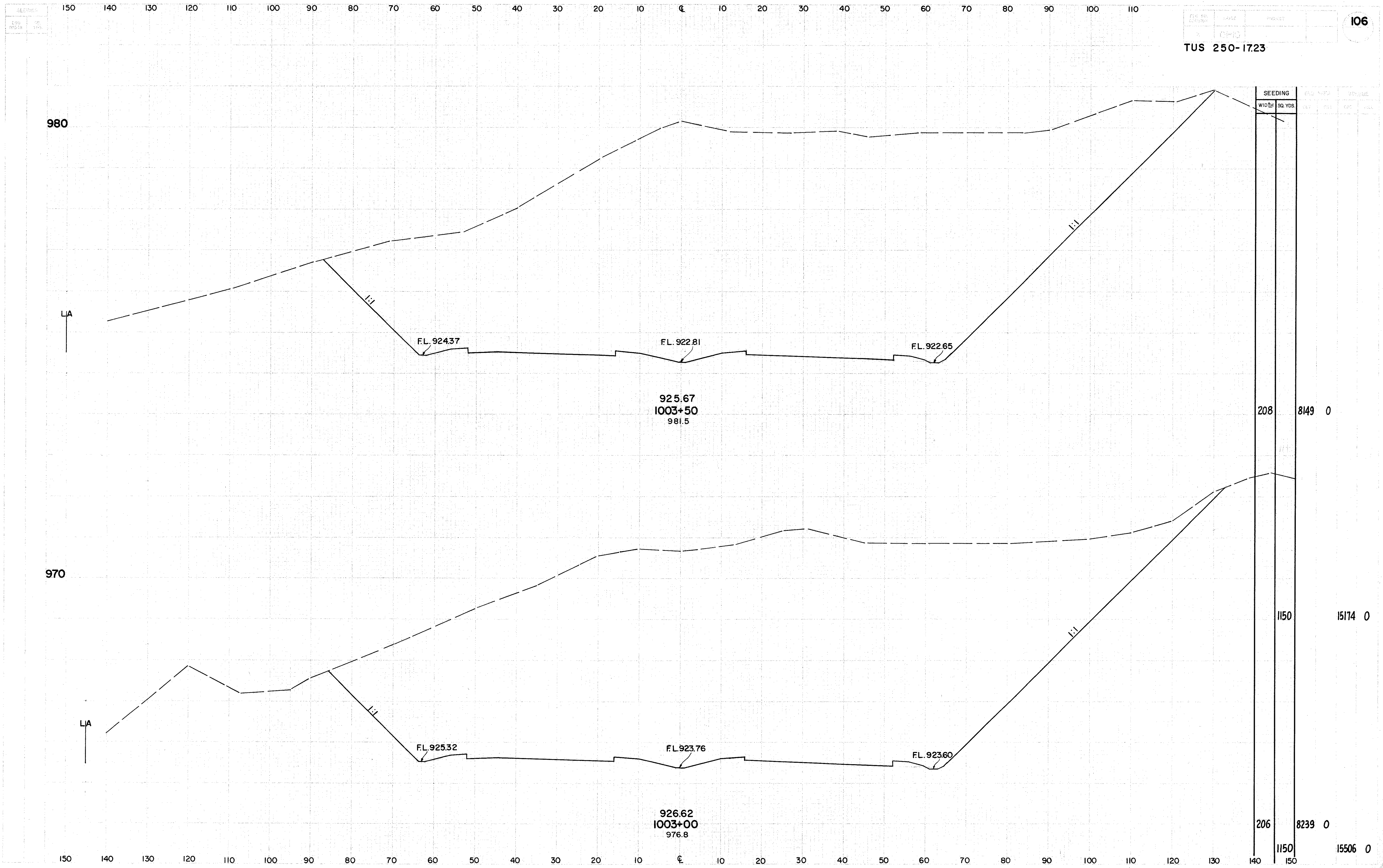
208

8507 0

1161

16609 0

STA. 1002+50



150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

SECTION
DATE
BY

107
TUS 250-17.23

970

970

FL. 922.17

FL. 920.61

FL. 920.45

923.47
1004+50
970.9

FL. 923.32

FL. 921.76

FL. 921.60

924.62
1004+00
973.5

SEEDING		AREA		VOLUME	
WIDTH	SQ. YDS.	CU YDS.	CU YDS.	CU YDS.	CU YDS.
175	7921	0			
1011	14894	0			
189	8165	0			
1103	15106	0			

STA. 1004+00 TO STA. 1004+50

SEEDING 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

DATE
10/9/88

BY
JES

108

TUS 250-1723

970

FL 919.57

FL 918.01

FL 917.85

920.87
1005+50
977.8

SEEDING
WIDTH SQ.YDS

182 8697 0

970

FL 920.92

FL 919.36

FL 919.20

922.22
1005+00
973.1

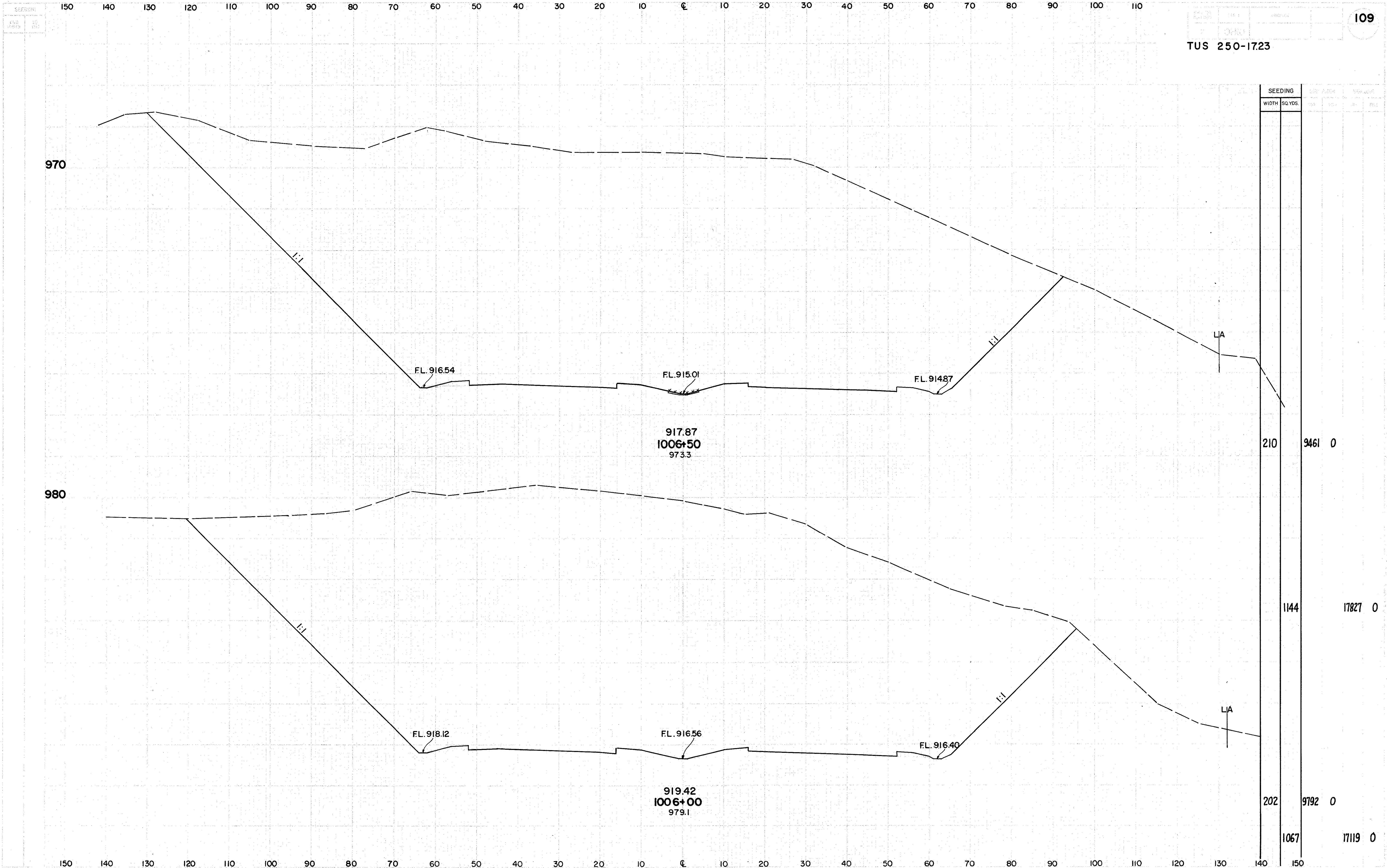
986 15211 0

173 7731 0

967 14493 0

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

STA 1005+00 TO STA 1005+50



TUS 250-1723

109

STA. 1006+00 TO STA. 1006+50

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

SECTION
AND
DATE
25
00

TUS 250-1723

110

SEEDING		TOTAL AREA		TOTAL VOLUME	
WIDTH	SQYDS	FT	IN	CU YD	CU FT

970

FL. 914.78

FL. 913.32

FL. 913.36

LA

916.22
1007+00
969.8

248

10927 0

1272

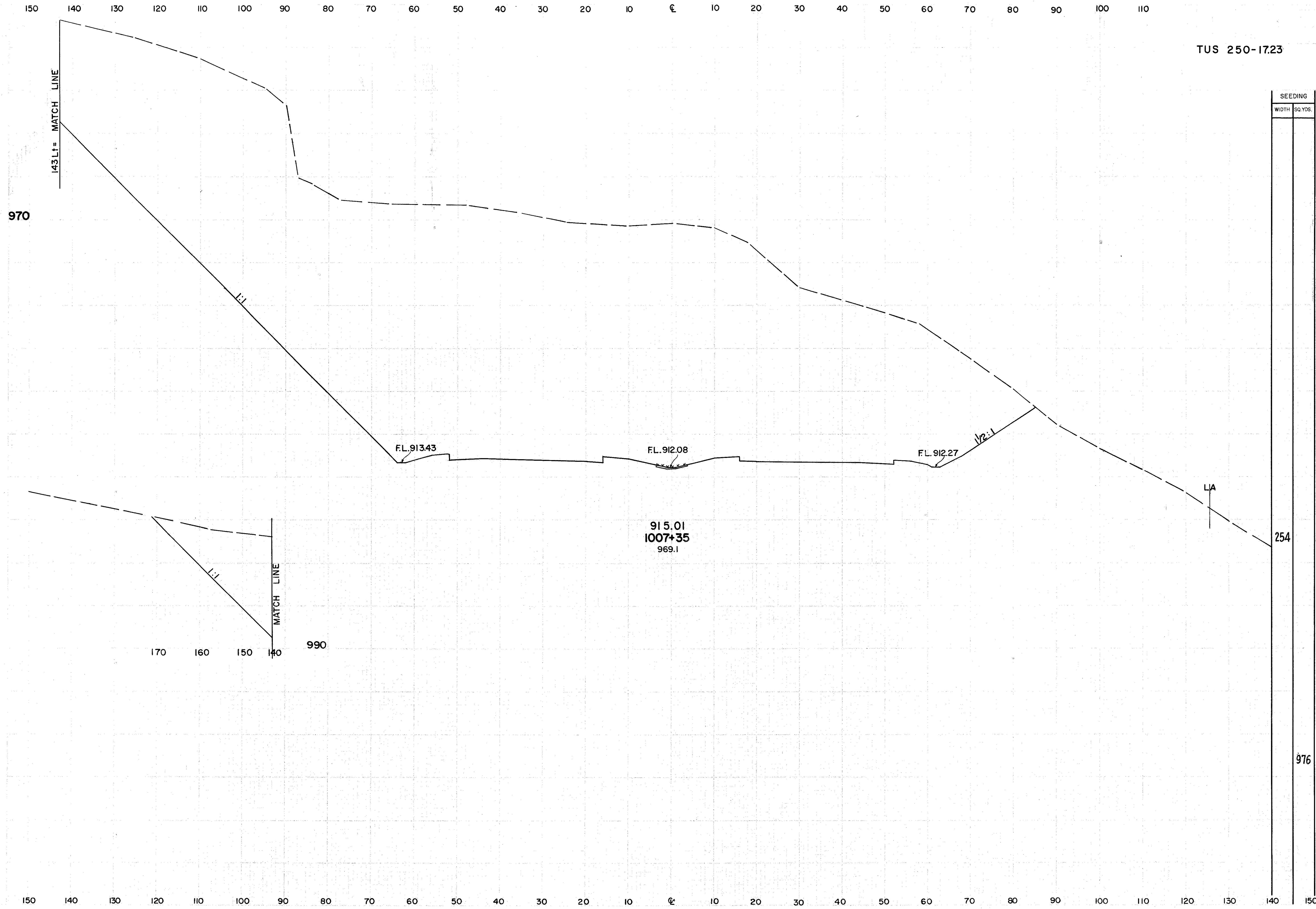
18878 0

STA. 1007+00

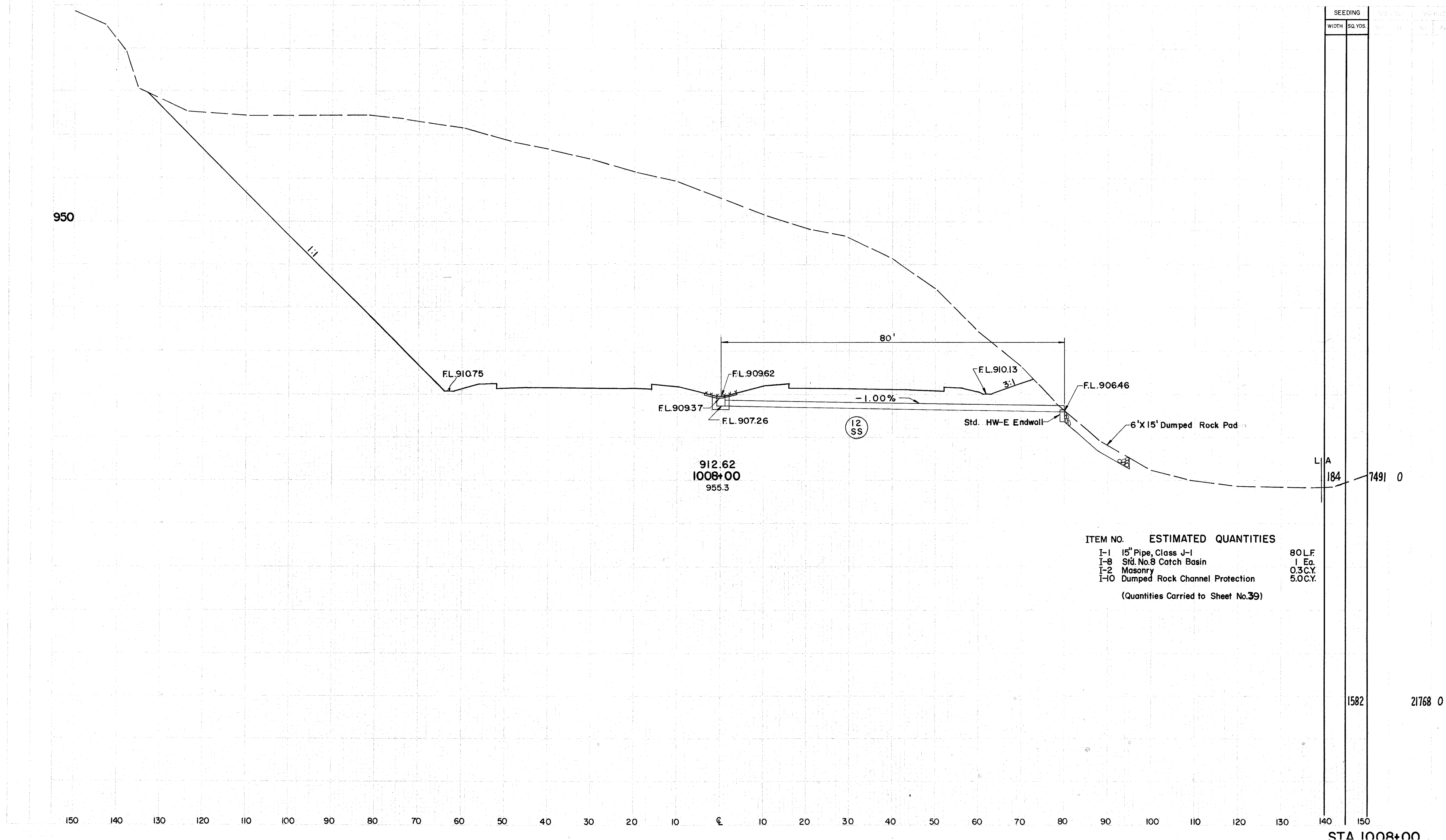
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

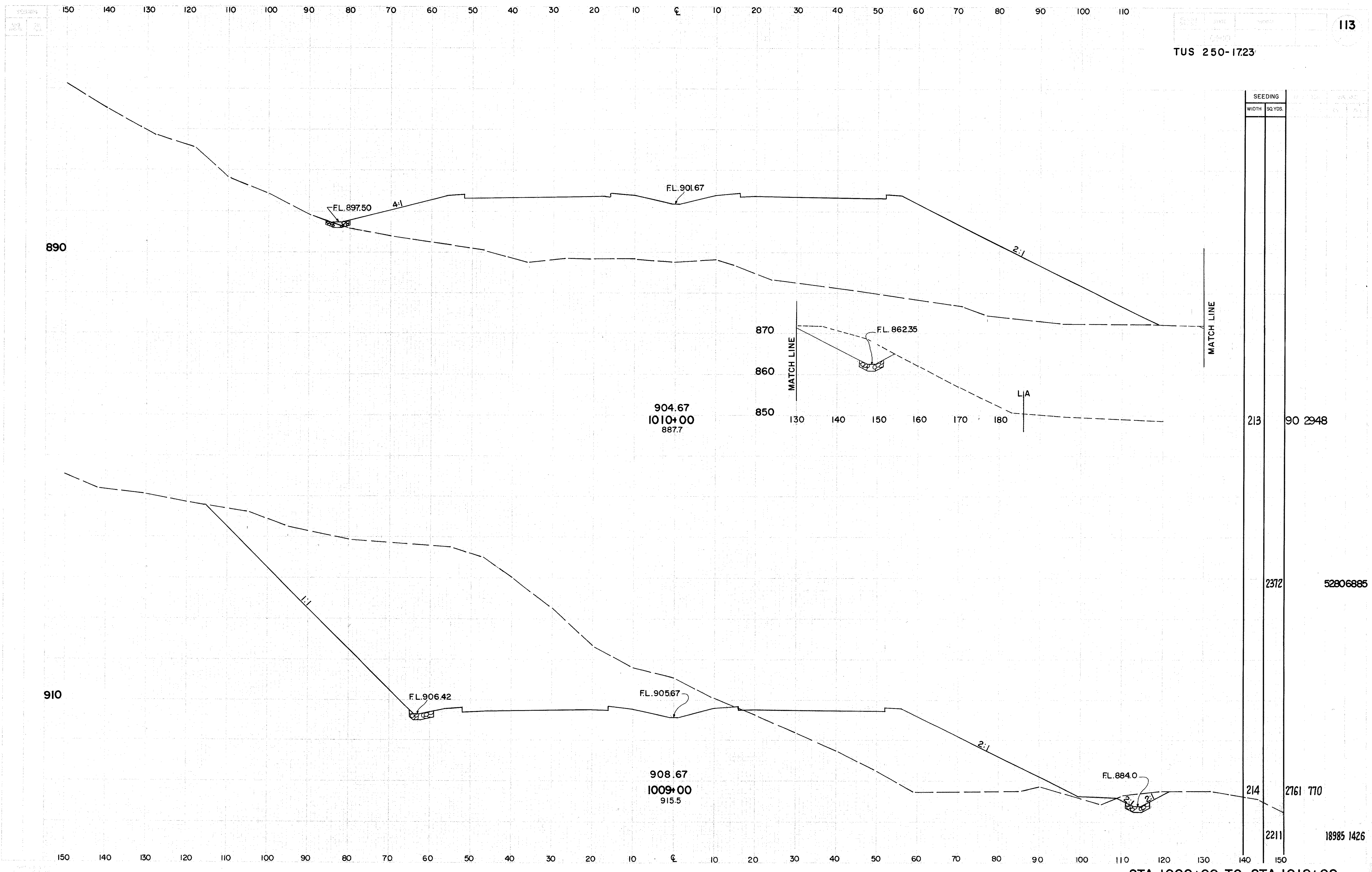
TUS 250-17.23

III



SEEDING	
WIDTH	SQ. YDS.
254	10593 0
976	13948 0

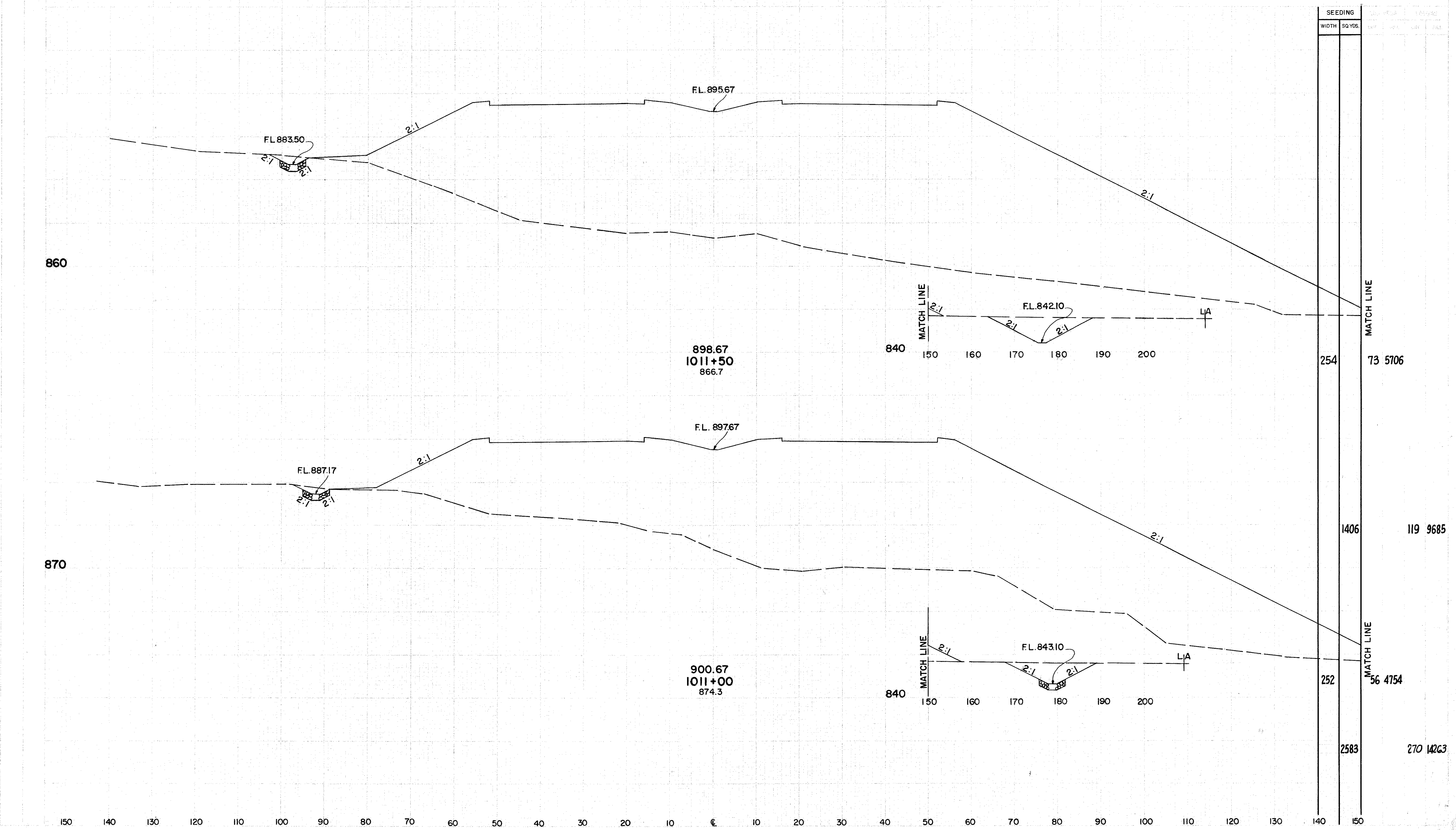




150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

TUS 250-1723

114



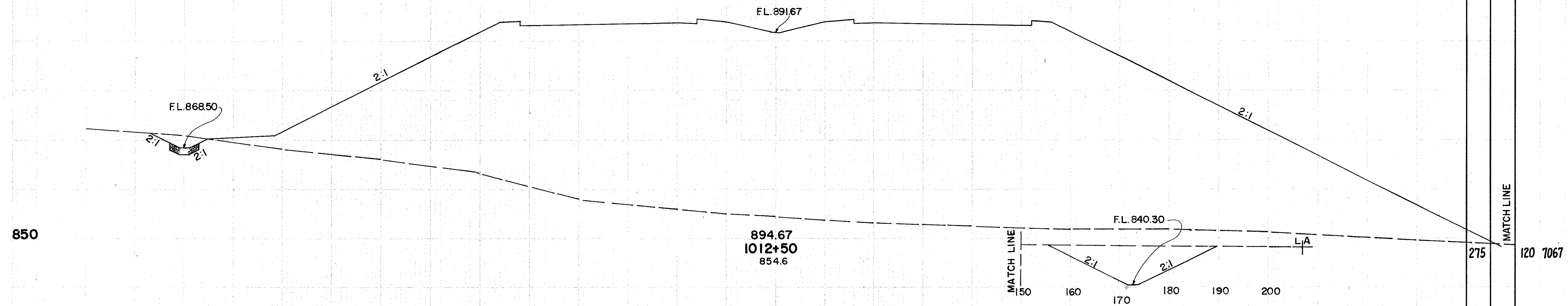
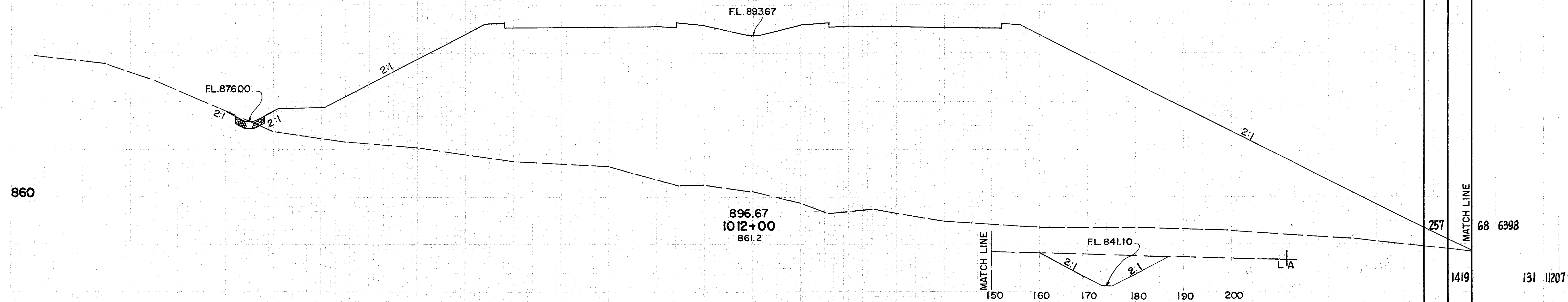
SEEDING		AREA		VOLUME	
WIDTH	SQ. YDS.	CU YDS.	CU YDS.	CU YDS.	CU YDS.
254	73 5706				
1406	119 9685				
252	56 4754				
2583	270 14263				

STA. 1011+00 TO STA. 1011+50

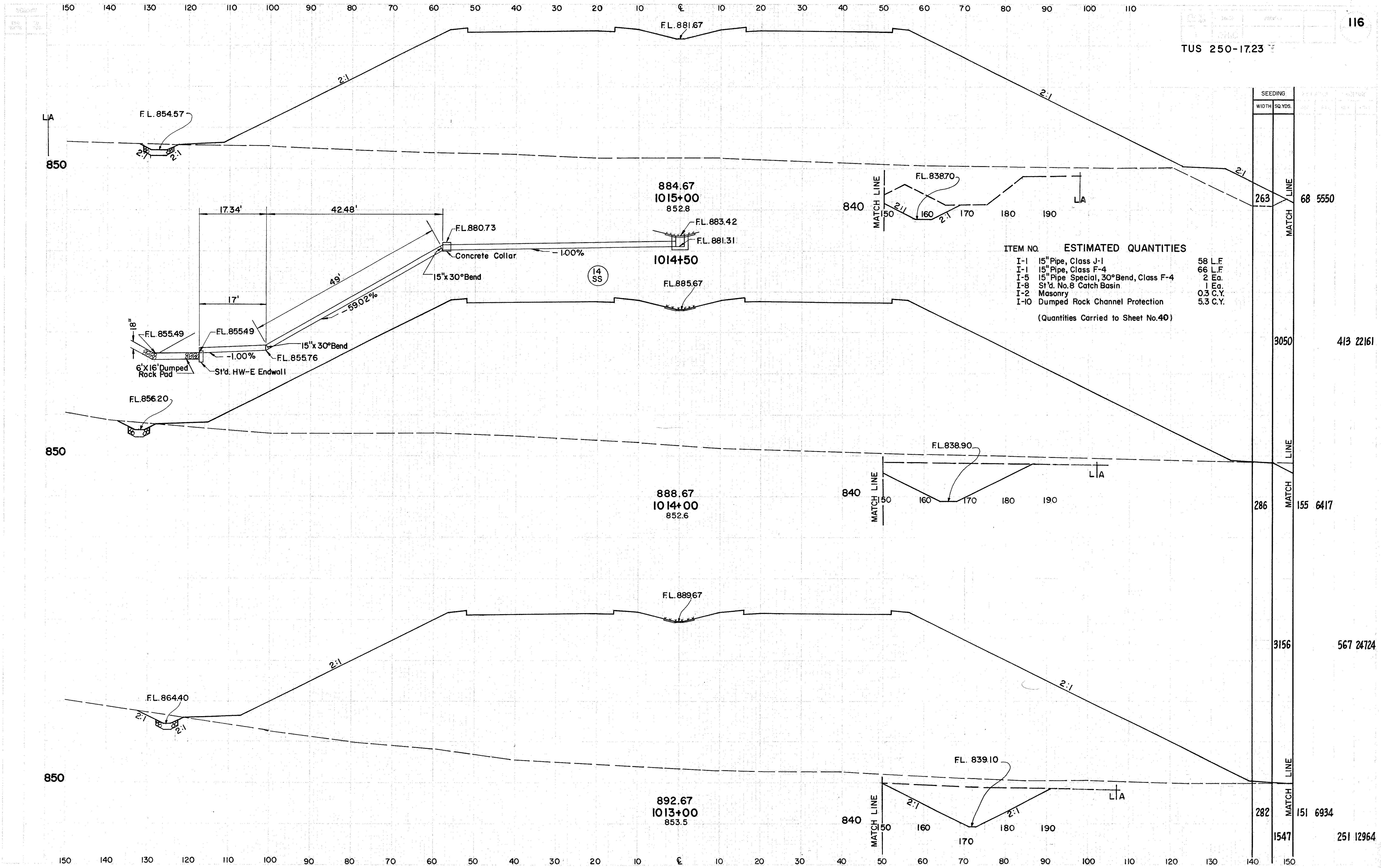
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

TUS 250-17.23

115

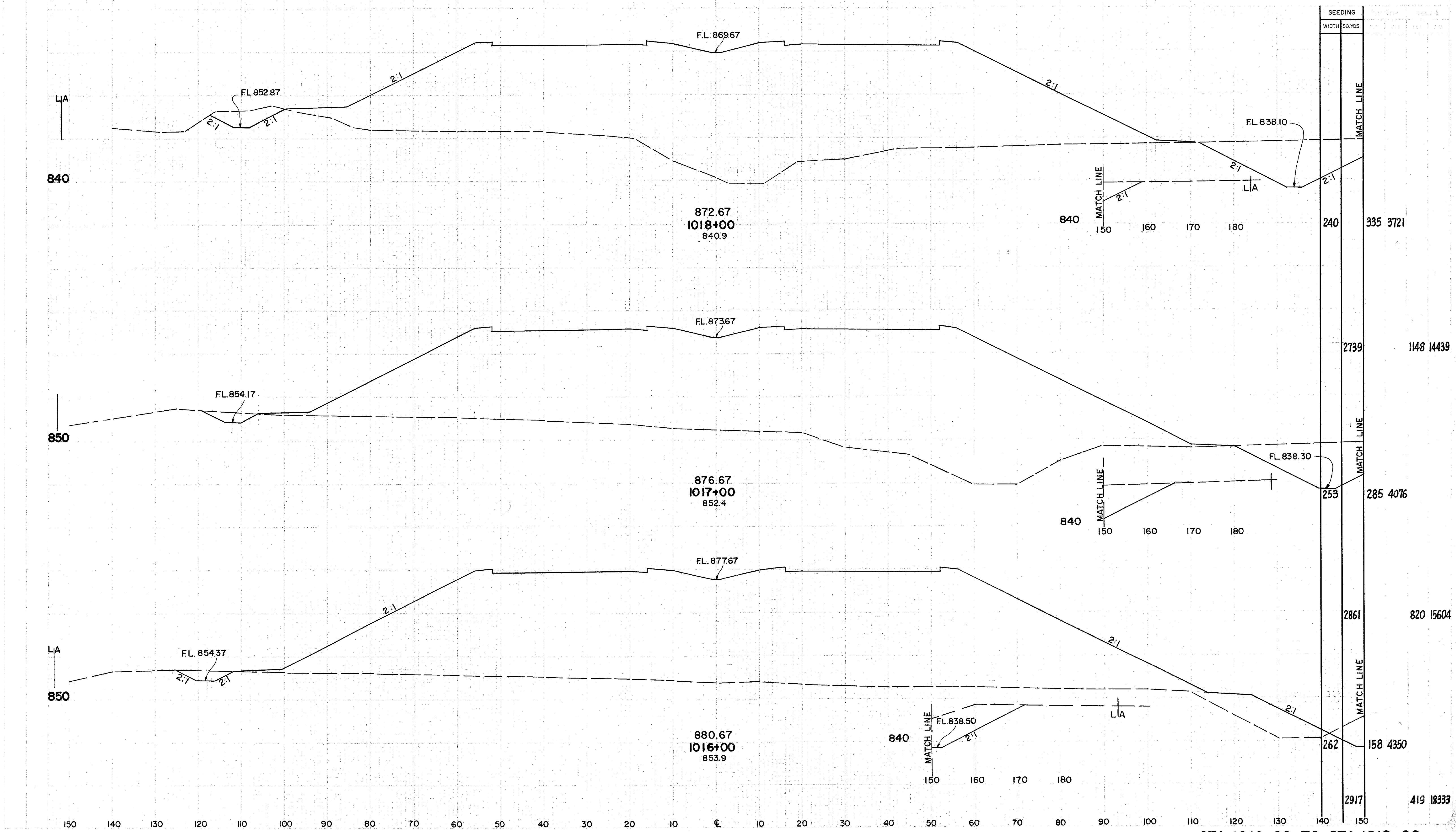


STA. 1012+00 TO STA. 1012+50

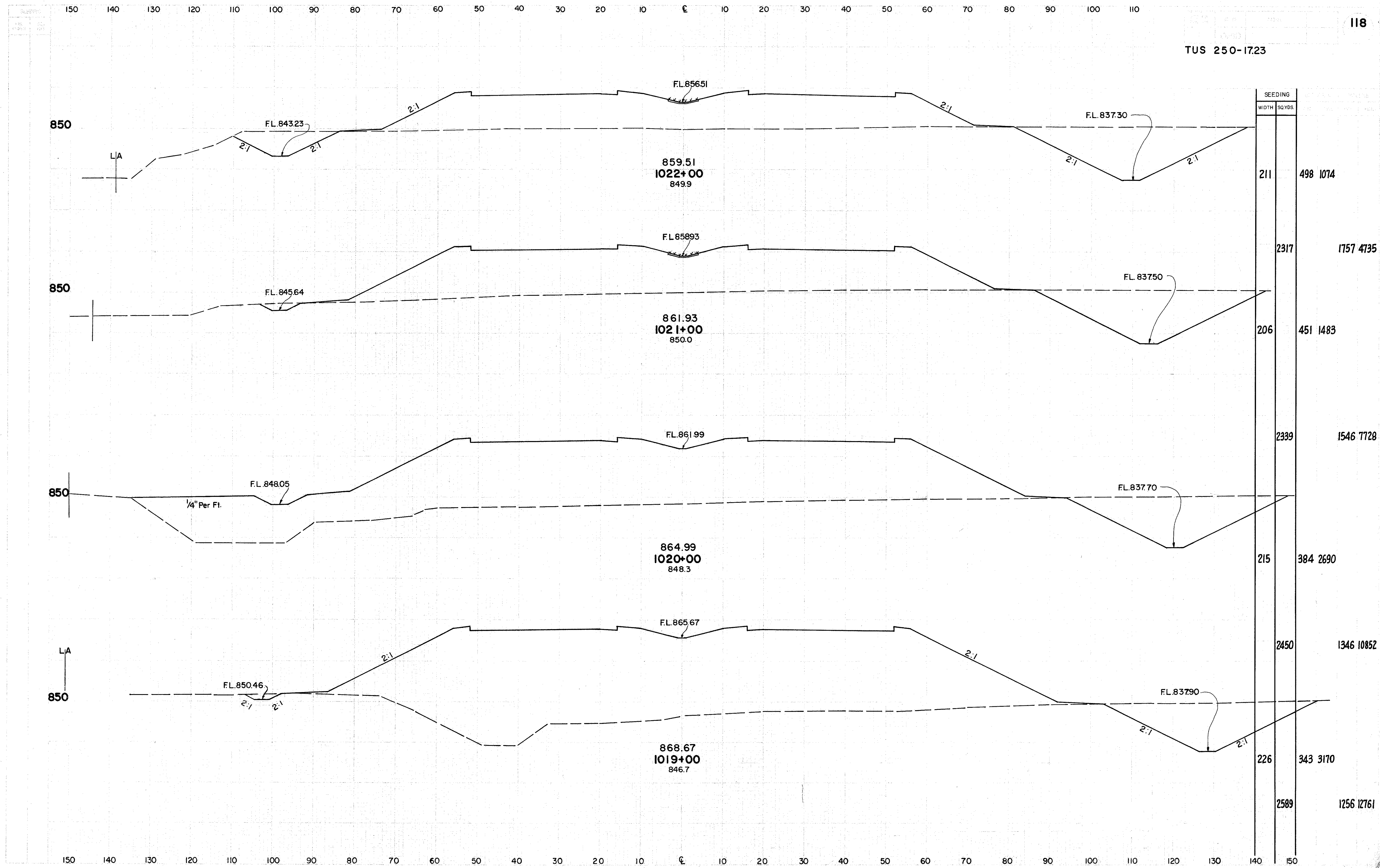


ITEM NO.		ESTIMATED QUANTITIES	
I-1	15" Pipe, Class J-1	58	L.F.
I-1	15" Pipe, Class F-4	66	L.F.
I-5	15" Pipe, Special, 30° Bend, Class F-4	2	Ed.
I-8	St'd. No. 8 Catch Basin	1	Ed.
I-2	Masonry	0.3	C.Y.
I-10	Dumped Rock Channel Protection	5.3	C.Y.
(Quantities Carried to Sheet No. 40)			

SEEDING		MATCH LINE	68	5550
WIDTH	SQ. YDS.			
263		MATCH LINE		
3050		LINE	413	22161
286		MATCH LINE	155	6417
3156		LINE	567	24724
282		MATCH LINE	151	6934
1547		LINE	251	12964

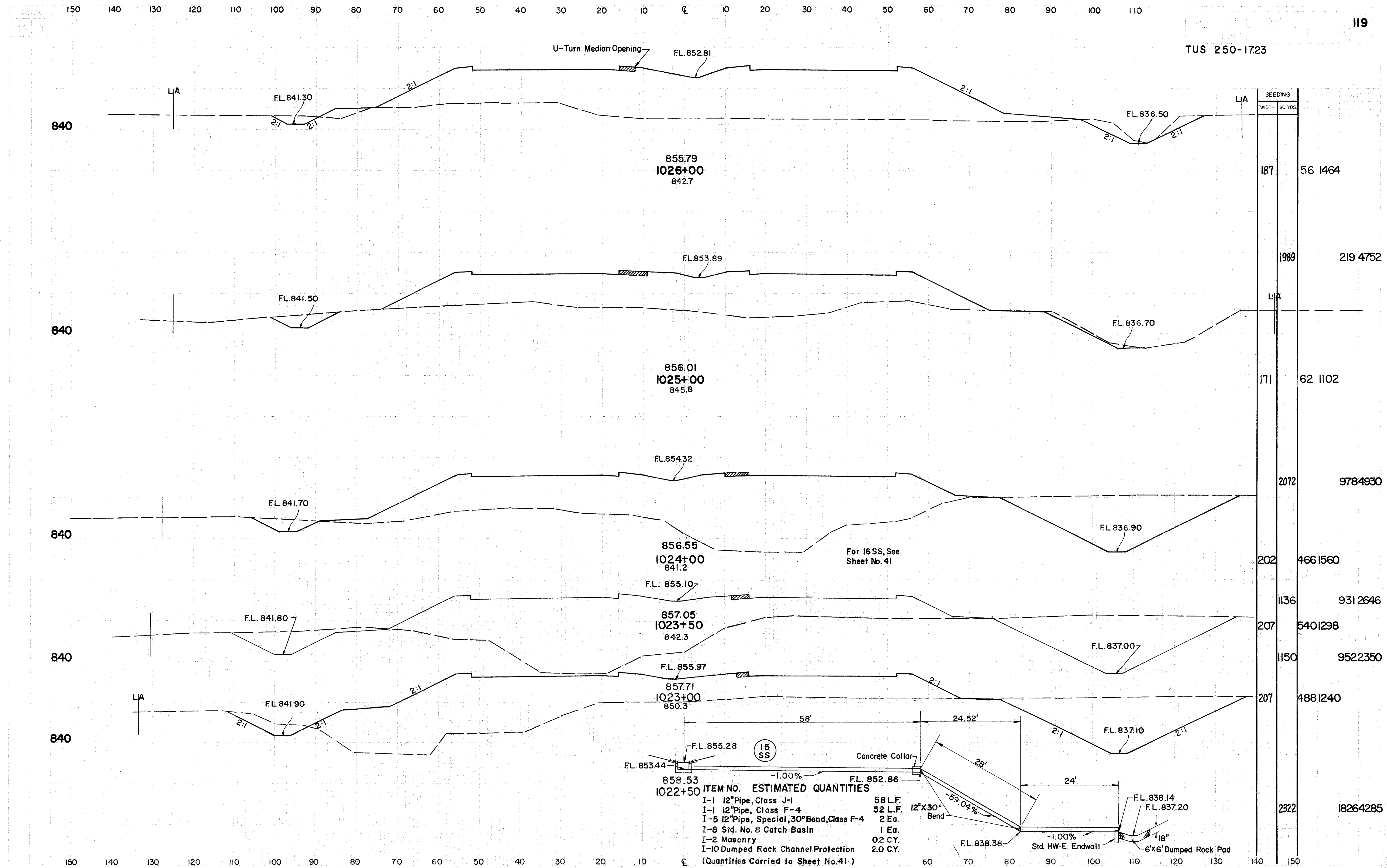


TUS 250-17.23



STA. 1019+00 TO STA. 1022+00

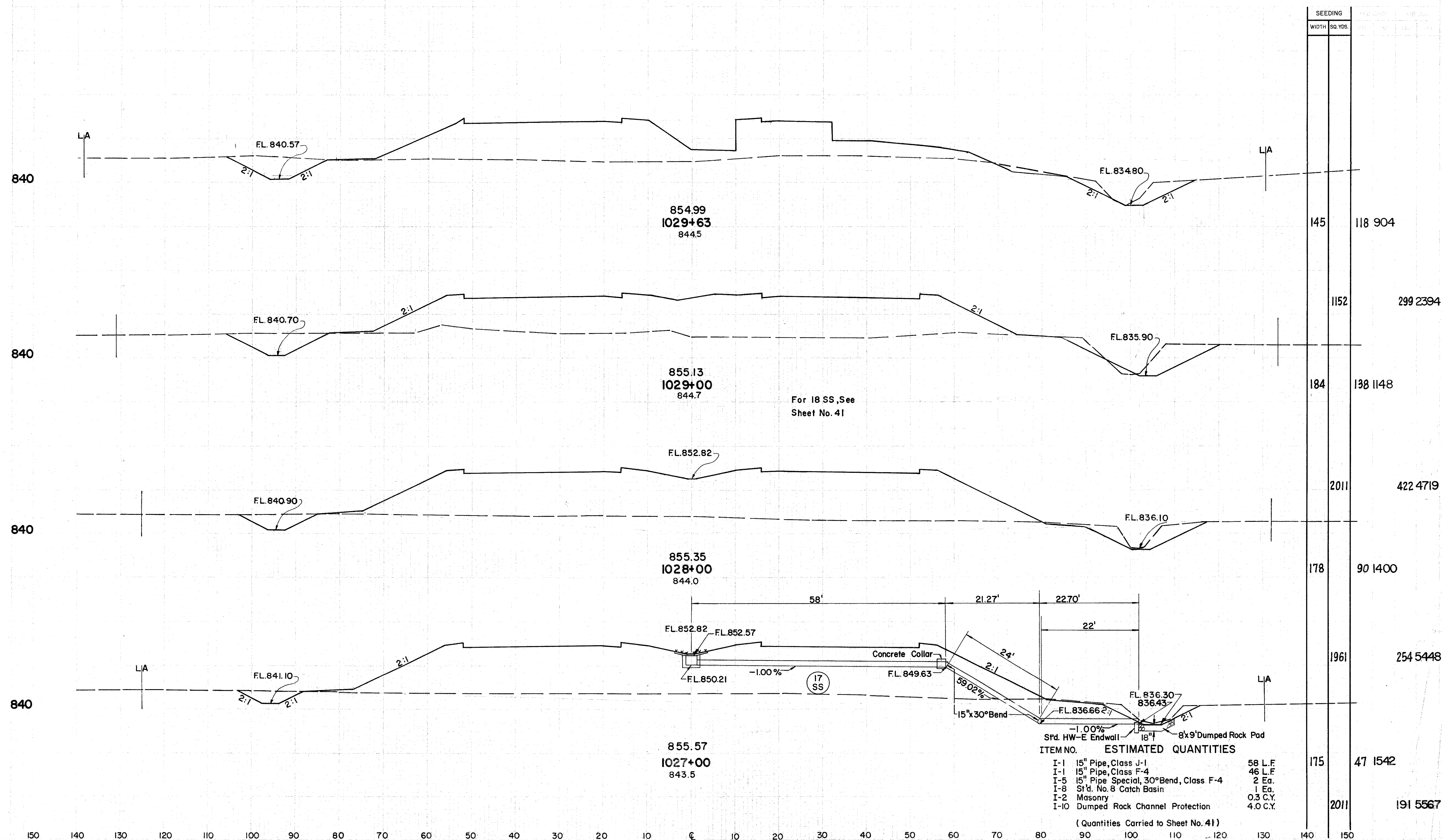
TUS 250-17.23

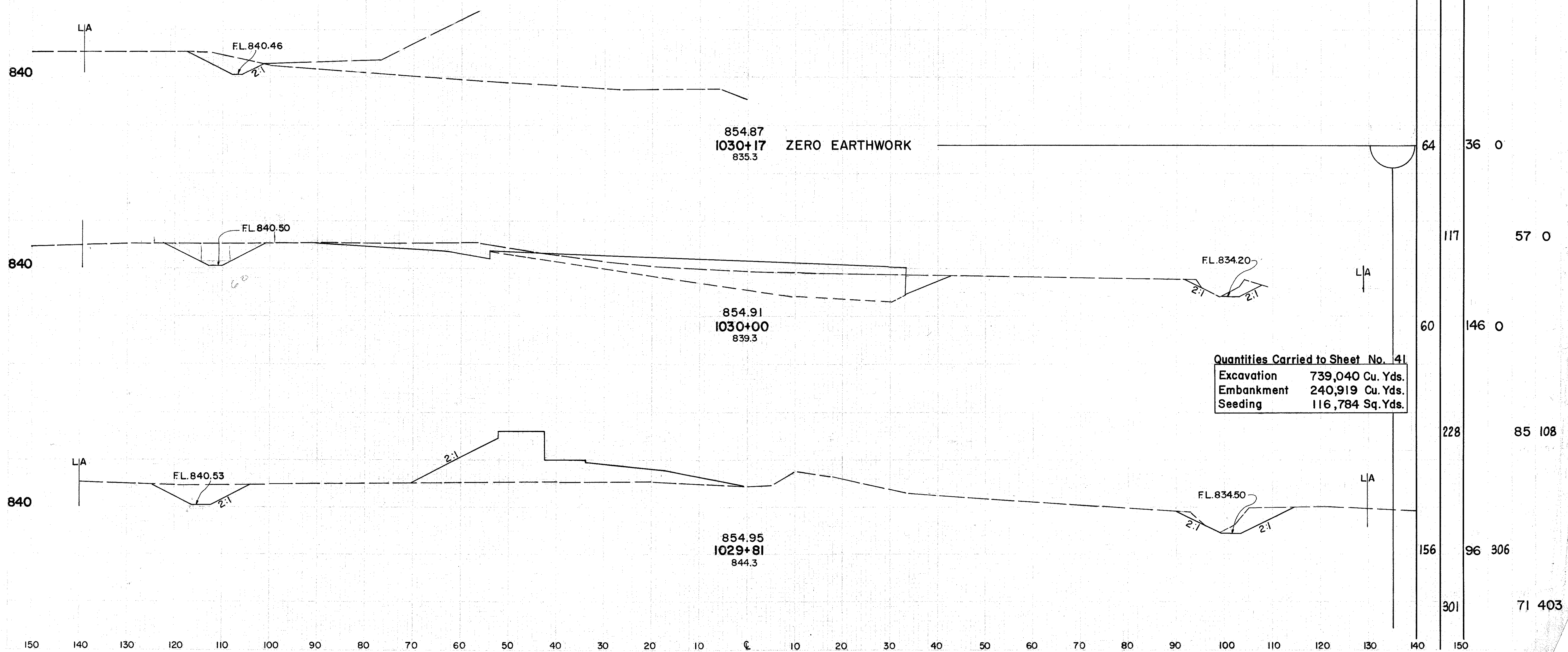


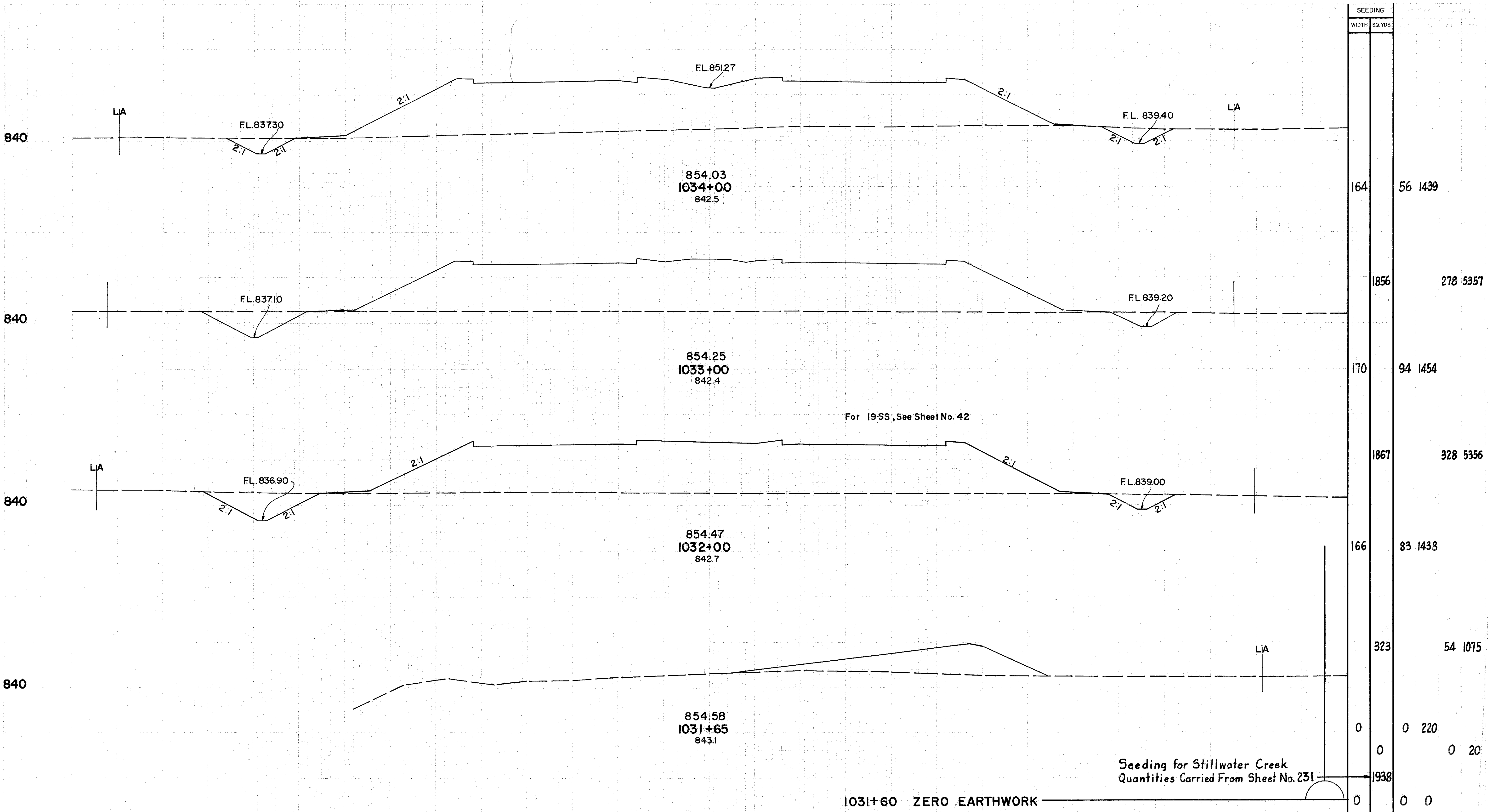
ITEM NO. ESTIMATED QUANTITIES	
1-1 12" Pipe, Class J-1	58 L.F.
1-1 12" Pipe, Class F-4	52 L.F.
1-5 12" Pipe, Special, 30° Bend, Class F-4	2 Ea.
1-8 Std. No. 8 Catch Basin	1 Ea.
1-2 Masonry	0.2 C.Y.
1-10 Dumped Rock Channel Protection	2.0 C.Y.
(Quantities Carried to Sheet No. 41)	

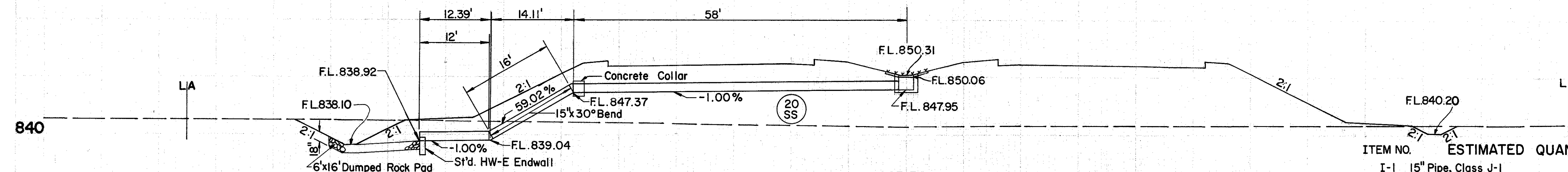
SEEDING	
WIDTH	SQ. YDS.
187	56 1464
1989	219 4752
171	62 1102
2072	978 4930
202	466 1560
1136	931 2646
207	540 1298
1150	952 2350
207	488 1240
2322	1826 4285

STA. 1023+00 TO STA. 1026+00

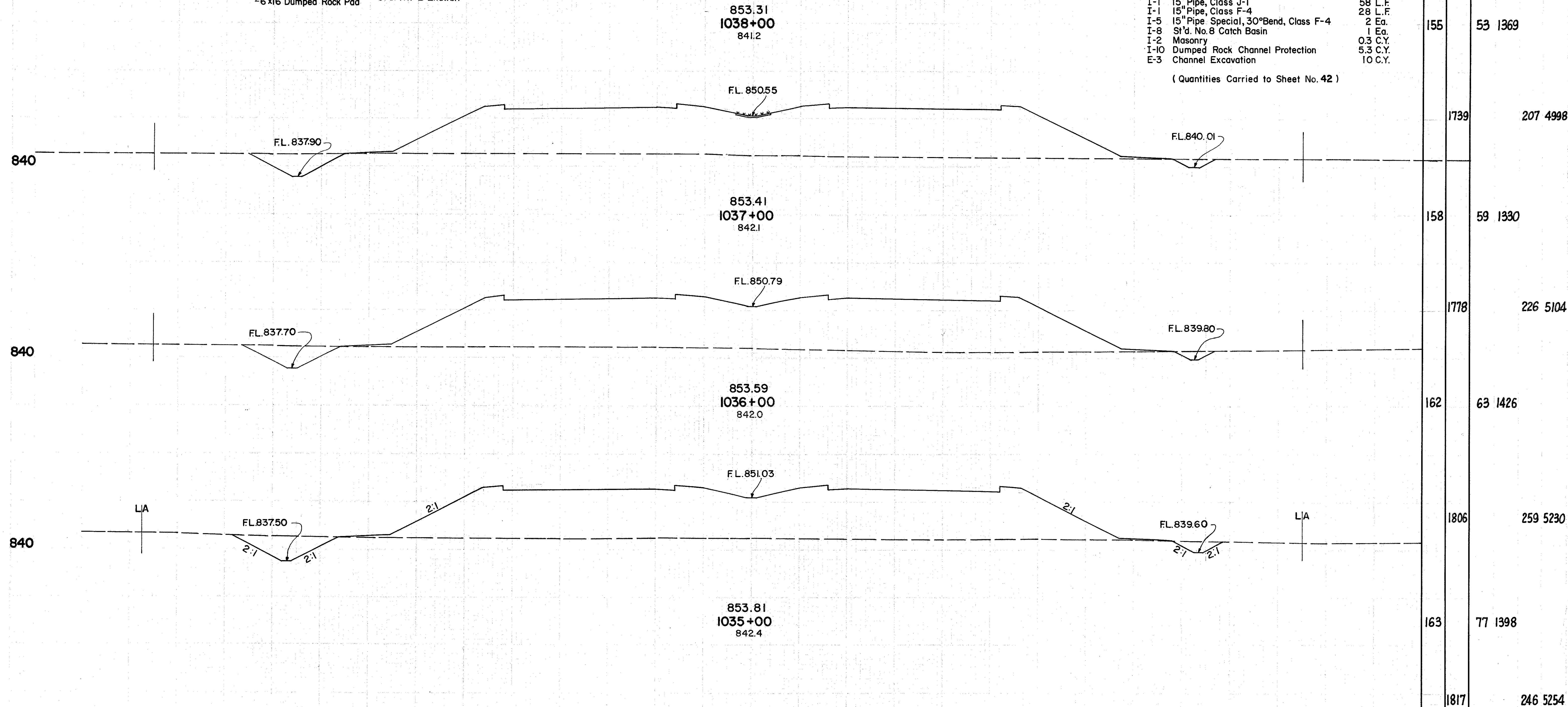




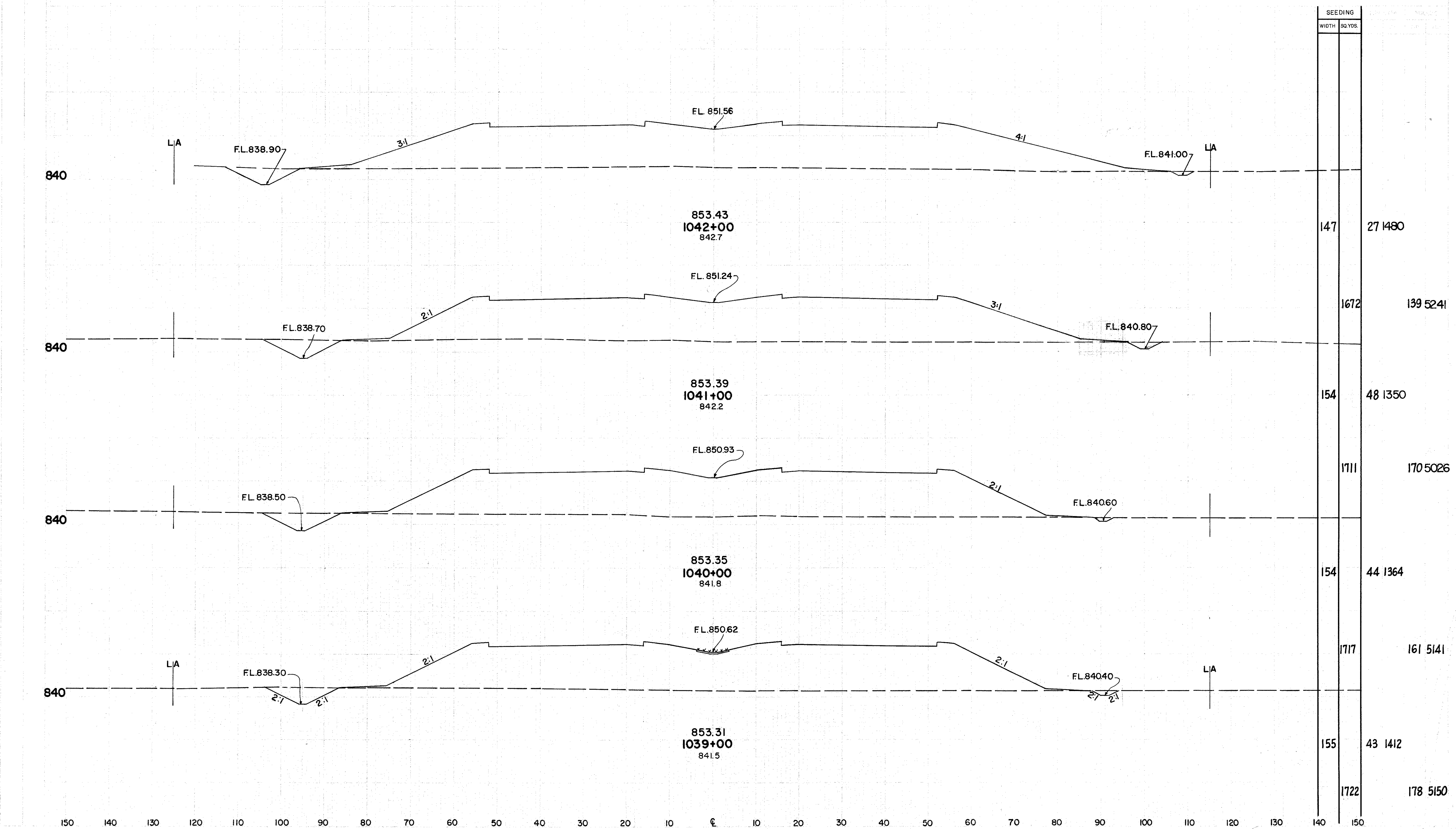




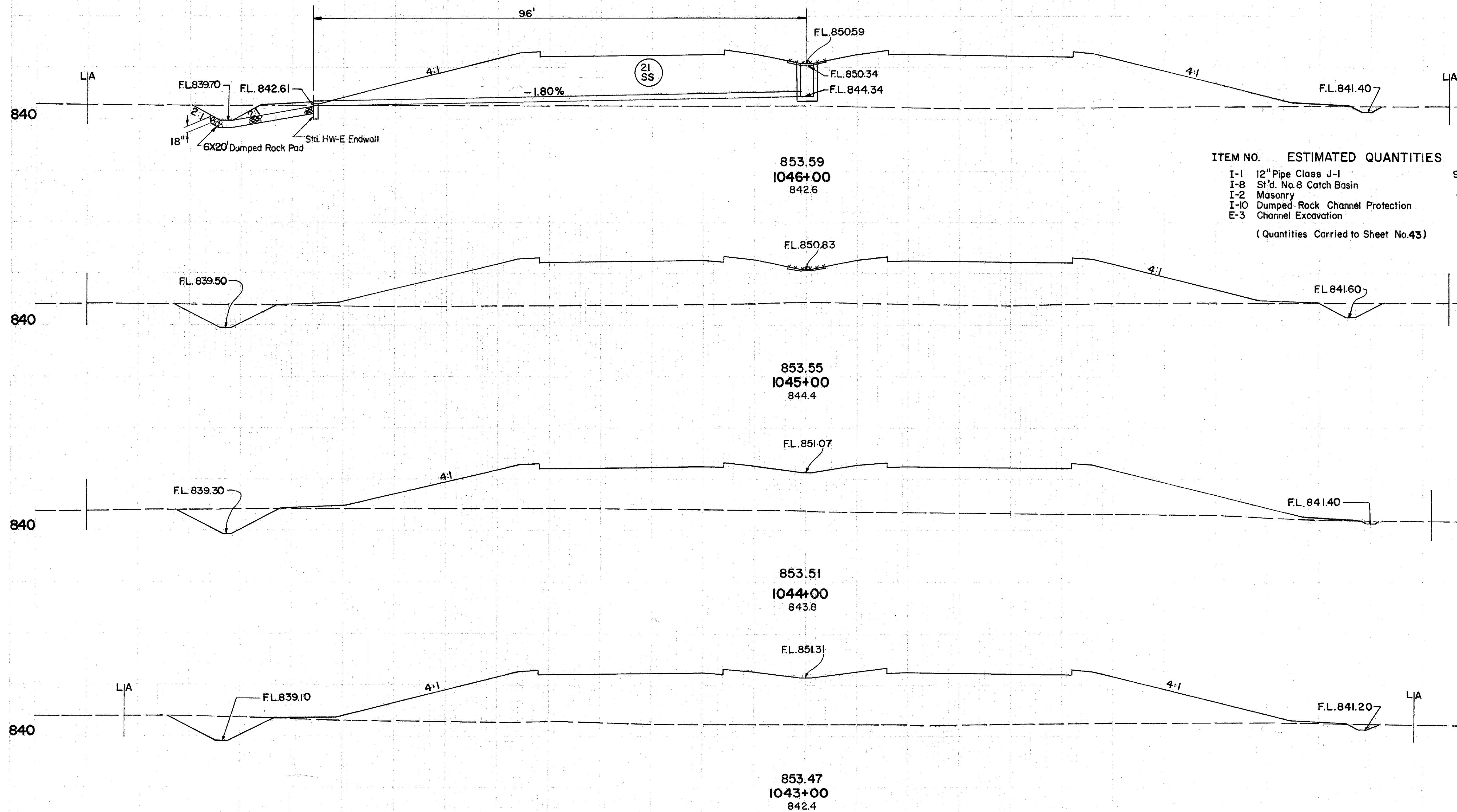
ITEM NO.		ESTIMATED QUANTITIES	
I-1	15" Pipe, Class J-1	58 L.F.	
I-1	15" Pipe, Class F-4	28 L.F.	
I-5	15" Pipe, Special, 30° Bend, Class F-4	2 Ea.	
I-8	St'd. No. 8 Catch Basin	1 Ea.	
I-2	Masonry	0.3 C.Y.	
I-10	Dumped Rock Channel Protection	5.3 C.Y.	
E-3	Channel Excavation	10 C.Y.	
(Quantities Carried to Sheet No. 42)			



TUS 250-17.23



TUS 250-17.23

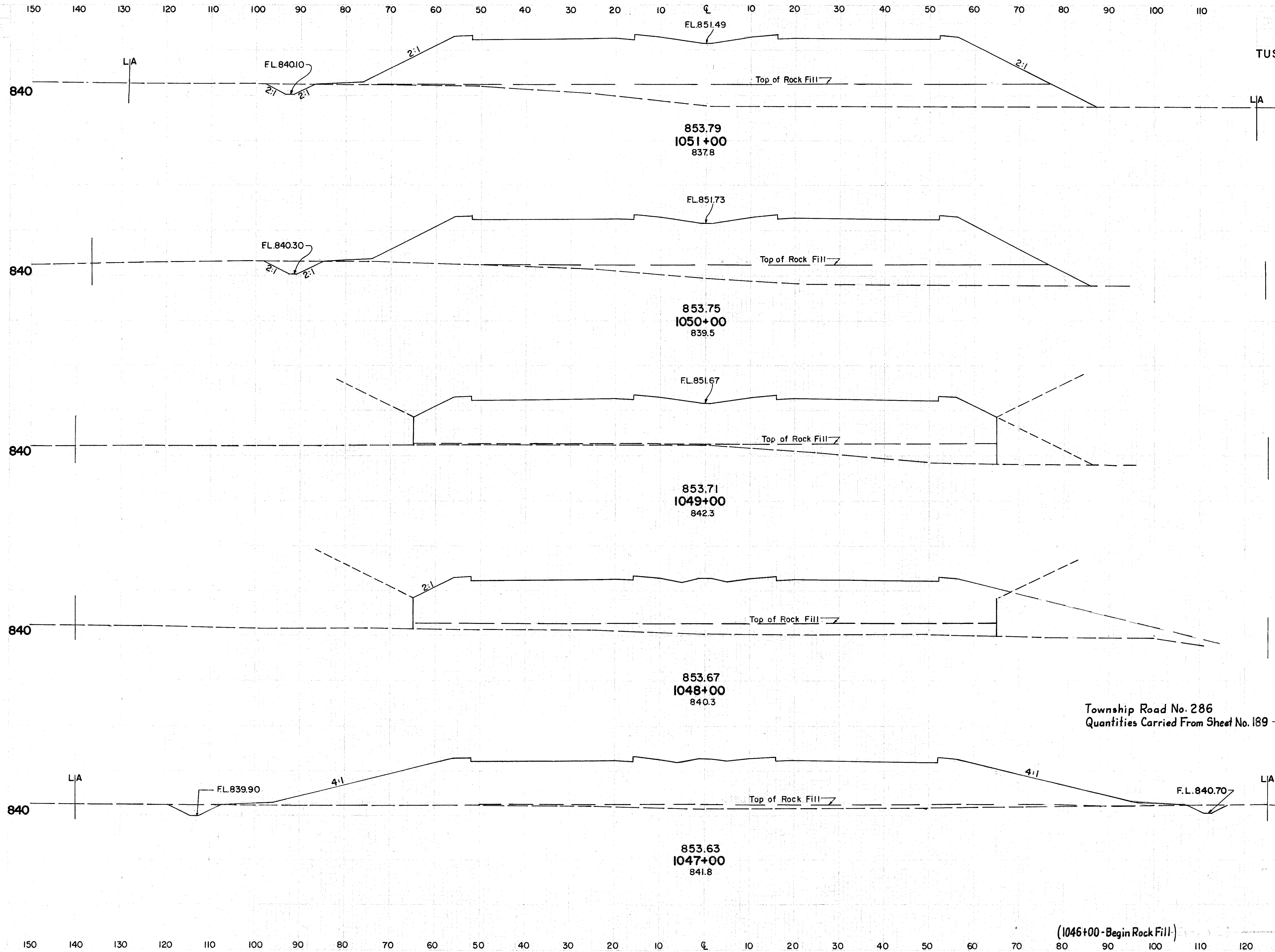


ITEM NO.	ESTIMATED QUANTITIES
I-1	12" Pipe Class J-I
I-8	St'd. No.8 Catch Basin
I-2	Masonry
I-10	Dumped Rock Channel Protection
E-3	Channel Excavation

(Quantities Carried to Sheet No.43)

SEEDING	
WIDTH	SQ. YDS.
165	45 1532
1967	231 5135
189	80 1241
2011	248 4743
173	54 1320
1850	198 5289
160	53 1536
1706	148 5585

TUS 250-17.23



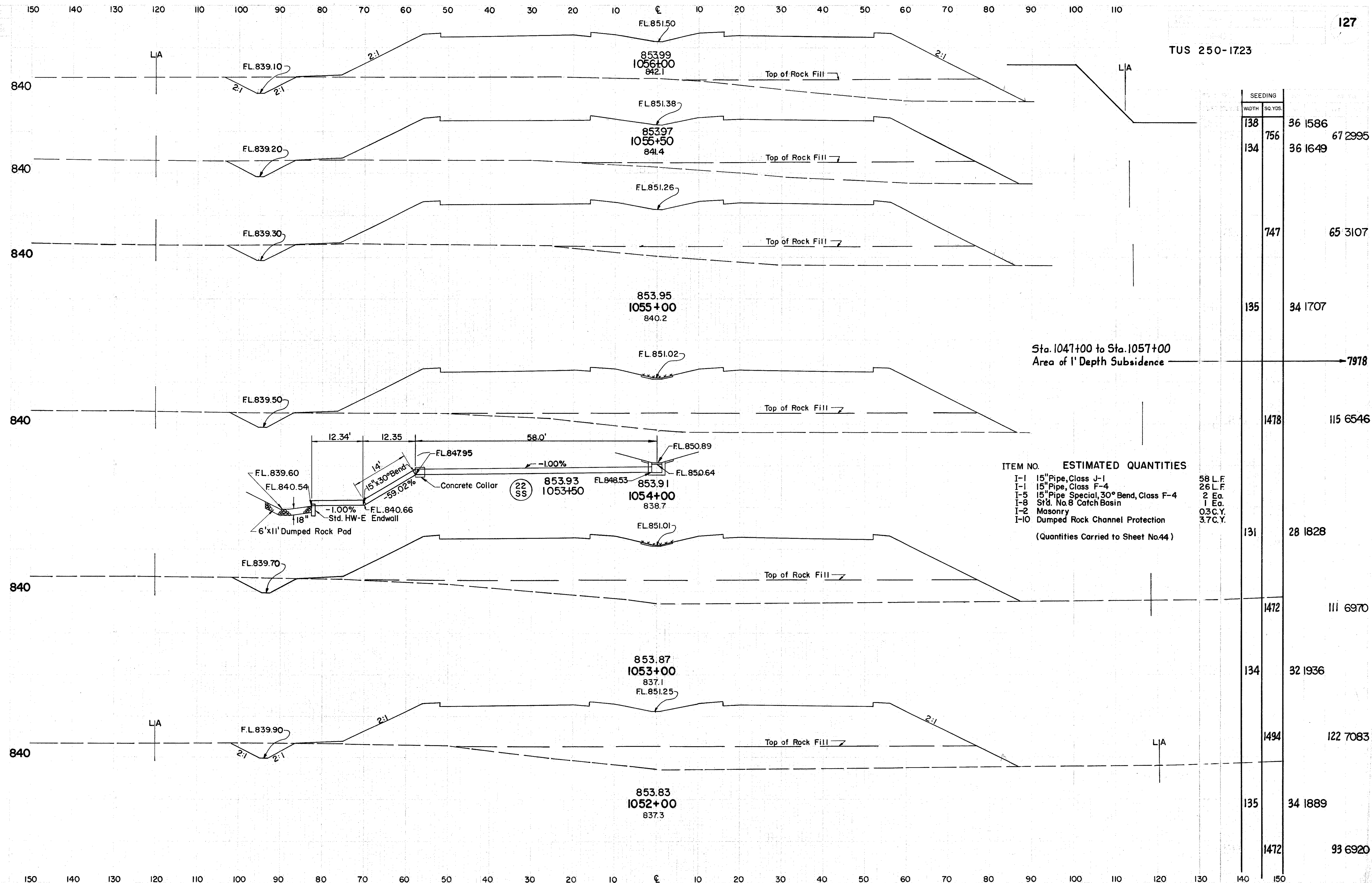
SEEDING		
WIDTH	SQ.YDS.	
130	16	1848
144	70	6661
130	22	1749
1056	41	5919
60	0	1447
667	0	5439
60	0	1490
23911	13223	76215
1167	46	5756
150	25	1618
1750	130	5833

Township Road No. 286
Quantities Carried From Sheet No. 189

(1046+00 - Begin Rock Fill)

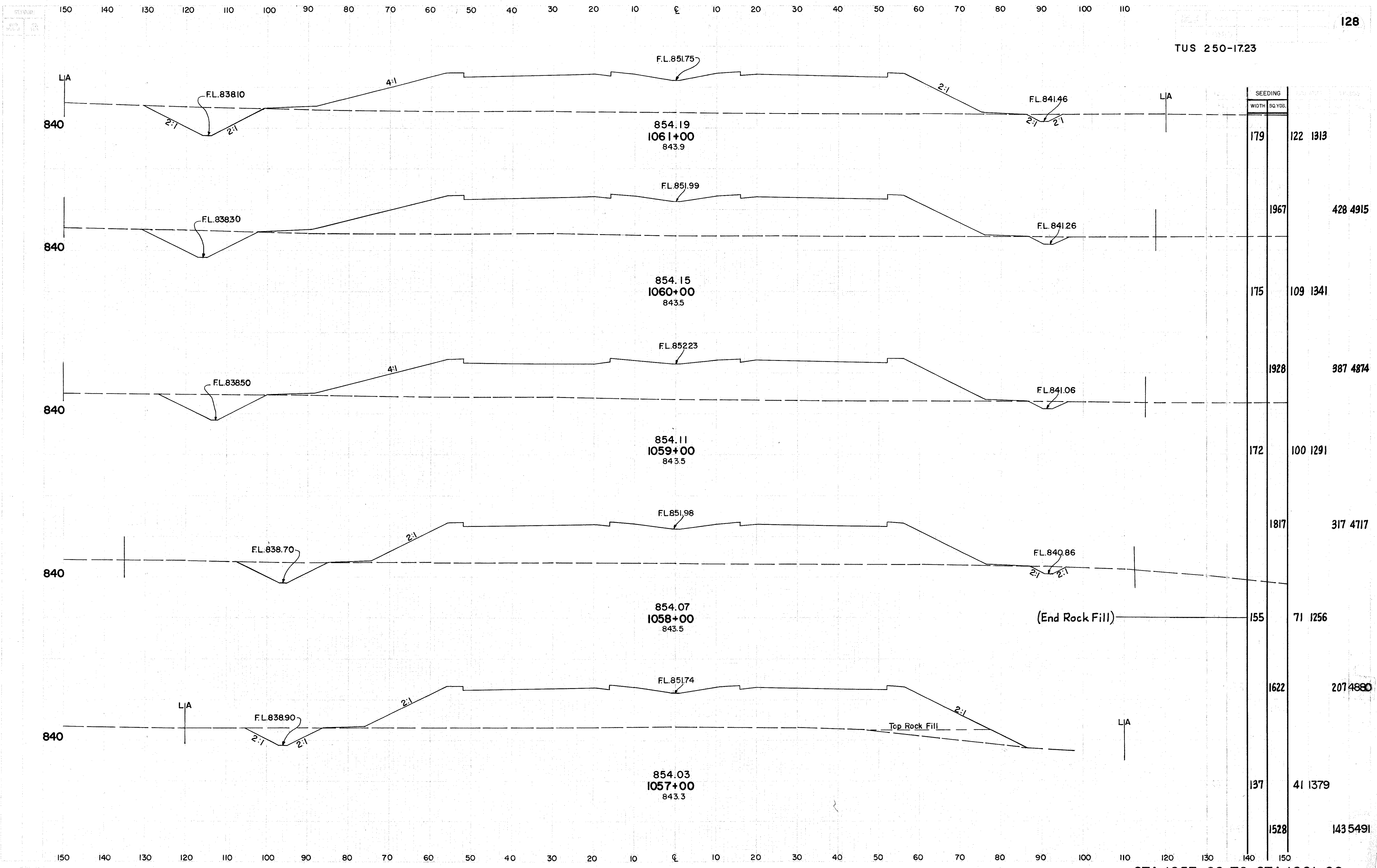
STA 1047+00 TO STA 1051+00

TUS 250-17.23



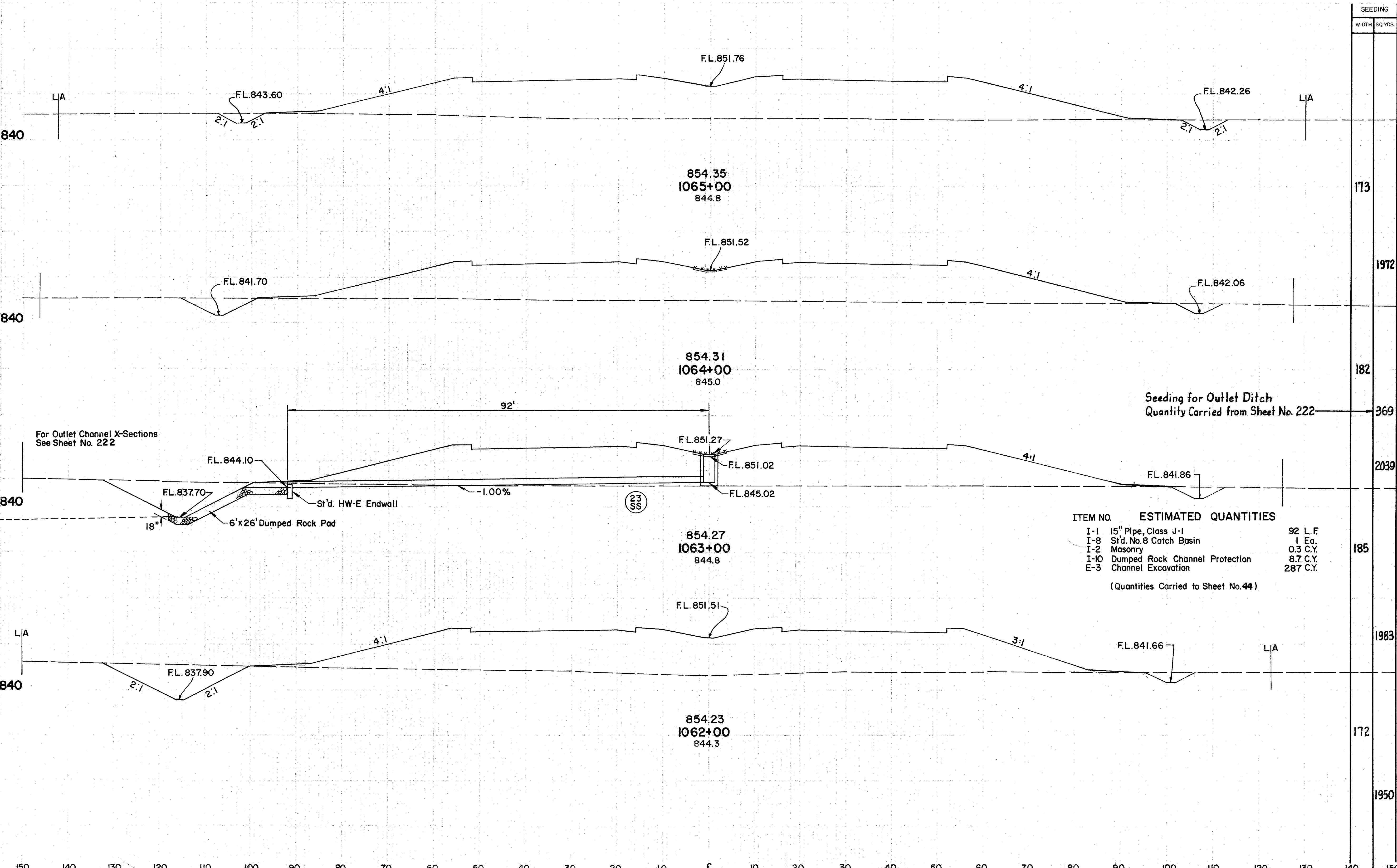
SEEDING		
WIDTH	SQ. YDS.	
138		36 1586
	756	67 2995
134		36 1649
	747	65 3107
135		34 1707
		→ 7978
	1478	115 6546
131		28 1828
	1472	111 6970
134		32 1936
	1494	122 7083
135		34 1889
	1472	93 6920

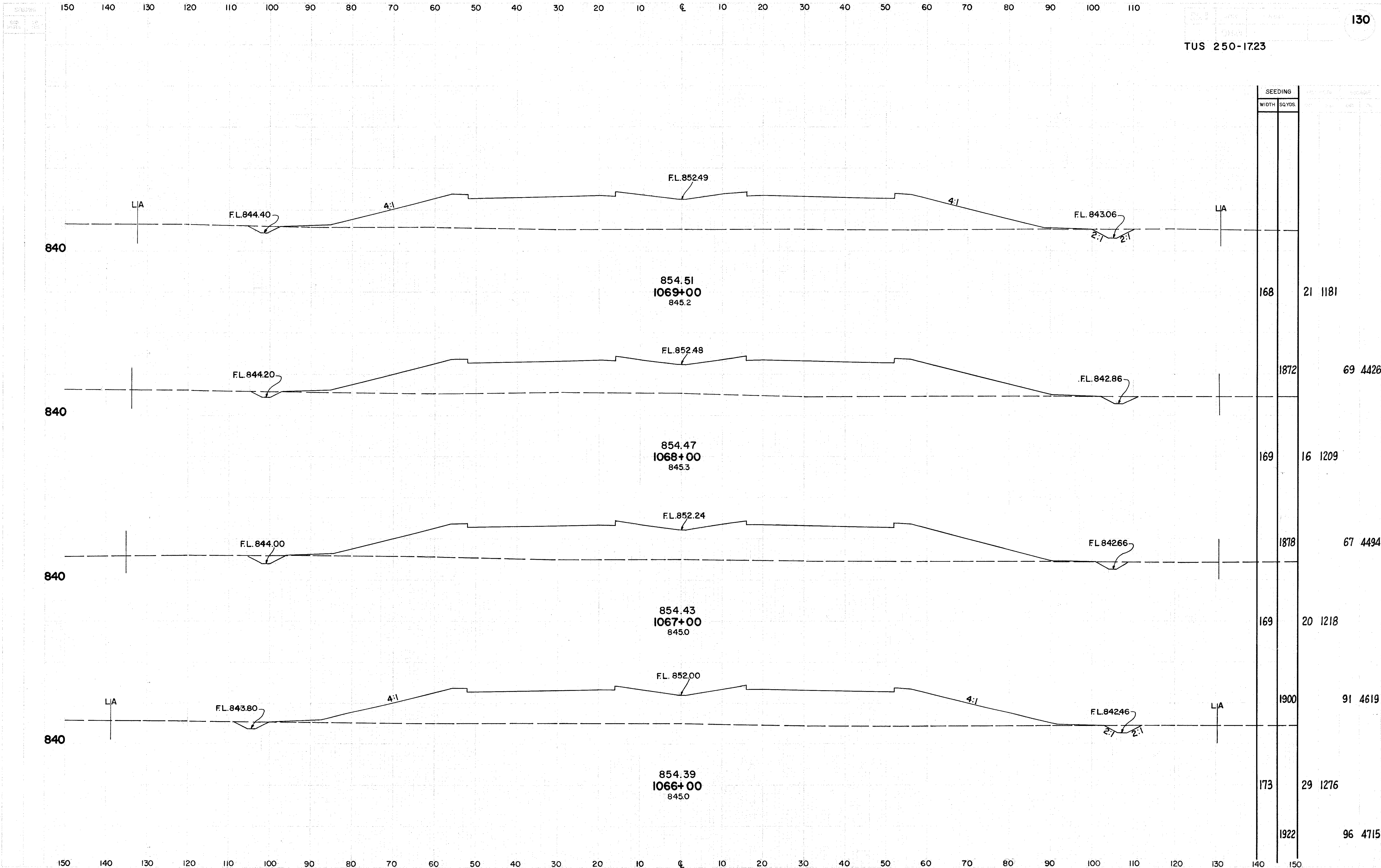
TUS 250-17.23



STA. 1057+00 TO STA. 1061+00

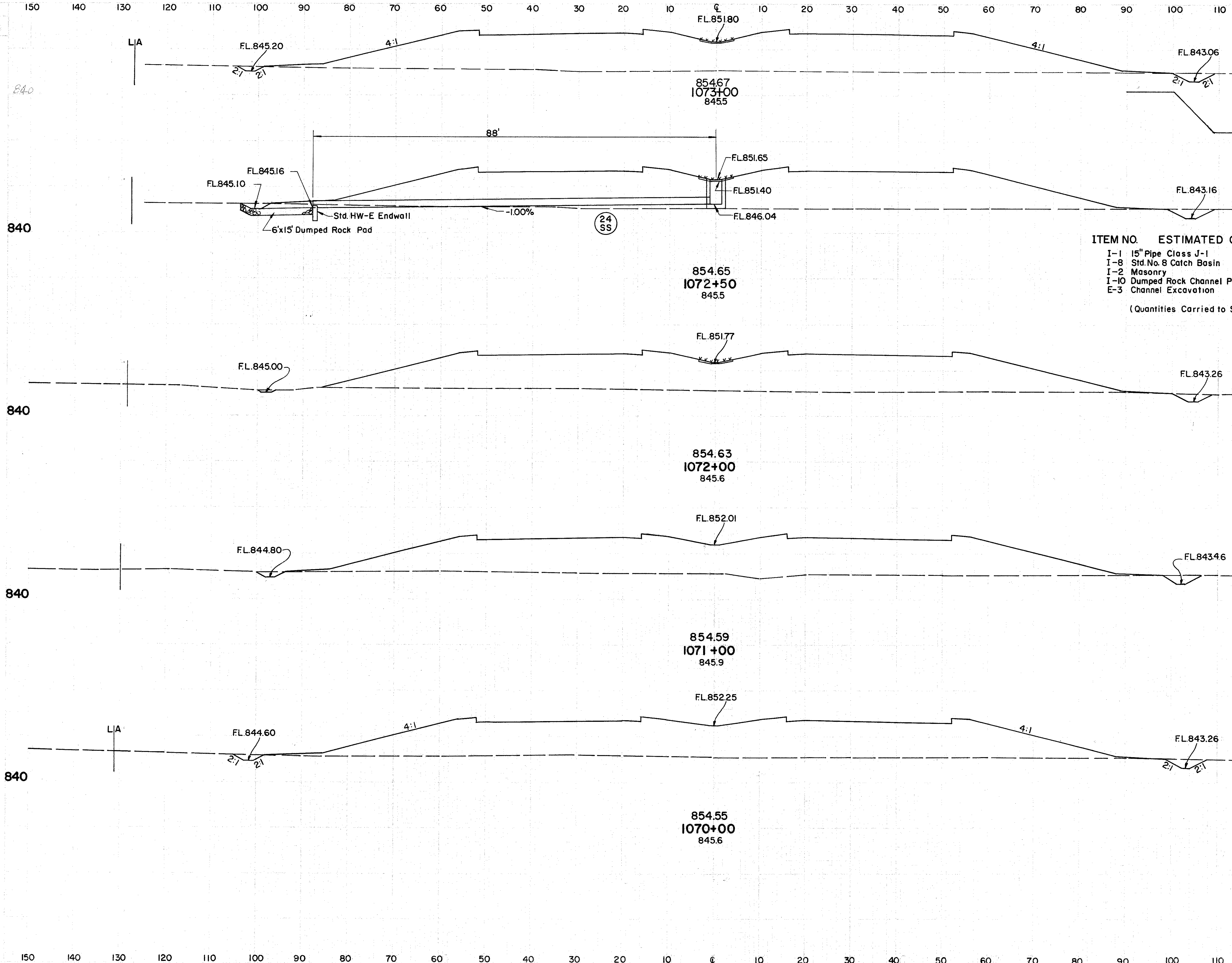
TUS 250-17.23





STA. 1066+00 TO STA. 1069+00

TUS 250-1723

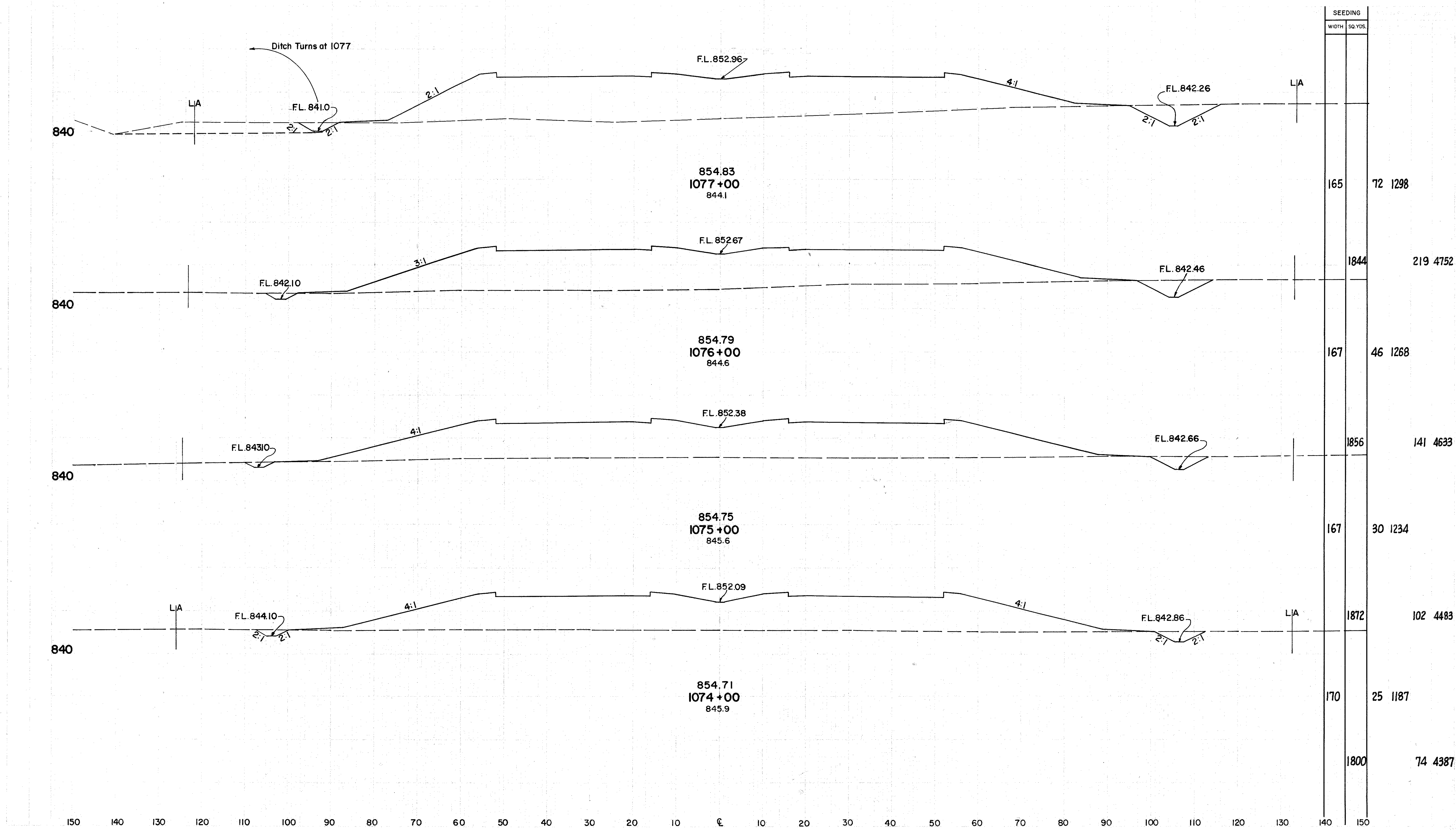


ITEM NO.	ESTIMATED QUANTITIES
I-1	15" Pipe Class J-1 88 LF
I-8	Std. No. 8 Catch Basin 1 Ea.
I-2	Masonry 0.3 CY
I-10	Dumped Rock Channel Protection 5.0 CY
E-3	Channel Excavation 3 CY

(Quantities Carried to Sheet No. 45)

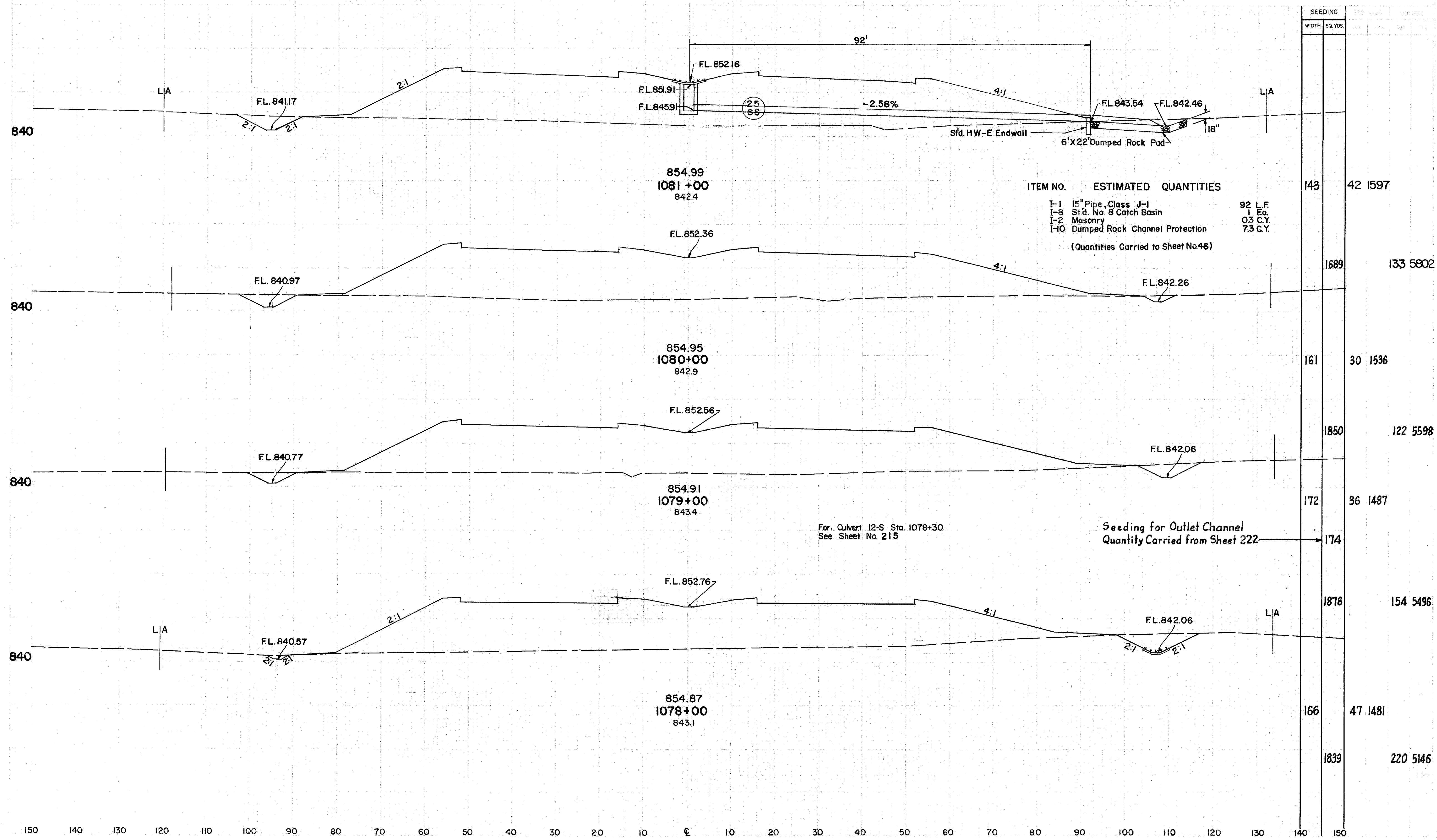
SEEDING	WIDTH	SG. YDS
154	15	1182
864	31	2189
157	18	1182
864	28	2136
154	12	1125
1717	50	4174
155	15	1129
1739	59	4146
158	17	1110
1811	70	4243

TUS 250-17.23



STA. 1074+00 TO STA. 1077+00

TUS 250-1723

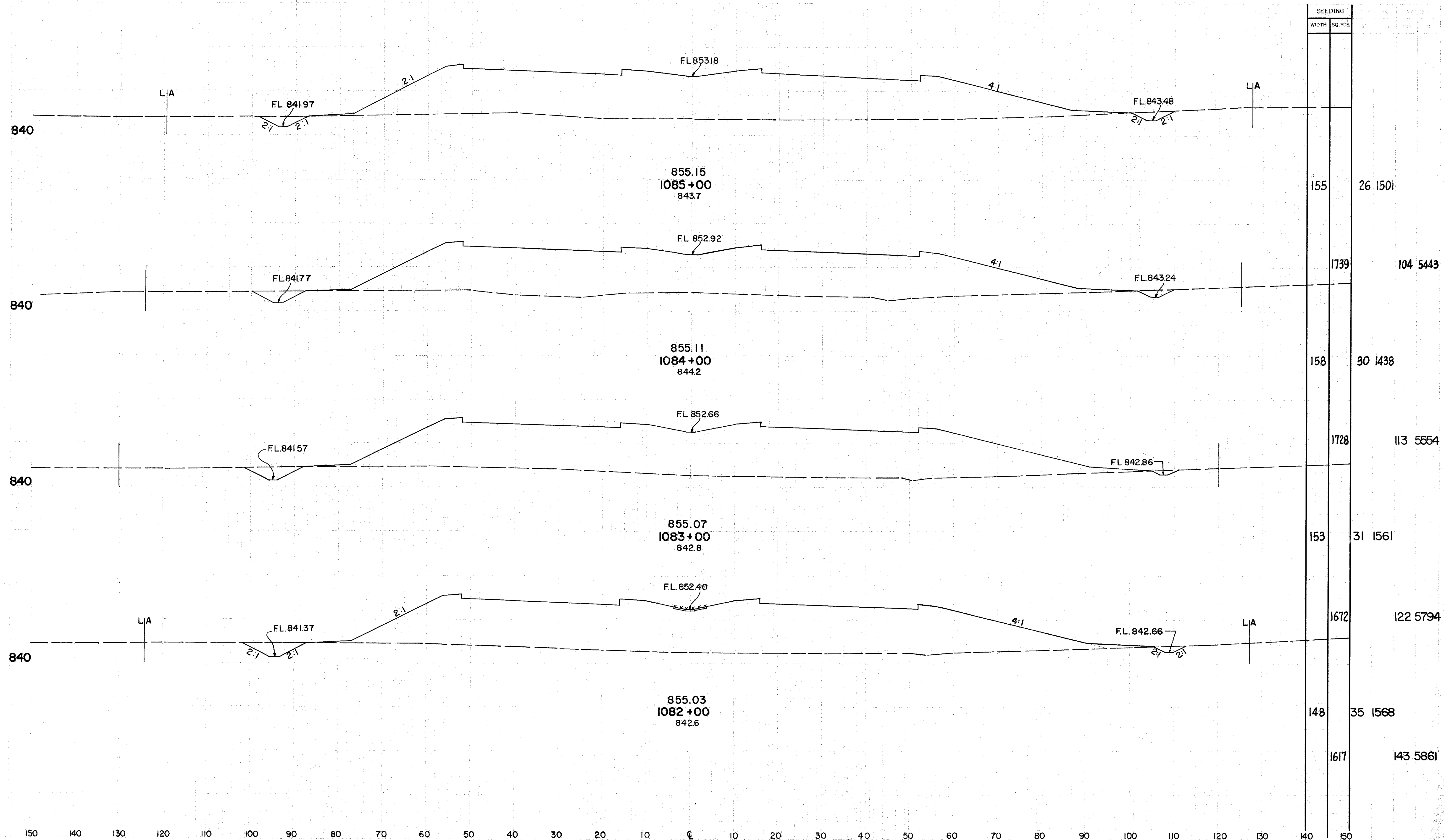


ITEM NO.	ESTIMATED QUANTITIES
I-1	15" Pipe, Class J-1
I-8	Std. No. 8 Catch Basin
I-2	Masonry
I-10	Dumped Rock Channel Protection
(Quantities Carried to Sheet No. 46)	

92 L.F.
0.3 E.C.
7.3 C.Y.

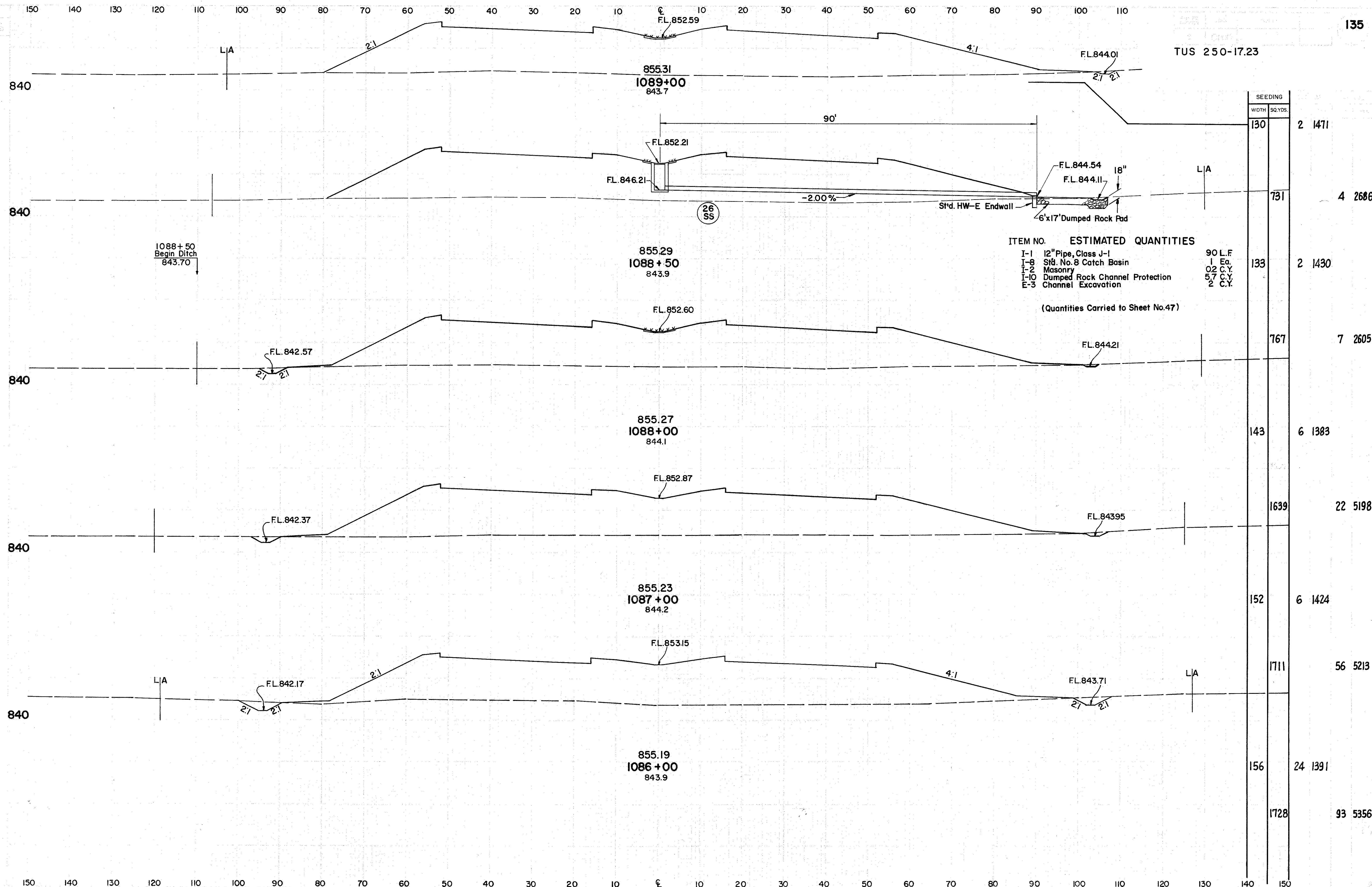
SEEDING		
WIDTH	SQ. YDS.	
143	42	1597
1689	133	5802
161	30	1536
1850	122	5598
172	36	1487
174		
1878	154	5496
166	47	1481
1839	220	5146

STA. 1078+00 TO STA. 1081+00



STA. 1082+00 TO STA. 1085+00

TUS 250-17.23



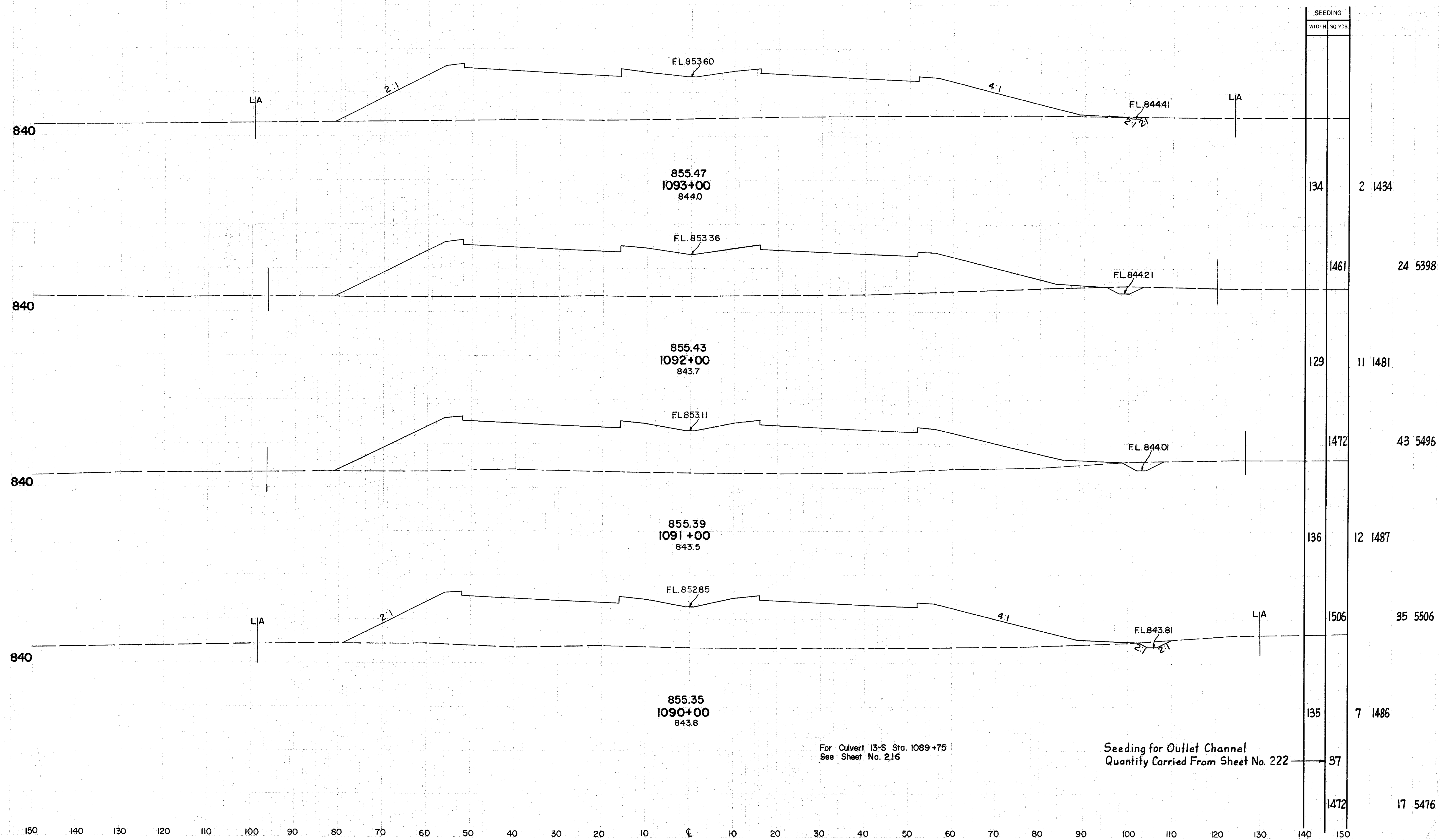
SEEDING	
WIDTH	SQ.YDS.
130	2 1471
731	4 2686
133	2 1430
767	7 2605
143	6 1383
1639	22 5198
152	6 1424
1711	56 5213
156	24 1391
1728	93 5356

ITEM NO. ESTIMATED QUANTITIES

I-1	12" Pipe, Class J-1	90 L.F.
I-8	Std. No. 8 Catch Basin	1 Ea.
I-2	Masonry	0.2 C.Y.
I-10	Dumped Rock Channel Protection	5.7 C.Y.
E-3	Channel Excavation	2 C.Y.

(Quantities Carried to Sheet No. 47)

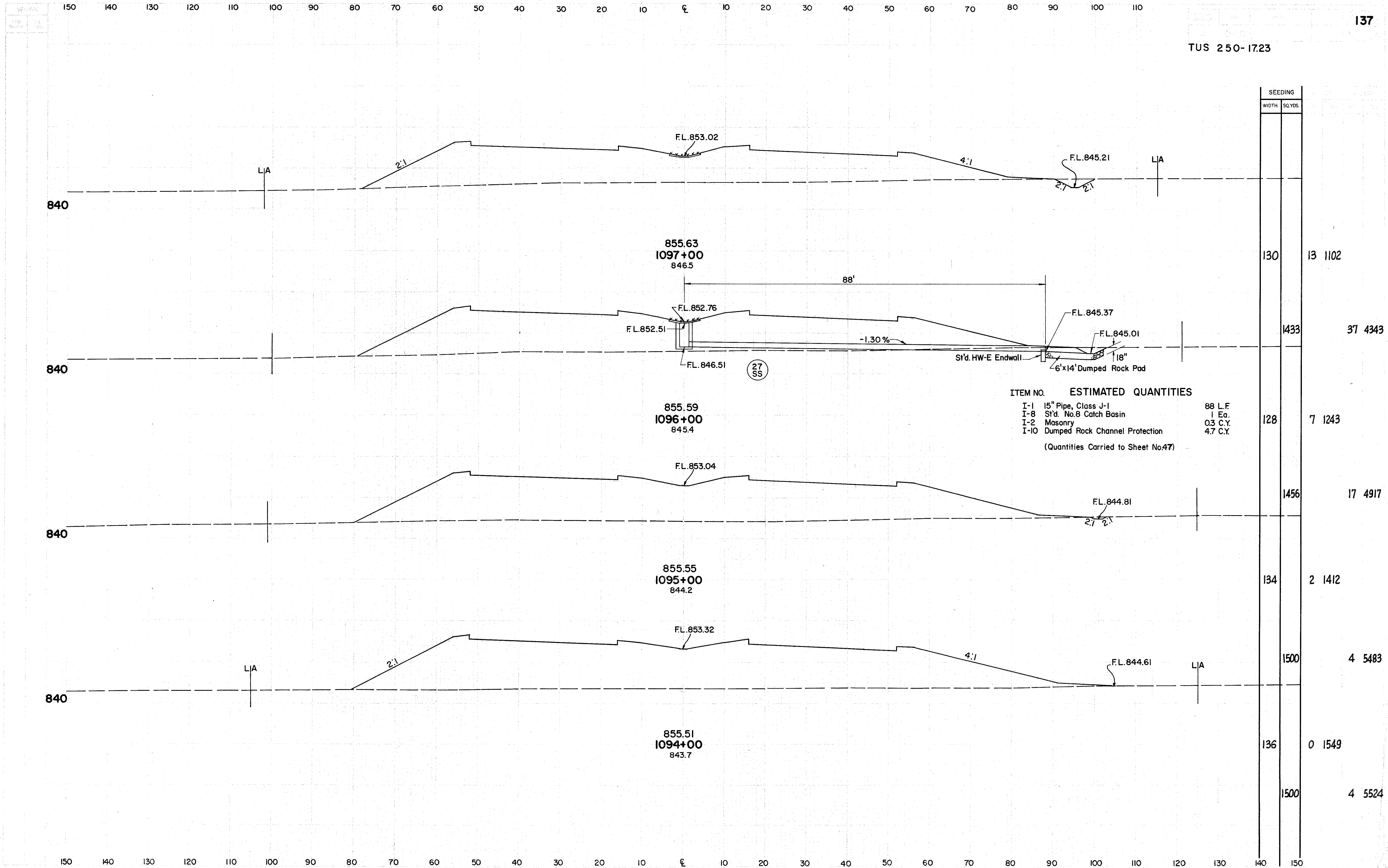
TUS 250-1723

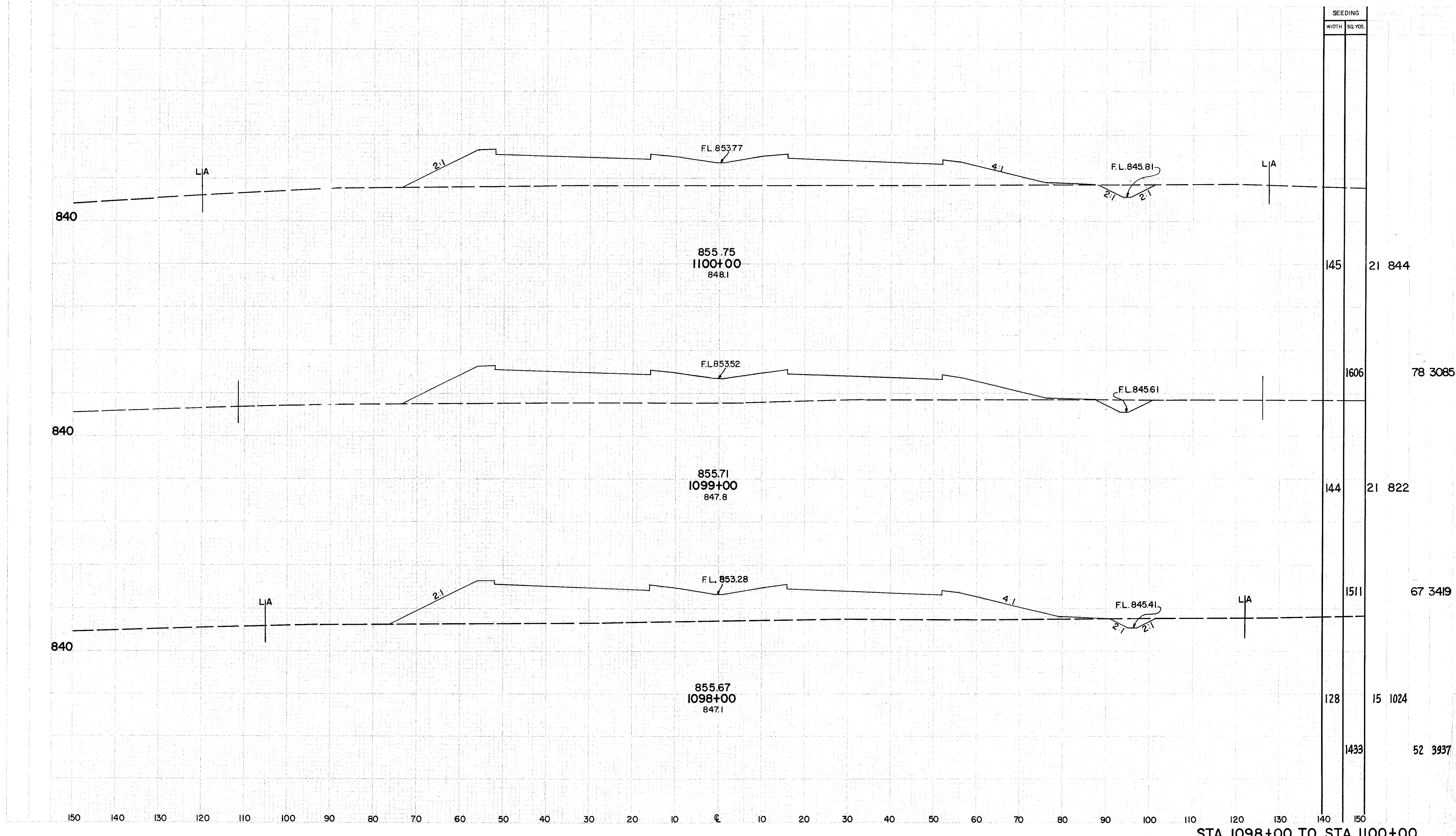


For Culvert 13-S Sta. 1089+75
See Sheet No. 216

Seeding for Outlet Channel
Quantity Carried From Sheet No. 222

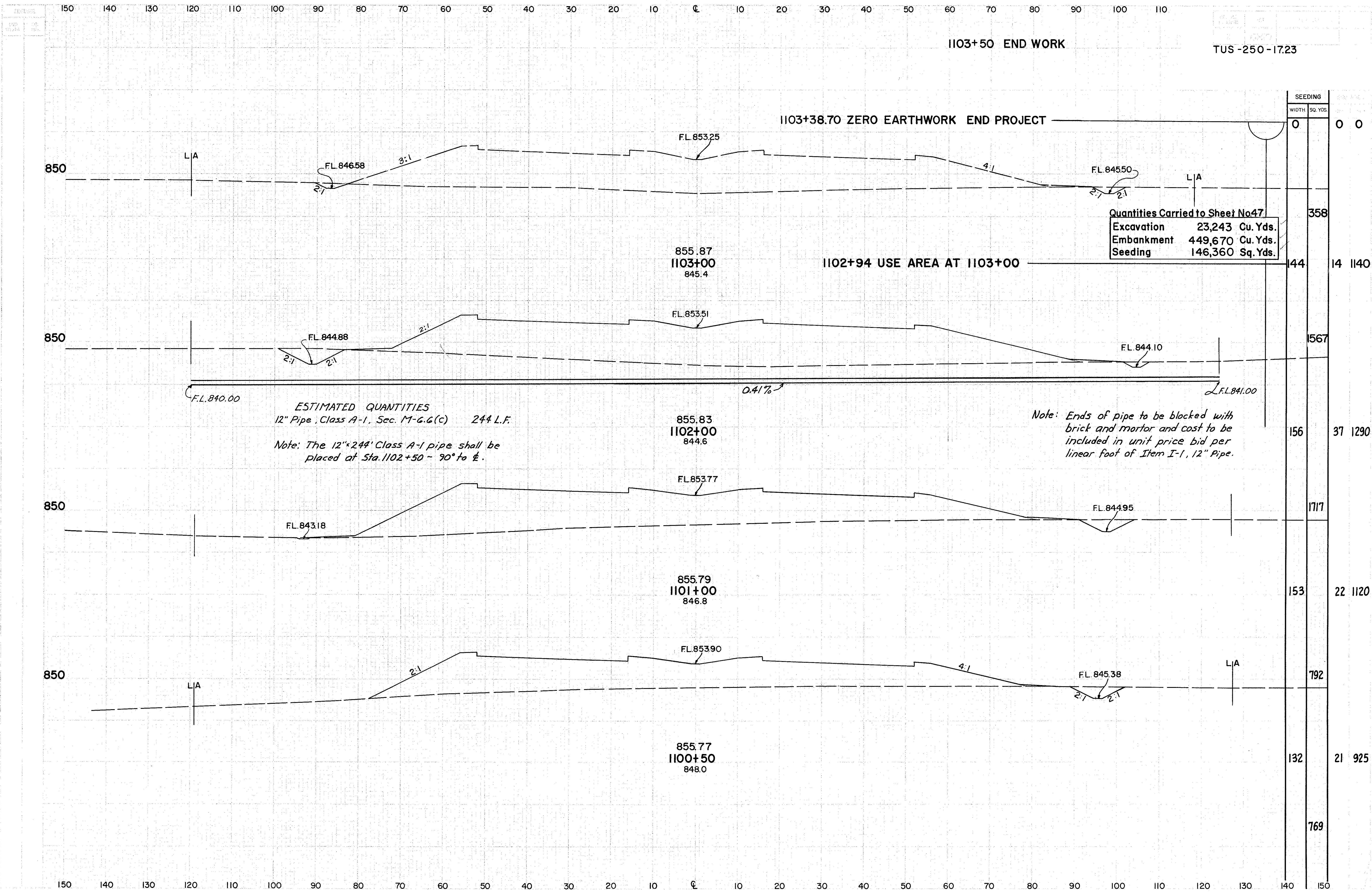
STA 1090+00 TO STA 1093+00



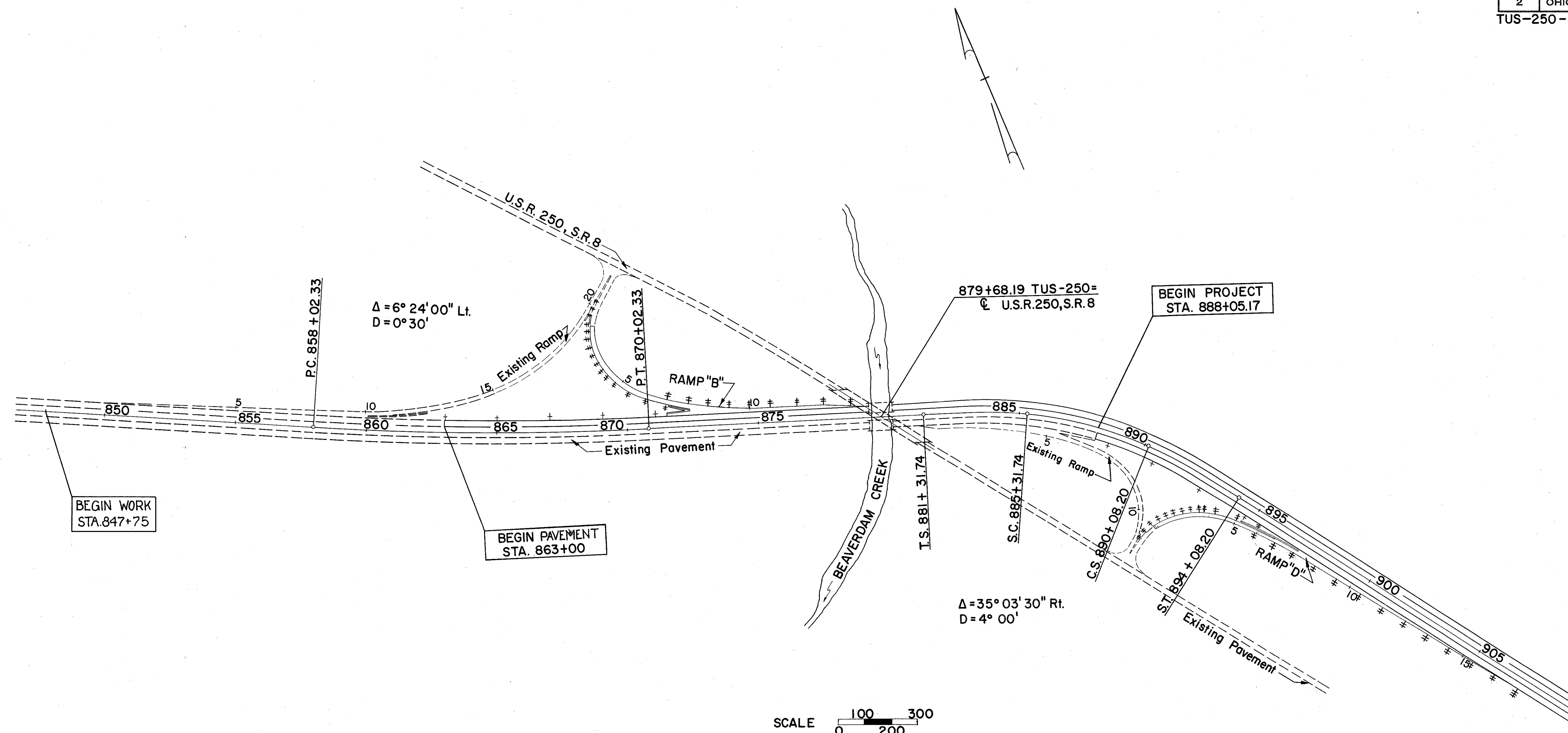


1103+50 END WORK

TUS -250 -17.23

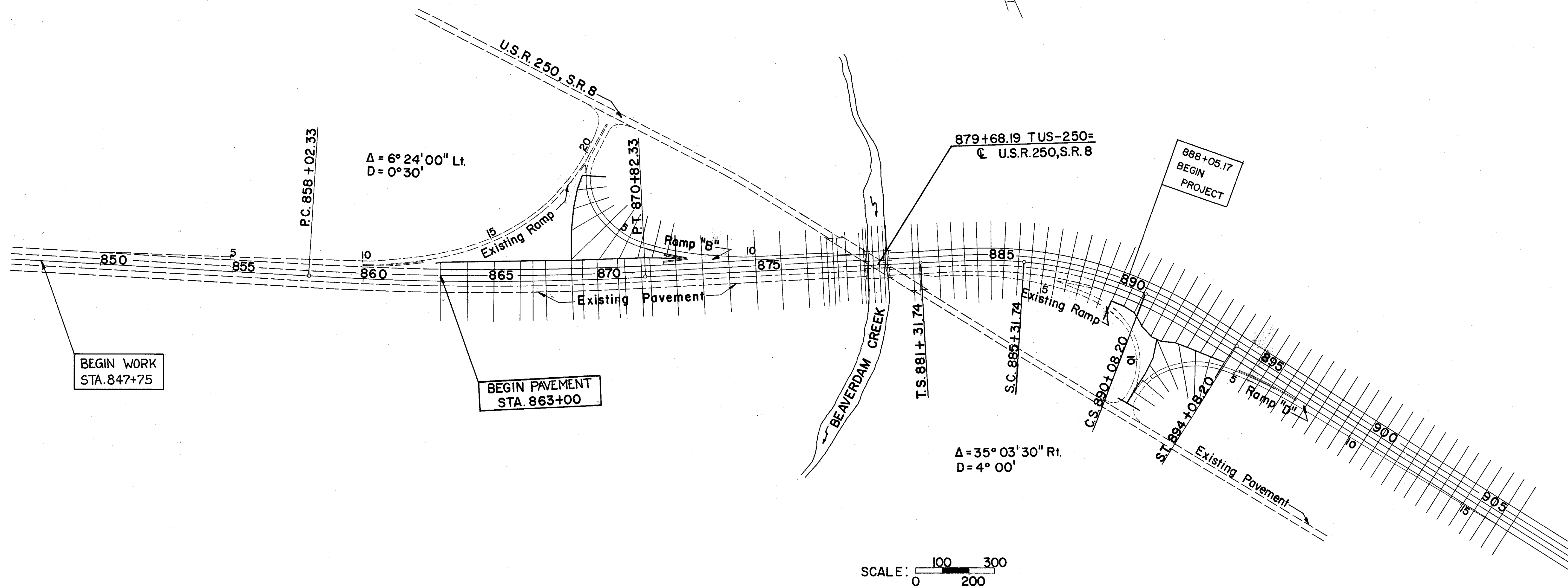


STA. 1100+50 TO STA. 1103+00



DELINEATOR INDEX
+ Type A1
≠ Type C2
≠ Type C3

Number of various type delineators are carried
on Sheet No. 21



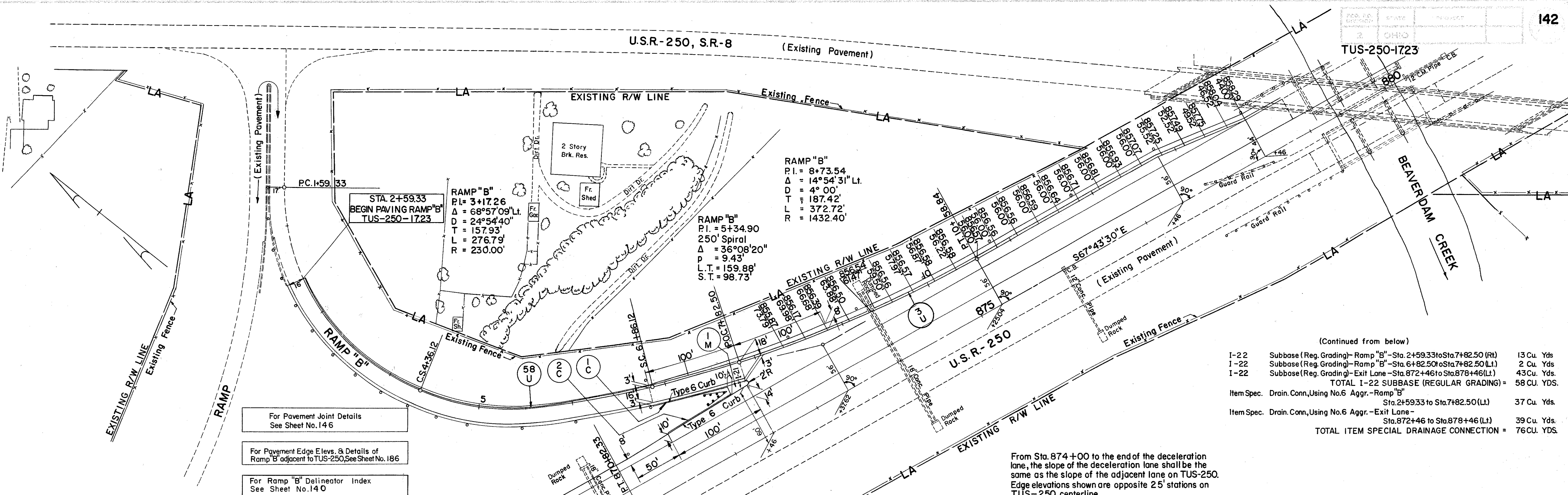
For Ramp B Cross Sections See Sheet No. 143
For Ramp D Cross Sections See Sheet No. 145

CROSS SECTION LAYOUT

INTERCHANGE AT U.S.R. 250, S.R. 8 STA. 879+68.19

U.S.R-250, S.R-8 (Existing Pavement)

TUS-250-1723



For Pavement Joint Details
See Sheet No. 146

For Pavement Edge Elevs. & Details of
Ramp 'B' adjacent to TUS-250, See Sheet No. 186

For Ramp 'B' Delineator Index
See Sheet No. 140

*Quantities Carried to Sheet No. 22, 23, 24, 25

ESTIMATED QUANTITIES			I-1		I-5		I-12		I-21					
REF. NO.	STATION TO STATION	SIDE	CLASS F-4 M-6.4(c) 8"	CLASS I-3 6"	CLASS I-3 6" SPEC. 90° BEND	CLASS I-3 6" SPEC.	CONCRETE CURB STD. TYPE	SEE SHEET NO.	REF. NO.	STATION TO STATION	SIDE	CONC. MED. PAVT. TYPE-I	SEE SHEET NO.	
			L.F.	L.F.	EA.	EA.	6					L.F.		S.Y.
1-C	6+82.50 - 7+61.50	RT.					79		I-M	872+25	LT.	21		
2-C	6+82.50 - 7+61.50	RT.					79							
58-U	2+59 - 9+29	LT.	10	676		1								
3-U	9+39 - 10+21	LT.	10	91										
*TOTALS			20	767		2	158			*TOTALS		21		

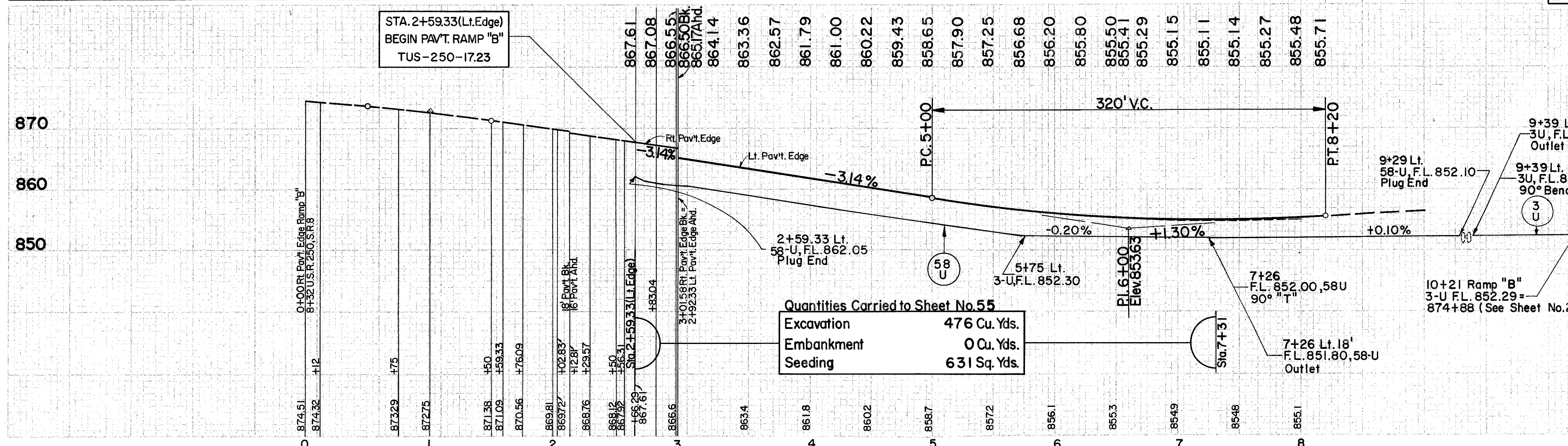
NOTE:
Profile grade jumped radially from right pav't. edge to left pav't. edge at station 2+92.33 (full super) to allow smooth edge adjacent to divisor through super transition. The odd stations and corresponding grades shown on the profile are radially opposite even 25' stations on the left pav't. edge as shown in the pav't. edge tabulation.

Left Edge Pav't. Elev.	Station	Right Edge Pav't. Elev.	Station
866.45	2+59.33	867.61	2+59.33
865.84	2+75	867.08	2+75
865.17	2+92.33	866.50	2+92.33
864.93	3+00	866.26	3+00
864.14	3+25	865.47	3+25
863.36	3+50	864.69	3+50
862.57	3+75	863.90	3+75
861.79	4+00	863.12	4+00
861.00	4+25	862.33	4+25
860.22	4+50	861.53	4+50
859.43	4+75	860.72	4+75
858.65	5+00	859.92	5+00
857.90	5+25	859.14	5+25
857.25	5+50	858.47	5+50
856.68	5+75	857.87	5+75
856.20	6+00	857.37	6+00
855.80	6+25	856.94	6+25
855.29	6+50	856.62	6+50
855.23	6+75	856.38	6+75
855.21	7+00	856.30	7+00
855.15	7+25	856.24	7+25
855.11	7+50	856.21	7+50
855.14	7+75	856.16	7+75
855.27	8+00	856.10	8+00
855.48	8+25	856.04	8+25
855.78	8+50	855.98	8+50
855.87	8+75	855.91	8+75

QUANTITIES TO PAVEMENT CALCULATIONS

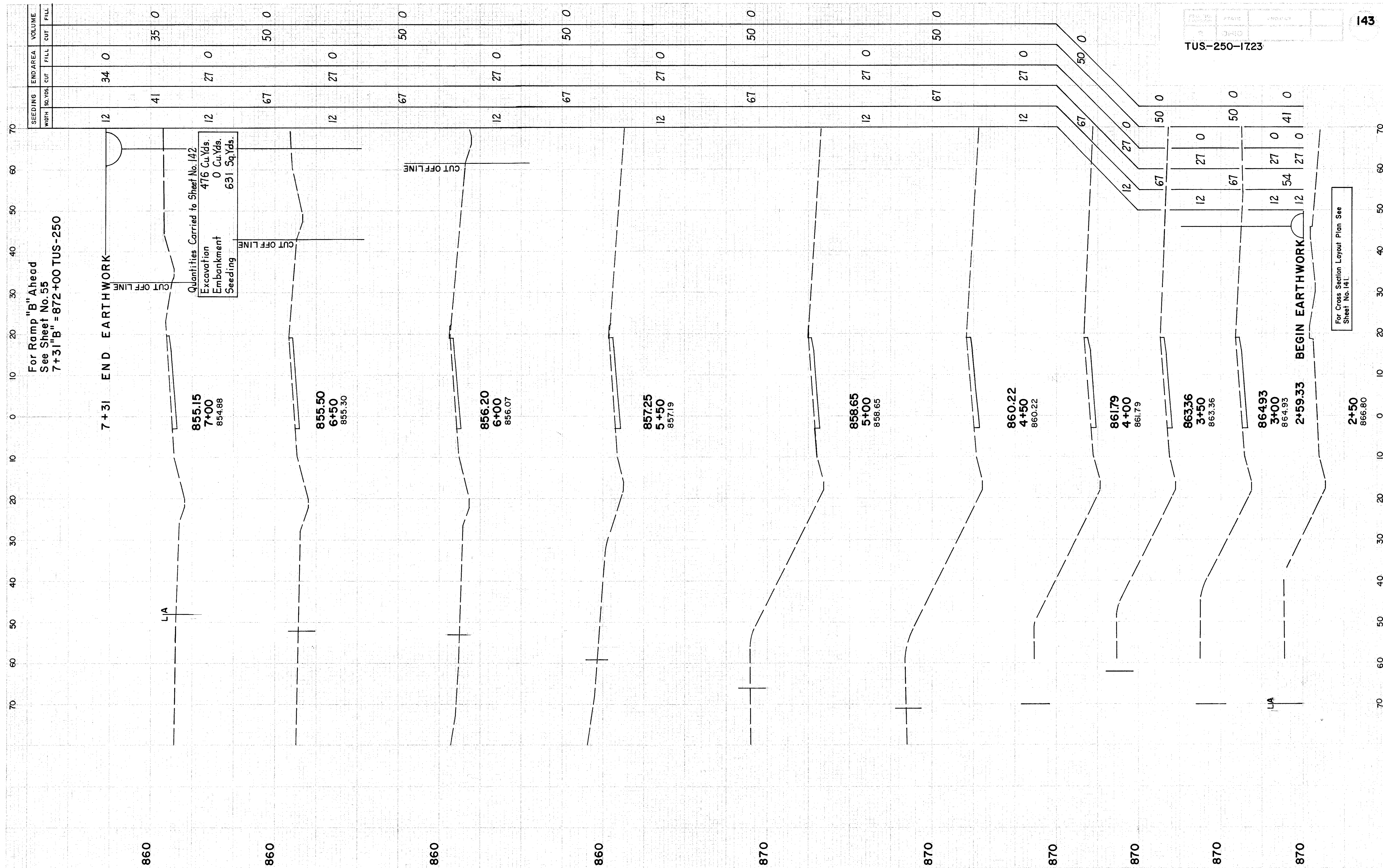
T-71	Sta. 2+59.33 to Sta. 7+82.50 (Ramp "B")	941 Sq. Yds.
T-71	Sta. 871+46 to Sta. 872+46 Lt. (Escape Lane)	133 Sq. Yds.
T-71	Sta. 872+46 to Sta. 878.46 (Exit Lane)	1017 Sq. Yds.
T-71	Sta. 878+29.33 to Sta. 878+46 Lt. (Wedge)	2 Sq. Yds.
TOTAL T-71=209350. YDS.		
T-31	Aggregate - Ramp "B"	3 Cu. Yds.
T-31	Aggregate - Exit Lane	4 Cu. Yds.
TOTAL T-31 AGGREGATE =		7 Cu. Yds.
T-31	Bituminous Material - Ramp "B"	91 Gal.
T-31	Bituminous Material - Exit Lane	129 Gal.
TOTAL T-31 BITUMINOUS MATERIAL =		220 GAL.
B-21	Waterproofed Aggr. Base Course - Ramp "B"	31 Cu. Yds.
B-21	Waterproofed Aggr. Base Course - Ramp "B"	29 Cu. Yds.
B-21	Waterproofed Aggr. Base Course - Exit Lane	86 Cu. Yds.
TOTAL B-21 =		146 Cu. Yds.
B-19	Aggr. Base Course Ramp "B" Sta. 6+82.50 to Sta. 7+82.50 (Lt.)	1 Cu. Yds.
B-19	Aggr. Base Course Ramp "B" Sta. 2+59.33 to Sta. 7+82.50 (Rt.)	15 Cu. Yds.
B-19	Aggr. Base Course Exit Lane Sta. 872+46 to Sta. 878+46 (Lt.)	29 Cu. Yds.
TOTAL B-19 =		45 Cu. Yds.
I-22	Subbase (Grading Aor B) - Ramp "B" (Under Pav't.)	157 Cu. Yds.
I-22	Subbase (Grading Aor B) - Ramp "B" (Under Lt. Shoulder)	43 Cu. Yds.
I-22	Subbase (Grading Aor B) - Ramp "B" (Under Rt. Shoulder)	9 Cu. Yds.
I-22	Subbase (Grading Aor B) - Exit Lane (Under Pav't.)	212 Cu. Yds.
I-22	Subbase (Grading Aor B) - Exit Lane (Under Shoulder)	47 Cu. Yds.
I-22	Subbase (Grading Aor B) - Escape Lane - Sta. 871+46 to Sta. 872+46 Lt.	28 Cu. Yds.
TOTAL I-22 SUBBASE (GRADING Aor B) =		496 CU. YDS.

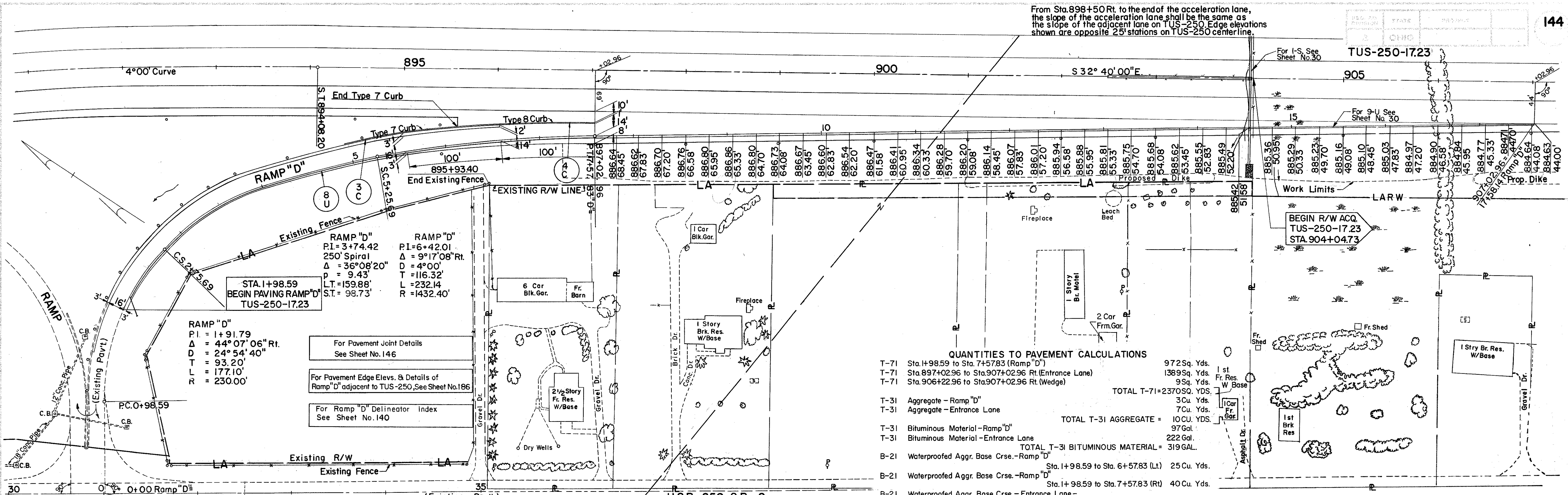
(Continued above)



Quantities Carried to Sheet No. 55
Excavation 476 Cu. Yds.
Embankment 0 Cu. Yds.
Seeding 631 Sq. Yds.

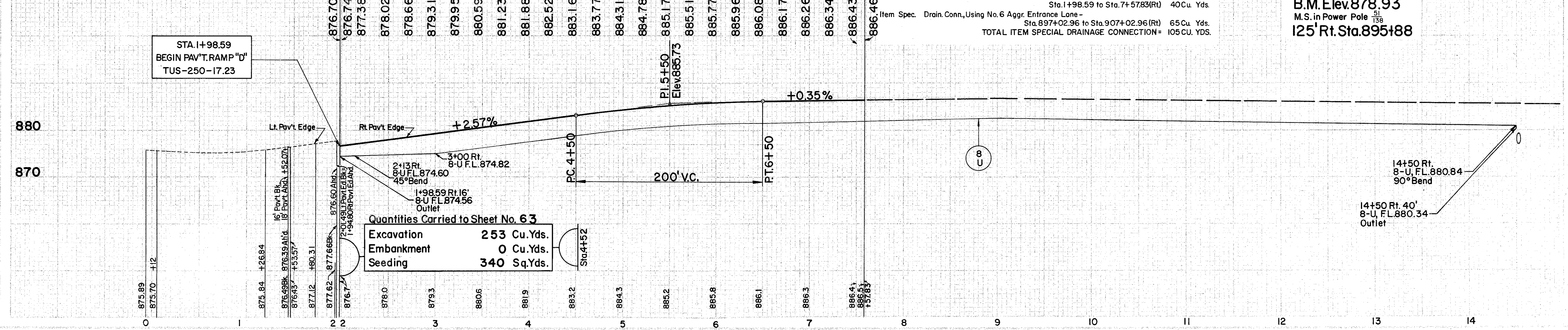
RAMP "B" AT U.S.R. 250, S.R. 8 INTERCHANGE





ESTIMATED QUANTITIES				I-1				I-5				I-12				SEE SHEET NO.			
REF. NO.	STATION TO STATION	SIDE		CLASS F-4 M-6.4(c) 8" L.F.	CLASS I-3 6" L.F.	CLASS I-3 6" SPEC. 45° BEND EA.	CLASS I-3 6" SPEC. 90° BEND EA.	CONCRETE CURB STD. TYPE	SEE SHEET NO.	REF. NO.	STATION TO STATION	SIDE		CONCRETE CURB STD. TYPE	SEE SHEET NO.	REF. NO.	STATION TO STATION	SIDE	
3-C	4+97 - 6+12	LT.						115											
4-C	6+12 - 7+58	LT.						146											
8-U	1+98.59 - 14+50	RT.		20	1275														
* TOTALS				20	1275		2	115	146	* TOTALS									

*Quantities Carried To Sheet Nos. 22, 23, 24, 25

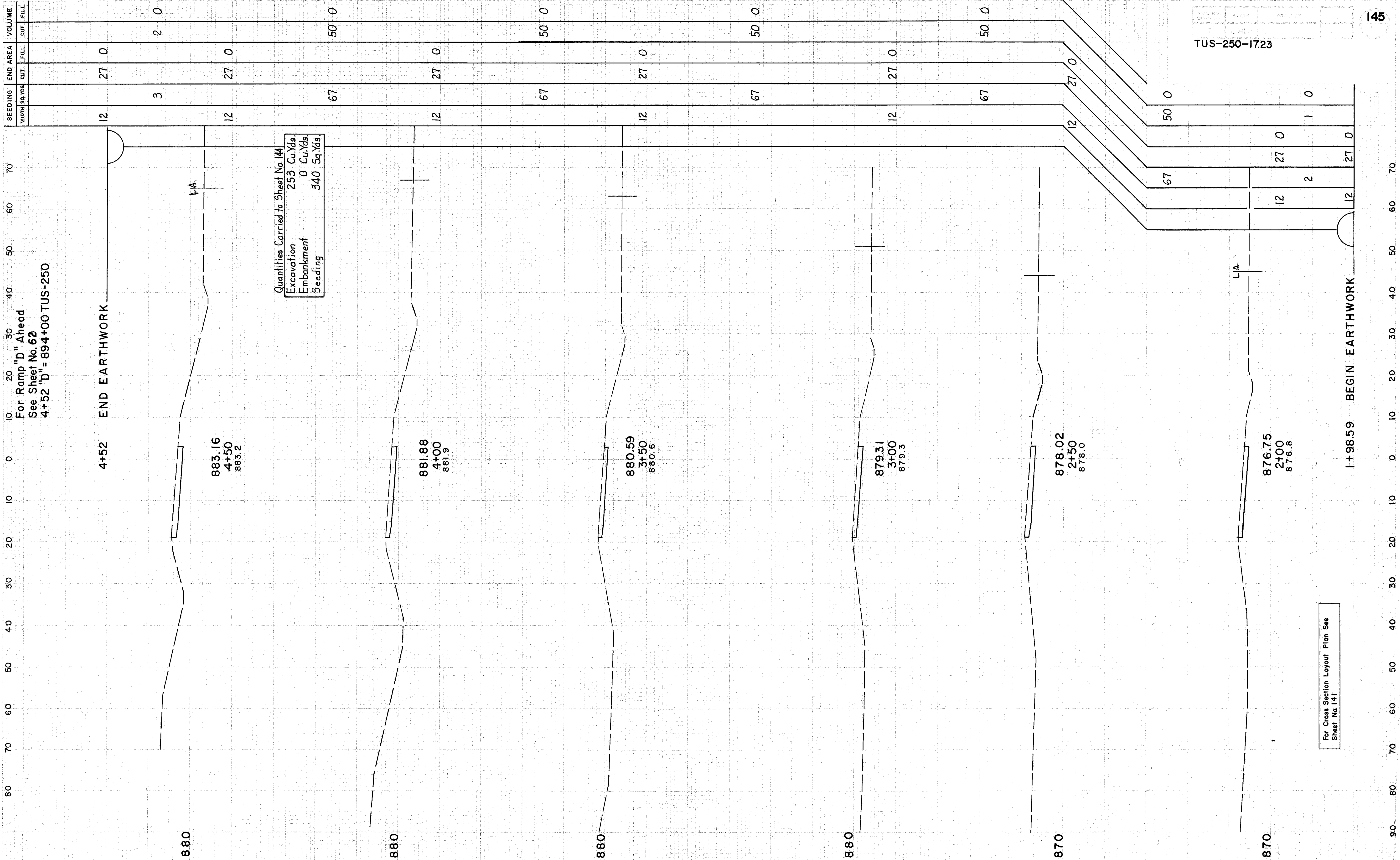


QUANTITIES TO PAVEMENT CALCULATIONS			
T-71	Sta. 1+98.59 to Sta. 7+57.83 (Ramp "D")	972 Sq. Yds.	
T-71	Sta. 897+02.96 to Sta. 907+02.96 Rt. (Entrance Lane)	1389 Sq. Yds.	
T-71	Sta. 906+22.96 to Sta. 907+02.96 Rt. (Wedge)	9 Sq. Yds.	
TOTAL T-71 = 2370 SQ. YDS.			
T-31	Aggregate - Ramp "D"	3 Cu. Yds.	
T-31	Aggregate - Entrance Lane	7 Cu. Yds.	
TOTAL T-31 AGGREGATE = 10 CU. YDS.			
T-31	Bituminous Material - Ramp "D"	97 Gal.	
T-31	Bituminous Material - Entrance Lane	222 Gal.	
TOTAL T-31 BITUMINOUS MATERIAL = 319 GAL.			
B-21	Waterproofed Aggr. Base Crse. - Ramp "D"	25 Cu. Yds.	
B-21	Waterproofed Aggr. Base Crse. - Ramp "D"	40 Cu. Yds.	
B-21	Waterproofed Aggr. Base Crse. - Entrance Lane	148 Cu. Yds.	
TOTAL B-21 = 213 CU. YDS.			
B-19	Aggr. Base Crse. Ramp "D" - Sta. 1+98.59 to Sta. 5+57.83 (Lt.)	12 Cu. Yds.	
B-19	Aggr. Base Crse. Ramp "D" - Sta. 5+57.83 to Sta. 7+57.83 (Rt.)	5 Cu. Yds.	
B-19	Aggr. Base Crse. Entrance Lane - Sta. 897+02.96 to Sta. 907+02.96 (Rt.)	50 Cu. Yds.	
TOTAL B-19 = 67 CU. YDS.			
I-22	Subbase (Grading A or B) - Ramp "D" (Under Pav't)	162 Cu. Yds.	
I-22	Subbase (Grading A or B) - Ramp "D" (Under Lt. Shoulder)	8 Cu. Yds.	
I-22	Subbase (Grading A or B) - Ramp "D" (Under Rt. Shoulder)	46 Cu. Yds.	
I-22	Subbase (Grading A or B) - Entrance Lane (Under Pav't)	289 Cu. Yds.	
I-22	Subbase (Grading A or B) - Entrance Lane (Under Shoulder)	78 Cu. Yds.	
TOTAL I-22 SUBBASE (GRADING A or B) = 583 CU. YDS.			
I-22	Subbase (Reg. Grad.) - Ramp "D" - Sta. 1+98.59 to Sta. 6+57.83 (Lt.)	11 Cu. Yds.	
I-22	Subbase (Reg. Grad.) - Ramp "D" - Sta. 5+57.83 to Sta. 7+57.83 (Rt.)	8 Cu. Yds.	
I-22	Subbase (Reg. Grad.) - Ent. Lane - Sta. 897+02.96 to Sta. 907+02.96 (Rt.)	75 Cu. Yds.	
TOTAL I-22 SUBBASE (REGULAR GRADING) = 94 CU. YDS.			
Item Spec.	Drain. Conn., Using No. 6 Aggr. Ramp "D"	40 Cu. Yds.	
Item Spec.	Drain. Conn., Using No. 6 Aggr. Entrance Lane	65 Cu. Yds.	
TOTAL ITEM SPECIAL DRAINAGE CONNECTION = 105 CU. YDS.			

B.M. Elev. 878.93
M.S. in Power Pole
125' Rt. Sta. 895+88

Quantities Carried to Sheet No. 63	
Excavation	253 Cu. Yds.
Embankment	0 Cu. Yds.
Seeding	340 Sq. Yds.

RAMP "D" AT U.S.R. 250, S.R. 8 INTERCHANGE

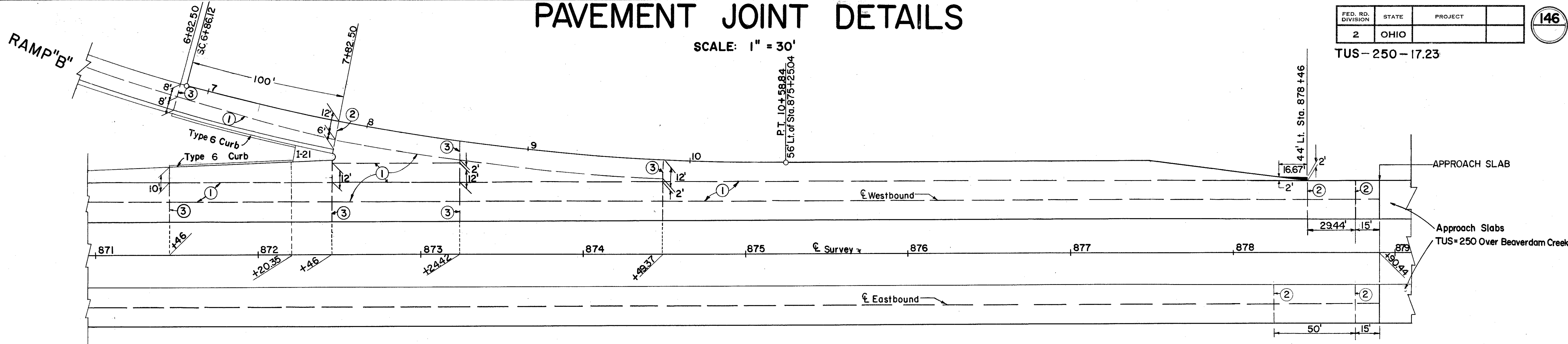


PAVEMENT JOINT DETAILS

SCALE: 1" = 30'

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

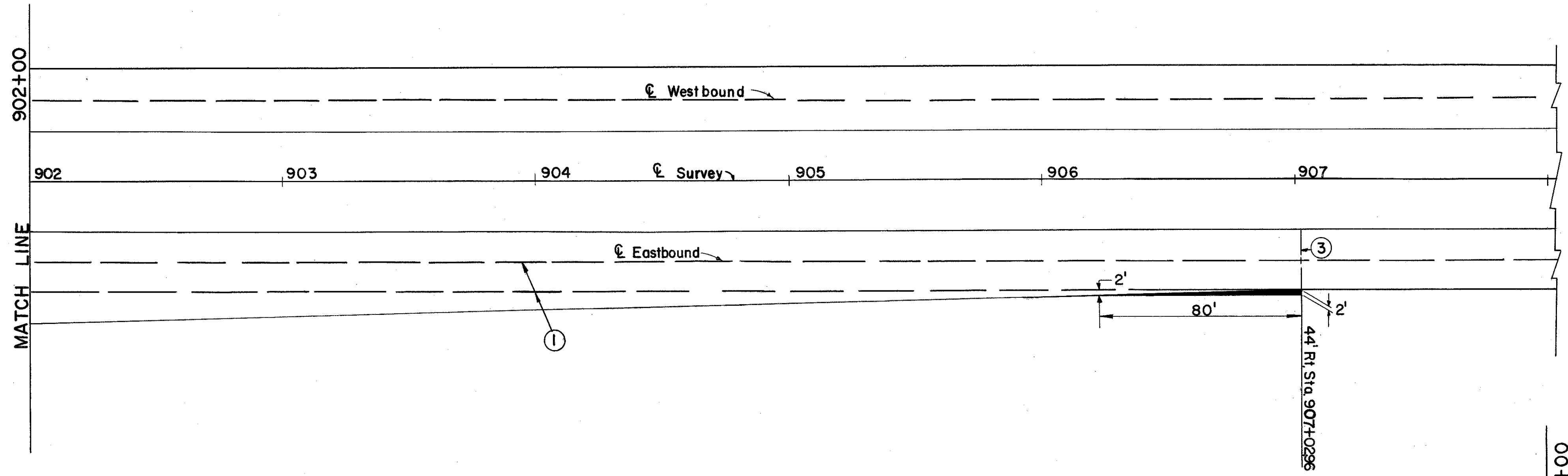
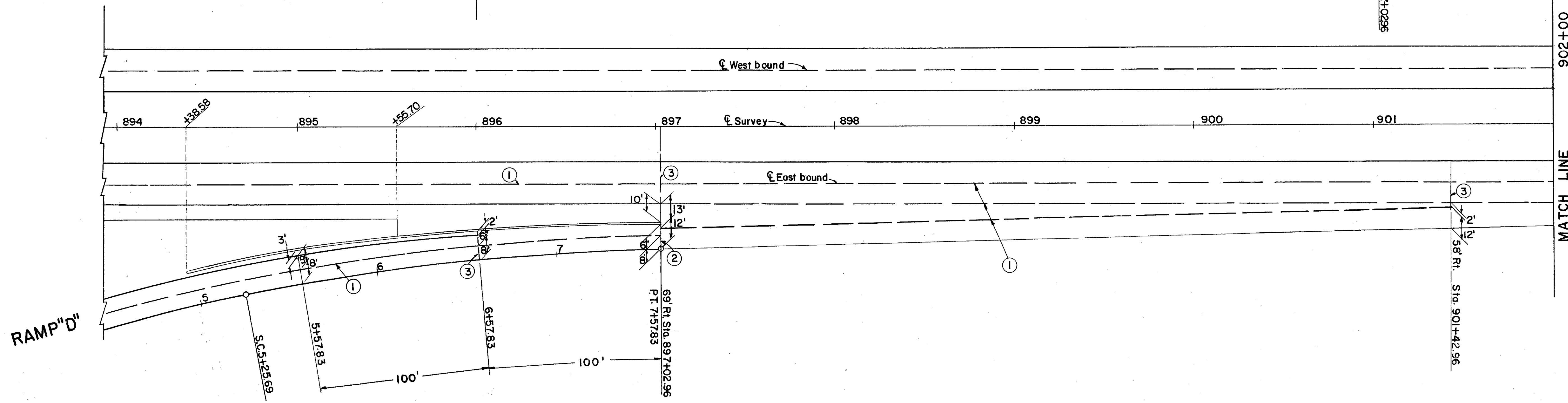
TUS-250-17.23

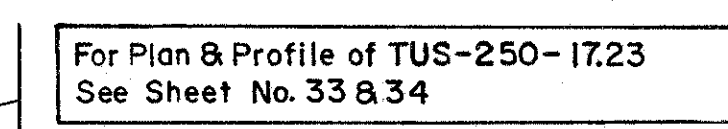
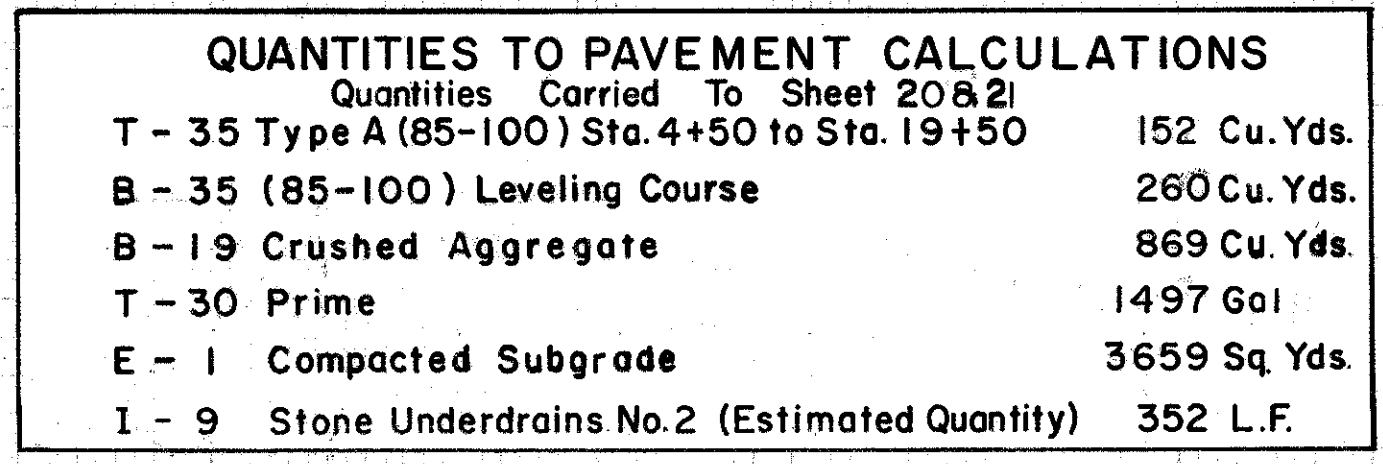


- LEGEND
- ① Standard Longitudinal Joint
 - ② Standard Expansion Joint
 - ③ Standard Contraction Joint

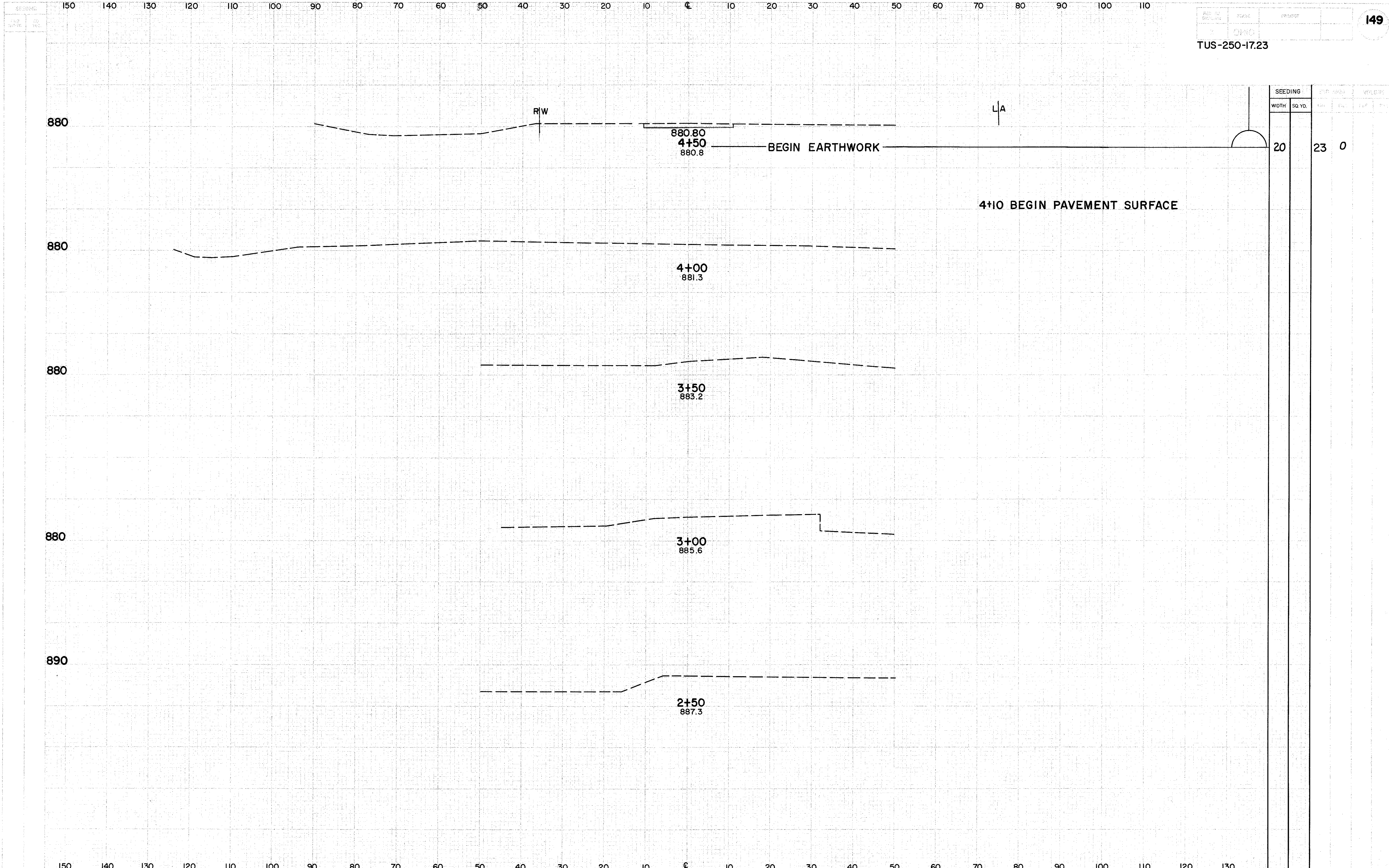
NOTE :

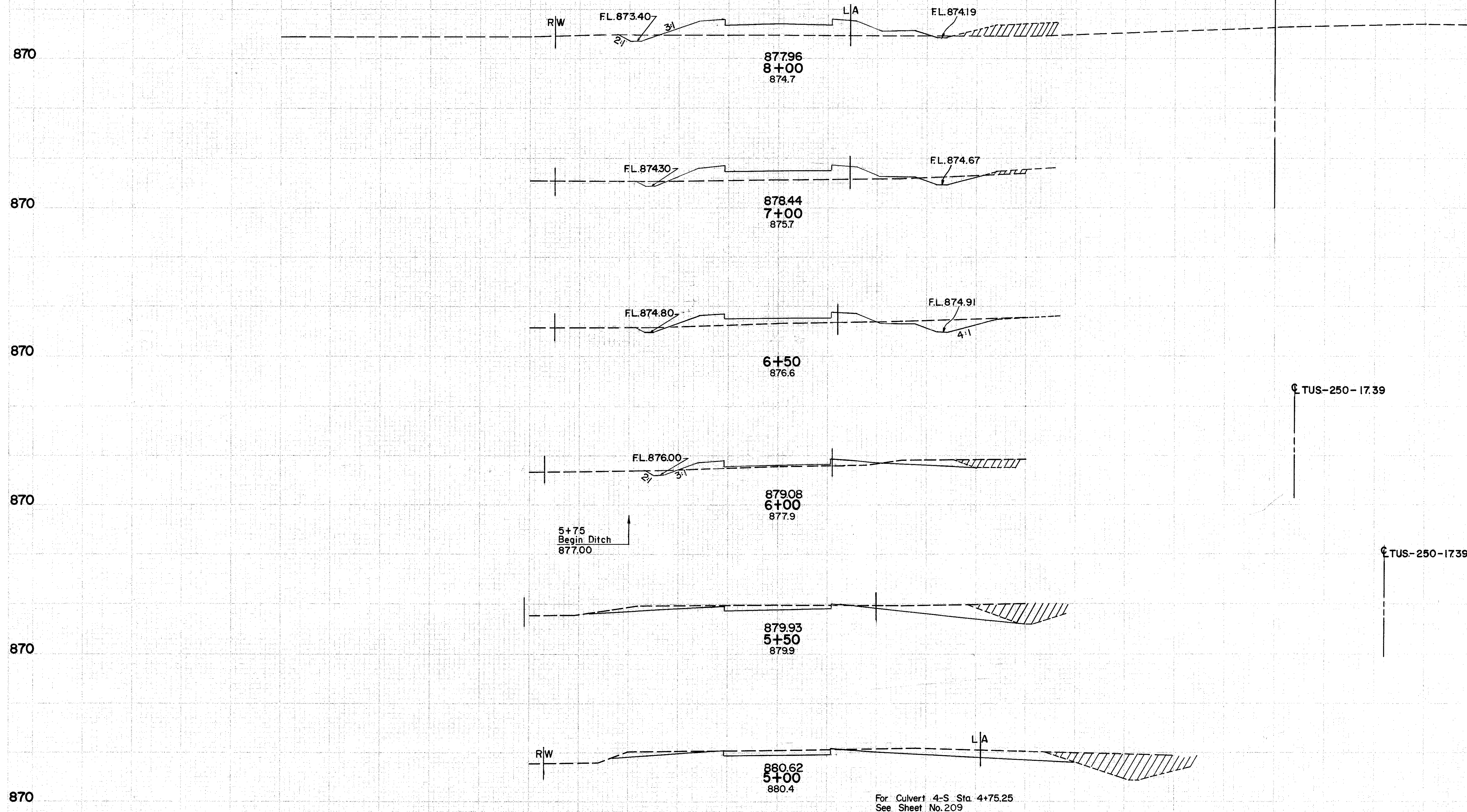
The shaded areas adjacent to TUS-250 shall be constructed of concrete pavement to an elevation 1/2" lower than the adjacent pavement and surfaced with T-31 using No.6 aggregate as the maximum size. The shaded area shall be paid for as full depth T-71 and the surface treatment shall be paid for as T-31.



PLAN & PROFILE MARGINAL ROAD STA. 2+00 TO STA. 13+00

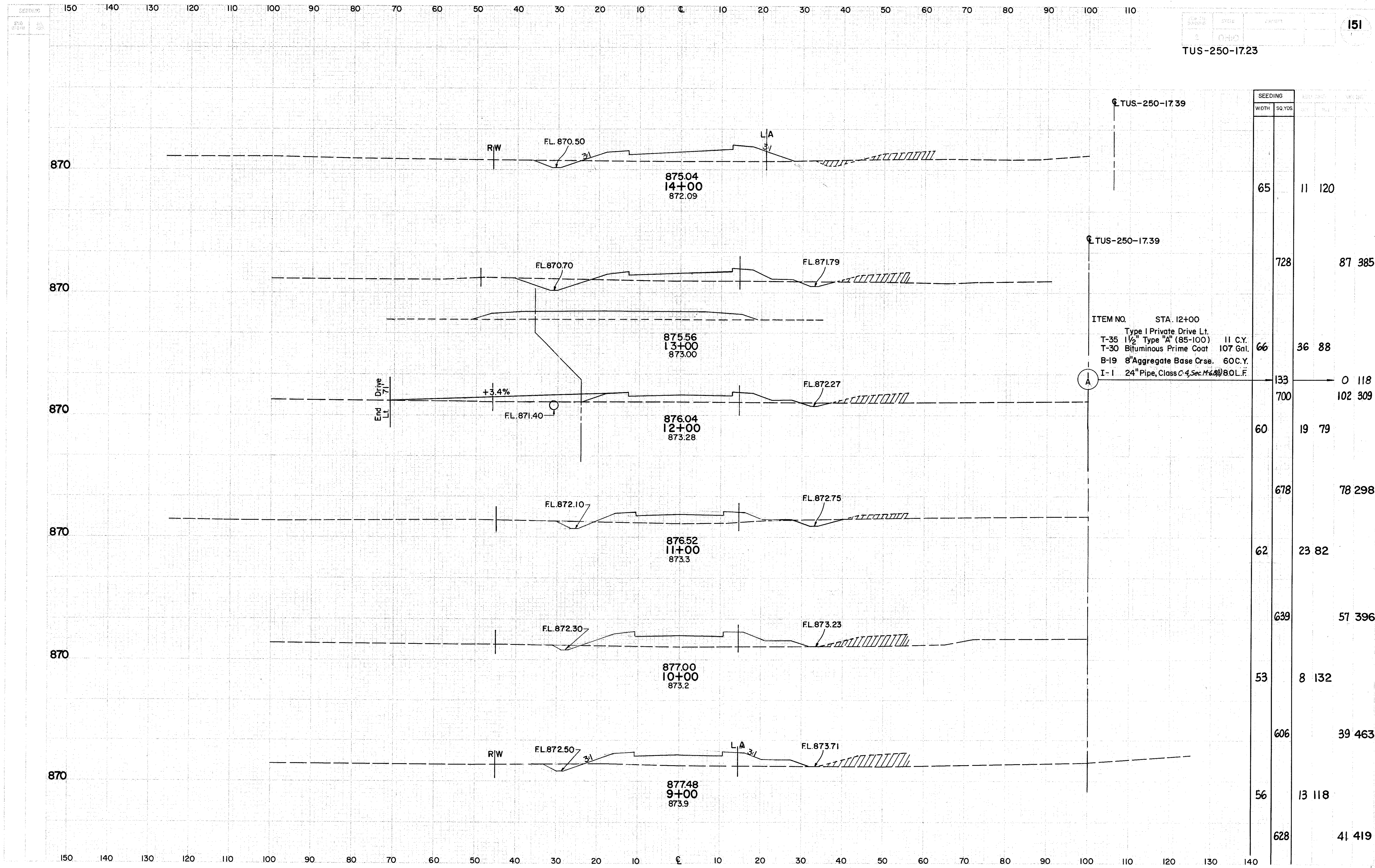
Quantities Carried to Sheet No. 76		
Excavation	1,603	Cu. Yds.
Embankment	3,713	Cu. Yds.
Seeding	10,892	Sq. Yds.





SEEDING		WIDTH		SQ.YDS	
57	9	108	650	48	348
60	17	80	339	46	124
62	33	54	325	49	66
55	20	17	344	94	16
69	81	0	411	158	0
79	90	0	275	105	0
160					

Seeding for Outlet Channel
Quantity Carried from Sheet No. 219
MARGINAL ROAD STA. 5+00 TO STA. 8+00

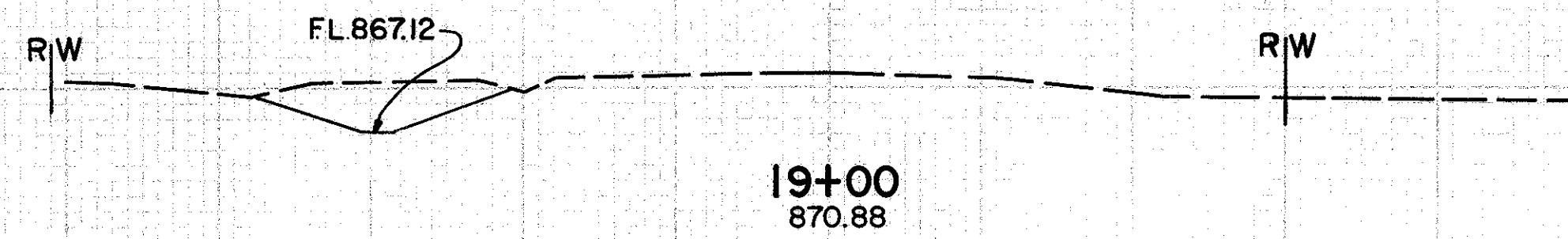


SEEDING		ITEM NO.		STA. 12+00	
WIDTH	SQ. YDS.				
65	11	120			
728					87 385
66	36	88			
133	0	118			
700	102	309			
60	19	79			
678					78 298
62	23	82			
639					57 396
53	8	132			
606					39 463
56	13	118			
628	41	419			

ITEM NO. STA. 12+00
Type I Private Drive Lt.
T-35 1 1/2" Type "A" (85-100) 11 C.Y.
T-30 Bituminous Prime Coat 107 Gal.
B-19 8" Aggregate Base Crse. 60 C.Y.
I-1 24" Pipe, Class C-4, Sec. M-6 (4) 80 L.F.

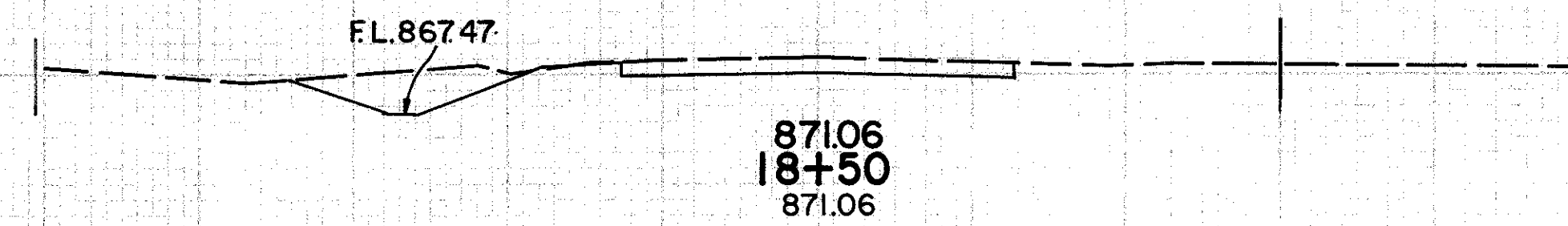
SEEDING 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

870

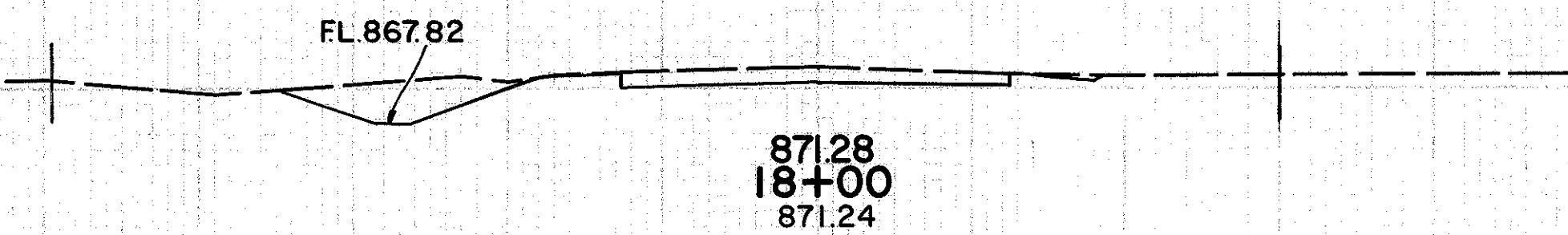


Seeding for Outlet Channel
Quantity Carried from Sheet No. 219 → 487

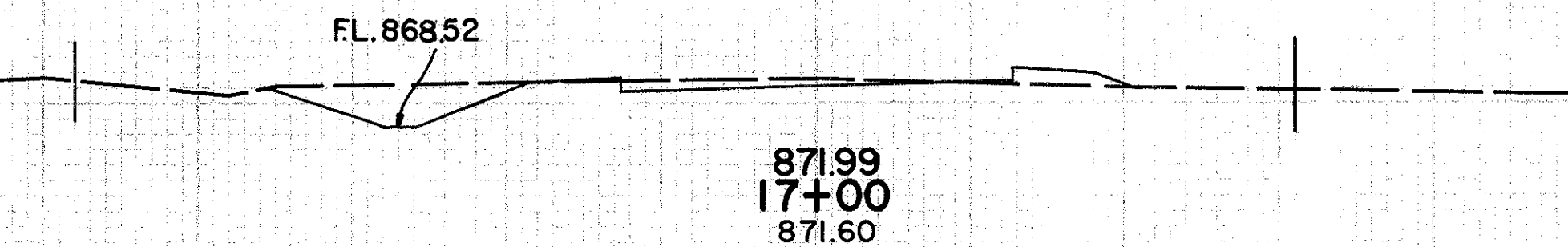
870



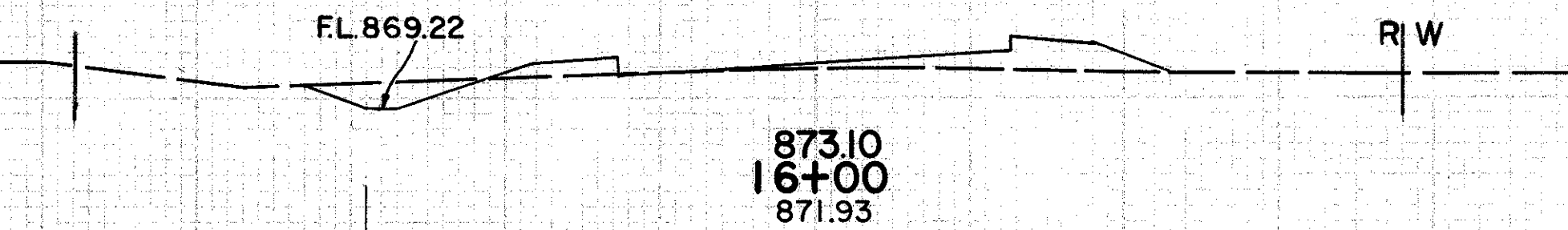
870



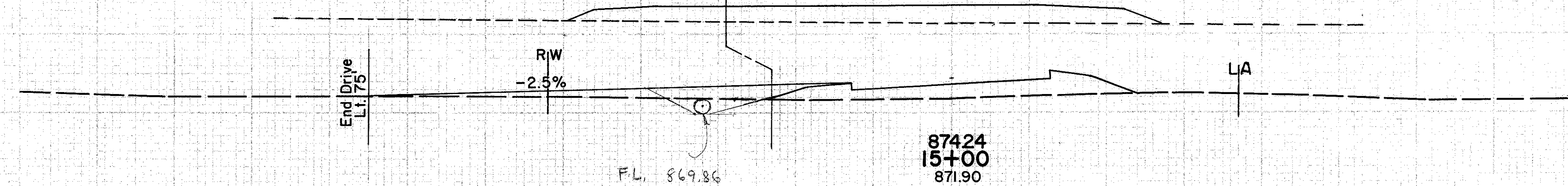
870



870



870



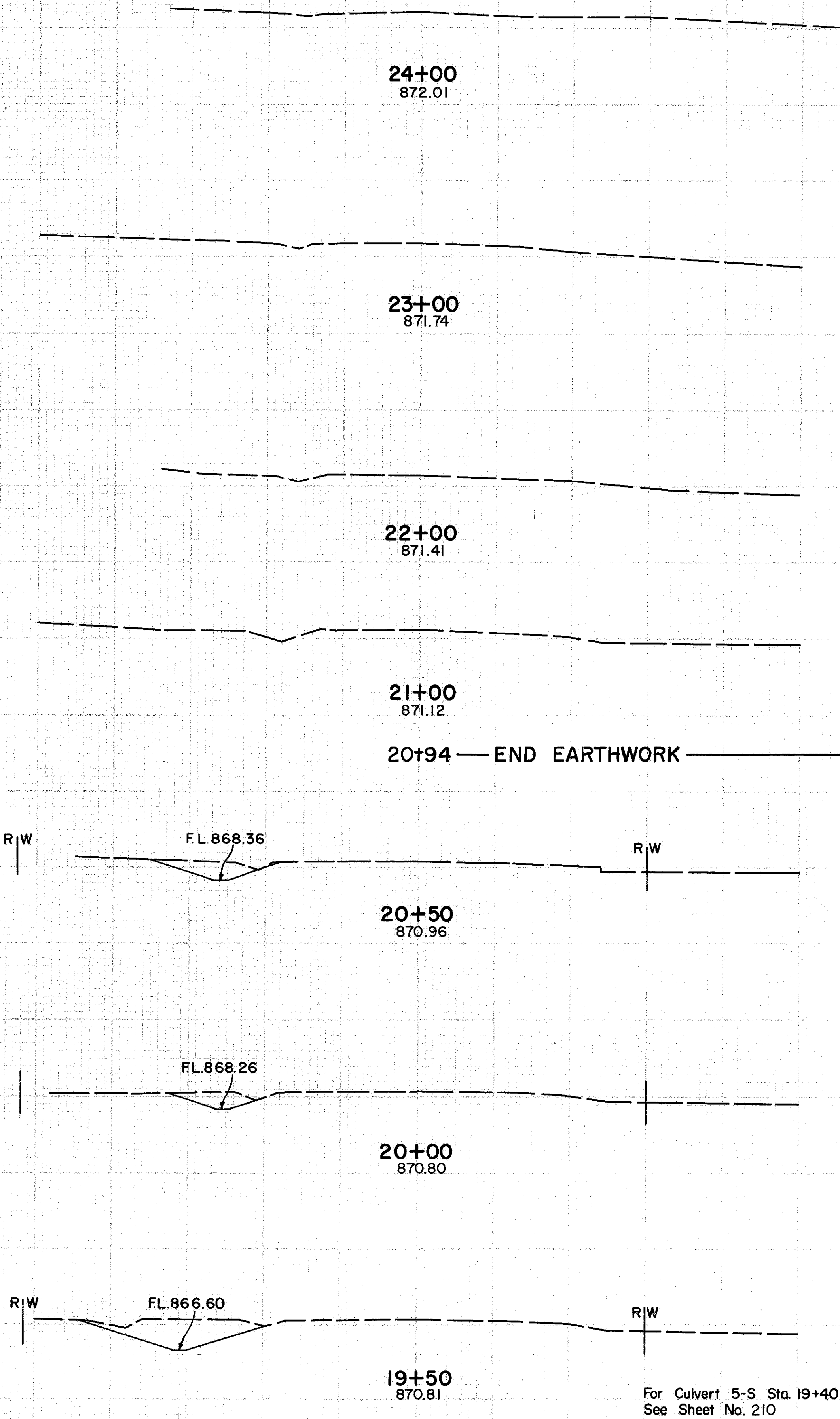
SEEDING			
WIDTH	SQ. YDS.		
36	34	0	
222	79	0	
44	51	0	
258	95	0	
49	52	0	
561	169	13	
52	39	7	
578	93	69	
52	11	30	
600	35	209	
140	0	104	
56	8	83	
672	35	376	

TUS-250-17.23

PAVT. EDGE ELEVATIONS

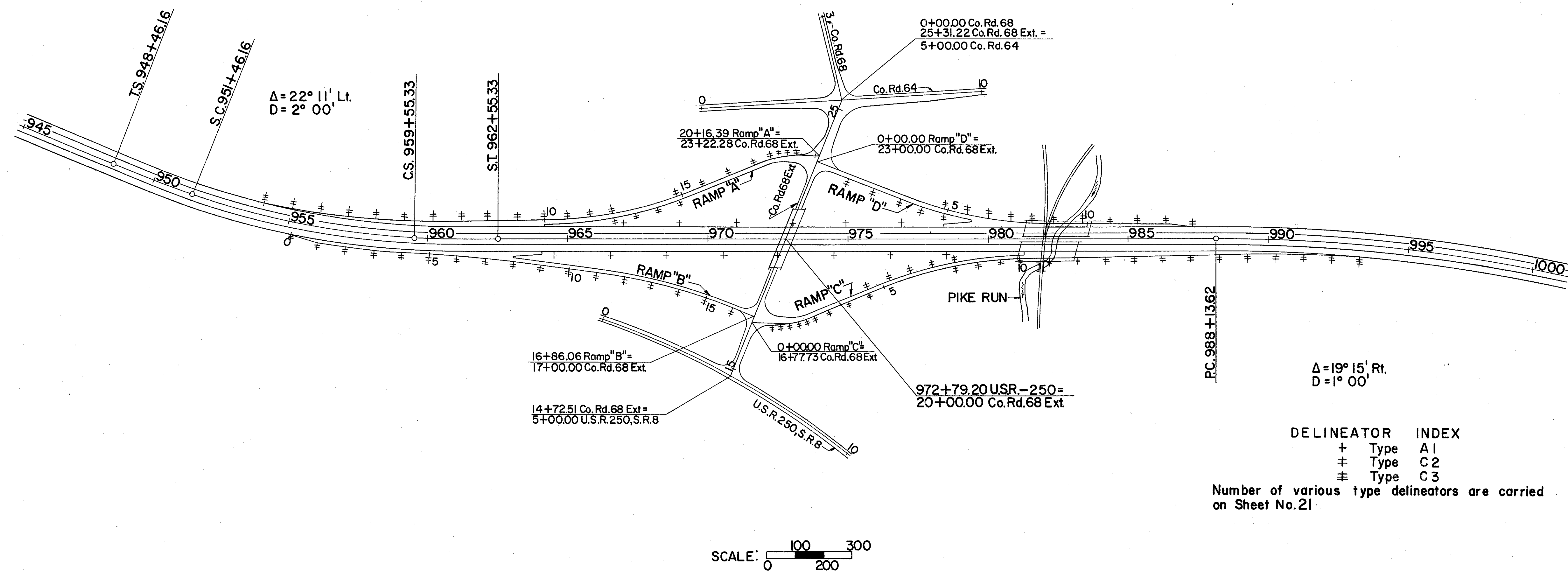
P.C. 3+65.26		D=20°-30' LT.		P.T. 6+40.87	
LEFT				RIGHT	
EDGE PAV. GRADE	DEDUCT CROWN	20' PAV. STATION	PROFILE GRADE	ADD SUPER	EDGE PAV. GRADE
880.78	-0.02	4+50	880.80		880.64
880.72	-0.02	4+58	880.80		880.62
880.75	-0.02	4+75	880.77	+0.03	880.80
880.52	-0.10	5+00	880.62	+0.56	881.18
880.39	-0.14	5+08	880.53	+0.63	881.16
880.19	-0.15	5+25	880.34	+0.70	881.04
879.78		5+50	879.93	+0.67	880.60
879.63		5+58	879.78	+0.67	880.45
879.31		5+75	879.46	+0.65	880.11
879.13		5+85.87	879.28	+0.60	879.88
878.93		6+00	879.08	+0.53	879.61
878.68		6+25	878.83	+0.41	879.24
878.57		6+40.87	878.72	+0.33	879.05
878.57		6+42	878.72	+0.33	879.05
878.53		6+50	878.68	+0.28	878.96
878.43		6+71.24	878.58	+0.15	878.73
878.41		6+75	878.56	+0.10	878.66
878.31		6+95.87	878.46	-0.00	878.46
878.29		7+00	878.44	-0.01	878.43
878.17		7+25	878.32	-0.06	878.26
878.05		7+50	878.20	-0.11	878.09
877.95	-0.15	7+71.87	878.10	-0.15	877.95

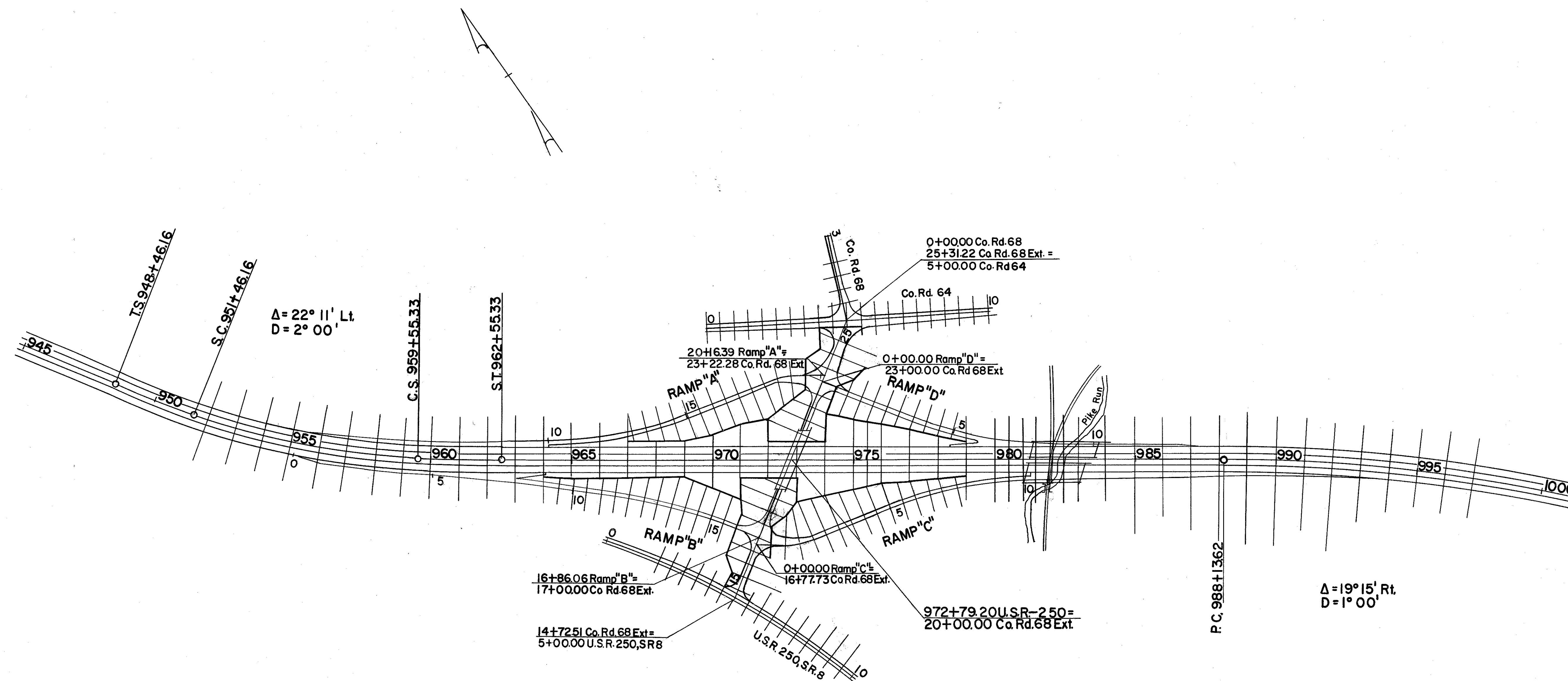
P.C. 13+05.14		D=6°-00' LT.		P.T. 17+20.70	
LEFT				RIGHT	
EDGE PAV. GRADE	DEDUCT CROWN	24' PAV. STATION	PROFILE GRADE	ADD SUPER	EDGE PAV. GRADE
876.05	-0.19	11+58.14	876.24	-0.19	876.05
875.97		11+75.00	876.16	-0.15	876.01
875.85		12+00.00	876.04	-0.09	875.95
875.73		12+25.00	875.92	-0.02	875.90
875.69		12+34.14	875.88	-0.00	875.88
875.61		12+50.00	875.80	+0.09	875.89
875.53		12+67.45	875.72	+0.19	875.91
875.49		12+75.00	875.68	+0.23	875.91
875.37		13+00.00	875.56	+0.38	875.94
875.35		13+05.14	875.54	+0.40	875.94
875.25		13+25.00	875.44	+0.52	875.96
875.13		13+50.00	875.32	+0.66	875.98
875.00		13+75.00	875.19	+0.80	875.99
875.00		13+76.14	875.19	+0.81	876.00
874.85		14+00.00	875.04		875.85
874.68		14+25.00	874.87		875.68
874.49		14+50.00	874.68		875.49
874.27		14+75.00	874.46		875.27
874.05		15+00.00	874.24		875.05
873.79		15+25.00	873.98		874.79
873.52		15+50.00	873.71		874.52
873.22		15+75.00	873.41		874.22
872.89		16+00.00	873.10		874.91
872.60		16+25.00	872.79		873.60
872.32		16+49.70	872.51	+0.81	873.32
872.31		16+50.00	872.50	+0.81	873.31
872.05		16+75.00	872.24	+0.67	872.91
871.81		17+00.00	872.00	+0.52	872.52
871.63		17+20.70	871.82	+0.40	872.22
871.60		17+25.00	871.79	+0.38	872.17
871.42		17+50.00	871.61	+0.24	871.85
871.34		17+58.39	871.53	+0.19	871.72
871.25		17+75.00	871.44	+0.10	871.54
871.14		17+91.70	871.33	+0.00	871.33
871.12		18+00.00	871.31	-0.02	871.29
871.00		18+25.00	871.19	-0.08	871.11
870.92		18+50.00	871.11	-0.15	870.96
870.87	-0.19	18+67.70	871.06	-0.19	871.87



Quantities Carried to Sheet No. 147		
Excavation	1,603	Cu.Yds.
Embankment	3,713	Cu.Yds.
Seeding	10,892	Sq.Yds.

SEEDING		WIDTH	SQ. YDS.
WIDTH	SQ. YDS.		
33	0	0	
161	16	0	
33	20	0	
175	32	0	
30	15	0	
203	64	0	
43	54	0	
219	81	0	

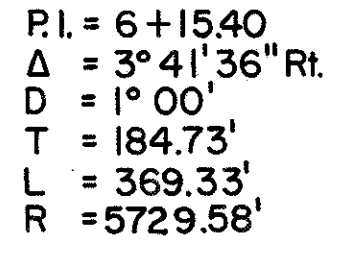




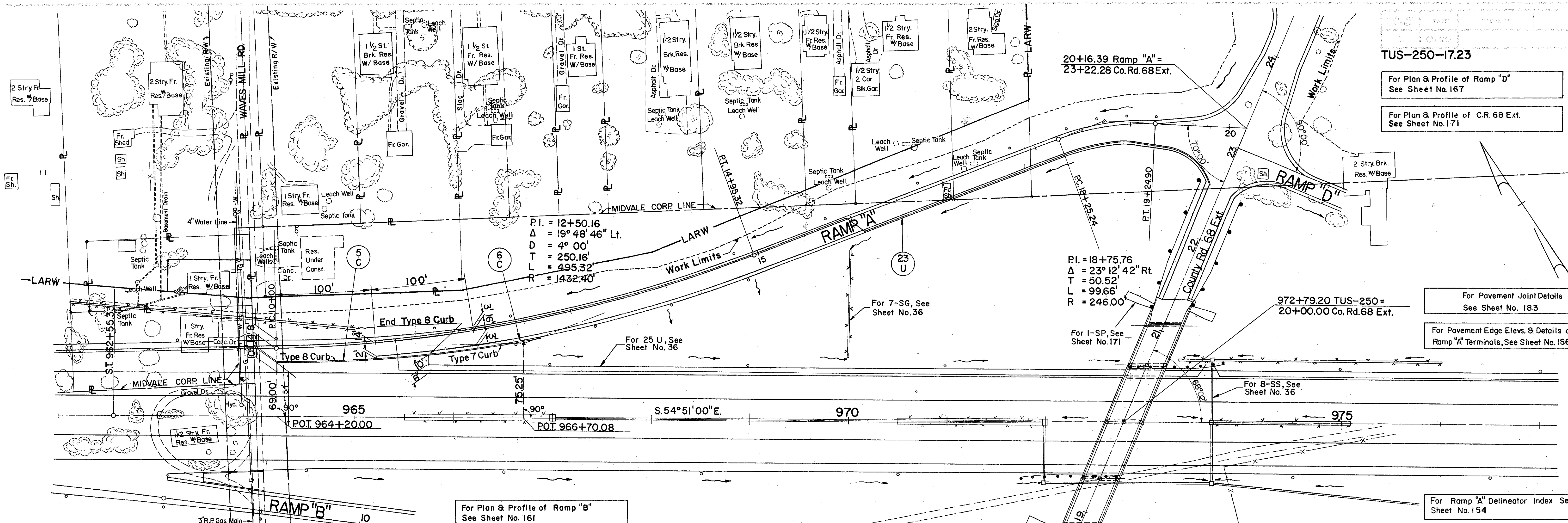
For Ramp A Cross Sections See Sheet No. 158
For Ramp B Cross Sections See Sheet No. 162
For Ramp C Cross Sections See Sheet No. 165
For Ramp D Cross Sections See Sheet No. 168
For County Rd. 64 Cross Sections See Sheet No. 177
For County Rd. 68 Cross Sections See Sheet No. 179
For County Rd. 68 Ext. Cross Sections See Sheet No. 172
For U.S.R. 250 Cross Sections See Sheet No. 181

From the beginning of the deceleration lane to Sta.959+55.33 Rt. the slope of the deceleration lane shall be the same as the slope of the adjacent lane on TUS-250. Edge elevations shown are opposite 25' stations on TUS-250 centerline.

For Pavement Joint Details
See Sheet No. 183



QUANTITIES TO PAVEMENT CALCULATIONS			
T-71	Entrance Lane	Sta. 954+20 to Sta. 964+20 Lt.	1377 Sq. Yds.
T-71	Wedge	Sta. 954+20 to Sta. 955+00 Lt.	9 Sq. Yds.
T-71	Exit Lane	Sta. 955+10 to Sta. 963+10 Rt.	1480 Sq. Yds.
T-71	Wedge	Sta. 955+10 to Sta. 955+26.67 Rt.	2 Sq. Yds.
TOTAL T-71=			2868 SQ. YDS.
T-31	Aggregate - Entrance Lane		7 Cu. Yds.
T-31	Aggregate - Exit Lane		6 Cu. Yds.
TOTAL T-31 AGGREGATE=			13 CU. YDS.
T-31	Bituminous Material - Entrance Lane		222 Gal.
T-31	Bituminous Material - Exit Lane		175 Gal.
TOTAL T-31 BITUMINOUS MATERIAL=			397 GAL.
B-21	Waterproofed Aggr. Base Course - Entrance Lane		
		Sta. 954+20 to Sta. 964+20 (Lt.)	148 Cu. Yds.
B-21	Waterproofed Aggr. Base Course - Exit Lane		
		Sta. 955+10 to Sta. 963+10 (Rt.)	117 Cu. Yds.
TOTAL B-21=			265 CU. YDS.
B-19	Aggr. Base Course - Ent. Lane	Sta. 954+20 to Sta. 964+20 (Lt.)	50 Cu. Yds.
B-19	Aggr. Base Course - Exit Lane	Sta. 955+10 to Sta. 963+10 (Rt.)	56 Cu. Yds.
TOTAL B-19=			106 CU. YDS.
I-22	Subbase (Grading A or B) - Entrance Lane (Under Pav't)		256 Cu. Yds.
I-22	Subbase (Grading A or B) - Entrance Lane (Under Shoulder)		69 Cu. Yds.
I-22	Subbase (Grading A or B) - Exit Lane (Under Pav't)		265 Cu. Yds.
I-22	Subbase (Grading A or B) - Exit Lane (Under Shoulder)		20 Cu. Yds.
TOTAL I-22 SUBBASE (GRADING A OR B)=			610 CU. YDS.
I-22	Subbase (Reg. Grading) - Entrance Lane	Sta. 954+20 to Sta. 964+20 (Lt.)	71 Cu. Yds.
I-22	Subbase (Reg. Grading) - Exit Lane	Sta. 955+10 to Sta. 963+10 (Rt.)	87 Cu. Yds.
TOTAL I-22 SUBBASE (REGULAR GRADING)=			158 CU. YDS.
Item Spec	Drain. Conn. using No. 6 Aggr. - Ent. Lane - Sta. 954+20 to Sta. 964+20 (Lt.)		62 Cu. Yds.
Item Spec	Drain. Conn. using No. 6 Aggr. - Exit Lane - Sta. 962+23 to Sta. 963+10 (Rt.)		6 Cu. Yds.
TOTAL ITEM SPECIAL DRAINAGE CONNECTION=			68 CU. YDS.



TUS-250-17.23

For Plan & Profile of Ramp "D"
See Sheet No. 167

For Plan & Profile of C.R. 68 Ext.
See Sheet No. 171

For Pavement Joint Details
See Sheet No. 183

For Pavement Edge Elev. & Details of
Ramp "A" Terminals, See Sheet No. 186 & 187.

For Ramp "A" Delineator Index See
Sheet No. 154

* Quantities Carried to Sheet No. 22, 23, 24, 25

ESTIMATED QUANTITIES			I-1		I-5		I-12		SEE SHEET NO.		REF. NO.	STATION TO STATION	SIDE						SEE SHEET NO.
REF. NO.	STATION TO STATION	SIDE	CLASS I-3 6" DEEP	CLASS J-1 6"	CLASS I-3 6" SPEC. 60° BEND	CLASS I-3 6" SPEC. "T"	CONCRETE CURB STD. TYPE		SHEET NO.										
			L.F.	L.F.	EA.	EA.	7	8		L.F.									
5-C	10 + 00 - 11 + 52	RT.						152											
6-C	11 + 52 - 12 + 65	RT.						113											
23-U	9 + 55 - 22 + 56 CR 68 Ext. LT & RT	LT & RT	1028	23		2	1												
*TOTALS			1028	23		3		113	152			*TOTALS							

QUANTITIES TO PAVEMENT CALCULATIONS

T-71 Sta. 10+00 to Sta. 20+03.62 (Thru Pav't) 1757 Sq. Yds.
 T-71 Sta. 19+25.43 to Sta. 20+03.62 (Quad. Lt. Incl. Taper) 89 Sq. Yds.
 T-71 Sta. 18+86.16 to Sta. 20+03.62 (Quad. Lt. Incl. Taper) 147 Sq. Yds.
 TOTAL T-71 = 1993 SQ. YDS.

T-31 Aggregate TOTAL T-31 = 6 CU. YDS.
 T-31 Bituminous Material TOTAL T-31 = 176 GAL.

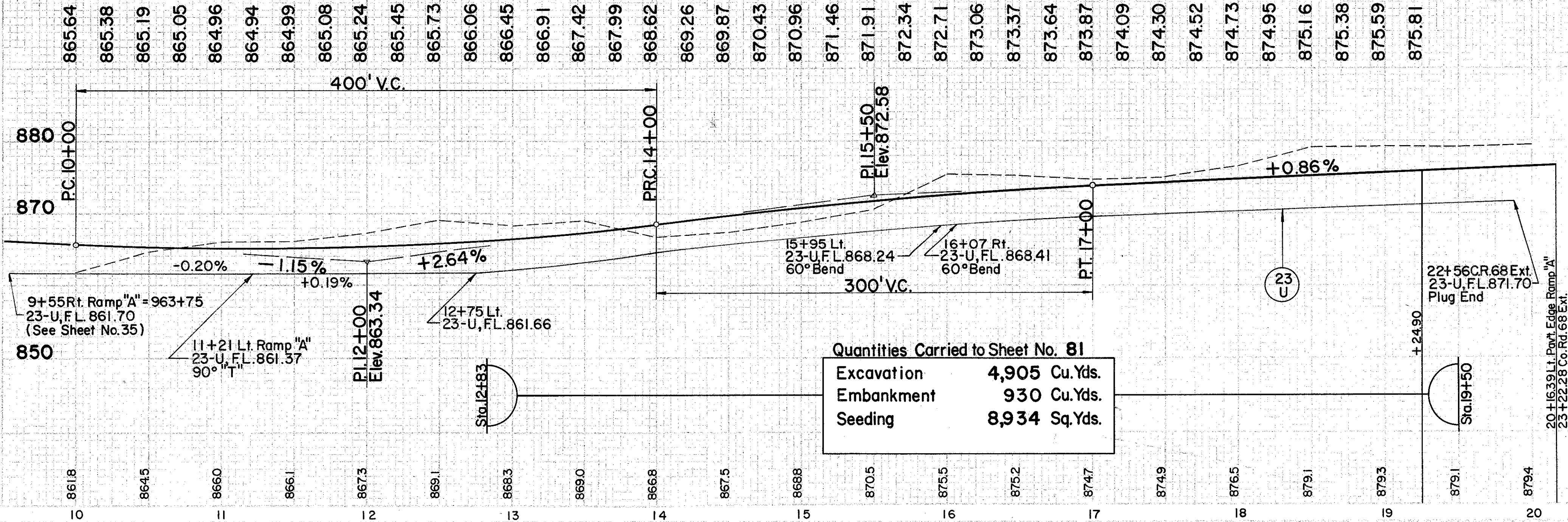
B-21 Waterproofed Aggr. Base Crse. Sta. 10+00 to C.R. 68 Ext. (Lt.) 68 Cu. Yds.
 B-21 Waterproofed Aggr. Base Crse. Sta. 11+00 to C.R. 68 Ext. (Rt.) 49 Cu. Yds.
 TOTAL B-21 = 117 Cu. Yds.

B-19 Aggr. Base Crse. Sta. 10+00 to Sta. 12+00 18 Cu. Yds.
 B-19 Aggr. Base Crse. Sta. 11+00 to Sta. 15+95 (Lt.) 14 Cu. Yds.
 B-19 Aggr. Base Crse. Sta. 11+00 to Sta. 15+95 (Rt.) 14 Cu. Yds.
 TOTAL B-19 = 32 CU. YDS.

I-22 Subbase (A or B) - (Under Pav't) 339 Cu. Yds.
 I-22 Subbase (A or B) - (Under Lt. Shoulder) 57 Cu. Yds.
 I-22 Subbase (A or B) - (Under Rt. Shoulder) 42 Cu. Yds.
 TOTAL I-22 SUBBASE (GRADING A or B) = 438 CU. YDS.

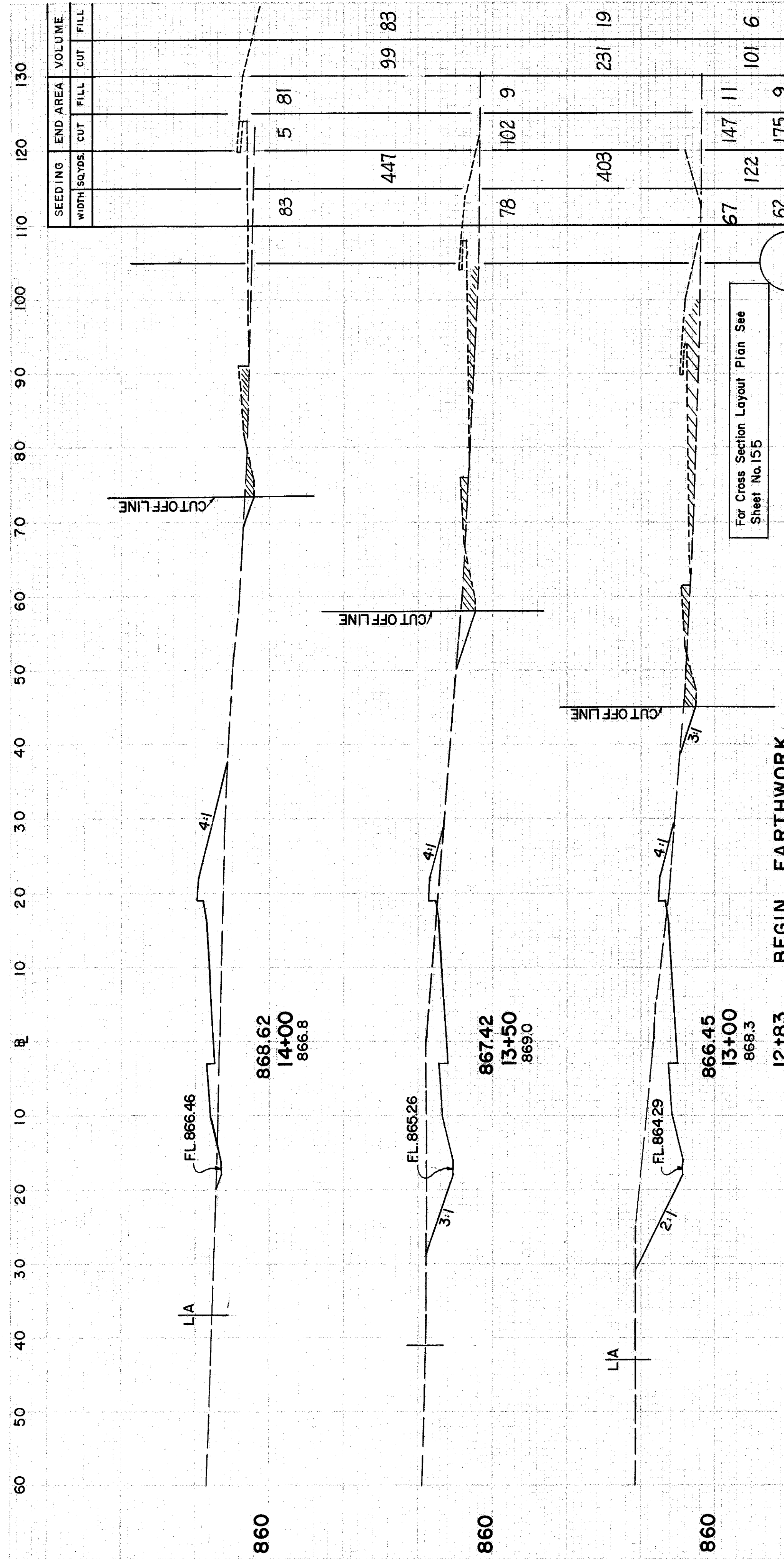
I-22 Subbase (Regular) Sta. 10+00 to Sta. 12+00 19 Cu. Yds.
 I-22 Subbase (Regular) Sta. 11+00 to Sta. 15+95 (Lt.) 12 Cu. Yds.
 I-22 Subbase (Regular) Sta. 11+00 to Sta. 15+95 (Rt.) 12 Cu. Yds.
 TOTAL I-22 SUBBASE (REGULAR GRADING) = 31 CU. YDS.

Item Spec. Drain. Conn., No. 6 Aggr. Sta. 10+00 to Sta. 15+95 (Lt.) 42 Cu. Yds.
 Item Spec. Drain. Conn., No. 6 Aggr. Sta. 15+95 to C.R. 68 Ext. (Rt.) 29 Cu. Yds.
 TOTAL ITEM SPECIAL DRAINAGE CONNECTION = 71 CU. YDS.



Quantities Carried to Sheet No. 81

Excavation 4,905 Cu. Yds.
 Embankment 930 Cu. Yds.
 Seeding 8,934 Sq. Yds.

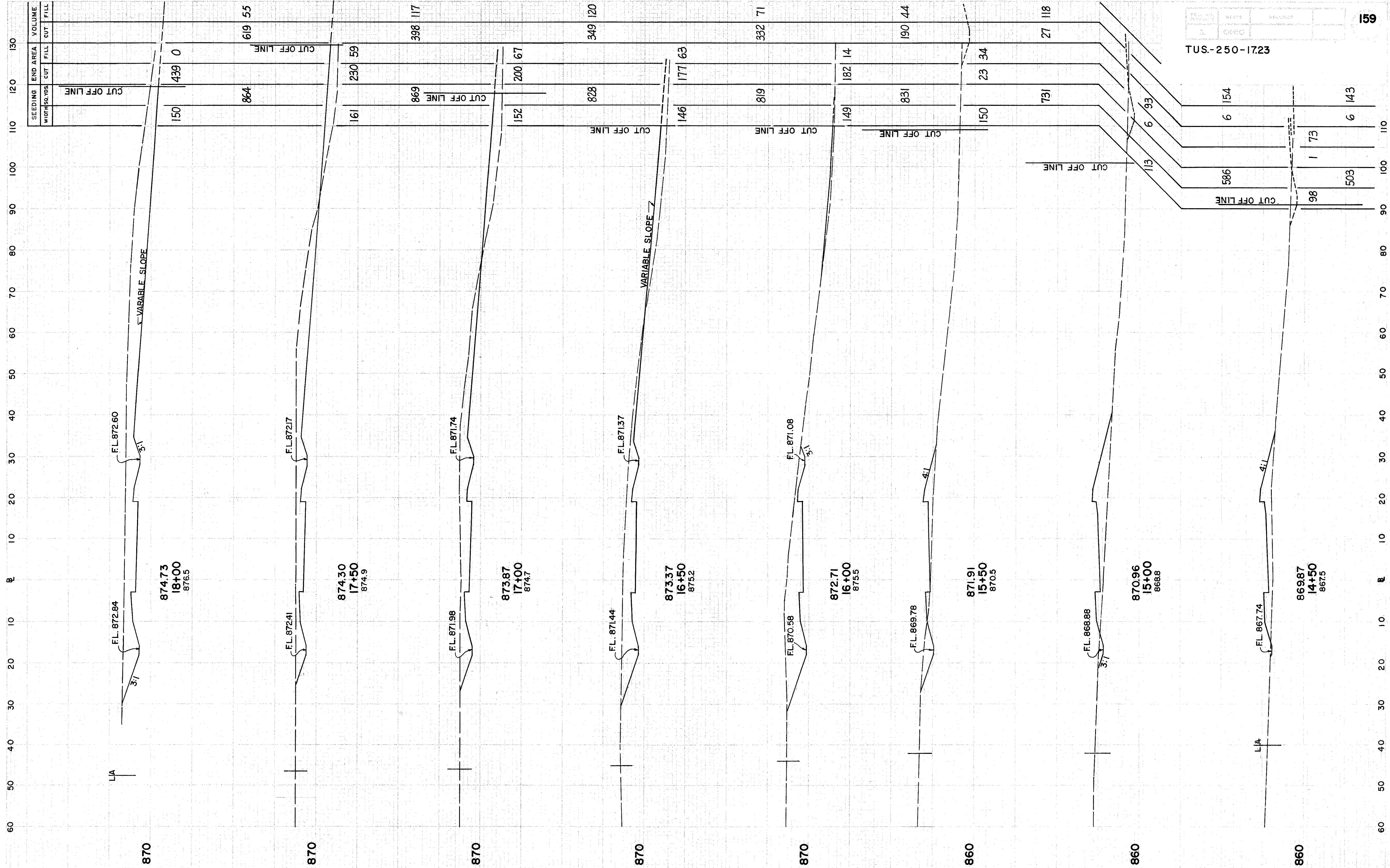


For Ramp "A" Back
See Sheet No. 81
967+00 TUS-250 = 12+83 "A"

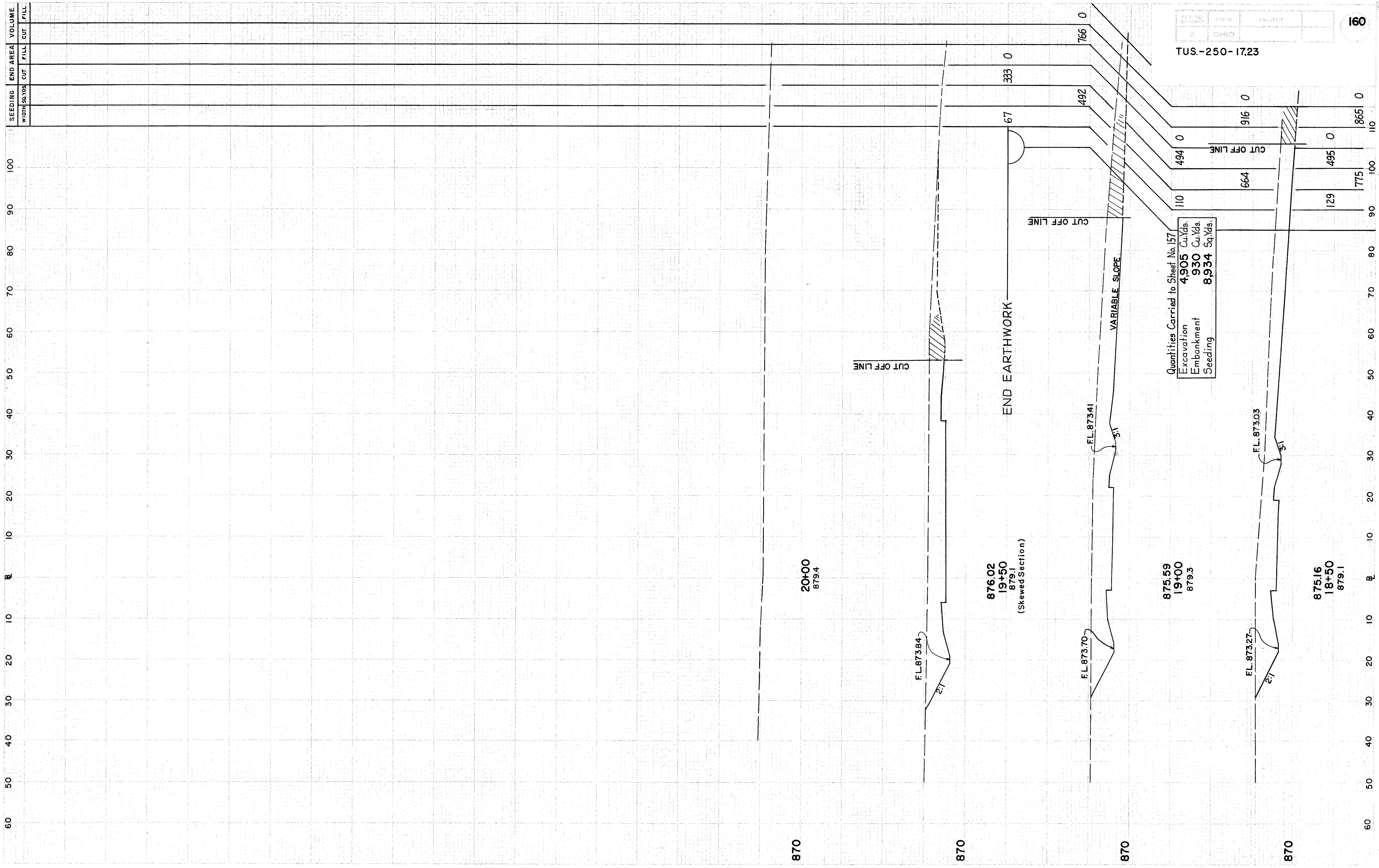
For Cross Section Layout Plan See
Sheet No. 155

BEGIN EARTHWORK

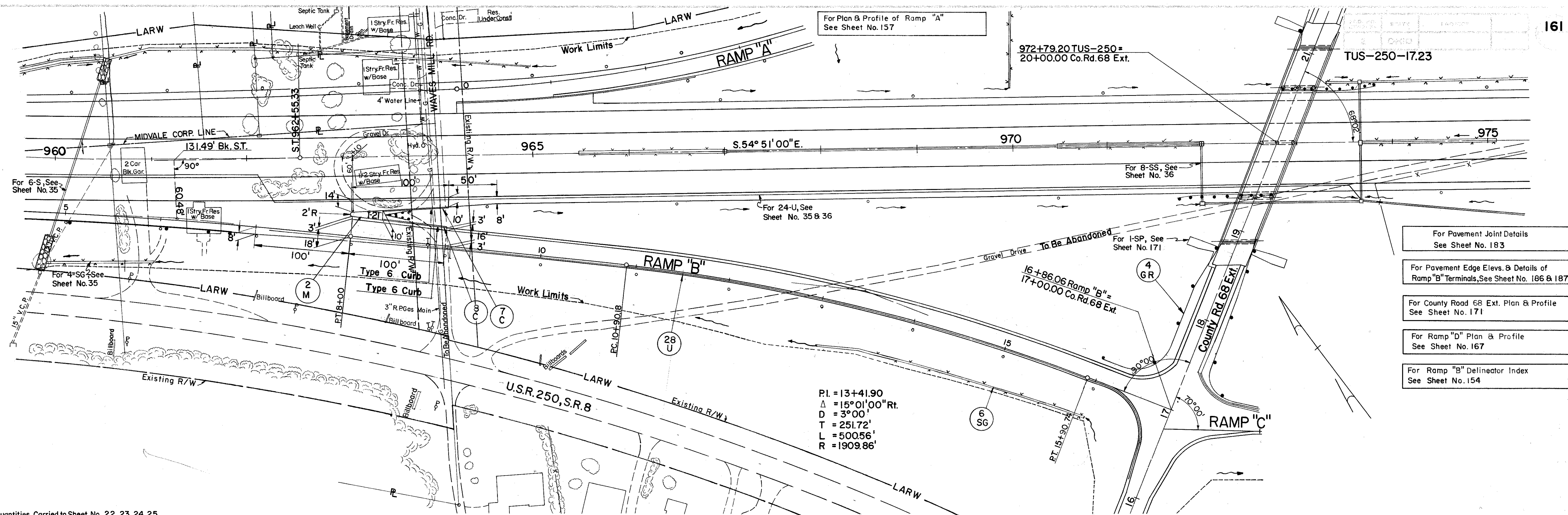
MIDVALE INTERCHANGE RAMP "A" STA. 10+00 To STA. 14+00



MIDVALE INTERCHANGE RAMP "A" STA. 14+50 TO STA. 18+00



MIDVALE INTERCHANGE RAMP "A" STA. 18+50 To STA. 20+00



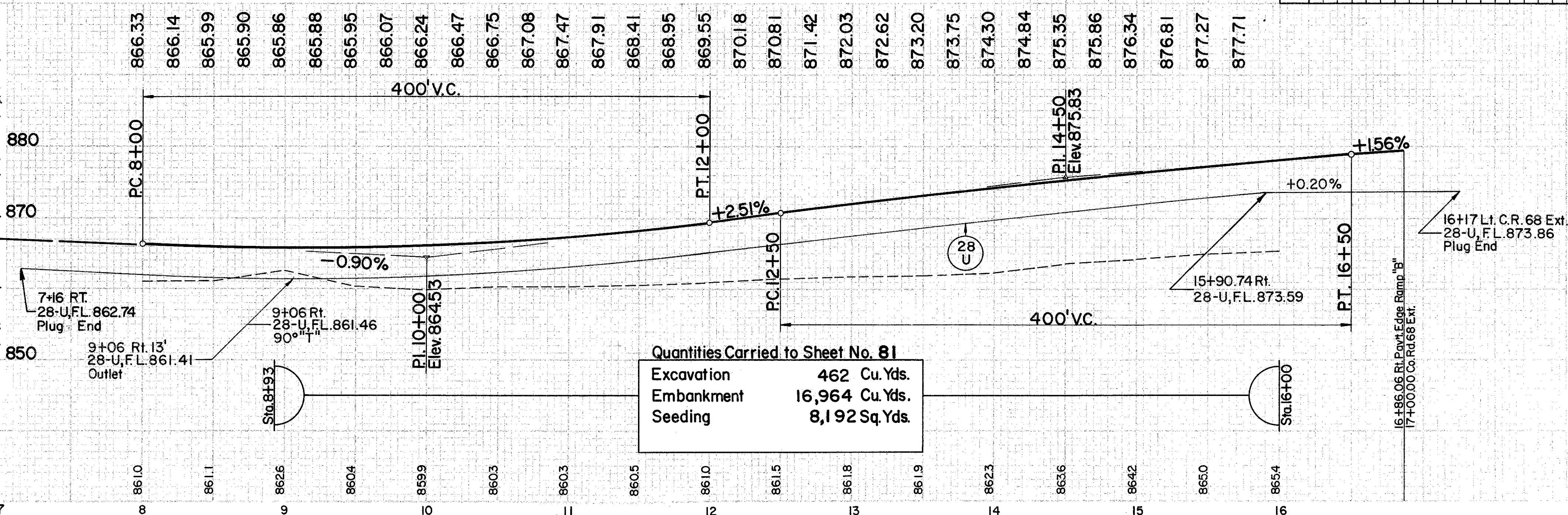
* Quantities Carried to Sheet No. 22, 23, 24, 25

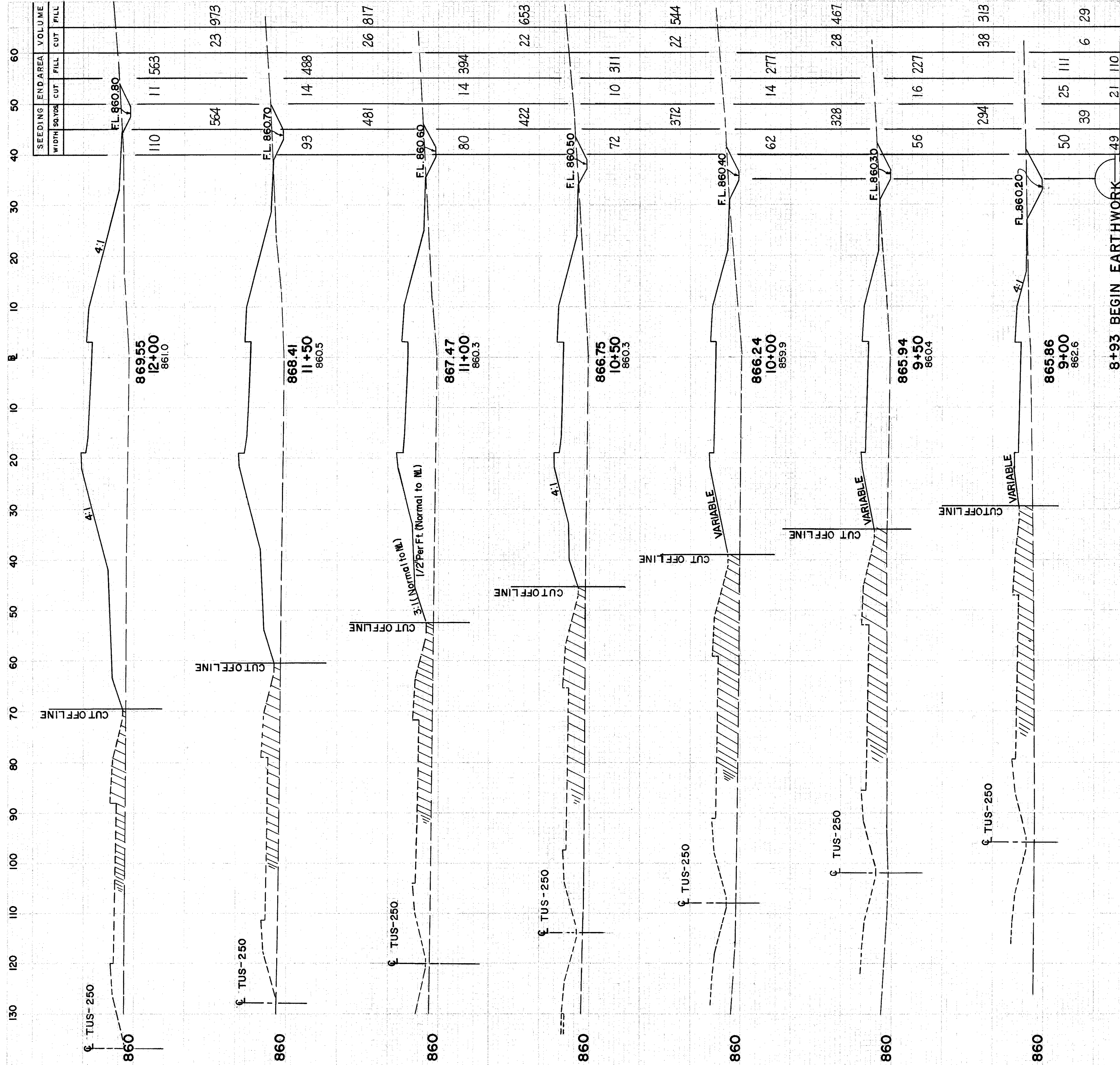
ESTIMATED QUANTITIES				I-12		I-15						L-10				I-1				I-5		I-21			
REF. NO.	STATION	TO STATION	SIDE	CONCRETE CURB STD. TYPE		GUARD RAIL STD.		SEE SHEET NO.	REF. NO.	STATION	TO STATION	SIDE	SODDING			CLASS I-3 6"	CLASS M-6.4(c) 8" "T"		CLASS I-3 6" SPEC. "T"	CONC. MED. PAVT. TYPE-I	SEE SHEET NO.				
				6		STR. CIR.																			
				L.F.		L.F.	L.F.																		
7 -C	8+35	- 9+00	LT.	65					2-M	963+30		RT.													
8 -C	8+35	- 9+00	LT.	65					6-SG	13+00	- 16+00	RT.	200												
4 -GR	16+02.84 "B"	18+7423 CR 68	LT.			150	50		28-U	7+16	16+17 CR 68 Ext. Lt.	RT.				1012	10		I						
*TOTALS				130		200			*TOTALS				200			1012	10		I						25

Left Edge Pavt. Elev.	Station	Right Edge Pavt. Elev.
866.61	8+00	866.33
866.41	8+25	866.14
866.26	8+50	865.99
866.16	9+00	865.86
866.11	9+25	865.86
866.13	9+50	865.88
866.19	10+00	865.94
866.32	10+25	866.07
866.49	10+50	866.24
866.72	10+75	866.47
866.84	11+00	866.75
867.07	11+25	867.08
867.52	11+50	867.30
868.03	12+00	867.47
868.60	12+25	867.91
869.05	12+50	868.27
869.19	13+00	868.41
869.73	13+25	868.95
870.33	13+50	869.55
870.96	14+00	870.18
871.59	14+25	870.81
872.20	14+50	871.42
872.81	15+00	872.03
873.40	15+25	872.62
873.98	15+50	873.20
874.53	16+00	873.75
875.08	16+25	874.30
875.62	16+50	874.84
876.13	17+00	875.35
876.82	17+25	875.86
877.04	17+50	876.34
877.29	18+00	876.81
877.72	18+25	877.27
878.04	18+50	877.71
878.23	19+00	878.14
878.35	19+25	878.59
878.69	19+50	879.06
879.51	20+00	879.51

QUANTITIES TO PAVEMENT CALCULATIONS

T-71	Sta. 8+00 to Sta. 16+74.06 (Thru Pavt.)	1565 Sq. Yds.
T-71	Sta. 16+28.06 to Sta. 16+74.06 (Quadrant Lt.)	43 Sq. Yds.
T-71	Sta. 16+12.17 to Sta. 16+74.06 (Quadrant Rt. Incl. Taper)	129 Sq. Yds.
T-71	Sta. 963+10 to Sta. 964+10 Rt. (Escape Lane)	133 Sq. Yds.
TOTAL T-71		1870 SQ.YDS
T-31	Aggregate	5 CU.YDS
T-31	Bituminous Material	156 GAL.
B-21	Waterproofed Aggr. Base Crse-Sta. 8+00 to C.R. 68 Ext. (Lt.)	49 Cu. Yds.
B-21	Waterproofed Aggr. Base Crse-Sta. 8+00 to C.R. 68 Ext. (Rt.)	55 Cu. Yds.
TOTAL B-21		104 CU.YDS
B-19	Aggr. Base Course-Sta. 8+00 to C.R. 68 Ext. (Lt.)	25 Cu. Yds.
B-19	Aggr. Base Course-Sta. 8+00 to Sta. 9+00 (Rt.)	1 Cu. Yds.
TOTAL B-19		26 CU.YDS
I-22	Subbase (Grading A or B)-(Under Pavt.)	289 Cu. Yds.
I-22	Subbase (Grading A or B)-(Under Lt. Shoulder)	15 Cu. Yds.
I-22	Subbase (Grading A or B)-(Under Rt. Shoulder)	78 Cu. Yds.
I-22	Subbase (Grading A or B)-Escape Lane-Sta. 963+10 to Sta. 964+10 (Rt.)	28 Cu. Yds.
TOTAL I-22 SUBBASE (GRADING A or B)		410 CU.YDS
I-22	Subbase (Regular Grading)-Sta. 8+00 to C.R. 68 Ext. Lt.	22 Cu. Yds.
I-22	Subbase (Regular Grading)-Sta. 8+00 to Sta. 9+00 Rt.	2 Cu. Yds.
TOTAL I-22 SUBBASE (REGULAR GRADING)		24 CU.YDS
Item Spec-Drain, Conn., No. 6 Aggr.-Sta. 8+00 to C.R. 68 Ext. (Rt.)		68 CU.YDS

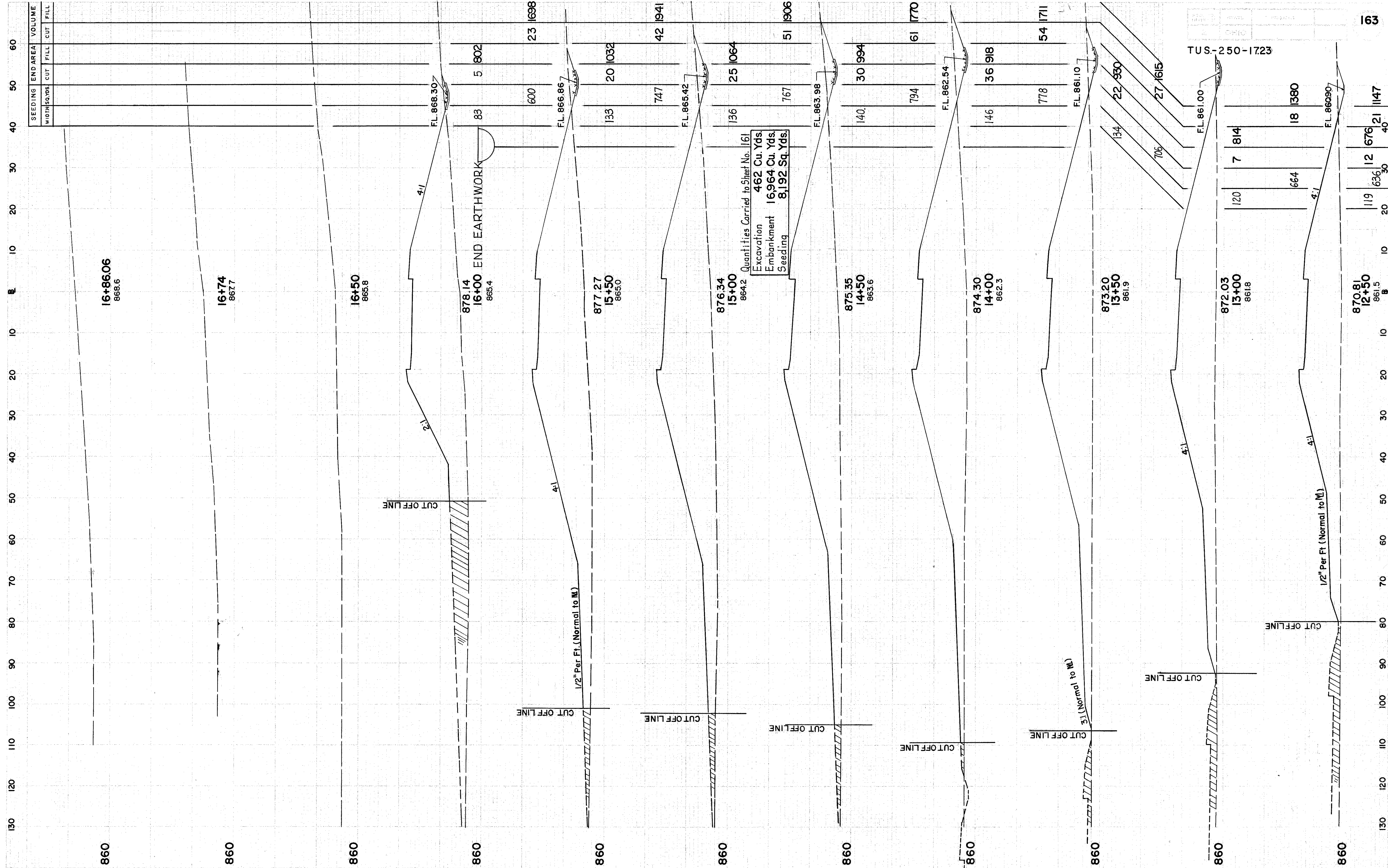




For Ramp "B" Back
See Sheet No. 80
964+00 TUS-250 = 8+93 "B"

MIDVALE INTERCHANGE RAMP "B" STA. 7+00 TO STA. 12+00

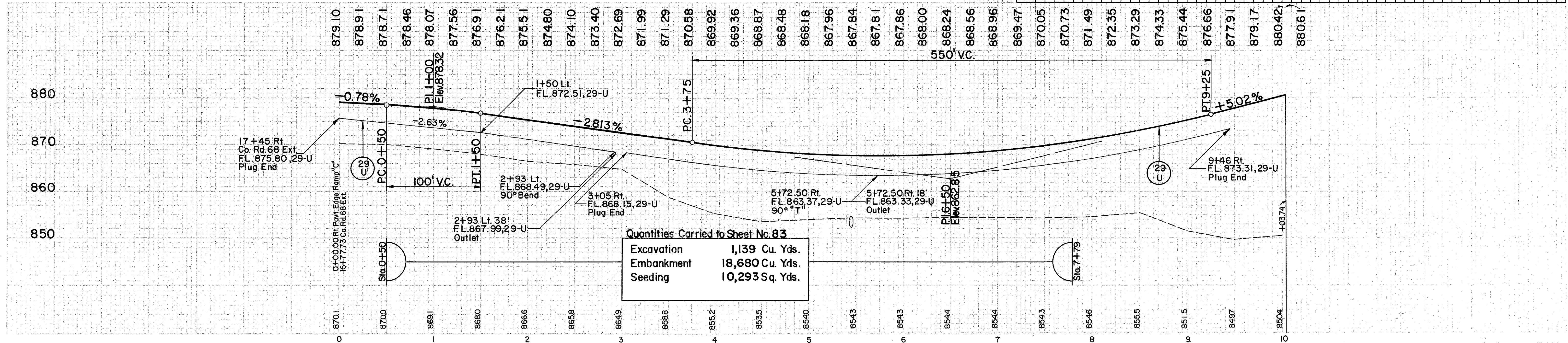
For Cross Section Layout See
Sheet No. 155

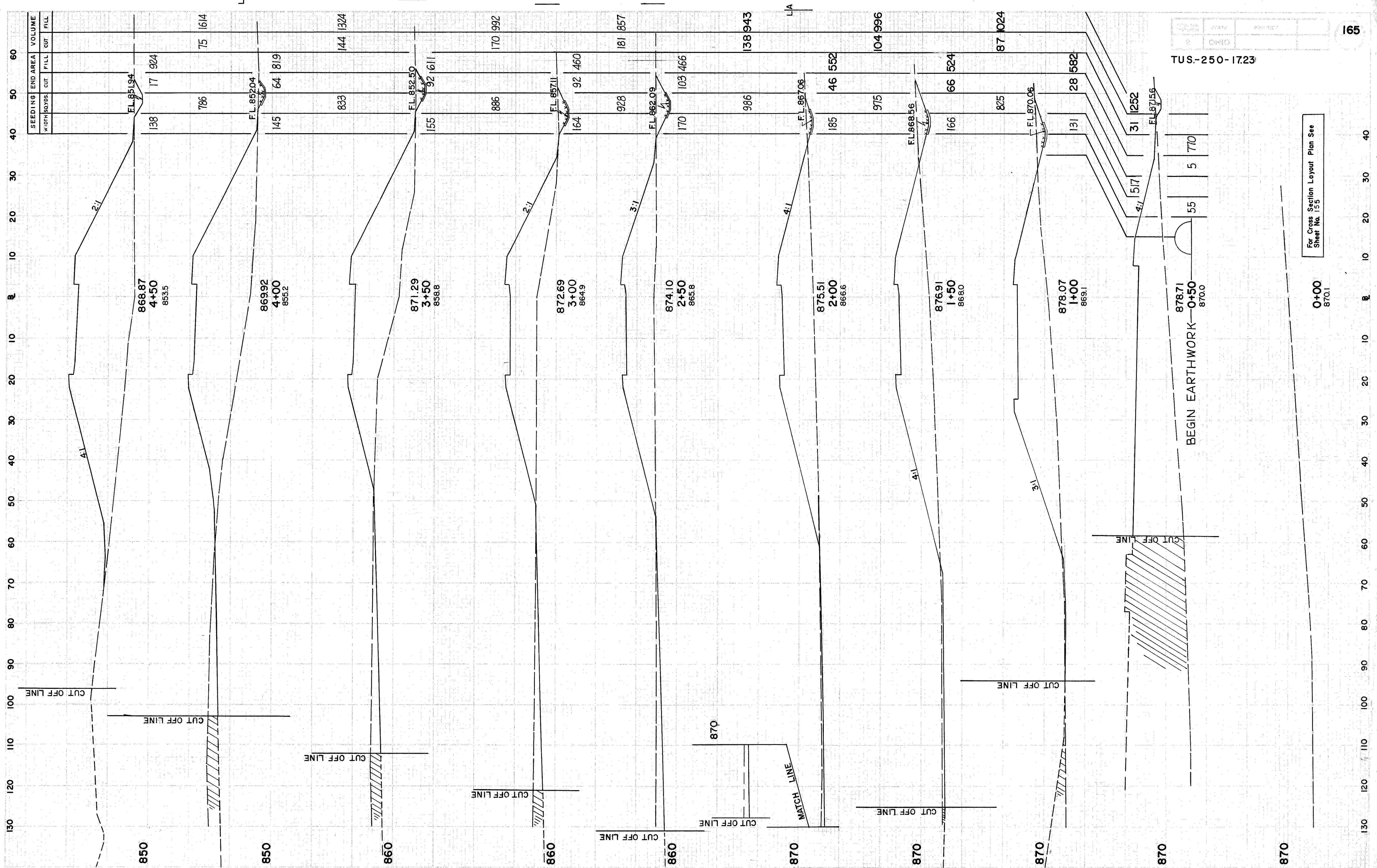


MIDVALE INTERCHANGE RAMP "B" STA.12+50 To STA.16+86.06

ESTIMATED QUANTITIES															I-12				I-15				L-10		I-1				I-5					
REF. NO.	STATION TO STATION		SIDE	CONCRETE CURB STD. TYPE		GUARD RAIL STD.		SEE SHEET NO.	REF. NO.	STATION TO STATION		SIDE	SODDING	CLASS I-4 M-6.4(c) 6"	CLASS I-3 6" SPEC. 90° BEND	CLASS I-3 6" SPEC. 90° BEND	CLASS I-3 6" SPEC. 90° BEND	SEE SHEET NO.																
				7	8	STR.	CIR.																											
				L.F.	L.F.	L.F.	L.F.																											
9-C	7+35	- 8+48	LT	113						9-SG	1+00	- 4+00	RT	200																				
10-C	8+48	- 10+04	LT		156					10-SG	8+35	- 9+80	RT	97																				
7-GR	8+88.94	- 8+88.94	LT							29-U	17+45	- 17+45	RT																					
8-GR	1+93.08	- 9+70.60	RT																															
* TOTALS				113	156					* TOTALS				297																				

Left Edge Pavt. Elev		Station	Right Edge Pavt. Elev
		0+00	879.10
		+127.7	879.00
		+91.52	878.21
		1+00	878.07
		+24.79	877.56
		+25	877.56
		+50	876.91
		+75	876.21
		+92.90	875.71
		2+00	875.51
		+07.90	875.28
		+22.90	874.86
		+25	874.80
		+50	874.10
		+75	873.40
		+98.95	872.72
		3+00	872.69
		+25	871.99
		+50	871.29
		+75	870.58
		+75	870.58
		4+00	869.92
		+25	869.36
		+50	868.87
		+55.99	868.78
		+75	868.48
		5+00	868.18
		+25	867.96
		+50	867.90
		+50	867.84
		+75	867.84
		6+00	867.86
		+25	868.00
		+50	868.24
		7+00	868.56
		+25	868.96
		+25	869.47
		+50	870.05
		+75	870.73
		8+00	871.49
		+03.74	871.62
		+25	872.35
		+50	873.29
		+75	874.33
		9+00	875.44
		+03.74	875.62
		+25	876.66
		+25	876.66
		+33.74	877.09
		+50	877.91
		+75	879.17
		10+00	880.42
		+03.74	880.61

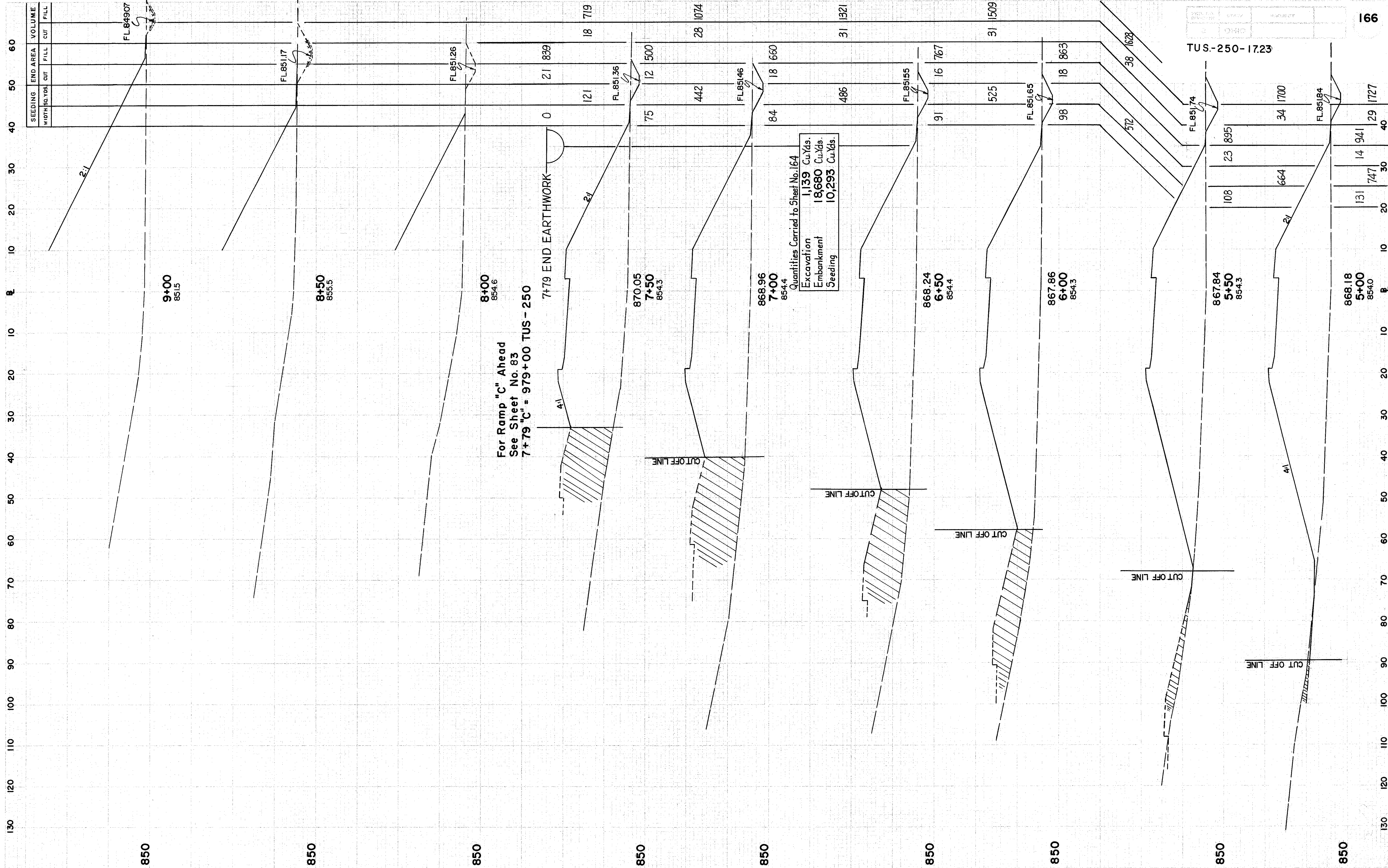




For Cross Section Layout Plan See
Sheet No. 155

0+00
870.1

MIDVALE INTERCHANGE RAMP "C" STA. 0+00 TO STA. 4+50



MIDVALE INTERCHANGE RAMP "C" STA. 5+00 To STA. 9+00

For Ramp "D" Delineator Index
See Sheet No. 154

For Pavement Joint Details
See Sheet No. 184

For Pavement Edge Elevs. & Details of Ramp "D"
Terminals, See Sheet No. 186 & 187

For Plan & Profile of Ramp "A"
See Sheet No. 157

For Plan & Profile of C.R. 68 Ext.
See Sheet No. 171

For Plan & Profile of Ramp "C"
See Sheet No. 164

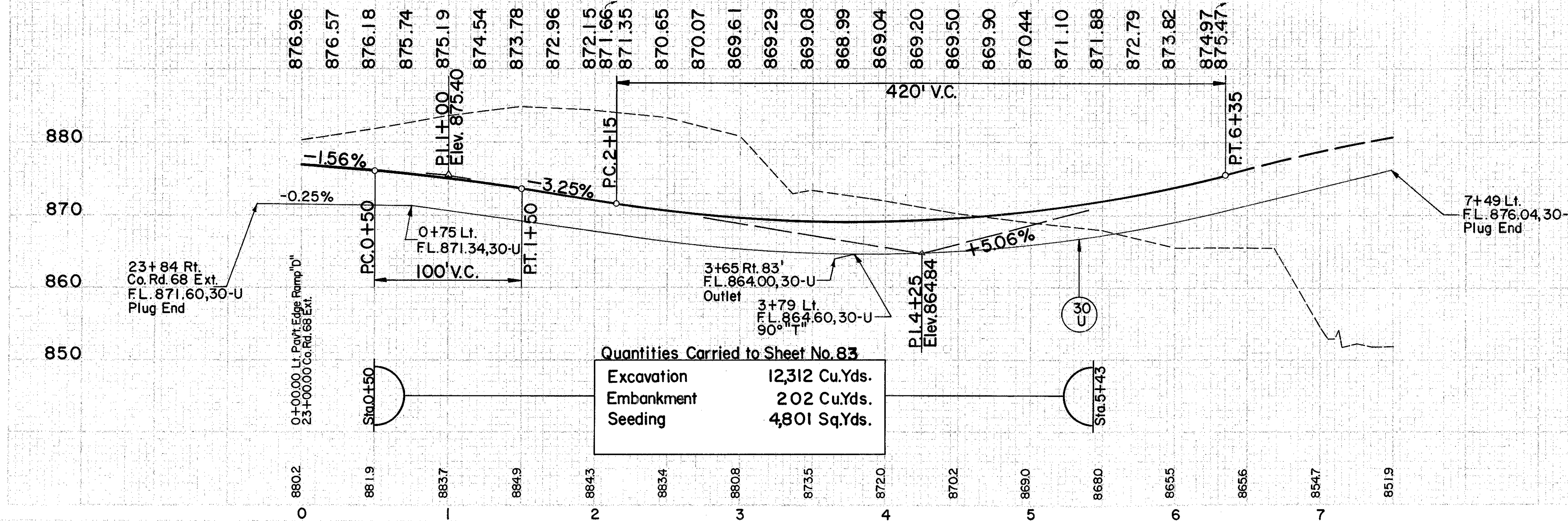
BRIDGE NO. TUS-250-1899

For Bridge Details TUS-250-17.23
Over B.O. R.R. See Sheet Nos. 243-262

*Quantities Carried to Sheet No. 22, 23, 24, 25

ESTIMATED QUANTITIES			I-12		I-15		L-10		I-1			I-5		I-21	
REF. NO.	STATION TO STATION	SIDE	CONC. CURB STD. TYPE		GUARD RAIL STD.				CLASS T-4 M-6.4(c) 8"	CLASS T-3 6" DEEP	CLASS J-1 6"	CLASS T-3 6" SPEC. TYPE-I	CONC. MED. PAVT. TYPE-I		SEE SHEET NO.
			S	L.F.	L.F.				L.F.	L.F.	L.F.	E.A.	S.Y.		
11-C	4+88.90 - 5+67.90	RT.	79												
12-C	4+88.90 - 5+67.90	RT.	79												
9-GR	6+00.02 - 7+76.00	LT.			175										
*TOTALS			158		175										

Station	Right Edge Pavt. Elev.	Left Edge Pavt. Elev.	Elev. of Lt. Edge of TUS-250
0+00	876.30	876.96	
0+58	875.76	875.51	
1+00	875.44	875.19	
1+25	874.79	874.54	
1+50	874.03	873.78	
2+00	873.21	872.96	
2+25	872.40	872.15	
2+50	871.60	871.35	
3+00	870.97	870.65	
3+25	870.52	870.07	
3+50	870.18	869.61	
4+00	869.99	869.28	
4+25	869.90	869.04	
4+50	869.94	869.20	
5+00	870.10	869.50	
5+25	870.26	869.66	
5+50	870.66	869.63	
6+00	870.88	869.90	
6+25	871.09	870.18	
6+50	871.30	870.44	
7+00	871.86	871.10	
7+25	872.53	871.88	
7+50	873.33	872.79	
8+00	874.81	874.97	
8+25	875.92	875.92	



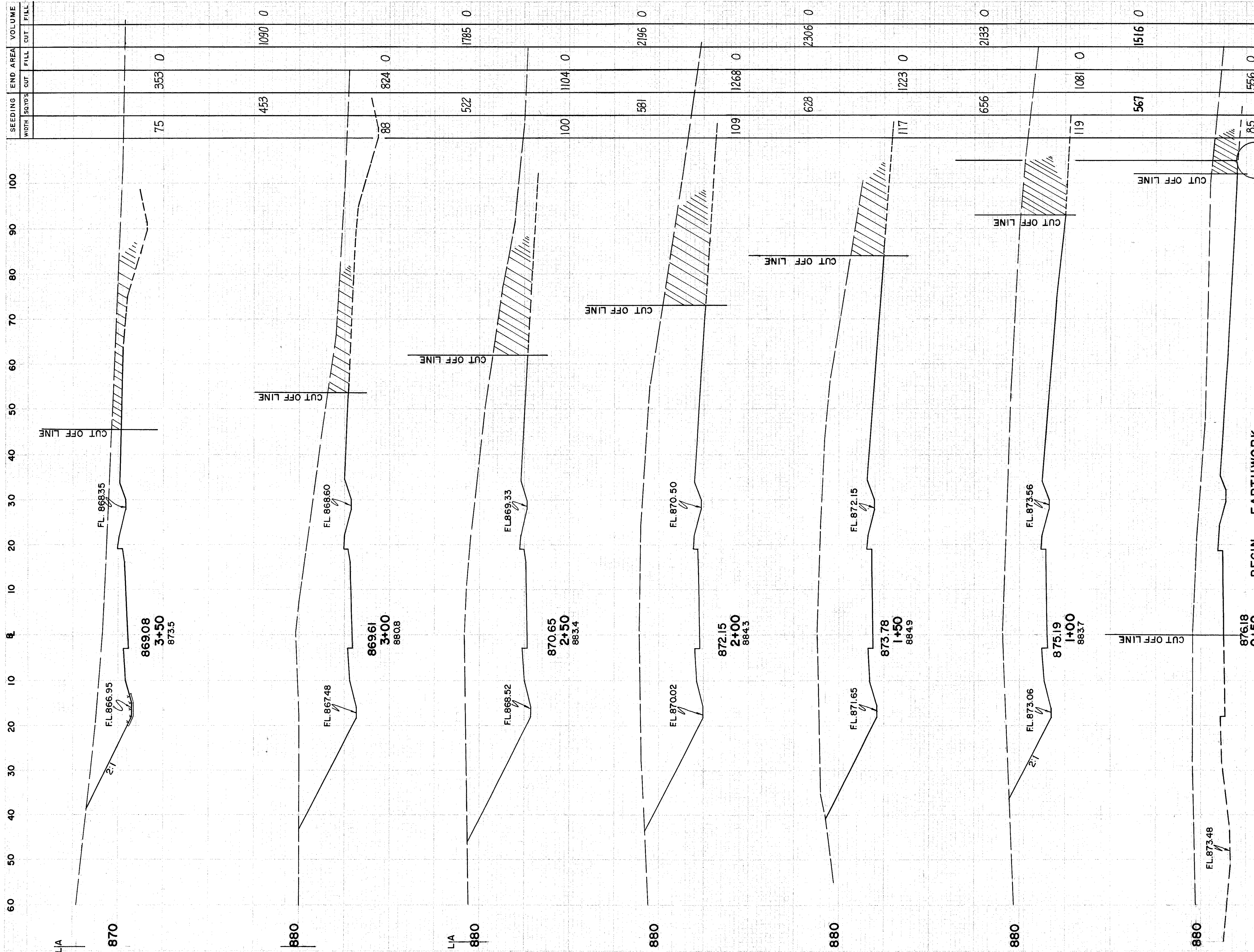
Quantities Carried to Sheet No. 83

Excavation 12,312 Cu.Yds.

Embankment 202 Cu.Yds.

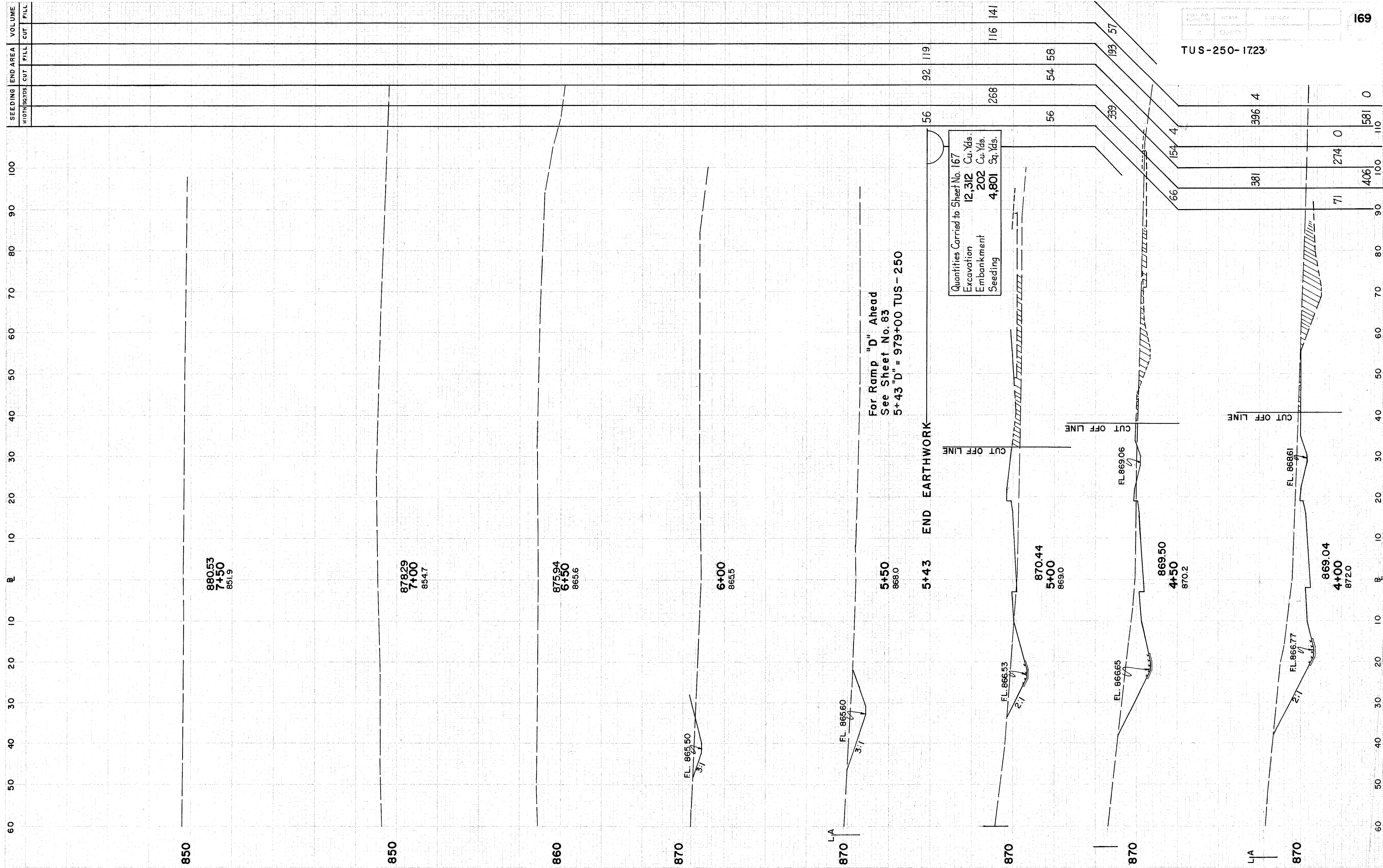
Seeding 4,801 Sq.Yds.

QUANTITIES TO PAVEMENT CALCULATIONS		
T-71	Sta. 0+12 to Sta. 0+58 (Quadrant Rt.)	43 Sq. Yds.
T-71	Sta. 0+24 to Sta. 0+85.89 (Quadrant Lt. incl. taper)	129 Sq. Yds.
T-71	Sta. 0+24 to Sta. 5+88.90 (Thru Pav't)	1015 Sq. Yds.
T-71	Sta. 978+42 to Sta. 979+42 Lt. (Escape Lane)	133 Sq. Yds.
TOTAL T-71		1320 SQ YDS
T-31	Aggregate	4 CU. YDS.
T-31	Bituminous Material	105 GAL.
B-21	Waterproofed Aggr. Base Course - C.R. 68 Ext. to Sta. 5+88.90 (Lt.)	37 Cu. Yds.
B-21	Waterproofed Aggr. Base Course - C.R. 68 Ext. to Sta. 5+88.90 (Rt.)	33 Cu. Yds.
TOTAL B-21		70 CU. YDS.
B-19	Aggr. Base Course - Sta. 4+88.90 to Sta. 5+88.90 (Lt.)	2 Cu. Yds.
B-19	Aggr. Base Course - C.R. 68 Ext. to Sta. 5+88.90 (Rt.)	16 Cu. Yds.
TOTAL B-19		18 CU. YDS.
I-22	Subbase (Grading A or B) - (Under Pav't)	198 Cu. Yds.
I-22	Subbase (Grading A or B) - (Under Lt. Shoulder)	53 Cu. Yds.
I-22	Subbase (Grading A or B) - (Under Rt. Shoulder)	10 Cu. Yds.
I-22	Subbase (Grading A or B) - Escape Lane - Sta. 978+42 to Sta. 979+42 Lt.	28 Cu. Yds.
TOTAL I-22 SUBBASE (GRADING A or B)		289 CU. YDS.
I-22	Subbase (Regular Grading) - Sta. 4+88.90 to Sta. 5+88.90 (Lt.)	2 Cu. Yds.
I-22	Subbase (Regular Grading) - CR 68 Ext. to Sta. 5+88.90 (Rt.)	14 Cu. Yds.
TOTAL I-22 SUBBASE (REGULAR GRADING)		16 CU. YDS.
Item Special Drain Conn., No. 6 Aggr. - CR 68 Ext. to Sta. 5+88.90 (Lt.)		45 CU. YDS.



MIDVALE INTERCHANGE RAMP "D" STA. 0+00 To STA. 3+50

For Cross Section Layout Plan See
Sheet No. 155



TUS-250-1723

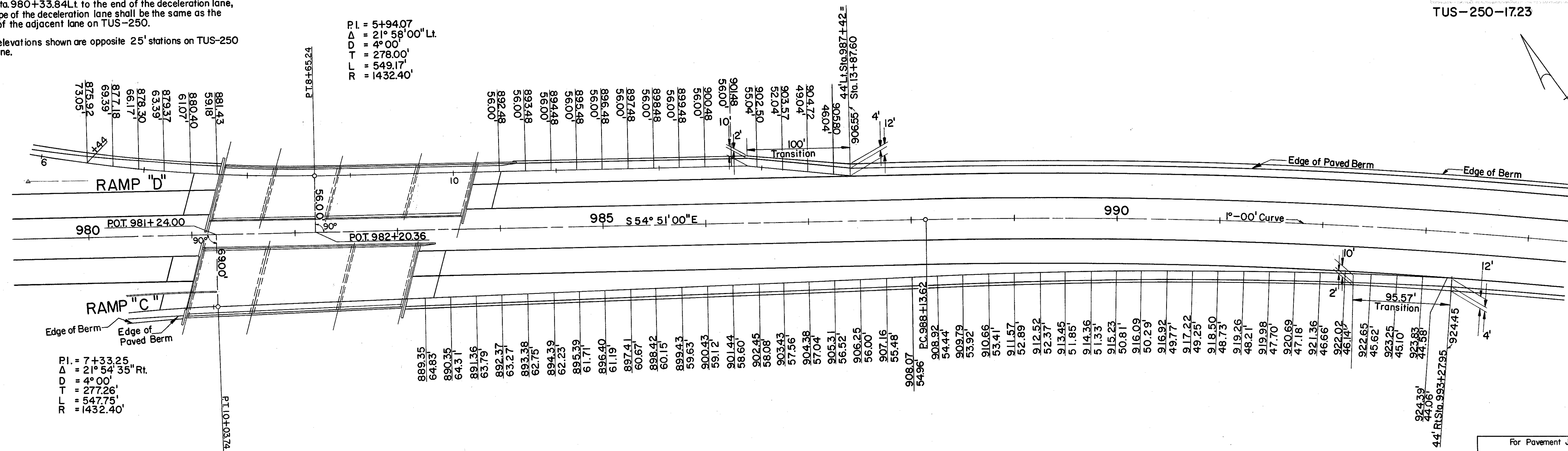
TUS-250-1723

From Sta. 981+93.98 Rt. to the end of the acceleration lane, the slope of the acceleration lane shall be the same as the slope of the adjacent lane on TUS-250.

From Sta. 980+33.84 Lt. to the end of the deceleration lane, the slope of the deceleration lane shall be the same as the slope of the adjacent lane on TUS-250.

Edge elevations shown are opposite 25' stations on TUS-250 centerline.

PI. = 5+94.07
 Δ = 21° 58' 00" Lt.
 D = 4° 00'
 T = 278.00'
 L = 549.17'
 R = 1432.40'



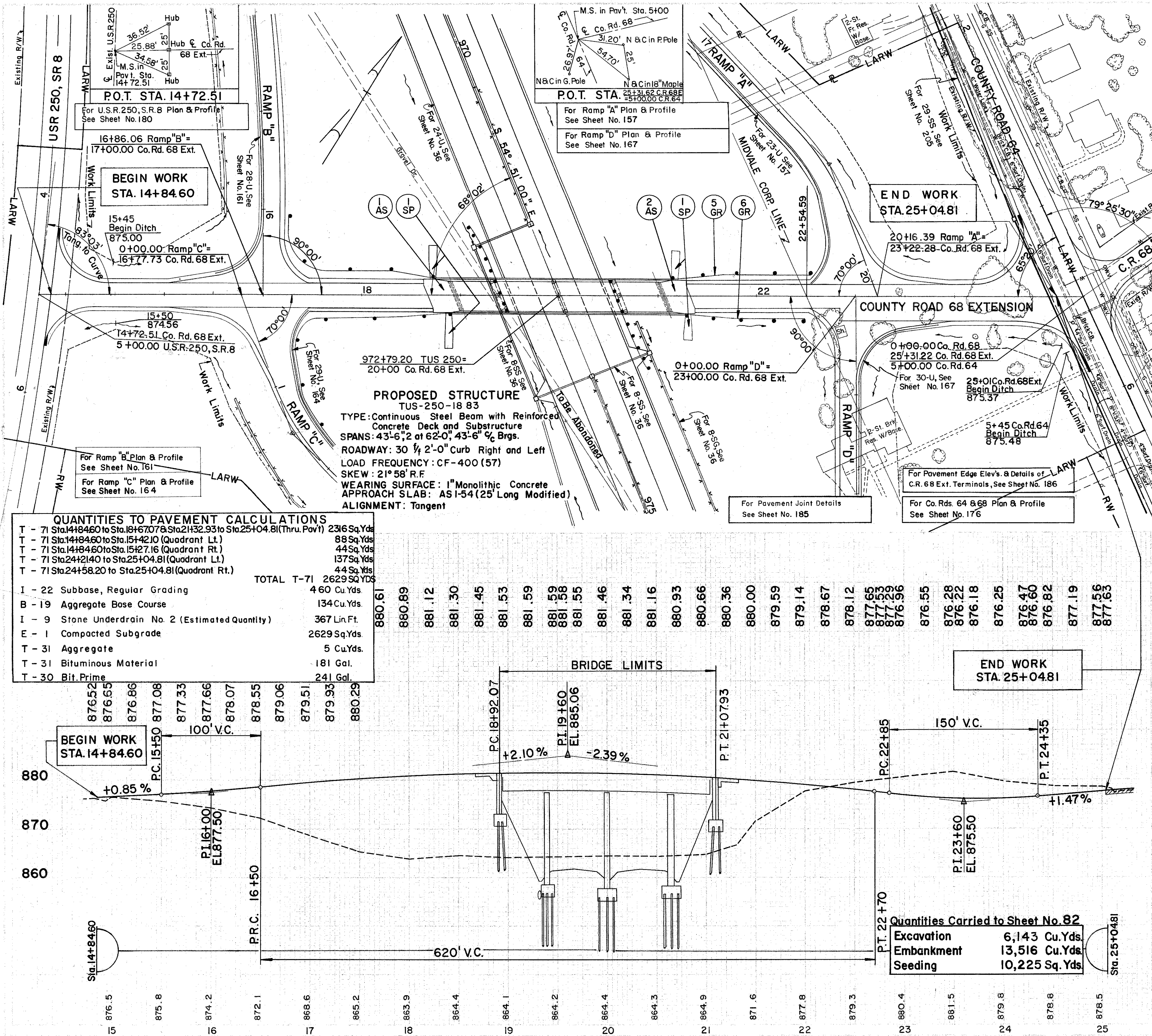
For Bridge Details TUS-250-1723
 Over B&O R.R. See Sheet Nos. 243 - 262

For Pavement Joint Details
 See Sheet No. 184

QUANTITIES TO PAVEMENTS CALCULATIONS

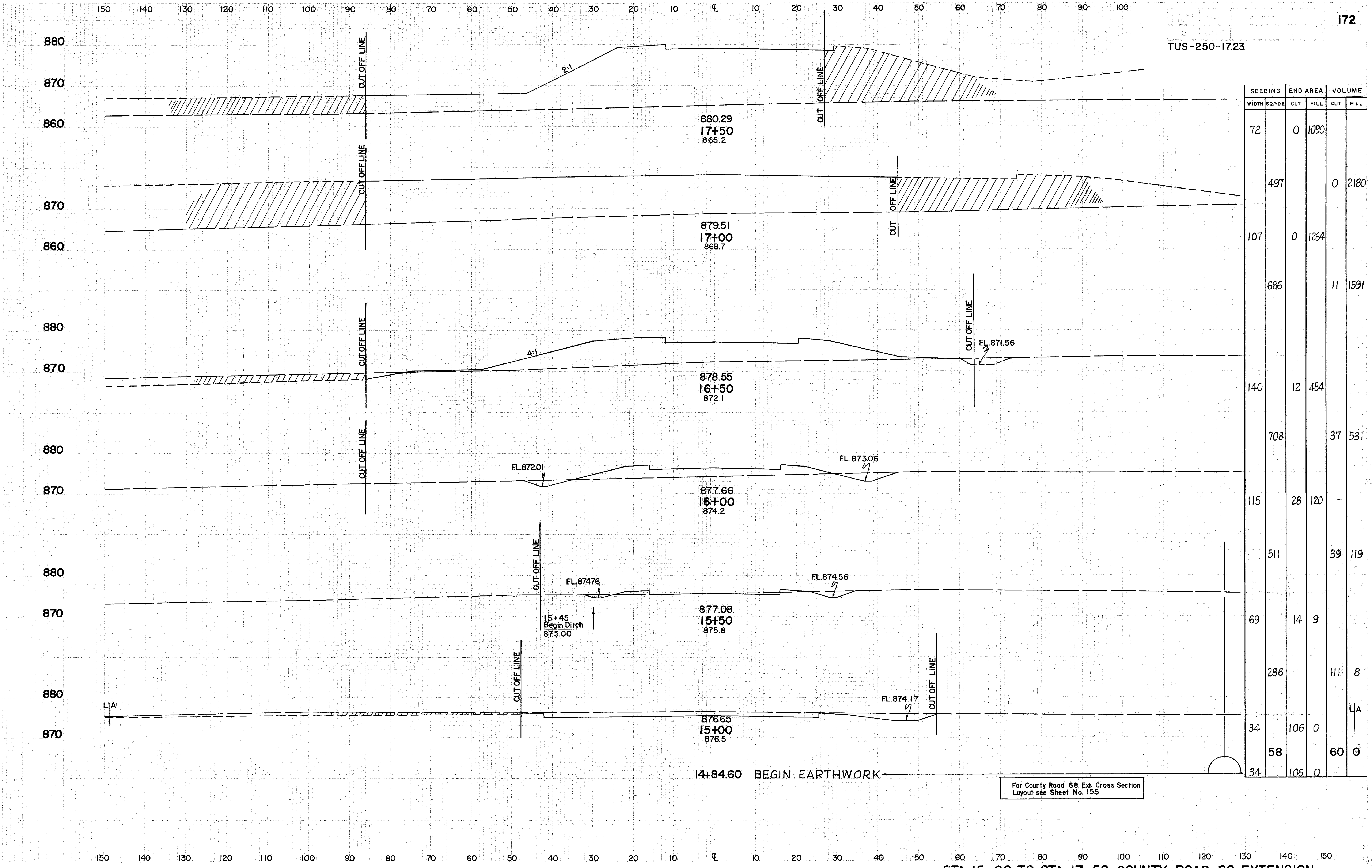
T-71	Entrance Lane - Sta. 983+30.96 (Appr. Slab) to Sta. 993+27.95 Rt.	1148	Sq. Yds.
T-71	Wedge - Sta. 992+32.37 to Sta. 993+27.95 Rt.	11	Sq. Yds.
T-71	Exit Lane - Sta. 979+42 to Sta. 981+04 (Appr. Slab) Lt.	468	Sq. Yds.
T-71	Exit Lane - Sta. 983+98.37 (Appr. Slab) to Sta. 987+42 Lt.	389	Sq. Yds.
T-71	Wedge - Sta. 987+25.33 to Sta. 987+42 Lt.	2	Sq. Yds.
		TOTAL T-71	2018
T-31	Aggregate - Entrance Lane	7	Cu. Yds.
T-31	Aggregate - Exit Lane	4	Cu. Yds.
		TOTAL AGGREGATE T-31	11
T-31	Bituminous Material - Entrance Lane	227	Gal.
T-31	Bituminous Material - Exit Lane	119	Gal.
		TOTAL BITUMINOUS MATERIAL T-31	346
B-21	Waterproofed Aggr. Base Course - Entrance Lane - Bridge to Sta. 993+27.95 (Rt)	151	Cu. Yds.
B-21	Waterproofed Aggr. Base Course - Exit Lane - Sta. 979+42 to Bridge & Bridge to Sta. 987+42 (Lt.)	79	Cu. Yds.
		TOTAL B-21	230
B-19	Aggr. Base Course - Entrance Lane - Bridge to Sta. 993+27.95 (Rt)	51	Cu. Yds.
B-19	Aggr. Base Course - Exit Lane - Sta. 979+42 to Bridge & Bridge to Sta. 987+42 (Lt.)	26	Cu. Yds.
		TOTAL B-19	77
I-22	Subbase (Grading A or B) - Entrance Lane - (Under Pav't)	276	Cu. Yds.
I-22	Subbase (Grading A or B) - Entrance Lane - (Under Shoulder)	82	Cu. Yds.
I-22	Subbase (Grading A or B) - Exit Lane - (Under Pav't)	218	Cu. Yds.
I-22	Subbase (Grading A or B) - Exit Lane - (Under Shoulder)	48	Cu. Yds.
		TOTAL I-22 SUBBASE (GRADING A or B)	624
I-22	Subbase (Regular Grading) - Entrance Lane - Bridge to Sta. 993+27.95 (Rt)	79	Cu. Yds.
I-22	Subbase (Regular Grading) - Exit Lane - Sta. 979+42 to Bridge & Bridge to Sta. 987+42 (Lt.)	45	Cu. Yds.
		TOTAL I-22 SUBBASE (REGULAR GRADING)	124
		TOTAL I-22 SUBBASE (REGULAR GRADING)	124
		Item Special-Drainage Connection, using No. 6 Aggr. - Entrance Lane - Sta. 983+25 to Sta. 993+27.95 (Rt)	67
		Item Special-Drain. Conn., using No. 6 Aggr. - Exit Lane - Sta. 979+42 to Sta. 981+25 & Sta. 984+25 to Sta. 987+42 (Lt.)	36
		TOTAL ITEM SPECIAL - DRAIN. CONN.	103

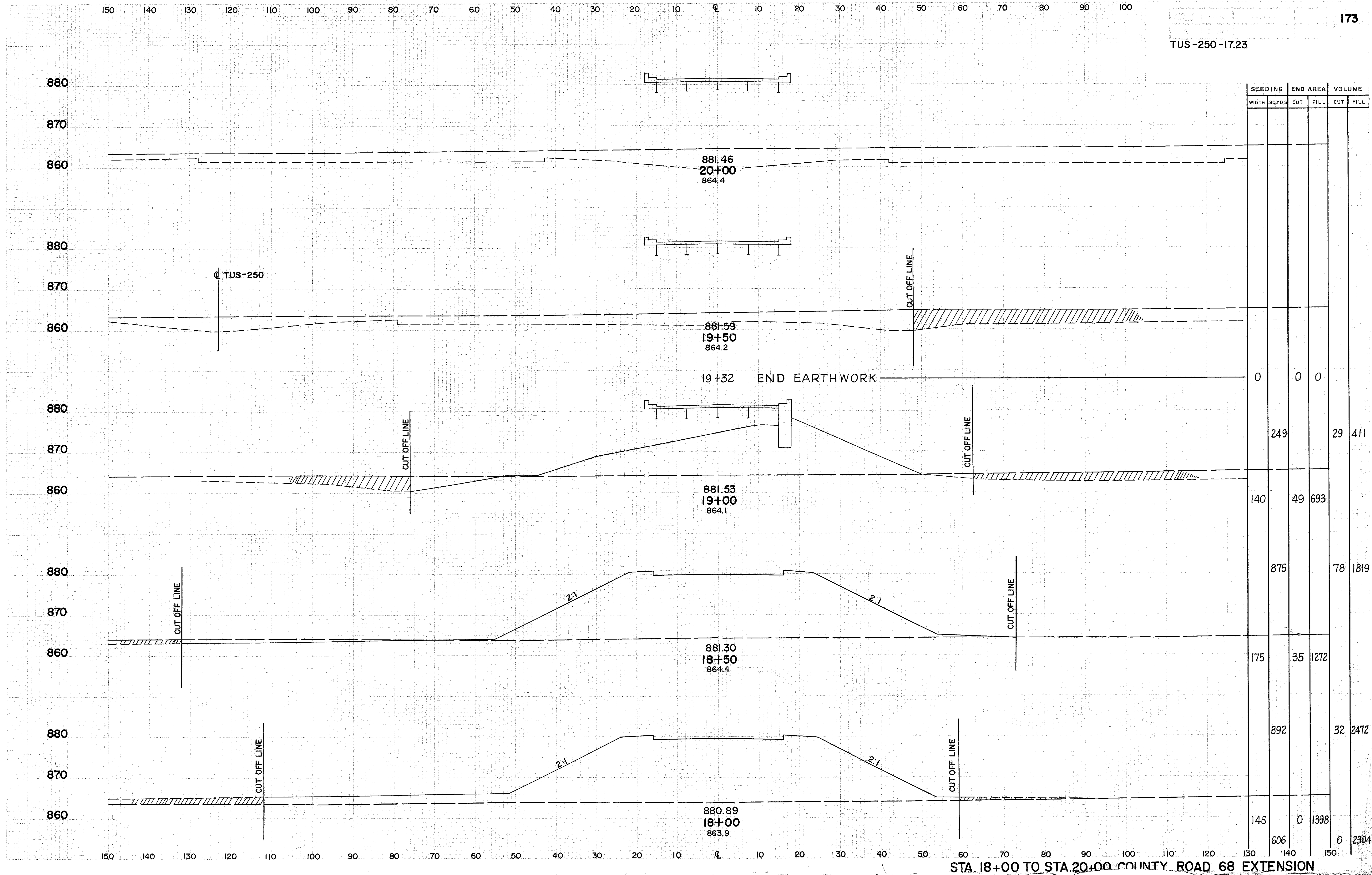
TUS-250-17.23



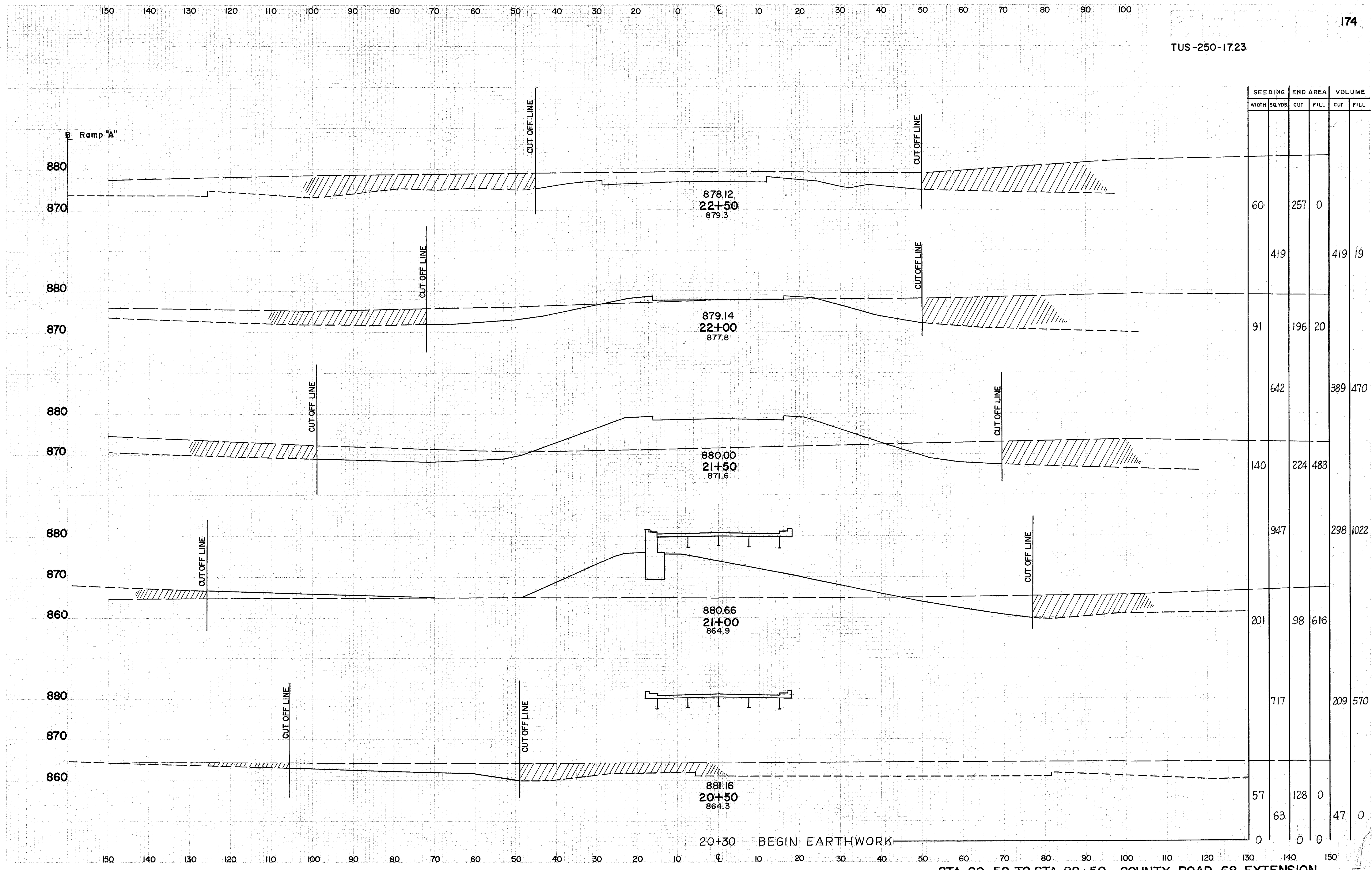
PLAN & PROFILE COUNTY ROAD 68 EXTENSION, 972+79.20

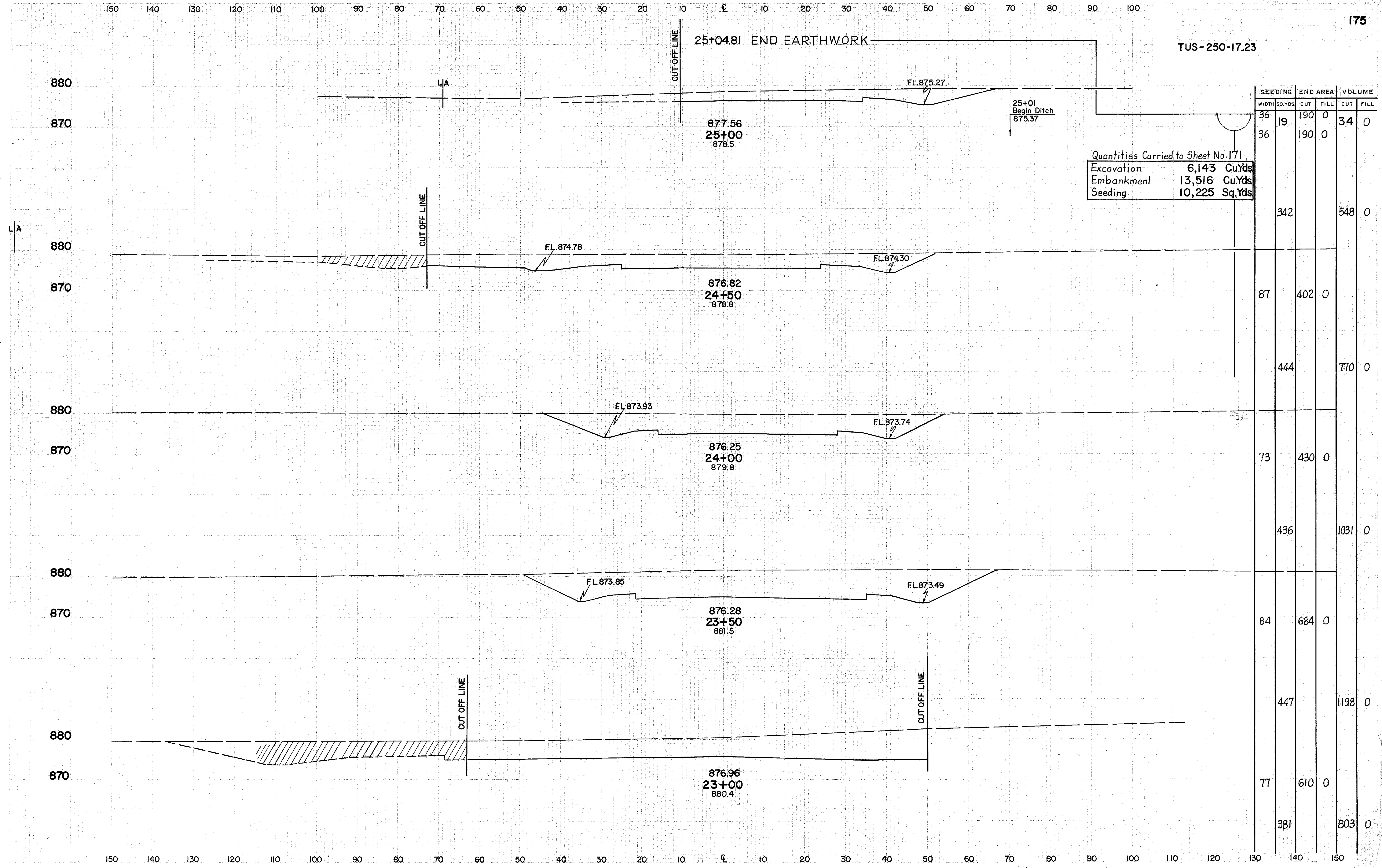
TUS-250-17.23



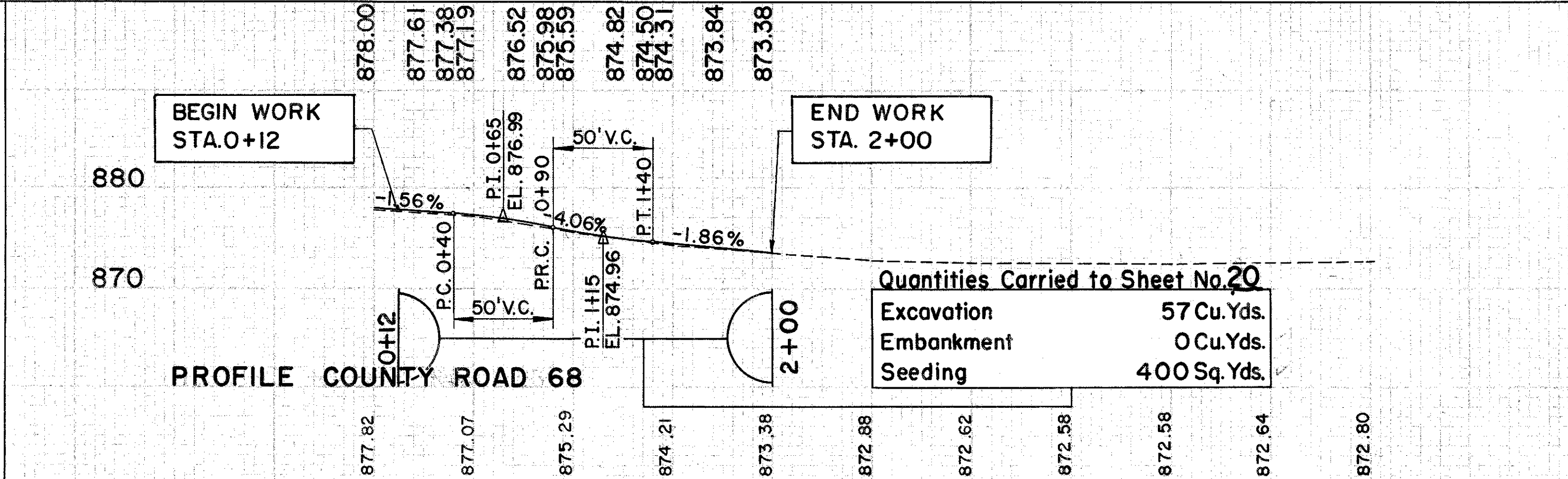


TUS-250-17.23

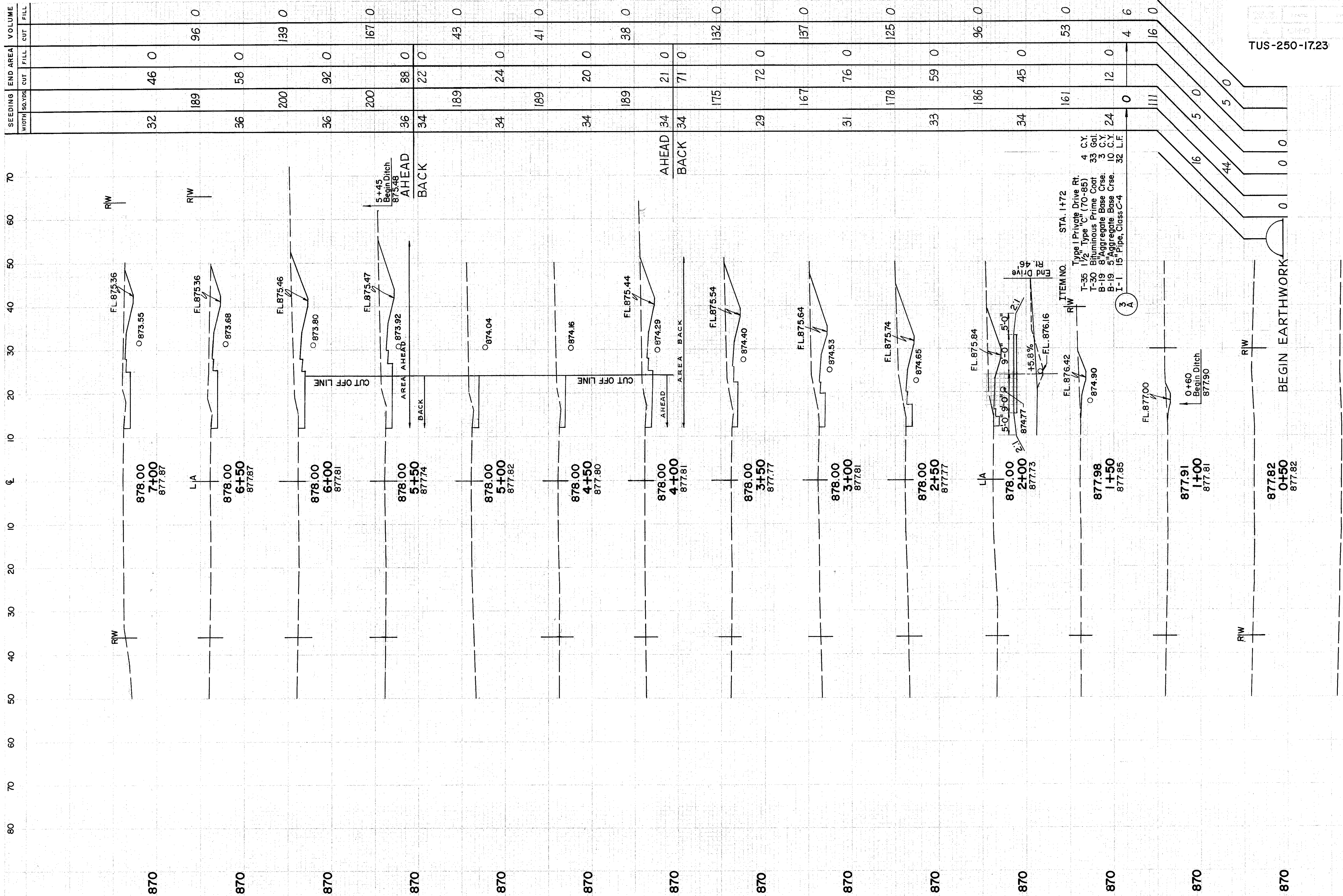




STA. 23+00 TO STA. 25+00 COUNTY ROAD 68 EXTENSION

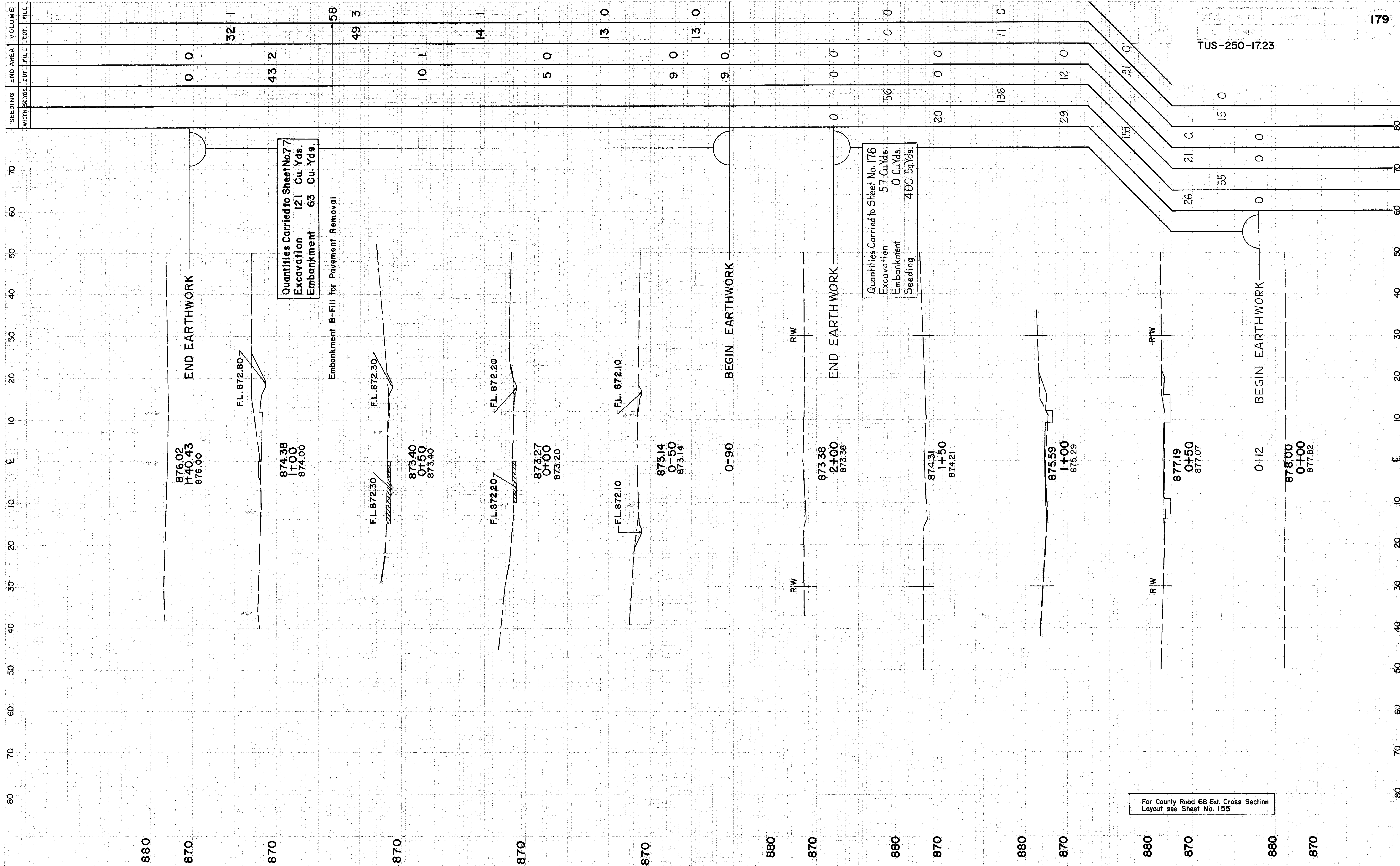


PLAN & PROFILE COUNTY ROADS 64 AND 68



TUS-250-17.23

For County Road 64 Cross Section
Layout see Sheet No. 155

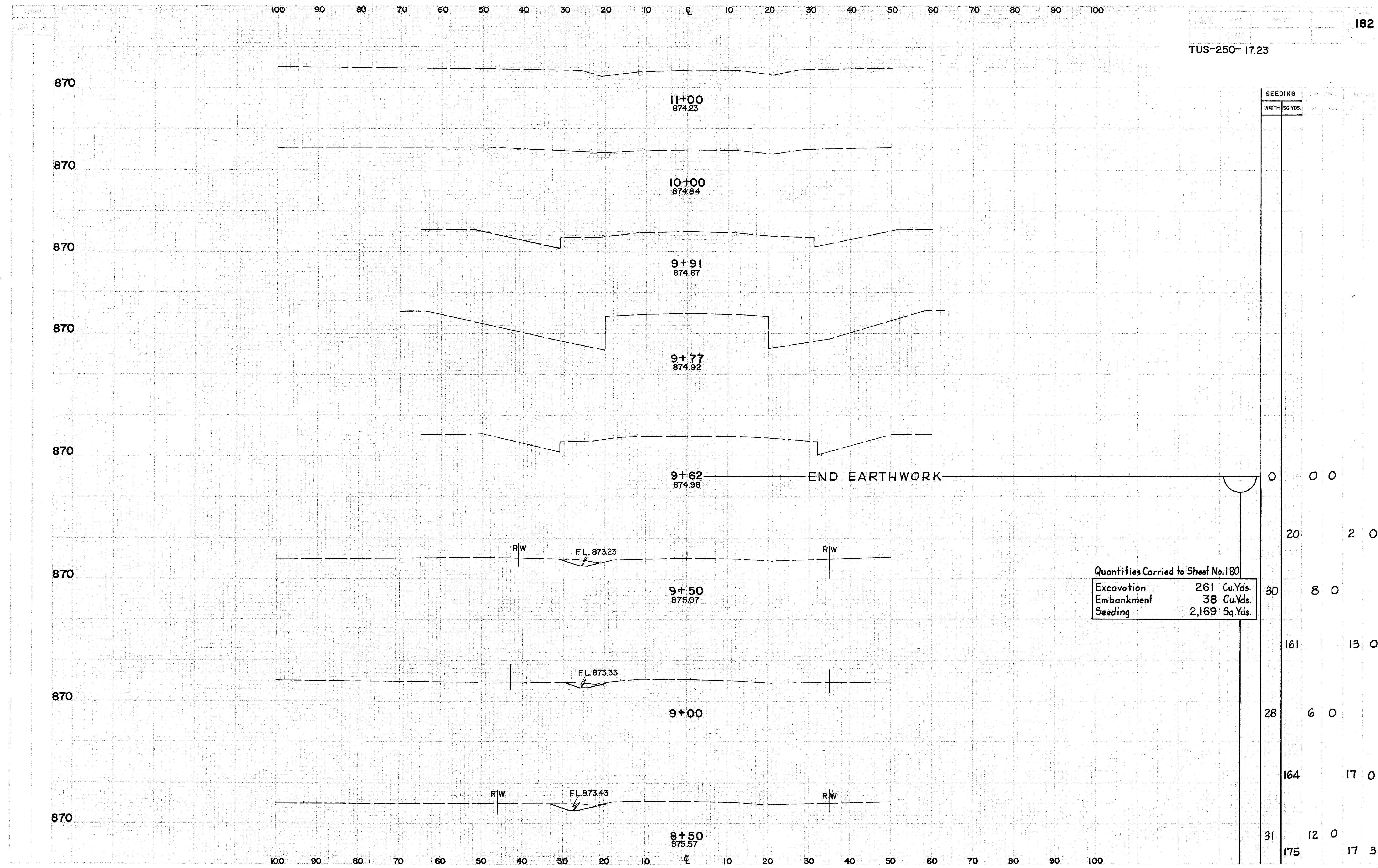


TUS-250-17.23

50	SEEDING		END AREA		VOLUME	
	WIDTH	SQ.YDS.	CUT	FILL	CUT	FILL
	43		27	1		
		222			48	2
	37		25	1		
		200			40	3
	35		18	2		
		194			29	4
	35		13	2		
		97			12	2
	0		0	0		

SEEDING		FIB. YDS.		FIB. YDS.	
WIDTH	SQ. YDS.				
32		6	3		
	178			13	6
32		8	3		
	181			15	6
33		8	3		
	189			16	5
35		9	2		
	194			17	4
35		9	2		
	194			22	3
35		15	1		

TUS-250-17.23



Quantities Carried to Sheet No. 180

Excavation	261 Cu.Yds.
Embankment	38 Cu.Yds.
Seeding	2,169 Sq.Yds.

SCALE: 1" = 30'



NOTE:
The shaded areas adjacent to TUS-250 shall be constructed of concrete pavement to an elevation 1/2" lower than the adjacent pavement and surfaced with T-31 using N#6 aggregate as maximum size. The shaded area shall be paid for as full depth T-71 and the surface treatment shall be paid for as T-31.

RAMPS A&B AT MIDVALE INTERCHANGE

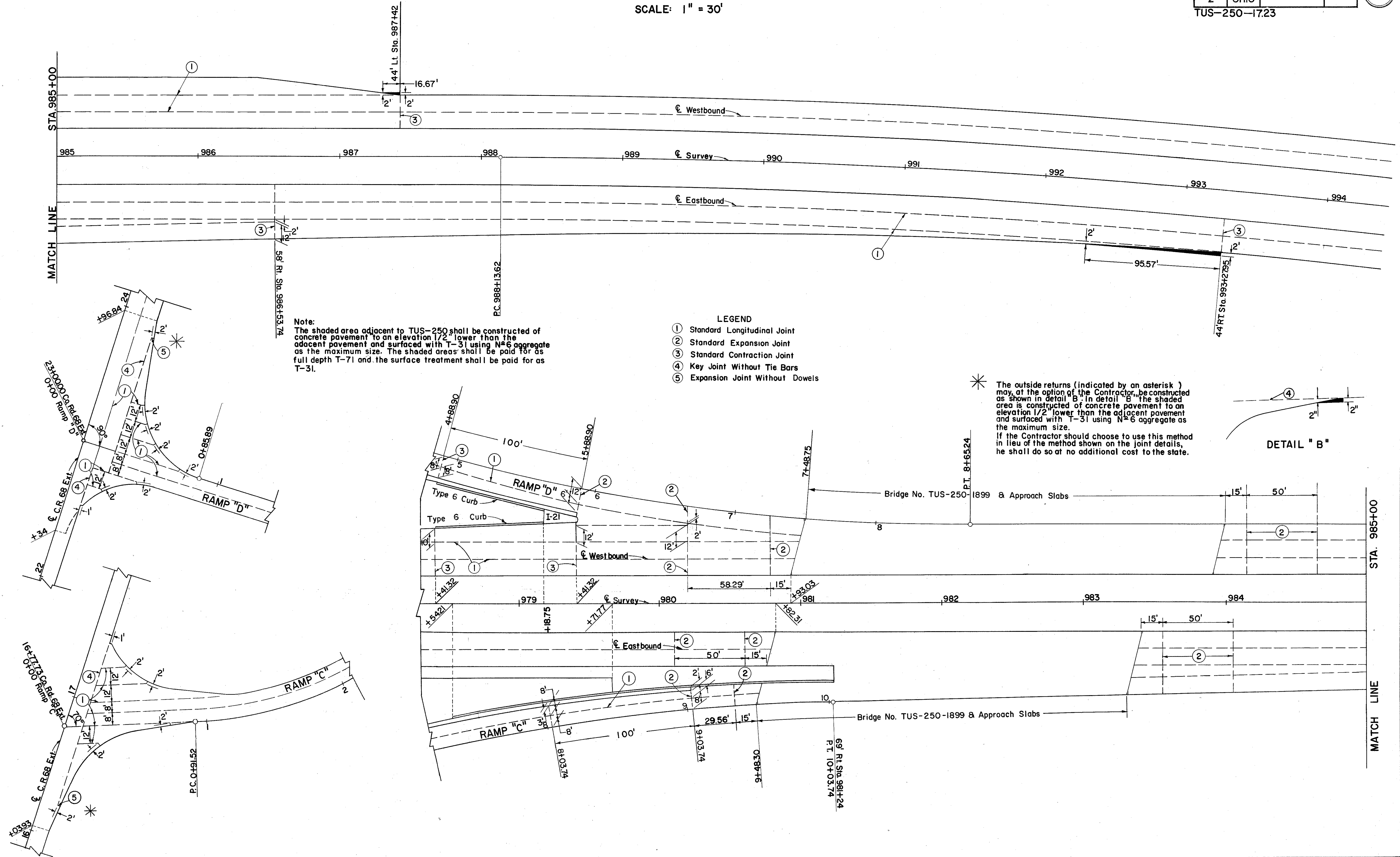
PAVEMENT JOINT DETAILS

SCALE: 1" = 30'

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

184

TUS-250-1723



RAMPS C & D AT MIDVALE INTERCHANGE

PAVEMENT JOINT DETAILS

SCALE: 1"= 30'

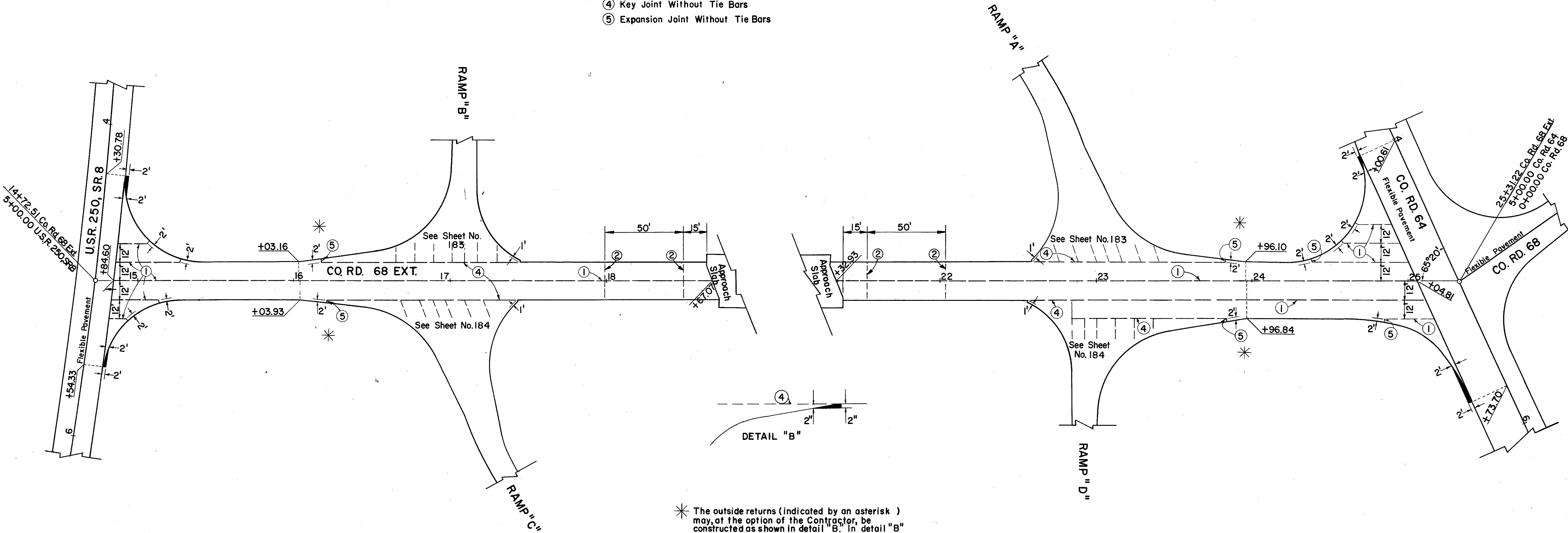
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

TUS-250-1723

185

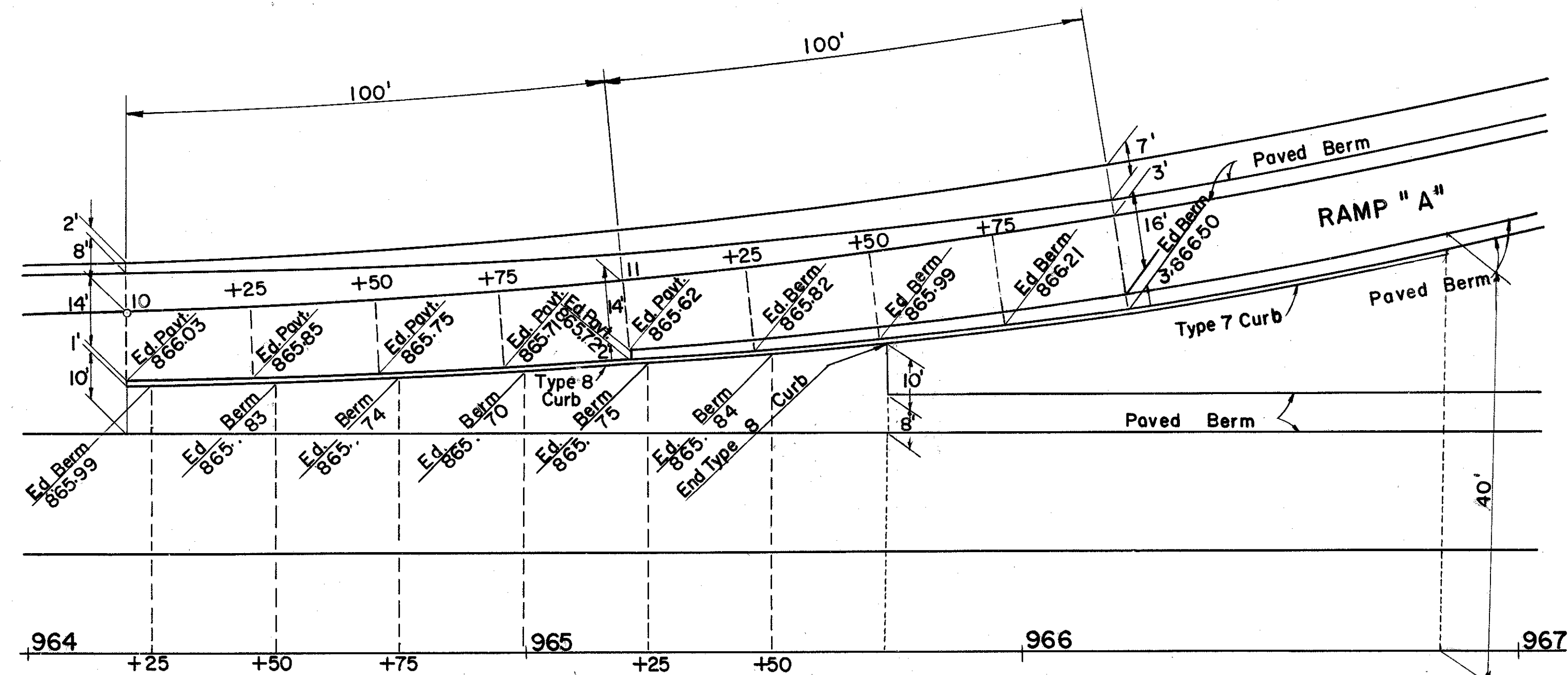
LEGEND

- ① Standard Longitudinal Joint
- ② Standard Expansion Joint
- ③ Standard Contraction Joint
- ④ Key Joint Without Tie Bars
- ⑤ Expansion Joint Without Tie Bars

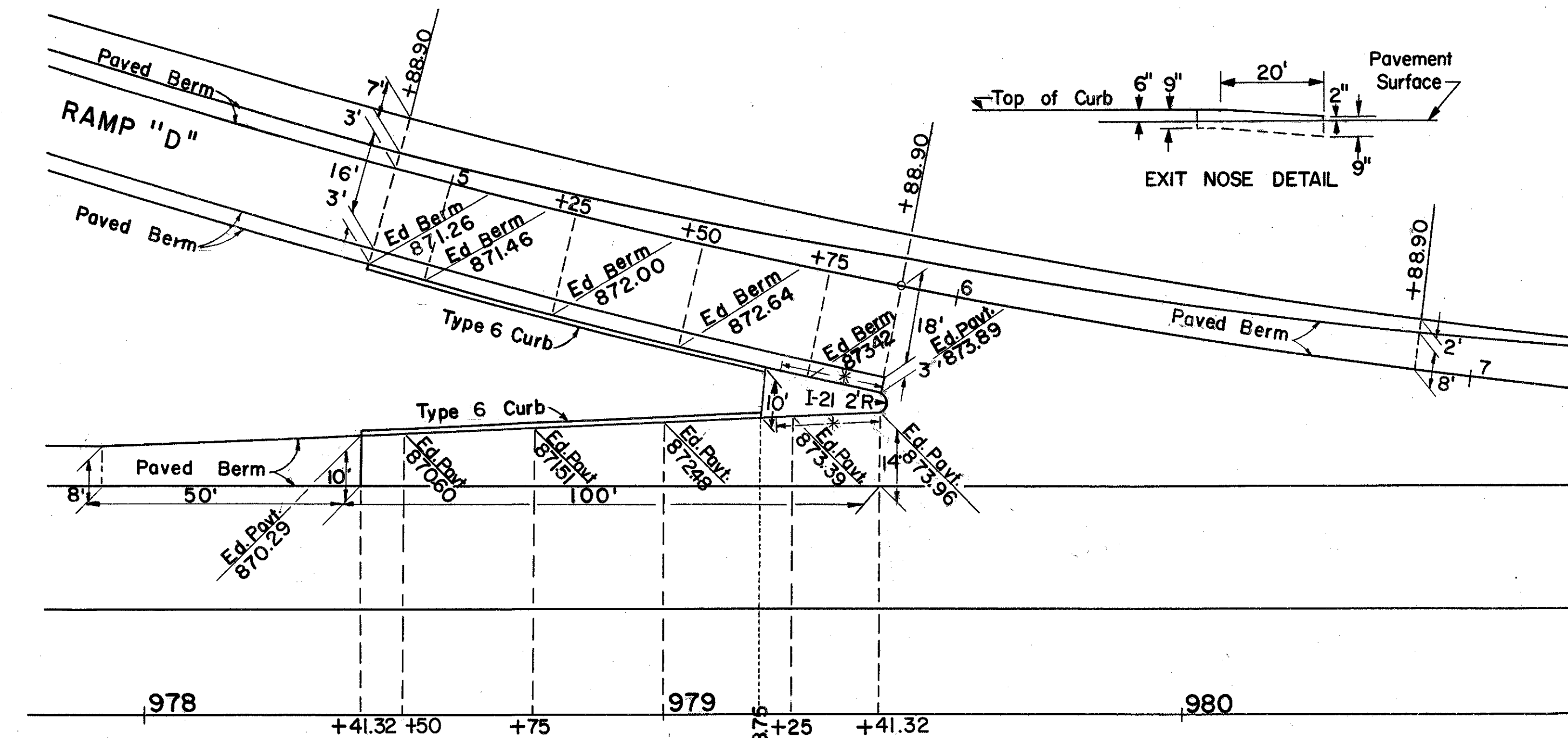


* The outside returns (indicated by an asterisk) may, at the option of the Contractor, be constructed as shown in detail "B". In detail "B" the shaded area is constructed of concrete pavement to an elevation 1/2" lower than the adjacent pavement and surfaced with T-31 using N#6 aggregate as the maximum size. If the Contractor should choose to use this method in lieu of the method shown on the joint details, he shall do so at no additional cost to the state.

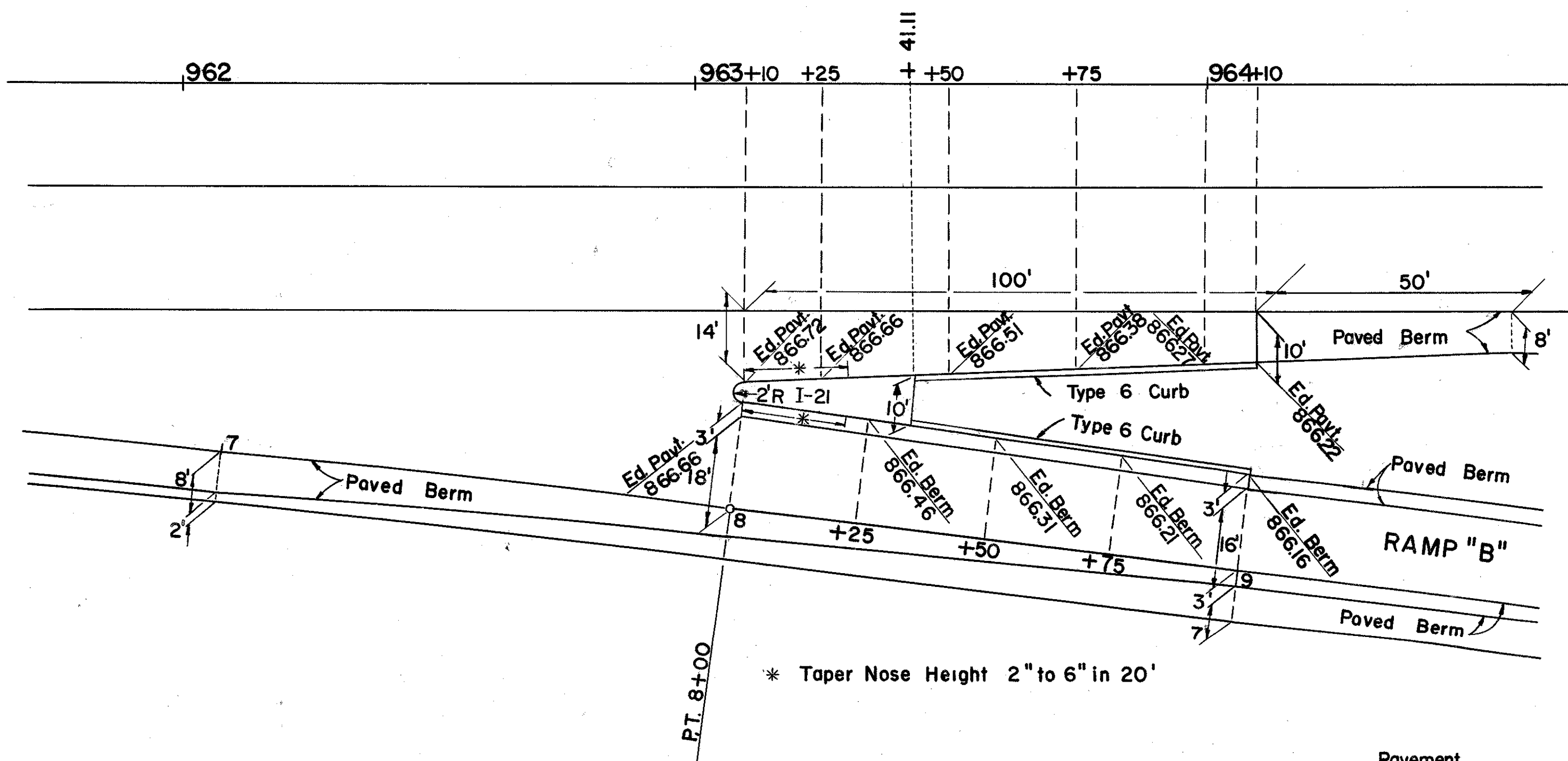
Note:
The shaded areas adjacent to Co. Rd. 64 & U.S.R. 250, SR. 8 shall be constructed of concrete pavement to an elevation 1/2" lower than the adjacent pavement and surfaced with T-31 using N#6 aggregate as the maximum size. These shaded areas shall be paid for as full depth T-71 and the surface treatment shall be paid for as T-31.



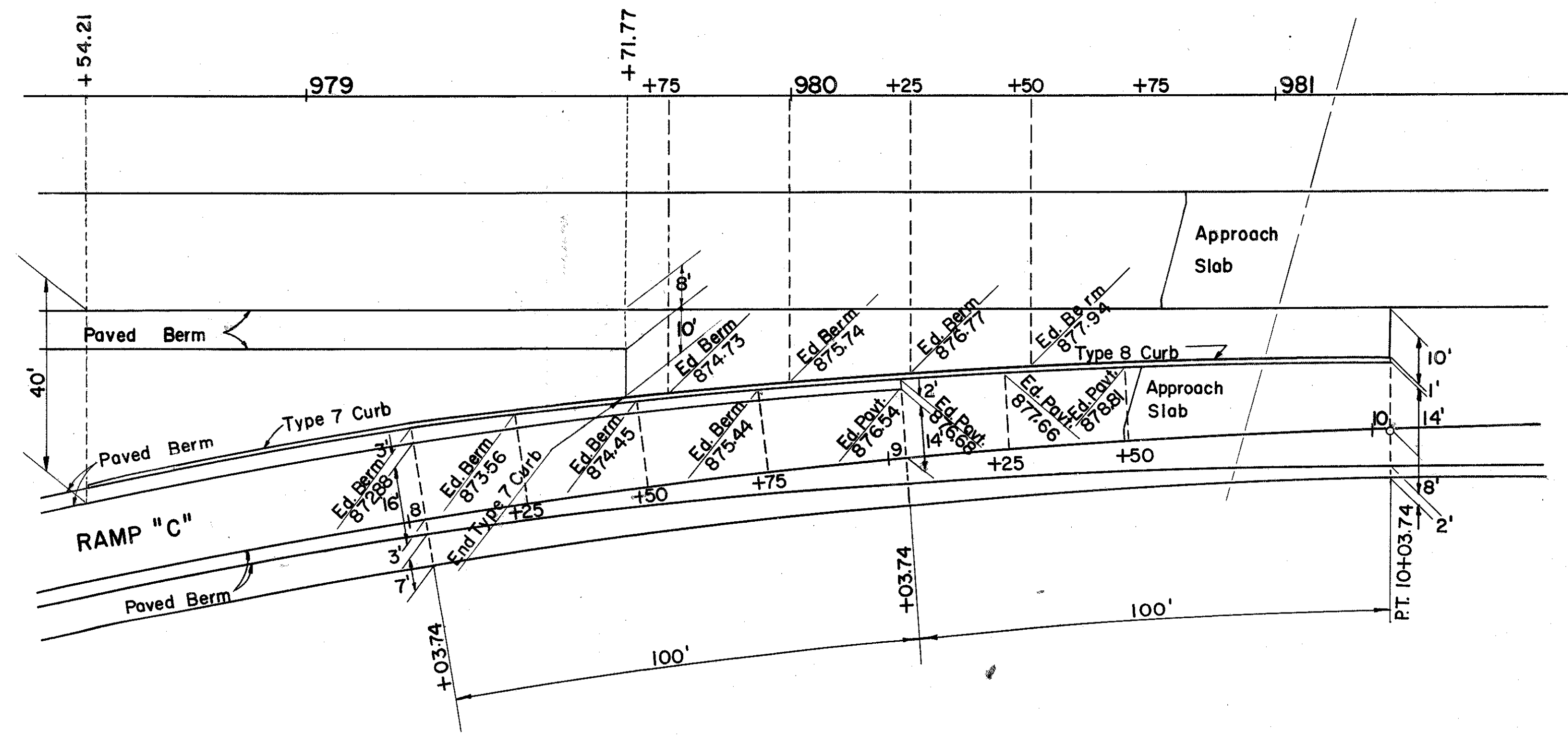
DETAIL ENTRANCE TERMINAL RAMP "A"
Scale: 1" = 20'



DETAIL EXIT TERMINAL RAMP "D"
Scale: 1" = 20'

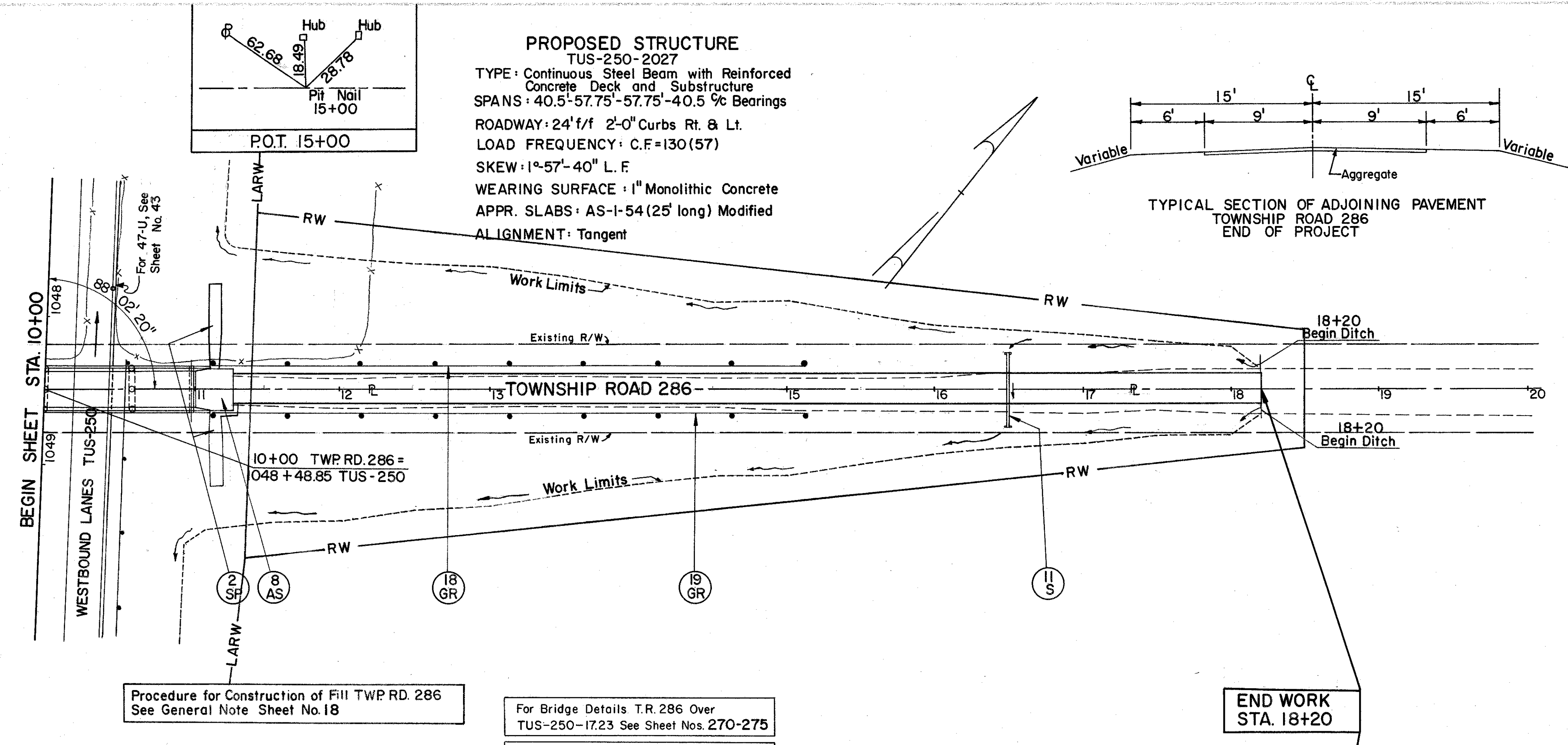
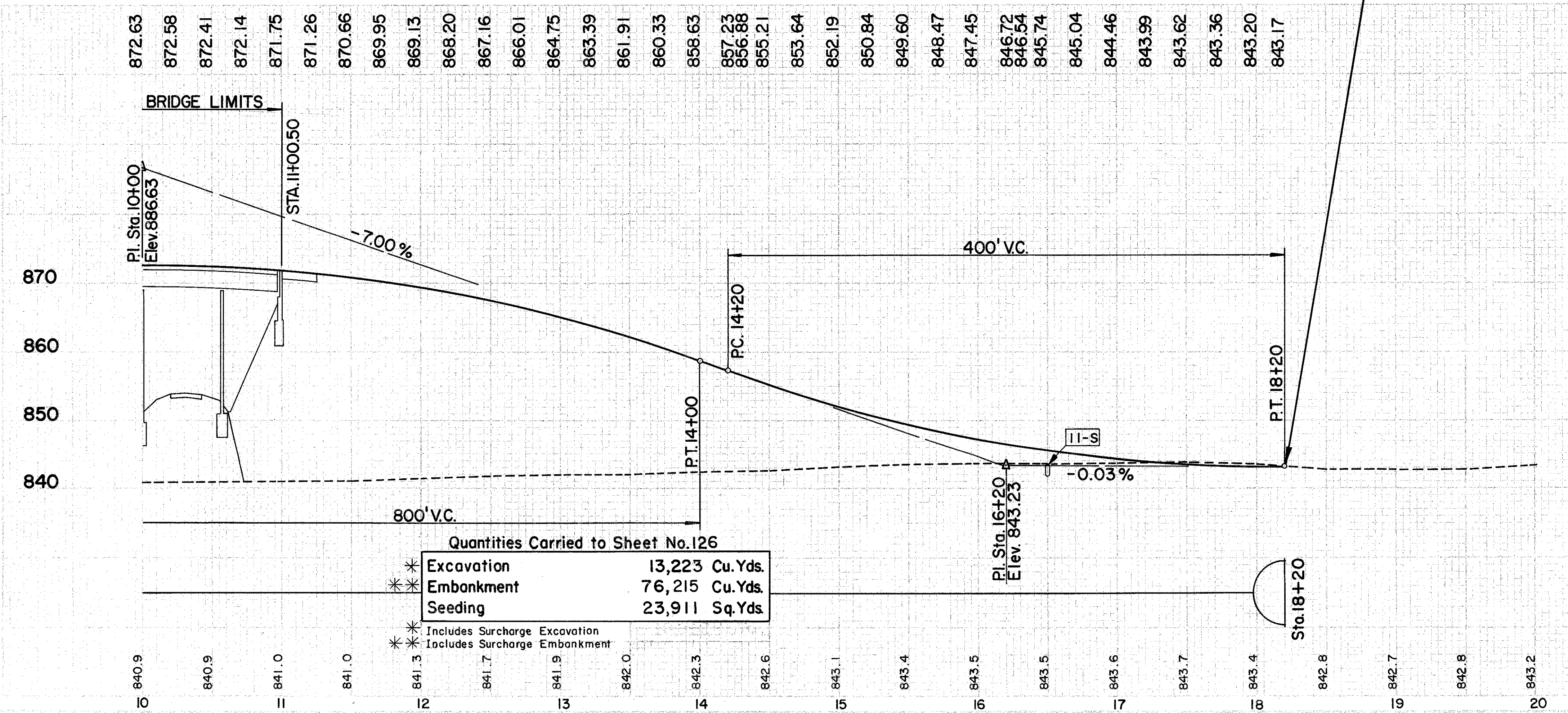


DETAIL EXIT TERMINAL RAMP "B"
Scale: 1" = 20'



DETAIL ENTRANCE TERMINAL RAMP "C"
Scale: 1" = 20'

TUS-250-17.23



Quantities Carried to Sheet No. 126

Excavation	13,223 Cu.Yds.
Embankment	76,215 Cu.Yds.
Seeding	23,911 Sq.Yds.

* Includes Surcharge Excavation
* Includes Surcharge Embankment

ESTIMATED QUANTITIES									
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1-1	CLASS A-1 M-6.8(b) 18' L.F.	L.F.	50			1-15	GUARD RAIL STD. L.F.	L.F.	375
1-7	CONC. APPR. SLABS S.Y.	S.Y.	73.0			1-15	GUARD RAIL STD. L.F.	L.F.	375
1-8	GR 11+13-14+88	Lt.				1-15	GUARD RAIL STD. L.F.	L.F.	375
1-9	GR 11+13-14+88	Rt.				1-15	GUARD RAIL STD. L.F.	L.F.	375
1-10	GR 16+50	℄	3.0			1-15	GUARD RAIL STD. L.F.	L.F.	375
2-SP	10+00	Lt.Rt.				1-15	GUARD RAIL STD. L.F.	L.F.	375

120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

840



0+40.70
843.5

840



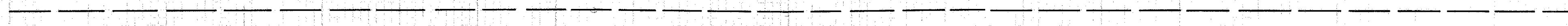
0+22.72
844.43

840



0+03.82
844.24

840



0+00
843.9

120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

TUS-250-17.23

840

840

840

840

R.W.

FL. 841.40

FL. 841.40

R.W.

1+75
Begin Ditch
841.50

842.86
2+00
842.8

1+75
Begin Ditch
841.50

1+75

BEGIN EARTHWORK

1+50
842.6

1+00
842.4

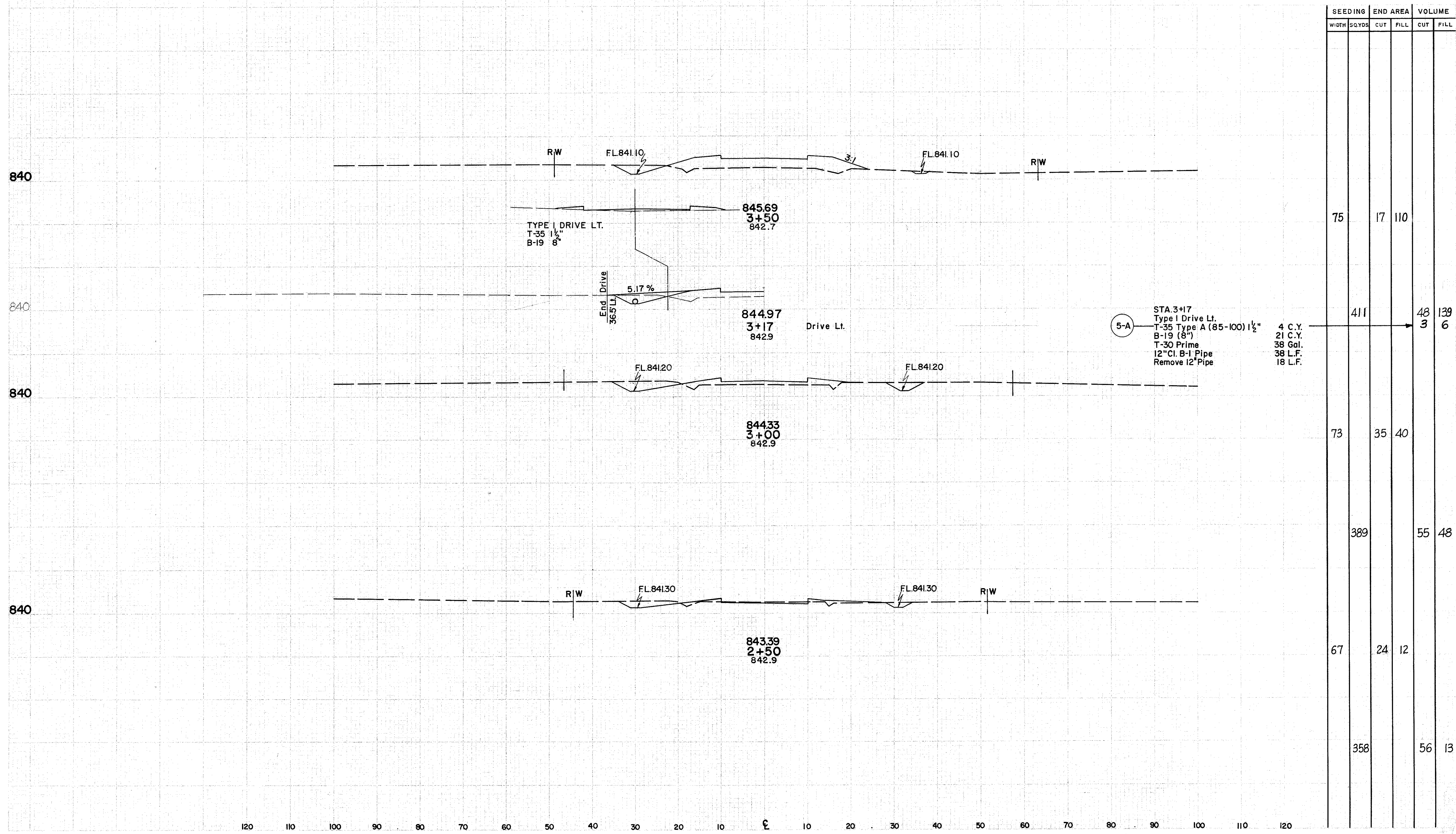
0+50
843.2

SEEDING		END AREA		VOLUME	
WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
62		37	2		
62	172	37	2	34	2

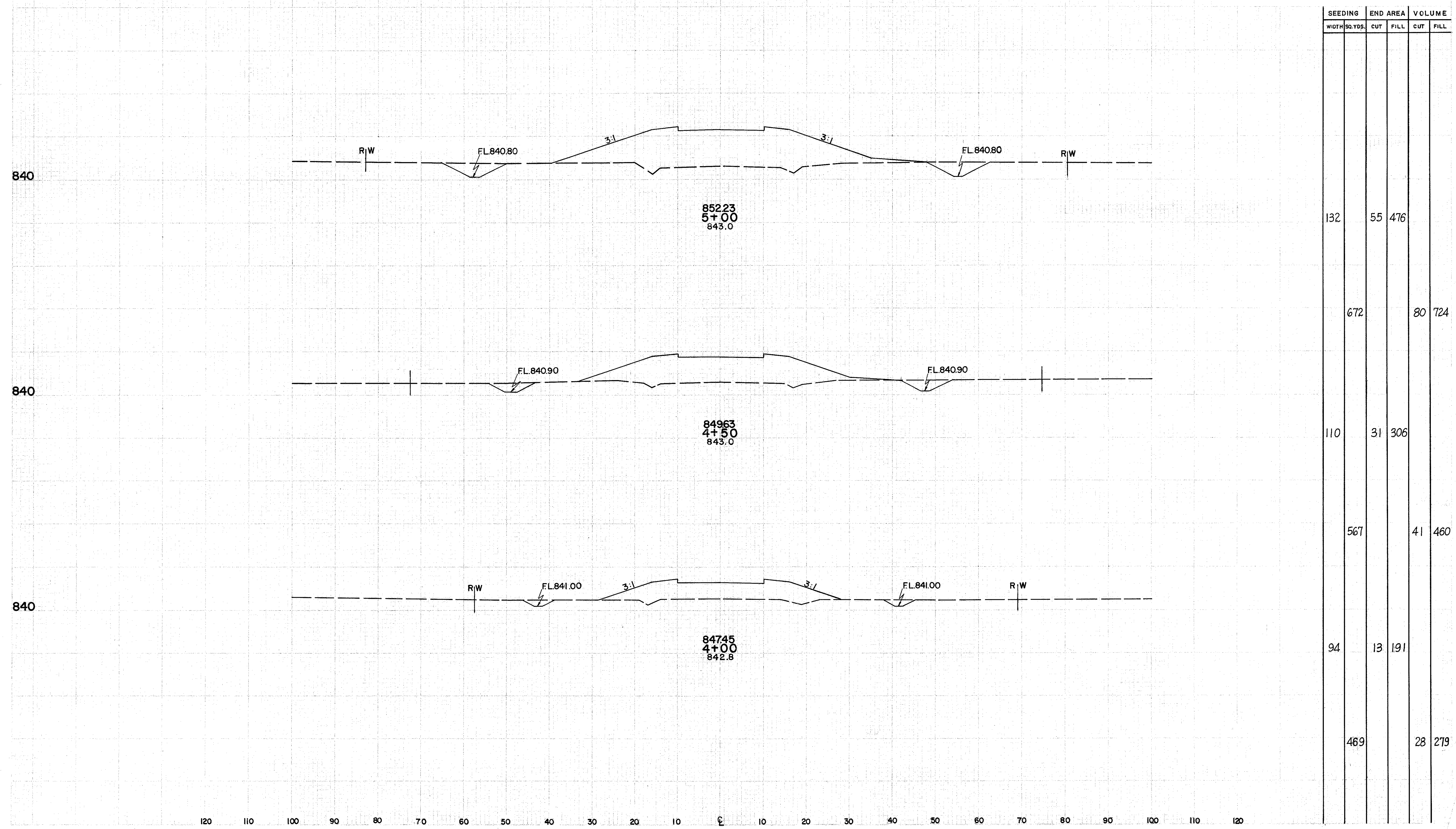
120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

TOWNSHIP ROAD 286 STA. 0+50 TO STA. 2+00

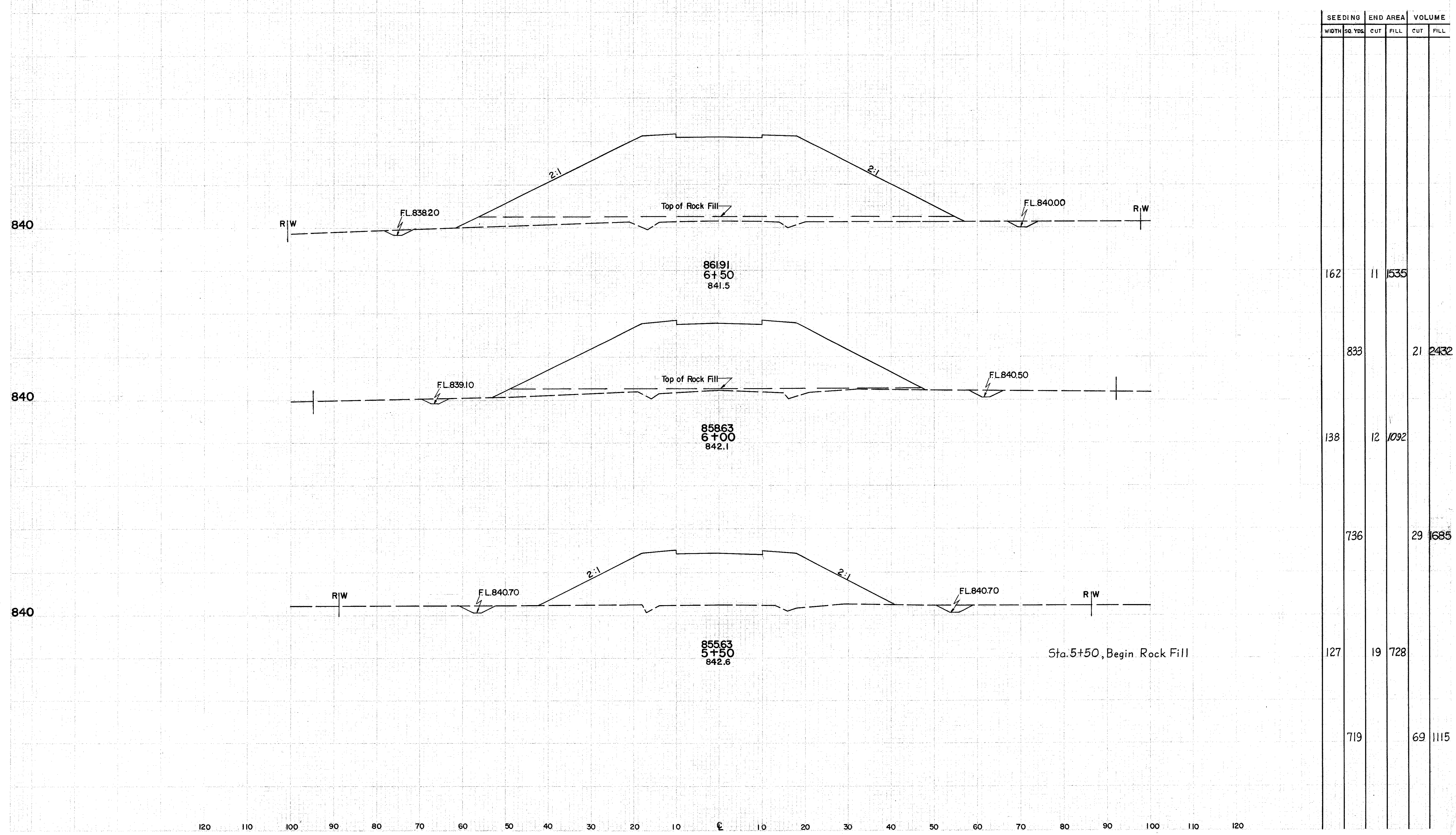
TUS-250-17.23



SEEDING		END AREA		VOLUME	
WIDTH	SQ.YDS	CUT	FILL	CUT	FILL
75		17	110		
411		48	139	3	6
73		35	40		
389		55	48		
67		24	12		
358		56	13		

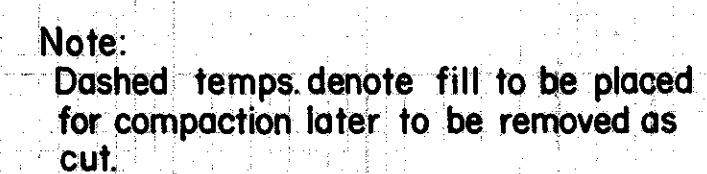


SEEDING		END AREA		VOLUME	
WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
132		55	476		
672			80	724	
110		31	306		
567			41	460	
94		13	191		
469			28	279	



SEEDING		END AREA		VOLUME	
WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
162	11	1535			
833	21	2432			
138	12	1092			
736	29	1685			
127	19	728			
719	69	1115			





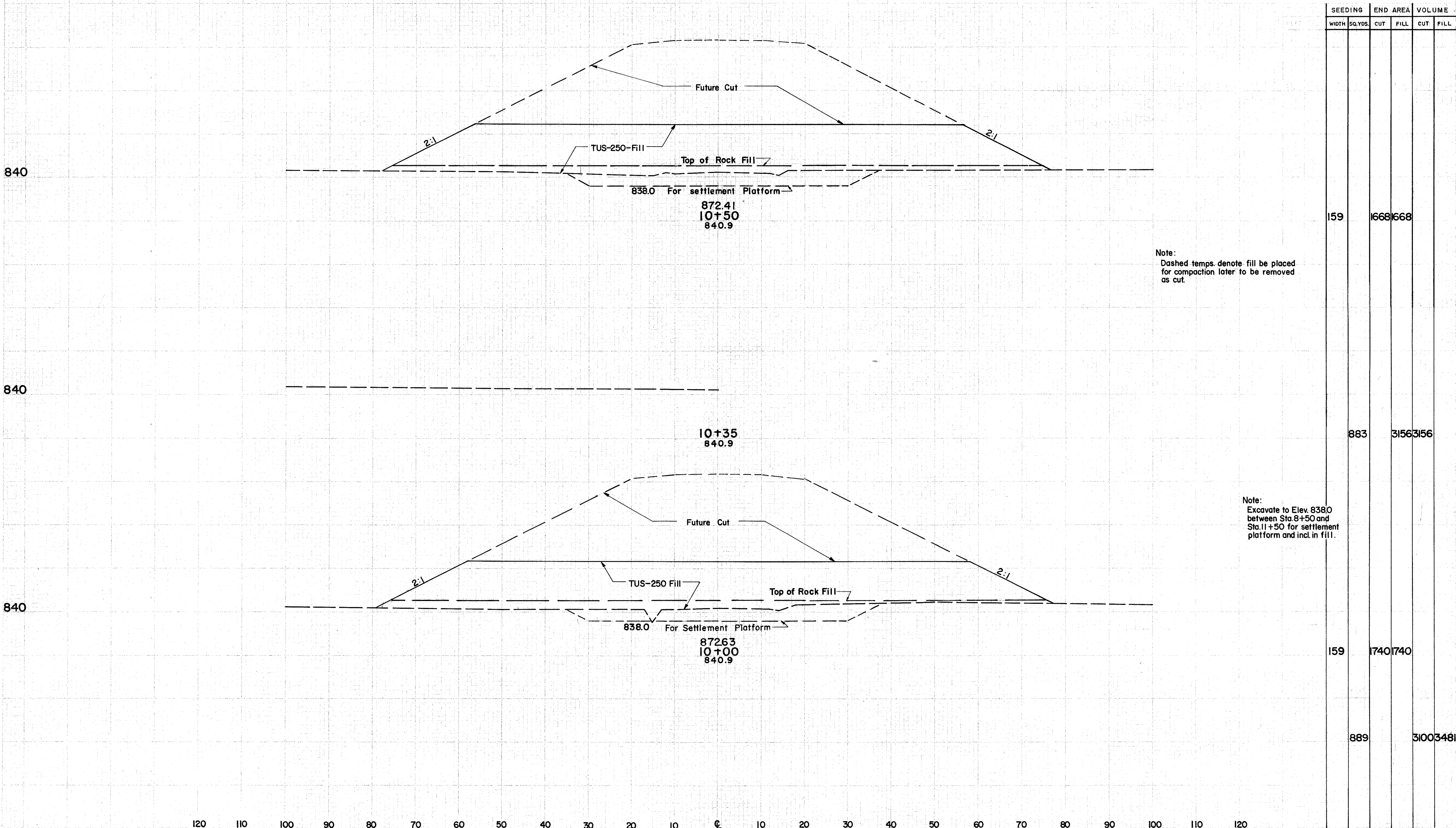
Note:
Excavate to Elev. 838.0
between Sta. 8+50 and
Sta. 11+50 for settlement
platform and incl. in fill.

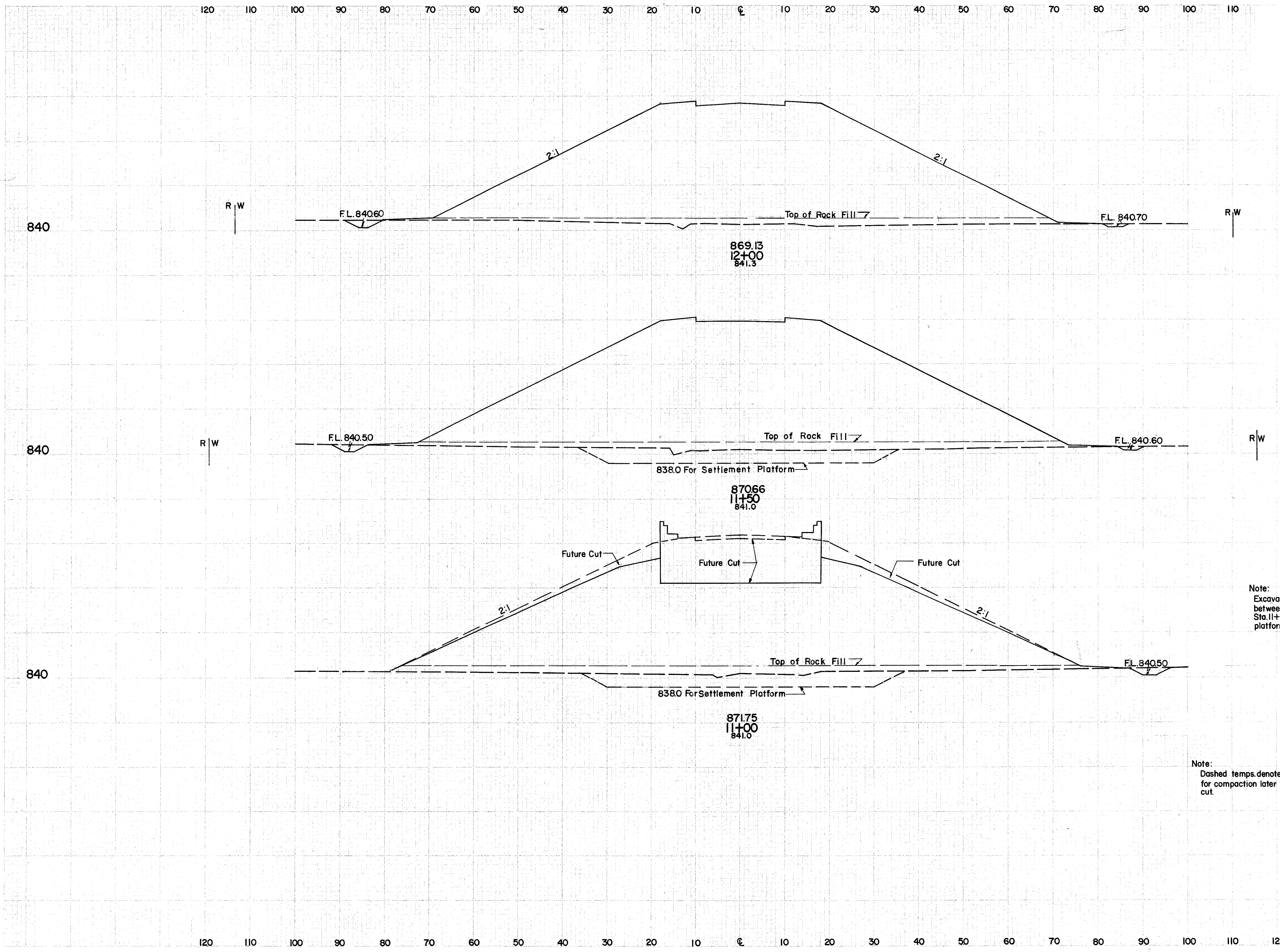
SEEDING		END AREA		VOLUME	
WIDTH	SG.YDS.	CUT	FILL	CUT	FILL
161		1608	2020		
	861			2081	5187
149		640	3582		
	881			672	6567
168		86	3510		
168		0	3424		
	981			4	5936

RW
AHEAD
BACK

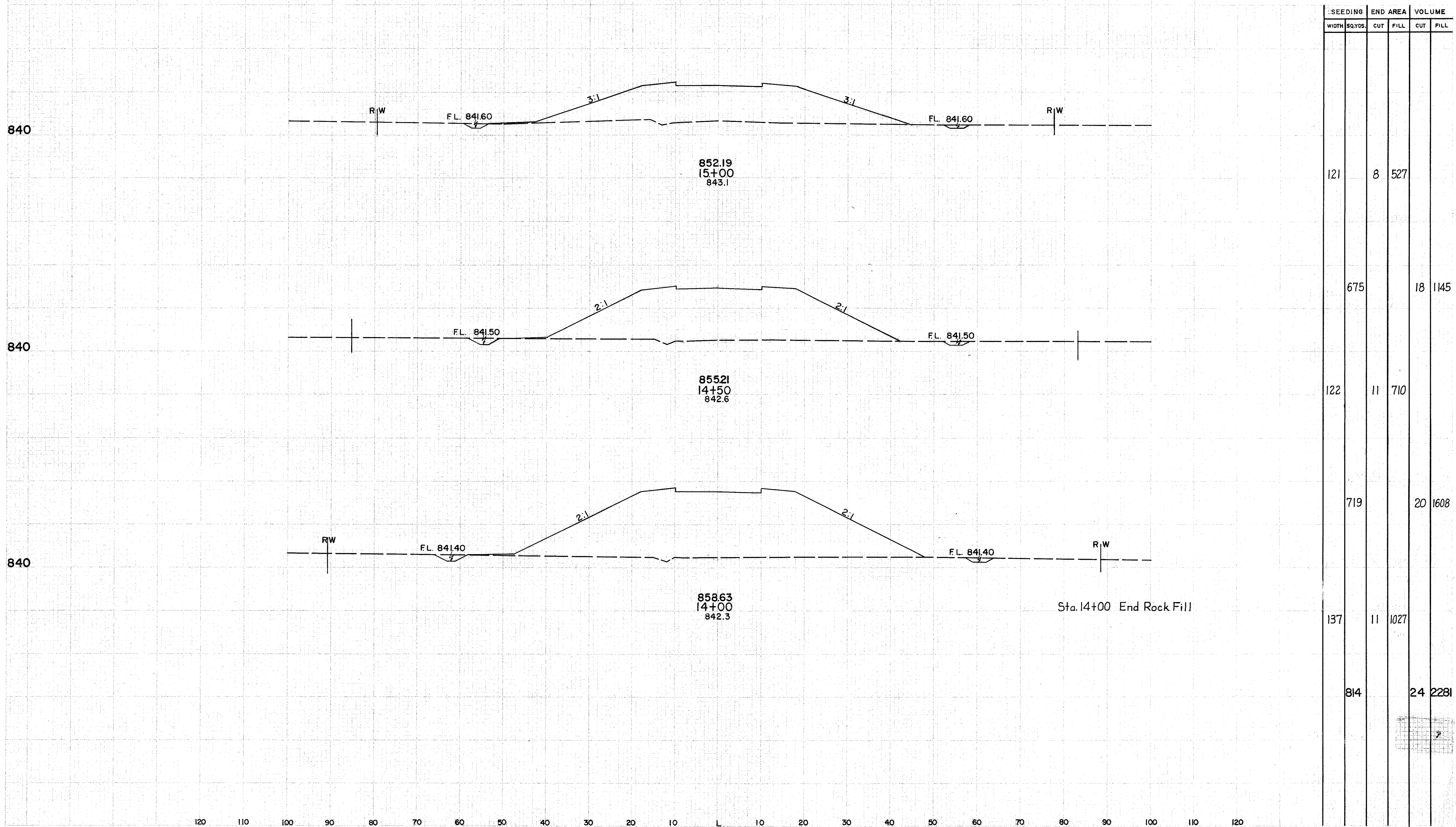
For Culvert IO-S Sta. 8+50
See Sheet No. 214

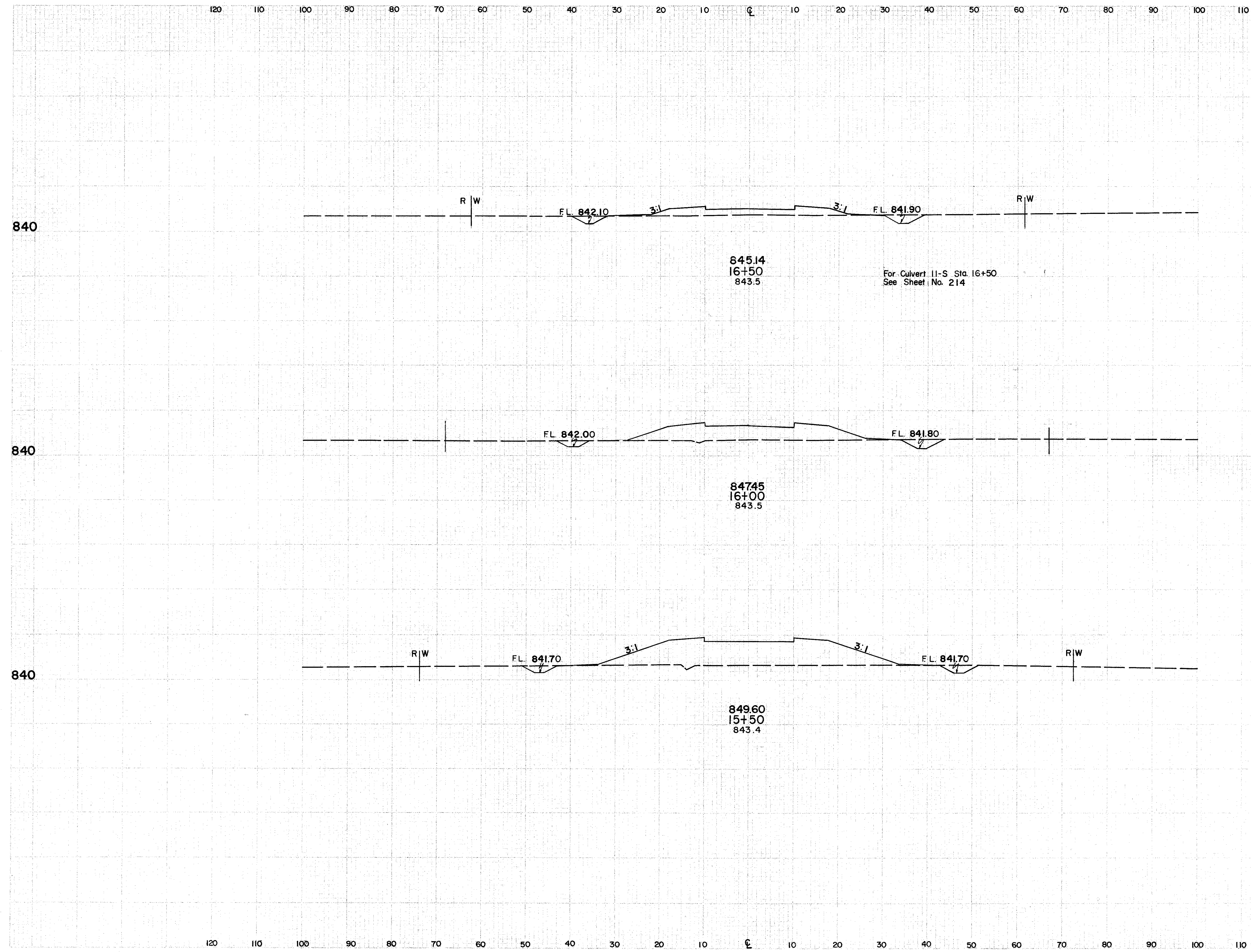
TUS-250-17.23





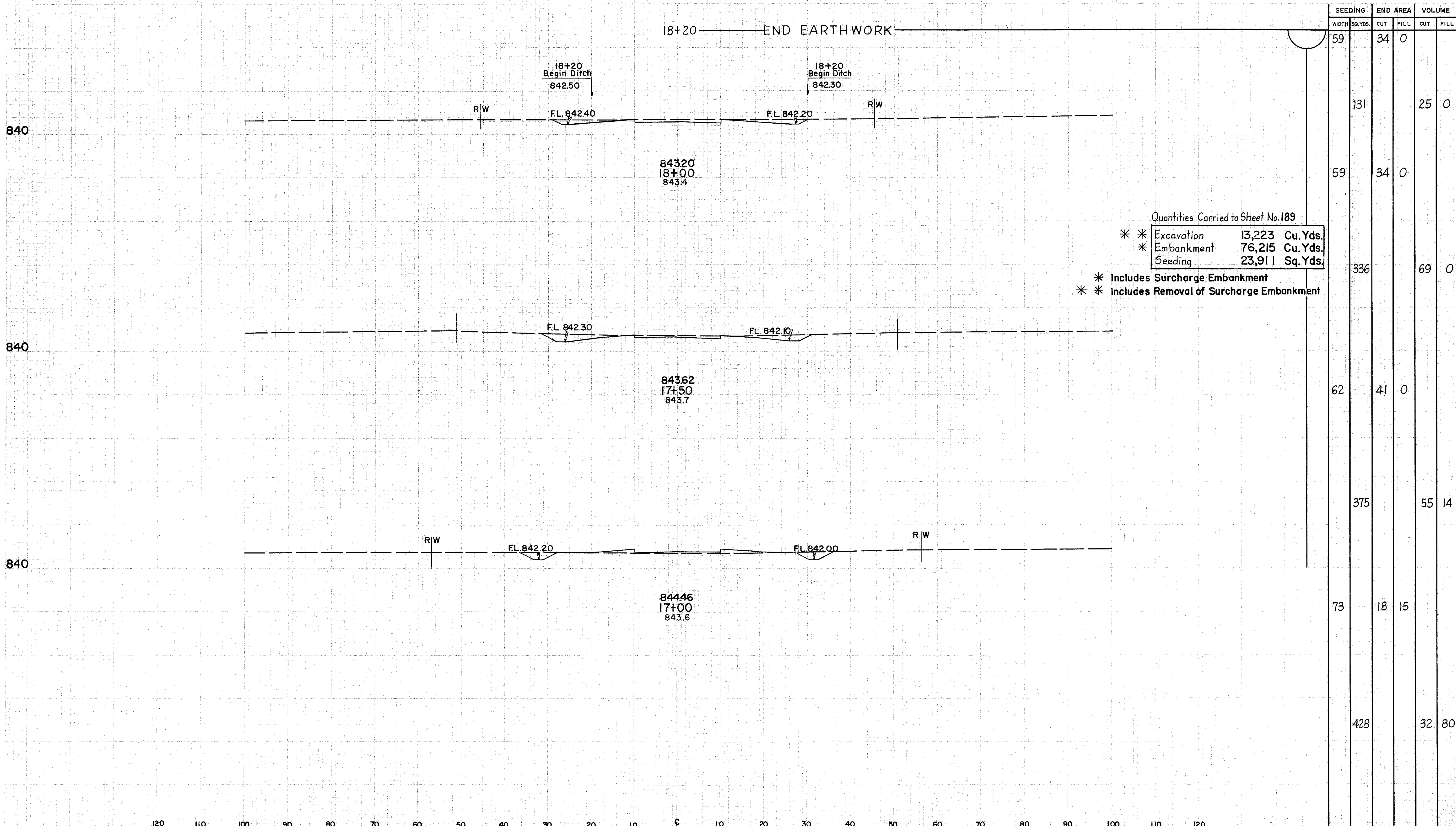
SEEDING		END AREA		VOLUME	
WIDTH	SQ.YDS.	CUT	FILL	CUT	FILL
190	12	2413			
1081			198	4931	
199	202	2912			
1067			872	5596	
185	740	3132			
956			2230	4444	





SEEDING		END AREA		VOLUME	
WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
81		17	71		
	472			34	207
89		20	153		
	542			33	416
106		16	296		
	631			22	762

TUS-250-17.23

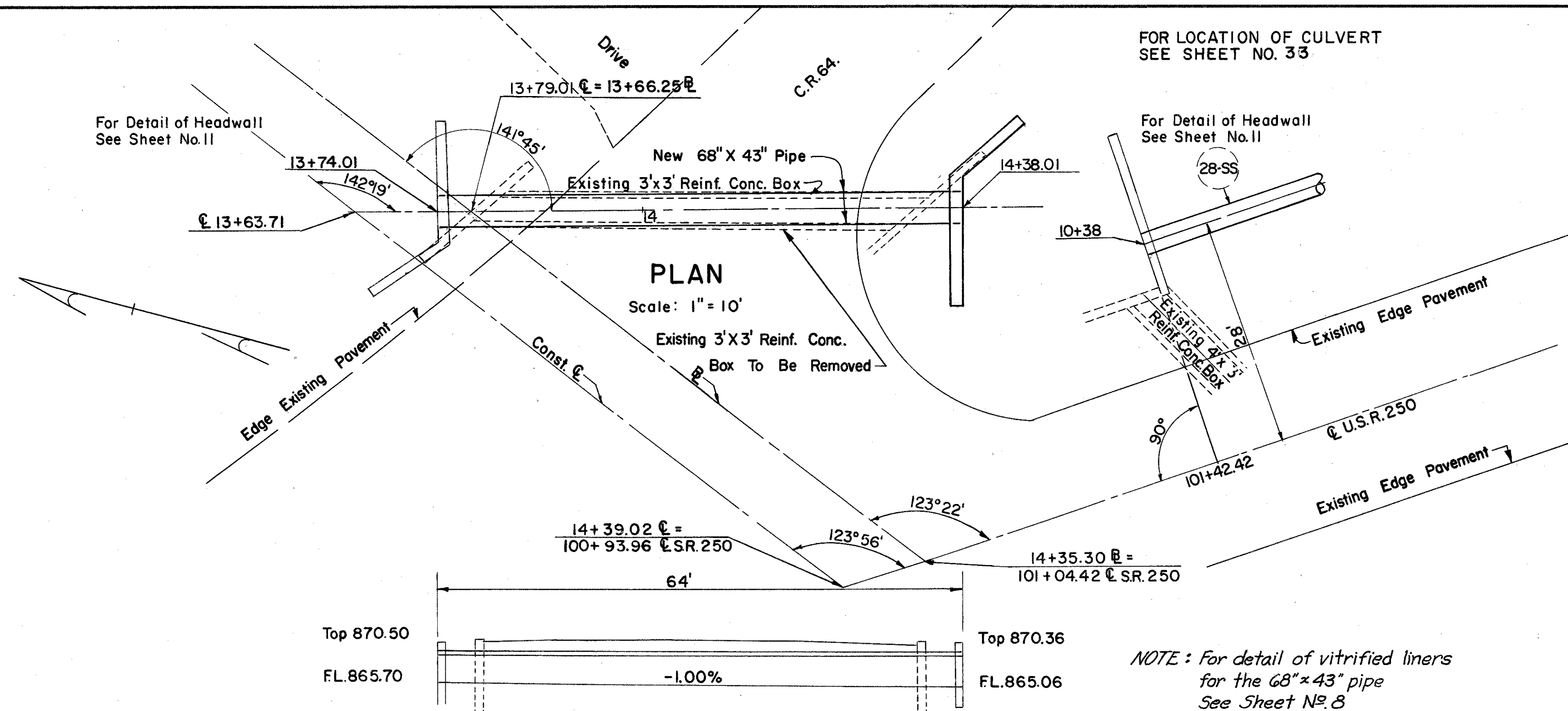


Quantities Carried to Sheet No. 189

* *	Excavation	13,223	Cu. Yds.
* *	Embankment	76,215	Cu. Yds.
	Seeding	23,911	Sq. Yds.

* Includes Surcharge Embankment
* Includes Removal of Surcharge Embankment

TUS-250-17.23



For Reinforcing Details of Endwalls
See Sheet No. 11

ESTIMATED QUANTITIES

I-1	68"x43" Reinforced Elliptical Conc. Pipe	64 L.F.
I-2	Vit. Lined Class G-1, Sec. M-6.7(b)	304 C.Y.
S-24	Masonry Removal of Existing Structure	L.S.

Quantities Carried to Sheet No. 33

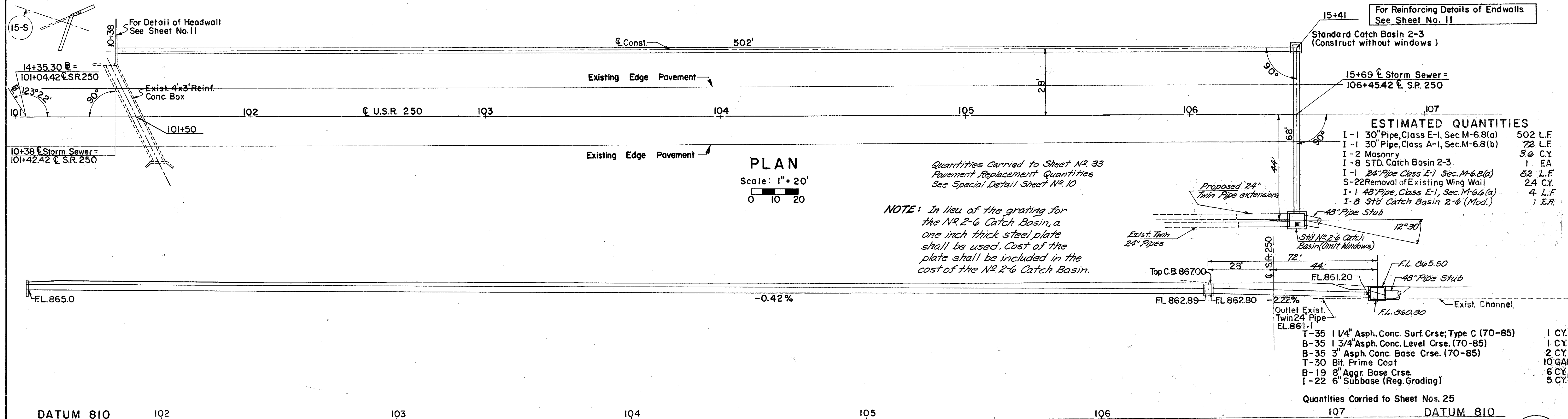
Pavement Replacement Quantities
See Special Detail Sheet No. 10

T-35	1 1/4" Asph. Conc. Surf. Crse; Type C (70-85)	2 CY.
B-35	1 3/4" Asph. Conc. Level Crse. (70-85)	3 CY.
B-35	3" Asph. Conc. Base Crse. (70-85)	5 CY.
T-30	Bit. Prime Coat	22 GAL.
B-19	8" Aggr. Base Crse.	13 CY.
I-22	6" Subbase (Reg. Grading)	10 CY.

Quantities Carried to Sheet Nos. 25

15-S

**STA. 14+10
68"x43" REINF. ELLIPTICAL
CONC. PIPE CULVERT**



For Reinforcing Details of Endwalls
See Sheet No. 11

Standard Catch Basin 2-3
(Construct without windows)

15+69 Storm Sewer =
106+45.42 S.R. 250

ESTIMATED QUANTITIES

I-1	30" Pipe, Class E-1, Sec. M-6.8(a)	502 L.F.
I-1	30" Pipe, Class A-1, Sec. M-6.8(b)	72 L.F.
I-2	Masonry	3.6 C.Y.
I-8	STD. Catch Basin 2-3	1 EA.
I-1	24" Pipe Class E-1, Sec. M-6.8(a)	52 L.F.
S-22	Removal of Existing Wing Wall	2.4 C.Y.
I-1	48" Pipe, Class E-1, Sec. M-6.6(a)	4 L.F.
I-8	Std Catch Basin 2-6 (Mod.)	1 EA.

Quantities Carried to Sheet No. 33
Pavement Replacement Quantities
See Special Detail Sheet No. 10

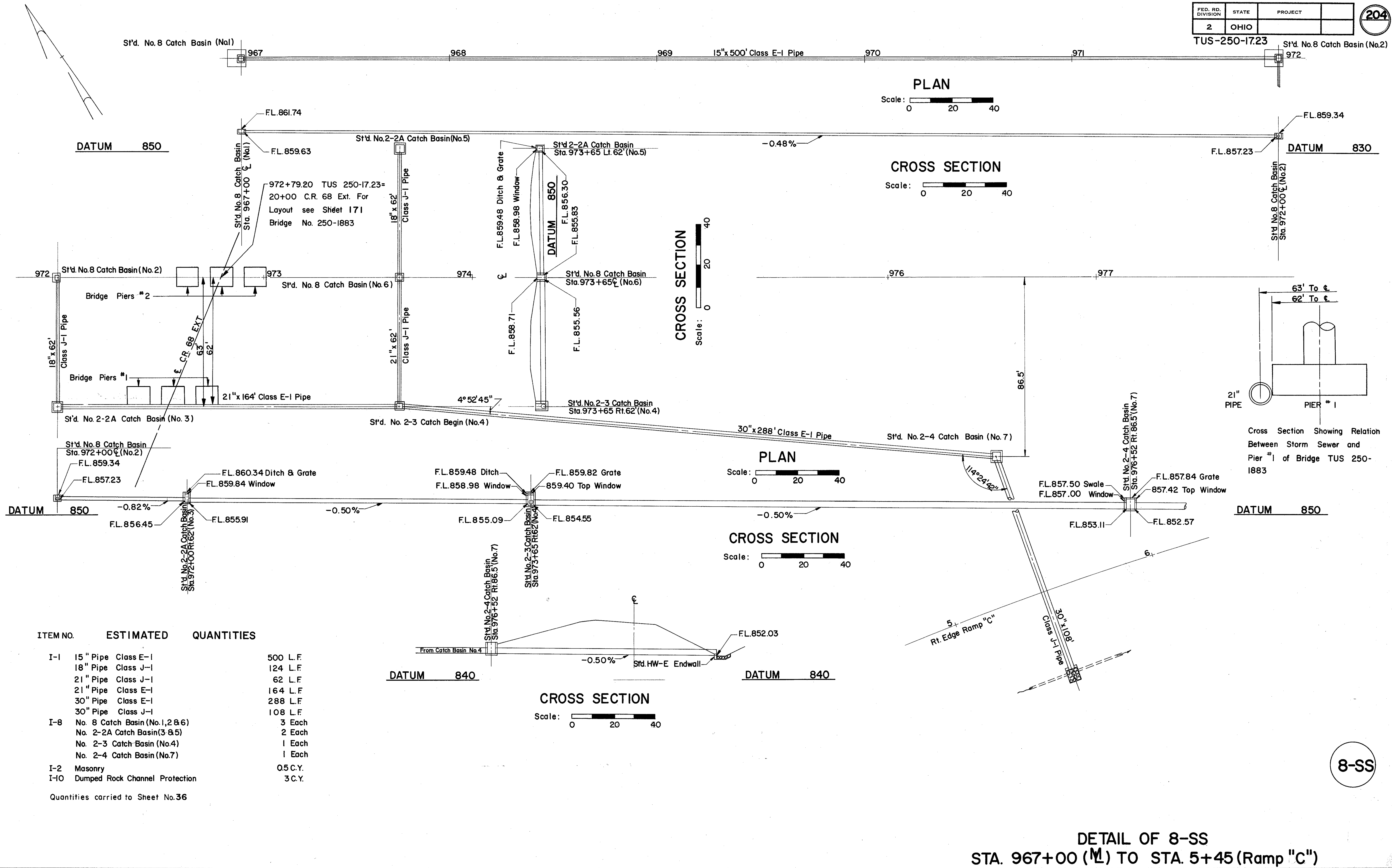
NOTE: In lieu of the grating for the No. 2-6 Catch Basin, a one inch thick steel plate shall be used. Cost of the plate shall be included in the cost of the No. 2-6 Catch Basin.

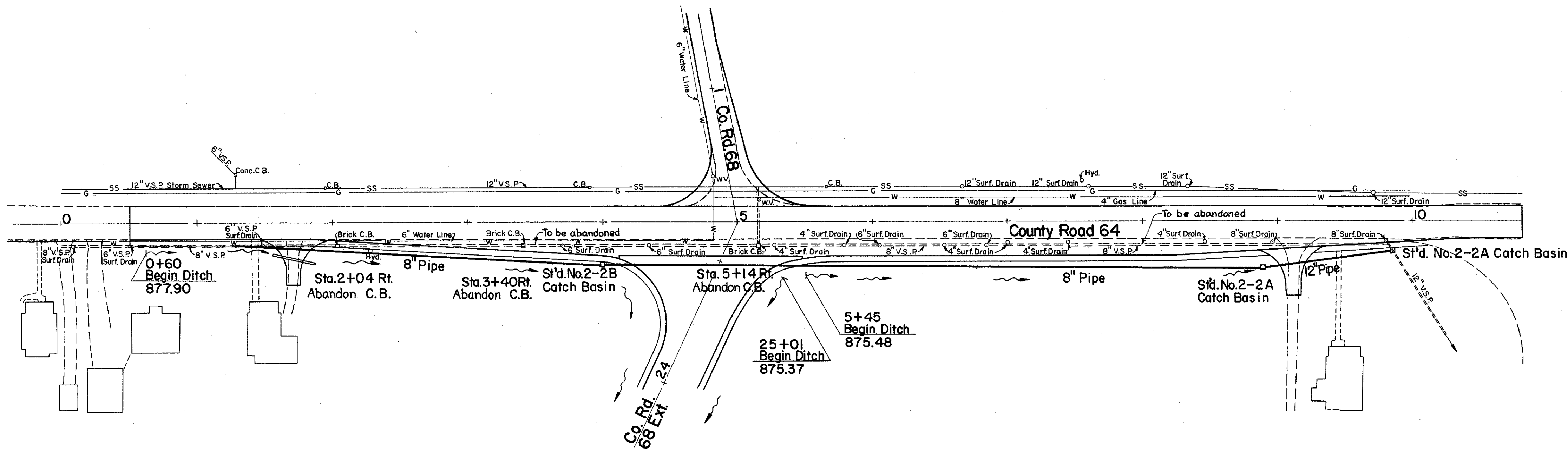
T-35	1 1/4" Asph. Conc. Surf. Crse; Type C (70-85)	1 CY.
B-35	1 3/4" Asph. Conc. Level Crse. (70-85)	1 CY.
B-35	3" Asph. Conc. Base Crse. (70-85)	2 CY.
T-30	Bit. Prime Coat	10 GAL.
B-19	8" Aggr. Base Crse.	6 CY.
I-22	6" Subbase (Reg. Grading)	5 CY.

Quantities Carried to Sheet Nos. 25

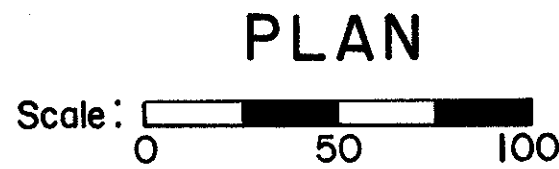
28-SS

**STA. 10+38 TO STA. 15+41
30"x57" STORM SEWER**



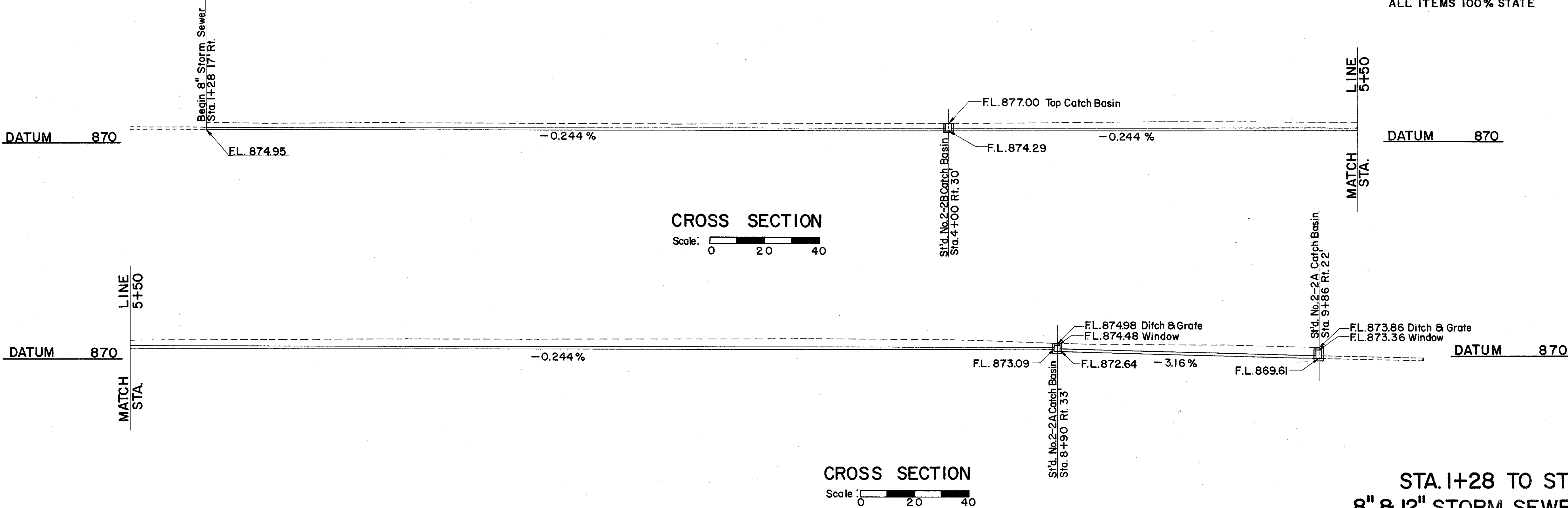


Note: In lieu of the grate for the 2-2B catch basin, a 1" thick steel plate will be used. A suitable lifting handle will be provided for the plate. The top of the catch basin shall be built flush with the slope of the shoulder. Cost of the plate shall be included in the cost of the 2-2B catch basin.

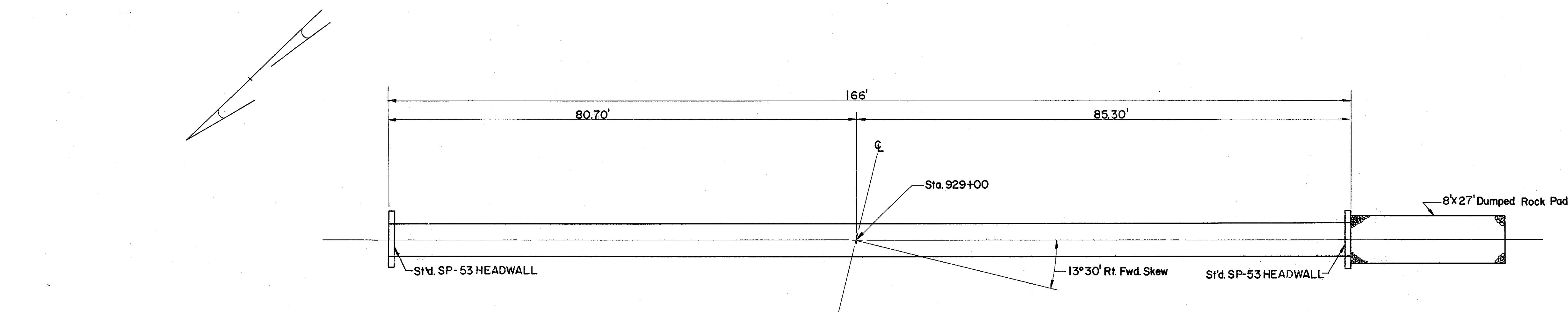


ITEM NO.	ESTIMATED QUANTITIES
I-1 8" Pipe Class E-1 M-6.8(a)	762 L.F.
I-1 12" Pipe Class E-1 M-6.8(a)	96 L.F.
I-8 No. 2-2B Catch Basin (Modified)	1 Each
I-8 No. 2-2A Catch Basin	2 Each
E-12 Remove 8" Pipe & Inlets Right Sta. 1+28 to Sta. 1+65	40 L.F.
E-12 Remove 12" Pipe Right Sta. 9+80 to Sta. 9+90	10 L.F.
I-16 Abandon Catch Basins Right Sta. 2+04, Sta. 3+40, Sta. 5+14	3 Each

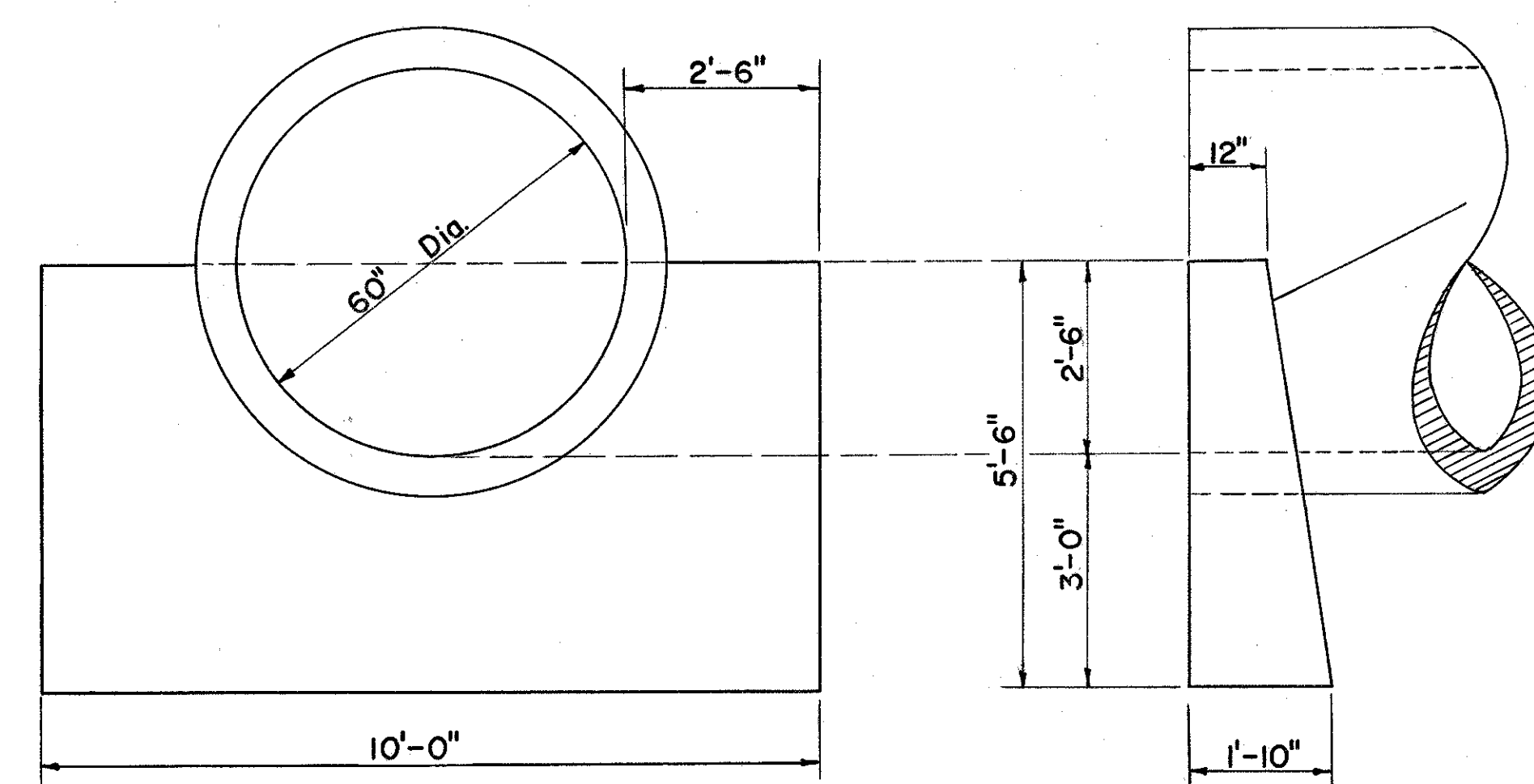
Quantities carried to Sheet No. 22,23,24
ALL ITEMS 100% STATE



STA. 1+28 TO STA. 9+86
8" & 12" STORM SEWER (Co. Rd. 64)



PLAN
Scale: 0 10 20



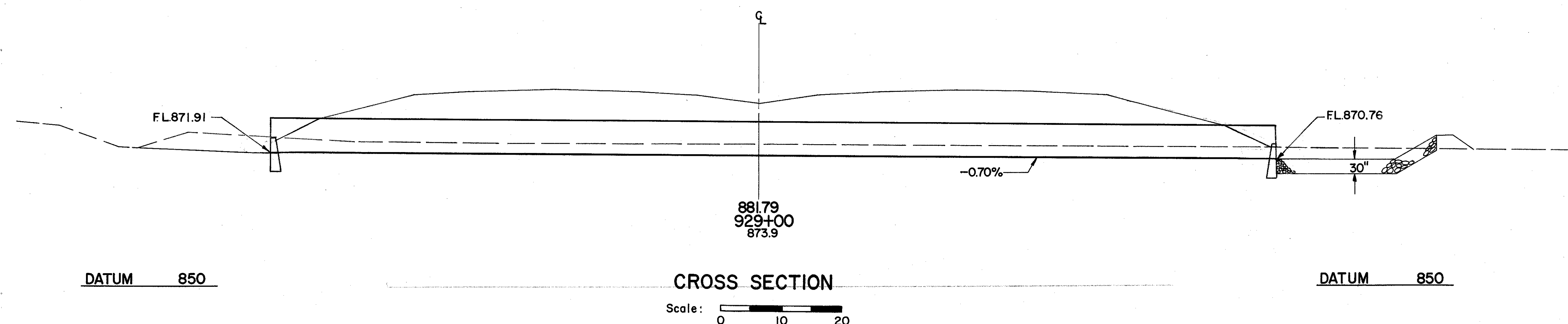
DETAIL OF ST'D. SP-53 HEADWALL (MOD.)
SCALE: 1" = 2'-0"

ITEM NO.	ESTIMATED QUANTITIES	
I-1	60" Pipe, Class A-1, Sec. M-6.6(a)	166 L.F.
	Vitrified Lined as per plan.	
I-10	Dumped Rock Channel Protection	20.0 C.Y.
E-3	Channel Excavation	5 C.Y.
I-2	Masonry	5.0 C.Y.

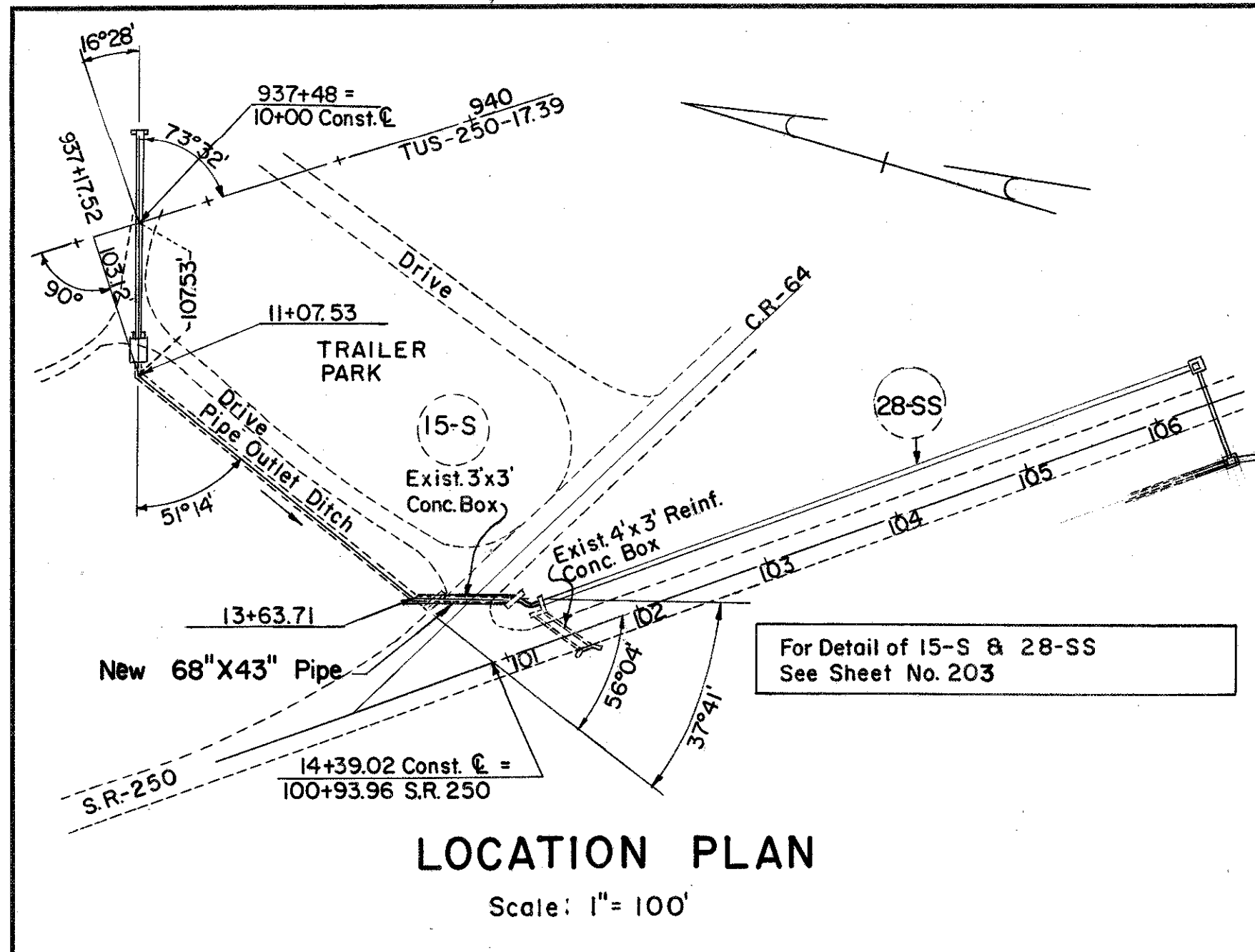
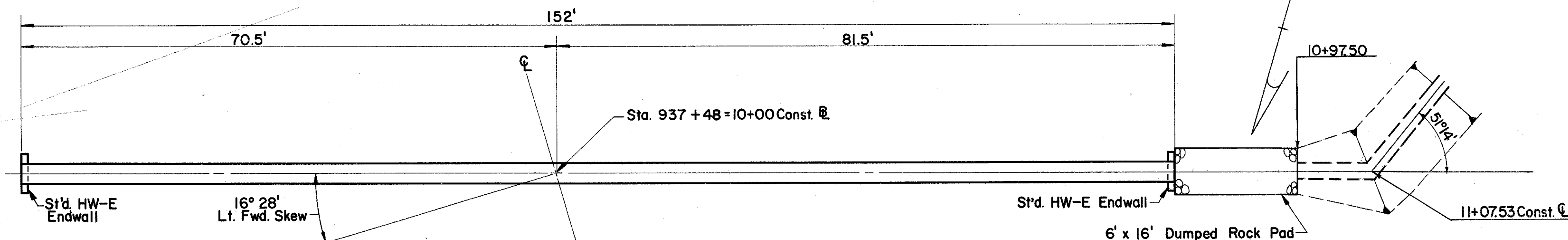
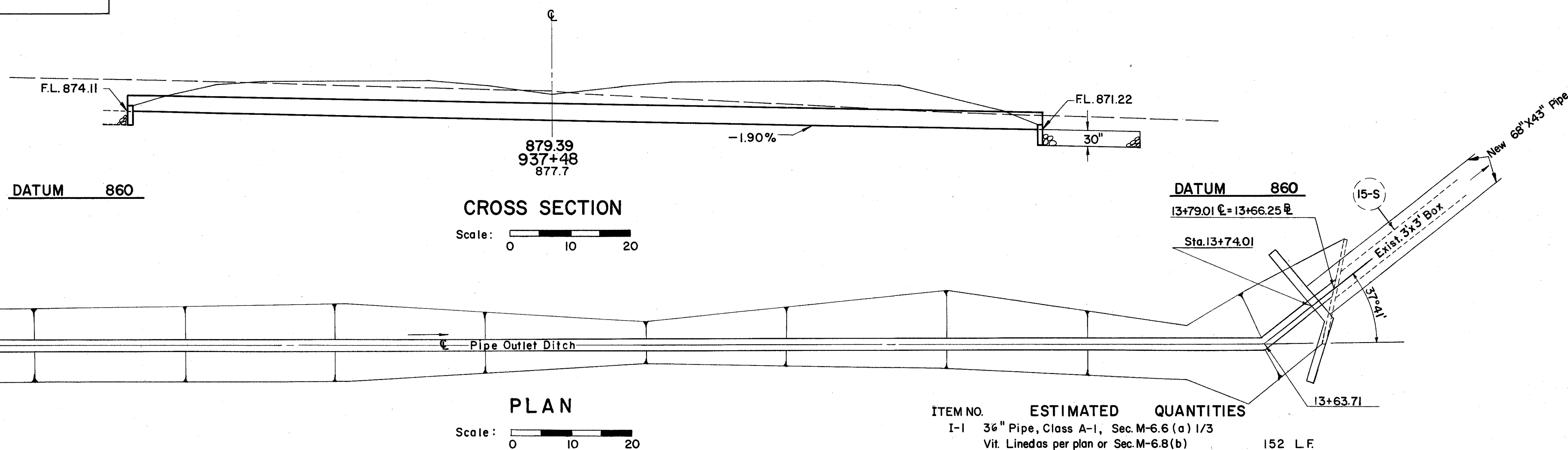
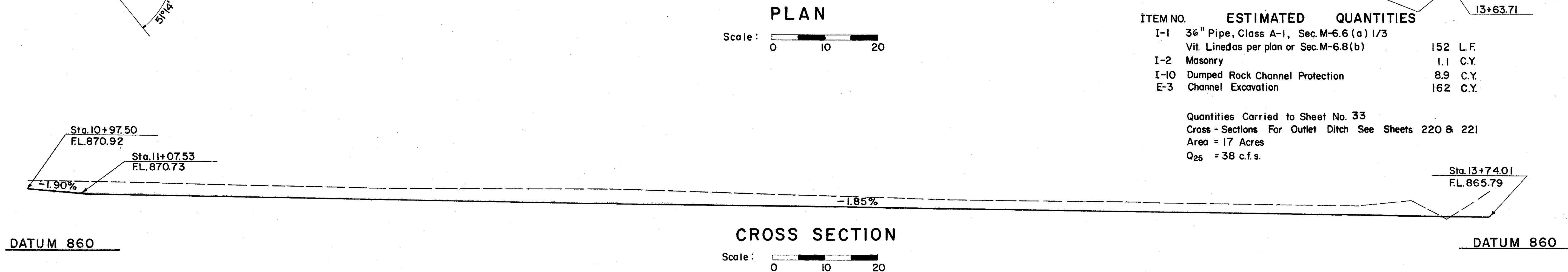
Quantities Carried to Sheet No. 32

Area = 182 Acres

Q₂₅ = 148cfs.



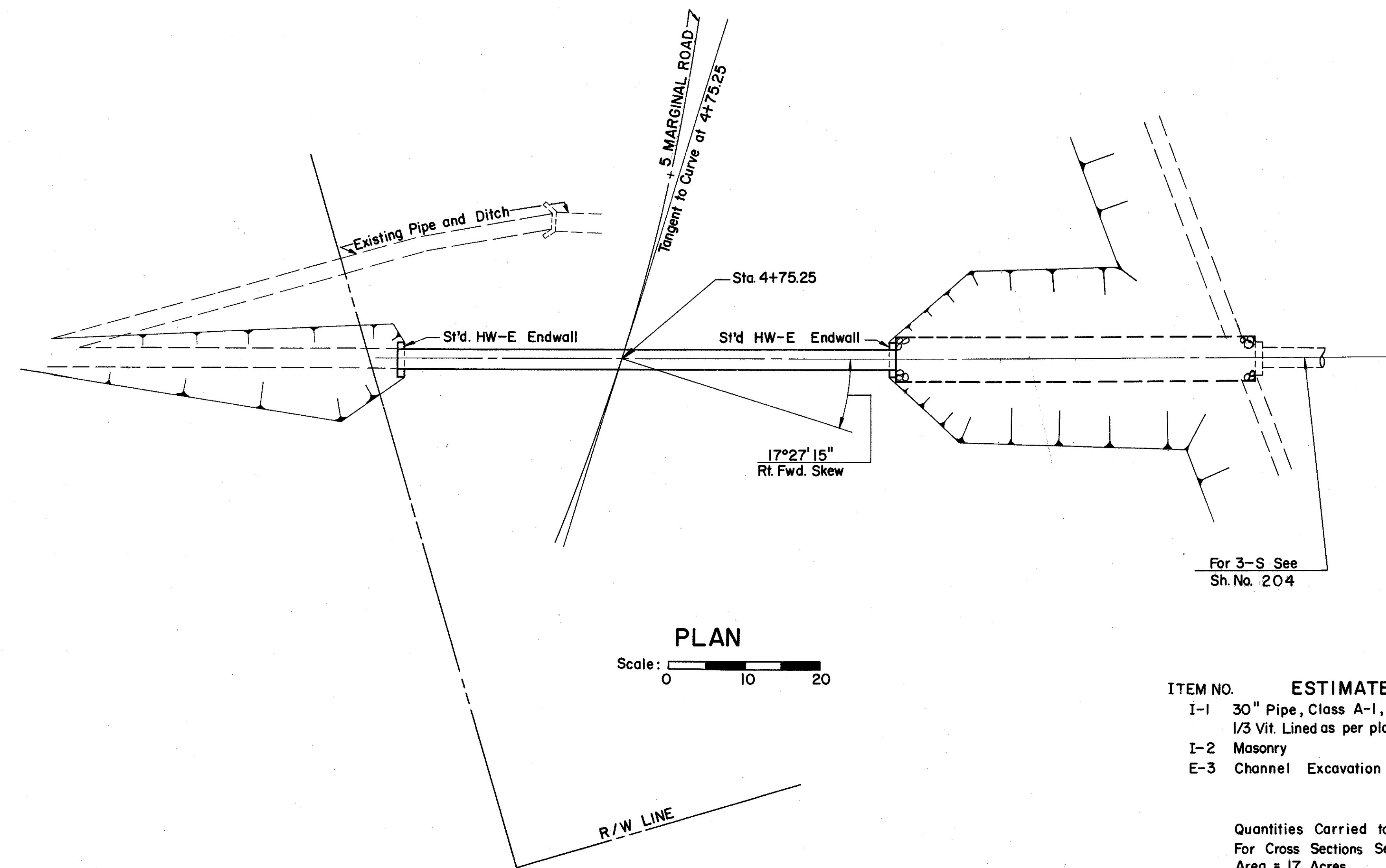
CROSS SECTION
Scale: 0 10 20



ITEM NO.	ESTIMATED QUANTITIES
I-1	36" Pipe, Class A-1, Sec. M-6.6 (a) 1/3
	Vit. Linedas per plan or Sec. M-6.8 (b)
I-2	Masonry
I-10	Dumped Rock Channel Protection
E-3	Channel Excavation
	152 L.F.
	1.1 C.Y.
	8.9 C.Y.
	162 C.Y.

Quantities Carried to Sheet No. 33
Cross - Sections For Outlet Ditch See Sheets 220 & 221
Area = 17 Acres
Q₂₅ = 38 c.f.s.

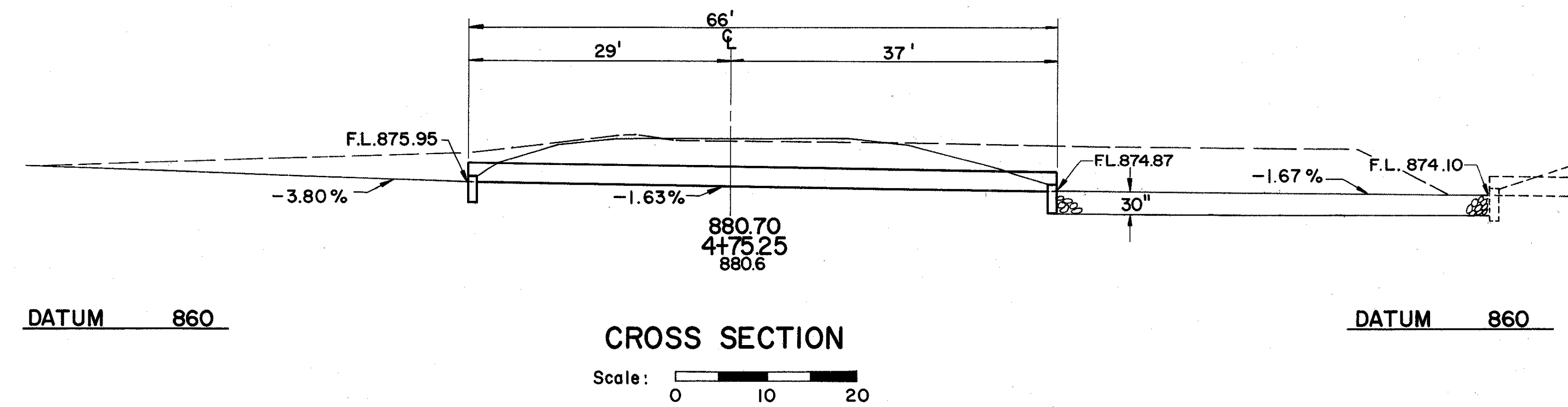
SLM. 18.16
STA. 937+48
36" x 152' PIPE CULVERT



PLAN
Scale: 0 10 20

ITEM NO.	ESTIMATED	QUANTITIES
I-1	30" Pipe, Class A-1, Sec. M-6.6 (a)	
	1/3 Vit. Lined as per plan or Sec. M-6.8(b)	66 L.F.
I-2	Masonry	1.0 C.Y.
E-3	Channel Excavation	92 C.Y.

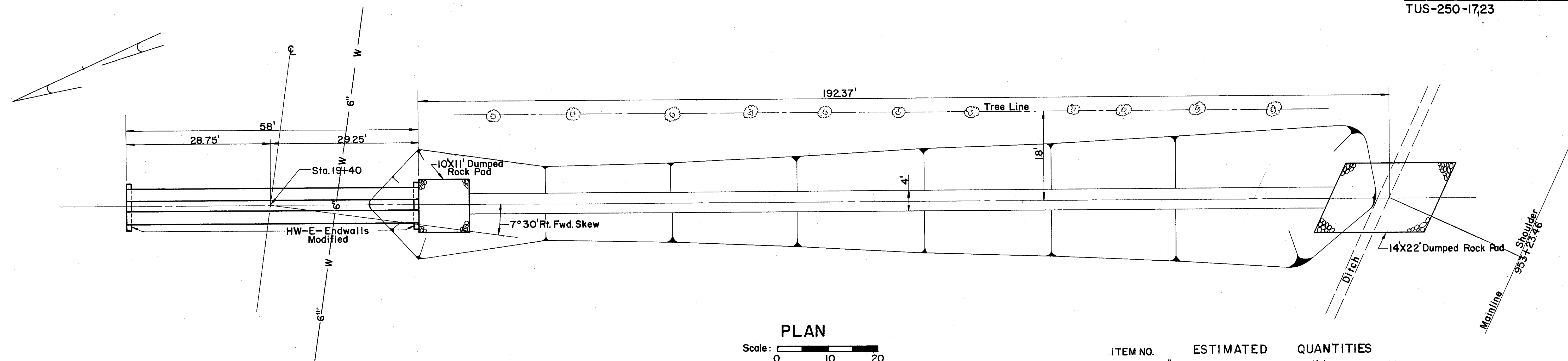
Quantities Carried to Sheet No. 147
For Cross Sections See Sheet 219
Area = 17 Acres
Q₂₅ = 39 c.f.s.



CROSS SECTION
Scale: 0 10 20

STA. 4+75.25 MARGINAL ROAD
30" x 66' PIPE CULVERT

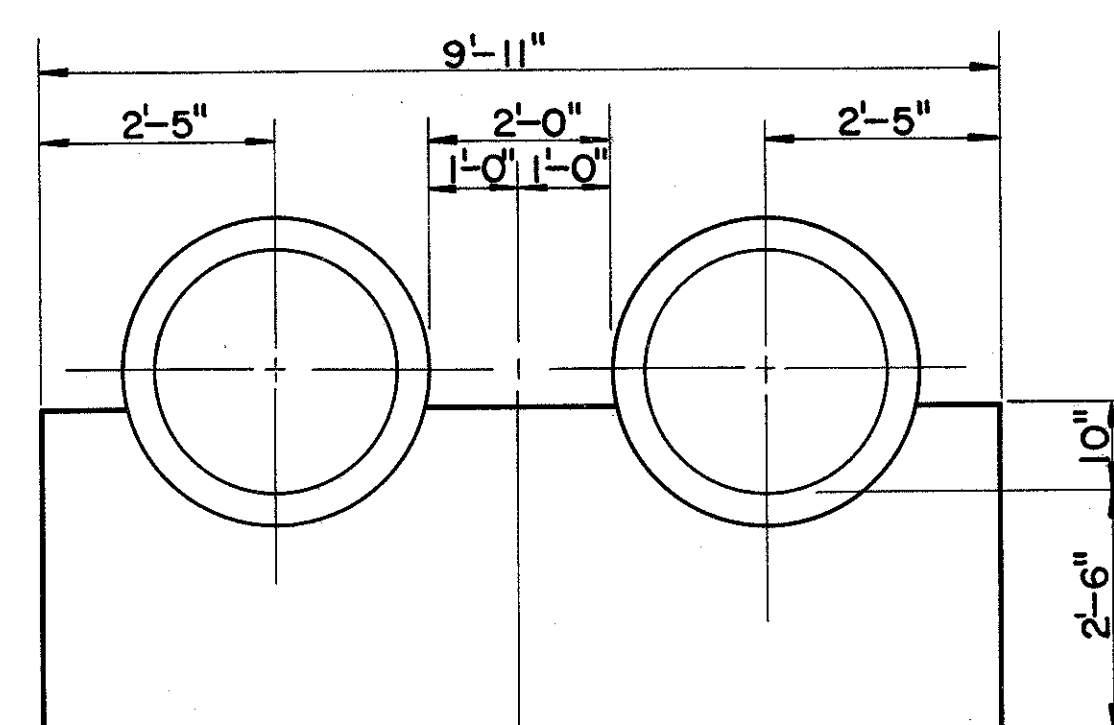
TUS-250-17,23



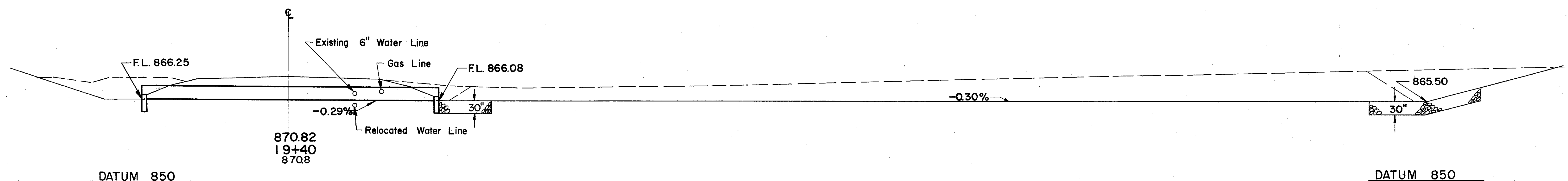
PLAN
Scale: 0 10 20

ITEM NO.	ESTIMATED QUANTITIES	
I-1, 30" Pipe, Class A-1, Sec. M-6.8(b) or Sec. M-6.6(a) 1/3 Vit. Lined as per plan	116 L.F.	
I-2 Masonry	2 C.Y.	
I-10 Dumped Rock Channel Protection	38.7 C.Y.	
E-3 Channel Excavation	393 C.Y.	

Quantities Carried to Sheet No. 148
For Cross Sections See Sheet 219
Area = 79 Acres
Q₂₅ = 65 c.f.s.



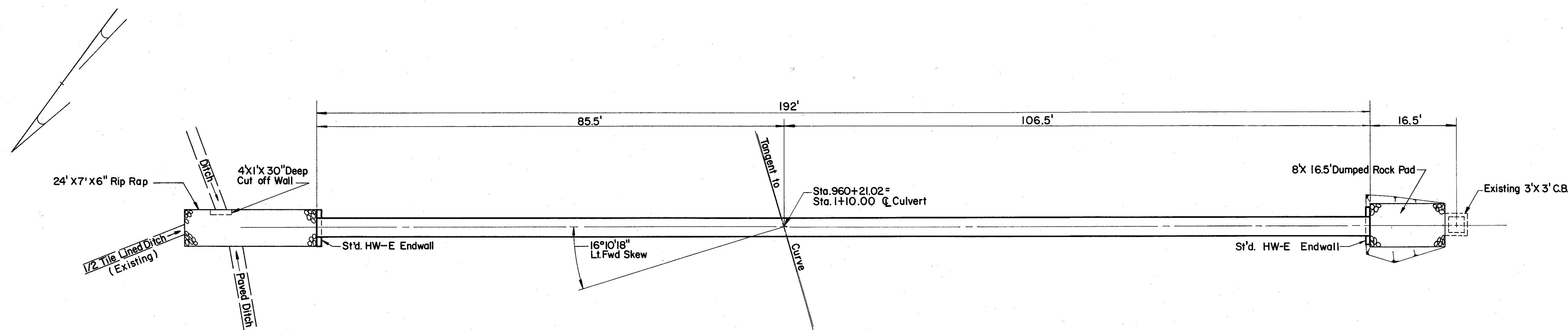
End View
HW-E Endwall Modified
Scale: 1"=2'



CROSS SECTION
Scale: 0 10 20

5-S

STA 19+40 MARGINAL ROAD
TWIN 30"X58' PIPE CULVERTS



PLAN

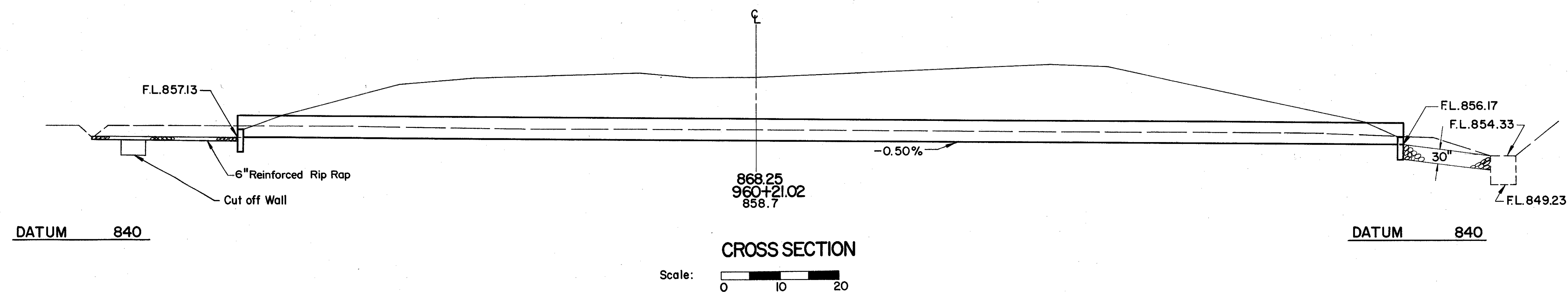
Scale: 0 10 20

ITEM NO. ESTIMATED QUANTITIES

I-1	42" Pipe, Class A-1, Sec. M-6.6 (b)	192	L.F.
I-2	Masonry	1.5	C.Y.
I-10	Dumped Rock Channel Protection	12	C.Y.
E-3	Channel Excavation	31	C.Y.
I-10	6" Reinforced Rip Rap	19	S.Y.

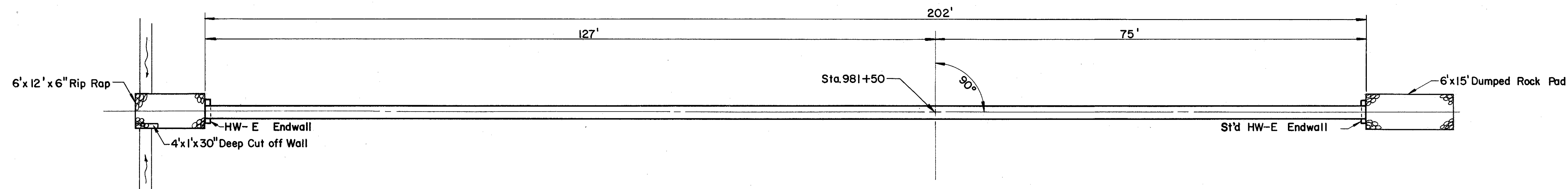
For Channel Cross-Sections See Sheet No. 219
Quantities Carried to Sheet No. 35

Area = 118 Acres
Q₂₅ = 82 c.f.s.



CROSS SECTION

Scale: 0 10 20



PLAN

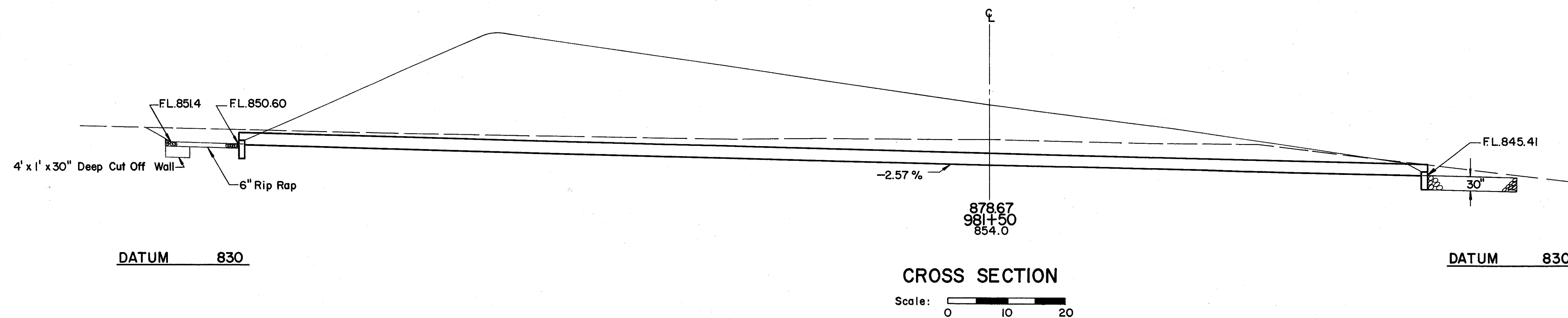
Scale: 0 10 20

ITEM NO.	ESTIMATED	QUANTITIES
I-1	30" Pipe, Sec. M-6.6(c) Class A-1	202 L.F.
I-2	Masonry	1.0 C.Y.
I-10	Dumped Rock Channel Protection	7.4 C.Y.
E-3	Channel Excavation	5 C.Y.
I-10	Rip Rap (6" Reinforced)	8 S.Y.

Quantities Carried to Sheet No. 37

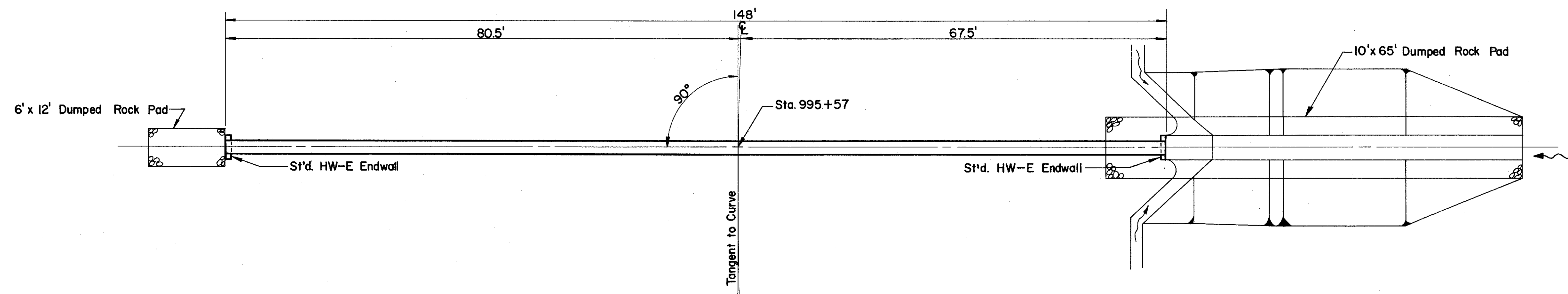
Area = 7 Acres

Q25 = 25 c.f.s.



CROSS SECTION

Scale: 0 10 20



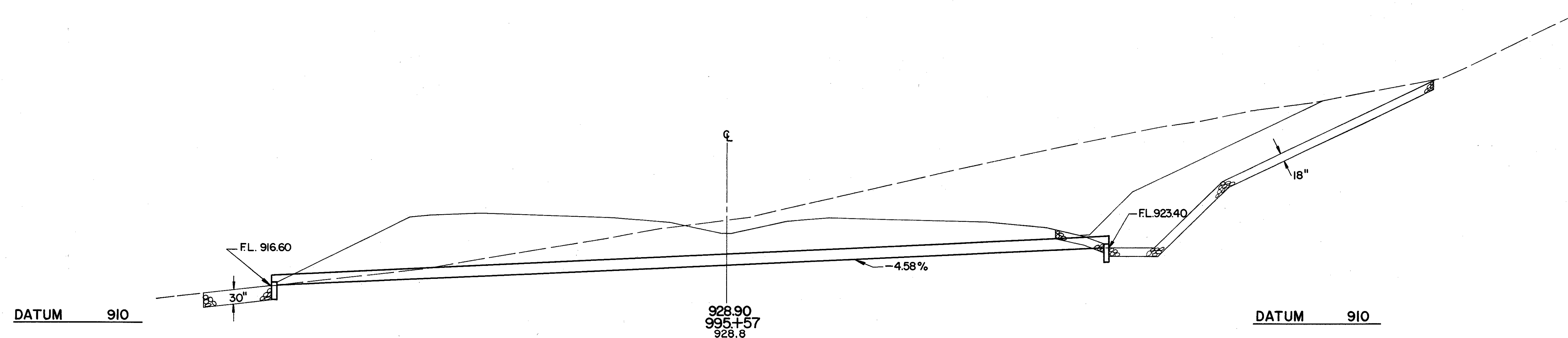
PLAN

Scale: 0 10 20

ITEM NO. ESTIMATED QUANTITIES

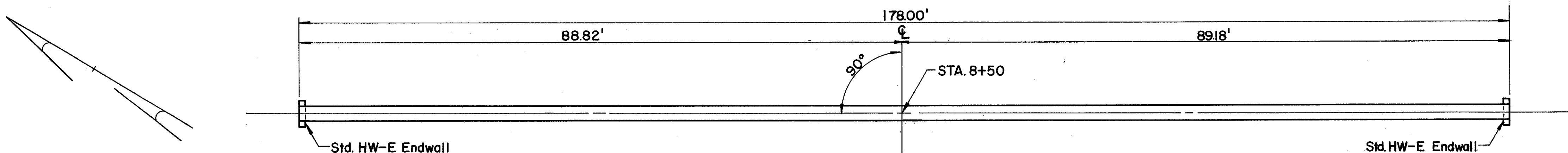
I-1	24" Pipe, Class A-I, Sec. M-6.8 (b)	148 L.F.
I-2	Masonry	08 C.Y.
I-10	Dumped Rock Channel Protection	42.7 C.Y.
E-3	Channel Excavation	193 C.Y. ✓

Quantities Carried to Sheet No. 38
For Cross Sections See Sheet 219
Area = 7 Acres
Q₂₅ = 21 c.f.s.



CROSS SECTION

Scale: 0 10 20

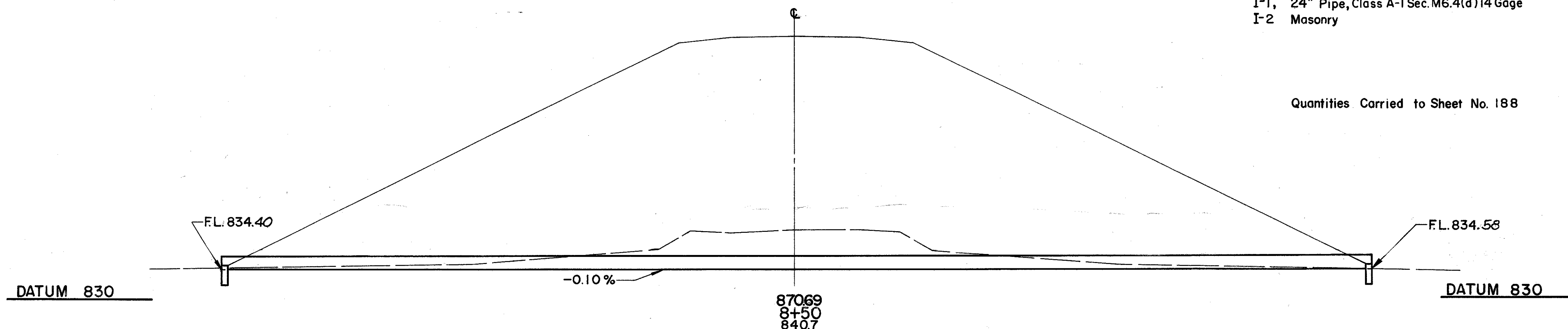


PLAN

Scale: 0 10 20

ITEM NO.	ESTIMATED QUANTITIES
I-1, 24" Pipe, Class A-I Sec. M6.4(d) 14 Gage	178 L.F.
I-2 Masonry	0.8 C.Y.

Quantities Carried to Sheet No. 188

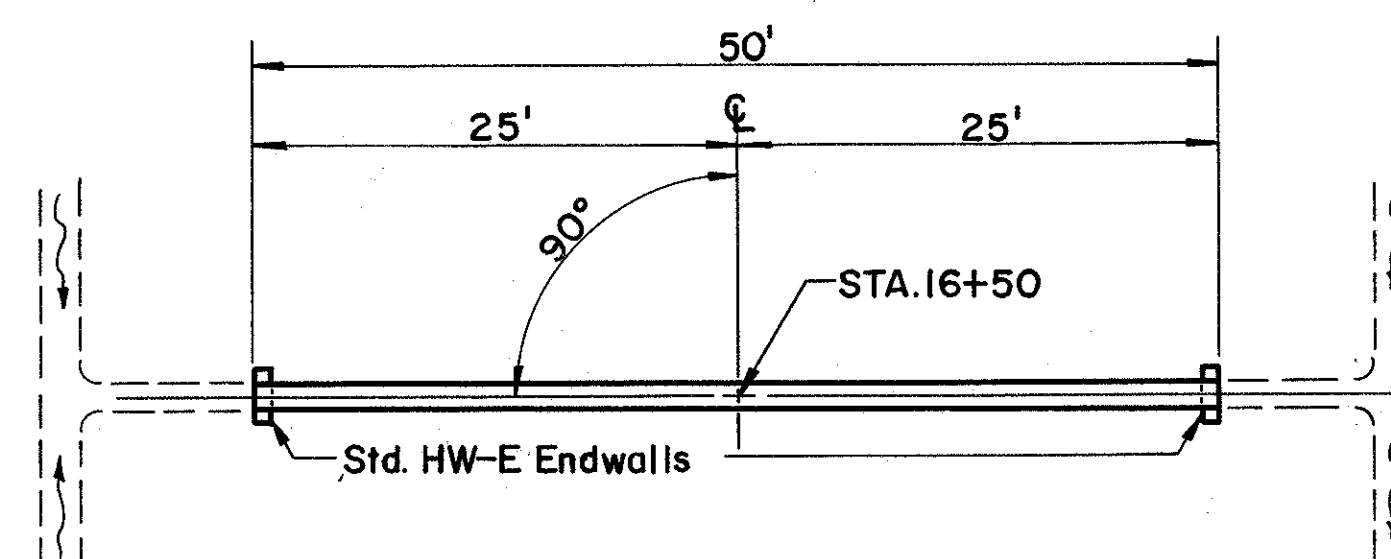


CROSS SECTION

Scale: 0 10 20

STA. 8+50 (On T.R. 286)
24" X 178' PIPE CULVERT

10-S



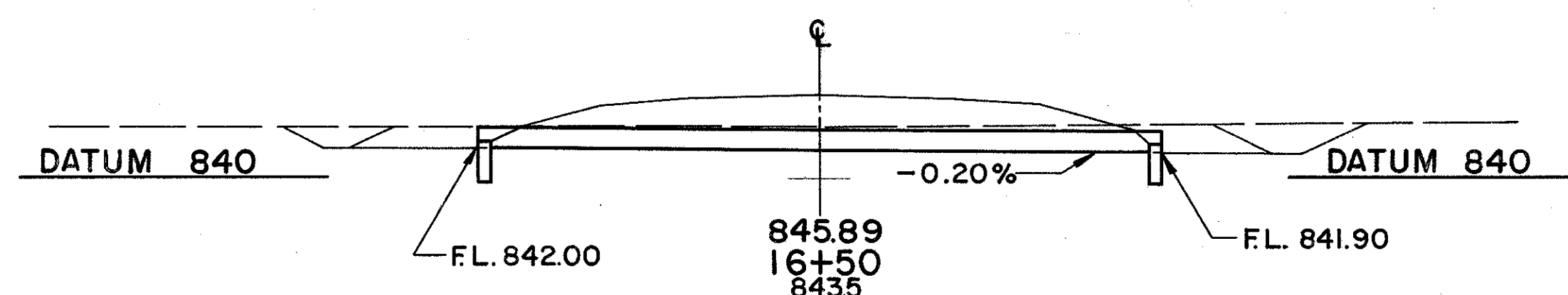
PLAN

Scale: 0 10 20

ITEM NO.	ESTIMATED QUANTITIES
I-1, 18" Pipe, Class A-I, Sec. M-6.8(b)	50 L.F.
I-2 Masonry	0.6 C.Y.
E-3 Channel Excavation	3 C.Y.

Quantities Carried to Sheet No. 189

Area = 276 Acres
Q₂₅ = 3.90 C.F.S.

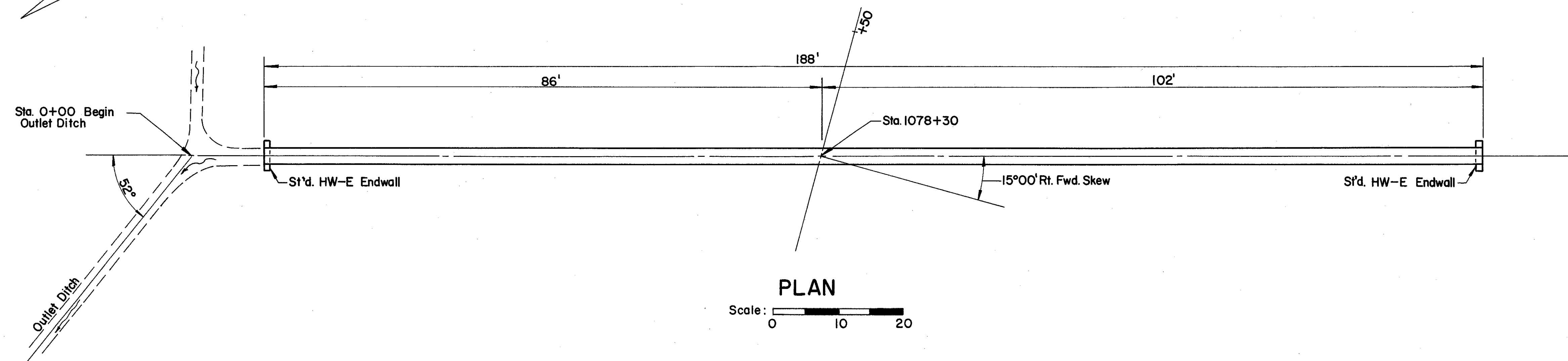
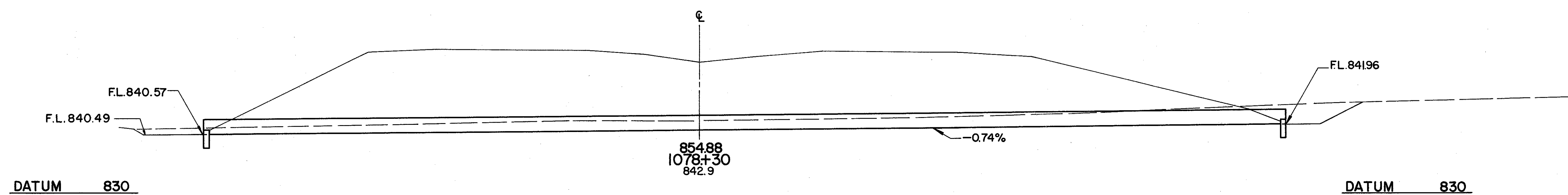


CROSS SECTION

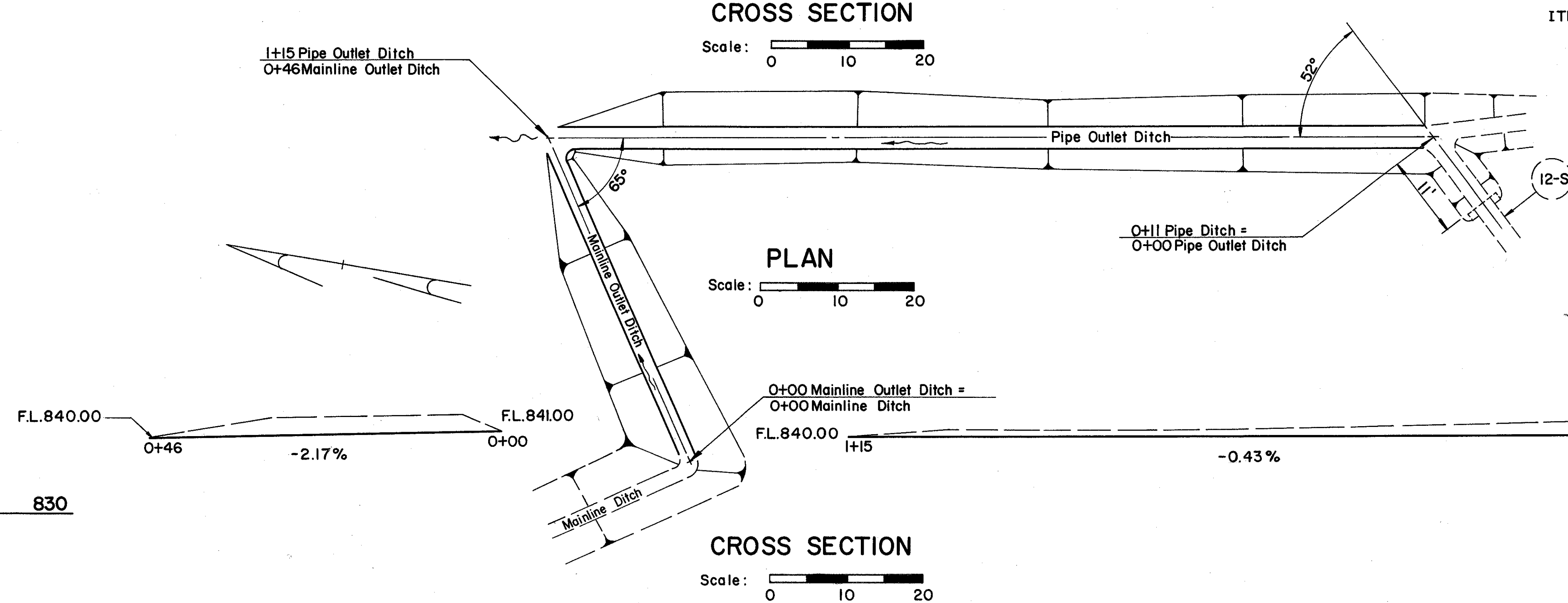
Scale: 0 10 20

STA. 16+50 (On T.R. 286)
18" X 50' PIPE CULVERT

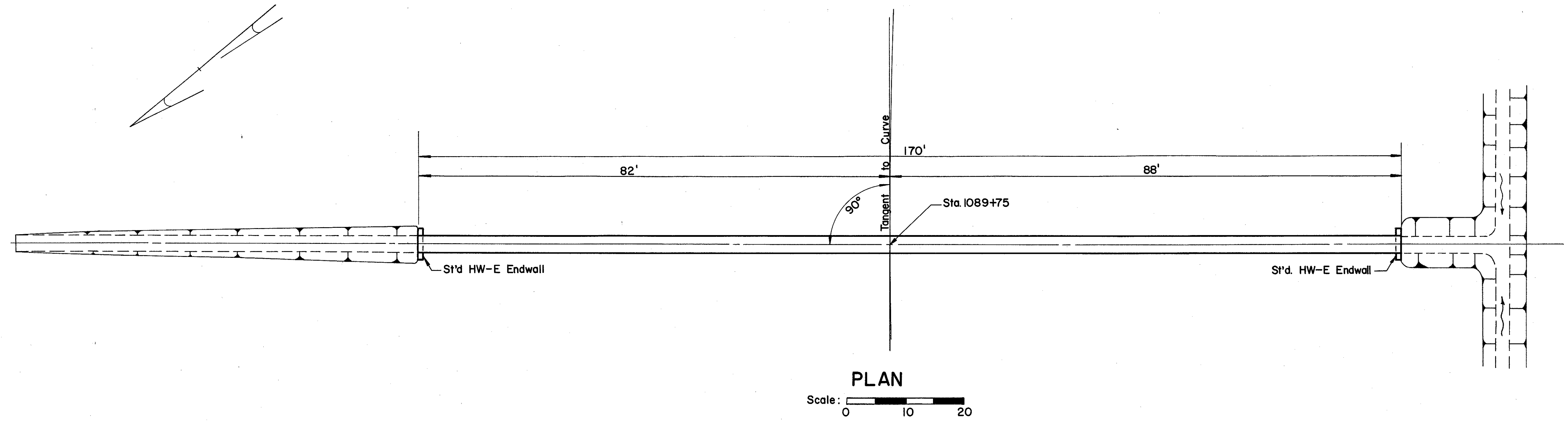
11-S



ITEM NO.	ESTIMATED QUANTITIES	
I-1	30" Pipe, Class A-I, Sec. M-6.6 (b) or Sec. M-6.8(b)	188 L.F.
I-2	Masonry	1.0 C.Y.
E-3	Channel Excavation	57 C.Y.
For Cross - Sections see Sheet 222		
Quantities Carried to Sheet No. 46		
Area = 30 Acres		
Q ₂₅ = 23 c.f.s.		

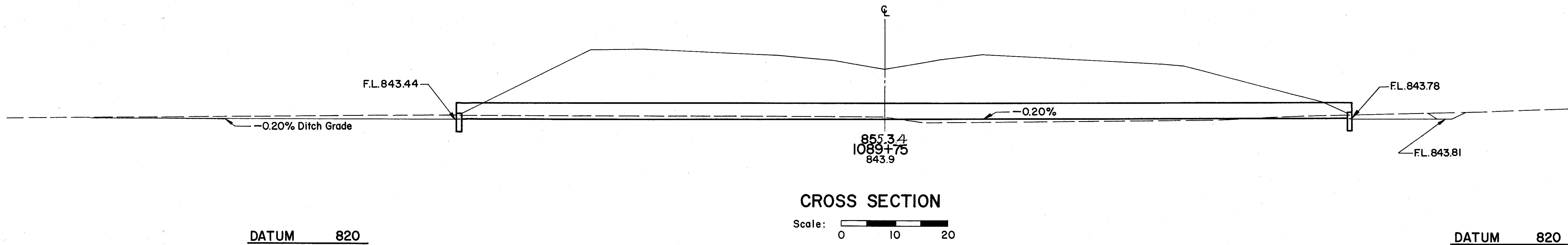


SLM. 20.83
STA. 1078+30
30" x 188' PIPE CULVERT



ITEM NO.	ESTIMATED QUANTITIES
I-1	36" Pipe, Class A-I, Sec.M-6.6 (b) or Sec.M-6.8(b) 170 L.F.
I-2	Masonry 1.2 C.Y.
E-3	Channel Excavation 5 C.Y.

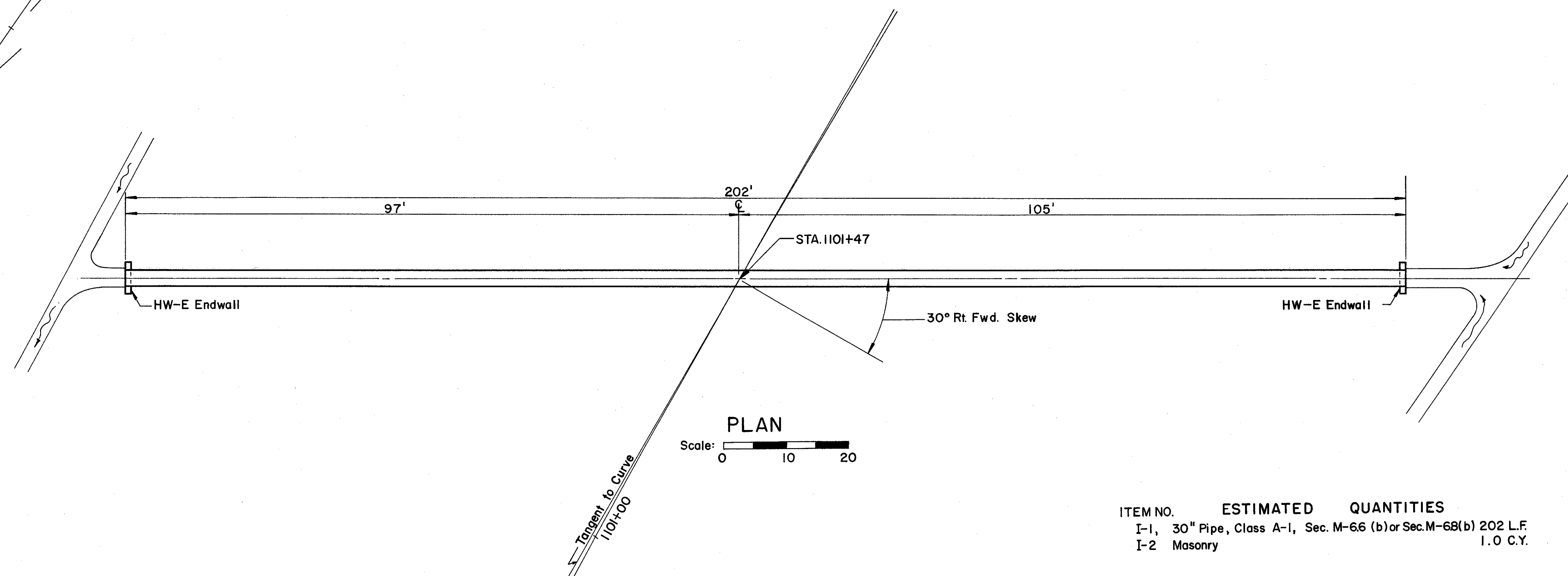
Quantities Carried to Sheet No. 47
 For Cross Sections See Sheet 222
 Area = 48 Acres
 Q₂₅ = 25 c.f.s.



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TUS-250-17.23

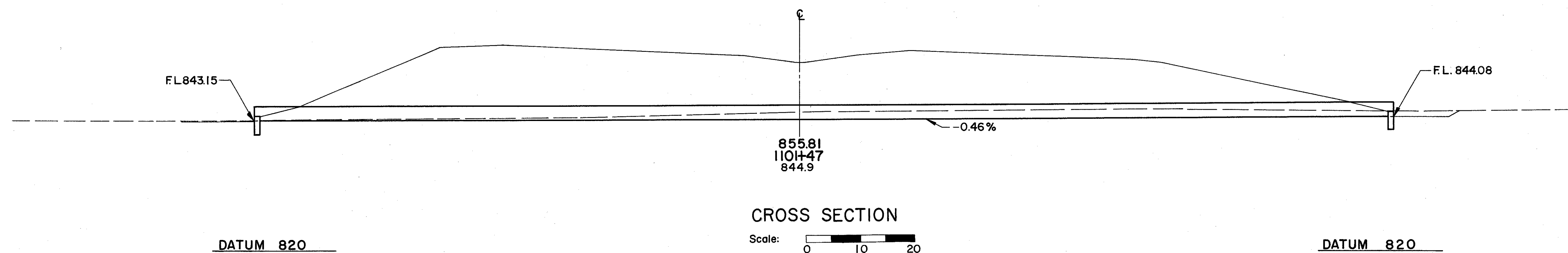
217



ITEM NO.	ESTIMATED QUANTITIES
I-1, 30" Pipe, Class A-1, Sec. M-66 (b) or Sec. M-68(b)	202 L.F.
I-2 Masonry	1.0 C.Y.

Quantities Carried to Sheet No. 48

Area = 38 Acres
Q₂₅ = 26 c.f.s.



14-S

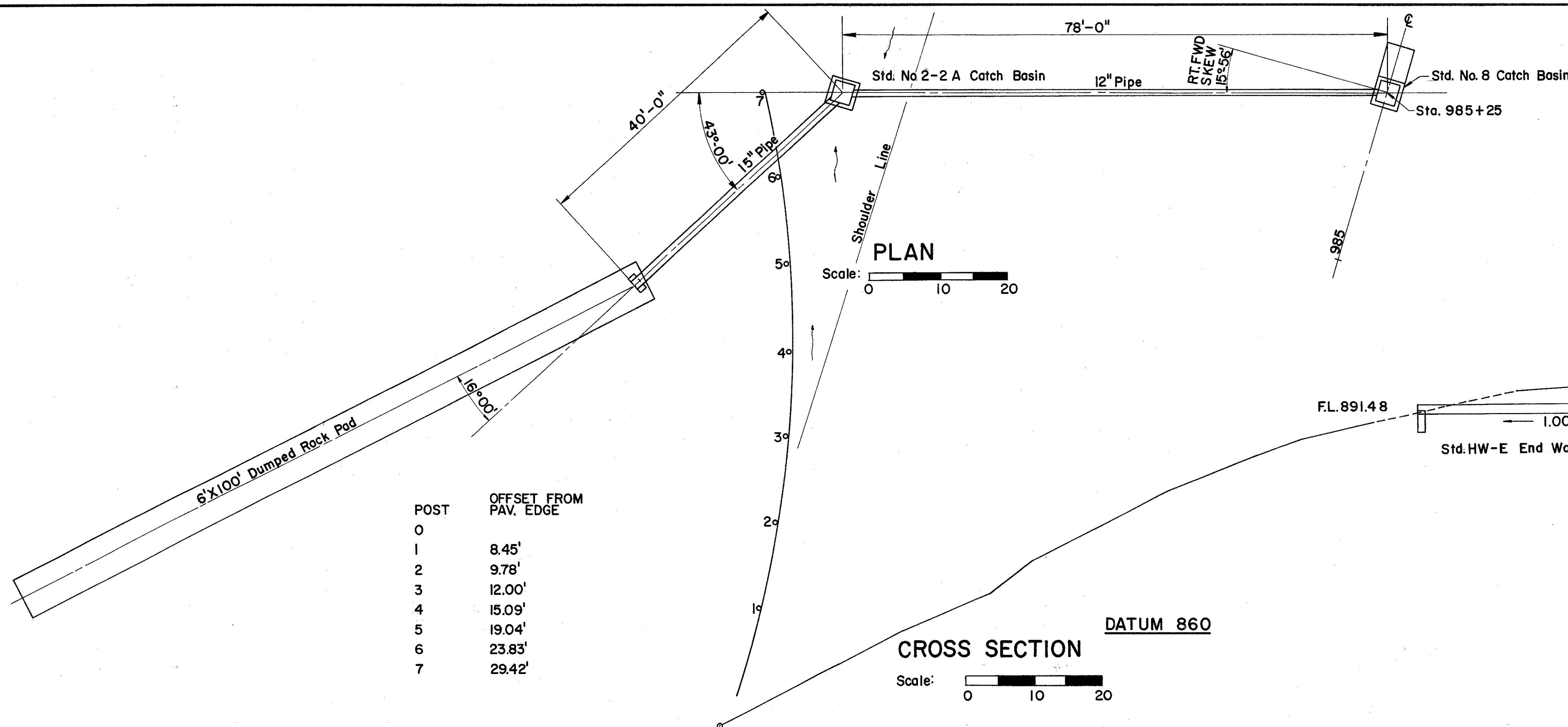
SLM. 21.27
STA. 1101+47
30" X 202' PIPE CULVERT

TUS-250-17.23

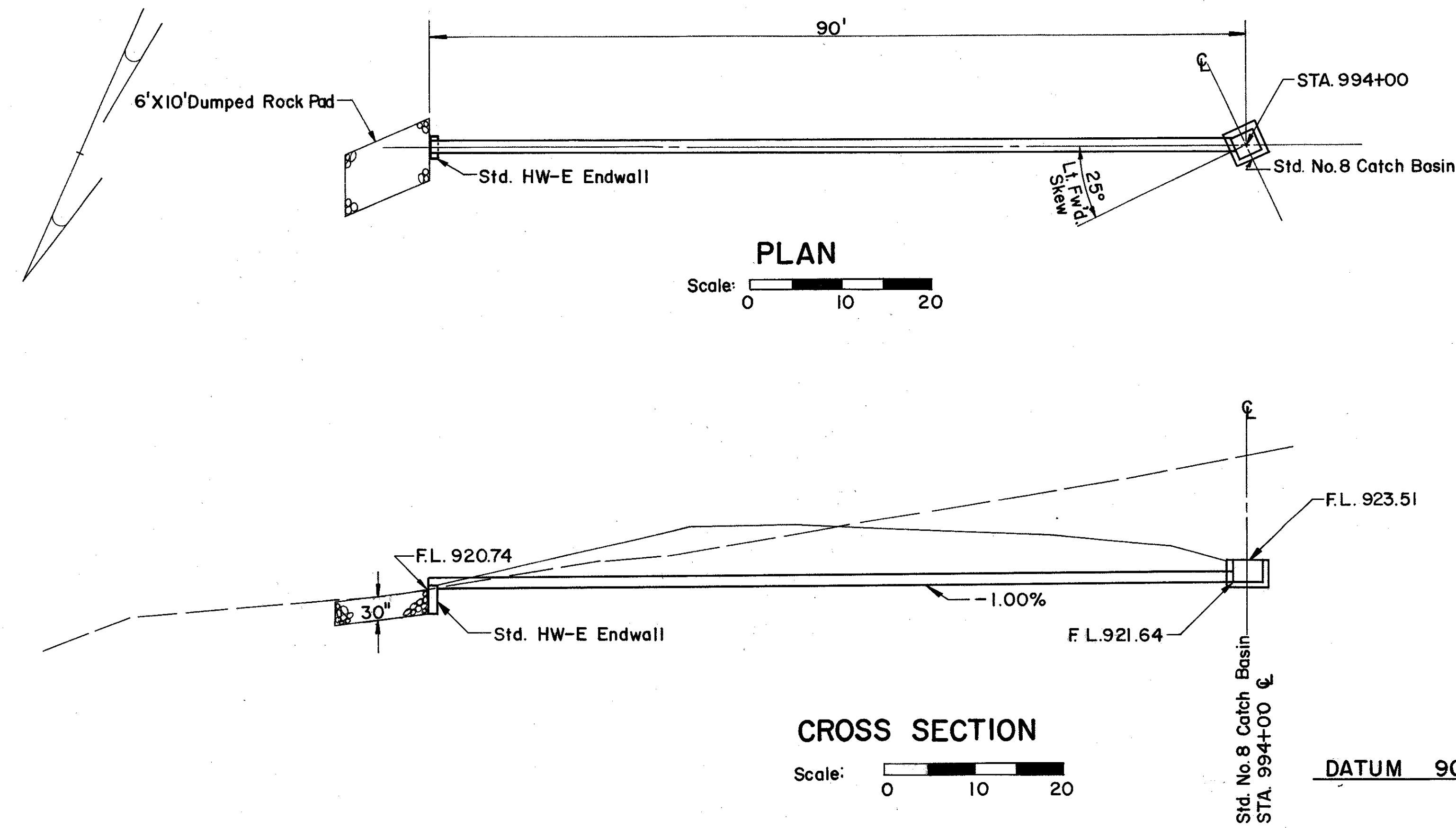
ITEM NO. ESTIMATED QUANTITIES

I-1	12" Pipe, Class J-I	78	L.F.
I-1	15" Pipe, Class E-I	40	L.F.
I-2	Masonry	0.2	C.Y.
I-8	Std. No.8 Catch Basin	1	Ea.
I-8	Std. No.2-A Catch Basin	1	Ea.
I-10	Dumped Rock Channel Protection	56	C.Y.

Quantities Carried to Sheet No. 37



LT. STA. 985+25
12"X78.0'&15"X40' PIPE CULVERT



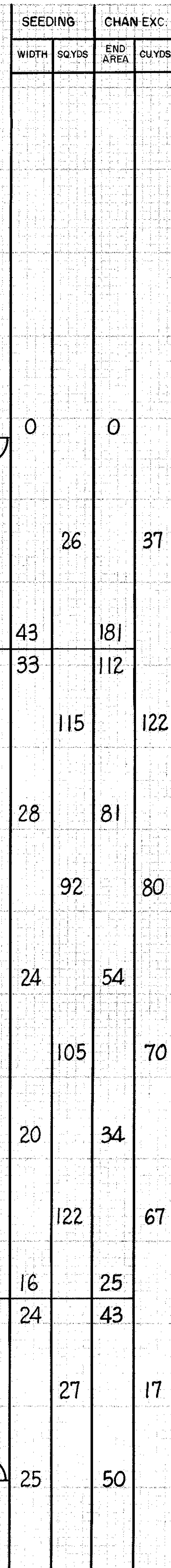
ITEM NO. ESTIMATED QUANTITIES

I-1	12" Pipe, Class J-I	90	L.F.
I-2	Masonry	0.2	C.Y.
I-10	Dumped Rock Channel Protection	5.6	C.Y.
I-8	Std. No.8 Catch Basin	1	Ea.

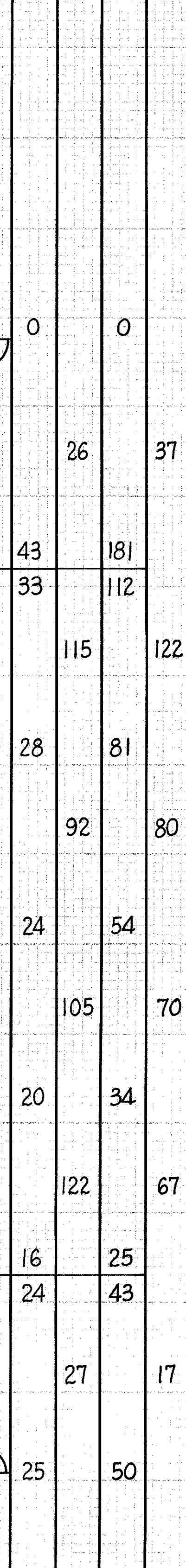
Quantities Carried to Sheet No. 38

LT. STA. 994+00
12"X90' PIPE CULVERT

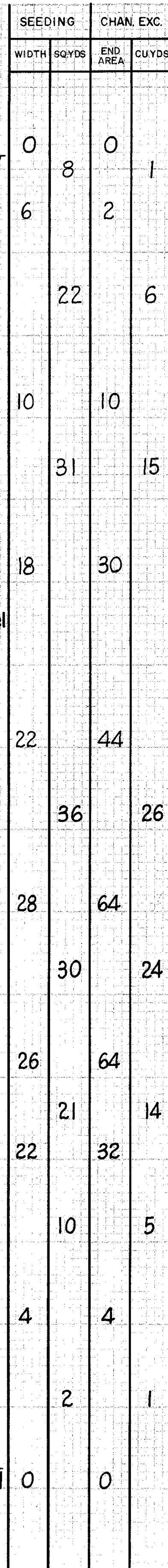
10 10



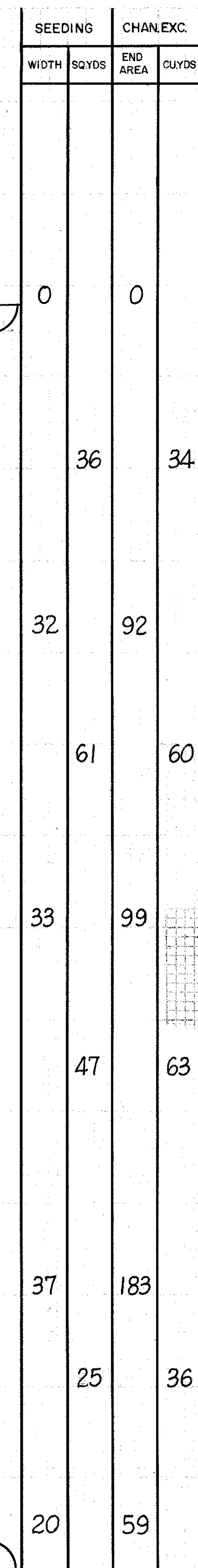
Excavation	393 Cu. Yds.	(Quantity Carried to Sheet No.210)
Embankment	0 Cu. Yds.	
Seeding	487 Sq. Yds.	(Quantity Carried to Sheet No.152)



Excavation	92 Cu.Yds.	(Quantity Carried to Sheet No.209
Embankment	0 Cu.Yds.	
Seeding	160 Sq.Yds.	(Quantity Carried to Sheet No.150)

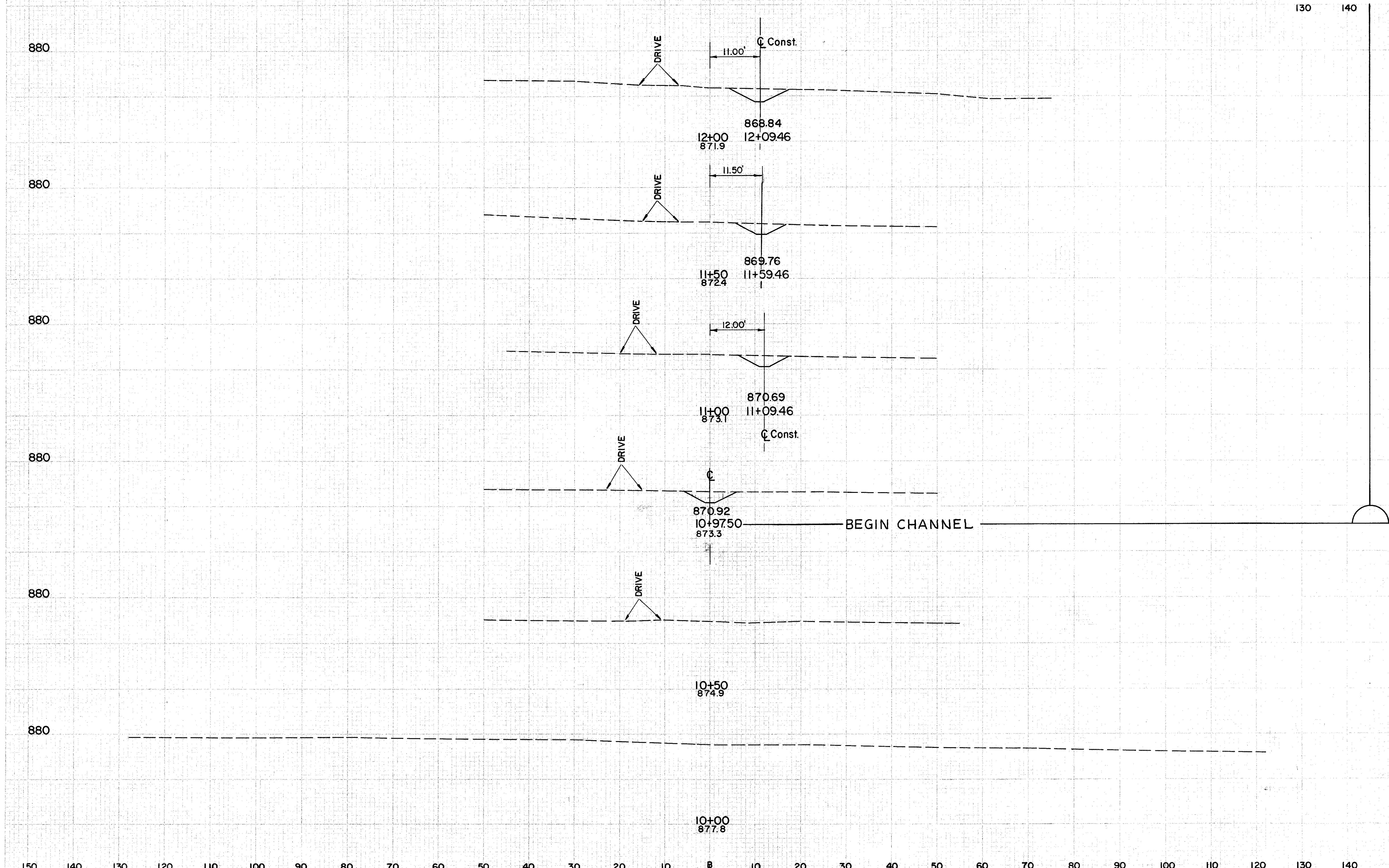


Excavation	31 Cu.Yds.	(Quantity Carried to Sheet No.211)
Embankment	0 Cu.Yds.	
Seeding	60 Sq.Yds.	(Quantity Carried to Sheet No. 80)

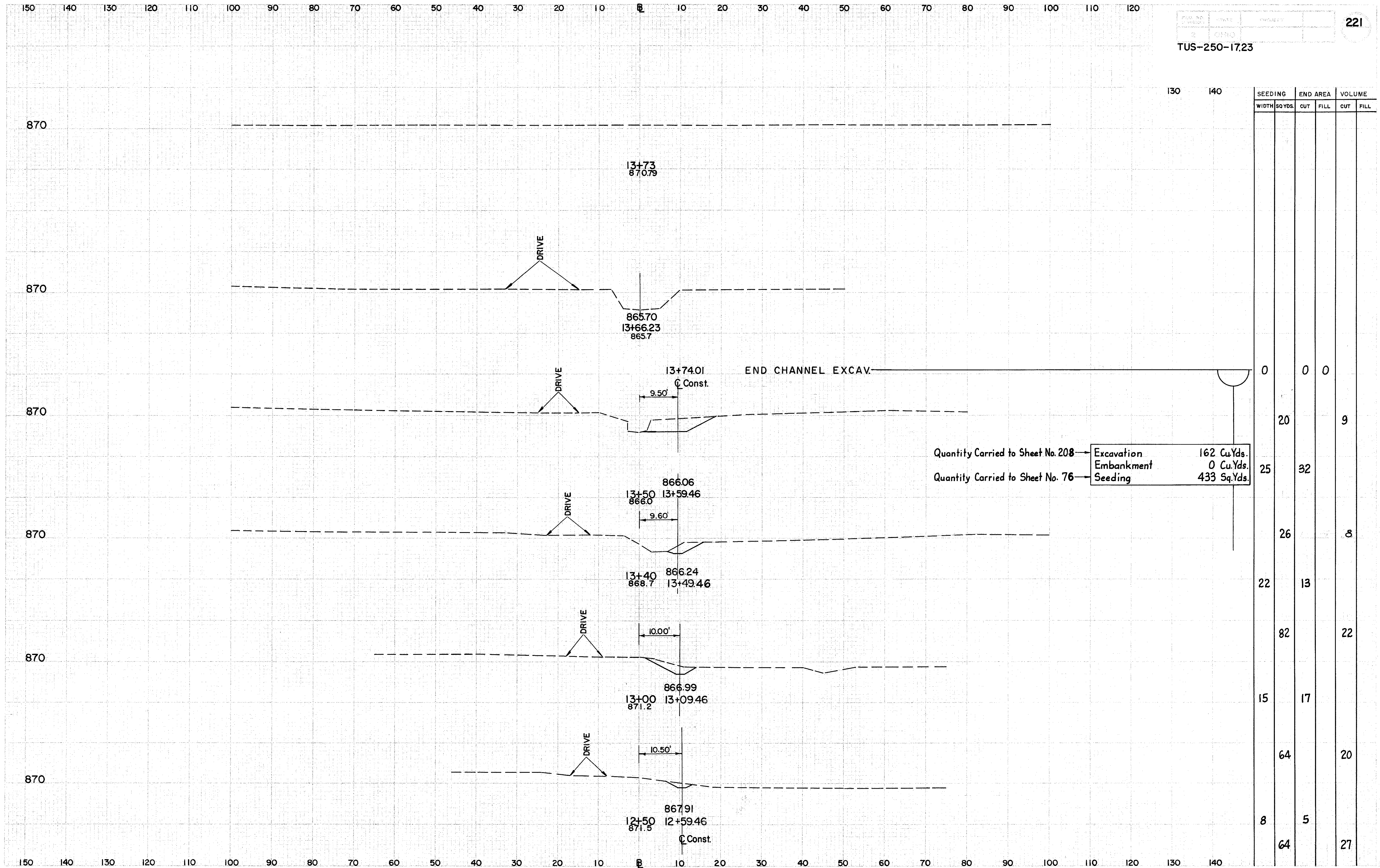


See Sheet 213	O+67	Begin Channel	20	39
995+57 C.M. = O+00	Channel	C Rt.		
Excavation	193 Cu.Yds.	(Quantity Carried to Sheet		
Embankment	0 Cu.Yds.	No. 213)		
Seeding	169 Sq.Yds.	(Quantity Carried to Sheet No.		
		95)		

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120



SEEDING	END AREA		VOLUME	
	WIDTH	SQYDS.	CUT	FILL
15			24	
13		78	17	38
15		78	17	31
21			7	
16			13	



SEEDING		END AREA		VOLUME	
WIDTH	SQ YDS.	CUT	FILL	CUT	FILL
0	0	0	0		
20				9	
25	32				
26				8	
22	13				
82				22	
15	17				
64				20	
8	5				
64				27	

Quantity Carried to Sheet No. 208

Excavation 162 Cu.Yds.

Embankment 0 Cu.Yds.

Quantity Carried to Sheet No. 76

Seeding 433 Sq.Yds.

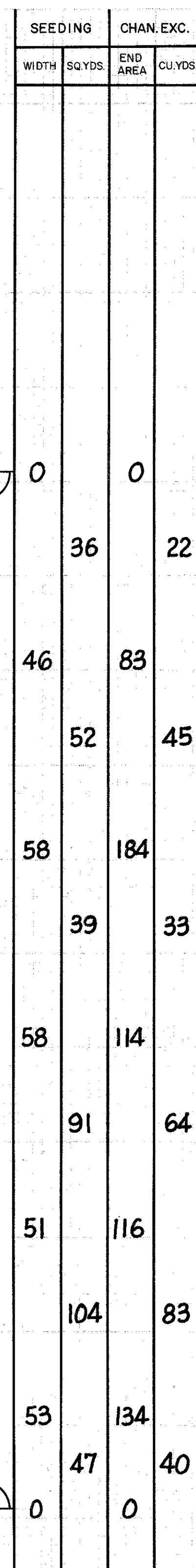
OUTLET CHANNEL FOR CULVERT PIPE AT 937+48 RT.

For Culvert See Sheet 215
1077+00 95' Lt. (TUS-250) = 0+00 Channel C

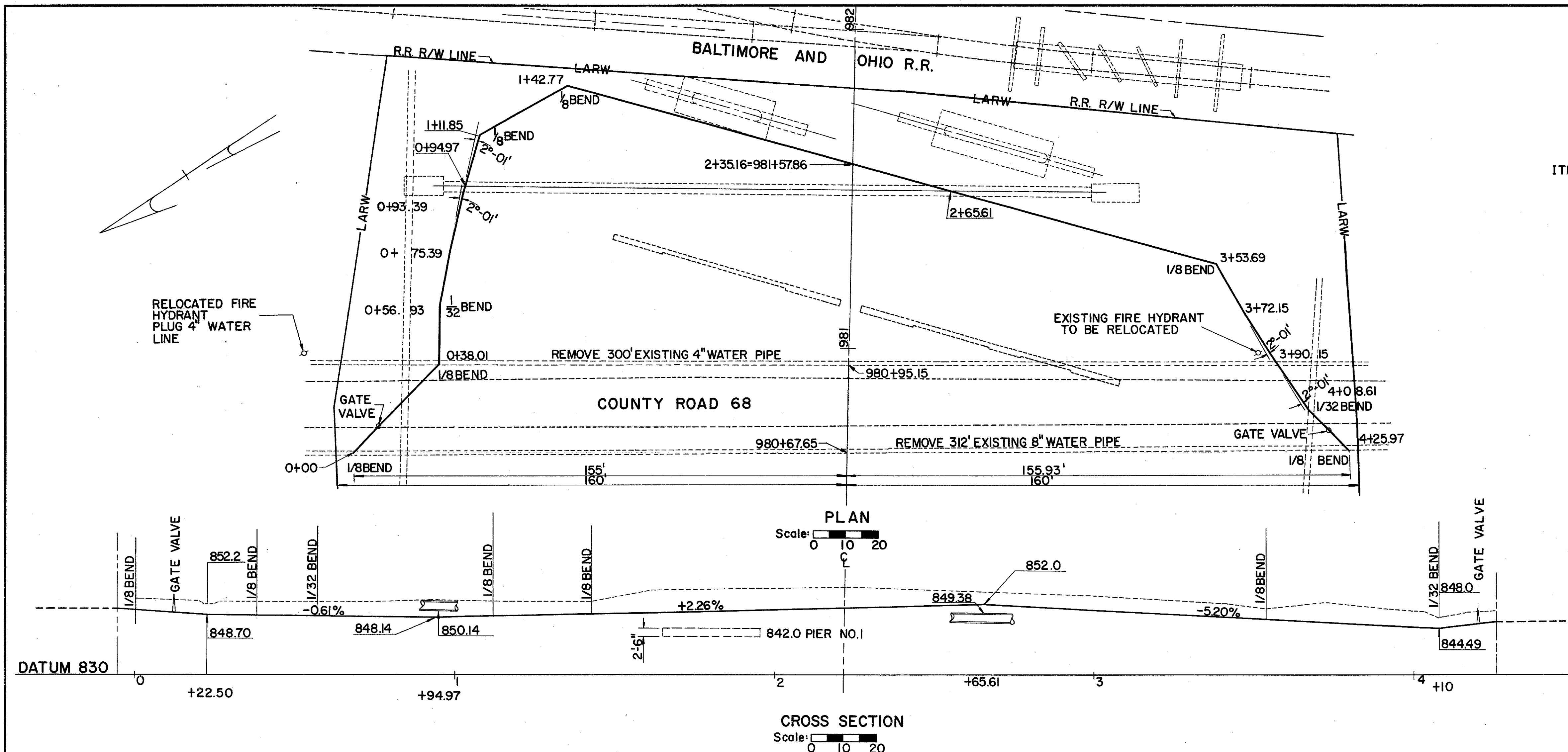
Excavation	20 Cu.Yds.	(Quantity Carried to Sheet No.215
Embankment	0 Cu.Yds.	
Seeding	49 Sq.Yds.	(Quantity Carried to Sheet No.133

1063+00 @ (TUS-250)=0+00 @ Channel

Excavation	287 Cu.Yds.	(Quantity Carried to Sheet No.
Embankment	0 Cu.Yds.	129
Seeding	369 Sq.Yds.	(Quantity Carried to Sheet No.



1063+00 Ç (TUS-250)=0+00 Ç Channel



ITEM NO.	ESTIMATED QUANTITIES	
I-124 8" 1/32 Bend	Fittings For Class 250 Mechanical Joint Pipe	2 EA.
I-124 8" 1/8 Bend		6 EA.
I-124 8" Gate Valve & Box		2 EA.
I-124 8" Class 250 Mechanical Joint Pipe		419 L.F.
I-124 4" Water Line Plug		1 EA.
I-124 8" Water Line Relaid		72 L.F.
I-124 Relocated 1 Fire Hydrant		1 EA.

QUANTITIES CARRIED TO SHEET NO. 24

EXISTING WATER LINES TO BE ABANDONED IN PLACE AFTER NEW PIPE IS CONNECTED

CONTRACTOR SHALL SO ARRANGE HIS WATER LINE WORK THAT THE 8" WATER LINE WILL NOT BE OUT OF SERVICE MORE THAN 4 HOURS WHEN CONNECTIONS BETWEEN THE OLD AND NEW LINES ARE MADE.

CONTRACTOR SHALL NOTIFY THE MIDVALE WATER BOARD AT LEAST 48 HOURS IN ADVANCE OF HIS INTENT TO TURN OFF THE MAIN WATER SUPPLY LINE.

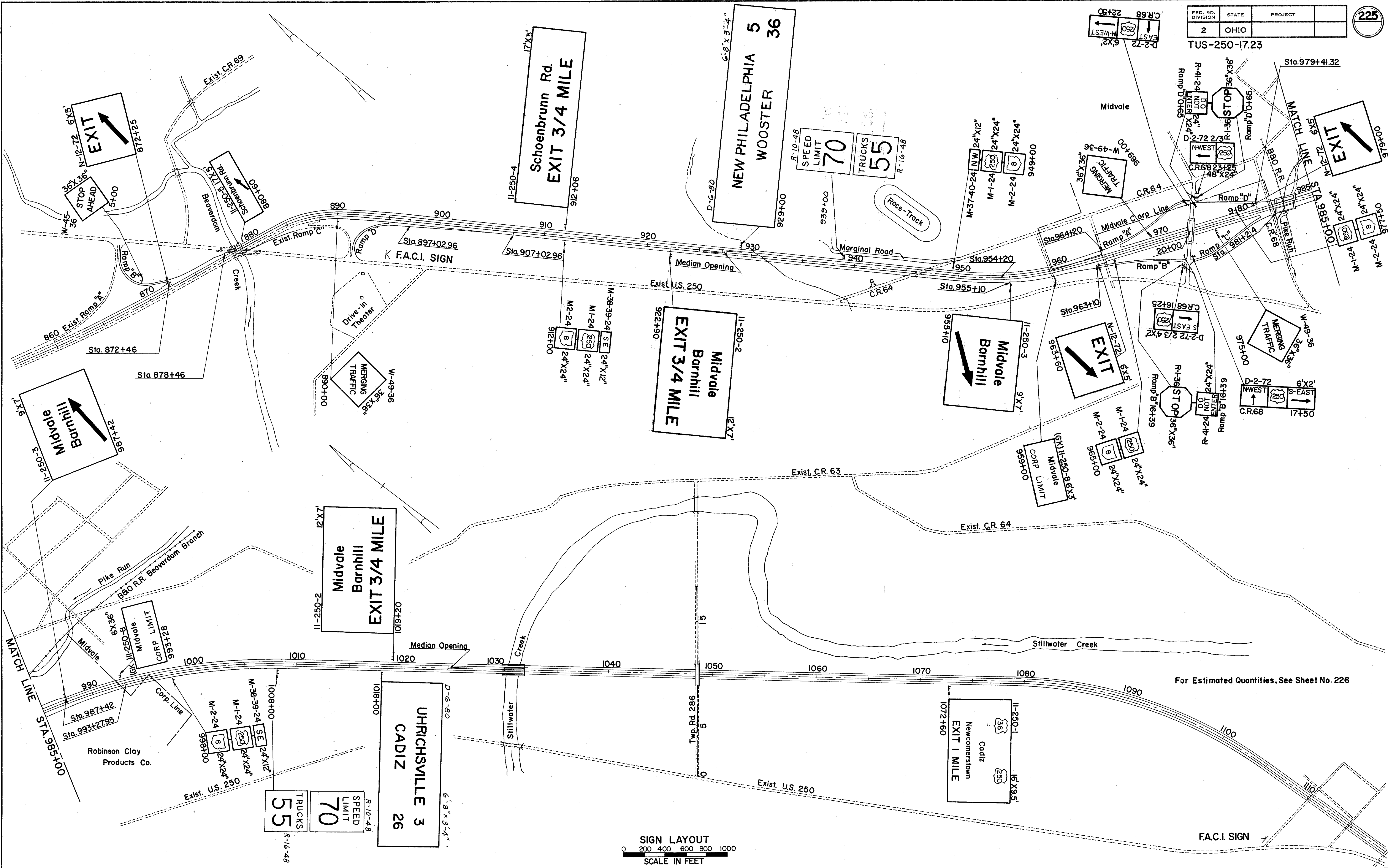
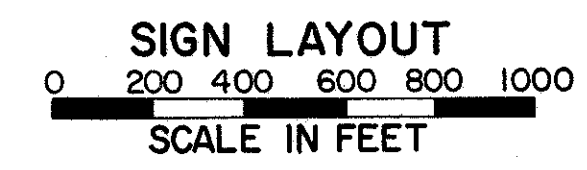
FOR ROADWAY PLAN & PROFILE SEE SHEET NO. 37

2WL

STA. 981+57.86
419 L.F. 8" MECHANICAL JOINT WATER LINE

8" WATER LINE COUNTY ROAD 68

TUS-250-17.23



For Estimated Quantities, See Sheet No. 226

TUS 250-17.23

[illegible]

815 Installation of Signs Carried To Sheet No. 22
Flat Sheet Type 308 Sq. Ft. ✓
Guide Type 706 Sq. Ft.

NOTE:
816 Support Quantities Carried To Sheet No. 22
606 Guard Fence Quantities Carried On Individual Sheets As Shown

PAVEMENT MARKINGS							
STATION TO STATION	4" EDGE LINE	4" LANE LINE		8" CHANNEL LINE	CURB ISLAND MARKINGS	DIAGONAL STRIPE	BARRIER LINE
	LIN.FT.	LIN.FT.		LIN.FT.	LIN. FT.	LIN. FT.	LIN. FT.
RAMP B RT. 7+83 -2+59	524						
RAMP B LT. 7+83 -2+59	524						
RAMP D RT. 1+99 -7+58	559						
RAMP D LT. 1+99 -6+58	459						
RAMP B RT. 8+00 -16+74	874						
RAMP B LT. 8+00 -16+74	874						
RAMP C RT. 0+13 -10+04	991						
RAMP C LT. 0+13 -9+04	891						
RAMP D RT. 5+89 -0+24	565						
RAMP D LT. 5+89 -0+12	577						
RAMP A RT. 20+04 -10+00	1004						
RAMP A LT. 20+04 -10+00	1004						
LT. 888+05 -1103+39	21534						
CTR. 888+05 -1103+39		21534					
RT. 888+05 -901+43	1338						
RT. 897+03 -899+03				200	LUMP		
RT. 899+03 -901+43		240					
RT. 897+03 -963+10	6607						
RT. 964+10 -986+52	2242						
RT. 960+90 -963+10				220	LUMP	LUMP	
RT. 960+90 -964+10				320			
RT. 958+50 -960+90		240					
RT. 981+24 -983+64				240	LUMP		
RT. 983+64 -986+52		288					
RT. 981+24 -1103+39	12215						
LT. 1103+39 -863+00	24039						
CTR. 1103+39 -863+00		24039					
RT. 1103+39 -979+41	12398						
RT. 978+41 -959+80	1861						
RT. 984+02 -981+82		240					
RT. 981+62 -979+41				221	LUMP	LUMP	
RT. 981+62 -978+41				321			
RT. 964+20 -962+20				200	LUMP		
RT. 962+20 -959+80		240					
RT. 964+20 -872+46	9174						
RT. 871+46 -863+00	846						
RT. 875+67 -873+86		181					
RT. 873+86 -872+46				140	LUMP	LUMP	
RT. 873+86 -871+46				240			
FEDERAL PART L.F.	101100	47002		2102	LUMP	LUMP	
MI.	19.15	3.34					
COUNTY ROAD 68 EXTENSION							
LT. 14+84 -16+03	145						
LT. 17+46 -22+56	510						
LT. 23+96 -24+21	123						
CTR. 15+27 -16+04							77
CTR. 17+45 -22+34							489
CTR. 23+47 -24+58							111
CTR. 23+47 -24+58		111					
RT. 14+84 -16+04	149						
RT. 17+45 -22+54	509						
RT. 23+97 -24+58	168						
LT. 0+50 -4+40	390						
LT. 5+54 -10+34	480						
CTR. 0+50 -4+40							390
CTR. 5+74 -10+34							460
CTR. 5+74 -8+24		250					
RT. 0+50 -4+19	369						
RT. 5+74 -10+34	460						
100% STATE L.F.	3303	361					1527
MI.	0.63	0.03					0.29
SUMMARY							
LENGTH FEDERAL PART	19.15	3.34		2102	LUMP	LUMP	
IN MILES 100% STATE PART	0.63	0.03					0.29
QUANTITIES CARRIED TO SHEET NO. 22							

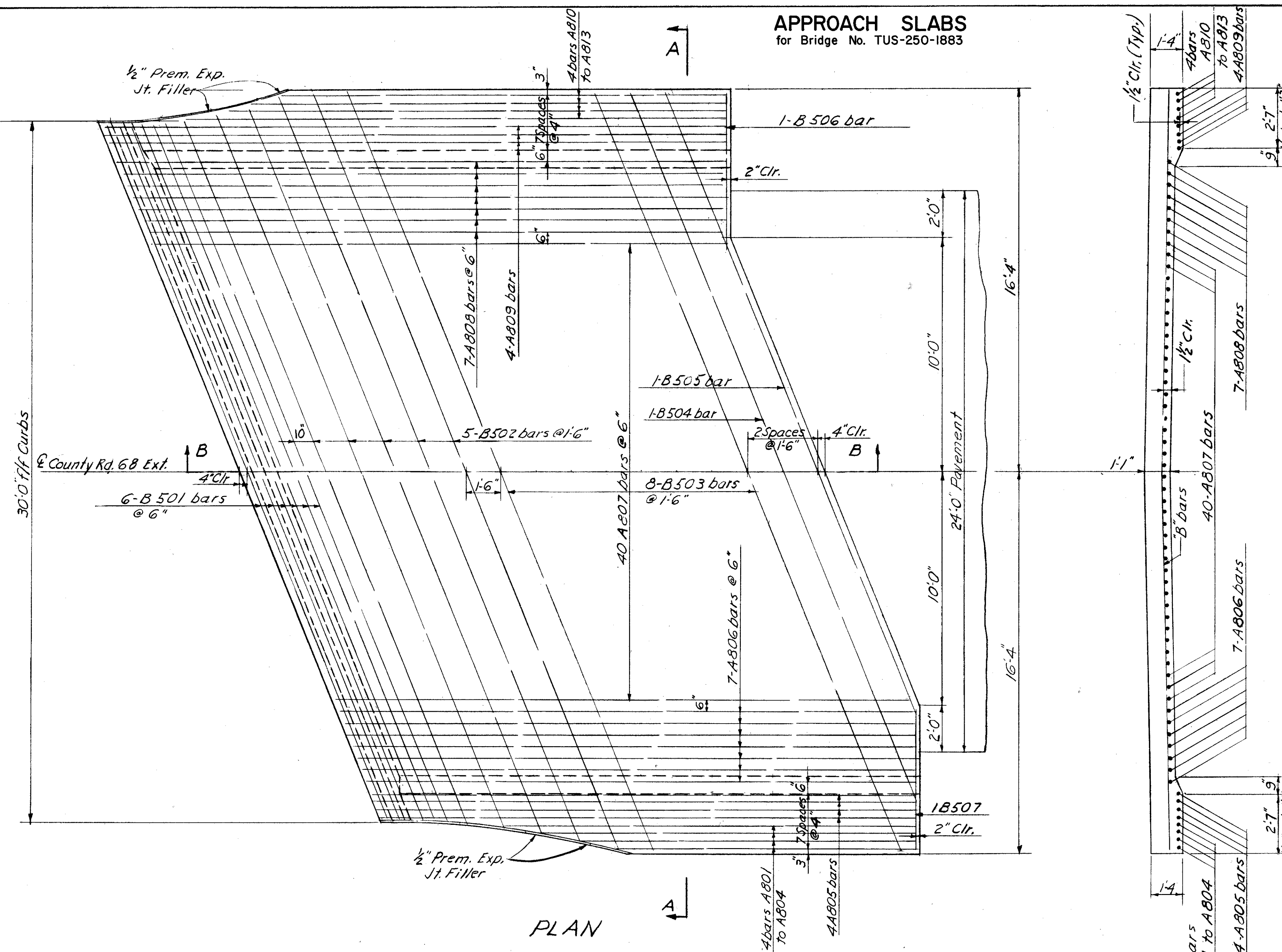
SUMMARY SIGNING AND PAVEMENT MARKING

APPROACH SLABS for Bridge No. TUS-250-1883

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

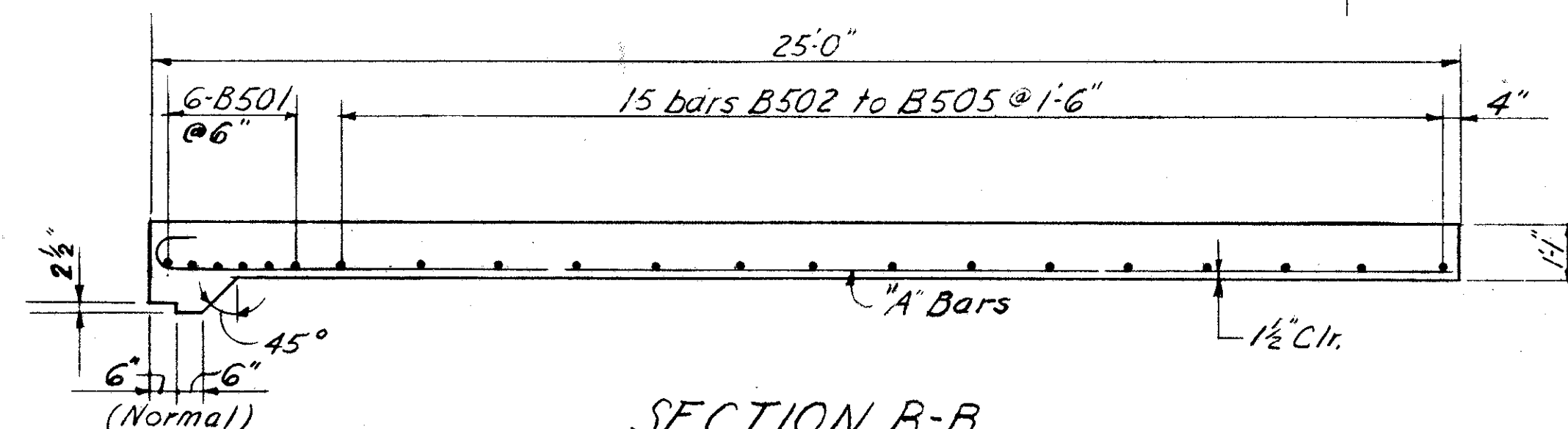
227

TUS-250-17.23



SECTION A-A

REINFORCING STEEL (For One Approach Slab)						
Mark	No. Req'd	Length	Dim. "A"	Mark	No. Req'd	Length
A 801	1	13'-7"	12'-6"	B 501	6	31'-10"
A 802	1	15'-0"	13'-11"	B 502	5	32'-4" to 34'-8" Vary Each by 7"
A 803	1	16'-8"	15'-7"	B 503	8	34'-8"
A 804	1	19'-0"	17'-11"	B 504	1	32'-7"
A 805	4	23'-9" to 24'-2" Vary Each by 1 1/8"	22'-8" to 23'-1" Vary Each by 1 1/8"	B 505	1	28'-7"
A 806	7	24'-4" to 25'-7" Vary Each by 2 1/2"	23'-3" to 24'-6" Vary Each by 2 1/2"	B 506	1	6'-9"
A 807	40	25'-7"	24'-6"	B 507	1	5'-10"
A 808	7	25'-9" to 27'-0" Vary Each by 2 1/2"	24'-8" to 25'-11" Vary Each by 2 1/2"			
A 809	4	27'-2" to 27'-7" Vary Each by 1 1/8"	26'-1" to 26'-6" Vary Each by 1 1/8"			
A 810	1	24'-2"	23'-1"			
A 811	1	22'-5"	21'-4"			
A 812	1	21'-1"	20'-0"			
A 813	1	20'-1"	19'-0"			



SECTION B-B

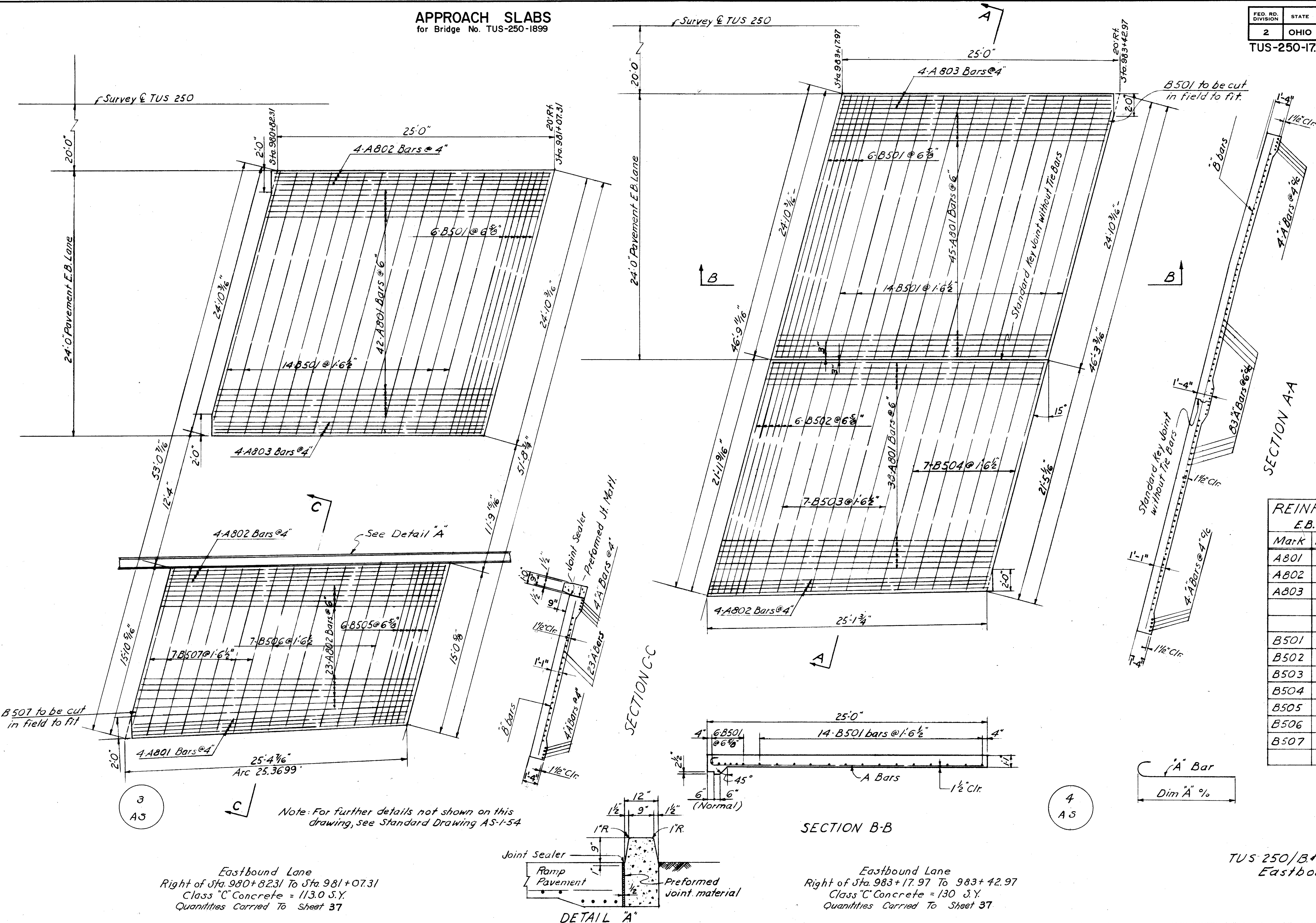
FORWARD APPROACH SLAB
Rear Approach Slab same on opposite hand

Note: For further details not shown on this drawing, see Standard Drawing AS-1-54.

ESTIMATED QUANTITIES
(For One Approach Slab)
Class "C" Concrete = 89 SY.
Quantities Carried To Sheet 171

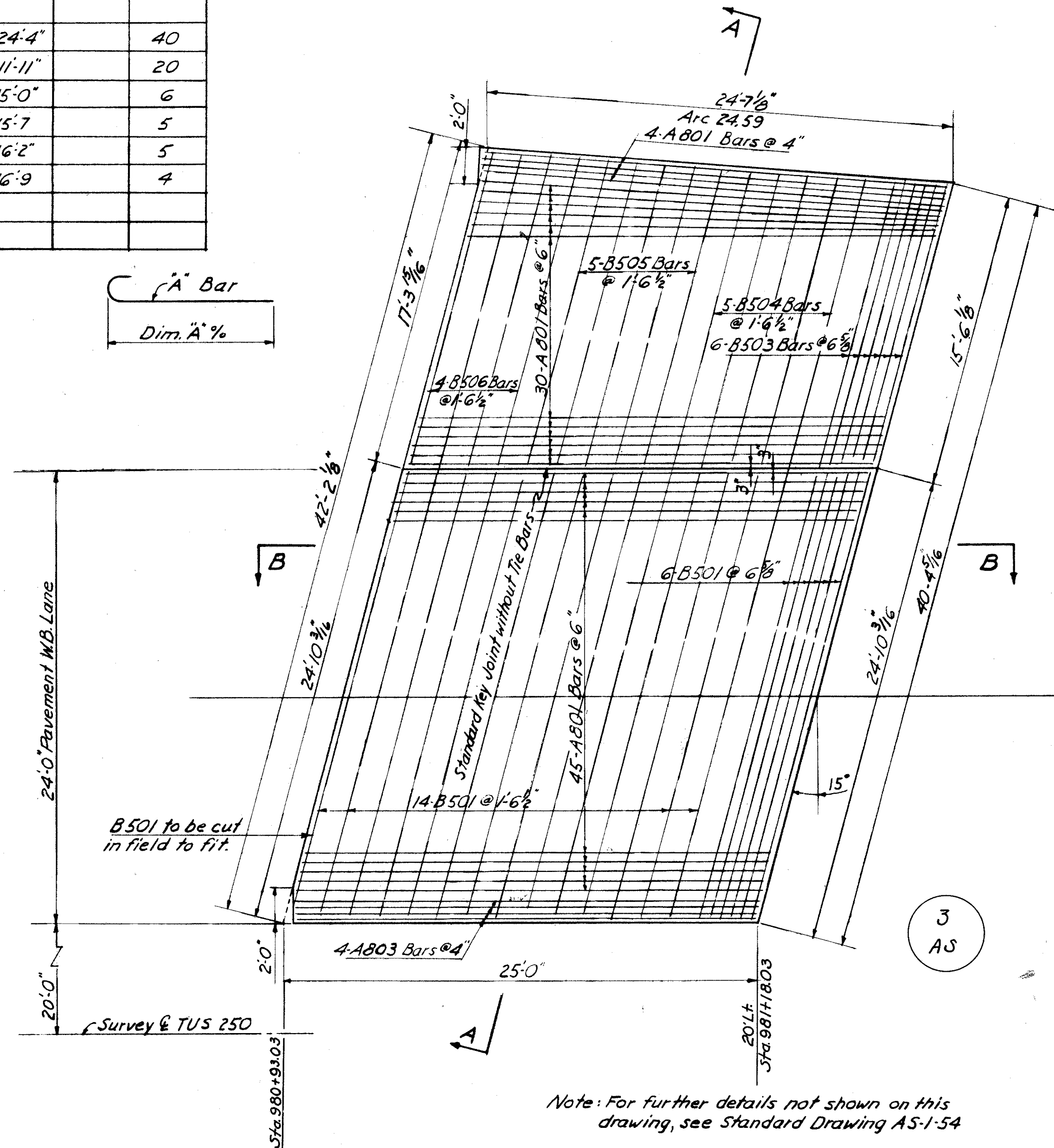
APPROACH SLABS
for Bridge No. TUS-250-1899

TUS-250-1723

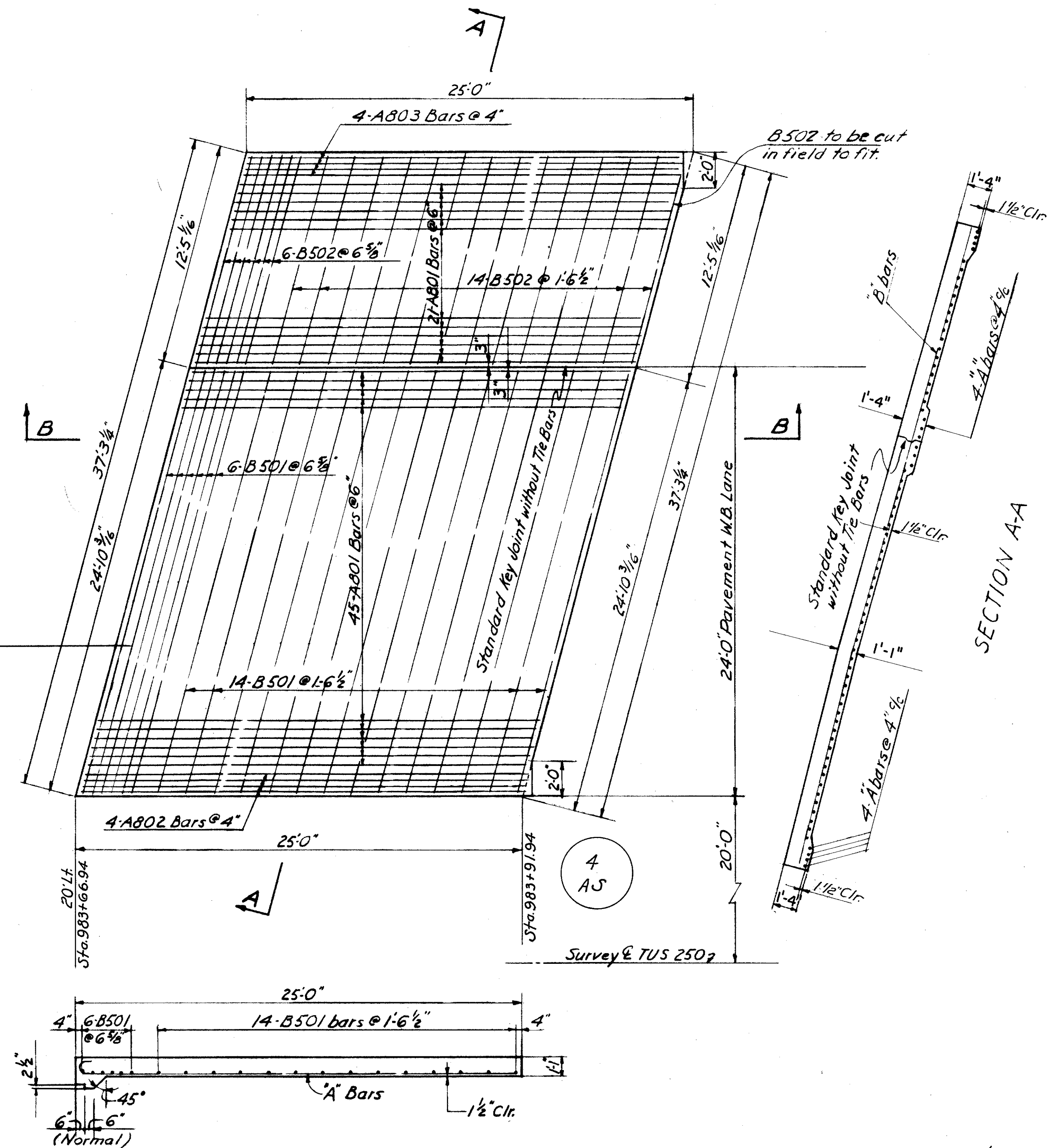


REINFORCING STEEL			
W.B.L. Approach Slabs			
Mark	Length	Dim "A"	No. Req'd
A801	25'-7"	24'-6"	145
A802	25'-10"	24'-9"	4
A803	25'-4"	24'-3"	8
B501	24'-4"		40
B502	11'-11"		20
B503	15'-0"		6
B504	15'-7"		5
B505	16'-2"		5
B506	16'-9"		4

APPROACH SLABS for Bridge No. TUS-250-1899



Westbound Lane
Left of Sta. 980+93.03 To Sta. 981+18.03 Quantities Carried To Sheet 37
Class "C" Concrete = 114.0 S.Y.

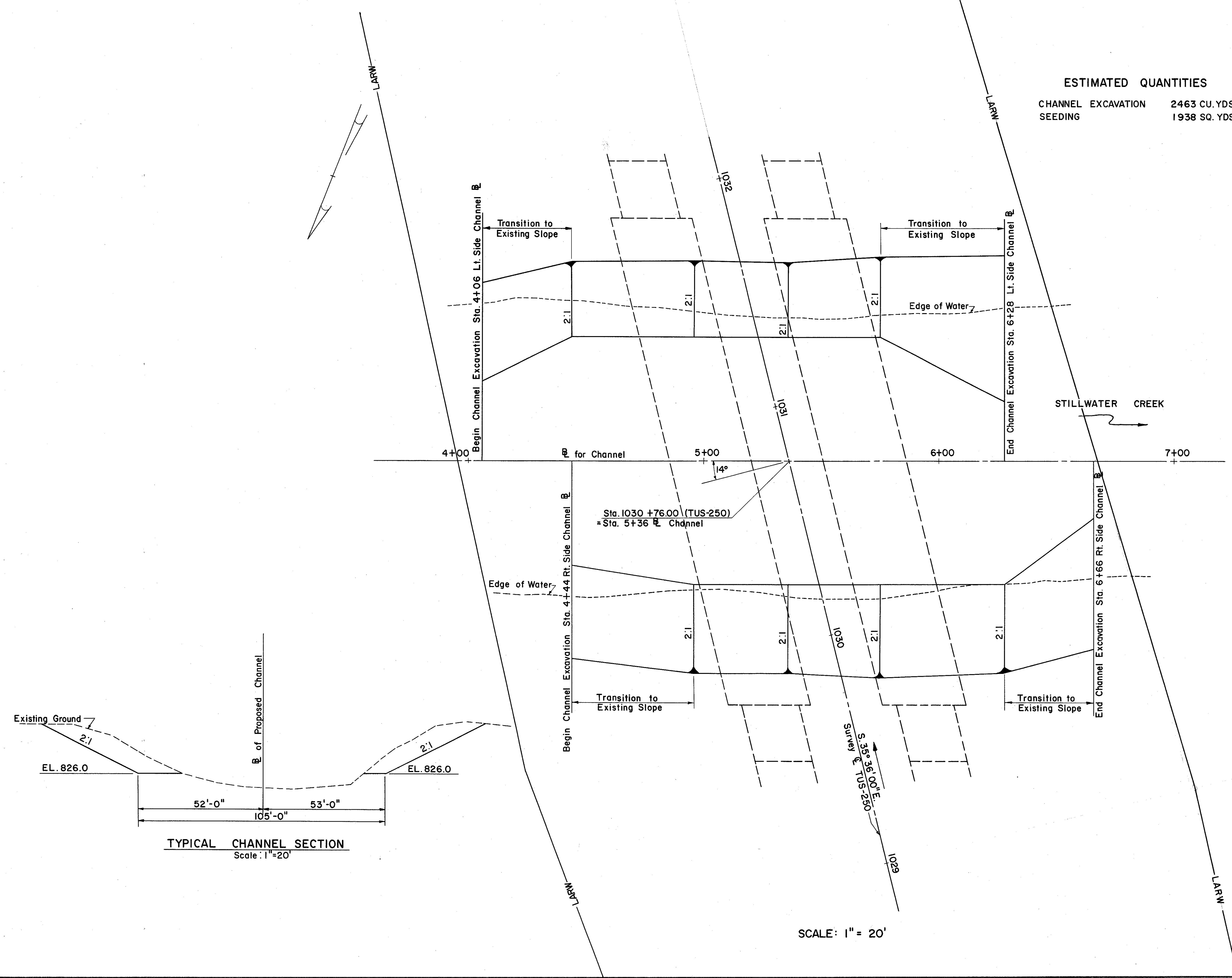
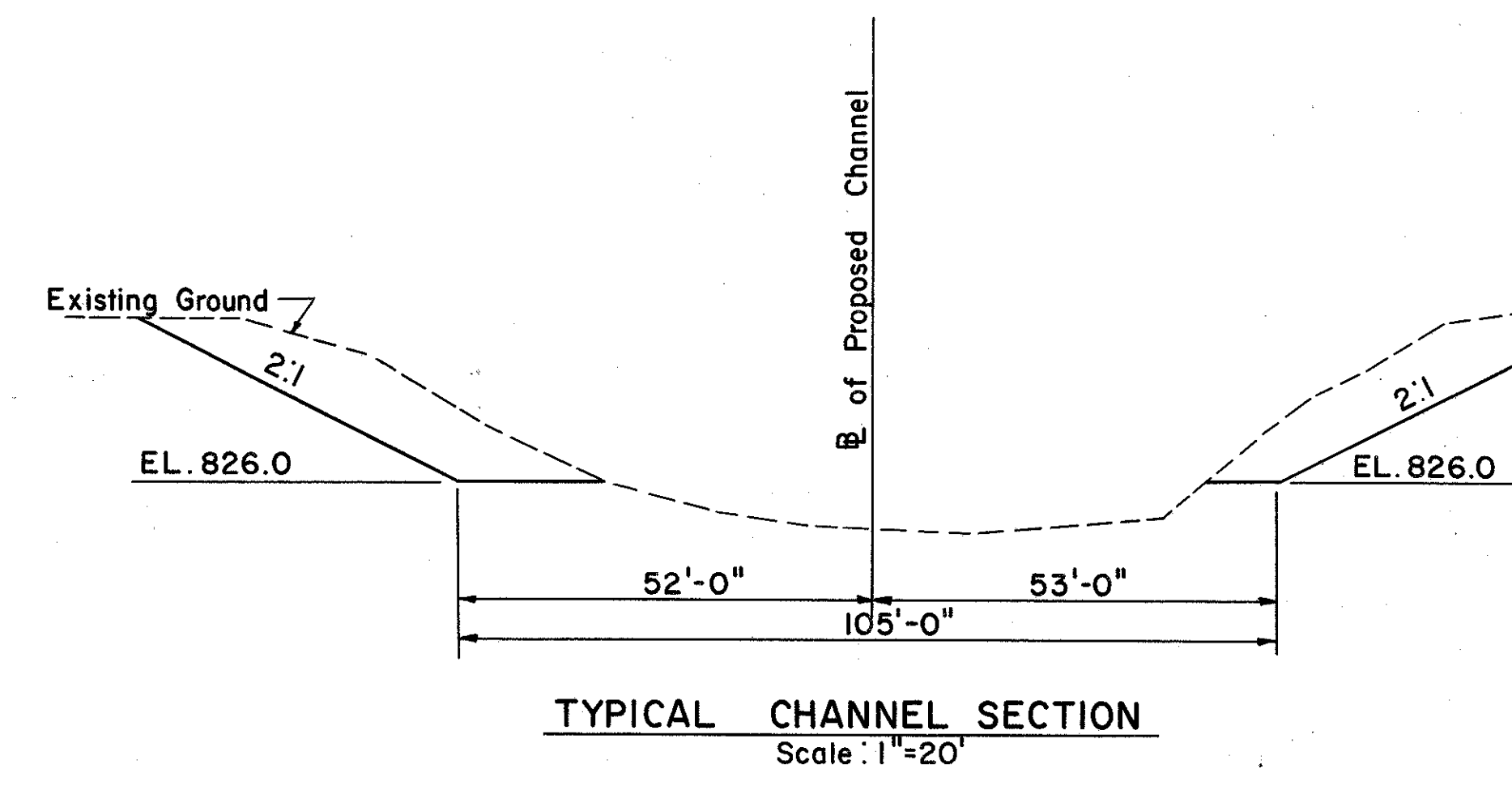


Westbound Lane
Left of Sta. 983+66.94 To Sta. 983+91.94 Quantities Carried To Sheet 37
Class "C" Concrete = 104 S.Y.

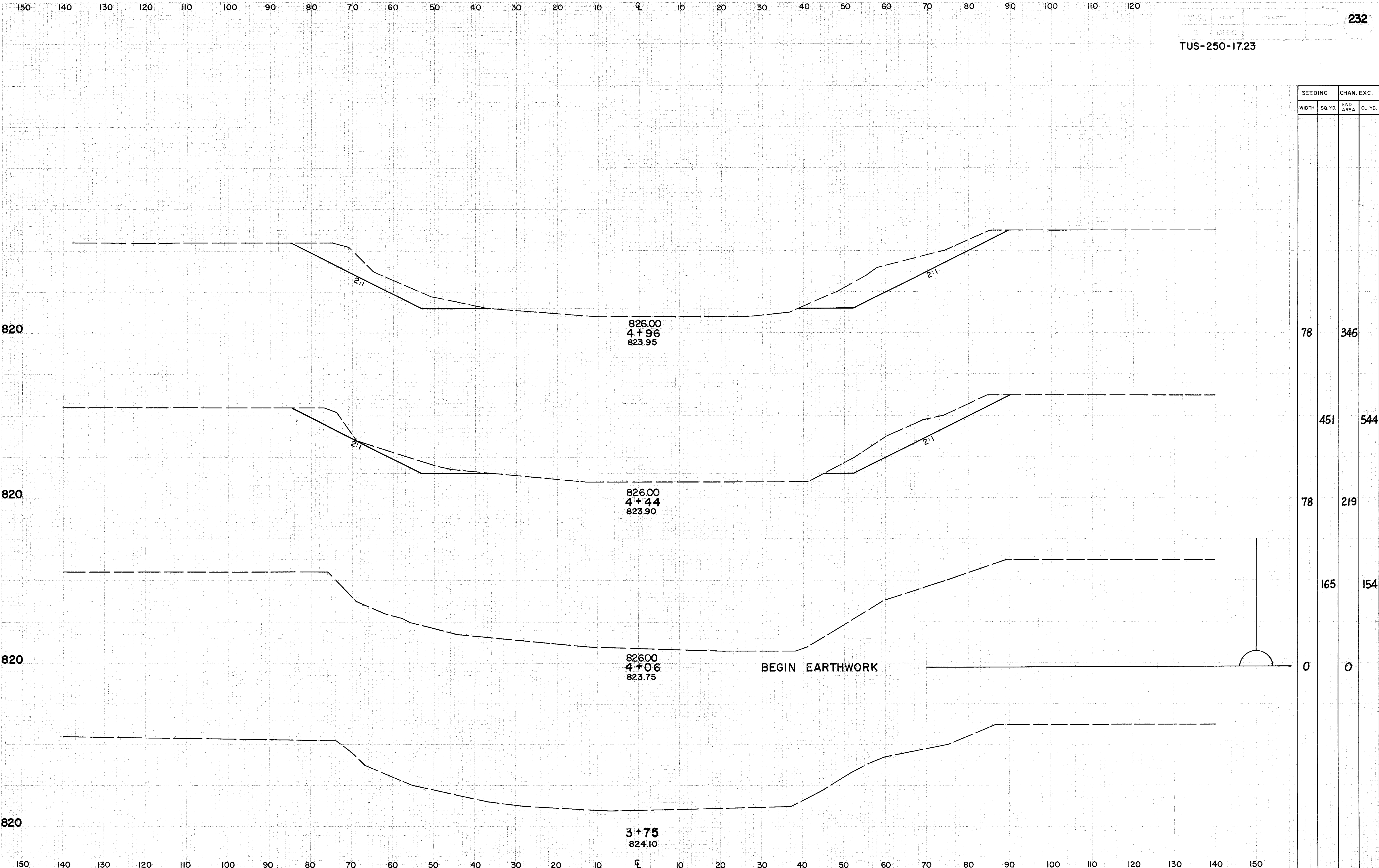
TUS 250/B+O.R.R. + Pike Run
Westbound Lanes

ESTIMATED QUANTITIES

CHANNEL EXCAVATION	2463 CU.YDS.-(Carried to Sheet No.23)	FROM SHEET 233
SEEDING	1938 SQ.YDS.-(Carried to Sheet No.122)	FROM SHEET 233

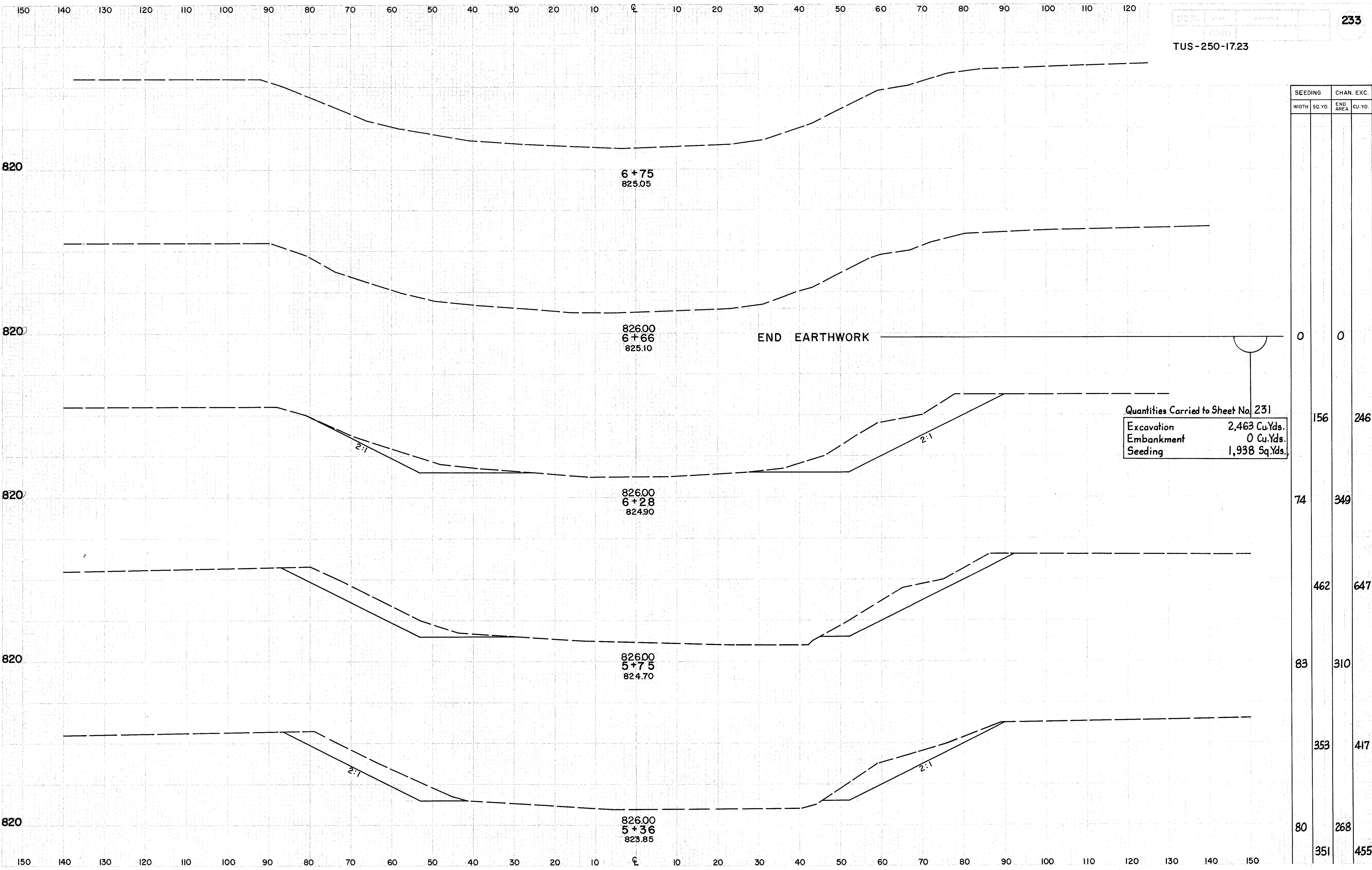


SCALE: 1" = 20'



SEEDING		CHAN. EXC.	
WIDTH	SQ. YD.	END AREA	CU. YD.
78	346		
451	544		
78	219		
165	154		
0	0		

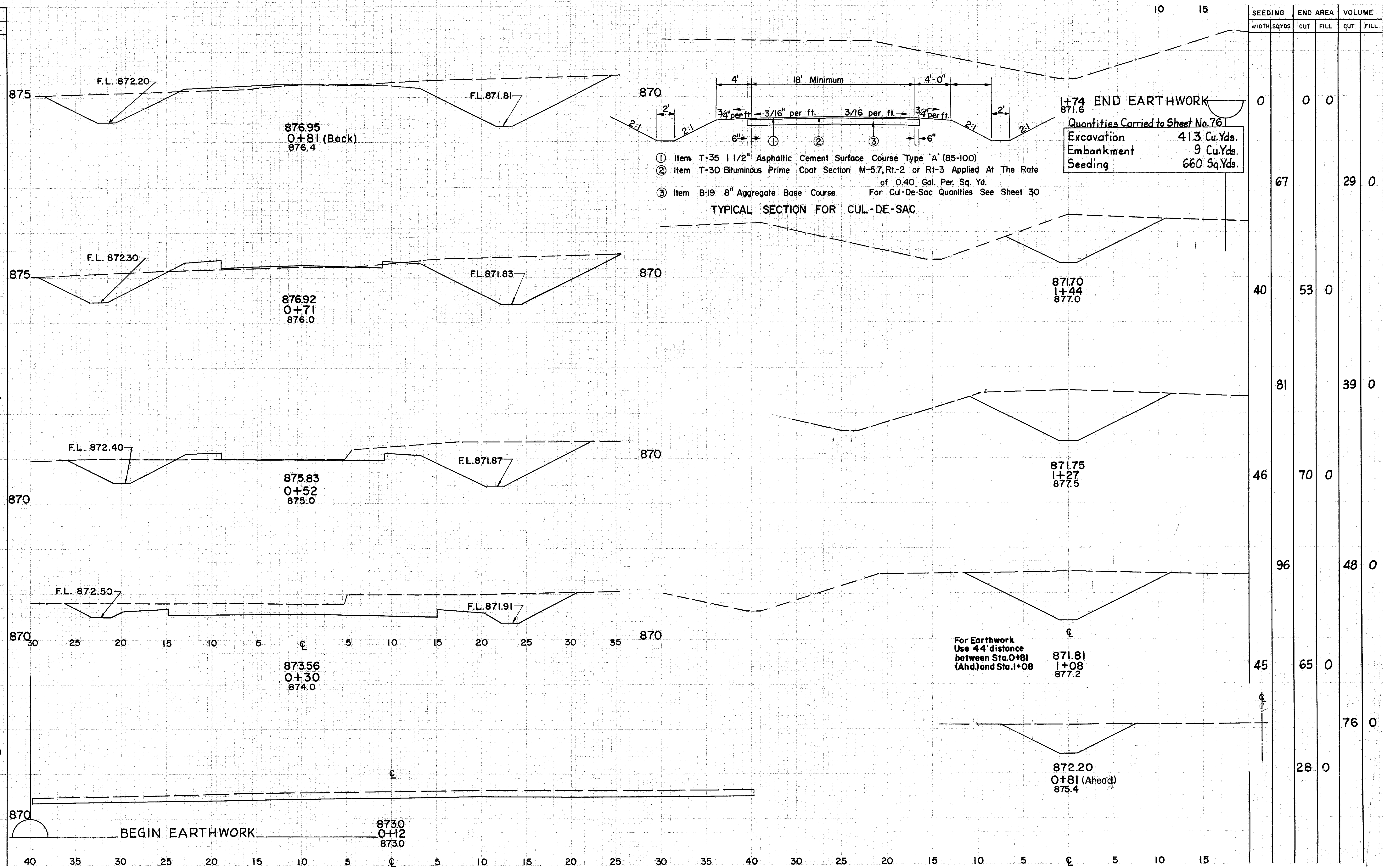
CHANNEL EXCAVATION - STILLWATER CREEK - STA. 3+75 TO STA. 4+96



SEEDING		CHAN. EXC.	
WIDTH	SQ. YD.	END AREA	CU. YD.
0	0	0	0
156	246		
74	349		
462	647		
83	310		
353	417		
80	268		
351	455		

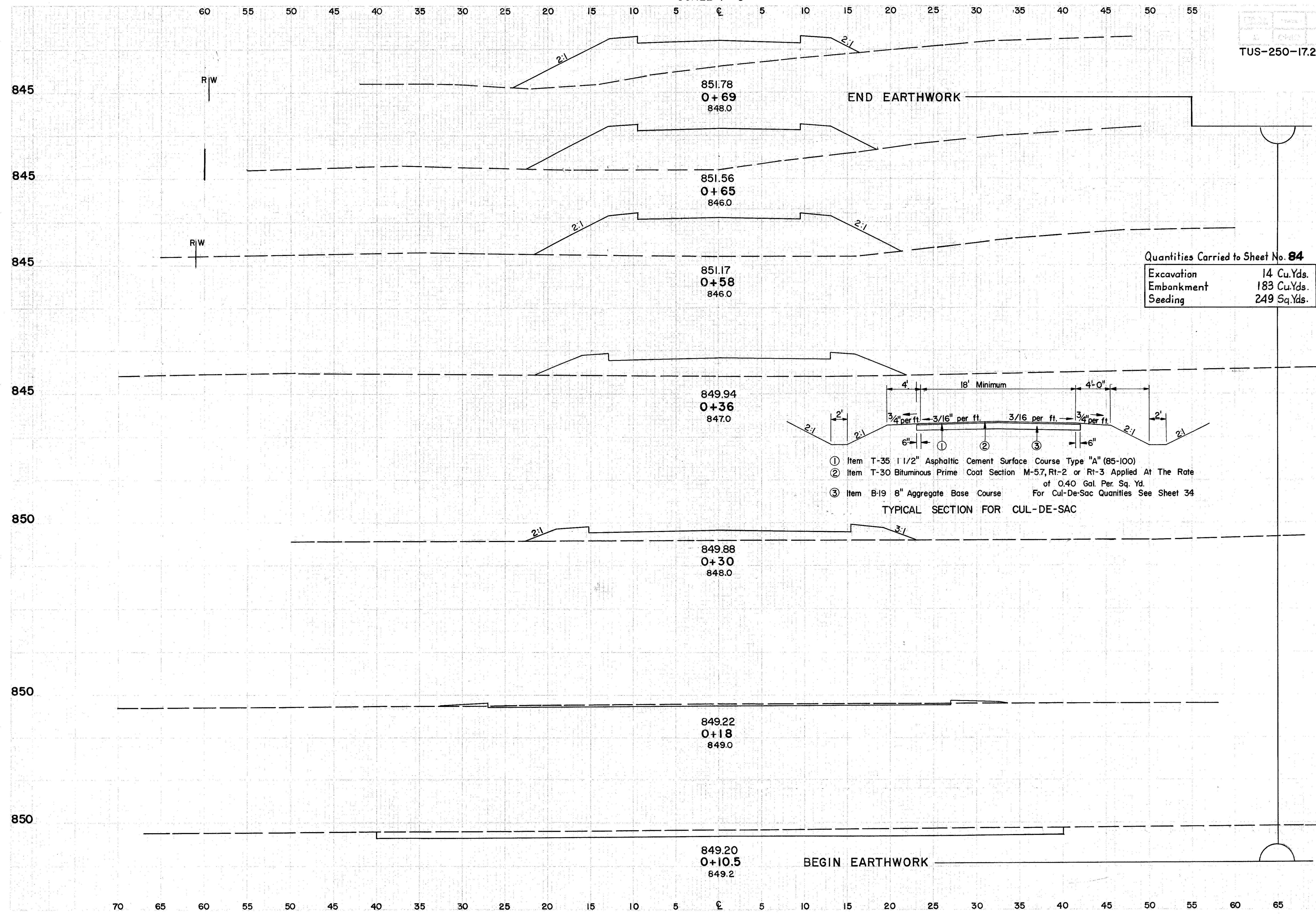
SCALE: 1" = 5'

SEEDING		END AREA		VOLUME	
WIDTH	SQ.YDS.	CUT	FILL	CUT	FILL
62	99	6			
71			35	3	
65	92	8			
134			63	4	
62	87	4			
139			72	2	
52	90	0			
72			51	0	
20	64	0			



SCALE: 1" = 5'

TUS-250-17.23



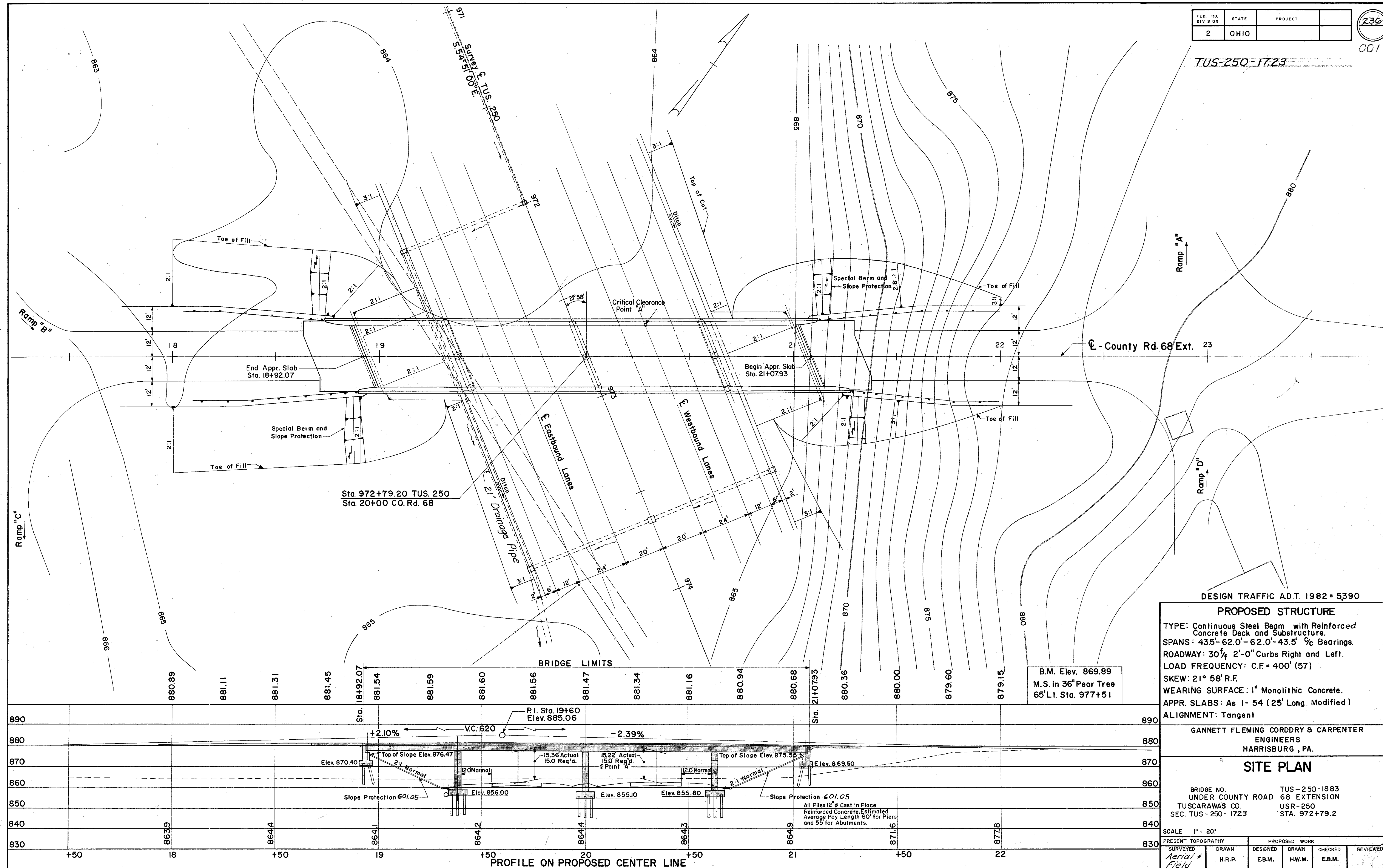
Quantities Carried to Sheet No. 84
Excavation 14 Cu.Yds.
Embankment 183 Cu.Yds.
Seeding 249 Sq.Yds.

TYPICAL SECTION FOR CUL-DE-SAC
① Item T-35 1 1/2" Asphaltic Cement Surface Course Type "A" (85-100)
② Item T-30 Bituminous Prime Coat Section M-5.7, Rt-2 or Rt-3 Applied At The Rate of 0.40 Gal. Per. Sq. Yd.
③ Item B-19 8" Aggregate Base Course For Cul-De-Sac Quantities See Sheet 34

SCALE: 1" = 5'

CUL-DE-SAC ON C.R. 68 STA. 980+81.15

TUS-250-17.23



GENERAL NOTES

REFERENCE shall be made to the following Standard Drawings: SD-63 sheets 2, 3 & 4 dated 11-12-63, SD-2-64 dated 11-25-64, FSB-1-62 dated 4-19-62 revised 1-15-63, BR-1-65 Sheet 1 revised 11-24-65 and Supplemental Specifications 808 dated 2-7-66, 811 dated 3-29-65 and 825 dated 4-22-65. DESIGN SPECIFICATIONS: This structure conforms to the requirements of Design Specifications for Highway Structures of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof. EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments.

PILES shall be driven to a minimum bearing capacity of 31 tons per pile for the abutments and 42 tons per pile for the piers.

CONCRETE DECK PLACING: In order to facilitate water curing of concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span. MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

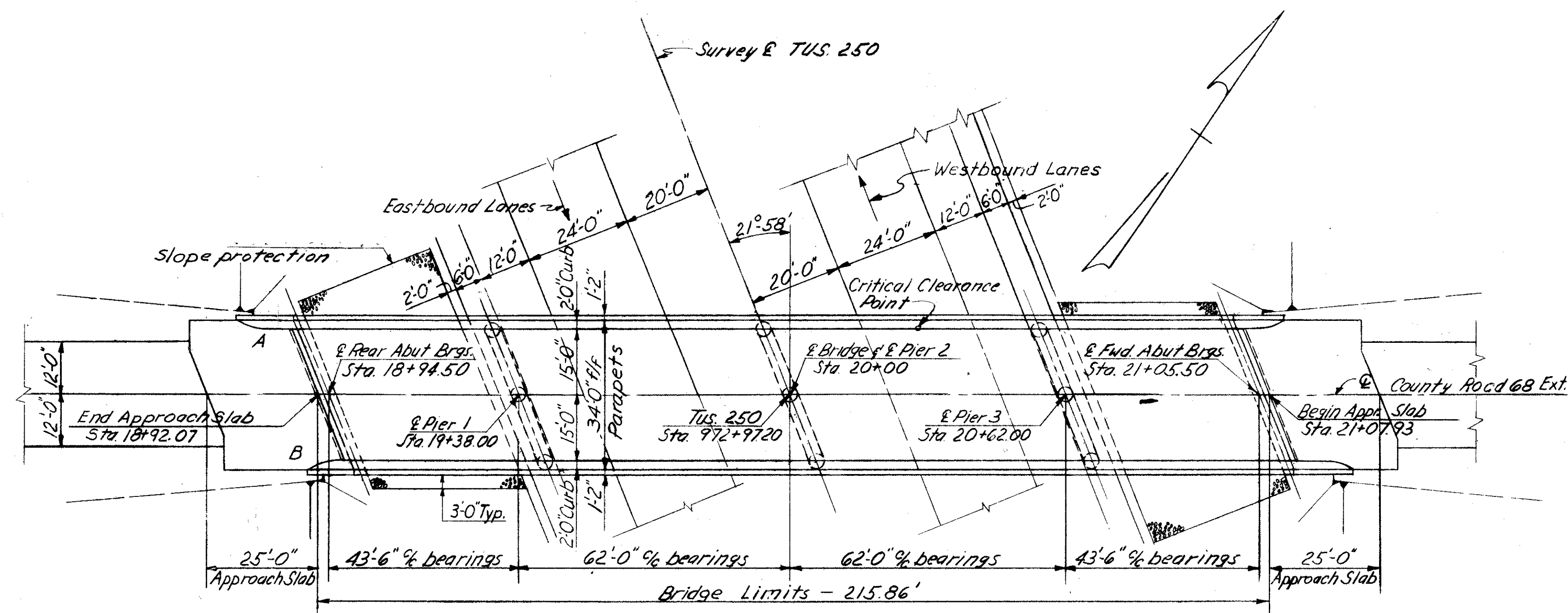
DESIGN LOADING: C.F-400(57)

CONCRETE CLASS C - basic unit stress 1333 psi.

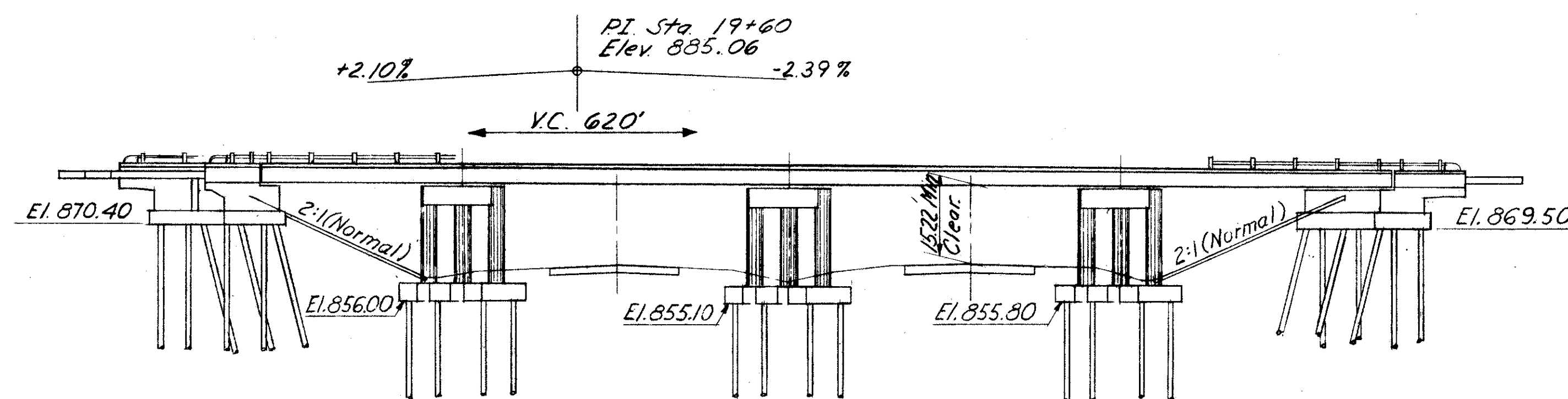
CONCRETE CLASS E - basic unit stress 1133 psi.

STRUCTURAL STEEL: ASTM-A36 - basic unit stress 20,000 psi (ASTM-A7 and A373 steel not permitted)

REINFORCING STEEL: ASTM A15, A16, and A160, Deformed, Intermediate, or Hard Grade. Basic unit stress 20,000 psi. Except spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 psi.



GENERAL PLAN



ELEVATION

All piles not shown

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Super.	Abuts.	Piers	Gen'l.		
503	423	Cu.Yds.	Unclassified excavation		209	214			
511	77	Cu.Yds.	Class "C" concrete, piers above footings			77			
511	243	Cu.Yds.	Class "C" concrete, superstructure	243					
511	157	Cu.Yds.	Class "E" concrete, footings		67	90			
511	80	Cu.Yds.	Class "E" concrete, abutments above footings		80				
509	95688	Lbs.	Reinforcing steel	65054	10975	19658			
513	176400	Lbs.	Structural steel	176400					
514	176400	Lbs.	Field painting of structural steel	176400					
517	470	Lin.Ft.	Railing Type 1	425	45				
505	Lump	Sum	First test pile				Lump		
507	3660	Lin.Ft.	12" cast-in-place reinforced concrete piles		1320	2340			
518	23	Cu.Yds.	Porous backfill		23				
518	8	Each	Scuppers including supports	8					
808	243	Each	Water reducing, set retarding admixtures for concrete	243					
825	1004	Sq.Yds.	Concrete surface treatment	960	44				
601	410	Sq.Yds.	Crushed aggregate slope protection				410		
518	64	Lin.Ft.	6" perforated Helical C.M.P. 707.06 including Specials		64				
518	51	Lin.Ft.	6" Helical C.M.P. 707.06 non-perforated		51				

GANNETT FLEMING CORDDRY & CARPENTER
ENGINEERS
HARRISBURG, PA.

GENERAL PLAN & ELEVATION
NOTES & ESTIMATED QUANTITIES

BRIDGE NO. TUS-250-1883
UNDER COUNTY ROAD 68 EXTENSION

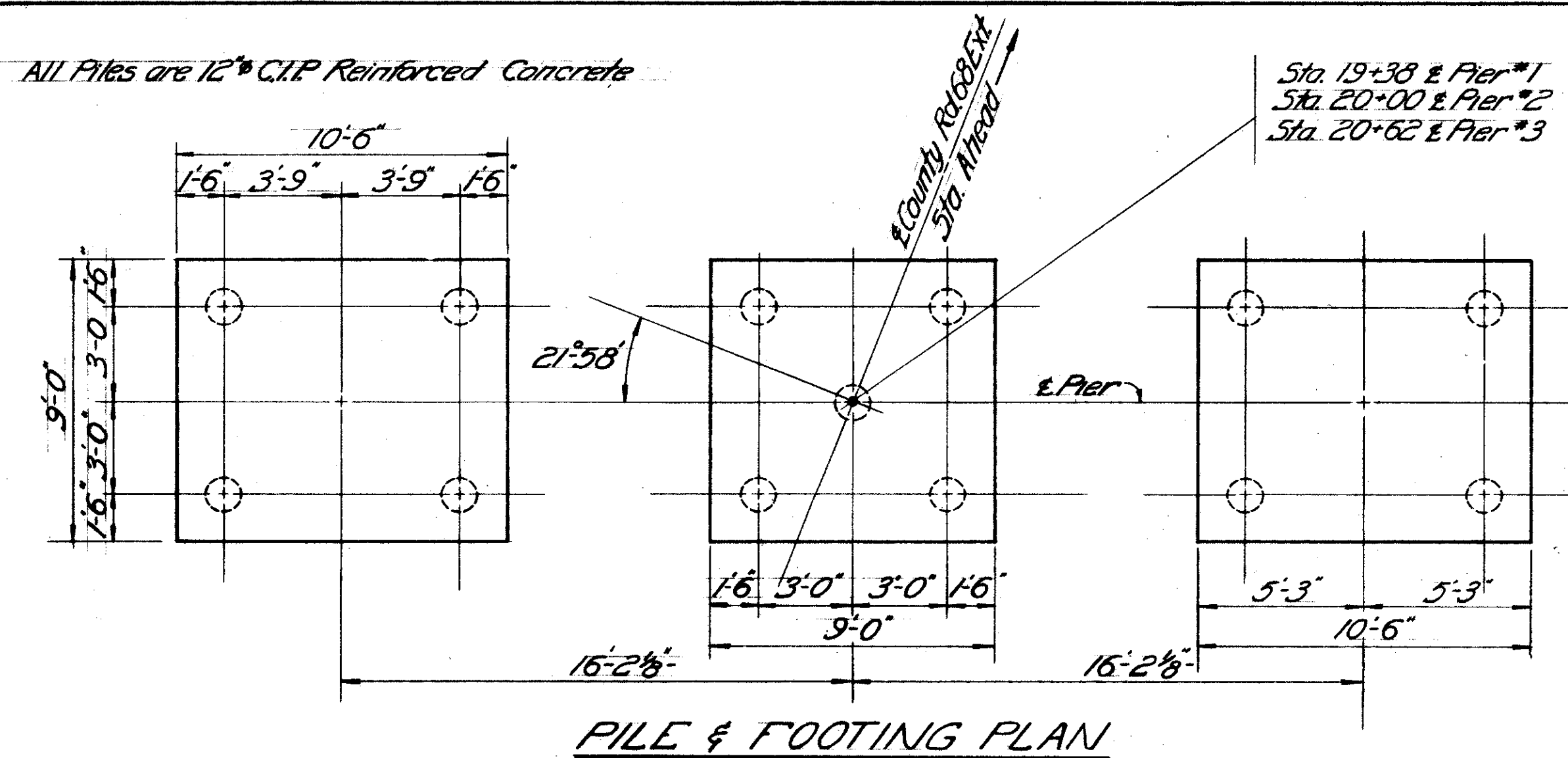
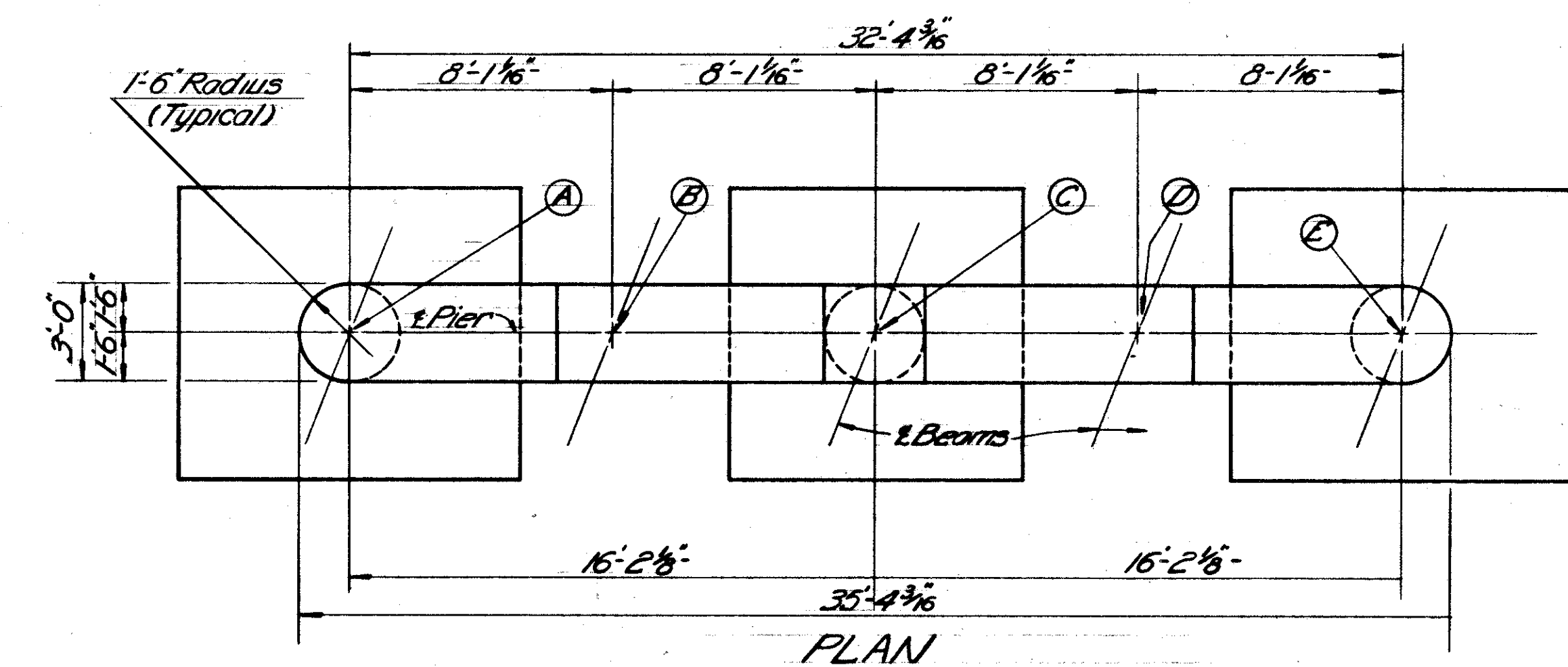
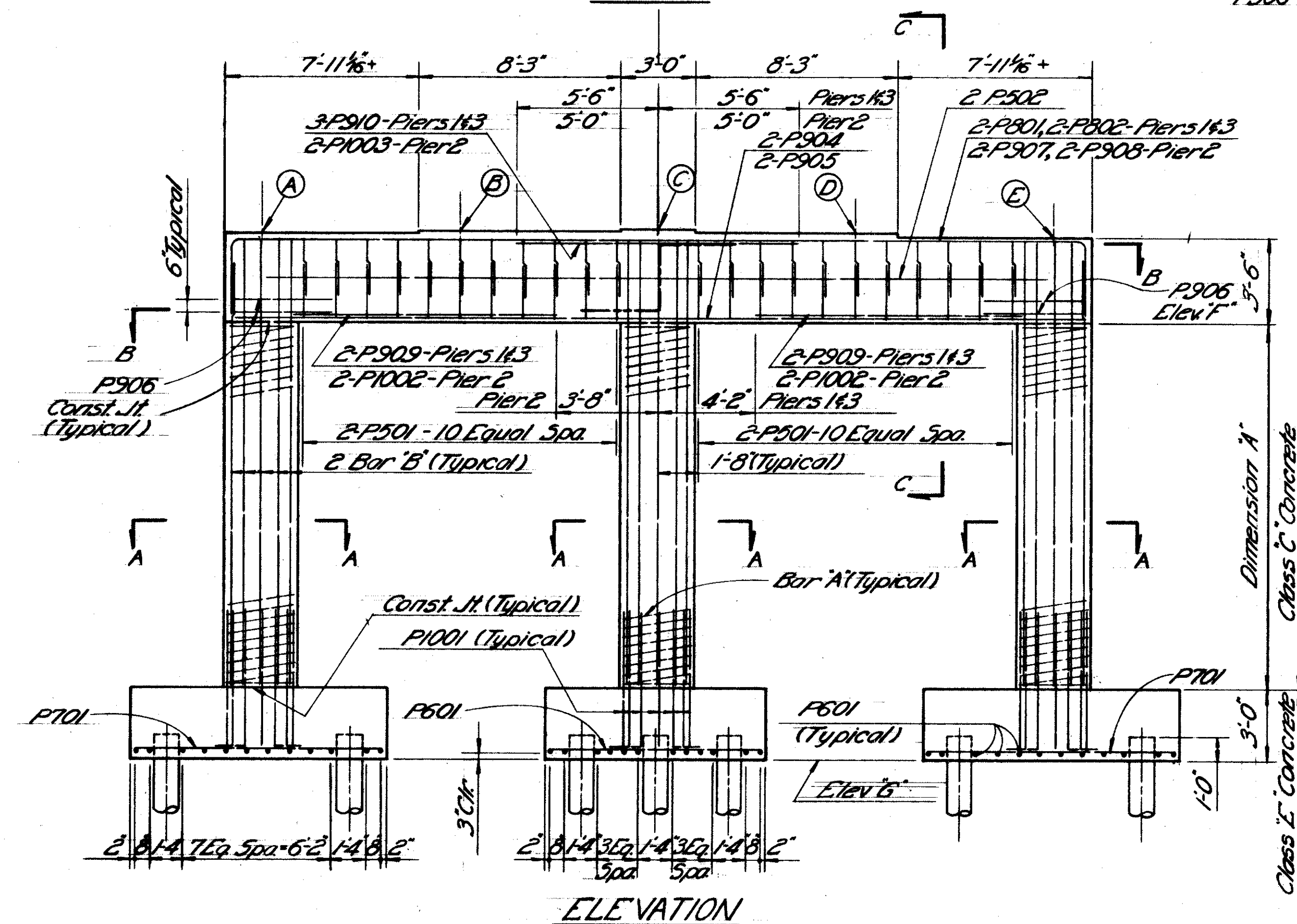
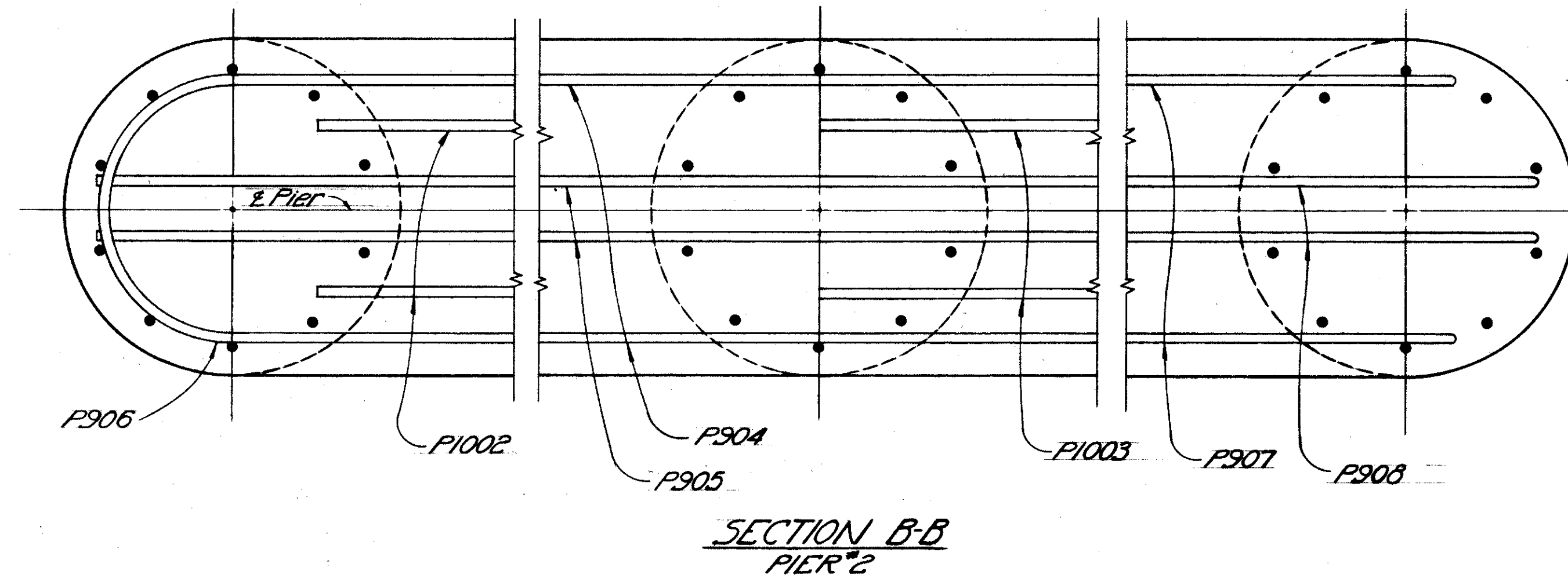
TUSCARAWAS COUNTY

USR-250

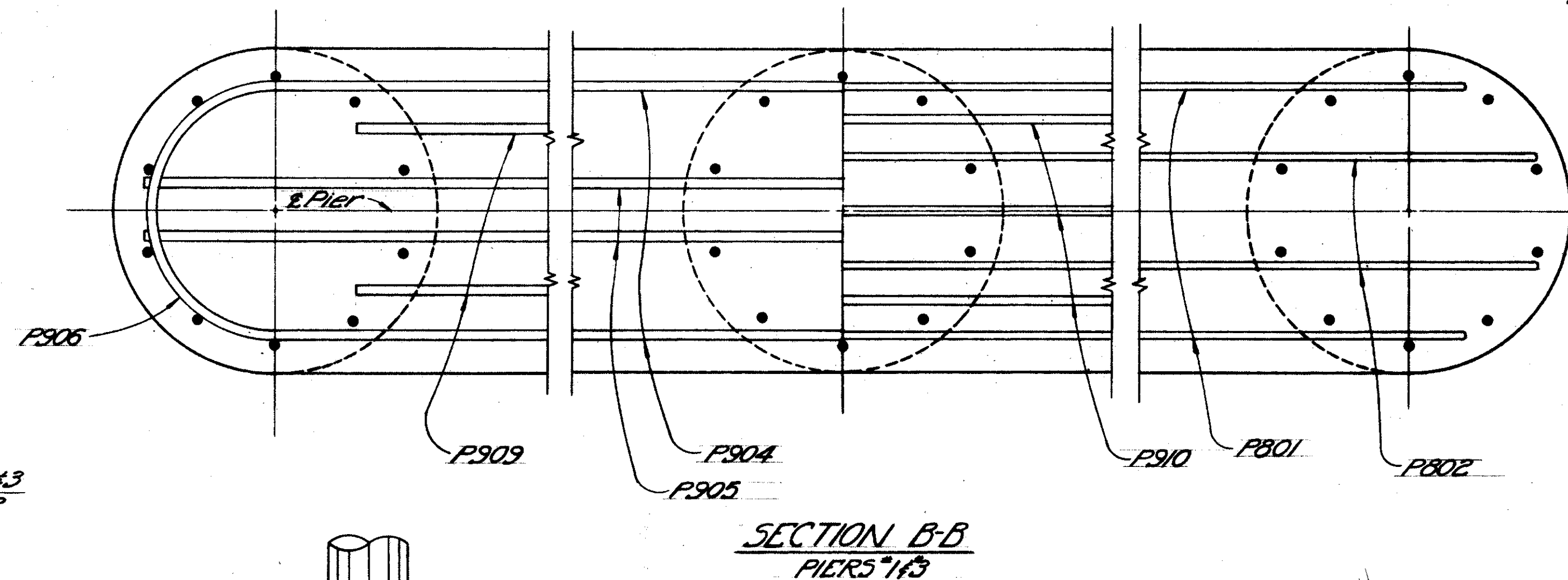
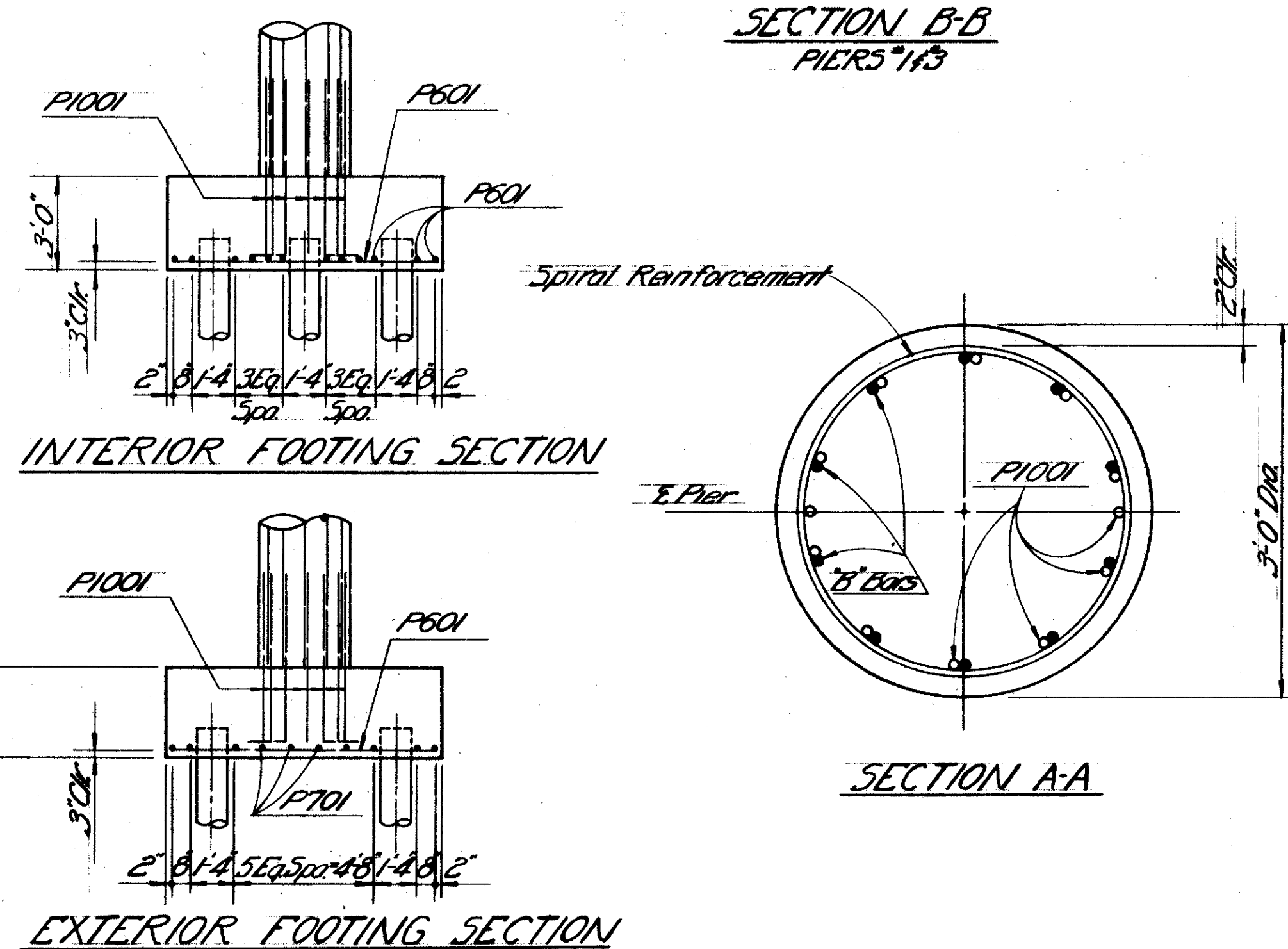
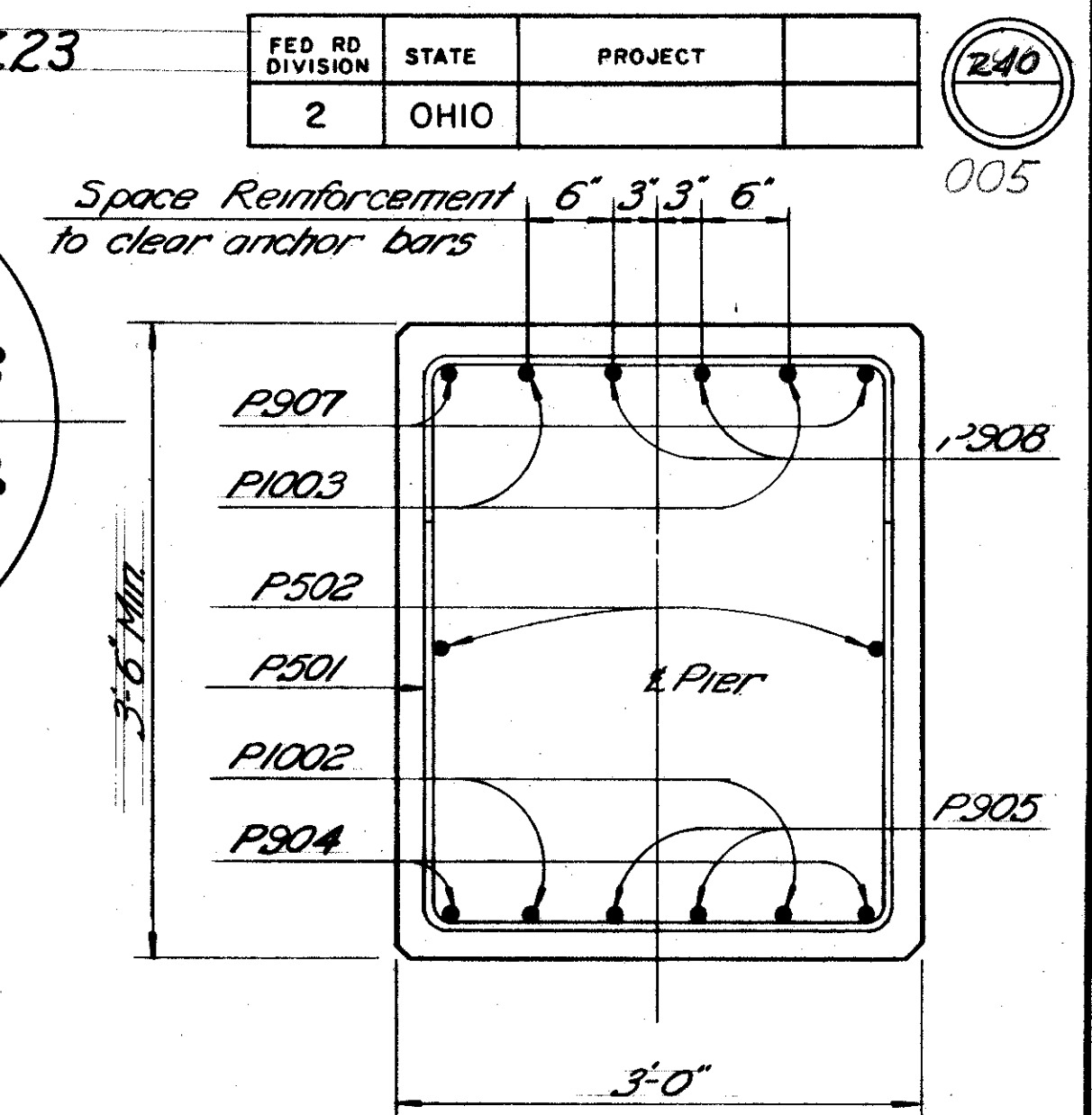
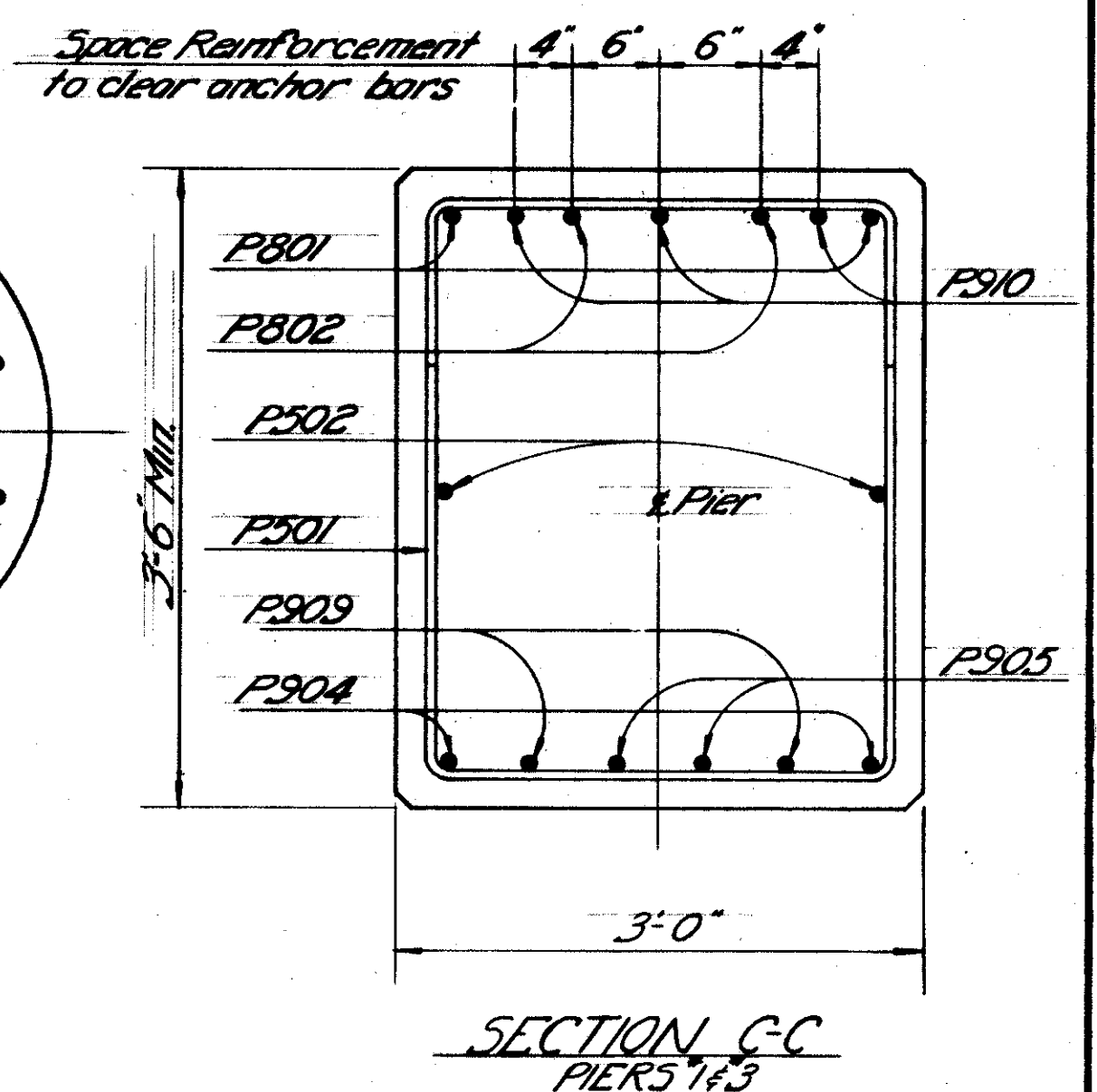
SEC. TUS-250-1723 STA. 18+92.07 To STA. 21+07.93

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.B.M.	G.D.M.	R.W.B.	E.B.M.			

All Piles are 12" CIP Reinforced Concrete



	ELEVATION							BAR		DIM.
	A	B	C	D	E	F	G	A	B	"
Pier #1	877.50	877.62	877.74	877.62	877.51	874.00	856.00	SP401	P901	15'-0"
Pier #2	877.18	877.29	877.39	877.26	877.13	873.63	855.10	SP402	P902	15'-6 3/8"
Pier #3	877.02	877.11	877.20	877.06	876.91	873.41	855.80	SP403	P903	14'-7 5/16"

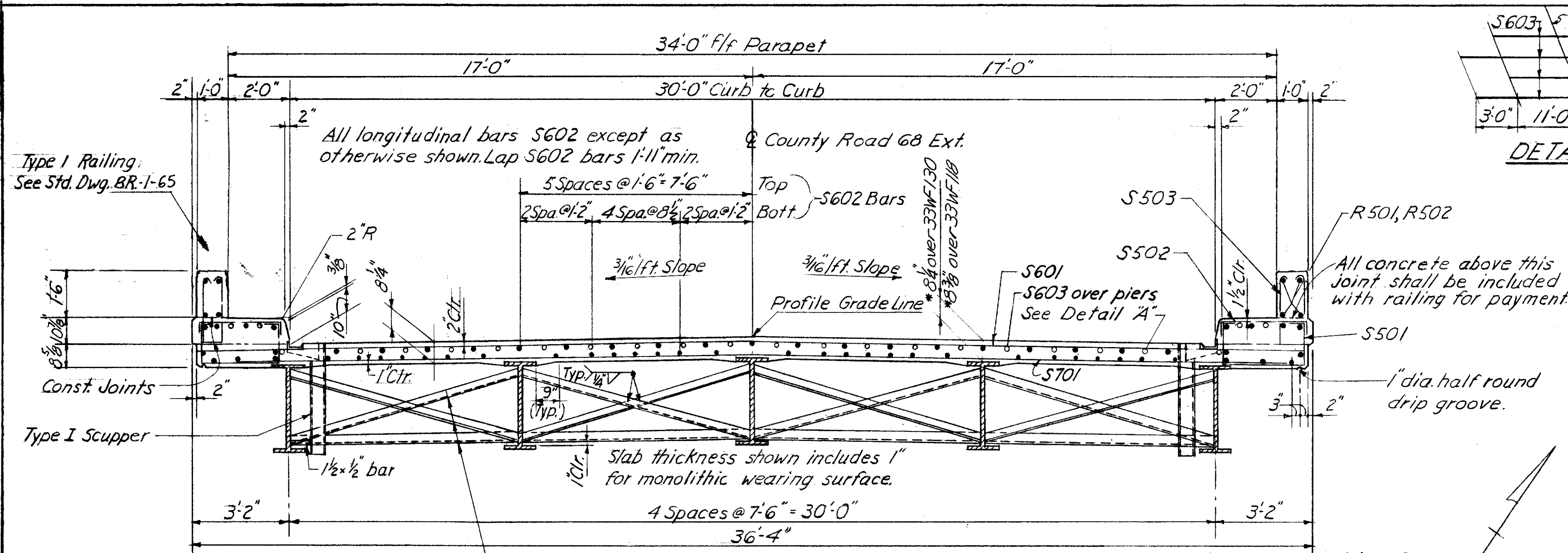


PIER NOTES

1. BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the bridge seats so as to avoid interference with the drilling of anchor bar holes.

2. REINFORCING STEEL shall clear the face of the concrete by 2" unless otherwise noted.

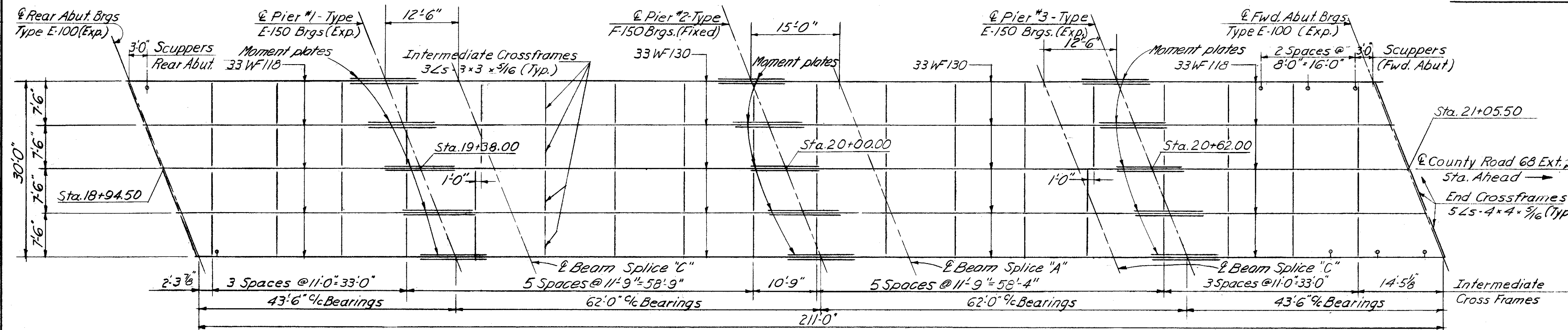
GANNETT FLEMING CORDRY & CARPENTER ENGINEERS HARRISBURG, PA.					
PIERS					
BRIDGE NO. TUS-250-1883 UNDER COUNTY ROAD 68 EXTENSION					
TUSCARAWAS COUNTY			USR - 250		
SEC. TUS-250-17.23			STA. 18+92.07 To STA 21+07.93		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
E.B.M.	R.W.B.	R.W.B.	E.B.M.		



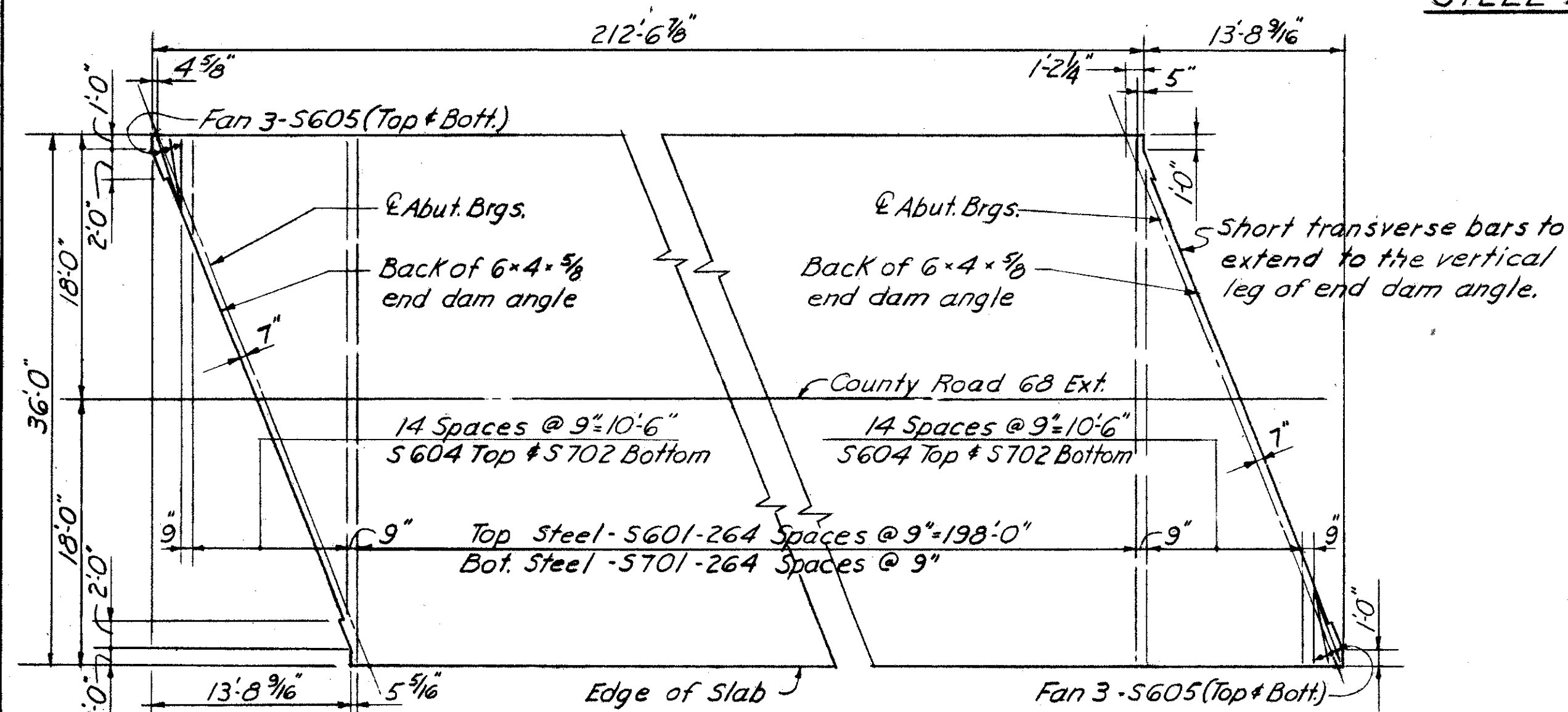
TRANSVERSE SECTION

Intermediate crossframe angles 3x3x5/16. Weld both sides of vertical leg & top side of horizontal leg to beam with 1/4 continuous fillet weld.

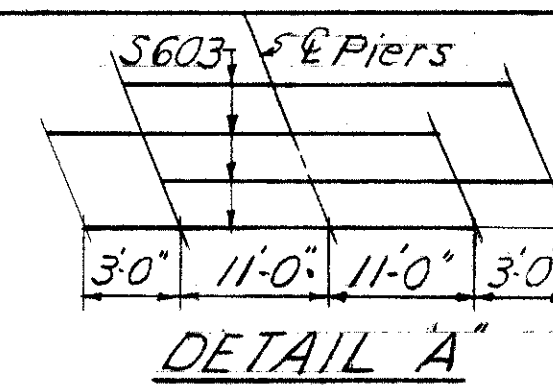
* These are nominal dimensions. The quantity of deck concrete to be paid for shall be based on these dimensions even though deviation from them may be necessary because the top flange of the beams may not have the exact camber or conformation required to place it parallel to the finished grade.



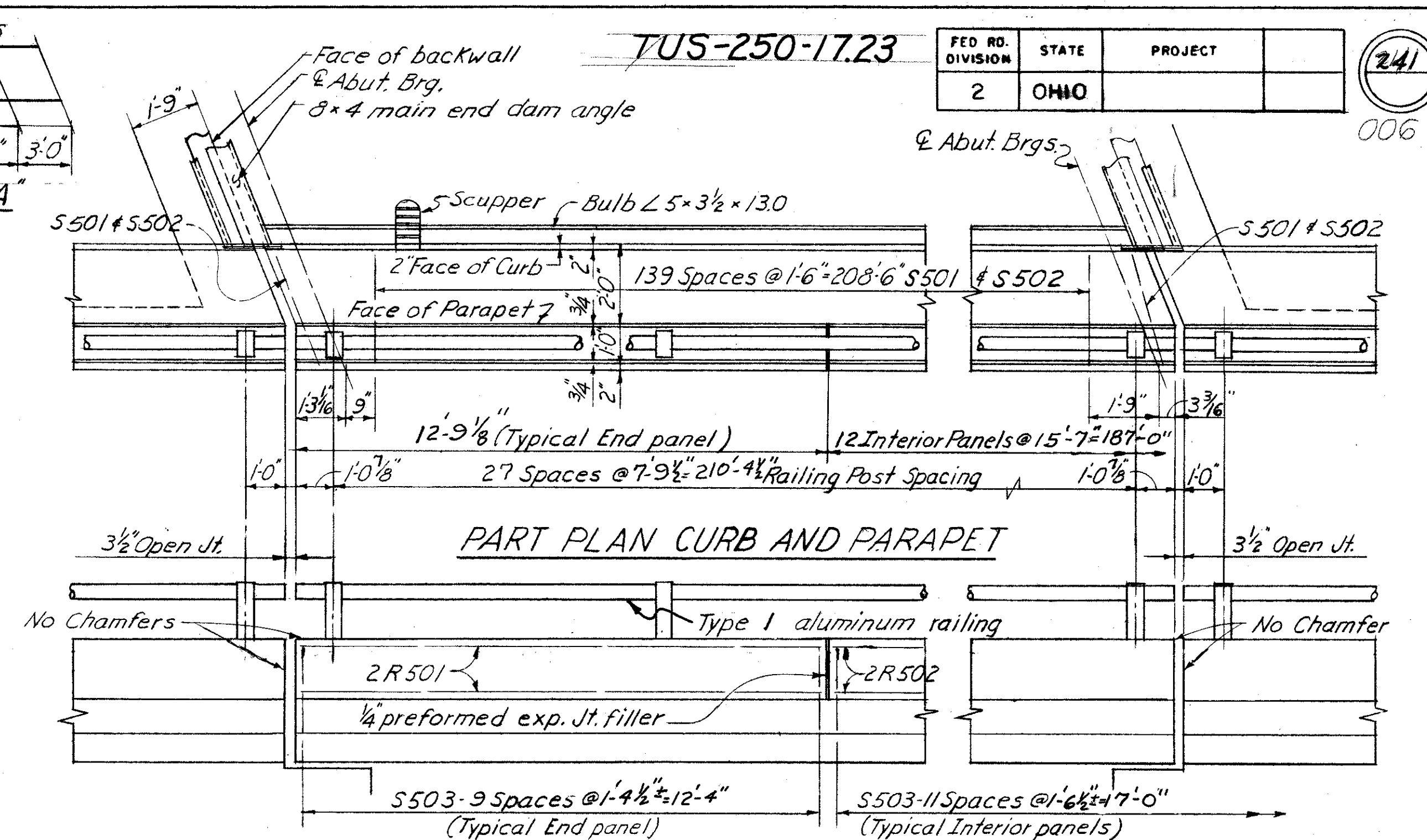
STEEL FRAMING PLAN



TRANSVERSE REINFORCING STEEL



DETAIL A



PARAPET ELEVATION

GENERAL NOTES: See sheet No. 087.
REFERENCE shall be made to Standard Drawing BR-1-65 for details of Railing and Parapet.
REFERENCE shall be made to Standard Drawing FSB-1-62 for bearing details.
REFERENCE shall be made to Standard Drawing SD-1-63 sheet #2 and #4 for end crossframe and roadway end dam details and data; sheet #3 for gutter and scupper details.
REFERENCE shall be made to Standard Drawing SD-2-64 for beam splice notes and detail of Beam Splice "A".
Details of moment plates and beam splice "C" are shown on sheet No. 042.

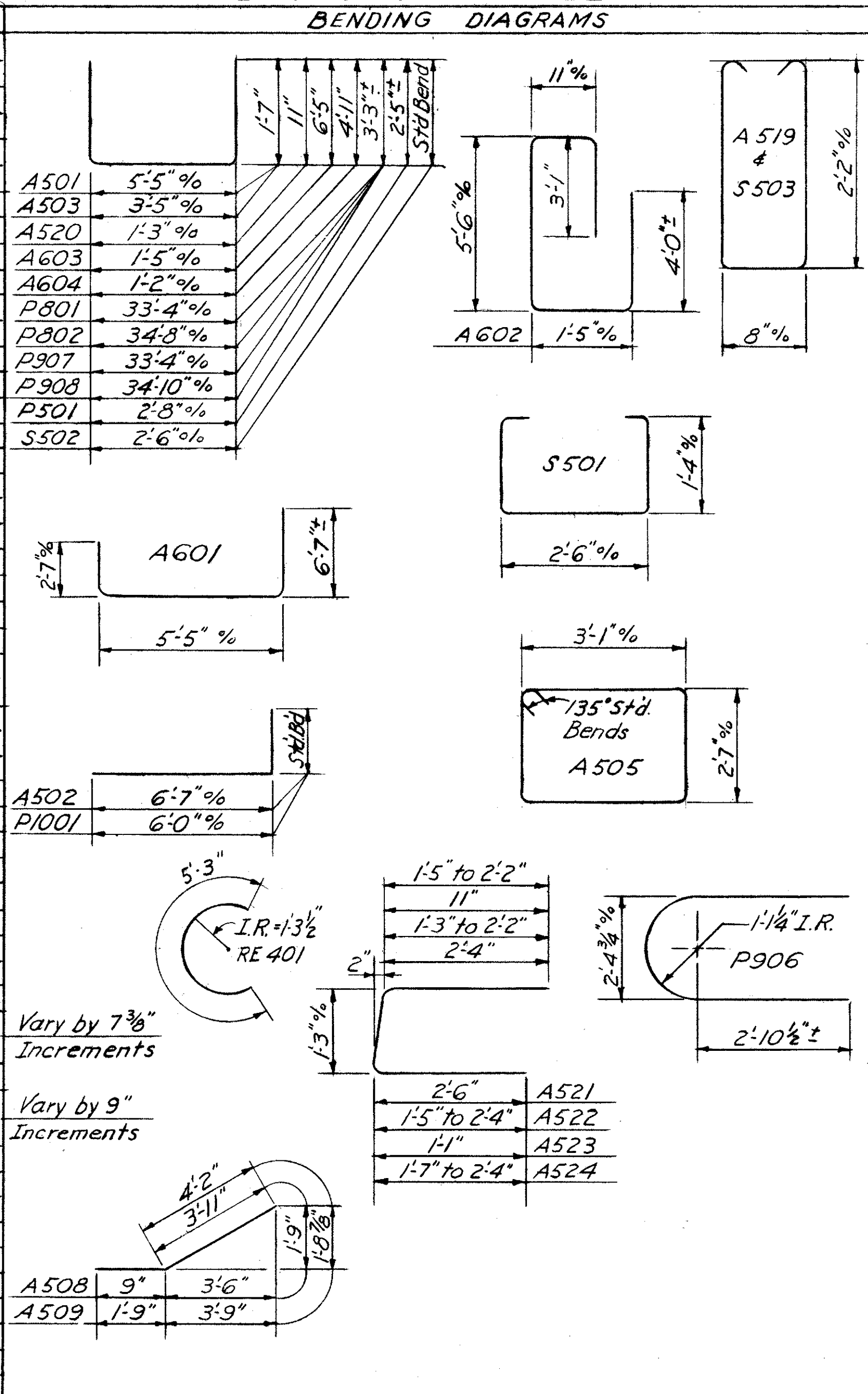
DECK SLAB HAUNCH: The typical haunch width, shown as 9", shall be used for computing quantity of concrete. However, the haunch width may vary between 6" and 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.

LOCATION	DEFLECTION & CAMBER TABLE			
	Outside Bms. End Spans	Inside Bms. Middle Spans	Outside Bms. End Spans	Inside Bms. Middle Spans
Deflection due to weight of steel	—	1/32	—	1/32
Deflection due to remaining dead load	1/8	5/16	1/8	5/16
Convexity required for vertical curve	15/32	11/16	15/32	11/16
Sum of deflection and convexity	19/32	1 1/32	19/32	1 1/32
Required camber	0	1"	0	1"

GANNETT FLEMING CORDRY & CARPENTER ENGINEERS HARRISBURG, PA.					
SUPERSTRUCTURE					
BRIDGE NO. TUS-250-1883 UNDER COUNTY ROAD 68 EXTENSION					
TUSCARAWAS COUNTY			USR-250		
SEC. TUS-250-17.23			STA 18+92.07 TO STA 21+07.93		
DESIGNED E.B.M. F.J.D.	DRAWN G.D.M.	TRACED A.R.B.	CHECKED C.B.M.	REVIEWED	DATE

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shp.
ABUTMENTS				
A801	28	21'3"	1589	S
A802	12	10'0"	320	S
A803	12	9'6"	304	S
A601	50	14'3"	1070	B
A602	66	14'3"	1413	B
A603	8	13'11"	167	B
A604	34	10'8"	545	B
A605	52	8'3"	644	S
A606	16	5'9"	138	S
A607	16	8'3"	198	S
A501	54	8'4"	469	B
A502	50	7'1"	369	B
A503	50	6'4"	330	B
A504	68	19'9"	1401	S
A505	38	11'10"	469	B
A506	24	3'7"	90	S
A507	8	4'3"	35	S
A508	4	4'8"	19	B
A509	4	5'11"	25	B
A510	6	14'0"	88	S
A511	6	12'4"	77	S
A512	12	7'3"	91	S
A513	8	4'4"	36	S
A514	16	3'7"	60	S
A515	2	9'4"	19	S
A516	2	7'6"	16	S
A517	6	12'2"	76	S
A518	4	13'2"	55	S
A519	34	5'7"	198	B
A520	34	2'10"	100	B
A521	16	5'10"	97	B
A522	2 Series of 4	3'8" to 5'6"	38	B
A523	4	3'0"	13	B
A524	2 Series of 3	4'0" to 5'6"	30	B
A525	12	7'0"	88	S
A526	2	8'6"	18	S
A527	2	6'0"	13	S
A528	6	13'3"	83	S
A529	6	10'10"	68	S
A530	6	10'11"	68	S
A531	4	10'5"	43	S



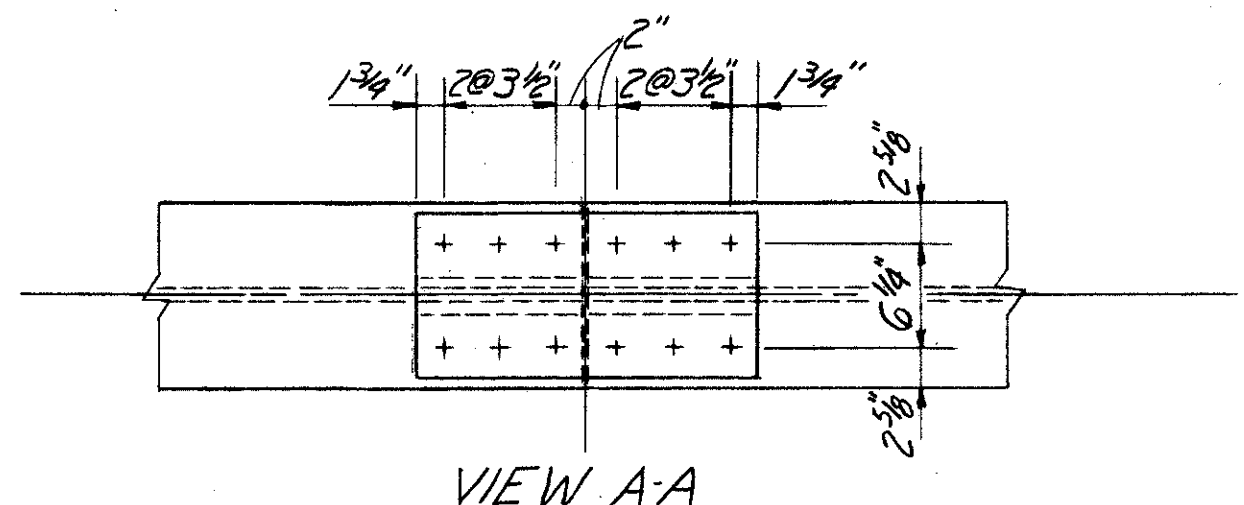
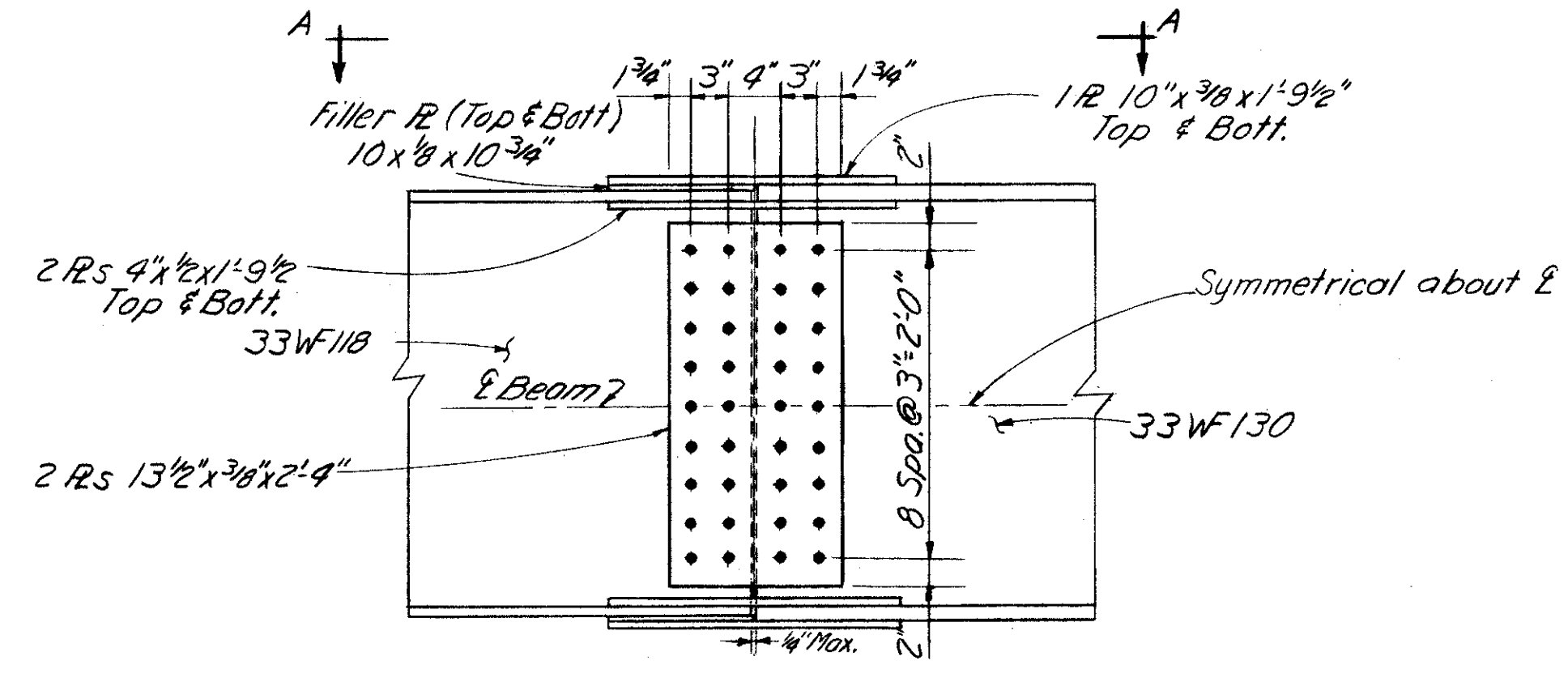
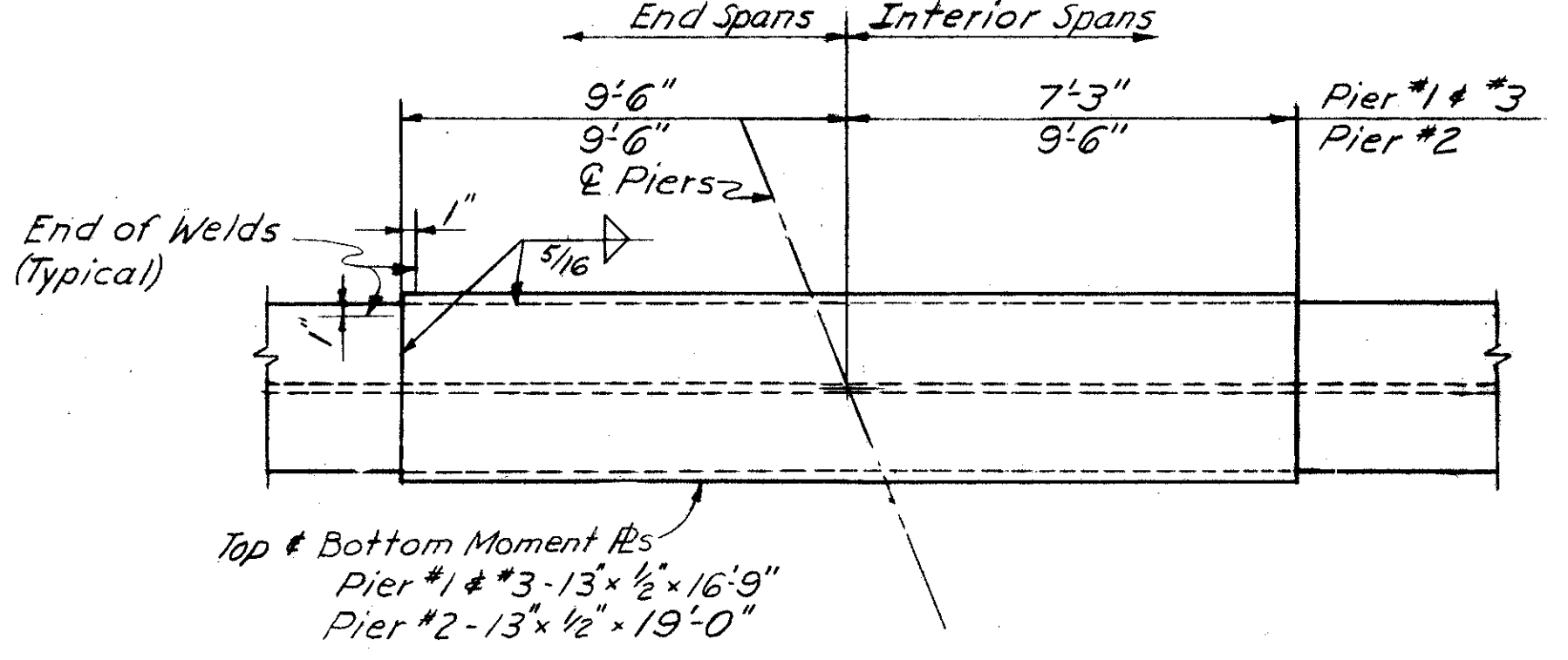
Mark	No.	Length	Weight	Shp.
SUPERSTRUCTURE				
S701	265	35'8"	19319	S
S702	2 Series of 15	7'6" to 33'7"	1260	S
S601	265	35'8"	14196	S
S602	455	32'0"	21869	S
S603	72	25'0"	2704	S
S604	2 Series of 15	7'6" to 33'7"	926	S
S605	12	5'8"	102	S
S501	282	5'11"	1740	B
S502	282	3'6"	1029	B
S503	328	5'7"	1910	B
RAILING				
R501	16	12'5"	*	S
R502	96	15'3"	*	S
R503	12	4'2"	*	B*
R504	8	5'4"	*	B*
R505	8	12'2"	*	S
R506	8	10'11"	*	S
PIERS				
P1001	108	7'1"	3292	B
P1002	4	11'9"	202	S
P1003	2	10'0"	86	S
P901	30	18'2"	1853	S
P902	30	18'8"	1904	S
P903	30	17'9"	1811	S
P904	6	32'4"	660	S
P905	6	34'10"	711	S
P906	12	9'6"	388	B
P907	2	39'3"	267	B
P908	2	40'9"	277	B
P909	8	11'3"	306	S
P910	6	11'0"	224	S
P801	4	39'5"	421	B
P802	4	40'9"	435	B
P701	60	10'2"	1247	S
P601	144	8'8"	1874	S
P501	132	7'3"	998	B
P502	6	32'5"	203	S

Vary by 1'10 3/8 Increments

Vary by 1'10 3/8 Increments

* Included with railing for payment.

† For bending diagrams See BR-1-65



SPIRAL REINFORCING LIST

The "Length" shown in the steel list for spiral bars is the distance from the top of the footing to the bottom of the pier cap.

The "No. of Turns" shown is the "Length" divided by the pitch plus 3 turns (total number of closed coils), expressed as the nearest whole number.

Spiral reinforcing bars shall not have deformations but shall in other respects conform to the Item

1 1/2 closed coils shall be provided at the ends of each spiral unit.

Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, P701 is a No. 7 size bar and P1003 is a No. 10 size.

Mark	No.	Core Dia. % Spiral	Length	Pitch	No. Turns	Weight
SP401	3	32"	15'0"	4 1/2"	43	833
SP402	3	32"	15'6"	4 1/2"	44	853
SP403	3	32"	14'7"	4 1/2"	42	813

GANNETT FLEMING CORDDRY & CARPENTER
ENGINEERS
HARRISBURG, PA.

REINFORCING STEEL LIST
AND STRUCTURAL STEEL DETAILS

BRIDGE NO. TUS-250-1883
UNDER COUNTY ROAD 68 EXTENSION

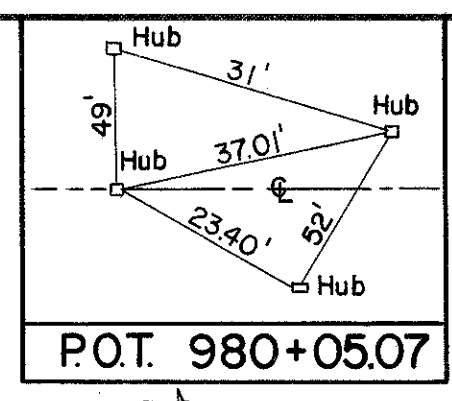
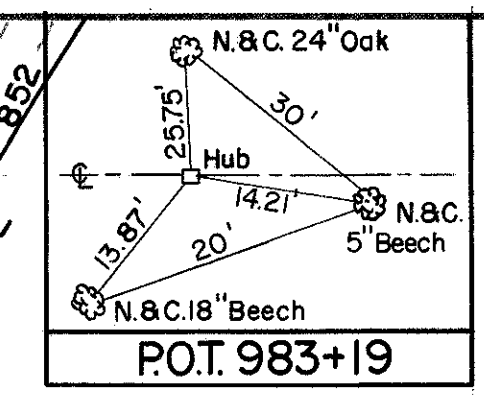
TUSCARAWAS COUNTY USR-250

SEC. TUS-250-1723 STA. 18+92.07 To STA. 21+07.93

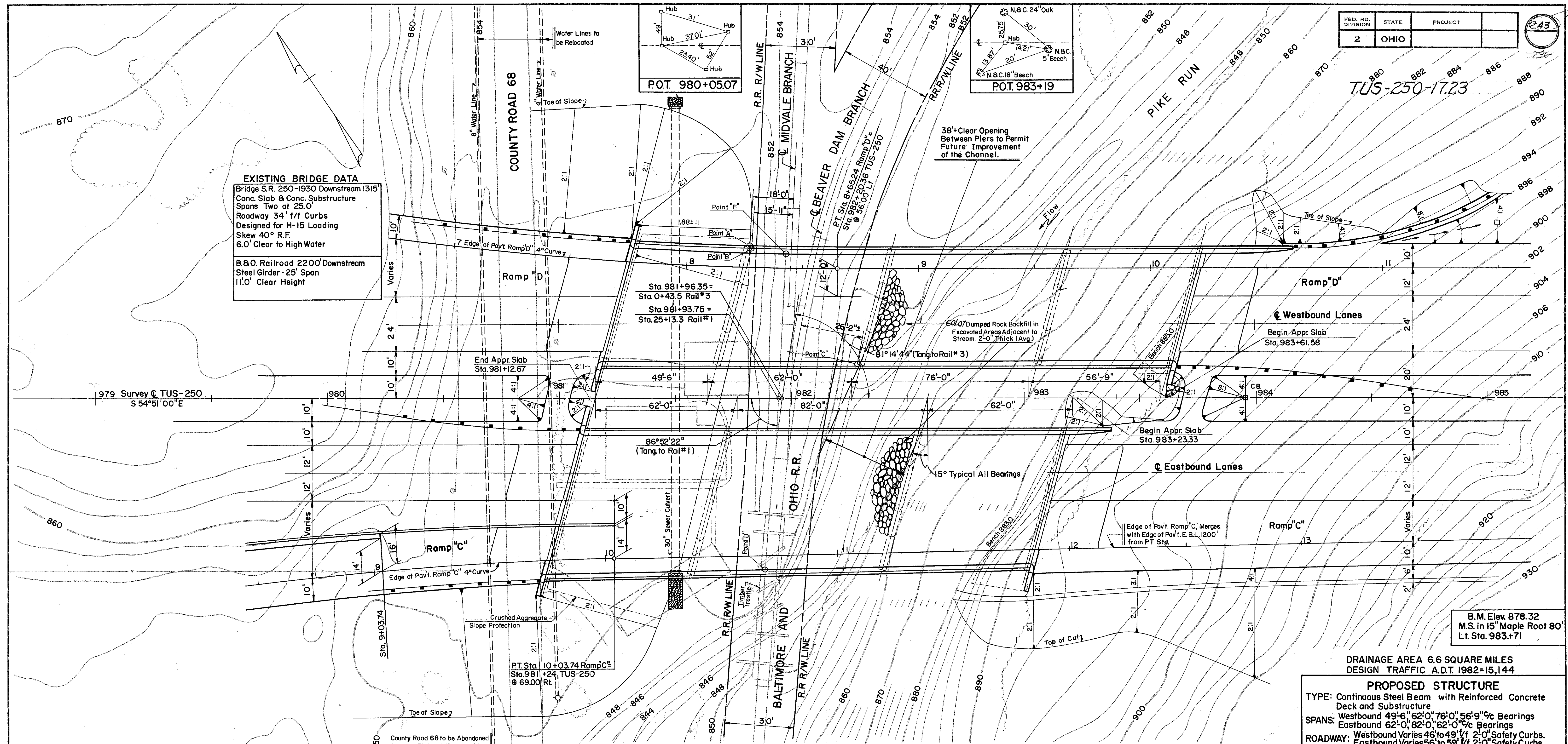
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.B.M.	H.W.M.	A.R.B.	F.J.D.			

EXISTING BRIDGE DATA
 Bridge S.R. 250-1930 Downstream 1315
 Conc. Slab & Conc. Substructure
 Spans Two at 25.0'
 Roadway 34' f/f Curbs
 Designed for H-15 Loading
 Skew 40° R.F.
 6.0' Clear to High Water

 B.&O. Railroad 2200' Downstream
 Steel Girder - 25' Span
 11.0' Clear Height



TUS-250-17.23



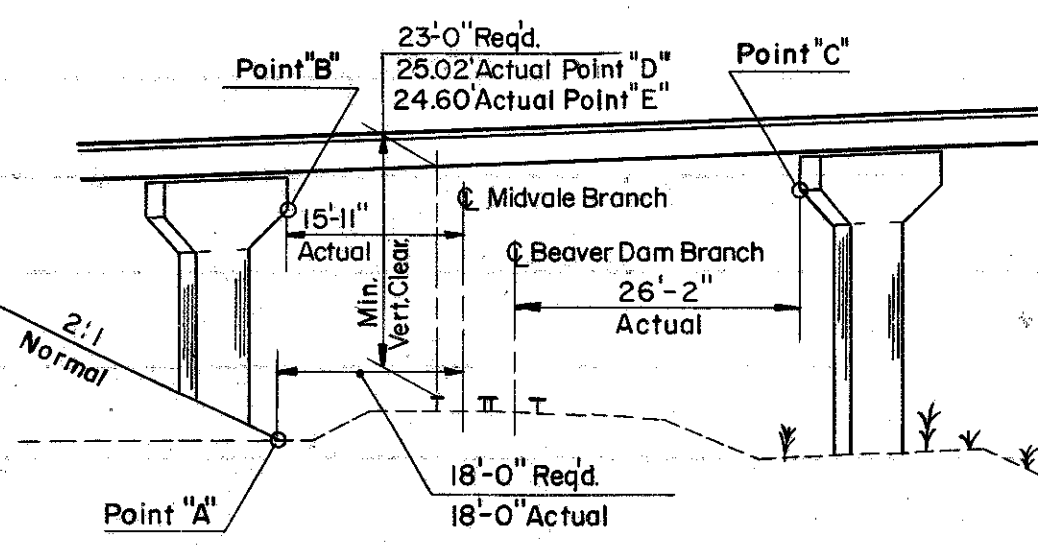
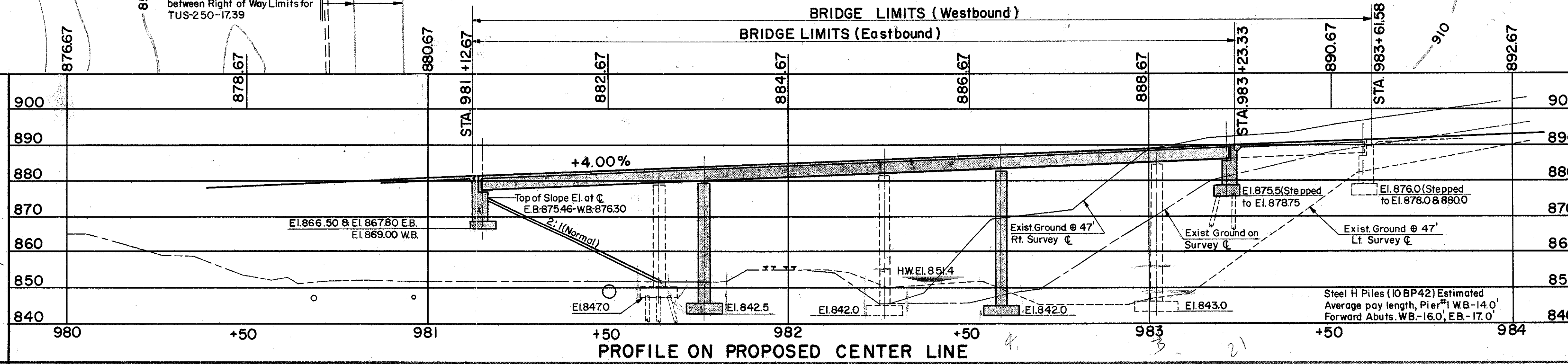
B.M. Elev. 878.32
 M.S. in 15" Maple Root 80'
 Lt. Sta. 983+71

DRAINAGE AREA 6.6 SQUARE MILES
 DESIGN TRAFFIC A.D.T. 1982=15,144

PROPOSED STRUCTURE
 TYPE: Continuous Steel Beam with Reinforced Concrete Deck and Substructure
 SPANS: Westbound 49'-6", 62'-0", 76'-0", 56'-9" % Bearings
 Eastbound 62'-0", 82'-0", 62'-0" % Bearings
 ROADWAY: Westbound Varies 46' to 49' 1/2' 2'-0" Safety Curbs
 Eastbound Varies 56' to 59' 1/2' 2'-0" Safety Curbs
 LOAD FREQUENCY: C.F. 2000 (57)
 SKEW: 15° L.F.
 WEARING SURFACE: 1" Monolithic Concrete
 APPR. SLABS: AS-1-54 (25' Long)
 ALIGNMENT: Tangent

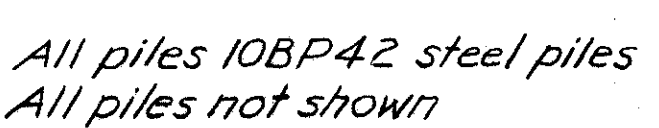
GANNETT FLEMING CORDDRY & CARPENTER ENGINEERS HARRISBURG, PA.					
SITE PLAN					
BRIDGE NO. TUS-250-1899 L.R. OVER B.&O. R.R. AND PIKE RUN TUSCARAWAS CO.			STA. 981+93.75		
SEC-TUS-250-1723			SCALE 1"=20'		
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
AAA.	AAA.	FJD	ARB		

B.M. Elev. 853.65
 M.S. in Tel. Pole 140'
 Lt. Sta. 980+99



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CONCRETE DECK PLACING: In placing the deck concrete, construction joints will be permitted, parallel to the transverse reinforcing steel and near the middle of any span. In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade, starting at the outside edges and the rear abutments.
(General Notes continued on Sheet # 246.)



ELEVATION

<div>GANNETT FLEMING CORDDRY & CARPENTER ENGINEERS HARRISBURG, PA.</div>							
<div>GENERAL PLAN AND ELEVATION AND GENERAL NOTES</div> <div>BRIDGE NO. TUS-250-1899 L&R. OVER B.80. R.R. AND PIKE RUN</div> <div>TUSCARAWAS COUNTYUSR -250</div> <div>SEC.TUS-250-172<i>3</i>STA.981+12.67to STA.983+61.58 L. STA.981+12.67to STA.983+23.33 R.</div>							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
E.B.M. F.J.D	A.R.B.	A.R.B.	E.B.M.				

EAST BOUND LANE REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	SHAPE
FORWARD ABUTMENT				
A801	7	35'-8"	667	S
A802	8	31'-4"	669	S
A803	4	8'-10"	94	B
A804	2	12'-6"	67	S
A805	8	19'-5"	415	S
A701	11	12'-2"	274	B
A702	3	12'-9"	78	B
A601	29	12'-8"	552	B
A602	27	11'-3"	406	B
A603	44	14'-8"	1035	B
A604	11	12'-3"	202	B
A605	6	13'-11"	125	B
A606	23	10'-0"	345	B
A607	7	7'-5"	79	S
A501	30	8'-1"	253	B
A502	29	5'-9"	174	B
A503	49	6'-4"	324	B
A504	24	9'-4"	234	B
A505	23	9'-10"	236	B
A506	5	2'-5"	57	S
A507	5	5'-6"	68	S
A508	2	15'-0"	31	B
A509	4	11'-7"	48	S
A510	15	34'-7"	541	S
A511	21	28'-7"	626	S
A515	11	11'-2"	128	B
A516	32	10'-10"	362	B
A517	4	11'-9"	49	B
A518	6	4'-8"	29	S
A519	10	5'-5"	56	S
A520	12	5'-7"	70	S
A521	3	3'-7"	27	S
A522	4	3'-6"	15	S
A523	2	8'-7"	18	B
A524	4	4'-3"	18	S
A525	10	17'-0"	177	S
A526	2	17'-9"	37	S
A527	6	23'-2"	145	S
A528	4	3'-4"	14	S
A529	3	23'-0"	72	S
A530	15	5'-7"	87	B
A531	16	3'-1"	51	B
A532	5	2'-11"	15	B
A533	1	4'-3"	21	B
A534	1	5'-3"	17	B
A535	5	5'-11"	31	B
P501	7	42'-8"	1587	B
P502	7	25'-9"	958	B
P503	14	36'-3"	2696	S
P504	14	29'-0"	2219	S
P505	44	8'-5"	1968	B
P506	7	26'-2"	773	B
P507	14	43'-9"	1627	B
P508	14	37'-0"	2752	S
P509	14	29'-9"	2213	S
P510	44	14'-4"	2714	B
P511	46	8'-10"	1748	B
P512	46	12'-4"	2441	B
P513	145	11'-8"	5752	S
P514	44	18'-6"	2173	S
P515	46	15'-9"	1934	S
P516	44	37'-0"	3328	S
P517	46	33'-0"	3103	S
P518	8	18'-11"	227	B
P519	12	36'-2"	652	S
P520	4	31'-7"	132	S
P521	4	28'-5"	119	S
P522	4	22'-6"	94	S
P523	128	6'-7"	879	B
P524	2	7'-3"	165	B
P525	2	13'-3"	248	B
P526	2	5'-3"	273	B
P527	4	11'-9"	451	B
P528	8	35'-6"	296	S
P529	14	3'-7"	52	S
P530	32	29'-0"	968	S
P531	58	7'-0"	423	B
P532	4	32'-4"	135	S
P533	4	29'-10"	124	S
P534	4	23'-7"	98	S
P535	2	8'-3"	181	B
P536	2	13'-5"	171	B
P537	26	30'-6"	827	S
P538	1	7'-7"	-	S
P539	1	7'-3"	-	S
P540	1	6'-10"	-	S
P541	1	6'-6"	-	S
P542	3	6'-3"	-	S
P543	5	5'-11"	-	S
P544	1	5'-7"	-	S
P545	8	13'-3"	159	B
P546	17	13'-3"	360	B
P547	23	13'-7"	469	B
P548	40	14'-6"	871	B
P549	22	12'-1"	399	B
P550	7	13'-9"	145	B
P551	8	36'-0"	433	S
P552	4	6'-0"	36	B
P553	2	9'-10"	53	S
P554	2	12'-10"	69	S

ESTIMATED QUANTITIES 2 BRIDGES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUT.	PIERS	GENERAL
503	Lump	Sum	Cofferdams, Cribbs & Sheeting				
503	1751	Cu.Yds.	Unclassified Excavation		996	755	
511	605	Cu.Yds.	Class "C" Concrete, piers above footing			605	
511	878	Cu.Yds.	Class "C" Concrete, superstructure	878			
511	416	Cu.Yds.	Class "E" Concrete, footings		249	167	
511	325	Cu.Yds.	Class "E" Concrete, abutments above footing		325		
509	367170	Lbs.	Reinforcing Steel	246914	30306	90390	
513	746400	Lbs.	Structural Steel	746400			
514	746400	Lbs.	Field Painting of structural steel	746400			
517	970	Lin.Ft.	Railing (type 1)	905	65		
505	Lump	Sum	First Test Pile				
507	1175	Lin.Ft.	Steel Piles, 10-BP-42		755	420	
518	144	Cu.Yds.	Porous Backfill		144		
518	29	Each	Scuppers including supports	29			
518	283	Lin.Ft.	6" perforated Helical C.M.P. 707.06, including specials		283		
518	278	Lin.Ft.	6" Helical C.M.P. 707.06 non-perforated		278		
518	3	Each	4" Pipe Scuppers	3			
808	876	Each	Water Reducing, set retarding admixture for concrete	876			
601	987	Sq.Yds.	Crushed Aggregate, slope protection				987
601	50	Cu.Yds.	Dumped Rock channel protection				50
825	3270	Sq.Yds.	Concrete surface treatment	3170	100		

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four digits are used. For example, P701 is a No 7 size bar and P1004 is a No 10 size bar.

* Vary length of bars in groups, with a maximum increment of 3"
* Included with railing for payment
* For bending diagrams see BR-1-65

GANNETT FLEMING CORDRY & CARPENTER
ENGINEERS
HARRISBURG, PA.

REINFORCING STEEL LIST-EBL
AND TABLE OF QUANTITIES
BRIDGE NO. TUS-250-18.99 L. & R.
OVER B. & O. R.R. AND PIKE RUN
TUSCARAWAS COUNTY USR-250
SEC. TUS 250-17.23 STA. 981+12.67 to STA. 983+61.58 L.
STA. 981+12.67 to STA. 983+23.33 R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
HRP	HWM	HRP	EBM			

BENDING DIAGRAMS

BENDING DIAGRAMS

Top Section:

- Bar sizes: A501, A514, A515, A552, A520, A603, A604, A607, A609, A614, A538, S503, A634, A635, P501, P502, P503, P509, P510, P524, P525, P526, P527, P528.
- Dimensions: 1'-7", 2'-1"±, 6'-0", 6'-10", 2'-3"±, 2'-3"±, 2'-3", 11", Std. Bend, 5'-11", 6'-0", 11", 11", 3'-5"±, 3'-2"±, 4'-6"±, 4'-5"±, 1'-5"±, 1'-5"±, 2'-6"±, 1'-5"±, 1'-5"±, 1'-10"±, 2'-8"±.
- Angles: 5'-5"±, 3'-5"±, 6'-5"±, 3'-5"±, 7'-2"±, 1'-5"±, 1'-5"±, 7'-2"±, 6'-5"±, 7'-2"±, 7'-2"±, 1'-4"±, 2'-6"±, 2'-6"±, 1'-10"±, 2'-8"±.

Middle Section:

- Bar sizes: A602, A633, P524, P525, P526, P527, P528.
- Dimensions: 5'-11", 6'-0", 11", 11", 3'-5"±, 3'-2"±, 4'-6"±, 4'-5"±, 1'-5"±, 1'-5"±, 2'-6"±, 1'-5"±, 1'-5"±, 1'-10"±, 2'-8"±.
- Angles: 5'-5"±, 3'-5"±, 6'-5"±, 3'-5"±, 7'-2"±, 1'-5"±, 1'-5"±, 7'-2"±, 6'-5"±, 7'-2"±, 7'-2"±, 1'-4"±, 2'-6"±, 2'-6"±, 1'-10"±, 2'-8"±.

Bottom Section:

- Bar sizes: A631, A502, A516, A517, A521, A608, A610, A701, A807, A551, P903, P802, P803, P804, P1001, P1003.
- Dimensions: 7'-10"±, 6'-7"±, 8'-11"±, 10'-10"±, 4'-4"±, 8'-11"±, 10'-10"±, 5'-0"±, 5'-3"±, 7'-10"±, 15'-9"±, 6'-9"±, 8'-9"±, 7'-9"±, 8'-9"±, 5'-6"±.
- Angles: 5'-5"±, 3'-5"±, 6'-5"±, 3'-5"±, 7'-2"±, 1'-5"±, 1'-5"±, 7'-2"±, 6'-5"±, 7'-2"±, 7'-2"±, 1'-4"±, 2'-6"±, 2'-6"±, 1'-10"±, 2'-8"±.

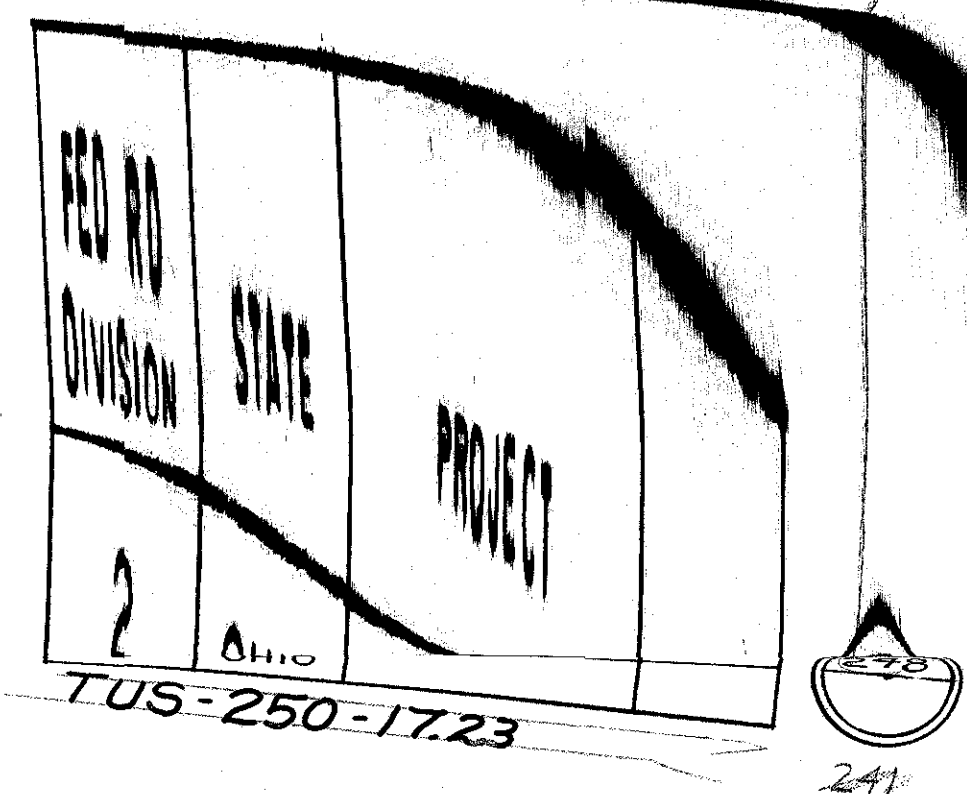
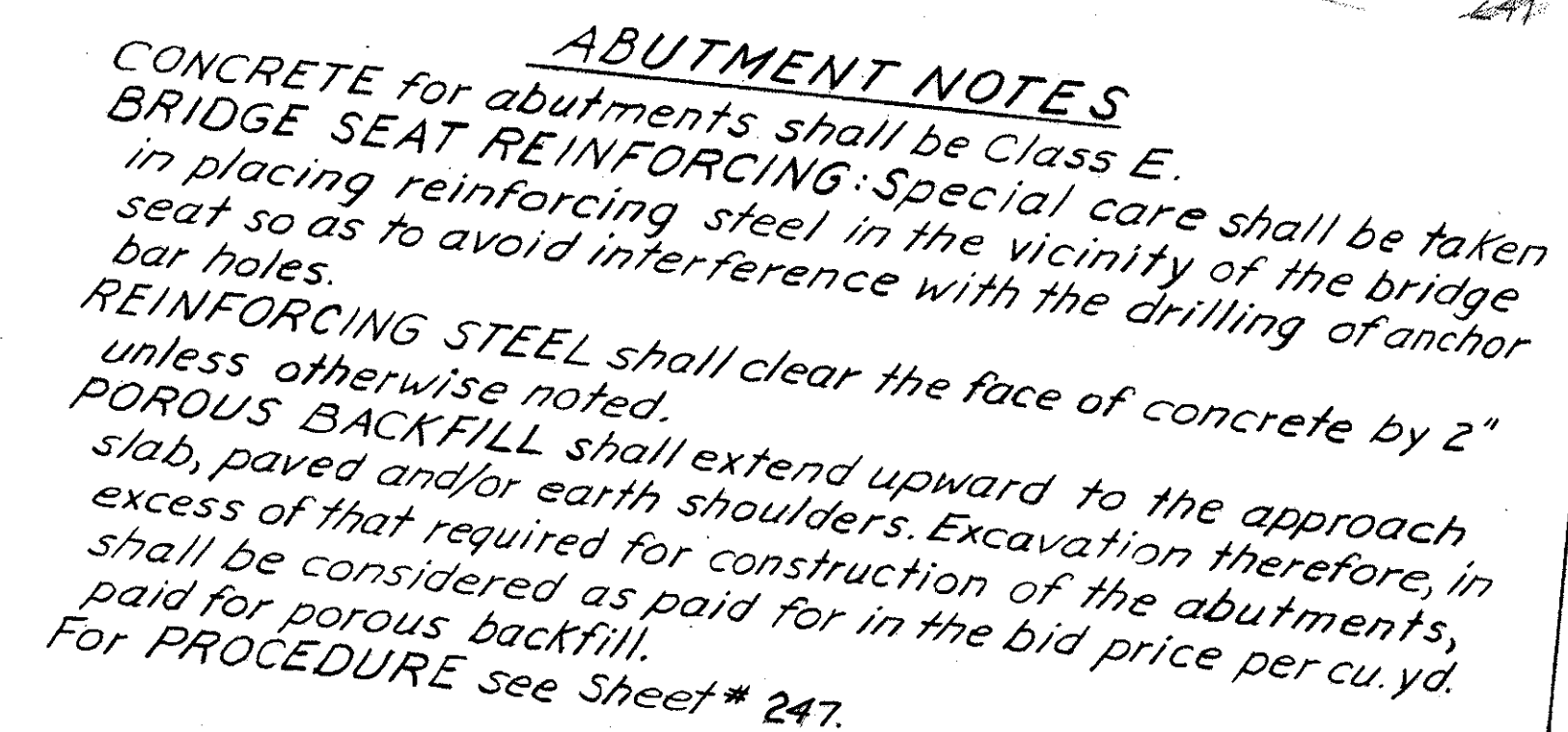
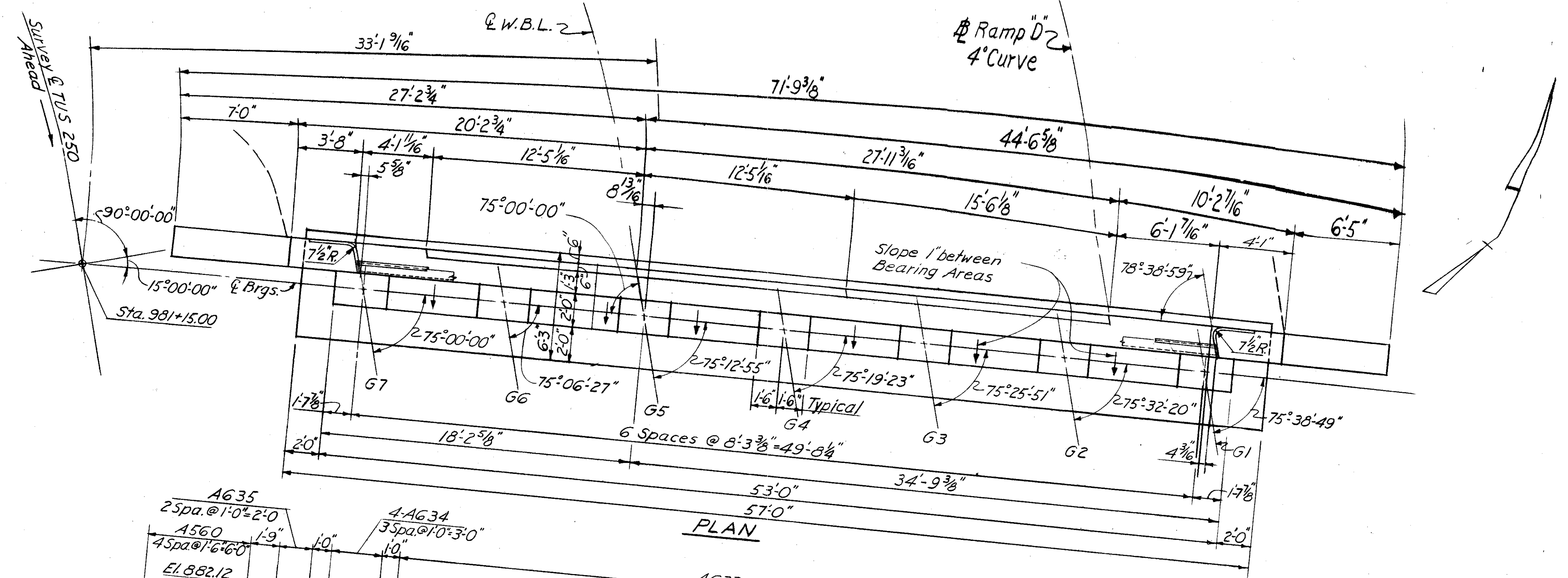
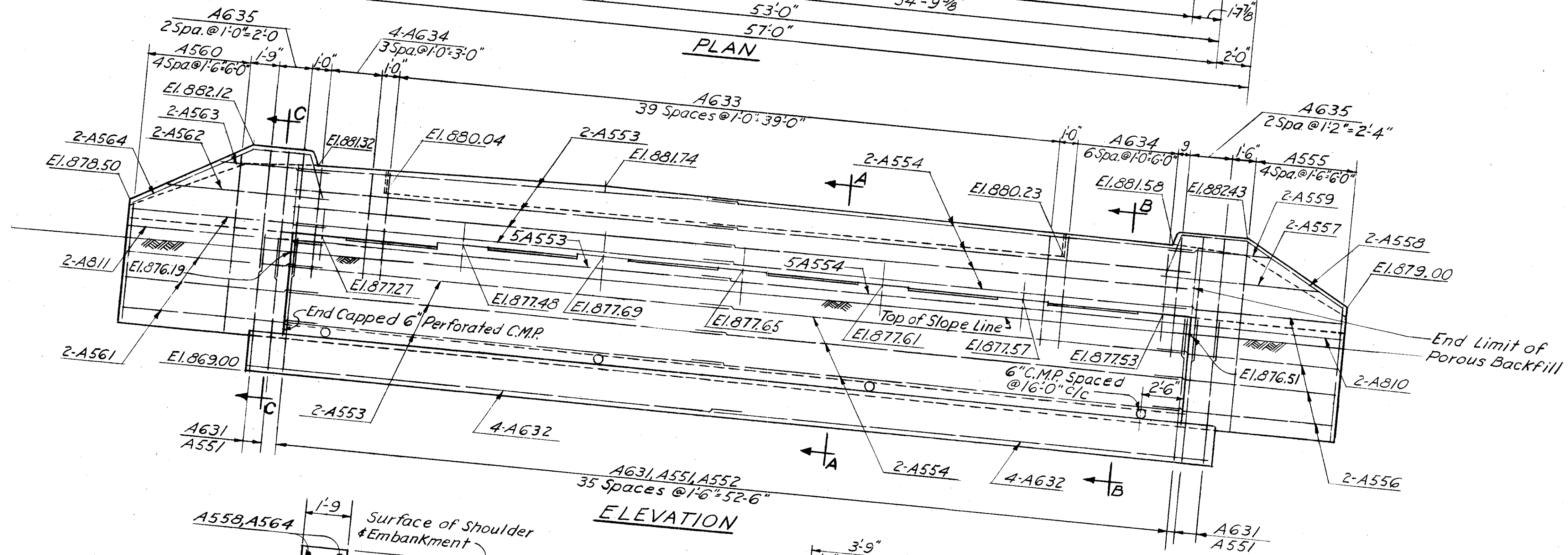
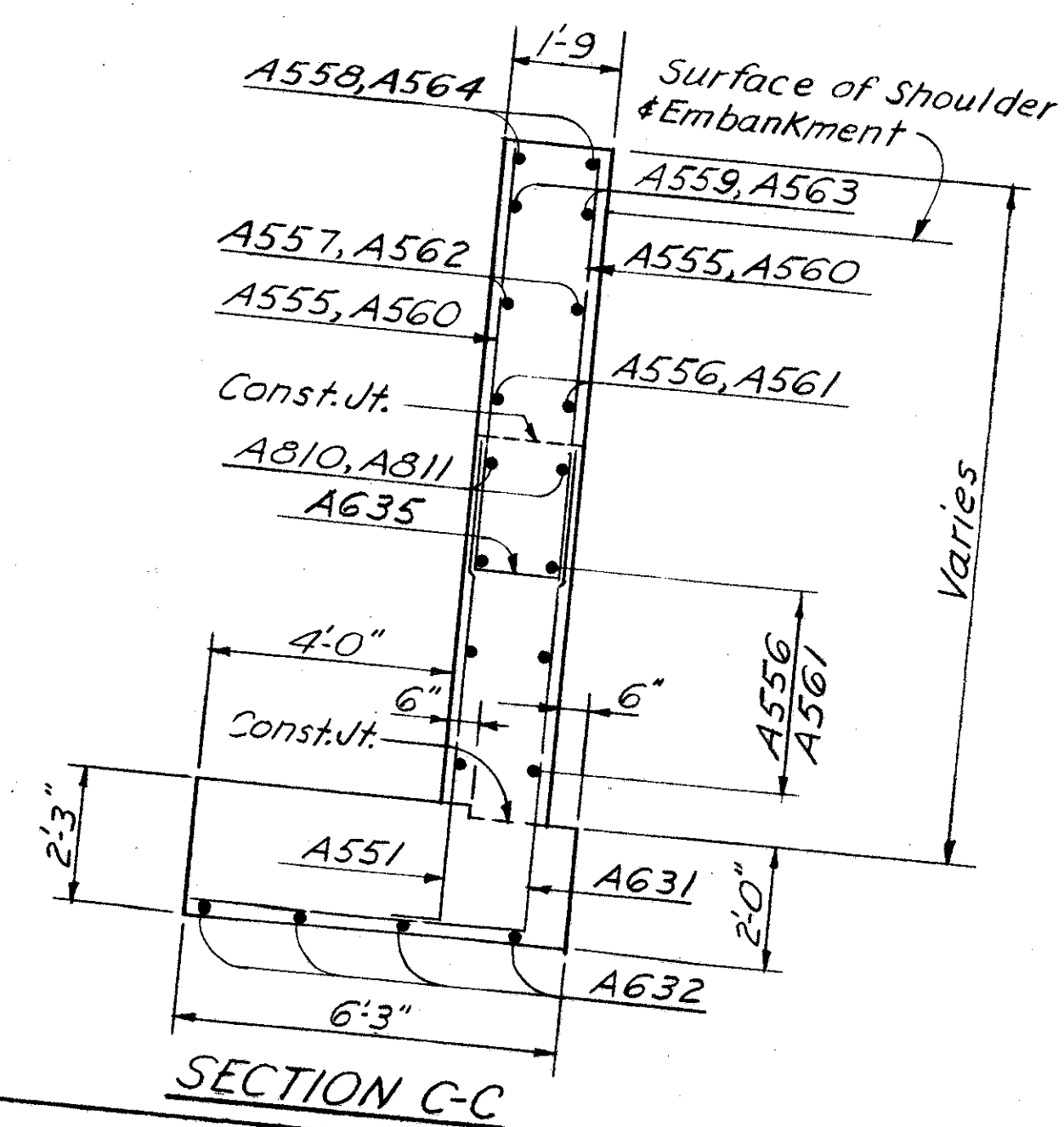
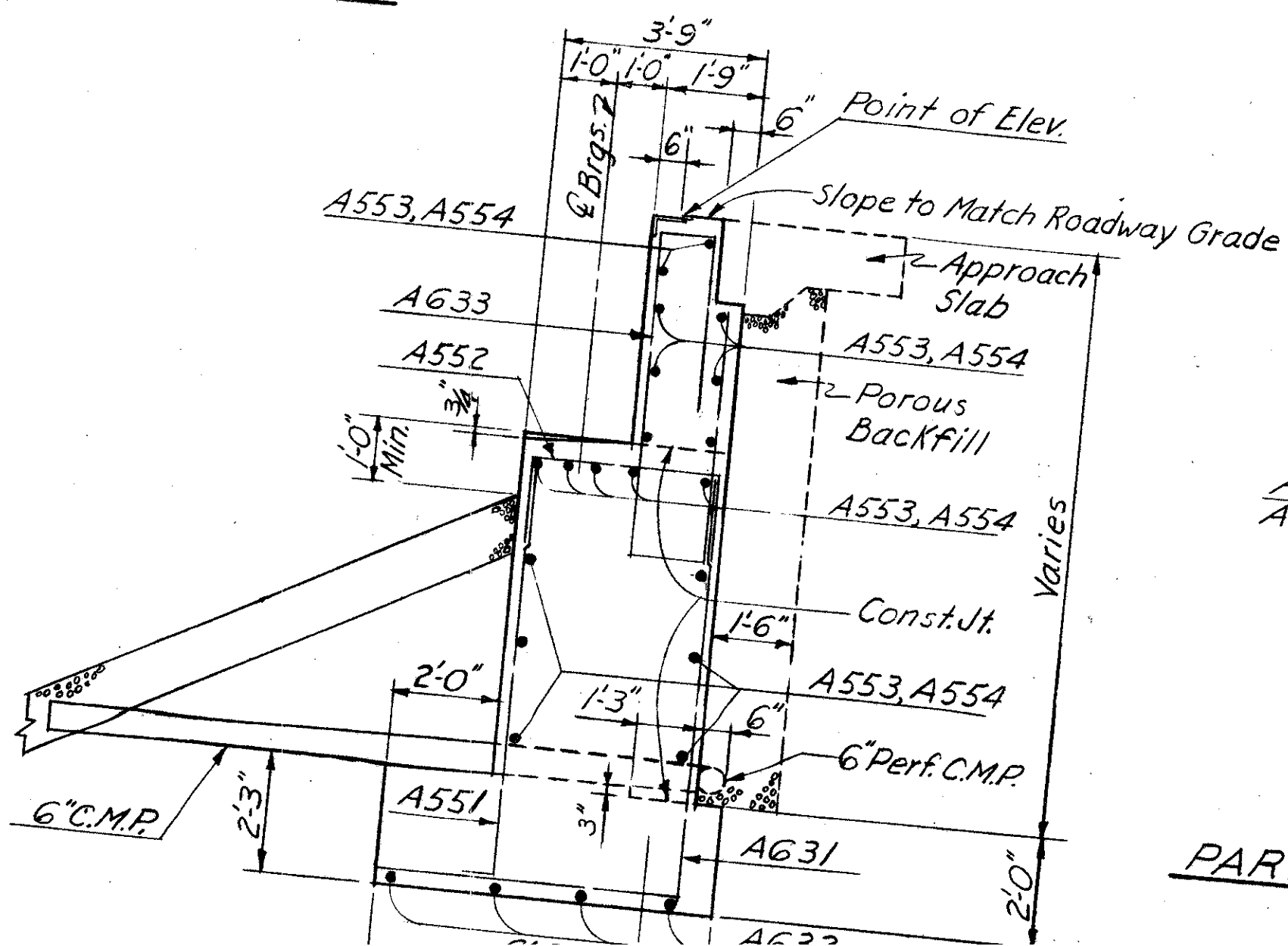
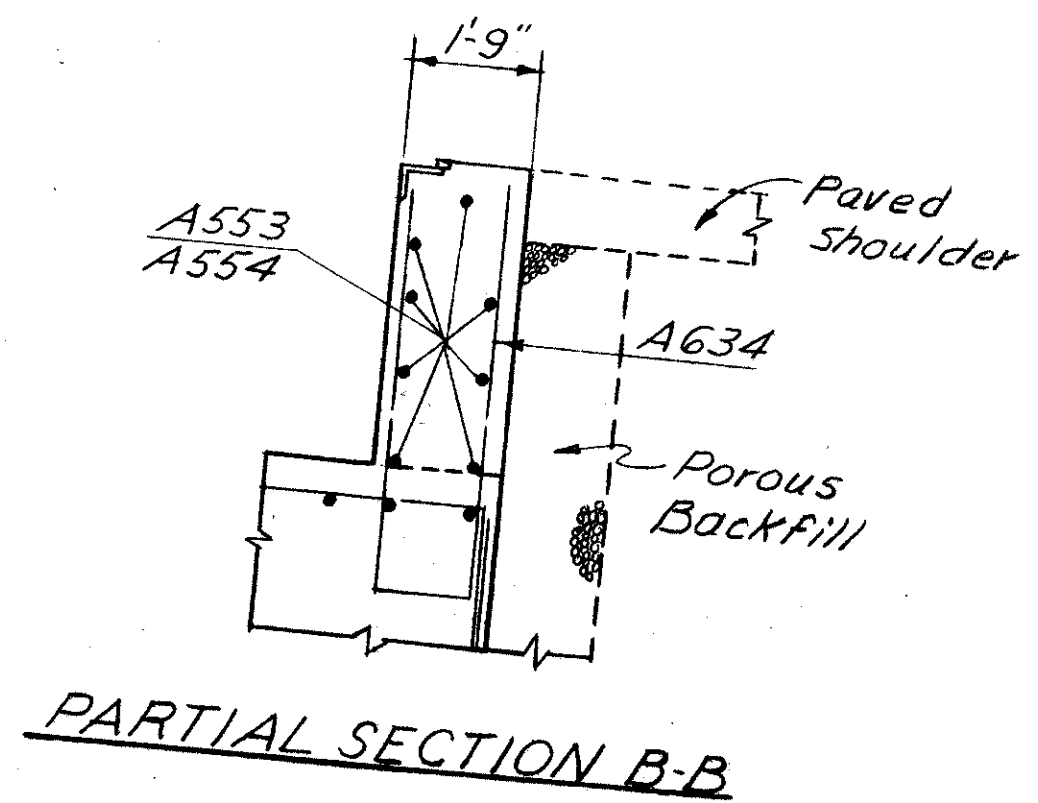
MARK	NO.	LENGTH	WEIGHT	SHAPE
SUPERSTRUCTURE				
S701	368	27'-6" 28'-11"	2,218	S *
S702	75	27'-8" 29'-7"	4,388	S *
S703	58	27'-4" 27'-8"	3,260	S *
S704	235	27'-4" 28'-3"	13,349	S *
S601	368	23'-5" 24'-7"	13,266	S *
S602	75	31'-7" 33'-7"	3,671	S *
S603	58	31'-3" 31'-7"	2,737	S *
S604	235	31'-3" 32'-0"	11,163	S *
S605	707	37'-0"	39,291	S
S606	40	26'-0"	1,562	S
S607	40	30'-0"	1,802	S
S608	39	28'-0"	1,640	S
S501	349	5'-7"	2038	B
S502	340	5'-11"	2098	B
S503	340	3'-6"	1241	B
RAILING				
R501	60	14'-10"	* *	S
R502	8	8'-8"	* *	S
R503	12	4'-2"	* *	B†
R504	8	5'-4"	* *	B†
R505	4	12'-6"	* *	S
R506	4	16'-6"	* *	S
R507	4	24'-5"	* *	S
R508	56	15'-6"	* X	S
R509	4	8'-5"	X X	S
REAR ABUTMENT				
A810	2	11'-4"	61	S
A811	2	12'-1"	65	S
A631	40	13'-1"	786	B
A632	8	29'-4"	352	S
A633	40	15'-2"	911	B
A634	11	12'-11"	213	B
A635	6	14'-7"	131	B
A551	40	8'-4"	348	B
A552	36	6'-4"	238	B
A553	19	25'-6"	505	S
A554	19	28'-8"	568	S
A555	2 Series of 5	7'-9" 10'-1" to	97	S
A556	8	10'-5"	87	S
A557	2	9'-0"	19	S
A558	2	12'-9"	27	B
A559	2	6'-0"	13	S
A560	2 Series of 5	7'-3" 10'-4" to	92	S
A561	8	11'-2"	93	S
A562	2	9'-0"	19	S
A563	2	6'-3"	13	S
A564	2	13'-3"	28	B
* Vary length of bars in 9" maximum increment				
* * Included with railing				
† For bending diagram				

[illegible]

REINFORCING STEEL-ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade, Basic unit stress 20,000 p.s.i.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REV
HRR	UWAM	ABR	EBM			

* * Included with railing for payment.
† For bending diagrams see BR-1-65



GANNETT FLEMING CORDDRY & CARPENTER
ENGINEERS
HARRISBURG, PA.
REAR ABUTMENT
WEST

245



PLAN



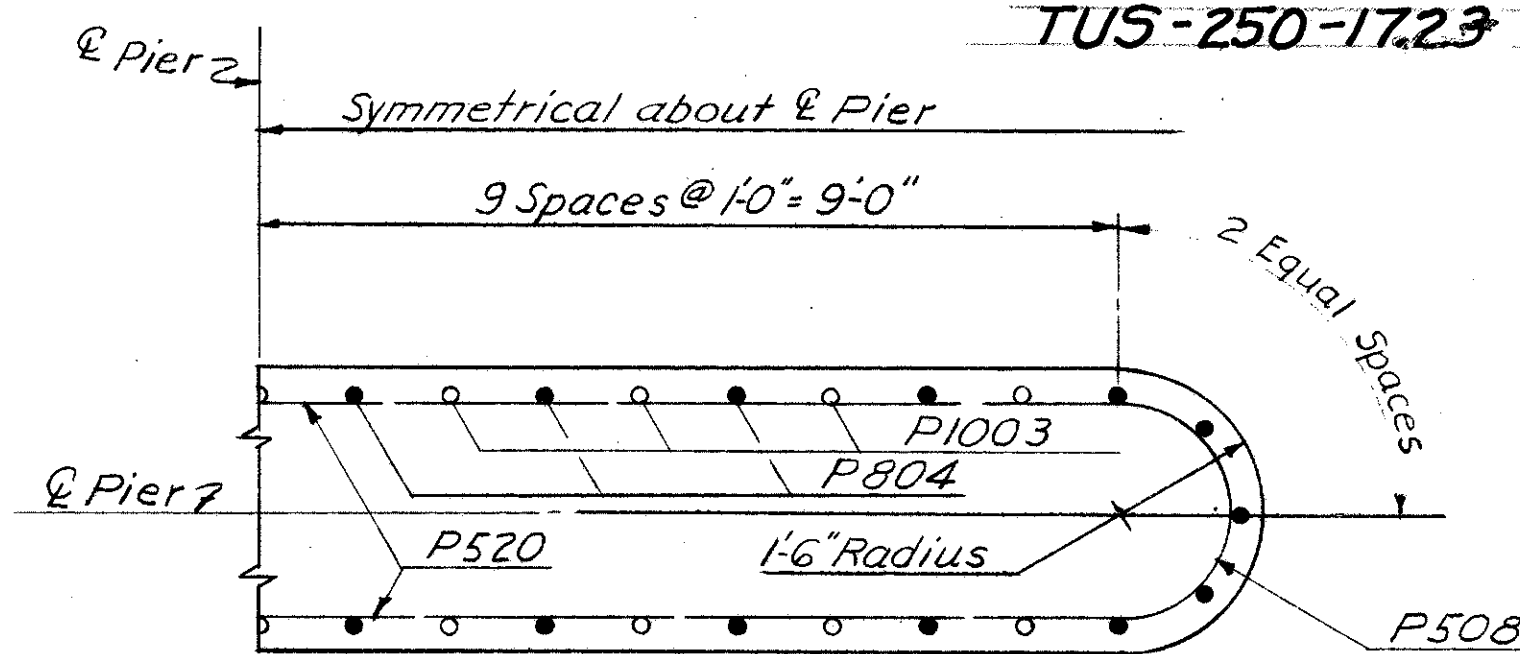
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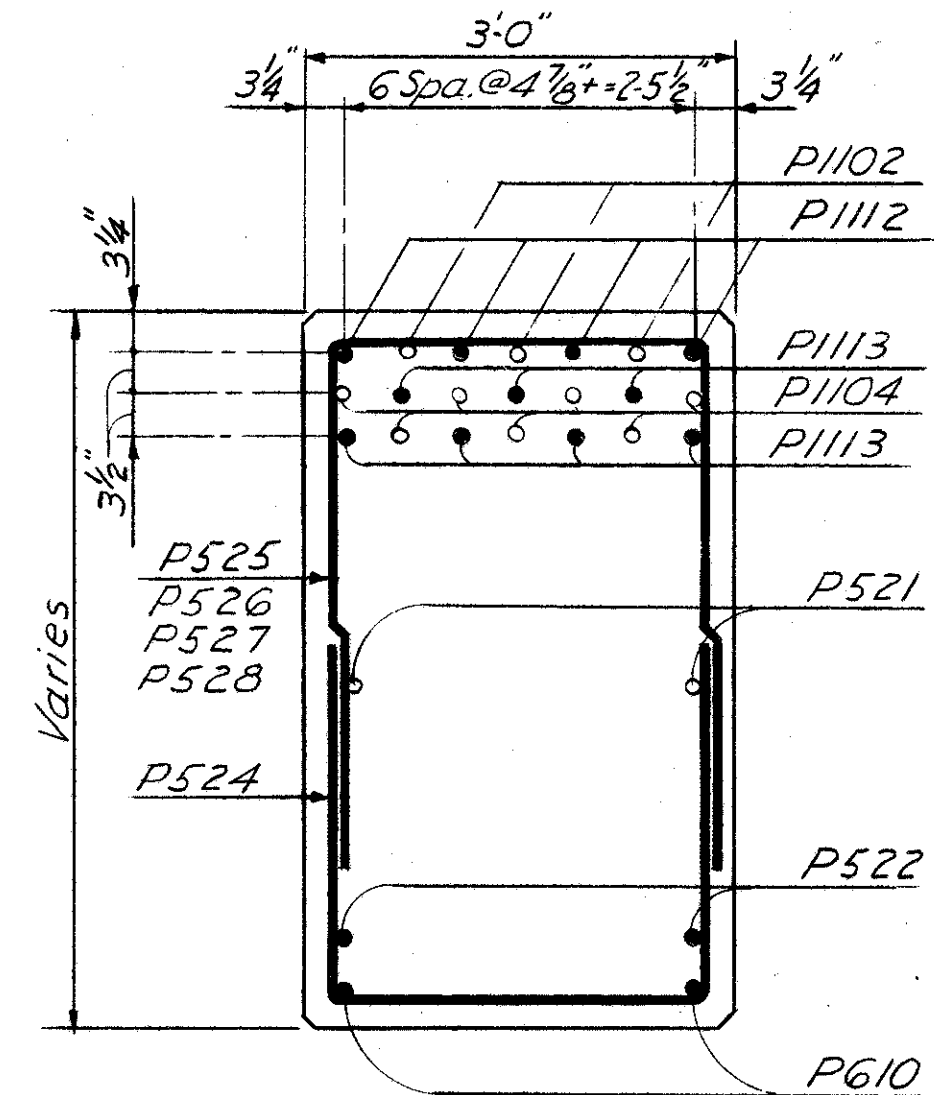
PIER NO.2 WESTBOUND LANES

BRIDGE NO. TUS-250-1899 L.&R. OVER B.&O. RR. AND PIKE RUN	
TUSCARAWAS COUNTY	USR-250
SEC. TUS-250-1723	STA. 981+12.67 to STA. 983+61.58 L. STA. 981+12.67 to STA. 983+23.33 R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.B.M.	H.W.M.	A.R.B.	H.R.P.			



SECTION B-B



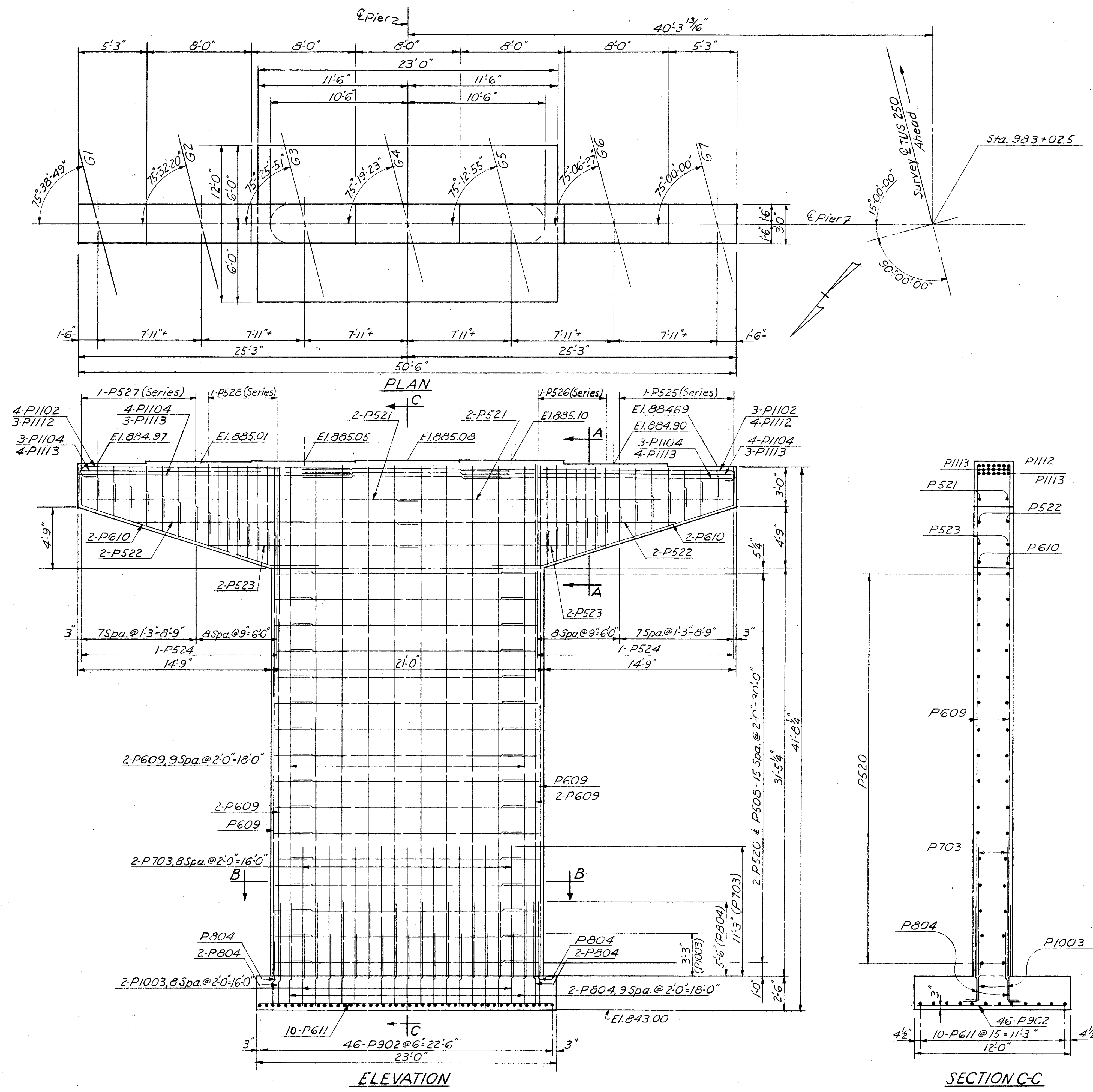
SECTION A-A

PIER NOTES
 BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.
 REINFORCING STEEL shall clear the face of concrete by 2" unless otherwise noted.

GANNETT FLEMING CORDRY & CARPENTER
 ENGINEERS
 HARRISBURG, PA.

PIER NO. 3 WESTBOUND LANES
 BRIDGE NO. TUS-250-1899 L.R.
 OVER B&O RR. AND PIKE RUN
 TUSCARAWAS COUNTY
 SEC. TUS-250-1723
 STA. 981+12.67 to STA. 983+61.58 L.
 STA. 981+12.67 to STA. 983+23.33 R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.B.M.	H.W.M.	A.R.B.	H.R.P.			

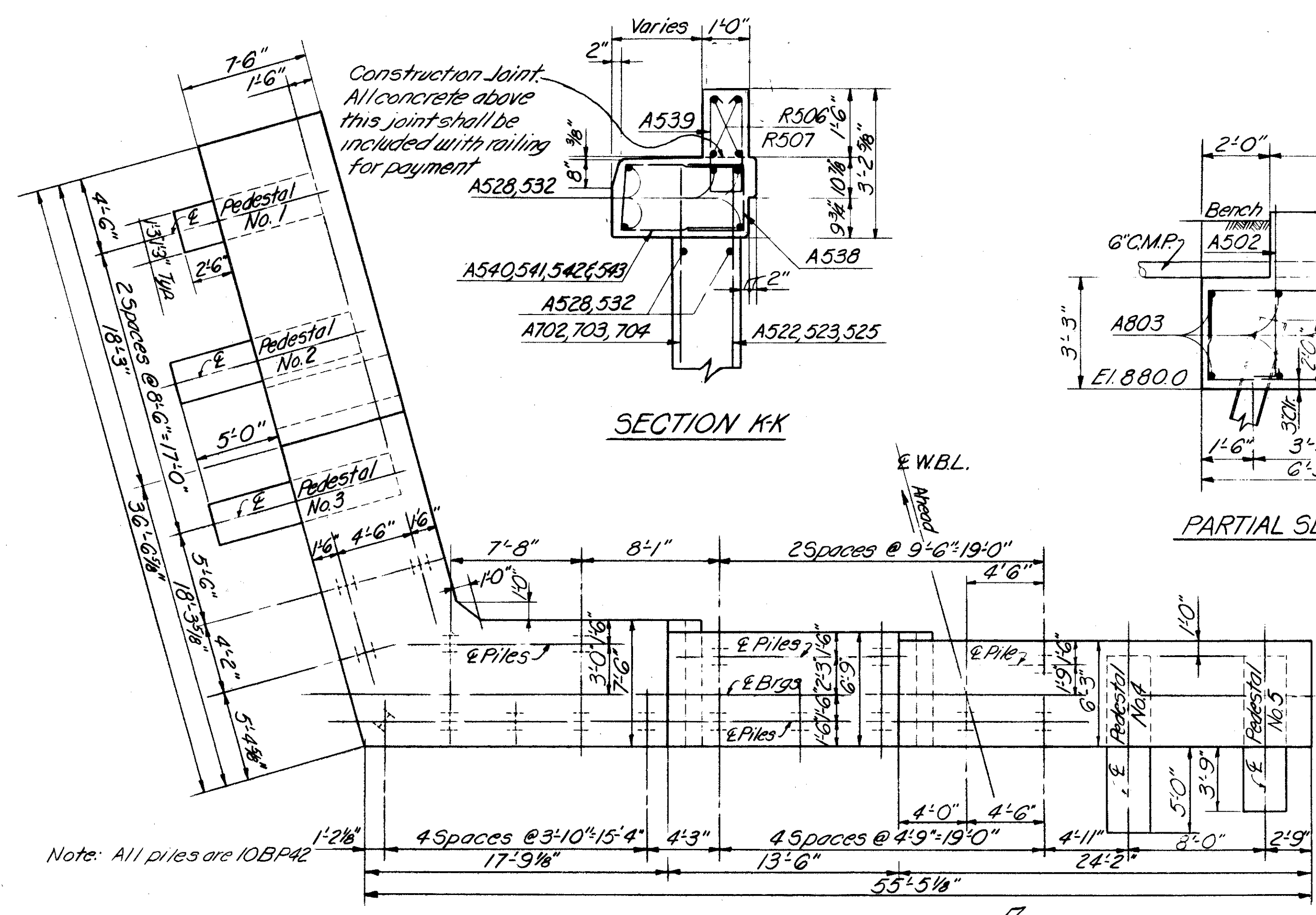
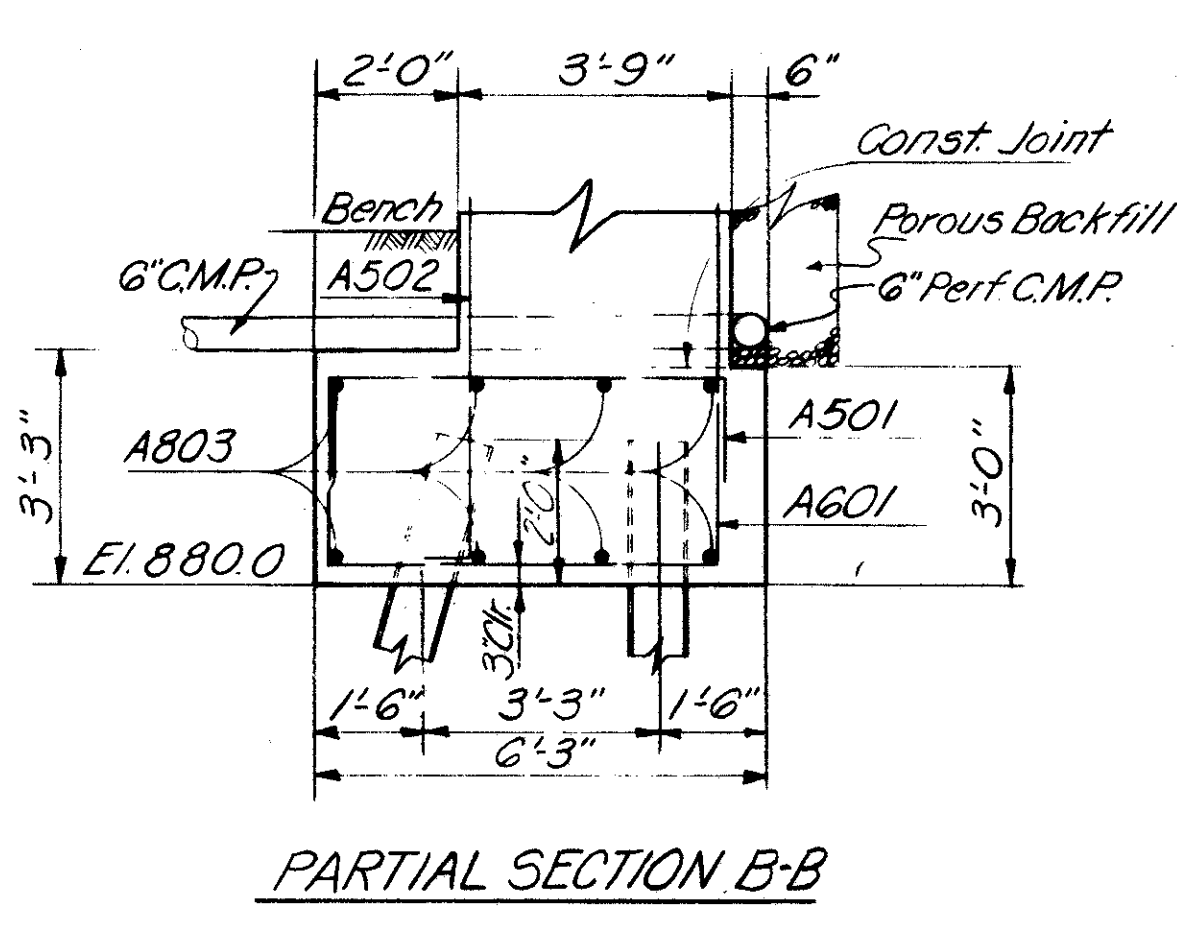
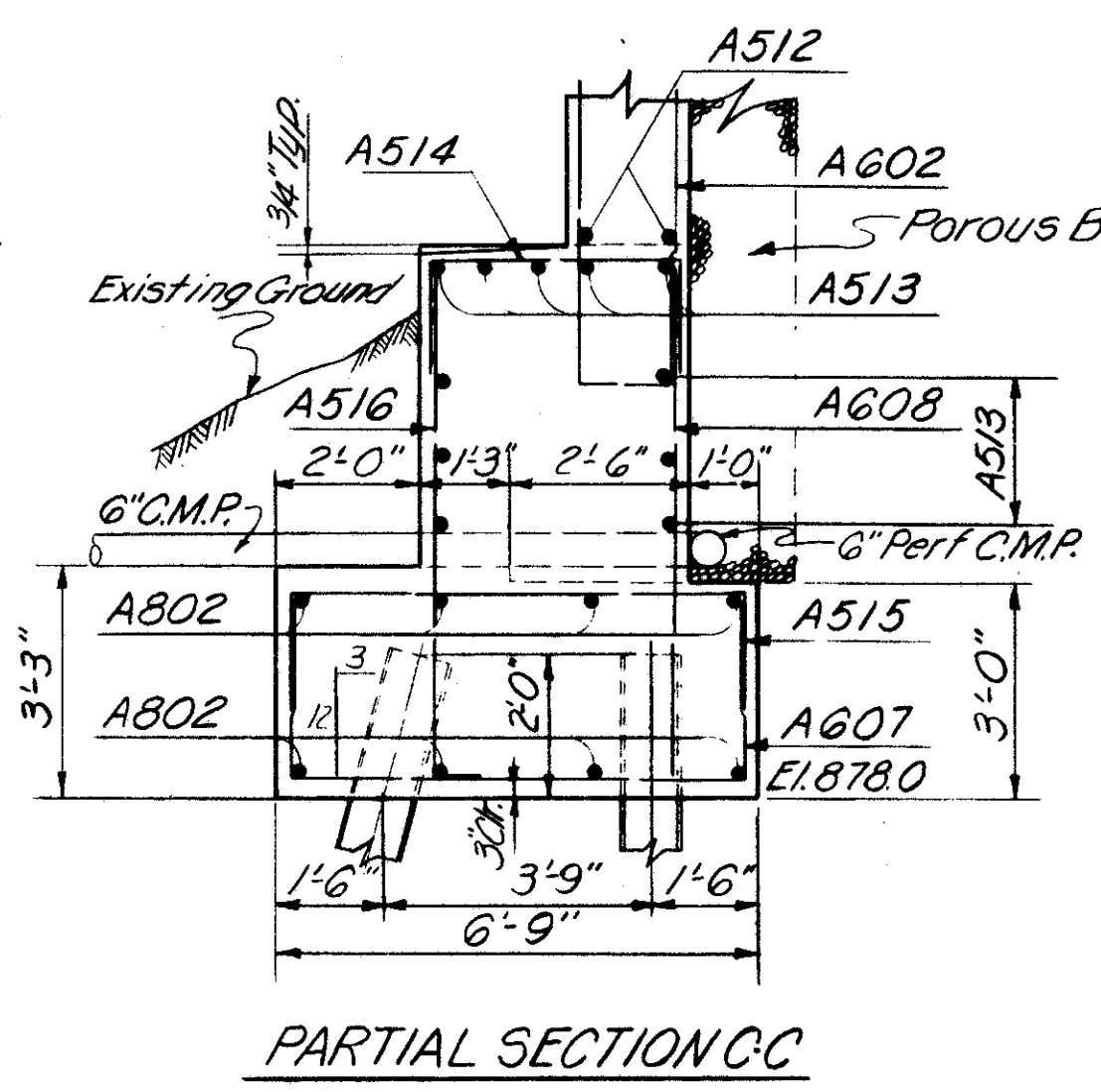
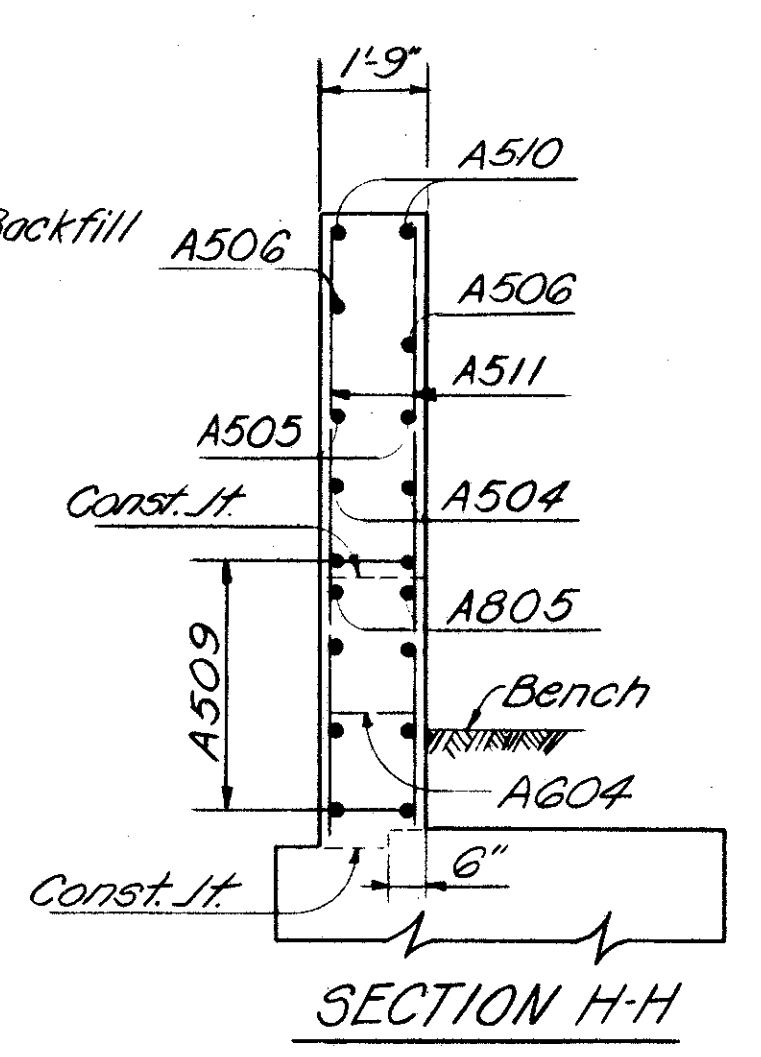
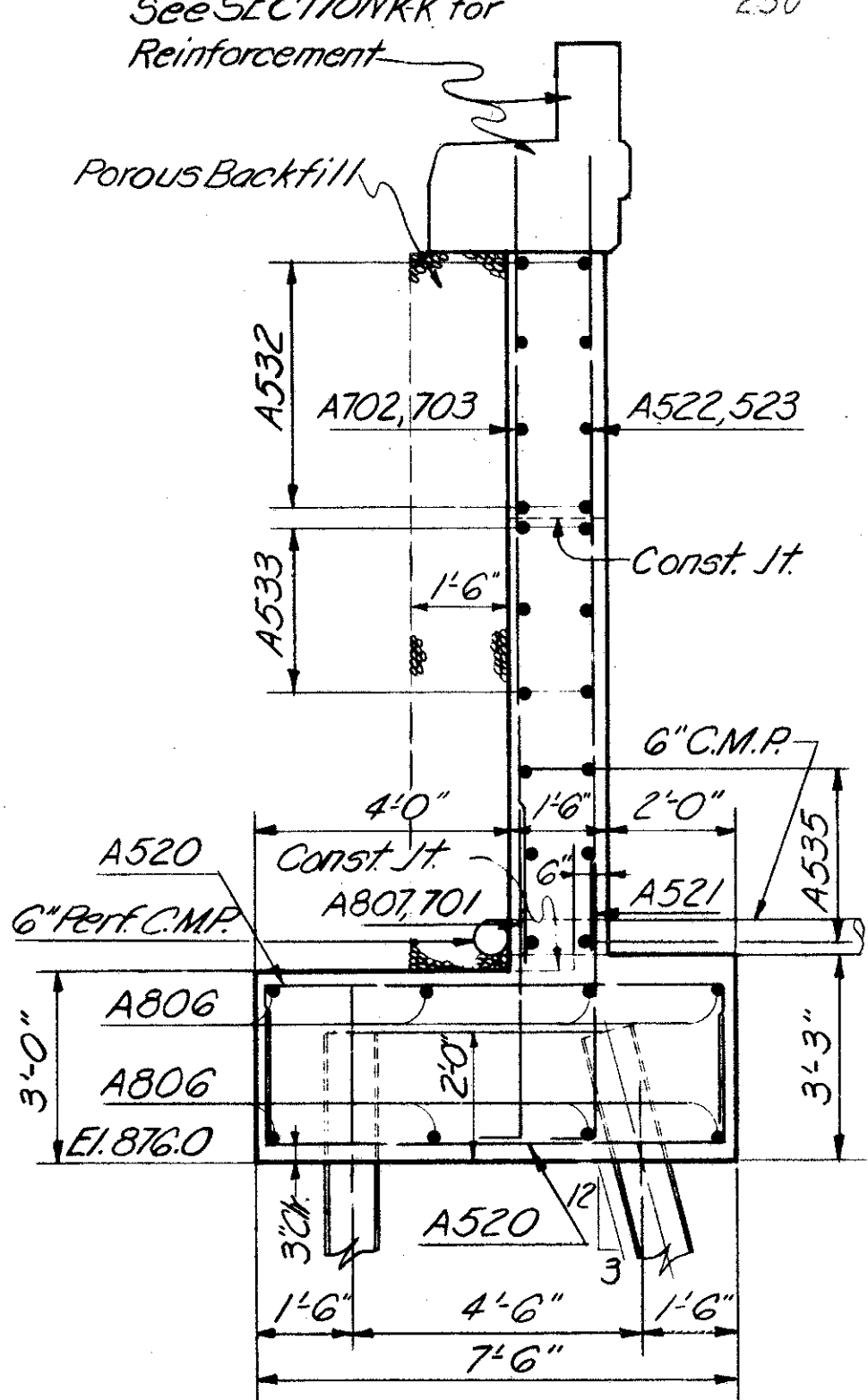
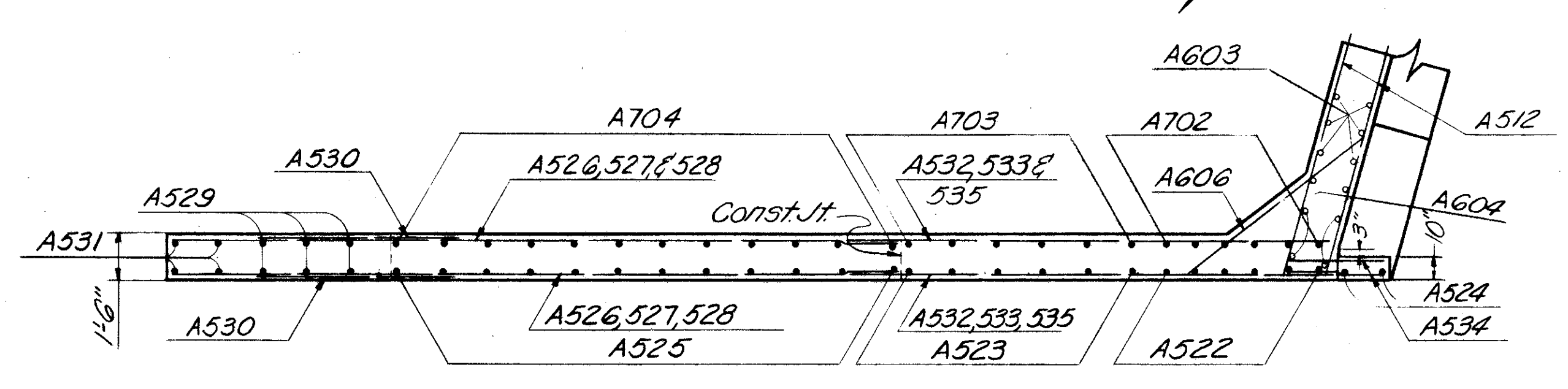
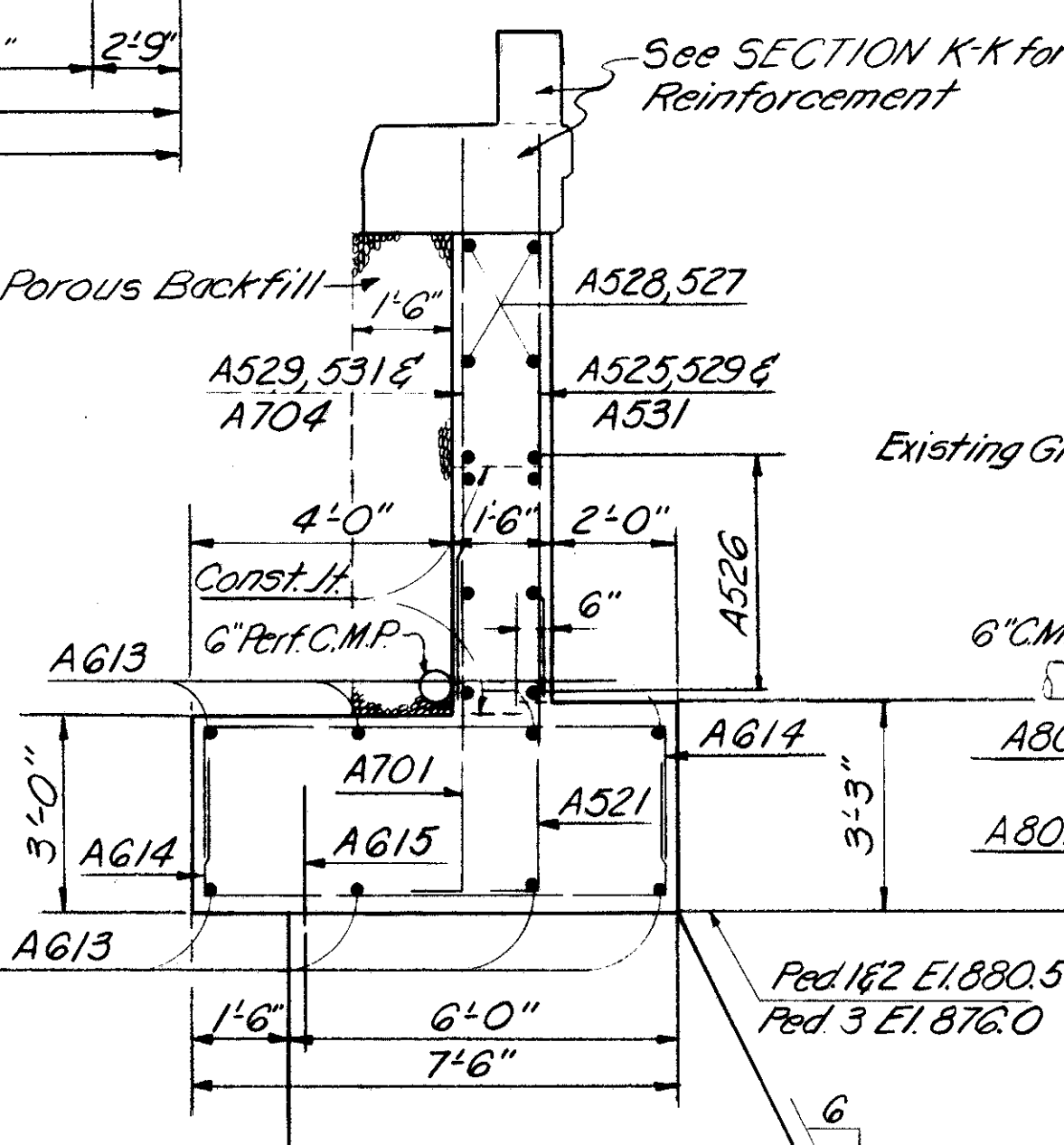
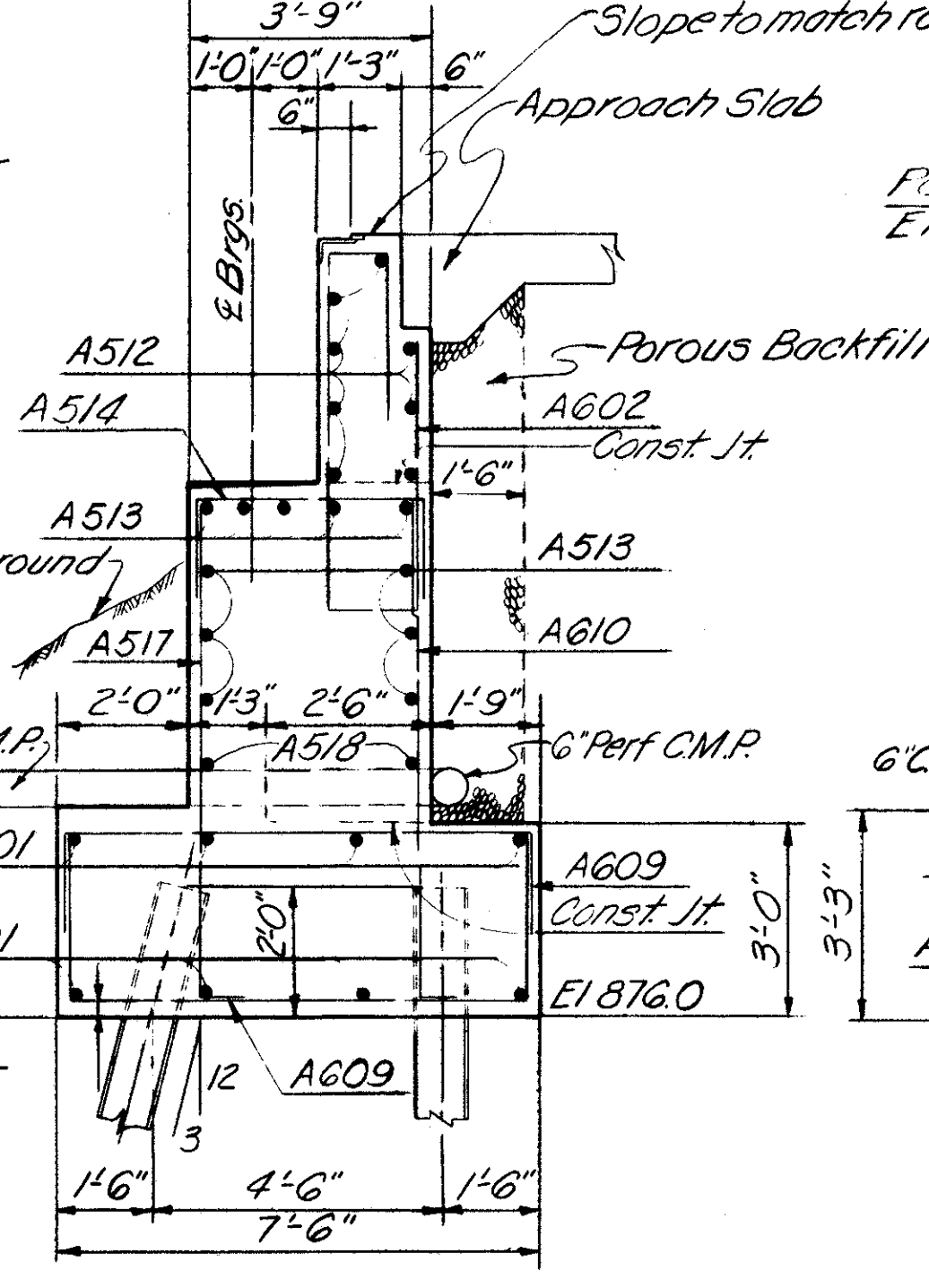
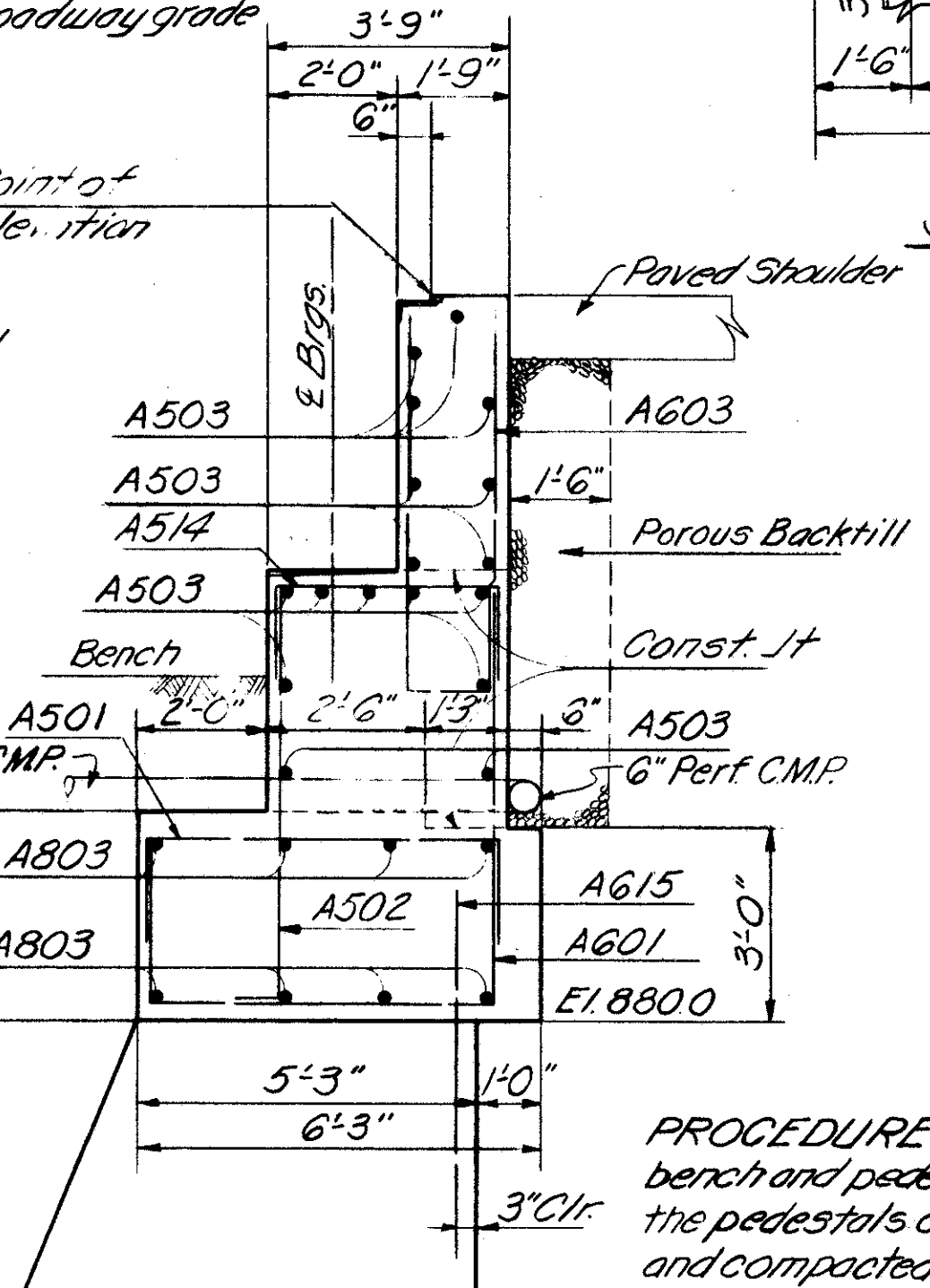
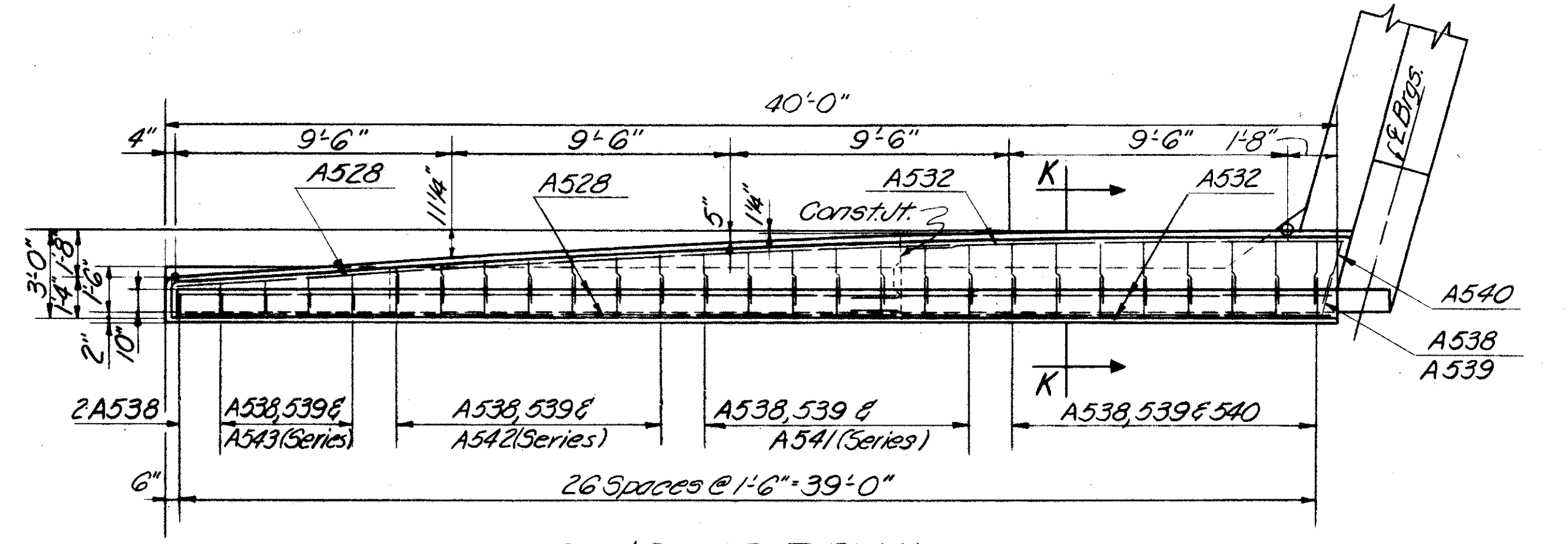
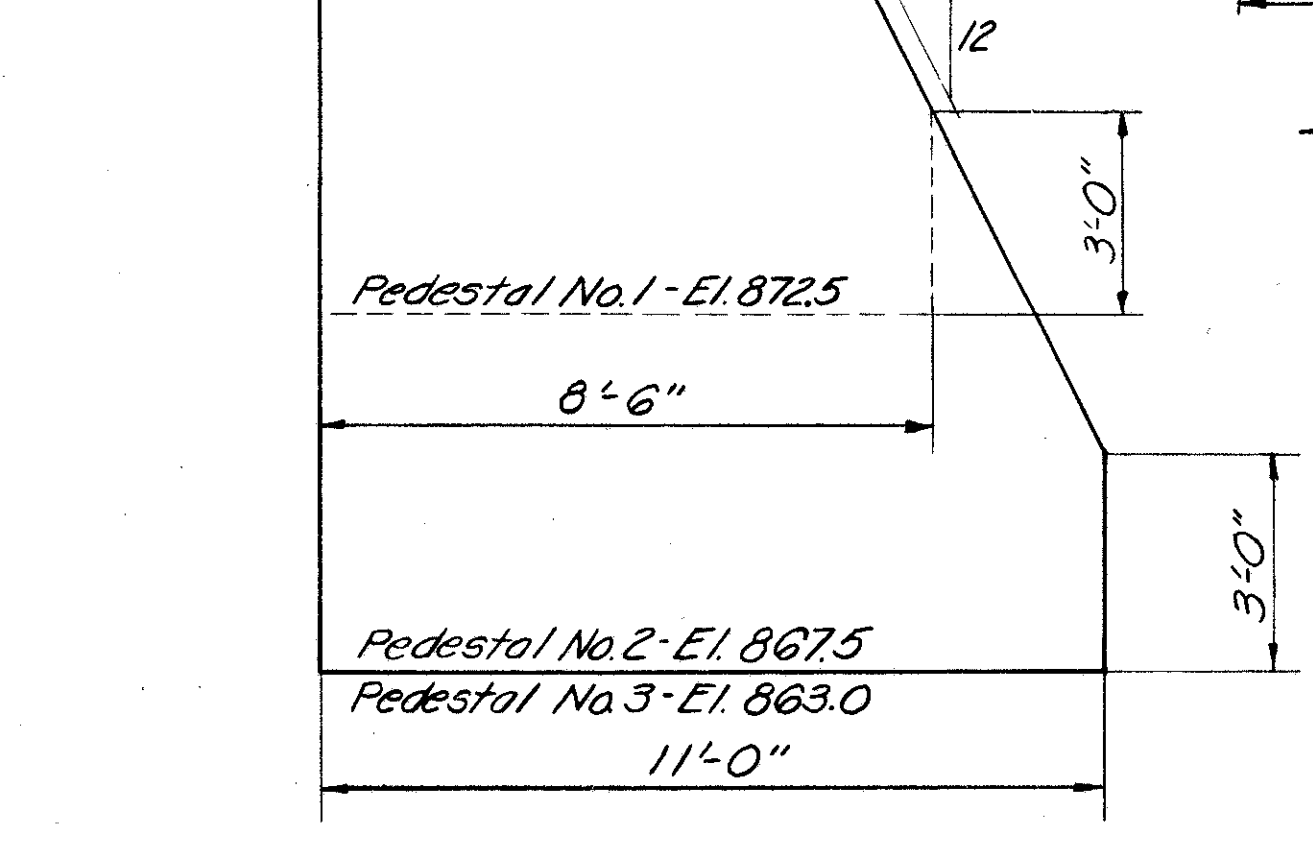
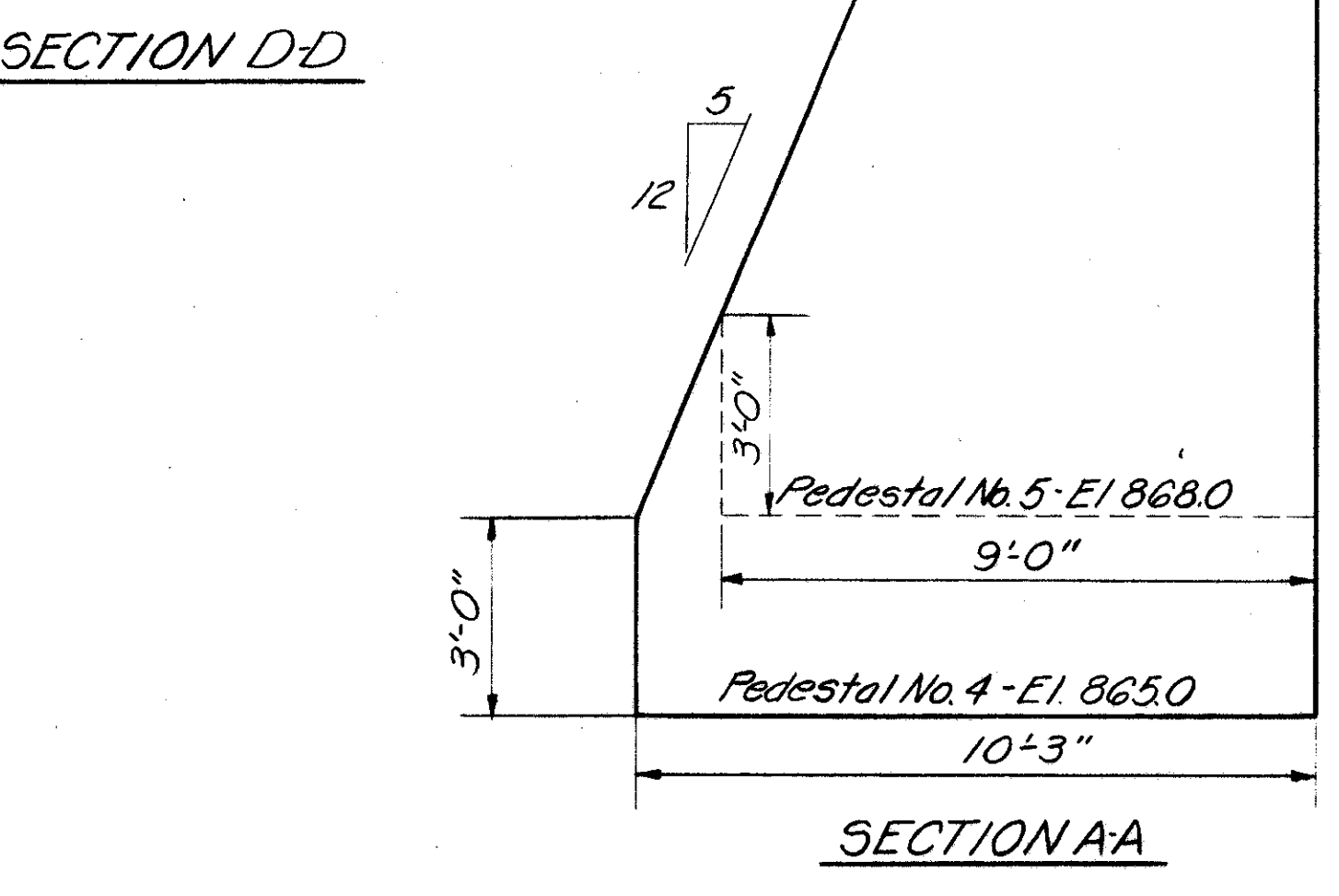


SECTION C-C

PROCEDURE: Excavation for bench and abutment shall be made before piles are driven.

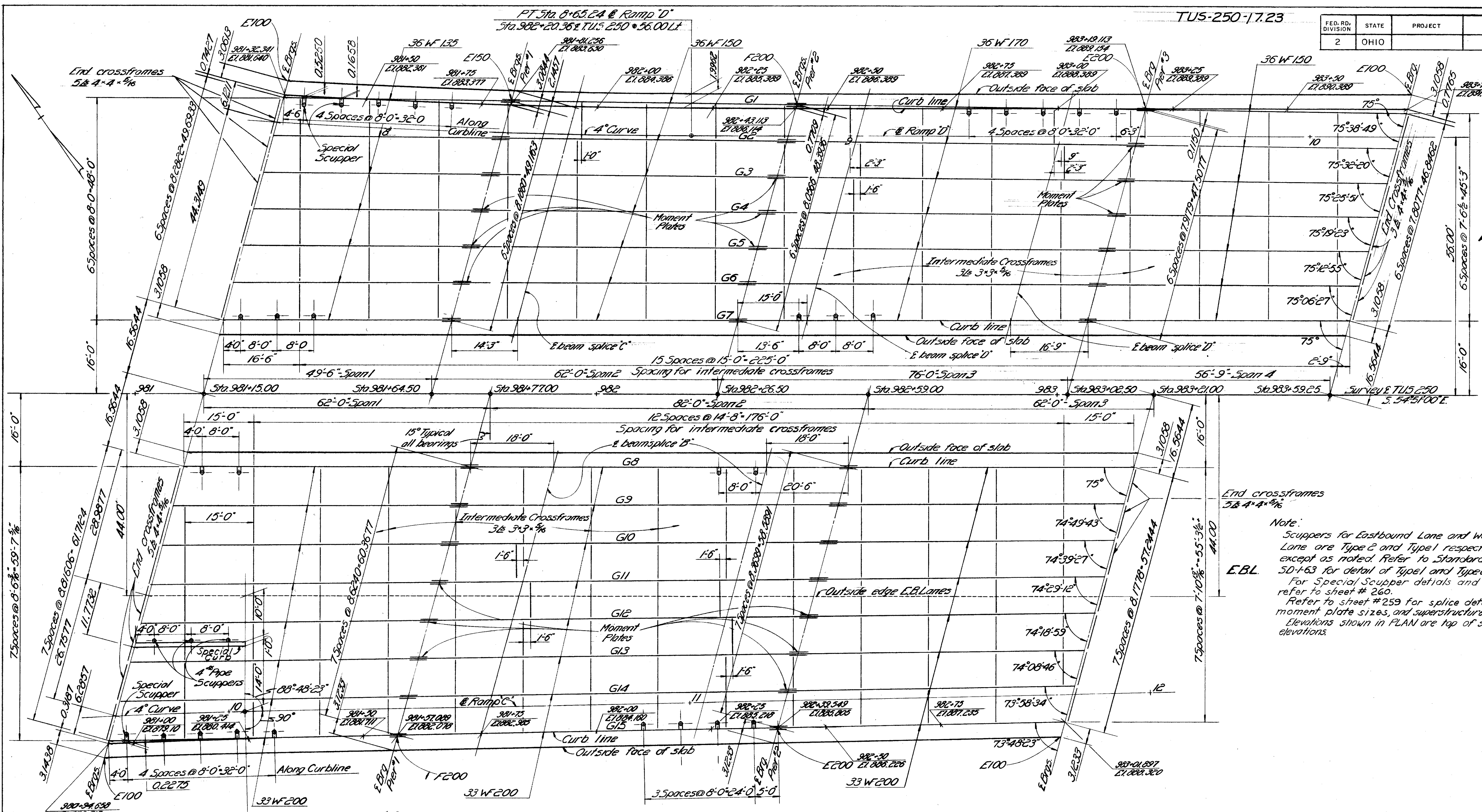


DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.B.M.	H.W.M.	H.W.M.	H.R.P.			3/11/61



PROCEDURE: Excavation for the bench and pedestals shall be made, the pedestals constructed, backfilled and compacted up to the bench or to the level of the existing ground at the front face of abutment and wing wall, after which excavation shall be made for the abutment and piles driven.

GANNETT FLEMING CORDRY & CARPENTER ENGINEERS HARRISBURG, PA.			
DETAILS FORWARD ABUTMENT WESTBOUND LANES			
BRIDGE NO. TUS-250-1899 L&R. OVER B&O R.R. AND PIKE RUN			
TUSCARAWAS COUNTY		USR-250	
SEC. TUS-250-17.23		STA. 981+12.67 to STA. 983+61.58 L.	
		STA. 981+12.67 to STA. 983+23.33 R.	
DESIGNED	DRAWN	TRACED	CHECKED
E.B.M.	H.W.M.	H.W.M.	H.R.P.
		REVIEWED	DATE
			REVISED



FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

Note:
Scuppers for Eastbound Lane and Westbound Lane are Type 2 and Type 1 respectively except as noted. Refer to Standard Drawing 50+63 for detail of Type 1 and Type 2 Scuppers. For Special Scupper details and 4" drains refer to sheet # 260.
Refer to sheet # 259 for splice details, moment plate sizes, and superstructure notes. Elevations shown in PLAN are top of slab elevations.

FRAMING PLAN AND SLAB GEOMETRY

DEAD LOAD DEFLECTION TABLE

Item	Lane Beam Span	WESTBOUND LANES								EASTBOUND LANES							
		G1				G2 to G6				G7				G8			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Weight of Steel		1/16	-	3/32	1/16	1/16	1/32	3/32	1/16	1/16	-	3/32	1/16	1/16	5/32	1/16	5/32
Remaining Dead Load		1/4	1/8	9/16	1/4	7/32	3/32	1/2	7/32	1/4	1/8	9/16	1/4	3/8	3/4	5/16	19/32
Vertical Curve Convexity		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sum of Deflection and Convexity		5/16	1/8	21/32	5/16	9/32	1/8	19/32	9/32	5/16	1/8	21/32	5/16	11/16	29/32	3/8	11/16
Required Camber		0	0	0	0	0	0	0	0	0	0	0	0	0	1/8	0	1/8

GANNETT FLEMING CORDRY & CARPENTER
ENGINEERS
HARRISBURG, PA.

FRAMING PLAN AND SLAB GEOMETRY

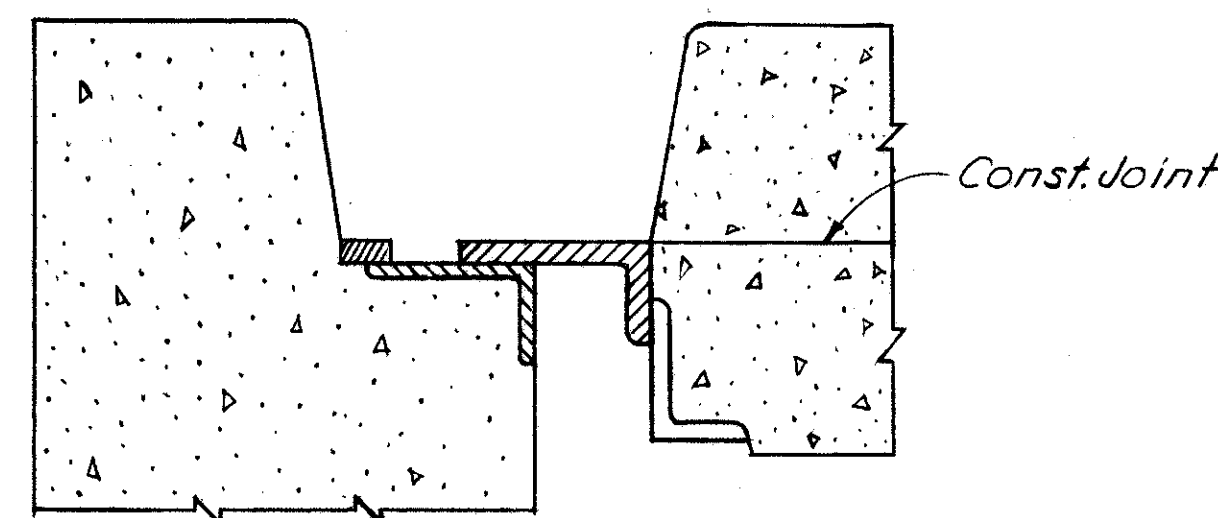
BRIDGE NO. TUS-250-1899 L. & R.
OVER B. & O. RR AND PIKE RUN

TUSCARAWAS COUNTY

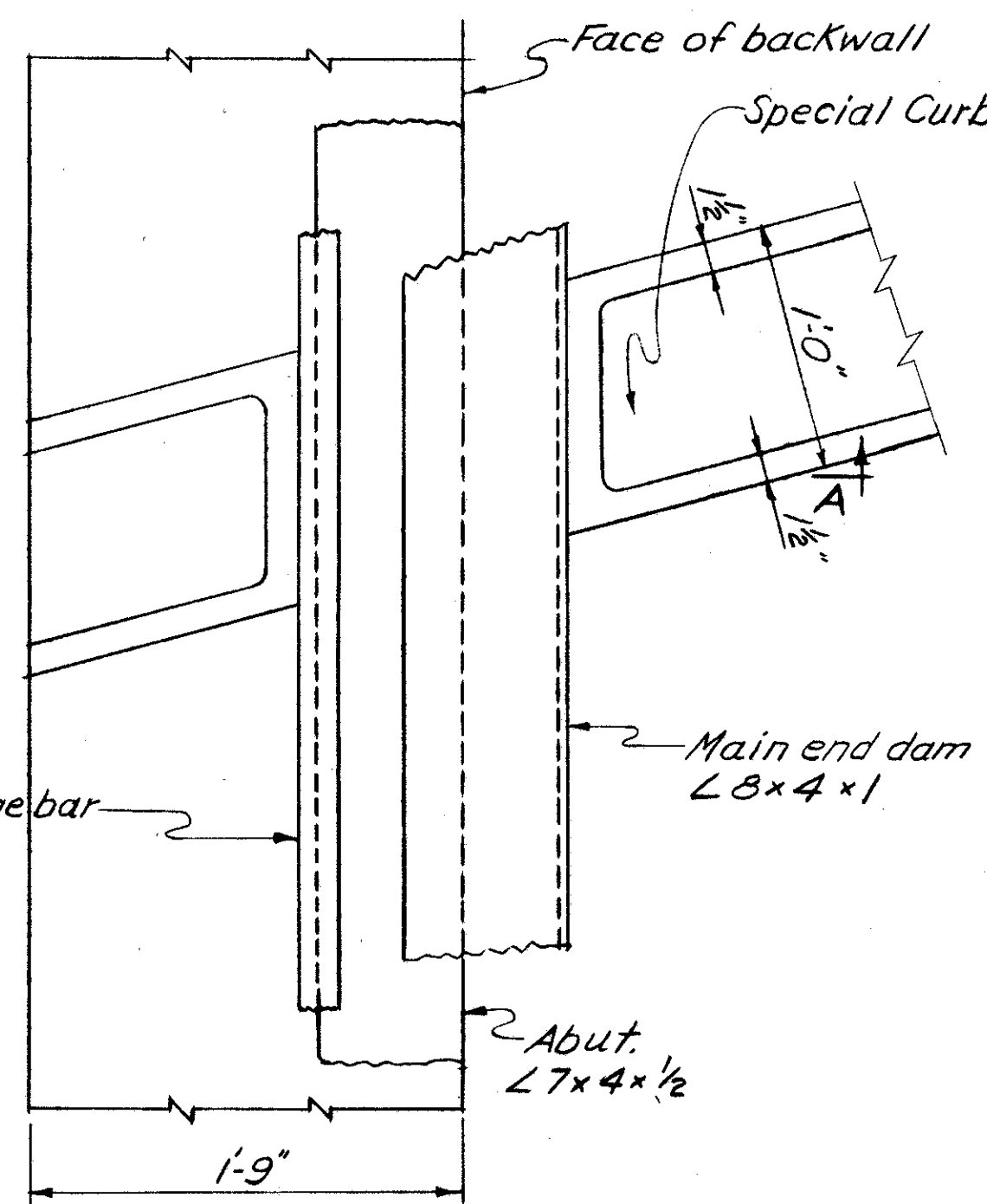
STA. 981+12.67 to STA. 983+61.58 L.
STA. 981+12.67 to STA. 983+23.33 R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.R.P.	H.R.P.	R.W.B.	E.B.M.			

ELEV & OFFSETS FOR VARIABLE WIDTH PAVEMENTS					
From Outside Edge W.B.L.		Station	From Outside Edge E.B.L.		
Gutter El.	Offset	Location	Offset	Slope $\frac{ft}{ft}$	Gutter El.
		980+94.658 @ E Brq. Rear Abut.	31.917'	0.0514	878.815
		981+10	31.361'	0.0459	879.631
		981+24 P.T. Ramp C	31.000'	0.0409	880.362
881.640	20.717'	981+32.341 @ E Brq. Rear Abut.			
		981+40	30.667'	0.0351	881.194
882.647	19.408'	981+57			
		981+57.089 @ E Brq. Pier #1	30.311'	0.0289	882.078
		981+64	30.167'	0.0264	882.434
883.630	18.536'	981+81.256 @ E Brq. Pier #1			
		981+75	29.938'	0.0229	882.985
		981+93.98	29.542'	0.0183	883.887
884.386	18.145'	982+00			
		982+10	29.209'	0.0164	884.591
885.203	18.00'	982+20.36 P.T. Ramp D			
		982+24	28.917'	0.0156	885.178
		982+39.549 @ E Brq. Pier #2	28.593'	0.0156	885.805
		982+75	27.854'	0.0156	887.235
		983+01.897 @ E Brq. Forward Abut.	27.294'	0.0156	888.320

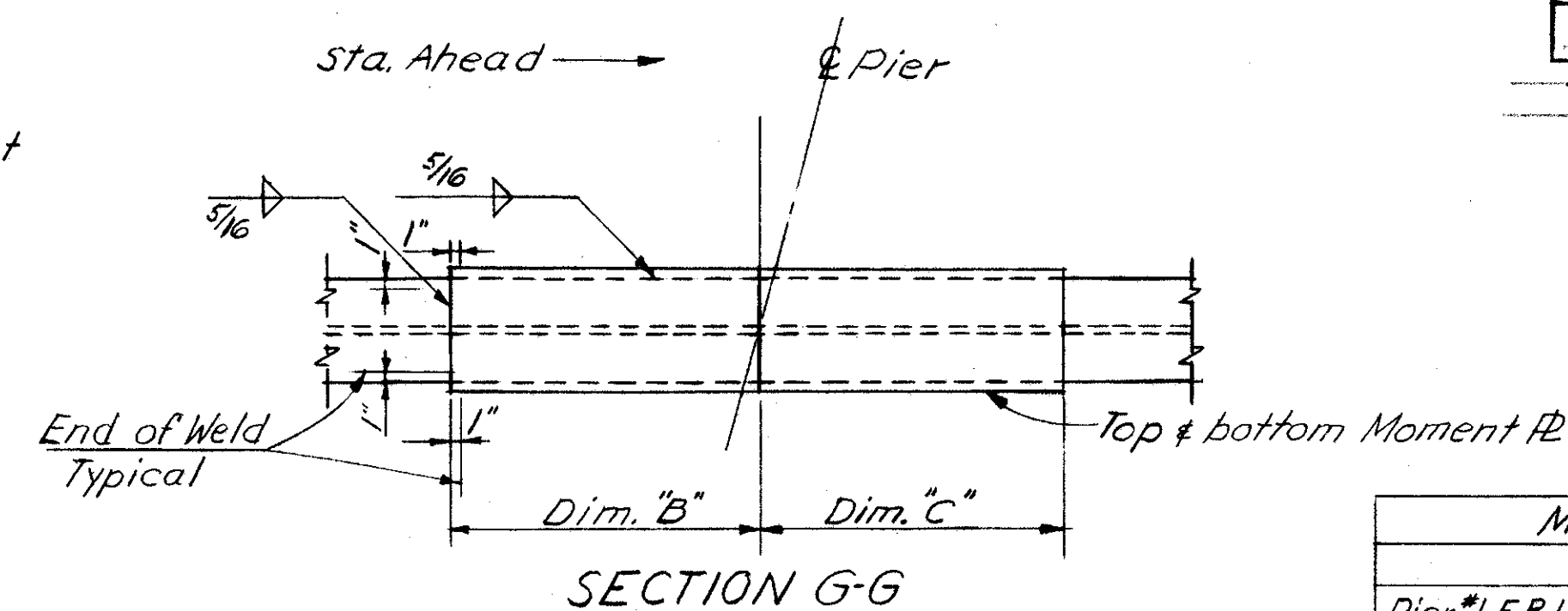


SECTION A-A



DETAIL "X"

See Sheet #253

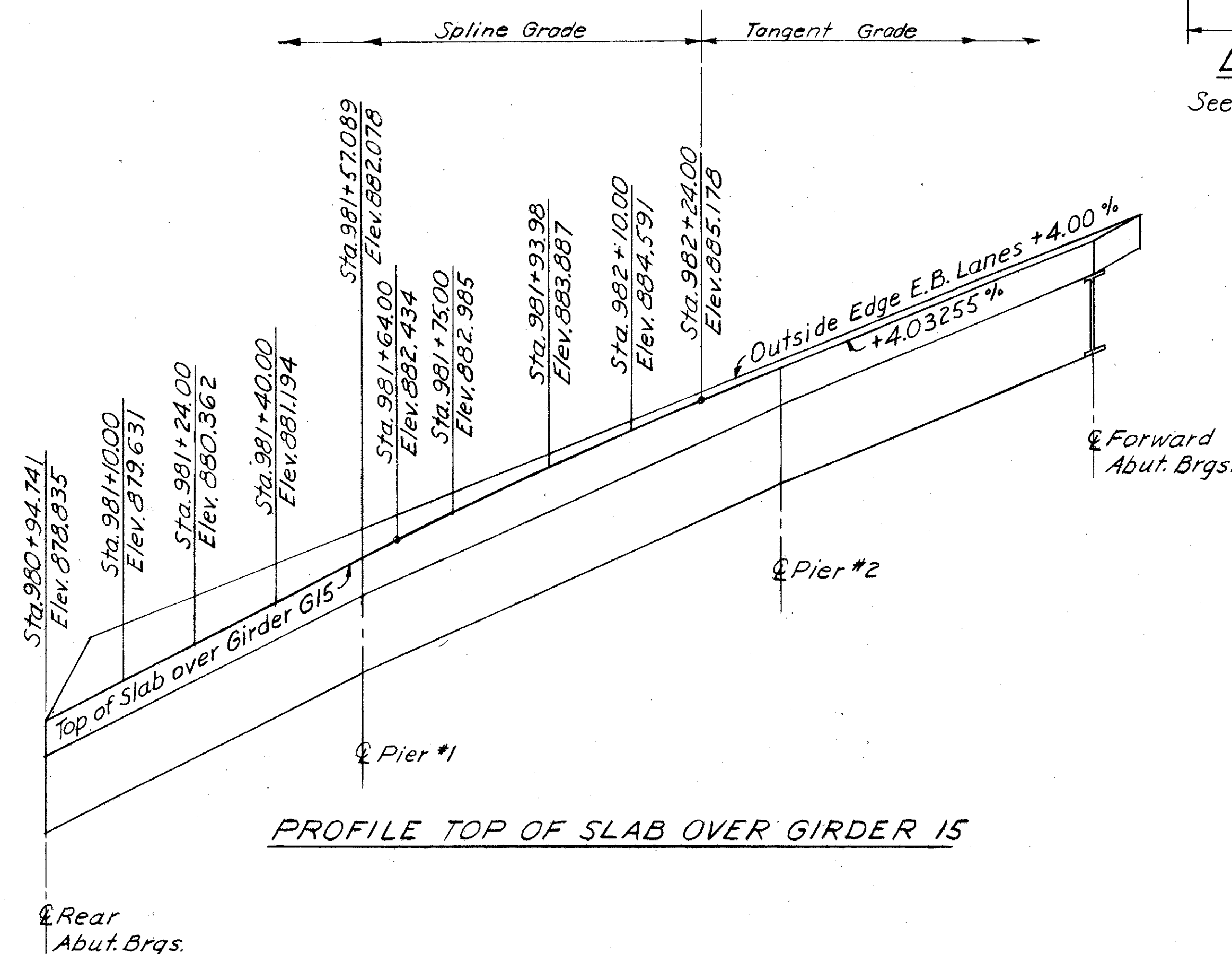
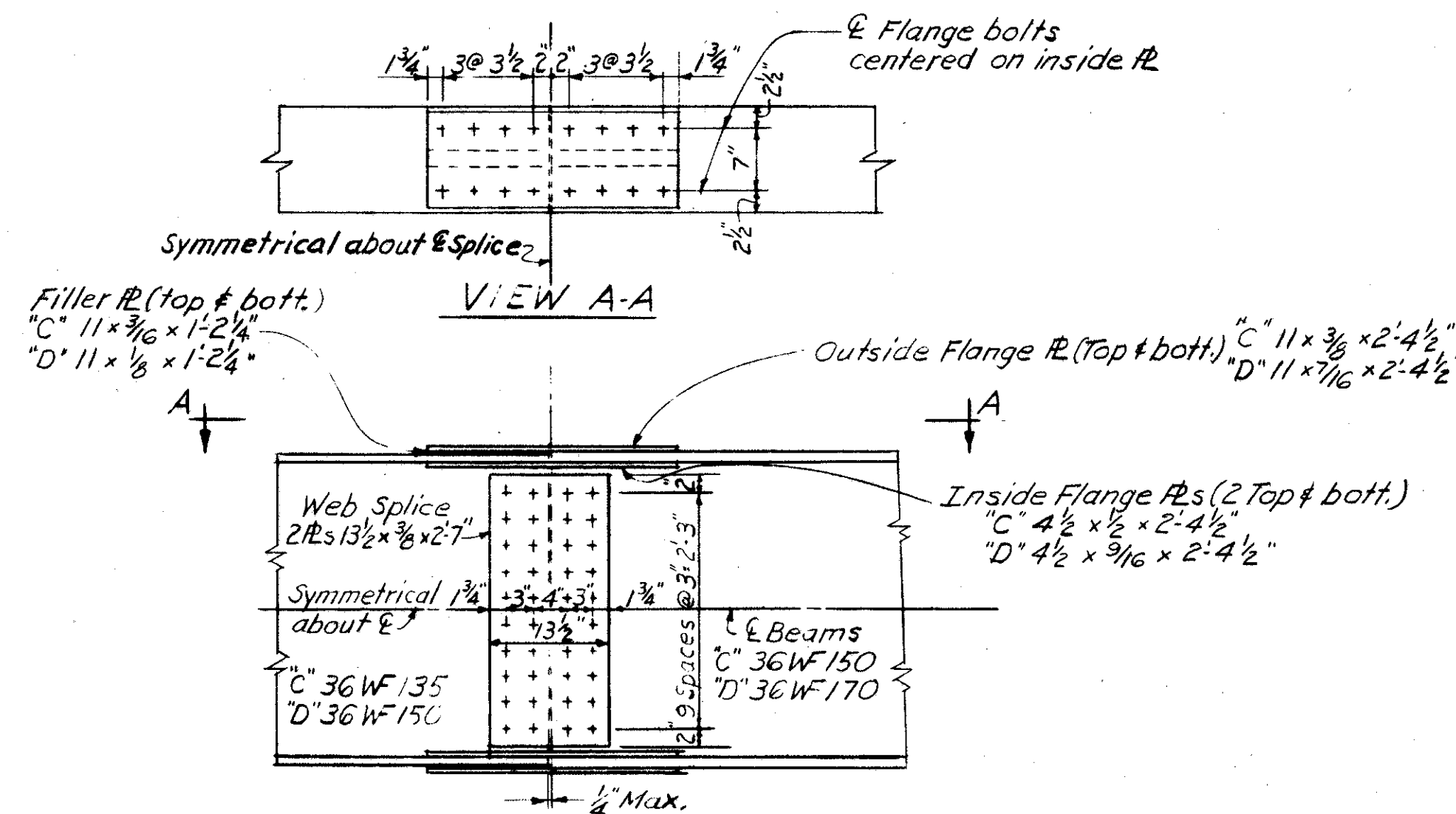


SECTION G-G

MOMENT PLATES			
	Plates	Dim. "B"	Dim. "C"
Pier #1 E.B.L.	17x1/16x22'6"	11'9"	10'9"
Pier #2 E.B.L.	17x1/16x22'6"	10'9"	11'9"
Pier #1 W.B.L.	13x1/2x15'0"	7'9"	7'3"
Pier #2 W.B.L.	13x1/2x22'7"	12'0"	10'7"
Pier #3 W.B.L.	13x1/2x24'6"	11'0"	13'6"

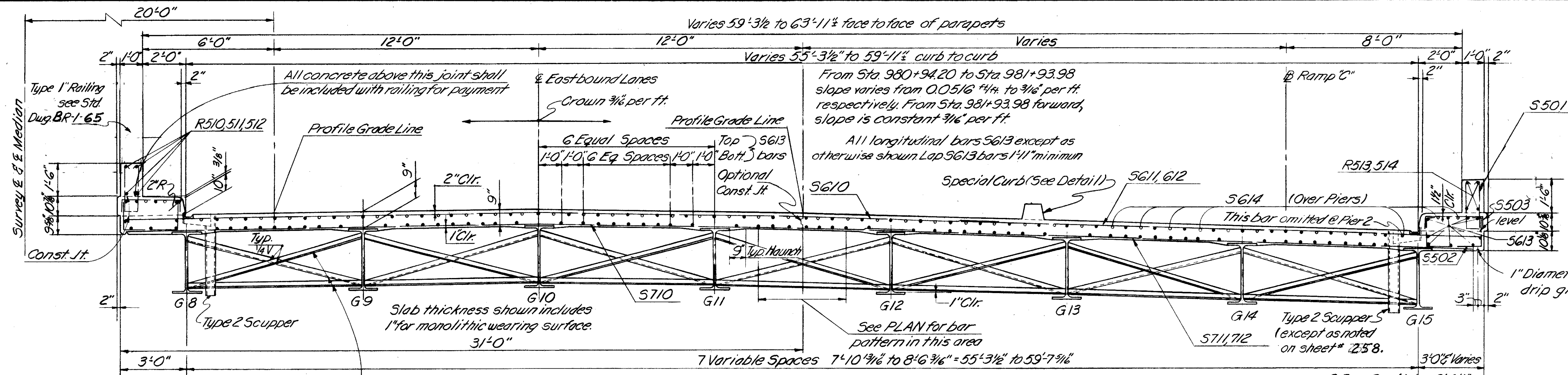
SUPERSTRUCTURE NOTES

REFERENCE shall be made to Standard Drawing FSB-1-62 for bearing details.
 REFERENCE shall be made to Standard Drawing SD-1-63 Sheet #2 and #4 for end crossframe and roadway end details and data; sheet #3 for gutter and scupper details.
 REFERENCE shall be made to Standard Drawing SD-2-64 for splice notes and details of beam splice "B".
 FOR SPECIAL SCUPPER details refer to Sheet #260 of these plans.



DETAIL BEAM SPLICE "D"

GANNETT FLEMING CORDDRY & CARPENTER ENGINEERS HARRISBURG, PA.			
SUPERSTRUCTURE DETAILS			
BRIDGE NO. TUS-250-1899 L.B.R. OVER B.&O. R.R. AND PIKE RUN TUSCARAWAS COUNTY			
USR-250			
SEC. TUS-250-1723 STA. 981+12.67 to STA. 983+61.58 L. STA. 981+12.67 to STA. 983+23.33 R.			
DESIGNED	DRAWN	TRACED	CHECKED
E.B.M.	R.W.B.	A.R.B.	E.B.M.
REVIEWED			
DATE			



TRANSVERSE SECTION

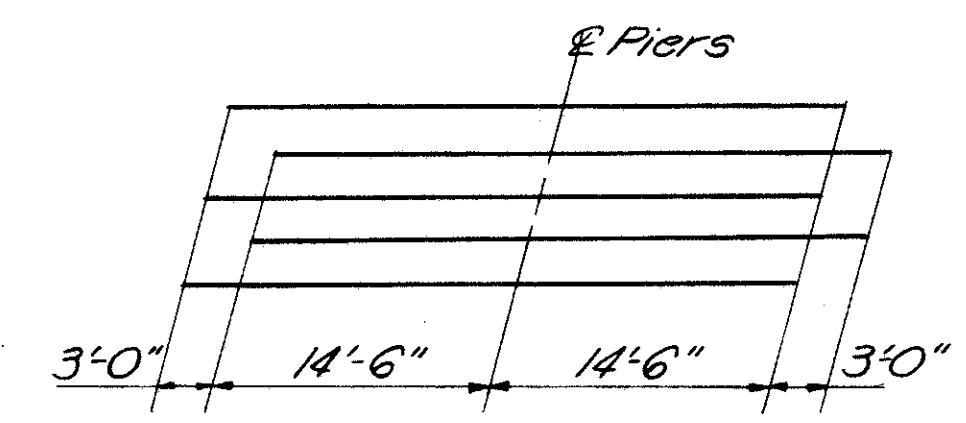
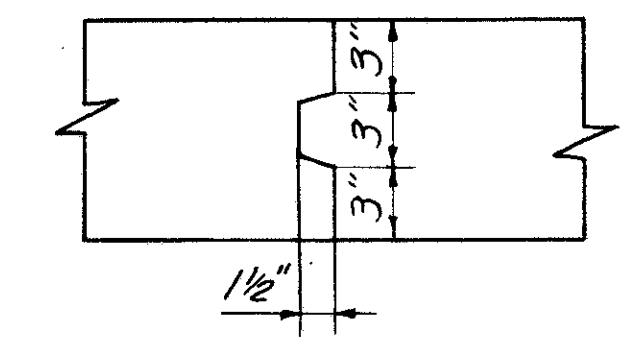
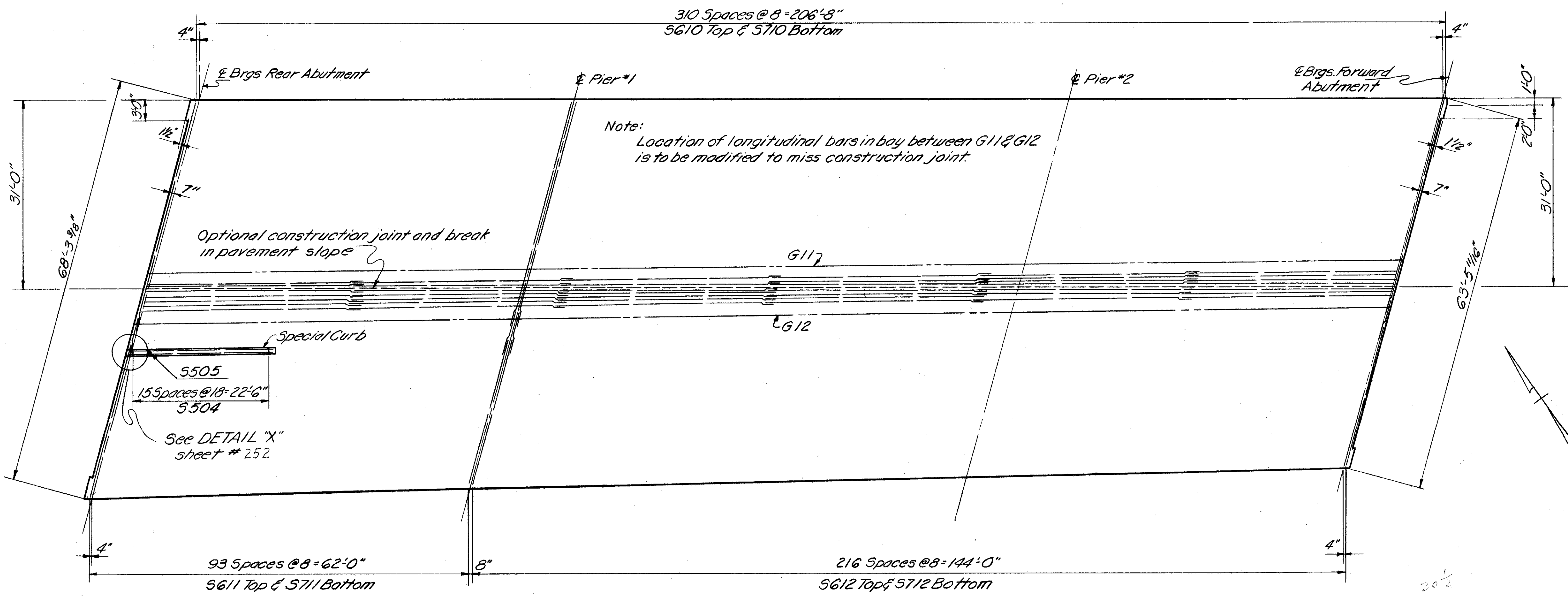


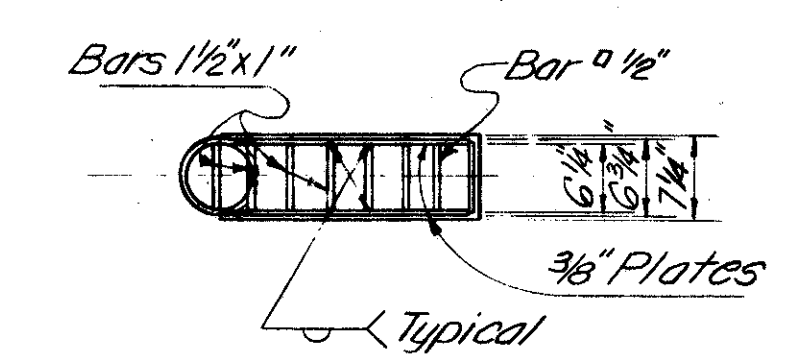
DIAGRAM SHOWING STAGGER OF S614 BARS OVER PIERS



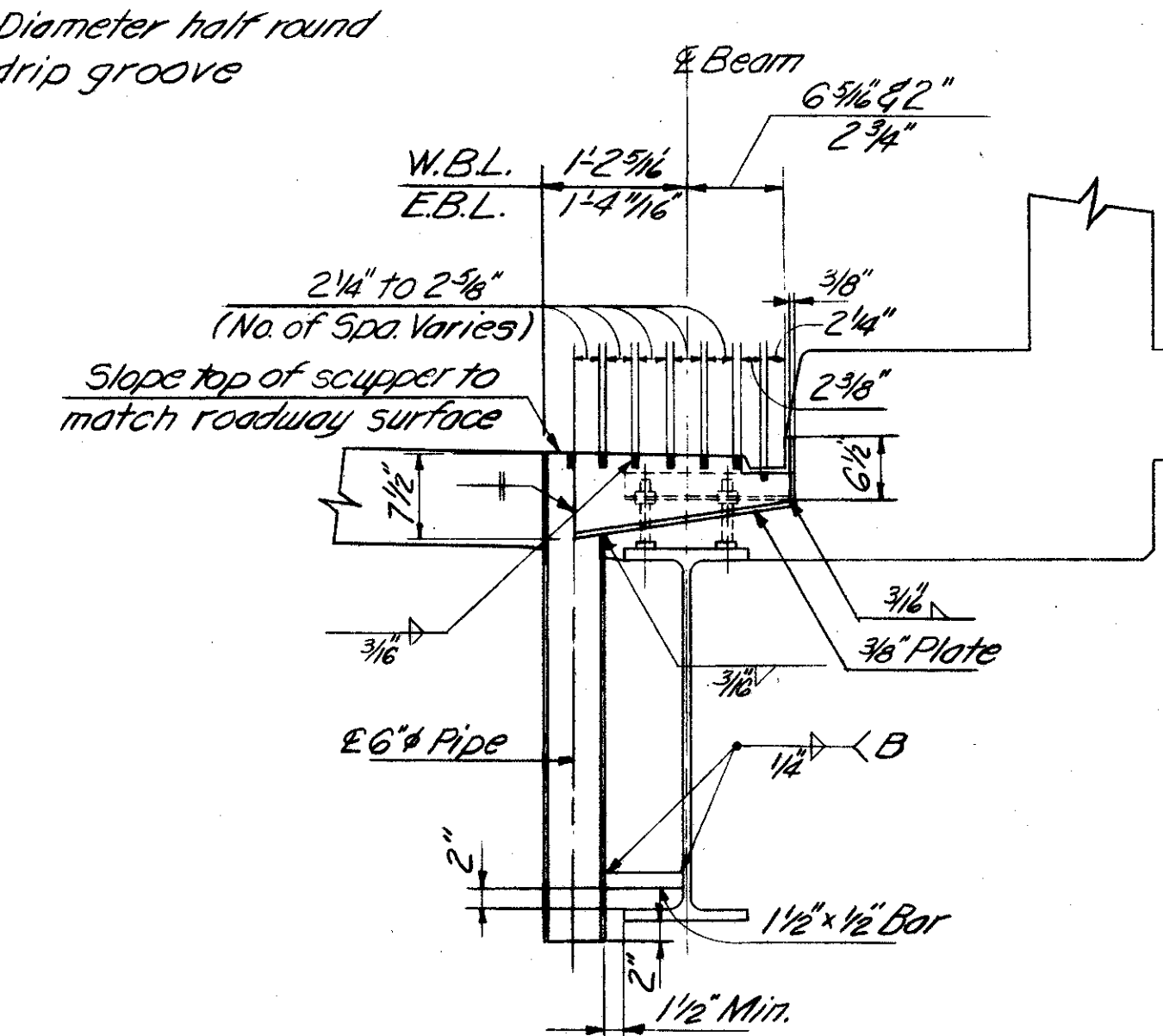
CONSTRUCTION JOINT



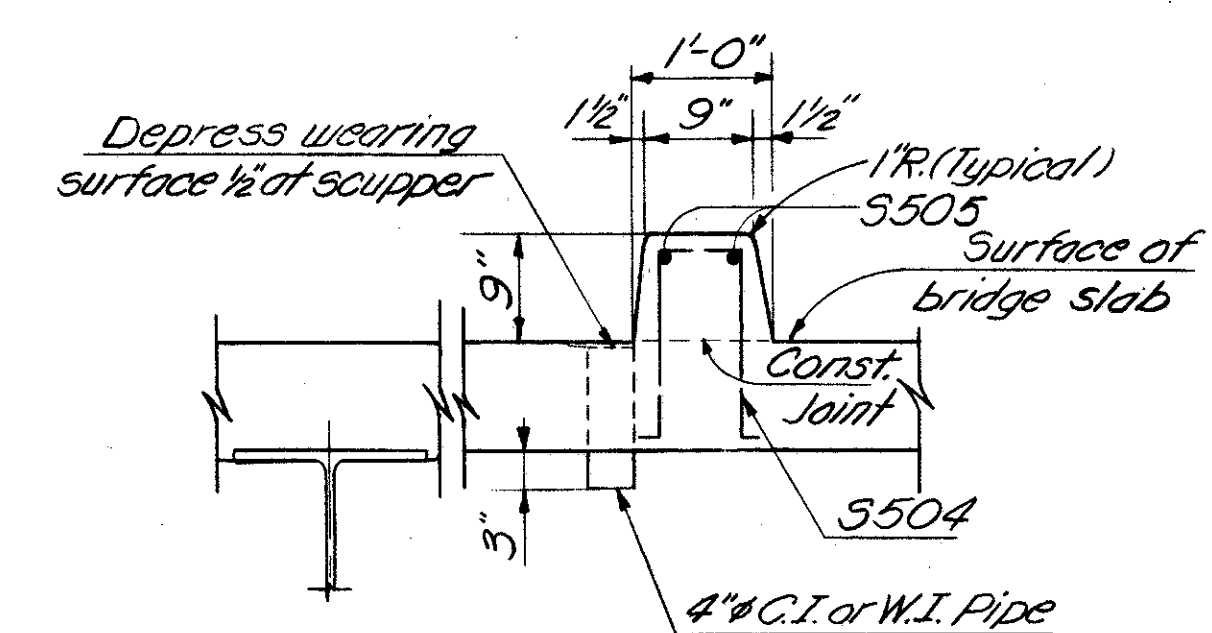
TRANSVERSE REINFORCING STEEL



PLAN SPECIAL SCUPPERS



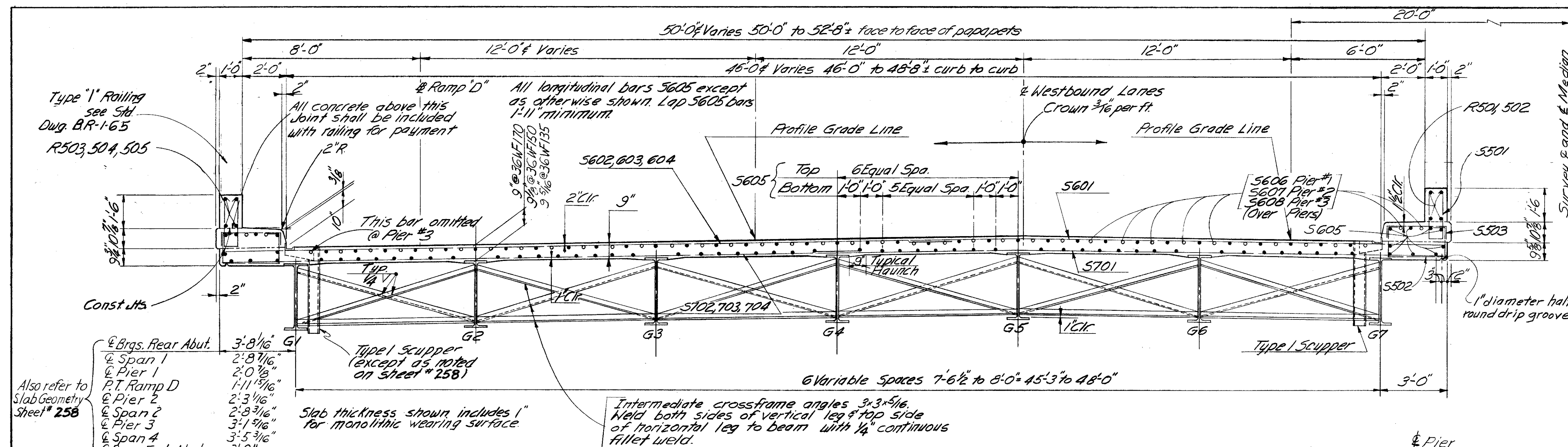
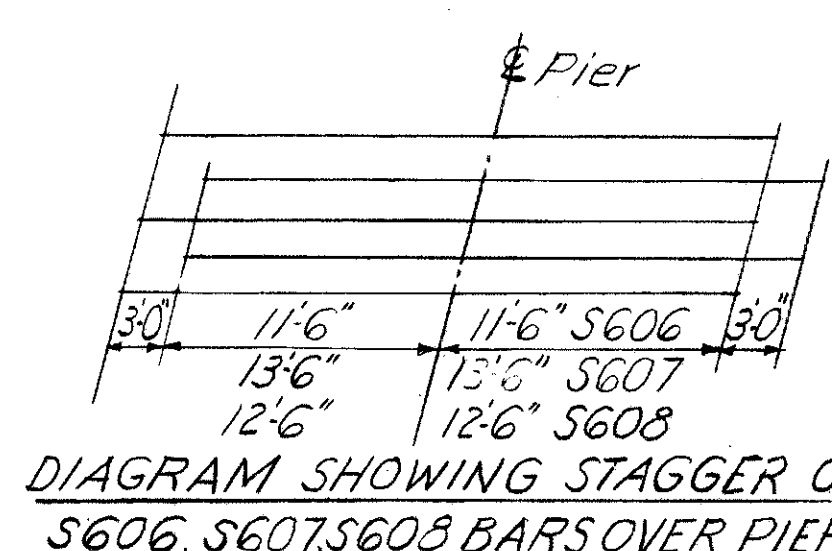
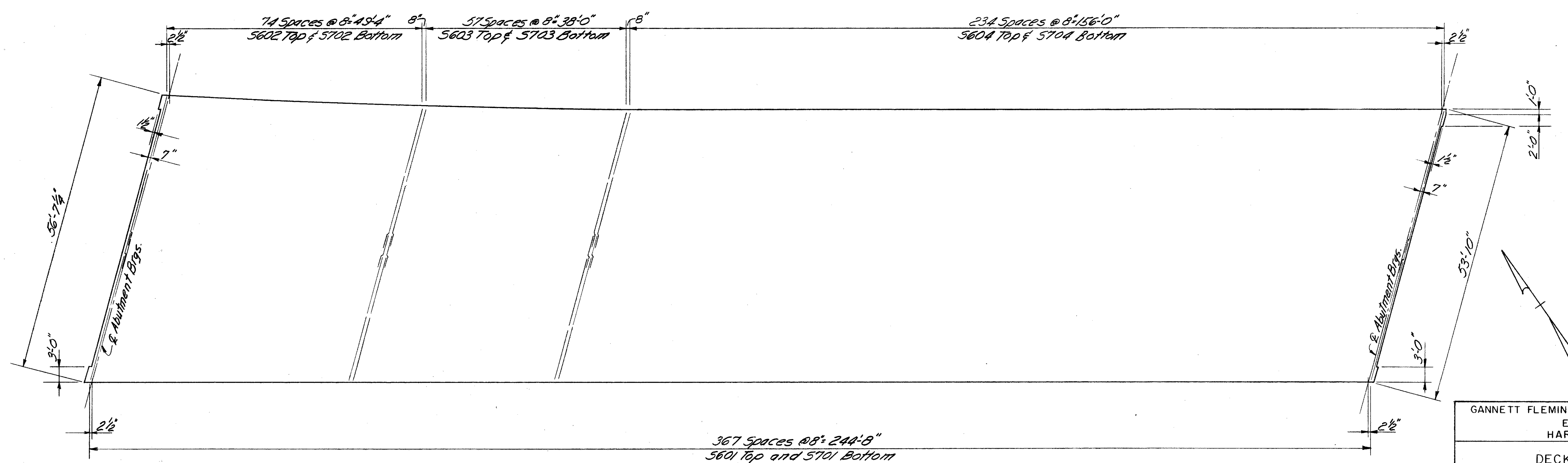
ELEVATION



SPECIAL CURB DETAIL

NOTE: For DECK SLAB NOTES See Sheet # 261.

GANNETT FLEMING CORDDRY & CARPENTER ENGINEERS HARRISBURG, PA.			
DECK SLAB-E.B.L.			
BRIDGE NO. TUS-250-1899 L. & R. OVER B. & O. R.R. AND PIKE RUN			
TUSCARAWAS COUNTY		USR-250	
SEC. TUS-250-1723		STA. 981+12.67 to STA. 983+61.58 L. STA. 981+12.67 to STA. 983+23.33 R.	
DESIGNED	DRAWN	TRACED	CHECKED
EBM	RWB	HWM	EBM



TUS-250-1723

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

254

261

DECK SLAB NOTES

DECK SLAB DEPTH: The distances from top of deck slab to top of steel beam are nominal dimensions. The quantity of deck concrete to be paid for shall be based on these dimensions even though deviation from them may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

DECK SLAB HAUNCH: The typical haunch width, shown as 9", shall be used for computing the quantity of concrete. However, the haunch width may vary between 6 and 12 inches provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.

CONCRETE shall be class "C". $f_c = 1333$ psi.

RAILING shall be aluminum with concrete parapet Type 1, Standard Drawing BR-1-65.

LOCATION of R-bars and spacing of S501, S502, S503 are shown on sheet #262. See curb and parapet PLAN and ELEVATION.

GANNETT FLEMING CORDDRY & CARPENTER
ENGINEERS
HARRISBURG, PA.

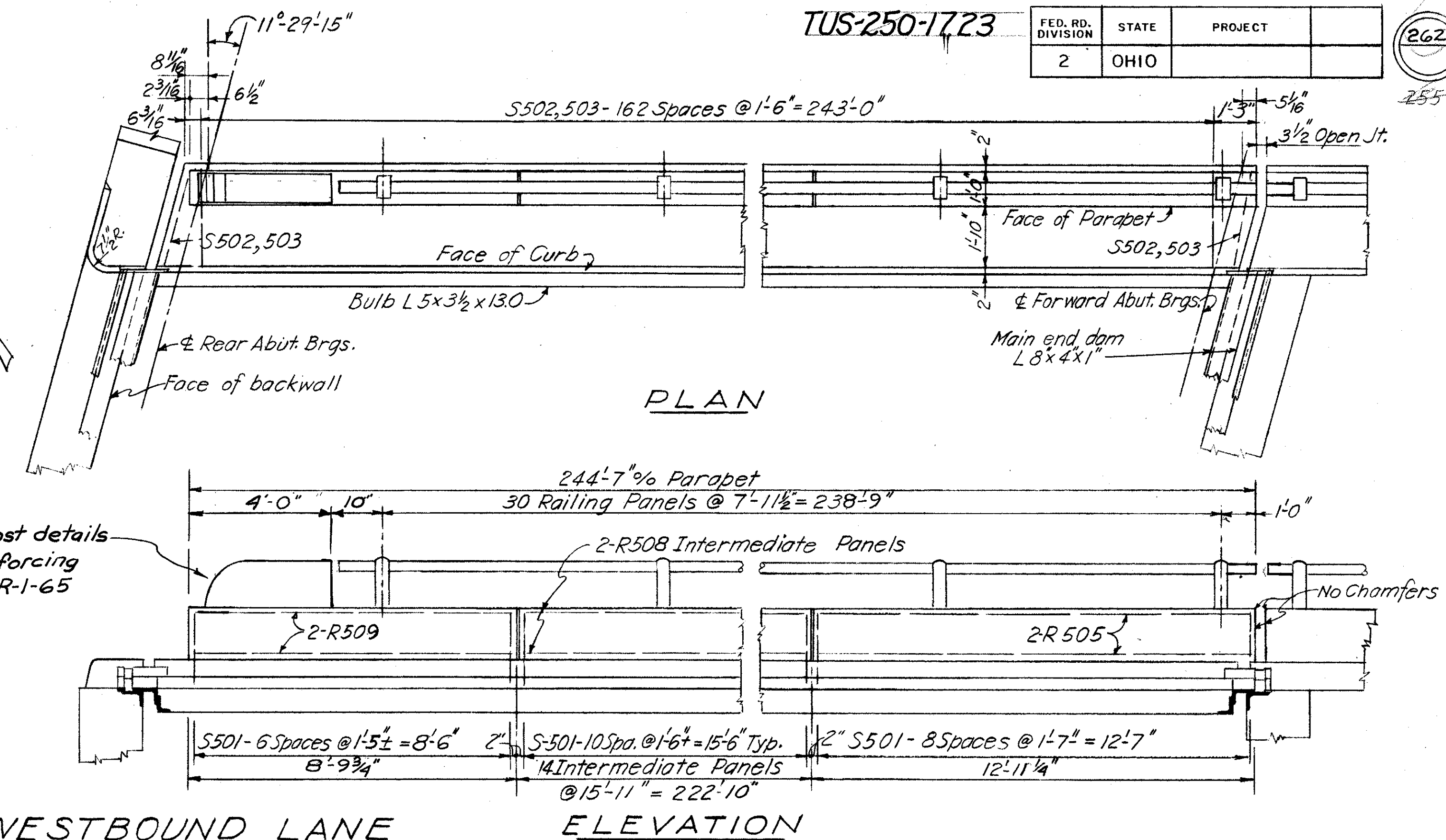
DECK SLAB-WBL.

BRIDGE NO. TUS-250-1899 L. & R.
OVER B. & O. R.R. AND PIKE RUN
TUSCARAWAS COUNTY

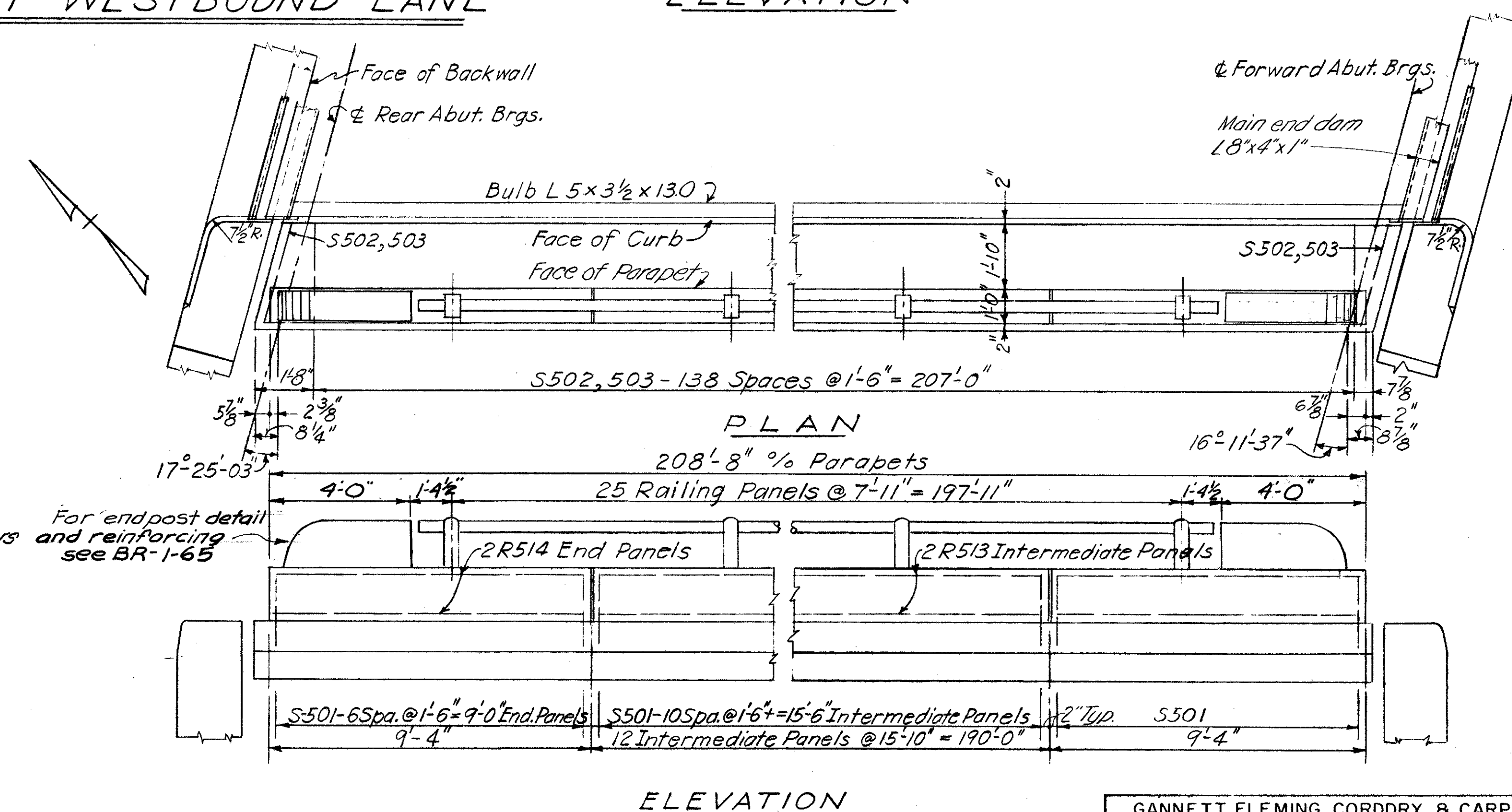
USR-250

SEC. TUS-250-1723 STA. 981+12.67 to STA. 983+61.58 L.
STA. 981+12.67 to STA. 983+23.33 R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.B.M.	R.W.B.	G.D.M.	E.B.M.			



CURB AND PARAPET WESTBOUND LANE



CURB AND PARAPET EASTBOUND LANE

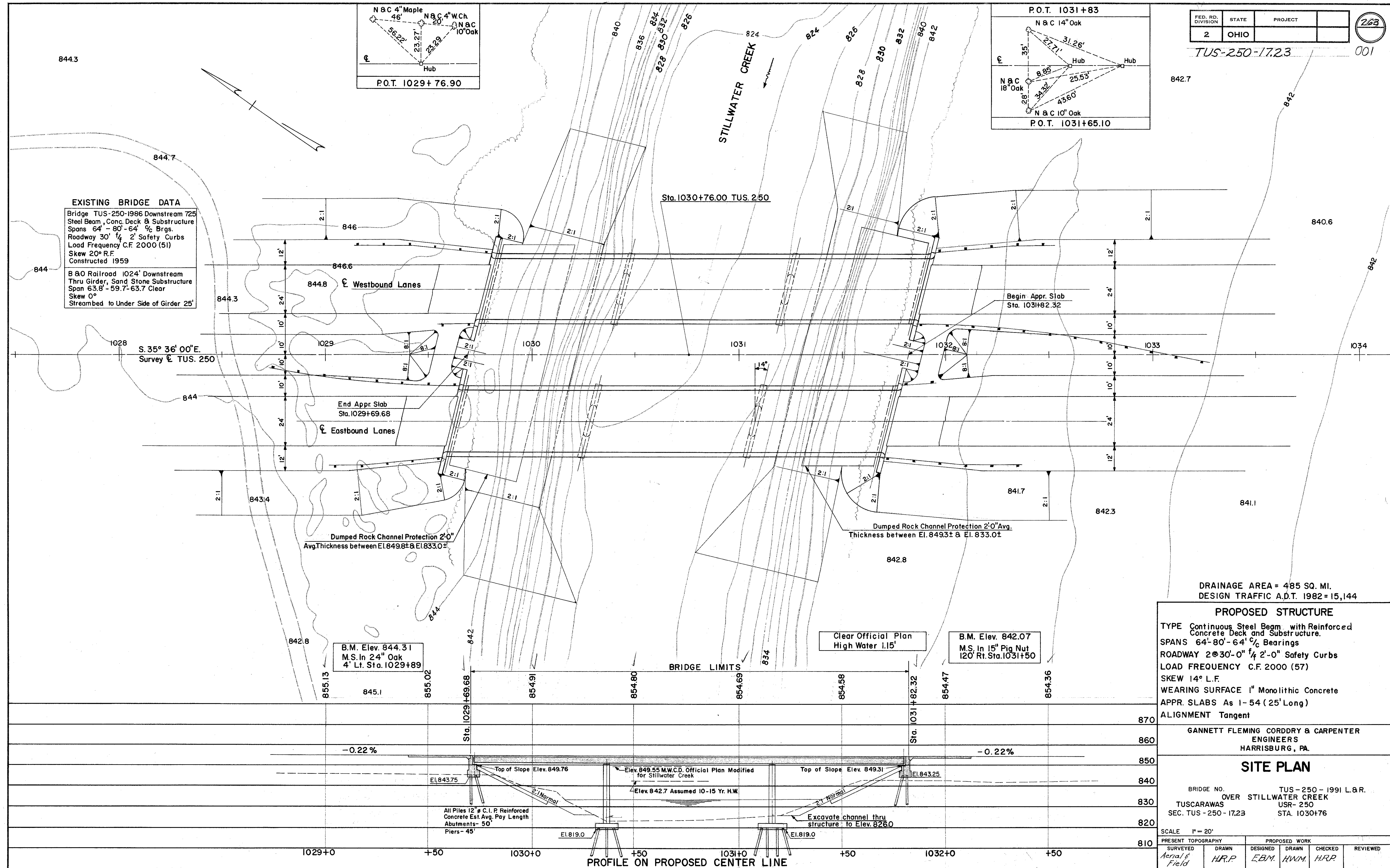
Note: All skew angles equal 15°00'00" unless otherwise noted.

GANNETT FLEMING CORDDRY & CARPENTER
ENGINEERS
HARRISBURG, PA.

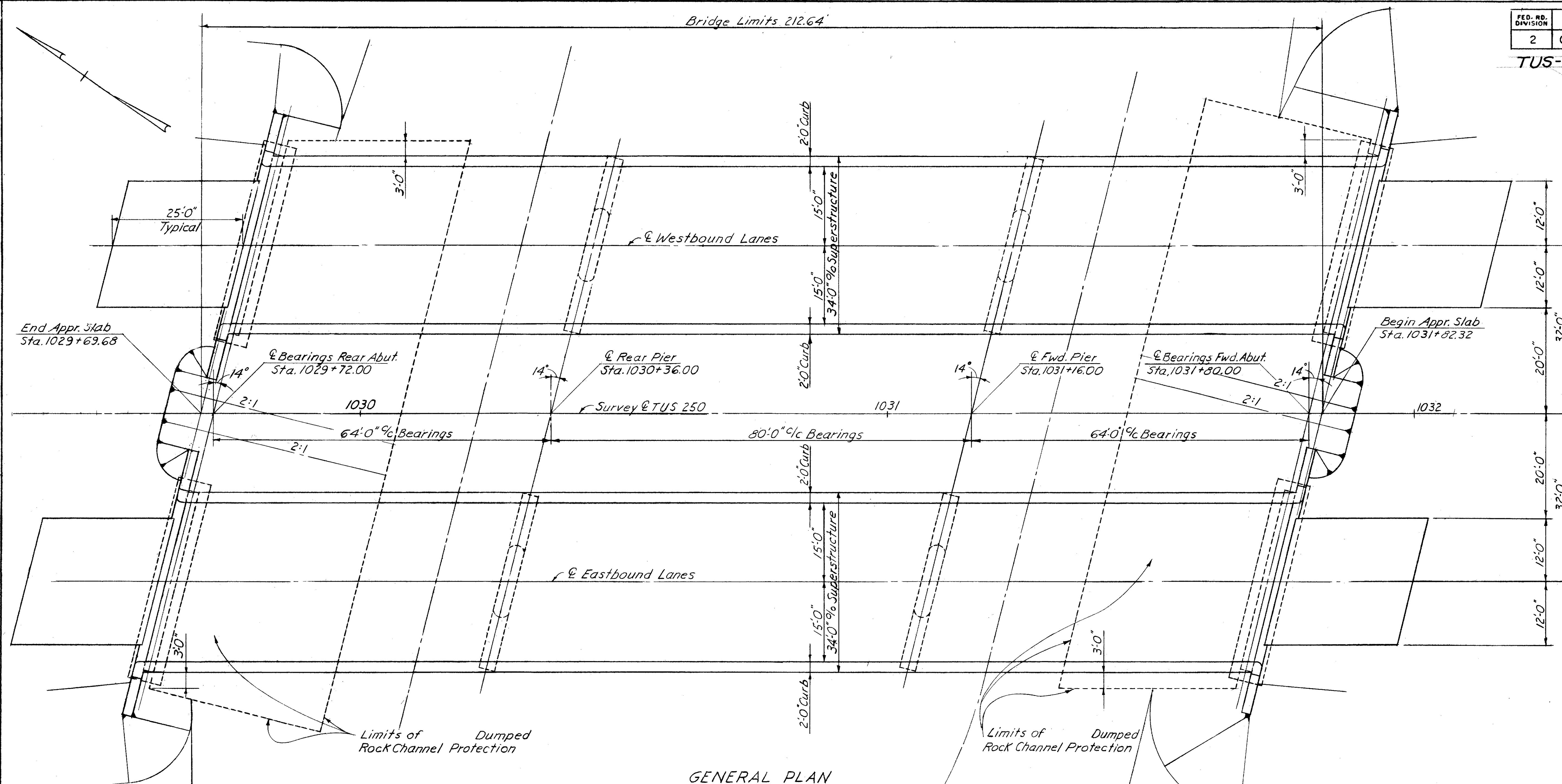
CURB AND RAILING DETAILS

BRIDGE NO. TUS-250-18 99 L. & R.
OVER B. & O. R.R. AND PIKE RUN
TUSCARAWAS COUNTY USR-250
SEC. TUS-250-17, 23 STA. 981+12.67 TO STA. 983+61.58 L
STA. 981+12.67 TO STA. 983+23.33 R

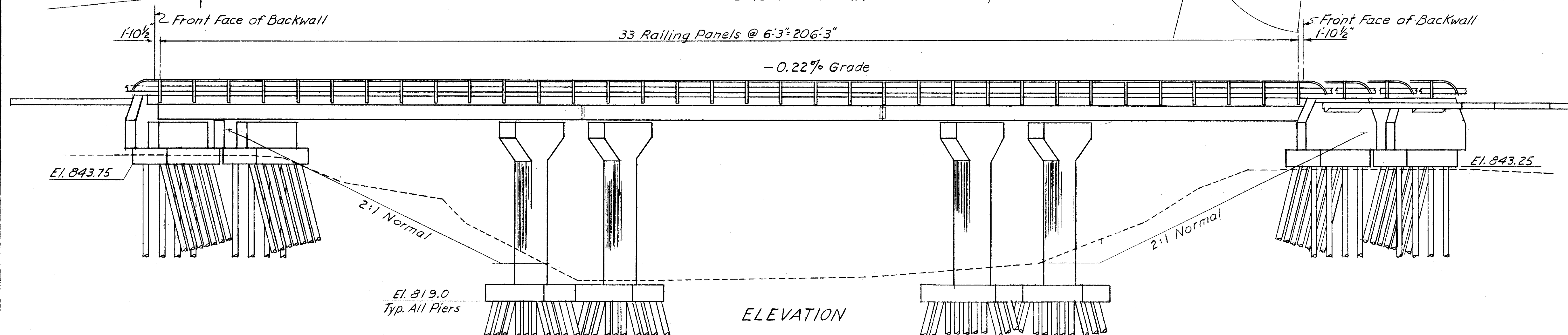
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EBM	RWB	HRP	EBM			



Bridge Limits 212.64'



GENERAL PLAN



ELEVATION

GANNETT FLEMING CORDRY & CARPENTER
ENGINEERS
HARRISBURG, PA.

GENERAL PLAN & ELEVATION

BRIDGE NO TUS-250-1991 L&R
OVER STILLWATER CREEK

TUSCARAWAS COUNTY

USR - 250

SEC. TUS 250-17.23 STA. 1029+69.68 TO STA. 1031+82.32

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
E.B.M.	R.W.B.	A.R.B.	H.R.P.		

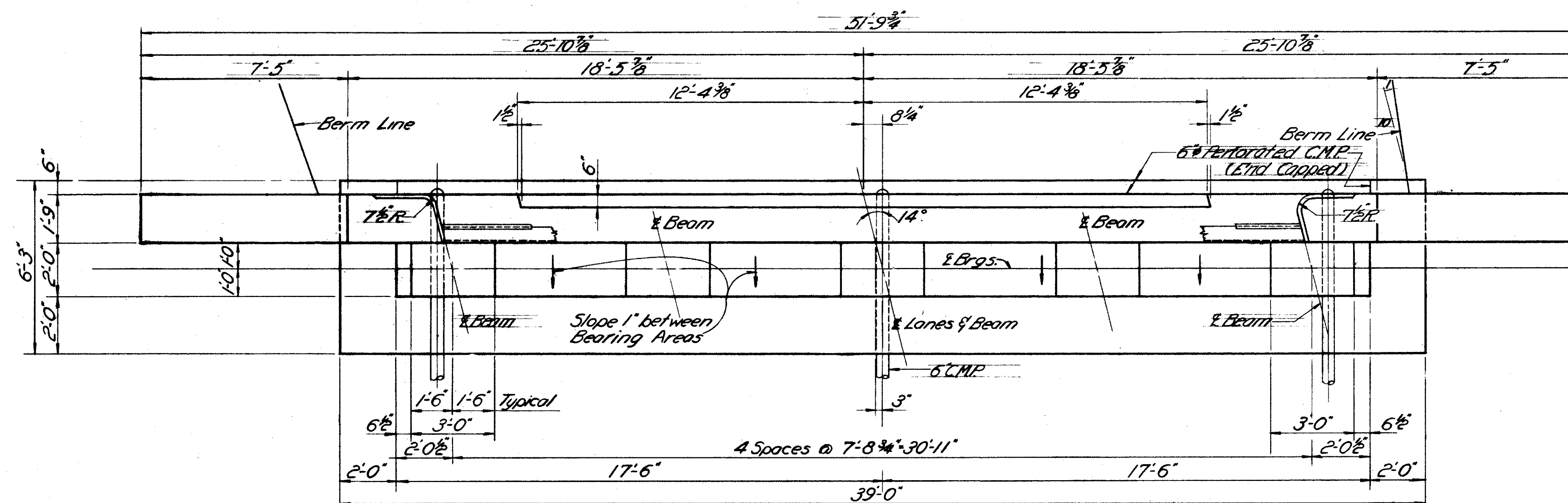
<p align="center">GANNETT FLEMING CORDDRY & CARPENTER ENGINEERS HARRISBURG, PA.</p>						
<p align="center">ESTIMATED QUANTITIES BAR SCHEDULE & NOTES BRIDGE NO. TUS-250-1991 L&R OVER STILLWATER CREEK TUSCARAWAS COUNTY USR-250</p>						
<p>SEC. TUS 250-17.23</p>			<p>STA. 1029+69.68 to STA. 103+82.32</p>			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
<i>E.B.M.</i>	<i>R.M.B.</i>	<i>R.M.B.</i>	<i>E.B.M.</i> <i>M.J.D.</i> <i>H.P.D.</i>			

TUS-250-1723

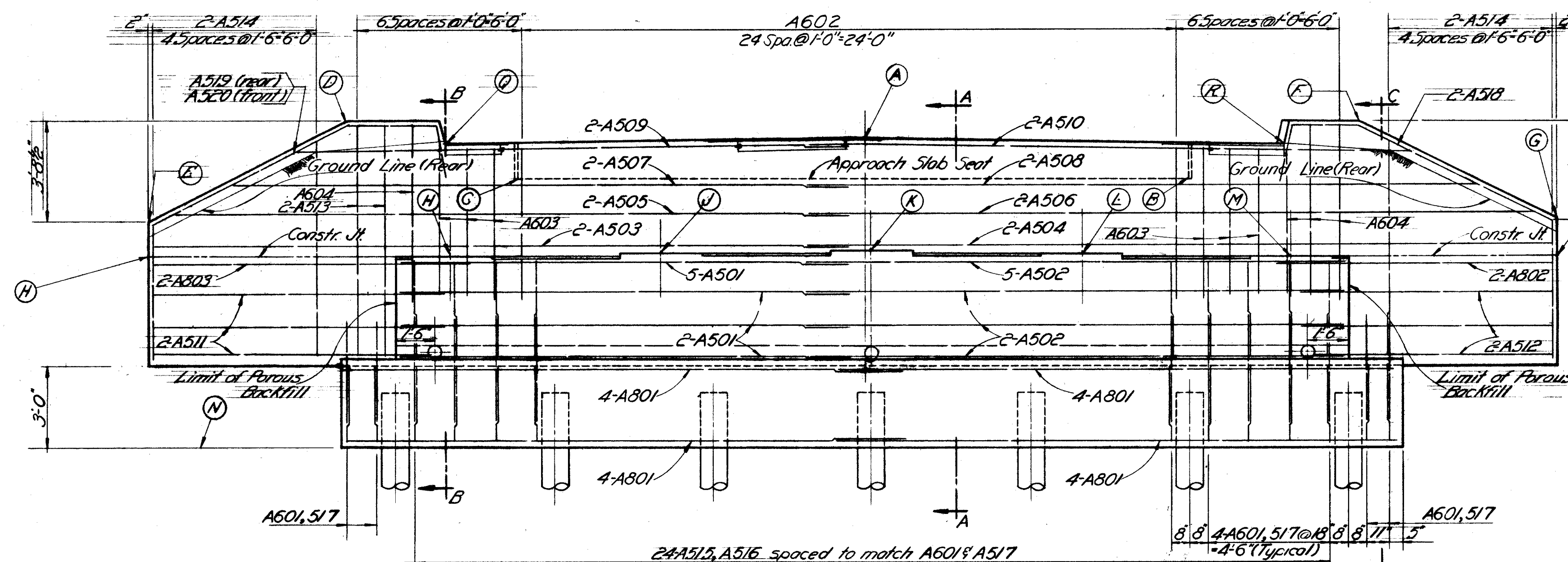
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	



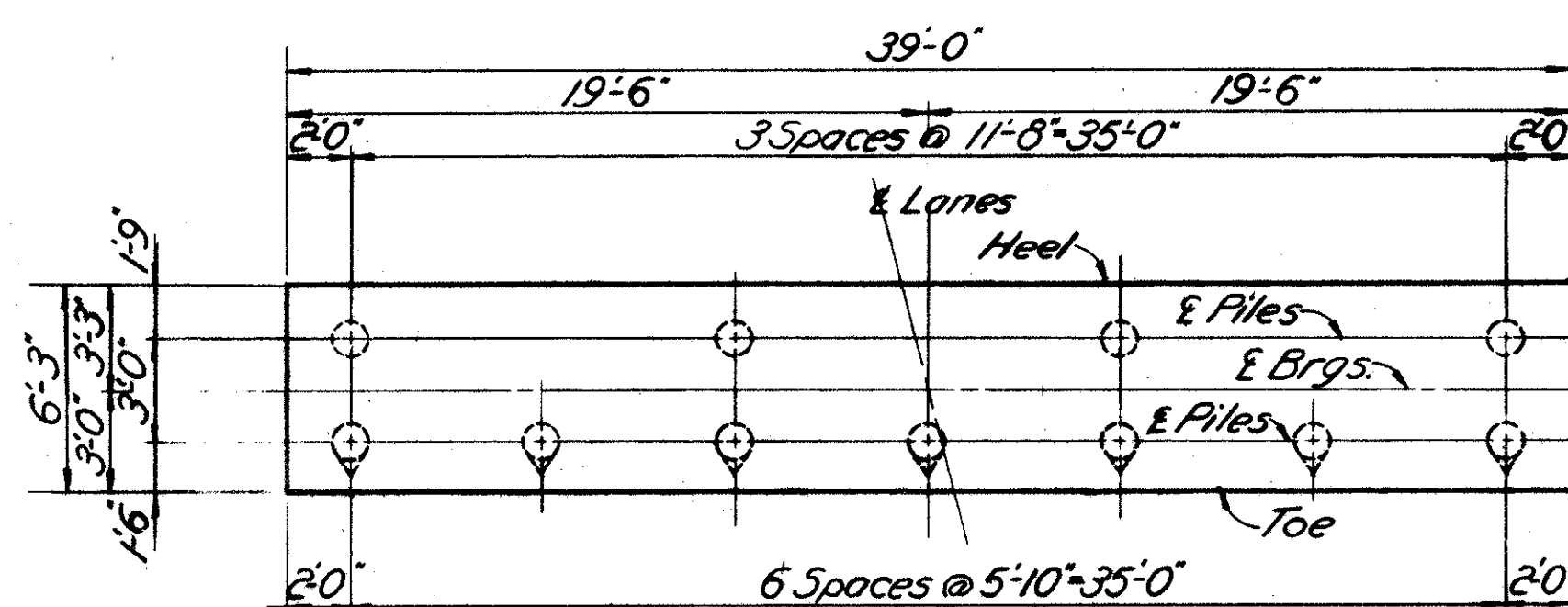
004



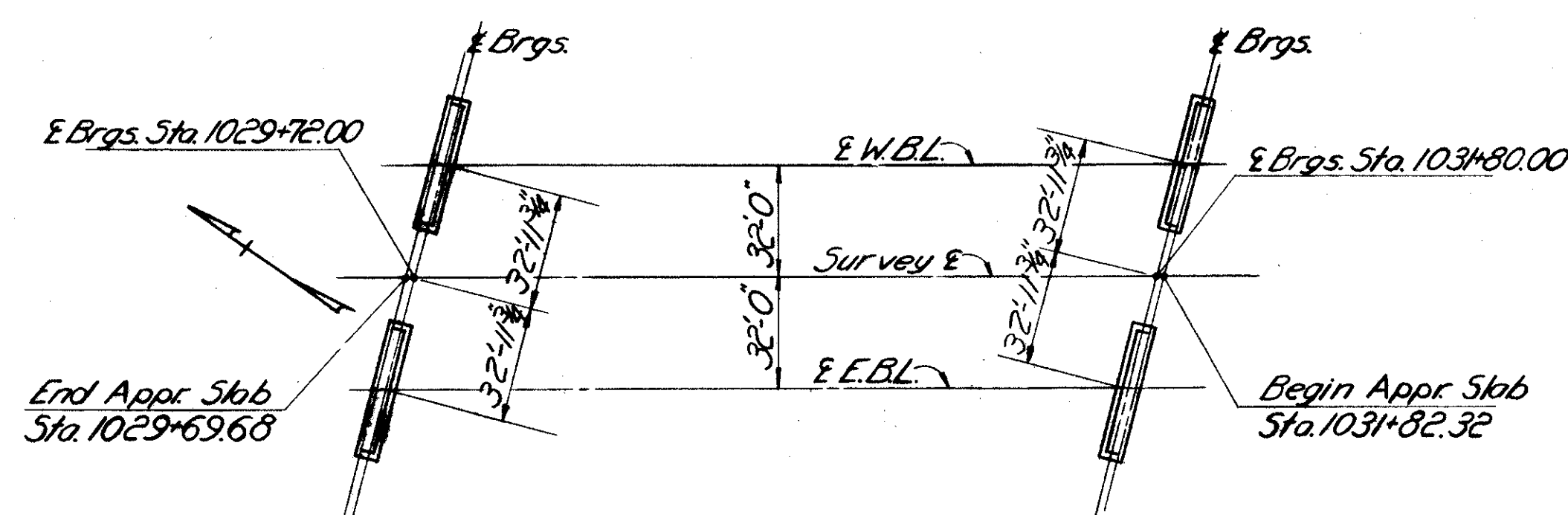
ABUTMENT PLAN



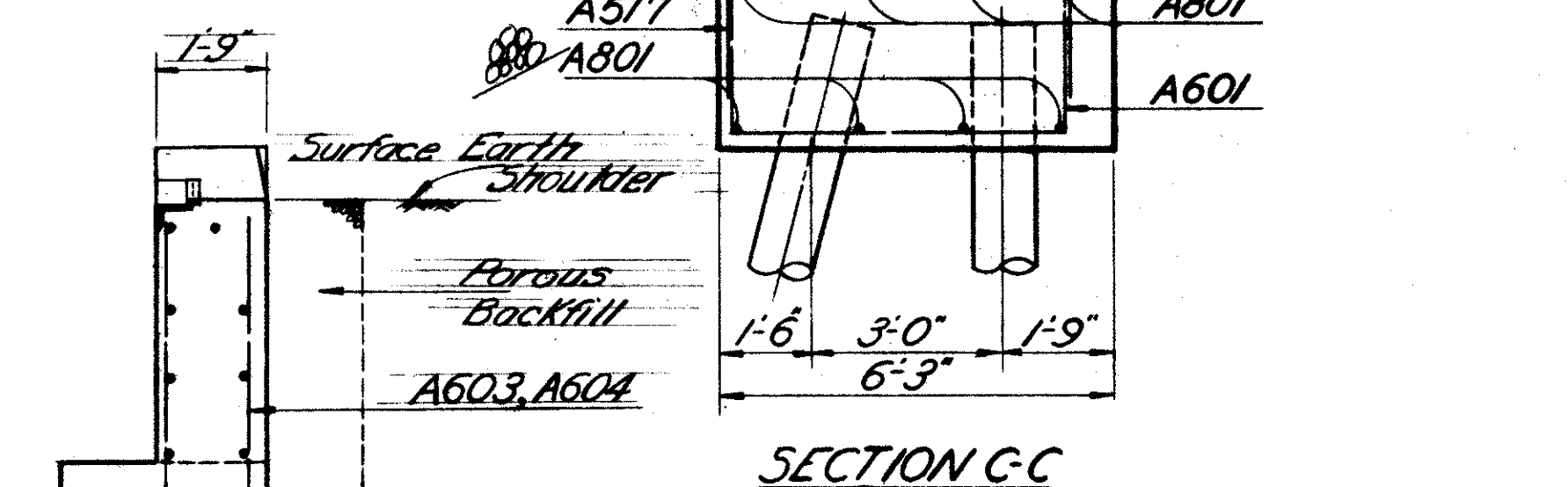
ABUTMENT ELEVATION



PILE SPACING



KEY PLAN OF ABUTMENTS



SECTION C-C

PARTIAL SECTION B-B

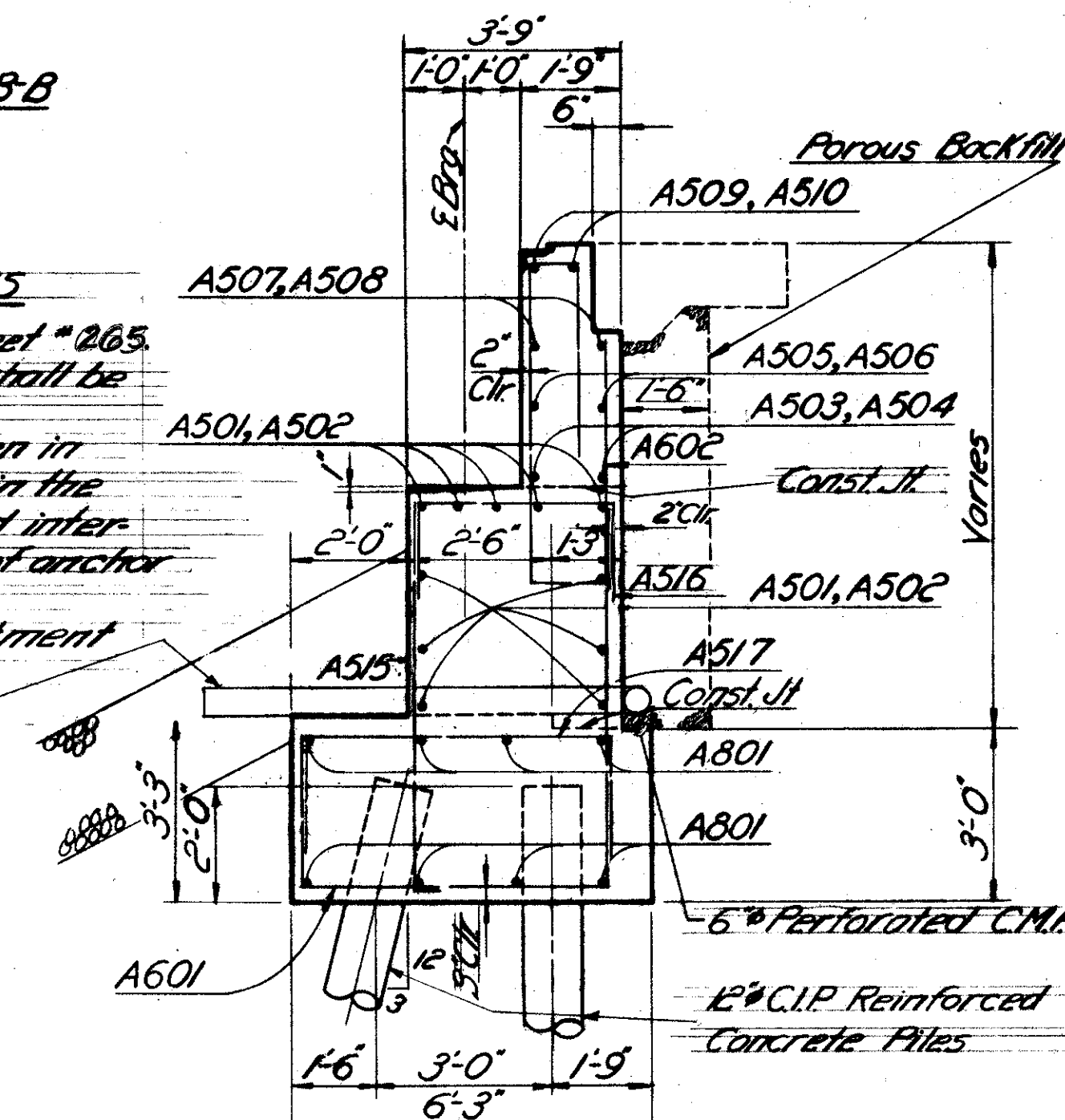
ABUTMENT NOTES

1. For General Notes see Sheet #065.
2. Concrete for abutments shall be Class E.
3. Special care shall be taken in placing reinforcing steel in the bridge seats so as to avoid interference with the drilling of anchor bar holes.
4. For continuation of abutment notes see sheet #067.

TABLE OF ELEVATIONS

	EB LANE	WB LANE	RA	FA
A	855.18	854.72	855.14	854.68
B	853.65	853.20	853.62	853.16
C	853.67	853.19	853.63	853.15
D	853.81	853.32	853.77	853.29
E	852.10	851.62	852.02	851.53
F	855.79	855.34	855.76	855.31
G	852.08	851.63	852.05	851.60
H	850.82	850.34	850.78	850.31
J	850.93	850.46	850.89	850.43
K	851.04	850.58	851.01	850.55
L	850.92	850.47	850.89	850.44
M	850.80	850.36	850.76	850.32
N	843.75	843.25	843.75	843.25
Q	854.95	854.47	854.92	854.44
R	854.94	854.45	854.90	854.46

Elevations given at top of back wall are on the front face.



SECTION A-A

GANNETT FLEMING CORDRY & CARPENTER
ENGINEERS
HARRISBURG, PA.

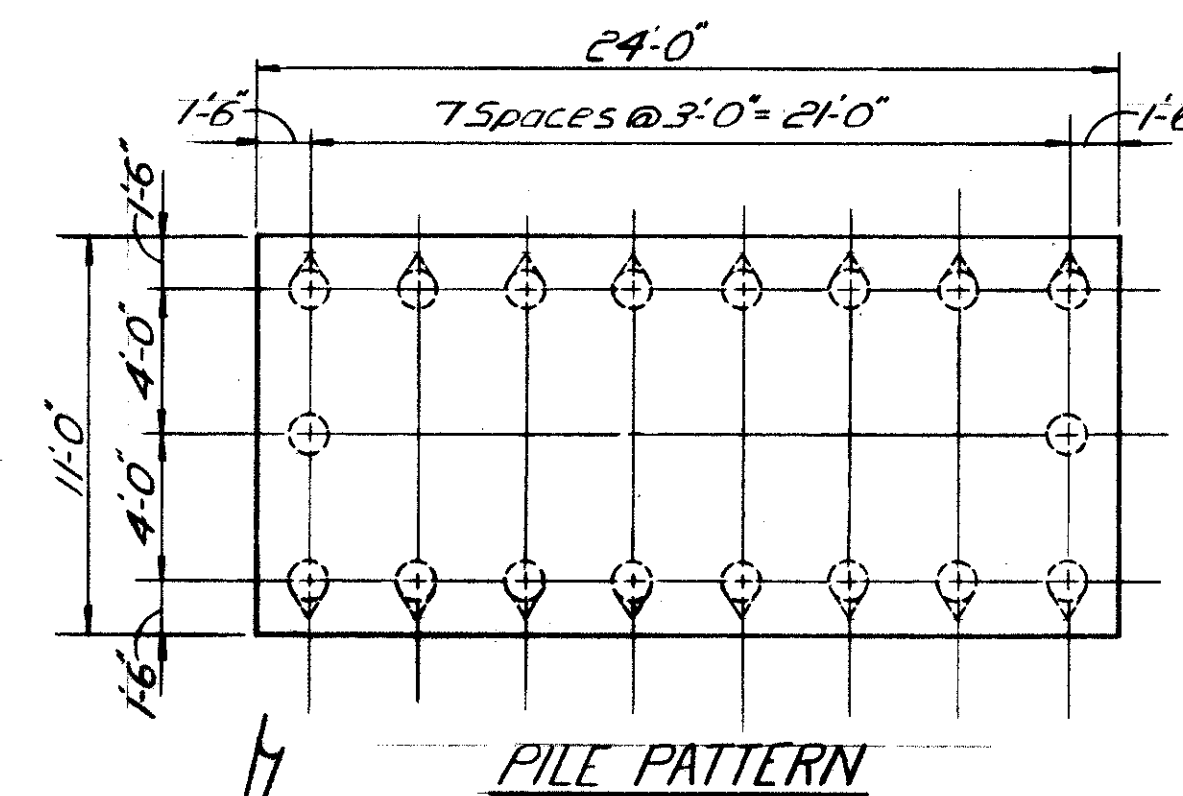
ABUTMENTS

BRIDGE NO TUS-250-1991 L&R
OVER STILLWATER CREEK
TUSCARAWAS COUNTY

USR-250

SEC. TUS 250-1723 STA. 1029+69.68 to STA. 1031+82.32

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.B.M.	H.W.M.	R.W.B.	E.B.M.			
M.J.D.						



32'-11 $\frac{3}{4}$ "

El. 850.82

El. 850.70

El. 850.58

El. 850.71

El. 850.60

El. 844.58

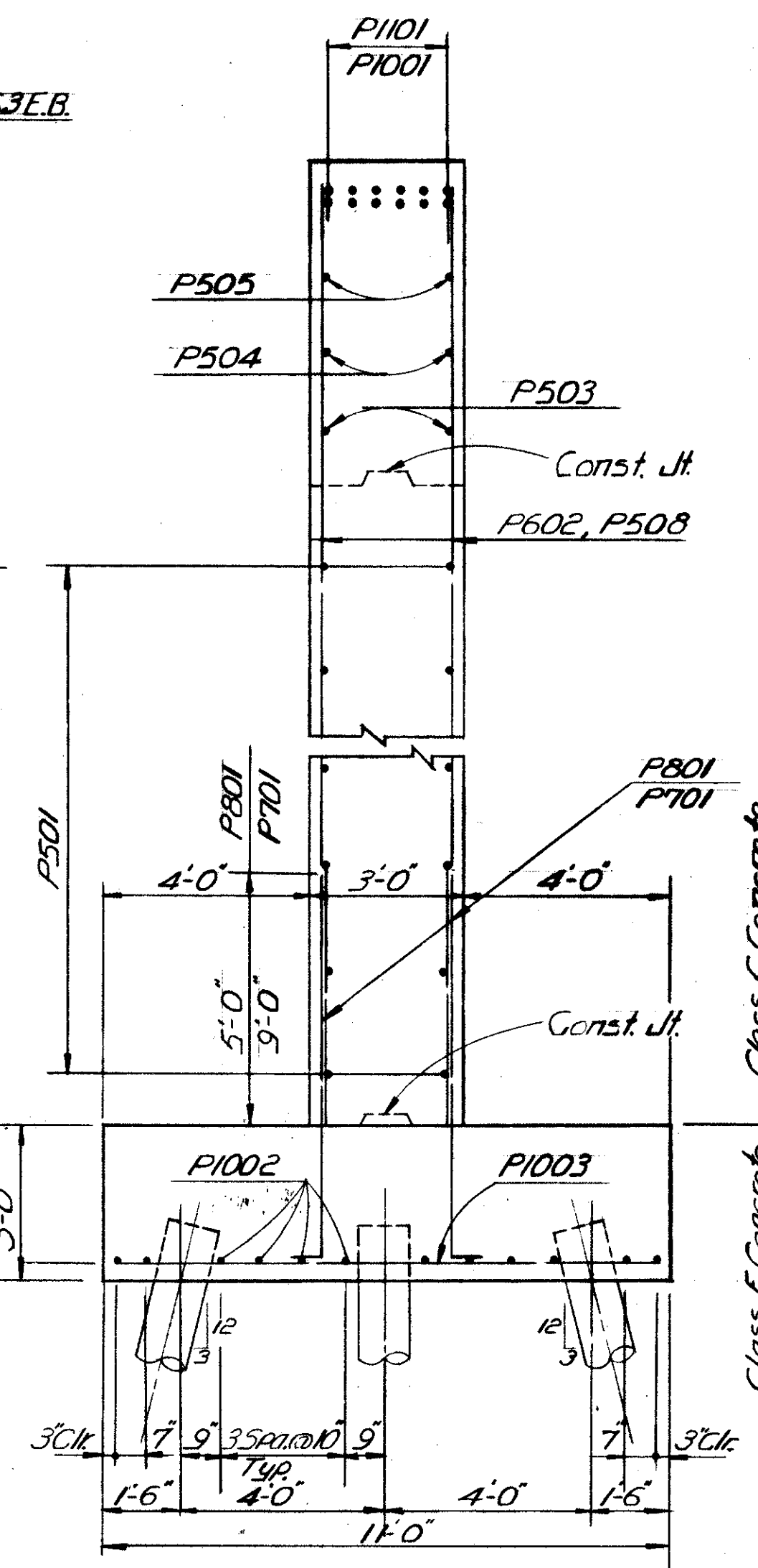
El. 813.00

PLAN (Westbound Lanes)

Sta 1030+36

Note
Details not shown
are same as East
bound Lanes

ELEVATION
(Westbound Lanes)



Technical drawing of a bridge pier cross-section. The pier is oval-shaped with a 16" Radius Typical. The pier is surrounded by a concrete deck with layers labeled P801, P602, P701, and P508. The pier itself has a central core labeled P501 and an outer shell labeled P502. A bracket labeled Typ. indicates the typical nature of the pier. The overall width of the pier is 14'-0".

Bar cut by section
 • Bar not cut by section

Special care shall be taken when placing cap reinforcing steel for the Piers avoiding interference with shoe anchor bars.

ABUTMENT NOTES (CONT'D)

5. Porous backfill shall extend upward to the approach slab and to the surface of the earth shoulders. Excavation therefor, in excess of that required for construction of the abutments shall be considered as paid for in the bid price per cu. yd. paid for porous backfill.

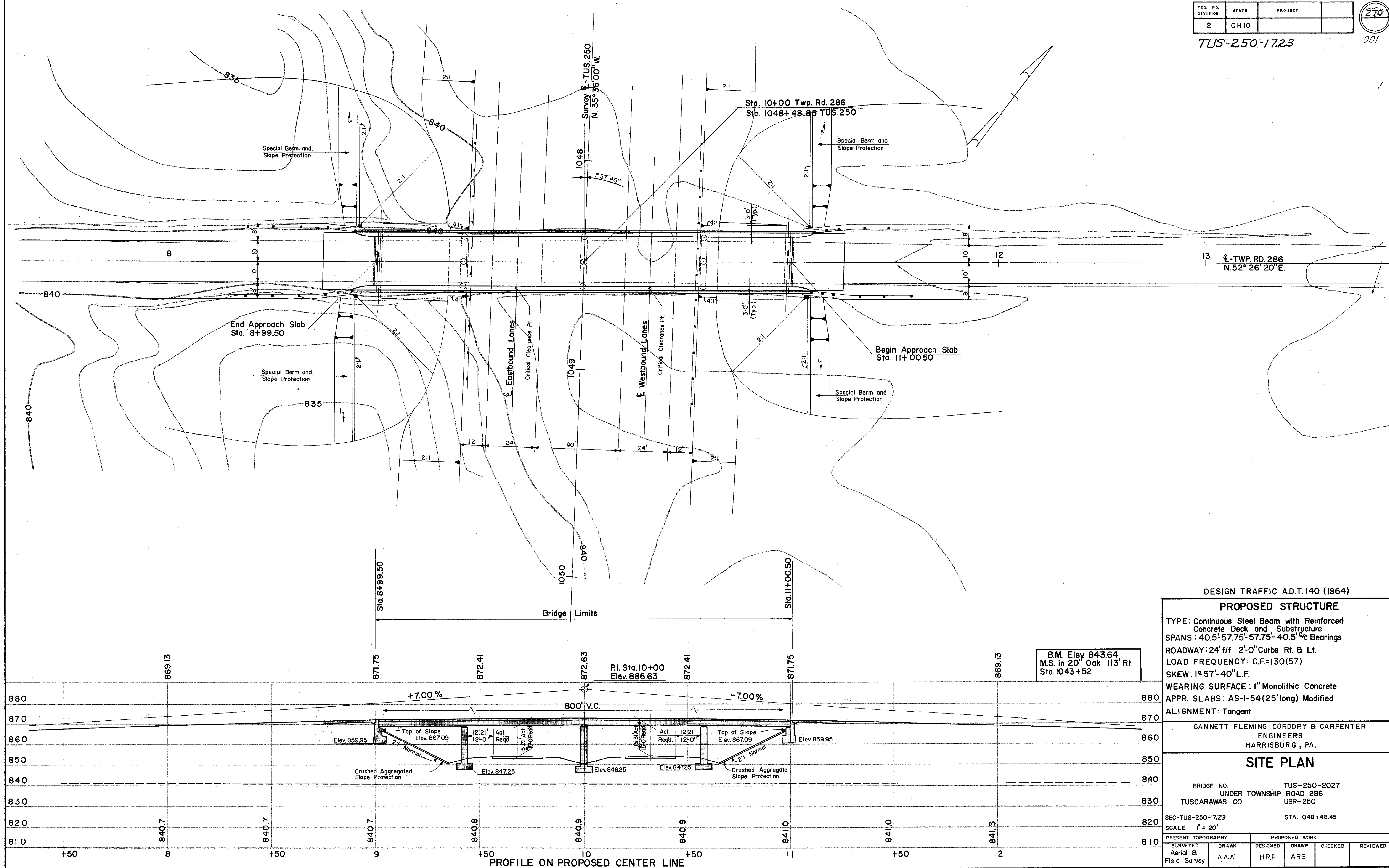
6. PROCEDURE: The embankment shall be placed and compacted up to the finished spill thru slope after which excavation shall be made for the abutment and piles driven.

GANNETT FLEMING CORDDRY & CARPENTER
ENGINEERS
HARRISBURG, PA.

REAR PIERS
BRIDGE NO. TUS-250-1991 L&R
OVER STILLWATER CREEK
TUSCARAWAS COUNTY USR-250

SEC. TUS 250-17.23 STA. 1029+69.68 to STA. 1031+82.32

DESIGNED <i>E.B.M.</i> <i>M.I.D.</i>	DRAWN <i>R.W.B.</i>	TRACED <i>R.W.B.</i>	CHECKED <i>M.J.D.</i> & <i>H.R.P.</i>	REVIEWED	DATE	REVISED
--	------------------------	-------------------------	--	----------	------	---------



DESIGN TRAFFIC A.D.T. 140 (1964)

PROPOSED STRUCTURE

TYPE: Continuous Steel Beam with Reinforced Concrete Deck and Substructure
SPANS: 40.5'-57.75'-57.75'-40.5' % Bearings
ROADWAY: 24' f/f 2'-0" Curbs Rt. & Lt.
LOAD FREQUENCY: C.F.=130(57)
SKEW: 1° 57' 40" L.F.
WEARING SURFACE: 1" Monolithic Concrete
APPR. SLABS: AS-I-54 (25' long) Modified
ALIGNMENT: Tangent

GANNETT FLEMING CORDDY & CARPENTER
ENGINEERS
HARRISBURG, PA.

SITE PLAN

BRIDGE NO. TUS-250-2027
UNDER TOWNSHIP ROAD 286
TUSCARAWAS CO. USR-250

SEC-TUS-250-17.23 STA. 1048+48.45

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
Aerial & Field Survey	A.A.A.	H.R.P.	ARB.		

11505

GENERAL NOTES

REFERENCE shall be made to the following Standard Drawings:
SD-1-63, sheets #2,3 & 4 dated 11-12-63, SD-2-64 dated 11-25-64,
BR-1-65 revised 11-24-65, FSB-1-62 dated 4-19-62 revised
1-15-63 and Supplemental Specifications 808 dated 2-7-66, 811
dated 3-29-65 and 825 dated 4-22-65.

DESIGN SPECIFICATIONS: This structure conforms to the requirements
of "Design Specifications for Highway Structures" of the State of Ohio,
Department of Highways, dated September 1, 1957, together with current
revisions thereof.

EXCAVATION QUANTITY includes the removal of fill material, below
subgrades and spill thru slopes, required for construction of the
abutments and piers.

FOUNDATION BEARING PRESSURE: Abutment footings are designed
for a maximum bearing pressure of 1.8 ton per square foot. Pier footings
are designed for a maximum bearing pressure of 1.5 ton per square foot.

DECK PLACING PROCEDURE: In placing the deck concrete, const-
ruction joints will be permitted parallel to the transverse reinforcing
steel and near the middle of any span. Because of the flow of curing
water from the surface of previously placed deck concrete, the sequence
of pours shall be upgrade, starting at the low points in the grade line.
MACHINE FINISH: The concrete bridge deck shall be finished by the use of
a finishing machine.

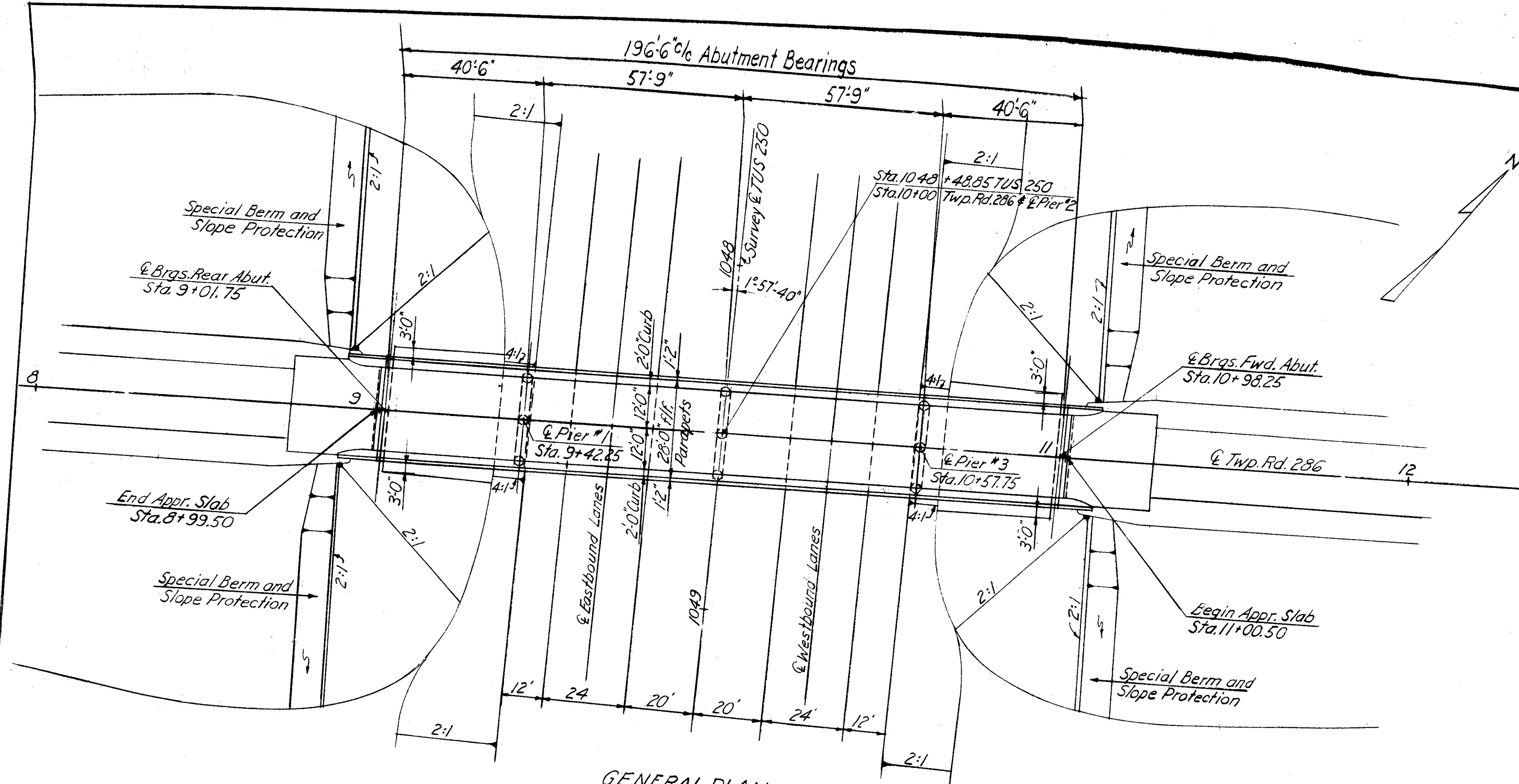
DESIGN LOADING: CF130(57)

CONCRETE CLASS C: basic unit stress 1333 p.s.i.

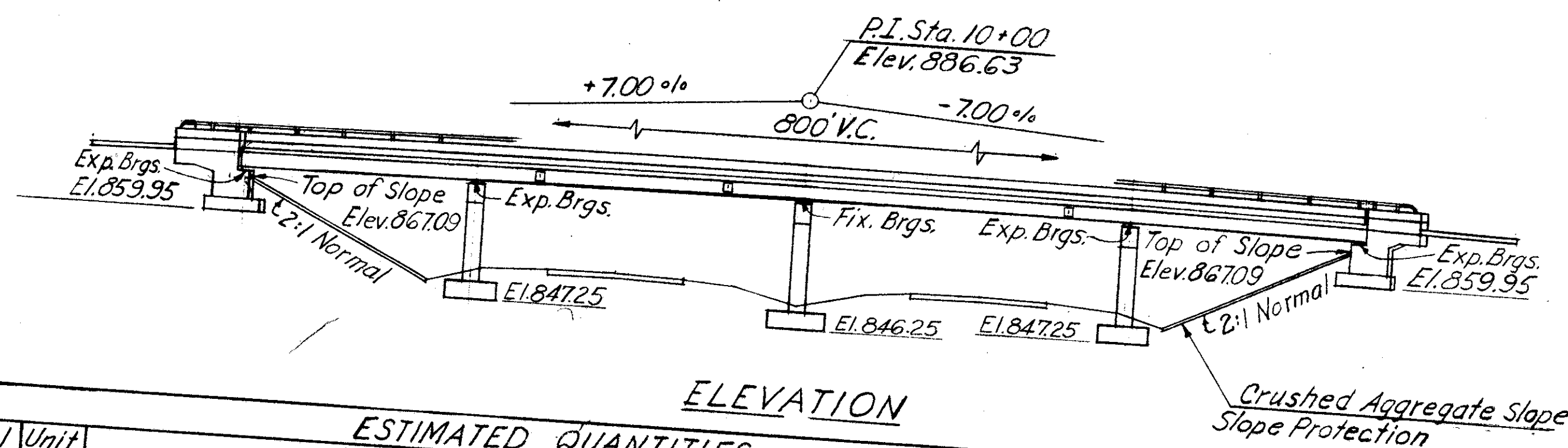
CONCRETE CLASS E: basic unit stress 1133 p.s.i.

STRUCTURAL STEEL: ASTM-A36-basic unit stress 20,000 p.s.i. (ASTM-
A7 and A373 steel not permitted)

REINFORCING STEEL: ASTM-A15, A16 and A160, Deformed, Intermediate,
or Hard Grade. Basic unit stress 20,000 p.s.i., except spiral reinforcement
may be plain, Structural Grade with basic unit stress of 18,000 p.s.i.



GENERAL PLAN



ELEVATION

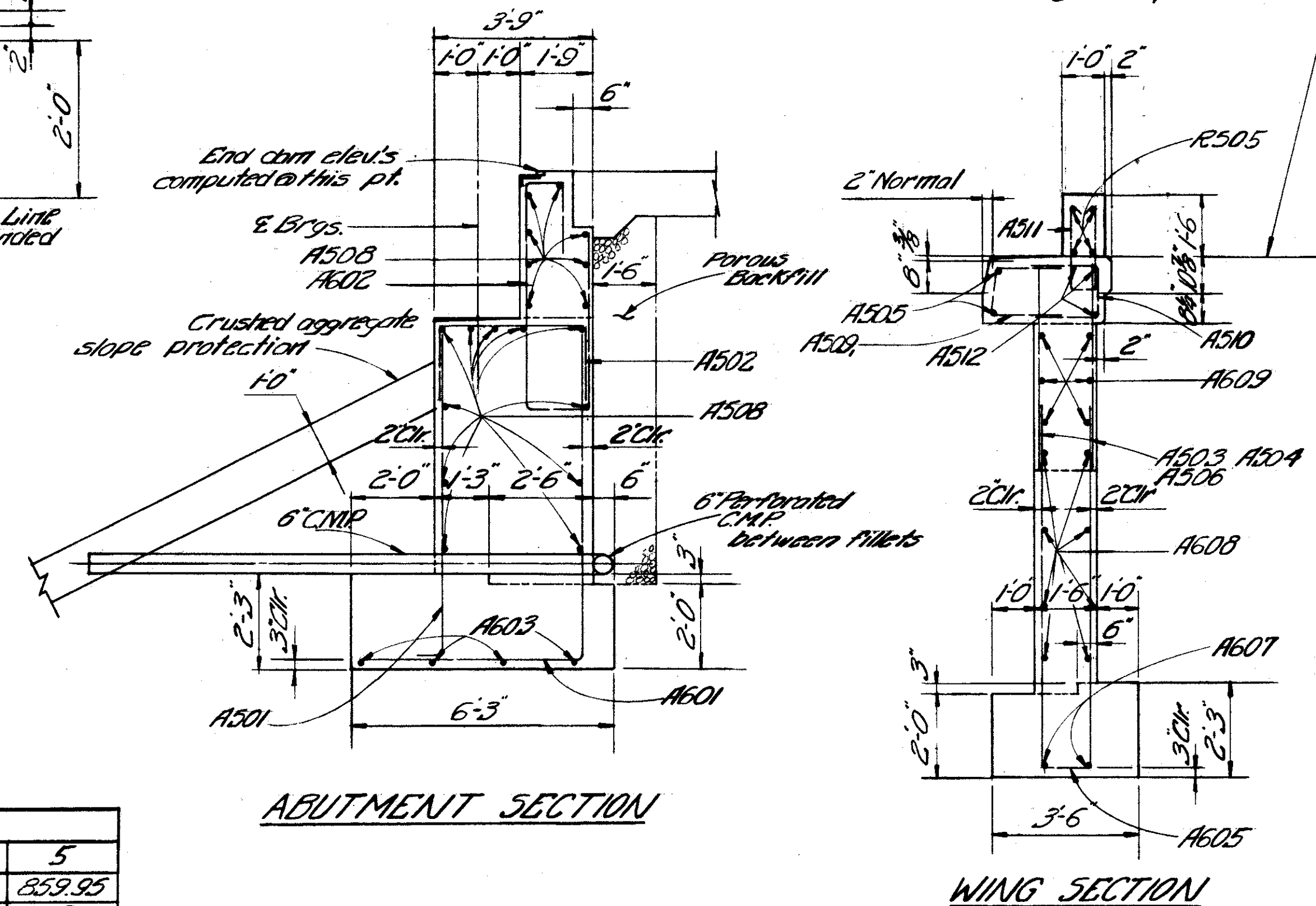
Item	Total	Unit	ESTIMATED QUANTITIES			
			Description	Superstructure	Abutments	Piers
503	595	Cu.Yds.	Unclassified Excavation		195	400
511	67	Cu.Yds.	Class "C" concrete, pier caps and columns			
511	187	Cu.Yds.	Class "C" concrete, superstructure			
511	141	Cu.Yds.	Class "E" concrete, footings	187		67
511	79	Cu.Yds.	Class "E" concrete, abutments above footings		35	106
509	71,730	Lbs.	Reinforcing steel		79	
513	115,000	Lbs.	Structural steel	41,007	71,85	17,538
514	115,000	Lbs.	Field painting of structural steel	115,000		
517	43,750	Lin.Ft.	Railing Type 1	115,000		
518	22	Cu.Yds.	Porous backfill	395.83	41.67	
518	8	Each	Scuppers including supports		22	
518	43	Lin.Ft.	6" perforated Helical C.M.P., 70706, including specials	8		
518	75	Lin.Ft.	6" Helical C.M.P., 70706, non perforated		48	
808	187	Each	Water-reducing, set retarding admixtures for concrete	187	75	
825	800	Sq.Yds.	Concrete surface treatment	760	40	
601	299	Sq.Yds.	Crushed aggregate slope protection			299

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ENGINEERS
HARRISBURG, PA.

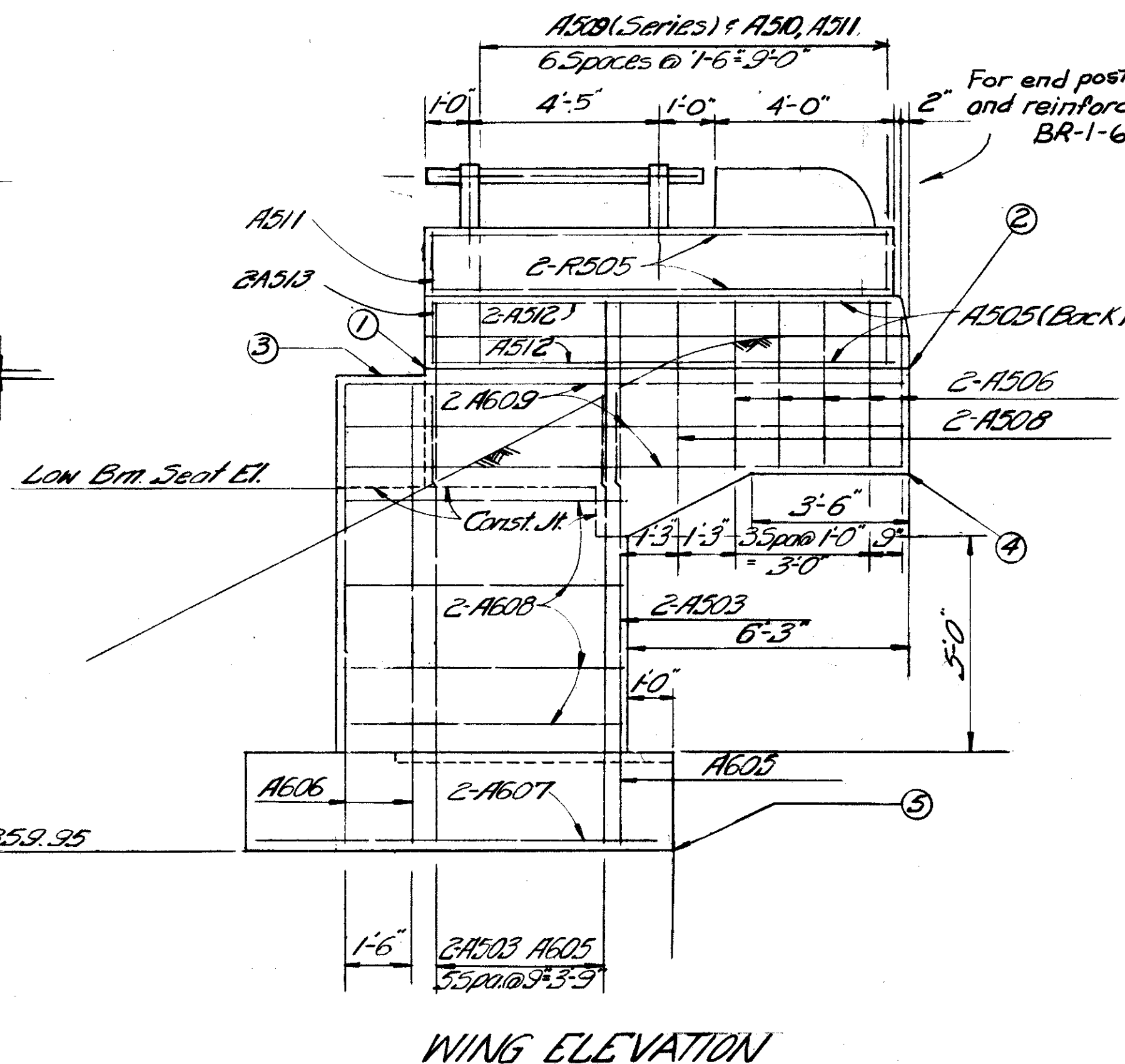
GENERAL PLAN & ELEVATION
AND ESTIMATED QUANTITIES

BRIDGE NO. TUS-250-2027
UNDER TOWNSHIP ROAD 286

003



	ELEVATION				
	1	2	3	4	5
Wing A	870.85	870.66	870.69	868.37	859.92
Wing B	870.86	870.67	870.69	868.38	859.92
Wing C	870.85	870.66	870.63	868.37	859.92
Wing D	870.86	870.67	870.69	868.38	859.95



GENERAL NOTES: See sheet *001.
CONCRETE for abutments shall be Class E.
BRIDGE SEAT RETAINING: Special care shall be taken in placing reinforcing steel in the bridge seats so as to avoid interference with the drilling of anchor bar holes.
CORVUS BACKFILL shall extend upward to the approach slab. Excavation therefor, in excess of that required for construction of the abutments shall be considered as paid for in the bid price per cubic yard paid for corvus backfill.
PROCEDURE: See sheet *006

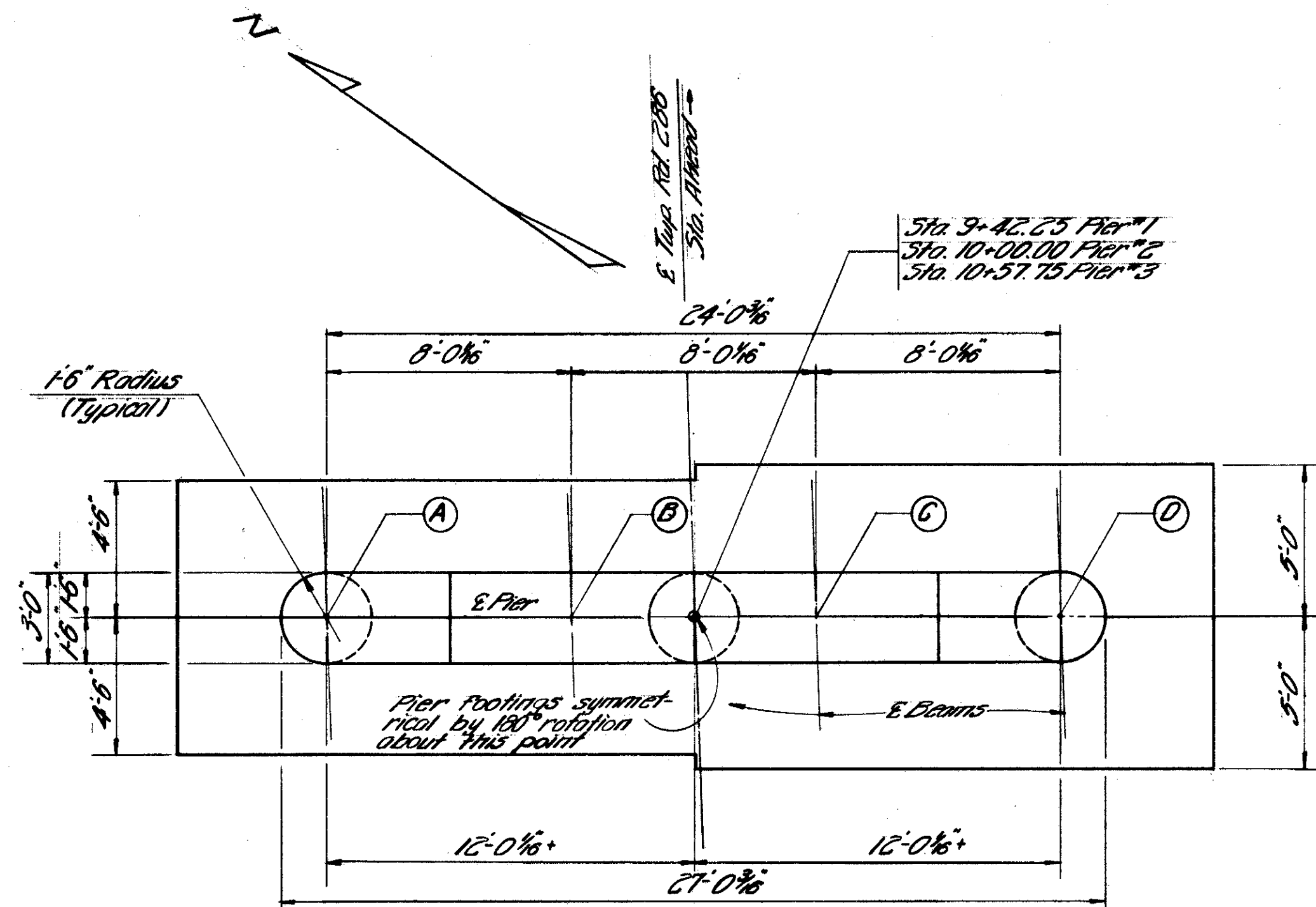
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ENGINEERS
HARRISBURG, PA.

ABUTMENTS

BRIDGE NO. TUS 250-2027
UNDER TOWNSHIP ROAD 286

TUSCARAWAS COUNTY USR- 250
SEC.TUS 250-17,23 STA.8+99.50 To STA.11+00.50

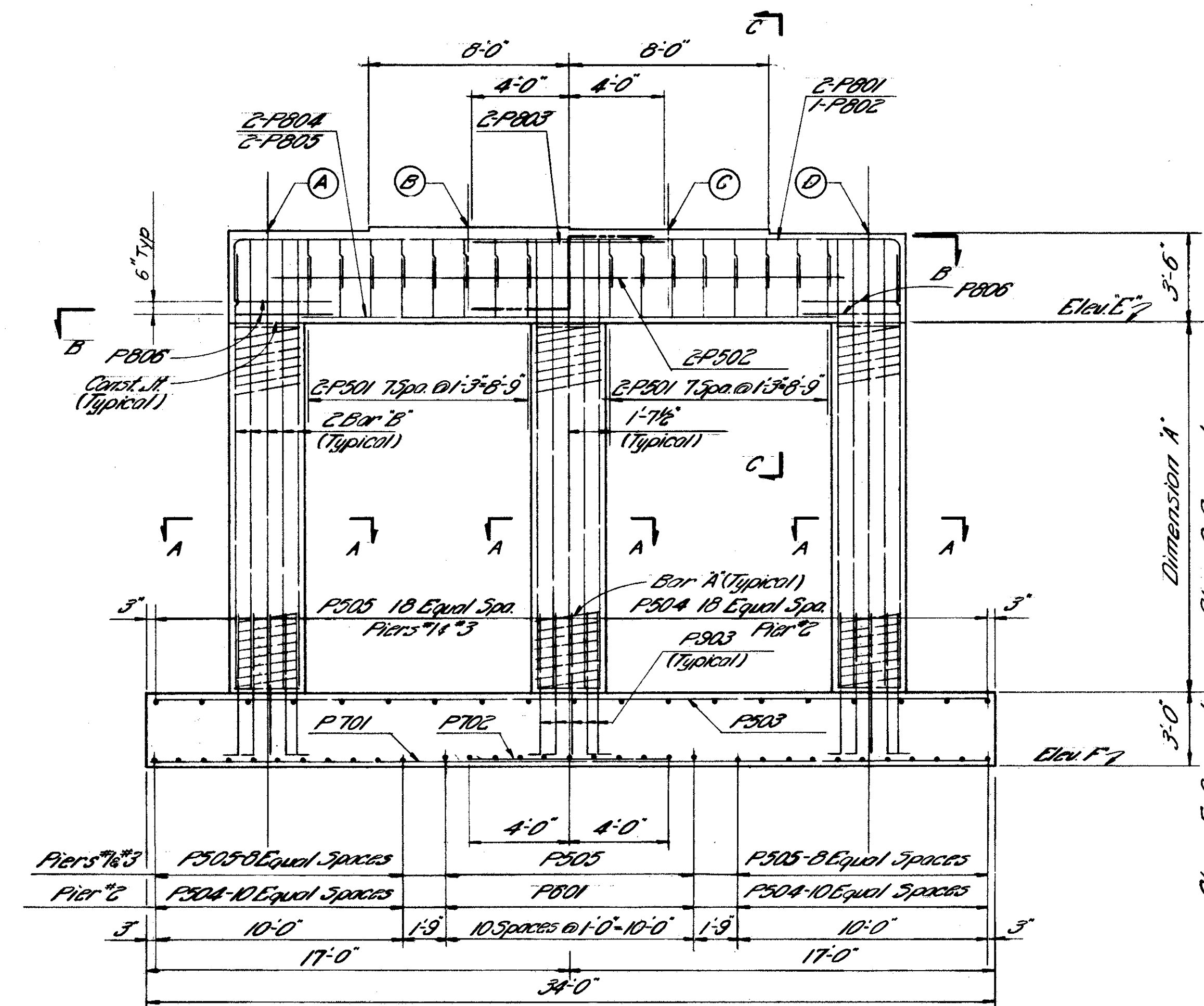
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISE
G.D.M.	R.W.B.		H.R.P.		



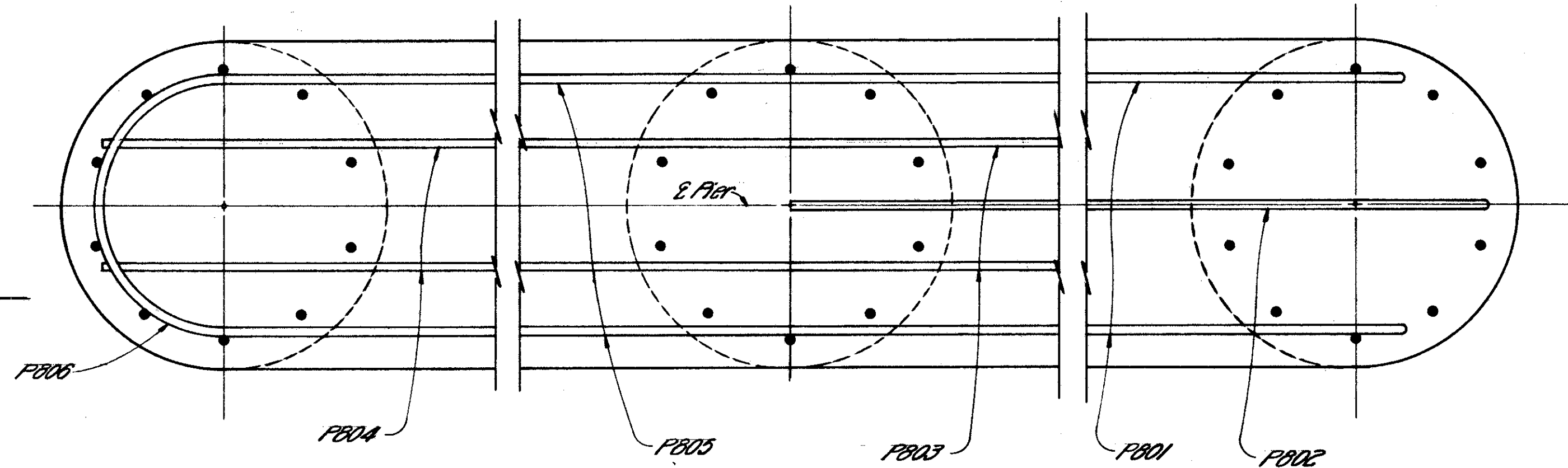
PART PLAN PIERS #1 & 3

PART PLAN PIER #2

PLAN

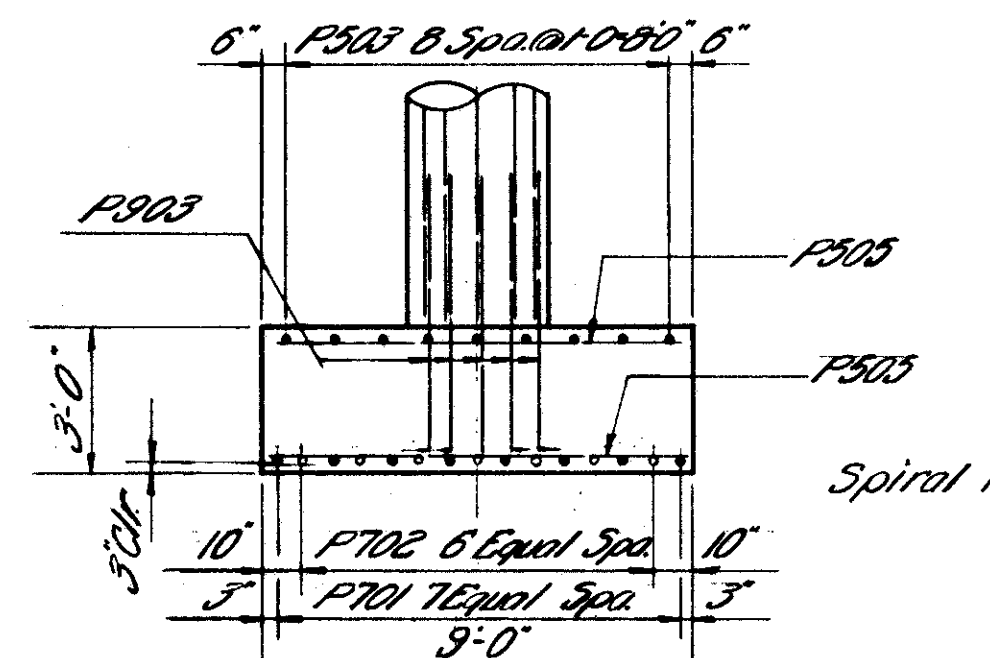


ELEVATION

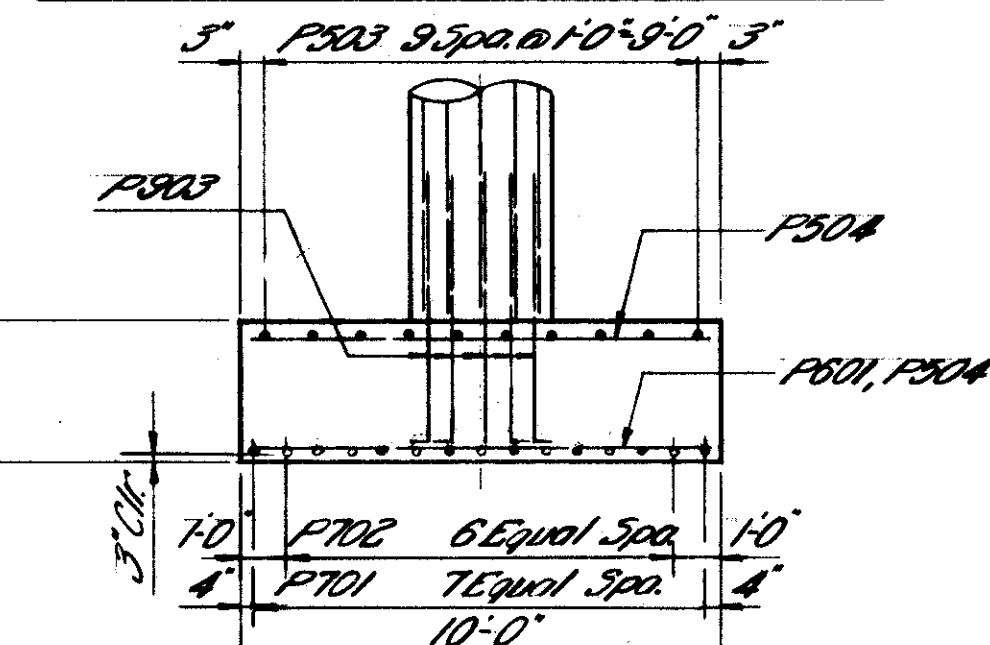


SECTION B-B

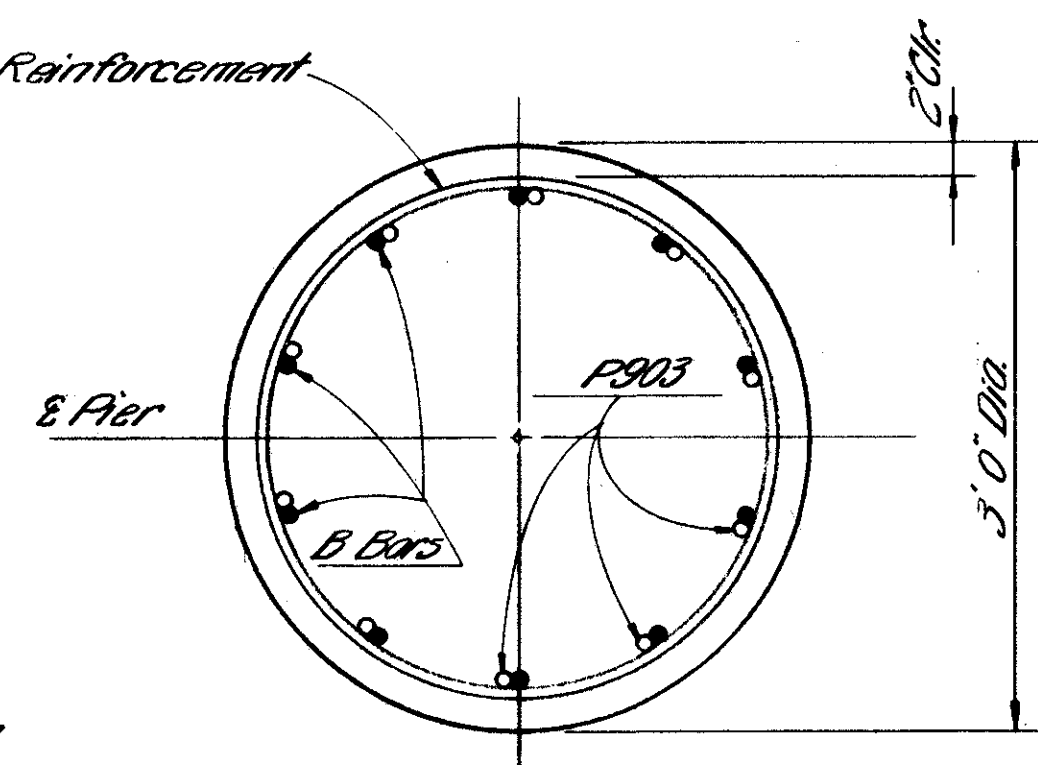
	ELEVATION						BAR		DIM.
	A	B	C	D	E	F	A	B	
Pier #1	868.61	868.74	868.73	868.60	865.10	847.25	SP401	P901	14'-10 1/4"
Pier #2	868.68	868.80	868.80	868.68	865.18	846.25	SP402	P902	15'-11 1/8"
Pier #3	868.60	868.73	868.74	868.61	865.10	847.25	SP401	P901	14'-10 1/4"



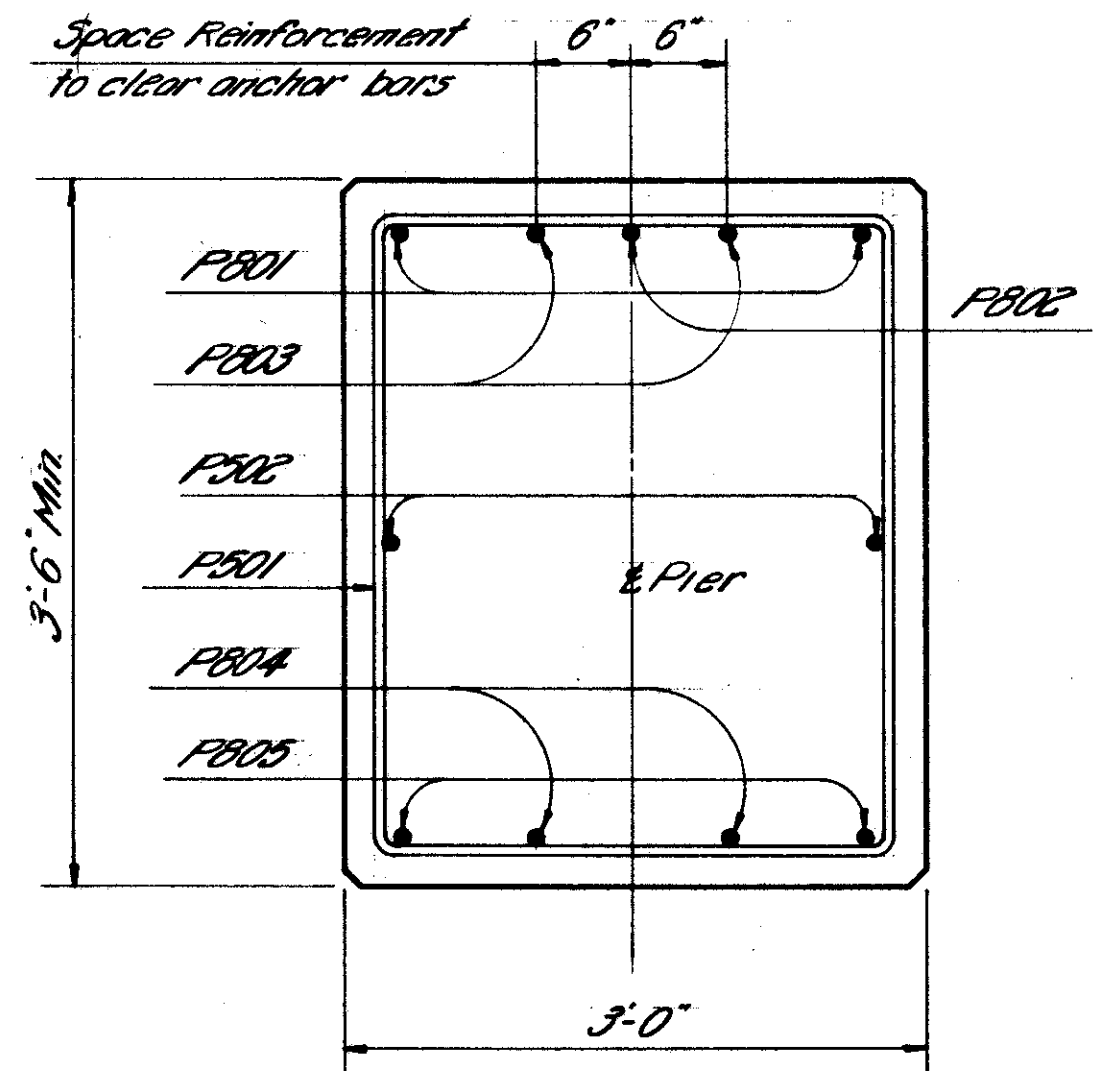
FOOTING SECTION PIERS #1 & 3



FOOTING SECTION PIER #2



SECTION A-A



SECTION C-C

- PIER NOTES**
1. BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the bridge seats so as to avoid interference with the drilling of anchor bar holes.
 2. REINFORCING STEEL shall clear the face of the concrete by 2" unless otherwise noted.
 3. PROCEDURE: See sheet #215.

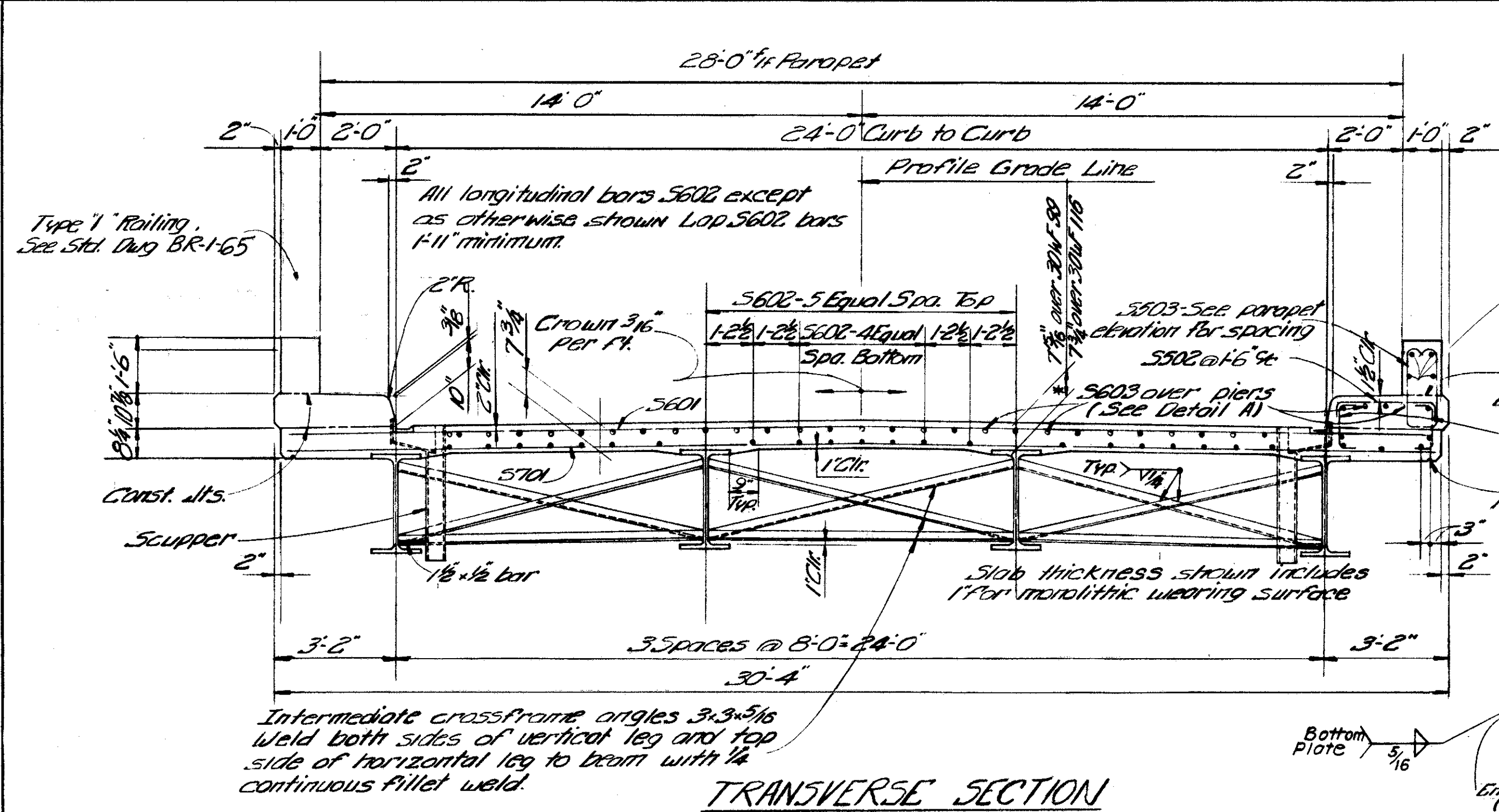
GANNETT FLEMING CORDRY & CARPENTER
ENGINEERS
HARRISBURG, PA.

PIERS

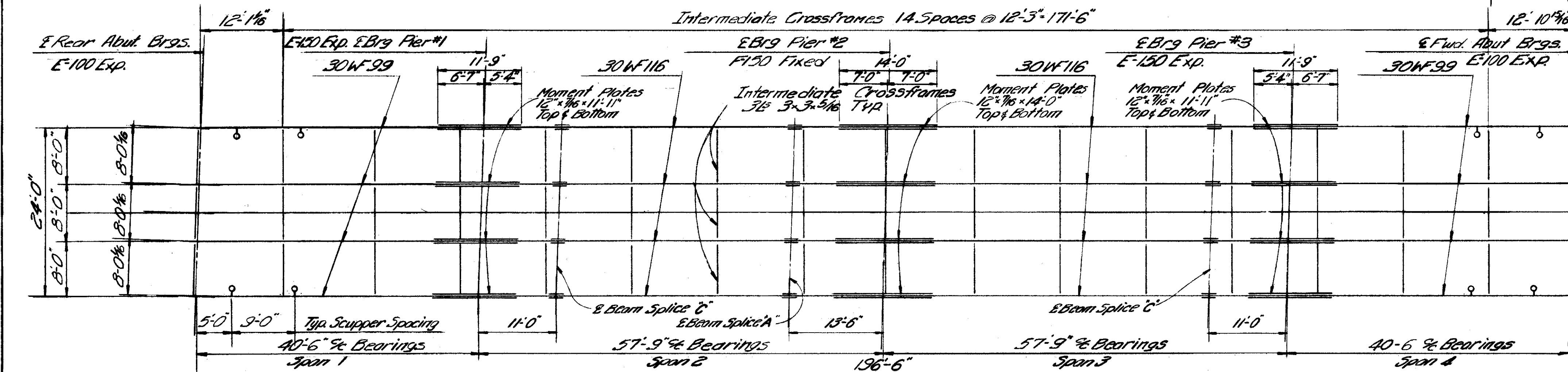
BRIDGE NO. TUS-250-2027
UNDER TOWNSHIP ROAD 286

TUSCARAWAS COUNTY USR - 250
SEC. TUS 250-17.23 STA. 8+9950 To STA. 11+00.50

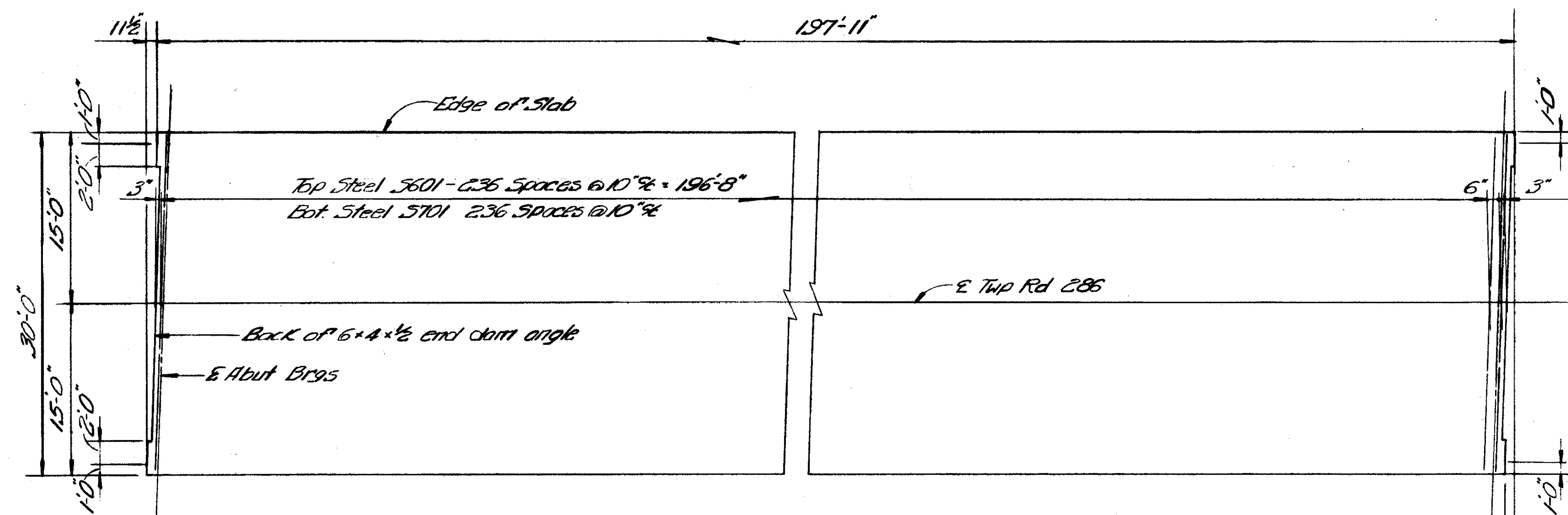
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.D.M.	R.W.B.		H.R.P.			



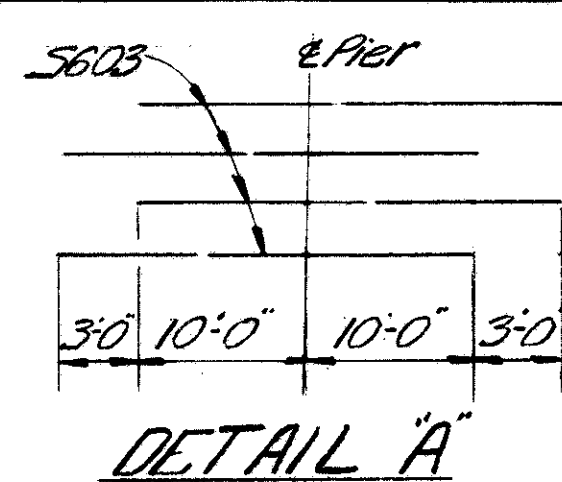
TRANSVERSE SECTION



STEEL FRAMING PLAN



TRANSVERSE REINFORCING STEEL



DETAIL A

R501 intermediate panels
R502 end panels
All concrete above this joint shall be included with railing for pavement
S501 at 6" Sp.
1" Diameter half round drip groove

1" Diameter half round drip groove

11" Piers * 18" x 14'-0" Pier #2
R 12" x 1/2"

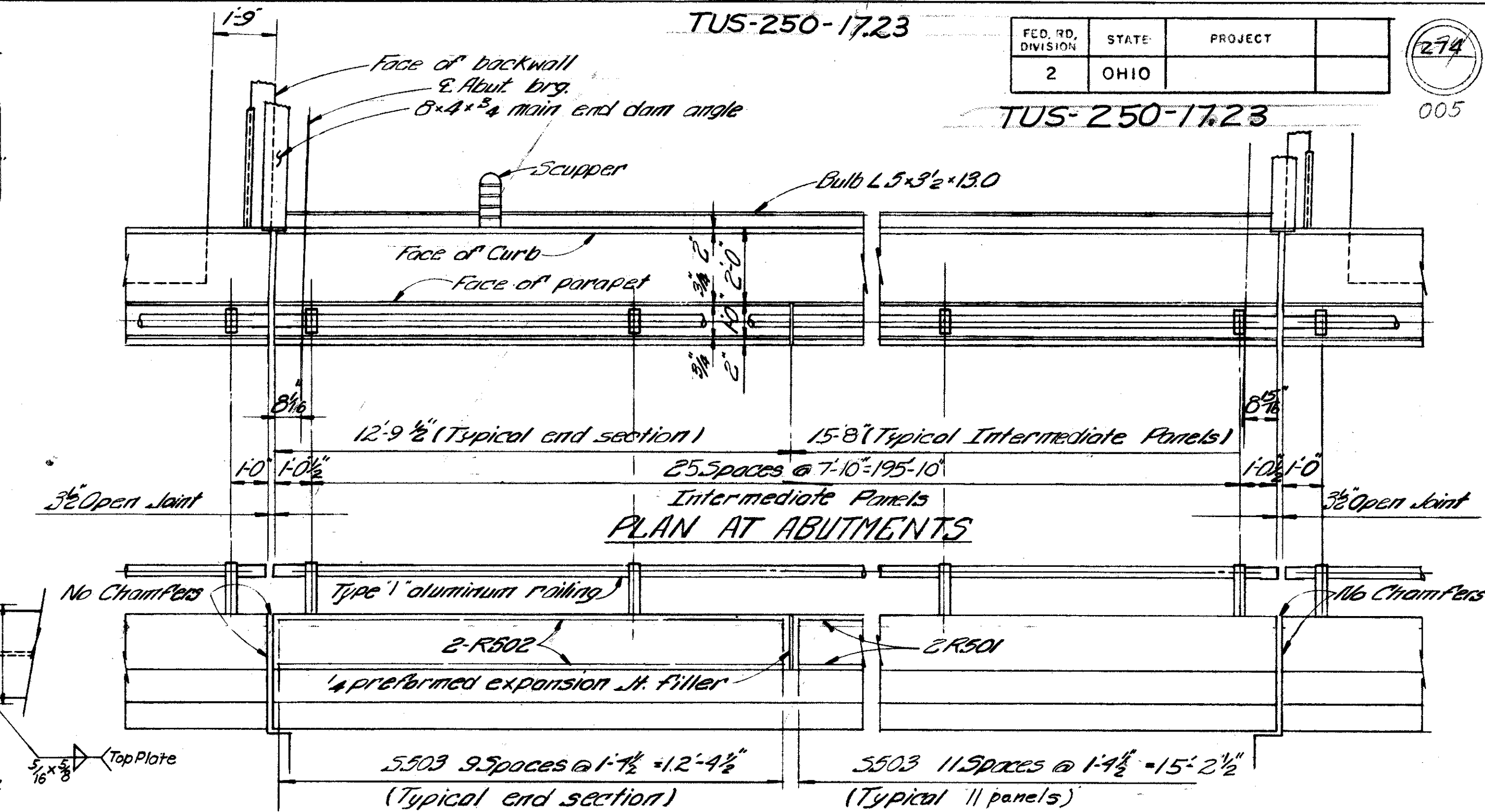
Top & Bottom Plates

Bottom Plate 5/16"

End of Weir (Typical)

Top Plate 5/16" x 3/8"

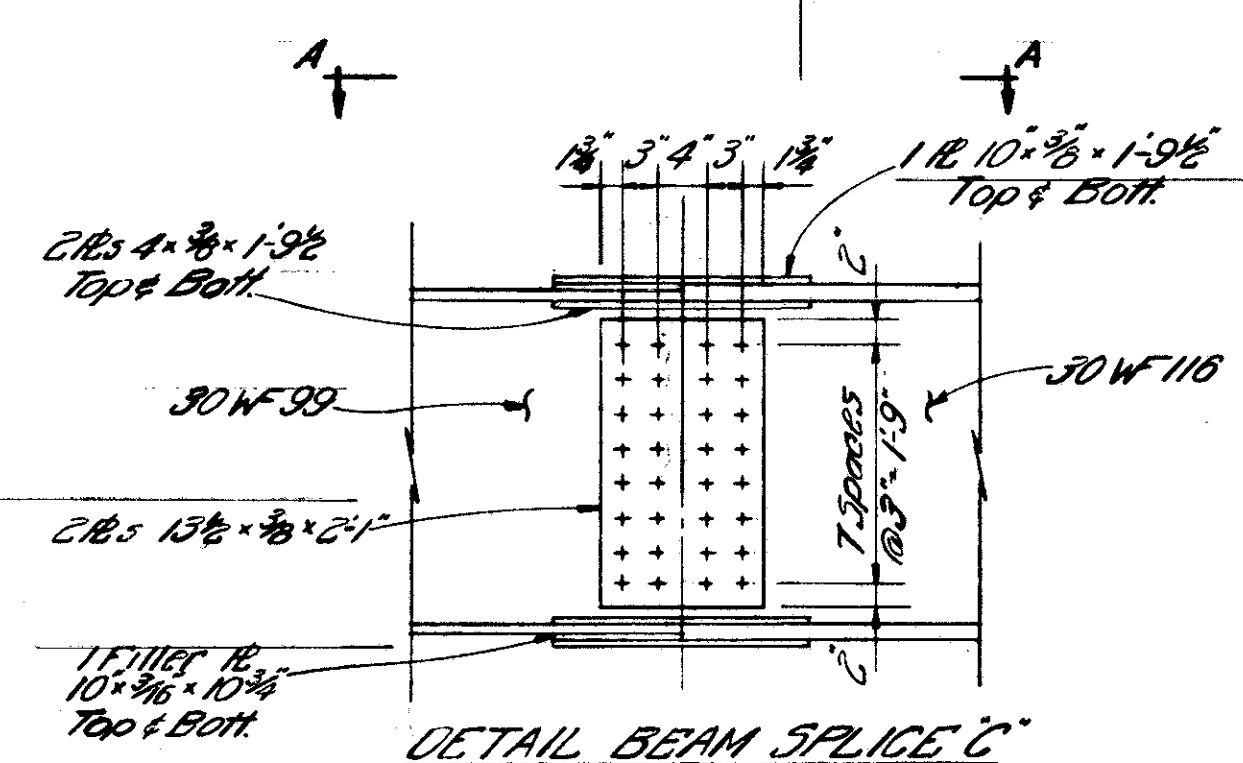
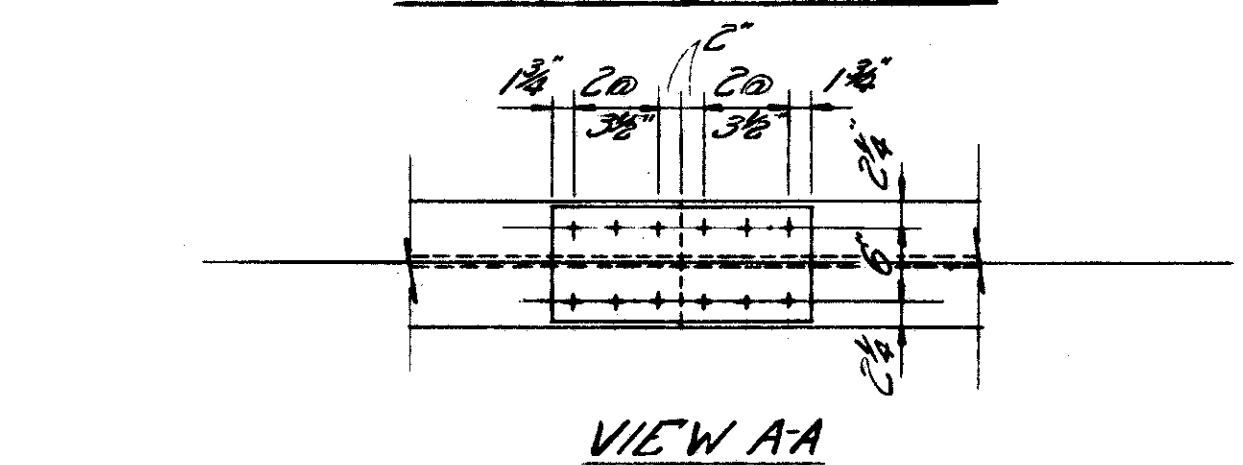
MOMENT PLATE DETAIL



PARAPET ELEVATION

GENERAL NOTES: See sheet # 271.
REFERENCE shall be made to Standard Drawing F3B-1-62 for bearing details.
REFERENCE shall be made to Standard Drawing 5D-1-63 sheet "2" and "4" for end crossframe and roadway end dam details and data; sheet "3" for guller and scupper details.
REFERENCE shall be made to Standard Drawing 5D2-64 for splice notes and details of beam splices.
DECK SLAB HAUNCH: The typical haunch width shown as 9" shall be used for computing quantity of concrete. However the haunch width may vary between 6" and 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.
SLAB THICKNESS: These are the nominal dimensions. The quantity of deck concrete to be paid for shall be based upon these dimensions, even though deviation from them may be necessary because the top flange of the beams may not have the exact camber or conformation required to place them parallel to the finished grade.

LOCATION	DEFLECTION & CAMBER TABLE			
	Outside Bms. End Spans	Inside Bms. Middle Spans	Outside Bms. End Spans	Inside Bms. Middle Spans
Deflection due to weight of steel	1/6"	3/8"	1/6"	1/6"
Deflection due to remaining dead load	1/8"	2 3/8"	1/8"	1/32"
Convexity required for vertical curve	1/6"	7/8"	1/6"	7/8"
Sum of deflection and convexity	3/4"	1 3/32"	3/4"	1 3/32"
Required camber	0	1 1/4"	0	1 1/4"



NOTE: All bolts to be 1" High Strength Bolts

TUS-250-17.23

FED. RD. DIVISION 2 STATE OHIO PROJECT

TUS-250-17.23

005

274

GANNETT FLEMING CORDRY & CARPENTER
ENGINEERS
HARRISBURG, PA.

SUPERSTRUCTURE
BRIDGE NO TUS-250-2027
UNDER TOWNSHIP ROAD 286

TUSCARAWAS COUNTY USR - 250
SEC. TUS 250 17.23 STA. 8+99.50 To STA. 11+00.50

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.B.M.	R.W.B.		E.B.M.			

REINFORCING STEEL LIST									
ABUTMENTS					SUPERSTRUCTURE				
Mark	No.	Length	Weight	Shp.	Mark	No.	Length	Weight	Shp.
A601	30	12'-8"	723	B	S701	238	29'-8"	14432	S
A602	40	13'-11"	1003	B					
A603	8	3'-4"	377	S	S801	238	29'-8"	10825	S
A604	32	6'-6"	312	S	S902	306	34'-7"	15895	S
A605	20	20'-4"	835	B	S903	57	23'-0"	1969	S
A606	8	20'-2"	242	B					
A607	8	9'-4"	112	S	S501	580	2'-3"	1344	B
A608	32	6'-2"	296	S	S502	280	3'-6"	1022	B
A609	24	12'-5"	440	S	S503	304	5'-7"	1770	B
A301	30	7'-11"	318	B	RAILING				
A302	30	6'-4"	251	B	R501	88	15'-4"	*	S
A303	36	4'-0"	234	S	R502	16	12'-5"	*	S
A304	30	29'-8"	1163	S	R503	12	4'-2"	*	B#
A305	8	10'-3"	86	S	R504	8	5'-4"	*	B#
A306	40	3'-6"	146	S	R505	16	10'-1"	*	S
					REPLACEMENT BARS				
A508	8	4'-3"	35	S	RE301	1	6'-10"	-	S
A509	9	3'-2" to 6'-6"	141	B	RE301	1	6'-6"	-	S
A510	20	3'-2"	92	B	RE701	1	6'-3"	-	S
A511	32	5'-7"	186	B	RE801	2	3'-11"	-	S
A512	12	10'-1"	126	S	RE501	1	5'-7"	-	S
A513	8	5'-6"	43	B	RE401	1	5'-3"	-	B
PIERS					SPIRAL REINFORCING				
P301	60	18'-0"	3672	S	Mark	No.	Length	Pitch	No. Turns
P302	30	15'-1"	1946	S	SP401	6	32"	14'-10"	4 1/2
P303	30	6'-7"	2014	B	SP402	3	32"	15'-11"	4 1/2
P801	6	3'-0"	497	B					
P802	3	32'-6"	260	B					
P803	6	8'-0"	128	S					
P804	6	25'-4"	422	S					
P805	6	24'-0"	384	S					
P806	12	9'-3"	296	B					
P701	24	33'-6"	1643	S					
P702	21	8'-0"	343	S					
P601	11	9'-6"	157	S					
P501	36	8'-4"	834	B					
P502	6	24'-1"	131	S					
P503	20	33'-8"	978	S					
P504	41	9'-8"	406	S					
P505	36	8'-6"	831	S					

BENDING DIAGRAMS

RAILING

REPLACEMENT BARS

SPIRAL REINFORCING

SPIRAL REINFORCING BARS

The "Length" shown in the steel list for spiral bars is the distance from the top of the footing to the bottom of the pier cap.

The No. of turns shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to the ITEM 509.

1/2 closed coils shall be provided at the ends of each spiral unit.

Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

BAR SIZE is indicated in the bar mark. The first digit where three digits are used and the first two digits where four are used indicate the bar size number. For example P701 is a No. 7 size bar and P1003 is a No. 10 size bar.

* For bending diagrams see BR-1-65

PROCEDURE: (a) Excavate to Elevation 888.0 on area defined by station and offset from centerline of survey of Township Road 286 as follows: Station 8+30 to Station 11+30 and 30 each side of centerline.

(b) Construct three settlement platforms placed as follows: Station 8+85, 15 ft. left; Station 10+00, 0 offset; Station 11+15, 15 ft. right.

(c) Place and compact embankments for both USR 250 and Township Road 286 in accordance with pertinent construction specifications except that the embankment for Township Road 286 shall be continuous across USR 250 up to the level of subgrade at the abutments.

(d) Provide a minimum waiting period of six months during which readings will be taken on the settlement platforms to determine amount and rate of settlement.

(e) Removal of embankment between bridge limits and commencement of work on the substructure units shall depend upon results obtained from the settlement platforms and shall not be started until authorized by the Director.

(f) Excavate for abutment and pier footings.

GENERAL INFORMATION

INTRODUCTION

The project consists of a section of the major relocation of USR 250, approximately 4.7 miles in length, beginning approximately 0.2 mile south of USR 230 and 0.4 mile east of SR 233, extending southeastward, and terminating immediately north of Uhrichsville and Stillwater Creek.

The proposed grade indicates cuts, generally ranging between 3 and 10 feet in depth, but as high as 100 feet at ditchline in the major cut; fill embankments, ranging between 0 and 20 feet in height.

GEOLOGY AND OBSERVATIONS OF THE PROJECT

The alignment incepts on the broad terraced flood plain of the Tuscarawas River, ascends the east steep valley wall, crosses the upland portion, descends onto the broad flood plain of the Stillwater Creek, crosses Stillwater Creek, and terminates on the broad flood plain of Stillwater Creek. Deep valley fill and thin residual soil cover overlies limestone, indurated clay, shale, sandstone, and associated coal, of Pennsylvanian age. A stratigraphic rock section was measured and recorded representing the general lithology between approximately stations 300+00 and 1015+00.

EXPLORATION

The exploration was made by means of truck-mounted mechanical earth auger, hand auger (in area of difficult access), and rotary type drill rig, between January 20 and February 1, February 23 and 26, and May 14 and 22, 1963.

INVESTIGATION DISCLOSURES

Borings disclose that materials occurring immediately below proposed grade consists of gravels, sandy gravels, sandy silts, and silt clay, in the A-1-a, A-1-b, A-2-4, A-4a, and A-6a classifications, generally having low moisture contents or moisture contents in the lower portion of the plastic range, with some elastic clay, in the A-7-5 classification at station 364+00, and clays, in the A-7-6 classification, as well as bedrock.

Bedrock is anticipated to be encountered in the excavations at the following locations:

Stations 364+00 to 365+00 - coal and indurated clay, at right ditch and lower-most portion of the right backslope.

Stations 365+00 to 366+00 - shale, indurated clay, sandstone, and some coal at right grade, median and right ditches and right backslope.

Stations 366+00 to 367+00 - shale, sandstone, and some coal and limestone, at both grades, ditches, right backslope and lower portion of the left backslope.

Stations 367+00 to 368+00 - shale, sandstone, and some coal, at right grade, right ditch and lower portion of the right backslope.

Stations 367+00 to 1007+35 - shale, sandstone, and some coal, at both grades, ditches and backslopes.

Stations 1007+35 to 1008+50 - shale and sandstone, at both grades, ditches and left backslope.

Stations 1008+50 to 1009+50 - shale and sandstone, at left grade, median and left ditches, and left backslope.

Frost susceptible silts were encountered within three feet of proposed grade at station 377+15.

Five feet of random fill, comprised of clayey silt with cinders and brick bats, was encountered at station 305+00.

Embankment foundation materials are comprised of unstratified gravels, sandy gravel, sands, sandy silts, silts and silt clays, in the A-1-a, A-2-4, A-4, and A-6a classifications, over the entire project, generally having low moisture contents or moisture contents in the lower portion of the plastic range, with exception of some areas between stations 1014+00 and 1102+00.

Wet materials, overlain by as much as 14 feet of random fill, comprised of cinders, bricks and broken tile, were encountered between approximately stations 1014+00 and 1025+00; wet materials, some containing various amounts of organic matter, were encountered between stations 1025+30 and 1102+00. 3 to 6 feet of soft sediments occur in the low poorly drained area in the vicinity right of station 1047+00 to 1056+00.

LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS- 277 SAMPLES TESTED

DESCRIPTION	H. R. B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Gravel or stone fragments	A-1-a(C)	A-1-a	64	21	9	2	4	NP	NP	10	26
Gravel or stone fragments with sand	A-1-b(C)	A-1-b	45	21	21	5	3	27	1	12	30
Fine sand	A-3(C)	A-3	8	10	75	3	4	NP	NP	13	5
Coarse and fine sand	-----	A-3a	8	12	55	6	19	21	0	17	32
Gravel or stone fragments with sand and silt	A-2-4(C)	A-2-4	54	8	14	10	14	26	5	13	13
Gravel or stone fragments with sand, silt and clay	A-2-6(C)	A-2-6	60	12	8	4	16	36	14	15	4
Sandy silt	A-4(5)	A-4a	7	3	32	27	31	26	3	23	52
Silt	A-4(8)	A-4b	0	0	7	54	39	23	4	28	26
Silt and clay	A-6(8)	A-6a	5	2	14	33	46	31	11	25	36
Silty clay	A-6(11)	A-6b	0	4	18	29	47	36	17	22	3
Elastic clay	A-7-5(14)	A-7-5	12	2	2	19	65	52	20	37	5
Clay	A-7-6(14)	A-7-6	12	1	4	25	33	46	21	23	11
Underclay											
Random fill											
Coal											
Coal blossom											
Cinders											
Weathered indurated clay											3
Weathered sandstone											1
Indurated clay											
Shale											
Sandstone											
Limestone											
Various other materials											

Sod or Topsoil-X' = Approximate depth.

Berm material.

Auger boring - plan view.

Auger boring plotted to vertical scale only.

Core boring plotted to vertical scale only.

● Water content nearly equal to or greater than liquid limit.

⊖ Indicates a non-plastic material with high water content.

— Free water.

Core boring - plan view

NOTE: Figures beside borings indicate water content in percent. e.g. 75

SOIL PROFILE

TUSCARAWAS COUNTY

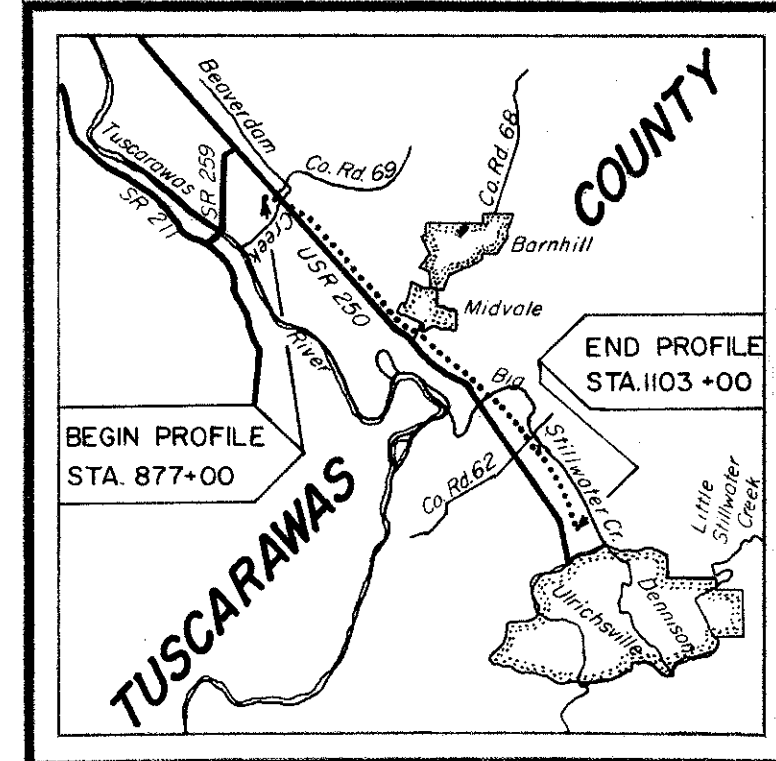
TUS-250-17.23

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO



NOTE: INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THIS DATA AND IT IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT.

Fed. No. F-675(6)



LOCATION MAP

Recon - A.J. - 12/3/62

Drilling - Auger - CMC, T.R.S., J.A.G. - 1/23/62,
1/29/63 - 2/1/63, 2/25/63 - 2/27/63
Core - D.W.B., R.L.S. - 5/14/63 - 5/16/63,
5/21/63 - 5/23/63

Drafting - R.P.W., F.H.S. - 6/7/63

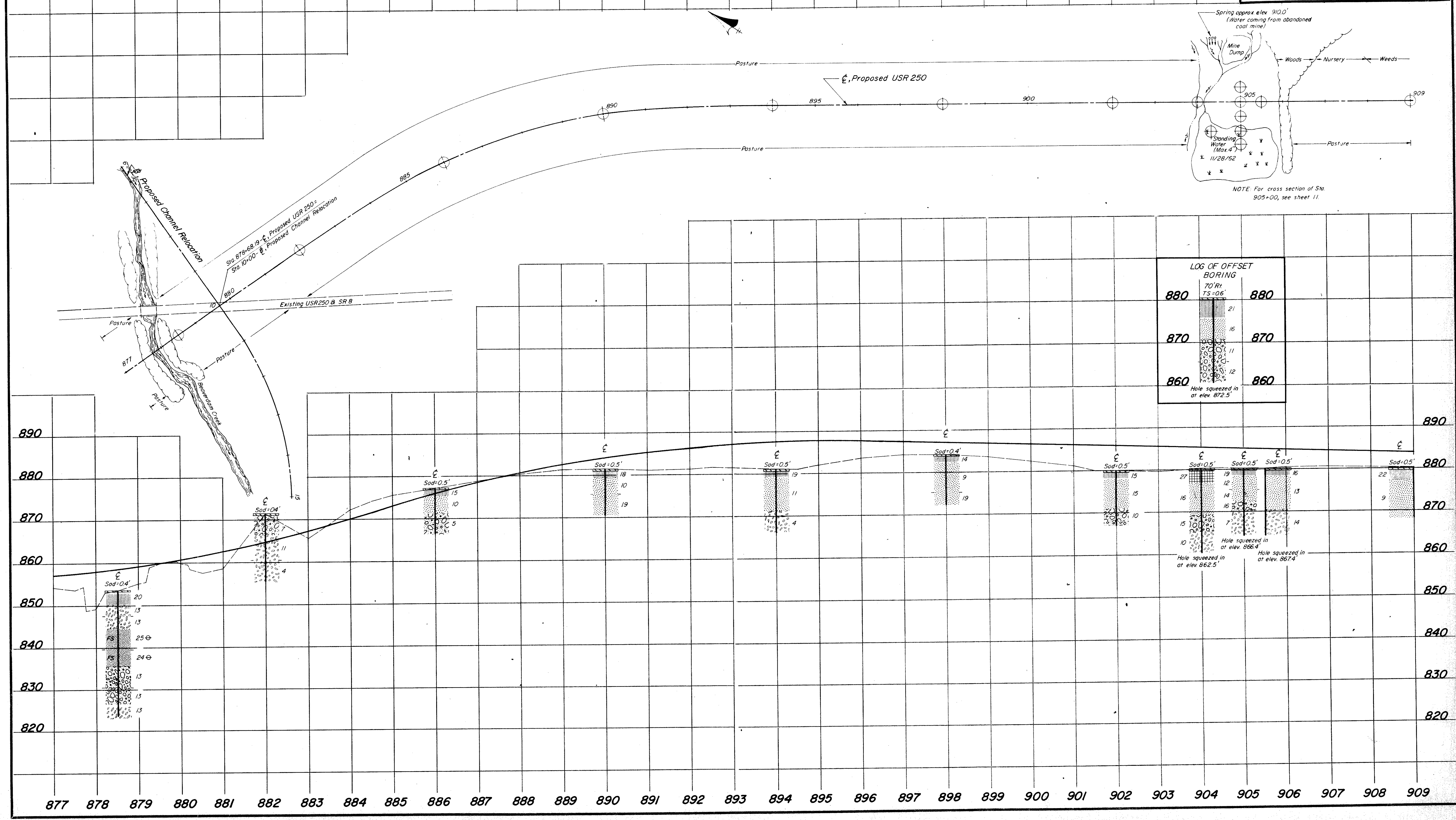
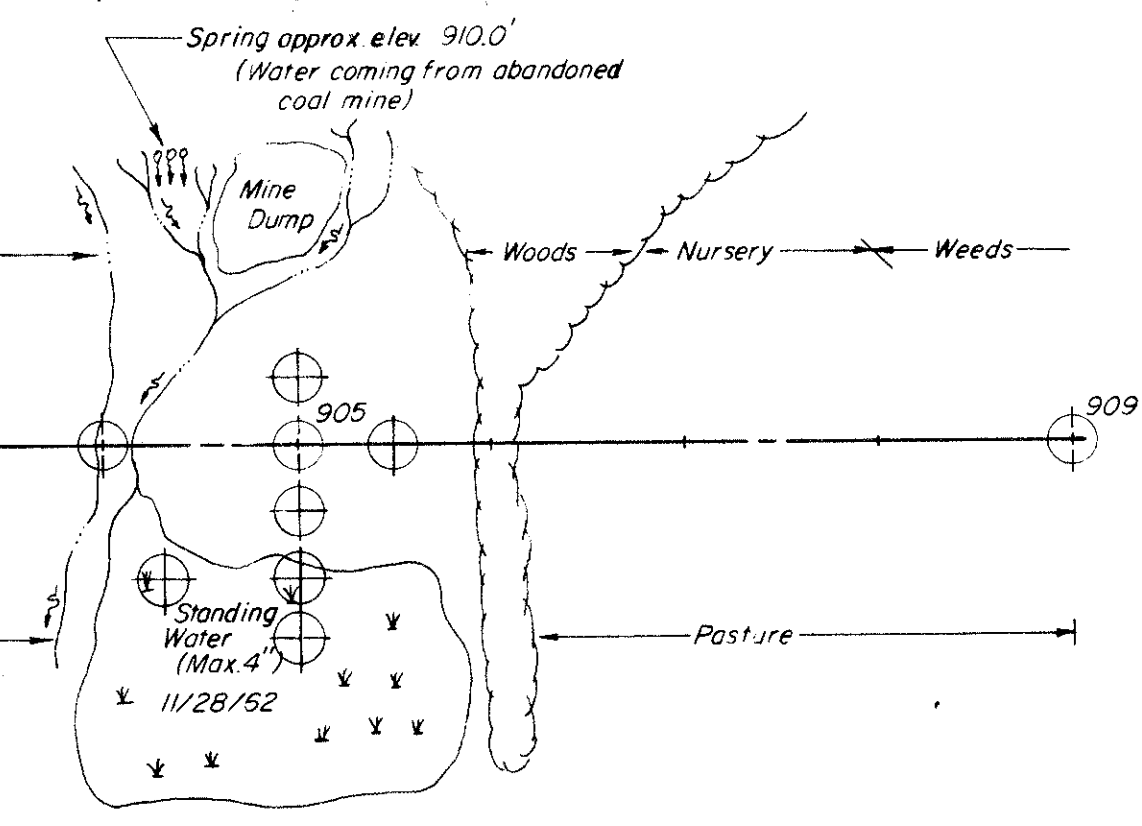
*Denotes sample taken at or near grade

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FROM-TO	AGG.	C.S.	F.S.	SILT	CLAY	L.L.	P.I.I.	W.C.	CLASS.	FROM-TO	AGG.	C.S.	F.S.	SILT	CLAY	L.L.	P.I.I.	W.C.	CLASS.	FROM-TO	AGG.	C.S.	F.S.	SILT	CLAY	L.L.	P.I.I.	W.C.	CLASS.	FROM-TO	AGG.	C.S.	F.S.	SILT	CLAY	L.L.	P.I.I.	W.C.	CLASS.	FROM-TO	AGG.	C.S.	F.S.	SILT	CLAY	L.L.	P.I.I.	W.C.	CLASS.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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FORMERLY TE-54-B
61

SOIL PROFILE
TUSCARAWAS COUNTY
TUS - 250 - 17.23
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

3
75



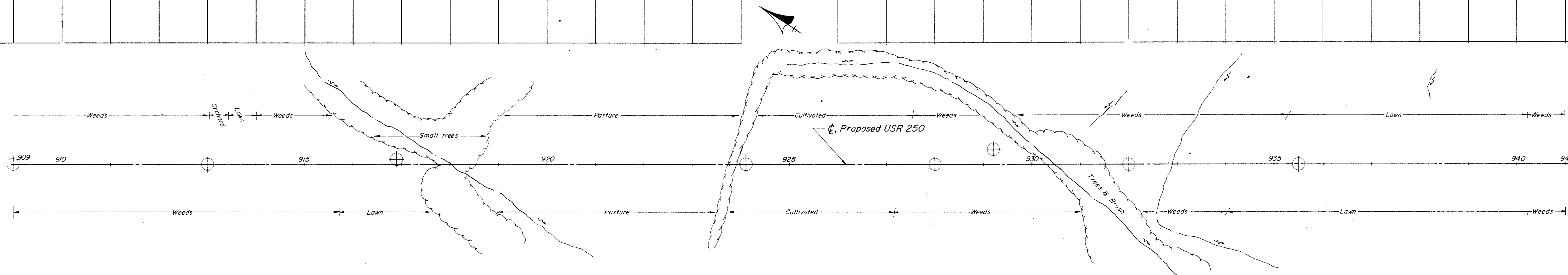
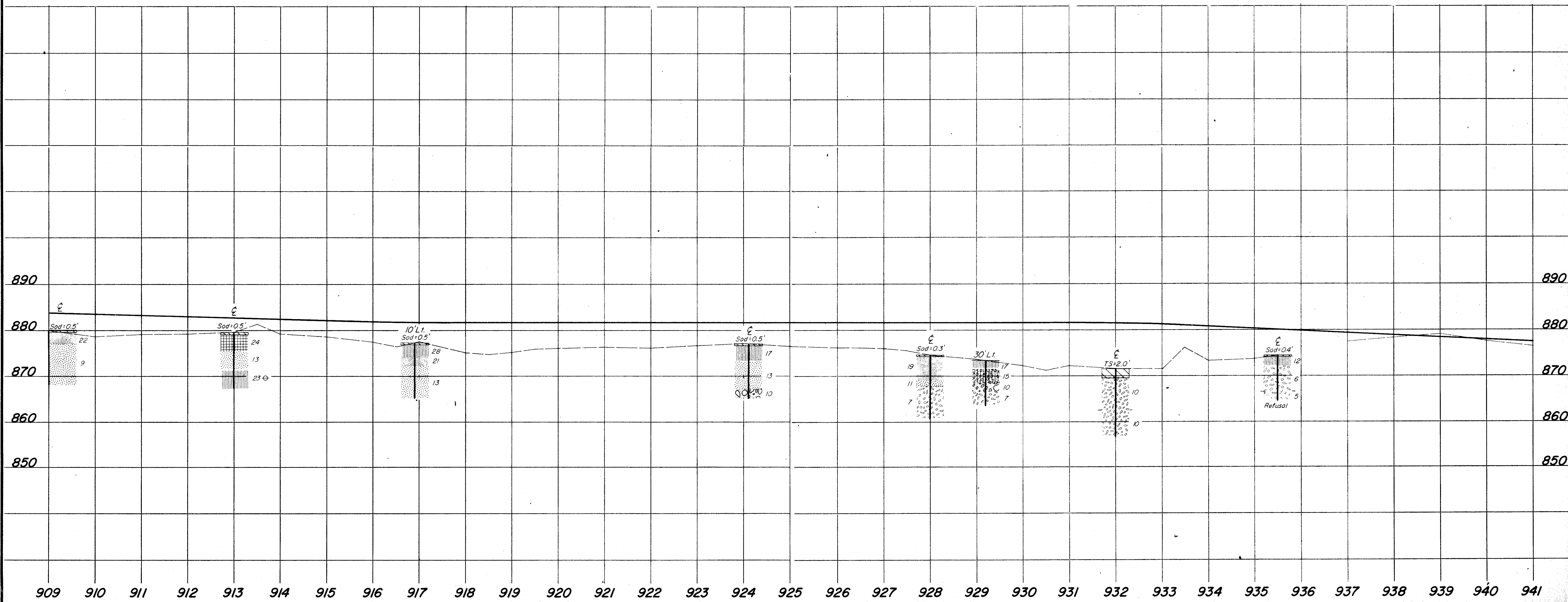
NOTE: For cross section of Sta. 905+00, see sheet 11.

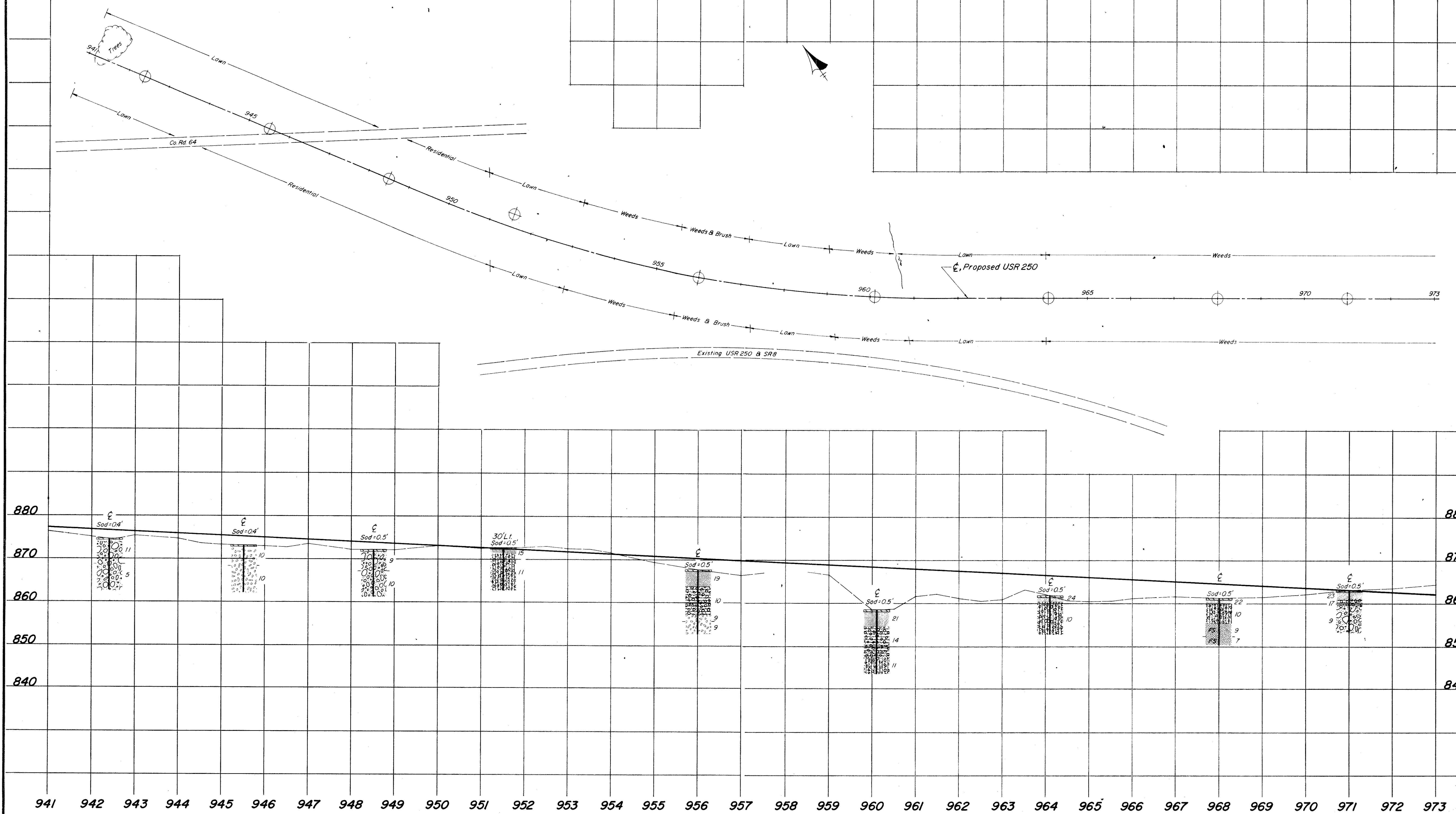
LOG OF OFFSET BORING
70' R.L.
TS=0.6'

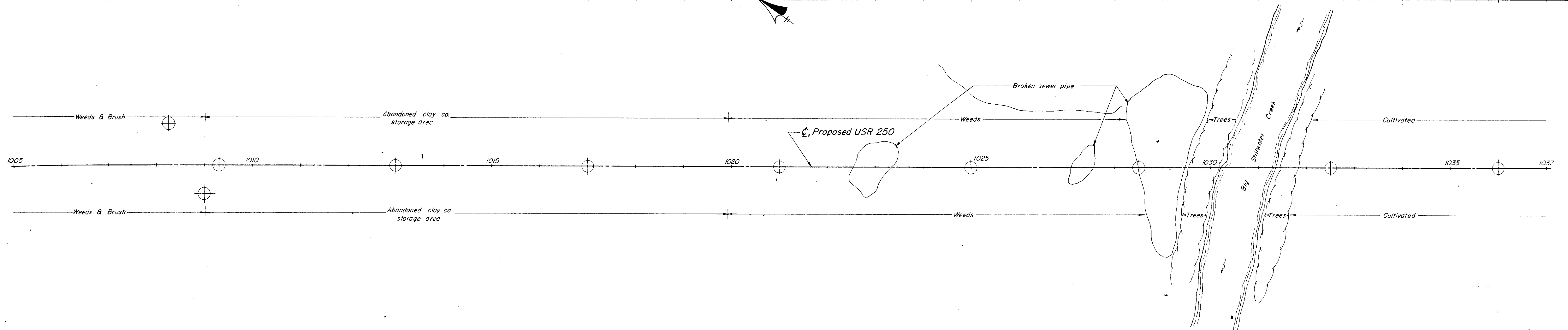
Station	Depth (ft)
880	21
870	16
860	11
860	12

Hole squeezed in at elev. 872.5'

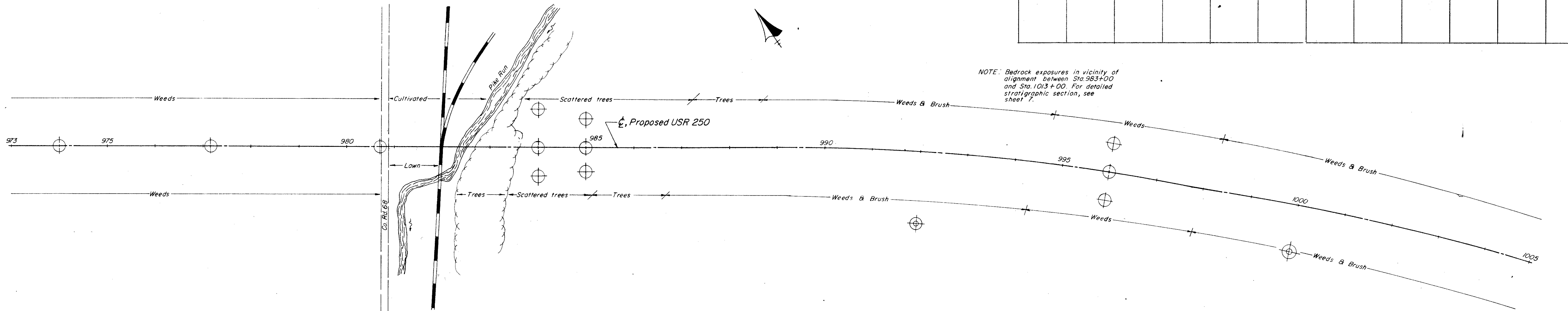
Station	Depth (ft)
890	
880	18
870	10
860	19
850	11
840	4
830	14
820	19
878	20
879	13
880	13
881	25
882	24
883	13
884	13
885	13
886	13
887	13
888	13
889	13
890	13
891	13
892	13
893	13
894	13
895	13
896	13
897	13
898	13
899	13
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901	13
902	13
903	13
904	13
905	13
906	13
907	13
908	13
909	13

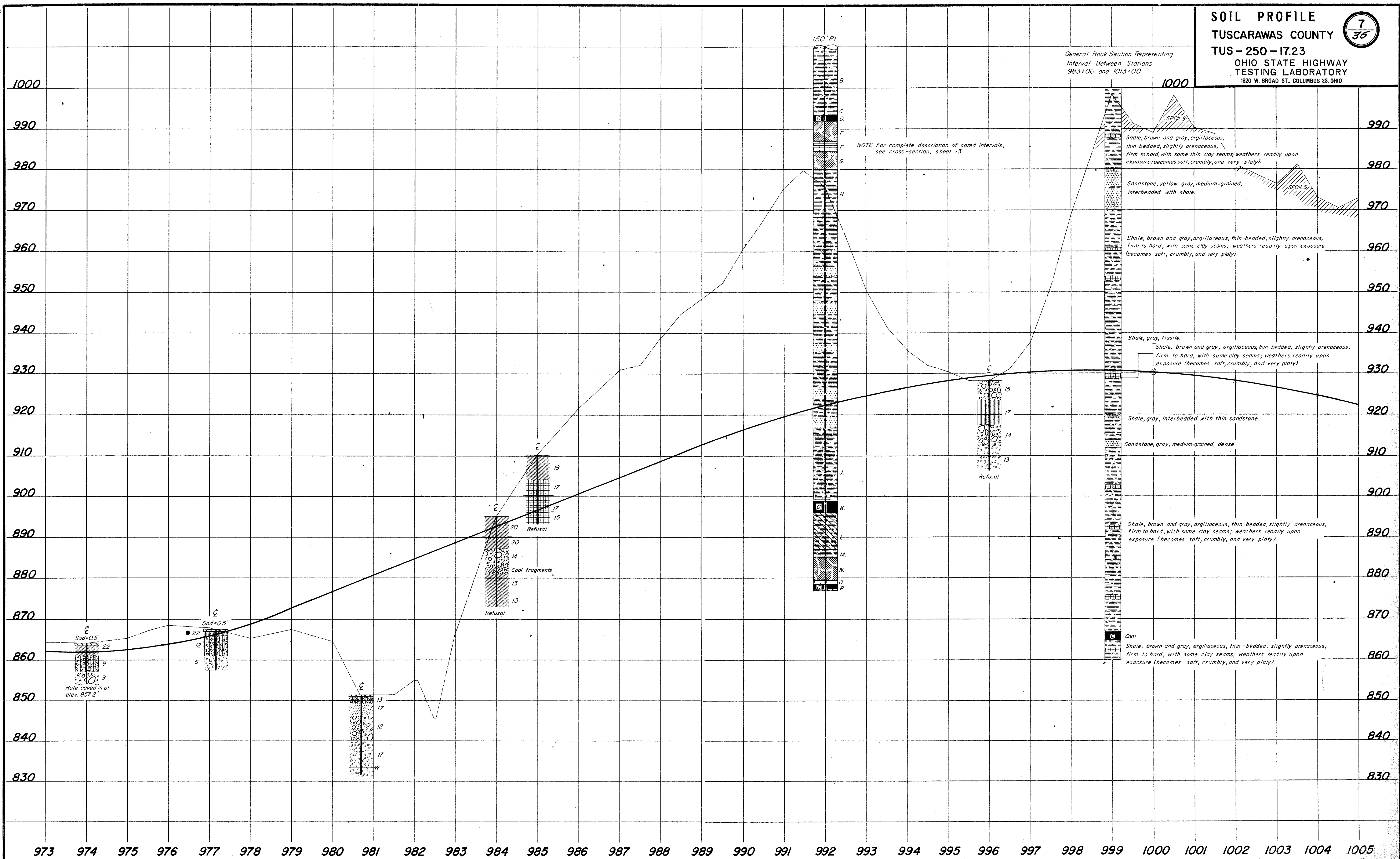


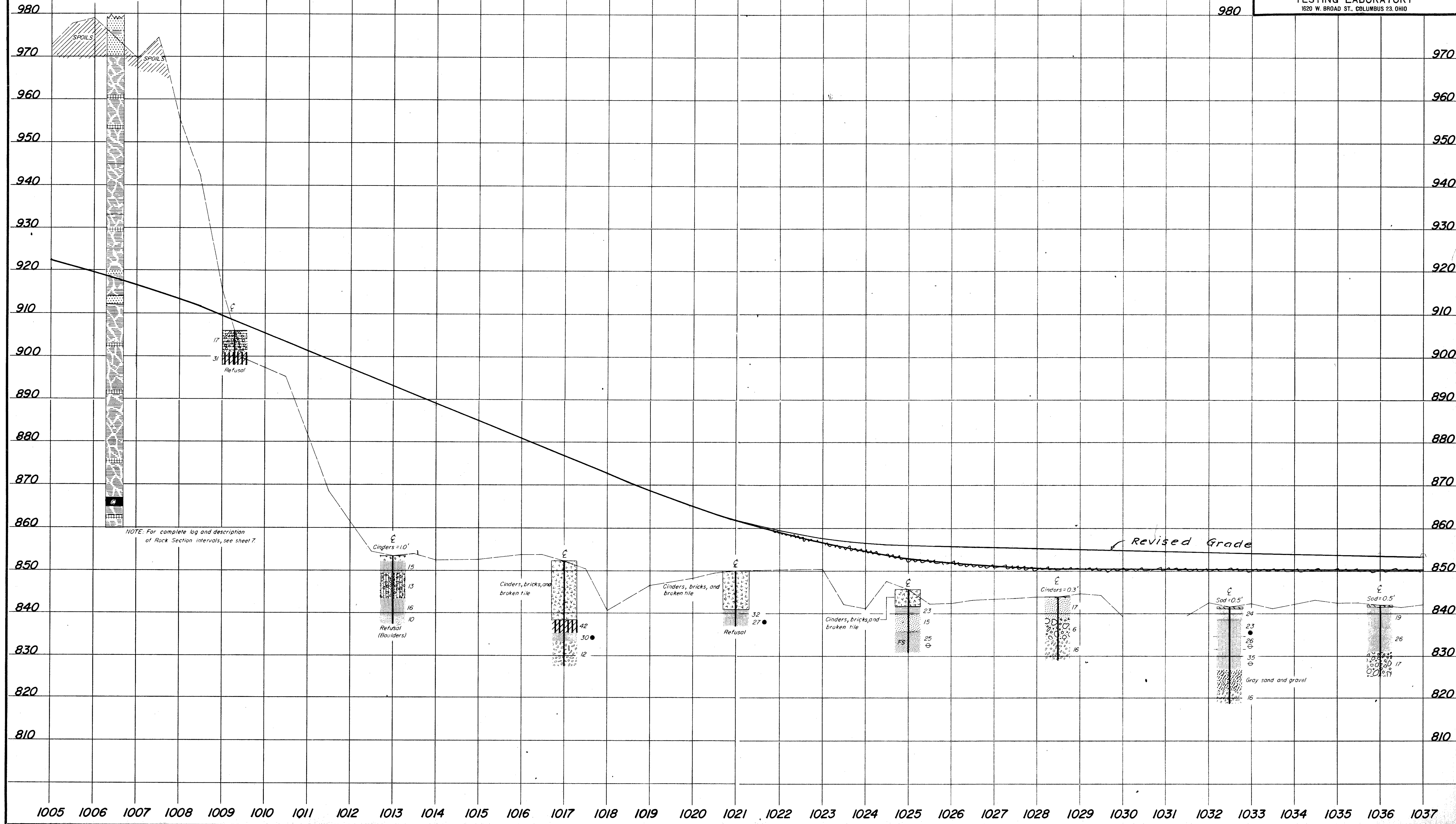


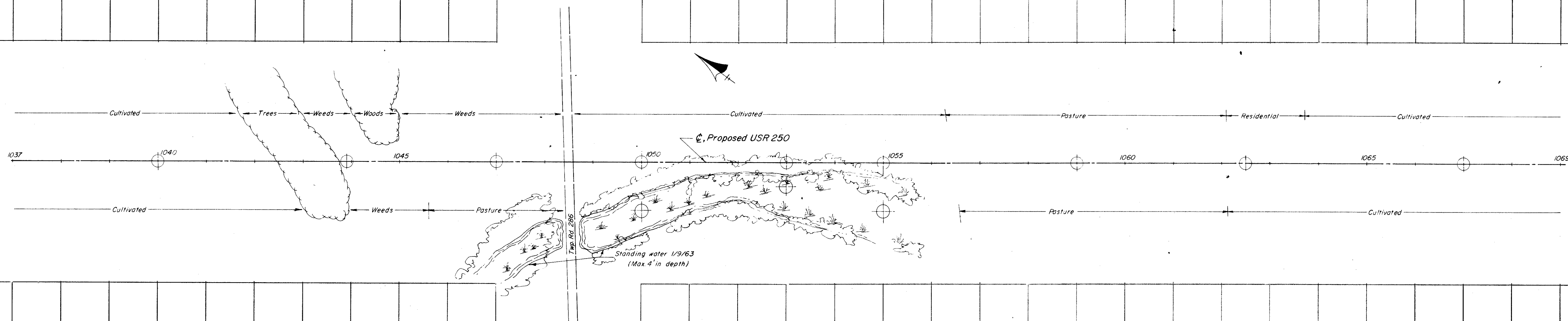
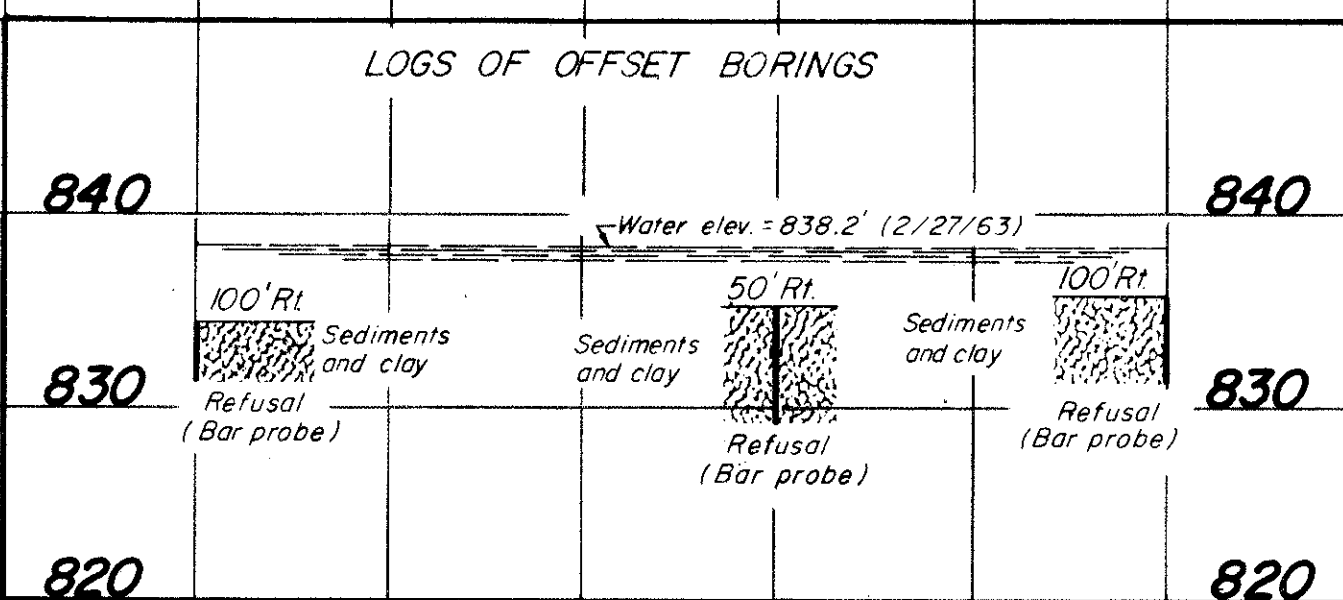
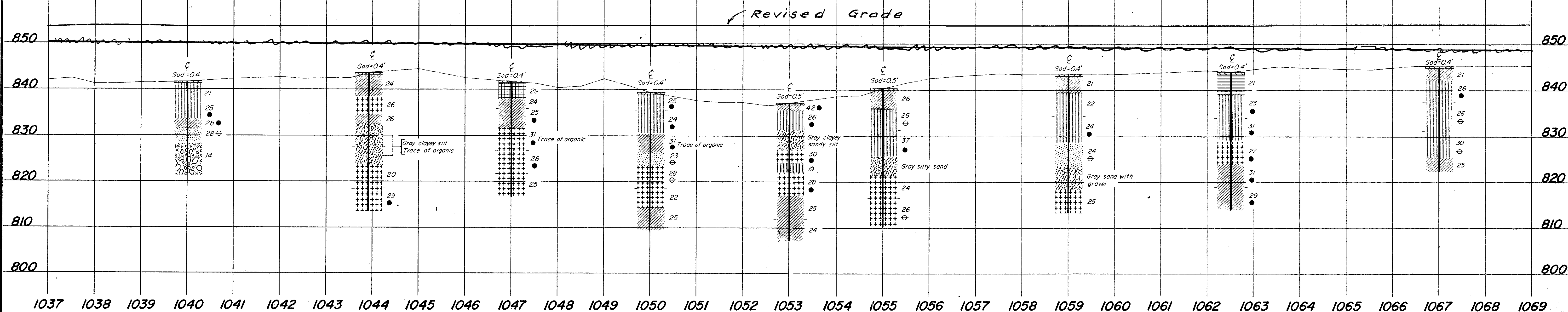


CROSS SECTION INDEX	
STATION	SHEET
984+00	11
985+00	12
992+00	13
996+00	14
1000+00	15
1008+00	16
1009+00	17



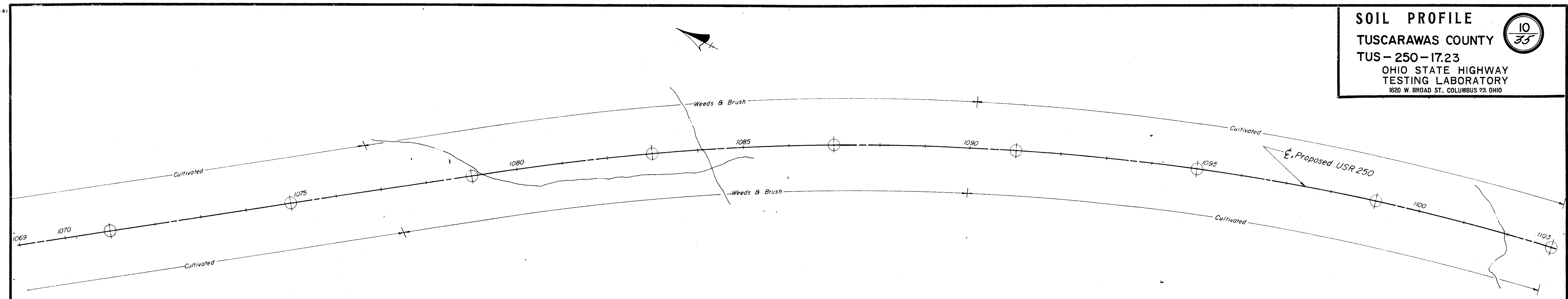
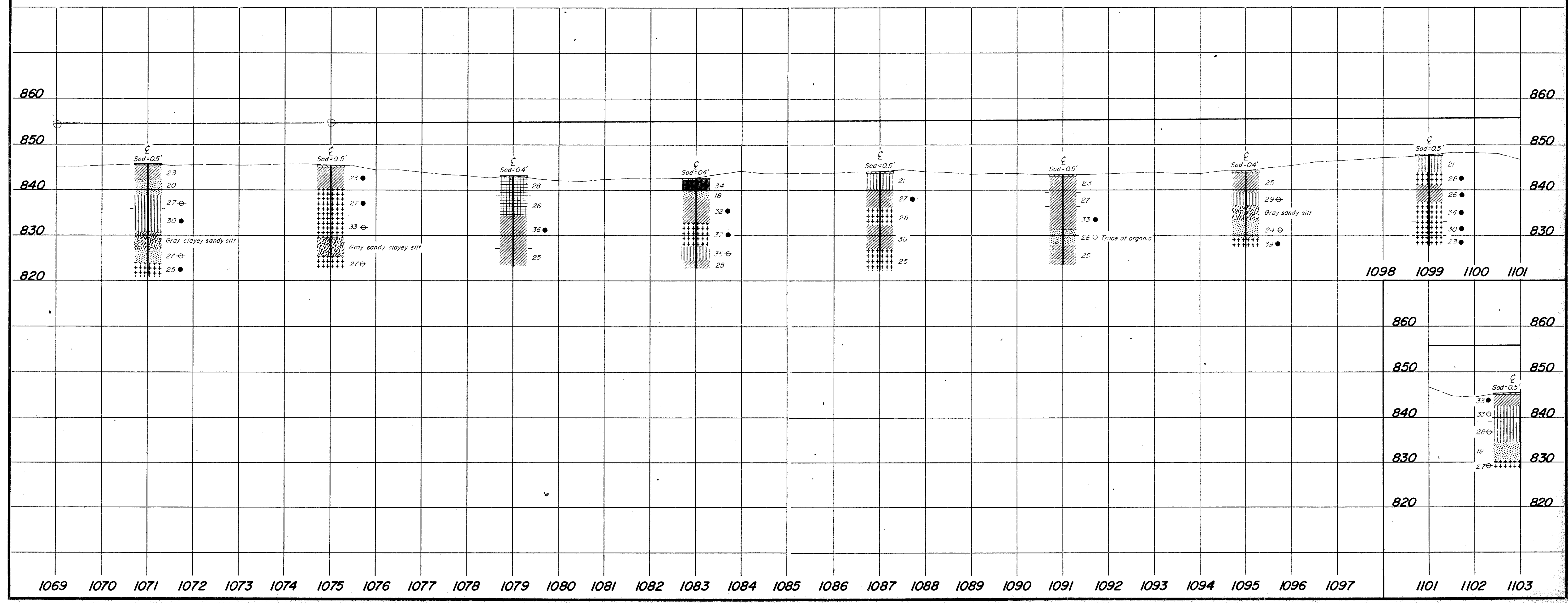


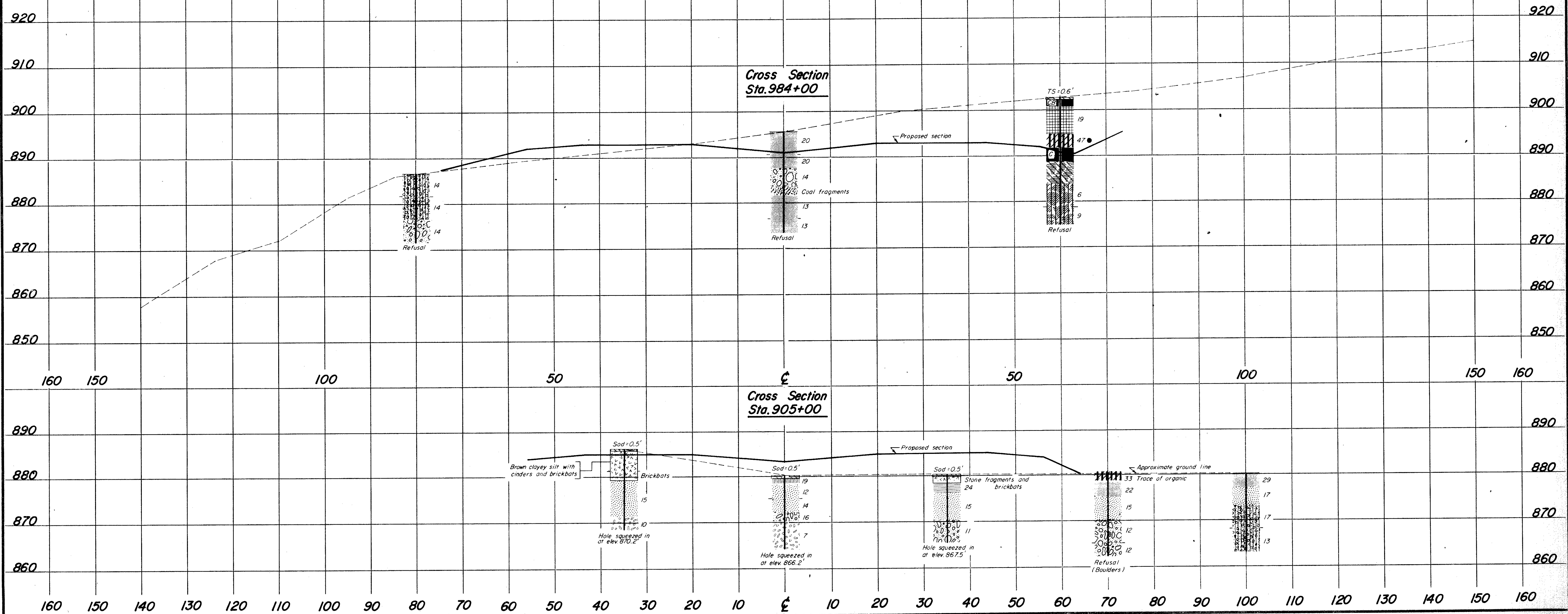


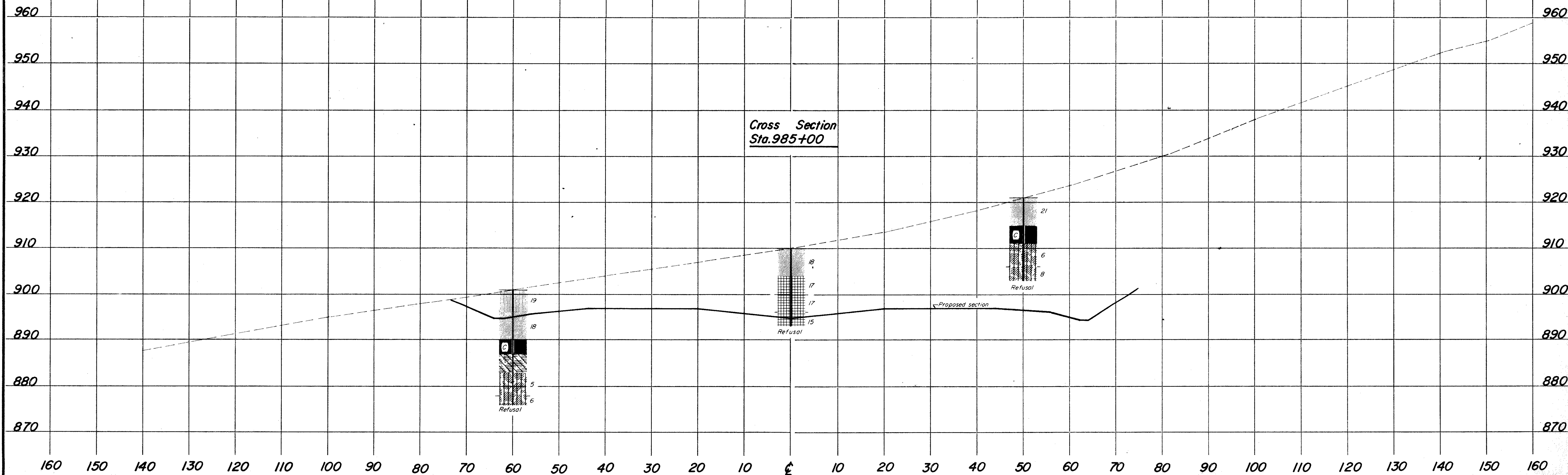


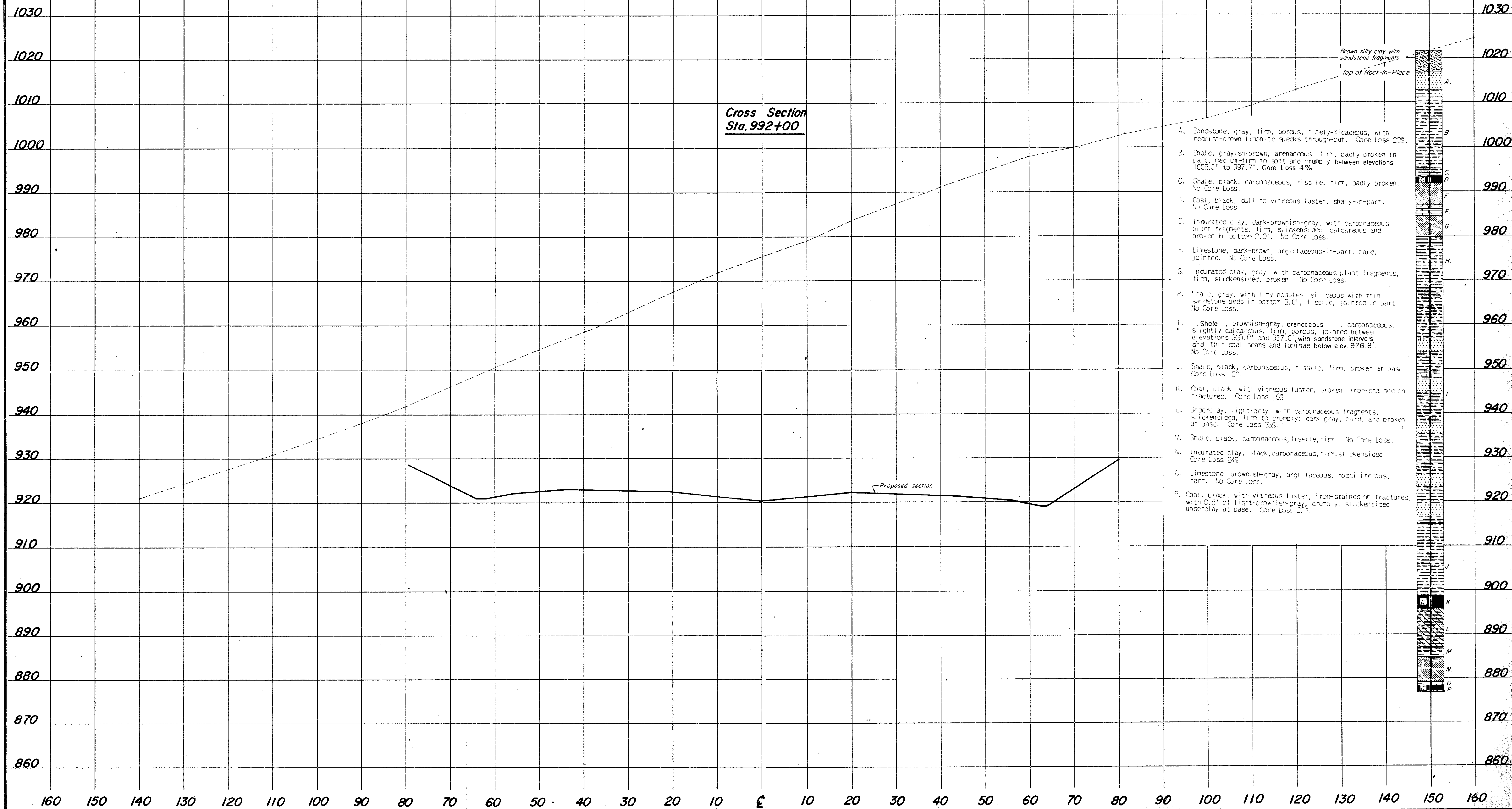
SOIL PROFILE
TUSCARAWAS COUNTY
TUS-250-17.23
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

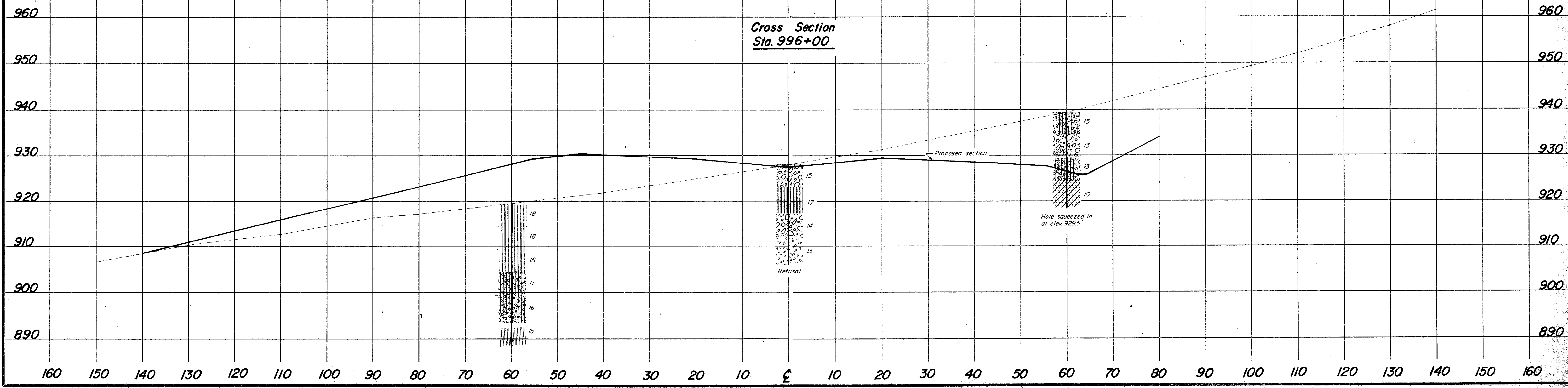
10
35

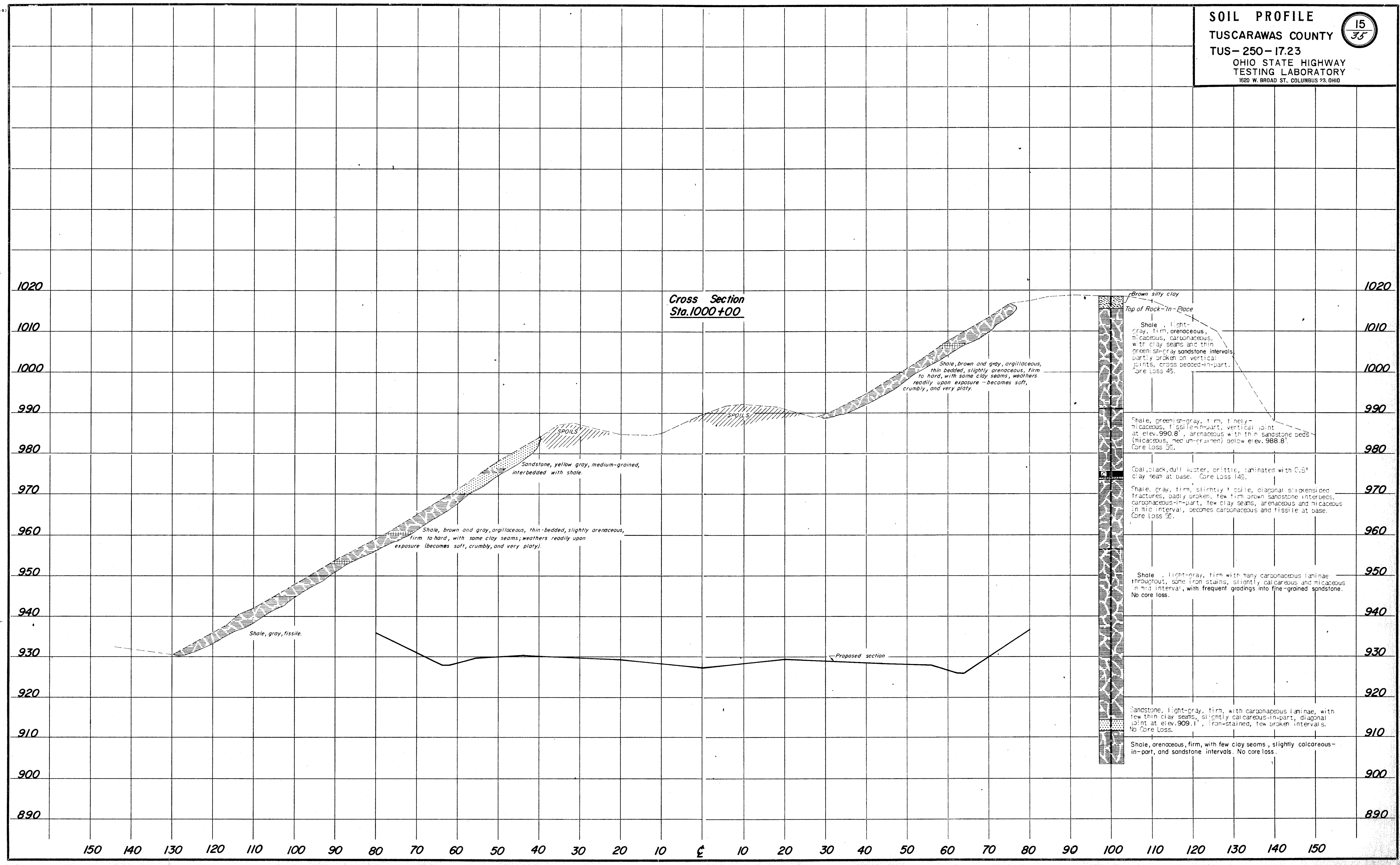


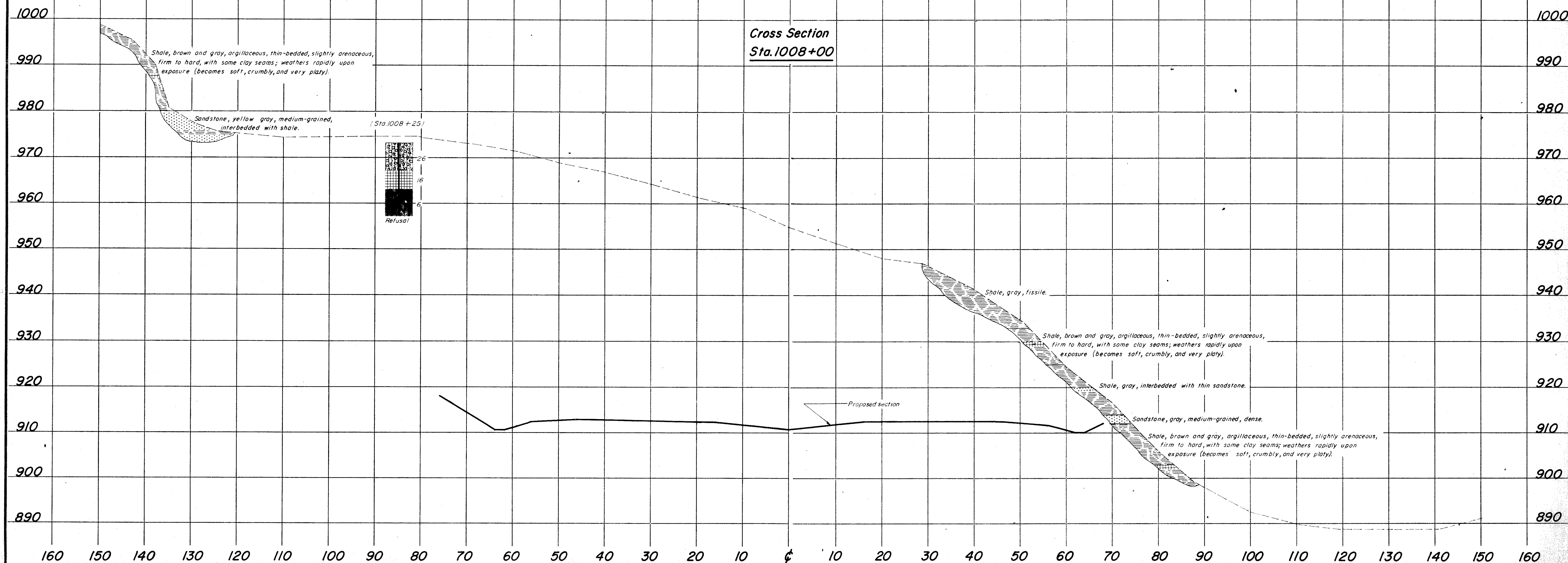


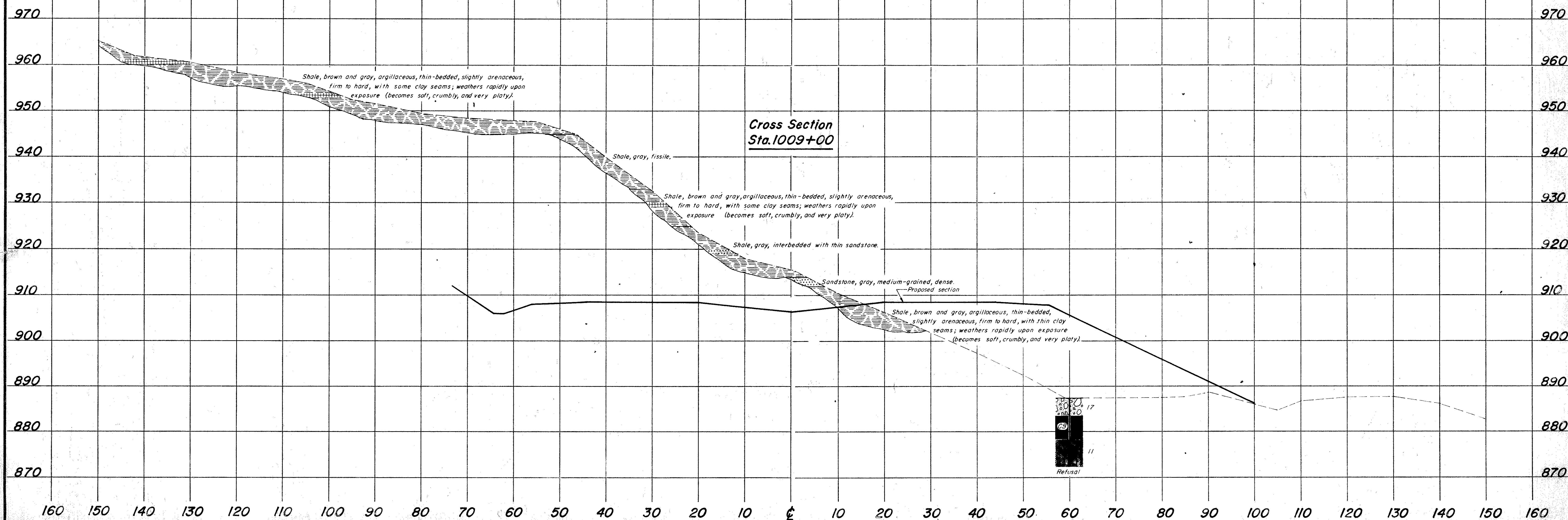












GENERAL INFORMATION

Drive Rod Penetration Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface conditions may be evaluated.

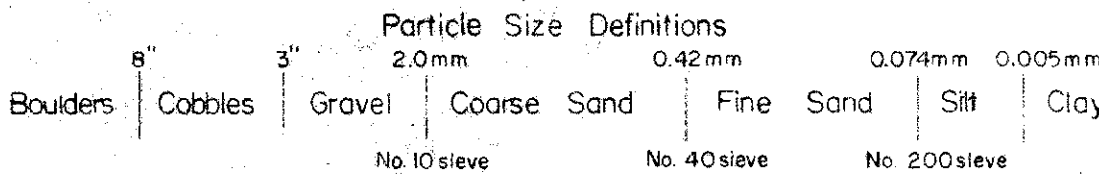
Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are by means of a rotary type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and/or 5-foot depth intervals, driven by means of a 140 pound drop-hammer, with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

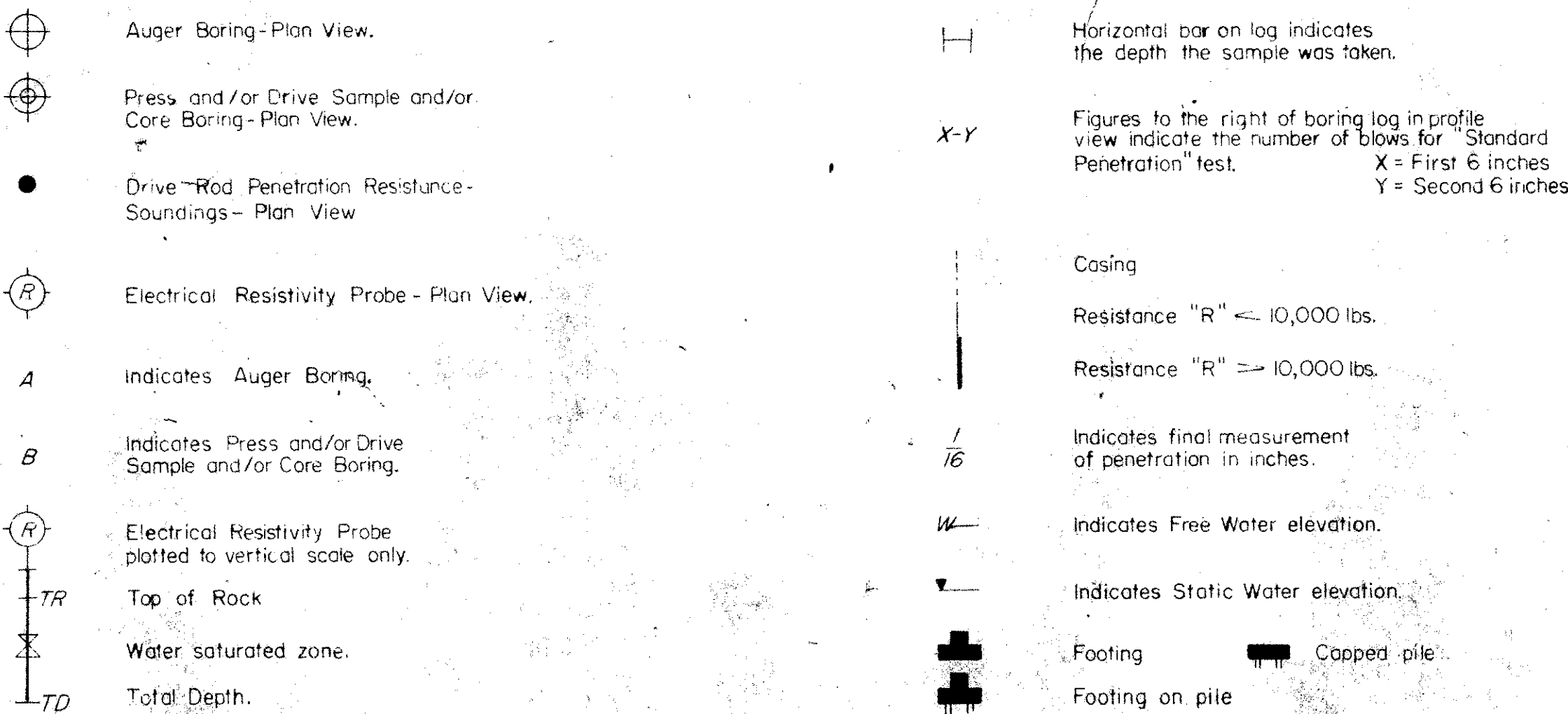
Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The Boring Log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depths of press samples, field sample number, sample description based on laboratory test results and the Casagrande A.C. classification system and gradation, plasticity and moisture content determinations. Results of strength and consolidation testing appear on separate enclosures.

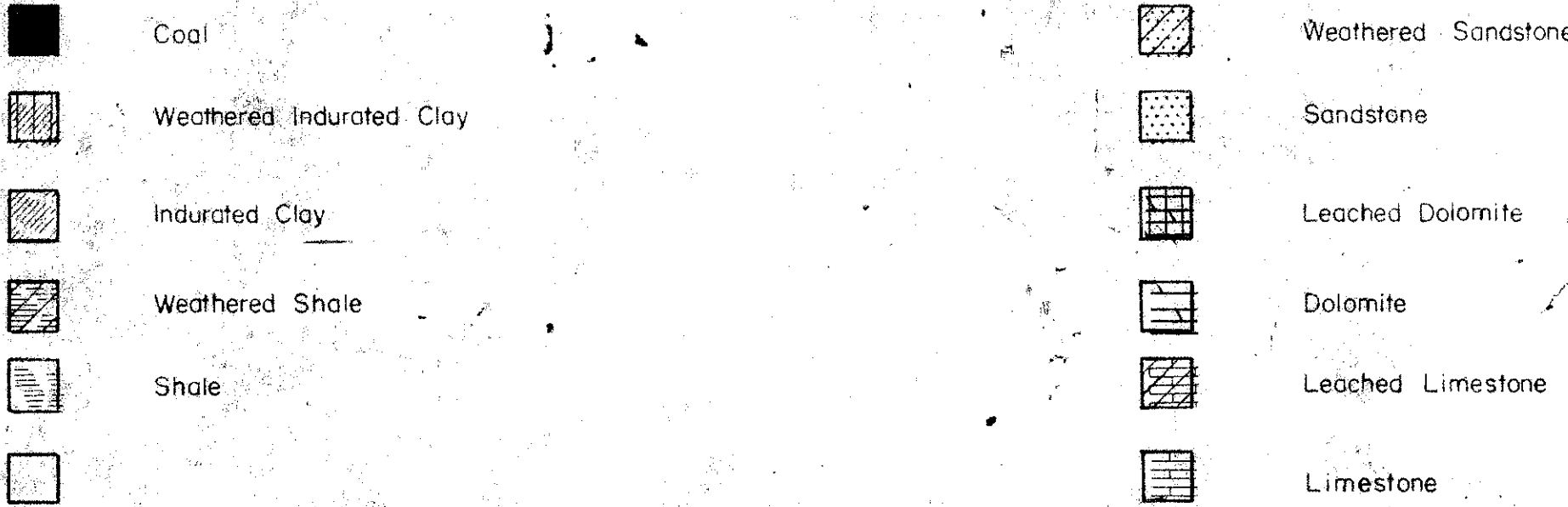
At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.



LEGEND



SYMBOLS OF ROCK TYPES



GEOLOGY OF THE SITE

The structure site is located upon the flood plain of the Tuscarawas River, which occupies a valley formed by major glacial and inter-glacial streams. Deep alluvial deposits overlie bedrock, of Pennsylvanian age.

EXPLORATION

The exploration consisted of two drive sample borings and five drive rod penetration tests, made between June 19 and July 9, 1963.

INVESTIGATIONAL FINDINGS

The borings disclosed moist, medium-dense to very dense silty and sandy gravels, silty and gravelly sands, and boulders. Heaving in the casing was encountered in boring B-8 between elevations 824 and 803 feet. The borings were terminated at 61 and 71-foot depths, elevations 803 and 792 feet.

The rod soundings, generally penetrating to greater depths, met very low and low resistance to penetration with increase in depth and were terminated upon encounter with medium-high resistance, near refusal, and refusal to penetration at 60 to 77-foot depths, elevations 788 to 804 feet, in dense gravel, sand, or other materials similar to these revealed by the borings at a higher elevation.

No free water was observed in the rod sounding holes.

No test penetrated to bedrock surface.

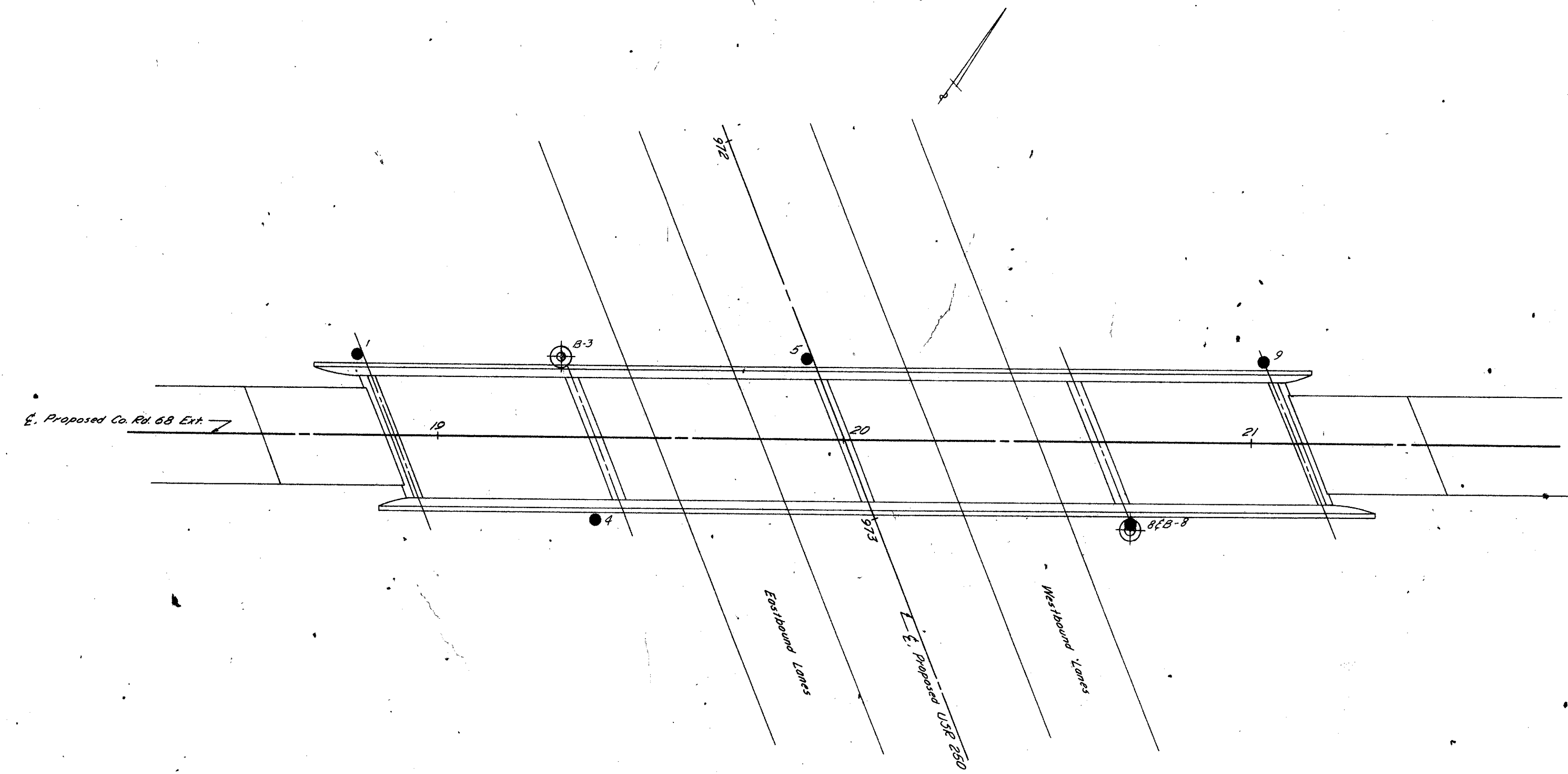
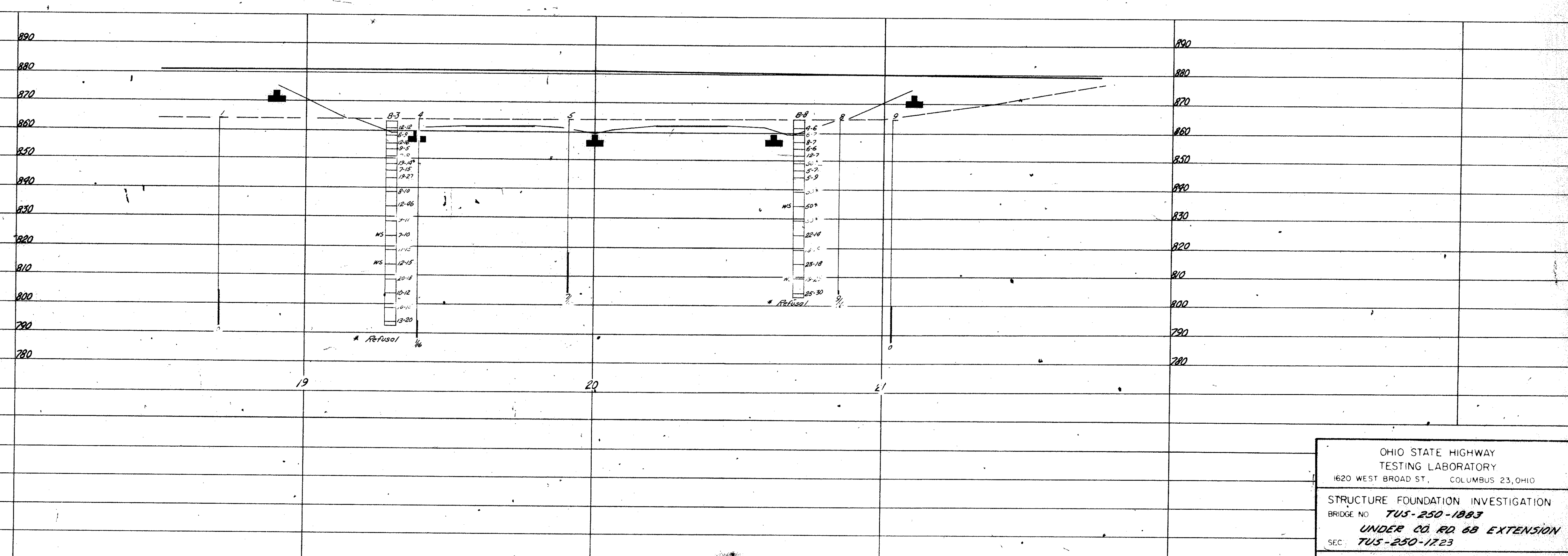
Add these sheets to Soil Profile and number consecutively

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. TUS-250-1883
UNDER CO. RD. 68 EXTENSION
SEC. TUS-250-1723

CHECKED BY F.L.P. REVIEWED BY R.D.C. DATE 8-5-63



OHIO STATE HIGHWAY TESTING LABORATORY 1620 WEST BROAD ST. COLUMBUS 23, OHIO			
STRUCTURE FOUNDATION INVESTIGATION			
BRIDGE NO. TUS-250-1883			
UNDER CO. RD. 68 EXTENSION			
SEC. TUS-250-1723			
PLAN AND PROFILE			
DRAWN BY RPM, RPS	CHECKED BY FLR	REVIEWED BY RDR	DATE 8-5-63

SCALE: 1" = 20'

LOG OF BORING															
Date Started 6-24-63			Sampler Type SS			Dia. 1 3/8"			Water Elev.						
Date Completed 6-26-63			Casing Length 70'			Dia. 1 1/2"									
Boring No. B-3			Station & Offset 19+30, 20' Lt. (REAR PIER)						Surface Elev. 863.5'						
Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% S.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
863.5	0														
861.0	2														
858.5	4	12/12			Brown Gravelly Sand	1	43	35	16	-6-	NP	NP	19		
856.0	6	6/9			Brown Silty Gravelly Sand	2	25	47	23	-5-	NP	NP	18		
853.5	8	12/16			Brown Gravelly Sand	3	44	31	17	-8-	NP	NP	11		
851.0	10	9/5			Brown Sandy Gravel	4	72	17	7	-4-	NP	NP	10		
848.5	12	7/8			Brown Sandy Gravel	5	56	34	8	-2-	NP	NP	19		
846.0	14	19/14*			Boulders (Driller's Description)										
843.5	16	(0.2')													
841.0	18	7/15			Brown Sandy Gravel	6	59	14	21	-6-	NP	NP	14		
838.5	20	19/27			Brown Silty Sandy Gravel	7	47	21	22	-10-	NP	NP	12		
836.0	22														
833.5	24														
831.0	26	8/10			Brown Sandy Gravel	8	67	16	10	-7-	NP	NP	10		
828.5	28														
826.0	30	12/46			Brown Sandy Gravel	9	68	17	7	-8-	NP	NP	7		
823.5	32														
821.0	34														
818.5	36	9/11			Brown Silty Gravelly Sand	10	43	31	16	-10-	NP	NP	11		
816.0	38														
813.5	40	7/10			Brown Sand (Wash Sample)	11									
811.0	42														
808.5	44														
806.0	46	11/15			Brown Sand and Gravel	12									
803.5	48														
801.0	50	12/15			Brown Sand (Wash Sample)	13									
798.5	52														
796.0	54														
793.5	56	20/18			Brown Sandy Gravel	14	65	22	8	-5-	NP	NP	6		
791.0	58														
788.5	60														
786.0	62	10/12			Gray Clay	15	0	0	1	19	80	48	22	24	
783.5	64														
781.0	66	10/15			Gray Silt and Clay	16	0	0	0	30	70	35	13	25	
778.5	68														
776.0	70	13/20			Gray Silt	17	0	0	1	50	49	28	6	24	
773.5	72														
*REFUSAL															
BOTTOM OF BORING															

LOG OF BORING															
Date Started 6-27-63			Sampler Type SS			Dia. 1 3/8"			Water Elev.						
Date Completed 7-9-63			Casing Length 60'			Dia. 3 1/2"									
Boring No. 4-B			Station & Offset 20+71, 21' Rt. (FORWARD PIER)									Surface Elev. 864.2'			
Elev.	Depth	Std. Pen.	Rec.	Loss	Description	Sample No.	% Agg.	% S.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
864.2	0														
861.7	2														
	4	4/6			Brown Silty Gravel	1	50	7	16	12	15	24	7	20	
859.2	6	6/7			Brown Silty Sand	2			V	I	S	U	A	L	23
856.7	8	8/7			Brown Sandy Gravel	3	80	15	3	-2-		NP	NP	15	
854.2	10	6/6			Brown Sandy Gravel	4	69	28	2	-1-		NP	NP	11	
851.7	12	12/7			Brown Sandy Gravel	5			V	I	S	U	A	L	9
849.2	14	(0.3')													
	16	50*			Boulders (Driller's Description)										
846.7	18	5/7			Brown Gravelly Sand	6	45	25	24	-6-		NP	NP	12	
844.2	20	5/9			Brown Sandy Gravel	7			V	I	S	U	A	L	9
	22														
839.2	24	(0.2')			No Sample Recovered										
	26	50*													
	28														
834.2	30	(0.3')			Brown and Gray Sandy Gravel (Wash Sample)	8			V	I	S	U	A	L	
	32	50*													
	34														
829.2	36	(0.2')			No Sample Recovered										
	38	50*													
	40														
824.2	42	22/14			Brown Sand	9	11	58	25	-6-		NP	NP	16	
	44														
819.2	46	13/19			Brown Gravelly Sand	10	35	45	17	-3-		NP	NP	13	
	48														
814.2	50	23/18			Brown Sand	11	7	63	26	-4-		NP	NP	23	
	52														
	54														
809.2	56	19/29			Brown Gravelly Sand (Wash Sample)	12			V	I	S	U	A	L	
	58														
804.2	60														
801.2	62	25/30			Brown Sand (Wash Sample)	13			V	I	S	U	A	L	
BOTTOM OF BORING															
*REFUSAL															
Sand heaving 1.5 to 2.0 feet in casing between elevations 824.2 and 801.2 feet															

OHIO STATE HIGHWAY TESTING LABORATORY 1620 WEST BROAD ST., COLUMBUS 23, OHIO			
STRUCTURE FOUNDATION INVESTIGATION BRIDGE NO. TUS-250-1883 UNDER CO. RD 68 EXTENSION SEC. TUS-250-1723			
BORING DATA			
TYPED BY JRC	CHECKED BY JRC	REVIEWED BY JRC	DATE 8-2-63

Test Location No. 1 Station B Offset 18+80.20' LT REAR ABUTMENT Surface Elev. 864.1 Water Elev. 864.1

Test Location No. 2 Station B Offset 19+39.20' RT REAR PIER Surface Elev. 864.5 Water Elev. 864.5

Test Location No. 3 Station B Offset 19+91.20' LT CENTER PIER Surface Elev. 864.3 Water Elev. 864.3

Test Location No. 4 Station B Offset 20+71.20' RT FORWARD PIER Surface Elev. 864.3 Water Elev. 864.3

Test Location No. 5 Station B Offset 21+03.20' LT FORWARD ABUTMENT Surface Elev. 864.5 Water Elev. 864.5

OHIO STATE HIGHWAY TESTING LABORATORY 1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION BRIDGE NO. TUS-250-1883 UNDER CO. RD. 68 EXTENSION SEC. TUS-250-1723

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY EC CHECKED BY RLB REVIEWED BY ROR DATE 8-5-66

GENERAL INFORMATION

Drive Rod Penetration Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface conditions may be evaluated.

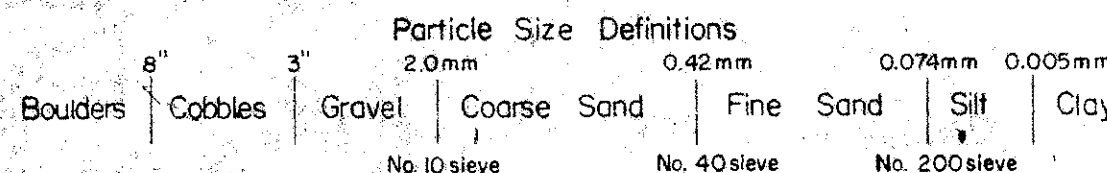
Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and/or 5-foot depth intervals, driven by means of a 140-pound drop-hammer, with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The Boring Log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depths of press samples, field sample number, sample description based on laboratory test results and the Casagrande A.C. classification system - and gradation, plasticity and moisture content determinations. Results of strength and consolidation testing appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.



LEGEND

- Auger Boring - Plan View.
- Press and/or Drive Sample and/or Core Boring - Plan View.
- Drive Rod Penetration Resistance Soundings - Plan View.
- Electrical Resistivity Probe - Plan View.
- Indicates Auger Boring.
- Indicates Press and/or Drive Sample and/or Core Boring.
- Electrical Resistivity Probe plotted to vertical scale only.
- Top of Rock
- Water saturated zone.
- Total Depth.
- Horizontal bar on log indicates the depth the sample was taken.
- Figures to the right of boring log in profile view indicate the number of blows for "Standard Penetration" test.
X = First 6 inches
Y = Second 6 inches
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Indicates final measurement of penetration in inches.
- Indicates Free Water elevation.
- Indicates Static Water elevation.
- Footings
- Capped pile
- Footings on pile

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GEOLOGY OF THE SITE

The structure site is located upon the flood plain of the Tuscarawas River, over the channel of Pike Run. Thin to moderately deep alluvial and residual deposits overlie sandstone and shale bedrock, of Pennsylvanian age.

EXPLORATION

The exploration consisted of four drive sample-core borings and thirteen drive rod penetration tests, made between June 13 and 20, 1963.

INVESTIGATIONAL FINDINGS

The borings disclosed moist, medium-dense to dense silty and sandy gravels, gravelly and sandy silts, and occasional intervals of sand and boulders to bedrock surface, encountered at 13 to 30-foot depths, elevations 870 to 820 feet. The borings were terminated at 25 to 65-foot depths, elevations 841 to 806 feet.

Rod soundings numbers 1 thru 6 met very low to low and occasionally erratic resistance to penetration with increase in depth; the remainder met increasing and generally erratic resistance. The rod soundings were terminated at 3 to 33 foot depths, elevations 873 to 819 feet. Rod soundings numbers 1 through 9 are considered to be on or slightly above bedrock surface; the remainder are considered to have penetrated below bedrock surface, as indicated by the borings, into weathered bedrock and to approximate firm bedrock surface.

On the basis of the tests, bedrock surface is considered to slope downward from the forward to the rear portion of the structure site, between elevations 870 and 820 feet, and also from the right to the left side of the site.

If it is the intention to found pier substructure units on bedrock, it is considered advisable that the open excavation be inspected in the field in order to insure that the excavations have been extended to rock throughout the entire founding area.

Unconfined compression tests on similar shale and sandstone bedrock indicates a crushing strength on the order of 175 and 200 tons per square foot, respectively.

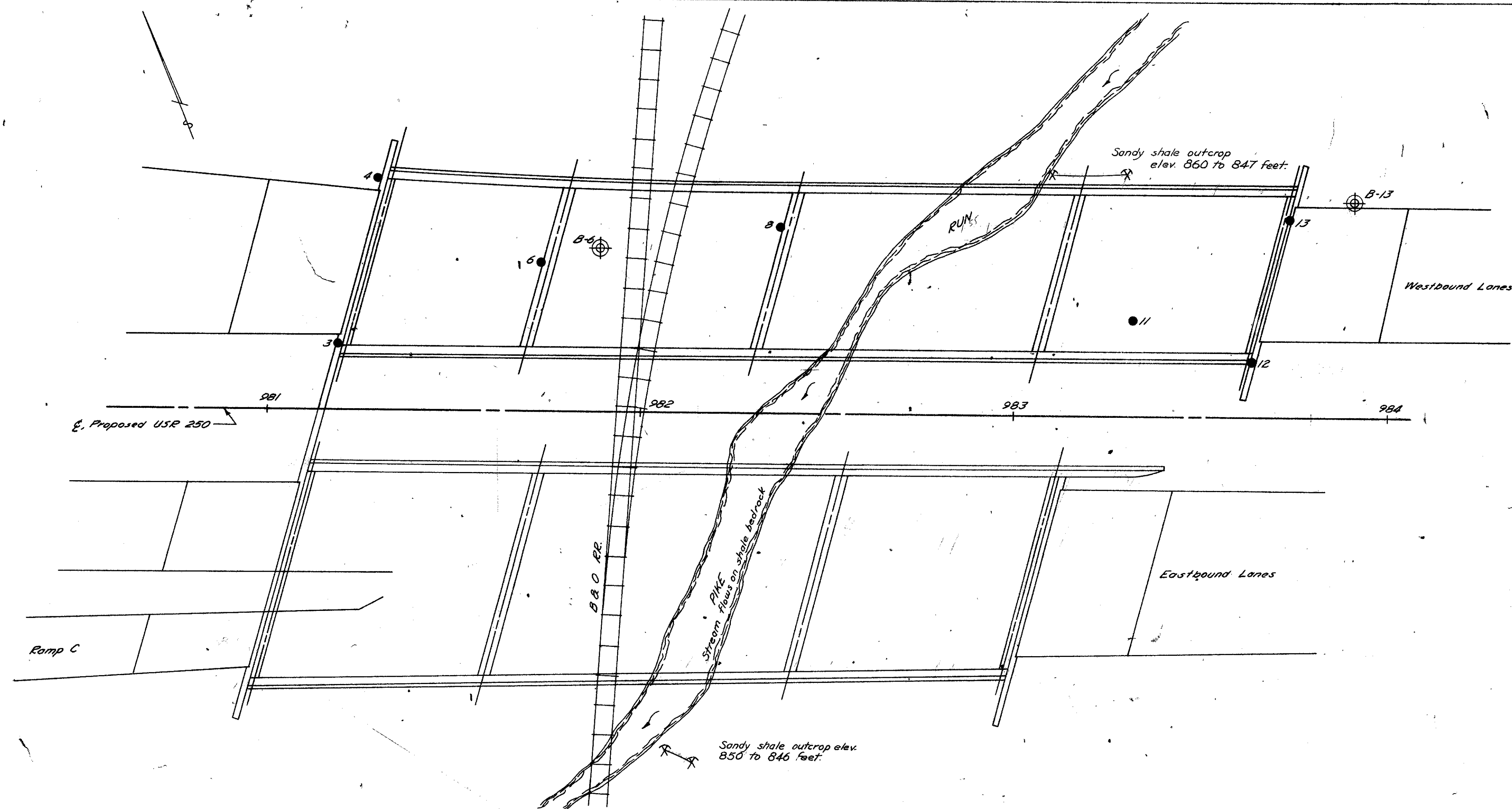
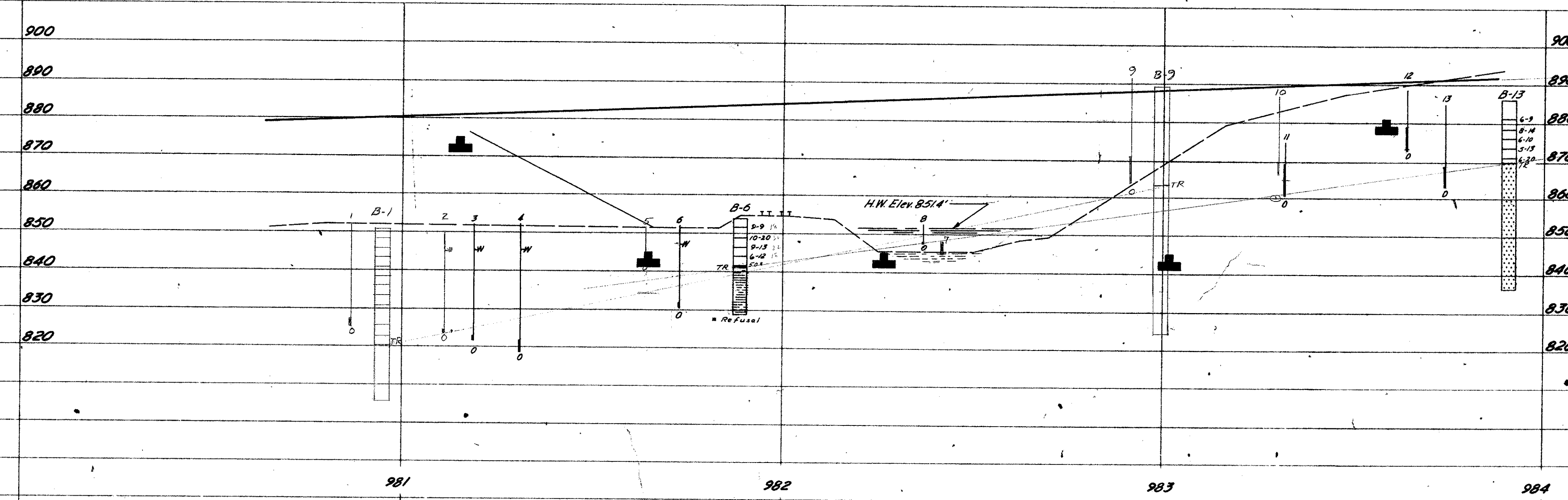
No free water was observed in the test holes.

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

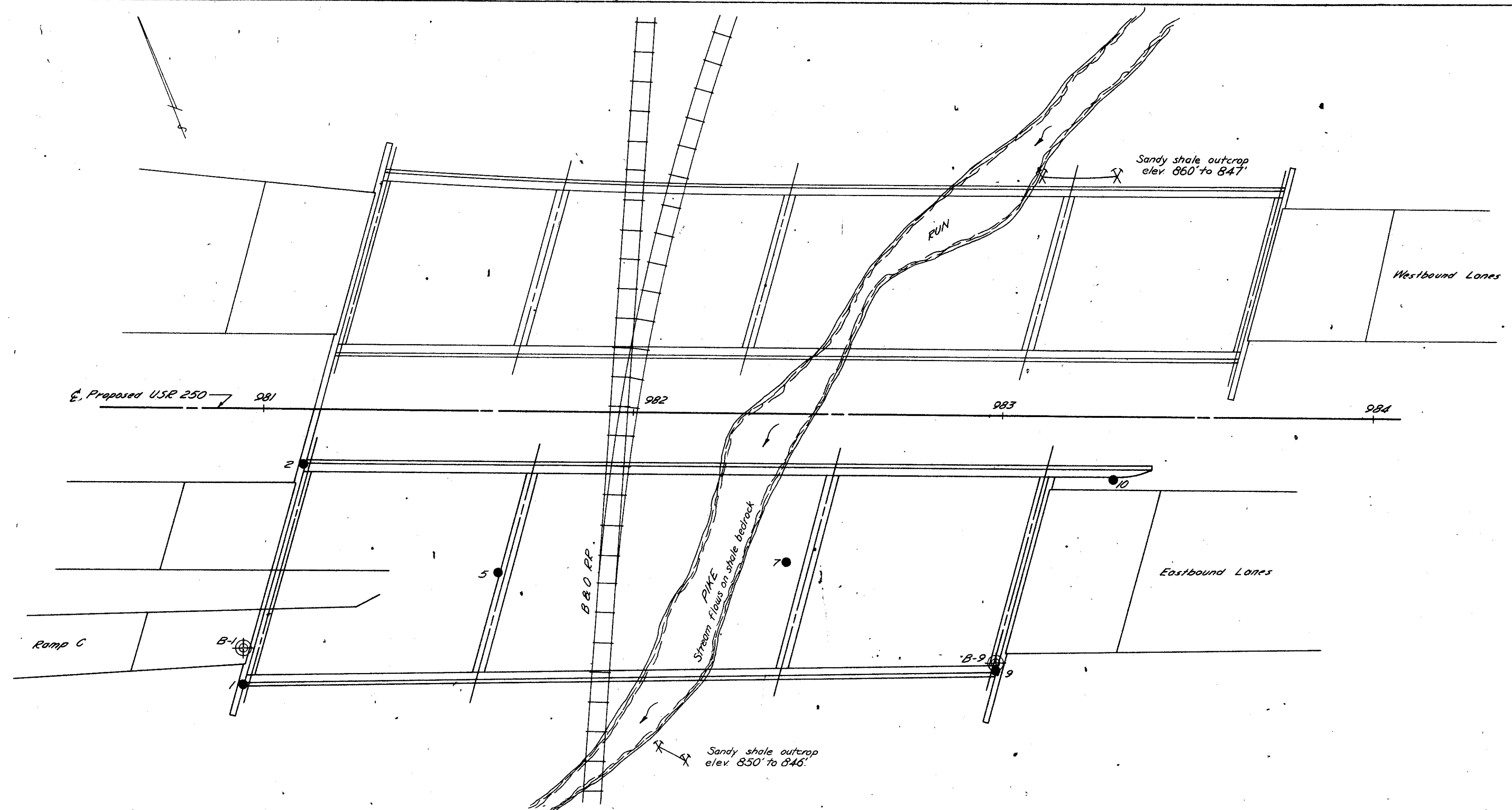
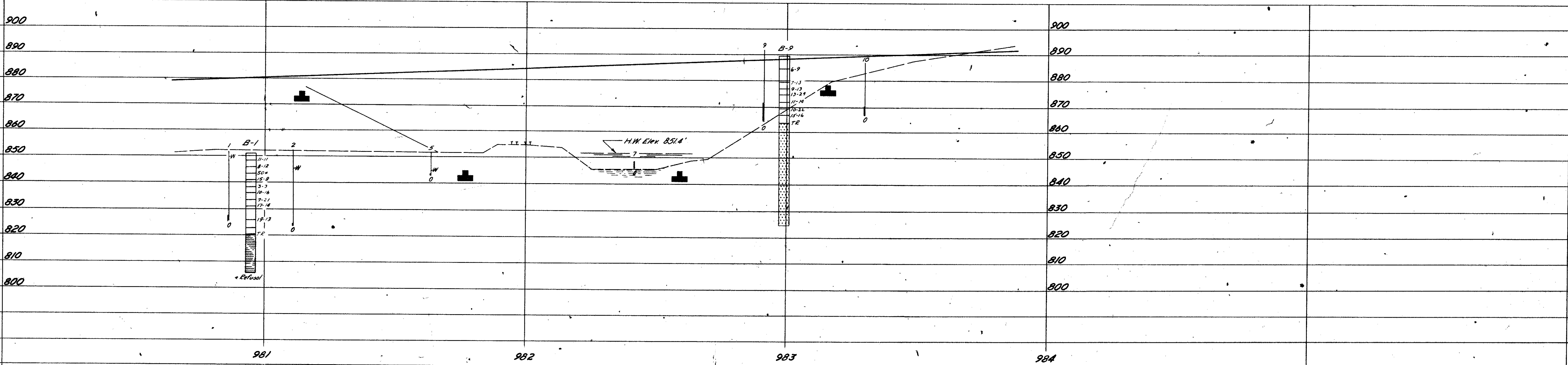
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. TUS-250-1899 L & R
OVER B & O RR & PIKE RUN
SEC. TUS-250-17.23

CHECKED BY: FLR
REVIEWED BY: RDR
DATE: 7-17-63



OHIO STATE HIGHWAY TESTING LABORATORY 421 WEST BROAD ST. COLUMBUS, OHIO			
STRUCTURE FOUNDATION INVESTIGATION PROJECT NO. TUS-250-1899 L OVER B&O RR & PIKE RUN TUS-250-1723			
PLAN AND PROFILE			
RPW	FLR	RDR	7-17-63

SCALE 1" = 20'



OHIO STATE HIGHWAY TESTING LABORATORY 1620 WEST BROAD ST., COLUMBUS 23, OHIO			
STRUCTURE FOUNDATION INVESTIGATION			
BRIDGE NO. TUS-250-1899 R			
OVER B&O RR & PIKE RUN			
SEC. TUS-250-17.23			
PLAN AND PROFILE			
DRAWN BY RPN	CHECKED BY FLR	REVIEWED BY RDR	DATE 7-17-63

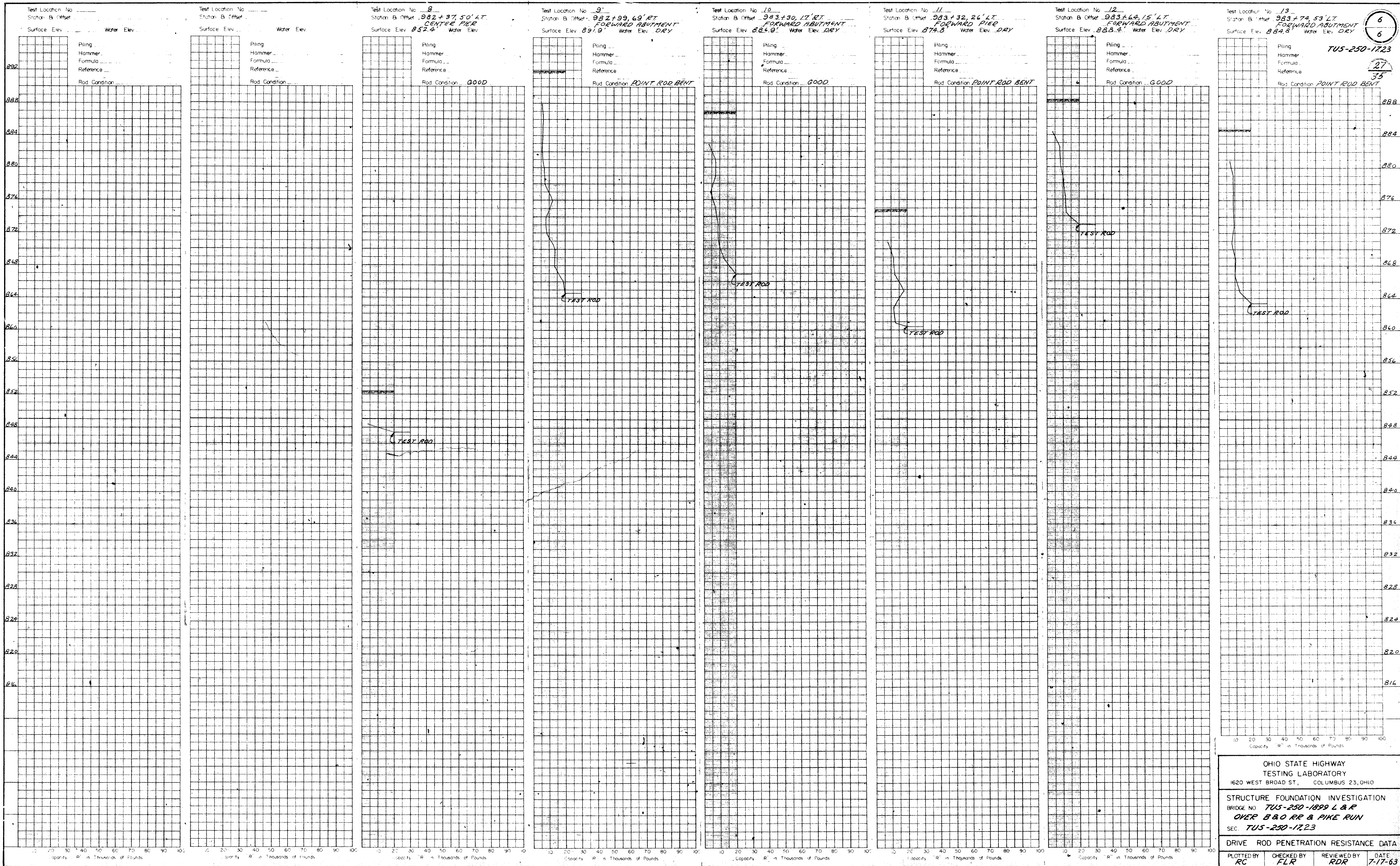
LOG OF BORING															
Date Started 6-12-63			Sampler Type SS			Dia. 1 3/8"			Water Elev.			Surface Elev. 850.8'			
Date Completed 6-12-63			Casing Length			Dia.			Station & Offset 920+95, 65' Rt. (REAR ABUTMENT)						
Boring No. R-1															
Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics								SHTL Class.
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	W.C.	
850.8	0														
848.3	2					1	74	15	9	-2	NF	NF		10	
845.8	4	11/11			Gray sandy gravel										
843.3	6	8/12			Gray gravel	2	84	10	4	-2	NF	NF		4	
840.8	8	50*			No sample recovered										
838.3	10					3	15	31	40	5	9	NF	NF	13	
835.8	12	15/8			Gray silty gravelly sand										
833.3	14	3/3			Gray sandy gravel	4	52	26	19	-3	NF	NF		11	
830.8	16	10/16			Brown sandy gravel	5								25	
828.3	18	7/21			Brown silty sand	6	14	3	71	7	5	NF	11	7	
825.8	20	17/14			Brownish-gray silty sandy gravel	7	66	10	8	-16	NF	NF		18	
823.3	22														
820.8	24														
818.3	26	19/13			Brownish-gray silty sandy gravel	8	66	3	12	12	7	NF	NF	11	
815.8	28				Gray clay and granite boulders										
813.3	30														
810.8	32				TOP OF ROCK										
808.3	34		2.5	2.5	Shale, black, carbonaceous, firm, fissile, broken, few diagonal joints, few clay seams throughout. Core loss 35%.										
805.8	36														
803.3	38		2.5	2.5											
800.8	40														
798.3	42														
795.8	44		3.1	1.9											
*REFUSAL BOTTOM OF BORING															

LOG OF BORING															
Date Started <u>6-20-63</u>			Sampler Type <u>SS</u>			Dia. <u>1 3/8"</u>			Water Elev. _____						
Date Completed <u>6-20-63</u>			Casing Length _____			Dia. _____									
Boring No. <u>R-6</u>			Station & Offset <u>921+89, 44' Lt. (REAR FIER)</u>						Surface Elev. <u>853.2'</u>						
Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	W.C.	SHTL. Class.
853.2	0														
851.3	2														
848.2	4	0/9			Brown silty sandy gravel	1	61	13	13	8	5	NF	NF	15	
846.2	6	10/20			Brown sandy gravel	2	68	11	12	5	4	NF	NF	10	
843.2	8	9/13			Brown silty sandy gravel	3	73	5	11	7	4	NF	NF	13	
841.2	10	6/12			Brown sandy gravel	4	62	22	7	-6		NF	NF	16	
839.2	12	50* (0.1')			Gray gravelly silt	5	38	1	11	34	16	NF	NF	15	
837.0	14		2.2	0.0	TOP OF ROCK										
	16														
	18		5.0	0.0											
	20				Shale, gray, arenaceous, firm, with some argillaceous intervals throughout, slightly fissile-in-part, broken and jointed. No core loss.										
	22														
822.8	24		5.0	0.0											
BOTTOM OF BORING															

LOG OF BORING															
Date Started 6-12-63			Sampler Type SS			Dia. 1 3/8"			Water Elev.						
Date Completed 6-12-63			Casing Length 25'			Dia. 3 1/2"									
Boring No. R-9			Station & Offset 922+99, 67' Rt. (FORWARD ABUTMENT)			Surface Elev. 889.4'									
Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	W.C.	SHTL Class.
889.4	0														
	2														
	4														
884.4	6	6/9			Brown silty gravelly sand	1	23	4	40	14	19	NF	NF		22
	8														
879.4	10	7/13			Brown gravelly silt	2	19	7	5	25	44	33		7	27
	12														
876.0	14	0/13			Brownish-gray gravelly sandy silt	3	22	7	28	23	20	NF	NF		18
874.4	16	17/24			Brown silty sandy gravel	4	41	6	29	15	9	NF	NF		18
871.9	18	11/14			Brown silty sandy gravel	5	58	5	23	8	6	NF	NF		18
869.4	20	10/22			Brownish-gray sandy gravelly silt	6	33	4	16	36	11	NF	NF		16
866.9	22														
861.9	24	15/16			Brownish-gray silty gravel	7	72	6	4	11	7	NF	NF		14
	26														
	28		3.5	1.5	TOP OF ROCK										
	30														
	32														
	34		4.6	0.4											
	36														
	38														
	40		10.0	0.0											
	42														
	44														
	46														
	48														
	50		9.7	0.3											
	52														
	54														
	56														
	58														
	60		9.9	0.1											
	62														
	64														
824.4															
BOTTOM OF BORING															

LOG OF BORING															
Date Started 6-13-63			Sampler Type SS			Dia. 1 3/8"			Water Elev.			Surface Elev. 886.1'			
Date Completed 6-13-63			Casing Length 14'			Dia. 3 1/2"			Station & Offset 923+91, 52' Lt. (FORWARD ABUTMENT)						
Boring No. R-13															
Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	W.C.	SHTL Class.
886.1	0														
	2														
	4														
881.1	6	6/9			Brown silty sandy gravel	1	40	5	17	24	14	NP	NP	18	
879.6	8	8/14			Brown sandy gravelly silt	2	27	8	18	22	25	NP	NP	21	
876.1	10														
	12	6/10			Brown sandy gravelly silt	3	32	5	14	26	23	24	5	20	
873.6	14	5/13			Mottled brownish-gray gravelly silt	4	25	2	4	25	44	30	7	17	
870.1	16	6/20			Light brown gravelly sandy silt	5		V	I	S	U	A	I	14	
	18		1.6	2.4	TOP OF ROCK										
	20														
	22		3.4	1.6	Sandstone, gray, firm, medium-grained; micaceous, carbonaceous laminae, cross-bedded, vertical iron stained joints at 30.0 and 47.0 feet, increases in carbonaceous and argillaceous content from 46.0' to 50.0', very broken from 16.0' to 22.0'. Sandstone in maximum 0.3' beds. Weathered to 23.0'. Core loss 30%.										
	24														
	26														
	28		4.5	0.5											
	30														
	32		4.0	1.0											
	34														
	36														
	38		4.5	0.5											
	40														
	42		3.5	1.5											
	44														
	46														
	48		5.0	0.0											
836.1	50														
BOTTOM OF BORING															

OHIO STATE HIGHWAY TESTING LABORATORY 1620 WEST BROAD ST. COLUMBUS 23, OHIO			
STRUCTURE FOUNDATION INVESTIGATION BRIDGE NO. TUS-250-1899 L&R OVER B&O RR & PIKE RUN SEC. TUS-250-1723			
BORING DATA			
TYPED BY BR	CHECKED BY FLR	REVIEWED BY RDR	DATE 7-17-63



LEGEND

	Auger Boring - Plan View.		Horizontal bar on log indicates the depth the sample was taken.
	Press and/or Drive Sample and/or Core Boring - Plan View.		Figures to the right of boring log in profile view indicate the number of blows for "Standard Penetration" test. X = First 6 inches Y = Second 6 inches
	Drive Rod Penetration Resistance - Soundings - Plan View.		Casing
	Electrical Resistivity Probe - Plan View.		Resistance "R" < 10,000 lbs.
	Indicates Auger Boring.		Resistance "R" > 10,000 lbs.
	Indicates Press and/or Drive Sample and/or Core Boring.		Indicates final measurement of penetration in inches.
	Electrical Resistivity Probe plotted to vertical scale only.		Indicates Free Water elevation.
	Top of Rock		Indicates Static Water elevation.
	Water saturated zone.		Footing
	Total Depth.		Capped pile
			Footing on pile

SYMBOLS OF ROCK TYPES

	Coal		Weathered Sandstone
	Weathered Indurated Clay		Sandstone
	Indurated Clay		Leached Dolomite
	Weathered Shale		Dolomite
	Shale		Leached Limestone
			Limestone

GENERAL INFORMATION

Drive Rod Penetration Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface conditions may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and/or 5-foot depth intervals, driven by means of a 140-pound drop-hammer, with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The Boring Log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depths of press samples, field sample number, sample description based on laboratory test results and the Casagrande A.C. classification system and gradation, plasticity and moisture content determinations. Results of strength and consolidation testing appear on separate enclosures.

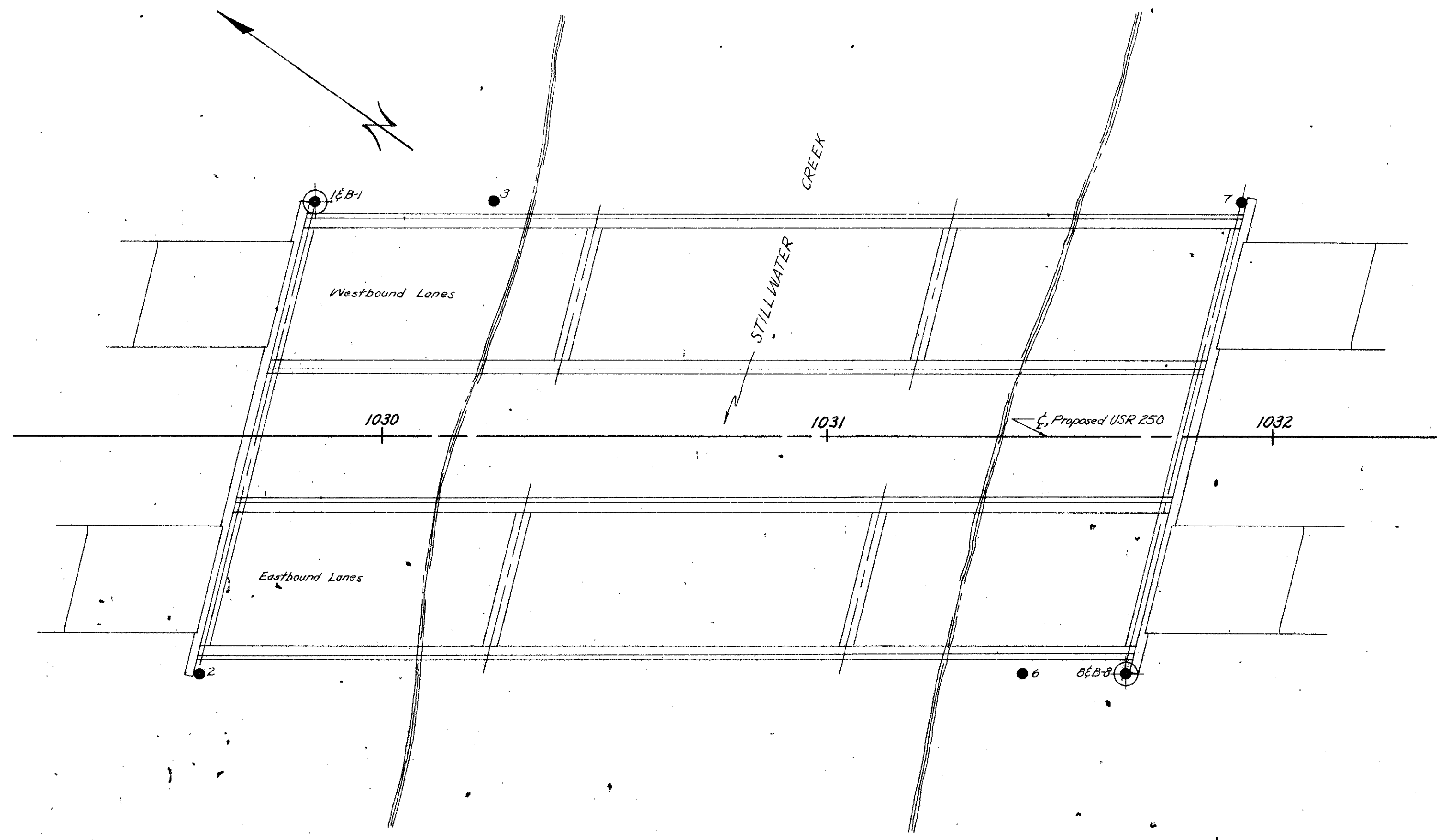
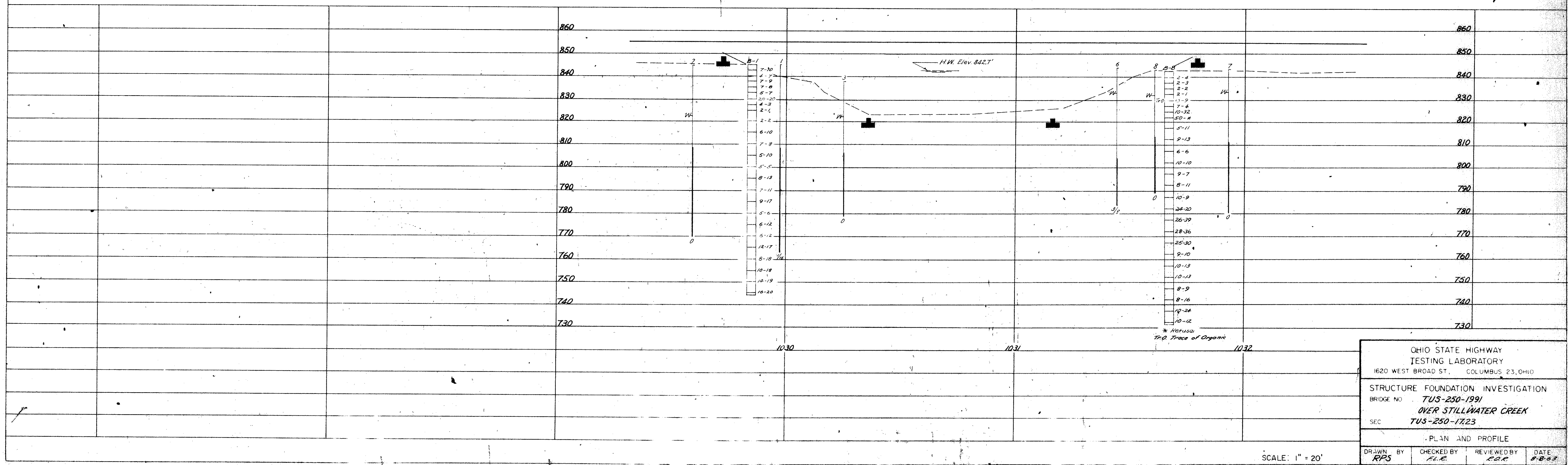
At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions									
	8"	3"	2.0mm	0.42mm	0.075mm	0.005mm			
Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay			
		No. 10 sieve	No. 40 sieve	No. 200 sieve					

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. TUS-250-199/
OVER STILLWATER CREEK
SEC. TUS-250-17.23

CHECKED BY	REVIEWED BY	DATE
RL	ELC	11-5-63



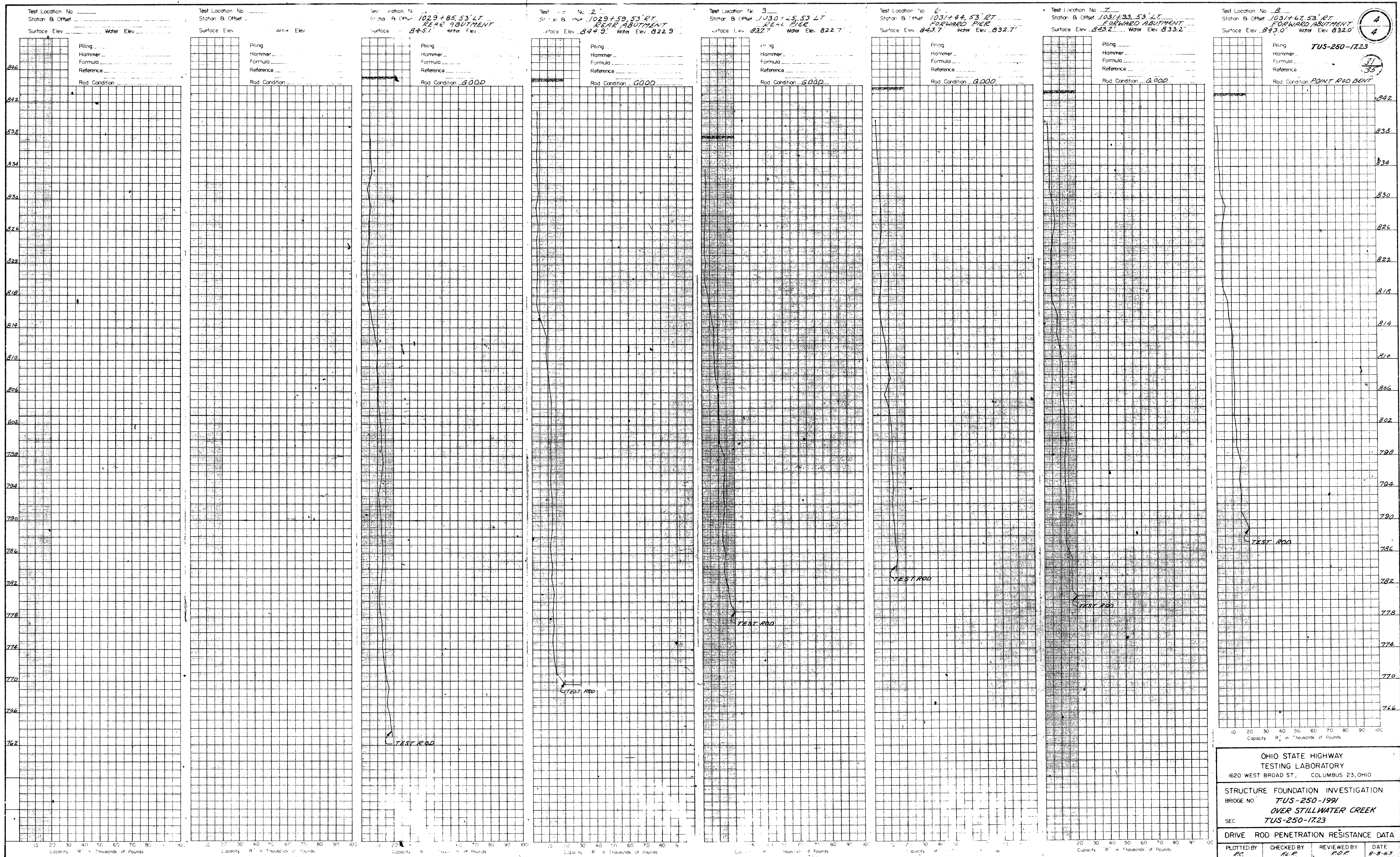
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. TUS-250-1991
OVER STILLWATER CREEK
TUS-250-1723

PLAN AND PROFILE

DRAWN BY RPS
CHECKED BY FLE
REVIEWED BY EOR
DATE 8-8-63

SCALE: 1" = 20'



GEOLOGY OF THE SITE

The structure site is located on the flood plain of Stillwater Creek, of Deep Stage origin, in an area where deep valley fill overlies bedrock, of Pennsylvanian age.

EXPLORATION

The exploration consisted of two drive sample borings and five drive rod penetration tests, made between September 3 and 29, 1964.

INVESTIGATIONAL FINDINGS

Borings encountered at-surface loose silts containing various amounts of organic material to 15-foot depth; below this, dense to very dense sandy silt, and silty sand. The borings were terminated at 51-foot depths, elevations 760 and 759 feet, after penetrating in excess of 20 feet of material requiring in excess of 30 blows per foot in the standard penetration test.

Rod soundings met gradual increase in penetration resistance with increase in depth and were terminated because of high resistance to penetration between 50 and 65-foot depths, elevations 791 and 770 feet, considered to be in very dense sands and silts, as revealed by the borings.

Free water was encountered in rod sounding holes numbers 1, 4, and 8, between elevations 837 and 832 feet.

No test penetrated to bedrock surface.

LEGEND

-  Auger Boring Location - Plan View.
-  Press and/or Drive Sample and/or Core Boring Location - Plan View.
-  Drive Rod Penetration Resistance Sounding Location - Plan View.
-  Capped Pile
-  Footing
-  Footing on Pile
-  Top of Rock

SYMBOLS OF ROCK TYPES

-  Coal
-  Weathered Indurated Clay
-  Indurated Clay
-  Weathered Shale
-  Shale
- 

-  Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
-  Figures Beside the Boring Log in Profile Indicate the Number of Blows For Standard Penetration Test.
X = Number of Blows for First 6 Inches.
Y = Number of Blows for Second 6 Inches.
-  Drive Rod Penetration Resistance Sounding Log - Profile.
-  Casing
-  Resistance "R" < 10,000 lbs.
-  Resistance "R" > 10,000 lbs.
-  Indicates Final Measurement of Penetration, in Inches.
-  Indicates Free Water Elevation.
-  Indicates Static Water Elevation.

-  Weathered Sandstone
-  Sandstone
-  Leached Dolomite
-  Dolomite
-  Leached Limestone
-  Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with post performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

Drive Sample Borings - Drive - Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and/or 5-foot depth intervals, driven by means of a 140-pound drop-hammer, with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive - press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

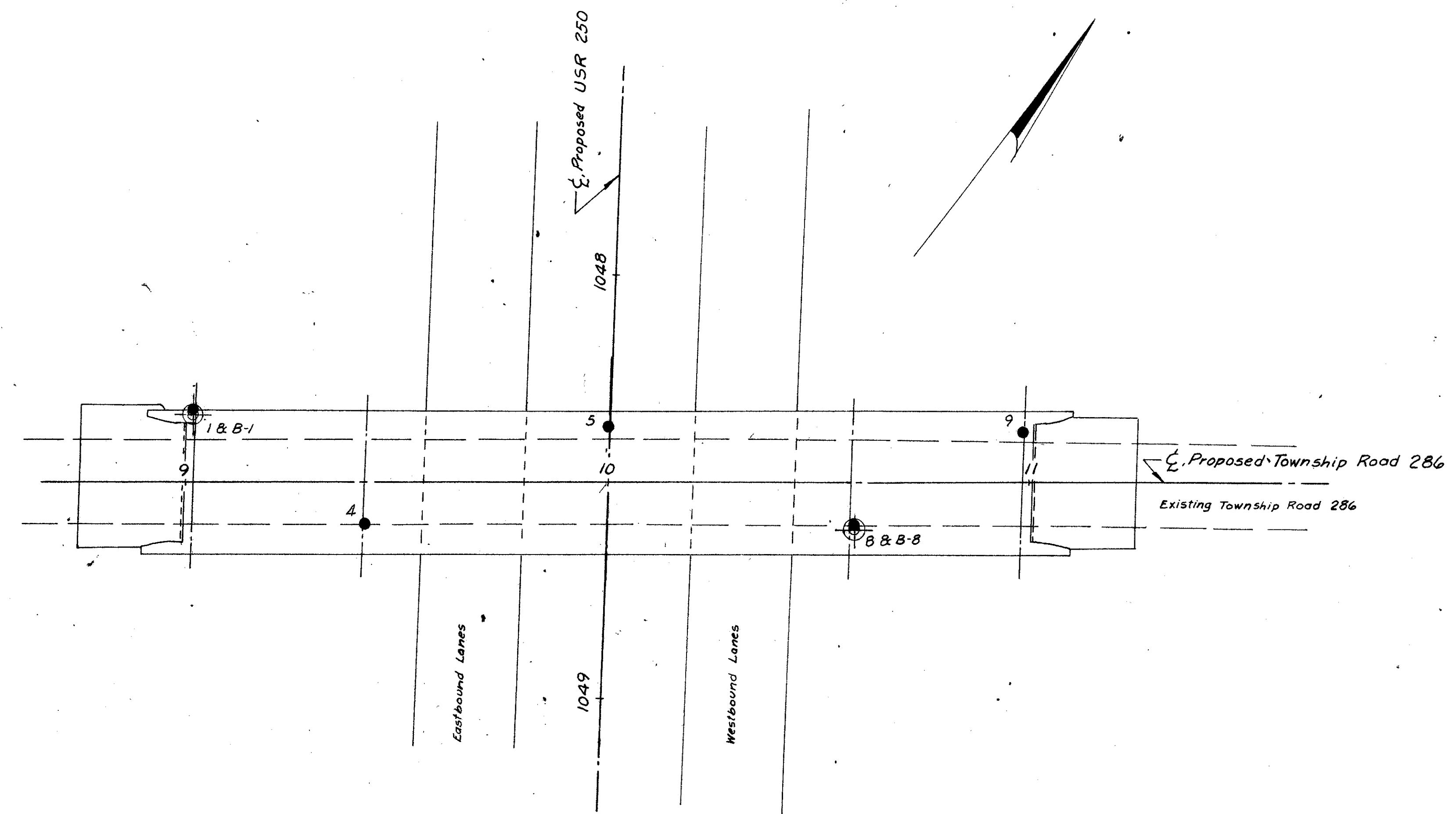
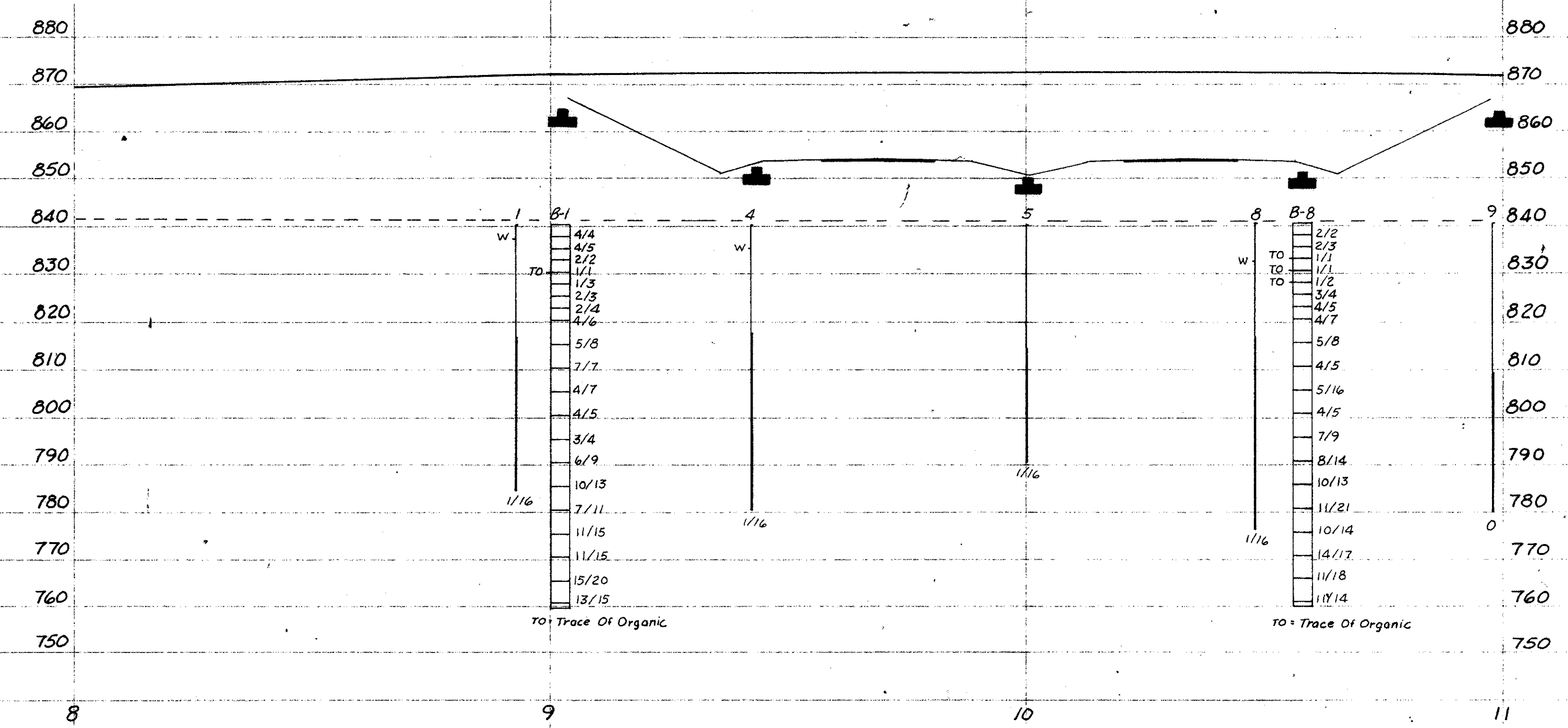
Particle Size Definitions							
Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay	
9"	3"	2.0mm	0.42mm	0.074mm	0.005mm		
		No. 10 sieve	No. 40 sieve	No. 200 sieve			

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. TUS-250-2027
UNDER TOWNSHIP ROAD 286
SEC. TUS-250-17.23

CHECKED BY L.N.L.	REVIEWED BY R.D.R.	DATE 10/16/64
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OHIO STATE HIGHWAY TESTING LABORATORY 1620 WEST BROAD ST., COLUMBUS 23, OHIO			
STRUCTURE FOUNDATION INVESTIGATION BRIDGE NO. TUS-250-2027 UNDER TOWNSHIP ROAD 286 SEC. TUS-250-17.23			
PLAN AND PROFILE			
DRAWN BY R.L.C.	CHECKED BY L.N.L.	REVIEWED BY R.D.R.	DATE 10/16/64

LOG OF BORING																			
Date Started <u>9-29-64</u>		Sampler Type <u>SS</u>		Dia. <u>1 3/8"</u>		Water Elev. _____		Station & Offset <u>9+02.16' 12" (FROM ANCHORAGE)</u>		Surface Elev. <u>840.3'</u>									
Date Completed <u>9-29-64</u>		Casing Length <u>25'</u>		Dia. <u>3 1/2"</u>															
Boring No. <u>2-1</u>																			
Elev.	Depth	Std. Pen. (lb./in.)	Rec. ft.	Loss ft.	Description								Sample No.	Physical Characteristics					SHTL Class.
840.3	0																		
837.8	2																		
835.3	4	1/4			Mottled light brown and gray sandy silt														
832.8	6	1/5			Mottled light brown and gray silt														
830.3	8	2/2			Brown and gray sandy silt														
827.8	10	1/1			Gray and brown silty sand, trace of organic														
825.3	12	1/3			Gray and brown sandy silt														
822.8	14	2/3			Gray sandy silt														
820.3	16	2/4			Gray silt														
817.8	18	1/6			Gray silt														
815.3	20	5/8			Gray silt														
812.8	22																		
810.3	24	7/7			Gray silt														
807.8	26	1/7			Gray silt														
805.3	28																		
802.8	30	1/9			Gray silt														
800.3	32																		
797.8	34	3/4			Gray clayey silt														
795.3	36	6/9			Gray and brown sandy silt														
792.8	38																		
790.3	40	10/13			Gray sandy silt														
787.8	42	7/11			Gray sandy silt														
785.3	44																		
782.8	46	11/15			Brown and gray silty sand														
780.3	48																		
777.8	50	11/15			Brown and gray silty sand														
775.3	52																		
772.8	54	13/20			Brown and gray silt														
770.3	56																		
767.8	58	15/25			Gray and brown silty sand														
765.3	60																		

LOG OF BORING															
Date Started <u>9-29-64</u>		Sampler Type <u>SS</u>		Dia. <u>1 3/8"</u>		Water Elev. _____									
Date Completed <u>9-30-64</u>		Casing Length <u>20 1/2'</u>		Dia. <u>3 1/2"</u>											
Boring No. <u>B-8</u>		Station & Offset <u>10+50.11' Rt (FORWARD PIER)</u>				Surface Elev. <u>840.7'</u>									
Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% CS.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
840.7	0														
838.2	2														
	4	2/2			Reddish Brown Clayey Silt	1	0	1	12	54	33	27	8	29	
835.7	6	2/3			Reddish Brown and Gray Sandy Silt	2	0	0	26	43	31	28	7	25	
833.2	8	1/1			Gray Silt and Clay, Trace of Organic	3	0	0	18	65	17	33	11	31	
830.7	10	1/1			Gray Sandy Silt, Trace of Organic	4	0	5	39	37	19	31	6	33	
828.2	12														
	14	1/2			Gray Sandy Silt, Trace of Organic	5	0	0	20	55	25	33	6	35	
825.7	16	3/4			Gray Sandy Silt	6	0	9	24	29	38	28	5	28	
823.2	18	4/5			Gray Sandy Silt	7	0	11	32	25	32	MP	MP	25	
820.7	20	4/7			Gray Silt	8	0	9	10	34	47	28	3	24	
	22														
	24														
815.7	26	5/8			Gray and Brown Silt	9	0	0	6	68	26	MP	MP	24	
	28														
810.7	30	4/5			Gray Silty Sand	10	0	0	20	65	15	MP	MP	23	
	32														
	34														
805.7	36	5/16			Gray Clayey Silt	11	0	0	0	52	48	30	7	30	
	38														
800.7	40														
	42	4/5			Gray Clayey Silt	12	0	0	2	48	50	34	7	30	
	44														
795.7	46	7/9			Gray and Brown Silt	13	0	0	5	60	35	MP	MP	25	
	48														
790.7	50	8/14			Gray Silt	14	0	0	3	71	26	MP	MP	26	
	52														
	54														
785.7	56	10/13			Gray Silt	15	0	0	3	48	49	28	2	29	
	58														
780.7	60														
	62	11/21			Gray Sandy Silt	16	0	1	50	31	18	MP	MP	31	
	64														
775.7	66	10/14			Gray Silt	17	0	1	9	46	44	26	6	27	
	68														
770.7	70														
	72	14/17			Brown and Gray Sandy Silt	18	0	2	56	27	15	MP	MP	21	
	74														
765.7	76	11/18			Brown and Gray Silty Sand	19	0	1	44	21	14	MP	MP	26	
	78														
	80														
760.7	82	11/20			Brown and Gray Silty Sand	20	0	1	44	15	21	MP	MP	21	

OHIO STATE HIGHWAY TESTING LABORATORY 1620 WEST BROAD ST. COLUMBUS 23, OHIO	
STRUCTURE FOUNDATION INVESTIGATION BRIDGE NO. TLS-2FO-2027 UNDER TOWNSHIP ROAD 286 SEC. TLS-2FO-17.23	
BORING DATA	
TYPED BY J.A.C.	CHECKED BY. REVIEWED BY R.C. R.D.R. 10/16/64

