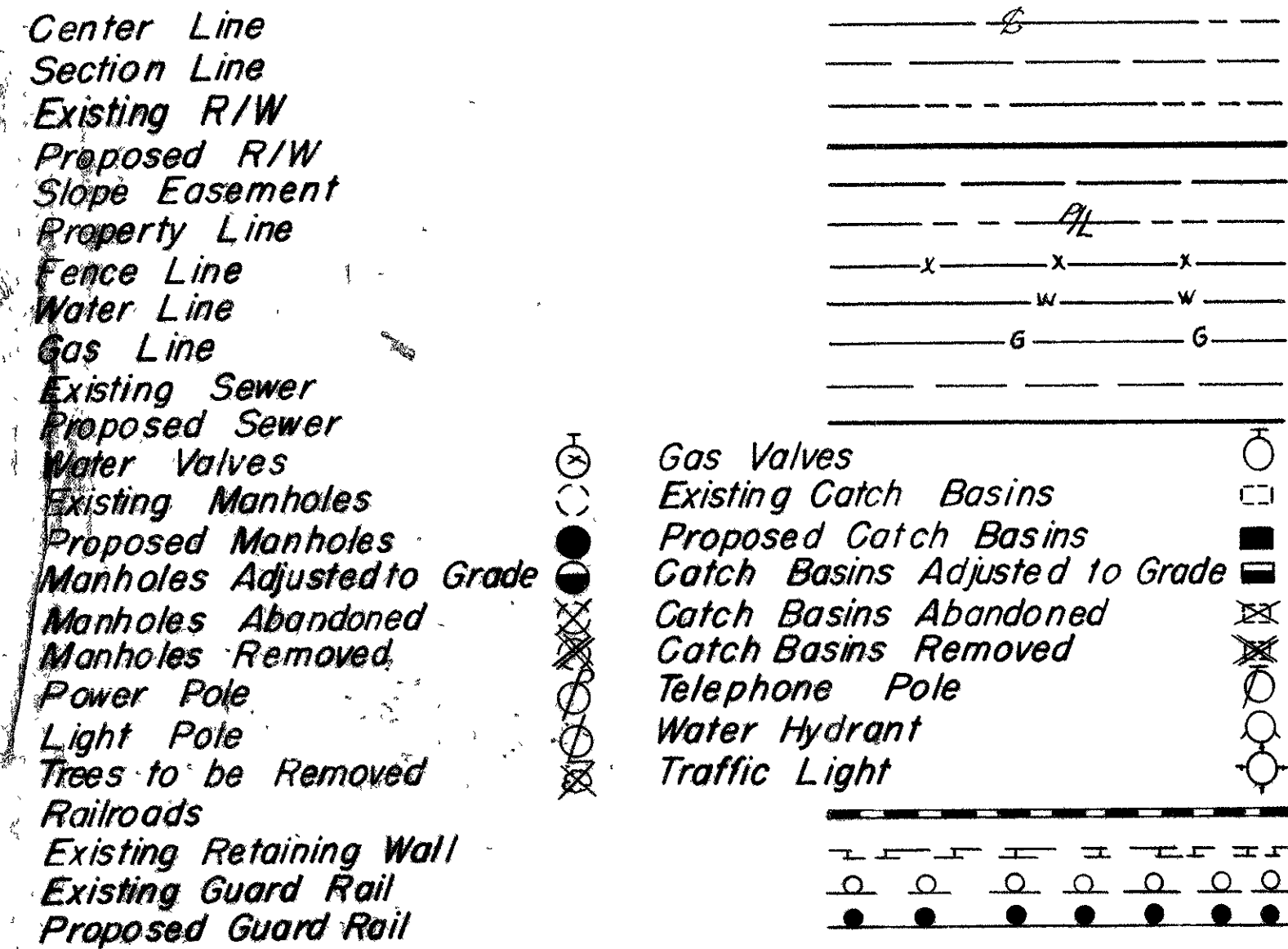


CONVENTIONAL SIGNS



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LINE DATA

Begin Project	358+00
End Project	422+25
Net Length Project ACI-1097(4)	64 25' = 1.216 mi
Work Limits: S. 2-49 Connection	280+57.52 to 295+20 = 1467.48'
Main C	334+00 to 426+68 = 9268'
Diamond Mill Rd.	47+40 to 64+00 = 1660'
Kimmel Rd.	42+50 to 58+00 = 1550'
Crestway Dr.	45+00 to 54+00 = 900'
Brookville Salem	73+50 to 86+00 = 1250'
Net Length Work ACI-1097(4)	16,090.48 = 3.047 mi.
Begin Project	295+20
End Project	342+35.08
Net Length Project F-127(2)	47 15.08' = 0.893 mi
Existing U.S. 40	65+32.02 to 70+16.32 = 484.30'
Existing U.S. 40	71+09 to 71+16 = 66.00'
Main C	295+20 to 344+74.35 = 4954.35'
Ramp C	10+44.08 to 12+57.12 = 213.04'
Pleasant Plain	50+00 to 57+00 = 700.00'
Ramp A	0+49.61 to 4+94.00 = 444.39'
Net Length Work F-127(2)	6862.08' = 1.299 mi
Total Net Length Project	11,140.08' = 2.109 mi
Total Net Length Work	22,952.56' = 4.347 mi

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS

MONTGOMERY COUNTY  
RANDOLPH TOWNSHIP  
CLAY TOWNSHIP

ACI-1097 (4) <sup>65</sup>  
F-127 (2) <sup>1-721</sup>

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	ACI-1097(4) F-127(2)	

MONTGOMERY COUNTY  
MOT - 40 - 5.98  
MOT - 49 - 12.45

1/241

"LIMITED ACCESS"

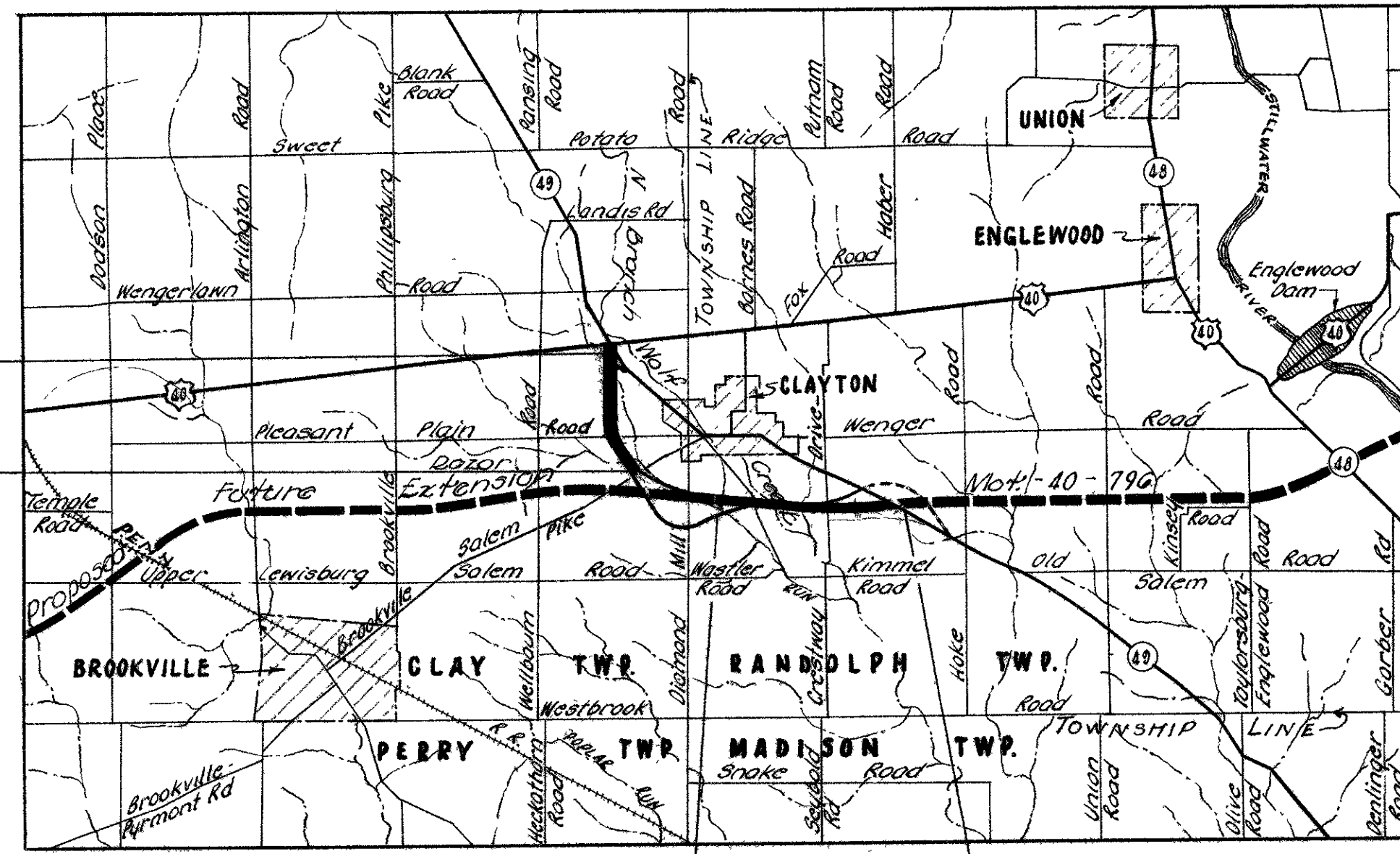
NOTE: Federal Project No. I-1097(4) appearing throughout this plan shall be considered to read ACI-1097(4).

This improvement is especially designed for thru traffic and has been declared a Limited Access Highway or Freeway by action of the Director of Highways, in accordance with the provisions of Sec. 5511.02 of The Revised Code of Ohio.

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 of the highways to traffic and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.



END PROJECT  
MOT-49-12.45  
STA 342+35.08  
S.L.M. 13.34

BEGIN PROJECT  
MOT-49-12.45  
STA. 295+20  
S.L.M. 12.45

BEGIN PROJECT  
MOT-40-5.98  
STA 358+00  
S.L.M. 5.98

END PROJECT  
MOT-40-5.98  
STA 422+25  
S.L.M. 7.96

DELIVERY POINT PENN SIDING BROOKVILLE, OHIO AVERAGE HAUL 4 MI.

Approved E. D. Ackerman  
Date 1/30/58 Division Deputy Director

Approved W. J. Mahoney  
Date 5-2-58 Deputy Director of Planning & Programming

Approved M. Corman  
Date 4-24-58 Engineer of Bridges

Approved P. E. Shultz  
Date 4-29-58 Engineer of Location & Design

Approved P. E. Washburn  
Date 5-1-58 Deputy Director of Design & Construction

Approved \_\_\_\_\_  
Date \_\_\_\_\_ First Assistant Director

Approved Roger J. Thorny  
Date 5/2/58 Acting Director of Highways

STANDARD DRAWINGS			
NUMBER	DATE	NUMBER	DATE
B-T-50-70-		L-3-A	4-1-50
71 E No. 1	10-1-47	L.J. No. 1	7-1-55
B-T-71 R	3-2-53	OS-2	12-17-56
DR-1	1-3-55	RI-1	1-3-55
G-7.07	6-1-56	S-27 PC 3	2-20-45
I-1-2-3-4-5	4-24-58	S-27 PC 4	1-4-54
I-RCB 2-2A&B	8-1-56	T-35	1-2-56
I-8 CB No. 6	5-1-52	T.J.	5-1-56
I-8 I-No. 2	12-1-54	F-1	4-1-57
I-12	7-1-54	X-8MH No. 1/A	1-3-55
I-14 G	1-22-52	AS-1-54	12-1-54
I-15 No. 1	8-1-55	SP-53	7-21-53
I-15 No. 2 A	6-1-57	CSB-2-56(6 Sheets)	3-1-58
I-15 No. 2 B	6-1-57	RB-1-55	3-1-55
I-21-23	8-1-56	A-1-54	12-1-54
I-8 MH No. 2	5-1-52	AR-1-57	3-1-58
L-1	4-1-50	P-1-54	12-1-54
L-3	4-1-50	CS-2-54(2 Sheets)	12-1-54
		CS-1-54(2 Sheets)	7-16-56

LOCATION PLAN  
PORTION TO BE IMPROVED \_\_\_\_\_  
STATE HIGHWAYS \_\_\_\_\_

SCALE  
PLAN AND PROFILE 1" = 50'  
PAVEMENT DETAILS 1 1/2" = 20'  
CROSS SECTIONS 1" = 10'

SUPPLEMENTAL SPECIFICATIONS			
NUMBER	DATE	NUMBER	DATE
B-119 Rev.	8-11-57	M-206.14	7-15-48
18 Rev.	2-6-57		
S-114 Rev.	8-1-57		
E-101	1-1-57		
5	6-8-55		
M-206.6 (b)	5-25-56		

Sheets 156, 157, 158 & 160 revised 7-25-58.

PLANS PREPARED BY  
ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
245 NORTH HIGH STREET  
COLUMBUS OHIO  
FOR  
STATE OF OHIO

DEPARTMENT OF COMMERCE  
BUREAU OF PUBLIC ROADS  
APPROVED \_\_\_\_\_  
DIVISION ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

FILE NUMBER	MONTGOMERY COUNTY MOT-40-5.98 MOT-49-12.45
DATE OF LETTING	_____
CONTRACT NUMBER	_____

DEC 1 1961  
GROUND PHOTOLAB

# LEGEND FOR TYPICAL SECTIONS

REF.	ITEM	DESCRIPTION
A		Standard Longitudinal Joint.
1	T-71	9" Reinforced Portland Cement Concrete Pavement.
2	I-22	Subbase
*3	I-18	Stabilized Crushed Aggregate.
4	L-9	Seeding & Protecting
5	I-5	Guard Rail
6	I-9	Stone Underdrains No 2
7	I-4	6" Underdrains
8	I-22	4" Subbase
9	I-12	Type 2-A Curb
10	I-12	Type 2-B Curb
11	T-35	1 1/2" Asphaltic Concrete Surface Course Type A (70-85)
12	B-35	2" Asphaltic Concrete Base Course (70-85)
13	B-70	9" Portland Cement Concrete Base Course
14	T-30	Bituminous Prime Coat, using 0.35 gal. per S.Y. Sec. M-5.2 RC 1 or RC 2 or Sec. M-5.1 BT 2 or BT 3
15	T-30	Bituminous Tack Coat, using 0.10 gal. per S.Y. as per Sec. T-30.02
**16	B-119	8" Crushed Aggregate Base (4" layers)(See note below.)
17	B-119	5" Crushed Aggregate Base
18	I-12	Curb, Type "A" or "B" as per plan.
*24	M-10	Calcium Chloride (See plan General Note)
29	B-33	5" Bituminous Macadam Base Course
30	T-31	Bituminous Surface Treatment in two applications. (See proposal note), 1st. application - 0.25 gal. Bituminous Material and 0.008 C.Y. No. 4 Aggregate per. S.Y. 2nd. Application - 0.25 gal. Bituminous Material and 0.008 C.Y. No. 6 Aggregate per. S.Y.

Note:  
No. 19 to 23 & 25 to 28 are not used.

\* For details of calcium chloride stabilization in the upper three inches of Reference 3, see note in Proposal.

\*\* Note: 8" B-119 may be placed in two 4" compacted thickness layers in lieu of 3" layers required by Suppl. Spec. B-119, when rollers only are used for compaction.

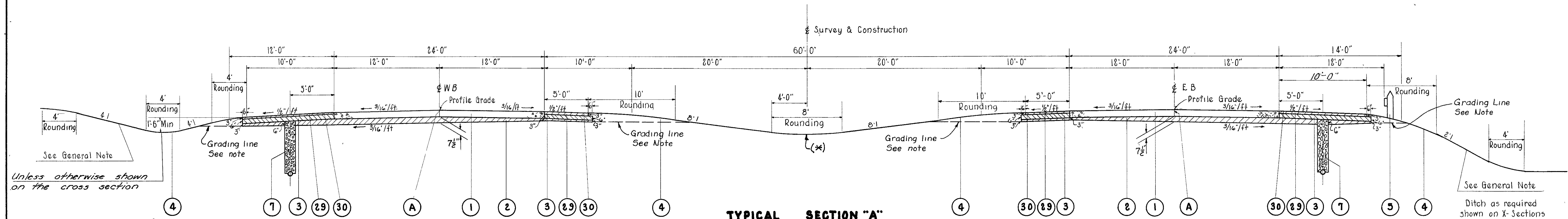
# U.S. 40 TYPICAL SECTIONS

## TYPE T-71

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

**MONTGOMERY COUNTY**  
**MOT 40 5.98**  
**MOT 49 12.45**

4  
241



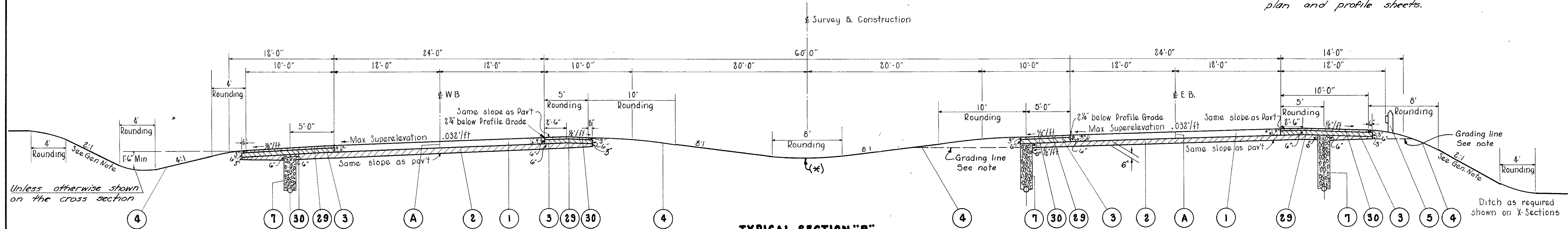
**TYPICAL SECTION "A"**  
**NORMAL SECTION**  
 DESIGN SPEED 70 M.P.H.

Sta. 334+00.00 to Sta. 352+19.95  
 Sta. 353+30.05 to Sta. 357+39.96  
 Sta. 364+48.80 to Sta. 377+25.38  
 Sta. 378+74.62 to Sta. 397+34.80  
 Sta. 409+09.80 to Sta. 422+25.00

**NOTE:** The pavement, paved berms, and subbase are not a part of this contract from Sta. 334+00 to 342+91.50 WB and from Sta. 334+00 to 358+00 EB. The grading within these limits is to be completed to the normal subgrade line extended through the shoulders. The entire roadway is to be seeded.

For acceleration and deceleration lanes and tapers, see Ramp Typical Sections and Pavement Detail Sheets.

For specific depths of I-4, see the plan and profile sheets.



**TYPICAL SECTION "B"**  
**SUPERELEVATED SECTION**  
 DESIGN SPEED 70 M.P.H.

Sta. 357+39.96 to Sta. 364+48.80  
 Sta. 397+34.80 to Sta. 409+09.80

(\*) Flow line elevation of median ditch is 2.8 ft. below elevation of  $\frac{1}{2}$  of pavement unless otherwise shown on the plans.

**GENERAL NOTES**

- For fills less than 10 feet, use 4:1 inslopes without guard rail.
- For fills greater than 10 feet, use 2:1 inslopes with guard rail.  
(Fill measured from shoulder edge to Existing Ground.)
- For cuts less than 5 feet, use 4:1 backslopes
- For cuts greater than 10 feet, use 2:1 backslopes
- For cuts between 5 and 10 feet, maintain 20 feet width from back of ditch to top of slope.  
(Cuts measured from bottom of ditch to top of cut)

ITEM	DESCRIPTION
1	T-71 9" Reinforced Portland Cement Concrete Pavement
2	I-22 Subbase
3	I-18 6" Stabilized Crushed Aggregate
4	L-9 Seeding and Protecting
5	I-15 Guard Rail
A	Standard Longitudinal Joint
7	I-4 Underdrains
29	B-33 3" Bituminous Macadam Base Course
30	T-31 Bituminous Surface Treatment in Two Applications. (See Proposal Note) 1st Application - 0.25 Gal. Bit. Material & .008 C.Y. N <sup>o</sup> 46 Agg. Per. 5 Y. 2nd Application - 0.25 Gal. Bit. Material & .008 C.Y. N <sup>o</sup> 6 Agg. Per. 5 Y.

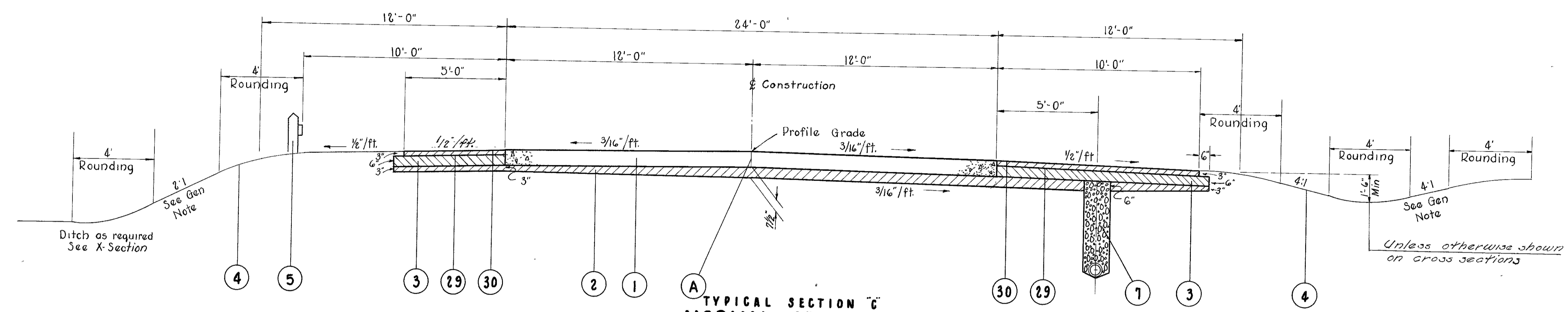
# S.R. 49 TYPICAL SECTION

## TYPE T-71

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

5  
241

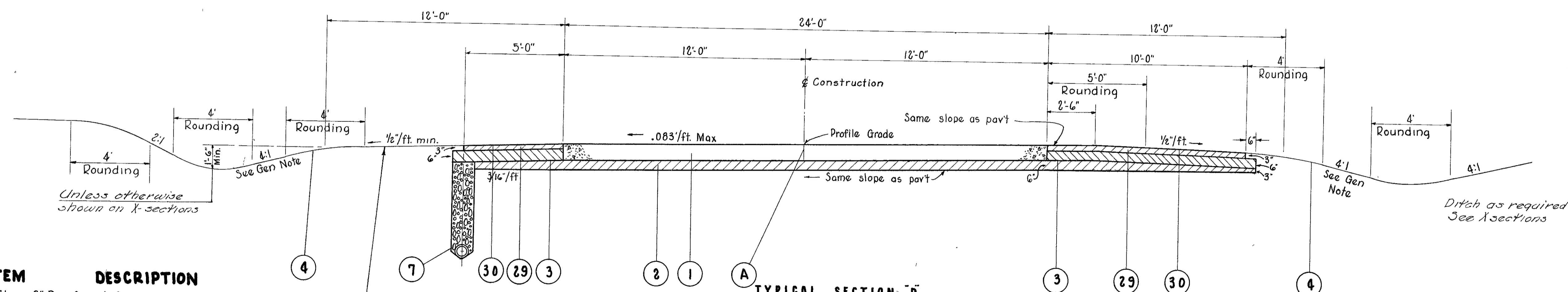
**MONTGOMERY COUNTY**  
**MOT-40-5.98**  
**MOT-49-12.45**



**TYPICAL SECTION "C"**  
**NORMAL SECTION**

DESIGN SPEED 50 M.P.H.  
N. B. S. R. 49 Sta. 291+00.50 to Sta. 294+50.00  
S. B. S. R. 49 Sta. 285+11.84 to Sta. 294+51.83 (Section is reversed.)

*For specific depths of I-4 see Plan & Profile sheets.*



**TYPICAL SECTION "D"**  
**SUPERELEVATED SECTION**

DESIGN SPEED 50 M.P.H.  
\* N. B. S. R. 49 Sta. 272+88.40 to Sta. 291+00.50  
\* J. B. S. R. 49 Sta. 254+11.50 to Sta. 281+32.02 (Section is reversed.)

**GENERAL NOTES**

- 1 For Fills less than 10 feet, use 4:1 inslopes without Guard Rail.
- 2 For Fills greater than 10 ft, use 2:1 inslopes with Guard Rail (Fill measured from shoulder edge to Existing ground)
- 3 For Cuts less than 5 feet, use 4:1 backslopes
- 4 For Cuts greater than 10 feet, use 2:1 backslopes
- 5 For Cuts between 5 and 10 feet, maintain 20 feet width from back of ditch to top of slope (Cuts measured from bottom of ditch to top of Cut.)

\* I-4 to be as shown on Typical Section "C"  
N.B. S.R. 49 Sta. 272+88.40 to Sta. 291+00.50  
S.B. S.R. 49 Sta. 254+11.50 to Sta. 267+00.00

ITEM	DESCRIPTION
1	T-71 9" Reinforced Portland Cement Concrete Pavement
2	I-22 Subbase
3	I-18 6" Stabilized Crushed Aggregate
4	L-9 Seeding and Protecting
5	I-15 Guard Rail
A	Standard Longitudinal Joints
7	I-4 6" Underdrains
29	B-33 3" Bituminous Macadam Base Course
30	T-31 Bituminous Surface Treatment in two applications. (See Proposal Notes.) 1st Application - 0.25 Gal. Bit. Material & .008 C.Y. N# 46 Agg. per. S.Y. 2nd Application - 0.25 Gal. Bit. Material & .008 C.Y. N# 6 Agg. per. S.Y.

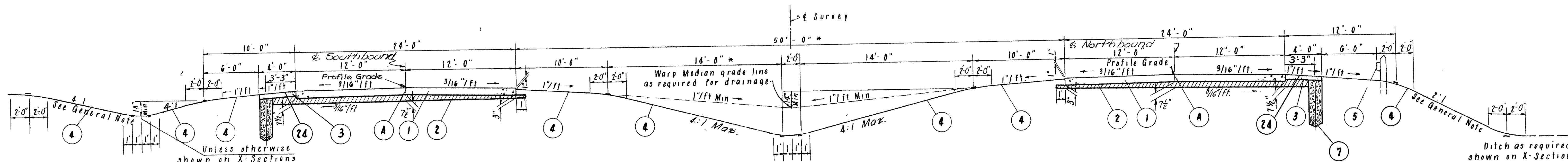
# S.R. 49 TYPICAL SECTIONS

TYPE T-71  
SCALE 3/16"=1'

FED. RD. DIST. NO.	STATE	PROJECT	TYPE
2	OHIO		

MONTGOMERY COUNTY  
MOT. - 40 5.98  
MOT. - 49 12.45

6  
241

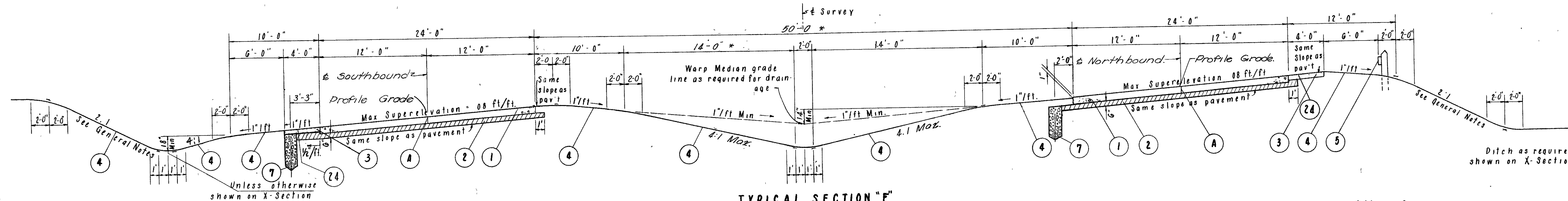
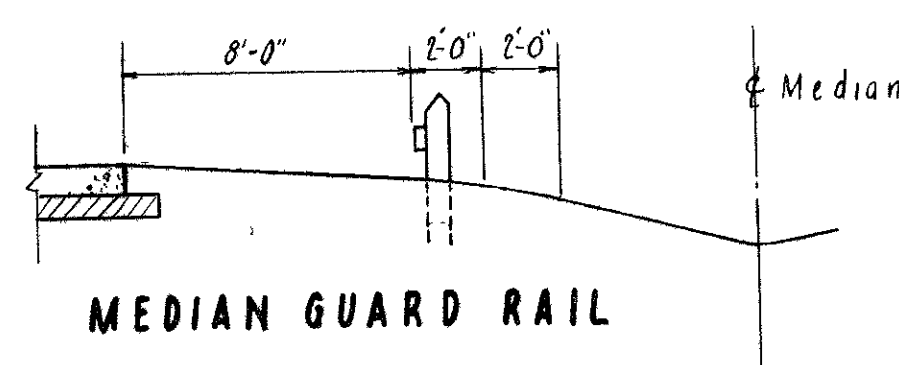


**TYPICAL SECTION "E"**  
**NORMAL SECTION**  
DESIGN SPEED - 70 MPH

Sta. 294+50.00 to Sta. 297+56.78  
Sta. 315+11.50 to Sta. 344+74.35

NOTE: For acceleration and deceleration lanes, tapers, and intersections, see Pavement Detail Sheets.

For specific depths of I-4 see Plan & Profile sheets.



**TYPICAL SECTION "F"**  
**SUPERELEVATED SECTION**  
DESIGN SPEED - 70 M.P.H.

Sta. 298+93.02 to Sta. 315+11.50

\* Sta. 294+50 to Sta. 304+73.32 Median width from pavement edge to pavement edge varies from 143' to 50'

ITEM	DESCRIPTION
①	T-71 9" Reinforced Portland Cement Concrete Pavement
②	I-22 Subbase
③	I-18 6" Stabilized Crushed Aggregate Shoulder
④	L-9 Seeding and Protecting
⑤	I-15 Guard Rail
⑦	I-4 6" Underdrains
24	M-10 Calcium Chloride
A	Standard Longitudinal Joint

- GENERAL NOTES**
- For fills less than 10 feet, use 4:1 inslopes without guard rail.
  - For fills greater than 10 feet, use 2:1 inslopes with guard rail.  
(Fill measured from shoulder edge to existing ground)
  - For cuts less than 5 feet, use 4:1 backslopes.
  - For cuts greater than 10 feet, use 2:1 backslope.
  - For cuts between 5 and 10 feet, maintain 20 foot width from back of ditch to top of slope.  
(Cuts measured from bottom of ditch to top of cut)
  - Shoulders with guard rail shall be 12'. Shoulders without guard rail shall be 10'.

SR.49 TYPICAL SECTION

# INTERSECTING ROAD TYPICAL SECTIONS

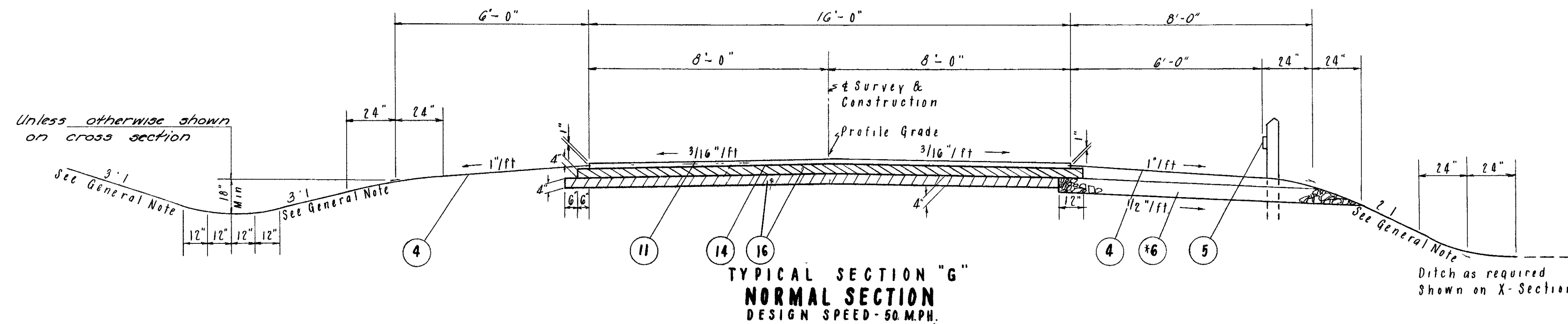
TYPE T-35 ON B-119

SCALE 1" = 3'

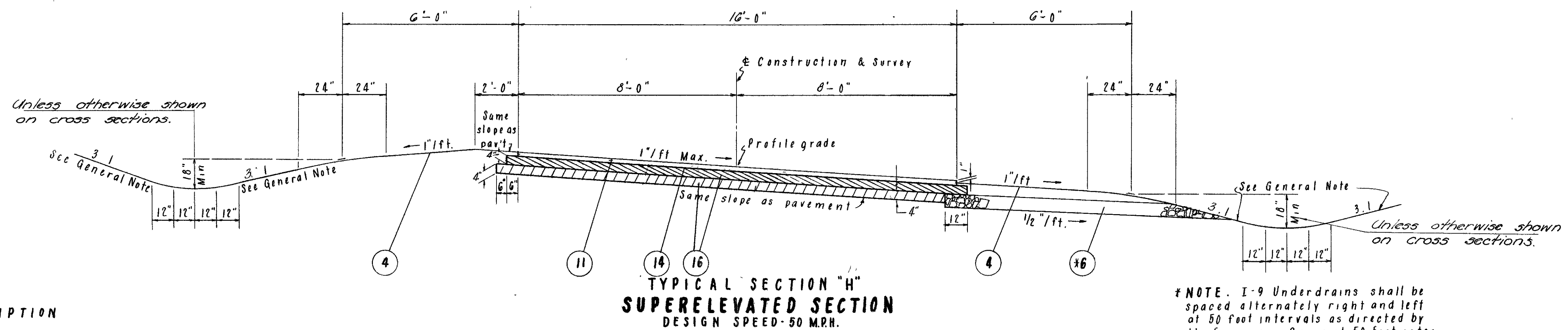
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

7  
241

MONTGOMERY COUNTY  
M.O.T. - 40- 5.98  
M.O.T. - 49- 12.45



Sta. 47+50 to Sta. 49+72.23 Kimmel Road  
Sta. 57+30.05 to Sta. 58+00.00 Kimmel Road  
Sta. 45+25.00 to Sta. 48+51.67 Crestway Drive  
Sta. 51+30.17 to Sta. 53+50.00 Crestway Drive  
Sta. 50+00.00 to Sta. 51+82.50 Pleasant Plain Road } Pavement width varies 15' to 20'  
Sta. 54+53.00 to Sta. 56+00.00 Pleasant Plain Road } see plan sheet No 132



Sta. 43+00.00 to Sta. 47+50.00 Kimmel Road  
Sta. 52+60.95 to Sta. 57+30.05 Kimmel Road

# NOTE: I-9 Underdrains shall be spaced alternately right and left at 50 foot intervals as directed by the Engineer. Space at 50 foot intervals on low side of super-elevated section.

ITEM	DESCRIPTION
4	L-9 Seeding and Protecting
5	I-15 Guard Rails
6	I-9 Stone Underdrains, No 2
11	T-35 1/2" Asphaltic Concrete Surface Course Type A (70-85)
14	T-30 Bituminous Prime Coat, using 0.35 gal. per Sq Yd, Sec M-5.2 RC-1 or RC-2, or Sec M-5.7 RT-2 or RT-3
16	B-119 8" Crushed Aggregate Base, (4" layers) (See note on sheet No 3)

### GENERAL NOTES

- For fills less than 10 feet, use 3:1 slopes without guard rail.
- For fills greater than 10 feet, use 2:1 slopes with guard rail.  
(Fill measured from shoulder edge to existing ground.)
- For cuts less than 5 feet, use 3:1 backslopes.
- For cuts greater than 5 feet, use 2:1 backslopes.  
(Cut measured from bottom of ditch to top of slope.)

**KIMMEL ROAD**  
**CRESTWAY DRIVE**  
**PLEASANT PLAIN ROAD**

# INTERSECTING ROAD TYPICAL SECTIONS

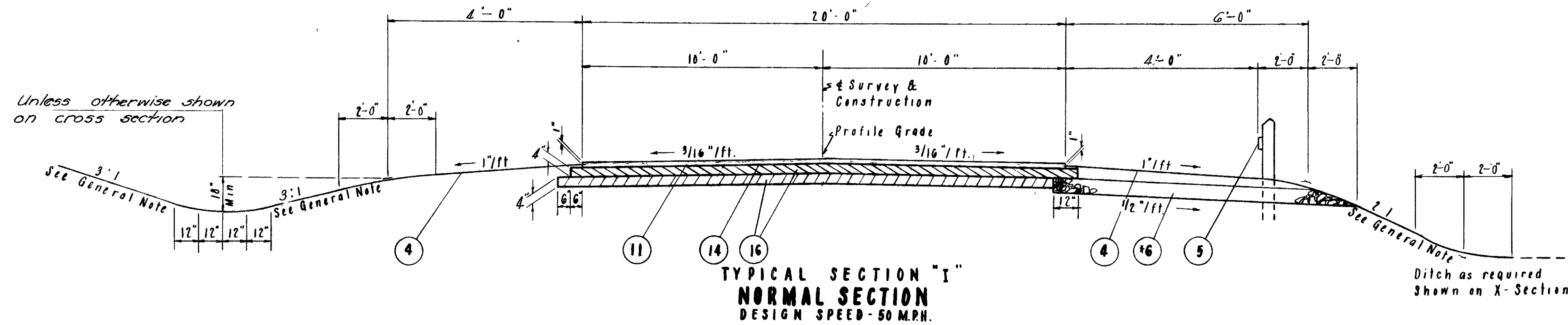
TYPE T-35 ON B-119

SCALE 1" = 3'

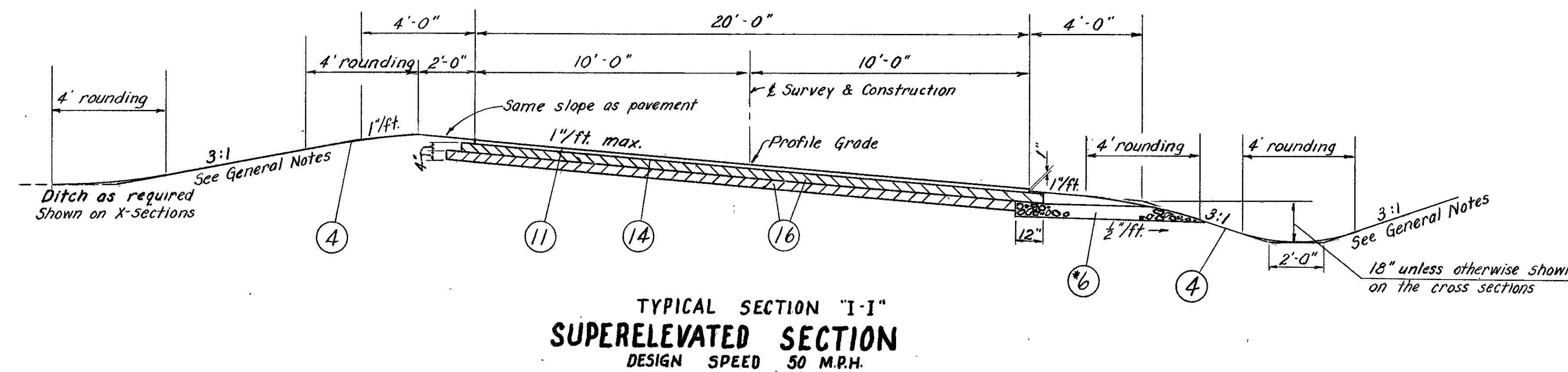
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

8  
241

MONTGOMERY COUNTY  
MOT. - 40 - 5.98  
MOT. - 49 - 12.45



Sta 47+68.00 to Sta 48+16.77 Diamond Mill Road  
Sta 49+98.37 to Sta. 51+60.86  
Sta 54+96.38 to Sta. 55+67.49  
Sta 57+29.51 to Sta. 64+00.00  
Sta. 19+09.80 to Sta. 29+87.06 Service Road



Sta. 8+82.63 to Sta. 19+09.80 Service Road  
Sta 29+87.06 to Sta. 36+79.40

Note: Sta 33+75 to Sta. 36+79.40  
Salvage section - variable  
thickness B-119. See  
detail on Sheet N<sup>o</sup> 134

\* NOTE. 1-9 Underdrains shall be spaced alternately right and left at 50 foot intervals as directed by the Engineer. Space at 50 foot intervals on the low side of super-elevated sections.

ITEM	DESCRIPTION
4	L-9 Seeding and Protecting
5	I-15 Guard Rails
6	I-9 Stone Underdrains, N <sup>o</sup> 2
11	T-35 1/2" Asphaltic Concrete Surface Course Type A (70-85)
14	T-30 Bituminous Prime Coat, using 0.35 gal. per Sq Yd, Sec. M-5.2, RC-1 or RC-2 or M-5.7 RT-2 or RT-3
16	B-119 8" Crushed Aggregate Base (4" Layers.) (See note on sheet N <sup>o</sup> 3)

### GENERAL NOTES

- For fills less than 10 feet, use 3:1 slopes without guard rail.
- For fills greater than 10 feet, use 2:1 slopes with guard rail.  
(Fill measured from shoulder edge to existing ground.)
- For cuts less than 5 feet, use 3:1 backslopes.
- For cuts greater than 5 feet, use 2:1 backslopes.  
(Cut measured from bottom of ditch to top of slope.)

SERVICE ROAD  
DIAMOND MILL ROAD  
INTERSECTING RD TYPICAL SECTIONS

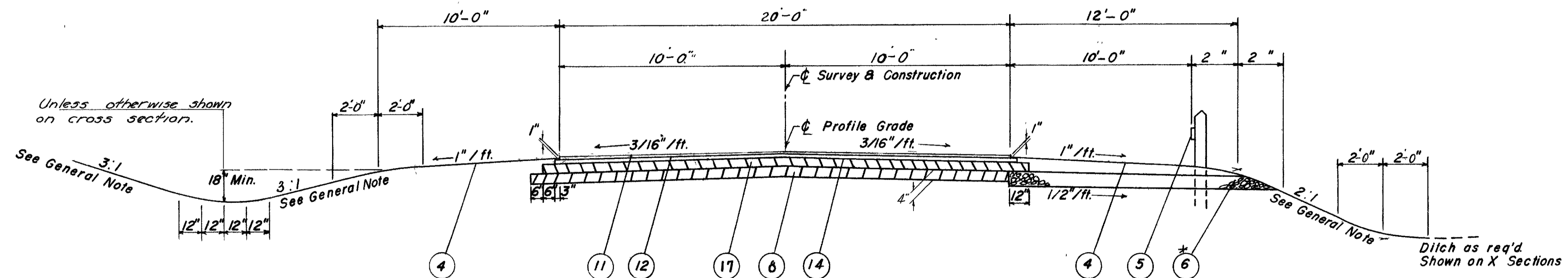
# INTERSECTING ROAD TYPICAL SECTION

TYPE T-35 ON B-119

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

9  
241

MONTGOMERY COUNTY  
MOT - 40 5.98  
MOT - 49 12.45



ITEM	DESCRIPTION
④	L-9 Seeding & Protecting
⑤	I-15 Guard Rail
⑪	T-35 1 1/2" Asphaltic Concrete Surface Course Type "A" (70-85)
⑫	B-35 2" Asphaltic Concrete Base Course (70-85)
⑭	T-30 Bituminous Prime Coat using 0.35 gal. per Sq Yd., Sec M-5.2 RC-1 or RC-2, or Sec. M-5.7 RT-2 or RT-3
⑰	B-119 5" Crushed Aggregate Base
⑧	I-22 4" Subbase
⑥	I-9 Stone Underdrains No 2

## TYPICAL SECTION "J" NORMAL SECTION

DESIGN SPEED 50 M.P.H.  
Sta 75+50 to Sta 77+98 Brookville - Salem Road  
Sta 81+19 to Sta 81+57.64 Brookville - Salem Road  
Sta 83+06.76 to Sta 86+00 Brookville - Salem Road

\* NOTE:  
I-9 Underdrains shall be spaced alternately right & left at 50' intervals as directed by the Engineer.

- GENERAL NOTES:
1. For fills less than 10', use 3:1 in slopes without guard rails
  2. For fills greater than 10', use 2:1 in slopes with guard rail. (Fills measured from shoulder edge to existing ground.)
  3. For cuts less than 5', use 3:1 back-slopes.
  4. For cuts greater than 5', use 2:1 back-slopes. (Cut measured from bottom of ditch to top of slope.)



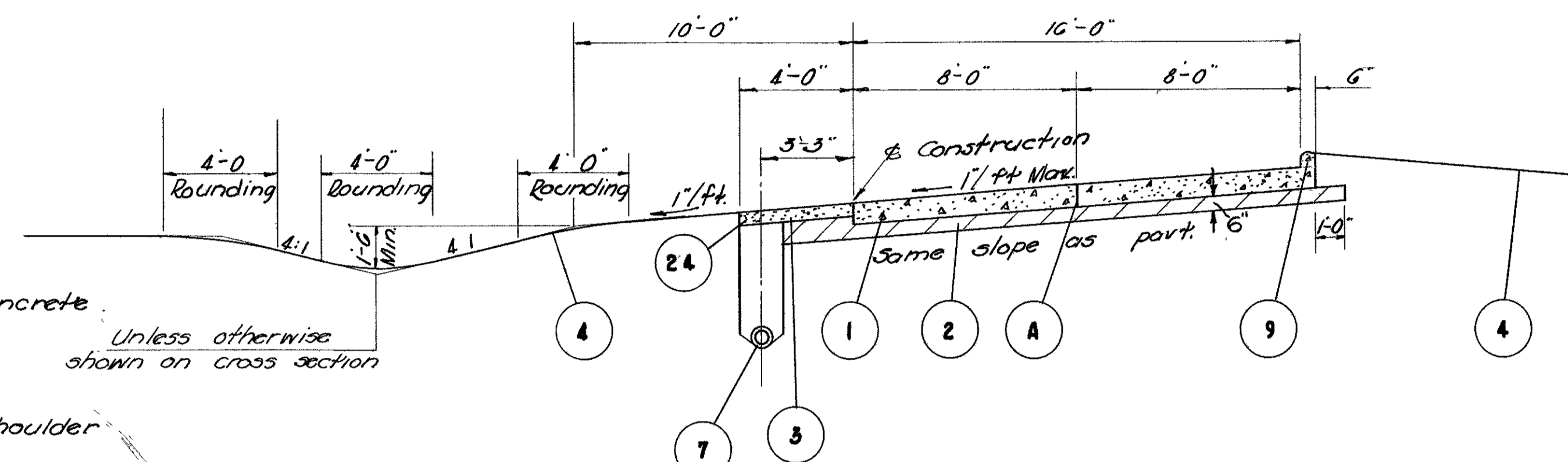
FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

10  
241

MONTGOMERY COUNTY  
MOT 40 5.98  
MOT 49 12.45

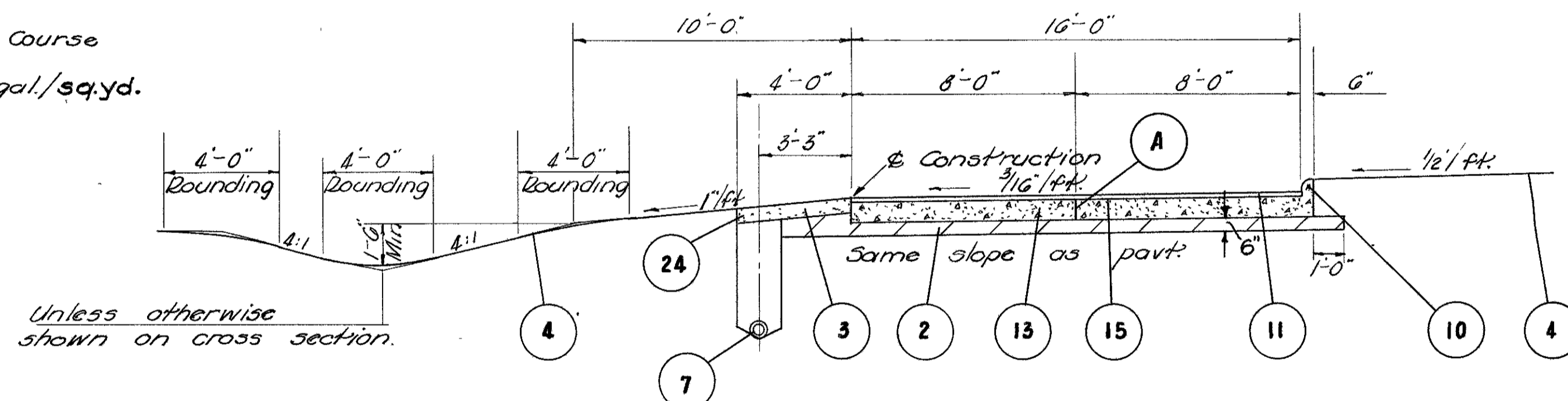
# RAMP TYPICAL SECTIONS

- | ITEM | DESCRIPTION  |
|------|--|
| ④    | Standard Longitudinal Joint                                    |
| ①    | T-71 9" Reinforced Portland Cement Concrete Pavement           |
| ②    | I-22 Subbase   |
| ③    | I-18 6" Stabilized Crushed Aggregate Shoulder                  |
| ④    | L-9 Seeding & Protecting                                       |
| ⑦    | I-4 6" Underdrains   |
| ⑨    | I-12 Type 2A Curb  |
| ⑩    | I-12 Type 2B Curb  |
| ⑪    | T-35 1 1/2" Asphaltic Concrete Surface Course Type A (70-85)   |
| ⑬    | B-70 9" Portland Cement Concrete Base Course                   |
| ⑮    | T-30 Bituminous Tack Coat, using 0.1 gal/sq.yd. as per T-30.02 |
| ⑳    | M-10 Calcium Chloride  |



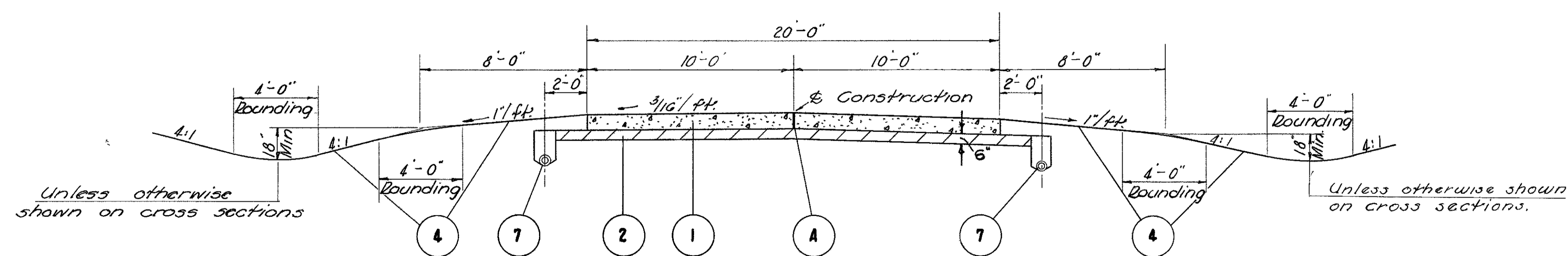
TYPICAL SECTION "K"  
TYPE T-71  
NORMAL & SUPERELEVATED SECTION  
2+35.08 to 8+32.05 Ramp B

2+35.08 to 3+20 and  
4+80 to 8+32.05 Omit curb on right.  
2+35.08 to 3+75 and  
4+50 to 8+32.05 Variable width pavement.



TYPICAL SECTION "L"  
TYPE T-35 ON B-70  
NORMAL SECTION  
10+45 to 12+18 Ramp C

11+36 to 12+12 Omit curb on right.  
10+45 to 10+88 and  
11+01.41 to 12+18 Variable width pavement.



TYPICAL SECTION "M"  
TYPE T-71  
NORMAL SECTION  
0+49 to 4+91.50 Ramp A

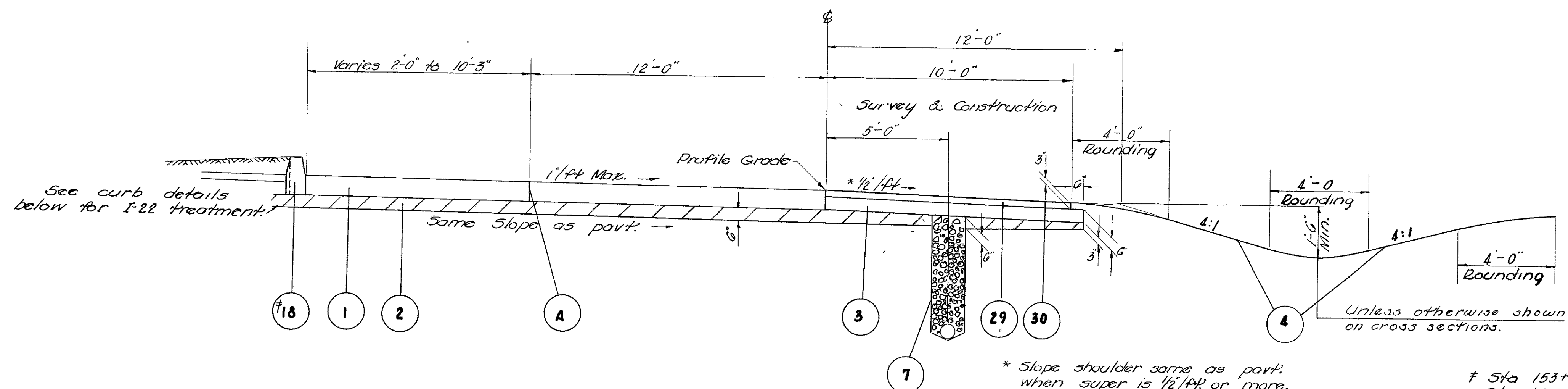
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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MONTGOMERY COUNTY  
MOT - 40 5.98  
MOT - 49 12.45

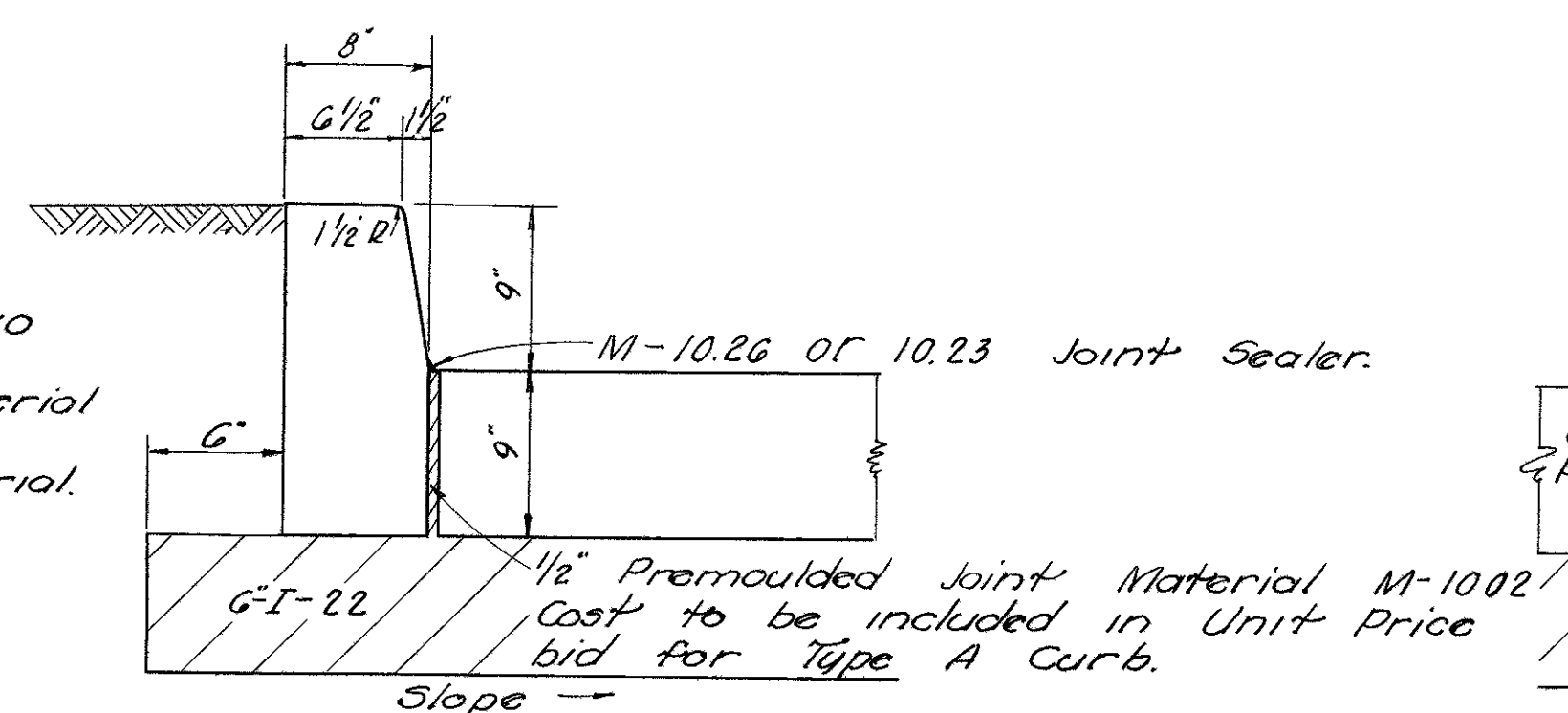
# RAMP TYPICAL SECTIONS

TYPE T-71

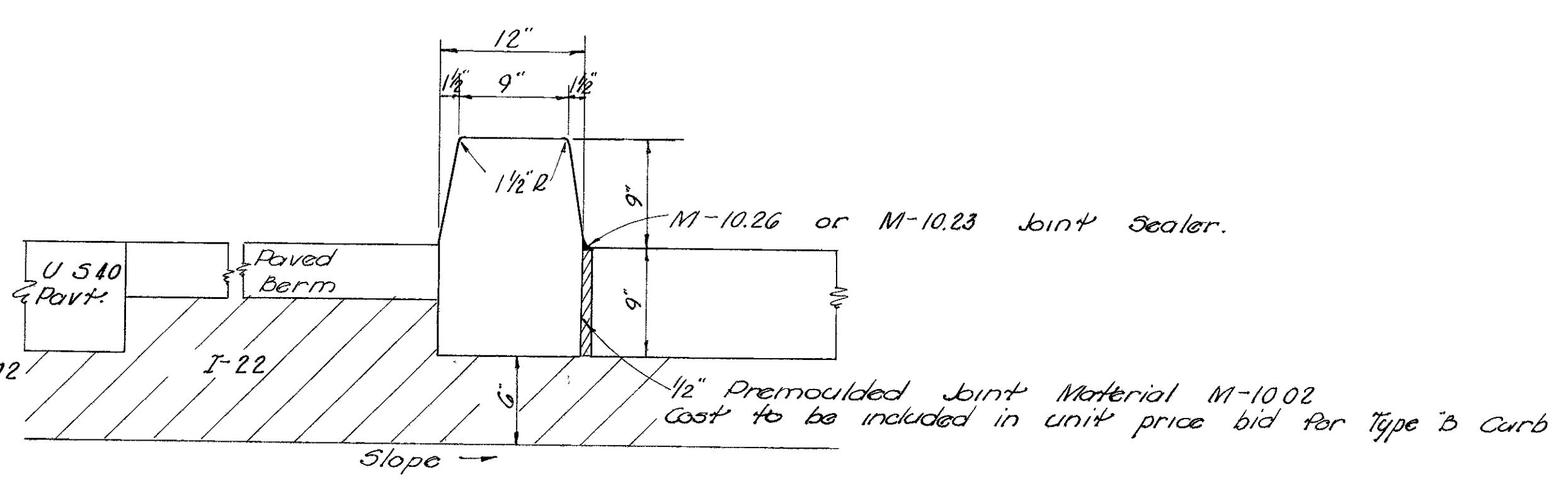


TYPICAL SECTION "N"  
NORMAL & SUPERELEVATED SECTION  
DESIGN SPEED 50 M.P.H.  
N B S. D. 49 Sta 153+75 to Sta 161+98.61

ITEM	DESCRIPTION
1 T-71	9' Reinforced Portland Cement Concrete Pavement.
2 I-22	Subbase
3 I-18	6" Stabilized Crushed Aggregate
4 L-9	Seeding & Protecting
7 I-4	6" Underdrains
16 I-12	Curb (Type "A" or "B" as indicated)
29 B-33	3" Bituminous Macadam Base Course
30 T-31	Bituminous Surface Treatment in two Applications (See proposal note) 1st. Application - 0.25 Gal. Bit. Material & .008 C.Y. No. 46 Agg. per. S.Y. 2nd. Application - 0.25 Gal. Bit. Material & .008 C.Y. No. 6 Agg. per. S.Y.



TYPE "A" CURB



TYPE "B" CURB

# GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

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MOT - 40 - 5.98  
MOT 49 12.45

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## GENERAL

### FIELD OFFICE

A field office shall be furnished by the Contractor at a convenient place for the exclusive use of the Engineer and his assistants. It shall have a minimum floor area of 500 sq. ft. It shall be the Contractor's responsibility to provide ample light and to equip and heat it as per Sec. J-0.01 (B) of the Construction and Material Specifications. The Contractor shall have a telephone installed and maintained during construction of the project.

### UTILITIES

The Contractor shall notify at least 48 hours before breaking ground, all Public Service Corporations having wires, poles, pipe, conduits, manholes or other structures that may be affected by this operation, including all structures which are affected and not shown on these plans. Any and all work required for public or private utilities will be done by and at the expense of their respective owners, unless otherwise noted on these plans.

### UNDERGROUND UTILITIES

The locations of the underground utilities shown on the plans have been obtained by diligent field checks and searches of available records. It is believed they are essentially correct, but the State of Ohio makes no guarantees as to their accuracy or completeness.

### UTILITY OWNERSHIP

Dayton Power & Light Co., Dayton, Ohio  
General Telephone Co., Brookville, Ohio.

### DESIGN SPEED

The geometrics for this project have been planned for a design speed of 70 miles per hour, unless otherwise noted on the plans.

### ELEVATION DATUM

All elevations are based on U.S.G.S. datum.

### SALVAGE MATERIAL

All materials shown on these plans which are to be removed and stored shall be stored on the right-of-way for removal by the State.

### SALVAGE OF EXISTING CATCH BASINS & INLET CASTINGS

The casting of all existing catch basins and inlets removed and abandoned under Items E-101, E-2, E-3, J-24 & I-16 shall be removed and stored on the right-of-way for removal by the State.

### REPLACEMENT

The Contractor shall replace at his own expense any item not specifically listed for removal that is damaged or destroyed by his operations.

## TRAFFIC MAINTENANCE

### DIAMOND MILL ROAD

Through traffic will be detoured over Washler Road and Kimmel Road.

### KIMMEL ROAD

Two way traffic will be maintained over existing Kimmel Road and the Temporary Run Around as shown on the plans. When Crestway Drive is opened to traffic, Kimmel Road may be closed and the traffic detoured over Crestway Drive, so that the connection of the existing and the proposed Kimmel Road may be made.

### CRESTWAY DRIVE

Through traffic will be detoured over Kimmel Road, S. R. 49 & Wenger Road except as otherwise noted.

### S. R. 49 AT STA. 422+25

Two way traffic will be maintained over the existing S. R. 49 until the North Bound S. R. 49 Ramp is completed. Traffic may then be routed over the N. B. S. R. 49 Ramp and the Temporary Run Around as shown on the plans.

### BROOKVILLE - SALEM & PLEASANT PLAIN ROADS

The work will be scheduled so that only one of these roads is closed at any one time. When one of these roads is closed, traffic will be detoured over Wellbaum Road to the other road.

### S. R. 49 AT EXISTING U.S. 40

Two way traffic will be maintained over the existing pavement. Traffic will be routed over Ramp "A" and the S. B. Lane of S. R. 49 while the North Bound Connection to existing U.S. 40 is being made.

### EXISTING U.S. 40

Two way traffic will be maintained at all times.

## GENERAL (TRAFFIC)

Within the limits of construction on the entire project, local traffic shall be maintained at all times in accordance with Sec. G-4.05 of the construction and material specifications.

500 Cy Yds. of Aggregate and 10 tons of Chloride have been included in Summary of Quantities on sheet 19 to facilitate maintenance of local traffic. Payment for construction, maintenance and removal of temporary roadways used for this purpose shall be included in lump sum bid for maintaining traffic. The Contractor shall furnish all drainage structures that are required for the temporary run-arounds. Payment shall be included in the Lump Sum price bid for S-15 Temporary Run-Around Roads.

## ROAD NAME SIGN

All County, Township, City or Village road or street name signs that will be disturbed by the construction shall be carefully removed and stored by the Contractor at the disposal of their respective owners. Payment for this operation shall be included in the Unit Price bid for Roadway Excavation. Item E-101

## R/W MONUMENTS, FEDERAL PROJECT MARKERS & SECTION MARKERS

Existing R/W Monument, Bench Marks, Federal Project and Section Markers that will be removed by construction, shall be protected by the contractor as per Section G 7.09 of the material and construction specifications, until they can be referenced and reset by the State.

## PAVEMENT

### SUPERELEVATION

Superelevated curves shall be built without crown. The crown shall be worked out of the pavement in that portion between the beginning of the transition and the point where the superelevation equals twice the crown.

### NON-RIGID PAVEMENT

The removal of non-rigid pavement is to be paid for under Item E-101 Roadway Excavation unless otherwise shown on the plans.

### PAVEMENT JOINTS

The location of construction joints not indicated on the plans shall be located by the Contractor subject to the approval of the Engineer.

### PAVEMENT JOINT SYMBOLS

————L———— Standard Longitudinal Joint.  
 ————LK———— Longitudinal Key Joint without tie bars.  
 ————E———— Standard Expansion Joint.  
 ————E———— Expansion Joint without Dowels  
 (2' Min. length)  
 ————C———— Contraction Joint.

### CURBED PAVEMENT ELEVATIONS & DIMENSIONS

Pavement edge elevations are at the backs of curbs unless otherwise indicated. Dimensions are to face of curbs unless otherwise indicated.

### PAVEMENT REPLACEMENT

The unit bid price for Item I-16 and Item I-2 shall not include payment for pavement replacement, if an existing pavement is disturbed for the exclusive performance of these items. Separate pavement replacement items have been provided for those conditions.

### B-35 ASPHALTIC CONCRETE BASE COURSE

Type "A" surface course composition shall be used in the construction of the asphaltic concrete base course on this project.

### CONTRACTION JOINTS

In addition to the pavement joints detailed for approaches and intersections the maximum distance between contraction joints shall in all cases be in accordance with Standard Drawing T.J.

# GENERAL NOTES

## ROADWAY

### EXISTING FLEXIBLE PAVEMENT

Within the limits of construction where the existing flexible pavement will have less than 6 inches (6") of fill placed upon it, the pavement shall be thoroughly scarified for its full depth, mixed with sufficient soil and properly compacted to insure the elimination of any plane of separation between it and the embankment placed thereon. Outside the limits of construction the existing flexible pavement shall be thoroughly scarified, mixed with sufficient soil and shaped to fit the supporting terrain in such a manner as to insure the growth of seed planted thereon. Payment for all the above shall be included in the unit price bid for Roadway Excavation Item E-101.

### ROUNDING OF CORNERS ON CROSS SECTIONS

The rounded corners, shown on the Typical Sections, apply to all cross sections even though otherwise shown in the these plans as per Standard Drawing B I-1.

### SPECIAL DITCHES

For special ditch grades, see cross sections.

### SEEDING & PROTECTING (MOT-40-5.98)

Quantities for Seeding Item L-9 are calculated for the soil areas between the Right of Way lines. All areas outside these lines where the vegetative growth has been injuriously disturbed by the contractor shall be restored and seeded in accordance with provisions of Sec. G-7.09 by the Contractor at his own expense. All areas surrounded by Ramps or proposed pavement shall be seeded and Estimated Quantities are included in the General Summary. On the intersecting roads quantities for Seeding are calculated for the soil areas between lines ten (10) feet outside the work limits or to the Right of Way line if such line is less than (10) feet beyond the work limits. Seeding formula for all seeded areas shall be in accordance with the following:  
65% Kentucky 31 Fescue  
25% Kentucky Bluegrass  
5% Redtop  
5% Alsike Clover  
For seeding limits on S.R. 49 see general note below.

### ITEM L-10 SODDING, I-10 RIPRAP, DUMPED ROCK FILL & I-14 PAVED GUTTER

These items are provided on the plans for erosion control. The Engineer shall check and make adjustments in location and quantities for these items where indicated by field conditions during construction.

### L-9 COMMERCIAL FERTILIZER

All areas to be seeded or sodded shall have commercial fertilizer (12-12-12 Mix) applied at the rate of twenty (20) pounds per 1000 Sq. Ft.

### REMOVAL OF TREES AND STUMPS

Trees or stumps shall be removed or preserved as indicated on the plans by the following symbols.

- ⊗ Trees or stumps to be removed.
- Trees to be preserved.

Tree lists which are crossed out are trees to be removed. The number of trees or stumps to be removed, as indicated by the above symbol, is approximate and the State of Ohio reserves the right to order the removal of additional trees or stumps, even though these trees or stumps are not indicated on the plans or are indicated to be preserved.

Payment for the removal of these additional trees or stumps is included in the Lump Sum bid for the removal of trees and stumps. Any trees considered particularly desirable and so designated by the Engineer shall be marked and left in place. The approximate number of trees and stumps to be removed are as follows.

Size	FAI	FAP
12"-18"	103	191
18"-24"	59	50
24"-30"	10	29
30"-36"	4	22
36"-42"	3	1
42"-48"	1	0
Total	180	293

### BASEMENTS

Before backfilling all basements, all floor should be broken up as per Sec. E-101.03 (c) and all drains plugged. Plugging shall be in accordance with 4th paragraph of Sec. I 16.03. Payment for same is to be included in the unit price bid for E-101 Roadway Excavation.

### GUARD RAILS

Use 50' taper with 10' normal shoulders at structures.  
Use 37.5' taper with 8' normal shoulders at structures.  
These tapers are to be used unless otherwise noted on the plans.

### EXISTING PAVEMENT REMOVAL

Outside normal construction limits, after the existing pavement has been removed, the old roadway shall be plowed, harrowed and dragged to a smooth grade. The old ditches filled and the entire area left in a neat condition. Cost of this work shall be included in the price bid for Pavement Removal, Item E-8. Areas shall then be seeded and mulched, Item L-9.

### WELLS TO BE ABANDONED

The casing shall be cut off three feet below the ground, threaded and capped. Payment for all labor and materials shall be included in the price bid per Cu. Yd. for Item E-101, Roadway Excavation.

### UNSUITABLE MATERIAL

At locations along the centerline where rubbish and dumped material exists, the unsuitable material shall be removed and paid for under Item E-101 and replaced with suitable embankment material except as otherwise noted on the plans.

### GUARD RAIL REMOVAL

The removal of any Guard Rail, Guard Rail Posts, or marker posts lying within the limits of Roadway Excavation or Embankment (and not specifically paid for under a separate item) is included in the contract Unit Price per cu. yd. bid for Item E-101 Roadway Excavation. All resulting material shall become the property of the contractor and shall be disposed of by him at no extra cost to the state except the steel rail on all existing steel beam type or steel cable on steel cable type Guard Rails shall be stored on the Right of Way at the disposal of the state.

### ITEM I-125 STRIPING

Details regarding pavement striping, and painting of curbs on this project shall be disregarded by the contractor. This work will be performed by others.

### SEEDING AND PROTECTING (MOT-49-12.45)

Quantities for seeding on S.R.49 and intersecting roads thereon 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. Seeding formula shall be the same as indicated for MOT-40-5.98.

The Contractor's attention is directed to the fact that seeding widths shown in the cross sections for S.R.49 are in error and shall be disregarded. Necessary adjustments in estimated seeding quantities for S.R.49 have been made on sheet 17. All pay quantities shall be as determined by final measurement.

### CHANNEL EXCAVATION

Where channel excavation is carried through a proposed pipe structure site, additional excavation required to obtain a stable foundation for the structure shall be measured and paid for as Item E-3, Channel Excavation.

### CONNECTIONS TO EXISTING SEWERS

At places where the plans provide for proposed drainage pipe to be connected to existing pipes, 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 sewer. The cost of this operation shall be included in the price bid for the pertinent Item I-2 Storm Sewer or I-3 Roadway Drainage.

### ITEM I-4 UNDERDRAINS

All I-4 Underdrains for which the flow line depth is 4'-6" or less below the profile grade shall be considered as shallow underdrains. Where the flow line depth is greater than 4'-6" below the profile grade they shall be considered as deep underdrains.

### PAVED GUTTER

The Contractor shall construct cut off walls at the ends of runs of all paved gutter in accordance with Standard Construction Drawing I-14G.

### CATCH BASINS

All catch basins with a depth greater than four feet shall be provided with steps. Dimensions, spacing, and materials shall be in accordance with the requirements for Standard No. 1 Manhole in the Standard Construction Drawings. The cost of all materials and labor shall be included in the unit price bid for I-8 Catch Basins.

### INLETS

Unless otherwise indicated, the elevation labeled as pavement at each curb inlet is two inches below the normal pavement elevation at the face of curb. The grate elevation shown for pavement grate inlets is the proposed elevation on the grate at the face of curb.

### DITCH PROTECTION

Where sod, paving or dumped rock has been provided on the plan for ditch protection and rock is encountered in the ditch flow line at the time of construction, the pertinent ditch protection shall be non-performed.

### LOCATION AND SIZE OF PIPES

The location, type, depth and size of all existing pipes are shown as accurately as the available information will permit. The State will not be responsible for any variations found during construction.

### REMOVAL OF EXISTING HOUSE DRAINS

The removal of all existing house connections, which includes sanitary, yard, roof, basement or other similar pipe drains within the roadway construction limits shall be classified and paid for as Item E-101, Roadway Excavation, unless otherwise itemized for payment in the plans.

### FARM DRAINS

Estimated quantities of 500 Lin. Ft. each for 6", 8" and 10" Class "A" Storm Sewers under Pavement or Approaches have been included in the General Summary to be used where directed by the Engineer to connect interrupted farm drains across roadway areas.

### I-9 STONE UNDERDRAINS

A quantity of stone underdrains has been provided at locations specified on the plans. Stone Underdrains shall be placed at approximately 50 foot intervals on alternate sides of the pavement. This quantity is to be used in its entirety. An additional 100 lin. ft. has been provided to be used as directed by the Engineer.

# GENERAL NOTES

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## USE OF EXPLOSIVES

Extreme care shall be exercised in the use of explosives so that the rock and/or shale remaining back of the construction lines will be sound, free of all loose particles and not cracked. Any rock and/or shale back of the construction lines, and lying within the limits of the Right of Way, that has been loosened or cracked by the Contractor's operations shall be removed to neat lines, as set by the Engineer, by the Contractor at no cost to the State.

Rock and/or shale, outside of the Right of Way line, that has been loosened and/or cracked by the Contractor's operations shall be removed to neat lines, as directed by the Engineer, at the Contractor's own expense. The Contractor shall pay the necessary damages to the property owners for this removal of material and necessary rights of entry.

Before acceptance of this project all loose rock and/or shale lying on or above the back slopes shall be removed by the Contractor.

The Engineer shall determine whether such material was loosened by the Contractor's operations. If the cause of such rock and/or shale being loosened was not by the Contractor's operations, the Contractor shall be paid for removal of the same at the unit price bid per cu. yd. for Item E-101, Roadway Excavation.

Explosives must be carefully selected with reference to the character of the work. It is strongly recommended that the Contractor utilize the consulting service which Explosive Manufacturers extend to their patrons.

Sec. G-7.08 of the specifications shall be strictly adhered to.

## SUBGRADE COMPACTION

The subgrade under drives or mailbox approaches, paved with T-70, T-35 or B-119 or B-119 shall be compacted to a depth of six (6) inches to the density requirements of Table III, Item E-101.

Payment for subgrade compaction as specified above shall be included in the unit price bid for Item E-101 Roadway Excavation.

## TREE PROTECTION

100 Sq. Yd. of L-7 Riprap for tree protection and 54 Cu. Yd. of L-8 Aggregate for Tree Root Aeration have been placed in the General Summary to be used at locations designated by the Engineer.

## AGRICULTURAL LIMING MATERIALS

The location and need for agricultural liming materials will be determined by laboratory tests, after rough grading operations have been performed. Quantities of agricultural liming materials as shown on the plans are sufficient for the entire project, but will be non-performed for the areas where tests show that the liming material is not needed.

## REFERENCE MONUMENTS AS PER PLAN

See Sheet No. 13B for details of reference monuments.

## MONUMENT BOXES

Ten (10) monument boxes have been set up on the general summary to be used as required and where deemed necessary by the engineer to preserve existing monuments.

## SURPLUS EXCAVATION

Surplus excavation shall be used to flatten the slopes as directed by the Engineer in areas where the cost of the drainage items will not be increased and where the required R/W will not be increased.

## SANITARY SEWERS

Connecting Private Drainage to the Highway drainage system when the Private drains carry effluent or drainage from leaching bed outlets, cellar drains, sink drains or polluted water of any kind will not be permitted. If such are encountered they shall be plugged with Class "E" Concrete at the R/W line. Payment for the plugging shall be included in the Unit Price bid for Roadway Excavation Item E-101.

## ESTIMATED QUANTITIES

Specific location 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 construction on this project.

## CONSTRUCTION LAYOUT STAKES

See note in proposal for work included in this lump sum pay item.

## UNDERGROUND ELECTRICAL DUCT

Ducts shall be encased by Class "C" Concrete having a minimum thickness of three inches, shall have at least 24 inches cover below subgrade and shall be pitched to drain. Ends of ducts shall extend two feet beyond edge of shoulder pavement or back of curb. One No. 10 AWG galvanized steel drop wire shall be left in each duct and ends of ducts shall be closed with capped bushings.

Cost of furnishing and placing Class "C" encasement shall be included in the unit price bid for Item S-25 Conduit.

Excavation and backfill shall conform with the applicable provisions of Item E-2.

## DUCT MARKERS

Concrete markers, manufactured in accordance with details shown on the plan shall be placed over each end of each underground duct. Markers shall be installed flat on the ground, projecting one inch above finished grade. Cost of furnishing and installing markers shall be included in the unit price bid for conduit. See sheet No. 24.

# GENERAL SUMMARY

ITEM	QUANTITIES		UNIT	DESCRIPTION	SERVICE RD NO FED. PARTICIPATION
	F.A.I	F.A.P. TOTAL			
	ACI-1097(4)	F-127(2)		<b>ROADWAY</b>	
				<b>TYPE CODE 7221</b>	
E-101	105,132	32,727	S.Y.	Compacted subgrade.	5771
E-101	421,538	39,936	C.Y.	Roadway excavation as per plan.	5877
E-8		180	S.Y.	Removal and disposal of existing wearing course	65
E-8	2247	2247	S.Y.	Removal and disposal of existing pavement as per plan.	
E-8		229	Lin. Ft.	Removal and disposal of existing curb.	
E-9	Lump.	Lump.	Lump.	Removal of trees & stumps.	
E-11	1,908	391	M-Gal.	Water.	50
E-12	1,250	247	Lin. Ft.	Pipe removed, 15" and under.	
E-12	659	659	Lin. Ft.	Pipe removed, over 15"	
I-8	10	10	each	Standard Monument bases	
I-8	40	98	each	Reference Monuments, as per plan	
I-15	2,302.5	37.5	Lin. Ft.	Guard Rail steel beam standard type (deep) as per standard drawing I-15 No. 2-A	
I-15	6,661.41	804.59	Lin. Ft.	Guard Rail steel beam standard type (shallow) as per standard drawing I-15 No. 2-B	
I-15	125	125	Lin. Ft.	Guard Rail steel beam barrier type (deep) as per standard drawing I-15 No. 2-B	
I-15	137.5	137.5	Lin. Ft.	Temporary Guard Rail, as per plan	
I-18	5,898	705	C.Y.	Stabilized Crushed Aggregate shoulders & approaches, as per plan.	
S-5-10	17,379	9,280	Lin. Ft.	Fence, type A.	
L-7	100	100	S.Y.	Bi-prop for tree protection	
L-8	54	54	C.Y.	Aggregate for tree root aeration	
L-9	339,083	95,341	S.Y.	Seeding & Protecting as per plan.	15,236
L-9	30.68	9.54	Tons.	Commercial Fertilizer (12-12-12)	1.37
L-9	153.41	47.70	Tons.	Agricultural liming material, as per plan.	6.86
L-10	8719	2,682	S.Y.	Soeding	5
L-10	772	1,047	S.Y.	Soeding for special berm & slope protection	
Special	4,230	4,230	S.Y.	Mixing Calcium Chloride and Crushed Aggregate.	
Special	2	2	each	Bridge type overhead sign assembly, type "A" 60' span	
Special	1	1	each	Bridge type overhead sign assembly, type "A" 44' span	
S-15	Lump	Lump	Lump.	Temporary runaround road, as per plan.	
S-15	875	875	C.Y.	Furnishing and placing aggregate for traffic bound surface course	
S-15	17.5	2.1	Tons.	Furnishing and applying calcium chloride	
S-25	306	306	L.F.	4" Asbestos Cement Conduity, Sec. M-206.14 as per plan.	
E-2	1,344	302	C.Y.	Excavation for structures	5
E-3	1,313	1373	C.Y.	Channel excavation	
I-1	176	119	L.F.	12" Pipe for driveways M-G.4 (a)	126
I-1	34	34	L.F.	15" Pipe for driveways M-G.4 (a)	
I-2	500	500	L.F.	6" Storm Sewers under pavement or approaches M-G.5 (b) or M-G.8 (b)	
I-2	500	500	L.F.	8" Storm Sewers under pavement or approaches M-G.5 (b) or M-G.8 (b)	
I-2	500	500	L.F.	10" Storm Sewers under pavement or approaches M-G.5 (b) or M-G.8 (b)	
I-2	92	92	L.F.	15" Storm Sewers under pavement or approaches M-G.5 (b) or M-G.8 (b)	
I-2	1,267	772	L.F.	12" Class B" Storm Sewers under pavement or approaches	
I-2	108	108	L.F.	12" Storm Sewers M-G.5(b) or M-G.8(b), under pavement or approaches.	
I-2	40	40	L.F.	6" Storm Sewers M-G.4 (b)(c), without perforations.	
I-2	142	142	L.F.	12" Storm Sewers, Class "A"	
I-2	106	106	L.F.	18" Storm Sewers, Class "A"	
I-2	10	10	L.F.	8" Storm Sewers, M-G.4 (c)	
I-2	24	10	L.F.	12" Storm Sewers M-G.4 (c)	
I-2	10	10	L.F.	18" Storm Sewers M-G.4 (c)	
I-2	66	66	L.F.	24" Class B" Storm Sewers M-G.4 (a) or M-G.8 (b)	
I-3	673	673	L.F.	12" Roadway drainage with porous backfill	
I-3	10	10	L.F.	12" Pipe Outlet, Sec. M-6.4(c), for Roadway Drainage.	
I-4	13,618	5,085	L.F.	6" Underdrains (deep)	
I-4	11,700	5,722	L.F.	6" Underdrains (shallow)	
I-4	260	190	L.F.	6" Outlets for underdrains M-G.4 (b) without perforation	
I-4	60	60	L.F.	8" Outlets for Underdrains M-G.4 (a)	
I-5	1	1	each	36" Pipe special for roadway culvert	
I-5			each	6" Pipe special for underdrain	
I-8	1	1	each	Standard No. 2 M.H. without drop pipe.	
I-8	11	8	each	Standard No. 2-2-A catch basins	
I-8	10	11	each	Standard No. 2-2-B catch basins	
I-8	3	3	each	Standard No. 6 catch basins	
I-8	1	3	each	Standard No. 8-6 inlets as per plan	
I-9	898	110	L.F.	Stone underdrains No. 2	
I-10	1,794	83	C.Y.	Dumped rock channel protection	
I-14	42	42	L.F.	Type "A" paved gutter, as per plan.	
I-14	228	228	L.F.	Type "B" paved gutter, as per plan.	
I-14	262	262	L.F.	Standard type 1 paved gutter	
I-16	3	4	each	Catch basins abandoned.	
I-1	38.8	43.9	C.Y.	Concrete for structures, Class "E"	1.2
S-24	Lump	Lump	Lump	Removal of existing structures.	
S-27	86	86	L.F.	15" Pipe for roadway culverts	
S-27	78	78	L.F.	18" Pipe for roadway culverts	
S-27	196	232	L.F.	30" Pipe for roadway culverts	
S-27	538	538	L.F.	42" Pipe for roadway culverts	
S-27		172	L.F.	54" Pipe for roadway culverts M-G.6 (b)	
S-27	292	292	L.F.	66" Pipe for roadway culverts	
S-27		62	L.F.	30" x 19" Pipe for roadway culverts M 206.6 (b)	
S-25	218	218	L.F.	11-7" x 7-5" Sectional corrugated metal structures, 8-5 gage M-G.4 (g)	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		15
<b>MONTGOMERY COUNTY</b>			
MOT. 40		5.98	
MOT. 49		12.45	

# GENERAL SUMMARY

ITEM	QUANTITIES		UNIT	DESCRIPTION	SERVICE RD. NO. FEDERAL PARTICIPATION
	F.A.I.	F.A.P.			
				TYPE CODE 7221	
				PAVEMENT	
B-33	31,434		S.Y.	3" Bituminous macadam base course	
B-35	121	1	C.Y.	Asphaltic Concrete base course (70-85), as per plan.	
B-70		356	S.Y.	Portland Cement concrete base course	1522
B-119	2,340	208	C.Y.	Crushed aggregate base course, as per plan.	
I-7	1,470	267	S.Y.	Reinforced concrete approach slabs (T-13'), As Per Plan	
I-12	320		L.F.	Type "A" concrete curb, as per plan	
I-12	504		L.F.	Type "B" concrete curb, as per plan	
I-12	79	1,094	L.F.	Standard Type 2-A concrete curb	
I-12	198		L.F.	Standard Type 2-B concrete curb	
I-12	79	35	L.F.	Standard Type G concrete curb	
I-21	13		S.Y.	4" Standard Type I Portland Cement Concrete median pavement	2206
I-22	15,902	6,196	C.Y.	Subbase	
T-30	2,664	274	Gal.	Bituminous Prime Coat, Sec. M-5.2, EC-1 or EC-2 or M-5.7, ET-2 or ET-3	
T-30		36	Gal	Bituminous Top Coat, Sec. M-5.2, EC-1 or EC-2 or M-5.5, MS-2 or MS-1, As Per Sec. T-30.02	
T-31	15718		Gal.	Bituminous surface treatment, bituminous material as per plan	
T-31	504		C.Y.	Bituminous surface treatment, No. G Aggregate	
T-31	504		C.Y.	Bituminous surface treatment, No. 4C aggregate	
T-35	415	57	C.Y.	Asphaltic concrete surface course, Type A (70-85)	279
T-71	62,614	31,194	S.Y.	9" Reinforced Portland Cement Concrete Pavement	

### STRUCTURES OVER 20 FOOT SPAN

Bridge No.	Mat. - 40 - 0631	Quantities	Sheet No. 152
Bridge No.	Mat. - 40 - 0635	Quantities	Sheet No. 160
Bridge No.	Mat. - 40 - 0664	Quantities	Sheet No. 168
Bridge No.	Mat. - 40 - 0700	Quantities	Sheet No. 177
Bridge No.	Mat. - 40 - 0712	Quantities	Sheet No. 184
Bridge No.	Mat. - 40 - 0733	Quantities	Sheet No. 191
Bridge No.	Mat. - 49 - 1213	Quantities	Sheet No. 198
Bridge No.	Mat. - 49 - 1221	Quantities	Sheet No. 206
Bridge No.	Mat. - 49 - 1281	Quantities	Sheet No. 216
Bridge No.	Diamond Mill over Major Run.	Quantities	Sheet No. 220
Bridge No.	Broadhills - Salem over Loyer Run.	Quantities	Sheet No. 228

Lump Lump Lump Construction layout Stakes







# SUMMARY OF QUANTITIES

DRIVES, APPROACHES, TEMPORARY RUNAROUNDS, AND CURBS

F. A. I.

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

19  
241

MONTGOMERY COUNTY  
MOT. 40 - 5.98  
MOT. 49 - 12.45

Ref. No.	Sh# No.	5-15 Temporary Runaround				B-35 2"	B-119	T-35 0' to 1/2"	T-35 1/2"	T-35 2"	T-30 Prime	T-30 Pack	I-22	I-1 Pipe for Drives.			I-8 No. 2-25 C.B.	I-10 Liprap 6" Wet P. Conc.	I-10 Dumped Rock	L-10 Sod.	Ref. No.	Sheet No.	I-12 Curb					I-21 6" Conc Mod. Port.
		5-15 Aggregate	5-15 Chloride	Temp. Round Road.	Temp. Round Road using class A Port.									N-GA(a)									Type A	Type B	Type L-A	Type L-B	Type G	
Gen. Note		C.Y.	Tons.	Lump		C.Y.	C.Y.	C.Y.	C.Y.	Gal.	Gal.	C.Y.	12"	15"	30"	Each	S.Y.	C.Y.	S.Y.			L.F.	L.F.	L.F.	L.F.	L.F.	S.Y.	
1-A	38	*500	10			20	62	15		125		43									1-C	31			79		79	12.7
<del>1-A</del>																					1-C	36	320	504				
1-A	125					10			4						34													
1-A	126					44.7			18.1													Total F.A.I. to Gen. Sum.						
2-A						28.7			6.3																			
3-A						18.5			4.5				68															
4-A						18.8			4.5																			
5-A						15.6			5.1																			
1-A	110					126.3			3.9																			
2-A						4.3			1.7																			
3-A						42.9			3.6																			
4-A						30.9			4.7																			
5-A						27.1			11.0																			
1-A	111					21.8			4.7																			
2-A						12.2			5.0																			
1-A	116					11.7	1.7			29																		
2-A						2.0							26			1												
3-A		375	7.5	Lump																								
4-A						21.9			8.9																			
5-A						16.9			6.8																			
6-A						4.3			1.7																			
7-A						11.0																						
1-A	117					14.0			5.7							1												
1-A	121					4.5	1.0			15																		
2-A						13.0			5.5																			
3-A						1.6			1.0																			
4-A						20.0			8.0																			
5-A						6.1																						
6-A						2.0																						
7-A						9.0	2.0			29																		
Total to Gen. Sum.		875	11.5	Lump									176	34		2												
Total to Sheet 22																												
Total to Sheet 18						20	621.8	4.7	15	114.7	198	43																

LIGHTING CONDUIT

Ref No.	Sheet No.	5-25 4" One Way Conduit
1-E	32	L.F. 149
1-E	68	60
2-E		49
1-E	126	48
Total to Gen. Sum.		306

F. A. P.

1-A	71				0.5				0.4	3		23																	
1-A	130					4.3			1.7																				
2-A						17.6			3.8																				
3-A						14.4			3.0																				
4-A						12.2																							
5-A						3.0																							
Total from SH#18			2.1																										
Total to Gen. Sum.			2.1																										
Total to Sheet 18					0.5	51.5			9.7	3		23	119																

E-101 COMPACTED SUBGRADE

FOR ITEM	F.A.I.	F.A.P.	TOTAL
T-71 S.Y.	62,614	31,194	93,808
B-35 S.Y.	31,434		31,434
T-35 S.Y.	9,614	1,266	10,880
I-7 S.Y.	1,470	267	1,737
Total to General Sum.		105,132	32,727





# SUMMARY OF QUANTITIES

## DRAINAGE

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		(22) 241
MONTGOMERY COUNTY			
MOT. 40 - 5.98			
MOT. 49 - 12.45			

Sheet No.	Ref. No.	I-2 Storm Sew. Under Pavt. & App.					I-2 Storm Sewers				I-5 for Underdrains	I-4		S-27 Roadway Culverts						I-5 for Roadway Culverts		I-3		I-8						L-10		E-3	E-2	S-1 Class "E"	I-10		I-14		I-9						
		Class "A"			Class "B"		Class "A"		Class "B"			6" Underdrain	Outlet Pipe	MG.G(b)	* GG	30" x 19"	30" x 18"	12"	12"	No. 2 M.G. (A)F	M.H.	2-2A C.B.	2-2B C.B.	No. 6 C.B.	2-G Inlet	Sod	Special Sod.	C.Y.	C.Y.	C.Y.	S.Y.				C.Y.	L.F.	L.F.	L.F.		L.F.					
		M-65(b) or M-68(b)	M-67(a)	12"	M-64(h) M-65(b) M-68(b)	12"	M-64(c)	M-66(a) M-68(b)	24"	each																															deep	shdw	6"	8"	15"
117	1-D																																												
121	1-D																																												
125	1-D																																												
126	1-D																																												
104																																													
Total this Sheet							GG	10	142	4	GG					78			292		218		1	3		230	80	609	606.2	27.28	240	10.5									438				
Total from SH#19												6073	7435	180	40			440																											
Total from SH#20		500	500	500			863	10		10																																			
Total from SH#21					92		338	20	108	106	10	10	7545	4265	80	20	86		196	98		1		673	10	3	5	2																	
Total F&T to Gen. Sum		500	500	500	92		1267	40	108	142	106	24	10	GG	13618	11,700	260	60	86	78	196	538		292		673	10	1	11	10	3	1													

\* If the Contractor elects to use M.G.4 pipe, the gage shall be 10-10 or heavier.

# SERVICE ROAD QUANTITIES

Sheet No.	Ref. No.	PAVEMENT			DRAINAGE					ROADWAY					E-11 WATER		E-101 Excavation		Embankment C.Y.
		B-119	T-30	T-35	E-2	I-1	I-8	S-1	S-27	E-8 Removal	E-101 Comp.	L-9	L-10	E-101	Embankment	Excavation	Embankment		
		C.Y.	Gal.	C.Y.	C.Y.	L.F.	L.F.	C.Y.	C.Y.	S.Y.	S.Y.	S.Y.	S.Y.	C.Y.	C.Y.	C.Y.	C.Y.		
133	1-A	4.8		1.9															
	2-A	17.2		4.7															
	1-D				5.0			1.2	56										
134	1-A	9.4		3.8															
	2-A	4.8		1.9															
	3-A	9.4		3.8															
	1-R									65									
133 & 134		14860	2206	262.7						5771									
135-137											15,236			5,877	7,038				
Total to Gen. Sum		15216	2206	278.8	5.0	126	1	1.2	56	65	5,771	15,236	5	5,877	7,038				

**E-11 WATER**  
 Embankment + 20%  
 8-119 8438 C.Y.  
 1522 C.Y.  
 9960 C.Y.  
 .005 M-gal./C.Y.  
 49,800 M-gal.

**L-9 FERTILIZER (Rate 20#/100 S.F.)**  
 L-9 Seeding 15,236 S.Y.  
 L-10 Sod 5 S.Y.  
 15,241 S.Y.  
 .00003  
 1.37 Tons

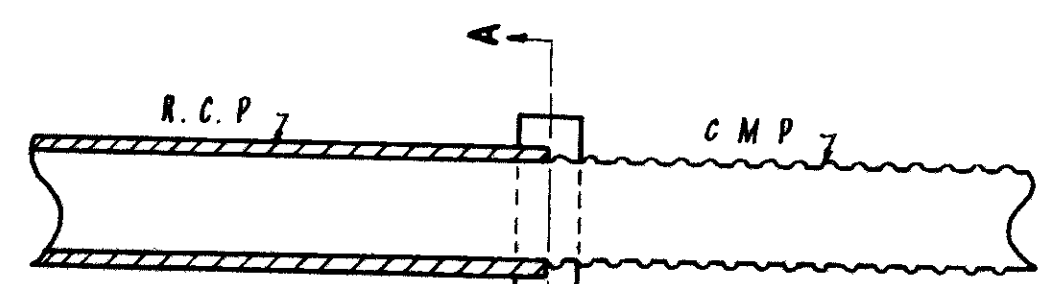
**L-9 AGRICULTURAL LIMING MATERIAL (Rate 100#/1000 S.F.)**  
 L-9 Seeding 15,236 S.Y.  
 L-10 Sod 5 S.Y.  
 15,241 S.Y.  
 .00045  
 6.86 TONS



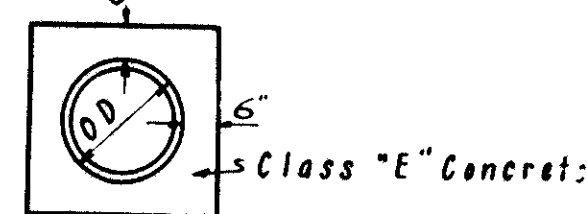
FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

24  
241

MONTGOMERY COUNTY  
MOT - 40 - 5.98  
MOT - 49 12.45

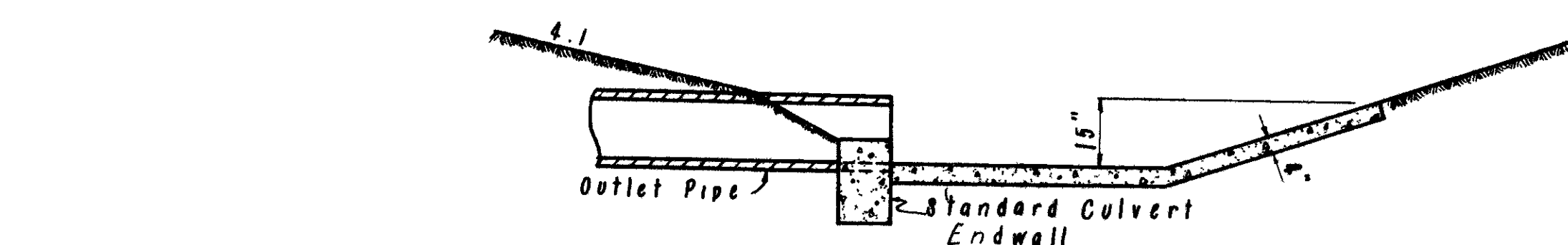


CONCRETE COLLAR DETAIL

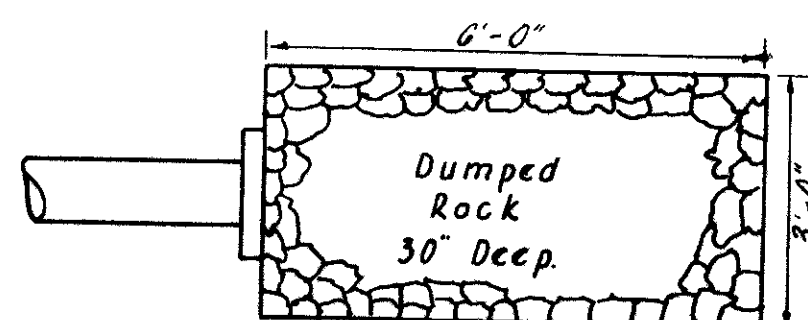


SECTION A-A

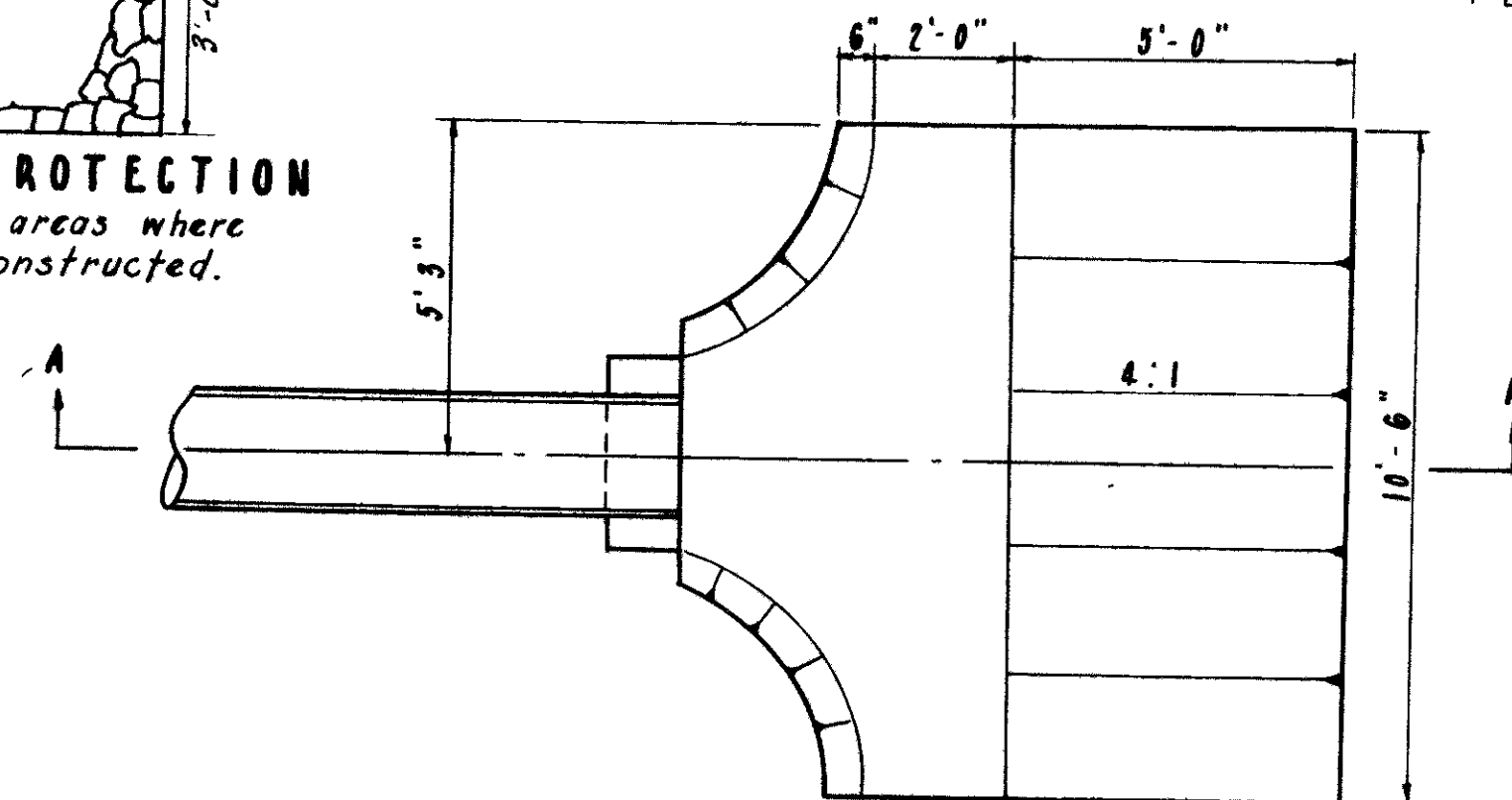
Class "E" Concrete



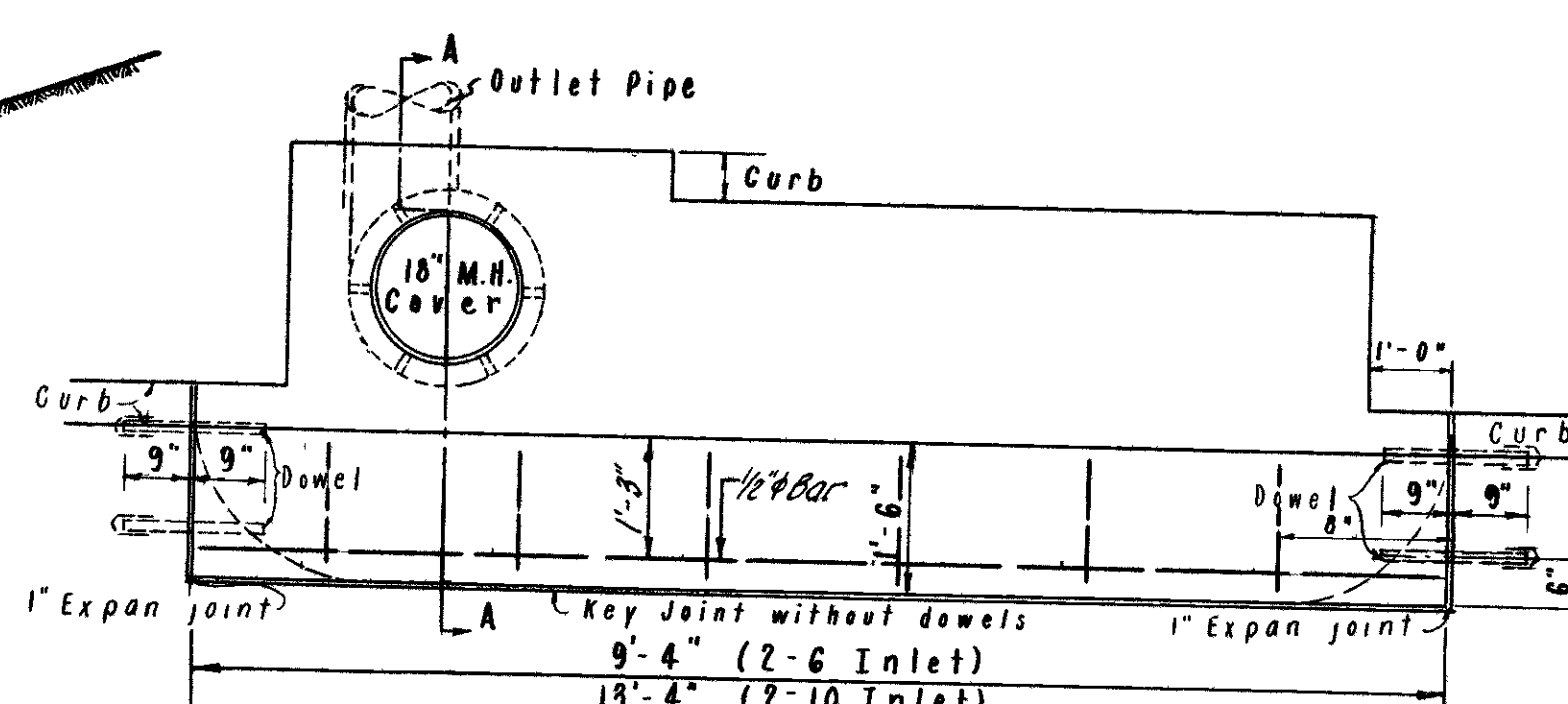
TYPE "A" PAVED GUTTER DETAIL  
SECTION A-A



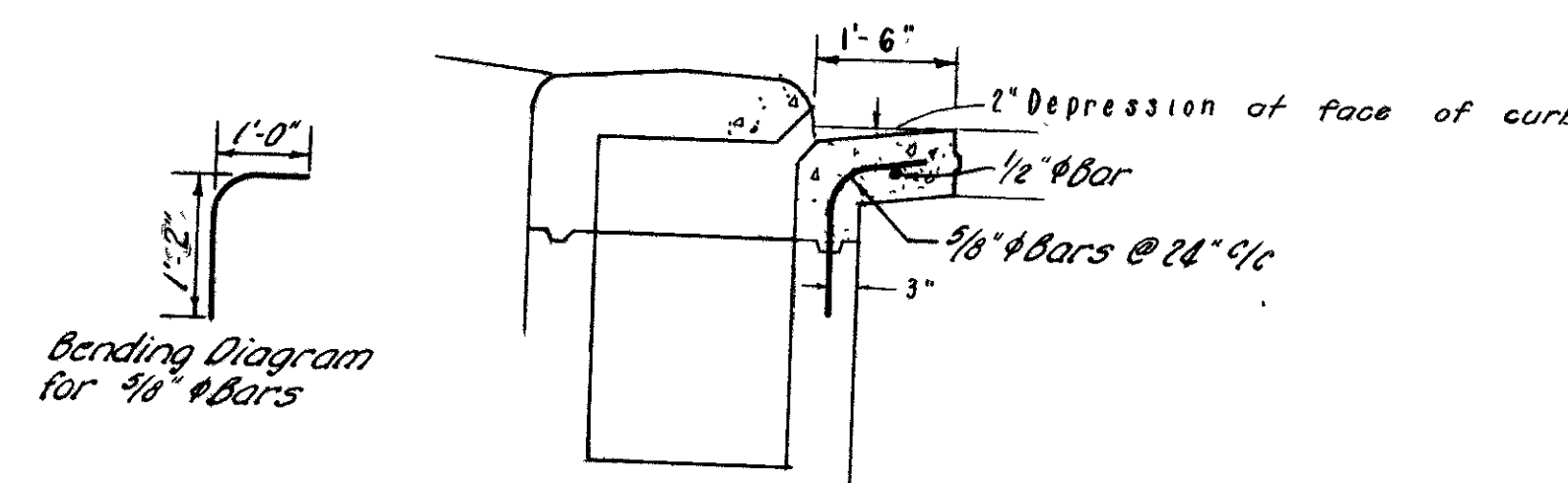
MEDIAN OUTLET PROTECTION  
To be used as noted in areas where no ditches are to be constructed.



OUTLET PLAN



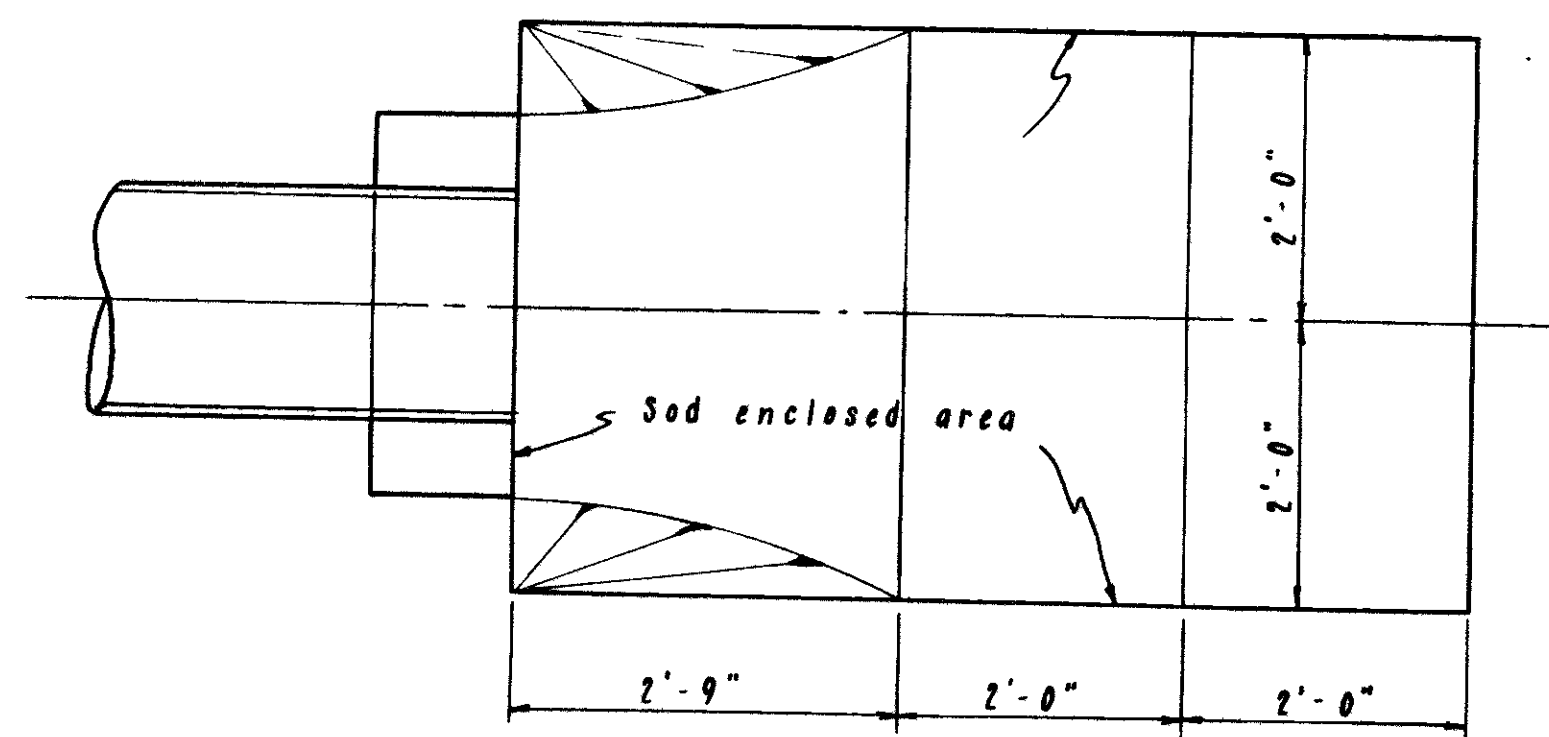
PLAN



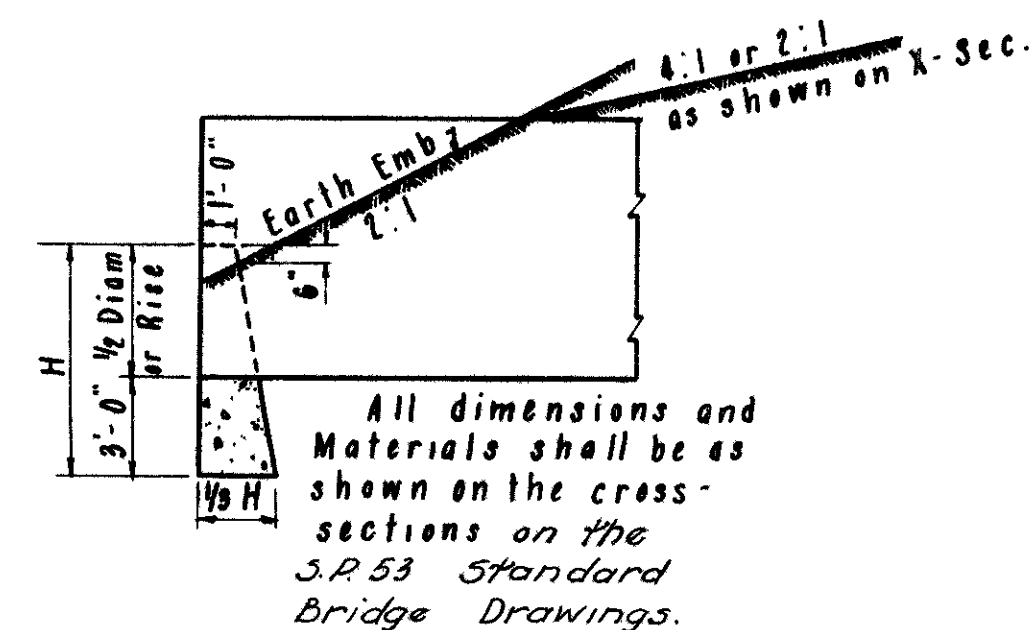
SECTION A-A

Bending Diagram for 3/8" bars

PAVEMENT BLOCKOUT FOR  
NO 2-6 or 2-10 INLET (Mod.)

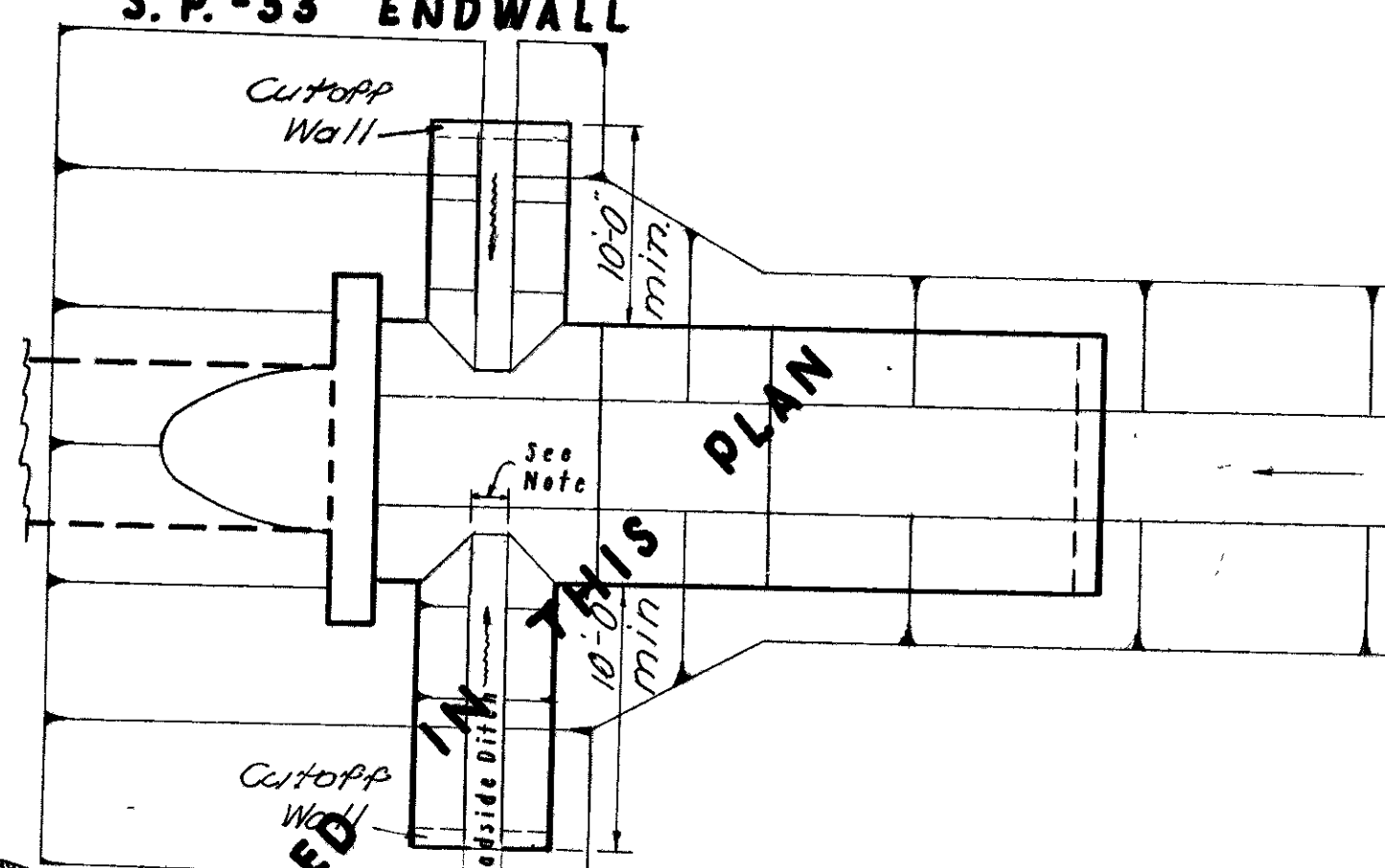


MEDIAN OUTLET SOD DETAIL



S.P.-53 ENDWALL

All dimensions and materials shall be as shown on the cross-sections on the S.P. 53 Standard Bridge Drawings.



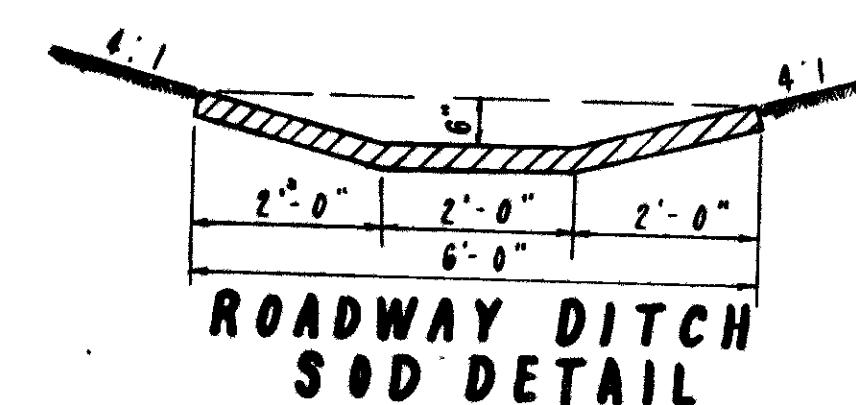
RIPRAP DETAIL AT CULVERT ENTRANCES  
(6" Reinforced Concrete)

All other dimensions and materials to be in accordance with Standard Construction Drawing S-27-P.C.4 All Endwalls are to be constructed normal to the pipe. Distance shown on Plan to end of pipe is to outside face of Endwall.

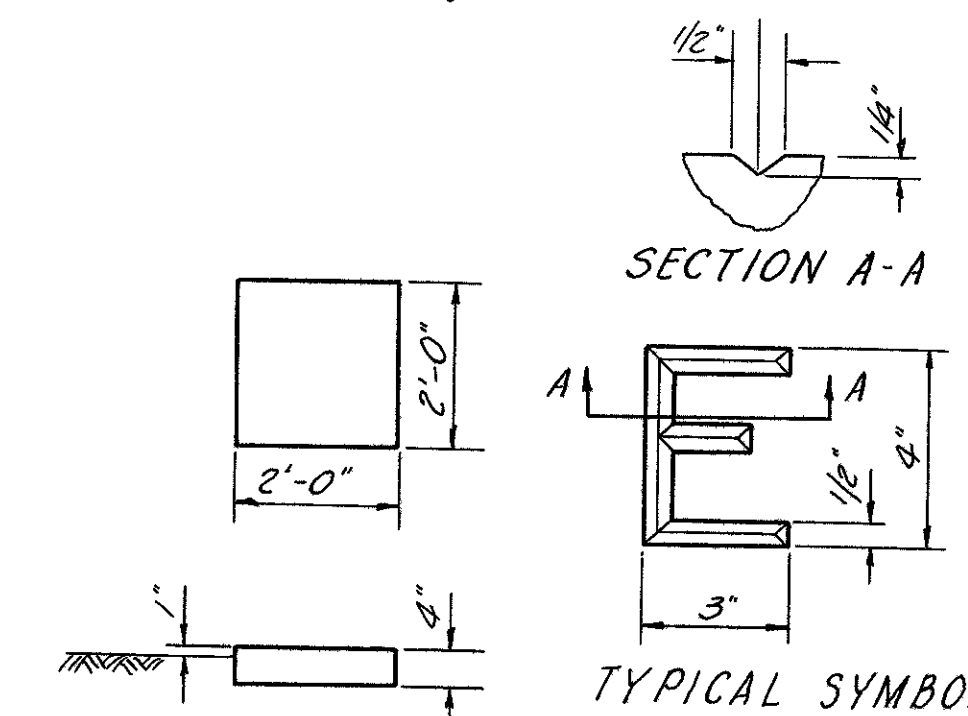
S-27 - P.C. 4 ENDWALL  
PIPE SIZES 12" to 54" incl.

Riprap is to be formed so as to provide an entrance for the roadside ditch at locations where a ditch is indicated on the plans or cross sections. The bottom width, for the roadside ditch entrance is to be 2' for the standard & sudded ditch and 4' for the dumped rock ditch. Dimensions of riprap are as shown on cross sections or culvert detail sheets. Payment for the cut off wall is to be included in the price bid per S.Y. for Item I-10 Riprap.

SOD DETAIL FOR  
DITCH CATCH BASINS

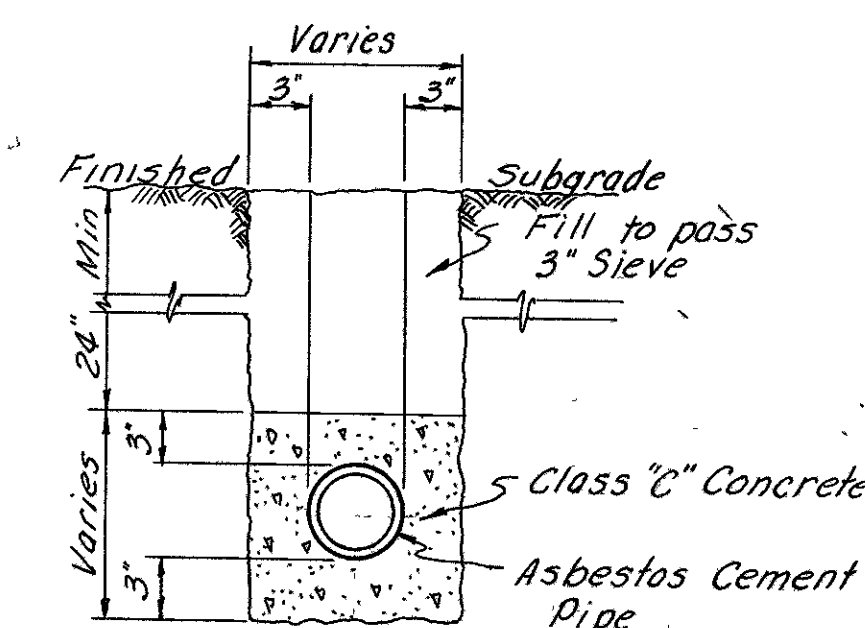


ROADWAY DITCH  
SOD DETAIL

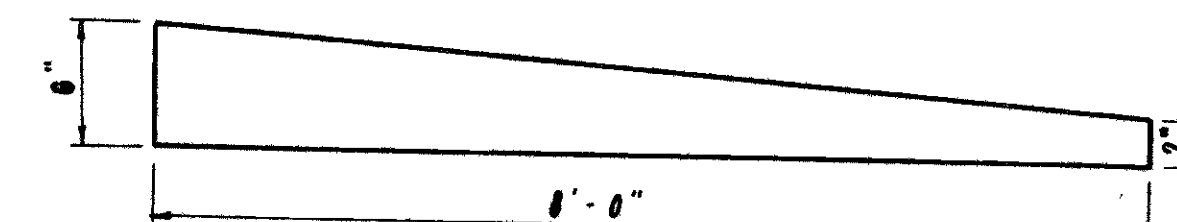


TYPICAL SYMBOL

Note Impress the word "Duct" in the top of concrete marker using letters of the type and dimensions per details.  
CONCRETE MARKER DETAILS  
For Lighting



ONE WAY DUCT SECTION  
For Lighting



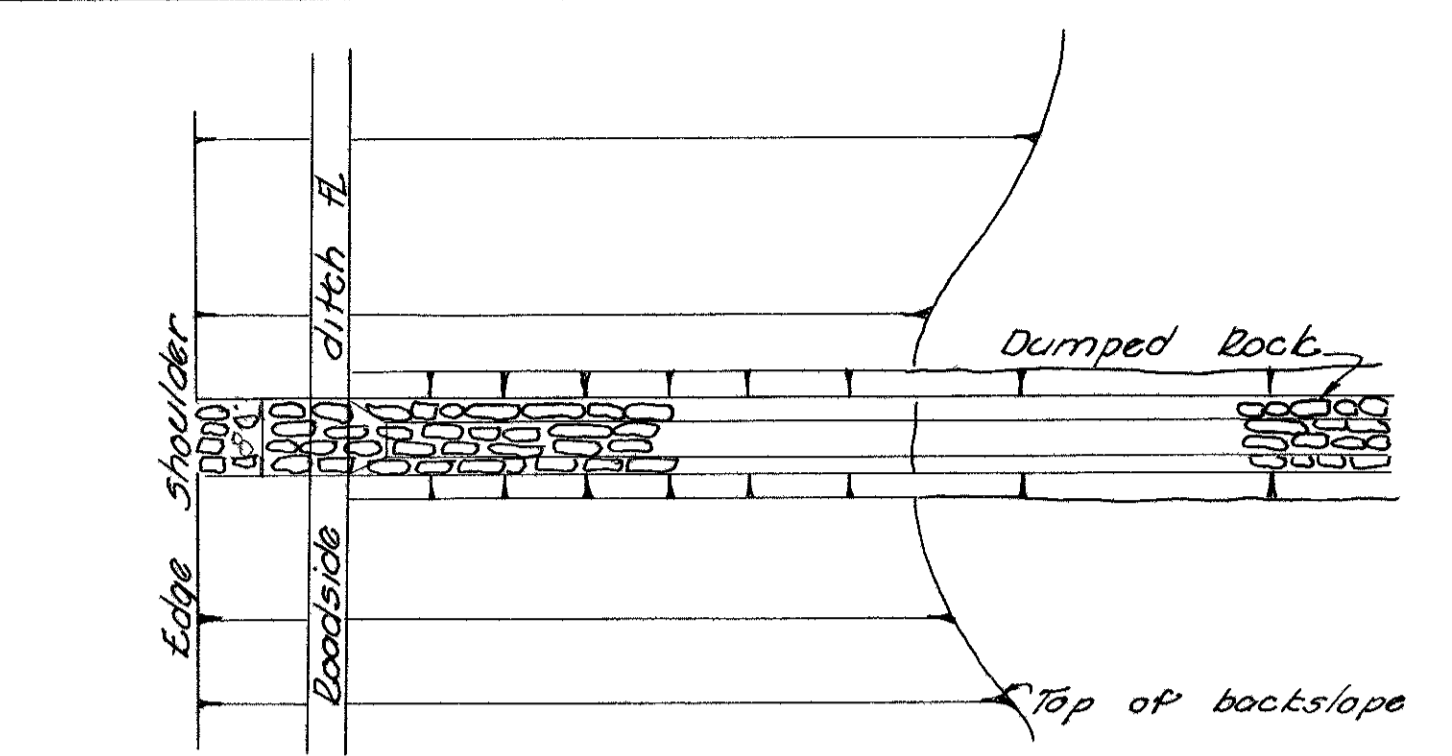
CURB HEIGHT REDUCTION DETAIL

Note. Curb height is to be reduced as shown above at all curb ends unless otherwise shown on the plans.

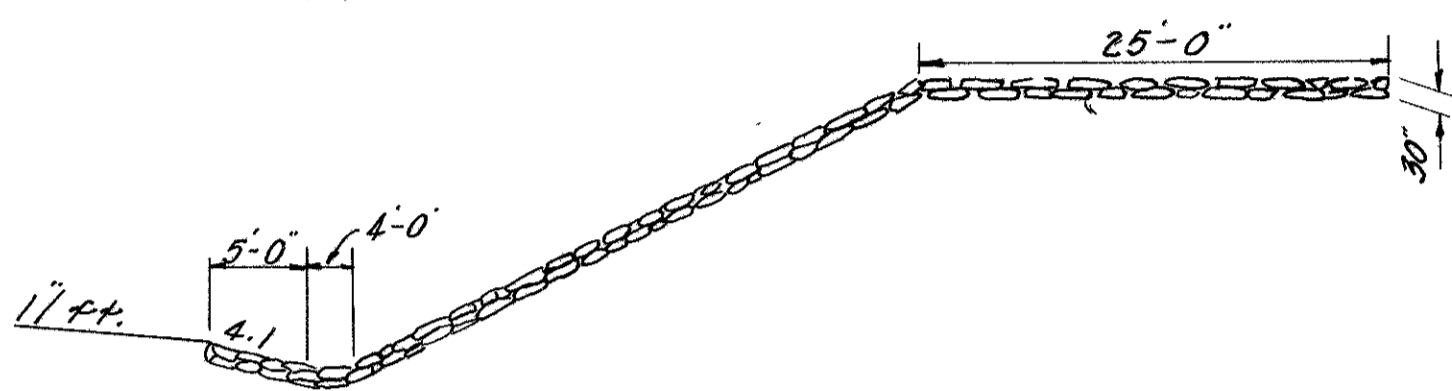
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

25  
241

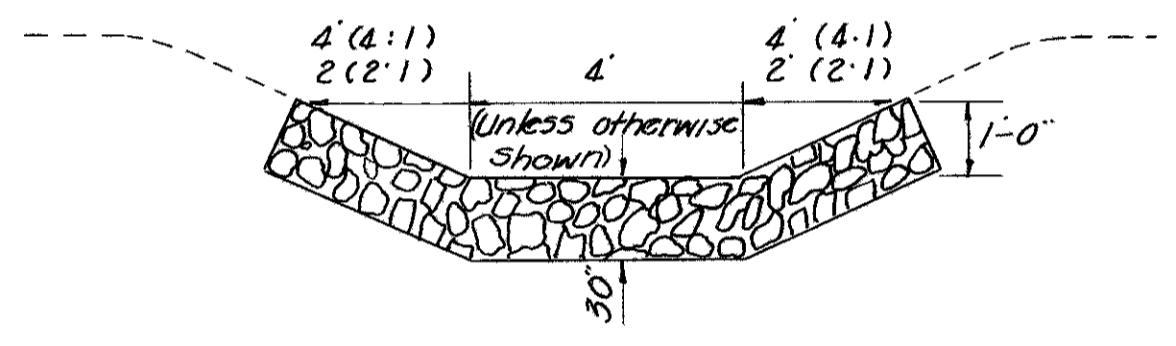
**MONTGOMERY COUNTY**  
**MOT. 40 5.98**  
**MOT. 49 12.45**



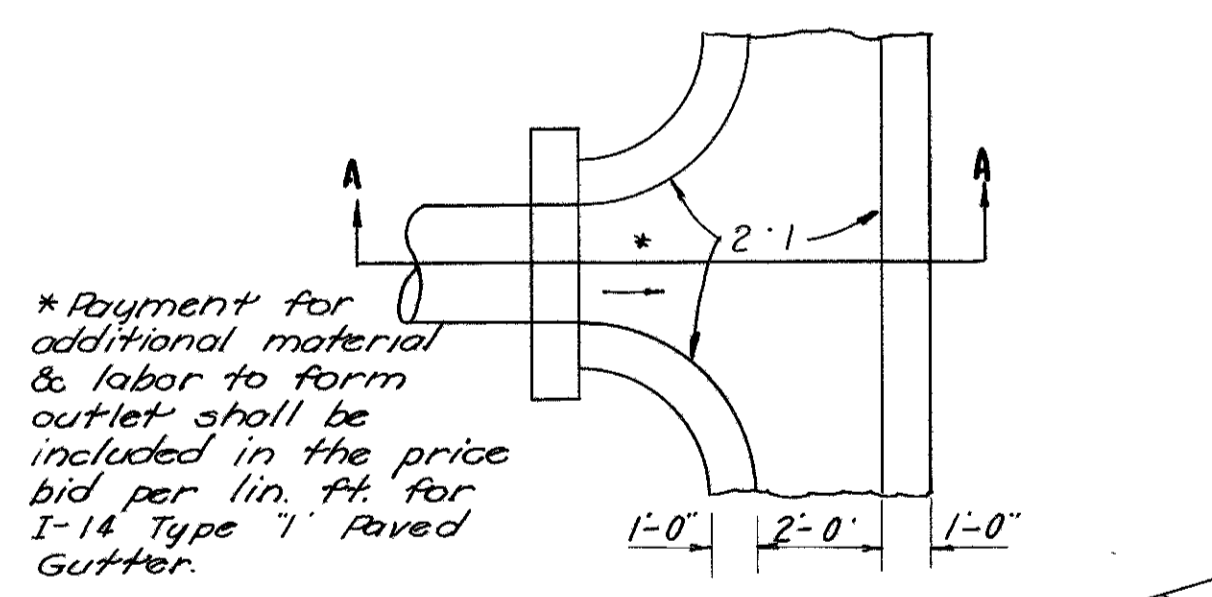
Typical section for dumped rock shall be the same as shown for the Roadside Ditch Dump Rock Detail with 2:1 slopes



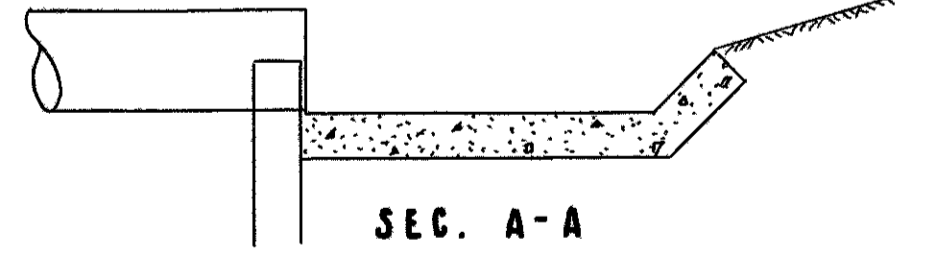
**DUMPED ROCK DETAIL FOR DITCHES OVER SLOPES**



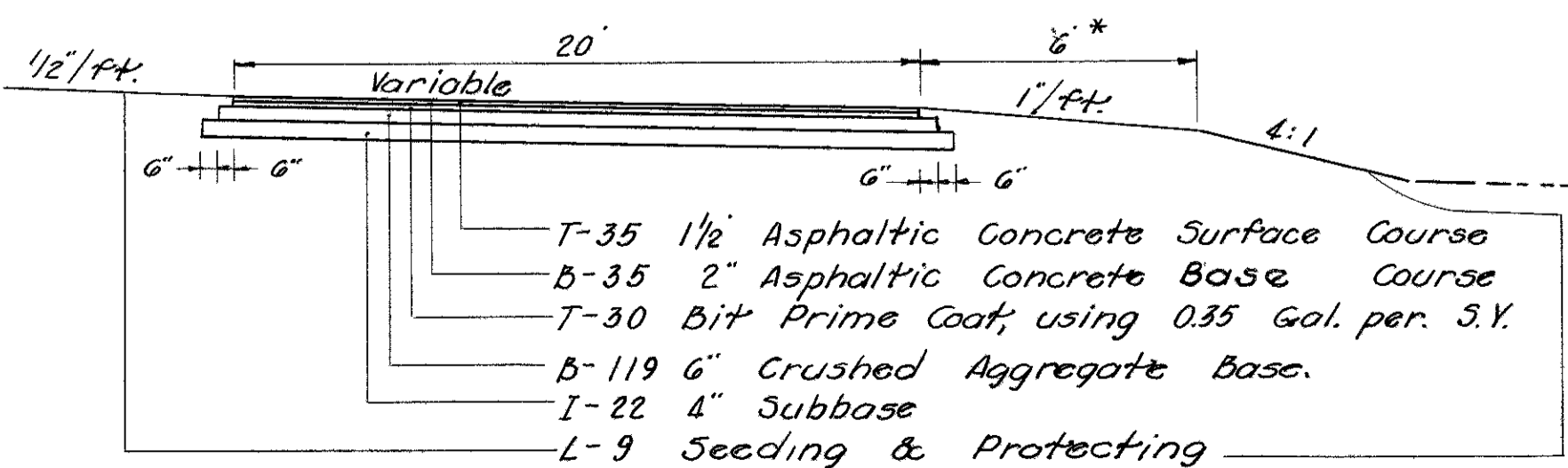
**ROADSIDE DITCH DUMP ROCK DETAIL**  
 1 CY/FT (2:1 Slopes)  
 1.25 CY/FT (4:1 Slopes)



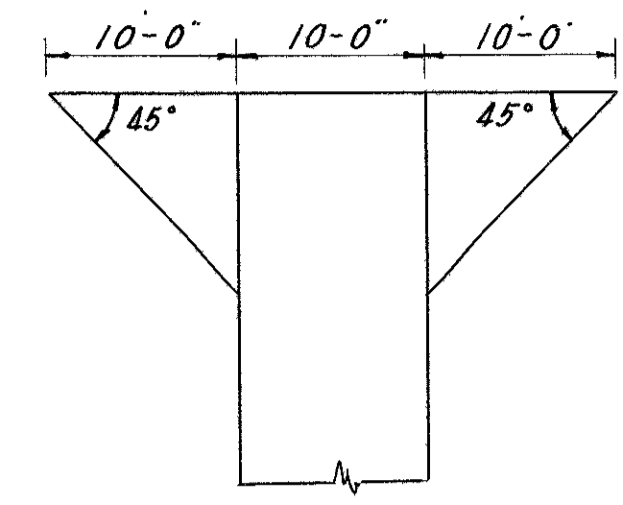
\* Payment for additional material & labor to form outlet shall be included in the price bid per lin. ft. for I-1 & Type 'I' Paved Gutter.



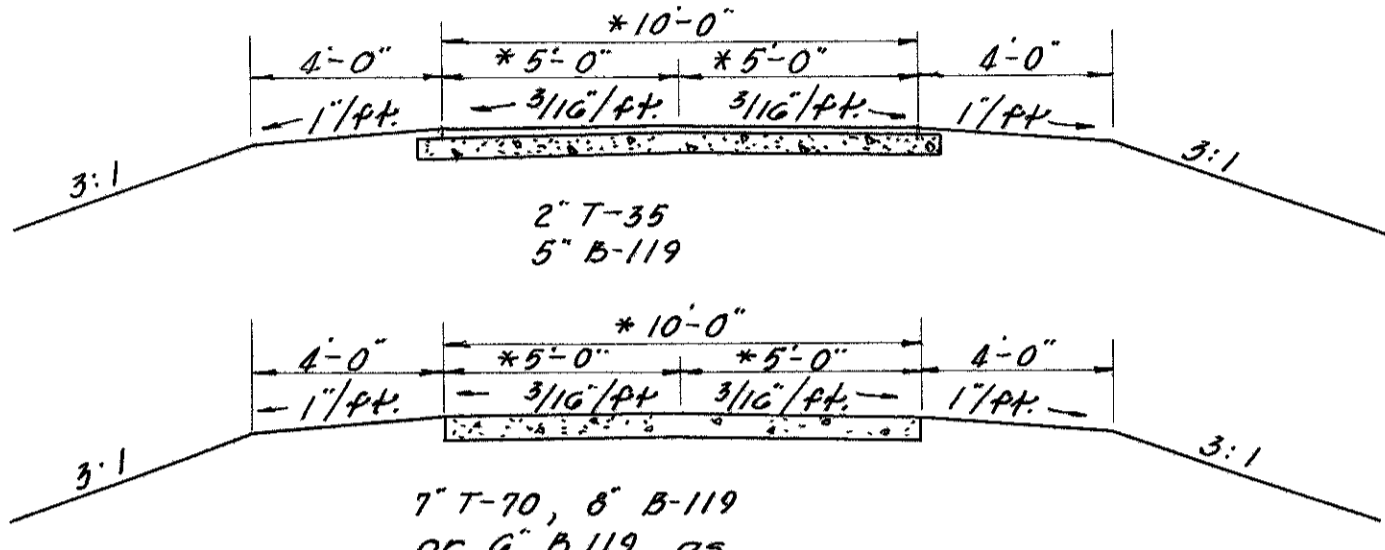
**PIPE OUTLET INTO TYPE "I" PAVED GUTTER**



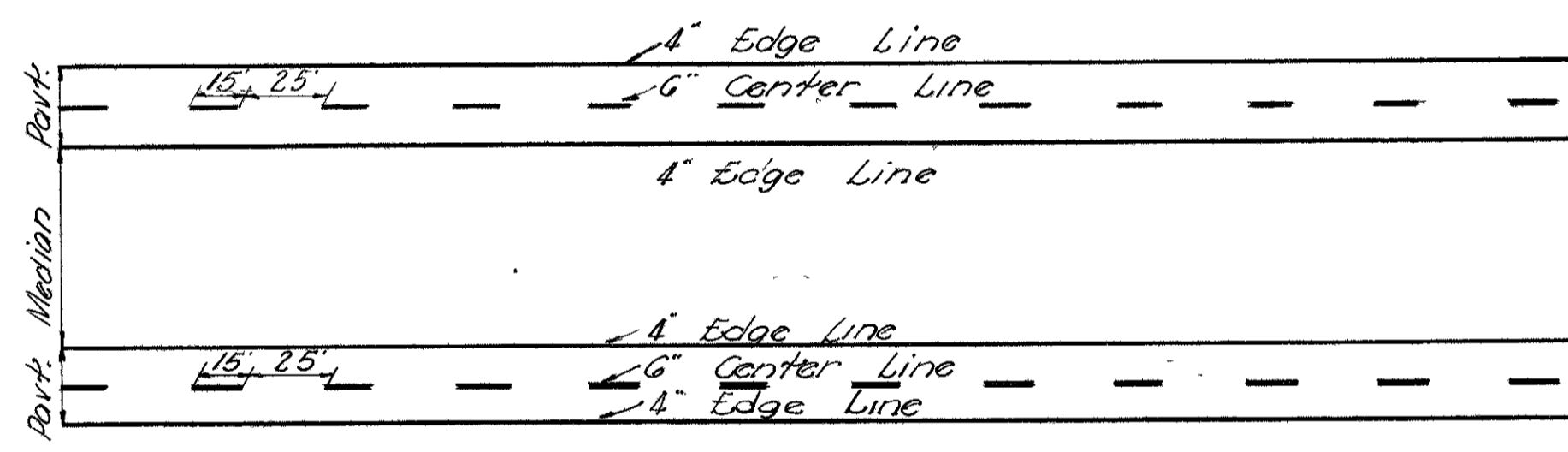
\* 6' to face of Guard Rail when Guard Rail is used  
**CUL-DE-SAC TYPICAL SECTION**



**FIELD DRIVE DETAIL**

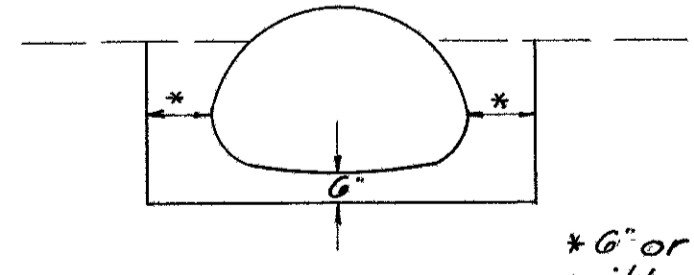


**RESIDENCE & FIELD DRIVE TYPICAL SECTIONS**

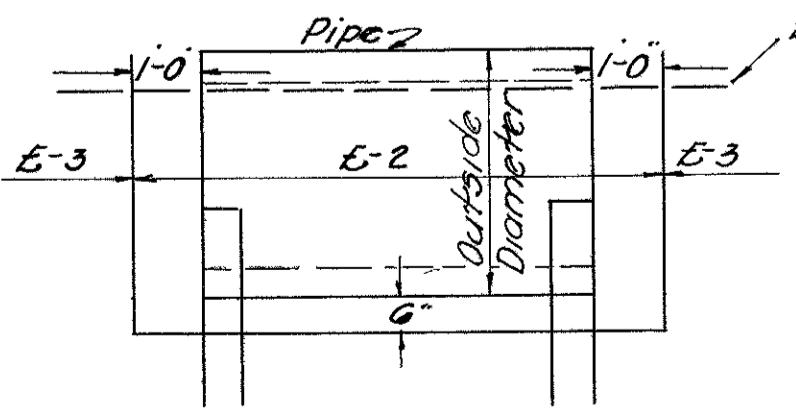
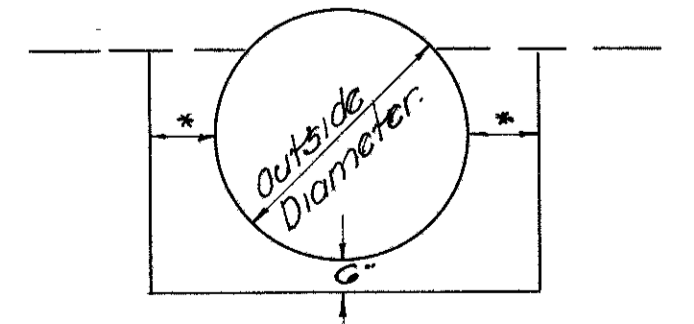


**EDGE AND CENTER LINE STRIPING DETAIL**

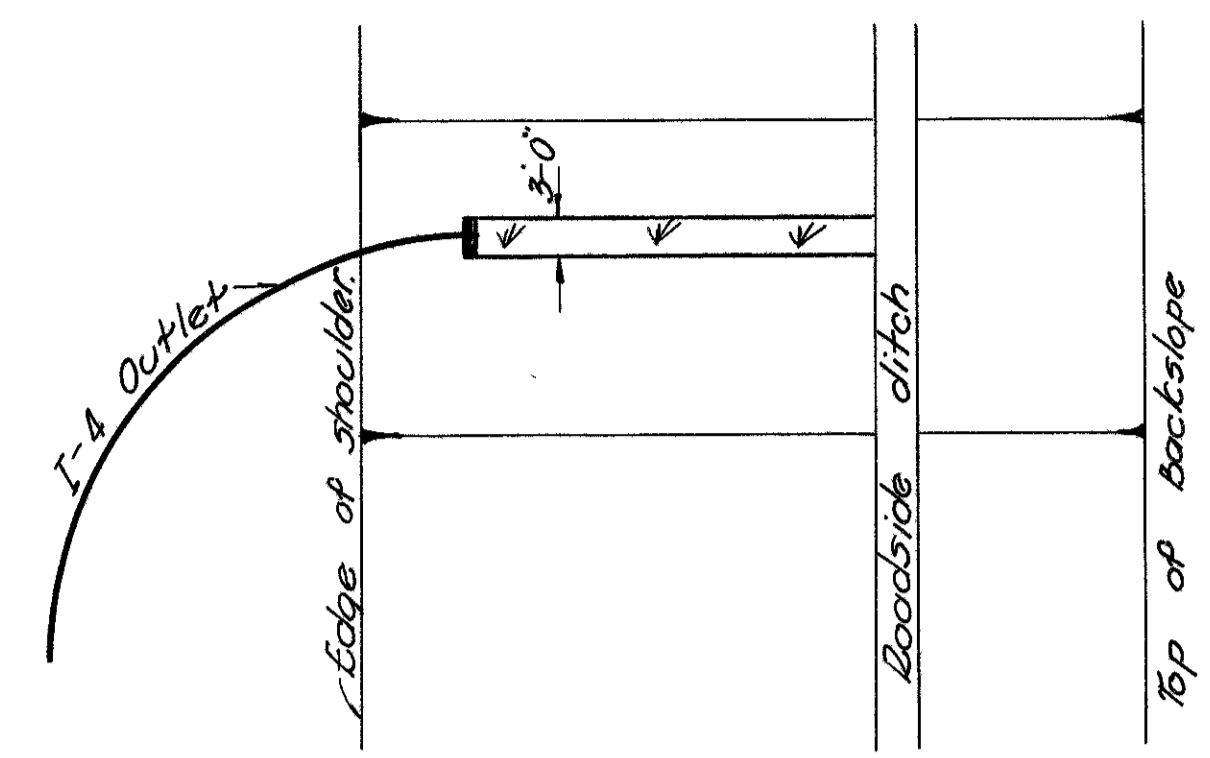
See pavement detail sheets for method of striping at interchanges and intersections. Top and exposed faces of curb and the surface of concrete median or traffic island pavement shall be painted solid yellow.



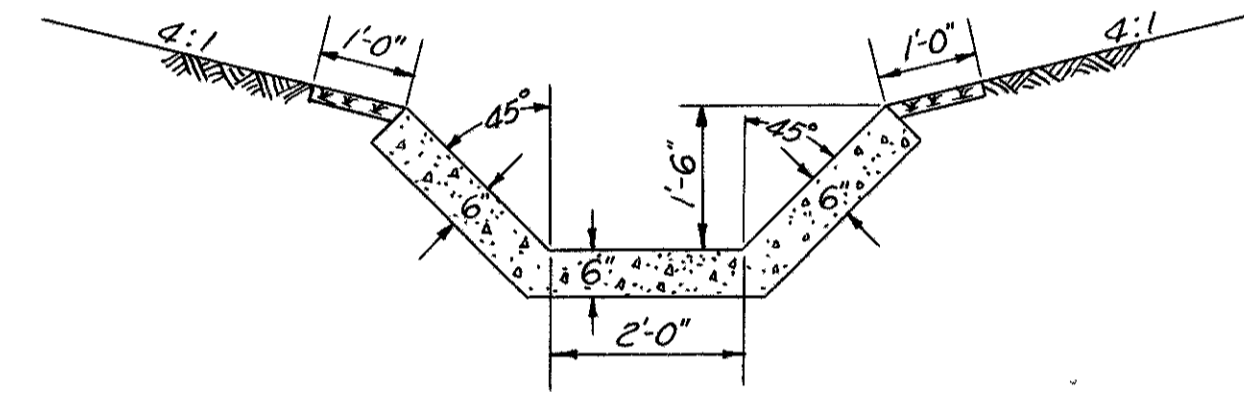
\* 6' or 12' in accordance with E-2 Specifications.



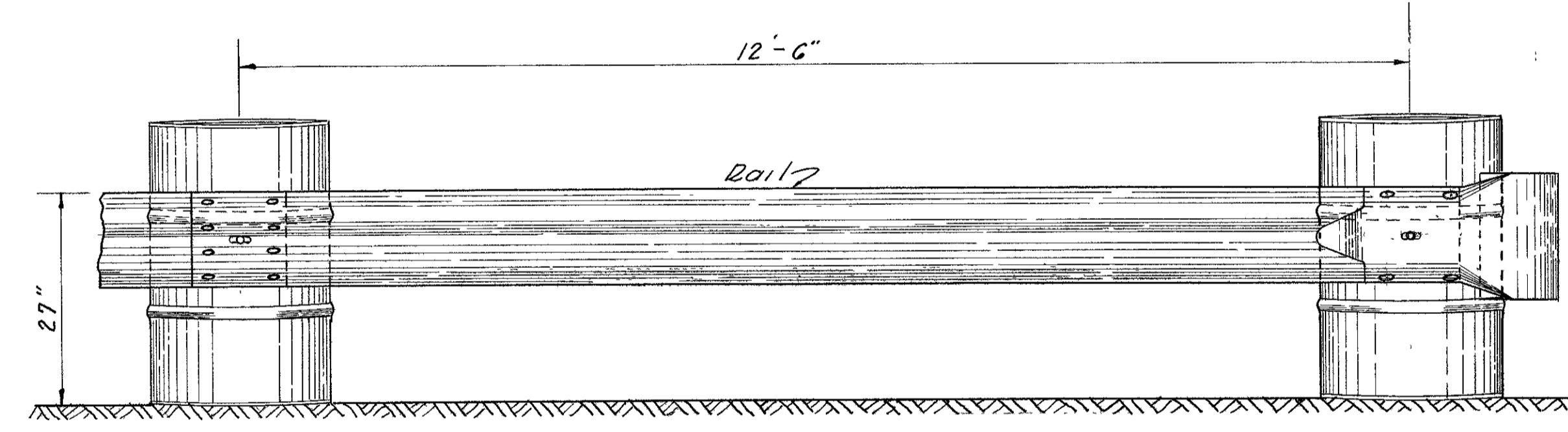
**STRUCTURE EXCAVATION FOR PIPE & ARCH STRUCTURES**



**SOD DETAIL FOR I-4 OUTLETS**



**TYPE B PAVED GUTTER DETAIL**



**TEMP. BARRICADE DETAIL**

The barrels shall be standard 55 gal. steel oil drums 2/3 filled with sand. Bolts for rail splice and for fastening rail to barrels to be 3/8" diameter with button head, oval shoulder and hexagon nuts. The rail shall be steel beam deep guard rail. The ends of the barricade shall be finished with a terminal section as shown. The barrels shall have two coats of yellow paint in addition to the prime coat. Materials and construction shall be in accordance with Standard Drawing E-15 No 2-A and Item I-15, except that the payment will be the price bid per linear foot for Item Special Barrel Barricade, as per plan.



MONTGOMERY COUNTY  
MOT - 48 - 5.98  
MOT - 49 - 12.45

### SPECIAL BERM & 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 spaced at four foot intervals and alternated in rows four feet apart.

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

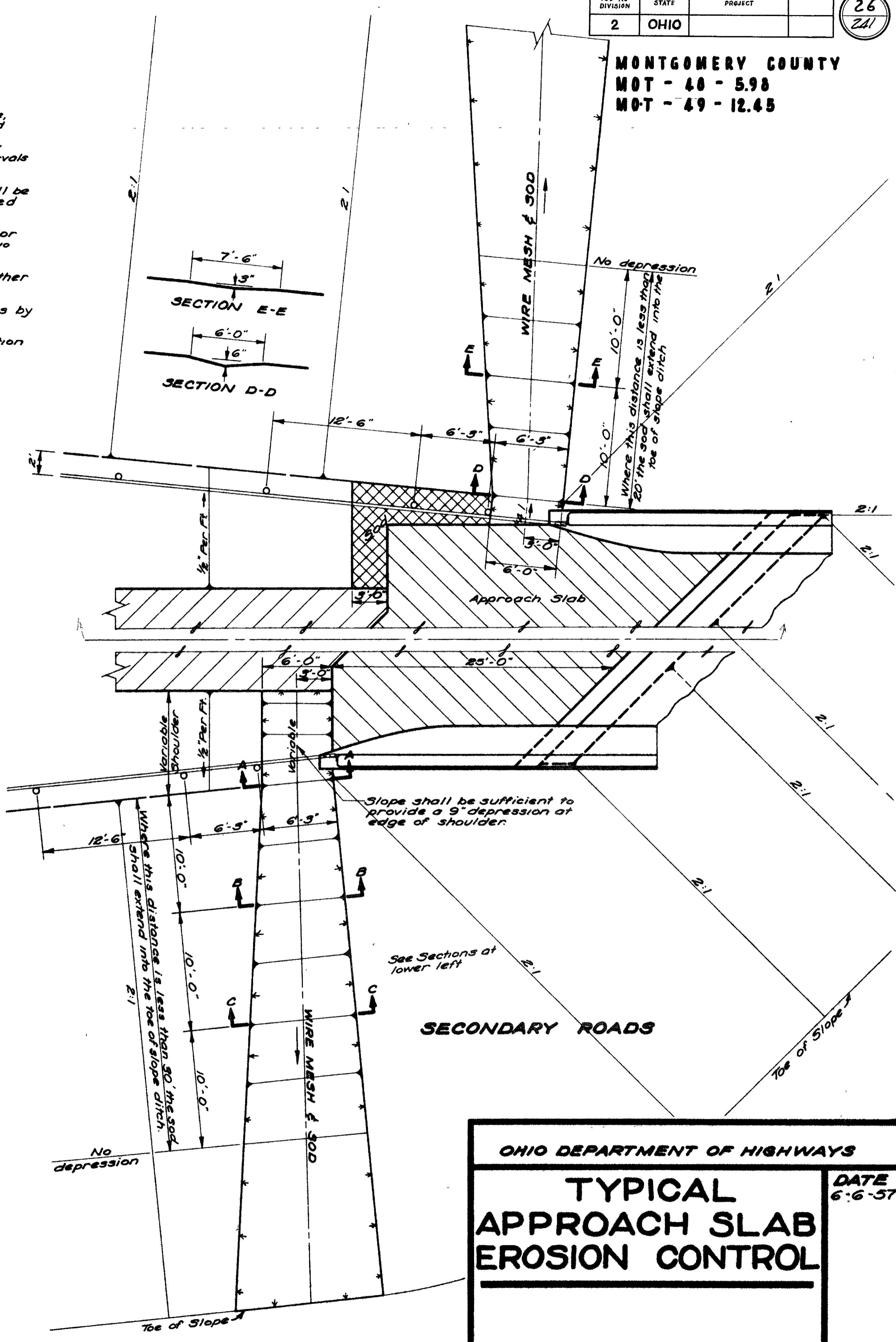
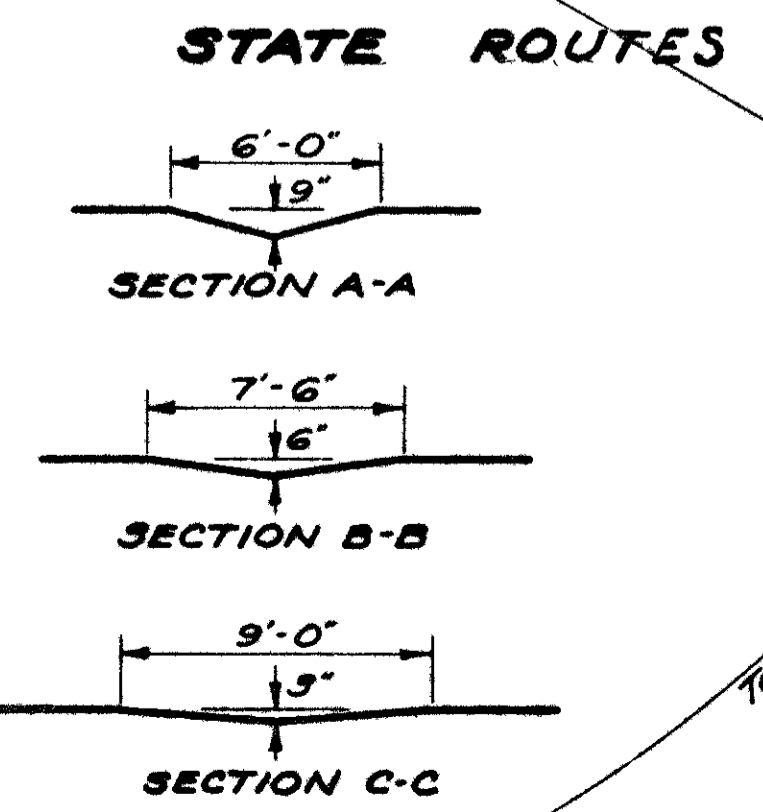
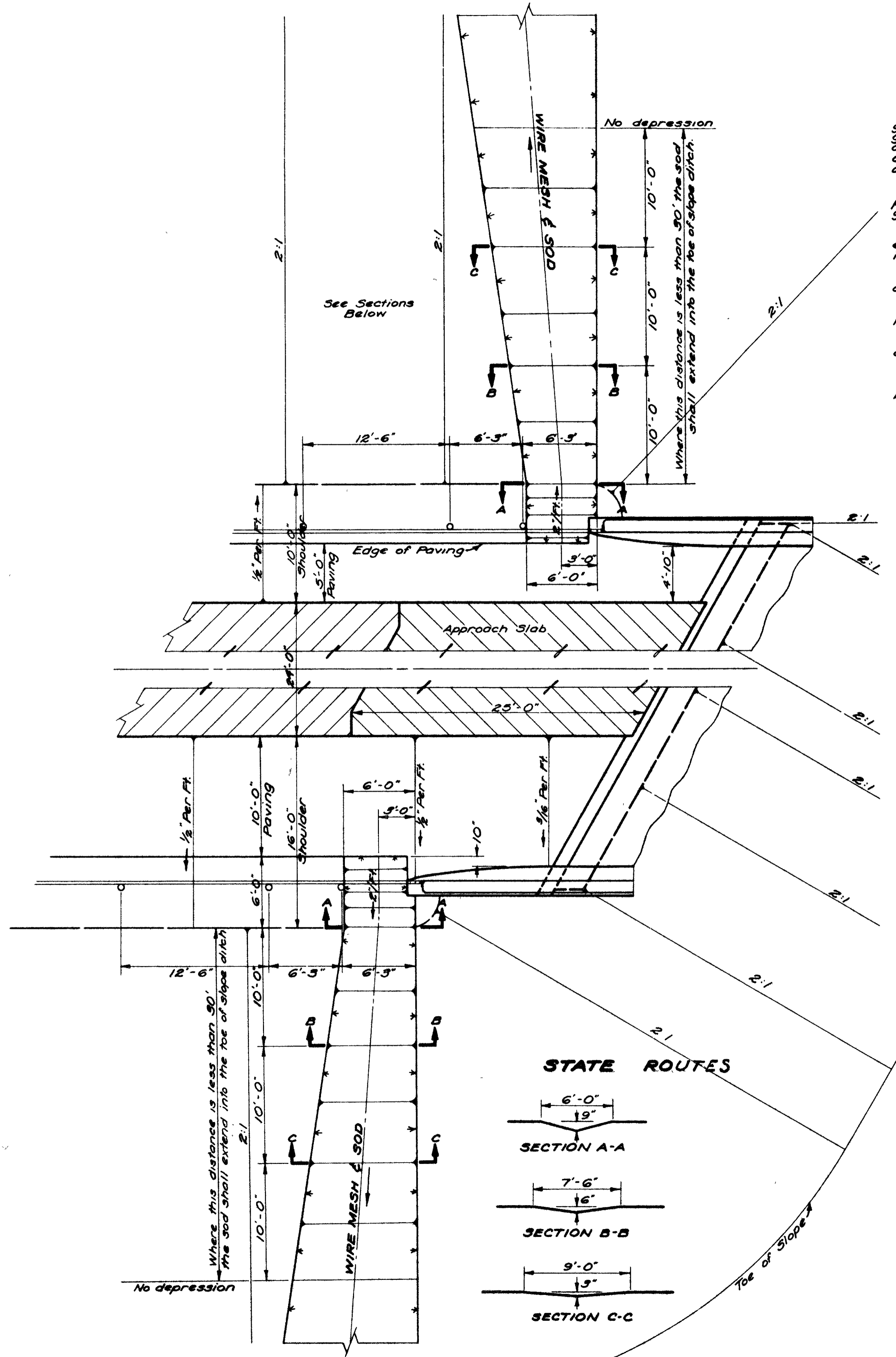
The fence shall be Straight Line Poultry Fence or equivalent with strand width of four feet, having a two inch mesh and all wires No 20 Gauge.

Each strand 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 Construction and Materials Specifications Section L-10.07.

Payment for all of the above is included in the unit price bid for Item L-10, Sodding for Special Berm and Slope Protection.



OHIO DEPARTMENT OF HIGHWAYS

## TYPICAL APPROACH SLAB EROSION CONTROL

DATE 6-6-57

# US 40 SUPERELEVATION TABLES

STA. 355+75 TO STA. 367+00						
STA.	WEST BOUND			EAST BOUND		
	LT. EDGE	℄	RT. EDGE	LT. EDGE	℄	RT. EDGE
355+75	958.46	958.65	958.46	958.46	958.65	958.46
356+00	958.39	958.58	958.41	958.41	958.60	958.43
+25	958.29	958.48	958.36	958.36	958.55	958.43
+50	958.18	958.37	958.31	958.31	958.50	958.44
+75	958.07	958.26	958.26	958.26	958.45	958.45
357+00	957.96	958.15	958.21	958.21	958.40	958.46
+25	957.85	958.04	958.16	958.16	958.35	958.47
+50	957.75	957.94	958.11	958.11	958.30	958.46
+75	957.68	957.87	958.06	958.06	958.25	958.44
358+00	957.63	957.82	958.01	958.01	958.20	958.39
+25	957.58	957.77	957.96	957.96	958.15	958.34
+50	957.53	957.72	957.91	957.91	958.10	958.29
+75	957.48	957.67	957.86	957.86	958.05	958.24
359+00	957.43	957.62	957.81	957.81	958.00	958.19
+25	957.38	957.57	957.76	957.76	957.95	958.14
+50	957.33	957.52	957.71	957.71	957.90	958.09
+75	957.28	957.47	957.66	957.66	957.85	958.04
360+00	957.23	957.42	957.61	957.61	957.80	957.99
+25	957.18	957.37	957.56	957.56	957.75	957.94
+50	957.13	957.32	957.51	957.51	957.70	957.89
+75	957.08	957.27	957.46	957.46	957.65	957.84
361+00	957.03	957.22	957.41	957.41	957.60	957.79
+25	956.98	957.17	957.36	957.36	957.55	957.74
+50	956.93	957.12	957.31	957.31	957.50	957.69
+75	956.88	957.07	957.26	957.26	957.45	957.64
362+00	956.83	957.02	957.21	957.21	957.40	957.59
+25	956.78	956.97	957.16	957.16	957.35	957.54
+50	956.73	956.92	957.11	957.11	957.30	957.49
+75	956.68	956.87	957.06	957.06	957.25	957.44
363+00	956.63	956.82	957.01	957.01	957.20	957.39
+25	956.58	956.77	956.96	956.96	957.15	957.34
+50	956.53	956.72	956.91	956.91	957.10	957.29
+75	956.48	956.67	956.86	956.86	957.05	957.24
364+00	956.43	956.62	956.81	956.81	957.00	957.19
+25	956.38	956.57	956.76	956.76	956.95	957.14
+50	956.35	956.54	956.71	956.71	956.90	957.07
+75	956.35	956.54	956.66	956.66	956.85	956.97
365+00	956.36	956.55	956.61	956.61	956.80	956.86
+25	956.37	956.56	956.56	956.56	956.75	956.75
+50	956.38	956.57	956.51	956.51	956.70	956.64
+75	956.39	956.58	956.46	956.46	956.65	956.53
366+00	956.39	956.58	956.41	956.41	956.60	956.43
+25	956.36	956.55	956.36	956.36	956.55	956.36
+50	956.31	956.50	956.31	956.31	956.50	956.31
+75	956.26	956.45	956.26	956.26	956.45	956.26
367+00	956.21	956.40	956.21	956.21	956.40	956.21

STA. 395+50 TO STA. 411+00						
STA.	WEST BOUND			EAST BOUND		
	LT. EDGE	℄	RT. EDGE	LT. EDGE	℄	RT. EDGE
395+50	952.67	952.86	952.67	952.67	952.86	952.67
+75	952.91	953.10	952.91	952.91	953.10	952.91
396+00	953.15	953.34	953.18	953.18	953.37	953.20
+25	953.38	953.57	953.46	953.46	953.65	953.53
+50	953.62	953.81	953.77	953.77	953.96	953.91
+75	953.87	954.06	954.09	954.09	954.28	954.29
397+00	954.14	954.33	954.44	954.44	954.63	954.74
+25	954.42	954.63	954.80	954.80	955.01	955.17
+50	954.74	954.96	955.18	955.18	955.40	955.61
+75	955.12	955.34	955.58	955.58	955.82	956.05
398+00	955.51	955.75	955.99	955.99	956.23	956.47
+25	955.92	956.16	956.40	956.40	956.64	956.88
+50	956.33	956.57	956.81	956.81	957.05	957.29
+75	956.74	956.98	957.22	957.22	957.46	957.70
399+00	957.15	957.39	957.63	957.63	957.87	958.11
+25	957.56	957.80	958.04	958.04	958.28	958.52
+50	957.97	958.21	958.45	958.45	958.69	958.93
+75	958.38	958.62	958.86	958.86	959.10	959.34
400+00	958.79	959.03	959.27	959.27	959.51	959.75
+25	959.20	959.44	959.68	959.68	959.92	960.16
+50	959.61	959.85	960.09	960.09	960.33	960.57
+75	960.02	960.26	960.50	960.50	960.74	960.98
401+00	960.43	960.67	960.91	960.91	961.15	961.39
+25	960.84	961.08	961.32	961.32	961.56	961.80
+50	961.25	961.49	961.73	961.73	961.97	962.21
+75	961.66	961.90	962.14	962.14	962.38	962.62
402+00	962.07	962.31	962.55	962.55	962.79	963.03
+25	962.48	962.72	962.96	962.96	963.20	963.44
+50	962.89	963.13	963.37	963.37	963.61	963.85
+75	963.30	963.54	963.78	963.78	964.02	964.26
403+00	963.71	963.95	964.19	964.19	964.43	964.67
+25	964.12	964.36	964.60	964.60	964.84	965.08
+50	964.53	964.77	965.01	965.01	965.25	965.49
+75	964.94	965.18	965.42	965.42	965.66	965.90
404+00	965.35	965.59	965.83	965.83	966.07	966.31
+25	965.76	966.00	966.24	966.24	966.48	966.72
+50	966.17	966.41	966.65	966.65	966.89	967.13
+75	966.58	966.82	967.06	967.06	967.30	967.54
405+00	966.99	967.23	967.47	967.47	967.71	967.95
+25	967.40	967.64	967.88	967.88	968.12	968.36
+50	967.81	968.05	968.29	968.29	968.53	968.77
+75	968.22	968.46	968.70	968.70	968.94	969.18
406+00	968.63	968.87	969.11	969.11	969.35	969.59
+25	969.04	969.28	969.52	969.52	969.76	970.00
+50	969.45	969.69	969.93	969.93	970.17	970.41
+75	969.86	970.10	970.34	970.34	970.58	970.82
407+00	970.27	970.51	970.75	970.75	970.99	971.23
+25	970.68	970.92	971.16	971.16	971.40	971.64
+50	971.09	971.33	971.57	971.57	971.81	972.05
+75	971.50	971.74	971.98	971.98	972.22	972.46
408+00	971.89	972.13	972.37	972.37	972.61	972.85
+25	972.26	972.50	972.74	972.74	972.98	973.22
+50	972.63	972.87	973.11	973.11	973.35	973.59
+75	972.99	973.22	973.46	973.46	973.70	973.94
409+00	973.36	973.57	973.79	973.79	974.01	974.23
+25	973.75	973.94	974.12	974.12	974.31	974.50
+50	974.12	974.31	974.43	974.43	974.62	974.73
+75	974.50	974.69	974.72	974.72	974.91	974.94
410+00	974.87	975.06	975.00	975.00	975.19	975.15
+25	975.20	975.39	975.27	975.27	975.46	975.35
+50	975.50	975.69	975.52	975.52	975.71	975.56
+75	975.76	975.95	975.77	975.77	975.96	975.78
411+00	975.99	976.18	975.99	975.99	976.18	975.99

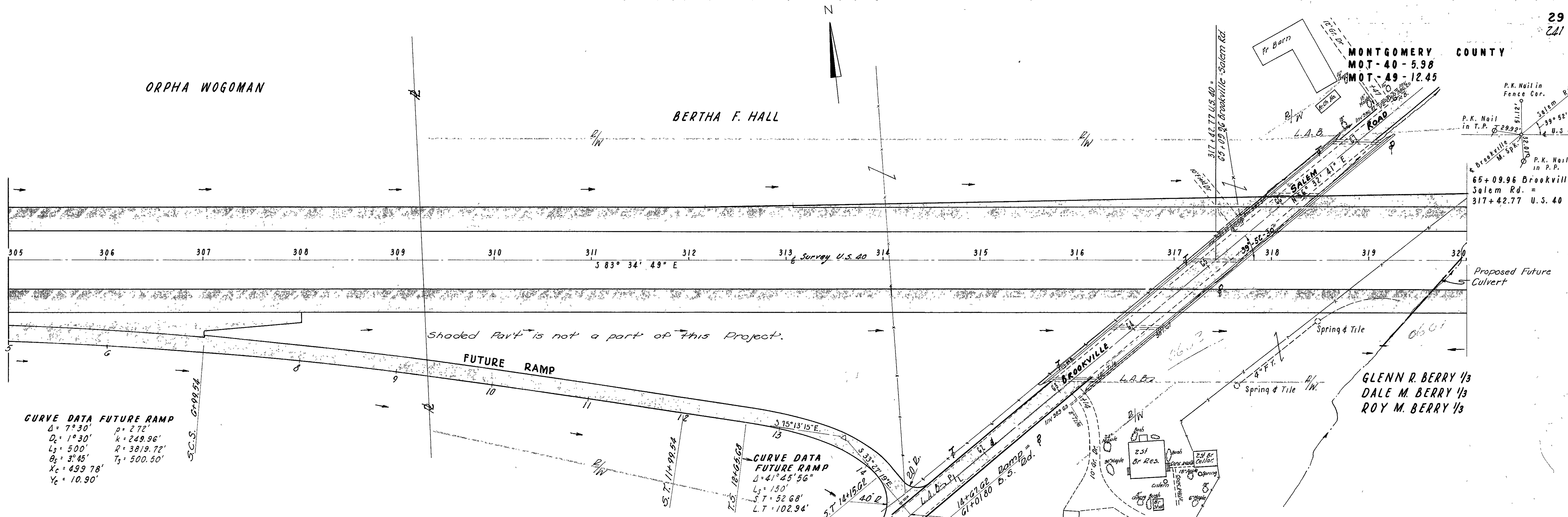
NB. SR. 49 ACCL. LANE STA. 398+08.60 TO STA. 410+00		
STA.	OFFSET	ELEV.
398+08.6	0	
+25	.34	955.91
+50	.86	956.31
+75	1.38	956.71
399+00	1.90	957.11
+25	2.42	957.51
+50	2.94	957.91
+75	3.46	958.31
400+00	3.98	958.71
+25	4.50	959.11
+50	5.02	959.51
+75	5.54	959.91
401+00	6.06	960.31
+25	6.58	960.71
+50	7.10	961.11
+75	7.62	961.51
402+00	8.14	961.91
+25	8.66	962.31
+50	9.18	962.71
+75	9.70	963.11
403+00	10.22	963.51
+25	10.74	963.91
+50	11.26	964.31
+75	11.78	964.70
404+00	12.30	965.10
+25	12.82	965.50
+50	13.34	965.90
+75	13.86	966.30
405+00	14.38	966.70
+25	14.90	967.10
+50	15.42	967.50
+75	15.94	967.90
406+00	16.46	968.30
+25	16.98	968.70
+50	17.50	969.10
+75	18.02	969.50
407+00	18.54	969.90
+25	19.06	970.30
+50	19.58	970.70
+75	20.10	971.10
408+00	20.62	971.48
+25	21.14	971.84
+50	21.66	972.22
+75	22.18	972.60
409+00	22.70	972.97
+25	23.22	973.35
+50	23.74	973.72
+75	24.26	974.09
410+00	24.78	974.47



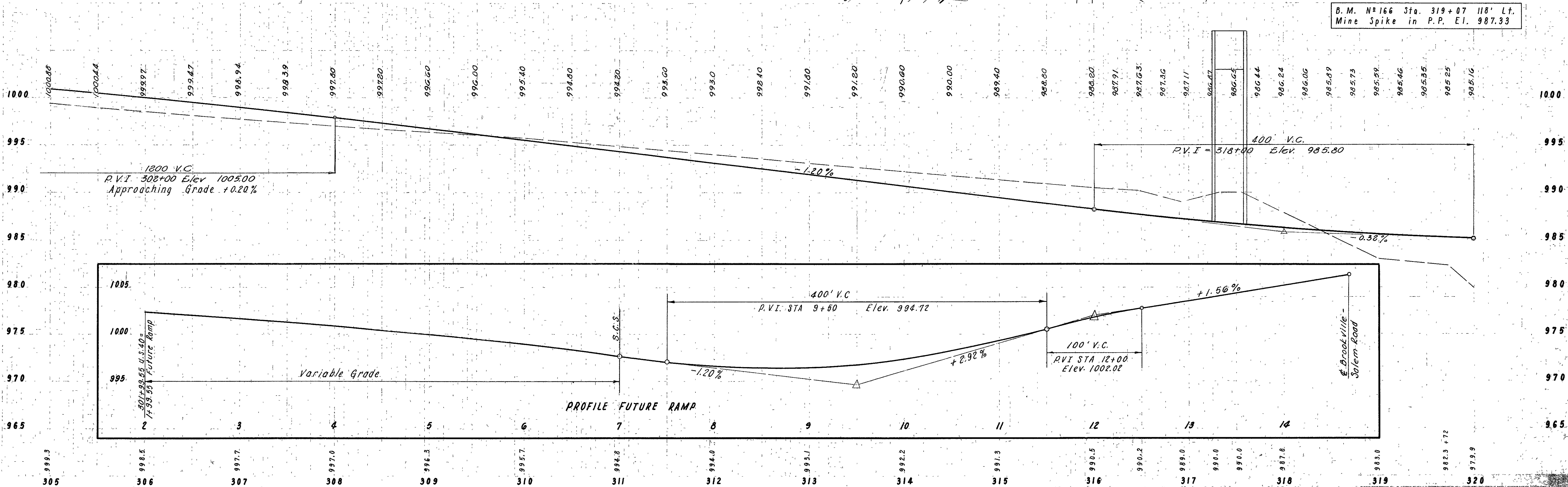
ORPHA WOGOMAN

BERTHA F. HALL

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

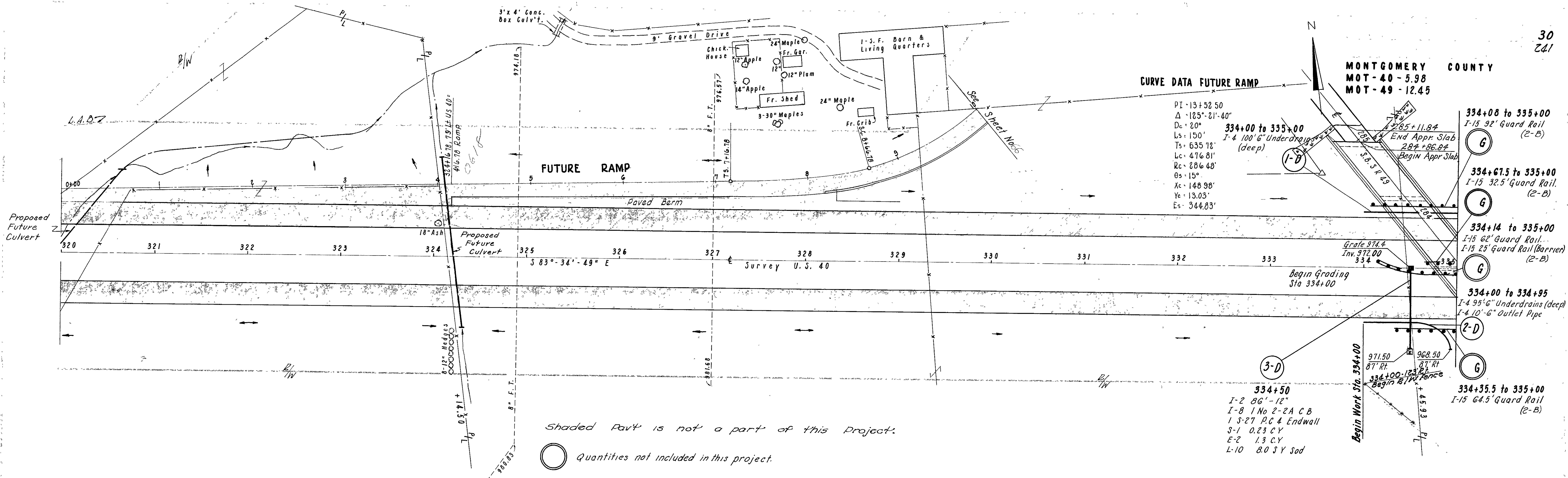


B.M. N#166 Sta. 319+07 118' Lt.  
Mine Spike in P.P. El. 987.33



305 + 00 To 320 + 00

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

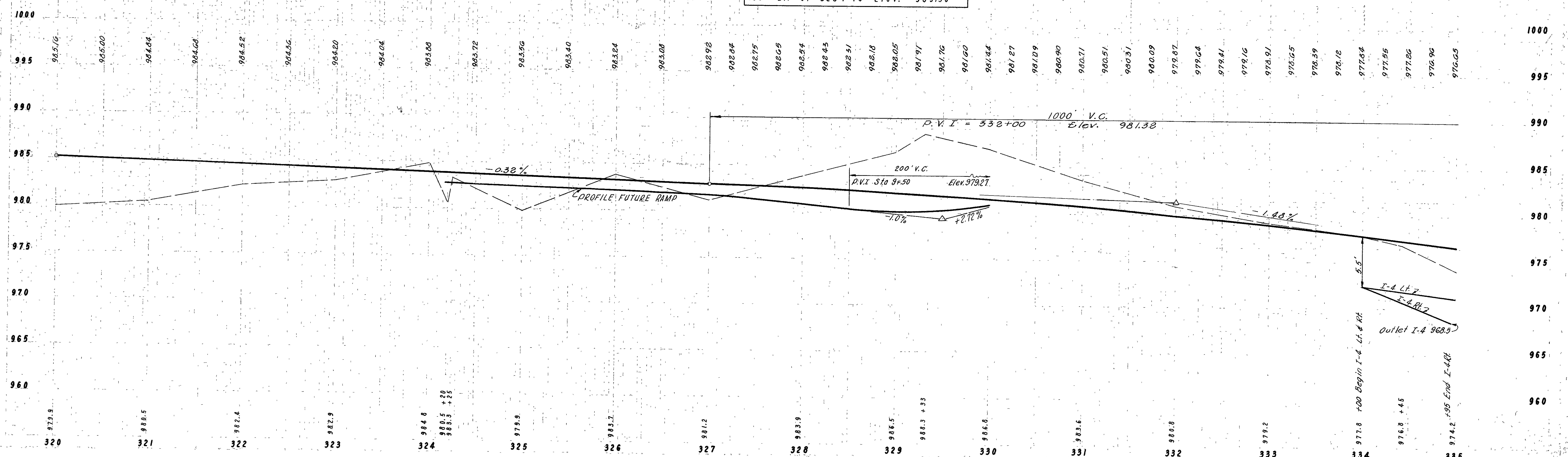


GLENN R. BERRY, DALE M. BERRY, ROY M. BERRY

GEORGE RAPPOLO

PAUL R. & FLORENCE H. NICELY

B.M. N° 167 Mine Spike in 18" Maple  
160' Lt. of 328+40 Elev. 985.30



**CURVE DATA S.B. S.R. 49**

PI 275+87.60  
 Δ 76°31'19"  
 Dc 7°00'  
 Ls 250'  
 Ts 778.98'  
 Lc 843.17'  
 Rc 818.51'  
 Bc 8.75'  
 Xc 249.02'  
 Yc 18.70'

**CURVE DATA N.B. S.R. 49**

PI 282+06.11  
 Δ 42°26'56"  
 Dc 3°00'  
 Ls 350'  
 Ts 917.71'  
 Lc 1064.96'  
 Rc 1909.86'  
 Bc 5.15'  
 Xc 349.71'  
 Yc 10.68'

**ALBERT N. & FLOYD BOWMAN**

**341+00**  
 I-2 106'-12"  
 I-8 1No 2-2A C.B.  
 I-1 5.27 P.C. 4 Endw.  
 S-1 0.23 C.Y.  
 E-2 1.3 C.Y.  
 L-10 0.05 S.Y. Sod.

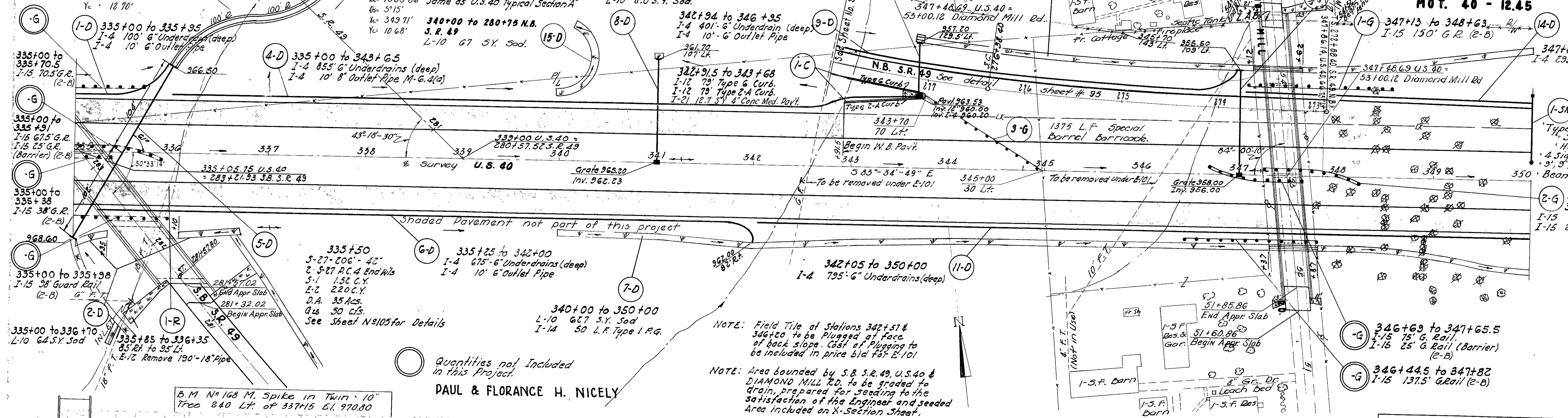
**343+65**  
 I-2 58'-12"  
 I-8 1No 2-G Inlet  
 I-14 10.5' Type A P.G.  
 S-1 0.23 C.Y.  
 E-2 1.3 C.Y.

**343+64 to 350+00**

I-14 387 S.Y. Sod  
 I-14 50 L.F. Type I P.G. fr. & Bl. Shed

**347+00**  
 I-2 108'-12"  
 I-8 1No 2-2A C.B.  
 I-1 5.27 P.C. 4 Endw.  
 S-1 0.23 C.Y.  
 E-2 1.3 C.Y.  
 L-10 5.0 S.Y. Sod

**MONTGOMERY COUNTY**  
**MOT. 40 - 598**  
**MOT. 40 - 12.45**



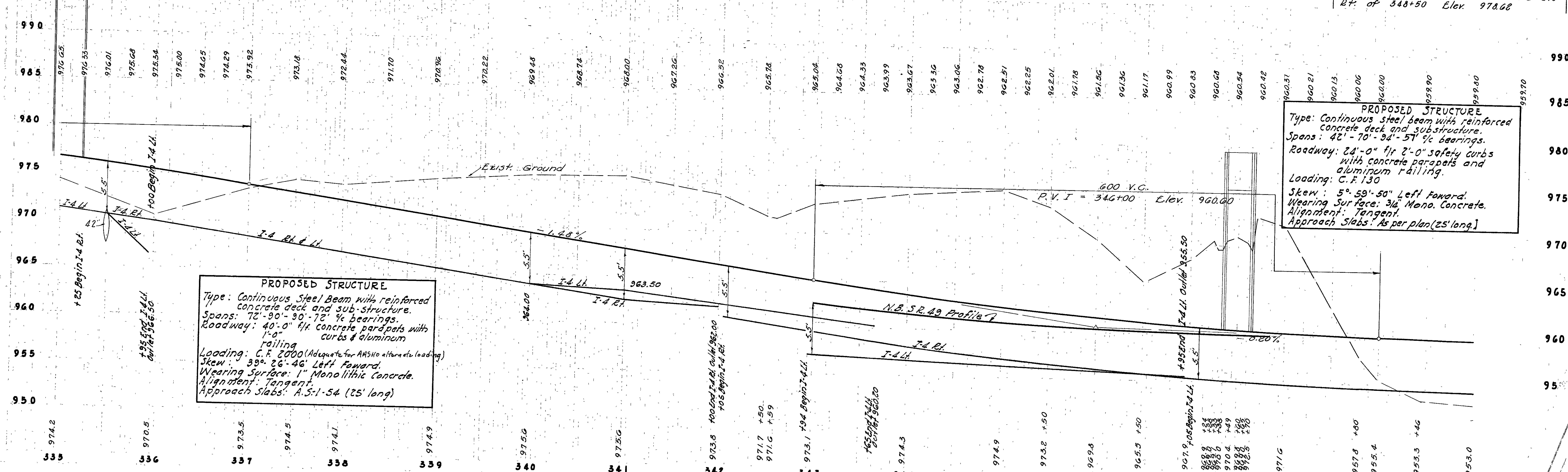
Quantities not Included in this Project.  
**PAUL & FLORANCE H. NICELY**

NOTE: Field Tile at Stations 342+57 & 346+20 to be Plugged at face of back slope. Cost of Plugging to be included in price bid for E-101

NOTE: Area bounded by S.B. S.R. 49, U.S. 40 & DIAMOND MILL RD. to be graded to drain, prepared for seeding to the satisfaction of the Engineer and seeded. Area included on X-Section Sheet.

B.M. N° 168 M. Spike in Twin 10" Tree 240 Lt. of 337+15 E.L. 970.80

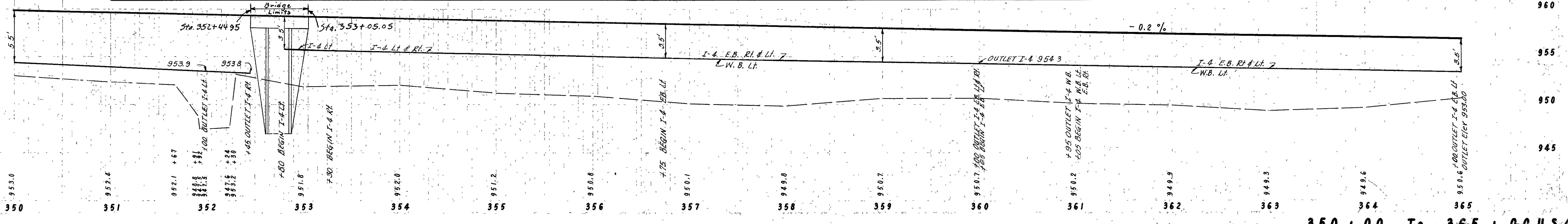
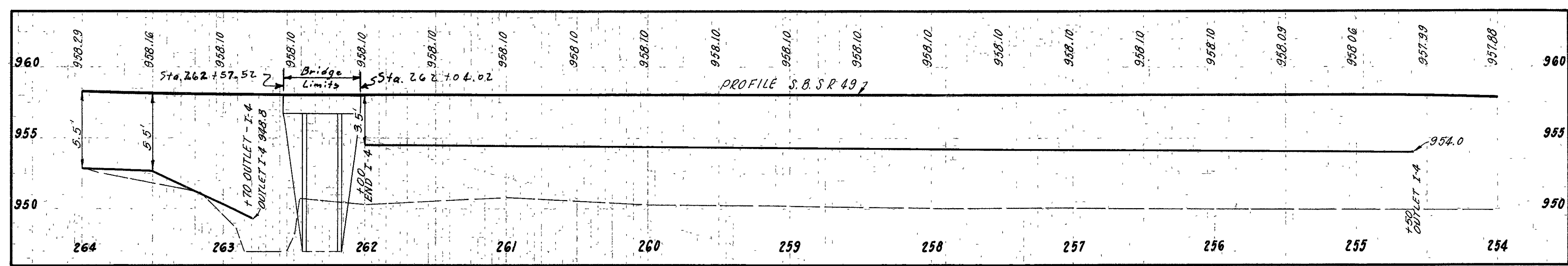
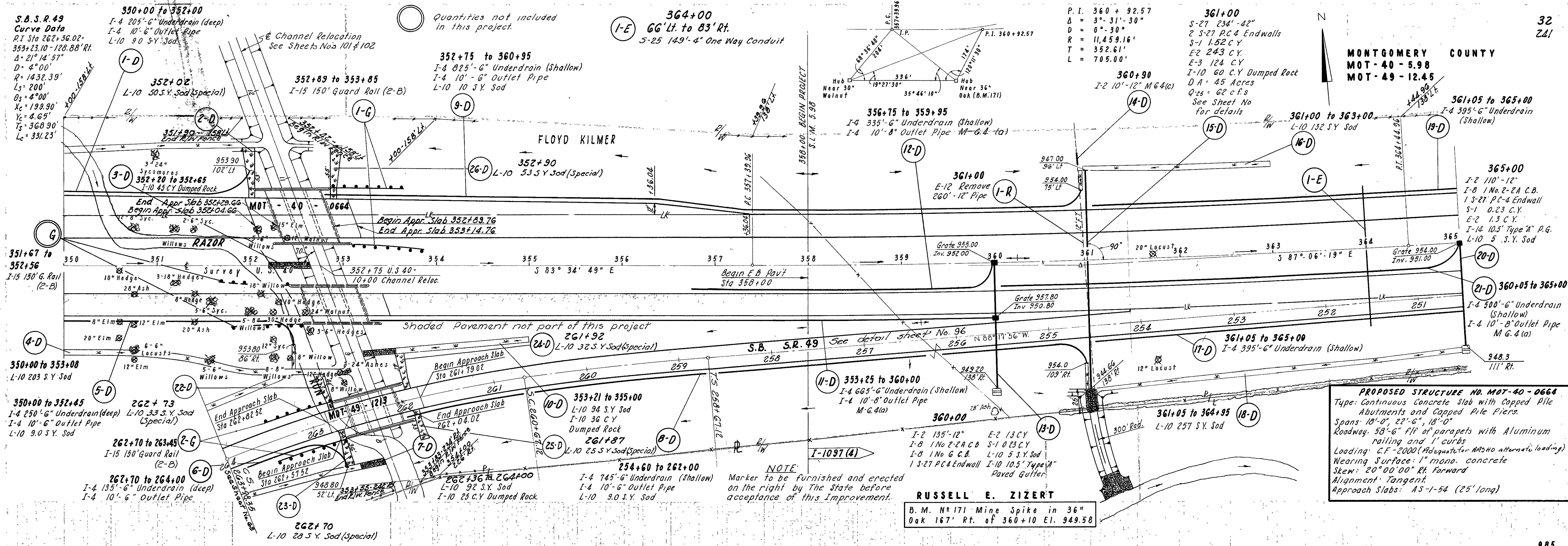
B.M. N° 169 M. Spike in Pole 278 Rt. of 348+50 Elev. 978.68



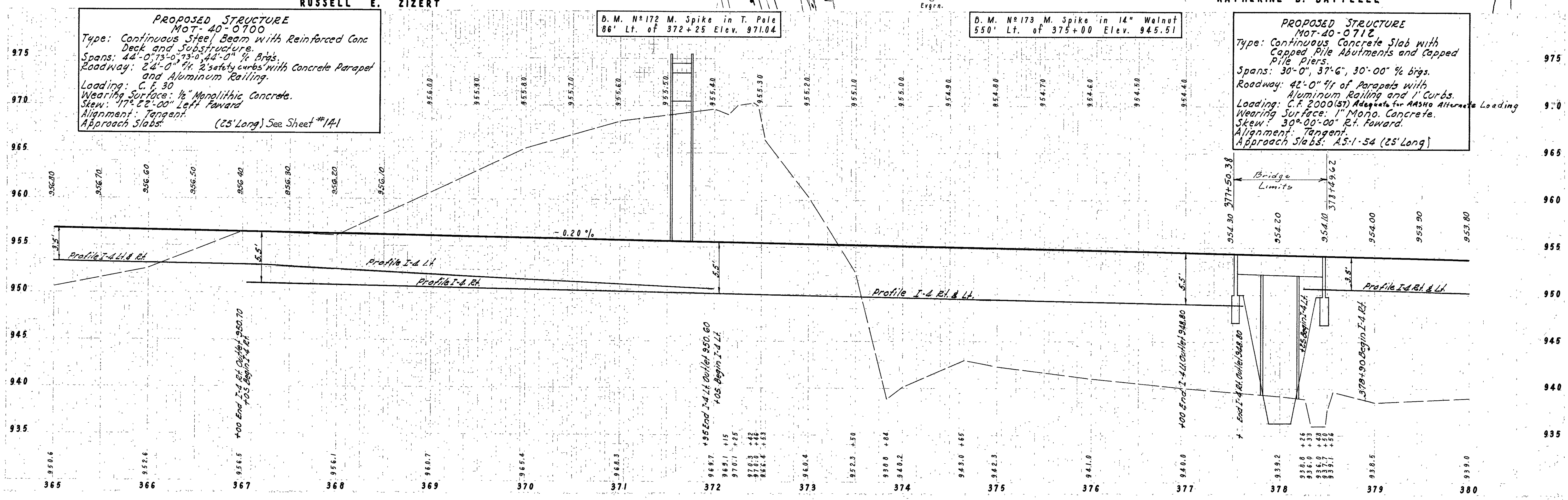
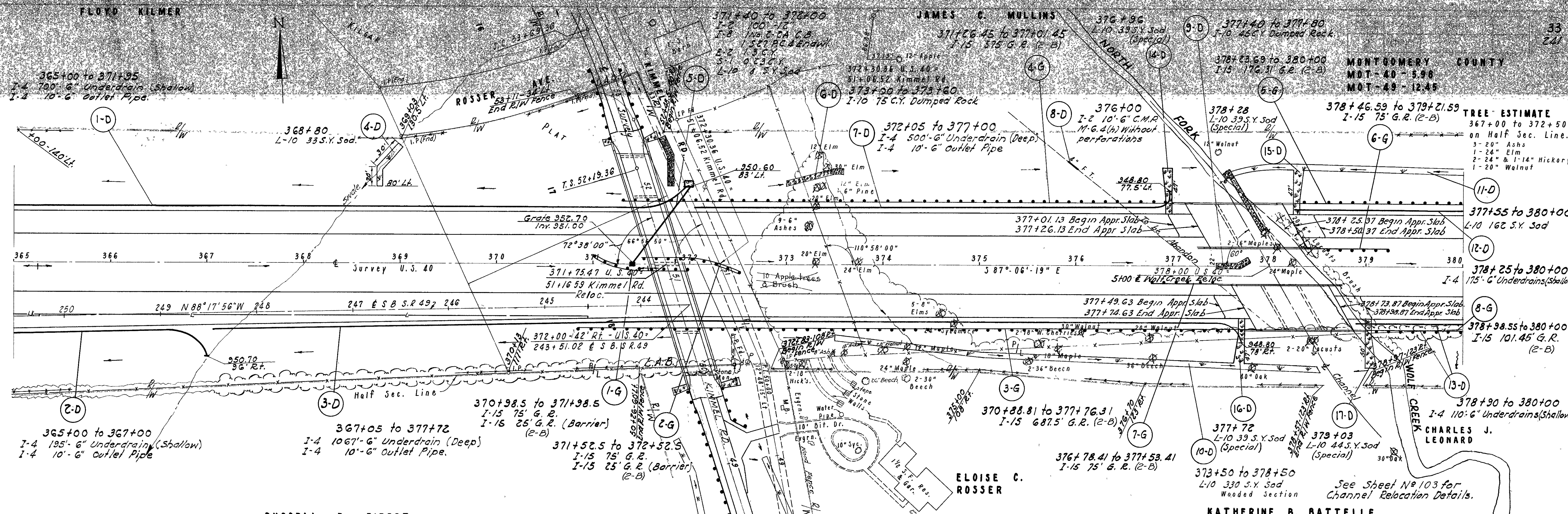
**PROPOSED STRUCTURE**  
 Type: Continuous Steel Beam with reinforced concrete deck and sub-structure.  
 Spans: 72'-30"-30'-72" 1/2 bearings.  
 Roadway: 40'-0" f/w concrete parapets with 1'-0" railing.  
 Loading: C.F. 2000 (Adequate for AASHTO alternate loading)  
 Skew: 39° 26' 46" Left Forward.  
 Wearing Surface: 1" Monolithic Concrete.  
 Alignment: Tangent.  
 Approach Slabs: A.S.-1-54 (25' long)

**PROPOSED STRUCTURE**  
 Type: Continuous steel beam with reinforced concrete deck and substructure.  
 Spans: 42'-70'-34'-57" 1/2 bearings.  
 Roadway: 24'-0" f/w 2'-0" safety curbs with concrete parapets and aluminum railing.  
 Loading: C.F. 130  
 Skew: 5° 59' 50" Left Forward.  
 Wearing Surface: 3/4" Mono. Concrete.  
 Alignment: Tangent.  
 Approach Slabs: As per plan (25' long)

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45



985  
980  
975  
970  
965  
960  
955  
950  
945



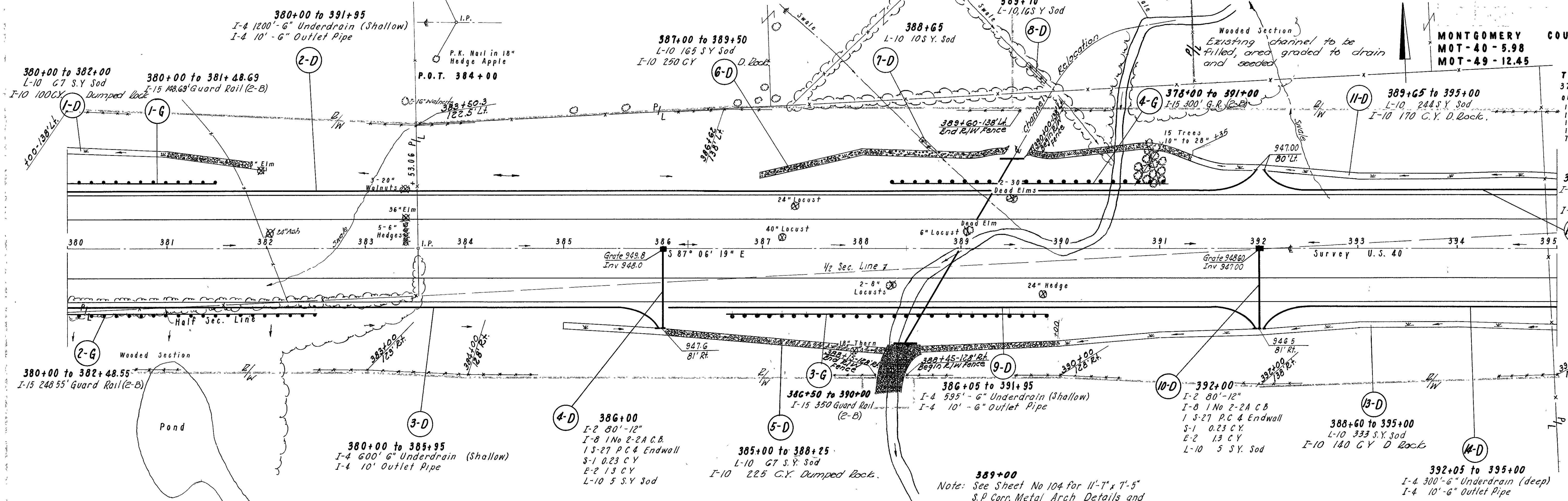


JAMES E. MULLINS

CHARLES MATTIS

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

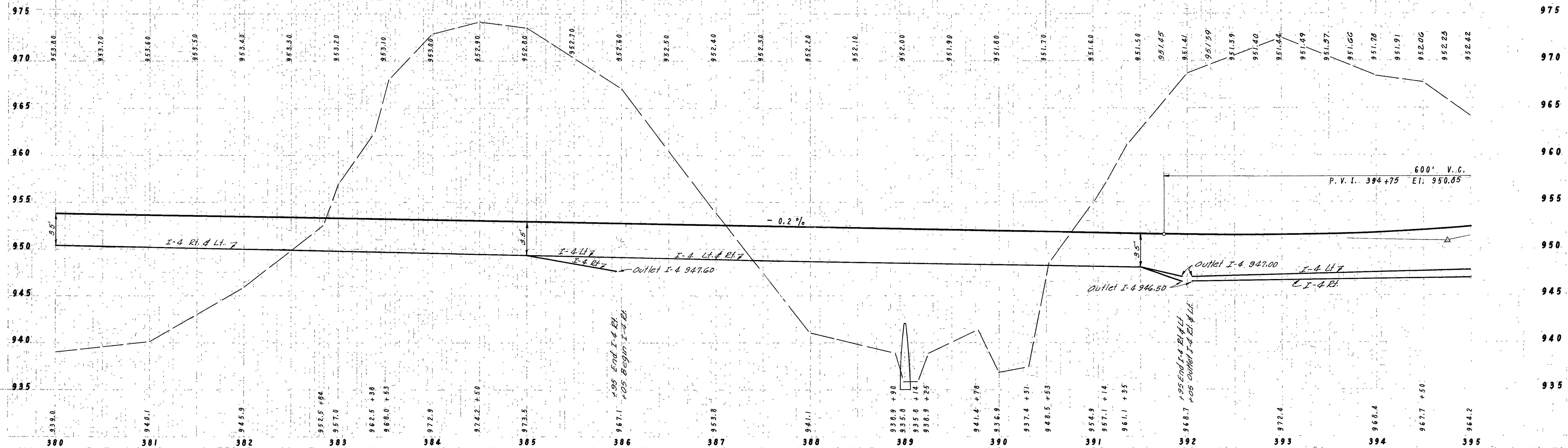
TREE ESTIMATE  
378+60 to 383+60  
on Half Sec. Line  
1-24" Ash  
1-24" Elm  
1-16" Hickory  
1-30" Walnut  
70-8" to 20" Hedges

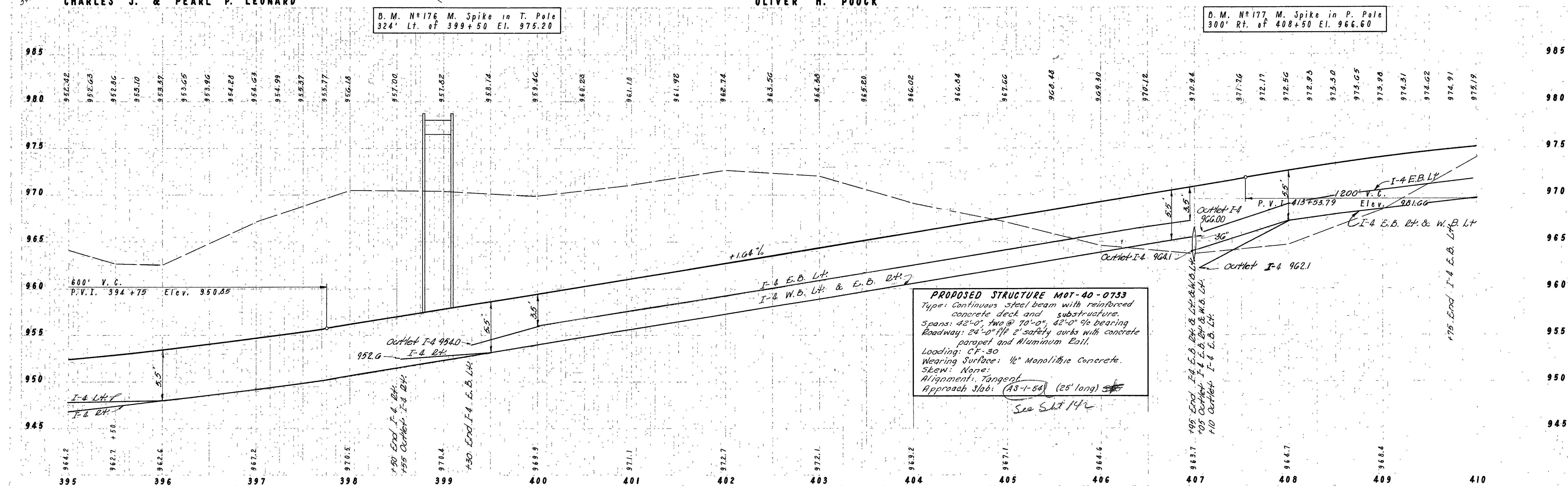
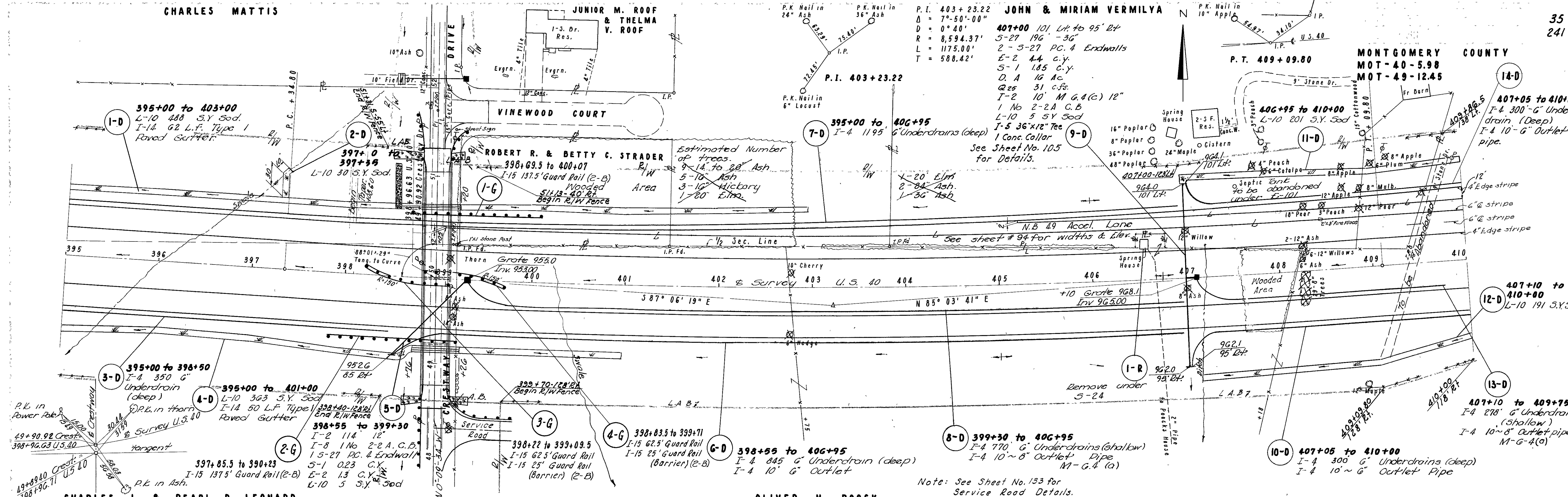


CHARLES J. LEONARD

B.M. No 174 M. Spike in 12" Thorn  
350' Lt. of 383+15 Elev. 980.02

B.M. No 175 M. Spike in 12" Silver  
Maple 312' Lt. of 389+90 El. 945.94





**PROPOSED STRUCTURE MOT-40-0733**  
 Type: Continuous steel beam with reinforced concrete deck and substructure.  
 Spans: 42'-0", 40'-0", 42'-0" 1/4 bearing roadway: 24'-0" 1/4 safety curbs with concrete parapet and Aluminum Rail.  
 Loading: CF-30  
 Wearing Surface: 1/2" Monolithic Concrete.  
 Skew: None.  
 Alignment: Tangent.  
 Approach Slab: (AS-1-54) (25' long) ~~5'~~  
 See Sht 142

B. M. No 177, M. Spike in P. Pole  
 300' Rt. of 408+50 El. 966.60

B. M. No 176, M. Spike in T. Pole  
 324' Lt. of 399+50 El. 975.20

Note: See Sheet No. 133 for Service Road Details.

JOHN & MIRIAM VERMILYA  
 P.I. 403+23.22  
 Δ = 7°-50'-00"  
 D = 0° 40'  
 R = 8,594.37'  
 L = 1175.00'  
 T = 588.42'

407+00 101 Lt. to 95' Lt  
 5-27 196 -36"  
 2-5-27 PC. 4 Endwalls  
 E-2 4.4 c.y.  
 5-1 1.85 c.y.  
 D. A 16 Ac  
 Q25 31 c.fs.  
 I-2 10' M.G.(C) 12"  
 1 No 2-2A C.B.  
 L-10 5 SY Sod  
 I-5 36"x12" Tee  
 1 Conc. Collar  
 See Sheet No. 105 for Details.

MONTGOMERY COUNTY  
 MOT-40-598  
 MOT-49-12.45

399+30 to 400+95  
 I-4 770' G Underdrains (shallow)  
 I-4 10' ~ 8" Outlet Pipe  
 M-G-4 (a)

398+55 to 400+95  
 I-4 845' G Underdrain (deep)  
 I-4 10' G Outlet

397+85.5 to 399+23  
 I-15 137.5' Guard Rail (E-B)  
 E-2 1.3 C.Y. Sod  
 L-10 5 SY Sod

395+00 to 398+50  
 I-4 350' G Underdrain (deep)  
 I-14 50 L.F. Type 1 Raved Gutter

**CURVE DATA N.B. S.R. 49**

PI = 155 + 96.45  
 $\Delta = 33^\circ 25' 38''$   
 Dc = 8' 00"  
 Ls = 200'  
 Tc = 315.68'  
 Lc = 217.84'  
 Pc = 716.20'  
 Es = 8' 00"  
 Xc = 199.61'  
 Yc = 9.30'

**1-D** 410+00 to 410+05  
 I-4 5'-6" Underdrain (deep)

410+12  
 I-2 44'-12"  
 I-8 1 No G.C.B.  
 S-1 27 P.C. 4 Endwall  
 S-1 0.23 C.Y.  
 E-2 1.3 C.Y.

**2-D**  
**3-D**  
**4-D**

**153+75 to 156+95 N.B. S.R. 49**

I-12 320 L.F. Type "A" Curb  
 156+95 to 161+98.61 N.B. S.R. 49  
 I-12 504 L.F. Type "B" Curb

**1-C**  
 I-2 44'-12"  
 I-8 1 No G.C.B.  
 S-1 27 P.C. 4 Endwall  
 S-1 0.23 C.Y.  
 E-2 1.3 C.Y.

**5-D**  
 I-4 10'-6" Outlet  
 L-10 132 S.Y. Sod

**6-D** 410+00 to 412+00  
 L-10 132 S.Y. Sod

**7-D** 410+00 to 422+25  
 I-4 1225'-6" Underdrain (deep)

**8-D** 419+50  
 I-2 92'-15"  
 2 S-27 P.C. 4 Endwalls  
 S-1 0.52 C.Y.  
 E-2 2.8 C.Y.  
 L-10 3 S.Y. Sod

**9-D** 419+00 to 422+25  
 L-10 215 S.Y. Sod

**10-D** 415+00 to 422+25  
 I-4 725'-6" Underdrain (deep)

**1-R** 420+82-85' Lt. to 422+00-189' Rt.  
 E-12 Remove 250'-12"  
 S-24 Remove 2 C.B.

**1-SN** 420+00  
 Type: OS-2-A  
 Span: 68'  
 H: 3'  
 4 Sign Supports  
 9', 9', 15', 15' from beam splice

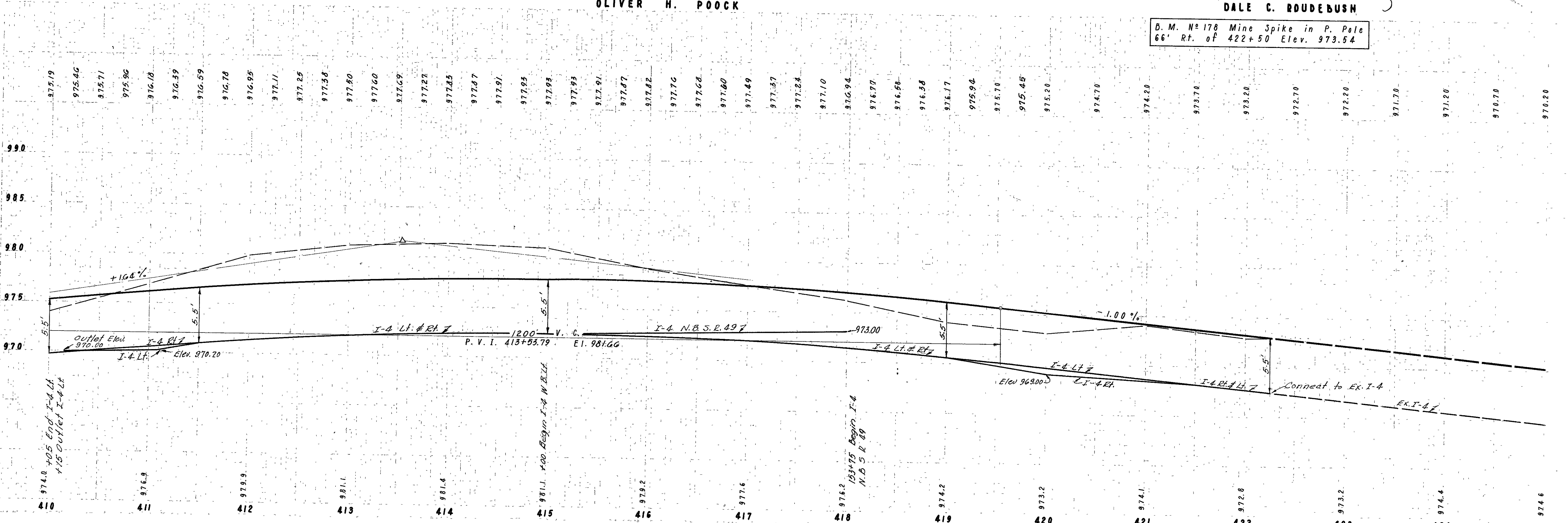
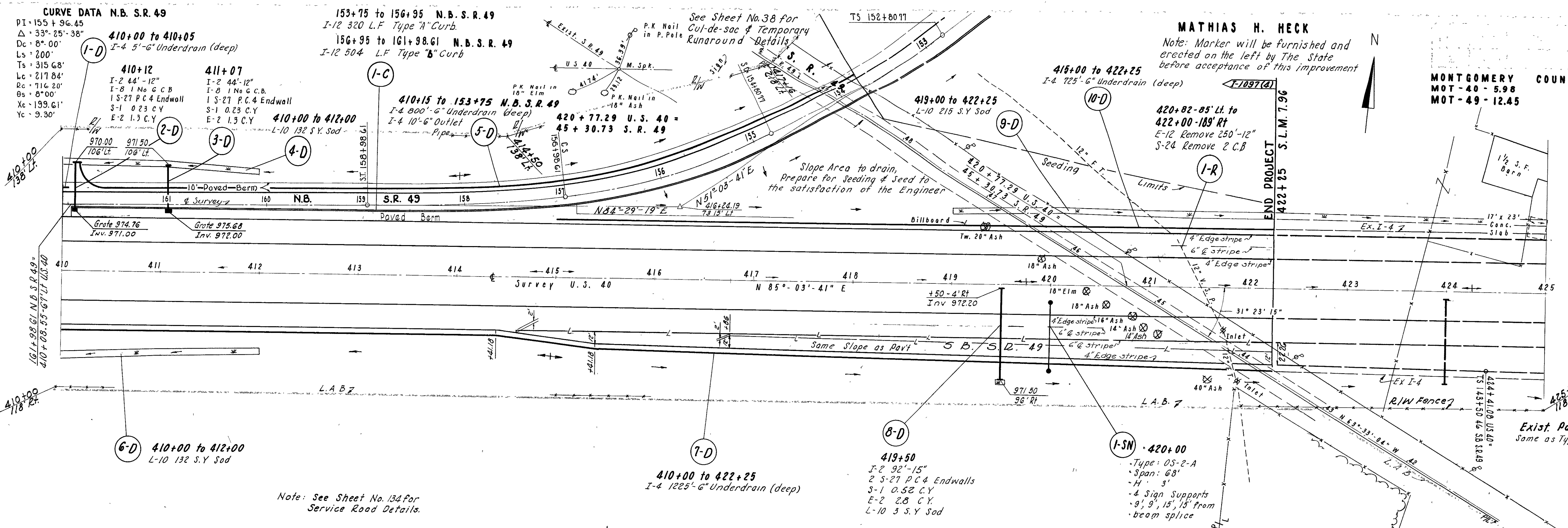
Note: See Sheet No. 134 for Service Road Details.

OLIVER H. POOCK

MATHIAS H. HECK

Note: Marker will be furnished and erected on the left by The State before acceptance of this improvement

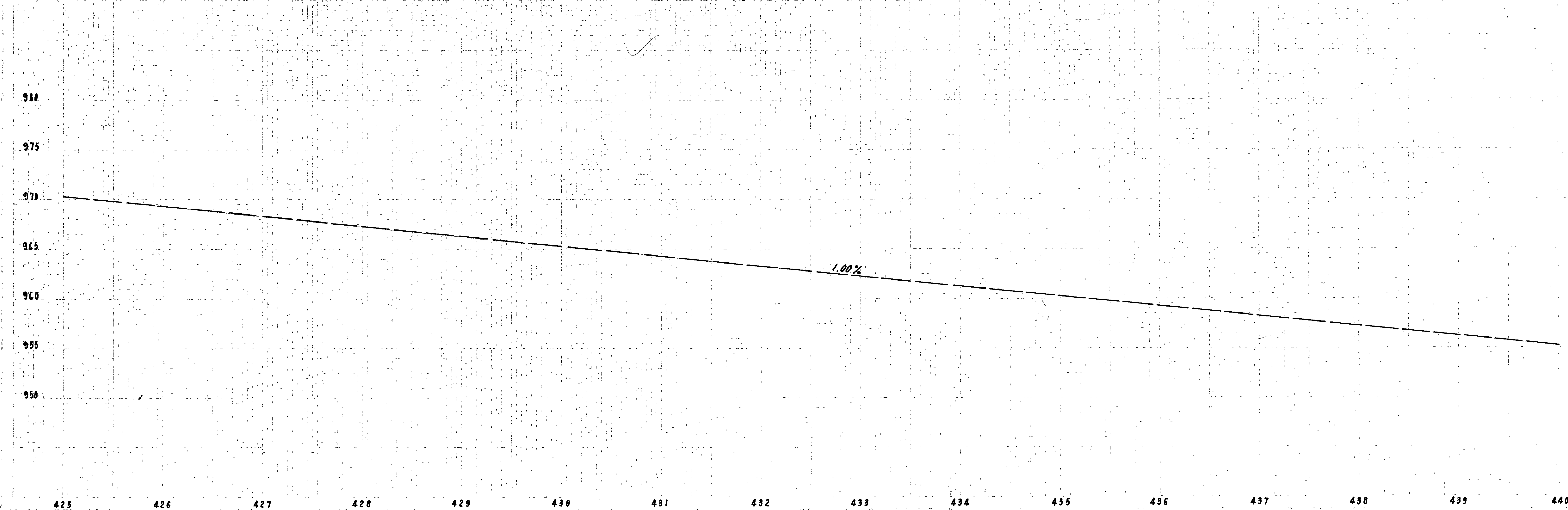
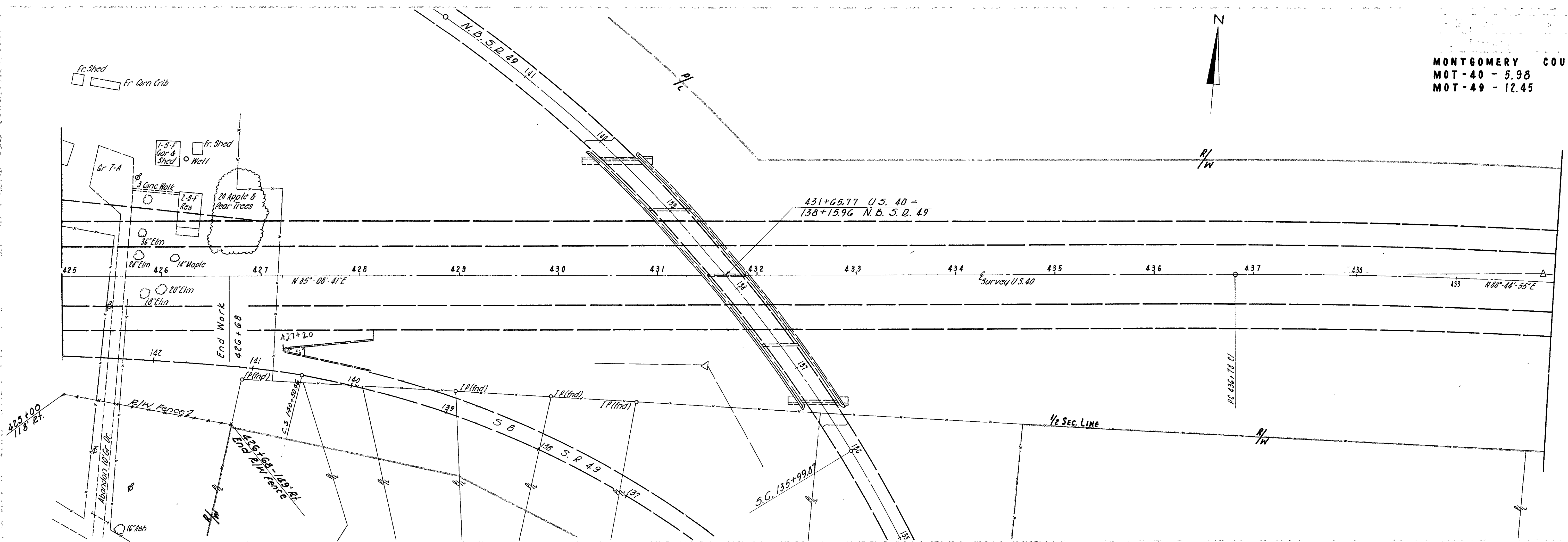
MONTGOMERY COUNTY  
 MOT-40-5.98  
 MOT-49-12.45



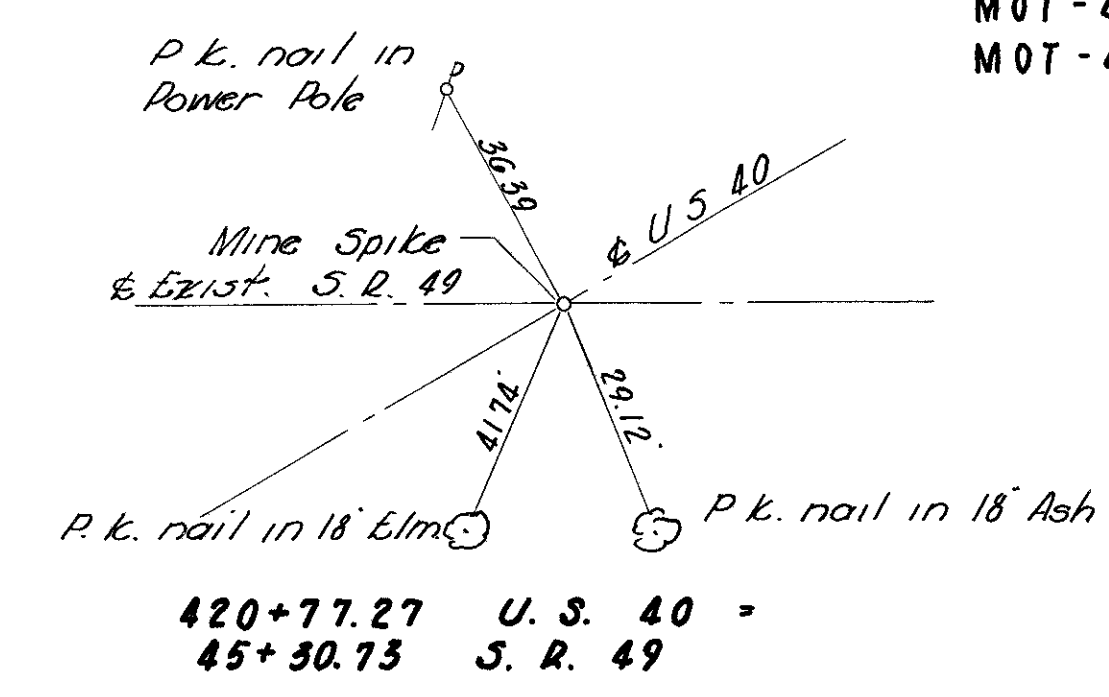
D.M. No 178 Mine Spike in P. Pole  
 66' Rt. of 422+50 Elev. 973.54

DALE C. ROUDEBUSH

MONTGOMERY COUNTY  
MOT-40 - 5.98  
MOT-49 - 12.45

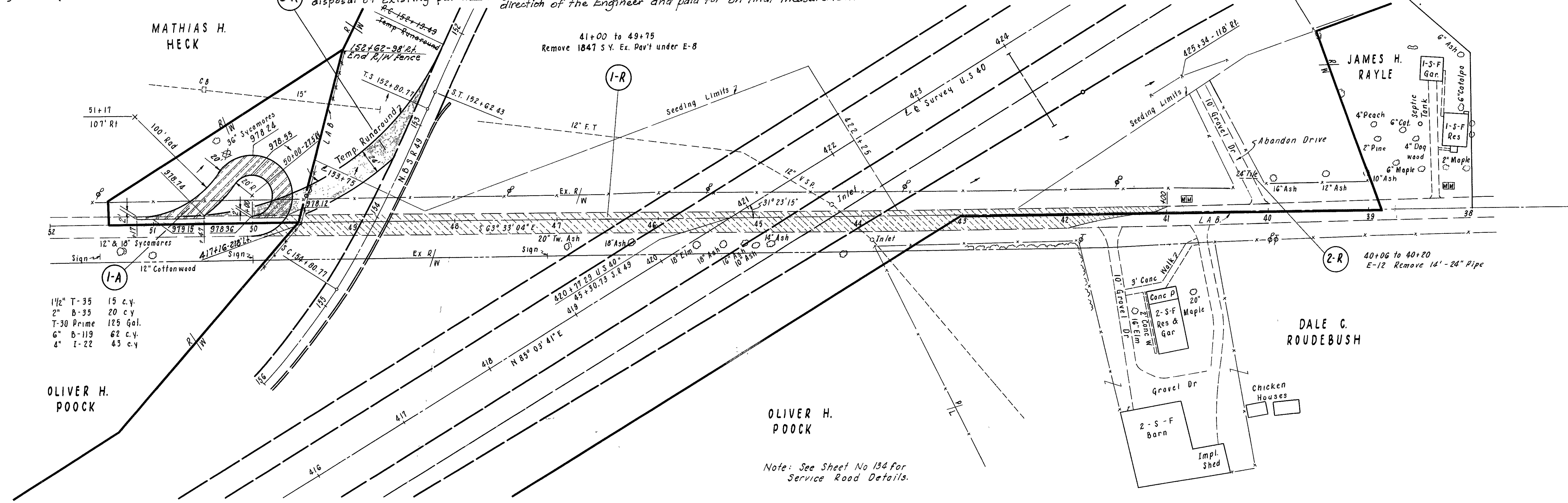


MONTGOMERY COUNTY  
MOT-40 - 5.98  
MOT-49 - 12.45



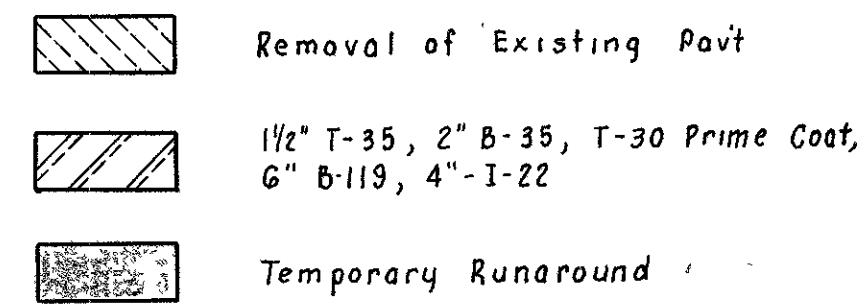
Temp. Runaround Curve Data  
P.I. Sta. 154+03.37  
 $\Delta = 65^\circ 23' 15''$   
 $D_c = 20'$   
 $R_c = 206.48'$   
 $T = 183.88'$   
 $L = 326.94'$

Approx. Sta. 153+02 Rt N B S R 49 to  
Approx. Sta. 49+85 Rt. Ex. S R. 49  
5" T-70 Temporary Conc. Paved Runaround  
to be placed under adjacent contract and removed,  
when no longer needed, as a part of this contract.  
Est. Item E-8 400 sq. yd. Removal and  
disposal of existing pavement. Grading and seeding shall be performed at the  
direction of the Engineer and paid for on final measurement.



- 1 1/2" T-35 15 c.y.
- 2" B-35 20 c.y.
- T-30 Prime 125 Gal.
- 6" B-119 62 c.y.
- 4" I-22 43 c.y.

Note: See Sheet No 134 for  
Service Road Details.



**EXISTING PAV'T. DATA**  
8" - B-70  
2" - Asphaltic Concrete Surface Course  
2" - Asphaltic Concrete Widening (each side)

SEEDING  
L.F. S.Y.

39  
241

MONTGOMERY COUNTY  
MOT-40-598  
MOT-49-12.45

AREA		VOLUME	
C	F	C	F

112

198 /

970

990

970

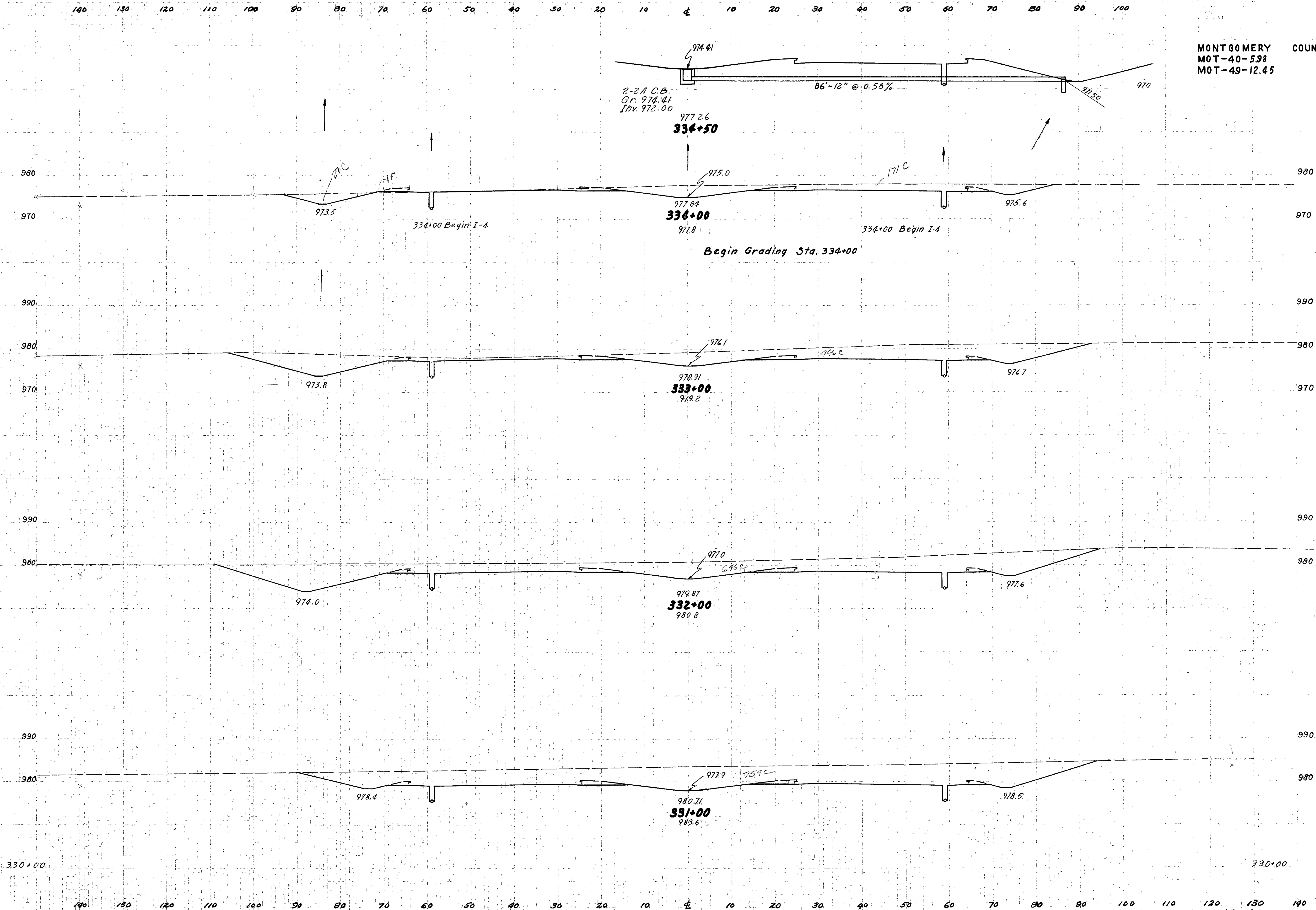
990

980

990

980

930+00



331+00 To 334+00 U.S. 40

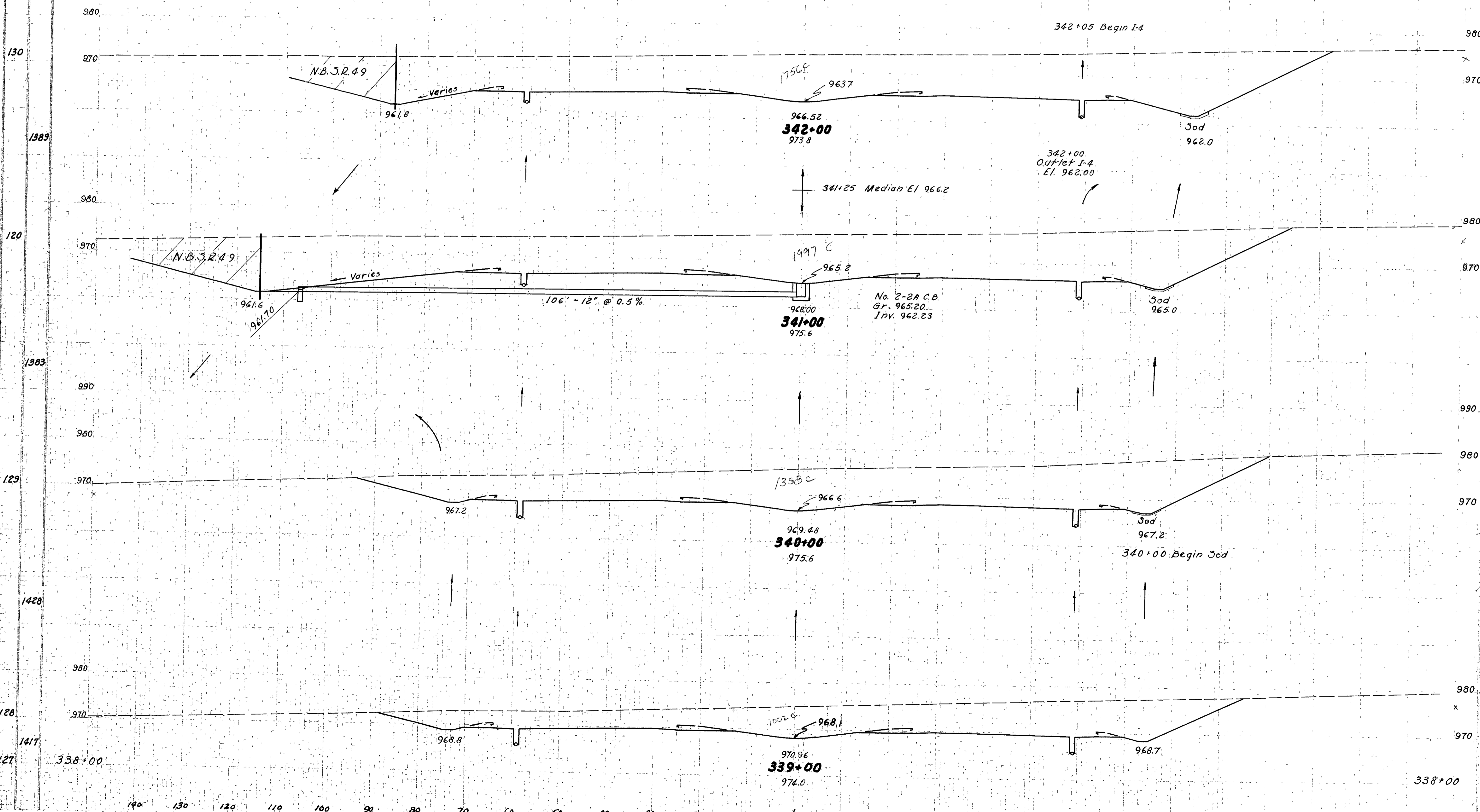
11-10-57  
11-10-57  
11-10-57  
11-10-57  
11-10-57



MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

SEEDING  
L.F. S.Y.  
140 130 120 110 100 90 80 70 60 50 40 30 20 10 ± 10 20 30 40 50 60 70 80 90 100

AREA		VOLUME	
C	F	C	F
1756	0	6350	0
1997	0	6213	0
1358	0	4371	0
1002	0	2965	0
539	0		



TYPED BY: S. L. ...  
 DATE: 11/19/57  
 CHECKED BY: ...  
 DATE: 11/19/57



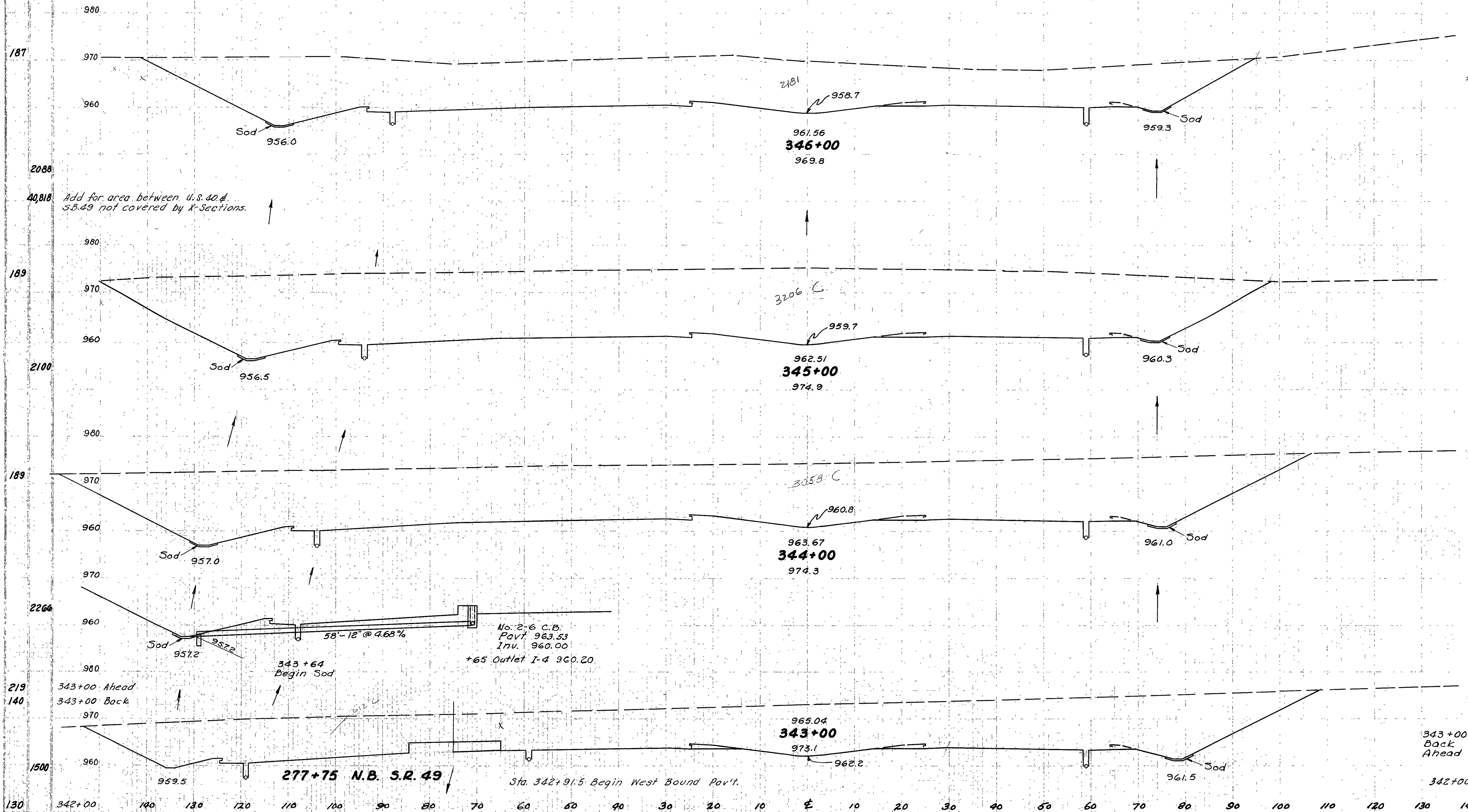
SEEDING  
I.F. SY.

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

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

42  
241

AREA VOLUM  
C F C F



Station	Area C.F.	Volume C.F.F.
346+00	2181	0
345+00	3206	0
344+00	3053	0
343+00	1719	0
342+00	1756	0
343+00 To 346+00	11600	3976
	7503	

I.F. SY.  
 Plan 243 S. 57' 0" 107' 0"  
 Elevation 10/19/57 243.5, 107.0 10/19/57 243.5  
 Date 11/25/57 11/25/57 11/25/57 11/25/57

343+00 To 346+00 11.5 4

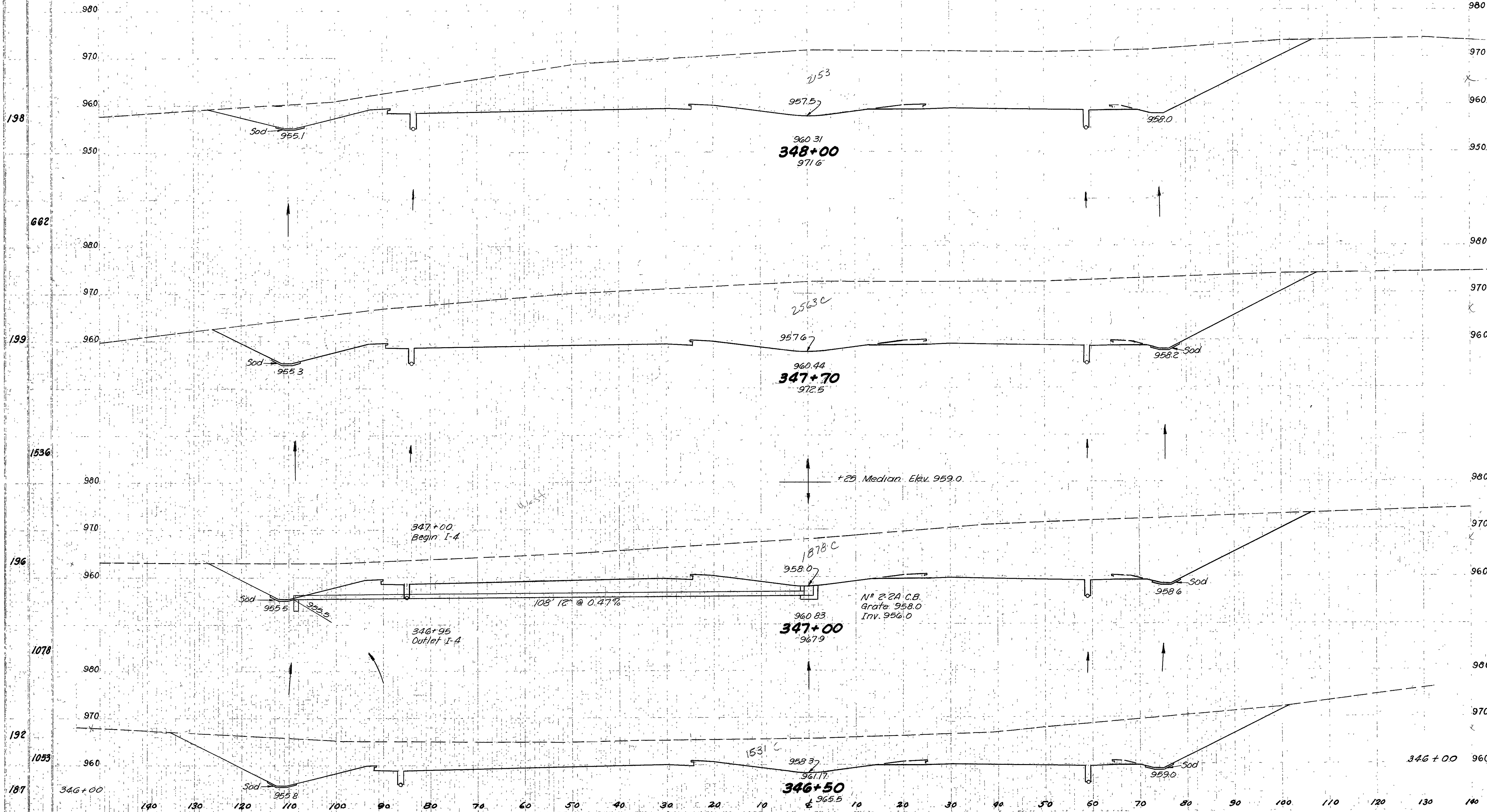
SEEDING  
L.F.S.Y.

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

43  
241

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

AREA		VOLUME	
C	F	C	F



2153	0	2620	0
2563	0	5757	0
1878	0	6313	0
1531	0	6875	0
1531	0	2181	0

Plan: D.B.B. 1, C&G, 10/15/57  
 Elevation: 10/16/57 D.B.B. C&G 10/15/57 J.Y.  
 Seeding: 10/16/57 J.Y. 11/19/57 J.Y.

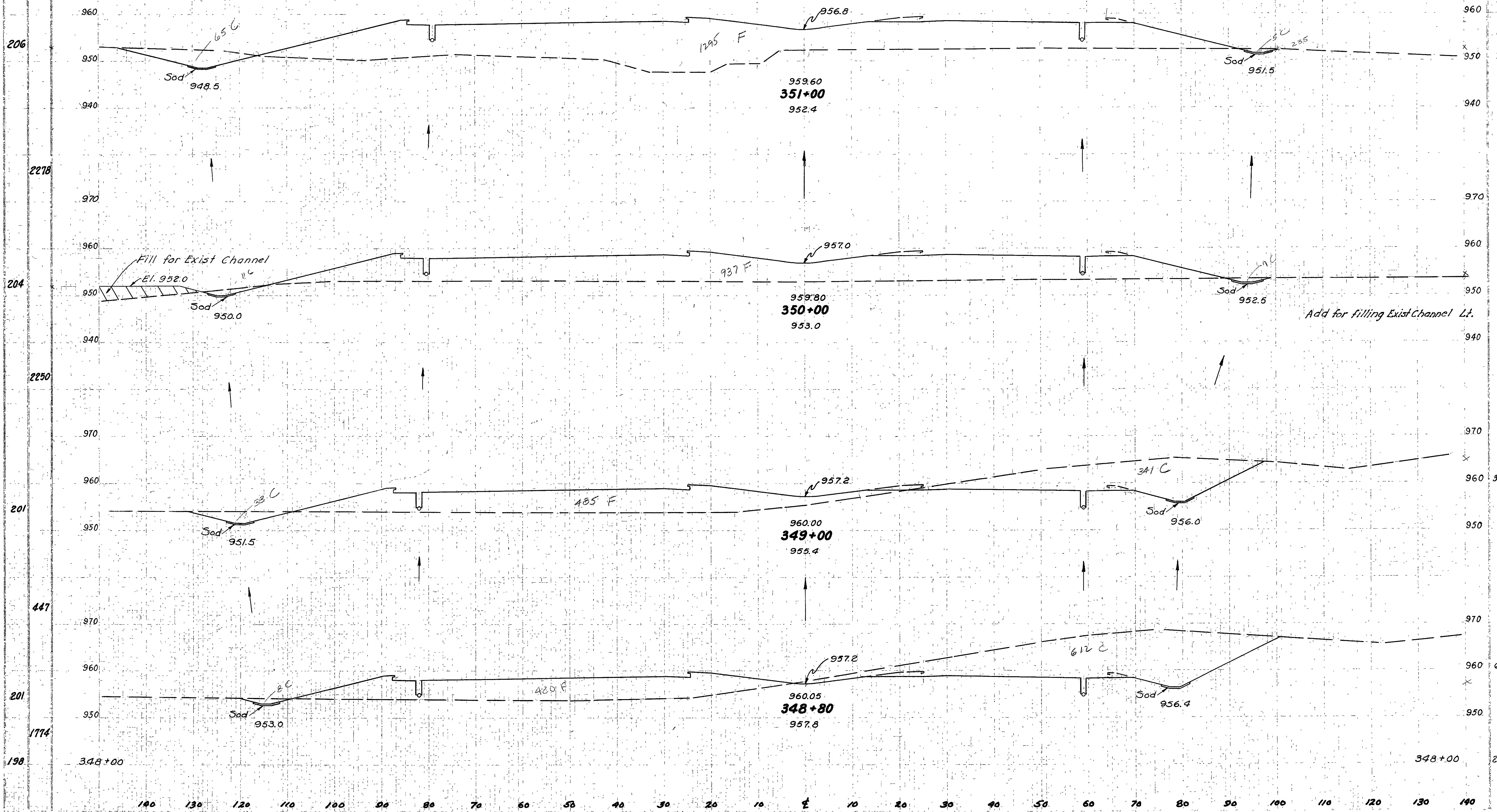
346+50 To 348+00 U.S. 41

SEEDING  
L.F. SY

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

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

44  
241



AREA	VOLUME	
	C	F
70.1295	163.4134	986
18.937	726.2633	368.1676
374.485	4180.622	0
620.420	2153	0

PLAN, DALL S.M. 57, 4/10/57, W.D. 10/15/57, W.Y.  
 EARTHWORKS, 10/16/57, 2000 B. C.R. 10/18/57, W.S. W.J.  
 SEEDS, 10/18/57, 10/18/57, C.C. 11/15/57, W.E.

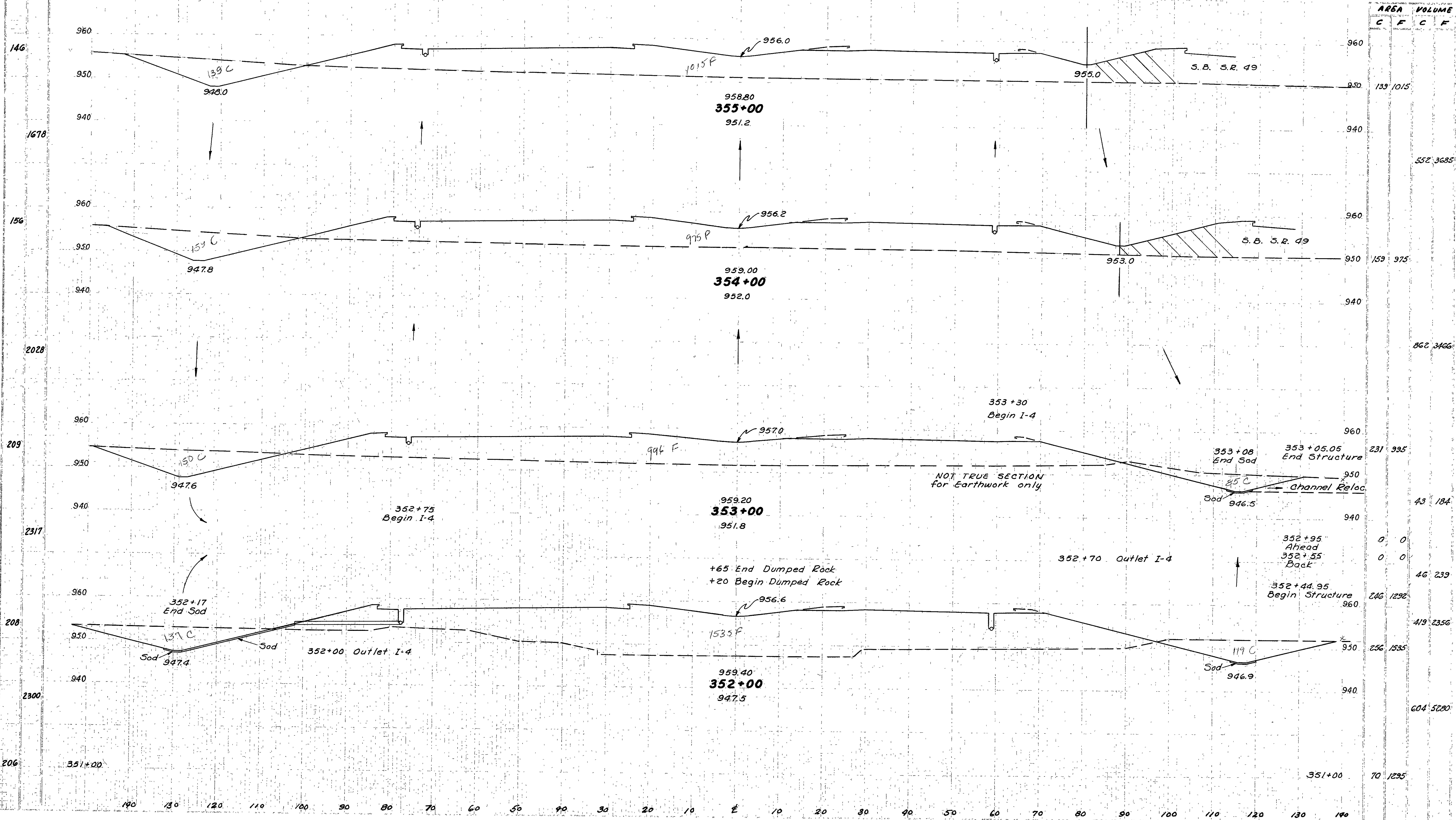
348+80 To 351+00 U.S. 40

SEEDING  
L.F.S.V.

190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 E 10 20 30 40 50 60 70 80 90 100

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

45  
241



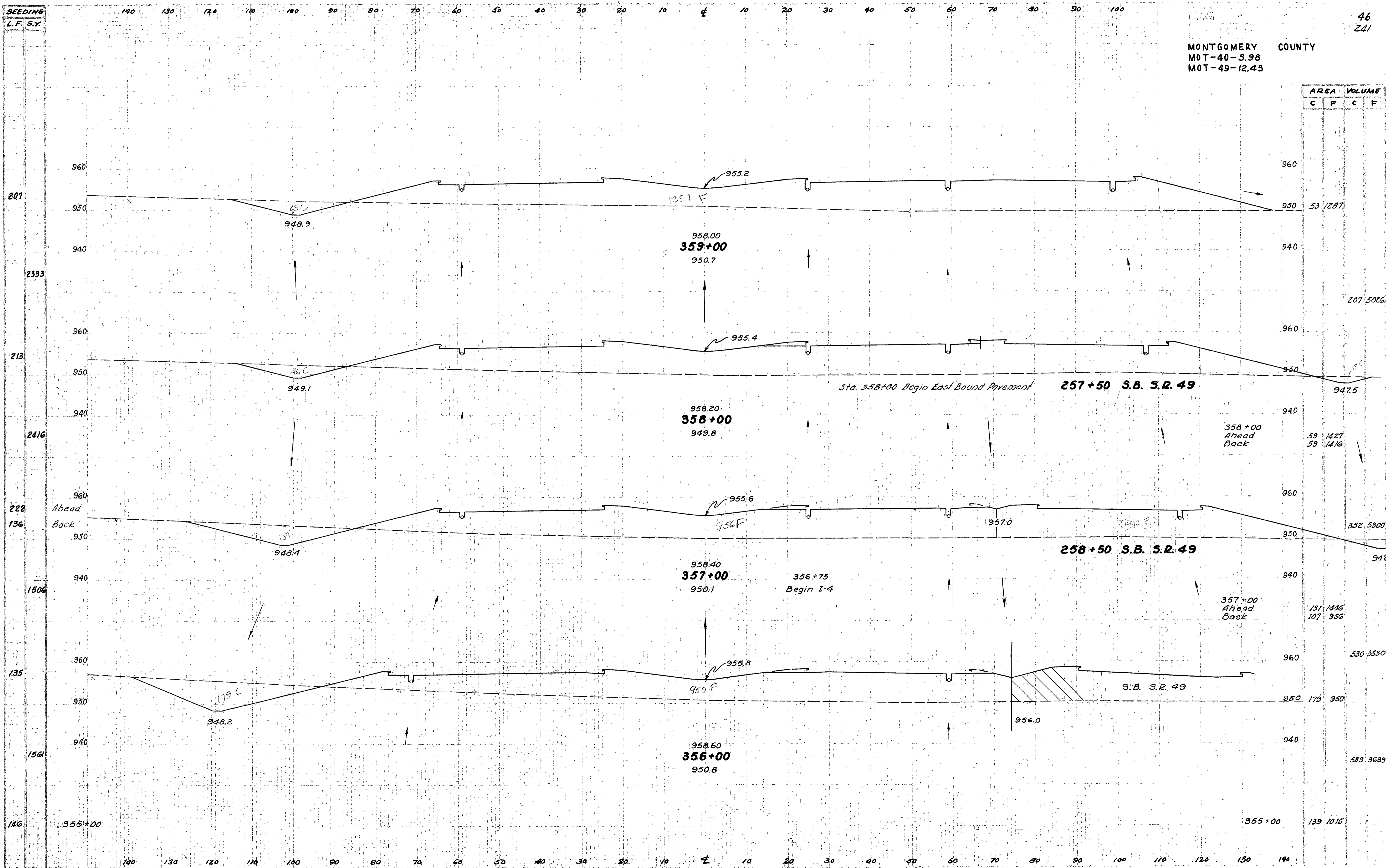
Review of 10/16/57  
 Plans for 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100  
 Earthwork 10/16/57  
 Seeding 10/16/57

SEEDING  
L.F.S.Y.

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

46  
241

AREA		VOLUME	
C	F	C	F



Plan  
 1. 11/1/57  
 2. 11/1/57  
 3. 11/1/57  
 4. 11/1/57  
 5. 11/1/57  
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 99. 11/1/57  
 100. 11/1/57

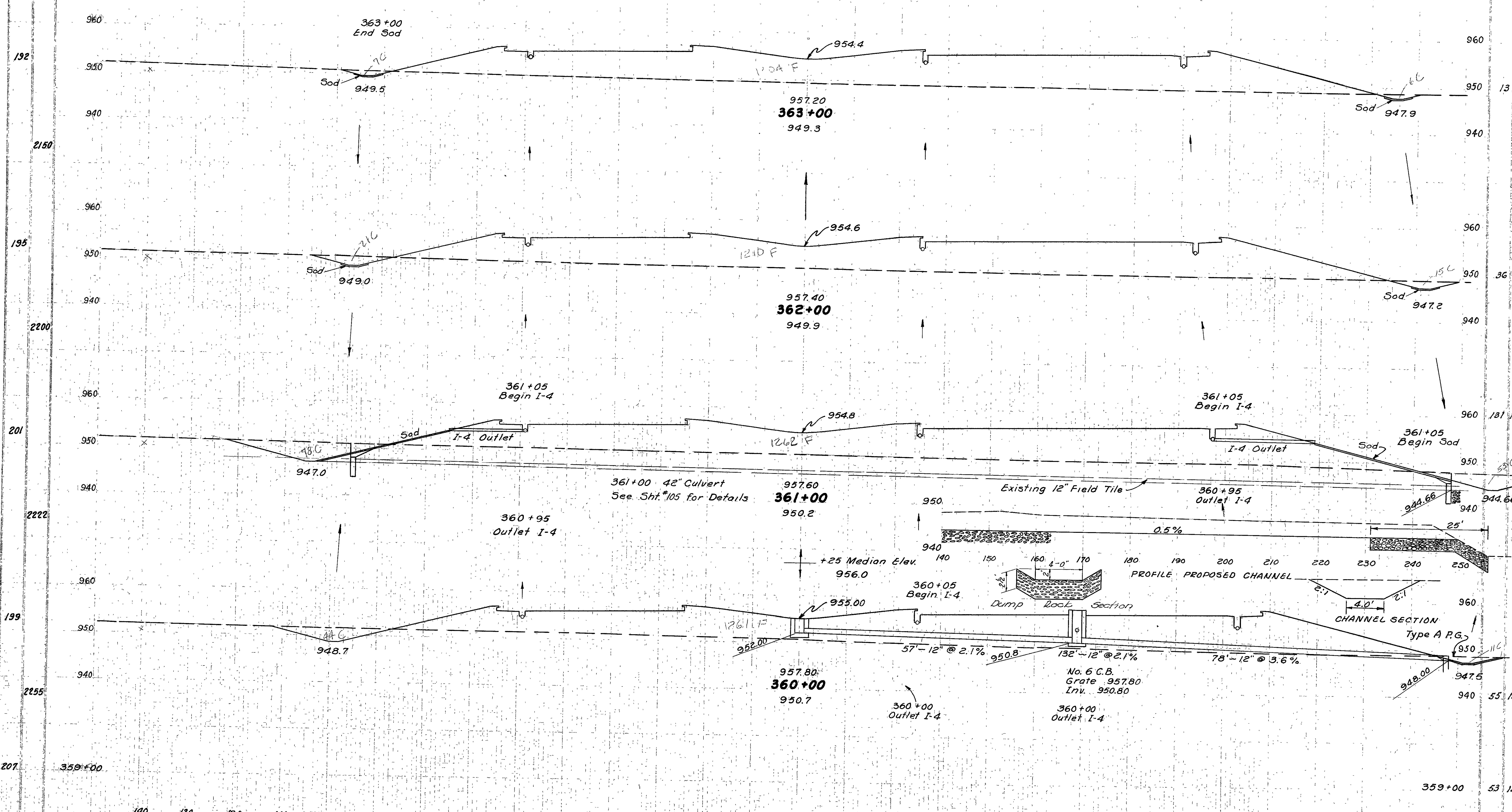
356+00 To 359+00 U.S. 40

SEEDING  
L.F. S.Y.

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

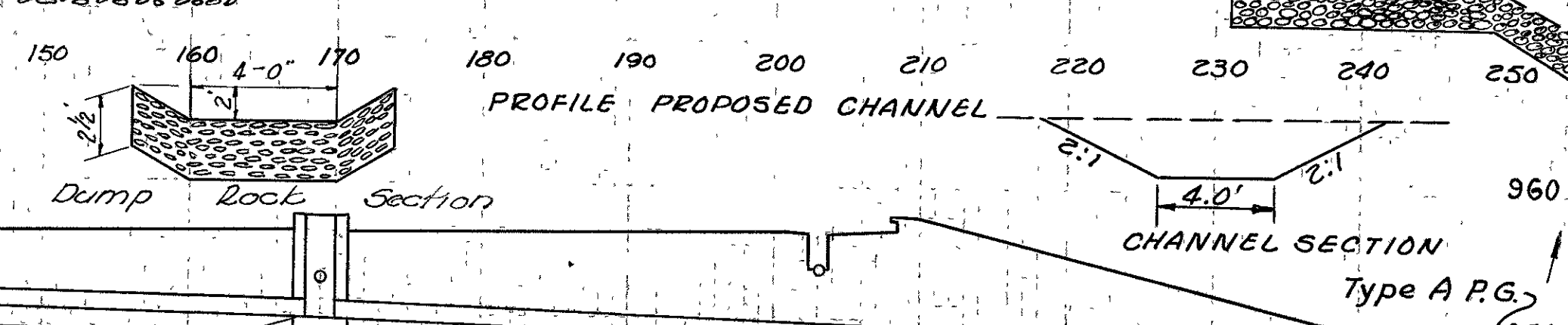
MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

AREA VOLUME  
C F C F



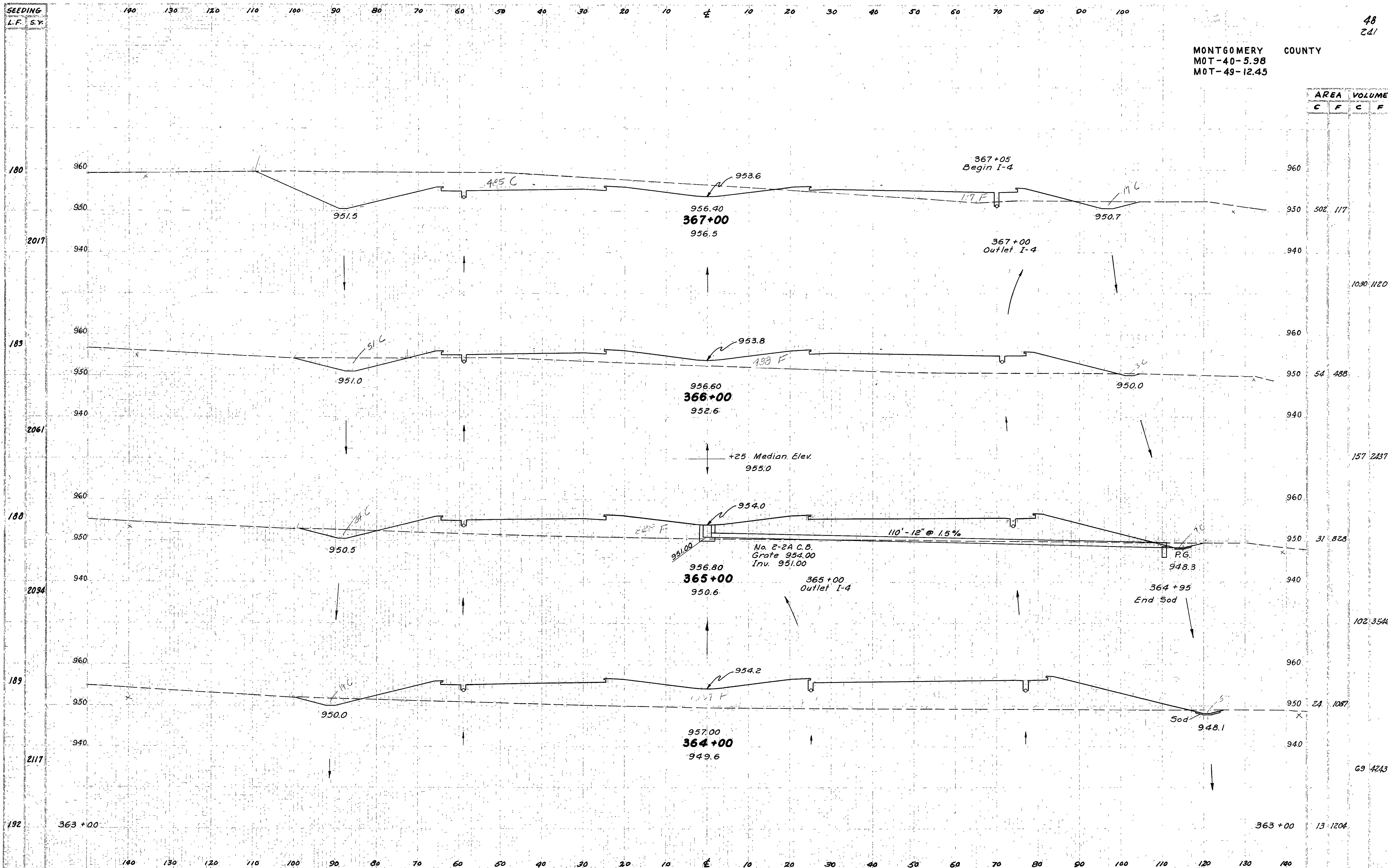
AREA	VOLUME		
C	F	C	F
13	1204		
36	1210		
36	1262		
32	4673		
55	1261		
53	1287		

Checked by P.A. [unclear] 1/19/57  
Earthwork 10/14/57  
Seedling 2/18/57



MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

AREA		VOLUME	
C	F	C	F



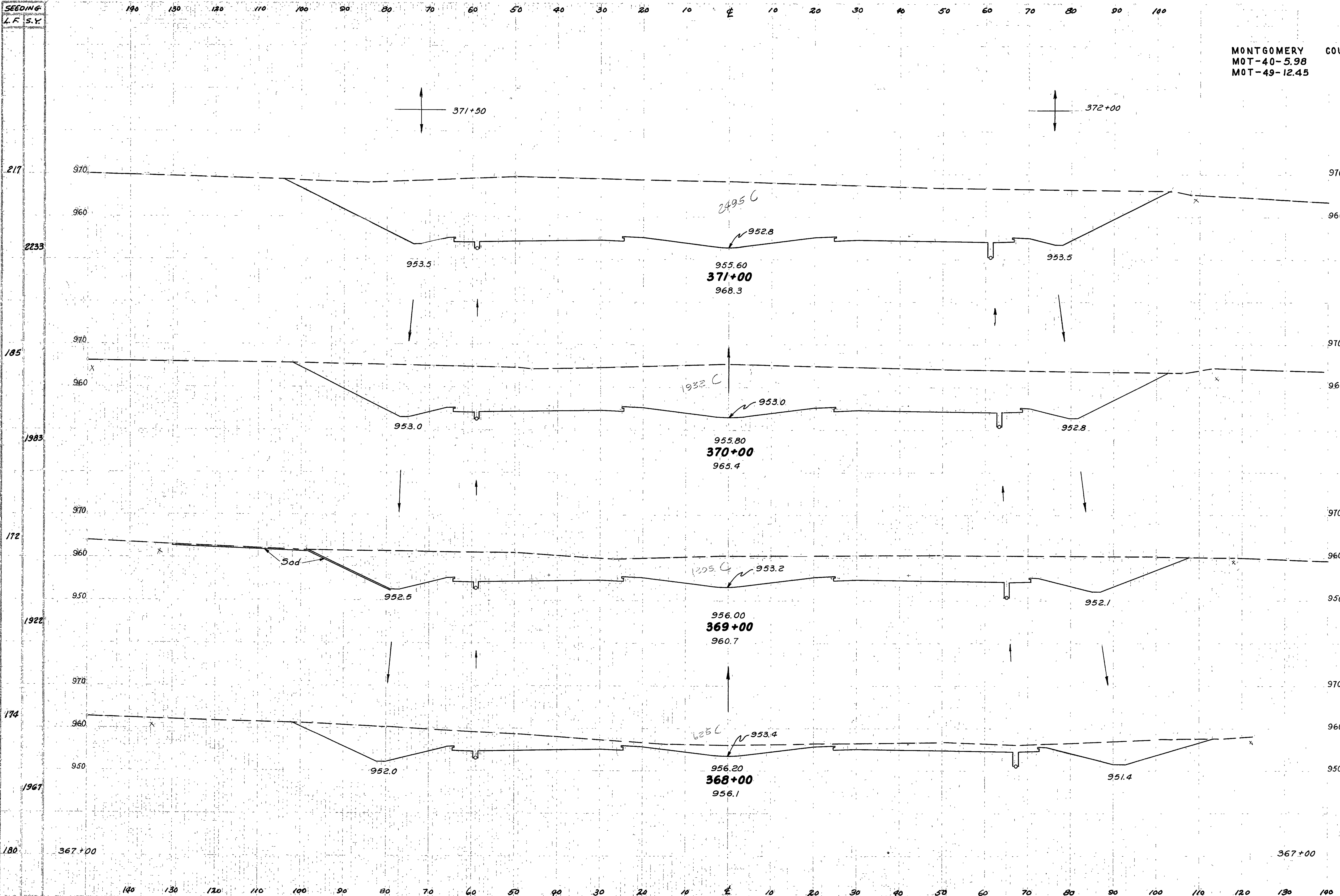
502	117	1030	1120
54	488	157	237
31	823	102	3546
24	1087	69	4243
		363+00	13 1204

Plan view of 1/2" = 100'  
 Plans by B.S. & H.S. dated 10/15/57  
 Checked by D.B. 10/16/57 C.E.D. 10/16/57  
 Sealing done by J.W. 10/16/57 C.E.D. 11/1/57 4058

SEEDING  
L.F. S.Y.

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

49  
241



AREA		VOLUME	
C	F	C	F
2435	0	8198	0
1932	0	5810	0
1205	0	3389	0
623	0	2087	212
502	117		

FORTY EIGHT (48) ST 57 C&G 10/15/57 BY  
 PLANNING, D&S, 10/14/57 C&G 10/15/57 BY  
 ENGINEER, D&S, 10/14/57 C&G 10/15/57 BY  
 SUPERVISOR, D&S, 11/29/57 C&G 11/27/57 BY

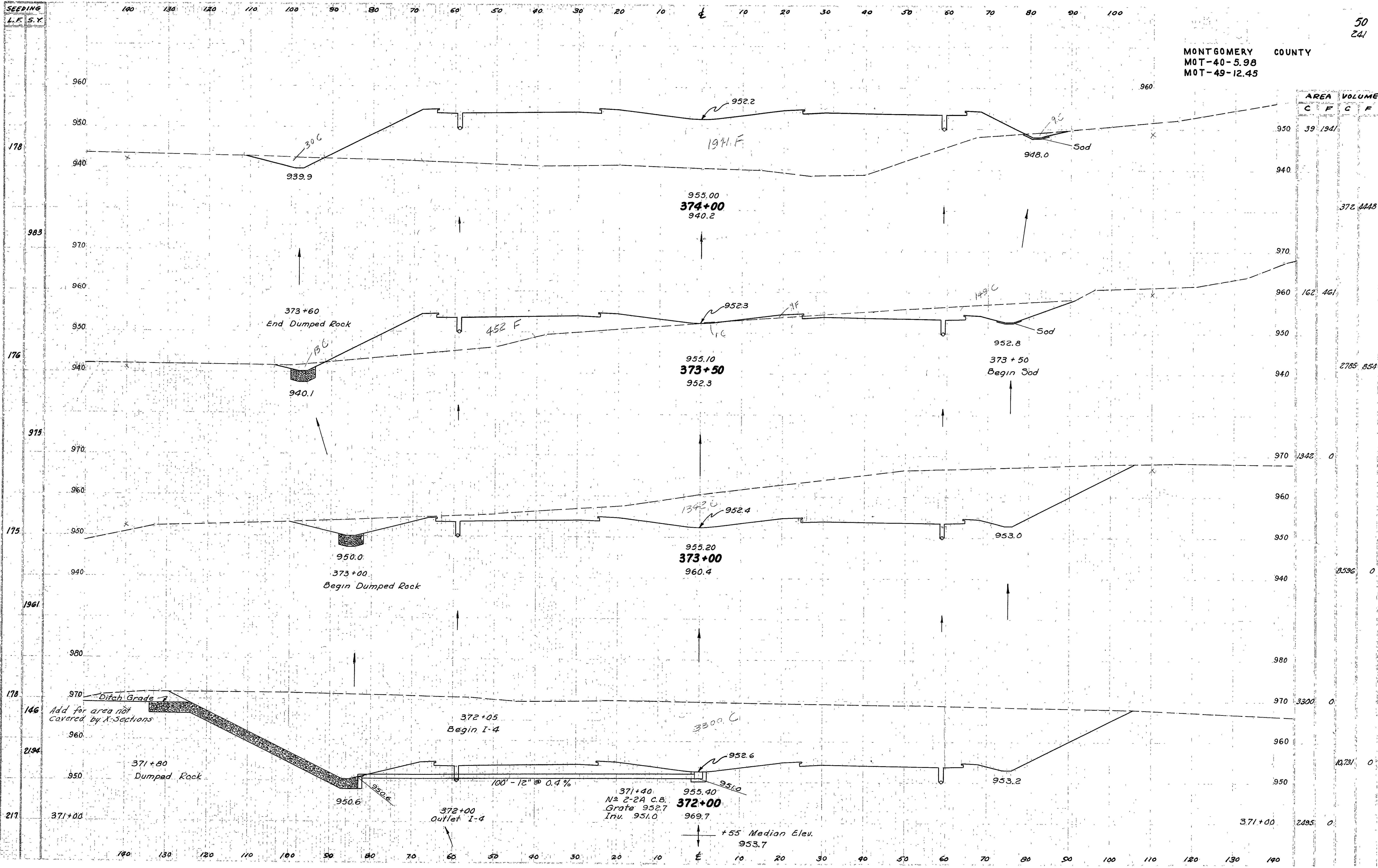
368+00 TO 371+00 11.54



SEEDING  
L.F. S.Y.

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

50  
241



Plan by P.A.B. Sept. 5 CK'D 10/15/57 JJJ  
 Earths. 10/14/57 DAB. CK'D 10/24/57 JJJ  
 Seeding 10/29/57 DAB. CK'D 11/17/57 JJJ

146 Add for area not covered by X-Sections

371+80 Dumped Rock

373+60 End Dumped Rock

373+00 Begin Dumped Rock

372+05 Begin I-4

372+00 Outlet I-4

371+40 N<sup>2</sup> 2-2A C.B. Grate 952.7 Inu. 951.0

372+00 955.40 951.0 969.7

+55 Median Elev. 953.7

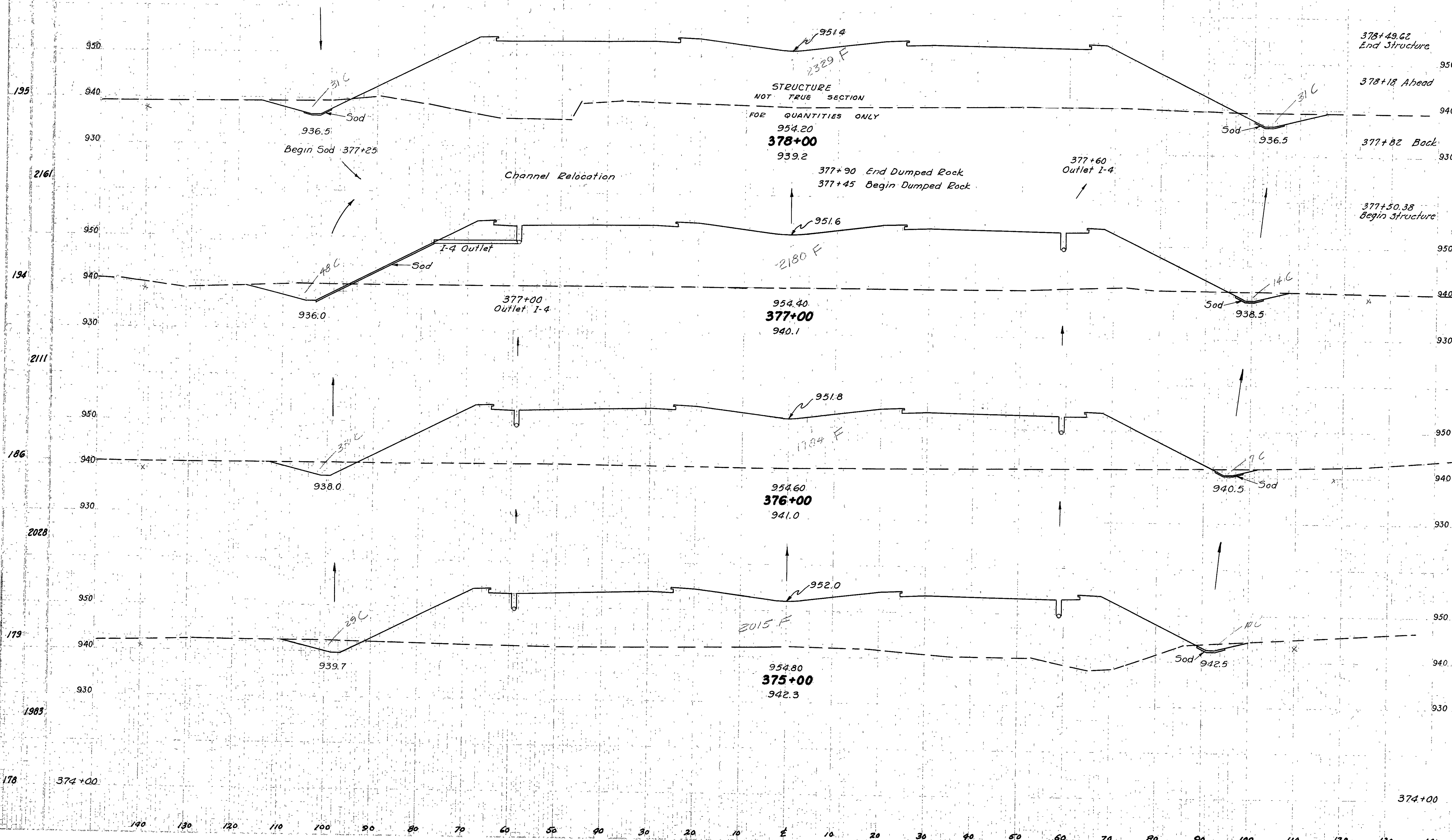
371+00 2495 0

SEEDING  
L.F.S.Y

120 130 120 110 100 90 80 70 60 50 40 30 20 10 E 10 20 30 40 50 60 70 80 90 100

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

AREA		VOLUME	
C	F	C	F
36	2409	21	14
0	0		
0	0		
136	13		
62	2255	116	23
62	2180		
		189	77
40	1984		
		146	74
39	2015		
		144	73
39	1941		



Plan by S. C. ... 10/16/15, July  
 E. ... 10/14/17  
 C. ... 10/29/17  
 D. ... 10/11/17

178 374+00

374+00 39 1941

SEEDING  
L.F.S.K.

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

AREA VOLUME  
C F C F

52  
241

181

2061

190

2128

193

2156

195

2167

195

960

950

940

950

940

950

940

950

940

930

382+00  
End Sod

Sod  
949.0

950.6

951 F

953.40

**382+00**

945.9

950.8

1982 F

953.60

**381+00**

940.1

951.0

2267 F

953.80

**380+00**

939.0

951.2

2489 F

954.00

**379+00**

938.5

378+25  
Begin I-4

378+90  
Begin I-4

960

950

940

950

940

950

940

950

940

930

15 357

52 544

13 1988

43 78

10 2267

35 82

9 2489

42 4

378+962 36 2409

379+00 To 382+00 1'

Pl. 2-1-57 to 10/15/53 by  
DATE  
Earth to 11/15/57  
Sod, 11/15/57  
11/15/57

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

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

SEEDING  
L.F. S.Y.

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

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

53  
241

AREA		VOLUME	
C	F	C	F

192

1053

189

2050

180

2006

181

980

970

960

950

980

970

960

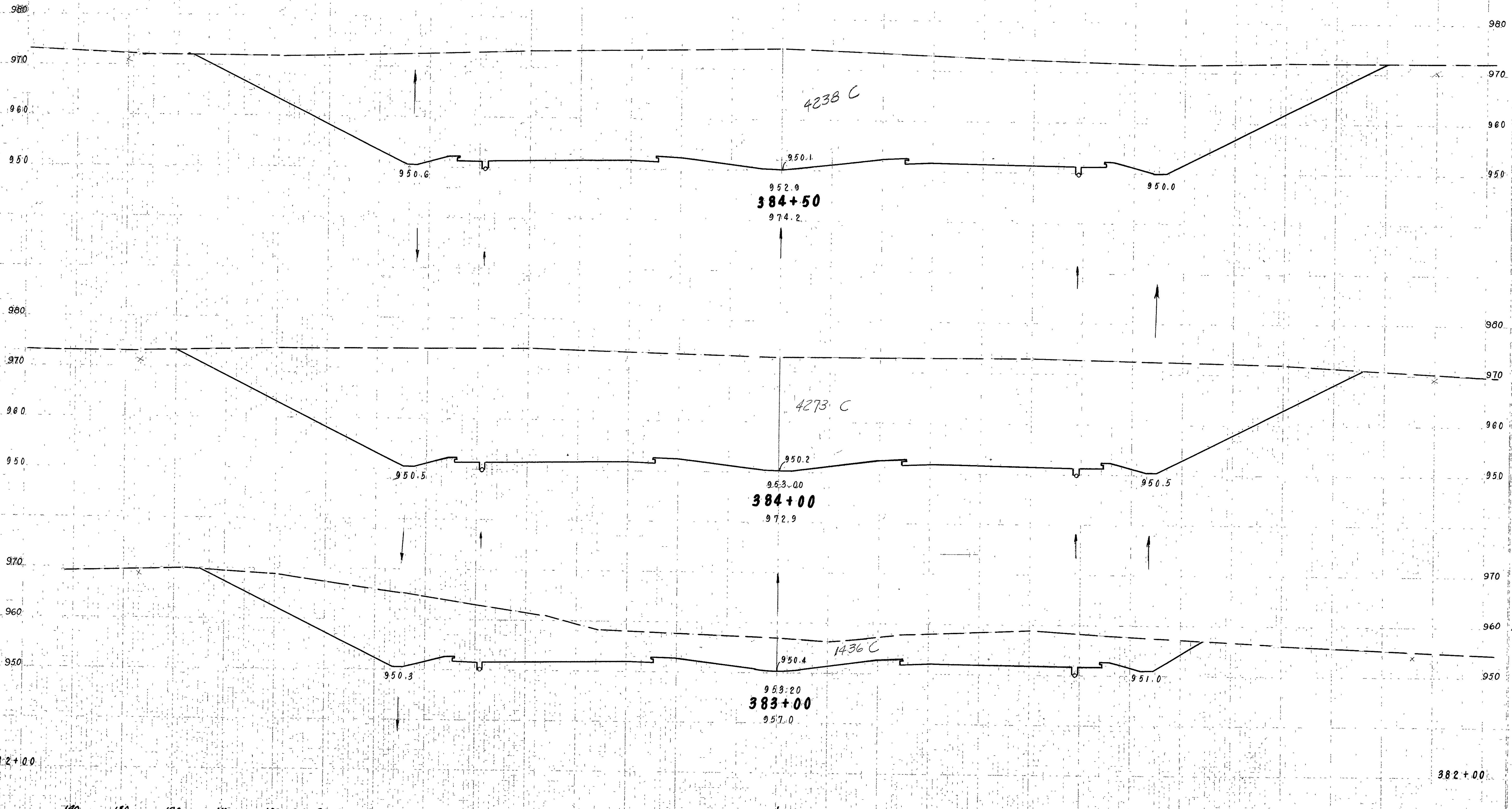
950

970

960

950

950



4238

789

4273

10572

1436

2687-1767

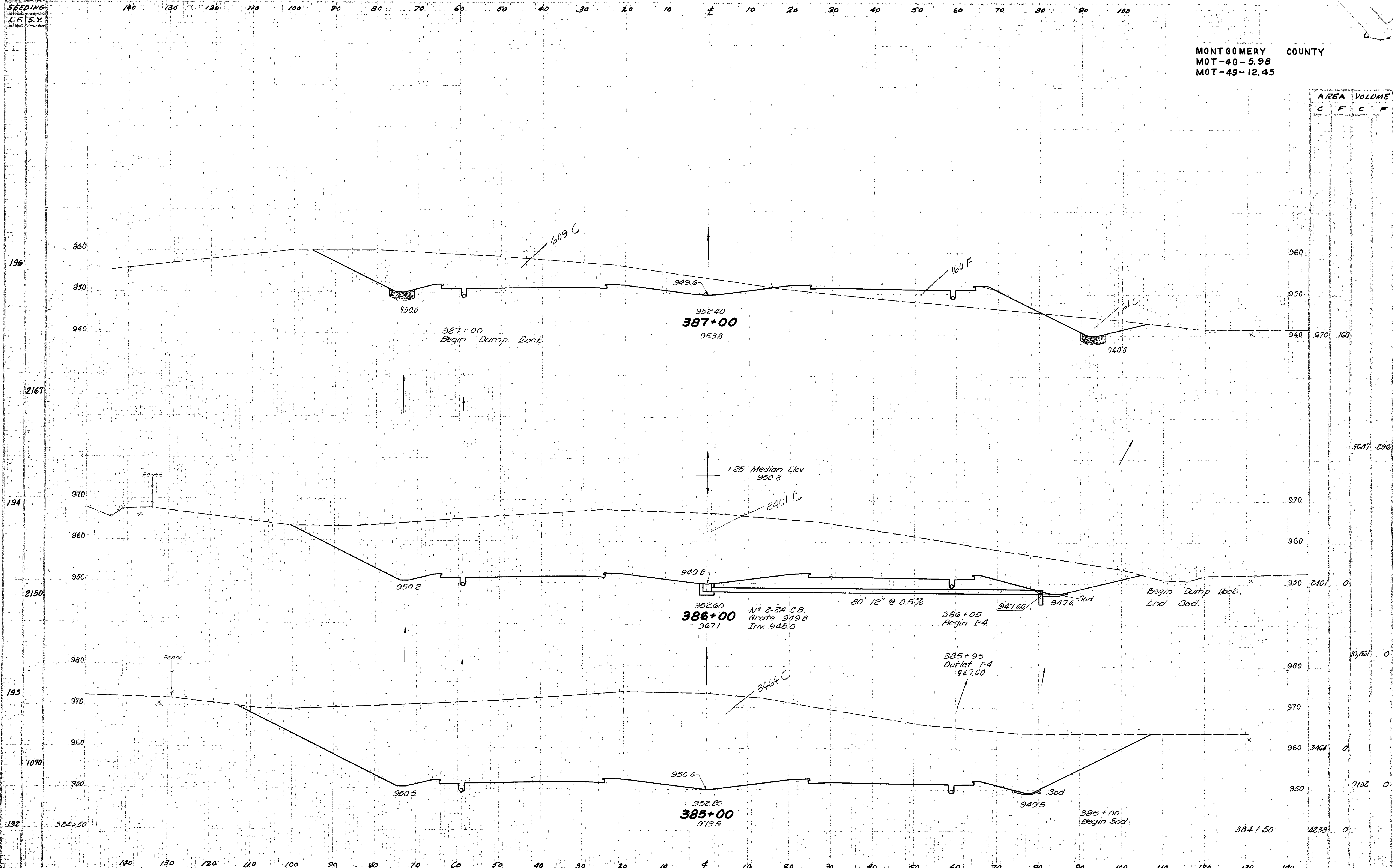
15 951

Review 11/11/57  
 Plan 10/10/57 C. to 10/15/57 vj  
 DA 8/10/57  
 Elevation 13 10/10/57  
 Seeding Date 10/10/57  
 C.C. 11/15/57

382+00

382+00

MONTGOMERY COUNTY  
 MOT-40-5.98  
 MOT-49-12.45



17. in. 3 1/2 x 8. 10/15/50 C.K. 12. 14  
 Enclosure 240. 11. 27. into 11/15/50  
 Seeding 2000 sq. yds. 11/11/50 6. 12. 3

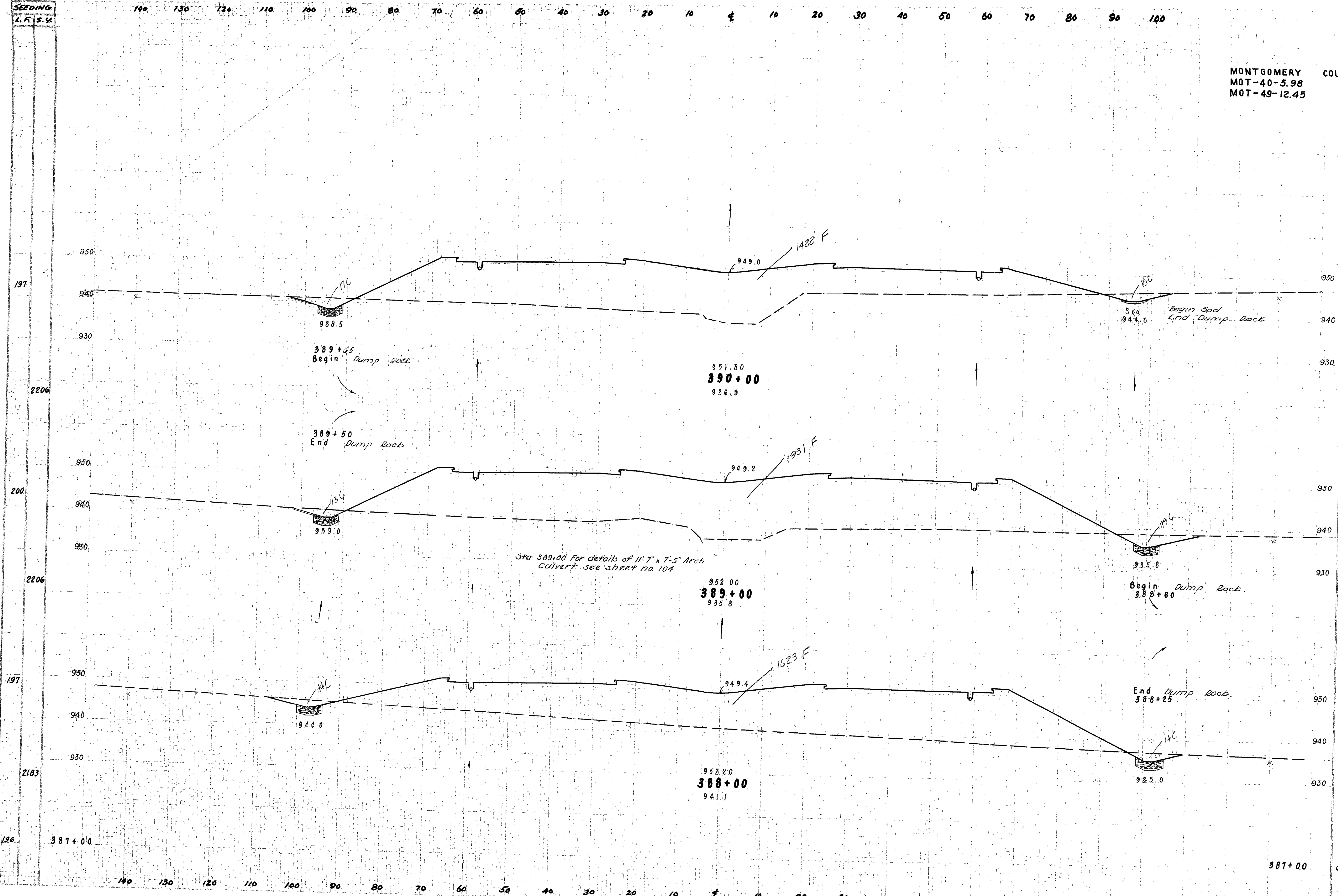
MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

SEEDING  
L.F. S.Y.

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

AREA  
C F C F

VOLUME  
C F C F



32 1422

137 6210

42 1931

130 6582

28 1623

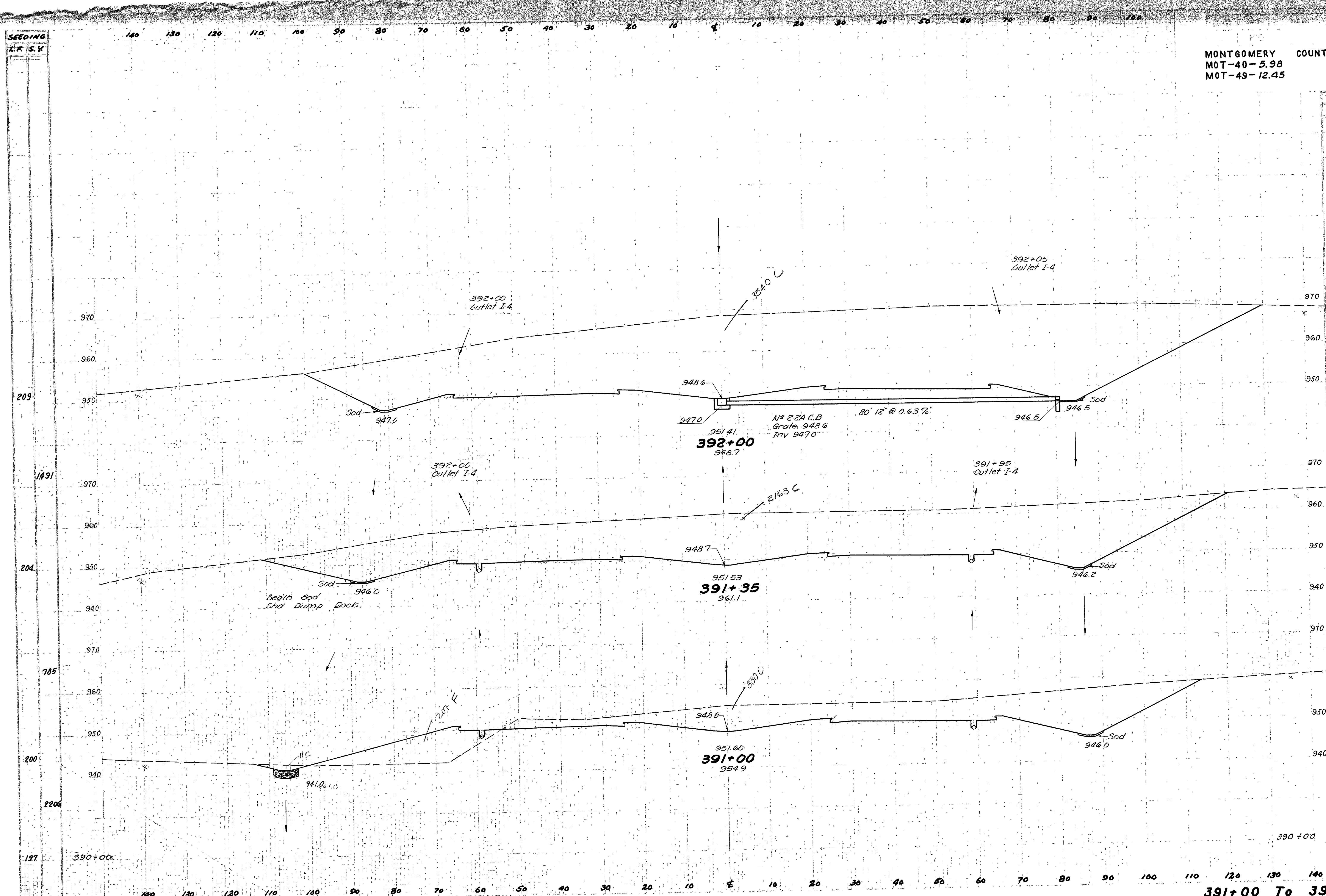
1293 3302

670 160

Review 5/1/57  
Plan 5/1/57  
Elevation 5/1/57  
Seeding 5/1/57

AREA		VOLUME	
C	F	C	F

SEEDING  
 L.F.S.K



3540	0	6663	0
2163	0	1947	1
841	207	1617	
32	1422		

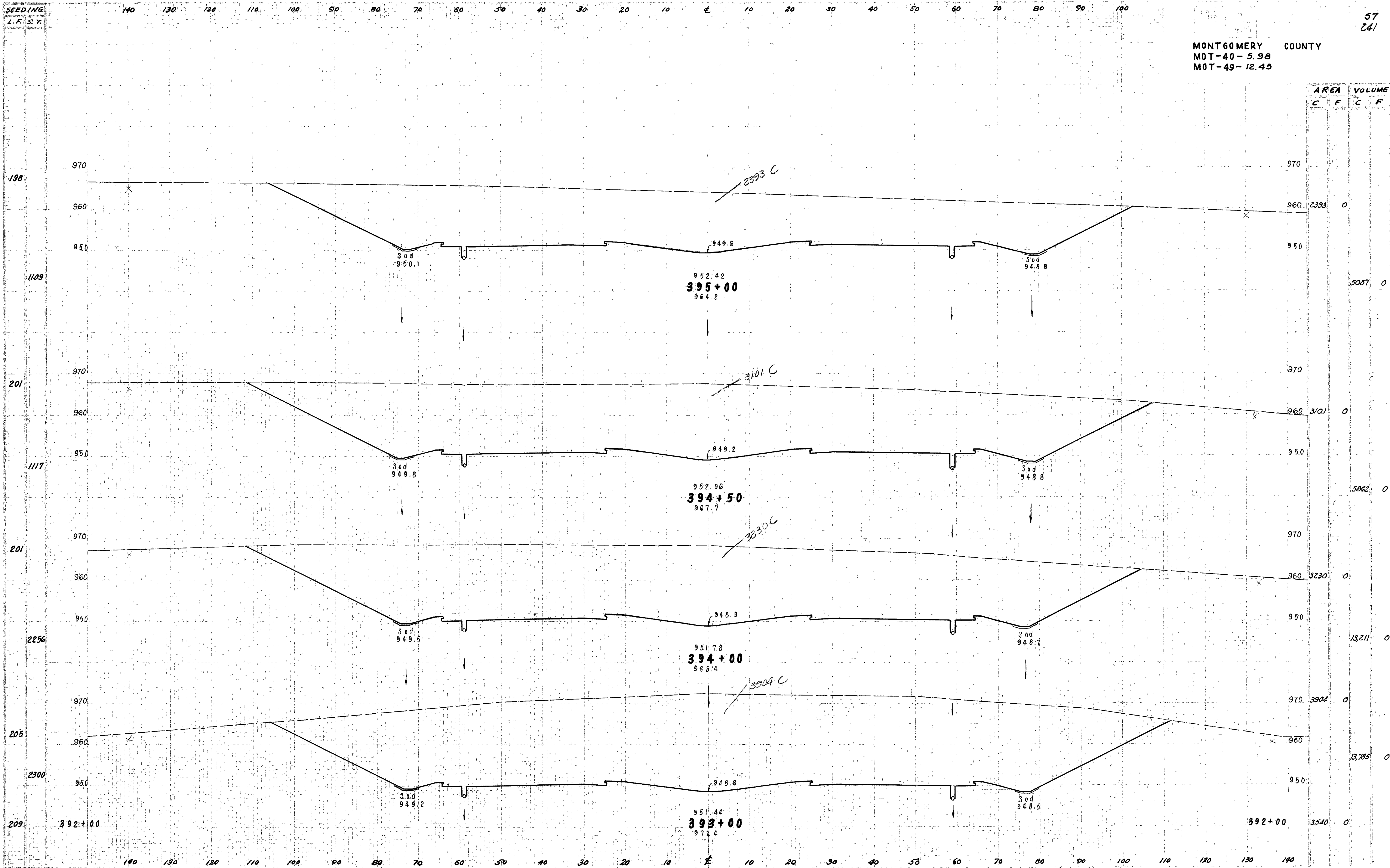
Plan D.A.B. 10/1/57  
 Elevation 200.00, 196.00, 190.00, 185.00  
 Seeding 10/1/57, 10/2/57, 10/3/57, 10/4/57, 10/5/57

391+00 To 392+00 U.

SEEDING  
L. F. S. Y.

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

57  
241



AREA		VOLUME	
C	F	C	F

2393	0		
------	---	--	--

5087	0		
------	---	--	--

3101	0		
------	---	--	--

5862	0		
------	---	--	--

3230	0		
------	---	--	--

13211	0		
-------	---	--	--

3904	0		
------	---	--	--

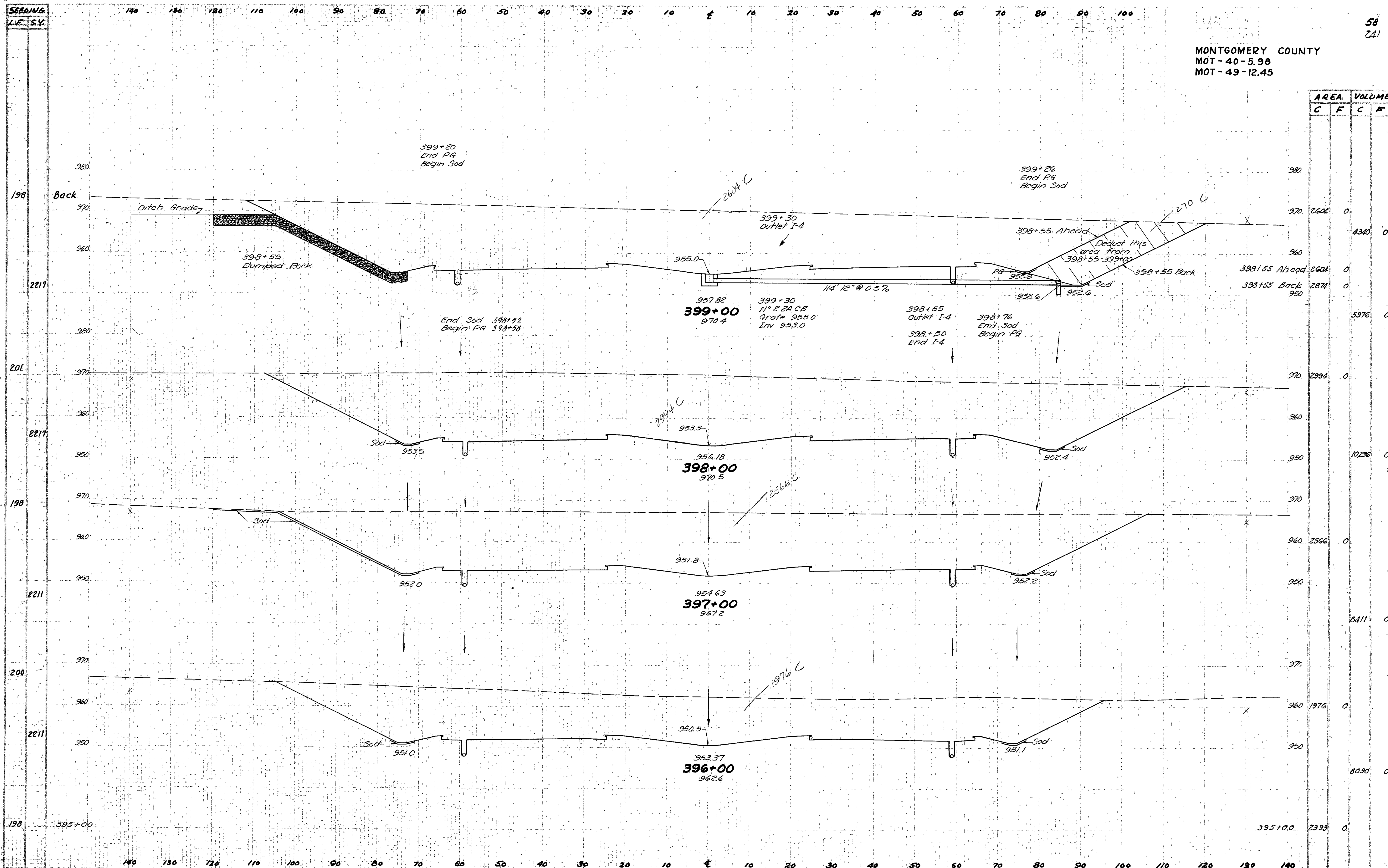
13785	0		
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3540	0		
------	---	--	--

Plan 10/1/57 CK 10 10/1/57  
 2nd 10/1/57 CK 10 10/1/57  
 Seeding 2nd 10/1/57 CK 10 10/1/57

393+00 To 395+00 U.S. 40





*Handwritten notes:*  
M 395+00 to 399+26  
11/15/57  
11/15/57  
11/15/57  
11/15/57

AREA		VOLUME	
C	F	C	F
2604	0	4340	0
2604	0	2874	0
2604	0	5976	0
2604	0	2394	0
2604	0	10236	0
2604	0	2566	0
2604	0	8411	0
2604	0	1976	0
2604	0	8030	0
2604	0	2399	0

SEEDING  
L.F. S.Y.

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

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

AREA  
C F C F

6365

7657

8072

9133

2604

171

1911

173

1944

177

1972

178

1994

181

End Sod  
403+00

Sod  
961.4

964.38  
403+00  
972.5

1657 C

2104 C

962.74  
402+00  
972.7

End Sod  
401+00

Sod  
958.8

961.10  
401+00  
971.1

2031 C

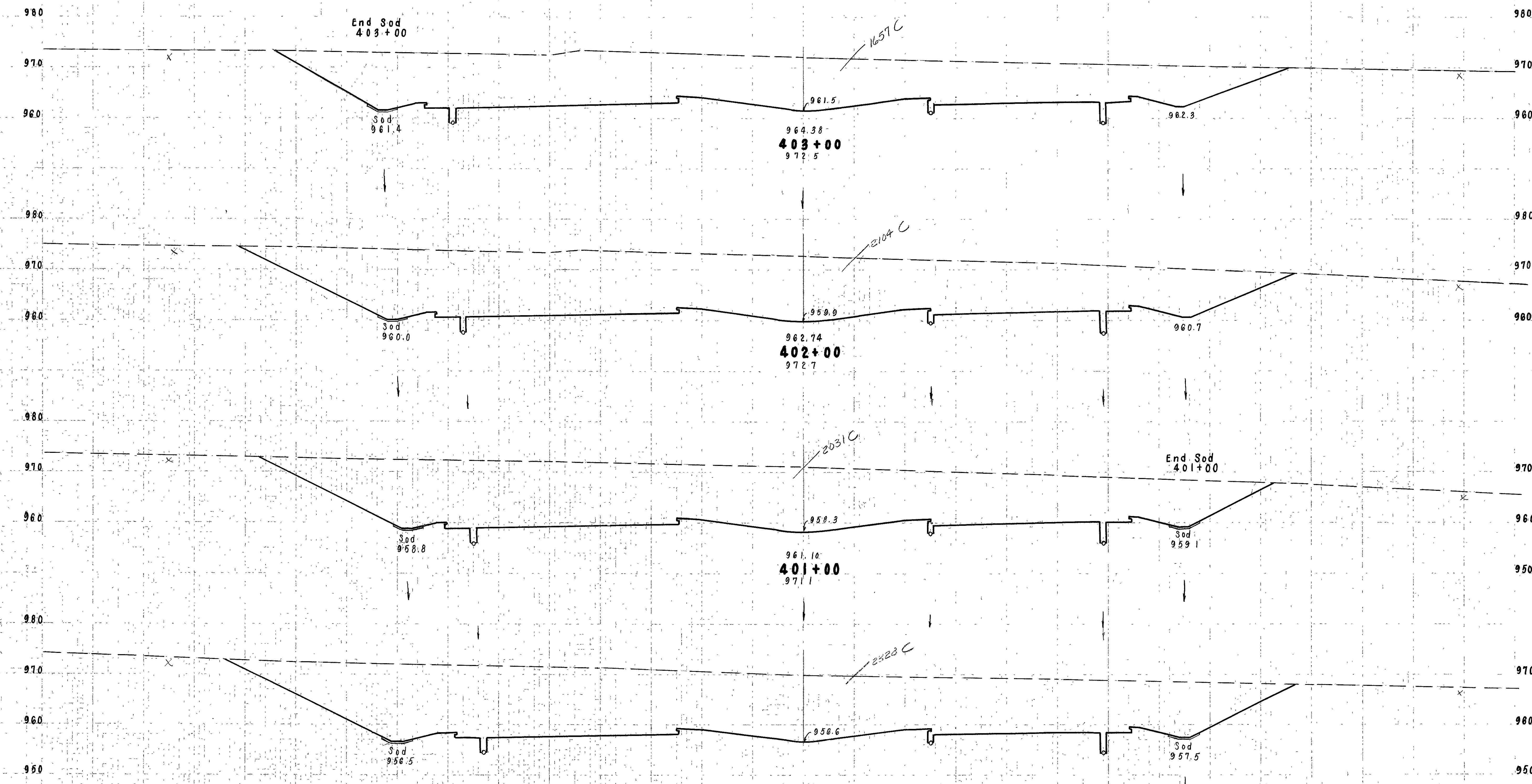
2328 C

Sod  
959.1

Sod  
956.5

959.46  
400+00  
969.9

Sod  
957.5



3.9.9+00 Ahead

399+00

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

400+00 To 403+00 U.S.A.

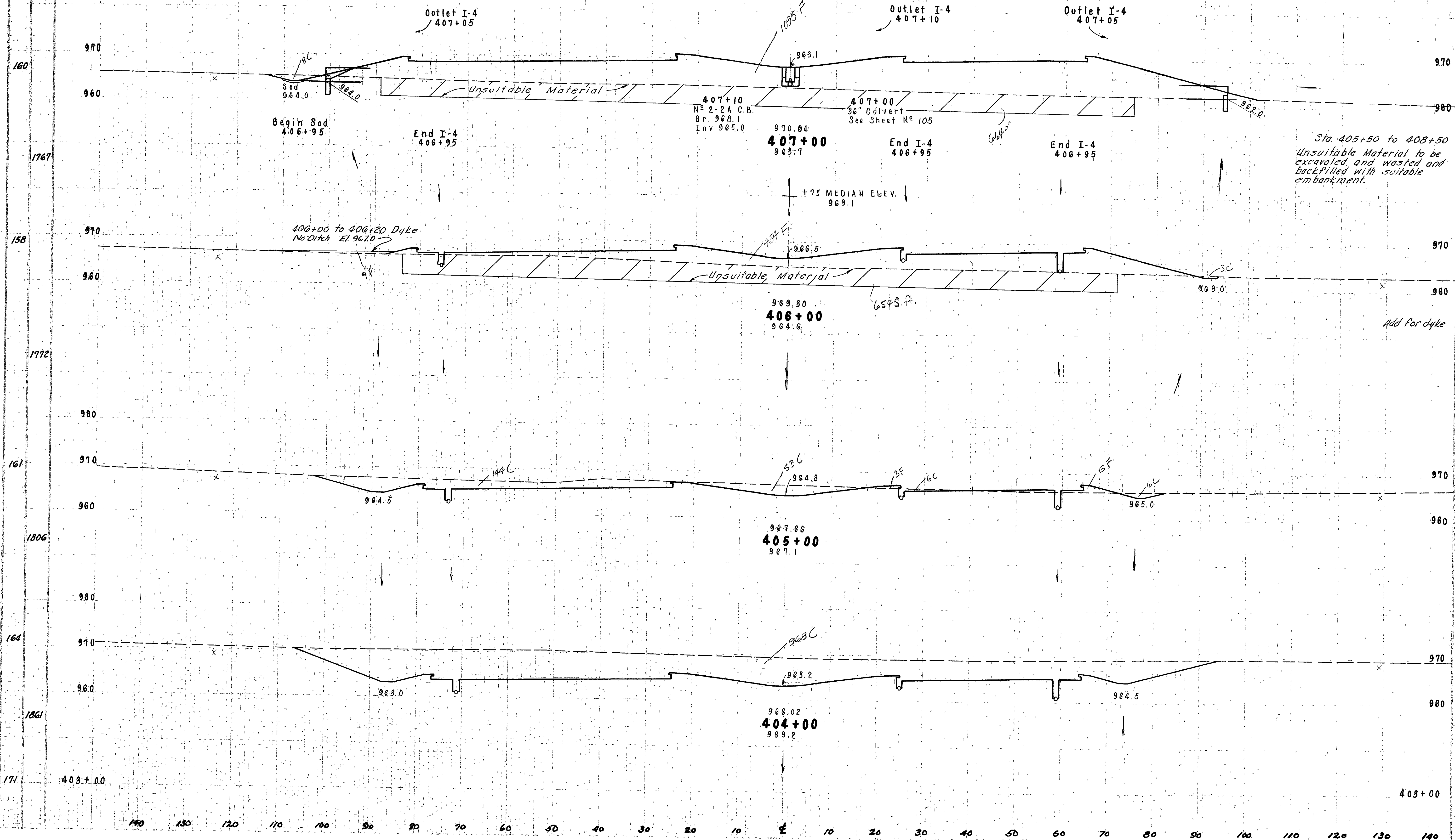
Handwritten notes on the left margin: '1911', '1944', '1972', '1994', '181', '3.9.9+00 Ahead', 'SEEDING L.F. S.Y.', 'MONTGOMERY COUNTY MOT-40-5.98 MOT-49-12.45', 'AREA C F C F', 'VOLUM C F C F', '6365', '7657', '8072', '9133', '2604', '400+00 To 403+00 U.S.A.', '140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140', '59 241'.

SEEDING  
L.F.S.V.

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

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

AREA  
VOLUN  
C F C



Sta 405+50 to 408+50  
Unsuitable Material to be  
excavated and wasted and  
backfilled with suitable  
embankment.

Add for dyke

AREA	VOLUN
C	F C
8 1035	6374.63
20 28	20 28
3 452	391 8
208 18	2178 3
968 0	4861
1657 0	

11/10/57 D.A.B.  
11/10/57 D.A.B. 11/10/57 D.A.B.  
11/10/57 D.A.B. 11/10/57 D.A.B.

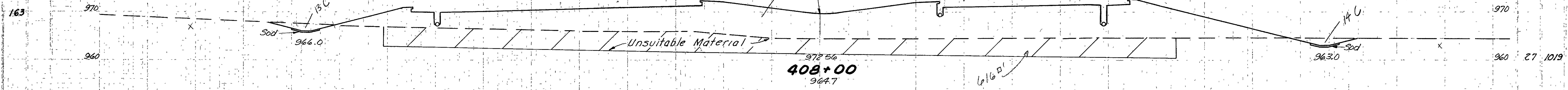
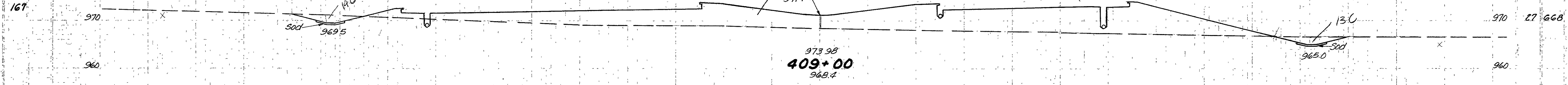
SEEDING  
L.F.S.Y.

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

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

AREA VOLUME  
C F C F

61  
241

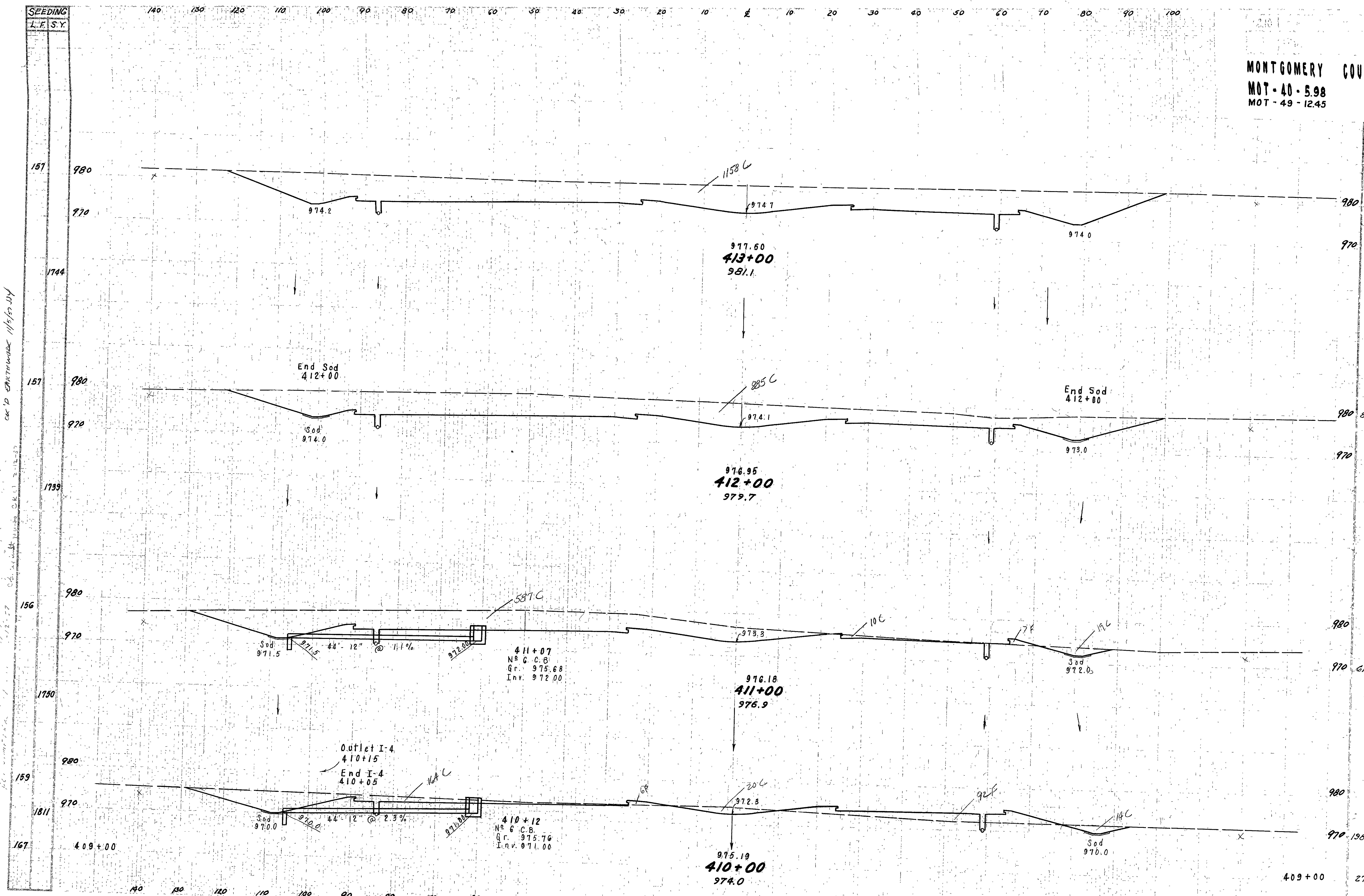


28-11-12 11:30 AM  
Plan, D.A.B. 10 17 C&G 10/15/12 JJK  
E-1000, D.A.B. 10/14/12 C&G 10/15/12 JJK  
Seeding, D.A.B. 10/14/12 C&G 10/15/12 JJK

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

408+00 To 409+00 U.S.

MONTGOMERY COUNTY  
 MOT - 40 - 5.98  
 MOT - 49 - 12.45

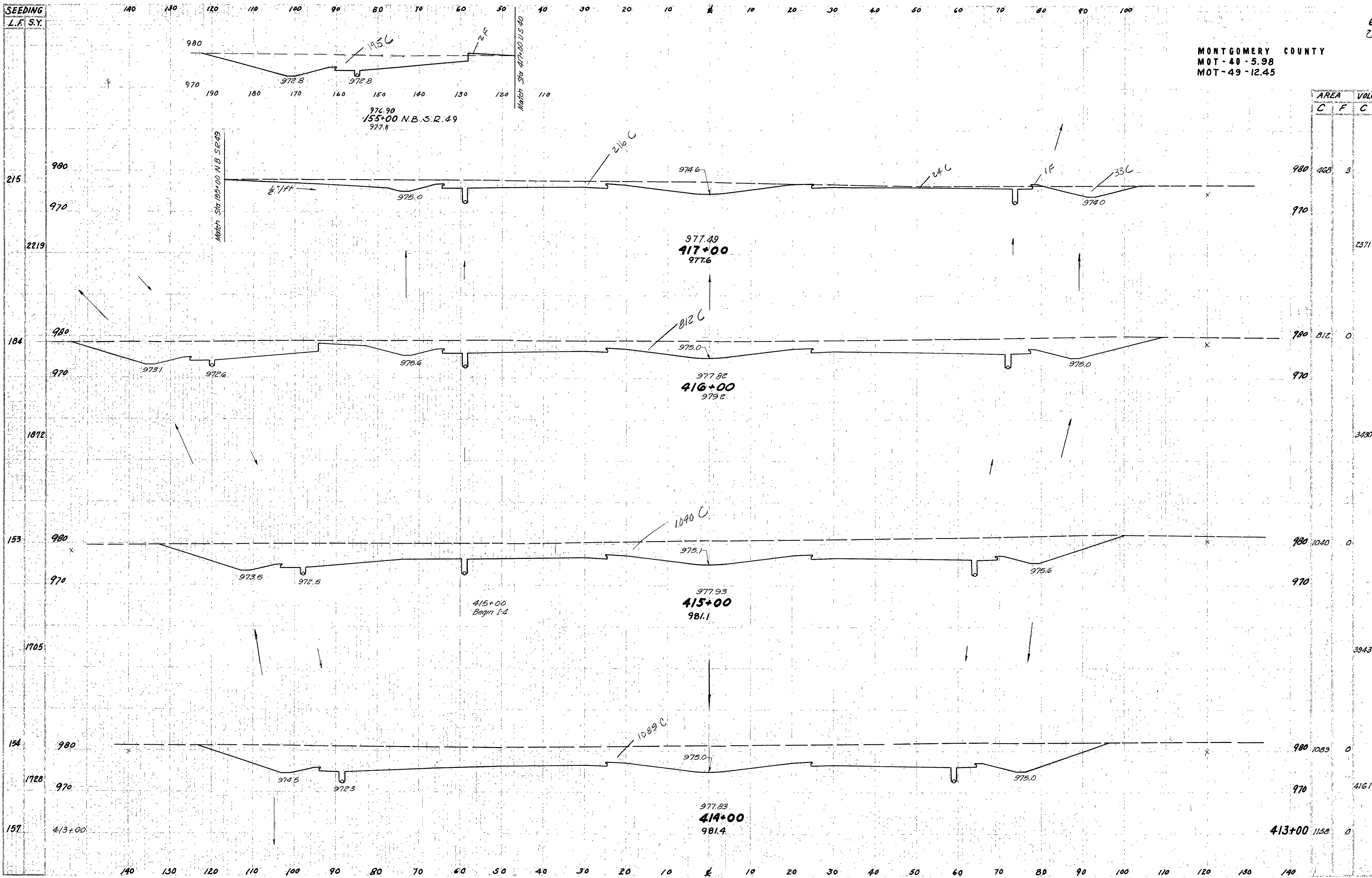


AREA		VOLUME	
C	F	C	F
1158	0		
885	0		
616	7		
198	98		
27	668		

Plan D.A.B. 11/1/57 OK'D 11/15/57 J.S.K.  
 Earthwork D.A.B. 11/1/57 Sealing D.A.B. 11/29/57 - C.B. 11/1/57 W.B.C.  
 OK'D CONTRACTOR 11/15/57 J.S.K.  
 C.B. 11/1/57 OK'D 11/15/57 J.S.K.

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 100 - 11/1/57

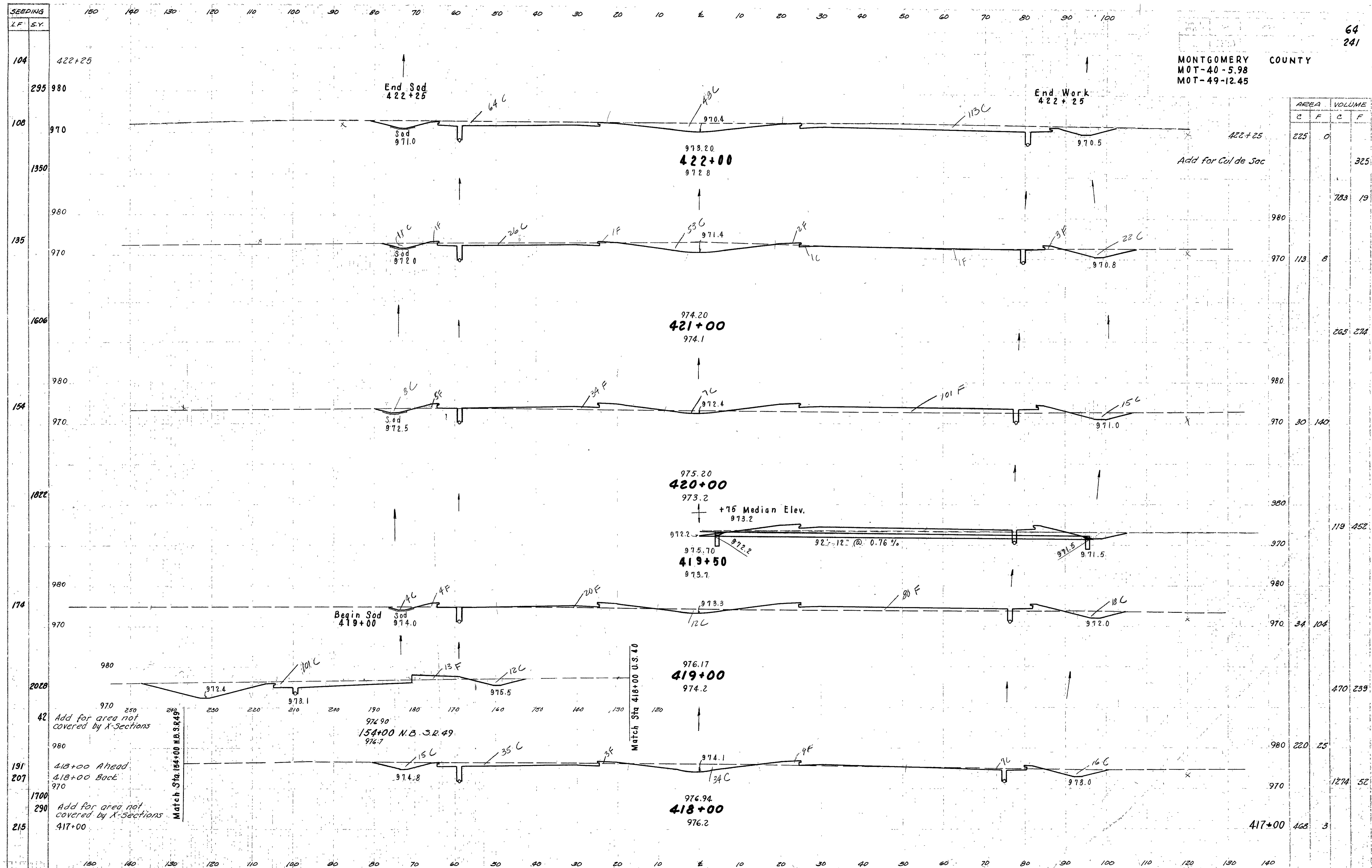
MONTGOMERY COUNTY  
 MOT-40-5.98  
 MOT-49-12.45



AREA	VOLUME	
	C	F
980	463	3
970		
980	812	0
970		
980	1040	0
970		
980	1089	0
970		
413+00	1152	0

REVISION 7/5/24  
 PLANNING DIVISION 10/1/27  
 CK 'U' 10/15/27  
 EARTHWORK 10/15/27  
 DESIGN 10/15/27  
 CHECK 11/15/27

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45



AREA		VOLUME	
C	F	C	F
225	0		325
		783	19
113	8		265
			272
30	140		
		119	452
34	104		470
			239
220	25		
		1274	52
403	3		

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 12/31/57

42 Add for area not covered by X-Sections  
 191 418+00 Ahead  
 207 418+00 Back  
 1700 Add for area not covered by X-Sections  
 215 417+00

Match Sta. 418+00 U.S. 49

Match Sta. 418+00 U.S. 40

154+00 N.B. S.R. 49

418+00 to 422+00

MONTGOMERY COUNTY  
 MOT. 40 5.98  
 MOT. 49 12.45

S.B. S.D. 49  
 P.I. = 202+36.02  
 $\Delta$  = 21°-14'-57"  
 $D_c$  = 4'-00"  
 $D$  = 1432.39  
 $L_s$  = 200'  
 $\theta$  = 4°-0'  
 $X_c$  = 199.90  
 $Y_c$  = 465  
 $T_s$  = 368.90  
 $L_c$  = 331.23  
 $D.S.$  = 60 M.P.H.  
 $Super.$  = .066'/ft.

1-D 264+00 TO 267+00  
 I-4 300~6" Underdrain (deep)

268+04 TO 269+54  
 I-15 150 Guard Rail (2-B)

2-D 264+00 TO 276+25  
 L-10 776 5Y Sod  
 I-14 50 L.F. Type 1 PG

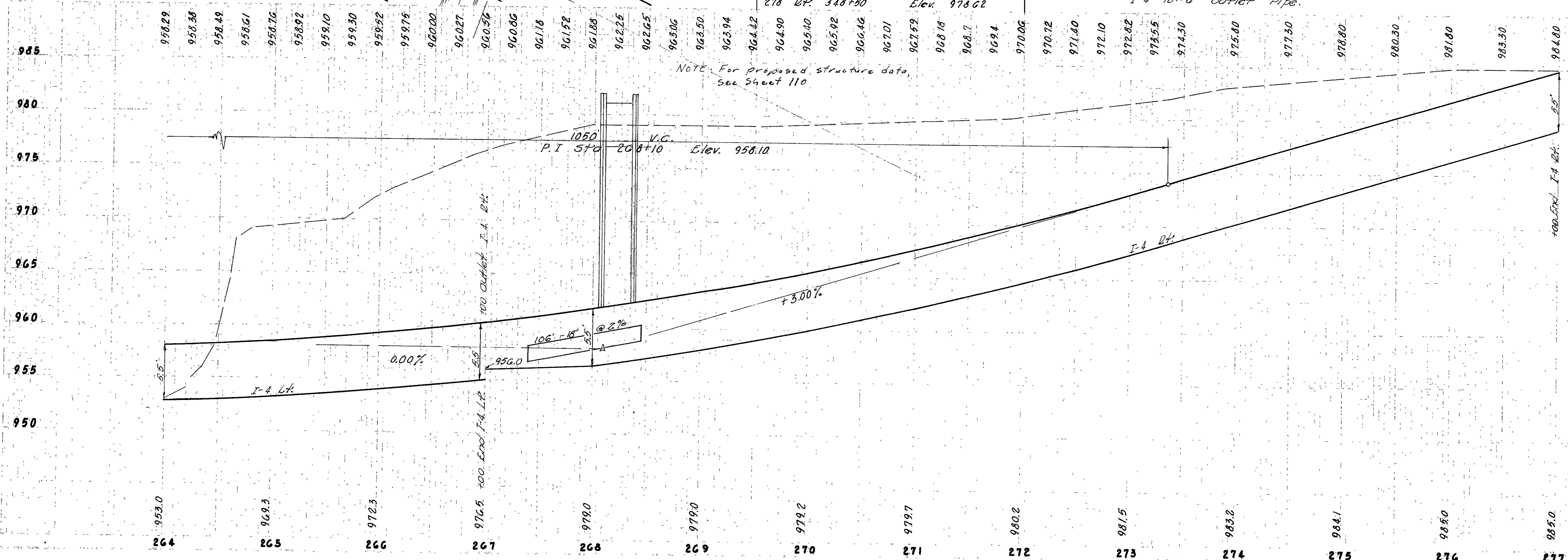
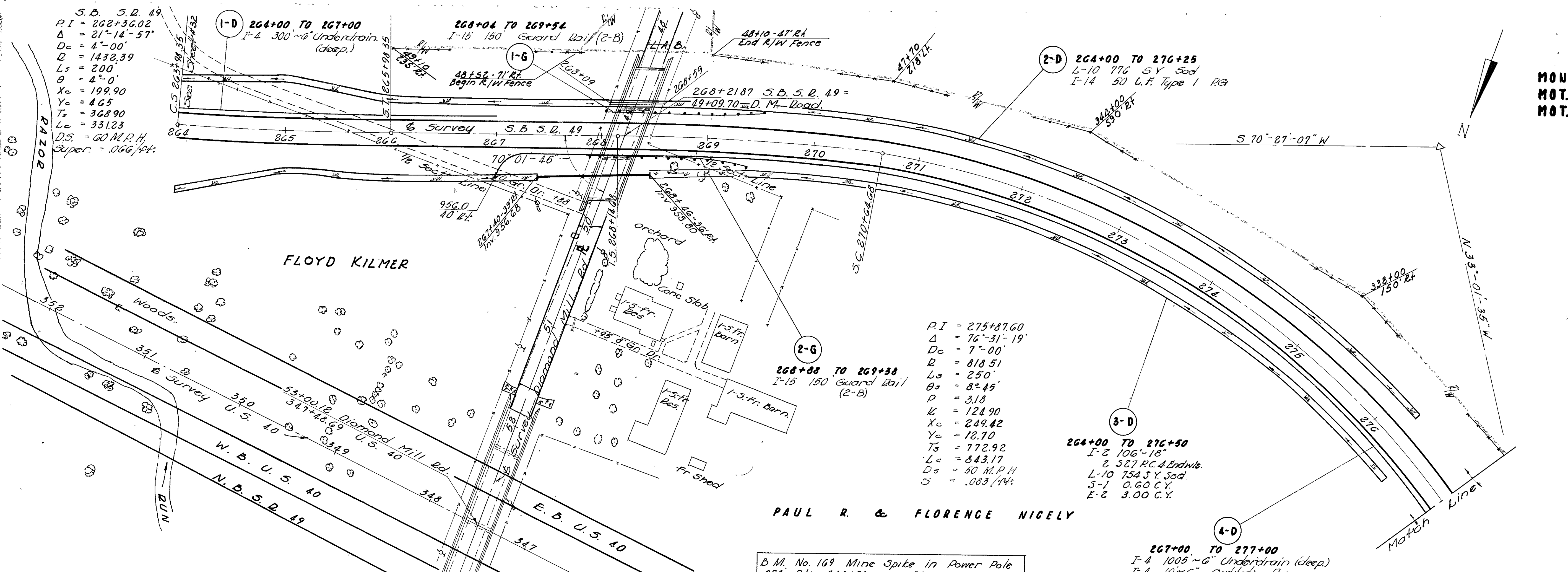
2-G 268+08 TO 269+38  
 I-15 150 Guard Rail (2-B)

3-D 264+00 TO 276+50  
 I-2 106'-18"  
 2 527 PC. A Endwls.  
 L-10 754.5 Y. Sod.  
 S-1 0.60 C.Y.  
 E-2 3.00 C.Y.

4-D 267+00 TO 277+00  
 I-4 1005~6" Underdrain (deep)  
 I-4 10~6" Outlet Pipe.

B.M. No. 169 Mine Spike in Power Pole  
 278 DT: 348+50 Elev. 978.62

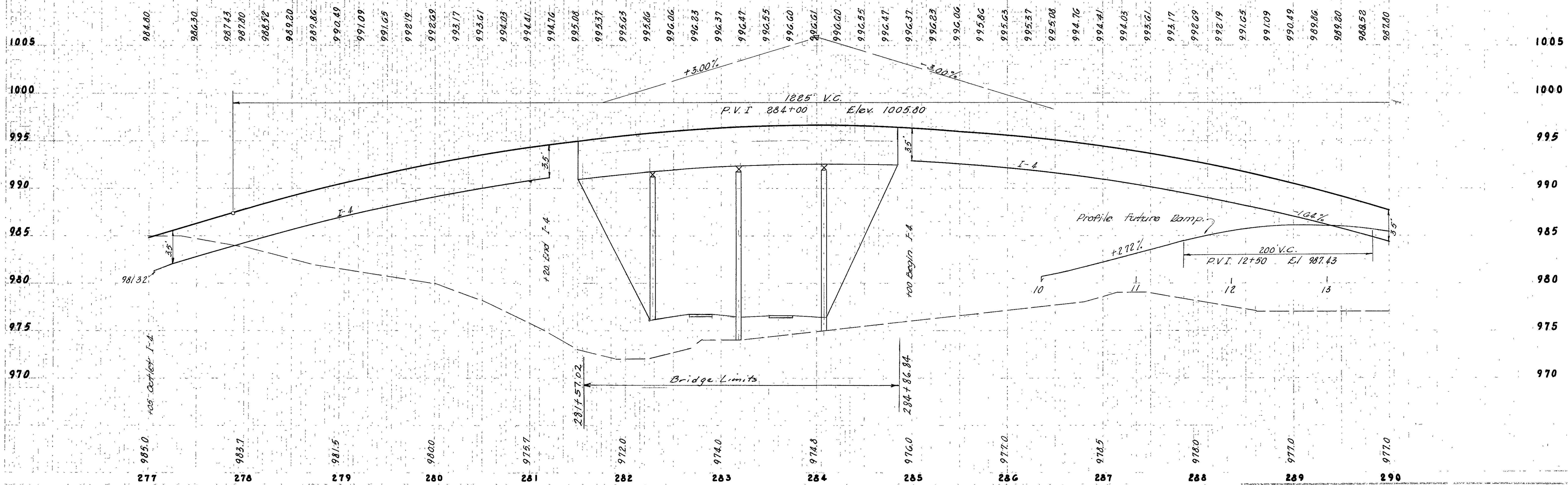
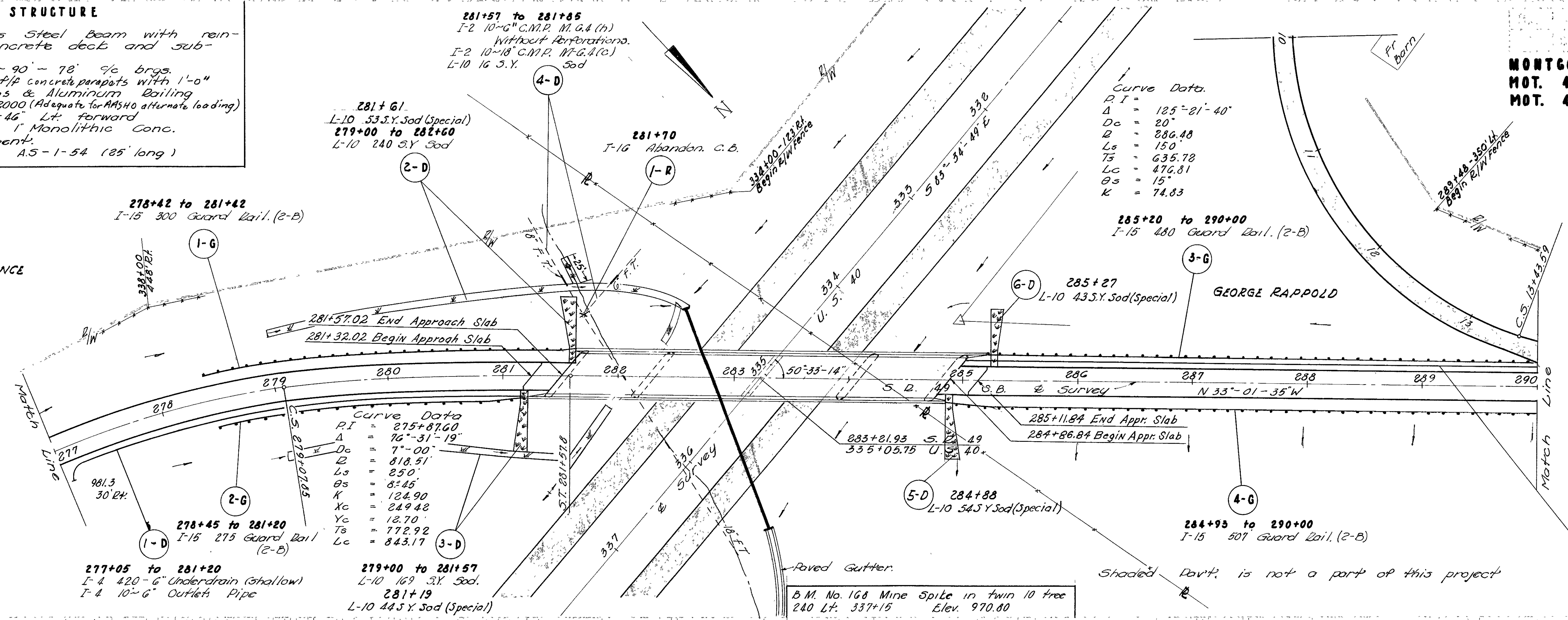
NOTE: For proposed structure data,  
 See Sheet 110



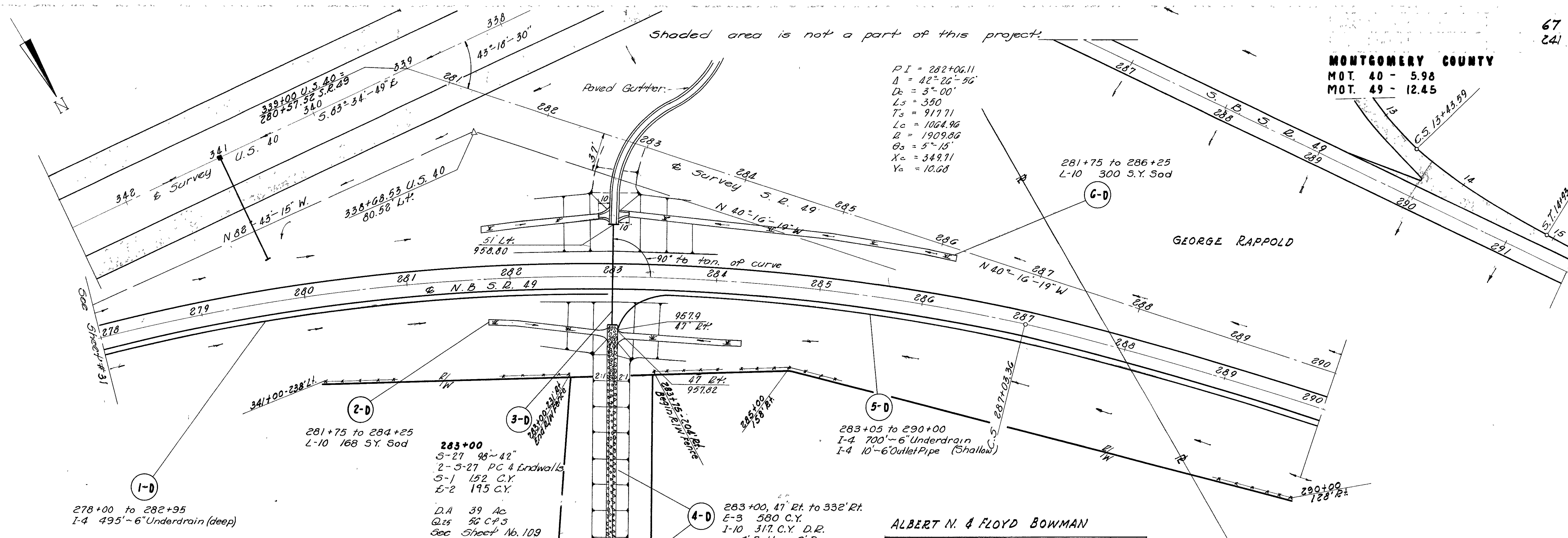


MONTGOMERY COUNTY  
MOT. 40 - 5.98  
MOT. 49 - 12.45

**PROPOSED STRUCTURE**  
Type: Continuous Steel Beam with reinforced concrete deck and sub-structure.  
Span: 78' - 90' - 90' - 78' c/c brgs.  
Roadway: 40'-0" f/c concrete parapets with 1'-0" curbs & Aluminum Railing  
Loading: C.F. = 8000 (Adequate for AASHTO alternate loading)  
Skew: 39°-26'-46" Lt. forward  
Wearing Surface: 1" Monolithic Conc.  
Alignment: Tangent  
Approach Slabs: A5-1-54 (25' long)



MONTGOMERY COUNTY  
MOT. 40 - 5.98  
MOT. 49 - 12.45



PI = 282+06.11  
Δ = 42° 26' 56"  
D<sub>s</sub> = 3° 00'  
L<sub>s</sub> = 350  
T<sub>s</sub> = 917.71  
L<sub>c</sub> = 1064.96  
B = 1909.86  
O<sub>s</sub> = 5° 15'  
X<sub>c</sub> = 349.71  
Y<sub>c</sub> = 10.68

278+00 to 282+95  
I-4 495'-6" Underdrain (deep)

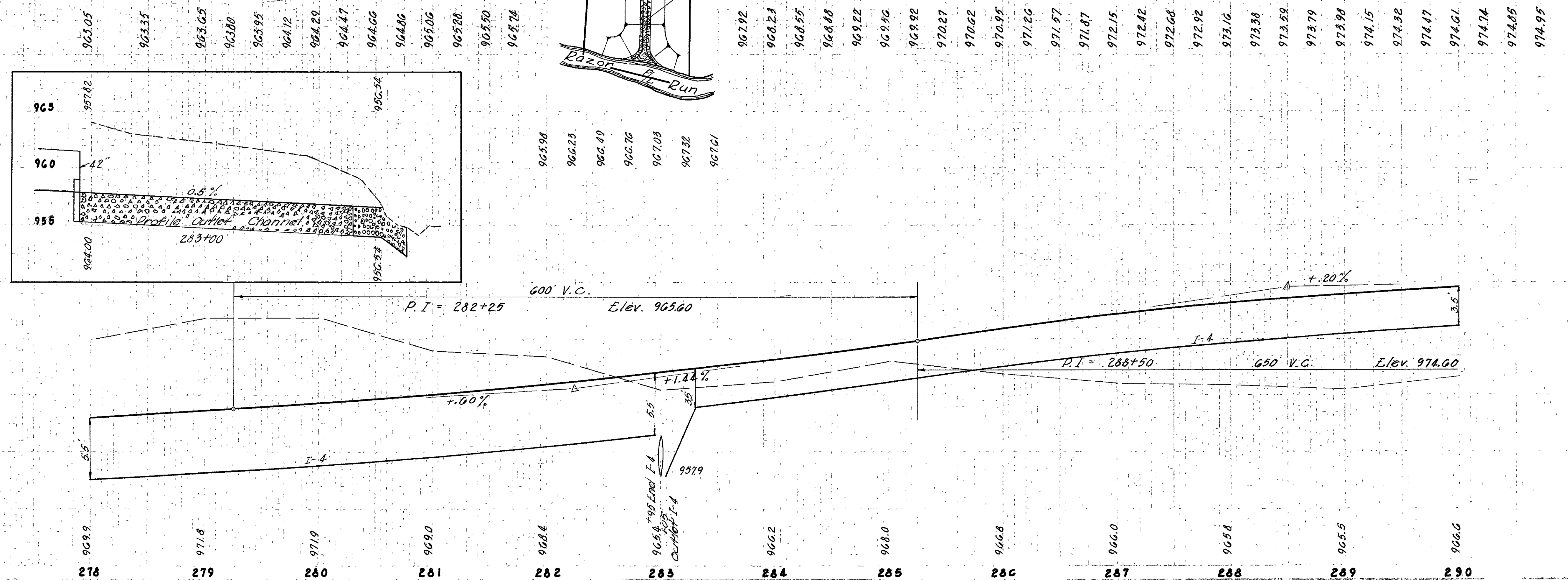
281+75 to 284+25  
L-10 168 S.Y. Sod

283+00  
S-27 98' 42"  
2-5-27 PC 4 Endwalls  
S-1 152 C.Y.  
E-2 195 C.Y.  
D.A 39 Ac  
Q.25 56 C.P. 3  
Sec Sheet No. 109

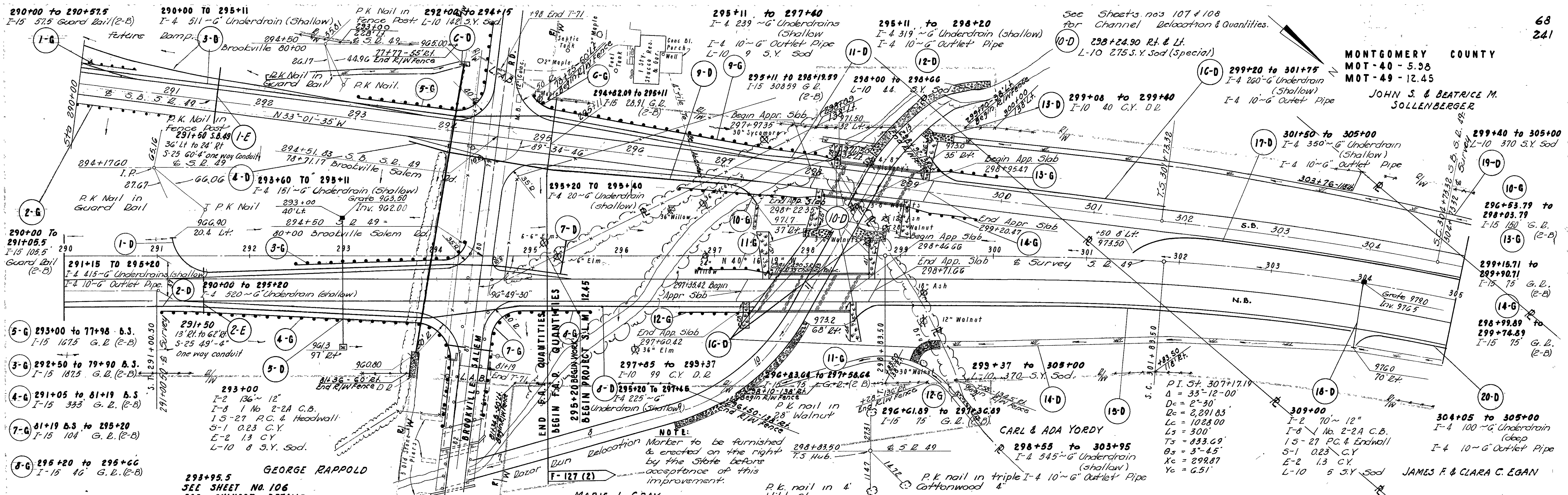
283+00, 47' Rt. to 332' Rt.  
E-3 580 C.Y.  
I-10 317 C.Y. D.R.  
4 Bottom, 2 Deep  
2' Sides.

ALBERT N. & FLOYD BOWMAN

B.M. No. 168 Mine Spike in twin 10' tree  
240 Lt. 337+15  
Elev. 970.80



MONTGOMERY COUNTY  
MOT-40 - 5.98  
MOT-49 - 12.45  
JOHN S. & BEATRICE M.  
SOLLENBERGER



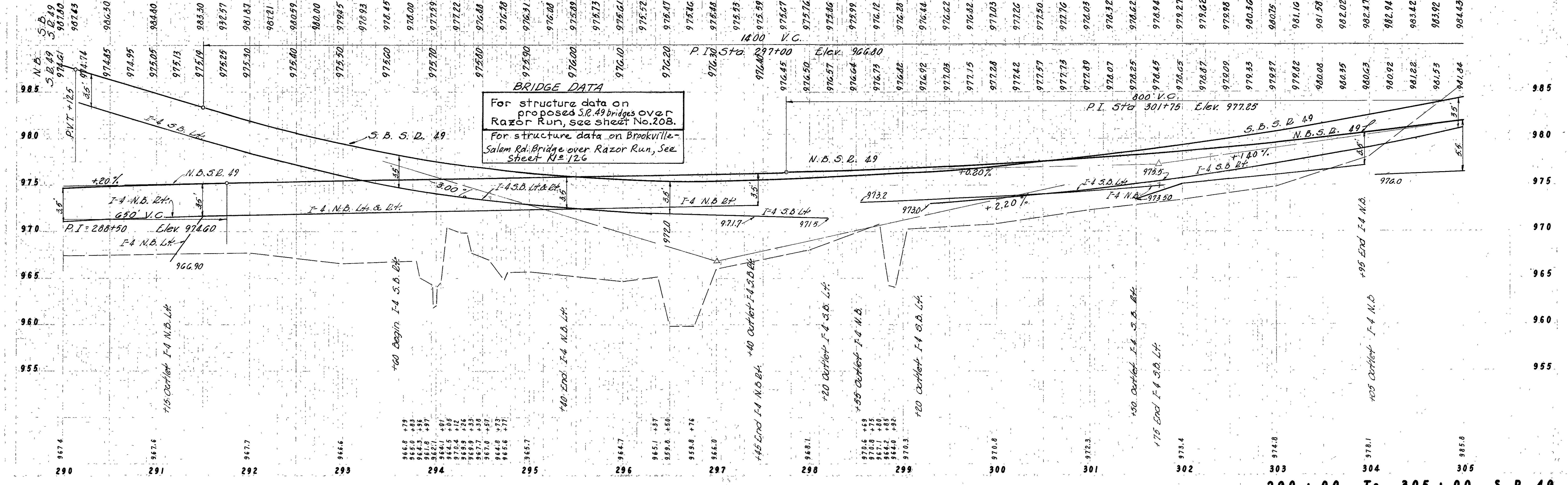
GEORGE RAPPOLD  
SEE SHEET NO. 106  
FOR CULVERT DETAILS

MARIE L. GRAY

CARL & ADA YORDY

JAMES F. & CLARA C. EGAN

**BRIDGE DATA**  
For structure data on proposed S.R. 49 bridges over Razor Run, see sheet No. 208.  
For structure data on Brookville-Salem Rd. Bridge over Razor Run, see Sheet No. 126

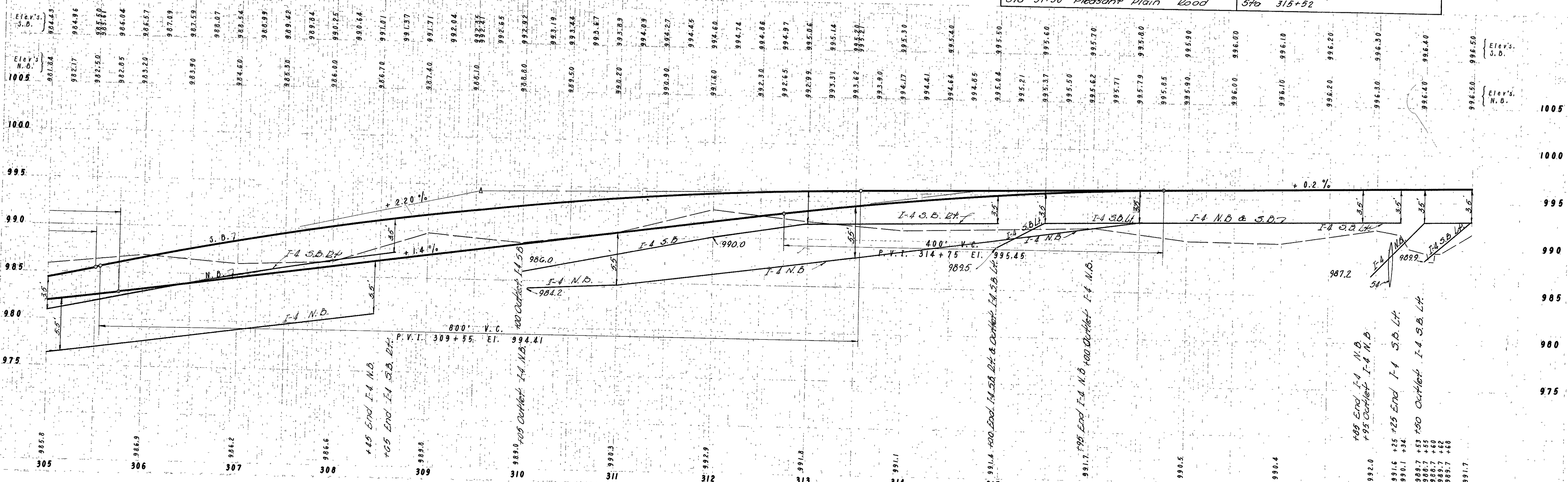
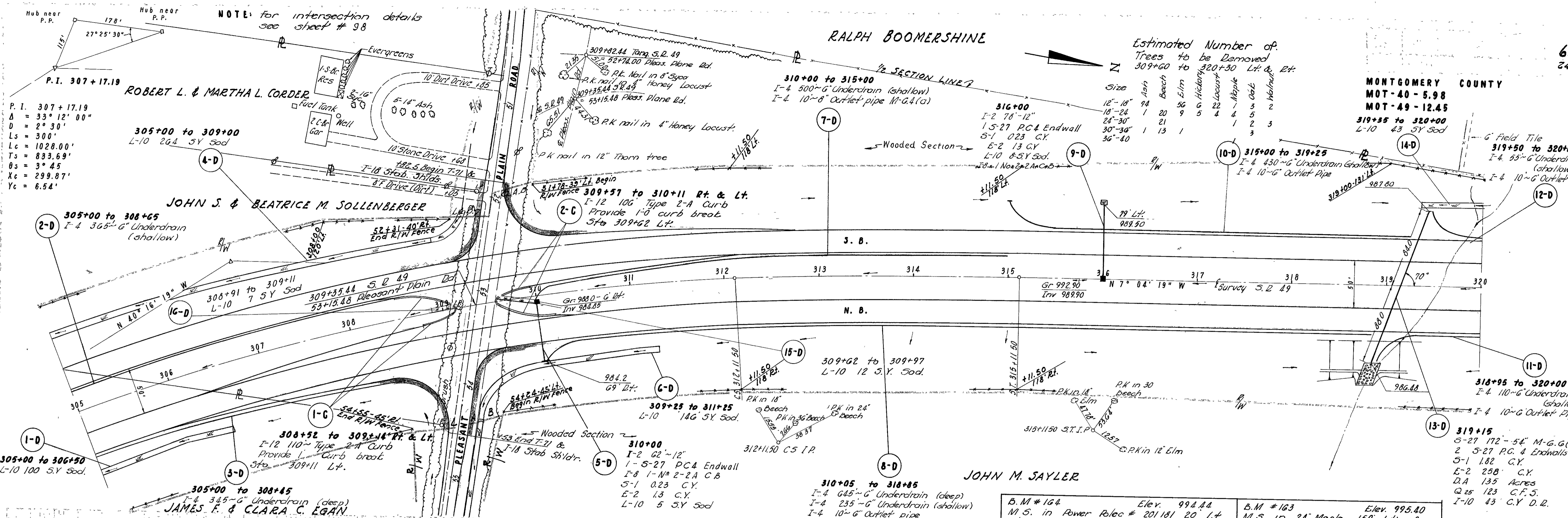


NOTE: for intersection details see sheet # 98

### RALPH BOOMERSHINE

Estimated Number of Trees to be Removed  
309+60 to 320+30 Lt. & Rt.

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45  
319+35 to 320+00  
L-10 43 5Y Sod



B.M. #164	Elev. 994.44	B.M. #163	Elev. 995.40
M.S. in Power Pole # 20181 20 Lt		M.S. in 24" Maple 159 Lt. of	
Sta 51+50 Pleasant Plain Road		Sta 315+52	

P.I. 307+17.19  
 $\Delta = 33^\circ 12' 00''$   
 $D = 2^\circ 30'$   
 $L_s = 300'$   
 $L_c = 1028.00'$   
 $T_s = 833.69'$   
 $O_s = 3^\circ 45'$   
 $X_c = 299.87'$   
 $Y_c = 6.54'$

ROBERT L. & MARTHA L. CORDER  
 305+00 to 309+00  
 L-10 264 5Y Sod

JOHN S. & BEATRICE M. SOLLENBERGER  
 305+00 to 308+65  
 I-4 365" G Underdrain (shallow)

JAMES F. & CLARA C. EGAN  
 305+00 to 308+45  
 I-4 345" G Underdrain (deep)

310+00 to 315+00  
 I-4 500" G Underdrain (shallow)  
 I-4 10" 8" Outlet pipe M-G.4(a)

316+00  
 I-2 78" 12"  
 I-5-27 P.C. Endwall  
 S-1 0.23 C.Y.  
 E-2 13 C.Y.  
 L-10 8-5Y Sod.

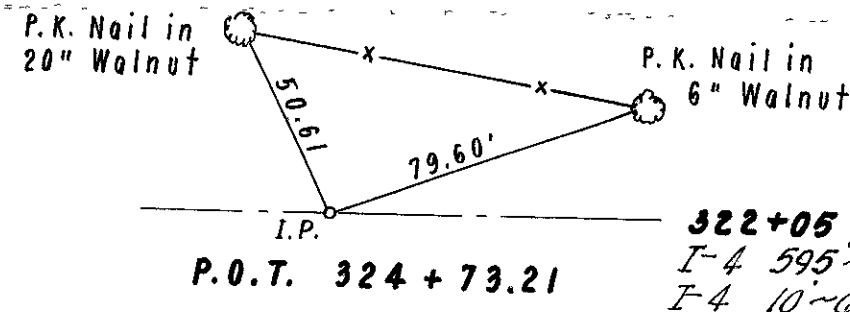
310+00  
 I-2 62" 12"  
 I-5-27 P.C. Endwall  
 I-8 1" N<sup>o</sup> 2-2A C.B.  
 S-1 0.23 C.Y.  
 E-2 13 C.Y.  
 L-10 5 5Y Sod

310+05 to 318+85  
 I-4 645" G Underdrain (deep)  
 I-4 235" G Underdrain (shallow)  
 I-4 10" 6" Outlet pipe

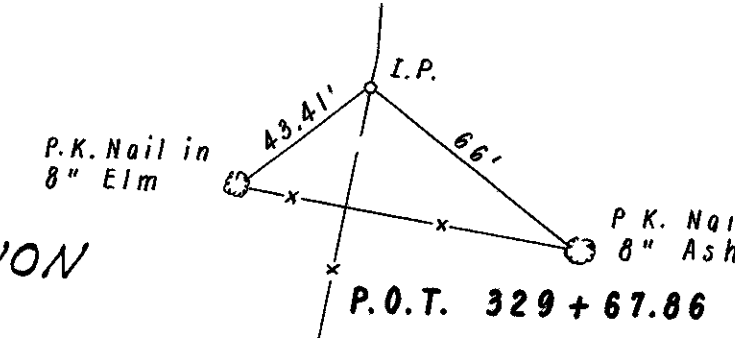
JOHN M. JAYLER

319+15  
 S-27 172" 54" M-G. G(b)  
 Z 5-27 P.C. 4 Endwalls  
 S-1 1.82 C.Y.  
 E-2 258" C.Y.  
 D.A 135 Acres  
 Q.25 123 C.F.5.  
 I-10 43 C.Y. D.2.

320+00 TO 321+95  
I-4 195~6" Underdrain (shallow)



NOTE: 320+00 to 320+30  
See Table Sheet No. 69  
for tree removal.

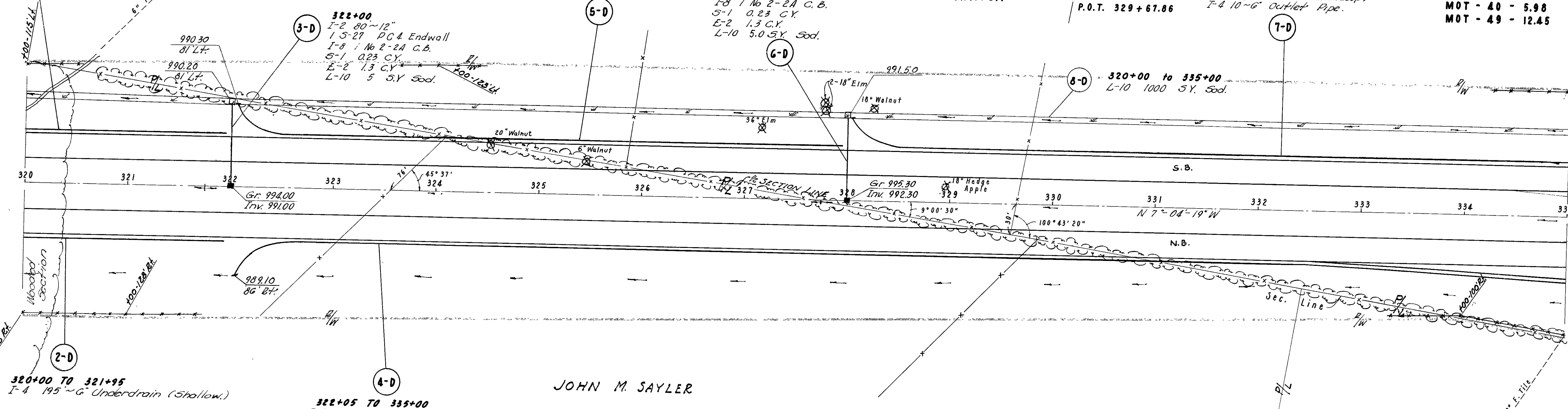


328+05 TO 335+00  
I-4 105~6" Underdrain (deep)  
I-4 10~6" Outlet Pipe

MONTGOMERY COUNTY  
MOT - 40 - 5.98  
MOT - 49 - 12.45

322+05 TO 327+95  
I-4 595~6" Underdrain (deep)  
I-4 10~6" Outlet Pipe

ALBERT BRANNON



320+00 TO 321+95  
I-4 195~6" Underdrain (shallow)

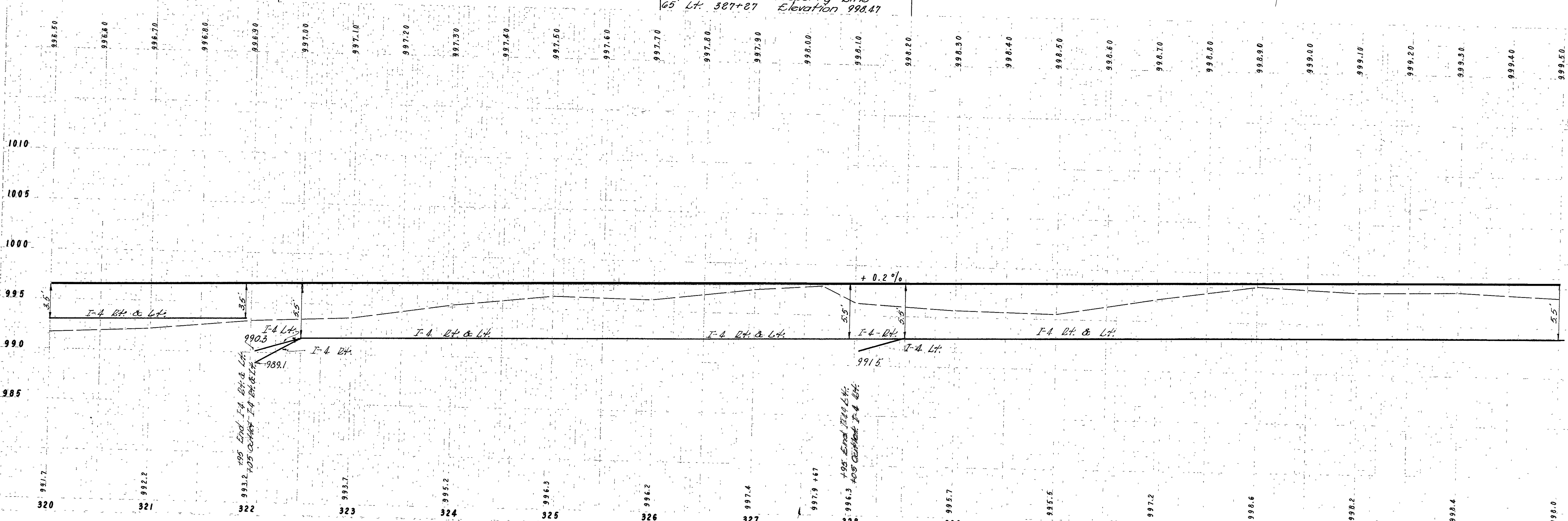
322+05 TO 335+00  
I-4 1305~6" Underdrain (deep)  
I-4 10~6" Outlet Pipe

JOHN M. SAYLER

RAYMOND E. SHAFER

B.M. N° 168 M.S. in 30 Beech 50' East  
of Sailors W. 1/2 63' Lt. 320+00 Elev. 991.65

B.M. N° 161 M.S. in 30' Elm 60' West  
of Sailors West Property Line  
65' Lt. 327+27 Elevation 998.47



M.P. 100 M.S. in Power Pole # 212504  
117' E. of 336+02

335+45 to 335+65  
L-10 7 5.Y Sod.  
(3' wide)

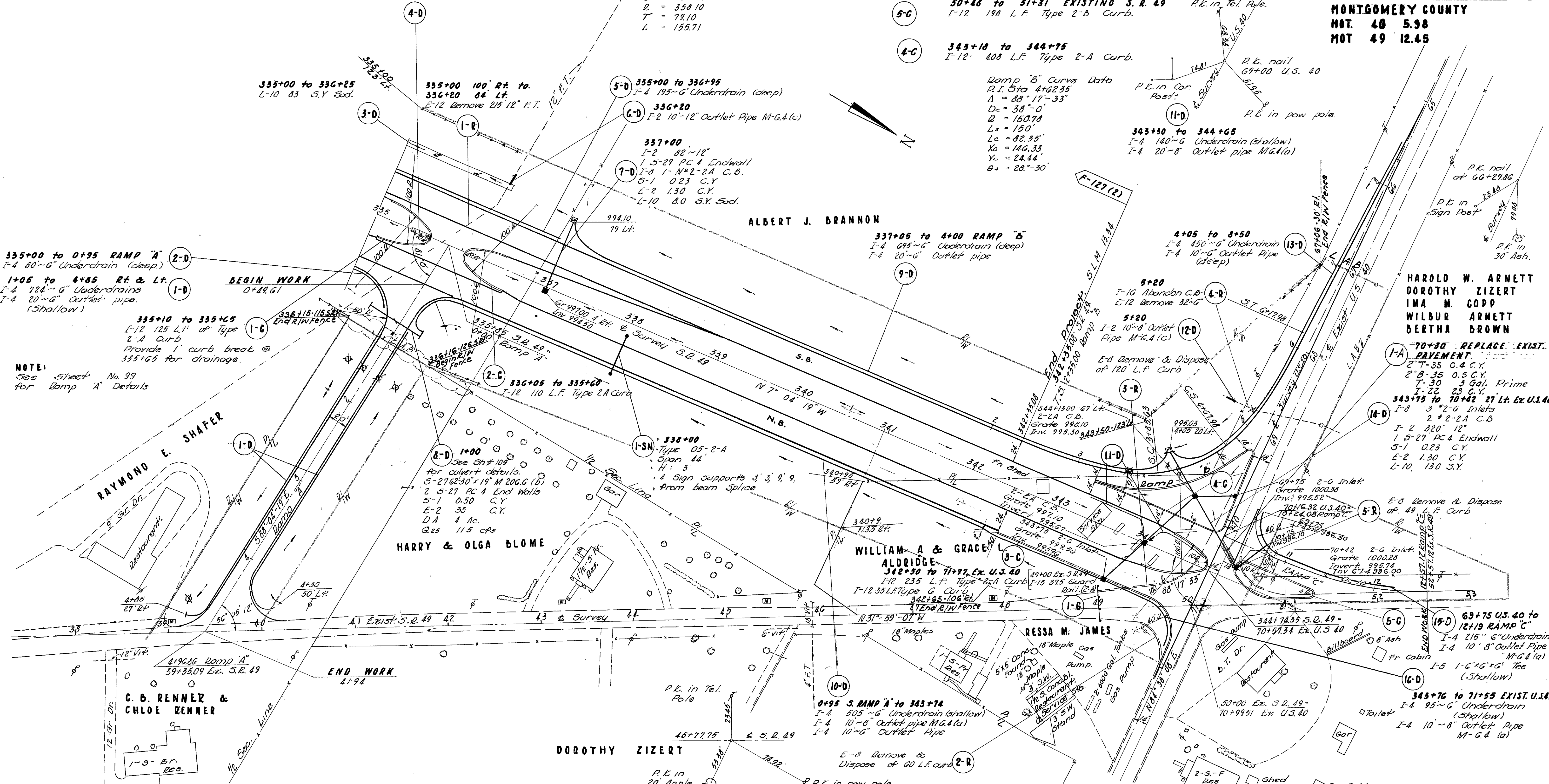
Curve Data  
P.I. 340.51  
Δ = 24° 34' 48"  
D = 16'-00"  
R = 358.10  
T = 79.10  
L = 155.71

NOTE: Marker to be furnished & erected on the left by the State before acceptance of this improvement.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MONTGOMERY COUNTY  
MOT. 40 5.98  
MOT. 49 12.45

71  
241



335+00 to 0+95 RAMP A  
I-4 50'-6" Underdrain (deep)  
1+05 to 4+85 Rt. & Lt.  
I-4 724'-6" Underdrains  
I-4 20'-6" Outlet pipe.  
(Shallow)

335+10 to 335+65  
I-12 125 L.F. of Type 2-A Curb  
Provide 1' curb break @ 335+65 for drainage.

NOTE:  
See sheet No. 99 for Ramp A Details

1+00  
See Sht # 109 for culvert details.  
5-27 62'30" x 19" M 20G.C (B)  
2 5-27 PC 4 End Walls  
5-1 0.50 C.Y.  
E-2 35 C.Y.  
D.A. 4 Ac.  
G.25 115 cfs

WILLIAM A & GRACE ALDRIDGE  
342+50 to 71+77, Ex. U.S. 40  
I-2 235 L.F. Type 2-A Curb  
I-12 35 L.F. Type G Curb  
342+65-106' End R/W Fence

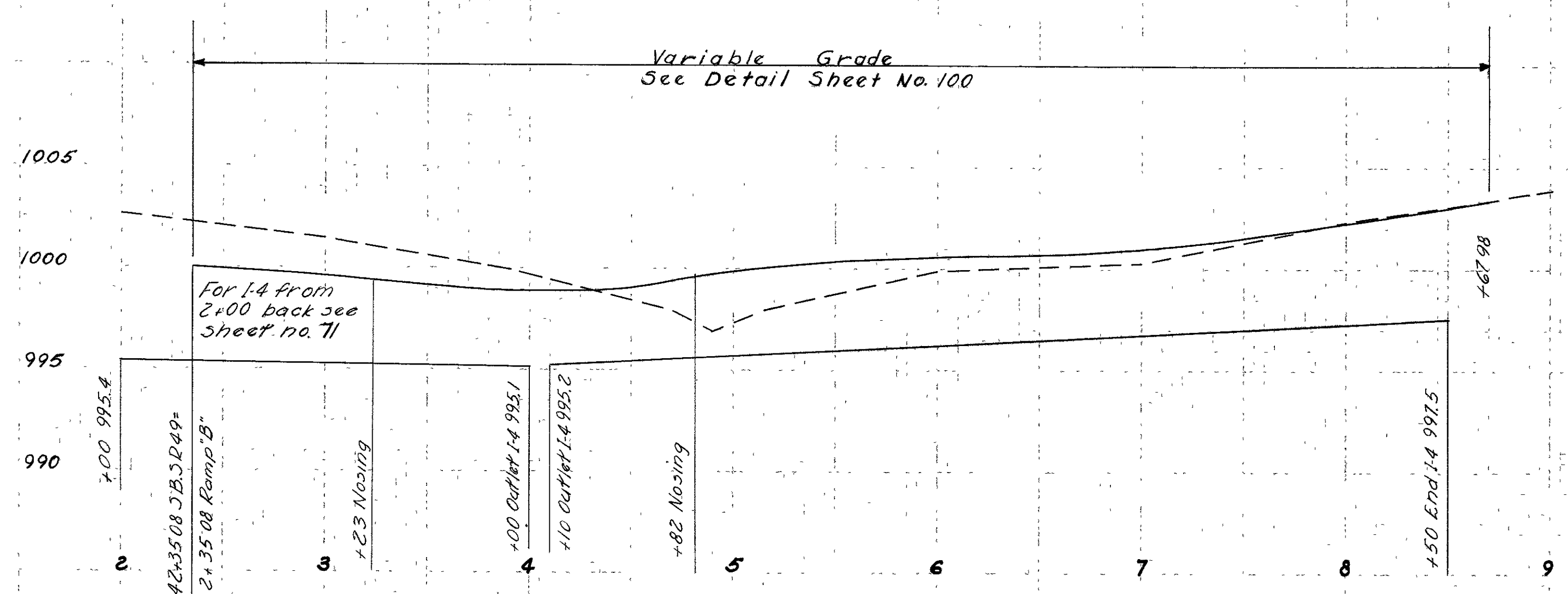
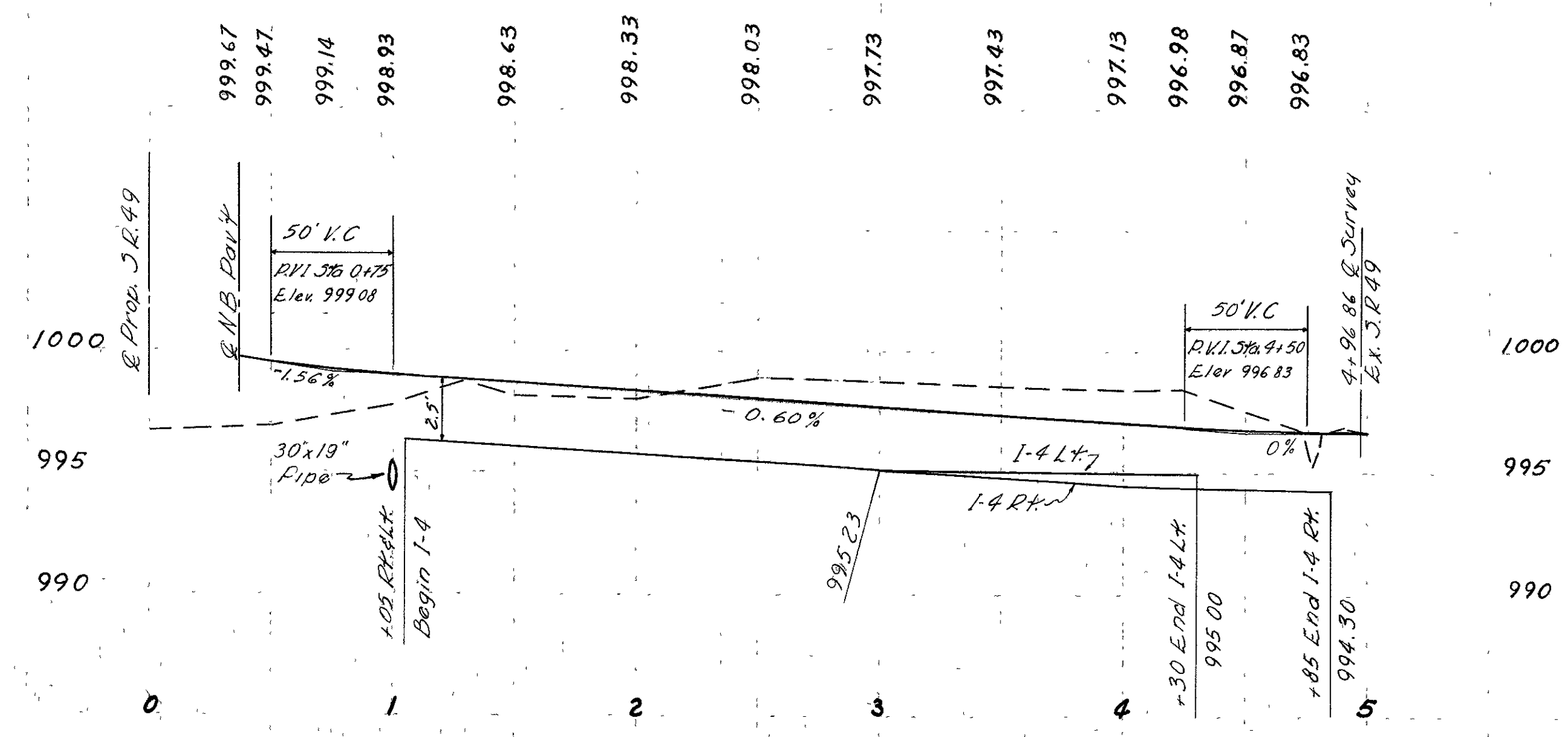
0+95 S. RAMP A to 343+74  
I-4 505'-6" Underdrain (Shallow)  
I-4 10'-8" Outlet pipe M.G.A. (a)  
I-4 10'-6" Outlet Pipe

70+30 REPLACE EXIST. PAVEMENT  
2'-35 0.4 C.Y.  
2'-35 0.5 Gal. Prime  
7-22 23 C.Y.  
343+75 to 70+42 27' Lt. Ex. U.S. 40  
I-8 3'-2" Inlets  
2'-2-A C.B.  
I-2 320' 12"  
1 5-27 PC 4 Endwall  
5-1 0.23 C.Y.  
E-2 1.30 C.Y.  
L-10 130 S.Y.

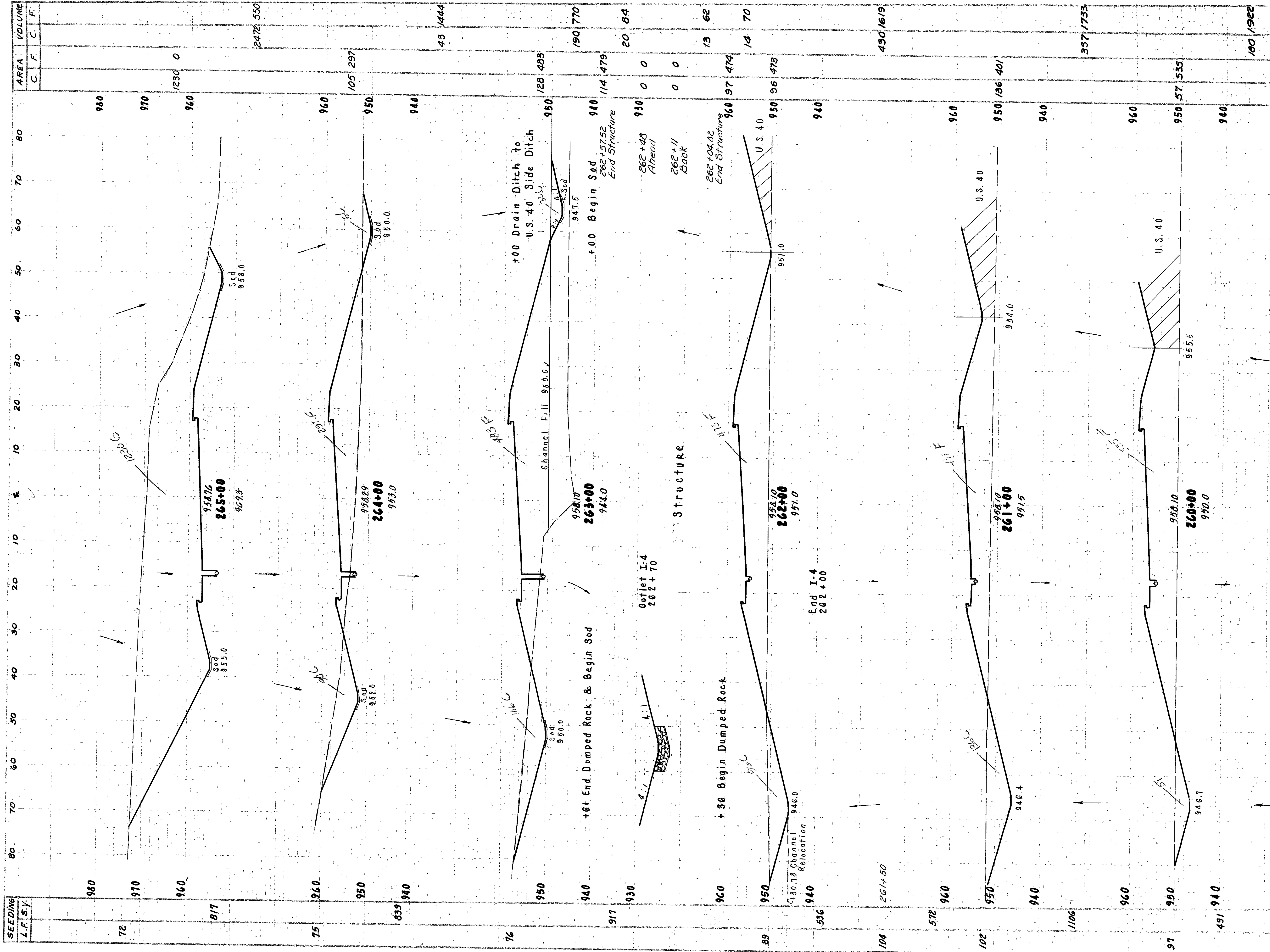
69+75 U.S. 40 to 124+19 RAMP C  
I-4 215' 6" Underdrains  
I-4 10' 8" Outlet Pipe M.G.A. (a)  
I-5 1'-6" x 6" x 6" Tee (Shallow)  
345+76 to 71+55 EXIST. U.S. 40  
I-4 95'-6" Underdrain (Shallow)  
I-4 10'-8" Outlet Pipe M-G.A. (a)

1005	999.50	999.60	999.70	999.80	999.90	1000.00	1000.10	1000.20	1000.30	1000.40	1000.50	1000.54	1000.55	1000.54	1000.50	1000.40	1000.30	1000.20	1000.10	1000.00
995	998.0	998.5	998.7	998.5	998.5	998.5	998.5	998.5	998.5	998.5	998.5	998.5	998.5	998.5	998.5	998.5	998.5	998.5	998.5	998.5
335	336	337	338	339	340	341	342	343	344	345	335+00 TO 344+74.35	S. R. 49								

For limits of Pavement Removal see pavement detail sheet # 100  
E-8 Removal of existing wearing course 100 S.Y.  
Removal of existing flexible pavement is to be paid for under E-101



Plans by F/92 by  
 Planning 10/15/57 DAB C.V. 10/15/57 JAY  
 Earthwork 10/16/57 DAB C.V. 10/15/57 JAY  
 Surveying Data 11/11/57 C.V. 10/15/57 JAY

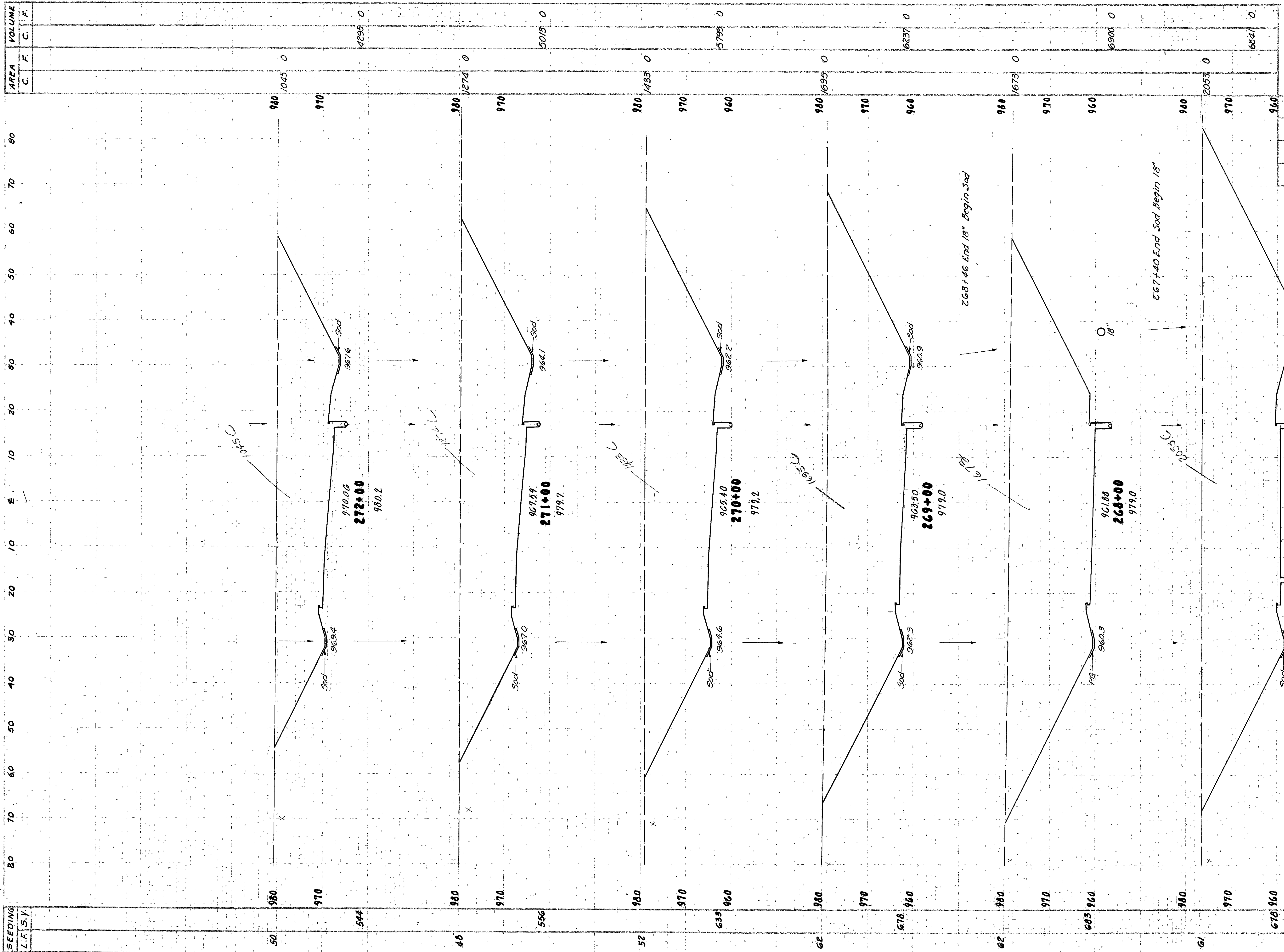


SEEDING L.F. S.Y.	AREA			VOLUME
	C.	F.	C. F.	
72	980	970	960	1230 0
817	960	950	940	2472 550
75	960	950	940	105 297
839	940	930	920	43 1444
76	950	940	930	128 483
917	940	930	920	190 770
89	950	940	930	20 84
536	940	930	920	0 0
104	950	940	930	0 0
572	960	950	940	13 62
102	950	940	930	14 70
1106	940	930	920	430 1619
97	960	950	940	357 1733
49	940	930	920	950 57 535
95	960	950	940	180 1922
940	950	940	930	61 920
95	960	950	940	24 490
940	950	940	930	258 + 50

MONTGOMERY COUNTY  
 NOT 48 5.98  
 NOT 49 12.45



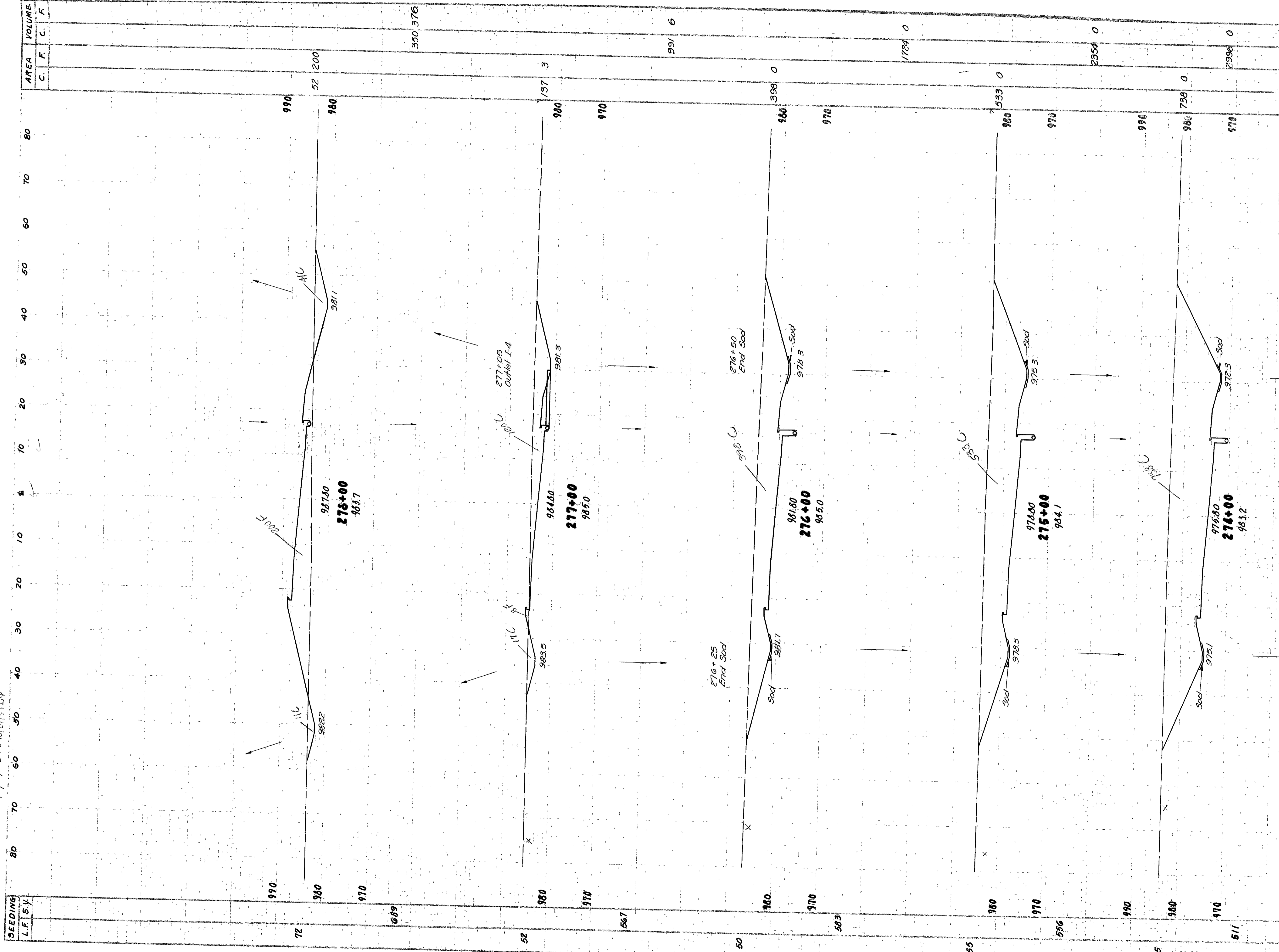
TEMPERATURE 8/1/57  
 Planning 10/1/57 DAG  
 Earthworks 10/8, 10/16/57 C.W.O. 10/15/57 J.Y.  
 Station 0+00 to 1+00



MONTGOMERY COUNTY  
 MOT 40 5.98  
 MOT 49 12.45

SEEDING L.F.S.Y.	AREA C.	AREA F.	VOLUME C.	VOLUME F.
50	1045		0	
40	1274		0	
52	1433		0	
62	1695		0	
68			0	6237
62	1673		0	
68			0	6237
61	2053		0	
68			0	6237
61			0	6847
72	265+00		1230	

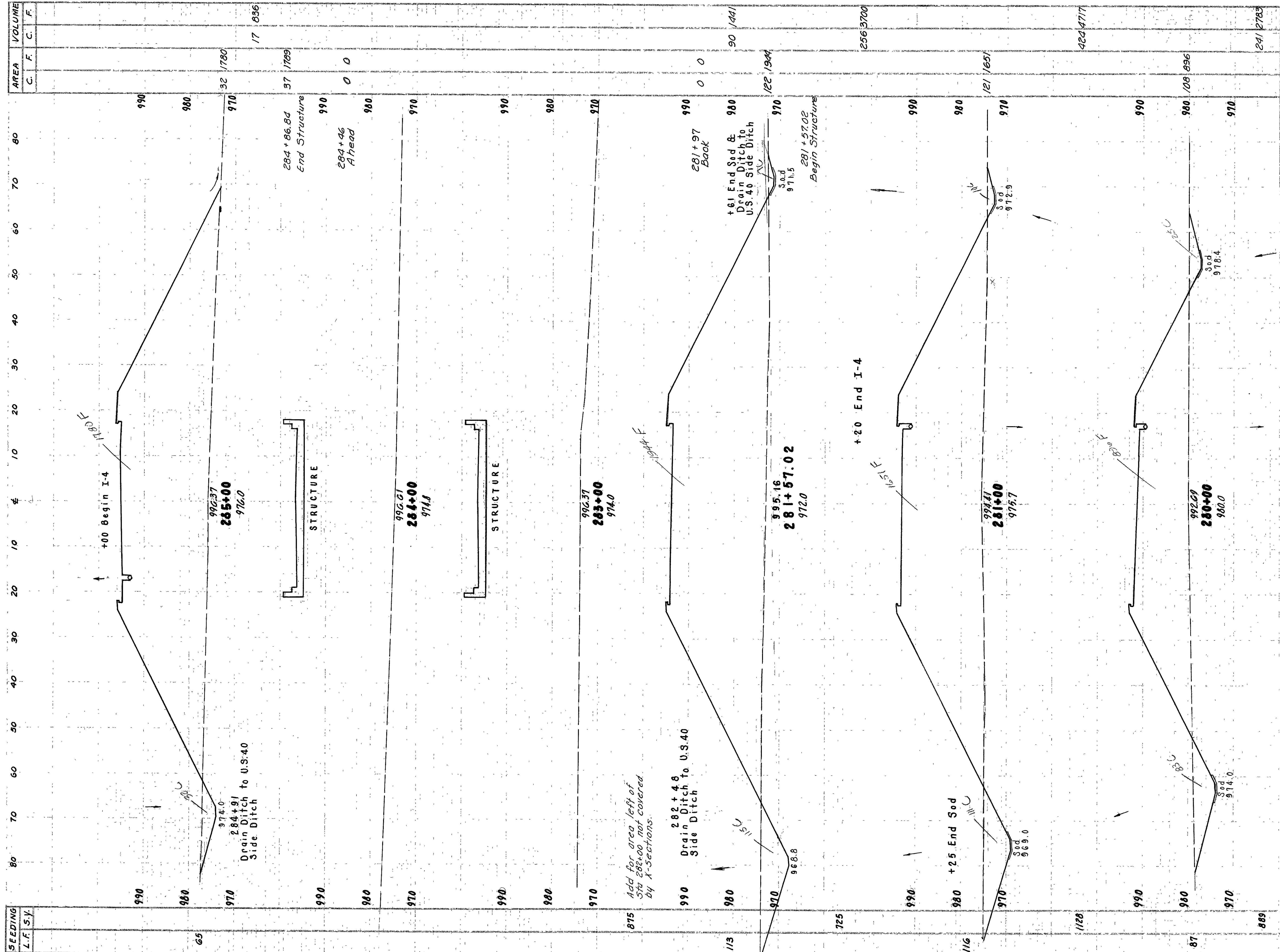
Plan 10/1/57 D.A.B. (K to 144) 2.3.57  
 IS-MALTYC. 01/1/57  
 Earthworks 2008.10/21/57 CKY. 12-3-57 W.B.  
 Earthworks 2008.10/16/57 CKY 10/16/57 W.B.



SEEDING	L.F. S.Y.	AREA		VOLUME	
		C.	F.	C.	F.
72				52	200
689				350	976
52				137	3
567				99	6
50				398	0
583				970	
55				533	0
556				970	
55				2354	0
15				990	
15				738	0
511				970	
7				3566	0
539				1045	0
1				272+00	
				2996	0

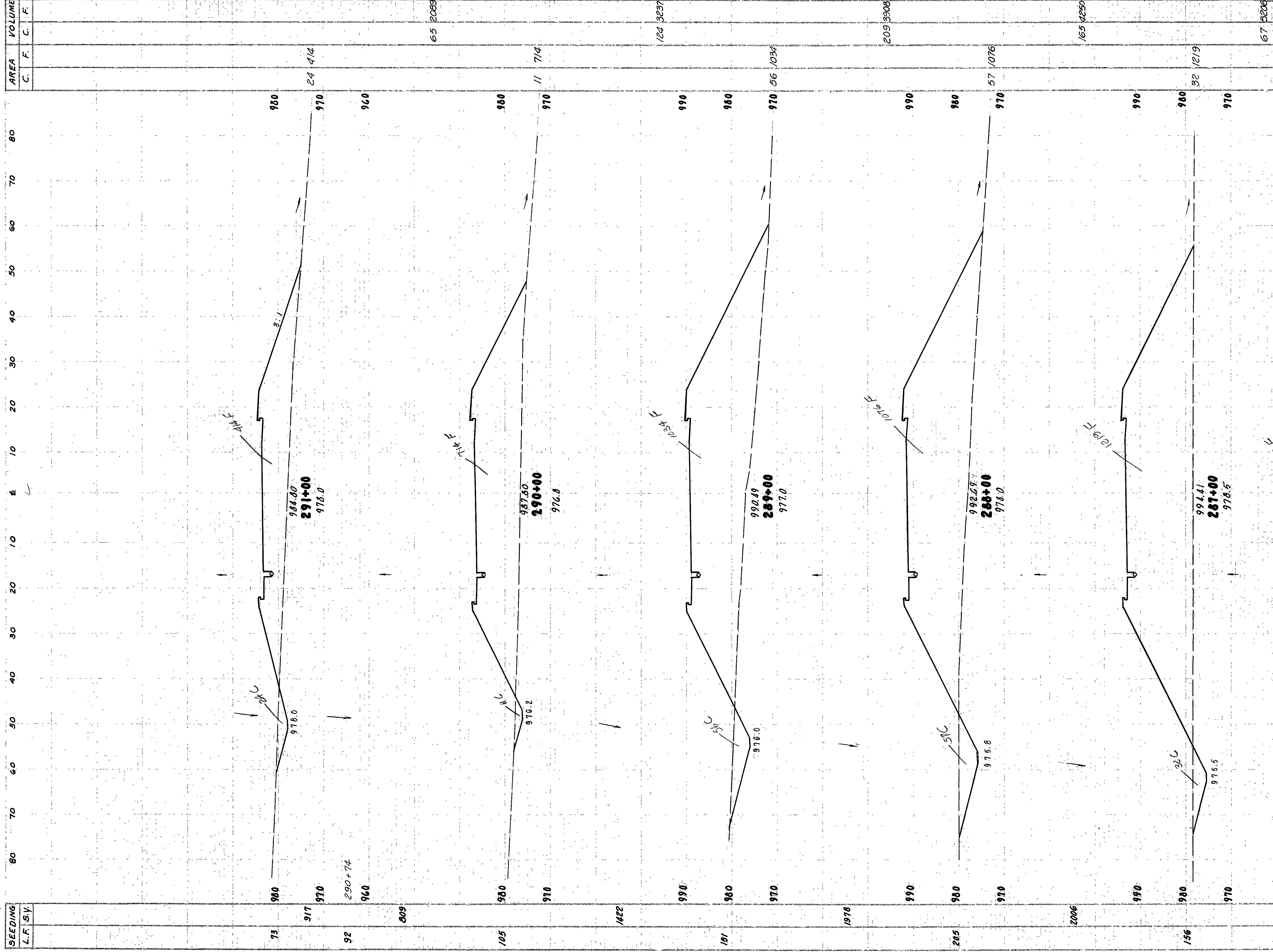
MONTGOMERY COUNTY  
 MOT 40 5.98  
 MOT 49 12.45

Plan 10/1/57 D.A.E. K.O. 11/1/57  
 Elevation 284, 10/1/57 C.K.O. 10/1/57  
 Section 284, 10/1/57 C.K.O. 10/1/57



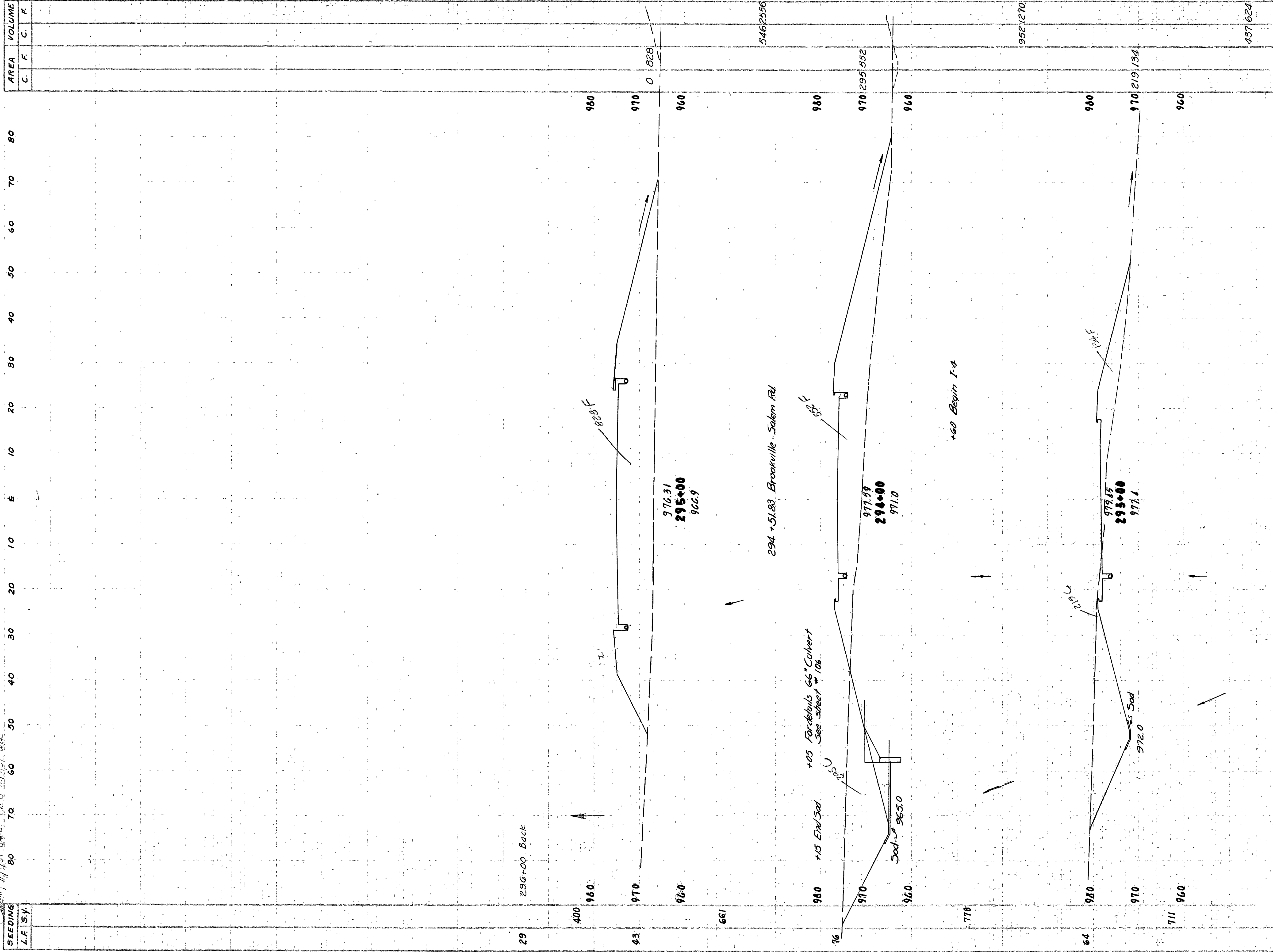
MONTGOMERY COUNTY			
MOT	40	5.98	
MOT	49	12.45	

TERRACE 8/1/57 JJY  
 PHINA 2006 11/1/57 CK'S 10/1/57 JJY  
 BATHUBS D.A.S 10/1/57 CK'S 09/1/57 JJY  
 SEEDING D.A.S 11/1/57 CK'S 10/1/57 JJY



MONTGOMERY COUNTY  
 MOT 48 5.98  
 MOT 49 12.45

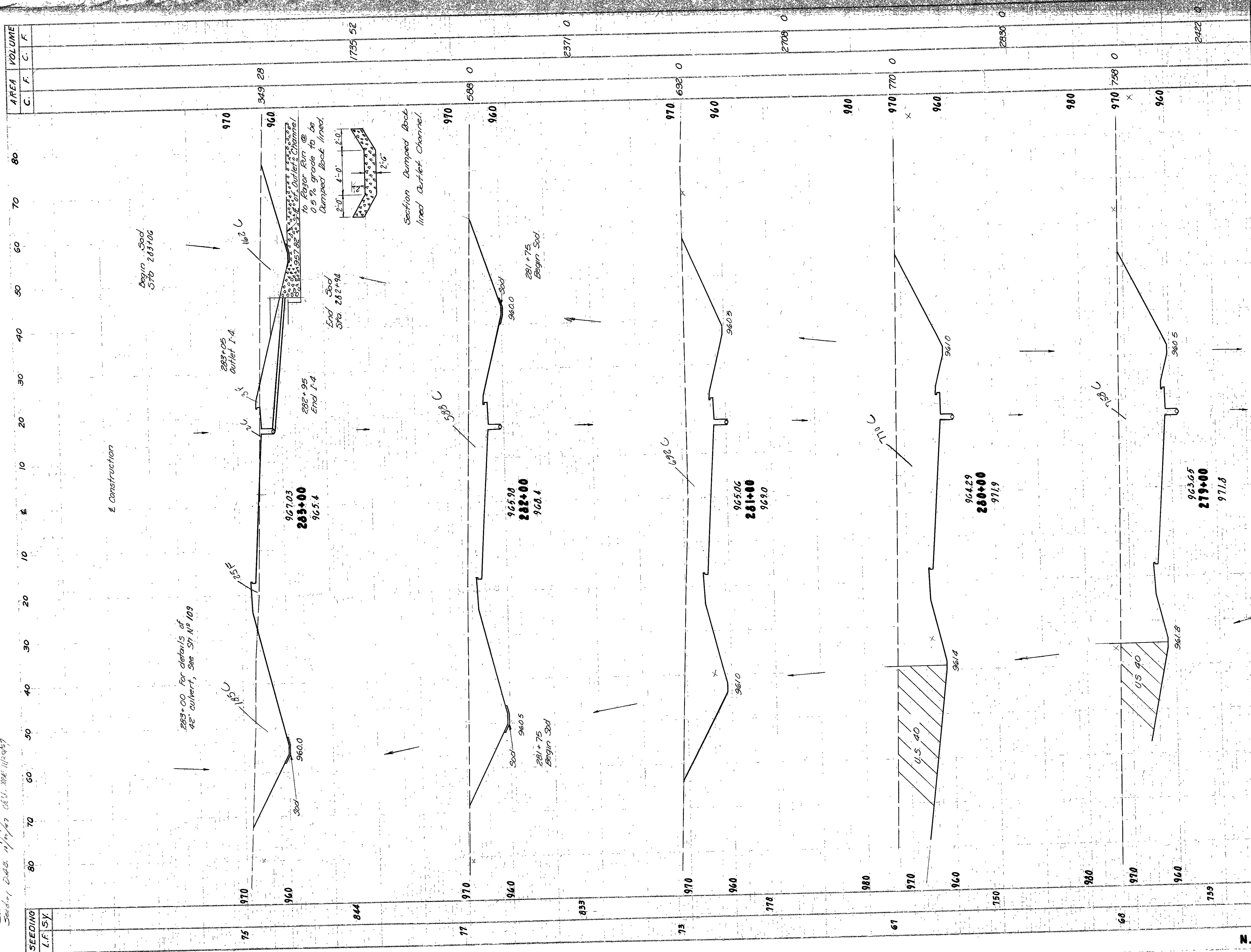
7/18/57  
 Planning 10/17/57  
 200 B 11/7/57  
 200 C 12/15/57  
 200 D 12/15/57



AREA		VOLUME	
C	F	C	F
64	17	203	
64	17	203	
76	143		
73	24	414	
			437 624

MONTGOMERY COUNTY  
 MOT - 40 5.98  
 MOT - 49 12.45

Date: 10/16/57  
 Planning Div. 10/15/57  
 Earthworks Div. 10/17/57  
 Section: DAB 10/10/57  
 C.E. 11/2/57

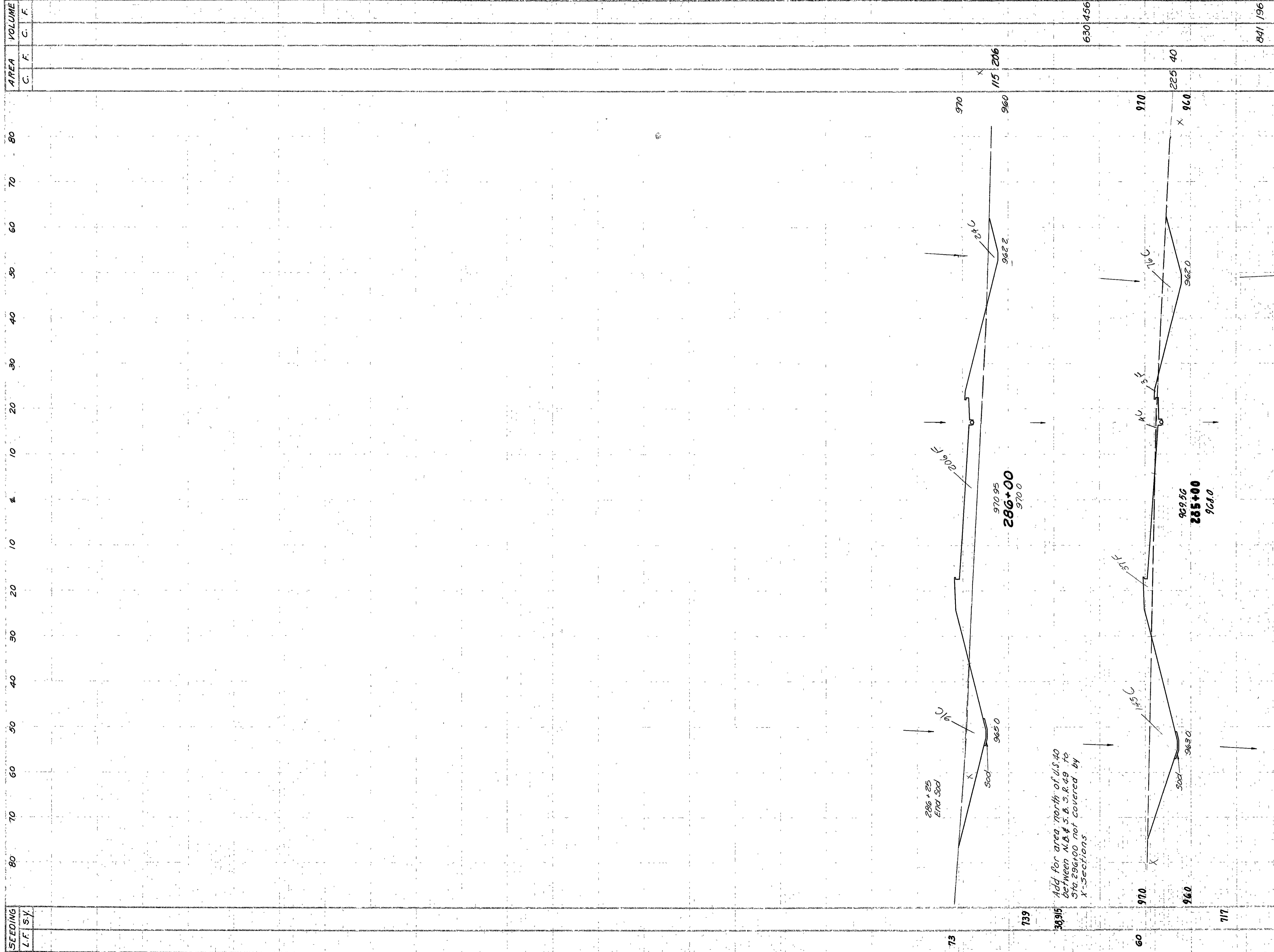


SEEDING		AREA		VOLUME	
L.F.	S.Y.	C.	F.	C.	F.
75			349		28
77			588		0
833					2371
73			692		0
778					2708
61					0
750					2830
68					0
759					2422
65					0
782					538
66					612

**MONTGOMERY COUNTY**  
 MOT 40 5.98  
 MOT 49 12.45

N. B. S. R. 49 278+00 TO 283+00

T.C. 10/15/57  
 Plans 10/15/57  
 286+00 to 288+00  
 10/15/57  
 286+00 to 288+00  
 10/15/57  
 286+00 to 288+00

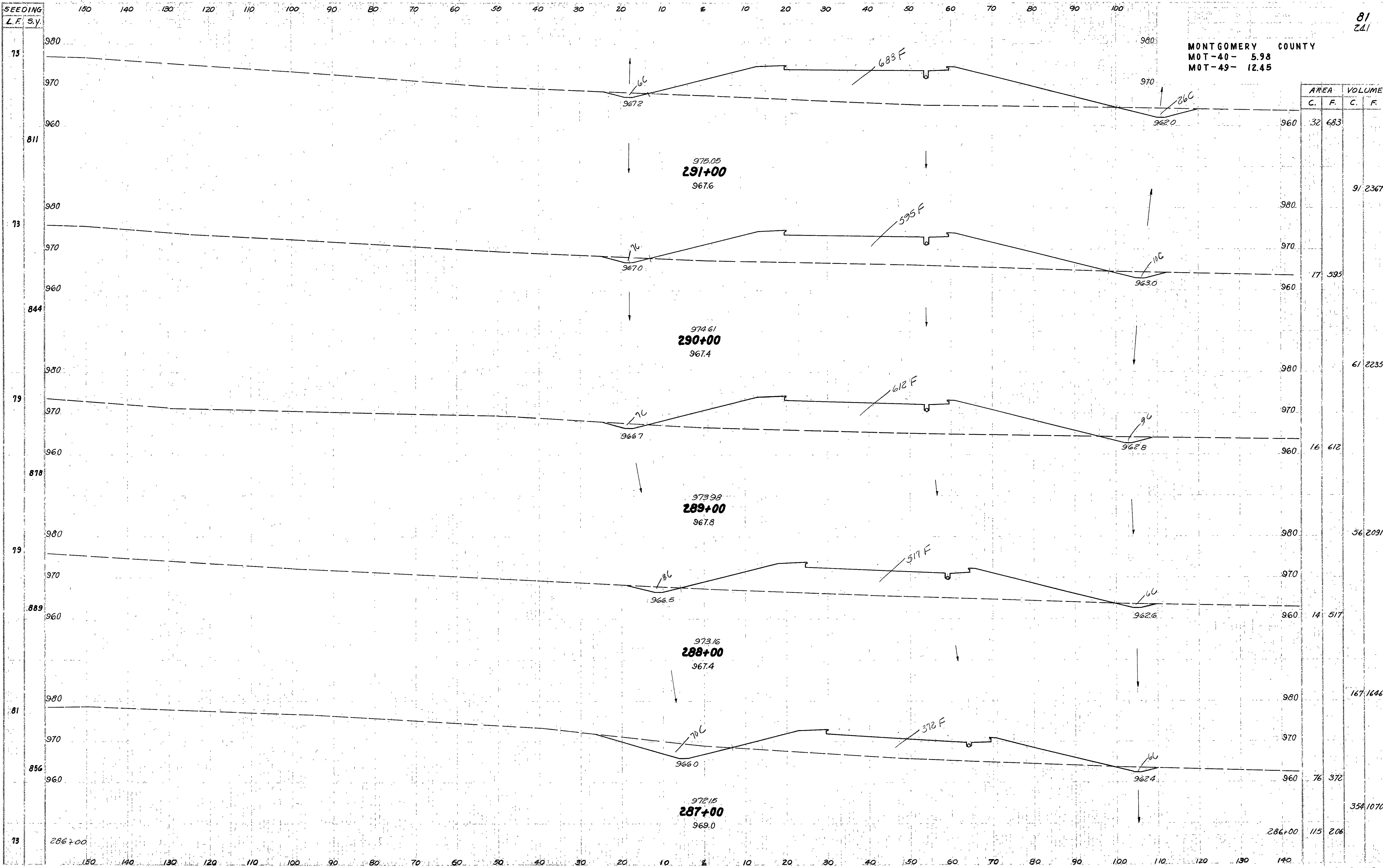


AREA	VOLUME	
	C	F
630.456		
115.206		
225.40		
841.196		

MONTGOMERY COUNTY	
MOT 40	5.98
MOT 49	12.45
	1070.174
	283+00 349.28
	283+00

38915 Add for area north of U.S. 40 between N.B. & S.B. S.R. 49 to Sta. 286+00 not covered by X-sections.

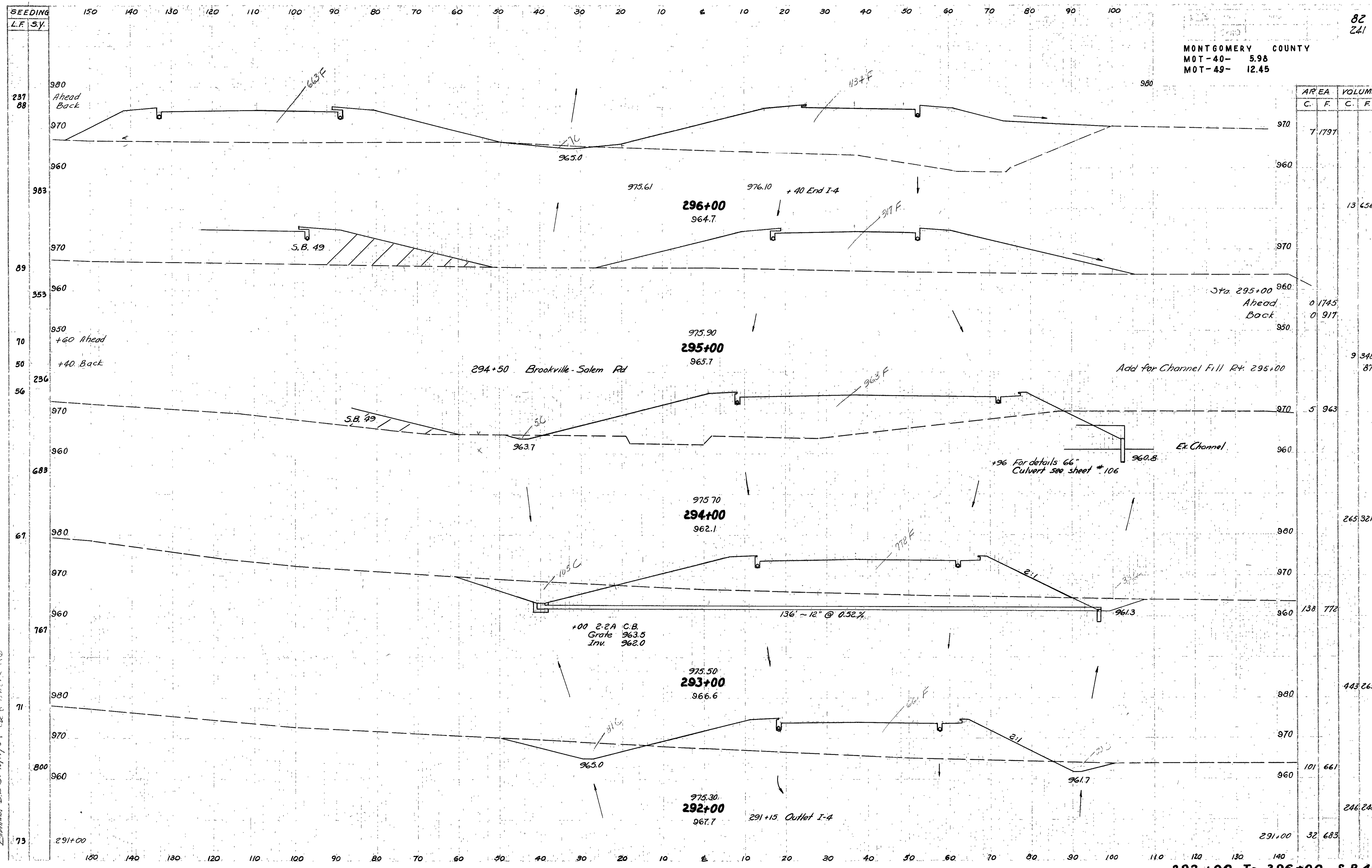
MONTGOMERY COUNTY  
MOT-40- 5.98  
MOT-49- 12.45



PLAN OF THE  
 PLANNING BOARD  
 FOR THE DISTRICT OF  
 SEEDING DISTRICT (SEE MAP 11/15/57)



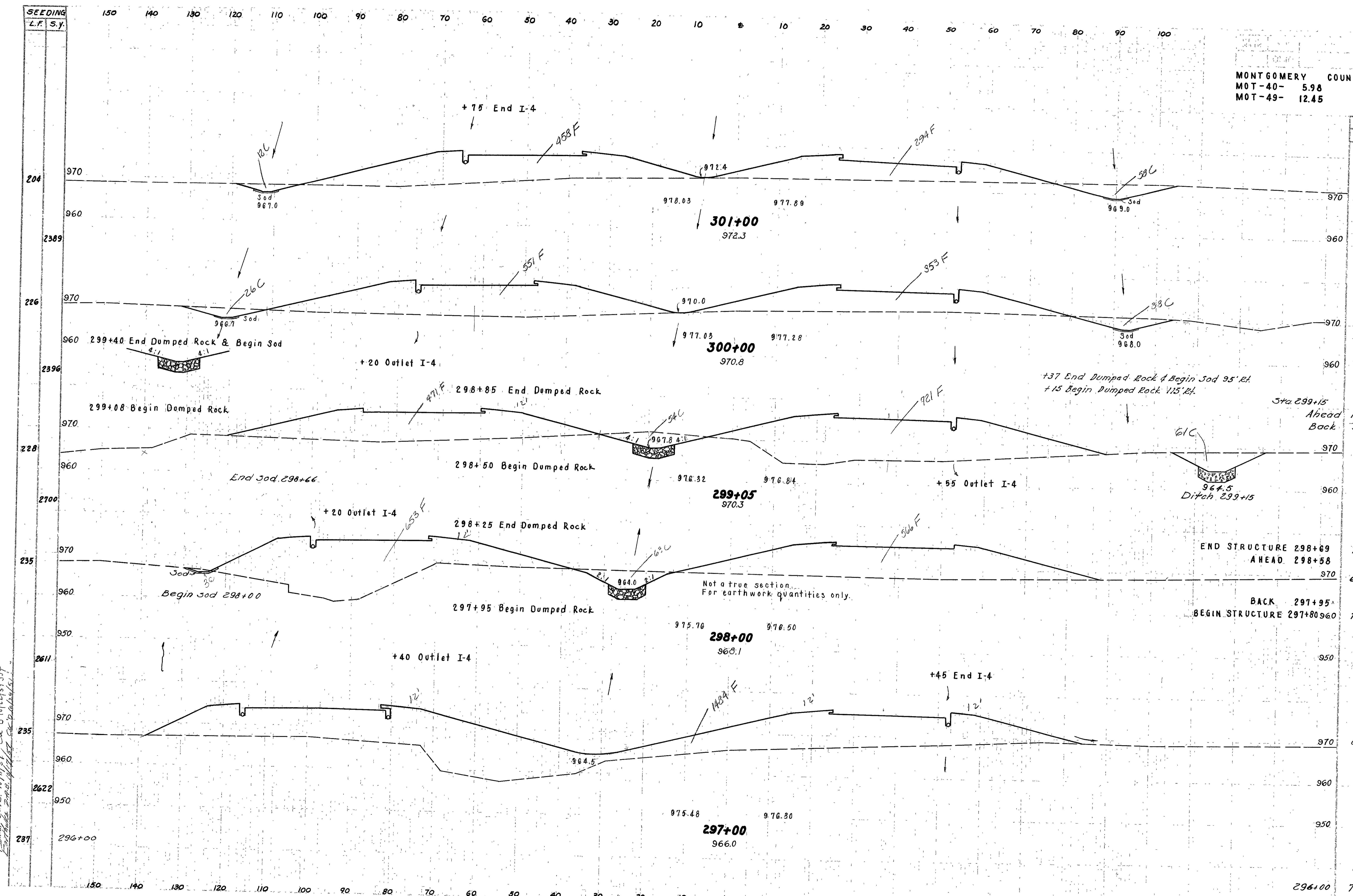
MONTGOMERY COUNTY  
MOT-40- 5.98  
MOT-49- 12.45



AREA		VOLUME	
C.	F.	C.	F.
7	1797		
		13	6560
0	1745		
0	917		
		9	3482
			878
5	963		
		265	3213
138	772		
		443	2654
101	661		
		246	2489
32	683		

Plans, M. H. S. 11/1/57  
 Plans, S. H. S. 11/1/57  
 Plans, D. P. S. 11/1/57  
 Plans, E. H. S. 11/1/57  
 Plans, G. H. S. 11/1/57  
 Plans, H. H. S. 11/1/57  
 Plans, I. H. S. 11/1/57  
 Plans, J. H. S. 11/1/57  
 Plans, K. H. S. 11/1/57  
 Plans, L. H. S. 11/1/57  
 Plans, M. H. S. 11/1/57  
 Plans, N. H. S. 11/1/57  
 Plans, O. H. S. 11/1/57  
 Plans, P. H. S. 11/1/57  
 Plans, Q. H. S. 11/1/57  
 Plans, R. H. S. 11/1/57  
 Plans, S. H. S. 11/1/57  
 Plans, T. H. S. 11/1/57  
 Plans, U. H. S. 11/1/57  
 Plans, V. H. S. 11/1/57  
 Plans, W. H. S. 11/1/57  
 Plans, X. H. S. 11/1/57  
 Plans, Y. H. S. 11/1/57  
 Plans, Z. H. S. 11/1/57

MONTGOMERY COUNTY  
MOT-40- 5.98  
MOT-49- 12.45



AREA		VOLUME	
C.	F.	C.	F.
70	752		
64	984		
115	1192		
71	1200	14	244
66	1219		
73	1272		
0	1484		
13	6076		
7	1797		

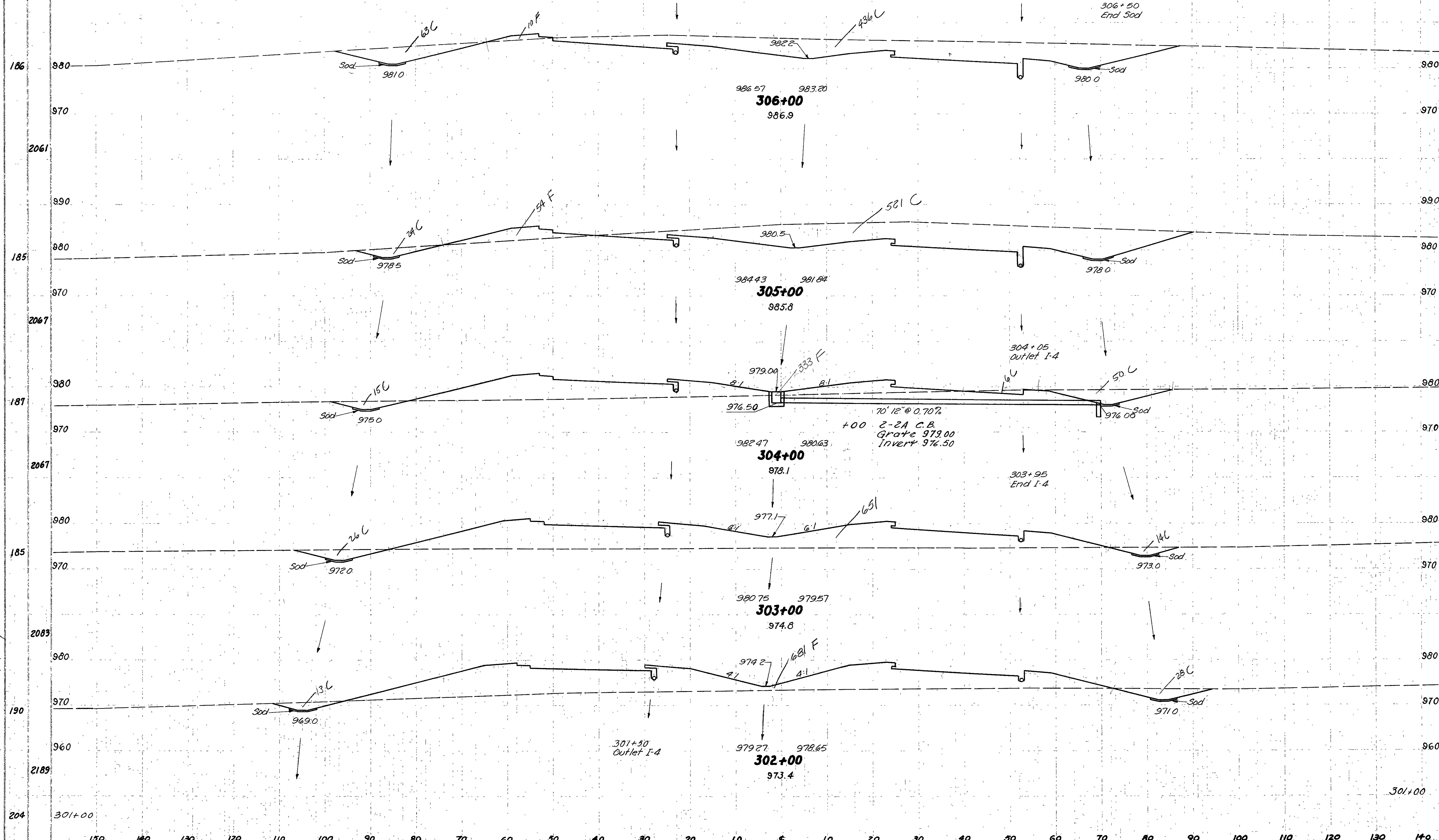
Trans. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

SEEDING L.F. S.Y. 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

MONTGOMERY COUNTY  
 MOT-40- 5.98  
 MOT-49- 12.45

84  
 241

AREA		VOLUME	
C.	F.	C.	F.



980	499	10		
970				
2061			1933	119
990				
980	545	54		
970				
2067			1141	717
980	71	333		
970				
2067			206	1822
980				
970	40	651		
2083			150	247
980				
970	41	681		
2189			206	2654
960				
204			70	152
301+00				

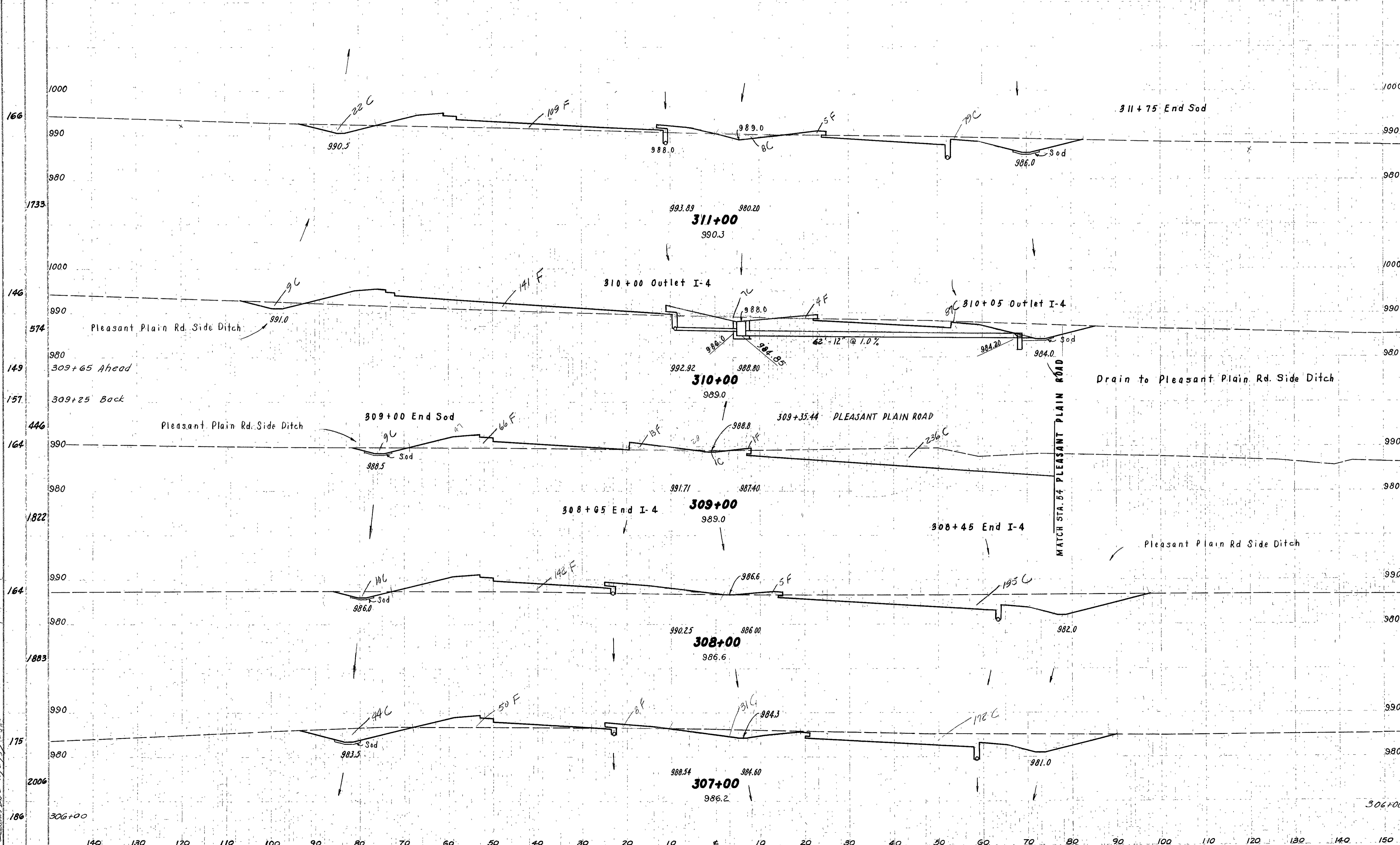
302+00 To 306+00 S.R.49

Temp. Plotter Dis 3-1-7  
 Seeding area 10/30/57 cell 11-29-57 4.53  
 Plan 204-B 10/1/57 OK 10/12/57 JY  
 Earthwork 204-B 10/19/57 OK 10/19/57 JY

SEEDING L.F.S.Y. 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

MONTGOMERY COUNTY  
MOT-40- 5.98  
MOT-49- 12.45

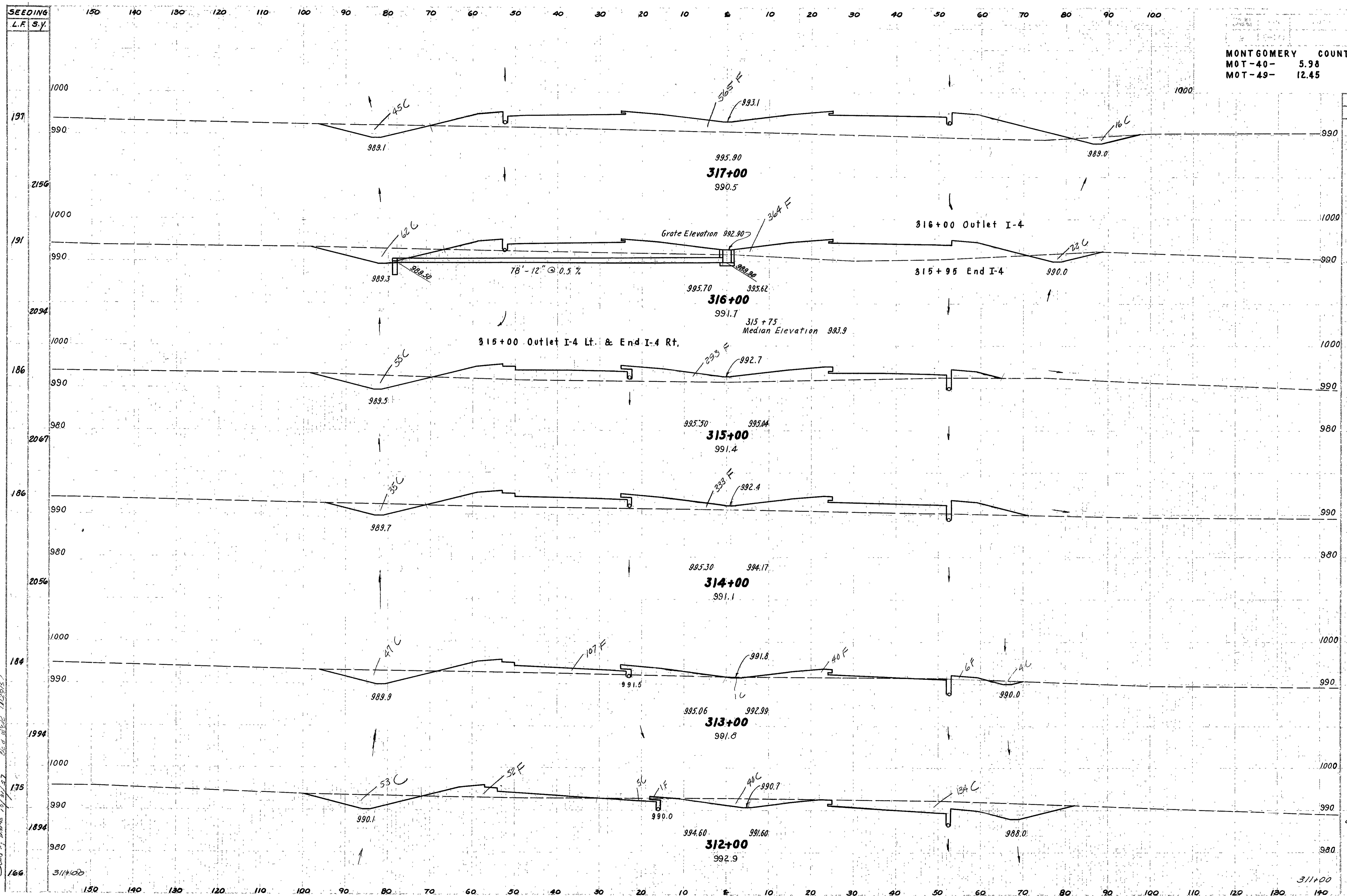
AREA		VOLUME	
C.	F.	C.	F.



103	114	393	480
103	145	646	417
246	80	635	420
205	147	837	380
247	58	1381	126
306+00	499	10	

Temp. Plot Head 3-9-57  
 Plan. 1/11/57 D. B. C. B. C. B. 10/10/57  
 Station 307+00 to 311+00 to Pleasant Plain Rd.

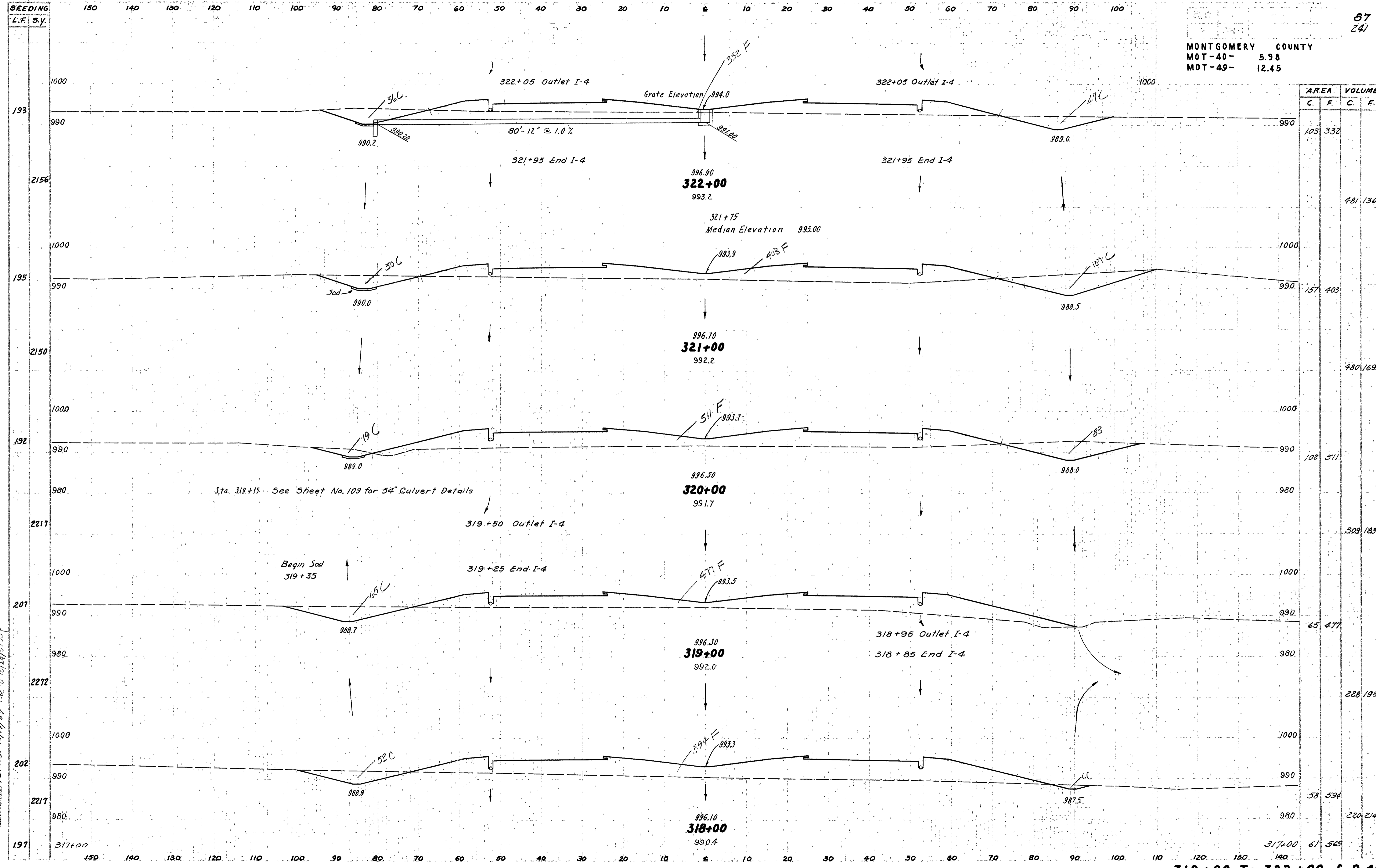
MONTGOMERY COUNTY  
MOT-40- 5.98  
MOT-49- 12.45



AREA		VOLUME	
C.	F.	C.	F.
61	565		
84	364	269	1720
55	293	257	1217
35	333	167	1159
52	133	161	900
53	53	526	381
109	114	631	309

Trench, H. H. & D. D. 3. 2. 57  
 Alameda, 19/1/57 2048. Cx 0 10/21/57 2044  
 Easton, 19/1/57 2048. Cx 0 10/21/57 2044  
 3000 ft. 2048. 19/1/57. 10/21/57

MONTGOMERY COUNTY  
MOT-40- 5.98  
MOT-49- 12.45

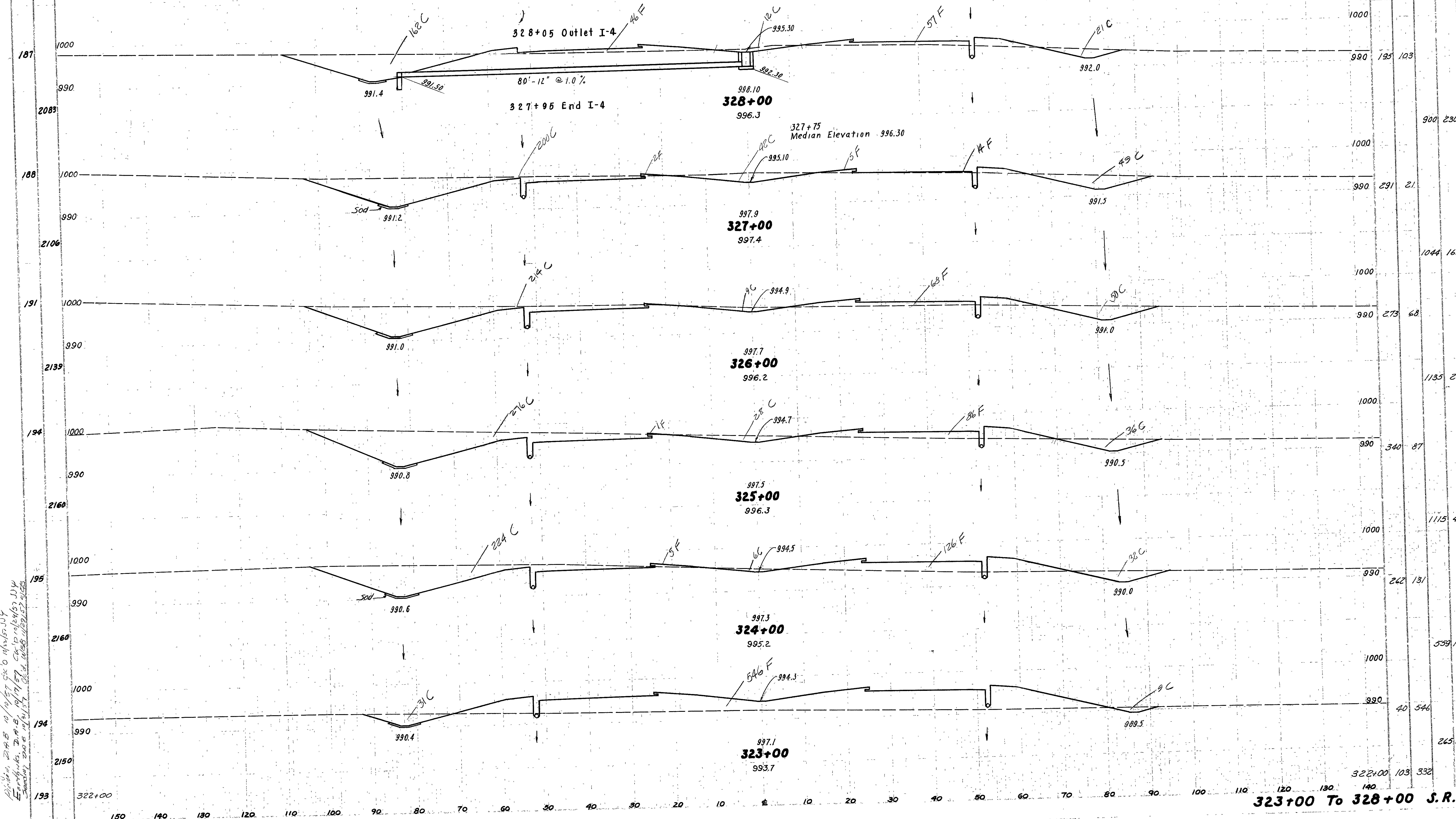


Original P.L. H. d. D. 5 3-4-57 Seeding 2003 10/21/57 C.R. 10/21/57  
 Plan & P.A. B. 10/10/57 C.R. 10/10/57  
 Elevation. D.A. B. 10/10/57 C.R. 10/10/57

MONTGOMERY COUNTY  
MOT-40- 5.98  
MOT-49- 12.45

SEEDING  
L.F. S.Y.

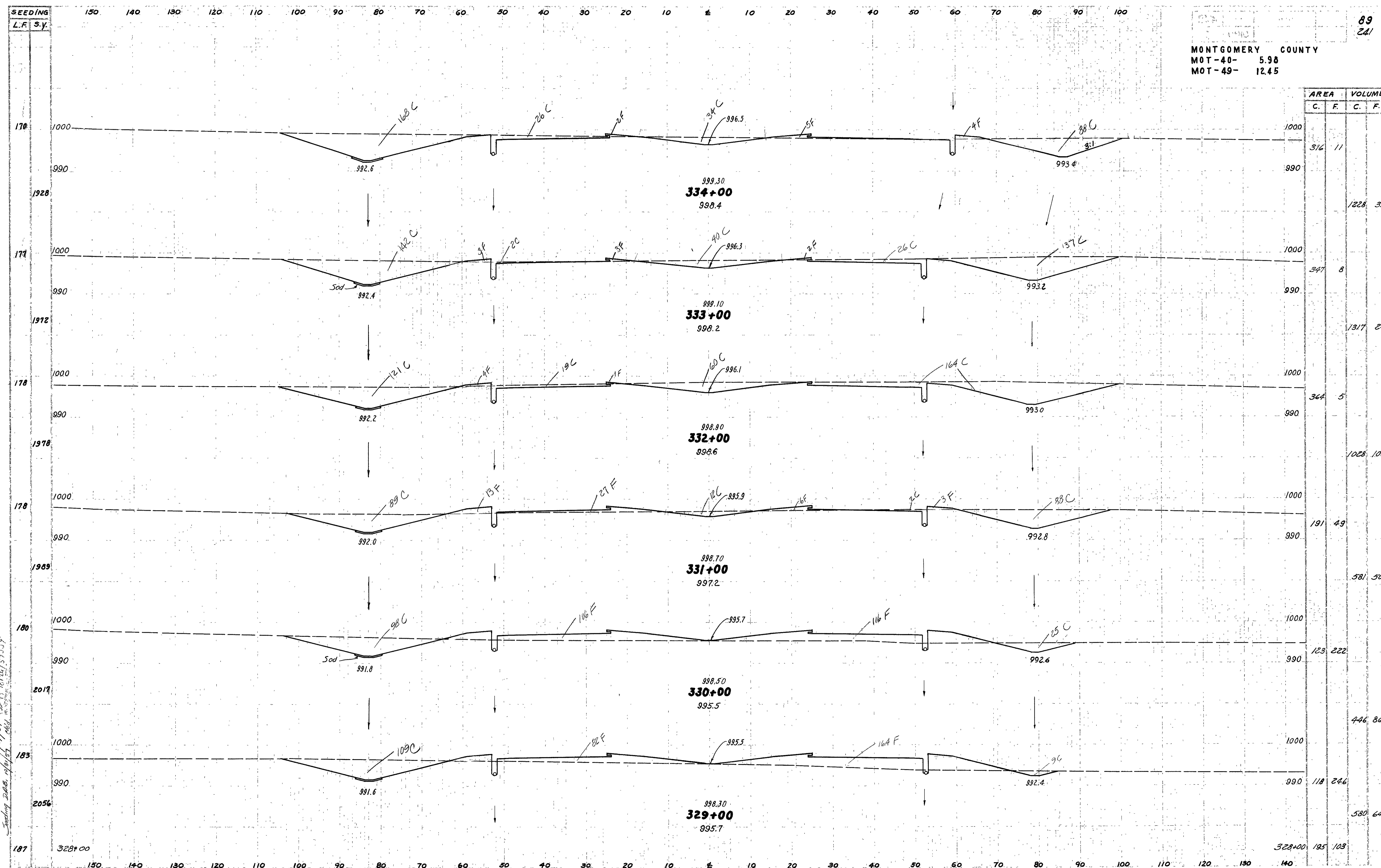
AREA		VOLUME	
C.	F.	C.	F.
195	103	900	230
291	21	1044	165
275	68	1135	287
340	87	1115	40
262	131	559	12
40	546	265	16
103	332		



Trench 11' High 3'-4-57  
 Poles 2x4x8 10/10/57 to 11/15/57  
 E. of 11/15/57 to 11/17/57 C. to 11/18/57 W. to  
 Seeding 2x8 11/15/57 2x4 11/17/57 2x4 11/18/57 2x4 11/19/57

323+00 To 328+00 S.R.4

MONTGOMERY COUNTY  
MOT-40- 5.98  
MOT-49- 12.45



Temp. Plots Head D. 3 & 4-57  
 Plan No. 10 110 157 205-8, cc to 10/21/57 JJJ  
 Earthworks, 205-8, cc to 10/21/57 JJJ  
 Seeding Data, 10/21/57 JJJ

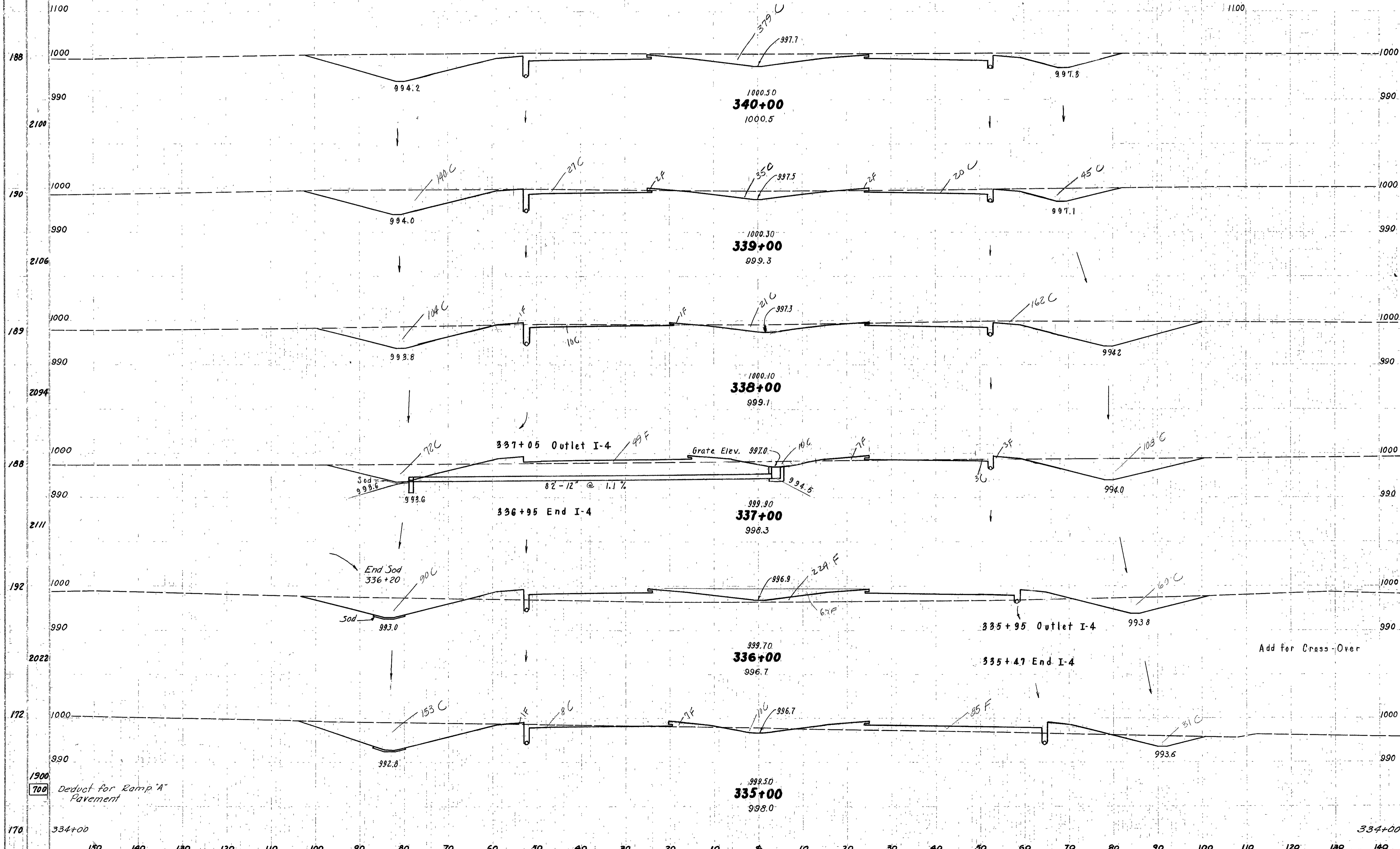


SEEDING  
L.F. S.Y.

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

MONTGOMERY COUNTY  
MOT-40- 5.98  
MOT-49- 12.45

90  
241



AREA  
C. F.

VOLUME  
C. F.

379 0

1196 7

267 4

1044 11

297 2

907 113

193 59

635 52

150 224

125

652 58

202 93

259 193

334+00 316 11

Add for Cross-Over

335+00 To 340+00 S.P.

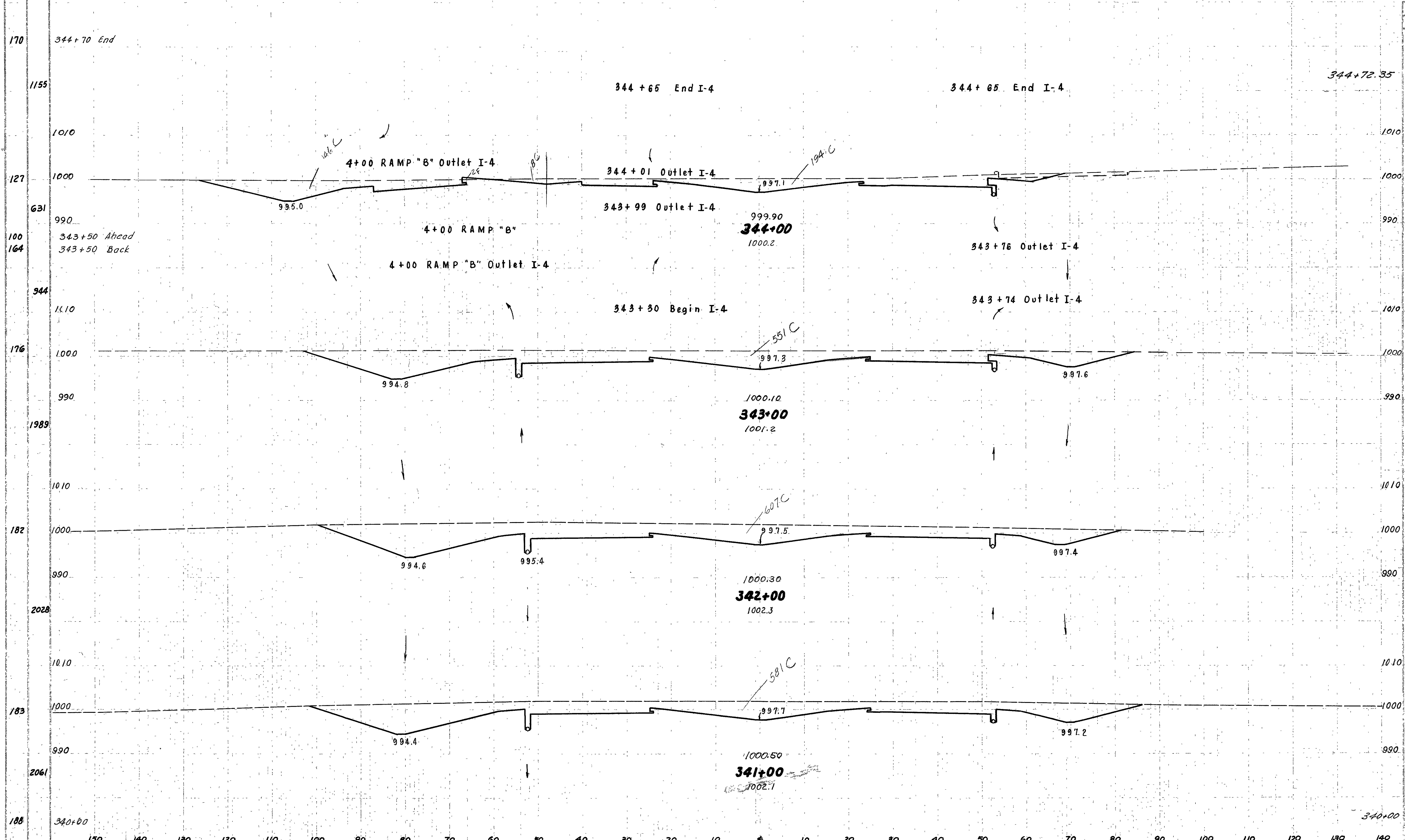
Bedding 10/21/57  
Trench 11/4/57  
Plan 10/10/57  
Excavation 10/17/57  
Ck to 10/21/57

700 Deduct for Ramp "A" Pavement

SEEDING L.F.S.V. 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ± 10 20 30 40 50 60 70 80 90 100

MONTGOMERY COUNTY  
MOT-40 - 5.98  
MOT-49 - 12.45

91  
241



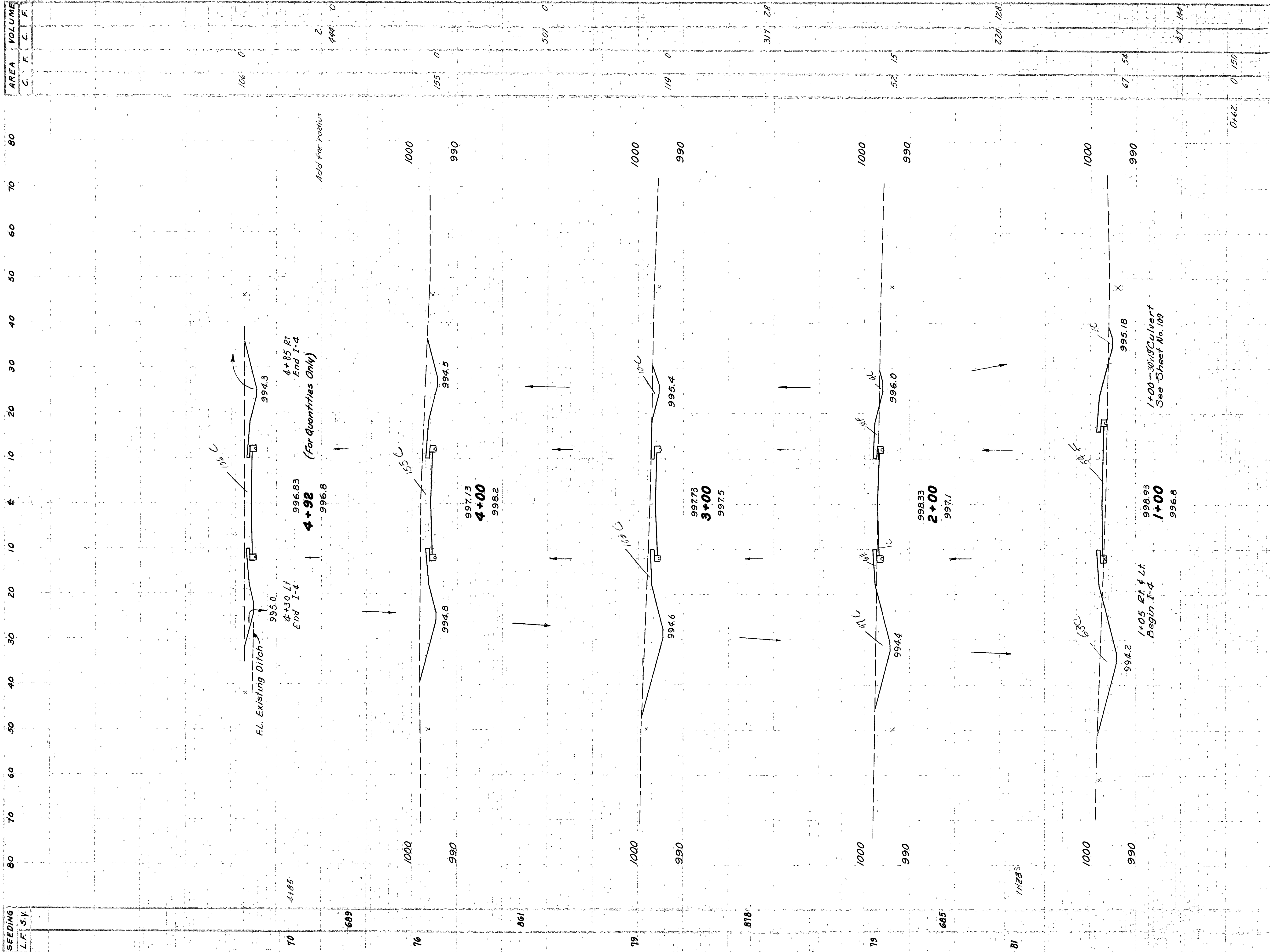
AREA		VOLUME	
C.	F.	C.	F.

		344+72.35	163.0
			684.3
			348.2
			1665.4
			551.0
			2145.0
			607.0
			2220.0
			581.0
			1778.0
		340+00	379.0

Plan view of D.P.A. 10/15/57 WY  
 10/15/57 cr. 10/15/57 WY  
 10/15/57 cr. 10/15/57 WY

341+00 To 344+00 S.R.

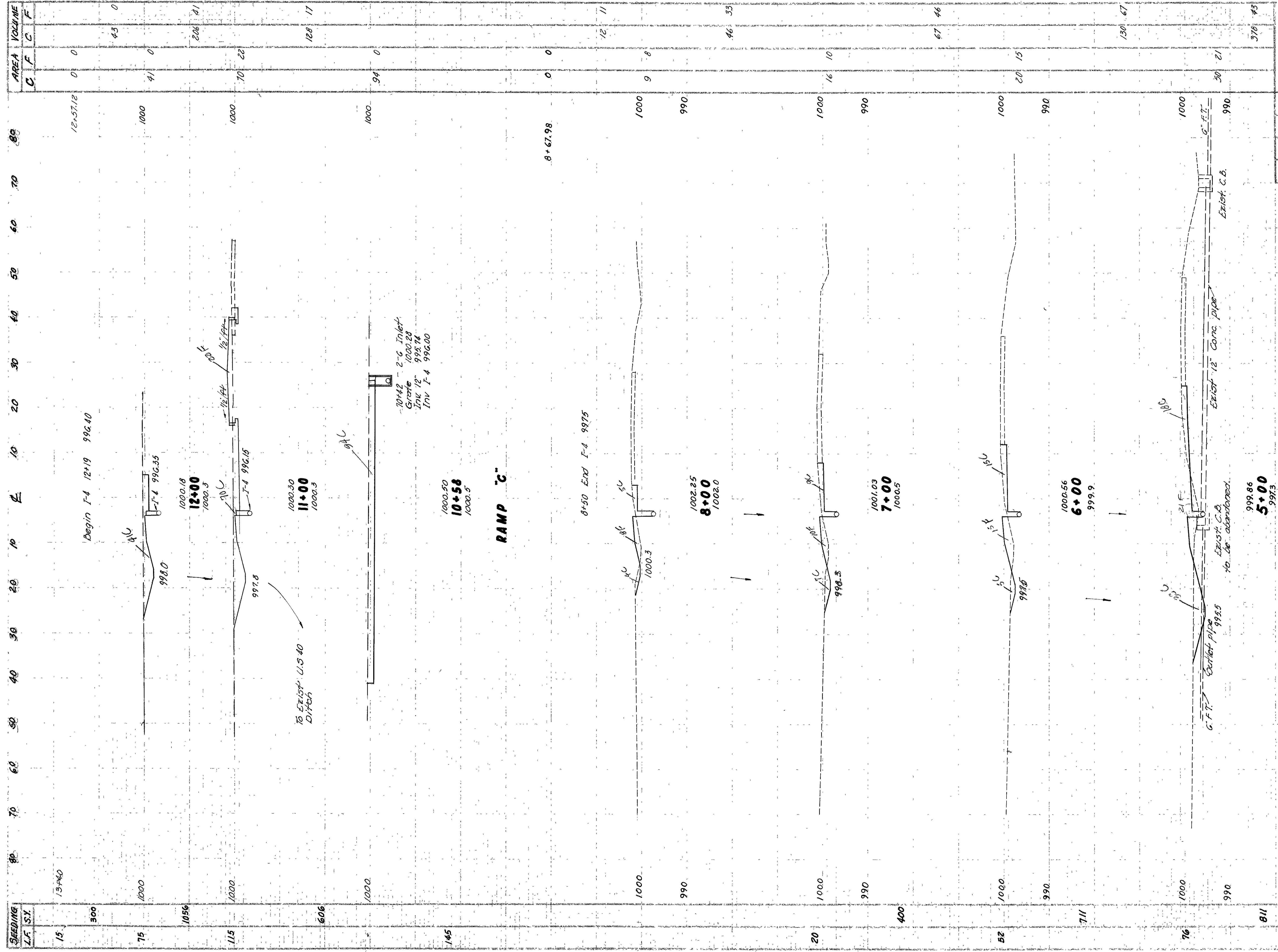
Plan: 11/57 D-40 1" C. 10' x 15' 11" JY  
 Elevation: 11/57 1" C. 10' x 15' 11" JY  
 Stationing: 11/57 1" C. 10' x 15' 11" JY



STATION	AREA	VOLUME
0+00	990	
1+00	990	
2+00	990	
3+00	990	
4+00	990	
4+92	990	

MONTGOMERY COUNTY  
 MOT-40-5.98  
 MOT-49-12.45

Planned 11/15/57 D.A.B., 10/16/57 J.J.Y.  
 E-4 1/19/57 S.W.B., C.W.O. 57 J.K.  
 Speedy D.A.B. 10/31/57 W.E.D. 11/29/57 W.E.B.

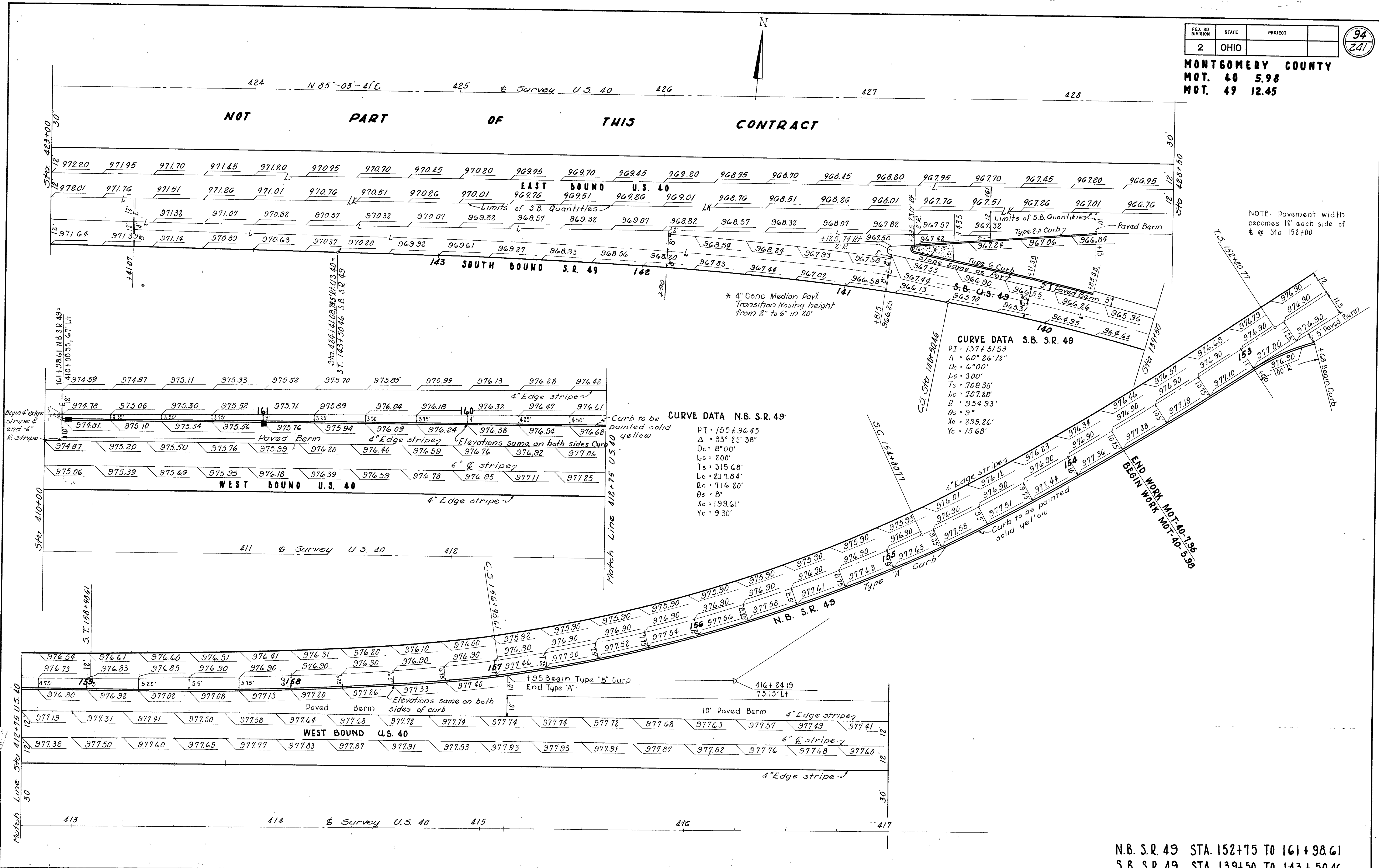


SEEDING L.F. S.Y.	AREA			VOLUME
	C	F	F	
15	12.57	12	0	89
75	1000	41	0	43
115	1000	22	0	206
145	1000	94	0	126
				17
				11
				33
				46
				67
				15
				21
				67
				45

MONTGOMERY COUNTY  
 MOT-40-5.98  
 MOT-49-12.45

RAMP "B"

10+58 to 12+00 RAMP "C" 4+00 to 8+00 RAMP "B"



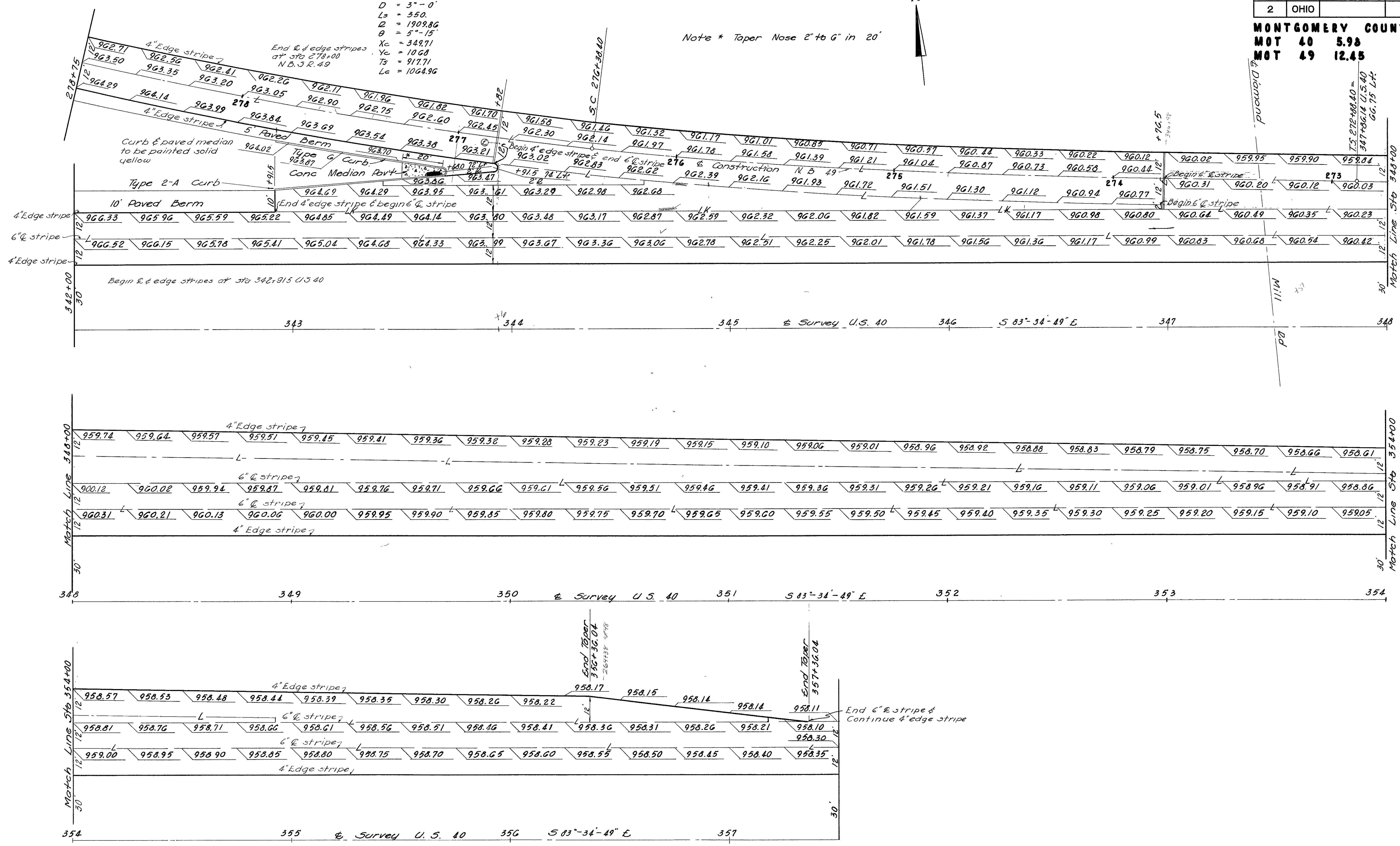
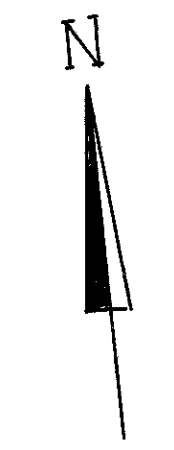
NOTE: Pavement width becomes 12' each side of @ Sta 152+00

N.B. S.R. 49 STA. 152+75 TO 161+98.61  
 S.B. S.R. 49 STA. 139+50 TO 143+50.46

**MONTGOMERY COUNTY**  
**MOT 40 5.98**  
**MOT 49 12.45**

PI = 282+06.11  
 $\Delta = 42^\circ - 26' - 56''$   
 $D = 3'' - 0'$   
 $L_s = 350.$   
 $R = 1909.86$   
 $\theta = 5^\circ - 15'$   
 $X_c = 348.71$   
 $Y_c = 1068$   
 $T_s = 917.71$   
 $L_c = 1064.96$

Note \* Taper Nose 2" to 6" in 20'

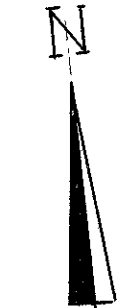


FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

96  
241

MONTGOMERY COUNTY  
MOT 40 5.98  
MOT 49 12.45

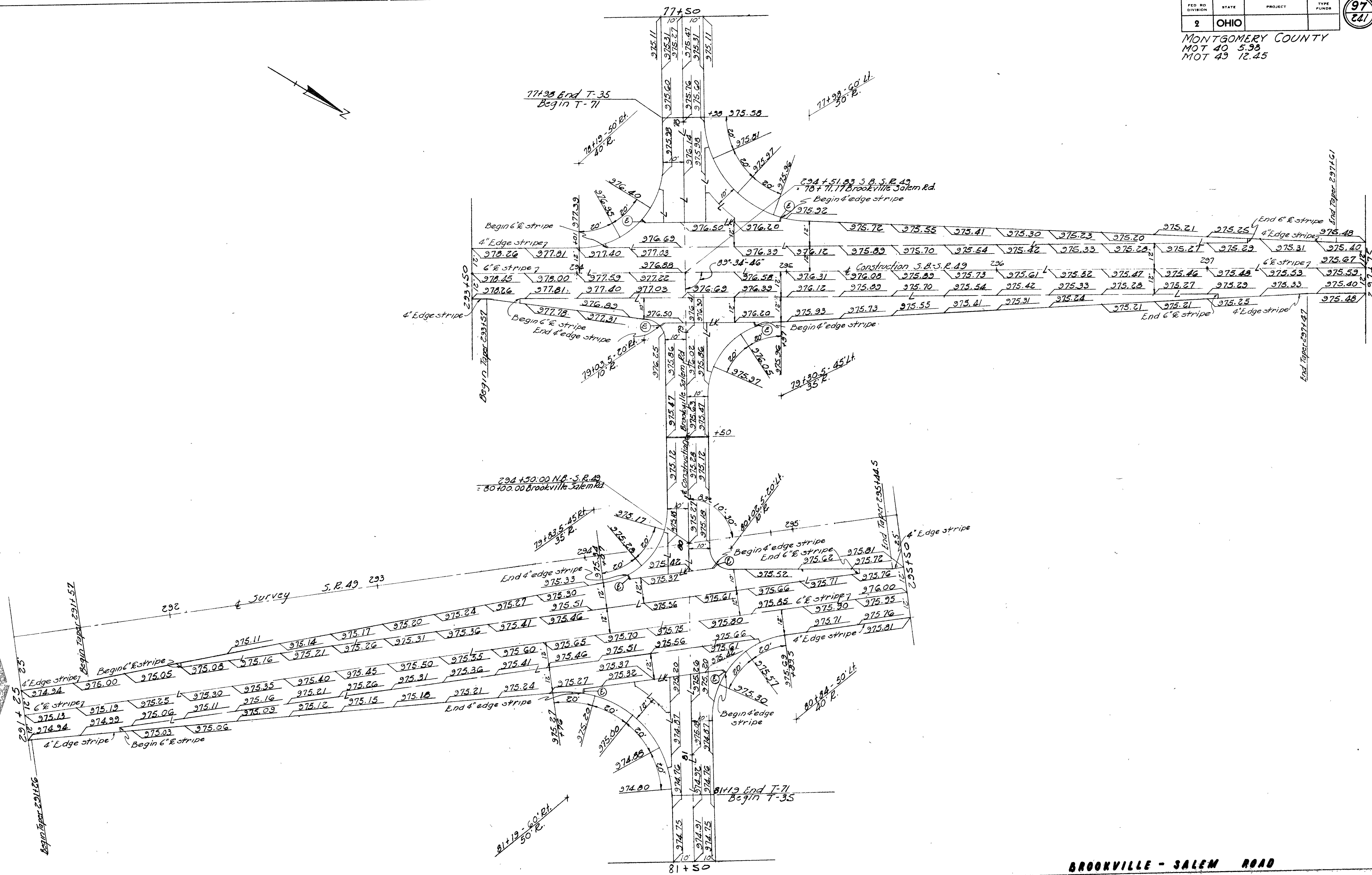
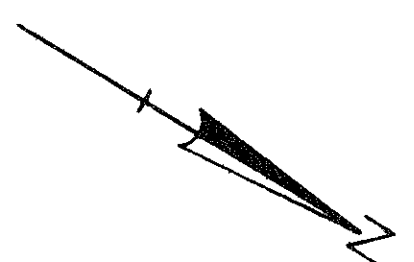
P.I. = 360+92.57  
Δ = 3°-31'-30"  
D = 0°-30"  
Q = 14,452.16  
T = 352.01  
L = 705.00



FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

97  
241

MONTGOMERY COUNTY  
MOT 40 5.98  
MOT 49 12.45



BROOKVILLE - SALEM ROAD  
INTERSECTION DETAILS STA. 294+50 S.R. 49

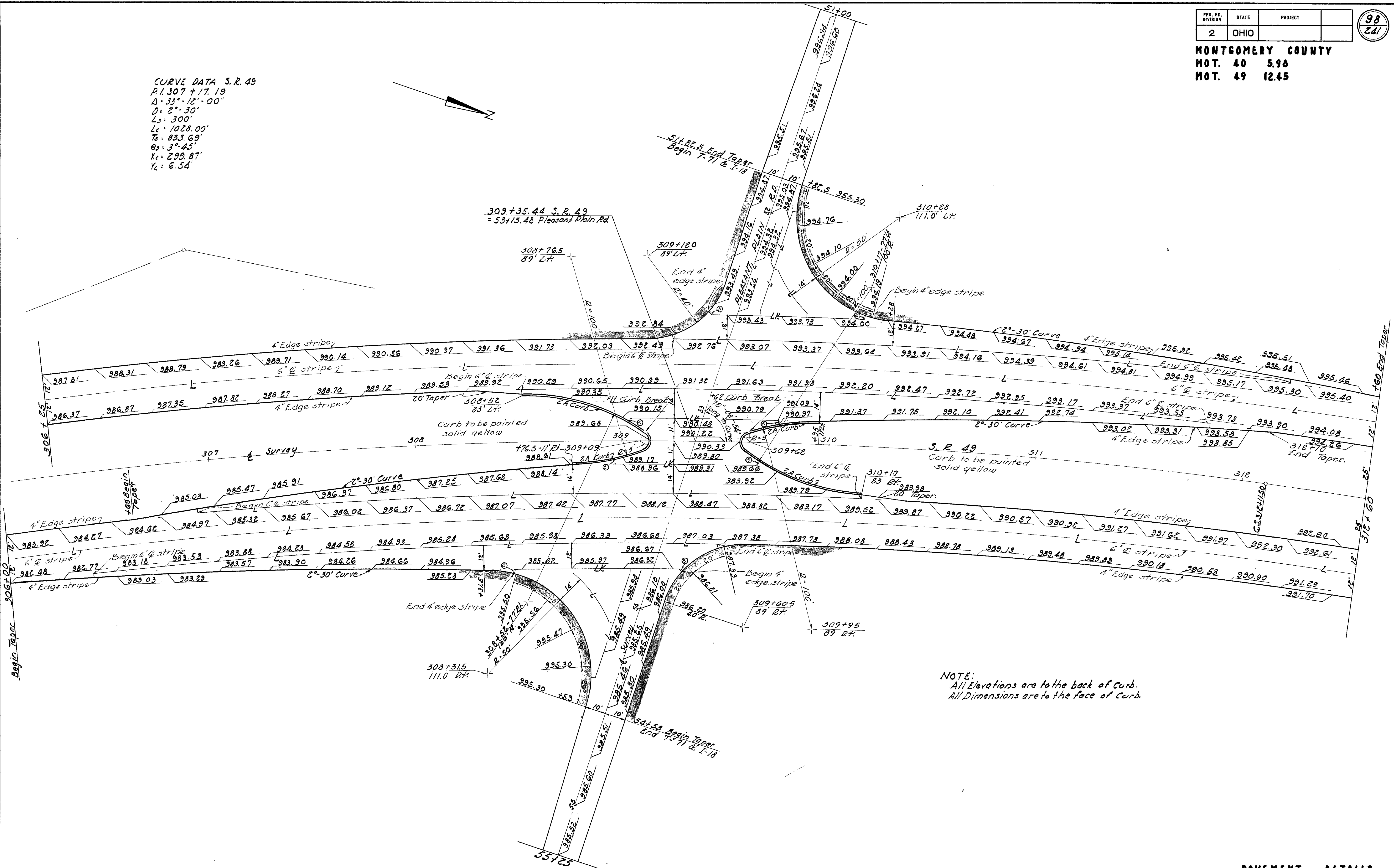
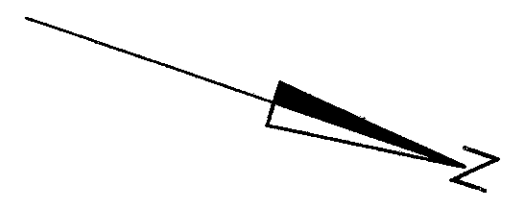


FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

98  
241

**MONTGOMERY COUNTY**  
**MOT. 40 5.98**  
**MOT. 49 12.45**

**CURVE DATA S.R. 49**  
 P.I. 307 + 17.19  
 $\Delta = 33^{\circ} - 12' - 00''$   
 $D = 2^{\circ} - 30'$   
 $L_s = 300'$   
 $L_c = 1028.00'$   
 $T_s = 833.69'$   
 $\theta_s = 3^{\circ} - 45'$   
 $X_c = 299.87'$   
 $Y_c = 6.54'$



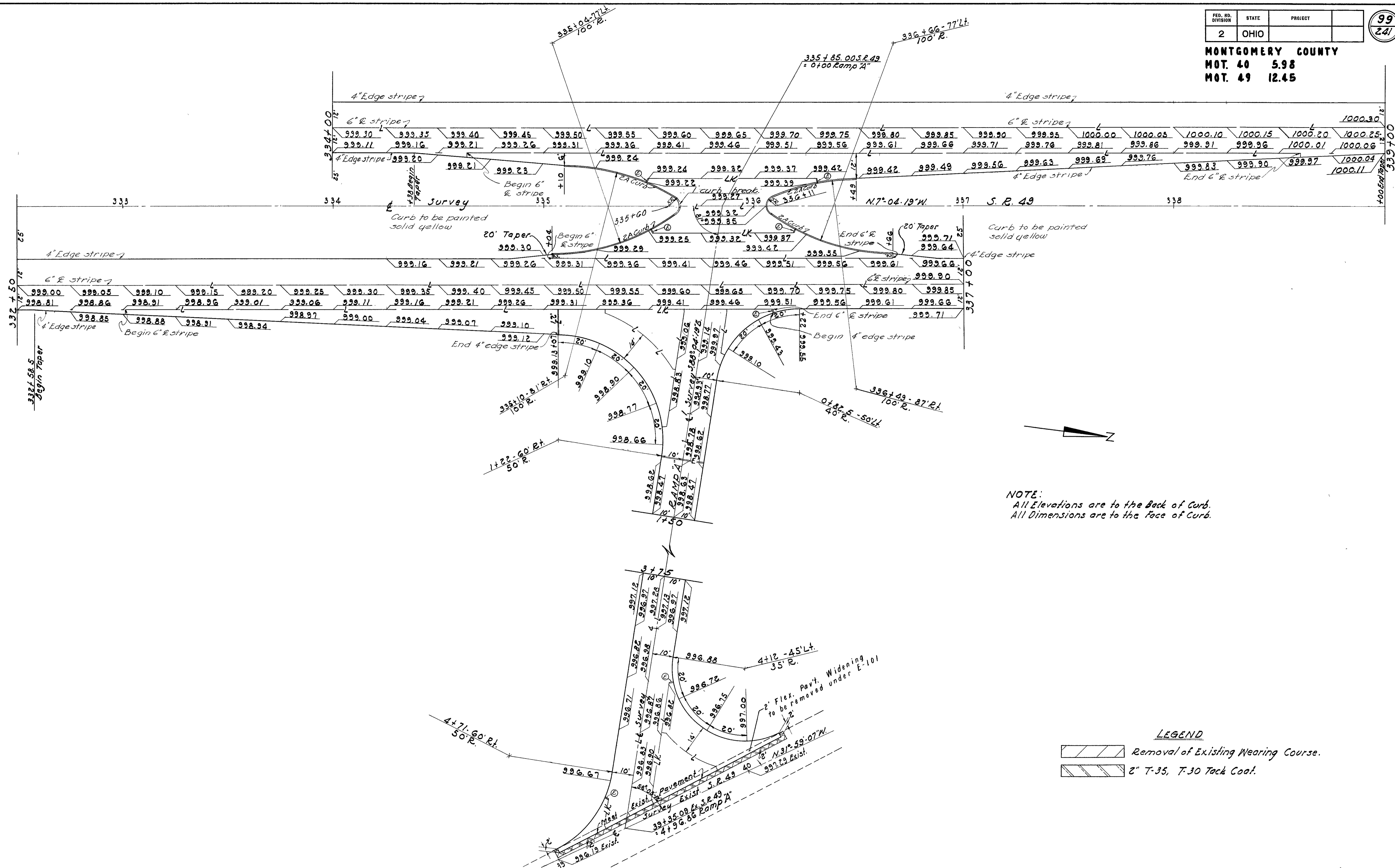
**PAVEMENT DETAILS**

**PLEASANT PLAIN ROAD S.R. 49 INTERSECTION**

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

99  
241

MONTGOMERY COUNTY  
MOT. 40 5.98  
MOT. 49 12.45



NOTE:  
All Elevations are to the Back of Curb.  
All Dimensions are to the Face of Curb.

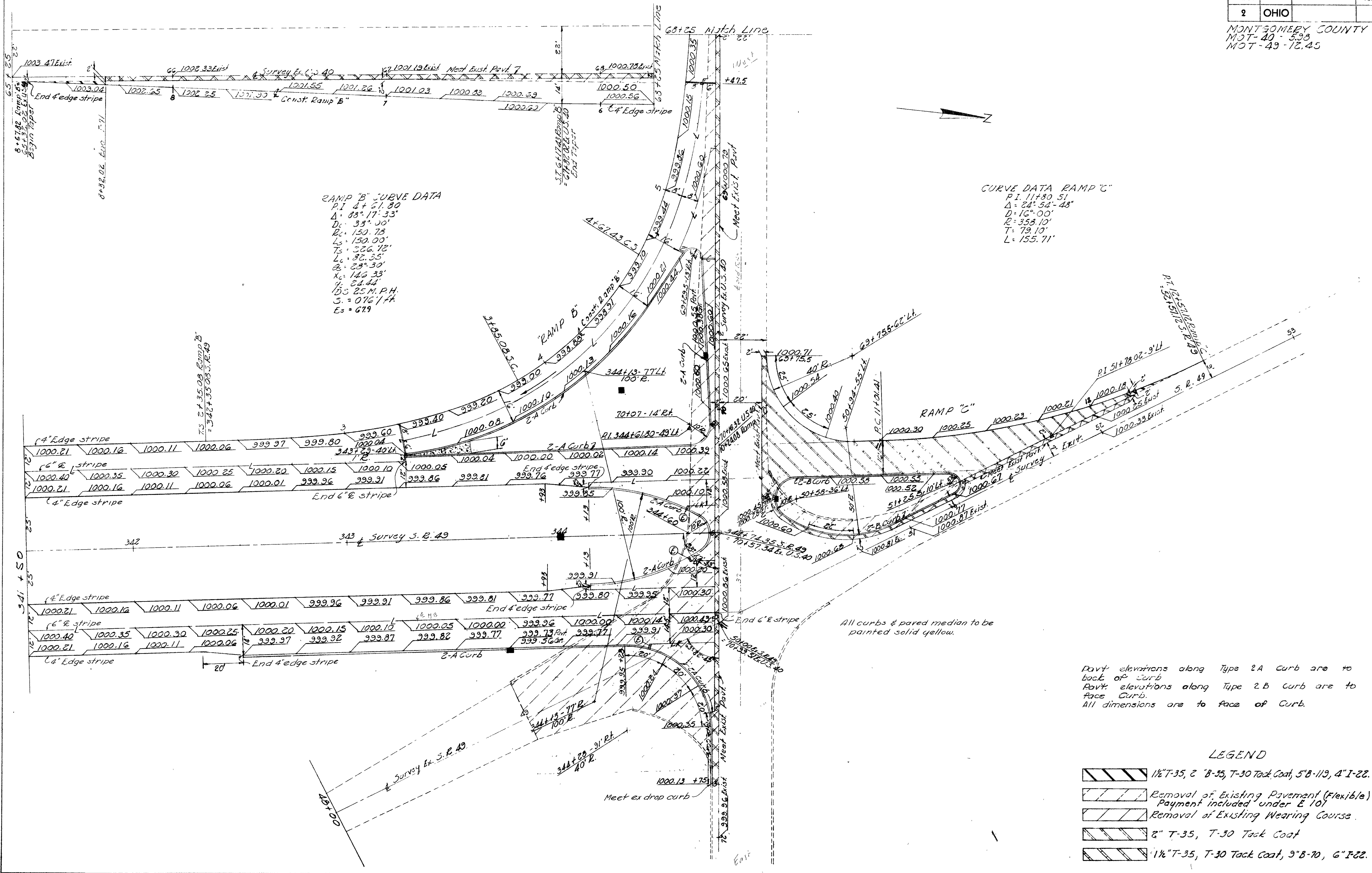
**LEGEND**  
 Removal of Existing Wearing Course.  
 2" T-35, T-30 Tack Coat.

PAVEMENT DETAILS RAMP A

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

100  
241

MONTGOMERY COUNTY  
MOT-40-538  
MOT-49-12.45



RAMP "B" CURVE DATA  
 P.I. 4+51.80  
 $\Delta = 88^\circ 17' 33"$   
 $D = 35^\circ 30'$   
 $R = 150.73$   
 $L = 150.00'$   
 $T = 326.72'$   
 $L_1 = 82.35'$   
 $B = 25^\circ 30'$   
 $X = 146.33'$   
 $Y = 81.44'$   
 1/5 S.M.P.H.  
 $S = 0.76$  / ft.  
 $E = 679$

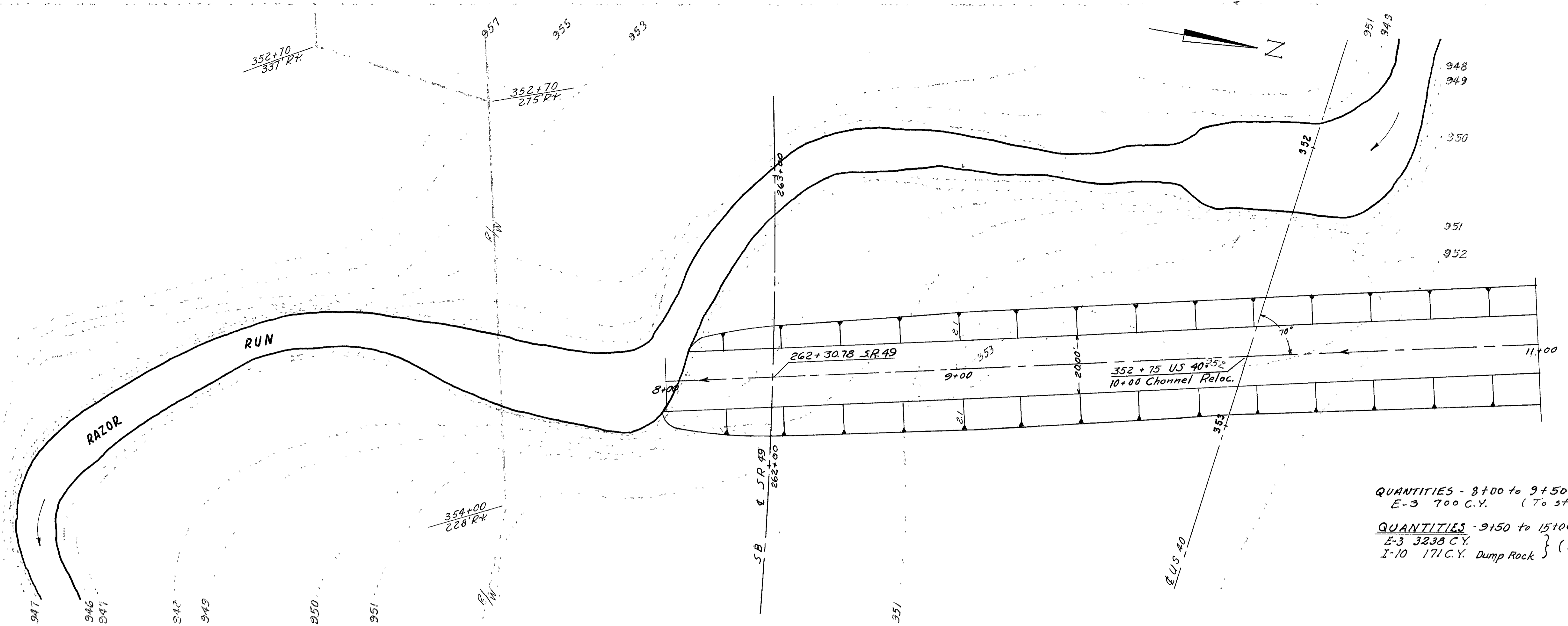
CURVE DATA RAMP "C"  
 P.I. 11+80.51  
 $\Delta = 24^\circ 54' 48"$   
 $D = 16^\circ 00'$   
 $R = 358.10'$   
 $T = 79.10'$   
 $L = 135.71'$

All curbs & paved median to be painted solid yellow.

Point elevations along Type 2A Curb are to back of curb.  
 Point elevations along Type 2B Curb are to face of curb.  
 All dimensions are to face of curb.

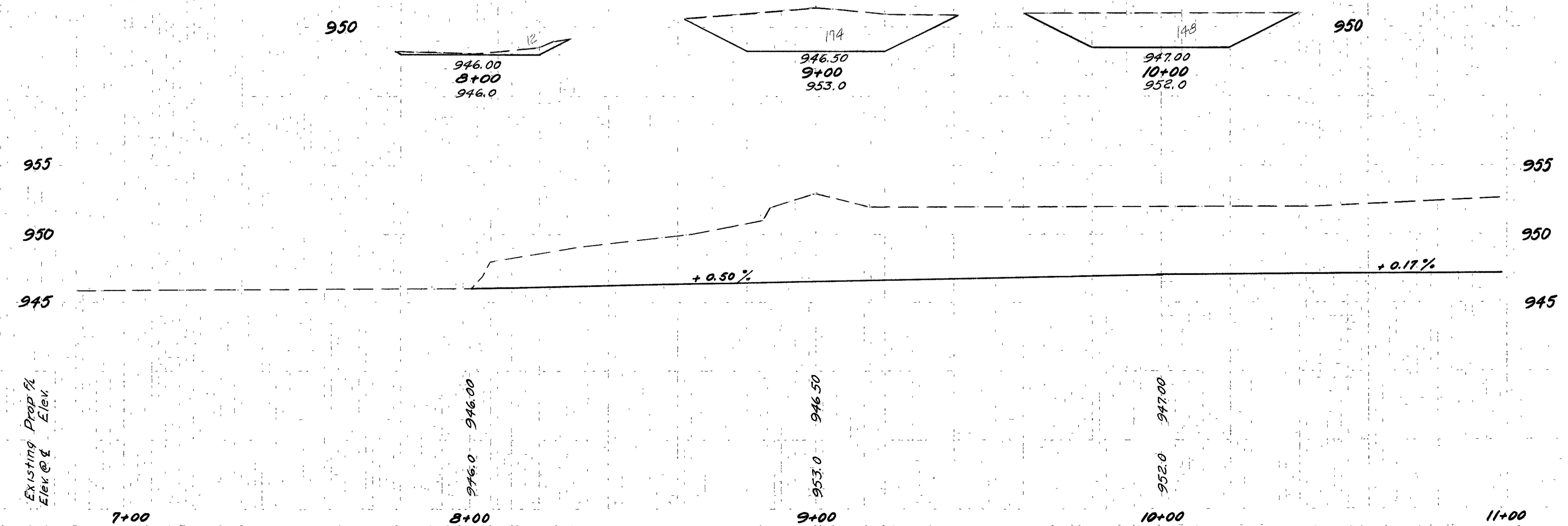
LEGEND

- 1/2" T-35, 2" B-35, T-30 Tack Coat, 5" B-119, 4" I-22.
- Removal of Existing Pavement (Flexible) Payment included under E 101
- Removal of Existing Wearing Course.
- 2" T-35, T-30 Tack Coat
- 1/2" T-35, T-30 Tack Coat, 9" B-70, 6" I-22.



QUANTITIES - 8+00 to 9+50  
E-3 700 C.Y. (To structure quantities, Sheet 198)

QUANTITIES - 9+50 to 15+00  
E-3 3238 C.Y.  
I-10 171 C.Y. Dump Rock } (To structure quantities, Sheet 168)

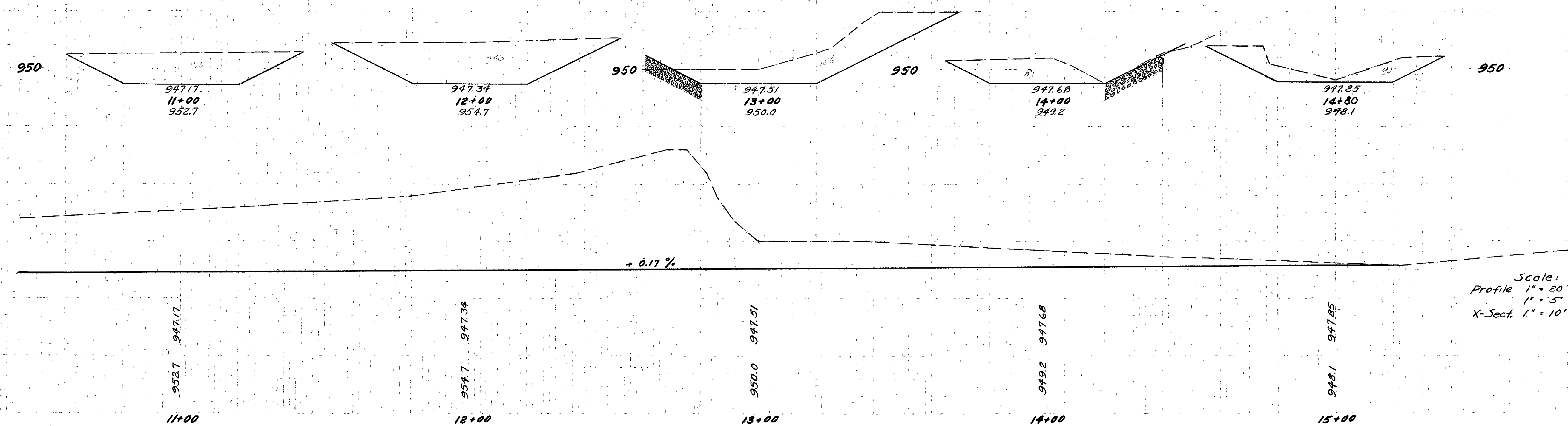
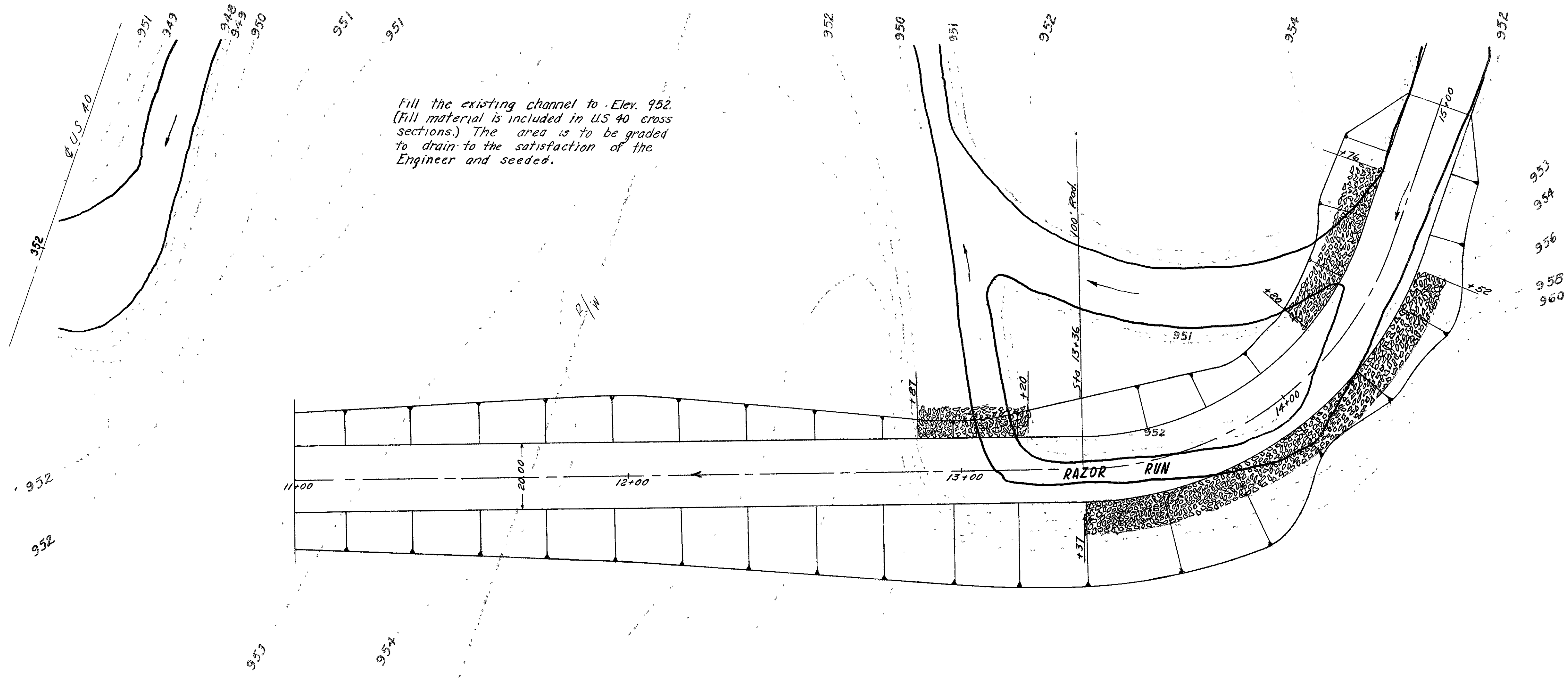


Scale:  
Profile 1" = 20' Horiz.  
1" = 5' Vert.  
X- Sect 1" = 10'

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

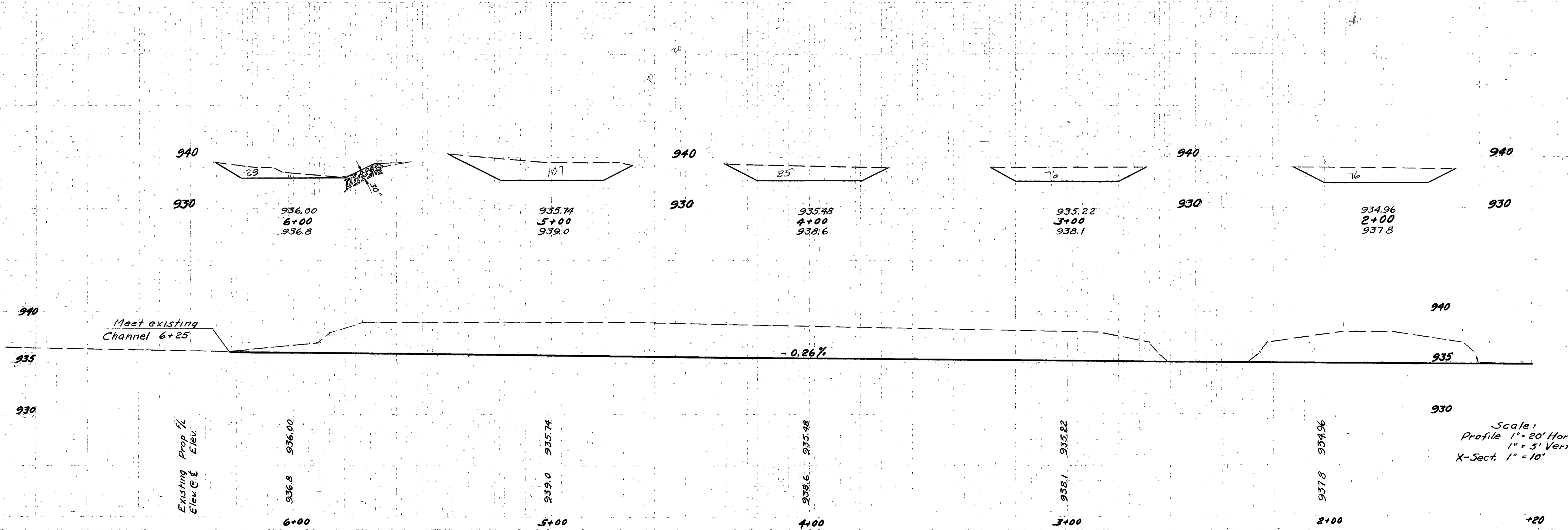
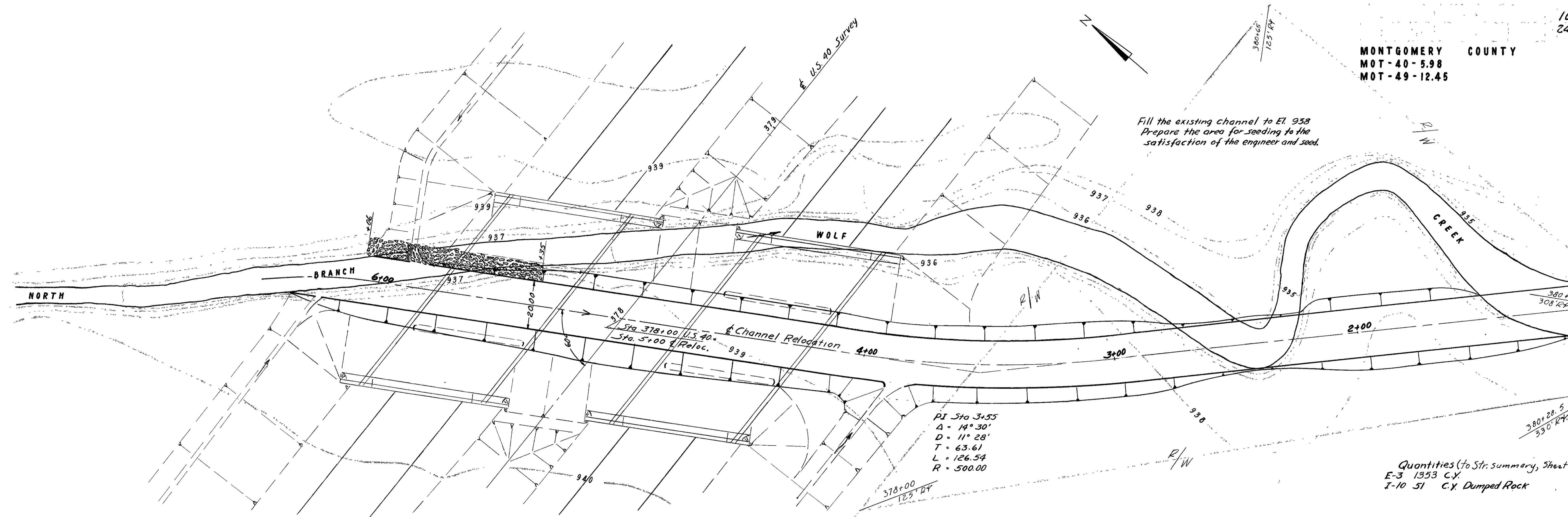


Fill the existing channel to Elev. 952.  
(Fill material is included in US 40 cross  
sections.) The area is to be graded  
to drain to the satisfaction of the  
Engineer and seeded.



Existing Prop. Fl.  
Elev. @ E.

Scale:  
Profile 1" = 20' Horiz.  
1" = 5' Vert.  
X-Section 1" = 10'

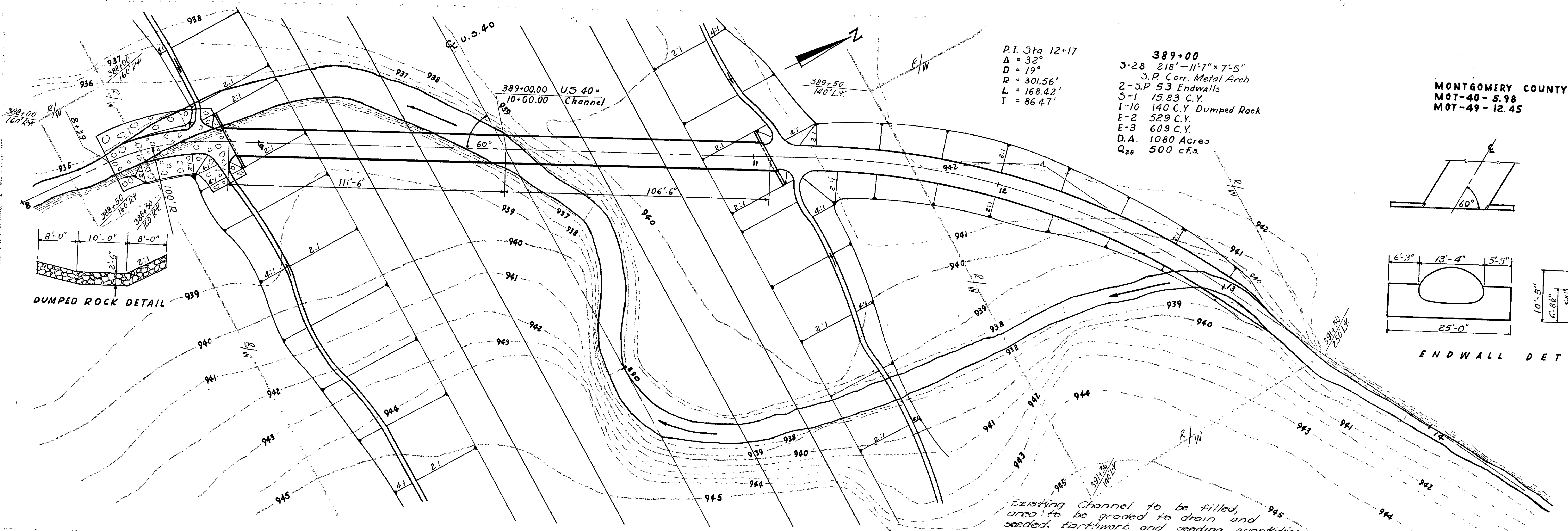
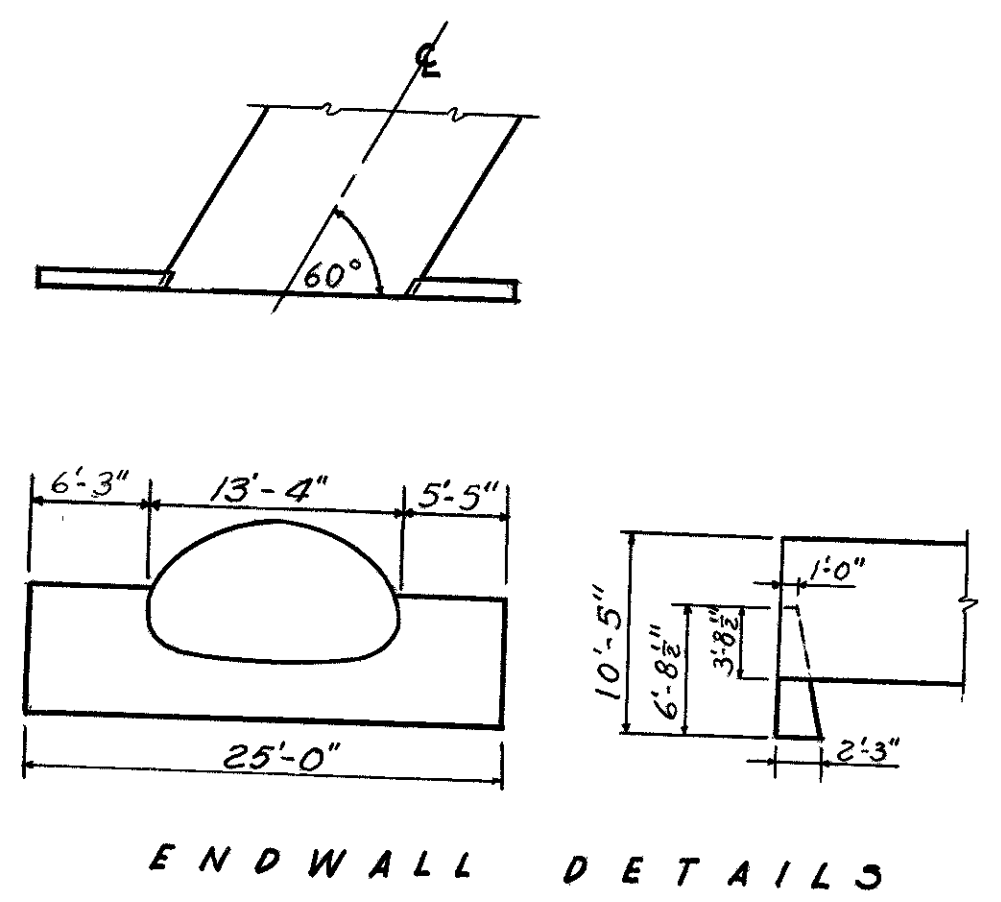


NORTH BRANCH WOLF CREEK RELOCATION 378+00 U.S. 40

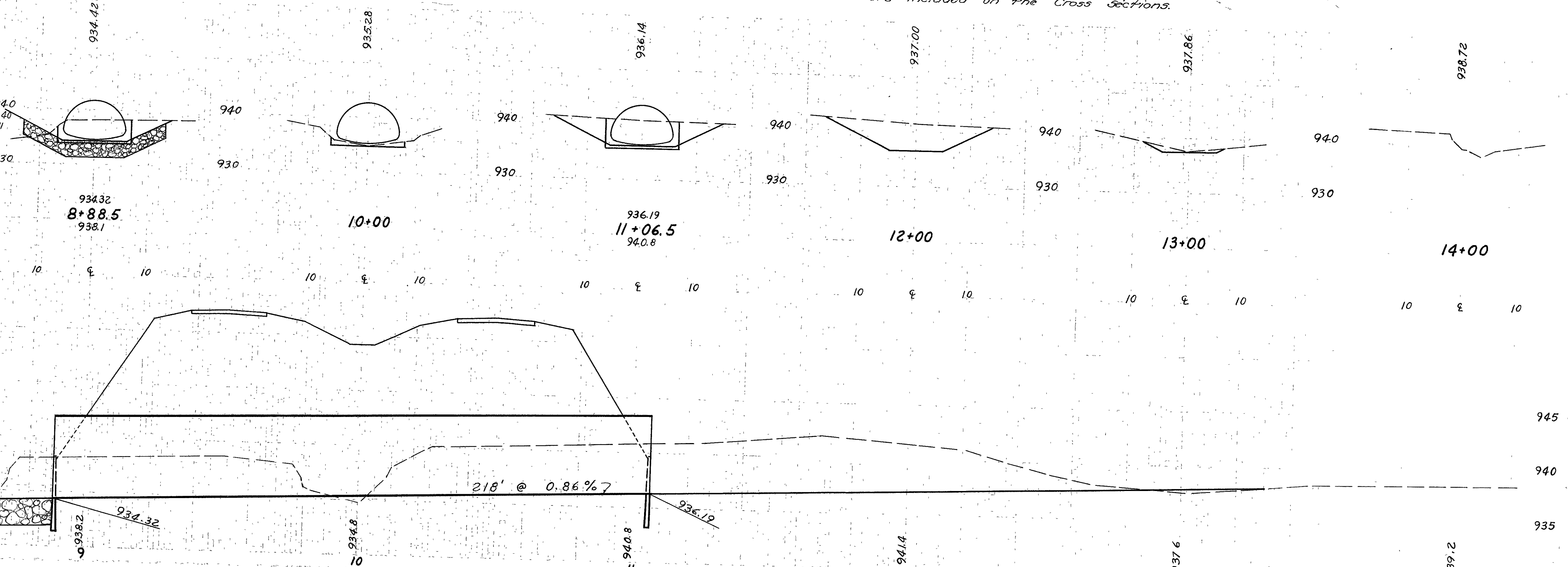
MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

P.I. Sta 12+17  
Δ = 32°  
D = 19°  
R = 301.56'  
L = 168.42'  
T = 86.47'

389+00  
3-28 218'-11" x 7'-5"  
S.P. Corr. Metal Arch  
2-S.P. 53 Endwalls  
5-1 15.83 C.Y.  
1-10 140 C.Y. Dumped Rock  
E-2 529 C.Y.  
E-3 609 C.Y.  
D.A. 1080 Acres  
Q<sub>25</sub> 500 c.f.s.

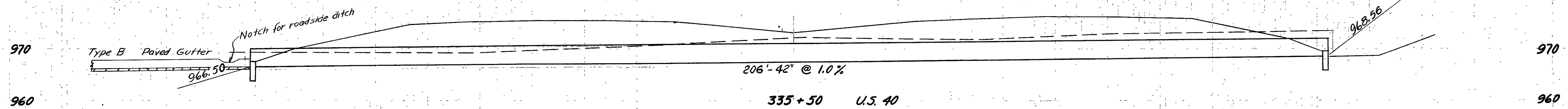
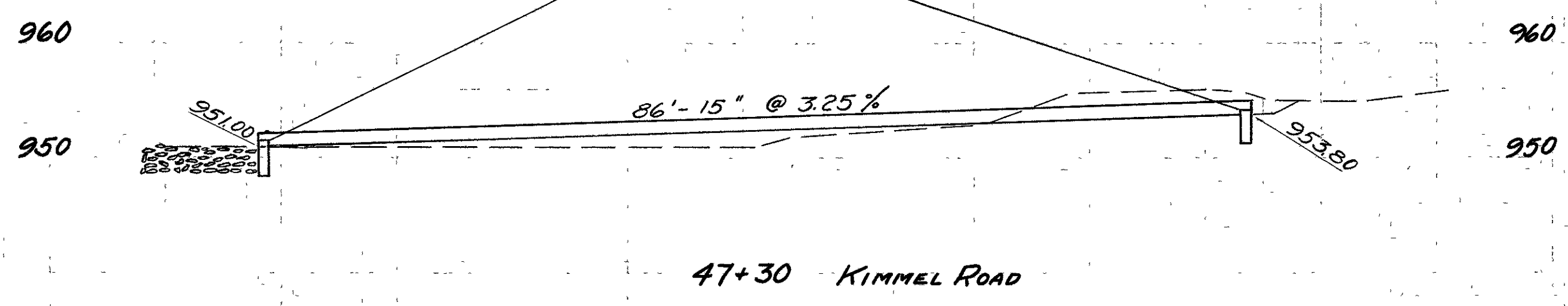
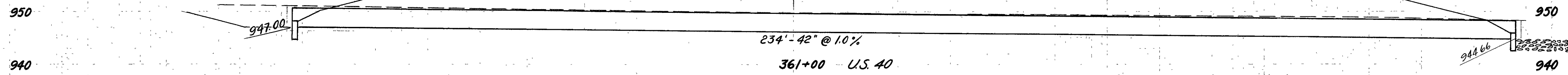
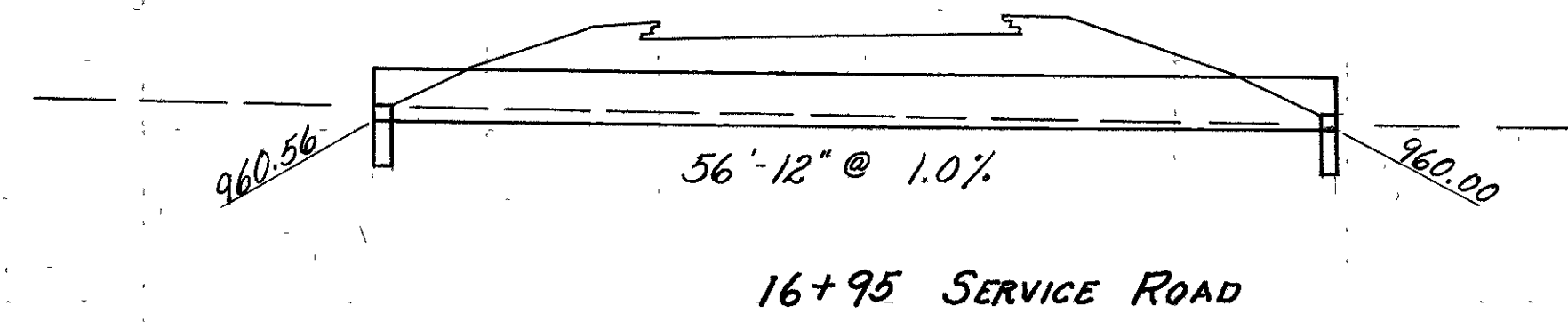
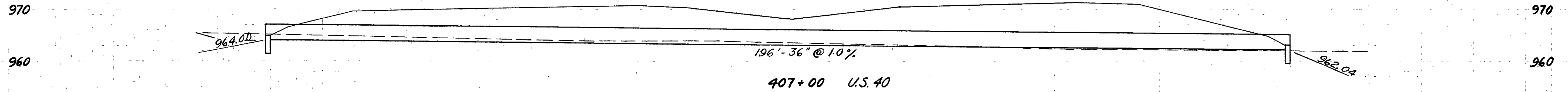


Station	E-2		E-3	
	S.F.	C.Y.	S.F.	C.Y.
8+40			0	58
8+88.5	58		65	
11+06.5	72	525	102	
Minus for Ex. Channel @ 10+00		(53)	350	
12+00			100	
13+00			198	
13+25			7	3
13+25			0	
Add for Endwalls		57		
Total		529		609



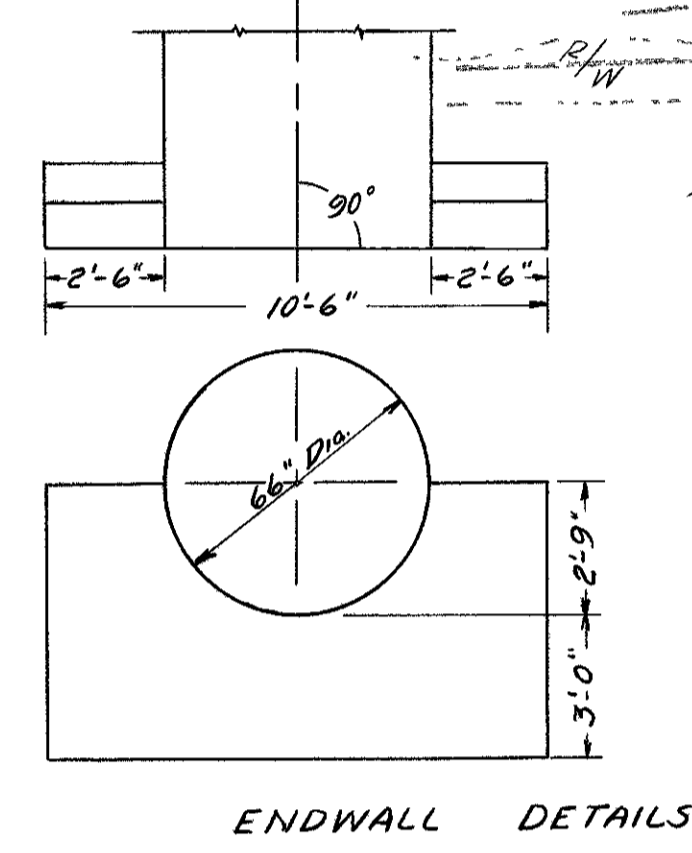
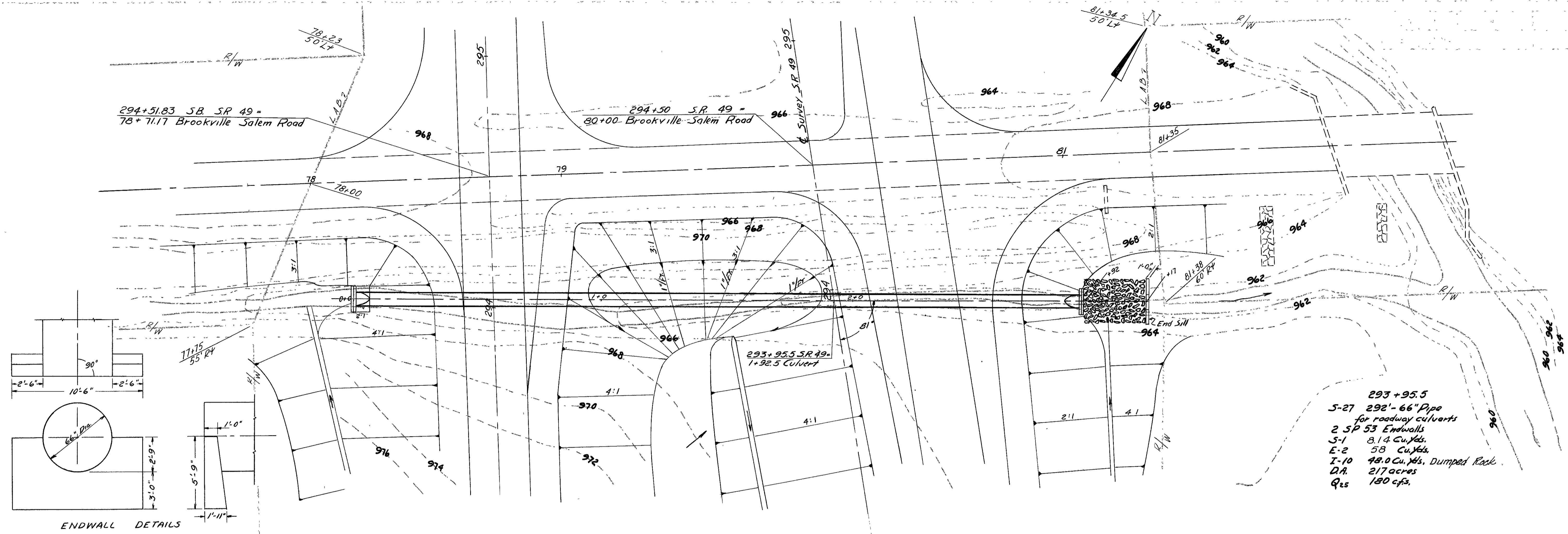
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

MONTGOMERY COUNTY  
MOT - 40 - 5.98  
MOT - 49 - 12.45

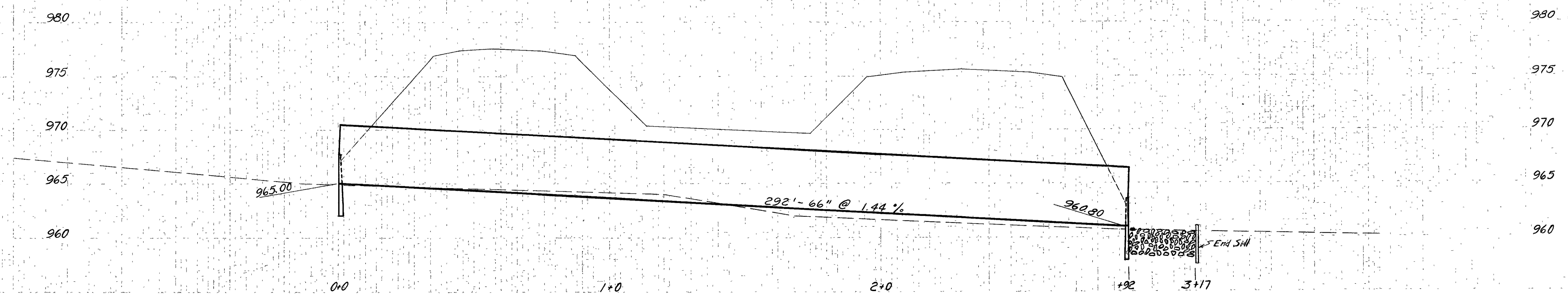
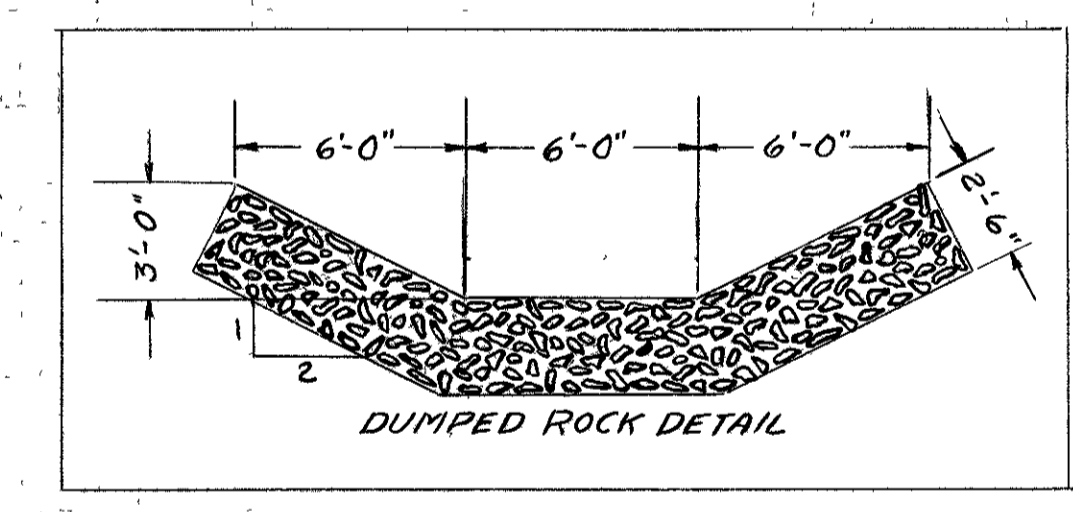
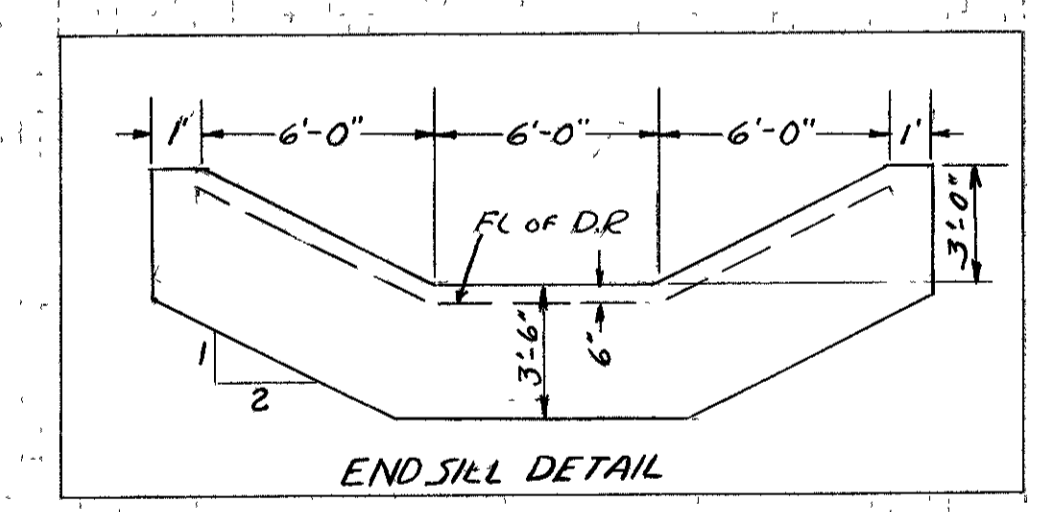


150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140



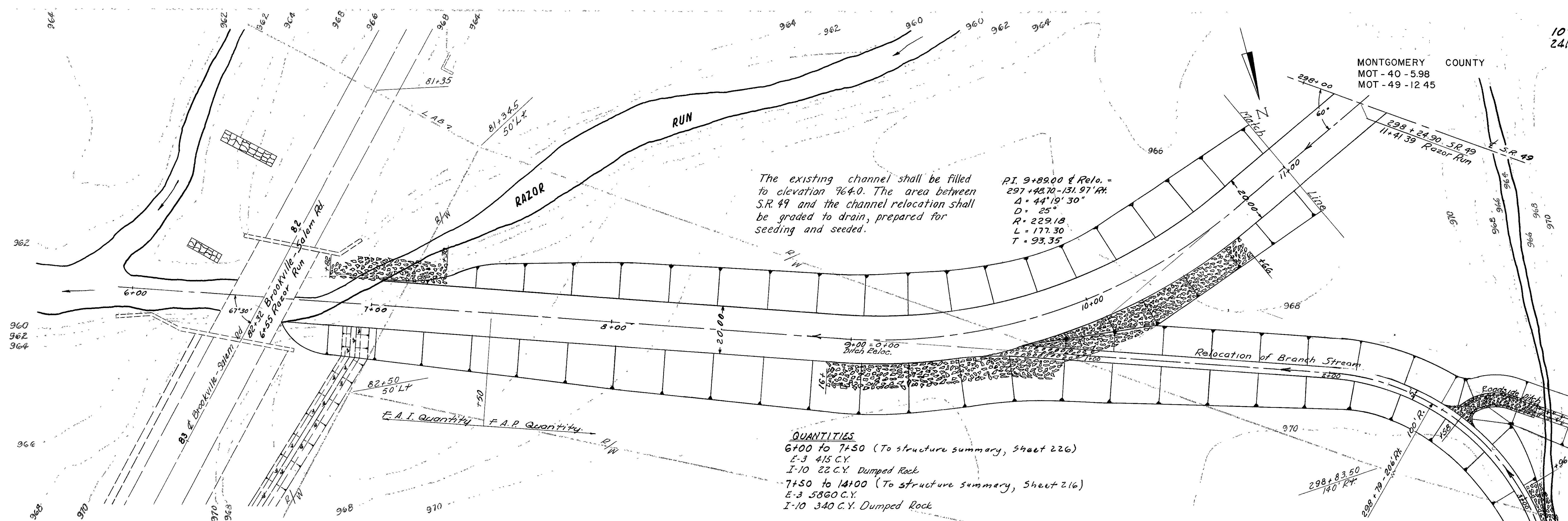


- 293+95.5
- S-27 292'-66" Pipe for roadway culverts
- 2 SP 53 Endwalls
- S-1 8.14 Cu. Yds.
- E-2 58 Cu. Yds.
- I-10 48.0 Cu. Yds. Dumped Rock
- D.A. 2.17 acres
- Q.15 180 cfs.



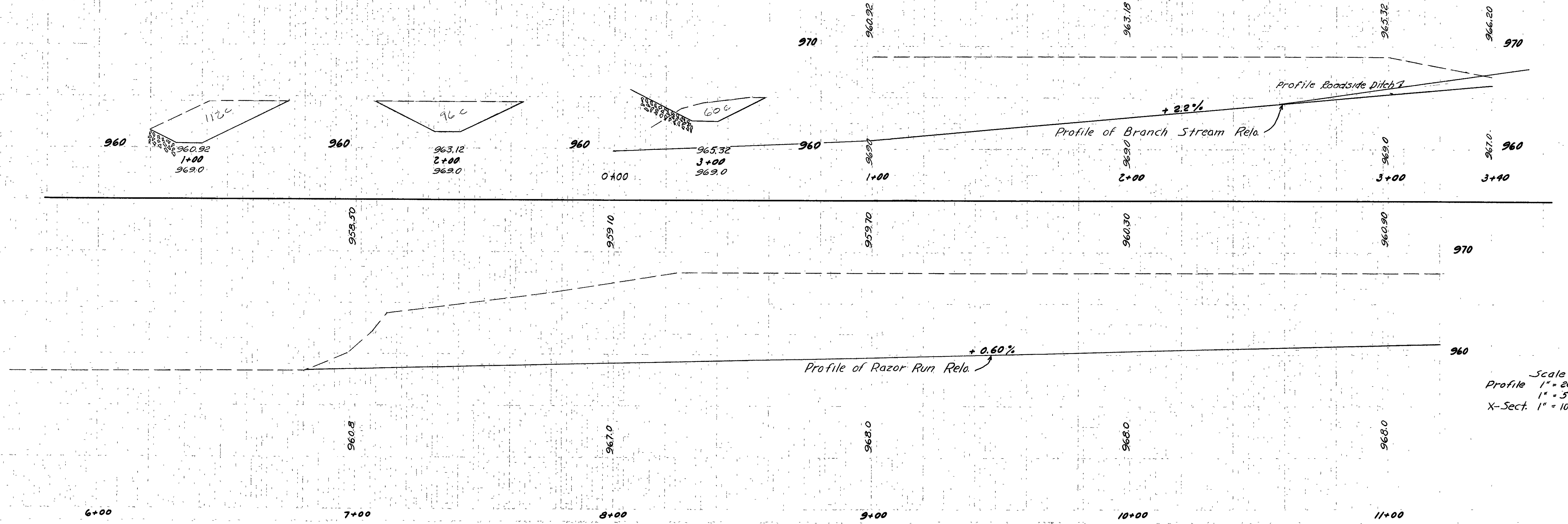
CULVERT DETAIL Sta 293+95.5 SR

MONTGOMERY COUNTY  
MOT - 40 - 5.98  
MOT - 49 - 12.45

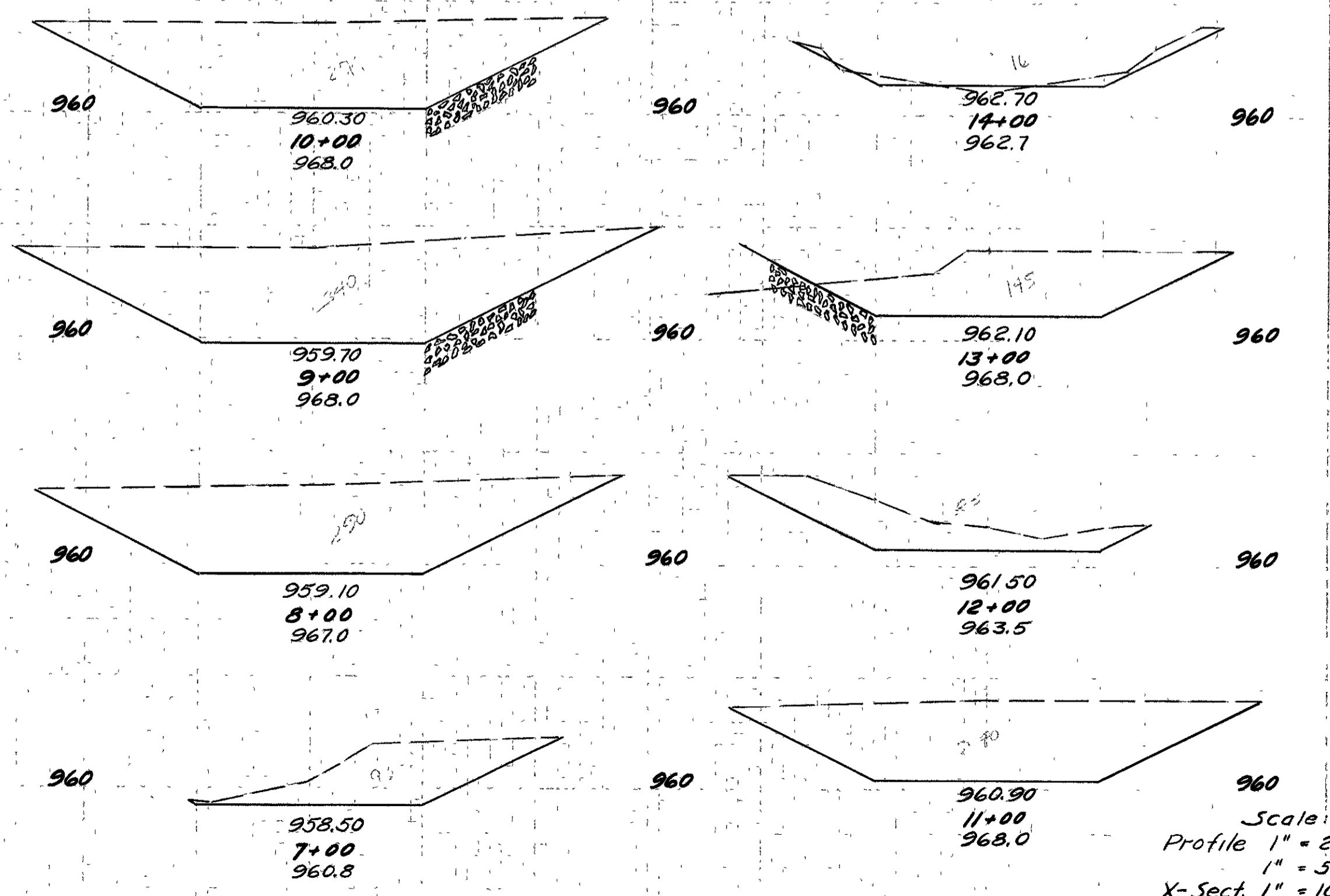
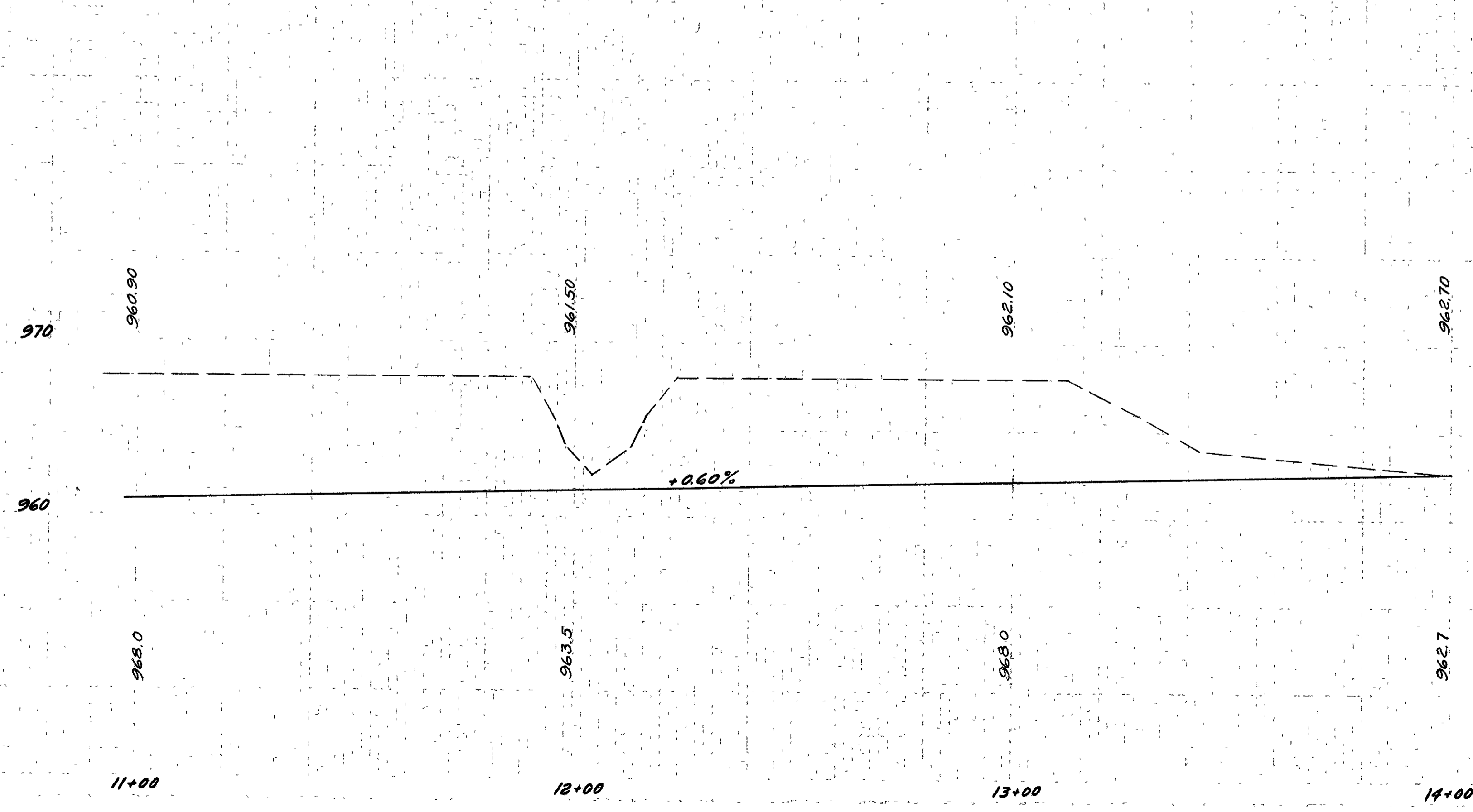
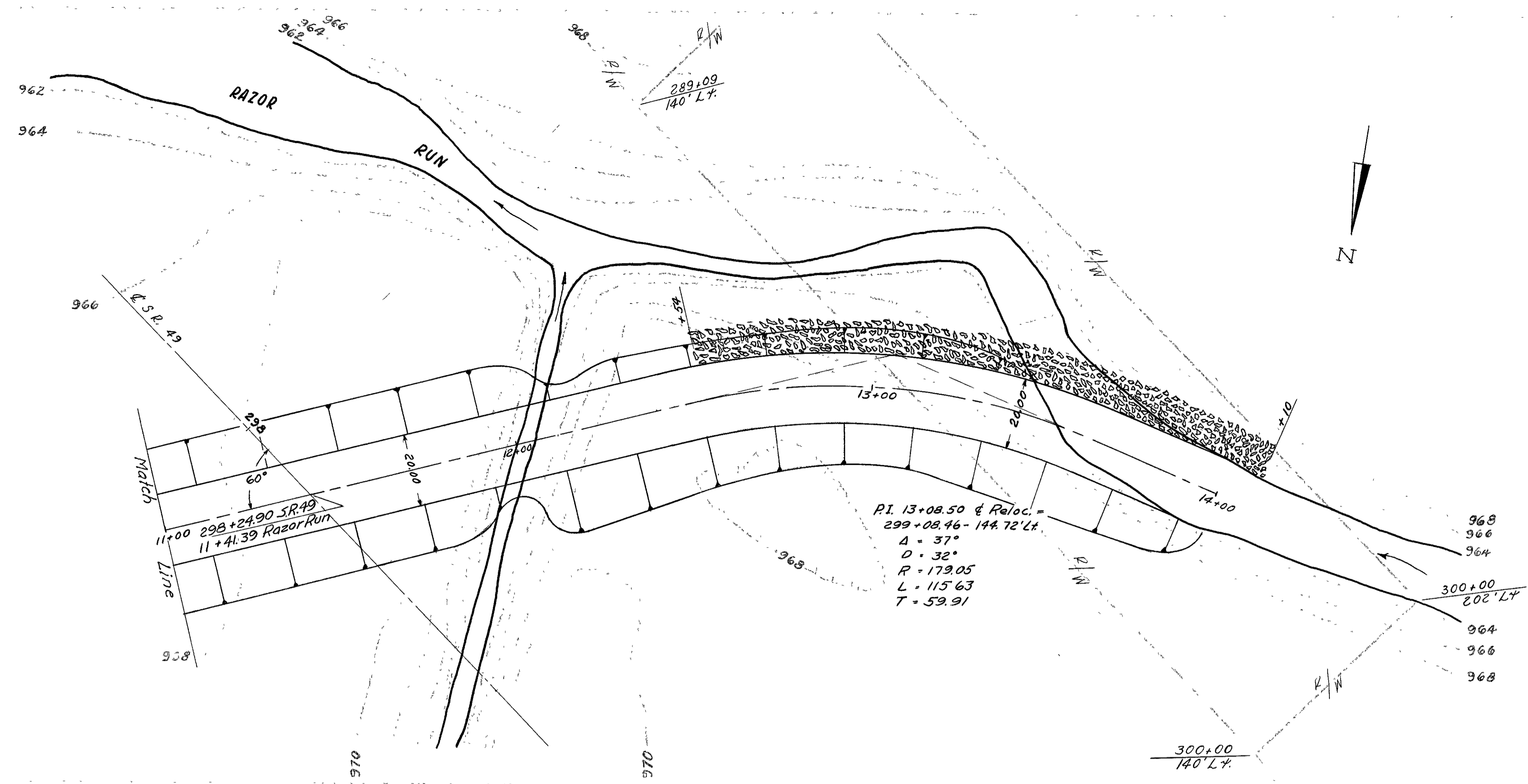


The existing channel shall be filled to elevation 964.0. The area between S.R. 49 and the channel relocation shall be graded to drain, prepared for seeding and seeded.

**QUANTITIES**  
 6+00 to 7+50 (To structure summary, Sheet 226)  
 E-3 415 C.Y.  
 I-10 22 C.Y. Dumped Rock  
 7+50 to 14+00 (To structure summary, Sheet 216)  
 E-3 5860 C.Y.  
 I-10 340 C.Y. Dumped Rock

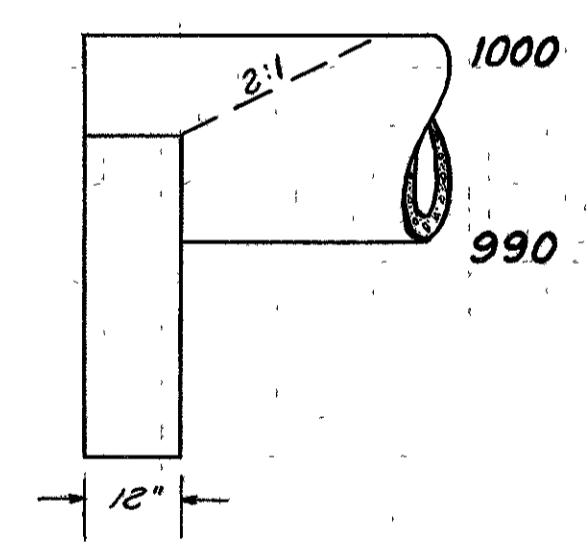
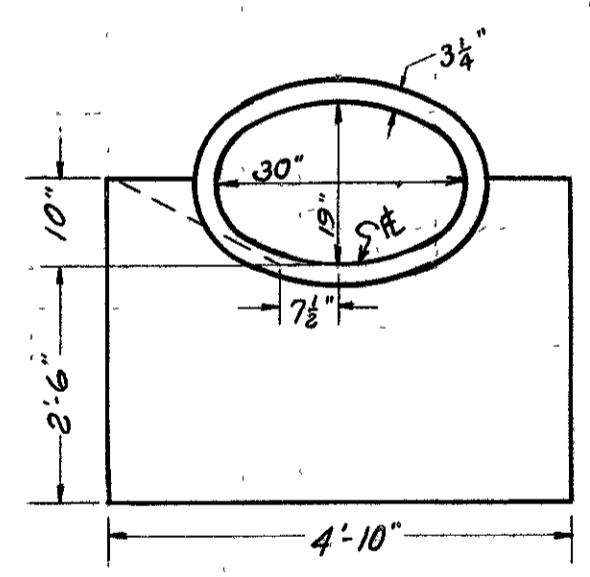
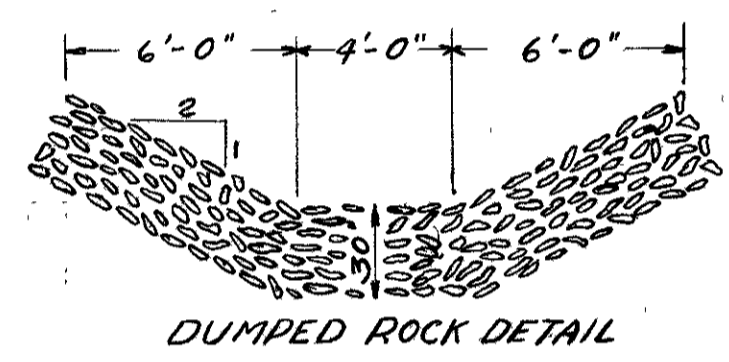
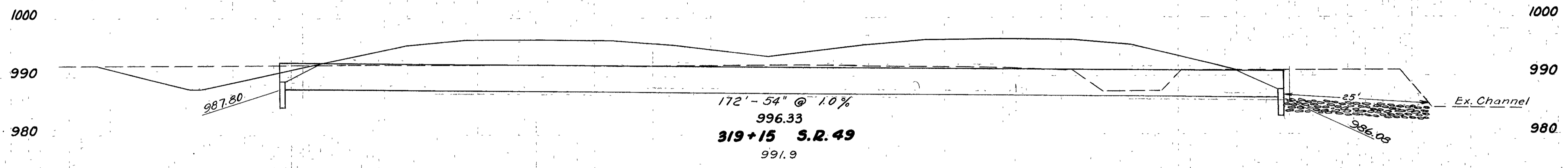
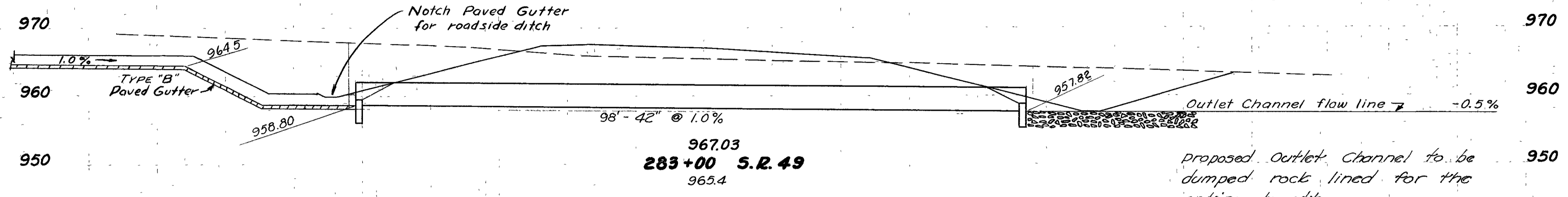
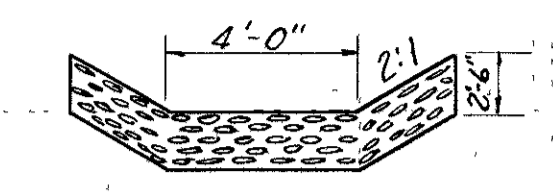


Scale:  
 Profile 1" = 20' Horiz.  
 1" = 5' Vert.  
 X-Sept. 1" = 10'

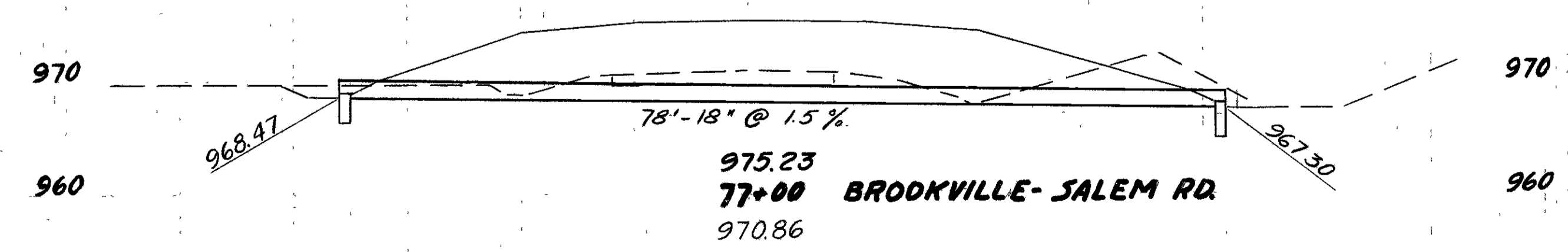
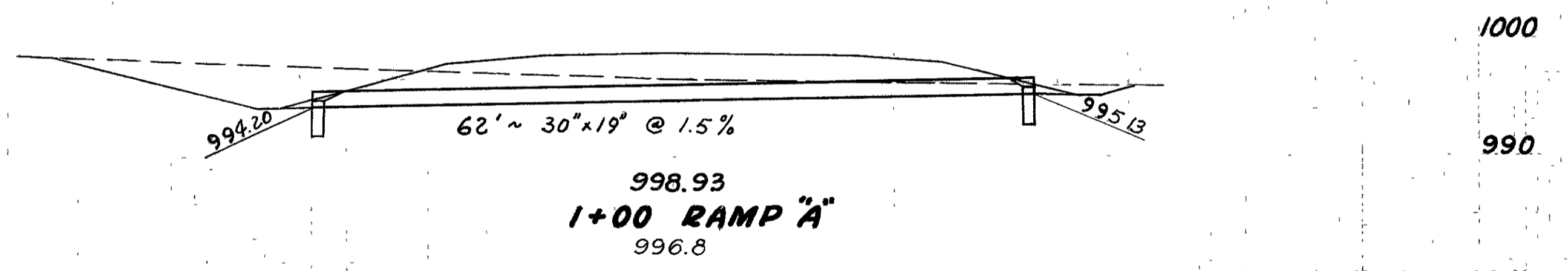


Scale:  
Profile 1" = 20' Horiz.  
1" = 5' Vert.  
X- Sect. 1" = 10'

MONTGOMERY COUNTY  
MOT - 40 - 5.98  
MOT - 49 - 12.45

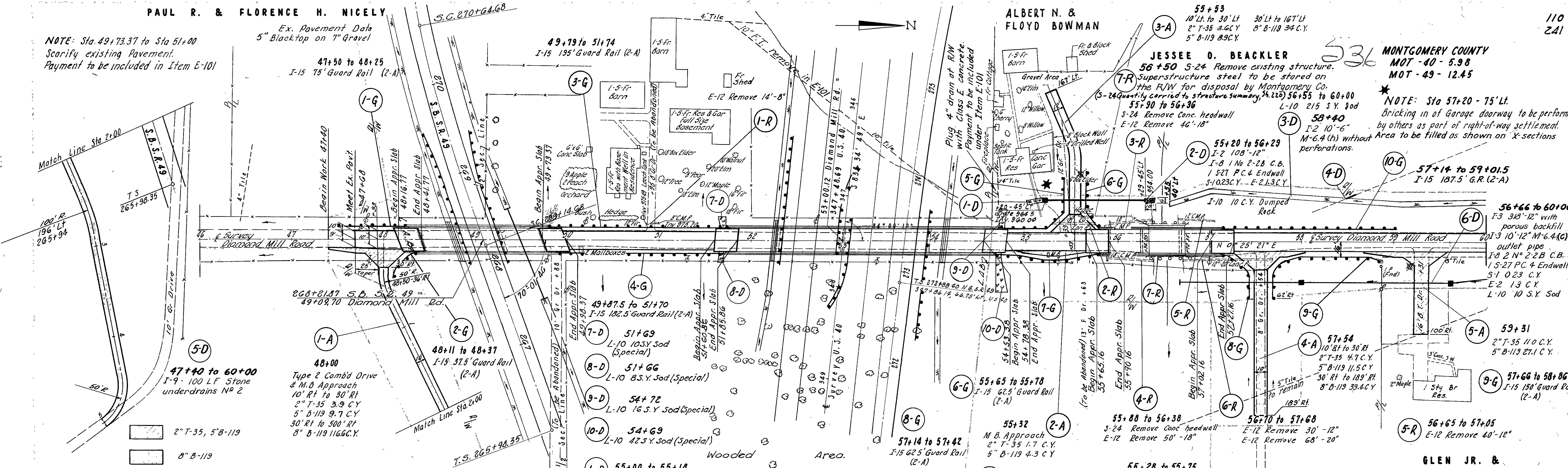


ENDWALL DETAILS



NOTE: Sta. 49+73.37 to Sta 51+00  
Scarify existing Pavement.  
Payment to be included in Item E-101

Ex. Pavement Data  
5" Blacktop on 1" Gravel



2" T-35, 5" B-119  
8" B-119

NOTE: See following sheet for centerline references.

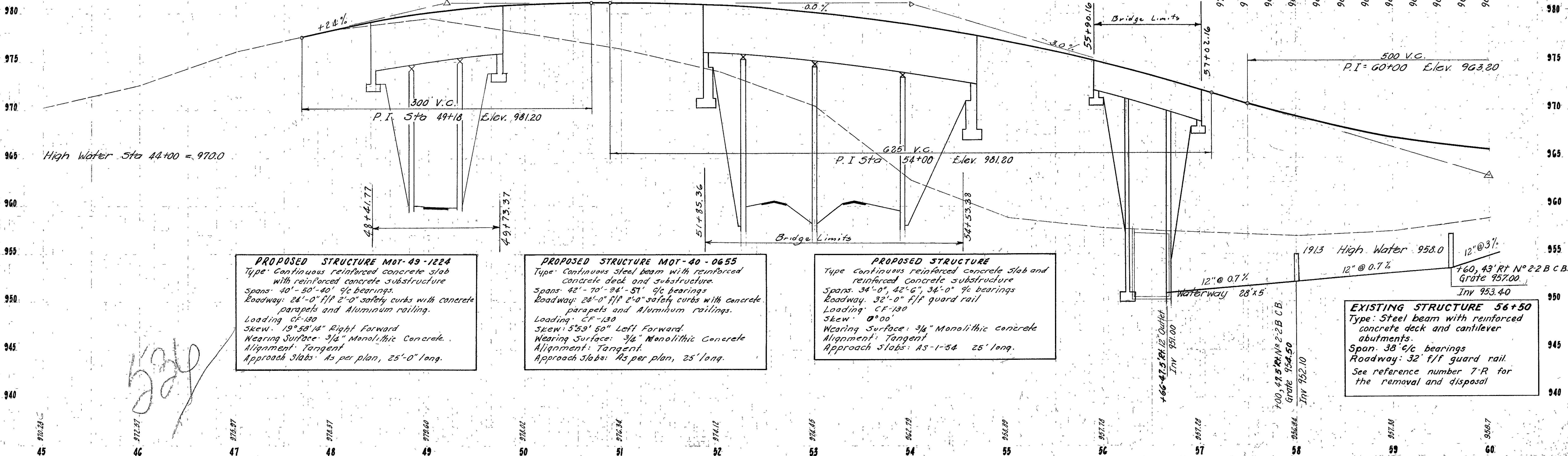
RUSSELL E. ZIZERT

B.M. #169 Mine spike in P 278' Rt. Sta. 348+50 Elev. 978.62

FLOYD KILMER

JUNIOR C. & EDNA MAE WEAVER

GLEN JR. & PAULINE VALENTINE



**PROPOSED STRUCTURE MOT-49-1224**  
Type: Continuous reinforced concrete slab with reinforced concrete substructure  
Spans: 40'-0" 40'-0" 40'-0" 9% bearings  
Roadway: 24'-0" f/f 2'-0" safety curbs with concrete parapets and Aluminum railing.  
Loading: CF-130  
Skew: 19° 58' 14" Right Forward  
Wearing Surface: 3/4" Monolithic Concrete  
Alignment: Tangent  
Approach Slabs: As per plan, 25'-0" long.

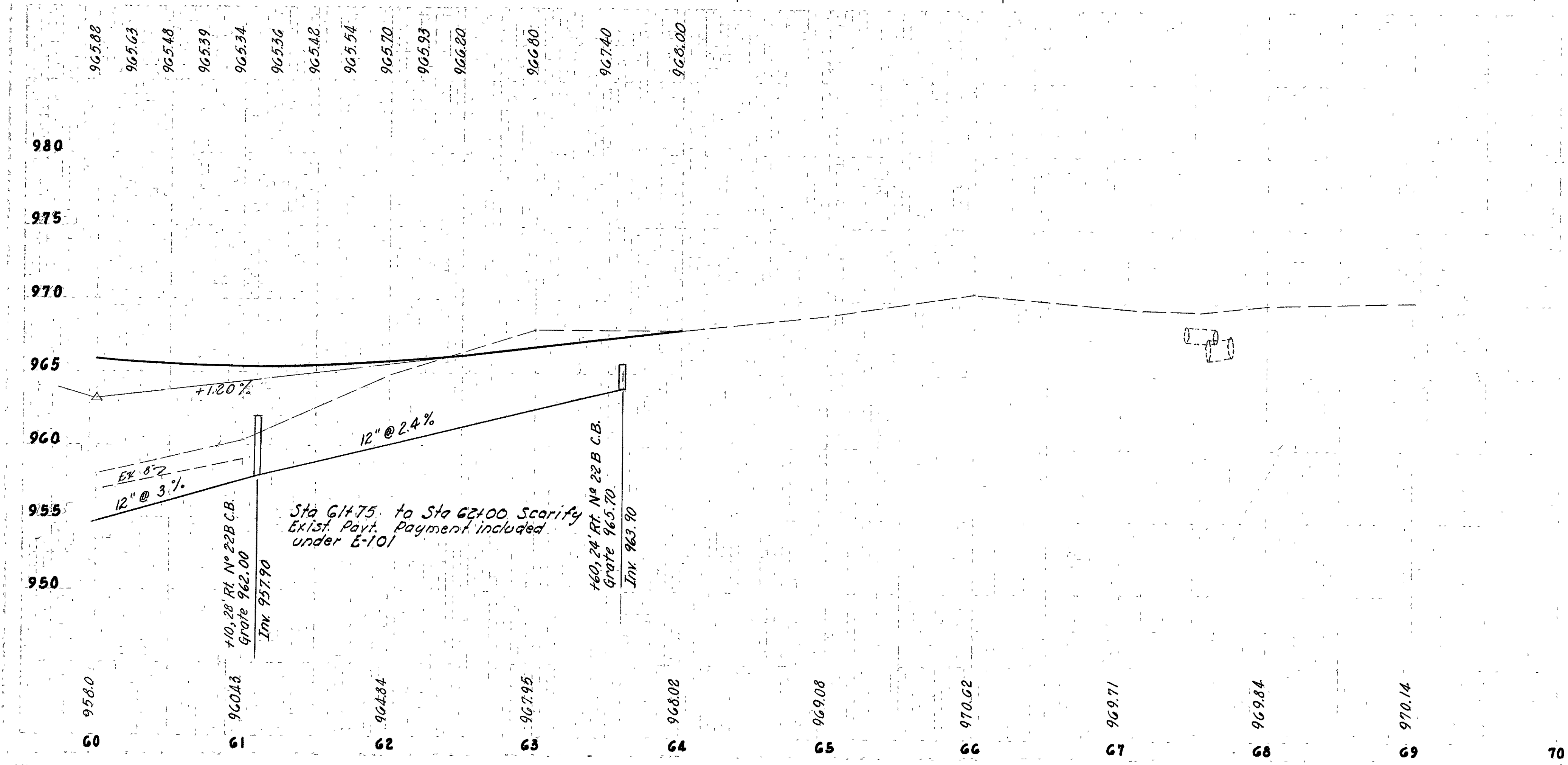
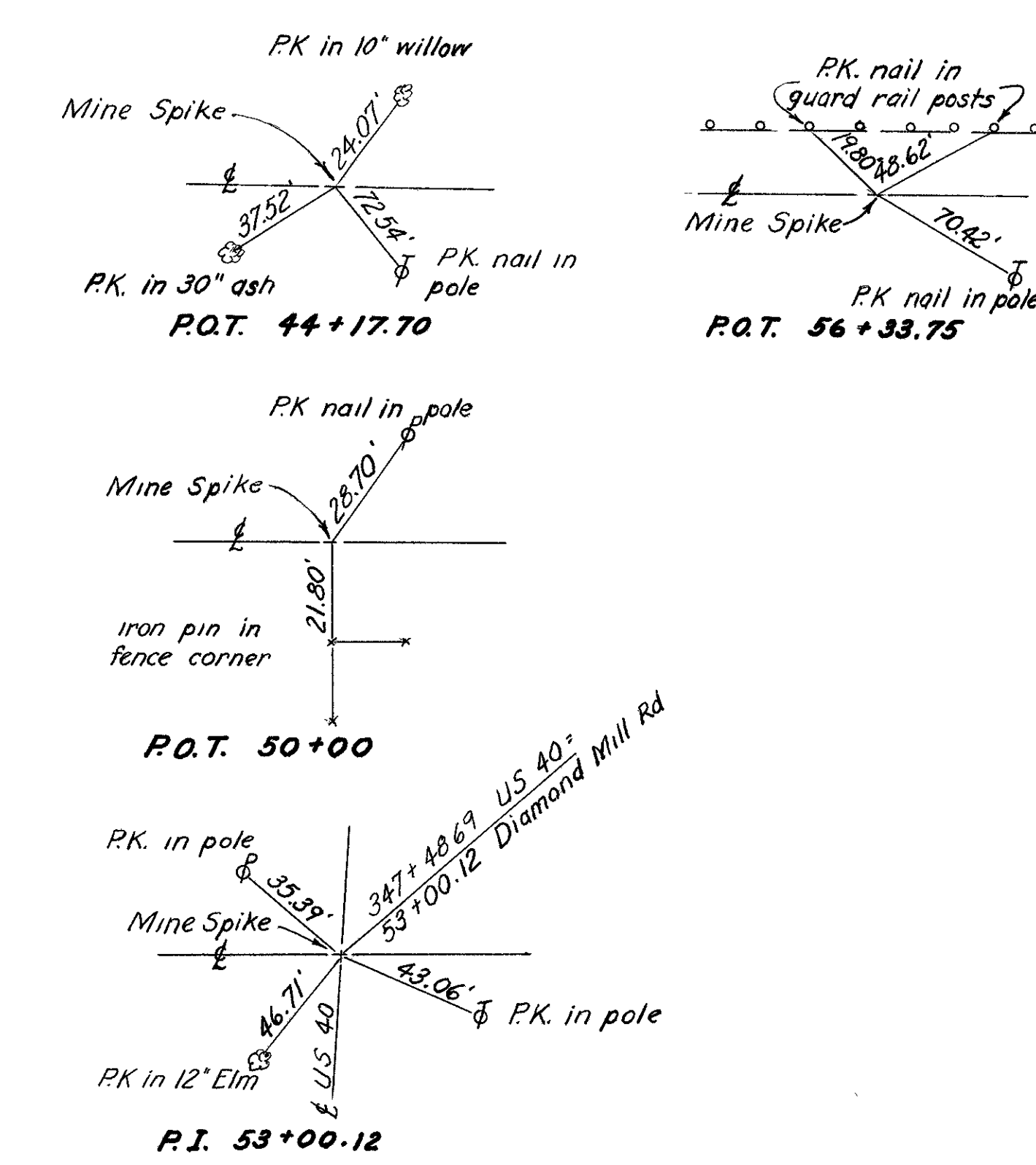
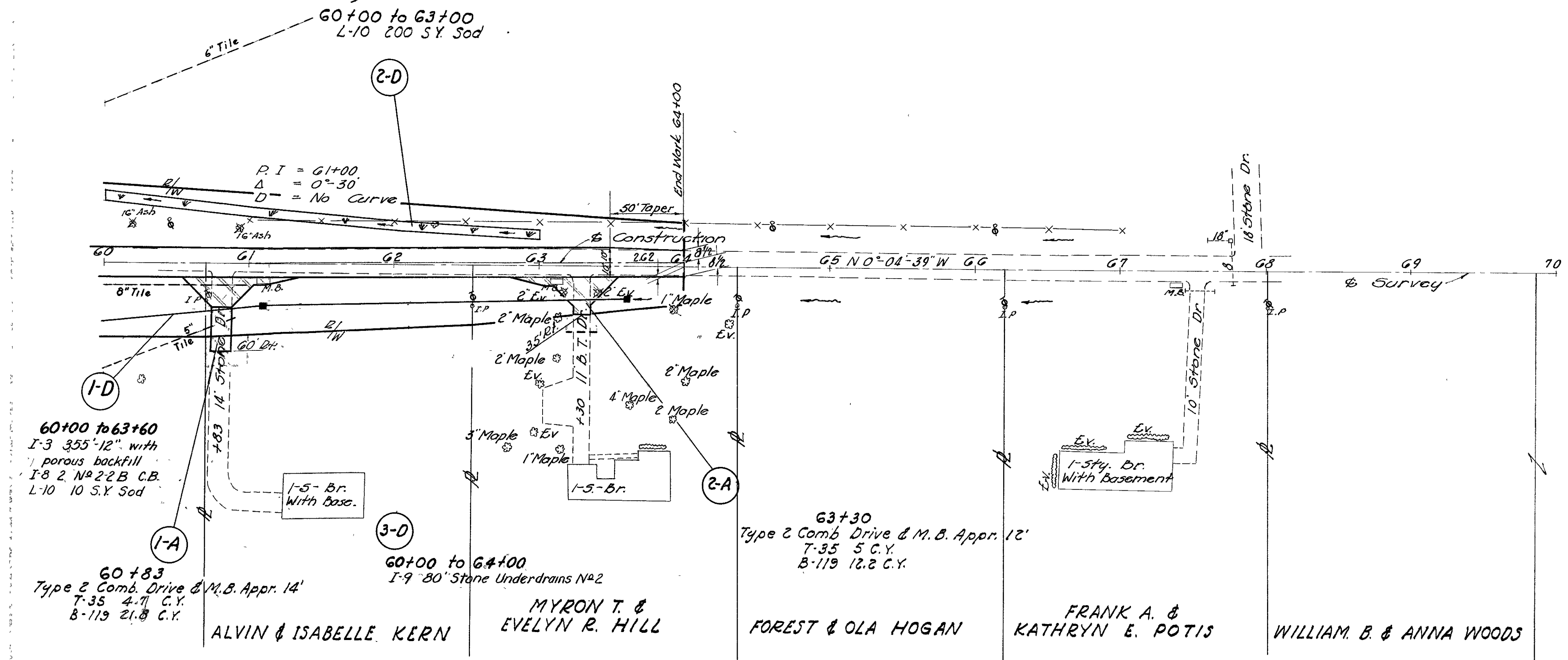
**PROPOSED STRUCTURE MOT-40-0655**  
Type: Continuous steel beam with reinforced concrete deck and substructure.  
Spans: 42'-0" 70'-0" 34'-0" 51' 9% bearings  
Roadway: 28'-0" f/f 2'-0" safety curbs with concrete parapets and Aluminum railings.  
Loading: CF-130  
Skew: 5° 59' 50" Left Forward  
Wearing Surface: 3/4" Monolithic Concrete  
Alignment: Tangent  
Approach Slabs: As per plan, 25' long.

**PROPOSED STRUCTURE**  
Type: Continuous reinforced concrete slab and reinforced concrete substructure  
Spans: 34'-0" 42'-6" 34'-0" 9% bearings  
Roadway: 32'-0" f/f guard rail  
Loading: CF-130  
Skew: 0° 00'  
Wearing Surface: 3/4" Monolithic concrete  
Alignment: Tangent  
Approach Slabs: As 1-54 25' long.

**EXISTING STRUCTURE 56+50**  
Type: Steel beam with reinforced concrete deck and cantilever abutments.  
Span: 38' c/c bearings  
Roadway: 32' f/f guard rail.  
See reference number 7-R for the removal and disposal

MONTGOMERY COUNTY  
MOT.-40- 5.98  
MOT.-49- 12.45

JESSE O. BEACKLEY



CKO Rm 14/15/16/17/18/19/20/21/22/23/24  
 CKO Rm 14/15/16/17/18/19/20/21/22/23/24  
 CKO Rm 14/15/16/17/18/19/20/21/22/23/24  
 CKO Rm 14/15/16/17/18/19/20/21/22/23/24



MONTGOMERY COUNTY  
 MOT-40- 5.98  
 MOT-49- 12.45

112  
 241

48+00 to 54+00 DIAMOND MILL RD





Volume 14/10/57 D.A.S. 1010 1065157 1014  
 1015157 1015157 1015157 1015157  
 1015157 1015157 1015157 1015157

SEEDING  
 L.F. S.Y.

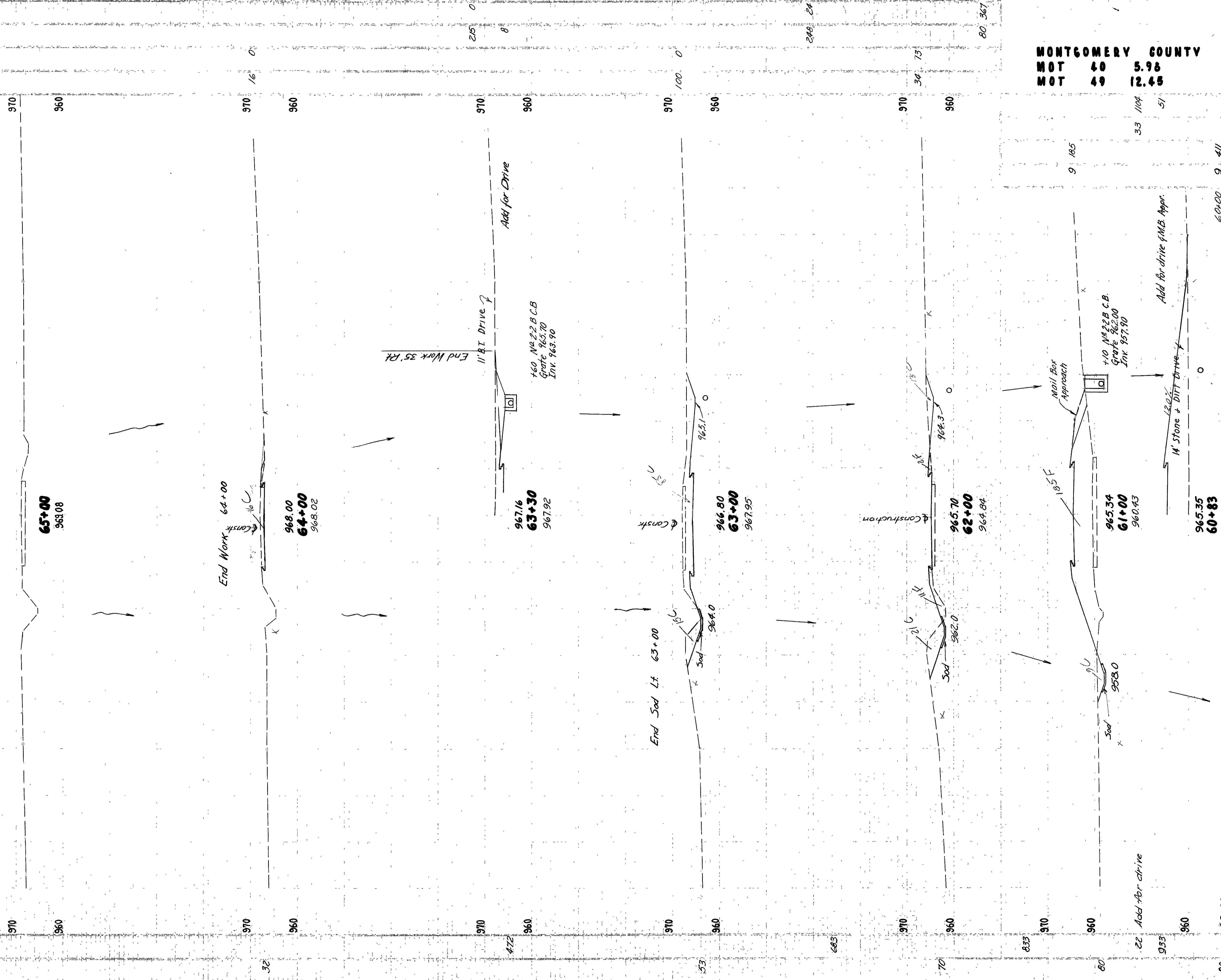
80 70 60 50 40 30 20 10 0

AREA  
 C F

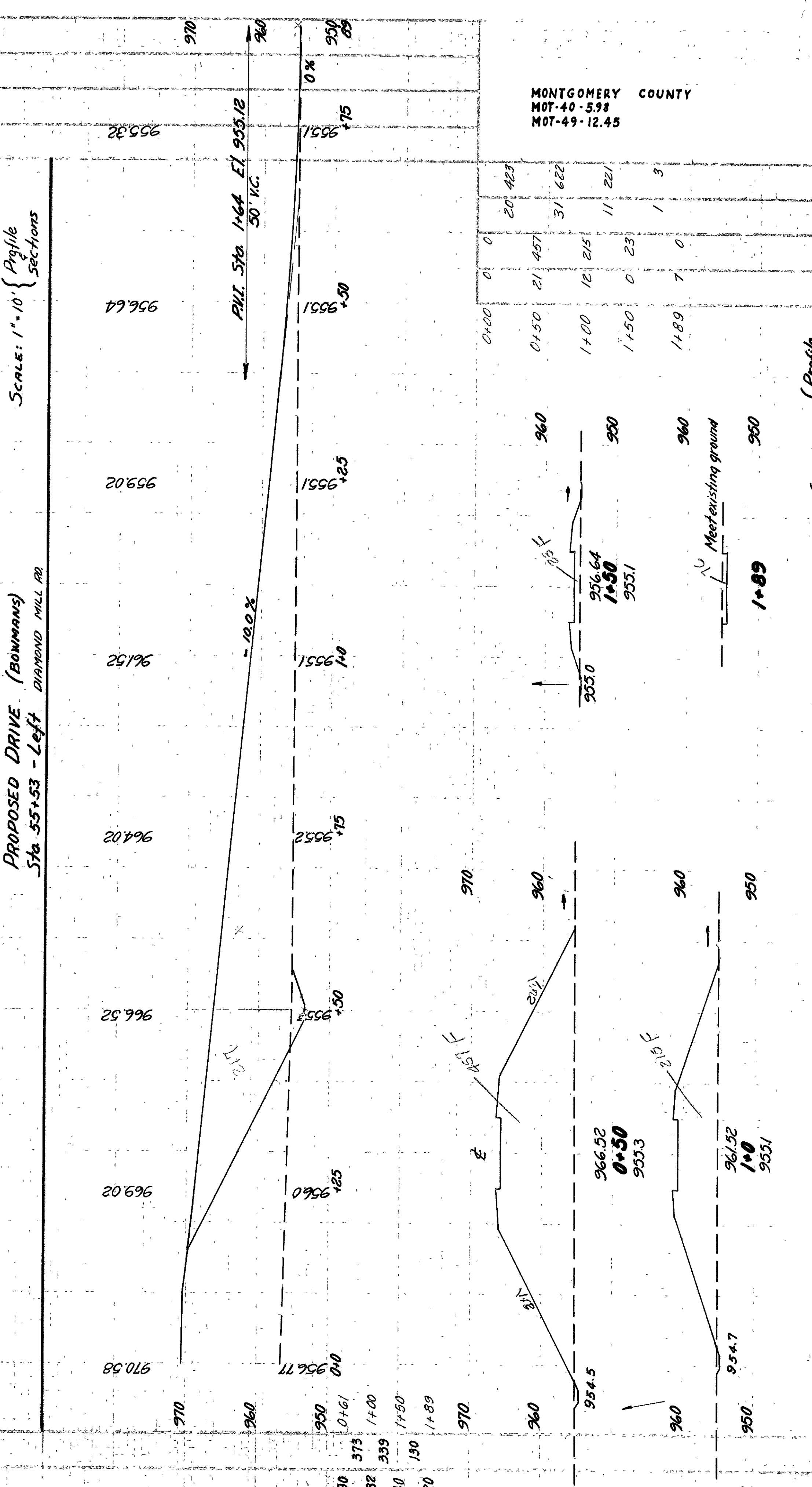
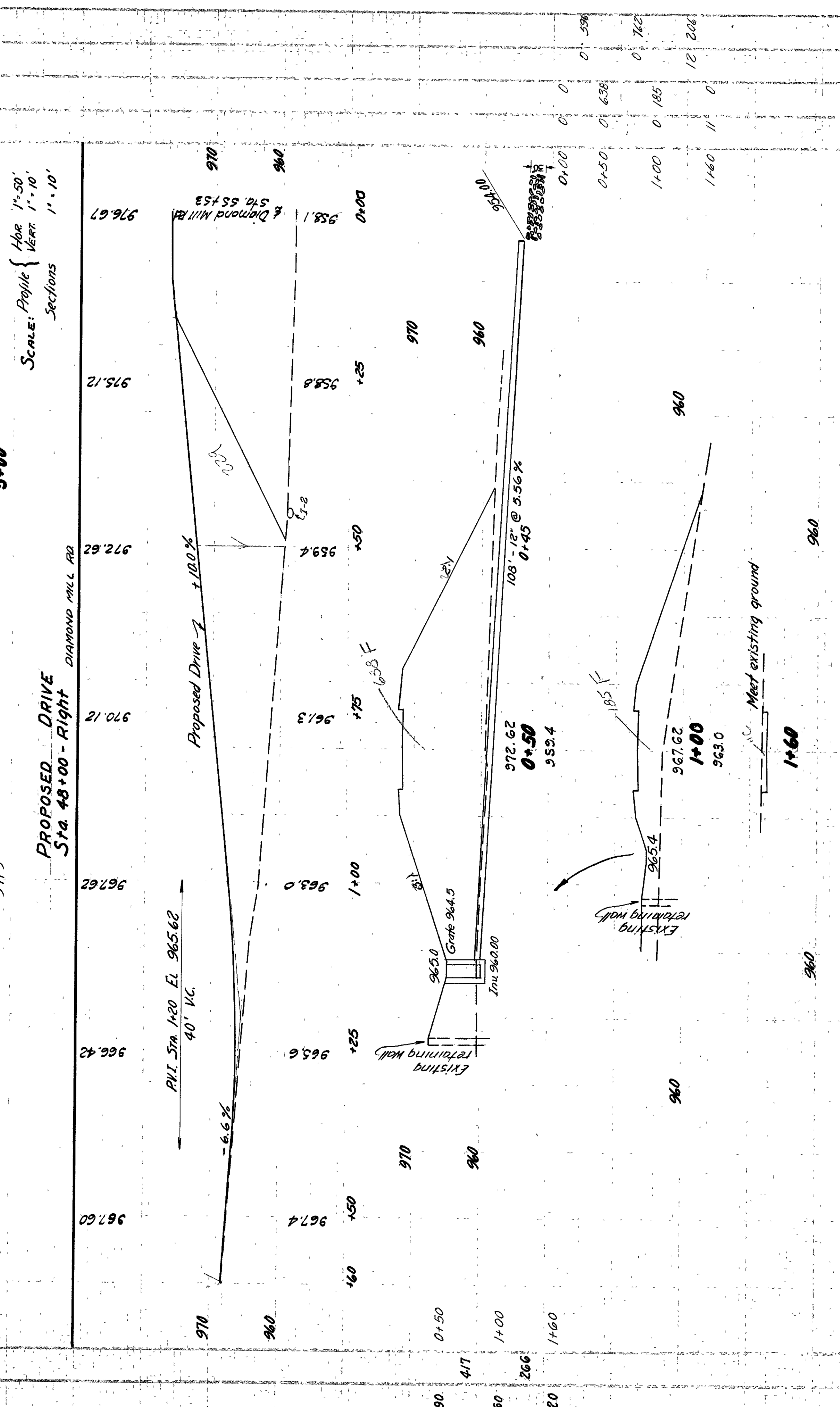
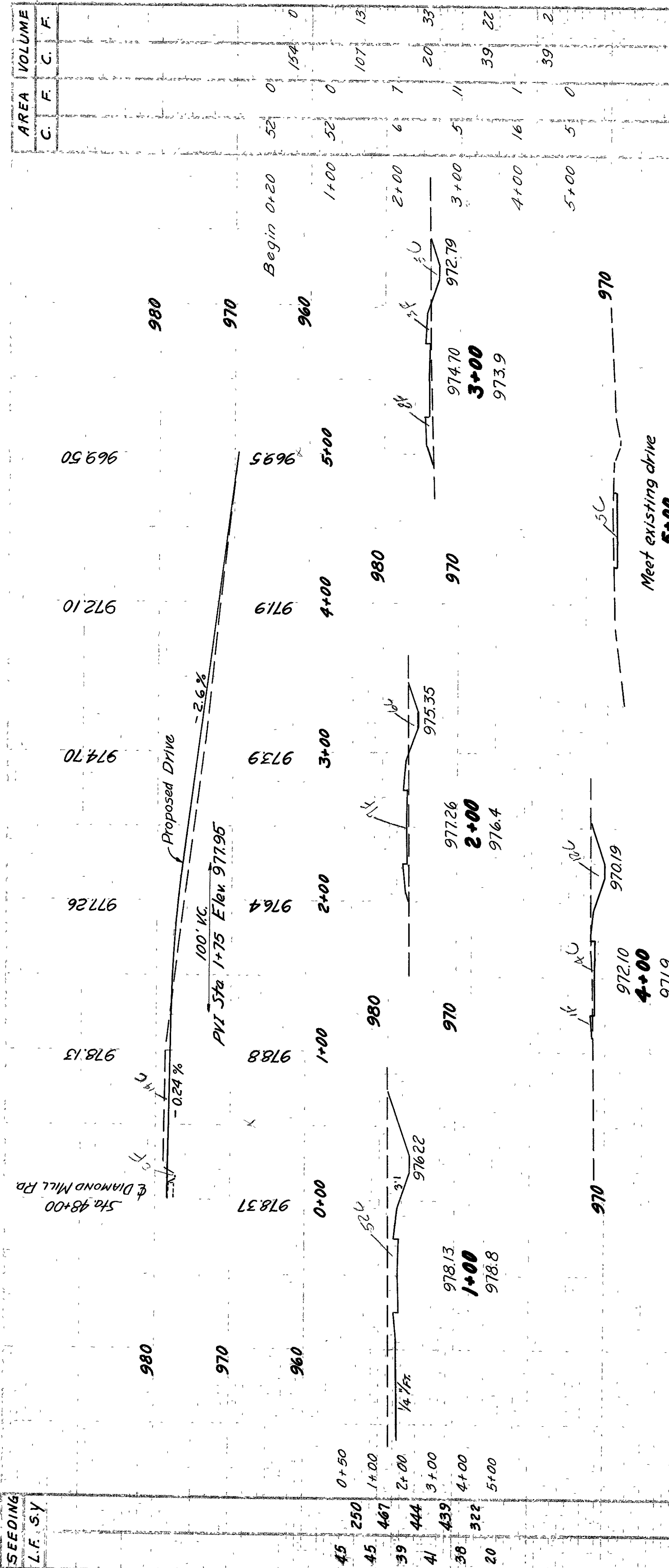
VOLUME  
 C F

MONTGOMERY COUNTY  
 MOT 40 5.96  
 MOT 49 12.45

114  
 241



Add'l notes 2-8-8.  
 Plan notes 2-8-8 CD 11/13/11  
 Earthwork 11/12/17 DWB CD 11/13/11  
 Seeding 11/15/17 CD 11/13/11



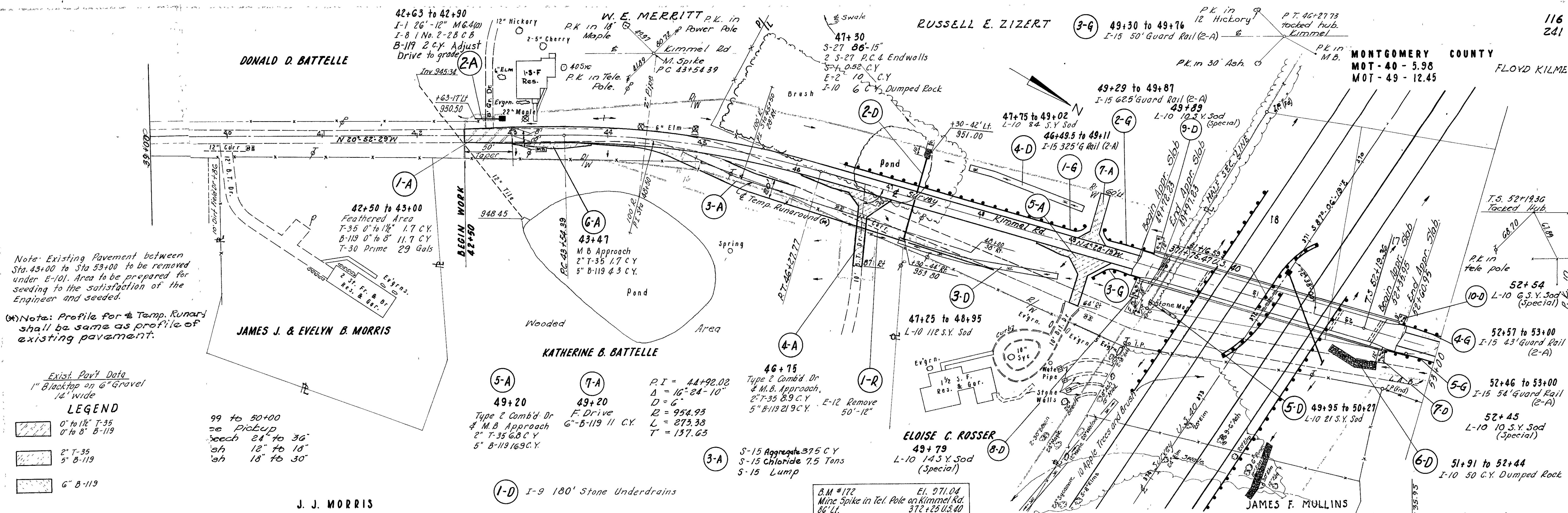
SEEDING	
L.F.	S.Y.
45	250
45	467
39	444
41	439
38	322
20	

AREA		VOLUME	
C.	F.	C.	F.
0	52	0	152
0	22	0	107
1	6	1	20
1	5	1	39
1	16	1	39
0	5	0	39

MONTGOMERY COUNTY  
 MOT-40-5.98  
 MOT-49-12.45

SCALE: 1"=10' (Profile Sections)  
 PROPOSED DRIVE (DIAMOND MILL RD)  
 Sta 57+54 - Right

115  
 241



Note: Existing Pavement between Sta. 43+00 to Sta 53+00 to be removed under E-10. Area to be prepared for seeding to the satisfaction of the Engineer and seeded.

(\*) Note: Profile for Temp. Runaroud shall be same as profile of existing pavement.

Exist Pav Data  
1" Blacktop on 6" Gravel  
14" wide

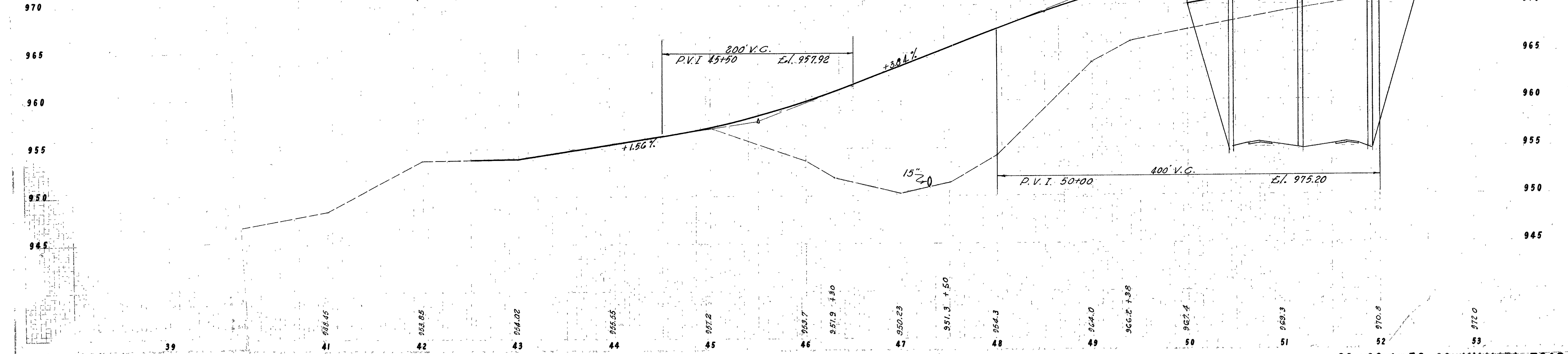
**LEGEND**

- 0" to 1 1/2" T-35  
0" to 8" B-119
- 2" T-35  
5" B-119
- 6" B-119

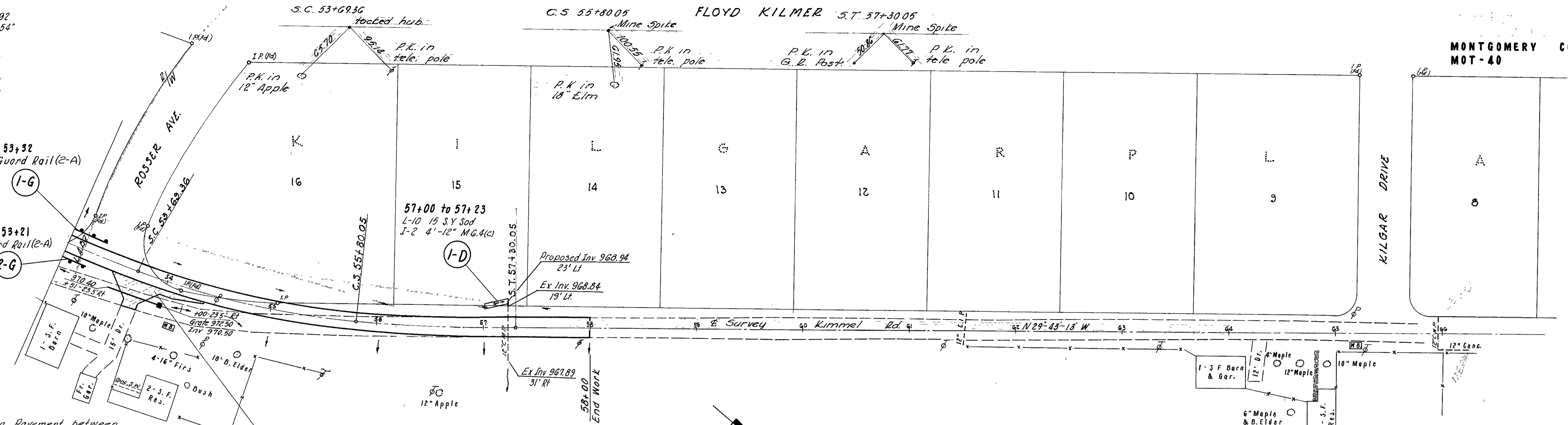
99 to 50+00  
see Pickup  
each 24" to 36"  
sh 12" to 18"  
sh 18" to 30"

**PROPOSED STRUPE MOT-40-0700**  
Type: Continuous beam with reinforced concrete deck substructure.  
Spans 44'-0", 73'-0", 44'-0" @ bearings  
Roadway: 24'-0" R/F, curbs with concrete parapet and num railing.  
Loading: CF-30  
Wearing Surface: Volcanic concrete.  
SKEN = 17° 22' 00" forward  
Alignment: Tangent  
Superelevation: N  
Approach Slabs: Set #1A (25' long)

Station	Rt. Edge Elev.	Li. Edge Elev.
42+00	953.73	953.91
42+10	953.78	953.94
42+20	953.91	954.02
42+30	954.28	954.41
42+40	954.67	954.80
42+50	955.06	955.19
42+60	955.33	955.58
42+70	955.59	955.97
42+80	955.86	956.36
42+90	956.18	956.79
43+00	956.61	957.28
43+10	957.18	957.85
43+20	957.82	958.49
43+30	958.59	959.20
43+40	959.50	959.98
43+50	960.48	960.84
43+60	961.53	961.76
43+70	962.59	962.72
43+80	963.55	963.68
43+90	964.51	964.64
44+00	965.47	965.60
44+10	966.56	966.56
44+20	967.52	967.52
44+30	968.45	968.45
44+40	969.31	969.31
44+50	970.10	970.10
44+60	970.83	970.83
44+70	971.49	971.49
44+80	972.09	972.09
44+90	972.62	972.62
45+00	973.08	973.08
45+10	973.48	973.48
45+20	973.81	973.81
45+30	974.07	974.07
45+40	974.27	974.27
45+50	974.40	974.40
45+60	974.47	974.47
45+70	974.47	974.47
45+80	974.40	974.40
45+90	974.30	974.30
46+00	974.07	974.07
46+10	974.05	974.05
46+20	974.10	974.10
46+30	974.00	974.00
46+40	973.88	973.88
46+50	973.98	973.98



PI 54+77.92  
Δ = 25° 14' 54"  
L<sub>s</sub> = 150'  
B<sub>s</sub> = 5' 15"  
T<sub>s</sub> = 258.56'  
D<sub>c</sub> = 7' 00"  
L<sub>c</sub> = 210.69'  
X<sub>c</sub> = 149.87'  
Y<sub>c</sub> = 4.58'



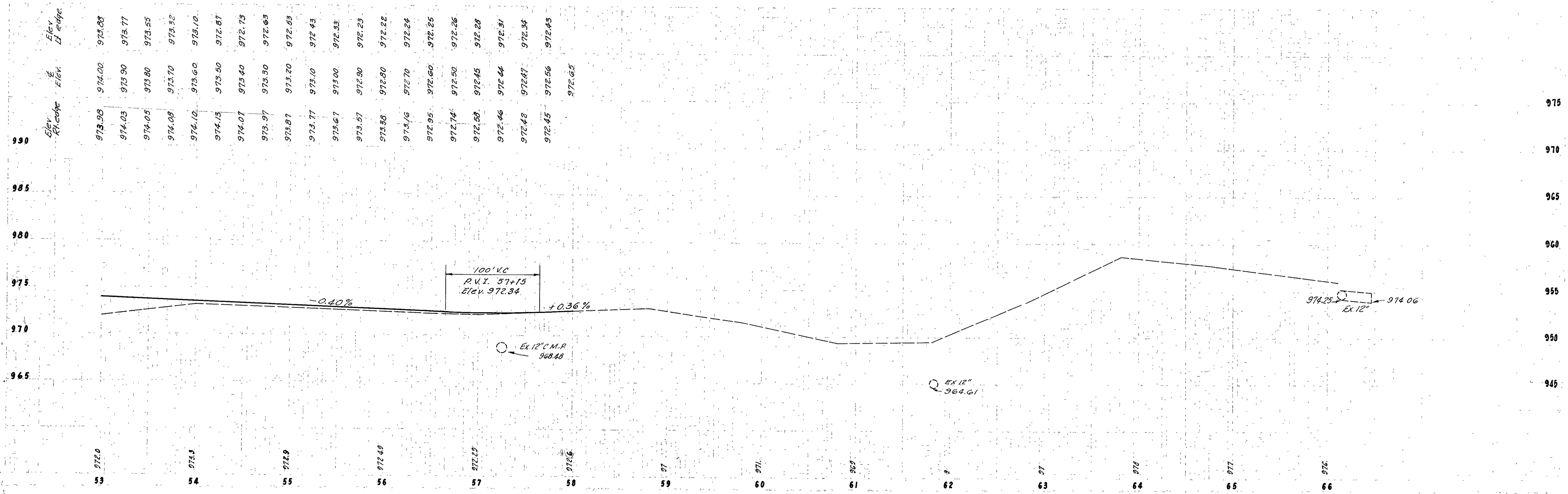
Note: Existing Pavement between Sta. 53+00 and Sta 58+00 to be removed under E-101. Area to be prepared for seeding to the satisfaction of the Engineer and seeded.

**I-A** 53+75  
Type 2 Comb'd Dr & M.B Approach  
2" T-35 5.7 C.Y  
5" B-119 14 C.Y  
I-1 48'-12"  
1 No 2-2B C.B.

JAMES E. MULLINS

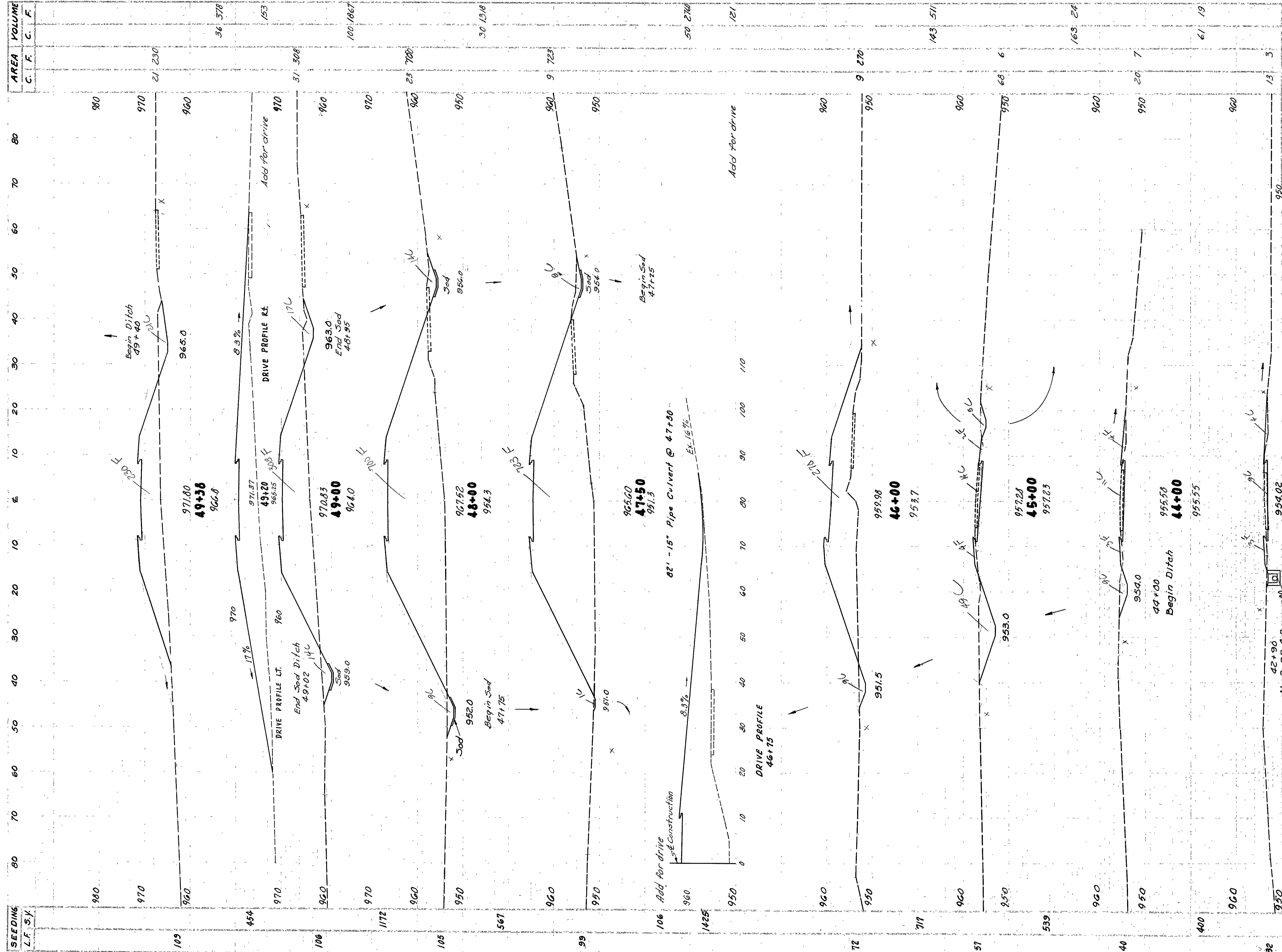
**2-D** I-9 120' Stone Underdrains

MARJORIE M. SCHAFER



Station	Elev. Right-of-Way	Elev. of	Elev. Left-of-Way
53	973.98	974.00	973.88
54	974.03	973.90	973.77
55	974.05	973.80	973.55
56	974.09	973.70	973.32
57	974.10	973.60	973.10
58	974.13	973.50	972.87
59	974.07	973.40	972.73
60	973.97	973.30	972.63
61	973.87	973.20	972.53
62	973.77	973.10	972.43
63	973.67	973.00	972.33
64	973.57	972.90	972.23
65	973.33	972.50	972.22
66	973.16	972.70	972.24
67	972.95	972.60	972.25
68	972.74	972.50	972.26
69	972.58	972.45	972.28
70	972.46	972.44	972.31
71	972.40	972.47	972.34
72	972.45	972.56	972.43
73		972.65	

11/17/57 S.W. 21st St. 11/17/57  
 Plans 11/17/57 D.A. - Earth's Drive 101st & 102nd Sts.  
 CKS own property  
 CKS own property

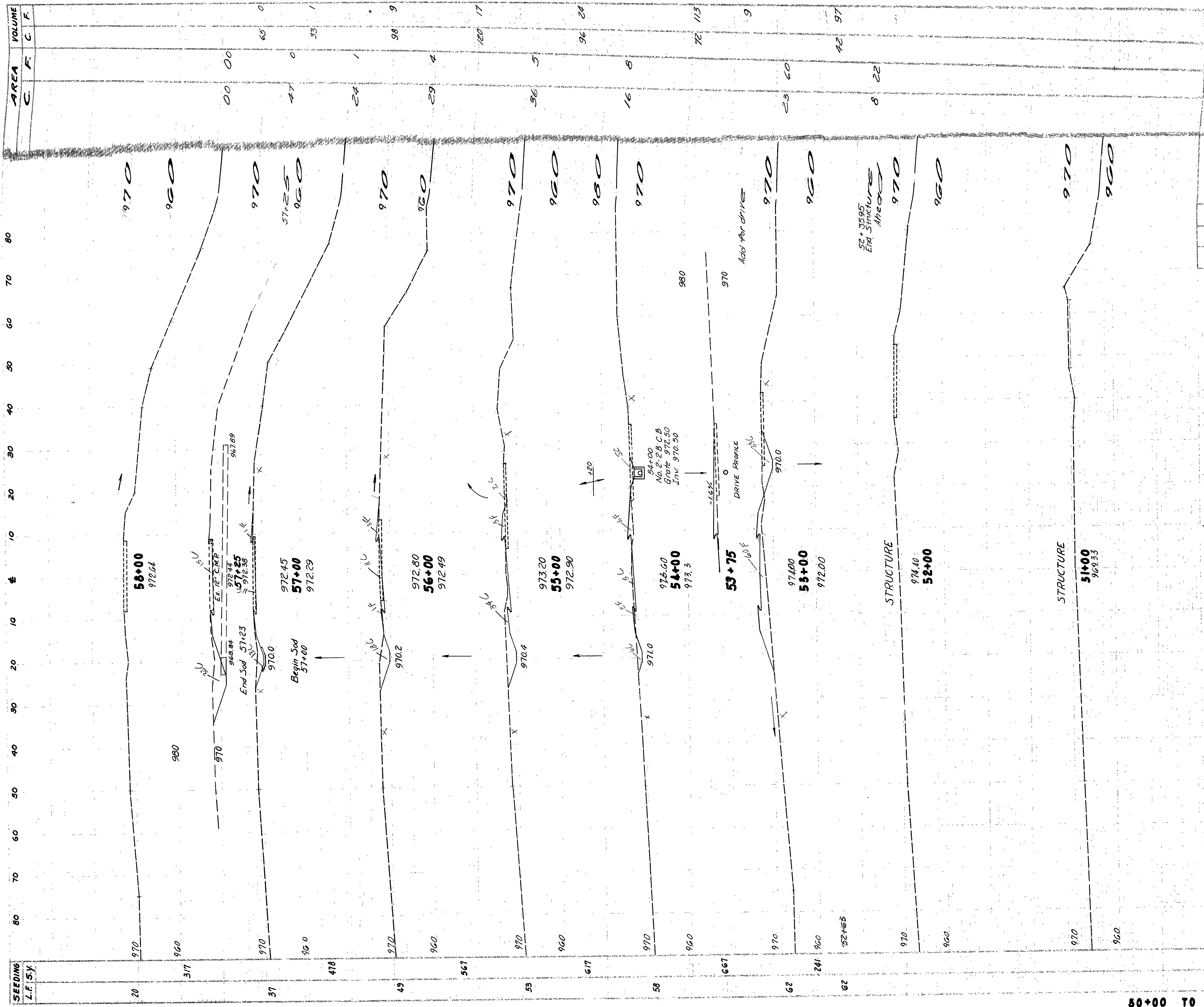


AREA	VOLUME	
	C	F
21	230	
36	370	
100	1667	
30	1318	
50	2100	
121		
143	511	
163	24	
61	19	

SEEDING	L.F. SY.	
	C	F
103		
454		
106		
105		
99		
106		
1425		
72		
711		
57		
539		
40		
400		
38		
20		

MONTGOMERY COUNTY  
 MOT 40 5.98  
 MOT 49 12.45

Plan 10/14/57 DAB. 42 1/2" x 11" 1/2" S.S.Y.  
 Section 2000. 10/14/57 C.H. 1183-10447  
 C&D GRANTWORKS 1/15/57



AREA	VOLUME	
	C	F
00	00	00
47	0	33
24	1	98
29	4	120
56	5	96
16	8	72
23	60	42
8	22	97

MONTGOMERY COUNTY  
 MOT 40 5.98  
 MOT 49 12.45

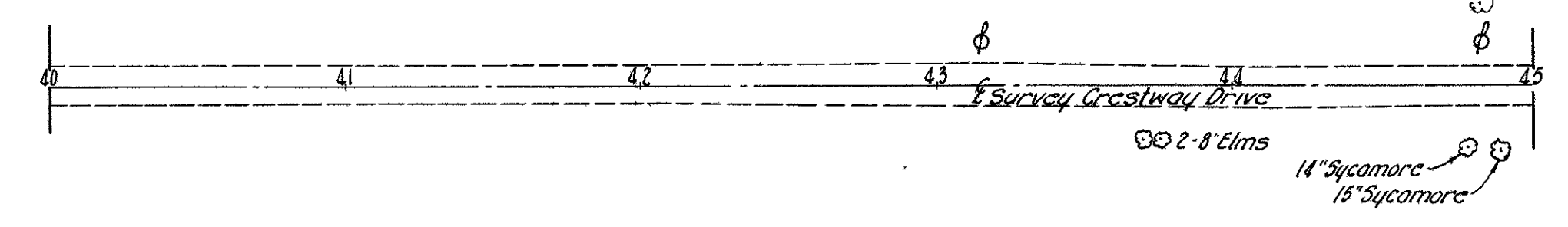
SEEDING	L.F.	S.Y.	AREA	VOLUME
20	20	317	970	970
31	20	418	960	970
43	20	567	970	960
55	20	617	970	960
58	20	667	970	960
62	20	741	970	960
62	20	824	970	960
780	20	880	970	960

50+00 TO 58+00 KIMMEL RD

NOT TRUE SECTION  
 FOR QUANTITIES ONLY

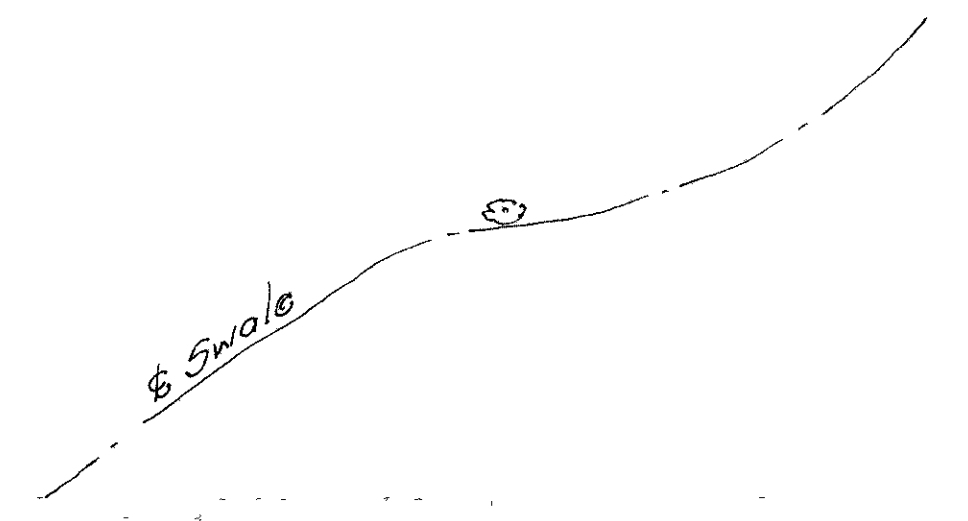
MONTGOMERY COUNTY  
MOT - 40 - 5.98  
MOT - 49 - 12.45

120  
241



970  
965  
960

970  
965  
960

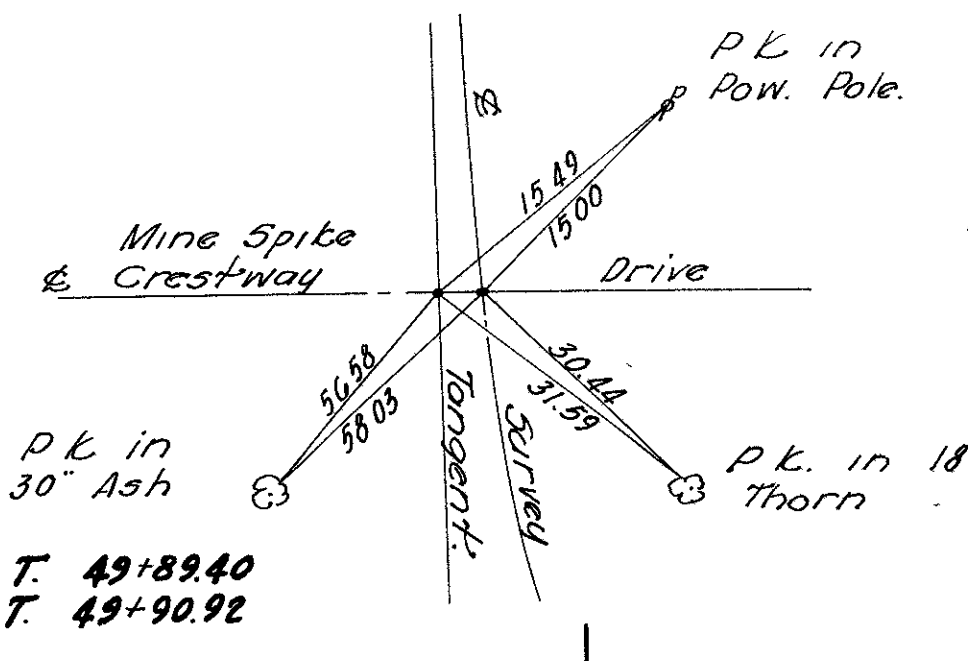


40 41 42 43 44 45  
961.01 962.21 964.24  
40 + 00 To 45 + 00 CRESTWAY DRIVE

MONTGOMERY COUNTY  
MOT-40-598  
MOT-49-12.45

(101-221)  
65  
yellow

- 3-D 48+61 Lt.  
L-10 21 S.Y. Sod (Special)
- 4-D 48+61 Rt.  
L-10 18 S.Y. Sod (Special)
- 5-D 51+21 Lt.  
L-10 30 S.Y. Sod (Special)
- 6-D 51+21 Rt.  
L-10 11 S.Y. Sod (Special)



CHARLES J.  
&  
PEARL P. LEONARD

CHAS. MATTIS

DAVIS OIL CO.

ROBERT R. & BETTY C. STRADER  
14 2<sup>nd</sup>  
E-12 Remove  
64'-15" C.M.P.

JUNIOR M. ROOF  
&  
THELMA V. ROOF

LARRY AMOS  
&  
VERA E. AMOS

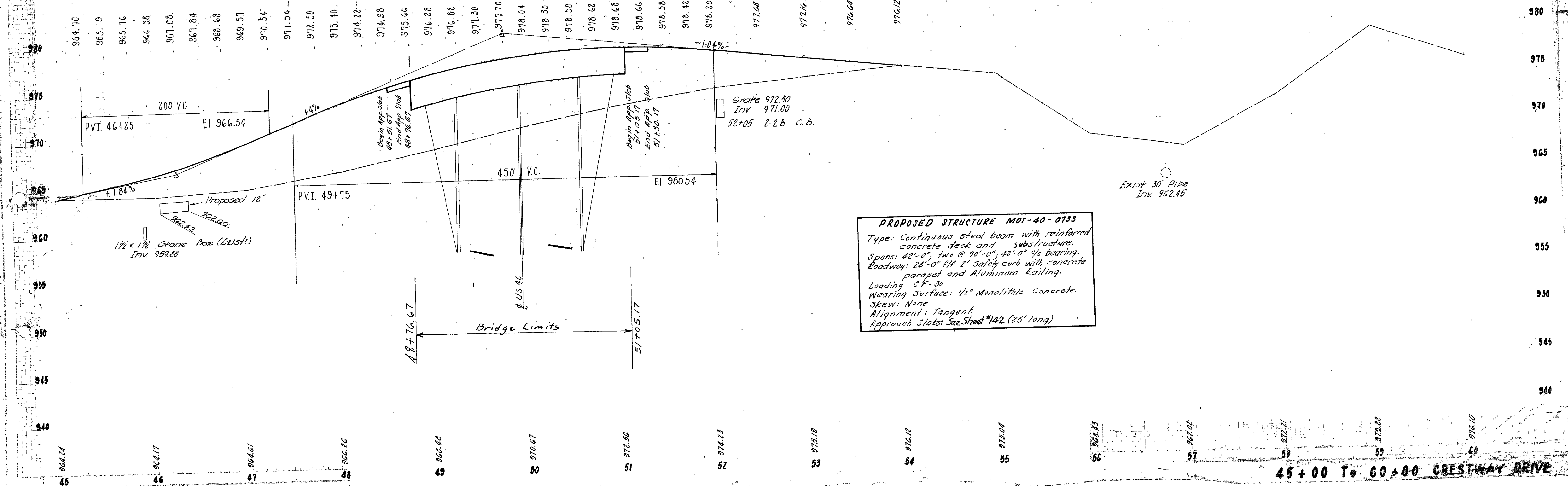
WILLIAM C.  
PFEIFFER

B.M. #176 Mine Spike in tele pole 324  
Lt. 399+50 Elev. 975.20

OLIVER POOCK

Note: See Sheet No. 133 for  
Service Road Details.

- 0" to 1 1/2" T-35, 0" to 6" B-119, T-30 Prime
- 2" T-35, 5" B-119
- 6" B-119



**PROPOSED STRUCTURE MOT-40-0733**  
 Type: Continuous steel beam with reinforced concrete deck and substructure.  
 Spans: 42'-0", two @ 90'-0", 42'-0" 1/2 bearing.  
 Roadway: 26'-0" R/W 2' safety curb with concrete parapet and Aluminum Railing.  
 Loading: C.F. 30  
 Wearing Surface: 1/2" Monolithic Concrete.  
 Skew: None  
 Alignment: Tangent  
 Approach Slabs: See Sheet #142 (25' long)

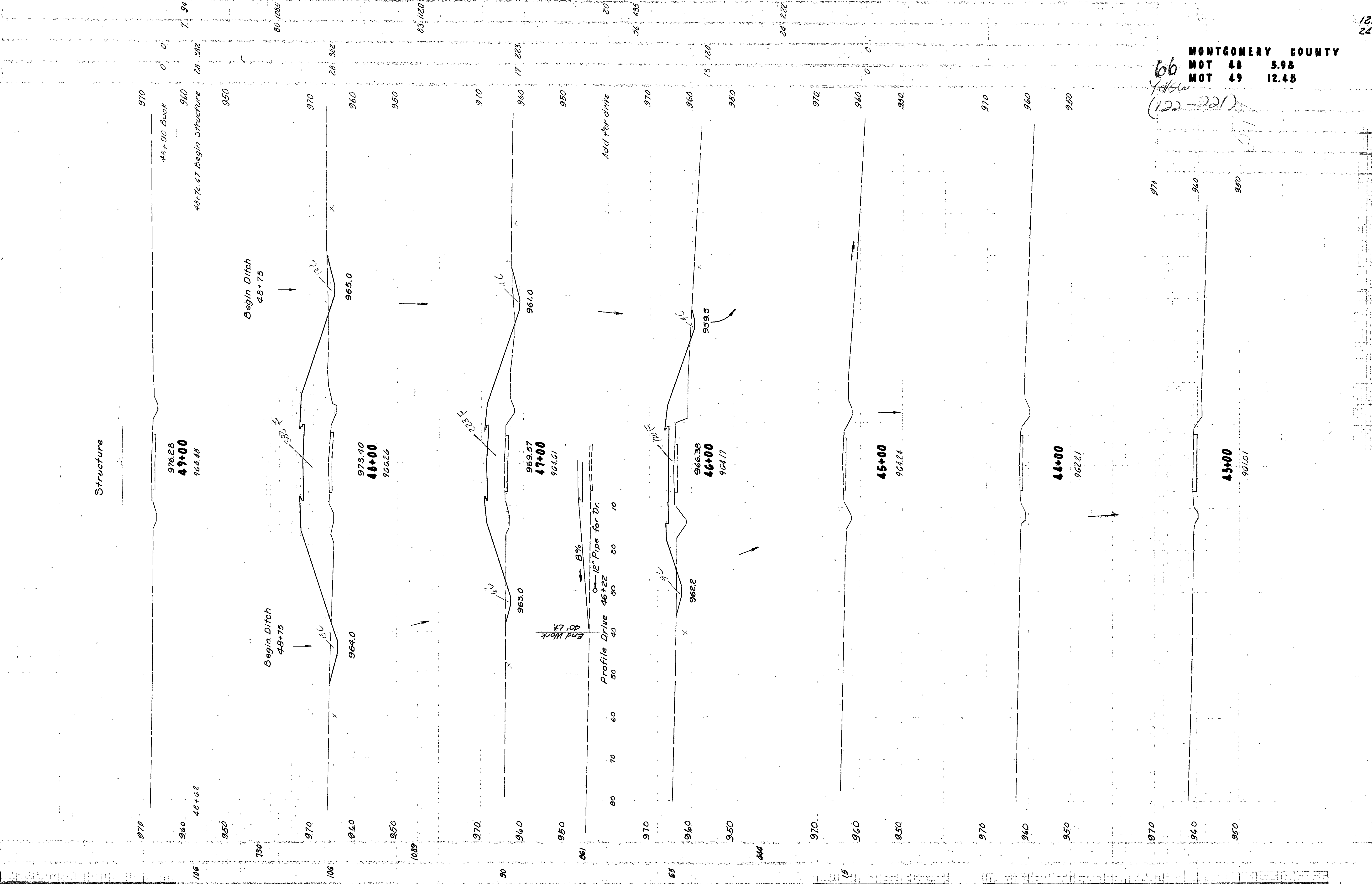
45+00 TO 60+00 CRESTWAY DRIVE



SEEDING  
L.F. S.V.

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

AREA  
C F C F



*Handwritten notes:*  
 1. 100' wide  
 2. 100' wide  
 3. 100' wide  
 4. 100' wide  
 5. 100' wide

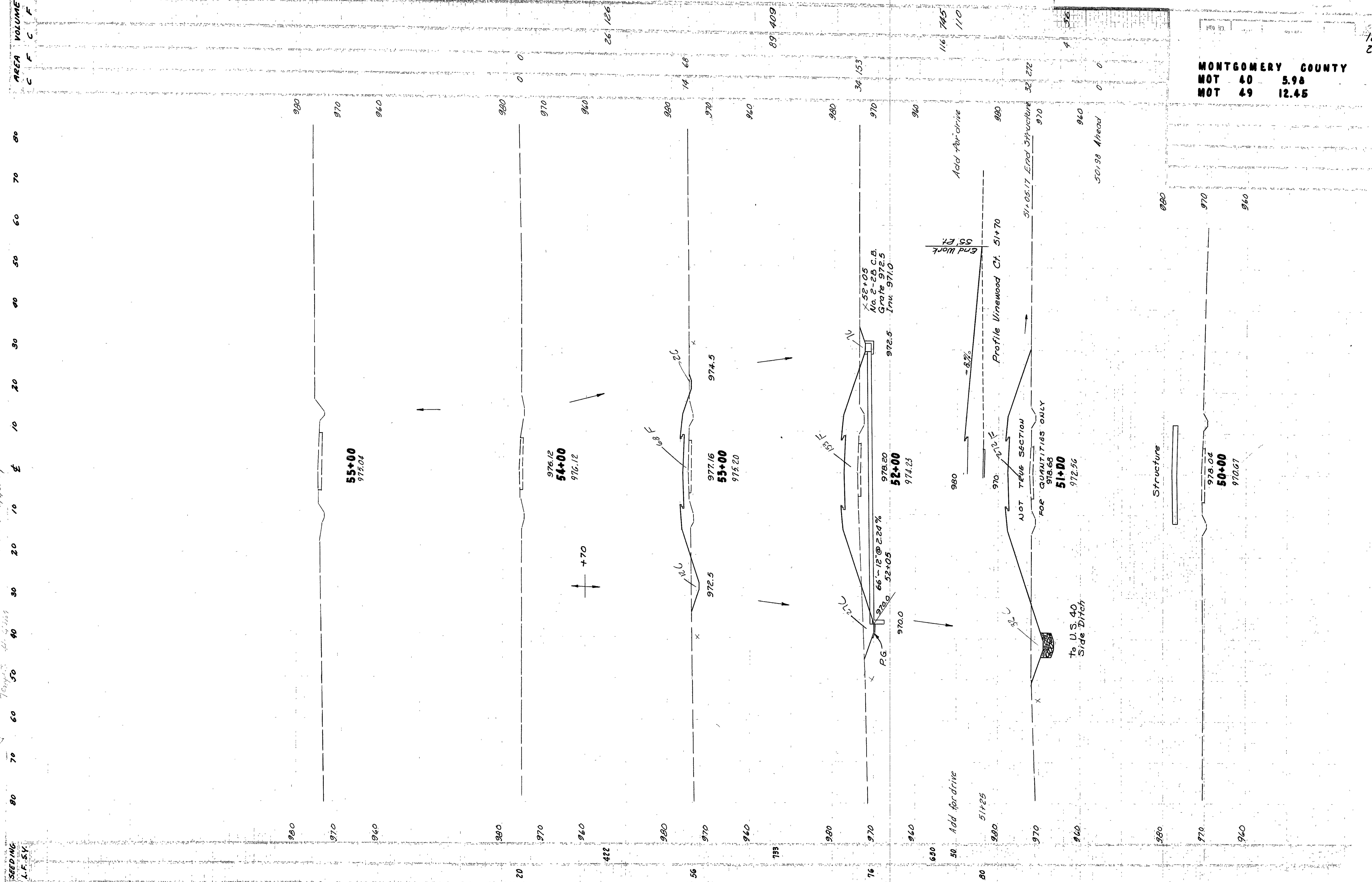
*Handwritten:* 66 Yellow (122-221)

MONTGOMERY COUNTY  
 MOT 48 5.98  
 MOT 49 12.45

122  
221

43+00 + 49+00 CRESTWAY DR

Plan of 1/2" scale 10' intervals  
 (Seeley D.B. 1/31/59 C.S. 15167 W.C.  
 C.R. 10000000 1/31/59)  
 by T.O. 1/31/59  
 Total 46.4519



AREA	VOLUME
C	F
0	0
26	126
14	68
89	409
38	153
116	745
110	110
50	98
50	98
0	0

MONTGOMERY COUNTY  
 NOT 40 5.98  
 NOT 49 12.45

123  
 241

SEEDING  
 L.F. 54

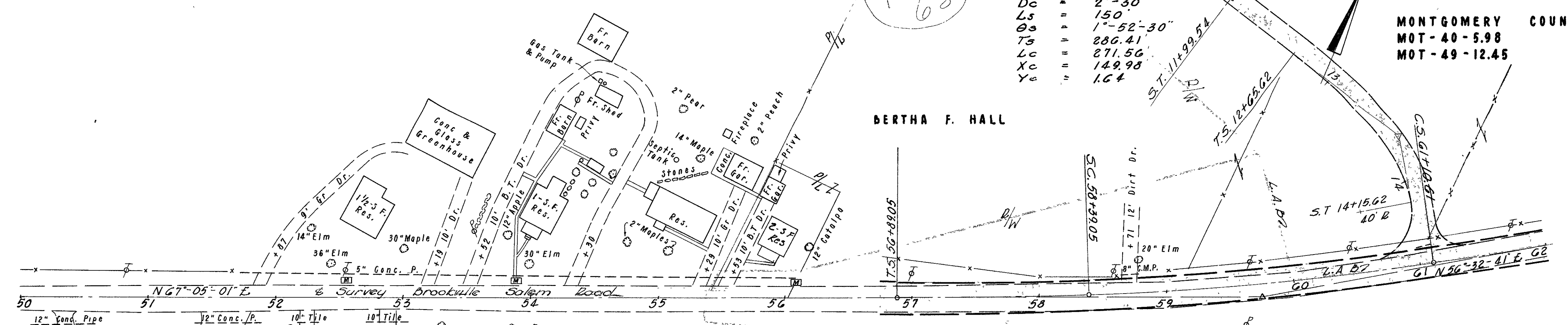
80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

Yellow  
65

CURVE DATA

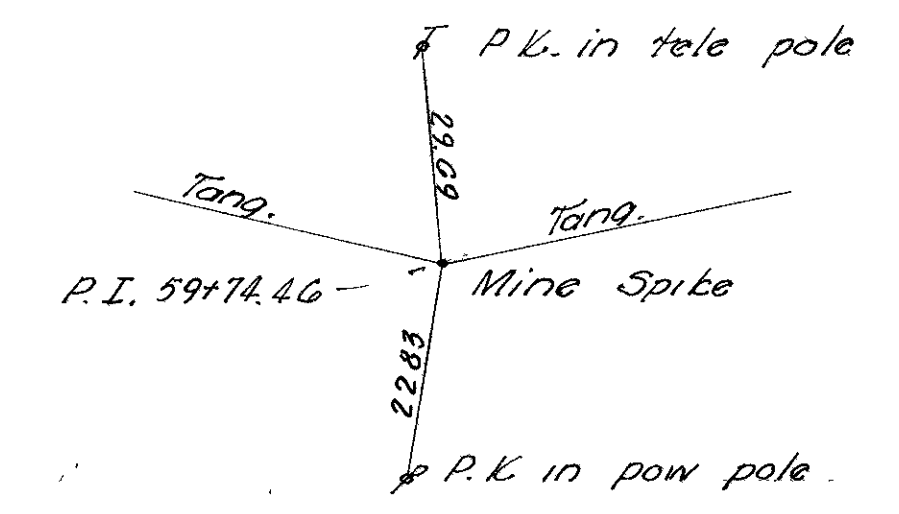
P.I.	59+75.46
Δ	10°-32'-20"
Dc	2°-30'
Ls	150
Os	1°-52'-30"
Lc	286.41
Ts	271.56
Xc	149.98
Yc	1.64

MONTGOMERY COUNTY  
 MOT-40-5.98  
 MOT-49-12.45

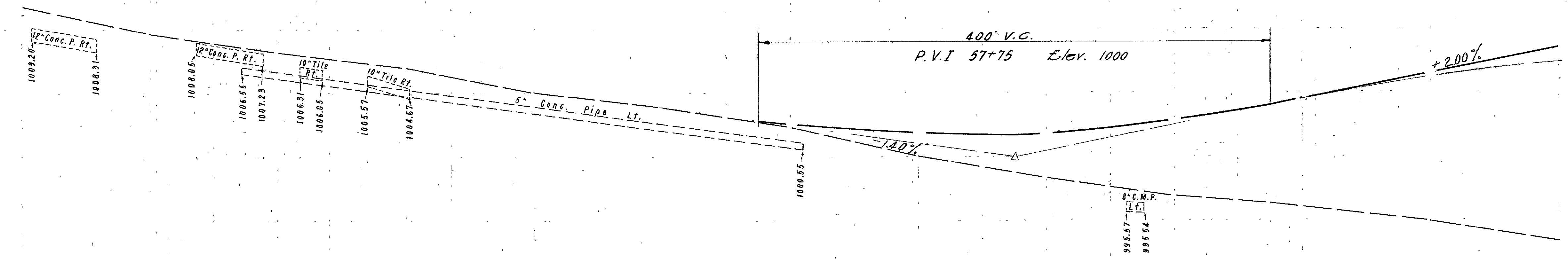


GLENN R. BERRY 1/3  
 DALE M. BERRY 1/3  
 ROY M. BERRY 1/3

Shaded Part is not part of this project.



1015  
1010  
1005  
1000  
995  
990  
985  
980



50 51 52 53 54 55 56 57 58 59 60 61 62

1009.77 1008.67 1008.20 1006.55 1007.23 1006.31 1006.05 1005.57 1004.67 1000.55 998.57 995.64 994.33 993.36

50+00 TO 62+00 BROOKVILLE SALEM ROAD

BERTHA F. HALL

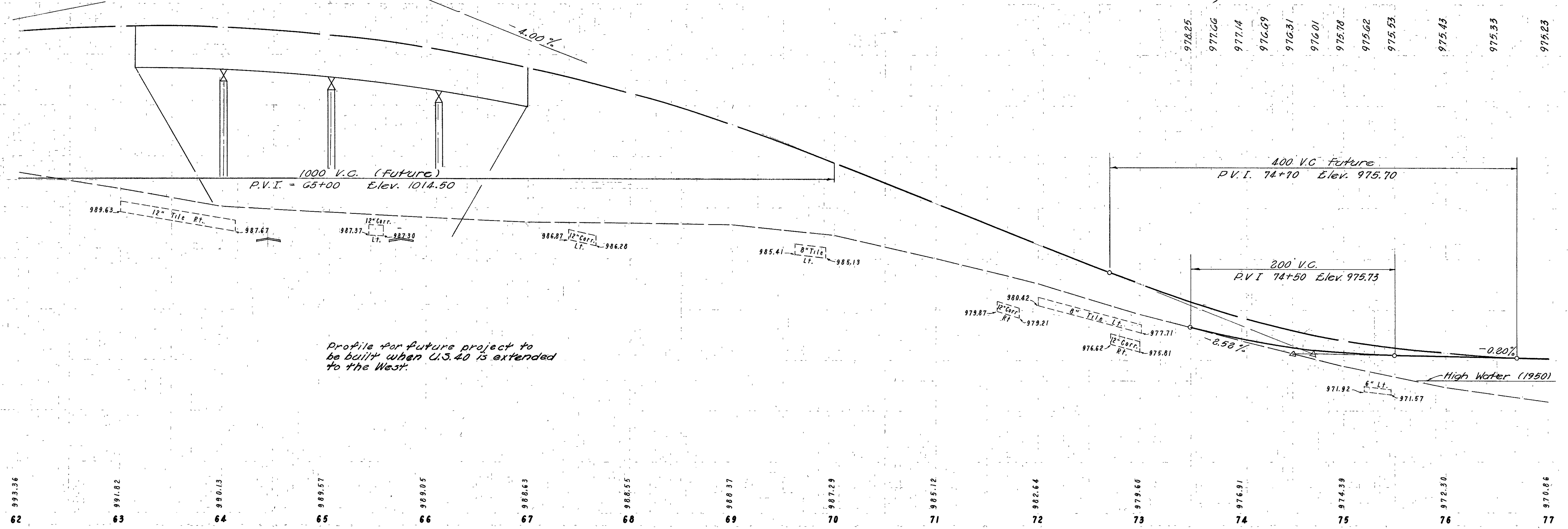
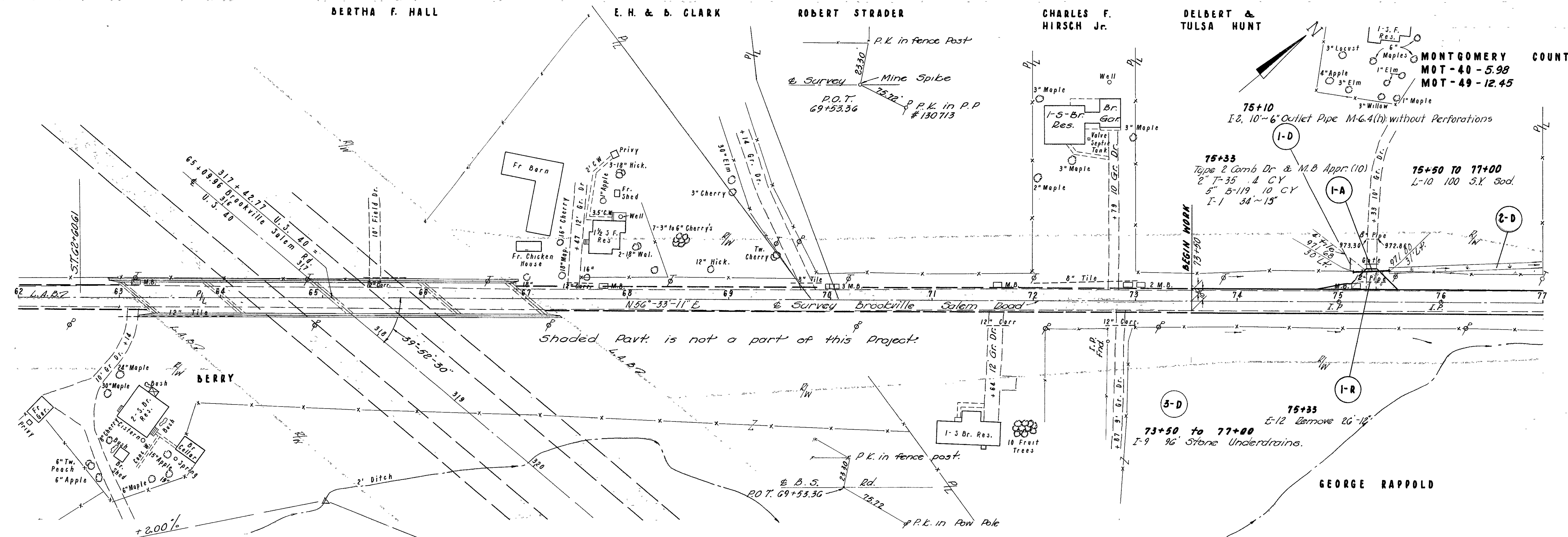
E. H. & B. CLARK

ROBERT STRADER

CHARLES F. HIRSCH Jr.

DELBERT & TULSA HUNT

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45



Profile for future project to be built when U.S. 40 is extended to the West.

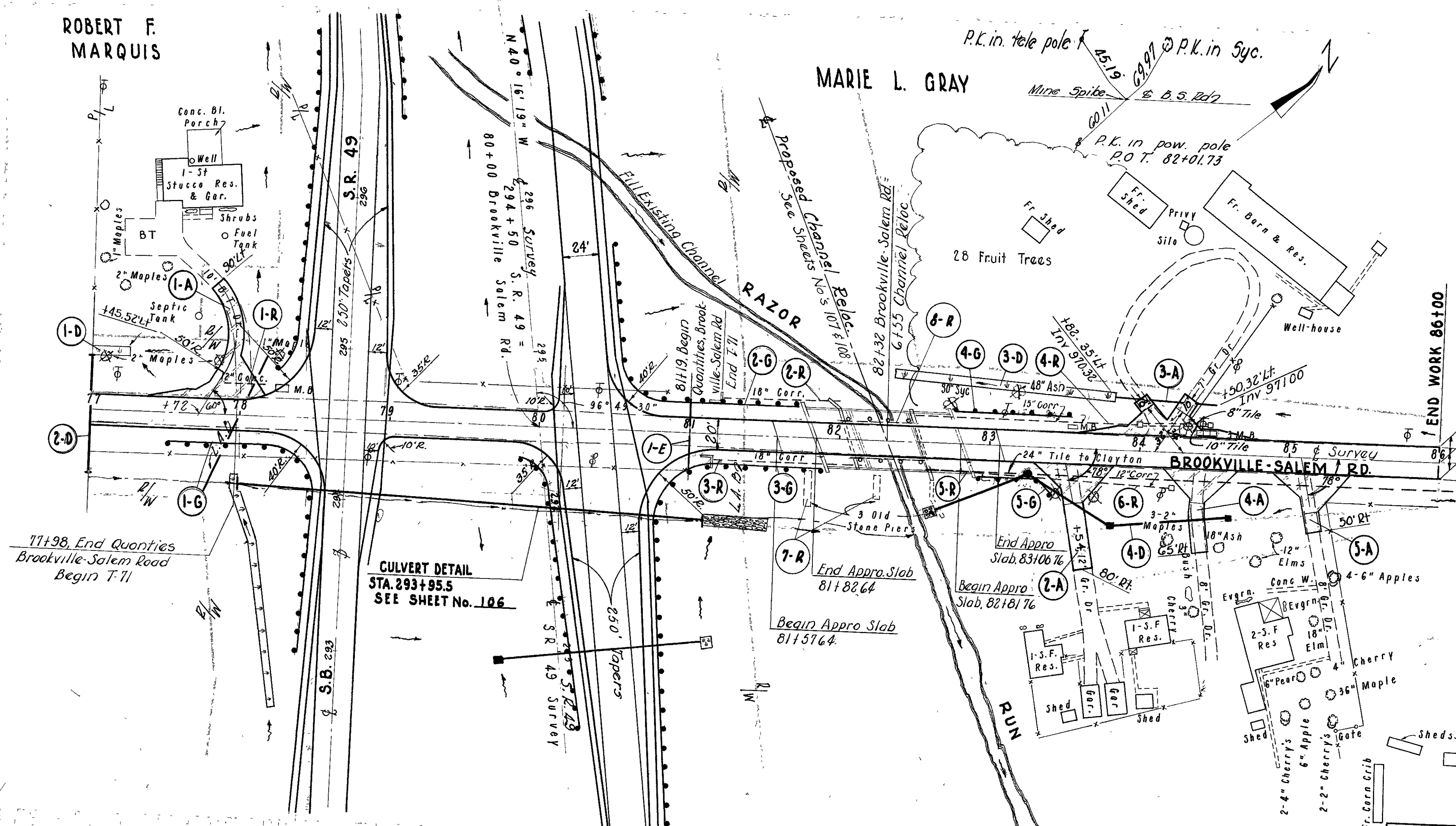
ROBERT F. MARQUIS

MARIE L. GRAY

JESSEE O. BEACKLER

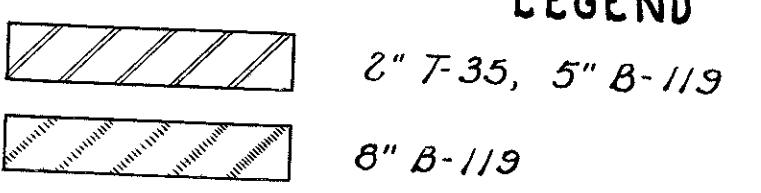
MONTGOMERY COUNTY  
MOT-40-598  
MOT-49-12.45

126  
241



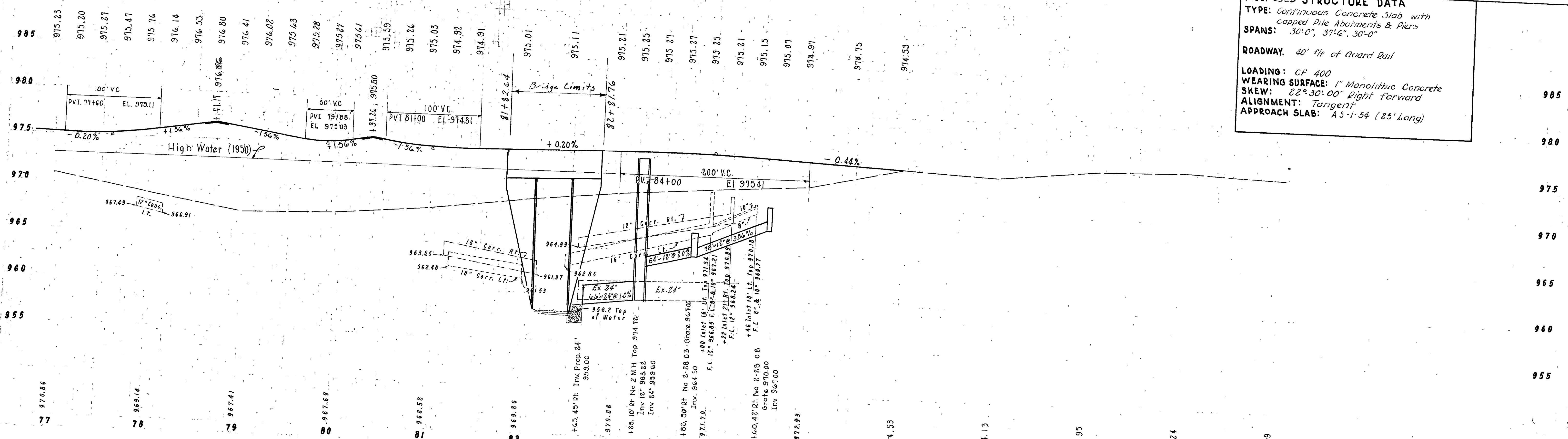
- 1-A 77+72  
Type 2 Comb Dr & MB Appro. 10'  
T-35, 18.1 CY  
B-119, 44.7 CY
- 2-A 83+54  
Type 2 Dr. 12'  
T-35, 6.3 CY  
B-119, 28.7 CY
- 3-A 84+20  
Type 2 Dr. 10'  
Comb MB Appro. (1MB)  
Comb MB Appro. (3MB)  
T-35, 4.5 CY  
B-119, 18.5 CY  
I-1, 68'-12"
- 4-A 84+41  
Type 2 Dr. 10'  
T-35, 4.5, CY  
B-119, 18.0 CY
- 1-E 81+00  
13' Rt to 26' Rt.  
5-25 48'-4" one way Conduit
- 5-A 85+12  
Type 2 Dr 10'  
T-35, 5.1 CY  
B-119, 15.6 CY
- 1-D 77+00 to 77+25  
L-10, 17 SY Sod
- 2-D 77+00  
5-27, 78'-18"  
2-527 PC 4 Endwall  
S-1, 0.60 CY  
E-2, 16 CY
- 5-D 77+00 to 86+00  
I-9 Stone Underdrains 90 LF
- 3-D 82+35, 44' Lt. to 83+82, 35' Lt.  
L-10, 98 SY Sod
- 4-D 82+65, 45' Rt. to 83+25, 18' Rt.  
I-2, 66'-84"  
I-8, 1- No 2 M.H. 51 O. 41 c.y  
I-10, 2 CY Dumped Rock E-2 1.9 c.y  
83+25, 18' Rt. to 83+82, 50' Rt.  
I-2, 64'-12"  
I-8, 1- No 2-28 CB  
I-2, 78'-12"  
I-8, 1- No 2-28 CB
- 1-G 77+53  
I-15, 45'-GR (2-A)
- 2-G 81+19 to 81+69  
I-15, 50'-GR (2-A)
- 3-G 81+19 to 81+86  
I-15, 67'-GR (2-A)
- 4-G 82+67 to 83+42  
I-15, 75'-GR (2-A)
- 5-G 82+93 to 83+43  
I-15, 50'-GR (2-A)
- 1-R 78+00  
E-12, Remove 26'-12"
- 2-R 81+20 to 81+98 Lt.  
E-12, Remove 78'-18"
- 3-R 81+16 to 82+16 Rt.  
E-12, Remove 100'-18"
- 4-R 82+45 to 84+46 Lt.  
E-12, Remove 156'-15"  
E-12, Remove 46'-8"  
E-12, Remove 46'-10"  
I-16, Abandon CB
- 5-R 82+59 to 83+25 Rt.  
E-12, Remove 66'-24"
- 6-R 82+59 to 84+22 Rt.  
E-12, Remove 162'-12"  
I-16, Abandon CB
- 7-R 82+00 Rt.  
5-24 Remove Stone Piers.
- 8-R 82+32  
5-24 Remove Existing Structure store steel on 2/W for disposal by Montgomery County. (Carried to structure summary, Sheet 226)

CULVERT DETAIL  
STA 293+95.5  
SEE SHEET No. 106



**EXISTING STRUCTURE 82+32**  
Type Single span steel beam with cantilever abutments.  
Span: 40' 4/8" of abutments,  
Roadway 24' 4/8" Guard Rail

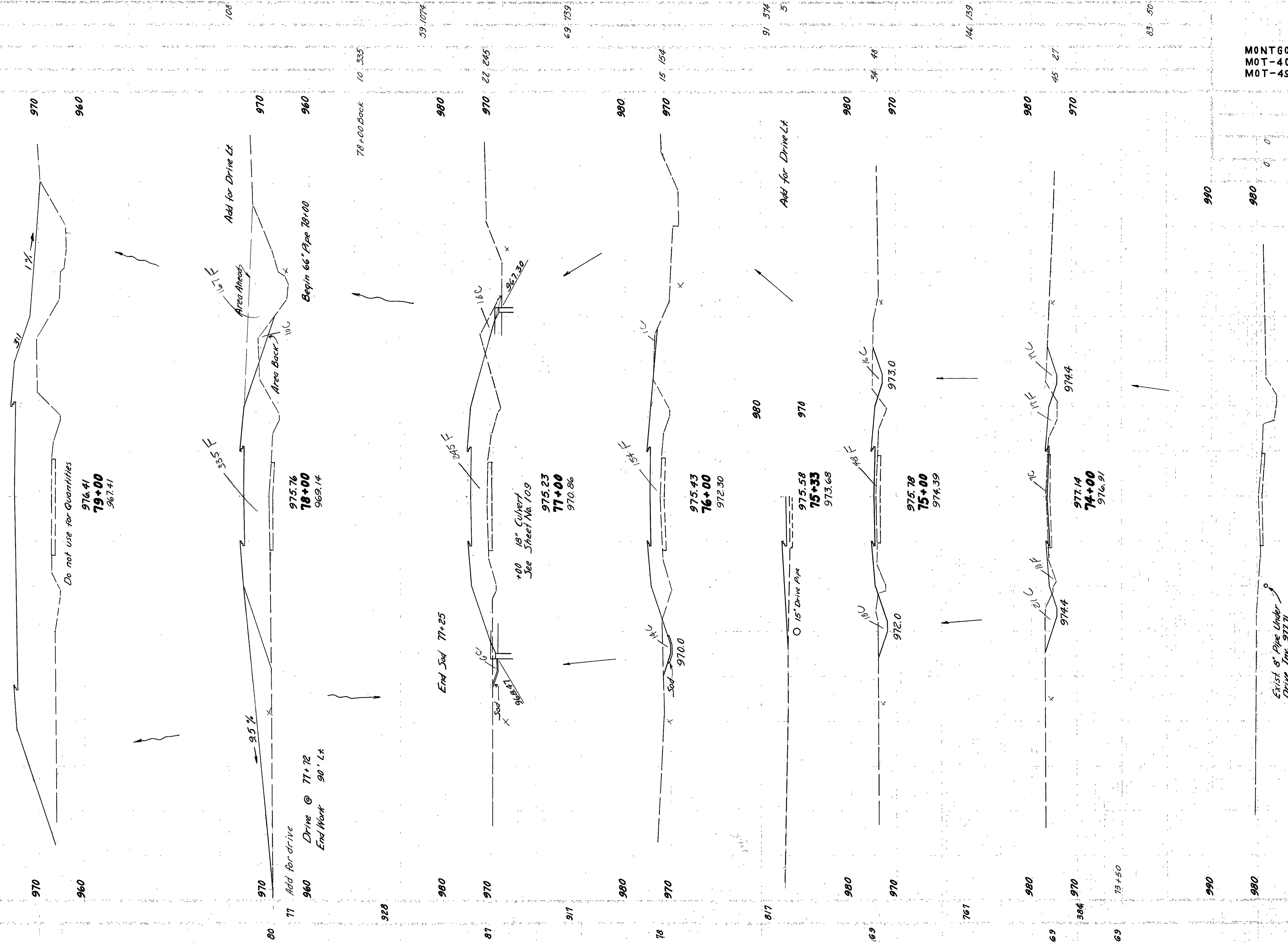
**PROPOSED STRUCTURE DATA**  
TYPE: Continuous Concrete Slab with capped Pile Abutments & Piers  
SPANS: 30'-0", 37'-6", 30'-0"  
ROADWAY: 40' 1/8" of Guard Rail  
LOADING: CF 400  
WEARING SURFACE: 1" Monolithic Concrete  
SKEW: 22° 30' 00" Right Forward  
ALIGNMENT: Tangent  
APPROACH SLAB: A3-1-54 (85' Long)



Plan 11/19/57 D.A.B. C&D 10/10/57 S.S. C&D 10/10/57 11/19/57  
 Plot 61 F.O. 11/19/57  
 11-12-56 Seeding D.O.B. 10/10/57 C&D 10/10/57

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90  
 BEEDING L.F.S.Y. AREA VOLUME C.F. C.F. C.F.

S.R. 49 INTERSECTION S.B.



Do not use for Quantities

976.41  
**79+00**  
 967.41

77 Add for drive  
 Drive @ 77+72  
 End Work 90' Lt.

975.76  
**78+00**  
 969.14

Begin 66" Pipe 78+00

78+00 Back 10 335

End Sod 77+25

+00 15" Culvert  
 See Sheet No. 109

975.23  
**77+00**  
 970.86

975.43  
**76+00**  
 972.30

975.58  
**75+33**  
 973.68

Add for Drive Lt.

975.78  
**75+00**  
 974.39

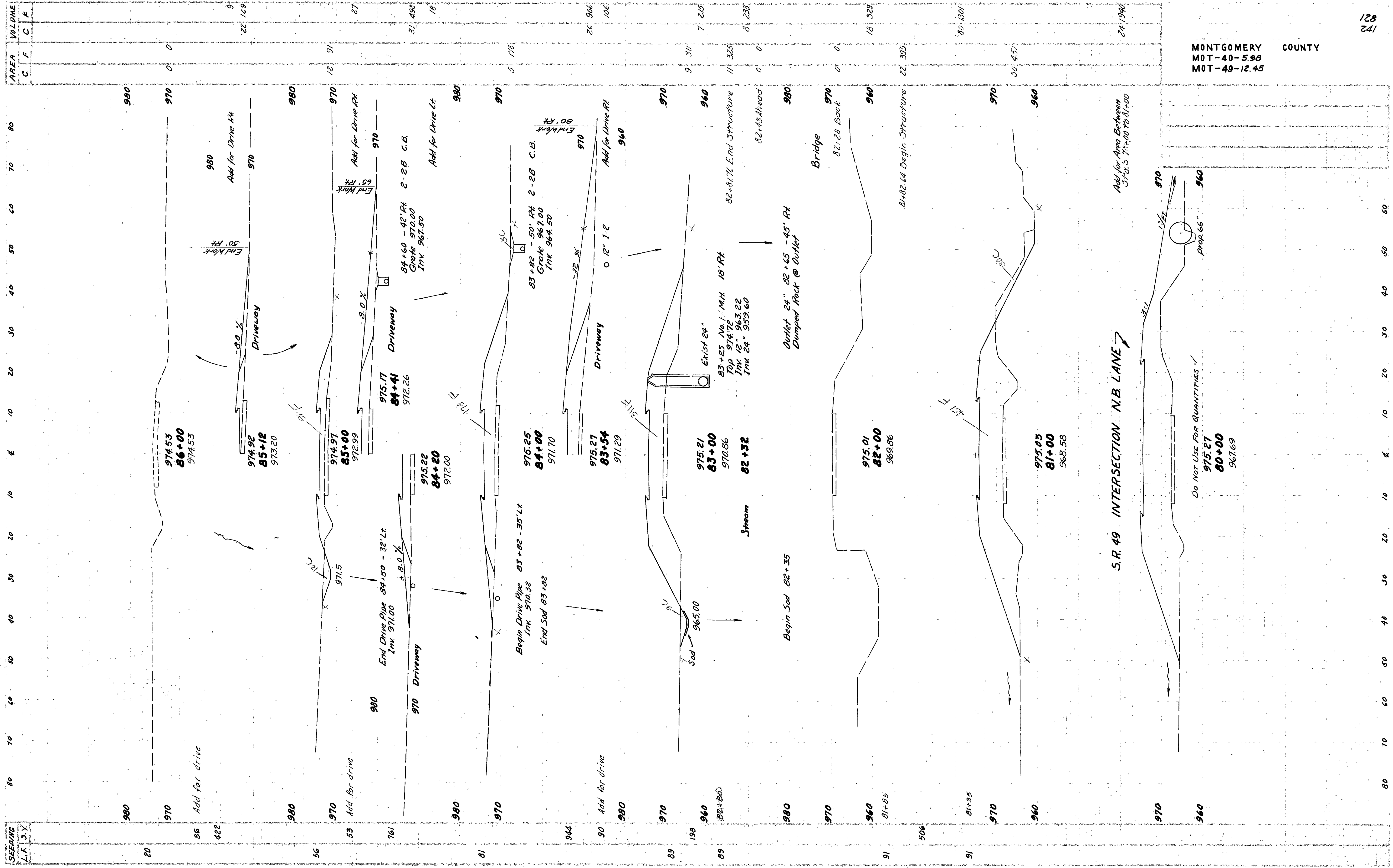
977.14  
**74+00**  
 976.91

979.60  
**73+00**  
 979.60

Exist 5" Pipe Under  
 Drive Im. 977.71

MONTGOMERY COUNTY  
 MOT-40-5.98  
 MOT-49-12.45

C&D Plan 19/11/53  
 Planning for D.A.E. Earthworks, D.A.E. 19/11/53  
 Planning for D.A.E. Earthworks, D.A.E. 19/11/53  
 Plotting FO Seeding Data 10/30/57 Old 19/57/58  
 12/20/56



AREA	VOLUME
C	F
20	0
21	16
22	160
23	27
24	31
25	480
26	18
27	26
28	906
29	106
30	9
31	311
32	7
33	205
34	11
35	325
36	0
37	0
38	0
39	0
40	0
41	0
42	0
43	0
44	0
45	0
46	0
47	0
48	0
49	0
50	0
51	0
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78	0
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80	0
81	0
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83	0
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86	0
87	0
88	0
89	0
90	0
91	0
92	0
93	0
94	0
95	0
96	0
97	0
98	0
99	0
100	0

MONTGOMERY COUNTY  
 MOT-40-5.98  
 MOT-49-12.45

172

S.R. 49 INTERSECTION N.B. LANE

Do Not Use For QUANTITIES ✓  
 975.27  
 80+00  
 967.69

80+00 + 96+00 BROOKVILLE - SALEM ROAD

Plot  
12-31-50  
P.W.D.

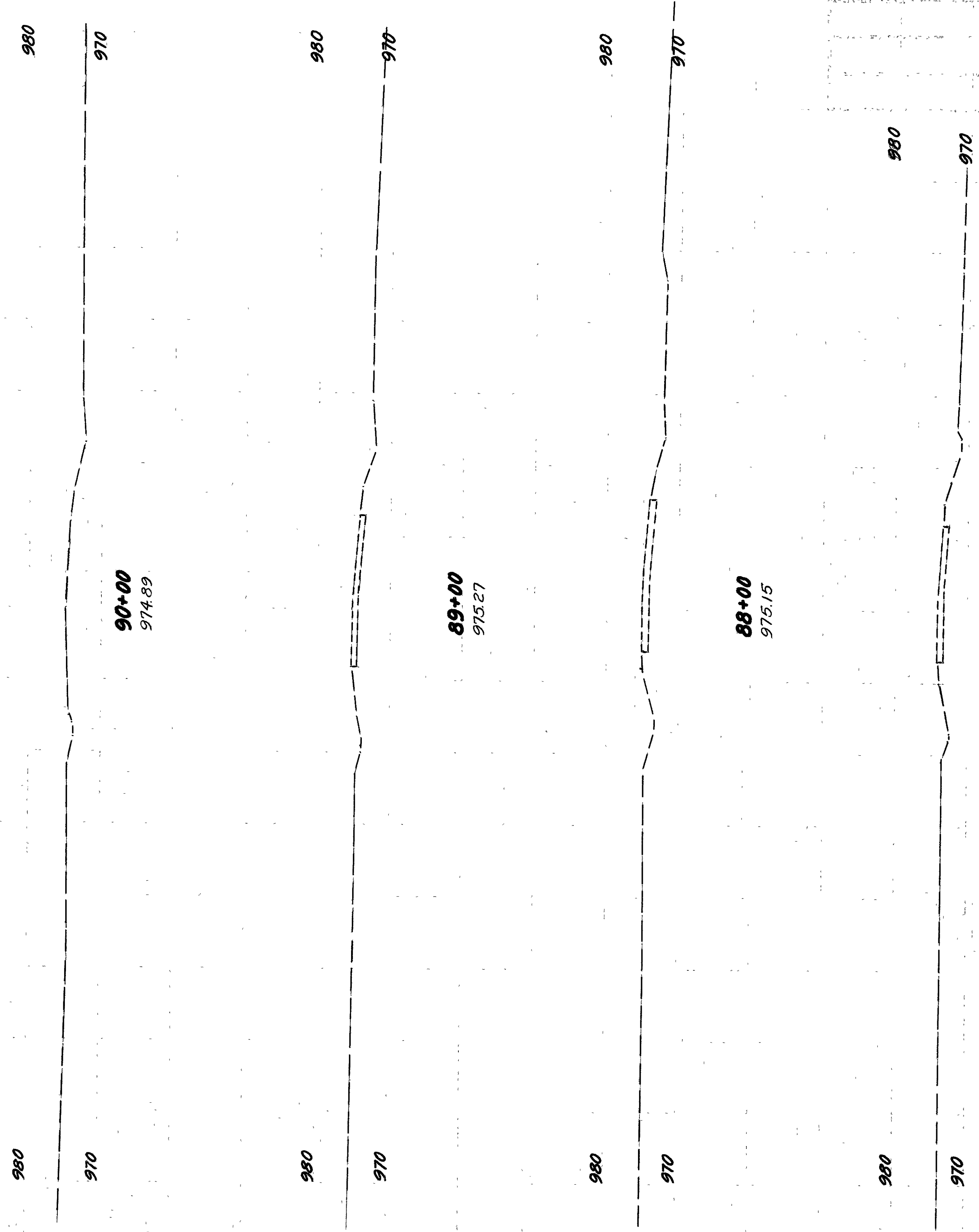
AREA  
C F C F

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

SEEDING  
L.F. S.Y.

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

129  
241



80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80



JOHN M. SAYLOR

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-43-12.45

LEGEND  
6" B-119  
2" T-35  
5" B-119

S.R. 43 CURVE DATA  
PI = 507+77.94  
Δ = 83° 12' 00"  
D = 2° 30'  
Ls = 300'  
Lc = 1028.00'  
Ts = 833.69'  
Os = 5° 45'  
Xc = 299.87'  
Yc = 6.54'

MILDRED BOOMERSHINE  
1-5 Fr. barn

RALPH BOOMERSHINE

52+17 PLEASANT PLAIN RR. to 309+00 S.R. 49  
L-10 38 S.Y. Sod.

51+40  
Comb. M.B. Appr  
T-35 1.7 C.Y.  
B-119 4.3 C.Y.

Existing Pavt. Data  
15" Bit Surface Treatment

309+25 J.R. 49 to 56+00  
L-10 110 S.Y. Sod.

RICHARD E. & MARY ANN GROSKEY.

EDWARD F. GROSKEY.

50+85  
Type 2 Res. Dr  
T-35 38 C.Y.  
B-119 17.6 C.Y.  
I-1 44'-12"

51+68  
Type 2 Res. Dr.  
T-35 38 C.Y.  
B-119 14.4 C.Y.  
I-1 15'-12"

ROBERT L. & MARTHA L. CORDER

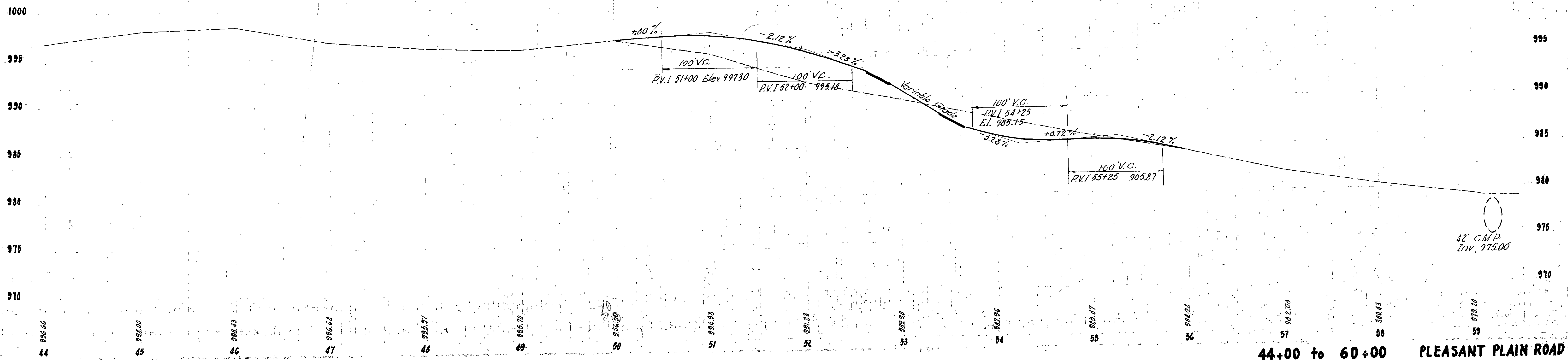
JOHN S. & BEATRICE M. SOLENBERGER

JAMES F. & CLARA C. EGAN

CARL & ADA YARDY

995.50  
992.70  
992.90  
997.01  
996.94  
996.68  
996.24  
995.67  
995.03  
994.32  
993.54

986.79  
986.10  
985.65  
985.46  
985.51  
985.00  
985.52  
985.25  
984.81  
984.28



Vertical curve data and notes for the profile view.

42' C.M.P.  
Inv. 975.00

44+00 to 60+00 PLEASANT PLAIN ROAD

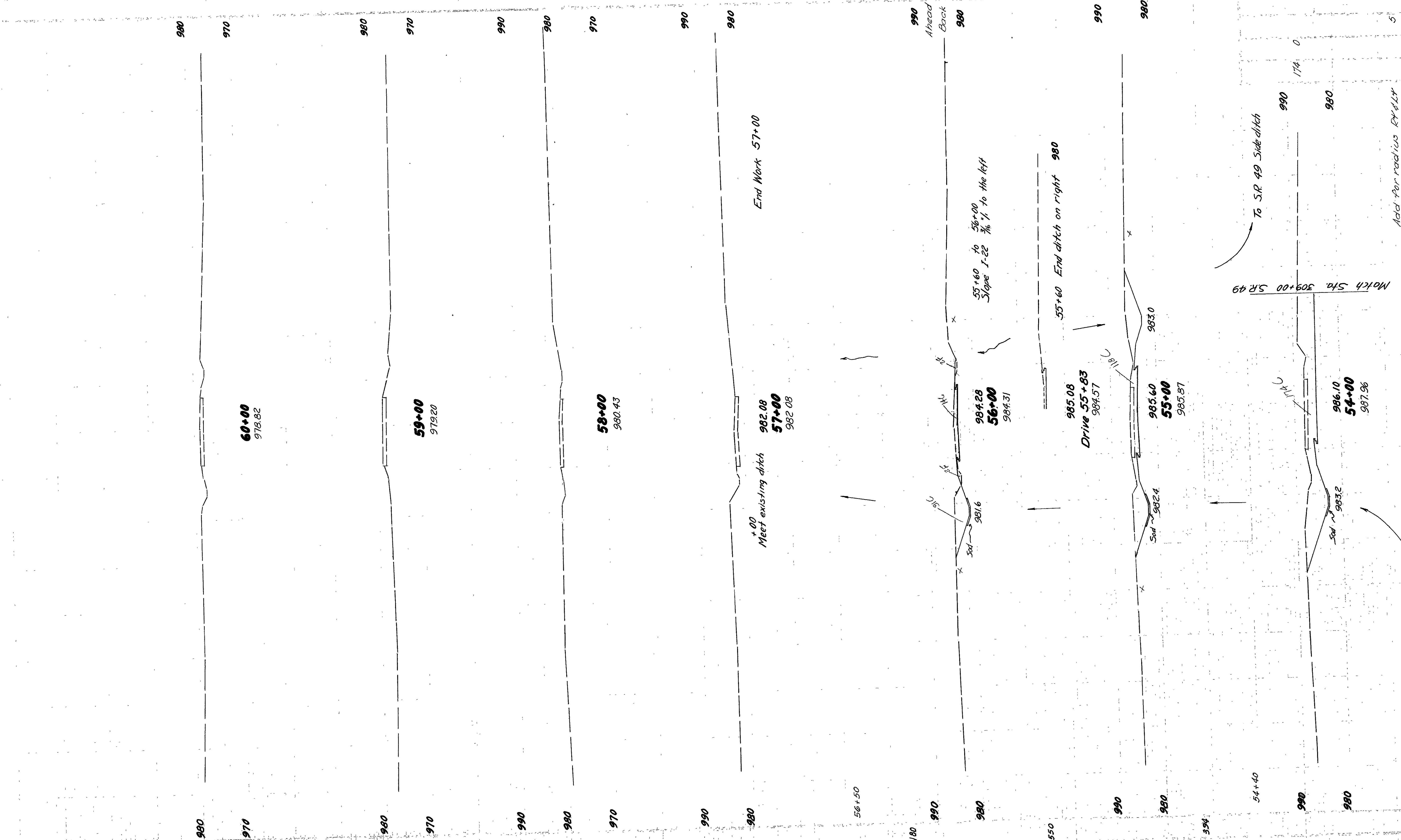


Plan 10/1/57 D.A.B. CK'D 11/1/57  
 Sounding D.A.B. 10/30/57 CK'D 12/1/57  
 CK'D EARTHWORK 11/5/57

AREA VOLUME  
 C F C F

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

SEEDING  
 L.F. S.F.



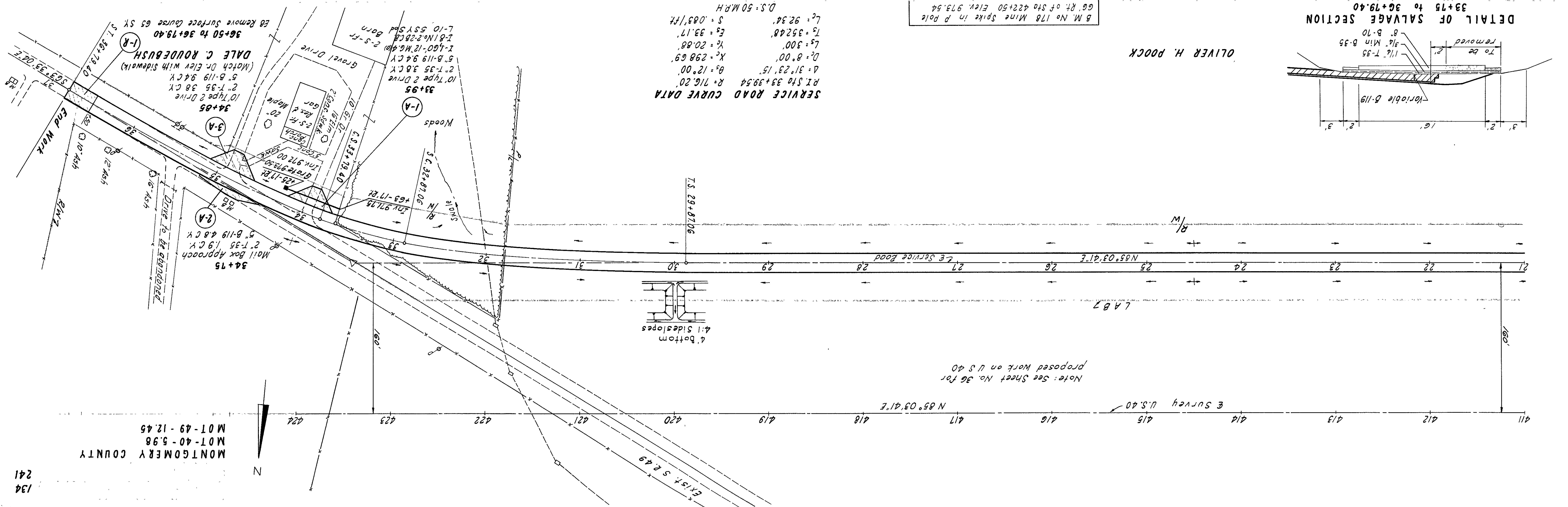
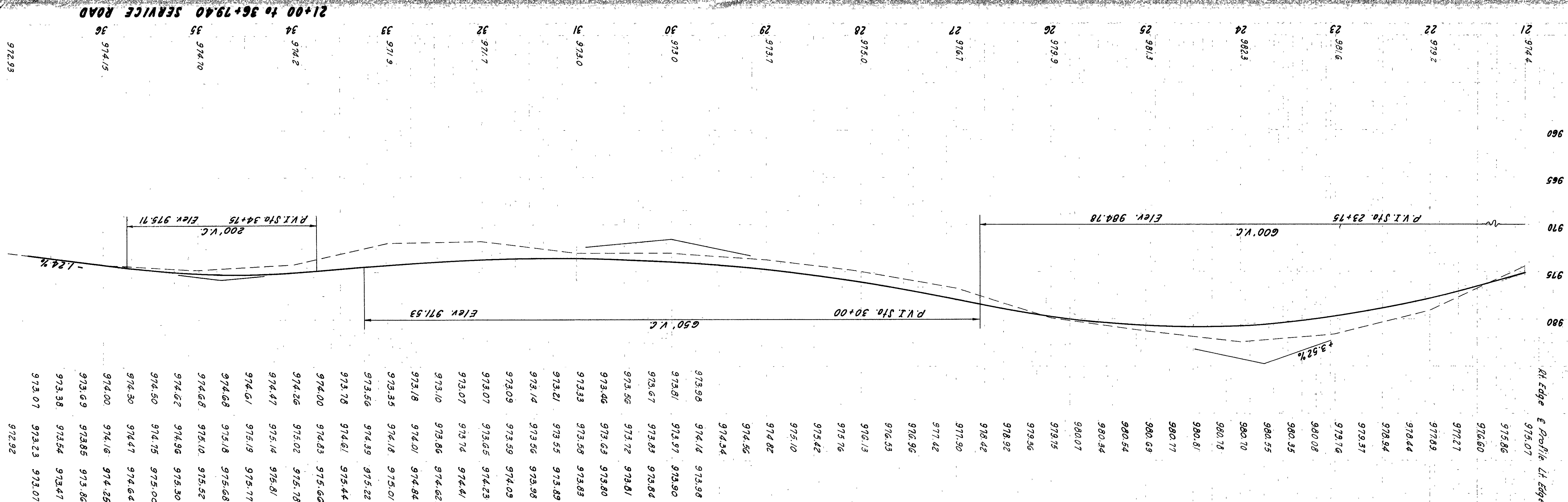
MONTGOMERY COUNTY  
 MOT-40-  
 MOT-49-

Add for radius RYELY  
 Begin Quantities 54+00

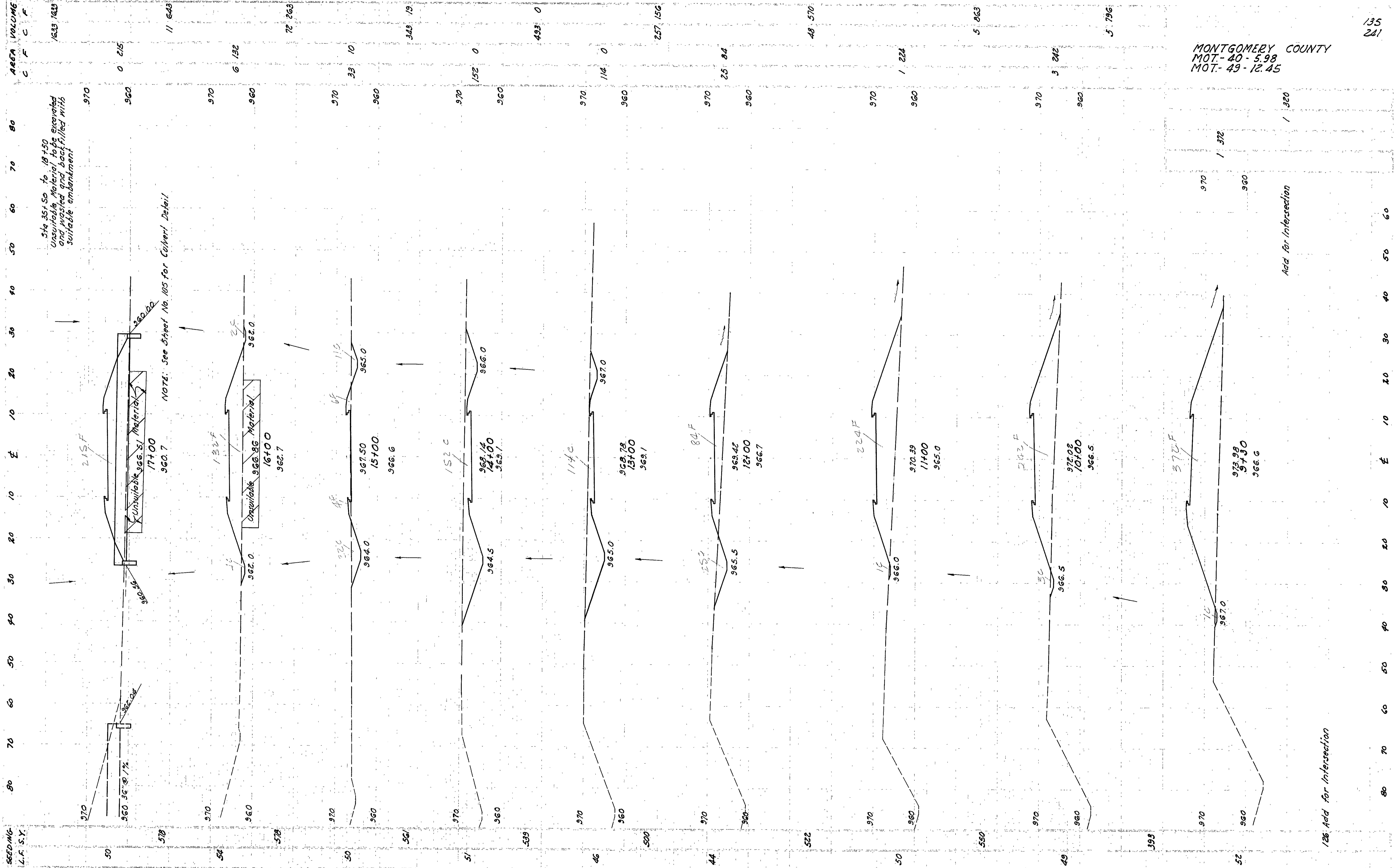
54+00 to 60+00 PLEASANT PLAIN RL

132  
 241





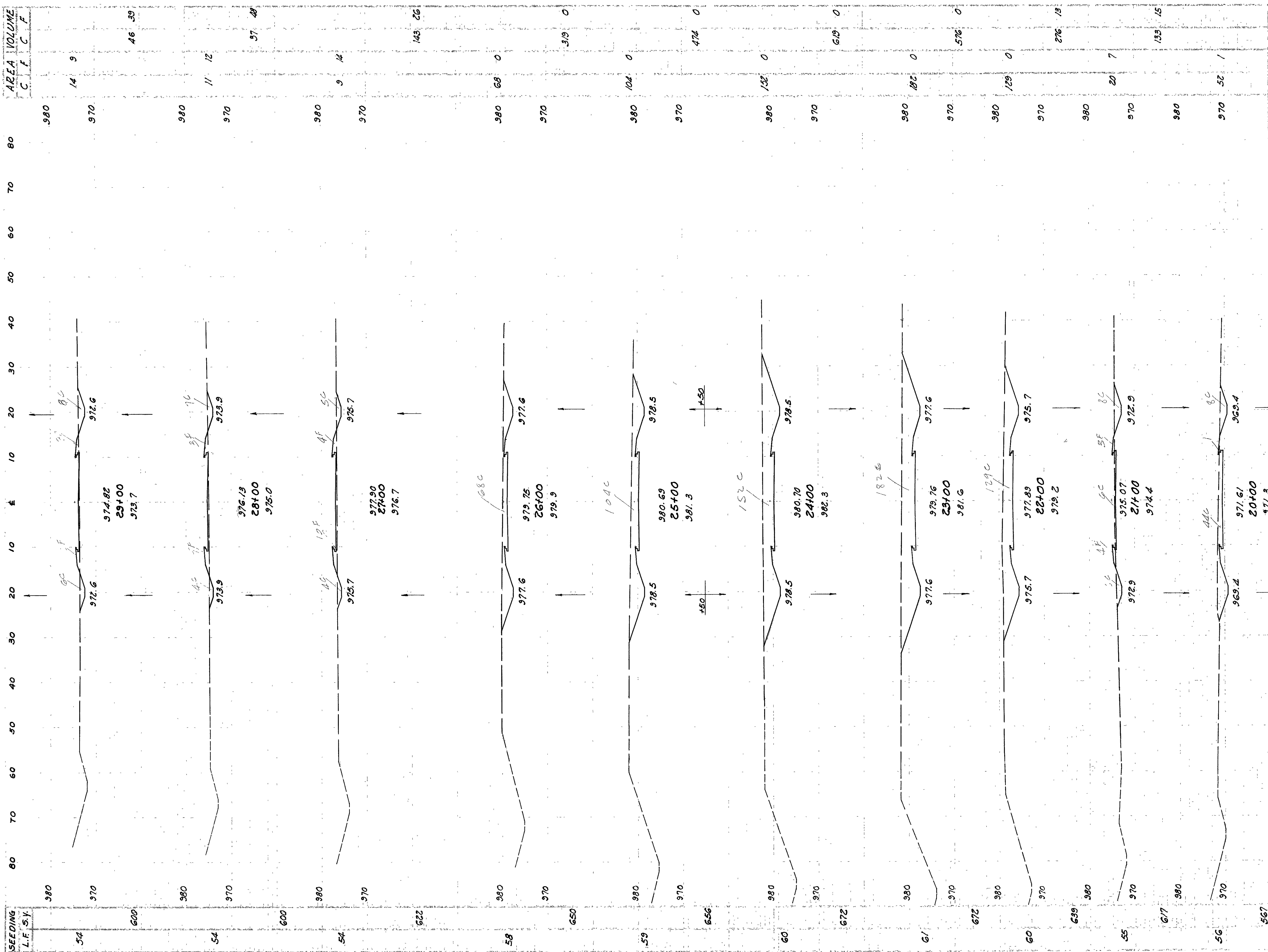
MONTGOMERY COUNTY  
 NOT-40-5.98  
 MOT-49-12.45



MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

126 Add for Intersection

Add for Intersection

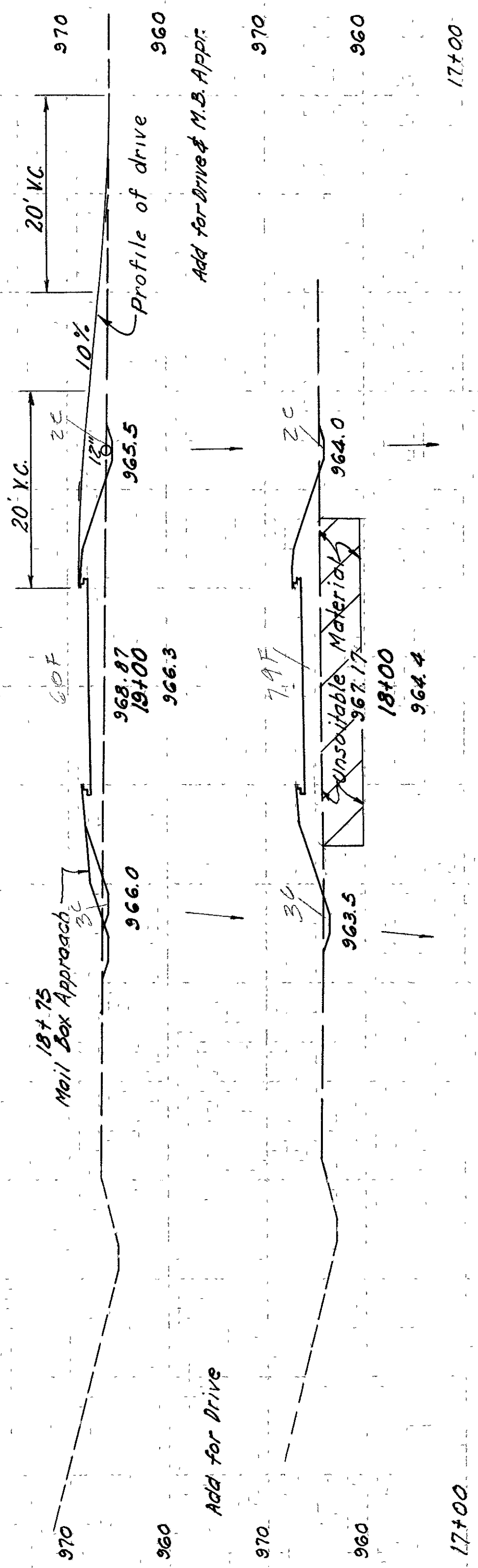


MONTGOMERY COUNTY  
 MOT. - 40-5.98  
 MOT. - 49-12.45

136  
241

SEEDING  
L.F. S.Y.

54  
600  
54  
600  
58  
650  
59  
656  
60  
672  
61  
679  
60  
638  
55  
677  
56  
567  
46  
511  
45  
46  
533  
50



18+00 TO 29+00 SERVICE ROAD

17+00

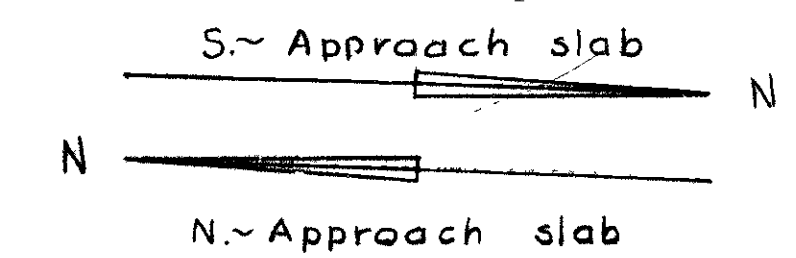
0.215

17+00

0.215

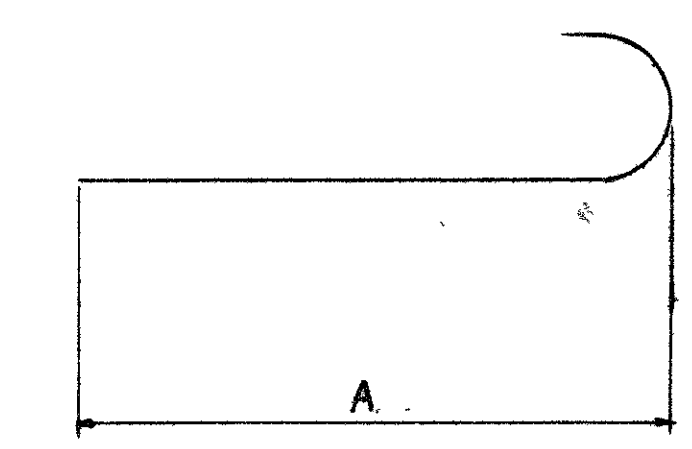
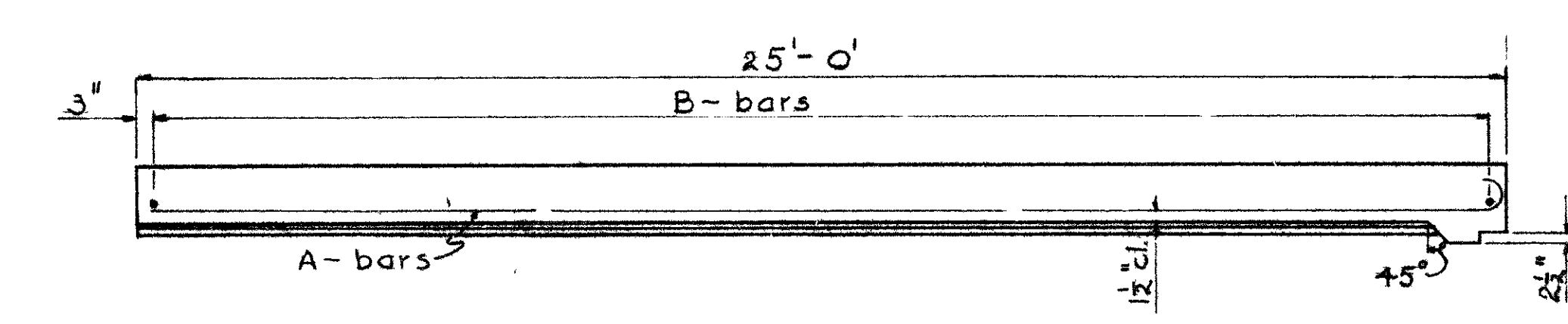
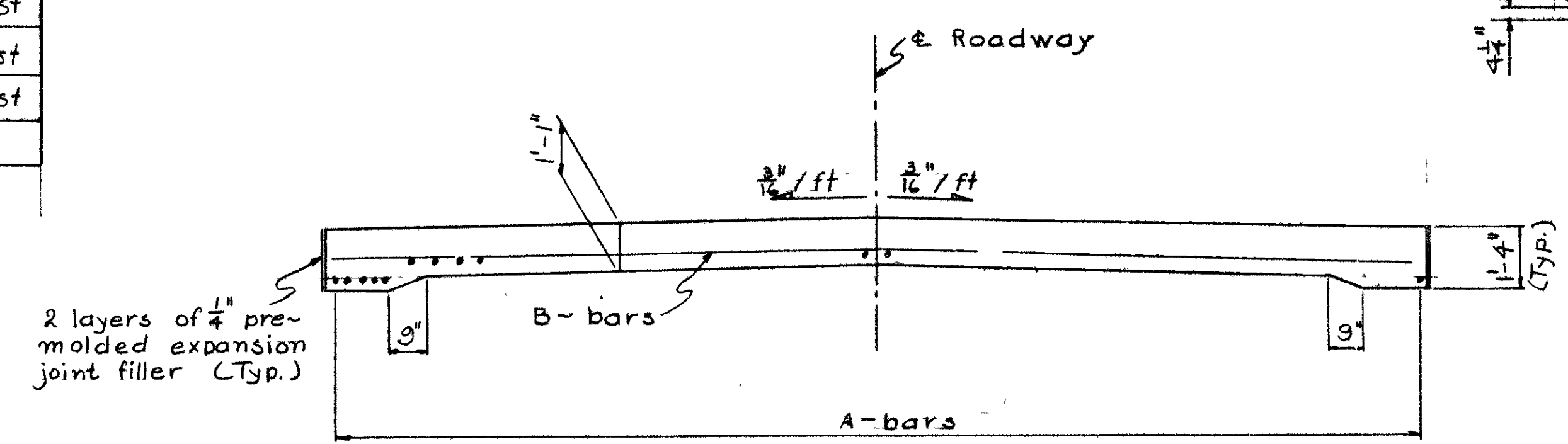
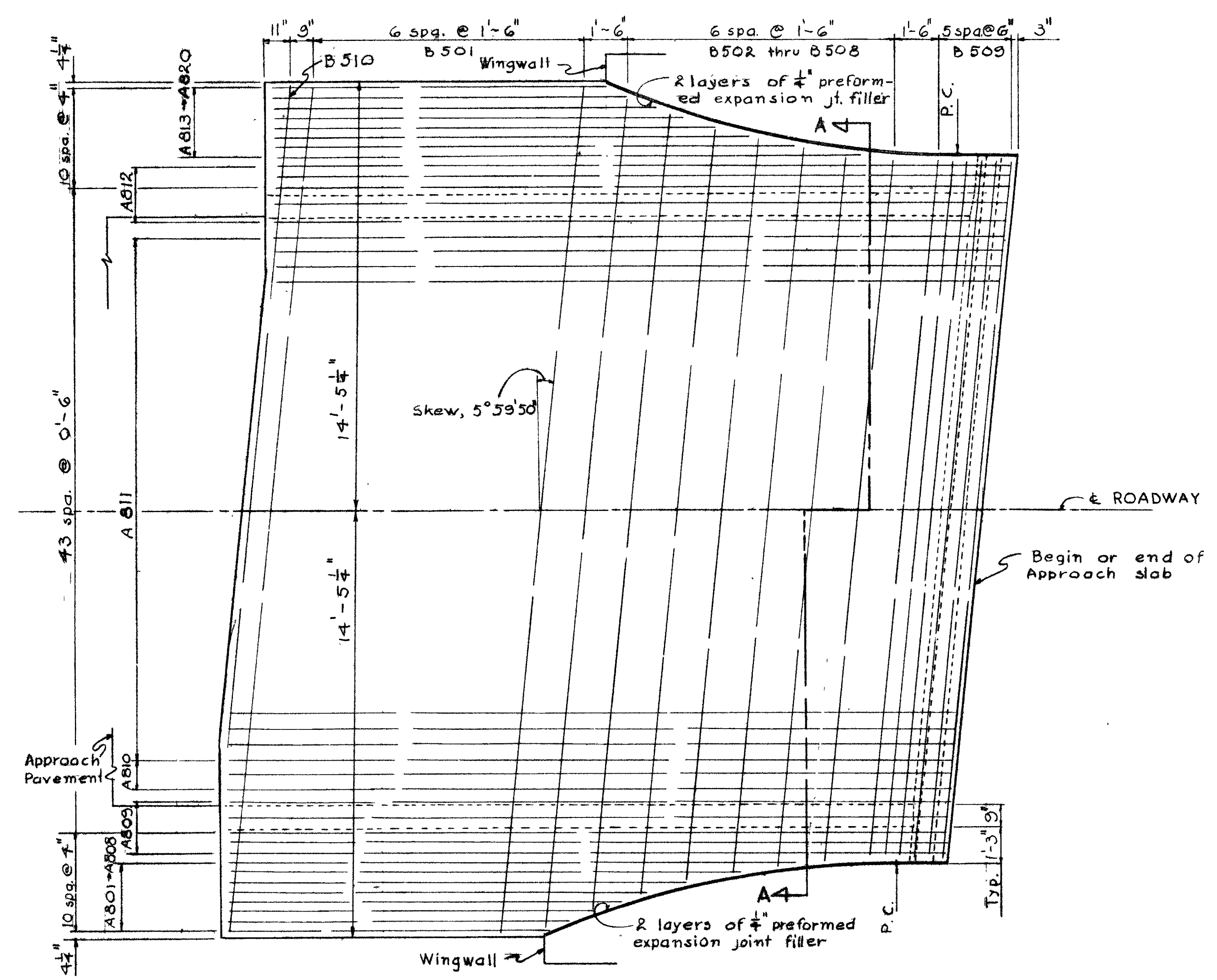






REINFORCING STEEL LIST					
MARK	Nº	LENGTH	A	TYPE	SHP.
A 801	1	11-10	10-9	1	bt
A 802	1	12-7	11-6	1	bt
A 803	1	13-4	12-3	1	bt
A 804	1	14-4	13-3	1	bt
A 805	1	15-5	14-4	1	bt
A 806	1	16-9	15-8	1	bt
A 807	1	18-4	17-3	1	bt
A 808	1	20-4	19-3	1	bt
A 809	5	25-2	24-1	1	bt
A 810	3	25-4	24-3	1	bt
A 811	35	25-7	24-6	1	bt
A 812	5	25-10	24-9	1	bt
A 813	1	21-1	20-0	1	bt
A 814	1	19-1	18-0	1	bt
A 815	1	17-5	16-4	1	bt
A 816	1	16-3	15-2	1	bt
A 817	1	15-4	14-3	1	bt
A 818	1	14-3	13-2	1	bt
A 819	1	13-6	12-5	1	bt
A 820	1	12-5	11-4	1	bt
B 501	7	28-8			st
B 502	1	28-3			st
B 503	1	27-0			st
B 504	1	26-0			st
B 505	1	25-3			st
B 506	1	24-6			st
B 507	1	24-0			st
B 508	1	23-9			st
B 509	6	23-6			st
B 510	1	22-3			st

NOTES:  
 Reinforcing steel listed is for one approach slab.  
 Transverse reinforcing steel shall be placed parallel to the skew.  
 I-22, the same thickness as on the approach roadway, shall be used under the entire area of the approach slab.  
 Preformed expansion joint filler shall be included with the approach slab for payment.  
 Concrete shall be Class "C"  
 For details of Wingwalls see Abutment Details, Sheet 156



TYPE 1

SECTION A-A

SECTION ALONG ROADWAY

ALDEN E. STILSON & ASSOCIATES, LIMITED  
 CONSULTING ENGINEERS  
 COLUMBUS, OHIO

APPROACH SLAB DETAILS  
 BRIDGE Nº MOT-40-0655  
 U.S. 40 UNDER DIAMOND MILL ROAD  
 ACI-1037(4)  
 Montgomery County Sta. 3+7.48.69

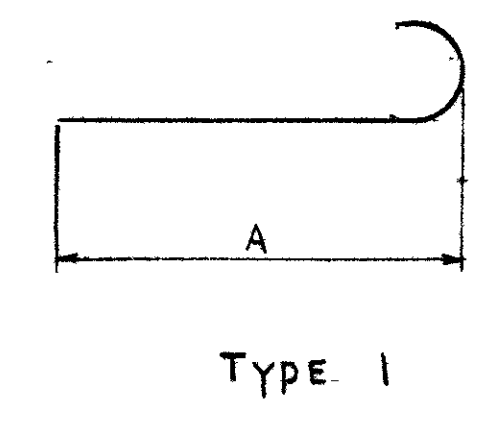
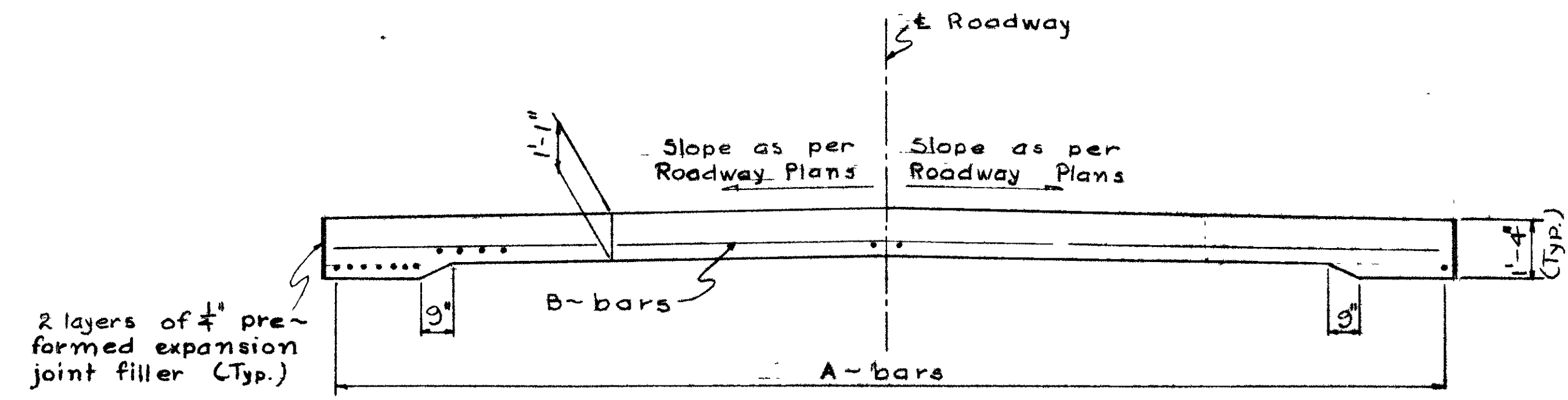
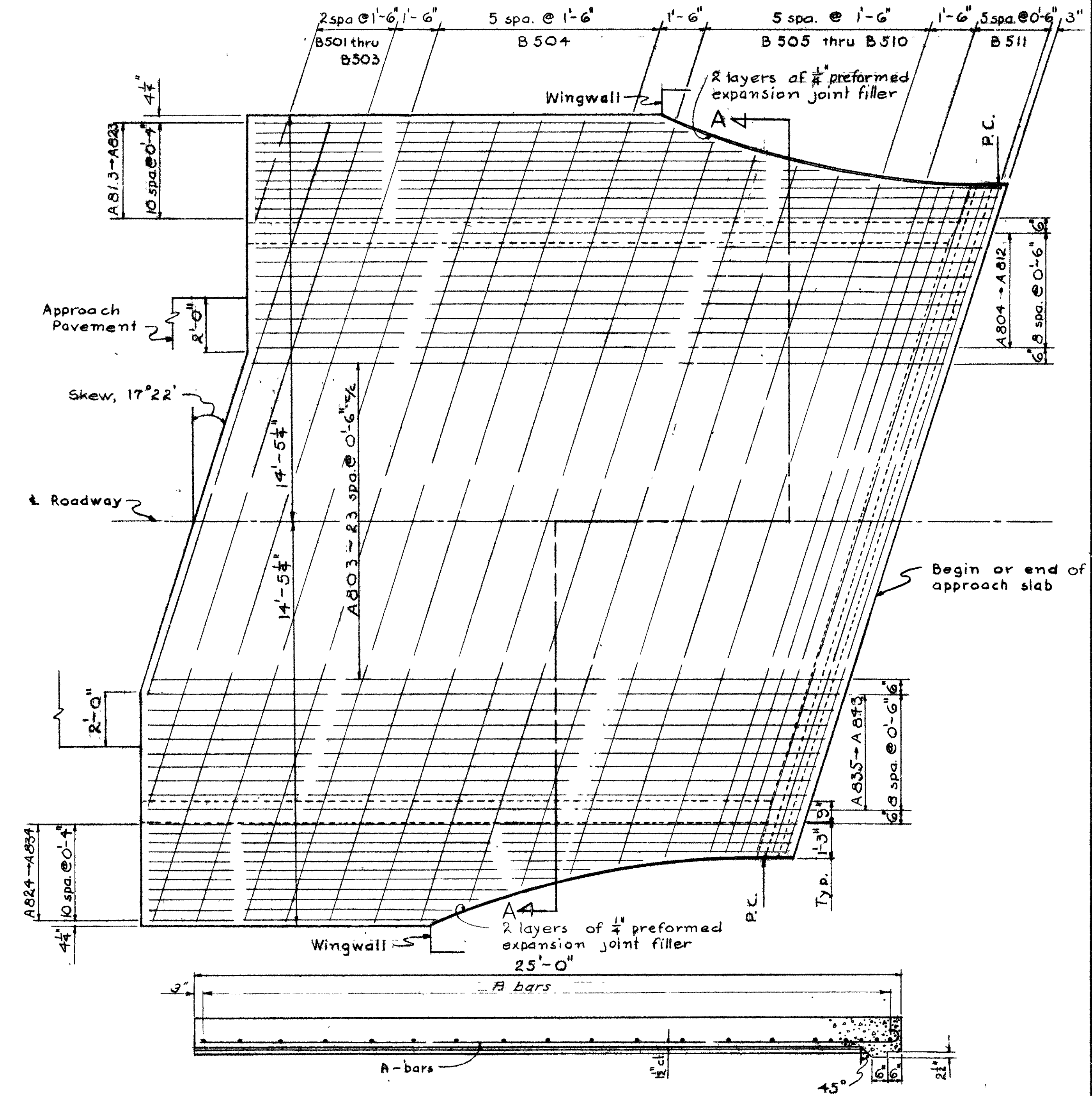
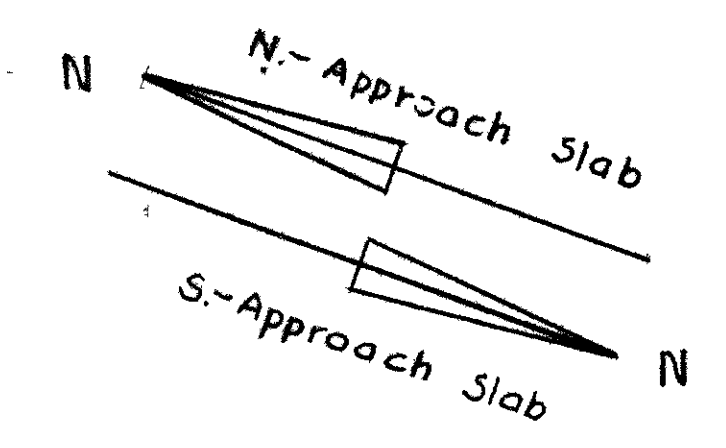
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	C.B.R.		J.O.R.	TLU	1-8-58	

5/15/58

REINFORCING STEEL LIST

MARK	№	LENGTH	A	TYPE	SH#
A 803	24	25-7	24-6	1	bt
A 804	1	25-8	24-7	1	bt
thru increments of 2"					
A 815	1	27-6	26-5	1	bt
A 816	1	27-7	26-0	1	bt
A 817	1	22-10	21-9	1	bt
A 818	1	21-0	19-11	1	bt
A 819	1	19-2	18-1	1	bt
A 820	1	18-4	17-3	1	bt
A 821	1	17-4	16-3	1	bt
A 822	1	16-5	15-4	1	bt
A 823	1	15-7	14-6	1	bt
A 824	1	11-3	10-2	1	bt
A 825	1	11-9	10-8	1	bt
A 826	1	12-9	11-8	1	bt
A 827	1	13-9	12-8	1	bt
A 828	1	15-7	14-6	1	bt
A 829	1	16-8	15-7	1	bt
A 830	1	18-7	16-6	1	bt
A 831	1	23-6	22-5	1	bt
thru increments of 2"					
A 843	1	25-6	24-5	1	bt
B 501	1	3-8			st
B 502	1	21-4			st
B 503	1	25-6			st
B 504	6	29-9			st
B 505	1	29-6			st
B 506	1	28-5			st
B 507	1	27-3			st
B 508	1	26-5			st
B 509	1	25-8			st
B 510	1	25-0			st
B 511	6	24-9			st

NOTES:  
 Prefomed expansion joint filler shall be included with the approach slab for payment.  
 I-22, the same thickness as on the approach roadway, shall be used under the entire area of the approach slab.  
 Transverse steel shall be placed parallel to the skew.  
 Reinforcing steel listed is for one approach slab.  
 For details of wingwalls see Abutment Details, sheet N° 172.  
 Concrete shall be Class "C".



SECTION ALONG ROADWAY

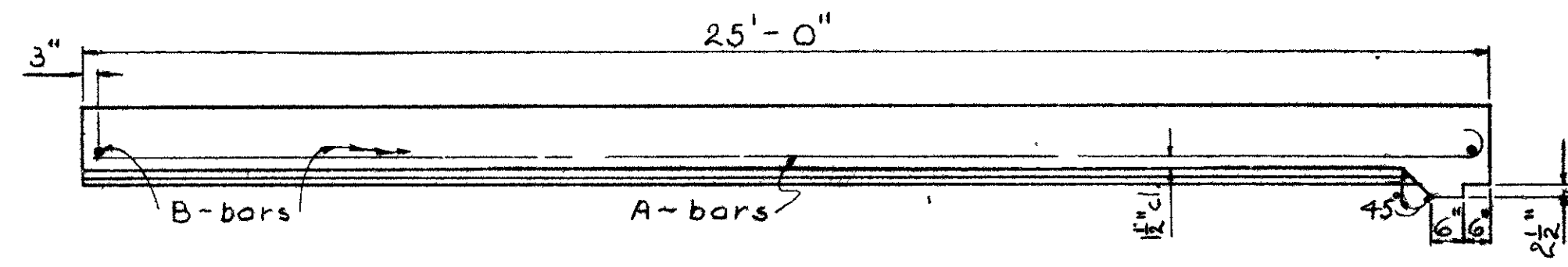
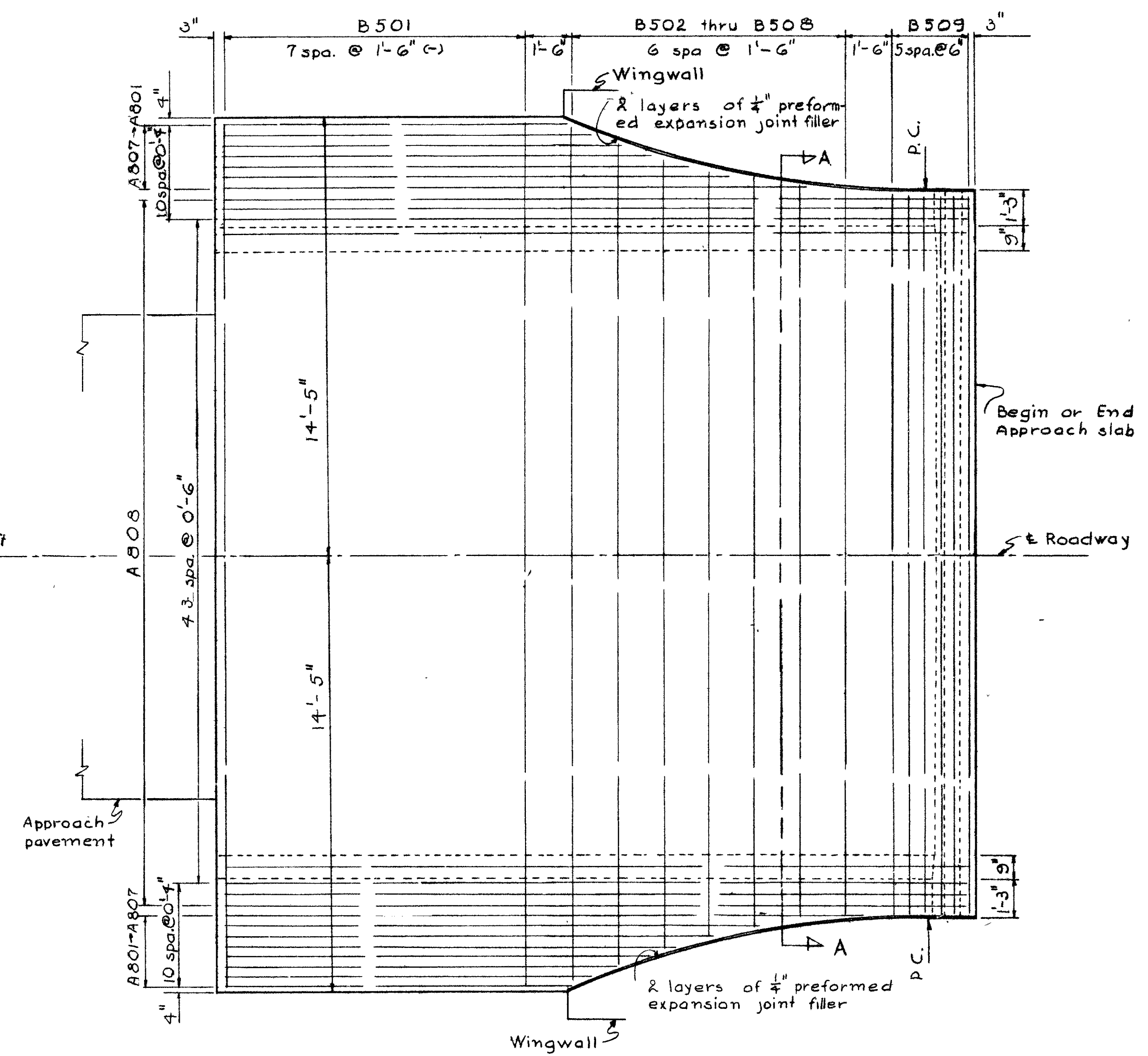
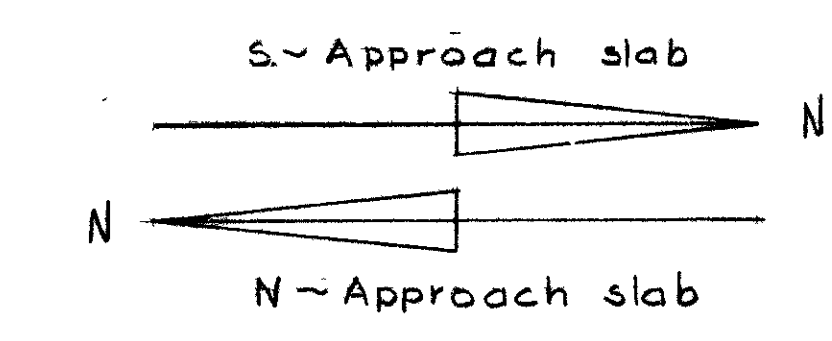
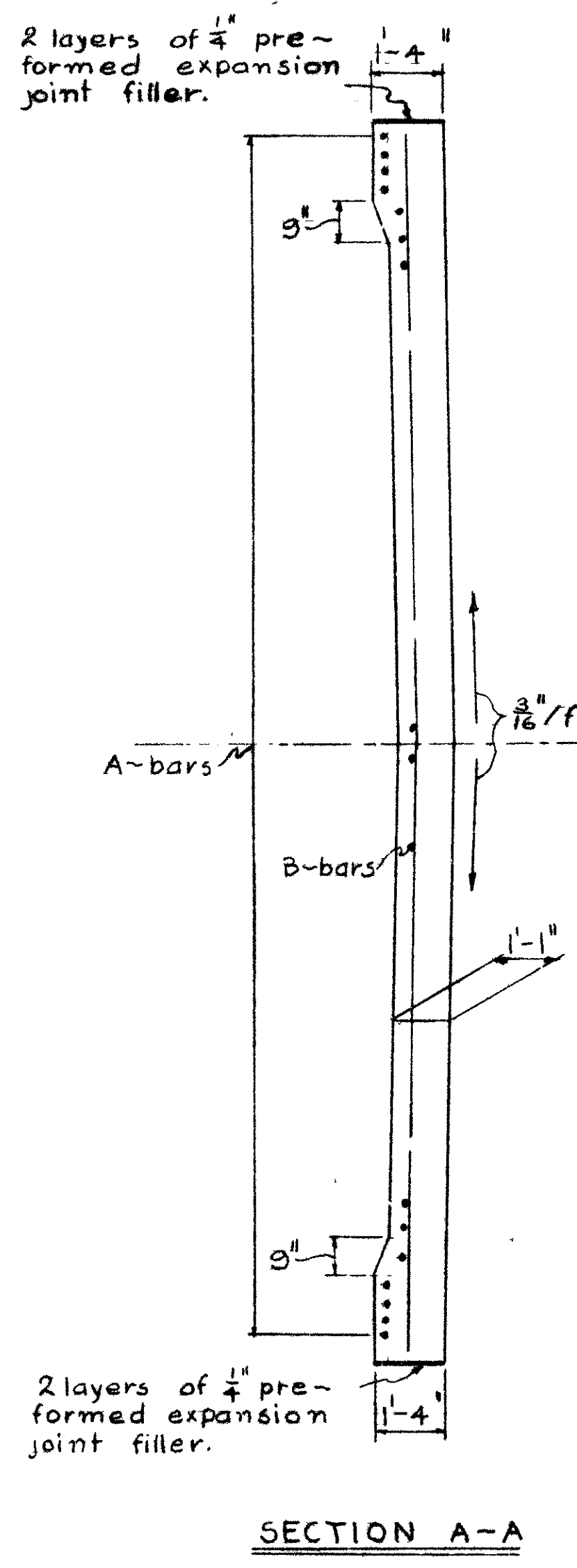
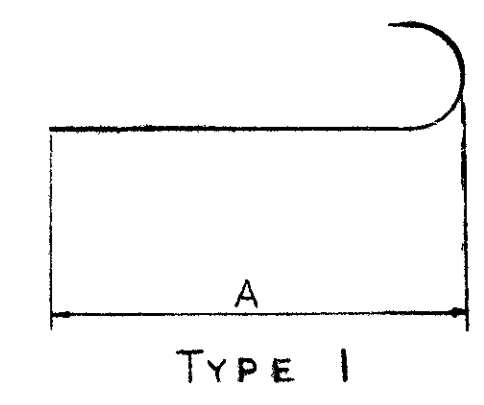
ALDEN E. STILSON & ASSOCIATES, LIMITED  
 CONSULTING ENGINEERS  
 COLUMBUS, OHIO

APPROACH SLAB DETAILS  
 BRIDGE N° MOT-40-0700  
 U.S.R. 40 UNDER KIMMEL ROAD  
 ACI-1097(4)  
 Montgomery County Sta. 371+75.47

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	C.B.R.		J.O.R.	T.L.U.	4-8-58	

REINFORCING STEEL LIST					
MARK	Nº	LENGTH	TYPE	A	SHP.
A 801	2	12-4	1	11-3	bt
A 802	2	13-1	1	12-0	bt
A 803	2	14-1	1	13-0	bt
A 804	2	15-1	1	14-0	bt
A 805	2	16-0	1	14-11	bt
A 806	2	17-7	1	16-6	bt
A 807	2	19-5	1	18-4	bt
A 808	50	25-7	1	24-6	bt
B 501	8	28-4			st
B 502	1	28-0			st
B 503	1	27-0			st
B 504	1	26-0			st
B 505	1	25-2			st
B 506	1	24-6			st
B 507	1	24-0			st
B 508	1	23-9			st
B 509	6	23-7			st

NOTES:  
 Preformed expansion joint filler shall be included with the approach slab for payment.  
 I-22, the same thickness as on the approach roadway, shall be used under the entire area of the approach slab.  
 Reinforcing steel as listed is for one approach slab.  
 Concrete shall be Class "C"  
 For details of wingwalls see Abutment Details, sheet N<sup>o</sup> 187



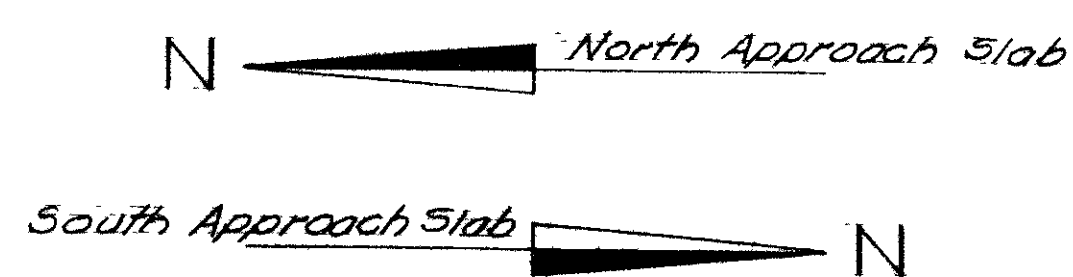
ALDEN E. STILSON & ASSOCIATES, LIMITED  
 CONSULTING ENGINEERS  
 COLUMBUS, OHIO

APPROACH SLAB DETAILS  
 BRIDGE N<sup>o</sup> MOT-40-0733  
 U.S.R. 40 UNDER CRESTWAY DRIVE  
 ACI-1097(A)  
 Montgomery County Sta. 398+36.63

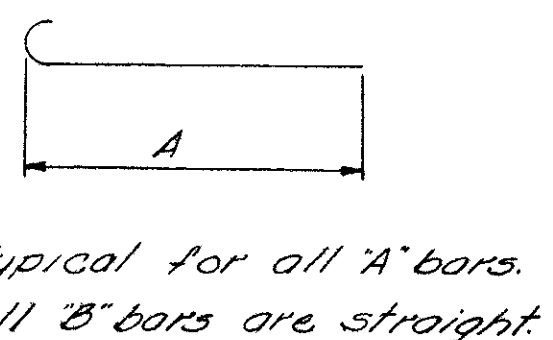
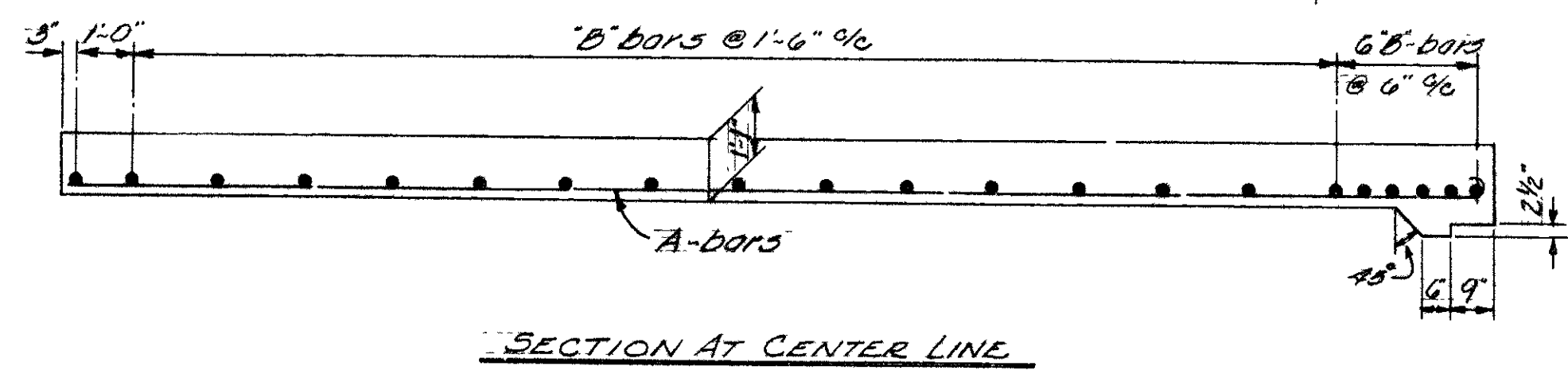
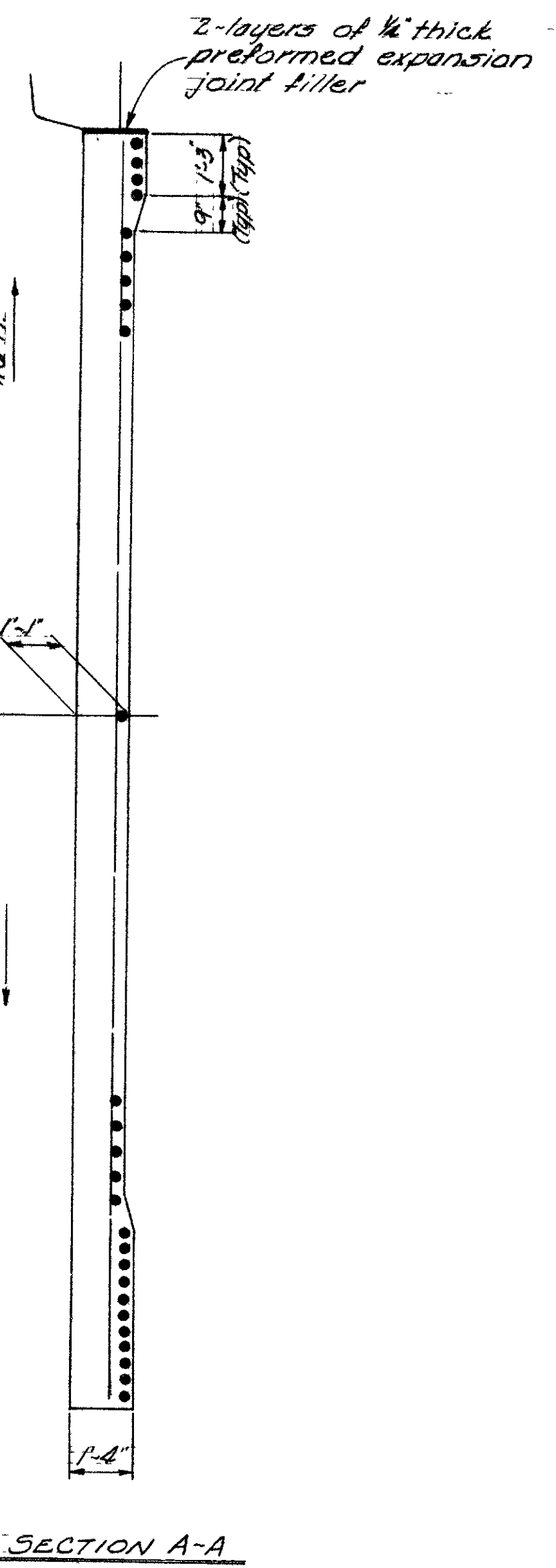
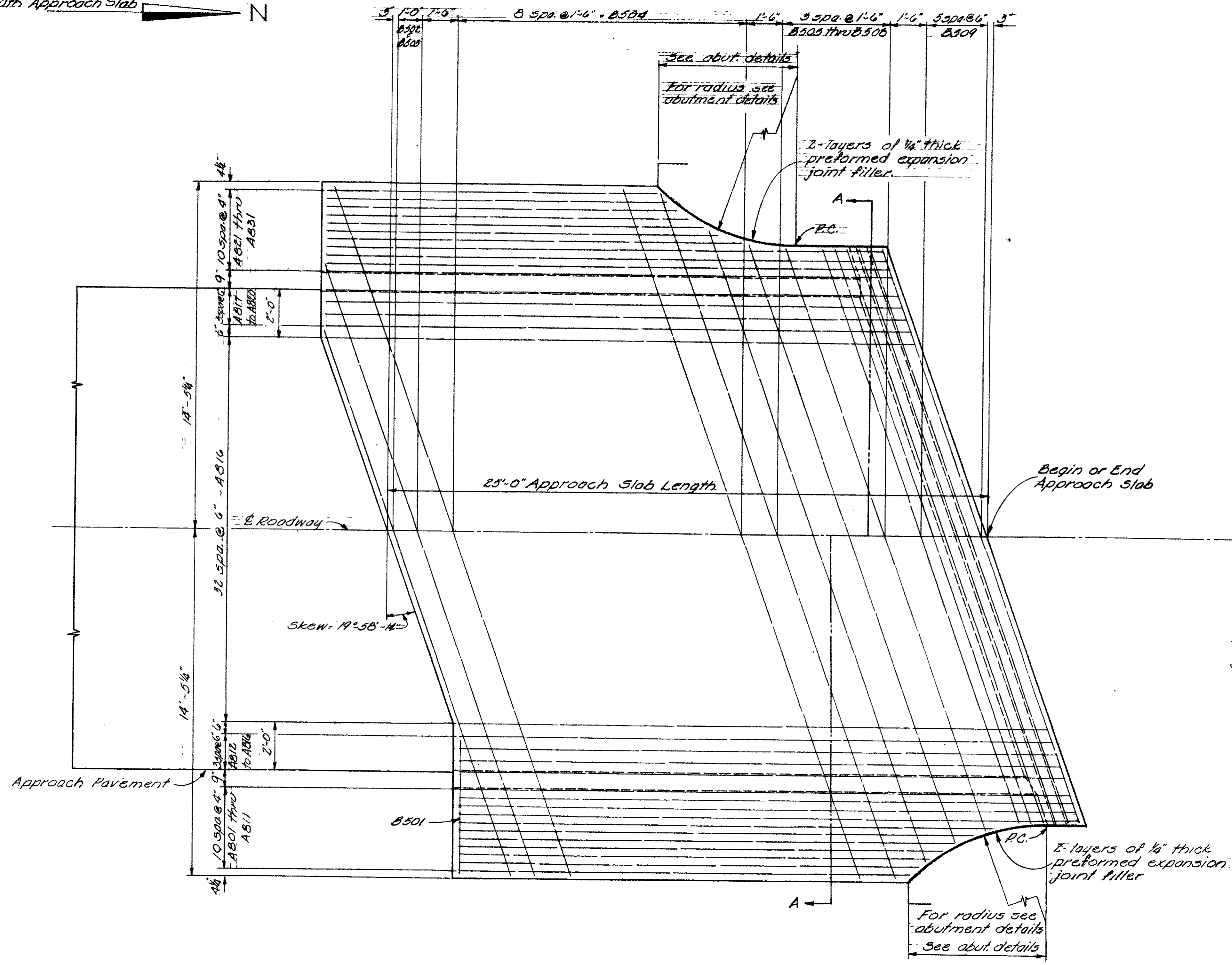
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	C.B.R.		U.O.R.	T.L.V.	1-8-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	143 241
2	OHIO			

MONTGOMERY COUNTY  
 MOT-40-5-90  
 MOT-49-12-45



REINFORCING STEEL LIST			
Mark	No.	Length	"A"
AB01	1	19-10	18-9
AB02	1	20-3	19-2
AB03	1	20-7	19-6
AB04	1	21-1	20-0
AB05	1	21-7	20-6
AB06	1	22-3	21-2
AB07	1	23-1	22-0
AB08	1	24-10	23-9
thru	Varies By 1/2"		
AB11	1	26-3 1/2	25-4 1/2
AB12	1	26-3	25-2
thru	Varies By 2"		
AB15	1	25-9	24-8
AB16	33	25-7	24-6
AB17	1	25-4	24-3
thru	Varies By 2"		
AB20	1	24-10	23-9
AB21	1	24-6	23-5
thru	Varies By 1/2"		
AB24	1	24-1 1/2	23-0 1/2
AB25	1	18-0	16-11
AB26	1	17-0	15-11
AB27	1	16-7	15-6
AB28	1	16-0	14-11
AB29	1	15-6	14-5
AB30	1	15-1	14-0
AB31	1	14-8	13-7
B501	1	5-6	
B502	1	23-8	
B503	1	26-8	
B504	9	30-2	
B505	1	29-9	
B506	1	27-7	
B507	1	26-0	
B508	1	25-5	
B509	6	25-0	



Typical for all A-bars.  
 All B-bars are straight.

- NOTES**
- Premolded Expansion Joint Filler at the edges of the approach slab shall be included with the approach slab for payment.
  - Concrete shall be Class "C"
  - It is the same thickness as on the approach roadway, shall be used under the entire area of the approach roadway.
  - For abutment details see sheet 203
  - Reinforcing Steel listed is for one approach slab.

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
 CONSULTING ENGINEERS  
 COLUMBUS, OHIO

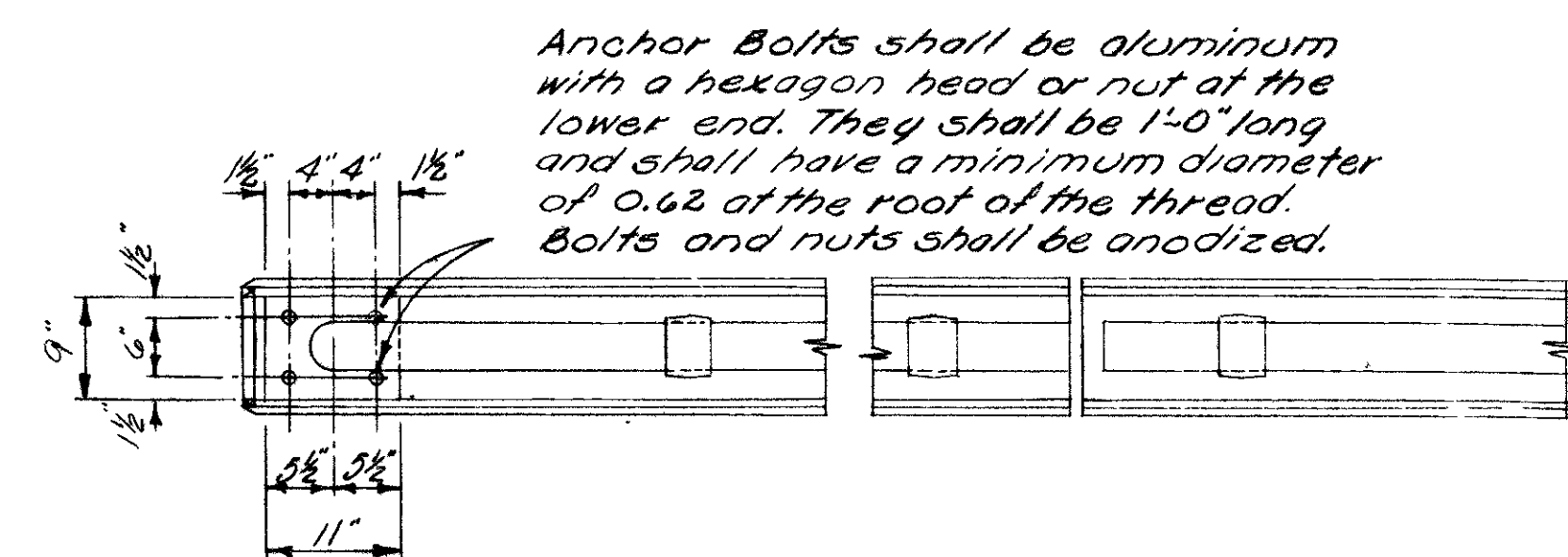
**APPROACH SLAB DETAILS**  
 BRIDGE N<sup>o</sup> MOT-49-1224  
 S.B. 5R49 UNDER DIAMOND MILL RD  
 MONTGOMERY COUNTY  
 ACI-1097(4) STA-268+21.87

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	BDB		JOR	TLU	1-8-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

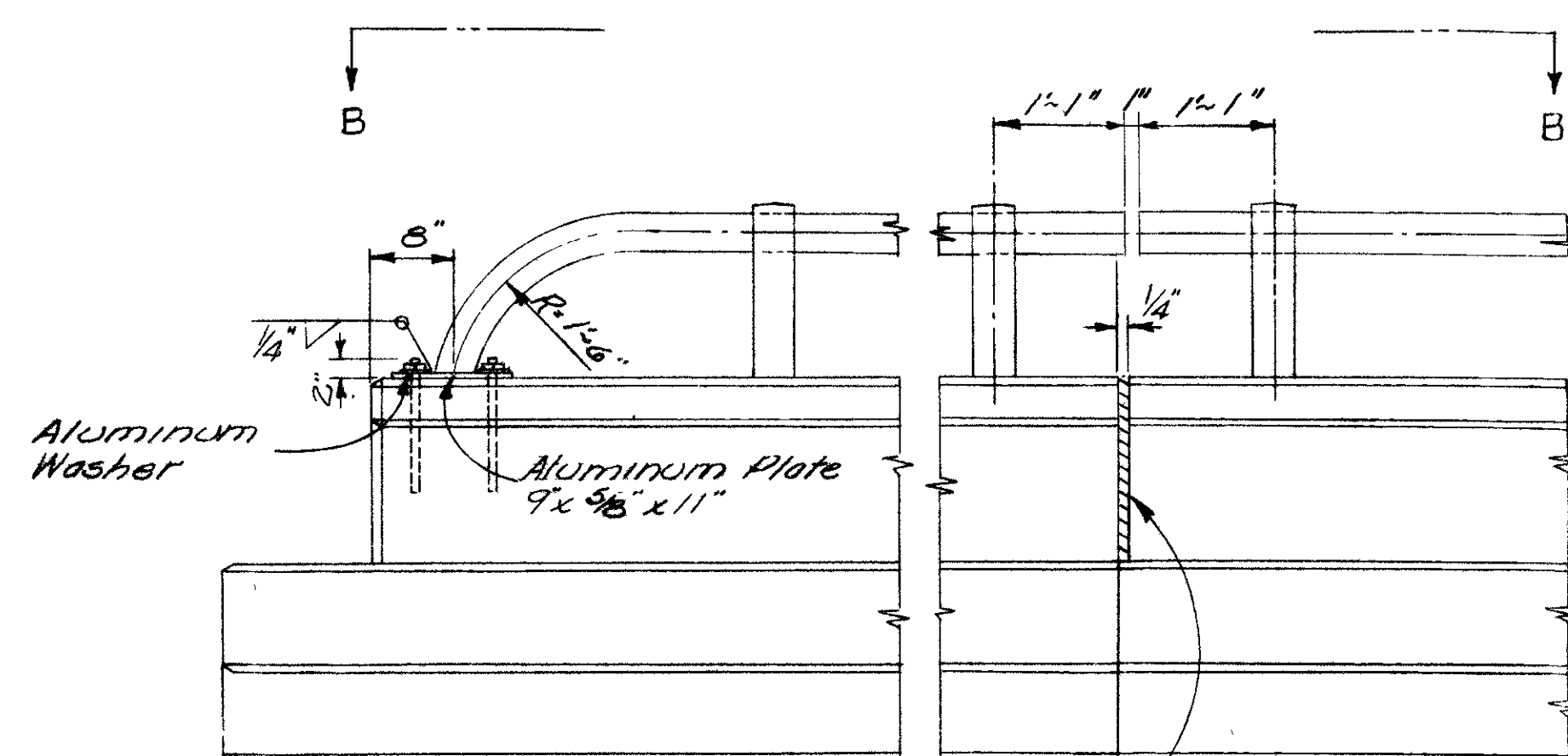
144  
241

Montgomery County  
Mot - 40 - 5.98  
Mot - 49 - 12.45



Anchor Bolts shall be aluminum with a hexagon head or nut at the lower end. They shall be 1'-0" long and shall have a minimum diameter of 0.62 at the root of the thread. Bolts and nuts shall be anodized.

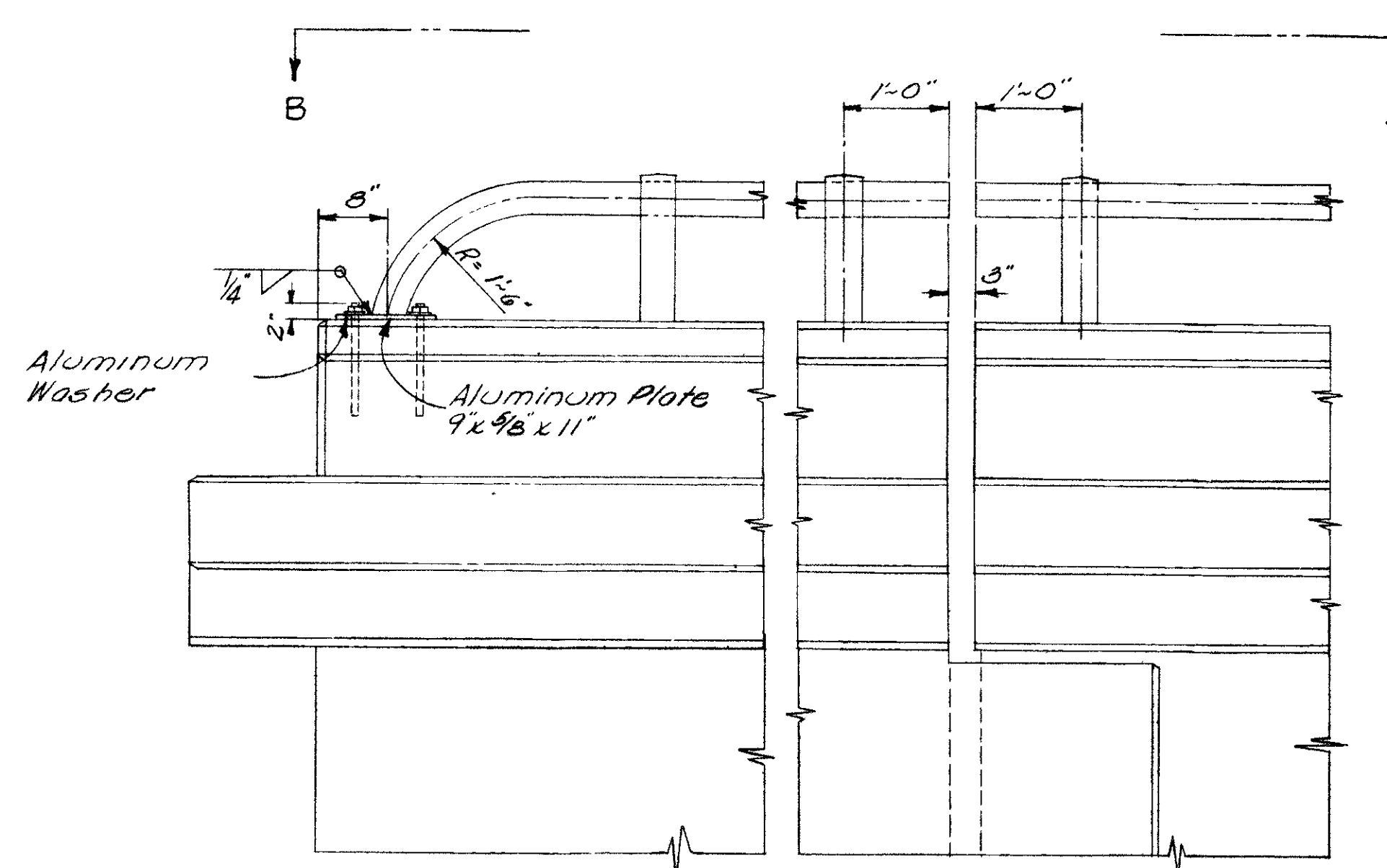
VIEW B-B



1/4" Grey sponge rubber preformed expansion joint filler meeting the requirements of Sec. M 10.02 Type 1.

Continuous Concrete Slab Bridge

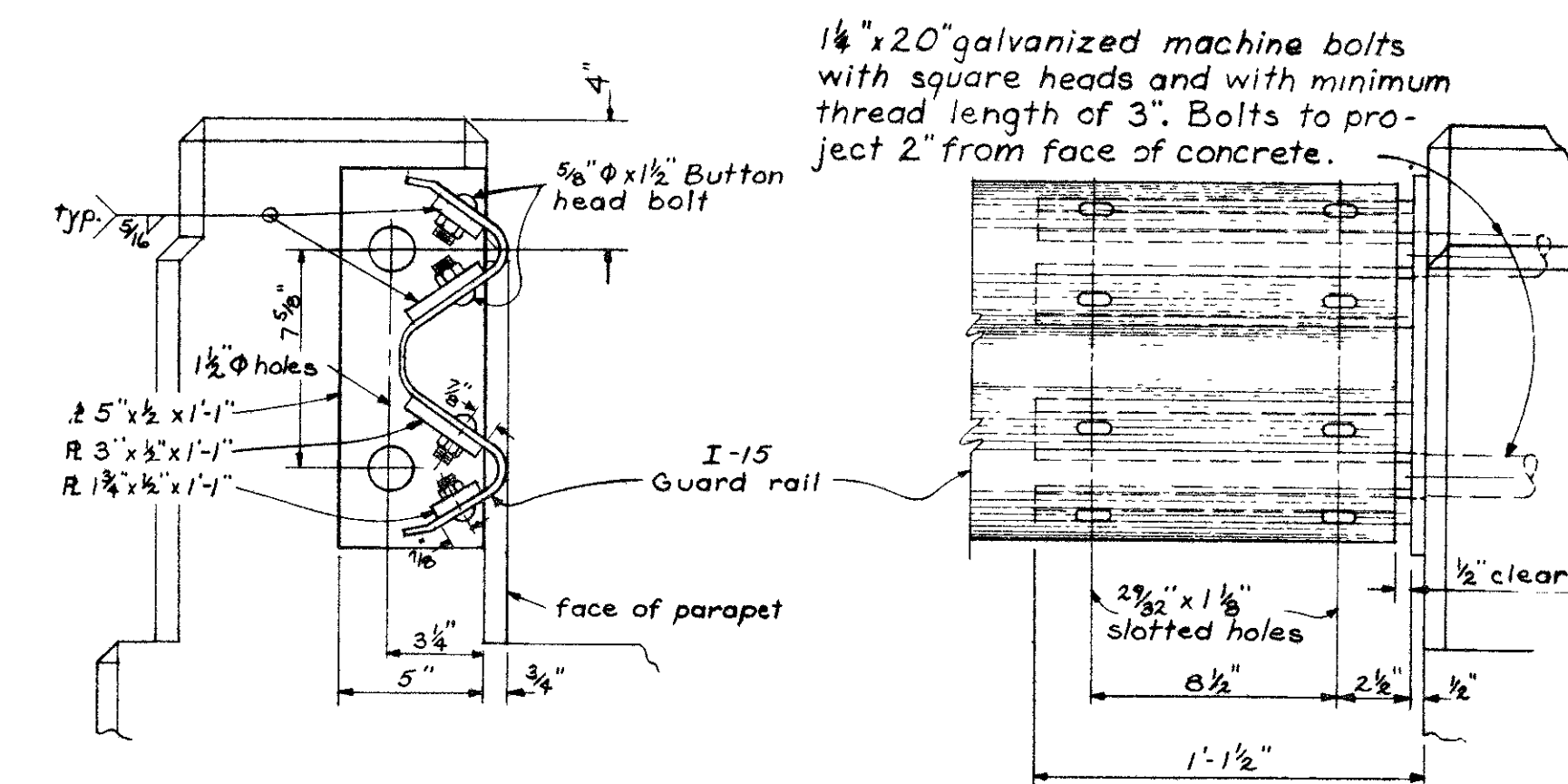
ELEVATION



Continuous Steel Beam Bridge

ELEVATION

END RAILING DETAILS



Guard rail end connection assembly shall be galvanized after welding.

1 1/2" x 20" galvanized machine bolts with square heads and with minimum thread length of 3". Bolts to project 2" from face of concrete.

Guard rail end connection shall be included for payment with Item S-14

GUARD RAIL END CONNECTION

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

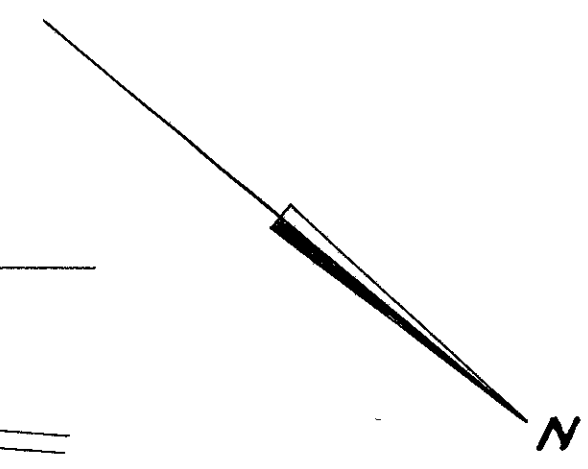
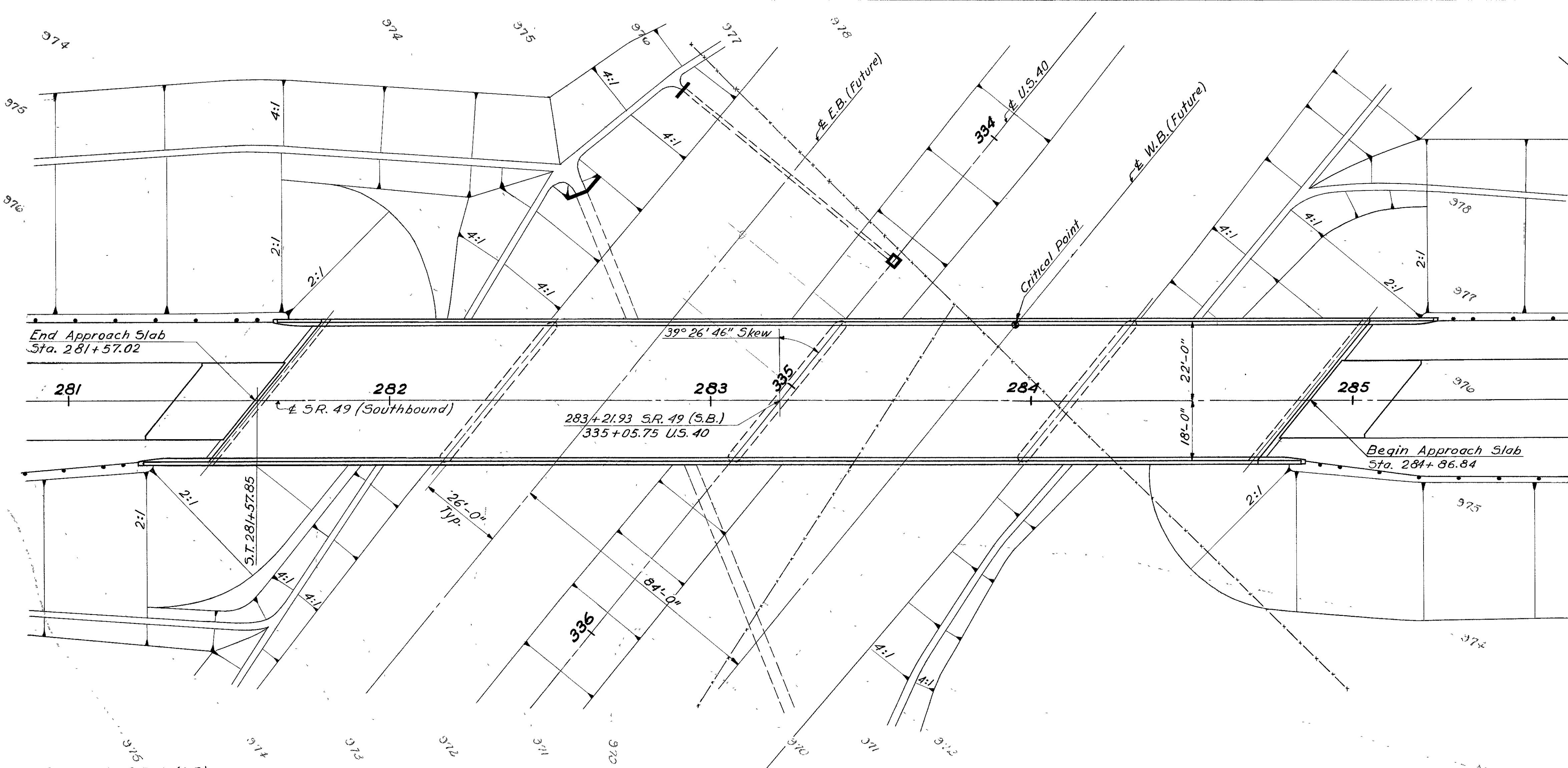
GUARDRAIL & RAILING DETAILS  
Montgomery County  
Mot - 40 - 5.98  
ACI-1097(4)  
F-127(2) Mot - 49 - 12.45

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
				TLU	4-7-58	

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

145  
241

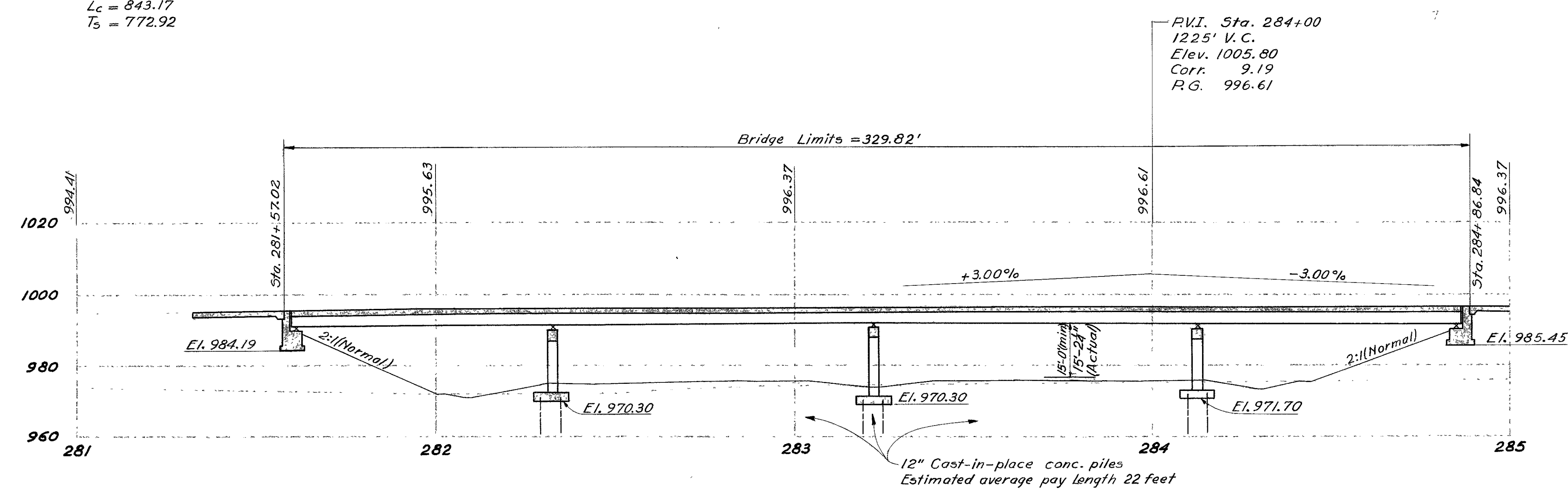
MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45



Curve Data S.R. 49(S.B.)  
 $\Delta = 76^\circ 31' 19''$   
 $D_c = 7^\circ$   
 $R = 818.51'$   
 $L_s = 250'$   
 $L_c = 843.17$   
 $T_s = 772.92$

PLAN

**PROPOSED STRUCTURE**  
 Type: Continuous steel beam with reinforced concrete deck and substructure  
 Spans: 72'-90'-90'-72' c/c brgs  
 Roadway: 40'-0" f/f concrete parapets with 1'-0" curbs and aluminum railing  
 Loading: CF 2000 (Adequate for AASHO alternate loading)  
 Skew: 39° 26' 46" Lt. forward  
 Wearing surface: 1" monolithic concrete  
 Alignment: Tangent  
 Approach: Slabs: A5-1-54 (25' long)

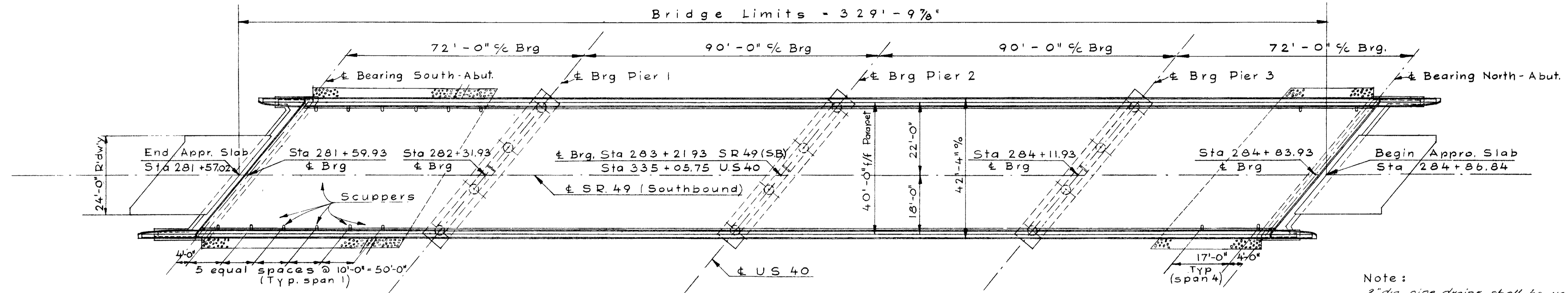


PROFILE ON E SB. S.R. 49

ALDEN E. STILSON & ASSOCIATES, LIMITED  
 CONSULTING ENGINEERS  
 COLUMBUS, OHIO

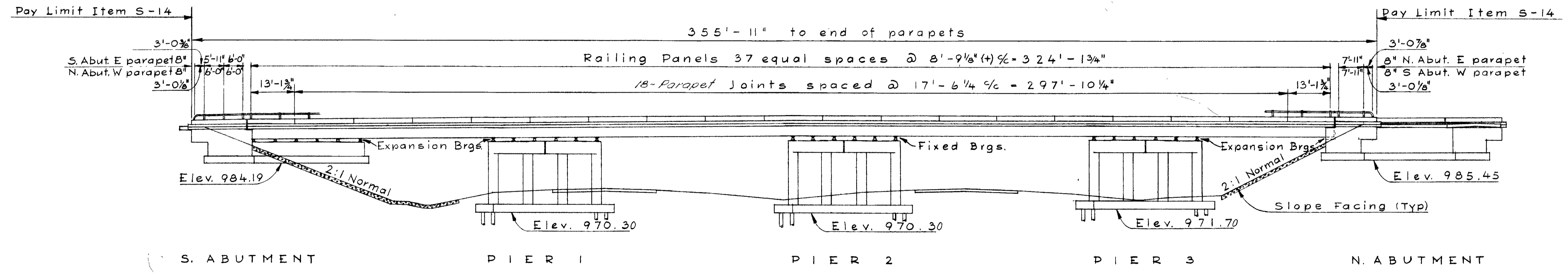
**SITE PLAN**  
 BRIDGE No MOT-40-0631  
 U.S. 40 under SOUTHBOUND S.R. 49  
 Montgomery County Sta. 335+05.75  
 ACI-1057(4)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.E.V.	J.E.V.	J.F.M.	Wisse	T.L.U.	4-3-58	



Note:  
2" dia pipe drains shall be used at ends of each bulb angle gutter

G E N E R A L P L A N

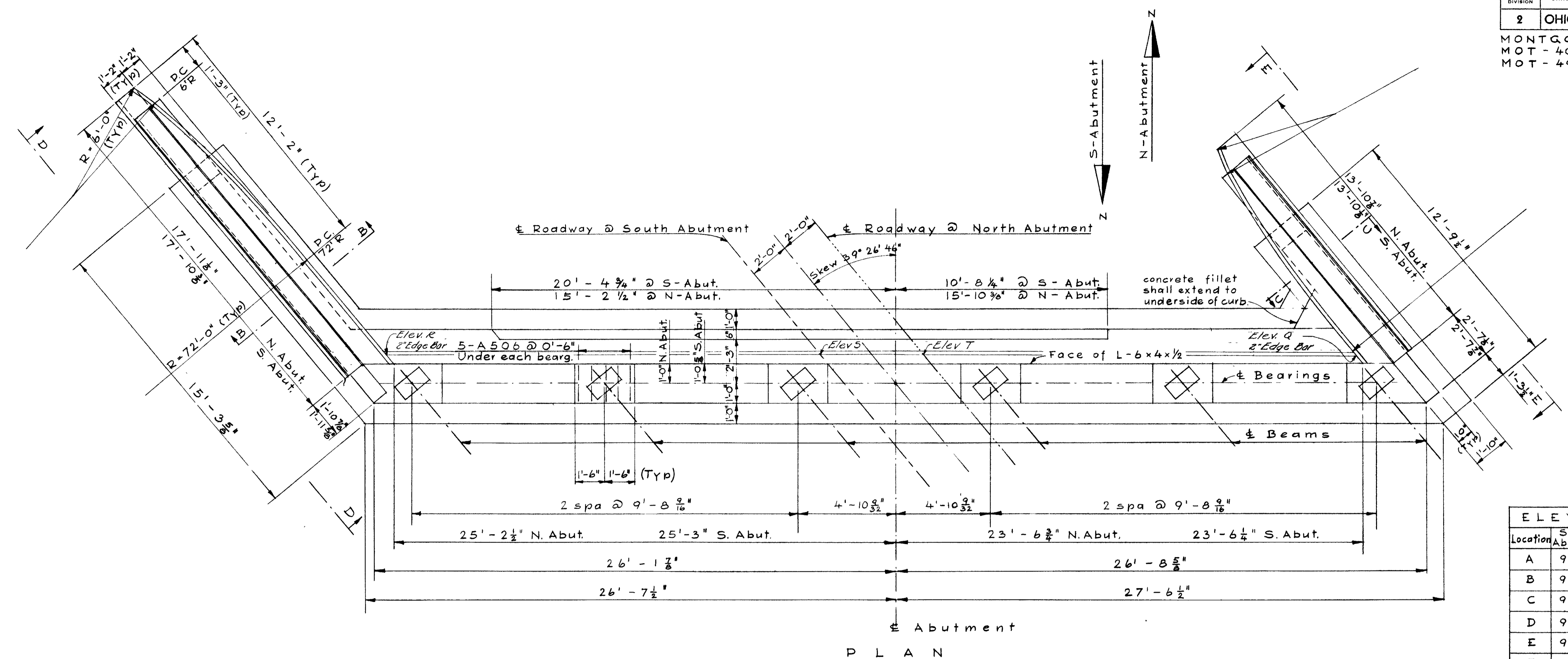


G E N E R A L E L E V A T I O N

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COLUMBUS, OHIO

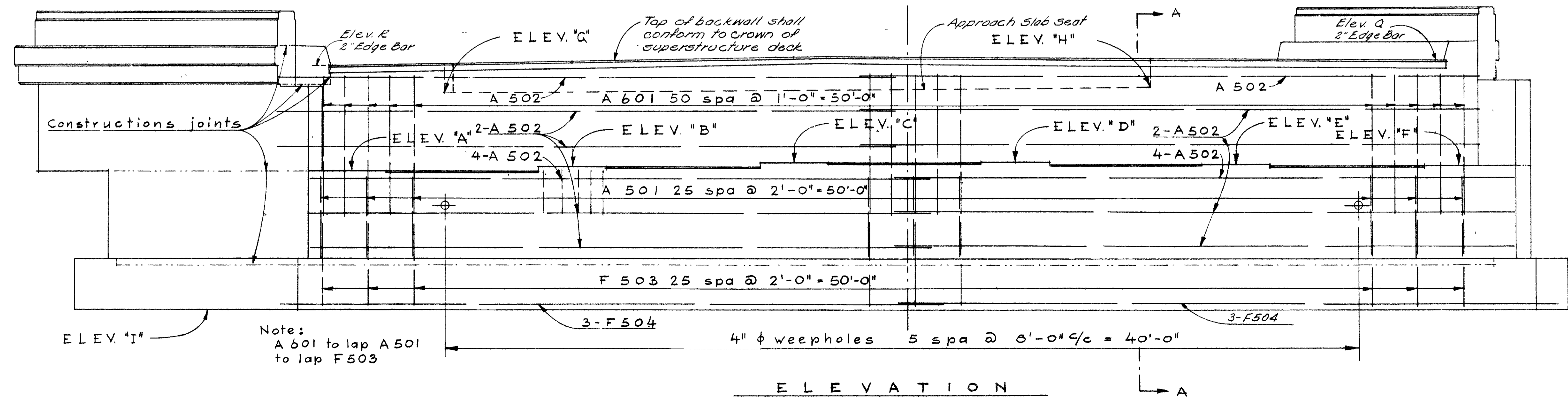
GENERAL PLAN &  
GENERAL ELEVATION  
BRIDGE No MOT-40-0631  
U.S. 40 UNDER SB SR 49  
MONTGOMERY COUNTY  
ACI-1097(A)      STA 335+05.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.S.	H.S.		BETTIN	TLU	4-3-58	



ELEVATIONS		
Location	South Abutment	North Abutment
A	990.16	991.42
B	990.35	991.57
C	990.54	991.72
D	990.55	991.80
E	990.50	991.71
F	990.46	991.62
G	993.53	994.06
H	993.76	994.94
I	984.19	985.45
Q	995.05	996.22
R	994.75	996.03
S	995.18	
T		996.43

Note:  
For sections A-A, B-B & C-C  
and Views D-D & E-E see Sheet 148



Note:  
A 601 to lap A 501  
to lap F 503

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

**ABUTMENT DETAILS**  
BRIDGE No MOT-40-0631  
U.S. 40 UNDER S.B. SR 49

MONTGOMERY COUNTY  
ACI-1097(4) STA 335+05.75

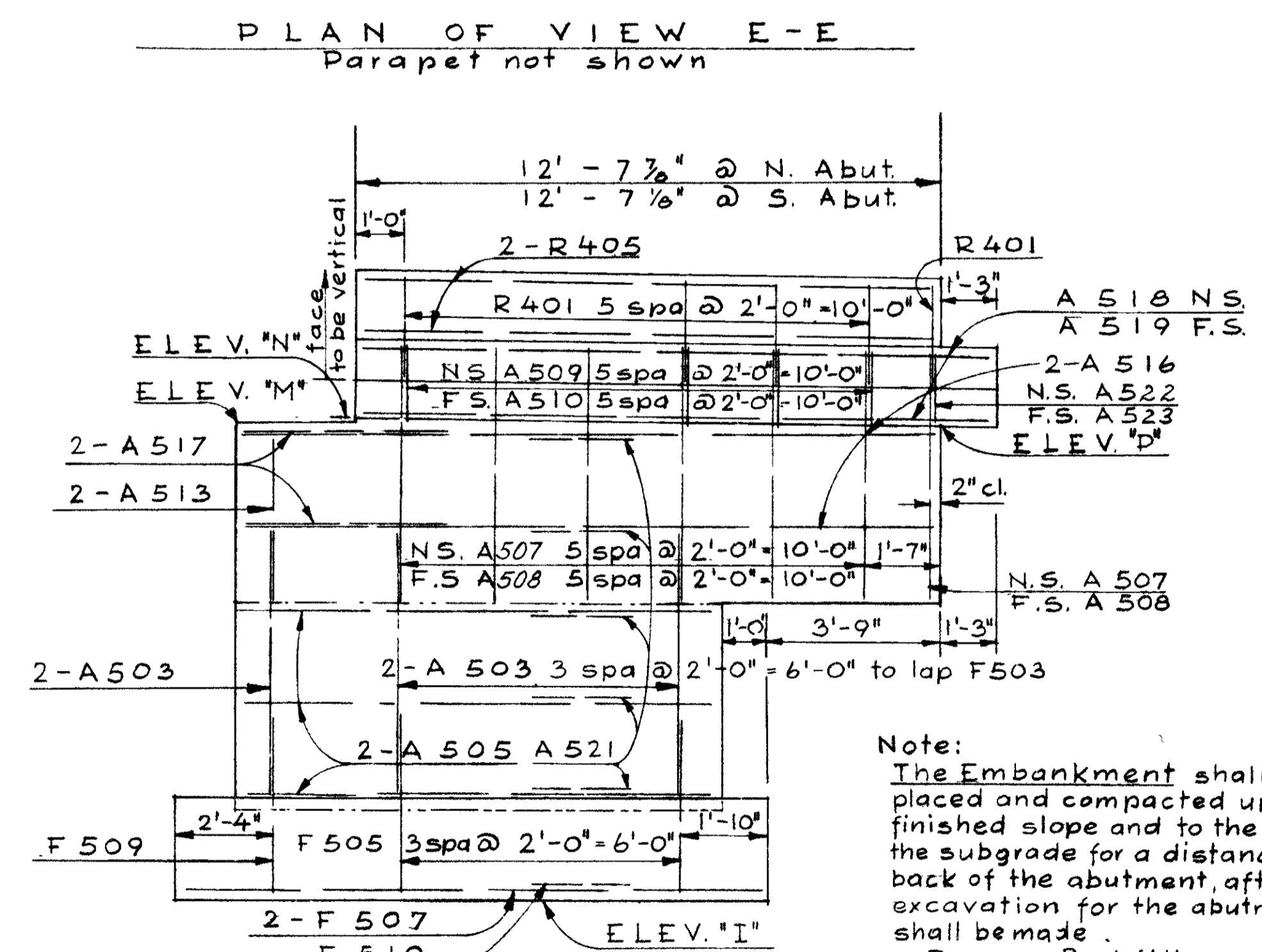
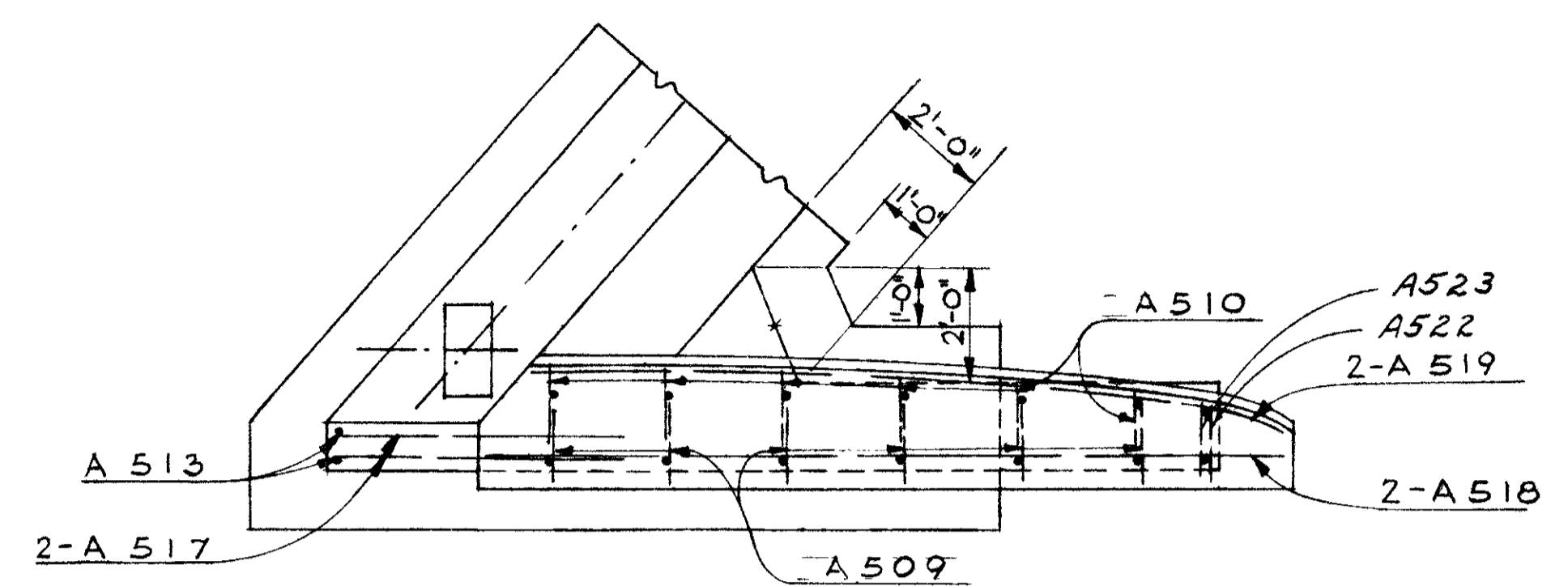
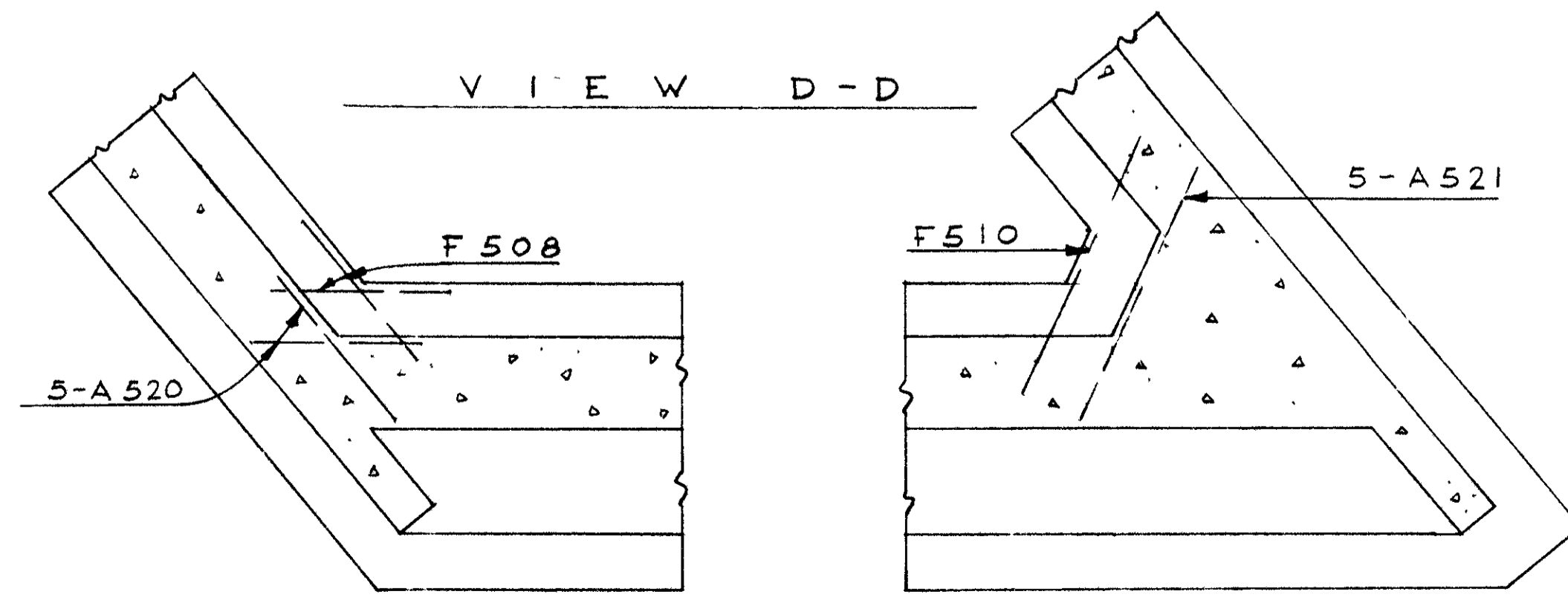
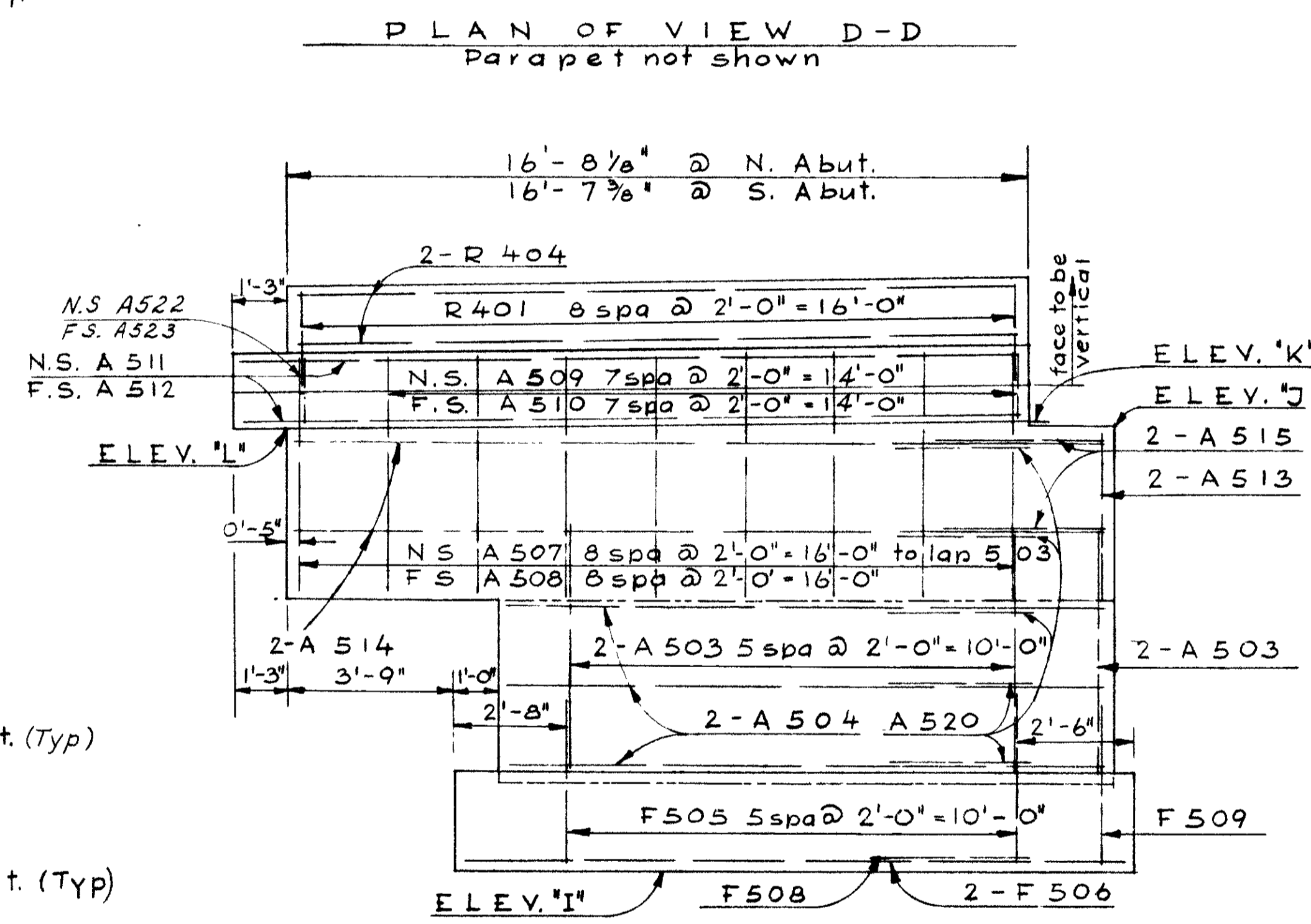
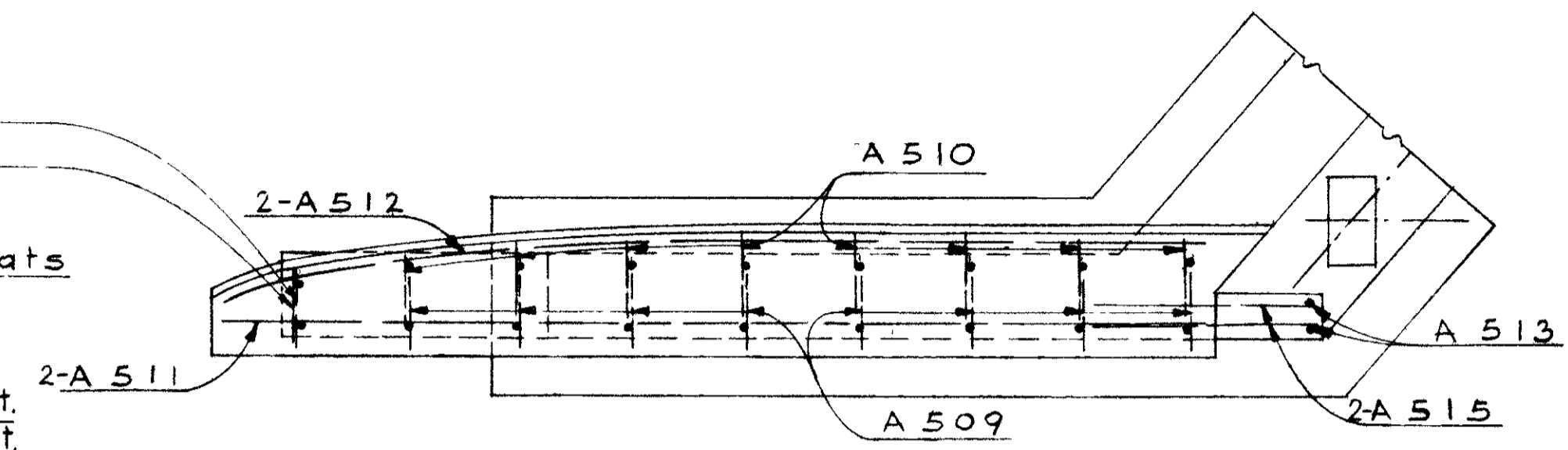
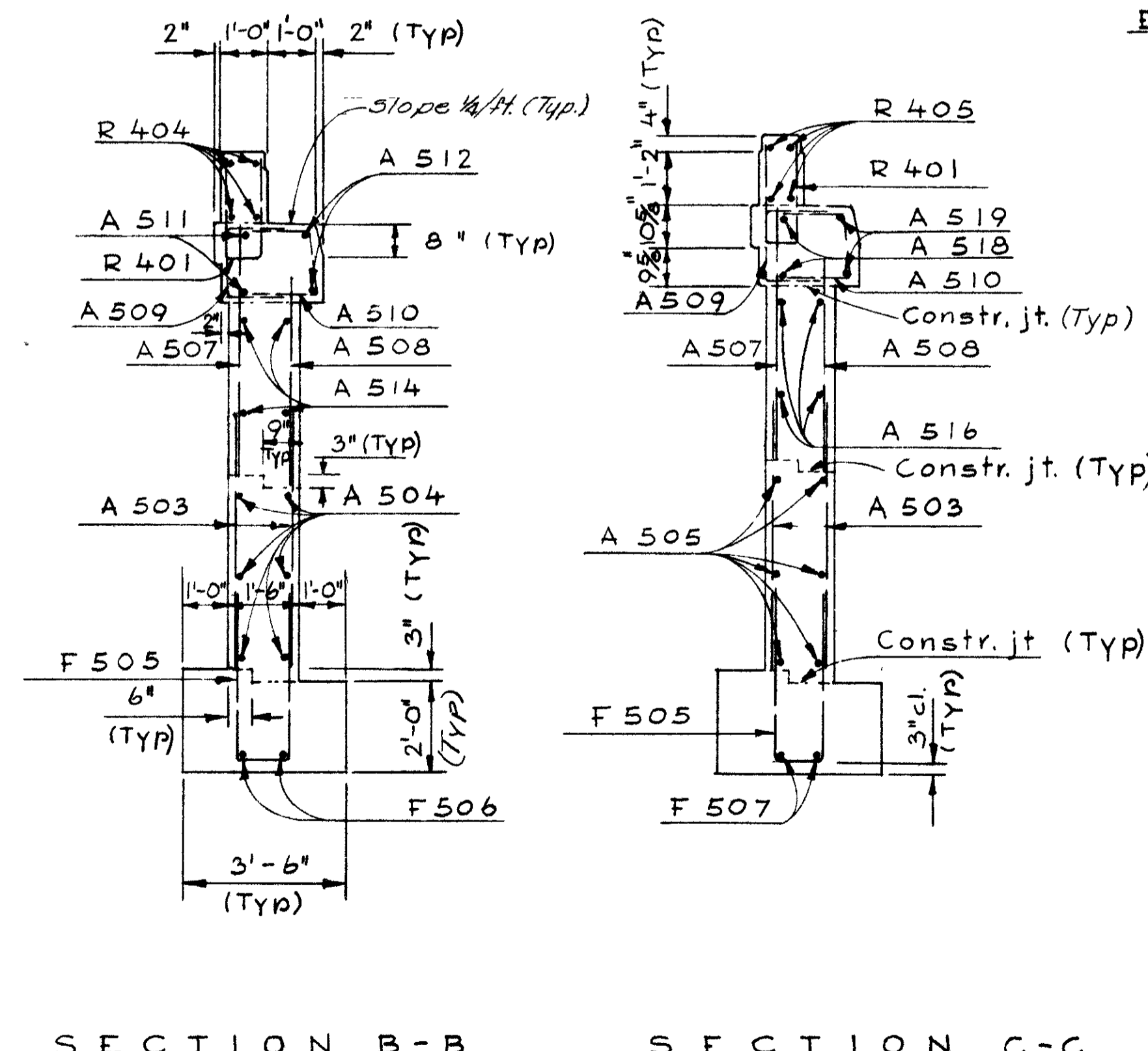
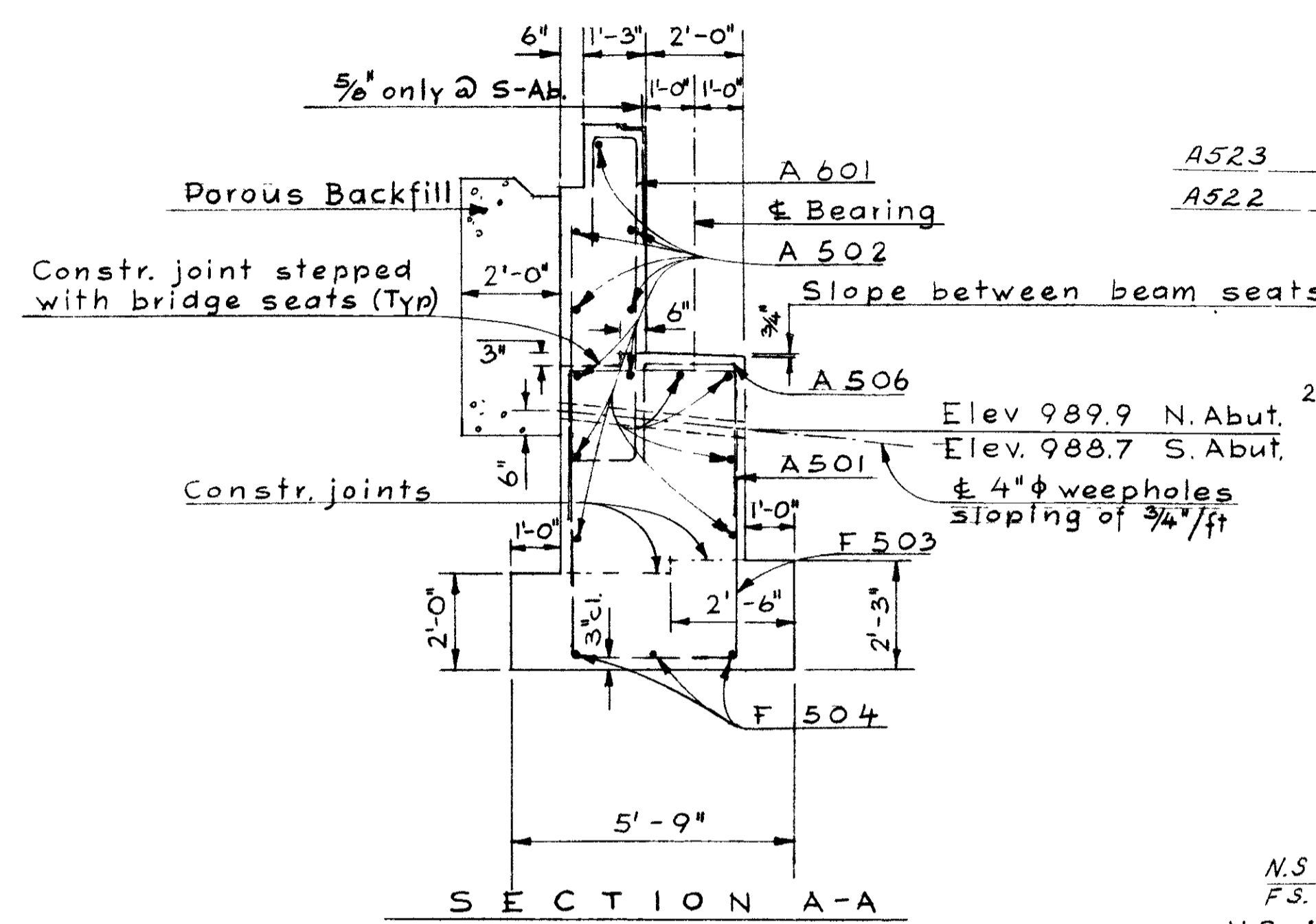
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.S.	H.S.		BETTIN	TLU	1-3-58	



FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

148  
241

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45



Note:  
The Embankment shall be placed and compacted up to the finished slope and to the level of the subgrade for a distance of 200' back of the abutment, after which excavation for the abutment shall be made.  
Porous Backfill as shown between wingwalls shall extend to underside of the approach slab or I-22.  
Concrete Parapets are included in Item 5-4 for payment.

ELEVATIONS		
Location	S. Abutment	N. Abutment
I	984.19	985.45
J	993.85	995.12
K	993.92	995.20
L	993.69	995.10
M	994.18	995.32
N	994.24	995.40
P	994.09	995.34

Note:  
Reinforcing Steel:  
N.S. indicates Near Side  
F.S. indicates Far Side

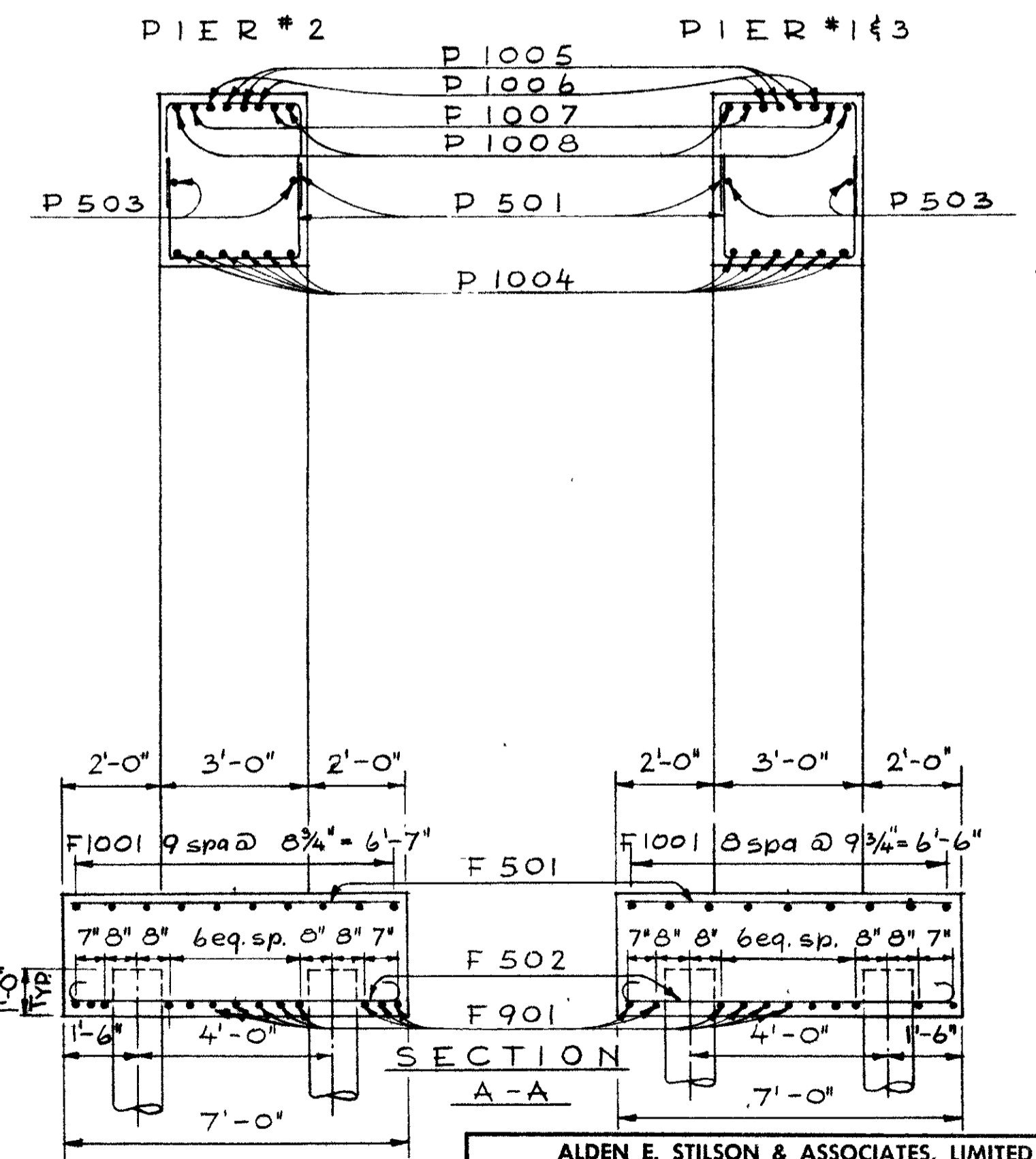
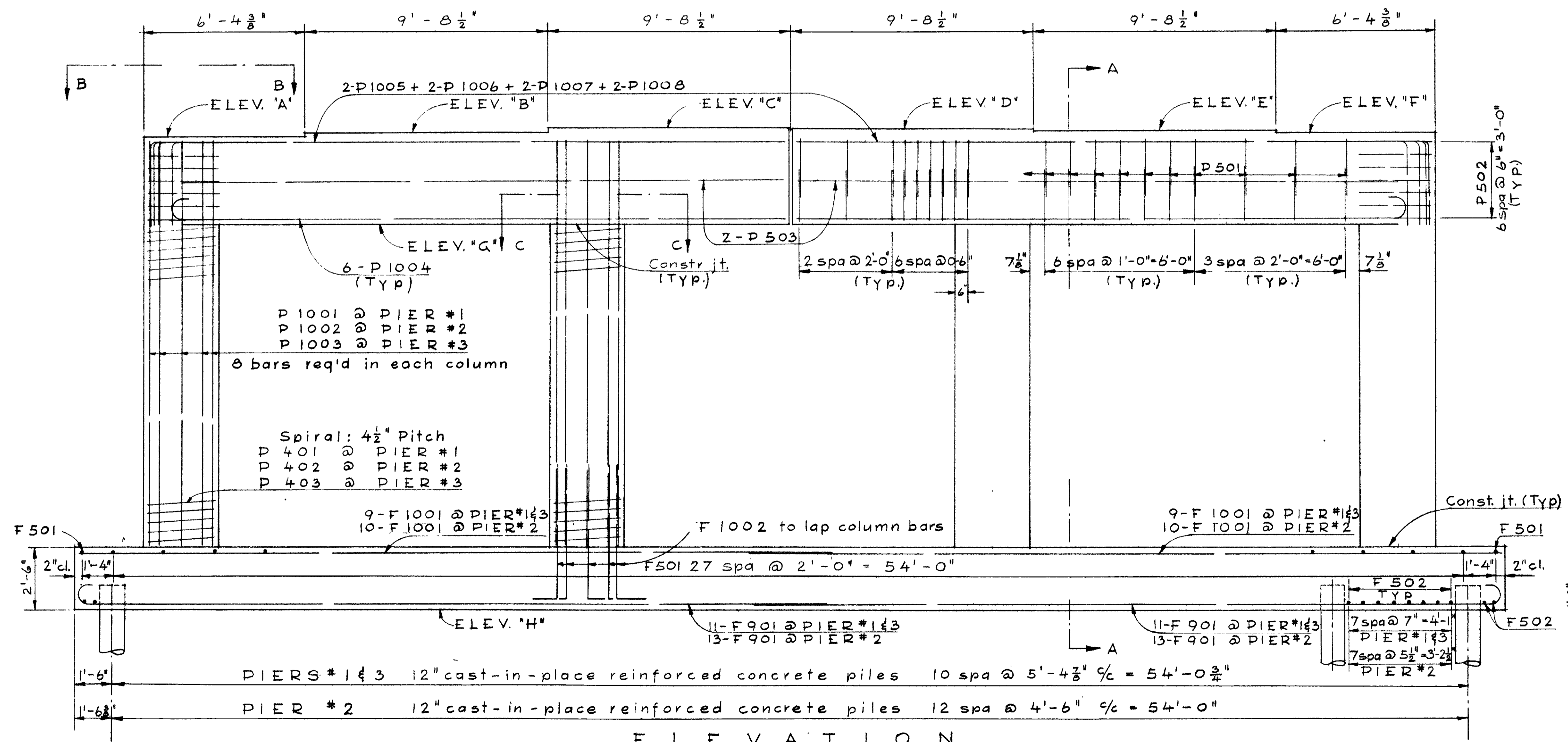
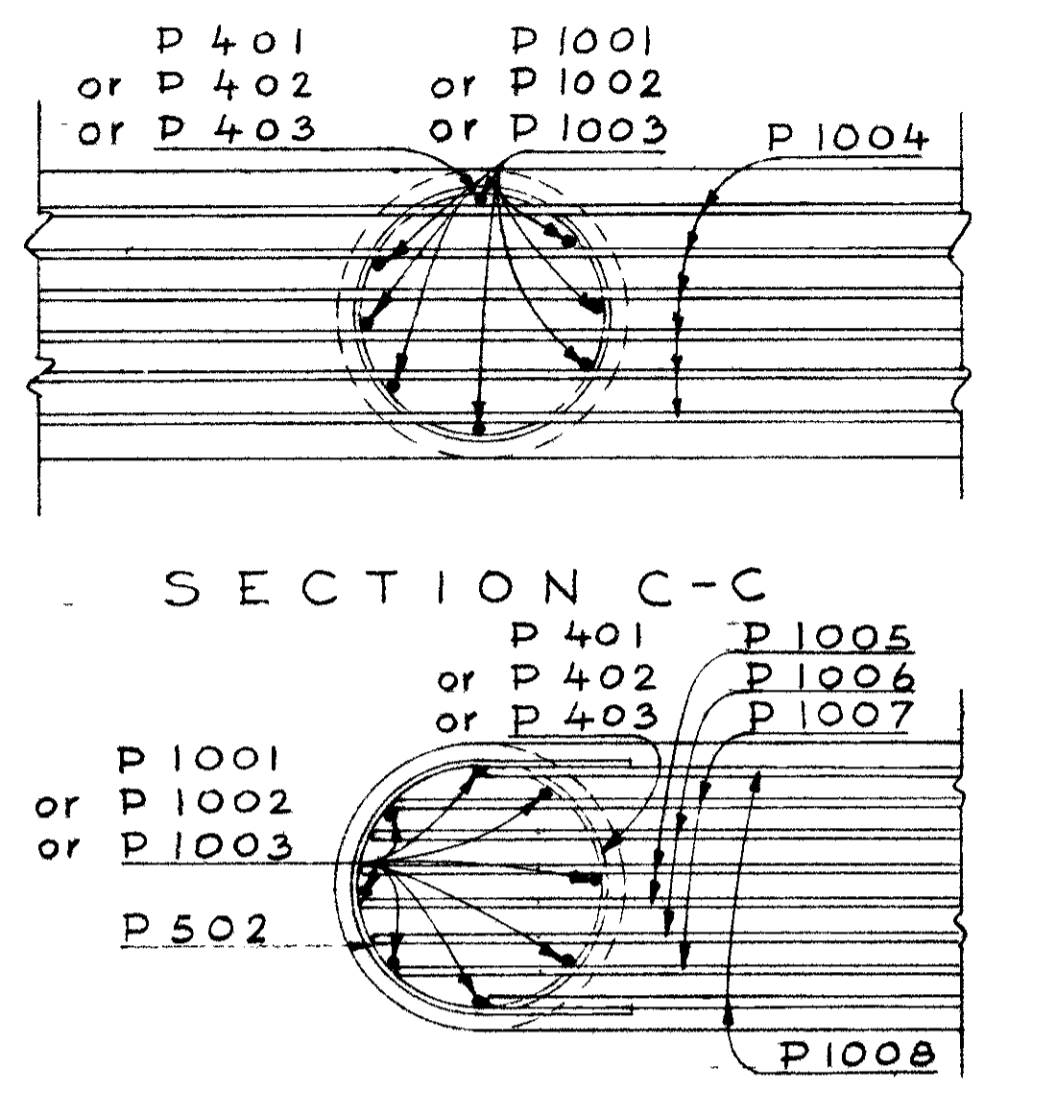
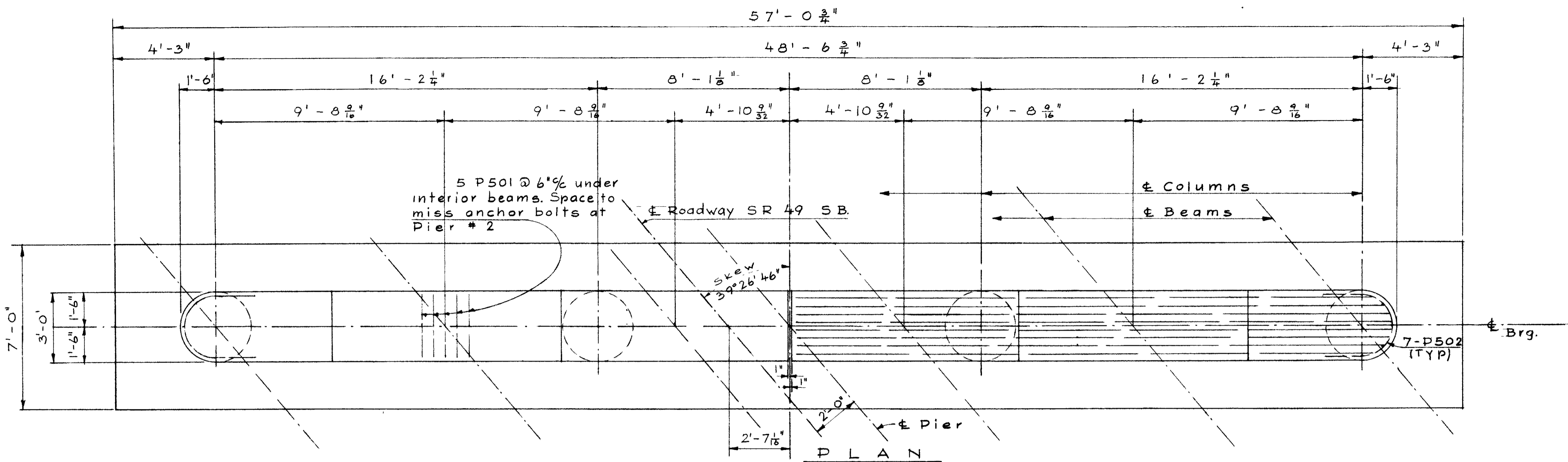
ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

ABUTMENT DETAILS  
BRIDGE No: MOT-40-0631  
U.S. 40 UNDER SB. SR49

MONTGOMERY COUNTY  
ACI-1097(4) STA 335+05.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.S.	H.S.		BETTIN	TU	4-3-58	

MONTGOMERY COUNTY  
MOT 40-5.98  
MOT 49-12.45



PIERS #1 & 3 12" cast-in-place reinforced concrete piles 10 spa @ 5'-4 3/8" c/c = 54'-0 3/8"

PIER #2 12" cast-in-place reinforced concrete piles 12 spa @ 4'-6" c/c = 54'-0"

ELEVATION

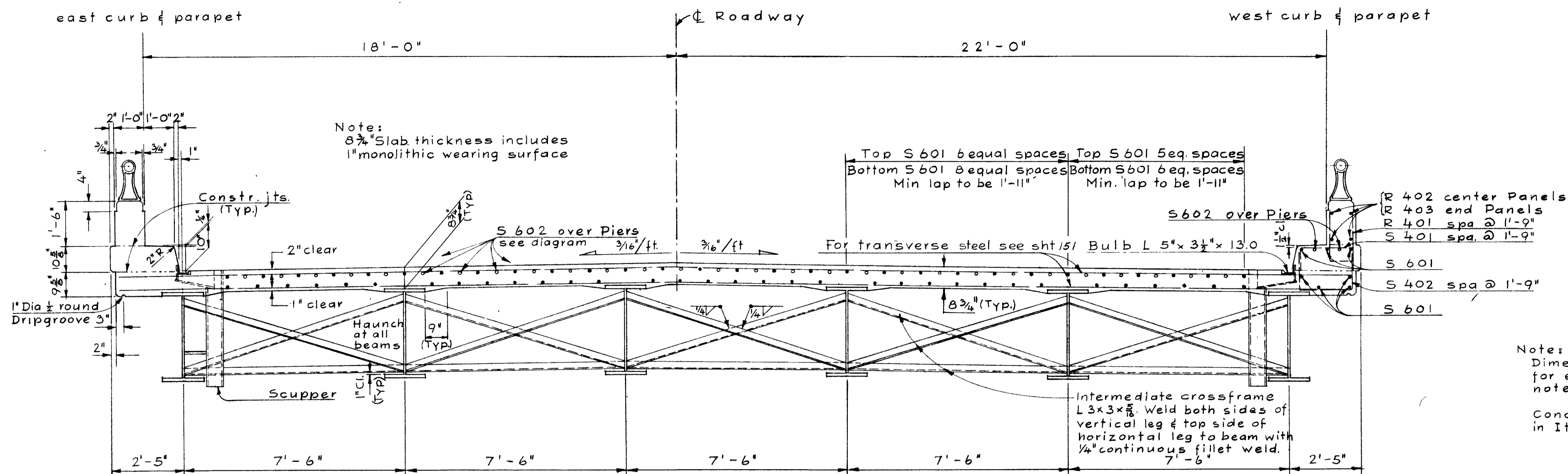
LOCATIONS	A	B	C	D	E	F	G	H
PIER #1	990.35	990.52	990.69	990.68	990.61	990.54	986.85	970.30
PIER #2	990.95	991.09	991.23	991.19	991.10	991.00	987.45	970.30
PIER #3	991.16	991.27	991.39	991.32	991.20	991.07	987.57	971.70

ALDEN E. STILSON & ASSOCIATES, LIMITED  
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COLUMBUS, OHIO

PIER DETAILS  
BRIDGE No MOT-40-0631  
U.S. 40 UNDER SB SR49

MONTGOMERY COUNTY  
ACI-1097(4) STA. 335+05.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.S.	H.S.		BETTIN	TU	4-5-58	

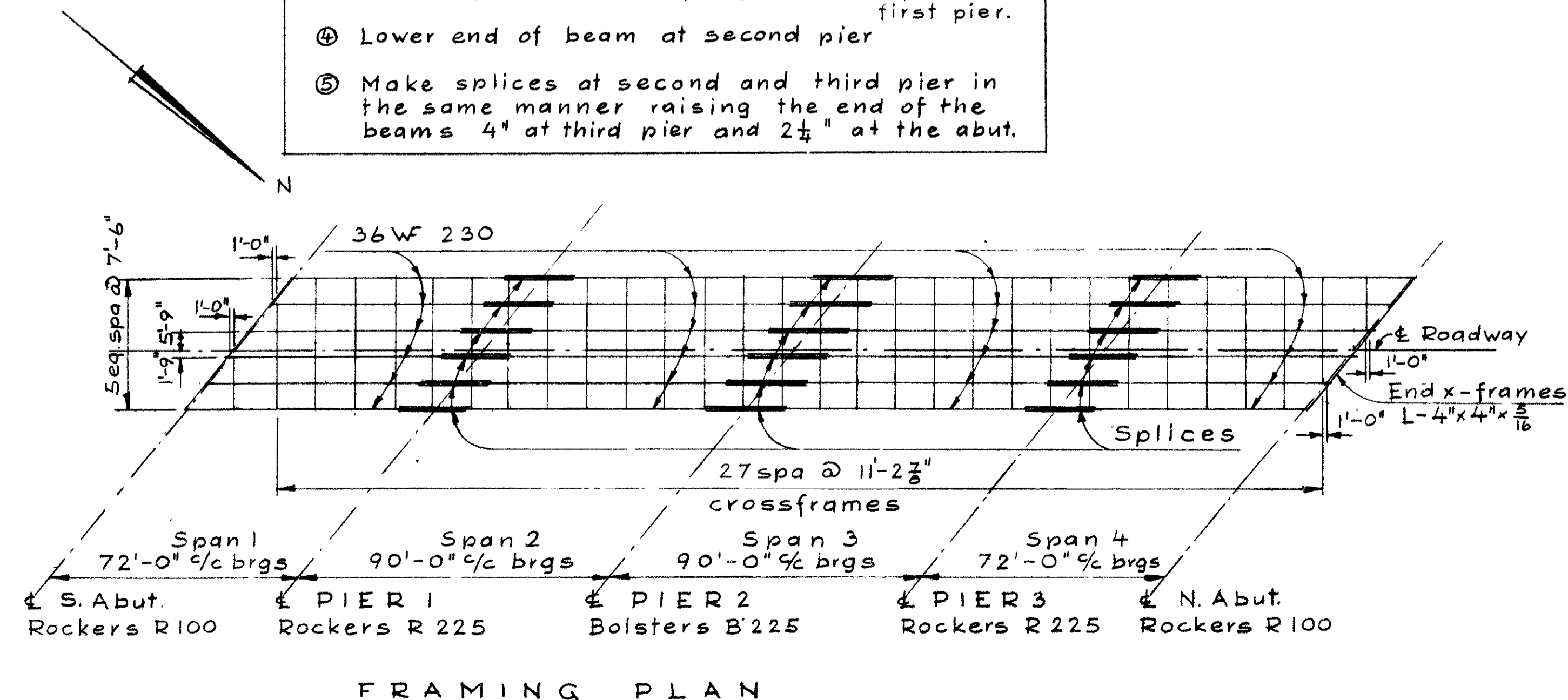


Note:  
Dimensions and reinforcing same for each curb and parapet unless noted.  
Concrete parapets are included in Item S-14 for payment.

TRANSVERSE SECTION

- Beam splice welding procedure
- ① Raise end of beam at second pier  $3\frac{3}{4}$ "
  - ② Butt-weld beam flanges and web at first pier using the following sequence: make one pass on each flange then one on the web; repeat until welds are completed.
  - ③ Weld top and bottom flange moment plates at first pier.
  - ④ Lower end of beam at second pier
  - ⑤ Make splices at second and third pier in the same manner raising the end of the beams 4" at third pier and  $2\frac{1}{4}$ " at the abut.

Location	Span 1 & 4		Span 2 & 3	
	Int.	Ext.	Int.	Ext.
Due to weight of steel	$-\frac{1}{8}$ "	$\frac{1}{8}$ "	$\frac{1}{8}$ "	$\frac{1}{8}$ "
Due to remaining D.L.	$\frac{7}{16}$ "	$\frac{7}{16}$ "	$\frac{9}{16}$ "	$\frac{9}{16}$ "
Due to Vertical Curve	$\frac{3}{8}$ "	$\frac{3}{8}$ "	$\frac{3}{8}$ "	$\frac{5}{8}$ "
Total	$\frac{15}{16}$ "	$\frac{15}{16}$ "	$1\frac{3}{8}$ "	$1\frac{3}{8}$ "
Shop Camber req'd	1"	1"	$1\frac{3}{8}$ "	$1\frac{3}{8}$ "



FRAMING PLAN

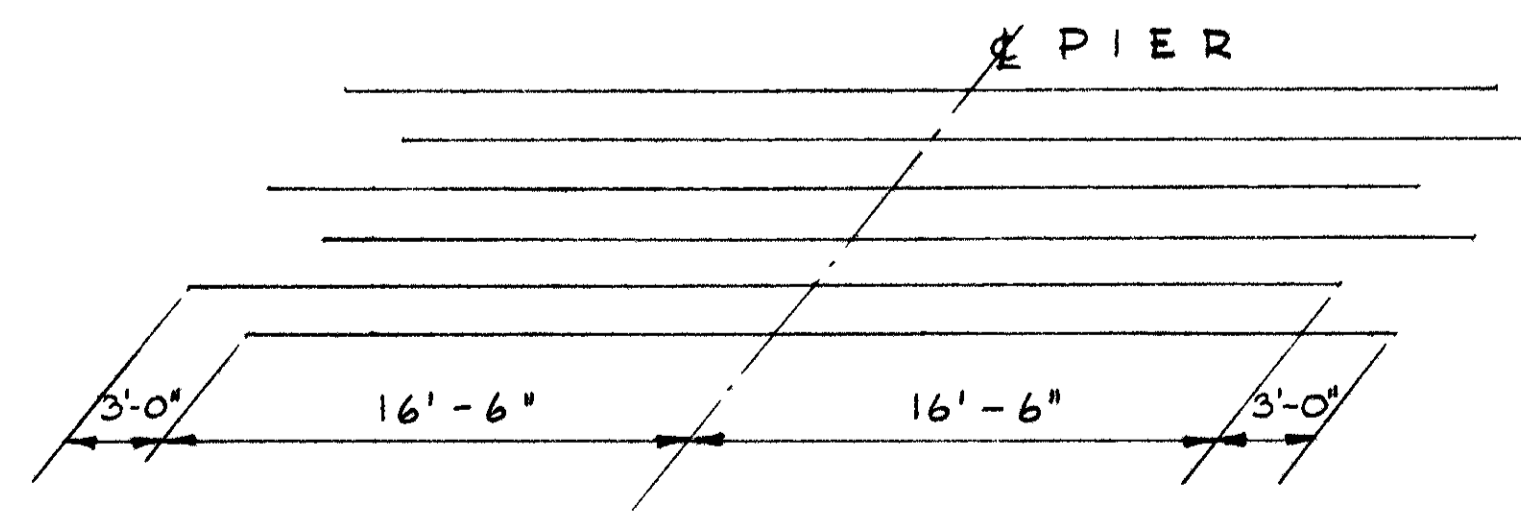


DIAGRAM SHOWING STAGGER OF S 602 BARS OVER PIERS

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

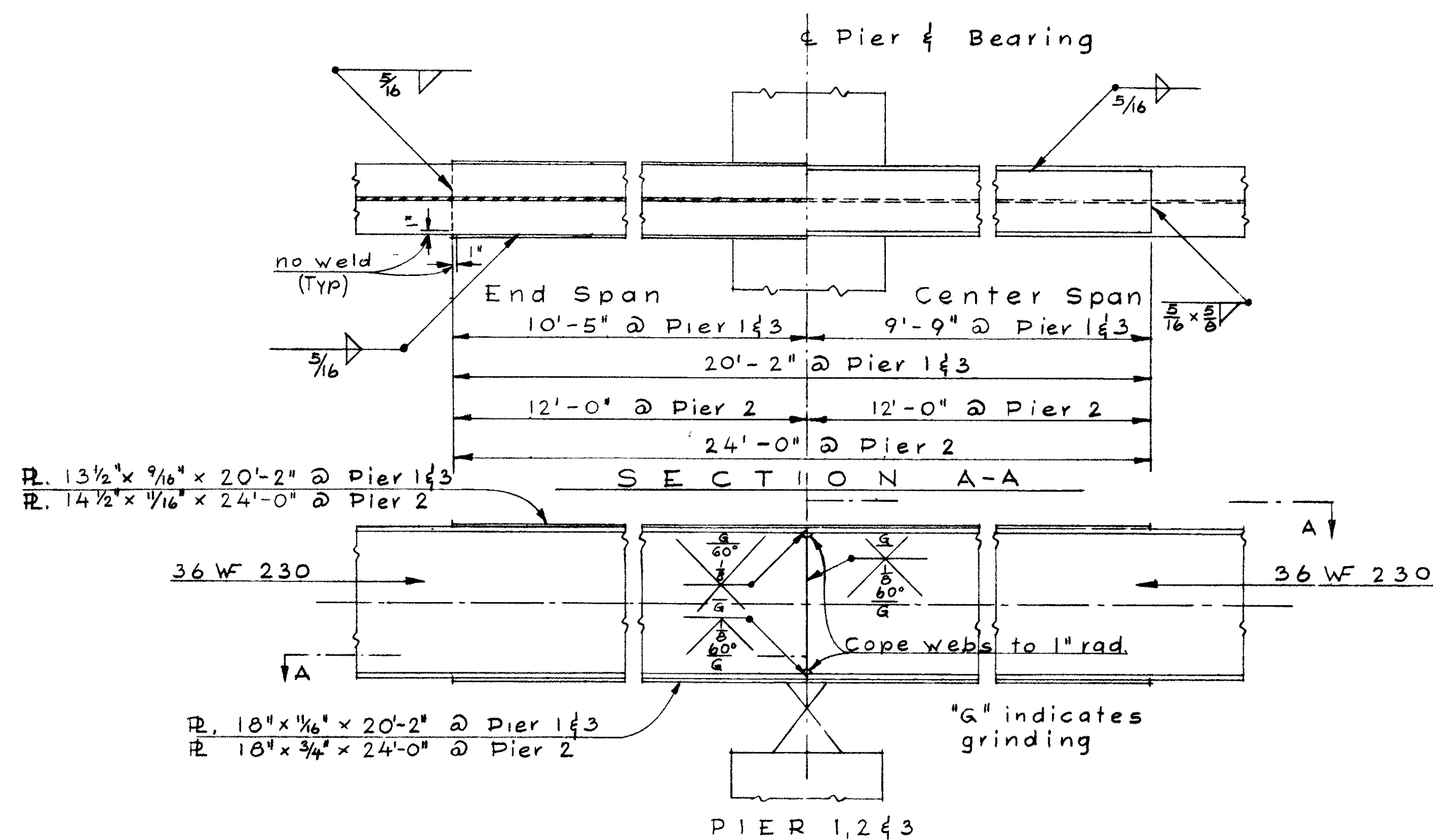
SUPERSTRUCTURE  
DETAILS  
BRIDGE No. MOT-40-0631  
U.S. 40 UNDER S.B. SR 49  
MONTGOMERY COUNTY  
ACI-1097(A) STA 335+05.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.S.	H.S.		BETTIN	TLO	4-3-58	

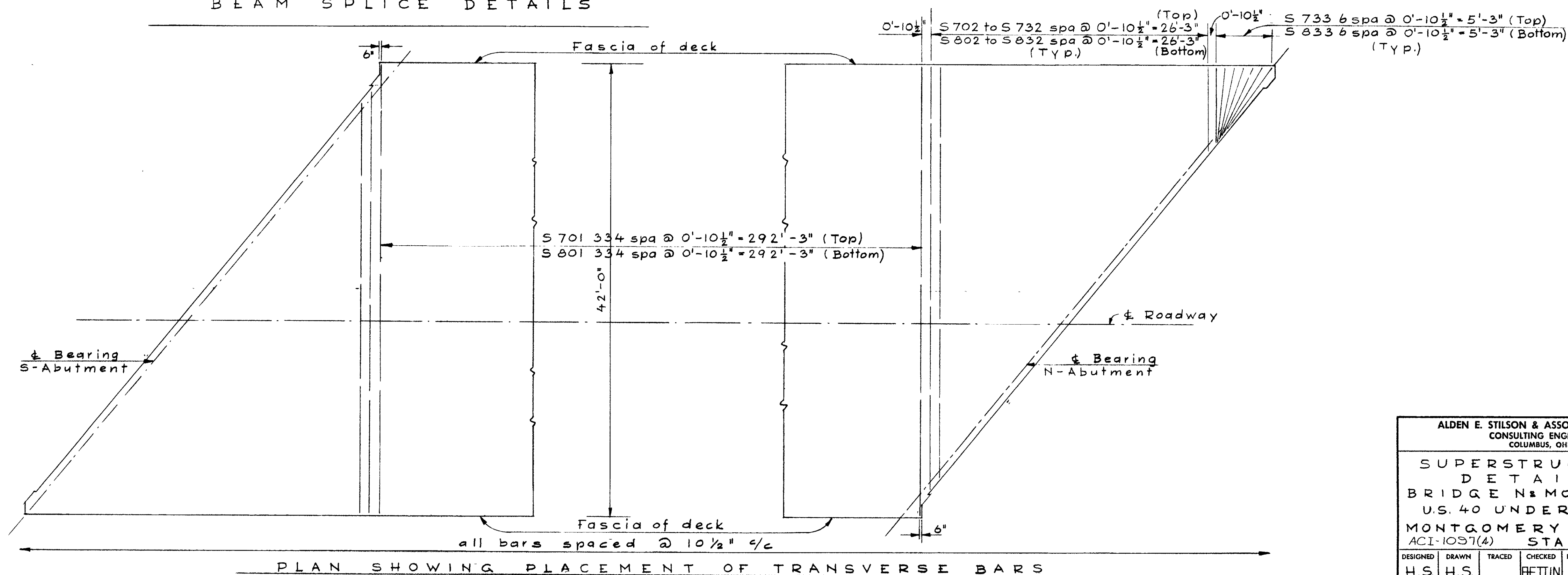
FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

151  
241

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45



BEAM SPLICE DETAILS



ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
SUPERSTRUCTURE DETAILS BRIDGE N & MOT-40-0631 U.S. 40 UNDER S.B. SR49 MONTGOMERY COUNTY ACI-1097(4) STA 335+05.75						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.S.	H.S.		BETTIN	7/20	13-58	

**REINFORCING**

**STEEL**

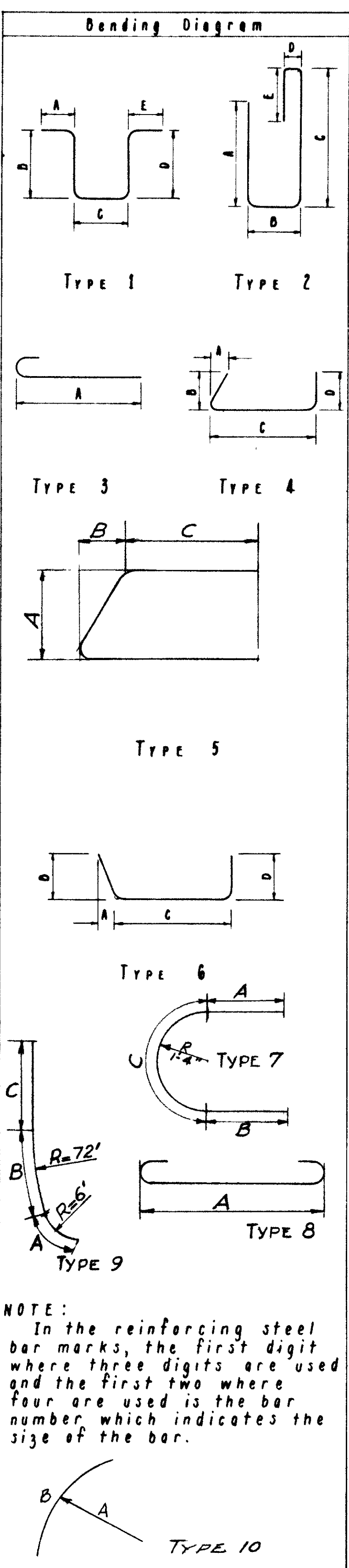
**LIST**

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

152  
241

Montgomery County  
Mot - 40-5.98  
Mot - 49-12.45

Mark	N <sup>o</sup>	Length	Weight	Type	"A"	"D"	"C"	"D"	"E"	Shape
<b>Abutments</b>										
A501	52	8-4	452	1		2-7	3-5	2-7		6t
A502	52	27-1	1469							st
A503	48	5-7	280							st
A504	12	13-6	169							st
A505	12	9-9	122							st
A506	60	4-9	297	1		1-7	1-10	1-7		6t
A507	32	5-6	184							st
A508	32	4-6	150							st
A509	28	3-3	95	1		1-1	1-4	1-1		6t
A510	28	3-6	102	5	1-4	0-2	1-1			6t
A511	4	17-6	73							st
A512	4	18-4	76	9	1-2	11-0	6-2			6t
A513	8	3-6	29							st
A514	8	16-3	136							st
A515	8	3-4	28							st
A516	8	12-3	102							6t
A517	8	4-5	37							st
A518	4	13-6	56							st
A519	4	12-10	54	9	1-2	11-0	0-8			6t
A520	20	3-0	63							st
A521	10	5-0	52							st
A522	4	2-9	11	1		0-10	1-4	0-10		6t
A523	4	3-0	13	5	1-4	0-2	0-10			6t
<b>REPLACEMENT STEEL</b>										
F503	52	13-2	714	1		5-0	3-5	5-0		6t
F504	12	28-4	355							st
F505	20	8-1	169	1		3-7	1-2	3-7		6t
F506	4	14-10	62							6t
F507	4	12-0	50							st
F508	4	4-0	17							st
F509	4	7-5	31	1		3-7	0-6	3-7		6t
F510	2	5-0	10							st
<b>REPLACEMENT STEEL FOR SPIRALS</b>										
RE401	1	5-3				10	1-3/4	5-3		6t
<b>Piers</b>										
F501	90	6-8	626							st
F502	268	7-10	2,190	8		6-8				6t
F901	70	31-0	7,378	3		28-9				6t
F1001	56	30-0	7,229							st
F1002	96	6-4	2,616	1	1-4	5-4				6t
<b>Spiral Reinforcing Bars</b>										
P501	228	7-3	1,724	1		2-5	2-8	2-5		6t
P502	42	7-5	325	7	1-7	1-7	4-3			6t
P503	12	24-0	300							st
P1001	32	17-5	2,398							st
P1002	32	18-0	2,479							st
P1003	32	16-9	2,306							st
P1004	36	25-10	4,002	3	24-5					6t
P1005	12	28-3	1,459	1	3-4	25-3				6t
P1006	12	28-2	1,454	1	3-4	25-2				6t
P1007	12	27-11	1,442	1	3-4	24-11				6t
P1008	12	27-0	1,394	1	3-4	24-0				6t



ITEM	TOTAL	UNIT	DESCRIPTION	ESTIMATED QUANTITIES			
				ABUT.	PIER	SUPERS.	GENERAL
E-2	468	cu.yd	Unclassified Excavation	281	187		
S-1	427	cu.yd	Class "C" concrete, Superstructure				427
S-1	109	cu.yd	Class "C" concrete, Pier Caps & Columns		109		
S-1	117	cu.yd	Class "E" concrete, Abutments above footings	117			
S-1	168	cu.yd	Class "E" concrete footings	57	111		
S-4	170,543	l.b	Reinforcing Steel	7,962	42,472	120,109	
S-7	540,864	l.b	Structural Steel			540,864	
S-8	540,864	l.b	Field Painting of Structural Steel			540,864	
S-14	712	lin.ft	Railing (Aluminum Rails and Supports & Concrete Parapet)				712
S-16	Lump	Sum	First Test Pile				Lump
S-18	1540	lin.ft	12" Cast-in-Place Reinforced Concrete Piles		1540		
S-29	38	cu.yd	Porous Back fill	38			
S-29	223	cu.yd	Slope Facing (S-29.05 type)				223

**SPIRALS - HOT ROLLED**

Mark	N <sup>o</sup>	Length	Core	Pitch	Turns	Spacers	Weight
P401	4	14-1	32	4 1/2	41	16	1058
P402	4	14-8	32	4 1/2	42	16	1086
P403	4	13-5	32	4 1/2	39	16	1006

**SPIRALS**  
THE 'LENGTH' SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP.  
THE 'NO. OF TURNS' SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS 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 ITEM S-4  
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.

\* HORIZONTAL PARAPET REINFORCING THESE BARS ARE INCLUDED WITH THE RAILING FOR PAYMENT.

**REPLACEMENT BARS**  
IF REINFORCING BARS ARE FABRICATED FROM STOCK WHICH HAS PREVIOUSLY BEEN TESTED AND APPROVED BY THE OHIO HIGHWAY TESTING LABORATORY TEST SAMPLES AS PROVIDED IN SEC. S-4.02 NEED NOT BE FURNISHED AND REPLACEMENT BARS WILL NOT BE REQUIRED

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

**STEEL LIST & ESTIMATED QUANTITIES**  
BRIDGE No - MOT-40-063/  
U.S. 40 under Southbound S.R. 49  
Montgomery County Sta. 335+0575  
ACI-1097(4)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.S.	J.F.F.		BETTIN	J.L.V.	4-3-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

153  
241

MONTGOMERY COUNTY  
MOT 40-598  
MOT 49-12.45

REFERENCES:

Standard Drawings:

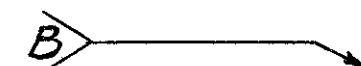
End Finish and End Cross Frame Details	- CSB-2-56 dated 12-3-56, revised 3-1-58.
Gutter and Scupper Details	- CSB-2-56 dated 12-3-56, revised 3-1-58.
Rocker and Bolster Details	- RB-1-55 dated 3-1-55
Railing Details Type A	- AR-1-57 dated 4-9-57, revised 3-1-58.
Supplemental Specifications	- S-114 rev. 8-1-57
Guardrail and Railing Details	- Sheet 144

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 revisions thereof dated 2-21-58.

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling and soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.

WELDED STEEL: The steel for the 36 WF 230 beams shall conform to ASTM Designation A-373. All other structural steel shall conform to either ASTM A-7 (as per Sec. M-7.4 (a) of the Construction and Material Specifications) or to A-373.

WELDING of structural steel shall be Class "A" except as otherwise shown. Any welds shown as field welds may, at the option of the Contractor, be made in the shop. Class "B" welding shown thus



EXCAVATION QUANTITY includes the removal of fill material between the subgrade elevation and the bottom of the abutment footing.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete in 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 the transverse slab bars and are located near the center of any span.

SLOPE FACING shall be provided under the structure at both abutments. The porous drain material shall be 12" thick and shall extend transversely to 3 ft. outside the edge of the superstructure. At the N. abutment the longitudinal limits are the face of abutment and the toe of the 2:1 slope. At the S. abutment these limits are the face of abutment and a line 10'-0" ± north of and parallel to the centerline of the ditch.

PILES shall be driven to a minimum bearing capacity of 35 tons per pile for the piers.

FOUNDATION BEARING PRESSURE:

Dead Load -	
Abutments =	1.4 tons per sq. ft.
Dead Load + Vertical Live Load -	
Abutments =	1.9 tons per sq. ft.

MAXIMUM PILE REACTION: The maximum calculated pile reaction including lateral loads is as follows:

Piers 1 and 3 -	42.5 tons per pile
Pier 2 -	42.4 tons per pile

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

GENERAL NOTES

BRIDGE No MOT-40-0631

U.S.40 UNDER S.B. SR 49

MONTGOMERY COUNTY

ACI-1097(4)

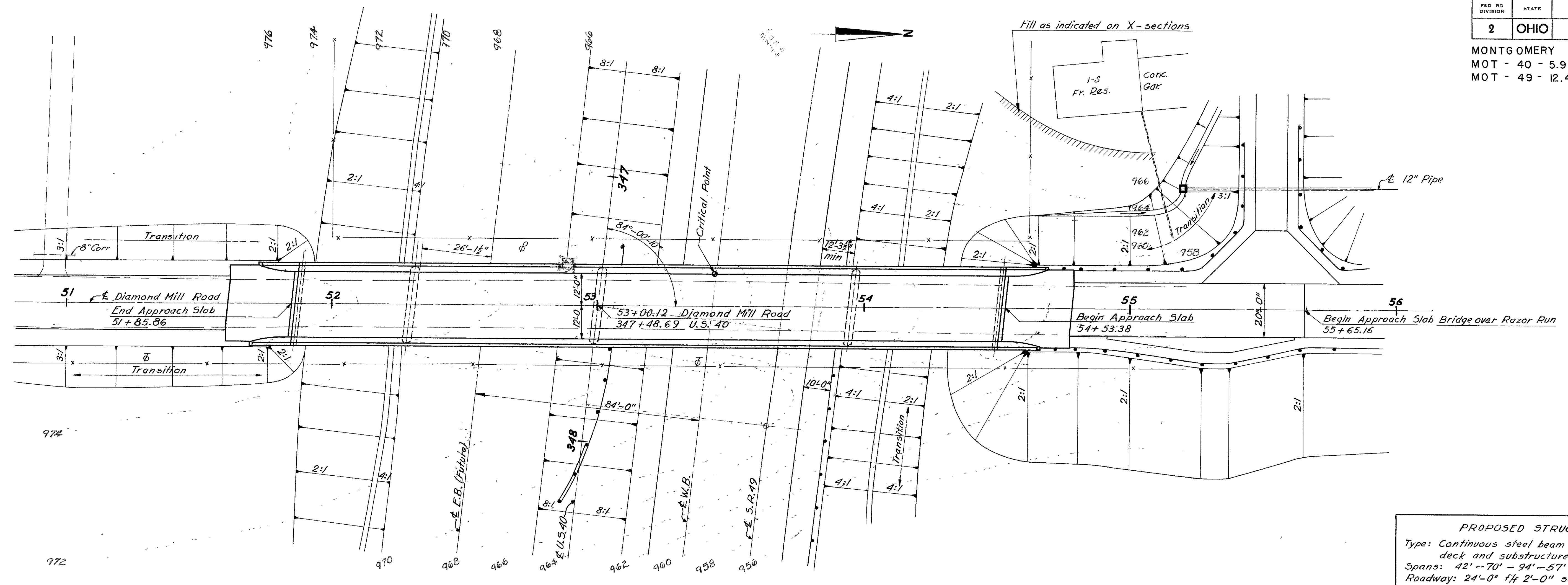
STA. 335 + 05.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
				TLU	4-7-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

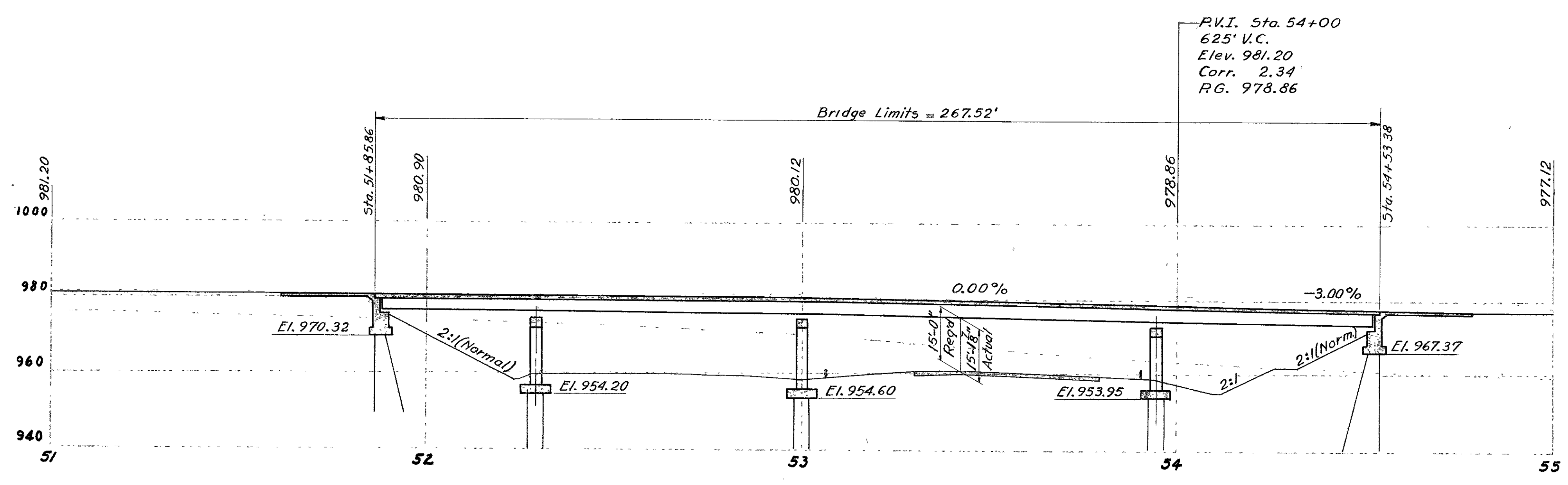
154  
241

MONTGOMERY COUNTY  
MOT - 40 - 5.98  
MOT - 49 - 12.45



PLAN

**PROPOSED STRUCTURE**  
 Type: Continuous steel beam with reinforced concrete deck and substructure  
 Spans: 42'-70'-94'-57' c/c brgs  
 Roadway: 24'-0" f/f 2'-0" safety curbs with concrete parapets and aluminum railing  
 Loading: CF-130  
 Skew: 5°-59'-50" Lt Forward  
 Wearing Surface: 3" monolithic concrete  
 Alignment: Tangent  
 Approach Slabs: 25' long, see sheet 140



PROFILE ON CL

Average pay length for  
12" cast-in-place reinforced concrete piles  
 South Abutment 20 ft  
 Pier #1 22 ft  
 Pier #2 25 ft  
 Pier #3 25 ft  
 North Abutment 30 ft

ALDEN E. STILSON & ASSOCIATES, LIMITED  
 CONSULTING ENGINEERS  
 COLUMBUS, OHIO

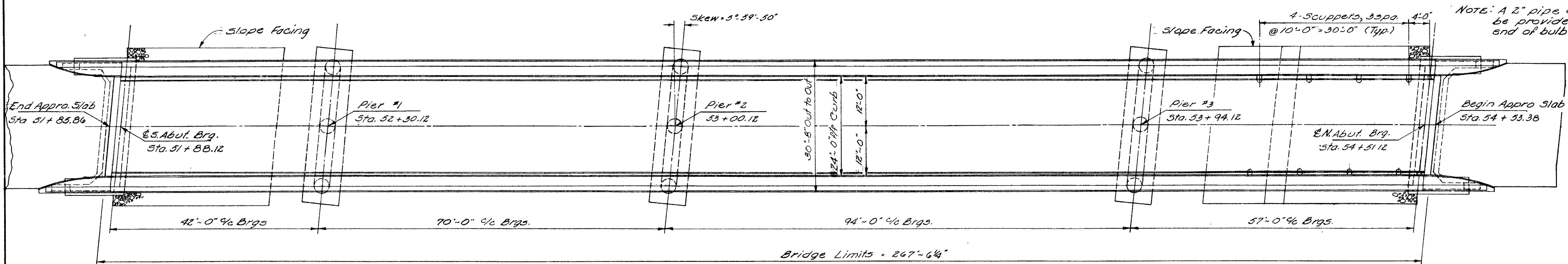
**SITE PLAN**  
 BRIDGE N<sup>o</sup> MOT-40-0655  
 U.S.R. 40 UNDER  
 DIAMOND MILL RD.  
 MONTGOMERY COUNTY  
 STATION 347+48.69

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.L.P.	G.L.P.	J.F.M.	J.P.	T.L.U.	4-3-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

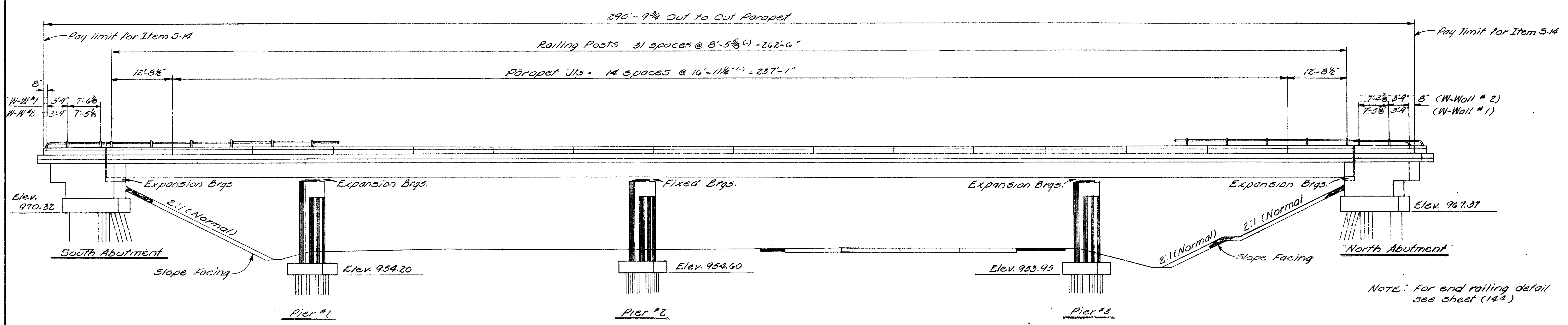
155  
241

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45



NOTE: A 2" pipe drain shall be provided at North end of bulb angles only.

GENERAL PLAN



NOTE: For end railing detail see sheet (142)

GENERAL ELEVATION

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

GENERAL PLAN & ELEVATION  
BRIDGE N<sup>o</sup> MOT-40-0655  
U.S. 40 UNDER DIAMOND MILL RD  
MONTGOMERY COUNTY  
ACI-1097(4) STA-347 + 48.69

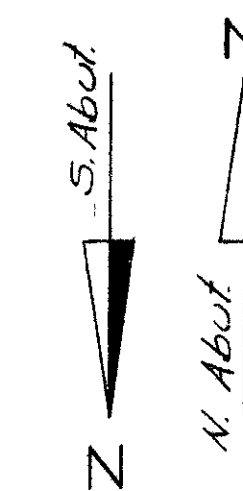
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RJW	BDB		PFG	TLU	4-7-58	



FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

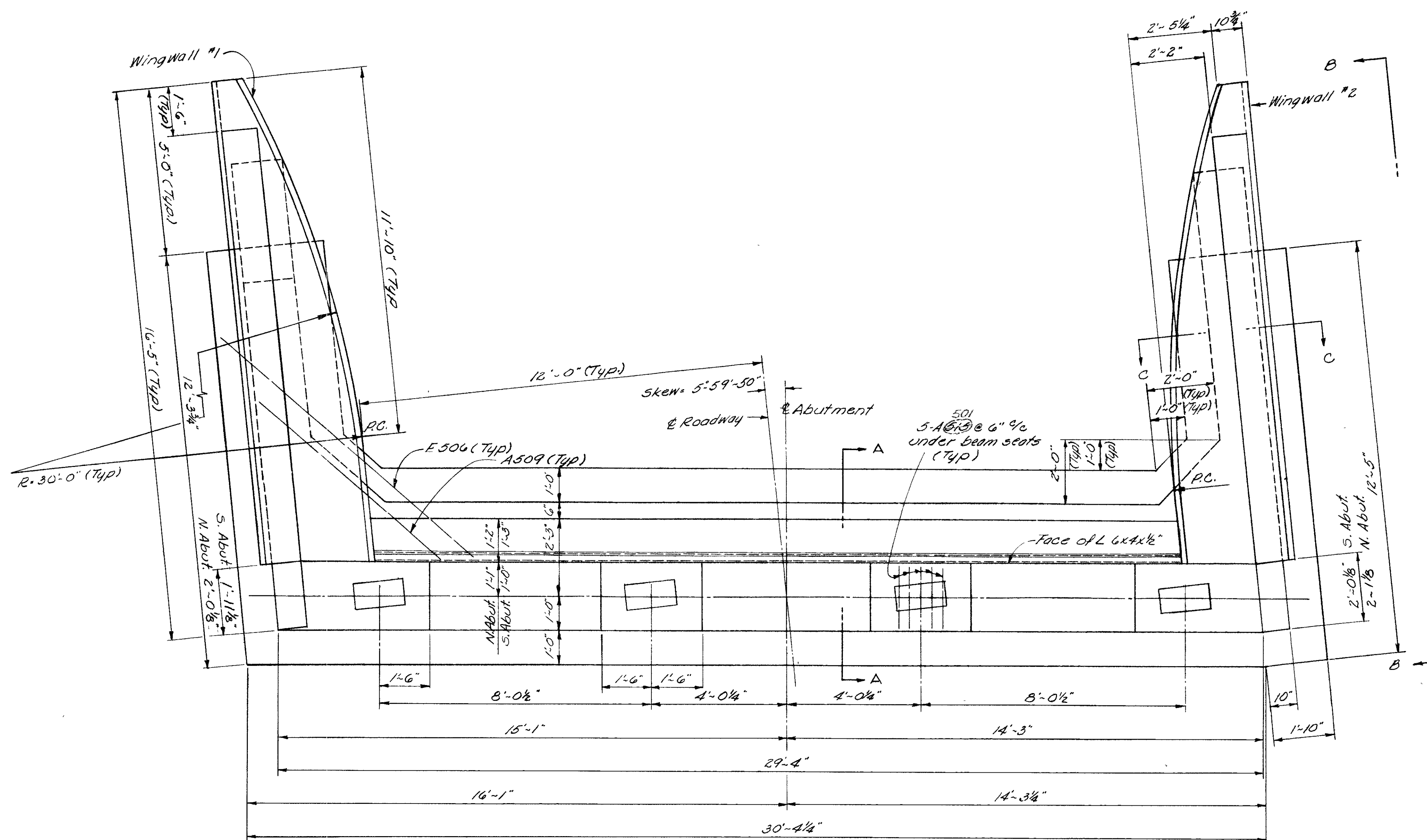
150  
241

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

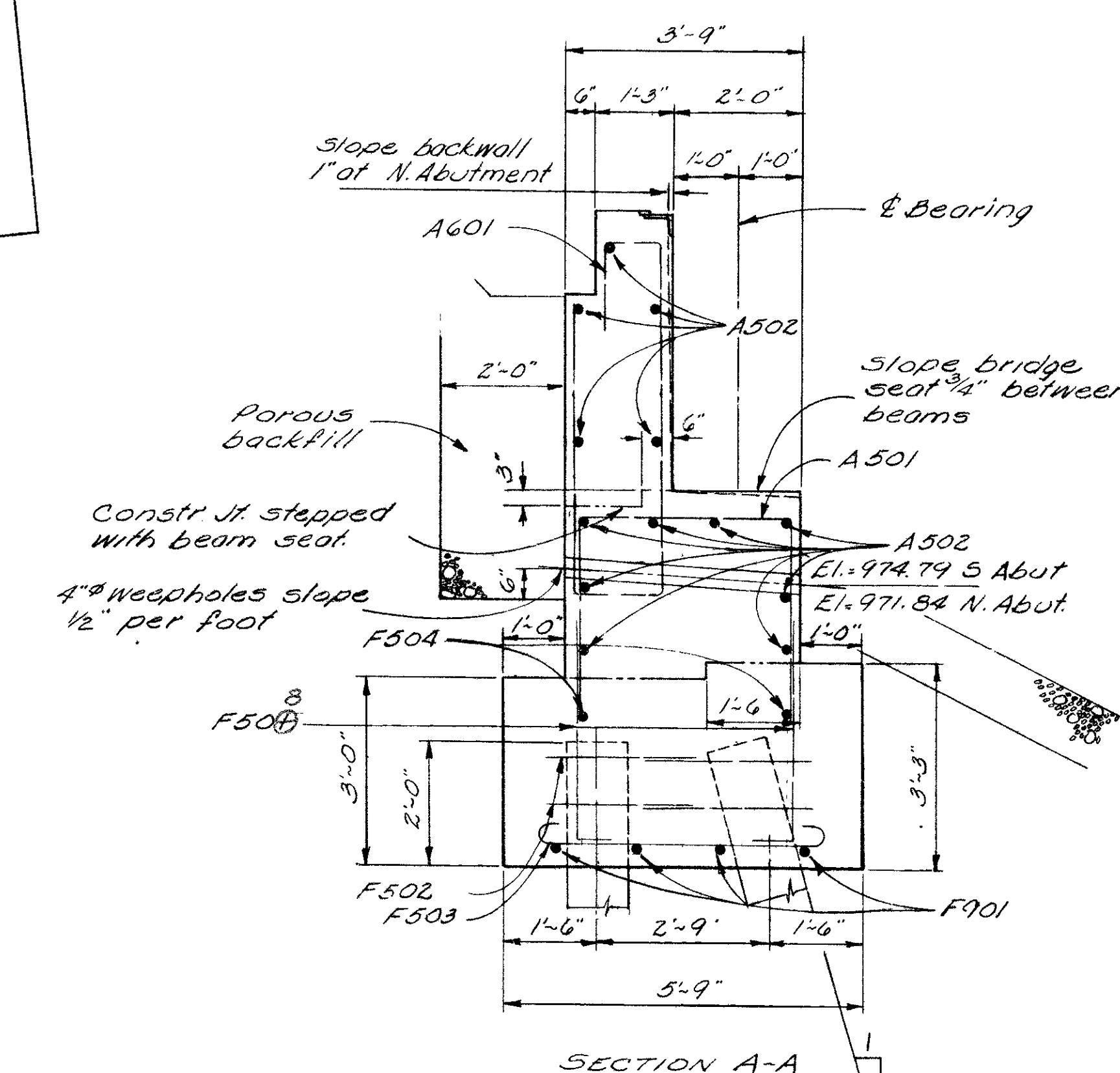


ELEVATIONS									
LOCATION	A	B	C	D	E	F	G	H	J
N. Abut.	973.34	973.48	973.50	973.38	967.37	976.44	976.49	977.84	977.80
S. Abut.	976.30	976.42	976.42	976.29	970.32	979.44	979.45	980.75	980.79

NOTE: Elevations H & J are given to the top of 2" edge bar at the face of curb.

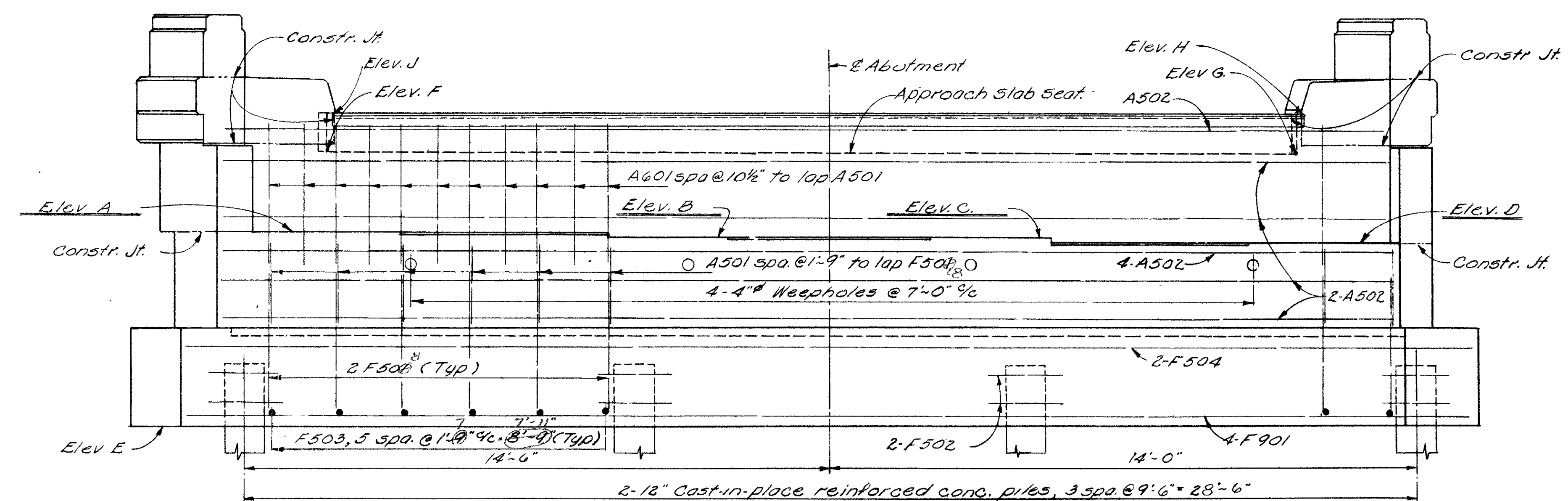


PLAN



SECTION A-A

For additional notes & details see sheet no. (157)



ELEVATION

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

ABUTMENT DETAILS  
BRIDGE No. MOT-40-0655  
U.S. 40 UNDER DIAMOND MILL RD.  
MONTGOMERY COUNTY  
STA. 347+48.69  
ACI-1097(A)

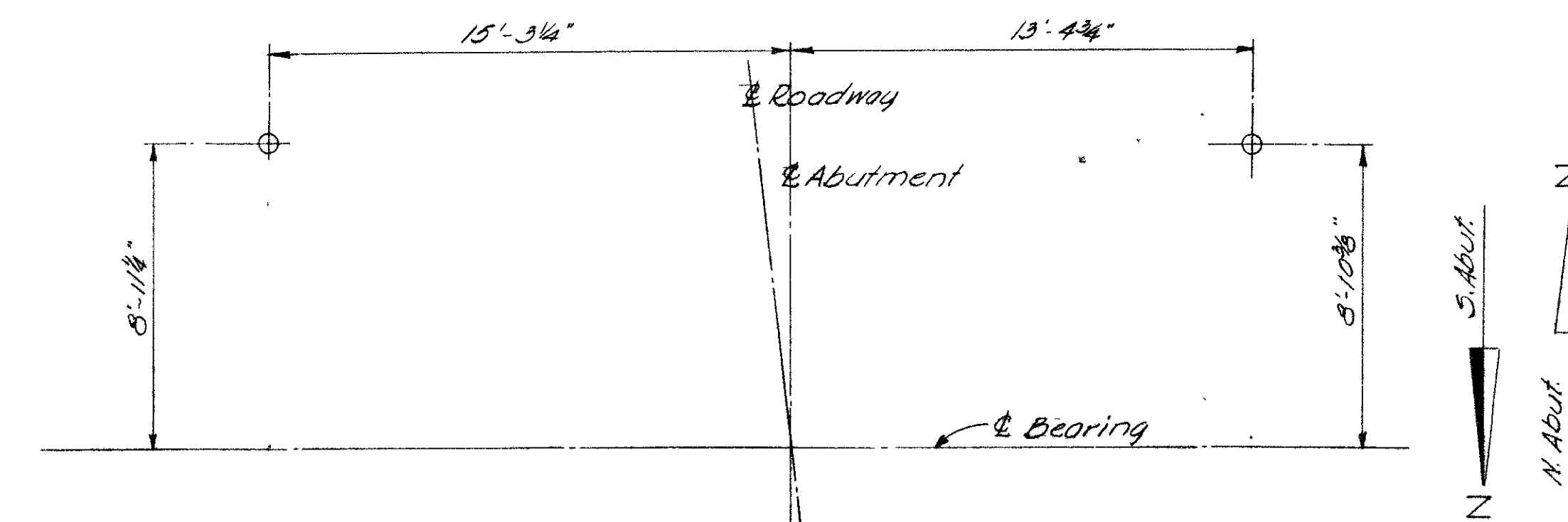
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RJW	BDB		PFG	TLU	4-7-58	

Revised 7.25.58

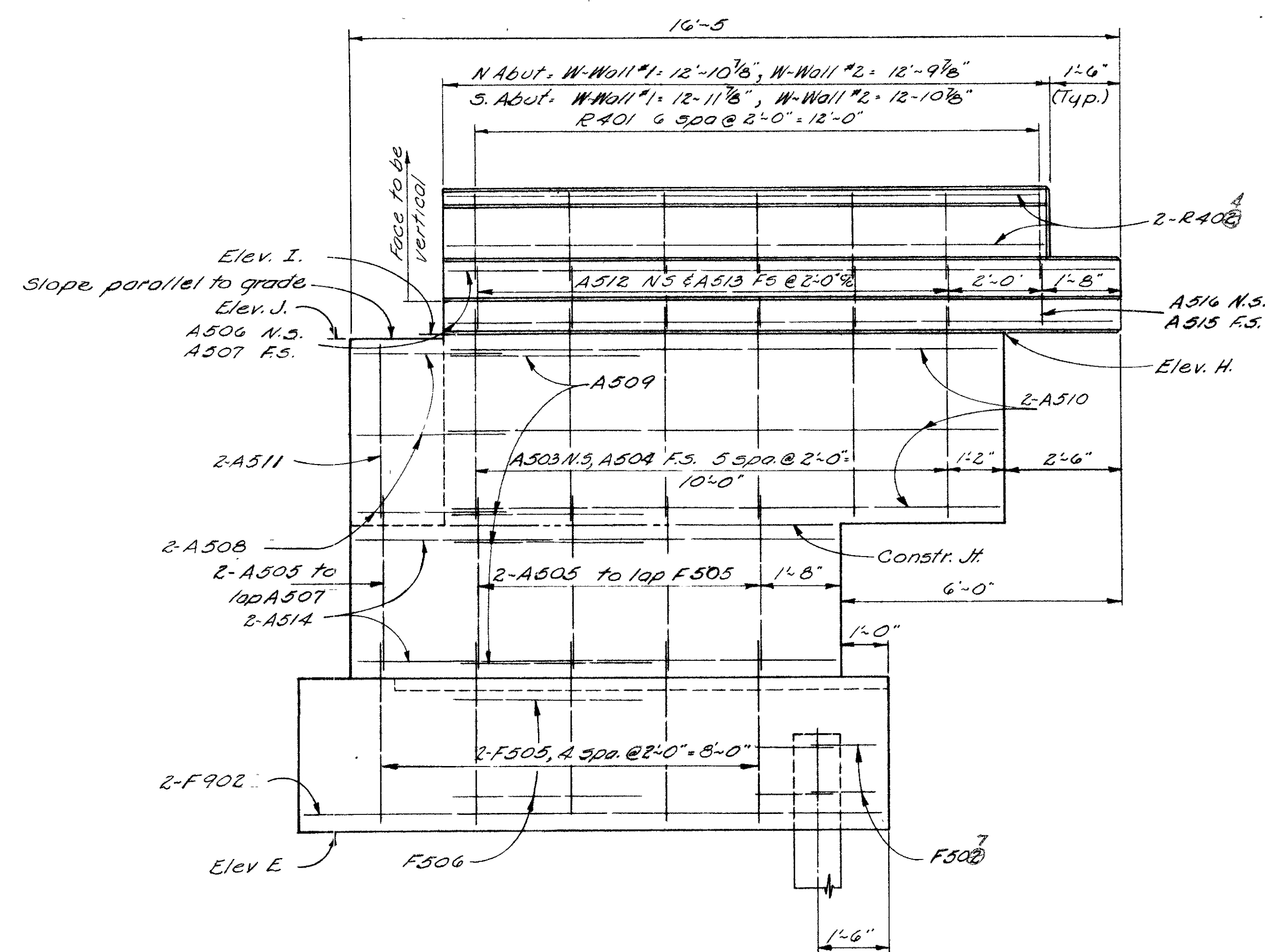
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

157  
24

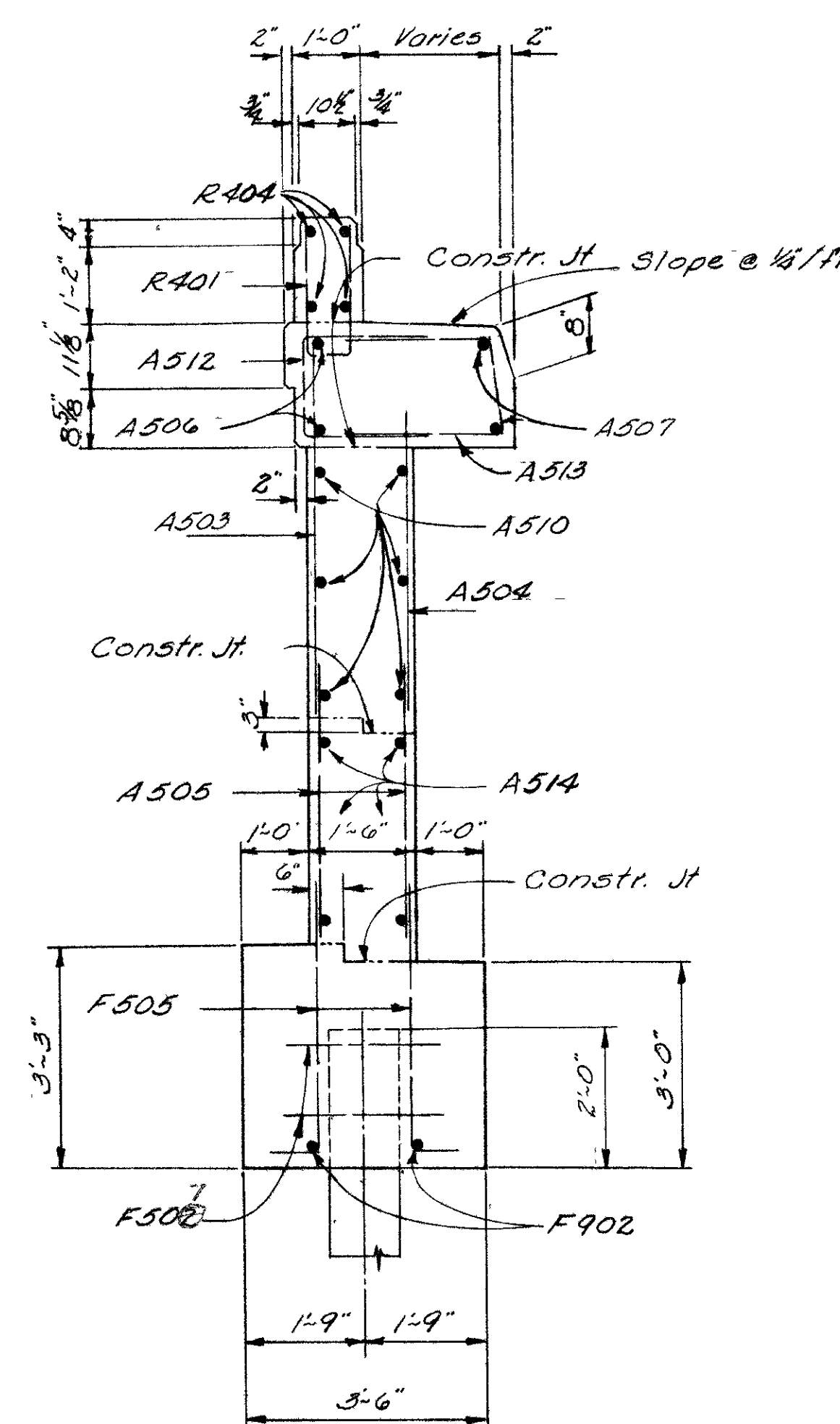
MONTGOMERY COUNTY  
MOT. 40-5.98  
MOT. 49-12.45



LOCATION OF WINGWALL PILE



VIEW B-B  
(Railing not shown)



SECTION G-C

NOTES

EMBANKMENT: The embankment shall be placed and compacted up to the finished slope and to the level of the top of slope at the face of abutment after which excavation for the abutment shall be made.

POROUS BACKFILL: Porous backfill as shown between wingwalls shall extend to the underside of the approach slab or I-22.

CONCRETE PARAPETS: are included with Item 3-A for payment

GUARD RAIL END CONNECTIONS: For guard rail connection to end of parapet see sheet (144)

REINFORCING STEEL LOCATION: N.S. indicates near side F.S. indicates far side

LOCATION	H		I		J	
	W-Wall #1	W-Wall #2	W-Wall #1	W-Wall #2	W-Wall #1	W-Wall #2
N. Abut.	976.81	976.88	977.03	977.08	976.98	977.03
S. Abut.	980.07	980.06	980.02	980.00	979.92	979.91

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

ABUTMENT DETAILS  
BRIDGE No. MOT 40-0655  
U.S. 40 UNDER DIAMOND MILL RD.  
MONTGOMERY COUNTY  
STA. 347+48.69  
ACI-1097(4)

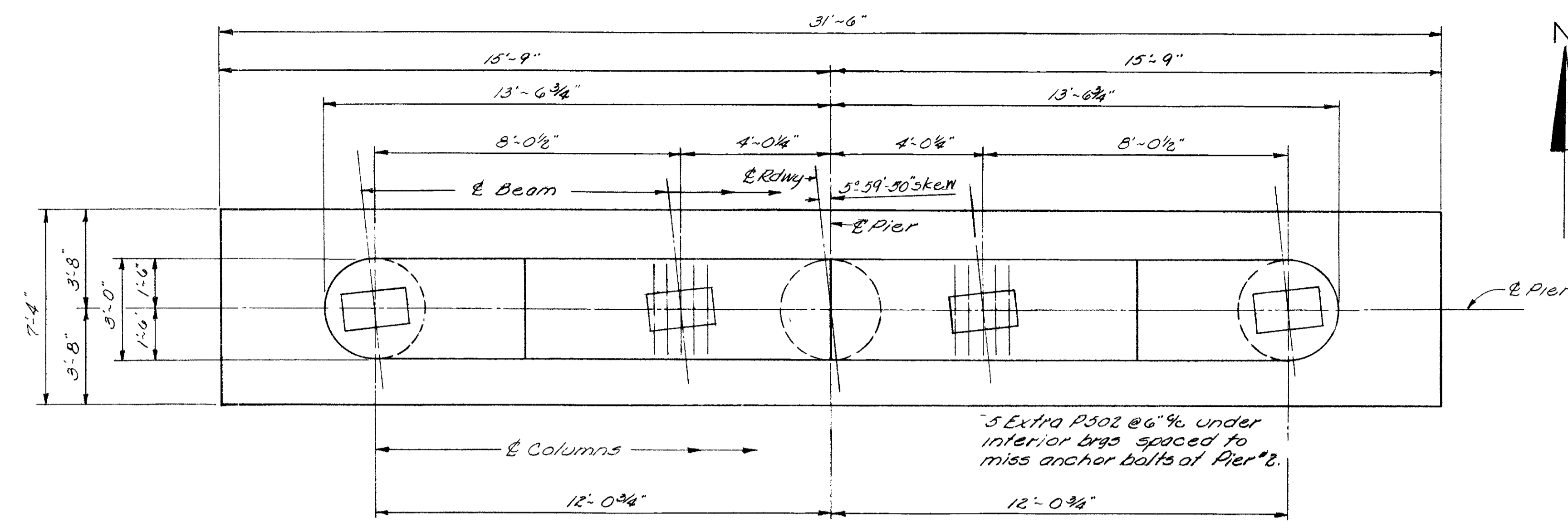
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RJW	BDB		PEF	TLU	4-7-58	

Revised 7-25-58

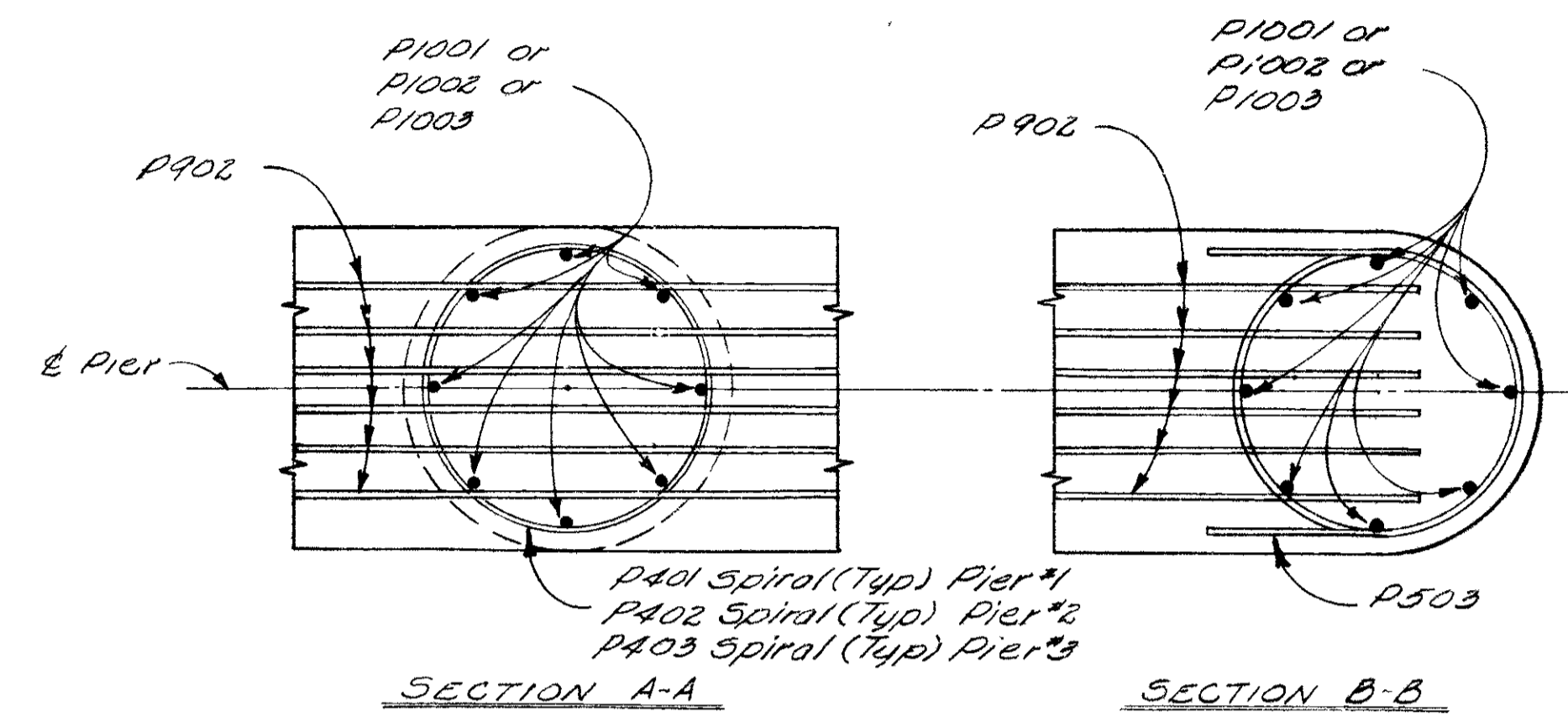
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

15B  
241

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

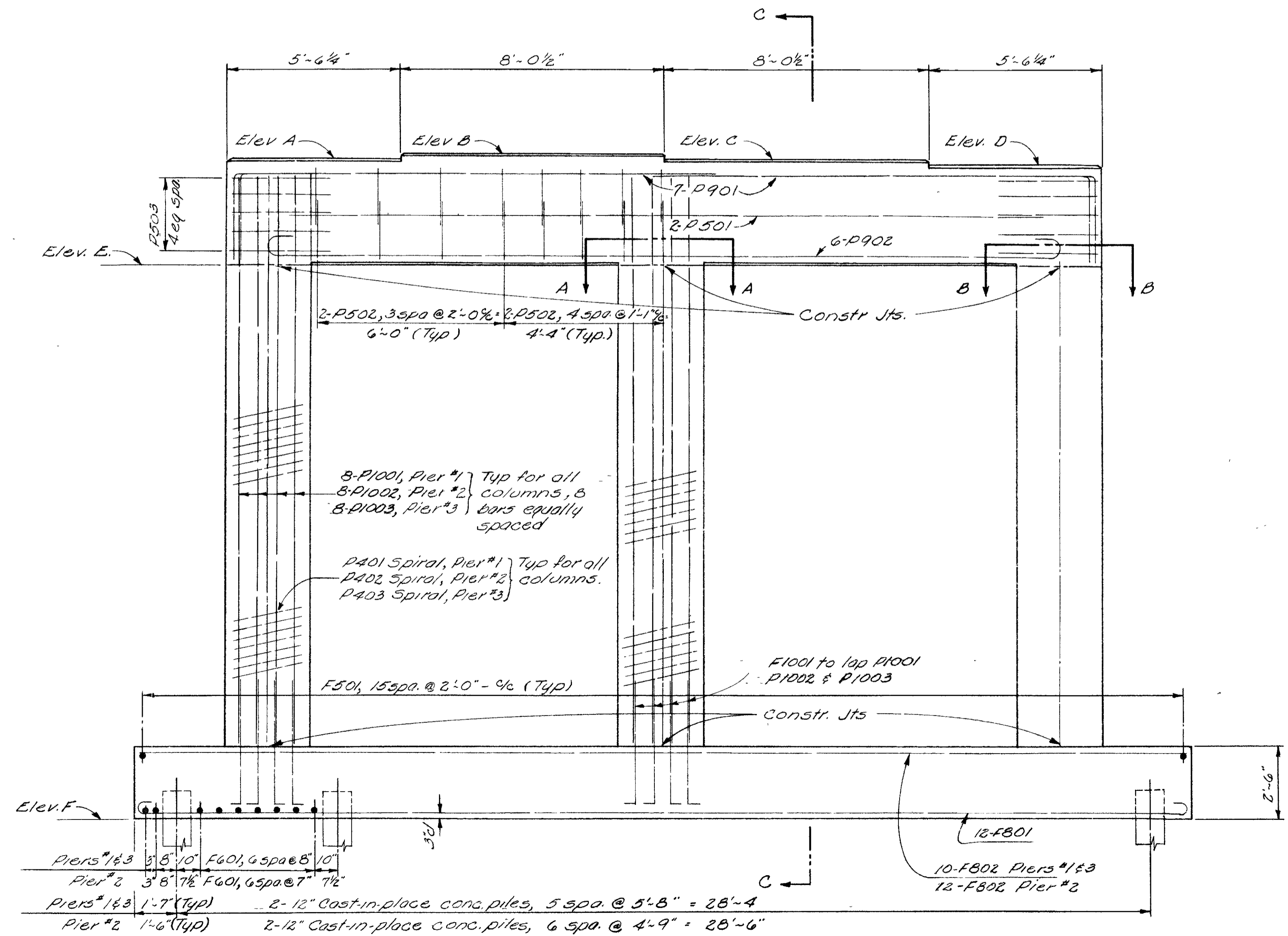


PLAN

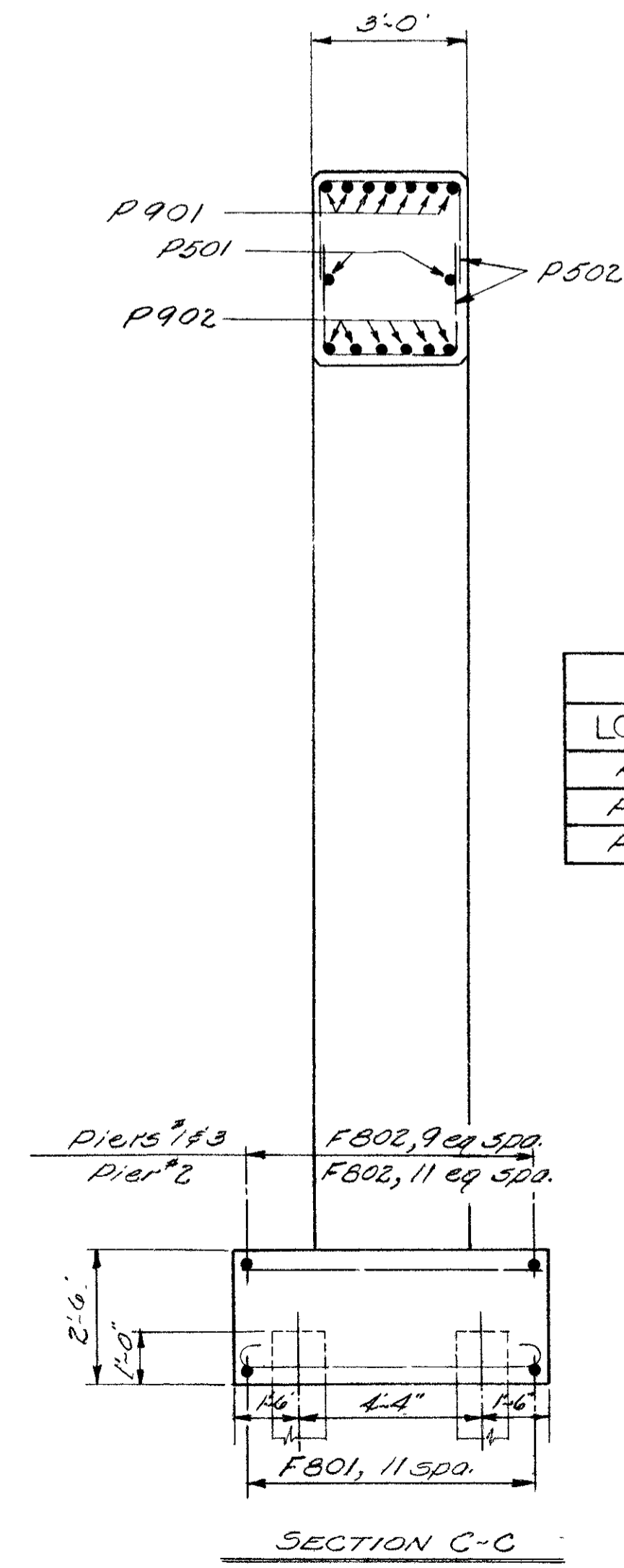


SECTION A-A

SECTION B-B



ELEVATION



SECTION C-C

ELEVATIONS						
LOCATION	A	B	C	D	E	F
Pier #1	975.73	975.86	975.86	975.74	972.23	954.20
Pier #2	974.80	974.94	974.94	974.83	971.30	954.60
Pier #3	974.63	974.77	974.78	974.67	971.13	953.95

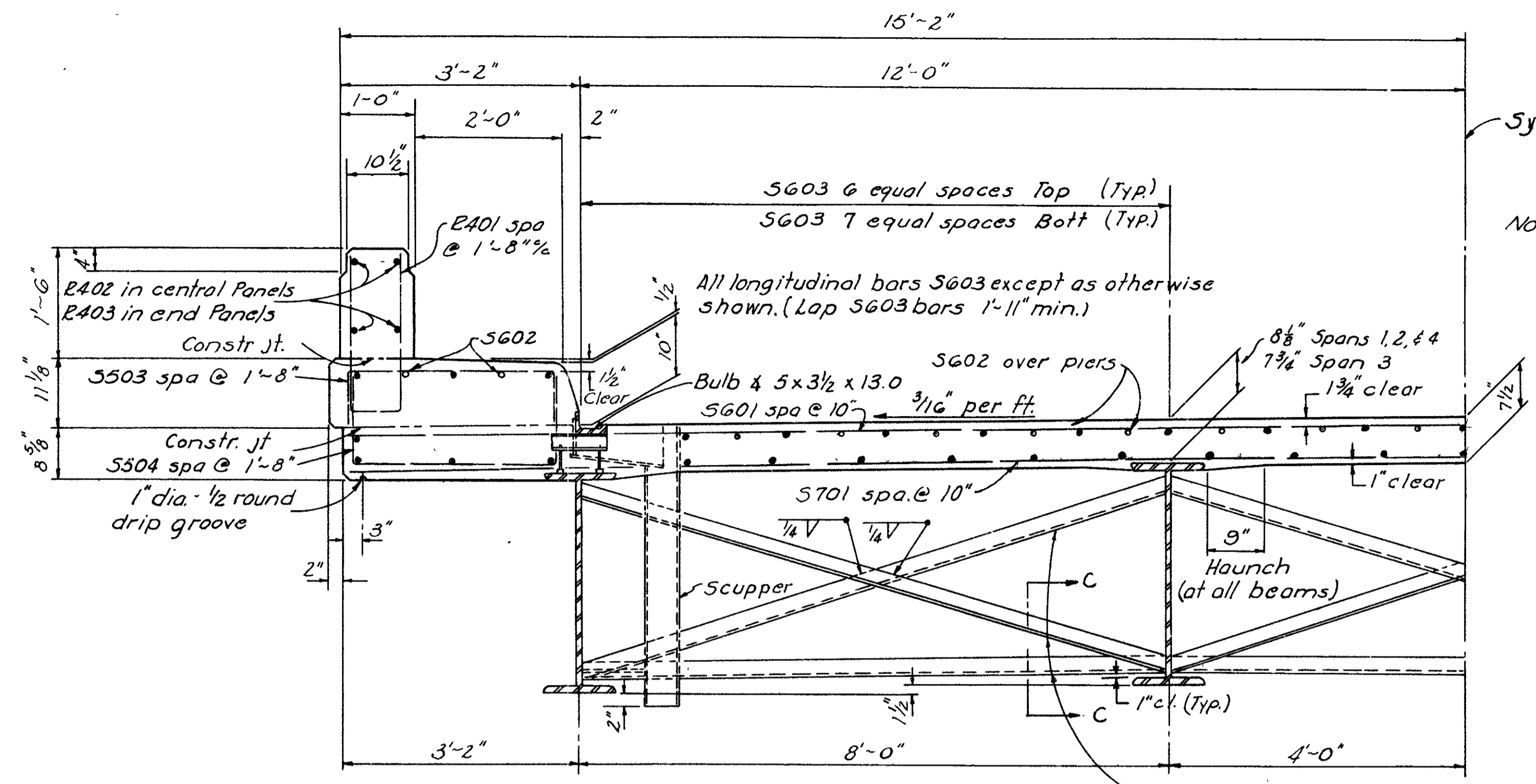
Piers #1&3 3' 5" 10" F601, 6 spa @ 8" 10"  
 Pier #2 3' 8" 7 1/2" F601, 6 spa @ 7" 7 1/2"  
 Piers #1&3 1'-7" (Typ) 2-12" Cast-in-place conc. piles, 5 spa @ 5'-8" = 28'-4"  
 Pier #2 1'-6" (Typ) 2-12" Cast-in-place conc. piles, 6 spa @ 4'-9" = 28'-6"

ALDEN E. STILSON & ASSOCIATES, LIMITED  
 CONSULTING ENGINEERS  
 COLUMBUS, OHIO

PIER DETAILS  
 BRIDGE No MOT-40-0655  
 U.S.40 UNDER DIAMOND MILL RD  
 MONTGOMERY COUNTY  
 STA. 347+48.69  
 ACI-1097(4)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RJW	BDB		PF6	TLU	4-7-58	

Revised 7-25-58



Symmetrical about E

Note: All transverse steel shall be placed parallel to E of piers and abutments.

Note: Slab thickness shown includes 3/4" for monolithic wearing surface.

Note: Concrete in parapets is included in Item 5-14 for payment.

Intermediate crossframe L<sub>3</sub> 3"x3"x5/16" Weld both sides of vertical leg and top side of horizontal leg to beam with 1/4" continuous fillet weld

TRANSVERSE HALF SECTION

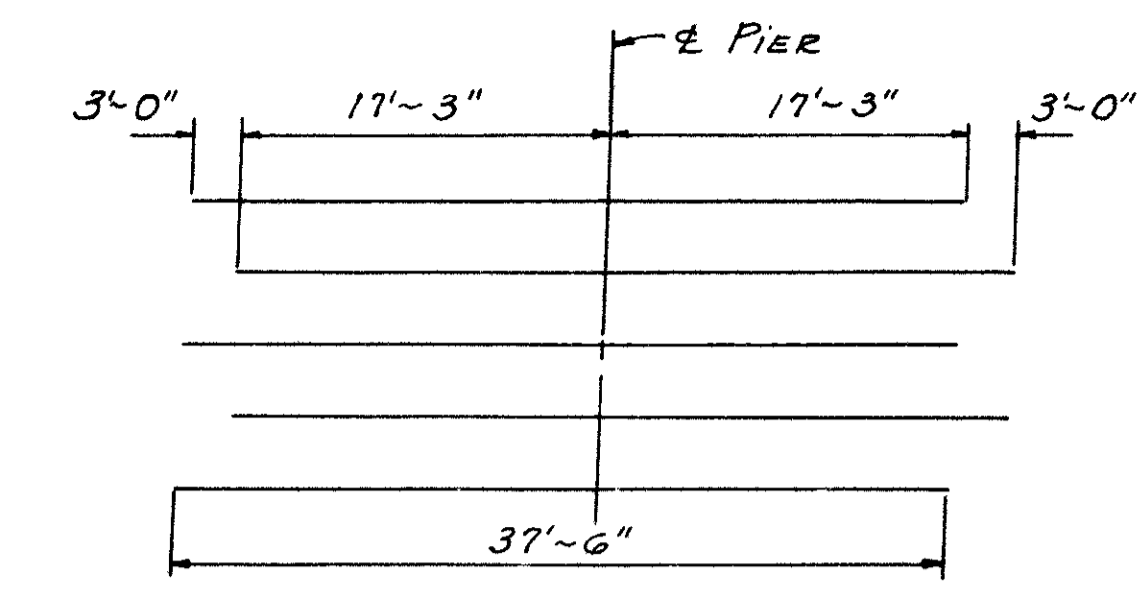
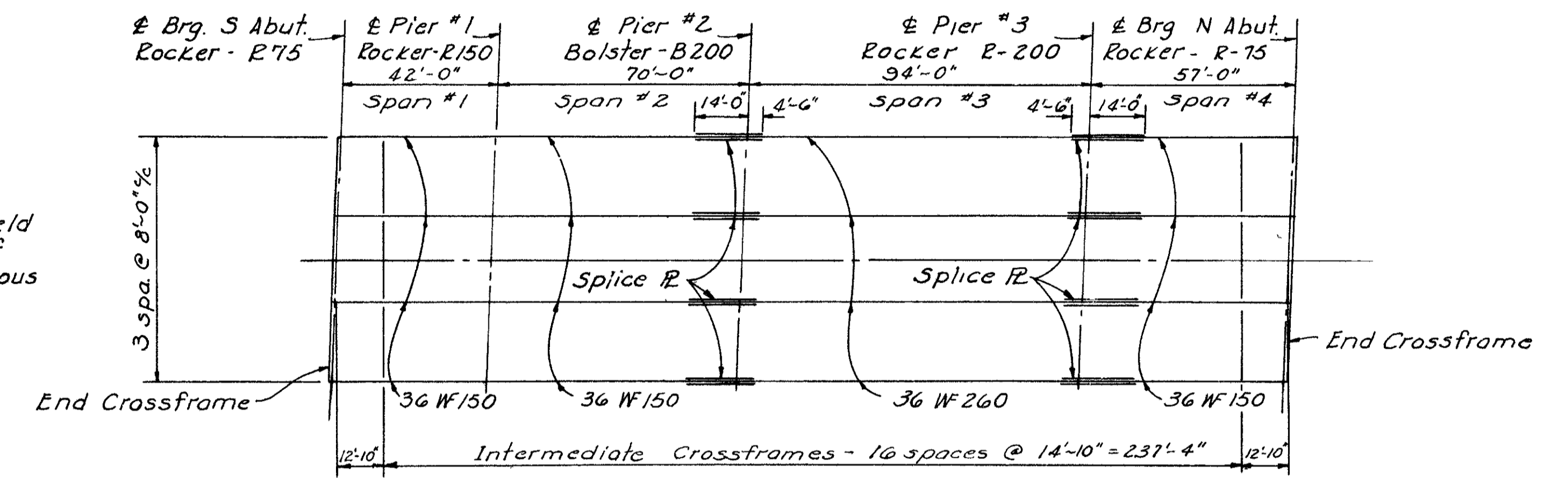
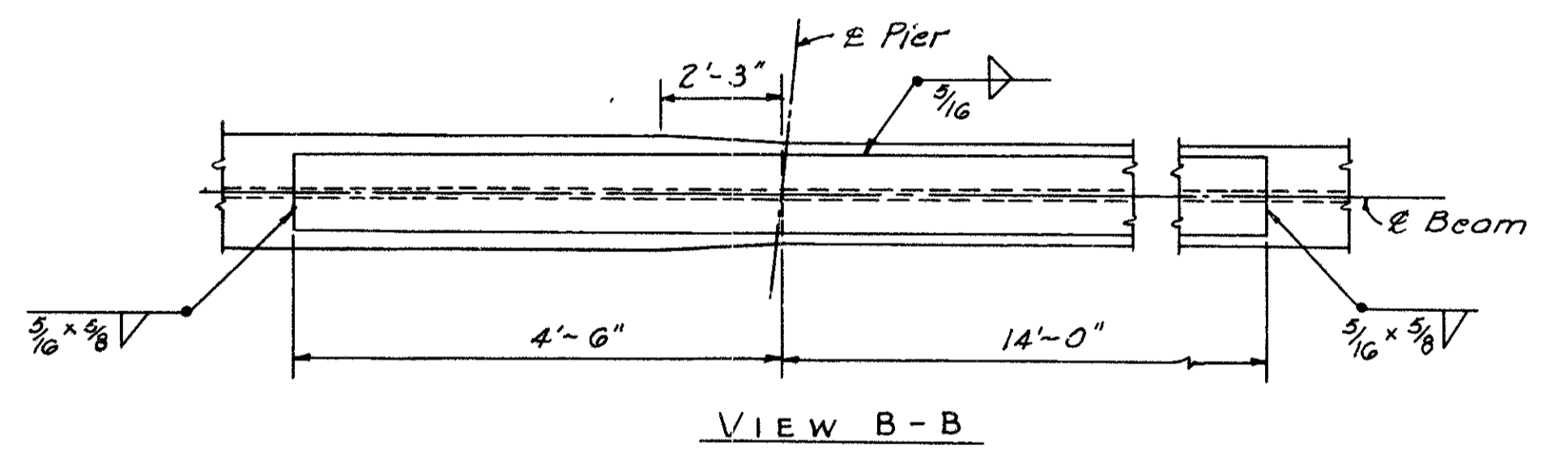


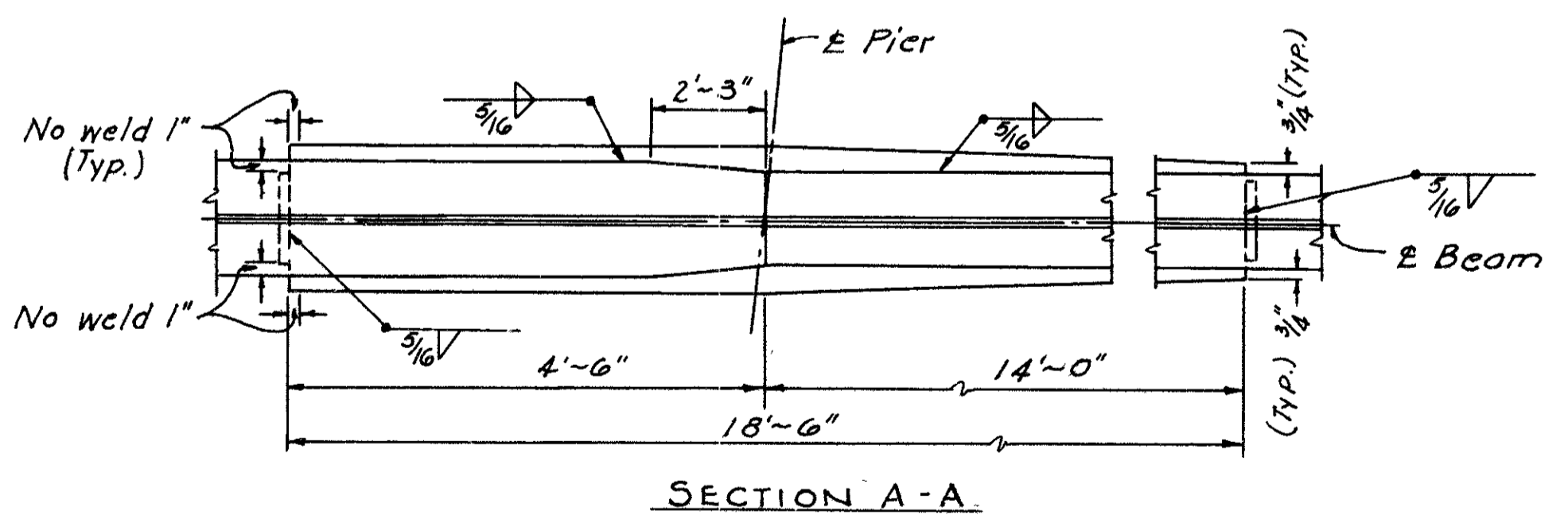
DIAGRAM SHOWING STAGGER OF S602 BARS OVER PIERS



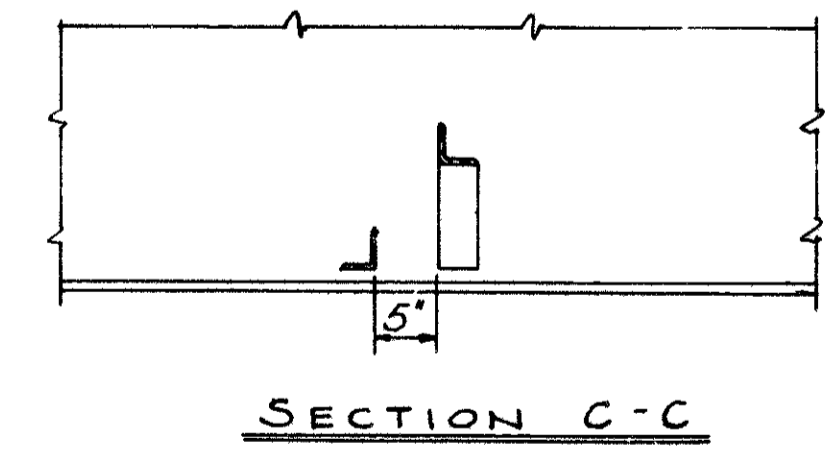
FRAMING PLAN



VIEW B-B



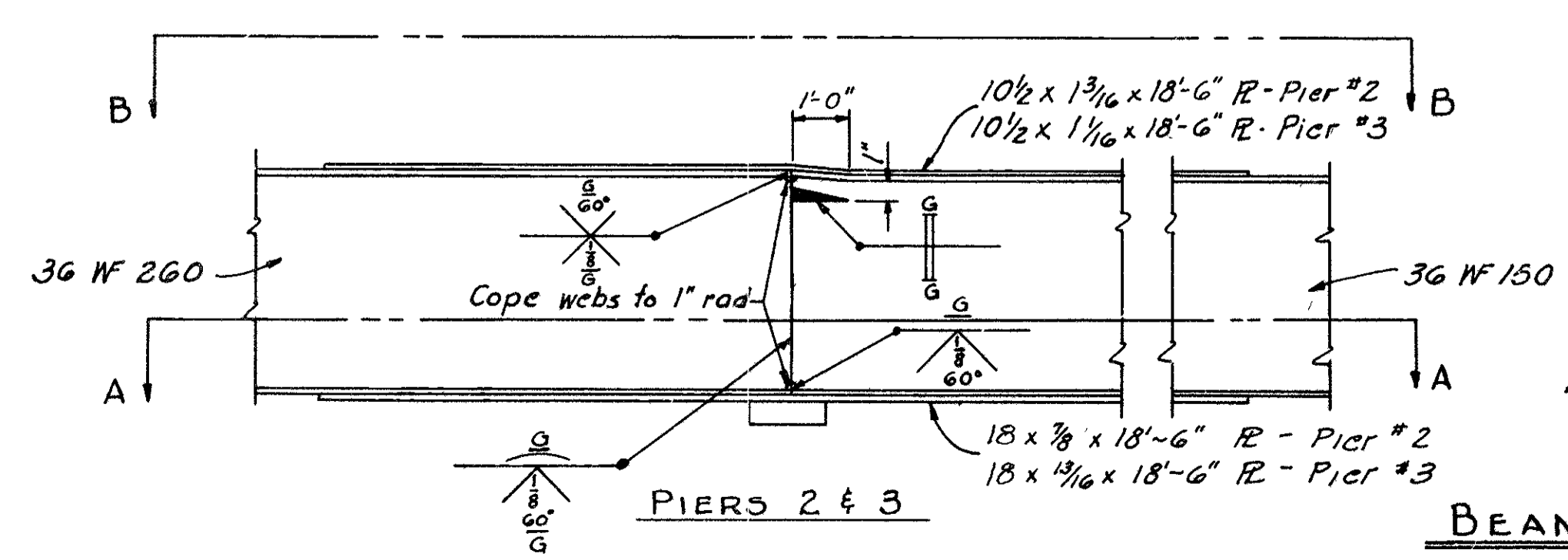
SECTION A-A



SECTION C-C

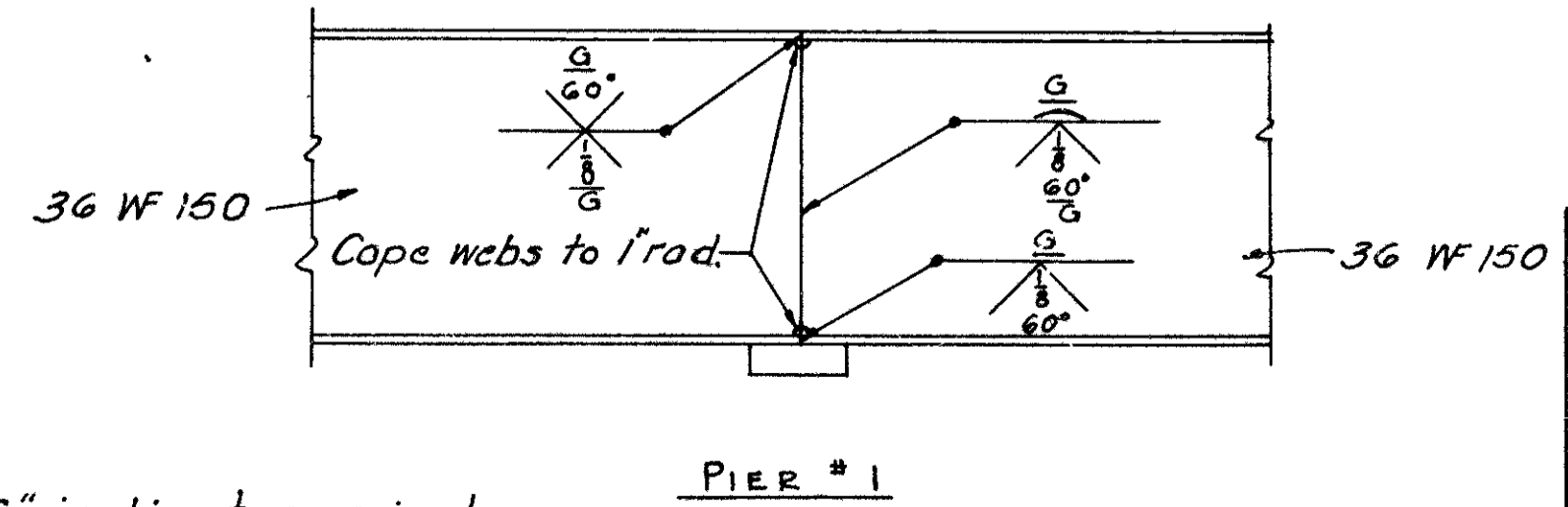
BEAM SPLICE PROCEDURE

- 1 Raise end of beam at Pier #2 1 1/4".
- 2 Butt-weld beam flanges & web at Pier #1 using the following sequence: make one pass on each flange, then one on the web; repeat until welds are completed.
- 3 Lower end of beam at Pier #2
- 4 Make beam splice at Pier #2 in the same manner raising the end of the beam 3 3/4" at Pier #3
- 5 Weld top and bottom flange moment plates at Pier #2
- 6 Lower end of beam at Pier #3
- 7 Make splice at Pier #3 in same manner as at Pier #2, raising beam 1 1/2" at the abutment.



BEAM SPLICE DETAILS

"G" indicates grind



PIER #1

LOCATION	SPAN #1		SPAN #2		SPAN #3		SPAN #4	
	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.
Weight of beams	0	0	0	0	1/4	1/4	-1/16	-1/16
Remaining D.L.	1/16	1/16	3/16	1/2	13/16	1	1/8	1/8
Vertical Curve	1/8	1/8	3/8	3/8	5/8	5/8	1/4	1/4
Total	3/16	3/16	2/16	5/8	1 1/16	1 1/8	3/16	5/16
Required Shop Camber	0	0	0	0	1/8	1 1/8	0	0

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SUPERSTRUCTURE  
AND FRAMING PLAN DETAILS  
BRIDGE No MOT-40-0655  
USR 40 UNDER DIAMOND MILL RD.

MONTGOMERY COUNTY  
ACI-1097(4) STA 347+48.69

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RJW	EJA		PFQ	TLU	4-7-58	

**REINFORCING**

**STEEL**

**LIST**

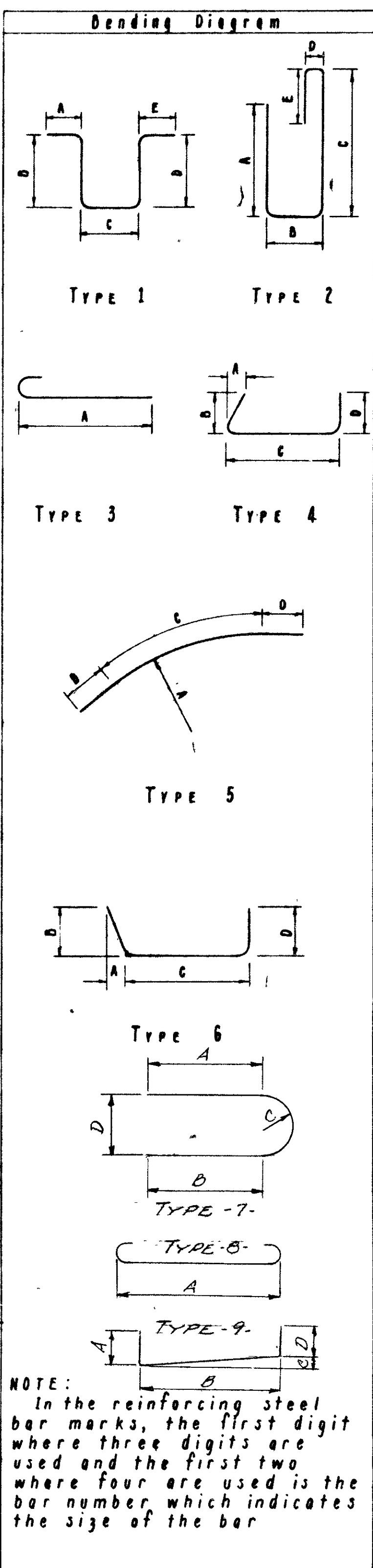
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

160  
241

MONTGOMERY COUNTY  
MOT-40-5-9B  
MOT-49-12-45

Mark	N <sup>o</sup>	Length	Weight	Jhp.	Mark	N <sup>o</sup>	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Jhp.
<i>SUPERSTRUCTURE</i>															
R402	112	16-9	*	st	R401	320	4-0	865	1	1-10	0-6	1-10			bt
R403	16	13-4	*	st											
			13,119		S503	320	3-1	1307	1	0-9	2-8	0-9			bt
S601	320	30-0	13,919	st	S504	320	5-2	4787	1	1-3	2-8	1-3			bt
S602	160	37-6	9447	st											
			3374		S603	371	39-5	21,965							st
S-701	320	30-0	19,622	st											
<i>PIERS</i>															
P501	6	24-0	150	st	P502	120	7-9	4218	1	2-8	2-8	2-8			bt
P1001	24	18-10	1944	st	P503	30	7-3	227	7	1-7	1-7	1-3 1/2	1-3 1/2		bt
P1002	24	17-6	1806	st	P901	42	17-0	2428	1	3-2	14-1				bt
P1003	24	18-0	1860	st	P902	18	26-10	1642	8	24-4					bt
F501	48	7-0	350	st	F601	124	8-4	1552	8	7-0					bt
F802	32	31-2	2663	st	F801	36	33-4	3204	8	31-2					bt
					F1001	72	6-9	1962	1	5-4	1-4				bt
<i>ABUTMENT</i>															
A502	24	29-10	809	st	A501	16	8	1641	1	2-6	8-5	2-6			bt
A503	24	5-8	142	st	A507	8	14-2	118	5	48-7	12-1	2-1			bt
A504	24	5-0	125	st	A512	24	4-2	103	1	1-7	1-3	1-7			bt
A505	40	4-7	191	st	A513	24	4-0	100	9	1-7	1-2	0-2	1-7		bt
A506	8	14-0	117	st	A515	4	2-8	11	1	0-10	1-3	0-10			bt
A508	24	3-8	92	st	A516	4	2-7	11	9	0-10	1-2	0-2	0-10		bt
A509	16	7-0	117	st				1448							
A510	24	11-6	288	st	A601	20	14-3	473	2	4-11	1-5	6-0	0-11	1-6	bt
A511	8	3-5	29	st				218							
A514	16	10-1	168	st	F502	24	8-4	237	1	3-5	1-9	3-5			bt
			133		F503	36	6-7	247	8	5-5					bt
F504	8	31-10	250	st	F505	40	5-8	236	1	4-10	1-0				bt
F506	8	10-0	83	st	F507	16	4-8	78	1	1-7	1-9	1-7			bt
F901	8	31-10	273	st	F508	72	5-0	375	1	0-6	4-7				bt
F902	8	12-1	329	st	R401	28	4-0	75	1	1-10	0-6	1-10			bt
R404	16	12-6	*	st											
<i>REPLACEMENT STEEL</i>															
RE401	1	5-3		st											
RE501	1	5-7		st											
RE601	2	5-4		st											
RE701	1	6-2		st											
RE801	1	6-6		st											
RE901	1	6-10		st											
RE1001	1	7-2		st											

Mark	N <sup>o</sup>	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Jhp.
<i>REPLACEMENT STEEL FOR SPIRALS</i>										
RE402	1	5-3		5	1-3 1/2		5-3			bt



NOTE:  
In the reinforcing steel bar marks, the first digit where three digits are used and the first two where four are used is the bar number which indicates the size of the bar

ESTIMATED QUANTITIES							
Item	Total	Unit	Description	Abut.	Pier	Supers.	General
E-2	245	Cu.Yd	Unclassified Excavation	136	109		
S-1	248	Cu.Yd	Class "A" concrete, superstructure			248	
S-1	6067	Cu.Yd	Class "C" concrete, pier caps & columns		6067		
S-1	50	Cu.Yd	Class "E" concrete, abutments above footings	50			
S-1	118	Cu.Yd	Class "E" concrete, footings	54	64		
S-4	93,509	Lb	Reinforcing steel	7260	23,060	63,183	
	93,509			7260	23,060	63,183	
S-7	239,000	Lb	Structural steel			239,000	
S-8	239,000	Lb	Field painting of structural steel			239,000	
S-14	582	Lin.Ft.	Railing (Aluminum rail & supports & conc. parapet)			582	
S-16	Lump	Sum	First test pile				Lump
S-18	1414	Lin.Ft.	12" cast-in-place reinforced conc piles	500	914		
S-29	24	Cu.Yd	Porous Backfill	24			
S-29	186	Cu.Yd	Slope Facing (S-29.05 Type)	186			

\* HORIZONTAL PARAPET REINFORCING  
THESE BARS ARE INCLUDED WITH THE RAILING FOR PAYMENT

SPIRALS - NOT ROLLED							
Mark	N <sup>o</sup>	Length	Core	Pitch	Turns	Spacers	Weight
P401	3	15-6 3/4	32	4 1/2	44	12	855
P402	3	14-2 3/4	32	4 1/2	41	12	714
P403	3	13-8 3/4	32	4 1/2	39	12	757

THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP.  
THE "NO. OF TURNS" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS 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 ITEM S-4  
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.

REPLACEMENT BARS  
IF REINFORCING BARS ARE FABRICATED FROM STOCK WHICH HAS PREVIOUSLY BEEN TESTED AND APPROVED BY THE OHIO HIGHWAY TESTING LABORATORY TEST SAMPLES AS PROVIDED IN SEC S-4.02 NEED NOT BE FURNISHED AND REPLACEMENT BARS WILL NOT BE REQUIRED.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

REINFORCING STEEL LIST  
AND ESTIMATED QUANTITIES  
BRIDGE No. MOT-40-0655  
US 40 UNDER DIAMOND MILL RD  
MONTGOMERY COUNTY  
ACT-1097(4) STA-347+48.69

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RJW	BOB		PFG	TLU	4-7-58	

Revised 7-25-58

FED. NO. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

161  
241

MONTGOMERY COUNTY  
MOT 40-5.98  
MOT 49-12.45

**REFERENCES:**

Standard Drawings:

End Finish and End		
Cross Frame Details	-	CSB-2-56 dated 12-3-56, revised 3-1-58.
Gutter and Scupper Details	-	CSB-2-56 dated 12-3-56, revised 3-1-58.
Rocker and Bolster Details	-	RB-1-55 dated 3-1-55
Railing Details Type A	-	AR-1-57 dated 4-9-57, revised 3-1-58
Supplemental Specifications	-	S-114 revised 8-1-57
Guardrail and Railing Details	-	Sheet 144

**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 revisions thereof dated 2-21-58.

**FOUNDATION SOUNDINGS:** Foundation design and foundation quantities are based on a study of rod soundings and soil sampling and soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.

**WELDED STEEL:** The steel for the 36 WF 260 beams shall conform to ASTM Designation A-373. All other structural steel shall conform to either ASTM A-7 (as per Sec. M-7.4 (a) of the Construction and material Specifications) or to A-373.

**WELDING** of structural steel shall be Class "A" except as otherwise shown. Any welds shown as field welds may, at the option of the Contractor, be made in the shop. Class "B" welding shown thus B

**EXCAVATION QUANTITY** includes the removal of fill material between bottom of the footing and the top of the slope at the face of the abutment.

**CONCRETE DECK PLACING:** In order to facilitate water curing of the concrete in 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 the transverse slab bars and are located near the center of any span.

**SLOPE FACING** shall be provided under the structure at both abutments. The porous drain material shall be 12" thick and shall extend from the face of the abutment down to bottom of ditch and transversely to 3 ft. outside the edge of the superstructure.

**PILES** shall be driven to a minimum bearing capacity of 30 tons per pile for the abutments and 40 tons per pile for the piers.

**MAXIMUM PILE REACTION:** The maximum calculated pile reaction including lateral loads is as follows:

S. Abutment	-	25.8 tons per pile
N. Abutment	-	27.4 tons per pile
Piers 1 & 3	-	46.7 tons per pile
Pier 2	-	48.9 tons per pile

**TRAFFIC:** Diamond Mill Road traffic will be detoured. See Sheet 12.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

**GENERAL NOTES**

BRIDGE No MOT -40-0655  
U.S. 40 UNDER DIAMOND MILL RD.  
MONTGOMERY COUNTY

ACI-1097(4) STA. 347 + 48.69

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
				TLO	4-7-58	

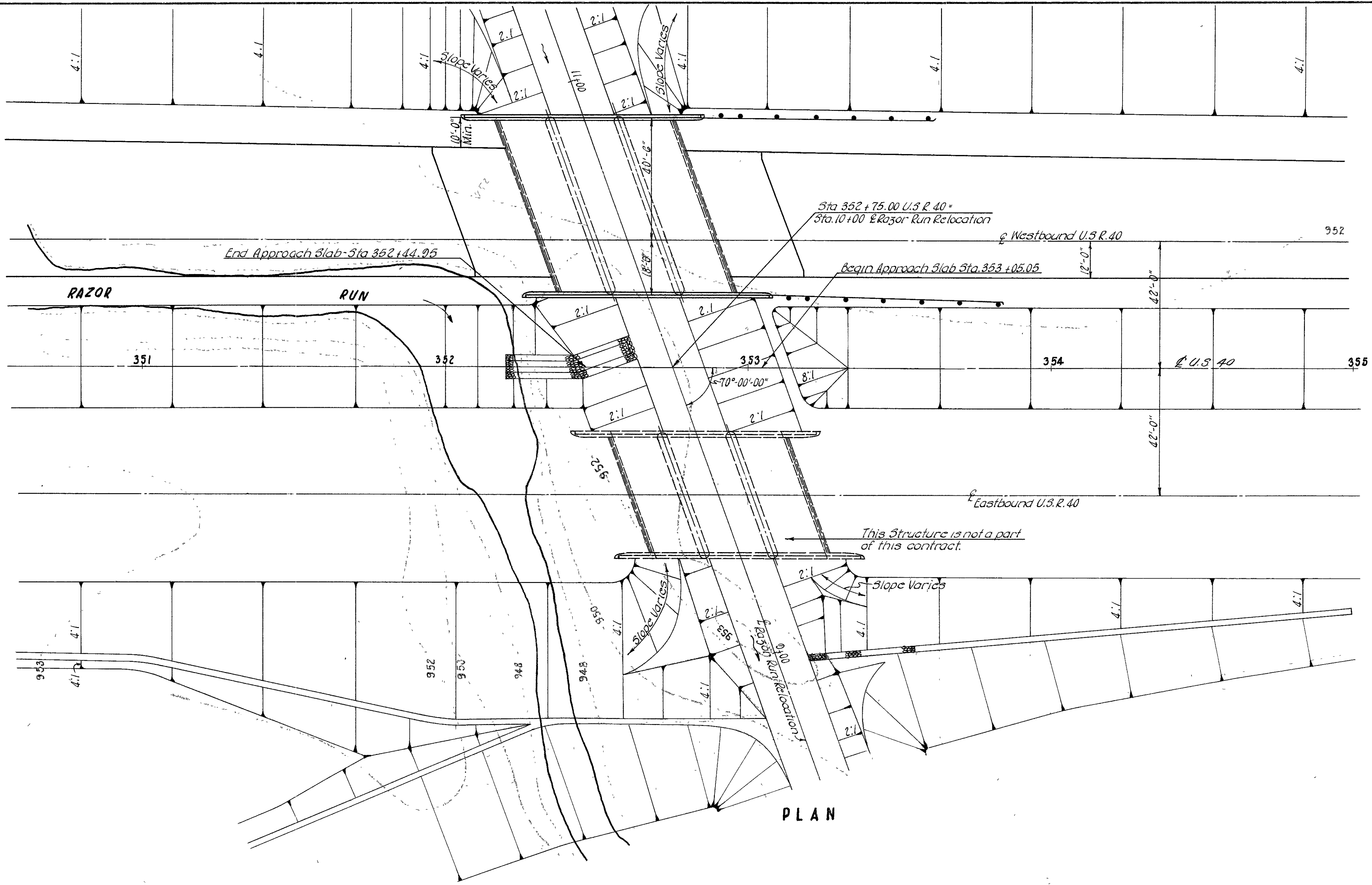
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

MONTGOMERY COUNTY  
MOT - 40 - 5.98  
MOT - 49 - 12.45

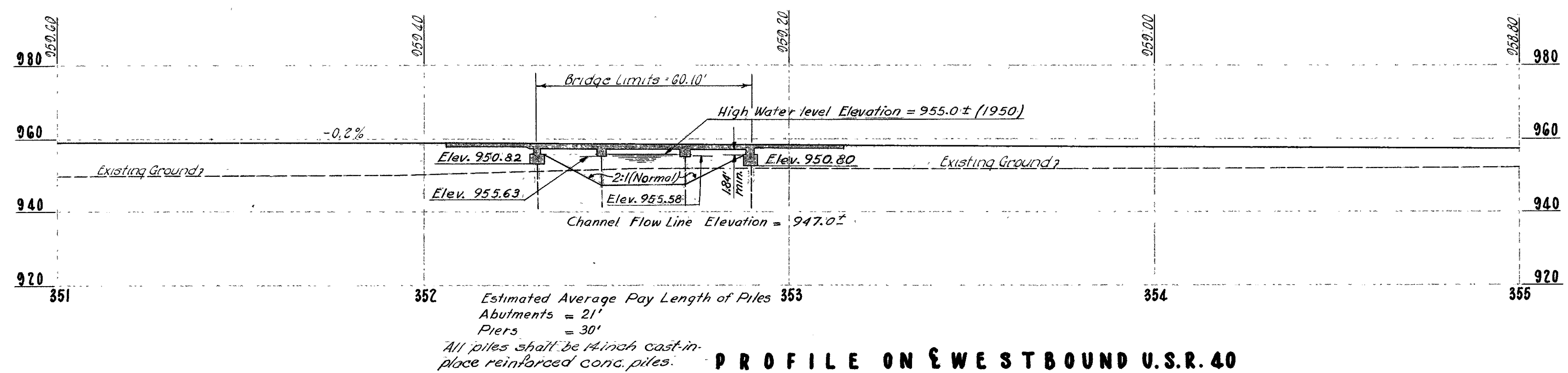


**PROPOSED STRUCTURE N° MOT - 40 - 0664**  
**TYPE:** Continuous Concrete Slab with Capped Pile Abutments and Capped Pile Piers  
**SPANS:** 18'-0", 22'-6", 18'-0"  
**ROADWAY:** 58'-6" r/r of parapets with aluminum railing and 1' curbs  
**LOADING:** CF-2000 (Adequate for AA5H0 Alternate Loading)  
**WEARING SURFACE:** 1" Monolithic Concrete  
**SKEW:** 20°-00'-00" Rt Forward  
**ALIGNMENT:** Tangent  
**APPROACH SLABS:** A5-1-54 (25' Long)

**NOTES:**  
For channel relocation see sheet 101 & 102 roadway plans  
Drainage Area 2850 Acres  
Calc. 50yr H.W. Elev. 952.0  
Observed 1950 H.W. Elev. 955.0



PLAN



PROFILE ON WESTBOUND U.S.R. 40

Estimated Average Pile Length of Piles  
Abutments = 21'  
Piers = 30'  
All piles shall be 14 inch cast-in-place reinforced conc. piles.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

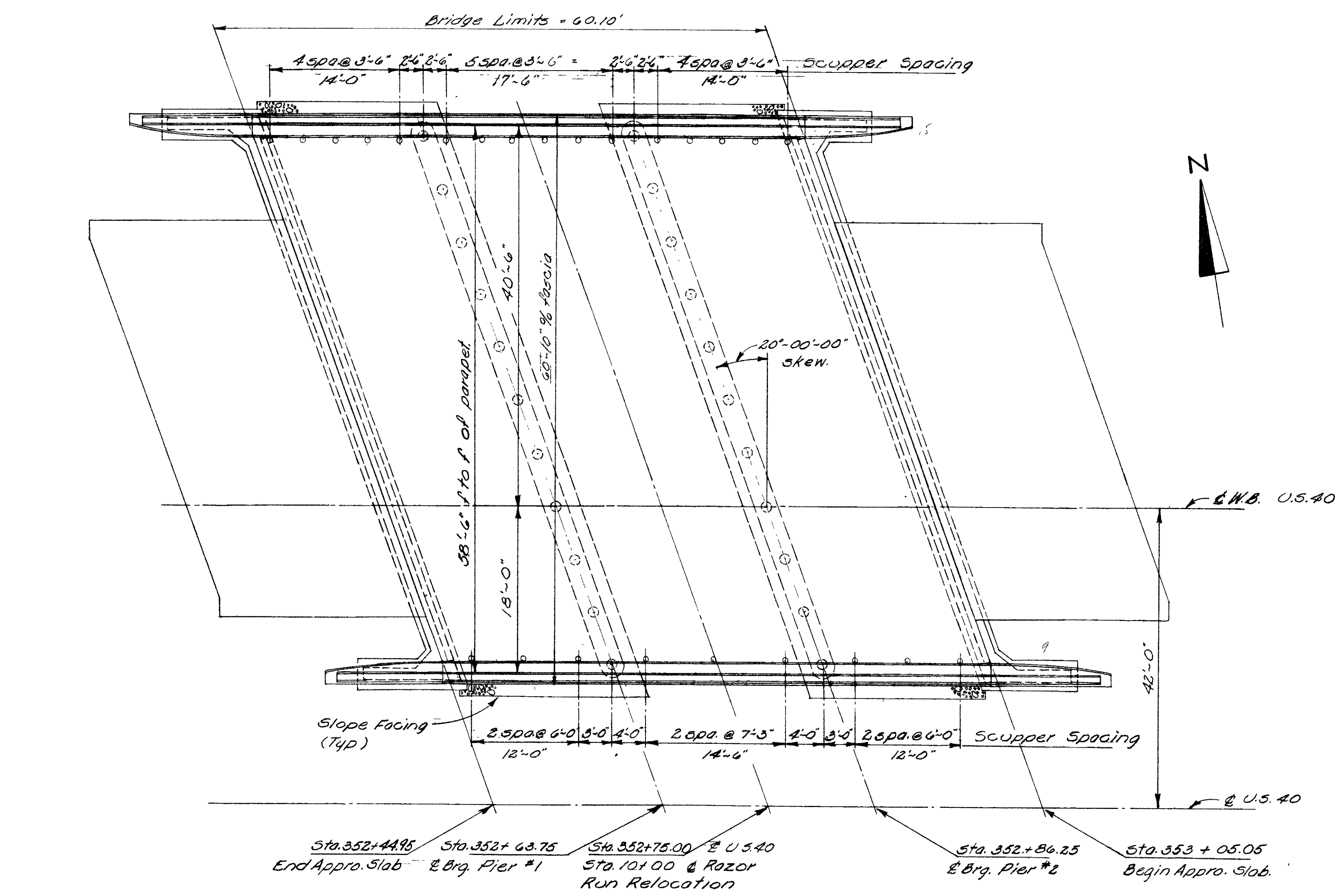
**SITE PLAN**  
**BRIDGE N° MOT-40-0664**  
W.B. U.S.R. 40 OVER RAZOR RUN  
MONTGOMERY COUNTY  
STATION 352 + 75.00 ACI-1037(4)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.B.M.	W.B.M.	J.E.C.	J.P.	T.L.U.	3-28-58	

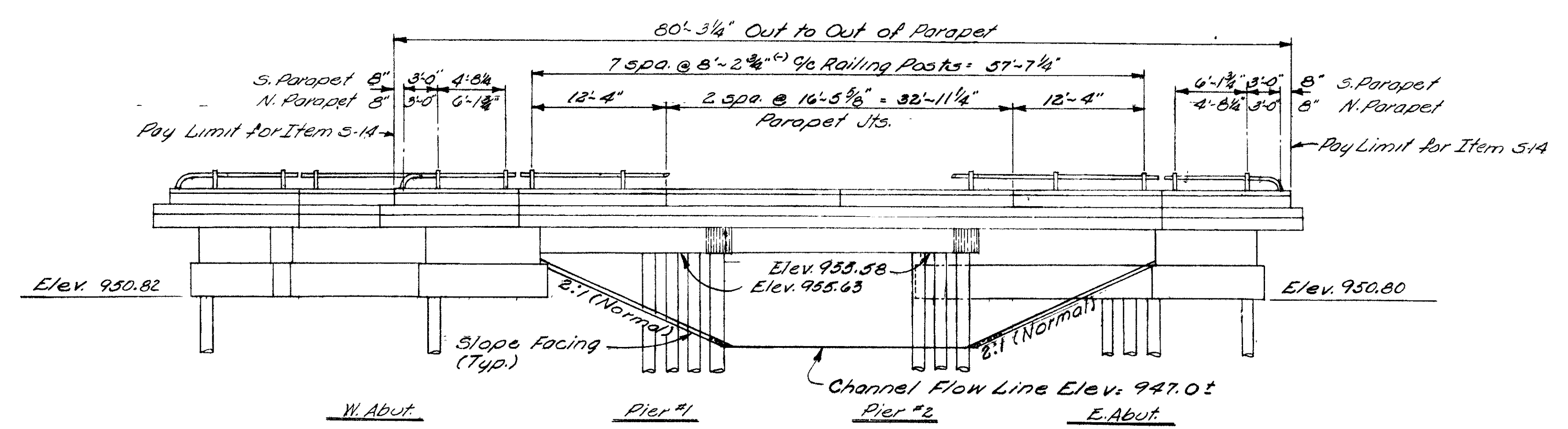
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

103  
241

MONTGOMERY COUNTY  
MOT. 40-5.98  
MOT. 49-12.45



PLAN



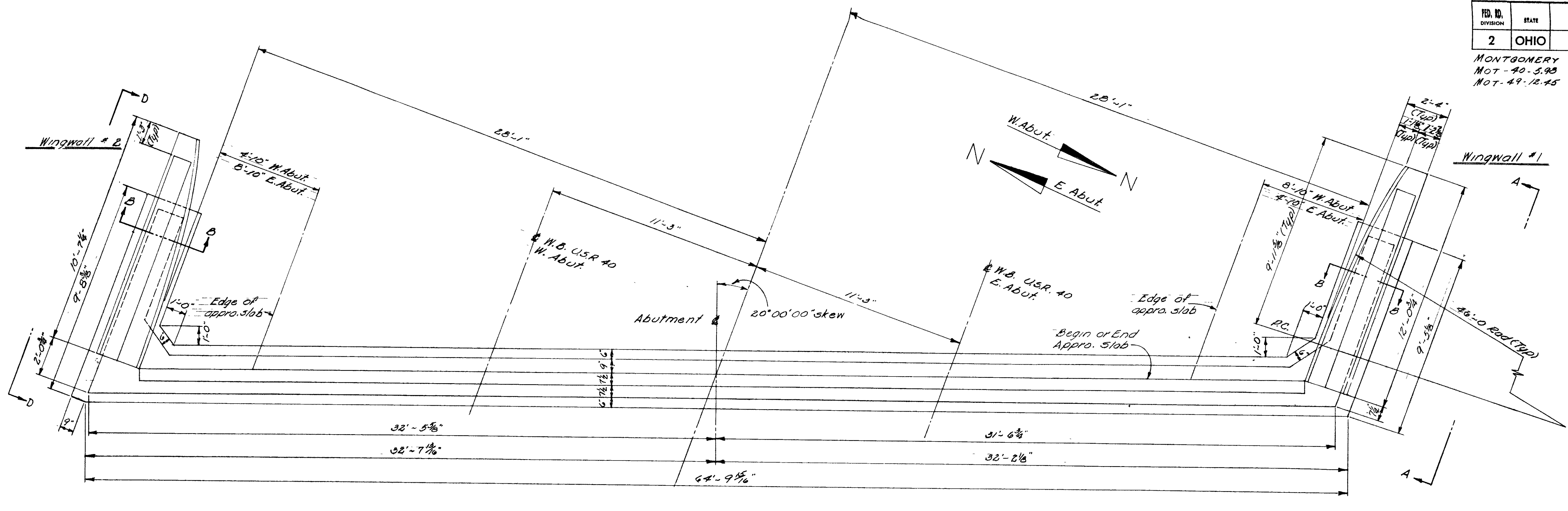
ELEVATION

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
GENERAL PLAN BRIDGE N <sup>o</sup> MOT 40-0664 W.B. US 40 OVER RAZOR RUN MONTGOMERY COUNTY STA- 352 + 75.00 ACI-1097(4)						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RDB	RDB		JOR	TLU	3-28-58	



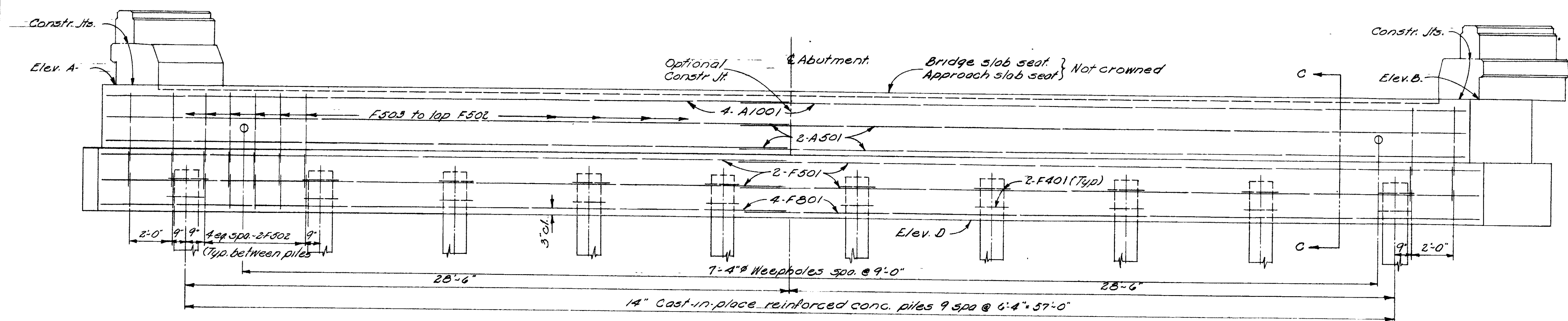
FED. NO. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

MONTGOMERY COUNTY  
MOT-40-5.95  
MOT-49-12.45

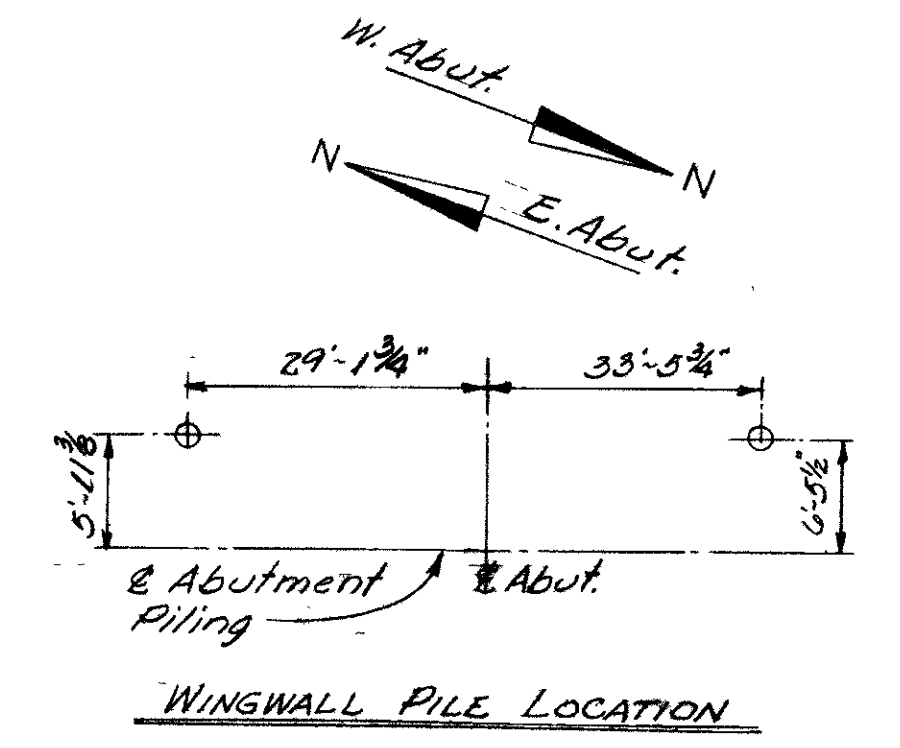


PLAN

NOTE:  
For additional reinforcing steel and sectional views see sheet 165  
For elevations A, B & D see sheet 165



ELEVATION



ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
ABUTMENT DETAIL BRIDGE No. MOT-40-0664 W.B.U.S 40 OVER RAZOR RUN MONTGOMERY COUNTY STA 352+75.00 ACI-1097(4)						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BDB	BDB		J.O'R.	TLU	3-28-58	

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

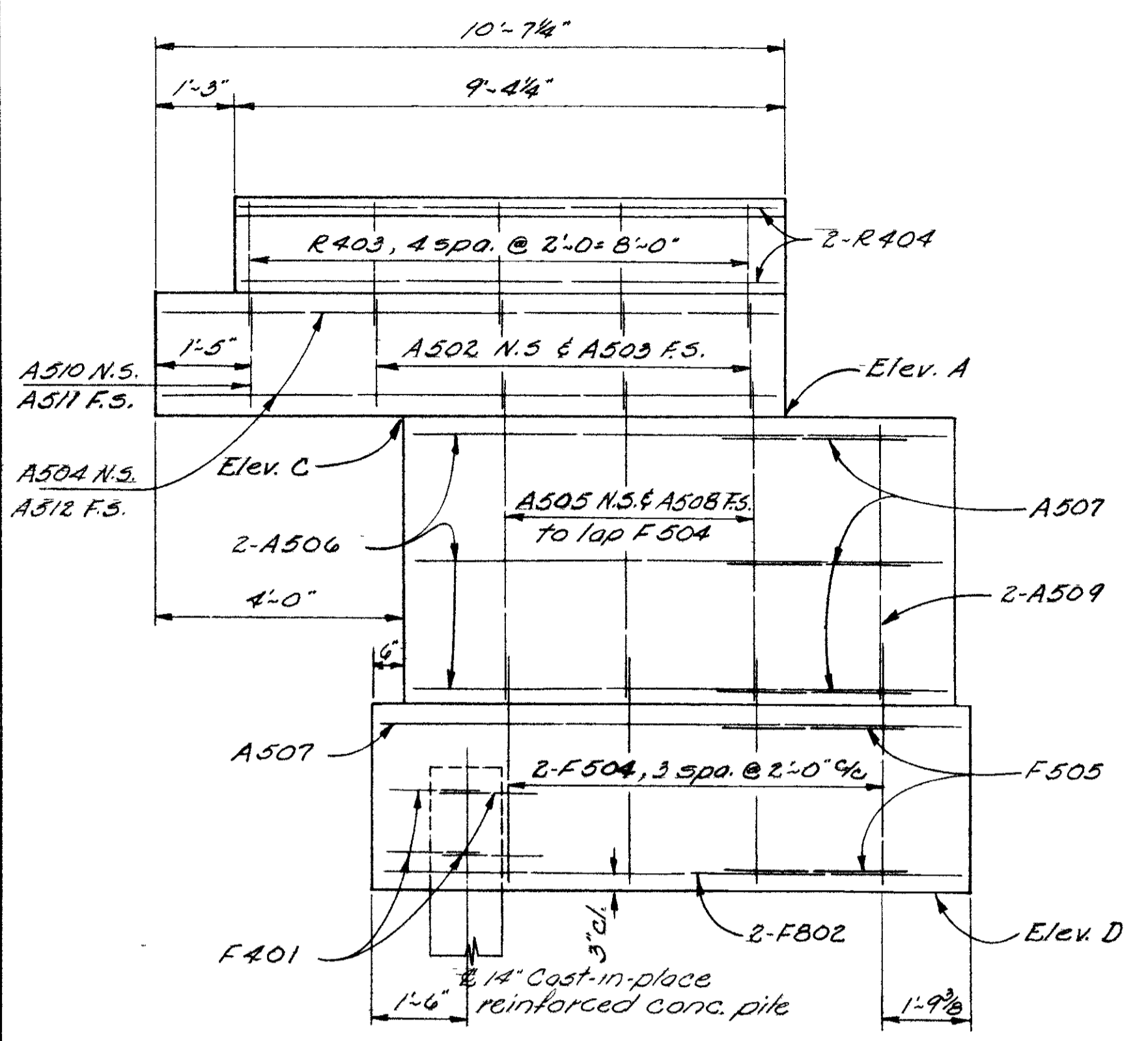
MONTGOMERY COUNTY  
 MOT-40-5.98  
 MOT-49-12.45

165  
 241

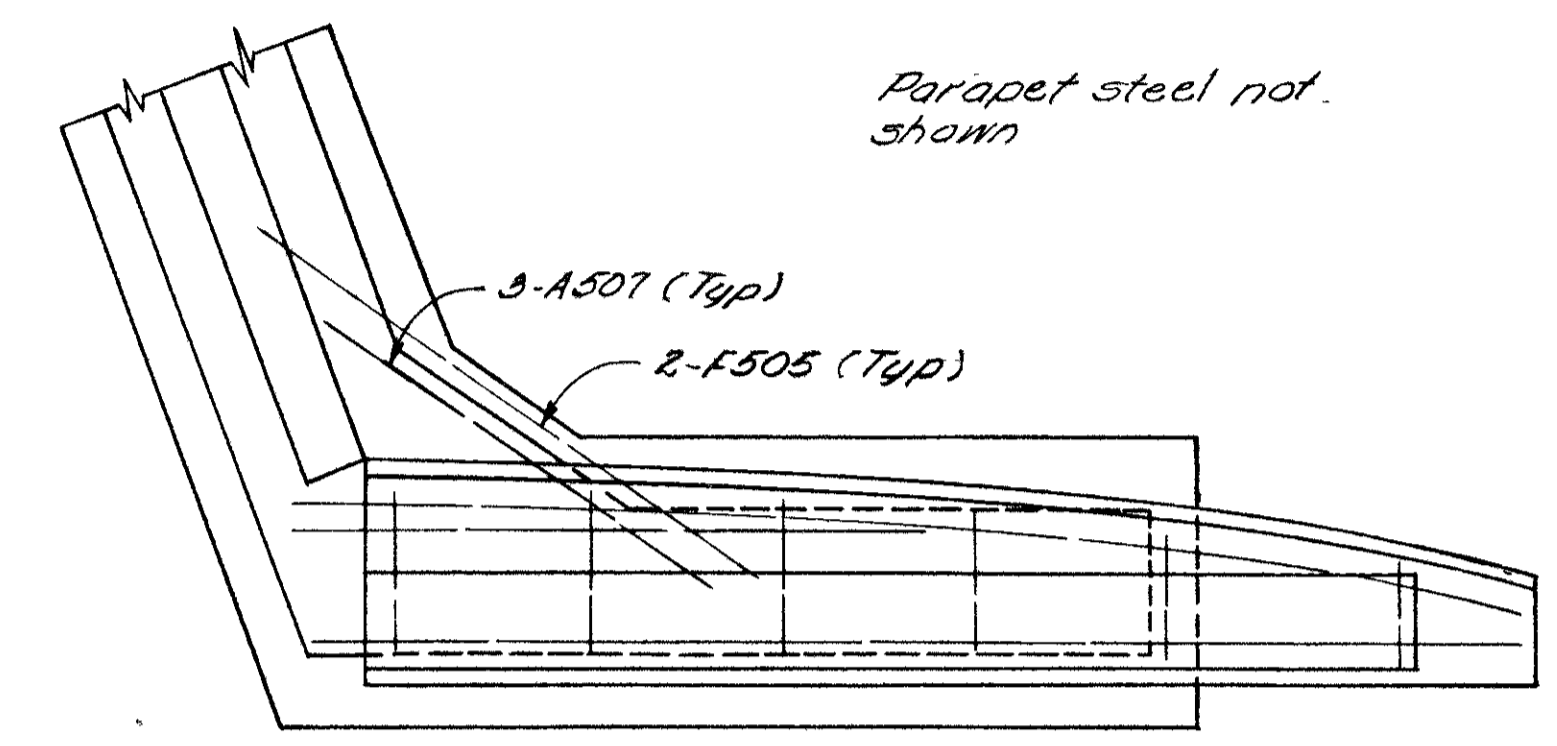
ELEVATIONS						
LOCATION	A	B	C	D	E	F
E. Abut.	957.37	957.73	957.72	957.36	950.80	955.00
W. Abut.	957.85	957.49	957.51	957.86	950.82	955.25

**NOTES**

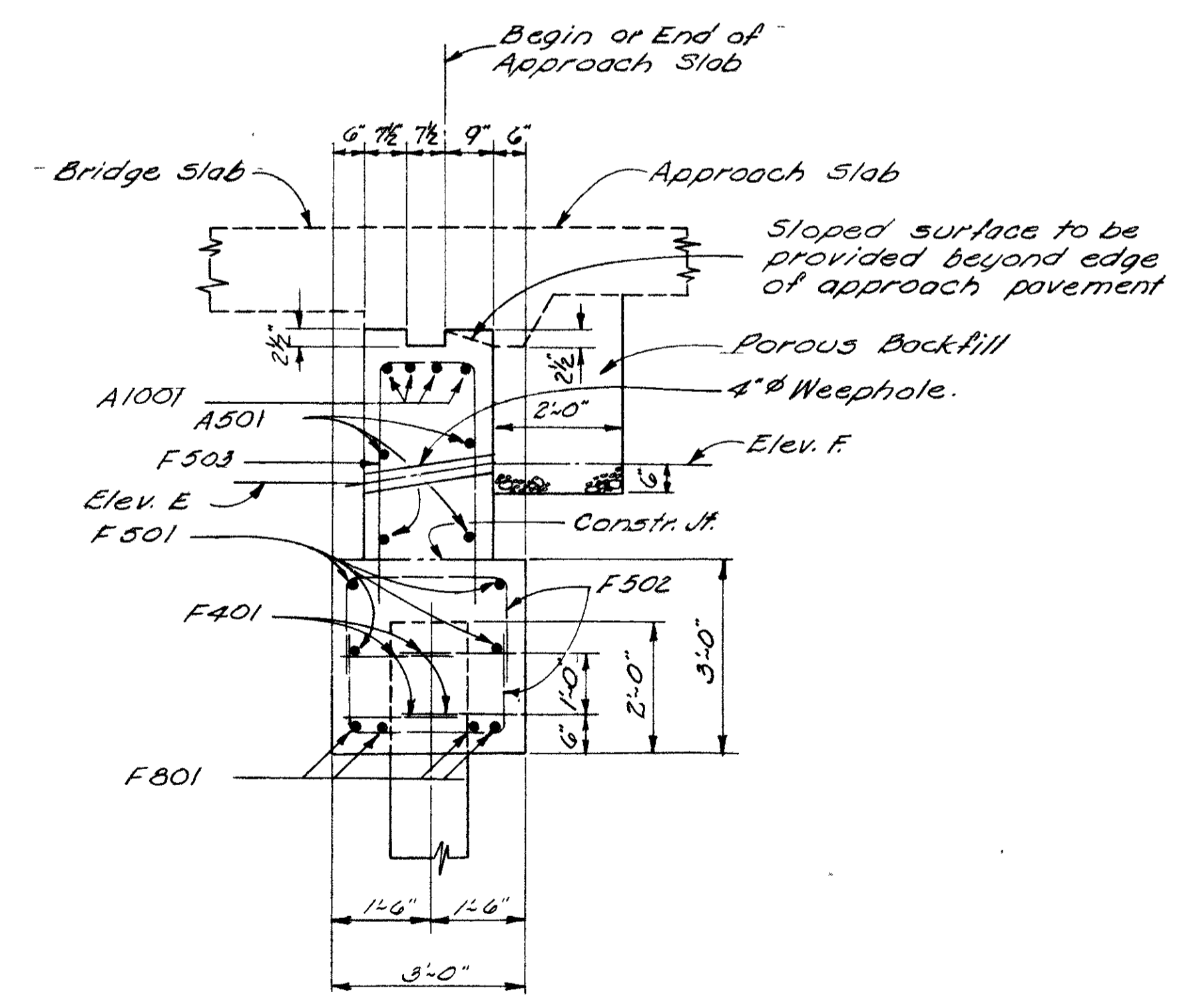
- REINFORCING STEEL: N.S. denotes near side. F.S. denotes far side.
- EMBANKMENT: Embankment shall be placed and compaction to elevation 955.5 at both abutments, after which excavation shall be made for the abutments.
- POROUS BACKFILL: Porous backfill as shown between wingwalls shall extend to the under side of the approach slab or I-22.
- GUARDEIL END CONNECTION: For connection of guardrail to end of parapet see sheet 144.
- PARAPETS: Concrete parapets are included under Item 5-14 for payment.



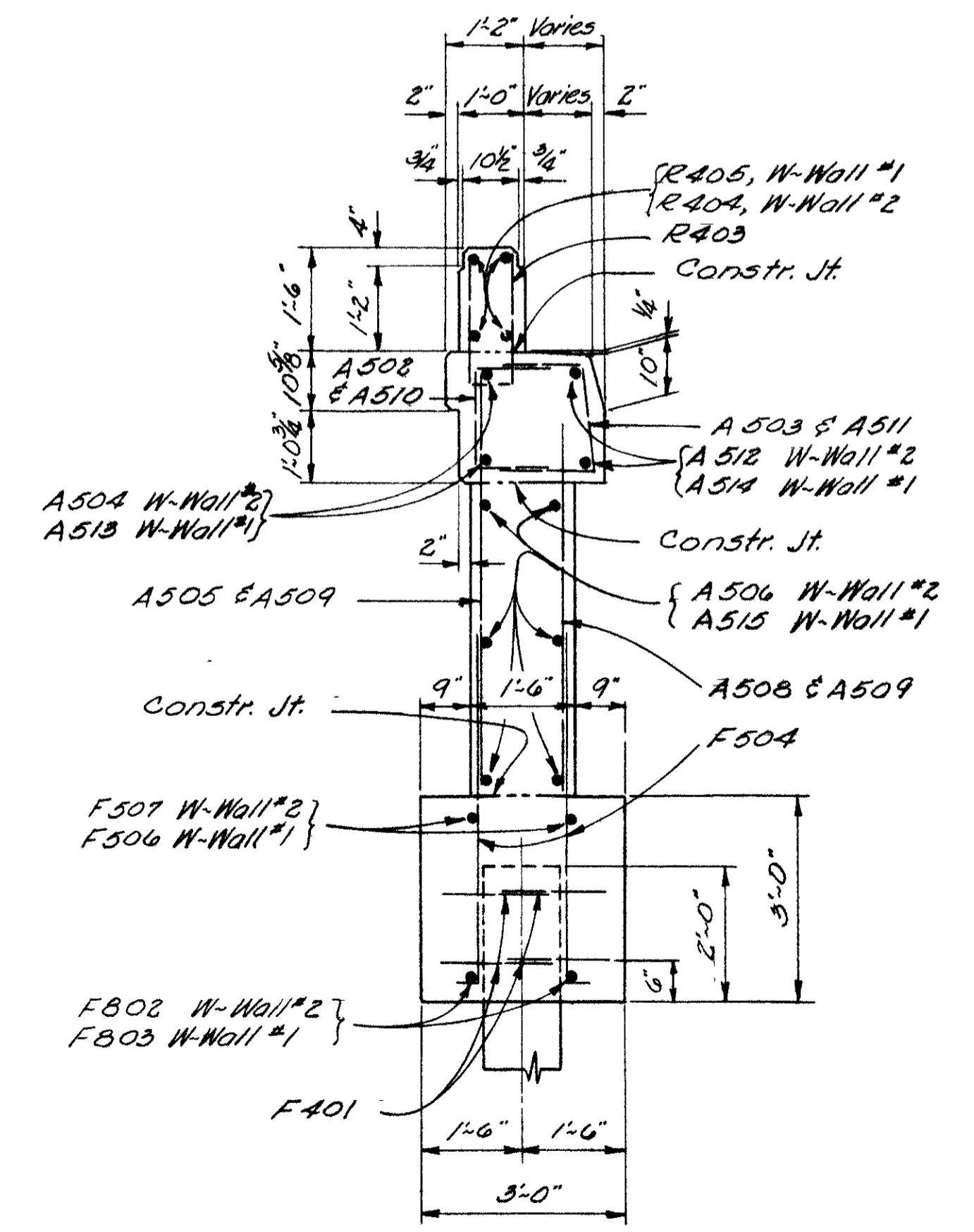
VIEW D-D



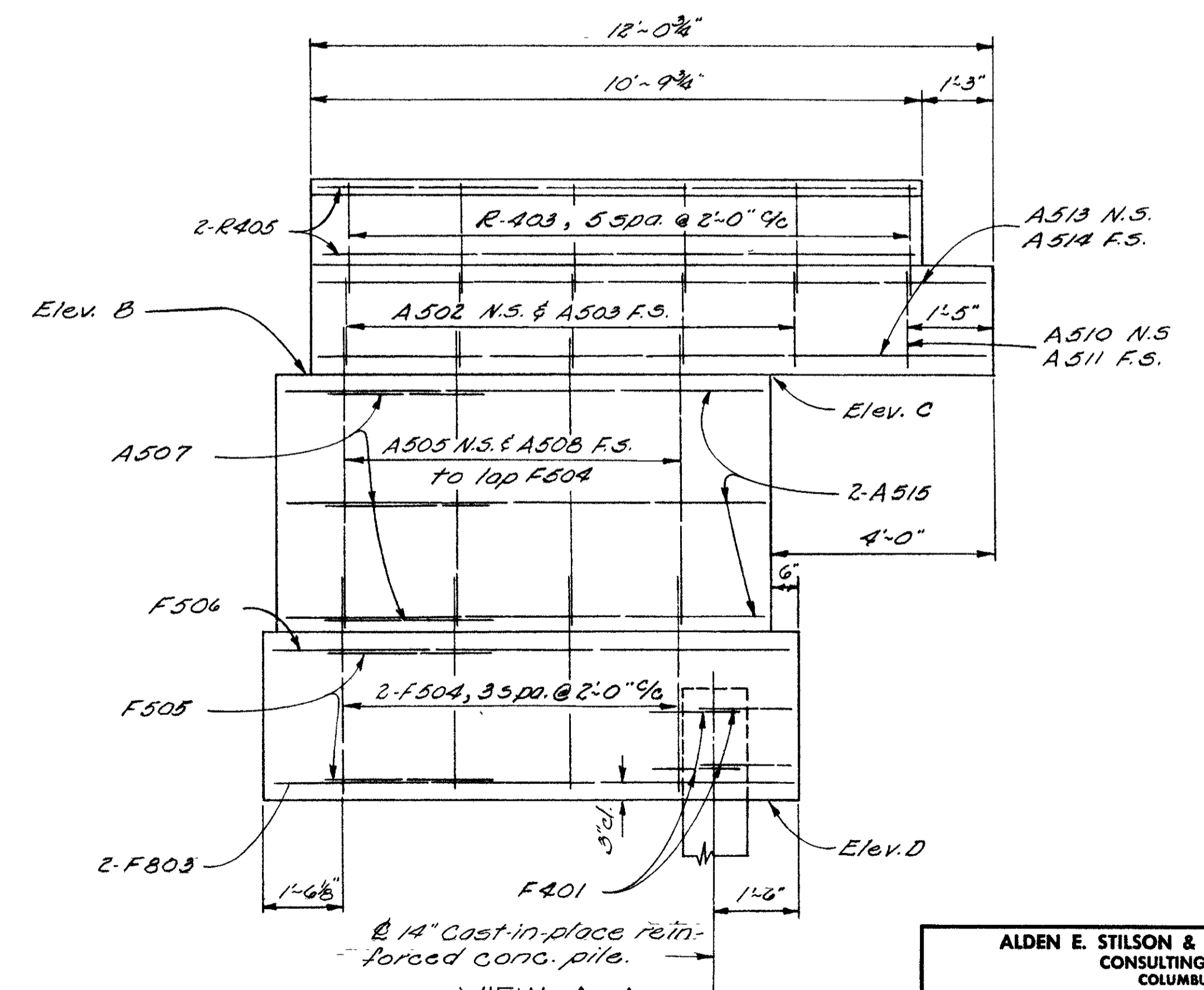
PLAN OF VIEW A-A



SECTION C-C



SECTION B-B



VIEW A-A

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
 CONSULTING ENGINEERS  
 COLUMBUS, OHIO

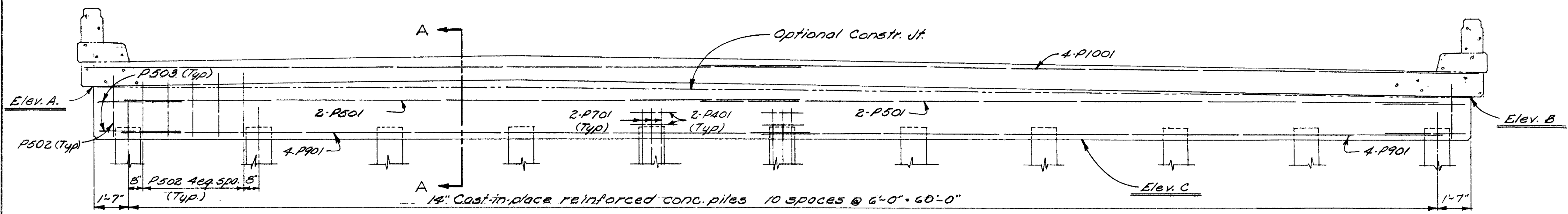
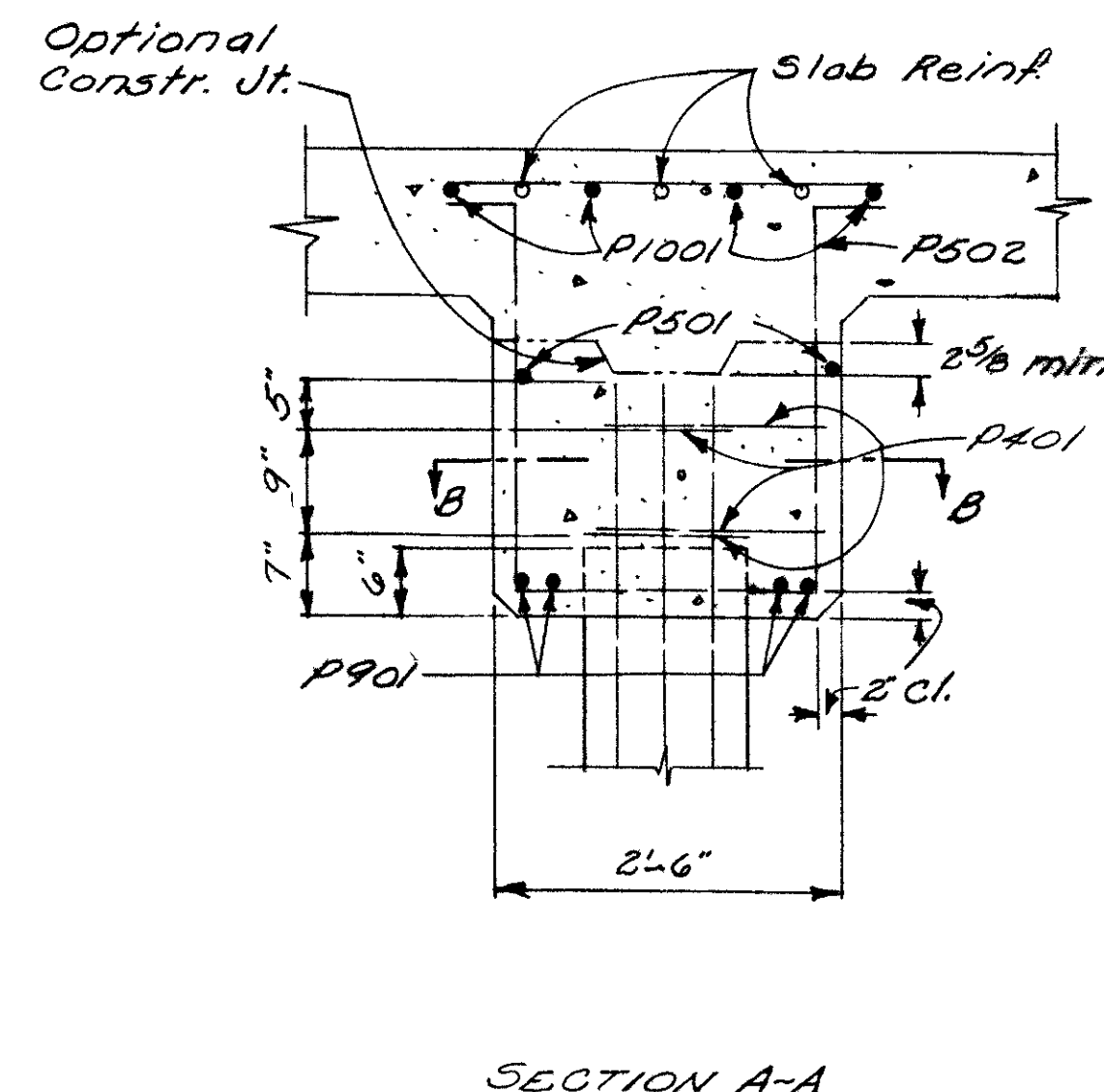
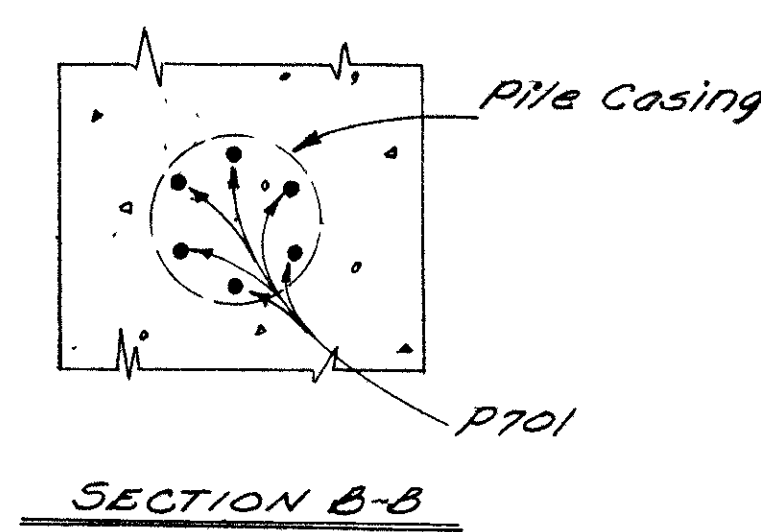
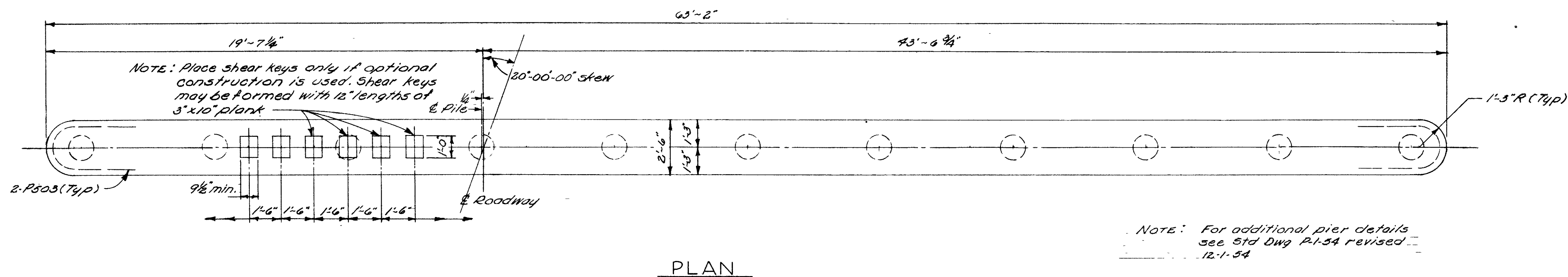
ABUTMENT DETAILS  
 BRIDGE No. MOT-40-0644  
 W.B. U.S. 40 OVER RAZOR RUN  
 MONTGOMERY COUNTY  
 STA-352+75.00  
 ACI-1097(4)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BDB	BDB		J.O.R.	T.L.V.	3-29-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

166  
241

MONTGOMERY COUNTY  
MOT 40-5.98  
MOT 49-12.45



ELEVATION

ELEVATIONS			
LOCATION	A	B	C
PIER #1	957.95	957.63	955.63
PIER #2	957.90	957.58	955.58

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

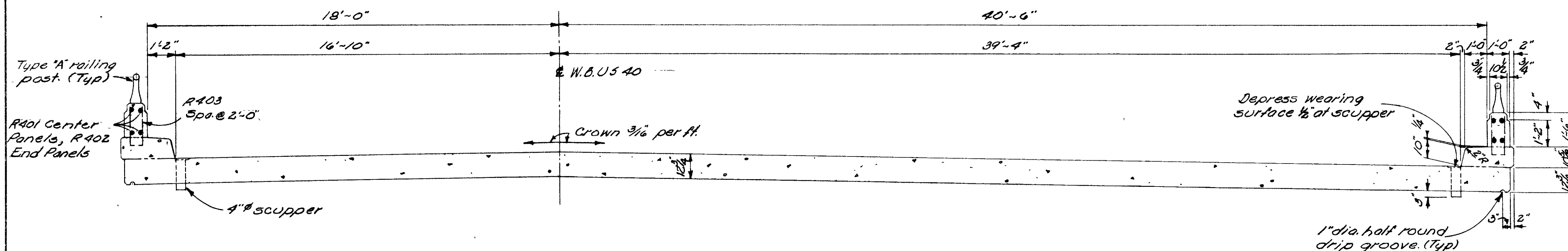
PIER DETAILS  
BRIDGE No MOT 40-0664  
W.B.U.S. 40 OVER RAZOR RUN  
MONTGOMERY COUNTY  
STA. 352 + 75.00  
ACI-1097(4)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BDB	BDB		JOR	TLU	3-23-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

167  
241

MONTGOMERY COUNTY  
MOT. 40-5.98  
MOT. 49-12.45



TRANSVERSE SECTION

NOTE: For additional size and placement of reinforcing steel and detail see Std. Dwg. No. CS-2-54.

Slab thickness shown includes 1" monolithic concrete wearing surface.

All transverse reinforcing steel shall be field bent to fit the crown of the roadway. Payment shall be included with Item 5-4.

Concrete Parapets are included under Item 5-14 for payment

Reinforcing and dimensions are the same for each curb and parapet.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SUPERSTRUCTURE  
BRIDGE No. MOT 40-0664  
W.B.U.S. 40 OVER RAZOR RUN  
MONTGOMERY COUNTY  
STA. 352 + 75.00

ACI-1097(4)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BDB	BDB		J.O'R	TLU	3-28-58	

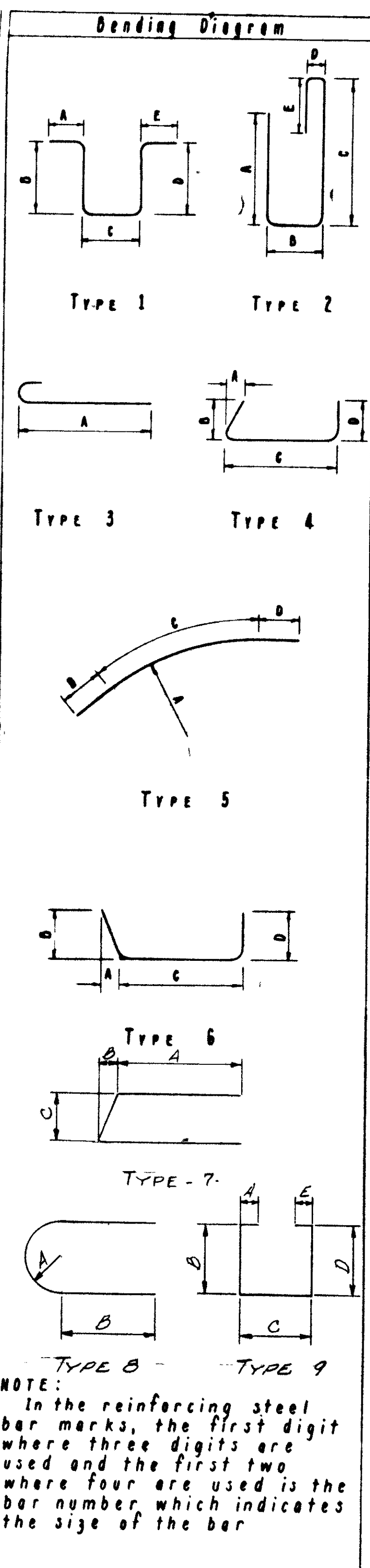
# REINFORCING

# STEEL

# LIST

Mark	N <sup>o</sup>	Length	Weight	Shp.	Mark	N <sup>o</sup>	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp.
ABUTMENTS															
F401	96	5-5	387	1						1-11	1-9	1-11			bt
F501	16	33-5	558												st
F502	196	6-7	1346	1						2-1	2-8	2-1			bt
F503	98	9-11	1014	1						4-3	1-8	4-3			bt
F504	32	4-10	161	1						0-8	4-4				bt
F505	8	10-0	83												st
F506	4	9-2	38												st
F507	4	8-6	35												st
F801	16	33-11	1449												st
F802	4	8-6	91												st
F803	4	9-2	98												st
A501	16	32-8	545												st
A502	18	3-6	66	1						1-1	1-7	1-1			bt
A503	18	3-8	69	7						1-1	0-2	1-7			bt
A504	4	10-3	43												st
A505	14	5-8	83												st
A506	12	7-10	98												st
A507	12	5-9	72												st
A508	14	4-6	66												st
A509	4	3-5	14												st
A510	4	3-0	13	1						0-10	1-7	0-10			bt
A511	4	3-2	13	7						0-10	0-2	1-7			bt
A512	4	10-3	43	5						4-0	0-6	9-9			bt
A513	4	11-8	49												st
A514	4	11-8	49	5						4-0	1-11	9-9			bt
A515	12	8-4	104												st
A1001	16	33-5	2301												st
R403	22	4-0	59	1						1-10	0-6	1-10			bt
R404	8	9-0	*												st
R405	8	10-5	*												st
PIERS															
P401	88	5-5	318	1						1-11	1-9	1-11			bt
P501	8	32-3	269												st
P502	104	6-0	868	1						0-10	2-4	2-2	2-4	0-10	bt
P503	8	6-2	51	8						0-11	1-7				bt
P701	132	4-0	1079												st
P901	16	32-10	1786												st
P1001	16	33-7	2312												st

Mark	N <sup>o</sup>	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp.	
SUPERSTRUCTURE											
AB61	162	21-7	9336							st	
BB61	54	17-3	2487	3					14-2	bt	
CB61	52	15-8	2175	3					14-7	bt	
DB61	27	16-10	1213							st	
EB61	26	13-2	914							st	
FB61	122	20-5	6651							st	
GB61	60	11-10	1896							st	
HB61	60	10-10	1735							st	
J601	62	11-2	1040							bt	
K601	31	7-6	349							st	
M701	104	33-0	7015							st	
N601	88	33-0	4362							st	
O501	6	13-3	83							st	
R501	12	14-0	175							st	
R761	20	12-5	508							st	
S501	140	5-1	848	9		0-6	1-6	1-8	1-6	0-6	bt
T501	160	2-9	459	1		0-8	1-8	0-8		bt	
R401	16	16-1	*							st	
R402	16	13-3	*							st	
R403	60	4-0	140	1		1-10	0-6	1-10		bt	
REPLACEMENT STEEL											
RE401	1	5-3								st	
RE501	1	5-7								st	
RE601	1	5-11								bt	
RE701	1	6-2								st	
RE801	2	6-6								st	
RE901	1	6-10								st	
RE1001	1	7-2								st	



NOTE:  
In the reinforcing steel bar marks, the first digit where three digits are used and the first two where four are used is the bar number, which indicates the size of the bar

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

MONTGOMERY COUNTY  
 MOT-40-5-9B  
 MOT-49-12-45

		ESTIMATED QUANTITIES			
Item	Total	Unit	Description	Abut.	Pier
E-2	139	Cu.Yd	Unclassified Excavation	139	
S-1	180	Cu.Yd	Class "C" concrete, Superstructure & pier caps		29
S-1	100	Cu.Yd	Class "E" concrete, abutments	100	
S-4	56,996	Lb.	Reinforcing Steel	8907	6683
S-4	160	Lin.Ft.	Railing (Aluminum rail & supports & conc. parapet)	40	120
S-16	Lump	Sum	First test pile		Lump
S-18	1164	Lin.Ft.	14" Cast-in-place Reinforced concrete piles	504	660
S-29	29	Cu.Yd	Porous Backfill	29	
S-29	100	Cu.Yd	Slope Facing (S-29.05 Type)		100
S-29	25	Each	Scuppers, 4" dia. Cast Iron or Wrought Iron pipe		25
E-3	3238	Cu.Yd	Channel Excavation		3238
I-10	171	Cu.Yd	Dumped Rock Fill		171

\* HORIZONTAL PARAPET REINFORCING  
THESE BARS ARE INCLUDED WITH THE RAILING FOR PAYMENT

REPLACEMENT BARS  
IF REINFORCING BARS ARE FABRICATED FROM STOCK WHICH HAS PREVIOUSLY BEEN TESTED AND APPROVED BY THE OHIO HIGHWAY TESTING LABORATORY TEST SAMPLES AS PROVIDED IN SEC S-4.02 NEED NOT BE FURNISHED AND REPLACEMENT BARS WILL NOT BE REQUIRED

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO					
REINFORCING STEEL LIST AND ESTIMATED QUANTITIES BRIDGE No. MOT-40-0664 W.B. US40 over RAZOR RUN MONTGOMERY COUNTY ACI-1037(A) STA-352 + 75.00					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
BDB	BDB		JOR	TLU	3-28-53

FED RD DIVISION	STATE	PROJECT	TYPE FUND
2	OHIO		

169  
241

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

REFERENCES:

Standard Drawings:

- |                               |   |
|-------------------------------|---|
| Railing Details, Type A       | - AR-1-57 dated 4-9-57, revised 3-1-58. |
| Superstructure Details        | - CS-2-54 dated 12-1-54                 |
| Pier Details                  | - P-1-54 revised 12-1-54                |
| Supplemental Specifications   | - S-114 revised 8-1-57                  |
| Guardrail and Railing Details | - Sheet 144                             |

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 revisions thereof dated 2-21-58.

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.

SLAB THICKNESS of 12-3/4 inches includes 1 inch for monolithic wearing surface.

EXCAVATION QUANTITY includes the removal of fill material between elevation 955.5 and the bottom of the abutment.

SLOPE FACING shall be provided under the structure at both abutments. The porous drain material shall be 12" thick and shall extend from the face of the abutment down to the toe of the embankment slope and transversely to 3 ft. outside the edge of the superstructure.

PILES shall be driven to minimum bearing capacity of 19 tons per pile for the abutments and 24 tons per pile for the piers.

PIER PILE ENCASEMENT as shown on Std. Dwg. No. P-1-54 may be omitted provided that the tapered portion, if any, of all pier piles does not extend above the stream bed or the proposed surface of the ground. If the tapered portion of any pile extends above these limitations the encasement will be required for all the pier piles. If the encasement is omitted the pile casings shall have a thickness of metal not less than No. 7 gage, and the painting of the piles shall extend to low water elevation or, if the proposed surface of the ground is above low water, the painting shall extend to at least one foot below the proposed surface of the ground.

MAXIMUM PILE REACTION: The maximum calculated pile reactions are as follows:

- |           |           |
|-----------|-----------|
| Piers     | - 24 tons |
| Abutments | - 19 tons |

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

GENERAL NOTES  
BRIDGE No MOT 40-0664  
W.B. US 40 OVER RAZOR RUN  
MONTGOMERY COUNTY  
ACI-1097(4) STA. 352 + 75.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
				TLU	3-28-58	

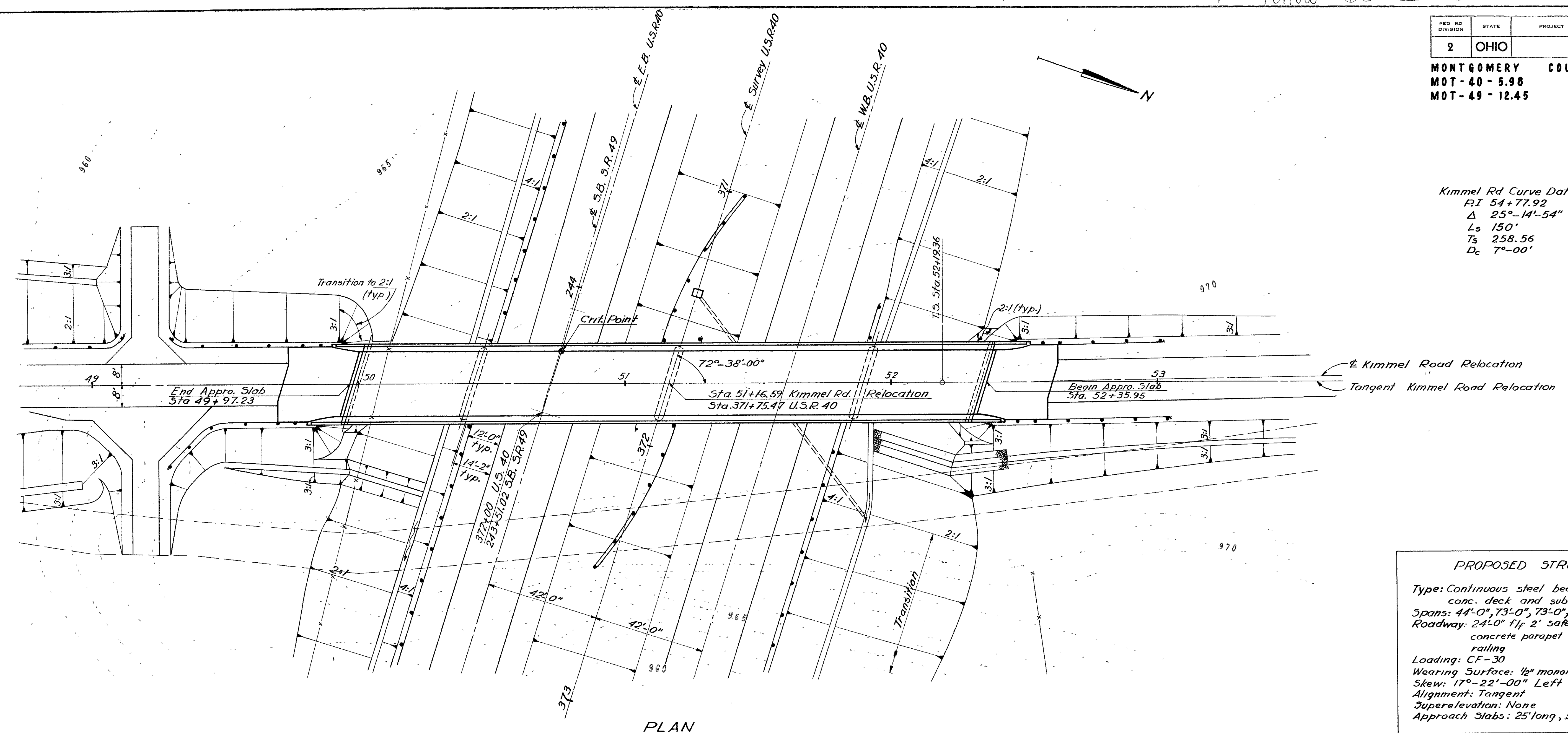
Yellow 65

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

170  
241

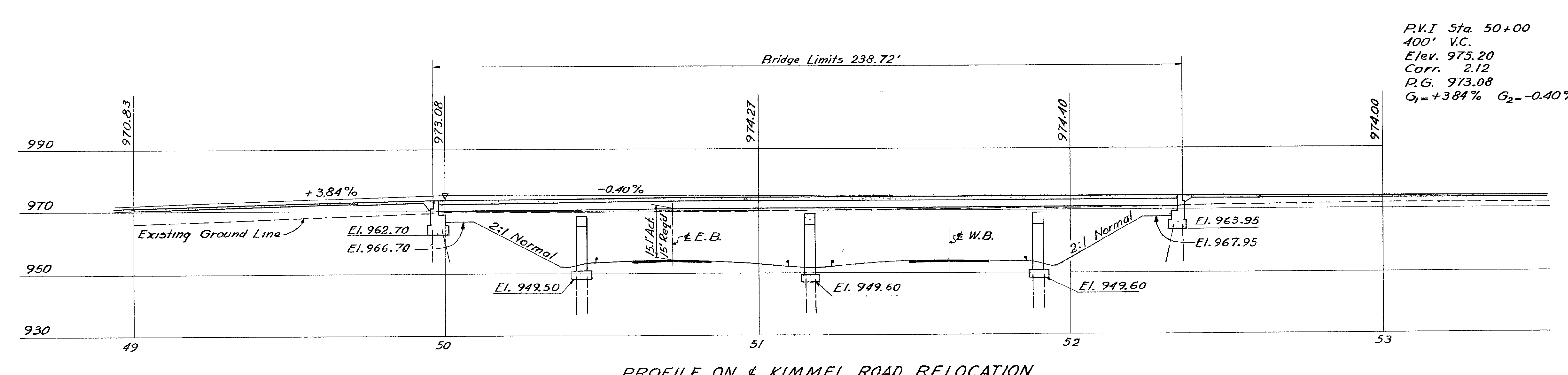
MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

*Kimmel Rd Curve Data*  
P.I. 54+77.92  
 $\Delta$  25°-14'-54"  
Ls 150'  
Ts 258.56  
Dc 7°-00'



PLAN

**PROPOSED STRUCTURE**  
 Type: Continuous steel beam with reinf. conc. deck and substructure  
 Spans: 44'-0", 73'-0", 73'-0", 44'-0" 5/8 brgs  
 Roadway: 24'-0" flt 2' safety curbs with concrete parapet and aluminum railing  
 Loading: CF-30  
 Wearing Surface: 1/2" monolithic conc.  
 Skew: 17°-22'-00" Left Forward  
 Alignment: Tangent  
 Superelevation: None  
 Approach Slabs: 25' long, see Sheet 141



PROFILE ON E KIMMEL ROAD RELOCATION

P.V.I. Sta 50+00  
400' V.C.  
Elev. 975.20  
Corr. 2.12  
P.G. 973.08  
G<sub>1</sub> = +3.84% G<sub>2</sub> = -0.40%

**NOTES:**  
 All piling shall be 12" Cast-In-Place reinforced concrete piles. Estimated average pay length is as follows:  
 All piers: 15'  
 Abutments: 15'

ALDEN E. STILSON & ASSOCIATES, LIMITED  
 CONSULTING ENGINEERS  
 COLUMBUS, OHIO

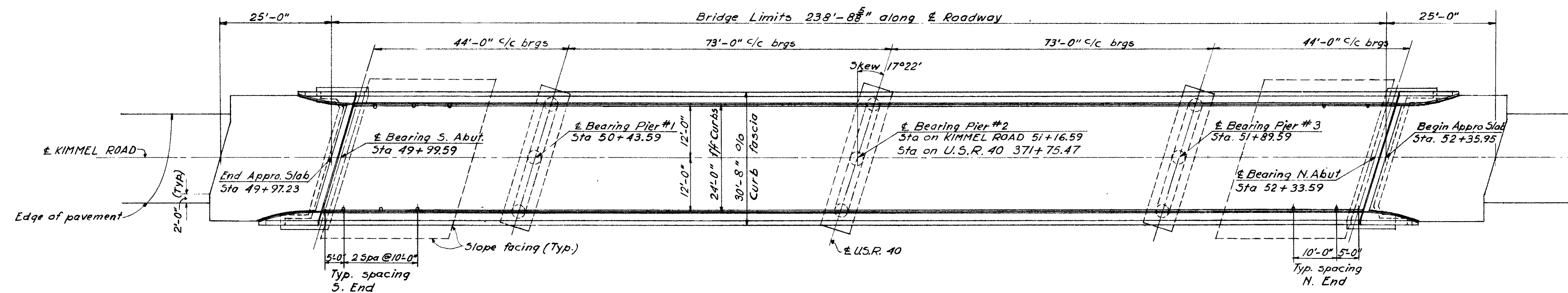
**SITE PLAN**  
**BRIDGE NO MOT-40-0700**  
 U.S.R. 40 UNDER  
 KIMMEL ROAD  
 MONTGOMERY COUNTY  
 A.C.I. 1037(4) Sta. 371+75.47

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.J.M.	J.J.M. R.R.M.	J.F.M.	P.M.	TLU	4-3-58	

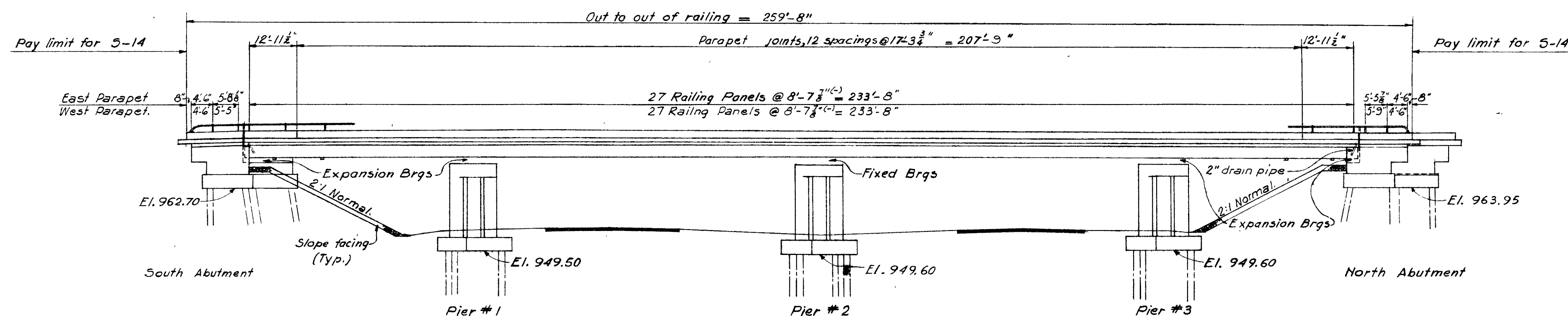
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

171  
241

Montgomery County  
Mot. 40-5.98  
Mot. 49-12.45



GENERAL PLAN



GENERAL ELEVATION

NOTE:  
2 in diam. drain pipes shall be provided at both ends of each bulb angle gutter.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

GENERAL PLAN & ELEVATION  
BRIDGE No Mot-40-0700

U.S.R. 40 Under KIMMEL Rd

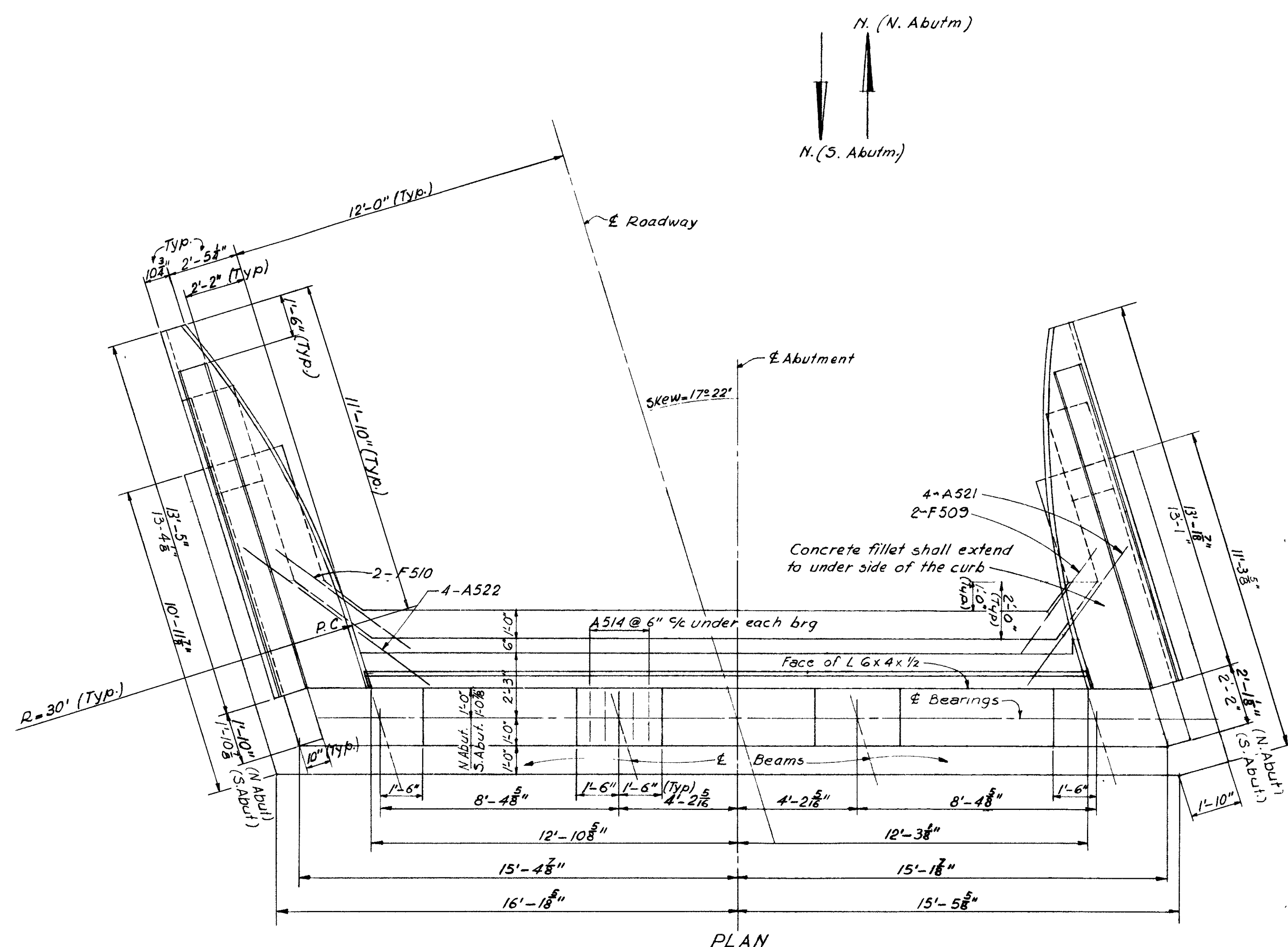
Montgomery County Sta 371+75.47

ACI-1097(A)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.C.	J.F.M.		R.R.M.	T.L.U.	4-3-58	



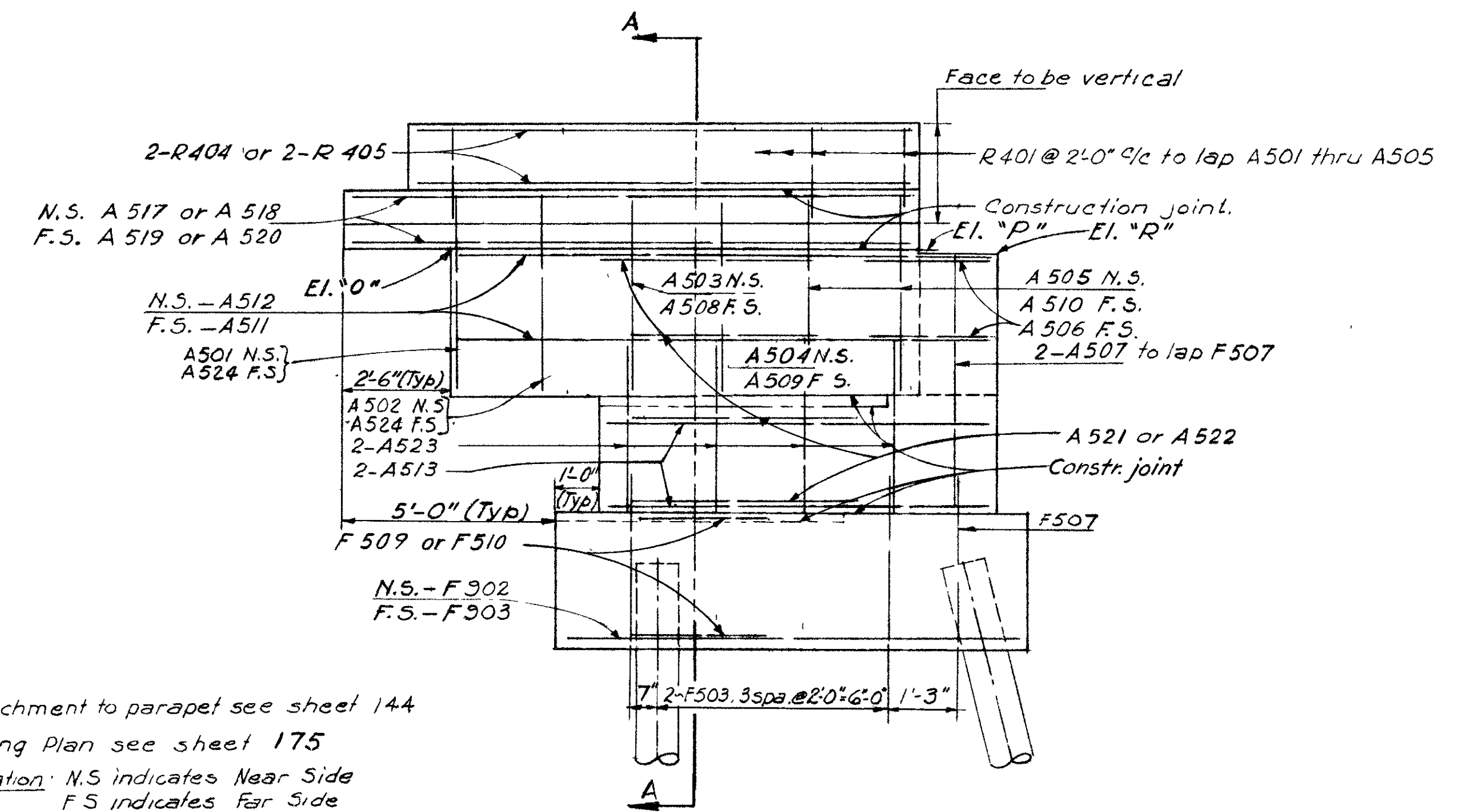
Montgomery County  
Mot. 40 - 5.98  
Mot. 49 - 12.45



**Notes.**

- Guardrail, for attachment to parapet see sheet 144
- Piles, for Piling Plan see sheet 175
- Reinforcement location: N.S. indicates Near Side, F.S. indicates Far Side
- Porous Backfill: Porous backfill as shown btw wingwalls shall extend to underside of appro slabs
- Backwall and wingwall: Backwall and wingwall above constr jt at the bridge seat elev. shall be poured at the same time.
- Concrete parapets are included with Item S-14 for payment

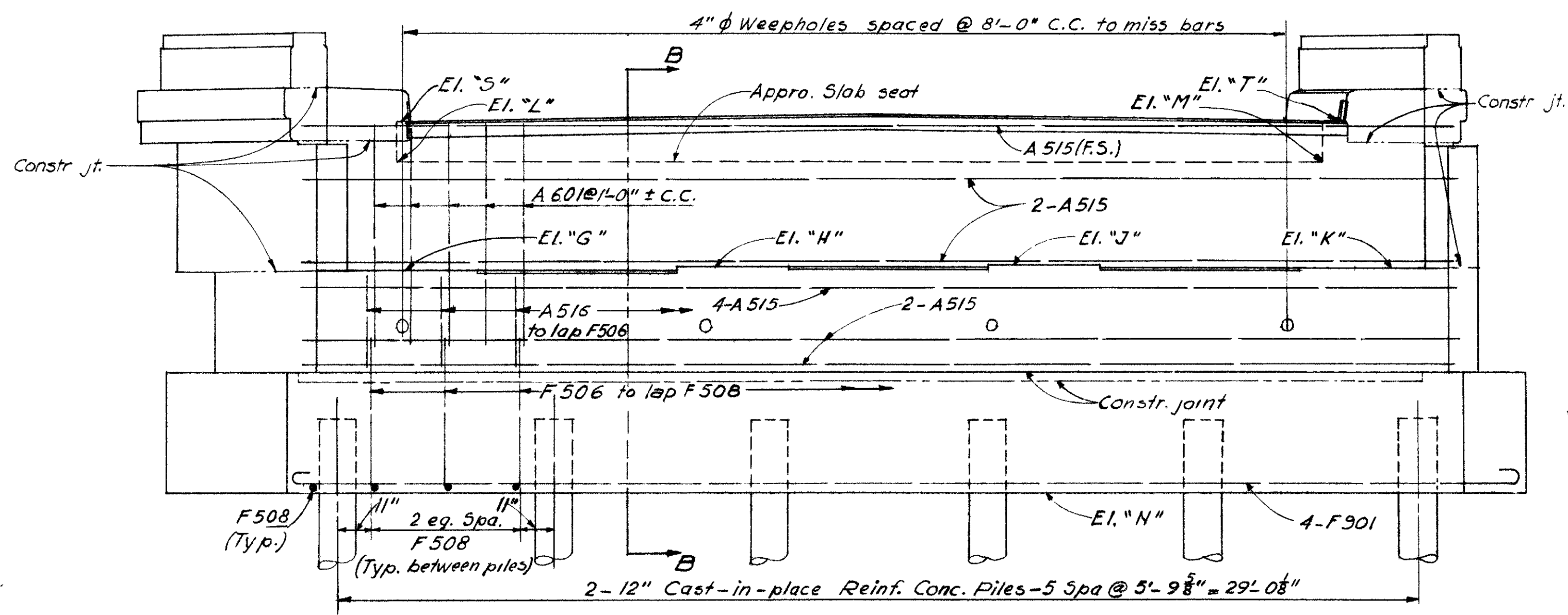
**WINGWALL ELEVATION**



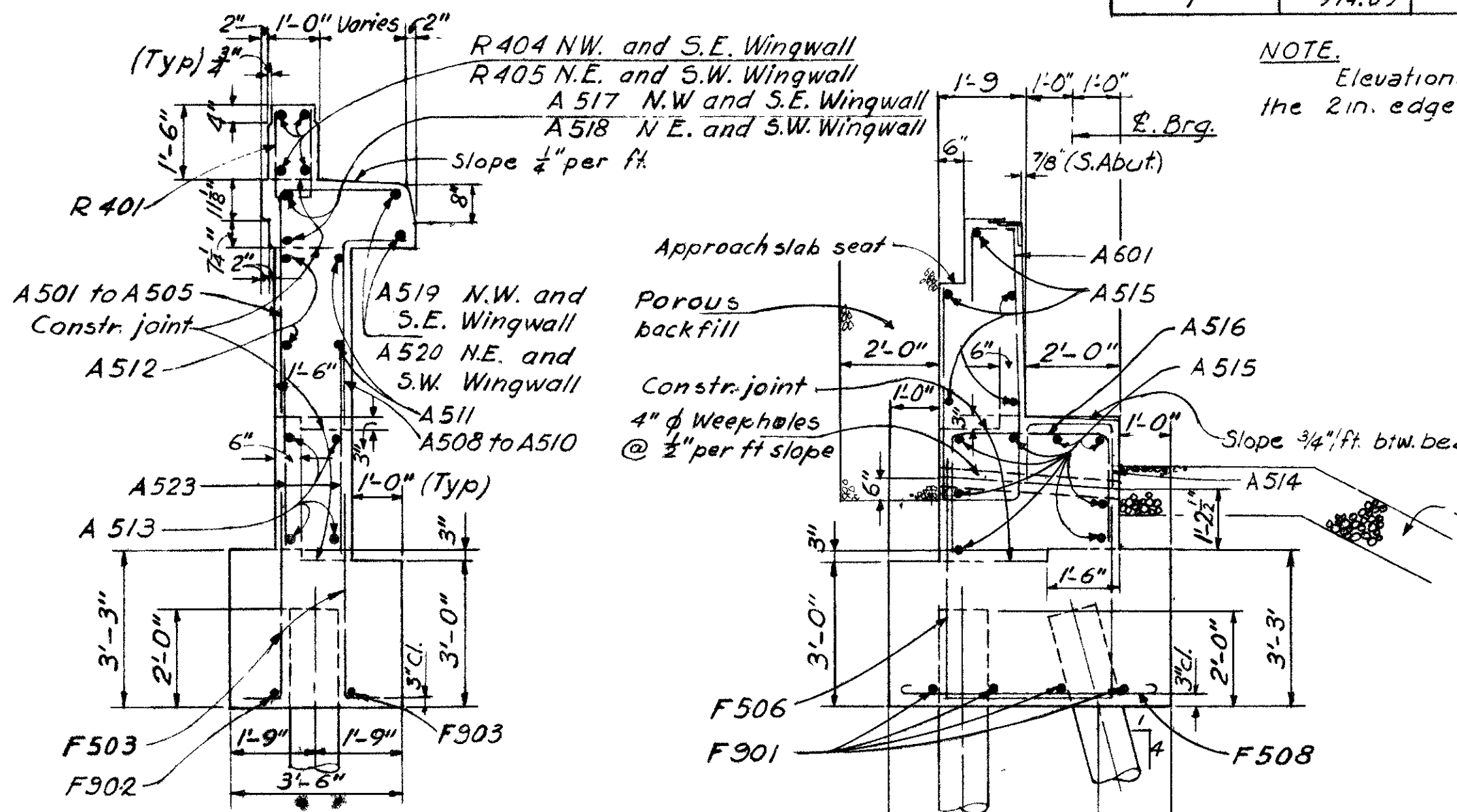
**ELEVATIONS**

LOCATION	NORTH ABUTMENT			SOUTH ABUTMENT		
	Abutment	E. Wingwall	W. Wingwall	Abutment	E. Wingwall	W. Wingwall
G	969.91	—	—	968.67	—	—
H	970.04	—	—	968.84	—	—
J	970.05	—	—	968.88	—	—
K	969.94	—	—	968.80	—	—
L	972.73	—	—	971.45	—	—
M	972.76	—	—	971.58	—	—
N	963.95	—	—	962.70	—	—
O	—	973.41	973.37	—	972.00	972.17
P	—	973.44	973.40	—	972.14	972.29
R	—	973.36	973.33	—	972.09	972.23
S	974.06	—	—	972.80	—	—
T	974.09	—	—	972.93	—	—

NOTE: Elevations 'S' and 'T' are given at the top of the 2 in. edge bar



**ELEVATION**  
Railing not shown



**SECTION A-A**

**SECTION B-B**

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

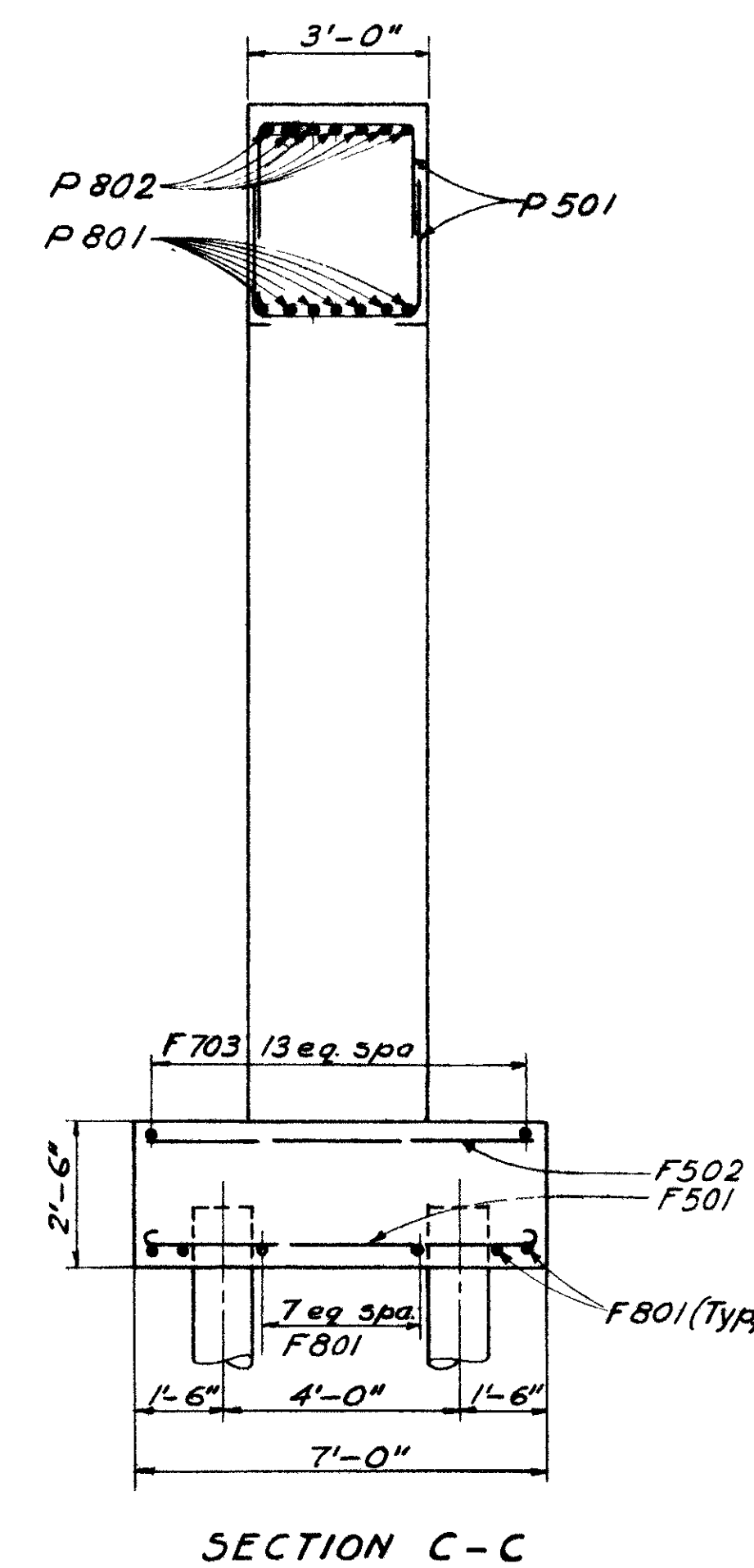
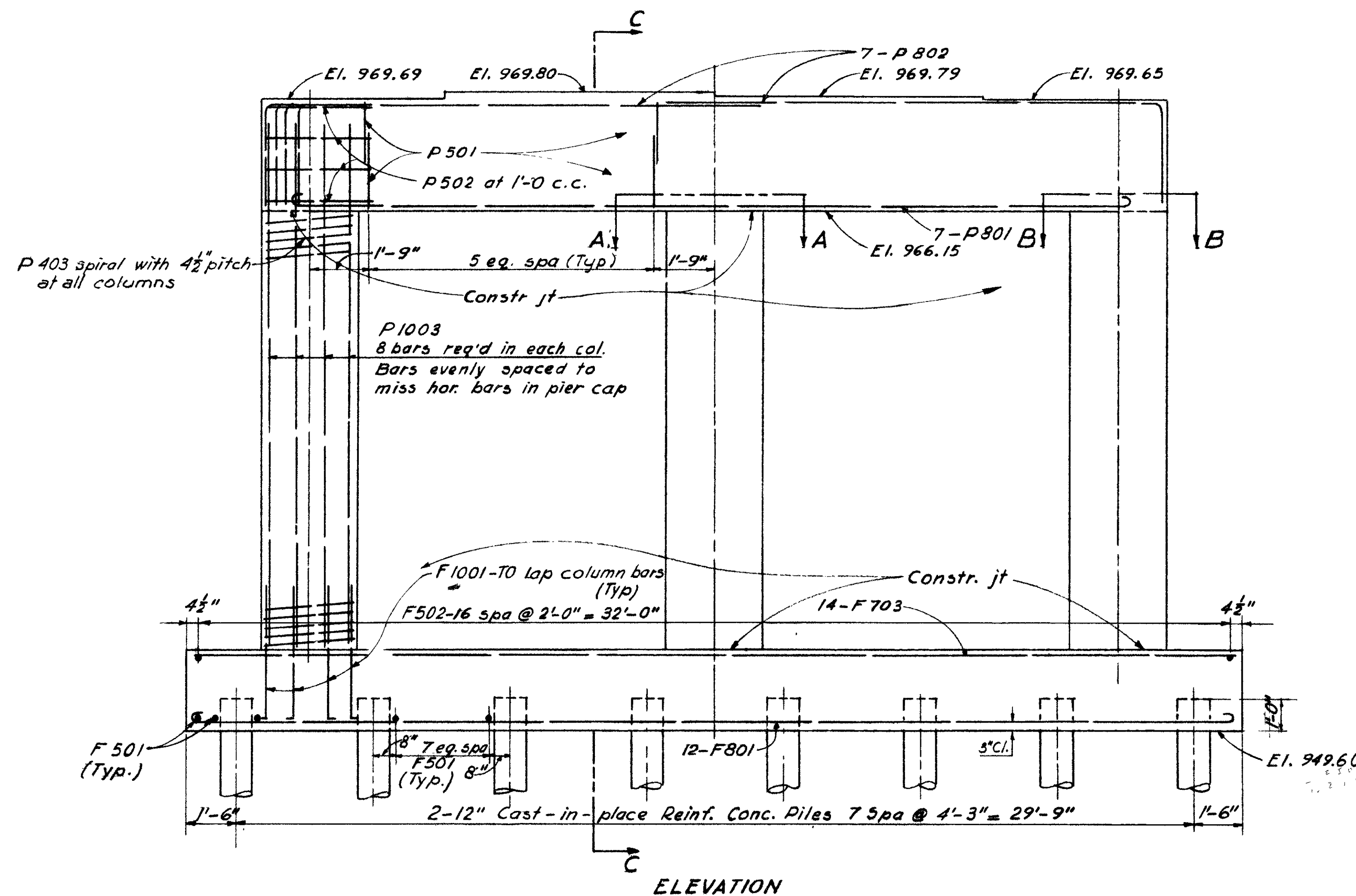
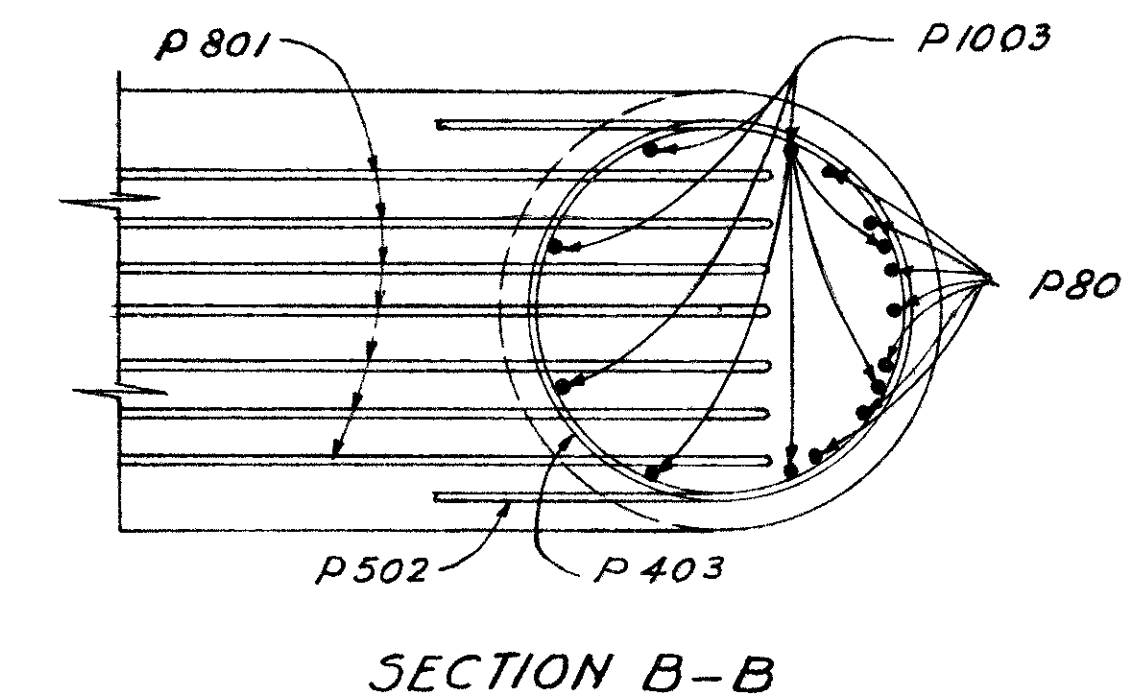
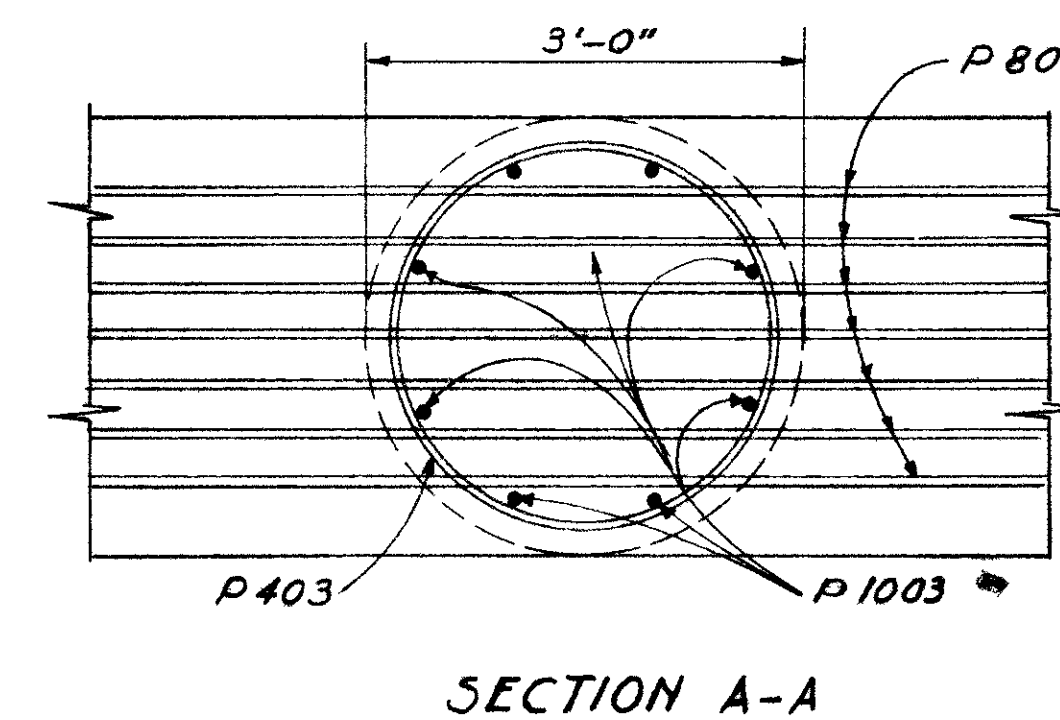
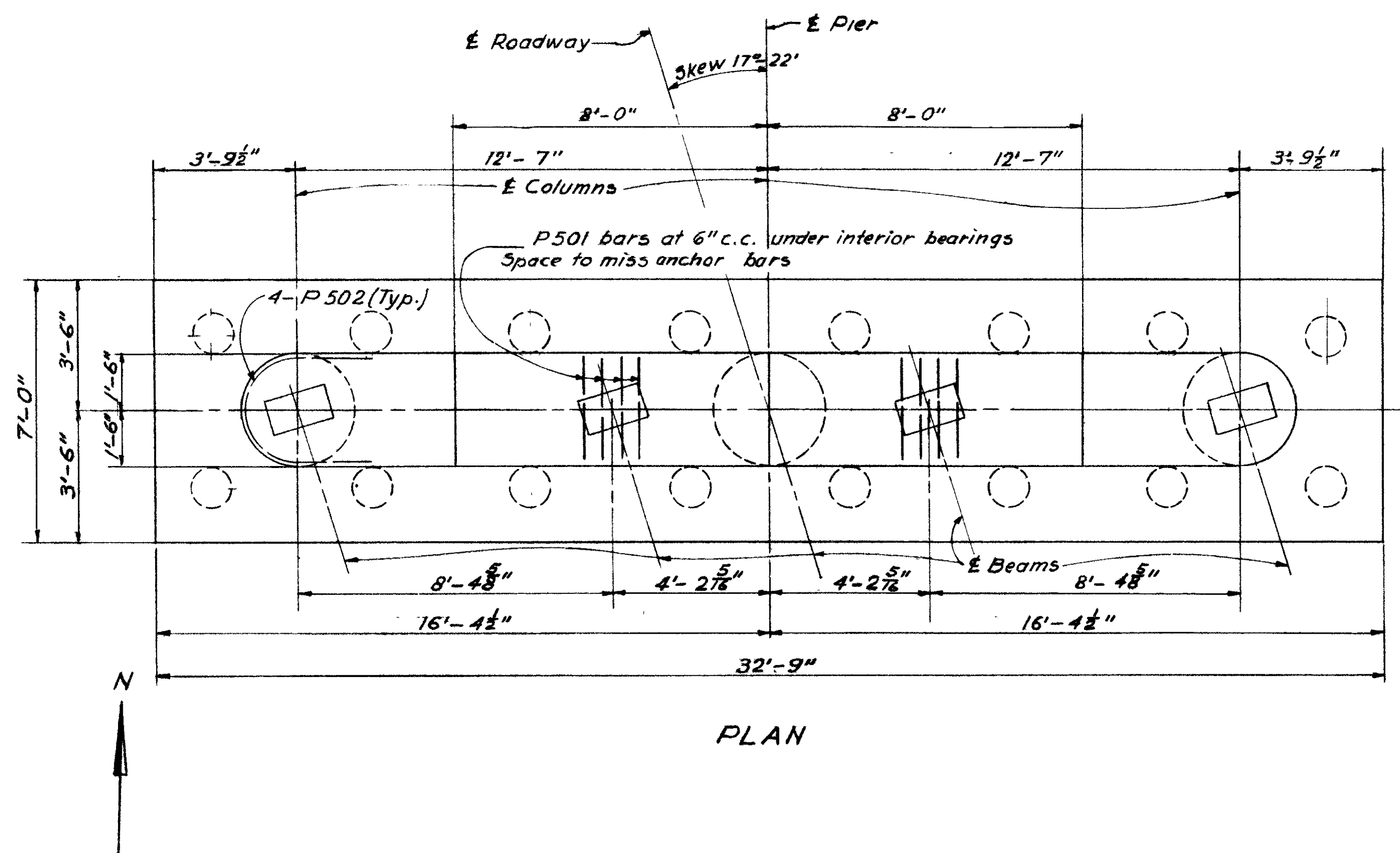
**ABUTMENT DETAILS**  
BRIDGE No Mot-40-0700  
U.S.R. 40 UNDER KIMMEL Rd  
Montgomery County Sta 371+75.47  
ACT-1057(4)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RC	J.F.M.		R.R.M.	T.L.U.	4-3-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

173  
241

Montgomery County  
Mot. 40-5.98  
Mot. 49-12.45

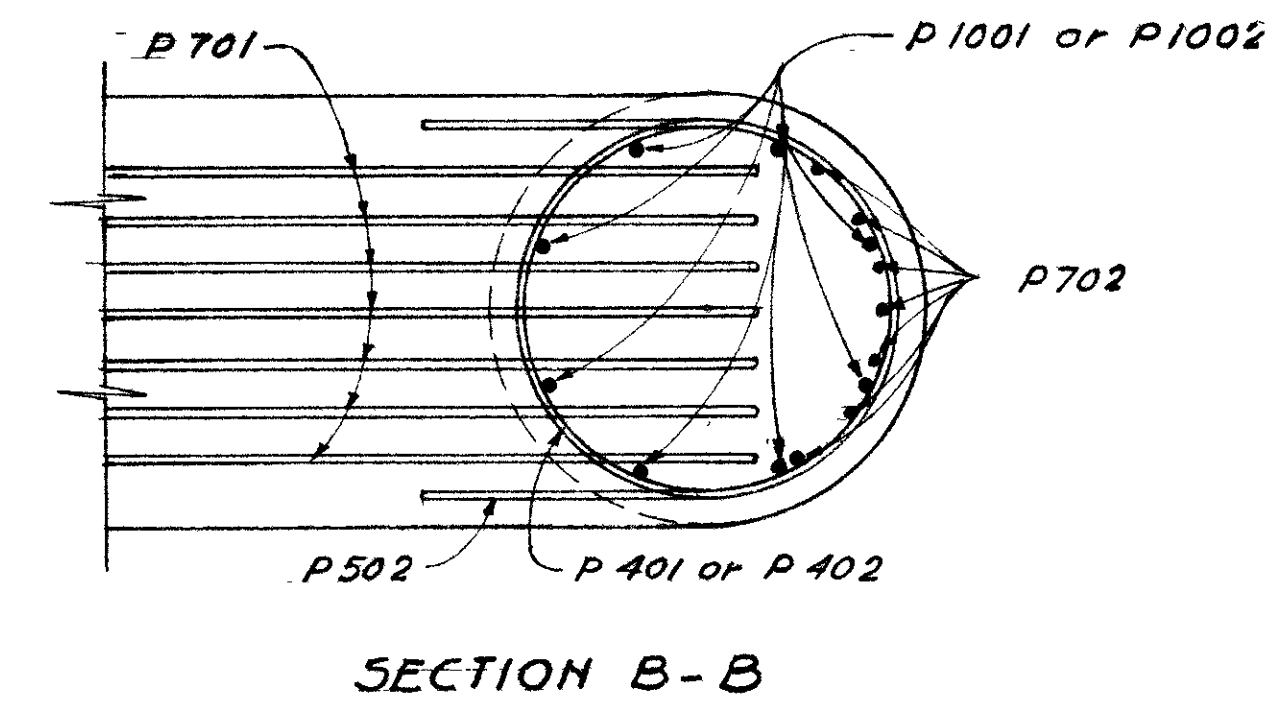
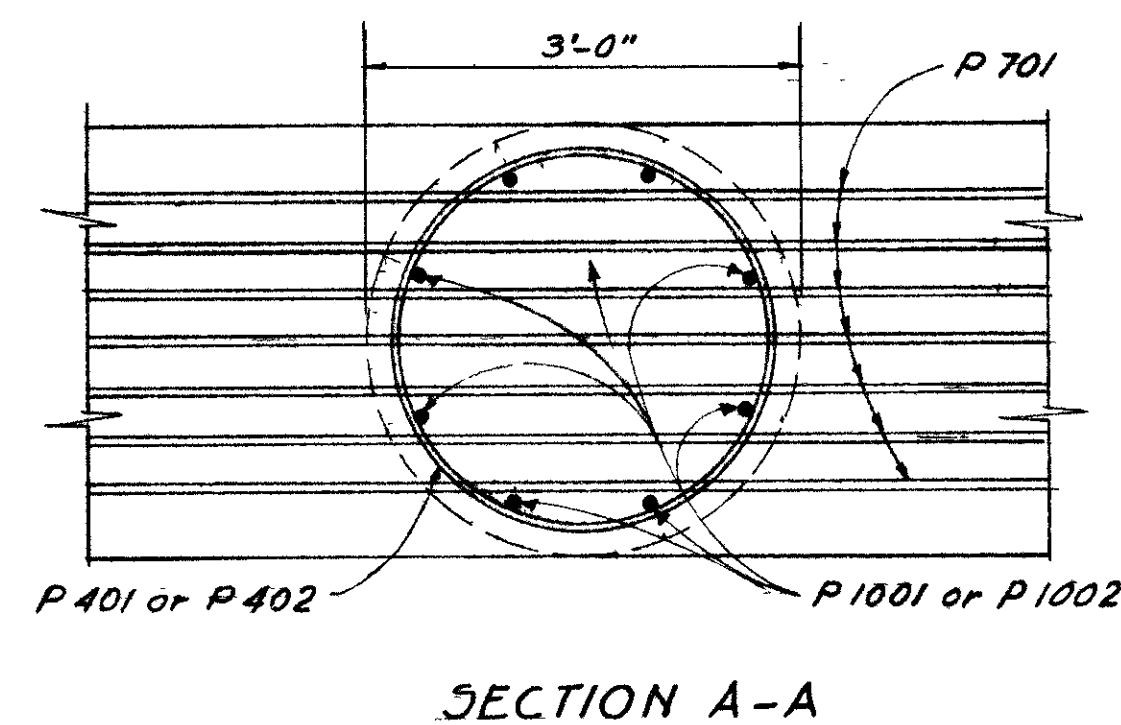
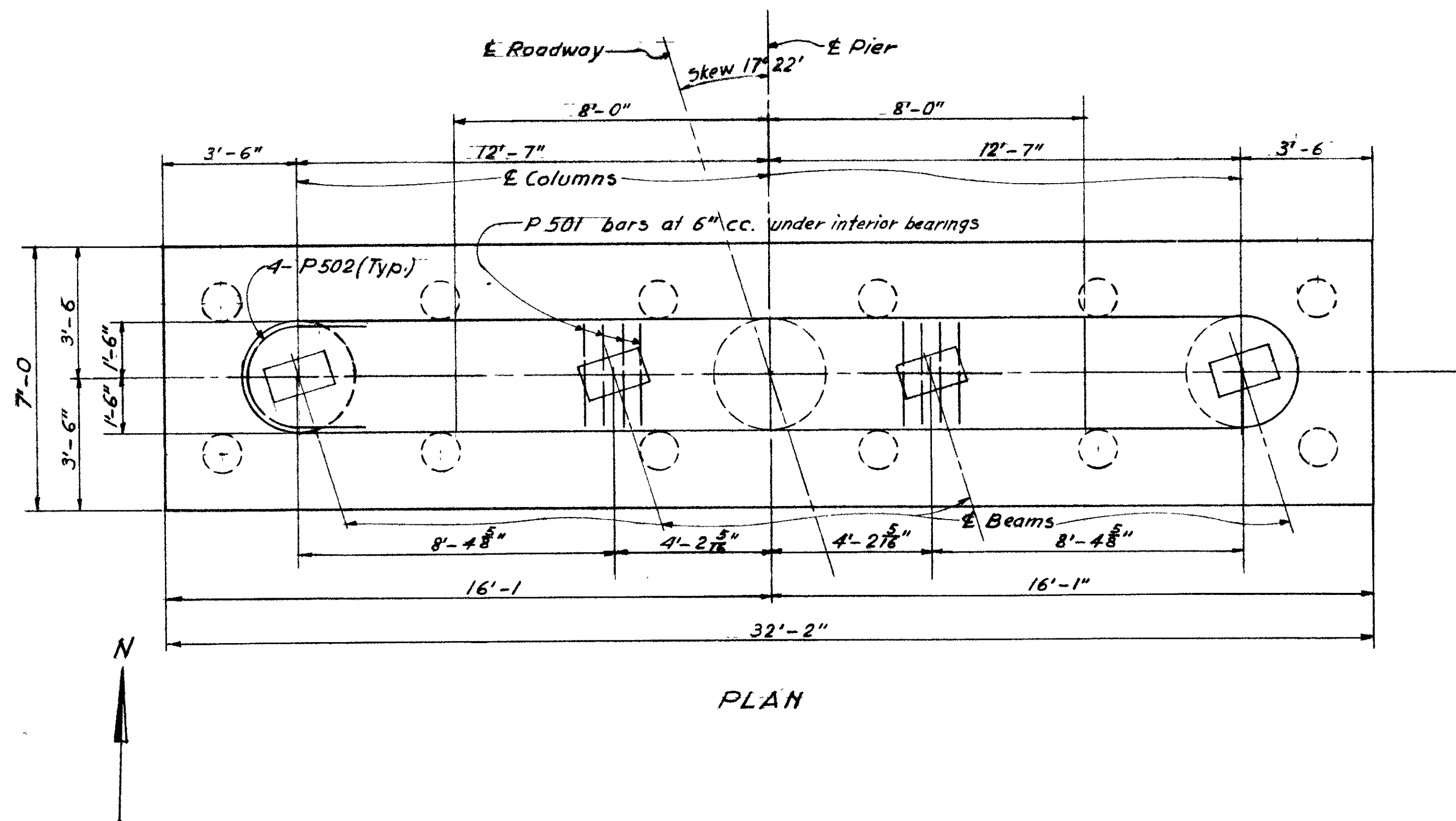


ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
<b>PIER 2 DETAILS</b>						
BRIDGE No Mot-40-0700 U.S.R. 40 UNDER KIMMEL Rd. Montgomery County Sta 371+75.47						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RC	J.F.M.		R.R.M.	T.L.V.	1-3-58	

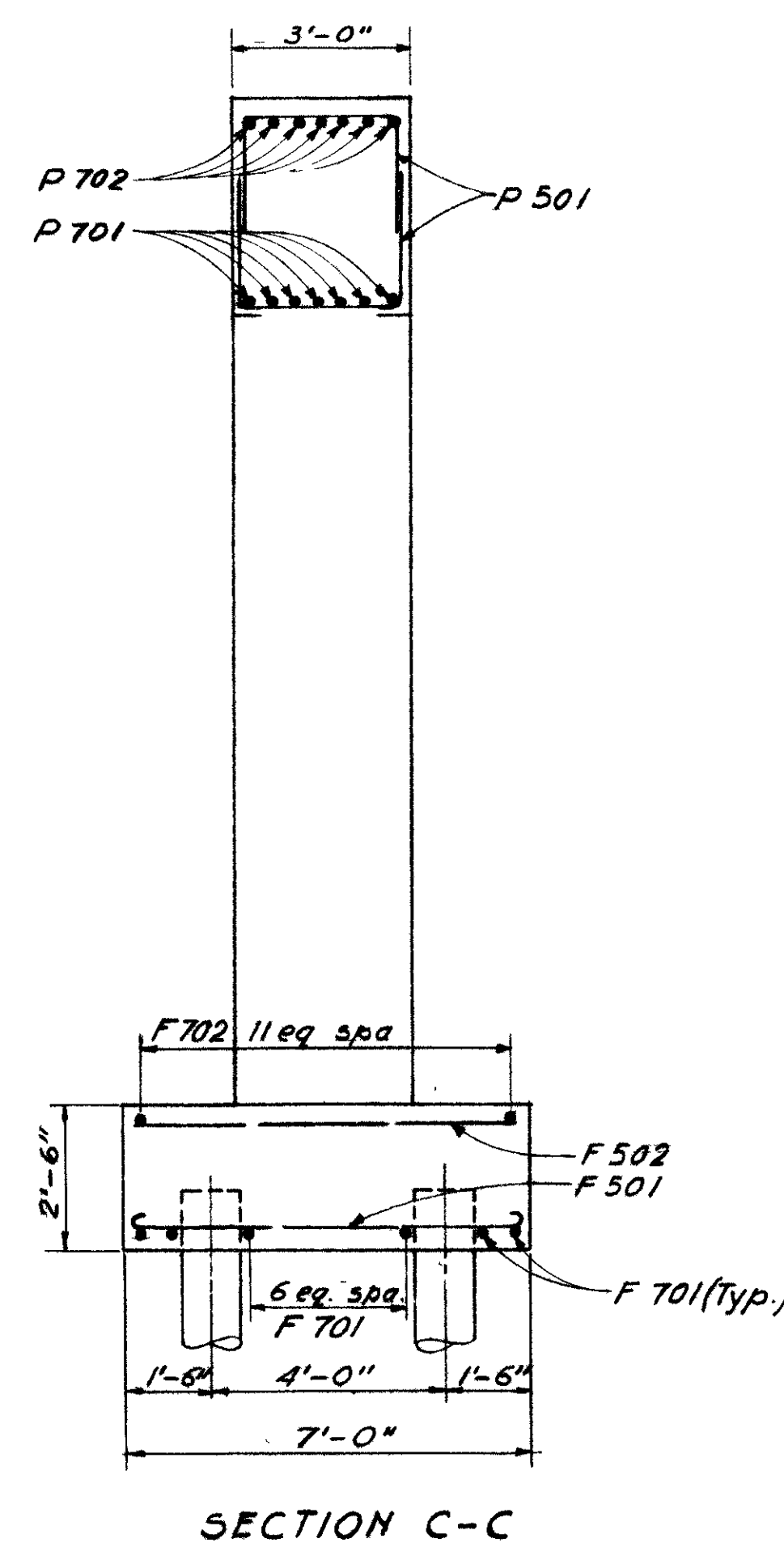
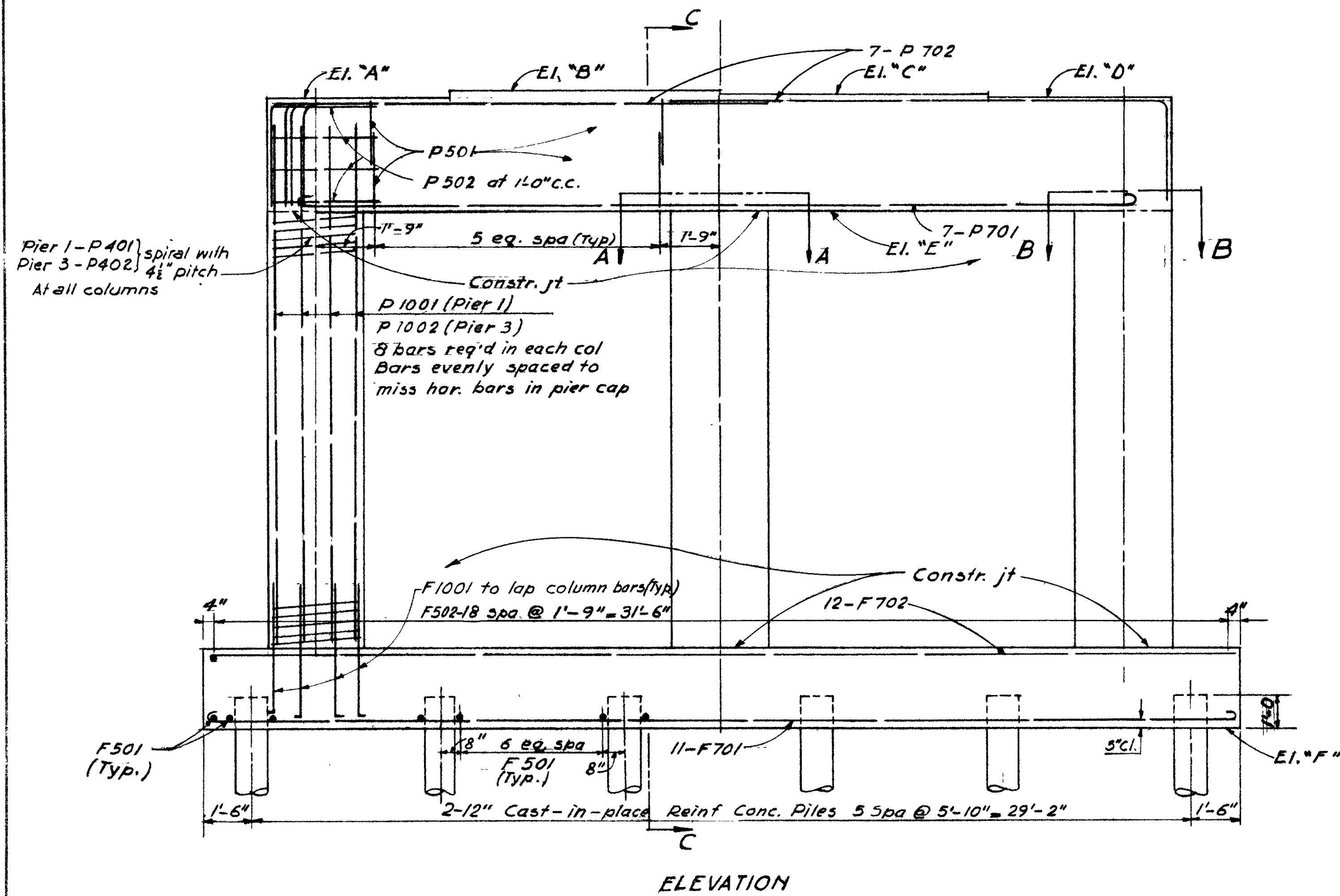
FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

174  
241

Montgomery County  
Mot. 40 - 5.98  
Mat. 49 - 12.45



LOCATION	ELEVATIONS					
	A	B	C	D	E	F
PIER 1	969.18	969.28	969.25	969.09	965.59	949.50
PIER 3	969.83	969.97	969.97	969.86	966.33	949.60



ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

PIERS 1 & 3 DETAILS  
BRIDGE No Mot-40-0700  
U.S.R. 40 UNDER KIMMEL Rd.  
Montgomery County Sta 371+75.47  
ACT-1037(4)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R C	J.F.M.		R.R.M.	T.L.U.	4-3-58	

Notes: All longitudinal bars shall be S501 unless otherwise shown.  
Lap S501 bars 1'-7" min.

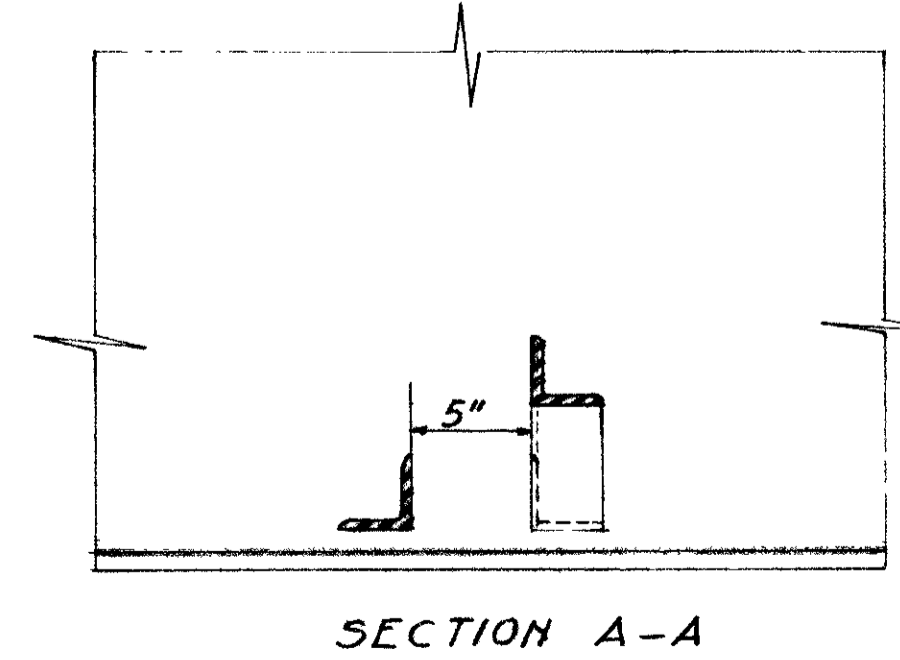
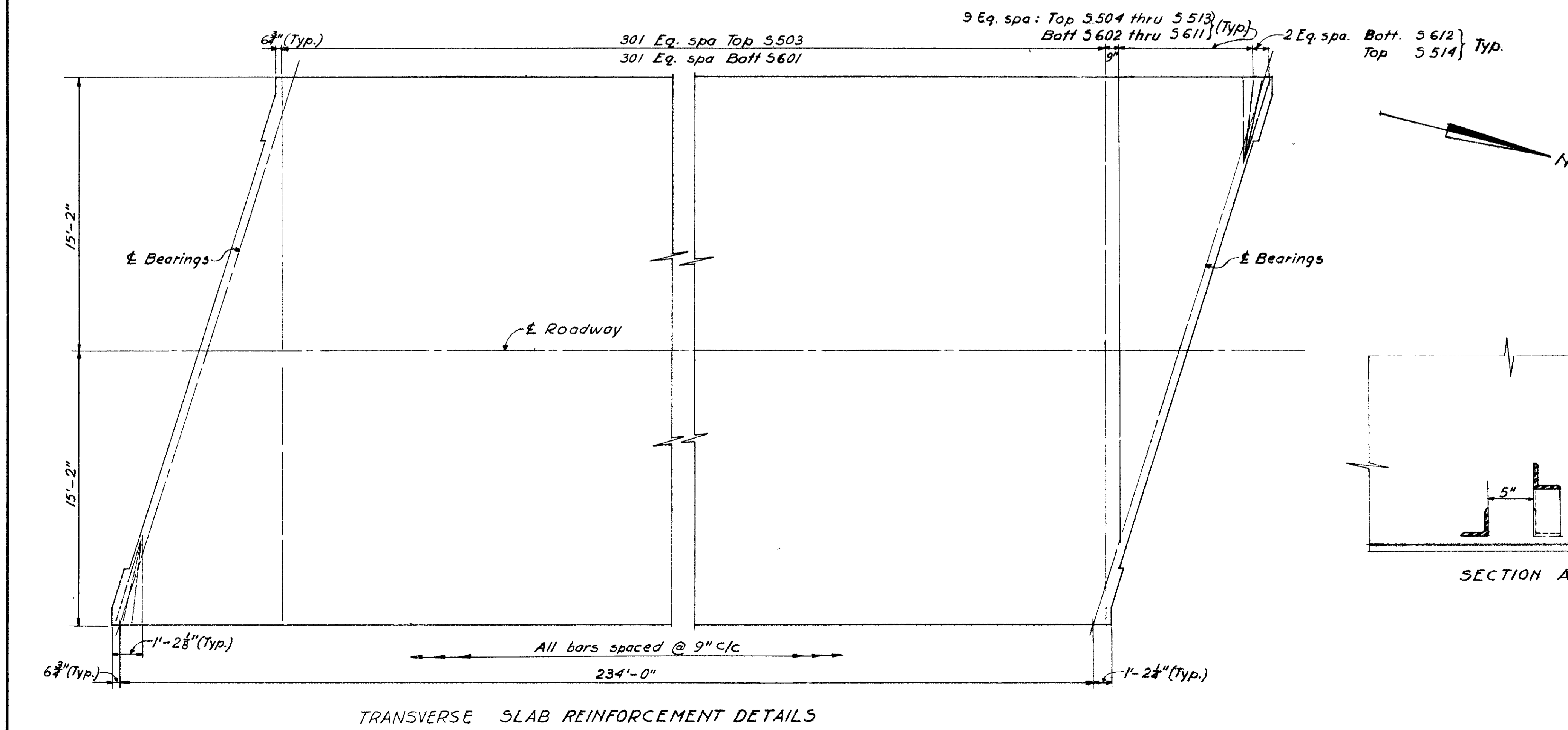
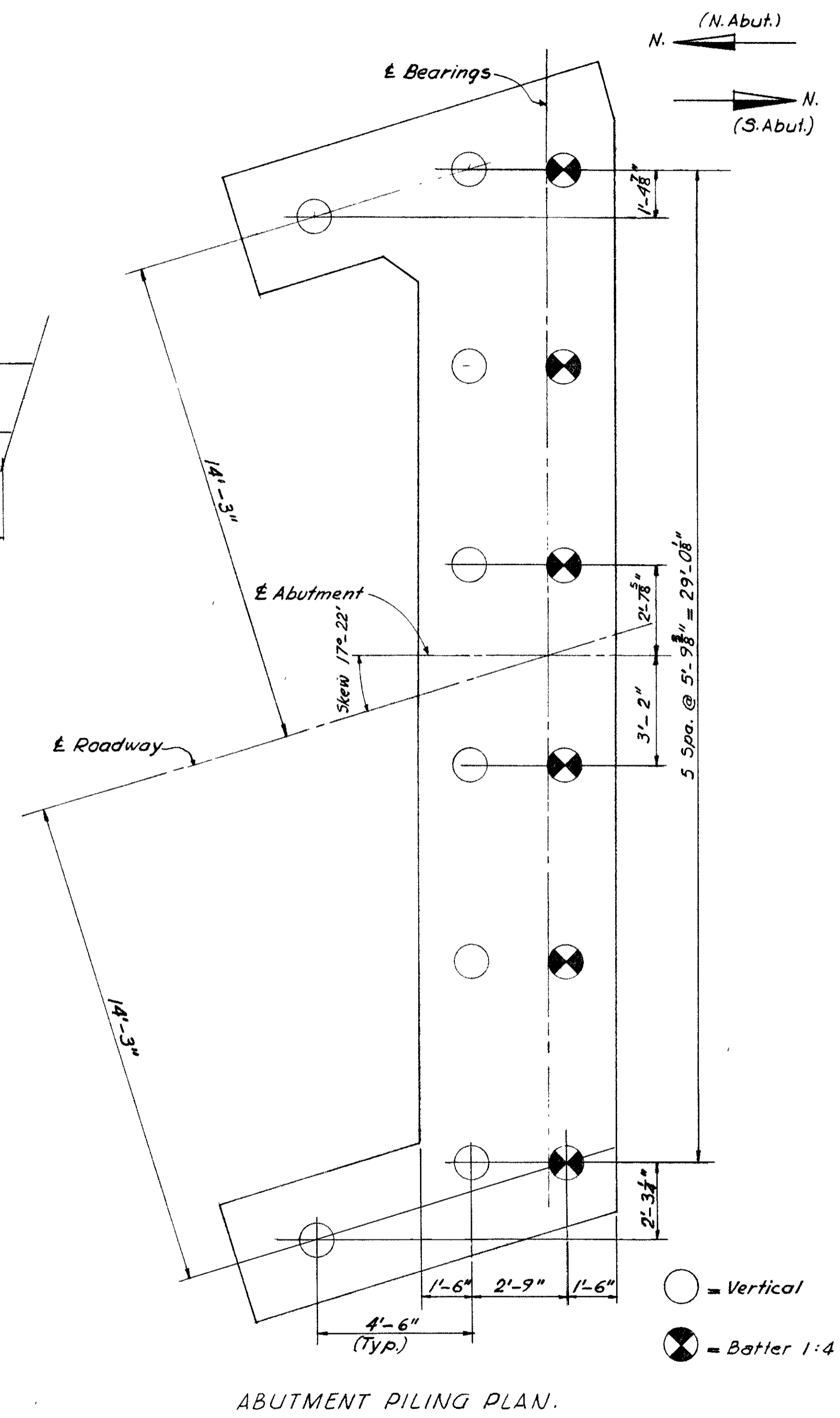
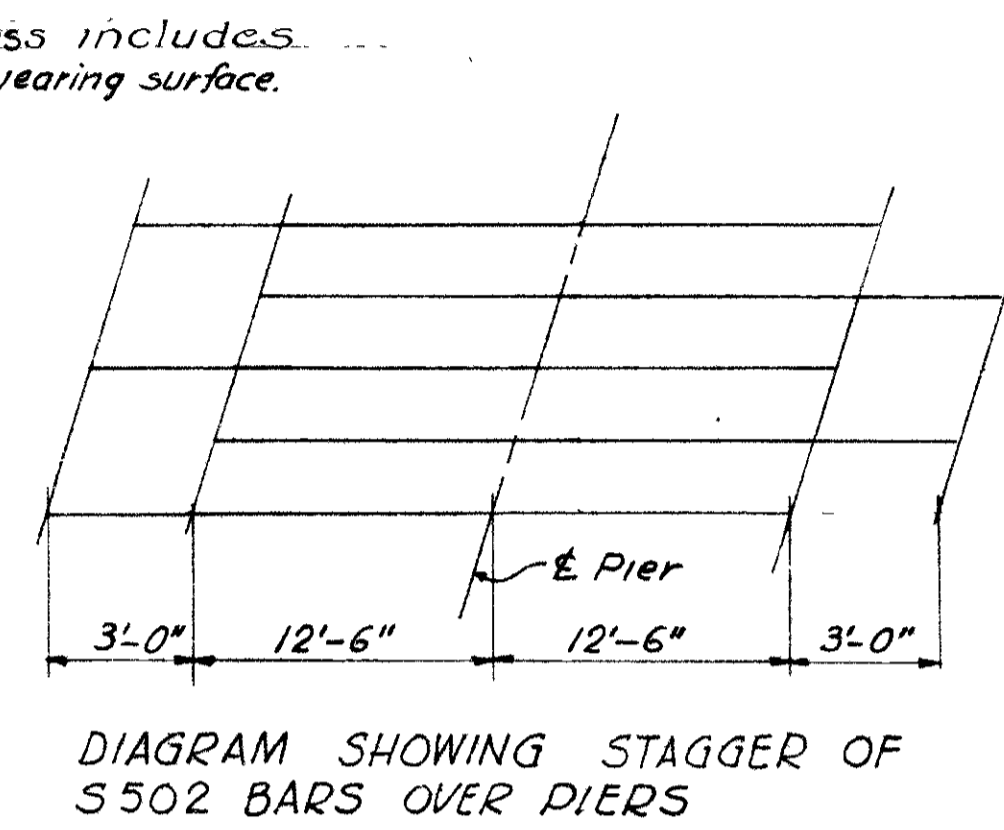
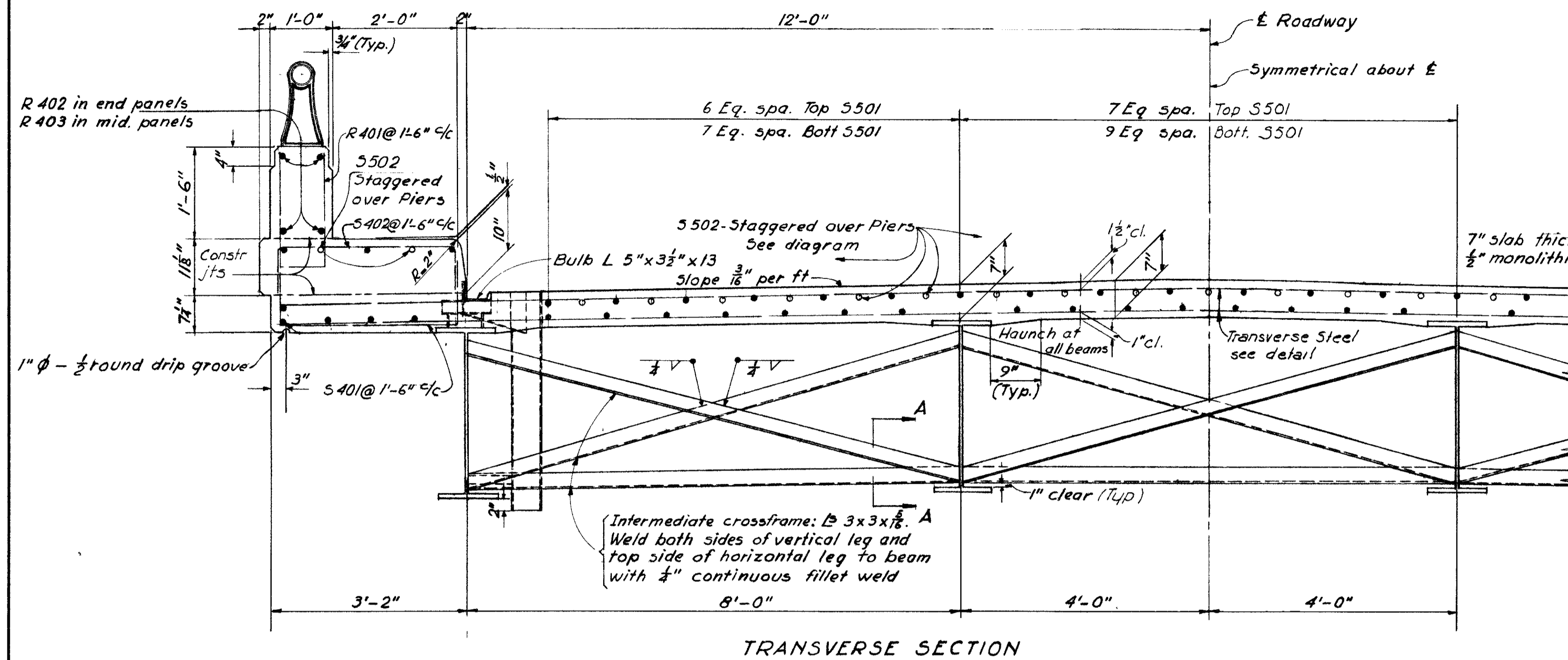
For scupper details see Standard drawing CSB-2-56, sheet 3

Concrete parapets are included with Item 5-14 for payment.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

175  
241

Montgomery County  
Mot. 40-5.98  
Mot. 49-12.45

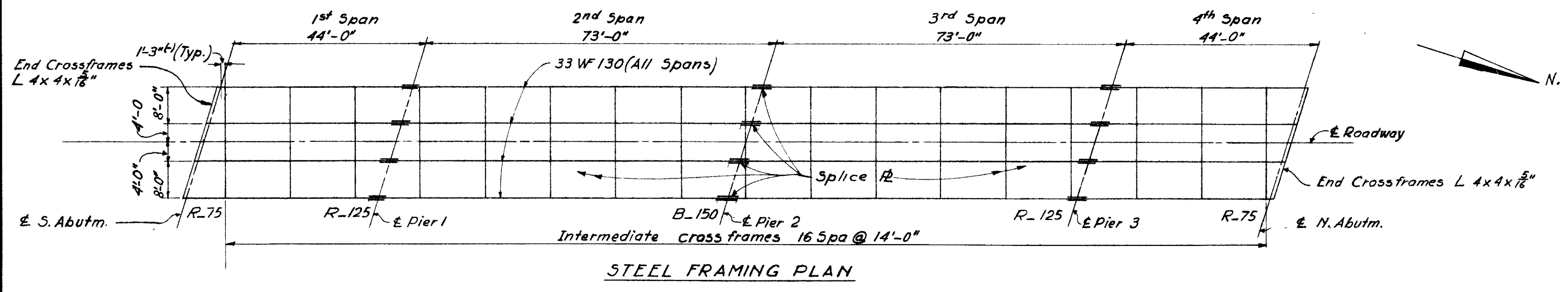


ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

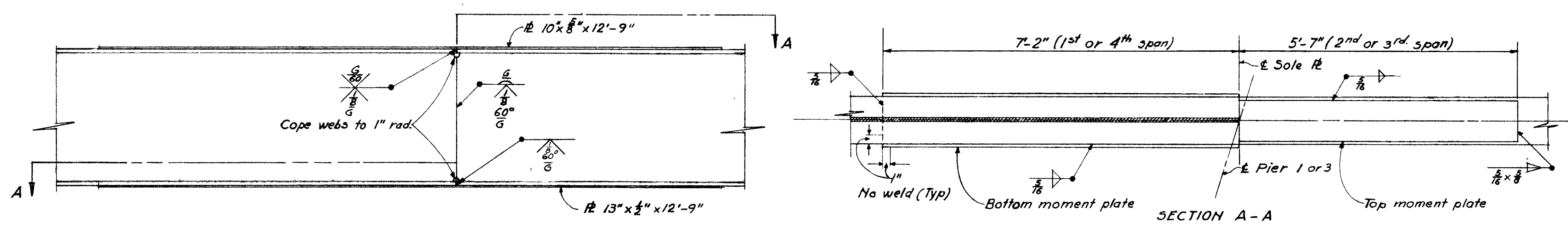
SUPERSTRUCTURE DETAILS &  
ABUTMENT PILING PLAN.  
BRIDGE No Mot-40-0700  
U.S.R. 40 under KIMMEL Rd.  
Montgomery County Sta. 371+75.47  
Act 105712

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RC	JFM		R.R.M.	TLU	4-3-58	

Montgomery County  
Mot. 40-5.98  
Mot. 49-12.45

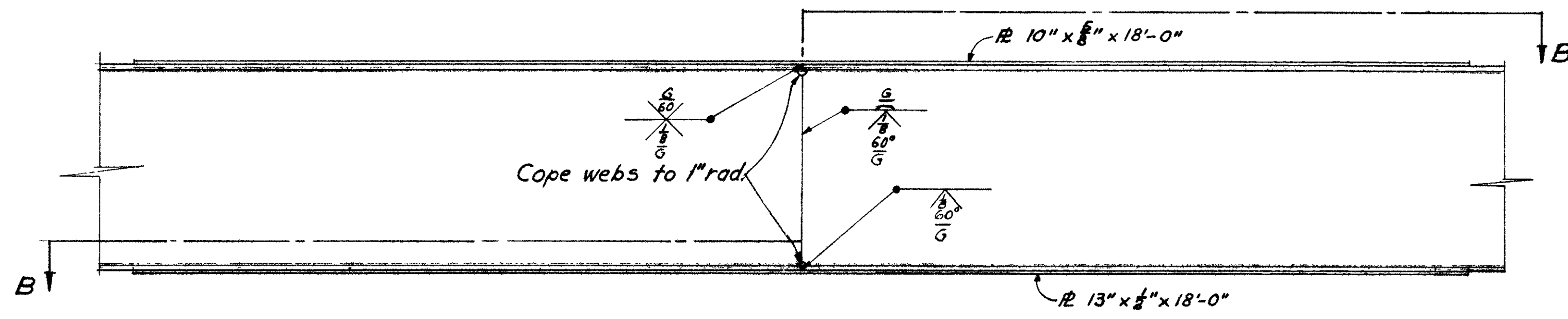


STEEL FRAMING PLAN



BEAM SPLICE DETAILS, PIERS 1 & 3.

"G" indicates grinding



SECTION B-B  
BEAM SPLICE DETAILS, PIER 2

"G" indicates grinding

Location	DEFLECTION & CAMBER							
	Span 1		Span 2		Span 3		Span 4	
	Int.	Ext.	Int.	Ext.	Int.	Ext.	Int.	Ext.
Due to weight of steel	0	0	3/16	3/16	3/16	3/16	0	0
Due to remaining D.L.	1/16	3/16	3/4	1/8	3/4	1/8	1/16	3/16
Due to Vertical Curve	5/16	1/16	7/8	7/8	7/8	7/8	5/16	5/16
Total	3/8	1/2	1 13/16	2 3/8	1 13/16	2 3/8	3/8	1/2
Shop Camber required	0	0	1/8	2 1/4	1/8	2 1/4	0	0

Beam splice welding procedure

1. Place beams of the 2nd and 3rd span.
2. Raise ends of beams 2 3/8" at pier #1 or pier #3.
3. Butt weld beam flanges and webs at pier #2.  
First make one pass in the flanges, then one in the web, then repeat until completed.
4. Weld top and bottom plates.
5. Lower ends of beams to final positions.
6. Place beams of the 1st and 4th span.
7. Raise ends of beams 3/8" at the North and South abutments.
8. Make splices at piers #1 and #3 in the same manner as at pier #2.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

FRAMING PLAN & SPLICE DETAILS  
BRIDGE No Mot-40-0700  
U.S.R. 40 UNDER KIMMEL Rd.  
Montgomery County Sta 371+75.47  
ACT-1037(4)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RC	J.F.M.		R.R.M.	T.L.U.	4-3-58	

REINFORCING

STEEL

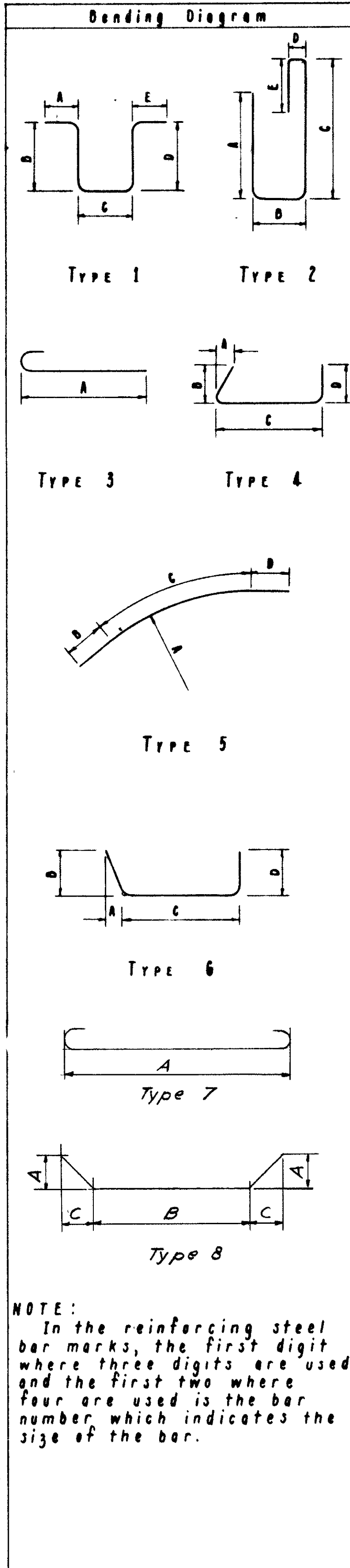
LIST

FED. RD. DIVISION	STATE	PROJECT	TYPE FUND
2	OHIO		

177  
241

Montgomery County  
Mot. 40-5.98  
Mot. 40-12.45

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
<b>Piers</b>										
F501	138	7-10	1127	7	6-8					bt
F502	55	6-8	382	7						st
F701	22	33-6	1506	7	31-10					bt
F702	24	31-10	1562							st
F703	14	32-5	928							st
F801	12	34-7	1108	7	32-5					bt
F1001	72	6-4	1962	1	1-4	5-4				bt
<b>Abutments</b>										
A501	4	5-10	24	1	1-5	4-7				bt
A502	4	6-4	26	1	1-11	4-7				bt
A503	4	6-10	29	1	2-3	4-9				bt
A504	4	7-1	30	1	2-6	4-9				bt
A505	8	7-3	60	1	2-8	4-9				bt
A506	8	3-6	29							st
A507	8	6-0	50							st
A508	4	4-9	20	1	1-2	3-9				bt
A509	4	5-0	21	1	1-5	3-9				bt
A510	8	5-2	43	1	1-7	3-9				bt
A511	8	10-2	85							st
A512	8	12-2	102							st
A513	16	8-8	145							st
A514	40	3-3	136	1		0-10	1-10	0-10		bt
A515	26	30-6	827							st
A516	30	8-4	261	1		2-7	3-5	2-7		bt
A517	4	13-1	55							st
A518	4	12-10	54							st
A519	4	14-0	58	5	30-0	2-0	12-0			bt
A520	4	12-5	52	5	30-0	0-5	12-0			bt
A521	8	6-7	55	8	0-5	5-10	0-4			bt
A522	8	8-0	64							st
A523	32	4-4	145							st
A524	8	4-4	36							st
A601	58	14-7	1271	2	4-3	1-5	5-9	0-10	2-11	bt
F503	32	4-11	164	1	0-6	4-7				bt
<b>Replacement Bars</b>										
RE401	1	5-3								st
RE501	2	5-7								st
RE601	1	5-11								st
RE701	1	6-3								st
RE801	1	6-6								st
RE901	1	6-10								st
RE1001	1	7-2								st
<b>Replacement Bars For Spirals</b>										
RE402	1	5-4		5	1-4	5-4				bt



		ESTIMATED QUANTITIES					
ITEM	TOTAL	UNIT	DESCRIPTION	ABUT.	PIER	SUPERS.	GENERAL
E-2	292	Cu. yd.	Unclassified Excavation	175	117		
5-1	204	Cu. yd.	Class "C" concrete, superstructure			204	
5-1	66	Cu. yd.	Class "C" concrete, pier caps and columns		66		
5-1	52	Cu. yd.	Class "E" concrete, abutments above footings	52			
5-1	114	Cu. yd.	Class "E" concrete, footings	52	62		
5-4	69,564	Lb.	Reinforcing steel	5,719	20,169	43,676	
5-7	156,300	Lb.	Structural steel			156,300	
5-8	156,300	Lb.	Field painting of structural steel.			156,300	
5-14	520	Lin. ft.	Railing [Aluminum rail & Supports & concrete parapets]	47		473	
5-16	Lump	Sum	First test pile				Lump
5-18	1060	Lin. ft.	12" Cast-in-place reinforced concrete piles	420	640		
5-29	95	Cu. yd.	Slope facing (5-29.05 Type)				95
5-29	21	Cu. yd.	Porous backfill	21			

SPIRALS - HOT ROLLED							
Mark	Nº	Length	Core	Pitch	Turns	Spacers	Weight
R401	3	13-8	32	4½	39	12	757
R402	3	14-3	32	4½	41	12	795
R403	3	14-1	32	4½	41	12	794

**SPIRALS**  
THE 'LENGTH' SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP.  
THE 'NO. OF TURNS' SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS 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 ITEM S-4  
1¼ 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.

\* HORIZONTAL PARAPET REINFORCING  
THESE BARS ARE INCLUDED WITH THE RAILING FOR PAYMENT.

**REPLACEMENT BARS**  
IF REINFORCING BARS ARE FABRICATED FROM STOCK WHICH HAS PREVIOUSLY BEEN TESTED AND APPROVED BY THE OHIO HIGHWAY TESTING LABORATORY, TEST SAMPLES AS PROVIDED IN SEC. S-4 02 NEED NOT BE FURNISHED AND REPLACEMENT BARS WILL NOT BE REQUIRED.

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

REINFORCING STEEL LIST AND  
ESTIMATED QUANTITIES  
BRIDGE No Mot-40-0700  
U.S.R. 40 under Kimmel Road  
MONTGOMERY CO. Sta. 371+75.47  
ACT-1037(4)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.P.		J.F.M.	RRM	T.L.V.	4-3-58	

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

178  
241

MONTGOMERY COUNTY  
MOT 40-5.98  
MOT 49-12.45

**REFERENCES:**

**Standard Drawings:**

- |  |   |
|--|---|
| End Finish and End Cross Frame Details | - CSB-2-56 dated 12-3-56, revised 3-1-58. |
| Gutter and Scupper Details             | - CSB-2-56 dated 12-3-56, revised 3-1-58. |
| Rocker and Bolster Details             | - RB-1-55 dated 3-1-55                    |
| Railing Details Type A                 | - AR-1-57 dated 4-9-57, revised 3-1-58.   |
| Supplemental Specifications            | - S-114 revised 8-1-57                    |
| Guardrail and Railing Details          | - Sheet 144                               |

**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 revisions thereof dated 2-21-58.

**FOUNDATION SOUNDINGS:** Foundation design and foundation quantities are based on a study of rod soundings and soil sampling and soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.

**WELDING** of structural steel shall be Class "A" except as otherwise shown. Any welds shown as field welds may, at the option of the Contractor, be made in the shop. Class "B" welding shown thus B )

**CONCRETE DECK PLACING:** In order to facilitate water curing of the concrete in 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 the transverse slab bars and are located near the center of any span.

**SLOPE FACING** shall be provided under the structure at both abutments. The porous drain material shall be 12" thick and shall extend from the face of the abutment down to the toe of the slope and transversely to 3 ft. outside the edge of the superstructure.

**PILES** shall be driven to a minimum bearing capacity of 25 tons per pile for the abutments and 35 tons per pile for the piers.

**MAXIMUM PILE REACTION:** The maximum calculated pile reaction including lateral loads is as follows:

- |               |                    |
|---------------|--------------------|
| Abutments     | - 24 tons per pile |
| Piers 1 and 3 | - 37 tons per pile |
| Pier 2        | - 39 tons per pile |

**TRAFFIC:** Two-way traffic shall be maintained on KIMMEL ROAD during construction of proposed structure. See traffic note, Sheet 12.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

**GENERAL NOTES**

BRIDGE N<sup>o</sup> MOT-40-0700

U.S. 40 UNDER KIMMEL RD.

MONTGOMERY COUNTY

ACI-1097(4)

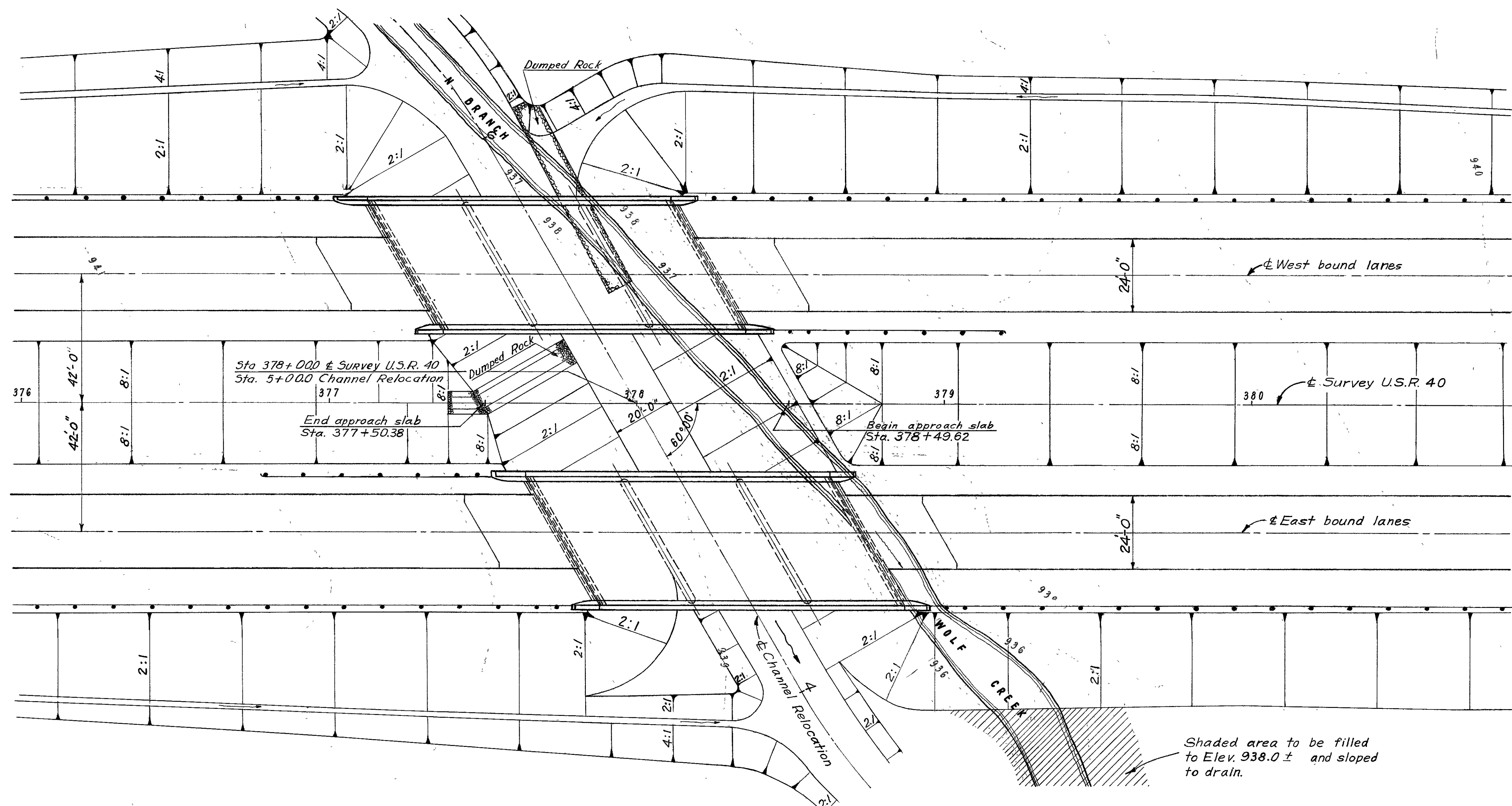
STA. 371 + 75.47

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
				TLU	4-7-58	

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
.2	OHIO		

179  
241

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

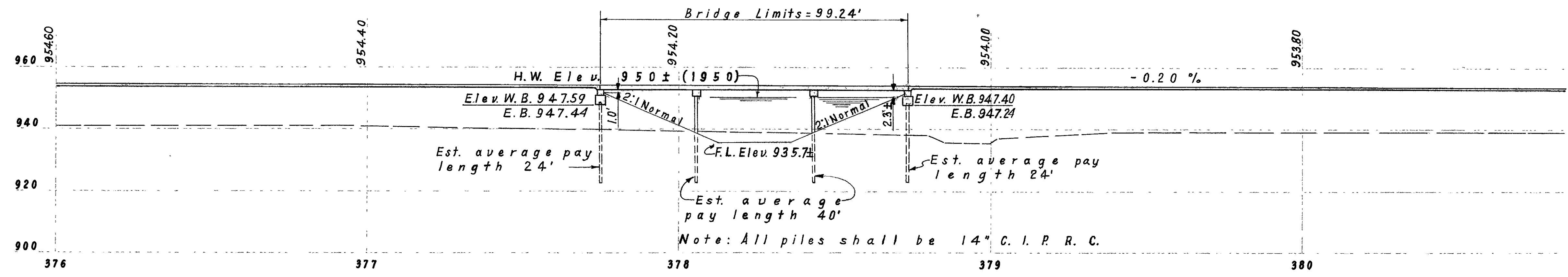


PLAN

**PROPOSED STRUCTURES**  
 Type: Continuous conc. slab with capped pile abutments and piers.  
 Spans: 30'-0", 37'-6", 30'-0" c/c brgs.  
 Roadway: 42'-0" flt parapets 1'-0" conc. curb and alum. railing  
 Loading: CF-2000(57) (Adequate for AASHO Alternate Loading)  
 Wearing surface: 1" mona concrete  
 Skew: 30° Rt. forward.  
 Alignment: Tangent.  
 Approach slabs: AS-1-54 (25' long)

For channel relocation see Sht. # 103 of Roadway Plans.

Drainage Area = 2260 Acres  
 Calc. 50yr HW = El. 941.0  
 Observed 1950 HW = El. 950.0



PROFILE ON E. B. LANES

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
<b>SITE PLAN</b>						
BRIDGE NO MOT-40-0712 U.S.R. 40 OVER N. BRANCH WOLF CREEK MONTGOMERY COUNTY						
ACI-1097(4) Sta. 378+00.00						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.L.P.	G.L.P.	A.V.G.	W.B.M.	J.E.V.	11-8-57	



FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

130  
241

MONTGOMERY COUNTY  
MOT.-40-5.98  
MOT.-49-12.45

GENERAL NOTES

REFERENCES:

Standard Drawings:

- Railing Details, Type "A" - AR-1-57 dated 4-9-57, revised 3-1-58.
- Superstructure Details - CS-2-54 dated 12-1-54
- Pier Details - P-1-54 revised 12-1-54
- Supplemental Specifications - S-114 revised 8-1-57

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 revisions thereof dated 2-21-58.

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.

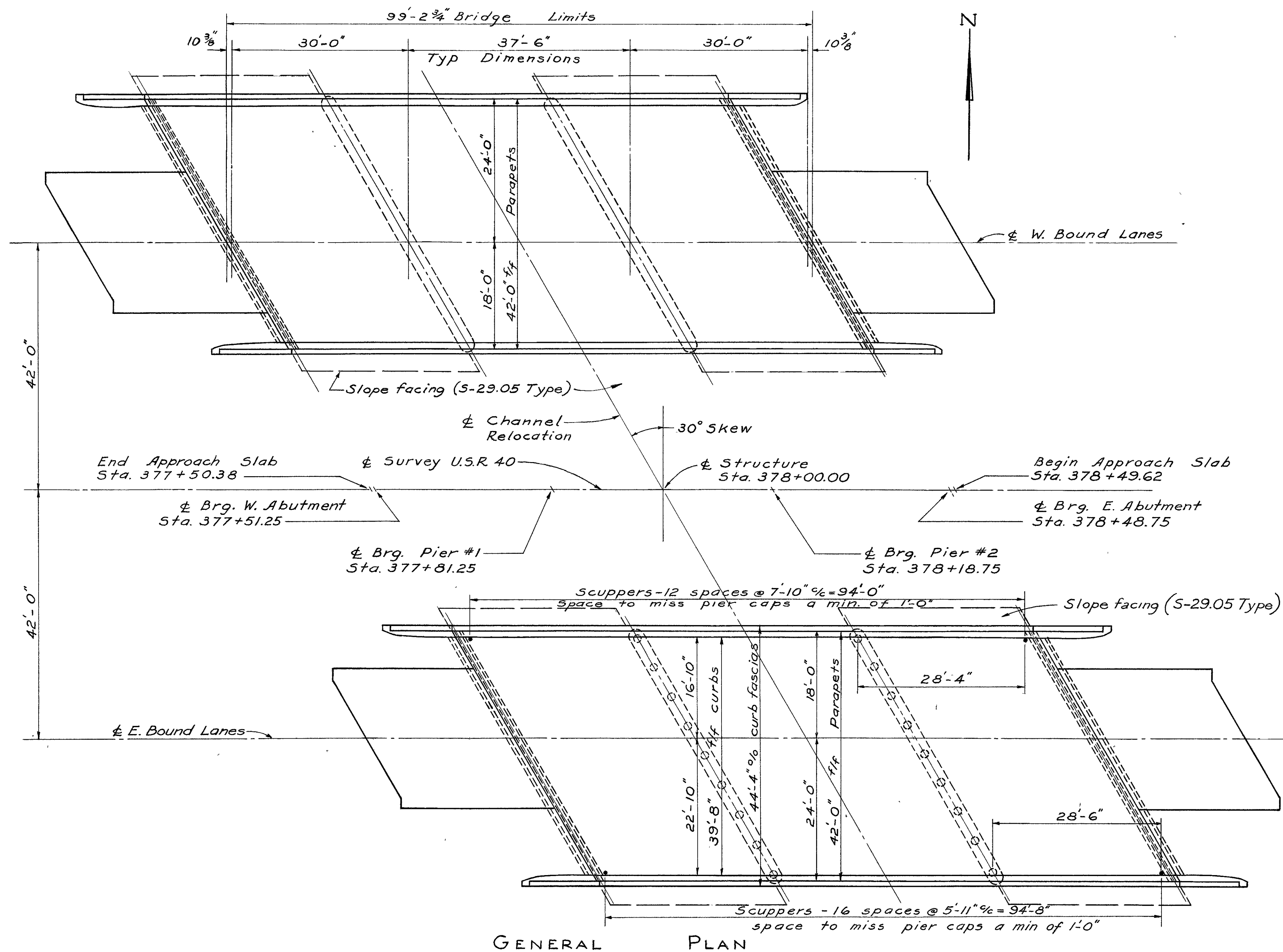
SLAB THICKNESS of 16 3/4 inches includes one inch for monolithic wearing surface.

EXCAVATION QUANTITY includes the removal of fill material between the bottom of the abutment cap and Elev. 951.6 at the W. abutments and Elev. 951.4 at the E. abutments.

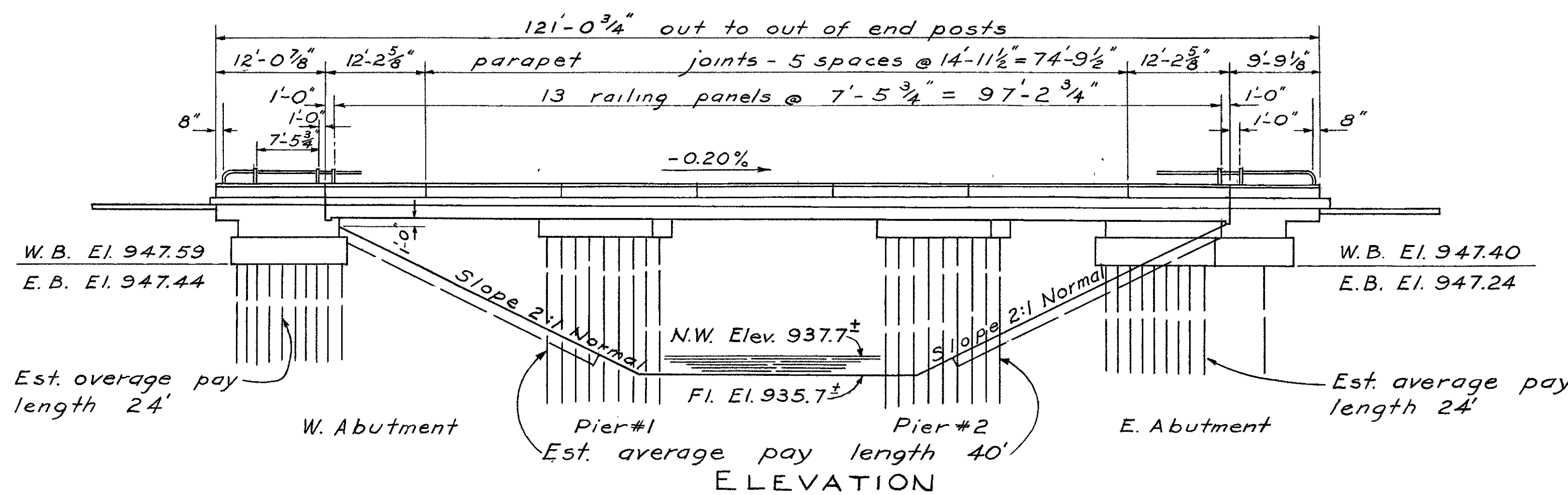
SLOPE FACING shall be provided under the structure at both abutments. The porous drain material shall be 12" thick and shall extend from the face of the abutment down to Elev. 937.7 and transversely to 3 ft. outside the edge of the superstructure.

PILES shall be driven to a minimum bearing capacity of 25 tons per pile for the abutments and 35 tons per pile for the piers. The design load for the pier piles is 34 tons and for the abutment piles is 22.5 tons per pile.

PIER PILE ENCASEMENT as shown on Std. Dwg. No. P-1-54 may be omitted provided that the tapered portion, if any, of all pier piles does not extend above the stream bed or the proposed surface of the ground. If the tapered portion of any pile extends above these limitations the encasement will be required for all the pier piles. If the encasement is omitted the pile casings shall have a thickness of metal not less than No. 7 gage, and the painting of the piles shall extend to low water elevation or, if the proposed surface of the ground is above low water, the painting shall extend to at least one foot below the proposed surface of the ground.

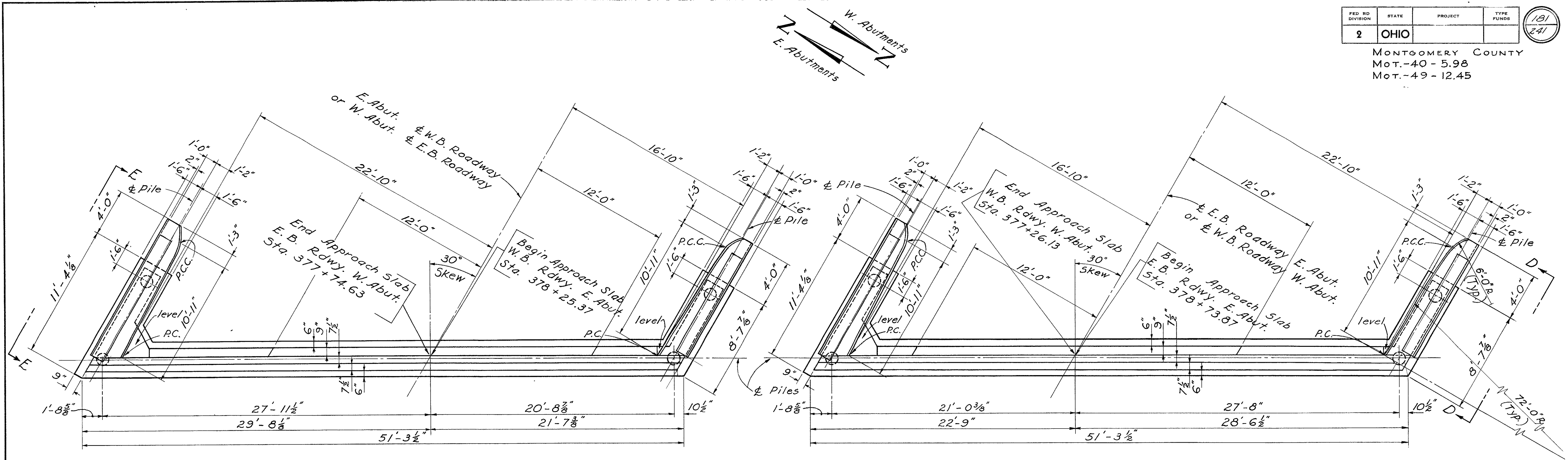


GENERAL PLAN

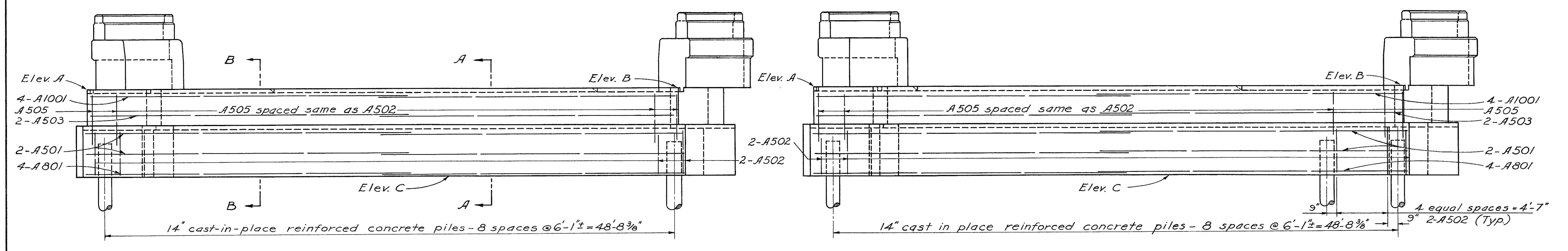


ELEVATION

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
GENERAL PLAN, ELEVATION AND GENERAL NOTES BRIDGE No. MOT-40-0712 U.S.R. 40 OVER N. BRANCH WOLF CREEK ACI-1097(4)						
MONTGOMERY COUNTY STA. 378+00.00						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GLP	GLP	E.S.S.	W.B.M.	J.E.V.	11/8/57	



ABUTMENT PLAN



ABUTMENT ELEVATION

		ELEV. A	ELEV. B	ELEV. C	ELEV. D	ELEV. E
E. ABUTMENTS	E.B.L.	952.39	952.24	947.24	952.37	952.22
	W.B.L.	952.40	952.44	947.40	952.38	952.42
W. ABUTMENTS	E.B.L.	952.44	952.58	947.44	952.46	952.60
	W.B.L.	952.63	952.59	947.59	952.65	952.61

Note: For Additional Abutment Details See Sht. 182

ALDEN E. STILSON & ASSOCIATES, LIMITED  
 CONSULTING ENGINEERS  
 COLUMBUS, OHIO

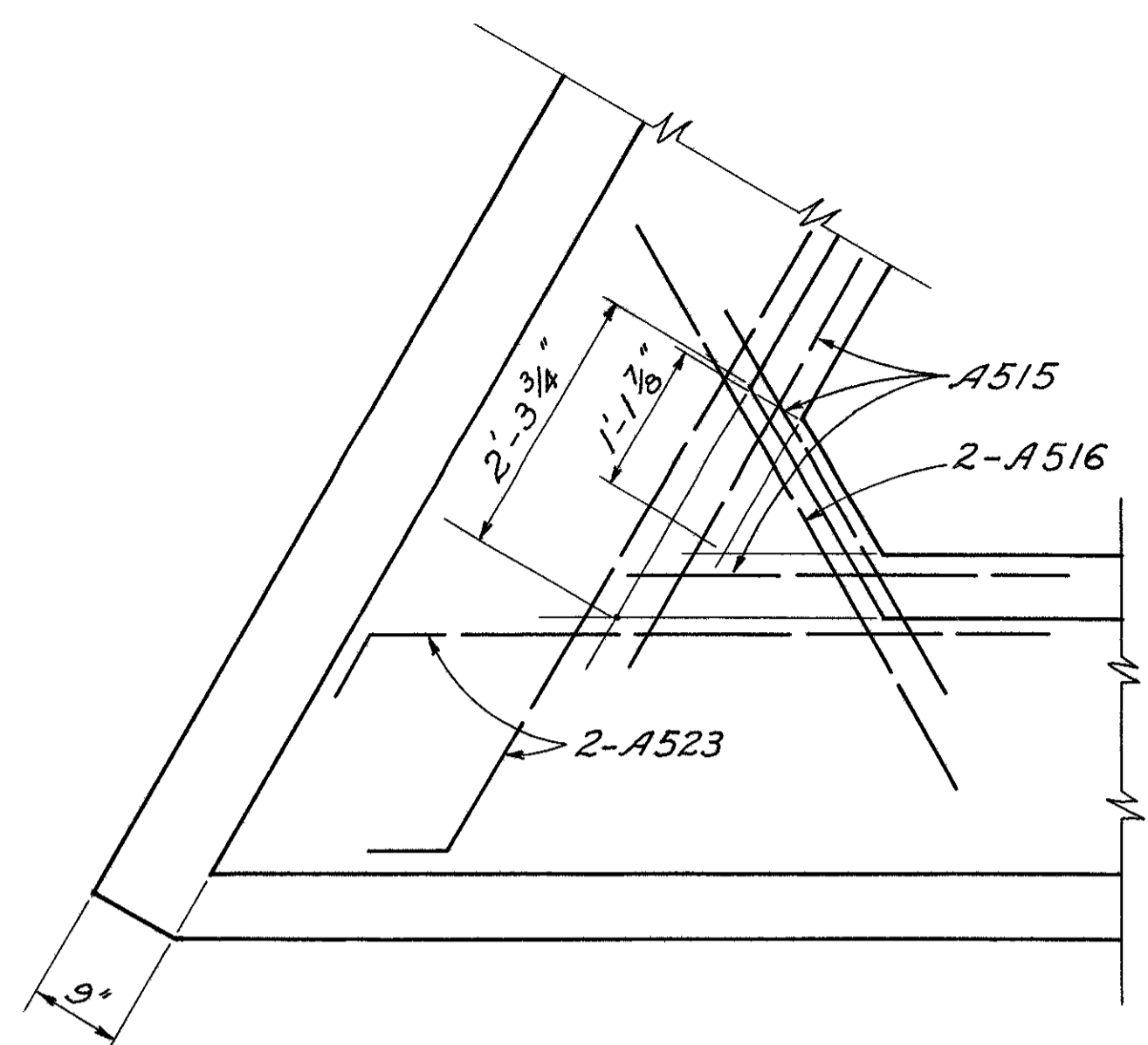
ABUTMENT PLANS  
 AND ELEVATIONS  
 BRIDGE No. MOT-40-0712  
 USR 40 OVER N. BRANCH  
 WOLF CREEK ACI-1097(4)  
 MONTGOMERY COUNTY STA. 378+00.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GLP	GLP	ESS	WBM	J.E.V.	1/8/57	

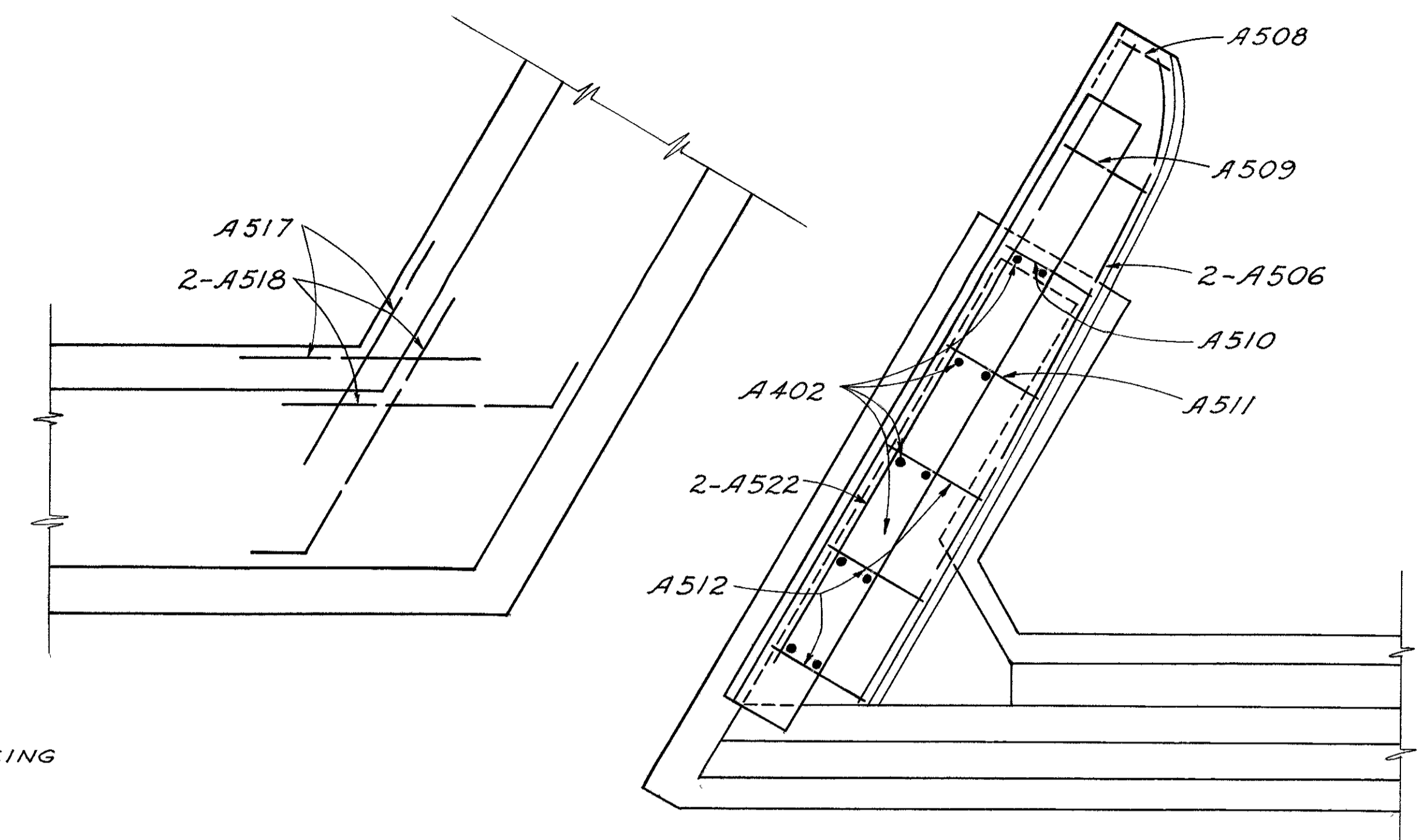
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

132  
241

MONTGOMERY COUNTY  
Mot. 40-5.98  
Mot. 49-12.45

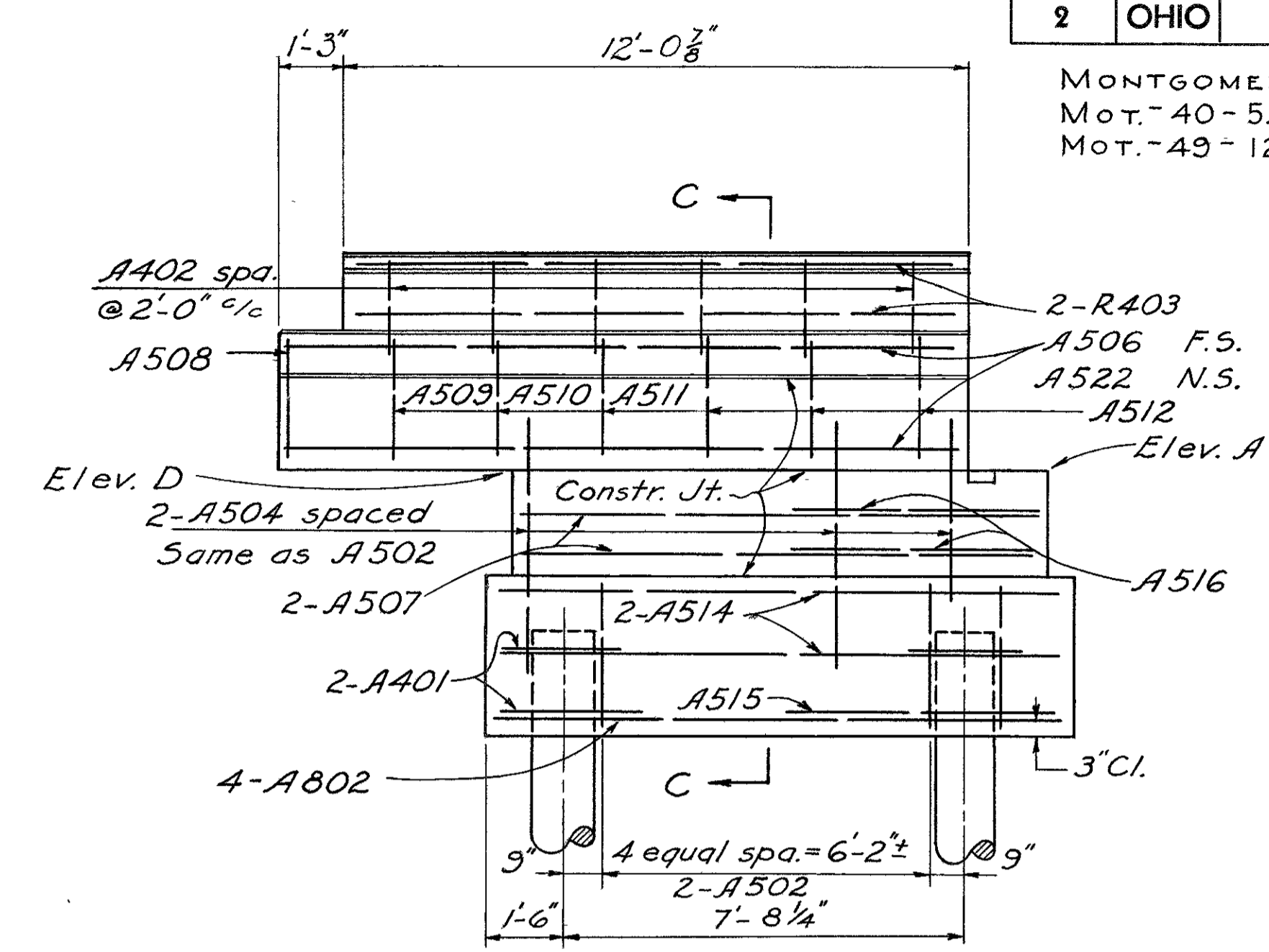


DETAIL OF CORNER REINFORCING

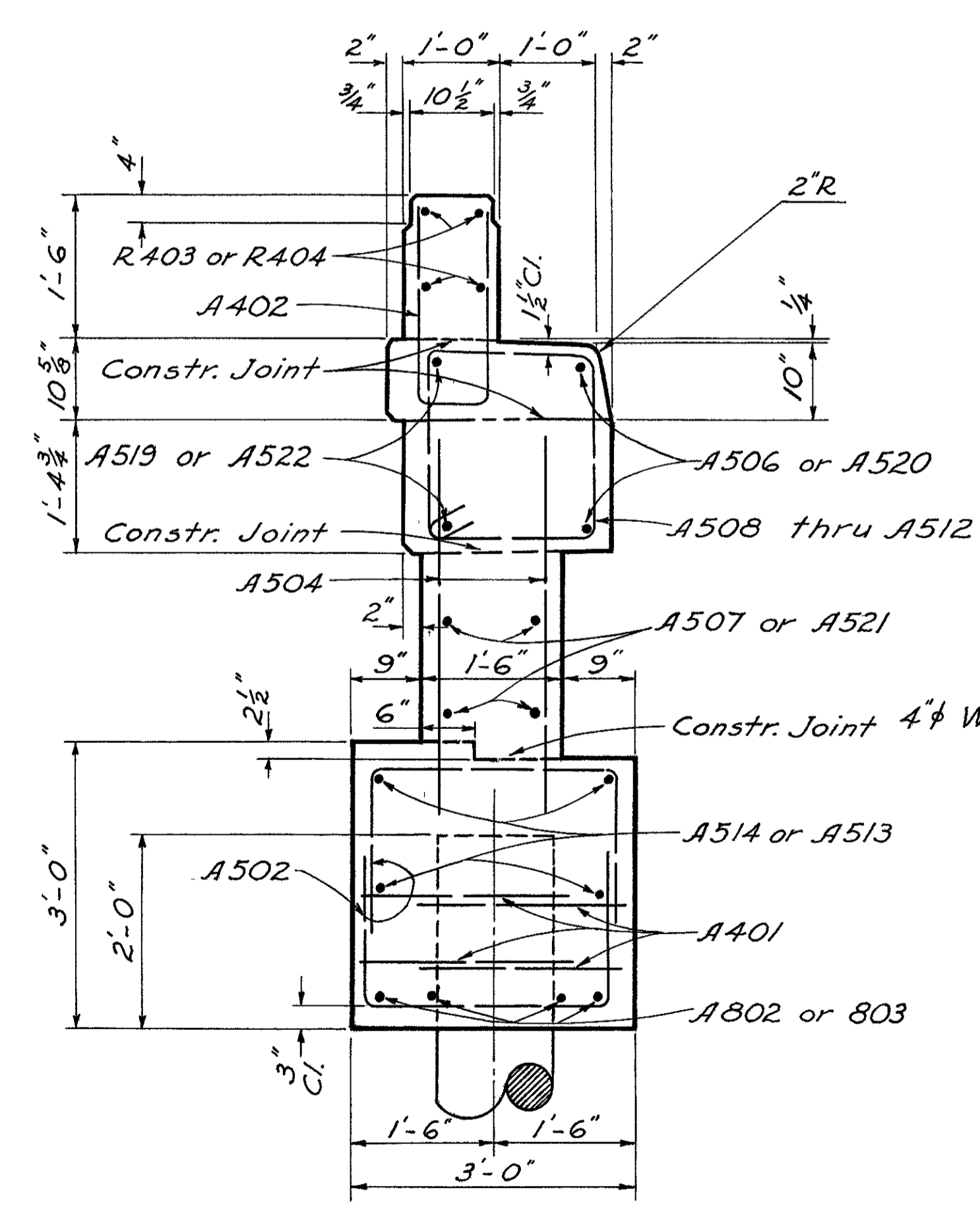


Note: Parapet steel not shown

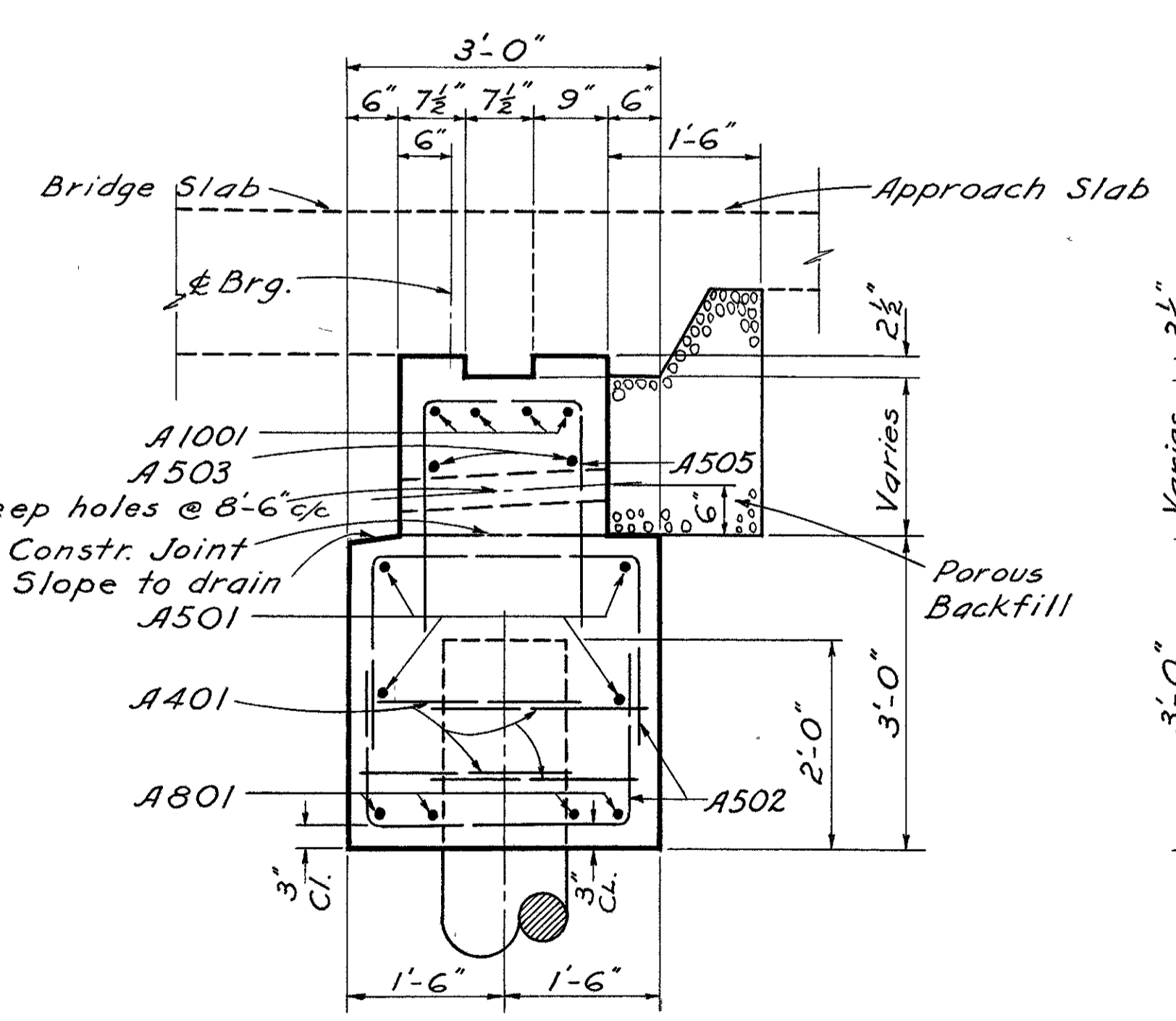
PLAN OF VIEW E-E



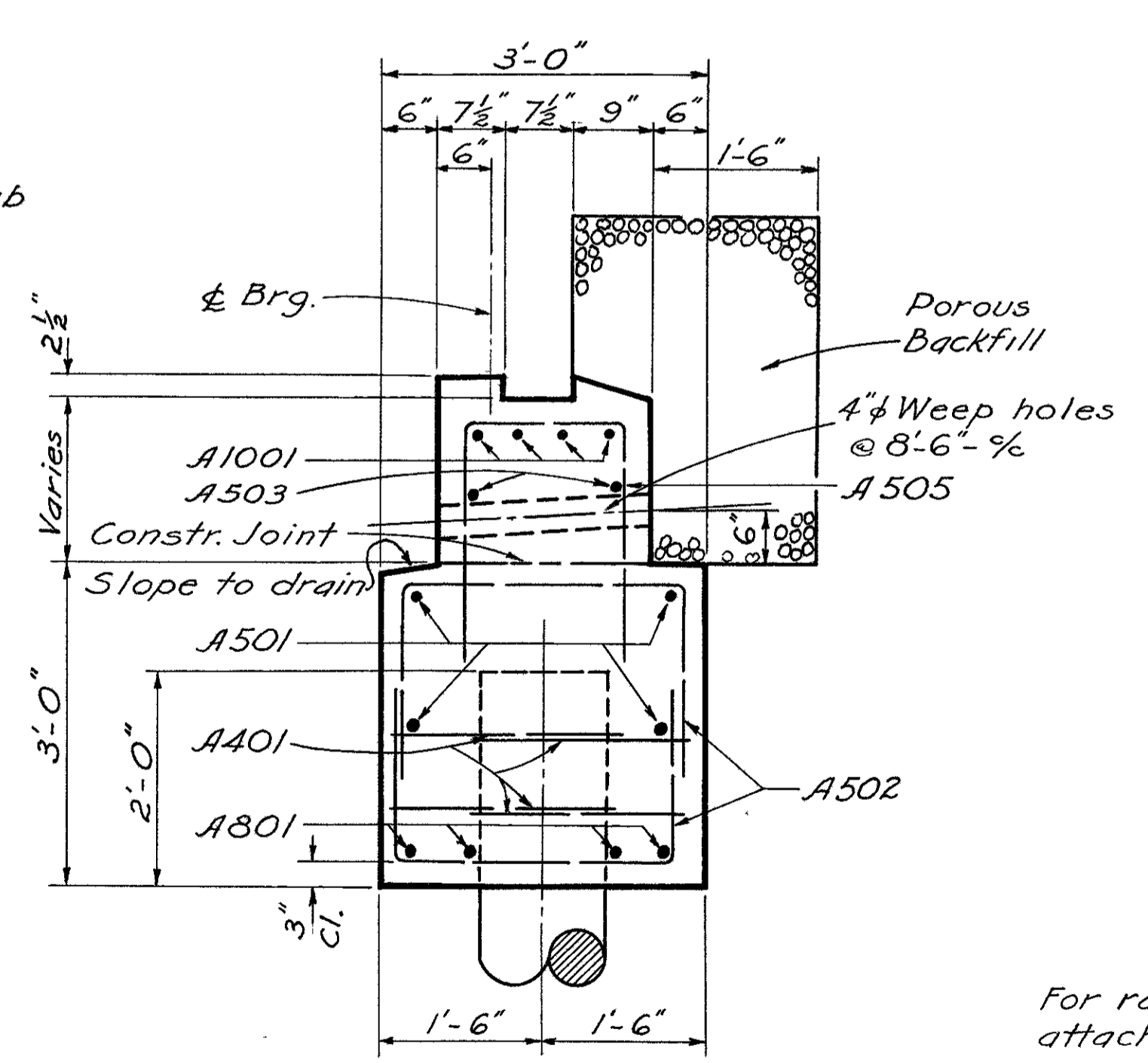
VIEW E-E



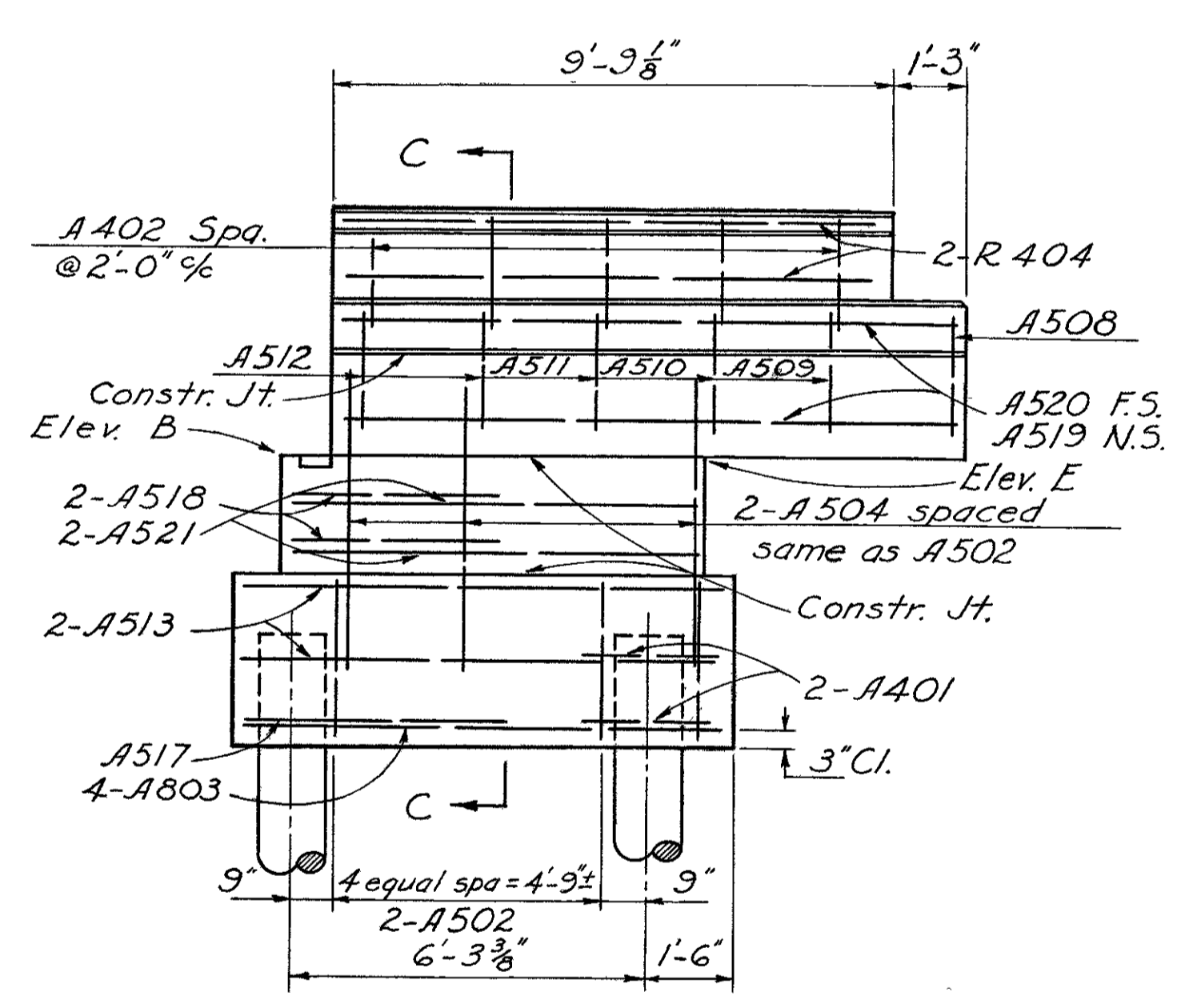
SECTION C-C



SECTION A-A



SECTION B-B



VIEW D-D

For railing details and guardrail attachment, see Sht. 144

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

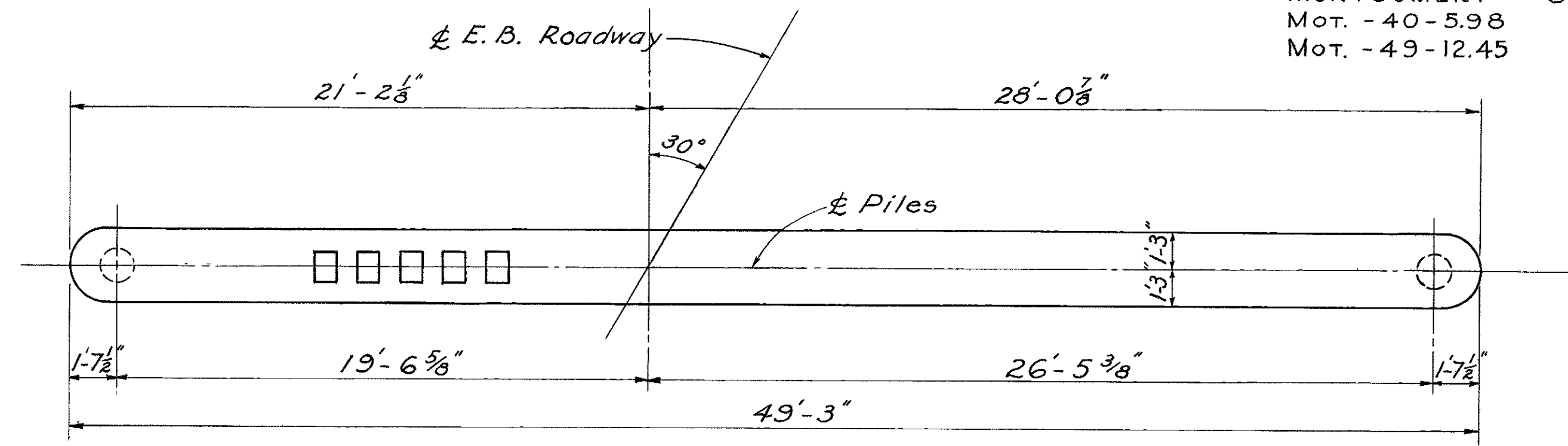
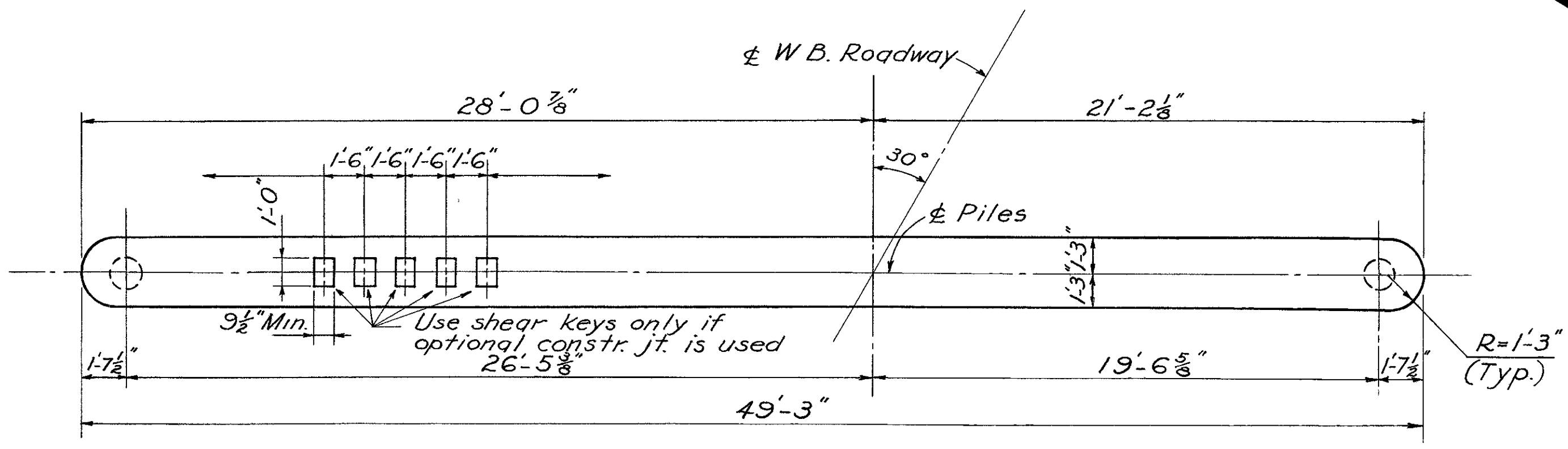
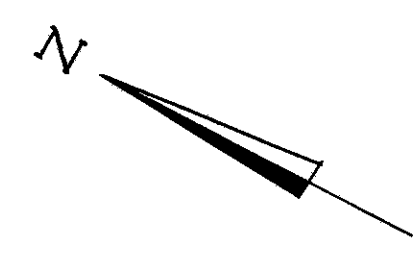
ABUTMENT SECTIONS  
AND DETAILS  
BRIDGE No Mot. 40-0712  
U.S.R. 40 OVER N. BRANCH  
WOLF CREEK ACI-1097(4)  
MONTGOMERY COUNTY STA. 378+00.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GLP	GLP	E.S.S.	W.B.M.	J.E.V.	1/8/57	

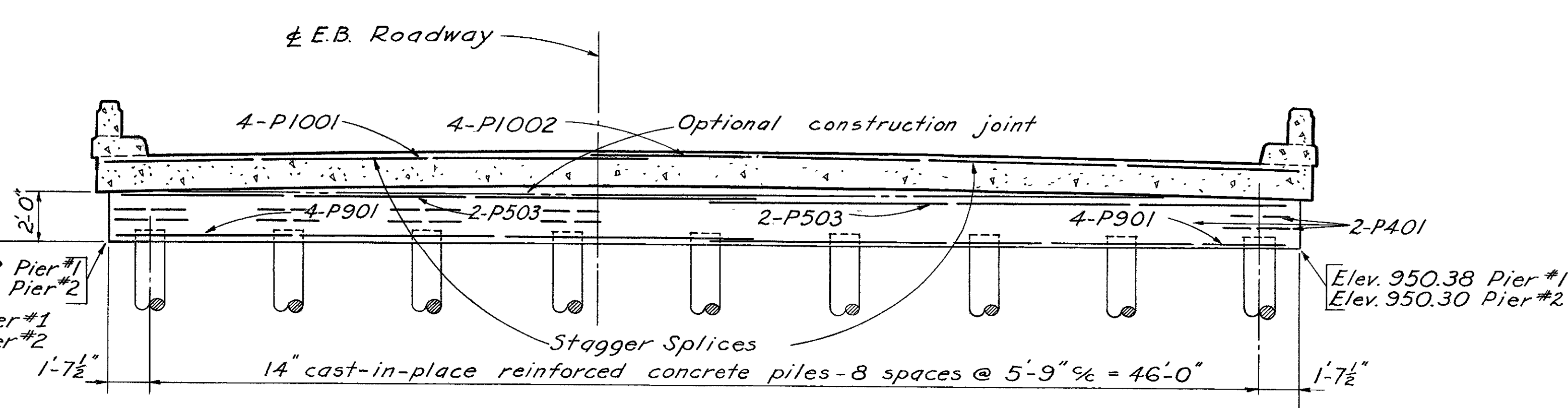
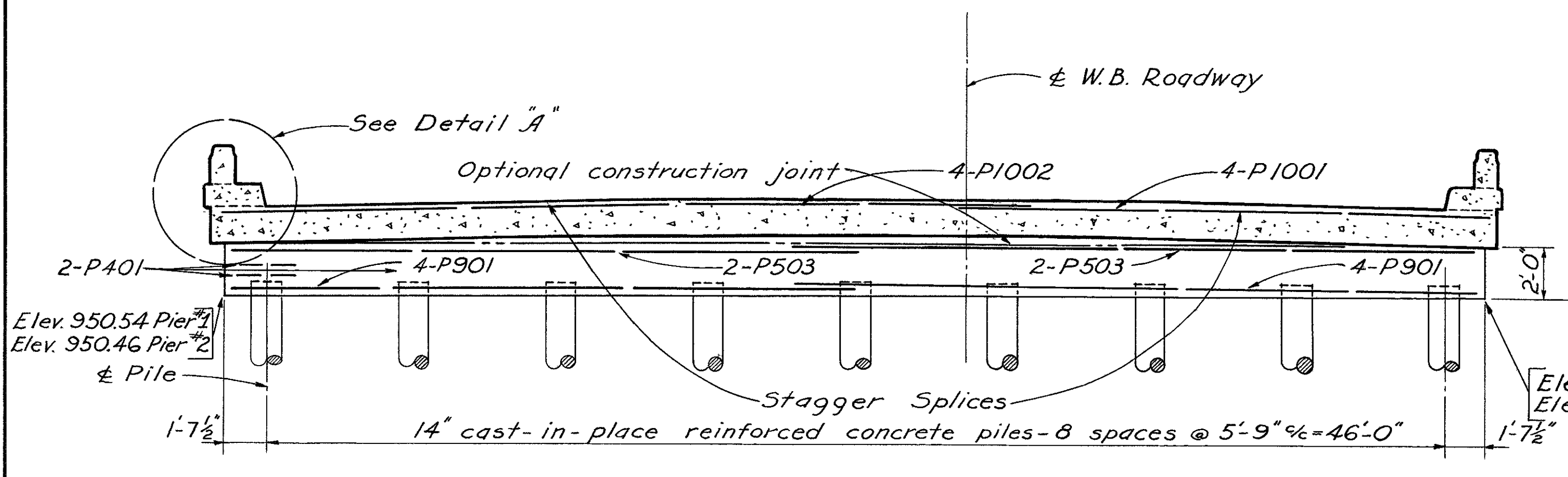
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

183  
241

MONTGOMERY COUNTY  
Mot. - 40-598  
Mot. - 49-12.45

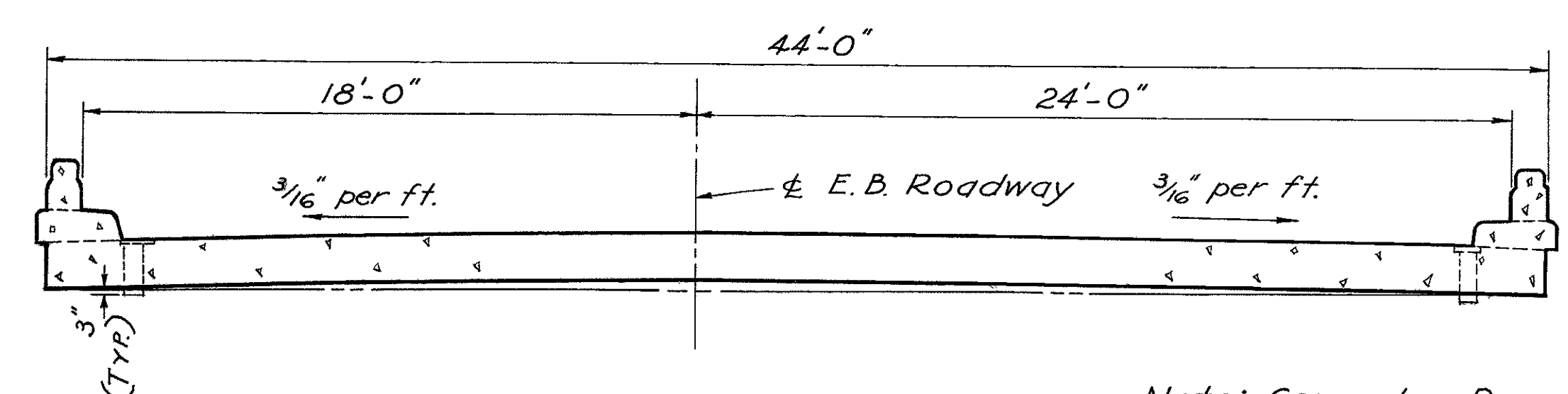
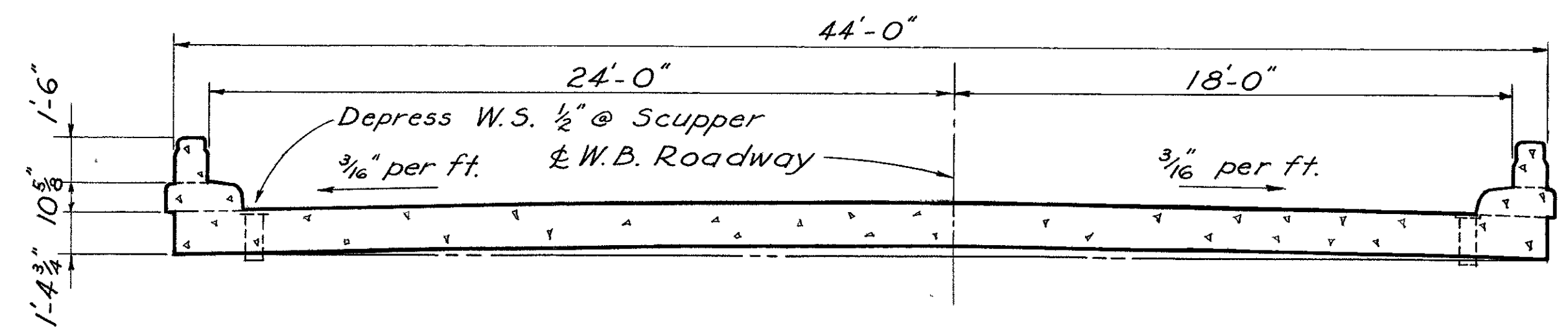


PIER PLAN



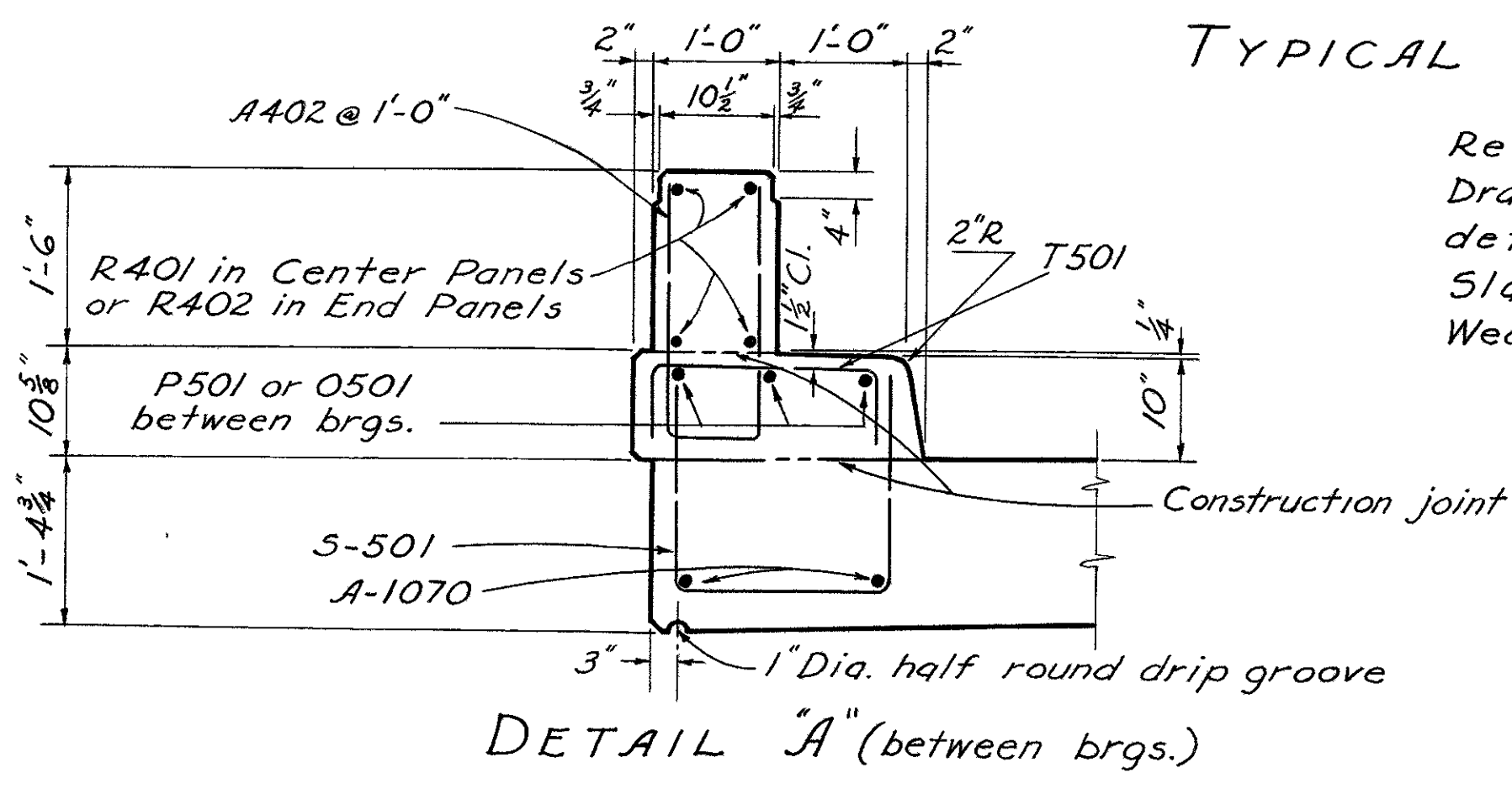
PIER ELEVATION

Reference shall be made to standard Drawing P-1-54, Revised 12-1-54 for details not shown.



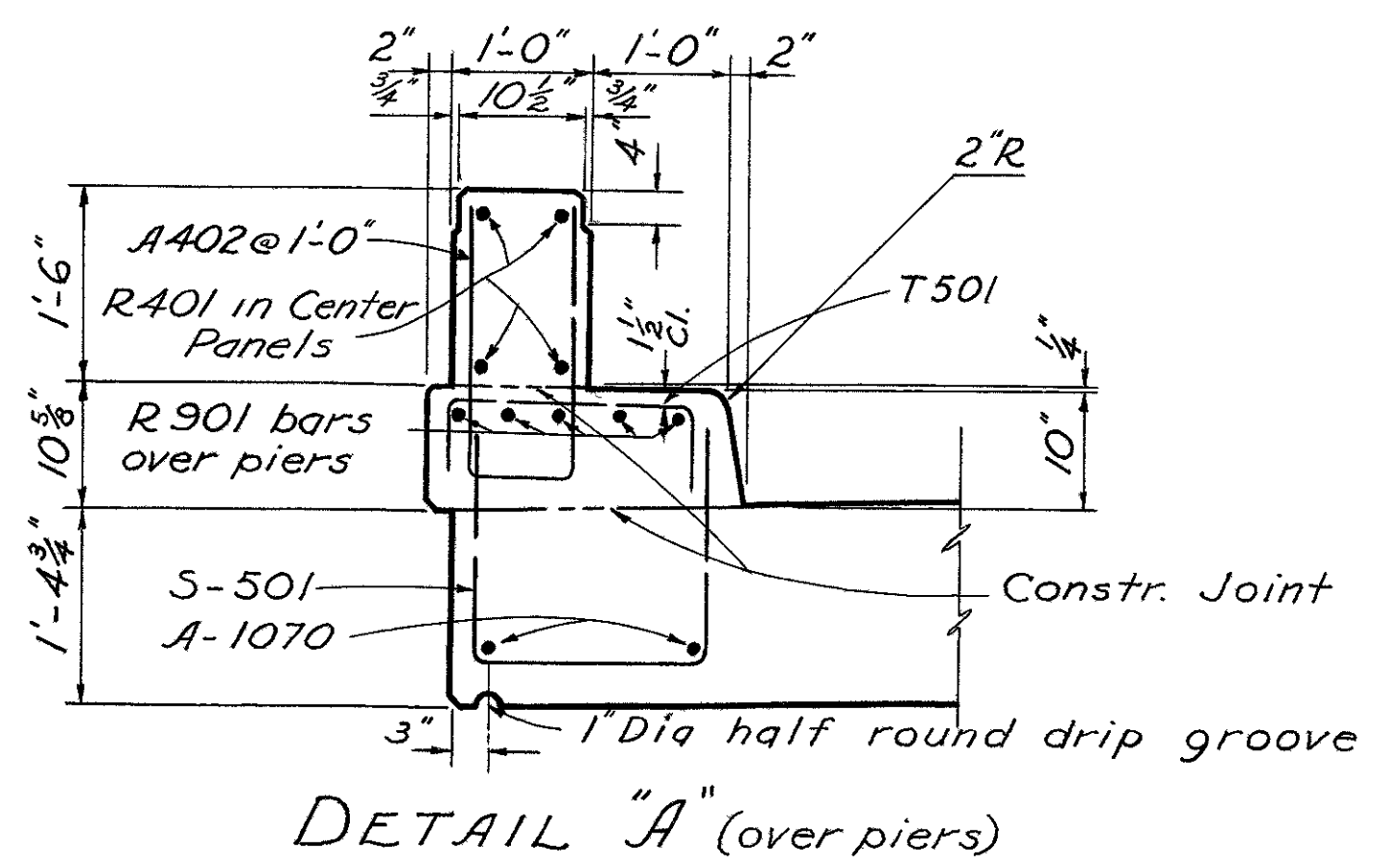
TYPICAL BRIDGE SLAB SECTIONS

Note: Concrete Parapet Reinforcing and Dimensions same as other side. See Detail 'A'.



DETAIL "A" (between brgs.)

Reference shall be made to standard Drawing CS-2-54 Revised 12-1-54 for details not shown. Slab Thickness of 1'-4 3/4" includes 1" monolithic Wearing Surface.



DETAIL "A" (over piers)

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
PIER DETAILS AND TYPICAL BRIDGE SLAB SECTIONS BRIDGE No. MOT. - 40-0712 U.S.R 40 OVER N. BRANCH MONTGOMERY COUNTY STA. 378+00.00						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GLP	GLP	E.S.S.	W.B.M.	J.E.V.	11/8/57	

# REINFORCING

# STEEL

# LIST

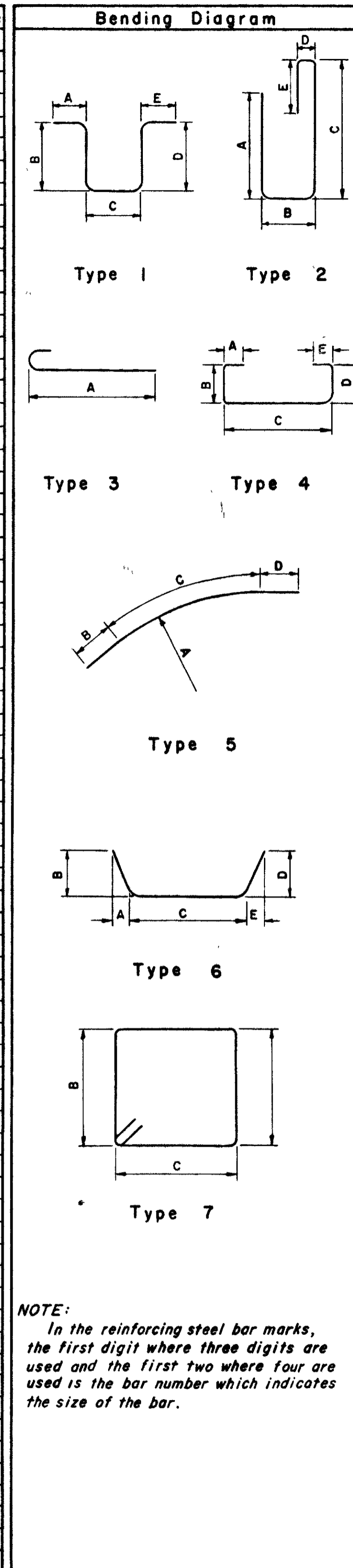
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

184  
241

MONTGOMERY COUNTY  
 Mot.-40-5.98  
 Mot.-49-1245

Mark	N°	Length	Weight	Type		"A"	"B"	"C"	"D"	"E"	Shape
				A	B						
A401	176	5'-5"	637	1			1'-11"	1'-9"	1'-11"		Bt.
A402	44	4'-10"	142	1			2'-2"	0'-8"	2'-2"		Bt.
A501	32	26'-2"	873								St.
A502	432	6'-7"	2965	1			2'-1"	2'-8"	2'-1"		Bt.
A503	16	25'-6"	425								St.
A504	72	5'-4"	401								St.
A505	168	7'-11"	1388								St.
A506	8	12'-2"	102	5	6'-0"		1'-6"		10'-8"		Bt.
A507	16	9'-10"	164								St.
A508	8	5'-8"	47	7			1'-11"	0'-10"	1'-11"		Bt.
A509	8	6'-8"	56	7			1'-11"	1'-4"	1'-11"		Bt.
A510	8	6'-10"	57	7			1'-11"	1'-5"	1'-11"		Bt.
A511	8	7'-0"	65	7			1'-11"	1'-6"	1'-11"		Bt.
A512	20	7'-2"	148	7			1'-11"	1'-7"	1'-11"		Bt.
A513	16	8'-0"	134								St.
A514	16	10'-0"	167								St.
A515	12	3'-6"	45								St.
A516	8	5'-0"	42								St.
A517	8	3'-0"	26								St.
A518	16	4'-0"	66	6	0'-3"	0'-6"	3'-6"				Bt.
A519	8	10'-6"	88								St.
A520	8	12'-2"	102	5	6'-0"		1'-6"		10'-8"		Bt.
A521	16	7'-0"	107								St.
A522	8	12'-10"	107								St.
A523	16	5'-10"	97	6	0'-3"	0'-6"	5'-4"				Bt.
A801	32	26'-2"	2236								St.
A802	16	10'-10"	463								St.
A803	16	8'-0"	342								St.
A1001	32	25'-6"	3511								St.
PIERS											
P401	72	5'-5"		1			1'-11"	1'-9"	1'-11"		Bt.
P502	68	8'-0"	568	1			2'-4"	2'-2"	2'-4"		Bt.
P503	16	23'-10"	398								St.
P504	16	6'-4"	107	4	11 1/2"	1'-7"					St.
P901	32	24'-5"	2666								St.
P1001	16	23'-5"	1612								St.
P1002	16	30'-4"	2088								St.
SUPERSTRUCTURE											
A903	288	34'-10"	34106								St.
B903	88	24'-11"	7456	3	23'-10"						Bt.
C903	84	21'-11"	6260	3	20'-10"						Bt.
D903	44	23'-4"	3490								St.
E903	42	18'-2"	2595								St.
F1067	156	34'-1"	22877								St.
G1067	76	19'-10"	6485								St.
H1067	72	15'-9"	4880								St.
J601	80	18'-4"	2201								St.
K601	40	8'-5"	506								St.
M701	364	26'-2"	19471								St.
N601	252	26'-1"	9871								St.
O501	12	20'-0"	251								St.
P501	24	21'-10"	546								St.

Mark	N°	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape	
											STRUCTURE
R901	40	20'-8"	2811							St.	
S501	476	5'-6"	2731	4	0'-6"	1'-10"	1'-5"	1'-10"	0'-6"	Bt.	
T501	476	2'-6"	1241	1		0'-8"	1'-5"	0'-8"		Bt.	
A402	476	4'-10"	1342	1		2'-2"	0'-8"	2'-2"		Bt.	
RAILING											
R401	112	11'-1"								St.	
R402	16	9'-3"								St.	
R403	16	11'-8"								St.	
R404	16	9'-5"								St.	
REPLACEMENT STEEL											
RE401	1	5'-3"								St.	
RE501	1	5'-7"								St.	
RE601	1	5'-11"								St.	
RE701	1	6'-3"								St.	
RE801	1	6'-6"								St.	
RE901	3	6'-10"								St.	
RE1001	3	7'-3"								St.	



		ESTIMATED QUANTITIES					
ITEM	TOTAL	UNIT	DESCRIPTION	ABUT.	PIER	SUPERS.	GENERAL
E-2	204	Cu.Yd.	Unclassified Excavation	204			
S-1	519	Cu.Yd.	Class "C" Concrete, Superstructure & Pier Caps		39	480	
S-1	133	Cu.Yd.	Class "E" Concrete, Abutments	133			
S-4	151,823	lb.	Reinforcing Steel	15,003	10511	126,309	
S-14	484	Linft.	Railing (Aluminum Rail and Supports and Concrete Parapet)				484
S-16	Lump	Sum	First Test Pile				Lump
S-18	2496	Lin Ft	14' Cast-in-Place Reinforced Concrete Piles	1056	1440		
S-29	38	Cu.Yd.	Porous Backfill	38			
S-29	227	Cu.Yd.	Slope Facing (S-29.05 Type)				227
S-29	60	Each	Scuppers, 4" dia. Wrought Iron or Cast Iron Pipe				60
E-3	1353	Cu.Yd.	Channel Excavation				1353
I-10	51	Cu.Yd.	Dumped Rock Fill				51

**REPLACEMENT BARS**  
 IF REINFORCING BARS ARE FABRICATED FROM STOCK WHICH HAS PREVIOUSLY BEEN TESTED AND APPROVED BY THE OHIO HIGHWAY TESTING LABORATORY, TEST SAMPLES AS PROVIDED IN SEC. S-4.02 NEED NOT BE FURNISHED AND REPLACEMENT BARS WILL NOT BE REQUIRED.

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
 CONSULTING ENGINEERS  
 COLUMBUS, OHIO

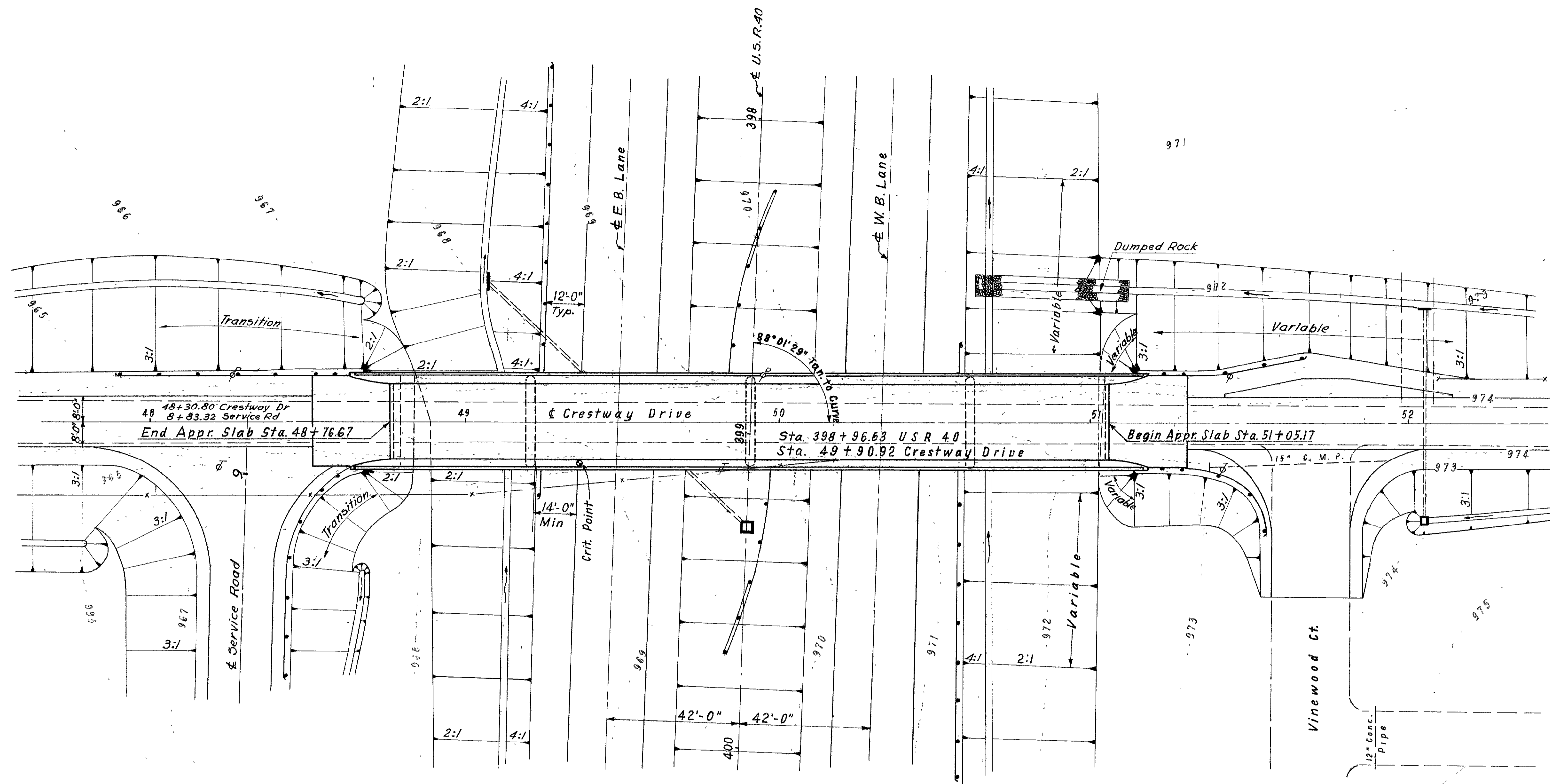
ESTIMATED QUANTITIES  
 AND REINFORCING STEEL LIST  
 BRIDGE No. Mot-40-0712  
 U.S.R. 40 OVER N. BRANCH  
 ACT-1097(A) WOLF CREEK  
 MONTGOMERY COUNTY Sta. 378+00.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GLP	GLP	E.S.S.	W.B.M.	J.E.V.	11/8/57	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

185  
241

MONTGOMERY COUNTY  
MOT-40 - 5.98  
MOT-49 - 12.45

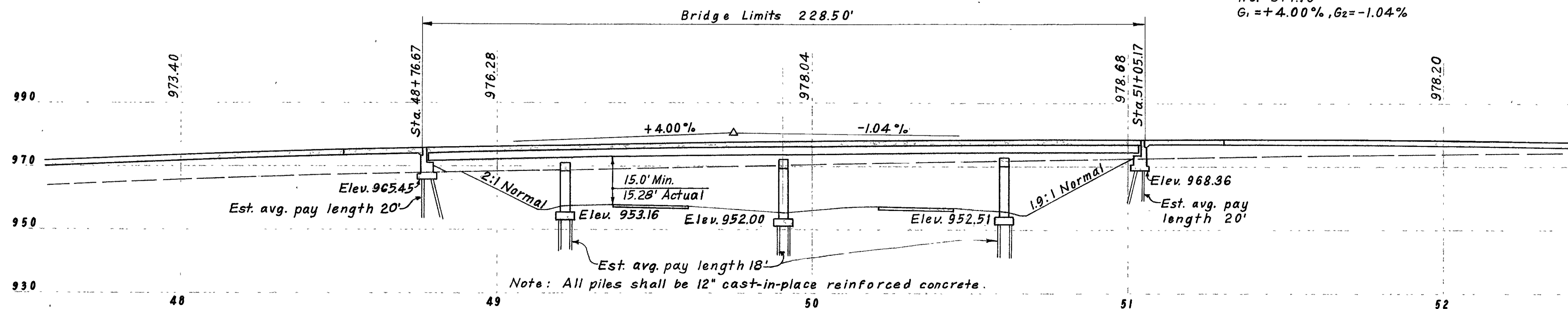


U.S.R. 40 Curve Data  
 P.I. = 403 + 23.22  
 $\Delta = 7^{\circ}50'00''$   
 $D = 0^{\circ}40'00''$   
 $R = 8594.37'$   
 $T = 588.42'$   
 $L = 1175.00'$   
 $S = 0.020\%$

**PROPOSED STRUCTURE**  
 Type: Continuous steel beam with reinf. concrete deck and substructure.  
 Spans: 42'-0", two @ 70'-0", 42'-0" 1/2 brg.  
 Roadway: 24'-0" F/F 2'-0" safety curbs with concrete parapet and aluminum rail'g.  
 Load: CF-30  
 Wearing Surface: 1/2" mono. concrete  
 Skew: None  
 Alignment: Tangent  
 Approach slabs: 25' long, see sheet 142

PLAN

P.V.I. Sta. 49+75  
 450' V.C.  
 Elev. 980.54  
 Corr. -2.84  
 R.G. 977.70  
 G<sub>1</sub> = +4.00%, G<sub>2</sub> = -1.04%



PROFILE ON CRESTWAY DRIVE

ALDEN E. STILSON & ASSOCIATES, LIMITED  
 CONSULTING ENGINEERS  
 COLUMBUS, OHIO

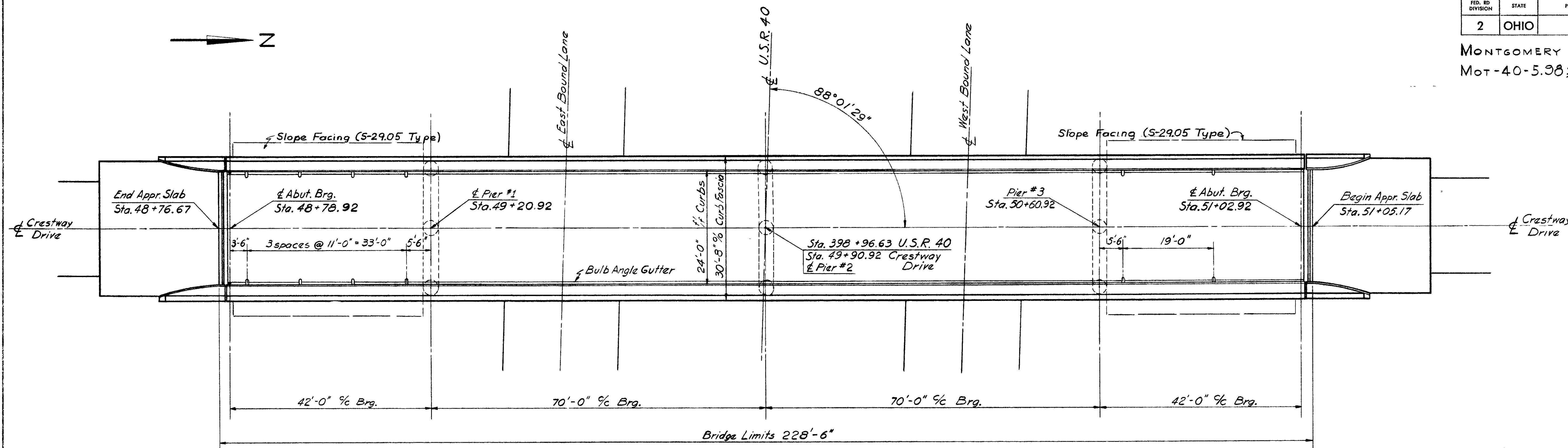
**SITE PLAN**  
**BRIDGE NO MOT-40-0733**  
**U.S.R. 40 UNDER**  
**CRESTWAY DRIVE**  
**MONTGOMERY COUNTY**  
**ACI-1037(4) STA. 398+96.63**

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
P.M.	P.M.	A.V.G.	J.J.M.	J.E.V.	4-8-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

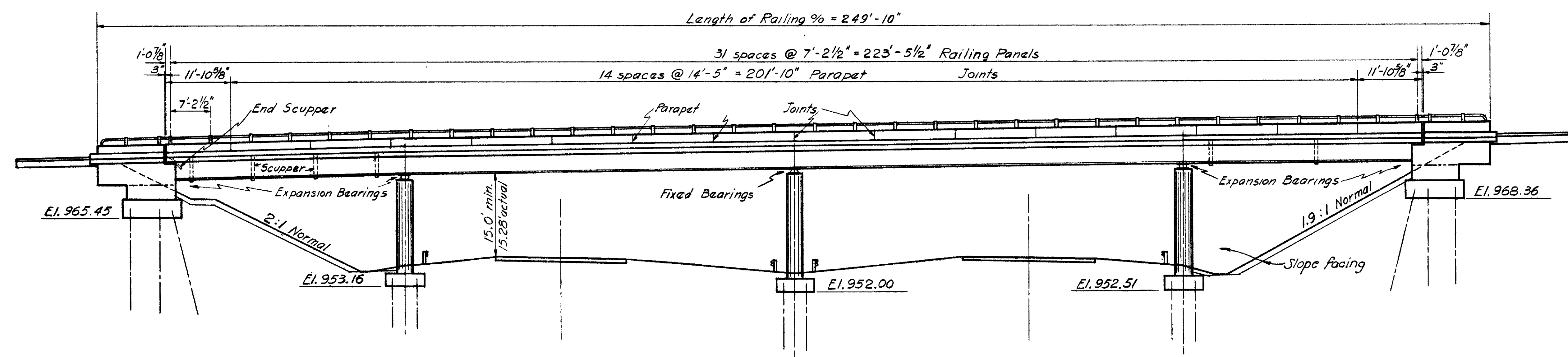
186  
241

MONTGOMERY COUNTY  
MOT-40-5.98; MOT-49-12.45



**GENERAL PLAN**

P.V.I. Sta. 49+75  
450' V.C.  
El. 980.54  
Corr. 2.84  
G<sub>1</sub> = +4% G<sub>2</sub> = -1.04%



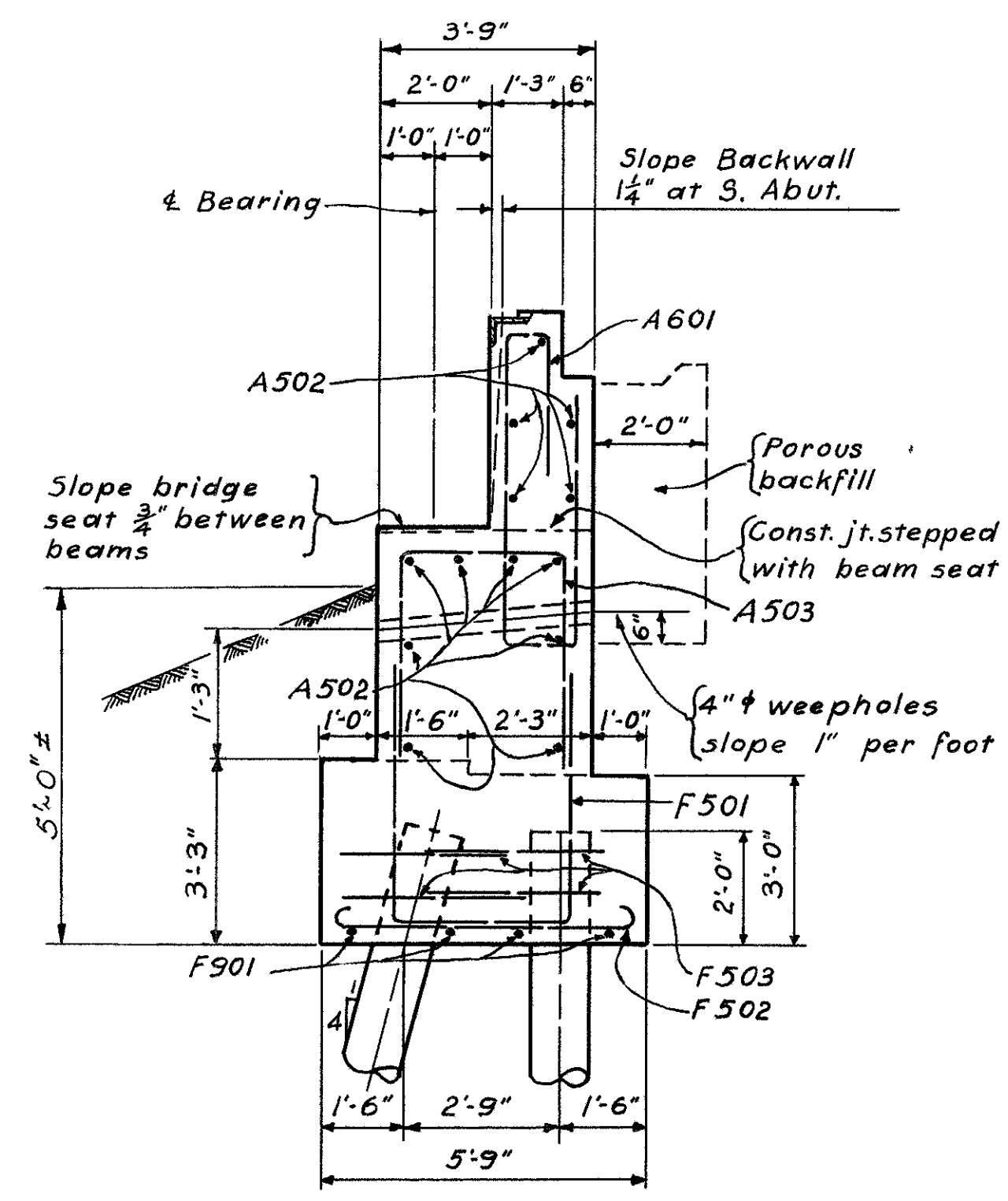
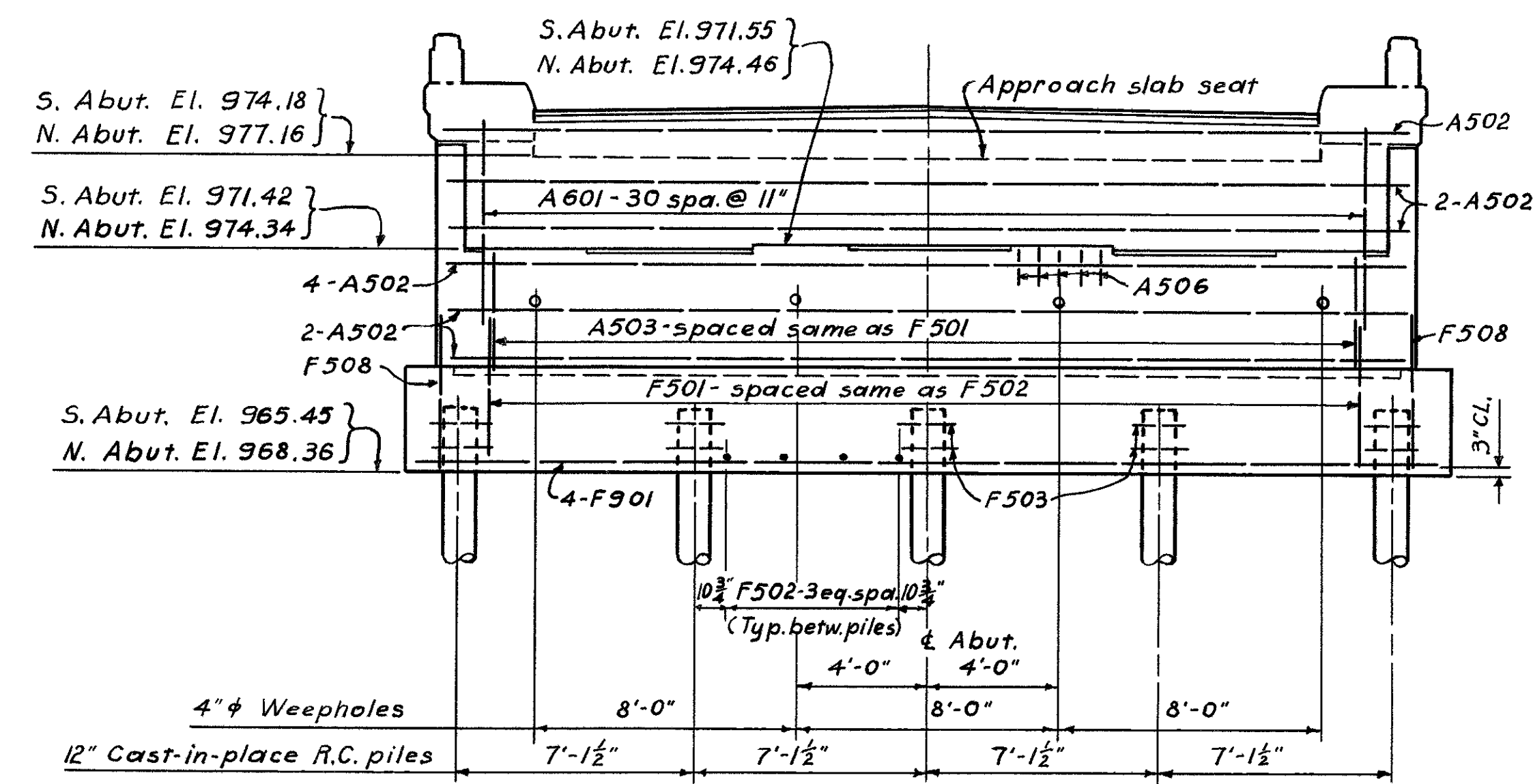
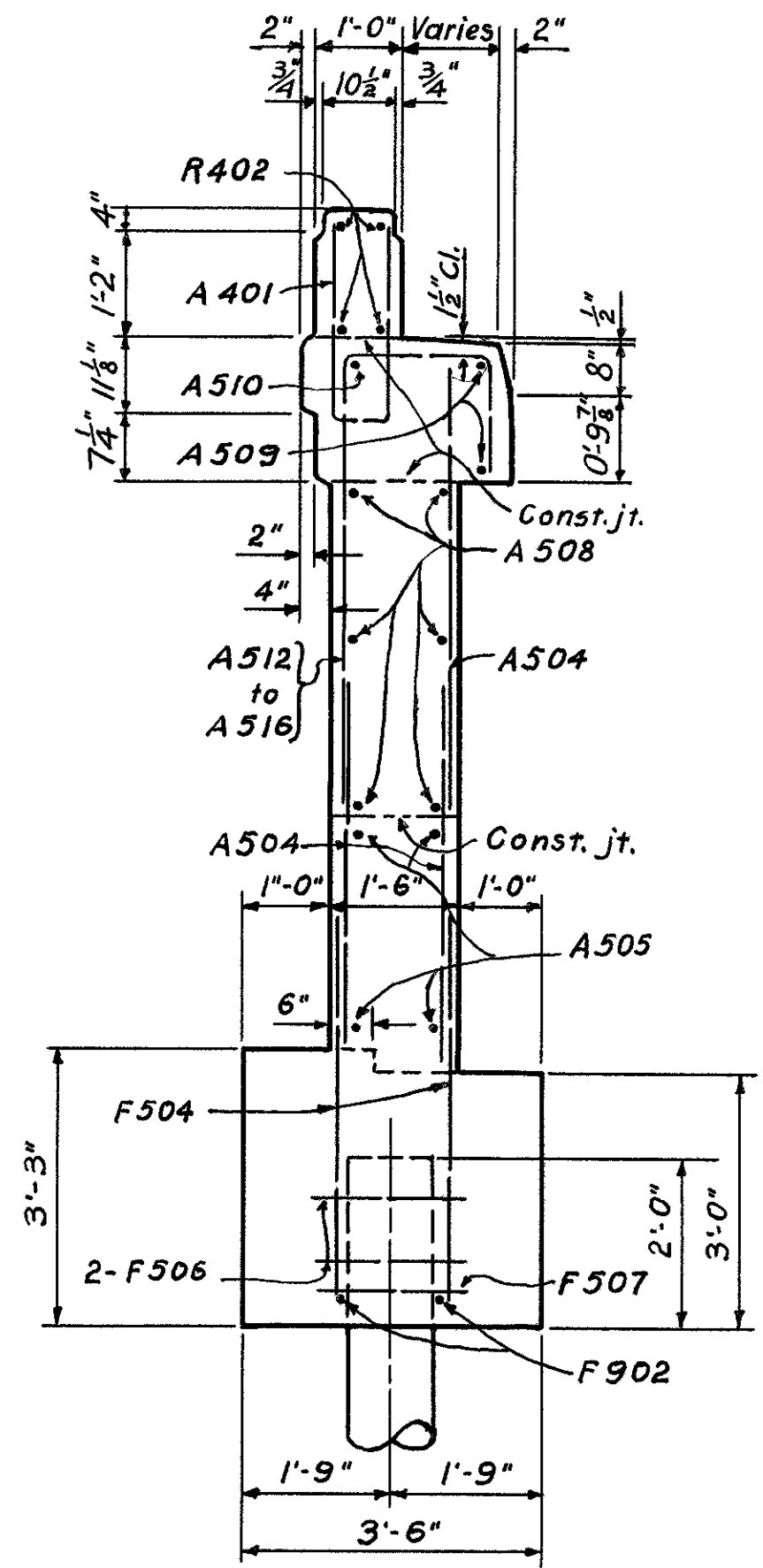
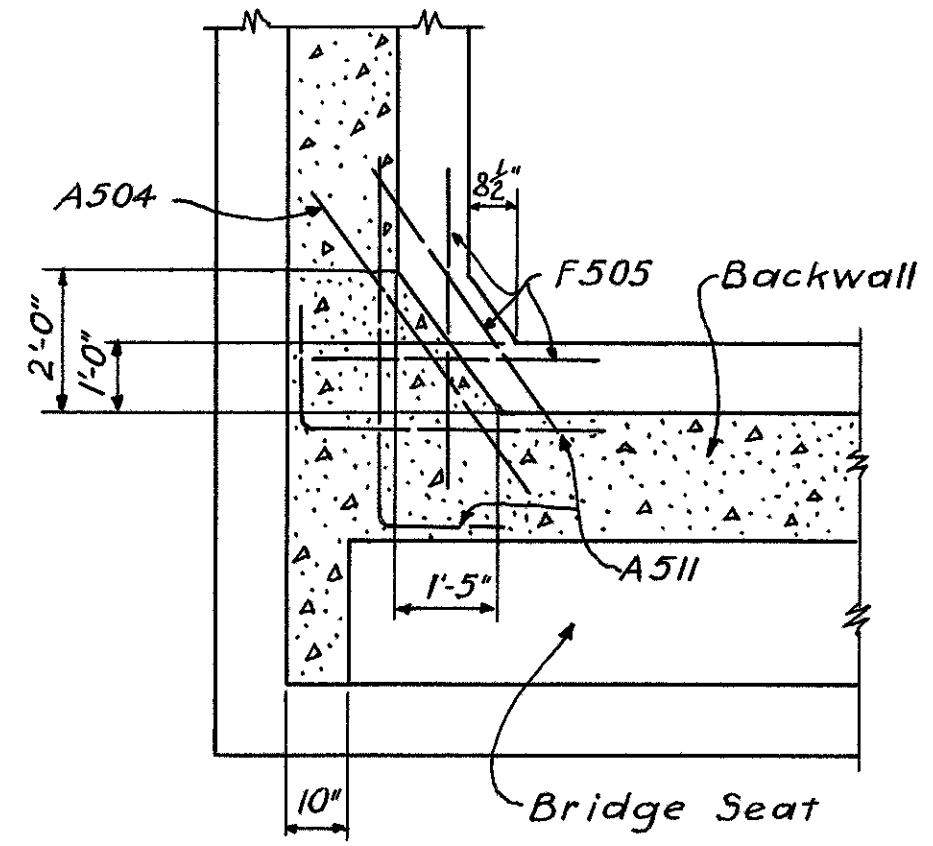
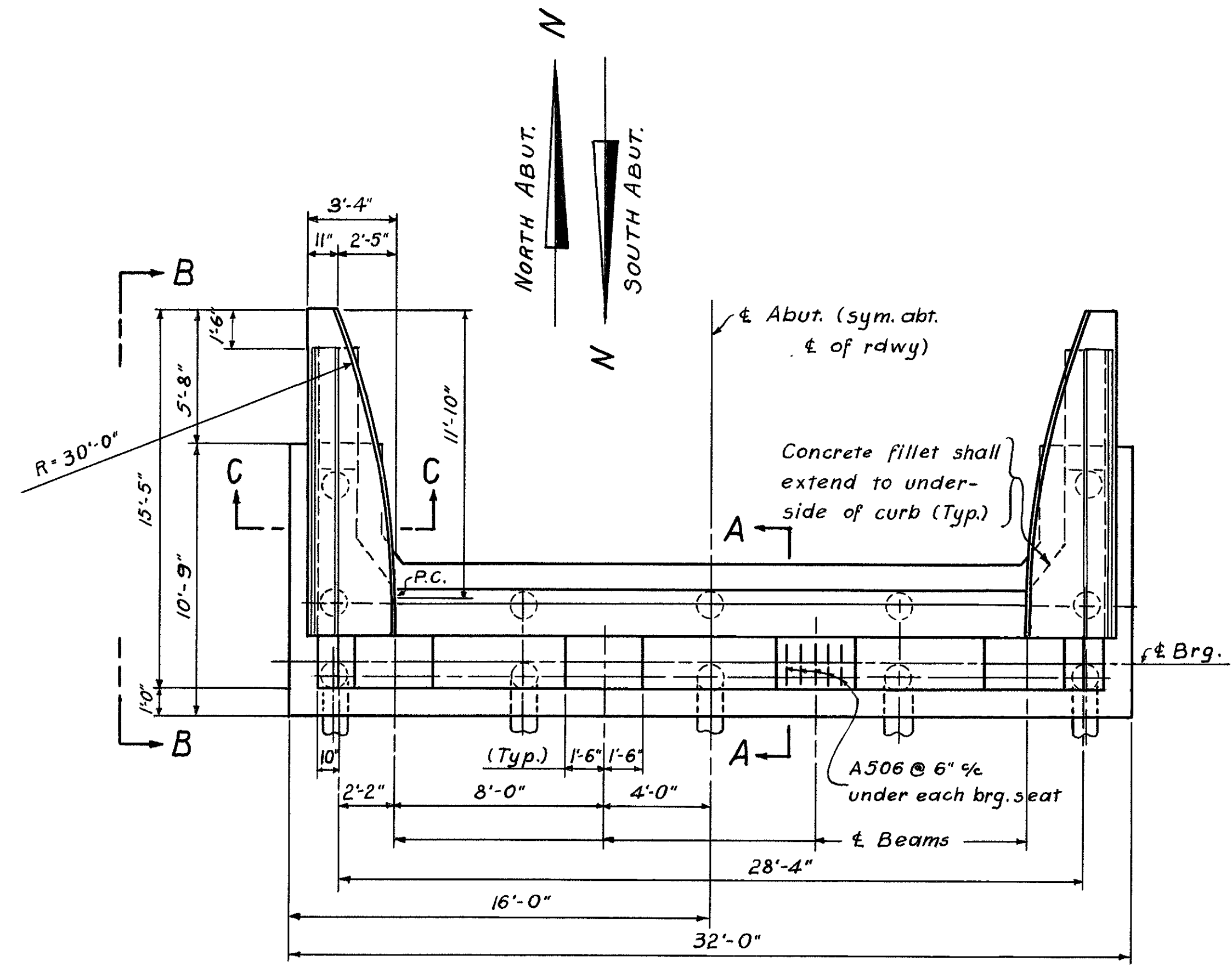
**GENERAL ELEVATION**

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
GENERAL PLAN AND ELEVATION BRIDGE N° MOT-40-0733 U.S. 40 UNDER CRESTWAY DRIVE ACI-1097(4) MONTGOMERY COUNTY STA.-398+96.63						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.E.V.	J.E.V.	N.K.	R.C.	J.E.V.	1/10/58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

187  
241

MONTGOMERY COUNTY  
Mot-40-5.98  
Mot-49-12.45



Notes: For guard rail attachment at end of wingwall see sheet # 144  
For additional abutment details see sheet # 188

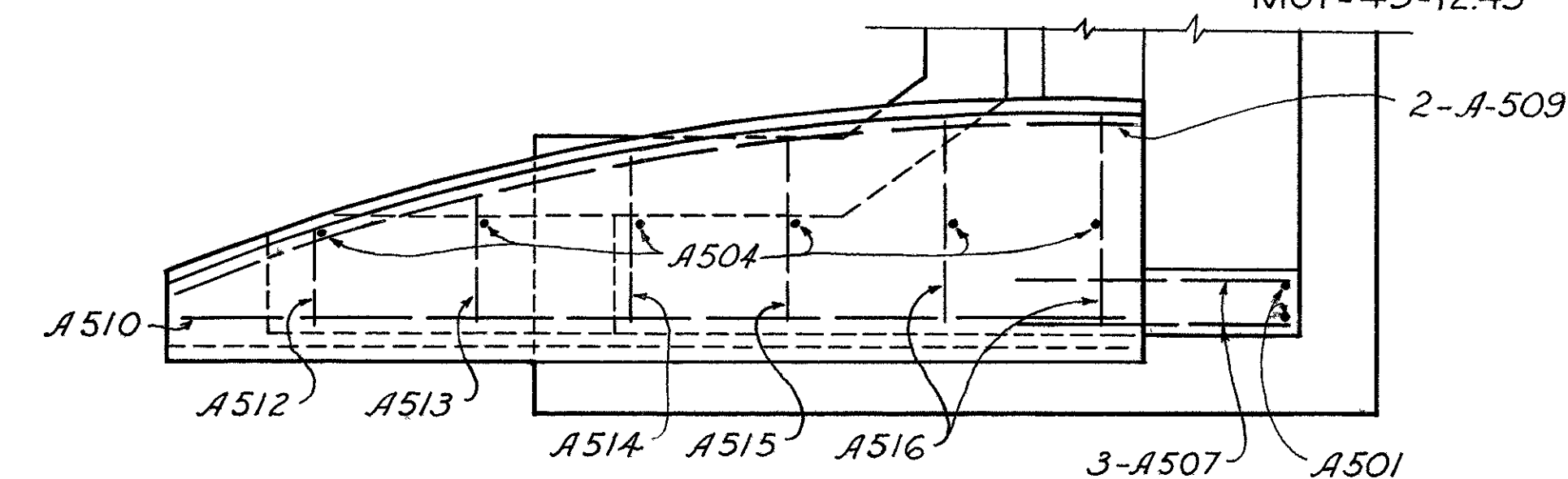
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
ABUTMENT DETAILS BRIDGE N <sup>o</sup> Mot-40-0733 U.S.R. 40 UNDER CRESTWAY DRIVE MONTGOMERY COUNTY Sta. 398+96.63 ACI-1097(4)						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.G.S.	H.G.S.	L.M.	R.C.	J.E.V.	1/10/58	



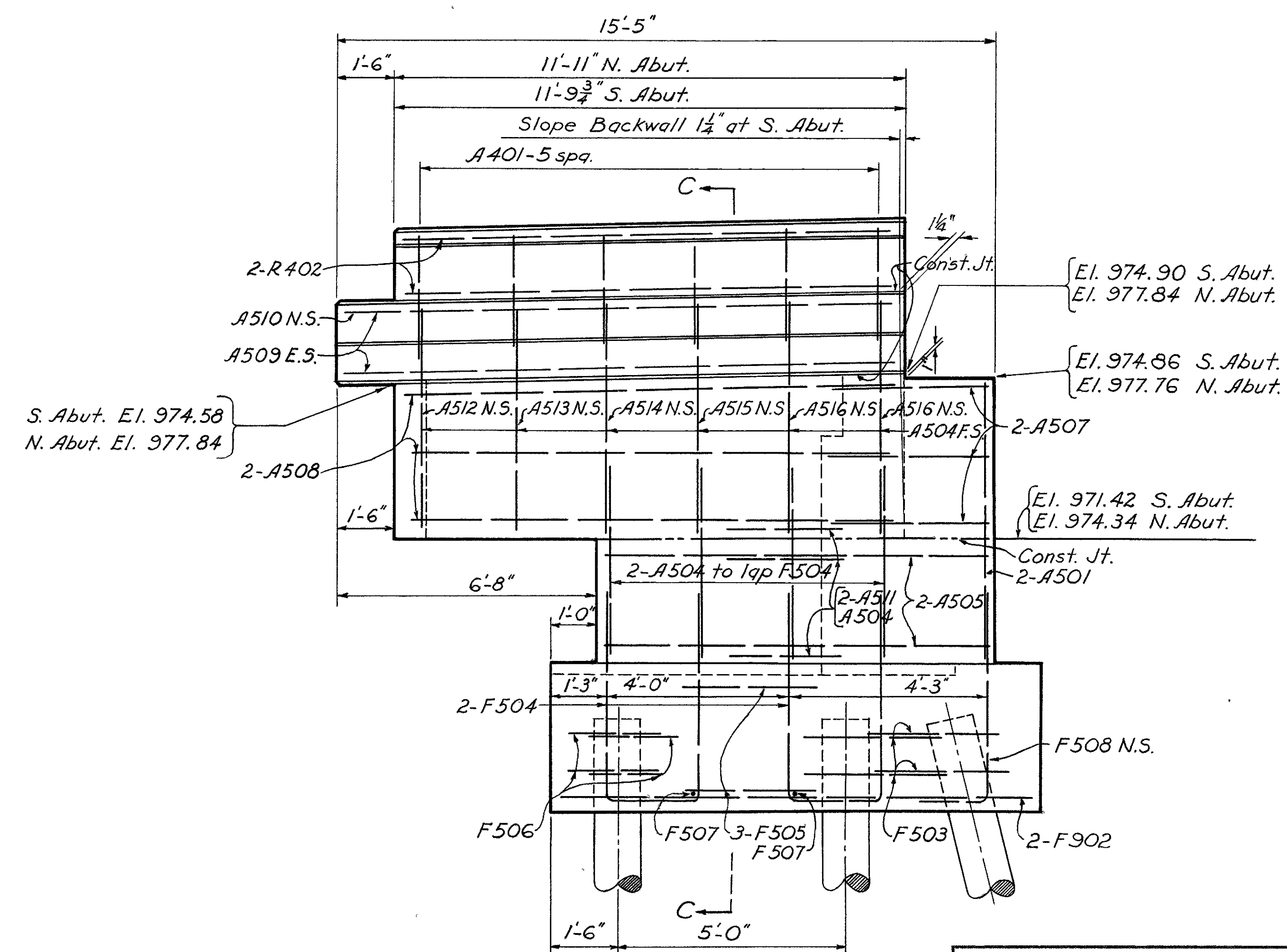
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

188  
241

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45



PLAN OF VIEW B-B  
(Parapet not shown)



VIEW B-B  
(Aluminum rail and posts not shown)

Note: For Section C-C see Sheet #187

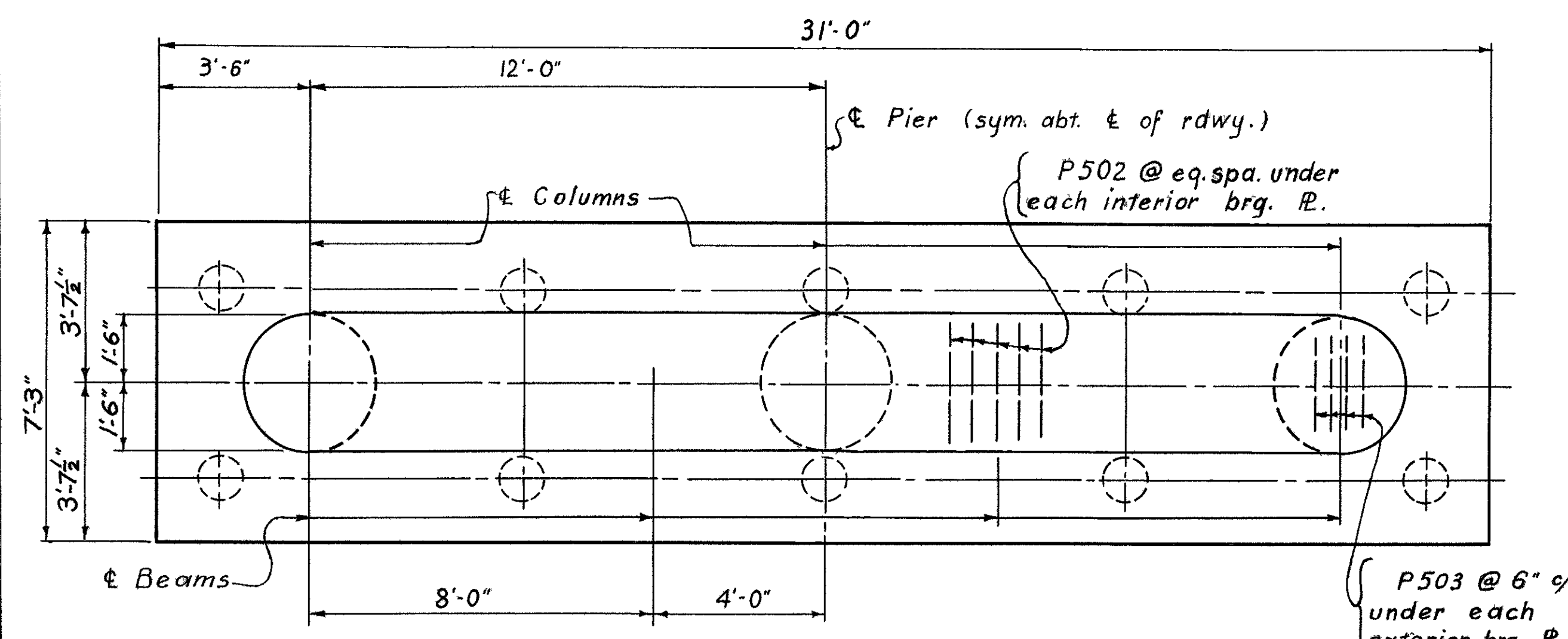
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
ABUTMENT DETAILS BRIDGE N <sup>o</sup> MOT-40-0733 U.S.R.40 UNDER CRESTWAY DRIVE MONTGOMERY COUNTY ACI-1097(4) Sta. 398+96.63						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.G.S.	H.G.S.	E.S.S.	R.C.	J.E.V.	1/10/58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

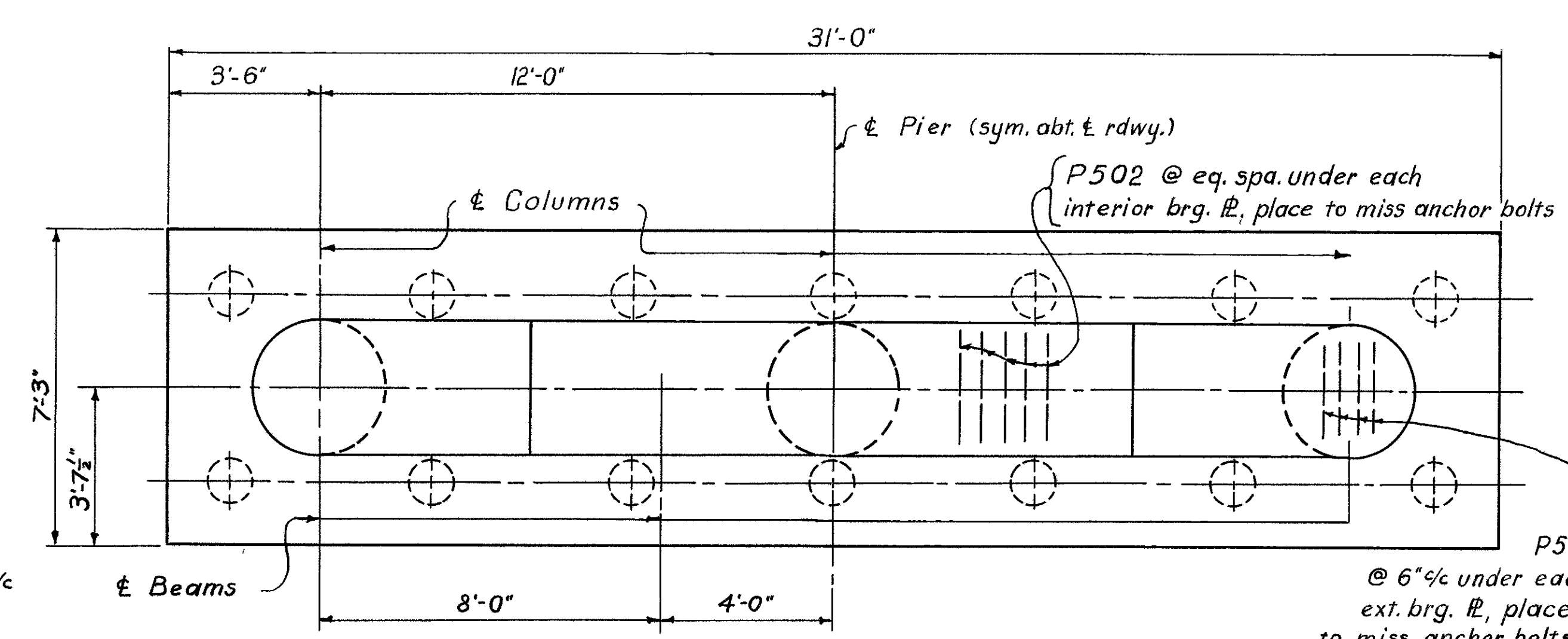
189  
241

MONTGOMERY COUNTY  
MOT. 40-5.98, MOT. 49-12.45

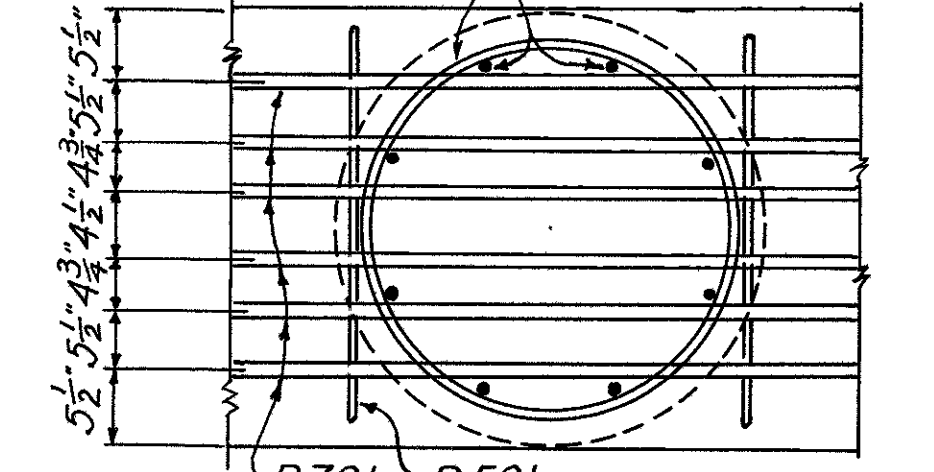
SP401 or SP402 or SP403, P1001 or P1002 or P1003



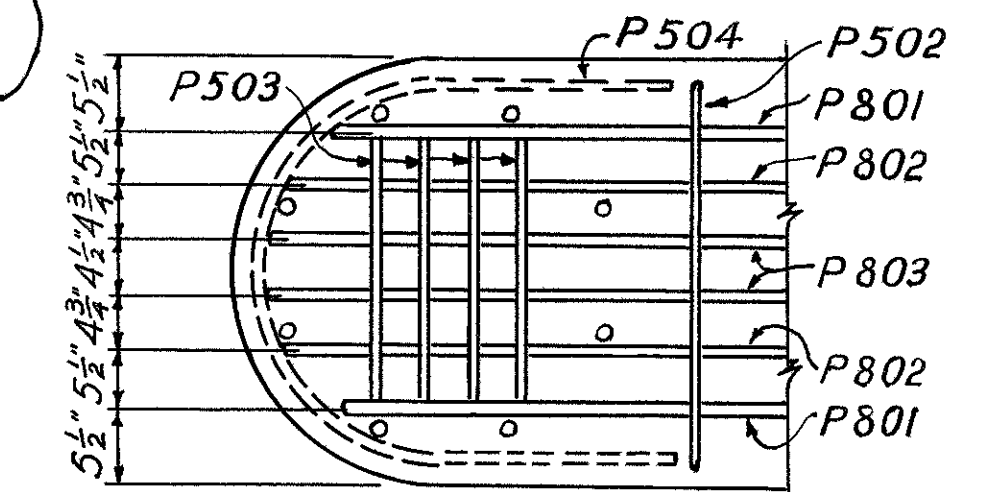
PLAN OF PIERS #1 AND #3



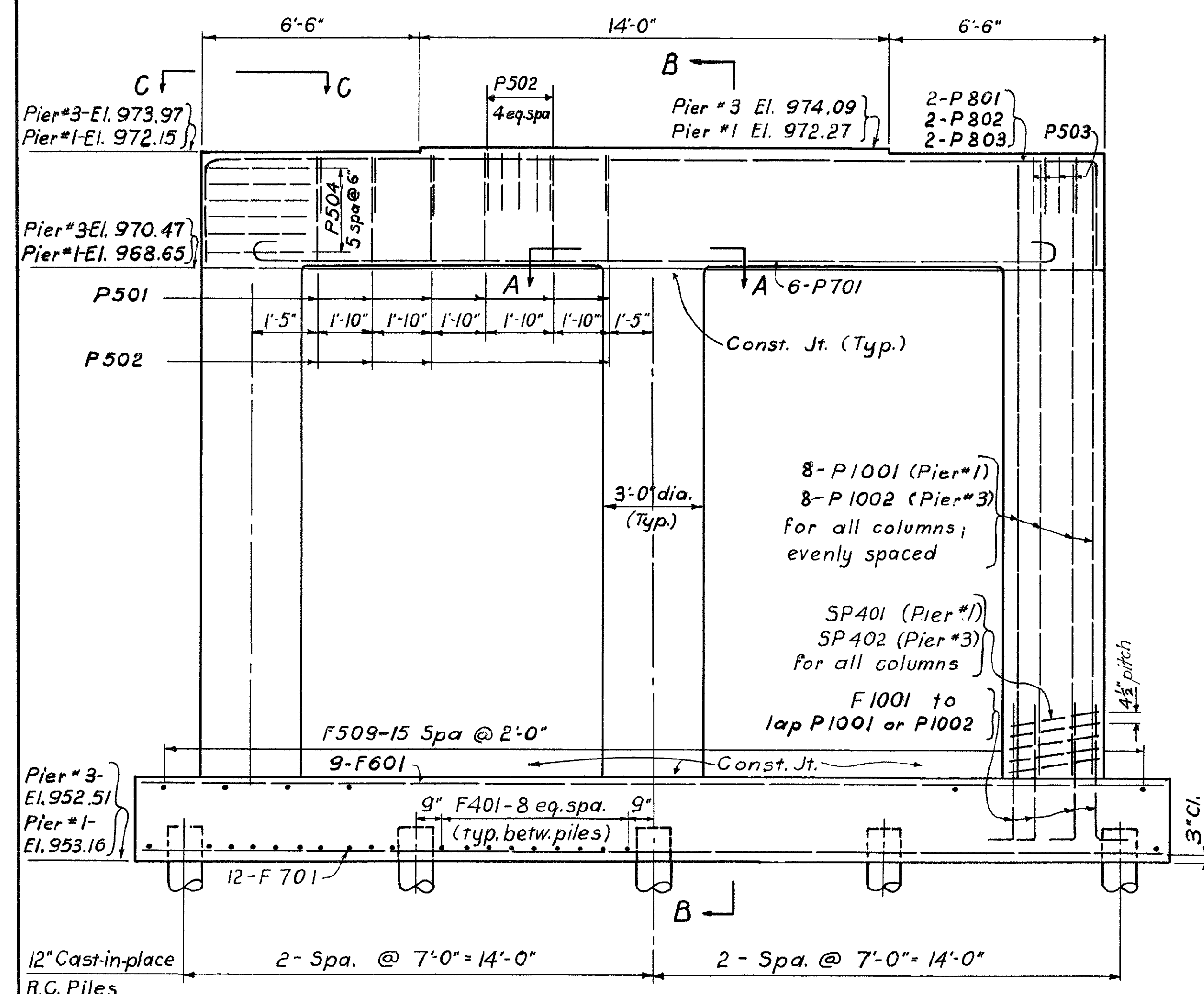
PLAN OF PIER #2



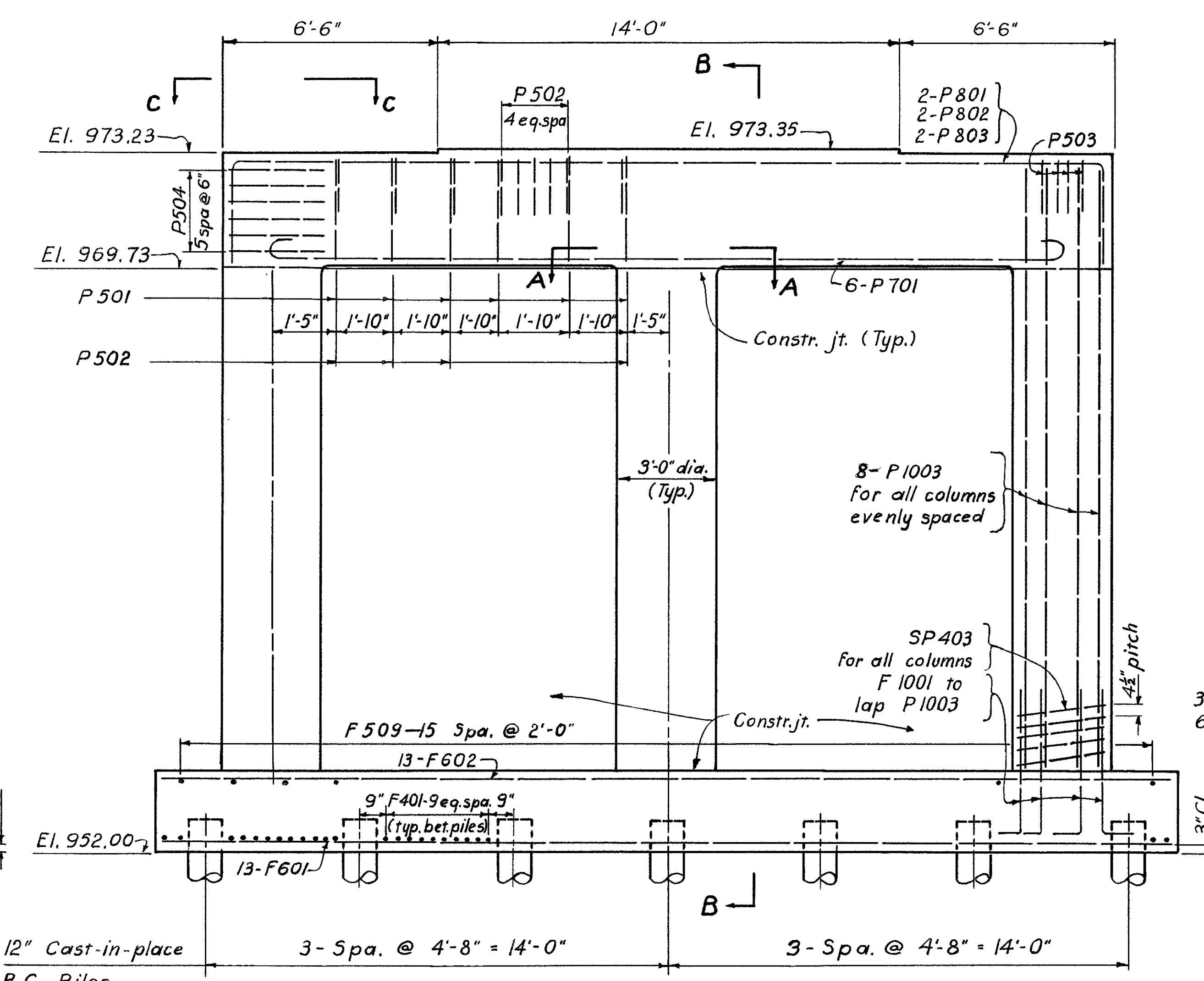
SECTION A-A



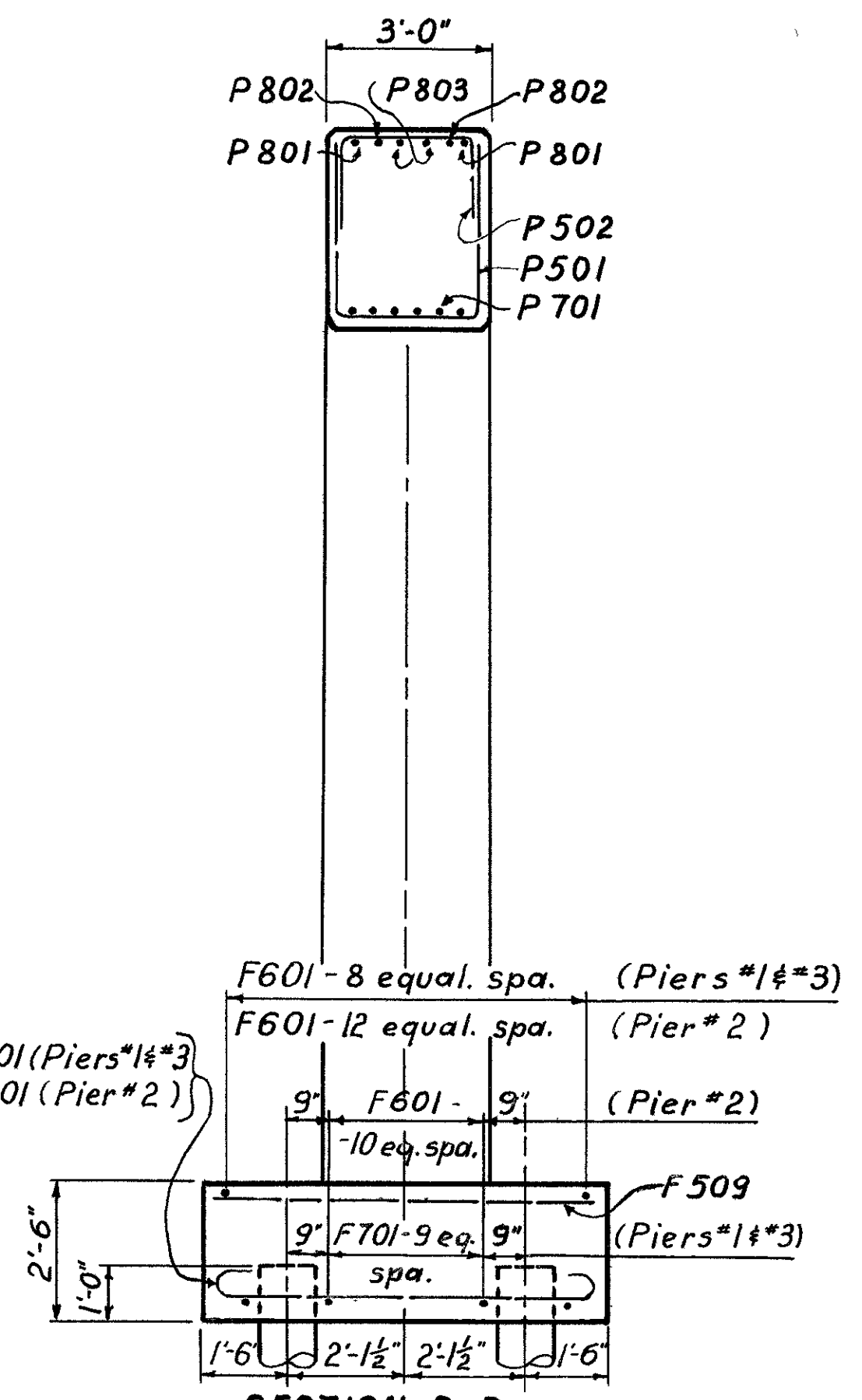
VIEW C-C



ELEVATION OF PIERS #1 AND #3



ELEVATION OF PIER #2

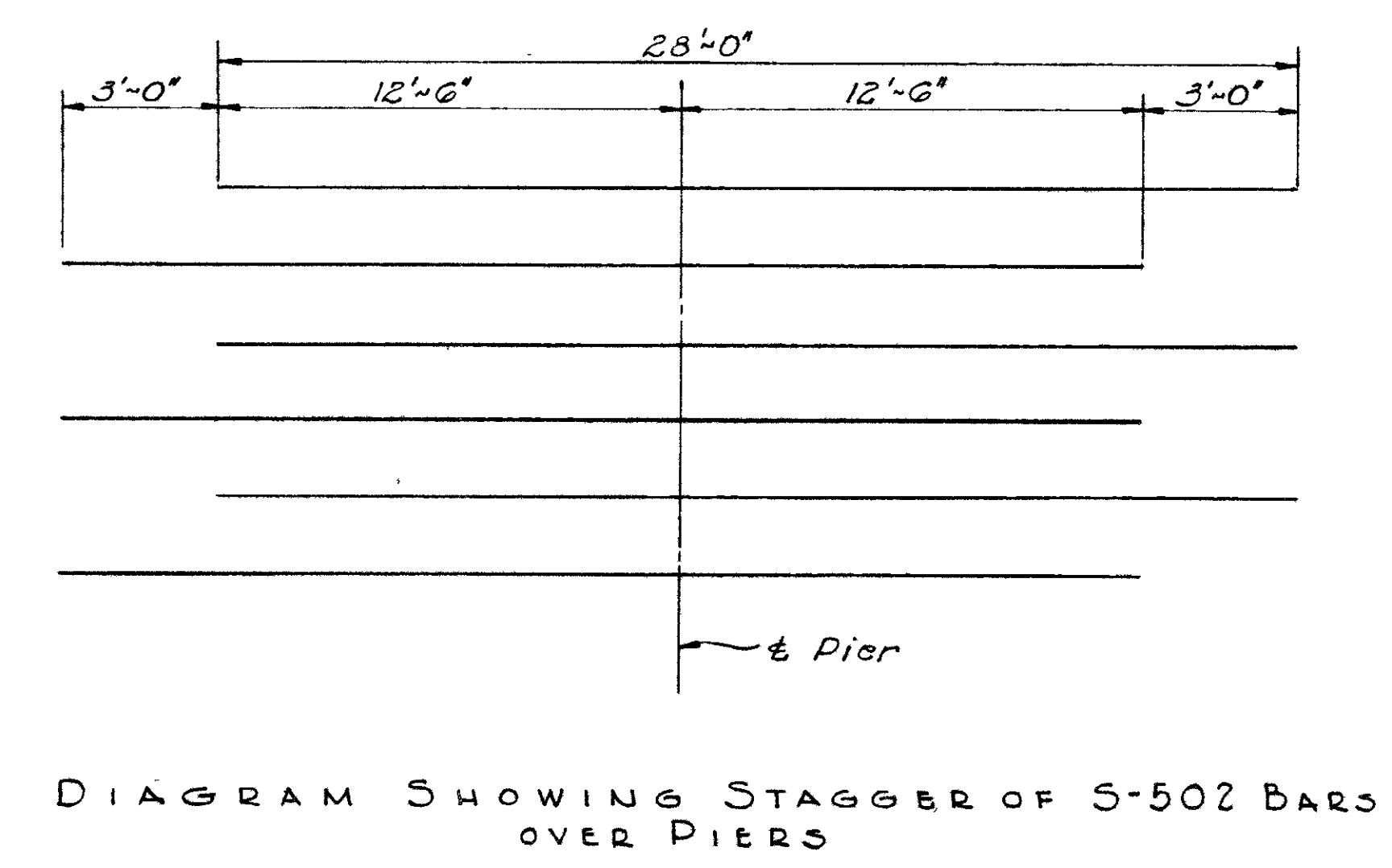
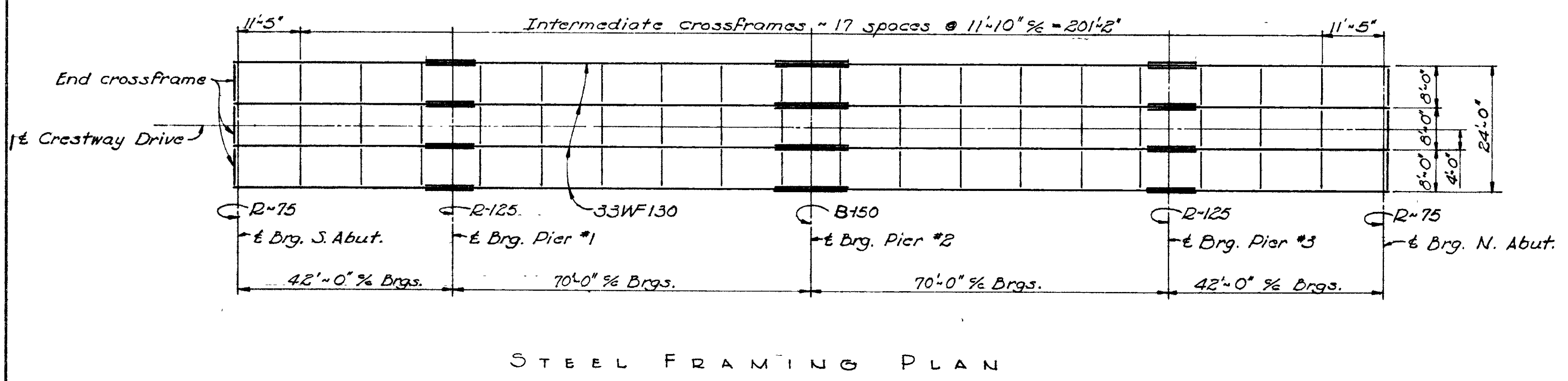
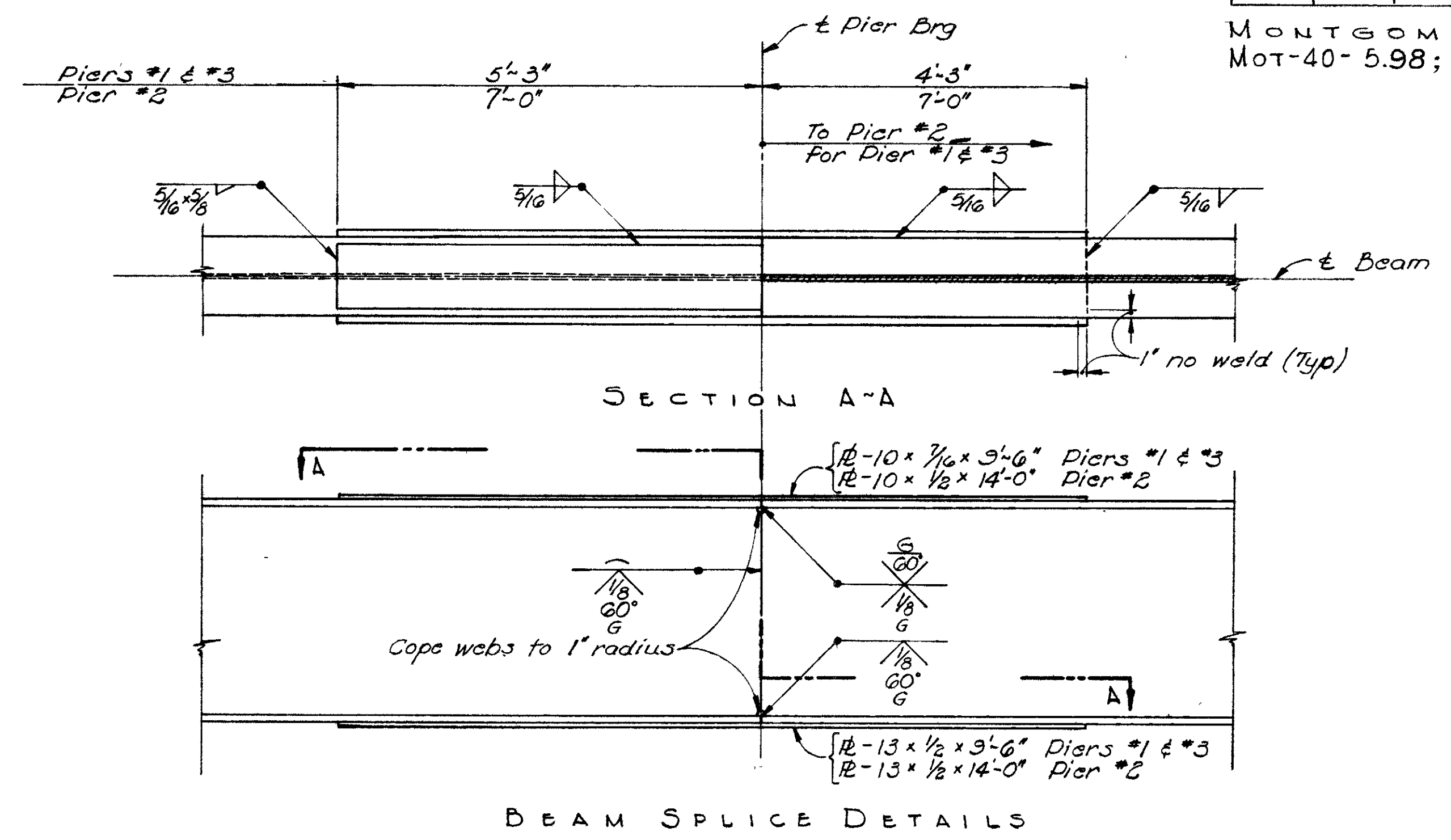
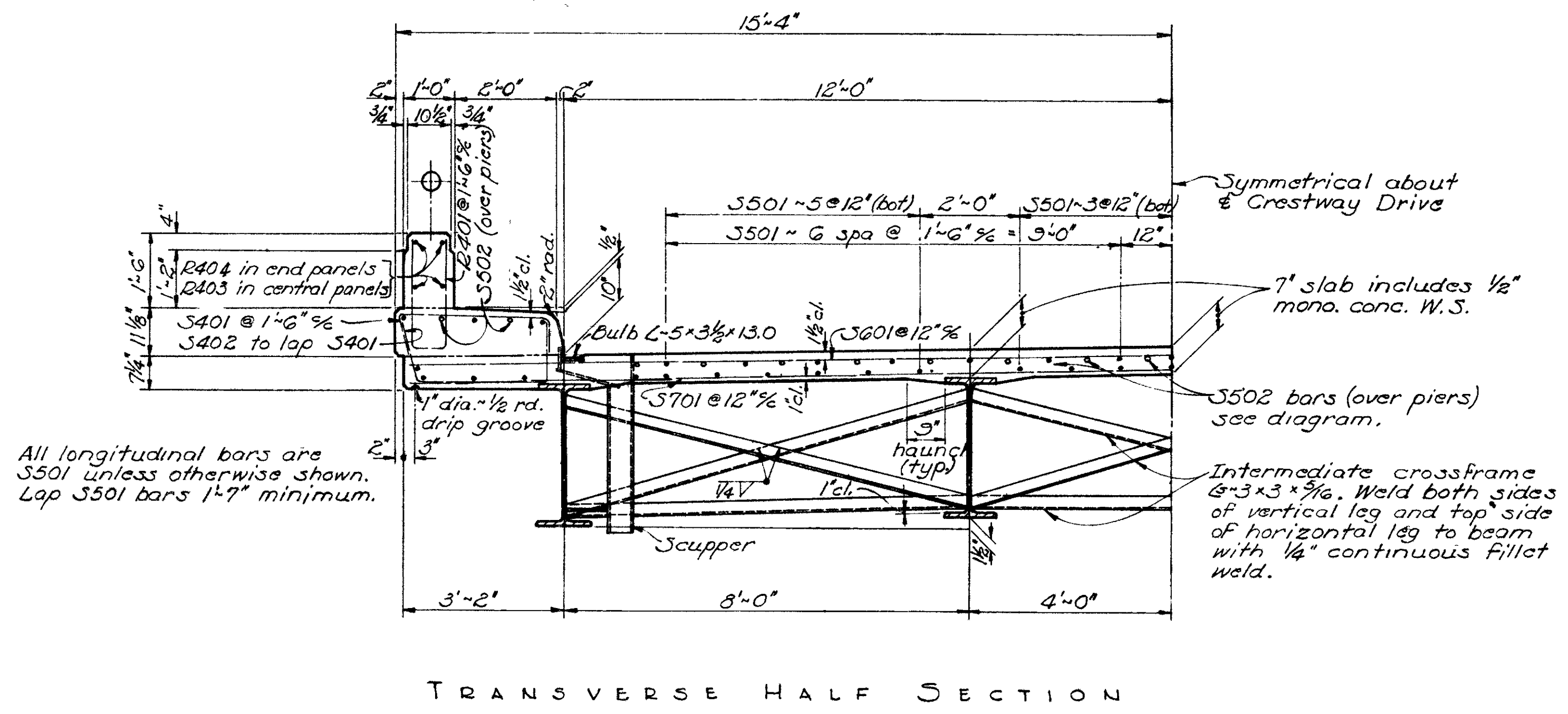


SECTION B-B

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

PIER DETAILS  
BRIDGE N<sup>o</sup> MOT-40-0733  
U.S.R. 40 UNDER CRESTWAY DRIVE  
MONTGOMERY COUNTY  
ACI-1037(4) 5ra. 398 + 96.63

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.G.S.	H.G.S.	L.M.	R.C.	J.E.V.	1/10/58	



LOCATION	DEFLECTION AND CAMBER			
	EXTERIOR BMS.		INTERIOR BMS.	
	End spans	Central spans	End spans	Central spans
Defl. due to weight of steel	0"	1/16"	0"	1/16"
Defl. due to remaining D.L.	1/16"	3/16"	1/16"	7/16"
Camber required for V.C.	3/16"	13/16"	3/16"	13/16"
Total	3/16"	1 1/16"	3/8"	1 3/16"
Required shop camber	0"	1 3/4"	0"	1 1/4"

\*Beams requiring no camber shall be so fabricated that any curved beams will be placed with convex flange up.

- WELDING PROCEDURE**
1. Raise end of beam 1/4" at Pier #2.
  2. Butt-weld beam flanges and web at Pier #1 using the following sequence: make one pass on each flange, then one on the web; repeat until welds are completed.
  3. Weld top and bottom flange moment plates at Pier #1.
  4. Lower end of beam at Pier #2.
  5. Make splice at Pier #2 and Pier #3 in the same manner raising the end of the beams 1/4" at Pier #3 and 3/4" at the N. Abutment.

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

**SUPERSTRUCTURE DETAILS**  
BRIDGE N<sup>o</sup> MOT-40-0733  
U.S. 40 UNDER CRESTWAY DRIVE

MONTGOMERY COUNTY  
ACI-1037(4) STA-398+96.63

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H. S. J. E. V.			R. C.	J. E. V.	1/10/58	

REINFORCING

STEEL

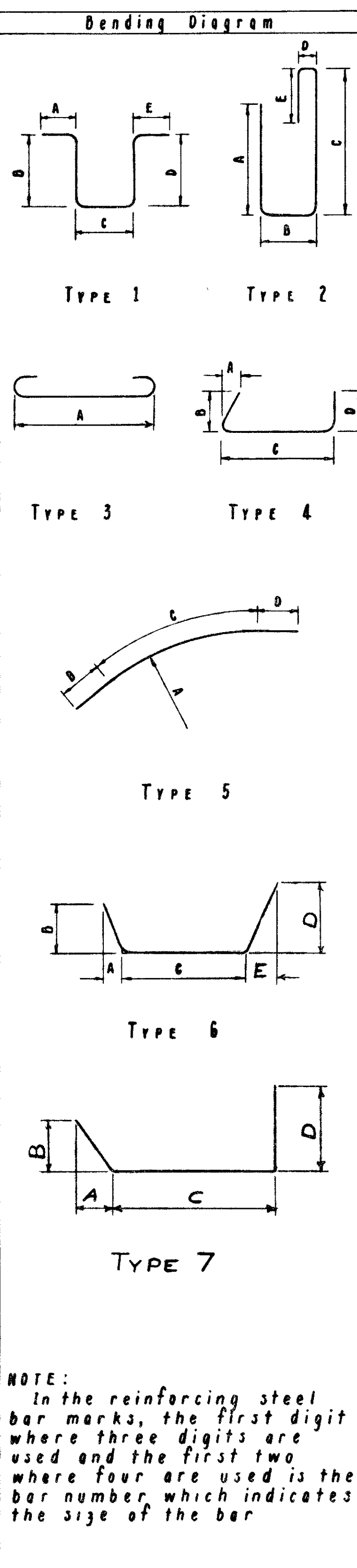
LIST

Table with columns: FED. RD. DIVISION, STATE, PROJECT, TYPE FUNDS. Values: 2, OHIO, MONTGOMERY COUNTY MOT-40-5.98, 191/241

MONTGOMERY COUNTY MOT-40-5.98 MOT-49-12.45

Table with columns: Mark, No, Length, Weight, Shp. for SUPERSTRUCTURE, ABUTMENTS, and PIERS.

Table with columns: Mark, No, Length, Weight, Type, "A", "B", "C", "D", "E", Shp. for PIERS (CONTINUED), RAILING, and REPLACEMENT STEEL.



ESTIMATED QUANTITIES table with columns: Item, Total, Unit, Description, Abut., Pier, Supers., General.

GENERAL NOTES and REFERENCES section containing design specifications and references to standard drawings.

CONCRETE DECK PLACING and SLOPE FACING notes detailing construction requirements.

TRAFFIC: Traffic on Crestway Drive will be detoured. See note on sheet 12.

Table for SPIRALS - HOT ROLLED with columns: Mark, No, Length, Core, Pitch, Turns, Spacers, Weight.

SPIRALS text explaining the 'LENGTH' and 'NO. OF TURNS' shown in the steel list.

SHALL IN OTHER RESPECTS CONFORM TO ITEM S-4 1 1/2 CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT.

REPLACEMENT BARS text detailing requirements for fabricating bars from stock.

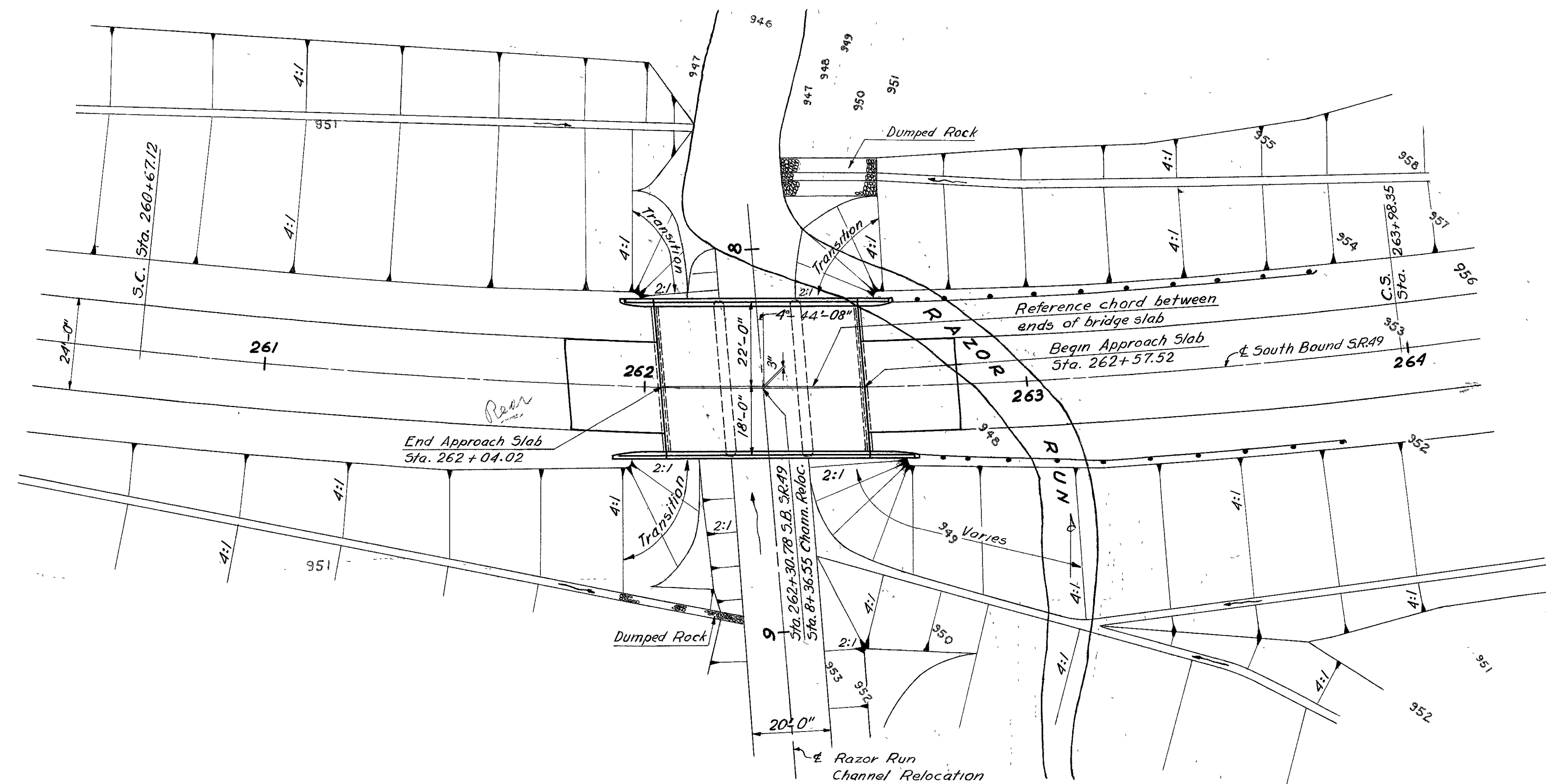
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO. REINFORCING STEEL LIST, ESTIMATED QUANTITIES & GEN. NOTES BRIDGE NO MOT-40-0733 U.S.R.40 UNDER CRESTWAY DRIVE MONTGOMERY COUNTY ACI-1097(4) Sta 398 + 96.63

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

192  
241

MONTGOMERY COUNTY  
MOT - 40 - 5.98  
MOT - 49 - 12.45

S.B. S.R. 49 Curve Data  
P.I. 262 + 36.02  
 $\Delta = 21^\circ 14' 52''$   
 $D_c = 4^\circ 00'$   
 $R = 1432.39$   
 $L_s = 200'$   
 $T_b = 368.90'$   
 $L_c = 331.23'$

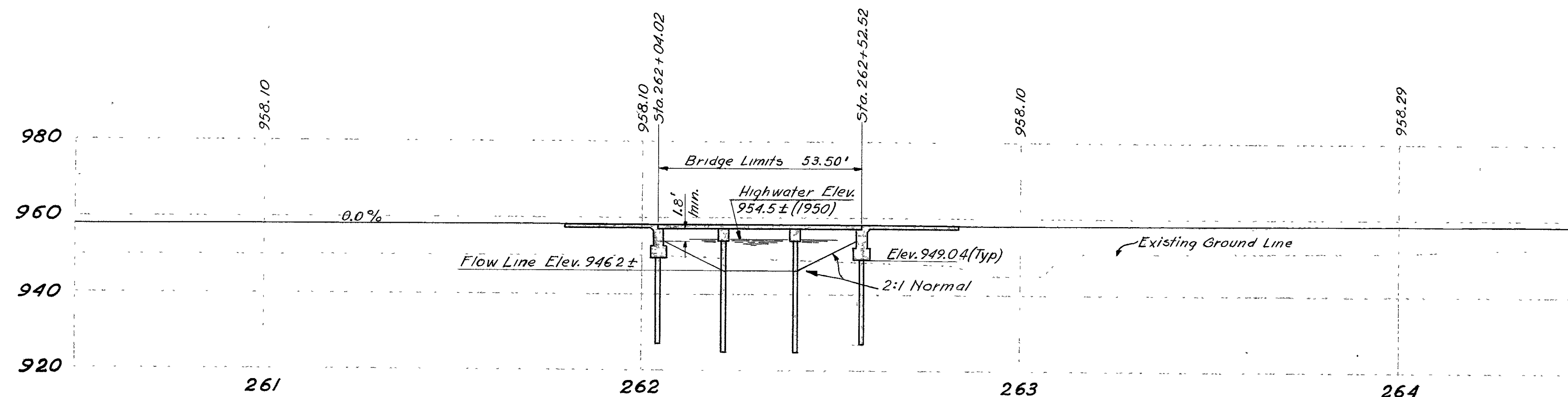


PLAN

**PROPOSED STRUCTURE**  
Type: Continuous Concrete Slab with capped Pile Abutments and Piers  
Spans: 16'-0", 20'-0", 16'-0" C/c Brgs along reference chord  
Roadway: 40'-0" fl Parapets with Aluminum Railing and 1'-0" concrete Curbs (adequate for AASHTO alternate loading)  
Loading: CF - 2000 (adequate for AASHTO alternate loading)  
Wearing Surface = 1" Monolithic Concrete  
Skew = 4° 44' 08" Rt forward from reference chord  
Alignment: Chord between ends of Bridge Slab  
Approach Slab: A5-1-54 (25' long)  
Superelevation: 0.066 ft/ft

**NOTES:**  
For Channel Relocation see Sheet #101 & 102 in Roadway Plans

Drainage Area 2850 Acres  
Calc. 25 Yr H.W. = El. 951.0  
Observed 1950 H.W. = El. 954.5



PROFILE ON E

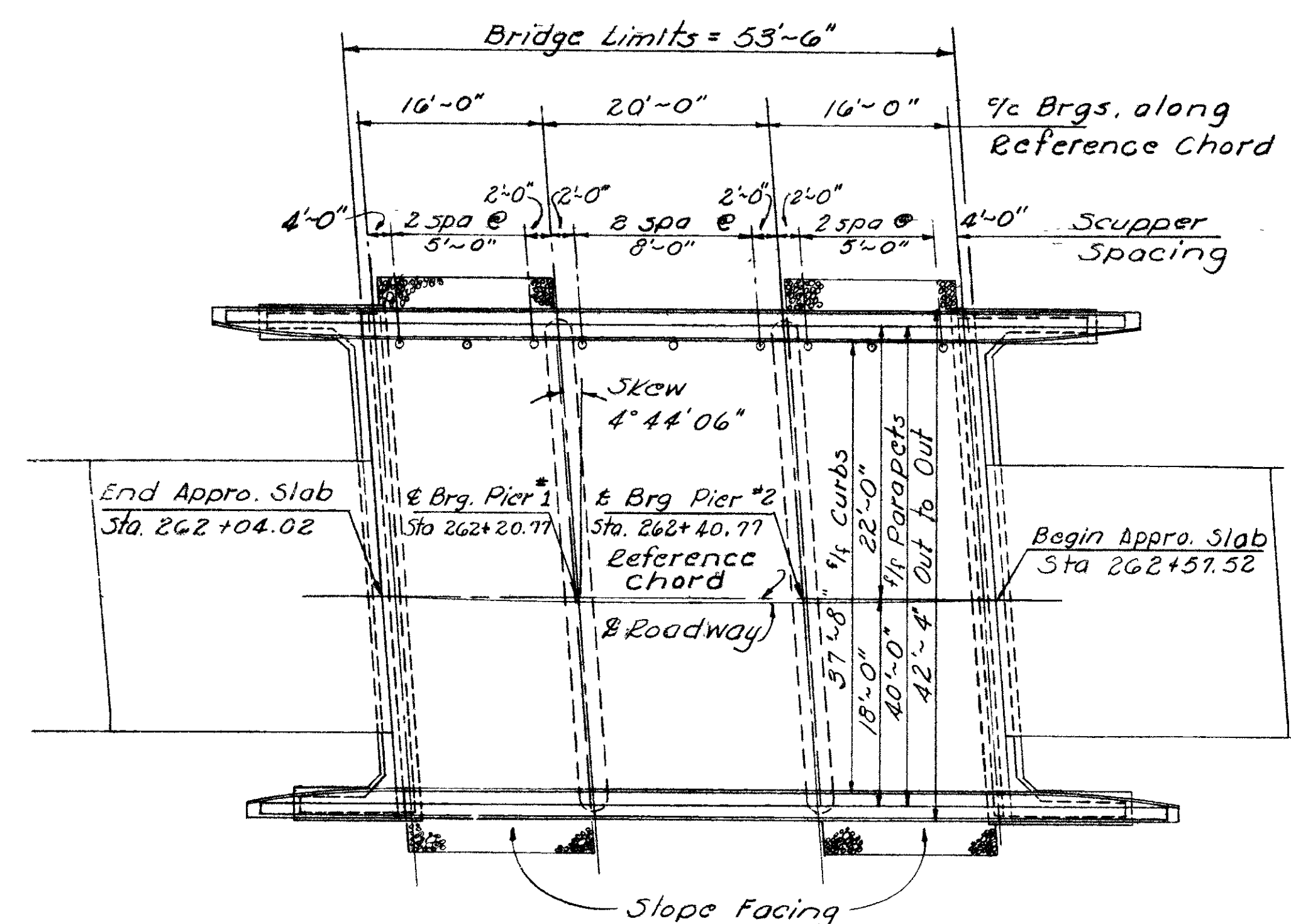
**Piling Note:**  
All piling shall be 14" cast-in-place reinforced concrete. The estimated average pay lengths are 20' at the abutments and 26' at the piers.

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
SITE PLAN						
BRIDGE No. MOT - 49 - 1213 SOUTHBOUND S.R. 49 OVER RAZOR RUN MONTGOMERY COUNTY						
ACI-109(4) STATION 262 + 30.78						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.B.M.	W.B.M.	J.F.M.	Wisse	T.L.W.	4-3-58	

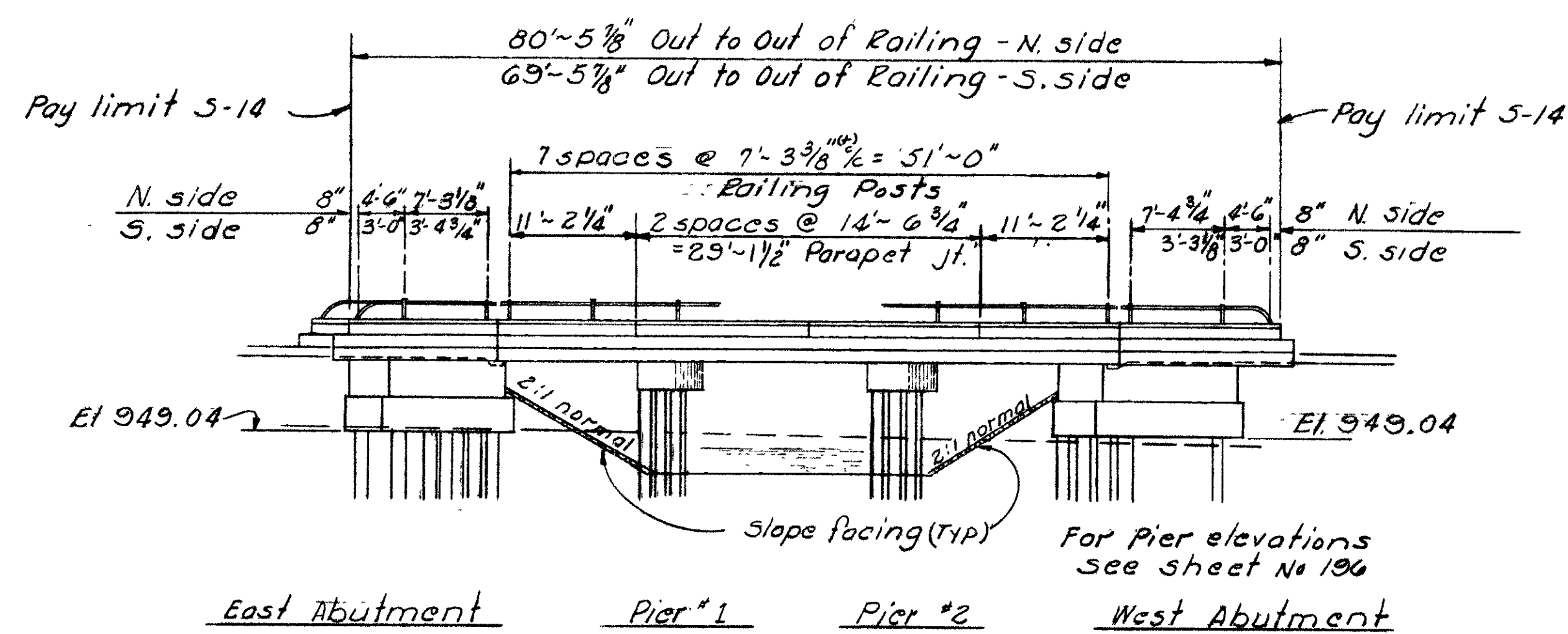
FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

193  
241

MONTGOMERY COUNTY  
MOT - 40-5.98  
MOT - 49-12.45



GENERAL PLAN



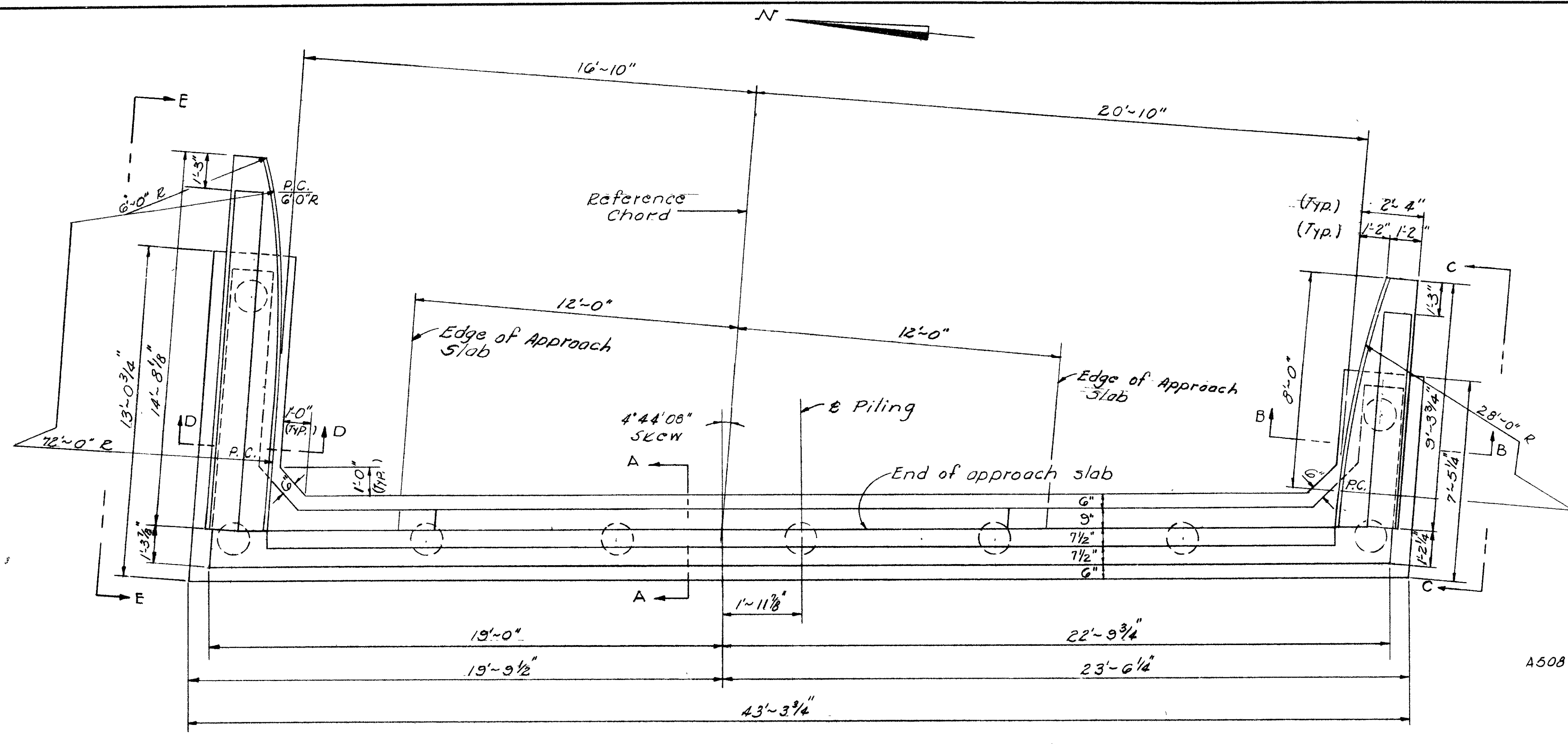
GENERAL ELEVATION

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
GENERAL PLAN & ELEVATION BRIDGE N° MOT. - 49-1213 SOUTHBOUND SR 49 OVER RAZOR RUN MONTGOMERY COUNTY ACT-1097(A) STA. 262+90.78						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.A.	E.A.		J.P.	T.L.U.	4-3-58	

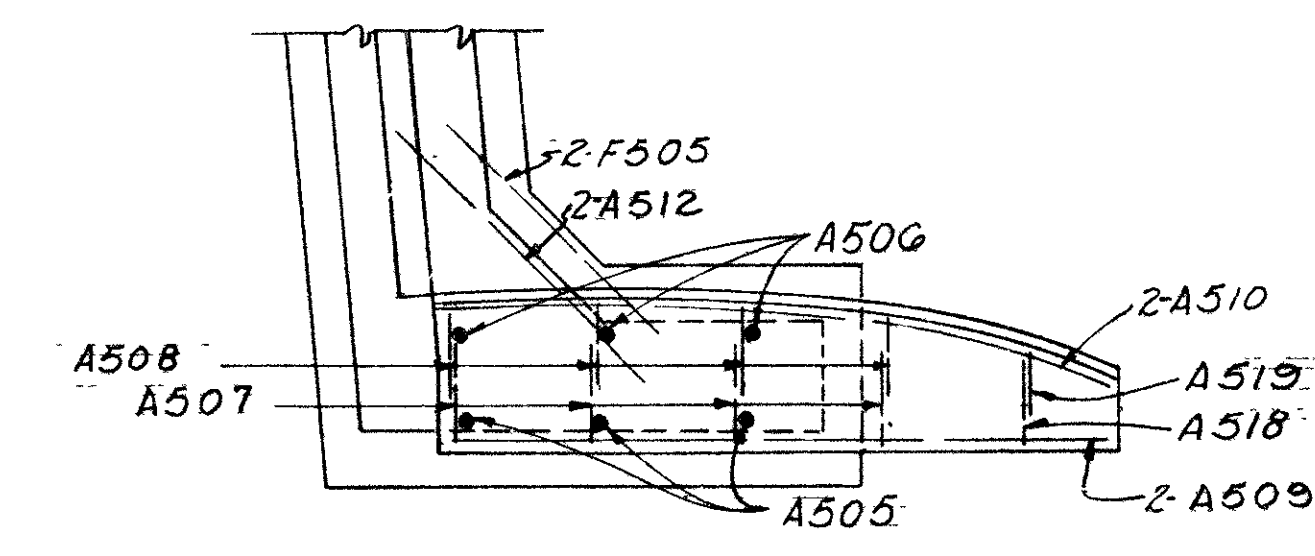
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

MONTGOMERY COUNTY  
 Mot - 40-5, 98  
 Mat - 49-12.45

194  
 241

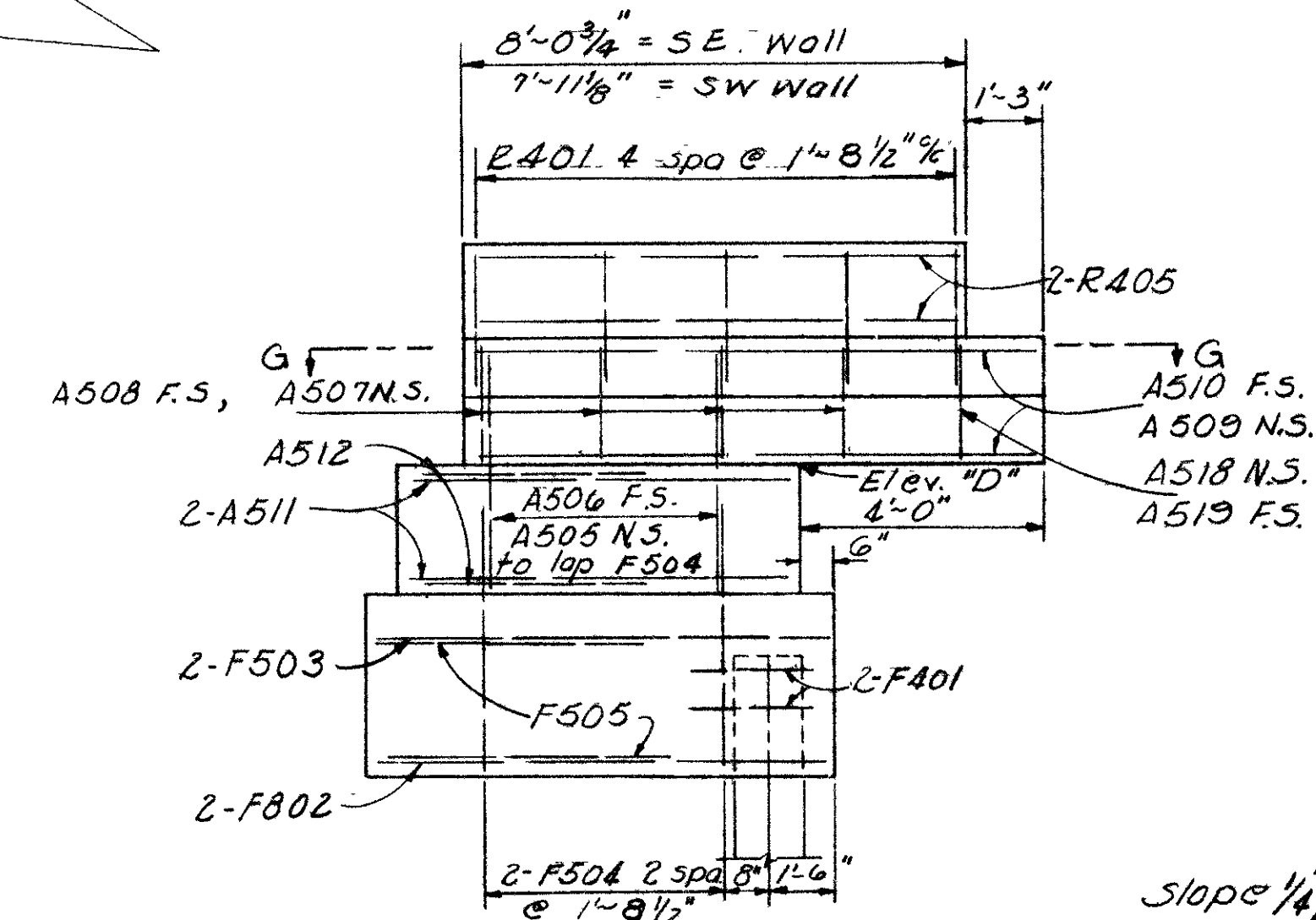


PLAN



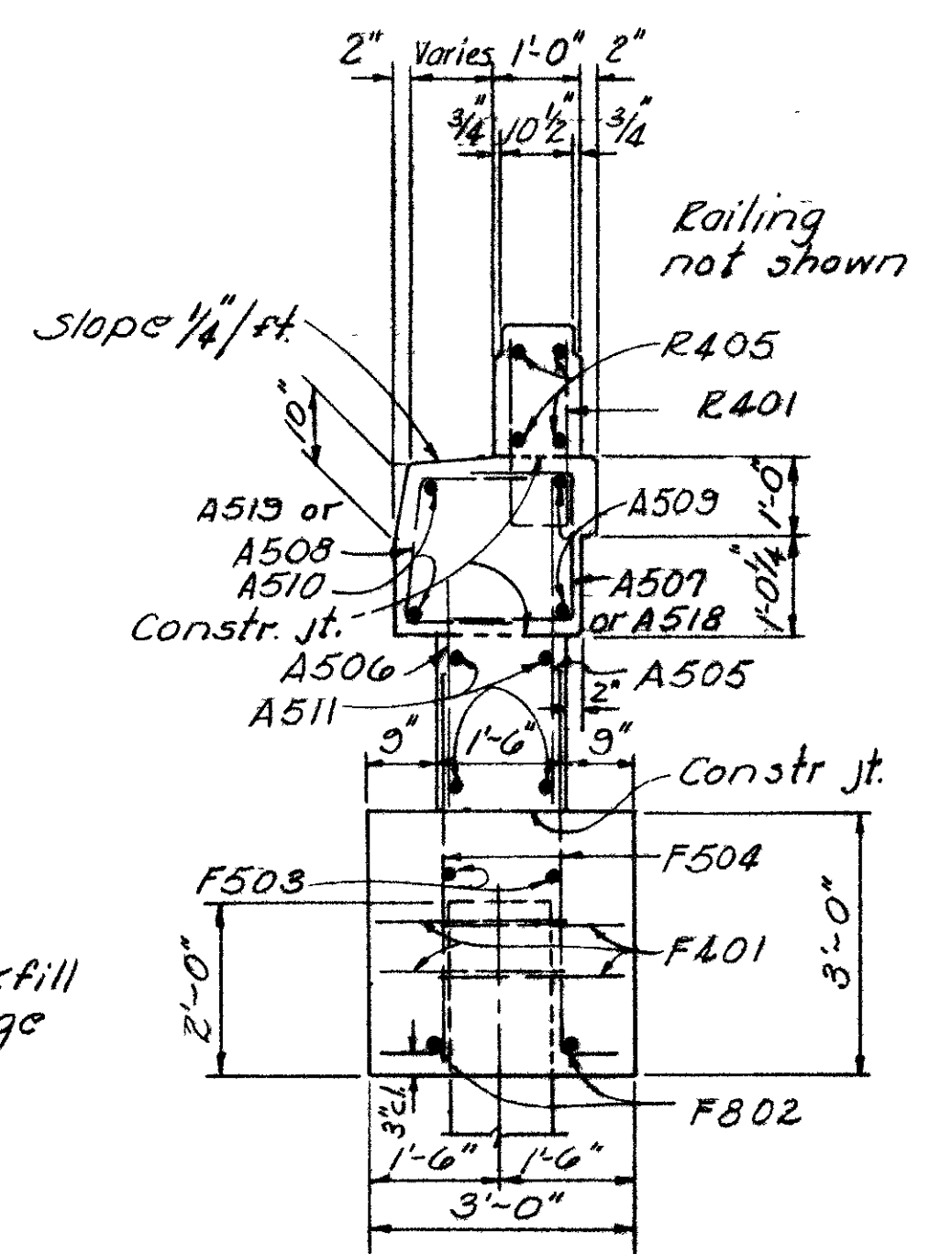
SECTION G-G

Notes: For section D-D, view E-E  
 Elevations and additional notes  
 see sheet N<sup>o</sup> 195

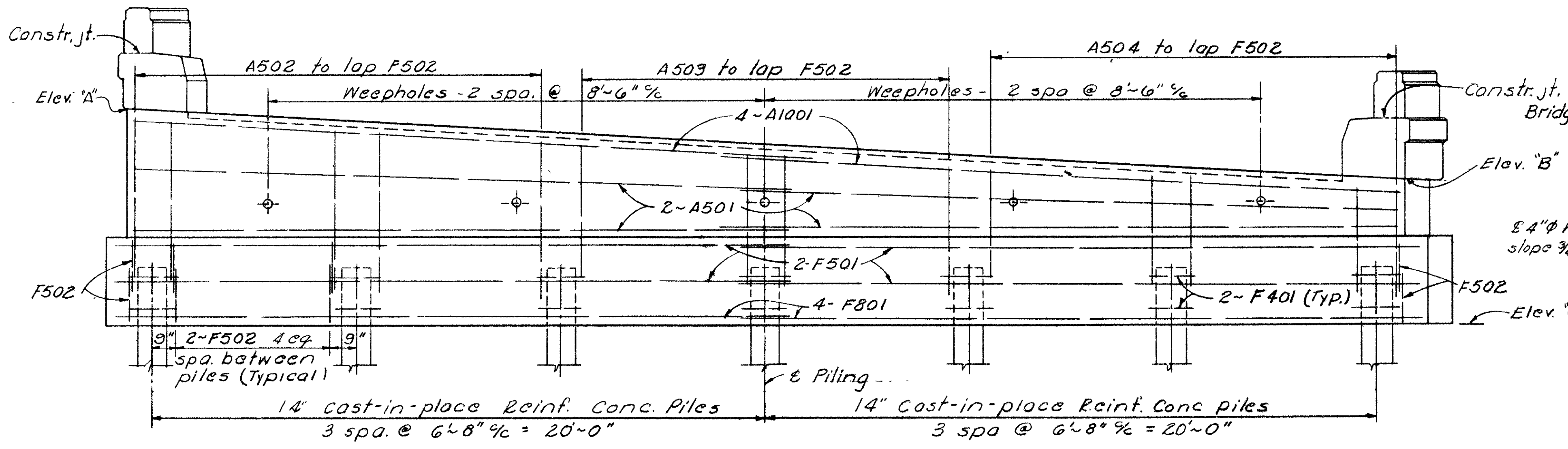


VIEW C-C

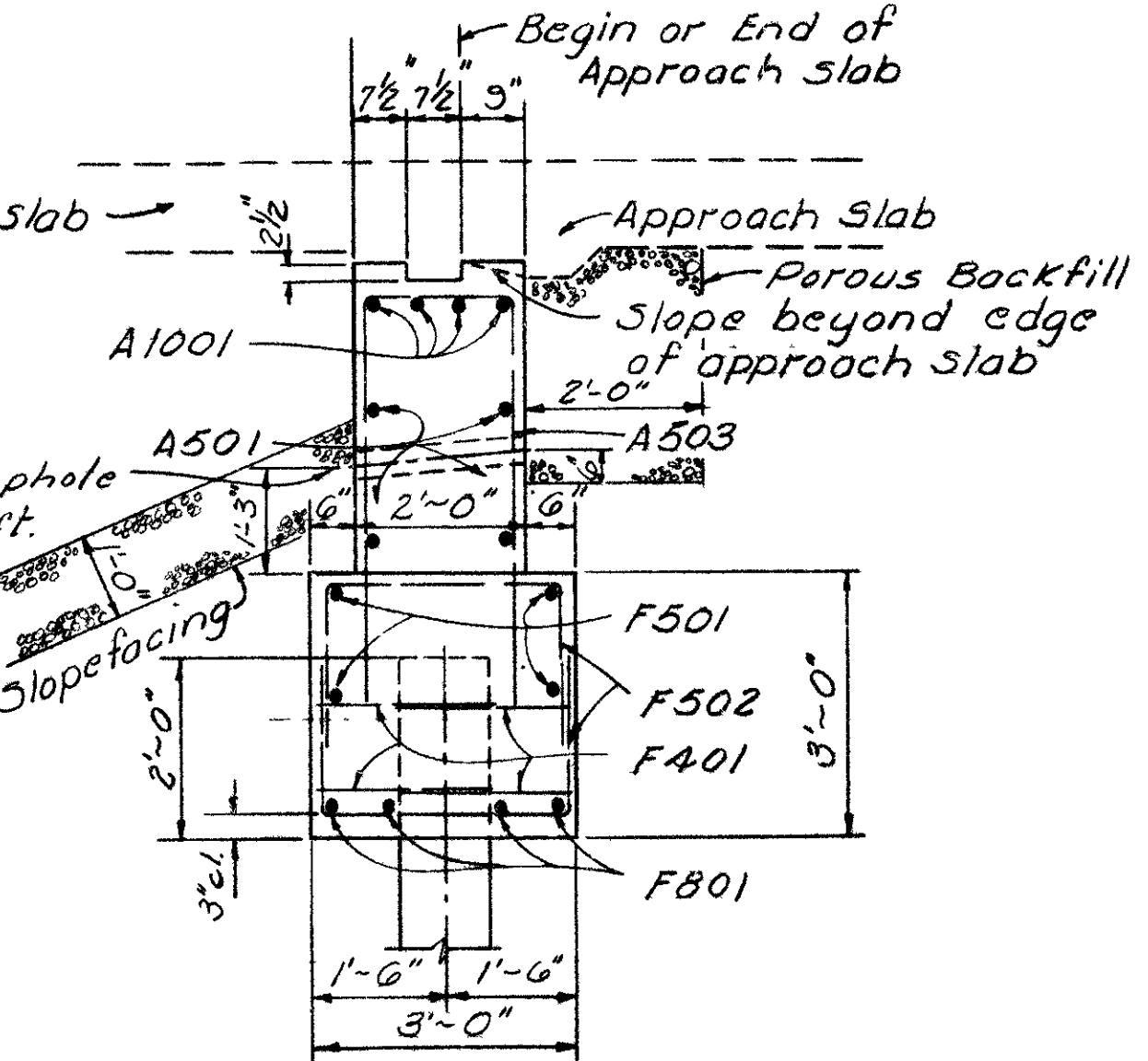
S.E. wall is shown  
 S.W. wall opposite hand  
 (Railing not shown)



SECTION B-B



ELEVATION



SECTION A-A

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
E. ABUTMENT DETAILS BRIDGE N <sup>o</sup> Mot-49-1213 SOUTHBOUND SR 49 OVER RAZOR RUN MONTGOMERY COUNTY ACI-1097(4) STA. 262 + 30.78						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.T.A.	E.T.A.		J.P.	T.L.V.	11-58	



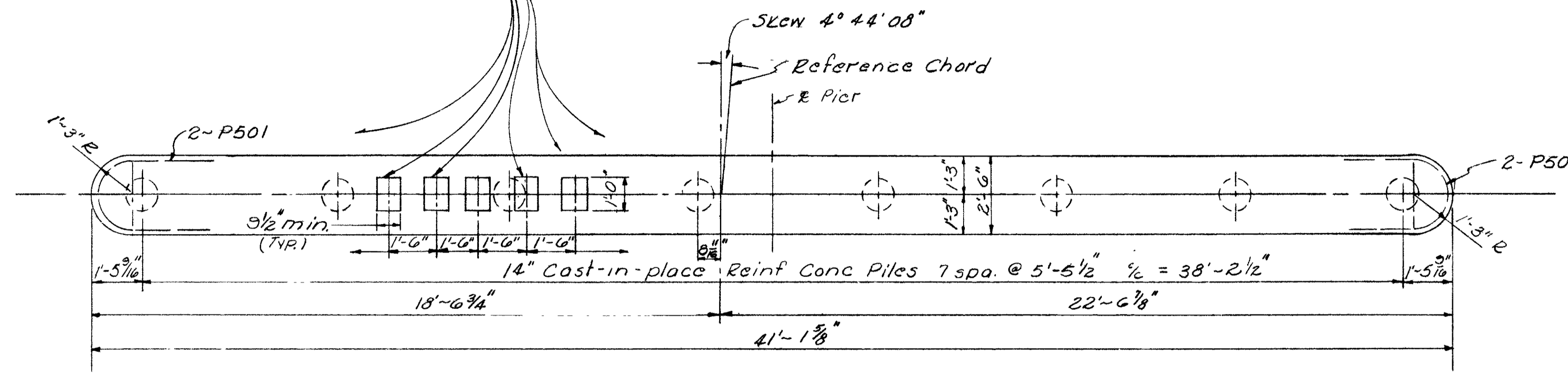


FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

196  
241

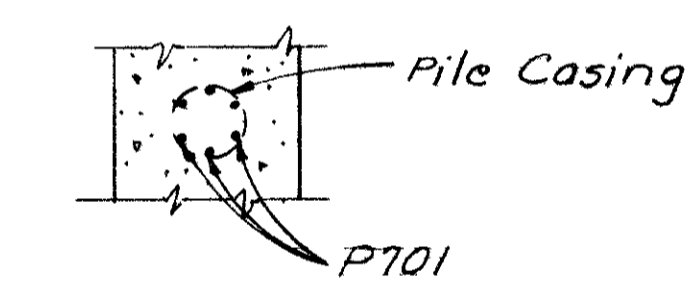
MONTGOMERY COUNTY  
MOT. - 40-5.98  
MOT. - 49-12.45

Note: Place shear keys only if optional construction joint is used  
Shear keys may be formed with 12" lengths of 3"x10" plank.

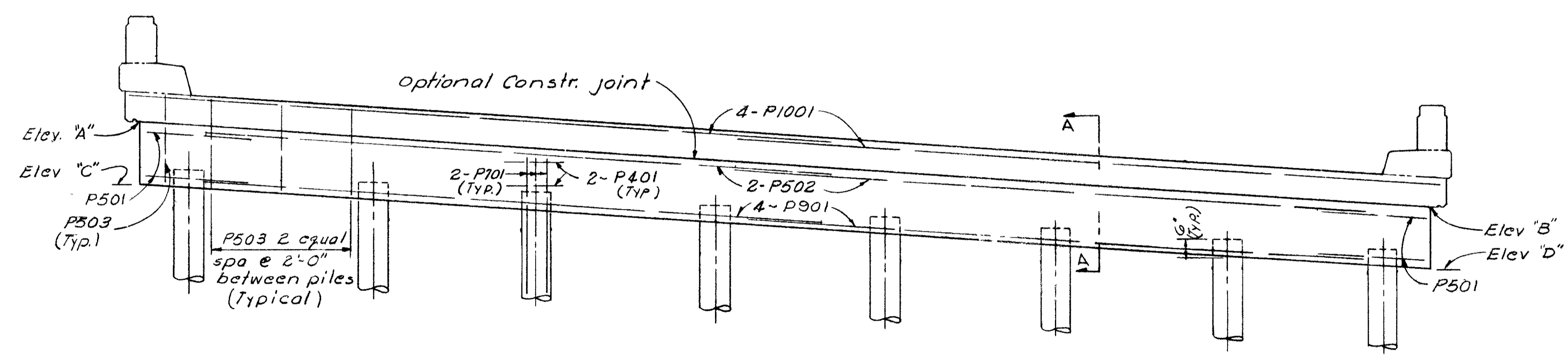


Note: For additional Pier Details  
See P-1-54 revised 12-1-54.

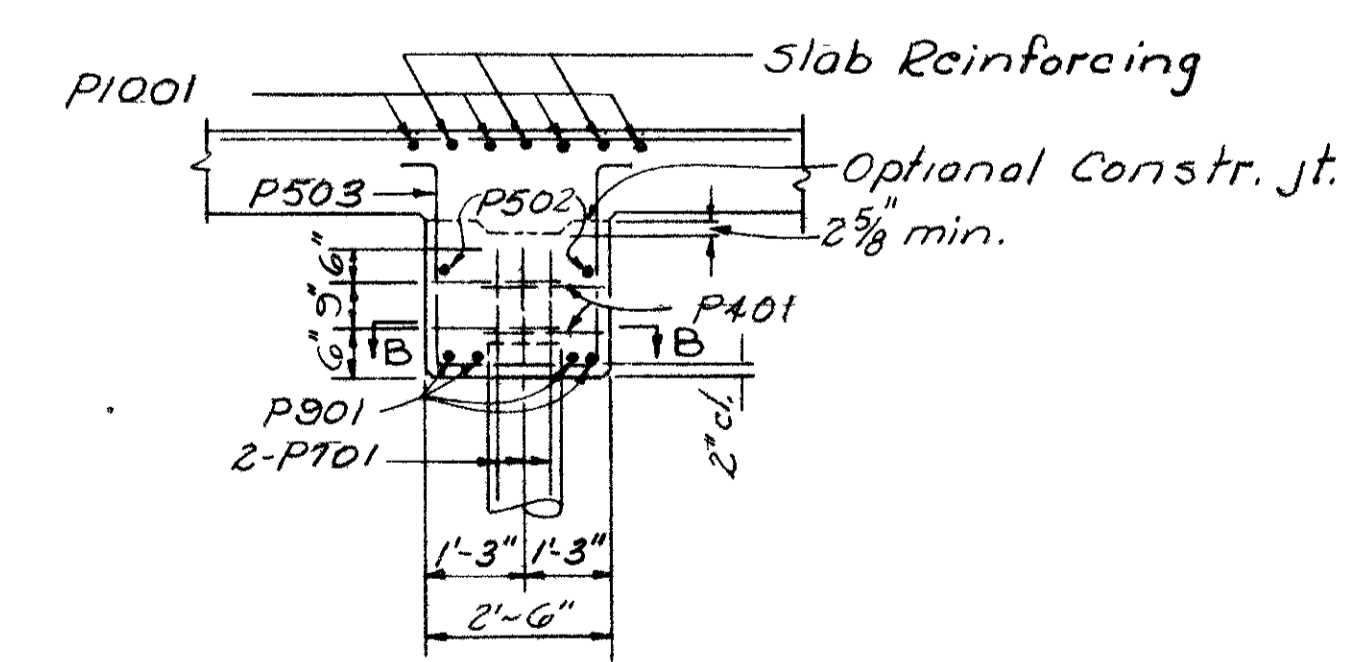
PLAN



SECTION B-B



ELEVATION



SECTION A-A

ELEVATIONS				
LOCATION	A	B	C	D
PIER #1	958.30	955.59	956.30	953.59
PIER #2	958.30	955.59	956.30	953.59

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

PIER DETAILS  
BRIDGE N<sup>o</sup> MOT.-49-1213  
SOUTHBOUND SR 49 OVER  
RAZOR RUN

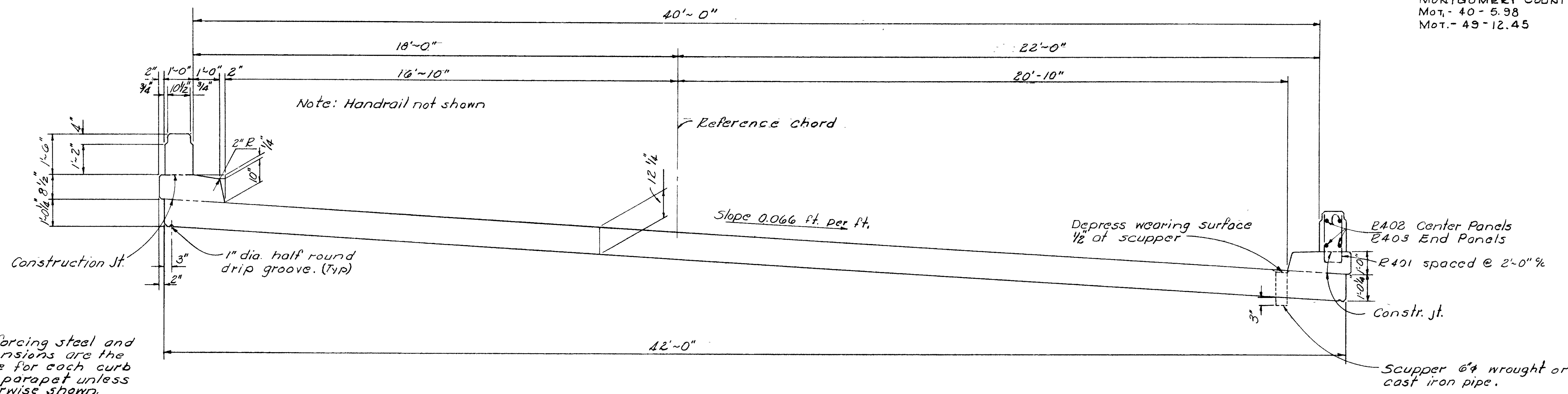
MONTGOMERY COUNTY  
ACI-1097(4) STA. 262+30.78

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.P.A.	E.P.A.		J.P.	T.L.U.	4-5-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

197  
241

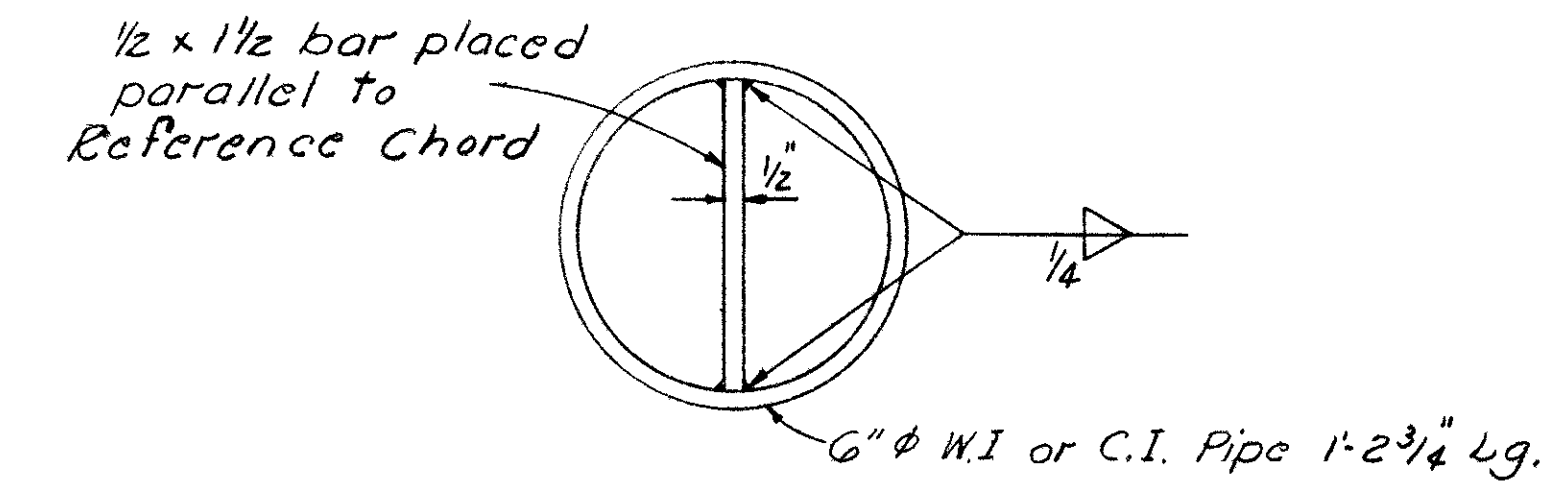
MONTGOMERY COUNTY  
MOT. - 40-5.98  
MOT. - 49-12.45



TRANSVERSE SECTION

Note: Reinforcing steel and dimensions are the same for each curb and parapet unless otherwise shown.

Notes: For additional superstructure details see Std. Dwg. N<sup>o</sup> CS-2-54  
 12 1/4" Slab thickness includes 1" monolithic concrete wearing surface.  
 Concrete parapets are included in item 5-14 for payment.



SCUPPER DETAIL

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
SUPERSTRUCTURE DETAILS BRIDGE N <sup>o</sup> MOT-49-1213 SOUTHBOUND SR 49 OVER RAZOR RUN MONTGOMERY COUNTY ACI-1097(4) STA. 262 + 30.78						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.A.	E.A.		J.P.	J.L.	4-3-58	

**REINFORCING**

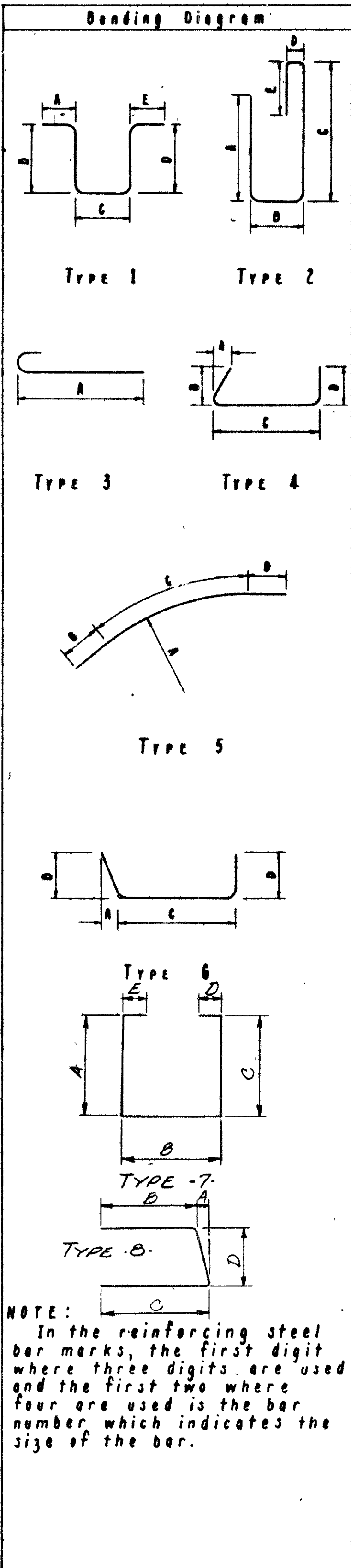
**STEEL**

**LIST**

MONTGOMERY COUNTY  
 MOT-40-5-98  
 MOT-49-12-45

Mark	N <sup>o</sup>	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
<b>PIERS</b>										
R401	64	5-5	232	1		1-11	1-9	1-11		bt
P501	8	6-6	54	5	1-0 <sup>3</sup>	1-7	3-4	1-7		bt
P502	8	20-2	168							st
P503	46	8-6	408	1	1-0	2-5	2-2	2-5	1-0	bt
P701	96	4-0	785							st
P901	16	20-9	1129							st
P1001	10	22-7	1555							st
<b>SUPERSTRUCTURE</b>										
AS60	119	14-5	6066							st
BS60	36	15-11	1830	3	14-10					bt
CS60	36	14-1	1354	3	13-0					bt
DS60	18	15-8	753							st
ES60	18	10-10	521							st
FS60	78	17-7	2662							st
GS60	36	8-6	817							st
HS60	40	7-6	801							st
J601	40	10-0	601							st
K601	20	5-8	170							st
M701	48	41-8	4088							st
N601	41	41-8	2560							st
O501	6	12-2	76							st
P501	12	12-8	159							st
R660	20	11-0	330							st
S501	146	4-7	698	7	1-3	1-8	1-3	0-6	0-6	bt
T501	146	2-5	368	7	0-6	1-8	0-6			bt
R401	54	4-0	144	1		1-10	0-6	1-10		bt
R402	16	14-2	*							st
R403	16	11-10	*							st

Mark	N <sup>o</sup>	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
<b>ABUTMENTS</b>										
R401	24	4-0	64	1		1-10	0-6	1-10		bt
R404	8	13-1	*							st
R405	8	7-7	*							st
AS01	16	21-7	360							st
AS02	22	16-1	369	1		7-4	1-8	7-4		bt
AS03	20	14-1	294	1		6-4	1-8	6-4		bt
AS04	22	12-1	277	1		5-4	1-8	5-4		bt
AS05	6	5-2	32							st
AS06	6	3-11	25							st
AS07	8	3-7	30	1		1-1	1-8	1-1		bt
AS08	8	3-9	31	8	0-2	1-1	1-3	1-8		bt
AS09	4	8-10	37							st
AS10	4	8-11	37	5	27-8	1-0	7-11			bt
AS11	8	6-2	51							st
AS12	10	4-5	46							st
AS13	12	11-8	146							st
AS14	12	6-9	84							st
AS15	12	7-8	96							st
AS16	4	14-5	60	5	71-8	2-4	12-1			bt
AS17	4	14-4	60							st
AS18	2	3-1	6	1		0-10	1-8	0-10		bt
AS19	2	3-3	7	8	0-2	0-10	1-0	1-8		bt
AS20	12	3-3	41	1		1-1	1-4	1-1		bt
AS21	12	3-5	43	8	0-2	1-1	1-3	1-4		bt
AS22	2	2-9	6	1		0-10	1-4	0-10		bt
AS23	2	2-11	6	8	0-2	0-10	1-0	1-4		bt
A1001	16	22-5	1543							st
F401	72	5-5	261	1		1-11	1-9	1-11		bt
F501	16	22-4	373							st
F502	128	6-9	901	1		2-2	2-8	2-2		bt
F503	4	7-1	30							st
F504	36	4-8	175	1	0-6	4-4				bt
F505	8	3-8	31							st
F506	4	12-7	52							st
FB01	16	22-9	972							st
FB02	4	7-1	76							st
FB03	4	12-9	134							st
<b>REPLACEMENT STEEL</b>										
RE401	1	5-3								st
RE501	1	5-7								st
RE601	1	5-11								st
RE701	1	6-3								st
RE801	1	6-6								st
RE901	1	6-10								st
RE1001	1	7-3								st



		ESTIMATED QUANTITIES					
ITEM	TOTAL	UNIT	DESCRIPTION	ABUT.	PIER	SUPERS.	GENERAL
E-2	103	Cu.Yds	Unclassified Excavation	103			
S-1	109	Cu.Yds	Class "C" concrete, superstructure & pier caps		15	94	
S-1	85	Cu.Yds	Class "E" concrete, abutments	85			
S-4	35791	Lb	Reinforcing Steel	6756	4331	24704	
S-14	150	Lin.Ft.	Railing (Aluminum rail & supports & conc. parapets)	43		107	
S-16	Lump	Sum	First test pile				Lump
S-18	776	Lin.Ft.	14" Cast-in-place Reinforced Concrete Piles	360	416		
S-29	23	Cu.Yds	Porous Backfill	23			
S-29	62	Cu.Yds	Slope Facing (S-29.05 Type)				62
S-29	9	Each	Scuppers, 6" dia, Cast Iron or Wrought Iron Pipe			9	
E-3	700	Cu.Yds	Channel Excavation				700

\* HORIZONTAL PARAPET REINFORCING THESE BARS ARE INCLUDED WITH THE RAILING FOR PAYMENT.

REPLACEMENT BARS  
 IF REINFORCING BARS ARE FABRICATED FROM STOCK WHICH HAS PREVIOUSLY BEEN TESTED AND APPROVED BY THE OHIO HIGHWAY TESTING LABORATORY TEST SAMPLES AS PROVIDED IN SEC. S-402 NEED NOT BE FURNISHED AND REPLACEMENT BARS WILL NOT BE REQUIRED.

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
 CONSULTING ENGINEERS  
 COLUMBUS, OHIO

**REINFORCING STEEL LIST AND ESTIMATED QUANTITIES**  
 BRIDGE NO. MOT-49-1213  
 SOUTHBOUND SR 49 OVER  
 BAZOR RUN  
 MONTGOMERY COUNTY  
 ACI-1037(4) STA. 262+30.78

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.P.	BDB		E.D.	TLV	4-3-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

199  
241

MONTGOMERY COUNTY

MOT - 40 - 5.98

MOT - 49 - 12.45

REFERENCES:

Standard Drawings:

Railing Details, Type A	- AR-1-57 dated 4-9-57, revised 3-1-58.
Superstructure Details	- CS-2-54 dated 12-1-54
Approach Slab Details	- AS-1-54 revised 12-1-54
Pier Details	- P -1-54 revised 12-1-54

Supplemental Specifications	- S-114 revised 8-1-57
Guardrail and Railing Details	- Sheet 144

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 revisions thereof dated 2-21-58.

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.

SLAB THICKNESS of 12-1/4 inches includes 1 inch for monolithic wearing surface.

EXCAVATION QUANTITY includes the removal of fill material between level of top of slope at the face of abutment and bottom of footer or existing ground, whichever is higher.

SLOPE FACING shall be provided under the structure at both abutments. The porous drain material shall be 12" thick and shall extend from the face of the abutment down to the toe of slope and transversely to 3 ft. outside the edge of the superstructure.

PILING shall be driven to a minimum bearing capacity of 23 tons for the abutments and 22 tons for the piers.

PIER PILE ENCASEMENT as shown on Std. Dwg. No. P-1-54 may be omitted provided that the tapered portion, if any, of all pier piles does not extend above the stream bed or the proposed surface of the ground. If the tapered portion of any pile extends above these limitations, the encasement will be required for all the pier piles. If the encasement is omitted, the painting of the piles shall extend to low water elevation of, if the proposed surface of the ground is above low water, it shall extend to at least one foot below the proposed surface of the ground.

MAXIMUM PILE REACTION.

The maximum calculated pile reactions are as follows:

Abutments	- 23 tons per pile
Piers	- 22 tons per pile.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

GENERAL NOTES

BRIDGE No MOT - 49 - 1213

S.B. SR 49 OVER RAZOR RUN

MONTGOMERY COUNTY

ACI-1097(4)

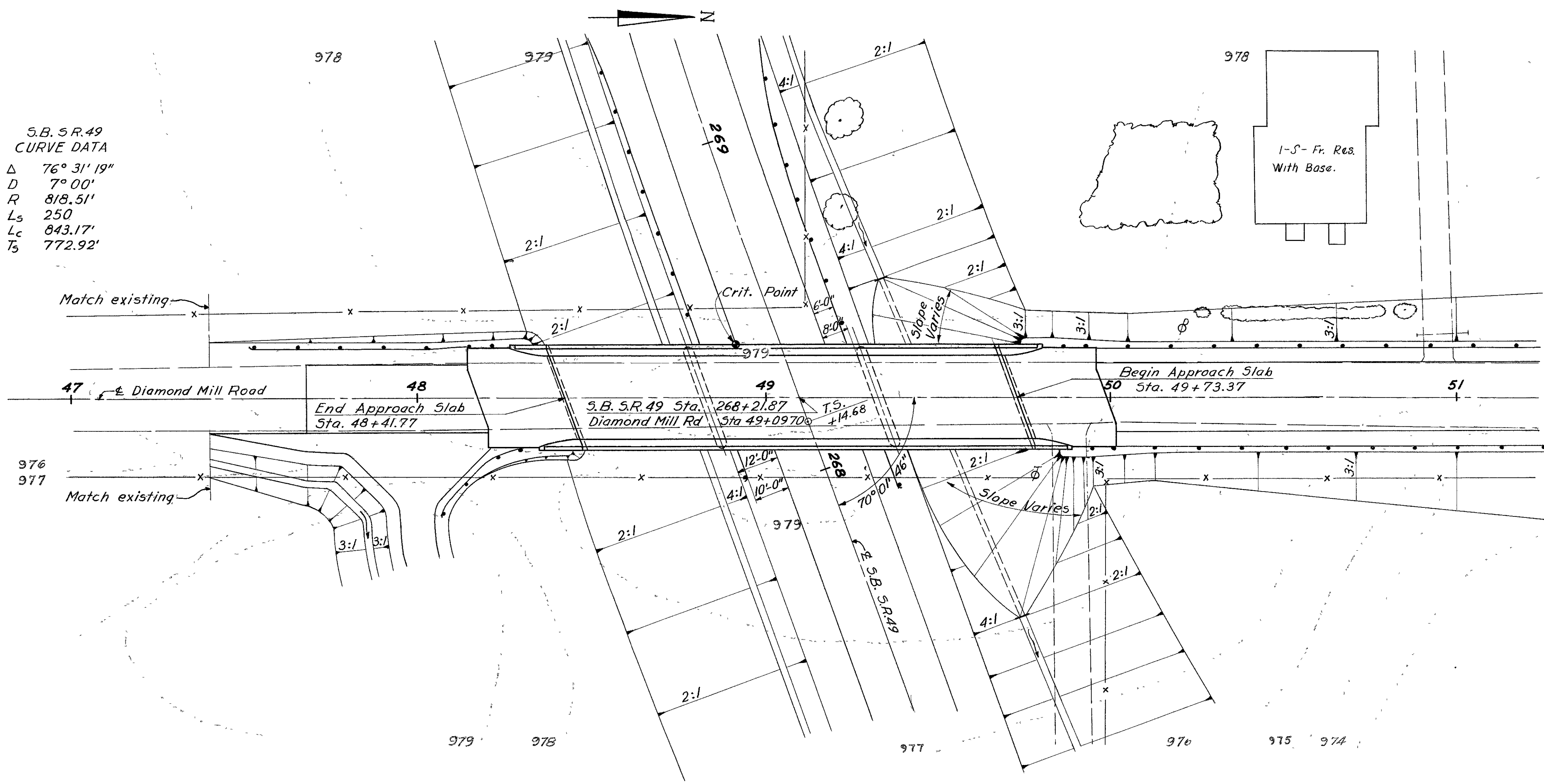
STA. 262 + 30.78

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
				TLU	4.7.58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		200 241

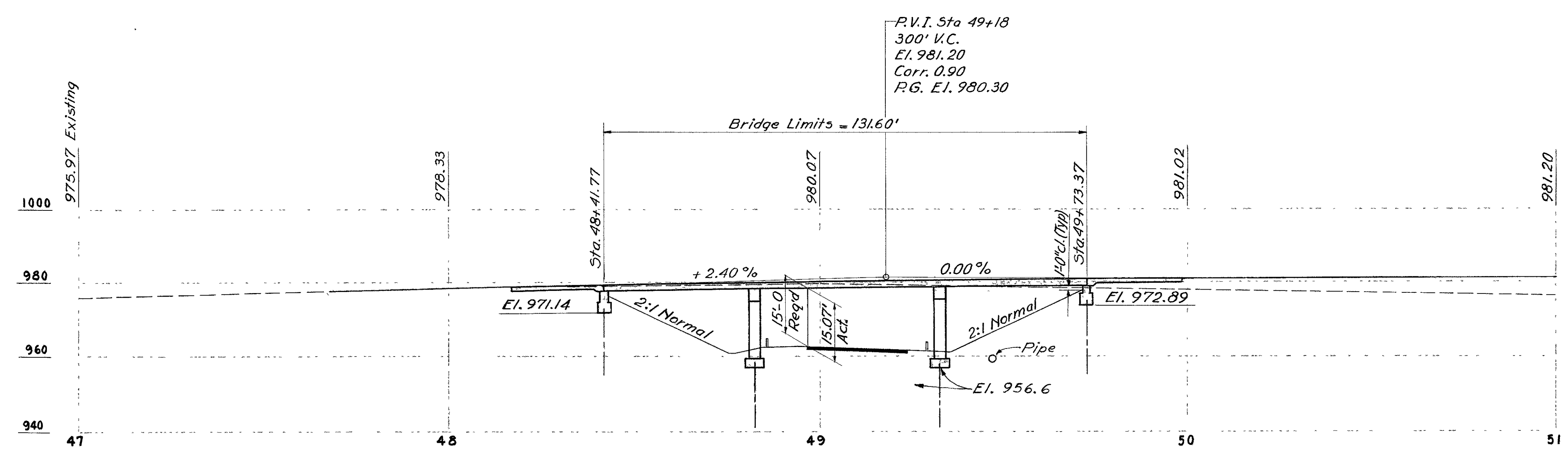
MONTGOMERY COUNTY  
MOT - 40 - 598  
MOT - 49 - 12.45

S.B. S.R. 49  
CURVE DATA  
 $\Delta$  76° 31' 19"  
D 7° 00'  
R 818.51'  
Ls 250  
Lc 843.17'  
Ts 772.92'



PLAN

**PROPOSED STRUCTURE**  
Type: Continuous reinforced concrete slab with reinforced concrete substructure  
Spans: 40'-50'-40' c/c bearings  
Roadway: 24'-0" flt 2'-0" safety curbs with concrete parapets and aluminum railing  
Loading: CF 130  
Skew: 19° 58' 14" Right forward  
Wearing surface: 3/4" monolithic concrete  
Alignment: Tangent  
Approach slab: 25'-0" long, see sheet 143



PROFILE ON E

P.V.I. Sta. 54+00  
625' V.C.  
El. 981.20  
Corr. 2.34  
P.G. El. 978.86

Note:  
All piling shall be 12" cast-in-place reinforced concrete  
Estimated average pile lengths:  
Abutments 23 feet  
Piers 25 feet

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COLUMBUS, OHIO

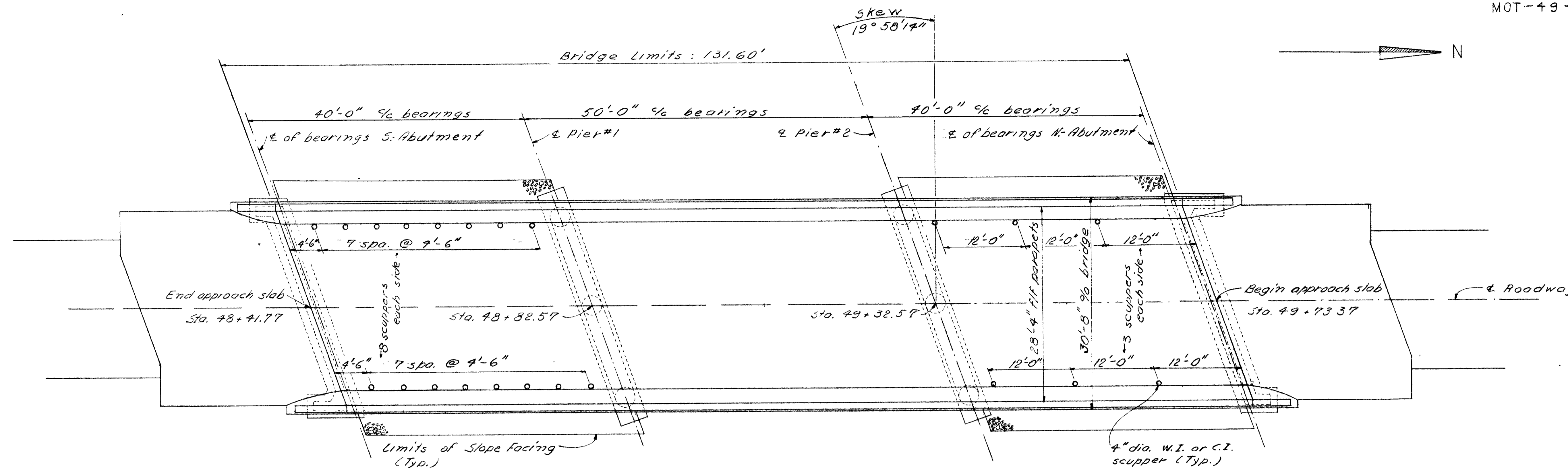
**SITE PLAN**  
**BRIDGE No MOT-49-1224**  
SOUTH BOUND S.R 49 UNDER  
DIAMOND MILL RD.  
MONTGOMERY COUNTY  
STATION 268+21.87 ACI-1097(4)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Wisse	Wisse	J.F.M.	J.P.	J.L.V.	3-28-58	

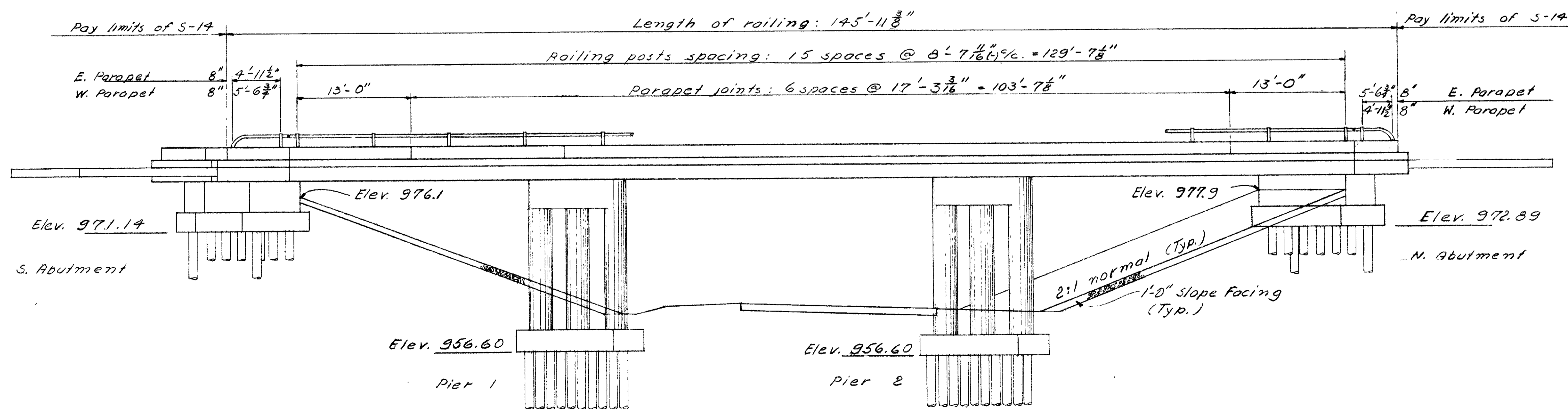
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

20/  
241

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45



GENERAL PLAN



GENERAL ELEVATION

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

GENERAL PLAN & ELEVATION  
BRIDGE N° MOT-49-1224  
S.B. S.R. 49 UNDER DIAMOND MILL ROAD  
ACI-1097(A)  
Montgomery County Sta. 268+21.87

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.B.R.	C.B.R.		R.E.B.	T.L.U.	3-28-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

202  
271

MONTGOMERY COUNTY  
MOT - 40 - 5.98  
MOT - 49 - 12.45

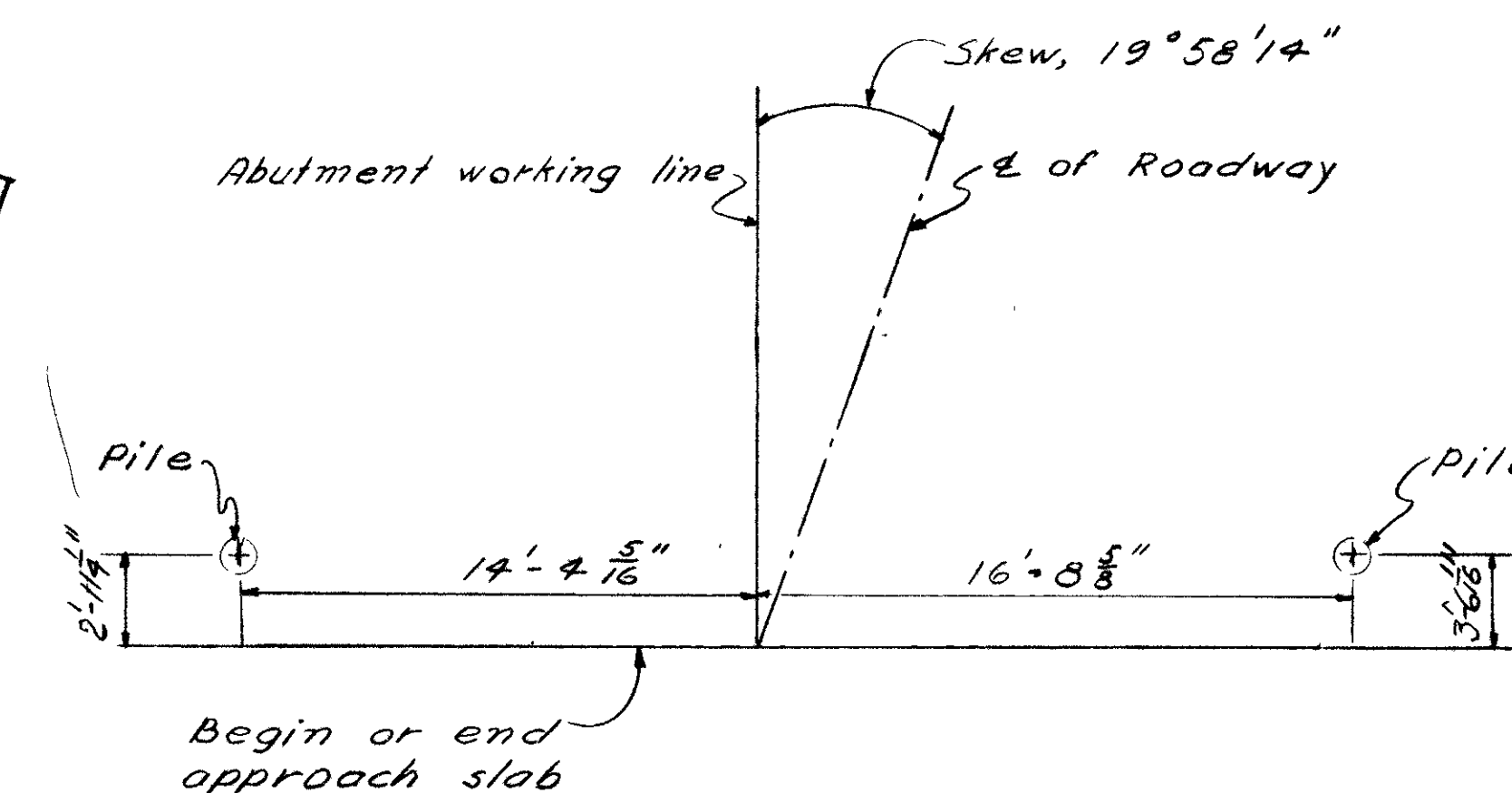
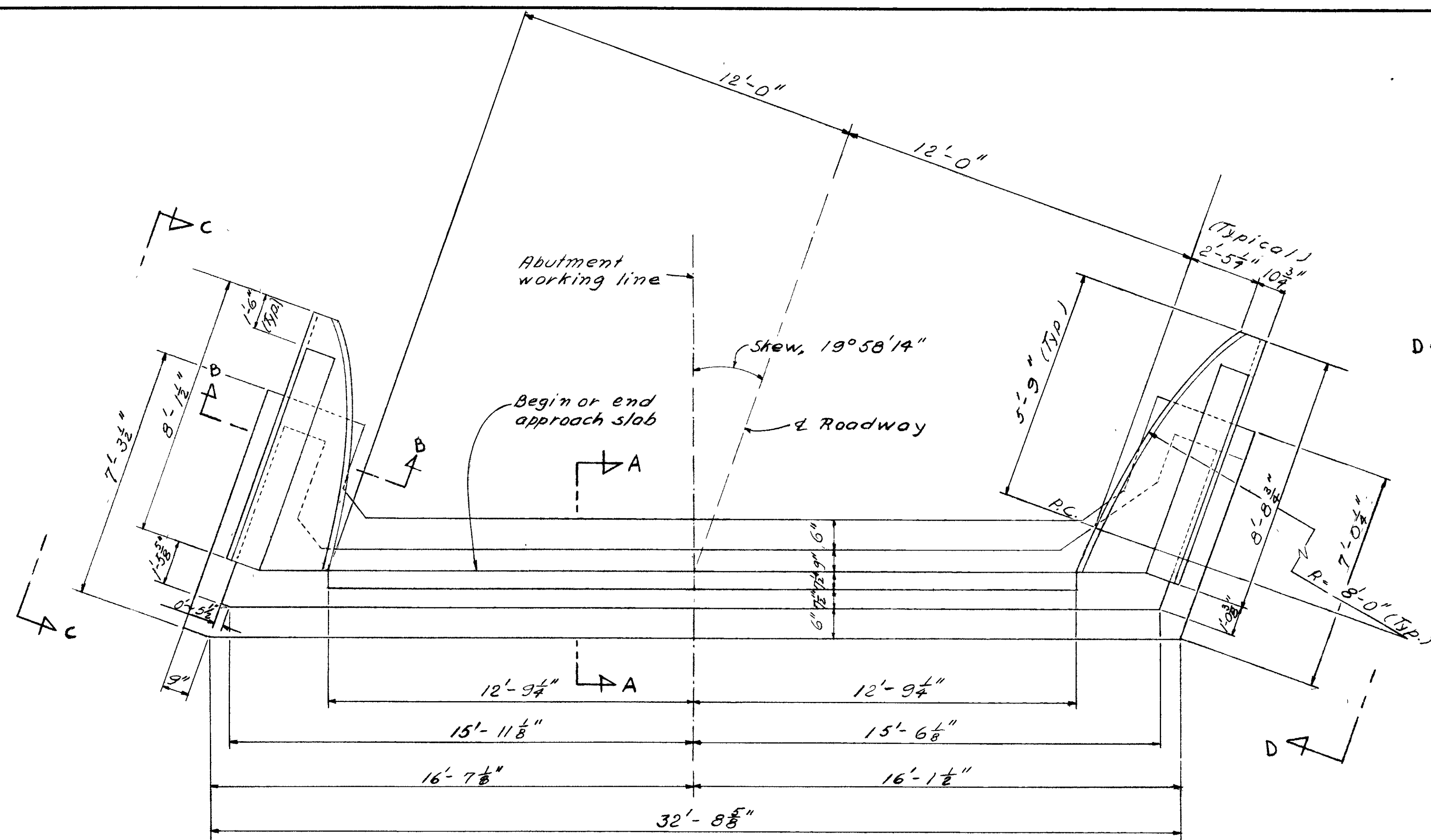
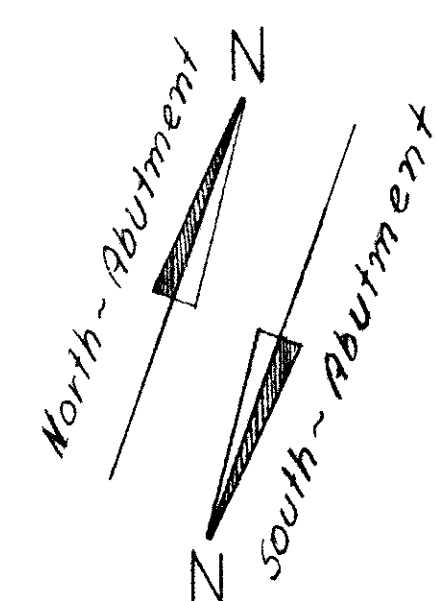
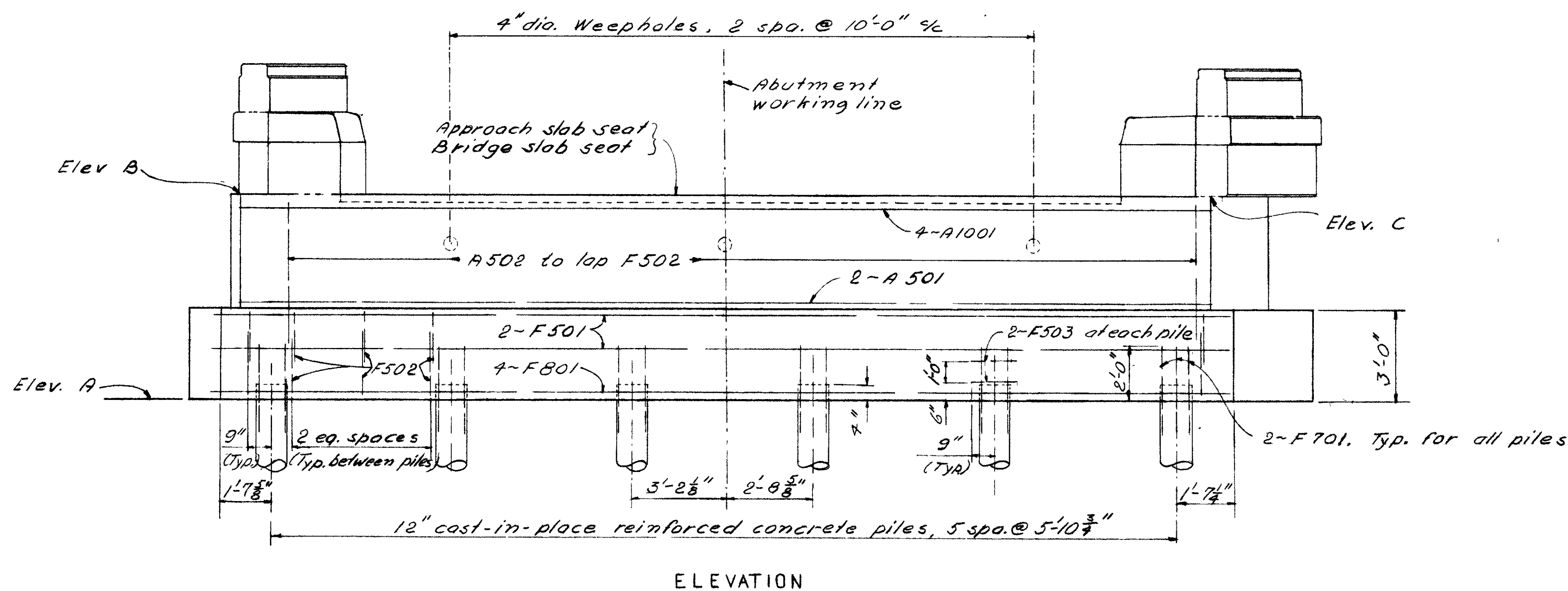


DIAGRAM SHOWING PLACING OF SINGLE PILES UNDER EACH WINGWALL

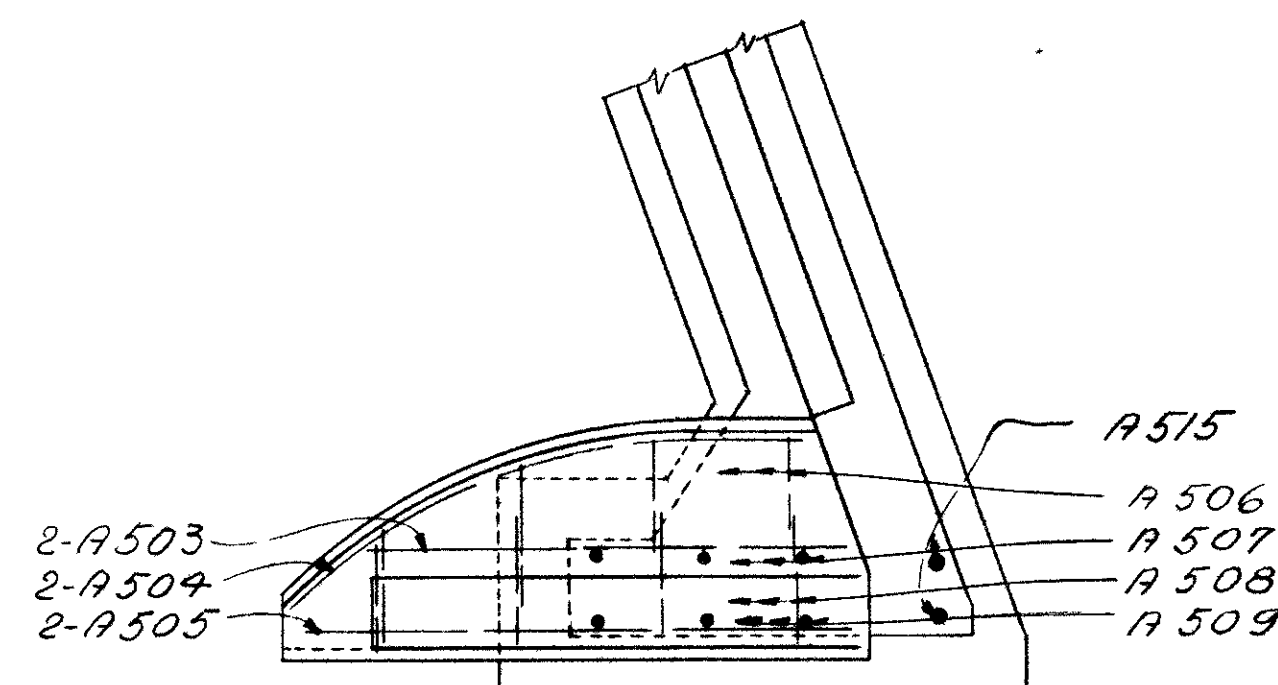
ELEVATIONS		
	S-Abutment	N-Abutment
A	971.14	972.89
B	977.31	978.86
C	977.11	978.94



NOTE:  
For additional details see sheet 203

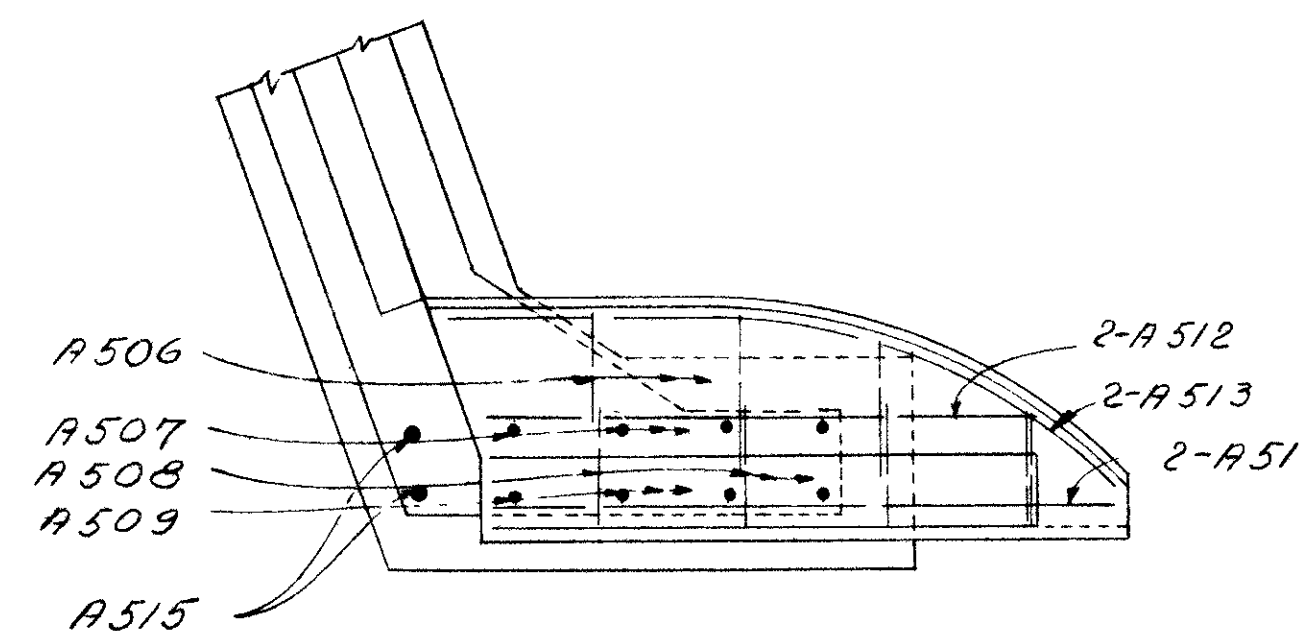
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
ABUTMENT DETAILS BRIDGE No MOT-49-1224 S.B. S.R.49 UNDER DIAMOND MILL ROAD ACI-1097(4) Montgomery County Sta. 268+21.87						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.A.R.	C.A.R.		R.E.B.	T.L.U.	3-28-58	

MONTGOMERY COUNTY  
MOT - 40 - 5.98  
MOT - 49 - 12.45



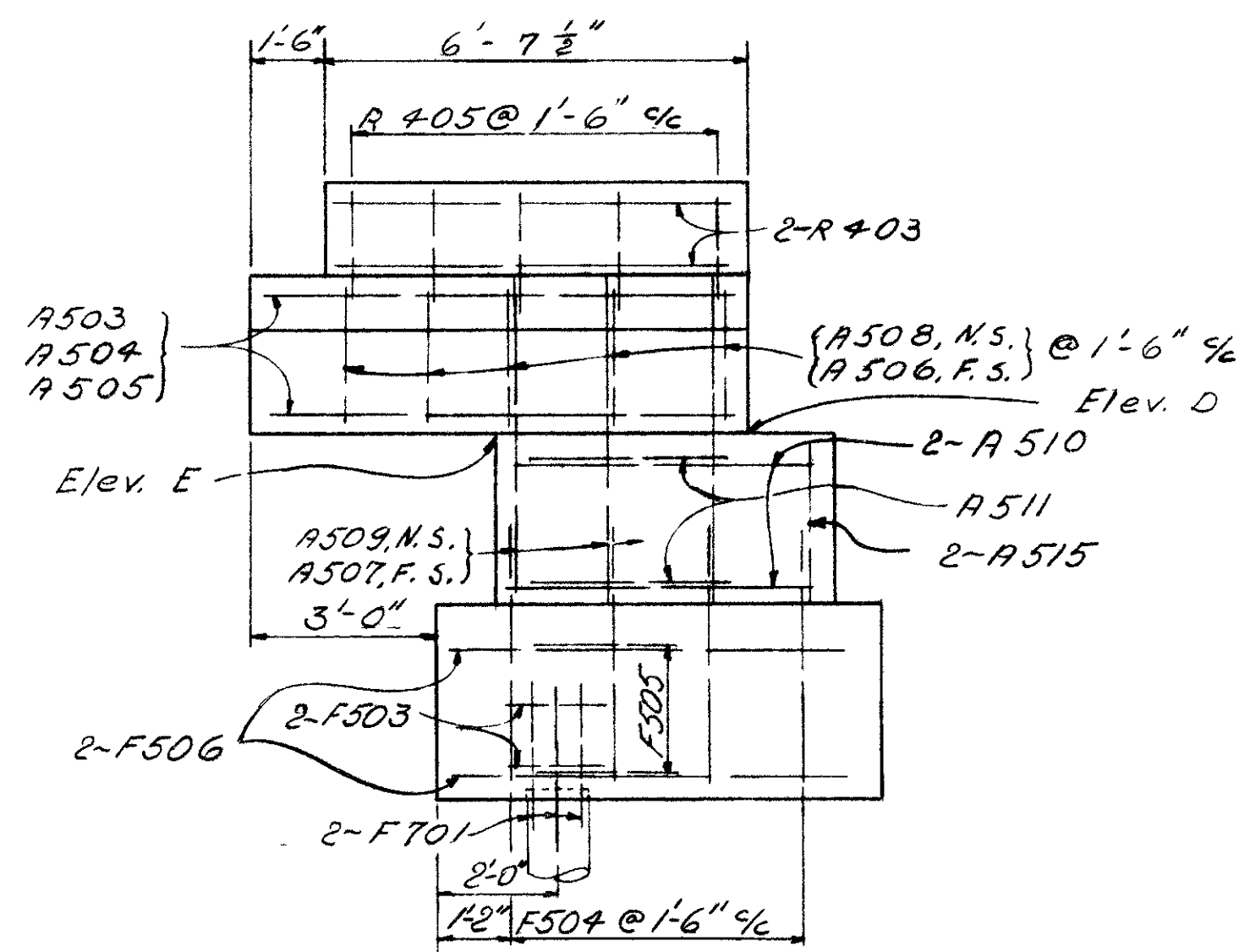
PLAN OF VIEW C - C

ELEVATIONS		
	S-Abutment	N-Abutment
D	977.31	978.86
E	977.21	978.86
F	977.11	978.94
G	977.00	978.94

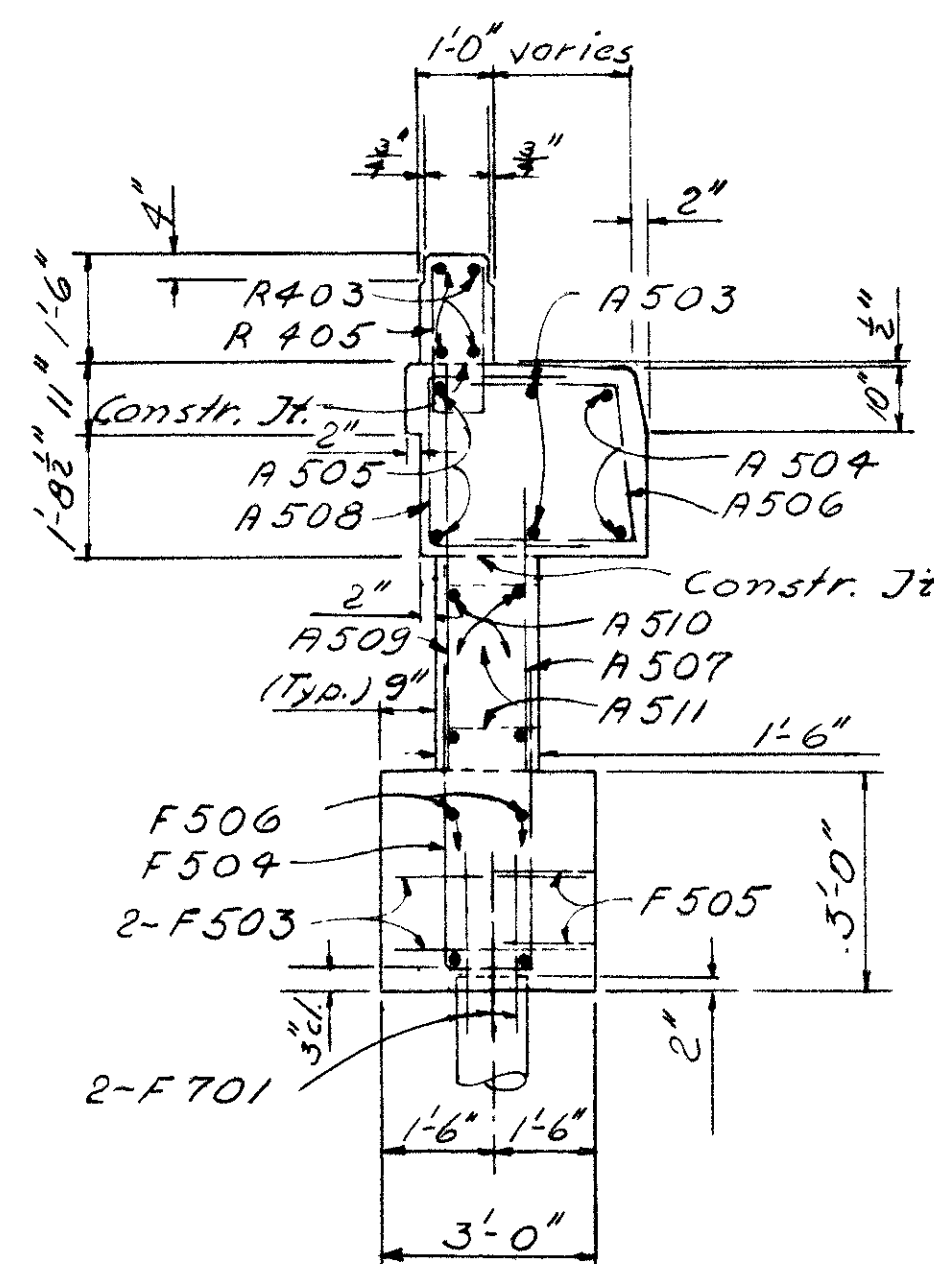


PLAN OF VIEW D - D

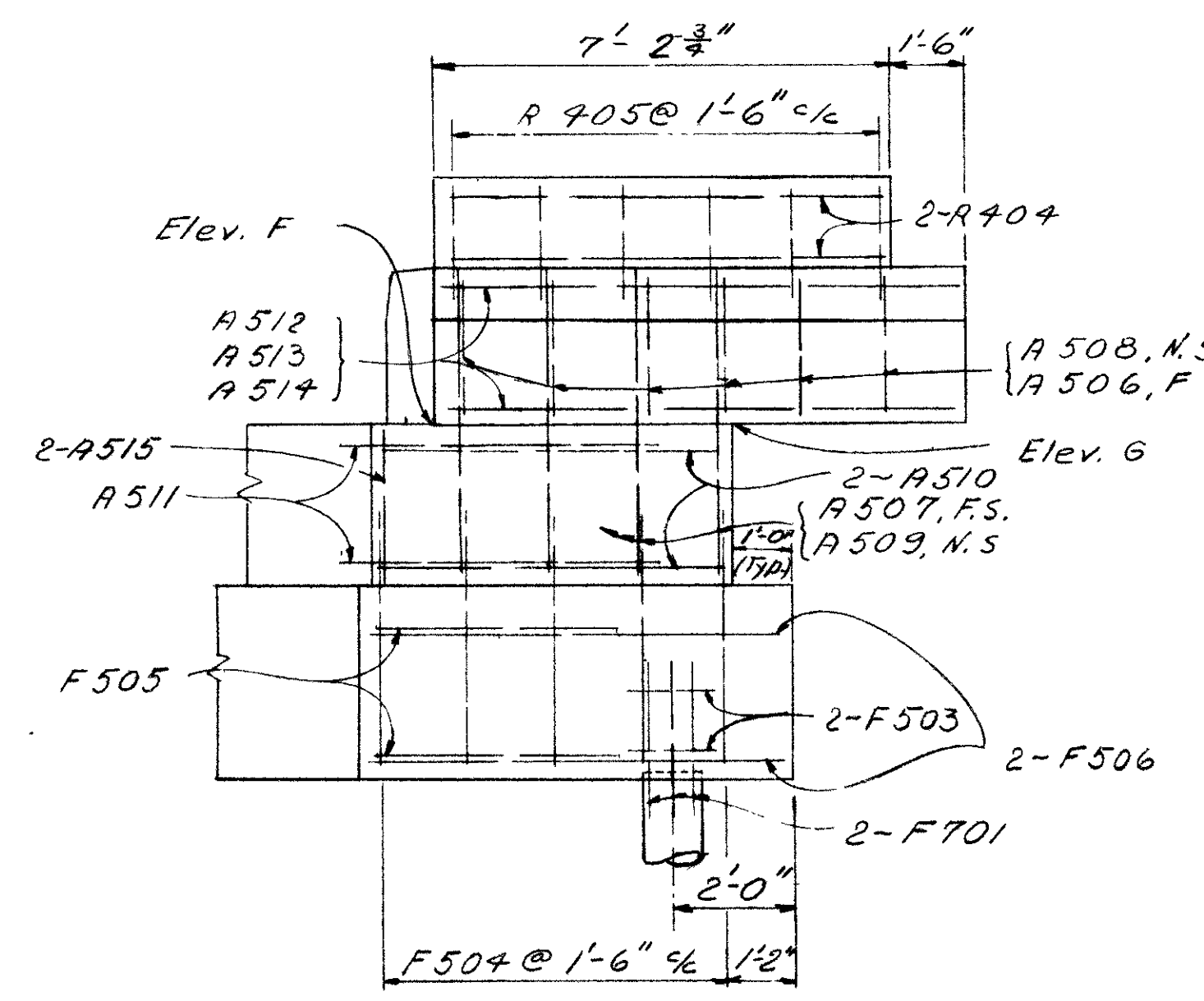
NOTES:  
Reinforcing Steel Location:  
*N.S.* indicates Near Side  
*F.S.* indicates Far Side  
Porous Backfill:  
Porous backfill shall extend to the underside of approach slab or I-22  
Guardrail End Connection:  
For guardrail attachment to end of parapet see sheet 1A4  
Parapet:  
Concrete in the parapet is included in Item 5-14 for payment.



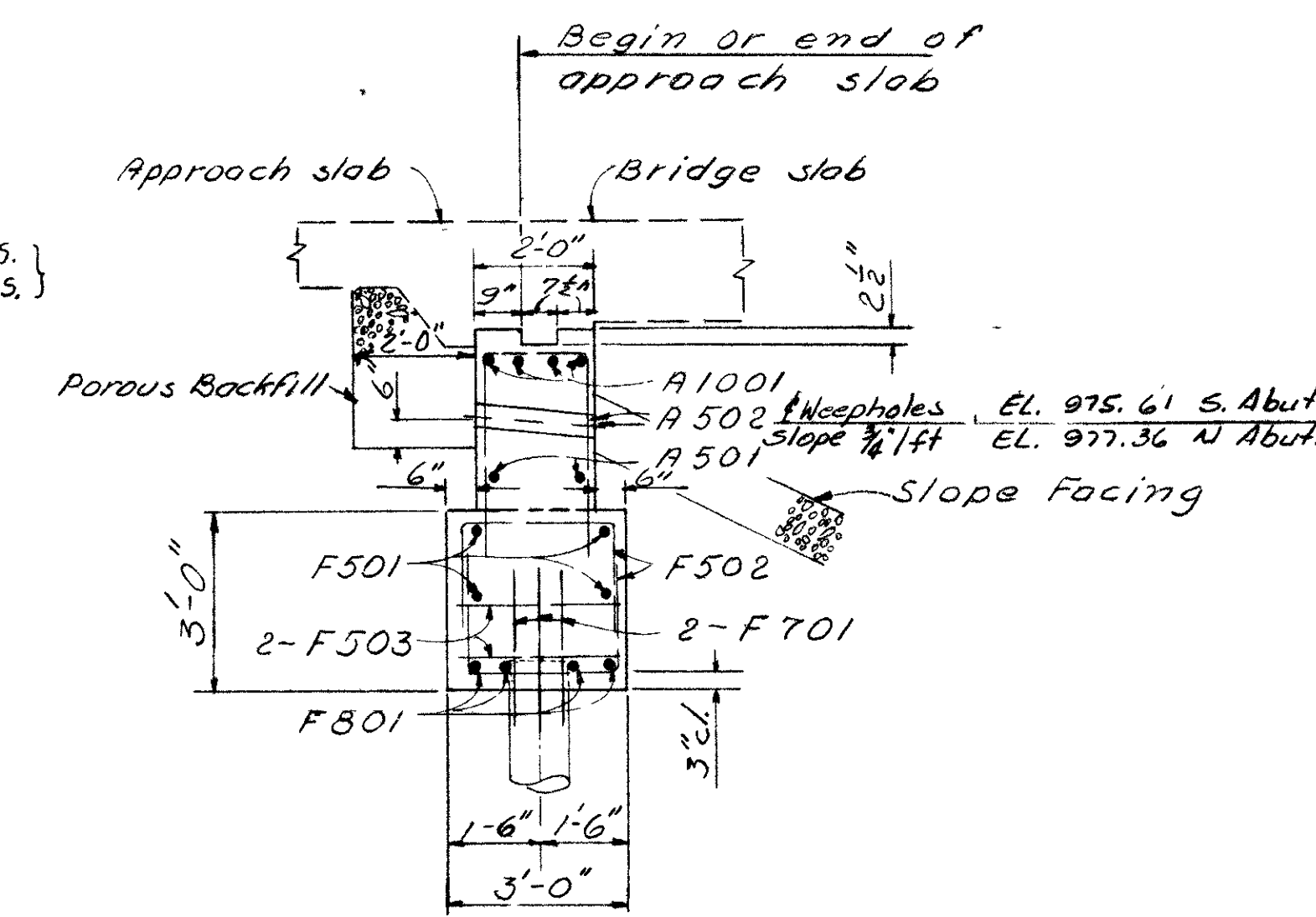
VIEW C - C



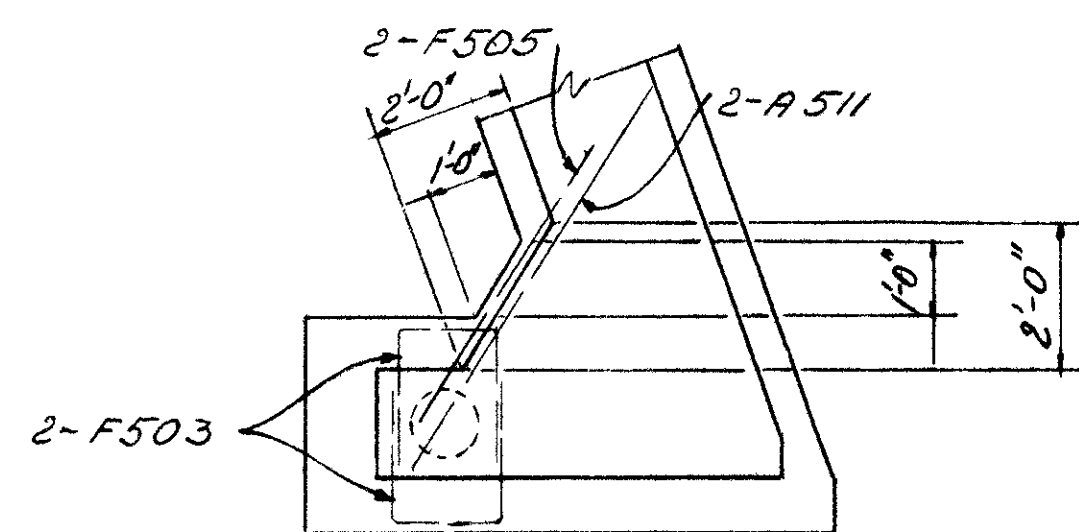
SECTION B - B



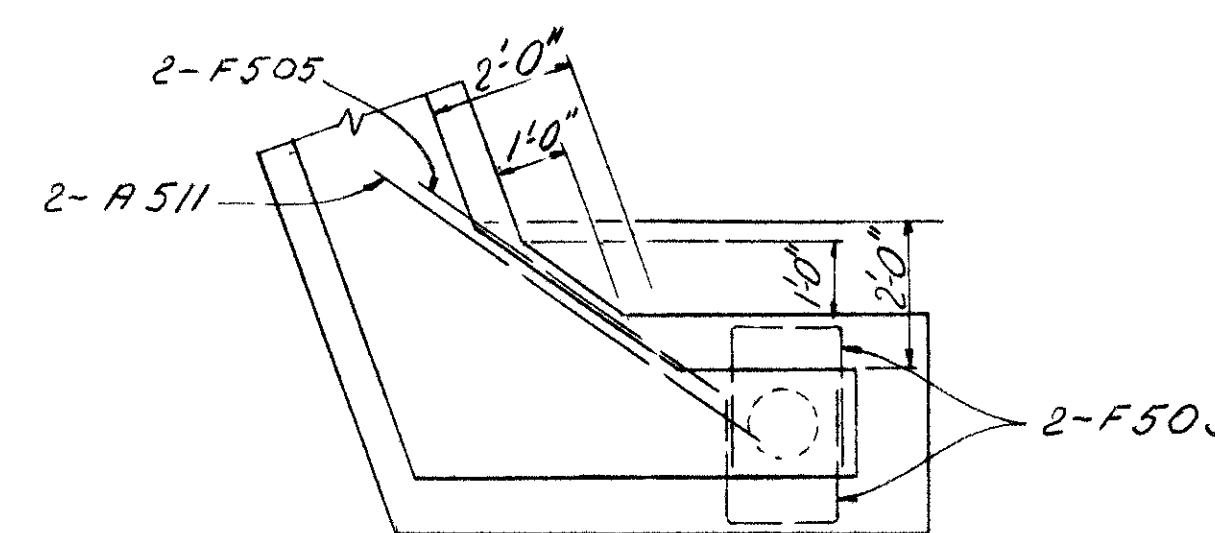
VIEW D - D



SECTION A - A



CORNER DETAIL



CORNER DETAIL

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
ABUTMENT DETAILS						
BRIDGE N <sup>o</sup> MOT - 49 - 1224						
S.B. SR. 49 UNDER DIAMOND MILL ROAD						
ACI-1097(4) Montgomery County Sta. 268 + 21.87						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.B.R.	C.B.R.		REB.	TLV	3-28-58	

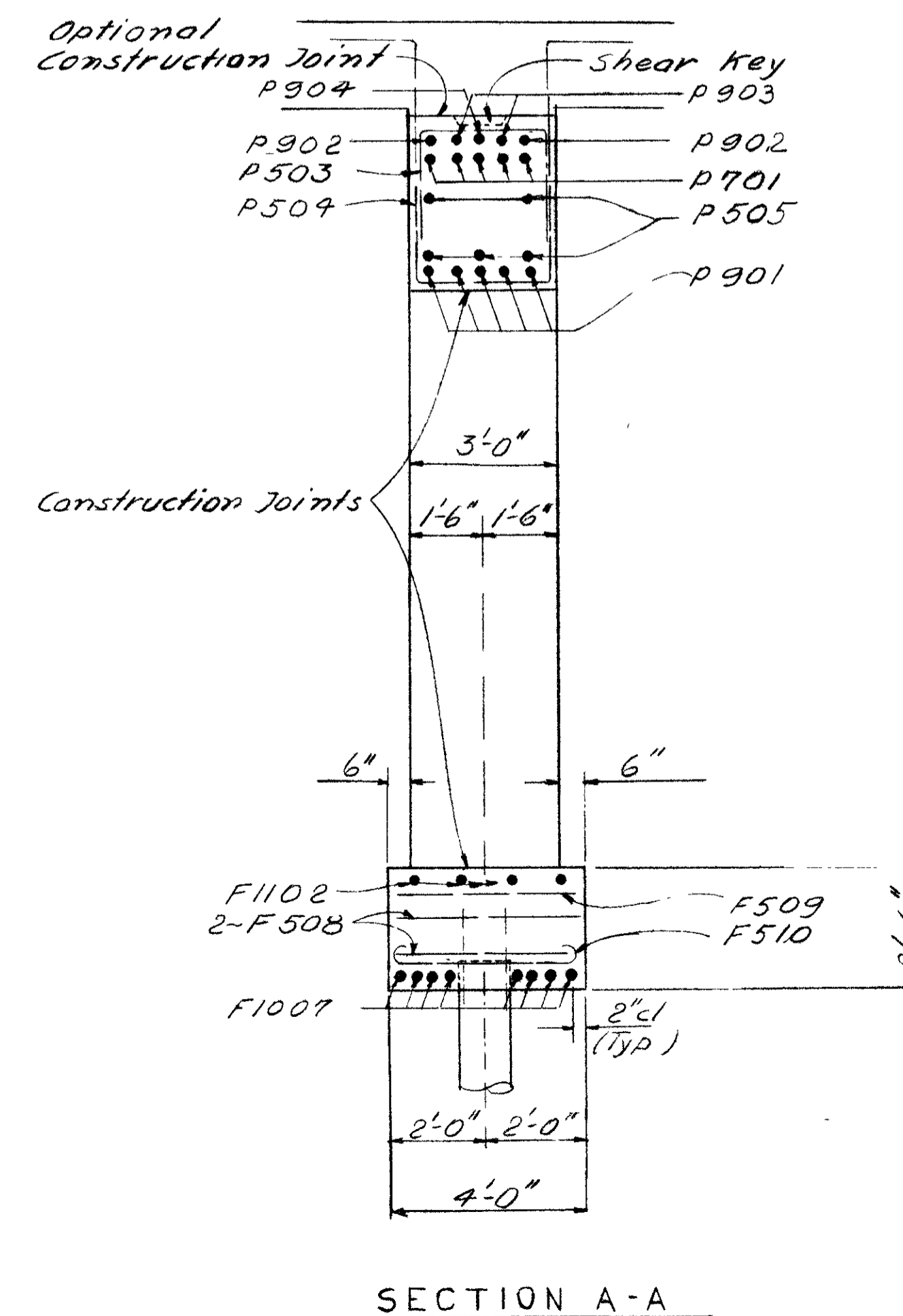
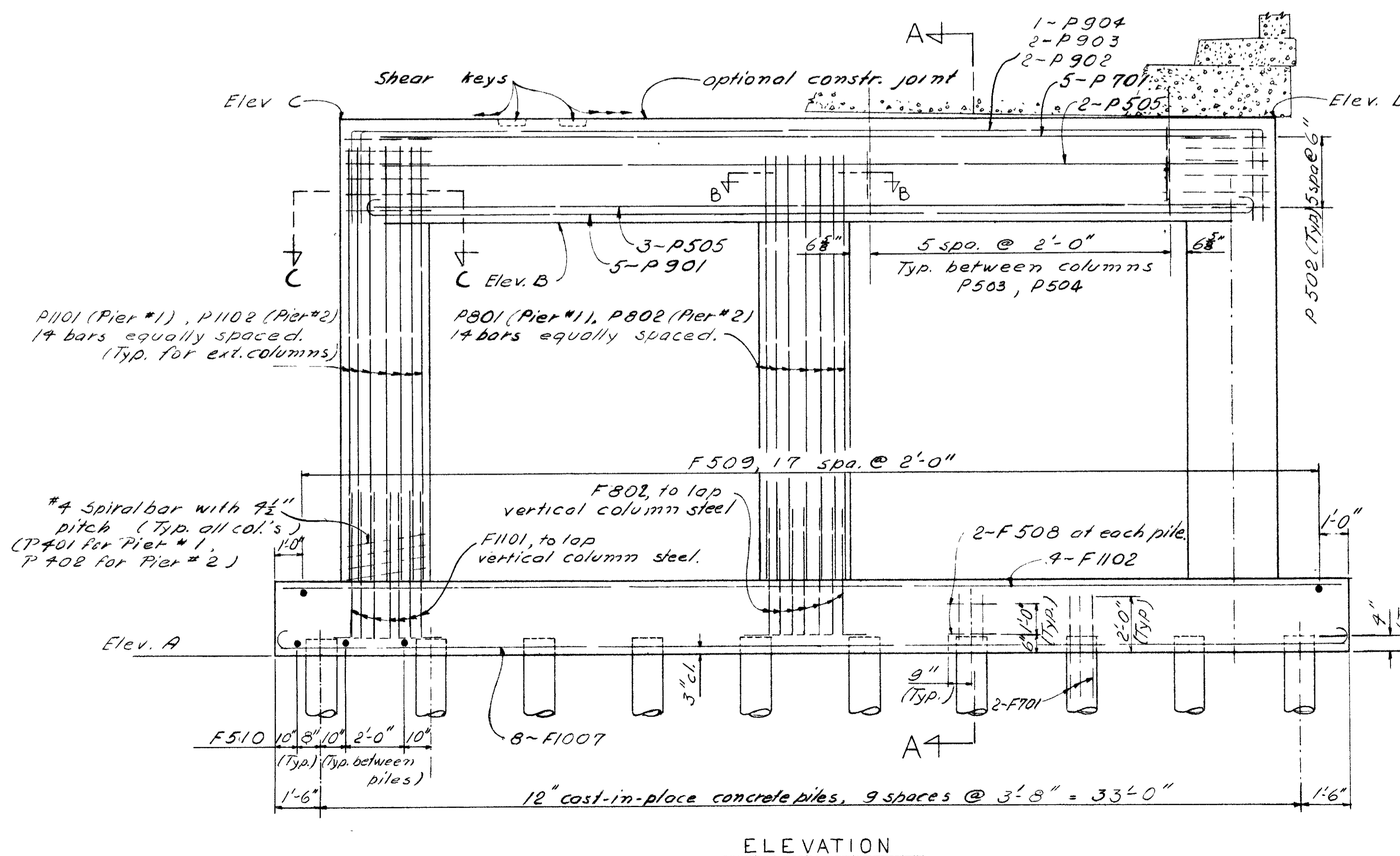
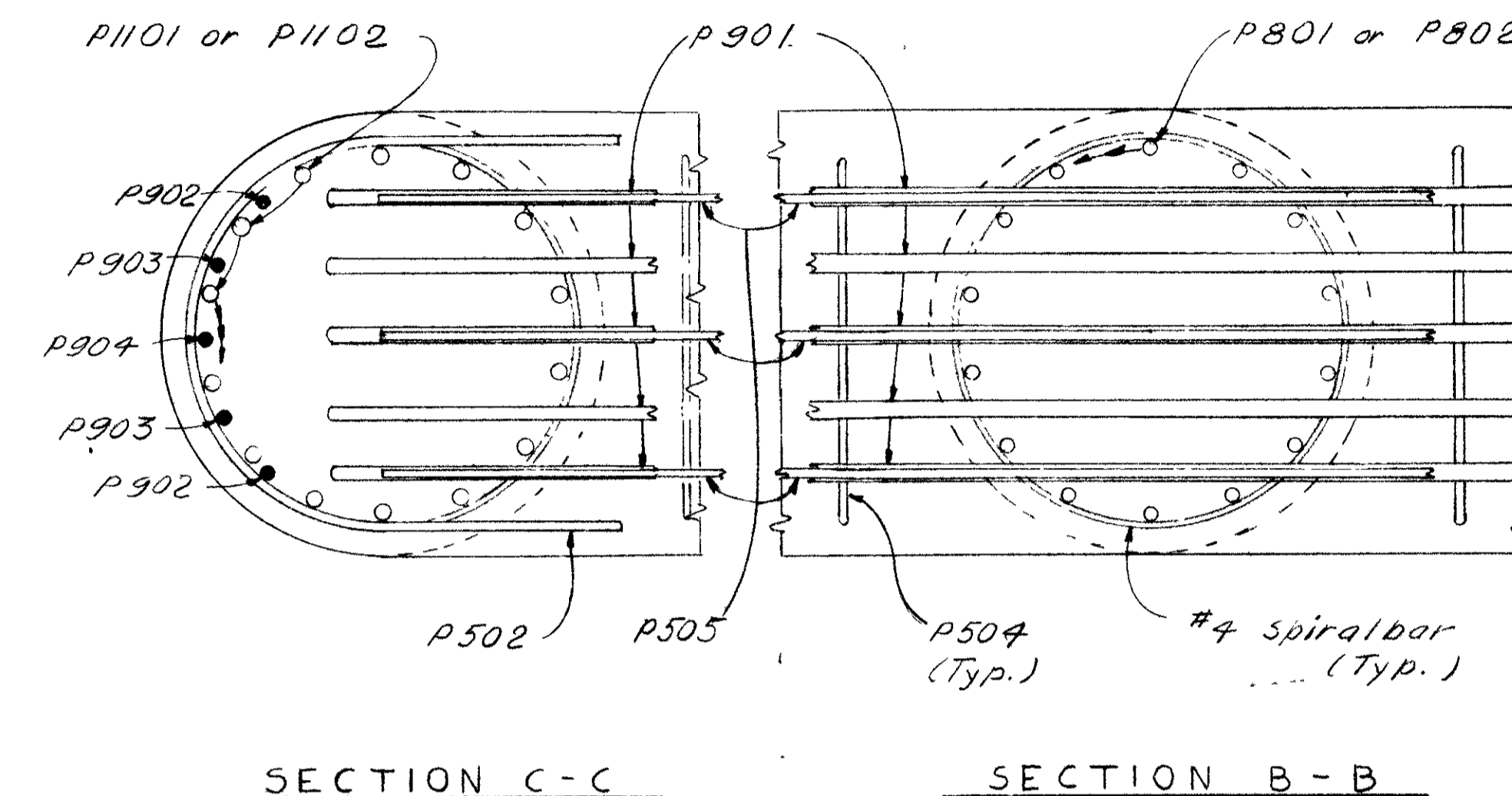
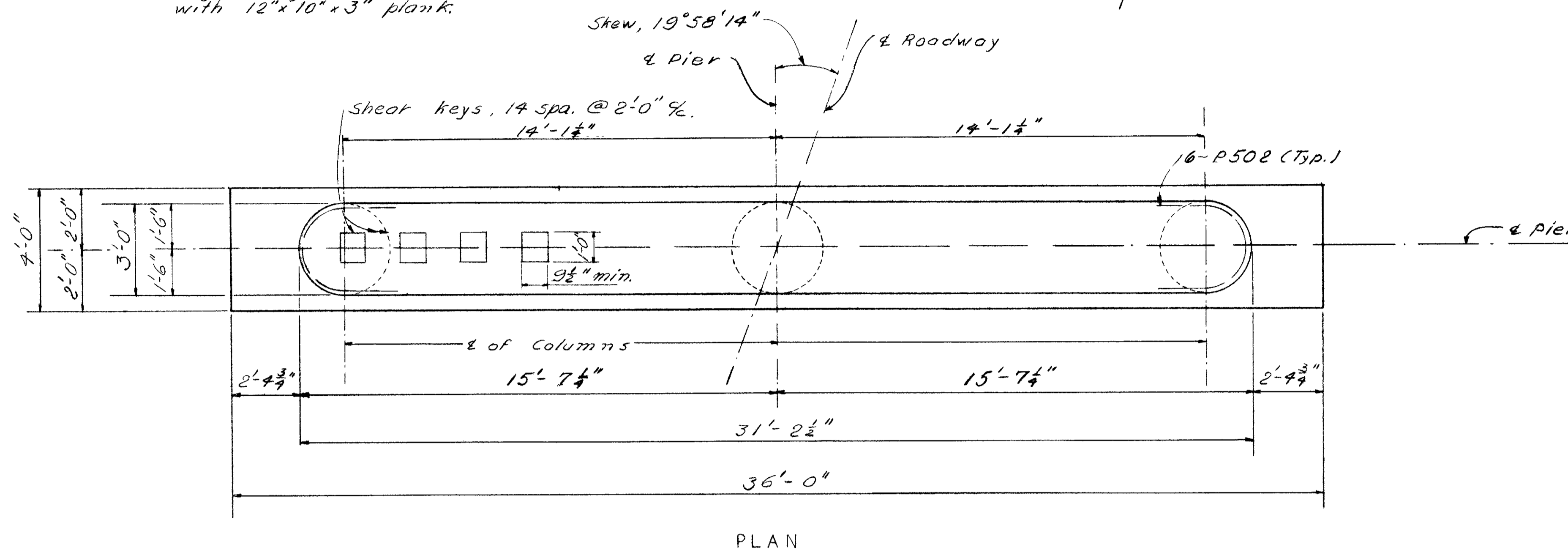


FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

204  
241

MONTGOMERY COUNTY  
MOT - 40 - 5.98  
MOT - 49 - 12.45

NOTE:  
Place shear keys only if optional construction joint is used. Shear keys may be formed with 12"x10"x3" plank.



ELEVATIONS		
	Pier #1	Pier #2
A	956.60	956.60
B	974.31	974.97
C	977.81	978.97
D	977.96	978.58

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

PIER DETAILS  
BRIDGE N° MOT - 49-1224  
S.B. SR.49 UNDER DIAMOND MILL ROAD

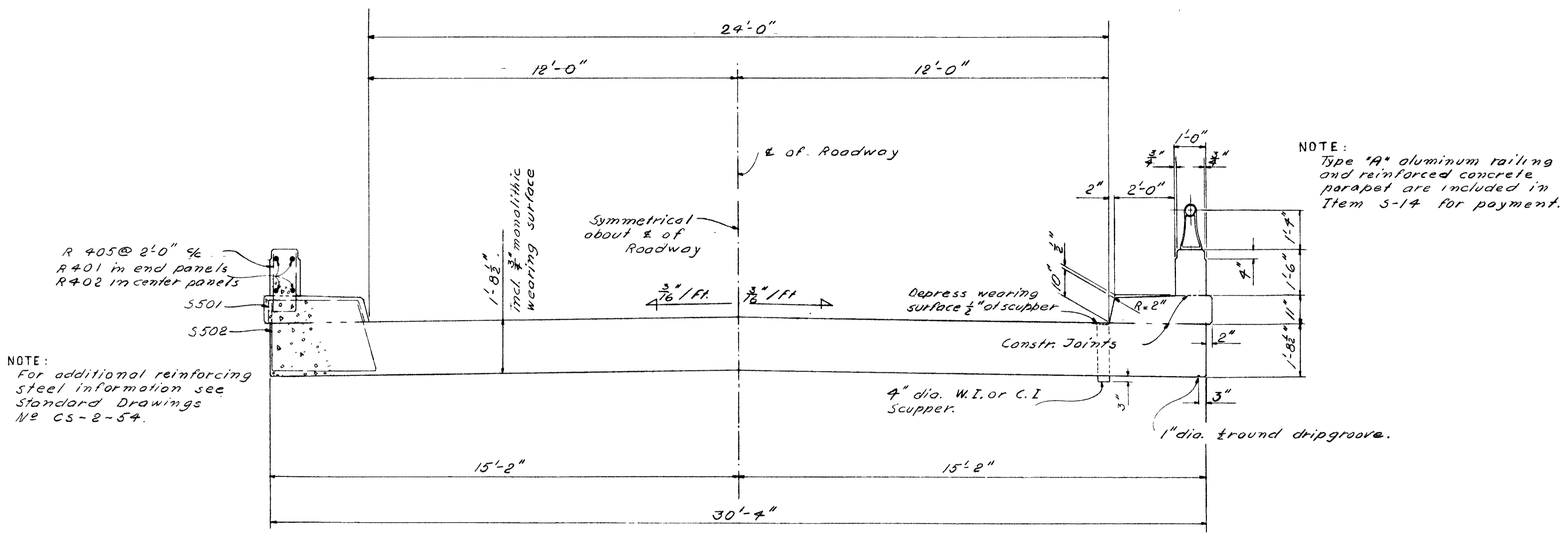
ACI-1097(4)  
Montgomery County Sta. 268+21.87

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.B.R.	C.B.R.		A.E.B.	T.L.V.	3-28-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

205  
271

MONTGOMERY COUNTY  
MOT - 40 - 5.98  
MOT - 49 - 12.45



TRANSVERSE SECTION

49-1279L

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
SUPERSTRUCTURE DETAILS BRIDGE No MOT-49-1224 S.B. S.R. 49 UNDER DIAMOND MILL ROAD ACI-1097(A) Montgomery County Sta. 268+21.87						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.B.R.	C.B.R.		R.E.B.	T.L.U.	5-28-58	

**REINFORCING**

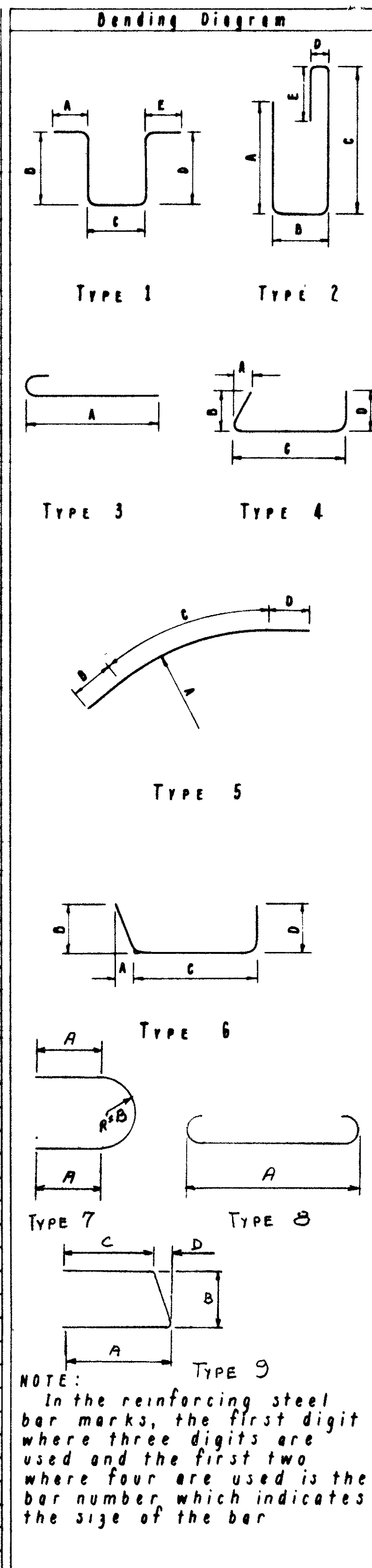
**STEEL**

**LIST**

MONTGOMERY COUNTY  
MOT - 40 - 5.98  
MOT - 49 - 12.45

Mark	N <sup>o</sup>	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp.
<b>SUPERSTRUCTURE</b>										
A1032	93	45-10	18,392							st
B1032	26	32-4	3,617	3	31-1					bt
C1032	26	28-4	3,170	3	27-1					bt
D1032	13	29-0	1,622							st
E1032	13	22-0	1,231							st
F1132	62	33-11	11,172							st
G1132	30	18-5	2,936							st
H1132	30	13-2	2,099							st
J 601	32	27-0	1,298							st
K 601	16	20-8	497							st
M 701	113	32-1	7,411							st
N 601	80	32-1	3,853							st
O 501	6	25-8	161							st
P 501	12	28-5	356							st
R1032	20	27-6	2,367							st
S 501	302	3-9	1,181	6	0-2	0-8	2-10	0-8		bt
S 502	302	6-11	2,177	4	0-6	2-0	3-2	2-0		bt
R5701	140	4-1	382	1			1-10	0-7	1-10	bt
R401	16	13-8	*							
R402	48	16-9	*							
<b>PIERS</b>										
P502	24	7-3	181	7	1-7	1-3 1/2				bt
P503	24	7-5	186	1		2-6	2-8	2-6		bt
P504	24	14-4	359	1	1-7	4-6	2-8	4-6	1-7	bt
P505	10	28-3	295							st
P701	10	28-3	577							st
P801	14	17-3	625							st
P802	14	17-9	663							st
P901	10	31-6	1,071	8	29-0					bt
P902	4	34-10	474	1	3-1	29-3	3-1			bt
P903	4	36-0	490	1	3-1	30-3	3-1			bt
P904	2	36-4	247	1	3-1	30-9	3-1			bt
P1101	28	18-1	2,690							st
P1102	28	18-7	2,764							st
F509	36	3-8	138							st
F510	40	4-10	202	8	3-8					bt
F508	80	7-7	633	1	3-2	1-6	3-2			bt
F802	28	5-5	405	1	1-0	4-8				bt
F1007	16	38-6	2,651	8	35-8					bt
F1101	56	7-0	2,083	1	1-8	5-8				bt
F1102	8	35-8	1,576							st
F701	120	4-0	381							st

Mark	N <sup>o</sup>	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp.
<b>ABUTMENTS</b>										
R403	8	6-3	*							
R404	8	6-10	*							
RR401	22	4-1	60	1		1-10	0-7	1-10		bt
A501	4	31-1	130							st
A502	32	8-5	281	1		3-6	1-8	3-6		bt
A503	4	6-6	28							st
A504	4	7-0	30	5	7-8	1-6	5-6			bt
A505	4	7-9	32							st
A506	22	5-4	122	9	1-9	2-3	1-7	0-2		bt
A507	14	3-6	51							st
A508	22	5-2	119	1		1-7	2-3	1-7		bt
A509	14	5-7	82							st
A510	16	5-3	87							st
A511	8	5-7	47							st
A512	4	7-10	33							st
A513	4	8-6	36	5	7-8	3-0	5-6			bt
A514	4	8-4	35							st
A515	8	2-10	24							st
A1001	8	31-2	1,073							st
F501	8	32-8	273							st
F502	68	6-7	467	1		2-1	2-8	2-1		bt
F503	64	5-11	395	1		2-3	1-8	2-3		bt
F504	18	9-7	180	1		4-4	1-2	4-4		bt
F505	8	4-10	40							st
F506	16	6-10	114							st
F701	96	4-0	785							st
F801	8	32-8	698							bt
<b>REPLACEMENT BARS</b>										
RE401	1	5-3								st
RE501	1	5-7								st
RE601	1	5-11								st
RE701	1	6-2								st
RE801	1	6-6								st
RE901	1	6-10								st
RE1001	2	7-2								st
RE1101	2	7-6								st
<b>REPLACEMENT STEEL FOR SPIRALS</b>										
RE402	1	5-3		5	1-4	5-3				bt



ESTIMATED QUANTITIES							
Item	Total	Unit	Description	Abut.	Pier	Supers.	General
E-2	179	cu.yd.	Unclassified Excavation	117	62		
S-1	308	cu.yd.	Class "C" concrete, Superstructure & Pier Caps		24	284	
S-1	25	cu.yd.	Class "C" concrete, Columns		25		
S-1	28	cu.yd.	Class "E" concrete, Abutments above Footings	28			
S-1	57	cu.yd.	Class "E" concrete, Footings	30	27		
S-4	90.073	lb	Reinforcing Steel	5,222	20,977	63,874	
S-14	291	lin.ft.	Railing (Aluminum rails & supports and concrete parapets)	28		263	
S-16	Lump Sum		First Test Pile				Lump
S-18	868	lin. ft.	12" cast-in-place reinforced concr. Piles	368	500		
S-29	11	cu.yd.	Porous Backfill	11			
S-29	121	cu.yd.	Slope Facing (S-29.05 Type)				121
S-29	22	each	Scuppers, 4" dia. W.I. or C.I. Pipe			22	

SPIRALS - HOT ROLLED							
Mark	N <sup>o</sup>	Length	Core	Pitch	Turns	Spacers	Weight
P401	3	15-3	32	4 1/2	44	12	853
P402	3	15-9	32	4 1/2	45	12	873

**SPIRALS**  
THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP.  
THE NO. OF TURNS SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS 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 ITEM S-4  
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

\* HORIZONTAL PARAPET REINFORCING THESE BARS ARE INCLUDED WITH THE RAILING FOR PAYMENT

**REPLACEMENT BARS**  
IF REINFORCING BARS ARE FABRICATED FROM STOCK WHICH HAS PREVIOUSLY BEEN TESTED AND APPROVED BY THE OHIO HIGHWAY TESTING LABORATORY, TEST SAMPLES AS PROVIDED IN SEC. S-402 NEED NOT BE FURNISHED AND REPLACEMENT BARS WILL NOT BE REQUIRED.

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

**REINFORCING STEEL LIST & ESTIMATED QUANTITIES**

BRIDGE N<sup>o</sup> MOT-49-1224  
SB. SR. 49 UNDER DIAMOND MILL ROAD  
Montgomery County, Ohio Sta 268+21.87

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.B.R.	C.B.R.		R.E.B.	T.L.U.	3-20-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

207  
241

MONTGOMERY COUNTY  
MOT - 40-5.98  
MOT - 49-12.45

**REFERENC ES:**

**Standard Drawings:**

- |                             |   |
|-----------------------------|---|
| Railing Details, Type A     | - AR-1-57 dated 4-9-57, revised 3-1-58. |
| Superstructure Details      | - CS-2-54 dated 12-1-54                 |
| Supplemental Specifications | - S-114 rev. 8-1-57                     |
| Guardrail & Railing Details | - Sheet 144                             |

**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 revisions thereof dated 2-21-58.

**FOUNDATION SOUNDINGS:** Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.

**SLAB THICKNESS** of 20-1/2 inches includes 3/4 inch for monolithic wearing surface.

**SLOPE FACING** shall be provided under the structure at both abutments. The porous drain material shall be 12" thick and shall extend from the face of the abutment down to the bottom of slope and transversely to 3 ft. outside the edge of the superstructure.

**PILES** shall be driven to a minimum bearing capacity of 30 tons per pile for the abutments and 40 tons per pile for the piers.

**TRAFFIC MAINTENANCE:** For maintenance of traffic, see General Note Sheet #12 of Roadway Plans.

**MAXIMUM PILE REACTION:** The maximum calculated pile reaction including lateral loads is as follows:

- |           |                      |
|-----------|----------------------|
| Abutments | - 33 tons per pile   |
| Pier 1    | - 40.5 tons per pile |
| Pier 2    | - 40.5 tons per pile |

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CONSULTING ENGINEERS  
COLUMBUS, OHIO

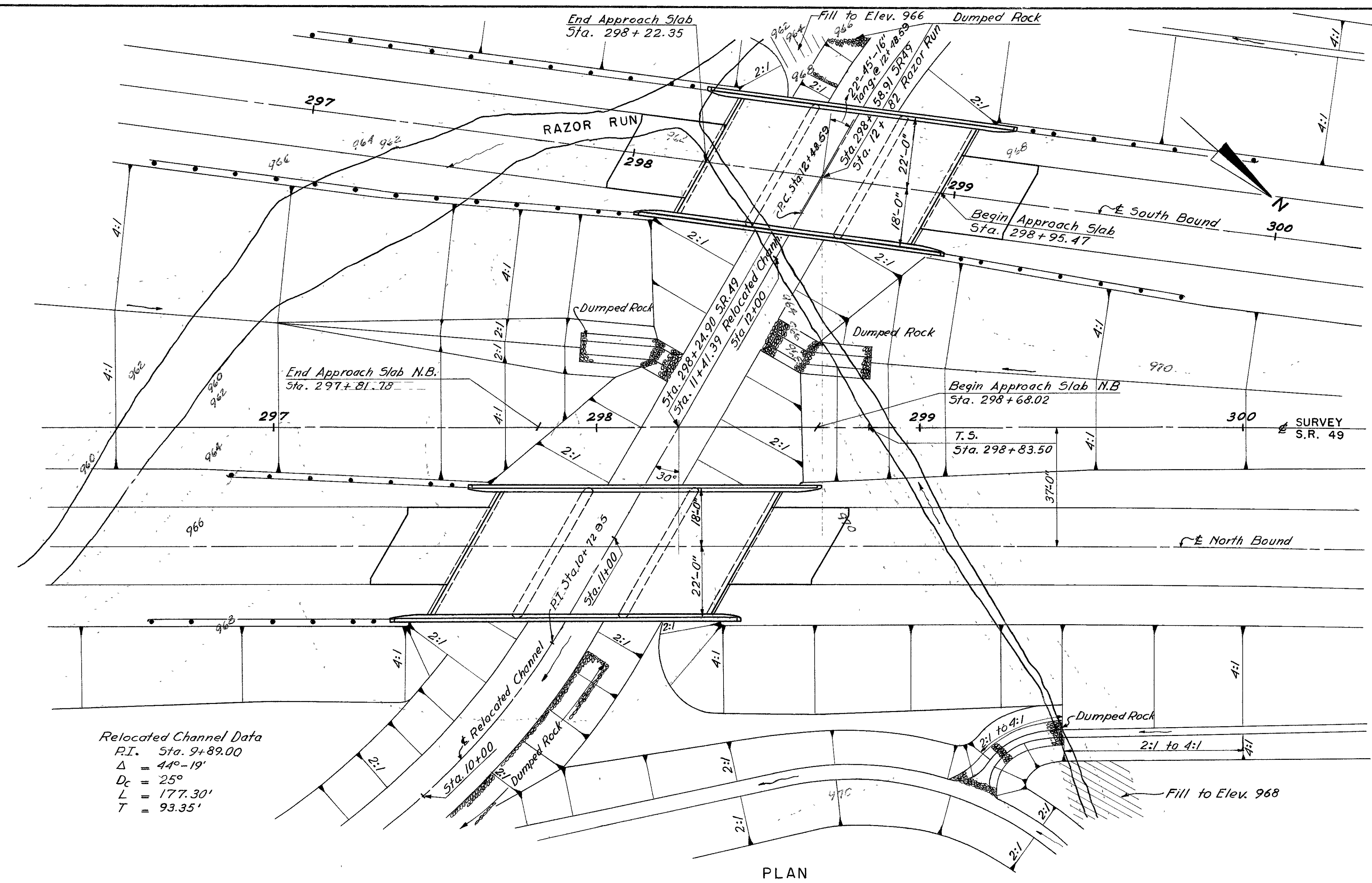
**GENERAL NOTES**  
BRIDGE N<sup>o</sup> MOT 49-1224  
S.B. SR 49 UNDER DIAMOND MILL ROAD  
MONTGOMERY COUNTY  
STA. 268+21.87

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
					7/10 3-28-58	

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

208  
241

MONTGOMERY COUNTY  
MOT - 40-5.98  
MOT - 49-12.45



Relocated Channel Data  
P.I. Sta. 13+08.50  
 $\Delta = 37^\circ$   
 $D_c = 32'$   
 $L = 115.63'$   
 $T = 59.91'$

S.R. 49 Curve Data  
 $\Delta = 33^\circ-12'-00''$   
 $D_c = 2'-30''$   
 $R_c = 2291.83'$   
 $L_c = 1028.00'$   
 $L_s = 300'$   
 $T_s = 833.69'$

Relocated Channel Data  
P.I. Sta. 9+89.00  
 $\Delta = 44^\circ-19'$   
 $D_c = 25'$   
 $L = 177.30'$   
 $T = 93.35'$

**PROPOSED STRUCTURE SOUTH BOUND**  
Type: Continuous Concrete Slab with Capped Pile Abutments and Piers  
Spans: 22' - 27.5' - 22'  
Roadway: 40' flt of parapets with aluminum railing and 1'-0" curbs (adequate for AASHTO alternate loading)  
Wearing Surface: 1" Monolithic Concrete  
Skew: 22°-45'-16" Lt forward  
Alignment: Tangent  
Approach Slab: A5-1-54(25' Long)

**PROPOSED STRUCTURE NORTH BOUND**  
Type: Continuous Concrete Slab with Capped Pile Abutments and Piers  
Spans: 26' - 32.5' - 26'  
Roadway: 40' flt of parapets with alum. railing and 1'-0" curbs (adequate for AASHTO alternate loading)  
Wearing Surface: 1" Monolithic Concrete  
Skew: 30°-00'-00"  
Alignment: Tangent  
Approach Slab: A5-1-54(25' Long)

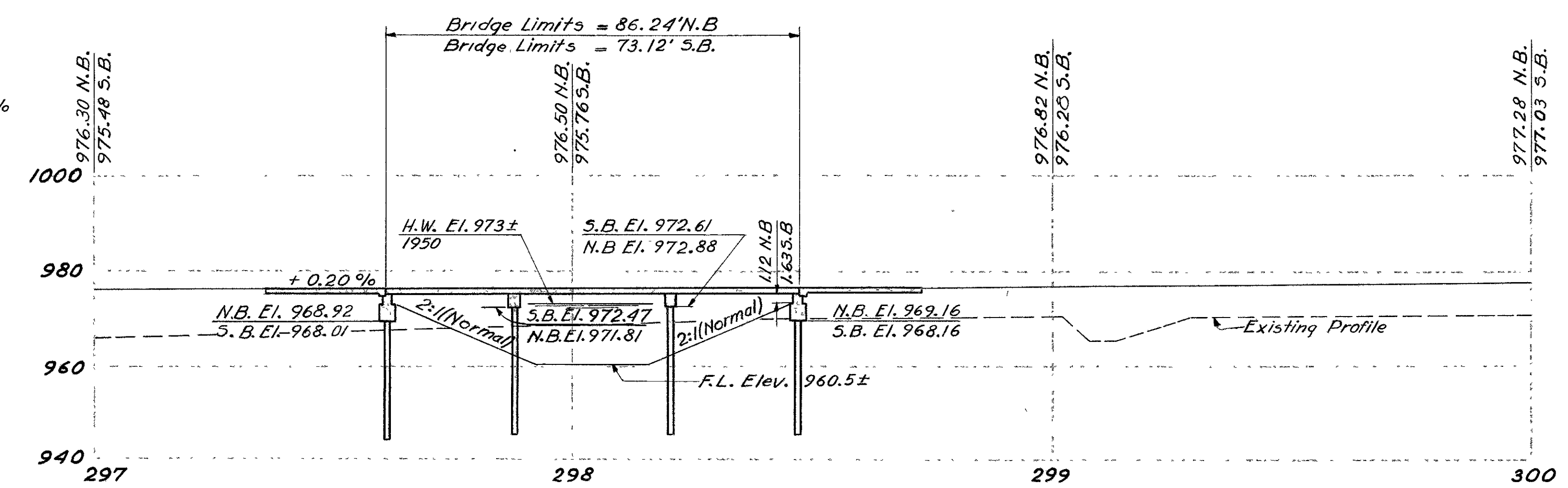
For channel relocation see Sheet 102 & 108 Roadway Plans

PLAN

**South Bound**  
P.V.I. Sta. 297+00  
1400' Unsymm.V.C.  
 $T_1 = 550'$   $T_2 = 850'$   
P.V.I. Elev. = 966.80  
Corr. = 8.68  
P.G. = 975.48  
 $G_1 = -3.00\%$  ;  $G_2 = +2.20\%$

**North Bound**  
P.V.I. Sta. 301+75  
800' V.C.  
Elev. = 977.25  
Corr. = 1.20  
P.G. = 978.45  
 $G_1 = +0.20\%$  ;  $G_2 = +1.40\%$

Drainage Area = 2200 acres  
Calc. 25yr. HW El. 965.0  
Observed 1950 HW = El. 973.0



PROFILE ON C. OF N.B.

All piling shall be 12 BP 53  
Estimated average Pile length  
Abutments 24'-0"  
Piers 34'-0"

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

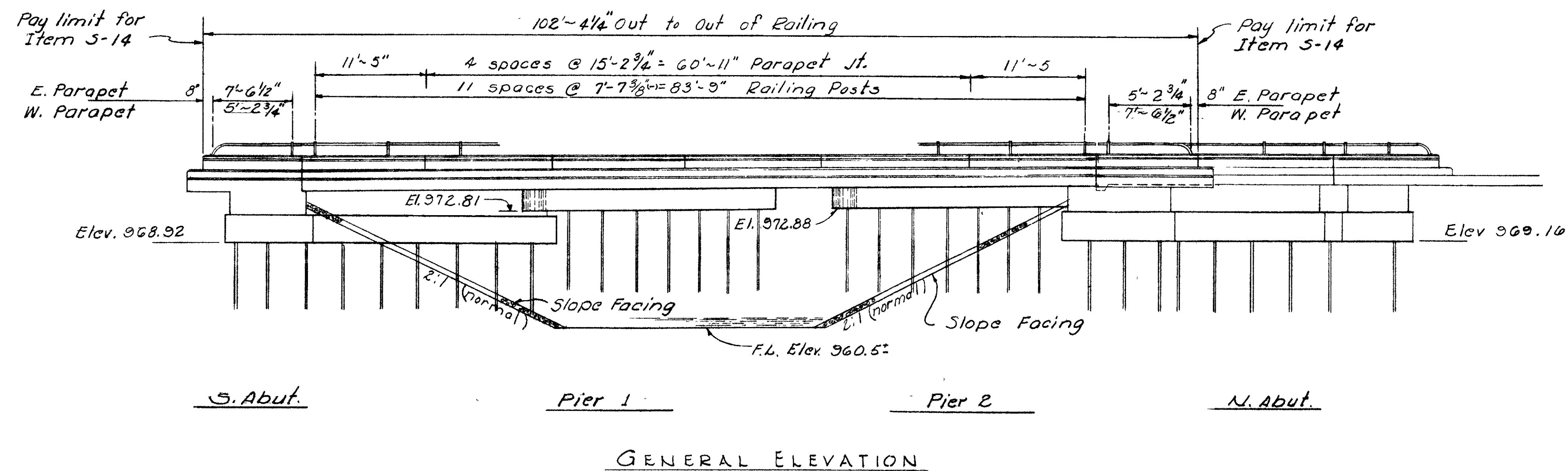
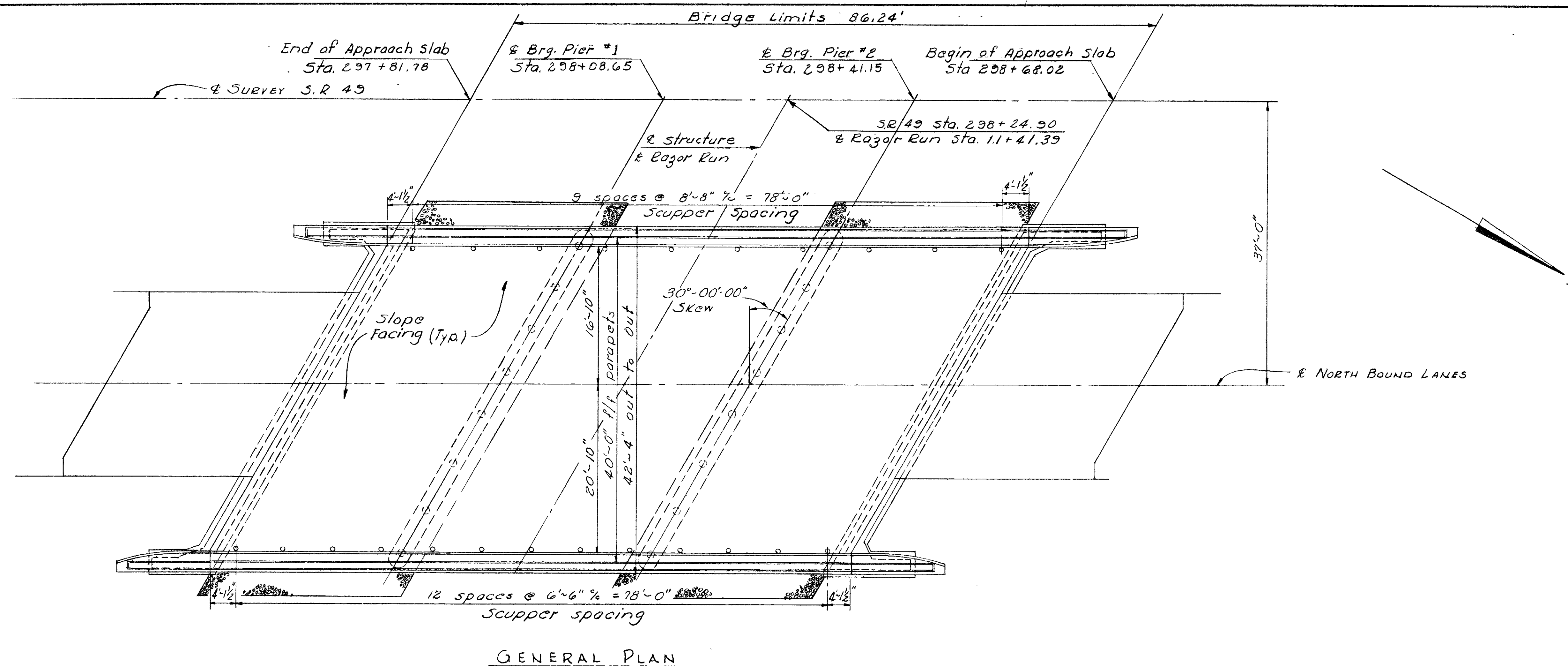
**SITE PLAN**  
BRIDGE No MOT - 49 - 12 81  
S.R. 49 OVER RAZOR RUN  
F-127(2)  
MONTGOMERY COUNTY STA. 298+24.90

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JO'R	JO'R	J.F.M.	Wisse	TLU	4-3-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

209  
241

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-40-12.45

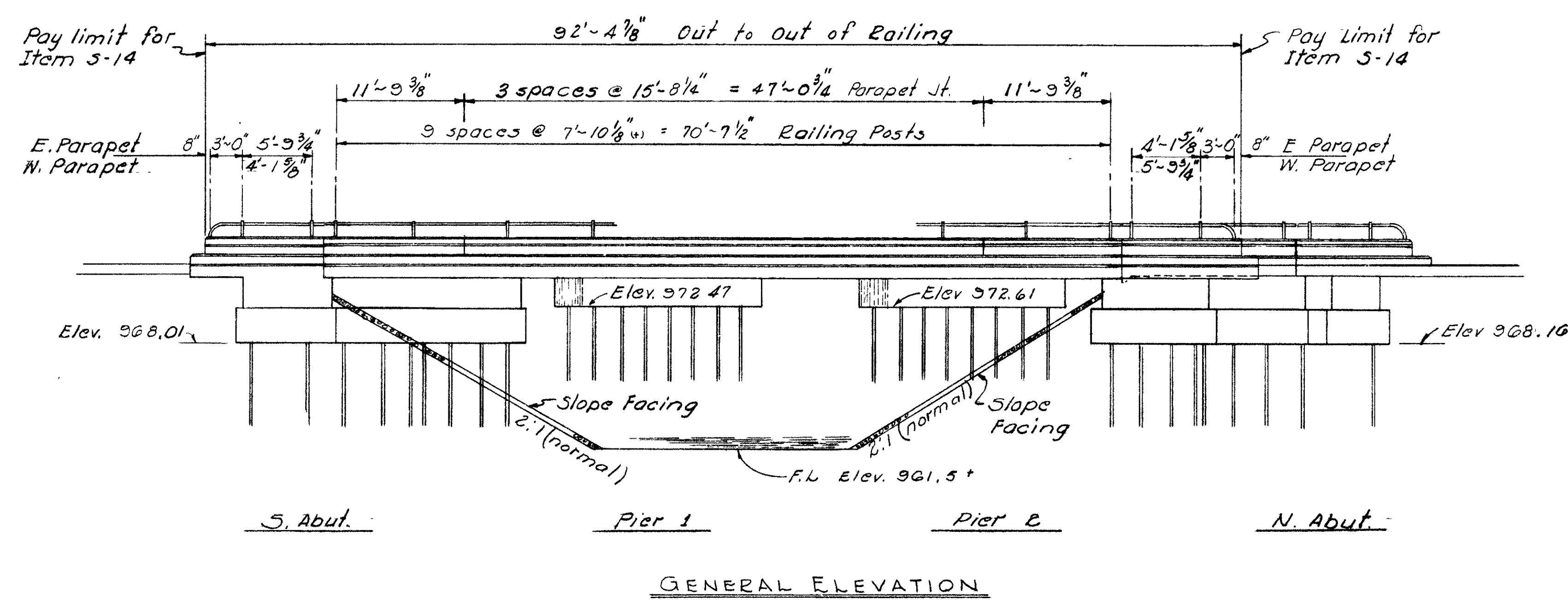
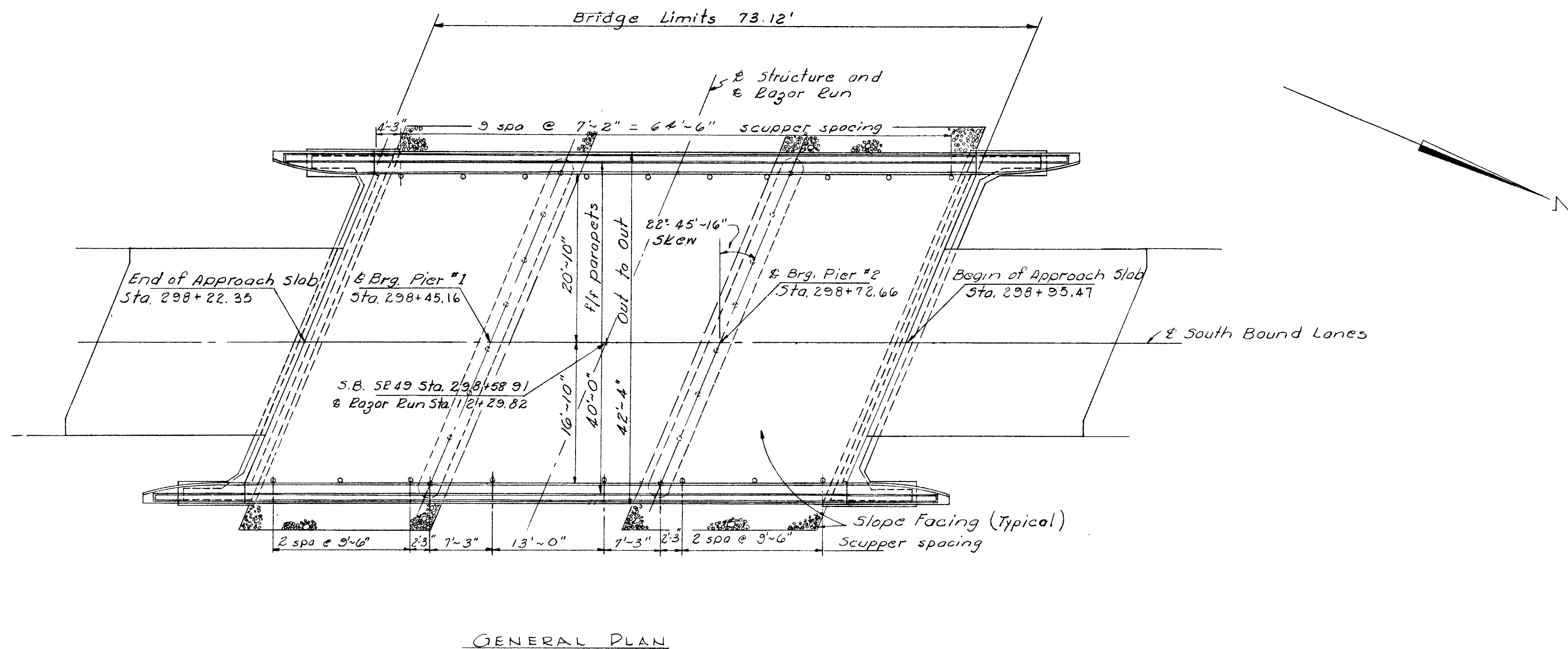


ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO							
GENERAL PLAN & ELEVATION (NORTH BOUND)							
BRIDGE No. MOT-49-1281							
S.R. 49 OVER RAZOR RUN							
MONTGOMERY COUNTY							
F-127(2)				STA. 298+24.90			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
E.D.A.	E.D.A.		JOP	TLV	4-3-58		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

210  
241

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

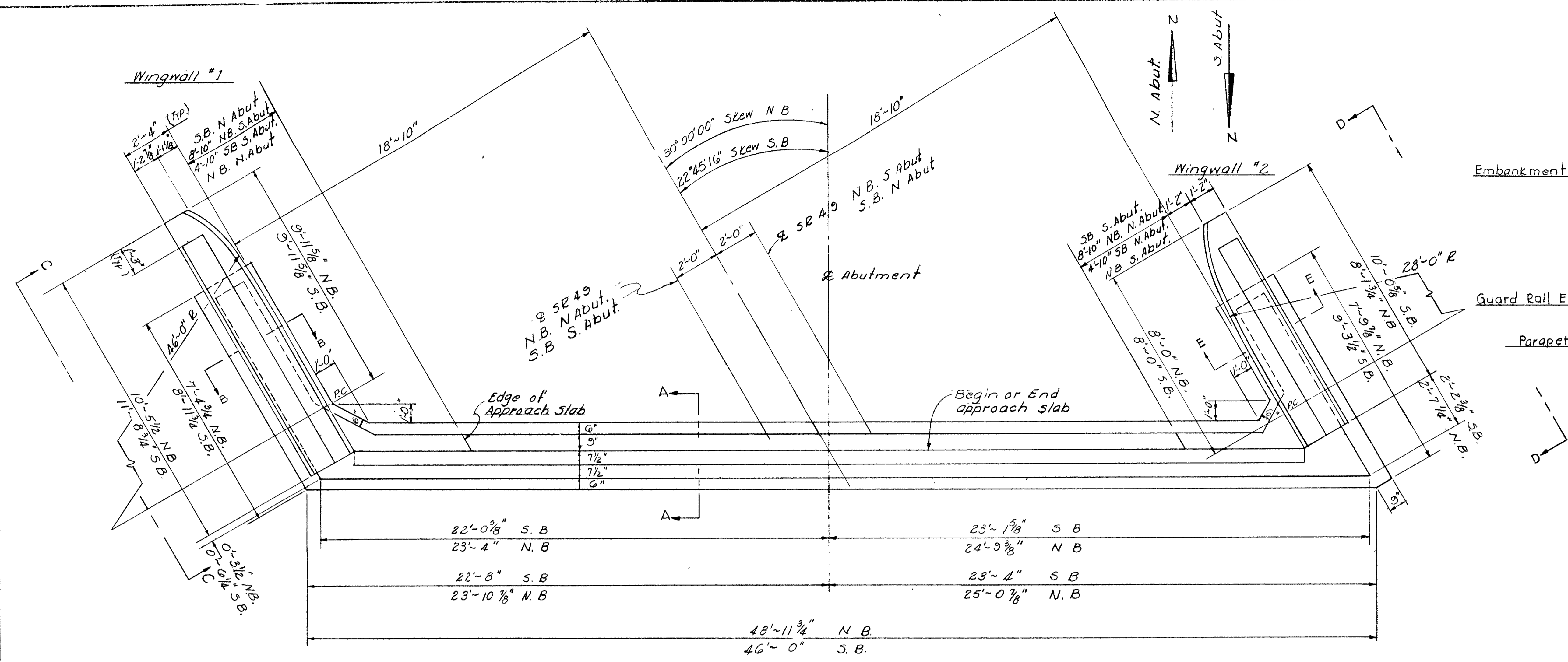


ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
GENERAL PLAN & ELEVATION (SOUTH BOUND)						
BRIDGE No. MOT-49-1281						
S.R. 49 OVER RAZOR RUN						
MONTGOMERY COUNTY						
F-127(2)				STA. 298+24.90		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EDA	EDA		JOR	TLO	4-3-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

MONTGOMERY COUNTY  
 MOT. - 40 - 598  
 MOT. - 49 - 12.45

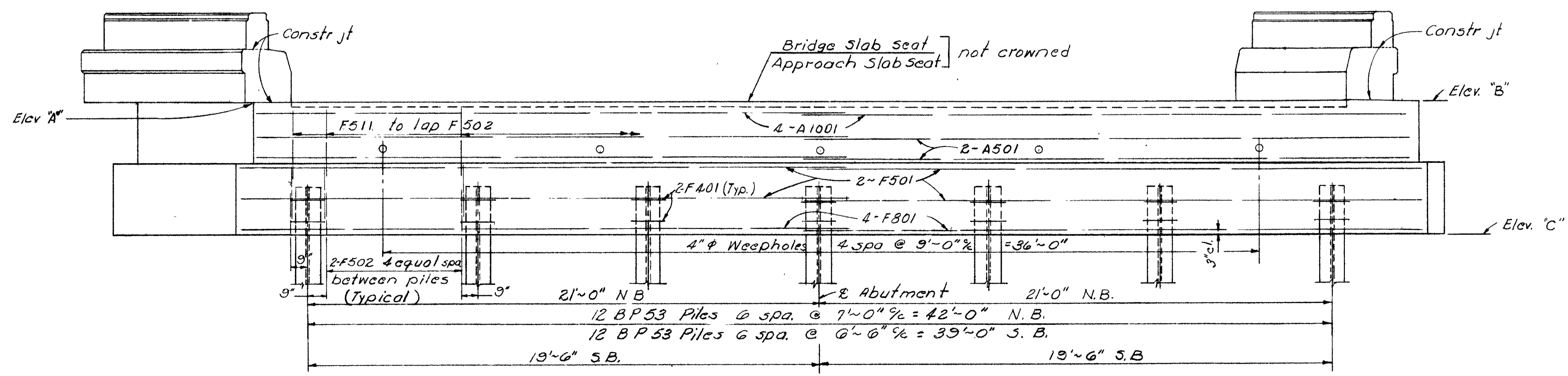
211  
241



PLAN

- NOTES**
- Embankment:** The embankment shall be placed and compacted to elevation 913.6 at the S<sub>3</sub> Abutment and 913.9 at the N<sub>3</sub> Abutment on the North Bound structure and elevation 972.7 at the S<sub>2</sub> Abutment and elevation 972.9 at the N<sub>2</sub> abutment on the South Bound structure, after which excavation shall be made for the abutments.
  - Guard Rail End Connection:** For guardrail connection to end of parapet see sheet 144
  - Parapets:** Concrete parapets are included in Item S-14 for payment.

Note: For sectional views and additional reinforcing steel see sheet 212  
 For elevations A B & C see sheet 212  
 N.B. indicates North Bound Structure  
 S.B. indicates South Bound Structure

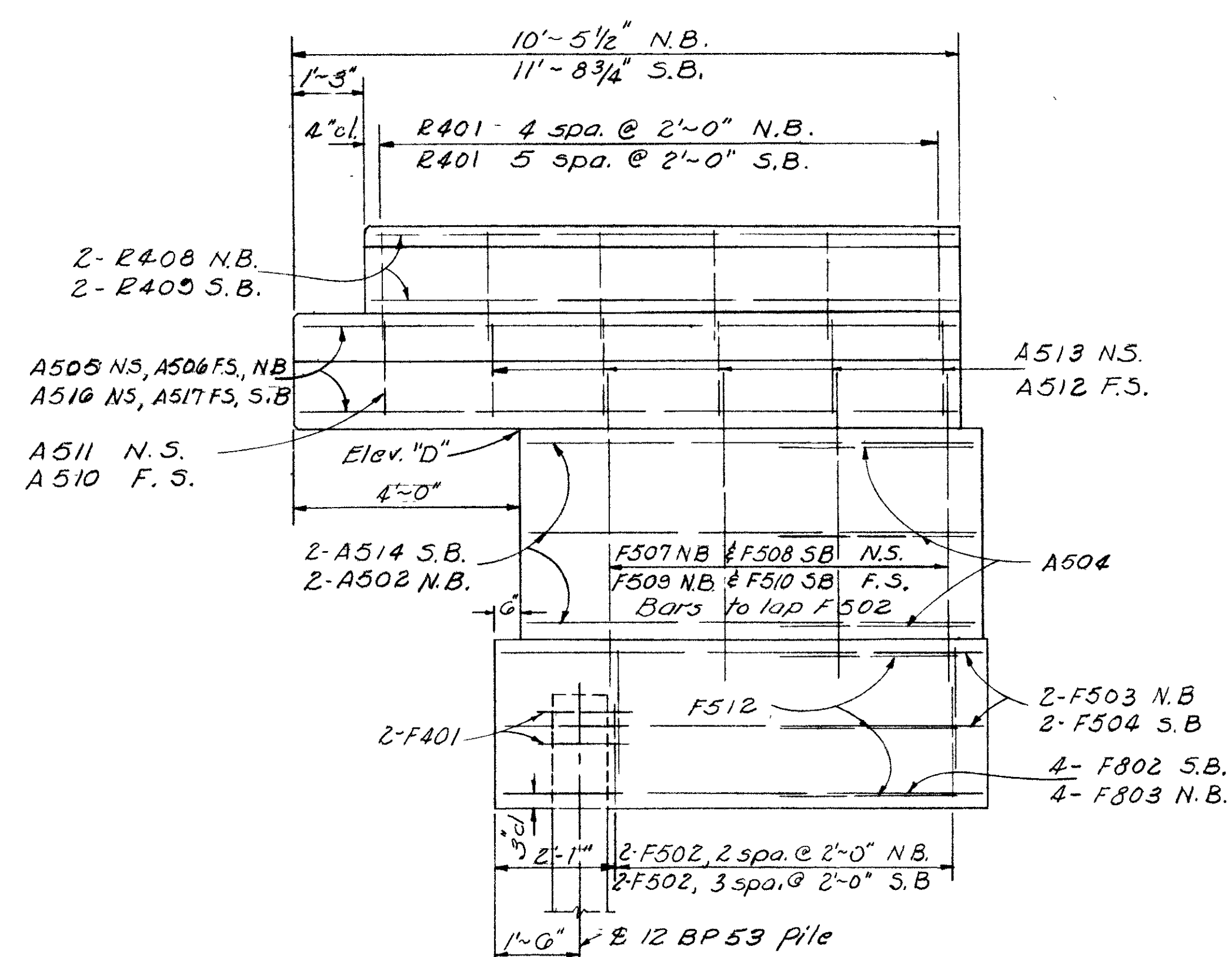


ELEVATION

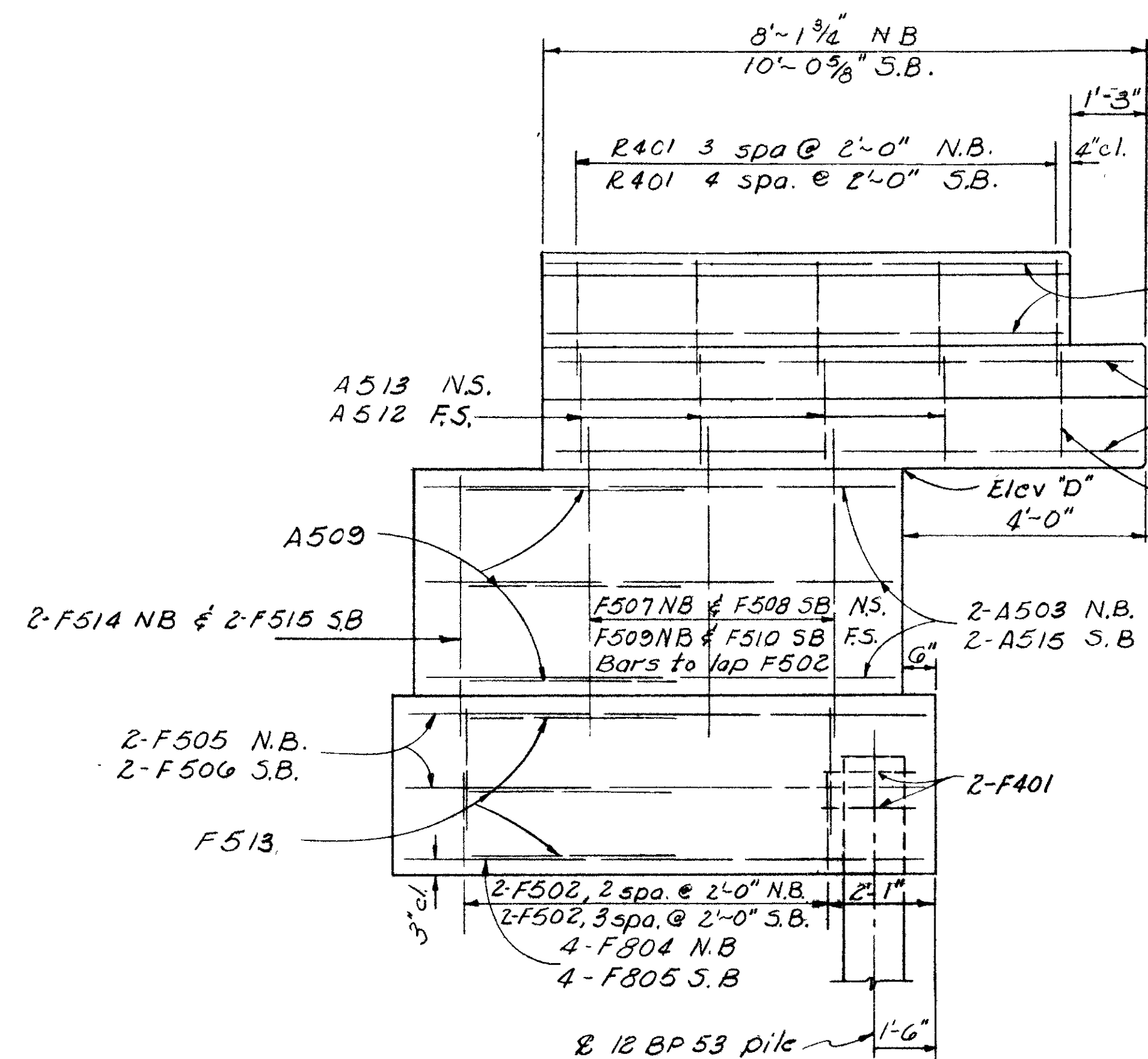
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
ABUTMENT DETAILS BRIDGE No MOT - 49 - 1281 SR 49 OVER RAZOR RUN						
MONTGOMERY COUNTY F-127(2)				STA. 298+24.90		
DESIGNED E.D.A.	DRAWN E.D.A.	TRACED	CHECKED JOP	REVIEWED JLU	DATE 4-3-58	REVISED



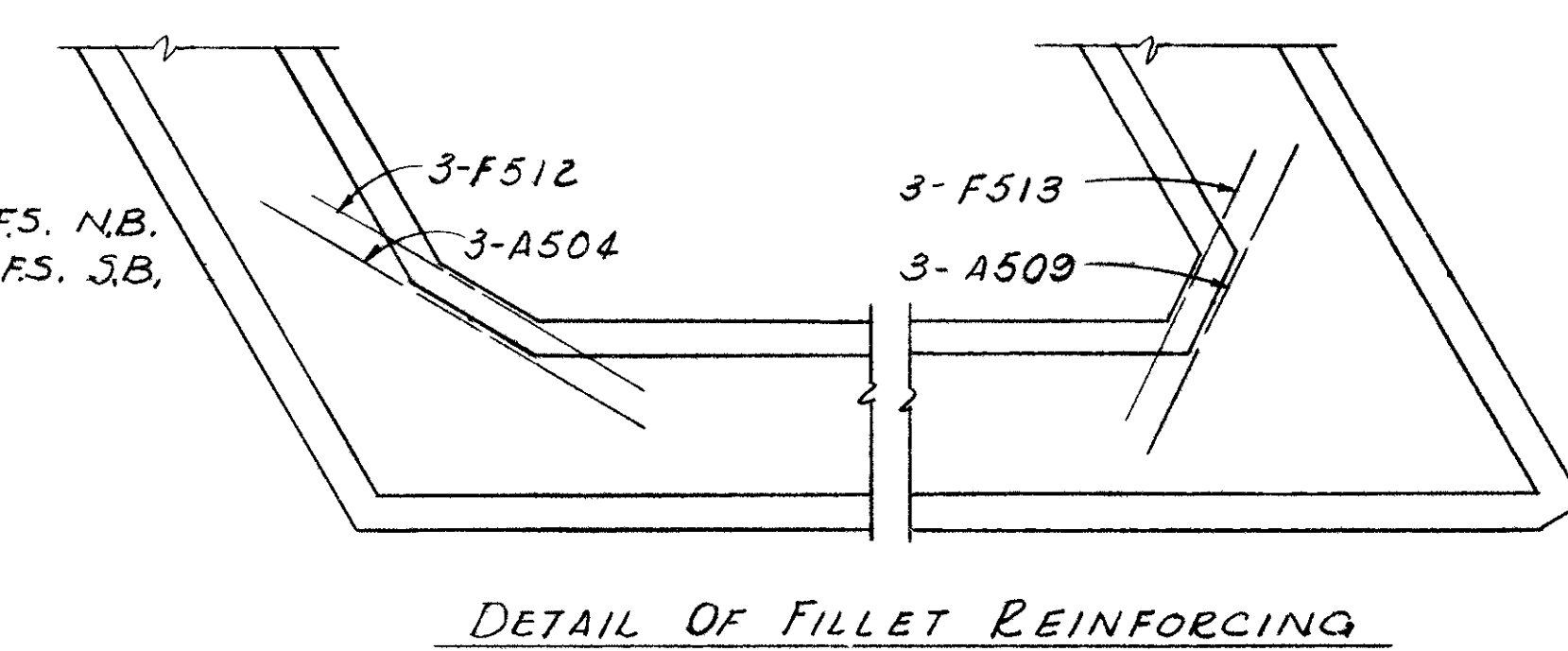
MONTGOMERY COUNTY  
 Mot-40-5.98  
 Mot-49-12.45



VIEW C-C



VIEW D-D



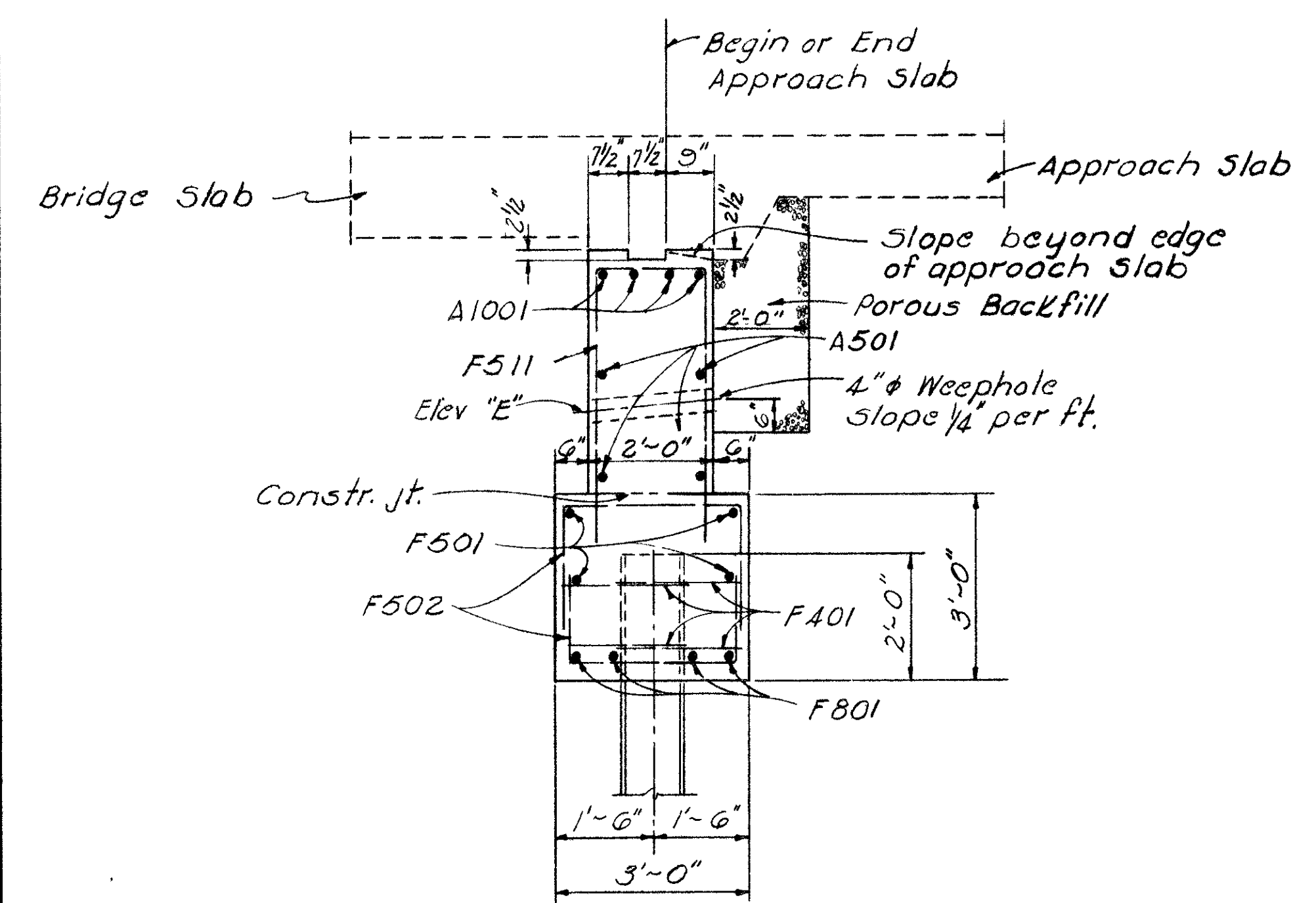
DETAIL OF FILLET REINFORCING

LOCATIONS	A	B	C	D		E
				W. Wall #1	W. Wall #2	
N. Abutment	975.07	974.93	969.16	975.10	974.97	973.38
S. Abutment	974.75	974.86	968.92	974.73	974.83	973.14

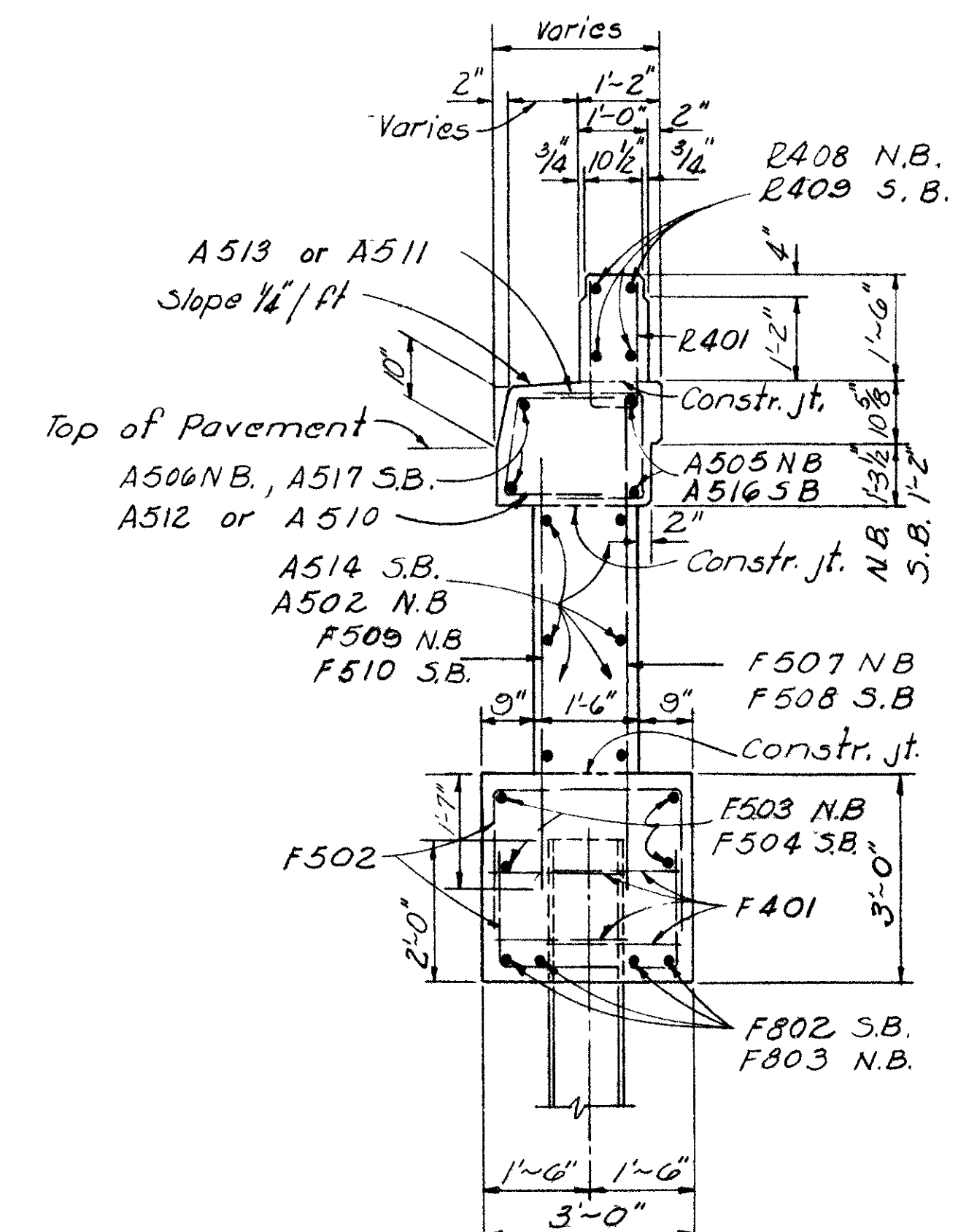
LOCATIONS	A	B	C	D		E
				W. Wall #1	W. Wall #2	
N. Abutment	974.76	974.70	968.16	974.83	974.80	972.38
S. Abutment	974.32	974.36	968.01	974.33	974.34	972.23

Reinforcing Steel Location:  
 N.S. - indicates near side  
 F.S. - indicates far side

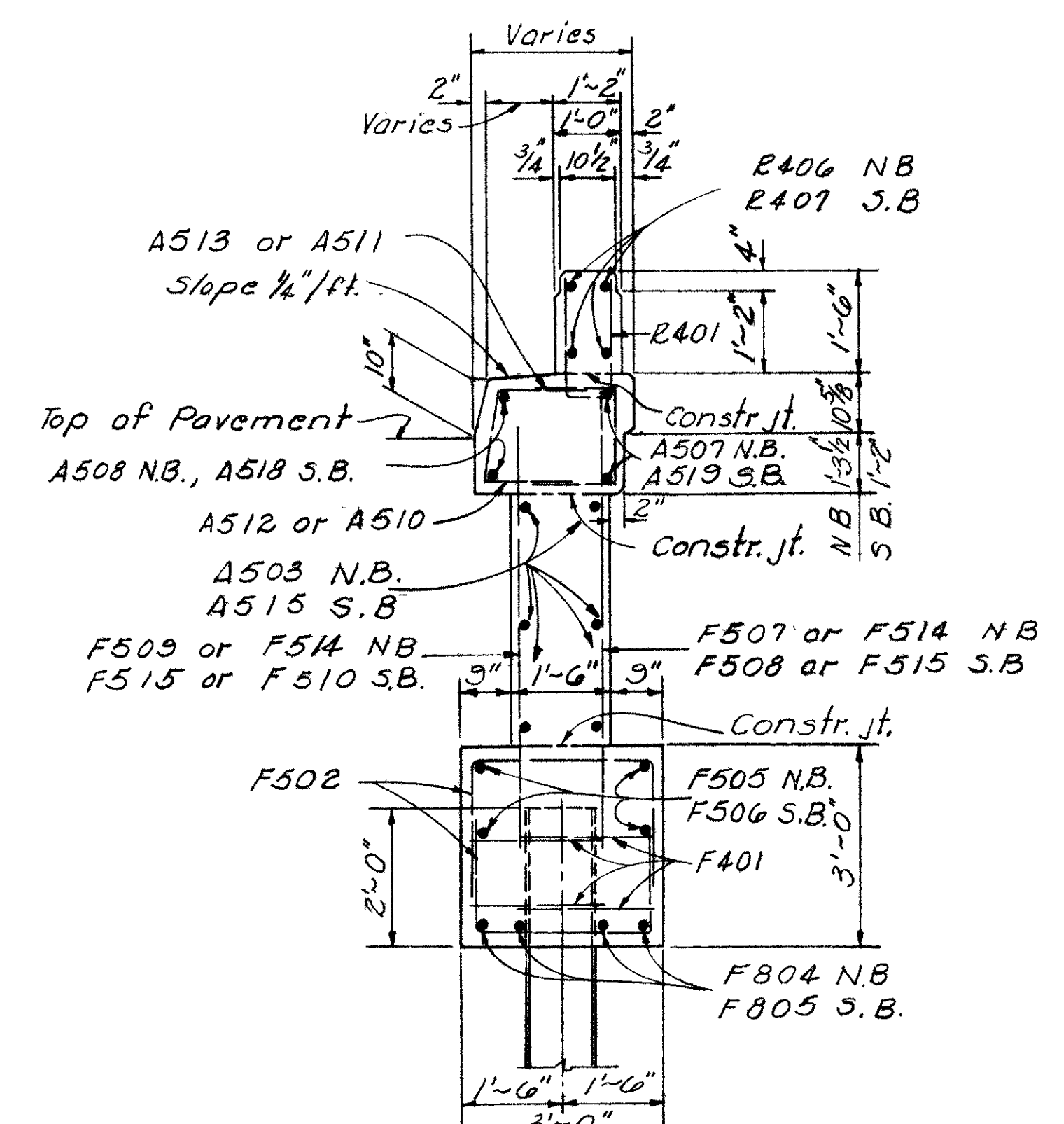
Structure Designation  
 N.B. indicates North Bound structure  
 S.B. indicates South Bound structure



SECTION A-A



SECTION B-B



SECTION E-E

Note:  
 Porous Backfill as shown between wings shall extend to underside of approach slab or I-22.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
 CONSULTING ENGINEERS  
 COLUMBUS, OHIO

ABUTMENT DETAILS  
 BRIDGE N° MOT-49-1281  
 OR 49 OVER RAZOR RUN

MONTGOMERY COUNTY  
 F-127(2) STA. 298+24.90

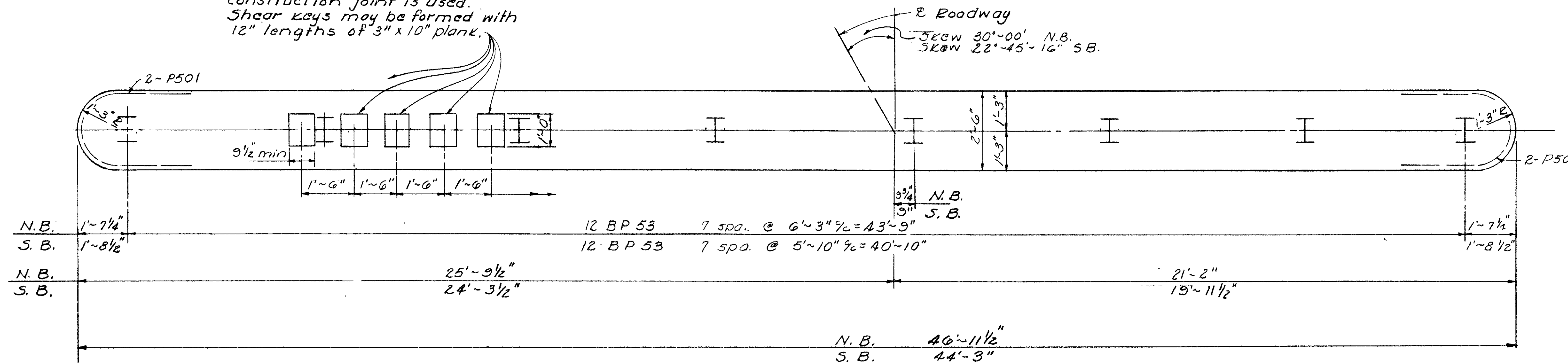
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
E.D.A.	E.D.A.		JOP	TLU	4-3-58

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

213  
241

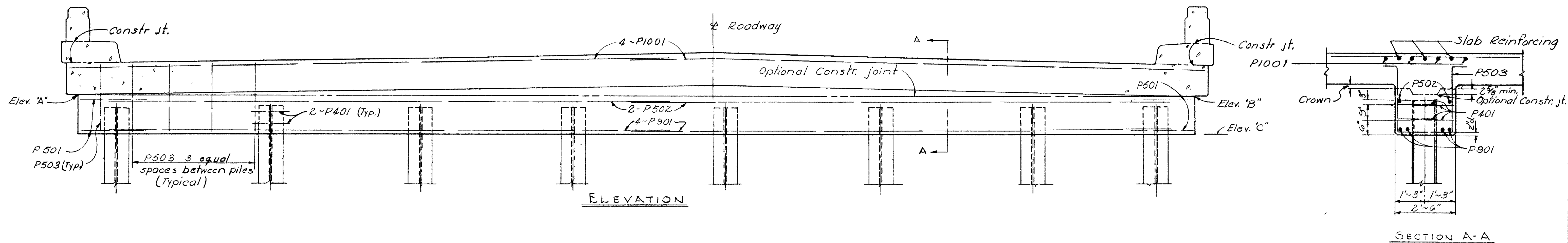
MONTGOMERY COUNTY  
 Mot. - 40-598  
 Mot. - 49-12.45

Note: Place shear keys only if optional construction joint is used.  
 Shear keys may be formed with 12" lengths of 3" x 10" plank.



PLAN

Note: For additional Pier Details  
 See P-1-54 revised 12-1-54  
 N.B. indicate North Bound Structure  
 S.B. indicate South Bound Structure



ELEVATIONS NORTH BOUND			
Locations	A	B	C
Pier #1	974.81	974.92	972.81
Pier #2	972.88	975.01	972.88

ELEVATIONS SOUTH BOUND			
Locations	A	B	C
Pier #1	974.50	974.47	972.47
Pier #2	974.65	974.61	972.61

ALDEN E. STILSON & ASSOCIATES, LIMITED  
 CONSULTING ENGINEERS  
 COLUMBUS, OHIO

PIER DETAILS  
 BRIDGE No. MOT. - 49-1281  
 S.R 49 OVER RAZOR RUN

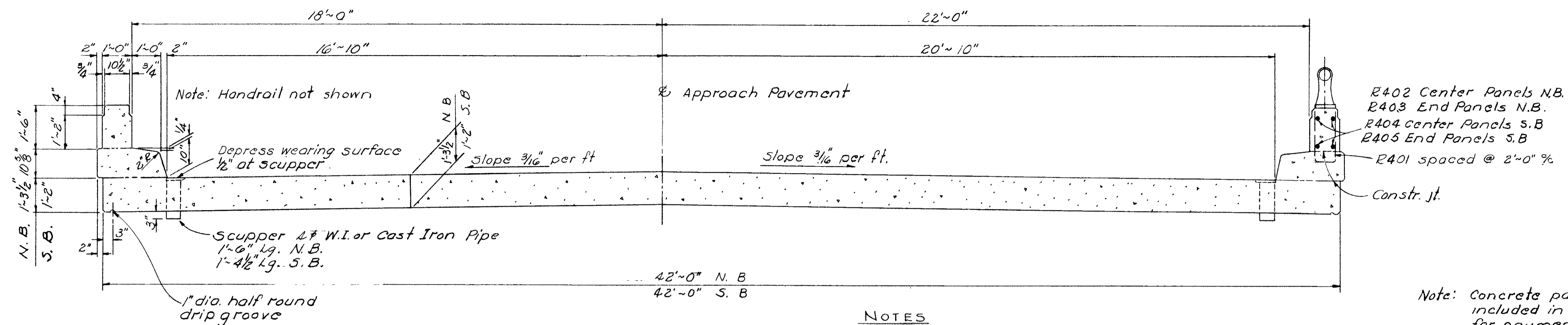
MONTGOMERY COUNTY  
 F-127(2) STA. 298+24.90

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EDA	EDA		JOP	TLU	4-3-58	

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

21A  
241

MONTGOMERY COUNTY  
MOT-40-5,98  
MOT-49-12.45



NOTES

For additional size and placement of reinforcing steel and detail see Std. Dwg. No. CS-2-54.

Slab thickness shown includes 1" monolithic concrete wearing surface.

All transverse reinforcing steel shall be field bent to fit the crown of the roadway. Payment shall be included with Item 5-4.

Reinforcing steel and dimensions same for each curb and parapet unless otherwise shown.

N.B. indicate North Bound Structure  
S.B. indicate South Bound Structure

Note: Concrete parapets are included in Item 5-14 for payment.

TRANSVERSE SECTION

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
SUPERSTRUCTURE DETAILS						
BRIDGE No. MOT-49-1281						
SR 49 OVER RAZOR RUN						
MONTGOMERY COUNTY						
F-127(2)				STA. 298+24.90		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.D.A.	E.D.A.		JOY	TLU	4-3-58	

**REINFORCING**

**STEEL**

**LIST**

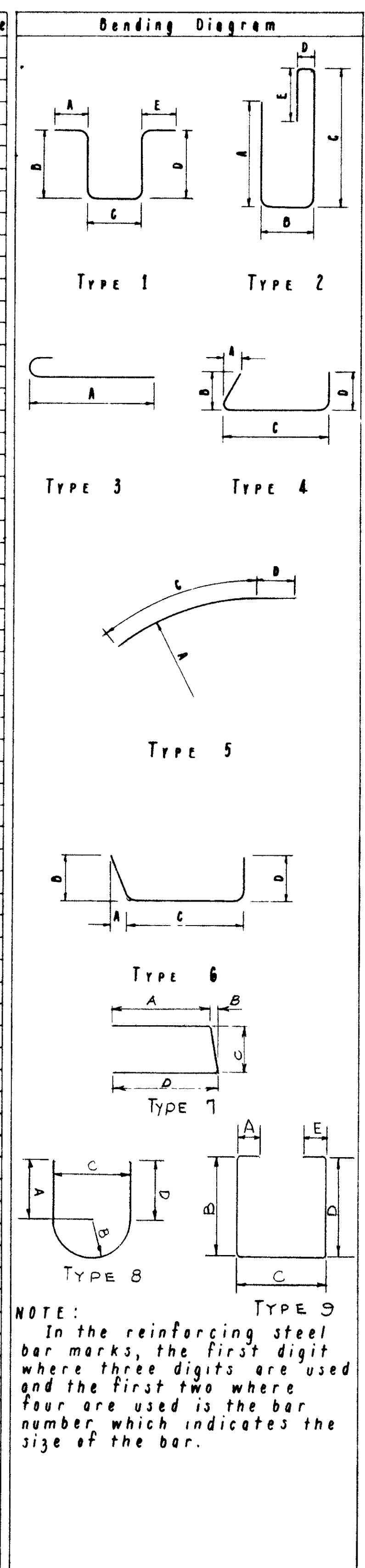
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

215  
241

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

Mark	N <sup>o</sup>	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
SOUTH BOUND STRUCTURE										
ABUTMENT										
R401	22	3-7	53	1		1-8	0-6	1-8		b.t.
R407	8	8-5	*							st.
R409	8	10-2	*							st.
F401	72	5-5	261	1		1-11	1-9	1-11		b.t.
F501	16	25-4	423							st.
F502	160	6-9	1,126			2-2	2-8	2-2		b.t.
F504	8	8-8	72							st.
F506	8	7-8	64							st.
F508	14	7-2	105							st.
F510	14	5-8	83							st.
F511	64	11-1	740	1		4-10	1-8	4-10		b.t.
F512	6	10-0	63							st.
F513	6	8-0	50							st.
F515	4	5-0	21							st.
F801	16	25-9	1100							st.
F802	8	8-8	185							st.
F805	8	7-8	164							st.
A501	16	24-8	412							st.
A504	6	9-0	56							st.
A509	6	5-0	31							st.
A510	4	3-5	14	7	0-10	0-2	1-10	1-0		b.t.
A511	4	3-3	14	1		0-10	1-10	0-10		b.t.
A512	18	3-11	74	7	1-1	0-2	1-10	1-3		b.t.
A513	18	3-9	70	1		1-1	1-10	1-1		b.t.
A514	12	8-0	100							st.
A515	12	7-3	91							st.
A516	4	11-4	47							st.
A517	4	11-5	48	5	46-0		9-10	1-7		b.t.
A518	4	9-8	40	5	28-0		7-10	1-10		b.t.
A519	4	9-8	40							st.
A1001	16	25-6	1,756							st.
PIERS										
P401	64	5-5	232	1		1-11	1-9	1-11		b.t.
P501	8	6-4	53	8	1-7	0-11½	1-7	2-0¼		b.t.
P502	8	21-8	181							st.
P503	60	8-4	521	9	0-6	2-10	2-2	2-10	0-6	b.t.
P901	16	22-4	1,215							st.
P1001	16	24-1	1,658							st.

Mark	N <sup>o</sup>	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
SUPER STRUCTURE										
A863	123	25-11	8,511							st.
B863	40	19-7	2,091	3	18-6					b.t.
C863	40	16-6	1,762	3	15-5					b.t.
D863	20	14-8	783							st.
E863	20	14-4	765							st.
F963	78	24-9	6,564							st.
G963	38	13-2	1,701							st.
H963	38	11-5	1,475							st.
J601	38	12-11	737							st.
K601	19	8-3	235							st.
M701	122	23-7	5,881							st.
N601	100	23-6	3,530							st.
O501	6	15-6	97							st.
P501	12	16-7	208							st.
R763	20	15-2	620							st.
S501	186	5-5	1,051	9	0-6	1-8	1-8	1-8	0-6	b.t.
T501	186	2-3	533	1		0-8	1-8	0-8		b.t.
R401	74	3-7	277	1		1-8	0-6	1-8		b.t.
R404	24	15-4	*							st.
R405	16	11-5	*							st.
REPLACEMENT STEEL										
RE400	1	5-3								st.
RE500	1	5-7								st.
RE600	1	5-11								st.
RE700	1	6-3								st.
RE800	1	6-6								st.
RE900	3	6-10								st.
RE1000	1	7-3								st.



\*HORIZONTAL PARAPET REINFORCING THESE BARS ARE INCLUDED WITH THE RAILING FOR PAYMENT

REPLACEMENT BARS  
IF REINFORCING BARS ARE FABRICATED FROM STOCK WHICH HAS PREVIOUSLY BEEN TESTED AND APPROVED BY THE OHIO HIGHWAY TESTING LABORATORY, TEST SAMPLES AS PROVIDED IN SEC S-402 NEED NOT BE FURNISHED AND REPLACEMENT BARS WILL NOT BE REQUIRED

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

REINFORCING STEEL LIST

BRIDGE No. MOT-49-1281  
S.R. 49 OVER RAZOR RUN  
MONTGOMERY COUNTY  
STA. 29.8 ± 24.90

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EDA	EDA		JOR	TLO	4-3-58	

# REINFORCING

# STEEL

# LIST

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

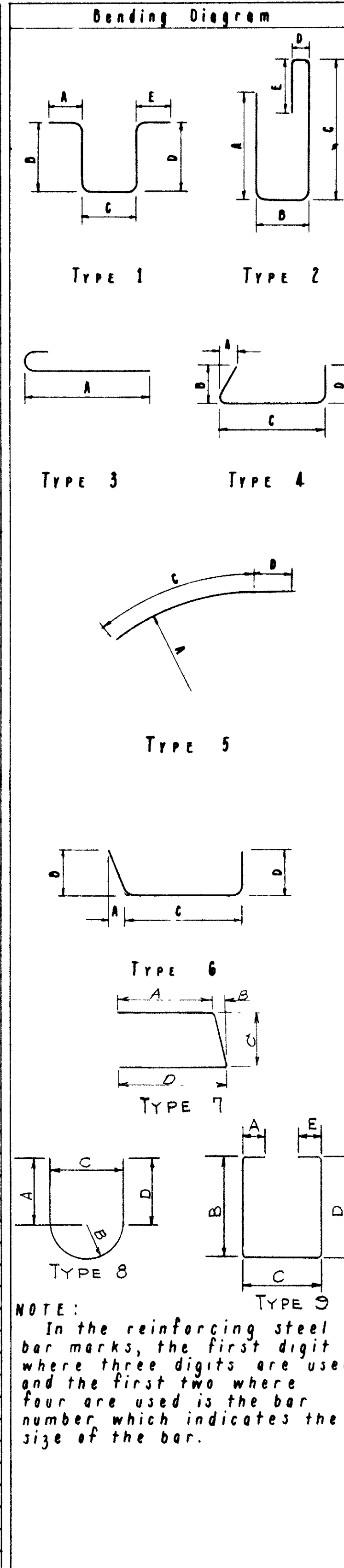
216  
241

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

FOR TWO STRUCTURE

Mark	N <sup>o</sup>	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
NORTH BOUND STRUCTURE										
ABUTMENTS										
R401	18	3-7	43	1		1-8	0-6	1-8		b.t.
R406	8	6-6	*							st.
R408	8	8-10	*							st.
F401	72	5-5	261	1		1-11	1-9	1-11		b.t.
F501	16	25-4	423							st.
F502	152	6-9	1070	1		2-2	2-8	2-2		b.t.
F503	8	7-0	58							st.
F505	8	6-0	50							st.
F507	10	6-5	67							st.
F509	10	5-0	52							st.
F511	64	11-1	740	1		4-10	1-8	4-10		b.t.
F512	6	10-0	63							st.
F513	6	8-0	50							st.
F514	4	4-5	18							st.
F801	16	25-9	1100							st.
F803	8	7-0	150							st.
F804	8	6-0	128							st.
A501	16	24-8	412							st.
A502	12	6-5	80							st.
A503	12	5-2	65							st.
A504	6	9-0	56							st.
A505	4	10-1	42							st.
A506	4	10-2	42	5	46-0		9-10	0-4		b.t.
A507	4	7-10	33							st.
A508	4	7-10	33	5	28-0		7-10			b.t.
A509	6	5-0	31							st.
A510	4	3-5	14	7	0-10	0-2	1-10	1-0		b.t.
A511	4	3-3	14	1		0-10	1-10	0-10		b.t.
A512	14	3-11	57	7	1-1	0-2	1-10	1-3		b.t.
A513	14	3-9	55	1		1-1	1-10	1-1		b.t.
A1001	16	25-6	1756							st.
PIERS										
P401	64	5-5	232	1		1-11	1-9	1-11		b.t.
P501	8	6-4	53	8	1-7	0-11½	2-0¼	1-7		b.t.
P502	8	23-0	192							st.
P503	60	8-4	521	1	0-6	2-10	2-2	2-10	0-6	b.t.
P901	16	24-2	1315							st.
P1001	16	25-7	1761							st.

Mark	N <sup>o</sup>	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
SUPERSTRUCTURE										
A965	111	30-6	11,511							st.
B965	36	22-5	2,744	3	21-4					b.t.
C965	36	19-10	2,426	3	18-9					b.t.
D965	18	21-4	1,306							st.
E965	8	16-10	1,030							st.
F965	86	29-11	8,748							st.
G965	42	16-3	2,321							st.
H965	42	13-5	1,916							st.
J601	42	15-6	978							st.
K601	21	7-9	244							st.
M701	142	25-1	7,280							st.
N601	114	23-0	4,281							st.
O501	6	17-9	111							st.
P501	12	19-3	241							st.
R865	20	17-11	957							st.
S501	212	5-7	1234	9	0-6	1-9	1-8	1-9	0-6	b.t.
T501	212	2-9	608	1		0-8	1-8	0-8		b.t.
R401	88	3-7	329	1		1-8	0-6	1-8		b.t.
R402	32	14-10	*							st.
R403	16	11-1	*							st.



		ESTIMATED QUANTITIES					
ITEM	TOTAL	UNIT	DESCRIPTION	ABUT.	PIER	SUPERS.	GENERAL
E-2	214	Cu. Yd.	UNCLASSIFIED EXCAVATION	214			
S-1	361	Cu. Yd.	CLASS "C" CONCRETE, SUPERSTRUCTURE AND PIER CAPS		34	327	
S-1	140	Cu. Yd.	CLASS "E" CONCRETE, ABUTMENTS	140			
S-4	107,288	L.B.	REINFORCING STEEL	14,266	8,141	84,879	
S-14	390	Lin. Ft.	RAILING (ALUMINUM RAIL AND SUPPORTS, AND CONCRETE PARAPET)	71		319	
S-16	Lump. Sum.		FIRST TEST PILE				Lump
S-18	1952	Ln. Ft.	STEEL PILES 12 BP 53	864	1088		
S-29	200	Cu. Yd.	SLOPE FACING (S-29.05 TYPE)	200			
S-29	41	Each	SCUppers 4" DIAMETER W.I. OR CAST IRON PIPE			41	
S-29	37	Cu. Yd.	POROUS BACKFILL	37			
E-3	5860	Cu. Yd.	Channel Excavation				5860
I-10	340	Cu. Yd.	Dumped Rock Fill				340

\* HORIZONTAL PARAPET REINFORCING THESE BARS ARE INCLUDED WITH THE RAILING FOR PAYMENT

REPLACEMENT BARS  
IF REINFORCING BARS ARE FABRICATED FROM STOCK WHICH HAS PREVIOUSLY BEEN TESTED AND APPROVED BY THE OHIO HIGHWAY TESTING LABORATORY, TEST SAMPLES AS PROVIDED IN SEC. S-402 NEED NOT BE FURNISHED AND REPLACEMENT BARS WILL NOT BE REQUIRED

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

REINFORCING STEEL LIST  
AND ESTIMATED QUANTITIES

BRIDGE No. MOT-49-1281  
SR 49 OVER RAZOR RUN  
MONTGOMERY COUNTY  
F-127(2) STA. 298+24.90

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EDA	EDA		JOR	TLU	1-3-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUND.
2	OHIO		

217  
241

MONTGOMERY COUNTY  
MOT 40-5.98  
MOT 49-12.45

REFERENCES:

Standard Drawings:

- Railing Details, Type A - AR-1-57 dated 4-9-57, revised 3-1-58.
- Superstructure Details - CS-2-54 dated 12-1-54
- Pier Details - P-1-54 revised 12-1-54
- Supplemental Specifications - S-114 revised 8-1-57
- Guardrail and Railing Details - Sheet 144

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 revisions thereof dated 2-21-58.

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.

SLAB THICKNESS of 15-1/2" for the North Bound structure and 14" for the South Bound structure includes 1 inch for monolithic wearing surface.

EXCAVATION QUANTITY includes the removal of fill material between the bottom of footings and elevations 973.6 at the south abutment and 973.9 at the north abutment on the North Bound structure and elevations 972.7 at the south abutment and 972.9 at the north abutment on the South Bound structure.

SLOPE FACING shall be provided under the structure at both abutments. The porous drain materials shall be 12" thick and shall extend from the face of the abutment down to the toe of slope and transversely to 3 ft. outside the edge of the superstructure.

PILES shall be driven to a minimum bearing capacity of 21 tons per pile for the abutments on the South Bound structure and 23 tons per pile for the abutments on the North Bound structure and 33 tons per pile for the piers of the North Bound structure and 28 tons per pile for the piers of the South Bound structure.

MAXIMUM PILE REACTION. The maximum calculated pile reactions are as follows:

	N. Bound	S. Bound
Abutments	23 tons	21 tons
Piers	33 tons	28 tons

PIER PILE ENCASEMENT as shown on Std. Dwg. P-1-54 is not required. The painting of the piles shall extend to low water elevation, or, if the proposed surface of the ground is above low water, it shall extend to at least one foot below the proposed surface of the ground.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

GENERAL NOTES

BRIDGE No MOT-49-1281

SR 49 OVER RAZOR RUN

MONTGOMERY COUNTY

F-127(2)

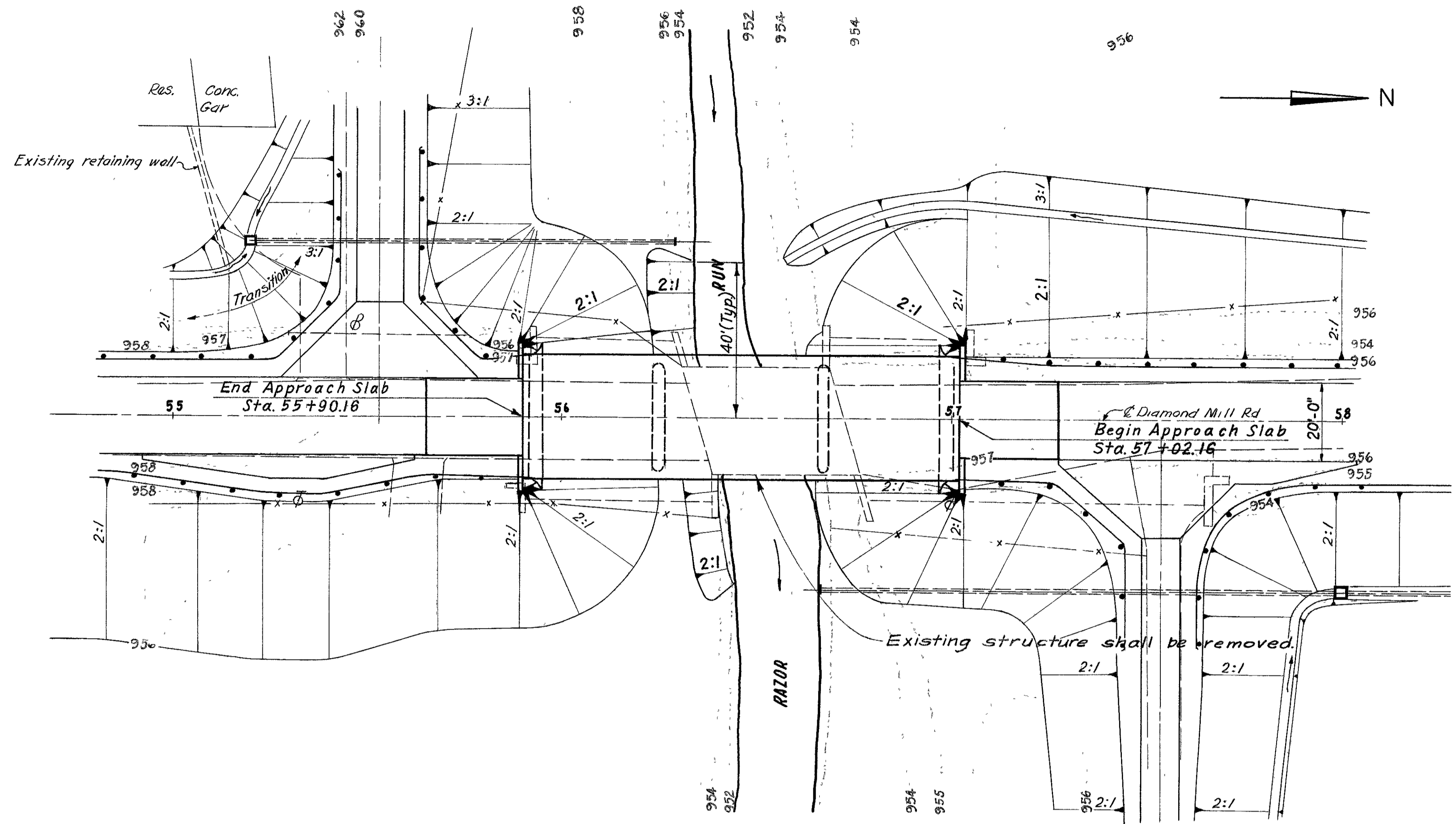
STA. 298 + 24.90

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
					7-20-47-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

218  
241

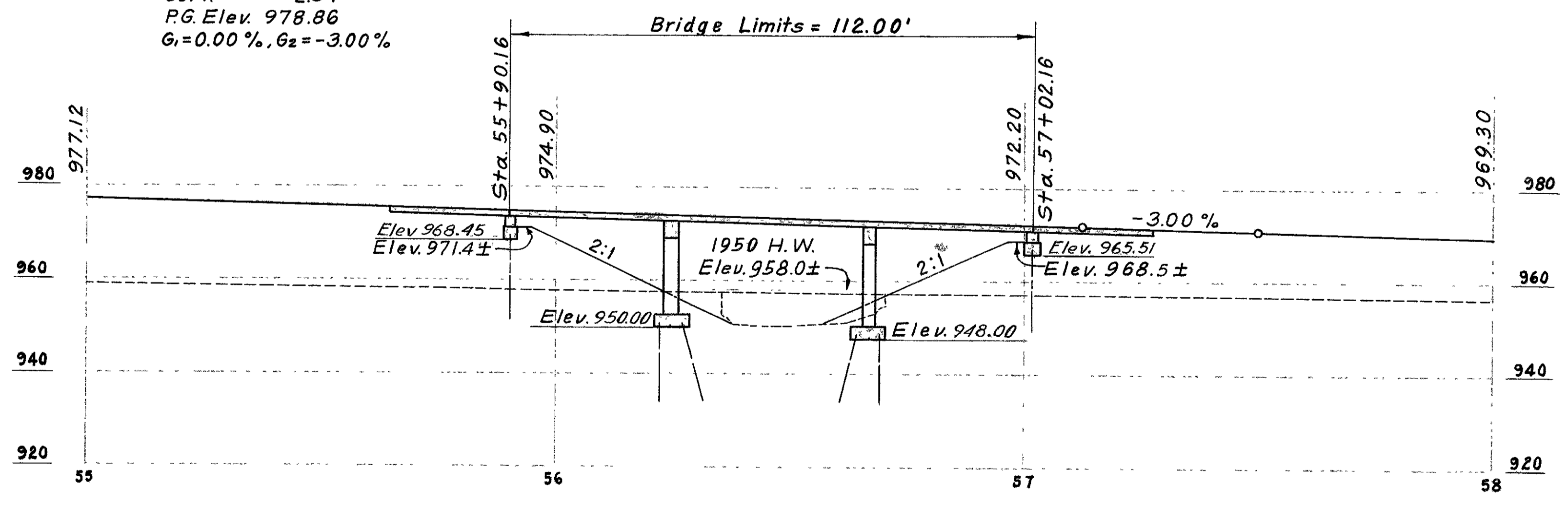
MONTGOMERY COUNTY  
MOT - 40 - 5 98  
MOT - 49 - 12 45



PLAN

P.V.I. Sta. 54+00  
625' V.C.  
Elev. 981.20  
Corr. 2.34  
P.G. Elev. 978.86  
G<sub>1</sub>=0.00%, G<sub>2</sub>=-3.00%

P.V.I. Sta. 60+00  
500' V.C.  
Elev. 963.20  
Corr. +2.62  
P.G. Elev. 965.82  
G<sub>1</sub>=-3.00%, G<sub>2</sub>=+1.20%



PROFILE ON E

Note: Estimated average pay length of piles:  
Abutments = 33'  
Piers = 27'  
All piles shall be 12BP53 steel H piles.

**EXISTING STRUCTURE**  
Type: Steel beam with reinforced concrete deck and cantilever abutments.  
Span: 38'± c/c bearings.  
Roadway: 32' F/F guard rails.  
Loading: Unknown.  
Wearing Surface: Asphalt.  
Condition: Good.

**PROPOSED STRUCTURE**  
Type: Continuous reinforced concrete slab and reinforced concrete sub-structure.  
Spans: 34'-0", 42'-6", 34'-0" c/c bearings  
Roadway: 32'-0" F/F guard rails.  
Loading: C F 130  
Skew: None.  
Wearing Surface: 3/4" monolithic concrete.  
Alignment: Tangent.  
Approach slabs: AS-1-54, 25'-0" long.

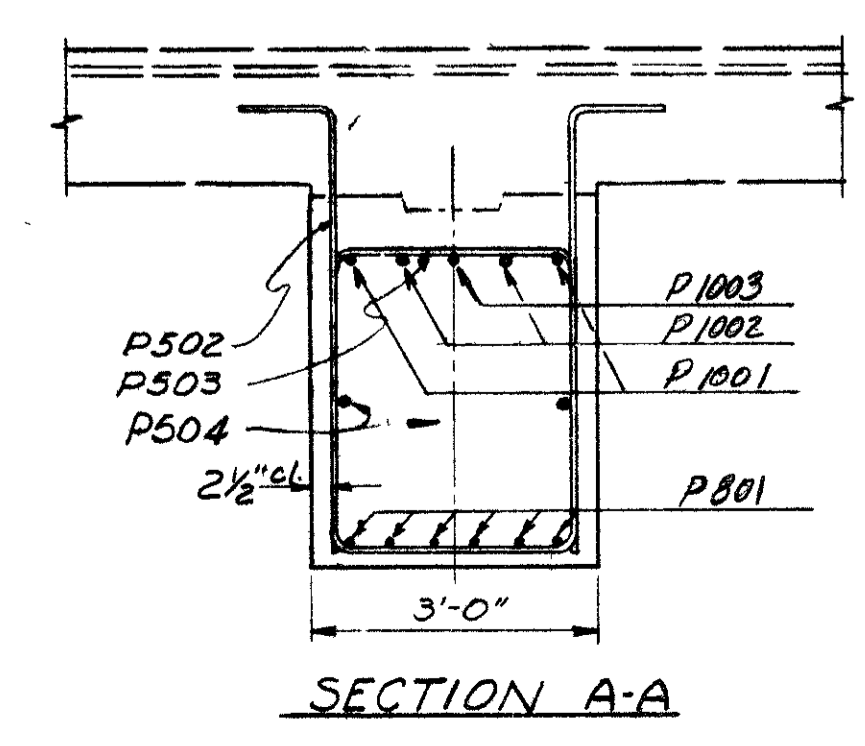
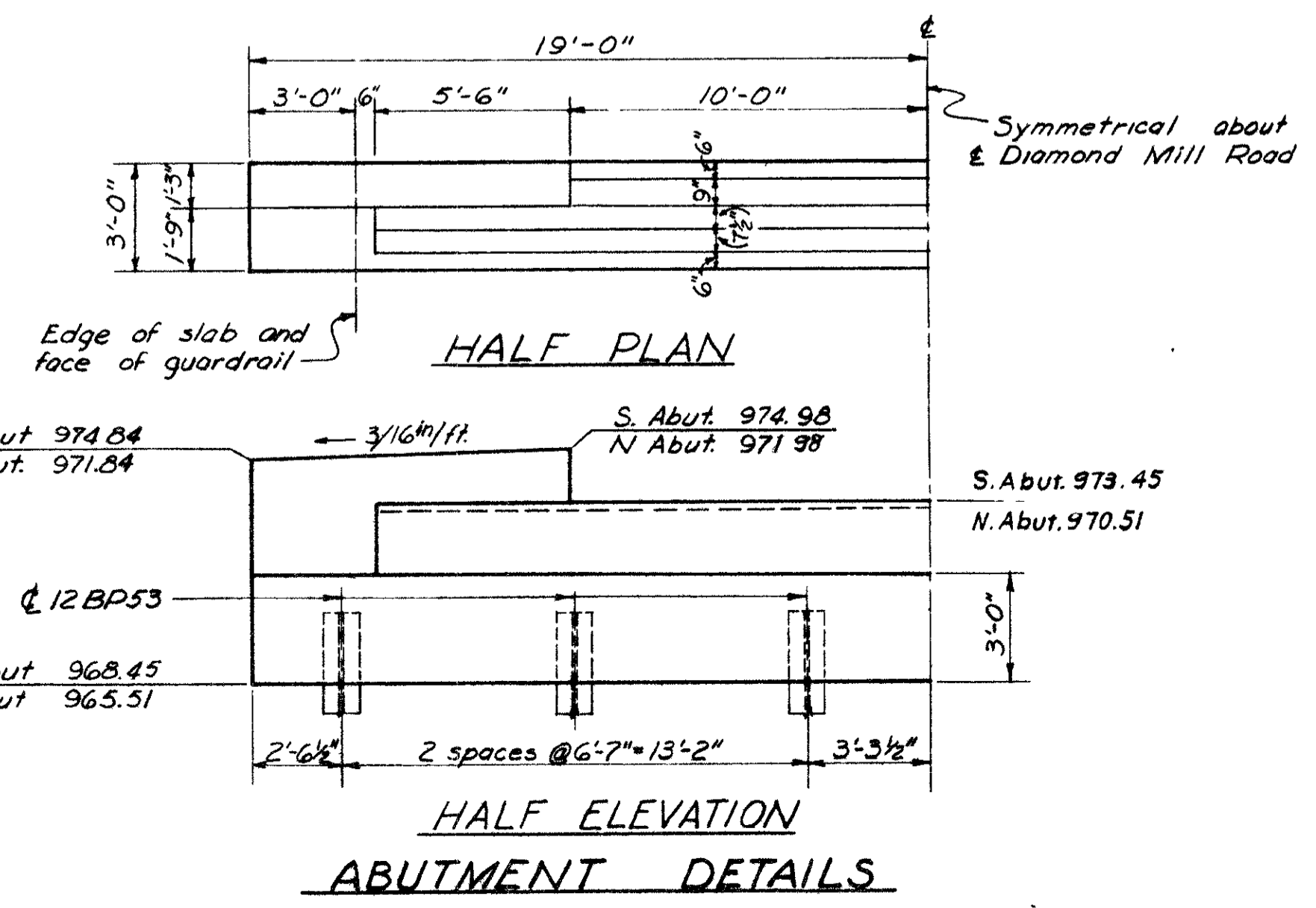
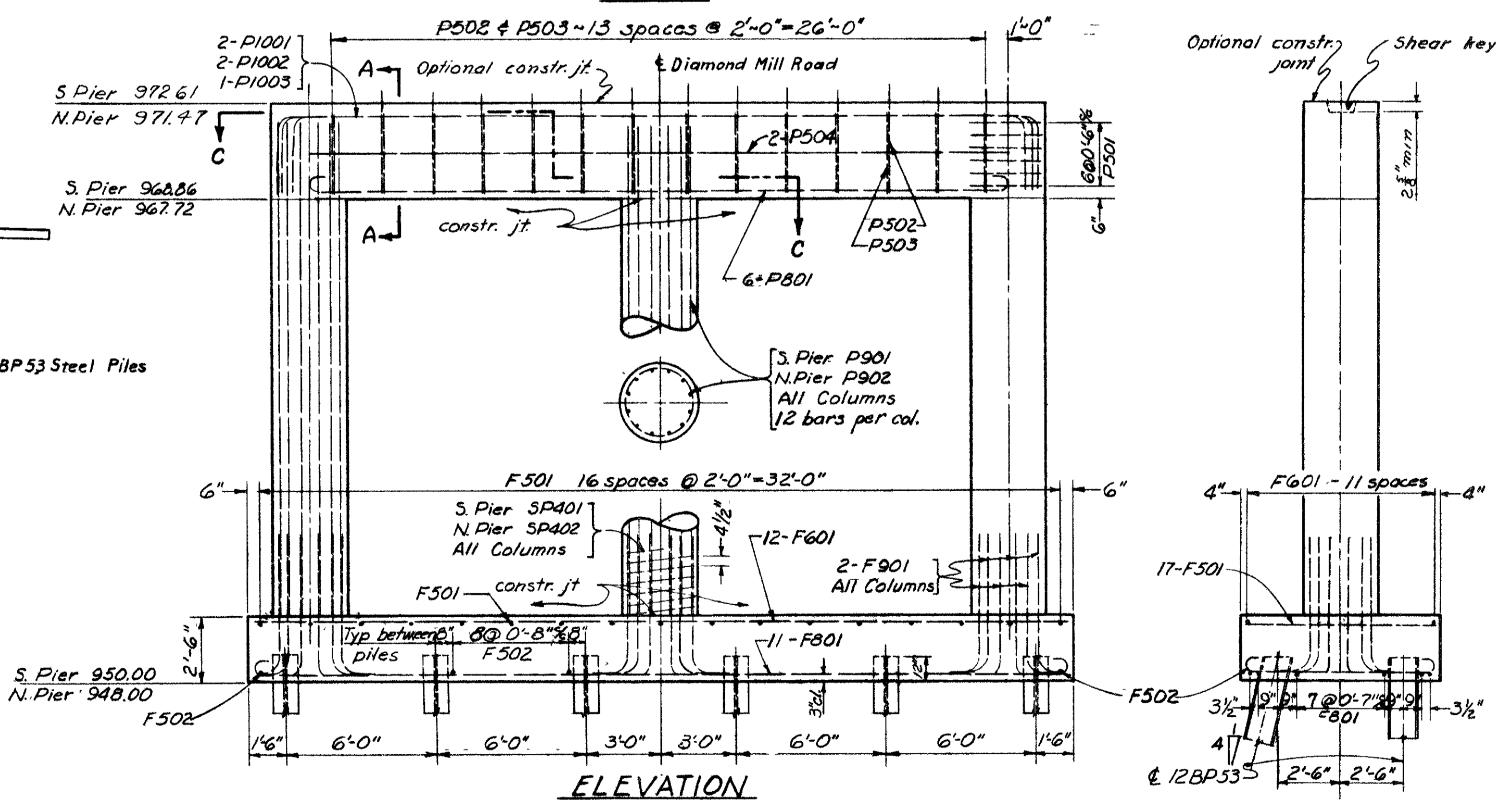
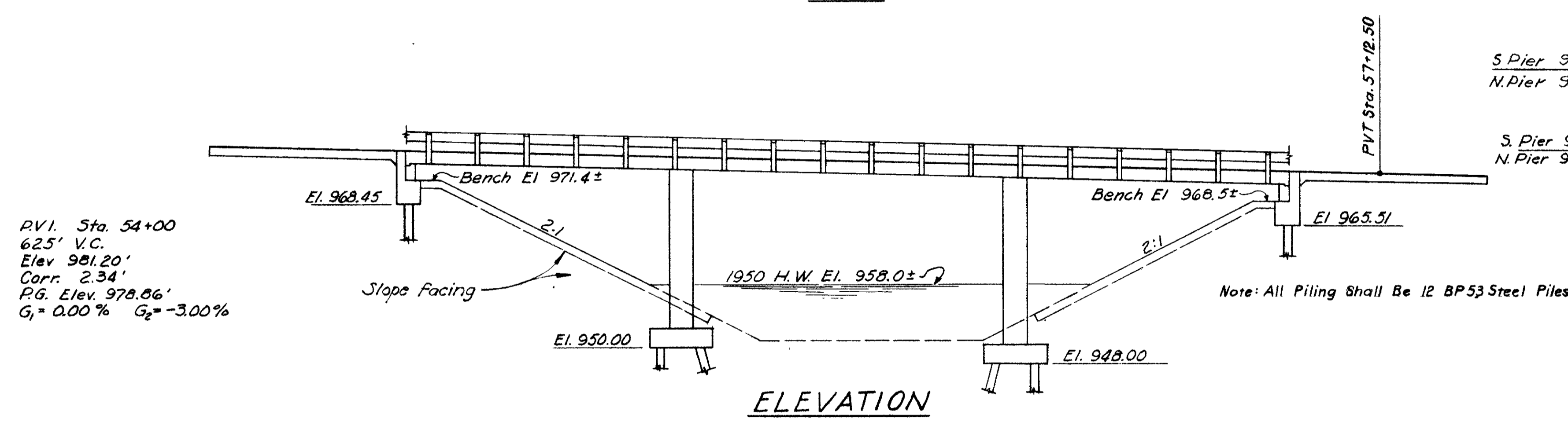
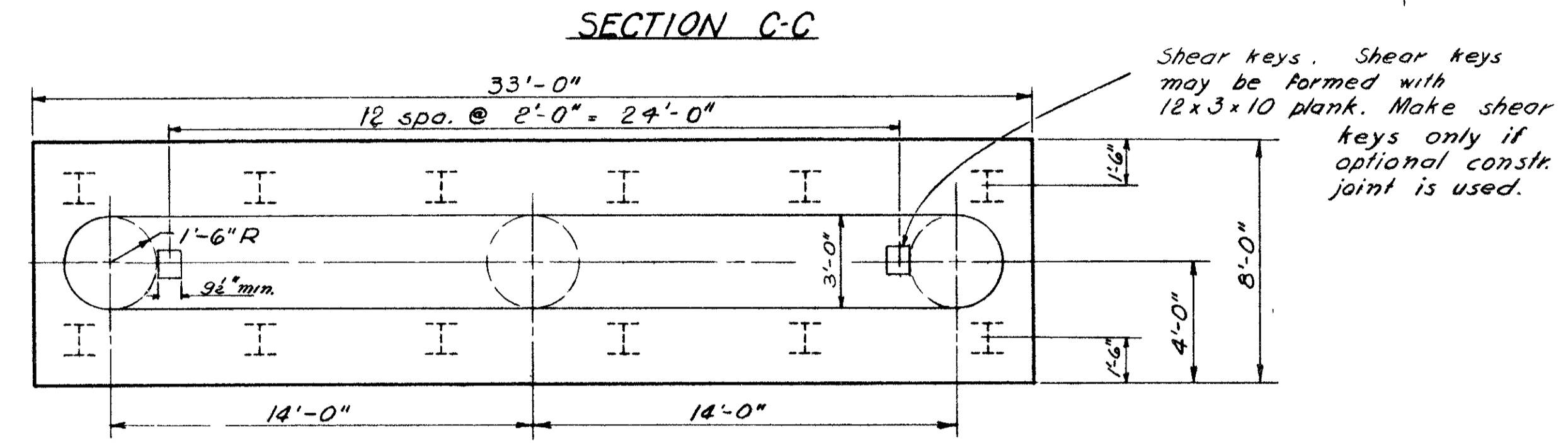
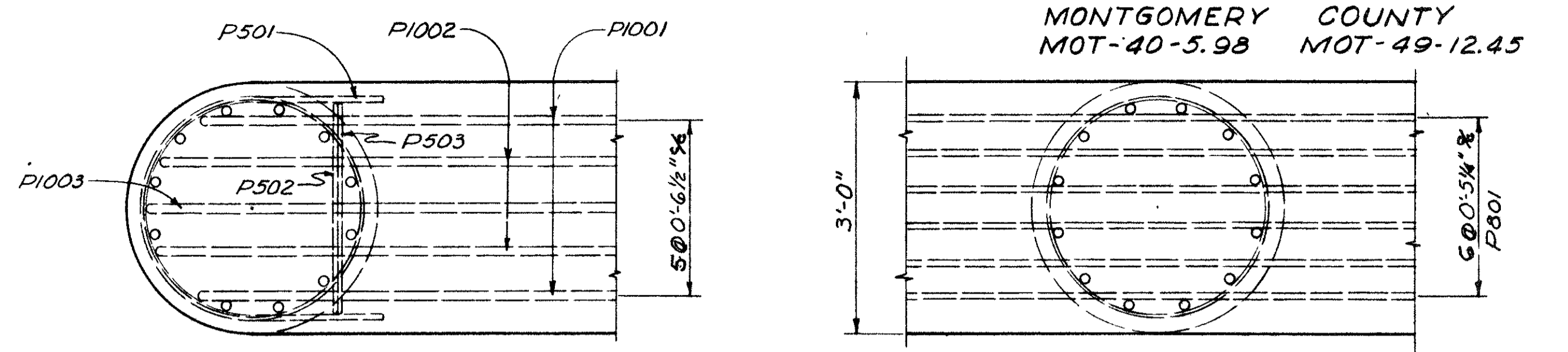
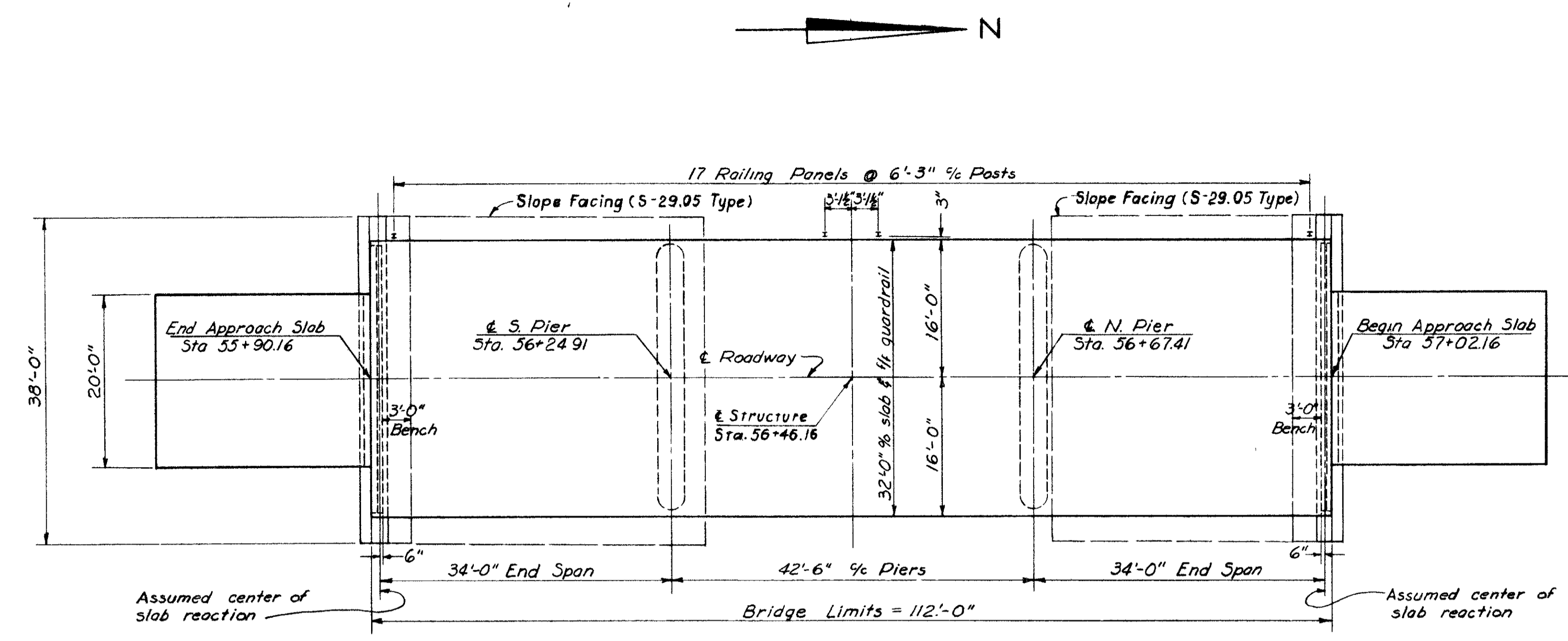
Drainage Area 800 acres  
Calculated 25 yr H.W. 955.0  
Observed 1950 H.W. 958.0

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

**SITE PLAN**  
**BRIDGE - DIAMOND MILL RD.**  
**OVER RAZOR RUN**  
MONTGOMERY COUNTY  
STATION 56+46.16

ACI-1037(A)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Wisse	Wisse	A.V.G.	J.P.	T.L.U.	3-28-58	



ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

GENERAL PLAN & ELEVATION  
PIER & ABUTMENT DETAILS  
DIAMOND MILL ROAD STRUCTURE  
ACI-1087(4) OVER RAZOR RUN  
MONTGOMERY CO. Sta. 56+46.16

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.T.C.	J.T.C.	J.T.C.	J.E.V.	T.L.V.	3-28-58	



# REINFORCING

# STEEL

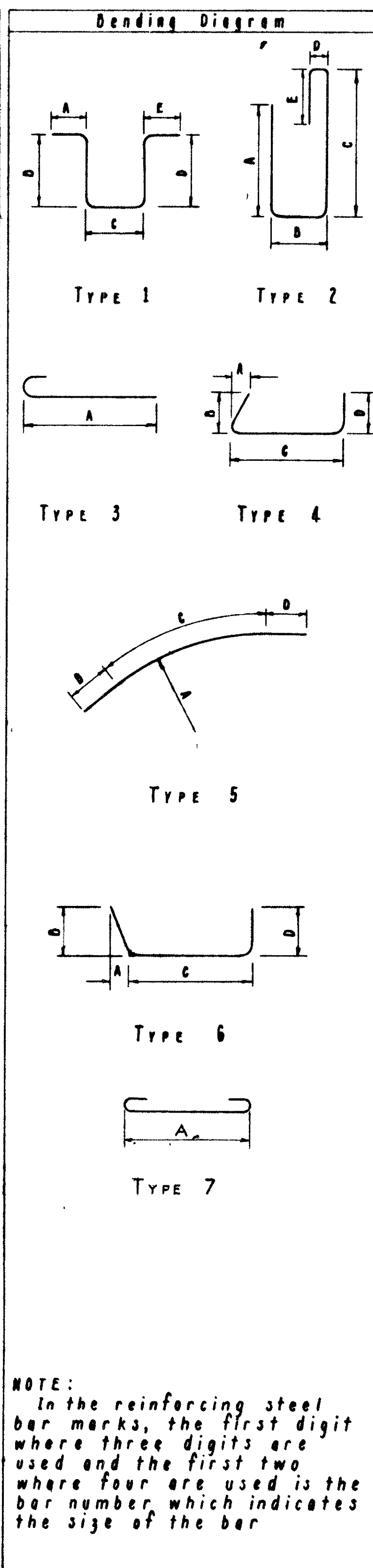
# LIST

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

MONTGOMERY COUNTY  
 Mot-40-5.98  
 Mot-49-12.45

Mark	N <sup>o</sup>	Length	Weight	Shp.
SUPERSTRUCTURE				
A1029	81	39-4	13,709	ST
B1029	26	28-3	3,161	BT
C1029	26	24-8	2,760	BT
D1029	13	25-2	1,408	ST
E1029	13	18-10	1,054	ST
F1029	62	26-9	7,137	ST
G1029	30	12-11	1,667	ST
H1029	30	8-10	1,140	ST
PIERS				
J601	32	22-11	1,101	ST
K601	16	20-0	481	ST
M701	97	31-6	6,245	ST
N601	70	31-6	3,312	ST
ABUTMENTS				
F601	24	32-8	1,178	ST
F501	34	7-8	272	ST
F502	88	8-10	811	BT
F801	22	34-10	2,046	BT
F901	72	6-0	1,469	BT
P501	24	7-2	179	BT
P502	28	12-6	366	BT
P503	28	8-8	253	BT
P504	4	28-0	117	ST
P801	12	30-2	967	BT
P901	36	20-1	2,458	ST
P902	36	20-6	2,509	ST
P1001	4	35-1	604	BT
P1002	4	36-2	623	BT
P1003	2	36-5	314	BT
REPLACEMENT STEEL				
RE401	1	5-3		ST
RE501	1	5-7		ST
RE601	1	5-11		ST
RE701	1	6-3		BT
RE801	1	6-6		ST
RE901	1	6-10		ST
RE1001	2	7-3		ST
REPLACEMENT STEEL FOR SPIRALS				
RE402	1	5-3		BT

Mark	N <sup>o</sup>	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp.
REPLACEMENT STEEL										
RE401	1	5-3								ST
RE501	1	5-7								ST
RE601	1	5-11								ST
RE701	1	6-3								BT
RE801	1	6-6								ST
RE901	1	6-10								ST
RE1001	2	7-3								ST
REPLACEMENT STEEL FOR SPIRALS										
RE402	1	5-3		5	1-3/4		5-3			BT



ESTIMATED QUANTITIES				Abut.	Pier	Supers.	General
Item	Total	Unit	Description				
E-2	LUMP	SUM	COFFERDAMS, CRIBS AND SHEETING				LUMP
E-2	184	CU.YDS.	UNCLASSIFIED EXCAVATION	44	140		
S-1	190	CU.YDS.	CLASS "C" CONCRETE, SUPERSTRUCTURE			190	
S-1	52	CU.YDS.	CLASS "C" CONCRETE, PIER CAPS AND COLUMNS		52		
S-1	49	CU.YDS.	CLASS "E" CONCRETE, FOOTINGS		49		
S-1	38	CU.YDS.	CLASS "E" CONCRETE, ABUTMENTS	38			
S-4	63,375	LBS.	REINFORCING STEEL	4,174	16,076	43,175	
S-14	224	LIN.FT.	RAILING, TYPE I-15.13 WITH GALVANIZED STEEL POSTS AND BOLTS.			224	
S-16	LUMP	SUM	FIRST TEST PILE				LUMP
S-18	1,044	LIN.FT.	STEEL PILES 12 BP53	396	648		
S-24	Lump	Sum	Removal of existing structure.				Lump
S-29	13	CU.YDS.	POROUS BACKFILL				13
S-29	108	CU.YDS.	SLOPE FACING (S-29.05 TYPE)				108
E-3	75	CU.YDS.	Channel Excavation				75

SPIRALS - NOT ROLLED						
Mark	N <sup>o</sup>	Length	Core	Pitch	Turns	Weight
SP401	3	16-4	32	4 1/2"	47	910
SP402	3	17-3	32	4 1/2"	49	990

**SPIRALS**  
 THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP.  
 THE "NO. OF TURNS" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS 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 ITEM S-4  
 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.

**REPLACEMENT BARS**  
 IF REINFORCING BARS ARE FABRICATED FROM STOCK WHICH HAS PREVIOUSLY BEEN TESTED AND APPROVED BY THE OHIO HIGHWAY TESTING LABORATORY TEST SAMPLES AS PROVIDED IN SEC. S-4.02 NEED NOT BE FURNISHED AND REPLACEMENT BARS WILL NOT BE REQUIRED.

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
 CONSULTING ENGINEERS  
 COLUMBUS, OHIO

REINFORCING STEEL LIST AND  
 ESTIMATED QUANTITIES --  
 DIAMOND MILL OVER RAZOR RUN,  
 MONTGOMERY COUNTY  
 ACI-1087(4) STA. 56+46.16

DESIGNED J.T.C.	DRAWN J.E.V.	TRACED E.S.	CHECKED W.D.M. G.P.	REVIEWED T.L.V.	DATE 3-28-58	REVISED
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FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

221  
241

MONTGOMERY COUNTY  
MOT - 40-5.98  
MOT - 49-12.45

REFERENCES:

Standard Drawings:

Superstructure Details - CS-1-54 dated 7-16-56  
Abutment Details - A - 1-54 revised 12-1-54

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 revisions thereof dated 2-21-58.

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.

SLAB THICKNESS of 17 inches includes 3/4 inch for monolithic wearing surface.

CAMBER of 1/8 inch in the end spans and 1/4 inch in center span shall be provided under full dead load to coincide with the vertical curve over the bridge. These values do not include the camber required by CS-1-54.

EXCAVATION QUANTITY includes the removal of fill material between the earth bench and the bottom of abutment cross beam.

SLOPE FACING shall be provided under the structure at both abutments. The porous drain material shall be 12" thick and shall extend from the face of the abutment down to Elev. 954.0 and transversely to 3 ft. outside the edge of the superstructure.

REMOVAL OF EXISTING STRUCTURE: Superstructure steel is to be stored on the R/W for disposal by Montgomery County forces.

PILES shall be driven to a minimum bearing capacity of 30 tons per pile for abutments and 35 tons per pile for the piers. The design loads are 34 tons per pile for the pier piles and 30 tons per pile for the abutment piles.

TRAFFIC: Traffic on Diamond Mill Road will be detoured. See note on Sheet 12.

CHANNEL EXCAVATION, ITEM E-3: An estimated quantity for this item has been determined from the topography shown on the Site Plan. Pay quantity shall be determined in accordance with the requirements of Item E-3.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

GENERAL NOTES  
DIAMOND MILL OVER  
RAZOR RUN

MONTGOMERY COUNTY

ACI-1097(4)

STA. 56+46.16

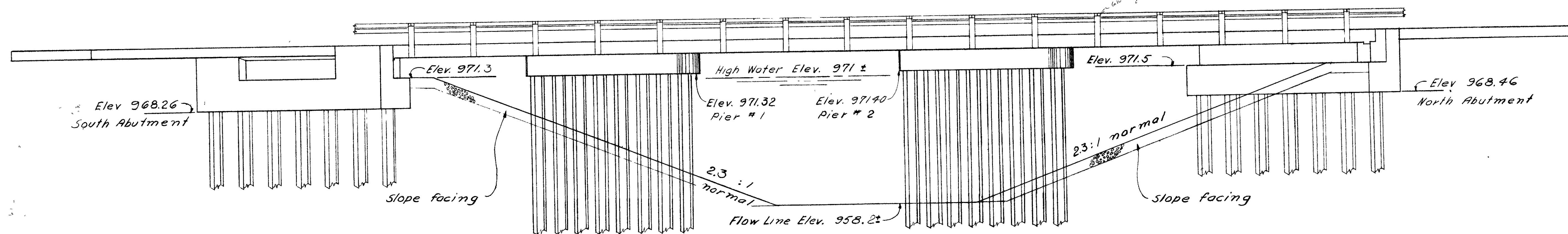
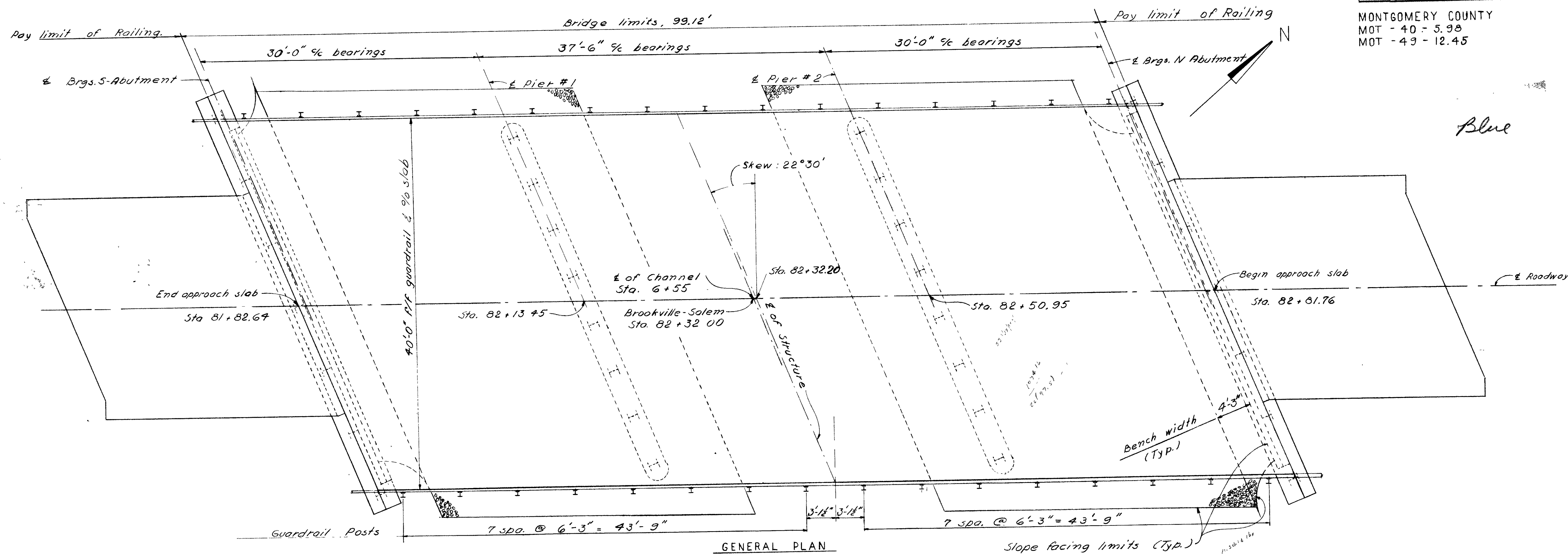
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
				TLU	3-28-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

223  
241

MONTGOMERY COUNTY  
MOT - 40 - 5.98  
MOT - 49 - 12.45

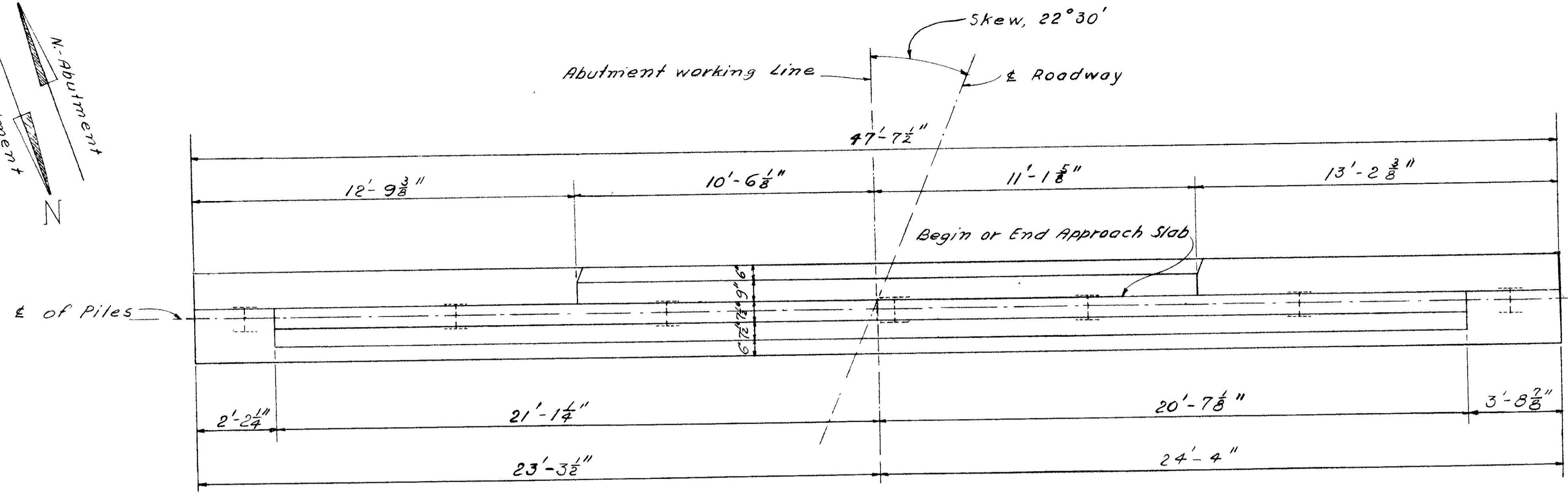
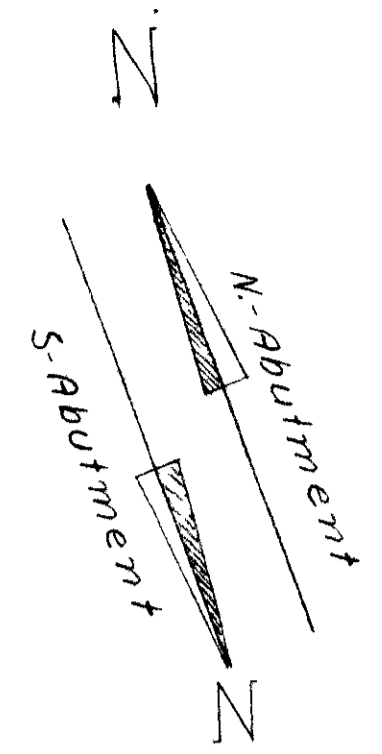
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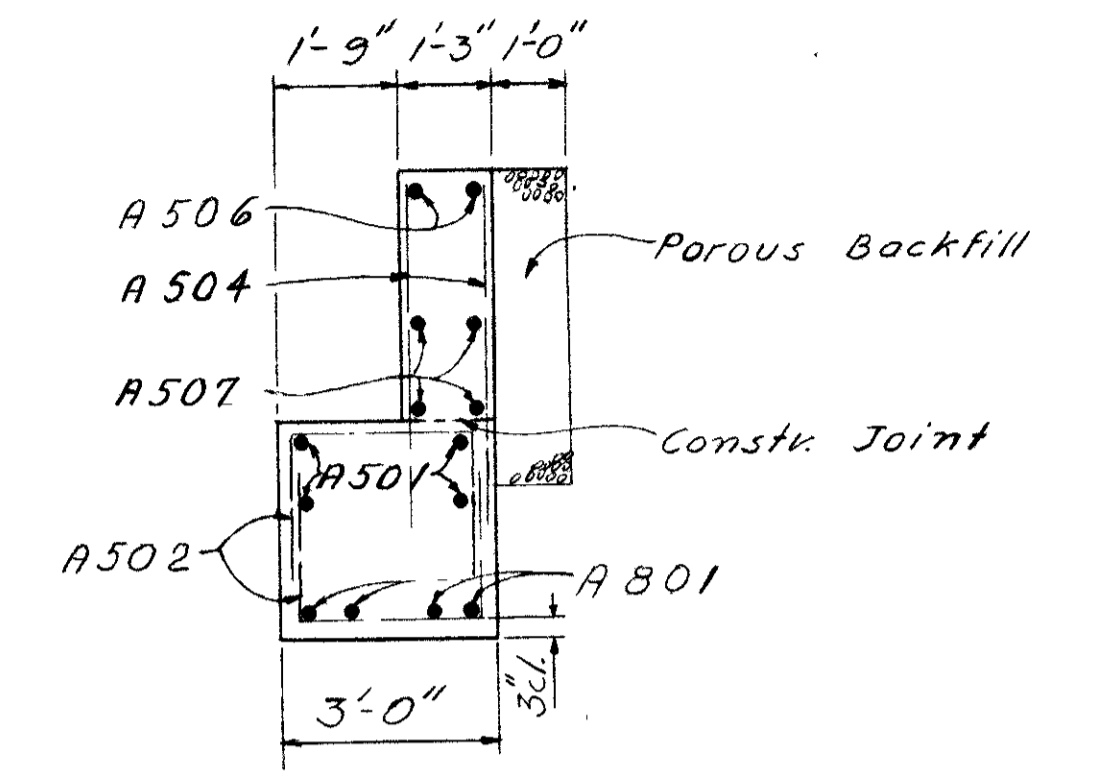
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
GENERAL PLAN & ELEVATION						
BROOKVILLE-SALEM ROAD OVER RAZOR RUN ACI-1097(4) Montgomery County Sta. 82+32.00						
DESIGNED C.B.R.	DRAWN C.B.R.	TRACED	CHECKED J.P.	REVIEWED J.P.	DATE 7-20-58	REVISED

MONTGOMERY COUNTY

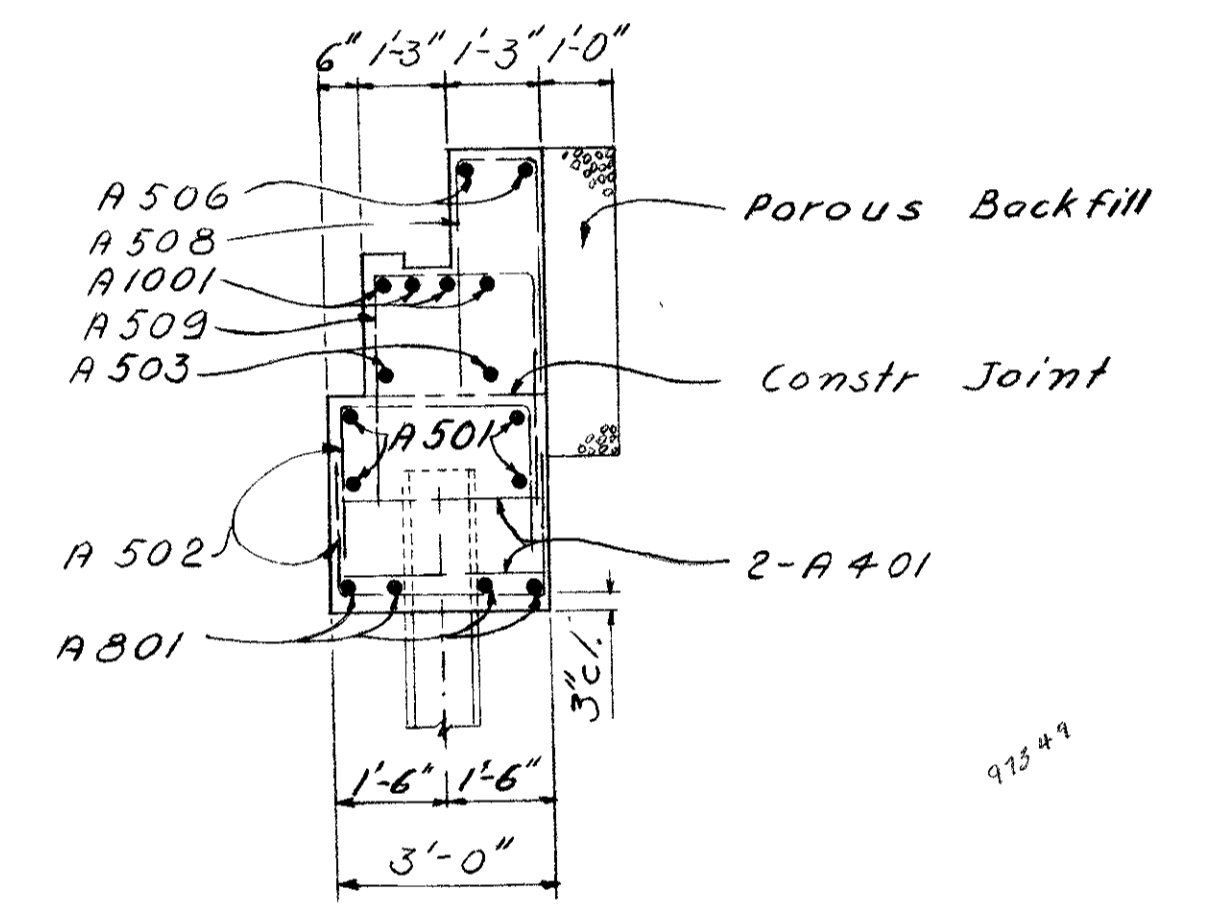
MOT - 40 - 5.98  
MOT - 49 - 12.45



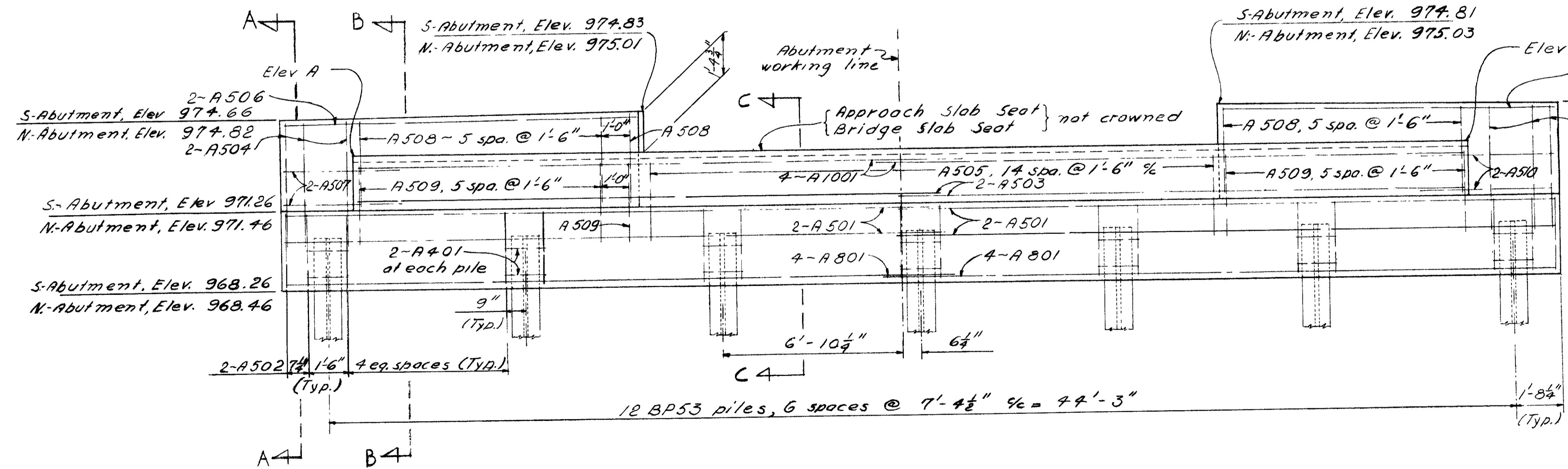
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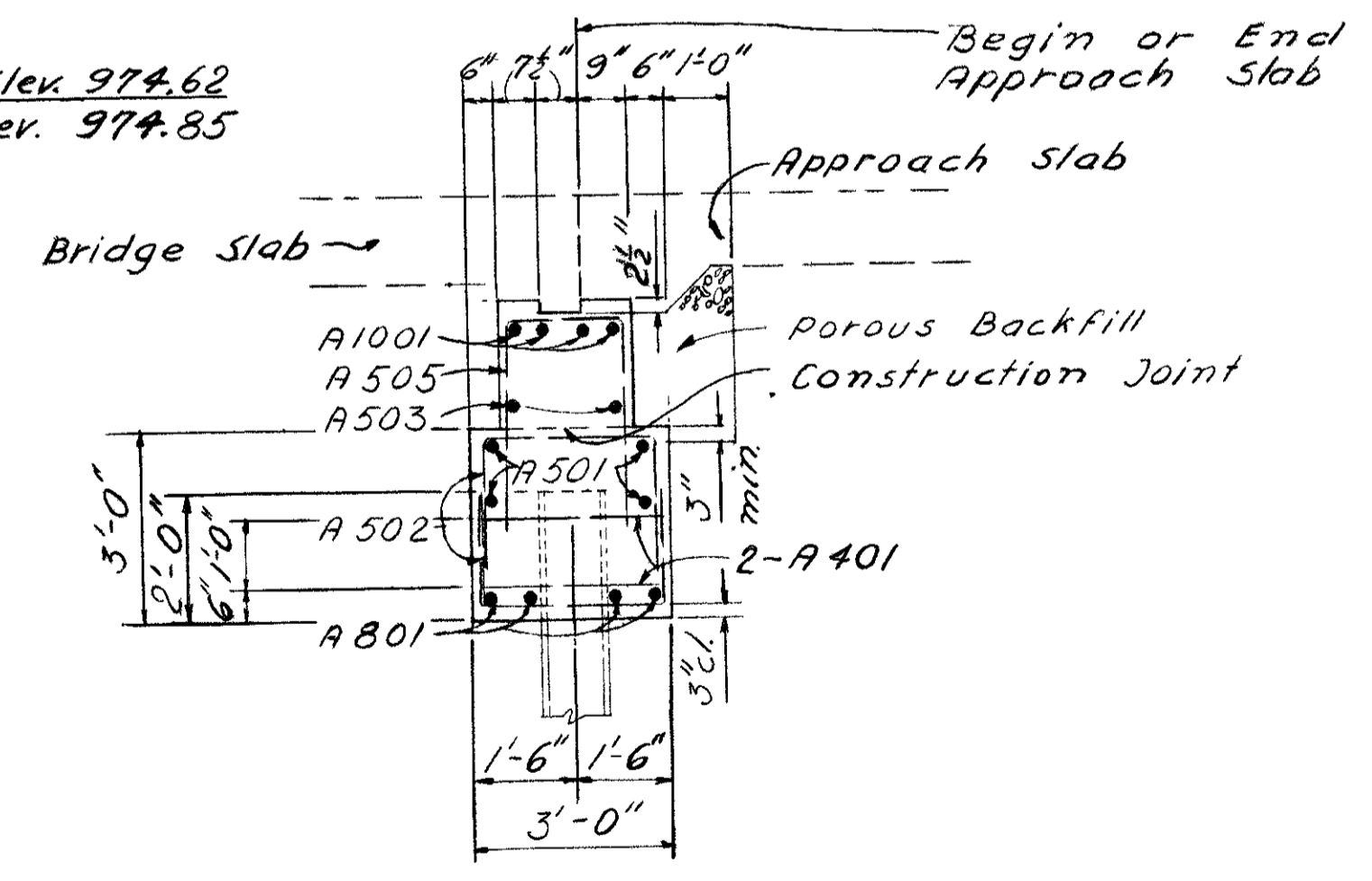
SECTION A-A



SECTION B-B



ELEVATION



SECTION C-C

BRIDGE SEAT ELEVATIONS			
S. Abutment		N. Abutment	
A	B	A	B
973.29	973.26	973.46	973.49

NOTE  
Porous Backfill Porous backfill of abutment and wings shall extend up to the underside of the approach slab or to the finished ground surface. The bottom shall be a minimum of 3" below the bench elevation of the center of the abutment and shall slope 1/2" per foot down and away from the center to the surface of the outside slopes. Excavation therefore in excess of that required for construction of the abutment, shall be considered as paid for in the bid price per cu yd. paid for porous backfill.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

ABUTMENT DETAILS  
BROOKVILLE - SALEM ROAD  
OVER RAZOR RUN

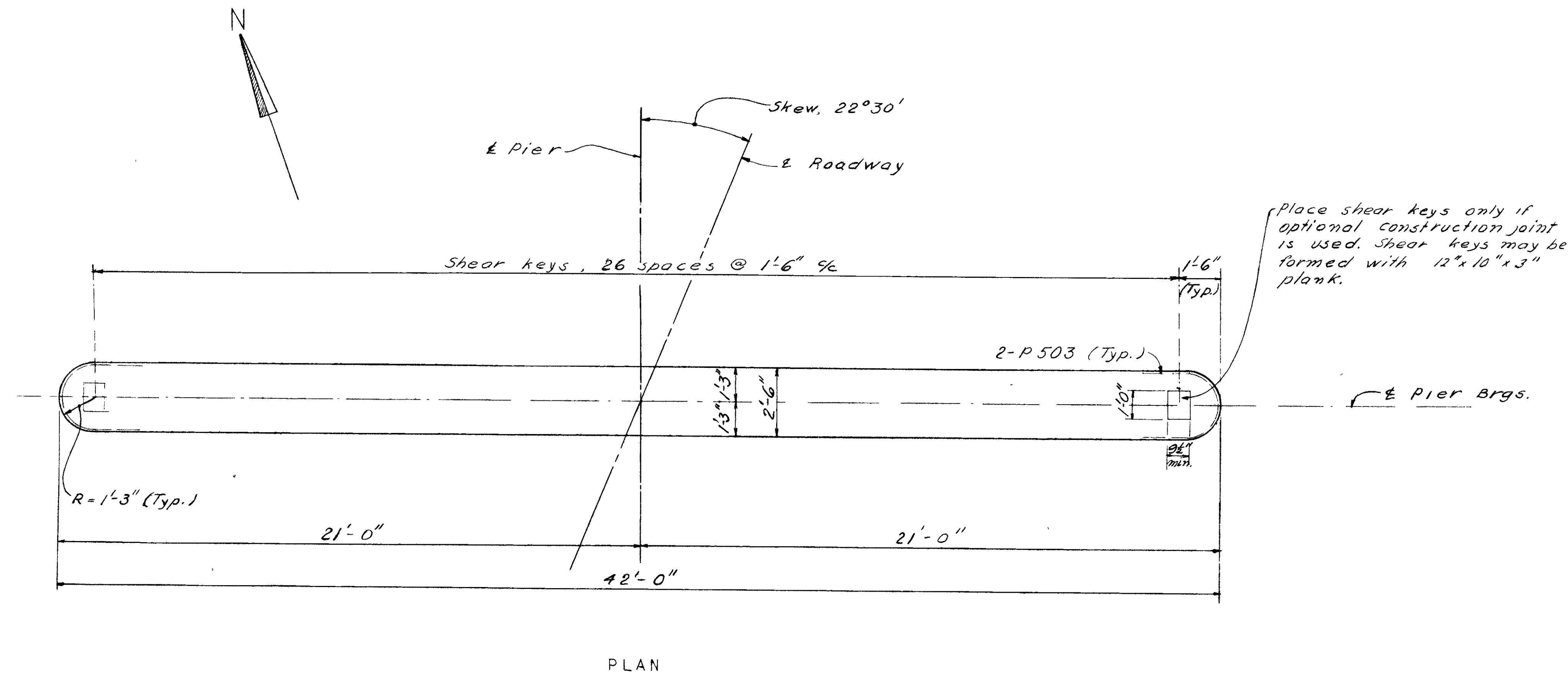
ACI-1097(4)  
Montgomery County Sta. 82+32.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.B.R.	C.B.R.		J.P.	T.L.V.	3-28-58	

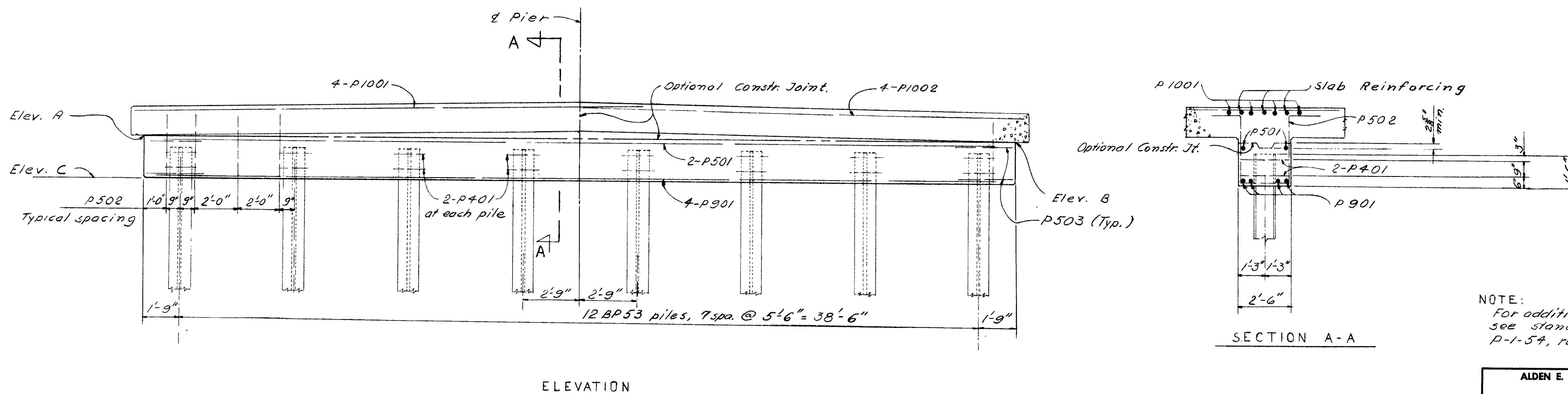
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

285  
241

MONTGOMERY COUNTY  
MOT - 40 - 5.98  
MOT - 49 - 12.45



ELEVATIONS		
	Pier #1	Pier #2
A	973.32	973.40
B	973.35	973.43
C	971.32	971.40



NOTE:  
For additional pier details see standard Drawing P-1-54, revised 12-1-54.

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

**PIER DETAILS**  
BROOKVILLE - SALEM ROAD  
OVER RAZOR RUN  
ACI-1097(4)  
Montgomery County Sta. 82 + 32.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.B.R.	C.B.R.		J.P.	J.L.U.	3-28-58	

### REINFORCING

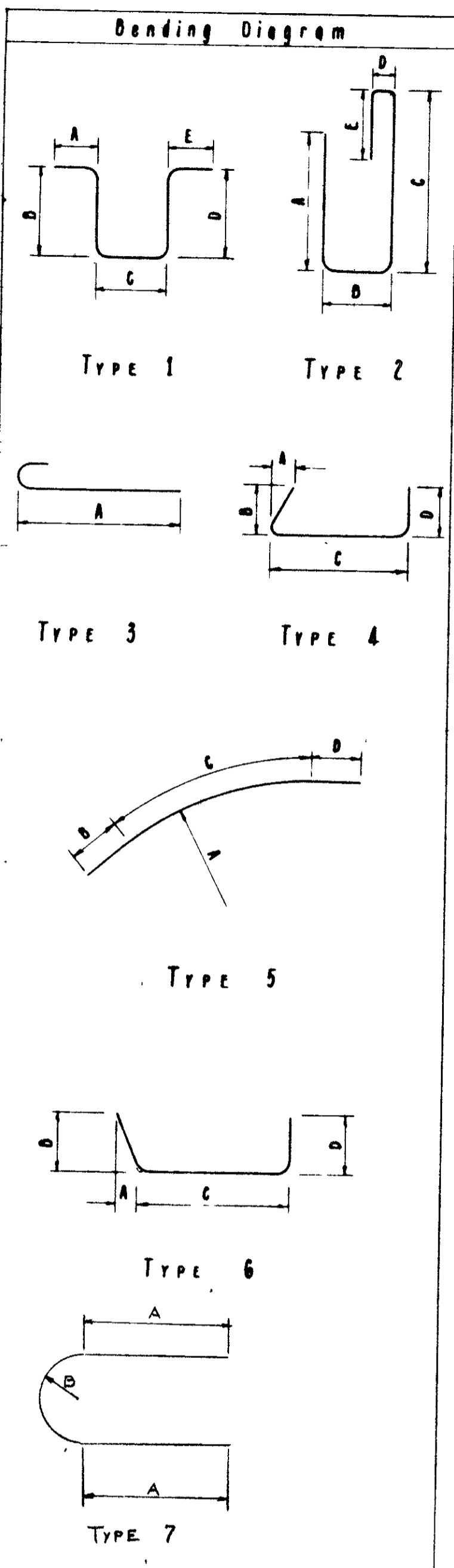
### STEEL

### LIST

FED. NO. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		226 241

MONTGOMERY COUNTY  
MOT-40-5.98  
MOT-49-12.45

Mark	No	Length	Weight	Type	"A"	"D"	"C"	"D"	"E"	Shape
<b>SUPERSTRUCTURE</b>										
A 947	17	34-10	13.857							sf
B 947	40	24-11	3.389	3	23-10					bf
C 947	40	21-11	2.981	3	20-10					bf
D 947	20	23-4	1.587							sf
E 947	20	18-2	1.235							sf
F 1047	70	31-3	9.413							sf
G 1047	36	17-0	2.633							sf
H 1047	36	12-11	2.001							sf
J 601	36	18-4	.991							sf
K 601	18	11-3	.304							sf
M 701	91	42-9	2.952							sf
N 601	63	42-9	2.045							sf
<b>PIERS</b>										
P 401	64	4-10	207	1	1-9	1-6	1-9			bf
P 501	4	39-6	165							sf
P 502	46	9-4	448	1	1-0	2-10	2-2	2-10	1-0	bf
P 503	8	6-4	53	7	1-7	1-0				bf
P 901	8	39-6	1,074							sf
P 1001	8	24-7	846							sf
P 1002	8	21-4	734							sf
<b>ABUTMENTS</b>										
A 401	56	5-7	209	1		2-2	1-6	2-2		bf
A 501	16	24-6	409							sf
A 502	128	6-9	901	1		2-2	2-8	2-2		bf
A 503	8	21-5	179							sf
A 504	24	5-0	125							sf
A 505	30	7-11	248	1		3-3	1-8	3-3		bf
A 506	4	12-5	52							sf
A 507	8	3-9	31							sf
A 508	26	6-8	181	1		3-0	0-11	3-0		bf
A 509	26	8-5	228	1		3-3	2-2	3-3		bf
A 510	8	5-3	44							sf
A 511	4	12-10	54							sf
A 801	16	25-0	1,068							sf
A 1001	16	22-2	1,526							sf
<b>REPLACEMENT STEEL</b>										
RE 401	1	5-3								sf
RE 501	1	5-7								sf
RE 601	1	5-11								sf
RE 701	1	6-3								sf
RE 801	1	6-6								sf
RE 901	2	6-10								sf
RE 1001	1	7-3								sf



NOTE:  
In the reinforcing steel bar marks, the first digit where three digits are used and the first two where four are used is the bar number which indicates the size of the bar.

ITEM	TOTAL	UNIT	DESCRIPTION	ESTIMATED QUANTITIES			
				ABUT.	PIER	SUPERSTR.	GENERAL
E-2	56	cu. yd.	Unclassified Excavation	56			
S-1	223	cu. yd.	Class "C" concrete. Superstructure & Pier Caps		16	207	
S-1	50	cu. yd.	Class "E" concrete. Abutments	50			
S-4	59,170	lb.	Reinforcing Steel	5,255	3,527	50,388	
S-14	198.24	lin. ft.	Railing (Type I-15.13 with galvanized steel posts & bolts)			198.24	
S-16	Lump Sum		First Test Pile				Lump
S-18	809	lin. ft.	Steel Piles, 12 BP53	329	480		
S-29	14	cu. yd.	Porous Backfill	14			
S-29	124	cu. yd.	Slope Facing (S-29.05 type)				124
S-24	Lump Sum		Removal of existing structure				Lump
E-3	415	Cu Yd	Channel Excavation				415
I-10	22	Cu Yd	Dumped Rock Fill				22

REPLACEMENT BARS  
IF REINFORCING BARS ARE FABRICATED FROM STOCK WHICH HAS PREVIOUSLY BEEN TESTED AND APPROVED BY THE OHIO HIGHWAY TESTING LABORATORY, TEST SAMPLES AS PROVIDED IN SEC. S-402 NEED NOT BE FURNISHED AND REPLACEMENT BARS WILL NOT BE REQUIRED

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

**REINFORCING STEEL LIST & ESTIMATED QUANTITIES**  
BROOKVILLE - SALEM ROAD  
OVER RAZOR RUN

ACI-1097(4)  
Montgomery County Sta. 82+32.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.B.R.	C.B.R.		J.P.		7.20 3-28-58	

FED RD DIVISION	STATE	PROJECT	TYPE PLAN
2	OHIO		

221  
241

MONTGOMERY COUNTY  
MOT - 40-5.98  
MOT - 49-12.45

REFERENCES: Standard Drawings CS-1-54 revised 7-16-56  
P-1-54 revised 12-1-54

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 revisions thereof dated 2-21-58.

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.

SLAB THICKNESS of 16-3/4 inches includes one inch for monolithic wearing surface.

EXCAVATION QUANTITY includes the removal of fill material between bench elevation and existing ground.

SLOPE FACING (S-29.05 Type) shall be provided under the structure at both abutments. The porous drain material shall be 12" thick and shall extend from the face of the abutment down to Elev. 958.2 ± and transversely to 3 ft. outside the edge of the superstructure.

PILES shall be driven to a minimum bearing capacity of 26 tons per pile for the abutments and 38 tons per pile for the piers.

PIER PILE ENCASUREMENT as shown on Std. Dwg. P-1-54 is not required. The painting of the piles shall extend to low water elevation or, if the proposed surface of the ground is above low water, it shall extend to at least one foot below the proposed surface of the ground.

MAXIMUM PILE REACTION: The maximum calculated pile reaction is as follows:

- Abutments: 25 tons
- Piers: 37 tons

REMOVAL OF EXISTING STRUCTURE: Superstructure steel is to be stored on the R/W for disposal by Montgomery County forces.

TRAFFIC: Traffic on Brookville-Salem Road will be detoured. See note on Sheet 12.

ALDEN E STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
GENERAL NOTES BROOKVILLE SALEM ROAD OVER RAZOR RUN MONTGOMERY COUNTY STA-82+32.00						
ACI-1097(4)						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
				TLU	3-28-58	