STATE OF OHIO
DEPARTMENT OF HIGHWAYS
JEF-7- 13.53
STEUBENVILLE TOWNSHIP
VILLAGE OF MINGO JUNCTION & CITY OF STEUBENVILLE
JEFFERSON COUNTY

U-430(14)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430 (14)	

1/322

AUG 23 1963
GROUND PHOTOLAB

JEFFERSON COUNTY
JEF-7- 13.53

NOTE:
Any reference in these plans to "TOTAL SHEET NUMBER 307" shall be considered to be "TOTAL SHEET NUMBER 322"

LIMITED ACCESS

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

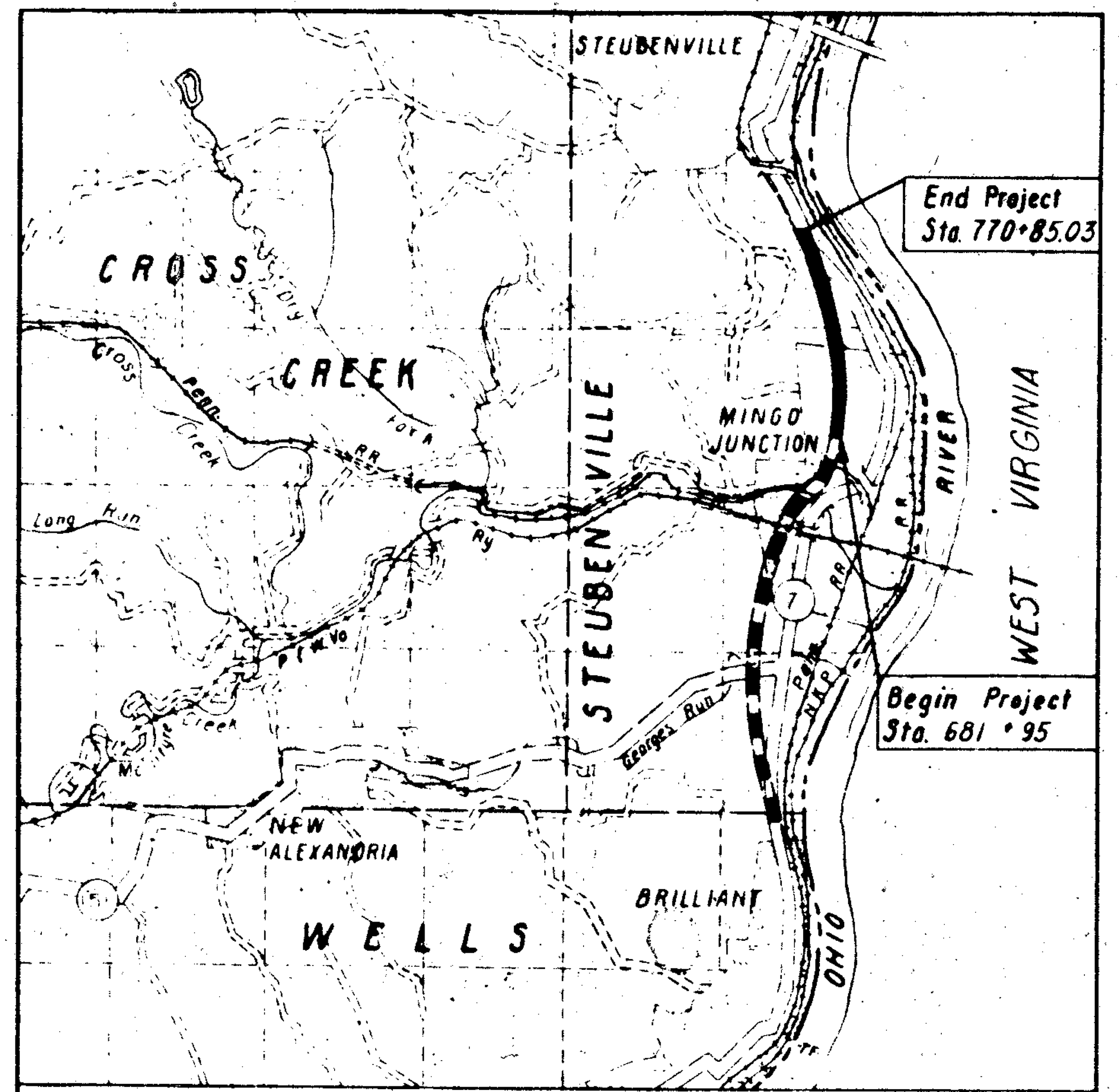
CONVENTIONAL SIGNS

- Limited Access and Right of Way
- Limited Access Only (LA)
- Right of Way Only (RW)
- Existing Right of Way
- State Line
- County Line
- Township Line
- Section Line
- Center Line (700, 701, 702, 703)
- Corporation Line
- Fence Line
- Guard Rail (existing)
- Guard Rail (proposed)
- Steam Railroad
- Power Poles
- Telephone Poles
- Trees (existing)
- Trees or Stumps (to be removed)

INDEX OF SHEETS

LINE DATA U-430 (14)

BEGIN PROJECT	STA. 681+95.00
END PROJECT	STA. 770+85.03
GROSS LENGTH OF PROJECT	8,890.03 LIN. FT.
DEDUCT FOR EQUATIONS (SEE SHEET 2)	2.42 LIN. FT.
NET LENGTH OF PROJECT	8,887.61 LIN. FT. OR 1.683 MI.
BEGIN WORK	STA. 678+37.00
END WORK (URBAN)	STA. 770+85.03
GROSS LENGTH OF WORK	9,248.03 LIN. FT.
DEDUCT FOR EQUATIONS (SEE SHEET 2)	2.42 LIN. FT.
NET LENGTH	9,245.61 LIN. FT.
ADD FOR APPROACHES (See Sheet No. 10)	1,575.00 LIN. FT.
LENGTH OF WORK (URBAN)	10,820.61 LIN. FT. OR 2.049 MI.
BEGIN WORK-Steubenville	STA. 770+85.03
END WORK - Steubenville	STA. 776+00.00
LENGTH OF WORK (MUNICIPAL) Steubenville	514.97 LIN. FT. OR 0.097 MI.
ADD FOR URBAN	10,820.61 LIN. FT. OR 2.049 MI.
TOTAL LENGTH OF WORK	11,335.58 LIN. FT. OR 2.146 MI.



Delivery Point: Mingo Junction
Average haul from siding: 1.3 Miles

LOCATION MAP
SCALE OF MILES 0 1 2 3

- Portion to be Improved
- Portion Under Separate Contract
- State Roads
- Other Roads

SCALE

Plan: Horizontal	1"=50'
Profile: Horizontal	1"=50'
Profile: Vertical	1"=10'
Cross: Sections	1"=10'

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

Approved Wm. P. McKenna
Date 7-17-59 Division Deputy Director

Approved Guy E. Nagra
Date 10/16/59 Deputy Director of Planning & Programming

Approved D. F. Brennan
Date 10-12-59 Engineer of Bridges

Approved Warren Kunnen
Date 10-9-59 Engineer of Location & Design

Approved C.W. McCaughey
Date 10-13-59 Deputy Director of Design & Construction

Approved G. A. Berry
Date 10-15-59 First Assistant Director

Approved E. S. Preston
Date 10-15-59 Director of Highways

Sheets 238, 248 & 255 revised 11-20-59.
Sheets 203, 242 & 261 revised 3-24-60.
Sheet 265 revised 4-20-60.
Sheet 207A added 10-25-61.
Sheet 279 revised 10-25-61.

SHEETS 308 AND 313 REVISED 11-20-59. R.E.C.

AUG 23 1963
GROUND PHOTOLAB

Supplemental	Prints of Standard	Construction	Drawings
DR-1 1-3-55	I-8 C.B. NO.6 1-26-59	I-15 NO.1 5-21-59	L.J. NO.1 7-1-55
F-1 9-1-59			RI-1 7-15-58
G-7.07 6-1-56		I-15 NO.2A 5-21-59	S-27 P.C.3 2-20-45
B.T. 50-70-71 E No.1 10-1-47	I-8 I NO.2 12-1-54		S-27 P.C.4 1-4-54
I-1,2,3,4&5 4-24-58	I-8 M.H. NO.1 1-26-59	I-21-23 8-1-56	AR-1-57 2-2-59
F-3 9-1-59	I-8 M.H. NO.1-A 1-26-59		AS-1-54 12-1-54
I-8 CB 2-2-A&B 3-2-59	I-8 M.H. NO.2 1-26-59	L-1 4-1-50	T-35 1-2-56
B-T-71 R 3-2-53		L-3 4-1-50	T.J. 5-1-56
I-8 C.B. NO.3 1-26-59	I-12 7-1-54	L-3A 4-1-50	CSB-2-56 (Sht.2&3) 2-2-59
I-8 C.B. I-3 & I-4 1-26-59	I-14 G. 1-22-52	OS-1 12-17-56	RB-1-55 2-2-59

Supplemental	Specifications
18	REV. 6-15-59
B-219	REV. 3-12-59
I-124	1-11-56

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED

DIVISION ENGINEER DATE

File No.	JEFFERSON COUNTY JEF-7-13.53
	Date of Letting ______ 19__
	Contract No. ______

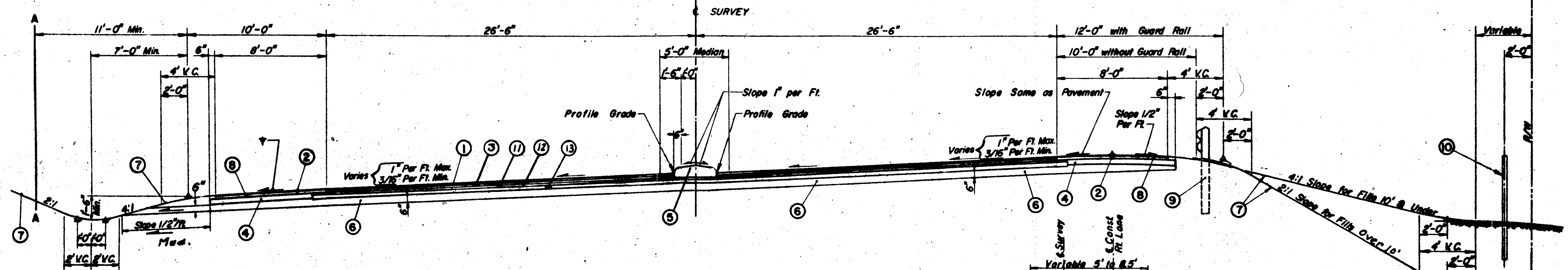
FED. RD. DIVISION | STATE | PROJECT
2 | OHIO | U-430 (14)
2 / 307
JEFFERSON COUNTY
JEF-7-13.53
NOTE:
Project and Work lengths in Line Data on Sheet 1 are based on ℄ length of North bound Lane from Sta. 681+95.00 to Sta. 691+07.89, plus ℄ length from Sta. 691+07.89 to Sta. 776+00.00.
CURVE DATA (N.B.)
P.I. • 686+12.75 P • 4.01' Δ • 28° 11' 21" K • 174.89' Dc • 4° 30' Δc • 12° 26' 21" Rc • 1,273.24' Lc 276.43' Ts • 495.58' LT 233.57' θs • 7.88° ST 116.88' Es • 43.66' Ls • 350'
CURVE DATA (S.B.)
P.I. • 686+12.75 Lc • 404.73 Δ • 28° 11' 21" Lt. Rc • 1,432.39' Dc • 4° 00' 00" Es • 47.16' Ls • 300' p • 2.62' θs • 6° 00' 00" k • 149.95' Ts • 510.25' LT • 200.11' Δc • 16° 11' 21" ST • 100.10'
BEGIN PROJECT STA. 681+95
U-430(14)
BEGIN WORK STA. 678+37
CURVE DATA
P.I. • 672+92.82 Rc • 1,432.39' Δ • 36° 49' 55" Rt. Dc • 4° 00' 00" Ls • 300' Lc • 620.80' θs • 6° 00' 00" p • 2.62' Ts • 627.76' k • 149.95' Δc • 24° 49' 55" LT • 200.12' ST 100.10
680+70 Exp'ry = 4+31.71 Clifton St.
CURVE DATA
P.I. • 698+95.42 Δ • 16° 00' 00" Rt Dc • 2° 00' 00" Ls • 150' θs • 1° 30' 00" Ts • 477.67' Δc • 13° 00' 00" Lc • 650.00' Rc • 2,864.79' Es • 28.49' p • 0.33' k • 75.00' LT • 100.00 ST • 50.00
CURVE DATA
P.I. • 707+70.53 Lc • 76.62' Δ • 11° 25' 54" Lt. Rc • 1,637.02' Dc • 3° 30' 00" Es • 9.78' Ls • 250' p • 1.59' θs • 4° 22' 30" k • 124.98' Ts • 288.99' LT • 166.72' Δc • 2° 40' 54" ST • 83.38'
P.O.T. 713+75 Exp'ry = P.O.T. 30+21.61 Logan Ave. Relocation
CURVE DATA
P.I. • 721+43.24 Ls • 300' Δ • 45° 00' 00" Lt. Δc • 31° 00' 00" Dc • 4° 00' 00" Lc • 775.00' Rc • 1,432.39' P • 2.62' Ts • 715.22' k • 149.95' θs • 6° 00' 00" LT 200.11' Es • 109.94' ST 100.10'
MADISON AVE. SPRING AVE. HOLLY AVE. GRANDVIEW AVE. WOODWARD AVE. JUNCTION ST. WILSON AVE. PLEASANT WAY LOGAN AVE. McKEE WAY MITCHELL ST. COMMERCIAL ST. MAY AVE. STEUBEN AVE. CLIFTON ST. PEELER ST. MURDOCK AVE. MURDOCK AVE. RELOCATION CHURCH UNION AVE. ST. CLAIR ST. RAVINE ST. LINCOLN AVE. STANTON AVE. STANDARD AVE. McLISTER ST. McLISTER AVE. POTTER ST. CROSS CREEK CLIFTON ST. RELOCATION PENN. R.R. EX. S.R. 7 RAMP "A" RAMP "B" RAMP "C" RAMP "D" Temporary Runaround
N 53°32'55"E N 25°21'14"E N 41°21'14"E N 28°55'20"E N 15°04'40"W
CORP. LINE OF MINGO JUNCTION
SEC. 27 T-2-N R-1-W
SEC. 21 T-2-N R-1-W
CURVE DATA
P.I. • 767+65.69 Ls • 300.00' Δ • 9° 54' 20" Lt. Δc • 0° 54' 20" Dc • 3° 00' 00" Lc • 30.19' Rc • 1,909.86' p • 1.96' Ts • 515.64' k • 149.97' θs • 4° 30' 00" LT • 200.06' Es • 9.15' ST • 100.06'
All work shown on these Plans North of Sta. 770+85.03 is designated as "MUNICIPAL"
All work shown on these Plans South of Sta. 770+85.03 is designated as "URBAN"
U-430(14) END PROJECT STA. 770+85.03
END WORK STA. 776+00
SOUTH CORP. LINE OF STEUBENVILLE
CURVE DATA
P.I. • 755+12.16 Ls • 200.00' Δ • 14° 48' 08" Lt. Δc • 10° 48' 08" Dc • 2° 00' 00" Lc • 540.11' Rc • 2,864.79' p • 0.58' Ts • 472.20' k • 100.00' θs • 2° 00' 00" LT • 133.34' Es • 24.65' ST • 66.67'
CURVE DATA
P.I. • 739+04.57 Δ • 10° 00' 00" Lt. D • 0° 40' 00" R • 8,594.37' T • 751.91' L • 1,500.00' E • 32.85'
N 15°04'40"W N 25°04'40"W N 31°51'48"W N 24°32'48"W N 34°41'08"W N 25°17'08"W
CURVE DATA
P.I. • 774+77.73 Ls • 200.00' Δ • 9° 30' 00" Rt Δc • 5° 30' 00" Dc • 2° 00' 00" Lc • 275.00' Rc • 2,864.79' p • 0.58' Ts • 538.09' k • 100.00' θs • 2° 00' 00" LT • 133.34' Es • 10.45' ST • 66.67'
CURVE DATA
P.I. • 761+04.76 Ls • 300.00' Δ • 13° 00' 00" Rt. Δc • 1° 00' 00" Dc • 4° 00' 00" Lc • 25.00' Rc • 1,432.39' p • 2.62' Ts • 313.45' k • 149.95' θs • 6° 00' 00" LT • 200.11' Es • 11.90' ST • 100.10'
MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA
SCHEMATIC LAYOUT PLAN
Designed | Drawn | Traced | Checked | Reviewed Date | Revised
Griffin | a.m.m. | a.m.m. | Strough

JEFFERSON COUNTY
JEF-7-13.53

TYPICAL SECTIONS

TYPE T-35 on B-20

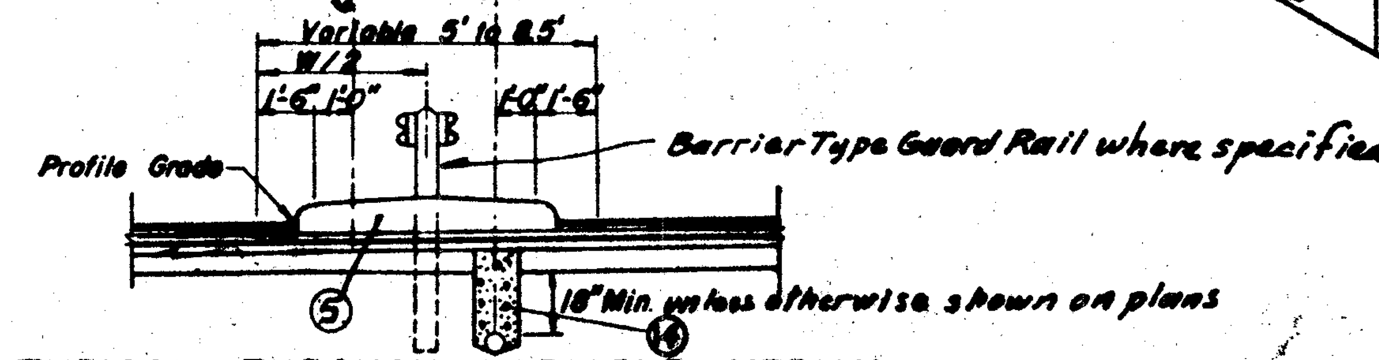
SCALE 1/4" = 1'-0"



TYPICAL PAVEMENT SECTION

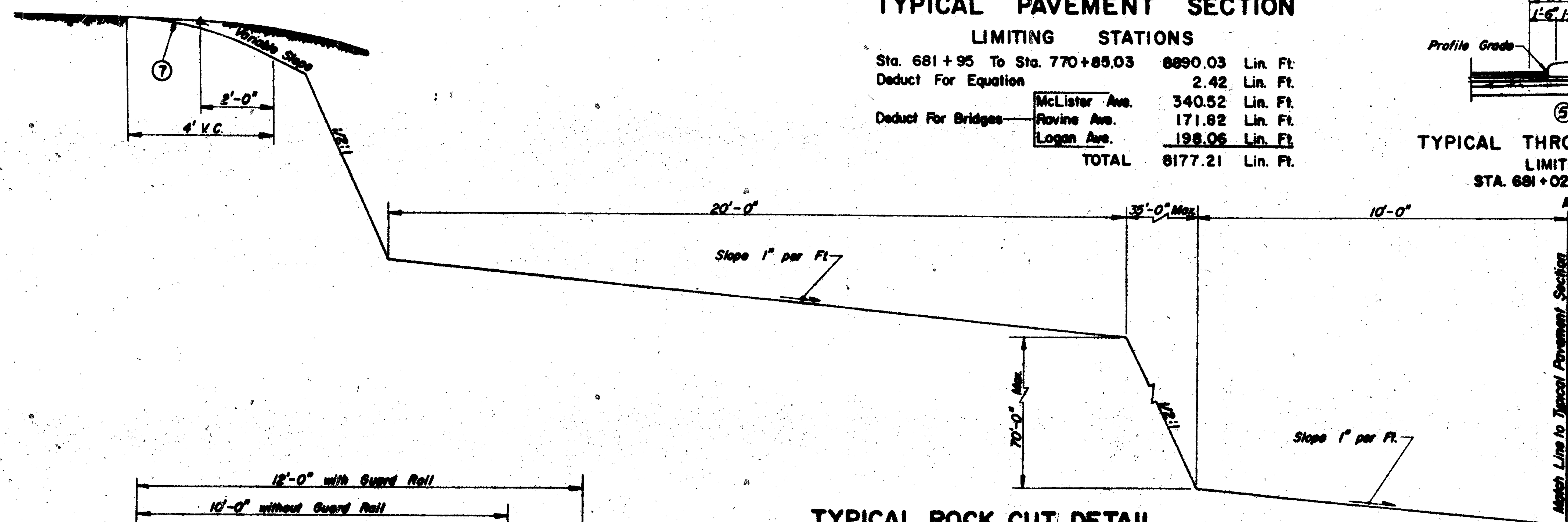
LIMITING STATIONS

Sta. 681 + 95 To Sta. 770 + 85.03	8890.03	Lin. Ft.
Deduct For Equation	2.42	Lin. Ft.
Deduct For Bridges — McLister Ave.	340.52	Lin. Ft.
Ravine Ave.	171.82	Lin. Ft.
Logan Ave.	198.06	Lin. Ft.
TOTAL	8177.21	Lin. Ft.



TYPICAL THROUGH VARIABLE MEDIAN

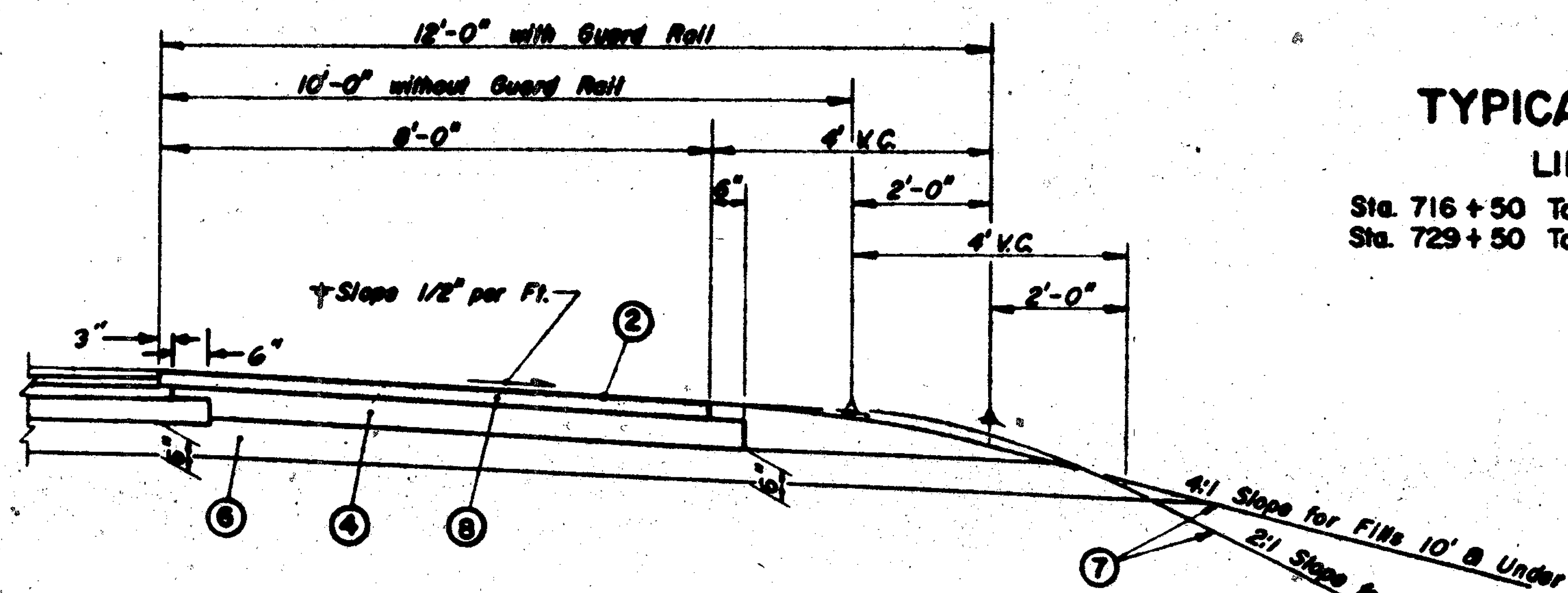
LIMITING STATIONS
STA. 681 + 02.50 TO STA. 691 + 07.89



TYPICAL ROCK CUT DETAIL

LIMITING STATIONS

Sta. 716 + 50 To Sta. 726 + 50	1000	Lin. Ft.
Sta. 729 + 50 To Sta. 771 + 00	4150	Lin. Ft.
TOTAL	5150	Lin. Ft.



SHOULDER DETAIL LOW SIDE OF SUPERELEVATION

LIMITING STATIONS

Sta. 716 + 50 To Sta. 770 + 85.03	5435.03	Lin. Ft.
TOTAL	5435.03	Lin. Ft.

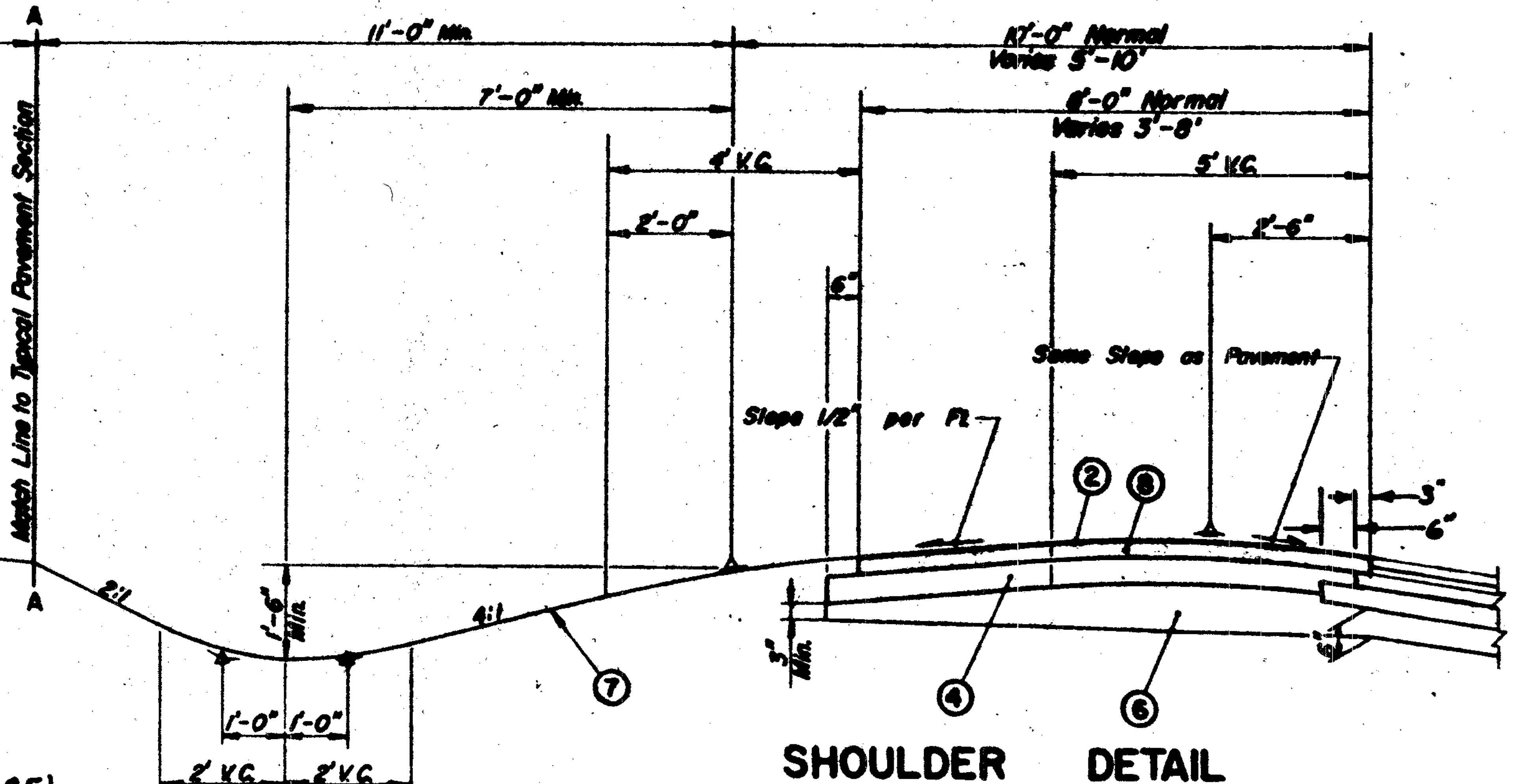
1. Item T-35 1½" Asphaltic Concrete Surface Course, Type "A" (70-85)
2. * Item T-31 Bituminous Surface Treatment - See Note in Proposal.
3. Item B-35 1¼" Asphaltic Concrete Leveling Course (70-85)
4. Item I-18 5" Stabilized Crushed Aggregate Shoulders and Approaches.
5. Item I-21 Portland Cement Concrete Median Pavement, Standard Type 2
6. Item I-22 Subbase, Variable Depth.
7. Item L-9 Seeding and Protecting
8. Item B-219 3" Waterproofed Aggregate Base Course
9. Item I-15 Guard Rail, Steel Beam Std. Type (Deep).
10. Item SS-18 Fence, Standard Type "C"
11. Item B-35 2¾" Asphaltic Concrete Base Course (70-85)
12. Item T-30 Bituminous Prime Coat @ 0.4 Gal. per Sq. Yd.
13. Item B-20 8" Waterbound Macadam Base Course using Size No. 2 Coarse Aggregate.
14. Item I-4 6" Pipe Underdrain

NOTES:

All Slopes Typical unless otherwise shown on Cross Sections.

† Slope away from Pavement 1/2" per Ft. except where Pavement Slope exceeds 1/2" per Ft. See Plans for exceptions.

* Bituminous Surface Treatment shall be applied in one operation. The Seal shall consist of 0.008 Cu. Yds. No. 6 Aggregate and 0.25 Gals. Bituminous Material per Sq. Yd.



SHOULDER DETAIL HIGH SIDE OF SUPERELEVATION

LIMITING STATIONS

Sta. 705 + 00 To Sta. 770 + 85.03	6585.03	Lin. Ft.
Deduct For Bridges — Logan Ave.	198.06	Lin. Ft.
Side Hill Structure	260.50	Lin. Ft.
TOTAL	6126.47	Lin. Ft.

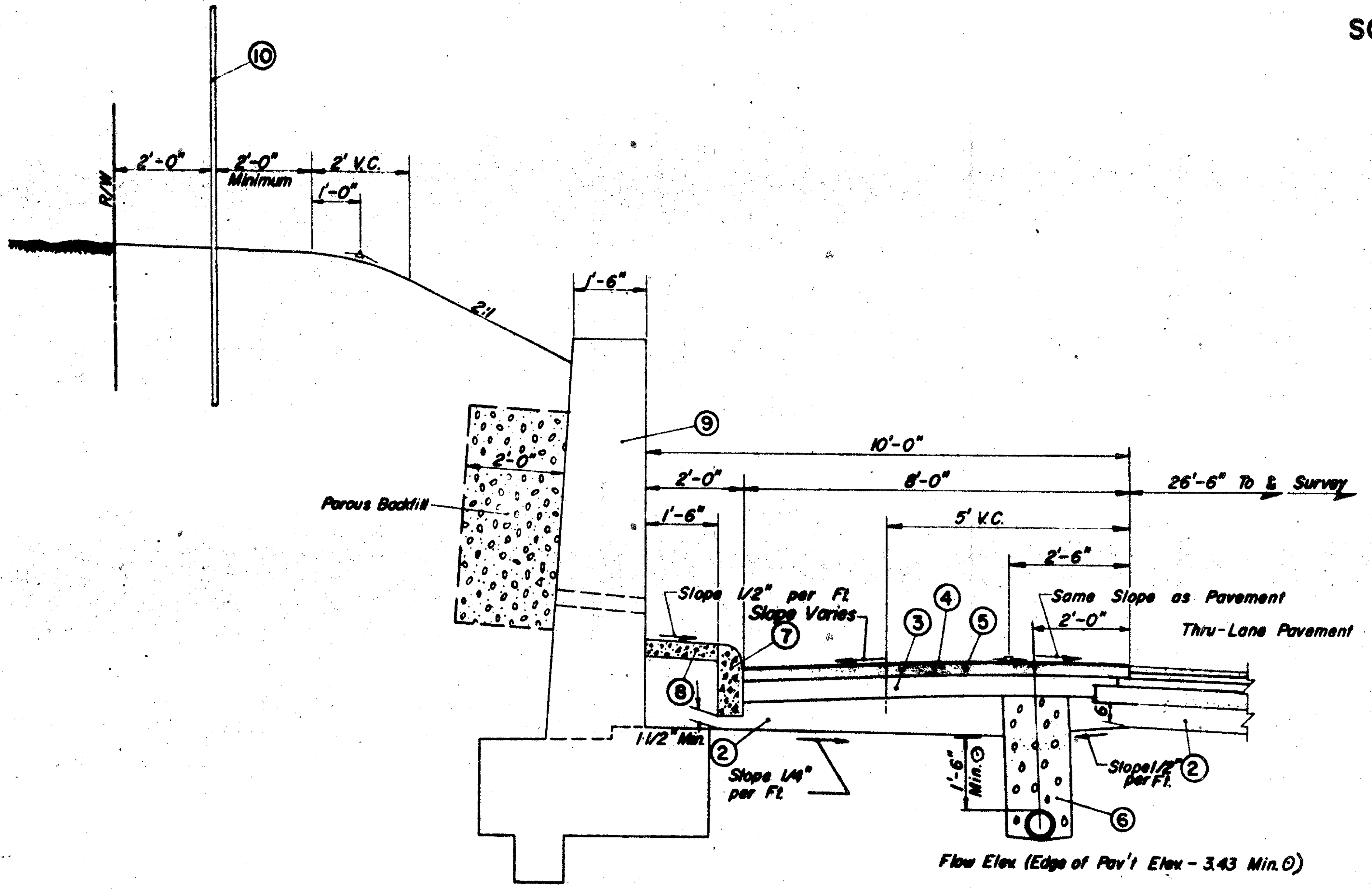
MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

TYPICAL SECTION
PAVEMENT & ROCK CUT

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
Griffin	Simpson	G.K.S.	Strough		

TYPICAL SECTIONS

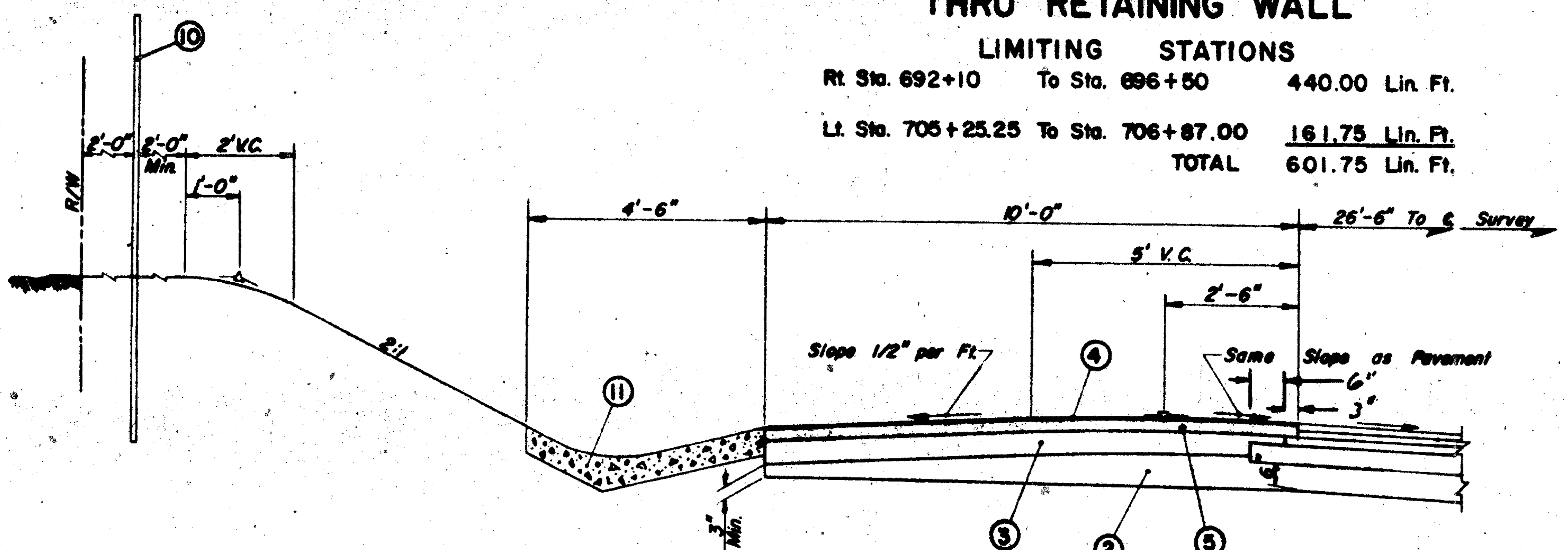
TYPE T-35 on B-20
SCALE: 1/2" = 1'-0"



SHOULDER DETAIL
THRU RETAINING WALL

LIMITING STATIONS

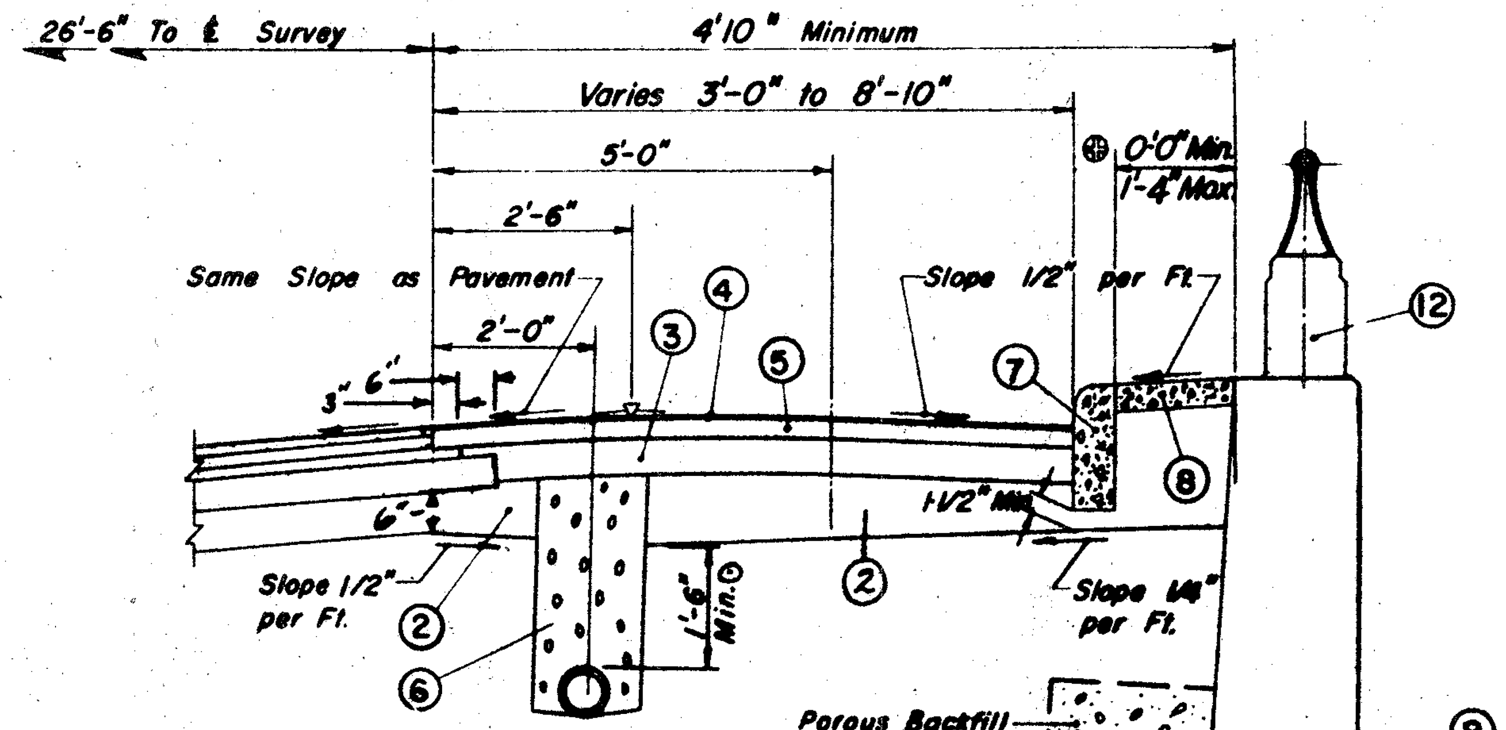
Rt. Sta. 692+10	To Sta. 696+50	440.00 Lin. Ft.
Lt. Sta. 705+25.25	To Sta. 706+87.00	161.75 Lin. Ft.
	TOTAL	601.75 Lin. Ft.



SHOULDER DETAIL
THRU PAVED DITCH

LIMITING STATIONS

Lt. Sta. 693+80	To Sta. 697+10	310 Lin. Ft.
	TOTAL	310 Lin. Ft.

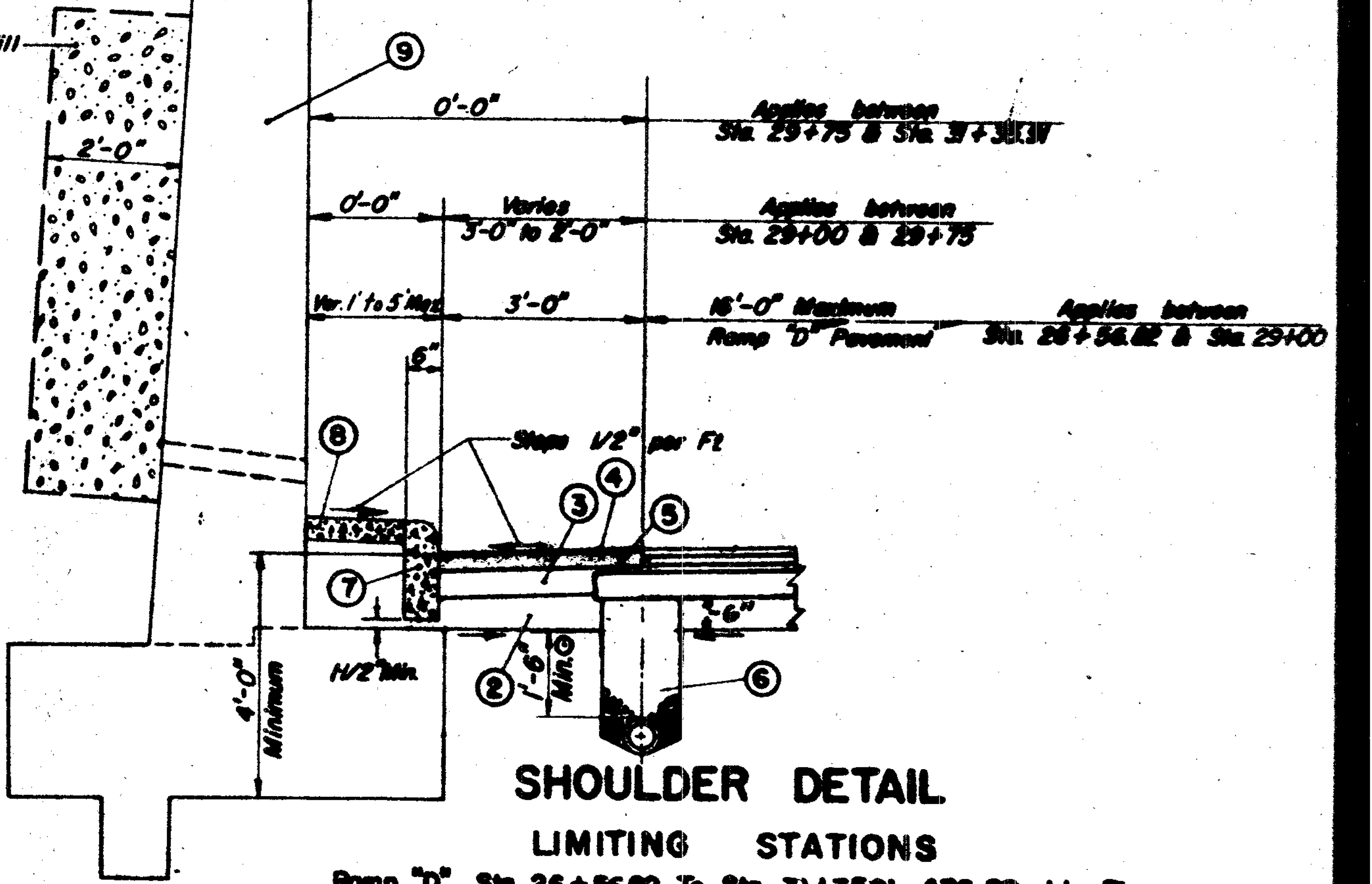


SHOULDER DETAIL
THRU RETAINING WALL

LIMITING STATIONS

Rt. Mainline Sta. 726+56.82	To Sta. 731+35.91	479.09	Lin. Ft.
Rt. Mainline Sta. 696+50	To Sta. 697+50.02	100.02	Lin. Ft.
	TOTAL	579.11	Lin. Ft.

⊕ 4" Concrete Sidewalk varies 1'-2" to 0" from Station 731+10.19 to Station 731+35.91.
4" Concrete Sidewalk varies from 1'-4" at Station 726+56.82 to 1'-2" at Station 728+15.91
4" Concrete Sidewalk 1'-2" from Station 728+15.91 to Station 731+10.19
4" Concrete Sidewalk Tapers from 1'-2" at Station 696+50 to 4" at Station 697+50.02



SHOULDER DETAIL

LIMITING STATIONS

Ramp "D" Sta. 26+56.82	To Sta. 31+35.91	479.09	Lin. Ft.
	TOTAL	479.09	Lin. Ft.

NOTES:
All Slopes Typical unless otherwise shown on Cross Sections.

* Bituminous Surface Treatment shall be applied in one operation. The seal shall consist of 0.008 Cu. Yds. No. 6 Aggregate and 0.25 Gals. Bituminous Material per Sq. Yd.

⊙ Unless otherwise shown on the plans.

②	Item I-22	Subbase, Variable Depth
③	Item I-18	5" Stabilized Crushed Aggregate Shoulders and Approaches.
④ *	Item T-31	Bituminous Surface Treatment - See Note in Proposal.
⑤	Item B-219	3" Waterproofed Aggregate Base Course
⑥	Item I-4	6" Pipe Underdrain.
⑦	Item I-12	Concrete Curb Standard Type 6.
⑧	Item I-13	4" Concrete Sidewalk.
⑨		Retaining Wall, as per Plan.
⑩	Item SS-18	Fence, Standard Type "C".
⑪	Item I-14	Paved Gutter, Standard Type 4.
⑫	Item S-14	Railing, Aluminum Rail and Supports, Concrete Parapet, Standard Type "A"

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

TYPICAL SECTION
SHOULDER DETAILS

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
Griffin	R.V.G.	Simpson	Strough		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(14)	

5
307

JEFFERSON COUNTY
JEF-7-13.53

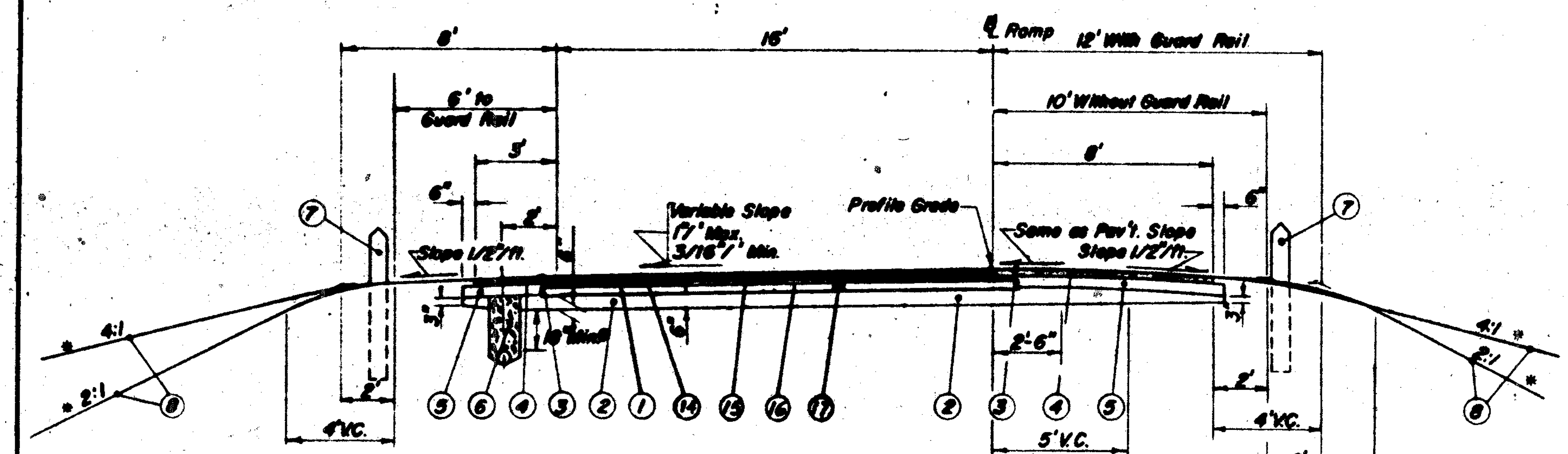
TYPICAL SECTIONS

TYPE T-35 on B-20

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

TYPICAL EXIT TERMINAL

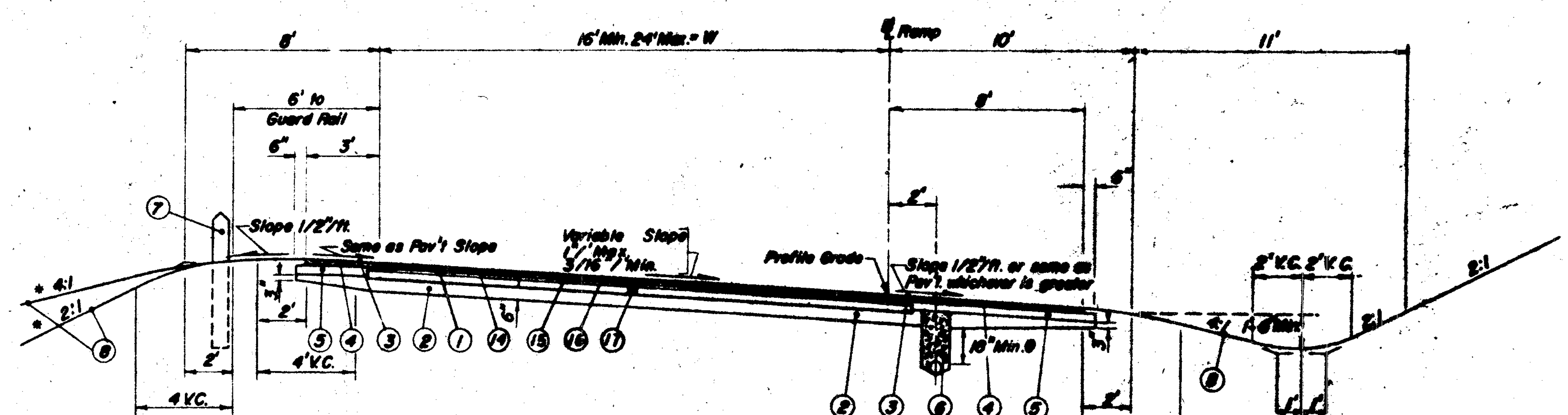
TYPICAL SPEED CHANGE LANE



TYPICAL ONE WAY RAMP

LIMITING STATIONS

Ramp "A" Sta. 9+60.00 To Sta. 14+25 465.00 Lin. Ft.
Ramp "C" Sta. 7+04.94 To Sta. 13+25 620.06 Lin. Ft.
● Ramp "D" Sta. 26+45.00 To Sta. 36+10 965.00 Lin. Ft.
TOTAL 2,050.06 Lin. Ft.



TYPICAL RAMP/STORAGE LANE

LIMITING STATIONS

Ramp "B" Sta. 14+61 To Sta. 17+73.97 312.97 Lin. Ft.
TOTAL 312.97 Lin. Ft.

LEGEND:

(2) I-22 Sub base (Variable Depth)
(3) ‡ T-31 Bituminous Surface Treatment - See Note in Proposal.
(4) B-219 3" Waterproofed Aggregate Base Course.
(5) I-18 5" Stabilized Crushed Aggregate Shoulders and Approaches.
(6) I-4 6" Pipe Underdrain.
(7) I-15 Guard Rail, Steel Beam Std. Type (Deep).
(8) L-9 Seeding and Protecting
(9) I-12 Concrete Curb, Standard Type 6.

(11) I-21 Portland Cement Concrete Median Pavement, Standard Type 2.
(12) I-12 Concrete Curb, Special, as per plan.
(13) I-13 4" Concrete Sidewalk

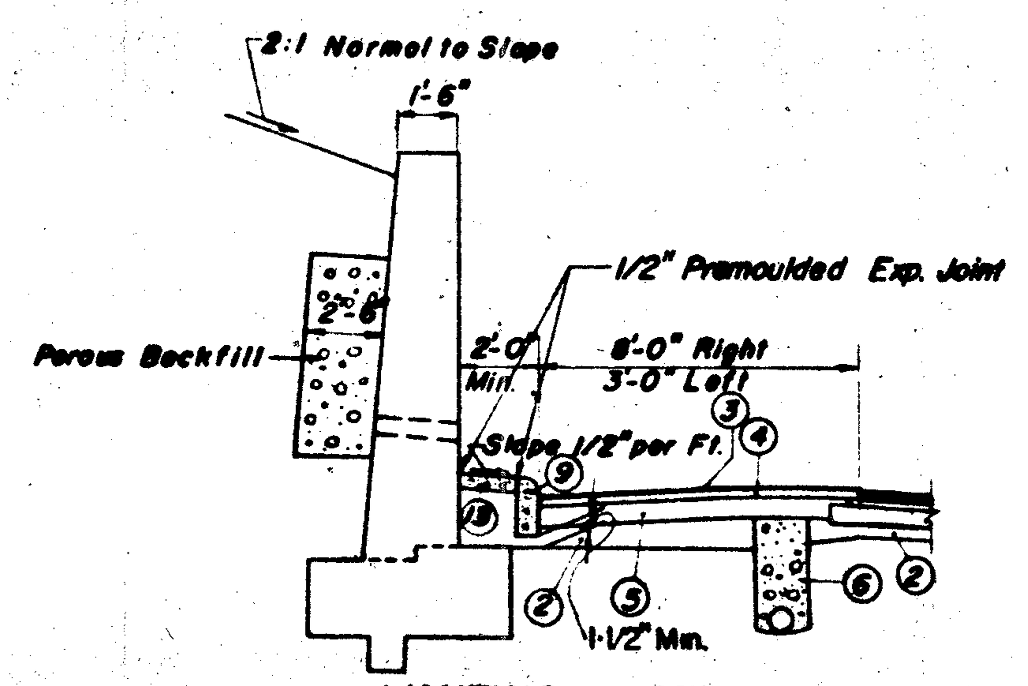
‡ Bituminous Surface Treatment shall be applied in one operation. The Seal shall consist of 0.008 Cu. Yds. No. 6 Aggregate and 0.25 Gal. Bituminous Material per Sq. Yd.

* Same Slope Criteria as Expressway. All Slopes Typical unless otherwise shown on Cross Sections.

Note: For Seeding Limits See General Notes.
● For Left Shoulder Detail See Sheet No. 4.
⊙ Unless otherwise indicated on the plans

LEGEND (CONTINUED)

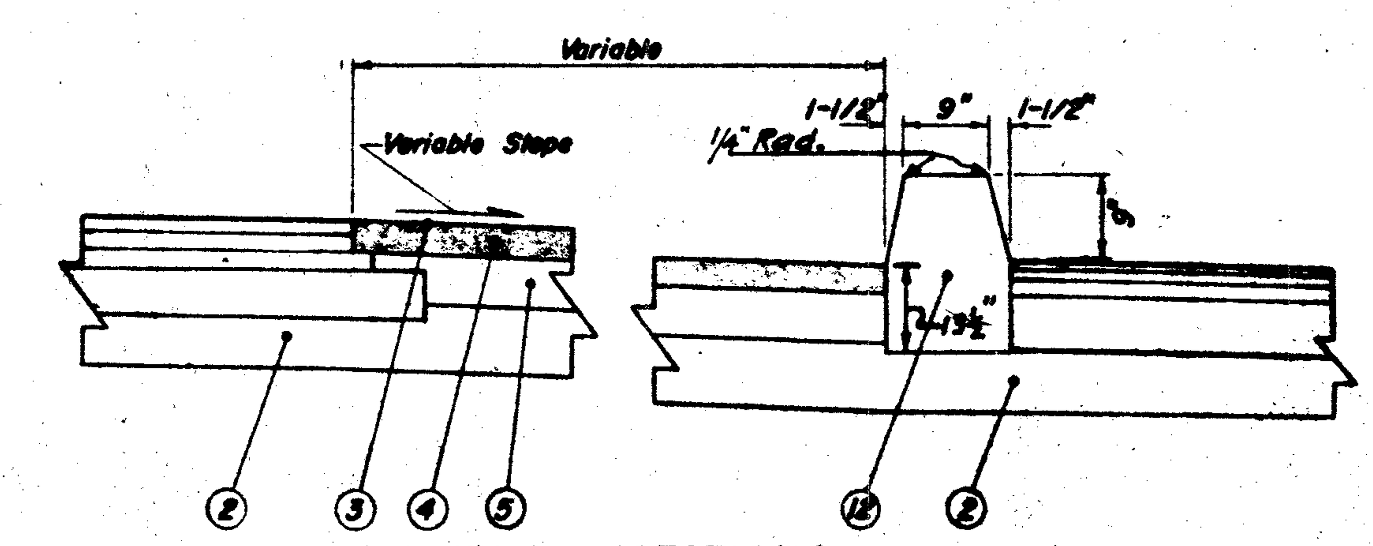
(1) T-35 1½" Asphaltic Concrete Surface Course, Type "A" (70-85)
(14) B-35 1½" Asphaltic Concrete Leveling Course (70-85)
(15) B-35 2½" Asphaltic Concrete Base Course (70-85)
(16) T-30 Bituminous Prime Coat @ 0.4 gal. per Sq. Yd. - Typical
(17) B-20 6" Waterbound Macadam Base Course using Size No. 2. Coarse Aggregate



LIMITING STATIONS

Rt. Ramp "C" Sta. 10+00 To Sta. 11+00 100 Lin. Ft.
Lt. Ramp "C" Sta. 9+80.5 To Sta. 13+09 328.5 Lin. Ft.
TOTAL 428.5 Lin. Ft.

DETAIL AT RETAINING WALL



LIMITING STATIONS

Ramp "A" Sta. 9+60 To Sta. 12+10 250.00 Lin. Ft.
Ramp "D" Sta. 31+35.91 To Sta. 32+10.0 4.09 Lin. Ft.
TOTAL 324.09 Lin. Ft.

SPECIAL CONCRETE CURB DETAIL

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

TYPICAL SECTIONS
SPEED CHANGE LANES & RAMPS
LOGAN AVENUE INTERCHANGE

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE
Griffin	Fabish	M.G.F.	Strouss	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(14)	

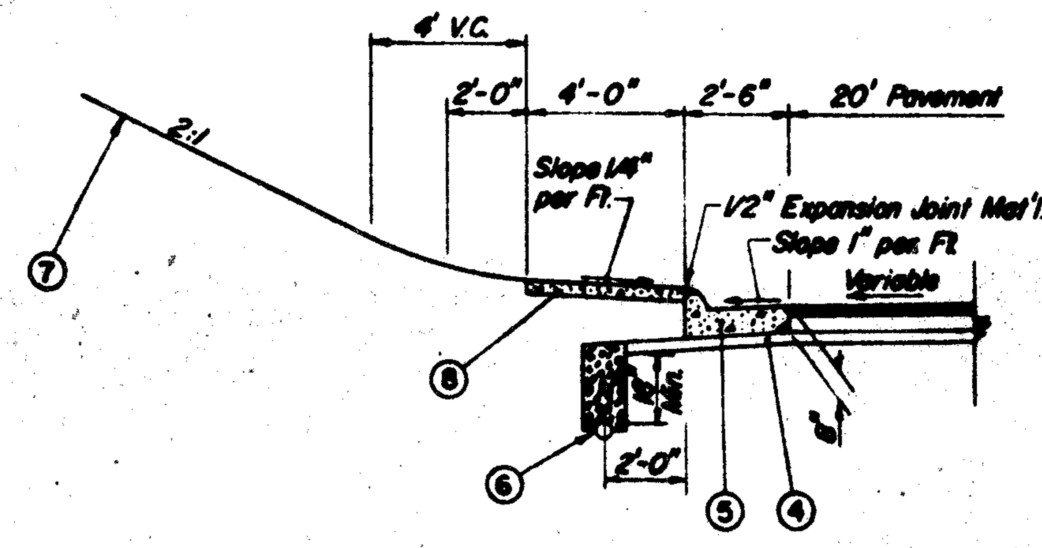
6 / 307

JEFFERSON COUNTY
JEF-7-1353

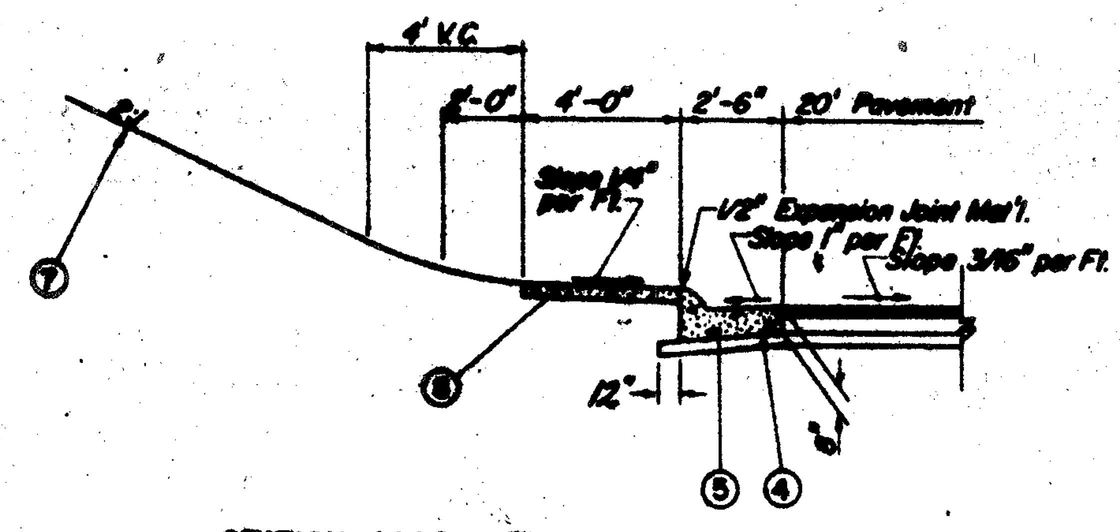
TYPICAL SECTIONS

TYPE T-35 or B-19

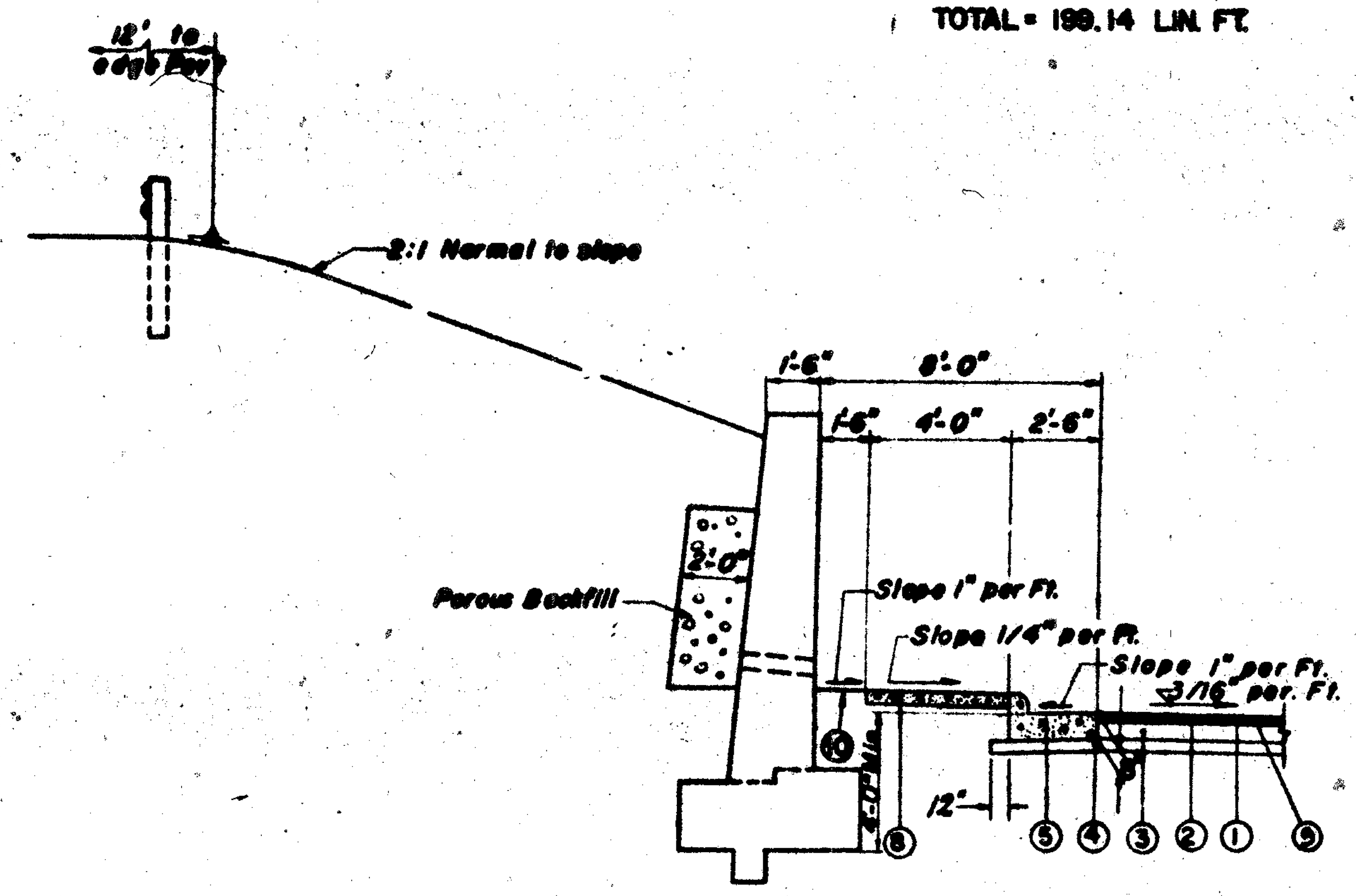
SCALE: 1/4" = 1'-0"



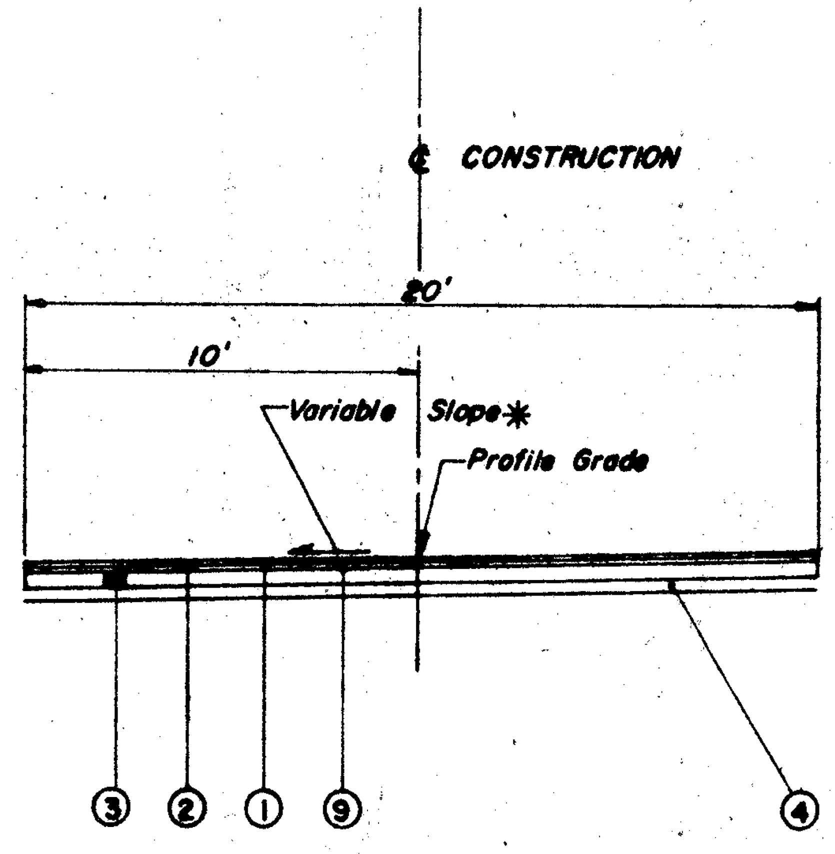
STATION 2+31 TO STATION 4+60 = 229 LIN. FT.



STATION 4+60 TO STATION 5+89.50 = 129.50 LIN. FT.
STATION 7+30.36 TO STATION 8+00 = 69.64 LIN. FT.
TOTAL = 199.14 LIN. FT.

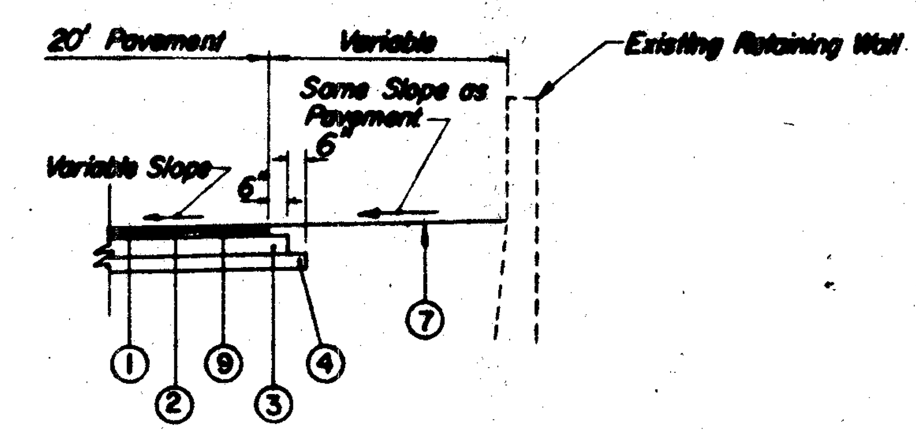


STATION 5+89.50 TO STATION 7+30.36 = 140.86 LIN. FT.

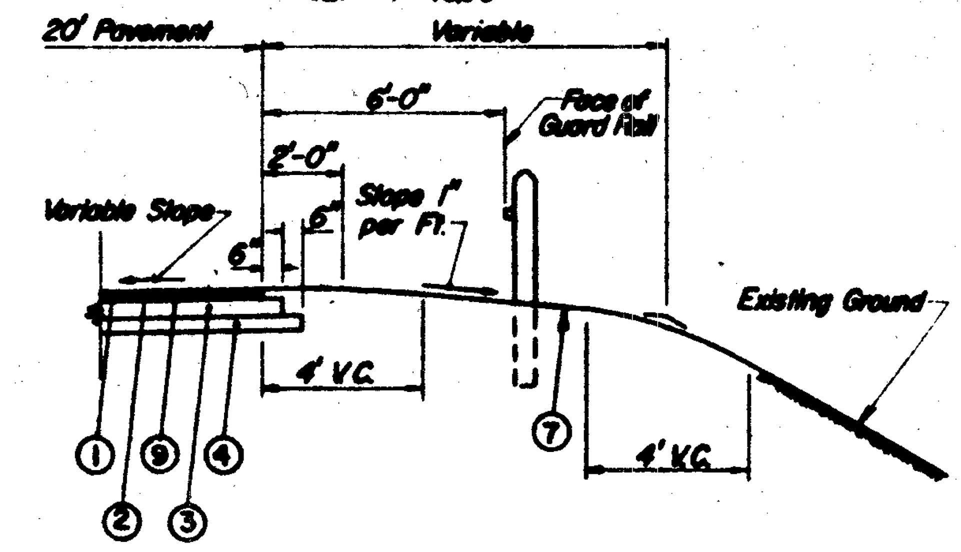


LIMITING STATIONS

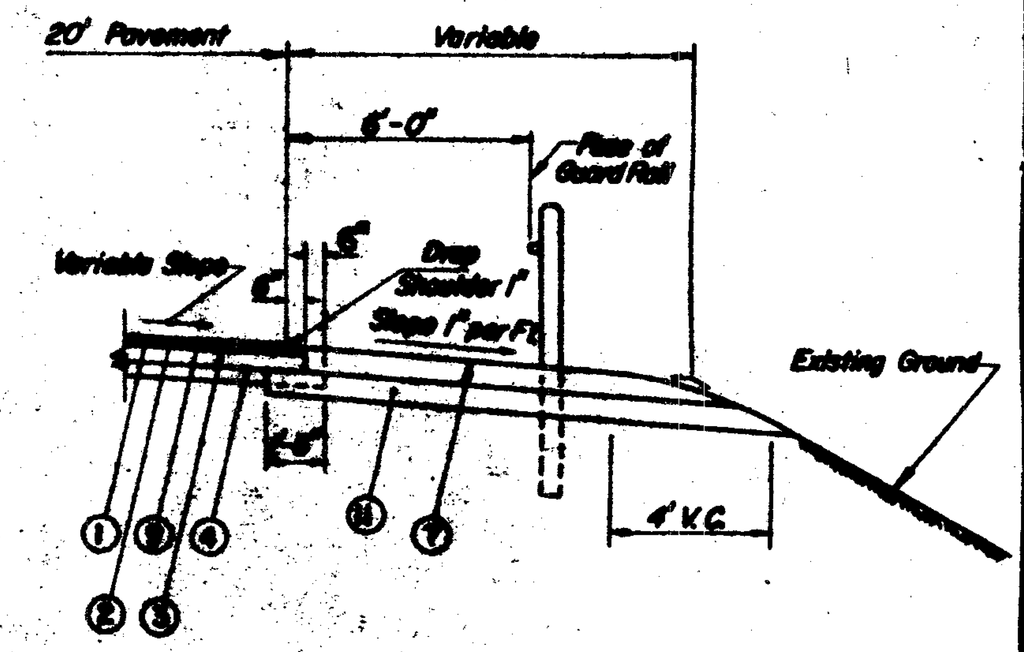
Sta. 2+25 To Sta. 8+00	575	Lin. Ft.
TOTAL	575	Lin. Ft.



STATION 2+25 TO STATION 3+12 = 87.00 LIN. FT.



STATION 3+12 TO STATION 4+60 = 148.00 LIN. FT.



STATION 4+60 TO STATION 8+00 = 340.00 LIN. FT.

1. Item T-35 1 1/2" Asphaltic Concrete Surface Course, Type A (70-85)
2. Item B-35 1 1/2" Asphaltic Concrete Leveling Course (70-85)
3. Item B-19 5" Aggregate Base Course
4. Item I-22 Subbase (4" Depth)
5. Item I-12 Combination Curb and Gutter, Standard Type 2
6. Item I-4 6" Pipe Underdrain
7. Item L-9 Seeding and Protecting
8. Item I-13 4" Concrete Sidewalk
9. Item T-30 Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3, applied at the rate of 0.40 Gal. per Sq. Yd.
10. Item L-10 Sodding
11. Item I-9 Stone Underdrains, No. 2.

NOTES:

All Slopes Typical Unless Otherwise Shown on Cross Sections.

* For Edge of Pavement Elevations See Plan & Profile Sheet

CLIFTON STREET

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

TYPICAL SECTION
CLIFTON STREET

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

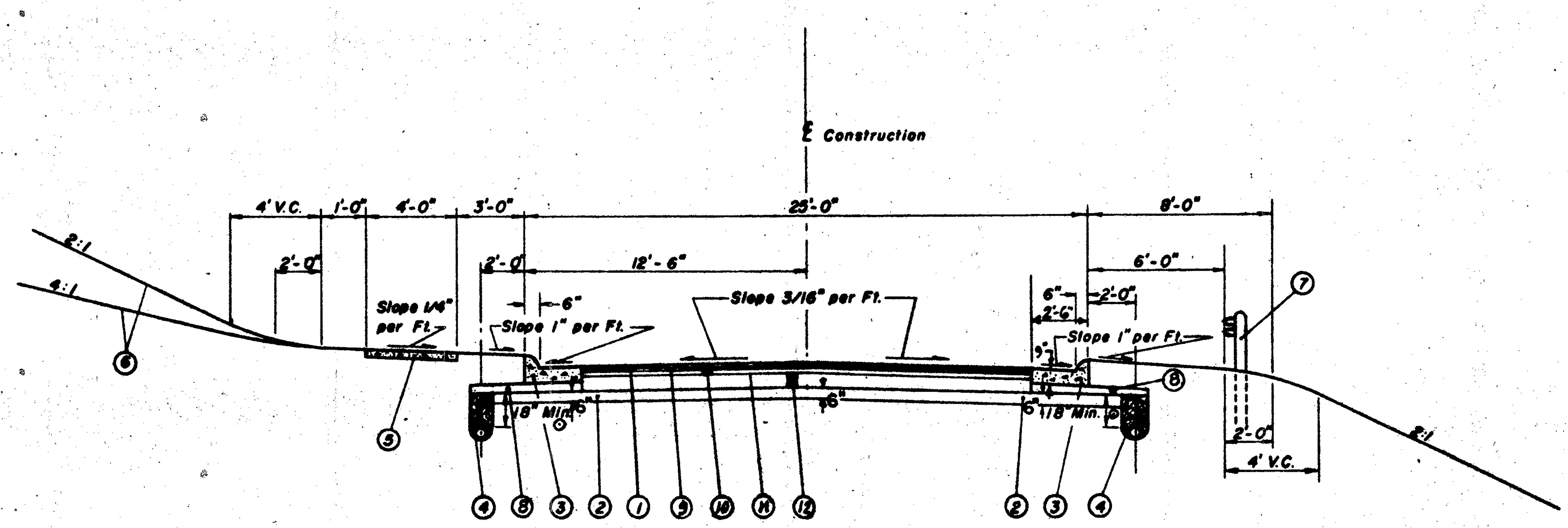
7
307

JEFFERSON COUNTY
JEF-7-1353

TYPICAL SECTION

TYPE T-35 on B-20

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



LIMITING STATIONS

Sta. 83+52.58 To Sta. 93+30		977.42	Lin. Ft.
	TOTAL	977.42	Lin. Ft.

1. Item T-35 — 1½" Asphaltic Concrete Surface Course, Type "A" (70-85)
2. Item I-22 — Subbase, (Variable Depth)
3. Item I-12 — Combination Curb and Gutter Std. Type 2
4. Item I-4 — 6" Pipe Underdrains
5. Item I-13 — 4" Concrete Sidewalk
6. Item L-9 — Seeding & Protecting
7. Item I-15 — Guard Rail, Steel Beam Std. Type (Deep)
8. I-4 Porous Backfill Material or B-20 Base Material (Included in I-12 Comb. Curb and Gutter for Payment)
9. Item B-35 — 1¼" Asphaltic Concrete Leveling Course (70-85)
10. Item B-35 — 2¾" Asphaltic Concrete Base Course (70-85)

MURDOCK AVENUE

11. Item T-30 — Bituminous Prime Coat, @ 0.4 gal. per Sq. Yd. Typical
12. Item B-20 — 8" Waterbound Macadam Base Course using Size No. 2 Coarse Aggregate

NOTES:

All Slopes Typical Unless Otherwise Shown on Cross Section.

⊙ Unless otherwise indicated on the plans.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

TYPICAL SECTION

MURDOCK AVENUE

Griffin | Camp

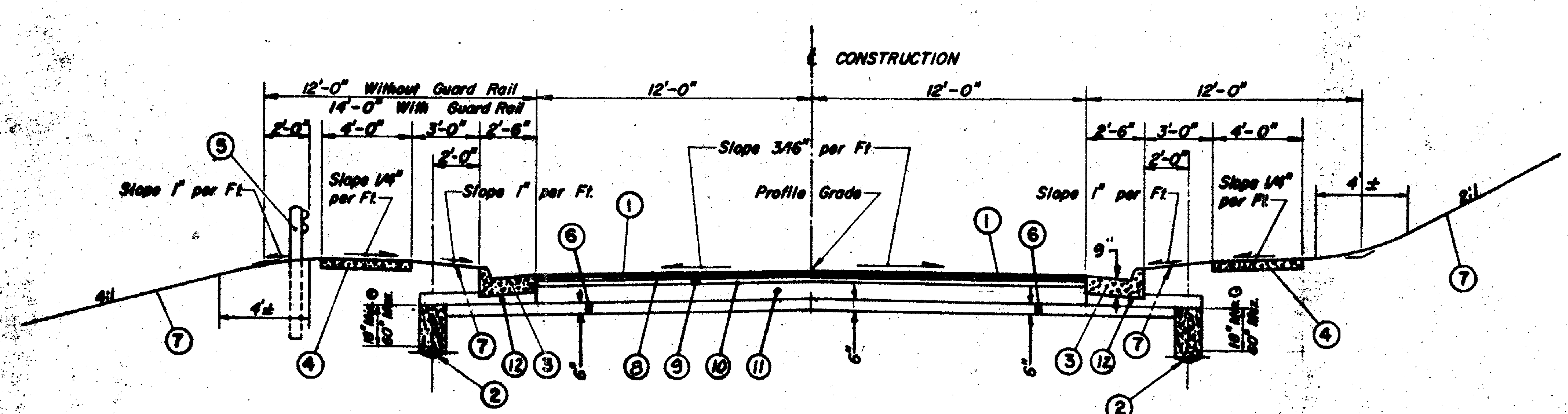
FED. RD. DIVISION	STATE	PROJECT		
2	OHIO	U-430 (14)		8/307

JEFFERSON COUNTY
JEF-7-13.53

TYPICAL SECTIONS

TYPE T-35 on B-20

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



LIMITING STATIONS

Sta. 25+00 To Sta. 35+00 1000 Lin. Ft.
TOTAL 1000 Lin. Ft.

1. Item T-35 1½" Asphaltic Concrete Surface Course, Type "A" (70-85)
2. Item I-4 6" Pipe Underdrain, See Standard Construction Drawing RI-1.
3. Item I-12 Combination Curb & Gutter, Standard Type 2
4. Item I-13 4" Concrete Sidewalk.
5. Item I-15 Guard Rail. Steel Beam Std. Type (Deep)
6. Item I-22 Subbase, 6" Thick
7. Item L-9 Seeding & Protecting.
8. Item B-35 1½" Asphaltic Concrete Leveling Course (70-85)
9. Item B-35 2½" Asphaltic Concrete Base Course (70-85)
10. Item T-30 Bituminous Prime Coat @ 0.4 gal. per Sq. Yd., Typical
11. Item B-20 Waterbound Macadam Base Course using Size No. 2 Coarse Aggregate
12. I-4 Porous Backfill Material or B-20 Base Material (Included in I-12 Comb. Curb and Gutter for Payment)

LOGAN AVENUE

NOTES:

All Slopes Typical Unless Otherwise Shown on Cross Section.
⊙ Unless otherwise indicated on these plans

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

TYPICAL SECTION
LOGAN AVENUE

Designed	Drawn	Traced	Checked			
Griffin	Jacques					

GENERAL NOTES

ROAD NAME: SIGNS:
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 for disposal by their respective owners. Payment for this operation shall be included in the Unit Price Bid for Roadway Excavation, Item E-1.

FIELD OFFICE:
The Contractor shall provide a suitable Field Office within Ten Days of the beginning of work for the exclusive use of the State employes, in accordance with Sec. S-0.01(b), having a minimum of 500 square feet of floor space. The Contractor shall have a telephone installed and maintained in the Field Office during the Construction of this Project. Contractor shall also install wiring and outlets suitable for connecting to office equipment, and provide 110 volt alternating current during the Construction of this Project.

DESIGN SPEED:
The Geometrics for this Project have been planned for a design speed of 50 miles per hour.

UTILITIES:
The Contractor shall notify, at least 48 hours before breaking ground, all Public Service Corporations having wire, 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 or 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.

ROUNDING OF CORNERS ON CROSS SECTIONS:
The rounded corners, shown on the Typical Sections apply to all cross sections even though otherwise shown in these plans.

R/W MONUMENTS, FEDERAL PROJECT MARKERS AND SECTION MARKERS:
Existing R/W Monuments, Bench Marks, Federal Project Markers, Section Markers, etc. that will be removed by construction, shall be protected by the Contractor as per Sec. B-7.05 until they can be witnessed, referenced and reset by the construction crew.

ELEVATION DATUM:
Elevations are based on U.S.G.S. datum.

LOCATION AND SIZE OF PIPES:
The location, type, depth and size of all existing pipes are shown as near exact as the available information will permit. The State will not be responsible for any variations found during construction.

UNDERGROUND UTILITIES:
The location of the Underground Utilities shown on the Plans have been obtained by diligent field checks and searches of available records. It is believed that they are essentially correct, but the State of Ohio makes no guarantees as to their accuracy or completeness.

REMOVAL OF TREES AND STUMPS:
All trees and stumps within the limits of the Limited Access Right-Of-Way on the mainline and the work limits on the Cross Roads and Channel improvements shall be removed unless otherwise directed by the Engineer. The number and size of trees and stumps shown below, for removal under the Construction as detailed on these Plans, are as nearly correct as available information permits. The State of Ohio will not be responsible for any variations found during Construction. The Lump Sum Bid for Item E-3, Removal of Trees and Stumps, shall constitute full payment for this item, and no additional compensation will be allowed. The number and size of trees and stumps are estimated below:

URBAN		MUNICIPAL	
12" to 18"	392	12" to 18"	5
18" to 24"	78	24" to 30"	1
24" to 30"	36		
30" to 36"	9		
36" to 42"	7		

PIPE FOR SUBGRADE DRAINAGE:
8" corrugated metal outlet pipe, Sec. M-6.4(a), shall be furnished and placed by the Contractor, in manholes, catch basins and inlets for each subgrade drain. Payment for each shall be made at the Unit Price Bid per lineal foot of underdrain outlets.

CONSTRUCTION LAYOUT STAKES:
See note in proposal describing the work included in this lump sum pay item.

PIPE:
When Bell and Spigot pipe is used, any necessary pipe cut-offs will be made at the spigot end of the length of pipe adjacent to the end length. When Tongue and Groove pipe is used the length of pipe next to the end length shall be cut and butt joint formed with a collar 12" larger than the outside diameter and 12" in length. The cost of the joint and collar shall be included in the Contract Price Bid for the pertinent pipe item, unless otherwise shown on plans. Collar shall be of Class "C" Concrete.

REMOVAL OF EXISTING HOUSE DRAINS:
The removal of all existing house connections, which include sanitary, yard, roof, basement or other similar pipe drains within the Roadway Construction Limits shall be classified and paid for as Roadway Excavation, unless otherwise itemized for payment in the Plans.

HEAVY EQUIPMENT:
The Contractor shall exercise care in the use of heavy equipment over finished work and will be required to remove and replace any completed work destroyed thereby. Culverts shall be backfilled to a height of four feet before loaded earth-moving equipment is permitted to cross the trench. Any additional fill and subsequent excavation required to provide this minimum cover shall be made at no additional cost to the State. Heavy equipment shall not be operated over any completed layer of embankment, compacted subgrade or subbase if such operation tends to destroy the soil structure or pipe underdrains; however, if such operation cannot be avoided, the Contractor will be required to reduce the size of loads to an extent that damage does not occur.

PLUGGING PIPE ENDS:
The upstream ends of pipe lines or tile lines intercepted by earthwork operations shall be effectively blocked and covered. Broken pieces and portions of pipe or tile shall be removed until a whole length is encountered, which shall be blocked with concrete, flat stone or brick laid in mortar, pre-cast clay or concrete stopper. Payment for the above work shall be included in the Unit Price Bid for roadway excavation.

GUARD RAIL REMOVAL:
The removal of any Guard Rail or Guard Rail 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 Bid for roadway excavation. All resulting materials, shall become the property of the Contractor and shall be disposed of by him at no extra cost to the State, except that 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 for disposal by the State.

ROCK AND SHALE SUBGRADE:
The Contractor shall be paid for the thickness of I-22 material shown on the typical sections in rock or shale excavation areas. Any pockets in the rock or shale below the plan subgrade elevation shall drain either longitudinally or laterally and all irregularities in the rock or shale below this elevation shall be filled with I-22 material at no additional cost to the State.

EXCAVATION FOR ITEM B-19:
Excavation for B-19 material used on Side Road Approaches and Drives has been included in earthwork quantities when same is in "Cut."

EXISTING FLEXIBLE PAVEMENT:
Within the limits of Construction where the existing flexible pavement will have less than 6" of fill placed upon it, the pavement shall be thoroughly scarified for its full depth, mixed with sufficient soil and properly recompacted 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 surrounding 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. Cost of removing Non-rigid pavement shall be included with the Unit Price Bid for Roadway excavation, Item E-1

REMOVAL OF EXISTING RETAINING WALLS:
The removal and disposal of existing concrete and masonry retaining walls not specifically paid for under a separate item shall be classified and paid for under Item E-1, Roadway Excavation, Method "B".

GUARD RAIL PARAPET ANCHOR:
Cost of providing and installing Anchor for connecting deep steel beam Guard Rail to bridge parapet is included in the bridge quantities for payment. The Contractor shall provide one additional guard rail post in the center of the first panel of deep steel beam guard rail where anchored to the parapet, cost of which shall be included in the Unit Price Bid per lineal foot of guard rail.

L-10 SODDING, I-10 SLOPE & CHANNEL PROTECTION, 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 under Item L-9 or sodded under L-10 shall have commercial fertilizer 12-12-12, applied at the rate of twenty (20) pounds per 1,000 square feet.

SEEDING AND PROTECTING:
Quantities for seeding under Item L-9 are calculated for all soils areas between lines located 10' beyond the work limits or to the Right-Of-Way line when it is less than 10' from the work limits on the mainline. On relocated side streets seeding limits are calculated for soil areas within the work limits only. In no case will slopes steeper than 1½:1 be seeded unless so directed by the Engineer.

ITEM I-8 CENTERLINE REFERENCE MONUMENTS:
Monuments shall be constructed of Class "C" concrete, cast in place in a circular hole, 8" in diameter and 42" in depth. Top of concrete shall be finished flush with the top of the median pavement, and the upper 10" of the concrete shall be formed. A one half inch (½") expansion joint, Sec. M-10.02 shall be provided around the upper 10" of the monument. A ¾"x6" brass rod shall be embedded in the wet concrete as directed by the Engineer to mark center line and Station.

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

SUBGRADE COMPACTION:
The area of compacted subgrade to be paid for includes the main pavement, curb and gutter, paved shoulders and hard surfaced cross road pavement, *except for rock and shale subgrade areas in cuts.*

EROSION CONTROL AT HEADWALLS:
An 18" wide strip of sod shall be placed along the back and both ends of each Standard PC-4 Endwall to prevent erosion. The quantity of sodding required to prevent erosion at the headwalls is included in each of the culvert estimated quantities.

ROADWAY DRAINAGE:
An estimated amount of Roadway Drainage Item I-5, and pipe outlets for Roadway Drainage, Item I-5 has been provided to outlet any possible field drains which may be encountered during construction. The outlet locations, grades and depths required shall be determined by the Engineer during construction. The quantity and location of any possible Roadway Drainage, Item I-5 and pipe outlets for Roadway Drainage, Item I-5 shall be recorded and submitted with the final estimate and payment shall be made on final measurement. The size and estimated quantities are as follows:

I-5 6"	Roadway Drainage	200 Lin. Ft.
I-5 8"	Roadway Drainage	200 Lin. Ft.
I-5 8"	Outlet for Roadway Drainage Sec. M-6.4(c)	50 Lin. Ft.

MAINTAINING TRAFFIC: *(See also Sheet 10.)*
The length and duration of use of temporary traffic lanes shall be held to an absolute minimum. The following estimated quantities of temporary paving materials are carried in the General Summary to be used in amounts and at locations directed by the Engineer:

Item T-10	2000 Cu. Yds.
Item T-10 as per plan	4000 Cu. Yds.
Item M-10	120 Tons
Item T-35 for Maintaining Traffic	300 Cu. Yds.

Payment for construction, maintenance, and subsequent removal, wherever required, of temporary roadways, not separately itemized under Item 515, Temporary Runaround Road, except for furnishing and placing of Items M-10, T-10, T-10 as per plan, and T-35 for Maintaining Traffic, shall be included in the lump sum price bid for "Maintaining Traffic".

SPRINGS:
An estimated amount of Pipe Underdrains, Item I-4 and Pipe Outlets for Underdrains Item I-4 has been provided to outlet any Springs which may be encountered during construction. The locations, grades and depths required shall be determined by the Engineer during construction. The quantity and location of any additional Pipe Underdrains, Item I-4 and Pipe Outlets for Underdrains, Item I-4 shall be recorded and submitted with the final estimate and payment shall be made on final measurement. The size and estimated quantities are as follows:

I-4 6"	Pipe Underdrains	500 Lin. Ft.
I-4 8"	Pipe Outlets for Underdrains Sec. M-6.4(c)	30 Lin. Ft.

ITEM T-10, AS PER PLAN:
The weights to be used in calculating the yardage to be paid for under this item shall be the same as those indicated in the Construction and Material Specifications for crusher run or bank run materials.

DRIVES AND APPROACHES:
An estimated amount of Item B-19 and T-35 has been provided for use on Drives and Road Approaches as directed by the Engineer. This estimated quantity is as follows:

B-19	30 Cu. Yds.
T-35	200 Cu. Yds.

SIDEWALK:
An estimated amount of Item I-15 has been provided in the Plans to be used as directed by the Engineer. This estimated quantity is as follows:
I-15 4" Conc. Sidewalk 3200 Sq. Ft.

CURB AND GUTTER:
An estimated amount of Item I-12 Combination Concrete Curb and Gutter has been provided in the Plans to be placed as directed by the Engineer. This estimated quantity is as follows:
I-12 Type 2 400 Lin. Ft.

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

COORDINATION WITH CITY OR VILLAGE:
It shall be the Contractor's responsibility to coordinate his work schedule so that proper Fire and Police protection may be maintained at all times.

PROTECTION OF TRAFFIC:
During Bridge construction, the Contractor shall safeguard the traveling Public on Ravine St., Mc Lister St. and Logan Ave. by providing platforms, nets, or other suitable protection above the traveled lanes. Payment for this protection shall be included in the Lump Sum Price Bid for "Maintaining Traffic."

STONE UNDERDRAIN Nº 2:
Nº 2 Stone underdrains have been estimated on this Project at approximately fifty ft. (50') intervals on Clifton Street where I-4 drainage is not provided. This quantity is to be used in its entirety where and as directed by the Engineer.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

GENERAL NOTES

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	REVISED
	O.M.R.	R.K.M.			

GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-450 (14)	

10
307

JEFFERSON COUNTY JEF-7-13.53

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 shown on the cross-sections 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 blasting 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 lines that has been loosened and/or cracked by the Contractor's use of explosives 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 obtain at his own expense the necessary right 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 blasting. If the cause of such rock and/or shale being loosened was not by blasting, the Contractor shall be paid for removal of same at the Unit Price Bid per cubic yard of Item E-1, Roadway Excavation, Method "B".

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

Extreme care must be used in the blasting operations to assure the safe and uninterrupted movement of vehicular traffic on local streets and roads over which traffic is to be maintained.

Item G-7.09 of the Specifications shall be strictly adhered to.

FILLING BASEMENTS:

All basements or portions thereof within the Right of Way but beyond the normal slope lines shall be filled to the surrounding ground elevation as directed by the Engineer. Prior to filling within this area, the basement floors and walls shall be broken up or removed as provided under Sec. E-1.05(c) and all house drains not removed shall be plugged with Class "E" Concrete.

Where basements extend beyond the Right of Way line, but are within slope easement or work agreement lines, they shall be filled to the elevation of the surrounding ground as directed by the Engineer but the requirements of Sec. E-1.05(c) shall be waived for these portions extending beyond the Right of Way line.
Payment for all the above is included in the Unit Price Bid for Item E-1, Roadway Excavation, Method "B".

LINE DATA CALCULATIONS FOR APPROACHES:

Length of Work on Approaches

Clifton Street		
Begin Work Sta.	2+25.00	
End Work Sta.	8+00.00	
Net Length of Work		575 L.F.
Logan Avenue		
Begin Work Sta.	25+00.00	
End Work Sta.	35+00.00	
Net Length of Work		1000 L.F.
Total Length of Work for Approaches		1575 L.F.

S-1 CONCRETE FOR STRUCTURES, AS PER PLAN:

Item S-1, Concrete for Structures, as per plan, shall conform to Item S-1, Concrete for Structures of the Construction and Material Specifications, with the following exceptions:

(a) Portland cement, fine aggregate and coarse aggregate shall be mixed in the proportions of one part of cement to not over 20 parts of the aggregates, by volume, provided the portions of cement and fine aggregate in the mixture is not greater than 1 to 10.
(b) The consistency of the concrete mixture shall be such that it will hold together when formed into a ball in the hands.
(c) The concrete mixture shall be so placed as to completely fill the structure and shall be thoroughly compacted by tamping and ramming in place.

MAINTAINING TRAFFIC (CONTINUED)

ALTERNATE METHODS:

If the Contractor so elects, he may submit alternate methods for the maintenance of traffic, provided the intent of these provisions is followed and no additional inconvenience to the traveling public results therefrom. No alternate plan shall be placed into effect until approval has been granted, in writing, by the Director.

CLIFTON STREET:

The Contractor shall be required to schedule his operation so that the prescribed work on Clifton Street, including the Retaining Walls, shall be completed within 45 calendar days of the beginning of work.
During this construction period traffic shall be diverted to existing Church Way and maintained there until Clifton Street is completed.
Traffic shall be restored to Clifton Street upon completion of the above prescribed work.

UNION AVENUE AND MURDOCK AVENUE:

Traffic shall be maintained at all times on Murdock Avenue and Union Avenue during construction of "Murdock Avenue Relocation".
One-way traffic will be permitted for minimum periods of time when necessitated by construction operations, with two-way traffic maintained at all other times
Upon the completion of "Murdock Avenue Relocation" on the left of the Main line, it shall be opened to traffic and subsequently used as part of the St. Clair street detour described below.

Traffic on Murdock Avenue between Union Avenue and Ravine Street shall be maintained at all times.

ST. CLAIR STREET:

St. Clair Street shall be closed between existing Murdock Avenue and Proposed Murdock Avenue Relocation. Traffic shall be diverted to the "at grade" crossing with the Expressway by way of existing Murdock Avenue and the proposed relocation and extension of Murdock Ave. A Temporary Crossover shall be constructed at Station 685± of the Expressway.
Traffic shall be maintained over this detour route at all times that traffic is not maintained on either the existing or proposed St. Clair street. When proposed St. Clair street is opened to traffic, the temporary median crossover of Murdock Ave Extension may be removed.

RAVINE STREET:

Two-way traffic shall be maintained at all times during construction.

LINCOLN AVENUE:

Two-way traffic shall be maintained on Lincoln Avenue at all times during construction of the bridge and approaches. A temporary run-around with Class "B" pavement has been provided for this purpose. The temporary run-around will be built to the line and grade shown on the plans.
Cost of the above shall be included in Item S-15 Lump Sum Bid for Temporary Run-around Road Class "B" Pavement.

Mc LISTER STREET:

Two-way traffic shall be maintained at all times during construction.

LOGAN AVENUE:

Logan Avenue, between Lockhart St. and Grandview Ave., shall be closed to traffic until the proposed work on "Logan Ave. Relocation" has been completed. During this closure, Logan Avenue traffic shall be detoured from Logan Avenue by way of of Grandview Avenue, Lockhart Street, then back to Logan Avenue.
Lockhart Street shall remain open to traffic until "Logan Avenue Relocation" has been opened. After traffic has been diverted to "Logan Avenue Relocation", Lockhart street may be removed as shown on the plans.

LOCAL ACCESS:

Throughout construction, access to all properties abutting this improvement shall be maintained in accordance with Sec. G-4.13.

MAINTAINING TRAFFIC (CONTINUED)

STATE ROUTE 7:

Two-way traffic shall be maintained on State Route 7 at all times. Maximum use shall be made of existing and proposed pavements for traffic maintenance, with use of temporary pavement and routings held to an absolute minimum.
The following Schedule of Construction and Traffic handling shall be followed unless otherwise approved, in writing, by the Director.

1. Substantially complete proposed construction as follows while maintaining traffic on the existing S.R. 7 pavement:
   (a) Construct left pair of lanes from Station 716+50± to end of Project, and the temporary connection at the North end of the Project. (See Proposal)
   (b) Construct Ramp "B" in its entirety.
   (c) Construct Logan Avenue Relocation from existing S.R. 7 to Grandview Avenue Intersection.
   (d) Transfer two way S.R. 7 traffic to the completed southbound lanes, Ramp B and Logan Avenue Relocation.
   (e) Complete proposed northbound lanes and Ramp D from station 746+25± to End of Project.
   (f) Transfer northbound S.R. 7 traffic north of Logan Avenue Relocation to existing S.R. 7, Ramp D and completed northbound lanes.

PLACING SOD IN DITCHES:

All sod placed in ditches shall be laid with the long edges of the strips perpendicular to the flow line of the ditch. Successive strips shall be neatly matched and all joints staggered or broken. The sod shall be staked securely with stakes placed on maximum two (2) ft. centers in row not more than two (2) ft. apart. Stakes in adjacent rows shall be staggered. The stakes shall be wood from ½" × ¾" × 12" to 1" × 1" × 24", as required to hold the sod and shall be driven flush with the top of the sod.

GRADING TOLERANCES:

For areas in front of residences, for area between curb and sidewalk and for other areas specifically indicated on the plans, the seed bed shall be prepared to provide a smooth surface. All stones larger than one inch in diameter shall be removed from the surface of the seed bed. Hand raking will be required in areas inaccessible to machines and hand raking may be required, if directed by the engineer, in all the aforementioned areas if machines used do not provided results equivalent to results obtained by hand raking. Cost of this additional work shall be included in the Unit Price Bid for Roadway Excavation, Item E-1.
All hand raking shall be at the direction of the Engineer. Locations of possible areas requiring hand raking are as follows:

Right of Station 687+85 to Station 697+00
Left of Station 705+00 to Station 711+00
Left of Murdock Avenue Relocation
Left and Right of Logan Avenue Relocation

CONNECTIONS TO EXISTING PIPE:

At places where the plans provide for proposed drainage and water 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 pipe. The cost of this operation shall be included in the unit price bid for the pertinent pipe item.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

GENERAL NOTES

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Griffin	[illegible]	[illegible]	[illegible]		

PAVEMENT CALCULATIONS
U-430(14)

Area of T-B-35 from Plan & Profile Sheets	60,833	S.Y.
Deduct for Type 2-A Curb deleted from Plans 15,895 x 0.5 x 9 =	- 883	S.Y.
Area of T-35 Surface and B-35 Leveling	59,950	S.Y.
Add Area of I-21 Median Pav't.	2,830	S.Y.
Add for 3" Offsets in B-35 Base (Est.)	480	S.Y.
Area of B-35 Base	63,260	S.Y.
Add for 6" Offsets in B-20 Base (Est.)	960	S.Y.
Area of B-20 Base & T-30 Prime	64,220	S.Y.

ITEM T-35, SURFACE 59,950 x 1.5 ÷ 36 =	See Sheet 13	2,498	C.Y.
ITEM B-35, LEVELING 59,950 x 1.25 ÷ 36 =	See Sheet 13	2,082	C.Y.
ITEM B-35, BASE 63,260 x 2.75 ÷ 36 =	See Sheet 13	4,832	C.Y.
ITEM T-30, PRIME 64,220 x 0.40 =	See Sheet 13	25,688	Gal.

GENERAL NOTES (CONTINUED)

CHANGE OF PAVEMENT TYPE

Attention of the Contractor is directed to the fact that the pavement type on this project was changed subsequent to the initial preparation of the detail sheets. Not all of the detail sheets have been revised to conform fully with the typical sections. Where there is a conflict, construction shall be in accordance with the typical sections and the following shall apply in interpretation of the details:

(1) Pavement joint details and joint legends shown on the intersection details shall be disregarded except those between existing pavement and proposed combination curb and gutter.

(2) Any reference to Item T-71 shall be disregarded.

(3) Any reference to a standard type 2-A curb in conjunction with a standard type 1 median pavement shall be considered to read standard type 2 median pavement.

ADJUSTMENT OF PLAN QUANTITIES:

ITEM E-1-EXCAVATION.

As a result of the change in the total pavement depth when the pavement type was changed, the pavement trench width and depth shown on the cross sections are in error. The following estimated adjustments in earthwork quantities are included in the earthwork calculations:

Add Item E-1 Excavation in cut areas	See Sheet 25 (Est)	7775	C.Y.
Deduct embankment in fill areas	See Sheet 25 (Est)	2592	C.Y.

ITEM E-1-COMPACTED SUBGRADE
Deduct for areas in Rock or Shale Cuts - See Sheet 25 (Est) 10,250 S.Y.

ITEM I-18-
Deduct for B-35 Base and B-20 Edge Steps - See Sheet 13 (Est) - 200 C.Y.

ITEM I-22-

Add for increased thickness under shoulders	(Est)	1500	C.Y.
Deduct for fill under eliminated I-21 Type 1 Median Pavement	(Est)	600	C.Y.
Net Addition - See Sheet 13	(Est)	900	C.Y.

Pay Quantities for all items shall be determined by final measurement.

COMPACTION OF SUBGRADE AND PAVEMENT COURSES ON MAIN LINE OF PROPOSED S.R. 7

In addition to the requirements of the Construction and Material Specifications for compaction of subgrade, I-22, B-20, B-35 Base and Leveling, and T-35 Surface, a roller meeting the requirements of CE-1.04, Type 3-P Pneumatic Tired Roller, shall be used in conjunction with the rollers specified under these items. The 3-P Roller shall be used after the initial compaction of these courses has been secured with other rollers and it's use shall be continued until there is no further appreciable increase in density of the courses. The wheel load and tire pressure of the 3-P Roller shall be varied as directed by the Engineer, but in no case shall the wheel load be less than 6,000 lbs. and the tire pressure less than 100 p.s.i.
Cost of all of the above shall be included in the unit prices bid for the various items affected.

HOT LONGITUDINAL JOINTS

Asphaltic concrete in the leveling and surface courses on Main Line of Proposed S.R. 7 shall be laid using bituminous pavers operating in parallel lanes, one just ahead of another, so that hot longitudinal joints will be secured. At no time shall one of the pavers be farther ahead of the adjacent paver than the distance the normal load being hauled will cover. The loads of mixture as they arrive shall be alternated between the pavers. Rollers performing the initial rolling operation on the first lane laid shall in no case be allowed closer than 12 inches to the longitudinal joint until the adjacent lane is laid.

PORTLAND CEMENT

Item B-70, 8" Portland Cement Concrete Base Course shall be constructed using High-Early Strength Portland Cement, Section M-1.2 or Section M-1.4.
If such cement cannot be obtained, the following substitution may be made at no additional cost to the State: Portland Cement, Section M-1.1, M-1.3, or M-1.8 may be used and, if used, the quantity of cement used shall be 15 percent greater than the quantity of cement required by the standard specifications. In addition, Calcium Chloride shall be added in an amount equal to 2 percent by weight of the total quantity of cement used. The Calcium Chloride shall be added in solution form.

BARRIER GUARD RAIL IN MEDIAN PAVEMENT

Where barrier guard rail is specified in the proposed I-21 Median Pavement, expansion joint material 1 inch thick shall be provided around each guard rail post. In this area the expansion joints in the median pavement shall be spaced at 12'6" intervals in lieu of the 20' interval specified on Standard Drawing I-21-23 and the joints shall be located uniformly either at the rear or forward edge of the guard rail posts.
Payment for 1" expansion joint material around the posts shall be included in the unit price bid for the median pavement, item I-21.

CURB ON APPROACH SLABS

The cost of Concrete Curb on Approach Slabs shall be included in the unit price bid for Item I-7, Reinforced Concrete Approach Slabs. Refer to Standard Drawing AS-1-54.

TYPE "C" FENCE ADJACENT TO PLAYGROUND

150 Lin. Ft. of Type "C" Fence shall be built from Sta. 83+69 to Sta. 85+09 Left of ℄ of Relocated Murdock Ave. (See Sheet № 290) before any other construction work is begun in this area.

GENERAL SUMMARY

ITEM	SHEET NUMBER																								Steubenville				ITEM	QUAN.	UNIT	DESCRIPTION
	9	14	15	16	17	18	19	20	21	22	23	24	25	149	154	157	158	159	181	182	183	184	303	TOTAL Urban	24	25	185	TOTAL Municipal	TYPE CODE 6201			
																																ROADWAY
E-1													1,532,584											1,532,584		24,623		24623	E-1	1,557,207	Cu. Yds.	Roadway Excavation; Method "B", as per plan.
E-1													72,940											72,940		1,060		1060	E-1	74,000	Sq. Yds.	Compacted Subgrade.
E-8						292		773	2,667	2,667	2,667	1558			1627		244	3649						16,144	840			840	E-8	16,984	Sq. Yds.	Removal and Disposal of Existing Pavement
E-8				2660		1925								2,160	5,440	1080	780	6,928						20,973					E-8	20,973	Sq. Ft.	Removal and Disposal of Existing Sidewalk.
E-8			130			1688			400		607			268	1,605	302	211	1,785						6,996	67			67	E-8	7,063	Lin. Ft.	Removal and Disposal of Existing Curb, Curb and Gutter or Header Curb.
E-9	Lump																							Lump				Lump	E-9	Lump	Lump	Removal of Trees and Stumps.
E-11													910											910		2		2	E-11	912	M Gals.	Water.
E-12										274	84	132												490					E-12	490	Lin. Ft.	Pipe Removed over 15"
I-13	3200			533	592			656						2224	4040	466	800	8686						20,757					I-13	20,757	Sq. Ft.	4" Concrete Sidewalks
I-8																							35	35					I-8	35	Each	Centerline Reference Monuments, as per plan
I-15			333	1069.5	460	1122.6	1182.8	290	1000	1000	1000	984.31		487.5	700	137.5	175	1072.5						10,621.81	215.69			215.69	I-15	10,837.5	Lin. Ft.	Guard Rail, Steel Beam Standard Type (Deep)
I-15			100	125																				225					I-15	225	Lin. Ft.	Guard Rail, Steel Beam Barrier Type (Deep)
I-16																									1			1	I-16	1	Each	Manholes, Abandoned
I-16										4	2	3												9					I-16	9	Each	Catch Basins, Abandoned
I-16											1													1					I-16	1	Each	Inlets, Abandoned
L-9													93,944											93,944		7,483		7,483	L-9	101,427	Sq. Yds.	Seeding and Protecting
L-9													8.48											8.48		0.67		0.67	L-9	9.15	Tons	Commercial Fertilizer (12-12-12).
L-9													4238											4238		3.37		3.37	L-9	45.75	Tons	Agricultural Liming Material.
L-10		1				55		2	2	2	1	1						128	2	1	2	3		200			3	3	L-10	203	Sq. Yds.	Sodding, as per plan.
L-10					30	34																		64					L-10	64	Sq. Yds.	Sodding for Special Berm and Slope Protection.
T-10	2000																							2,000					T-10	2,000	Cu. Yds.	Traffic Compacted Surface Course for Maintaining Traffic.
T-10	4000																							4,000					T-10	4,000	Cu. Yds.	Traffic Compacted Surface Course, using size No.3 or size No.34 materials for Maintaining
																																Traffic, as per plan.
M-10	120																							120					M-10	120	Tons	Calcium Chloride, Furnished and Applied, for Maintaining Traffic
T-35	300																							300					T-35	300	Cu. Yds.	Asphaltic Concrete Surface Course, or an approved Bituminous Pre-Mixed Surface
																																Course for Maintaining Traffic.
S-15																	Lump							Lump					S-15	Lump	Lump	Temporary Run-Around Road, using Class "B" Pavement, as per plan
S-22																			Lump					Lump					S-22	Lump	Lump	Removal of Portions of existing Structures.
Special			1	1		1	1																	4					Special	4	Each	Single Pole Overhead Sign Assembly, Type "A"
SS-18																							8380	8380					SS-18	8380	Lin. Ft.	Fence, Type "C"
Spec.								Lump	Lump	Lump														Lump					Special	Lump	Lump	Plugging Oil Wells, as per plan.
																																DRAINAGE
E-2																		Lump						Lump					E-2	Lump	Lump	Cofferdams, Cribbing and Sheeting.
E-2		1						2	2	2	1	1						4	628	128	166	120		1,055			110	110	E-2	1,165	Cu. Yds.	Excavation for Structures.
E-3									17	9	15	15							81	715		12		864			19	19	E-3	883	Cu. Yds.	Channel Excavation
I-2		12																						12					I-2	12	Lin. Ft.	15" Class "A" Storm Sewers.
I-2																		12						12					I-2	12	Lin. Ft.	30" Class "A" Storm Sewers.
I-2		24																						24					I-2	24	Lin. Ft.	12" Class "B" Storm Sewers.
I-2		86																						86					I-2	86	Lin. Ft.	15" Class "B" Storm Sewers.
I-2		376						428																804					I-2	804	Lin. Ft.	12" Class "B" Storm Sewers Under Pavement or Approaches.
I-2		256						66	102	46	46	56												572					I-2	572	Lin. Ft.	15" Class "B" Storm Sewers Under Pavement or Approaches.
I-2		24																88						112					I-2	112	Lin. Ft.	12" Storm Sewers, Sec. M-6.4(b).
I-2		198																						198					I-2	198	Lin. Ft.	30" Storm Sewers, Sec. M-6.4(c).
I-2																		326						326					I-2	326	Lin. Ft.	18" Storm Sewers, Sec. M-6.3(a) or Sec. M-6.8(a).

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U 430 (14)	12/307

JEFFERSON COUNTY
JEF-7-13.53

GENERAL SUMMARY

ITEM	9	14	15	16	17	18	19	20	21	22	23	24	25	149	154	157	158	159	181	182	183	184		TOTAL URBAN	24	25	185	Steubenville TOTAL MUNICIPAL	ITEM	QUAN.	UNIT	DESCRIPTION
																													TYPE CODE 6201			DRAINAGE (Continued)
I-2		672																						672					I-2	672	Lin. Ft.	24" Storm Sewers, Sec. M-6.6(b) or Sec. M-6.8(b).
I-2		382																						382					I-2	382	Lin. Ft.	30" Storm Sewers, Sec. M-6.6(a) or M-6.8(a)
I-2											14													14					I-2	14	Lin. Ft.	12" Storm Sewers Under Pavement or Approaches, Sec. M-6.8(b)
I-2																		388						388					I-2	388	Lin. Ft.	12" Storm Sewers Under Pavement or Approaches, Sec. M-6.5(b) or Sec. M-6.8(b).
I-2																		22						22					I-2	22	Lin. Ft.	12" Storm Sewers Under Pavement or Approaches, Sec. M-6.6(d)
I-2		146																206						352					I-2	352	Lin. Ft.	15" Storm Sewers Under Pavement or Approaches, Sec. M-6.5(b) or Sec. M-6.8(b).
I-2																		180						180					I-2	180	Lin. Ft.	15" Storm Sewers Under Pavement or Approaches, Sec. M-6.6(d)
I-2																		164						164					I-2	164	Lin. Ft.	18" Storm Sewers Under Pavement or Approaches, Sec. M-6.5(b) or Sec. M-6.8(b).
I-2		104																						104					I-2	104	Lin. Ft.	18" Storm Sewers Under Pavement or Approaches, Sec. M-6.6(c)
I-2		284								96								214						594					I-2	594	Lin. Ft.	24" Storm Sewers Under Pavement or Approaches, Sec. M-6.6(a) or Sec. M-6.8(b).
I-2																		470						470					I-2	470	Lin. Ft.	30" Storm Sewers Under Pavement or Approaches, Sec. M-6.6(a) or Sec. M-6.8(b)
I-2		140																98						238					I-2	238	Lin. Ft.	30" Storm Sewers Under Pavement or Approaches, Sec. M-6.6(b) or Sec. M-6.8(b).
I-3	200																							200					I-3	200	Lin. Ft.	6" Roadway Drainage.
I-3	200																							200					I-3	200	Lin. Ft.	8" Roadway Drainage.
I-3	50																							50					I-3	50	Lin. Ft.	6" Outlets for Roadway Drainage, Sec. M-6.4(c)
I-4																									456			456	I-4	456	Lin. Ft.	6" Underdrains, Sec. M-6.4(h)
I-4	500		520	1,880	506	364	160	550						228	2,584			3,616						10,908					I-4	10,908	Lin. Ft.	6" Underdrains.
I-4	30		20	50	10	16		12						20	60			206						424	10			10	I-4	434	Lin. Ft.	6" Pipe Outlets for Underdrains, Sec. M-6.4(e).
I-5			1	3	1	2		2						1	2			15						29	1			1	I-5	30	Each	6" Pipe Specials for Underdrains.
I-5		2																4						6					I-5	6	Each	12" Pipe Specials for Storm Sewers, Sec. M-6.4(c).
I-5																		1						1					I-5	1	Each	15" Pipe Specials for Storm Sewers Under Pavement and Approaches, Sec. M-6.6(d)
I-5																						1		1					I-5	1	Each	30" Pipe Specials for Roadway Culverts, Sec. M-6.8(b)
I-8																		1						1					I-8	1	Each	Standard No. 1-3 Catch Basins
I-8		3								1								3						7					I-8	7	Each	Standard No. 2-2A Catch Basins.
I-8		1																4						5					I-8	5	Each	Standard No. 2-2B Catch Basins.
I-8		1																1						2					I-8	2	Each	Standard No. 3 Catch Basins.
I-8		1																						1					I-8	1	Each	Standard No. 3 Catch Basins, Modified, as per Plan.
I-8		2						1										4						7					I-8	7	Each	Standard No. 6 Catch Basins.
I-8																		1						1					I-8	1	Each	Special Catch Basin, Type "A", as per plan.
I-8																		1						1					I-8	1	Each	Special Catch Basin, Type "B", as per plan.
I-8		3						1			1													5					I-8	5	Each	Standard No. 2-6 Inlets, as per Plan.
I-8		2																2						4					I-8	4	Each	Standard No. 2-10 Inlets, as per Plan.
I-8		2						1										1						4					I-8	4	Each	Standard No. 2-14 Inlets, as per Plan.
I-8		1						1	2	1														5					I-8	5	Each	Standard No. 2-16 Inlets (Modified), as per Plan.
I-8								1																1					I-8	1	Each	Standard No. 2-18 Inlets (Modified), as per Plan.
I-8		1									1							4						6					I-8	6	Each	Standard No. 2-20 Inlets, as per Plan.
I-8		2																2						4					I-8	4	Each	Standard No. 2-8 Inlets (Modified), as per Plan.
I-8		2										1						2						5					I-8	5	Each	Standard No. 2-12 Inlets (Modified), as per Plan.
I-8		10																8						18					I-8	18	Each	Standard No. 1 Manholes.
I-8																			1					1					I-8	1	Each	Standard No. 2 Manhole, without Drop Pipe.
I-8																		1						1					I-8	1	Each	Special Manhole Type "A", as per plan.
I-8																			1					1					I-8	1	Each	Special Manhole Type "B", as per plan.
I-10		18																6	18	15	15			72					I-10	72	Cu. Yds.	Dumped Rock Channel Protection.
I-14					567														13					580					I-14	580	Lin. Ft.	Standard Type 1 Paved Gutter.
I-14																			73					73					I-14	73	Lin. Ft.	Standard Type 1 Paved Gutter, Modified as per plan.
I-14					11	22																		33					I-14	33	Lin. Ft.	Standard Type 2 Paved Gutter.
I-14				120	210																			330					I-14	330	Lin. Ft.	Standard Type 4 Paved Gutter.
I-9														116										116					I-9	116	Lin. Ft.	Stone Underdrains, No. 2.
S-1		0.23						0.52	0.52	0.67	0.28	0.28						0.95	0.59	0.83	0.59	1.02		6.48			1.02	1.02	S-1	7.50	Cu. Yds.	Concrete for Structures, Class "E".

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

GENERAL SUMMARY

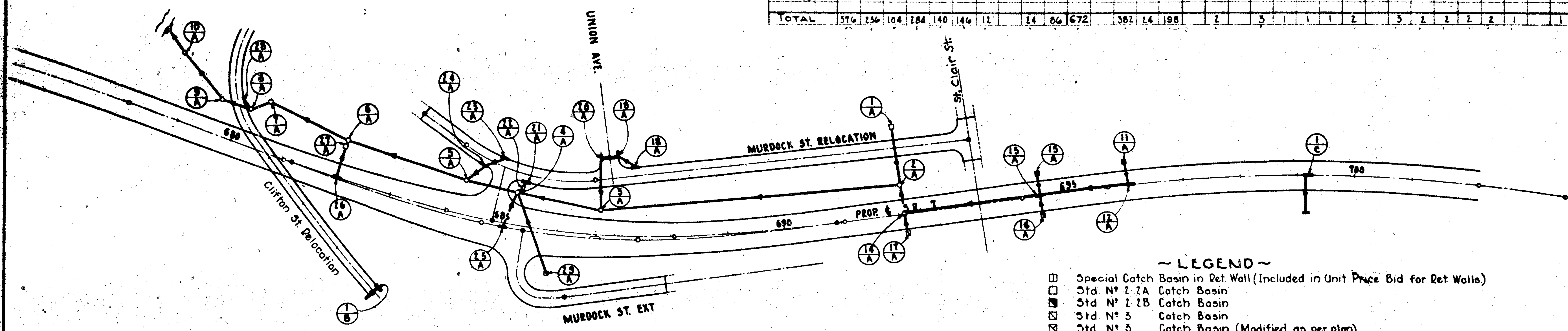
Designed	Drawn	Traced	Checked	Reviewed Date	Revised
R.V.G.	Simpson	Simpson	RDZ		

GENERAL SUMMARY

ITEM	SHEET NUMBER																										Steubenville	ITEM	QUAN.	UNIT	DESCRIPTION
	9	10-A	15	16	17	18	19	20	21	22	23	24	25	149	154	157	158	159	181	182	183	184	TOTAL Urban	24	25	185	TOTAL Municipal	TYPE CODE 6201			
																															DRAINAGE (Continued)
S-1																			48.5				48.5					S-1	48.5	Cu. Yds.	Concrete for Structures as per Plan
S-27																				90			90					S-27	90	Lin. Ft.	24" Pipe for Roadway Culverts, Sec. M-6.6(c)
S-27																										112	112	S-27	112	Lin. Ft.	30" Pipe for Roadway Culverts, Sec. M-6.6(b) or Sec. M-6.8(b).
S-27																						102	102					S-27	102	Lin. Ft.	30" Pipe for Roadway Culverts, Sec. M-6.8(b).
S-27																			148				148					S-27	148	Lin. Ft.	36" Pipe for Roadway Culverts, Sec. M-6.6(d) or Sec. M-6.4(d)
S-27																					100		100					S-27	100	Lin. Ft.	36" Pipe for Roadway Culverts, Sec. M-6.8(b)
S-27																			68				68					S-27	68	Lin. Ft.	36" Pipe for Roadway Culverts, Sec. M-6.4(d)
																															PAVEMENT
B-35		2082												53									2135	56			56	B-35	2191	Cu. Yds.	Asphaltic Concrete Leveling Course (70-85)
B-35		4832																					4832					B-35	4832	Cu. Yds.	Asphaltic Concrete Base Course (70-85)
B-19	50		15											182									247	384			384	B-19	631	Cu. Yds.	Aggregate Base Course.
B-70																		20					20					B-70	20	Sq. Yds.	8" Portland Cement Concrete Base Course, as per plan
B-219			3.4	103	86	70	88.1	132.6	148.3	148.3	148.3	86.8			127			264.2					1,406					B-219	1,406	Cu. Yds.	Waterproofed Aggregate Base Course.
B-20		64,220																					64,220					B-20	64,220	Sq. Yds.	8" Water Bound Macadam Base Course, using Size No. 2 Coarse Aggregate
T-30		25,688	3											447									26,138	472			472	T-30	26,610	Gals.	Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3
T-30								3															3					T-30	3	Gals.	Bituminous Tack Coat, Sec. M-5.5, MS-2 or RS-1; or Sec. M-5.2, RC-1 or RC-2 or RC-3, as per Sec. T-30.02
T-31			10.0	311	258	210.8	263.7	397.7	444.0	444.0	444.0	260			384			792.8					4,220					T-31	4,220	Gals.	Bituminous Surface Treatment, Bituminous Material, as per plan.
T-31			0.3	10.0	8.2	6.7	8.4	12.8	14.2	14.2	14.2	8.4			12.2			25.4					135					T-31	135	Cu. Yds.	Bituminous Surface Treatment; No. 6 Aggregate.
T-35	200	2498	1					2.4						53.3		1	1	1.3					2758	56			56.0	T-35	2814	Cu. Yds.	Asphaltic Concrete Surface Course, Type "A" (70-85)
I-7																93							93					I-7	.93	Sq. Yds.	Reinforced Concrete Approach Slabs (T=10").
I-7					630.6	283.4																	914					I-7	914	Sq. Yds.	Reinforced Concrete Approach Slabs, as per Plan (T=13").
I-7																	77						77					I-7	.77	Sq. Yds.	Reinforced Concrete Approach Slabs, as per Plan (T=10")
I-7								33															33					I-7	33	Sq. Yds.	Reinforced Concrete Approach Slabs. (T=13)
I-12	400													569	1951			2,102					4,622					I-12	4,622	Lin. Ft.	Combination Curb and Gutter, Standard Type 2, as per plan.
I-12				385	480			480								118		1,405					2,888					I-12	2,888	Lin. Ft.	Concrete Curb, Standard Type 6.
I-12																		324					324					I-12	324	Lin. Ft.	Concrete Curb, Special, as per plan.
I-18		-200	6.2	185	148.8	123.5	156.7	235.3	262.5	262.5	262.5	153.2			226.4			466.4					2,289					I-18	2,289	Cu. Yds.	Stabilized Crushed Aggregate Shoulders and Approaches.
I-21					22	11																	33					I-21	33	Sq. Yds.	4" Portland Cement Concrete Median Pavement, Standard Type 1
I-21			148	462	160.7	249.2	333.3	313.4	321.6	327.6	323.7	190.5						28					2858					I-21	2858	Sq. Yds.	Portland Cement Concrete Median Pavement, Standard Type 2
I-22		900	355	1,352	748.8	950.2	1,224	1,542.4	1,509.0	1,462.0	1,462	863		172.6	1,140.8			2,331.2					16,014					I-22	16,014	Cu. Yds.	Subbase.
																															RETAINING WALLS
																															For Estimated Quantities See Sheet No. 195A
																															COMBINATION AND SANITARY SEWERS
																															For Estimated Quantities See Sheet No. 308
																															WATER LINES
																															For Estimated Quantities See Sheet No. 308
																															STRUCTURES OVER 20' SPAN
																												FOR ESTIMATED QUANTITIES SEE SHEET NO.		240	St. Clair St. Sta. 693 + 42.20 JEF-7-1374
																														248	Ravine St. Sta. 698 + 21.50 JEF-7-1382
																														257	Lincoln Ave. Sta. 700 + 31.00 JEF-7-1387
																														269	McLister Ave. Sta. 703 + 51.68 JEF-7-1392
																														276	Logan Ave. Sta. 713 + 75.00 JEF-7-1411
																														286	Side Hill Structures - Sta. 724 + 12.75 to Sta. 726 + 50.75 JEF-7-1431
																							Lump				Lump		Lump	Lump	Construction Layout Stakes.

Ref. No	Sh't No	Sh't No	I-2 Under Pav't & Appro. Class "B" S.S.		M-6.6(c)	M-6.6(a) or M-6.8(b)	M-6.6(b) or M-6.8(b)	M-6.5(b) or M-6.8(b)	Class "A" S.S.		Class "B" S.S.		M-6.6(b) or M-6.8(b)	M-6.6(a) or M-6.8(a)	M-6.4(c)		I-5 Bend 12"x30" M-6.4(c)	I-8 Catch Basins Std 2-2A	Std 2-2B	Std No 5	Std No 5 Mod. a/p	Std No 6	Inlets as per plan Std 2-6	Std 2-8 Mod.	Std 2-10	Std 2-12 Mod	Std 2-14	Std 2-16 Mod	Std 2-20	Manholes Std No 1		I-10 Dumped Rock Chan. Prot.	L-10 Sodding	E-2 Exc. for Structures	S-1 Conc. for Str. Class "E"
			12"	15"	18"	24"	30"	15"	15"		12"	15"	24"	30"	12"	30"																			
			L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	C.Y.	S.Y.	C.Y.	C.Y.
1-A	32				104													1																	
2-A	32												524																	1					
3-A	29												148																	1					
4-A	29						88																							1					
5-A	28													222																1					
6-A	28													160																1					
7-A	151														38														1					
8-A	151						52																							1					
9-A	151														112														1					
10-A	151														48														1		15			
11-A	38		36																			1													
12-A	38		148																					1											
13-A	36					238																		1											
14-A	32					46																								1					
15-A	36			36																		1													
16-A	36	190	32																		1														
17-A	32		32																	1															
18-A	29											28																	1						
19-A	29			30																								1							
20-A	29			92																						1									
21-A	29										24														1										
22-A	29								6									1																	
23-A	28			40																			1												
24-A	28											42											1												
25-A	29			58																							1								
26-A	28		60																								1								
27-A	28								6									1																	
28-A	151											16														1									
29-A	29							146											1																
1-B	155		32																				1												
1-C	42		36												24		2								1							3	1	1	0.25
TOTAL			376	256	104	284	140	146	12		24	86	672	382	24	198	2	3	1	1	1	2	3	2	2	2	2	1	1	10		18	1	1	0.25

For Outlet Details See Sheet No. 151.



~ LEGEND ~

- Special Catch Basin in Ret. Wall (Included in Unit Price Bid for Ret. Walls)
- Std. No 2-2A Catch Basin
- Std. No 2-2B Catch Basin
- Std. No 3 Catch Basin
- Std. No 3 Catch Basin, (Modified, as per plan)
- Std. No 6 Catch Basin
- Std. No 1-3 Catch Basin
- Special Manhole, Type "A"
- Std. No 1 Manhole
- Std. No 2 Manhole
- Std. No 2 Inlet
- I-2 Storm Sewer Pipe
- Std. P.C. & Endwall
- I-5 Pipe Special
- Sheet Piling

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

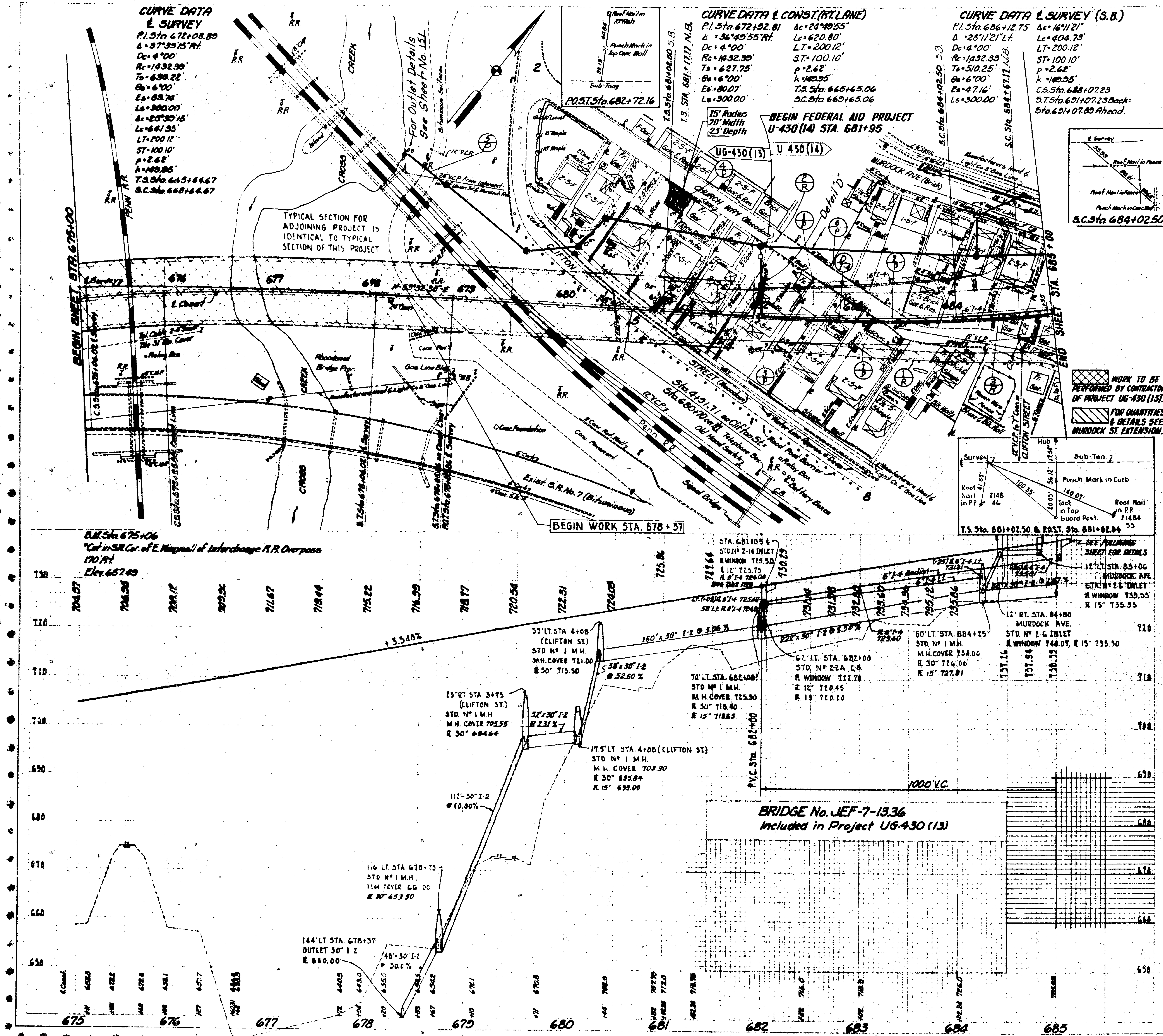
STORM SEWER LAYOUT
STA. 678+37 to STA. 700+00

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
WHT.	A.M.	A.M.	SLGL.		

NOTE: Marker will be furnished and erected on the right by State forces prior to acceptance of this improvement.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430 (14)	15/307

JEFFERSON COUNTY JEF.-7-13.53



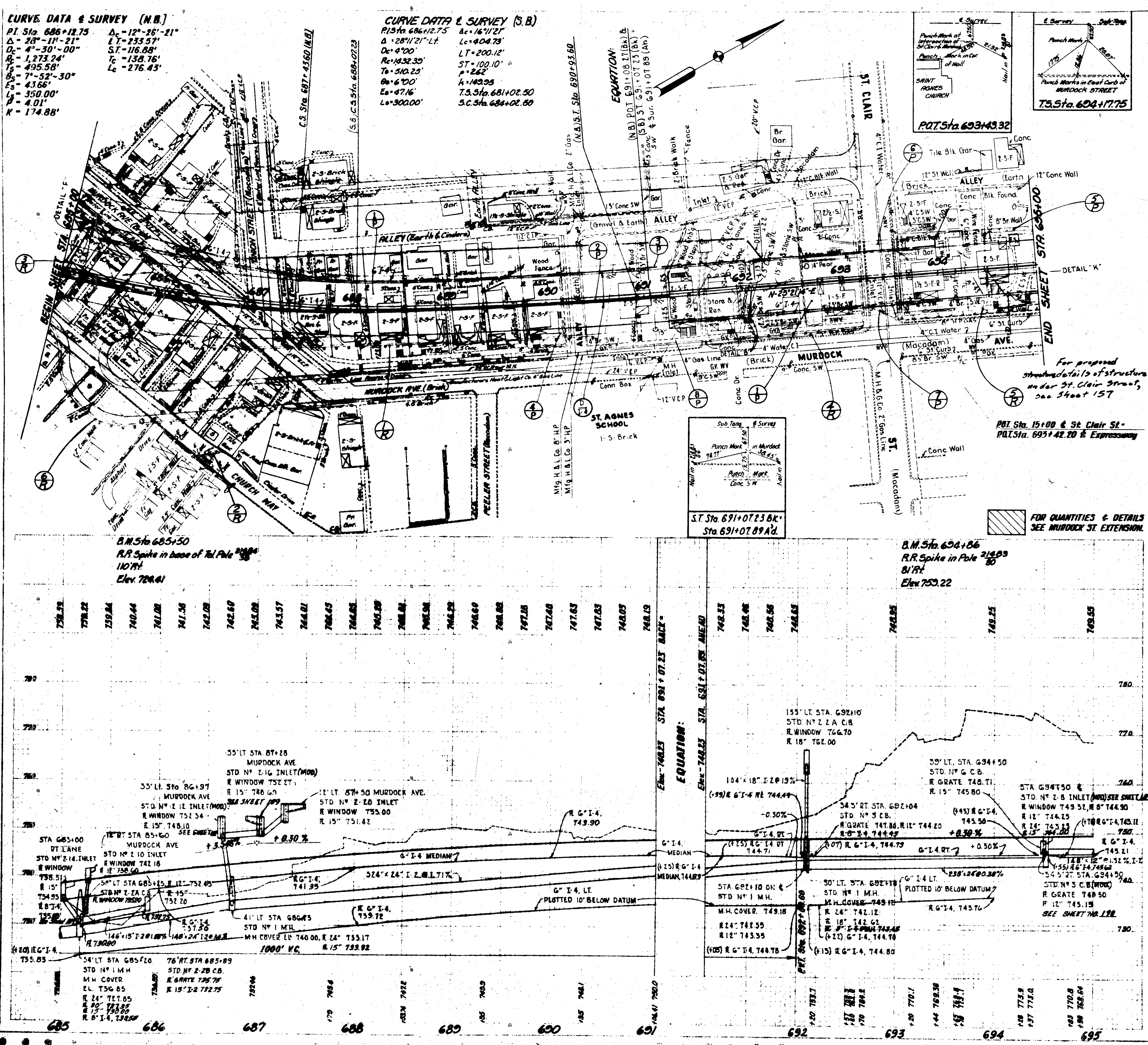
ESTIMATED QUANTITIES

REF NO	STATION TO STATION	SIDE	B-21a Water Proofed Agg. Base Course C.Y.	E-1 Compacted Sub-Grade S.Y.	I-12 Conc. Curb Type 2-A L.F.	I-18 Stabilized Cr'std Agg. Shld'rs & Approaches C.Y.	I-21 Portland Cem't Conc. Med. Pav't Std. Type 2 S.Y.	I-22 Sub-Base, Variable Depth C.Y.	T-B-34 Pav't S.Y.	T-31 Bit. Surface Treatment Bit. Mat'l GAL'S	T-31 Bit. Surface Treatment No. 6 Agg. C.Y.	T-30 Bit. Prime Coat GAL'S	I-15 Guard Rail Type 2-A LIN. FT.	I-15 Barrier Rail Type 2-A LIN. FT.	T-35 Asphaltic Concrete Surface Course C.Y.	SPECIAL Overhead Sign Type OS-1-A Each	B-10 8" Crushed Agg. Base Course C.Y.	I-5 Pipe Specials For Underdrains 6"x90° EACH	I-4 6" Under-drain LINEAL FEET	I-4 8" Pipe Outlet Sec. N6.4(a) LINEAL FEET	E-8 Removal & Disposal of Exist Curb LIN. FT.	SEE SHEET NO.
1-P	681+95 ~ 685+00	Lt & Rt		1,728				288	1725.0													3
2-P	681+95 ~ 685+00	Lt & Rt		119			148	56														3
3-P	681+95 ~ 682+41.16	Rt	3.4	41	579.33	6.1		8		10	0.3											3,155
4-P	Cul-De-Sac	Lt															15					-
5-P	678+50 ~ 678+62	Lt						3				8			1							-
6-P	682+20 ~ 683+30	Lt																			130	-
1-R	681+92 ~ 685+00	Rt											308									3
L.R	Barricade	Lt											25									
3-R	684+00 ~ 685+00	Median												100								3
DI-4	682+05 ~ 684+95	Rt Lt																1	520	20		188
OS-1	684+25.8	Lt.														1						155
TOTALS			3.4	1888	579.33	6.1	148	355	1725.0	10	0.5	8	333	100	1	1	15	1	520	20	130	

STA. 675+00 to STA. 685+00

2	OHIO	U-430 (14)	16/307

JEFFERSON COUNTY JEF-7-13.53

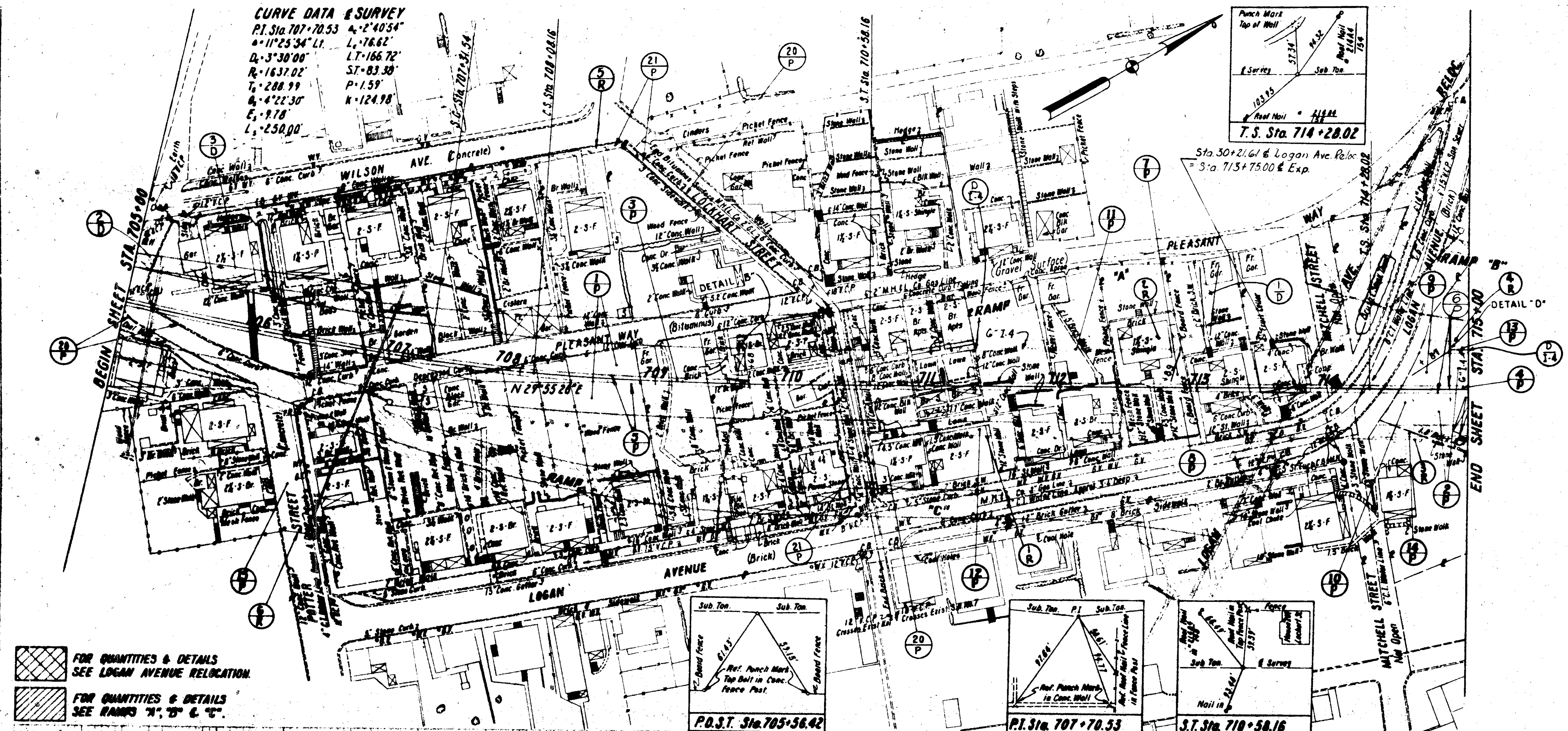


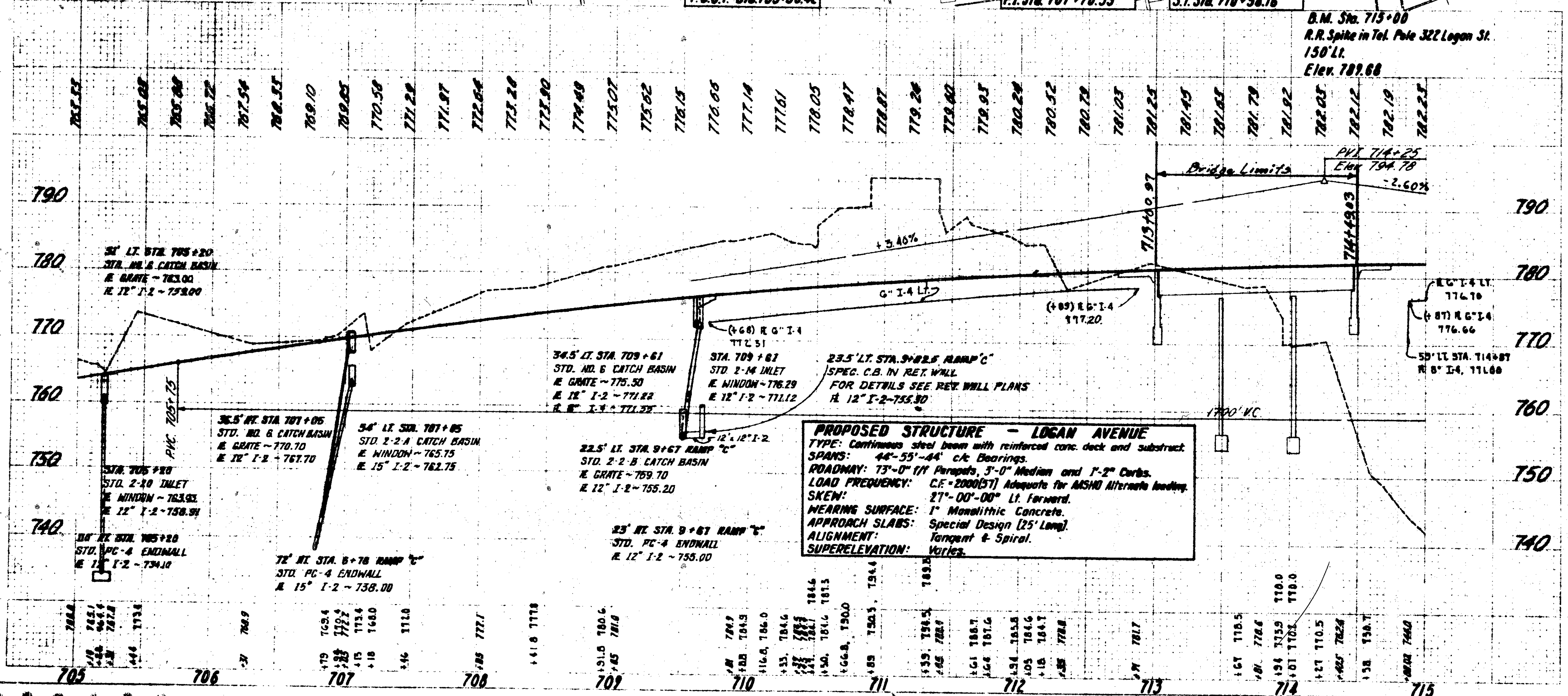
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	B-219 Water Proofed Agg. Base Course C.Y.	E-1 Compact Sub Grade S.Y.	I-12 Conc. Curb Std. Type 6 L.F.	I-18 Stab. Crsnd Agg. Shlds. & Apprs. C.Y.	I-21 Port. Cem't Conc. Med. Pav't. Std. Type 2 S.Y.	I-22 Sub Base Variable Depth C.Y.	T-B-35 Pav't. S.Y.	T-31 Bit. Surface Treatment Bit. Mat. GAL'S	T-31 Agg. Nº 6 C.Y.	SPECIAL Overhead Sign Type OS-1-A Each	I-15 G.R. Type 2-A L.F.	I-15 G.R. Type 2-A Barrier L.F.	I-5 Pipe Specials for U'drains 6"x60" Ea.	I-5 6" Wye Ea.	I-5 6" Tee Ea.	I-4 6" Under drains L.F.	I-4 8" Pipe Outlet M.G.4(a) L.F.	I-14 Paved Gutter Std. Type 4 L.F.	I-13 4" Conc. Sidewalk S.F.	E-8 Removal & Disposal of Exist. Sidewalk S.F.	SEE SHEET NO.
1-P	685+00 ~ 686+00	Lt.&Rt.		5,663				944	5662.6														3
2-P	685+00 ~ 695+00	Lt.&Rt.		359	[illegible]		462	167															3
3-P	687+80.97 ~ 695+00	Lt.	53	639		95		124		160	5.1												3
4-P	688+23.06 ~ 695+00	Rt.	50	602		90		117		151	4.8												3
5-P	689+80 ~ 695+00	Lt.																		120			4
6-P	692+93 ~ 693+93	Lt.			105																158		4
7-P	692+10 ~ 695+00	Rt.			290																435		4
8-P	688+00 ~ 695+00	Rt.																				2660	
1-R	686+50 ~ 690+50	Rt.											400										3
2-R	687+00 180' Rt.												25										
3-R	685+00 ~ 686+25	Med.											185	185									3
4-R	692+00 ~ Bridge	Rt.											140										-
5-R	Bridge ~ 695+00	Lt.&Rt.																					
D-1.4	685+00 ~ 695+00														2	2	1	1880	50				103,105
6-R	685+00 ~ Murdock Ext.	Rt.											378.5										7
OS-1	695+30	Rt.										1											155
TOTALS			105	7263	[illegible]	185	462	1352	5662.6	311	9.9	1	1128.5	185		5		1880	50	120	593	2660	

STA. 685+00 to STA. 695+00

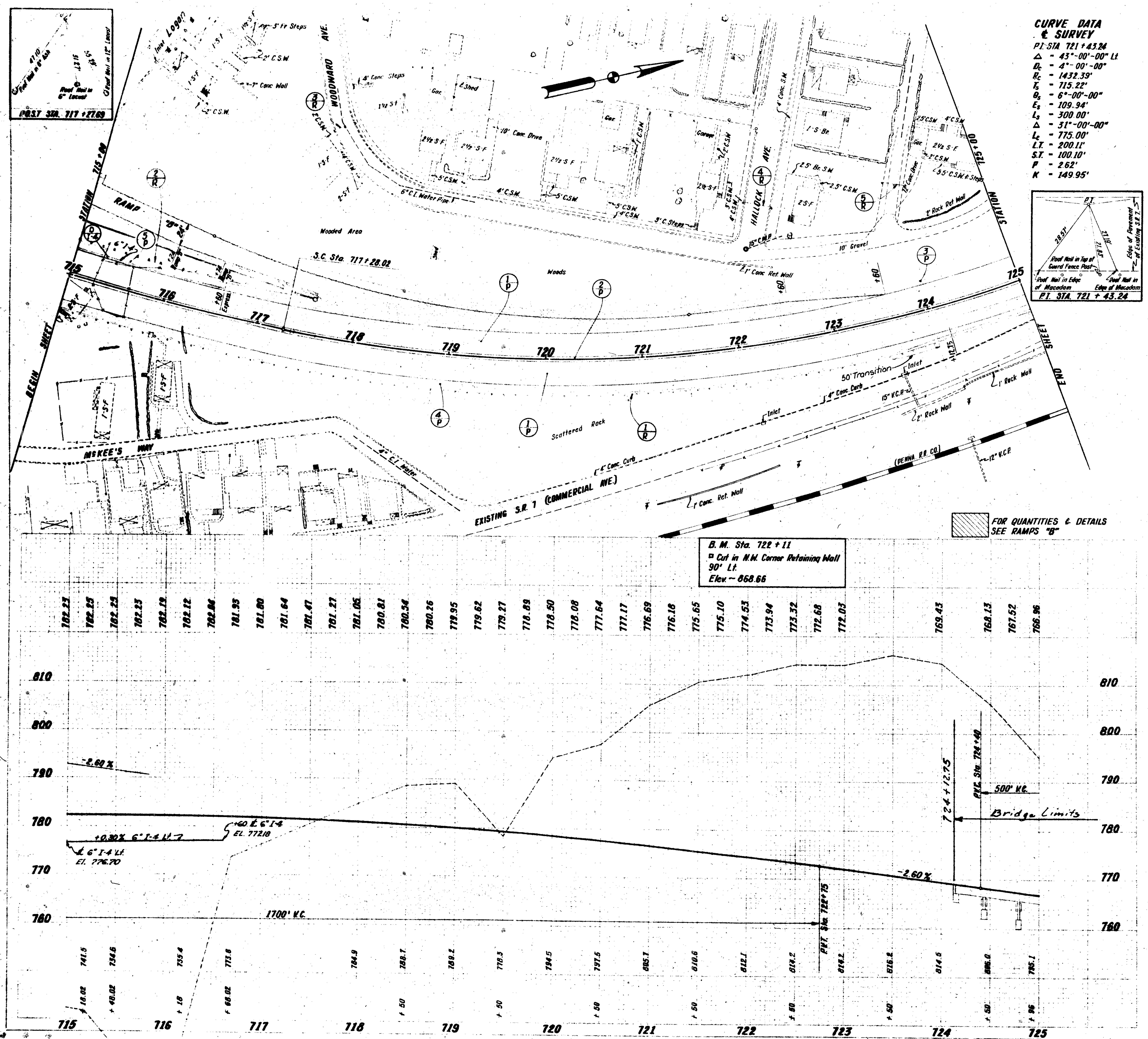

2 OHIO U 430-(14)
17
307
JEFFERSON COUNTY JEE-7-13.53
P.I. Sta. 698+95.42
C.S. Sta. 702+17.75
S.T. Sta. 703+67.75 Bk. = Sta. 703+69.83 Ad.
T.S. Sta. 704+81.54
STA. 698+21.50 & EXP. ¢ RAVINE ST.
Sta. 700+31.00 S.R. 7 = Sta. 11+83.80 Lincoln Avenue
STA. 0+00 ¢ McLISTER AVE. = STA. 703+51.68 ¢ EXP.
BEGIN SHEET STA. 695+00
END SHEET STA. 705+00
MURDOCK AVENUE
RAVINE ST.
LINCOLN AVE.
McLISTER AVE.
CURVE DATA ¢ SURVEY
NOTE: TRANSITION CURB 6" TO 10½" IN 20' @ RAVINE ST. BRIDGE.
For proposed structure details of structure under Lincoln Avenue, see Sheet 158.
For details of proposed structure over McLister Street see Sheets 258-269
PROPOSED STRUCTURE - RAVINE ST.
PROPOSED STRUCTURE - McLISTER AVE.
TYPE: Continuous steel girder with reinf. conc. deck & substruct.
SPANS: 88'-110'-88' c/c Bearings along reference tangent
ROADWAY: 75'-4" f/f Parapets with 2'-2" safety curbs & 5' Med.
LOAD FREQUENCY: C.F. = 2000 (57)
SKEW: None.
WEARING SURFACE: 1" Monolithic Concrete.
APPROACH SLAB: Special Design (25' Long).
ALIGNMENT: Spiral and tangent.
SUPERELEVATION: Varies.
B.M. Sta. 703+30 R.R. Spike in Pole 138' Rt. Elev. 700.69
Bridge Limits
400' V.C.
290.52'
ESTIMATED QUANTITIES
REF. NO.
STATION TO STATION
SIDE
695 696 697 698 699 700 701 702 703 704 705
770 760 750 740 730 720





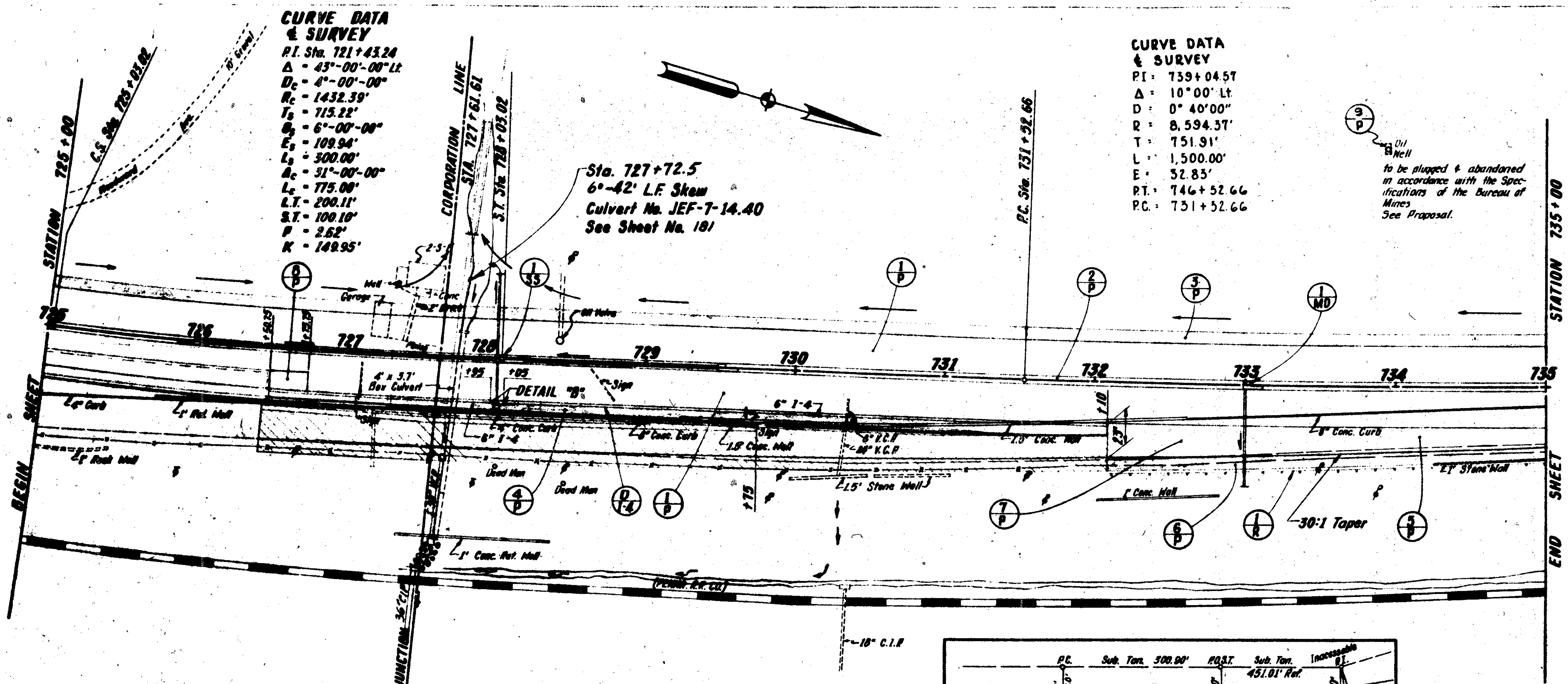
ESTIMATED QUANTITIES

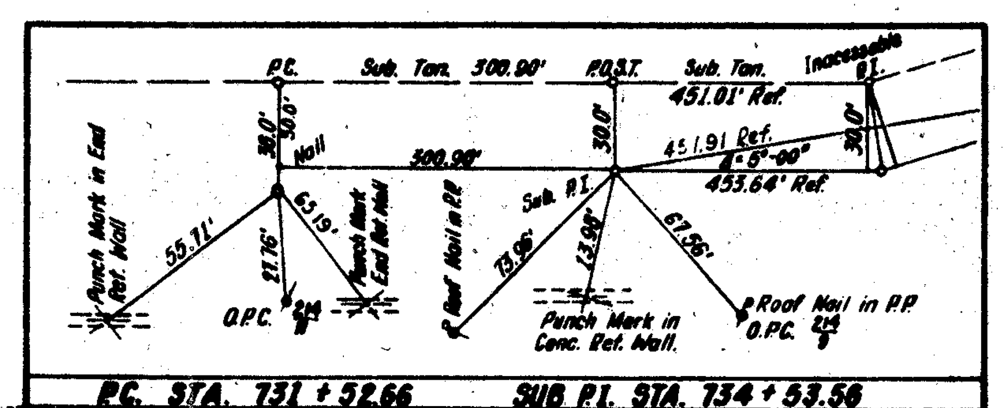
REF. NO.	STATION TO STATION	SIDE	B-219 Water Proofed Agg Base Course C.Y.	E-1 Compact Sub Grade S.Y.	I-16 Conc Curb Std Type 2-A L.F.	I-18 Stab. Cr'shd Agg Shldr's & Appr's C.Y.	I-21 Port Cem't Conc Med Pav't Std Type 2 S.Y.	I-22 Sub Base Variable Depth C.Y.	T-B-35 Pav't S.Y.	T-31 Bit. Surface Treatment Bit. Mat. GAL'S	T-31 Bit. Surface Treatment No 6 Agg. C.Y.	I-15 G.R. Type 2-A L.F.	I-21 Port Cem't Conc. Med Pav't Std Type 1 S.Y.	SPEC. Overhead Sign Type OS-1-A Each	I-7 Appr. Slab as per Plan 15 S.Y.	L-10 Sodding S.Y.	I-14 Paved Gutter Std Type 2 L.F.	I-5 Pipe Spec. for U'drains 6"x60" Ea.	I-5 Pipe Spec. for U'drains 6"x90" Ea.	I-4 6" Underdrains L.F.	I-4 8" Pipe Outlets M-G.4(a) L.F.	E-8 Removal & Disposal of Exist. Sidewalk S.F.	L-10 Spec. Berm & Slope Prot. S.Y.	E-8 Removal of Conc. Pav't S.Y.	E-8 Removal & Disposal of Exist. Curb L.F.	SHEET NO.
1-P	705+17.60 ~ 712+75.97	Lt & Rt		4297				716.3	4294.9																	3
2-P	714+74.03 ~ 715+00	Lt & Rt		147				24.5	147.2																	3
3-P	705+17.60 ~ 713+00.97	℄		174			252.8	84.6					5.5													3
4-P	714+49.03 ~ 715+00	℄		11			8.2	5.5					5.5													3
5-P	705+17.60 ~ 712+75.97	Lt & Rt			1516.7																					3
6-P	714+74.03 ~ 715+00	Lt & Rt			51.9																					3
7-P	712+75.97 ~ 713+00.97	Lt.		71											70.83											195
8-P	712+75.97 ~ 713+00.97	Rt.		71											70.83											195
9-P	714+49.03 ~ 714+74.03	Lt.		71											70.83											195
10-P	714+49.03 ~ 714+74.03	Rt.		71											70.83											195
11-P	709+00 ~ 713+18.60	Lt.	26.4	317		46.7		36.8		79.7	2.5															3.5
12-P	708+06 ~ 712+86.70	Rt.	35.6	429		62.9		72.5		101.2	3.4															3
13-P	714+63.3 ~ 715+00	Lt.	2.7	32		4.6		3.6		8.0	0.5															3
14-P	714+31.6 ~ 715+00	Rt.	5.3	64		9.3		10.4		16.0	0.5															3
15-P	Potter St.	Lt & Rt																						292		-
D-I-4	709+61 - 715+00	Lt.																1	1	364	16					188
20-P	704+97 ~ 710+75	Lt. & Rt.																							1688	-
21-P	705+00 ~ 710+50	Lt. & Rt.																				1925				-
1-D	713+00	Lt.																					34			191
1-R	707+88.1 ~ 712+70.6	Rt.										512.5														3
2-R	712+09 ~ 715+09.0	Lt.										100														3
3-R	714+41 ~ 715+00	Rt.										59.0														3
4-R	714+79.4 ~ 715+00	Lt.										20.6														3
5-R	705+80 ~ 709+20	Lt.										412.5														-
6-R	706+50	Rt.										25.0														-
2-D	705+00 ~ 705+22	Lt.															22									-
3-D	705+22 ~ 706+87															55										
	Sub-Total		70.0	5755	1568.6	123.5	261.4	954.2	4442.1	210.9	6.7	1129.6			283.32	55	22	2		364	16		34	292	1688	
	Deductions																									
	705+20				42.7		7.1	2.3	3.6																	
	709+61				[illegible]		5.1	1.7	2.5																	
~~D-1~~	707+30	Rt.												1												170
TOTALS			70.0	5,755	1498.2	123.5	249.2	950.2	4436	210.9	6.7	1129.6	11	1	283.32	55	22	2		364	16	1925	34	292	1688	



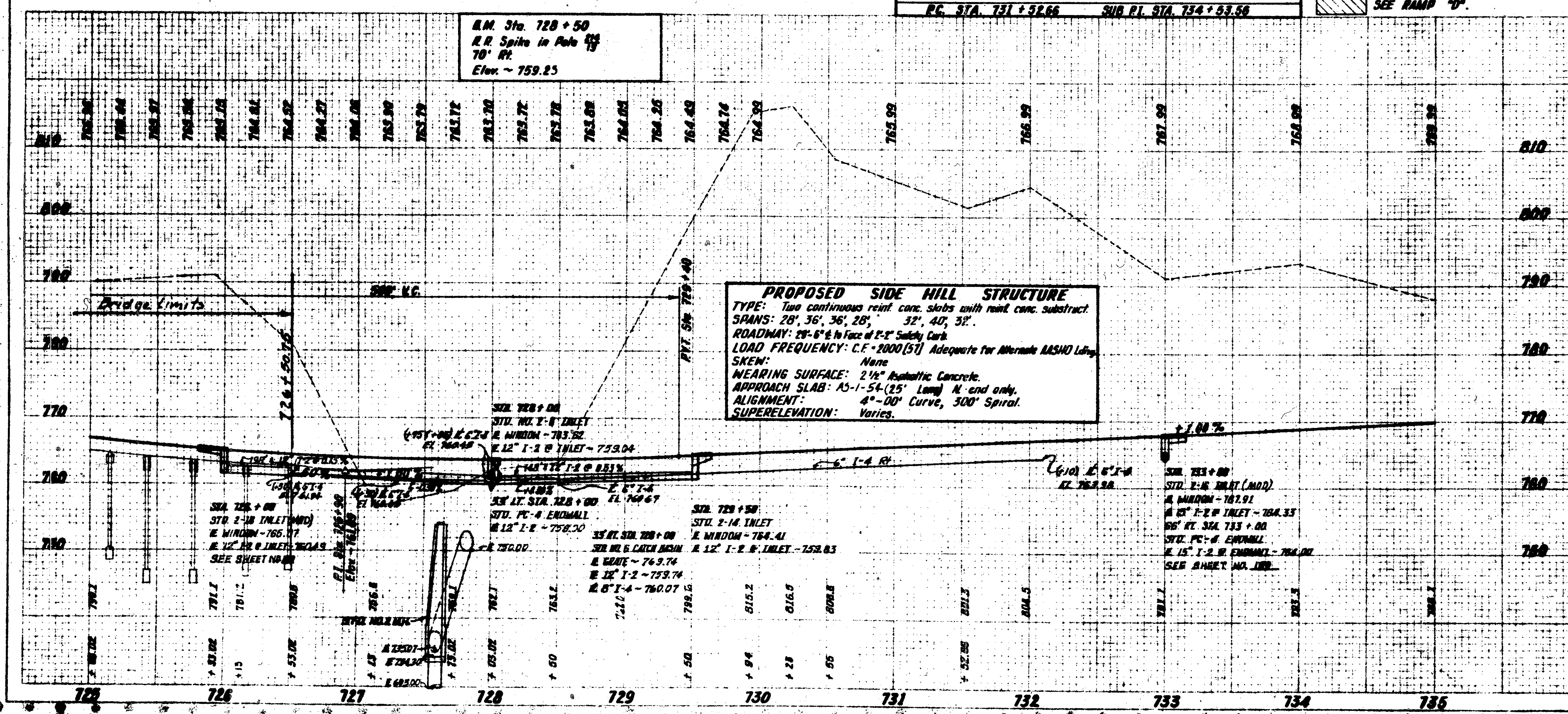
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	B-219 Water-proofed Agg. Base Course C.Y.	E-1 Compact. Sub-Grade S.Y.	I-12 Conc. Curb Std. Type 2-A L.F.	I-18 Stab. Cr'shd. Agg. Shldrs & Appr's C.Y.	I-21 Port. Cem't. Conc. Med. Pav't. Std. Type 2 S.Y.	I-22 Sub Base Variable Depth C.Y.	T-B-35 Pav't. S.Y.	T-31 Bit. Surface Treatment Bit. Mat. GAL'S.	T-31 No 6 Agg. C.Y.	I-15 G.R. Type 2-A L.F.	SPECIAL Overhead Sign TYPE OS-1-A Each	I-4 6" Pipe Under-drains L.F.	
1-P	715 + 00 ~ 725 + 00	Lt. & Rt.		5,666				944.0	5,666.6						3,170
2-P	715 + 00 ~ 725 + 00	℄		222	2000		333.3	108.0							3
3-P	723 + 60 ~ 725 + 00	Lt.	10.4	124		18.5		36.8		31.1	1.0				3
4-P	715 + 00 ~ 725 + 00	Rt.	74.1	889		131.2		132.0		222.0	7.1				3,170
5-P	715 + 00 ~ 716 + 60	Lt.	11.9	142		21.1		37.7		33.5	1.1				3
0 I-4	715 + 00 ~ 716 + 60	Lt.												160	
OS-1	717+35	Lt.											1		178
1-R	715 + 00 ~ 724 + 03.5	Rt.										928.5			3
2-R	715 + 00 ~ 716 + 79.4	Lt.										179.4			3
3-R	717 + 50 BARRICADE	Lt.										25			
4-R	722 + 40 BARRICADE	Lt.										25			
5-R	724 + 00 BARRICADE	Lt.										25			
	SUB-TOTALS		96.4	7,045	2000	170.8	333.3	1258.5	5,666.6	288.6	9.2	1182.9		160	
	DEDUCT FOR BRIDGE														
1-P	724+12.75 - 725+00	Rt.		117				19.4	116.4						
4-P	723+47.83 - 725+00	Rt.	8.5	100		14.1		15.1		24.9	0.8				
	TOTALS		88.1	6826	2000	156.7	333.3	1224.0	5,550.2	263.7	8.4	1182.9	1	160	





FOR QUANTITIES & DETAILS SEE RAMP "D".



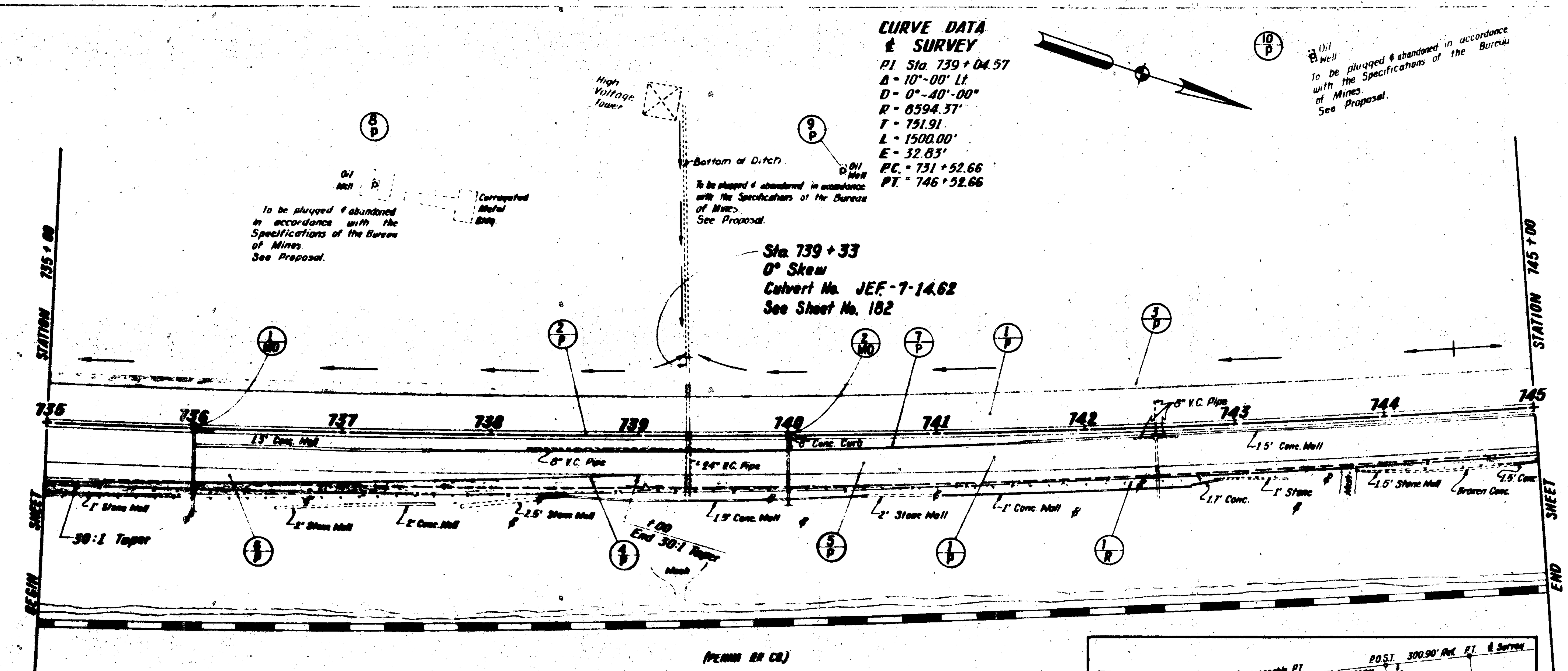
REF. NO.	SIDE	STATION TO STATION	I-4 6" Pipe Underdrains L.F.	I-4 8" Pipe Outlet Sec. M-6(a) L.F.	I-5 Pipe Specials for Underdrains 6"x60" EACH	T-7 Approach Slab T-15 S.Y.	T-35 2½" Asph. Conc. Surf. Course (T-35) C.Y.	T-30 Bituminous Tack Coat 0.1 Gal's/S.Y. GAL'S
D1-4	Rt.	726+50 – 732+10	550	12	2			
8-P	Rt.	726+50.75 – 726+75.75				33.3	2.3	3.3
TOTALS			550	12	2	33.3	2.3	3.3

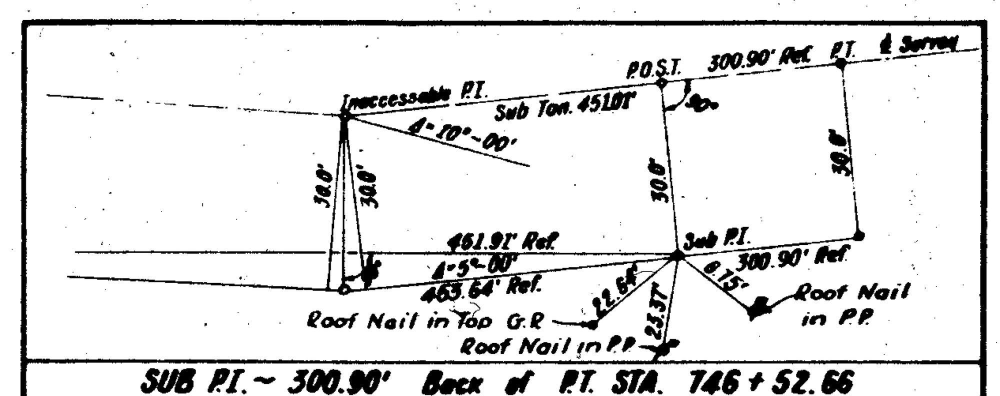
ESTIMATED QUANTITIES

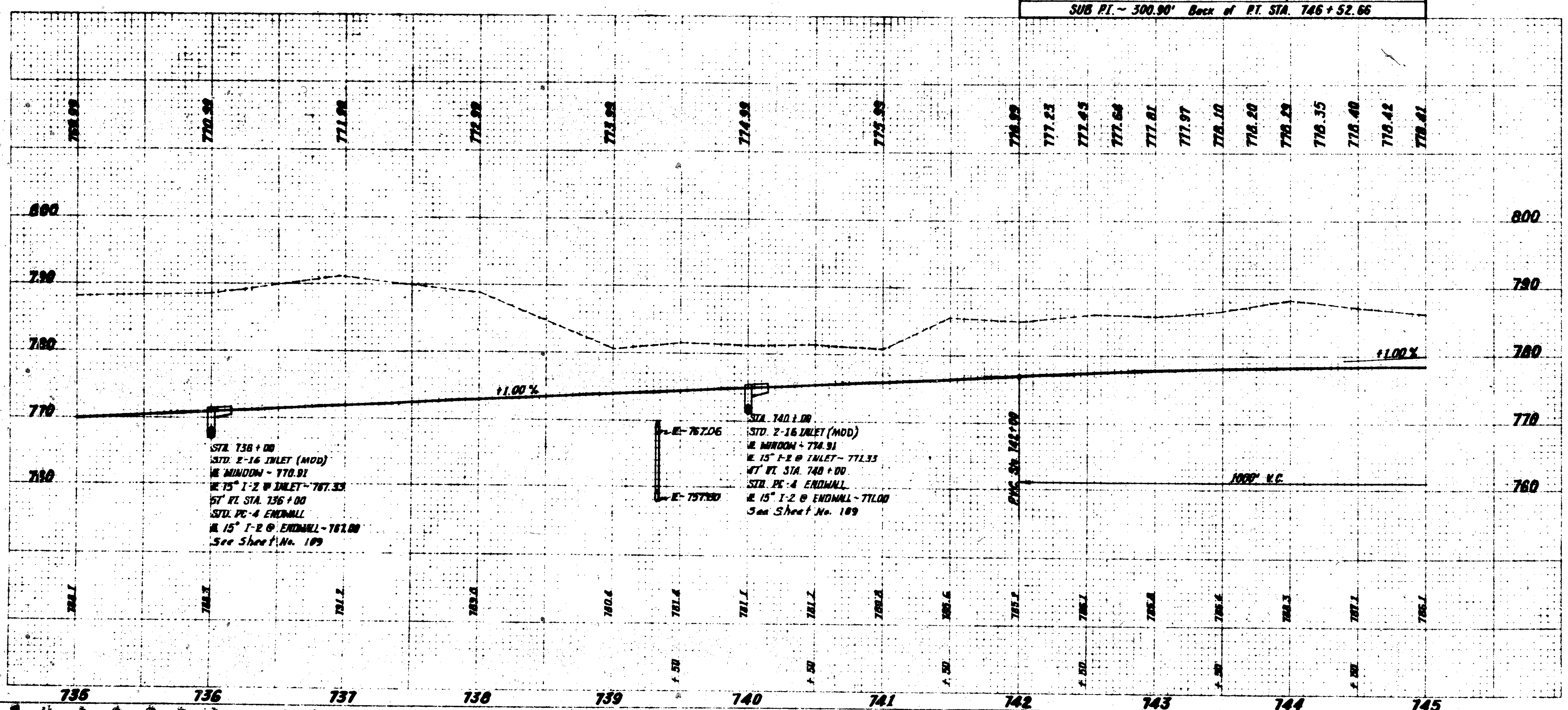
REF. NO.	STATION TO STATION	SIDE	B-219 Waterproofed Agg. Base Course C.Y.	E-1 Compact Sub Grade S.Y.	I-12 Conc. Curb Std. Type 6A L.F.	I-12 Conc. Curb Std. Type 6 L.F.	I-18 Stab. Crshd. Agg. Shldrs. & Appr's. C.Y.	I-21 Port. Cem't. Conc. Med. Pav't. Std. Type 2 S.Y.	I-22 Sub Base Variable Depth C.Y.	T-B-36 Pav't. S.Y.	T-51 Bit. Surface Treatment Bit. Mat. GAL'S	T-51 Bit. Surface Treatment N°C Agg. C.Y.	I-15 G.R. Type 2-A L.F.	SPECIAL Plugging Oil Wells LUMP
1-P	725+00 ~ 735+00	Lt & Rt		5,666					944.0	5,666.6				
2-P	725+00 ~ 735+00	℄		222	100			333.3	108.0					
3-P	725+00 ~ 735+00	Lt.	74.1	888			132.2		263.0		222.0	7.1		
4-P	726+50.15 ~ 732+10	Rt.	36.9	444		400	64.6		125.0		111.0	3.6		
5-P	732+00 ~ 735+00	Rt.		585					97.6	585.4				
6-P	732+10 ~ 735+00	Rt.	21.6	258			58.5		52.0		64.7	2.1		
7-P	732+10 ~ 735+00	Rt.												
1-R	732+10 ~ 735+00	Rt.											280	
9-P	734+00±	Lt.												Lump
1-SS	726+00 ~ 729+50	℄												
1-MD	735+00	Rt.												
SUB-TOTALS			132.6	8064	[illegible]	400	255.3	333.3	1589.6	6,252.0	397.7	12.8	290	Lump
DEDUCTIONS														
1-SS	726+00 ~ 729+50	℄			[illegible]			14.0	5.8	7.0				
1-MD	735+00	Rt.			[illegible]			5.0	2.3	2.9				
DEDUCT FOR BRIDGE														
1-P	725+00 – 726+50.75	Rt.		201					33.5	201.0				
8-P	726+50.75 – 726+75.75	Rt.		39					6.6	33.3				
TOTALS			132.6	[illegible]	[illegible]	[illegible]	255.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	LUMP

REF. NO.	I-8 Inlets Standard No. 2-6 EACH	I-8 Inlets Standard No. 2-14 EACH	I-8 Inlets N° 2-16 Mod. EACH	I-8 Inlets N° 2-18 Mod. EACH	I-8 Std. No. 6 Catch Basin EACH	I-10 Sodding S.Y.	I-2 Storm Sewers under Pav't or Appr's (L.F.) Class "B" 15"	I-2 Storm Sewers under Pav't or Appr's (L.F.) Class "B" 12"	E-2 Excavation for Structures C.Y.	E-8 Removal & Disposal of Existing Pavement S.Y.	S-1 Concrete for Struct's. Class "E" C.Y.	I-15 4" Conc. Side-Walk S.F.	SEE SHEET NO.
1-P													3
2-P													3
3-P													3
4-P												655.8	4,178,179
5-P													5,179
6-P													5,179
7-P										773			—
1-R													5
9-P													
1-SS	1	1		1	1	1		428	1		0.26		76,84,86
1-MD			1		1	1	66		1		0.26		92
SUB-TOTALS	1	1	1	1	1	2	66	428	2	773	0.52	655.8	
TOTALS	1	1	1	1	1	2	66	428	2	773	0.52	655.8	

STA. 735+00 to STA. 735+00



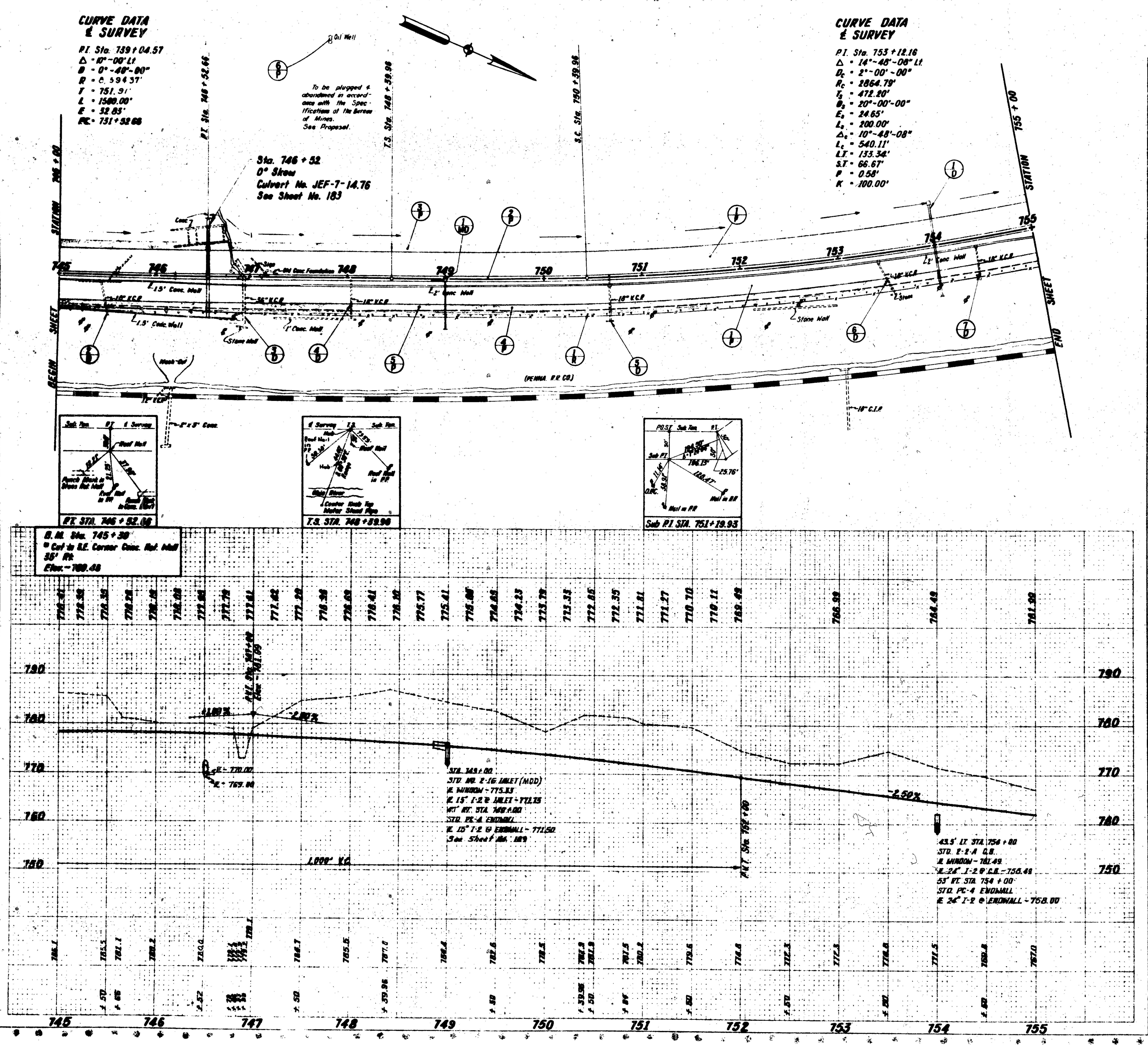




ESTIMATED QUANTITIES

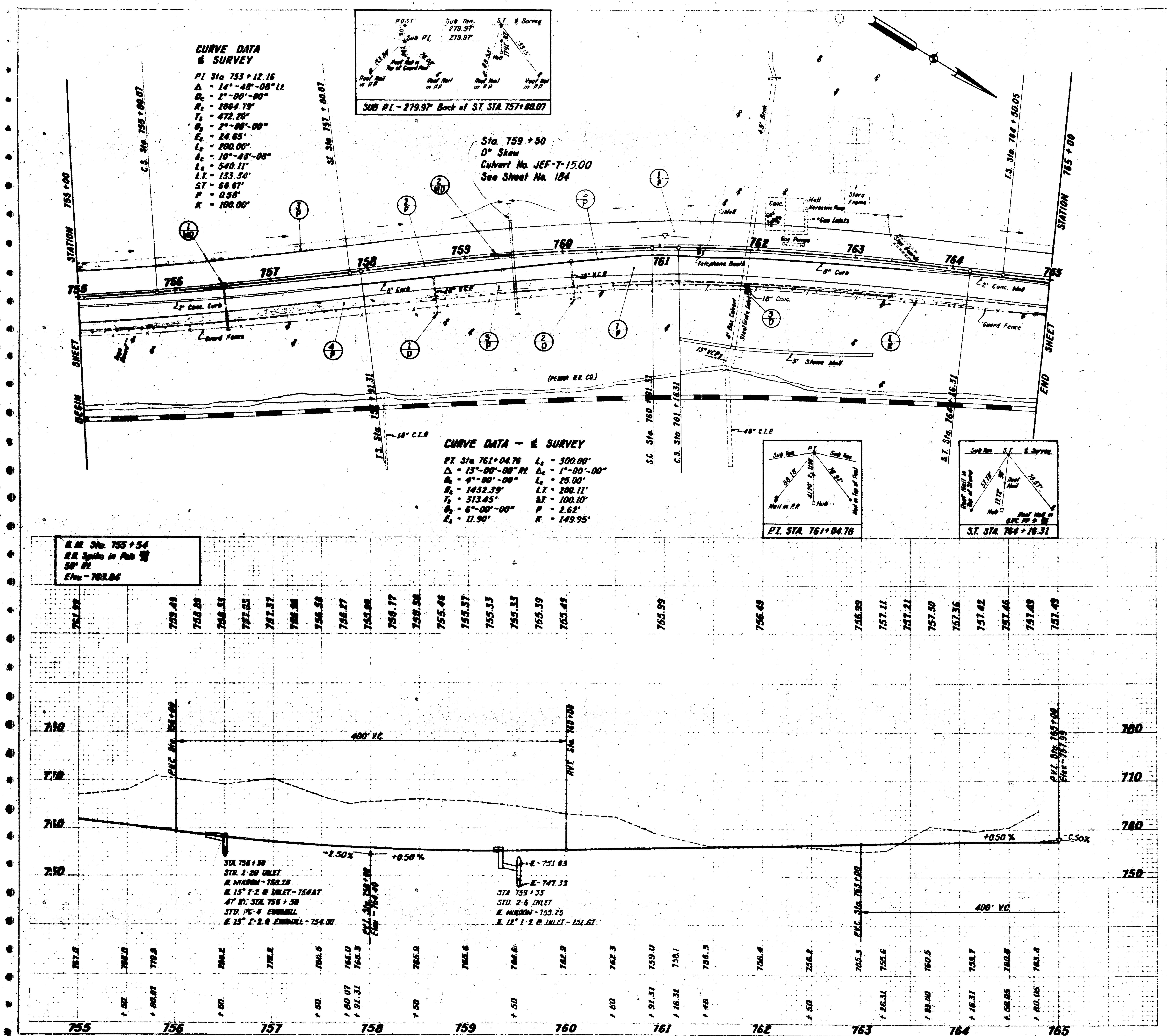
REF. NO	STATION TO STATION	SIDE	B-219 Waterproofed Agg. Base Course C.Y.	E-1 Compact Sub Grade S.Y.	T-12 Conc. Curb Std. Type L.F.	T-18 Stab. Crshd. Agg. Shldrs. & Appr's. C.Y.	T-21 Port. Cem't Conc. Med. Pav't Std. Type 2 S.Y.	T-22 Sub Base Variable Depth C.Y.	T-B-35 Pav't S.Y.	T-51 Bit. Surface Treatment Bit. Mat. GAL'S	T-51 No. 6 Agg. C.Y.
1-P	735 + 00 ~ 745 + 00	Lt & Rt		5,666				944	5,666.6		
2-P	735 + 00 ~ 745 + 00	℄		222	2000		333.3	188			
3-P	735 + 00 ~ 745 + 00	Lt.	74.1	889		131.2		263		222	7.1
4-P	735 + 00 ~ 745 + 00	Rt.	74.1	889		131.2		149		222	7.1
5-P	735 + 00 ~ 745 + 00	Rt.									
6-P	735 + 00 ~ 739 + 00	Rt.		296				49	296.3		
7-P	737 + 60 ~ 741 + 60	Rt.									
1-R	735 + 00 ~ 745 + 00	Rt.									
1-MD	736 + 00	Rt.									
2-MD	740 + 00	Rt.									
8-P	737 + 25±	Lt.									
9-P	740 + 50±	Lt.									
10-P	743 + 75±	Lt.									
SUB TOTAL			148.2	7962	2000	262.4	333.3	1593	5962.9	444	14.2
DEDUCTIONS 1-MD	736+00	Rt.			34.7		5.8	2	2.9		
DEDUCTIONS 2-MD	740+00	Rt.			34.7		5.8	2	2.9		
TOTALS			148.2	7962.0	[illegible]	262.4	321.7	1589	5957.1	444	14.2

REF. NO	T-15 G.R. Type 2-A L.F.	SPECIAL Plugging Oil Wells LUMP	E-2 Excav. for Struct's C.Y.	E-3 Channel Excav. C.Y.	E-6 Removal & Disposal of Exist. Pav't S.Y.	L-10 Sodding S.Y.	I-6 Std. No. 2-16 Mod. EACH	S-1 Conc. For Struct's Class "E" C.Y.	I-2 Storm Sewers under Pav't or Appr's (L.F.) Class "B" 15"	E-8 Removal & Disposal of Ex. Curb L.F.	SEE SHEET NO
1-P											3
2-P											3
3-P											3
4-P											3
5-P					2667						—
6-P											5/179
7-P										400	—
1-R	1000										5
1-MD			1	13		1	1	0.26	56		95
2-MD			1	4		1	1	0.26	46		101
8-P		Lump									
9-P		Lump									
10-P		Lump									
SUB TOTAL	1000	Lump	2	17	2667	2	2	0.52	102	400	
DEDUCTIONS 1-MD											
DEDUCTIONS 2-MD											
TOTALS	1000	LUMP	2	17	2667	2	2	0.52	102	400	



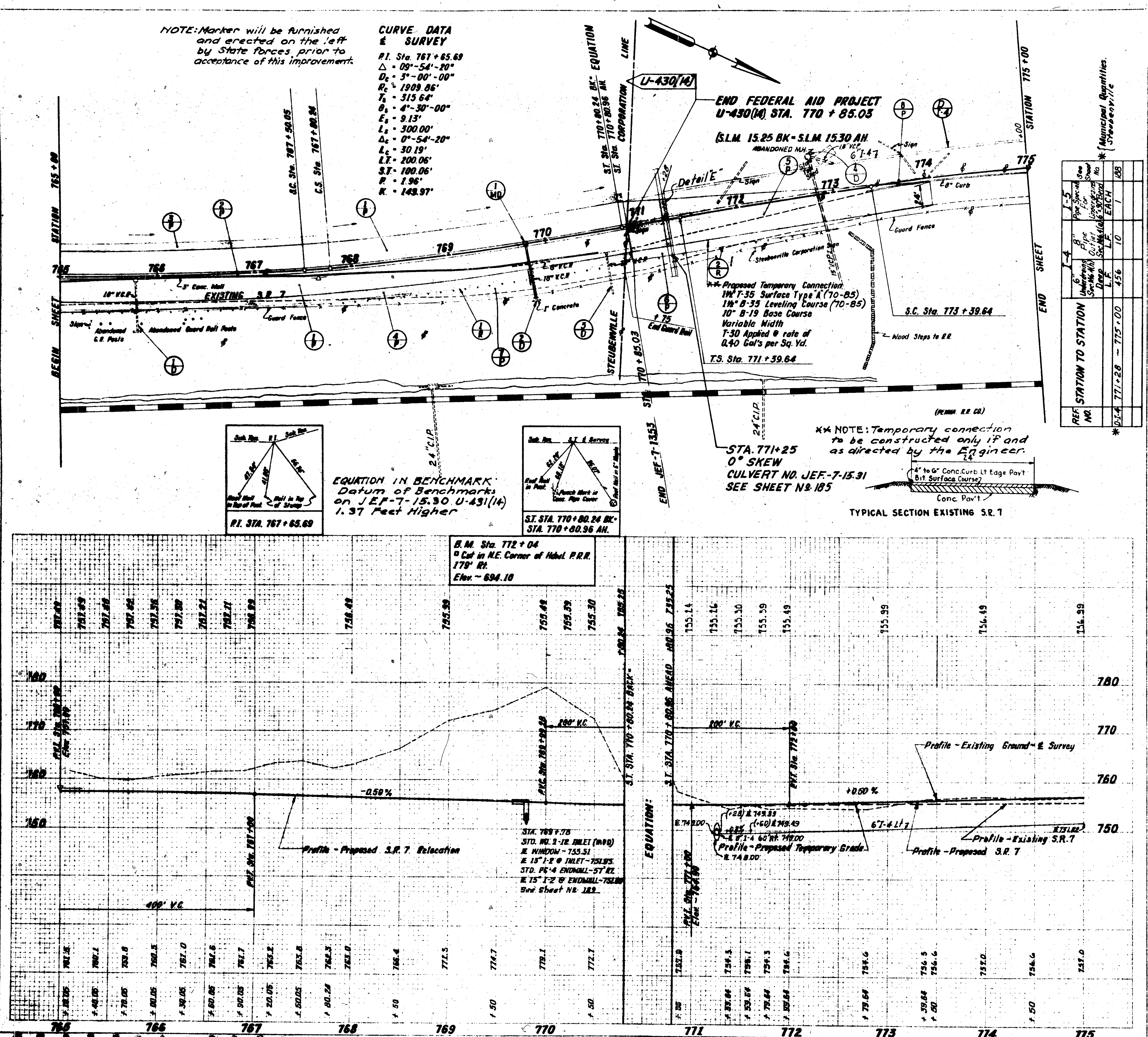
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	B-219 Waterproofed Agg. Base Course C.Y.	E-1 Compact. Sub-Grade S.Y.	T-15 Conc. Curb Std. Type 2A L.F.	C-18 Stab. Crshd. Agg. Shldrs & Appr's C.Y.	T-21 Pavt. Cem't Conc. Med. Pavt. Std. Type 2 S.Y.	Sub-base Variable Depth C.Y.	T-D-35 Pavt. S.Y.	T-31 Bit. Surface Treatment Bit. Mat. GALS.	T-31 Bit. Surface Treatment No. 6 Agg. C.Y.	G.R. Type 2A L.F.	Special Plugging Oil Wells Lump	Removal & Disposal of Exist. Pav't S.Y.	E-2 Excav. for Structs. C.Y.	E-3 Channel Excav. C.Y.	E-18 Pipe Removed Over 15" L.F.	I-10 Sodding S.Y.	I-2 Storm Sewers under Pav't or Appr's (L.F.) Class "B" 15"	I-2 Storm Sewers Class "B" 24"	I-8 Std. No. 2-16 Inlets (Mod.) EACH	I-8 Std. No. 2-2-A Catch Basin EACH	I-16 Catch Basins Abond'd EACH	S-1 Concrete for Structures Class "E" C.Y.	SEE SHEET NO.
1-P	745+00 - 755+00	Lt & Rt		5666	2000		333.3	944	5,666.6																3
2-P	745+00 - 755+00	Lt		222				108																	3
3-P	745+00 - 755+00	Lt	74.1	889		131.2		265		222	7.1														3
4-P	745+00 - 755+00	Rt	74.1	889		131.2		149		222	7.1														3
5-P	747+90± - 748+90±	Lt												2,667											
6-P	747+90±	Rt											Lump												
1-R	745+00 - 755+00	Rt										1000													3
1-MD	749+00	Rt													1	9		1	46		1			0.26	116
1-D	754+00	Lt & Rt													1			1		96		1		0.41	124
2-D	745+44	Rt															36						1		
3-D	746+50	Rt															80								
4-D	748+90	Rt															42						1		
5-D	750+64	Rt															46						1		
6-D	753+50	Rt															38						1		
7-D	754+40	Rt															34								
	SUB TOTAL		148.2	7,666	2000	262.4	333.3	1,464	5666.6	444	14.2	1000	Lump	2,667	2	9	274	2	46	96	1	1	4	0.67	
	DEDUCTIONS																								
1-MD	149+00	Rt			54.7		5.7	2	2.9																
	TOTALS		148.2	7,666	1945.3	262.4	327.6	1,462	5663.7	444	14.2	1000	Lump	2,667	2	9	274	2	46	96	1	1	4	0.67	



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	B-218 Water Proofed Agg. Base Course C.Y.	E-1 Compact Sub Grade S.Y.	I-11 Conc. Curb Std. Type 2-A L.F.	I-18 Stab. Crshd. Agg. Shldrs & Appr's. C.Y.	T-21 Port. Cem't Conc. Med. Pav't. Std. Type 2 S.Y.	I-22 Sub Base Variable Depth C.Y.	T-B-35 Pav't. S.Y.	T-31 Bit. Surface Treatment Bit. Mat. GAL'S	T-31 No. 6 Agg. C.Y.	I-15 G.R. Type 2-A L.F.	I-16 Inlets Abanded Each	E-6 Removal & Disposal of Exist Curb L.F.	E-8 Removal & Disposal of Exist Pav't S.Y.	E-2 Excav. for Struct's C.Y.	E-3 Channel Excav. C.Y.	E-12 Pipe Removed Over 15" L.F.	L-10 Sodding S.Y.	C-2 Storm Sewers Under Pavement or Approaches (LIN. FT.) Sec. M-6.9(b) 12"	C-2 Class "B" 15"	I-8 Standard Inlets (EACH) 2-6	I-8 2-20	I-16 Catch Basins Aband'd EACH	S-1 Concrete for Structures Class "E" C.Y.	SEE SHEET NO.
1-P	755+00 – 765+00	Lt & Rt		5866				944	5,666.6																	3
2-P	755+00 – 765+00	℄		222	2000		333.3	108																		3
3-P	755+00 – 765+00	Lt.	74.1	889		131.2		178		222	7.1															3
4-P	755+00 – 765+00	Rt.	74.1	889		131.2		235		222	7.1															3
5-P	755+00 – 765+00	Rt.													2,887											—
6-P	757+50 – 765+57	Rt.												607												—
1-R	755+00 – 765+00	Rt.										1000														3
1-MD	756+50	Rt.														1	15		1		46		1		0.26	127
2-MD	759+33	℄																		14		1				130, 184
3-D	761+10	Rt.											1					10						1		
1-D	758+66	Rt.																56						1		
2-D	760+08	Rt.																38								
	SUB TOTAL		148.2	7,666	2,000	262.4	333.3	1,465	5666.6	444	14.2	1000	1	607	2,667	1	15	84	1	14	46	1	1	2	0.26	
	DEDUCTIONS																									
1-MD	756+50	Rt.			[illegible]		2.2	2	3.6																	
2-MD	759+33	℄			[illegible]		2.3	1	1.2																	
	TOTALS		148.2	7,666	[illegible]	262.4	328.8	1,462	5,661.8	444	14.2	1000	1	607	2,887	1	15	84	1	14	46	1	1	2	0.26	

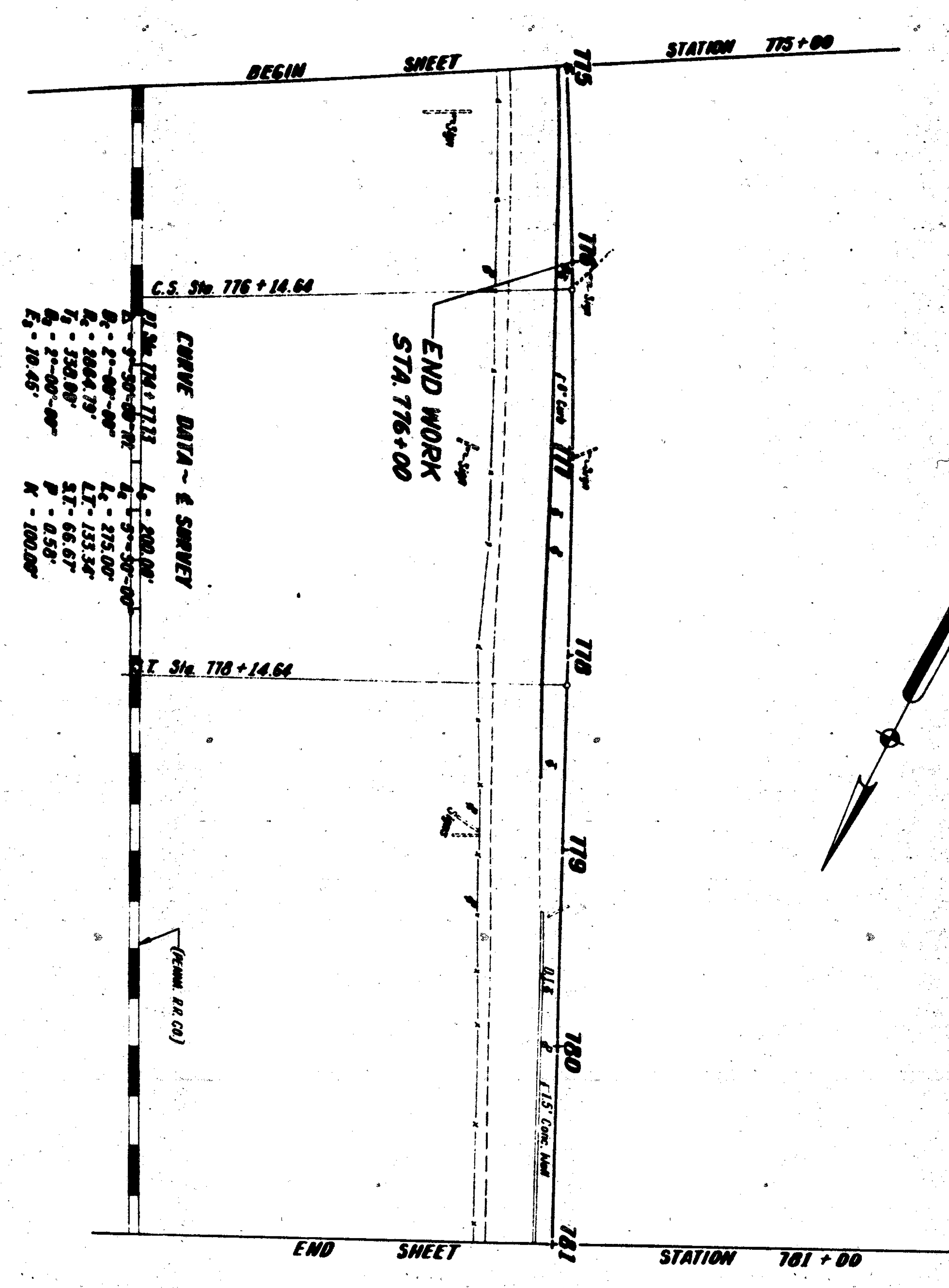


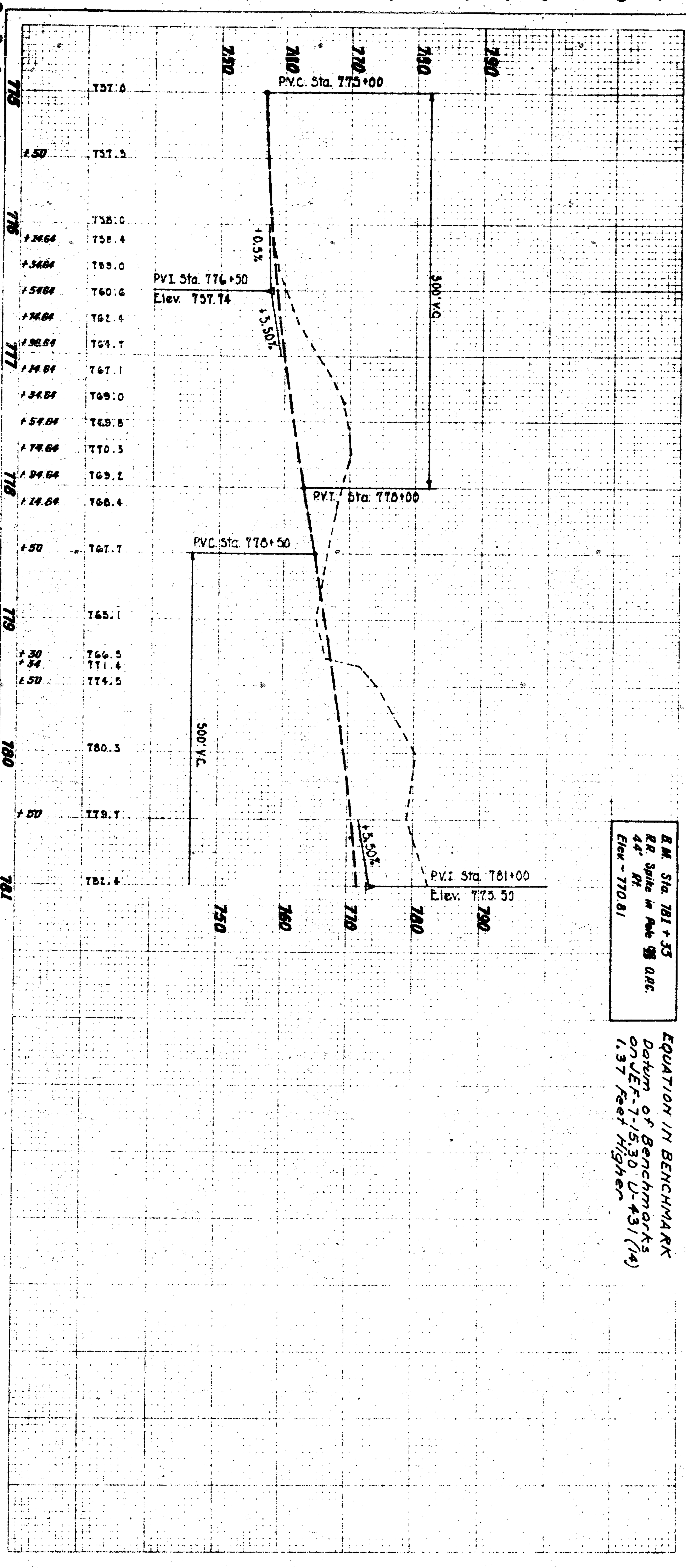
REF. NO.	STATION TO STATION	I-4 6" Underdrains Sec. M6.4(h) Deep L.F.	I-4 8" Pipe Outlet Sec. M6.4(a) L.F.	I-5 Pipe Specials for Underdrains 6"×90° Bend EACH	See Sheet No.
* D-I-4	771+28 ~ 775+00	456	10	1	188

* {Municipal Quantities. Steubenville

ESTIMATED QUANTITIES

REF. NO	STATION TO STATION	SIDE	B-219 Water Proofed Agg. Base Course C.Y.	E-1 Compact. Subgrade S.Y.	L-10 Sodding S.Y.	I-11 Conc. Curb Std. Type 2-A L.F.	I-18 Stab. Crshd. Agg. Shldrs. & Appr's. C.Y.	I-21 Port. Cem't Conc. Med. Pav't. Std. Type 2 S.Y.	I-22 Sub-base Var. Depth C.Y.	T-30 Bit. Prime Coat GAL'S	T-8-35 Pav't. S.Y.	T-31 Bit. Surface Treatment Bit. Mat. GAL'S	T-31 No. 6 Agg. C.Y.	I-15 G.R. Type 2-A L.F.	E-8 Rem. & Dispose of Exist. Curb L.F.	T-35 Asph. Conc. Surf. Course C.Y.	B-35 Asph. Conc. Level. Course C.Y.	E-2 Excav. for Structs. C.Y.	E-3 Channel Excav. C.Y.	E-12 Pipe Removed Over 15" L.F.	E-8 Removal & Disposal of Exist. Pav't. S.Y.	I-2 Class "B" Storm Sewers Under Pavement or Approaches (L.F.) 15"	I-8 Std. No. 2-12 (Mod) Inlet EACH	I-16 C.B. Aband'd EACH	I-16 M.H. Aband'd EACH	S-1 Concrete for Structures Class "E" C.Y.	B-19 10" Crshd. Agg. Base Course C.Y.	SEE SHEET NO
1-P	765 + 00 ~ 770 + 85.03	Lt. & Rt.		3311					552		3311.1																	3
2-P	765 + 00 ~ 770 + 85.03	℄		130		1169		195	63																			3
3-P	765 + 00 ~ 770 + 85.03	Lt.	43.4	520			76.6		153			130	4.2															3
4-P	765 + 00 ~ 770 + 85.03	Rt.	43.4	520			76.6		96			130	4.2															3
* 5-P	770 + 85.03 ~ 774 + 00	Rt. ℄ Lt.								472						56	56										384	-
* 6-P	770 + 85.03 ~ 774 + 00	Rt.																			840							-
7-P	765 + 00 ~ 770 + 85.05	Rt.																			1558							-
* 8-P	773 + 33 ~ 774 + 80	Rt.													67													-
1-MD	769 + 78	Rt.			1													1	15			56	1			0.26		142
1-D	765 + 78	Rt.																		52				1				-
2-D	769 + 83	Rt.																		38				1				-
3-D	770 + 60	Rt.																		42				1				-
* 4-D	772 + 80	Lt.																							1			-
1-R	765 + 00 ~ 770 + 85.03	Rt.												684.31														3
* 2-R	770 + 85.03 ~ 773 + 80.72	Rt.												215.69														3
SUB TOTAL URBAN			86.8	1481	1	1169	153.2	195	864		3311.1	260	8.4	684.31				1	15	132	1558	56	1	3		0.26		
* MUNICIPAL										472				215.69	67	56	56				840				1		384	
DEDUCTIONS (URBAN)																												
1-MD	769+78	Rt.				26.7		4.5	1		2.2																	
* MUNICIPAL				1810						472				215.69	67	56	56				840				1		384	
TOTALS URBAN			86.8	1481	1	1142.3	153.2	190.5	863		3308.9	260	8.4	684.31				1	15	132	1558	56	1	3		0.26		





B.M. Sta. 781+33
R.R. Spike in Pole 98 O.R.C.
44' Rt.
Elev. ~ 770.81

EQUATION IN BENCHMARK
Datum of Benchmarks
on JEF-7-15.30 U-431 (14)
1.37 Feet Higher

ESTIMATED QUANTITIES

URBAN

REF. NO.	STATION TO STATION	SIDE	E-1 Roadway Excav. C.Y.	E-1 Embank. C.Y.	E-1 Embank. + 15% C.Y.	Seeding & Protect S.Y.	L-9 Comm. Fertilizer (12-12-12) TONS	Agg. Liming Material TONS
	681+95 ~ 685+00	Lt-Rt	4,204	17,382	19,989	5,552		
	685+00 ~ 694+90	Lt-Rt	34,411	16,428	18,892	13,120		
	694+90 ~ 705+00	Lt-Rt	57,377	7,610	8,752	6,965		
	705+00 ~ 714+88.02	Lt-Rt	96,005	22,861	26,290	18,766		
	714+88.02 ~ 725+03.02	Lt-Rt	193,285	68,684	78,987	17,067		
	725+03.02 ~ 735+00	Lt-Rt	264,803	1,723	1,981	7,100		
	735+00 ~ 744+50	Lt-Rt	299,959	00	00	5,199		
	744+50 ~ 755+00	Lt-Rt	205,357	70	81	4,464		
	755+00 ~ 764+80.05	Lt-Rt	185,445	393	452	3,050		
	764+80.05 ~ 770+85.03	Lt-Rt	155,666	982	1,129	2,835		
	SUB ~ TOTAL		1,476,510	136,133	156,553	84,096		
	716+50-770+85.03 (Emb. on Shld's)			720	828			
	Clifton Ave.		7,974	6	7	2,847		
	Logan Ave. Relocation		40,325	1,122	1,290	7,001		
	Sub-totals		1,524,809	137,981	158,678	93,944	8.45	42.27
	Add for Change of Typical Section		7,775					
	Deduct for Change of Typical Section			2,592	2,981			
	Totals to General Summary		1,532,584	135,389	155,697	93,944	8.45	42.27

E-11 Water

Volume x 5 = M-gals / 1000

Embankment:	135,404
I-22	16,014
I-18	2,289
Comp. Subgrade	27,047
B-19	631
NET TOTAL	181,385

181,385 x 5 / 1000 = 910 M. Gal.

MUNICIPAL

STATION TO STATION	SIDE	E-1 Roadway Excav. C.Y.	E-1 Embank. C.Y.	E-1 Embank. +15% C.Y.	Seeding & Protect S.Y.	L-9 Comm. Fertilizer (12-12-12) TONS	Agg. Liming Material TONS	SEE SHEET NO
770+85.03 ~ 776+00	Lt-Rt	24,623	15	17	7,483	0.67	3.37	
TOTAL TO GENERAL SUMMARY		24,623	15	17	7,483	0.67	3.37	

COMPACTED SUBGRADE

Square Yards

SHEET	URBAN	MUNICIPAL
15	1888	
16	7263	
17	4698	
18	5755	
19	6826	
20	7830	
21	7962	
22	7666	
23	7666	
24	4481	1310
149	1436	
154	6388	
159	13081	
Sub-totals	82,940	1310
Deduct for Rock Areas (Est)	10,000	250
To Gen'l. Summary	72,940	1060

E-11 WATER

EMBANKMENT =	15
B-19 =	384
NET TOTAL	399

399 x 5 / 1000 = 2-M Gal's

STA. 775+00 TO STA. 781+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

26
307

JEFFERSON COUNTY
JEF 7-13.53

SUPERELEVATION TABLES

For Stations 681+50 to 689+75
See Table Nº1

②

STATION	Lt. Edge 26.5' Lt. of ℄	Profile Grade	Rt. Edge 26.5' Rt. of ℄
690+00	746.71	747.40	748.09
+25	747.07	747.63	748.19
+50	747.38	747.83	748.27
+75	747.64	748.03	748.34
691+00	747.80	748.18	748.38
691+07.23	747.84	748.23	748.38
EQUATION	Sta. 691+07.23 Back = Sta. 691+07.89 Ahead		
691+07.89	747.84	748.23	748.38
+25	747.94	748.33	748.40
+50	748.07	748.46	748.44
+75	748.17	748.56	748.45
692+00	748.26	748.65	748.49
+25	748.33	748.72	748.51
+50	748.43	748.80	748.52
+75	748.55	748.87	748.53
693+00	748.70	748.95	748.57
+25	748.83	749.02	748.63
+50	748.97	749.10	748.71
+75	749.10	749.17	748.78
694+00	749.26	749.25	748.86
+25	749.43	749.32	748.93
+50	749.64	749.40	749.01
+75	749.84	749.47	749.06
695+00	750.04	749.55	749.08
+25	750.24	749.62	749.12
+50	750.44	749.70	749.13
+75	750.58	749.77	749.15
696+00	750.68	749.85	749.17
+25	750.75	749.92	749.20
+50	750.83	750.00	749.22
+75	750.90	750.07	749.25
697+00	750.98	750.15	749.32
+25	751.06	750.22	749.39
+50	751.13	750.30	749.47
+75	751.20	750.37	749.54
698+00	751.28	750.45	749.62
+25	751.35	750.52	749.69
+50	751.43	750.60	749.77
+75	751.50	750.67	749.84
699+00	751.58	750.75	749.92
+25	751.65	750.82	749.99
+50	751.73	750.90	750.07
+75	751.82	750.99	750.16
700+00	751.98	751.15	750.32
+25	752.17	751.34	750.51
+50	752.42	751.59	750.76
+75	752.71	751.88	751.05
701+00	753.05	752.22	751.39
+25	753.44	752.61	751.78
+50	753.88	753.05	752.22
+75	754.37	753.54	752.71
702+00	754.90	754.07	753.24
+25	755.44	754.66	753.88
+50	755.97	755.29	754.61
+75	756.56	755.97	755.39
703+00	757.16	756.70	756.24
+25	757.82	757.47	757.12
+50	758.54	758.30	758.06
703+67.75	759.06	758.90	758.74
EQUATION	Sta. 703+67.75 Back = Sta. 703+69.83 Ahead		
703+69.83	759.06	758.90	758.74
+75	759.22	759.08	758.94
704+00	759.96	759.93	759.90
+25	760.70	760.78	760.86
+50	761.44	761.63	761.82
+75	762.18	762.48	762.78
705+00	762.92	763.33	763.74
+25	763.65	764.18	764.71
+50	764.39	765.03	765.67

③

STATION	Lt. Edge 26.5' Lt. of ℄	Profile Grade	Rt. Edge 26.5' Rt. of ℄
705+75	765.19	765.88	766.63
706+00	765.86	766.72	767.58
+25	766.57	767.54	768.51
+50	767.25	768.33	769.41
+75	767.91	769.10	770.29
707+00	768.54	769.85	771.16
+25	769.18	770.58	771.98
+50	769.84	771.29	772.74
+75	770.52	771.97	773.42
708+00	771.20	772.64	774.08
+25	771.97	773.28	774.59
+50	772.66	773.90	775.14
+75	773.38	774.49	775.60
709+00	774.08	775.07	776.06
+25	774.76	775.62	776.48
+50	775.41	776.15	776.89
+75	776.04	776.66	777.28
710+00	776.65	777.14	777.63
+25	777.20	777.61	778.02
+50	777.66	778.05	778.44
+75	778.08	778.47	778.86
711+00	778.48	778.87	779.26
+25	778.85	779.24	779.63
+50	779.21	779.60	779.99
+75	779.54	779.93	780.32
712+00	779.85	780.24	780.63
+25	780.13	780.52	780.91
+50	780.40	780.79	781.18
+75	780.64	781.03	781.42
713+00	780.86	781.25	781.64
+25	781.06	781.45	781.84
+50	781.24	781.63	782.02
+75	781.40	781.79	782.18
714+00	781.53	781.92	782.31
+25	781.64	782.03	782.42
+50	781.73	782.12	782.51
+75	781.77	782.19	782.61
715+00	781.72	782.23	782.74
+25	781.62	782.25	782.88
+50	781.49	782.25	783.01
+75	781.35	782.23	783.11
716+00	781.18	782.19	783.20
+25	780.99	782.12	783.25
+50	780.78	782.04	783.30
+75	780.55	781.93	783.31
717+00	780.29	781.80	783.31
+25	780.03	781.64	783.25
+50	779.82	781.47	783.12
+75	779.60	781.27	782.92
718+00	779.40	781.05	782.70
+25	779.16	780.81	782.46
+50	778.89	780.54	782.19
+75	778.61	780.26	781.91
719+00	778.30	779.95	781.60
+25	777.97	779.62	781.27
+50	777.62	779.27	780.92
+75	777.24	778.89	780.54
720+00	776.85	778.50	780.15
+25	776.43	778.08	779.73
+50	775.99	777.64	779.29
+75	775.52	777.17	778.82
721+00	775.04	776.69	778.34
+25	774.53	776.18	777.83
+50	774.00	775.65	777.30
+75	773.45	775.10	776.75
722+00	772.88	774.53	776.18
+25	772.29	773.94	775.59
+50	771.67	773.32	774.97
+75	771.03	772.68	774.33
723+00	770.38	772.03	773.68
+25	769.73	771.38	773.03

④

STATION	Lt. Edge 26.5' Lt. of ℄	Profile Grade	Rt. Edge 26.5' Rt. of ℄
723+50	769.08	770.73	772.38
+75	768.43	770.08	771.73
724+00	767.78	769.43	771.08
+25	767.13	768.78	770.43
+50	766.48	768.13	769.78
+75	765.87	767.52	769.17
725+00	765.34	766.96	768.58
+25	764.91	766.44	767.97
+50	764.55	765.97	767.39
+75	764.25	765.54	766.83
726+00	763.98	765.15	766.32
+25	763.77	764.81	765.85
+50	763.60	764.52	765.44
+75	763.48	764.27	765.06
727+00	763.39	764.06	764.73
+25	763.36	763.90	764.44
+50	763.36	763.79	764.22
+75	763.33	763.72	764.11
728+00	763.31	763.70	764.09
+25	763.33	763.72	764.11
+50	763.39	763.78	764.17
+75	763.50	763.89	764.28
729+00	763.66	764.05	764.44
+25	763.86	764.25	764.64
+50	764.10	764.49	764.88
+75	764.35	764.74	765.13
730+00	764.60	764.99	765.38
+25	764.85	765.24	765.63
+50	765.10	765.49	765.88
+75	765.35	765.74	766.13
731+00	765.60	765.99	766.38
+25	765.85	766.24	766.63
+50	766.10	766.49	766.88
+75	766.35	766.74	767.13
732+00	766.60	766.99	767.38
+25	766.85	767.24	767.63
+50	767.10	767.49	767.88
+75	767.35	767.74	768.13
733+00	767.60	767.99	768.38
+25	767.85	768.24	768.63
+50	768.10	768.49	768.88
+75	768.35	768.74	769.13
734+00	768.60	768.99	769.38
+25	768.85	769.24	769.63
+50	769.10	769.49	769.88
+75	769.35	769.74	770.13
735+00	769.60	769.99	770.38
+25	769.85	770.24	770.63
+50	770.10	770.49	770.88
+75	770.35	770.74	771.13
736+00	770.60	770.99	771.38
+25	770.85	771.24	771.63
+50	771.10	771.49	771.88
+75	771.35	771.74	772.13
737+00	771.60	771.99	772.38
+25	771.85	772.24	772.63
+50	772.10	772.49	772.88
+75	772.35	772.74	773.13
738+00	772.60	772.99	773.38
+25	772.85	773.24	773.63
+50	773.10	773.49	773.88
+75	773.35	773.74	774.13
739+00	773.60	773.99	774.38
+25	773.85	774.24	774.63
+50	774.10	774.49	774.88
+75	774.35	774.74	775.13
740+00	774.60	774.99	775.38
+25	774.85	775.24	775.63
+50	775.10	775.49	775.88
+75	775.35	775.74	776.13
741+00	775.60	775.99	776.38

⑤

STATION	Lt. Edge 26.5' Lt. of ℄	Profile Grade	Rt. Edge 26.5' Rt. of ℄
741+25	775.85	776.24	776.63
+50	776.10	776.49	776.88
+75	776.35	776.74	777.13
742+00	776.60	776.99	777.38
+25	776.84	777.23	777.62
+50	777.06	777.45	777.84
+75	777.25	777.64	778.03
743+00	777.42	777.81	778.20
+25	777.58	777.97	778.36
+50	777.71	778.10	778.49
+75	777.81	778.20	778.59
744+00	777.90	778.29	778.68
+25	777.96	778.35	778.74
+50	778.01	778.40	778.79
+75	778.03	778.42	778.81
745+00	778.02	778.41	778.80
+25	778.00	778.39	778.78
+50	777.96	778.35	778.74
+75	777.89	778.28	778.67
746+00	777.80	778.19	778.58
+25	777.69	778.08	778.47
+50	777.56	777.95	778.34
+75	777.40	777.79	778.18
747+00	777.22	777.61	778.00
+25	777.03	777.42	777.81
+50	776.81	777.20	777.59
+75	776.57	776.96	777.35
748+00	776.30	776.69	777.08
+25	776.02	776.41	776.80
+50	775.71	776.10	776.49
+75	775.38	775.77	776.16
749+00	775.02	775.41	775.80
+25	774.65	775.05	775.45
+50	774.19	774.65	775.11
+75	773.67	774.23	774.79
750+00	773.13	773.79	774.45
+25	772.56	773.33	774.10
+50	772.03	772.85	773.67
+75	771.52	772.35	773.18
751+00	770.98	771.81	772.64
+25	770.44	771.27	772.10
+50	769.87	770.70	771.53
+75	769.28	770.11	770.94
752+00	768.66	769.49	770.32
+25	768.04	768.87	769.70
+50	767.41	768.24	769.07
+75	766.79	767.62	768.45
753+00	766.16	766.99	767.82
+25	765.54	766.37	767.20
+50	764.91	765.74	766.57
+75	764.29	765.12	765.95
754+00	763.66	764.49	765.32
+25	763.04	763.87	764.70
+50	762.41	763.24	764.07
+75	761.79	762.62	763.45
755+00	761.16	761.99	762.82
+25	760.54	761.37	762.20
+50	759.91	760.74	761.57
+75	759.31	760.12	760.95
756+00	758.76	759.49	760.22
+25	758.28	758.89	759.50
+50	757.85	758.33	758.81
+75	757.47	757.83	758.19
757+00	757.14	757.37	757.60
+25	756.84	756.96	757.08
+50	756.60	756.58	756.56
+75	756.41	756.27	756.13
758+00	756.25	755.99	755.73
+25	756.16	755.77	755.38
+50	756.09	755.58	755.07
+75	756.10	755.46	754.82

⑥

STATION	Lt. Edge 26.5' Lt. of ℄	Profile Grade	Rt. Edge 26.5' Rt. of ℄
759+00	756.13	755.37	754.61
+25	756.22	755.33	754.44
+50	756.34	755.33	754.32
+75	756.53	755.39	754.25
760+00	756.75	755.49	754.23
+25	757.00	755.62	754.24
+50	757.25	755.74	754.23
+75	757.48	755.87	754.26
761+00	757.64	755.99	754.34
+25	757.75	756.12	754.49
+50	757.79	756.24	754.69
+75	757.80	756.37	754.94
762+00	757.80	756.49	755.18
+25	757.81	756.62	755.43
+50	757.82	756.74	755.66
+75	757.83	756.87	755.91
763+00	757.83	756.99	756.15
+25	757.83	757.11	756.39
+50	757.82	757.21	756.60
+75	757.79	757.30	756.81
764+00	757.73	757.36	756.99
+25	757.67	757.42	757.17
+50	757.59	757.46	757.33
+75	757.51	757.49	757.47
765+00	757.39	757.49	757.59
+25	757.28	757.49	757.70
+50	757.13	757.46	757.79
+75	756.97	757.42	757.87
766+00	756.79	757.36	757.93
+25	756.61	757.30	757.99
+50	756.40	757.21	758.02
+75	756.19	757.11	758.03
767+00	755.95	756.99	758.03
+25	755.71	756.86	758.01
+50	755.52	756.74	757.96
+75	755.42	756.67	757.84
768+00	755.30	756.49	757.68
+25	755.27	756.36	757.45
+50	755.24	756.24	757.24
+75	755.20	756.11	757.02
769+00	755.17	755.99	756.81
+25	755.14	755.86	756.58
+50	755.11	755.74	756.37
+75	755.08	755.61	756.14
770+00	755.05	755.49	755.93
+25	755.04	755.39	755.74
+50	755.05	755.30	755.55
+75	755.10	755.26	755.42
770+80.24	755.11	755.25	755.39
EQUATION	Sta. 770+80.24 Back = Sta. 770+80.96 Ahead		
770+80.96	755.11	755.25	755.39

①

STATION	Lt. Edge 26.5' Lt. of ℄	Profile Grade	Rt. Edge 26.5' Rt. of ℄
681+50	727.22	727.64	728.02
+75	728.00	728.52	729.03
682+00	728.77	729.41	730.05
+25	729.52	730.29	731.06
+50	730.25	731.14	732.03
+75	730.96	731.98	733.00
683+00	731.66	732.80	733.94
+25	732.33	733.60	734.87
+50	732.97	734.36	735.75
+75	733.61	735.12	736.63
684+00	734.25	735.86	737.47
+25	734.92	736.57	738.22
+50	735.61	737.26	738.91
+75	736.29	737.94	739.59
685+00	736.94	738.59	740.24
+25	737.57	739.22	740.87
+50	738.19	739.84	741.49
+75	738.79	740.44	742.09
686+00	739.35	741.00	742.66
+25	739.91	741.56	743.21
+50	740.44	742.09	743.74
+75	740.95	742.60	744.25
687+00	741.44	743.09	744.74
+25	741.92	743.57	745.22
+50	742.36	744.01	745.66
+75	742.80	744.45	746.10
688+00	743.22	744.85	746.48
+25	743.69	745.25	746.81
+50	744.17	745.61	747.06
+75	744.65	745.96	747.27
689+00	745.10	746.29	747.48
+25	745.54	746.60	747.66
+50	745.94	746.88	747.82
+75	746.35	747.16	747.97

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

STATE ROUTE NO. 7
SUPERELEVATION TABLES

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
Griffin	F.J.B.	F.J.B.	R.J.		

FED. R. DIVISION	STATE	PROJ.
2	OHIO	U 430(14)

27
307

JEFFERSON COUNTY
JEF-7-13.53

2	OHIO	U 430 (13)	28 / 307

JEFFERSON COUNTY
JEF-7-13.53

2 OHIO U 430(14)
29
307
JEFFERSON COUNTY
JEF.-7-13.53
Seeding
End Area
Volume
Cut
Fill
Cut
Fill
Sta. 687+00
65
990
Sta. 686+00
Sta. 685+00
Sta. 684+02.24
See Sheet No 189
33' Lt. Sta. Sta. 87+28 Mardock
Std. No 2-16 Inlet (Mod)
Ⓔ window 752.27
Ⓔ 748.69
28'x15" I-2 ● 9.75%
12' Lt. Sta. 87+50 Mardock
Std. 2-20 Inlet
Ⓔ window 755.00
Ⓔ 751.42
Union St.
3:1
30'x15" I-2 ● 19.6%
743.09
687+00
737.46
736.80
2:1
730
92'x15" I-2 ● 13.40%
41' Lt. Sta. 686+75
Std. No 1 M.H.
M.H. Cover Elev. 740.00
Ⓔ 733.92
Ⓔ 733.17
4:1
736.4
4:1
2:1
76' Rt. Sta. 685+89
Std. 2-2-B C.B.
Ⓔ Grade 732.75
146'x15" I-2 ● 1.88%
Ⓔ 15" I-2 ● C.B. 732.75
730
741.00
686+00
734.89
12' Rt. Sta. 85+60 Mardock
Std. No 2-10 Inlet
Ⓔ window 742.18
Ⓔ 738.60
24'x 12" I-2 ● 25.6%
Ⓔ 732.20
Ⓔ 732.45
6'x15" I-2 ● 36.7%
58' Lt. Sta. 685+25
Std. 2-2-A C.B.
Ⓔ window 735.2
15" I-2
Ⓔ 730.00
54' Lt. Sta. 685+20
Std. No 1 M.H.
M.H. Cover Elev. 736.85
Ⓔ 727.35
Outlet
Ⓔ 727.85
2:1
2:1
730
720
150
160
170
180
190
58'x15" I-2
Ⓔ 734.93
Sta. 685+00 Rt. Lane
Std. No 2-14 Inlet
Ⓔ window 738.51
See Sheet 189
2:1 Normal to Edge of Pavement
730
738.59
685+00
725.93
760
2:1
190
180
170
160
150
Sta. 684+02.24
140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
STA. 685+00 to STA. 687+00

FED. RD. DIVISION	STATE	PROJECT		SHEET
2	OHIO	U 430 (14)		30/307

JEFFERSON COUNTY
JEF. -7-13.53

Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
Sta. 689+35	1095	2		
			2445	69
Sta. 688+53.74	630	40		
			1350	436
Sta. 687+79	350	275		
			697	1860
Sta. 687+00	65	990		

STA. 687+79 to STA. 689+85

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U 430(14)	

JEFFERSON COUNTY
JEF.-7-13.53

Seeding	
End Area	Sq. Yd.

End Area		Volume	
Cut	Fill	Cut	Fill

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U 430 (18)	

32/307

JEFFERSON COUNTY
JEF.-7-13.53

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	U 430 (14)

39/307

JEFFERSON COUNTY
JEF.-7-13.53

FED RD DIVISION	STATE	PROJ.	
2	OHIO	U 430(14)	

34/307

JEFFERSON COUNTY
JEF.-7-13.53

STA 693+20 TO STA 693+65

FED. RD. DIVISION	STATE	PROJECT		
•2	OHIO	U 430(14)		95/307

JEFFERSON COUNTY
JEF.-7-13.53

	End Area Cut	End Area Fill	Volume Cut	Volume Fill
Sta. 694+28	3575	0		
			685	0
Sta. 693+70	2025	0		
			331	0
Sta. 693+65	1550	0		

FED RD DIVISION	STATE	PROJECT	
2	OHIO	U 430(14)	

JEFFERSON COUNTY
JEF.-7-13.53

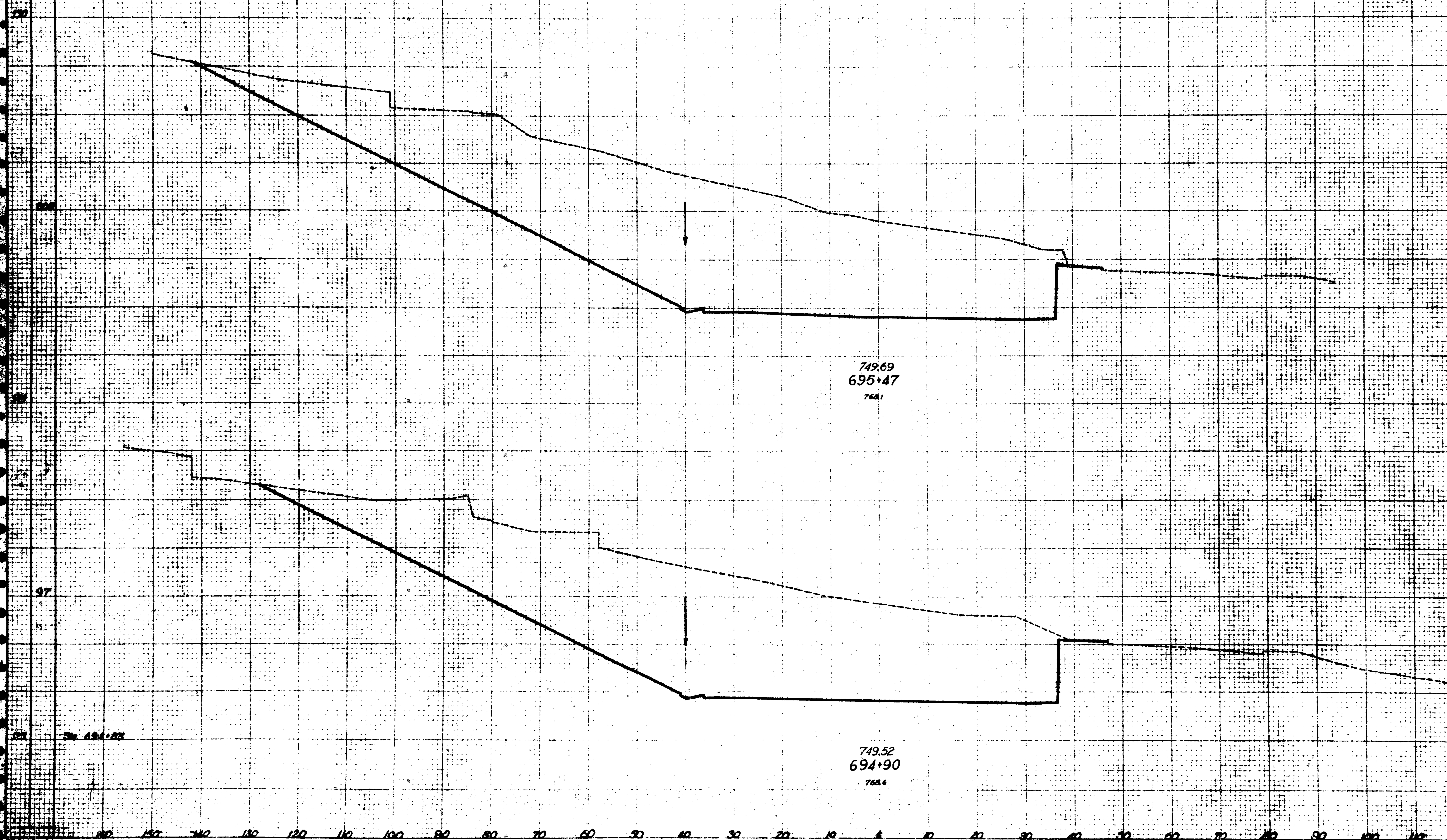
See Sheet No. 190 for details of modification

STA. 694+37 TO STA. 694+83

FED RD DIVISION	STATE	PROJECT	
2	OHIO	U 430 (14)	

37/307

JEFFERSON COUNTY
JEF-7-1353



Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
Sta 695+47	3155	0		
Sta 694+90	[illegible]	0		
Sta 694+63	3015	0		

STA 694+90 TO STA 695+47

FED. RD DIVISION	STATE	PROJECT	
2	OHIO	U 430 (14)	

JEFFERSON COUNTY
JEF-7-1353

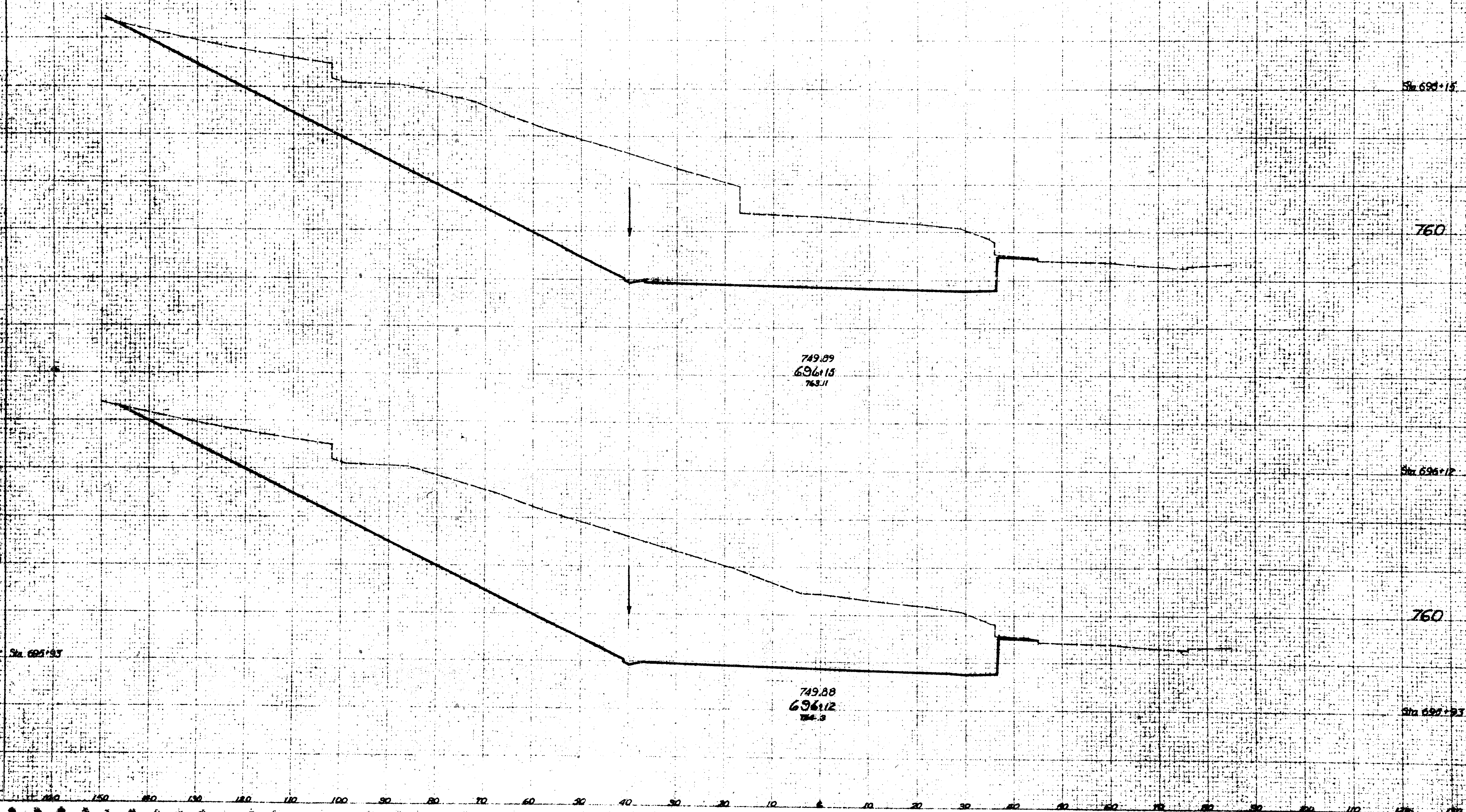
STA. 695+56 TO

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U 430(14)	

39/307

JEFFERSON COUNTY
JEF-7-13.53

Seeding	
End Width	Sq. Yd.
130	
43	
140	
265	
127	Sta. 695+93



	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta. 696+15	2815	0		
			389	0
Sta. 696+12	2930	0		
			2296	0
Sta. 695+93	3080	0		

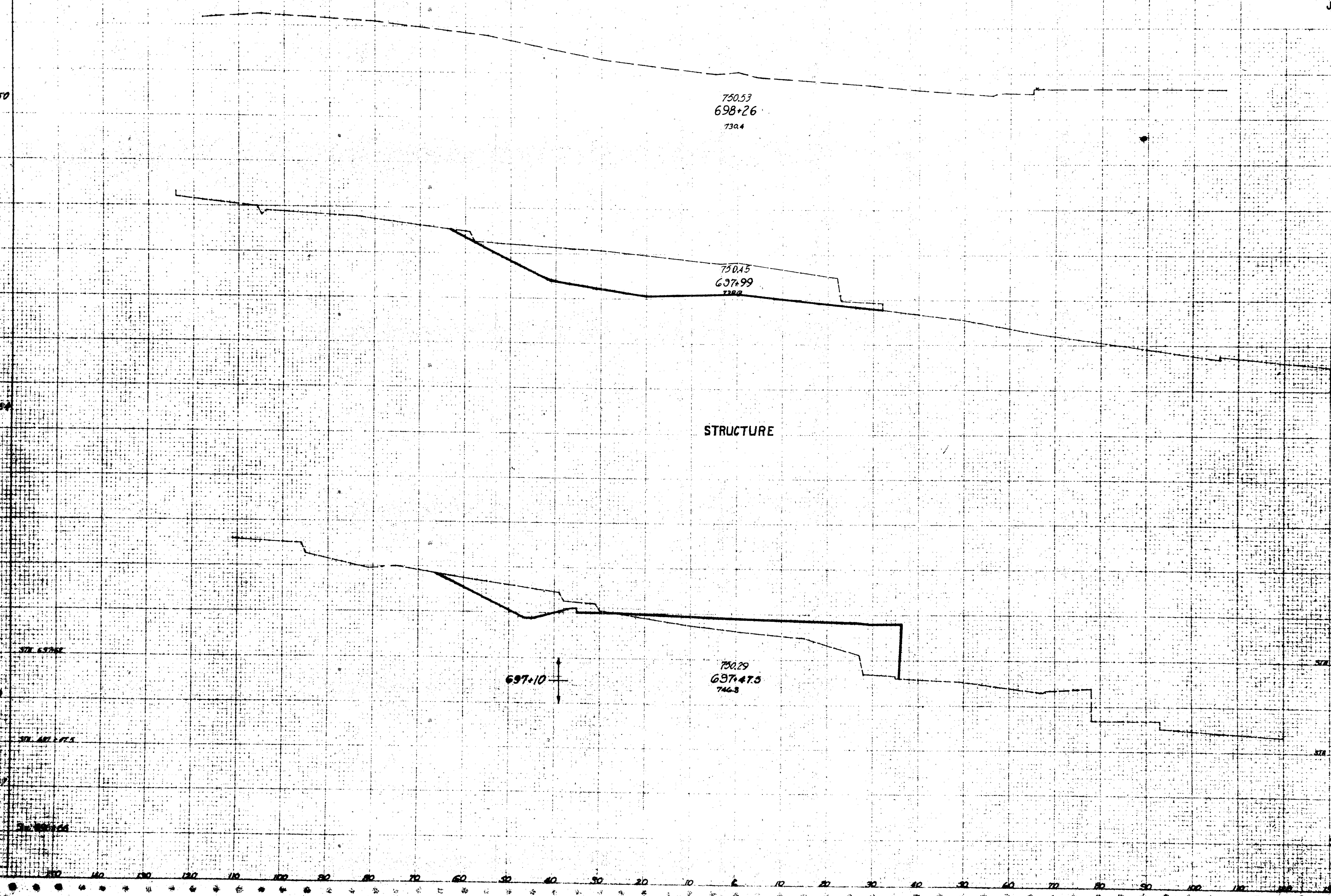
FED RD DIVISION	STATE	PROJECT	
2	OHIO	U 430(14)	

40/307

JEFFERSON COUNTY
JEF-7-1353

FED. RD DIVISION	STATE	PROJECT		
2	OHIO	U 430(14)		41/307

JEFFERSON COUNTY
JEF.-7-1353



Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
Sta. 698+26	0	0		
			290	0
Sta. 697+99	580	0		
			471	162
STA. 697+62	108	257		
			56	125
STA. 697+47.5	108	257		
			[illegible]	[illegible]
Sta. 696+66	[illegible]	0		

Seeding End Width	Seeding Sq. Yd.
0	
	150
100	
	264
38	
	181
38	
	587
105	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U 430(14)	

42/307

JEFFERSON COUNTY
JEF-7-13.53

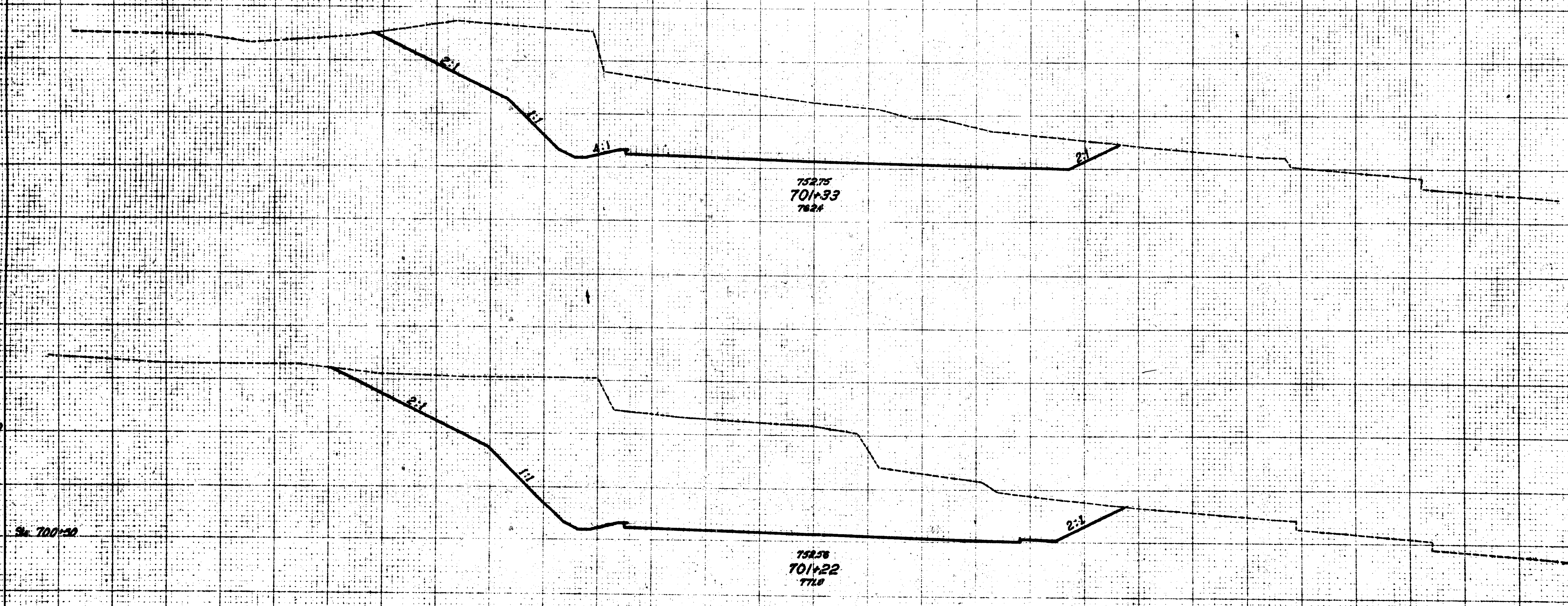
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U 430 (14)	

JEFFERSON COUNTY
JEF.-7-13.53

End Area Cut	End Area Fill	Volume Cut	Volume Fill
Sta. 700+50 1660	0		

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO	U 430(14)		44/307

JEFFERSON COUNTY
JEF.-7-13.53



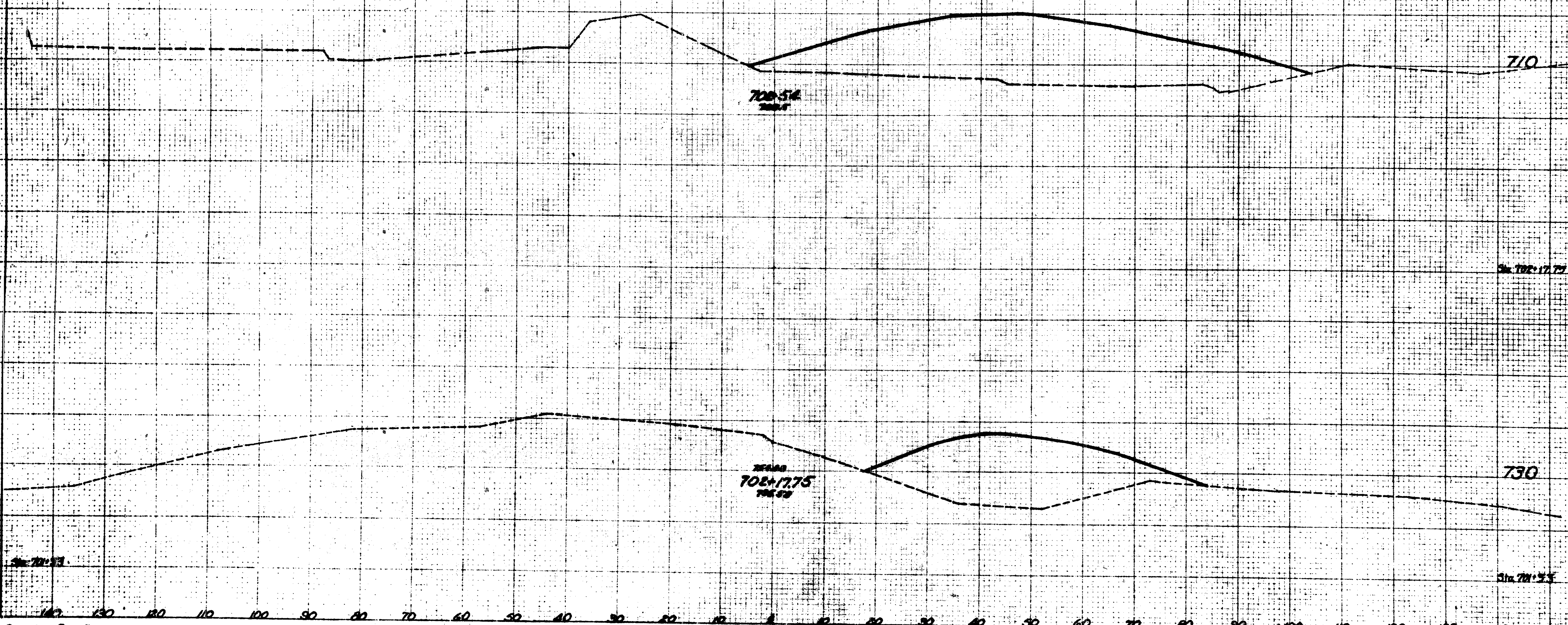
	End Area Cut	End Area Fill	Volume Cut	Volume Fill
Sta. 701+33	1510	0		
			754	0
Sta. 701+22	2190	0		
			1533	0
Sta. 700+50	1660	0		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U 430 (14)	

JEFFERSON COUNTY
JEF-7-13.53

Seeding	
End Width	Sq Yd
125	
	413
80	
	615
57	

Sta. 701+33



	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta. 702+54	0	973		
			0	1427
Sta. 702+17.75	0	555		
			2377	871
Sta. 701+33	1510	0		

STA. 702+17.75 to STA. 702+54

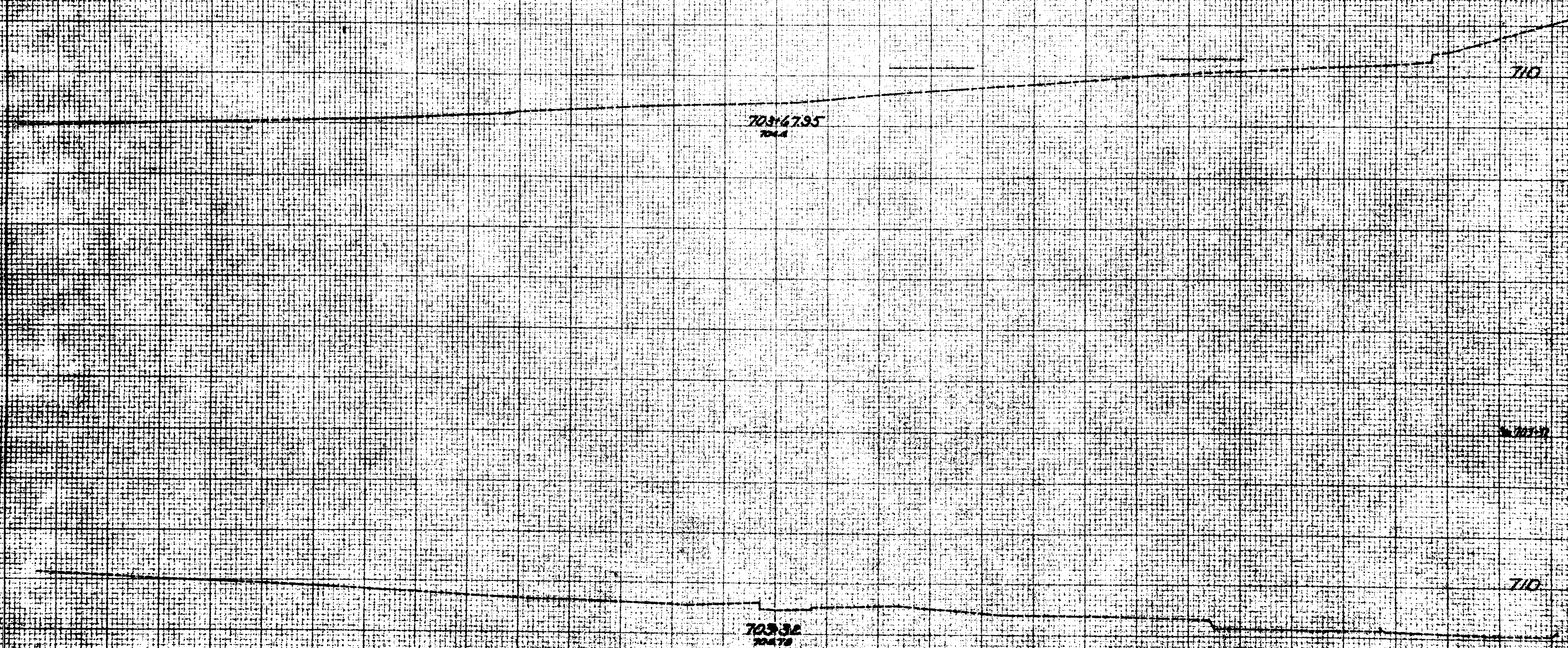
FED RD DIVISION	STATE	PROJECT	
2	OHIO	U 430(14)	

46/307

JEFFERSON COUNTY

JEF.-7-13.53

Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
Sta. 703+47.95	0	0		
			0	0
Sta. 703+32	0	0		



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U 430(14)	

47/307

JEFFERSON COUNTY

JEF-7-13.53

ESTIMATED QUANTITIES

12	12" Storm Sewers: Under Pavt or App. Sec. M6.5(b) or Sec. M6.2(b)	130	L.F.
12	12" Storm Sewers: Sec. M6.4(c)	60	L.F.
15	Pipe Specials: 12" x 30° Bend Sec. M6.4(e)	2	Each
16	Std. N° 6 C.B.	1	Each
16	Std. N° 2-20 Inlet	1	Each
10	Dumped Rock Channel Protection	[illegible]	C.Y.
10	Sodding	1	Sq.Y.
11	Conc. for Struct. Class C	.023	C.Y.
12	Excavation for Struct.	1	C.Y.

STA. 704+67 To STA. 705+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U 430(14)	

JEFFERSON COUNTY
JEF.-7-13.53

2	OHIO	U 430 (14)	

49/307

JEFFERSON COUNTY
JEF.-7-13.53

END AREA		VOLUME	
CUT	FILL	CUT	FILL

Rt. Side STA. 705+31 To STA. 706+31


2
OHIO
U 430(14)
50
307
JEFFERSON COUNTY
JEF-7-13.53
Seeding
End Area
Volume
Cut
Fill
Cut
Fill
Sta. 709+05
70' Incl. from Next Sheet
Sta. 709+05
C - 220
F - 55
Incl. from Next Sheet
2:1
775.18
709+05
Sta. 708+05
85' Incl. from Next Sheet
Sta. 708+05
C - 60
F - 530
Incl. from Next Sheet
2:1
772.77
708+05
Sta. 707+05
75' Incl. from Next Sheet
Sta. 707+05
C - 18
F - 1018
Incl. from Next Sheet
2:1
770.00
707+05
Sta. 706+31
Sta. 707+05
Sta. 706+87
Section A-A
Detail of Transition at End of Retaining Wall Lt. of ℄
Outlet of 15" 1-2
72' Rt. Sta. 6+70 Ramp 'C'
Sta. 706+31
Lt. Side
STA. 707+05 to STA. 709+05

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U 430 (14	

51/307

JEFFERSON COUNTY
JEE-7-13.53

END AREA		VOLUME	
CUT	FILL	CUT	FILL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U 430(14)	

52
307

JEFFERSON COUNTY
JEF.-7-13.53

End Area		Volume	
Cut	Fill	Cut	Fill
3975	101		
		5893	227
3919	22		
		7192	79
2759	45		
		7287	191
2460	55		

Lt. Side STA. 709+81 TO STA. 711+45

2	OHIO	U 430 (14)	53/307

JEFFERSON COUNTY
JEF-7-13.53

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO	U 430 (14)		54 / 307

JEFFERSON COUNTY
JEF-7-13.53

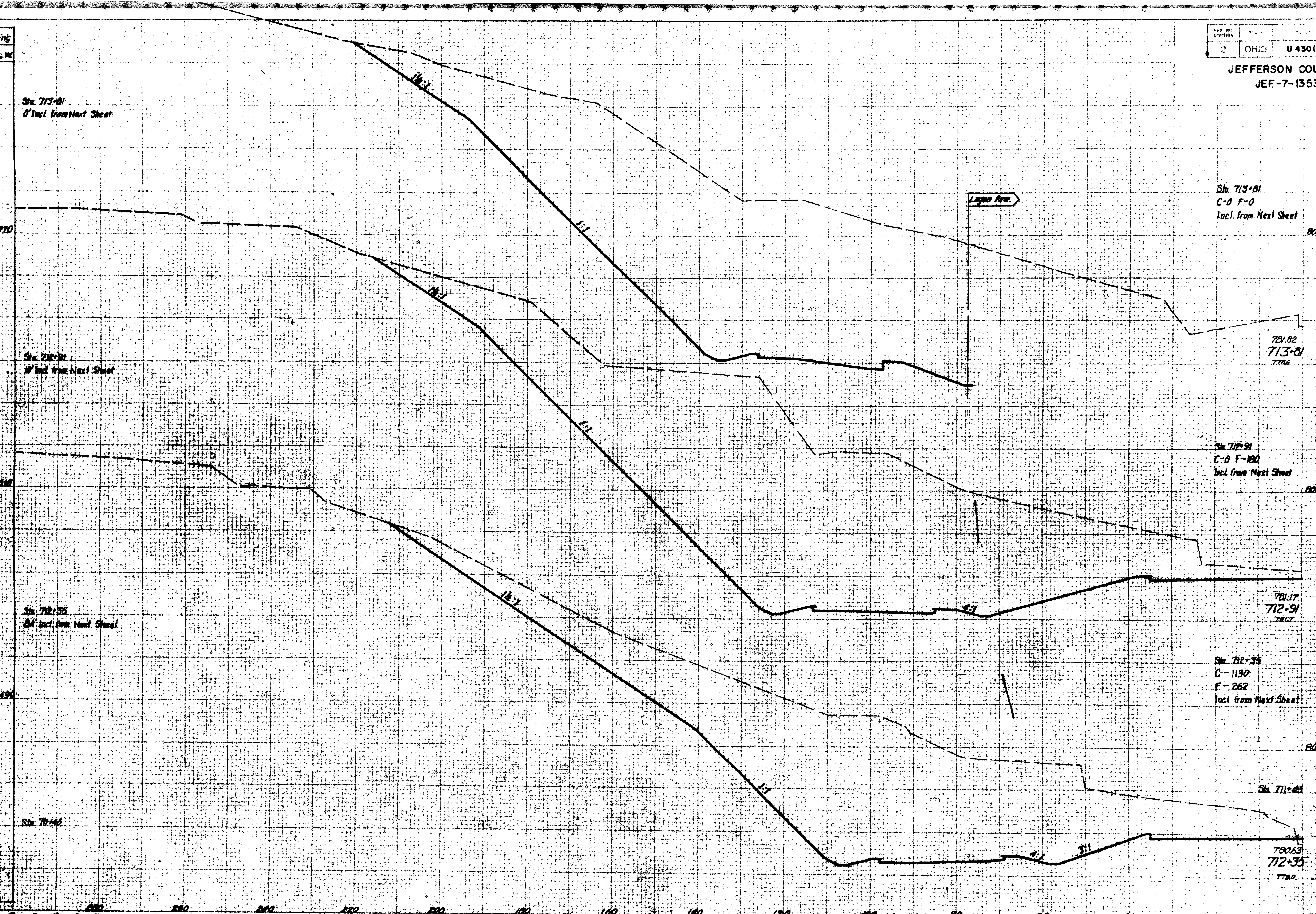
Seeding	
End Width	Sq. Yd.
60	
	870
106	
	1040
221	
	2450
255	

Sta. 713+81
0' Incl. from Next Sheet

Sta. 712+91
10' Incl. from Next Sheet

Sta. 712+35
64' Incl. from Next Sheet

Sta. 711+45



Sta. 713+81
C-0 F-0
Incl. from Next Sheet

Sta. 712+91
C-0 F-180
Incl. from Next Sheet

Sta. 712+35
C-1130
F-262
Incl. from Next Sheet

Sta. 711+45

End Area		Volume	
Cut	Fill	Cut	Fill
3980	0		
		14,792	500
4865	180		
		9749	458
4590	262		
		11,171	606
3373	101		

Lt. Side

STA. 712+35 to STA. 713+81

2	OHIO	U 430 (14)	

55/307

JEFFERSON COUNTY
JEF.-7-13.53

Rt. Side STA. 712+35 to STA. 713+81

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U 430(14)	

56
307

JEFFERSON COUNTY
JEF.-7-13.53

End Area Cut	End Area Fill	Volume Cut	Volume Fill
435	5806		
		1210	7355
140	2552		
		5421	2812
3907	0		

Sta. 714+40.50 to Sta. 714+88.02

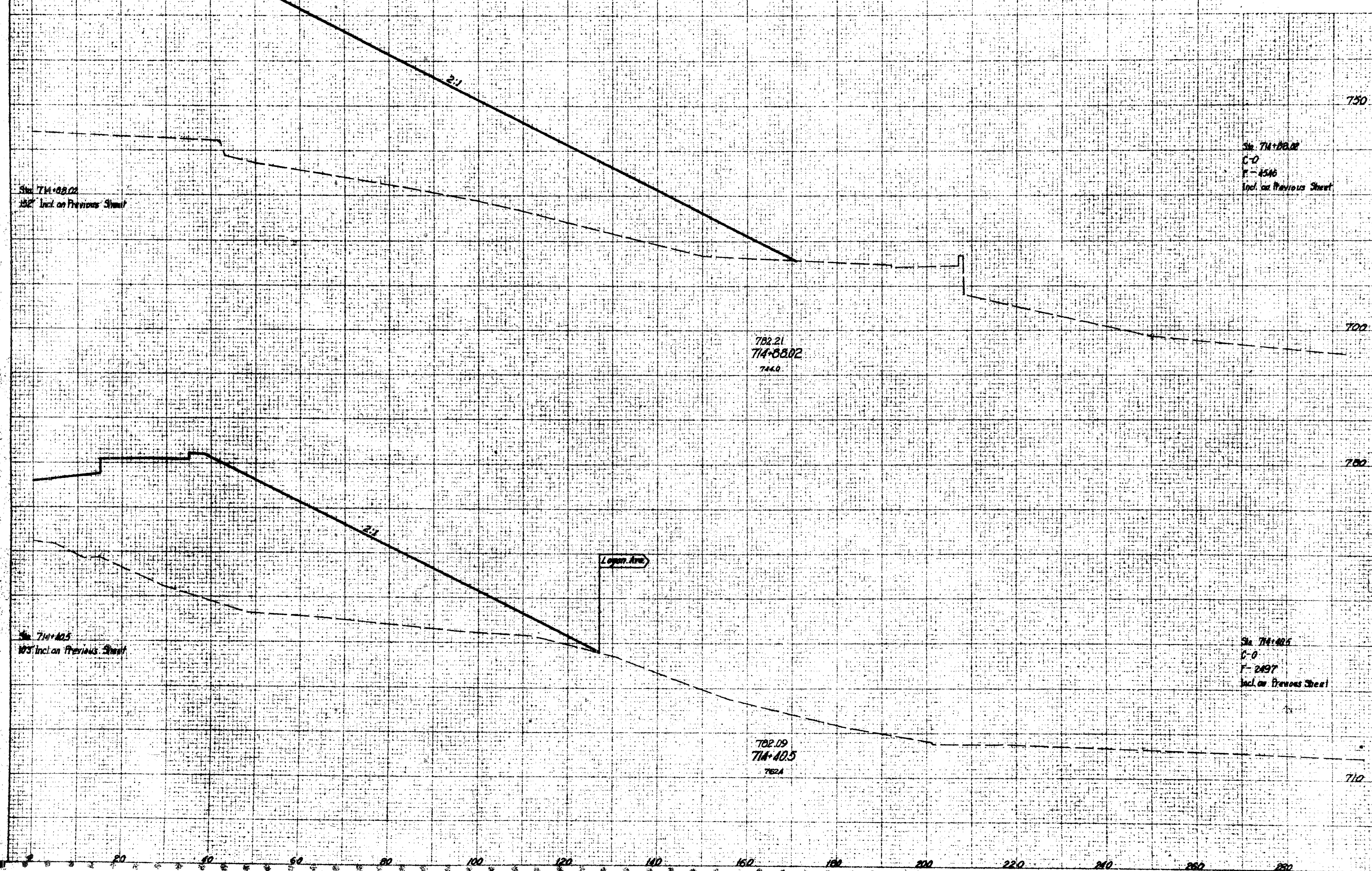
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	U 430 (14)

57/307

JEFFERSON COUNTY
JEF.-7-13.53

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL



Rt. Side STA. 714+40.5 to STA. 714+88.02

FED. RD. DIVISION | STATE | PROJECT
2 | OHIO | U 430(14)
58
307
JEFFERSON COUNTY
JEF-7-1353
Seeding
End Width
Sq. Yd.
End Area
Volume
Cut
Fill
Logan Ave
Sta. 715+48.02
160 Incl. from Next Sheet
Sta. 715+48.02
C - 0
F - 6270
Incl. from Next Sheet
0
10,060
0
782.25
715+48.02
Sta. 715+18.02
160 Incl. from Next Sheet
Sta. 715+18.02
C - 0
F - 5430
Incl. from Next Sheet
0
9300
242
782.25
715+18.02
Sta. 714+88.02
Sta. 714+88.02
435
2:1
220
218
202
790
730
800
750
280
260
240
220
200
180
160
140
120
100
80
60
40
20
Lt. Side

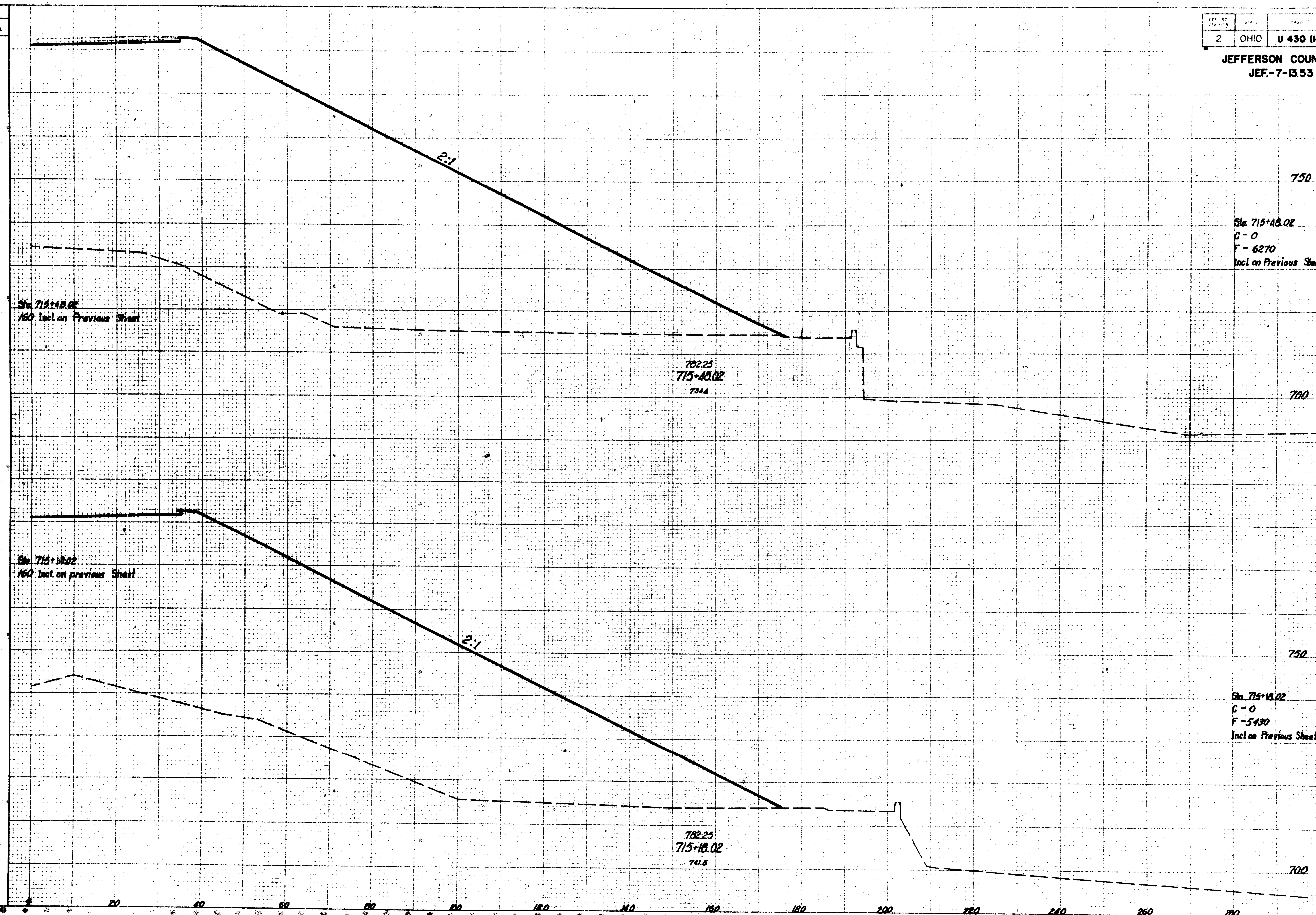
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U 430 (14)	

59/307

JEFFERSON COUNTY
JEF.-7-13.53

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL



Rt Side STA. 715+18.02 to STA. 715+48.02

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U 430(14)	

60/307

JEFFERSON COUNTY
JEF.-7-13.53

2	OHIO	U 430 (14)	61/307

JEFFERSON COUNTY
JEF.-7-13.53

2	OHIO	U 430 (14)	62/307

JEFFERSON COUNTY
JEF. -7- 13.53

2 OHIO U 430 (14)

63
307

JEFFERSON COUNTY
JEF.-7-13.53


OHIO U 430(14)
64
307
JEFFERSON COUNTY
JEF.-7-13.53
Seeding
End Width
Sq.yd.
185
917
147
1125
258
Sta. 720+00
77 Incl. from Next Sheet
Sta. 719+50
63 Incl. from Next Sheet
Sta. 719+00
2:1
2:1
End Area
Volume
Cut
Fill
Cut
Fill
850
800
800
5105
745
8588
1246
4170
600
8000
1542
4470
1065
Sta. 720+00
C - 206
F - 745
Incl. from Next Sheet
778.50
720+00
794.47
Sta. 719+50
C = 0
F = 600
Incl. from Next Sheet
779.27
719+50
778.3
Sta. 719+00
280
260
240
220
200
180
160
140
120
100
80
60
40
20
Lt Side
STA. 719+50 to STA. 720+00

SEEDING
END WDTH
SQ YDS
2 OHIO U 430 (14)
65
307
JEFFERSON COUNTY
JEF.-7-13.53
END AREA
VOLUME
CUT
FILL
Sta. 720+00
77 Incl. on Previous Sheet
2:1
750
778.50
720+00
Sta. 720+00
C - 206
F - 745
Incl. on Previous Sheet
2:1
Sta. 719+50
63 Incl. on Previous Sheet
750
773.27
719+50
Sta. 719+50
C - 0
F - 600
Incl. on Previous Sheet
20
40
60
80
100
120
140
160
180
200
220
240
260
280

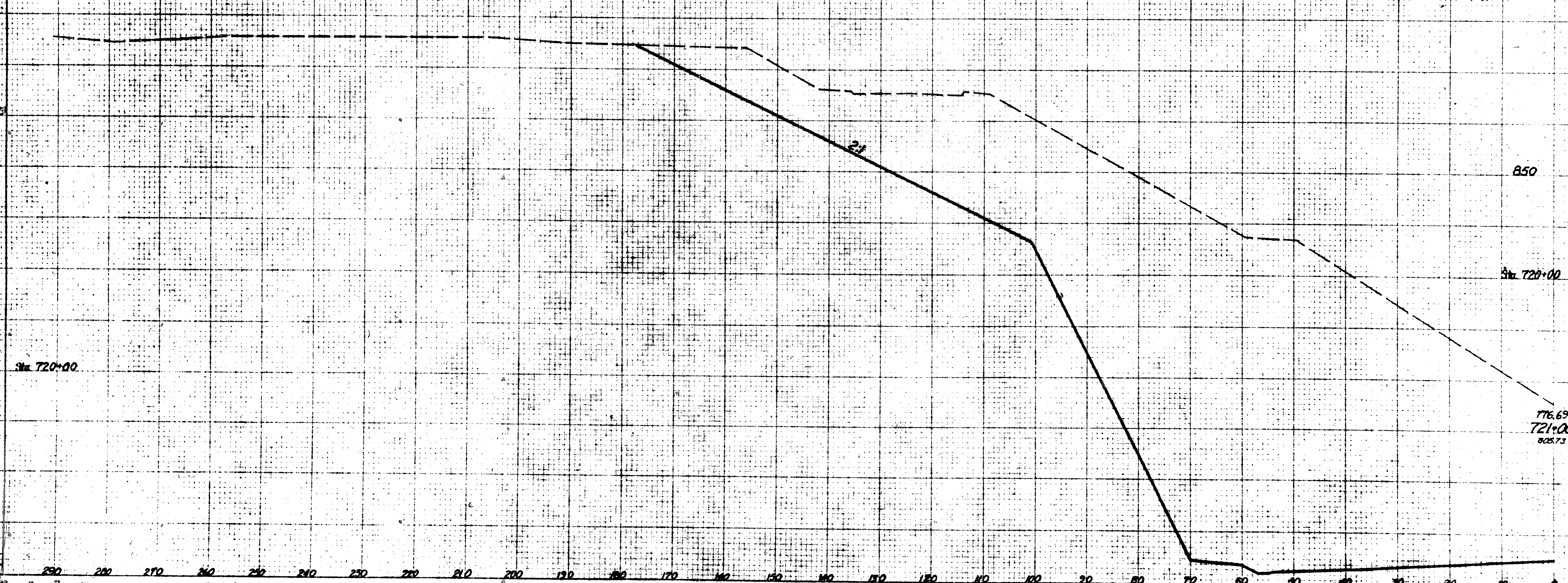
FED. RD. DIVISION	STATE	PROJECT		66/307
2	OHIO	U 430(14)		

JEFFERSON COUNTY
JEF.-7-13.53

Seeding	
End Width	Sq yd
120	
	1,6??
183	

Sta. 721+00
20' Incl. from Next Sheet

Sta. 720+00



Sta. 721+00
C - 795
F - 0
Incl. from Next Sheet

Sta. 720+00

End Area		Volume	
Cut	Fill	Cut	Fill
6965	0		
		22[illegible]	1580
5185	745		

STA. 721+00 Lt. Side


SEEDING
END WIDTH
SQ YDS
2
OHIO
U 430 (14)
67
307
JEFFERSON COUNTY
JEF.-7-1353
END AREA
VOLUME
770
Sta 721+00
20' Incl on Previous Sheet
Sta 721+00
C - 795
F - 0
Incl. on Previous Sheet
760
750
776.69
721+00
20
40
60
80
100
120
140
160
180
200
220
240
260
280
STA. 721+00 Rt Side

FED. RD. DIVISION			
2	OHIO	U-430(14)	

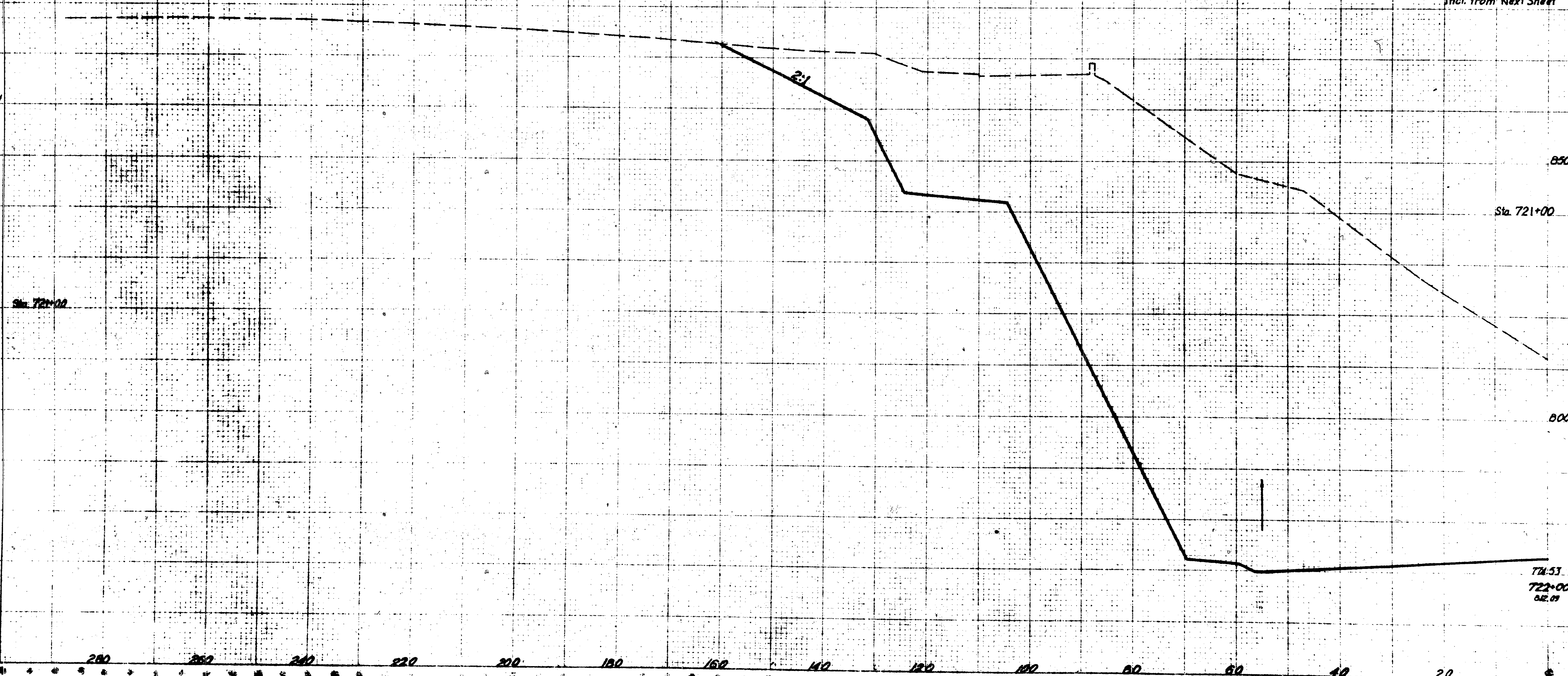
68
307

JEFFERSON COUNTY
JEF-7-1353

Seeding	
End Area	Sq.yd.
71	
	1,861
120	

Sta. 722+00
B/ Incl. from Next Sheet

Sta. 721+00



Sta. 722+00
C -1010
F - 0
Incl. from Next Sheet

Sta. 721+00

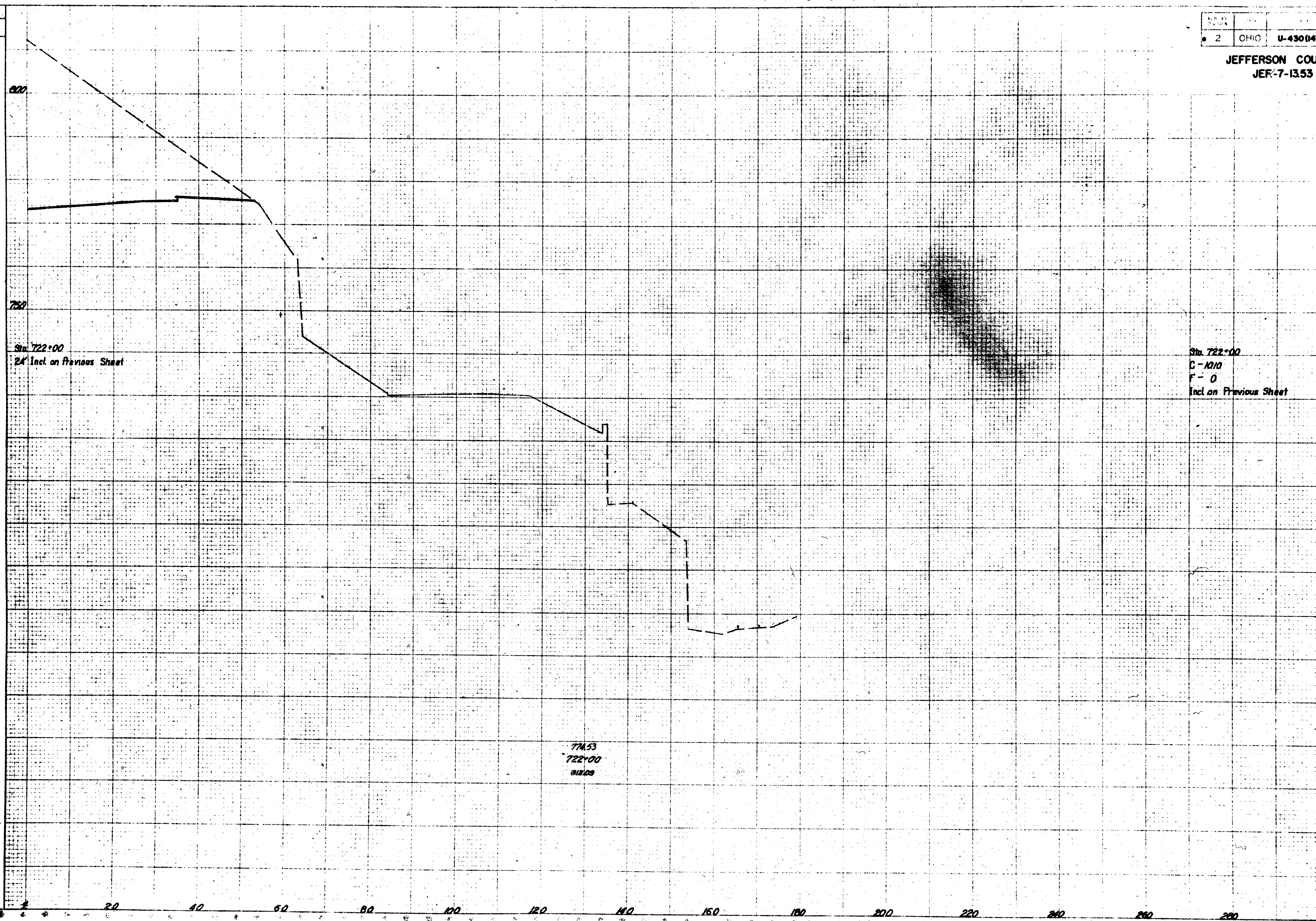
End Area		Volume	
Cut	Fill	Cut	Fill
8225	0		
		28,150	0
6965	0		

STA. 722+00 Lt. Side

2	OHIO	U-430(14)	69/307

JEFFERSON COUNTY
JEF-7-13.53

SEEDING	
END MOTH	SQ YDS



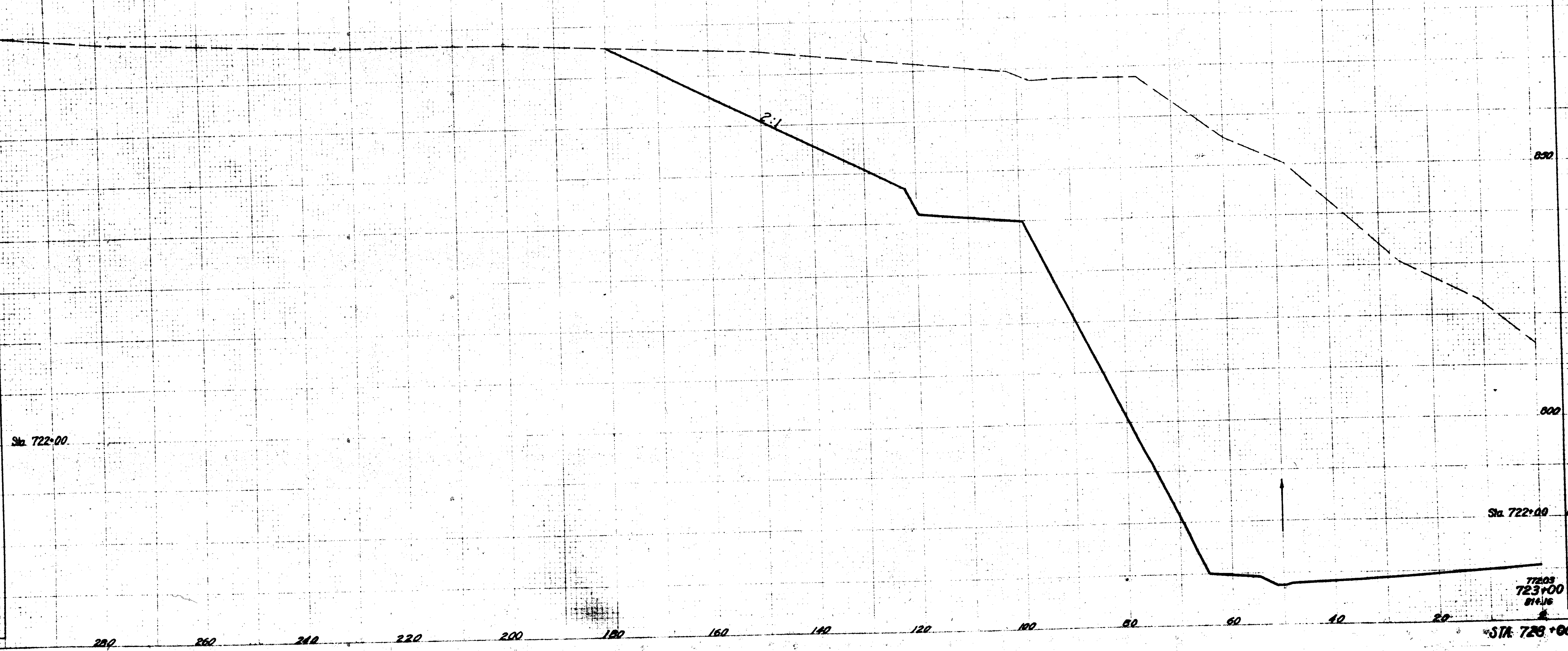
END AREA		VOLUME	
CUT	FILL	CUT	FILL

STA. 722+00 Rt Side

U-430(14)

JEFFERSON COUNTY
JEF.-7-1353

Seeding	
End Width	Sq.yd
89	Sta. 723+00 10' Incl. from Next Sheet
	887
71	Sta. 722+00



Sta. 723+00
C-1145
F-0
Incl. from Next Sheet

	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta. 723+00	9125	0		
			3210	0
Sta. 722+00	8225	0		

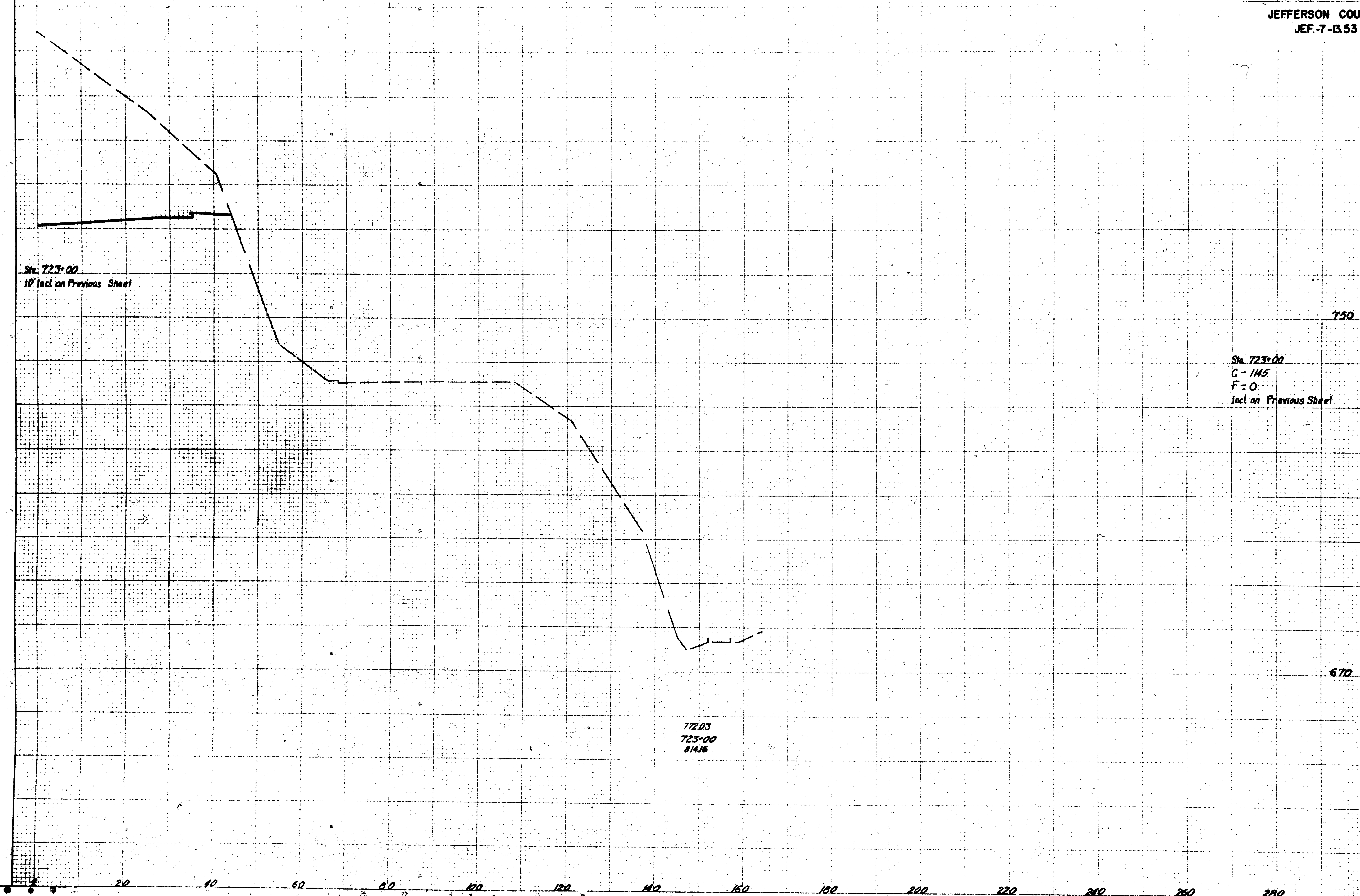
STA. 723+00 Lt. Side

2	OHIO	U-430(14)	71/307

JEFFERSON COUNTY
JEF.-7-13.53

SEEDING

END AREA		VOLUME	
CUT	FILL	CUT	FILL



STA. 723+00 - Rt. Side

2 Ohio U-430(14)

72
307

JEFFERSON COUNTY
JEF-7-1353

Seeding	
End Width	Sq yd
44	
	733
89	

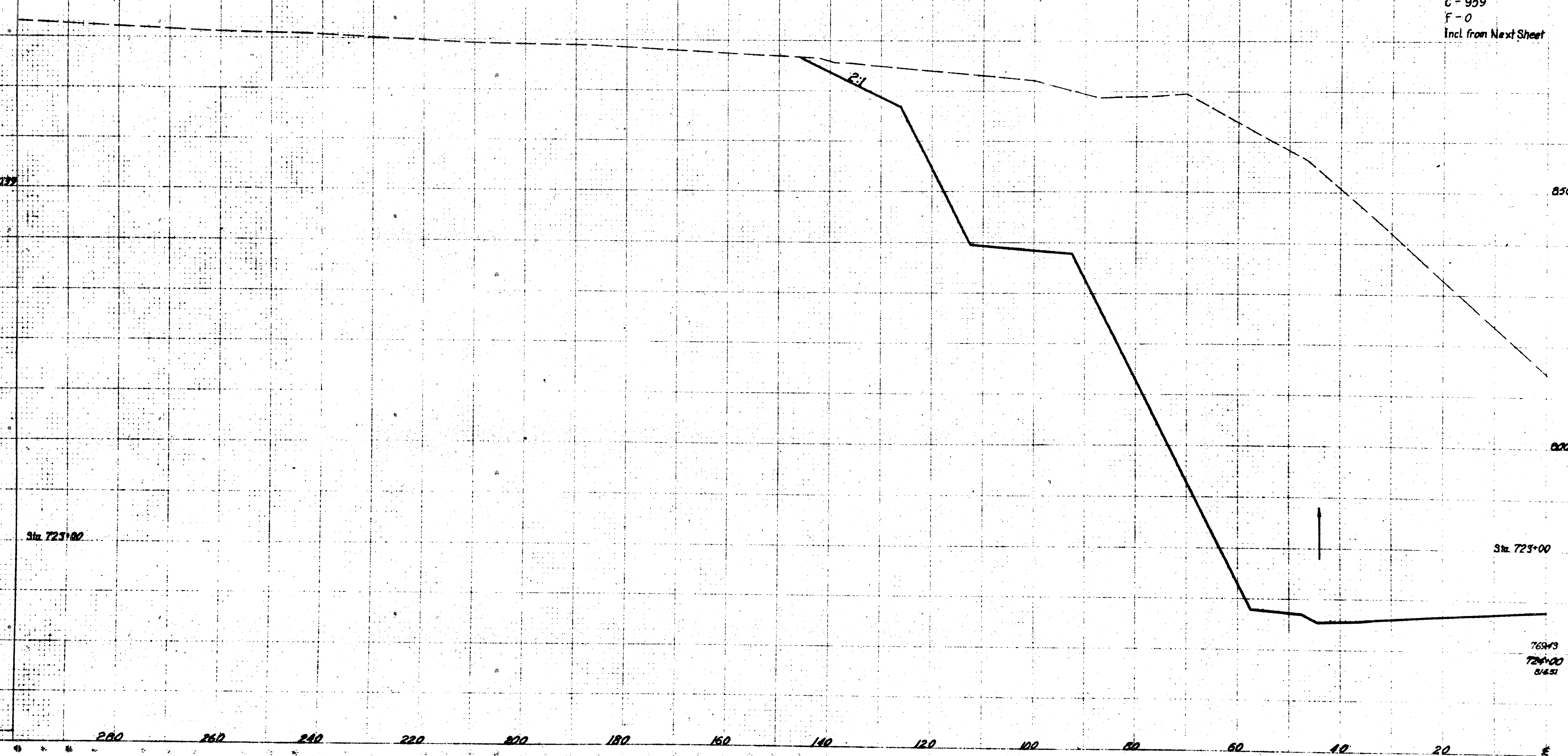
Sta. 724+00
8' Incl. from Next Sheet

Sta. 723+00

Sta. 724+00
C - 959
F - 0
Incl. from Next Sheet

Sta. 723+00

End Area		Volume	
Cut	Fill	Cut	Fill
8525	0		
		3269	0
9125	0		



STA. 72_ +00 ...

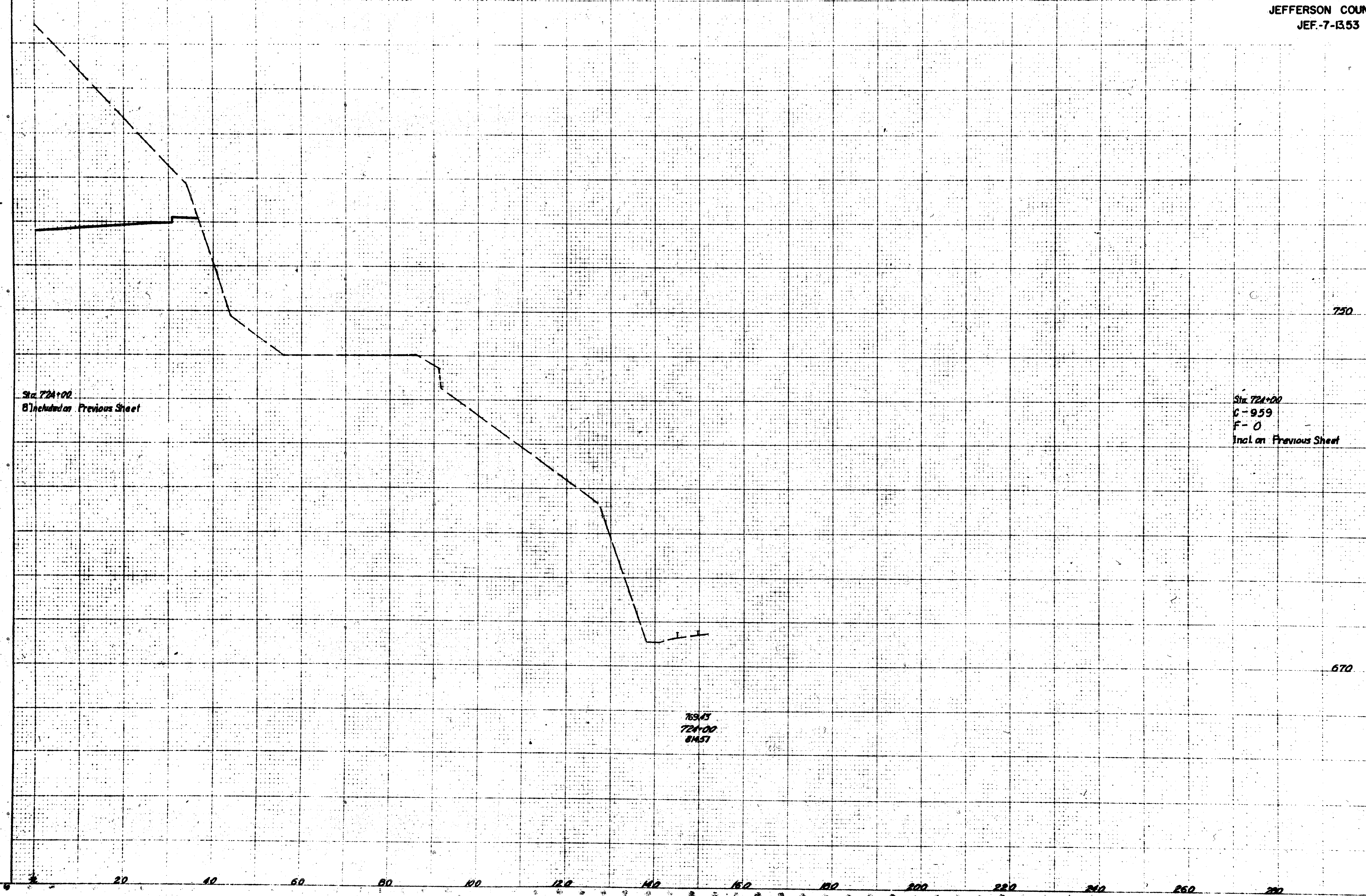
FED. AID DIVISION			
2	OHIO	U-430(14)	

73/307

JEFFERSON COUNTY
JEF.-7-13.53

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL



STA. 724+00

•2	OHIO	U-430(14)	74/407

JEFFERSON COUNTY
JEF-7-13.53

End Area Cut	End Area Fill	Volume Cut	Volume Fill
7870	0		
		9277	0
8525	0		

2	OHIO	U-430(14)	

75
307

JEFFERSON COUNTY
JEF.-7-13.53

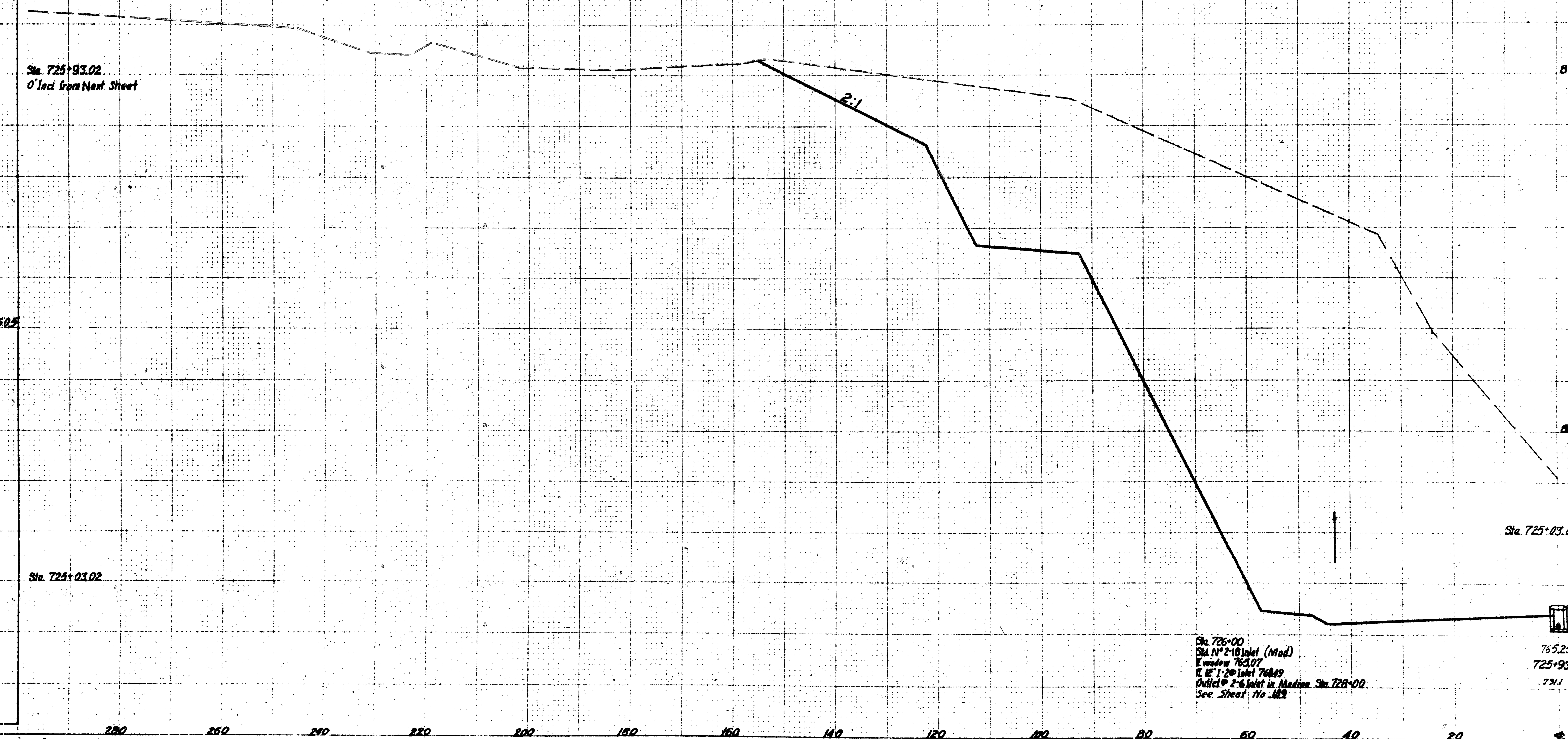
STA. 725+03.02 Rt. Side

JEFFERSON COUNTY
JEF-7-13.53

Seeding	
End Area	Sq. Yd.
51	
	505
50	

End Area		Volume	
Cut	Fill	Cut	Fill
6940	0		
		2820	0
7870	0		

Sta. 725+93.02
C - 365
F - 0
Incl. from Next Sheet



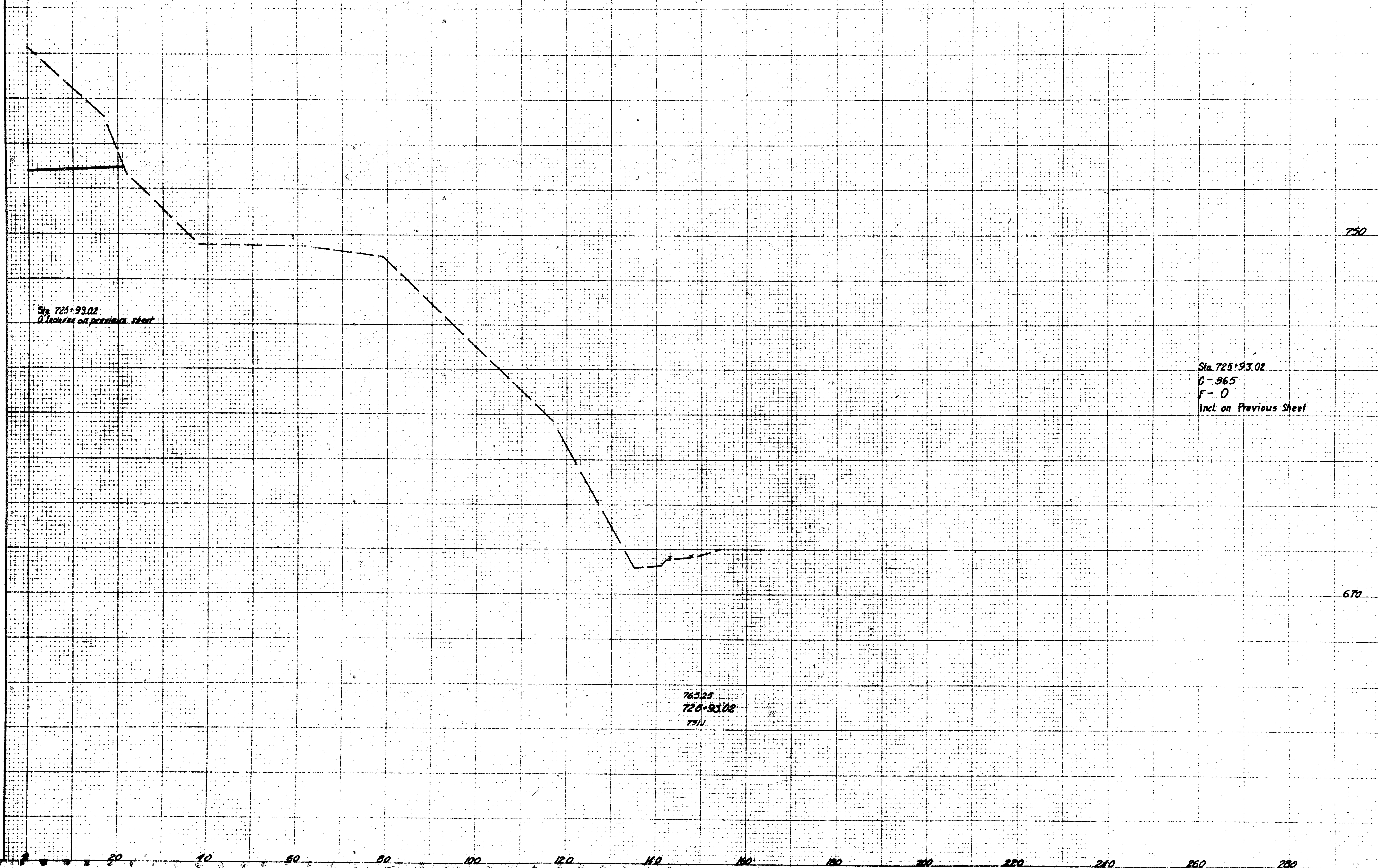
STA. 725+93.02 Lt. Side

SEEDING	
END WIDTH	10 YDS

2	OHIO	U-430(14)	77/307

JEFFERSON COUNTY
JEF.-7-13.53

END AREA		VOLUME	
CUT	FILL	CUT	FILL



STA. 725+93.02 Rt. Side

U-430(14)

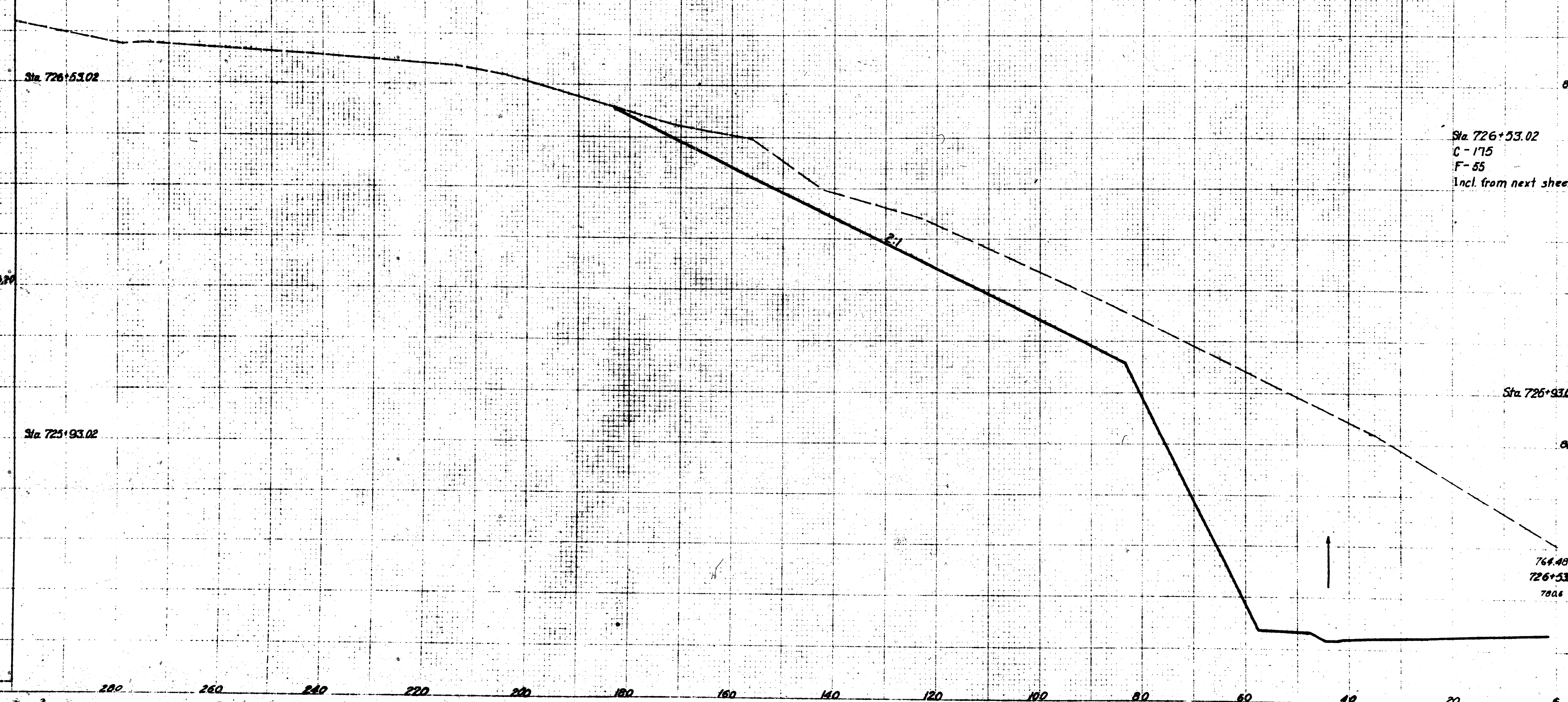
78
307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding	
End Width	Sq. Yd.
135	
	4.20
51	

Sta. 726+53.02

Sta. 725+93.02



Sta. 726+53.02
C - 175
F - 55
Incl. from next sheet

Sta. 725+93.02

End Area		Volume	
Cut	Fill	Cut	Fill
3715	55		
		1,859	61
6340	0		

STA. 726+53.02 Lt. Side

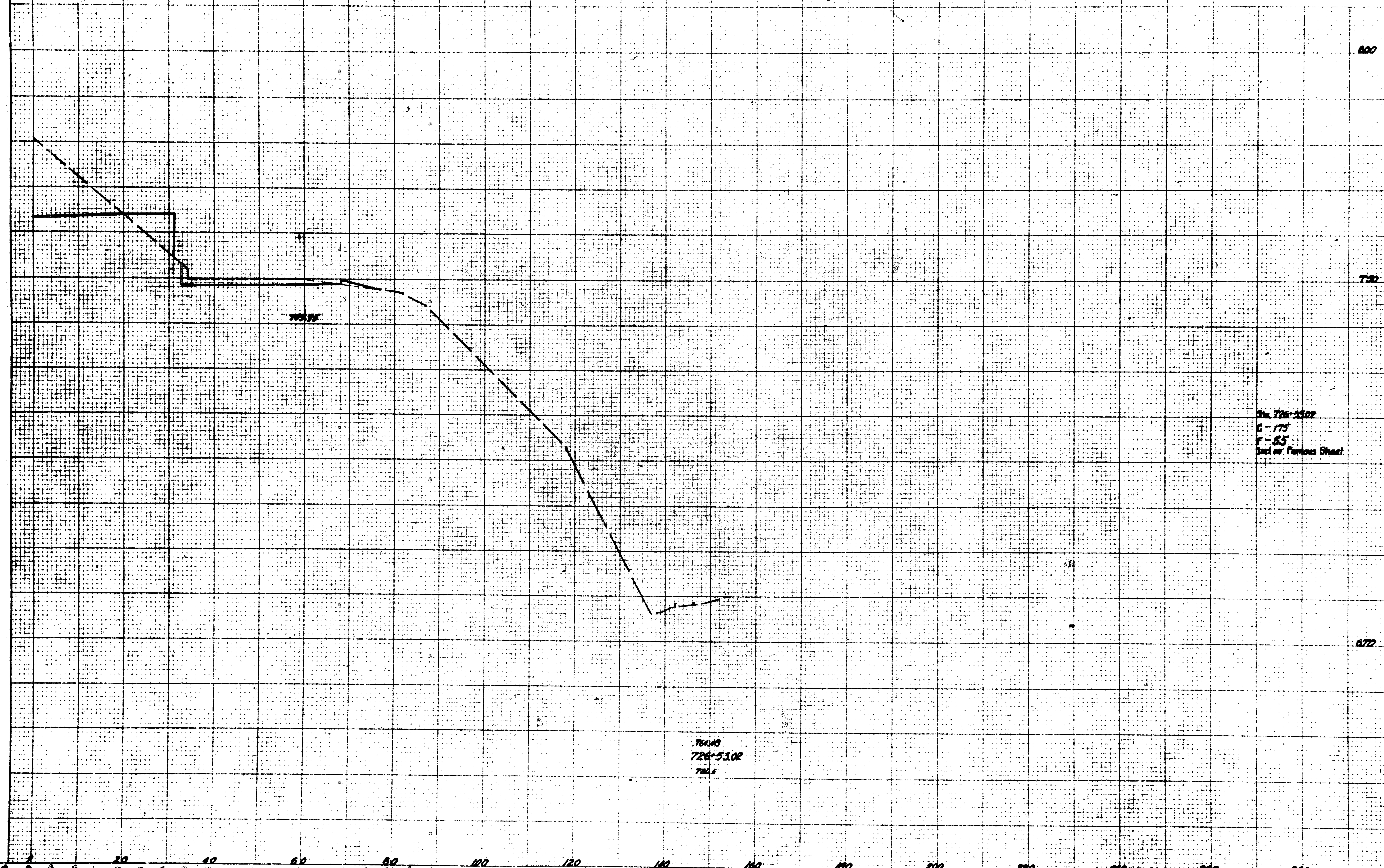
FED. RD. DIVISION	STATE	PROJECT		
2	OHIO	U-430(14)		

79
307

JEFFERSON COUNTY
JEF.-7-13.53

SEEDING	
END WIDTH	SQ YDS

END AREA		VOLUME	
CUT	FILL	CUT	FILL



STA. 726+53.02 Rt. Side

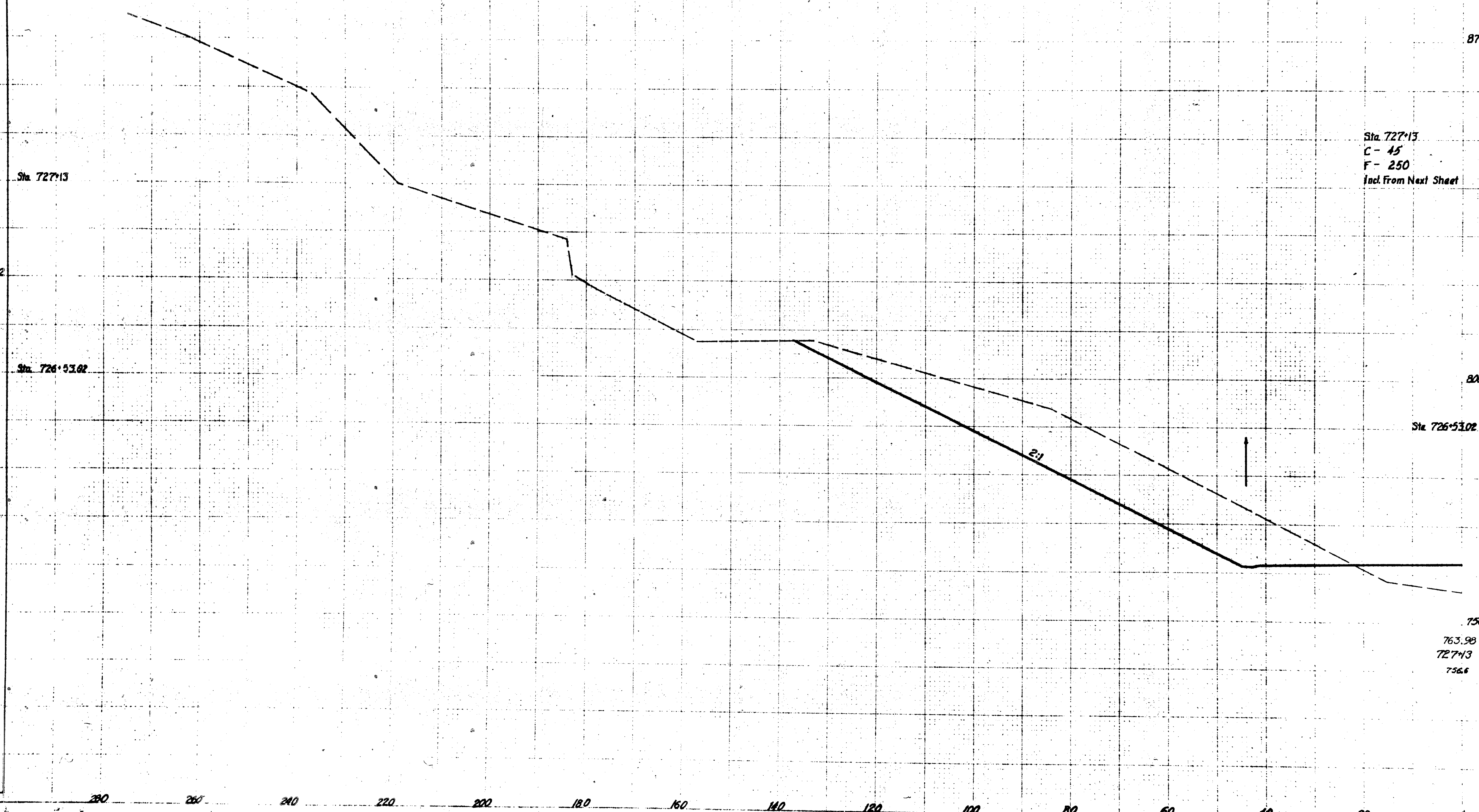
2	OHIO	U-430(14)	80/307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding	
End Width	Sq. Yd.
127	
	872
135	

Sta. 727+13

Sta. 726+53.02



Sta. 727+13
C - 45
F - 250
Incl. From Next Sheet

	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta. 727+13	1060	354		
			5806	454
Sta. 726+53.02	3715	55		

STA. 727+13 Lt. Side

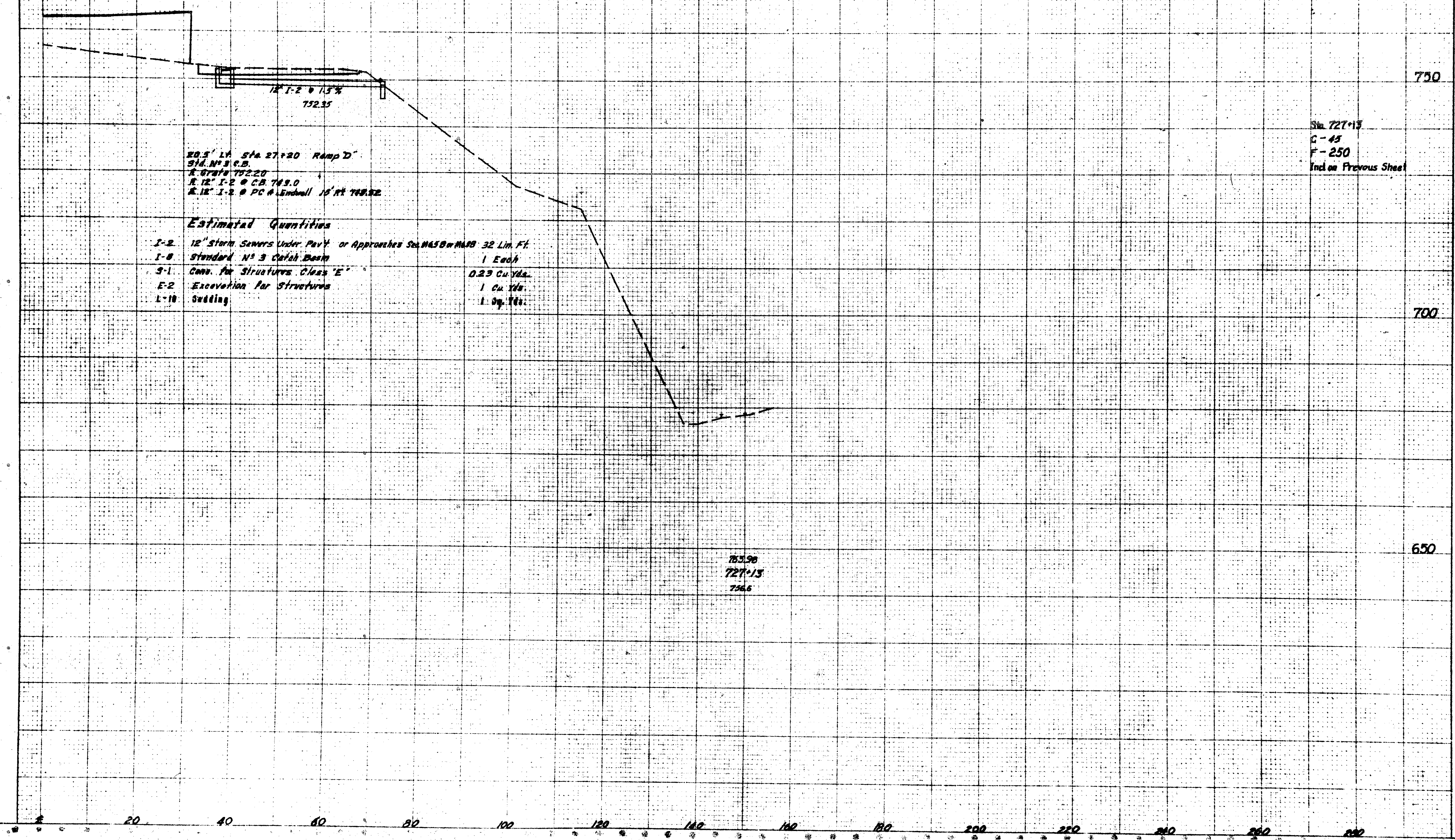
	STATE	PROJECT	
2	OHIO	U-430(14)	

81/307

JEFFERSON COUNTY
JEF.-7-13.53

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL



20.5' Lt. Sta. 27+20 Ramp "D"
Std. No 3 C.B.
E. Grate 752.20
E. 12" I-2 @ C.B. 749.0
E. 12" I-2 @ PC & Endwall 15' Rt 749.52

Estimated Quantities

I-2	12" Storm Sewers Under Pav't. or Approaches Sec. M6.5B or M6.8B	32 Lin. Ft.
I-8	Standard No 3 Catch Basin	1 Each
S-1	Conc. for Structures Class "E"	0.23 Cu. Yds.
E-2	Excavation for Structures	1 Cu. Yds.
L-10	Sodding	1 Sq. Yds.

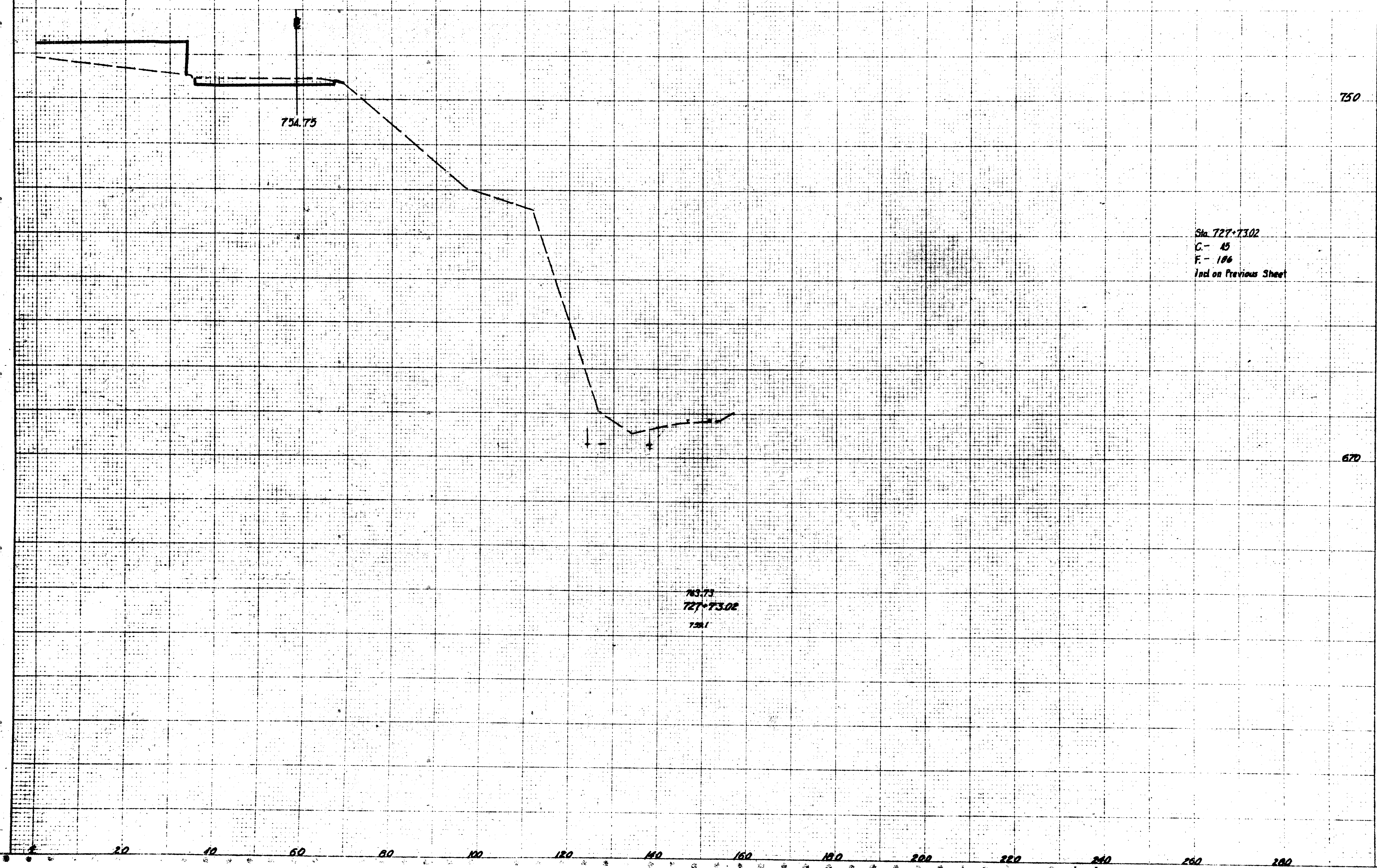
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	82/307

JEFFERSON COUNTY
JEF.-7-13.53

		PROJECT		83/307
2	OHIO	U-430 (14)		

JEFFERSON COUNTY
JEF.-7-13.53

SEEDING	
END WIDTH	SQ YDS



END AREA		VOLUME	
CUT	FILL	CUT	FILL

2	OHIO	U-430(14)	84/307

JEFFERSON COUNTY
JEF-7-13.53

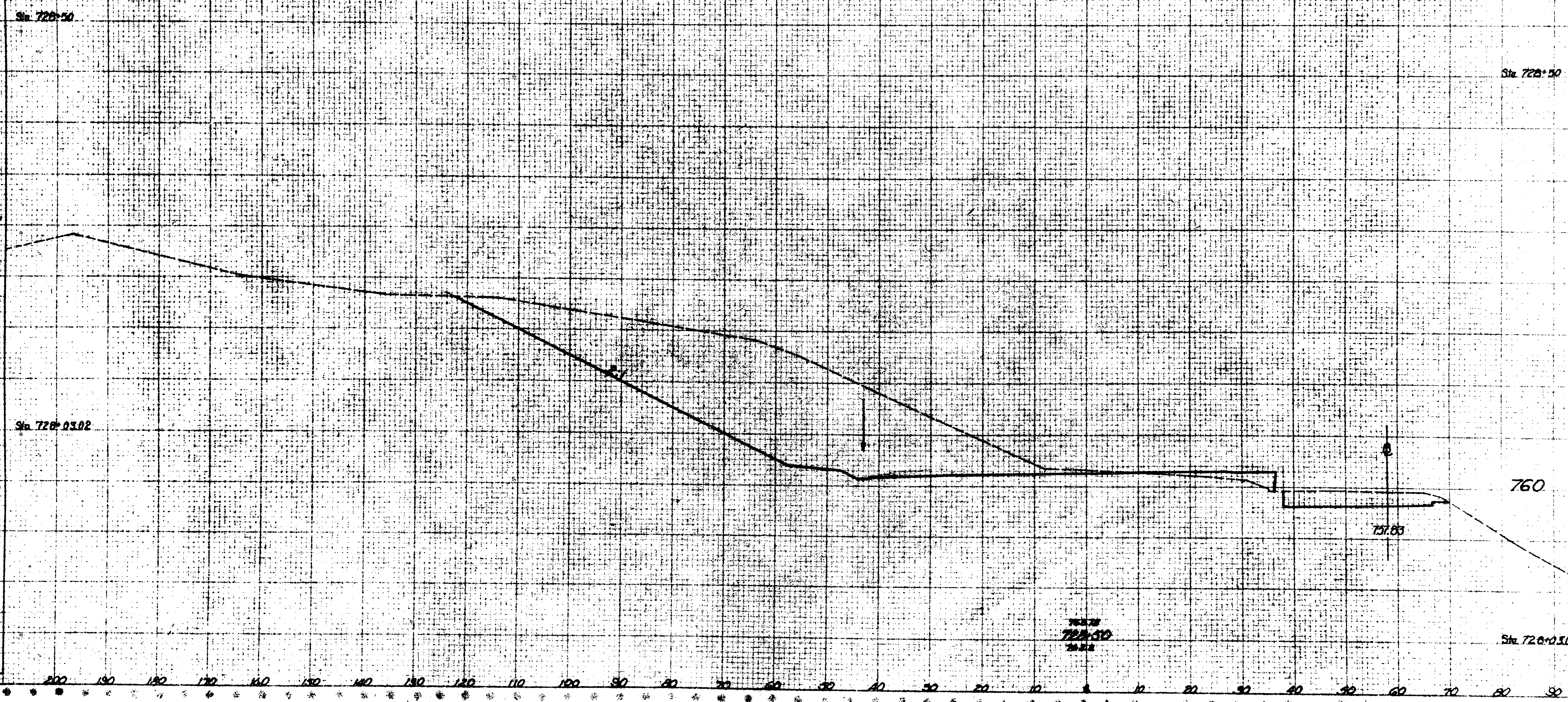
End Area Cut	End Area Fill	Volume Cut	Volume Fill
Sta. 728+03.02 385	80		
		409	250
Sta. 727+73.02 350	370		

STA. 728+03.02

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	85 / 307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding	
End Width	Sq.Yd.
97	
	307
39	



	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta. 728+50	1520	30		
			1764	102
Sta. 728+03.02	385	80		

FED RD DIVISION			
2	OHIO	U-430(14)	

86
307

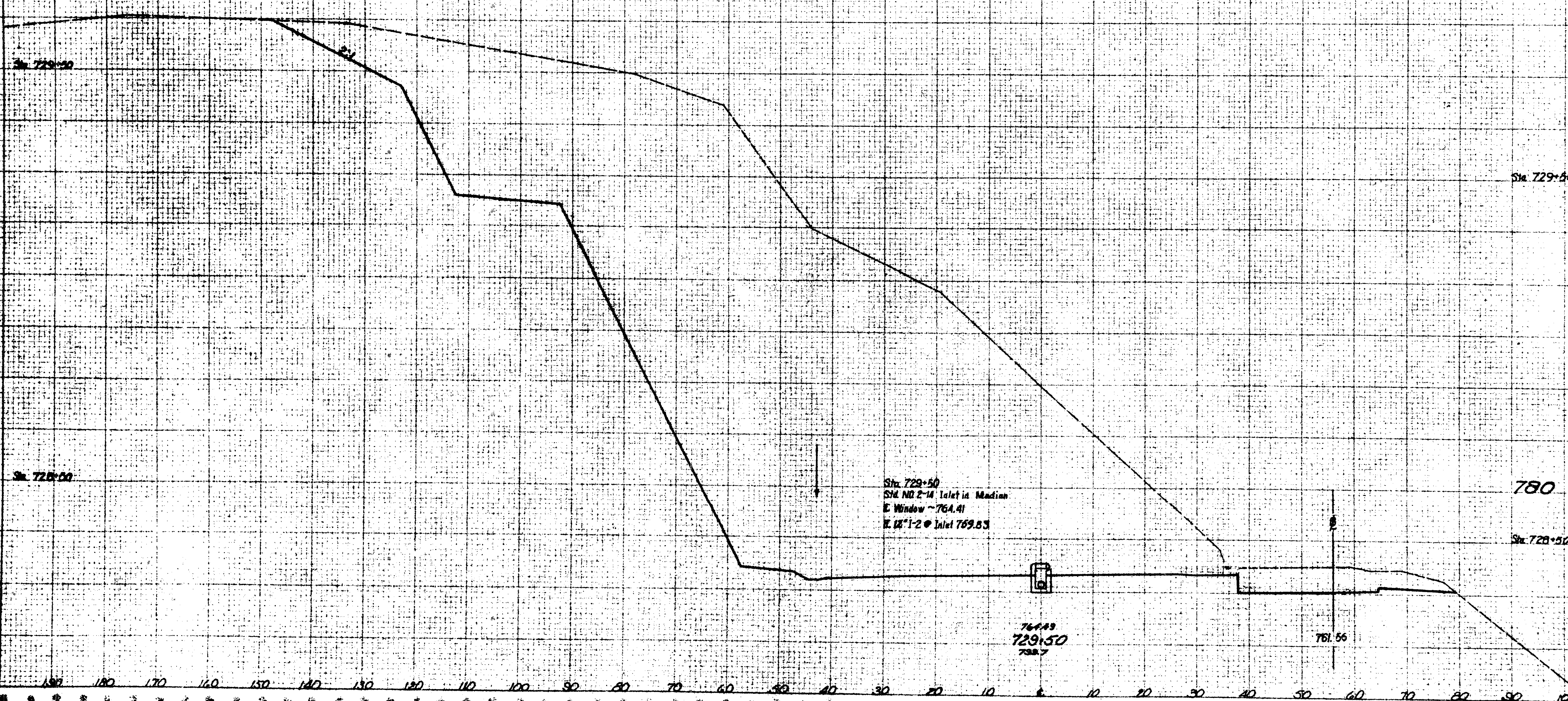
JEFFERSON COUNTY

JEF-7-13.53

Seeding	
End Width	Sq. Yd.
91	
	87
97	

Sta. 729+50

Sta. 728+50



	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta. 729+50	7327	0		
			16,383	56
Sta. 728+50	1520	90		

STA. 729+50

U-430(14)

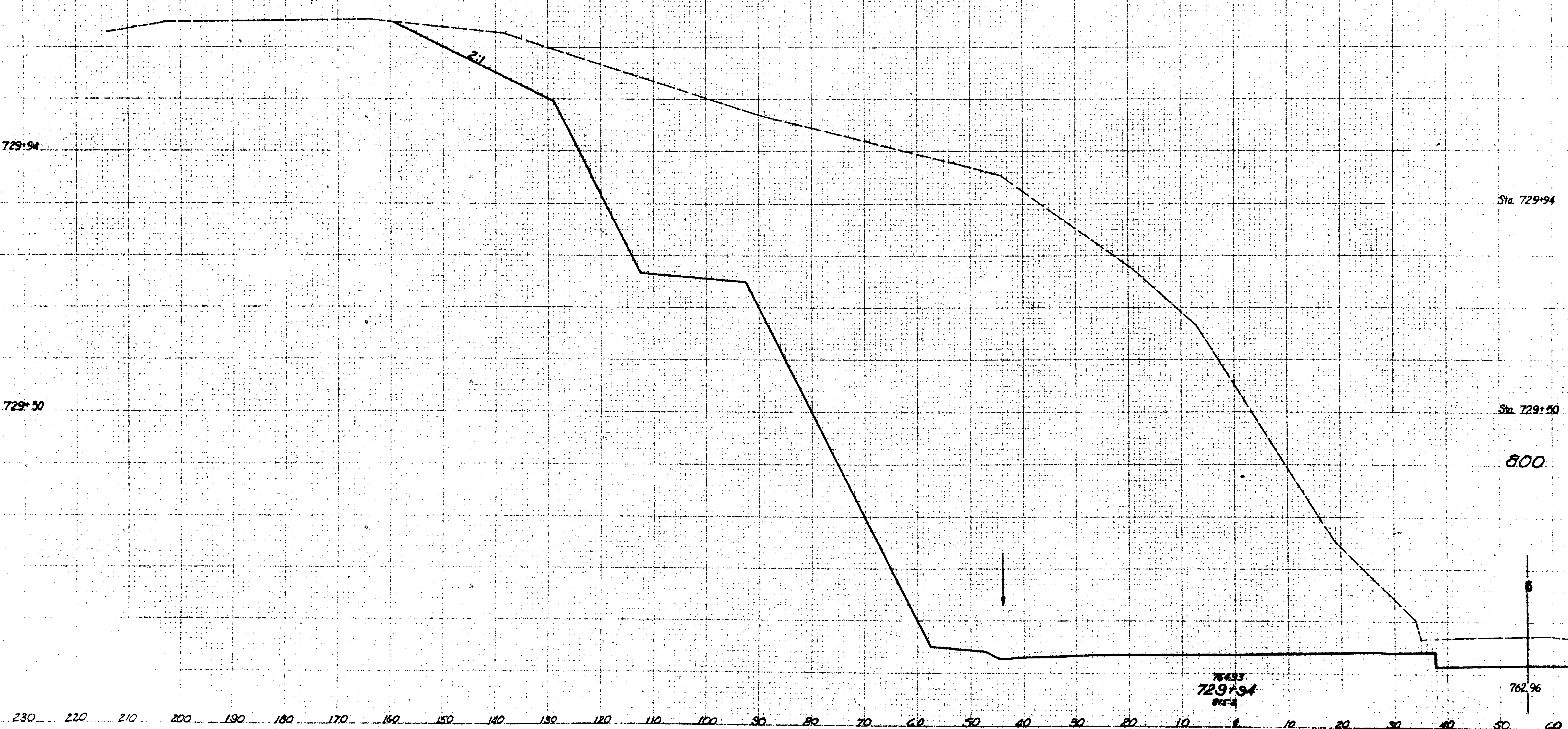
87
307

JEFFERSON COUNTY
JEF.-7-1353

Seeding	
End Width	Sq. Y.
58	
	266
51	

Sta. 729+94

Sta. 729+50



	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta. 729+94	9170	0		
			13442	0
Sta. 729+50	7327	0		

800

STA. 729+94

2	OHIO	U-430(14)	

89
307

JEFFERSON COUNTY
JEF.-7-13.53

FED RD DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	89 / 307

JEFFERSON COUNTY
JEF-7-1353

Seeding		
End Width	Sq Yd	
81		Sta 730+55
	304	
90		Sta 730+23

	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta 730+55	8330	0		
			11706	0
Sta 730+23	8843			

2 CHO U-430(14)

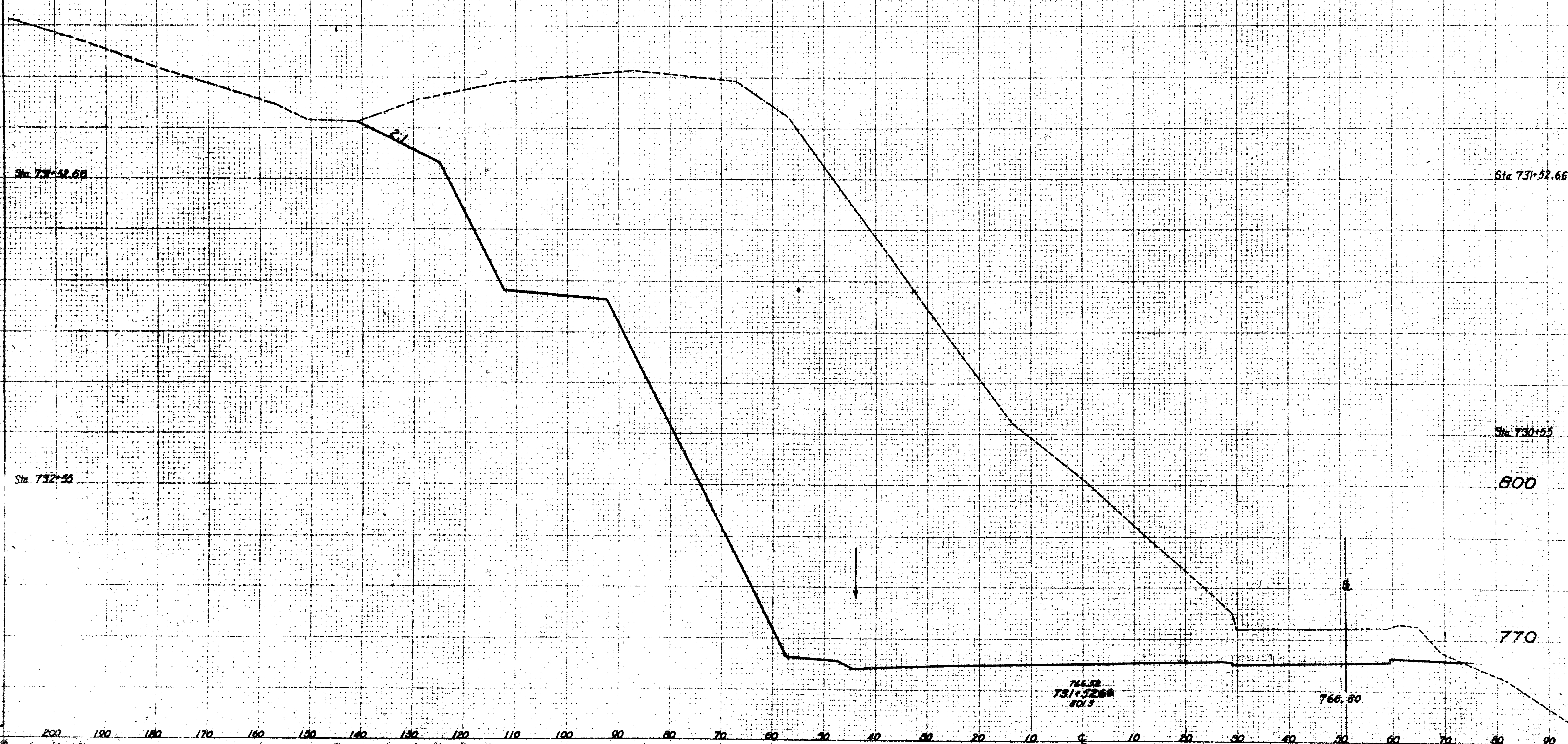
90
307

JEFFERSON COUNTY
JEF.-7-1353

Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
Sta. 731+52.66	8872	0		
			31,201	0
Sta. 730+55	8380	0		

Seeding End width	Sq. Yd.
41	
	664
21	

Sta. 731+52.66
Sta. 732+55



STA. 731+52.66

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	U-430(14)

91/307

JEFFERSON COUNTY
JEF-7-1353

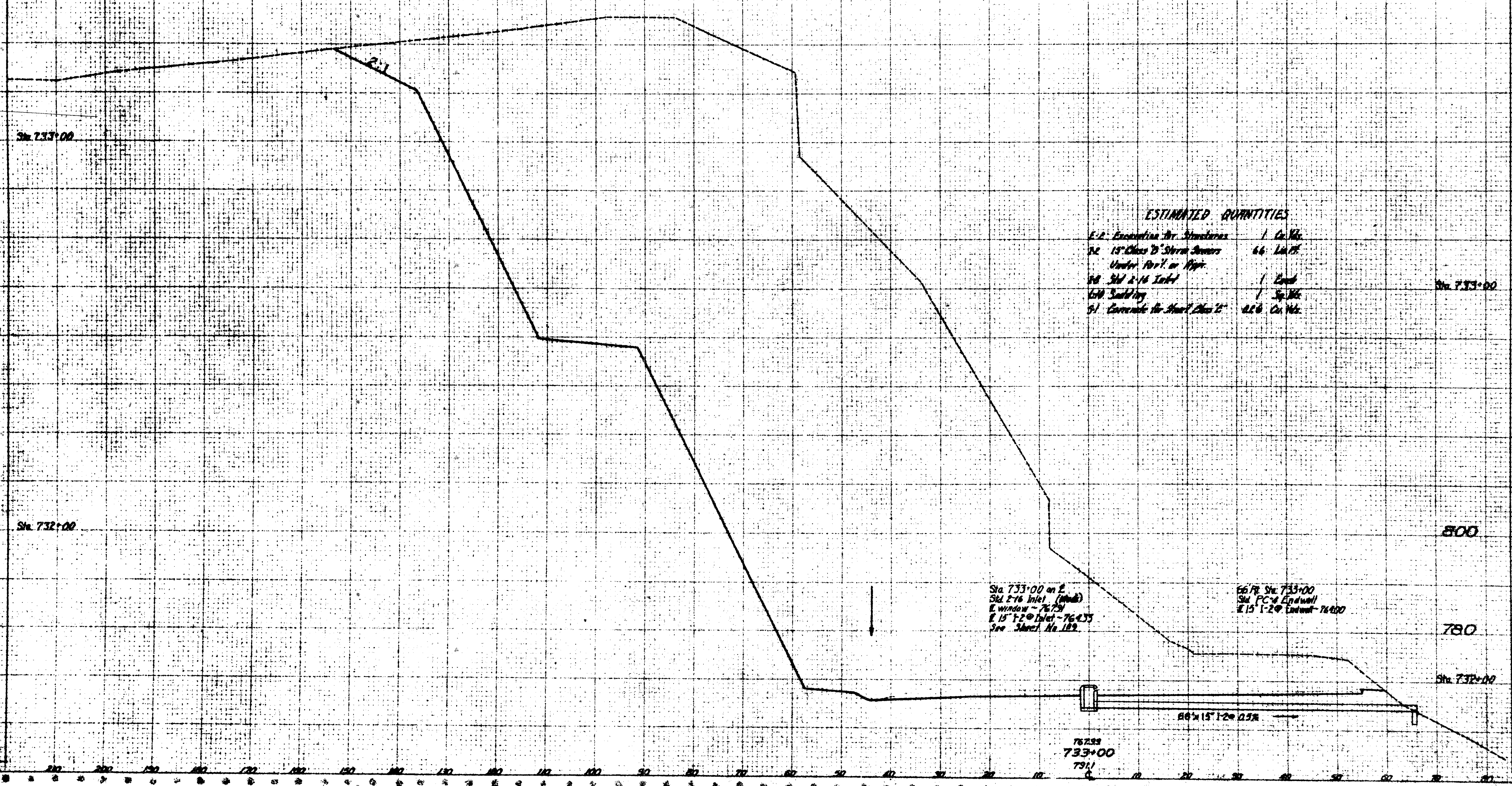
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

JEFFERSON COUNTY

JEF.-7-1353

Seeding	
End Width	Sq. Yd.
42	
38	

End Area		Volume	
Cut	Fill	Cut	Fill

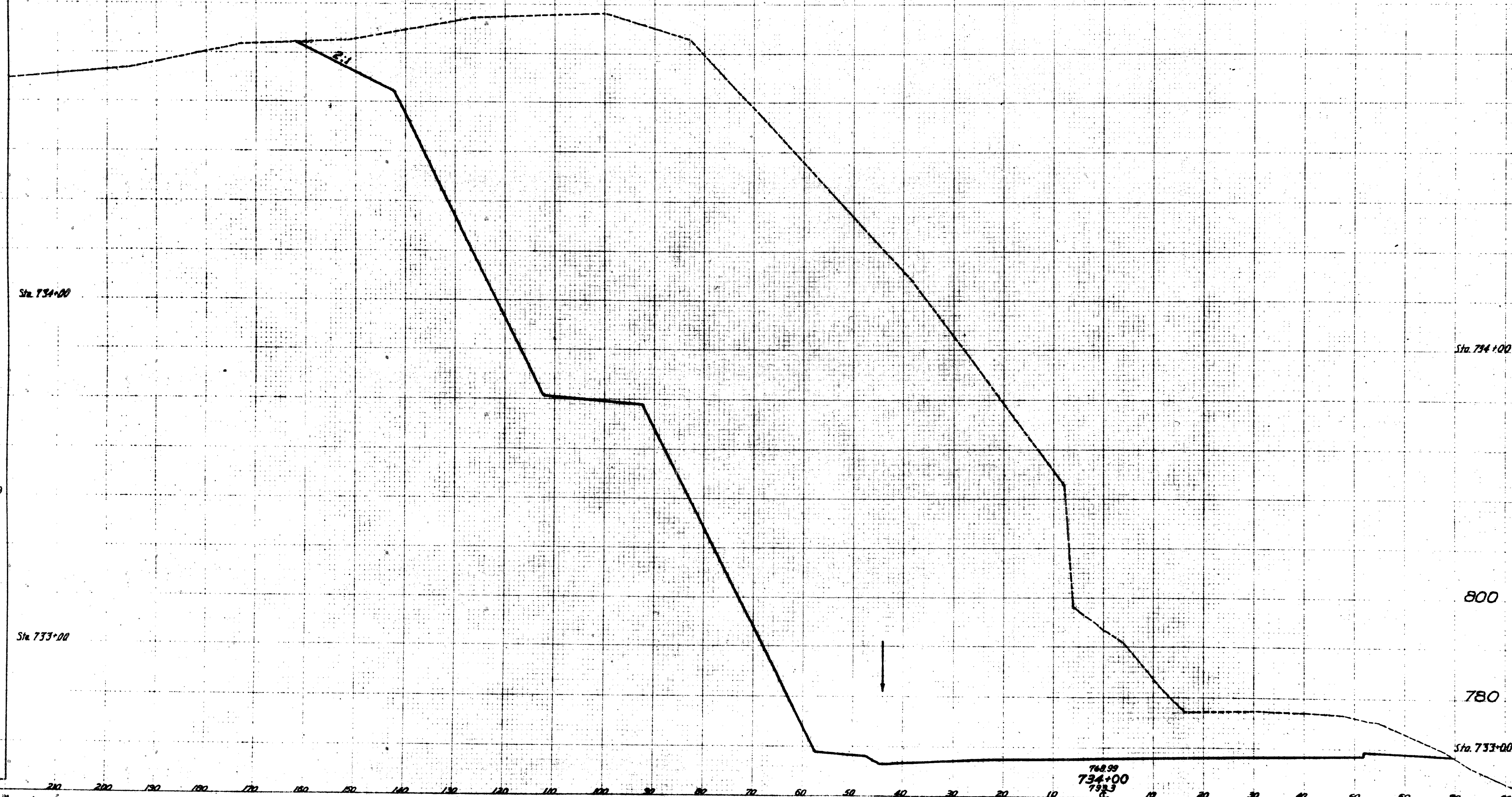


FED. RD. DIVISION	STATE	PROJECT
2	OHIO	U-430(14)

93/307

JEFFERSON COUNTY
JEF-7-13.53

Seeding		
End Width	Sq Yd	
55		Sta. 734+00
	539	
42		Sta. 733+00

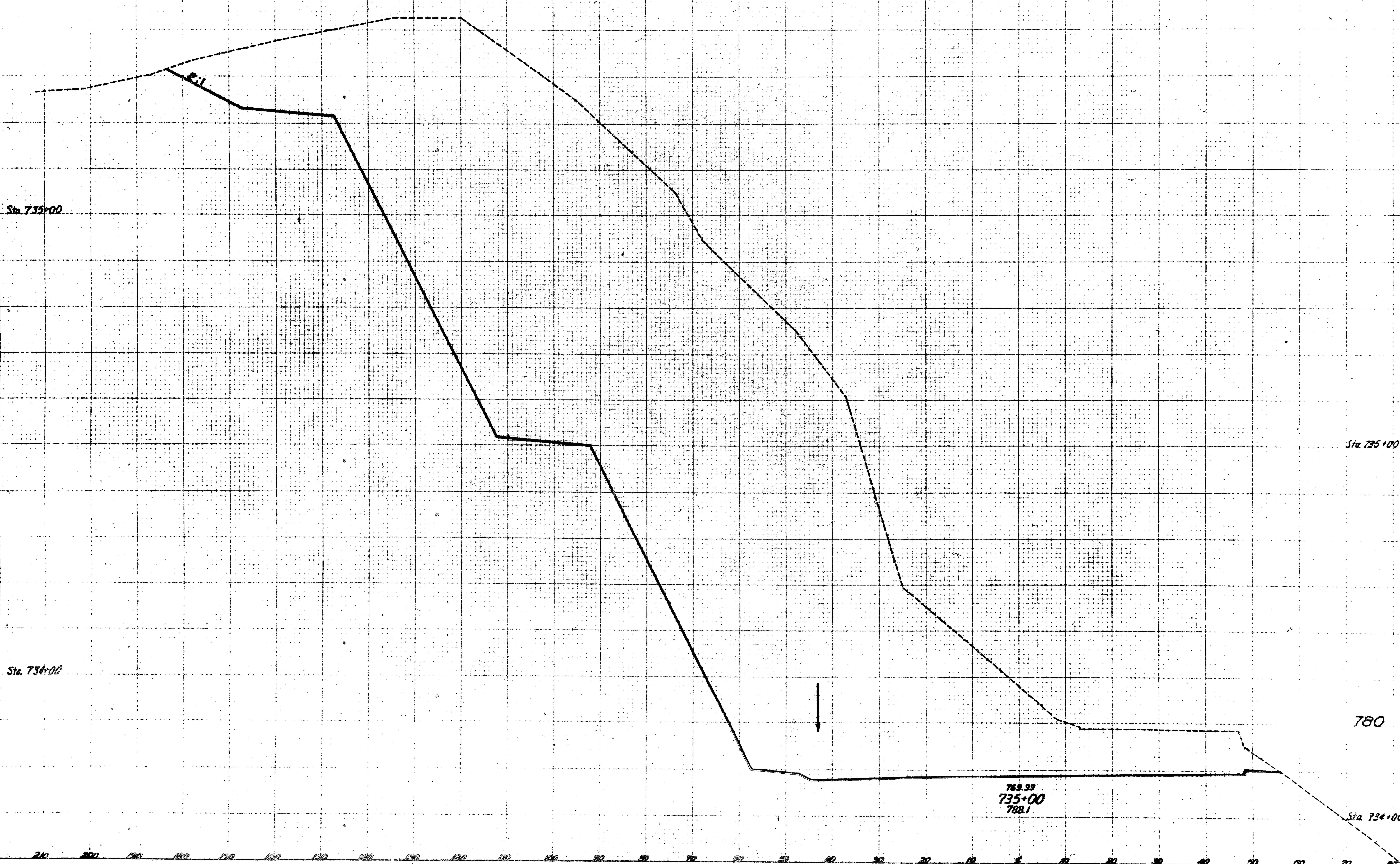


	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta. 734+00	11790	0		
			4142	0
Sta. 733+00	10480	0		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

JEFFERSON COUNTY
JEF-7-13.53

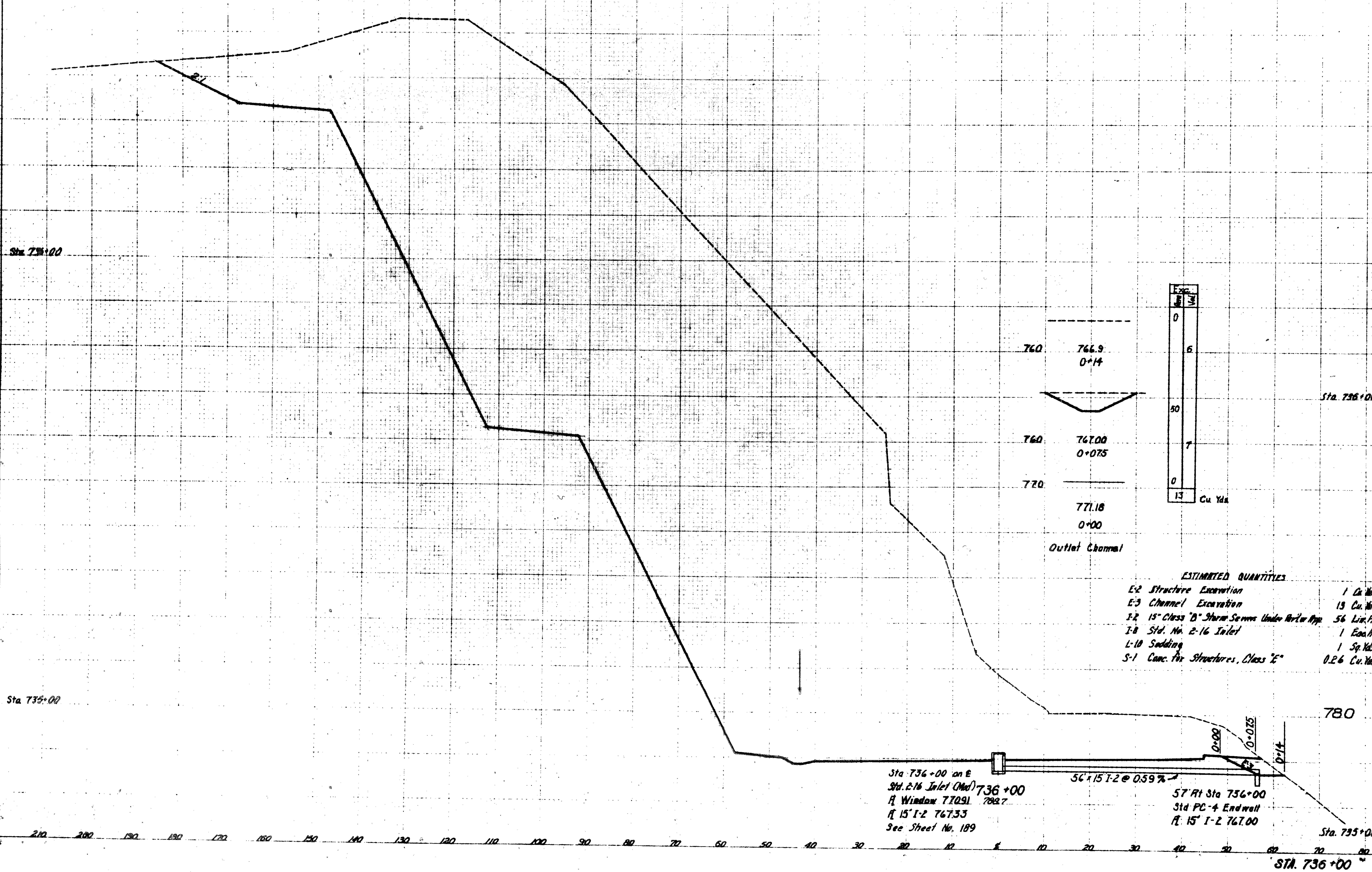
Seeding		
End Width	Sq. Yd.	
51		Sta. 735+00
	599	
55		Sta. 734+00



	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta. 735+00	1105.0	0		
			4229.7	0
Sta. 734+00	1179.0	0		

JEFFERSON COUNTY
JEF. 7-1353

Seeding	
End Width	Sq. Yd.
4.3	
	522
5.1	



Exc.	
Area	Vol.
0	
	6
50	
	7
0	
13	Cu. Yds.

ESTIMATED QUANTITIES

E-2	Structure Excavation	1 Cu. Yds.
E-3	Channel Excavation	13 Cu. Yds.
I-2	15" Class "B" Storm Sewers Under Pavt. or App.	56 Lin. Ft.
I-8	Std. No. 2-16 Inlet	1 Each
L-10	Sodding	1 Sq. Yds.
S-1	Conc. for Structures, Class "E"	0.26 Cu. Yds.

	End Area Cut	End Area Fill	Volume Cut	Volume Fill
Sta. 736+00	11,560	0		
			11,870	0
Sta. 735+00	11,050	0		

2	OHIO	U-430(14)

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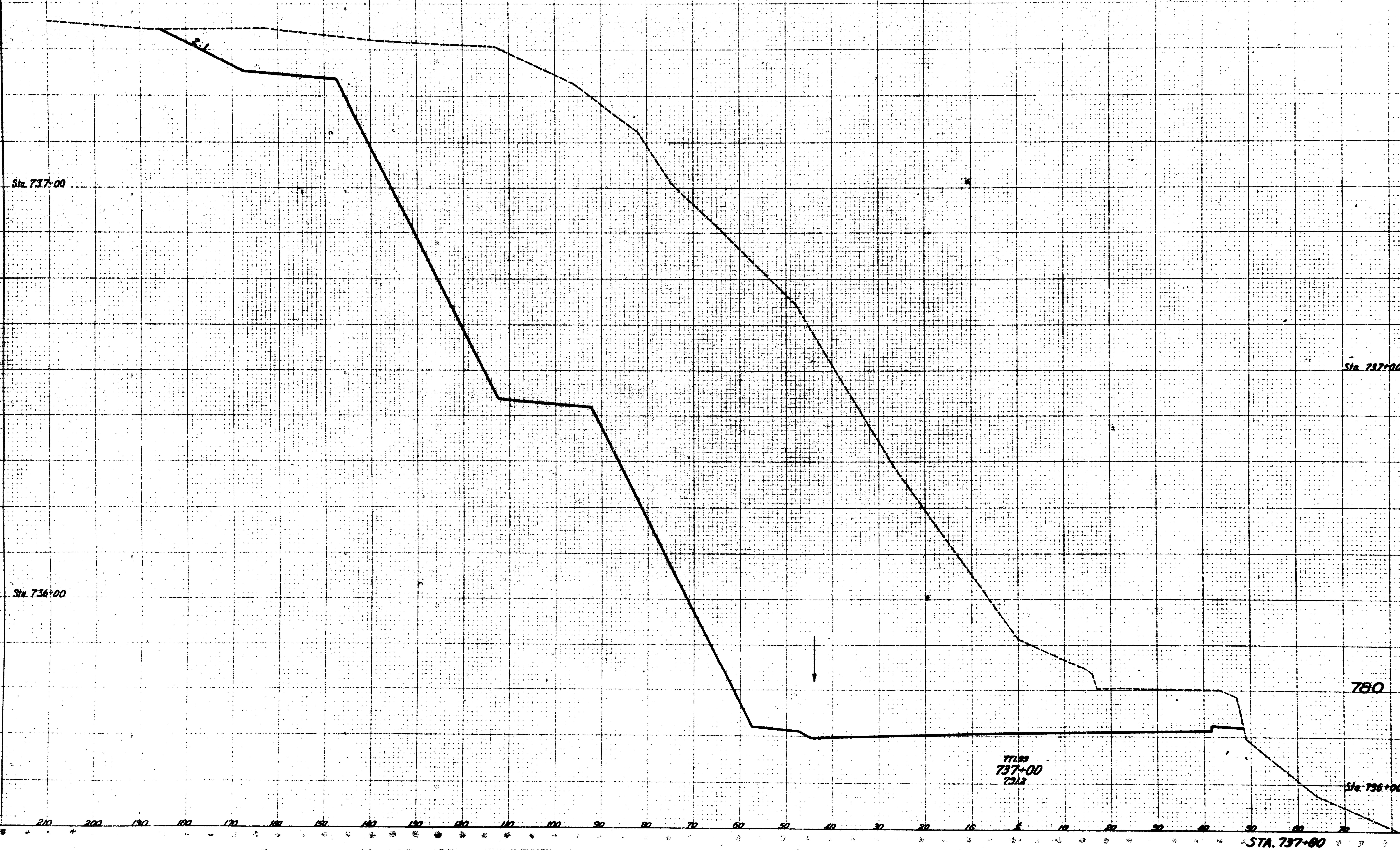
307

JEFFERSON COUNTY
JEF-7-13.53

Seeding	
End	Sq. Yd.
.44	
.43	



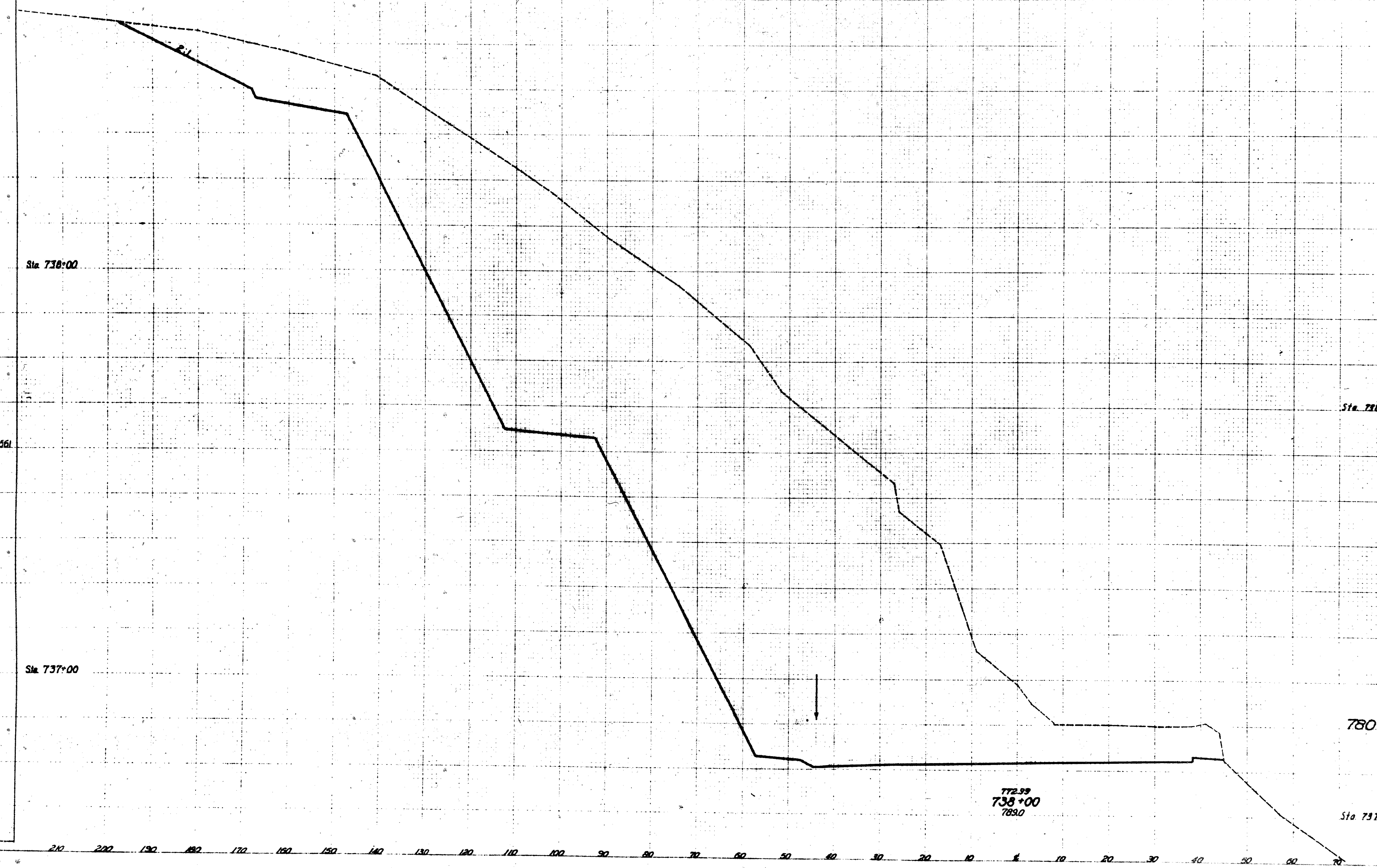
End Area		Volume	
Cut	Fill	Cut	Fill

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

97/307

JEFFERSON COUNTY
JEF-7-13.53

	Seeding	
	End Width	Sq. Yd.
Sta. 738+00	57	
		561
Sta. 737+00	44	



STA. 738+00

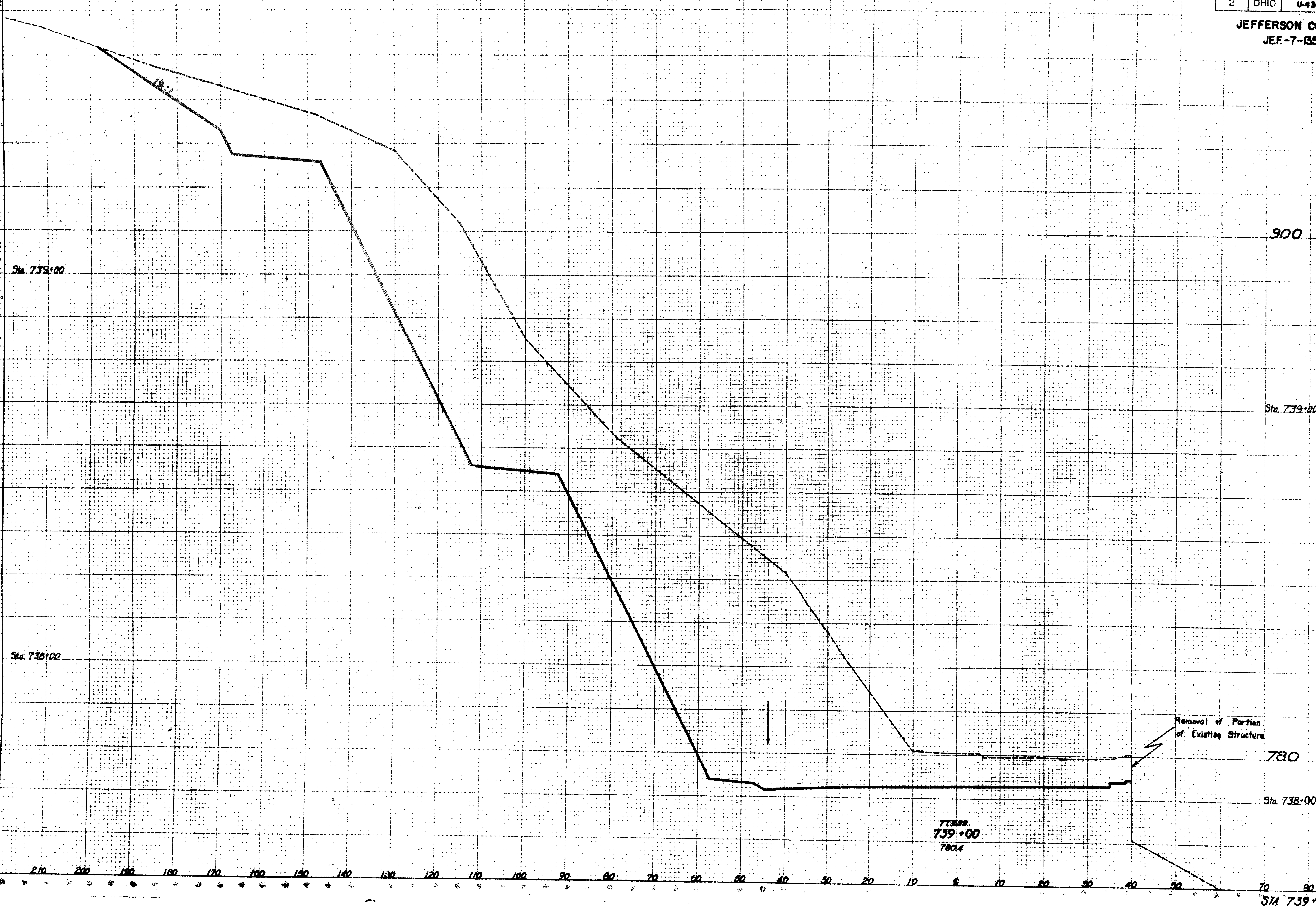
	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta. 738+00	8790	0		
			35,147	0
Sta. 737+00	10185	0		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

98 / 307

JEFFERSON COUNTY
JEF.-7-1353

Seeding	
End Width	Sq. Yd.
58	Sta. 739+00
	679
57	Sta. 738+00



	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta. 739+00	[illegible]	0		
			[illegible]	0
Sta. 738+00	8790	0		


FED RD DIVISION
STATE
2
OHIO
U-430 (14)
99
307
JEFFERSON COUNTY
JEF.-7-1353
Seeding
End Width
Sq yd
Sta 739+30
Sta 739+00
End Area
Volume
Cut
Fill
Cut
Fill
300
Pay Line C-1
Pay Line C-9
54' Lt Sta 739+33
Std PC-1 Endwall
24" S-27 760±00
See Culvert Section
Sheet No 102
Sta 739+30
3550
0
0
Removal of Portion
of Existing Structure
780
774.29
739+30
782.7
Sta 739+00
4005
0
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
10
20
30
40
50
60
STA. 739+30

FED RD DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

100/307

JEFFERSON COUNTY

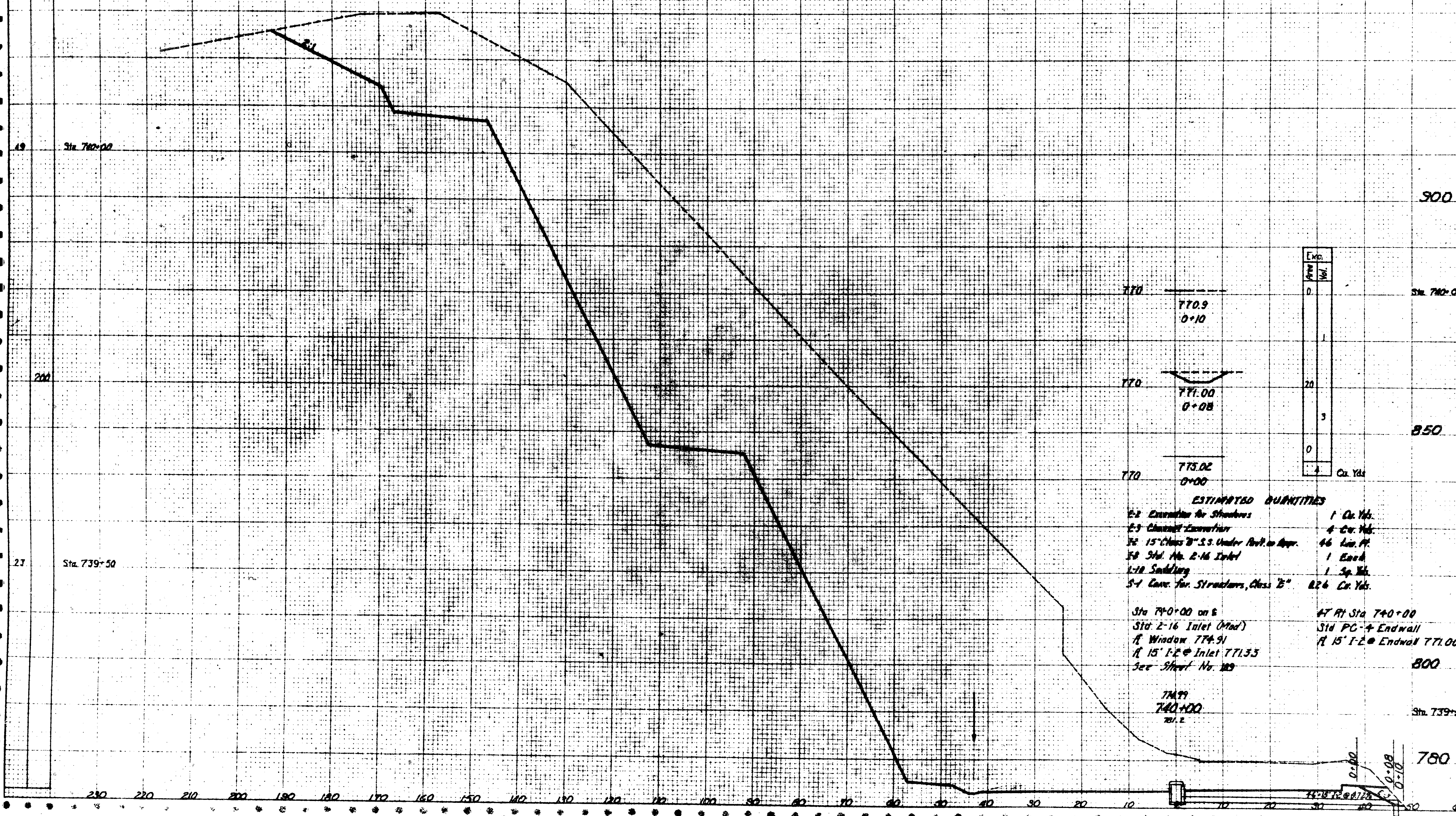
JEF.-7-1353

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

101/307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding	
End Width	Sq. Yd.
49	
	200
27	



ESTIMATED QUANTITIES

E-2 Excavation for Structures	1 Cu. Yds.
E-3 Channel Excavation	4 Cu. Yds.
F-2 15" Class "B" S.S. Under Pavt. or Appr.	46 Lin. Ft.
F-8 Std. No. 2-16 Inlet	1 Each
L-10 Sodding	1 Sq. Yds.
S-1 Conc. for Structures, Class "E"	0.26 Cu. Yds.

Sta 740+00 on ℄
Std 2-16 Inlet (Mod)
℄ Window 774.91
℄ 15" I-Z @ Inlet 771.33
See Sheet No. 109

47' Rt Sta 740+00
Std PC-4 Endwall
℄ 15" I-Z @ Endwall 771.00

	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta. 740+00	2490	0		
			11990	0
Sta. 739+50	4810	0		

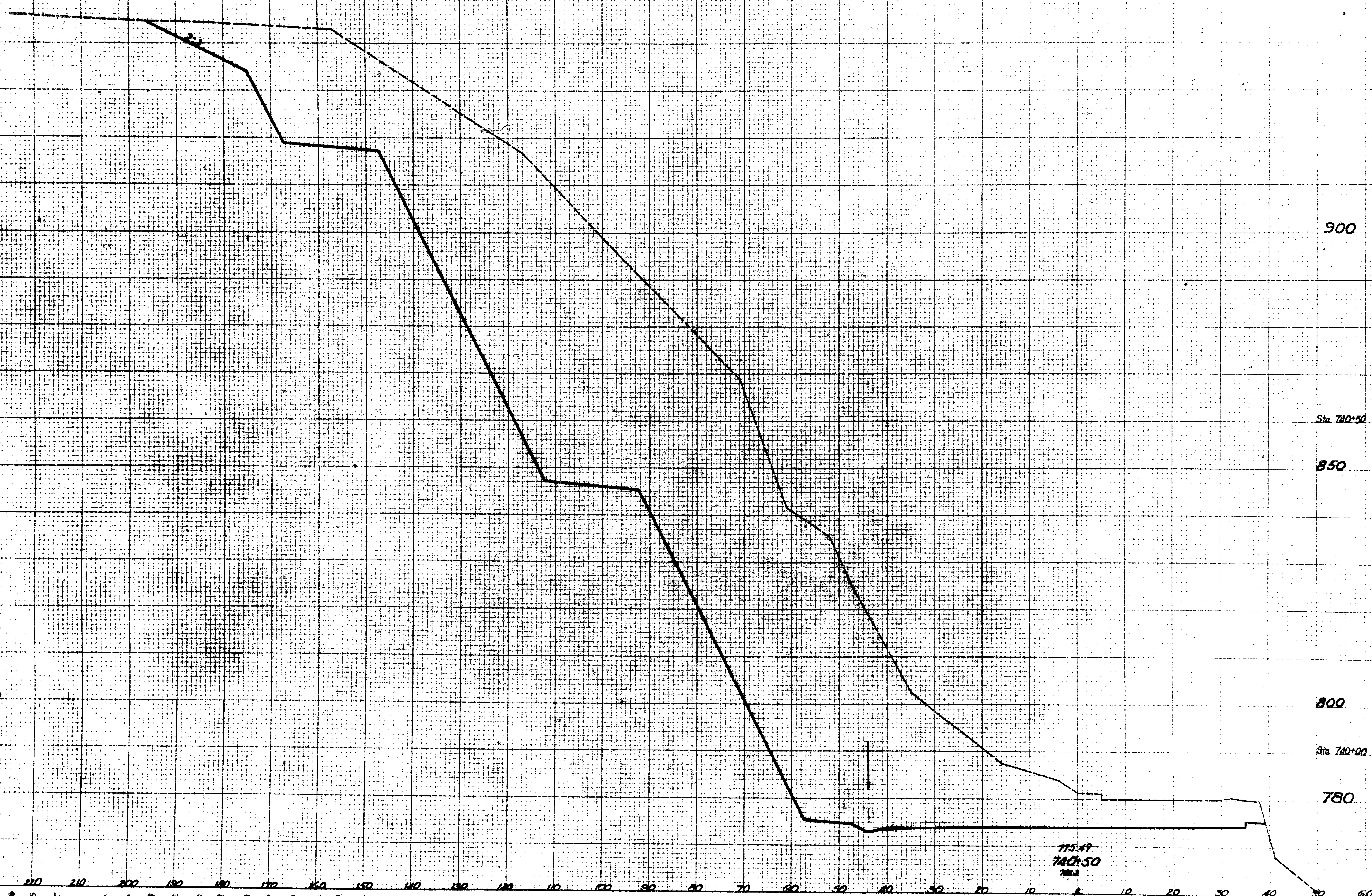
FED. RD. DIVISION	STATE	PROJECT		
2	OHIO	U-430(14)		102/307

JEFFERSON COUNTY
JEF.-7-1353

Seeding	
End Width	Sq. Yd.
47	
	267
49	

Sta. 740+50

Sta. 740+00



	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta. 740+50	7252	0		
			[illegible]	0
Sta. 740+00	7492	0		

STA. 740+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

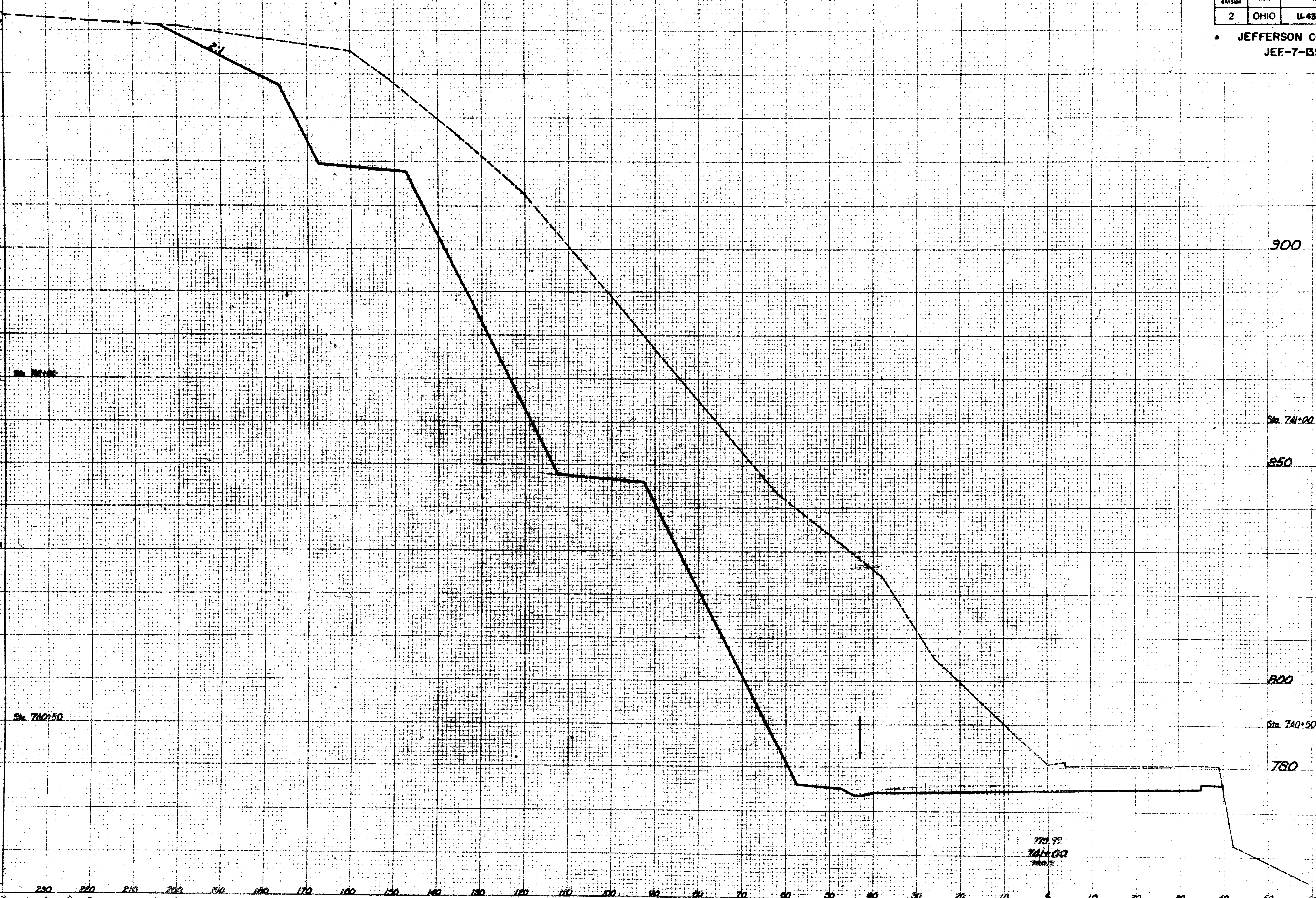
103
307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding	
End Width	Sq. Yd.
44	
	283
47	

Sta. 741+00

Sta. 740+50



STA 741+00

	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta. 741+00	7010	0		
			15,208	0
Sta. 740+50	7252	0		


2
OHIO
U-430(14)
184/307
JEFFERSON COUNTY
JEF.-7-13.53
Seeding
End Area
Volume
Cut
Fill
Cut
Fill
2:1
900
850
800
780
Sta. 741+50
8650 0
14500 0
Sta. 741+00
7010 0
741+50
STA. 741+50

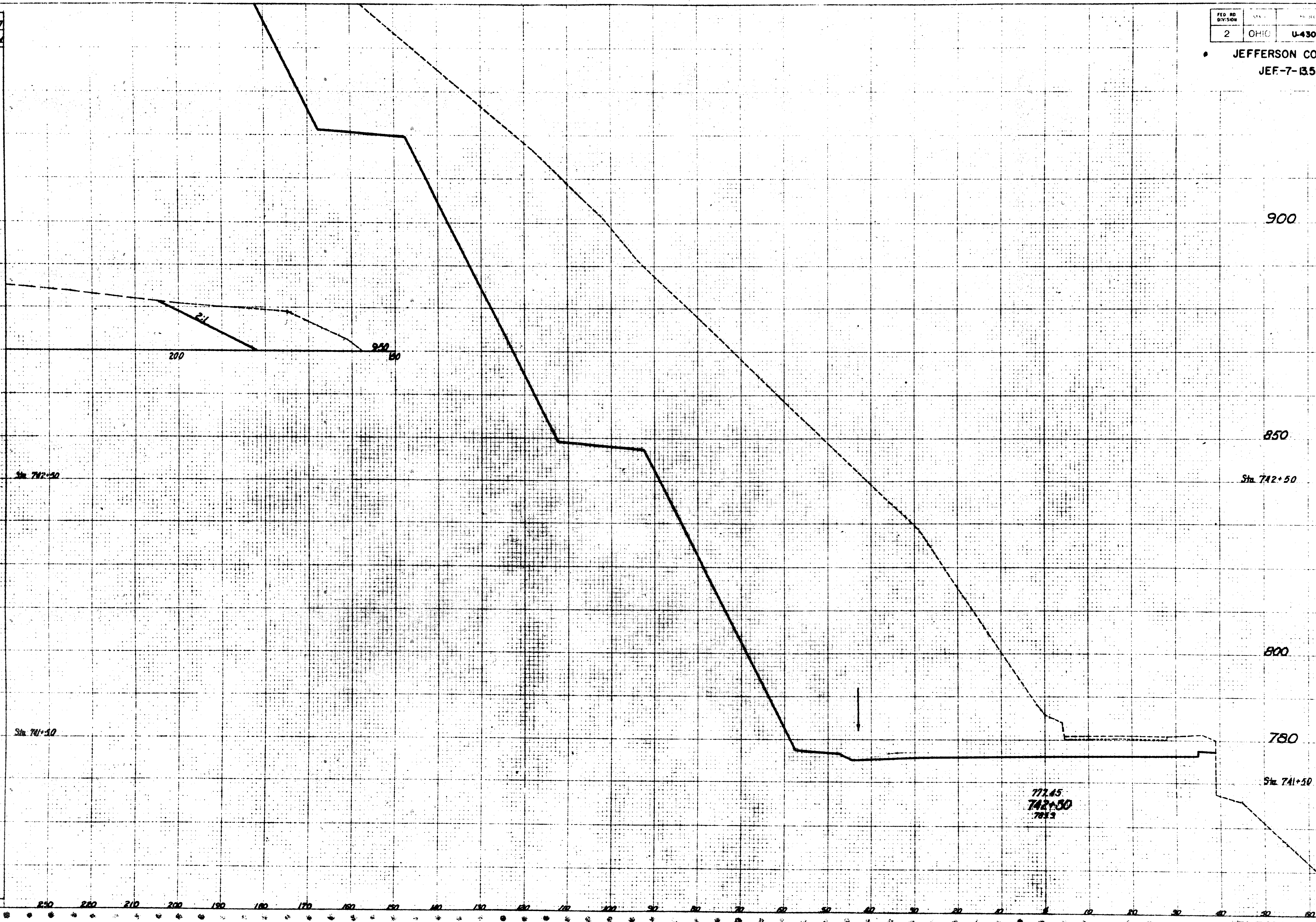
FED RD DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

105 / 307

JEFFERSON COUNTY

JEF.-7-13.53

Seeding		
	End Width	Sq.yd.
Sta. 742+50	49	
		544
Sta. 741+50	49	



	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta. 742+50	8710	0		
			32150	0
Sta. 741+50	8650	0		

FED RD DIVISION
STATE
PROJECT
2
OHIO
U-430(14)
106
307
JEFFERSON COUNTY
JEF-7-1353
Seeding
End Area
Sq yd
End Area
Volume
Cut
Fill
Cut
Fill
2:1
2:1
900
54
Sta 743+15
Sta 743+15
7620
0
318
19656
0
49
Sta 742+50
Sta 742+50
8710
0
780
777.91
743+15
STA 743+15

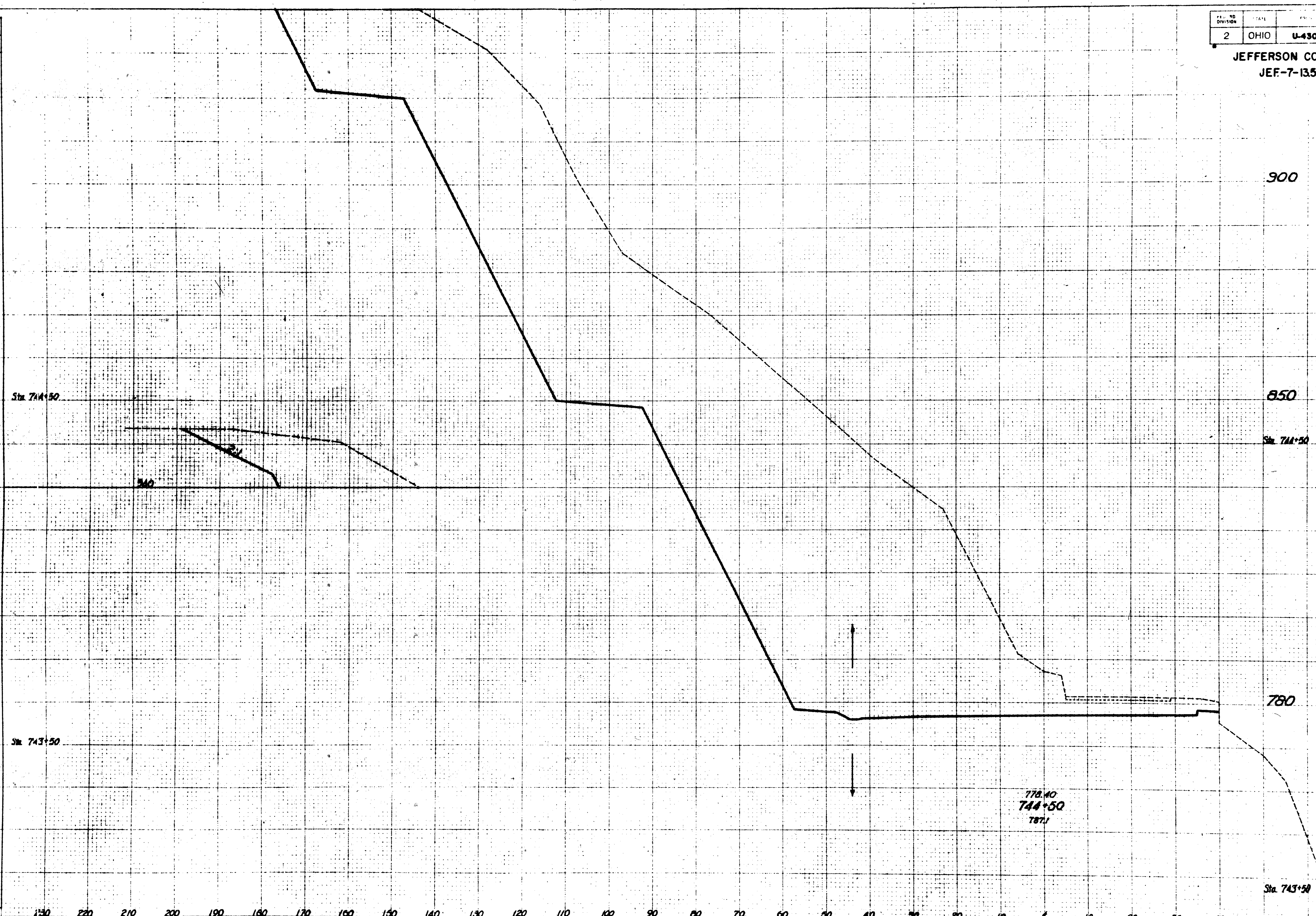
FED RD DIVISION
2
OHIO
U-430(14)
107
307
JEFFERSON COUNTY
JEF-7-13.53
Seeding
End Width
Sq. yd.
End Area
Volume
Cut
Fill
Cut
Fill
950
900
850
780
960
2:1
2:1
65
Sta. 743+50
Sta. 743+50
8540 0
231
51
Sta. 743+15
Sta. 743+15
7620 0
778.10
743+50
786.7
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
10
20
30
40
50
60
STA. 743+50

DIVISION	STATE	PROJECT
2	OHIO	U-430(14)

108
307

JEFFERSON COUNTY
JEF-7-13.53

Seeding		
	End Width	Sq yd
Sta. 744+50	47	
		622
Sta. 743+50	65	



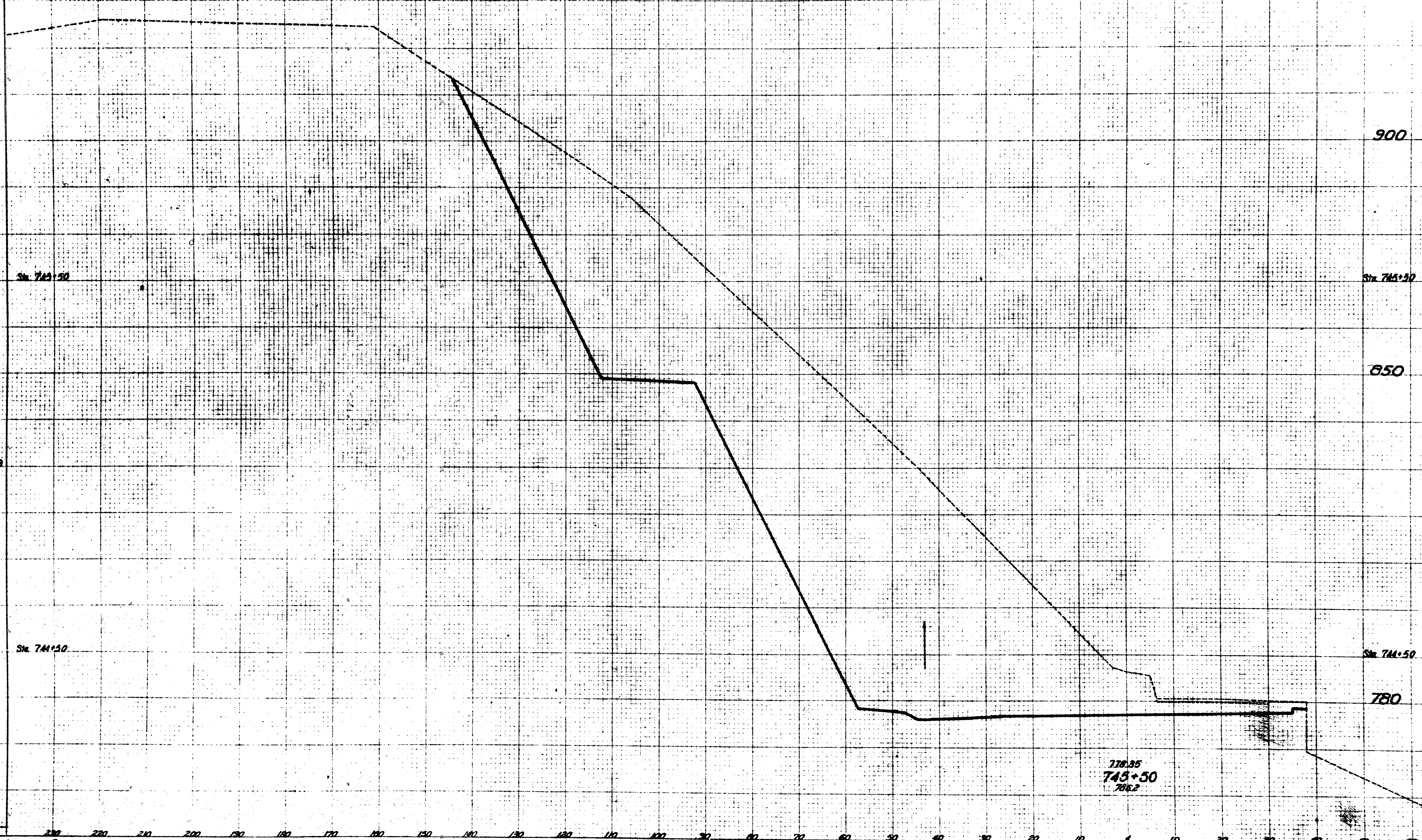
	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta. 744+50	8190	0		
			31,020	0
Sta. 743+50	8560	0		

FED RD DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

109/307

JEFFERSON COUNTY
JEF-7-13.53

Seeding		
End Width	Sq.yd	
23		Sta. 745+50
	309	
47		Sta. 744+50



	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta. 745+50	5315	0		
			25010	0
Sta. 744+50	8190	0		

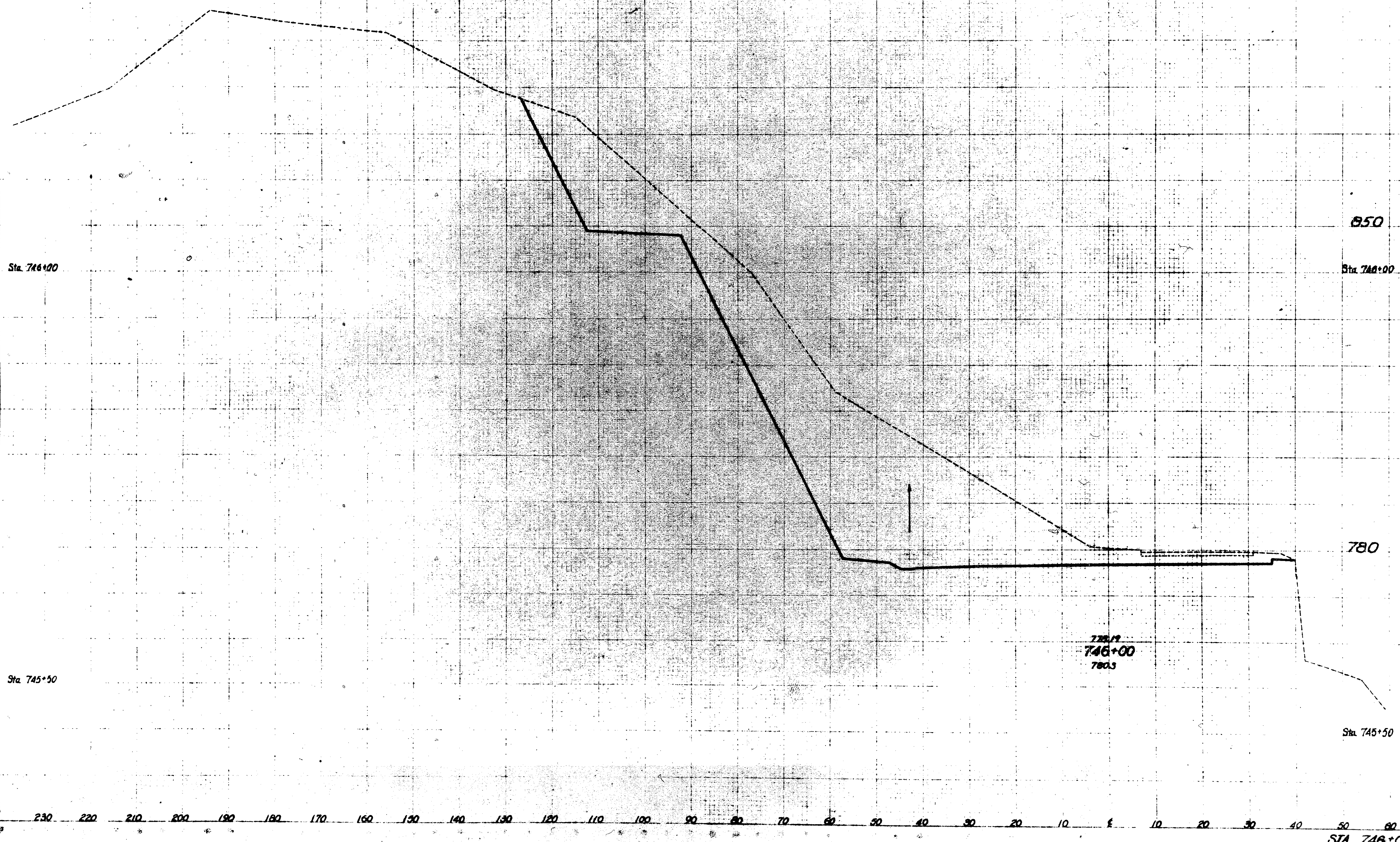
STA. 745+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

110
307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding End Width	Sq. yd.	Station
23		Sta. 746+00
	128	
23		Sta. 745+50



Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
Sta. 746+00	2495	0		
			7292	0
Sta. 745+50	5315	0		

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	U-430(14)

111
307

JEFFERSON COUNTY
JEF.-7-13.53

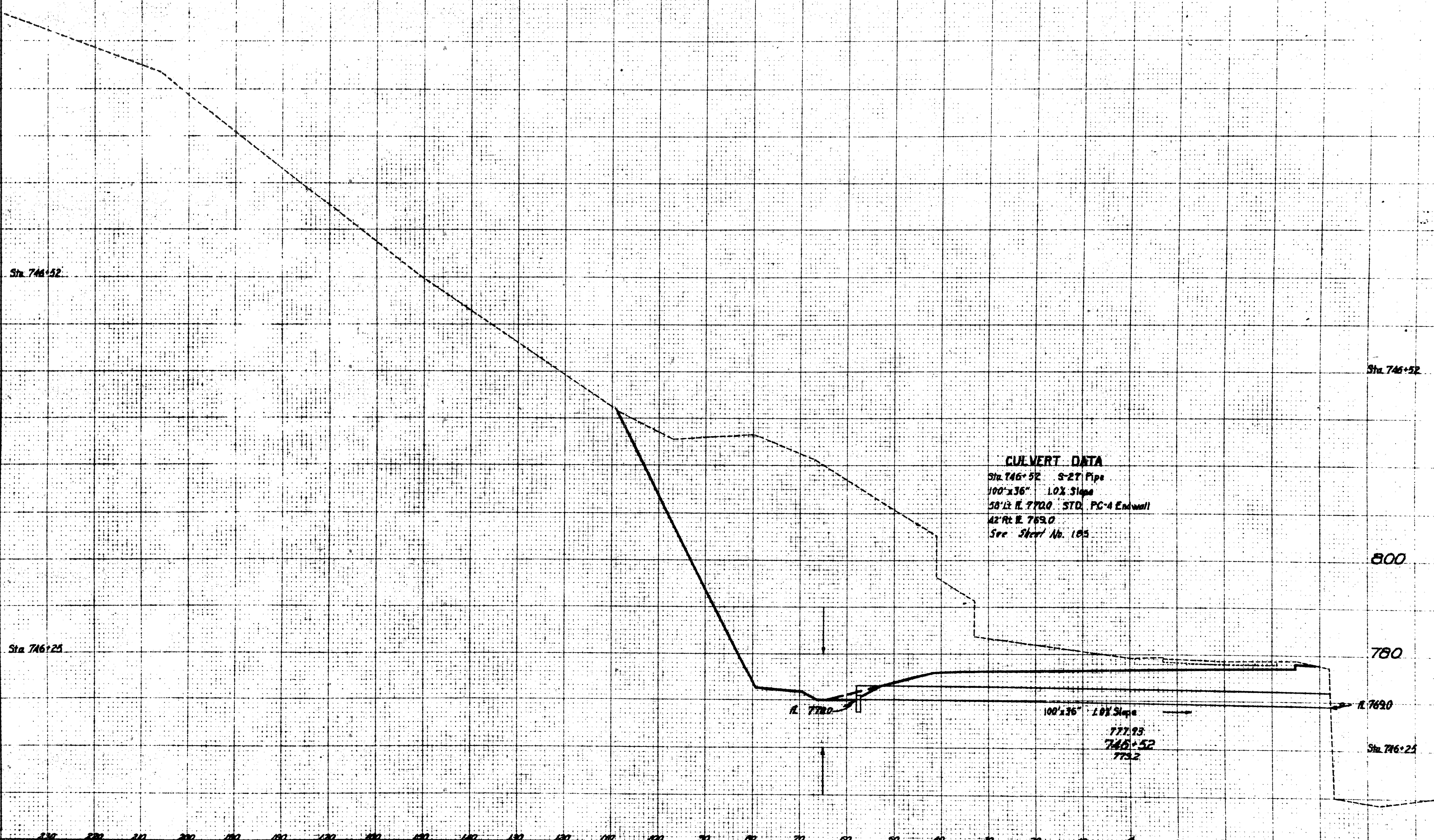
2 OHIO U 430(14)

112
307

JEFFERSON COUNTY

JEF-7-13.53

Seeding End Width	Seeding S.Y.	
23		Sta. 746+52
	69	
23		Sta. 746+25



	End Area Cut	End Area Fill	Volume Cut	Volume Fill
Sta. 746+52	2855	0		
			2,557	0
Sta. 746+25	[illegible]60	0		

STA. 746+52

Seeding
End Width
Sq. Yd.
2
OHIO
U-430(14)
113
307
JEFFERSON COUNTY
JEF-7-13.53
End Area
Volume
Cut
Fill
Cut
Fill
Sta. 746+72
2870
0
850
2120
0
780
Sta. 746+52
2855
0
23
Sta. 747+20
72
23
Sta. 746+72
51
23
Sta. 746+52
4:1
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
STA. 746+72

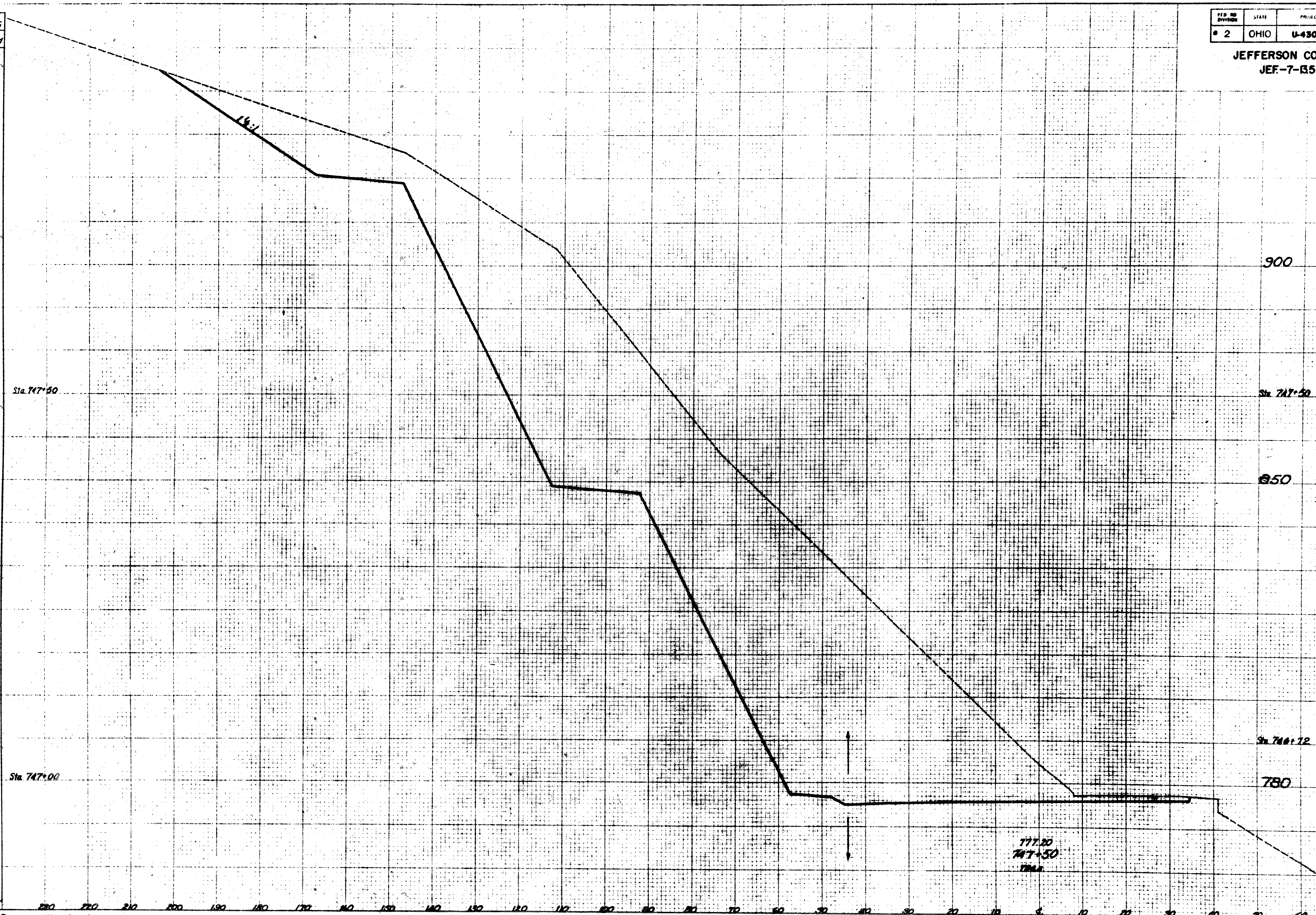
FED RD DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

114/307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding		
End Width	Sq Yd	
67		Sta. 747+50
	250	
23		Sta. 747+00

	End Area Cut	End Area Fill	Volume Cut	Volume Fill
Sta. 747+50	6350	0		
			12316	0
Sta. 746+72	2870	0		



STA. 747+50


FED RD DIVISION 2
STATE OHIO
PROJECT U-430(14)
115
307
JEFFERSON COUNTY
JEF-7-1353
Seeding
End Width
Sq Yd
69
Sta. 748+39.96
680
67
Sta. 747+50
End Area
Volume
Cut
Fill
Cut
Fill
Sta. 748+39.96 7605 2
22915 1
Sta. 747+50 6350 0
2:1
900
850
780
748+39.96
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60

STA. 748+39.86

FED RD DIVISION	STATE	PROJECT		
2	OHIO	U-430(14)		116/307

JEFFERSON COUNTY
JEF-7-13.53

2
OHIO
U-430(14)
117
307
JEFFERSON COUNTY
JEF-7-13.53
Seeding
End Width
Sq. Yd
85
Sta. 749+50
55
Sta. 749+00
970
2:1
2:1
900
850
780
End Area
Volume
Cut
Fill
Cut
Fill
Sta. 749+50
7375
0
0
Sta. 749+00
8020
0
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
STA. 749+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

118/307

JEFFERSON COUNTY
JEF.-7-1353

FED. RD. DIVISION
STATE
PROJECT
2
OHIO
U-430(14)
119
307
JEFFERSON COUNTY
JEF.-7-1353
End Area
Volume
Cut
Fill
Cut
Fill
Seeding
End Width
Sq. Yd.
Sta. 750+39.96
Sta. 750+00
1000
980
960
250
200
160
900
850
780
773.04
750+39.96
STA. 750+39.96

FED RD DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

120
307

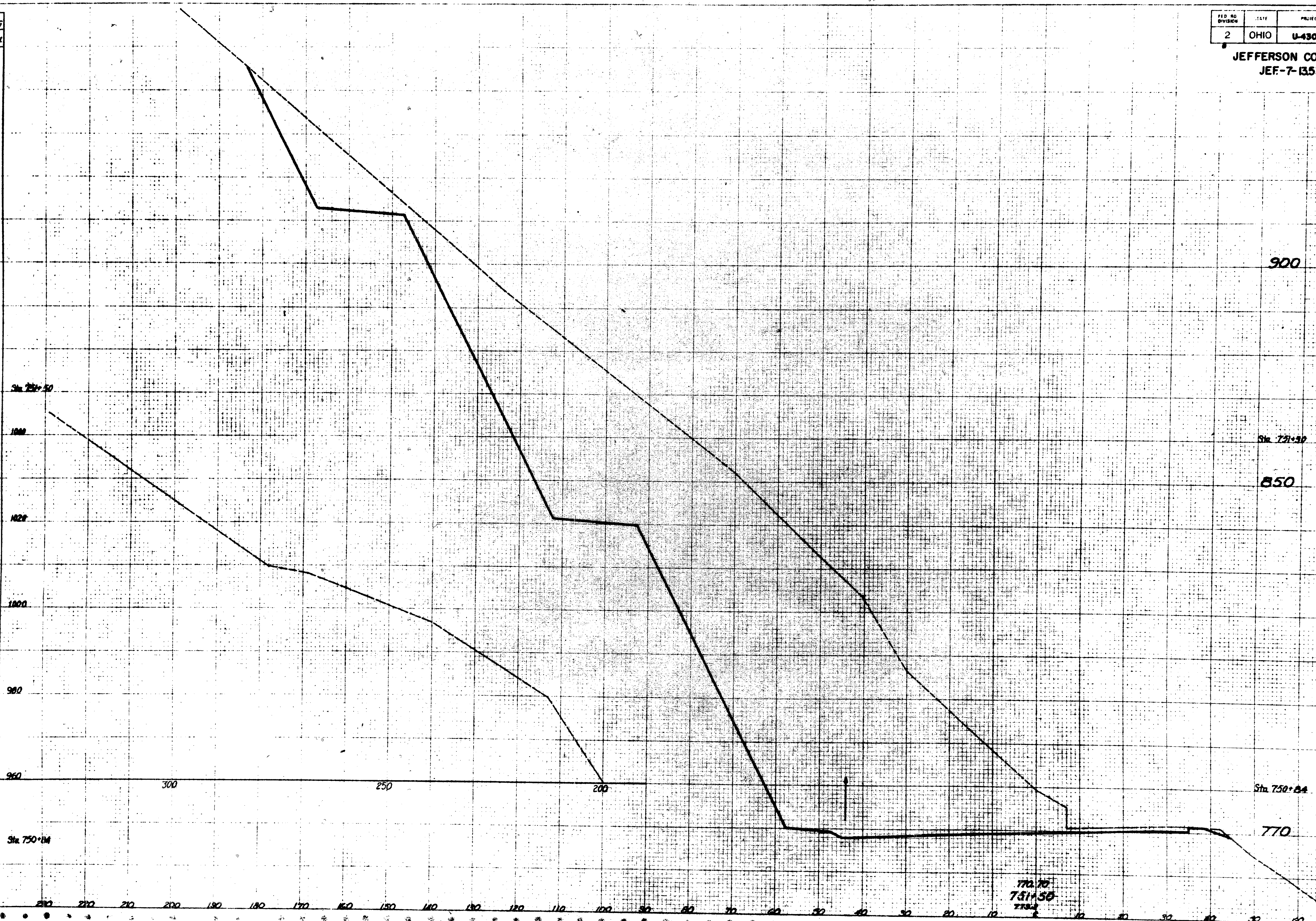
JEFFERSON COUNTY
JEF-7-13.53

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

121/307

JEFFERSON COUNTY
JEF-7-1353

Seeding	
End Area	Sq. Yd.
23	
	169
23	



End Area		Volume	
Cut	Fill	Cut	Fill
6890	0		
		16,698	2
5576	2		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

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307

JEFFERSON COUNTY
JEF.-7-1353


FED. RD. DIVISION
STATE
PROJECT
2
OHIO
U-430 (14)
123
307
JEFFERSON COUNTY
JEF-7-13.53
Seeding
End Area
Sq. Yd.
End Area
Volume
Cut
Fill
Cut
Fill
25
256
25
1060
Sta. 753+00
1040
1020
1000
980
960
Sta. 752+00
900
850
770
Sta. 753+00
Sta. 752+00
310
300
250
STA. 753+80

FED. RD. DIVISION	STATE	
2	OHIO	U-430 (14)

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307

JEFFERSON COUNTY
JEF-7-13.53

2 OHIO U-430 (14)

125
307

JEFFERSON COUNTY
JEF-7-1353

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	U-430 (14)

126
307

JEFFERSON COUNTY
JEF.-7-13.53

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	U-430 (14)

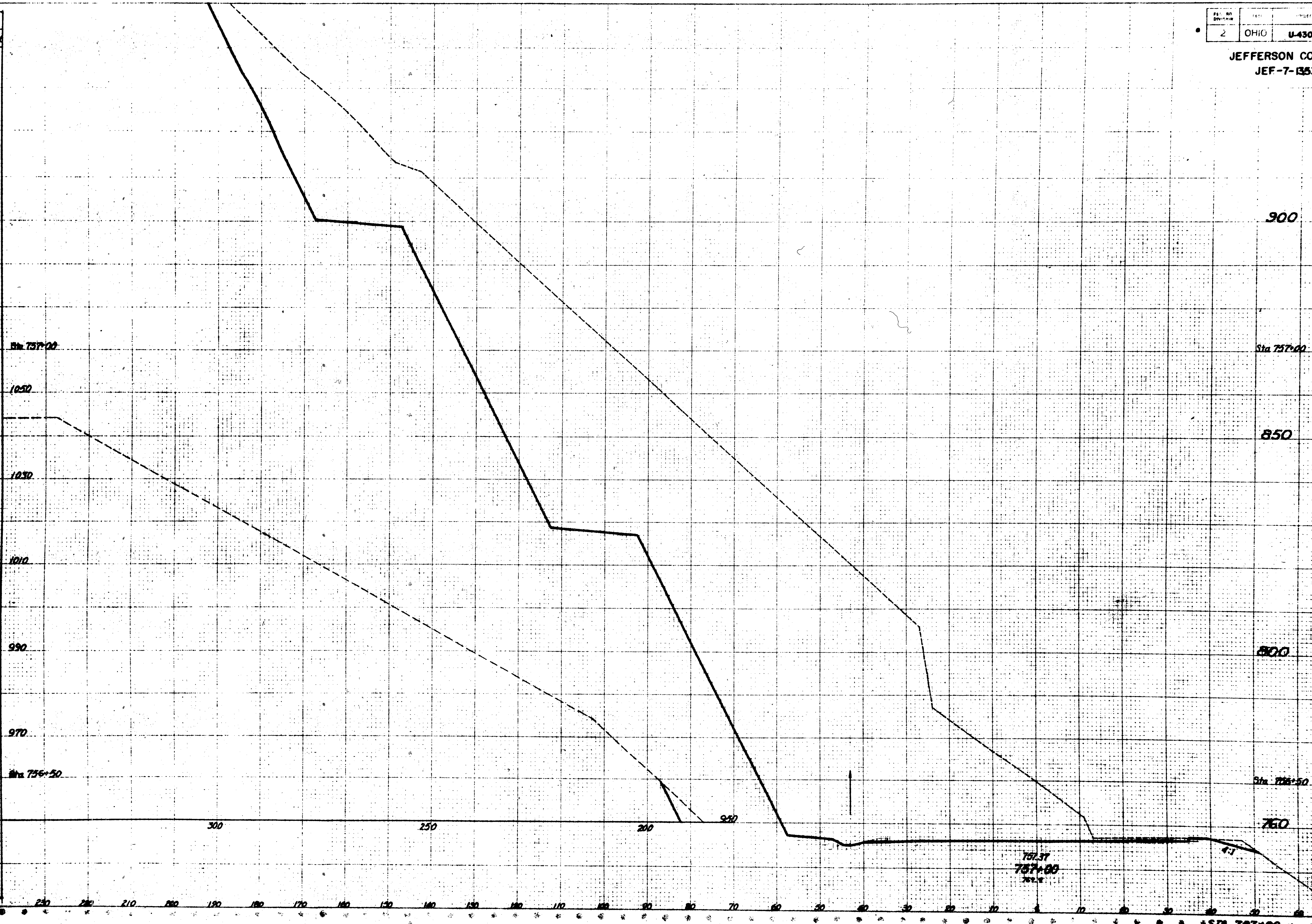
127
307

JEFFERSON COUNTY
JEF-7-1353

2	OHIO	U-430 (14)	128 / 307

JEFFERSON COUNTY
JEF-7-1353

Seeding	
End Width	Sq. Yds.
23	
	128
23	



End Area		Volume	
Cut	Fill	Cut	Fill
Sta 757+00 [illegible]	0		
		[illegible]	0
Sta 756+50 [illegible]	0		

2	OHIO	430 (14)	129/307

JEFFERSON COUNTY
JEF-7-13.53

2	OHIO	U-430(14)	130/307

JEFFERSON COUNTY
JEF-7-1353

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-630(14)	

131/307

JEFFERSON COUNTY
JEF.-7-1353

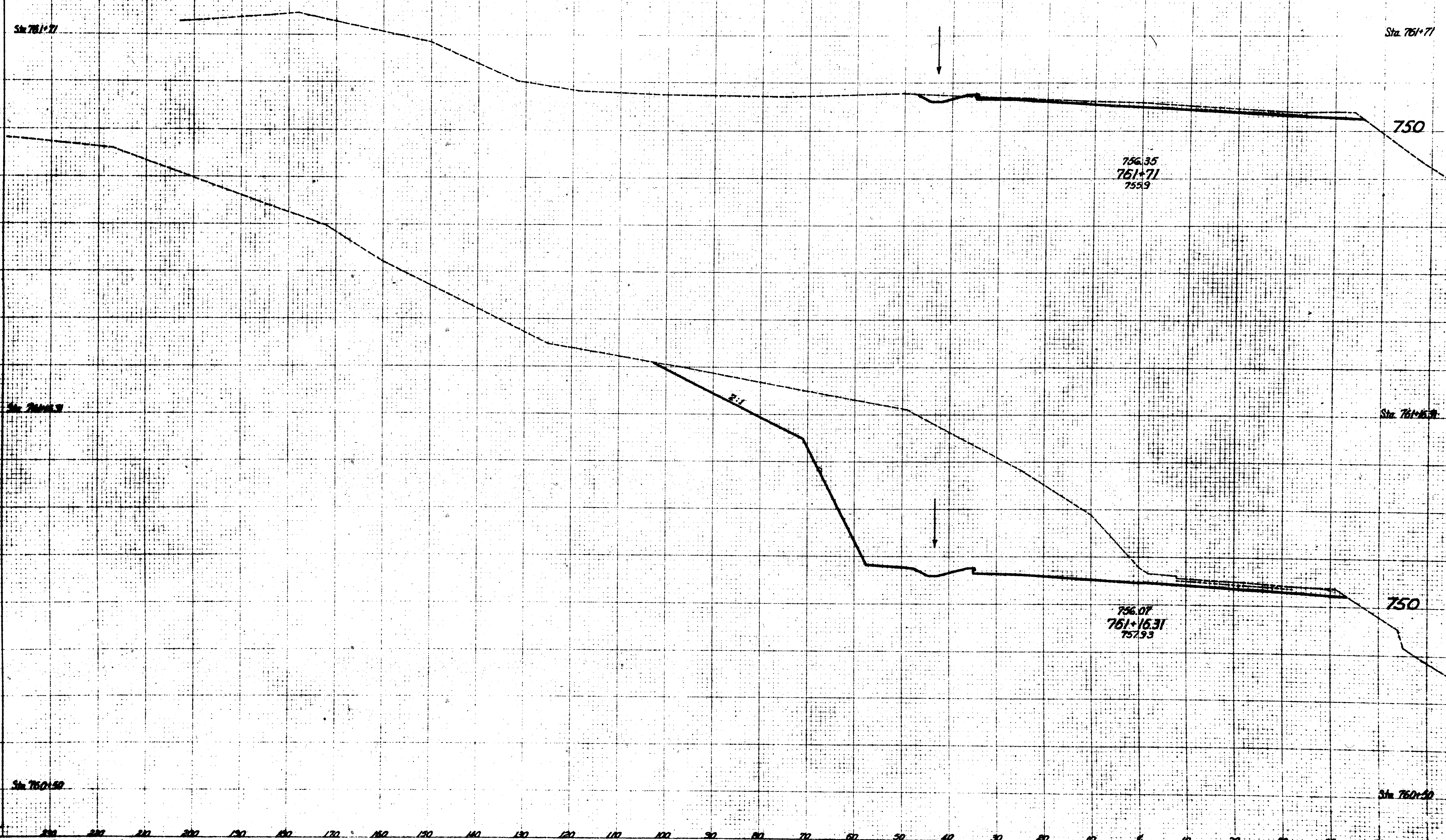
2
OHIO
JEFFERSON COUNTY
JEF.-7-13.53
132/307
Seeding
End Area
Sq. Yd.
256
End Area
Volume
Cut
Fill
900
850
800
760
Sta. 759+50
755.74
760+50
762.2
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
10
20
30
40
50
STA. 760+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430 (14)	

133/307

JEFFERSON COUNTY
JEF.-7-1353

Seeding	
End Width	Sq. yd.
25	
	251
30	
	302
28	



Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
Sta. 761+71	65	1		
			1960	1
Sta. 761+16.31	1870	0		
			7084	0
Sta. 760+50	1550	0		

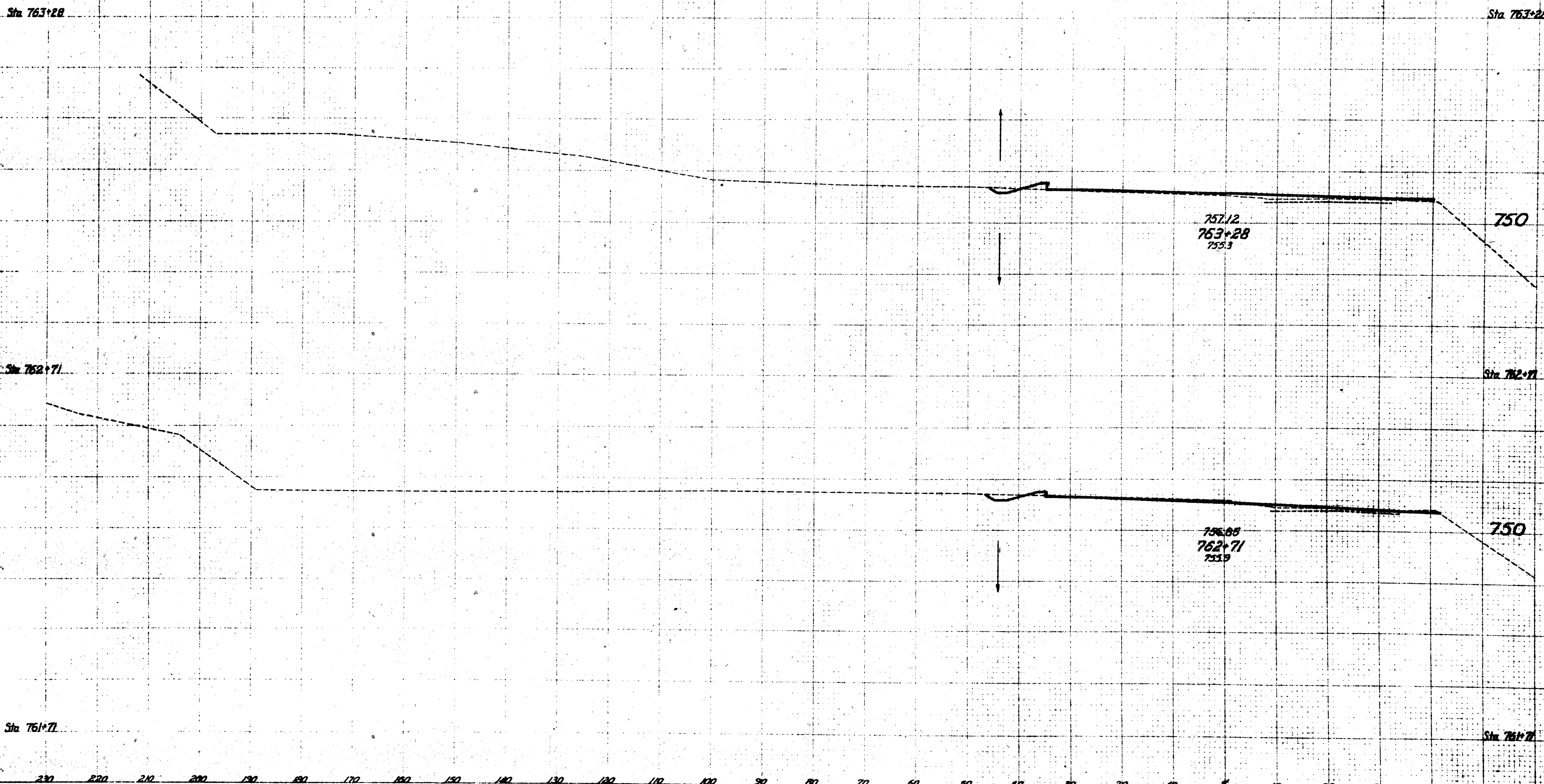
STA. 761+16.31 TO STA. 761+71

FED. RD. DIVISION			
2	OHIO	U-430 (14)	

134/307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding	
End Width	Sq.yd.
23	
	146
23	
	256
23	



Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
Sta 763+28	5	10		
			21	55
Sta 762+71	15	12		
			118	24
Sta 761+71	65	1		

STA. 762+71 to STA. 763+28

FED RD DIVISION	STATE	PROJECT		135/307
2	OHIO	U-430(14)		

JEFFERSON COUNTY
JEF.-7-13.53

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

136/307

JEFFERSON COUNTY

JEF.-7-13.53

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

JEFFERSON COUNTY
JEF-7-13.53

Seeding	
End Width	Sq. Yd.

End Area		Volume	
Cut	Fill	Cut	Fill

STA. 764+80.05

FED RD DIVISION
STATE
PROJECT
2
OHIO
U-430(14)
138
307
JEFFERSON COUNTY
JEF-7-13.53
Seeding
End Width
Sq. Yd.
End Area
Volume
Cut
Fill
Cut
Fill
Sta. 766+00.05
Sta. 764+80.05
Sta. 766+00.05
Sta. 764+80.05
2:1
940
930
850
800
760
300
250
757.37
766+00.05
STA. 766+00.05

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

139/307

JEFFERSON COUNTY
JEF-7-13.53

End Area		Volume	
Cut	Fill	Cut	Fill

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

140/307

JEFFERSON COUNTY
JEF-7-1353

FED RD DIVISION	STATE	PROJECT	
2	OHIO	U-430 (14)	141/307

JEFFERSON COUNTY
JEF-7-13.53

JEFFERSON COUNTY
JEF.-7-13.53

ESTIMATED QUANTITIES

E-2	Excavation for Structures	1	Cu. Yds.
E-3	Channel Excavation	16	Cu. Yds.
F-2	15" Class "B" S.S. Under Pav't. or App.	56	Lin. Ft.
F-8	Std. No. 2-12 Inlet	1	Each
L-10	Sodding	1	Sq. Yds.
S-1	Conc. for Struct., Class "E"	0.26	Cu. Yds.

2	OHIO	U-450 (14)	

JEFFERSON COUNTY
JEF.-7-13.53

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

144
307

JEFFERSON COUNTY
JEF-7-13.53

FED. RD. DIVISION	STATE		
2	OHIO	U 430 (14)	

145
307

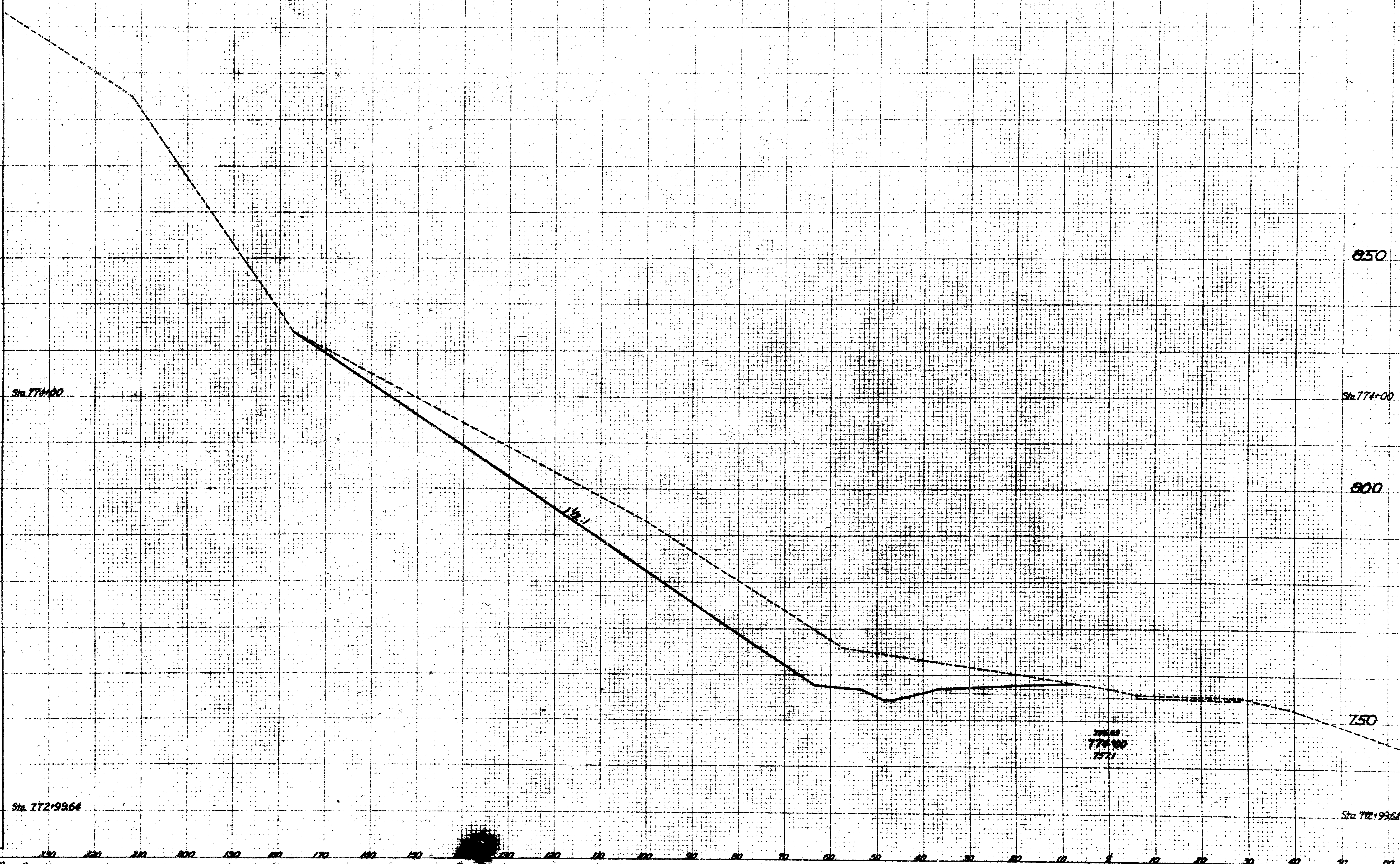
JEFFERSON COUNTY
JEF.-7-13.53

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U 450 (14)	

146/307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding	
End Width	Sq. Yd.
105	
	2007
155	



End Area		Volume	
Cut	Fill	Cut	Fill
1105	0		
		3724	0
840	0		

FED RD DIVISION	STATE	PROJECT	
2	OHIO	U 430	

147/307

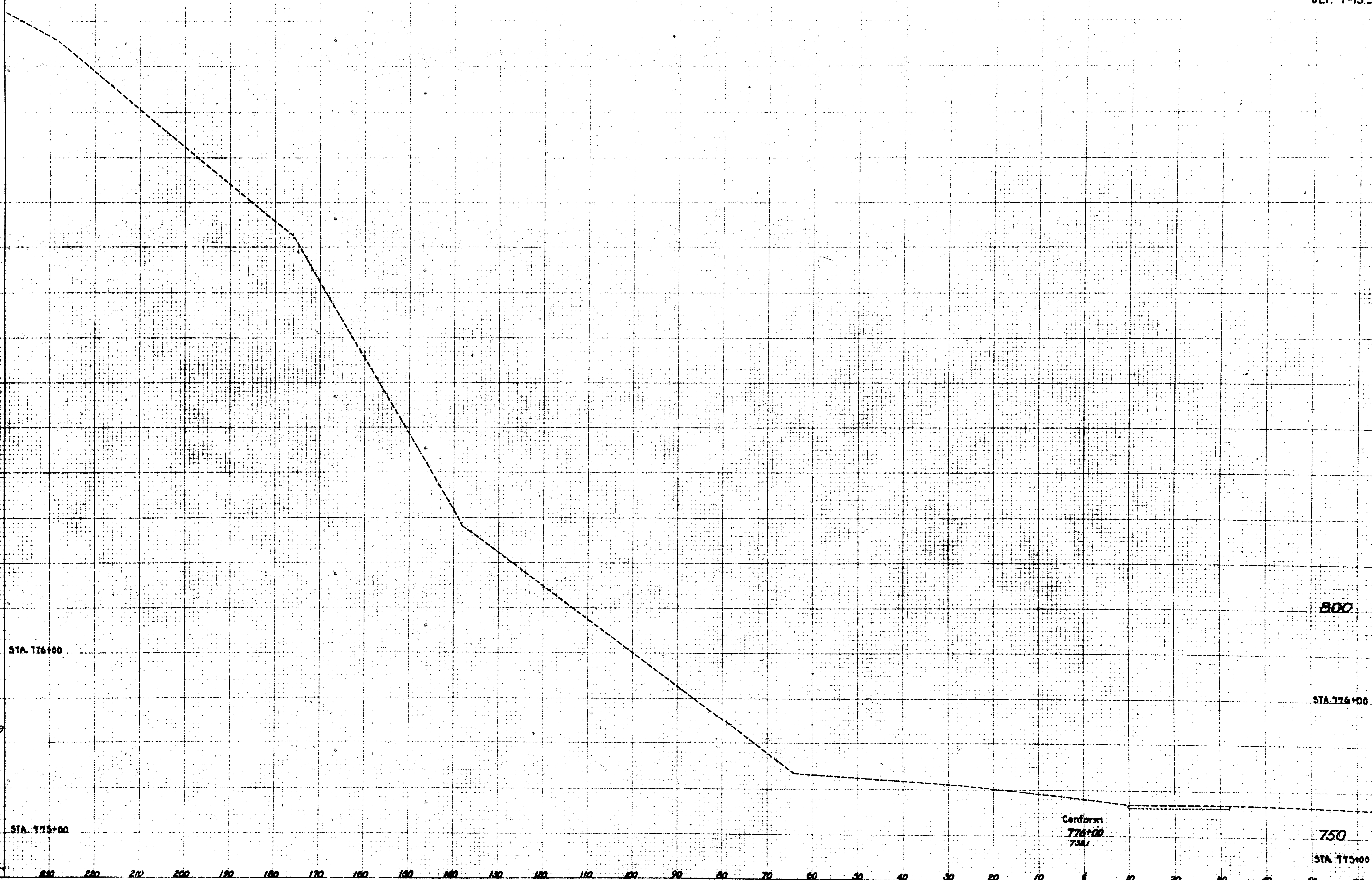
JEFFERSON COUNTY
JEF.-7-13.58

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO	U 430		148/307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding	
End Width	Sq. yd.
0	
	889
100	

STA. 776+00
STA. 775+00

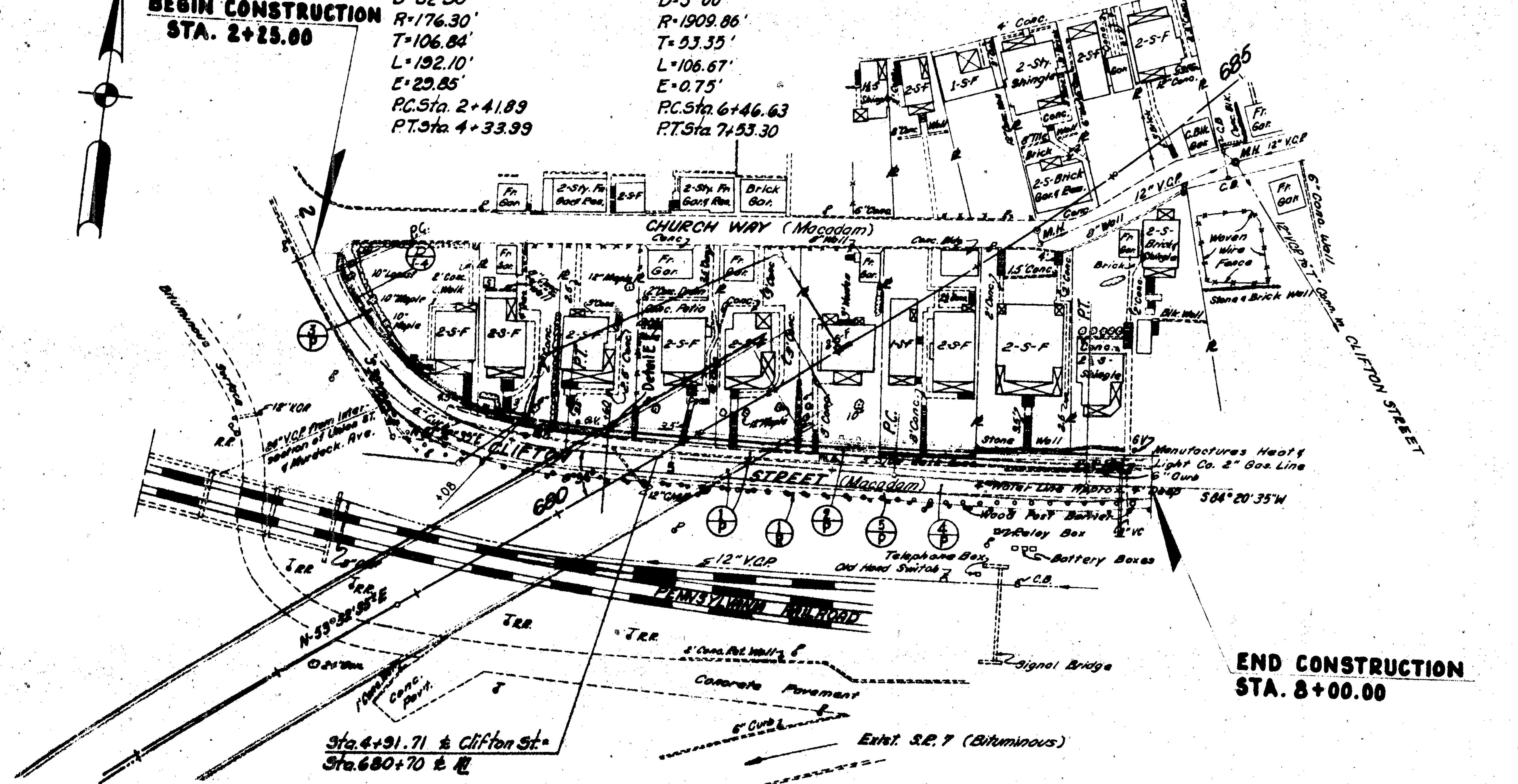


	End Area		Volume	
	Cut	Fill	Cut	Fill
STA. 776+00	0	0		
			3972	0
STA. 775+00	2145	0		

CURVE DATA
P.I. Sta. 3+48.73
Δ=62°26'00" Lt.
D=32°30'
R=176.30'
T=106.84'
L=192.10'
E=29.85'
P.C. Sta. 2+41.89
P.T. Sta. 4+33.99

CURVE DATA
P.I. Sta. 6+99.98
Δ=3°12'00" Lt.
D=3°00'
R=1909.86'
T=53.35'
L=106.67'
E=0.75'
P.C. Sta. 6+46.63
P.T. Sta. 7+53.30

BEGIN CONSTRUCTION STA. 2+25.00

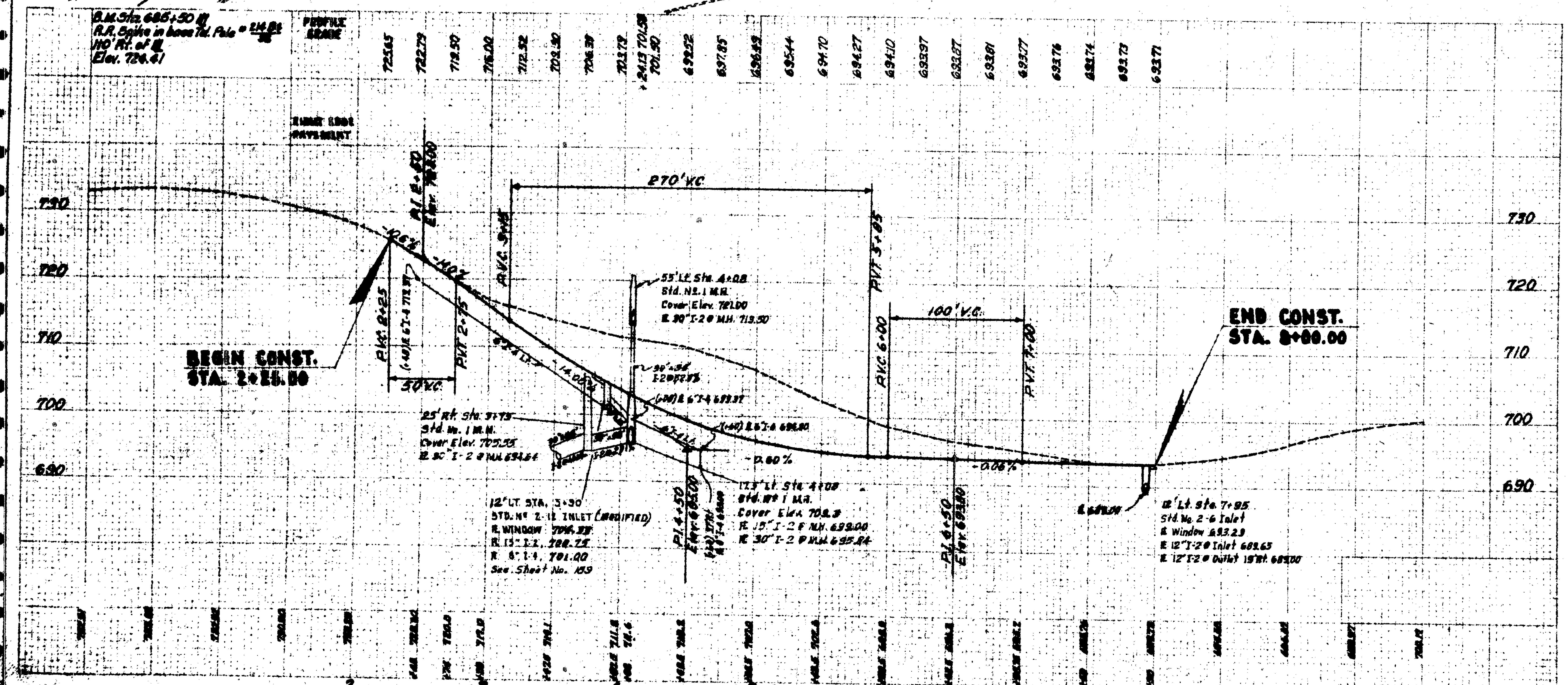


END CONSTRUCTION STA. 8+00.00

EDGE OF PAVEMENT ELEVATIONS

STATION	LEFT EDGE	RIGHT EDGE
P.V.C. 2+25.00	725.49	725.49
P.V.I. 2+50.00	722.63	722.67
P.V.T. 2+75.00	719.34	719.49
3+00.00	715.84	716.10
P.V.C. 3+15.00	713.74	714.04
+25	712.36	712.67
+50	709.14	709.46
+75	706.23	706.55
4+00.00	703.63	703.95
+24.13	701.43	701.73
+25	701.35	701.65
P.V.I. 4+50.00	699.44	699.60
+75	697.89	697.81
5+00.00	696.62	696.36
+25	695.60	695.28
+50	694.86	694.54
+75	694.43	694.11
P.V.T. 5+85.00	694.35	694.03
P.V.C. 6+00.00	694.26	693.94
+25	694.13	693.81
P.V.I. 6+50.00	694.03	693.71
+75	693.97	693.65
P.V.T. 7+00.00	693.93	693.61
+25	693.92	693.60
+50	693.90	693.58
+75	693.89	693.57
7+99.00	Conform	Conform

NOTE: 1. For Drainage Quantities not shown see Sheet No. 14.



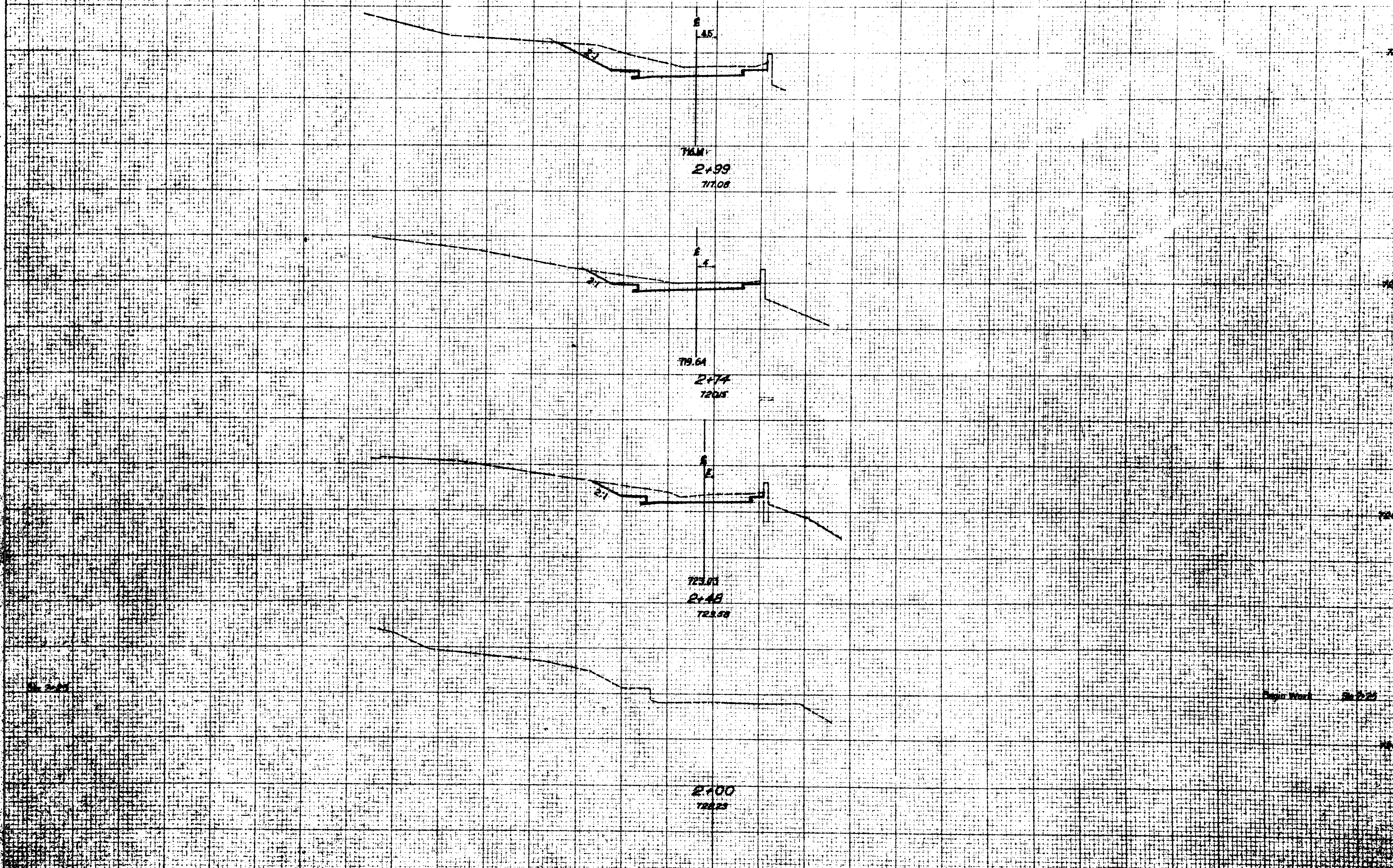
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	8-19 Crushed Agg. Base Course 3" C.Y.	8-35 Asp. Conc. Leveling Course 1½" C.Y.	T-30 Bit. Prime Coat GAL.	I-12 Comb. Curb & Gutter Std. Type 2 L.F.	I-15 Sidewalk 4" S.F.	T-22 Subbase (Depth) C.Y.	T-35 Asp. Conc. Surface Course 1½" Type A C.Y.	E-1 Compact. Sub-Grade S.Y.	E-8 Removal of Existing S'walk S.F.	E-8 Removal of Existing Curb L.F.	I-15 G.R. Type 2-A L.F.	I-4 8" Pipe Outlet M-6.4(a) L.F.	I-4 6" Underdrains L.F.	I-5 Pipe Specials for U'drains 6"x90° Ea.	I-9 Stone Underdrain No. 2 L.F.	SHEET NO.
1-P	2+25 to 8+00	E.R.M.	181.9	53.2	447			149.1	53.2	1216								9
2-P	2+31 to 8+00	Lt.				569				138								9
3-P	2+31 to 8+00	Lt.					2224	23.5										9
4-P	2+25 to 8+00	Lt. & Rt.									2160	268	483.5				116	9
5-P	4+60 to 8+00	Rt.																9
6-P	3+45 to 8+40	Rt.												20	228	1		188
7-P	2+38 to 4+60	Lt.																
	TOTAL		181.9	53.2	447	569	2224	172.6	53.2	1438	2160	268	483.5	20	228	1	116	

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	U 430 (14)

150/307

JEFFERSON COUNTY
JEF-7-13.53



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
125	0		
		88	0
65	0		
		65	0
70	0		
		30	0
0	0		

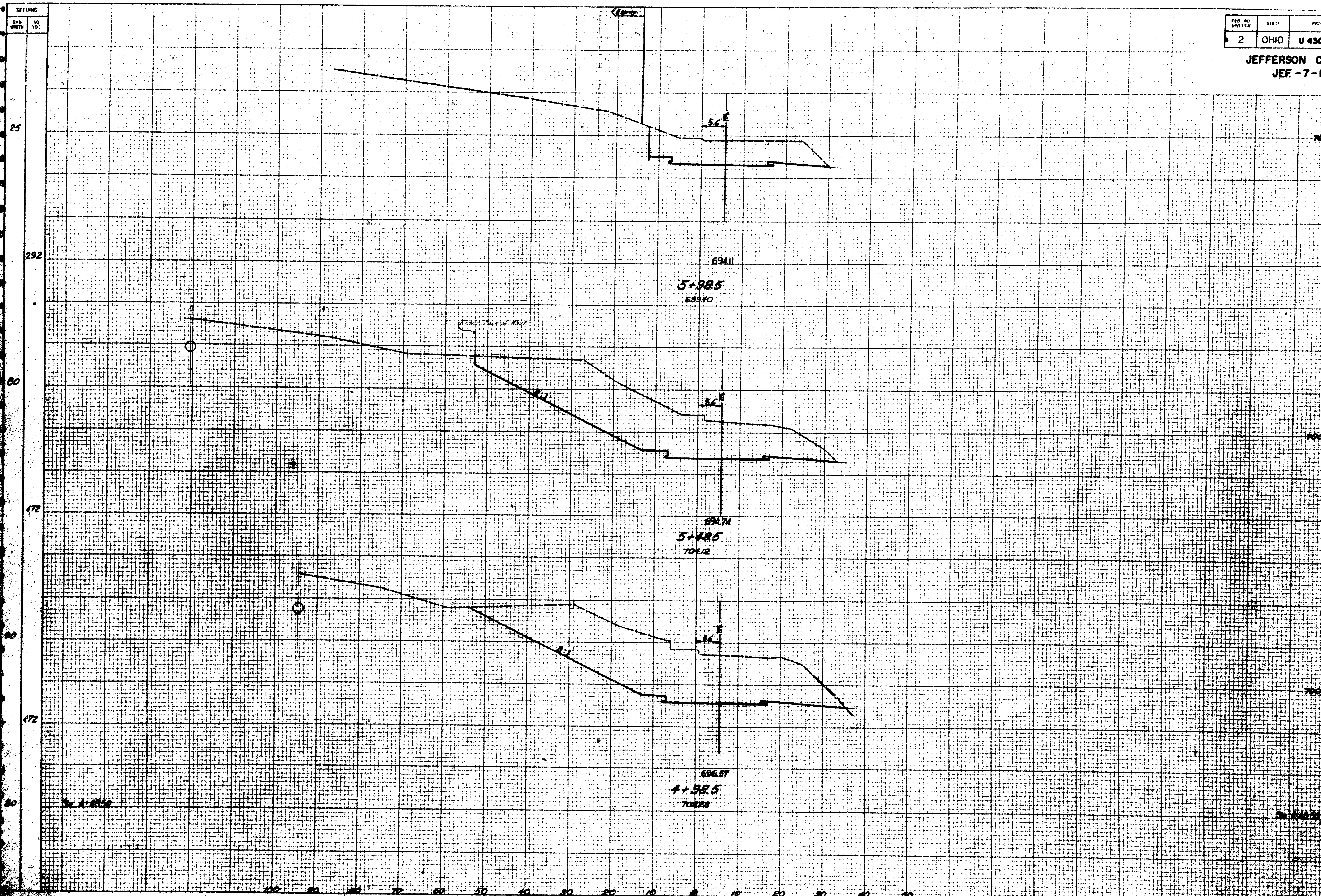
CLIFTON STREET STA. 2+00 TO [illegible]

FED RD DIVISION 2
STATE OHIO
PROJECT U 430 (14)
151/307
JEFFERSON COUNTY
JEF-7-13.53
SEEDING
END WIDTH
SQ YD.
END AREA
VOLUME
CUT
FILL
895 0
1151 0
640 0
247 0
630 0
972 0
420 0
469 0
125 0
2:1
5.6'
699.63
4+48.50
710.53
3.5
703.03
4+08
711.15
704.04
3+97.50
711.57
709.61
3+47.50
712.80
Sta. 2+99
CLIFTON STREET STA 3+47.50 TO STA

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	U 430 (14)

152/307

JEFFERSON COUNTY
JEF. -7-13.53



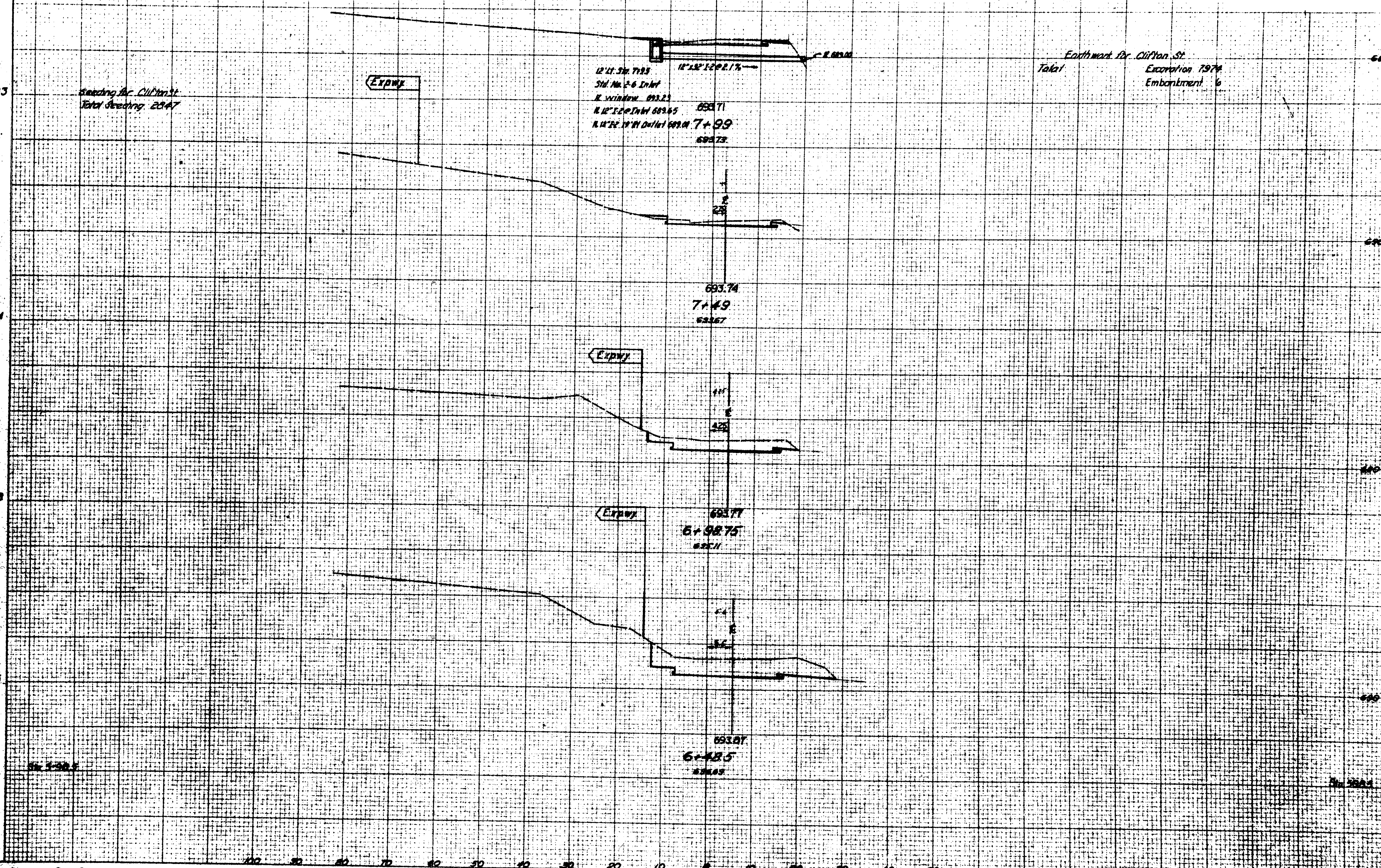
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
245	0		
		958	0
790	0		
		1574	0
910	0		
		1577	0
695	0		

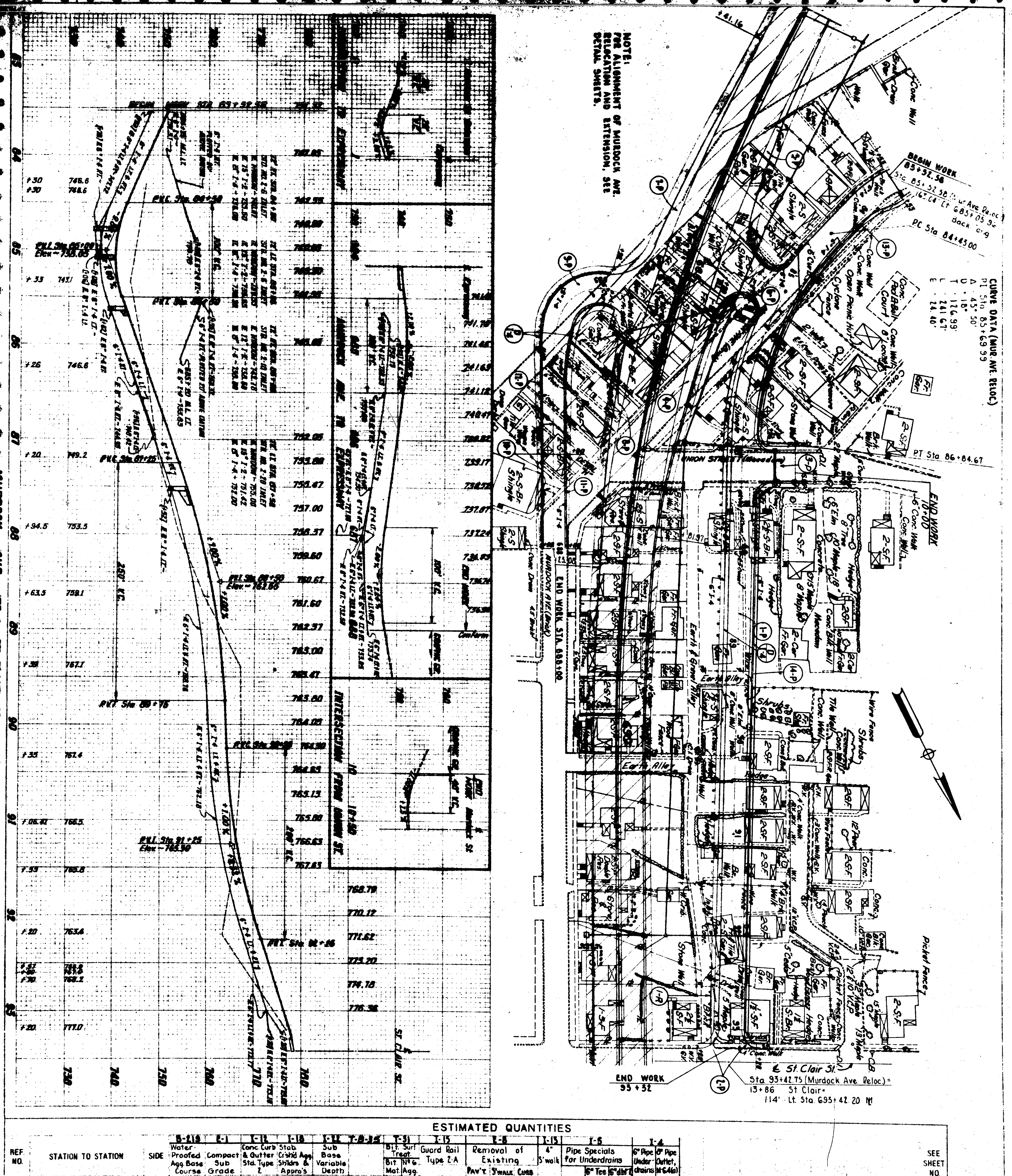
CLIFTON STREET STA. 4+98.5 TO STA. 5+98.5

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	U 430 (14)

153/307

JEFFERSON COUNTY
JEF - 7 - 13.53





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	B-219 Water-Proofed Agg. Base Course C.Y.	E-1 Compact Sub Grade S.Y.	I-12 Conc. Curb & Gutter Std. Type 2 L.F.	I-18 Stab. Cr'sh'd Agg. Sh'ldrs & Appro's C.Y.	I-22 Sub Base Variable Depth C.Y.	T-B-35 S.Y.	T-31 Bit. Surf. Treat. Bit. Mat. GALS	T-31 Bit. Surf. Treat. No. 6 Agg. C.Y.	I-15 Guard Rail Type 2-A L.F.	E-8 Removal of Existing Pav't S.Y.	E-8 S'walk S.F.	E-8 Curb L.F.	I-13 4" S'walk S.F.	I-5 Pipe Specials for Underdrains EACH	I-5 6" Tee EACH	I-5 6" dbl EACH	I-4 6" Pipe Underdrains L.F.	I-4 8" Pipe Outlet, M-64(a) L.F.	SEE SHEET NO.
1-P	83+52.58 to 93+30.00	Lt & Rt.		2679	1774		4904	2190.3													7,155 & 156
2-P	93+08 Fillet Areas	Lt & Rt.		37	65		7.6	19.1													7 & 156
3-P	87+13 Intersection Union St.	Lt.		180	114		31.0	161.8													7 & 155
4-P	685+40.97 to 681+80.97	LT.	17.8	373		31.5	54	160.0	54	1.7											5,155 & 156
5-P	681+95 to 684+25.80	LT.	16.8	283		29.9	53.2	159.9	51	1.6											5 & 155
6-P	684+84 SBL Turnoff	Lt.	9.8	539		11.7	87.9	418.0	30	1.0											5 & 155
7-P	682+41.16 to 684+81.16	RT.	17.8	373		51.5	61.4	160.0	54	1.7											5 & 155
8-P	685+83.08 to 688+23.08	RT.	17.8	373		51.5	61.4	160.0	54	1.7											5 & 155 & 156
9-P	685+40.37 NBL Turnoff	Rt.	25.0	1055		44.5	169.3	755.2	75	2.4											5 & 155
10-P	686+25.00 to 688+00.00	Lt. & Rt.		496			82.6	495.8													3,155 & 156
11-P	686+25.00 to 688+00.00	LT.	9.7			7.6	18.6		29	0.9											3,155 & 156
12-P	685+79.00 to 688+00.00	RT.	12.5			22.2	23.4		37	1.2											3,155,156
	83+50 (Murd. Reloc.) to 688+00 (Murd. Ext.)	LT. & RT.										1627	5440	1605							
13-P	83+50 (Murd. Reloc.) to 10+00 (Union St.)	LT.													1480						7 & 155
14-P	10+00 (Union St.) to 93+22 (Murdock Reloc.)	LT.													2560						7,155 & 156
1-R	86+00 to 92+95 (Murd. Reloc.)	Rt.									700										7
DI-4	684+79 to 688+00	Rt.															1	1	688	10	189
DI-4	83+53 to 93+20	Lt. & Rt.																	1896	50	
TOTALS			127.0	6388	1951	226.4	1140.8	4680.1	384	12.2	700	1627	5440	1605	4040		2		2584	60	

2	OHIO	U-430 (14)		154/307

JEFFERSON COUNTY JEF-7-13.53

MURDOCK AVE. EXTENSION

FED. RD. DIVISION 2
STATE OHIO
PROJECT U-430 (14)
155/307
JEFFERSON COUNTY
JEF-7-13.53
UNION AVE.
Overhead Sign
Station: 684+86 Lt.
Type: OS-1-A
Pole: 19'-6" (12"x 3.20", 3 ga.)
B: 16'
H: 4'
4 Sign Clamps
20:1 Taper
P.O.C. Sta. 85+18.84 Murdock Ave. = P.O.T. Sta. 0+00 Spur
P.T. Sta. 86+84.86
P.O.C. Sta. 684+84.00 M.L. S.B. = P.O.T. Sta. 1+83.84 Connection Spur
P.O.C. Sta. 685+48.57 M.L. N.B. = P.O.T. Sta. 684+77.86 Murdock Ave. Extension
P.C. Sta. 84+42.99
END WORK
STA. 10+00
Begin 20:1 Taper
C.S. Sta. 687+45.00 N.B.
P.T. Sta. 686+81.79
P.T. Transition Sta. 686+84.43
P.T. Transition Sta. 686+79.99
S.C. Sta. 684+67.17 N.B.
S.C. Sta. 684+02.50 S.B.
Sta. 684+92.73 Murdock Avenue
P.C. Sta. 684+84.00
P.C.C. Sta. 685+57.00
Overhead Sign
Station: 685+30 Rt.
Type: OS-1-A
Pole: 19'-6" (12"x 3.20", 3 ga.)
B: 16'
H: 4'
4 Sign Clamps
LEGEND
Standard Longitudinal Key Joint.
Standard Longitudinal Joint.
Standard Transverse Joint.
Expansion Joint without Dowels.
Expansion Joint with Dowels.
1 Bituminous Surface.
2 Seeding & Protecting.
3 Concrete Median Pavement Type 2
5 Standard Type 2 Curb & Gutter.
6 4" Sidewalk.
All Elevations @ 25' Intervals unless otherwise Shown.
All Main Line Elevations are offset from ℄ S.B. Lane
Work to be Performed by Contractor of Project UG-430 (15).
MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA
PAVEMENT DETAILS
MURDOCK AVENUE CONNECTION
DESIGNED DRAWN TRACED CHECKED

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

156/307

JEFFERSON COUNTY
JEF-7-13.53

LEGEND

Standard Longitudinal Joint.
Standard Transverse Joint.
Expansion Joint Without Dowels.
Standard Longitudinal key Joint.

① Bituminous Surface.
② Seeding & Protecting.
③ Concrete Median Pavement Type 2.

⑤ Standard Type 2 Curb & Gutter.
⑥ 4" Sidewalk.

All Elevations @ 25' Intervals unless otherwise Shown.
All Main Line Elevations are off-set from ℄ S.B. Pavement.

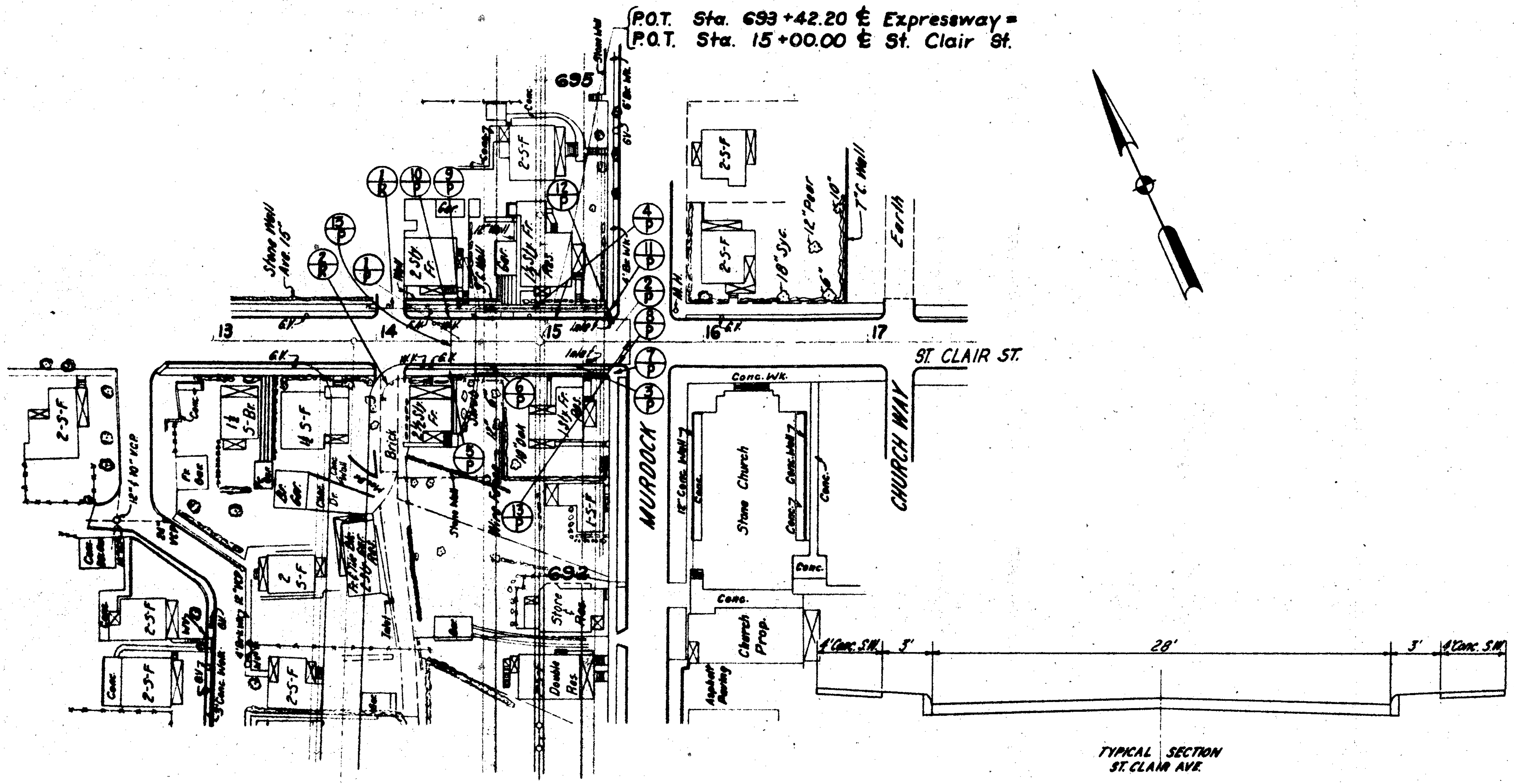
MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

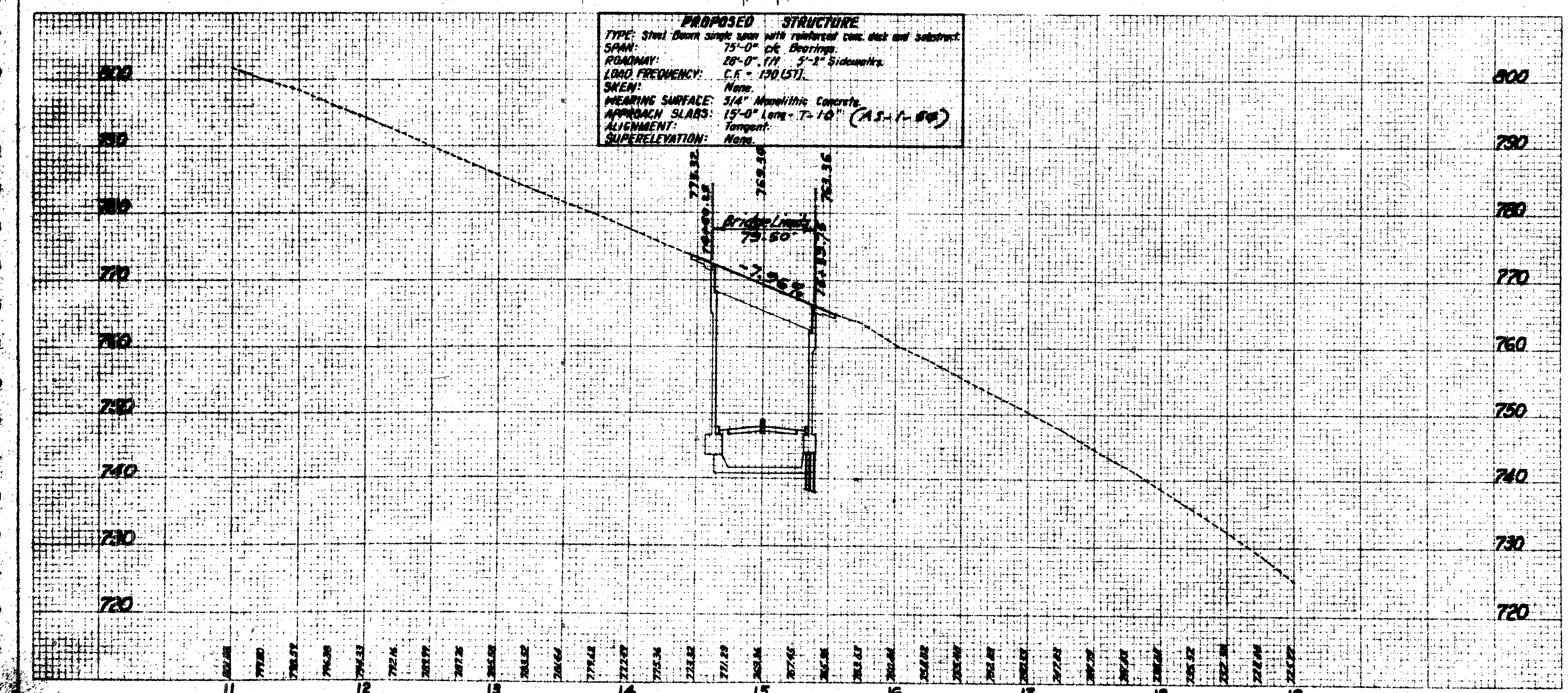
PAVEMENT DETAILS
MURDOCK AVENUE
CONNECTION

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	Bland	Simpson			

2	OHIO	U-430 (14)	157/307

JEFFERSON COUNTY JEF-7-13.53





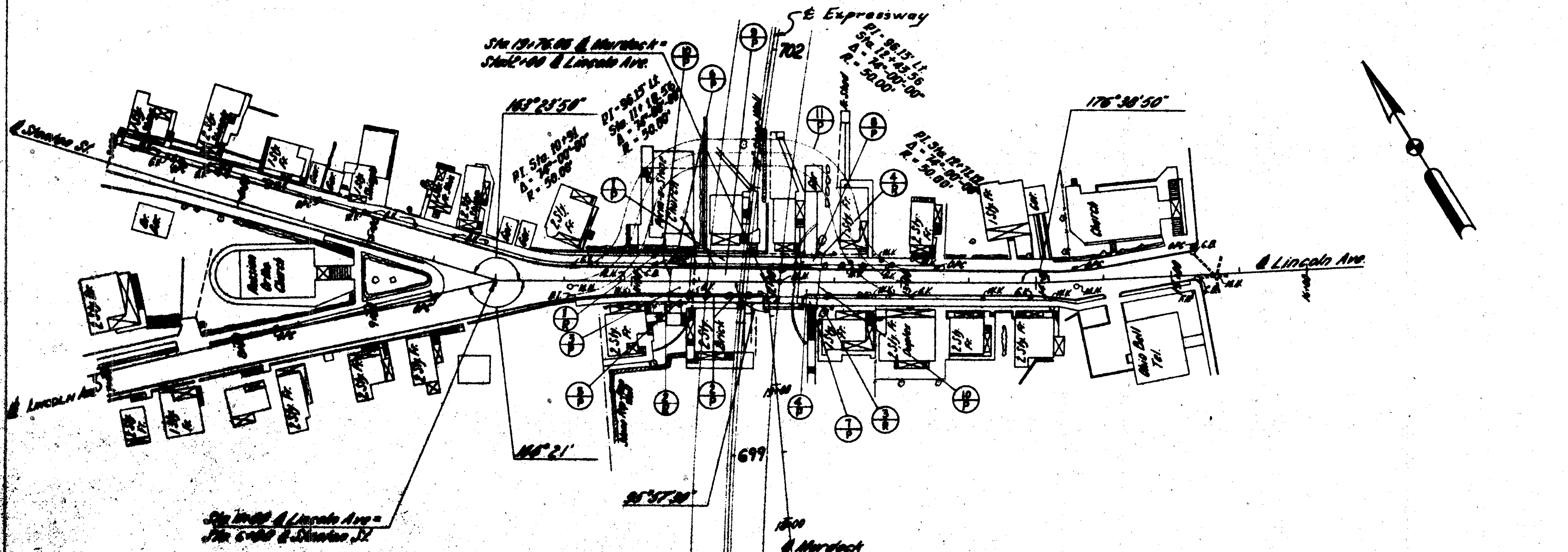
PROPOSED STRUCTURE

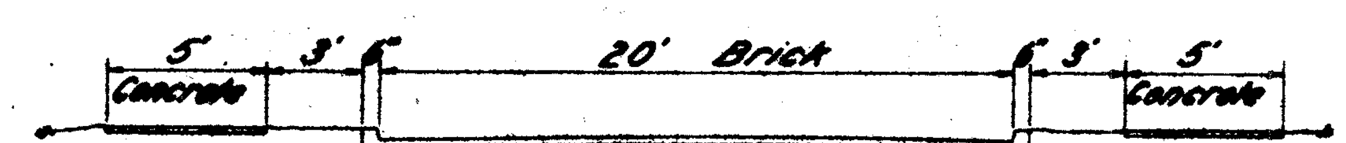
TYPE: Steel Beam single span with reinforced conc. deck and substruct.
SPAN: 75'-0" c/c Bearings.
ROADWAY: 28'-0", f/f 5'-2" Sidewalks.
LOAD FREQUENCY: C.F. = 130 (57).
SKEW: None.
WEARING SURFACE: 3/4" Monolithic Concrete.
APPROACH SLABS: 15'-0" Long - T-10" (AS-1-64)
ALIGNMENT: Tangent.
SUPERELEVATION: None.

ESTIMATED QUANTITIES

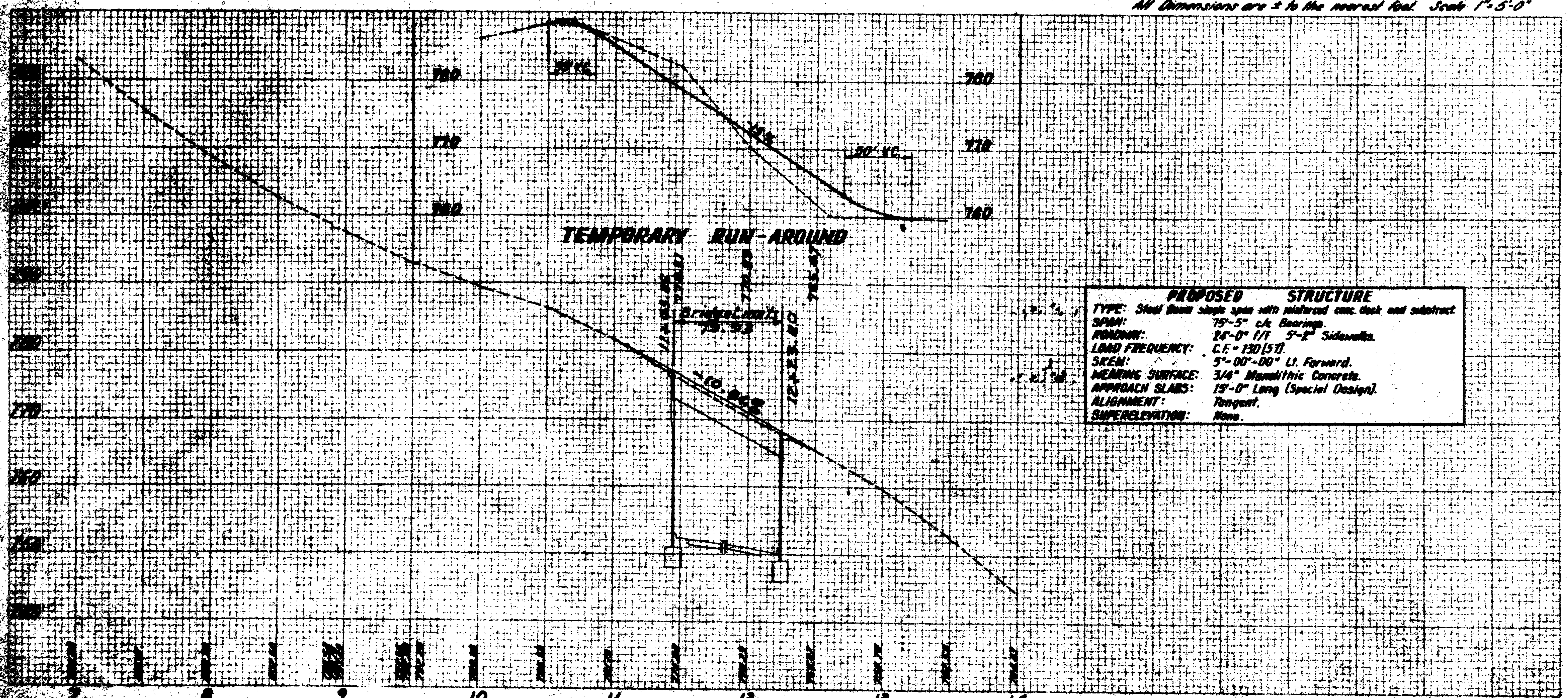
REF. NO.	STATION TO STATION	SIDE	I-7 Reinf. Conc. Appr. Slabs (T-10") S.Y.	I-15 Guard Rail, Type 2-A L.F.	E-8 Removal & Disposal of Existing: Curb L.F.	E-8 Sidewalk S.F.	I-12 Concrete Curb Std. Type 6 L.F.	I-13 4" Conc. Sidewalk S.F.	T-35 Asphaltic Conc. Surface Course Type "A" (70-B5) Variable Depth Cu. Yd.	SFE SHEET NO
										154, 156
1-P	14+45.25 - 14+60.25	℄	44.67							
2-P	15+39.75 - 15+54.75	℄	44.67							
3-P	14+16 - 15+54	Rt.			152	552				
4-P	14+16 - 15+48	Lt.			130	528				
1-R	13+96.06 - 14+58.50	Lt.		62.5						
2-R	92+95 Murdock Relac 14+58.50	Rt.		75.0						
5-P	14+01 - 14+59.75	Rt.						211		
6-P	14+18.25 - 14+60.25	Rt.					42			
7-P	15+40.25 - 15+53.5	Rt.						53		
8-P	15+39.75 - 15+48	Rt.					17			
9-P	14+16.5 - 14+59.75	Lt.						173		
10-P	14+16 - 14+60.25	Lt.					49			
11-P	15+40.25 - 15+47.5	Lt.						29		
12-P	15+39.75 - 15+48	Lt.					10			
13-P	14+18.25 - 15+53.5	Rt.&Lt.							1	
TOTALS			93.34	137.5	302	1080	118	466	1	

ST. "CLAIR" ST.





SECTION LINCOLN AVE.
All Dimensions are ± to the nearest foot. Scale 1" = 5'-0"



PROPOSED STRUCTURE
TYPE: Steel Beam single span with reinforced conc. deck and substruct.
SPAN: 75'-5" c/c Bearings.
ROADWAY: 24'-0" f/f 5'-2" Sidewalks.
LOAD FREQUENCY: C.F. = 130 [5T].
SKEW: 5°-00'-00" Lt. Forward.
WEARING SURFACE: 3/4" Monolithic Concrete.
APPROACH SLABS: 15'-0" Long (Special Design).
ALIGNMENT: Tangent.
SUPERELEVATION: None.

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	E-8 Removal of Existing: Curb & Gutter L.F.	E-8 Removal of Existing: Sidewalk S.F.	E-8 Removal of Existing: Pavement	I-15 4" Conc. Sidewalk S.F.	I-7 Reinf. Conc. Appr. Slabs as per Plan (T-10") S.Y.	I-15 Guard Rail, Type 2-A L.F.	T-35 Asphaltic Conc. Surface Course Type "A" (70-85) Variable Depth Cu. Yd.	S-15 Temporary Run-Around Road Class "B" Pav't. Lump
1-P	11+30 ~ 12+40	Lt.	110	440						
2-P	11+27.5 ~ 12+38.5	Lt.	101	340						
3-P	11+28.86 ~ 11+43.86	℄					38.3			
4-P	12+23.80 ~ 12+38.80	℄					38.3			
1-R	10+81.36 To 11+43.86	Lt.						62.5		
2-R	10+78.03 To 11+40.53	Rt.						62.5		
5-P	11+27.5 ~ 11+42	Rt.				75				
6-P	11+30 ~ 11+45	Lt.				75				
7-P	12+23.5 ~ 12+38.5	Rt.				75				
8-P	12+25 ~ 12+40	Lt.				75				
9-P	11+28.86 ~ 12+38.80	℄			244					
3-R	12+24.03 ~ 12+49.03	Rt.						25		
4-R	12+22.36 ~ 12+42.36	Lt.						25		
10-P	11+25 ~ 12+42	Rt. Lt.							1	
11-P	10+50 ~ 13+20	Lt.								Lump
TOTALS			211	780	244	300	76.6	175	1	Lump

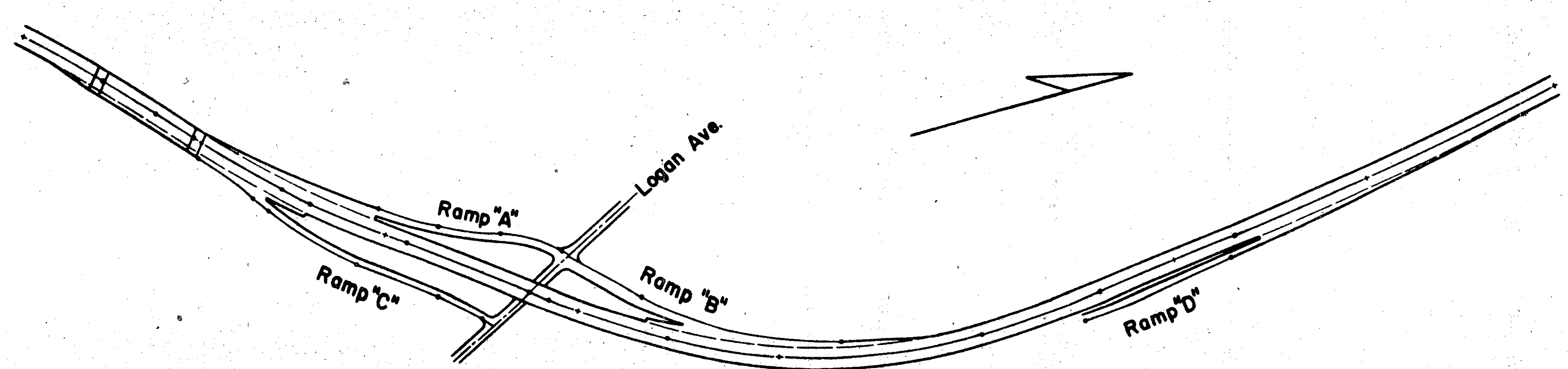
LINCOLN AVENUE

LOGAN AVE. INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

159/307

JEFFERSON COUNTY
JEF-7-13.53



INTERCHANGE

SHEET 162	163	172	173	174	NUMBER 175		161	ITEM	QUAN.	UNIT	DESCRIPTION
											ROADWAY
[illegible]	1422	2398	2971	2673	1649			E-1	13,081	Sq. Yds.	Compacted Subgrade.
[illegible]	712				1507			E-8	3,649	Sq. Yds.	Removal and Disposal of Existing Pavement.
[illegible]	4128							E-8	6,928	Sq. Ft.	Removal and Disposal of Existing Sidewalk
[illegible]	310							E-8	1,785	Lin. Ft.	Removal and Disposal of Existing Curb, Curb and Gutter or Header Curb.
[illegible]	[illegible]	281		809	668			I-13	8686	Sq. Ft.	4" Concrete Sidewalk
	50			450	572.5			I-15	1072.5	Lin. Ft.	Guard Rail, Steel Beam Standard Type, (Deep)
				124	1		3	L-10	128	Sq. Yds.	Sodding.
											DRAINAGE
							12	I-2	12	Lin. Ft.	30" Class "A" Storm Sewer
					32		356	I-2	388	Lin. Ft.	12" Storm Sewers Under Pavement or Approaches, Sec. M-6.5 (b) or Sec. M-6.8 (b).
							206	I-2	206	Lin. Ft.	15" Storm Sewers Under Pavement or Approaches, Sec. M-6.5 (b) or Sec. M-6.8 (b).
							164	I-2	164	Lin. Ft.	18" Storm Sewers Under Pavement or Approaches, Sec. M-6.5 (b) or Sec. M-6.8 (b).
							214	I-2	214	Lin. Ft.	24" Storm Sewers Under Pavement or Approaches, Sec. M-6.6 (a) or Sec. M-6.8 (b).
							470	I-2	470	Lin. Ft.	30" Storm Sewers Under Pavement or Approaches, Sec. M-6.6 (a) or Sec. M-6.8 (b).
							98	I-2	98	Lin. Ft.	30" Storm Sewers Under Pavement or Approaches, Sec. M-6.6 (b) or Sec. M-6.8 (b).
							22	I-2	22	Lin. Ft.	12" Storm Sewers Under Pavement or Approaches, Sec. M-6.6 (d).
							180	I-2	180	Lin. Ft.	15" Storm Sewers Under Pavement or Approaches, Sec. M-6.6 (d).
							326	I-2	326	Lin. Ft.	12" Storm Sewers, Sec. M-6.5 (a) or Sec. M-6.8 (a).
							88	I-2	88	Lin. Ft.	12" Storm Sewers, Sec. M-6.4 (c).
772	518	924	200	744	458			I-4	3616	Lin. Ft.	6" Underdrains
60	40	36	20	30	20			I-4	206	Lin. Ft.	6" Pipe Outlets for Underdrains, Sec. M-6.4 (a).
	1	6	2	5	1			I-5	15	Each	6" Pipe Specials for Underdrains.
							4	I-5	4	Each	12" Pipe Specials for Storm Sewers, Sec. M-6.4 (c).
							1	I-5	1	Each	15" Pipe Specials for Storm Sewers Under Pavement or Approaches, Sec. M-6.6 (d).

SUB - SUMMARY

SHEET 162	163	172	175	NUMBER 174	175	161	ITEM	QUAN.	UNIT	DESCRIPTION
										DRAINAGE (CONTINUED)
						1	I-8	1	Each	Standard No. 1-3 Catch Basins.
						3	I-8	3	Each	Standard No. 2-2A Catch Basins.
						4	I-8	4	Each	Standard No. 2-2B Catch Basins.
					1		I-8	1	Each	Standard No. 3 Catch Basins.
						4	I-8	4	Each	Standard No. 6 Catch Basins.
						1	I-8	1	Each	Special Catch Basins, Type "A"
						1	I-8	1	Each	Special Catch Basins, Type "B"
						2	I-8	2	Each	Standard No. 2-8 Inlets (Mod.) "As per plan"
						2	I-8	2	Each	Standard No. 2-10 Inlets "As per plan"
						2	I-8	2	Each	Standard No. 2-12 Inlets (Mod.) "As per plan"
						1	I-8	1	Each	Standard No. 2-14 Inlets "As per plan"
						4	I-8	4	Each	Standard No. 2-20 Inlets "As per plan"
						8	I-8	8	Each	Standard No. 1 Manhole.
						1	I-8	1	Each	Special Manhole Type "A"
						6	I-10	6	Cu. Yds.	Dumped Rock Channel Protection.
					0.23	0.72	S-1	0.95	Cu. Yds.	Concrete for Structures, Class "E".
					1	3	E-2	4	Cu. Yds.	Excavation for Structures.
						Lump	E-2	Lump	Lump	Cofferdams, Cribbing and Sheeting.
										PAVEMENT
	20						B-70	20	Sq. Yds.	8" Portland Cement Concrete Base Course
		72.4	69.5	71.2	51.0		B-219	264.1	Cu. Yds.	Waterproofed Aggregate Base Course.
		216.9	209.0	214.0	153.0		T-31	792.9	Gals.	Bituminous Surface Treatment - Bituminous Material; See Proposal
		7.0	6.6	6.9	4.9		T-31	25.4	Cu. Yds.	Bituminous Surface Treatment - No. 6 Aggregate.
	1.2						T-35	1.2	Cu. Yds.	Asphaltic Concrete Surface Course, Type A (E0-B5)
1658.7	1212.9	1473.2	2096.9	1775.4	1036.6			9253.7	Sq. Yds.	T-B-35 Pavement
		250			74		I-12	324.0	Lin. Ft.	Special Concrete Curb.
968	747	101.7	107.0	178.0			I-12	2101.7	Lin. Ft.	Combination Curb & Gutter, Standard Type 2.
		194	160	79.6	255		I-12	1405	Lin. Ft.	Concrete Curb, Standard Type 6.
		127.4	123.7	125.9	89.4		I-18	466.4	Cu. Yds.	Stabilized Crushed Aggregate Shoulders and Approaches.
			14	14			I-21	28	Sq. Yds.	Portland Cement Concrete Median Pavement, Standard Type 2.
344.0	255.5	382.9	567.8	473.9	307.0		I-22	2331.1	Cu. Yds.	Subbase.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

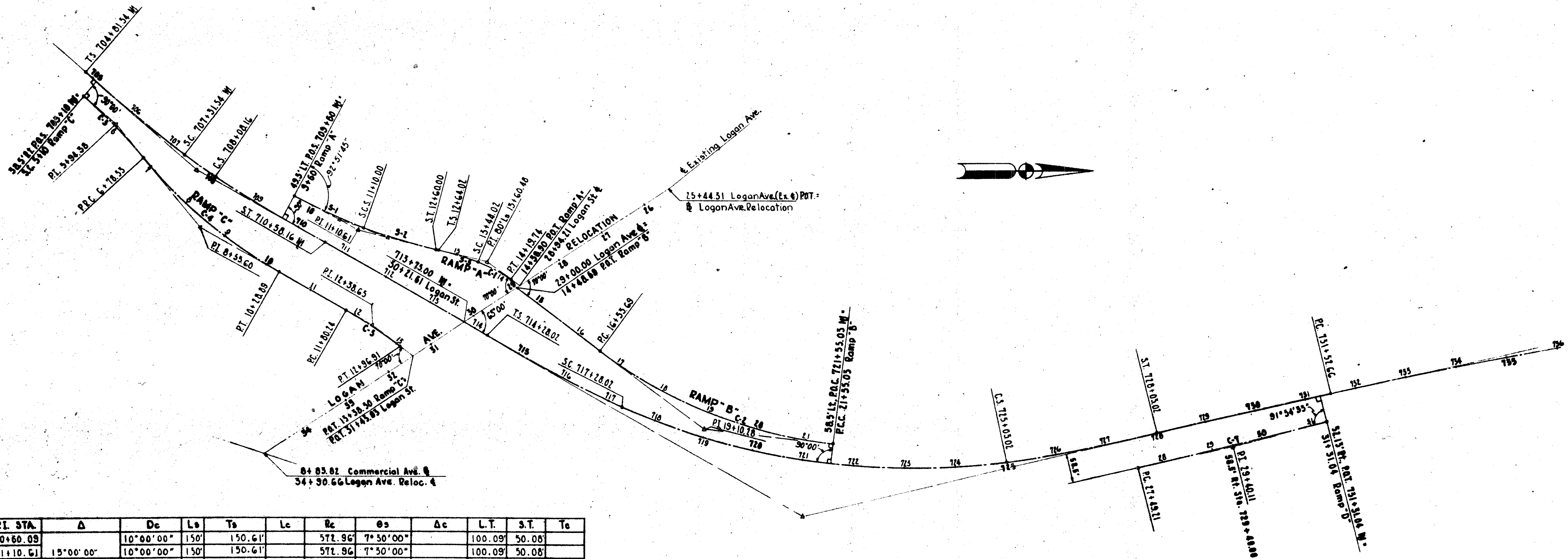
LOGAN AVE INTERCHANGE
SUB - SUMMARY

Designed	Drawn	Traced	Checked	Reviewed Date
	L.C.C.		[illegible]	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430 (14)	

160/307

JEFFERSON COUNTY
JEF - 7 - 13.55



CURVE Nº	P.I. STA.	Δ	Dc	Ls	Ts	Lc	Rc	θs	Δc	L.T.	S.T.	Tc
SPIRAL - 1	10+60.09		10°00'00"	150'	150.61'		572.96'	7°30'00"		100.09'	50.08'	
SPIRAL - 2	11+10.61	15°00'00"	10°00'00"	150'	150.61'		572.96	7°30'00"		100.09'	50.08'	
SPIRAL - 3	13+60.48			80'	Bk. 96.46'			8°00'00"		53.39'	26.72'	
CURVE - 1		23°08'41"	20°00'00"		Ah. 61.05'	75.72'	286.48'		15°08'41"			38.08'
CURVE - 2	19+10.28	30°04'50"	6°00'00"			501.34'	954.93'					256.59'
CURVE - 3	5+94.58	10°05'59"	6°00'00"			168.33'	954.93'					84.38'
CURVE - 4	8+55.60	21°02'00"	6°00'00"			350.56'	954.93'					177.27'
CURVE - 5	12+38.65	7°00'00"	6°00'00"			116.67'	954.93'					58.41'
CURVE - 7	29+40.11	1°54'33"	0°30'00"			381.83'	11,459.16					190.95'

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SCHEMATIC LAYOUT PLAN
LOGAN AVENUE INTERCHANGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	
Griffin Mudd	Manas	Manas	Strough Begley	Griffin [illegible]	

CURVE DATA & ALIGNMENT LOGAN ST. [illegible]

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(14)	

161 / 307

JEFFERSON COUNTY
JEF - 7 - 13.53

Reference No	Sheet No	Sheet No	I-2 Storm Sewer Under Pav't or Appro. M-6.6(a) or M-6.8(b) 30"	I-2 Sec. M-6.5(b) or Sec. M-6.8(b) 12"	I-2 Sec. M-6.5(b) or Sec. M-6.8(b) 15"	I-2 Sec. M-6.5(b) or Sec. M-6.8(b) 18"	I-2 Sec M-6.6(a) or Sec M-6.8(b) 24"	I-2 Sec M-6.6(a) or Sec M-6.8(b) 30"	I-2 Sec M-6.6(d) 15"	I-2 Sec M-6.6(d) 12"	I-2 Sec M-6.5(a) Sec M-6.8(a) 12"	I-2 Sec M-6.4(c) 12"	I-2 Class "A" 3.5 30"	I-5 Pipe Specials 15"x15"x12" Tee M-6.6(d)		I-5 12"x30" Bend M-6.4 (c)	I-8 Std No 2-2A C.B.	I-8 Std No 2-2B C.B.	I-8 Std No 6 C.B.	I-8 Std No 1-3 C.B.	I-8 Inlets as per plan Std No 2-8 Mod	I-8 Std No 2-10	I-8 Std No 2-12 Mod	I-8 Std No 2-14	I-8 Std No 2-20	I-8 Std M.H. Std No 1		I-8 M.H. Spec. M.H. Type "A"	L-10 Sodding	I-10 Dumped Rock Chan. Prot.		S-1 Conc. for Strs. Class "E"	I-8 Special Catch Basins Type "A"	I-8 Special Catch Basins Type "B"	E-2 Excav. for Structures	E-2 Cofferdams-Cribs & Sheeting
			L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	Ea.		Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.		Ea.	S.Y.	C.Y.		C.Y.	Each		C.Y.	Lump
1-A	47			30															1																	
2-A	47			30								60				2									1				1	6		0.23			1	
1-B	50								180								1																			
2-B	51									22									1																	
3-B	51													1															1			0.26			1	
1-C	52			32															1																	
2-C	52			40								28				2								1												
3-C	53			44														1											1			0.23			1	
4-C	225										14																						1			
1-D	[illegible]				16																				1											
[illegible]	[illegible]				16																				1											
[illegible]	[illegible]					134																				1										
[illegible]	[illegible]				14																				1											
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9-D	[illegible]				48												1																			
10-D	[illegible]					30												1																		
11-D	[illegible]				82												1																			
12-D	[illegible]										312								1																	
[illegible]	[illegible]				30													1																		
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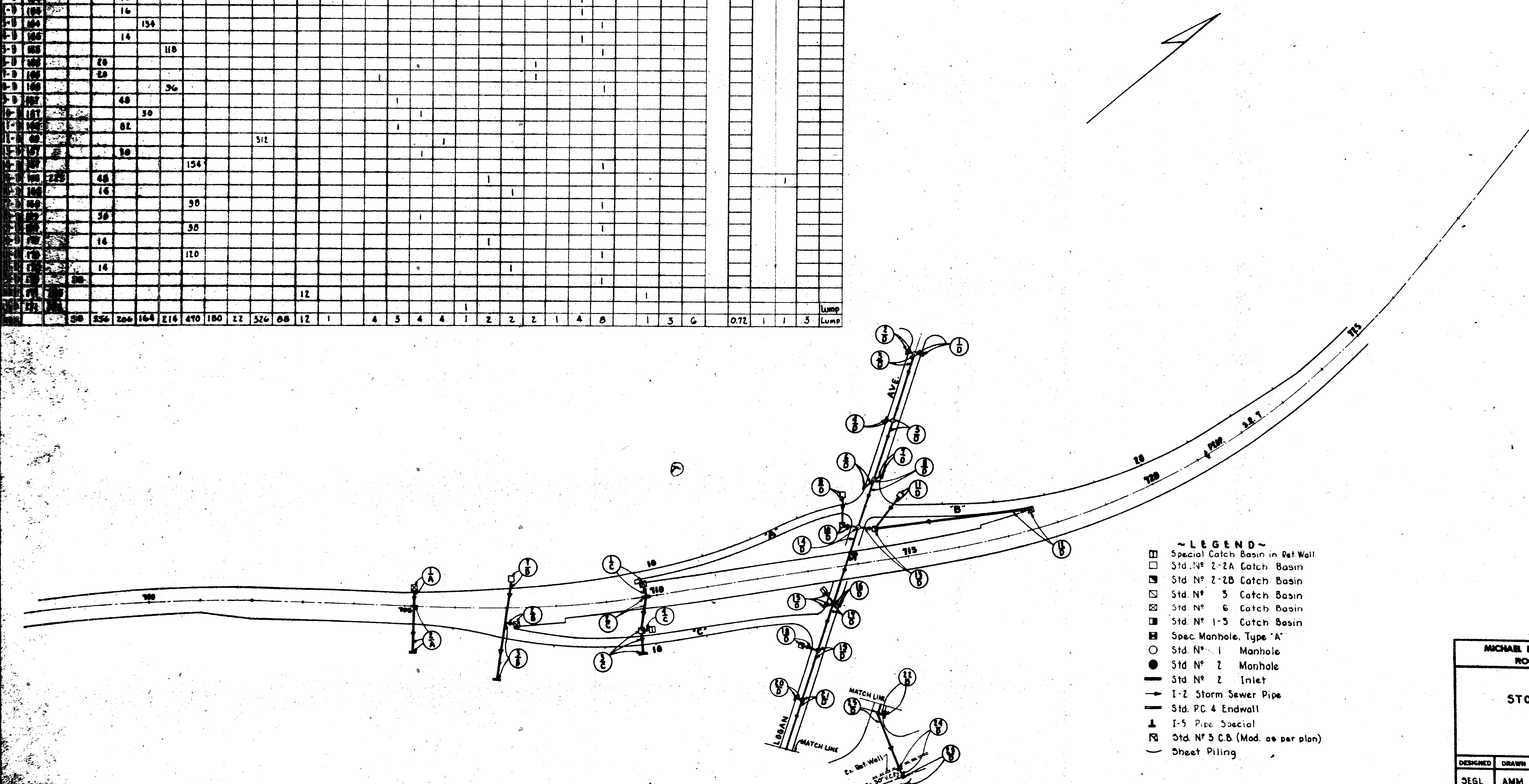
[illegible]	[illegible]			14																		1														
[illegible]	[illegible]		80																							1										
[illegible]	[illegible]	[illegible]											12															1								
[illegible]	[illegible]	[illegible]																		1																Lump
Total			80	256	206	164	216	470	180	22	326	88	12	1		4	3	4	4	1	2	2	2	1	4	8		1	3	6		0.72	1	1	3	Lump



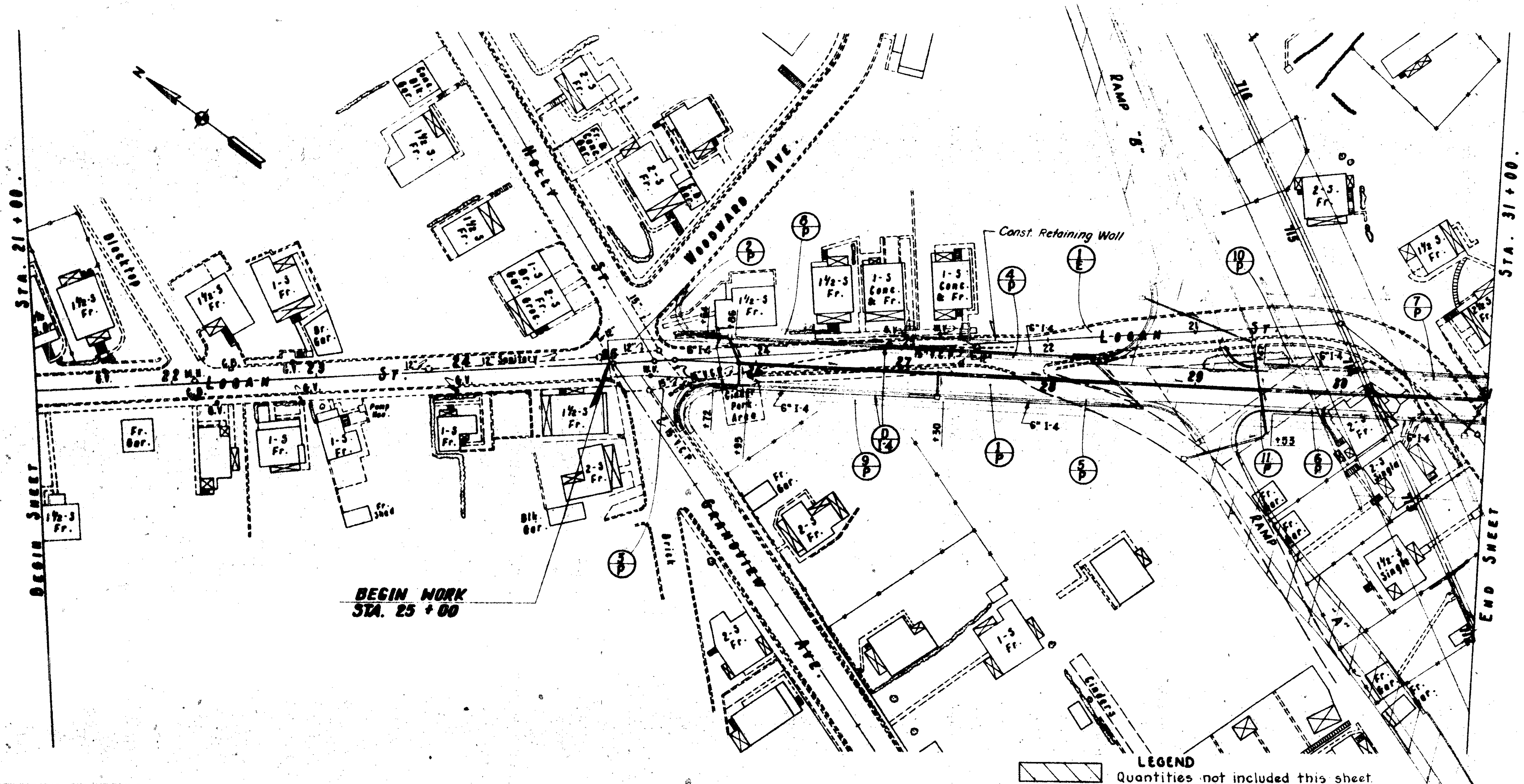
~ LEGEND ~
- Special Catch Basin in Ret. Wall.
- Std. No 2-2A Catch Basin
- Std. No 2-2B Catch Basin
- Std. No 3 Catch Basin
- Std. No 6 Catch Basin
- Std. No 1-3 Catch Basin
- Spec. Manhole, Type "A"
- Std. No 1 Manhole
- Std. No 2 Manhole
- Std. No 2 Inlet
- I-2 Storm Sewer Pipe
- Std. P.C. 4 Endwall
- I-5 Pipe Special
- Std. No 3 C.B. (Mod. as per plan)
- Sheet Piling

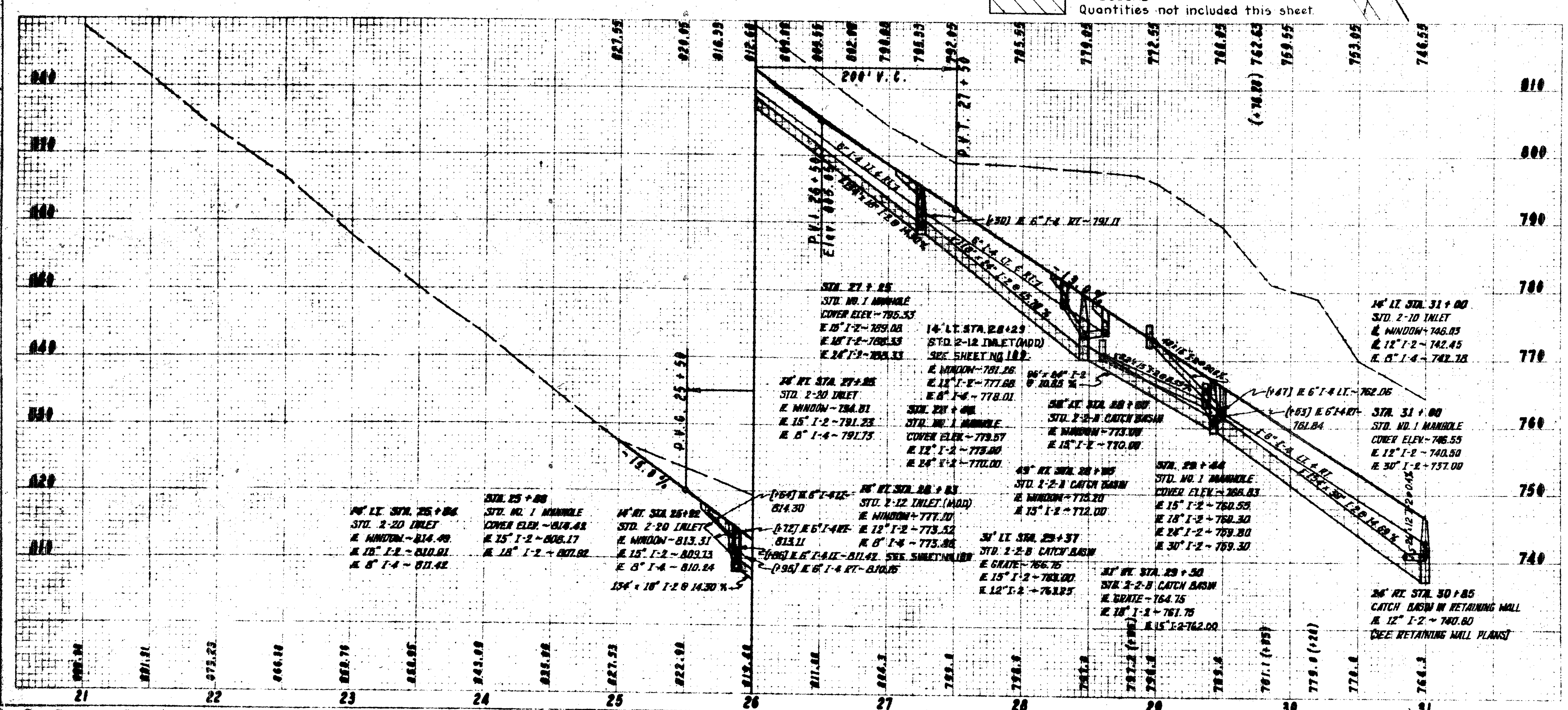
MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

STORM SEWER LAYOUT
LOGAN AVENUE
INTERCHANGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
SEGL	AMM	AMM	WHT		

OHIO U-430 (14)
JEFFERSON COUNTY JEF.-7-13.53

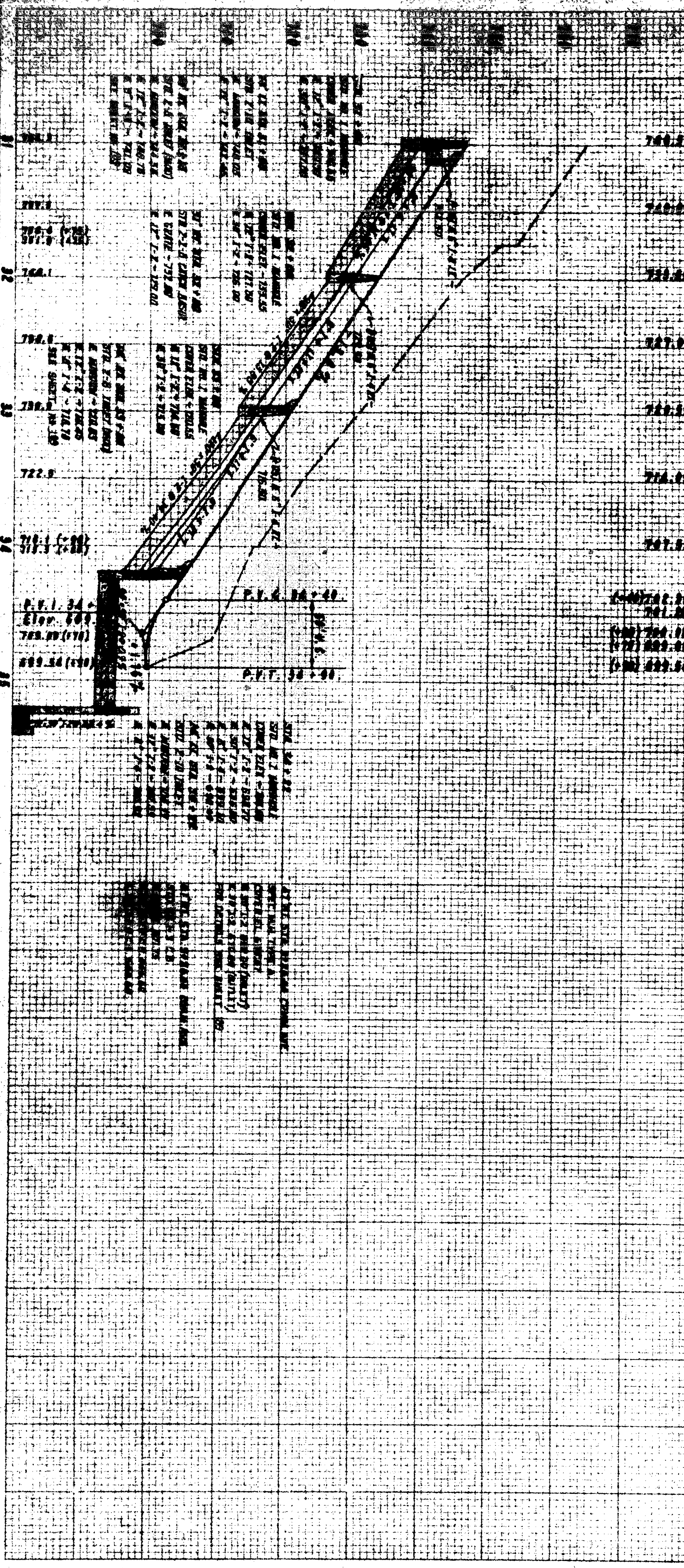


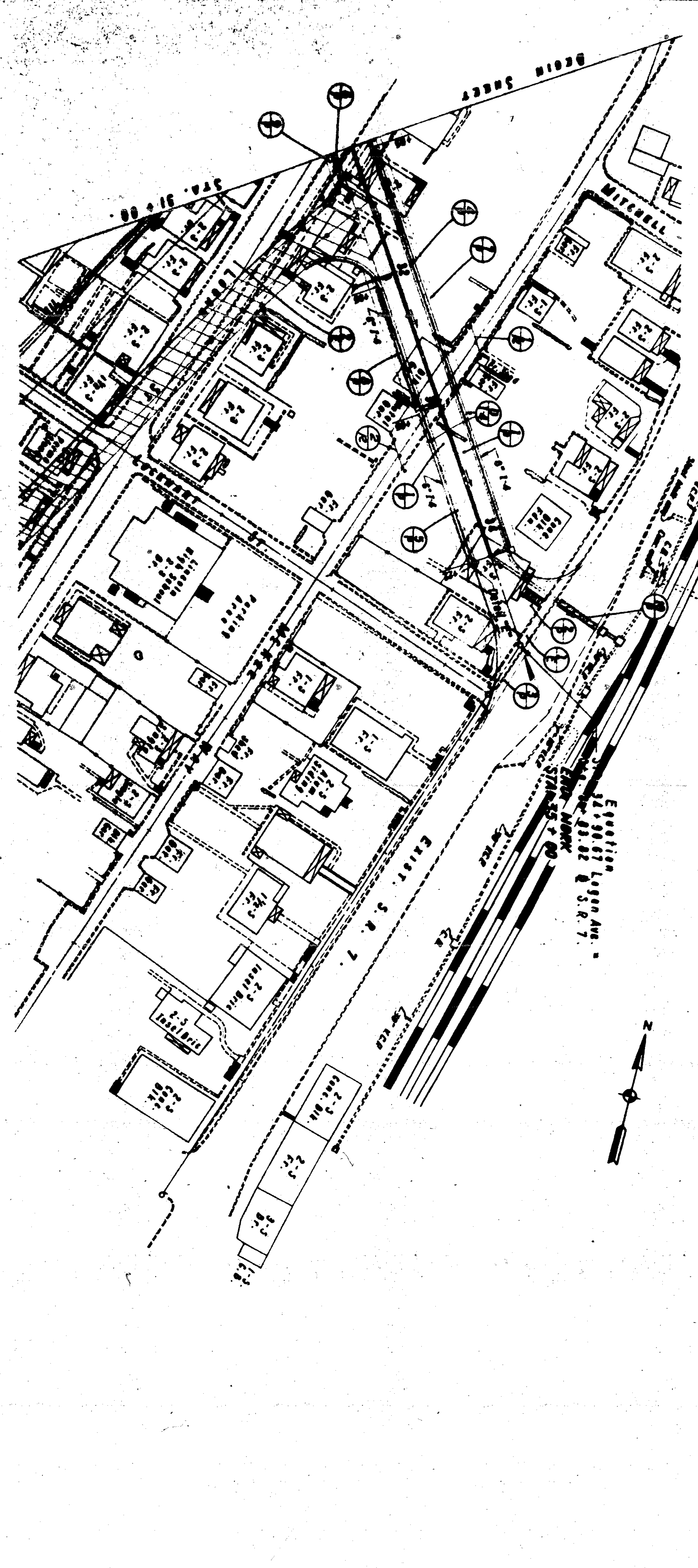


ESTIMATED QUANTITIES

REF. NO	STATION TO STATION	SIDE	E-1 Compacted Sub-Grade S.Y.	I-12 Combined Curb & Gutter, Type 2 L.F.	I-13 4" Side-walk S.F.		I-22 Sub-base, Variable Depth C.Y.	T-B-35 Pav't S.Y.		E-6 Removal of Existing Pav't S.Y.	E-6 Removal of Existing Curb L.F.	E-6 Removal of Existing Side-walk S.F.	I-4 6" Pipe Under-drains L.F.	I-4 8" Pipe Outlet, Sec. M-6.4(a) L.F.	SEE SHEET NO
1-P	25+00 Exist. Logan Ave. ℄ to 31+00 Logan Ave. Relocation	Lt. & Rt.	1600				266.6	1600							8
2-P	Fillet - Woodward Ave. to 25+63.88 Logan Ave.	Lt.	50				8.3	50							180
3-P	Fillet - 0+65.04 Grandview Ave. to 25+71.86 Logan Ave.	Rt.	49				8.1	48.7							180
4-P	Woodward Ave. to 28+29.88 Logan Ave.	Lt.	81	315			16.7								8, 180
5-P	0+65.04 Grandview Ave. to 28+63.64 Logan Ave.	Rt.	95	341			20.2								8, 180
6-P	29+50.30 ~ 31+00	Rt.	42	150			10.6								8
7-P	29+37.64 ~ 31+00	Lt.	45	162			11.5								8
8-P	25+51 to 28+48	Lt.			1226										8
9-P	0+71 Grandview Ave. to 28+85 Logan Ave.	Rt.			1429										8
10-P	29+26 ~ 31+00	Lt.			712										8
11-P	29+38 ~ 31+00	Rt.			663										8
1-E	25+00 ~ 31+00	Lt. & Rt.								1410	1275	2800			
DI-4	25+64 ~ 31+00	Lt. & Rt.											712	60	
TOTALS			1868	968	4030		344.0	1698.7		1410	1275	2800	772	60	

LOGAN AVENUE RELOCATION





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	E-1 Compact Sub Grade S.Y.	I-12 Comb. Curb & Gutter Std. Type 2 L.F.		I-13 4" Sidewalks S.F.	I-15 Guard Rail Type 2-A L.F.	I-22 Sub Base Variable Depth C.Y.	T-B-35 Pav't. S.Y.	B-70 8" Portland Cement Concrete Base Course S.Y.	E-8 Removal of Existing Pav't S.Y.	E-8 Removal of Existing Curb L.F.	E-8 Removal of Existing Side-walk S.F.	T-35 Asphaltic Concrete Surface Course Type "A" (70-85) C.Y.	I-5 Pipe Specials for Underdrains EACH 6"x90°	I-4 6" Pipe Under-drains L.F.	I-4 8" Pipe Outlet, Sec. M-6.4(a) L.F.	SEE SHEET NO.
1-P	31+00 – 35+00	Lt. & Rt.	1067					177.8	1066.7									8
2-P	34+22.89 Logan Ave. To 9+80.51 ℄ S.R. 7	Lt.	108					18.0	107.7									8 & 180
3-P	34+60.64 Logan Ave. To 8+13.07 ℄ S.R. 7	Rt.	39					6.4	38.5									8 & 180
4-P	31+00 Logan Ave. To 9+80.51 ℄ S.R. 7	Lt.	110	395				25.7										8
5-P	32+14.42 Logan Ave. To 8+13.07 ℄ S.R. 7	Rt.	94	338				23.3										8
6-P	31+00 – 31+13.90	Rt.	4	14				0.3										8
7-P	31+00 Logan Ave. To 9+80.51 ℄ S.R. 7	Lt.				1520												8
8-P	31+98 Logan Ave. To 8+13.07 ℄ S.R. 7	Rt.				1279												8
9-P	31+00 – 31+26	Rt.				119												8
10-P	34+75	Lt.						4		20				1.2				8
1-E	8+13.07 S.R. 7 To 9+80.51 S.R. 7										65		828					
2-E	31+00 Logan Ave. To Lockhart St.	Rt.									667	510	3300					
1-4	31+00 – 34+22	Lt. & Rt.													1	518	40	188
1-R	32+54 – 32+79; Barricade 40'	Lt.					25											
2-R	33+16 – 33+41; Barricade 40'	Rt.					25											
Totals			1422	747		[illegible]	50	255.5	1212.9	20	732	510	4128	1.2	1	518	40	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430 (14)	.

164/307

JEFFERSON COUNTY
JEF-7-13.53

Sta. 25+00 to Sta. 26+00 LOGAN Ave.

2	OHIO	U-430 (14)

JEFFERSON COUNTY
JEF-7-13.53

Sta 26+50 to Sta 27+50 LOGAN Ave

JEFFERSON COUNTY
JEF.-7-13.53

Sta. 28+00 to Sta. 28+50 LOGAN Ave.

U-430 (14)

JEFFERSON COUNTY
JEF-7-13.53

Sta. 29+00 to Sta. 29+50 LOGAN Ave.

U-430 (14)

JEFFERSON COUNTY
JEF.-7-13.53

Sta. 30+00 to Sta. 31+00 LOGAN Ave.

169
307

U-430 (14)

JEFFERSON COUNTY
JEF.-7-13.53

Sta. 31+50 to Sta. 32+50 LOGAN Ave.

U-430 (14) 170/307

JEFFERSON COUNTY
JEF.-7-13.53

Sta. 33+00 to Sta. 34+00 LOGAN Ave.

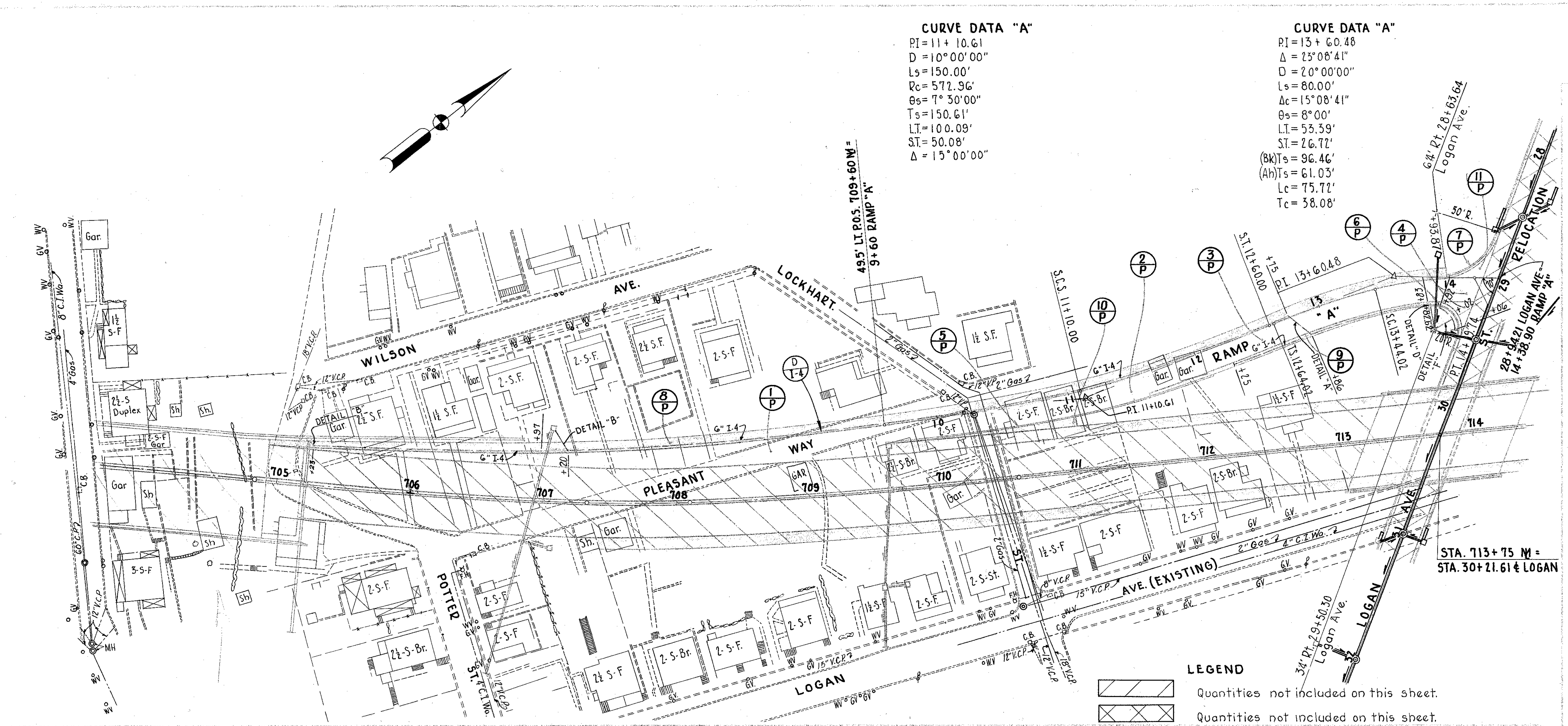
U-430 (14)

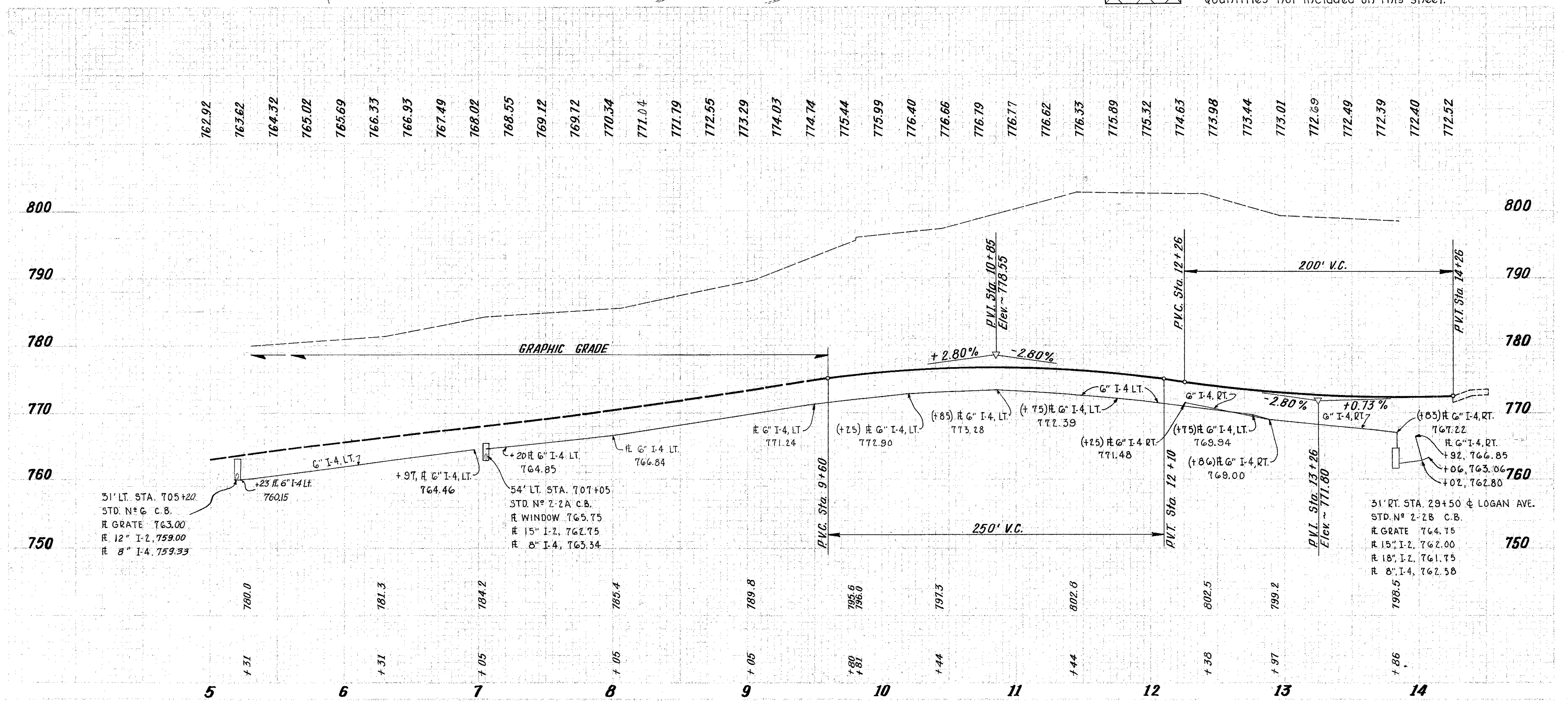
JEFFERSON COUNTY
JEF.-7-13.53

Sta. 34+50 to Sta. 35+00 LOGAN Ave.

U-430 (14)

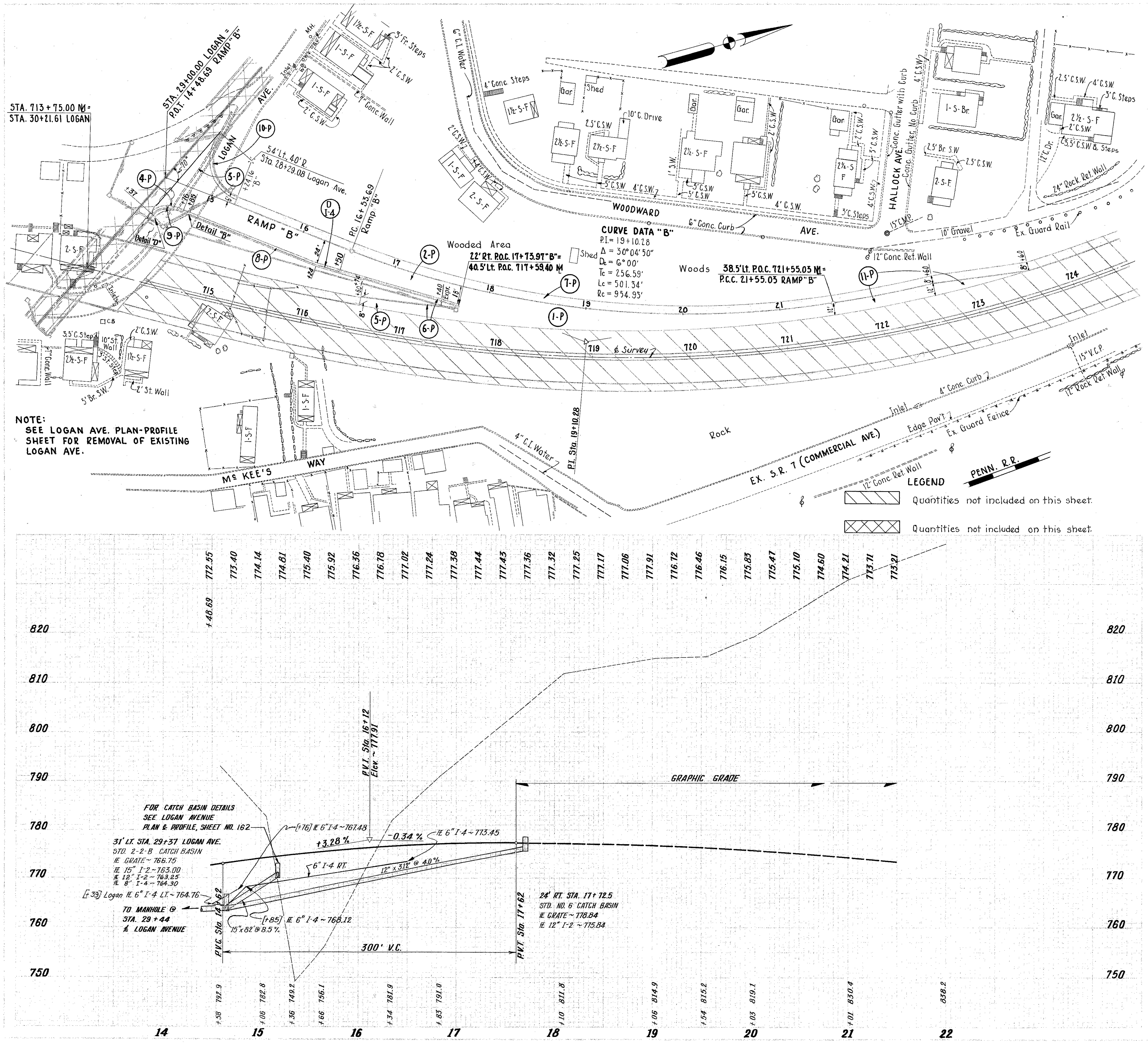
JEFFERSON COUNTY ~ JEF- 7- 13.53





ESTIMATED QUANTITIES

Ref. No.	Station to Station	Side	B-219 Water-Proofed Agg. Base Course C.Y.	E-1 Compact. Sub Grade S.Y.	I-12 Conc. Curb & Gutter Ty. 2 L.F.	I-12 Conc. Curb, Type 6 L.F.	I-18 Stab. Cr'shd Agg. Shldr's & Appr's. C.Y.	I-22 Sub Base Variable Depth C.Y.	T-B-35 Pav't. S.Y.	T-31 Bit. Surface Treatment Bit. Mat. GAL'S	T-31 Nº 6 Agg. C.Y.	I-13 4" Side-walk S.F.	I-12 Spec. Conc. Curb L.F.	I-5 Pipe Specials for Underdrains 6"×60° Ea.	I-5 6"×90° Ea.	I-5 6" Wye Ea.	I-5 6" Tee Ea.	I-4 6" Pipe Under-drains L.F.	I-4 8" Pipe Outlet M-6.4(a) L.F.	See Sheet No.
1-P	705 + 17.60 709 + 60 M.L.	Lt.		590				98	589.9											4,5,176 & 177
2-P	9 + 60 ~ 11 + 60	Rt.		356				59.3	355.6											5 & 177
3-P	11 + 60 ~ 13 + 82.62	Rt.		386				66.0	395.8											5 & 177
4-P	13+82.62 Ramp "A" ~ 29+50.30 Logan Ave.	Rt.		111				18.5	111.1											177
5-P	9 + 60 ~ 12 + 10	Rt.		28									250							5
6-P	13+82.62 Ramp "A" ~ 29+50.30 Logan Ave.	Rt.		13	45.1															8 & 177
7-P	13+93.87 Ramp "A" ~ 28+63.64 Logan Ave.	Lt.		16	56.6															8 & 177
8-P	704 + 93.1 M.L. ~ 13 + 93.87 Ramp "A"	Lt.	62.5	749		194	109.7	119.5		187.3	6.0	261								4,5,176 & 177
9-P	11 + 60 ~ 13 + 82.62	Rt.	6.0	71			11.2	10.7		17.9	0.6									5 & 177
10-P	709 + 60 ~ 711 + 00 M.L.	Rt.	3.9	47			6.5	7.4		11.7	0.4									5 & 177
11-P	13+93.87 Ramp "A" ~ 28+63.64 Logan Ave.	Lt.		21				3.5	20.8											177
D-I-4	705+20 M.L. to 14+06 Ramp "A"	LT. & Rt.												3	1	1	1	924	36	188
			72.4	2398	101.7	194	127.4	382.9	1473.2	216.9	7.0	261	250	6				924	36	



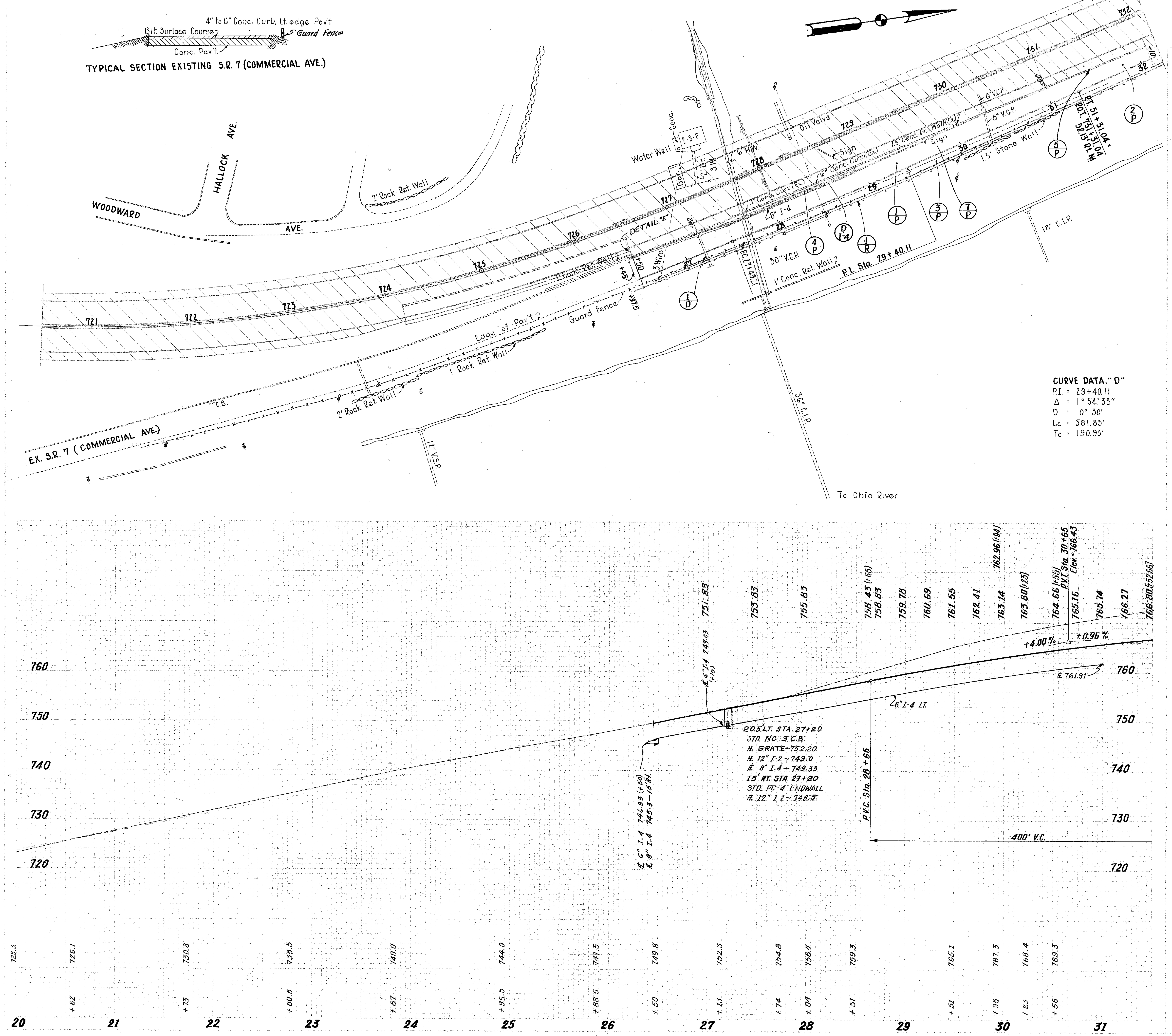
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	B-219 Water-Proofed Agg. Base Course C.Y.	E-1 Compact. Sub Grade S.Y.	I-12 Conc. Curb Std. Type 6 L.F.	I-18 Stab. Cr'shd Agg. Shldr's & Appr's. C.Y.	I-21 Port. Cem't. Conc. Med. Pav't. Std. Type 2 S.Y.	I-22 Sub Base Variable Depth C.Y.	T-B-35 Pav't S.Y.	T-31 Bit. Surface Treatment Bit. Mat. GAL'S	T-31 Bit. Surface Treatment Nº 6 Agg. C.Y.	I-12 Conc. Curb & Gut. Type 2 L.F.	I-5 Pipe Specials for Underdrains EACH 6"x60°	I-5 Pipe Specials for Underdrains EACH 6"x90°	I-4 6" Pipe Under-drains L.F.	I-4 8" Pipe Outlet, Sec. M-6.4(a) L.F.	REF. SHEET NO.
1-P	17+73.97 to 21+55.03	Rt.		857				142.8	856.7								3,5,178 & 179
2-P	14+61.46 to 17+73.97	Lt & Rt.		827				137.8	826.5								3,5, & 178
3-P	Logan 28+29.08 to Ramp "B" 15+24.16	Lt.		92				15.3	91.8								178
4-P	Logan 29+37.64 to Ramp "B" 14+67.77	Rt.		5				0.8	4.8								178
5-P	716+60.00 to 717+59.40	Lt.		111				18.4	110.5								5 & 178
6-P	Mainline 716+60.00 to Ramp "B" 16+74.00	Lt & Rt.		11	160		14										5 & 178
7-P	Ramp "B" 15+24.16 to Mainline 723+60.00	Lt	61.9	743		109.5		204.0		186	5.9						3,5,178 & 179
8-P	14+67.77 to 17+73.97	Rt.	7.6	91		14.2		14.3		23	0.7						5 & 178
9-P	Logan Ave. 29+37.64 to Ramp "B" 14+67.77			7								26.9					5 & 178 8 & 178
10-P	Logan Ave. 28+29.08 Ramp "B" 15+24.16	Lt.		22								80.1					8 & 178
11-P	721+55.03 to 723+60.00	Lt.		207				34.4	206.6								3,5 & 179
DI-4	Logan Ave 29+37 to Ramp "B" 16+50	Rt.											1	1	200	20	188
			69.5	2971	160	123.7	14	567.8	2096.9	209	6.6	107	2		200	20	

ESTIMATED QUANTITIES

Ref. No.	Station to Station	Side	See Sheet No.	B-219 Water-Proofed Agg. Base Course C.Y.	E-1 Compact Sub Grade S.Y.	I-12 Conc. Curb & Gutter, Type 2 L.F.	I-12 Conc. Curb, Type 6 L.F.	I-18 Stab. Cr'shd Agg. Shldr's & Appr's. C.Y.	I-21 Port. Cem't. Conc. Med. Pav't. Std. Type 2 S.Y.	I-22 Sub Base Variable Depth C.Y.	T-B-35 Pav't. S.Y.	T-31 Bit. Surface Treatment Bit. Mat. GAL'S	T-31 Bit. Surface Treatment Nº 6 Agg. C.Y.	I-15 G.R. Type 2-A L.F.	I-5 Pipe Specials for Underdrains EACH 6"x60°	I-5 Pipe Specials for Underdrains EACH 6"x90°	I-4 6" Pipe Under-Drains L.F.	I-4 8" Pipe Outlet, Sec. M-6.4(a) L.F.	I-13 4" Side-Walk S.F.	L-10 Sodding 3' Wide S.Y.
1-P	5+17.60~7+04.94	Lt.	5&176		409					68.2	409.0									
2-P	7+04.94 ~ 13+25.73	Lt.	5,176&177		1161					193.5	1161.3									
3-P	12+61.55 Ramp "C" ~32+14.42 Logan Ave.	Rt.	5&177		99					16.6	99.4									
4-P	3+16.51 Ramp "C" ~31+13.90 Logan Ave.	Lt.	177		5					0.8	4.8									
5-P	707+05 ~ 708+05 M.L.	Rt.	5,176&177		101					16.7	100.9									
6-P	707+03 ~ 708+05 M.L.	Rt.	5,176&177		6		82													
7-P	704+93.1 M.L.~12+61.55 Ramp "C"	Rt.	5,176&177	54.7	657			98.3		103.7		164	5.3							
8-P	7+04.94 ~ 13+16.51	Lt.	5,176&177	16.5	199			27.6		32.0		50	1.6							
9-P	7+04.94 ~ 13+16.51	Lt.					589													
10-P	13+16.51 Ramp "C" To 31+13.90 Logan Avenue	Lt.	8&177		7	27														
11-P	12+61.55 Ramp "C" To 32+14.42 Logan Avenue	Rt.	8&177		23	82				6.5										
12-P	10+27 ~ 10+90	Rt.	177			69													136	
13-P	10+70 ~	Rt.	177				25													
14-P	707+03. ~ 707+25	Rt.	5&176						14											
15-P	9+80.5 ~ 13+09	Lt.	5&177							28.5									523	
16-P	10+00 ~ 11+00	Rt.	177		6		100			7.4									150	
17-P	9+84.33 Ramp C~30+86.83 Logan Ave.	Lt.																		124
DI-4	6+00 ~ 12+62	Rt.	188												2	3	744	30		
1-R	705+29.35 ~ 709+79.35	Rt.												450						
				71.2	2,673	178	796	125.9	14	473.9	1775.4	214	6.9	450		5	744	30	809	124

RAMP "C"



ESTIMATED QUANTITIES

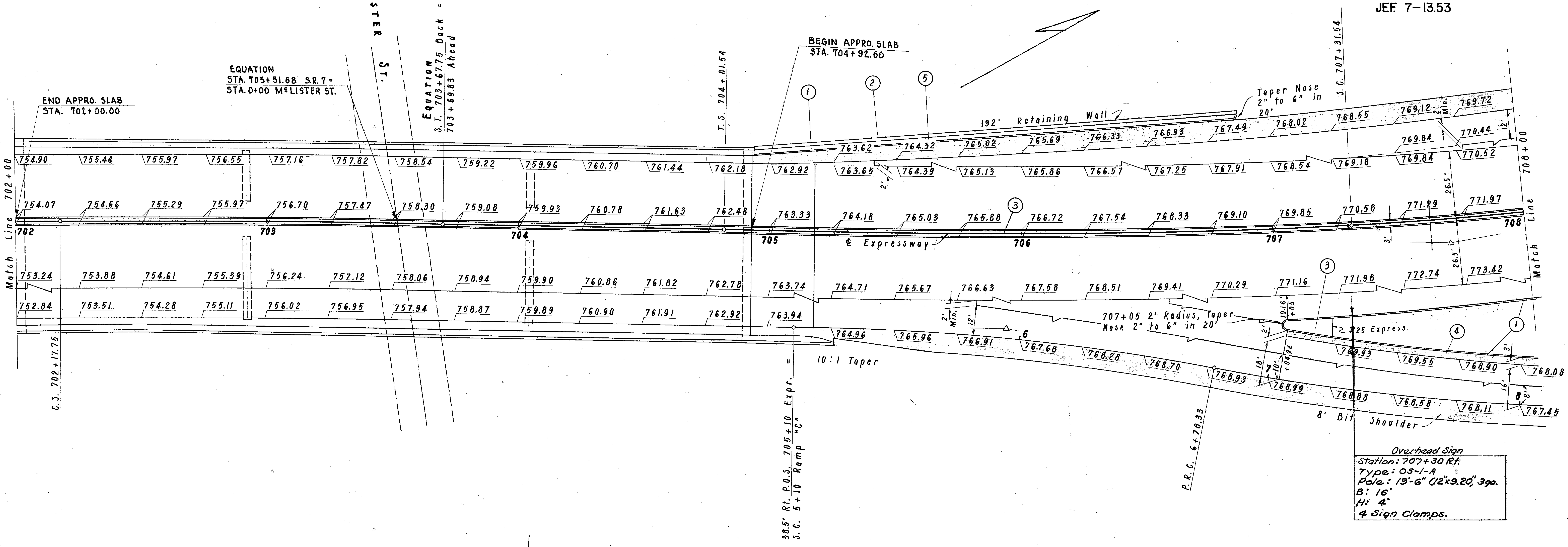
Ref.	Station to Station	Side	B-219 Water-Proofed Agg. Base Course C.Y.	E-1 Compact. Sub Grade S.Y.	I-12 Conc. Curb, Type 6 L.F.	I-18 Stab. Crshd Agg. Shldrs & Appr's. C.Y.	E-8 Removal & Disposal of Existing Pavement S.Y.	I-22 Sub Base Variable Depth C.Y.	T-B-35 Pav't. S.Y.	T-31 Bit. Surface Treatment Bit. Mat. GAL'S	T-31 No 6 Agg. C.Y.	I-15 G.R. Type 2-A L.F.	L-10 Sodding S.Y.	I-12 Special Concrete Curb L.F.	I-13 4" Side-walk S.F.	I-2 Storm Sewers Under Pav't or App., See M6.5B or M6.8B L.F. 12"	I-8 Std. No. 3 Catch Basins EACH	E-2 Excav. for Structs C.Y.	S-1 Conc. for Structs Class "C" C.Y.	I-5 Pipe Specials for Underdrains (EACH) 6"x90°	I-4 6" Pipe Under-Drains L.F.	I-4 8" Pipe Outlet, Sec. M 6.4(a) L.F.	Sheet No.
1-P	26+45 ~ 29+75	Lt.		619				103.1	618.8														4,5,178,179
2-P	29+75 ~ 32+10	Lt.		418				69.6	417.8														4,5,179
3-P	26+45 ~ 32+10	Rt.	41.8	502		74.1		84.0		125.5	4.0												5,178,179
4-P	26+45 ~ 29+75	Lt.	9.2	110	255	15.3		50.5		21.5	0.9				668								4,178,179
5-P	31+35.91 ~ 32+10	Lt.												74									5,179
1-R	26+37.5 ~ 32+10	Rt.										572.5											
7-P	26+45 ~ 32+10	℄					1507																
1-D	27+20	Lt. & Rt.											1			32	1	1	0.23				81
D I-4	26+50 ~ 31+00	Lt.																		1	458	20	188
Total			51.0	1649	255	89.4	1507	307.0	1036.6	153.0	4.9	572.5	1	74	668	32	1	1	0.23	1	458	20	

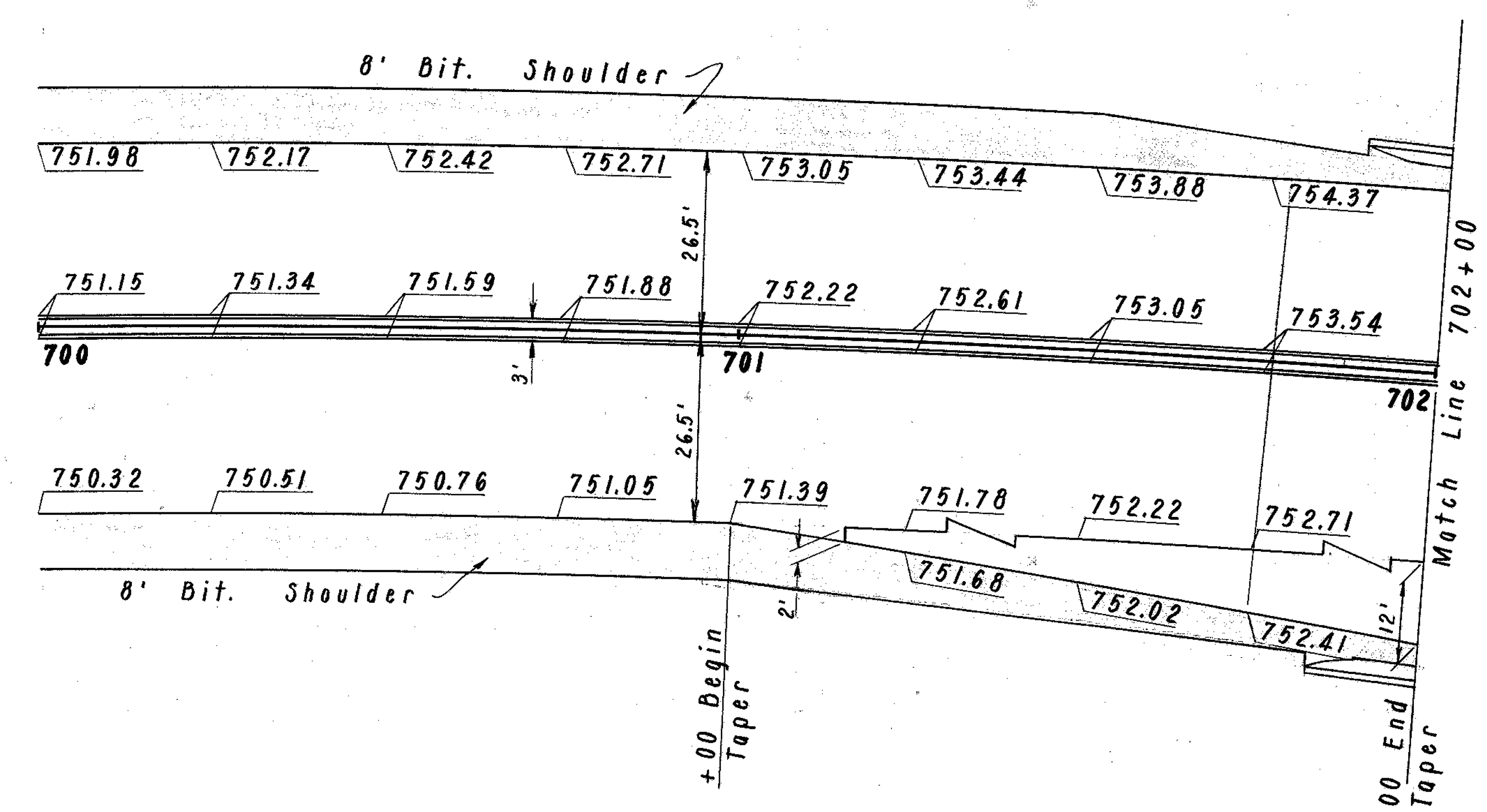
RAMP "D"

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430 (14)	

176 / 307

JEFFERSON COUNTY
JEF. 7-13.53





LEGEND

Std. Longitudinal Key Joint
Std. Longitudinal Joint
Expansion Joint with Dowels

All Elevations @ 25' Intervals Unless otherwise Shown.

1. Type 6 Conc. Curb
2. Retaining Wall (See Detail Plans)
3. Portland Cement Conc. Median Pav't., Type 2
4. Bit. Shoulder
5. 4" Conc. Walk

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA.

PAVEMENT DETAILS
STA. 700+00 TO STA. 708+00
LOGAN AVENUE INTERCHANGE

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
Griffin	F.J.B.	F.J.B.			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

177/307

JEFFERSON COUNTY
JEF-7-13.53

LEGEND

- Std. Longitudinal Key Joint
- Std. Longitudinal Joint
- Expansion Joint with Dowels
- Std. Key Joint without Tie Bars
- Expansion Joint without Dowels

All Elevations @ 25' Intervals Unless otherwise Shown.

1. Type 6 Conc. Curb
2. Retaining Wall (See Detail Plans)
3. Portland Cement Conc. Med. Pav't., Type 2
4. Bituminous Shoulder
5. Special Conc. Curb
6. Type 2 Conc. Curb & Gutter
7. 4" Conc. Walk

MICHAEL BAKER JR, CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

PAVEMENT DETAILS
STA. 708+00 TO STA. 714+00
LOGAN AVENUE INTERCHANGE

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
Griffin	F. J. B.	F. J. B.			

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	U-430 (14)

178/307

JEFFERSON COUNTY
JEF-7-13.53

1. Conc. Curb, Type 6
2. Type 2 Conc. Curb & Gutter
3. Portland Cement Conc. Median Pav't., Type 2
4. 4" Conc. Walk

LEGEND

- Std. Longitudinal Key Joint
- Std. Longitudinal Joint
- Expansion Joint with Dowels
- Std. Key Joint without Tie Bars
- Expansion Joint without Dowels

All Elevations @ 25' Intervals Unless otherwise Shown.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

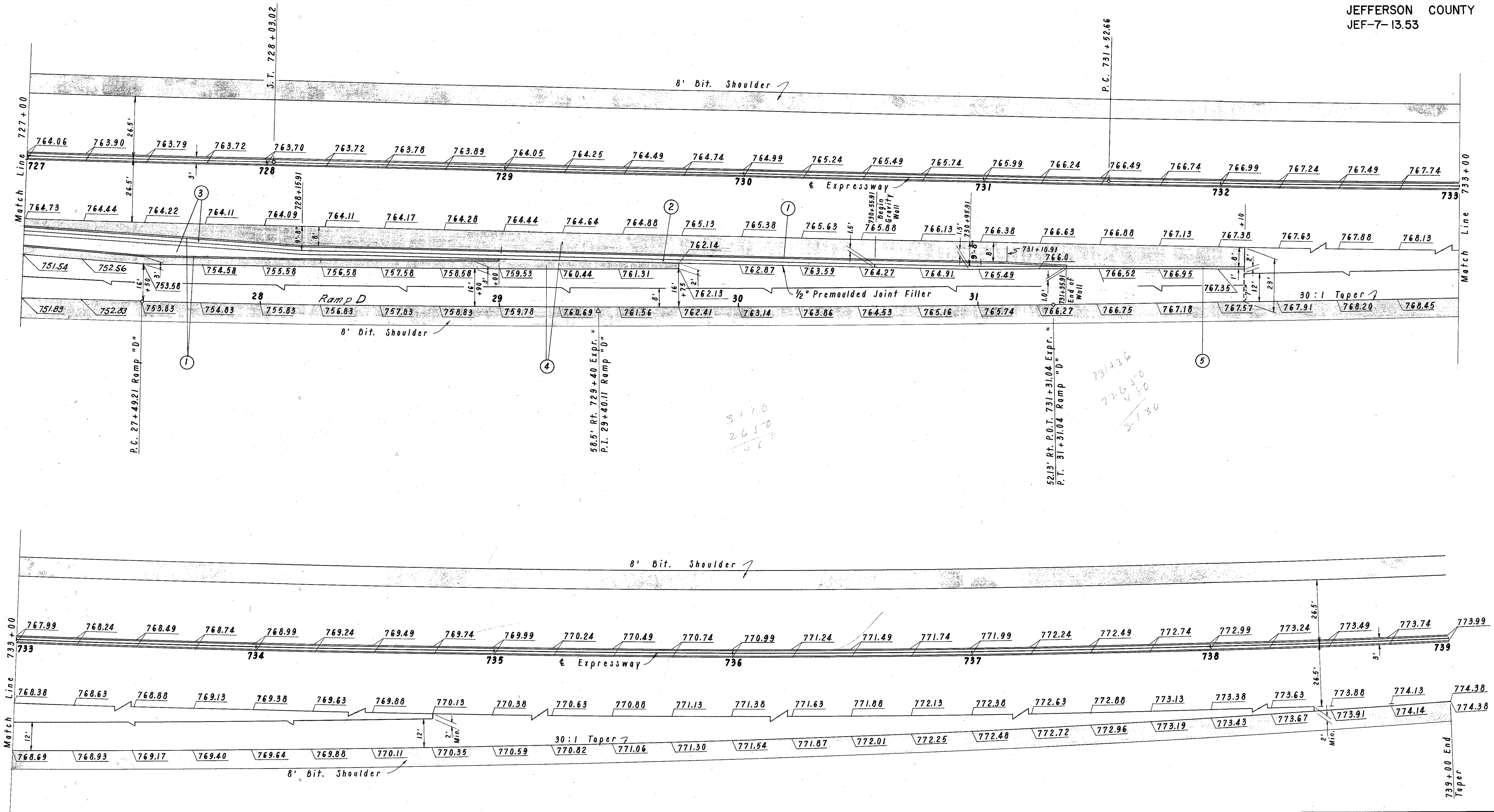
PAVEMENT DETAILS
STA. 714+00 TO STA. 727+00
LOGAN AVENUE INTERCHANGE

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
Griffin	F.J.B.	F.J.B.				

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430 (14)	

179
307

JEFFERSON COUNTY
JEF-7-13.53



LEGEND

1. Conc. Curb, Type 6
2. Retaining Wall (See Detail Plans)
3. 4" Conc. Walk
4. Bit. Shoulder
5. Special Conc. Curb

Std. Longitudinal Key Joint
Std. Longitudinal Joint
Expansion Joint with Dowels

All Elevations @ 25' Intervals Unless otherwise Shown.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

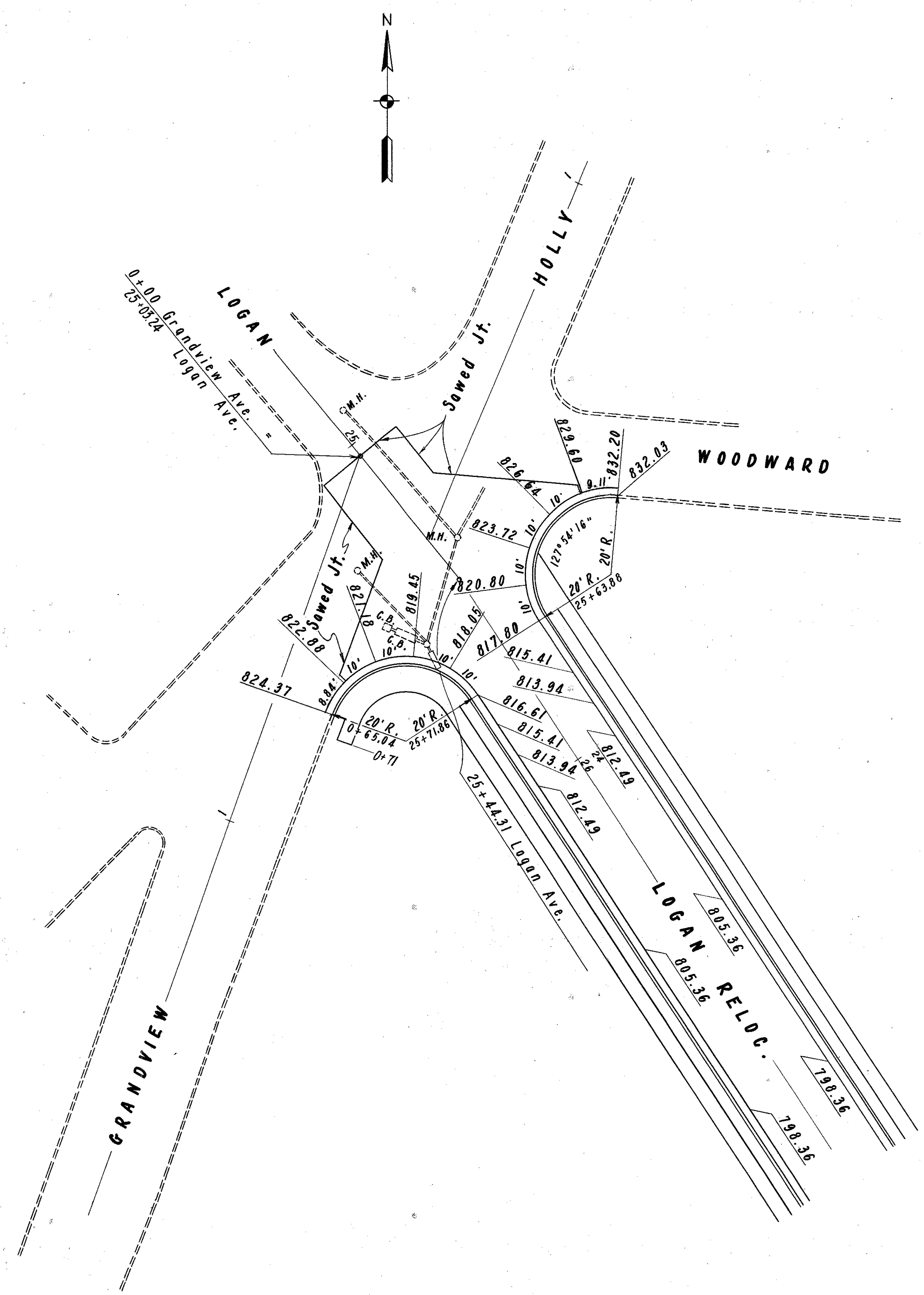
PAVEMENT DETAILS
STA. 727+00 TO STA. 739+00
LOGAN AVENUE INTERCHANGE

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
Griffin	F. J. B.	F. J. B.			

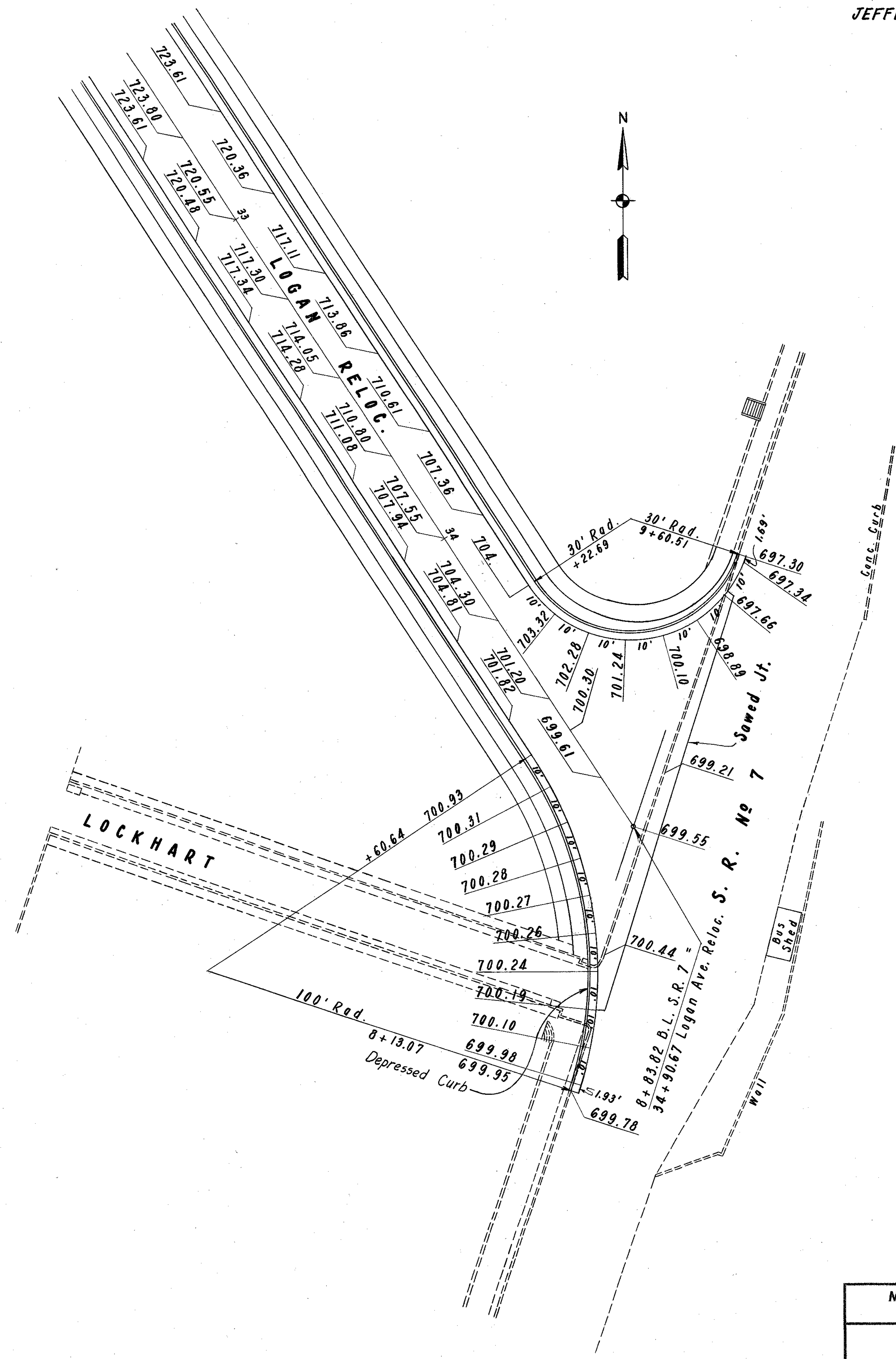
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

180
307

JEFFERSON COUNTY JEF-7-13.53



NOTE: All Elevations @ 25' Intervals unless otherwise Shown.



NOTE: All Elevations @ 25' Intervals unless otherwise Shown.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

INTERSECTION DETAILS
COMMERCIAL AVE. & LOGAN RELOC.
GRANDVIEW AVE. & LOGAN RELOC.
LOGAN AVENUE INTERCHANGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
Griffin	Mudd	G.K.M.			

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

JEFFERSON COUNTY
JEF- 7- 13.53

Drainage Area = 44 ac.
Discharge, Q25 = 77 c.f.s.
Scale 1" = 10'

INLET CHANNEL

ESTIMATED QUANTITIES

E-2	Excavation for Structures	628 C.Y.
E-3	Channel Excavation	81 C.Y.
I-8	Standard Nº 2 Manhole	1 Ea.
I-8	Special Manhole, Type "B"	1 Ea.
I-10	Dumped Rock Channel Protection	18 C.Y.
I-14	Type 1 Paved Gutter, Modified to 3' F.B. to 1' depth	73 L.F.
I-14	Standard Type 1 Paved Gutter	13 L.F.
L-10	Sodding	2 S.Y.
S-1	Concrete for Structures, Class "E"	0.59 C.Y.
S-1	Concrete for Structures, As per plan	48.5 C.Y.
S-22	Removal of portions of Existing Structures	Lump Lump
S-27	36" Pipe for Roadway Culverts, M-6.6(d) or M-6.4(d)	148 L.F.
S-27	36" Pipe for Roadway Culverts, M-6.4(d)	68 L.F.

CULVERT DATA

TYPE: S-27 Pipe for Roadway Culverts
Sec. M-6.6(d) or M-6.4(d)
& Sec. M-6.4(d)
SIZE: 36" x 148' & 36" x 68'

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

CULVERT SECTION STA. 727+72.5

CULVERT No. JEF-7-14.40

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
ℓ	ℓ	a.m.m.	W.H.T.		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430 (14)	

182
307

JEFFERSON COUNTY
JEF-7-13.53

ESTIMATED QUANTITIES

E-2	Excavation for Structures	128	C.Y.
E-3	Channel Excavation	715	C.Y.
S-1	Concrete for Structures, Class "E"	.83	C.Y.
S-27	24" Pipe for Roadway Culverts	90	L.F.
L-10	Sodding	1	S.Y.
I-10	Dumped Rock Channel Protection	15	C.Y.

CULVERT DATA

TYPE S-27 Pipe for Roadway Culverts
Sec. M-6.6(C) P.C. 4 Endwall
SIZE 24" × 90'

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

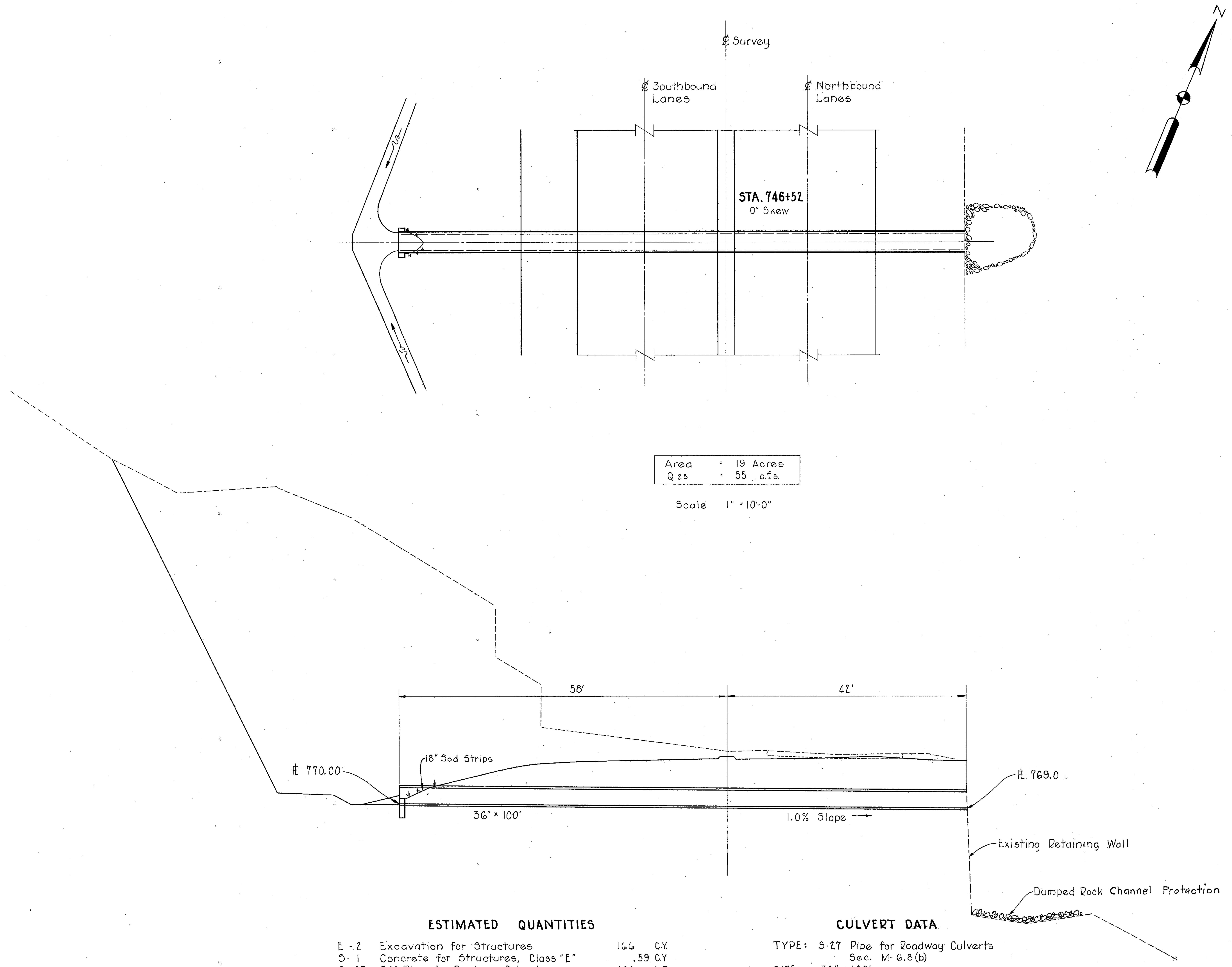
CULVERT SECTION STA. 739+33
CULVERT No. JEF-7-14.62

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
[illegible]	A.M.M.	A.M.M.	W.H.T.		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430 (14)	

183/307

JEFFERSON COUNTY
JEF-7-13.53



ESTIMATED QUANTITIES

E-2	Excavation for Structures	166	C.Y.
S-1	Concrete for Structures, Class "E"	.59	C.Y.
S-27	36" Pipe for Roadway Culverts	100	L.F.
L-10	Sodding	2	S.Y.
I-10	Dumped Rock Channel Protection	15	C.Y.

CULVERT DATA

TYPE: S-27 Pipe for Roadway Culverts
Sec. M-6.8 (b)
SIZE: 36" × 100'

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

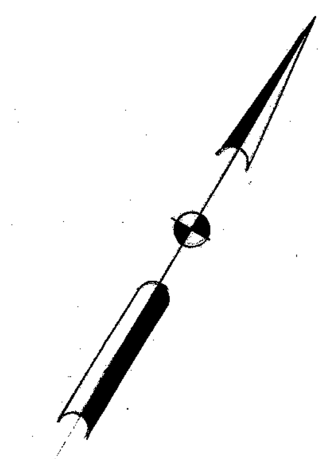
CULVERT SECTION STA. 746+52

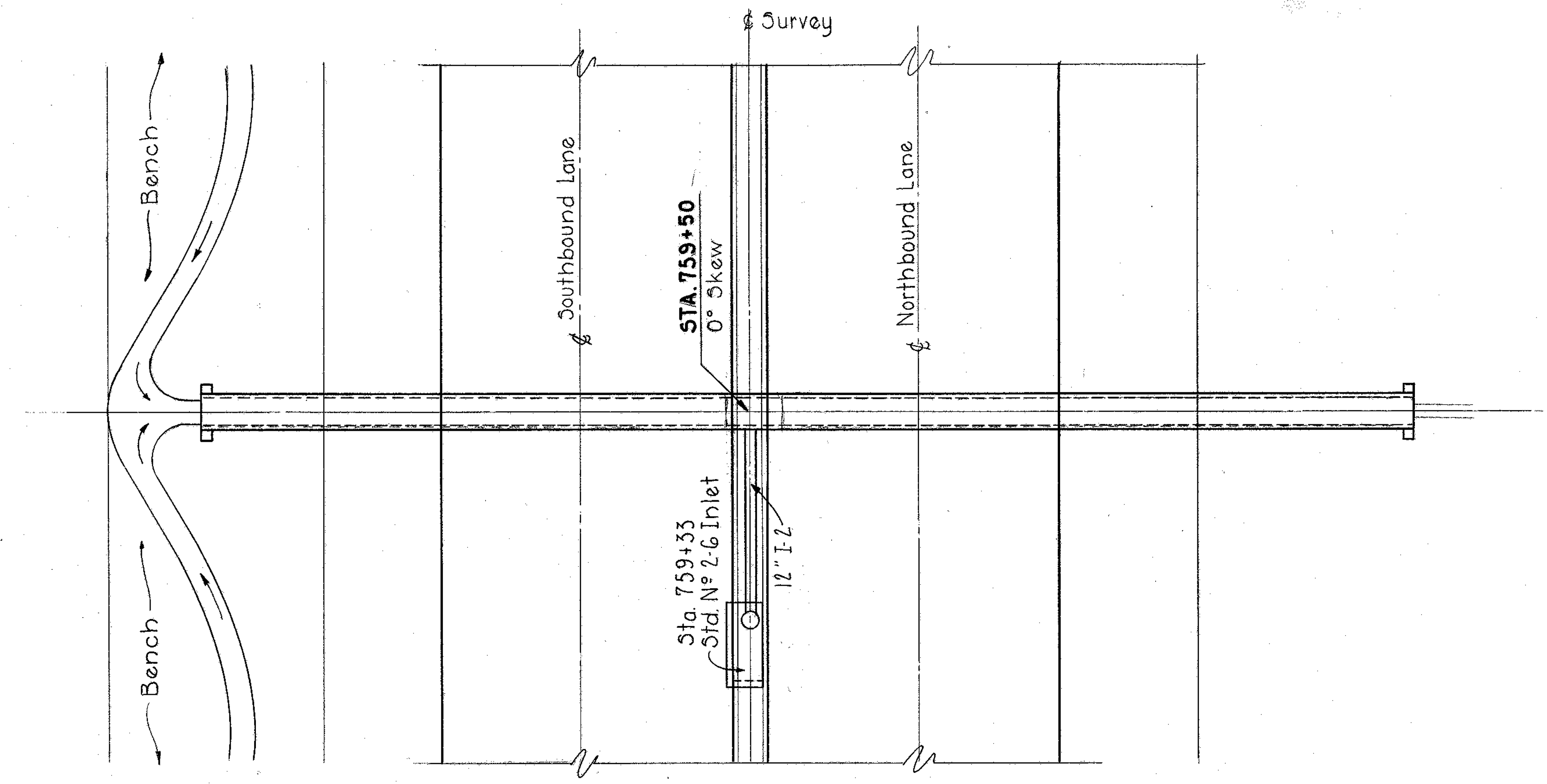
CULVERT No. JEF-7-14.76

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
₰	C.M.	A.M.	W.H.T.		

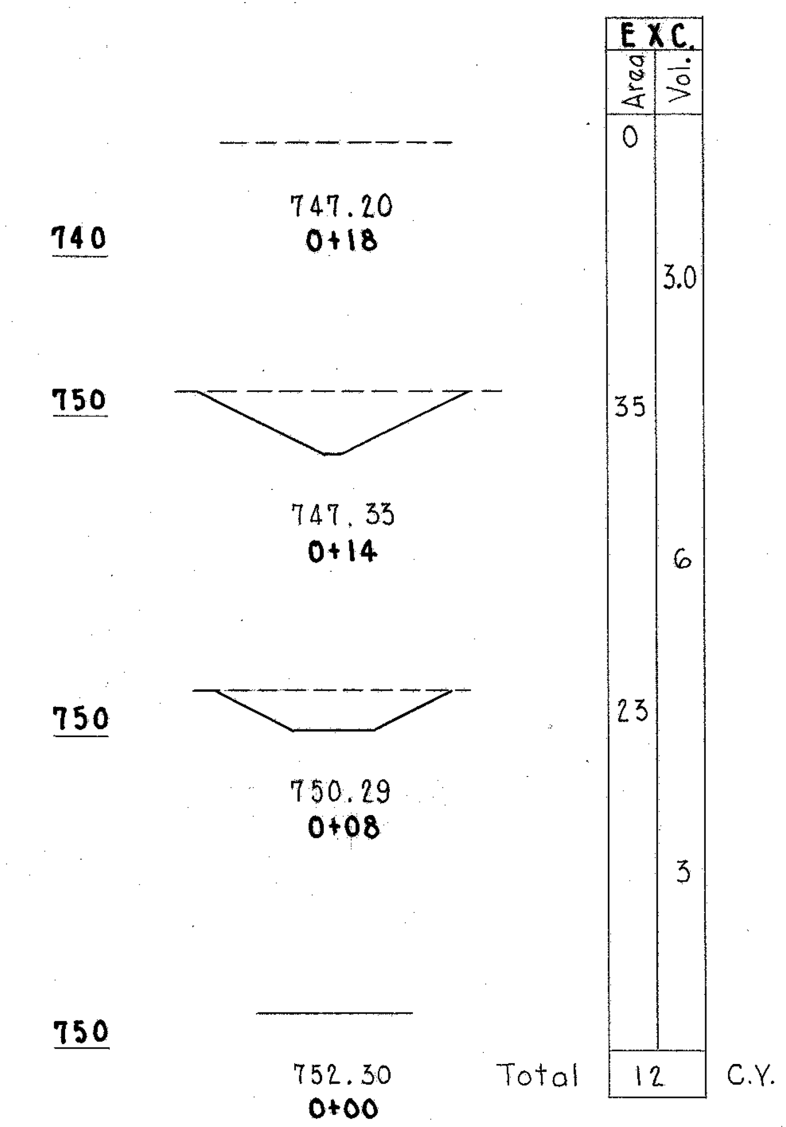
FED. RD. DIVISION	STATE	PROJECT		
2	OHIO	U-430 (14)		184 / 307

JEFFERSON COUNTY
JEF-7-13.53





D.A. = 7 Ac.
Q25 = 26 c.f.s.
Scale 1" - 10'



ESTIMATED QUANTITIES

E-2	Excavation for Structures	120	C.Y.
E-3	Channel Excavation	12	C.Y.
S-1	Concrete for Structures Class "E"	1.02	C.Y.
S-27	30" Pipe for Roadway Culverts	102'	L.F.
I-5	Pipe Special, 30" × 30" × 12" Tee, M-6.8(b)	1	Ea.
L-10	Sodding	3	S.Y.

CULVERT DATA

TYPE S-27 Pipe for Roadway Culverts
Sec. M-6.8(b) P.C.4 Endwalls
SIZE 30" × 106'

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

CULVERT SECTION STA. 759+50

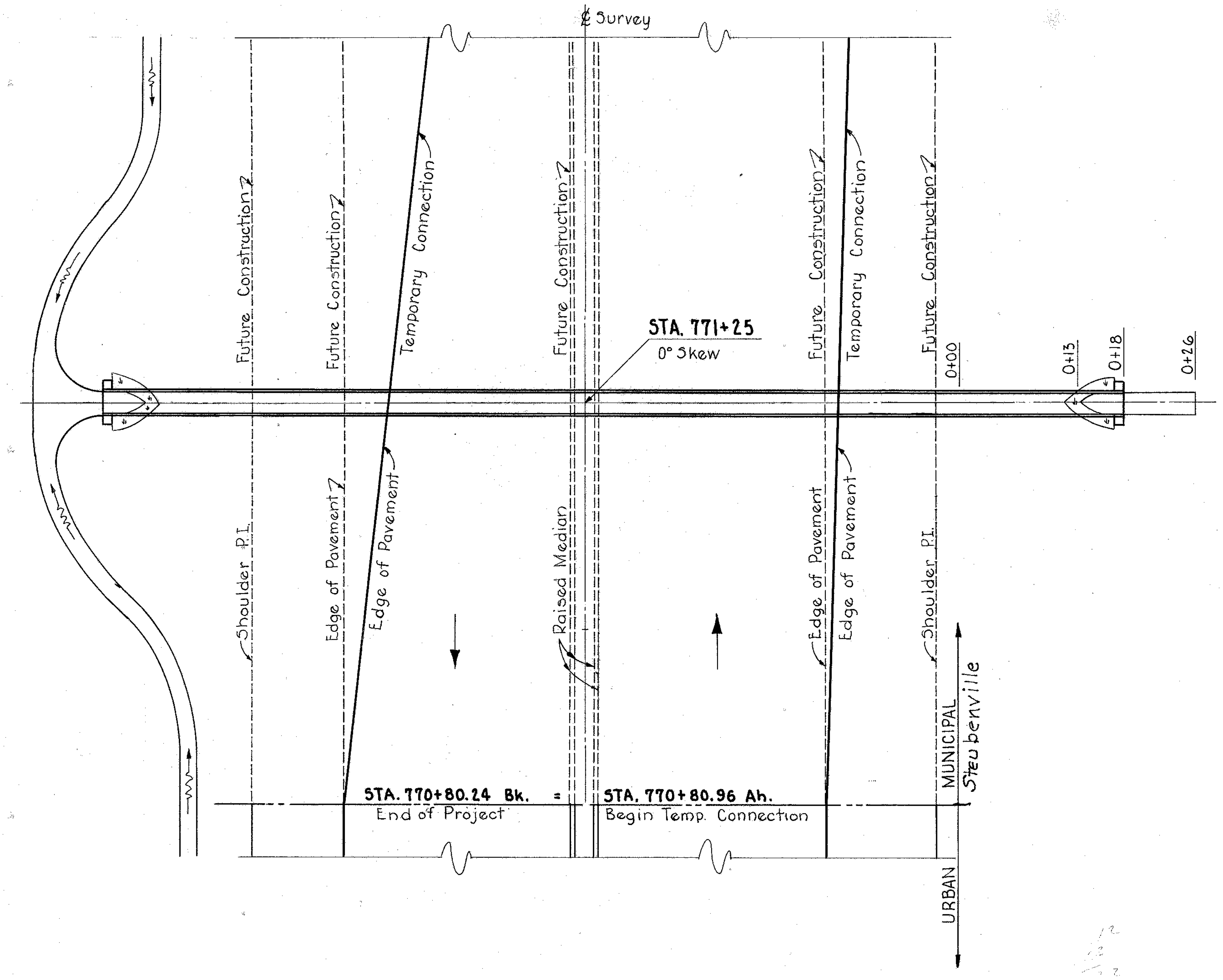
CULVERT No. JEF-7-15.00

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
⅃	AM	AM	WHT		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

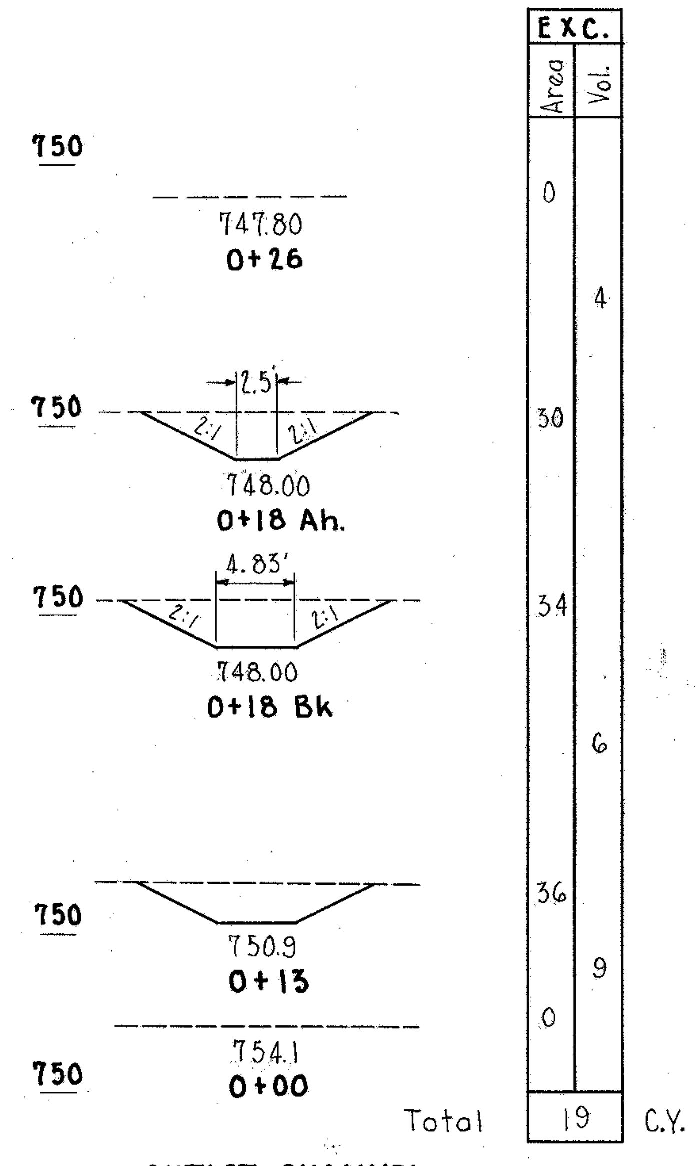
185
307

JEFFERSON COUNTY
JEF-7-13.53



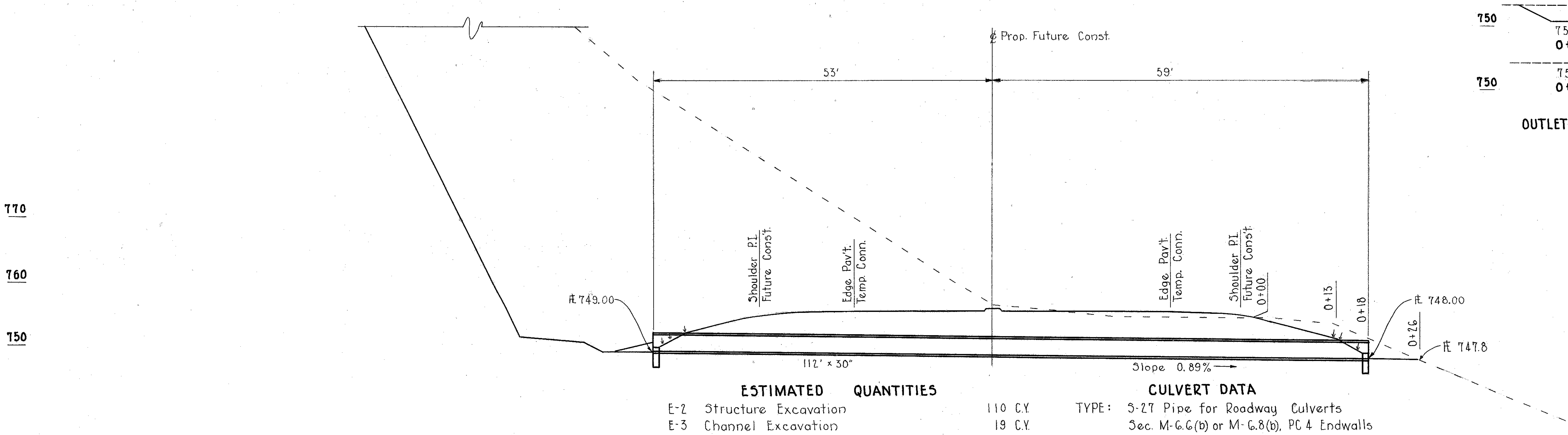
D.A	=	24 ac.
Q25	=	39 cfs

Scale 1" = 10'



OUTLET CHANNEL

Bench Mark Sta. 772+04
⊠ Cut in N.E. corner hdwl P.R.R.
179' Right Elev. 694.10



ESTIMATED QUANTITIES

E-2	Structure Excavation	110 C.Y.
E-3	Channel Excavation	19 C.Y.
L-10	Sodding	3 S.Y.
S-1	Concrete for Structure, Class "E"	1.02 C.Y.
S-27	30" Pipe for Roadway Culverts	112 L.F.

CULVERT DATA

TYPE: S-27 Pipe for Roadway Culverts
Sec. M-6.6(b) or M-6.8(b), PC 4 Endwalls
SIZE: 112' × 30"

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

CULVERT SECTION STA. 771+25

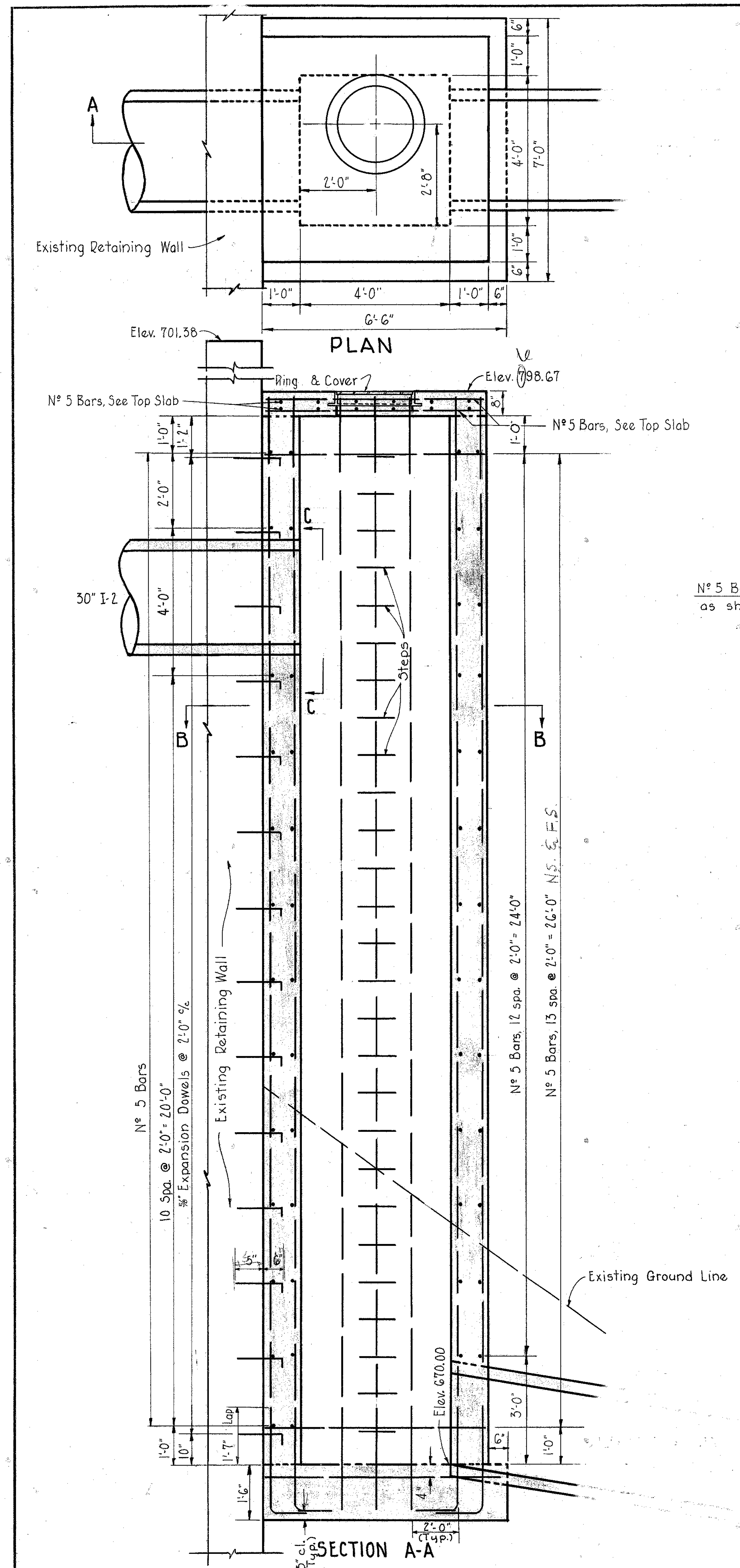
CULVERT No. JEF.-7-15.31

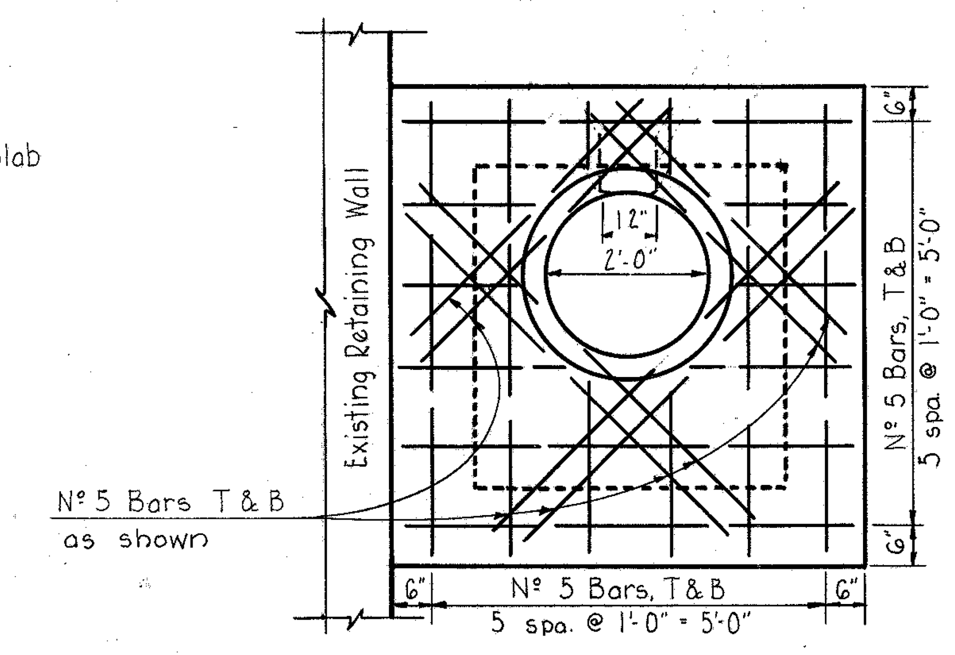
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
₫	₫	A.M.	W.H.T.		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

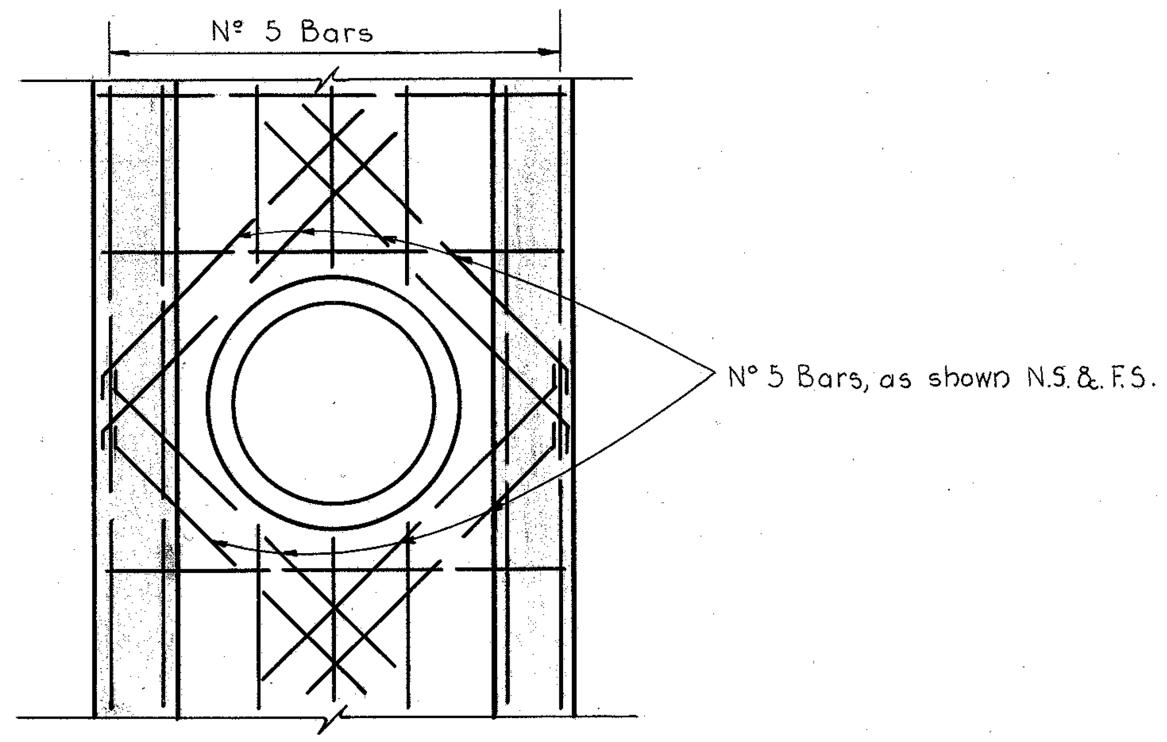
186 / 307

JEFFERSON COUNTY
JEF-7-13.53

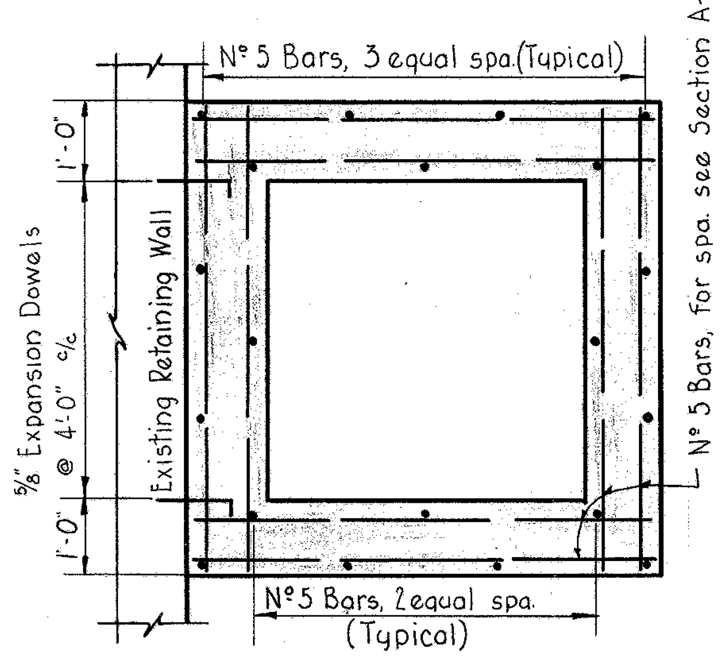




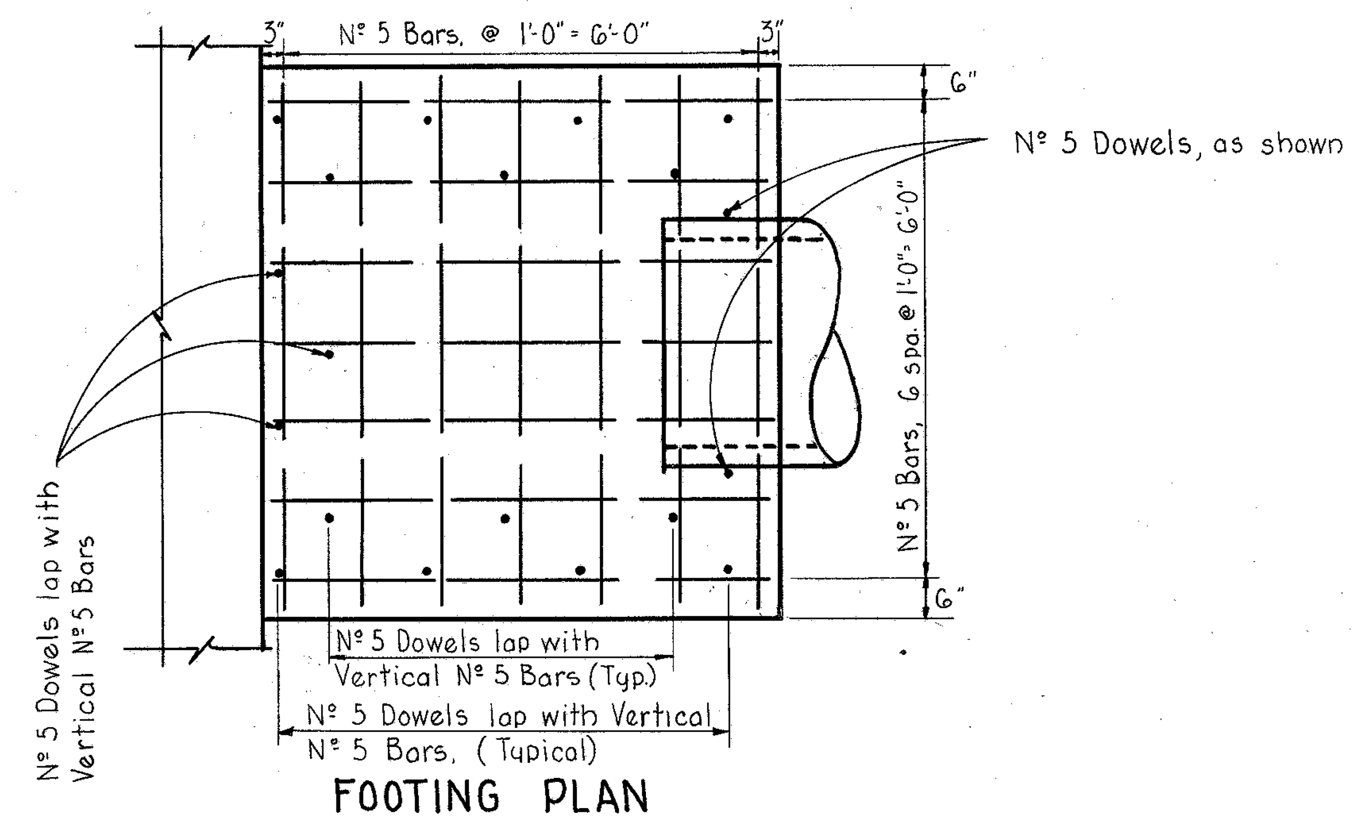
TOP SLAB



VIEW C-C



SECTION B-B



FOOTING PLAN

NOTES:

Reinforcing Steel shall be 5/8" round bars in accordance with details shown hereon and conforming to Item S-4 of the Construction and Material Specifications. Cost of furnishing and placing reinforcing steel, dowel holes and expansion dowels shall be included in the Unit Price Bid for Item I-8, Special M.H., Type "A"

Concrete shall be Class "C"

Ring, Cover and Steps shall be as shown on Std. Drwg I-8, Manhole Nº 3. The manhole shall conform to Item I-8 of the Construction and Material Specifications unless otherwise shown.

N.S. Near Side
F.S. Far Side
T Top of Slab
B Bottom of slab

30"-I-2 not a part of Item I-8, Special Manhole, Type "A"

"EXPANSION DOWELS" as appearing on Sheets 186 and 187 shall refer to "Expansion Bolt" as appearing on Standard Drawing L.J. No. 1

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

DETAIL OF SPECIAL MANHOLE TYPE A

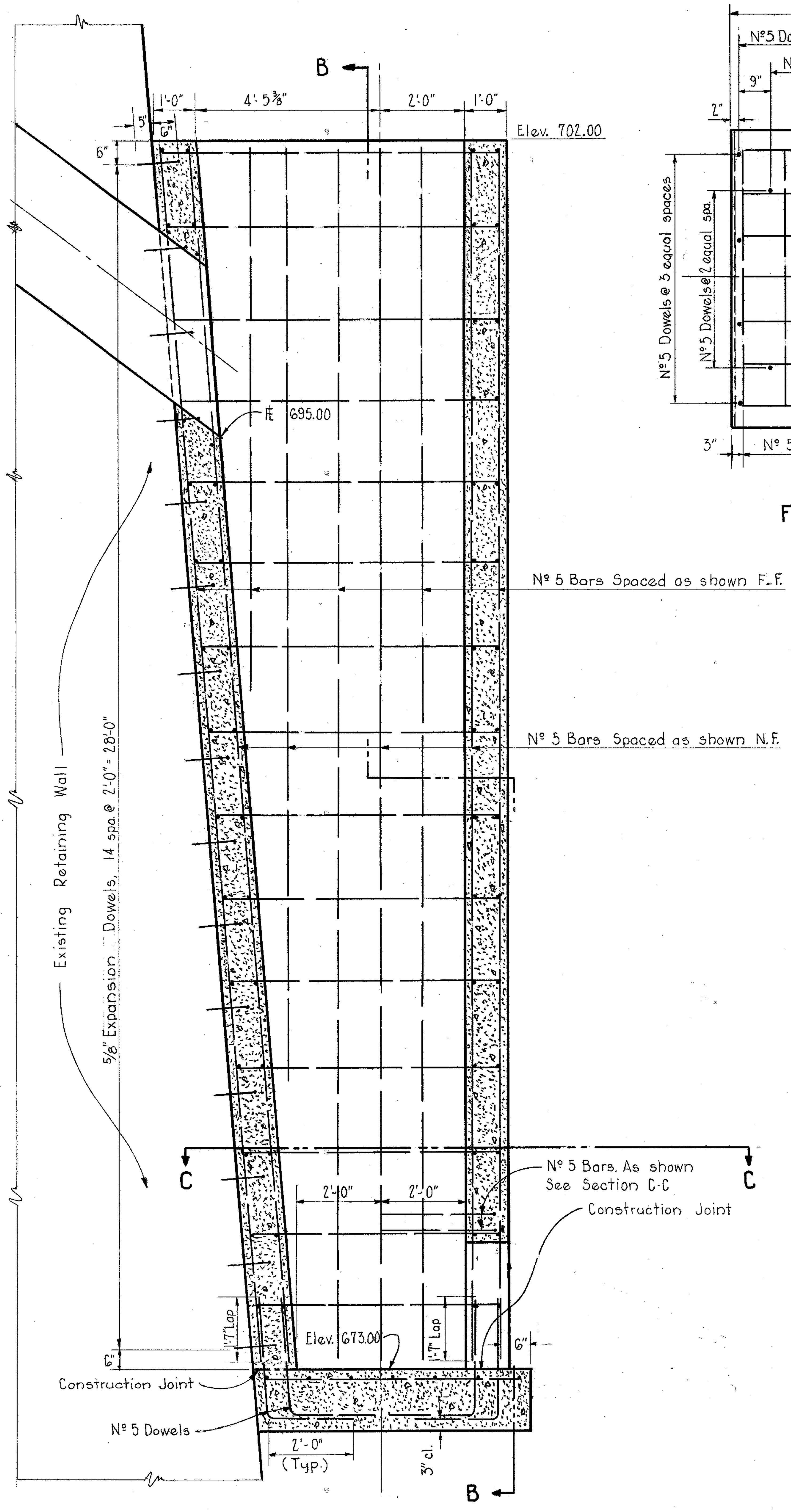
Sheets 163 and 171

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
⊕	⊕	D.H.B.	E.F.R.		

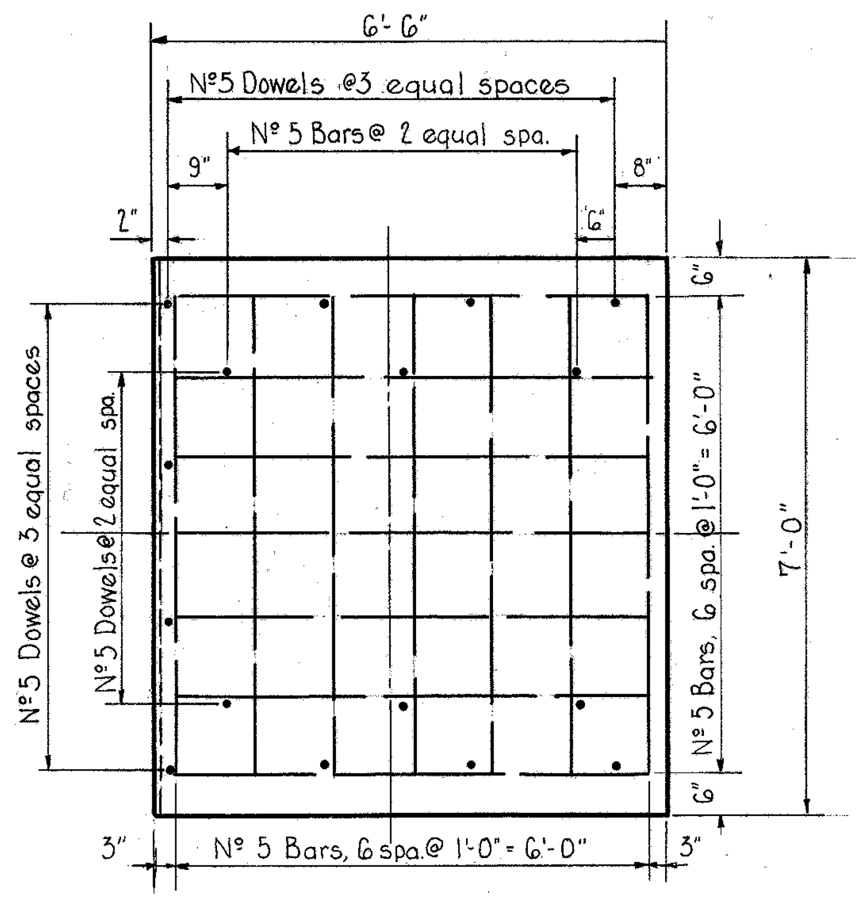
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U- 430 (14)	

187
307

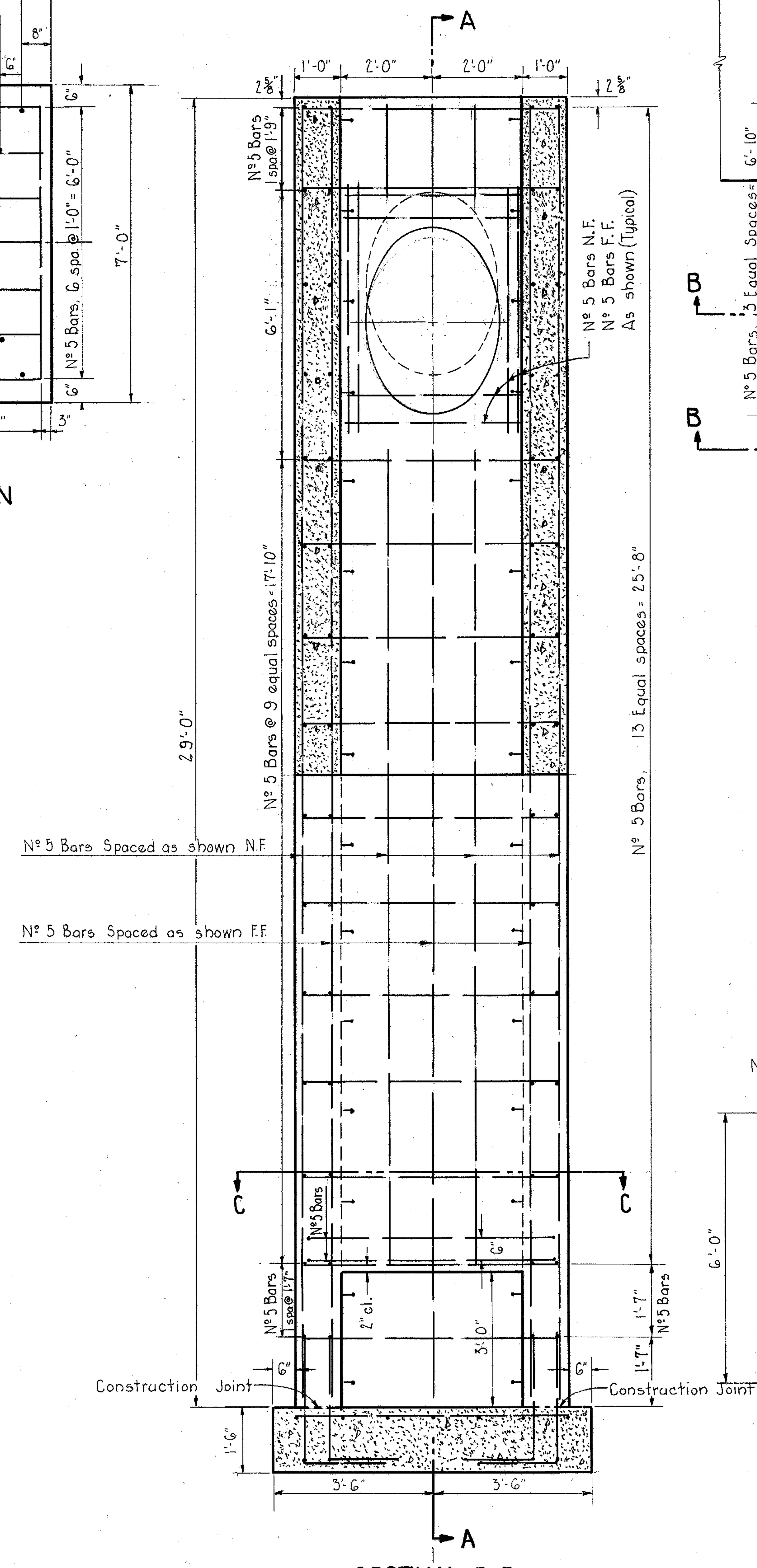
JEFFERSON COUNTY
JEF- 7- 13.53



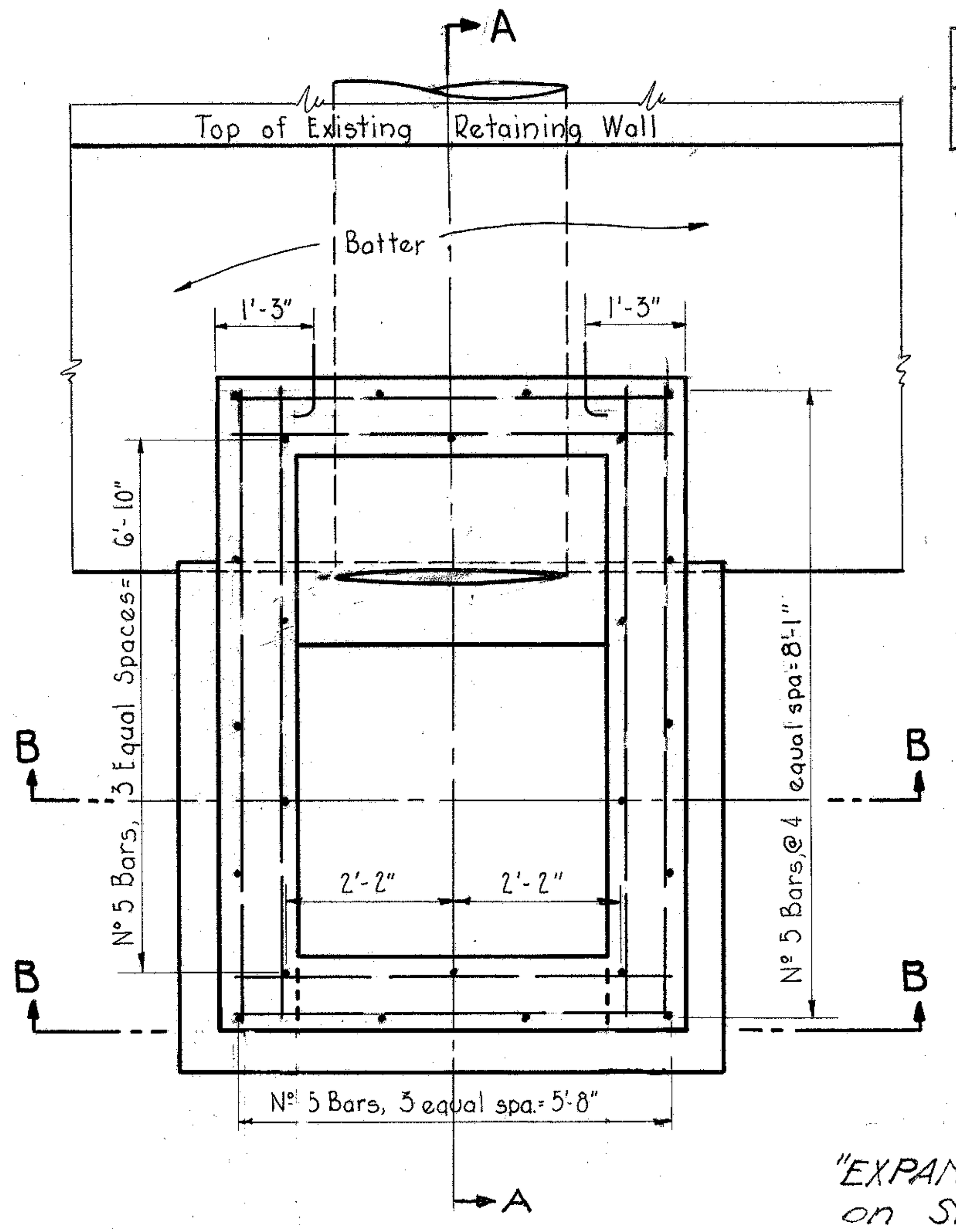
SECTION A-A



FOOTING PLAN



SECTION B-B



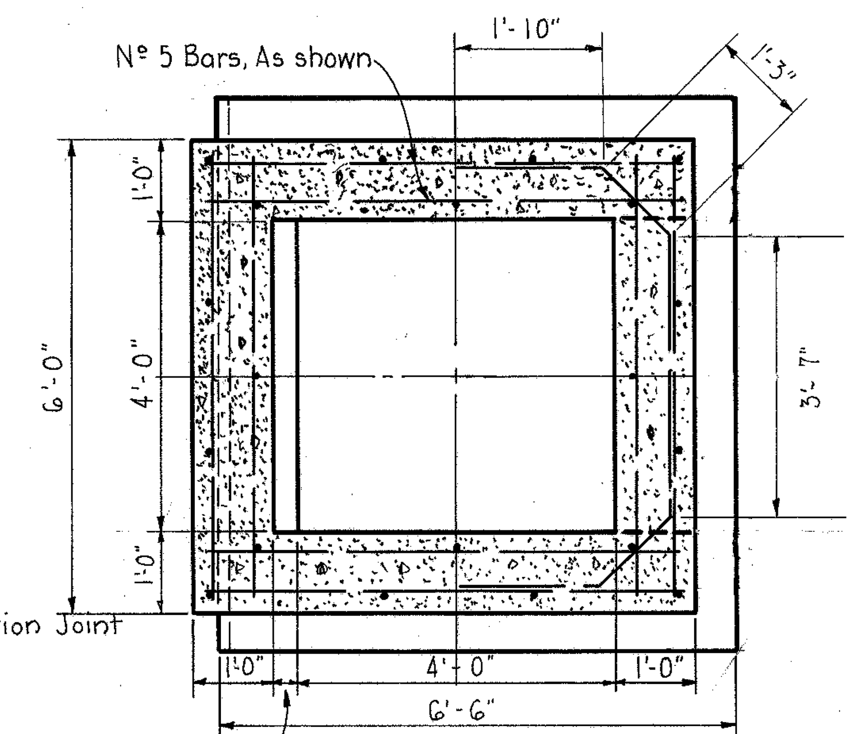
PLAN

NOTE:
Reinforcing Steel shall be ½" and ⅝" round bars in accordance with the details shown hereon and conforming to Item S-4 of the Construction and Material Specifications. Cost of furnishing and placing reinforcing steel, dowel holes and expansion dowels shall be included in the Unit Price Bid for Item I-8, Special Manhole, Type "B". Concrete shall be Class "C" Concrete.

The Special Manhole shall conform to Item I-8 of the Construction and Materials Specifications unless otherwise shown.

N. F. = Near Face
F. F. = Far Face

"EXPANSION DOWELS" as appearing on Sheets 186 and 187 shall refer to "Expansion Bolt" as appearing on Standard Drawing L.J. No. 1.



SECTION C-C

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

DETAILS FOR SPECIAL MANHOLE TYPE B

STA. 727+72.5 - SHEET 181

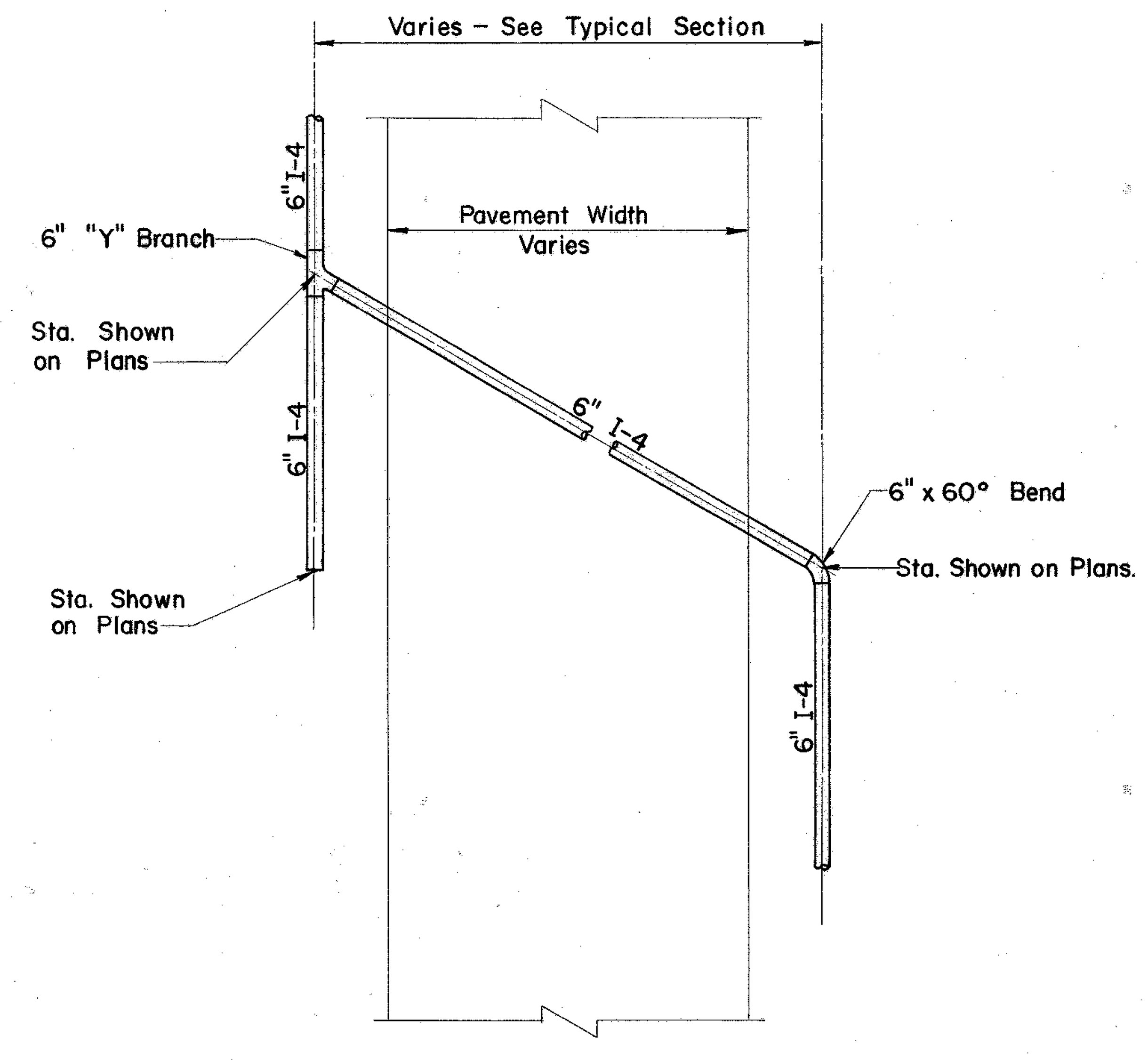
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
❡	❡	❡			

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27095

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

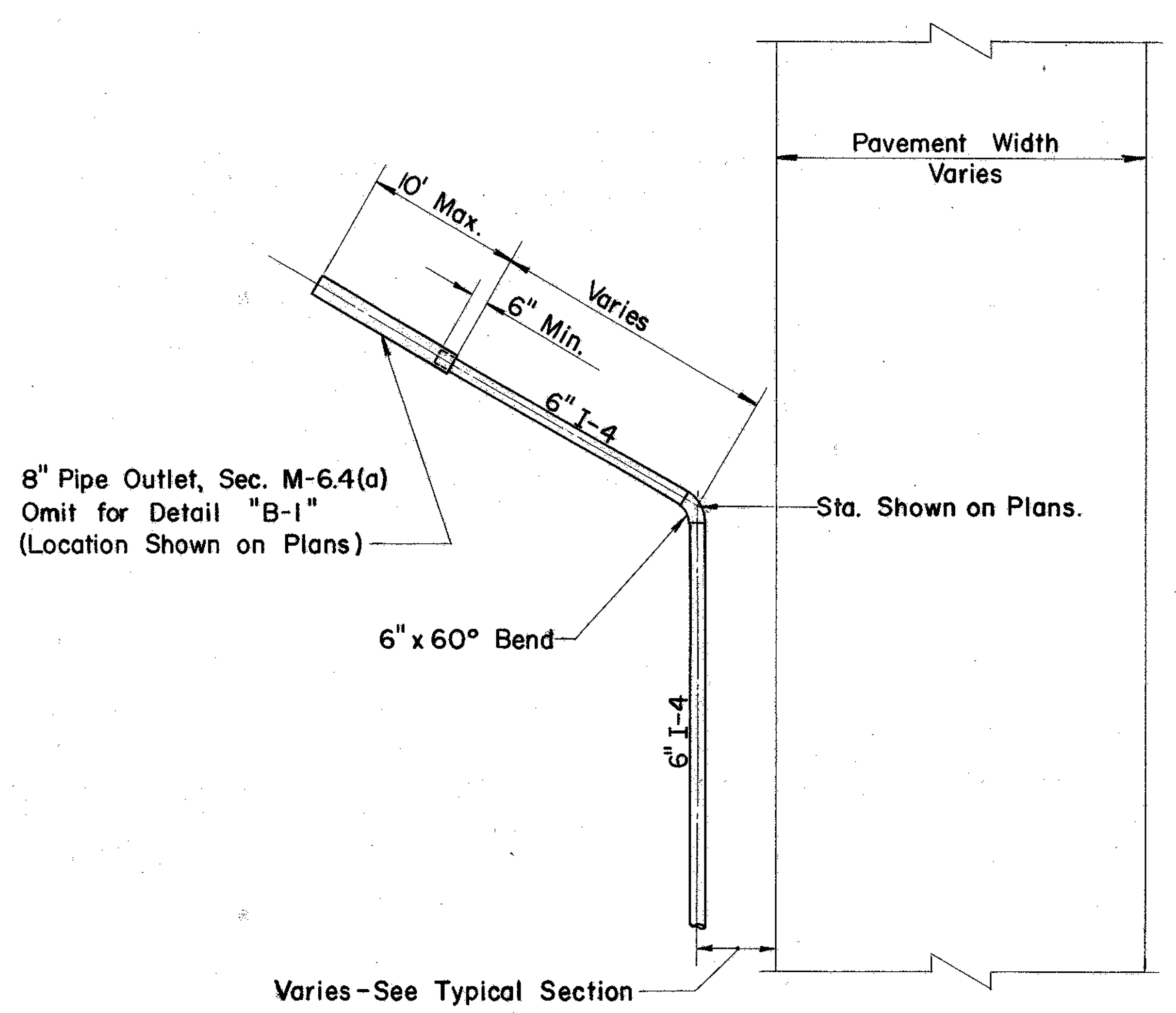
188/307

JEFFERSON COUNTY
JEF-7-13.53



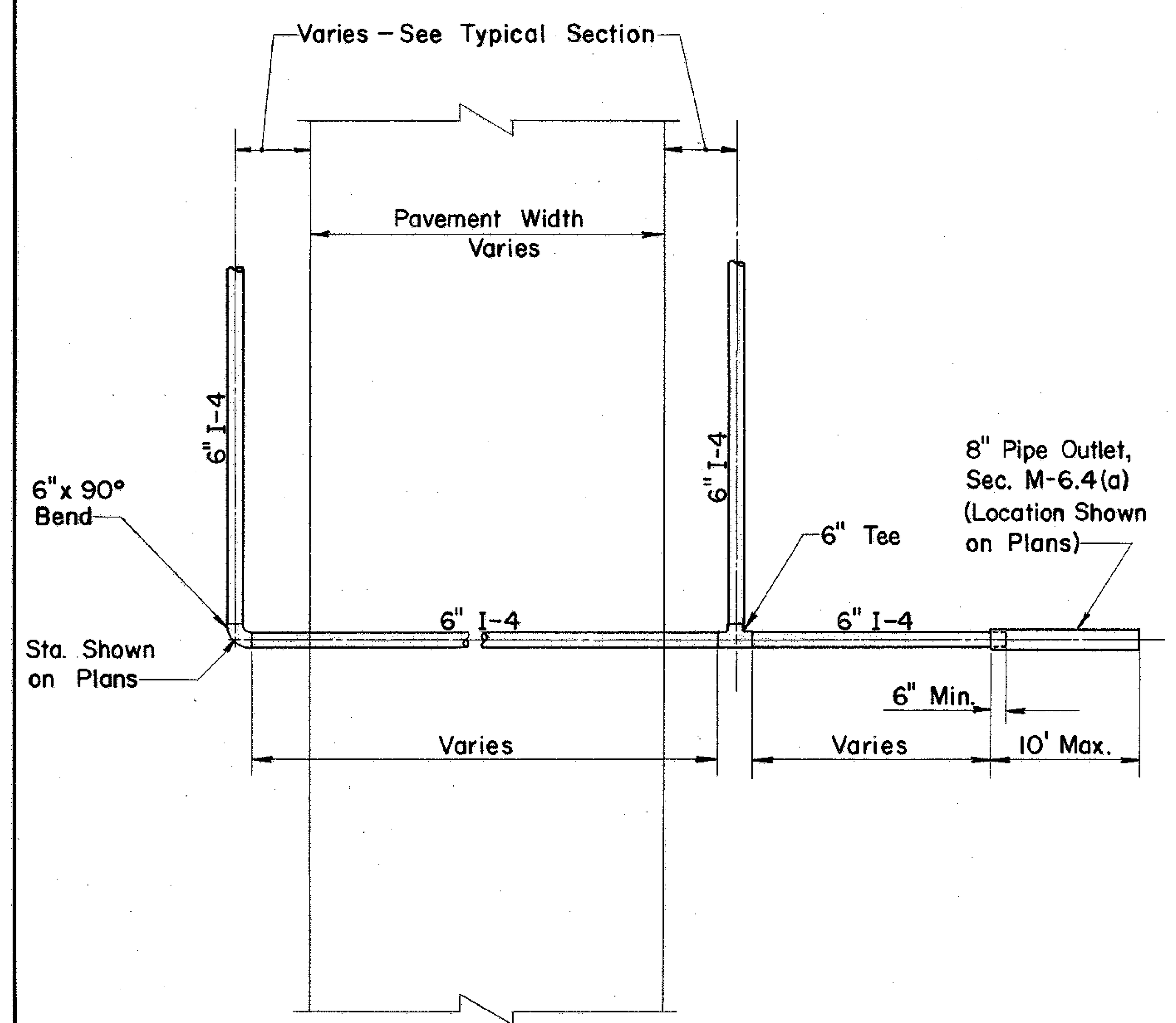
NOTE: All Pipe Specials are I-5 Pipe Specials for Underdrains.

DETAIL "A"



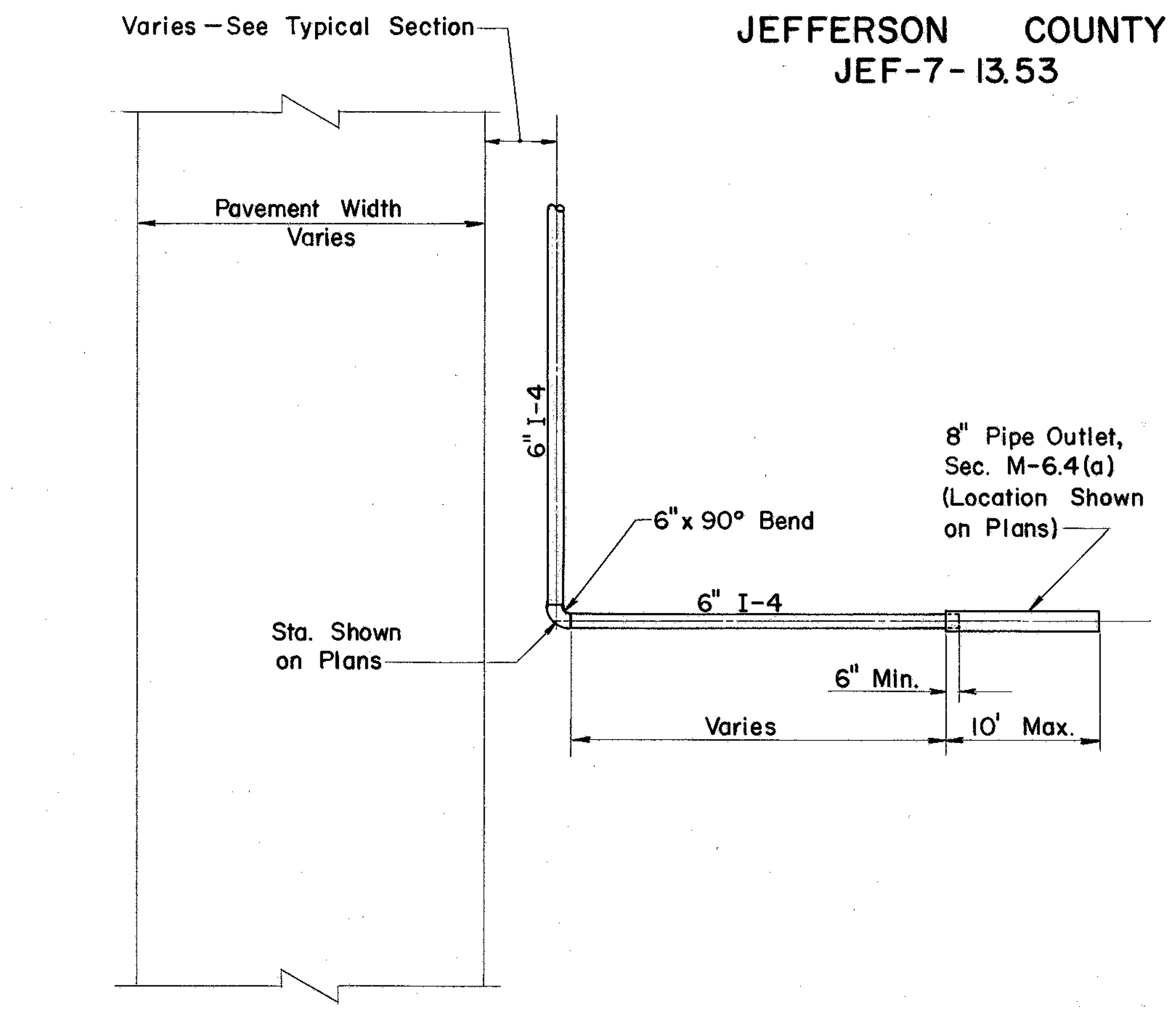
NOTE: All Pipe Specials are I-5 Pipe Specials for Underdrains.

DETAIL "B"
DETAIL "B-1"



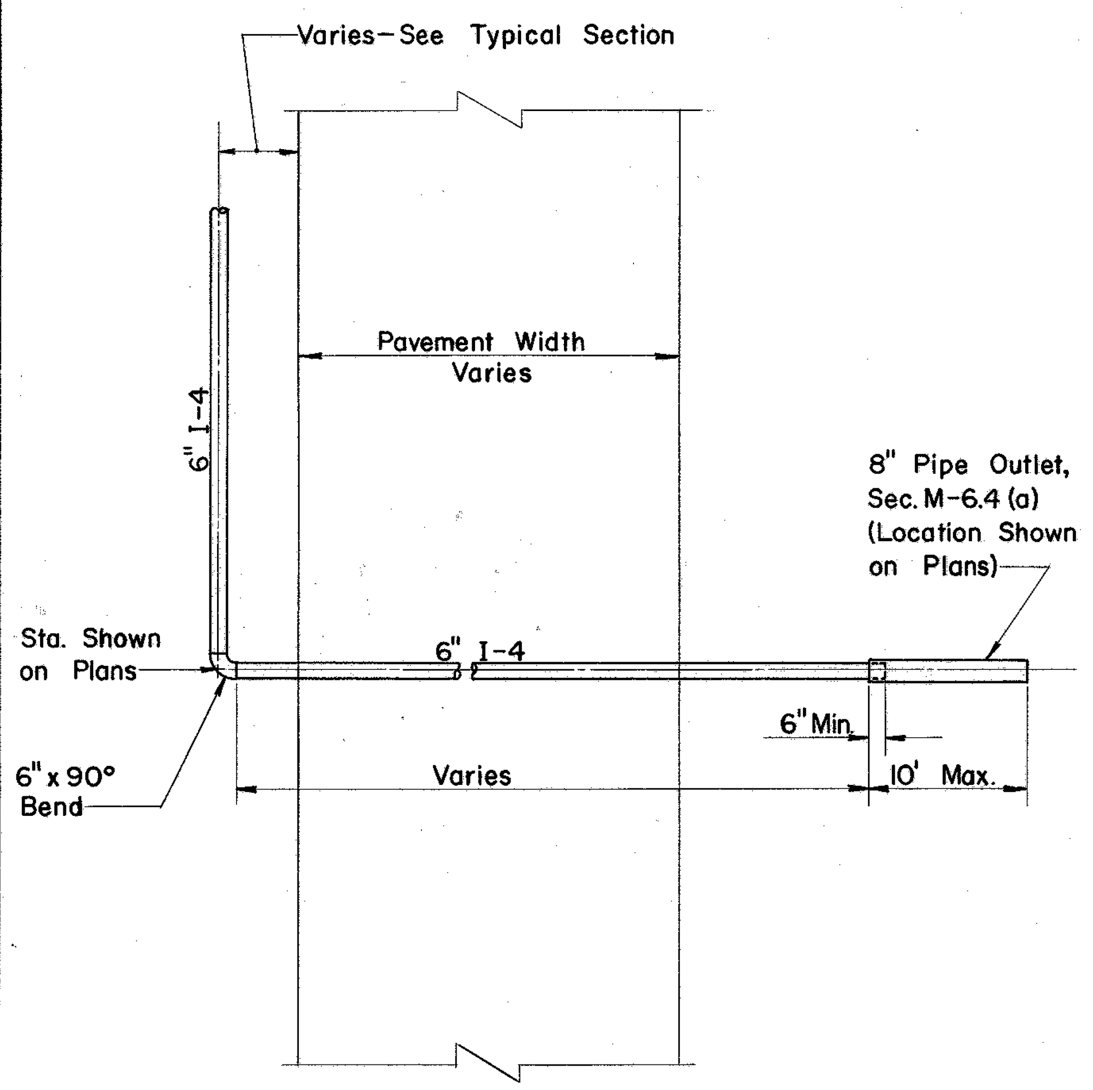
NOTE: All Pipe Specials are I-5 Pipe Specials for Underdrains.

DETAIL "C"



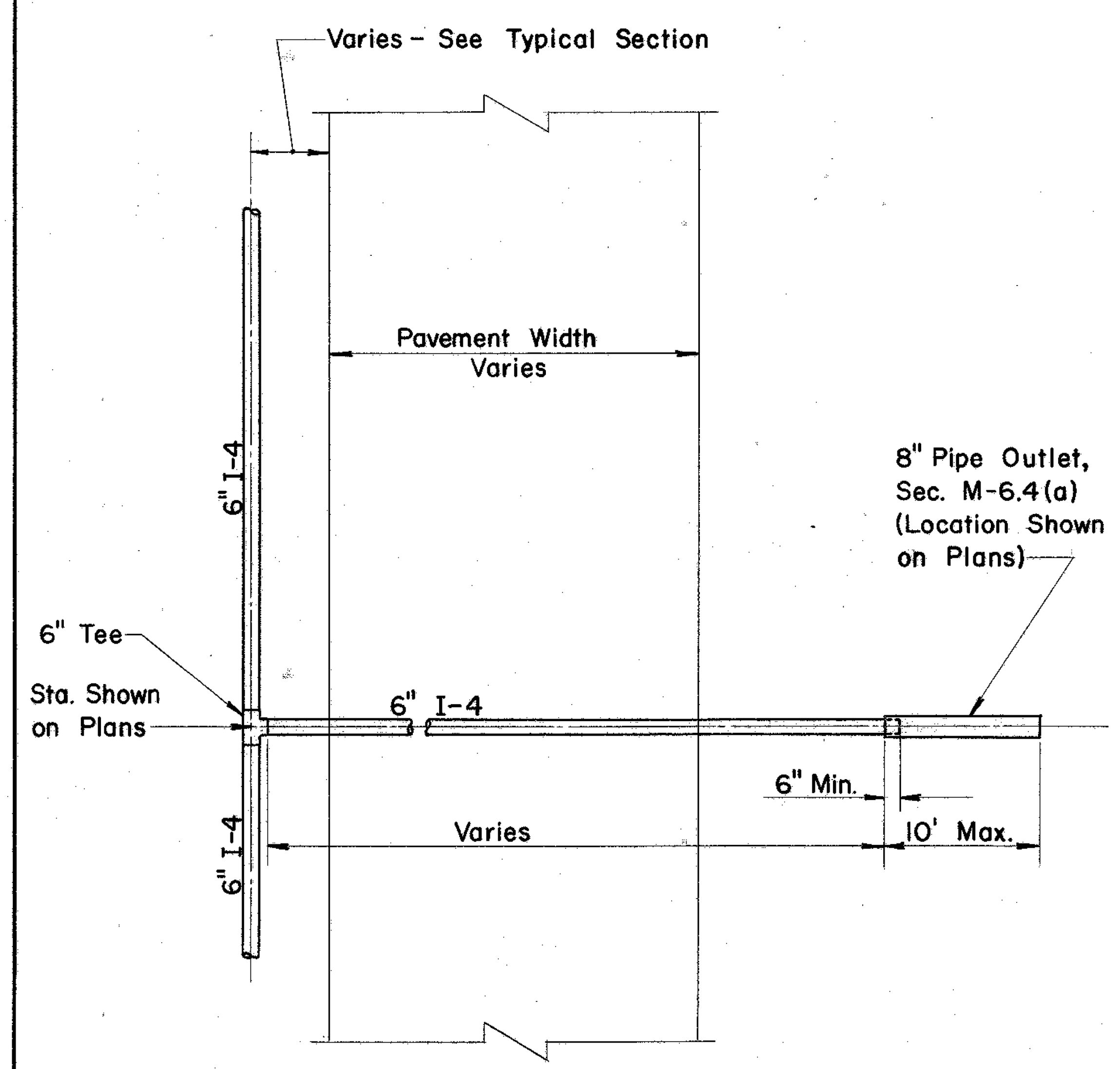
NOTE: All Pipe Specials are I-5 Pipe Specials for Underdrains.

DETAIL "D"



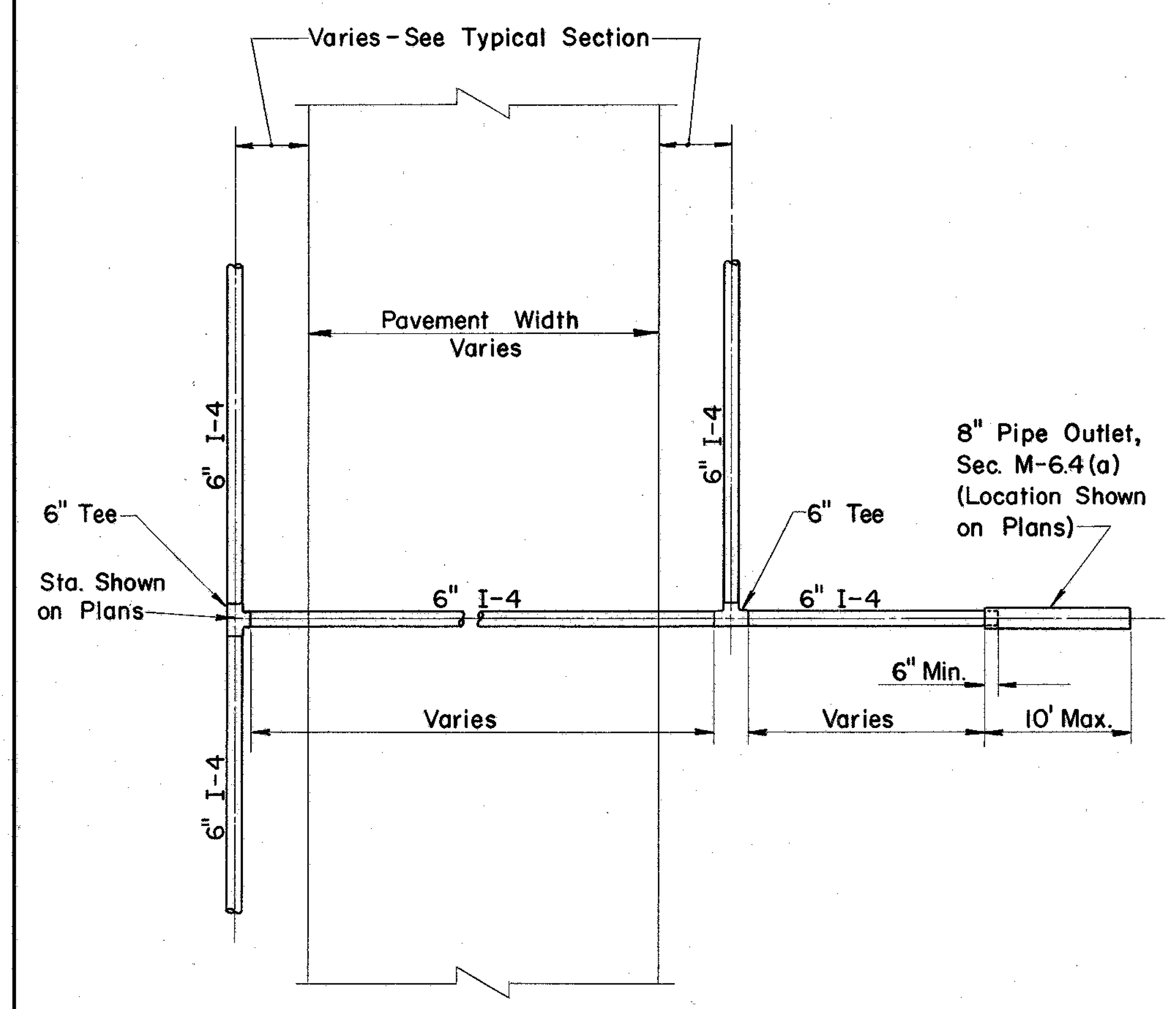
NOTE: All Pipe Specials are I-5 Pipe Specials for Underdrains

DETAIL "E"



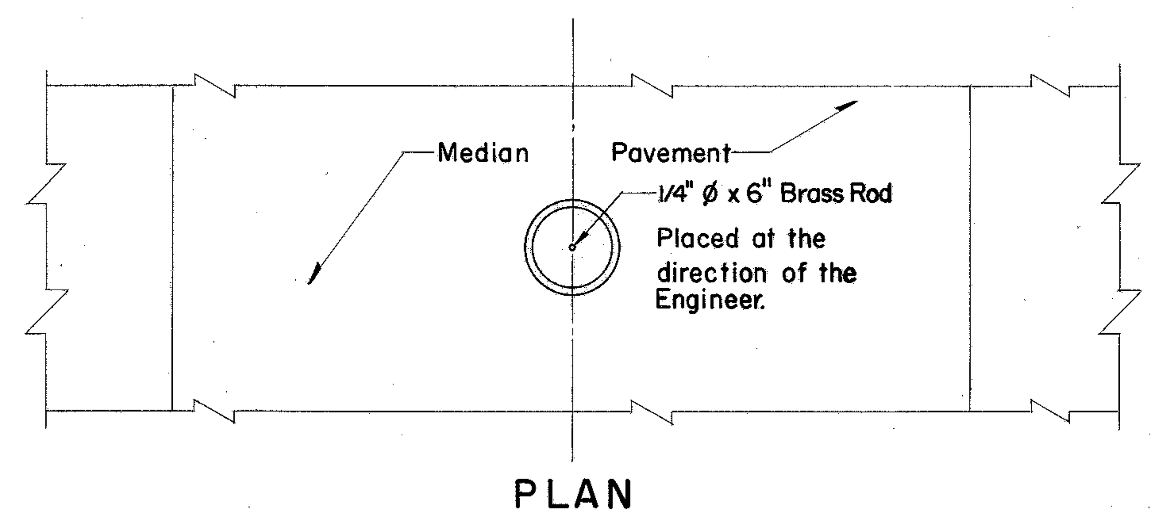
NOTE: All Pipe Specials are I-5 Pipe Specials for Underdrains.

DETAIL "F"

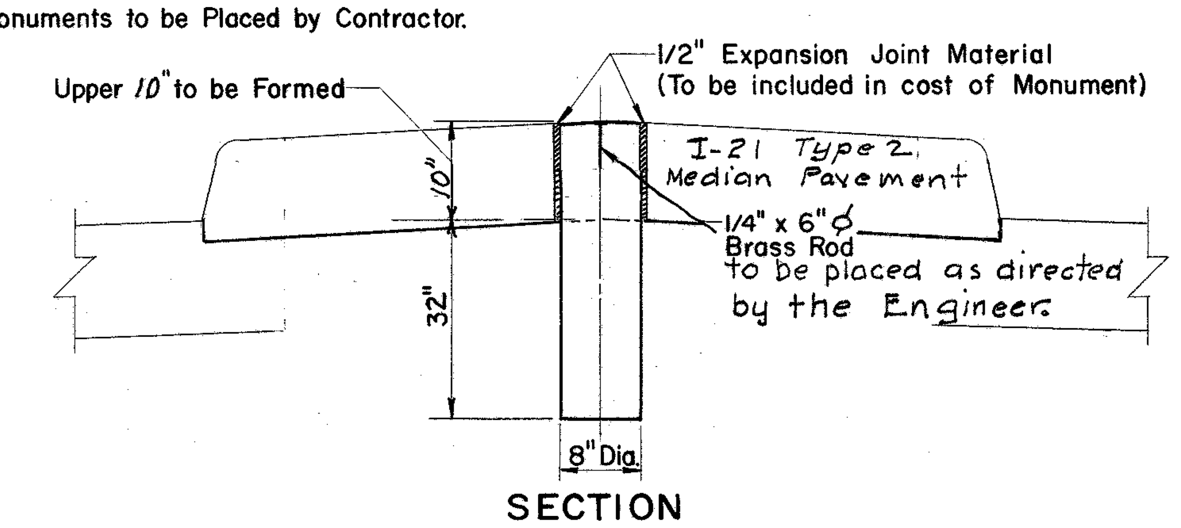


NOTE: All Pipe Specials are I-5 Pipe Specials for Underdrains.

DETAIL "G"



NOTE: Monuments to be Placed by Contractor.



DETAIL - CENTERLINE REFERENCE MONUMENTS

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

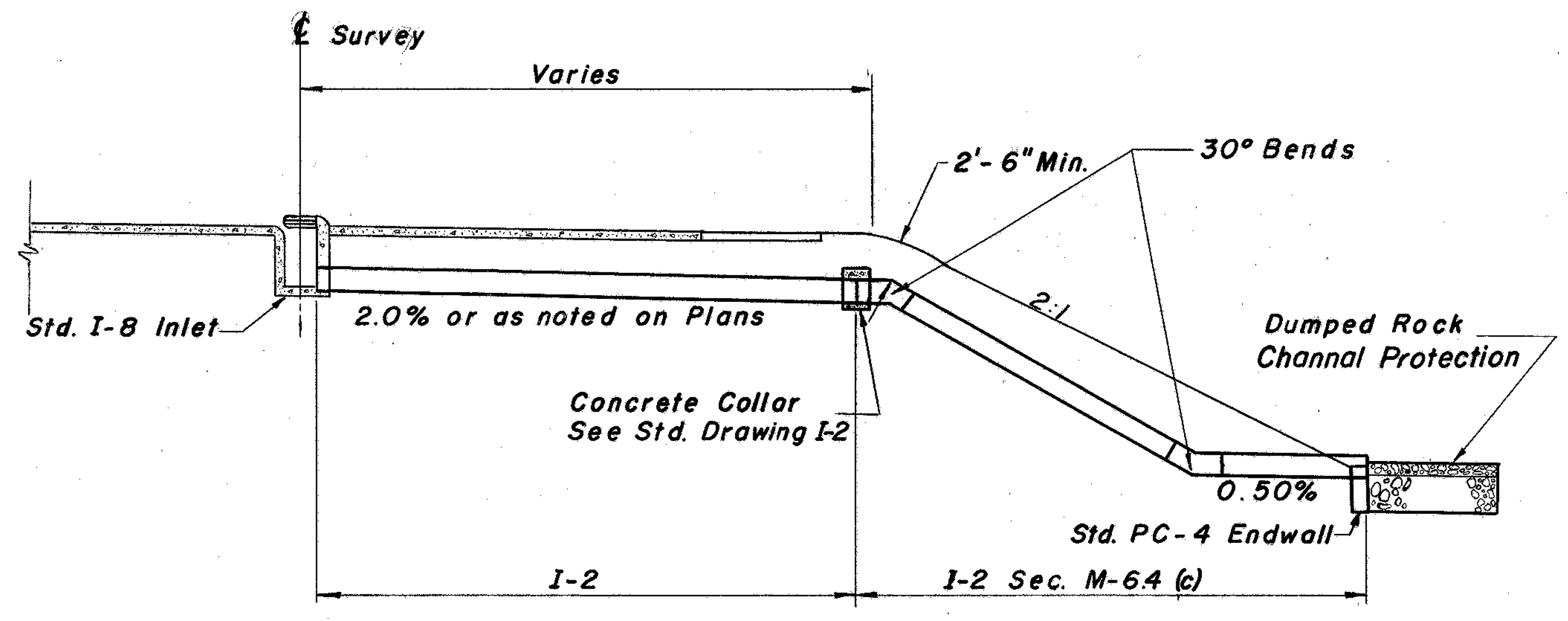
MISCELLANEOUS CONSTRUCTION DETAILS

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
W.H.T.	m		£		

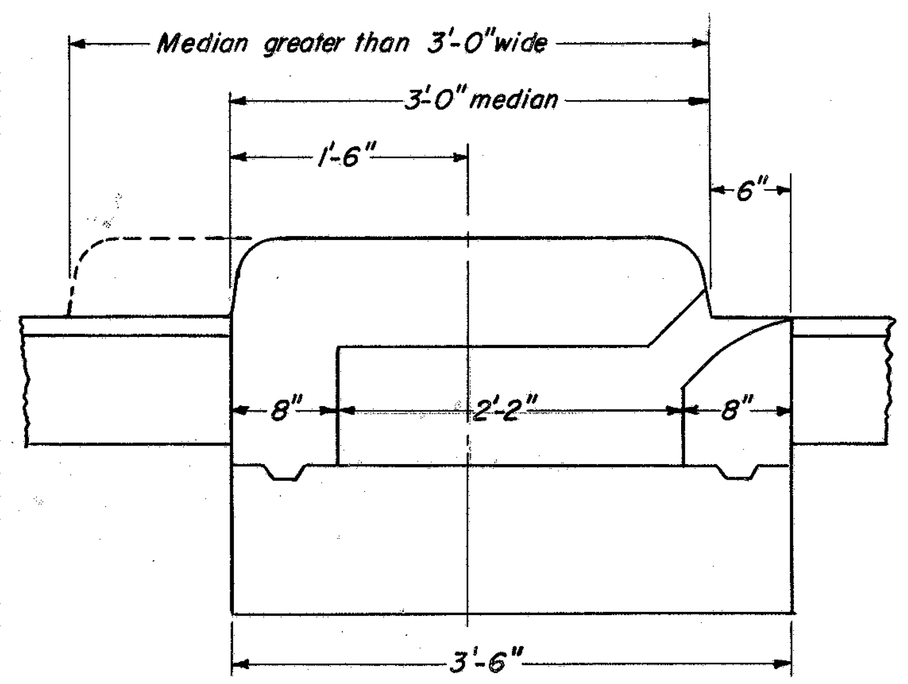
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

189
307

JEFFERSON COUNTY
JEF-7-13.53



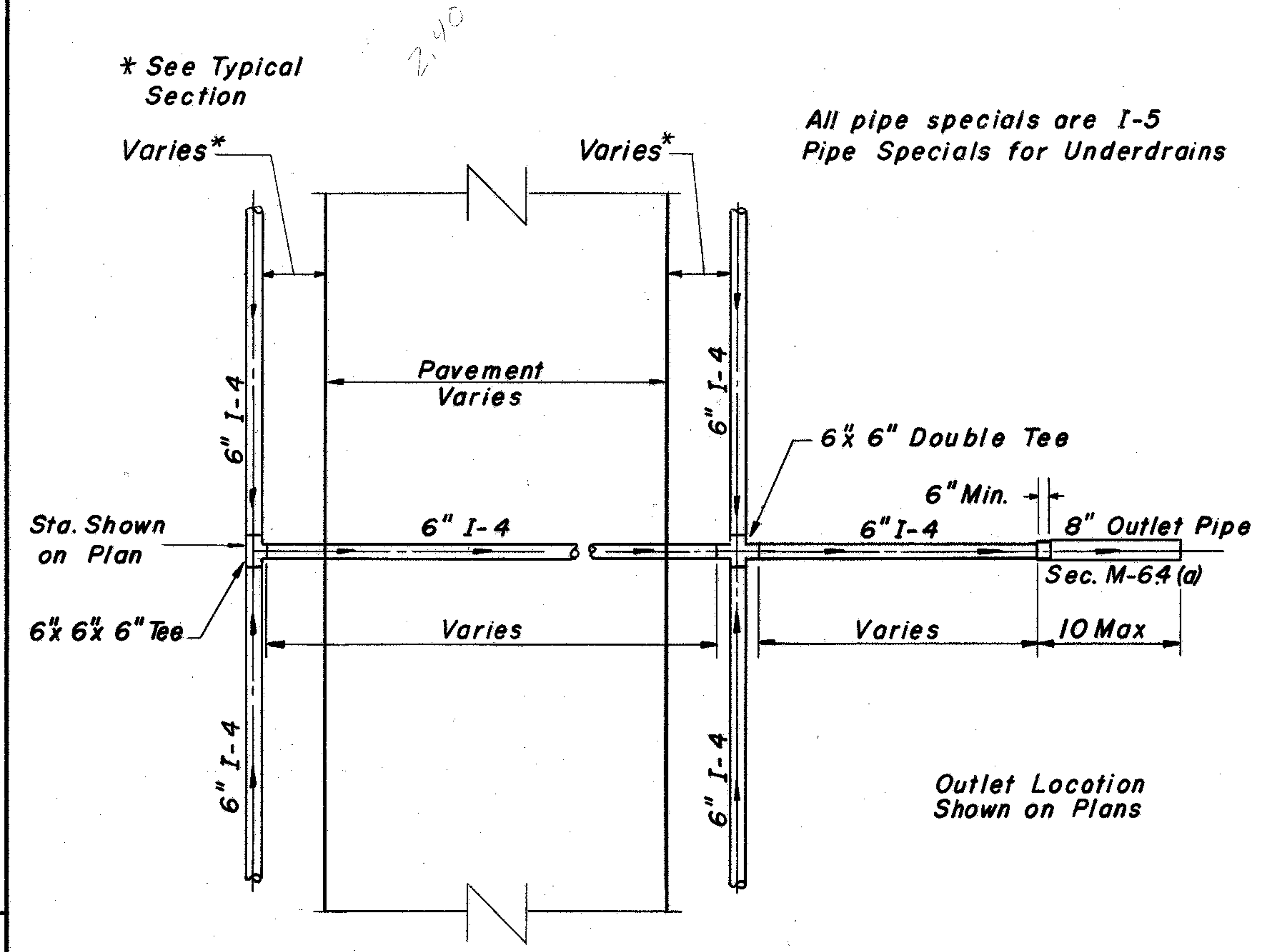
TYPICAL MEDIAN OUTLET DETAIL IN HIGH FILL



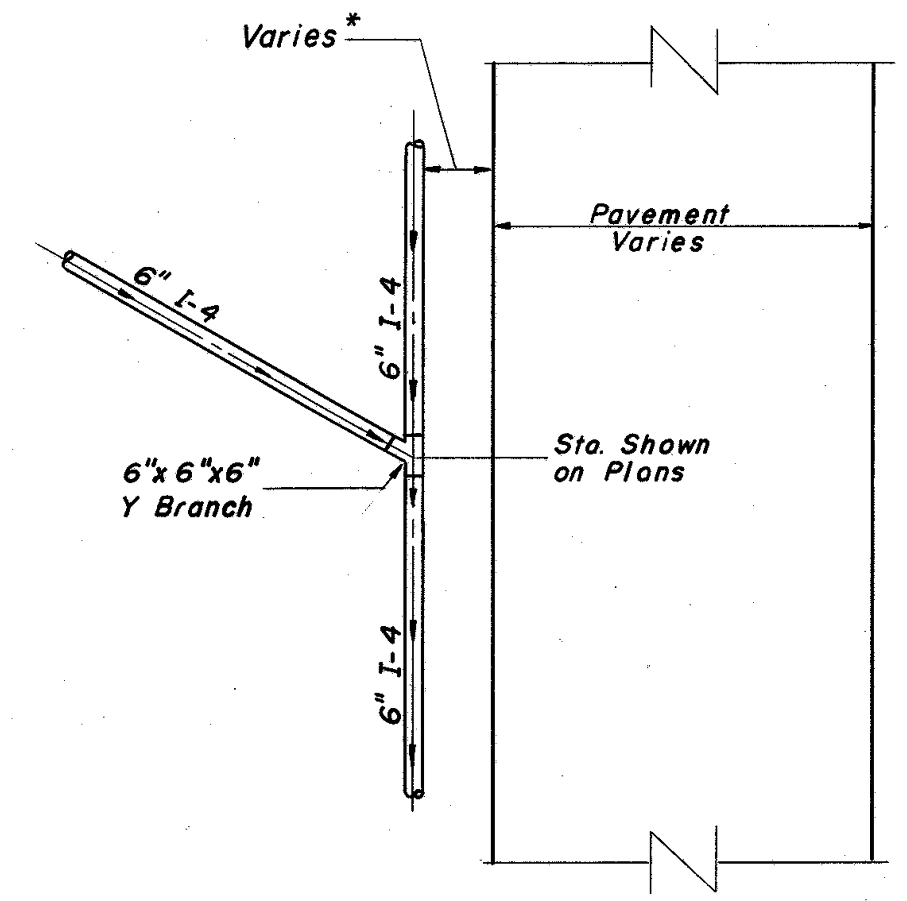
NOTES:

1. For additional details see Std. Dwgs. I-8 I, No. 2 and I-21-23.
2. Where proposed median pavement is greater than 3 feet wide, the maximum width of the inlet shall be as shown and a 1/2" thickness of expansion joint material shall be provided between the inlet and the adjacent median pavement.

DETAIL OF MODIFIED SECTION B-B FOR
NO. 2 INLETS IN MEDIAN PAVEMENT



DETAIL "H"



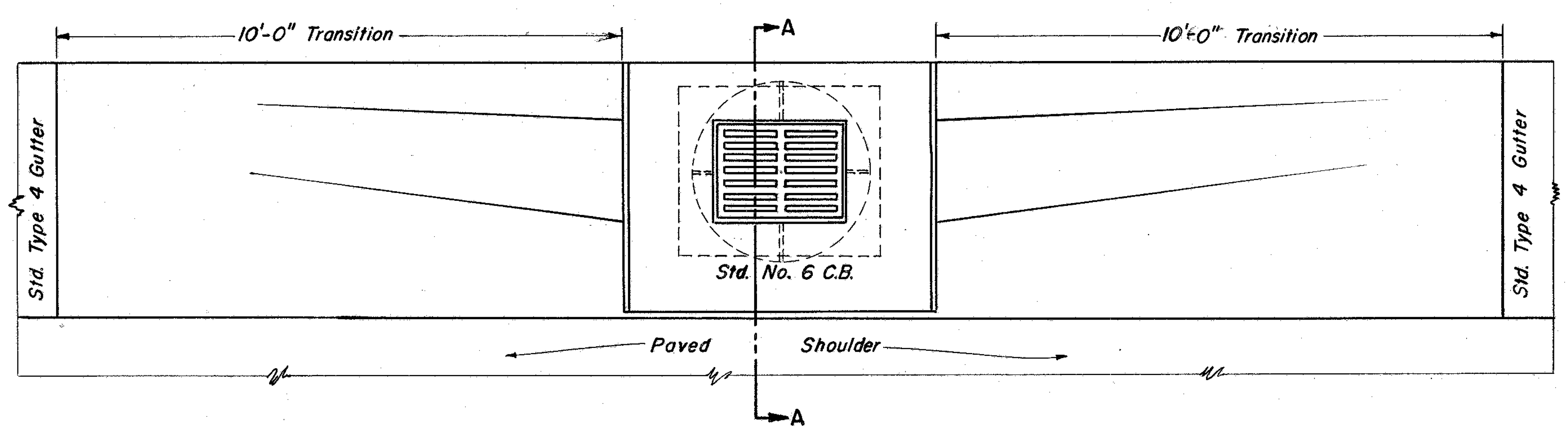
All pipe specials are I-5 Pipe Specials for Underdrains

DETAIL "K"

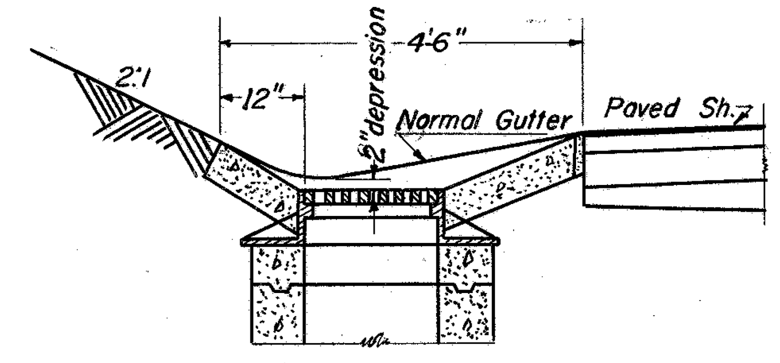
SUPPLEMENT TO STD. DWG. I-8 I No. 2 DATED 12-1-54
USE

CONCRETE AND REINFORCING STEEL QUANTITIES

Length	Concrete	S-5-a		S-5-b		S-5-c		S-5-d		H-5-a		V-5-a		V-5-b		Weight
in Ft.	Cu. Yds.	No.	Lin. Ft.	No.	Lin. Ft.	No.	Lin. Ft.	No.	Lin. Ft.	No.	Lin. Ft	No.	Lin Ft.	No.	Lin. Ft.	in Lbs.
6	2.3	5	5'-11 1/2"	4	2'-7"	3	4'-4"	2	7'-0"	4	3'-8"	4	2'-6"	5	1'-0"	101
8	2.7	9	5'-11 1/2"	4	2'-7"	3	6'-4"	2	9'-0"	4	5'-8"	4	2'-6"	7	1'-0"	147
10	3.0	13	5'-11 1/2"	4	2'-7"	3	8'-4"	2	11'-0"	4	7'-8"	4	2'-6"	9	1'-0"	193
12	3.4	17	5'-11 1/2"	4	2'-7"	3	10'-4"	2	13'-0"	4	9'-8"	4	2'-6"	11	1'-0"	238
14	3.7	21	5'-11 1/2"	4	2'-7"	3	12'-4"	2	15'-0"	4	11'-8"	4	2'-6"	13	1'-0"	284
16	4.1	25	5'-11 1/2"	4	2'-7"	3	14'-4"	2	17'-0"	4	13'-8"	4	2'-6"	15	1'-0"	330
18	4.5	29	5'-11 1/2"	4	2'-7"	3	16'-4"	2	19'-0"	4	15'-8"	4	2'-6"	17	1'-0"	375
20	4.9	33	5'-11 1/2"	4	2'-7"	3	18'-4"	2	21'-0"	4	17'-8"	4	2'-6"	19	1'-0"	421



PLAN



SECTION A-A

TRANSITION DETAILS FOR TYPE 4 GUTTER TO STD. NO. 6 CATCH BASIN

NOTE:
Cost of transition shall be included in the unit price bid for Std. Type 4 Gutter Item I-14

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

MISCELLANEOUS
CONSTRUCTION
DETAILS

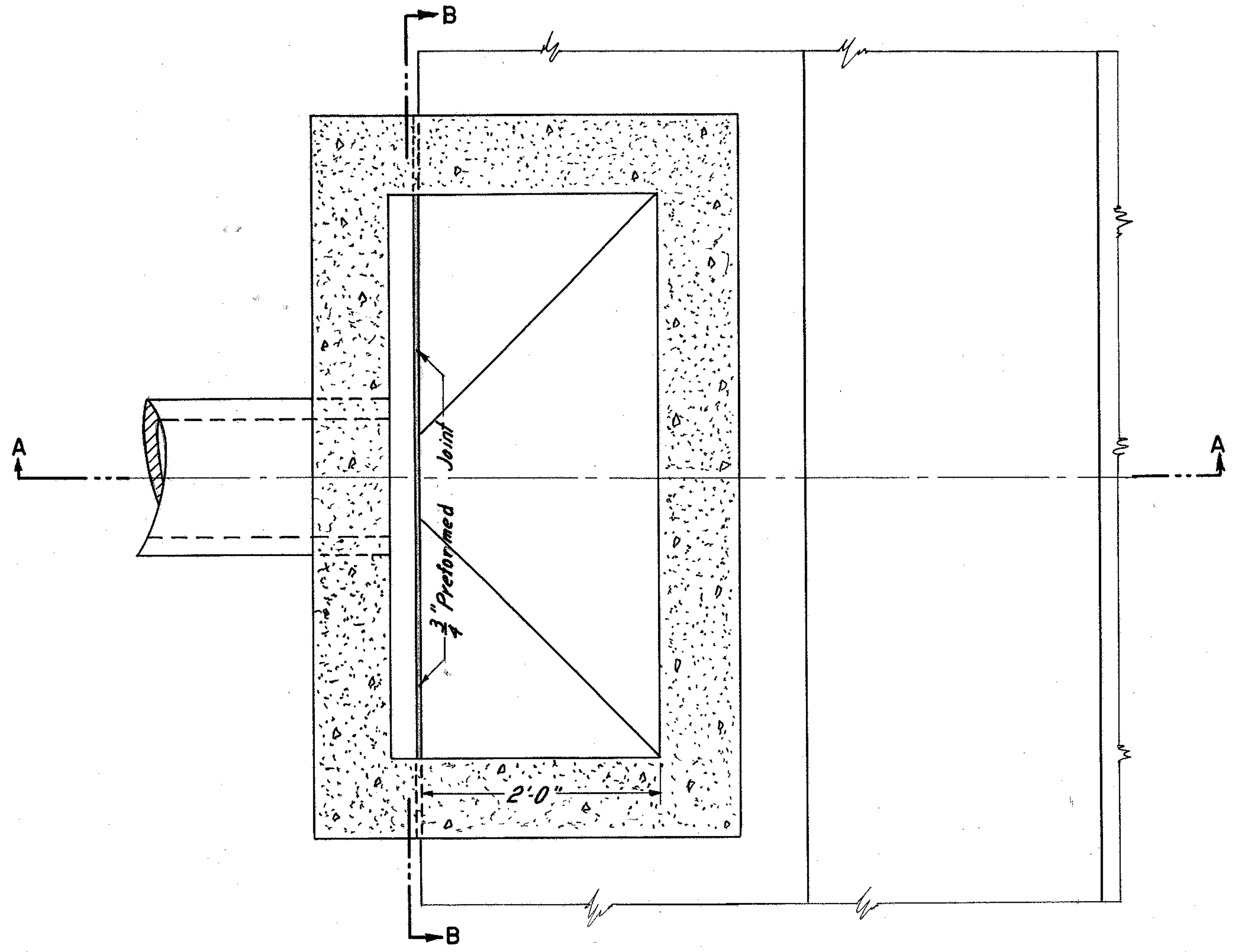
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
			W.H.T.		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

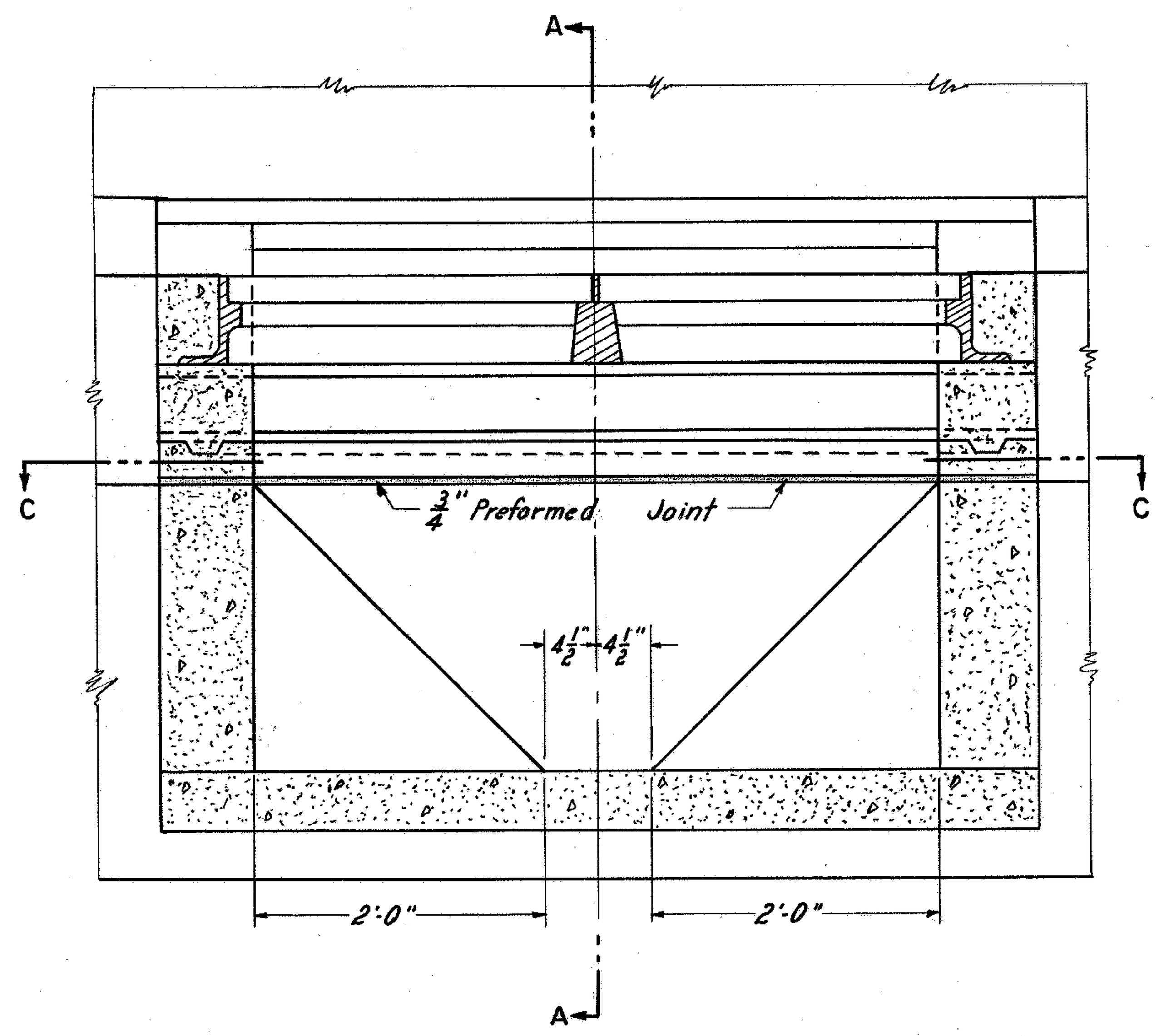
JEF-7-13.53

NOTES:

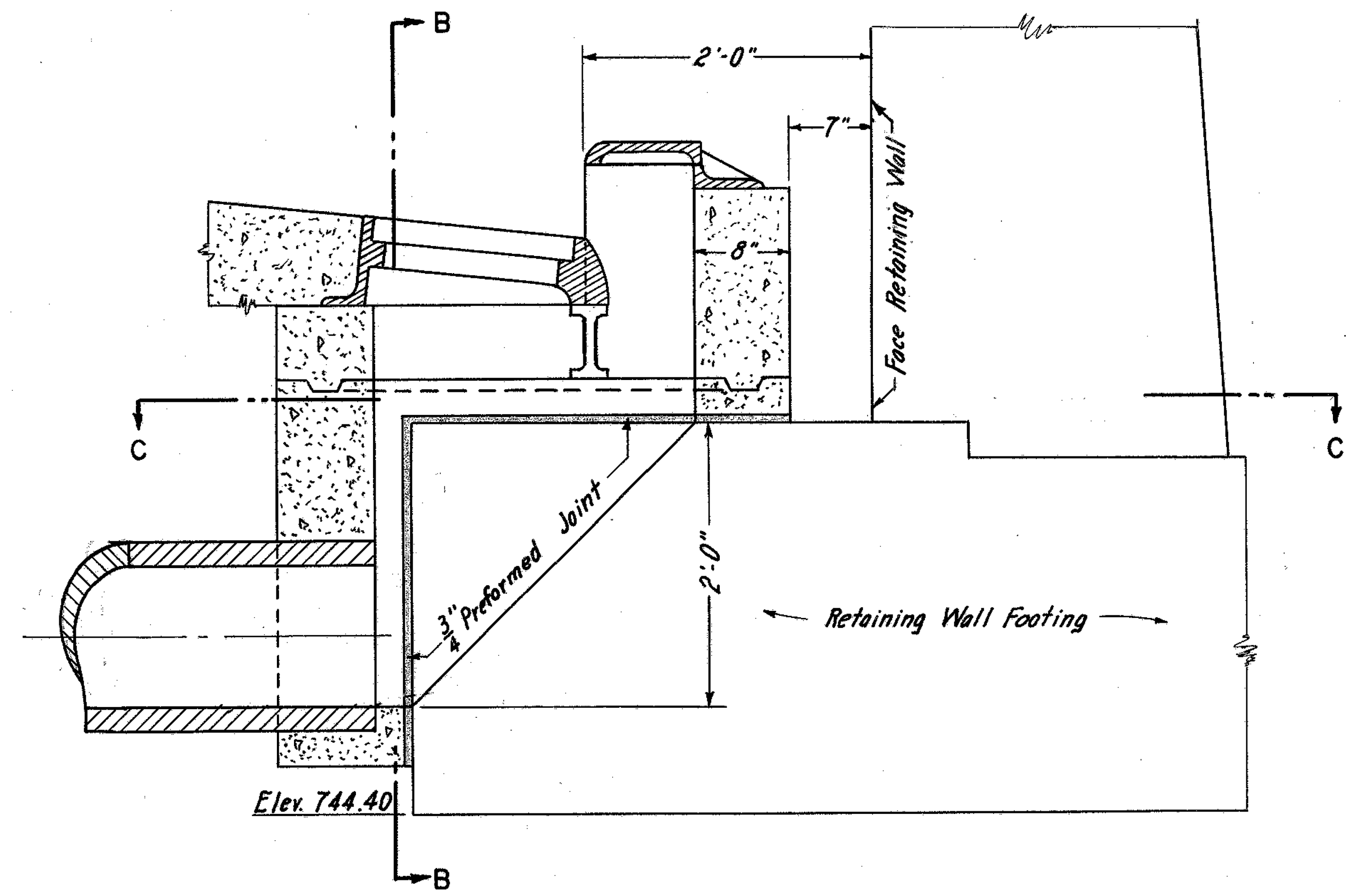
1. All details shall conform to STD. Drawing I-8 C.B. No. 3 except as shown hereon.
2. For retaining wall details see sheet no.
3. The cost of the $\frac{3}{4}$" preformed joint shall be included in the contract unit price bid for Item I-8, Standard No. 3 C.B., Modified as per plan.



SECTION C-C



SECTION B-B



SECTION A-A

I-8 STANDARD No. 3 CATCH BASIN, MODIFIED AS PER PLAN

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

MISCELLANEOUS CONSTRUCTION DETAILS

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
£	£	£	W.H.T.		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430 (14)	

191
307

JEFFERSON COUNTY
JEF-7-13.53

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.

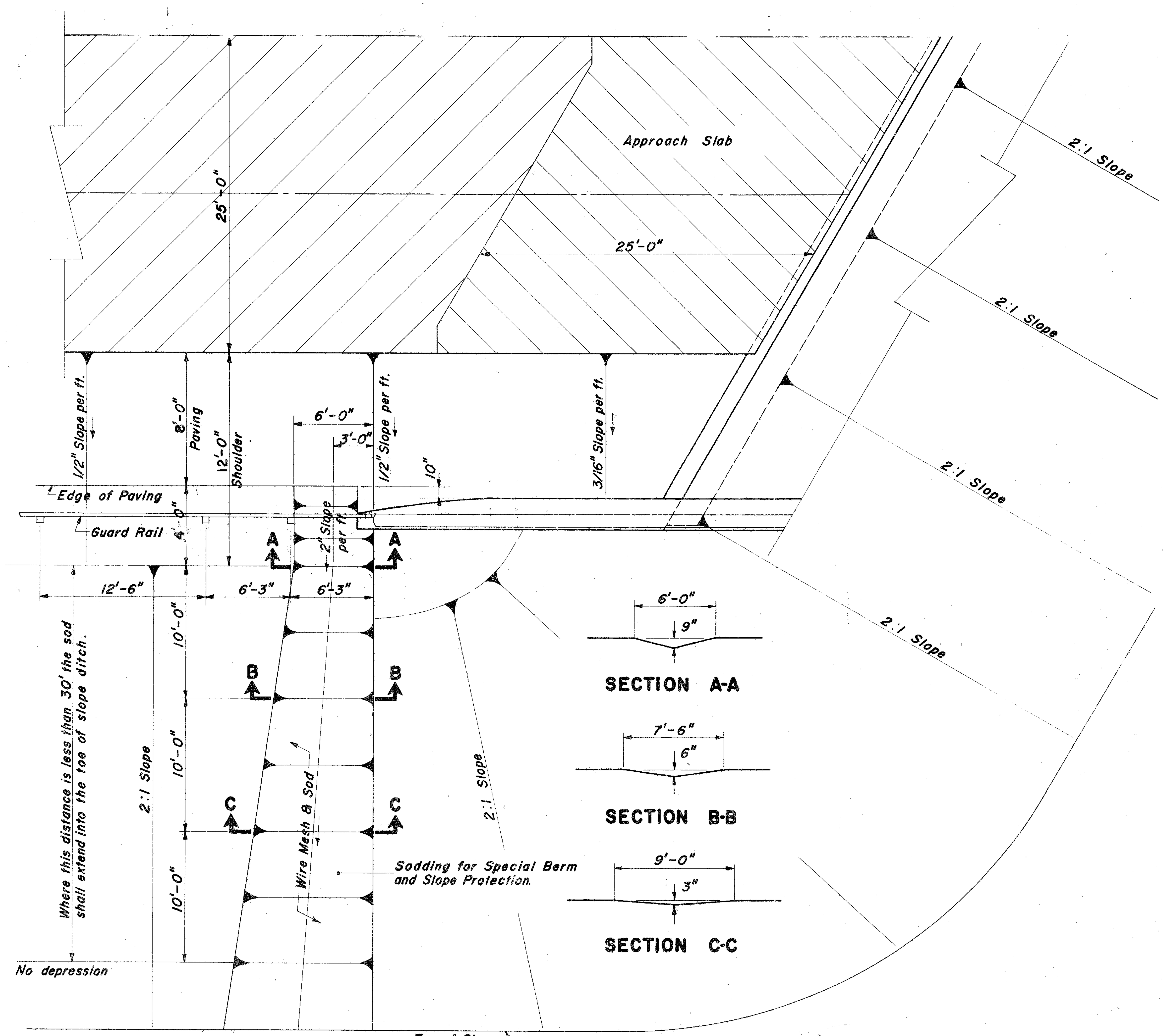
Stakes shall be 1" x 1" x 8" wood stakes and shall be perpendicular to the ground and flush with the finished grade.

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 Guage.

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.



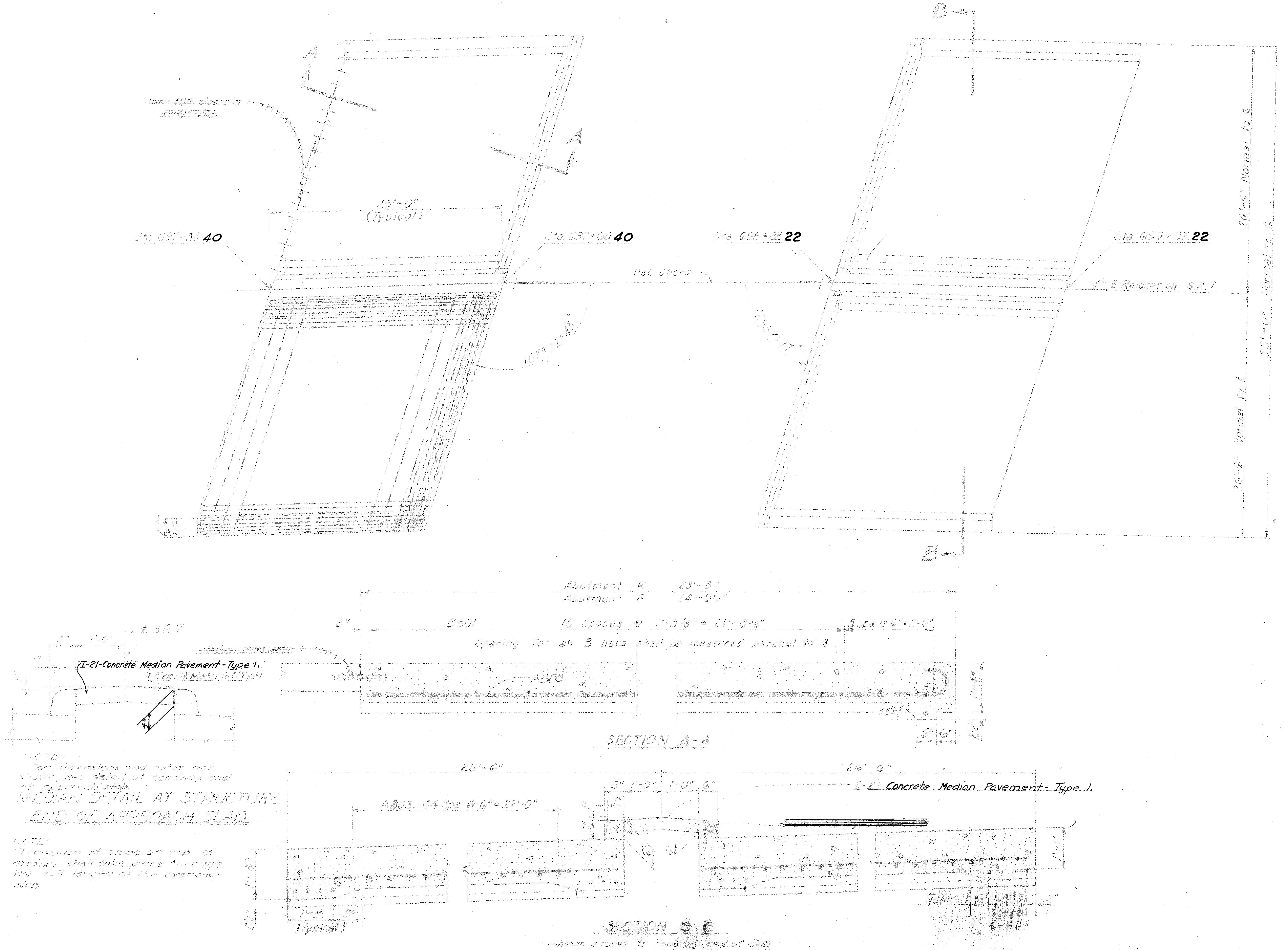
MICHAEL BAKER, JR, CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

DETAIL OF EROSION CONTROL

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
A.W.L.	M.W.L.	M.W.L.	H.C.		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(4)	

JEFFERSON COUNTY
JEF - 7 - 13.53



MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

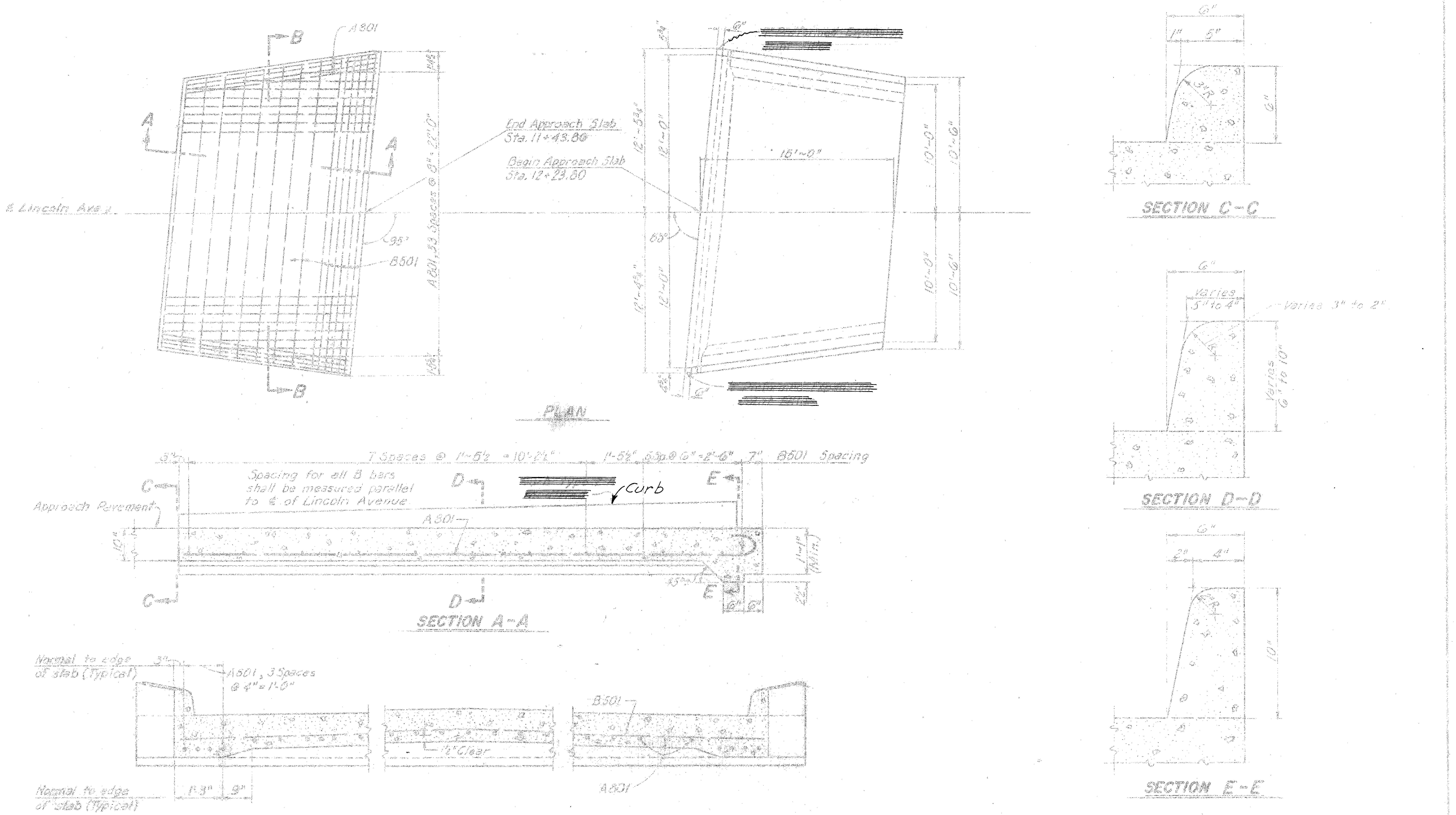
APPROACH SLAB DETAILS
BRIDGE NO. JEF-7-1392
OVER RAVINE STREET

JEFFERSON COUNTY — STATION 698+25.81

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
	J.J.K.		F.A.	E. Roberts 2-5-55		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-450(14)	

JEFFERSON COUNTY
JEF - 7 - 13.53



MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

APPROACH SLAB DETAILS
BRIDGE NO. JEF-7-13.67
UNDER LINCOLN AVENUE

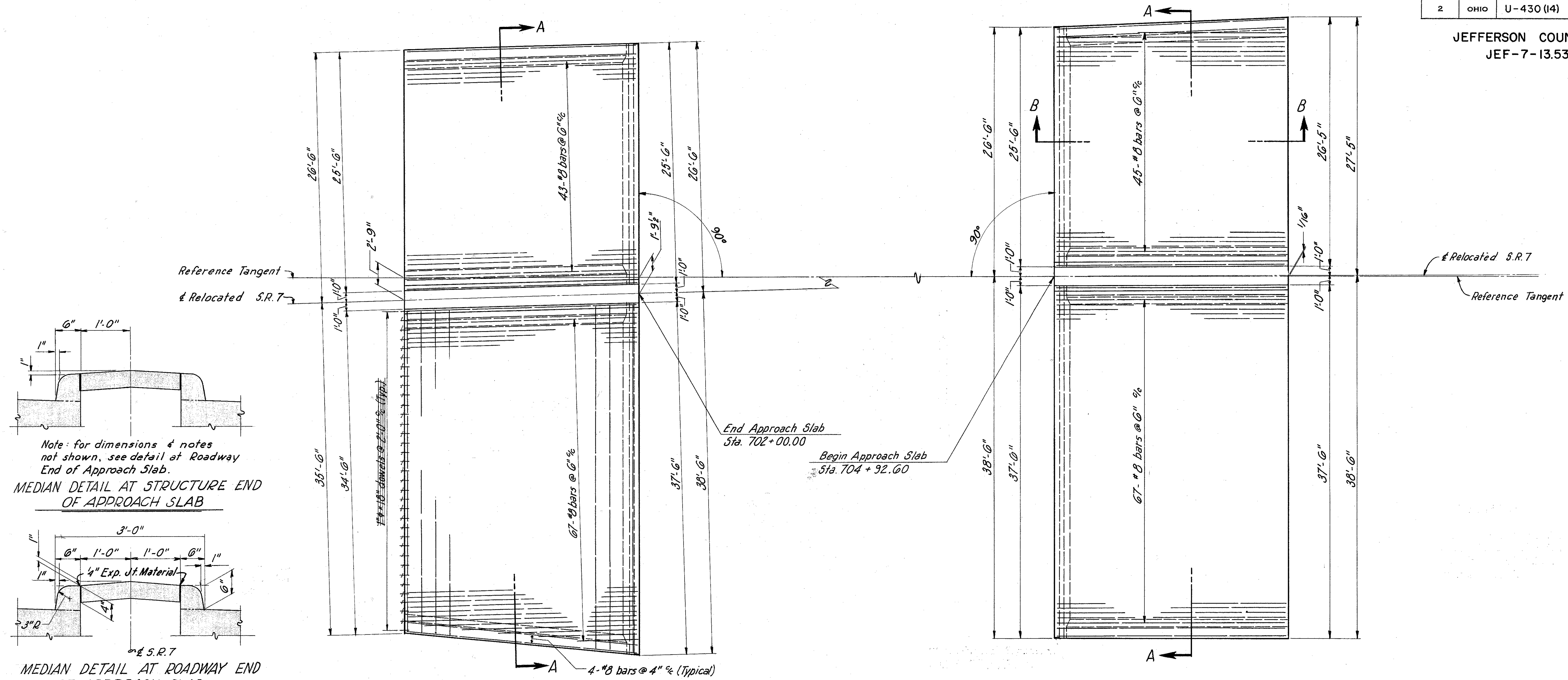
JEFFERSON COUNTY

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
	C.J.K.		P.M.			

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

194
307

JEFFERSON COUNTY
JEF-7-13.53



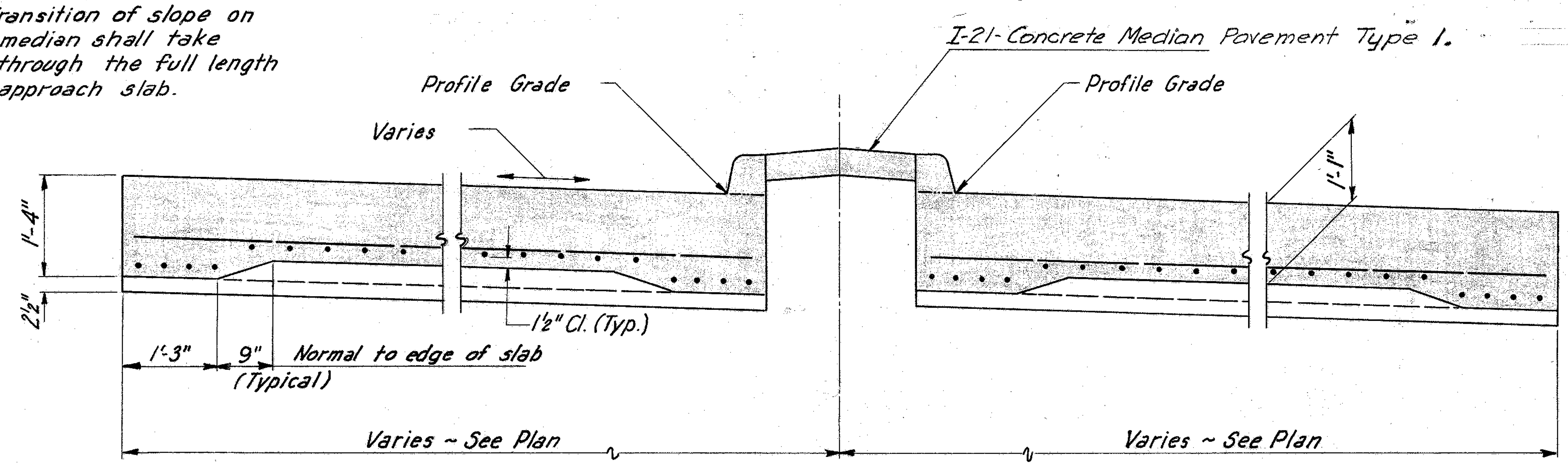
Note: for dimensions & notes not shown, see detail at Roadway End of Approach Slab.

MEDIAN DETAIL AT STRUCTURE END OF APPROACH SLAB

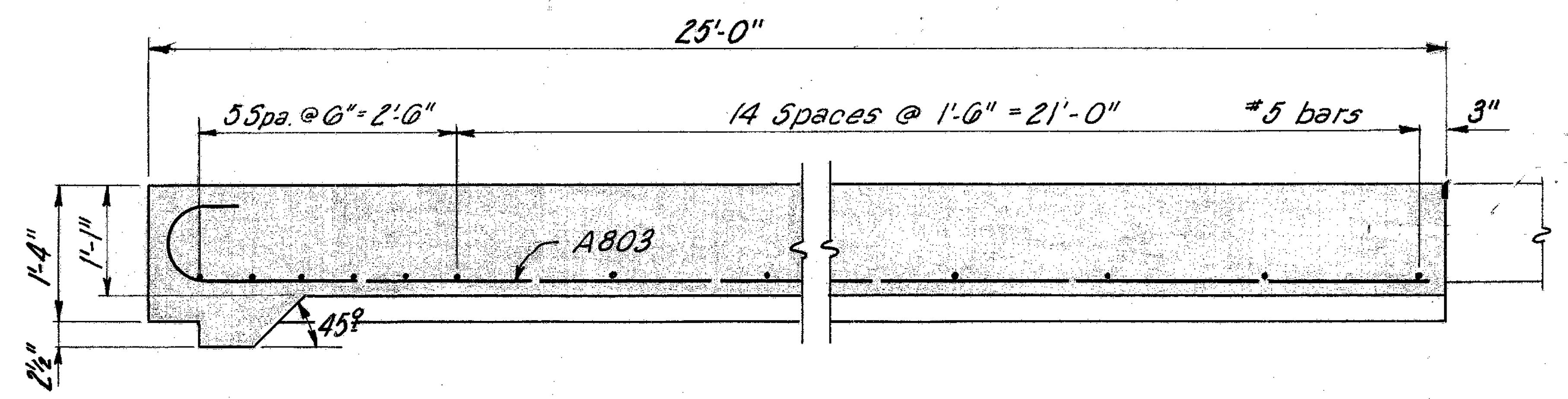
MEDIAN DETAIL AT ROADWAY END OF APPROACH SLAB

Note: Transition of slope on top of median shall take place through the full length of the approach slab.

PLAN



SECTION A-A
(Normal to ℄ Relocated S.R.7)



SECTION B-B
(Along ℄ Relocated S.R.7)

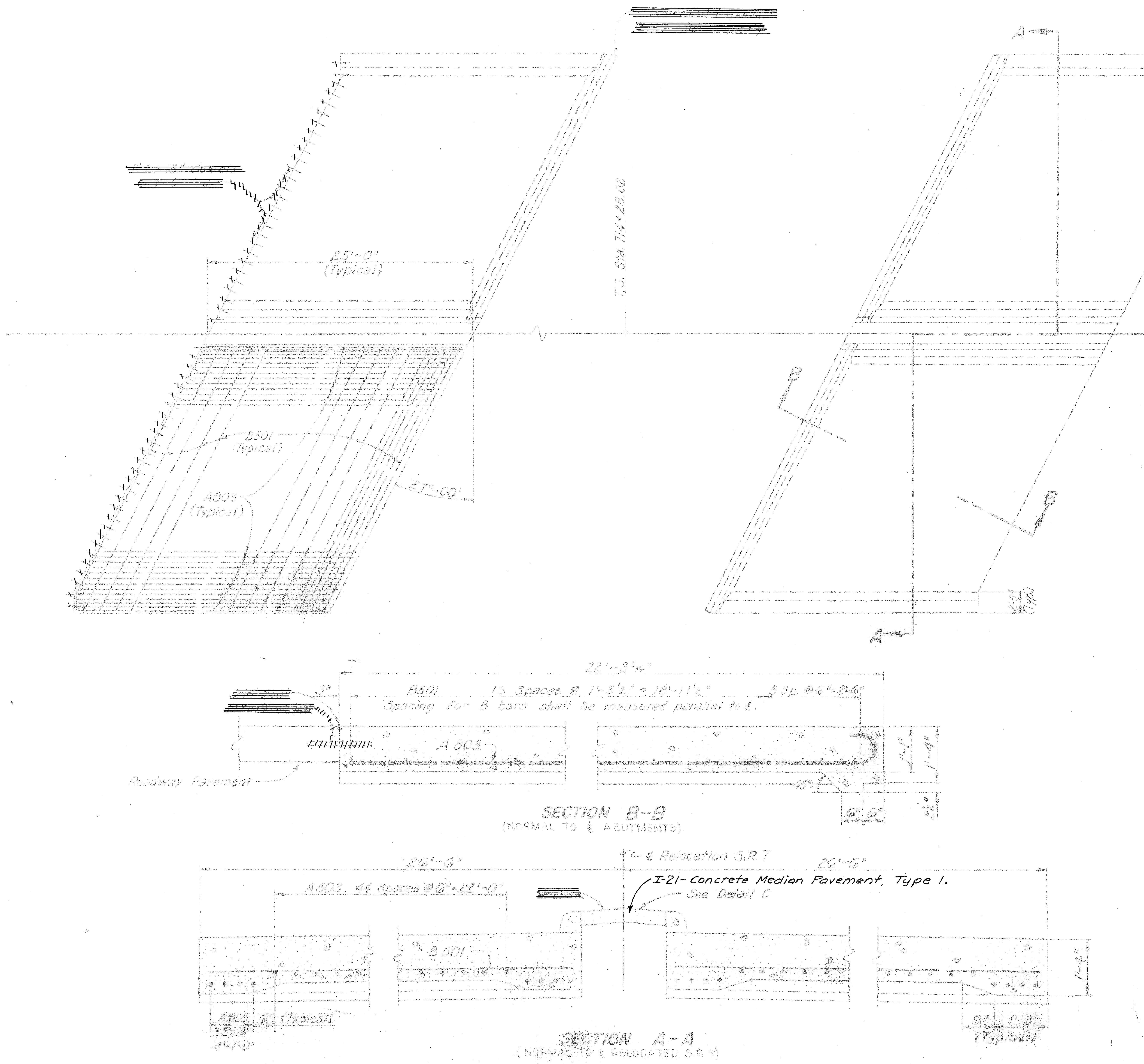
MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

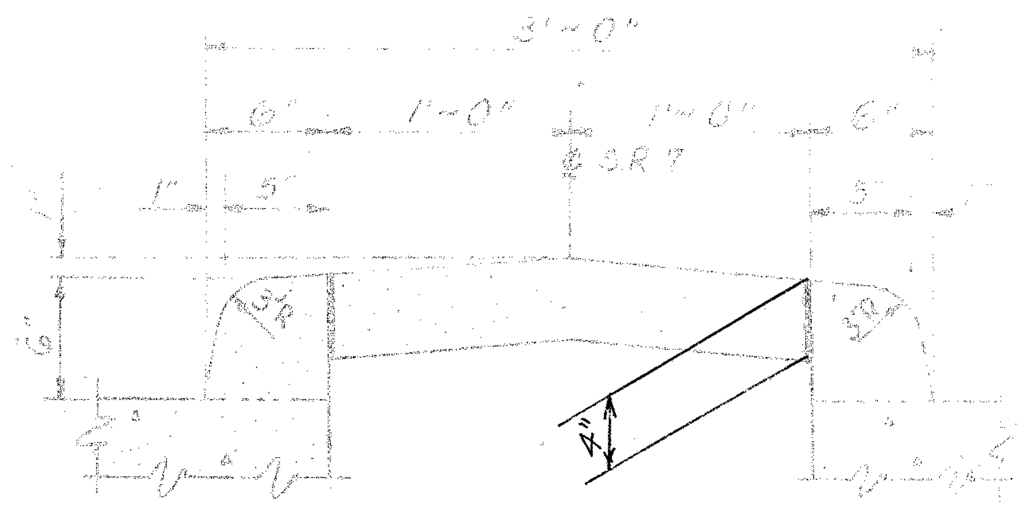
APPROACH SLAB DETAILS
BRIDGE NO. JEF-7-1392
OVER McLISTER STREET
JEFFERSON COUNTY SR.7
STA. 703+51.68

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	C.J.K.	C.J.K.	J.M.	E. Roberts 6-5-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(14)	

JEFFERSON COUNTY
JEF-7-13.53

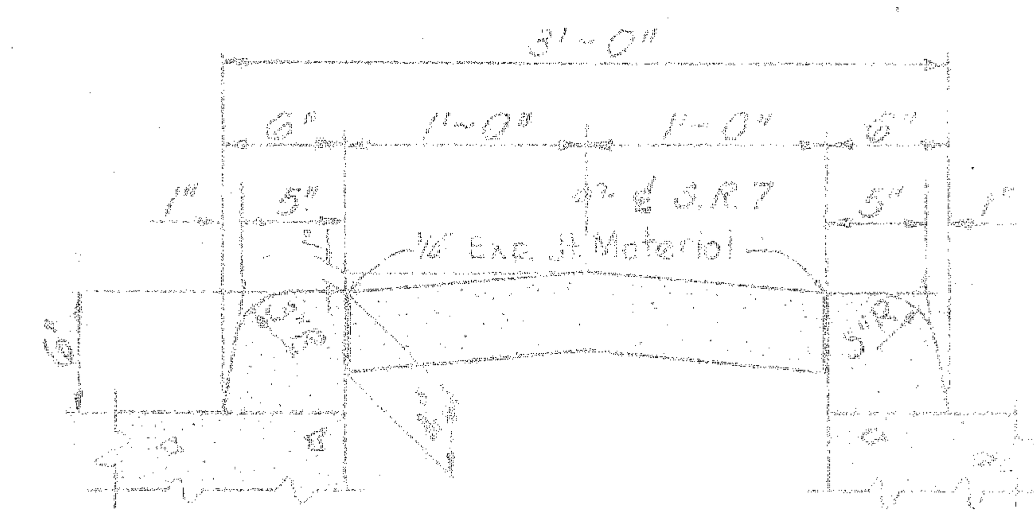




NOTE: For dimensions and notes not shown see detail of Roadway End of Approach Slab.

AT STRUCTURE END OF APPROACH SLAB

NOTE: Transition of slope on top of median shall take place through the full length of the approach slab.



AT ROADWAY END OF APPROACH SLAB
DETAIL "C"

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

APPROACH SLAB DETAILS
BRIDGE NO. JEF-7-1411
OVER LOGAN AVENUE

JEFFERSON COUNTY STATION 714+73.00

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
	C.J.K.					

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(14)	

195 A
307

JEFFERSON COUNTY

JEF - 7 - 13.53

SUMMARY OF ESTIMATED QUANTITIES FOR RETAINING WALLS

ITEM	TOTAL	UNIT	DESCRIPTION	RT. ℄ STA. 692+11.45	RT. ℄ STA. 693+63.91	RT. ℄ STA. 697+50.02	LT. ℄ STA. 705+25.26	RT. ℄ STA. 726+56.82	RT. ℄ STA. 730+55.91	RT. ℄ STA. 738+34	CLIFTON ST. LT. STA. 5+90.61	RAMP "C" LT. STA. 9+80.50	RAMP "C" RT. STA. 10+00	LOGAN AVE. LT. STA 26+16
E-2	Lump	Sum	Cofferdams, cribs & sheeting	Lump Sum	Lump Sum			Lump Sum					Lump Sum	Lump Sum
E-2	7105	Cu.Yds.	Excavation for structures	325	1258	275	236	1047	45		848	2150	452	469
S-1	1664	Cu.Yds.	Class "E" concrete ; walls	67	272	86	73	271	27	26	229	430	93	90
S-1	1503	Cu.Yds.	Class "E" concrete ; footings	78	237	99	51	329			183	334	105	87
S-3	814	Lin.Ft.	Waterproofing ; premolded sealing strip	25	120	68	28	214	16		58	192	43	50
S-3	2	Sq.Yds.	Waterproofing , Type "B"								2			
S-4	153,562	Lbs.	Reinforcing steel	6294	21,653	7413	3384	24,186	759	1375	33,721	41,394	7997	5386
S-9	423	Sq. Ft.	1" preformed expansion joint filler (gray rubber, M-10.02)	14	75	20	15	112	8		23	129	27	
S-14	500	Lin.Ft.	Railing (Aluminum railing & supports & concrete parapet)			100		400						
S-14	128	Lin.Ft.	Railing (Concrete parapet)										128	
S-16	Lump	Sum	First test pile	Lump Sum	Lump Sum			Lump Sum				*Lump Sum	Lump Sum	
S-18	10,110	Lin.Ft.	Steel piles, 12BP53	1290	2360			1570				3130	1760	
S-22	Lump	Sum	Removal of portions of existing structure, as per plan							Lump Sum				
S-23	200	Each	Dowel holes							200				
S-25	580	Lin.Ft.	4" fibre conduit			100		400	80					
S-25	Lump	Sum	Electrical lighting system (junction boxes, anchor bolts, electrical grounds & steel conduit)			Lump Sum		Lump Sum						
S-29	989	Cu.Yds.	Porous backfill	38	180	68	29	165			129	277	55	48
I-13	140	Lin.Ft.	Concrete steps											140
I-13	68	Sq.Ft.	4" sidewalk, concrete											68
‡ SPEC	1100	Lin.Ft.	Prebored Pile Holes, as per plan.									1100		

* See note on Sheet No. 226 for work required under this Item at this location.

‡ See notes on Sheets No. 222 and 226 for details of this Item.

226

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUMMARY OF ESTIMATED QUANTITIES FOR RETAINING WALLS

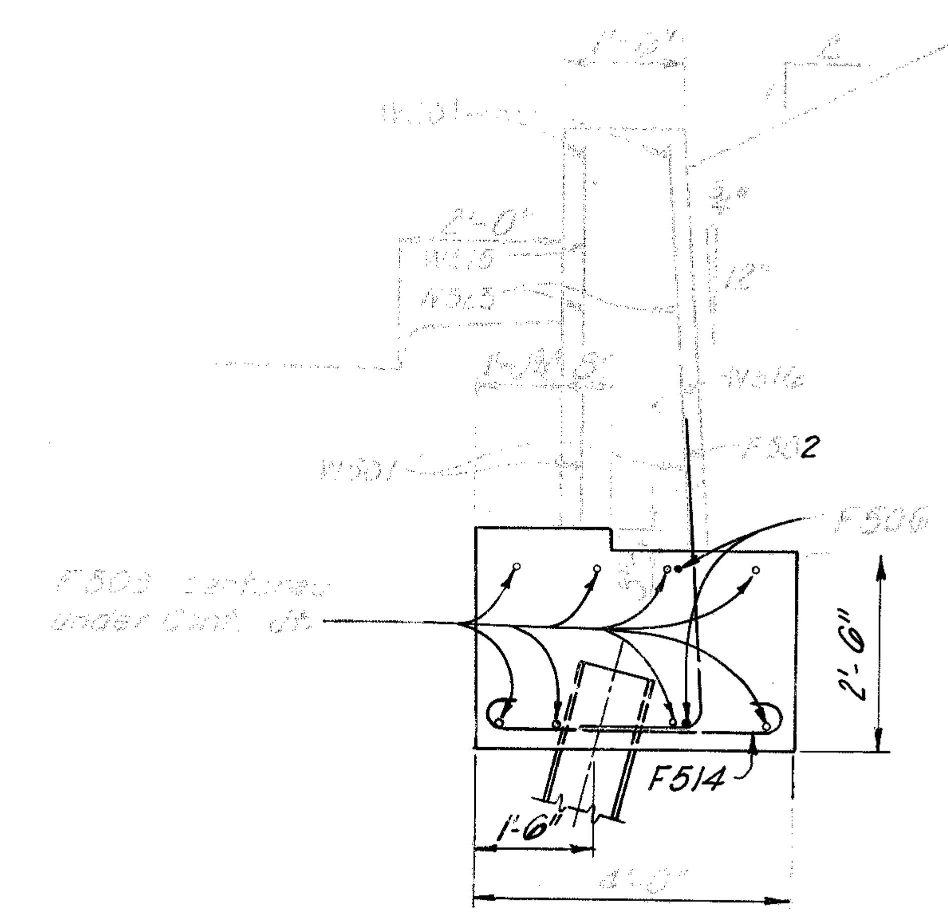
JEFFERSON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	CJK		P.M.	E. Roberts 9-8-59	

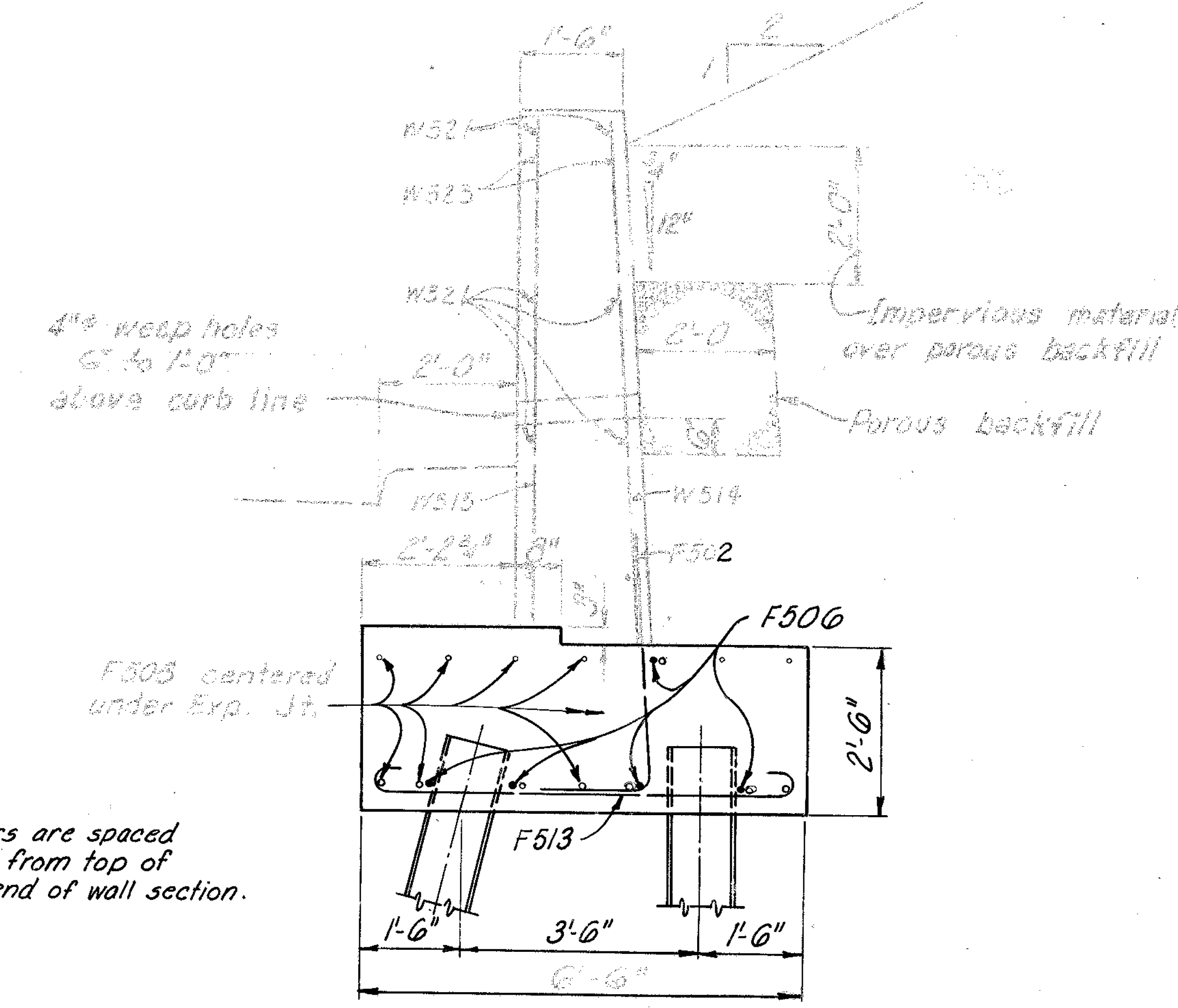
FED. RD. DIVISION | STATE | PROJECT
2 | OHIO | U 430(14)
JEFFERSON COUNTY
JEF-7-13.53
F503 (Bottom) 8 Spaces @ 3'-0" = 24'-0"
Optional Constr. Jt. in footing
Batter front row piles 1:4
Batter all piles 1:4
Transition curb - from 6" to 8" in 25'-0"
3'-6"
3 Spaces @ 7'-0" = 21'-0"
2'-9"
3 Spaces @ 6'-3" = 18'-9"
12BP53 Piles - Average Est. Pay Length = 40'
21'-0½"
7'-0"
12BP53 Piles - Average Estimated Pay Length = 35'
28'-0"
12BP53 Piles - Average Est. Pay Length = 30'
28'-0"
12BP53 Piles - Average Est. Pay Length = 25'
25'-0"
PLAN
℄ Expansion Joint, included with Jef-7-1374 for payment
Contraction Joint
Note: N.S. Indicates Near Side
F.S. Indicates Far Side
Br. No. Jef-7-1374
No. 5 bars, 10'-0" long, centered under expansion joint. For bar mark & details see sh. #235 & 240
4-F506
1-F506
F502
SECTION 4
SECTION 3
SECTION 2
SECTION 1
ELEVATION
℄ Exp. Jt.
½"
½"
12" x ½" Premolded sealing strip in 13" x ¾" recess. Stop strip & recess 6" from top of wall.
1" Preformed Gray rubber Exp. Jt. Filler.
Face of wall
Rustication Groove
DETAIL OF EXPANSION JOINT
DETAIL OF CONTRACTION JOINT
DETAIL OF RUSTICATION
FOR GENERAL NOTES SEE SHEET NO. 198
MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA
RETAINING WALL
PLAN & ELEVATION
RIGHT OF ℄ CONSTRUCTION
JEFFERSON COUNTY

FED'L RD. DIVISION	STATE	PROJECT
2	OHIO	U 430(14)

JEFFERSON COUNTY
JEF-7-13.53

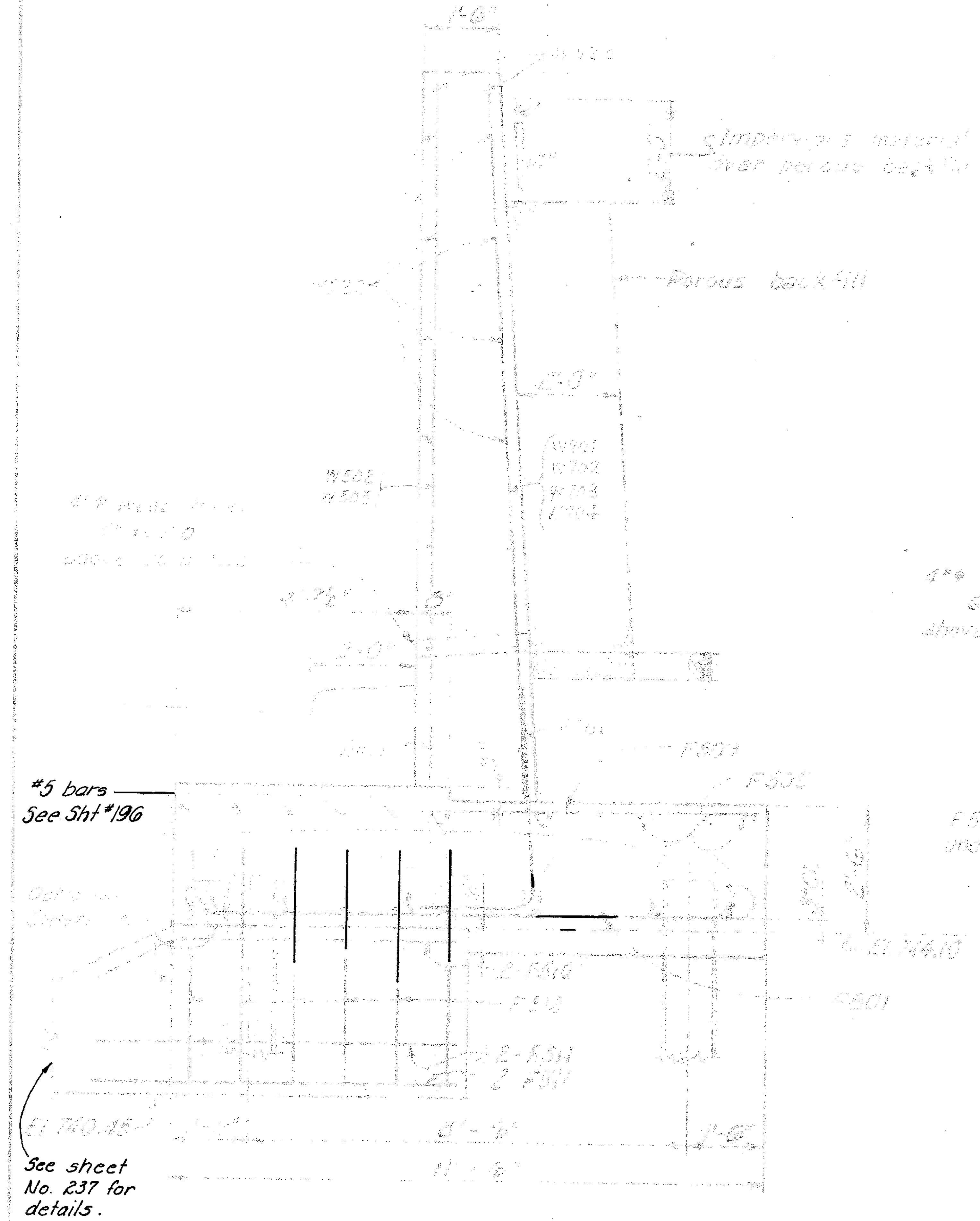


SECTION D-D

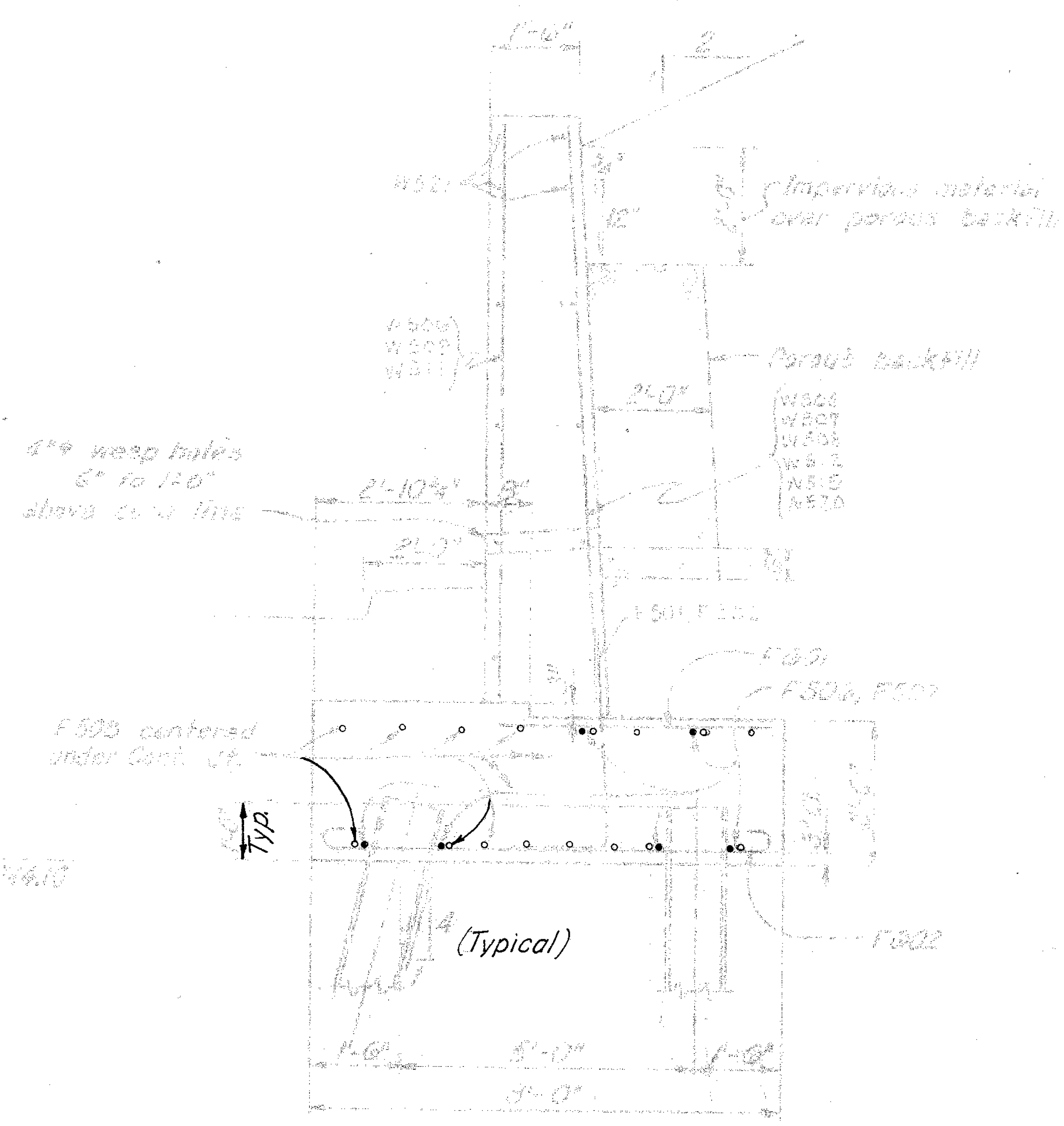


SECTION C-C

NOTE: All horizontal bars are spaced 2'-0" c/c starting from top of wall at the high end of wall section.

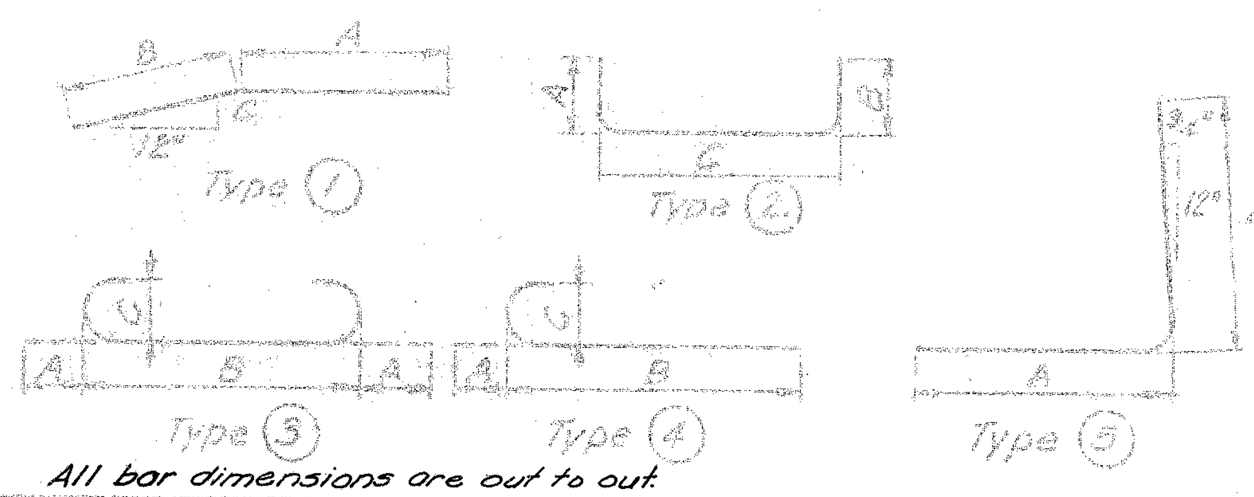


SECTION A-A



SECTION B-B

REINFORCING STEEL BAR SCHEDULE



All bar dimensions are out to out.

Mark	Total	Size	Length	Type	A	B	C	Weight
W501	4	5	24'-8"	Str.				102
W502	1	5	20'-0"	Str.				21
W503	6	5	15'-0 to 19'-3	Str.	Vary by 1'-3"			101
W504	1	5	12'-10"	Str.				13
W506	1	5	12'-7"	Str.				13
W507	5	5	3'-9"	Str.				20
W508	4	5	11'-7" to 12'-6"	Str.	Vary by 3" (one each)			60
W509	4	5	11'-4" to 12'-1"	Str.	Vary by 3" (one each)			49
W511	11	5	8'-2" to 11'-1"	Str.	Vary by 3½"(one each)			110
W512	11	5	8'-5" to 11'-4"	Str.	Vary by 3½"(one each)			113
W513	11	5	5'-1" to 8'-0"	Str.	Vary by 3½"(one each)			75
W514	11	5	5'-4" to 8'-3"	Str.	Vary by 3½"(one each)			78
W515	9	5	2'-3" to 4'-11"	Str.	Vary by 4" (one each			34
W516	9	5	2'-6" to 5'-2"	Str.	Vary by 4" (one each)			36
W519	5	5	4'-9"	Str.				24
W520	6	5	3'-5"	Str.				22
W521	30	5	27'-8"	Str.				866
W522	8	5	4'-6" to 16'-6"	Str.	Vary by 4'-0" (2 each)			88
W523	8	5	20'-3"	Str.				327
W524	2	5	11'-0"	Str.				23
F501	16	5	8'-0"	5	1'-7"	2'-6"		82
F502	42	5	5'-4"	5	1'-7"	3'-10"		234
F503	9	5	4'-10"	3	7"	3'-8"	5¼"	46
F505	10	5	17'-5"	Str.				182
F506	13	5	21'-5"	Str.				290
F507	6	5	5'-4"	Str.				33
F508	38	5	10'-0"	Str.				396
F509	16	5	6'-4"	Str.				106
F510	4	5	7'-2"	1	5'-7"	1'-7"	6"	30
F511	8	5	7'-2"	Str.				60
F512	12	5	9'-10"	2	4'-8"	4'-3"	9"	123
F513	11	5	7'-4"	3	7"	6'-2"	5¼"	84
F601	14	6	5'-6"	Str.				116
F602	24	6	9'-0"	3	8"	7'-8"	6"	351
F701	25	7	6'-7"	5	2'-4"	4'-6"		336
F801	33	8	12'-3"	3	1'-1"	11'-2"	9"	1079
W701	1	7	20'-5"	Str.				41
W702	12	7	7'-6"	Str.				184
W703	6	7	13'-5" to 19'-6"	Str.	Vary by 1'-5" (one each)			201
W704	6	7	10'-10"	Str.				163
						TOTAL		6294

BAR SIZE
Bar size is indicated in the barmark. The first digit where three digits are used and the first two where four are used, indicates the bars size number. For example A401 is a number 4 bar and A1114 is a number 11 size bar

ESTIMATED QUANTITIES

Item	Total	Unit	Description
E-2	lump	sum	Cofferdams, cribs and sheeting
E-3	325	cu.yds.	Excavation for structures
S-1	67	cu.yds.	Class "E" concrete: wall
S-1	78	cu.yds.	Class "E" concrete: footings
S-3	25	sq.ft.	Waterproofing: Premolded sealing strip
S-4	6294	lbs.	Reinforcing steel
S-7	14	sq.ft.	1" Preformed expansion joint filler (Gray rubber, M-19.02)
S-16	lump	sum	First test pile
S-18	1290	lin.ft.	Steel piles 12 BP53
S-27	35	cu.yds.	Porous backfill

REPLACEMENT BARS

Mark	No.	Size	Length	Type	Weight
RF601	1	6	2'-7"	Str.	
RE601	1	6	3'-11"	Str.	
RE701	1	7	6'-8"	Str.	
	1	8	7'-8"	3	
RE801	A =	1'-1"	B =	6'-7"	
	C =	9"			

REPLACEMENT BARS:
If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy. Testing Laboratory, testing sample as provided in Section S-402 need not be furnished and replacement bars will not be required.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL DETAILS
REINFORCING STEEL LIST
& ESTIMATED QUANTITIES
RIGHT OF ℄ CONSTRUCTION

JEFFERSON COUNTY — STATION 592+41.88

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
JRP	CJK	CJK	JFW			

JEFFERSON COUNTY

JEF-7-13.53

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	FU 430(14)	

● Denotes Boring Location

ELEVATION

GENERAL NOTES

- **DESIGN SPECIFICATIONS:** This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof.
- **EXCAVATION:** Excavation outside the unclassified excavation limits behind the wall, in lieu of sheeting, shall be backfilled with porous backfill material at the Contractors own expense.
- **COFFERDAMS, CRIBS AND SHEETING:** The Contractor shall furnish sufficient Cofferdams, Cribs and Sheeting to protect and maintain traffic on Murdock Avenue as specified, or as directed by the Engineer.
- **SURFACE FINISH OF CONCRETE:** Exposed area of front face of wall shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.
- **CONCRETE:** All concrete shall be Class "E".
- **BACKFILL:** Backfill shall be impervious material, and porous backfill within the limits shown, and shall extend for the full length of the structure.
- **FOUNDATION SOUNDINGS:** Foundation design and foundation quantities are based on a study of rod soundings (and/or soil-sampling soundings) made at the site. This sounding information may be inspected in the office of the

Foundation Soundings (cont.) Bureau of Bridges in Columbus or in the Division office, but the State assumes no responsibility for the accuracy thereof.

- **PILES:** Piles shall be driven to firm contact with shale or rock. If the length of penetration is approximately equal to the depth to shale or rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. S-18.05 is not less than the following

(continued on sheet 200)

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL
PLAN & ELEVATION
RIGHT OF ℄ CONSTRUCTION

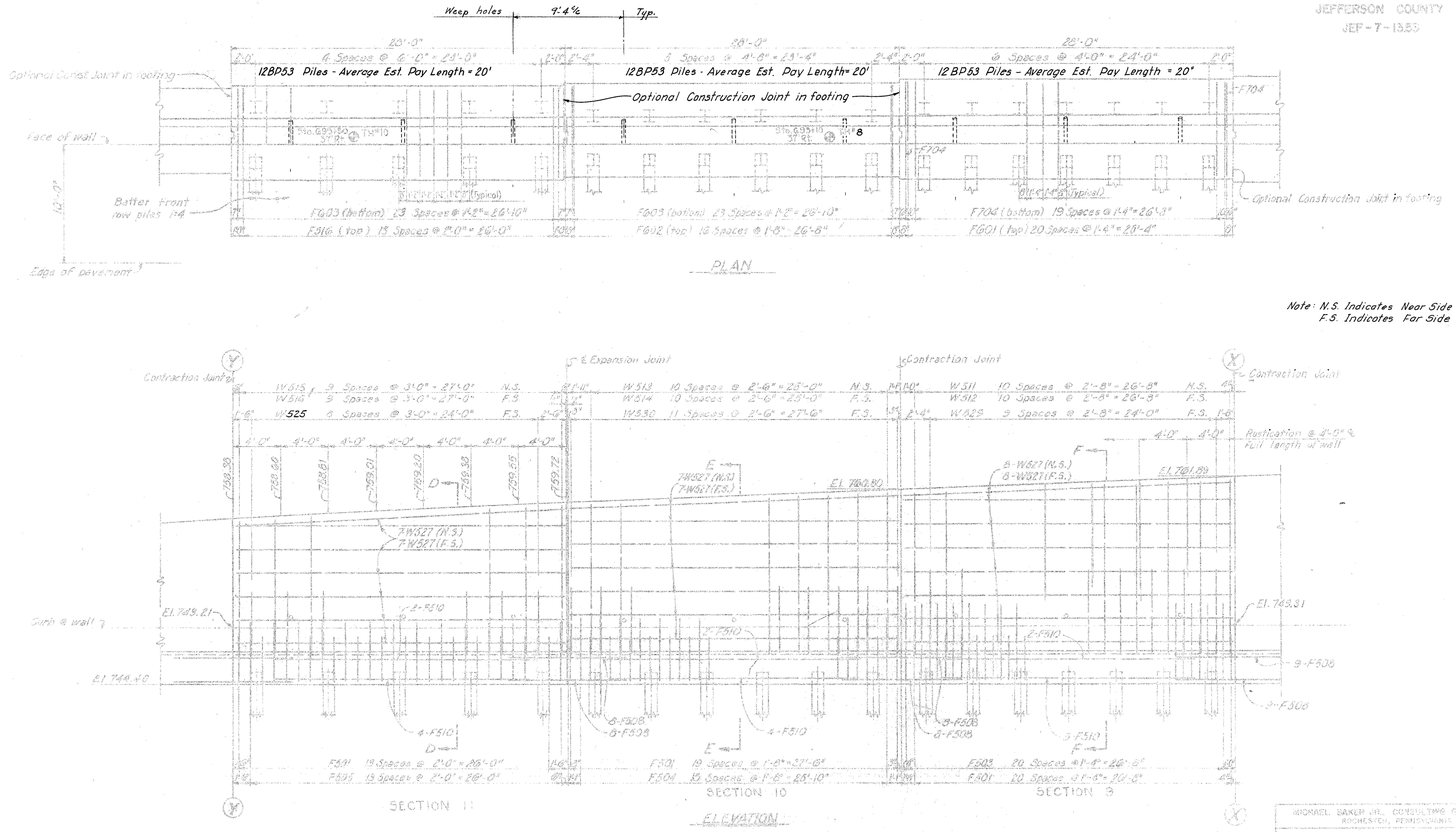
JEFFERSON COUNTY STATION 693+63.95

Designed	Drawn	Traced	Checked	Reviewed, Date	Revised
JDR	C.J.K.	C.J.K. G.M.M.	JPW	E. Roberts 6-5-59	

FEDERAL DIVISION	STATE	PROJECT	[illegible]
2	OHIO	U 430(4)	

199
307

JEFFERSON COUNTY
JEF-7-13.53



Note: N.S. Indicates Near Side
F.S. Indicates Far Side

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL
PLAN & ELEVATION
RIGHT OF ℄ CONSTRUCTION

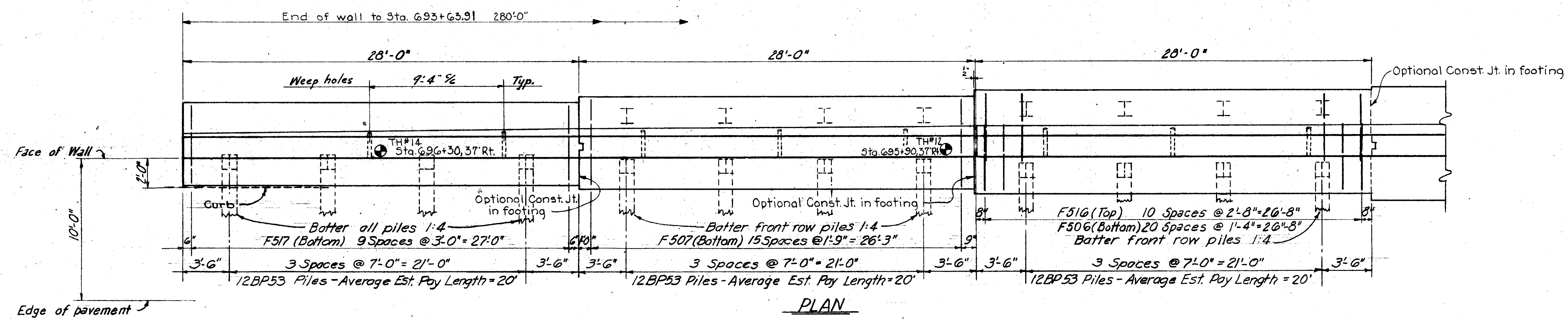
JEFFERSON COUNTY STATION [illegible]

Designed	Drawn	Traced	Checked	Reviewed	Date	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	E. Roberts 6-10-59		

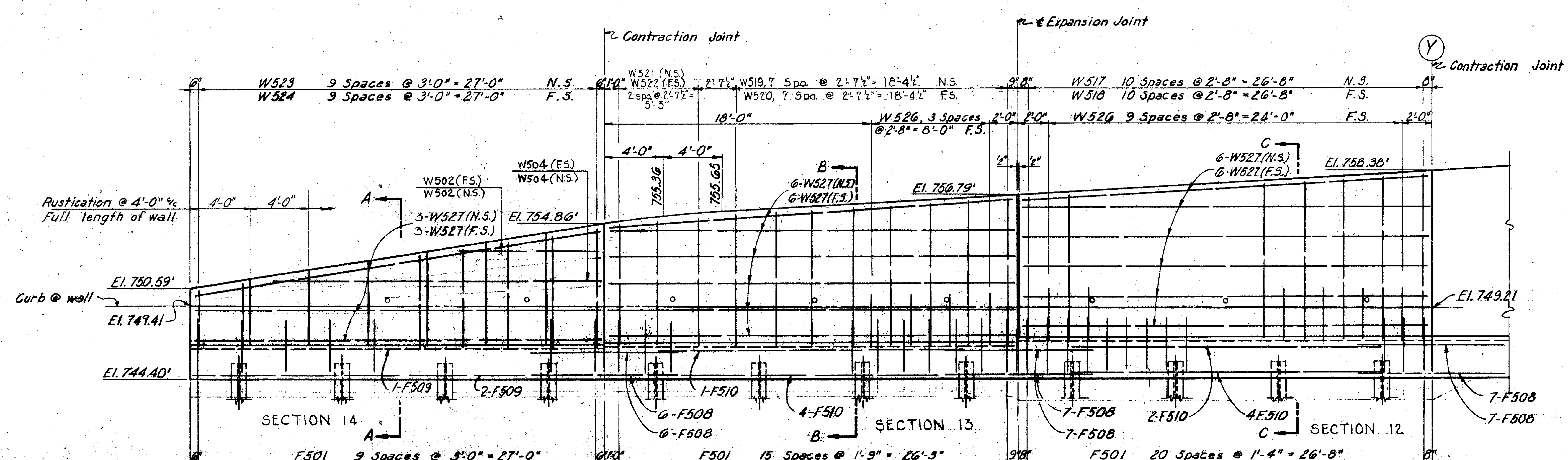
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	FU 430(14)	

200/307

JEFFERSON COUNTY
JEF-7-13.53



PLAN



ELEVATION

PILES: (continued)
value for a pile hammer of the indicated energy rating:

Section 1	37 tons per pile using a 7,000 ft.lb hammer
Section 1	28 tons per pile using an 11,000 ft.lb hammer
Section 1	26 tons per pile using a 15,000 ft.lb or greater hammer
Section 2	35 tons per pile using a 7,000 ft.lb hammer
Section 2	26 tons per pile using an 11,000 ft.lb hammer
Section 2	25 tons per pile using a 15,000 ft.lb or greater hammer
Section 3	34 tons per pile using a 7,000 ft.lb or greater hammer
Section 3	25 tons per pile using an 11,000 ft.lb or greater hammer
Section 4	58 tons per pile using a 15,000 ft.lb or greater hammer
Section 5	70 tons per pile using a 15,000 ft.lb or greater hammer

Section 6 thru 14 38 tons per pile using a 7,000 ft.lb. hammer
Section 6 thru 14 29 tons per pile using an 11,000 ft.lb. hammer
Section 6 thru 14 27 tons per pile using a 15,000 ft.lb. or greater hammer
If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design loads are as follows:
Sections 1, 2, 3, 6, 7, 8, 9, 10, 12, 13, & 14; 25 tons
Section 11; 30 tons
Section 4 & 5; 45 tons

● Denotes Boring Location
N.S. Indicate near side
F.S. Indicate far side

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

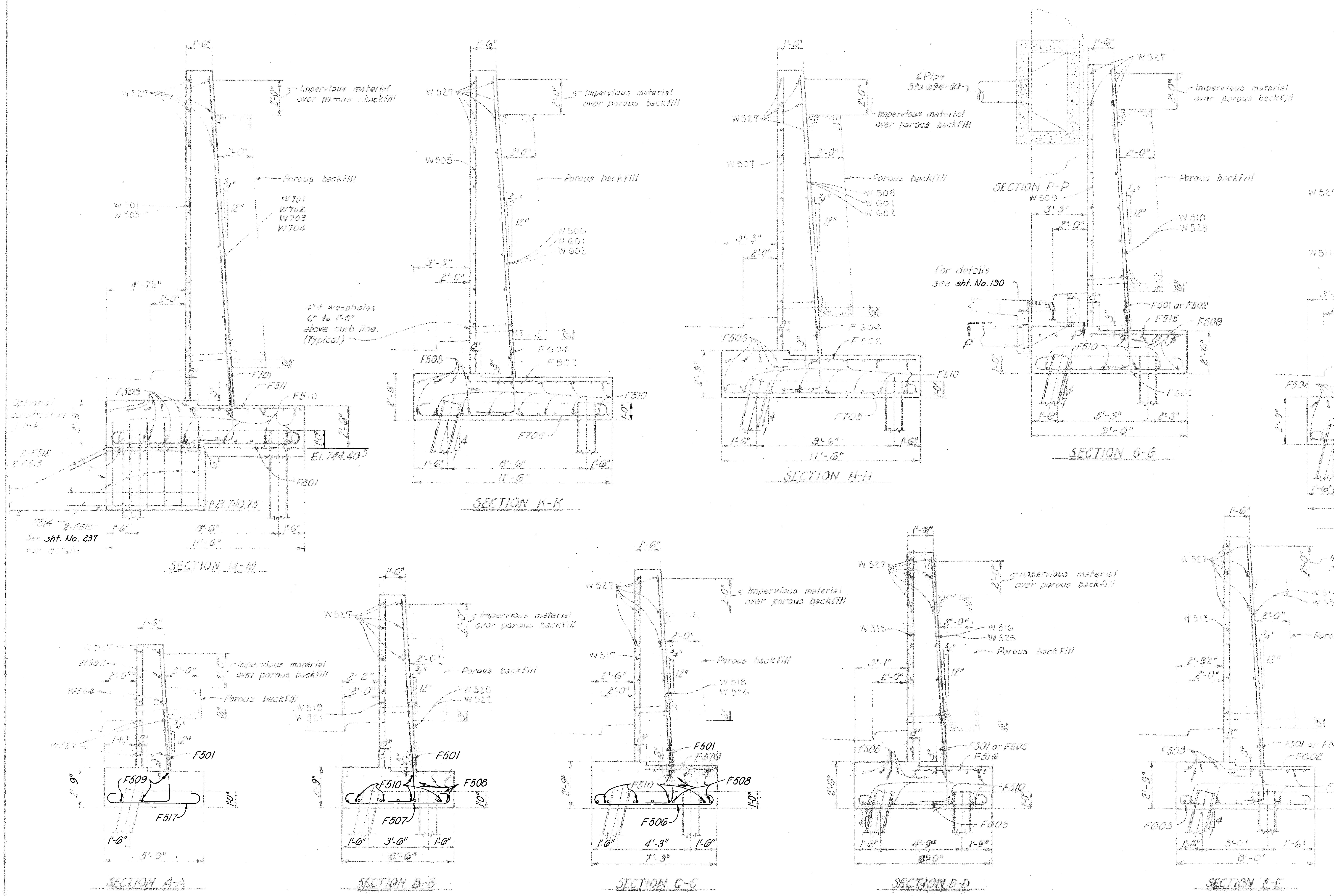
RETAINING WALL
PLAN & ELEVATION
RIGHT OF ℄ CONSTRUCTION

JEFFERSON COUNTY STATION 693+63.91

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
JDR	C.J.K.	C.J.K.	JPW	E. Roberts	6-5-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U 480(4)	

JEFFERSON COUNTY
JEF-7-13.53



NOTE: All horizontal bars are spaced 2'-0" c/c starting from top of wall at the high end of wall section.

MICHAEL BAKER JR. CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

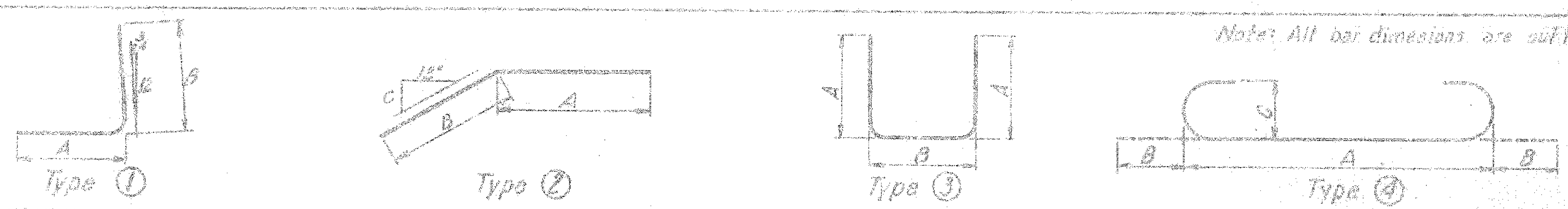
RETAINING WALL
DETAILS
RIGHT OF ℄ CONSTRUCTION

JEFFERSON COUNTY STATION 693+63.8

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
JDR	C.J.K.	C.J.K.	JRW	E. Roberts 6-8-59		

REINFORCING STEEL BAR SCHEDULE

Note: All bar dimensions are out to out



MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	WEIGHT
W501	4	5	[illegible]	Str.	Vary by 4"	(One Each)		[illegible]
W502	2	5	[illegible]	Str.				[illegible]
W503	7	5	[illegible]	Str.	Vary by 1½"	(One Each)		132
W504	2	5	[illegible]	Str.				40
[illegible]	12		[illegible]	Str.	Vary by 1"	(One Each)		[illegible]
W506	12		[illegible]	Str.	Vary by 1"	(One Each)		[illegible]
[illegible]	9		[illegible]	Str.	[illegible]	(One Each)		[illegible]
[illegible]	9		[illegible]	Str.	[illegible]	(One Each)		[illegible]
[illegible]	12		[illegible] to 6"	Str.	[illegible]	(One Each)		176
[illegible]	12		[illegible]	Str.	[illegible]	(One Each)		[illegible]
[illegible]	11		[illegible]	Str.	[illegible]	(One Each)		[illegible]
[illegible]	11		[illegible]	Str.	[illegible]	(One Each)		[illegible]
[illegible]	11		[illegible]	Str.	[illegible]	(One Each)		[illegible]
[illegible]	11		[illegible]	Str.	[illegible]	(One Each)		[illegible]
[illegible]	10		[illegible]	Str.	[illegible]	(One Each)		[illegible]
[illegible]	10		[illegible]	Str.	[illegible]	(One Each)		[illegible]
[illegible]	11		[illegible]	Str.	[illegible]	(One Each)		[illegible]
[illegible]	11		[illegible]	Str.	[illegible]	(One Each)		[illegible]
[illegible]	8		[illegible]	Str.	[illegible]	(One Each)		76
[illegible]	8		[illegible]	Str.	[illegible]	(One Each)		[illegible]
[illegible]	3		[illegible]	Str.	[illegible]	(One Each)		[illegible]
[illegible]	3		[illegible]	Str.	[illegible]	(One Each)		[illegible]
[illegible]	10		[illegible]	Str.	[illegible]	(One Each)		[illegible]
[illegible]	10		[illegible]	Str.	[illegible]	(One Each)		[illegible]
[illegible]	4		[illegible]		[illegible]	(One Each)		[illegible]
[illegible]	7		[illegible]		[illegible]	(One Each)		[illegible]

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	WEIGHT
F501	126	5	5'-4"	[illegible]	[illegible]	3'-10"		701
F502	[illegible]	5	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
F503	[illegible]	5	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
F504	[illegible]	5	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
F505	[illegible]	5	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
F506	[illegible]	5	8'-1"	4	6'-11"	7"	5¼"	177
F507	16	5	7'-4"	4	6'-2"	7"	5¼"	122
F508	154	5	[illegible]	Str.				1606
F509	3	5	24'-5"	Str.				76
F510	69	5	[illegible]	Str.				1523
F511	[illegible]	5	[illegible]	Str.				[illegible]
F512	[illegible]	5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
F513	[illegible]	5	[illegible]	Str.				[illegible]
F514	[illegible]	5	[illegible]	3	[illegible]	[illegible]		[illegible]
F515	[illegible]	5	[illegible]	Str.				[illegible]
F516	25	5	[illegible]	Str.				122
F517	10	5	6'-7"	4	5'-5"	7"	5¼"	69
							Total	21,653

ESTIMATED QUANTITIES

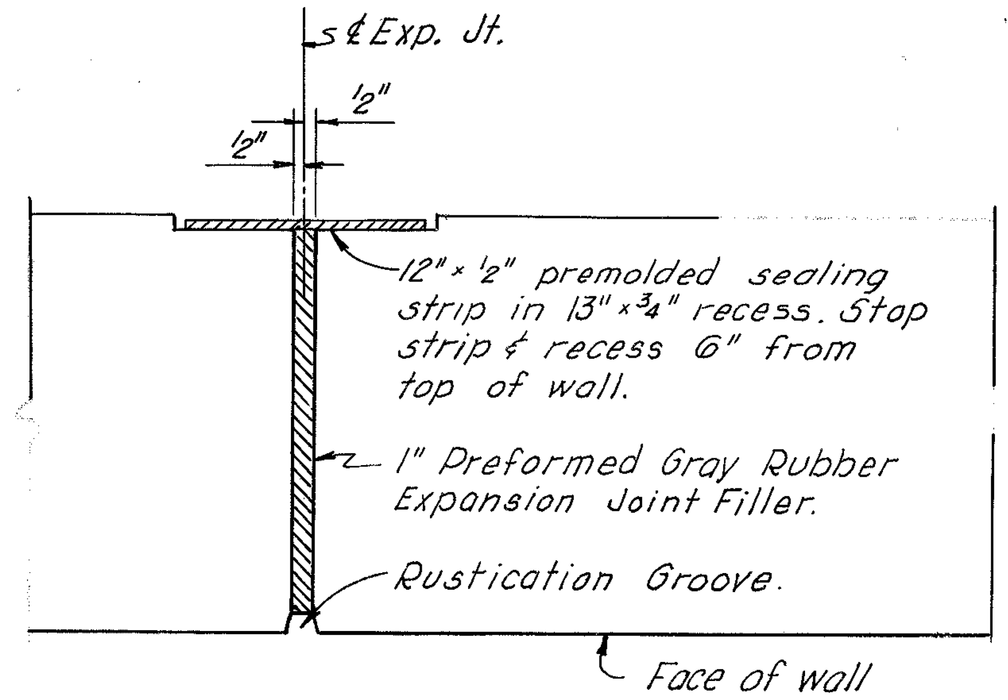
ITEM	TOTAL	UNIT	DESCRIPTION
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	272	[illegible]	[illegible]
[illegible]	237	[illegible]	[illegible]
[illegible]	120	[illegible]	[illegible] premolded [illegible]
[illegible]	21,653	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible] ([illegible])
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	2360	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

BAR SIZE:
Bar size is indicated in the barmark. The first digit where three digits are used and the first two where four are used, indicates the bars size number. For example, A401 is a number 4 bar and A1114 is a number 11 size bar.

REPLACEMENT BARS

MARK	NO.	SIZE	LENGTH	TYPE	WEIGHT
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]		

REPLACEMENT BARS:
If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy. Testing Laboratory, test sample as provided in section 5-402 need not be furnished and replacement bars will not be required.



Premolded

JEFFERSON COUNTY

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U 430(14)	

203
307

JEFFERSON COUNTY
JEF-7-13.53

Note: For locations of borings and rock elevations, see sheet # 241

For details of keyed joint with abutment see sheet #243

Legend: N.S. Denotes Near side
F.S. " Far side
E.S. " Each side

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL DETAILS
PLAN & ELEVATION
RIGHT OF ℄ CONSTRUCTION

JEFFERSON COUNTY STA. 697+50.02

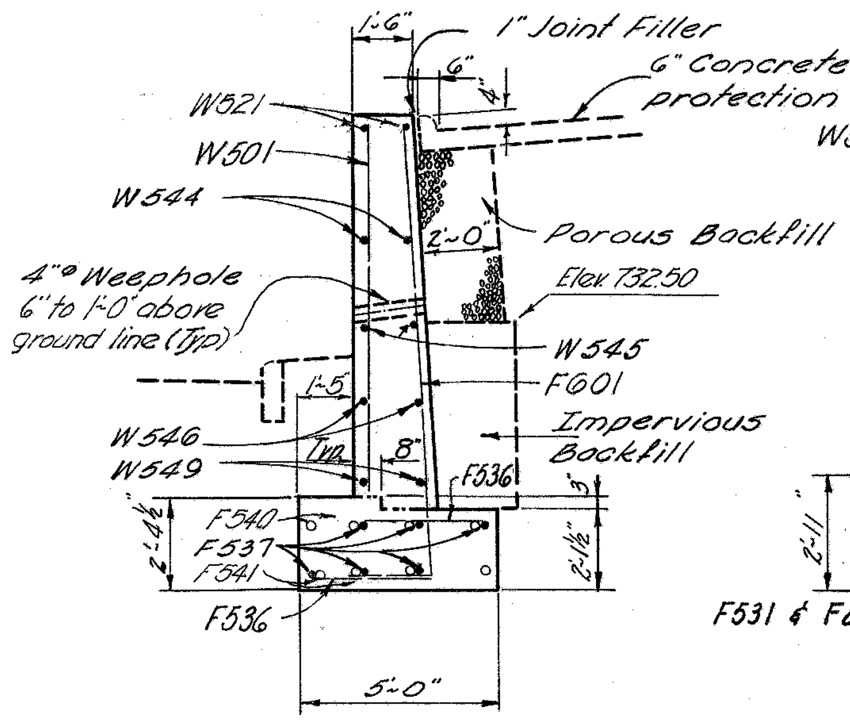
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
F.A.	BB	BB	E.F.R.	E. Roberts 6-10-59	3-24-60

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27096

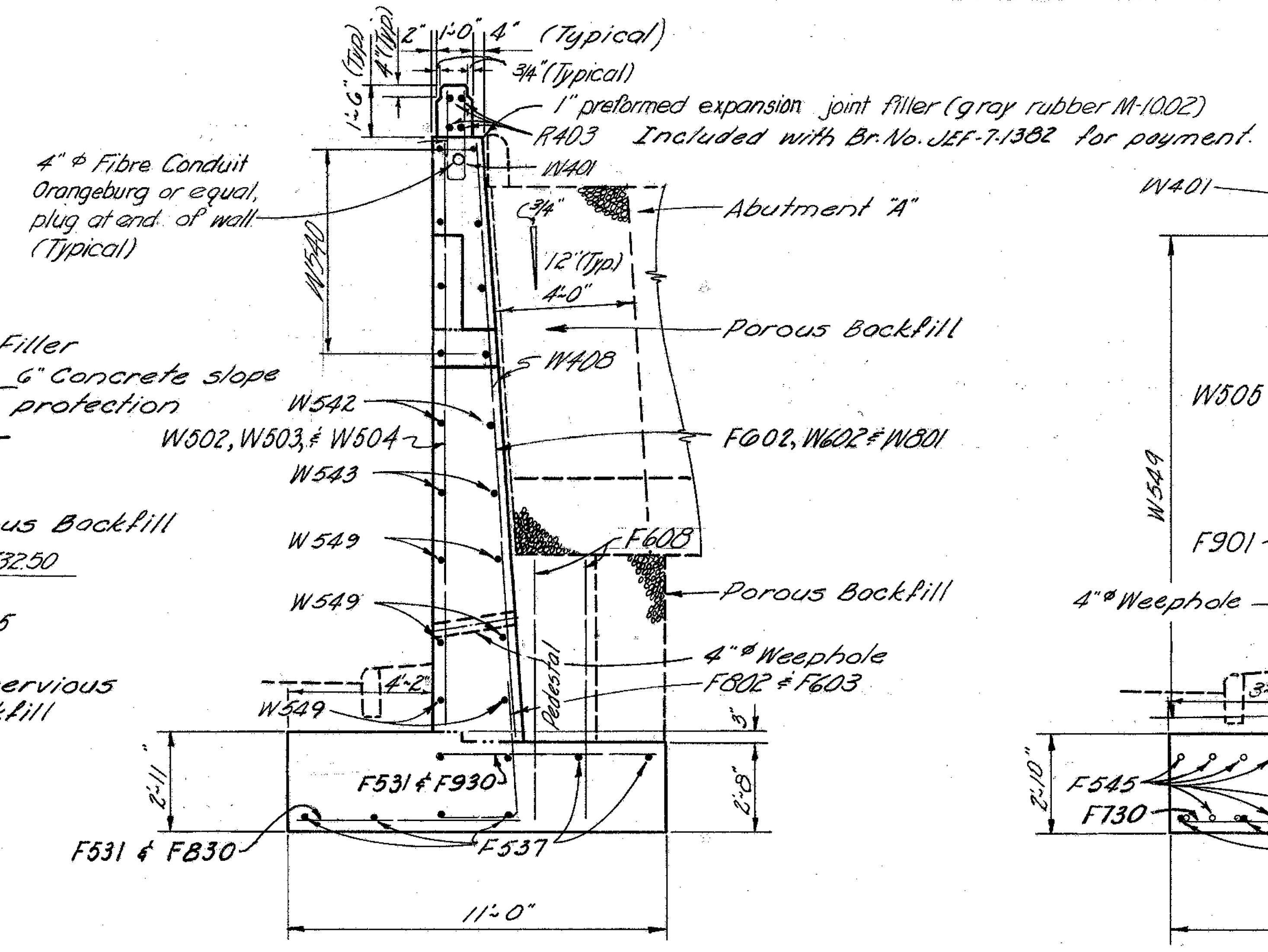
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(14)	

204
307

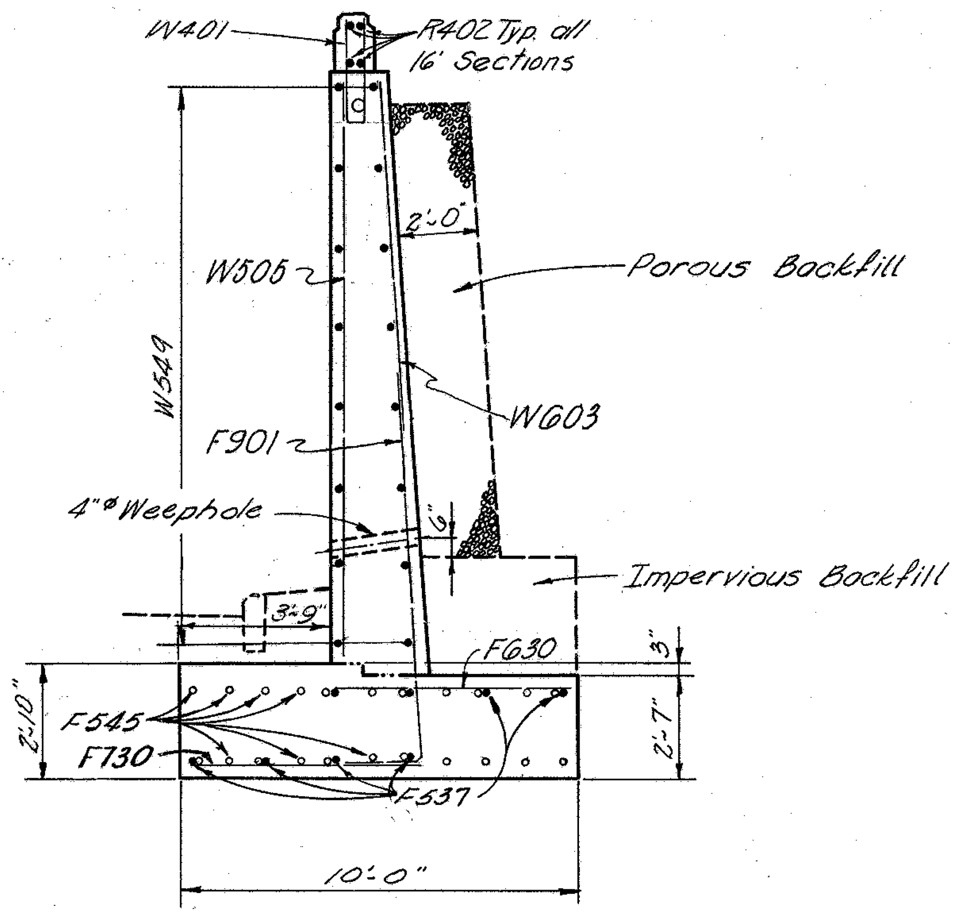
JEFFERSON COUNTY
JEF-7-13.53



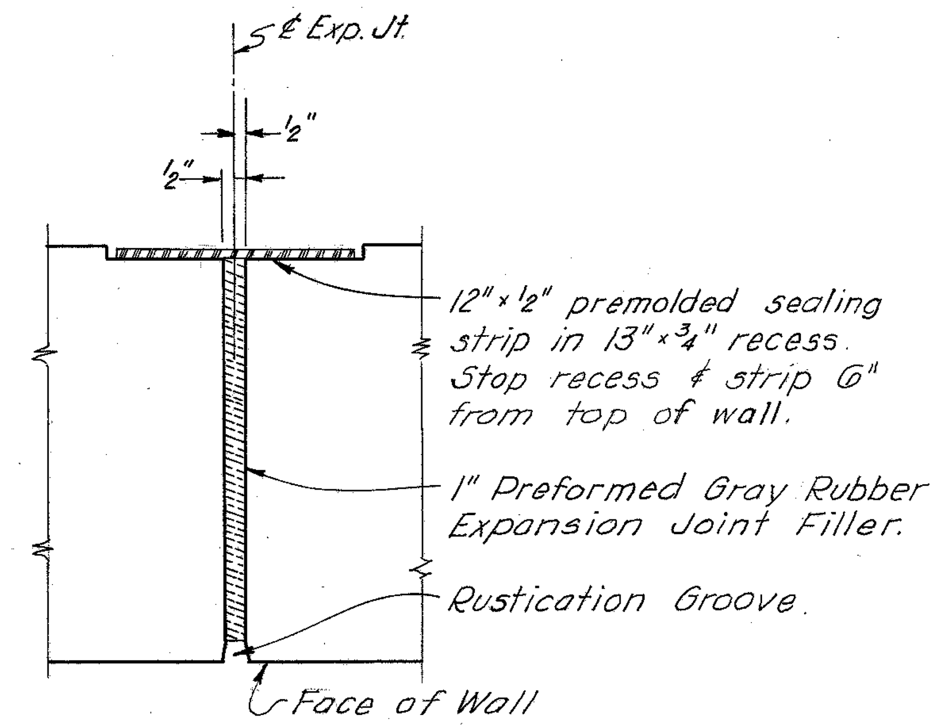
SECTION A-A



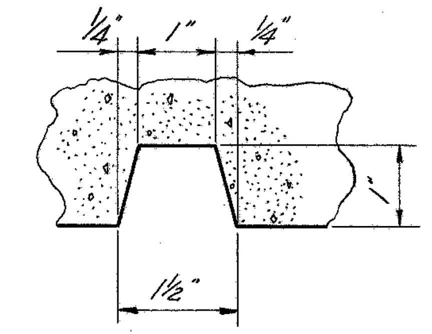
SECTION B-B



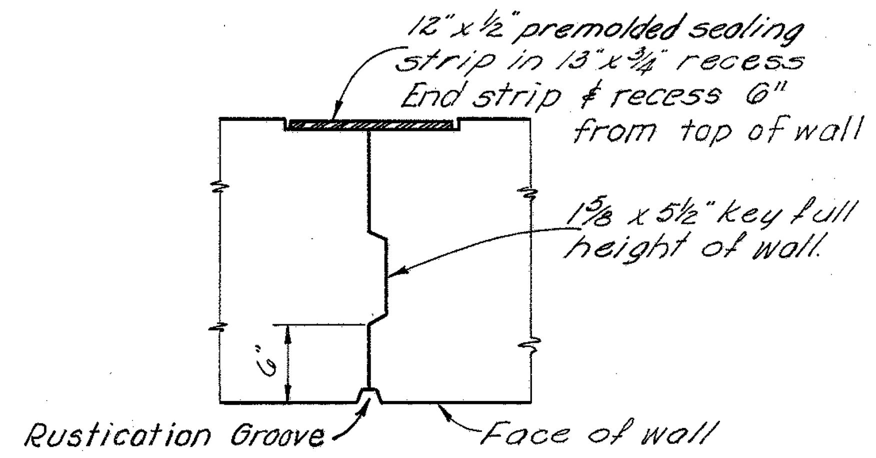
SECTION C-C



EXPANSION JOINT DETAIL



RUSTICATION DETAIL



CONTRACTION JOINT DETAIL

GENERAL NOTES:

DESIGN SPECIFICATIONS: This structure conforms to the requirements for "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

EXCAVATION: Excavation outside the structure excavation limits, as shown on the plans shall be backfilled with porous backfill material at the Contractors own expense.

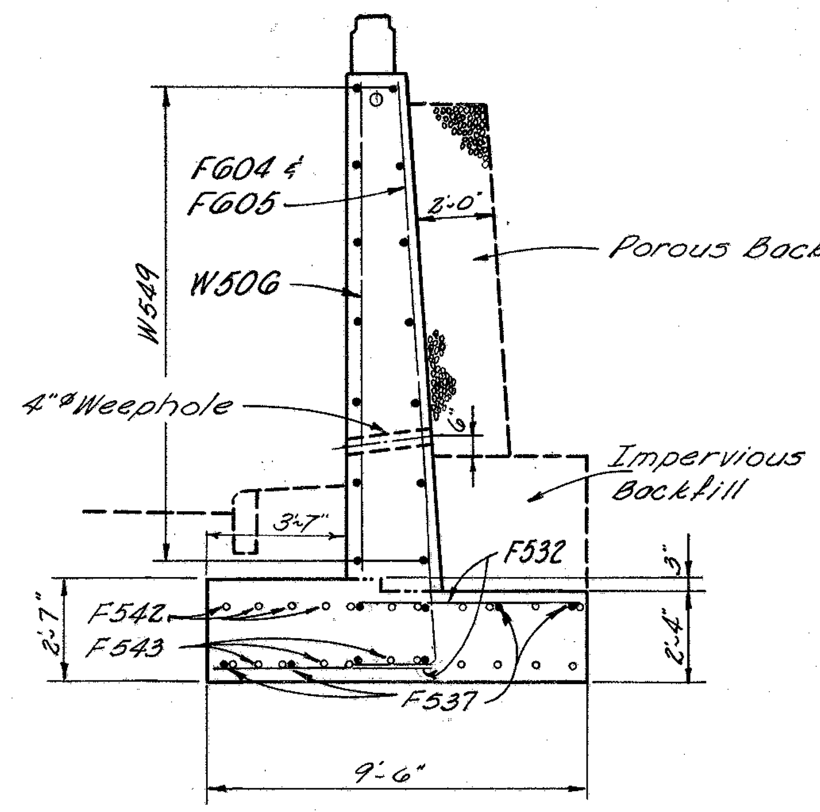
FOUNDATION BEARING PRESSURE: Footings for sections 1, 4, 5, 6, 7, and 8 are designed for a maximum bearing pressure of 1.3 tons per sq.ft. Footings for sections 2 and 3 are to be founded upon soft weathered bedrock and are designed for a maximum bearing pressure of 24 tons per sq. ft. The Engineer shall inspect the entire area and insure that excavation goes to bedrock, and, if necessary, require that over-excation be filled with Class "E" concrete. Prolonged exposure to atmospheric conditions shall be averted. The excavation shall be kept drained at all times. Where solid rock is found at a lower elevation, the footings shall be placed on pedestals as shown on this sheet. The pedestals shall have a maxium spacing c/c of 8'-0". The wall footings and/or pedestals shall be extended a minimum of 6" into solid rock or shale.

SURFACE FINISH OF CONCRETE: Exposed area of front face shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.

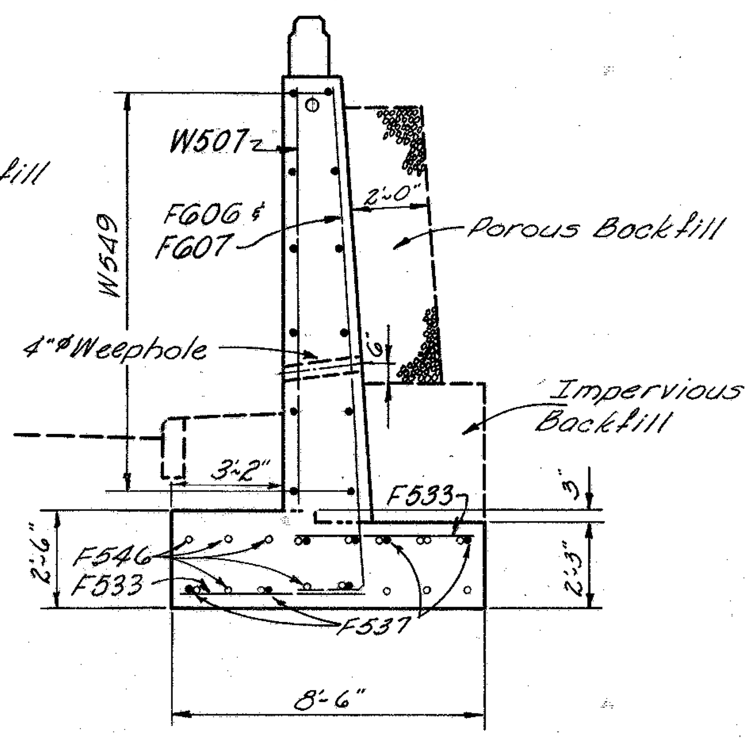
CONCRETE: All wall concrete shall be Class "E". All parapet concrete shall be Class "C". Steel and concrete, ~~and lighting standard bolts~~ shall be included with Item S-14 for payment.

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

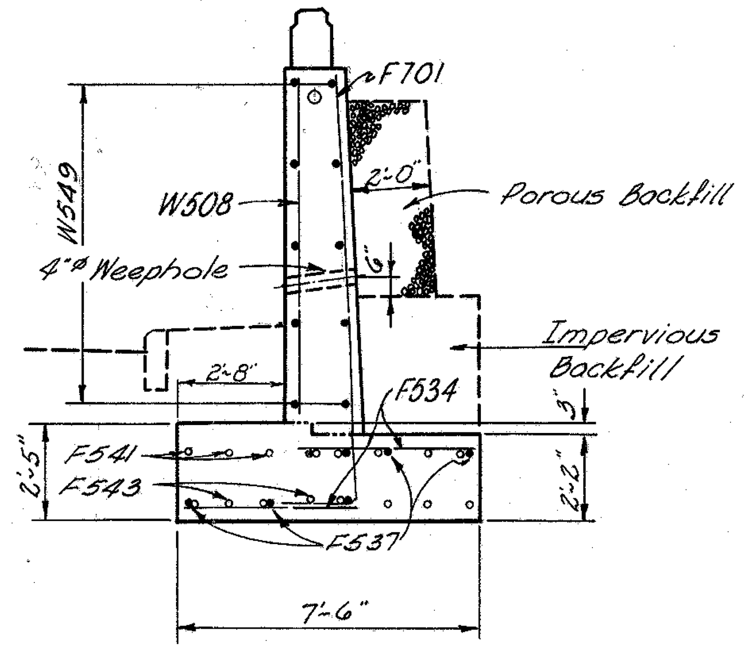
REFERENCE shall be made to Standard Drawing AR-1-57, revised 2-2-59, for Type "A" Aluminum Railing.



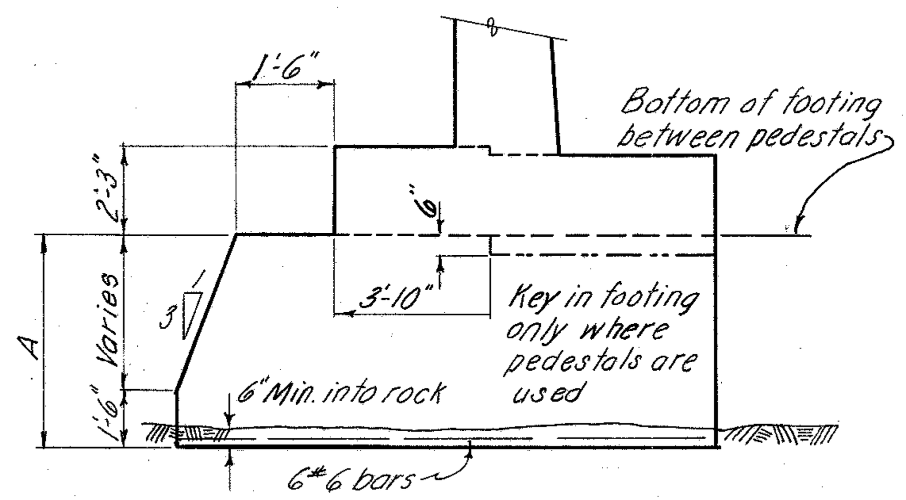
SECTION D-D



SECTION E-E



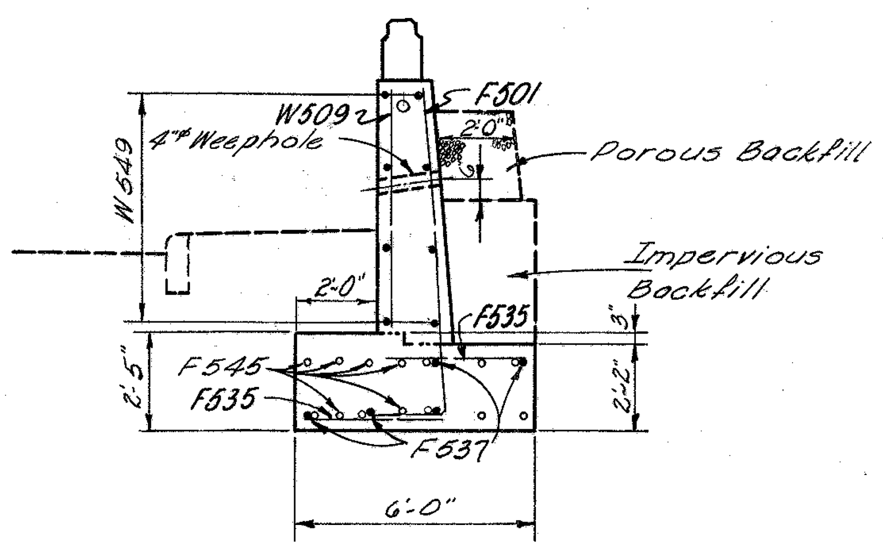
SECTION F-F



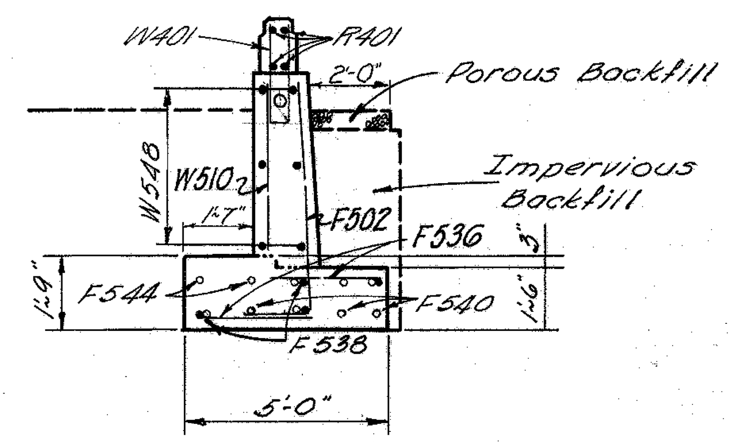
DETAILS OF PEDESTAL

Pedestals to be 3'-0" wide

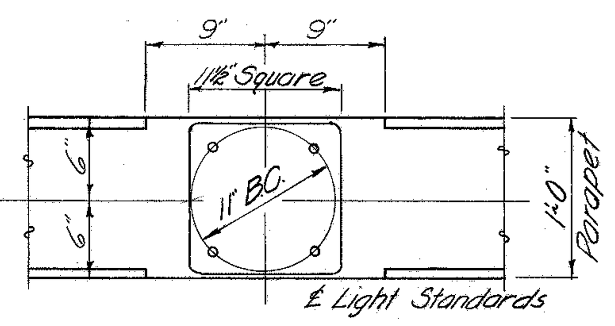
Note: Should dimension A be less than 1'-6" use thickened footing in place of pedestals.



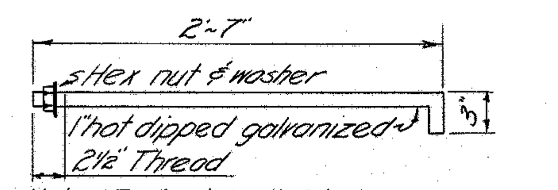
SECTION G-G



SECTION H-H



ANCHOR BOLT LAYOUT



Note: Project bolt 3" above concrete

LIGHT STANDARD ANCHOR BOLT

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL DETAILS

RIGHT OF ℄ CONSTRUCTION

JEFFERSON COUNTY — STA. 697 + 50.09

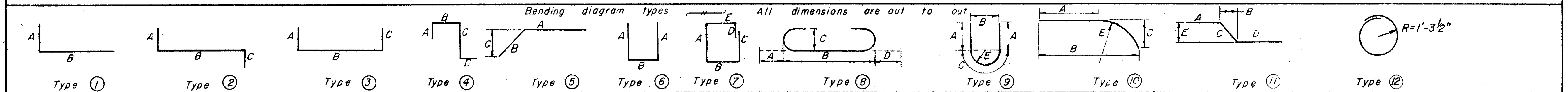
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
F.A.	BB	BB	E.F.R.	E. Roberts 6-10-59	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

JEFFERSON COUNTY
JEF-7-13.53

REINFORCING STEEL BAR SCHEDULE

Bending diagram types — All dimensions are out to out



MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
F501	6	5	9'-7"	1	1'-7"	8'-1½"				60
F502	5	5	7'-0"	1	1'-7"	5'-6½				37
F531	10	5	6'-6"	Str.						68
F532	32	5	5'-2"	Str.						172
F533	22	5	4'-10"	Str.						111
F534	12	5	4'-3"	Str.						53
F535	12	5	3'-9"	Str.						47
F536	22	5	2'-10"	Str.						65
F537	49	5	15'-8"	Str.						801
F538	4	5	14'-8"	Str.						61
F540	9	5	12'-2"	11	1'-7"	5'-0"	5'-8½"	5'-0"	2'-6"	114
F541	12	5	11'-3"	11	1'-7"	4'-2½"	4'-9"	5'-0"	2'-1¼"	141
F542	11	5	10'-10"	11	1'-7"	3'-11"	4'-4"	5'-0"	1'-11½"	124
F543	35	5	11'-4"	11	1'-7"	4'-5"	4'-11"	5'-0"	2'-2½"	414
F544	5	5	10'-9"	11	1'-7"	3'-8"	4'-1"	5'-0"	1'-10"	56
F545	36	5	11'-8"	11	1'-7"	4'-7"	5'-2"	5'-0"	2'-3½"	438
F601	6	6	6'-0½ to 12'-11	1	1'-11"	4'-3" to 11'-1½" (Vary by 1'-4½)				85
F602	3	6	12'-3" to 15'-0"	1	1'-11"	10'-5 to 13'-2" (Vary by 1'-4½)				62
F603	2	6	6'-3"	1	1'-11"	4'-6"				19
F604	8	6	5'-9"	1	1'-11"	4'-0"				69
F605	8	6	10'-9"	1	1'-11"	9'-0"				129
F606	6	6	14'-7"	1	1'-11"	12'-10				131
F607	5	6	9'-9"	1	1'-11"	8'-0"				73
F630	11	6	5'-6"	Str.						91
F608	12	6	7'-8"	Str.						138
F701	6	7	12'-7"	1	2'-3"	10'-6"				154
F730	11	7	5'-11"	Str.						133
F801	2	8	12'-9"	1	2'-6"	10'-6"				68
F802	3	8	7'-1"	1	2'-6"	4'-10"				57
F830	5	8	6'-6"	Str.						87
F901	11	9	13'-11"	1	2'-10"	11'-4"				520
F930	5	9	6'-4"	Str.						108

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
W501	One Each	5	2'-2" to 9'-0½	Str.	Vary by 1'-4½" (6 bars)					35
W502	One Each	5	7'-9" to 10'-6"	Str.	Vary by 1'-4½" (3 bars)					29
W503	2	5	13'-0"	Str.						27
W504	3	5	17'-3"	Str.						54
W505	6	5	14'-11"	Str.						93
W506	6	5	12'-10"	Str.						80
W507	6	5	10'-6"	Str.						66
W508	6	5	8'-5	Str.						53
W509	6	5	6'-0"	Str.						38
W510	5	5	4'-1"	Str.						21
W520	2	5	10'-6"	Str.						22
W521	2	5	17'-2"	Str						36
W540	8	5	4'-3"	Str.						35
W541	6	5	3'-7"	Str.						22
W542	2	5	9'-3"	Str.						19
W543	2	5	13'-6"	Str.						28
W544	2	5	4'-7"	Str.						10
W545	2	5	8'-6"	Str.						18
W546	2	5	12'-6"	Str.						26
W548	6	5	14'-8"	Str.						92
W549	62	5	15'-7"	Str.						1008
W550	2	5	12'-9"	6	6'-3"	6"				26
W601	8	6	13'-0"	Str.						156
W602	2	6	13'-3"	Str.						40
W603	6	6	8'-9"	Str.						79
W801	3	8	17'-6"	Str.						140
W401	112	4	6'-4"	6	3'-0"	6½"				474
R401	4	4	14'-8"	Str.	Included with railing for payment					
R402	22	4	15'-7"	Str.						
R403	4	4	4'-2	Str.						
										7413

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION
E-2	275	Cu. Yds.	Excavation for Structures Including Rock
S-1	86	Cu. Yds.	Class "E" Concrete : Wall
S-1	99	Cu. Yds.	Class "E" Concrete : Footing
S-3	68	Lin. Ft.	Waterproofing, Premolded Sealing Strip
S-4	7413	Lbs.	Reinforcing Steel
S-9	20	Sq. Ft.	1" Preformed Expansion Joint Filler (Gray Rubber, M-10.02)
S-14	100	Lin. Ft.	Railing (Aluminum Railing & Supports & Concrete Parapet)
S-25	100	Lin Ft.	4" Fibre Conduit
S-25	Lump	Sum	Electrical Lighting System (Junction Boxes, Anchor Bolts, Electrical Grounds & steel Conduit)
S-29	68	Cu. Yds.	Porous Backfill

REPLACEMENT BARS

MARK	NO.	SIZE	LENGTH	TYPE	WEIGHT
RE501	1	5	5-7	Str.	
RE601	1	6	5-11	Str.	
RE701	1	7	6-3	Str.	
RE801	1	8	6-6	Str.	
RE901	1	9	6-10	Str.	

REPLACEMENT BARS

If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy Testing Laboratory, test sample as provided in section S-4.02 need not be furnished and replacement bars will not be required.

BAR SIZE

Bar size is indicated in the barmark. The first digit where three digits are used and the first two where four are used, indicates the bar size number. For example, A401 is a number 4 bar and A1114 is a number 11 size bar.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

REINFORCING STEEL LIST & ESTIMATED QUANTITIES

RETAINING WALL

RIGHT OF ℄ CONSTRUCTION

JEFFERSON COUNTY — STA. 697 +50.02

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
F.A.	-B		E.F.R.	E.Roberts 6-10-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

206
307

JEFFERSON COUNTY
JEF-7-13.53

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

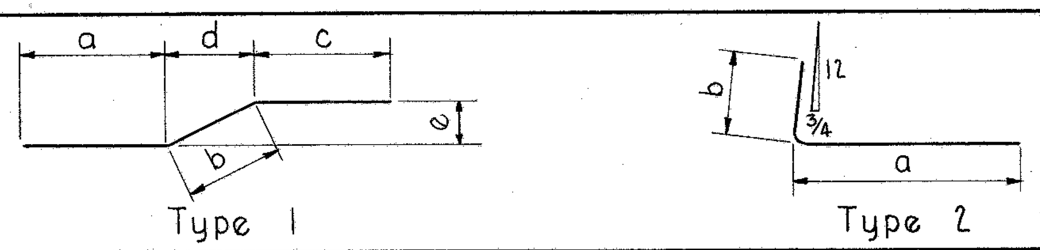
RETAINING WALL PLAN & ELEVATION
LEFT OF ℄ CONSTRUCTION
STA. 705+25.26

JEFFERSON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
STANDARD	C.W.S.	A.M.M.	JPW	E. Roberts 6-10-59	

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27066

REINFORCING STEEL BAR SCHEDULE



MARK	TOTAL	SIZE	LENGTH	TYPE	a	b	c	d	e	WEIGHT
F 501	5	5	31'~8"	Str.						165
F 502	65	5	4'~9"	2	3'-3½"	1'-7"				322
F 503	36	5	10'~0"	1	5'-1"	2'-0½"	2'-10½"	1'-10"	0'-11"	375
W 504	48	5	31'~8"	Str.						1585
W 505	13	5	8'~3"	Str.						112
W 506	13	5	3'-1" to 7'-4"	Str.	1 ea.	vary	by	4¼"		71
W 507	13	5	7'-1" to 9'-1"	Str.	1 ea.	vary	by	2 "		110
W 508	13	5	5'-10" to 7'-10"	Str.	1 ea.	vary	by	2 "		93
W 509	13	5	4'-6" to 6'-6"	Str.	1 ea.	vary	by	2 "		75
W 510	13	5	7'-4" to 9'-4"	Str.	1 ea.	vary	by	2 "		113
W 511	13	5	6'-1" to 8'-1"	Str.	1 ea.	vary	by	2 "		96
W 512	13	5	4'-9" to 6'-9"	Str.	1 ea.	vary	by	2 "		78
W 513	13	5	3'-4" to 7'-7"	Str.	1 ea.	vary	by	4¼"		74
W 514	13	5	8'~6"	Str.						115
									TOTAL	3384

REPLACEMENT BARS

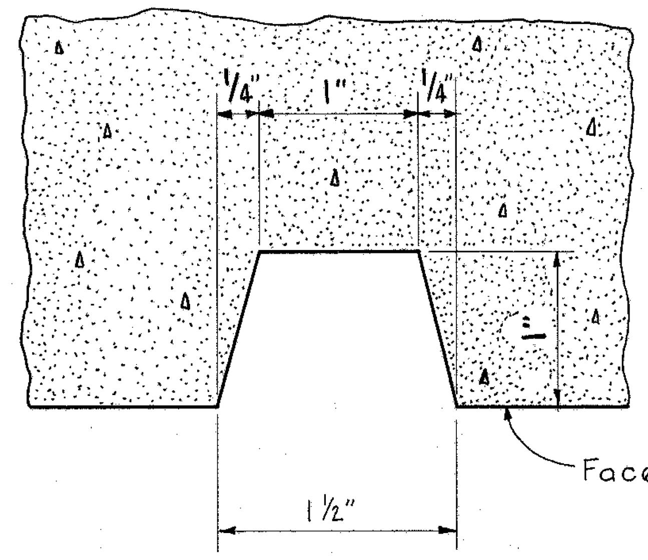
MARK	NO.	SIZE	LENGTH	TYPE	WEIGHT
RE 501	1	5	5'-7"	Str.	

ESTIMATED QUANTITIES

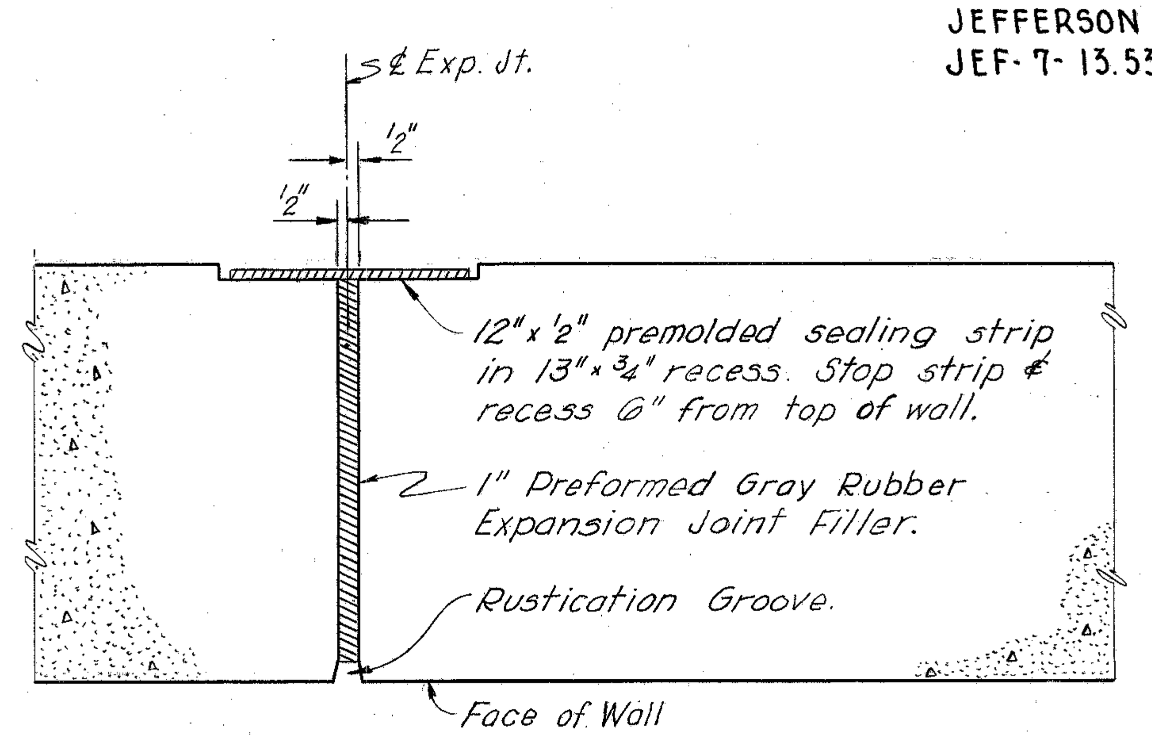
ITEM	TOTAL	UNIT	DESCRIPTION
E-2	236	C.Y.	Rock Excavation for Structures
S-1	73	C.Y.	Class "E" Concrete, Wall
S-1	51	C.Y.	Class "E" Concrete, footing
S-3	28	L.F.	Waterproofing, premolded sealing strip.
S-4	3384	lbs.	Reinforcing Steel
S-9	15	S.F.	1" Preformed expansion joint filler (Gray rubber M10.02)
S-29	29	C.Y.	Porous Backfill

BAR SIZE:
Bar size is indicated in the barmark. The first digit where three digits are used and the first two where four are used, indicates the bars size number. For example, A401 is a number 4 bar and A1114 is a number 11 size bar.

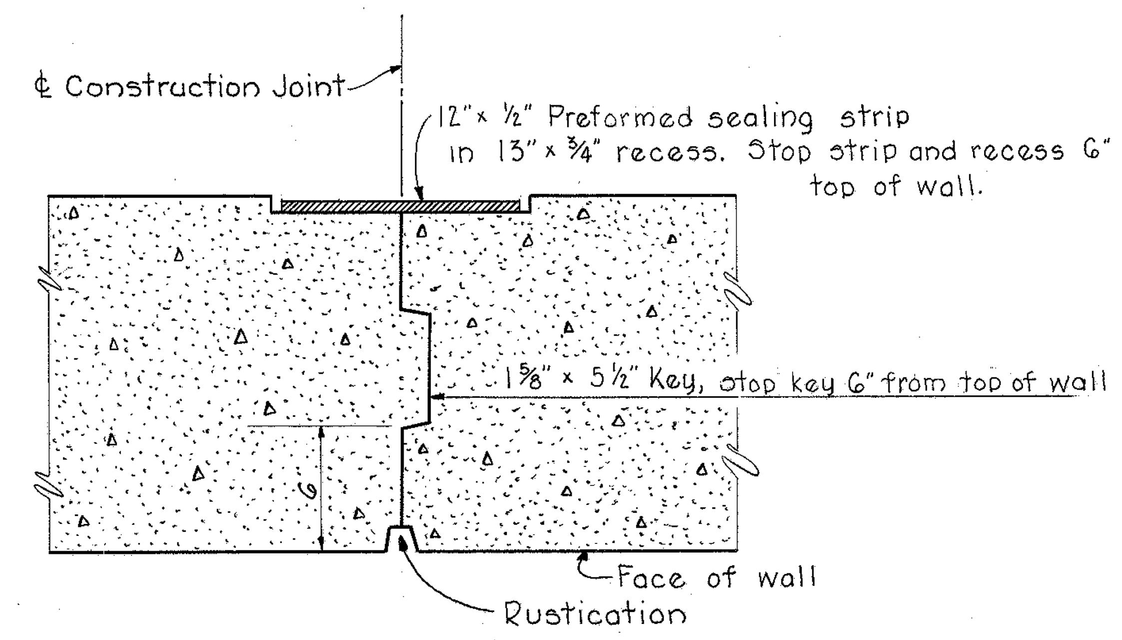
REPLACEMENT BARS:
If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy. Testing Laboratory, test sample as provided in section S-402 need not be furnished and replacement bars will not be required.



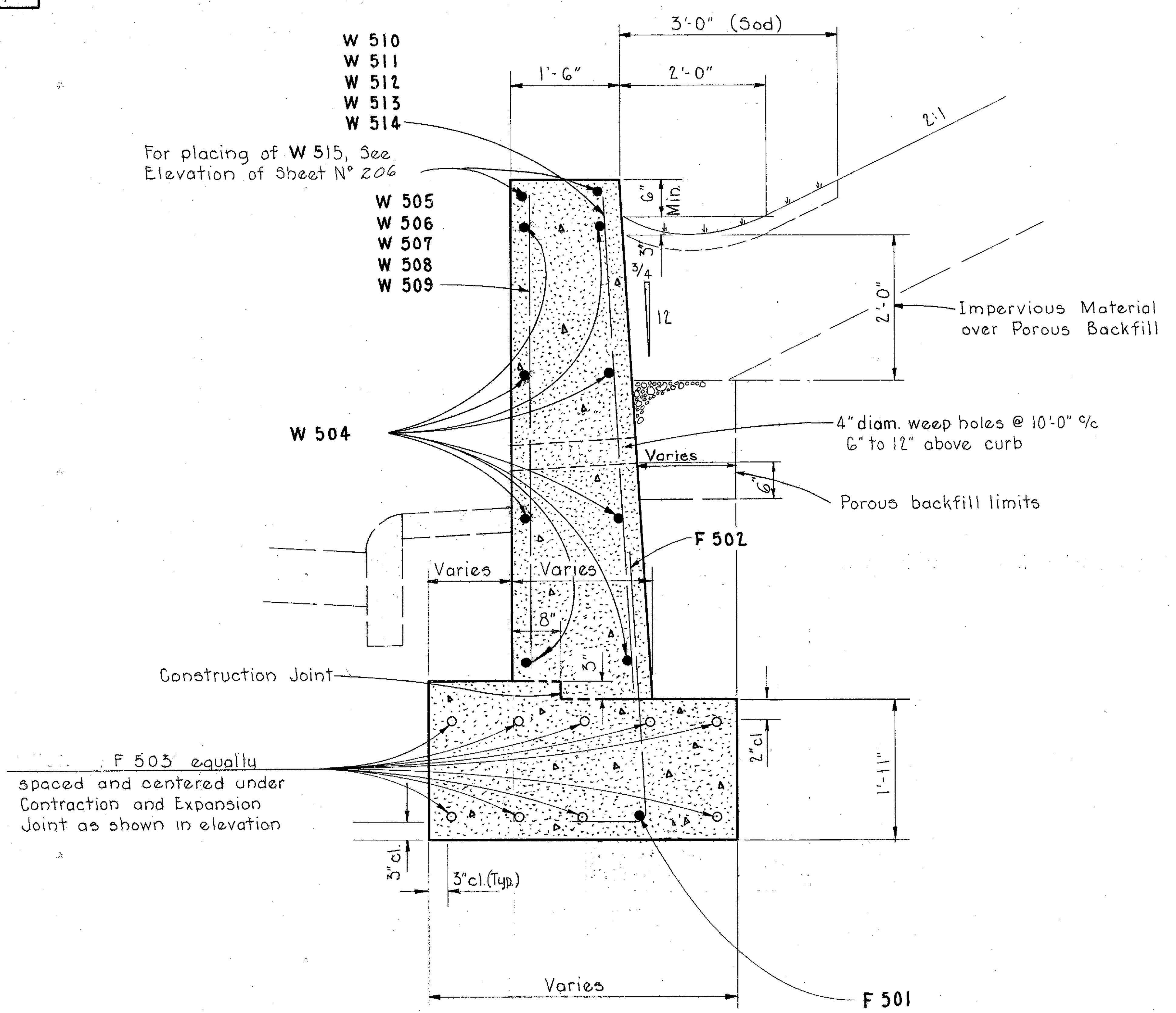
DETAIL OF RUSTICATION



DETAIL OF EXPANSION JOINT



DETAIL OF CONTRACTION JOINT



SECTION A-A

NOTE: For dimensions not shown see Plan and Elevations.

GENERAL NOTES:

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures," of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof.

BACKFILL: Backfill shall be impervious material, and porous backfill as shown by the limits in Section A-A. Excavation outside the unclassified excavation limits behind the wall and below the lower limit of the porous backfill shall be filled with impervious material.

FOUNDATION BEARING PRESSURE: Wall footings are designed for a maximum bearing pressure of 5 tons per square foot.

SURFACE FINISH OF CONCRETE: Walls shall recieve a rubbed surface finish.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL DETAILS, REINFORCING STEEL LIST & ESTIMATED QUANTITIES
LEFT OF ℄ CONSTRUCTION

JEFFERSON COUNTY STA. 705 + 25.26

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
C.W.S.	C.W.S.	A.M.M.	JPW	E. Roberts 6-8-59	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430 (14)	

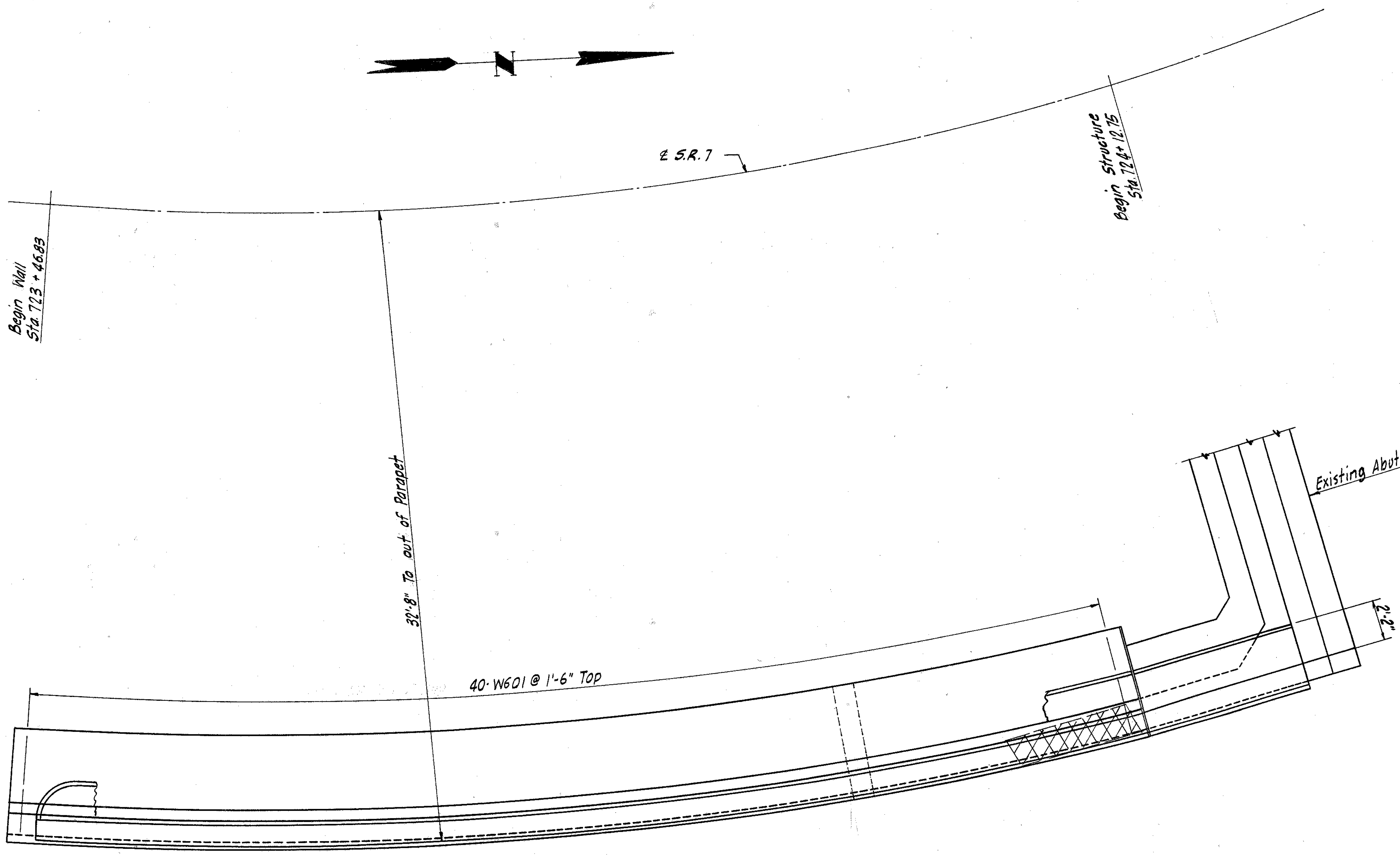
207A
307

JEFFERSON COUNTY
JEF-7-13.53

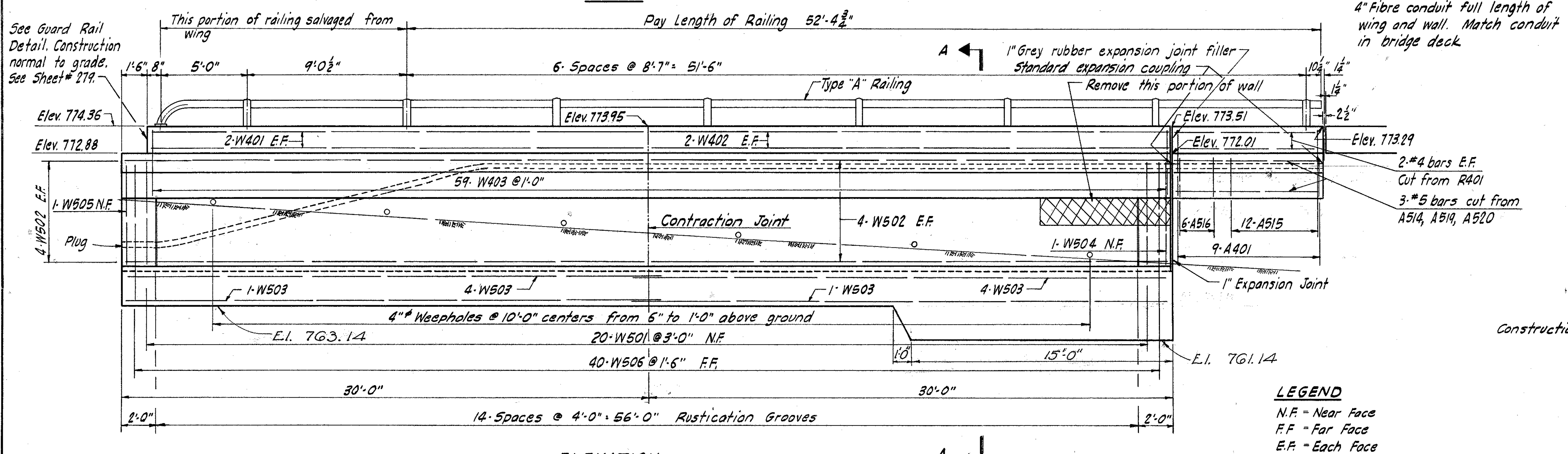
ESTIMATED QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION
E-2	86	Cu. Yds.	Excavation for structures, including rock
S-1	24	Cu. Yds.	Class "E" Concrete Walls
S-1	30	Cu. Yds.	Class "E" Concrete Footings
S-3	14	Lin. Ft.	Waterproofing, premolded sealing strip
S-4	2,065	Lbs.	Reinforcing Steel
S-9	9	Sq. Ft.	1" Preformed expansion joint filler (Grey Rubber, M-10.02)
S-14	52	Lin. Ft.	Railing (aluminum rail and supports and concrete parapet.)
S-25	63	Lin. Ft.	4" Fibre Conduit
S-29	31	Cu. Yds.	Porous Backfill
I-12	60	Lin. Ft.	Type 6 Curb
SPECIAL	80	Sq. Ft.	4" Concrete Slab
S-22	1	Cu. Yds.	Removal of portions of existing structure

REPLACEMENT BARS			
MARK	No	LENGTH	TYPE
RE 401	1	5'-3"	Str.
RE 501	1	5'-7"	Str.
RE 601	1	5'-11"	Str.

NOTES:
- DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof.
- REFERENCE: shall be made to Standard Drawings AR-1-57 (Revised 2-2-59) and to Standard Construction Drawing I-12 (Revised 7-1-54.)
- FOOTINGS shall extend a minimum of 3" into solid rock or shale or to the elevations shown, whichever is the lower. The Engineer shall inspect the entire area and insure that excavation goes to bedrock. Prolonged exposure to atmospheric conditions shall be averted. The excavations shall be kept drained at all times.
- FOUNDATION BEARING PRESSURE: Footings are designed for a maximum bearing pressure of 1.6 tons per square foot.
- For rustications grooves, and joint details see sheet # 212. For details of Abutment "A" not shown see Sheet # 279.
- CONCRETE: All wall concrete shall be Class "E". All parapet concrete shall be Class "C". * Parapet concrete and reinforcing steel shall be included with Item S-14 railing for payment. 4" concrete slab shall conform to the applicable provisions of Item I-13.

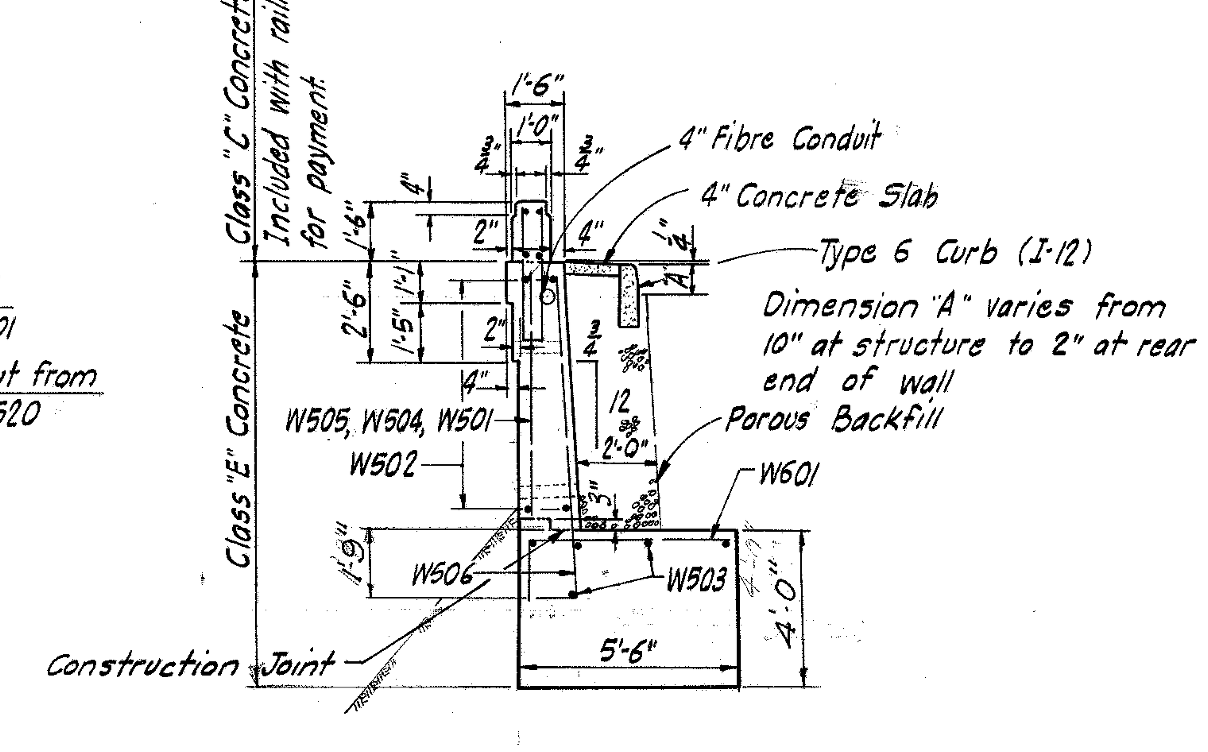


PLAN



ELEVATION

LEGEND
N.F. - Near Face
F.F. - Far Face
E.F. - Each Face



SECTION A-A

BAR SCHEDULE				
MARK	No	LENGTH	TYPE	WEIGHT
W401	4	28'-0"	Str.	*
W402	4	29'-6"	Str.	*
W403	59	7'-9"	1	305
W501	20	6'-3" to 7'-3"	Str.	141
W502	16	29'-6"	Str.	492
W503	10	30'-8"	Str.	320
W504	1	6'-3"	Str.	7
W505	1	7'-3"	Str.	8
W506	40	9'-0" to 10'-0"	2	396
W601	40	6'-7"	3	396
			TOTAL	2,065

This sheet added 10-25-61.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL DETAILS
REINFORCING STEEL LIST & ESTIMATED QUANTITIES
RIGHT OF ℄ CONSTRUCTION

JEFFERSON COUNTY — STA. 723 + 46.83

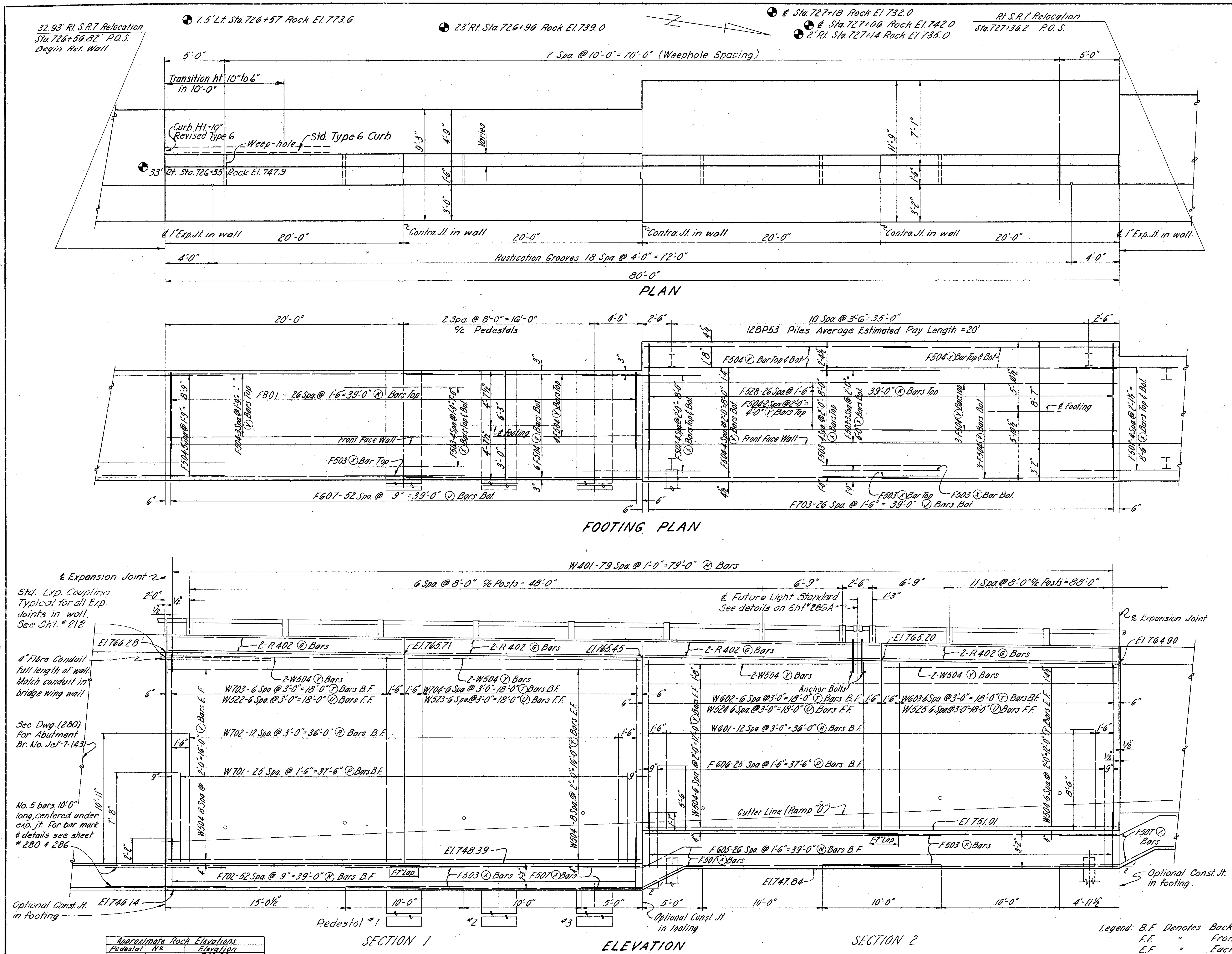
Designed	Drawn	Traced	Checked	Reviewed Date	Revised
E.F.R.	E.F.R.	M.M.	KAE	E. Roberts 9-6-61	

5337-3-1F

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

208
307

JEFFERSON COUNTY
JEF-7-13.56



Approximate Rock Elevations	
Pedestal No.	Elevation
1	743.00
2	742.00
3	741.00

GENERAL NOTES:

DESIGN SPECIFICATIONS; This structure conforms to the requirements of the "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof.
REFERENCE shall be made to Standard Drawing AR-1-57 Revised 2-2-59.

FOOTINGS; Spread footings, from Sta. 729+75.9 to Sta. 730+55.91 are designed for a maximum bearing pressure of 1.8 tons per square foot. Pedestals, from Sta. 726+56.82 to Sta. 727+36.2 are designed for a maximum bearing pressure of 6.0 tons per square foot. The excavation shall be kept drained at all times. Prolonged exposure to atmospheric conditions shall be averted.

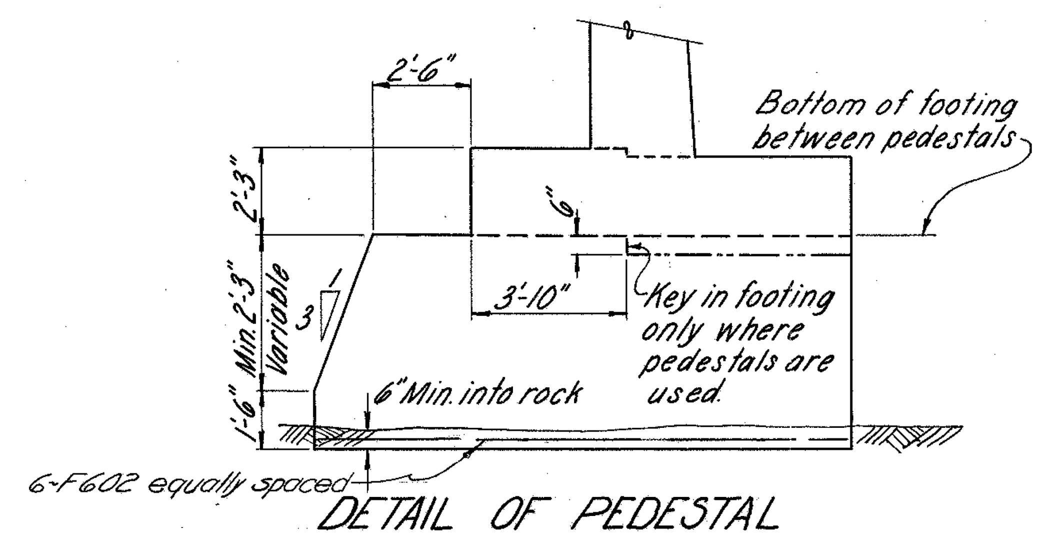
SURFACE FINISH OF CONCRETE; Exposed surfaces of walls to 6" below finished ground line, shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.

CONCRETE; The concrete for the key at the bottom of the footing shall be placed in a carefully made trench against undisturbed earth, and placed monolithically with the footing. Backfill shall be impervious material and porous backfill within the limits shown, and shall extend for the full length of the structure. All retaining wall concrete shall be Class "E".

PARAPETS; Concrete and reinforcing steel shall be included with Item S-14, Railing for payment. Concrete shall be Class "C". Refer to Std. Drawing AR-1-57 (Revised 2-2-55)

COFFER DAMS, CRIBS, AND SHEETING; The contractor shall furnish sufficient cofferdams, cribs and sheeting to protect S.R. 7 and Ramp "D" traffic and construction as directed by the engineer.

PILES; Piles shall be driven to firm contact with shale or rock. If the length of penetration is approximately equal to the depth to shale or rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. S-18.05 is not less than the following value for a pile hammer at the indicated energy rating:
Section 2, 3, & 5, 60 tons per pile using an 11,000 ft. lb. hammer.
Section 2, 3, & 5, 50 tons per pile using a 15,000 ft. lb. or greater hammer.
Section 4, 57 tons per pile using an 11,000 ft. lb. hammer.
Section 4, 47 tons per pile using a 15,000 ft. lb. or greater hammer.
Section 6, 80 tons per pile using an 11,000 ft. lb. hammer.
Section 6, 65 tons per pile using a 15,000 ft. lb. or greater hammer.
Section 7, 44 tons per pile using a 7,000 ft. lb. hammer.
Section 7, 37 tons per pile using an 11,000 ft. lb. hammer.
Section 7, 35 tons per pile using a 15,000 ft. lb. or greater hammer.
If the energy rating of the hammer is between the rating as shown above, the required formula capacity shall be determined by interpolation.
The design loads are 25 Tons per pile.



DETAIL OF PEDESTAL

Legend: B.F. Denotes Back Face
F.F. " Front Face
E.F. " Each Face
● " Foundation Soundings

NOTE: All horizontal dimensions to be made at face of wall.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL
PLAN & ELEVATION
RT. OF ℄ CONSTRUCTION

JEFFERSON COUNTY STA. 726+56.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.G.	C.M.	C.M.	JPW	E. Roberts 6-5-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(14)	

JEFFERSON COUNTY
JEFF-7-13.53

Legend: B.F. Denotes Back Face
F.F. " Front Face
E.F. " Each Face
" Foundation Soundings

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL
PLAN AND ELEVATION
RIGHT OF ℄ CONSTRUCTION

JEFFERSON COUNTY STA. 726+56.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
B.S. G.G.	C.M.	C.M.	B.S. G.G.	E. Roberts 6-5-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

210
307

JEFFERSON COUNTY
JEFF-7-13.53

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL
PLAN AND ELEVATION
RIGHT OF ℄ CONSTRUCTION

JEFFERSON COUNTY STA. 726+56.82

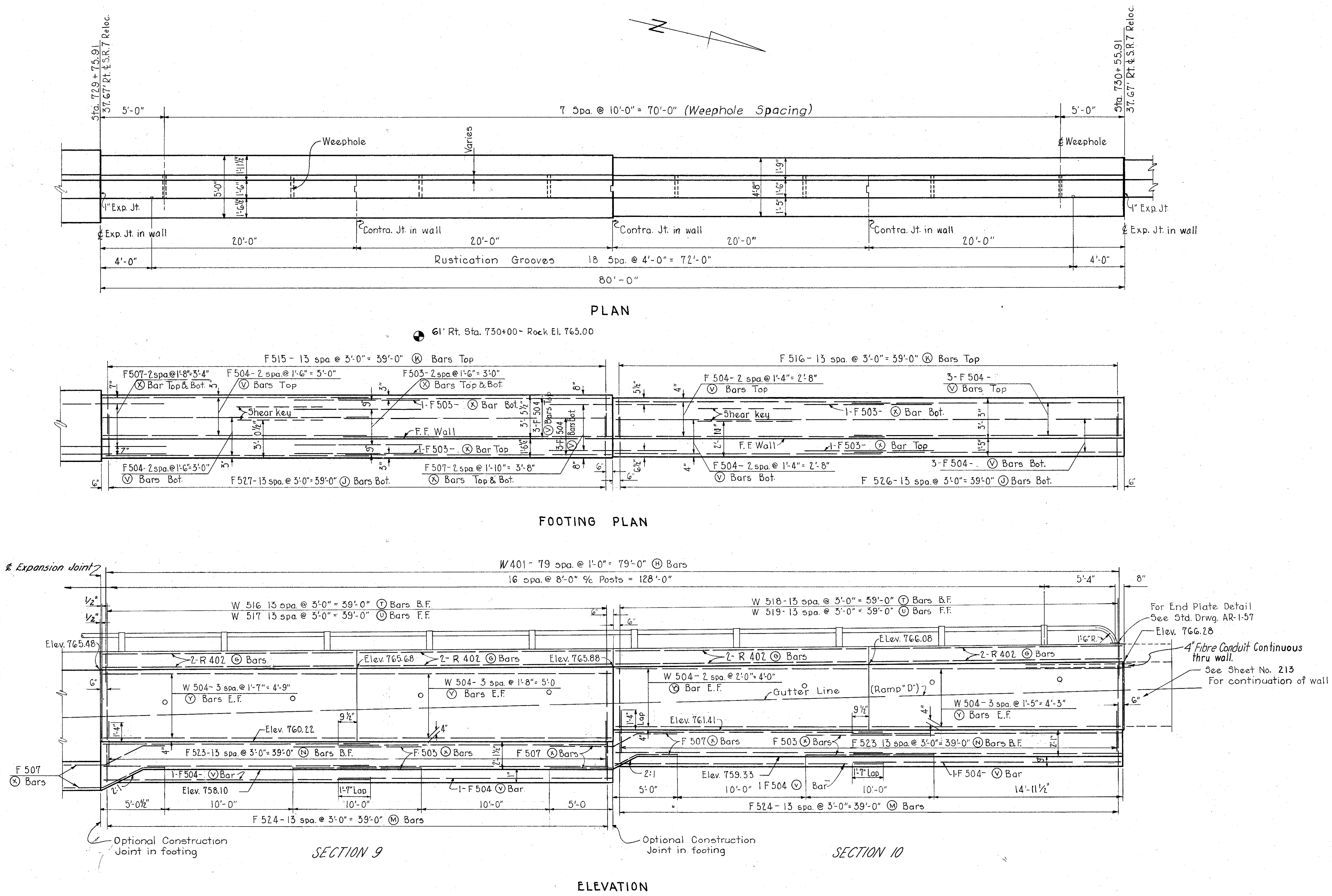
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
B.S. G.G.	B.S.	C.M.	G.G. B.S.	E. Roberts 6-6-59	

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27066

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

211
307

JEFFERSON COUNTY
JEF-7-13.53



LEGEND

B.F. Denotes Back Face
F.F. Denotes Front Face
E.F. Denotes Each Face
● Denotes Boring Location

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL
PLAN AND ELEVATION
RIGHT OF ℄ CONSTRUCTION

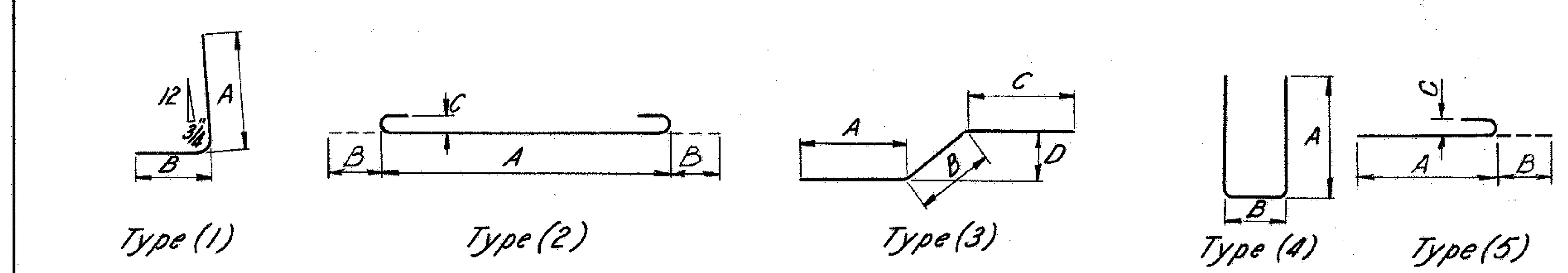
JEFFERSON COUNTY STA. 726+56.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
B.S./O.G.	C.M.	A.M.	G.G. B.S.	E. Roberts 6-6-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	
2	OHIO	U-430(14)		212 / 307

JEFFERSON COUNTY
JEF-7-13.53

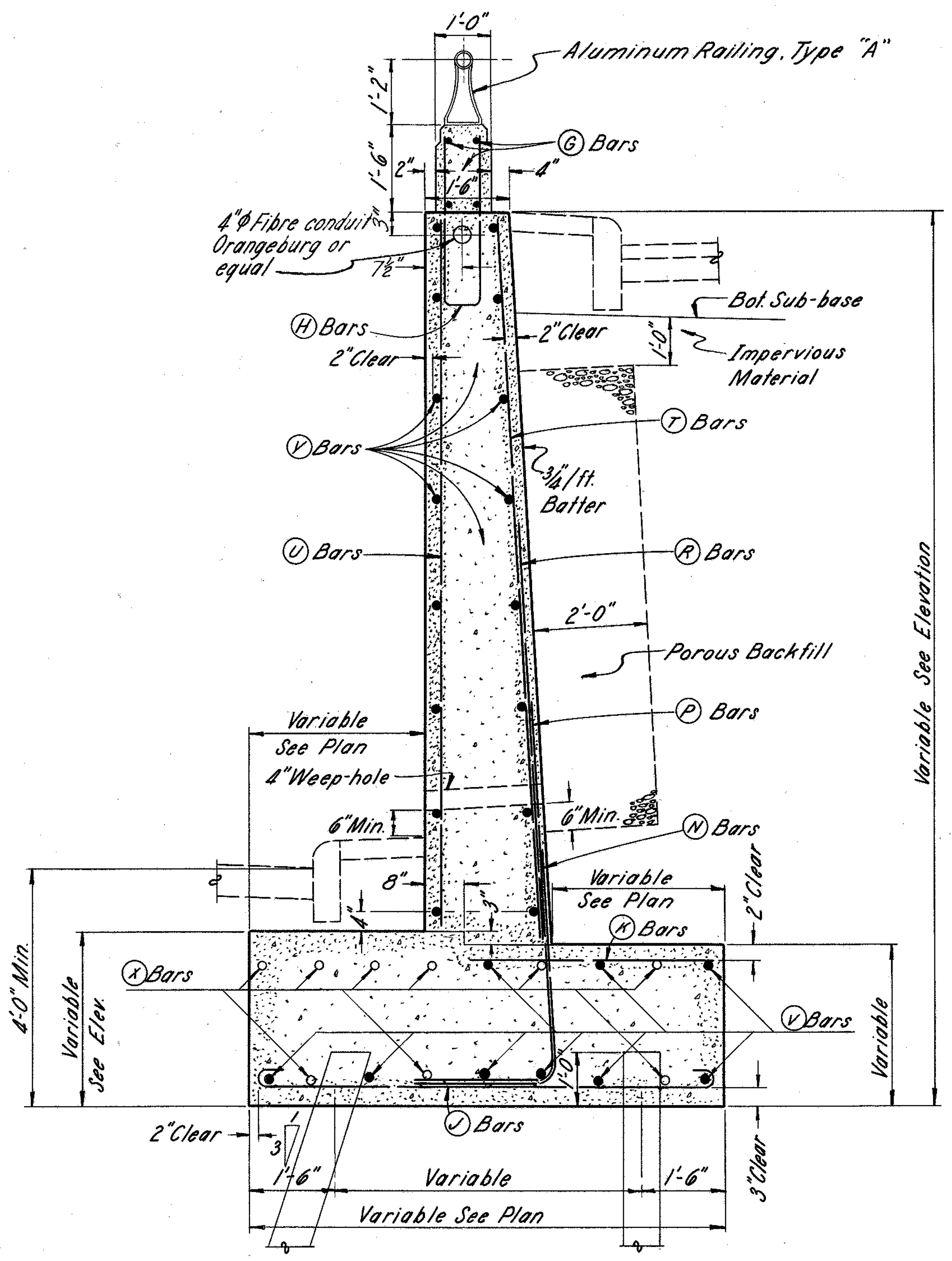
BAR SCHEDULE



Note : All dimensions are out to out

MARK	NO.	SIZE	LENGTH	TYPE	A	B	C	D	WEIGHT
W501	9	5	12'-10"	Str.					120
W502	7	5	12'-7"	"					92
W503	17	5	7'-6"	"					133
W504	242	5	19'-4"	"					4,879
W505	14	5	11'-2"	"					163
W506	14	5	10'-10"	"					158
W507	13	5	6'-4"	"					86
W508	18	5	9'-11"	"					186
W509	14	5	9'-8"	"					141
W510	14	5	8'-8"	"					127
W511	14	5	8'-5"	"					123
W512	14	5	7'-8"	"					112
W513	14	5	7'-5"	"					108
W514	14	5	6'-6"	"					95
W515	14	5	6'-3"	"					91
W516	14	5	5'-8"	"					83
W517	14	5	5'-5"	"					80
W518	14	5	4'-7"	"					67
W519	14	5	4'-4"	"					63
W520	9	5	12'-6"	"					117
W521	7	5	12'-3"	"					89
W522	1-Set of 7 bars	5	17'-2" ~ 17'-8"	Str.	Varies	by 1"	increments		127
W523	7	5	16'-11"	"					124
W524	7	5	14'-0"	"					102
W525	7	5	13'-9"	"					100
W601	13	6	8'-9"	"					171
W602	7	6	14'-2"	"					149
W603	7	6	14'-0"	"					147
W701	26	7	7'-11"	"					422
W702	13	7	11'-2"	Str.					297
W703	1-Set of 7 bars	7	17'-5" ~ 17'-11"	"	Varies	by 1"	increments		253
W704	7	7	17'-2"	"					246
F501	34	5	9'-1"	1	7'-8"	1'-7"			321
F502	35	5	5'-7"	1	4'-2"	1'-7"			204
F503	83	5	10'-0"	Str.					866
F504	168	5	20'-6"	"					3592
F505	26	5	7'-6"	1	6'-1"	1'-7"			203
F506	27	5	5'-6"	1	4'-1"	1'-7"			155
F507	80	5	10'-4"	3	5'-0"	3'-0"	2'-4"	1'-4"	862
F508	17	5	7'-9"	1	6'-4"	1'-7"			139
F509	18	5	5'-3"	1	3'-10"	1'-7"			99
F510	27	5	10'-3"	2	9'-1"	7"	5¼"		289
F511	19	5	5'-4"	Str.					106
F512	13	5	7'-1"	1	5'-8"	1'-7"			96
F513	42	5	4'-9"	1	3'-4"	1'-7"			208
F514	13	5	6'-2"	1	4'-9"	1'-7"			84
F515	14	5	3'-6"	Str.					51
F516	14	5	3'-3"	"					48
F517	14	5	4'-5"	"					64
F518	14	5	7'-6"	2	6'-4"	7"	5¼"		110
F519	14	5	4'-4"	Str.					63
F520	14	5	7'-2"	2	6'-0"	7"	5¼"		105
F521	14	5	3'-7"	Str.					52
F522	14	5	4'-0"	"					58
F523	28	5	4'-6"	"	3'-1"	1'-7"			131
F524	42	5	3'-0"	5	2'-5"	7"	5¼"		131
F526	14	5	3'-1"	Str.					45
F527	14	5	3'-4"	"					49
F528	27	5	8'-7"	"					242
F601	35	6	11'-5"	2	10'-1"	8"	6"		600
F602	49	6	8'-2"	Str.					601
F603	14	6	7'-2"	"					151
F604	19	6	9'-1"	2	7'-9"	8"	6"		259
F605	27	6	6'-3"	1	4'-6"	1'-11"			254
F606	26	6	10'-2"	1	8'-5"	1'-11"			414
F607	53	6	10'-2"	2	8'-10"	8"	6"		810
F801	27	7	6'-3"	Str.					451
F702	53	7	6'-2"	1	4'-2"	2'-2"			670
F703	27	7	13'-1"	2	11'-5"	10"	6¾		723
W401	424	4	5'-9"	4	2'-8"	6½"			1629
R402	84	4	19'-8"	Str.	Included with railing for payment				

Total
24,186



TYPICAL SECTION (With Piling)
STA. 726+56.82 to STA. 729+35.91

Note: See Footing Plan and Elevation for actual location and spacing of any reinforcing bars.

REPLACEMENT BARS					
MARK	NO.	SIZE	LENGTH	TYPE	
RE401	1	4	5'-3"	Str.	
RE501	1	5	5'-7"	"	
RE601	1	6	5'-11"	"	
RE701	1	7	6'-3"	"	

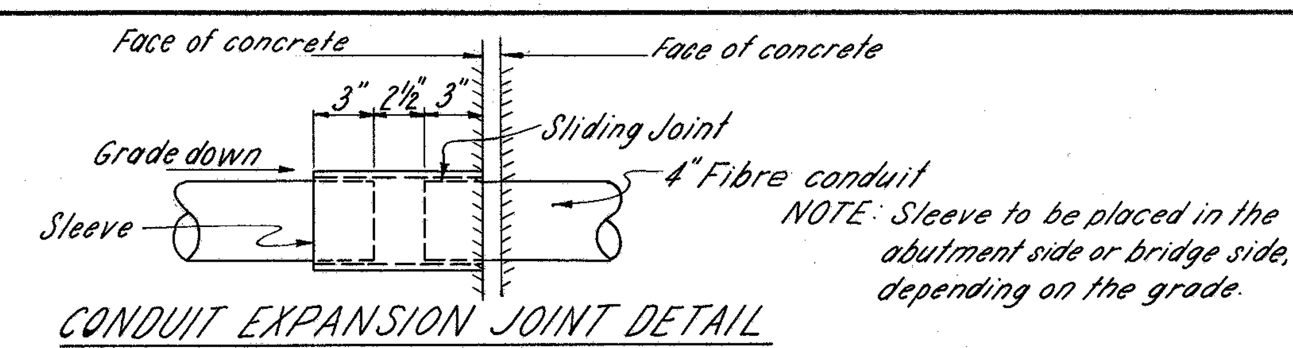
REPLACEMENT BARS

If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy. Testing Laboratory, test sample as provided in section S-402 need not be furnished and replacement bars will not be required.

BAR SIZE

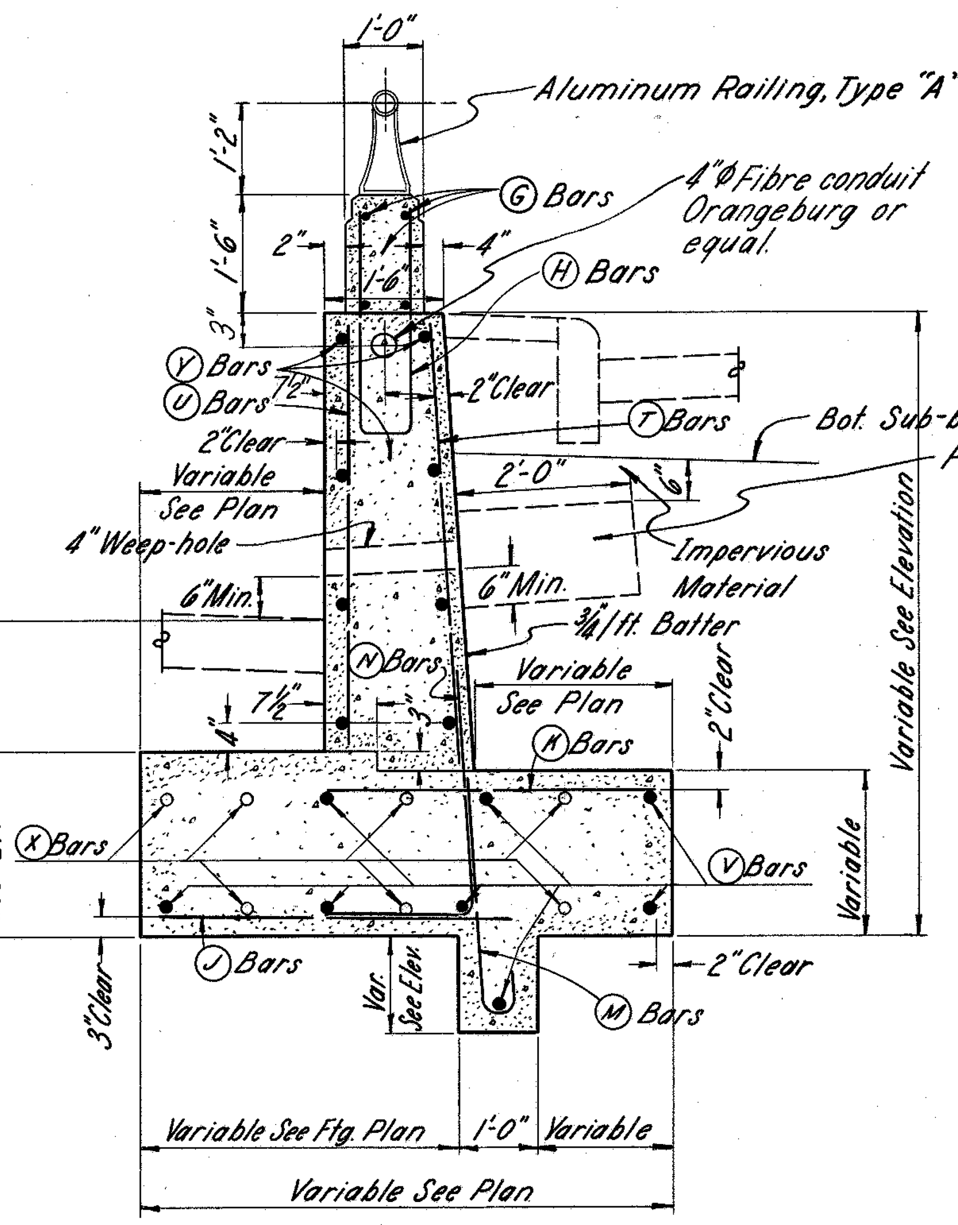
Bar size is indicated in the barmark. The first digit where three digits are used, indicates the bar size number. For example, a 501 is a no. 5 bar.

ESTIMATED QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION
E-2	Lump	Sum	Cofferdams, Cribs, & Sheeting
E-2	1,047	C.Y.	Excavation for Structures Including Rock
S-1	271	C.Y.	Class "E" Concrete - Wall
S-1	329	C.Y.	Class "E" Concrete - Footings
S-3	214	L.F.	Waterproofing Premolded Sealing Strip
S-4	24,186	Lbs.	Reinforcing Steel
S-9	112	S.F.	1" Preformed Expansion Joint Filler (Gray Rubber, M-10.02)
S-14	400	L.F.	Railing (Aluminum Rail and Supports
			and Concrete Parapet.
S-16	Lump	Sum	First Test Pile
S-18	1570	L.F.	Steel Piles 12 BP53
S-25	400	L.F.	4" Fibre Conduit
S-25	Lump	Sum	Electrical Lighting System (Junction Boxes,
			Anchor Bolts, Electrical Grounds & Steel Conduit)
S-29	165	C.Y.	Porous Backfill

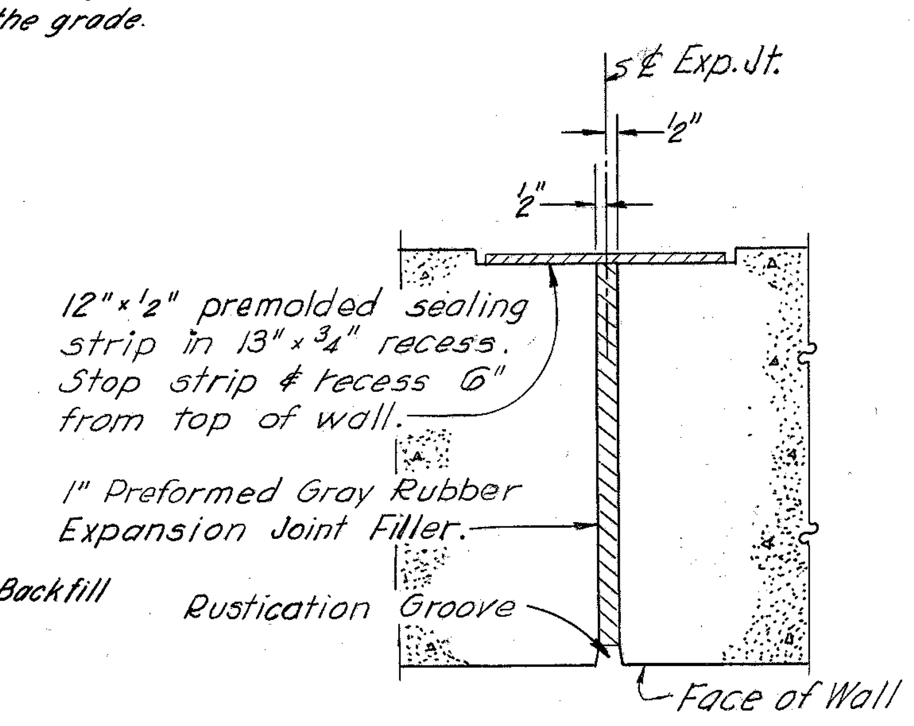


NOTE: Sleeve to be placed in the abutment side or bridge side, depending on the grade.

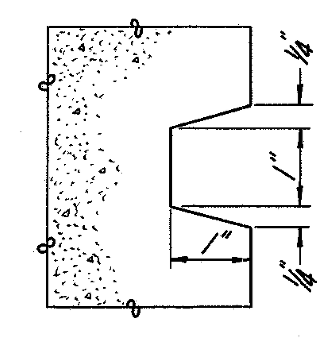
CONDUIT EXPANSION JOINT DETAIL
TYPICAL OF ALL EXP. JOINTS



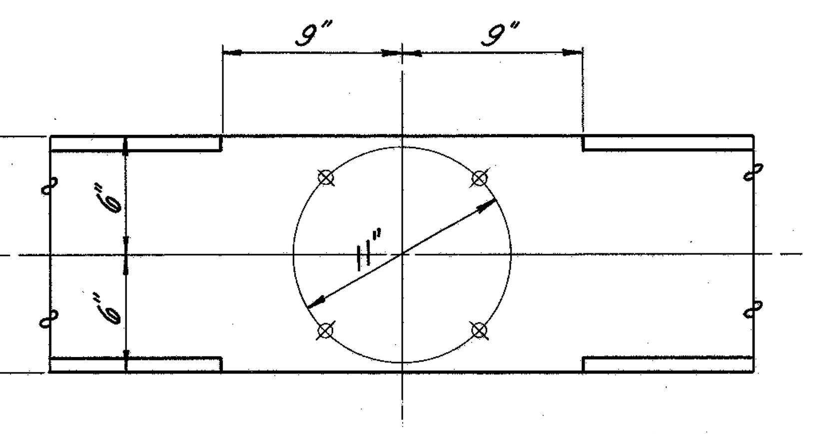
TYPICAL SECTION (Without Piling)
STA. 729+35.91 to STA. 730+55.91



EXPANSION JOINT

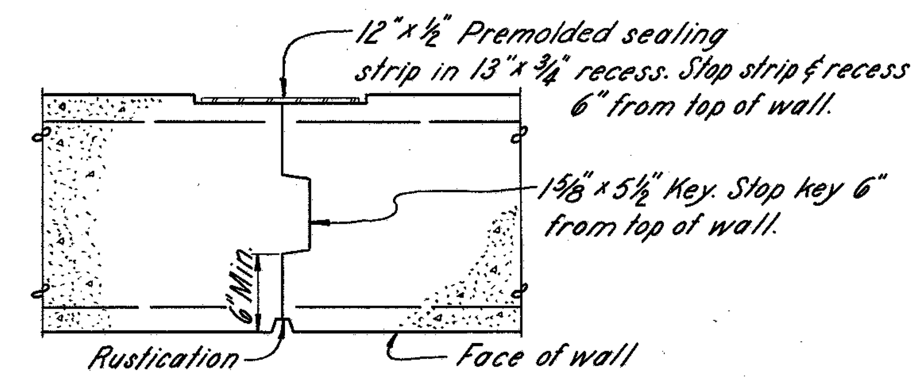


RUSTICATION

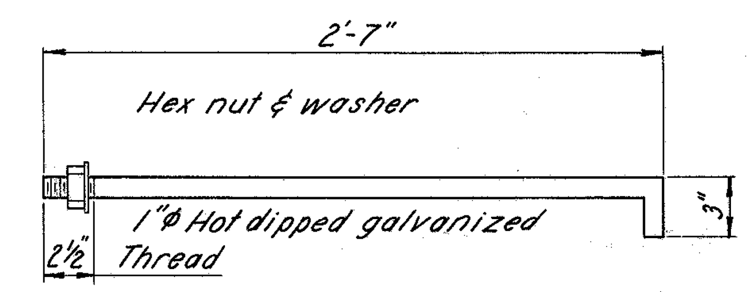


ANCHOR BOLT LAYOUT

Note: Project bolt 3" above concrete.



CONTRACTION JOINT



LIGHT STANDARD
ANCHOR BOLT
4 PER STANDARD

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL DETAILS
REINFORCING STEEL LIST
& ESTIMATED QUANTITIES
RIGHT OF ℄ CONSTRUCTION

JEFFERSON COUNTY STA. 726+56.82

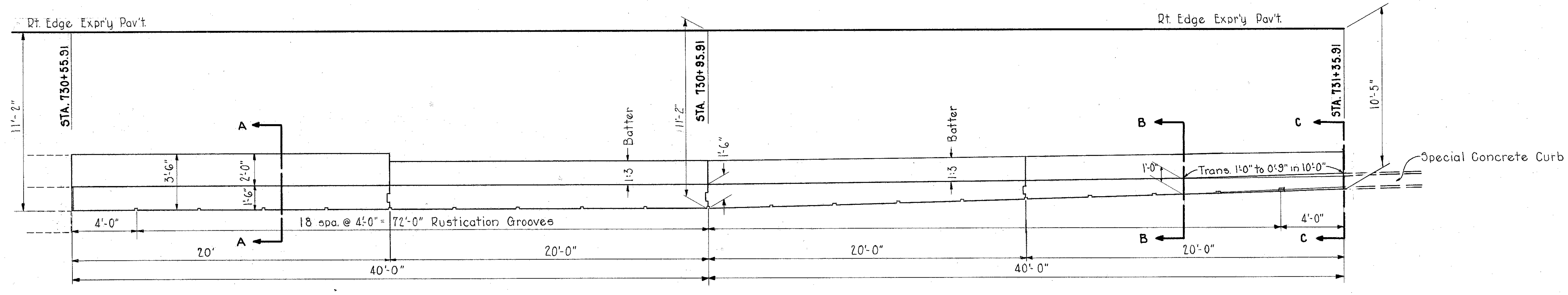
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
B.S. G.G.	C.M.	C.M.	G.G. B.S.	E. Roberts 6-6-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

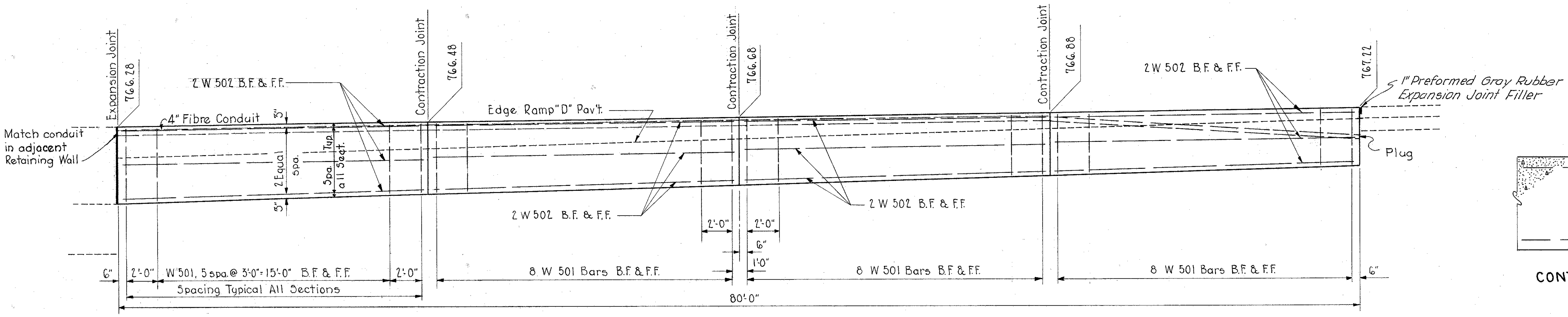
213
307

JEFFERSON COUNTY
JEF-7-13.53

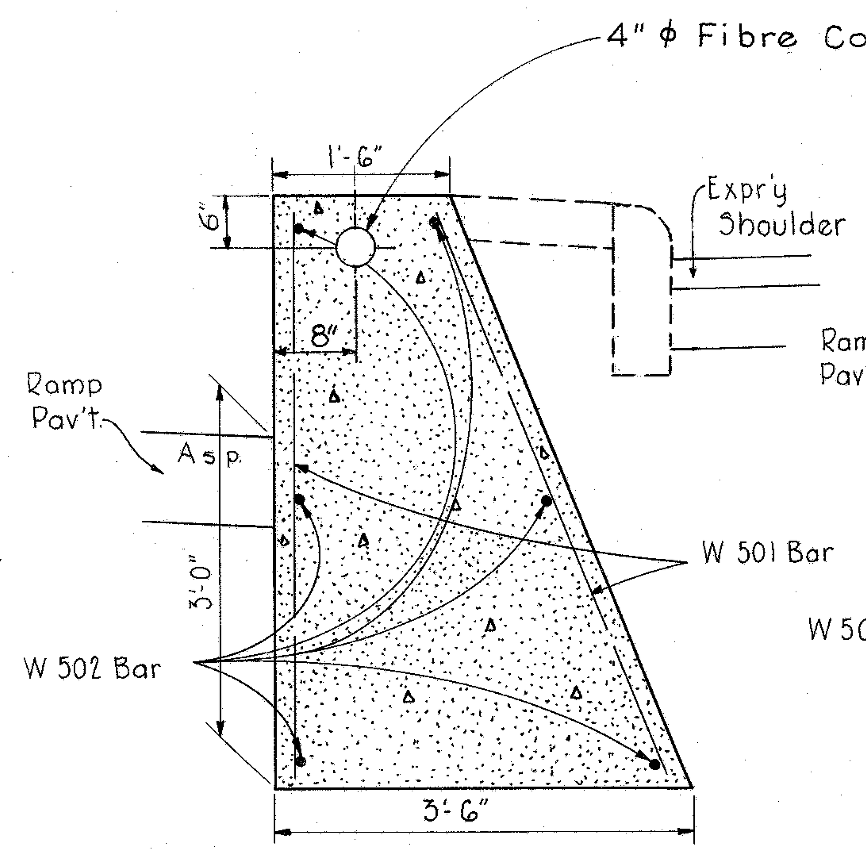
Reinforcing Steel Bar Schedule						
Mark	Total	Size	Length	Type		Weight
W 501	64	5	4'-5" to 3'-8"	Str.	4 sets of 16 bars Vary by 3" increment	270 lbs
W 502	24	5	19'-6"	Str.		489 lbs
					Total	759 lbs



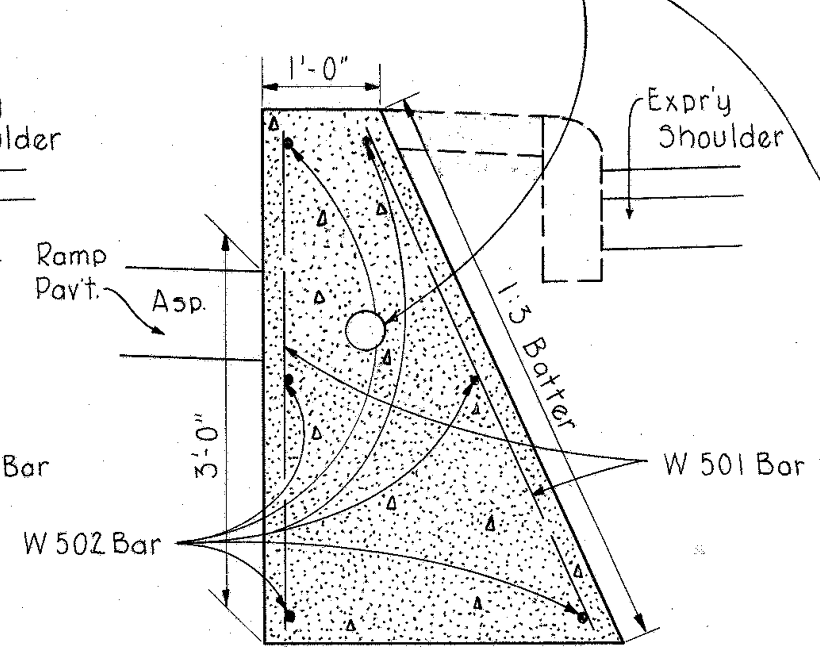
PLAN



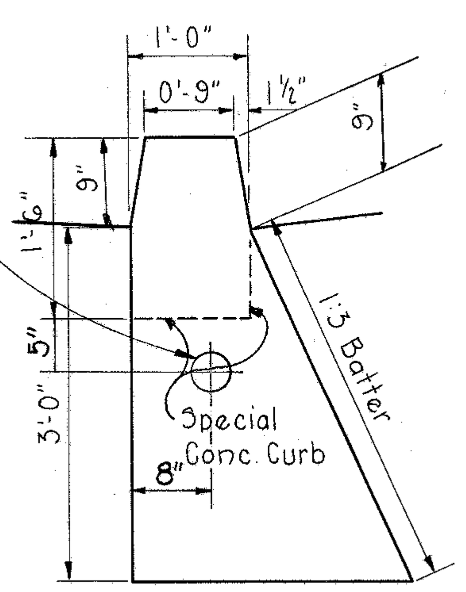
ELEVATION



SECTION A-A



SECTION B-B



VIEW C-C

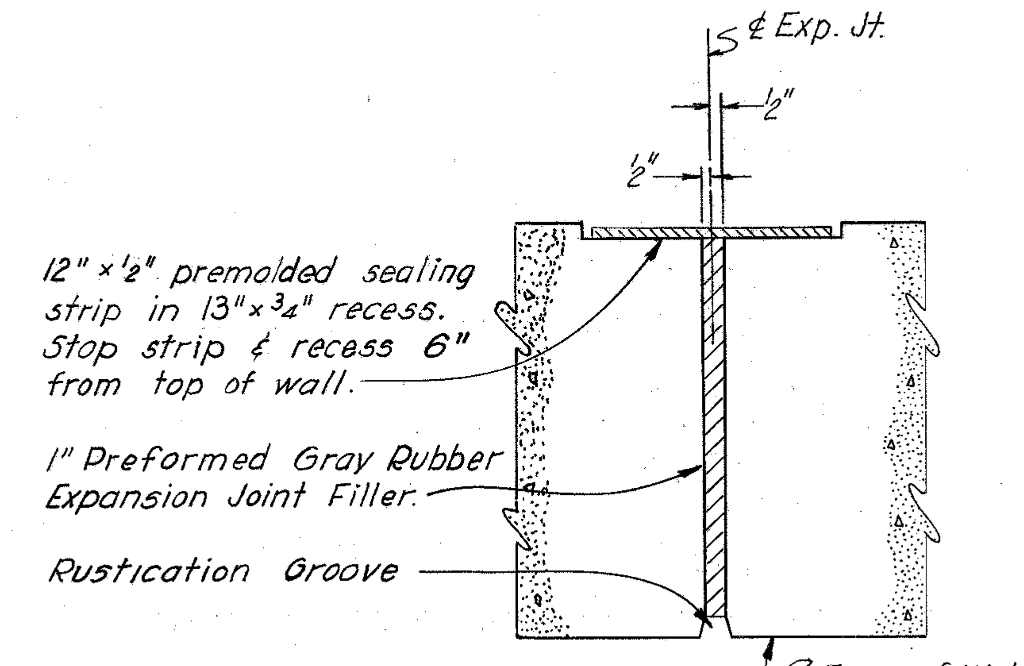
REPLACEMENT BARS					
MARK	NO.	SIZE	LENGTH	TYPE	WEIGHT
RE501	1	5	5'-7"	str.	

REPLACEMENT BARS

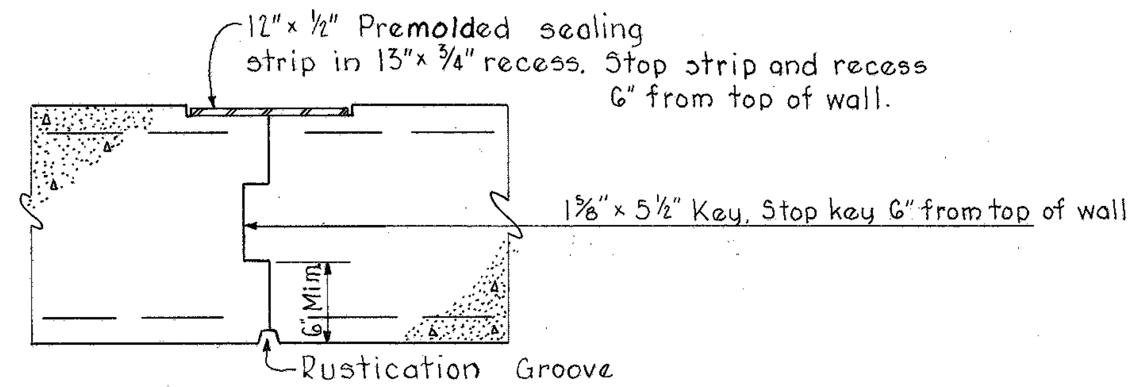
If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy. Testing Laboratory, test sample as provided in Section S-402 need not be furnished and replacement bars will not be required.

BAR SIZE

Bar size is indicated in the barmark. The first digit where three are used and the first two where four are used, indicates the bar size number. For example, A401 is a number 4 bar and A1114 is a number 11 size bar.

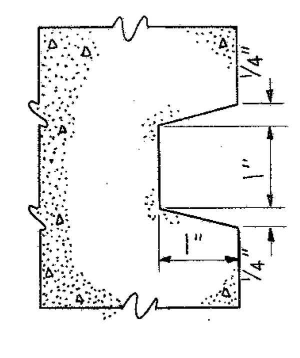


EXPANSION JOINT



CONTRACTION JOINT

ESTIMATED QUANTITIES			
Item	Total	Unit	Description
E-2	45	C.Y.	Excavation for Structures
S-1	27	C.Y.	Class "E" Concrete, Wall
S-3	16	L.F.	Waterproofing, Premolded Sealing Strip
S-4	759	Lbs.	Reinforcing Steel
S-9	8	S.F.	1" Preformed Expansion Joint Filler
			(Gray Rubber, M-10.02)
S-25	80	L.F.	4" Fibre Conduit



RUSTICATION GROOVE

GENERAL NOTES

DESIGN SPECIFICATIONS: This structure conforms to the requirements of the "Design Specifications for Highway Structures" of the STATE OF OHIO, Department of Highways, Dated 9-1-57, together with current revisions thereof.

FOUNDATION BEARING PRESSURE: Spread footings are designed for a maximum bearing pressure of 0.82 tons per square foot.

Special care shall be exercised by the Contractor in order that backfill in front of the retaining wall shall be made simultaneously with the backfill behind it. A greater height differential than 2' shall not be allowed.

B.F. = Back face
F.F. = Front face

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

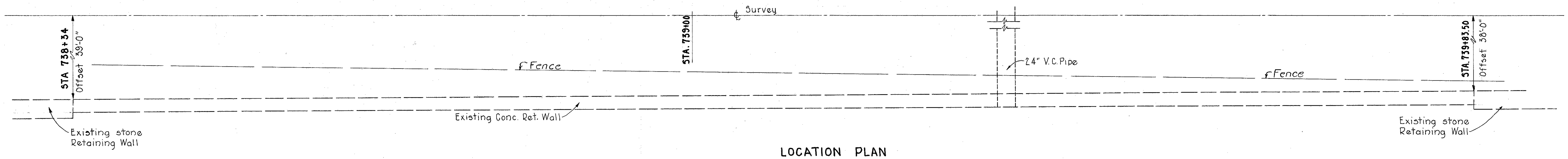
RETAINING WALL
PLAN, ELEVATION & DETAILS
STA. 730+55.91 thru STA. 731+35.91
JEFFERSON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
B.S.	A.M.M.	A.M.M.	G.G.	E. Roberts 6-6-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U 430 (14)	

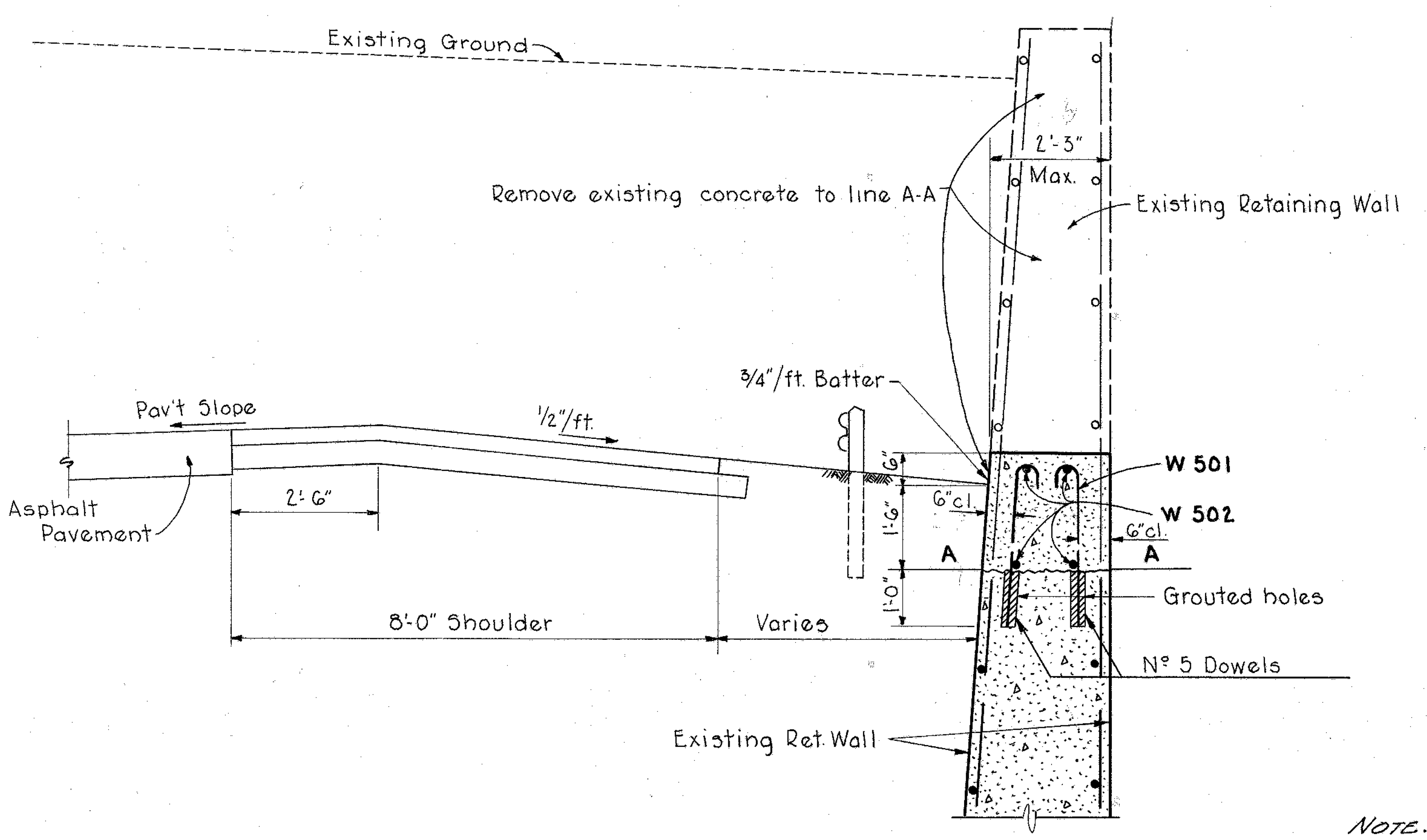
214
307

JEFFERSON COUNTY
JEF-7-13.53



LOCATION PLAN

ELEVATION



TYPICAL SECTION

REPLACEMENT BARS					
MARK	NO.	SIZE	LENGTH	TYPE	WEIGHT
RE501	1	5	5'-7"	str.	

REINFORCING STEEL BAR SCHEDULE

MARK	TOTAL	SIZE	LENGTH	a	b	c	WEIGHT
W 501	200	5	3'-5"	2'-10"	7"	5¼"	713
W 502	24	5	26'-5"				662
						Total	1,375

NOTE: All bar dimensions are out to out.

NOTES:

If upon removing concrete from existing retaining wall, reinforcing bars are found in each wall face, these bars, if so directed by the Engineer, shall be utilized by cutting 2" below finished grade of wall and left in place within the finished cap. In no case will the longitudinal spacing of vertical bars be less than 1'-6"

Vertical Joints of the type contained in the existing wall shall be constructed in the cap and shall be placed identically with such existing joints to form a continuous vertical line

BAR SIZE
Bar size is indicated in the barmark. The first digit where three digits are used and the first two where four are used, indicates the bars size number. For example, A401 is a number 4 bar and A1114 is a number 11 size bar.

REPLACEMENT BARS
If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy. Testing Laboratory, test sample as provided in Section S-402 need not be furnished and replacement bars will not be required.

ESTIMATED QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION
S-1	26	C.Y.	Class "E" Concrete, Wall
S-4	1,375	lbs.	Reinforcing Steel
S-22	Lump	Sum	Removal of Portions of Existing
			Structure, as per plan
S-23	200	Ea.	Dowel Holes

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL MODIFICATION
PLAN, ELEVATION & DETAILS

STA. 738+34 thru STA. 739+83.50
JEFFERSON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
B.S.	D.B.	A.M.M.	G.G.	E.Roberts 6-6-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	
2	OHIO	U 430 (14)		215/307

JEFFERSON COUNTY
JEF-7-13.53

GENERAL NOTES

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

FOUNDATION BEARING PRESSURE: Footings are designed for a maximum bearing pressure of 4.2 tons per sq. ft.

SURFACE FINISH OF CONCRETE: Exposed area of front face of wall shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.

CONCRETE: All concrete shall be Class "E".

EXCAVATION AND PLACING OF FOOTING CONCRETE: The rock excavation shall be made to the neat outlines of the footings and the footing concrete shall be placed in direct contact with the undisturbed rock. In case of over-excavation of rock the excavation shall be finished to neat vertical and horizontal surfaces and filled with Class "E" Concrete (at the Contractors own expense) to form neat outlines of the footing, after which the footing concrete shall be placed.

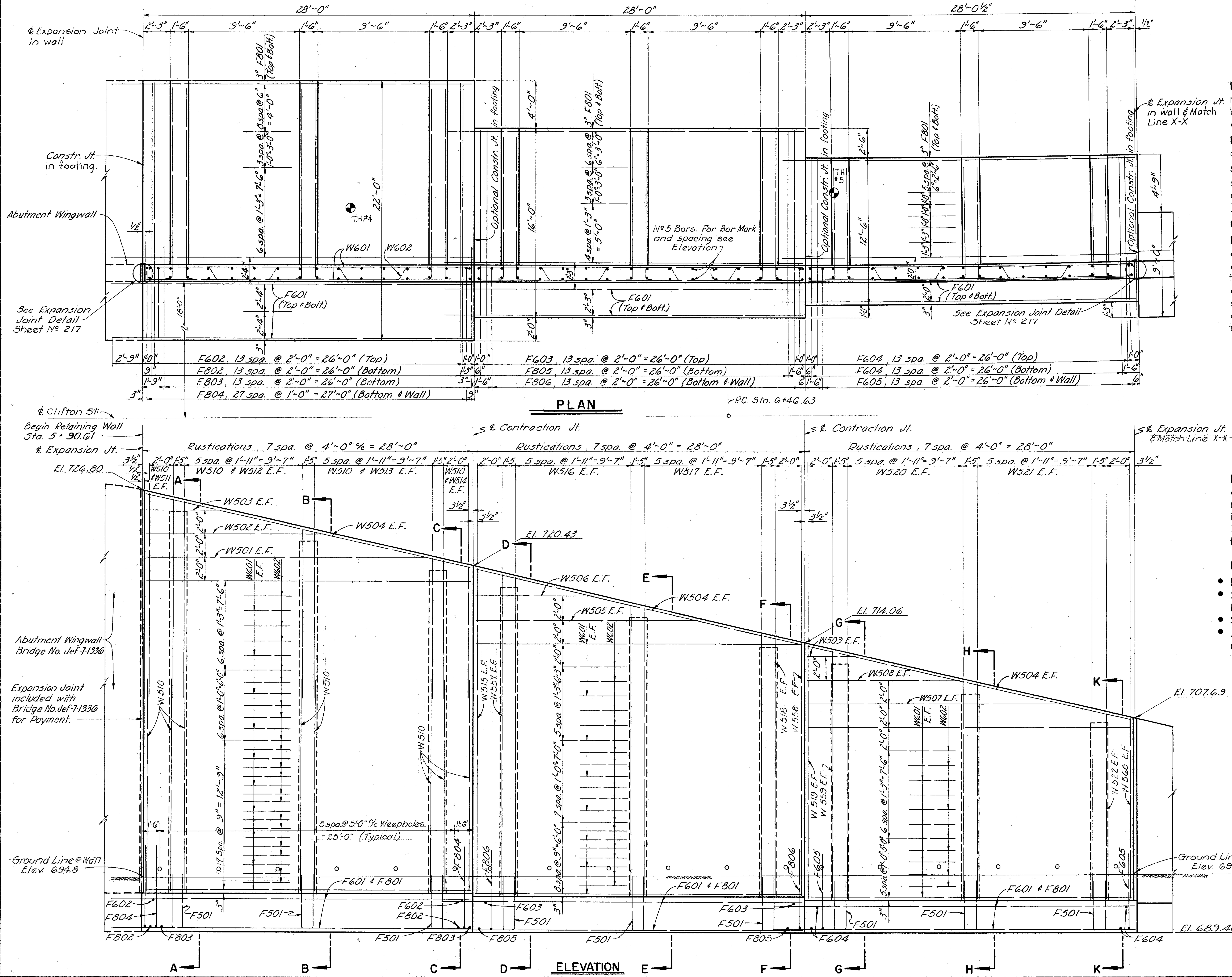
BORING LOCATIONS AND ROCK ELEVATIONS			
BORING NO.	S.R. 7 STA.	OFFSET	ROCK ELEV.
T.H.# 4	681+80	45' Rt.	696.0
T.H. #5	682+14	67' Rt.	694.0
T.H. #6	682+47	90' Rt.	692.6
T.H. #7	682+80	112' Rt.	692.7

⊕ Indicates boring location

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of borings and soil-samplings made at the site. The sounding information may be inspected in the office of the Bureau of Bridges in Columbus, or in the Division office, but the State assumes no responsibility for the accuracy thereof.

NOTES:

- E.F. indicates each face
- See sheet no. 216 for Contraction Joint Detail and Rustication Groove Detail
- See sheet no. 217 for Sections A-A thru K-K
- All horizontal dimensions are along front face of wall or normal to ℄ Clifton St.



MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL PLAN & ELEVATION

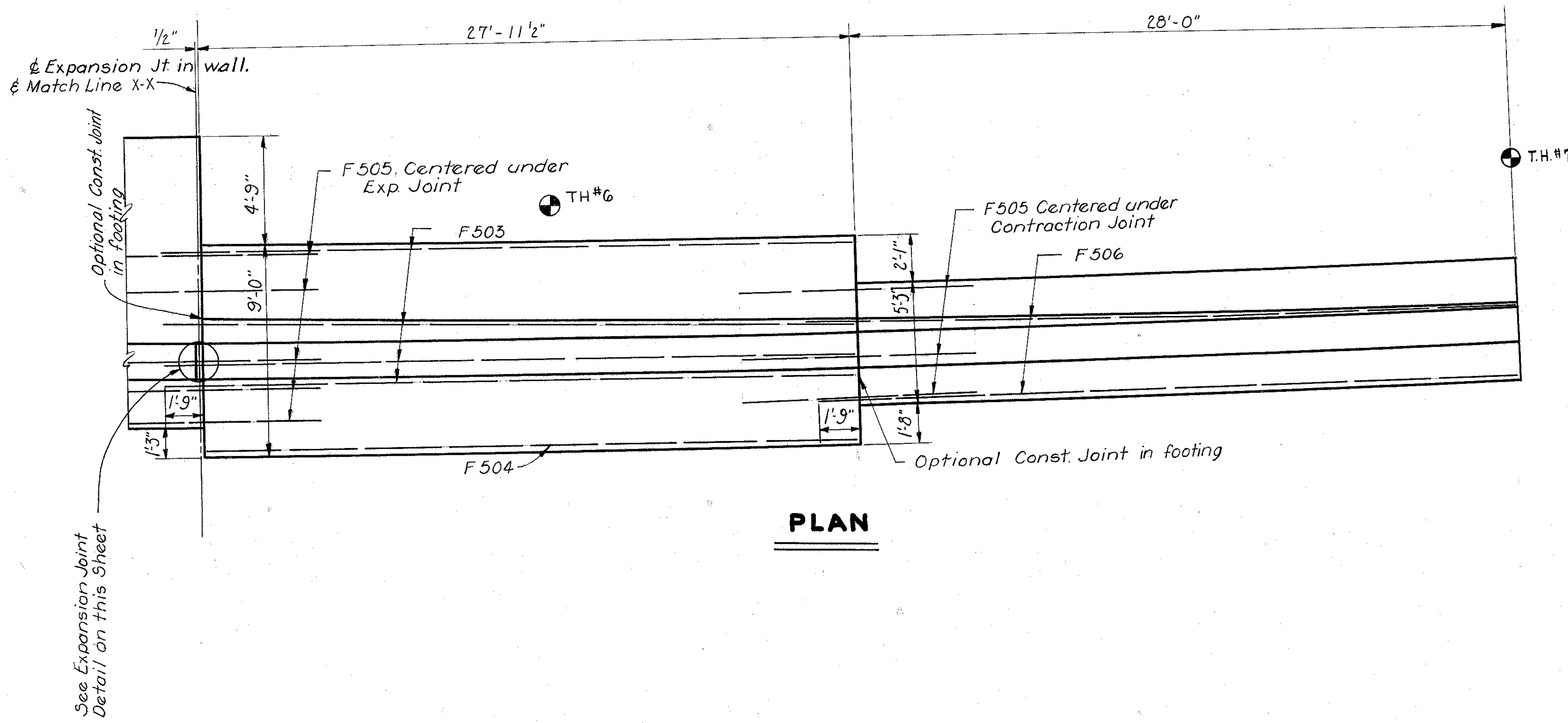
LEFT OF ℄ CONSTRUCTION CLIFTON STREET

JEFFERSON COUNTY STA. 5+90.61

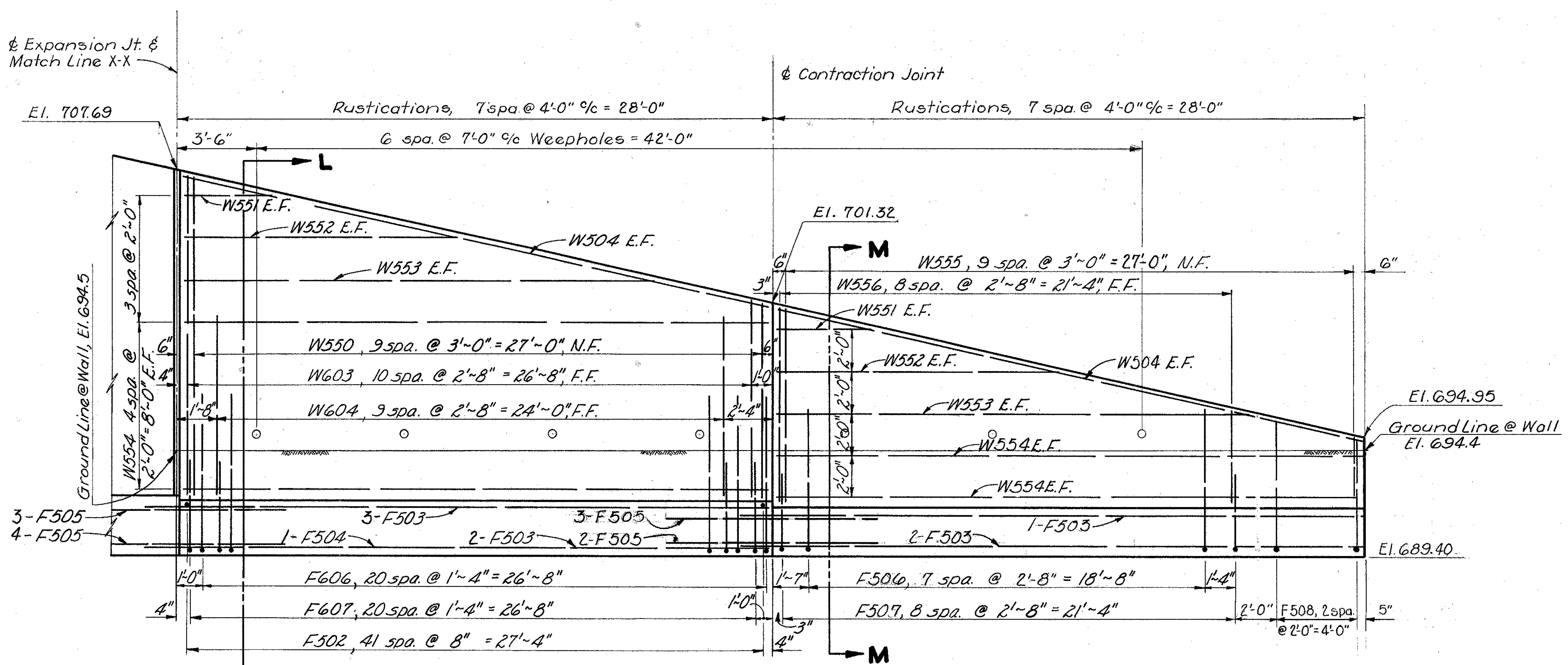
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.D.R.	K.E.A.		P.M.	E. Roberts 6-10-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	
2	OHIO	U 430 (14)		216 / 307

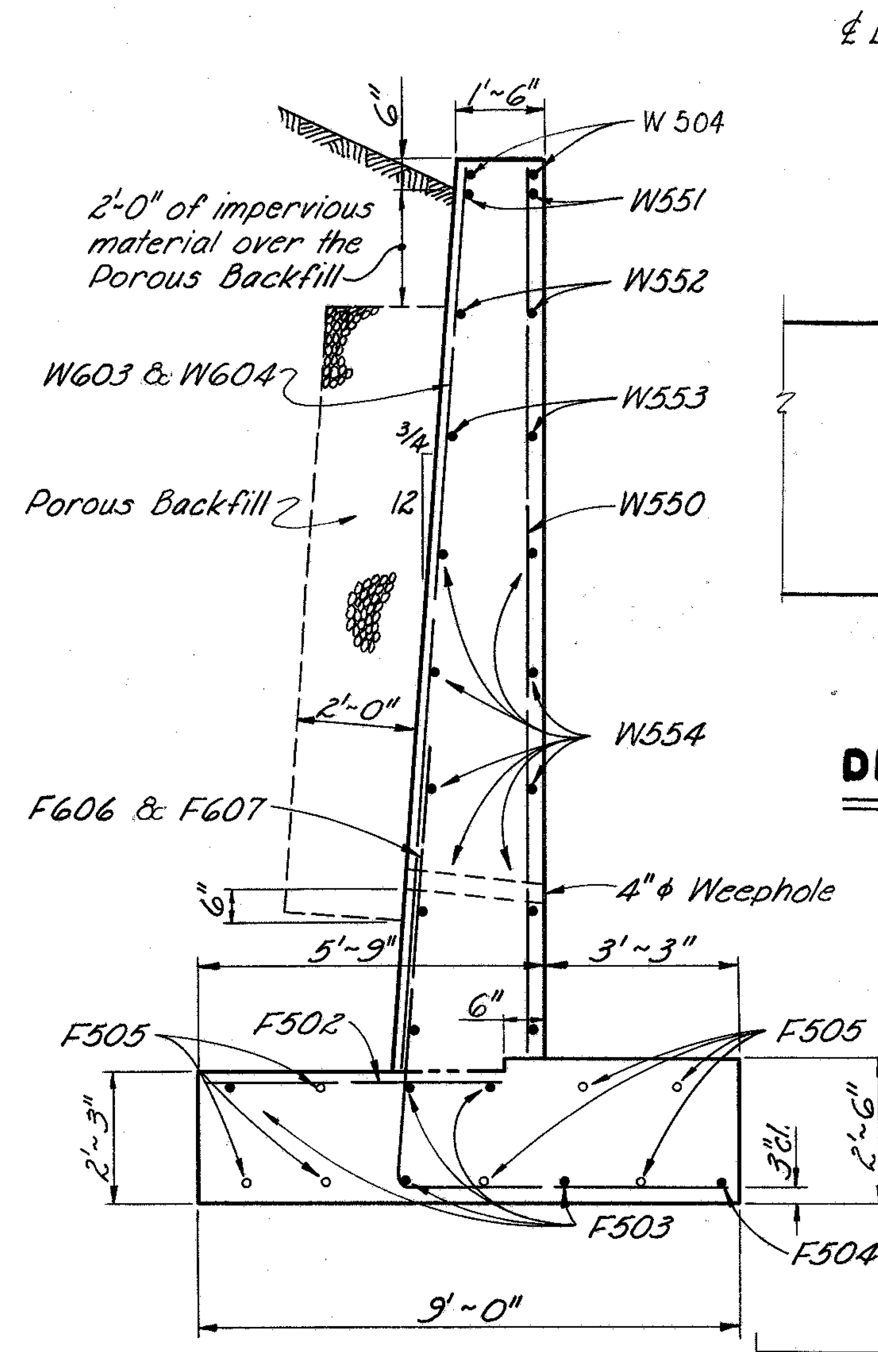
JEFFERSON COUNTY
JEF - 7 - 13.53



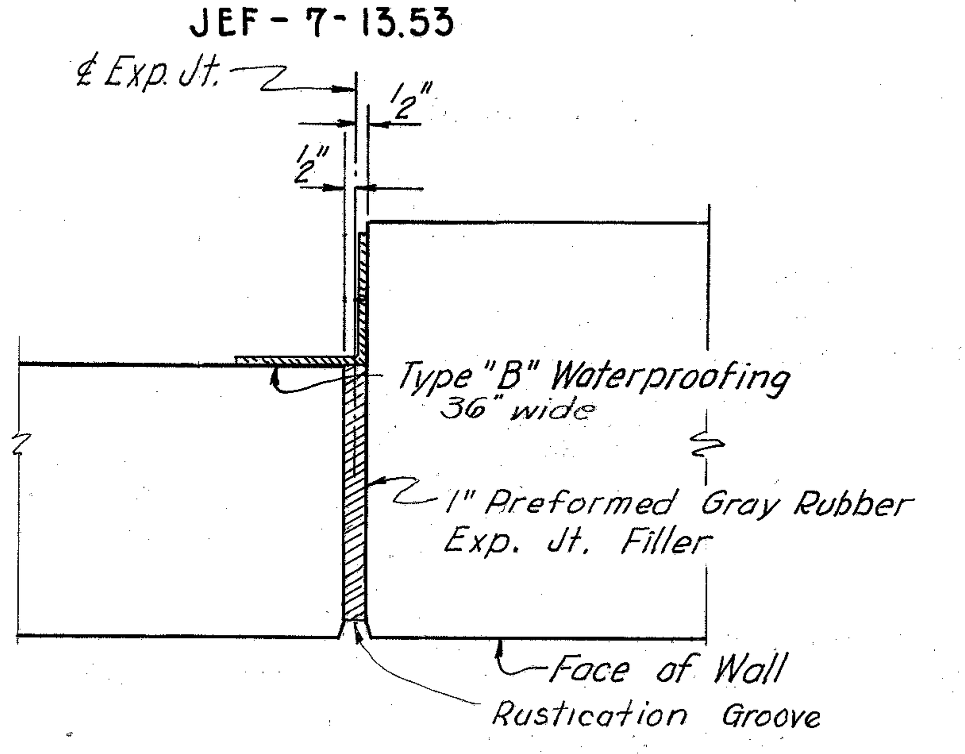
PLAN



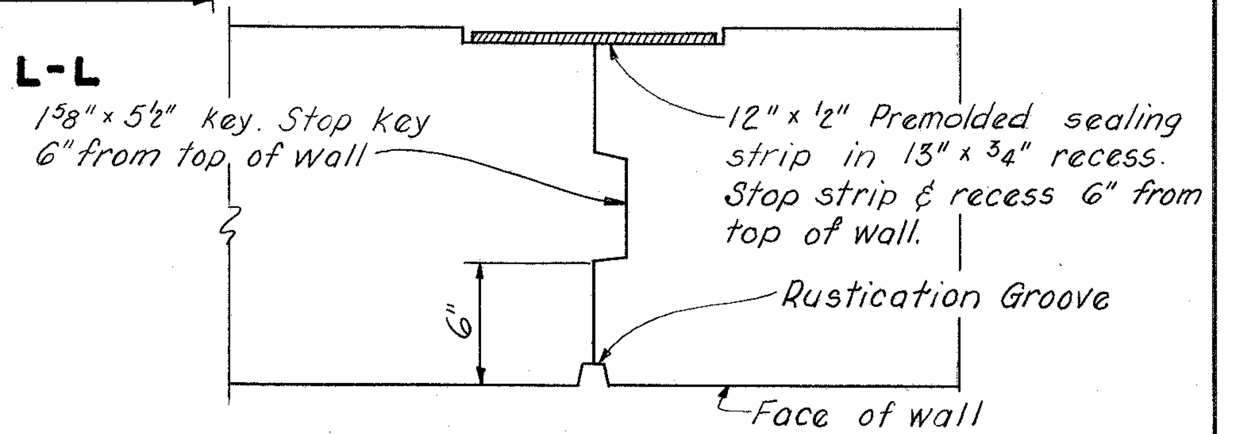
ELEVATION



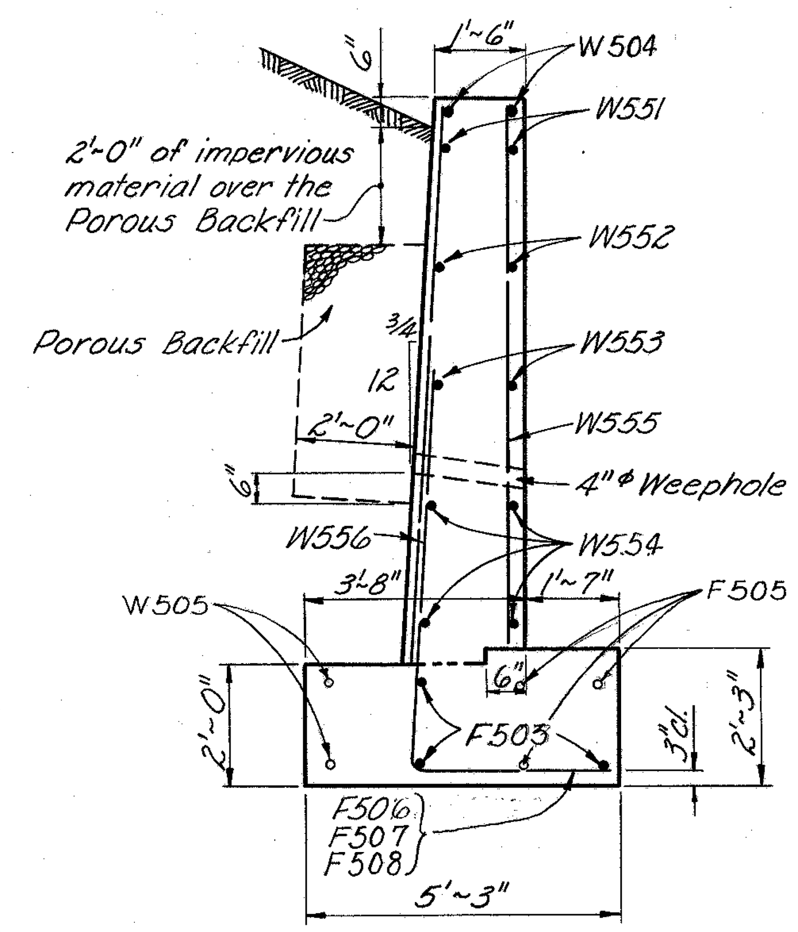
SECTION L-L



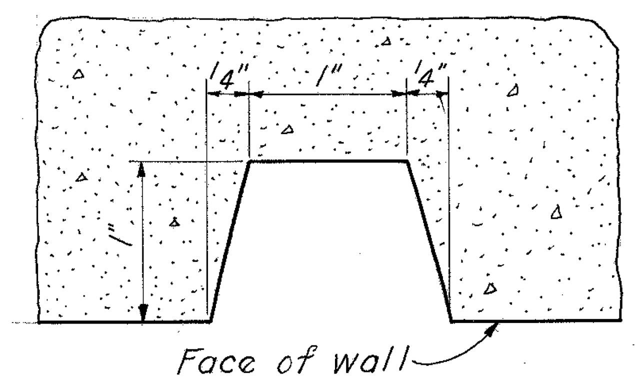
DETAIL OF EXPANSION JOINT



DETAIL OF CONTRACTION JOINT



SECTION M-M



DETAIL OF RUSTICATION GROOVE

NOTES:
N.F. Indicates near face
F.F. Indicates far face
E.F. Indicates each face
All horizontal dimensions are along front face of wall or normal to ℄ Clifton St.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL
PLAN & ELEVATION
LEFT OF ℄ CONSTRUCTION
CLIFTON STREET

JEFFERSON COUNTY STA. 5 + 90.61

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.D.R.	K.E.A.		P.M.	E. Roberts 6-10-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U 430 (14)	

217
307

JEFFERSON COUNTY
JEF-7-13.53

NOTES: See Sheet Nº 215 for location of Sections
E.F. Indicates each face

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL DETAILS

LEFT OF ℄ CONSTRUCTION
CLIFTON STREET

JEFFERSON COUNTY STA. 5+90.61

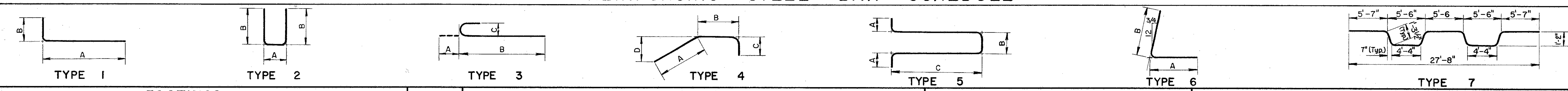
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.D.R.	K.E.A.		P.M.	E. Roberts 6-9-59	

JEFFERSON COUNTY
JEF-7-13.53

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

218
307

REINFORCING STEEL BAR SCHEDULE



FOOTINGS

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	WEIGHT
F 501	48	5	9'-8"	2	1'-1"	4'-5"			484
F 502	42	5	5'-0"	Str.					219
F 503	8	5	29'-7"	Str.					247
F 504	1	5	27'-8"	Str.					29
F 505	12	5	10'-0"	Str.					125
F 506	8	5	9'-8"	6	3'-2"	6'-8"			81
F 507	9	5	6'-6"	6	3'-2"	3'-6"			61
F 508	3	5	8'-5" to 9'-3"	6	3'-4"	5'-3" to 6'-1" (Vary by 5")			28
F 601	14	6	30'-7"	Str.					643
F 602	14	6	21'-8"	Str.					456
F 603	14	6	15'-8"	Str.					329
F 604	28	6	12'-2"	Str.					512
F 605	14	6	9'-2"	1	3'-1"	6'-3"			193
F 606	21	6	12'-5"	6	5'-1"	7'-6'			392
F 607	21	6	9'-2"	6	5'-1"	4'-3"			289
F 801	86	8	30'-7"	Str.					7022
F 802	14	8	21'-8"	Str.					810
F 803	14	8	8'-0"	Str.					299
F 804	28	8	13'-10"	1	6'-1"	8'-0"			1034
F 805	14	8	15'-8"	Str.					586
F 806	14	8	10'-4"	1	4'-1'	6'-6			386
F 1001	3	10	7'-8"	4	3'-3"	3'-5"	1'-5"	1'-5"	99
F 1002	3	10	7'-6"	4	3'-3"	3'-3"	1'-5"	1'-5"	97
F 1003	3	10	7'-4"	4	3'-3"	3'-1"	1'-5"	1'-5"	95
F 1004	3	10	7'-7"	4	3'-3"	3'-4"	1'-5"	1'-6"	98
F 1005	3	10	7'-5"	4	3'-3"	3'-2"	1'-5"	1'-6"	96
F 1006	3	10	7'-3"	4	3'-3"	3'-0"	1'-5"	1'-6"	94
F 1007	3	10	7'-5"	4	3'-3"	3'-2"	1'-5"	1'-7"	96
F 1008	3	10	7'-4"	4	3'-3"	3'-1"	1'-5"	1'-7"	95
F 1009	3	10	7'-3"	4	3'-3"	3'-0"	1'-5"	1'-7"	94
F 1010	2	10	7'-7"	4	3'-3"	3'-4"	1'-5"	1'-4"	65
F 1011	2	10	7'-5"	4	3'-3"	3'-2"	1'-5"	1'-4"	64
F 1012	3	10	7'-2"	4	3'-3"	2'-11"	1'-5"	1'-4"	93
F 1013	2	10	7'-5"	4	3'-3"	3'-2"	1'-5"	1'-5"	64
F 1014	2	10	7'-3"	4	3'-3"	3'-0"	1'-5"	1'-5"	62
F 1015	3	10	7'-1"	4	3'-3"	2'-10"	1'-5"	1'-5"	91
F 1016	2	10	7'-3"	4	3'-3"	3'-0"	1'-5"	1'-6"	62
F 1017	2	10	7'-2"	4	3'-3"	2'-11"	1'-5"	1'-6"	62
F 1018	3	10	7'-0"	4	3'-3"	2'-9"	1'-5"	1'-6"	90
F 1019	2	10	7'-1"	4	3'-3"	2'-10"	1'-5"	1'-4"	61
F 1020	3	10	6'-11"	4	3'-3"	2'-8"	1'-5"	1'-4"	89
F 1021	2	10	6'-11"	4	3'-3"	2'-8"	1'-5"	1'-6"	60
F 1022	3	10	6'-10"	4	3'-3"	2'-7"	1'-5"	1'-6"	88
F 1023	3	10	6'-9"	4	3'-3"	2'-6"	1'-5"	1'-8"	87
								TOTAL	16,127

WALLS

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	WEIGHT
W 501	2	5	24'-0"	Str.					50
W 502	2	5	15'-3"	Str.					32
W 503	2	5	6'-3"	Str.					13
W 504	10	5	28'-4"	Str.					296
W 505	2	5	19'-0"	Str.					40
W 506	2	5	10'-0"	Str.					21
W 507	2	5	21'-9"	Str.					45
W 508	2	5	13'-0"	Str.					27
W 509	2	5	4'-2"	Str.					9
W 510	32	5	18'-0"	Str.					601
W 511	4	5	17'-9"	Str.					74
W 512	2 Sets - 6 Ea. Set	5	14'-11" to 17'-0"	Str.	Vary by 5"				200
W 513	2 Sets - 6 Ea. Set	5	12'-5" to 14'-6"	Str.	Vary by 5"				168
W 514	4	5	12'-0"	Str.					50
W 515	2	5	27'-10"	Str.					58
W 516	2 Sets - 6 Ea. Set	5	24'-10" to 26'-11"	Str.	Vary by 5"				324
W 517	2 Sets - 6 Ea. Set	5	22'-4" to 24'-5"	Str.	Vary by 5"				293
W 518	2	5	22'-0"	Str.					46
W 519	2	5	21'-8"	Str.					45
W 520	2 Sets - 6 Ea. Set	5	18'-9" to 20'-10"	Str.	Vary by 5"				248
W 521	2 Sets - 6 Ea. Set	5	16'-3" to 18'-4"	Str.	Vary by 5"				216
W 522	2	5	15'-11"	Str.					33
W 523	21	5	15'-4" to 34'-6"	5	8 1/4"	1'-2"	6'-8" to 16'-3"	ⓐ	546
W 524	4	5	7'-11" to 13'-8"	5	8 1/4"	1'-2"	2'-11½" to 5'-10"	ⓑ	45
W 525	2 Sets - 7 Ea. Set	5	5'-0" to 30'-0"	Str.	Vary by 4'-2"				256
W 526	19	5	15'-8" to 34'-5"	5	8 1/4"	1'-2"	6'-10" to 16'-2 1/2"	ⓒ	496
W 527	4	5	7'-6" to 13'-9"	5	8 1/4"	1'-2"	2'-9" to 5'-10 1/2"	ⓓ	44
W 528	2 Sets - 7 Ea. Set	5	4'-9" to 27'-9"	Str.	Vary by 3'-10"				237
W 529	17	5	16'-4" to 34'-4"	5	8 1/4"	1'-2"	7'-2" to 16'-2"	ⓔ	449
W 530	4	5	7'-4" to 14'-1"	5	8 1/4"	1'-2"	2'-8" to 6'-0 1/2"	ⓕ	45
W 531	2 Sets - 7 Ea. Set	5	4'-3" to 25'-9"	Str.	Vary by 3'-7"				219
W 532	15	5	14'-4" to 26'-7"	5	8 1/4"	1'-2"	6'-2" to 12'-3 1/2"	ⓖ	320
W 533	4	5	7'-8" to 12'-11"	5	8 1/4"	1'-2"	2'-10" to 5'-5 1/2"	ⓗ	43
W 534	2 Sets - 5 Ea. Set	5	5'-5" to 23'-9"	Str.	Vary by 4'-7"				152
W 535	12	5	16'-0" to 26'-6"	5	8 1/4"	1'-2"	6'-11¾" to 12'-3"	ⓚ	266
W 536	4	5	8'-4" to 14'-1"	5	8 1/4"	1'-2"	3'-2" to 6'-0 1/2"	ⓑ	47
W 537	2 Sets - 5 Ea. Set	5	5'-0" to 21'-8"	Str.	Vary by 4'-2"				139
W 538	10	5	16'-8" to 26'-5"	5	8 1/4"	1'-2"	7'-4" to 12'-2½"	ⓜ	225
W 539	4	5	8'-1" to 14'-7"	5	8 1/4"	1'-2"	3'-0 1/2" to 6'-3 1/2"	ⓝ	47
W 540	2 Sets - 5 Ea. Set	5	4'-4" to 19'-0"	Str.	Vary by 3'-8"				122
W 541	9	5	14'-7" to 21'-7"	5	8 1/4"	1'-2"	6'-3 1/2" to 9'-9 1/2"	ⓟ	170
W 542	4	5	7'-6" to 12'-9"	5	8 1/4"	1'-2"	2'-9" to 5'-4 1/2"	ⓡ	42
W 543	2 Sets - 4 Ea. Set	5	4'-4" to 18'-0"	Str.	Vary by 4'-6"				93
W 544	6	5	16'-6" to 21'-6"	5	8 1/4"	1'-2"	7'-3" to 9'-9"	ⓢ	119
W 545	4	5	8'-5" to 14'-5"	5	8 1/4"	1'-2"	3'-2 1/2" to 6'-2 1/2"	ⓣ	48
W 546	2 Sets - 4 Ea. Set	5	3'-6" to 15'-3"	Str.	Vary by 3'-11"				78
W 547	4	5	17'-10" to 21'-4"	5	8 1/4"	1'-2"	7'-11" to 9'-8"	ⓥ	82
W 548	4	5	8'-6" to 15'-6"	5	8 1/4"	1'-2"	3'-3" to 6'-9"	ⓦ	50
W 549	2 Sets - 4 Ea. Set	5	3'-3" to 13'-6"	Str.	Vary by 3'-5"				70
W 550	10	5	9'-4" to 15'-6"	Str.	Vary by 8 1/4"				130
W 551	4	5	4'-3"	Str.					18
W 552	4	5	13'-0"	Str.					54
W 553	4	5	22'-3"	Str.					93
W 554	14	5	27'-8"	Str.					404
W 555	10	5	3'-2¾" to 9'-5"	Str.	Vary by 8 1/4"				66
W 556	9	5	4'-10" to 9'-8"	Str.	Vary by 7 1/4"				68
W 557	2	5	27'-4"	Str.					57
W 558	2	5	21'-7"	Str.					45
W 559	2	5	21'-3"	Str.					44
W 560	2	5	15'-5"	Str.					32

NOTE: *All bar dimensions are out to out.*

- ⓐ Vary by 5 3/4"
- ⓑ Vary by 1 1/2"
- ⓒ Vary by 6 1/4"
- ⓓ Vary by 1'-0 1/2"
- ⓔ Vary by 6 3/4"
- ⓕ Vary by 1'-1 1/2"
- ⓖ Vary by 5 1/4"
- ⓗ Vary by 10 1/2"
- ⓚ Vary by 5 3/4"
- ⓜ Vary by 6 1/2"
- ⓝ Vary by 1'-1"
- ⓟ Vary by 5 1/4"
- ⓡ Vary by 10 1/2"
- ⓢ Vary by 6"
- ⓣ Vary by 1'-0"
- ⓥ Vary by 7"
- ⓦ Vary by 1'-2"

WALLS (Continued)

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	WEIGHT
W 601	46	6	27'-8"	Str.					1912
W 602	42	6	30'-1"	7					1898
W 603	11	6	9'-8½" to 15'-9"	Str.	Vary by 7 1/4"				211
W 604	10	6	5'-6"	Str.					83
W 1001	3	10	13'-6"	Str.					174
W 1002	3	10	22'-0"	Str.					284
W 1003	3	10	38'-0"	3	1'-5"	36'-7"	1'-0 1/2"		491
W 1004	3	10	11'-3"	Str.					145
W 1005	3	10	19'-4"	Str.					250
W 1006	3	10	35'-4"	3	1'-5"	33'-11"	1'-0 1/2"		456
W 1007	3	10	8'-8"	Str.					112
W 1008	3	10	17'-0"	Str.					219
W 1009	3	10	33'-3"	3	1'-5"	31'-10"	1'-0 1/2"		429
W 1010	2	10	10'-2"	Str.					87
W 1011	2	10	15'-2"	Str.					131
W 1012	3	10	30'-6"	3	1'-5"	29'-1"	1'-0 1/2"		394
W 1013	2	10	7'-4"	Str.					63
W 1014	2	10	12'-9"	Str.					110
W 1015	3	10	28'-0"	3	1'-5"	26'-7"	1'-0 1/2"		361
W 1016	2	10	5'-0"	Str.					43
W 1017	2	10	10'-6"	Str.					90
W 1018	3	10	26'-0"	3	1'-5"	24'-7"	1'-0 1/2"		336
W 1019	2	10	8'-8"	Str.					75
W 1020	3	10	23'-9"	3	1'-5"	22'-4"	1'-0 1/2"		307
W 1021	2	10	6'-2"	Str.					53
W 1022	3	10	21'-6"	3	1'-5"	20'-1"	1'-0 1/2"		278
W 1023	3	10	19'-6"	3	1'-5"	18'-1"	1'-0 1/2"		252
								TOTAL	17,594

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION
E-2	515	Cu. Yds.	Excavation for Structures.
E-2	333	Cu. Yds.	Rock Excavation for Structures.
S-1	229	Cu. Yds.	Class "E" Concrete - Wall.
S-1	183	Cu. Yds.	Class "E" Concrete - Footings.
S-3	58	Lin. Ft.	Waterproofing, Premolded Sealing Strip.
S-3	6	Sq. Yds.	Waterproofing, Type "B"
S-4	33,721	Lbs.	Reinforcing Steel
S-9	23	Sq. Ft.	1" Preformed Expansion Joint Filler (Gray Rubber M-10.02)
S-29	129	Cu. Yds.	Porous Backfill.

REPLACEMENT BARS

MARK	NO.	SIZE	LENGTH	TYPE	WEIGHT
RE 501	1	5	5'-7"	Str.	
RE 601	1	6	5'-11"	Str.	
RE 801	1	8	6'-6"	Str.	
RE 1001	1	10	7'-3"	Str.	

BAR SIZE
Bar size is indicated in the barmark. The first digit where three digits are used and the first two where four are used, indicates the bar size number. For example, W 501 is a number 5 bar and W 1014 is a number 10 size bar.

REPLACEMENT BARS
If reinforcing bars are fabricated from stock which has been tested and approved by the Ohio Highway Testing Laboratory, test sample as provided in Section S-402 need not be furnished and replacement bars will not be required.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

REINFORCING STEEL LIST AND ESTIMATED QUANTITIES FOR RETAINING WALL LEFT OF ℄ CONSTRUCTION CLIFTON ST.

JEFFERSON COUNTY STA. 5 + 90.61

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
JPW	G.K.S.		P.M.	E. Roberts 6-10-59	

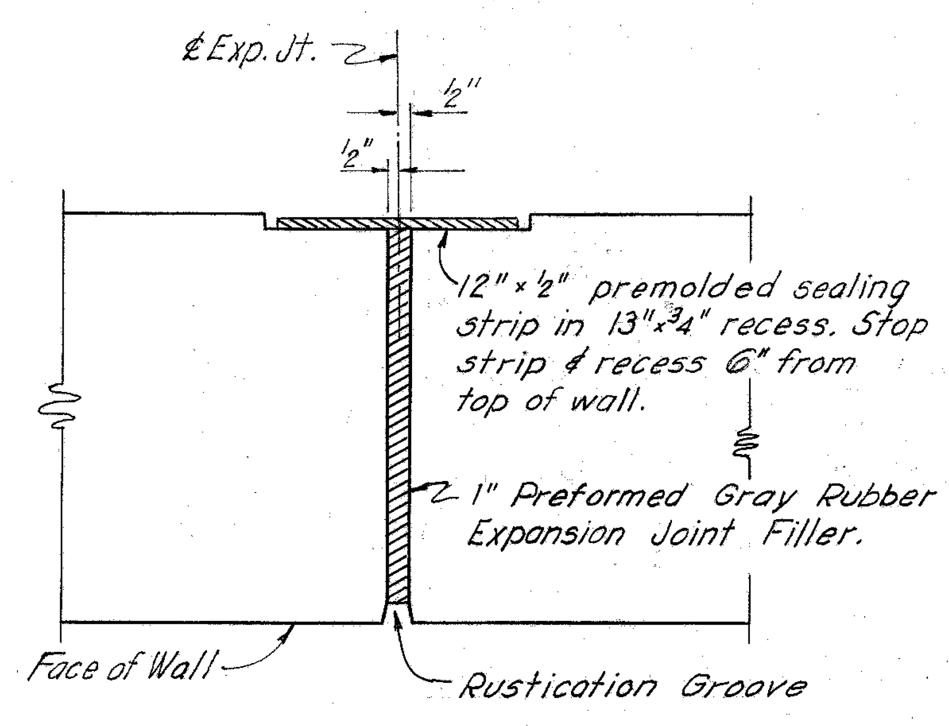
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

219
307

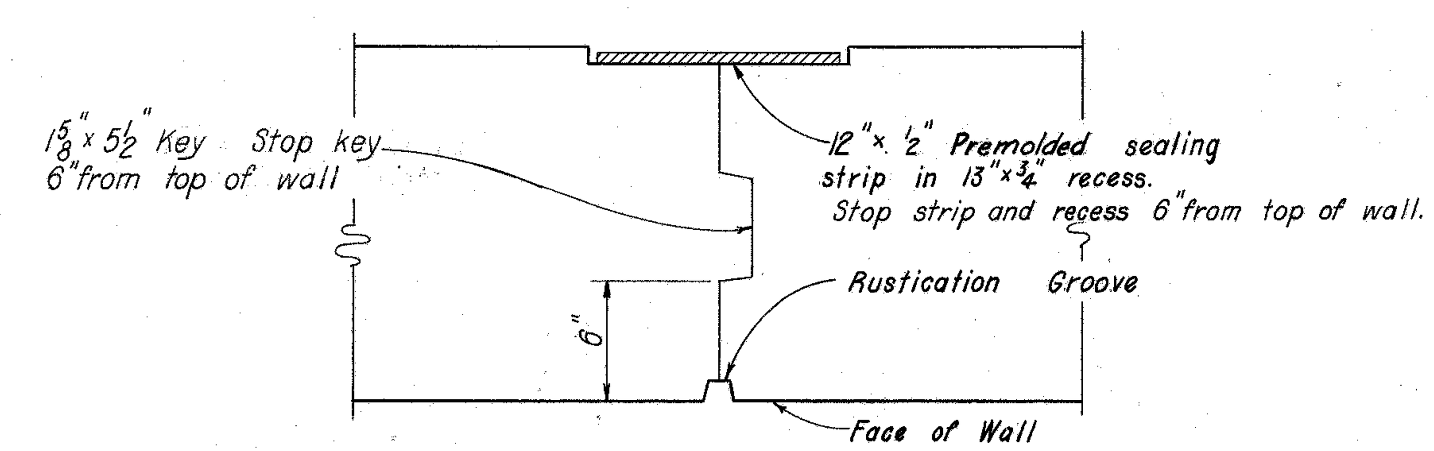
JEFFERSON COUNTY
JEF-7-13.53

PLAN

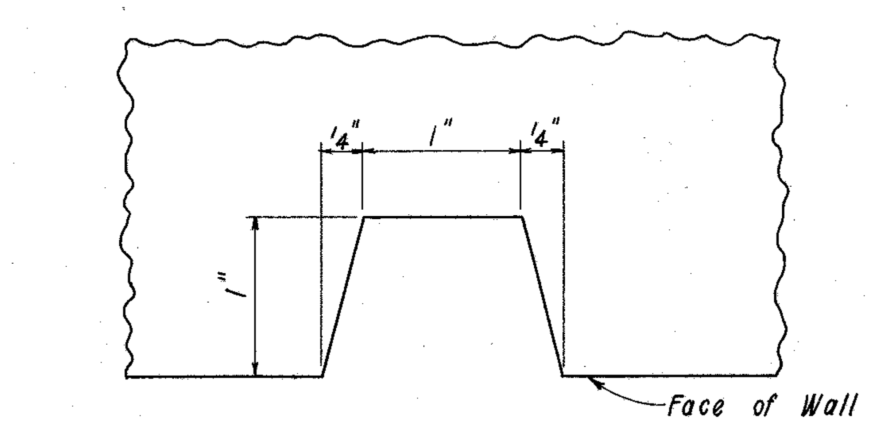
ELEVATION



DETAIL OF EXPANSION JOINT



DETAIL OF CONTRACTION JOINT



DETAIL OF RUSTICATION

Legend
N.S. indicates near side
F.S. indicates far side
E.S. indicates each side

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL
PLAN & ELEVATION
RIGHT OF EXPRESSWAY ℄ CONSTR.
LEFT SIDE RAMP "C"
JEFFERSON COUNTY STA. 9 + 80.50

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
JPW F.A.	M.G.F.	M.G.F.	P.M.	E. Roberts 6-6-59	

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27086

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

220/307

JEFFERSON COUNTY
JEF-7-13.53

Legend
N.S. indicates near side
F.S. indicates far side
E.S. indicates each side

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL
PLAN & ELEVATION
RIGHT OF EXPRESSWAY ℄ CONSTR.
LEFT SIDE RAMP "C"

JEFFERSON COUNTY STA. 9 + 80.50

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
JPW / F.A.	M.G.F.	M.G.F.	P.M.	E. Roberts 6-6-59	

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27086

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

221 / 307

JEFFERSON COUNTY
JEF-7-13.53

Legend
N.S. indicates near side
F.S. indicates far side
E.S. indicates each side

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL
PLAN & ELEVATION
RIGHT OF EXPRESSWAY ℄ CONSTR.
LEFT SIDE RAMP "C"
JEFFERSON COUNTY STA. 9 + 80.50

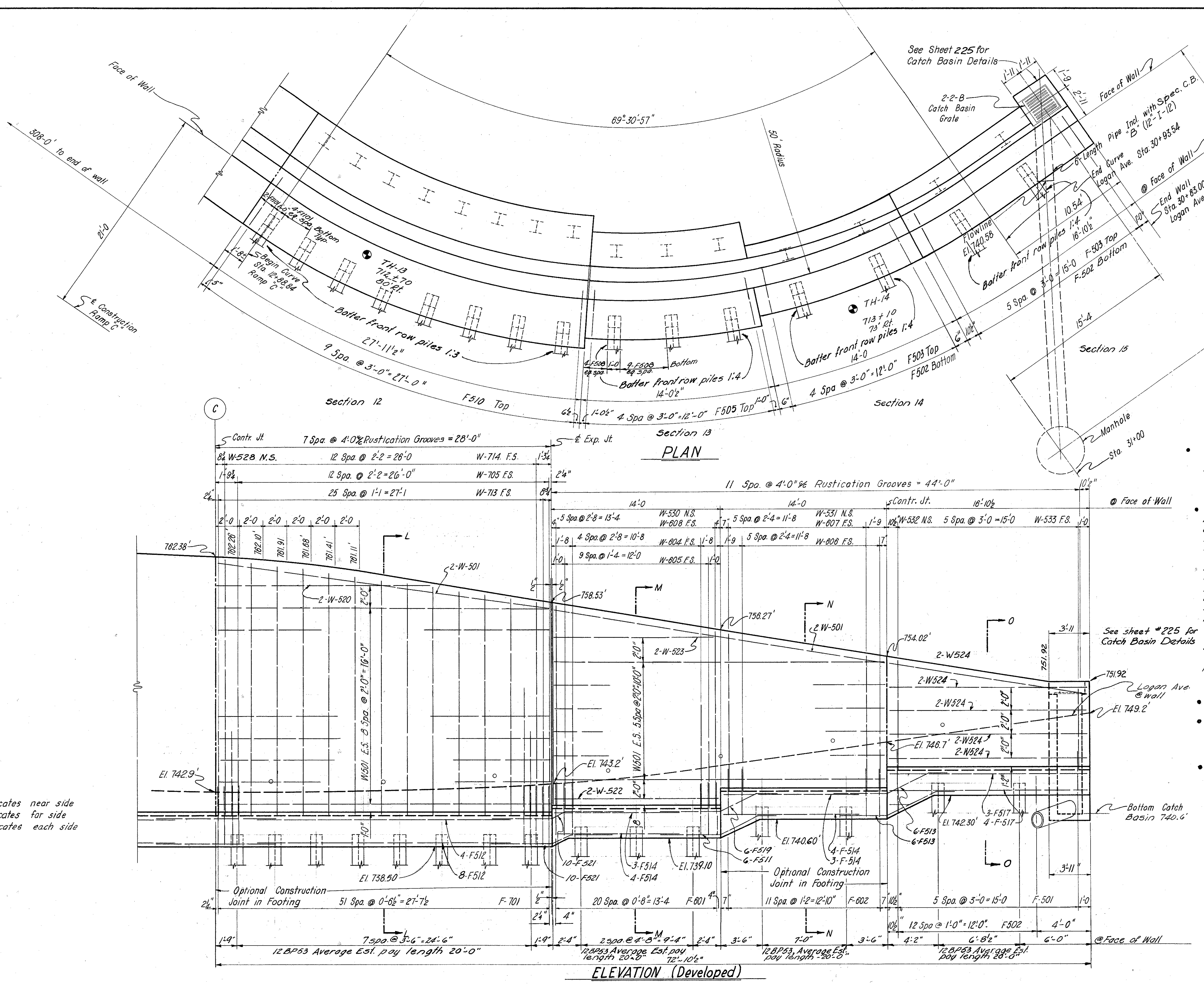
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
JPW F.A.	M.G.F.	M.G.F.	P.M.	E. Roberts 6-6-59	

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27066

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

222 / 307

JEFFERSON COUNTY
JEF.-7-13.53



LEGEND
N.S. indicates near side
F.S. indicates far side
E.S. indicates each side

GENERAL NOTES

- Design specifications: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof.
- Prebored Holes For Piles: Preboring, if necessary, shall be done to insure that the piles will make firm contact with shale. However, such preboring shall be done in the amount and at the locations designated by the Engineer.
  Where piles are driven in prebored holes, I-22 material shall be poured in the hole around the steel H pile and shall entirely fill the hole. The filling with I-22 material at each pile shall be done before driving of the pile is completed. The material shall be saturated with water to insure maximum compaction.
  Payment for I-22 material and any necessary water used shall be included in the unit price bid for Item Special, Prebored Holes For Piles.
  For additional notes concerning piles and preboring see sheets no. 225 and 226.
- Concrete: All concrete shall be Class "E".
- Surface Finish of Concrete: Exposed area of front wall shall receive a rubbed finish. All other exposed surfaces shall be governed by the provisions of Item S-1.
- Backfill: Backfill shall be impervious material and porous backfill within the limits shown and shall extend for the full length of the structure.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL
PLAN & ELEVATION
RIGHT OF EXPRESSWAY ℄ CONSTR.
LEFT SIDE RAMP "C"
JEFFERSON COUNTY STA. 9 + 80.50

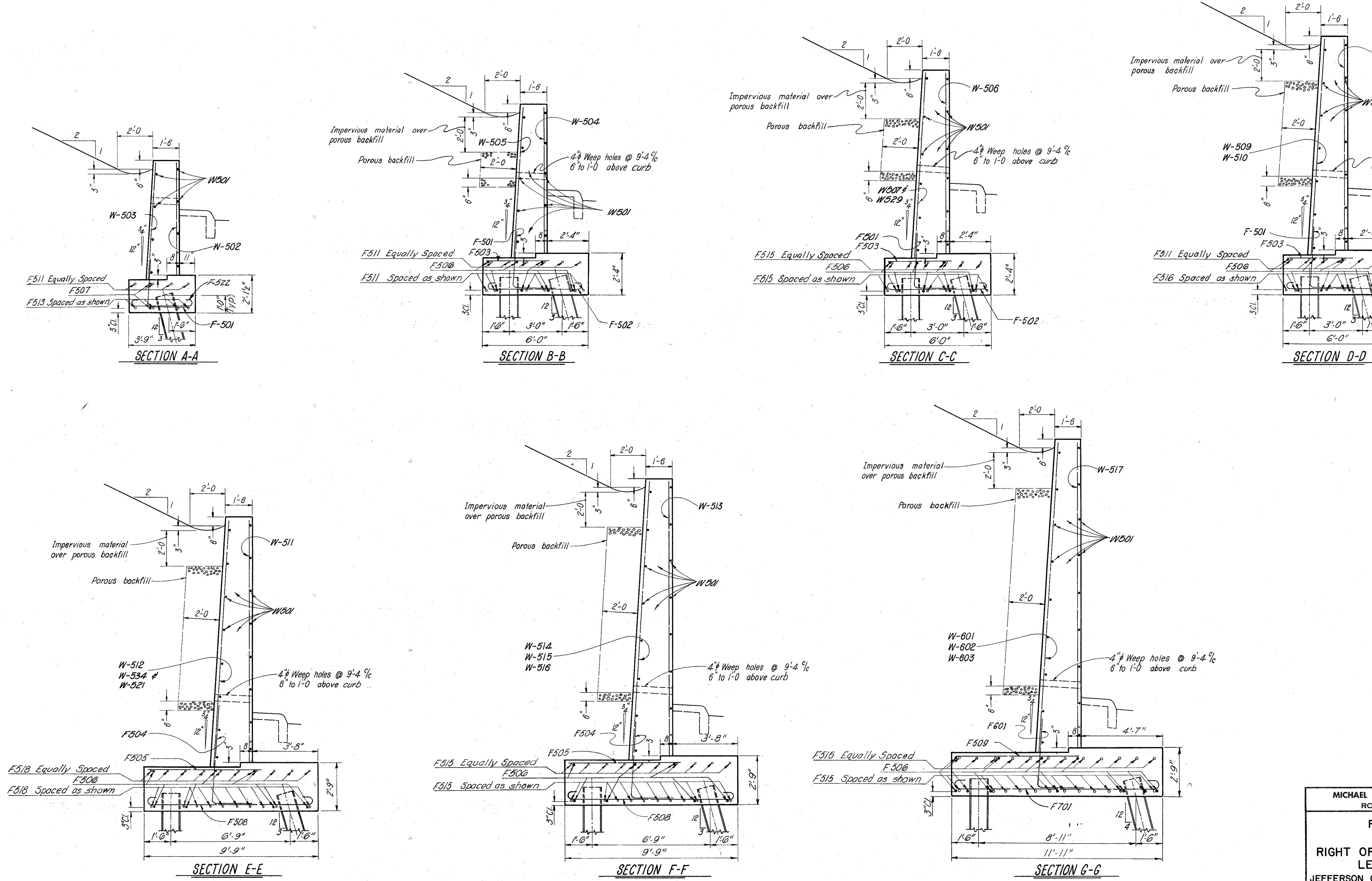
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
JPW F.A.	M.G.F.	M.G.F.	P.M.	E. Roberts 6-6-59	

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27006

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

223
307

JEFFERSON COUNTY
JEF.-7-13.53



MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

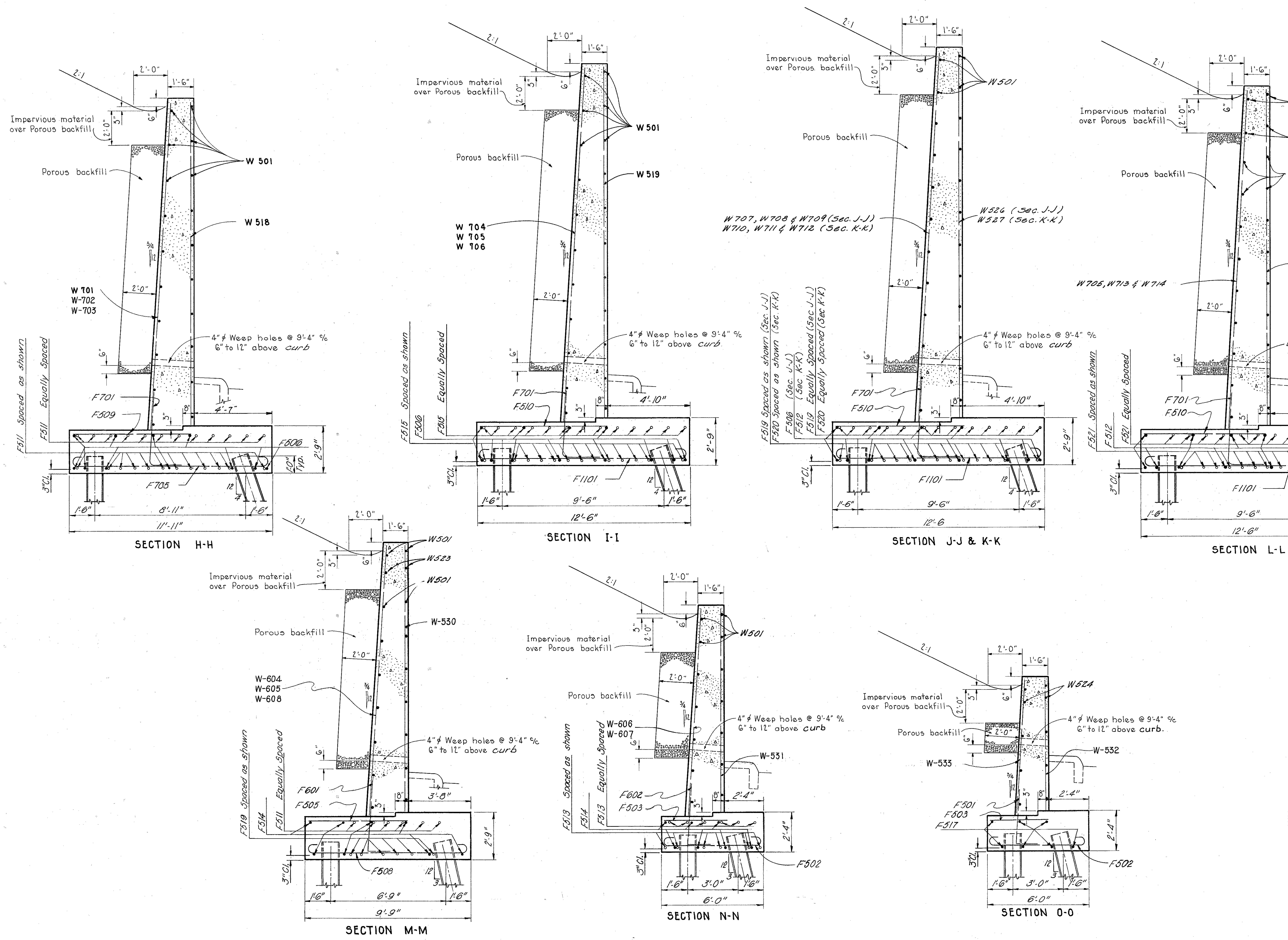
RETAINING WALL
DETAILS
RIGHT OF EXPRESSWAY ℄ CONSTR.
LEFT SIDE RAMP "C"
JEFFERSON COUNTY STA. 9+80.50

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
JPW / F.A.	M.G.F.	M.G.F.	P.M.	E. Roberts 6-6-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

224
307

JEFFERSON COUNTY
JEF-7-13.53



MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL
DETAILS
RIGHT OF EXPRESSWAY ℄ CONSTR.
LEFT SIDE RAMP "C"
JEFFERSON COUNTY STA. 9+80.50

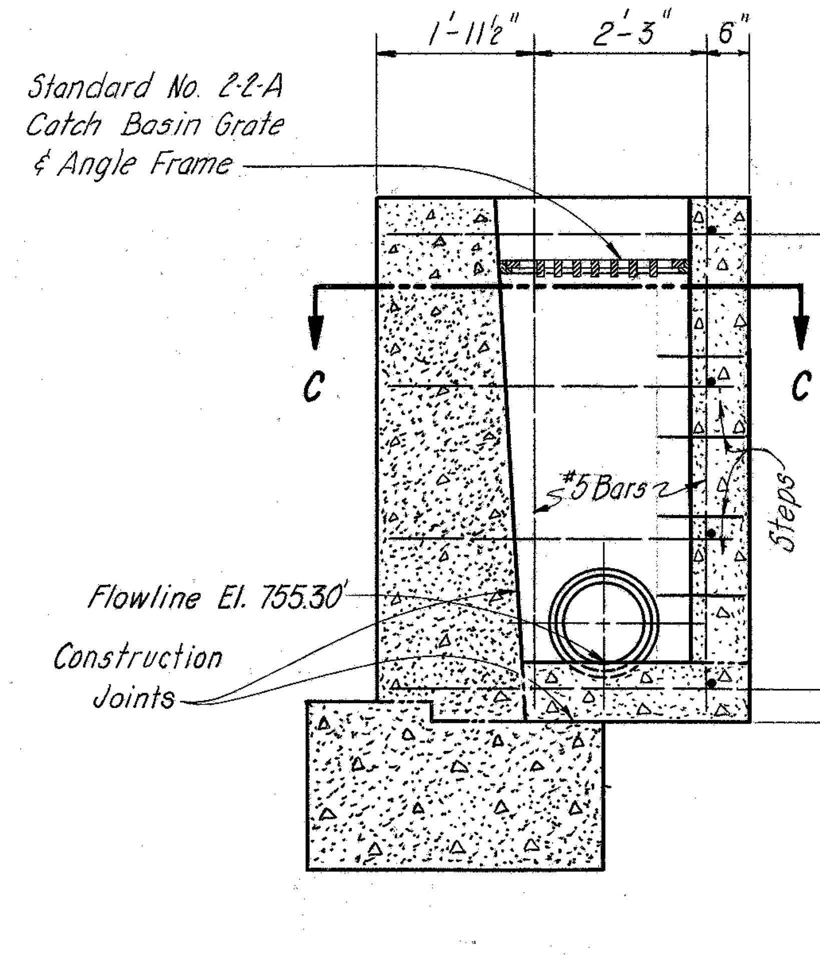
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
JPW F.A.	M.G.F.	AMM	P.M.	E. Roberts 6-6-59	

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27090

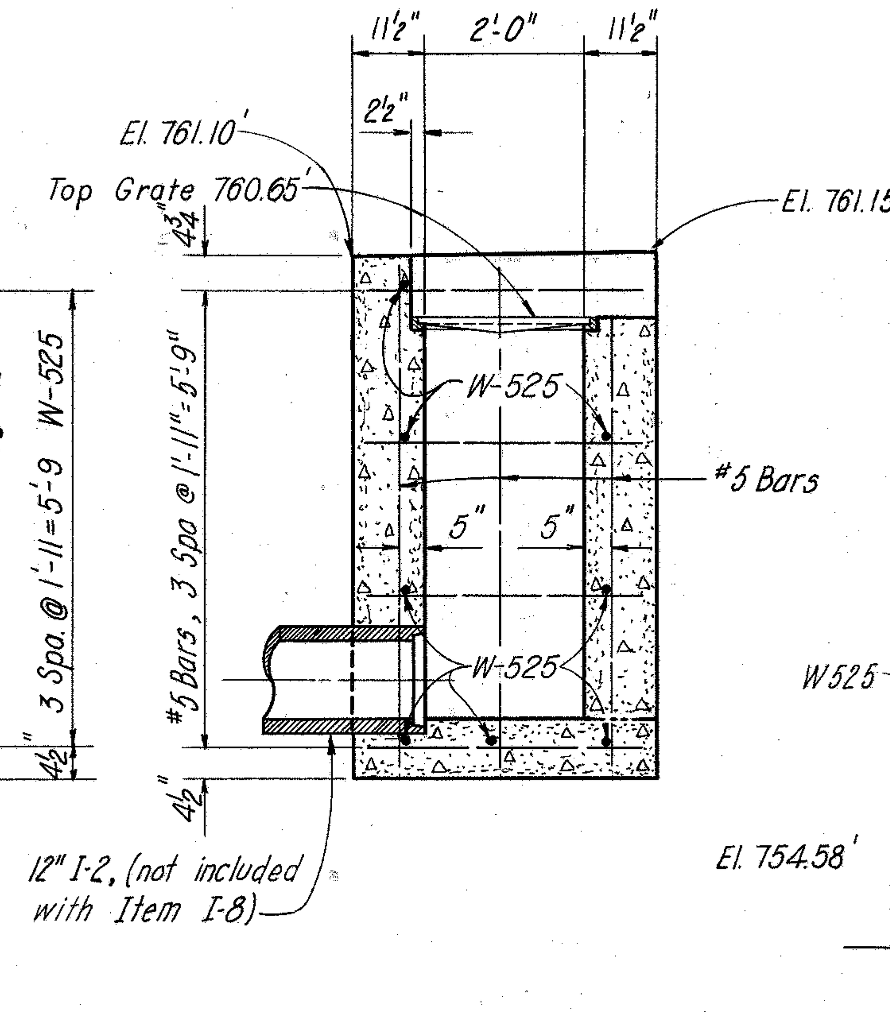
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

225
307

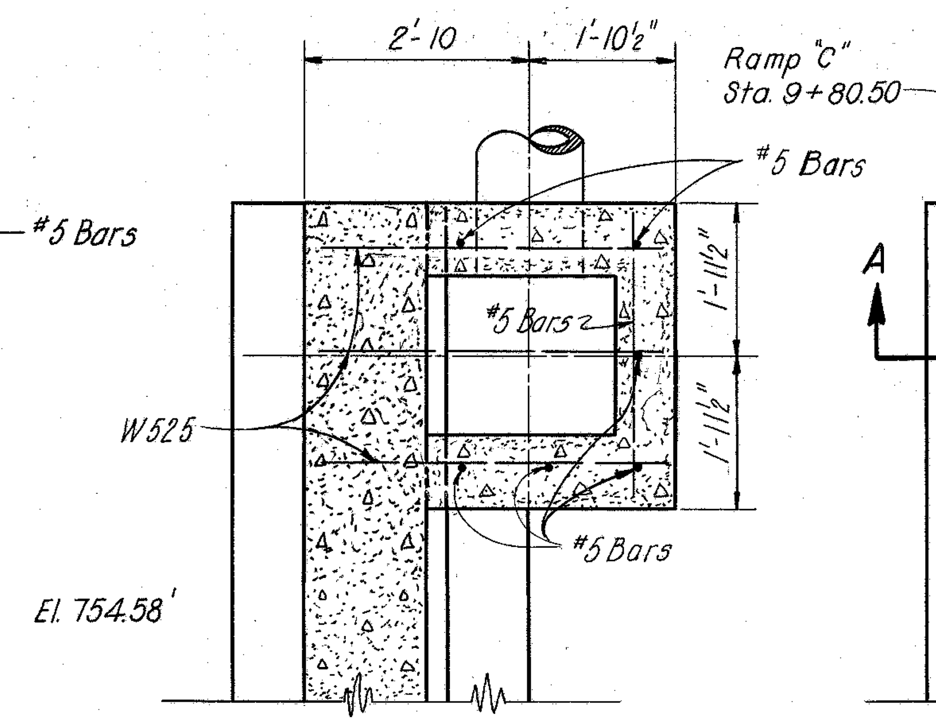
JEFFERSON COUNTY
JEF-7-13.53



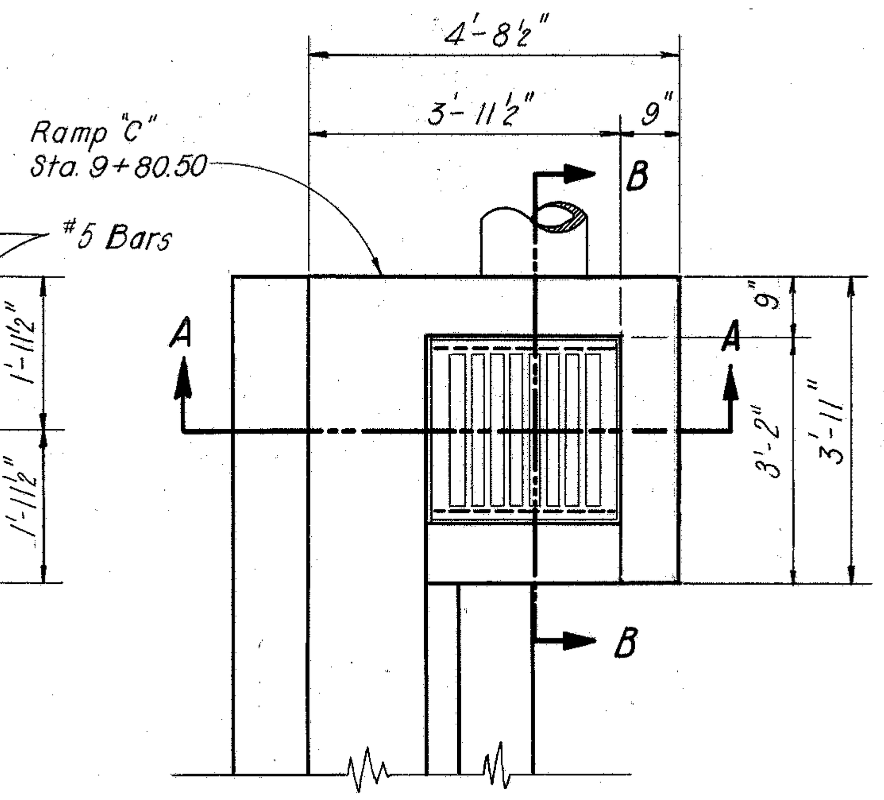
SECTION-AA



SECTION-BB



SECTION-CC



PLAN OF SPECIAL CATCH BASIN TYPE A

NOTES:

- Reinforcing steel shall be ⅝" round bars in accordance with details shown hereon and conforming to Item S-4 of the Construction and Materials Specifications. Cost of furnishing and placing reinforcing steel shall be included in the Unit Price Bid for Item I-8, Special Catch Basin.
- Concrete shall be Class "E".
- Catch Basin Grate & Angle Frame. shall be as shown on Std. Drwg. I-8, Catch Basins Nº 2-2-A & B.
- Steps shall be as shown on Std. Drwg. I-8, Catch Basins Nº 1-3 & 1-4. For quantities see sheet #161.

GENERAL NOTES (continued)

PILES shall be driven to firm contact with shale. If the length of penetration is approximately equal to the depth to shale according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. 5-18.05 is not less than the following value for a pile hammer of the indicated energy rating:

Sect. 1, Sect. 2, Sect. 3
31 tons per pile using a 7,000 ft. lb. hammer.
25 tons per pile using a 11,000 ft. lb. hammer.
25 tons per pile using a 15,000 ft. lb. hammer.

Sect. 4
40 tons per pile using a 7,000 ft. lb. hammer
32 tons per pile using a 11,000 ft. lb. hammer
30 tons per pile using a 15,000 ft. lb. hammer.

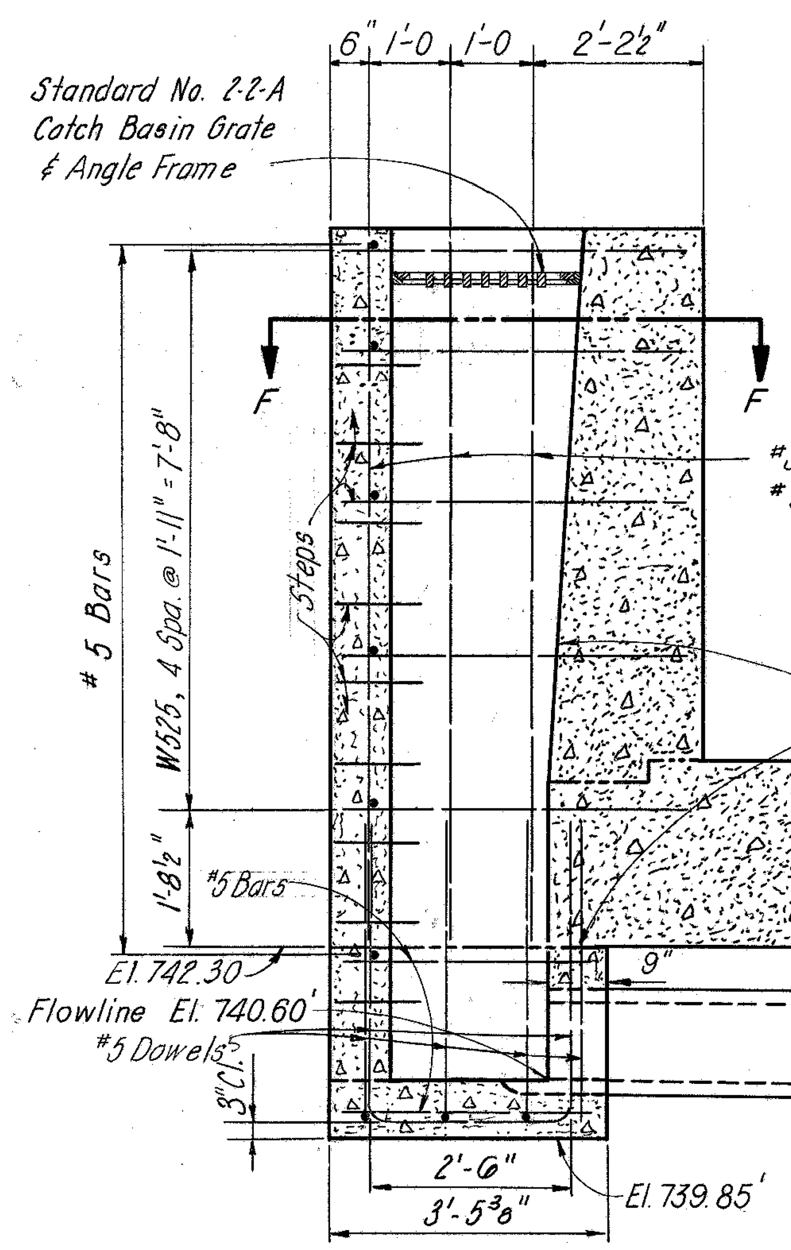
Sect. 5 thru Sect. 11
40 tons per pile using a 11,000 ft. lb. hammer.
37 tons per pile using a 15,000 ft. lb. hammer.

Sect. 12, Sect. 13
40 tons per pile using a 7,000 ft. lb. hammer.
35 tons per pile using a 11,000 ft. lb. hammer.
35 tons per pile using a 15,000 ft. lb. hammer.

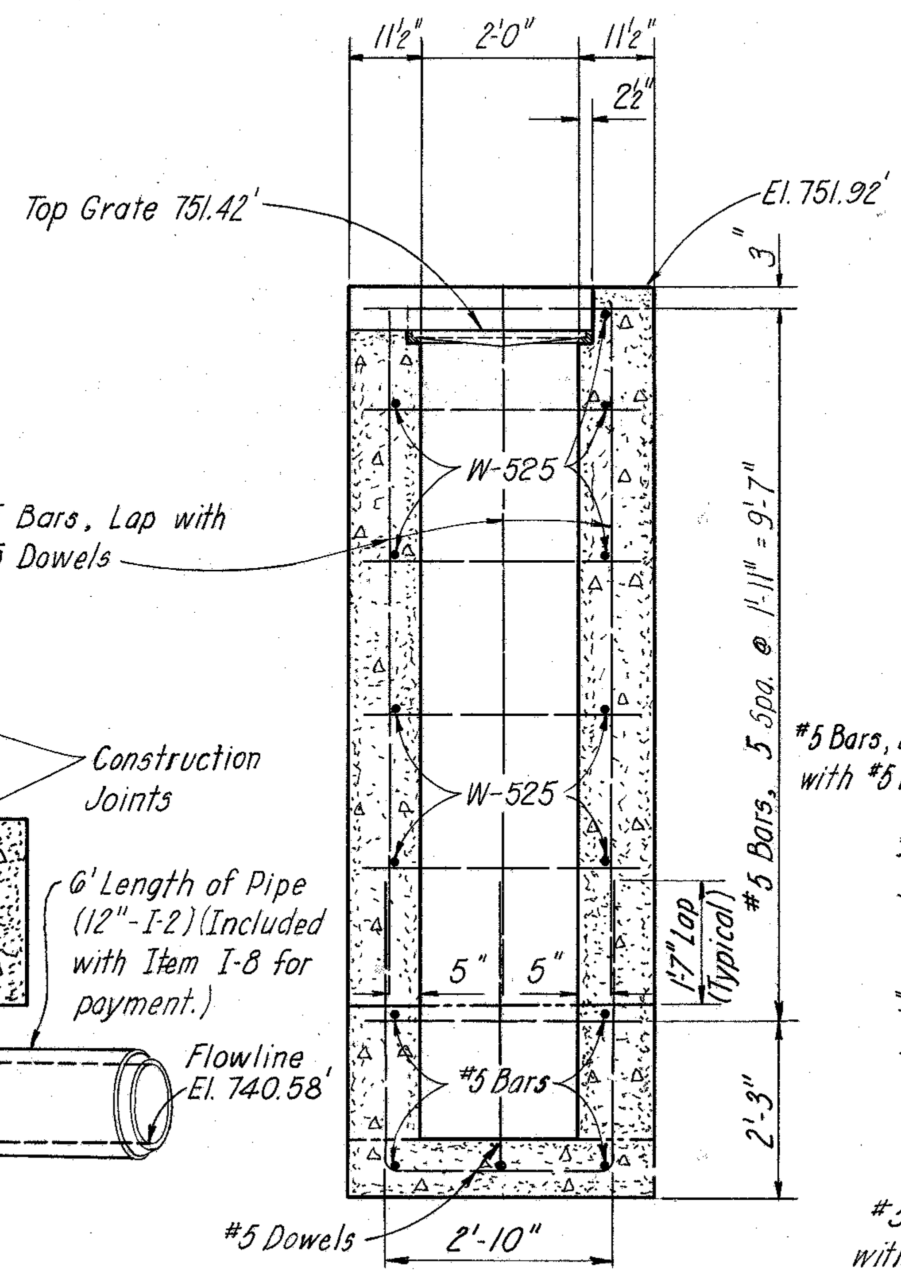
Sect. 14
33 tons per pile using a 7,000 ft. lb. hammer.
30 tons per pile using a 11,000 ft. lb. hammer.
30 tons per pile using a 15,000 ft. lb. hammer.

Sect. 15
26 tons per pile using a 7,000 ft. lb. hammer.
25 tons per pile using a 11,000 ft. lb. hammer.
25 tons per pile using a 15,000 ft. lb. hammer.

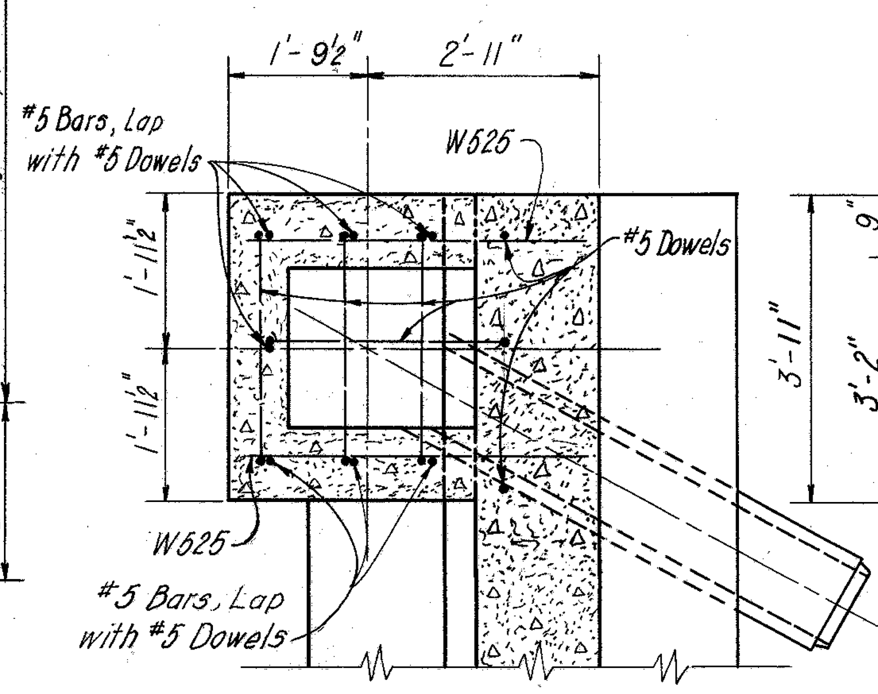
The design load is:
25 tons per pile for Sections 1, 2, and 3
30 tons per pile for Sections 4 and 14
35 tons per pile for Sections 5 thru 13



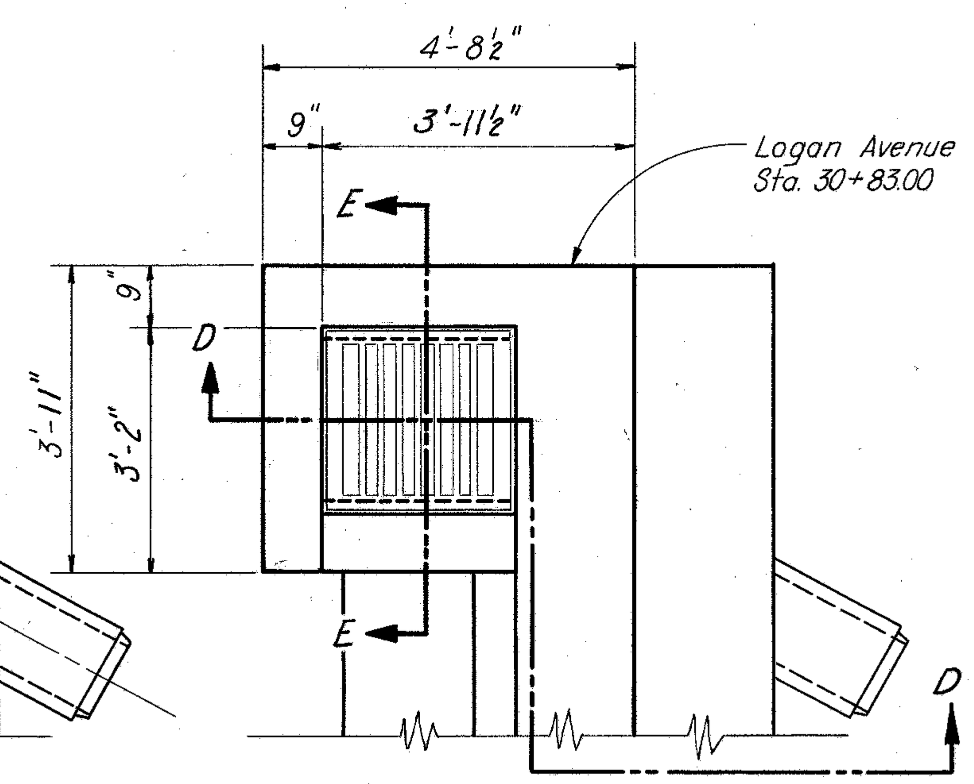
SECTION-DD



SECTION-EE



SECTION-FF



PLAN OF SPECIAL CATCH BASIN TYPE B

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL DETAILS & SPECIAL CATCH BASINS TYPES A&B RIGHT OF EXPRESSWAY ℄ CONSTR. LEFT SIDE RAMP "C"

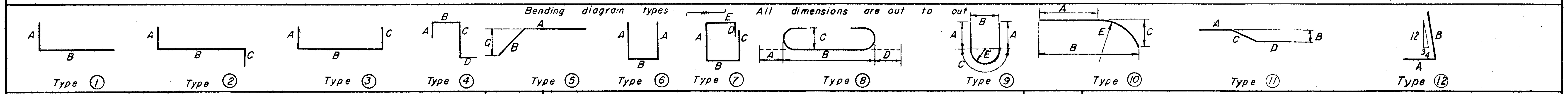
JEFFERSON COUNTY STA. 9+80.50

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
JPW. F.A.	M.G.F.	M.G.F.	P.M.	E. Roberts 6-6-59	

JEFFERSON COUNTY
JEF-7-13.53

REINFORCING STEEL BAR SCHEDULE

Bending diagram types — All dimensions are out to out



MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
F501	69	5	4'-2"	12	1'-0"	3'-4"				300
F502	48	5	6'-10"	8	7"	5'-8"	5¼"			342
F503	41	5	4'-9"	str.						203
F504	84	5	4'-7"	12	1'-0"	3'-9"				402
F505	25	5	6'-8"	str.						174
F506	81	5	24'-5"	str.						2063
F507	2	5	27'-8"	str.						58
F508	138	5	10'-7"	8	7"	9'-5"	5¼"			1523
F509	22	5	7'-8"	str.						176
F510	40	5	7'-9"	str.						323
F511	42	5	10'-4"	11	2'-0"	1'-6"	3'-4"	5'-0"		453
F512	24	5	21'-2"	str.						530
F513	16	5	10'-5"	11	1'-7"	1'-8½"	3'-10"	5'-0"		174
F514	14	5	10'-5"	str.						152
F515	78	5	10'-4"	11	2'-5"	1'-3½"	2'-11"	5'-0"		841
F516	6	5	10'-5"	11	1'-2"	1'-11"	4'-3"	5'-0"		65
F517	7	5	16'-6"	str.						120
F518	20	5	10'-4"	11	2'-2"	1'-5"	3'-2"	5'-0"		216
F519	38	5	10'-3"	11	3'-0"	1'-0"	2'-3"	5'-0"		406
F520	26	5	10'-0"	str.						271
F521	20	5	10'-2"	11	5'-0"	7"	1'-4"	3'-10"		212
F522	9	5	4'-7"	8	7"	3'-5"	5¼			43
F601	63	6	4'-11"	12	1'-0"	4'-1"				323
F602	12	6	4'-6"	12	1'-0"	3'-8"				56
F701	238	7	5'-3"	12	1'-0"	4'-5"				2554
F702	112	7	13'-3"	8	10"	11'-7"	6¾"			3033
F1101	116	11	15'-4"	8	1'-7"	12'-2"	1'-2"			9450
W501	218	5	27'-8"	Str.						6291
W502	10	5	6'-1"	Str.						63
W503	10	5	6'-4"	Str.						66
W504	10	5	8'-0"	Str.						83
W505	10	5	8'-3"	Str.						86
W506	10	5	9'-10"	Str.						103
W507	10	5	10'-2"	Str.						106
W508	12	5	11'-7"	Str.						145
W509	12	5	11'-10"	Str.						148

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
W510	12	5	3'-10"	Str.						48
W511	10	5	13'-5"	Str.						140
W512	10	5	13'-8"	Str.						143
W513	12	5	15'-2"	Str.						190
W514	12	5	15'-5"	Str.						193
W515	12	5	7'-6"	Str.						94
W516	23	5	4'-11"	Str.						118
W517	11	5	16'-11"	Str.						194
W518	10	5	18'-7"	Str.						194
W519	12	5	20'-2"	Str.						252
W520	2	5	17'-0"	Str.						35
W521	18	5	4'-1"	Str.						77
W522	2	5	13'-8"	Str.						29
W523	2	5	14'-0"	Str.						29
W524	10	5	16'-6"	Str.						172
W525	17	5	4'-4"	Str.						77
W526	13	5	20'-9"	Str.						281
W527	13	5	20'-9" to 21'-9"	Str.	vary by 1"					288
W528	13	5	16'-11" to 20'-11"	Str.	vary by 4"					256
W529	9	5	3'-3"	Str.						31
W530	6	5	14'-2" to 16'-8"	Str.	vary by 6"					96
W531	6	5	10'-7" to 13'-1"	Str.	vary by 6"					74
W532	6	5	6'-6" to 9'-0"	Str.	vary by 6"					48
W533	6	5	6'-9" to 9'-3"	Str.	vary by 6"					50
W534	9	5	6'-10"	Str.						64
W601	11	6	17'-2"	Str.						284
W602	10	6	9'-1"	Str.						136
W603	21	6	6'-0"	Str.						189
W604	5	6	8'-5"	Str.						63
W605	10	6	5'-4"	Str.						80
W606	6	6	4'-3"	Str.						38
W607	6	6	10'-10" to 13'-4"	Str.	vary by 6"					109
W608	6	6	14'-5" to 16'-11"	Str.	vary by 6"					141

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
W701	10	7	18'-10"	Str.						385
W702	9	7	10'-2"	Str.						187
W703	18	7	6'-11"	Str.						254
W704	12	7	20'-5"	Str.						501
W705	24	7	10'-11	Str.						536
W706	22	7	7'-4"	Str.						330
W707	13	7	21'-0"	Str.						558
W708	13	7	11'-5"	Str.						303
W709	26	7	7'-6"	Str.						399
W710	13	7	11'-8"	Str.						310
W711	26	7	7'-9"	Str.						412
W712	13	7	21'-0" to 22'-0"	Str.	vary by 1"					571
W713	26	7	7'-0"	Str.						372
W714	13	7	17'-2" to 21'-2"	Str.	vary by 4"					509

Total Weight 41,394

PREBORED HOLES FOR PILES:
Prebored holes for piles shall be 10" to 14" in diameter. The depth of the prebored holes may vary and, if deemed necessary by the Engineer, shall extend the full length of any pile or piles.
This item shall be performed in accordance with the note on Sheet 222.

FIRST TEST PILES:
Three test piles will be required and they shall be driven at wall sections No. 3, 7, and 12. If a service pile is to serve as a test pile, it shall not be a battered pile.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION
E-2	2150	Cu. Yd.	Excavation for Structures
S-1	430	Cu. Yd.	Class "E" Concrete; Wall
S-1	334	Cu. Yd.	Class "E" Concrete; Footings
S-3	192	Lin. Ft.	Waterproofing, Premolded Sealing Strip
S-4	41,394	Lbs.	Reinforcing Steel
S-9	129	Sq. Ft.	1" Preformed Expansion Joint Filler (Gray Rubber M-10.02)
S-18	3130	Lin. Ft.	Steel Piles 12BP53
S-29	277	Cu. Yd.	Porous Backfill
Spec.	1100	Lin. Ft.	Prebored Holes For Piles
S-16	Lump		First Test Piles.

REPLACEMENT BARS

MARK	NO.	SIZE	LENGTH	TYPE	WEIGHT
RE501	1	5	5'-7"	Str.	
RE601	1	6	5'-11"	Str.	
RE701	1	7	6'-3"	Str.	
RE801	1	8	6'-6"	Str.	

REPLACEMENT BARS:
If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy. Testing Laboratory, test sample as provided in section S-402 need not be furnished and replacement bars will not be required.

BAR SIZE:
Bar size is indicated in the barmark. The first digit where three digits are used and the first two where four are used, indicates the bar size number. For example, A401 is a number 4 bar and A1114 is a number 11 size bar.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL
REINFORCING STEEL LIST & ESTIMATED QUANTITIES
RIGHT OF EXPRESSWAY ℄ CONSTR.
LEFT SIDE RAMP "C"

JEFFERSON COUNTY — STA. 9+80.50

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
JPW F.A.	B		P.M.	E. Roberts 6-17-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U 430 (14)	

227
307

JEFFERSON COUNTY
JEF - 7 - 13.53

GENERAL NOTES

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof.

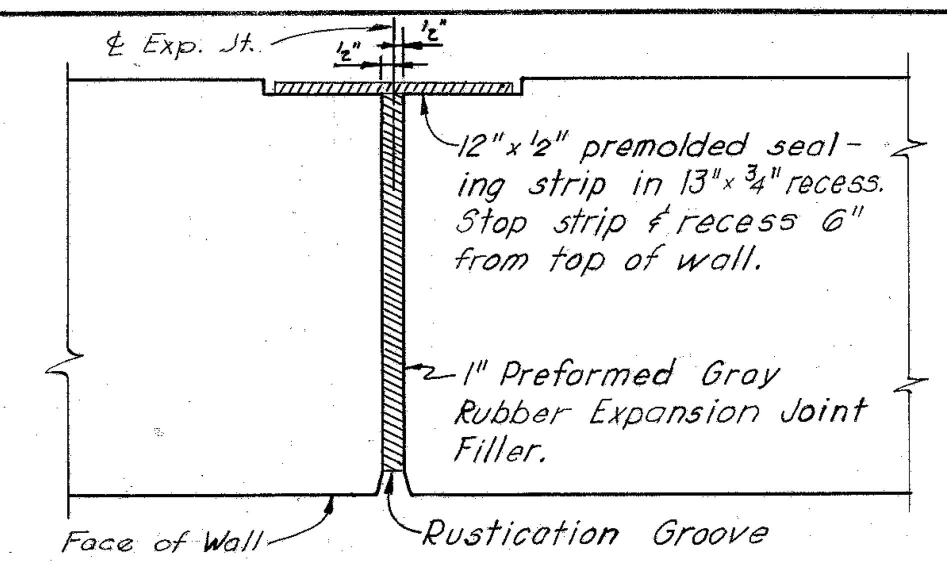
COFFERDAMS, CRIBS AND SHEETING: The Contractor shall furnish sufficient cofferdams, cribs and sheeting to protect public and adjacent property, as directed by the Engineer.

SURFACE FINISH OF CONCRETE: Exposed area of front of wall shall recieve a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.
CONCRETE: All wall concrete shall be Class "E". All parapet concrete shall be Class "C".

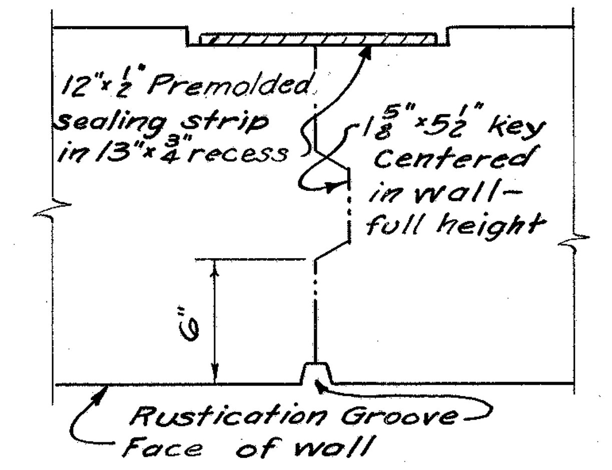
BACKFILL: Backfill shall be impervious material and porous backfill within the limits shown, and shall extend for the full length of the structure.
FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings (and/or soil sampling soundings) made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division office, but the State assumes no responsibility for the accuracy thereof.

Denotes Boring location.

(Continued on sheet #228)



DETAIL OF EXPANSION JOINT



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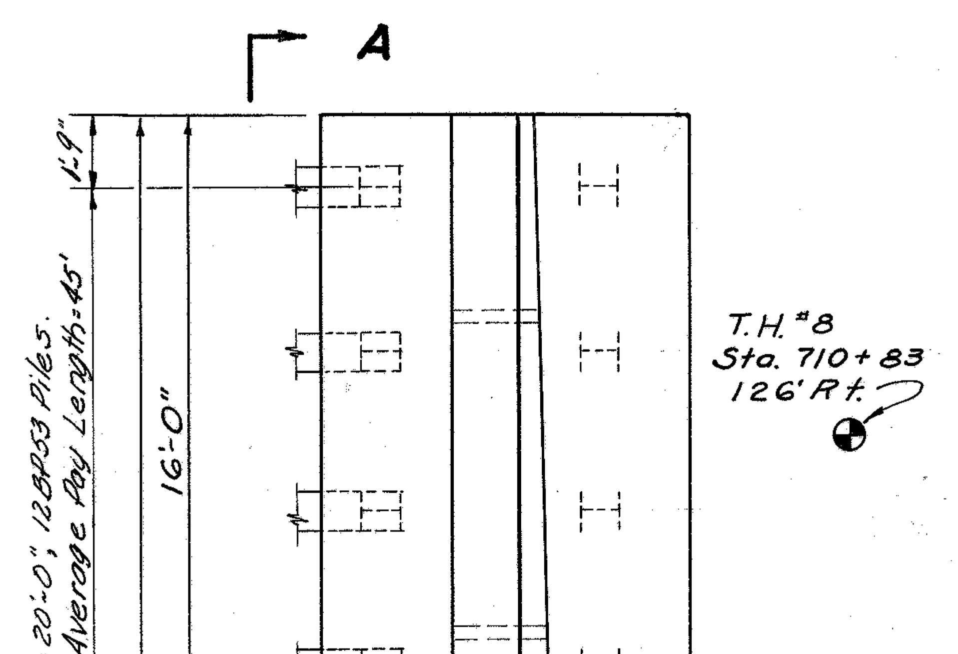
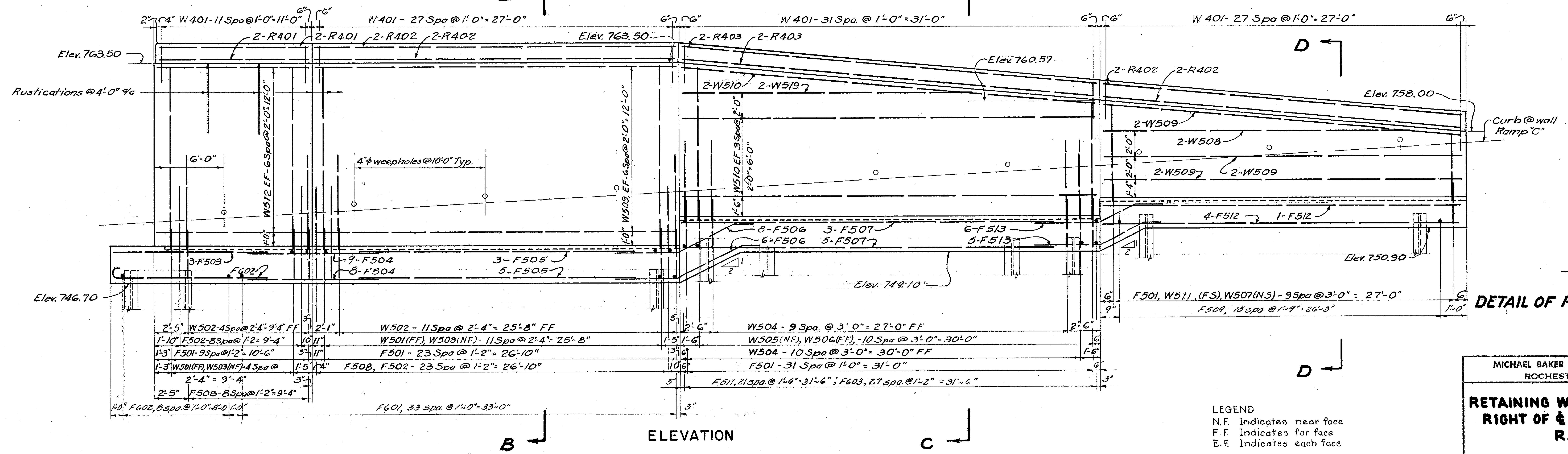


PLAN
Parapet not shown



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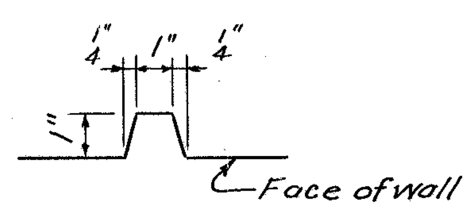


DETAIL OF RUSTICATION

LEGEND
N.F. Indicates near face
F.F. Indicates far face
E.F. Indicates each face

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

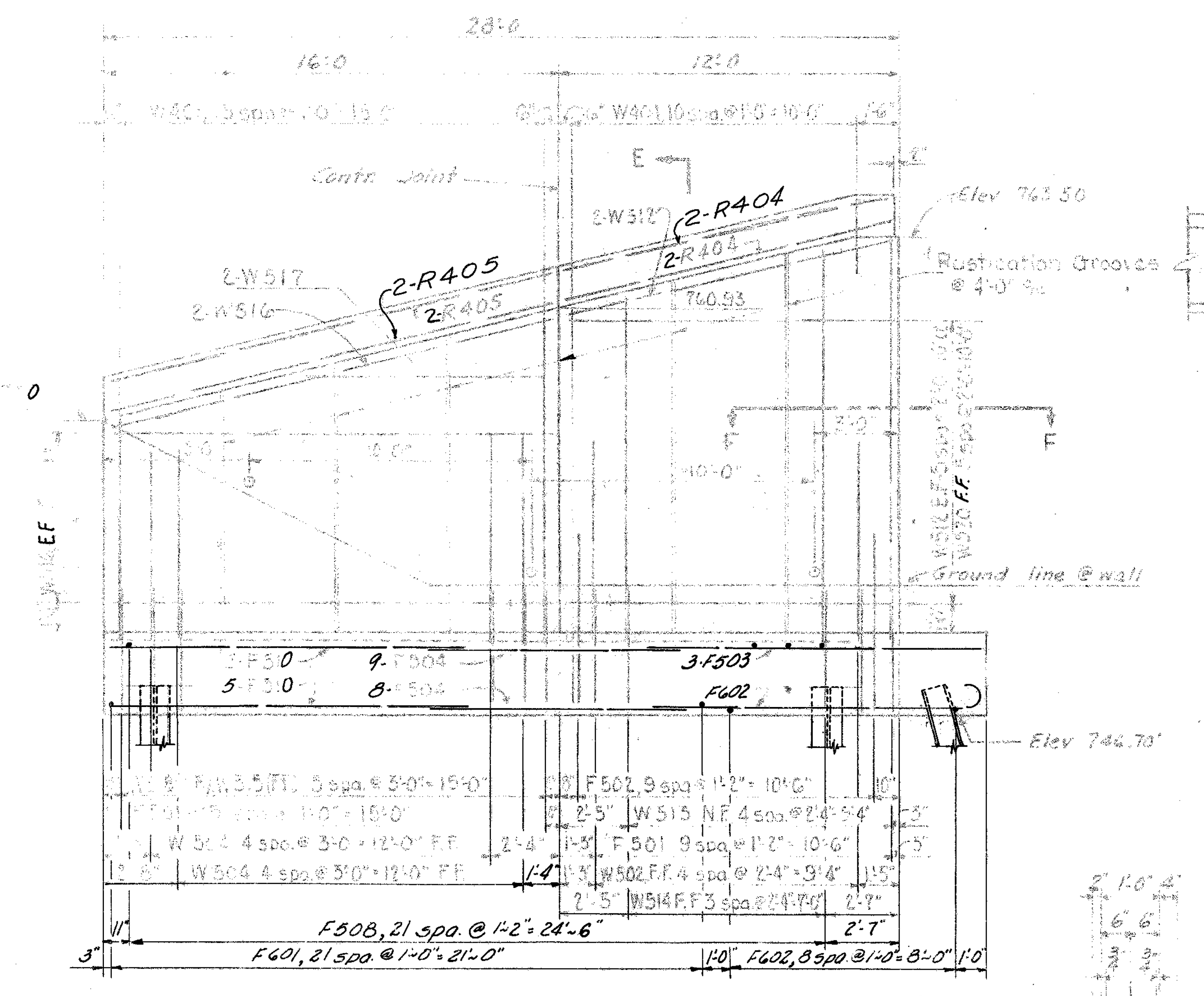
RETAINING WALL PLAN & ELEVATION RIGHT OF ℄ CONSTRUCTION RAMP "C"

JEFFERSON COUNTY — STA. 10+00

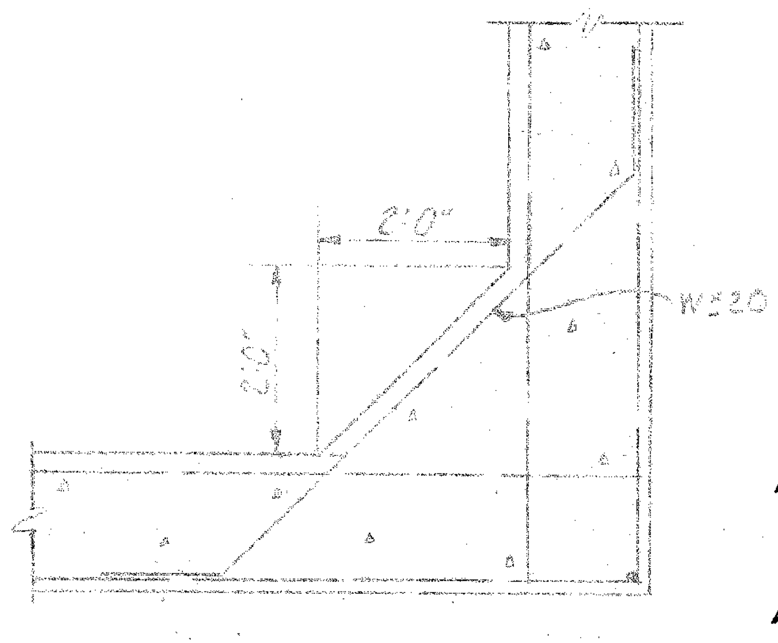
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
JPW	JPW		E.F.R.	E. Roberts 6-6-59	

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	U-430(14)

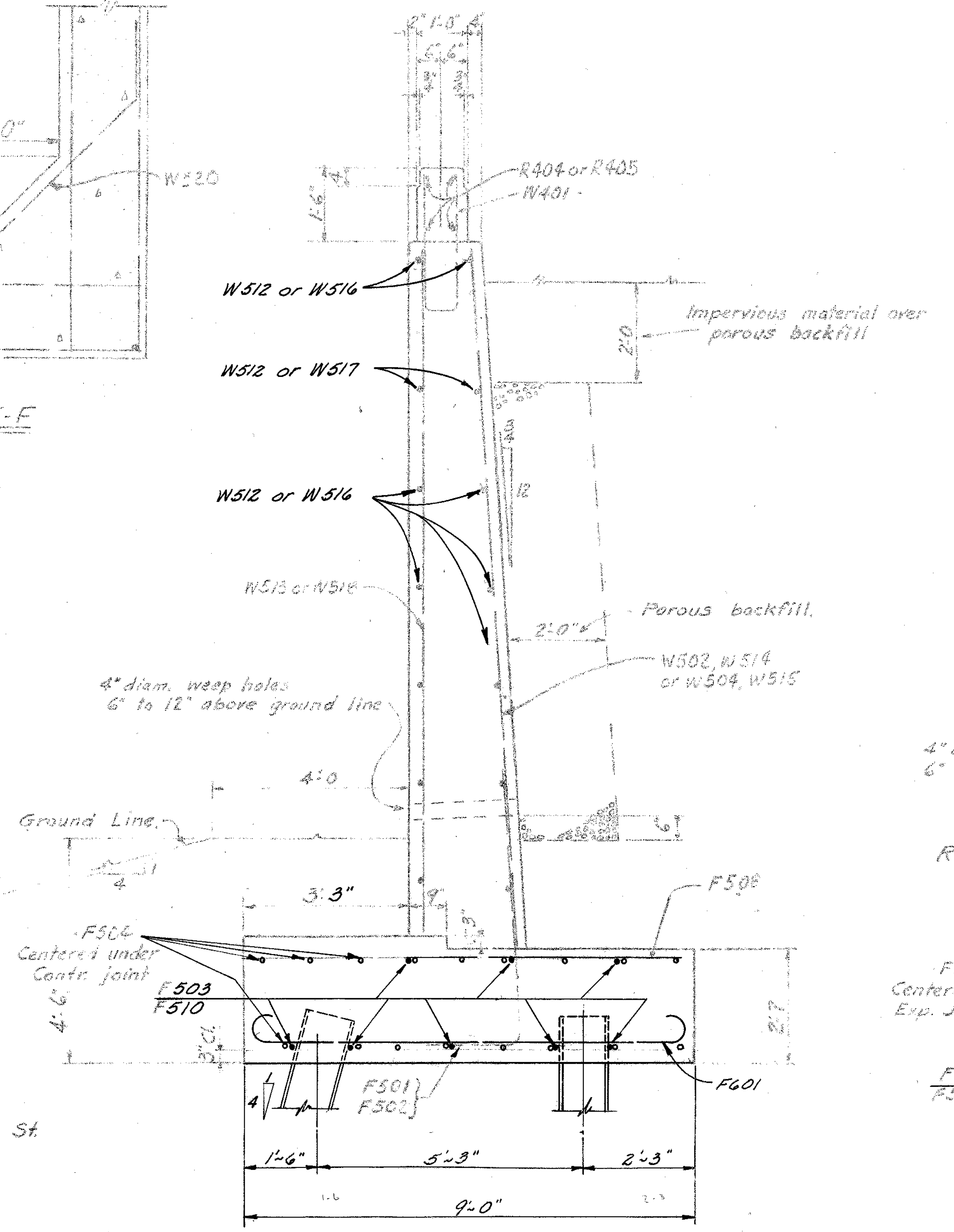
JEFFERSON COUNTY
JEF-7-13.53



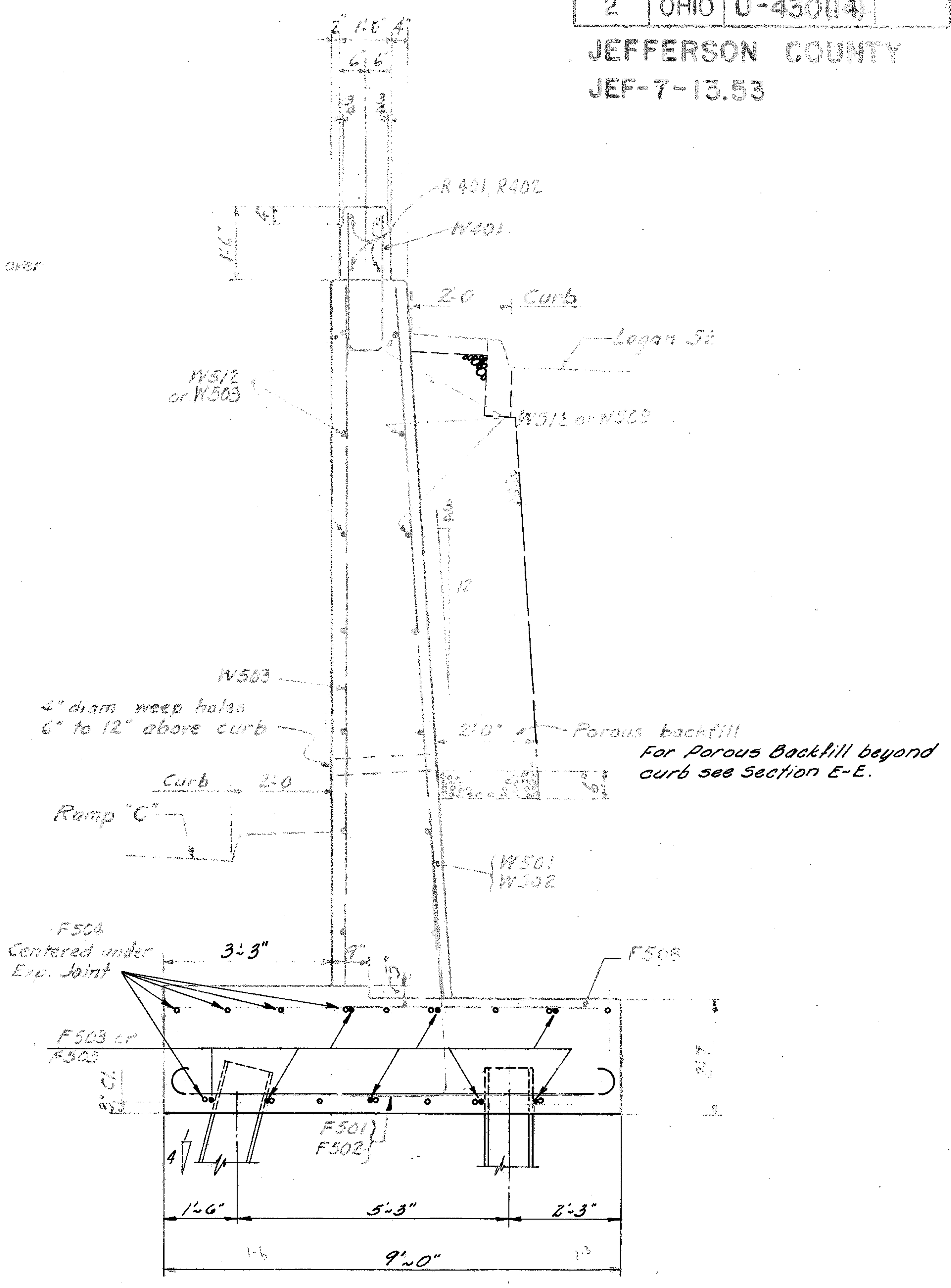
VIEW A-A



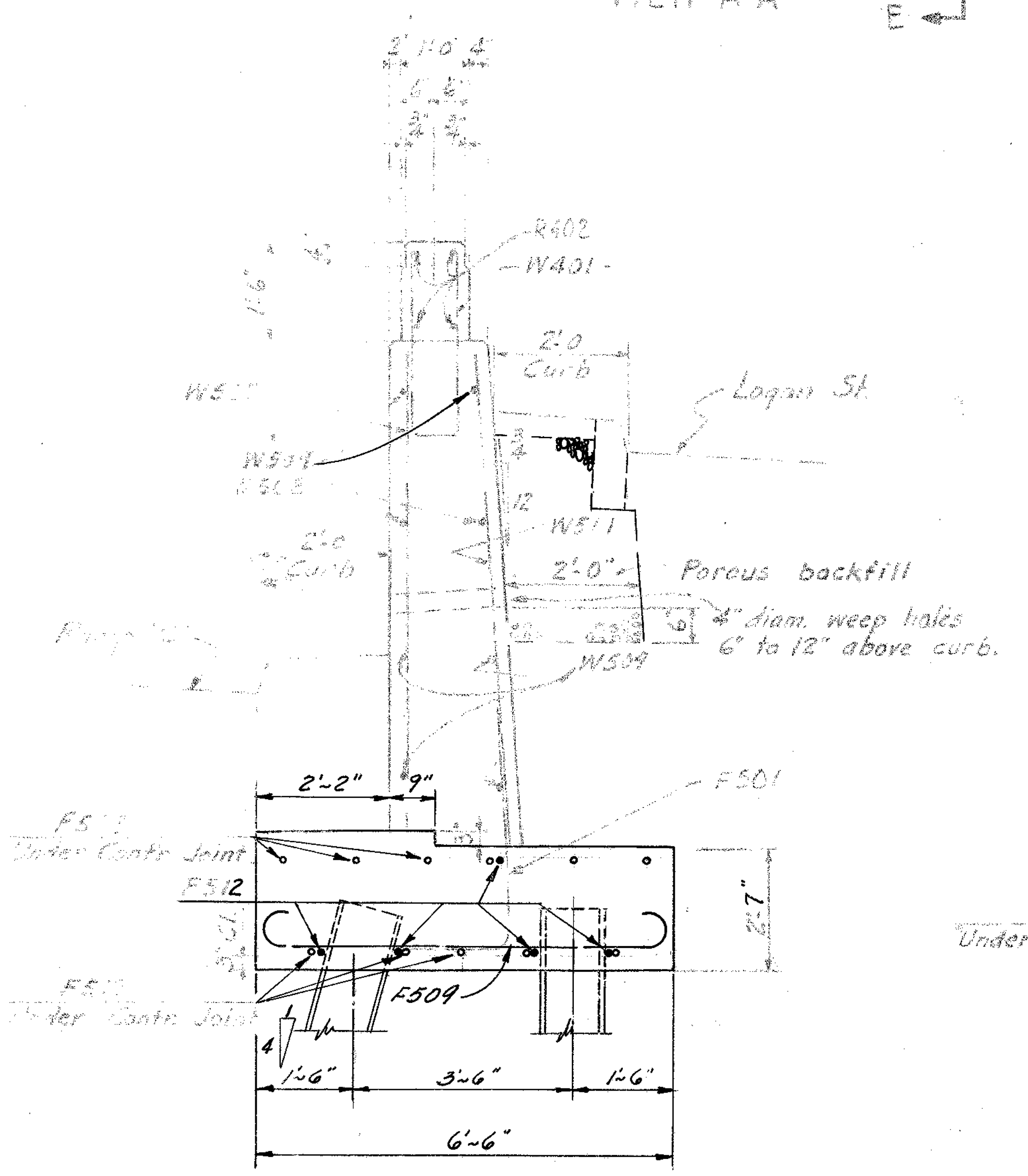
Section F-F



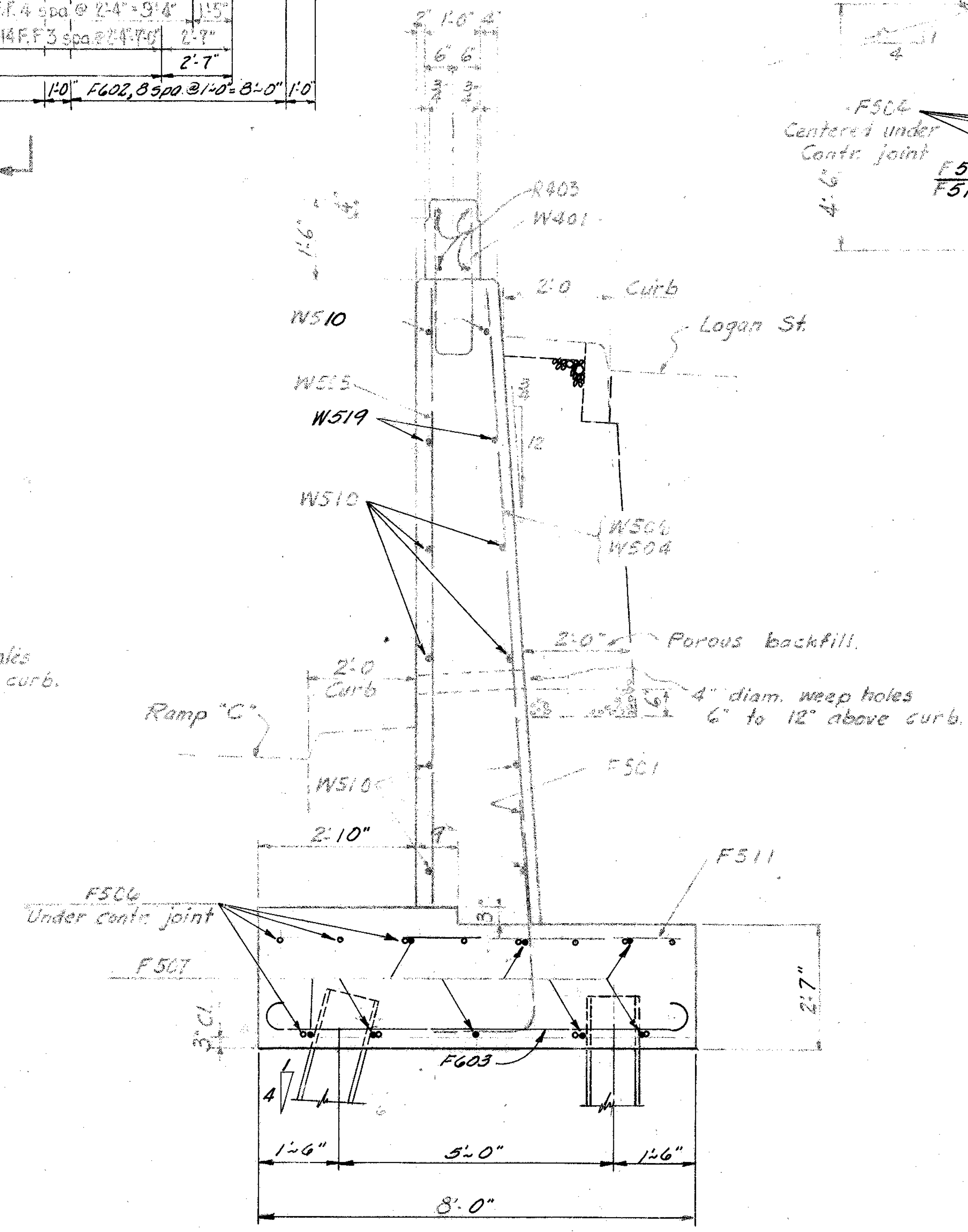
Section E-E



Section B-B



Section D-D



Section C-C

GENERAL NOTES (continued)

Piles shall be driven to firm contact with rock. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec.3-18.05 is not less than the following value for a pile hammer of the indicated energy rating:

LOCATION	7,000 ft.lb. Hammer	11,000 ft.lb. Hammer	15,000 ft.lb. or greater Hammer
	Tons per pile	Tons per pile	Tons per pile
Section B-B	35	27	25
Section C-C	38	30	28
Section D-D	34	26	25
Section E-E	33	25	25

If the energy rating of the hammer is between the ratings as shown above the required formula capacity shall be determined by interpolation. The design load is 25 tons per pile.

LEGEND
N.F. Indicates near face
F.F. Indicates far face
E.F. Indicates each face

Note:
Parapet concrete and reinforcing steel shall be included with Item 5-14, Railing for payment.

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

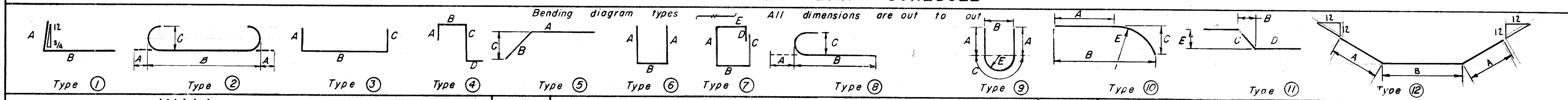
RETAINING WALL DETAILS
RIGHT OF ℄ CONSTRUCTION
RAMP "C"

JEFFERSON COUNTY STA. 10+00

Designed	Drawn	Traced	Checked	Reviewed Date
JPW	JPW		E.F.R.	E. Roberts 6-5-59

REINFORCING STEEL BAR SCHEDULE

Bending diagram types — All dimensions are out to out



WALL

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
W501	17	5	14'-0"	Str.						248
W502	22	5	7'-6"	Str.						172
W503	17	5	13'-9"	Str						244
W504	31	5	6'-1"	Str.						197
W505	11	5	8'-6" to 11'-2½	Str.			Vary	by	3¼"	113
W506	11	5	8'-9" to 11'-5½"	Str.			Vary	by	3¼"	116
W507	10	5	4'-2" to 6'-7¼	Str.			Vary	by	3¼"	57
W508	2	5	23'-6"	Str.						49
W509	20	5	27'-8"	Str.						577
W510	10	5	31'-8"	Str.						330
W511	10	5	4'-5" to 6-10¼	Str.			Vary	by	3¼"	59
W512	28	5	11'-8"	Str.						341
W513	5	5	11'-9" to 13'-9"	Str.			Vary	by	6"	66
W514	4	5	12'-0" to 13'-6"	Str.			Vary	by	6"	53
W515	6	5	7'-7" to 11'-4"	Str.			Vary	by	9"	59
W516	10	5	15'-8"	Str.						163
W517	2	5	9'-0"	Str.						19
W518	6	5	7'-4" to 11'-1"	Str.			Vary	by	9"	58
W519	2	5	22'-6"	Str.						47
W520	6	5	9'-11" to 11'-7"	12	1'-7"	6'-9 to 8'-5"	Vary	by	4"	67
W401	127	4	6'-2"	6	2'-11"	0'-6½				523
R401	4	4	11'-6"	Str.						
R402	8	4	27'-8"	Str.						
R403	4	4	31'-9"	Str.						
R404	4	4	11'-11"	Str.						
R405	4	4	16'-0"	Str.						

R401–R405: Included with railing for Payment (Item - S-14)

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
F 501	102	5	5'-4"	1	3'-11"	1'-7"				567
F 502	43	5	9'-0"	1	7'-7"	1'-7"				404
F 503	6	5	11'-8"	Str.						73
F 504	34	5	10'-0"	Str.						355
F 505	8	5	21'-2"	Str.						177
F 506	14	5	12'-0"	11	5'-0"	4'-10"	5'-5"	1'-7"	2'-5"	175
F 507	8	5	28'-5	Str.						237
F 508	57	5	5'-0"	Str.						297
F 509	16	5	7'-4"	2	7"	6'-2"	5¼"			122
F 510	8	5	12'-5"	Str.						104
F 511	22	5	4'-9"	Str.						109
F 512	5	5	27'-8	Str.						144
F513	11	5	10'-8"	11	5'-0"	3'-8"	4'-1"	1'-7"	1'-10"	122
F601	56	6	10'-0"	2	8"	8'-8"	6"			841
F602	18	6	12'-4"	8	8"	11'-8"	6"			333
F603	28	6	9'-0"	2	8"	7'-8"	6"			379

Total Weight 7997

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT

Total Weight

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION
E-2	Lump	Sum	Cofferdams, Cribs and Sheeting
E-2	452	C.Y.	Excavation for Structures
S-1	93	C.Y.	Class "E" Concrete, walls
S-1	105	C.Y.	Class "E" Concrete, footings
S-3	43	L.F.	Waterproofing, premolded sealing strip
S-4	7997	lbs	Reinforcing Steel
S-9	27	S.F.	1" Preformed expansion Joint filler (Grey Rubber M-10.02)
S-14	128	L.F.	Railing (concrete parapet)
S-16	Lump	Sum	First Test Pile.
S-18	1760	L.F.	Steel Piles, 12 BP53
S-29	55	C.Y.	Porous Backfill

REPLACEMENT BARS

MARK	NO.	SIZE	LENGTH	TYPE	WEIGHT
RE401	1	4	5'-3"	Str.	
RE501	1	5	5'-7"	Str.	

REPLACEMENT BARS:
If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy. Testing Laboratory, test sample as provided in section S-402 need not be furnished and replacement bars will not be required.

BAR SIZE:
Bar size is indicated in the barmark. The first digit where three digits are used and the first two where four are used, indicates the bar size number. For example, A401 is a number 4 bar and A1114 is a number 11 size bar.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL
REINFORCING STEEL LIST AND ESTIMATED QUANTITIES
RIGHT OF ℄ CONSTRUCTION
RAMP "C"
JEFFERSON COUNTY STA. 10+00

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
JPW	JPW		E.F.R.	E. Roberts 6-6-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U 430 (14)	

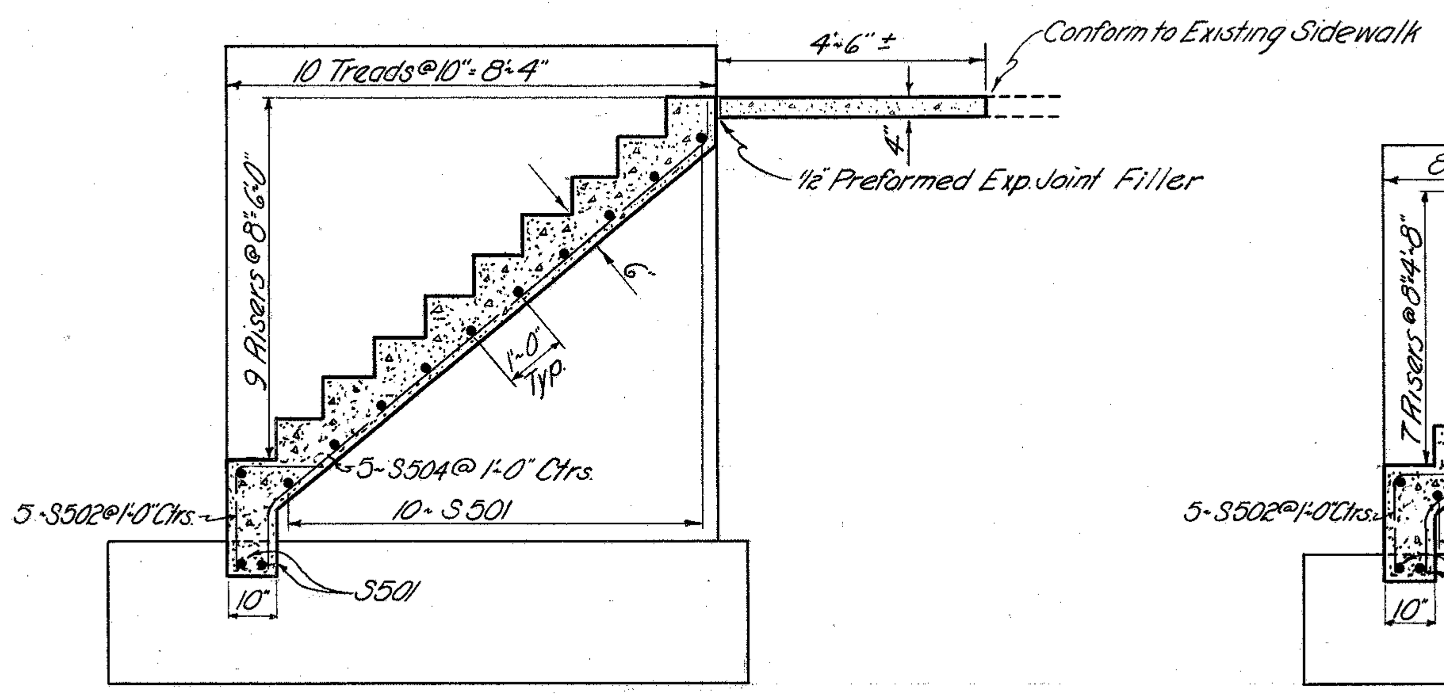
230
307

JEFFERSON COUNTY
JEF-7-13.53

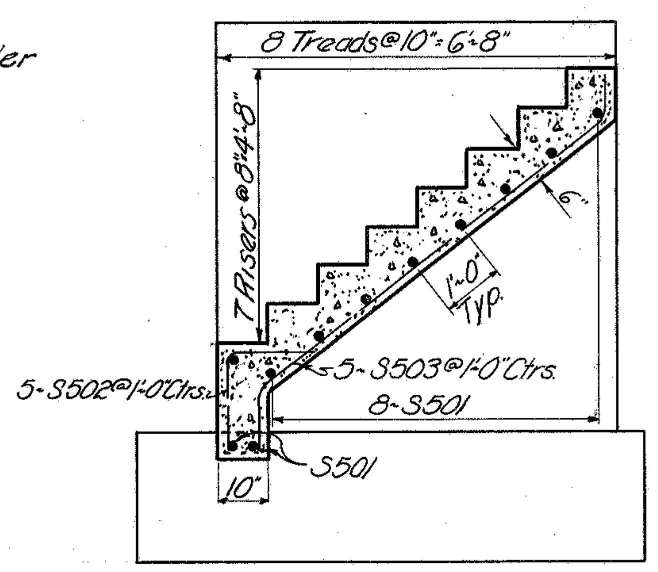
PLAN

ELEVATION

NOTES: DESIGN SPECIFICATIONS: This structure conforms to the requirements of the "Design Specifications for Highway Structures" of the State of Ohio Department of Highway Structures, dated 9-1-57 together with current revisions thereof.
FOUNDATION BEARING PRESSURE: Spread footing are designed for a maxium bearing pressure of 1.25 ton per sq.ft.
SURFACE FINISH OF CONCRETE; Exposed area of front face of wall shall receive a rubbed surface finish. All other exposed surfaces shall be governed by provisions of Item S-1.
CONCRETE; ~~All wall concrete shall~~ be Class "E" The concrete for the key at the bottom of the footing shall be placed in a carefully made trench against undisturbed earth, and placed monolithically with the footing. ~~All concrete for stairs shall be Class "C"~~
BACKFILL; Backfill shall be impervious material and porous backfill within the limits shown, and shall extend for the full length of the structure.
COFFER DAMS, CRIBS, AND SHEETING; The contractor shall furnish sufficient cofferdams, cribs, and sheeting to protect and maintain the existing houses as directed by the Engineer.



SECTION C-C
SECTION J-J



SECTION A-A

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DISCRIPTION
E-2	Lump	Sum	Cofferdams, Cribs and Sheeting
E-2	469	C.Y.	Excavation for Structures
S-1	90	C.Y.	Class "E" Concrete ~ Wall
S-1	87	C.Y.	Class "E" Concrete ~ Footings
S-3	50	L.F.	Waterproofing, Premolded Sealing Strip
S-4	5,386	Lb.	Reinforcing Steel
S-29	48	C.Y.	Porous Backfill
I-13	140	L.F.	Concrete Steps
I-13	68	S.F.	4" Sidewalk

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL PLAN & ELEVATION
LT. OF ℄ CONSTRUCTION
LOGAN AVE. RELOCATION

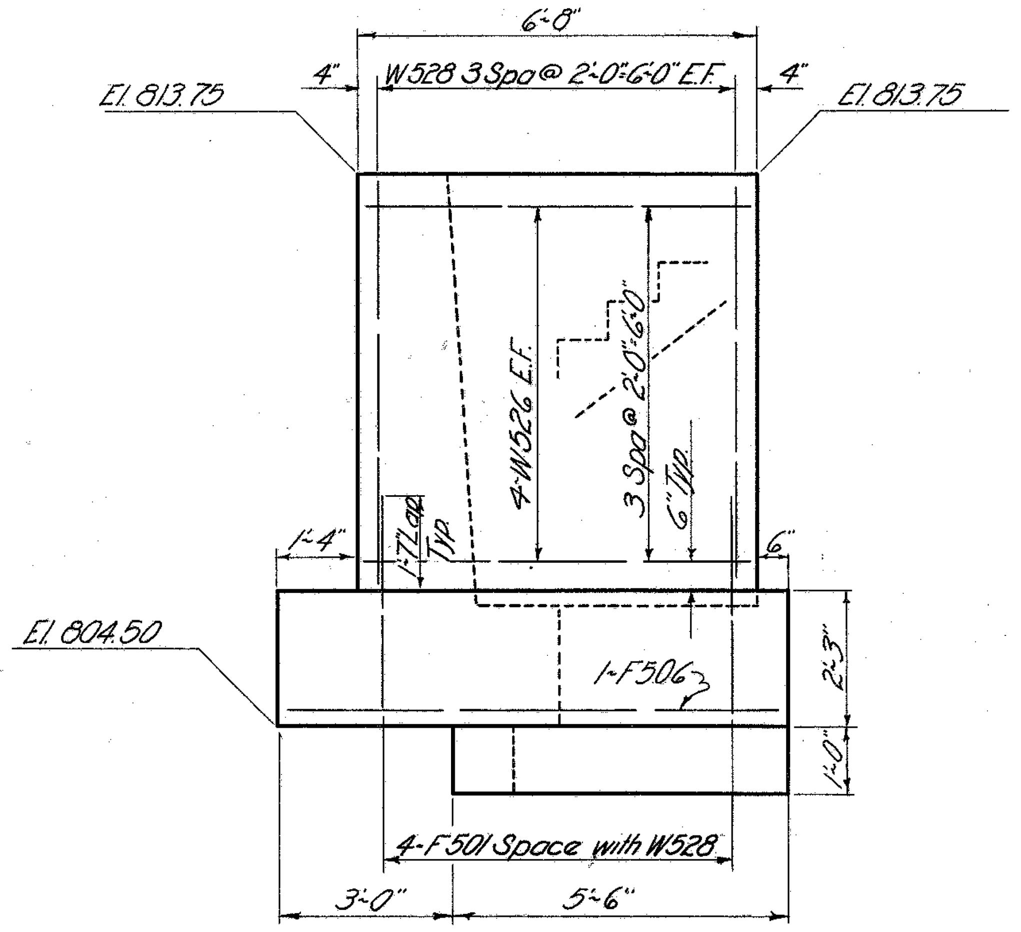
JEFFERSON COUNTY STA. 26+16

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
B.S. G.G.	B.	B.	G.G. B.S.	E. Roberts 6-6-59	

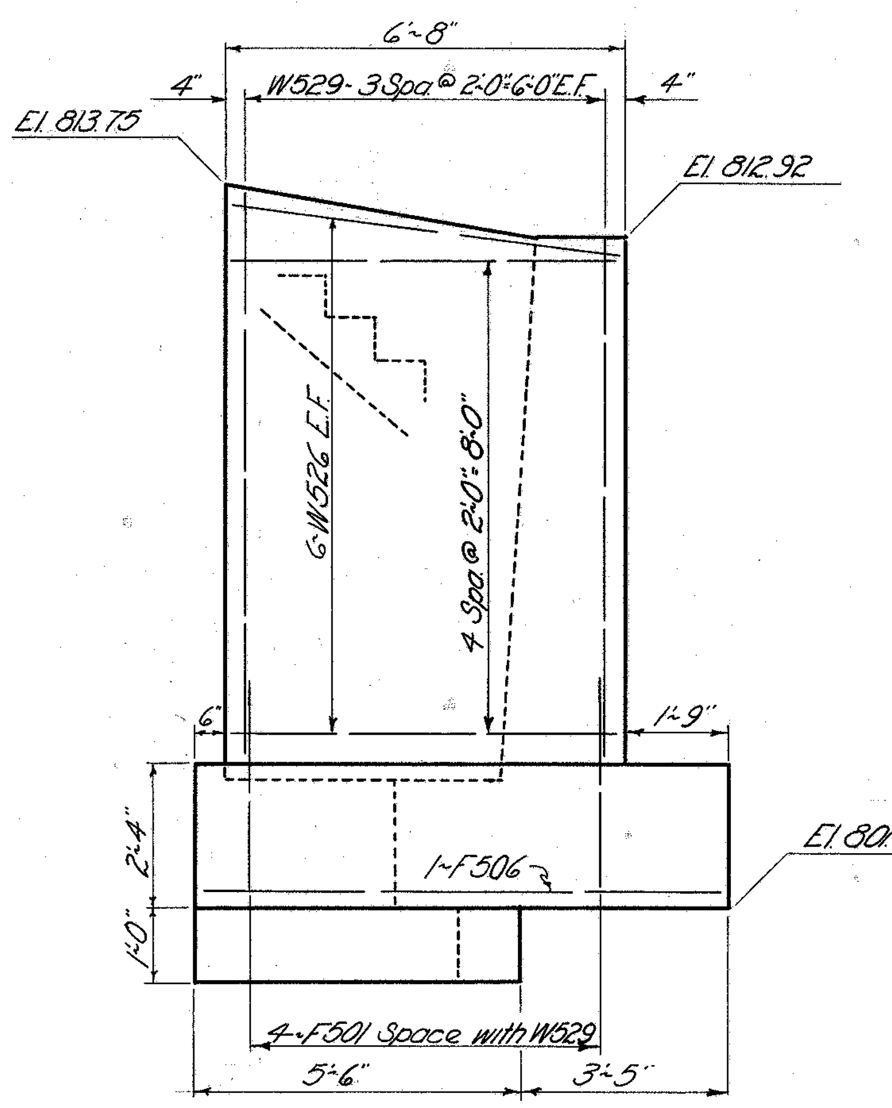
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U 430 (14)	

231
307

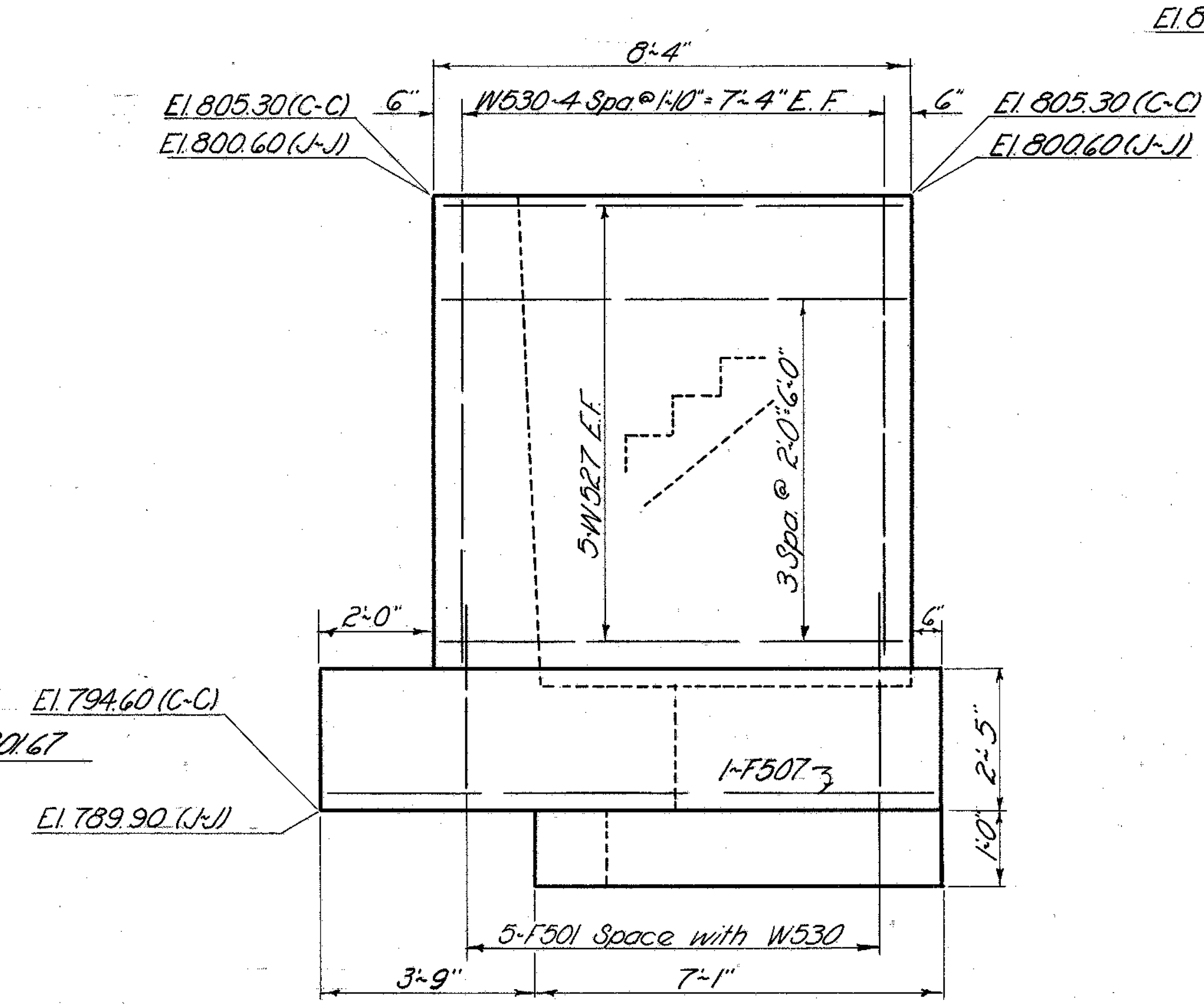
JEFFERSON COUNTY
JEF-7-13.53



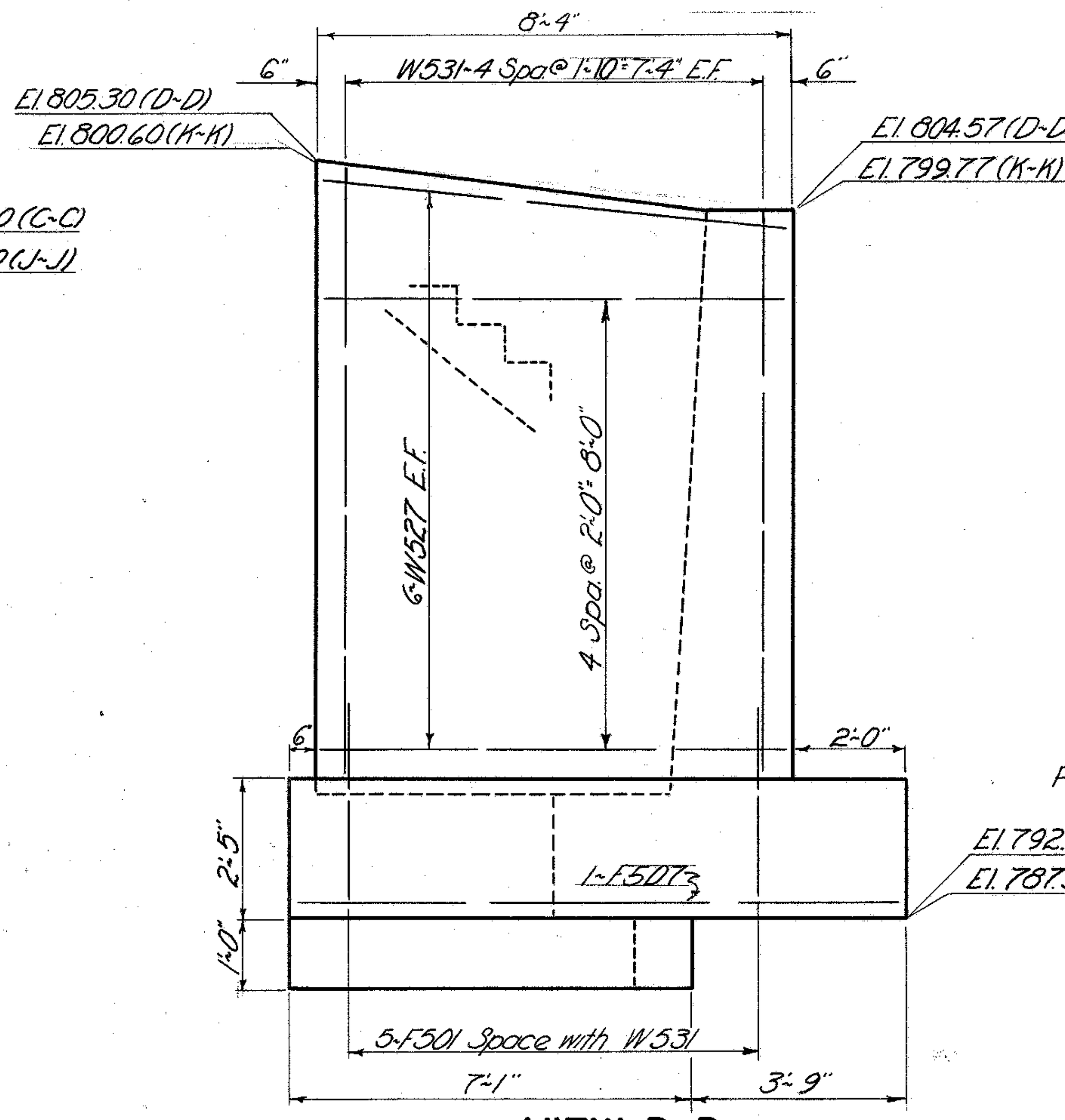
VIEW A-A



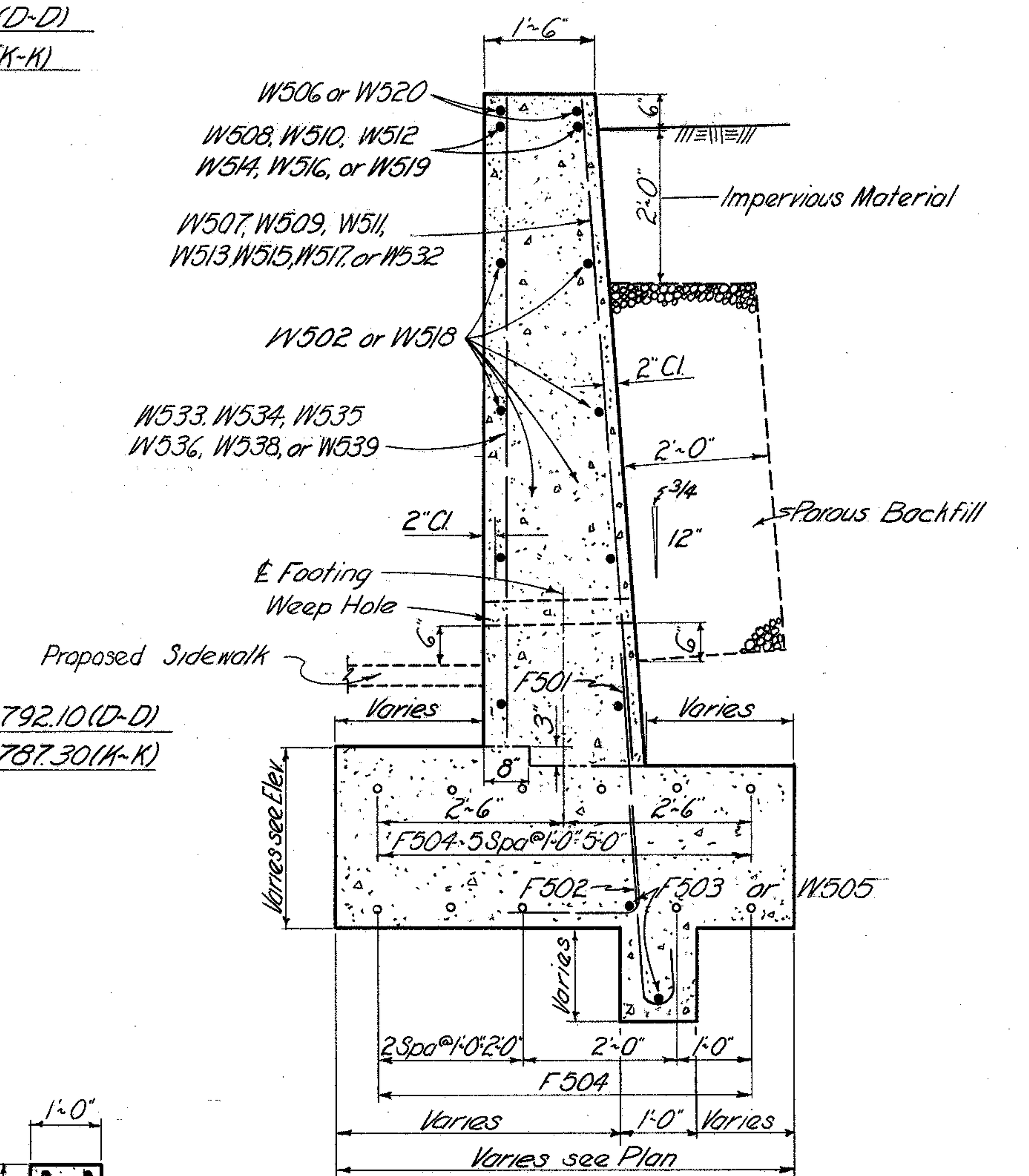
VIEW B-B



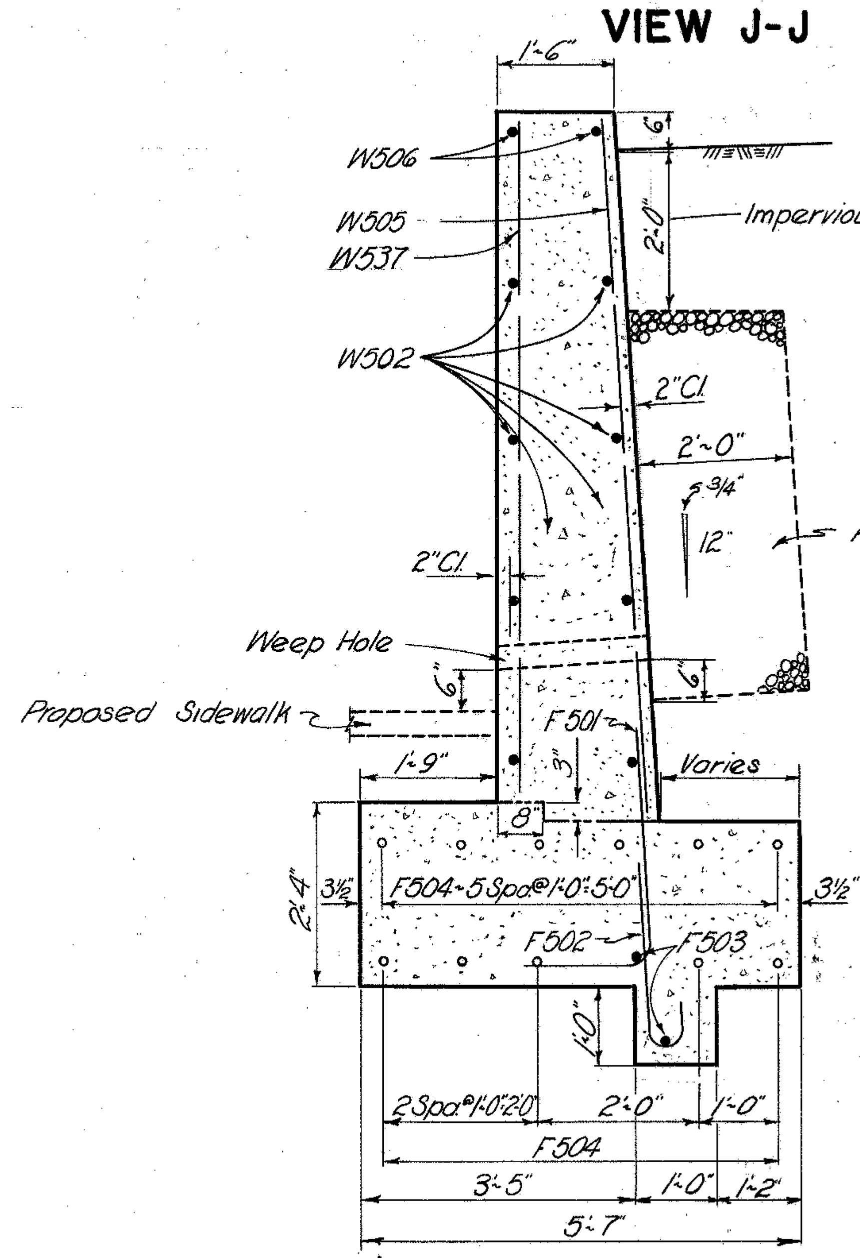
VIEW C-C
VIEW J-J



VIEW D-D
VIEW K-K



SECTION E-E



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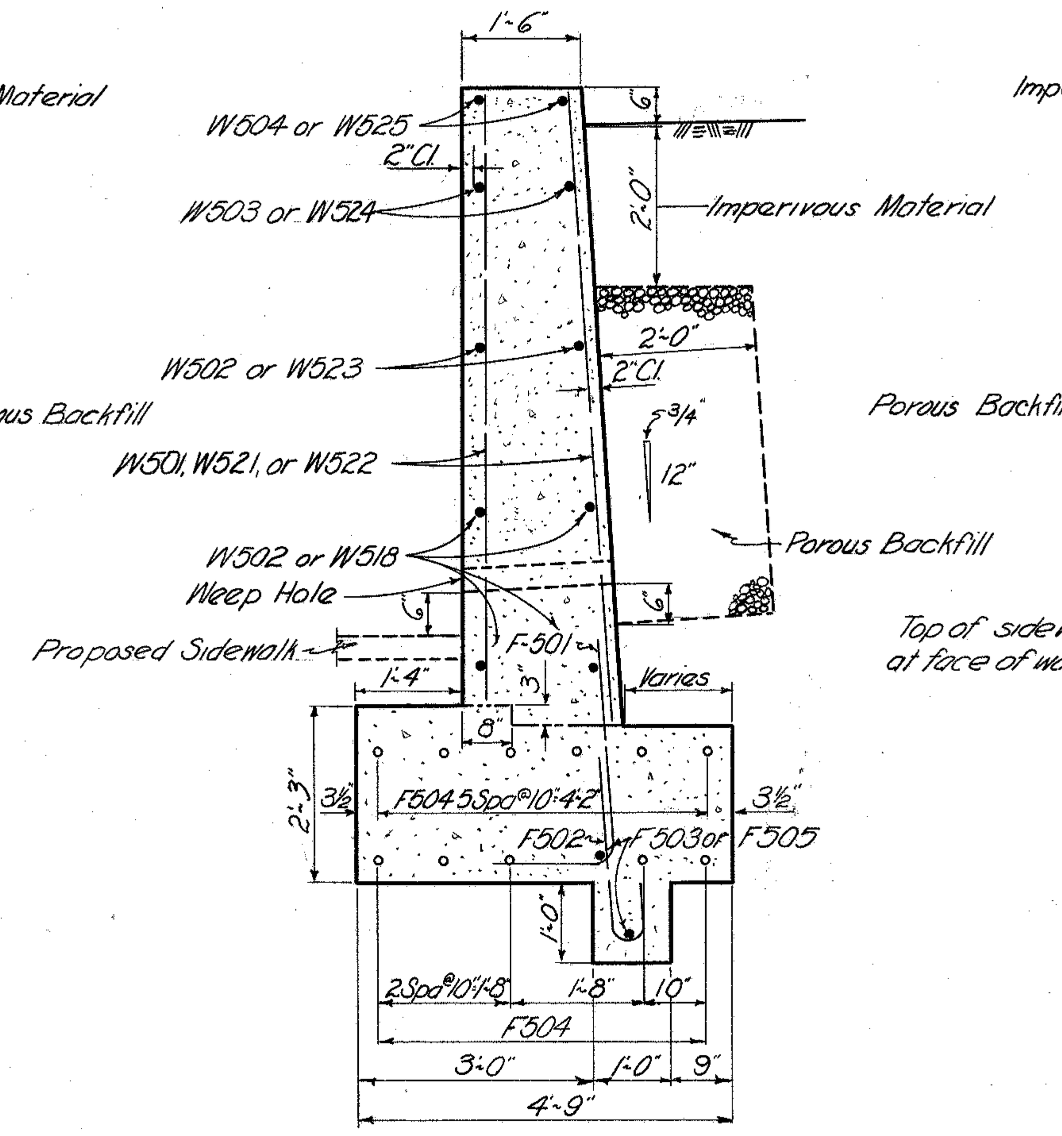
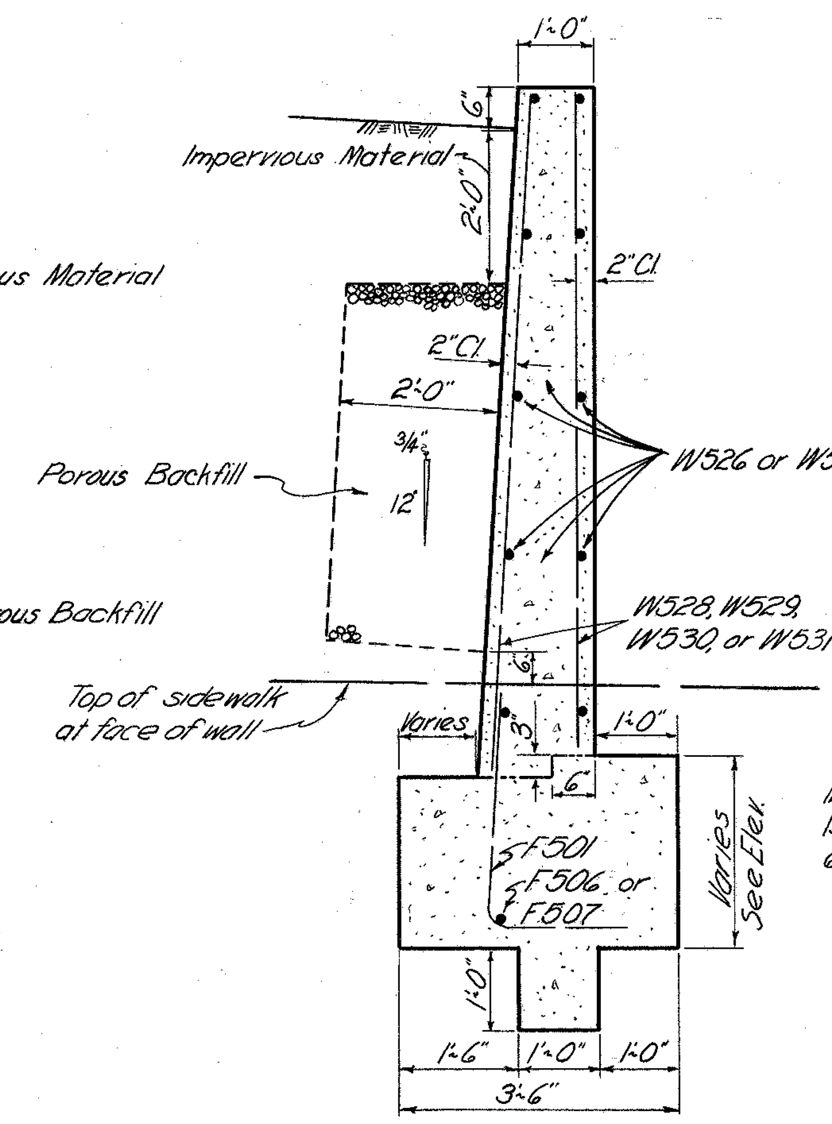
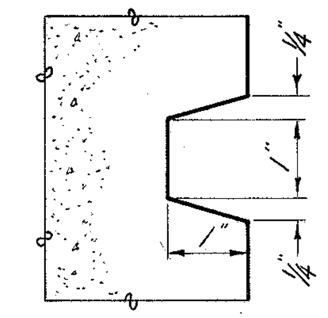


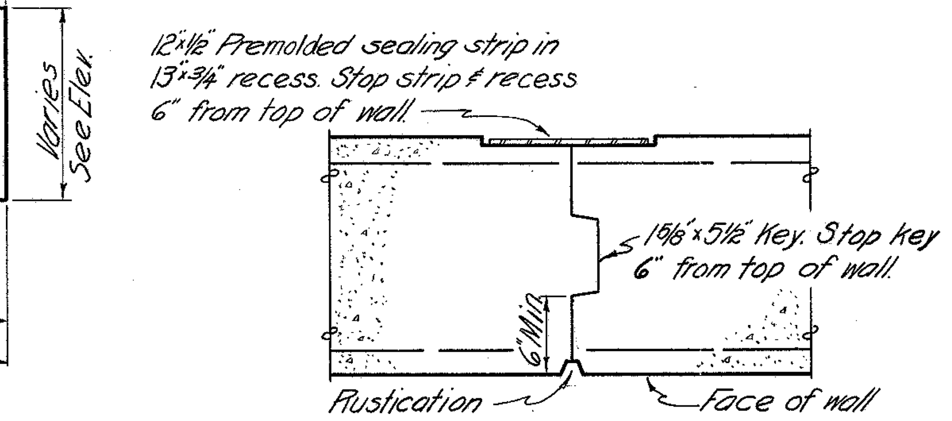
SECTION G-G



SECTION H-H



RUSTICATION



CONTRACTION JOINT

All bar dimensions are out to out.

BAR SCHEDULE

Type 1 — Type 2 — Type 3 — Type 4 — Type 5

MARK	NO.	SIZE	LENGTH	TYPE	A	B	C	D	WEIGHT
W501	Two Ea.	5	5'-7" to 7'-3"	Str.	Vary by 10" (6 bars)				40
W502	54	5	15'-8"	Str.					882
W503	2	5	11'-9"	Str.					25
W504	4	5	8'-0"	Str.					33
W505	One Ea.	5	7'-0" to 8'-0"	Str.	Vary by 3" (9 bars)				75
W506	12	5	15'-9"	Str.					197
W507	One Ea.	5	7'-4" to 9'-4"	Str.	Vary by 3" (9 bars)				78
W508	2	5	5'-6"	Str.					11
W509	One Ea.	5	7'-9" to 9'-3"	Str.	Vary by 2" (10 bars)				89
W510	2	5	6'-9	Str.					14
W511	One Ea.	5	8'-3" to 10'-2"	Str.	Vary by 2½"+ (10 bars)				96
W512	2	5	11'-6"	Str.					24
W513	One Ea.	5	8'-2" to 10'-1"	Str.	Vary by 2½"+ (10 bars)				95
W514	2	5	11'-9"	Str.					25
W515	One Ea.	5	8'-3" to 10'-2"	Str.	Vary by 2½"+ (10 bars)				96
W516	2	5	11'-3"	Str.					23
W517	One Ea.	5	9'-7" to 10'-1"	Str.	Vary by 2" (4 bars)				41
W518	12	5	11'-8"	Str.					146
W519	2	5	8'-0"	Str.					17
W520	4	5	6'-0"	Str.					25
W521	Two Ea.	5	6'-9" to 7'-3"	Str.	Vary by 3" (6 bars)				44
W522	Two Ea.	5	3'-2 to 8'-6"	Str.	Vary by 1'-4" (10 bars)				61
W523	2	5	9'-3"	Str.					19
W524	2	5	5'-0"	Str.					10
W525	2	5	12'-9"	Str.					27
W526	20	5	6'-4"	Str.					132
W527	44	5	8'-0"	Str.					367
W528	8	5	6'-10"	Str.					57
W529	Two Ea.	5	8'-9" to 9'-6"	Str.	Vary by 3" (8 bars)				76
W530	20	5	8'-1"	Str.					169
W531	Four Ea.	5	9'-10" to 10'-6"	Str.	Vary by 2" (20 bars)				212
W532	One Ea.	5	7'-4 to 8'-10"	Str.	Vary by 6" (4 bars)				34
W533	One Ea.	5	7'-0" to 9'-1"	Str.	Vary by 5" (6 bars)				50
W534	One Ea.	5	7'-6" to 9'-2"	Str.	Vary by 4" (6 bars)				52
W535	Two Ea.	5	7'-10" to 9'-11"	Str.	Vary by 5" (12 bars)				111
W536	One Ea.	5	7'-9" to 9'-10"	Str.	Vary by 5" (6 bars)				55
W537	One Ea.	5	6'-11" to 8'-7"	Str.	Vary by 4" (6 bars)				49
W538	One Ea.	5	7'-1" & 8'-3"	Str.	(2 bars)				16
W539	One Ea.	5	9'-0" to 9'-10"	Str.	Vary by 5" (3 bars)				29
F501	105	5	5'-4"	1	3'-9"	1'-7"			584
F502	77	5	3'-2"	2	2'-7"				254
F503	14	5	15'-8"	Str.					229
F504	55	5	10'-7"	3	5'-7"	5'-0"			607
F505	4	5	11'-8"	Str.					49
F506	2	5	8'-2"	Str.					17
F507	4	5	10'-6"	Str.					44
S501	37	5	4'-7"	Str.					*
S502	Three Ea.	5	2'-6" to 4'-10"	4	1'-0"	1'-6" to 3'-10" Vary by 7" (15 bars)			*
S503	One Ea.	5	8'-11" to 11'-7"	5	7'-5	7"	1'-0" to 3'-8" Vary by 8" (5 bars)		*
S504	Two Ea.	5	11'-0" to 13'-4"	5	9'-7	7"	10" to 3'-2" Vary by 7" (10 bars)		*

5,386 Total Weight

* Included with I-13, concrete steps, for payment.

REPLACEMENT BARS

MARK	NO.	SIZE	LENGTH	TYPE
RE501	1	5	5'-7"	Str.

REPLACEMENT BARS: If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy. Testing Laboratory, test sample as provided in section S-402 need not be furnished and replacement bars will not be required.
BAR SIZE: Bar size is indicated in the bar mark. The first digit where three digits are used and the first two where four are used, indicates the bar size number. For example, A401 is a number 4 bar and A1114 is a number 11 size bar.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

RETAINING WALL DETAILS & REINFORCING STEEL LIST
LT. OF ℄ CONSTRUCTION
LOGAN AVE. RELOCATION
JEFFERSON COUNTY STA. 26+16

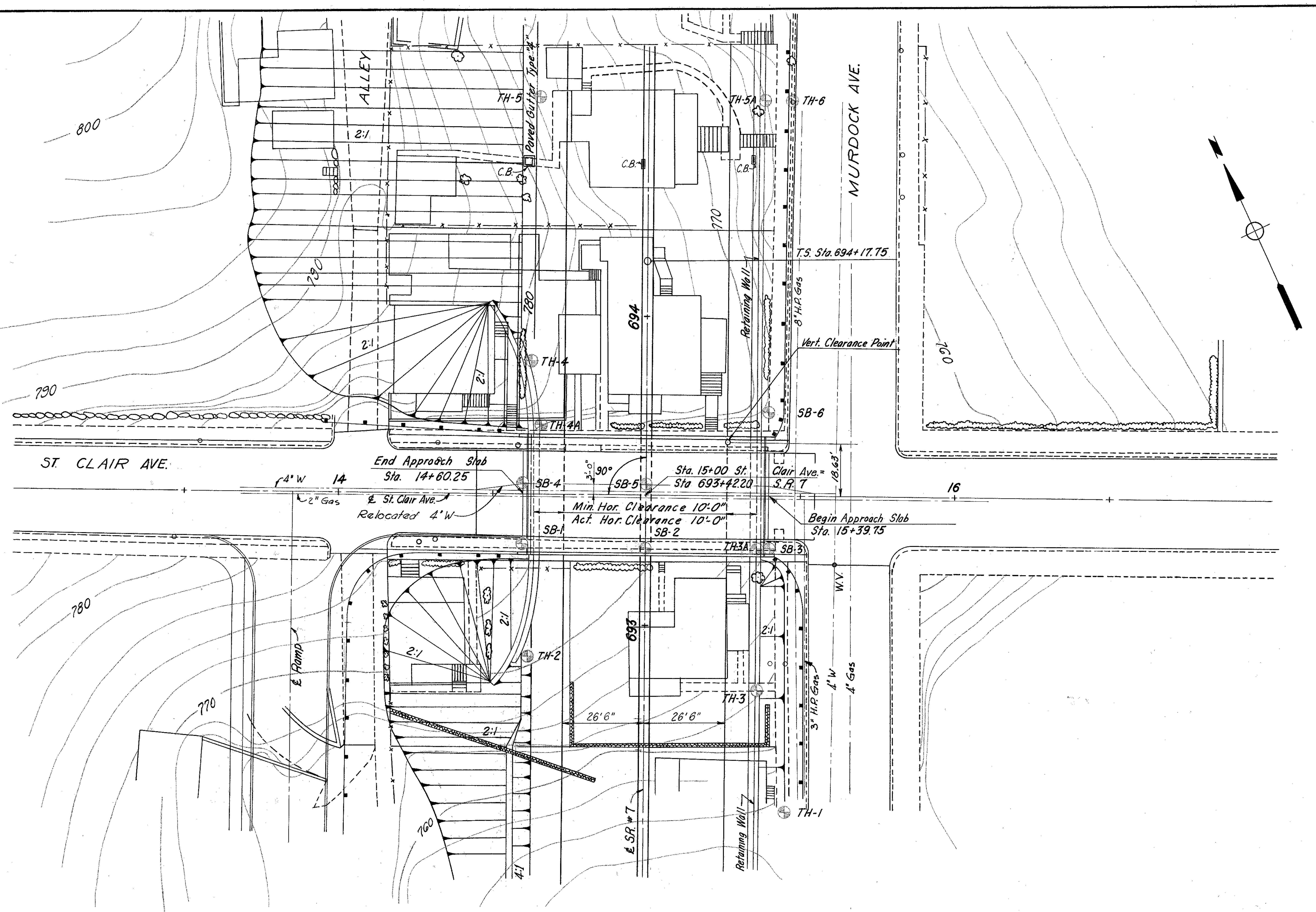
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
B.S. G.G.	B	B	G.G. B.S.	E. Roberts 6-6-59	

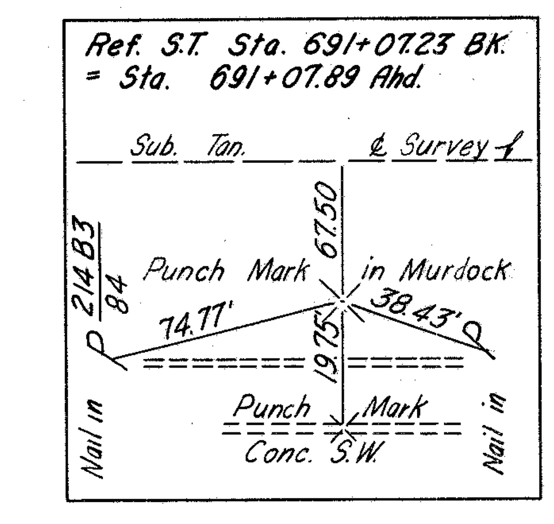
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(14)	

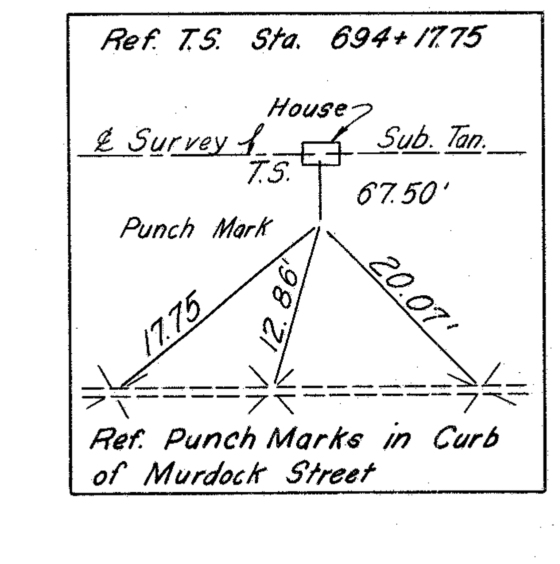
232/307

JEFFERSON COUNTY
JEF-7-13.53

B.M. R.R. Spike in pole 81' Rt. Sta. 694+86 Elev. 759.22



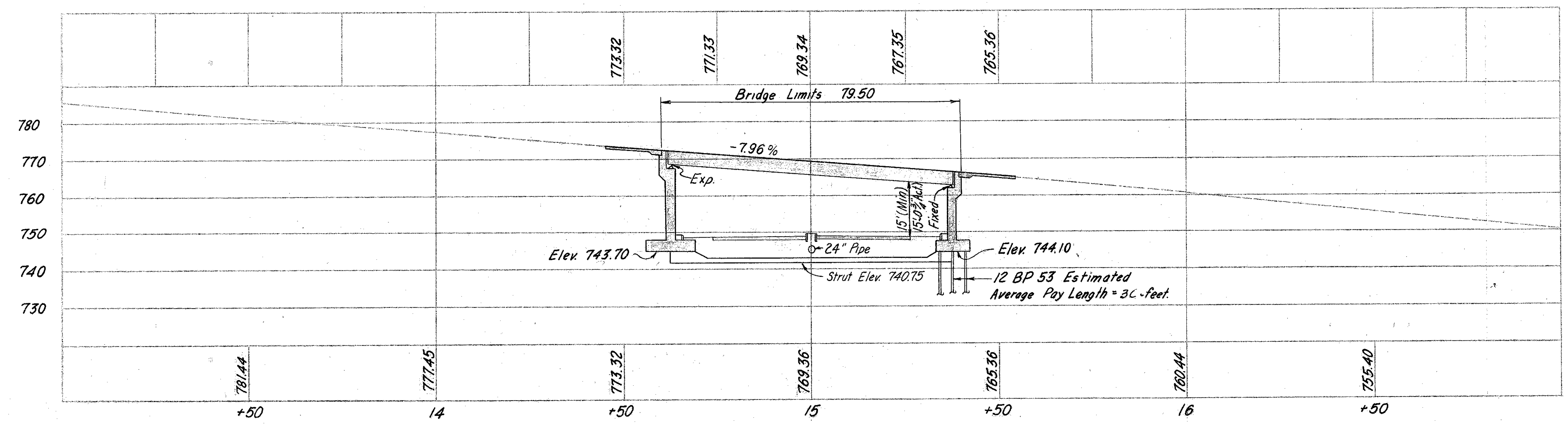




FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of borings and soil sampling soundings made at the site. The sounding information may be inspected in the office of the Bureau of Bridges in Columbus, or in the division office, but the State assumes no responsibility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

⊕ Indicates boring location

Boring	Rock El.
SB-1	737.5
SB-2	737.0
SB-3	709.0
SB-4	744.5
SB-5	732.8
SB-6	No Rock
TH-2	746.0



PROFILE ALONG ℄ ST. CLAIR AVE.

PROPOSED STRUCTURE

Type: Steel Beam Single Span with reinf. conc. deck and substructure.
Span: 75'-0" c/c Bearings
Roadway: 28'-0" f. to f. 5'-2" Sidewalks
Load Frequency: CF=130 (57)
Skew None
Wearing Surface: 3/4 Monolithic Conc.
Approach Slabs: AS-1-54 (15' Long)
Alignment: Tangent

RECEIVED SEP 2 1959

MICHAEL BAKER, JR. CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SITE PLAN
BRIDGE NO. JEF-7-1374
UNDER ST. CLAIR AVENUE

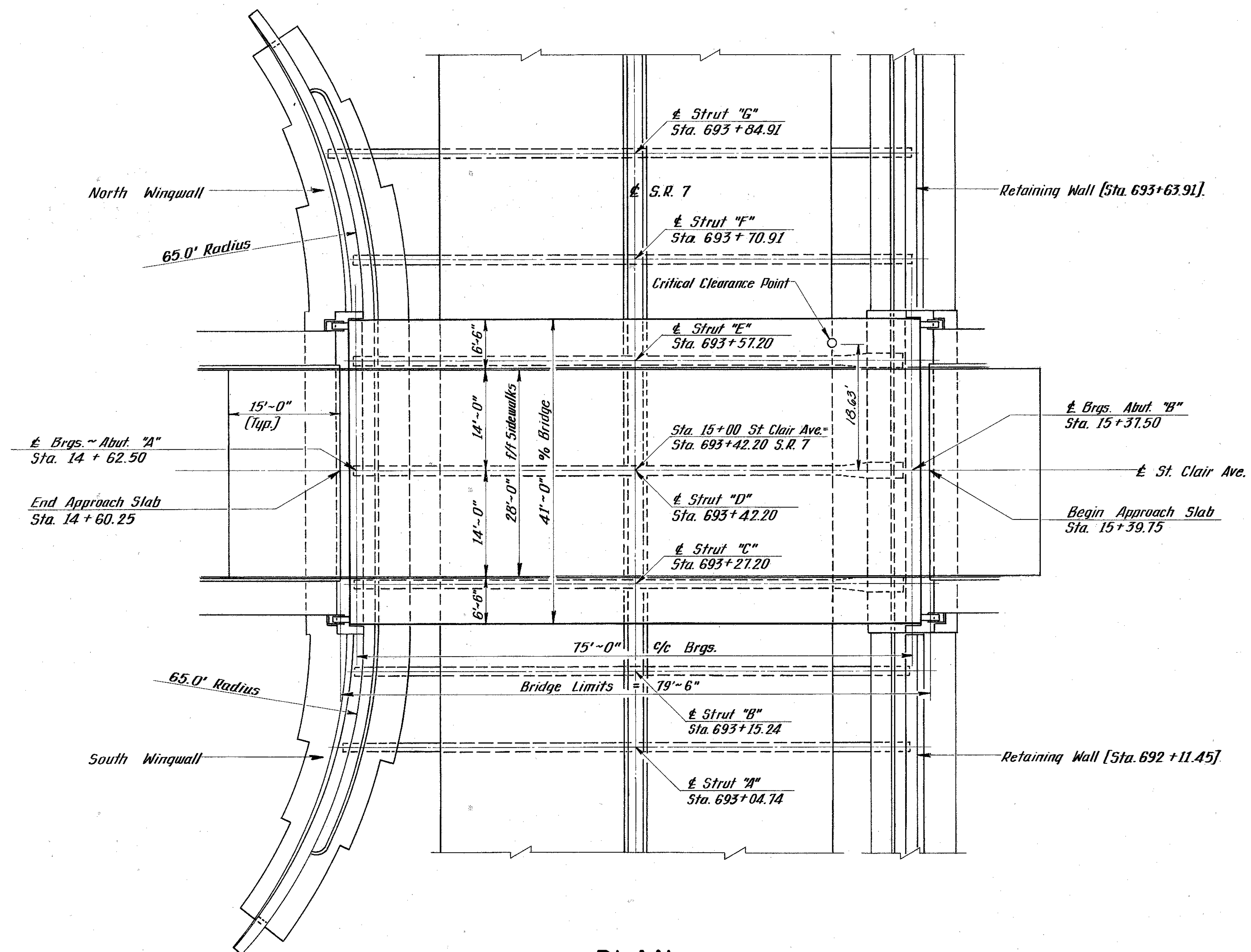
JEFFERSON COUNTY STA. 693+42.20

PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
Aerial		J.D.R.	J.D.R.	A.S.J.	E.F.R. 10-17-58

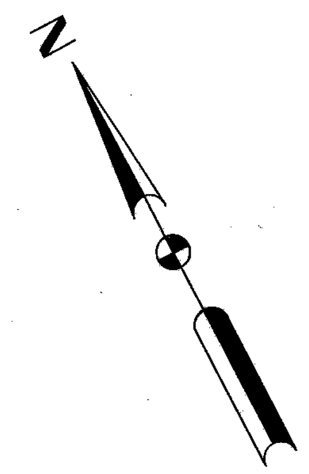
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

233
307

JEFFERSON COUNTY
JEF. -7-13.53



PLAN



GENERAL NOTES

DESIGN SPECIFICATIONS: *This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof.*

REFERENCE *shall be made to Standard Drawings CSB-2-56, sheet 2 of 6, revised 2-2-59 and RB-1-55 revised 2-2-59.*

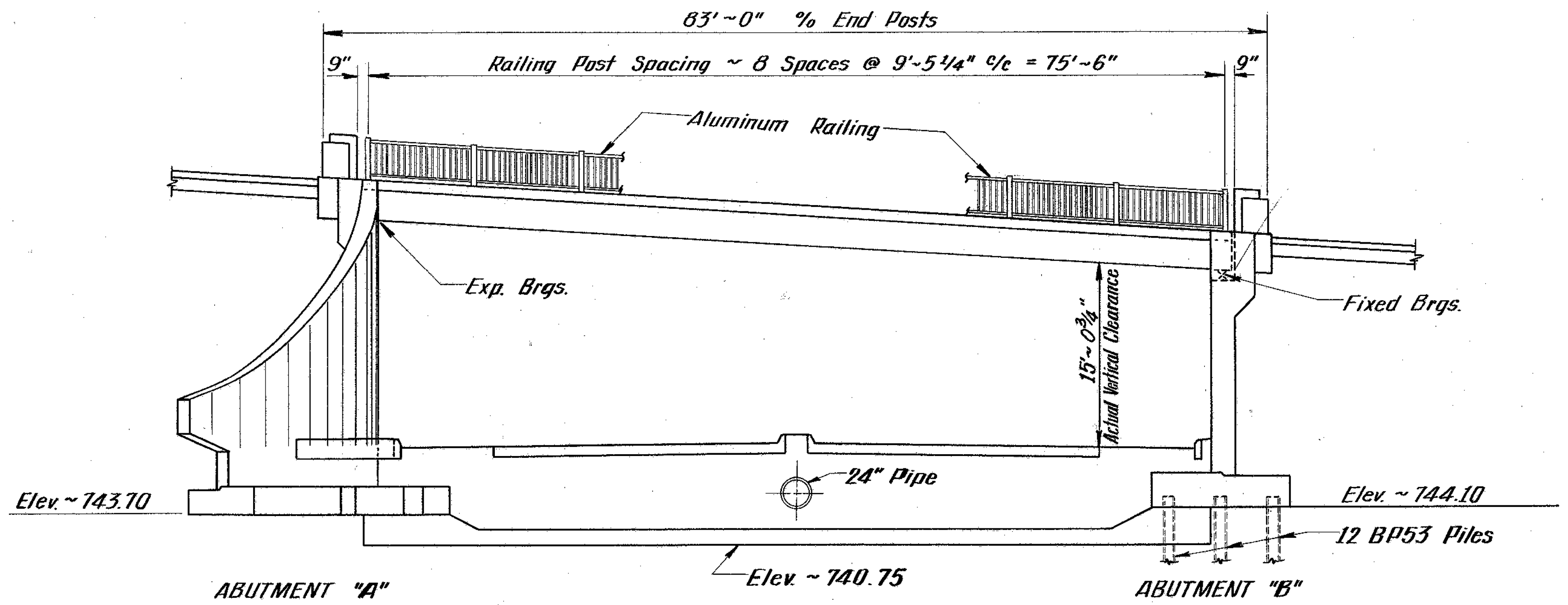
PILES: *All piles for Abutment "B" shall be 12 BP 53 Bearing Piles and they shall be driven with a hammer of not less than 11,000 ft. lb. per blow to firm contact with rock. If the length of penetration is approximately equal to the depth of rock according to the bridge foundation investigation report, the firm contract shall be considered as attained when the capacity according to the formula in Sec.-S-18.05 is not less than 40 tons per pile for the 11,000 ft. lb., the 15,000 ft. lb. or greater hammer. The design load is 40 tons per pile.*

FOOTINGS *for Abutment "A" & Wingwalls are designed for a max. bearing pressure of 3.3 tons per sq. ft. and are to be founded upon soft weathered bedrock. The Engineer shall inspect the entire area and insure that excavation goes to bedrock, and, if necessary, require that over-excavation be filled with Class "E" Concrete. Prolonged exposure to atmospheric conditions shall be averted. The excavation shall be kept drained at all times.*

WELDING *of structural steel shall be Class "A" except as otherwise shown [—<B]. Welds shown as field welds may, at the option of the Contractor, be made in the shop.*

SURFACE FINISH OF CONCRETE: *Abutment walls and wingwalls shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.*

BACKFILLING *of the strut excavation shall be completed before starting any backfilling behind the abutments, wingwalls, or adjoining retaining walls.*



ELEVATION

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

GENERAL PLAN & ELEVATION

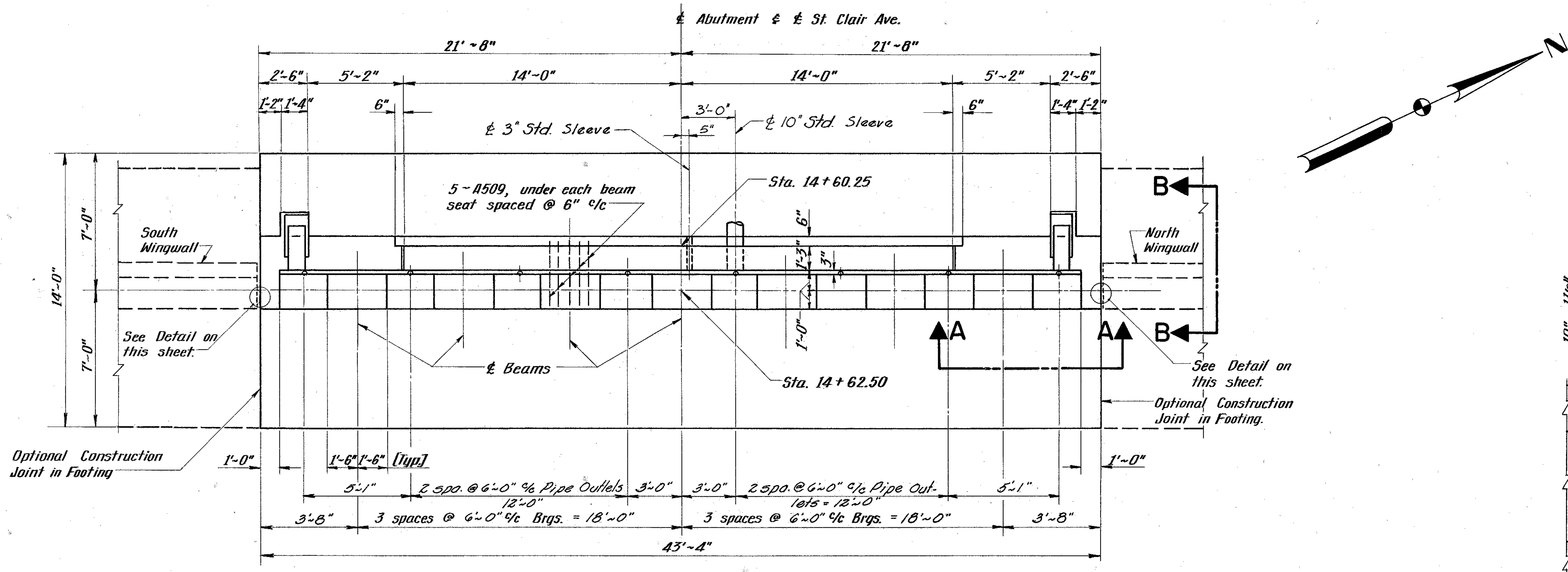
BRIDGE NO. JEF. - 7 - 1374
UNDER ST. CLAIR AVENUE

JEFFERSON COUNTY STA. 693 + 42.20

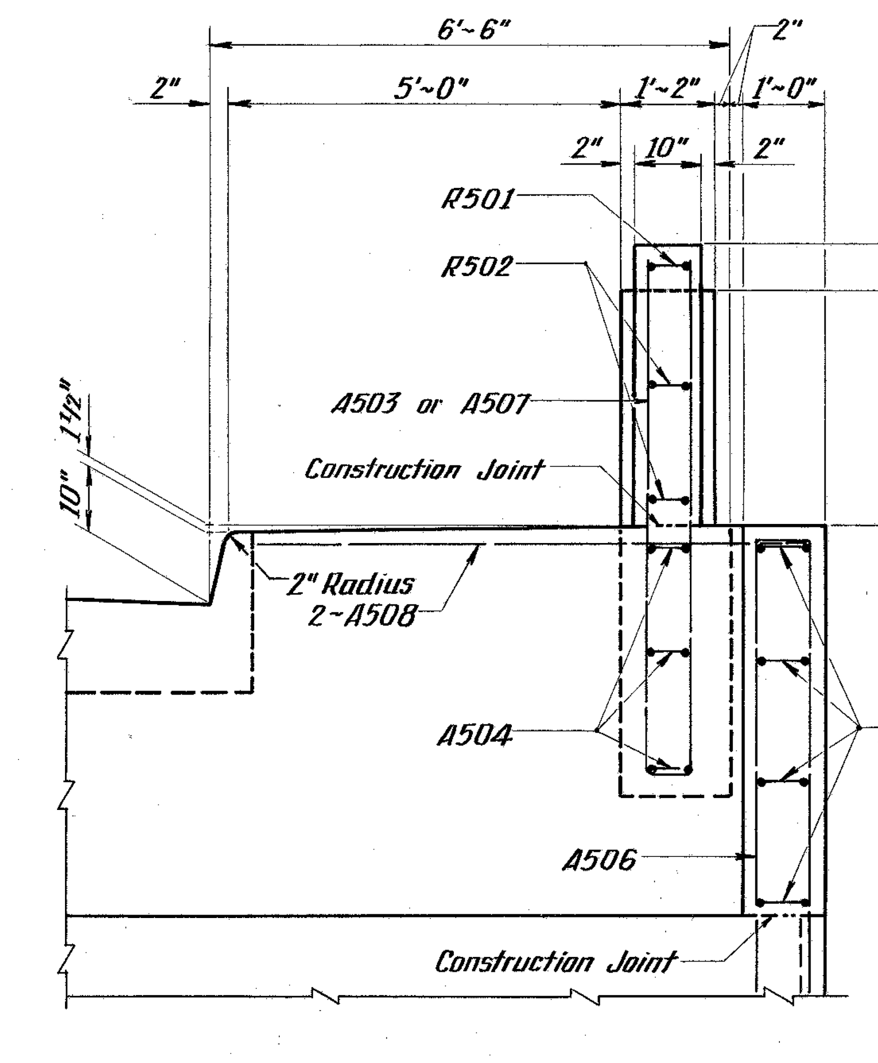
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
A.S.J.	BB	Simpson	P.M.	E. Roberts 6-9-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

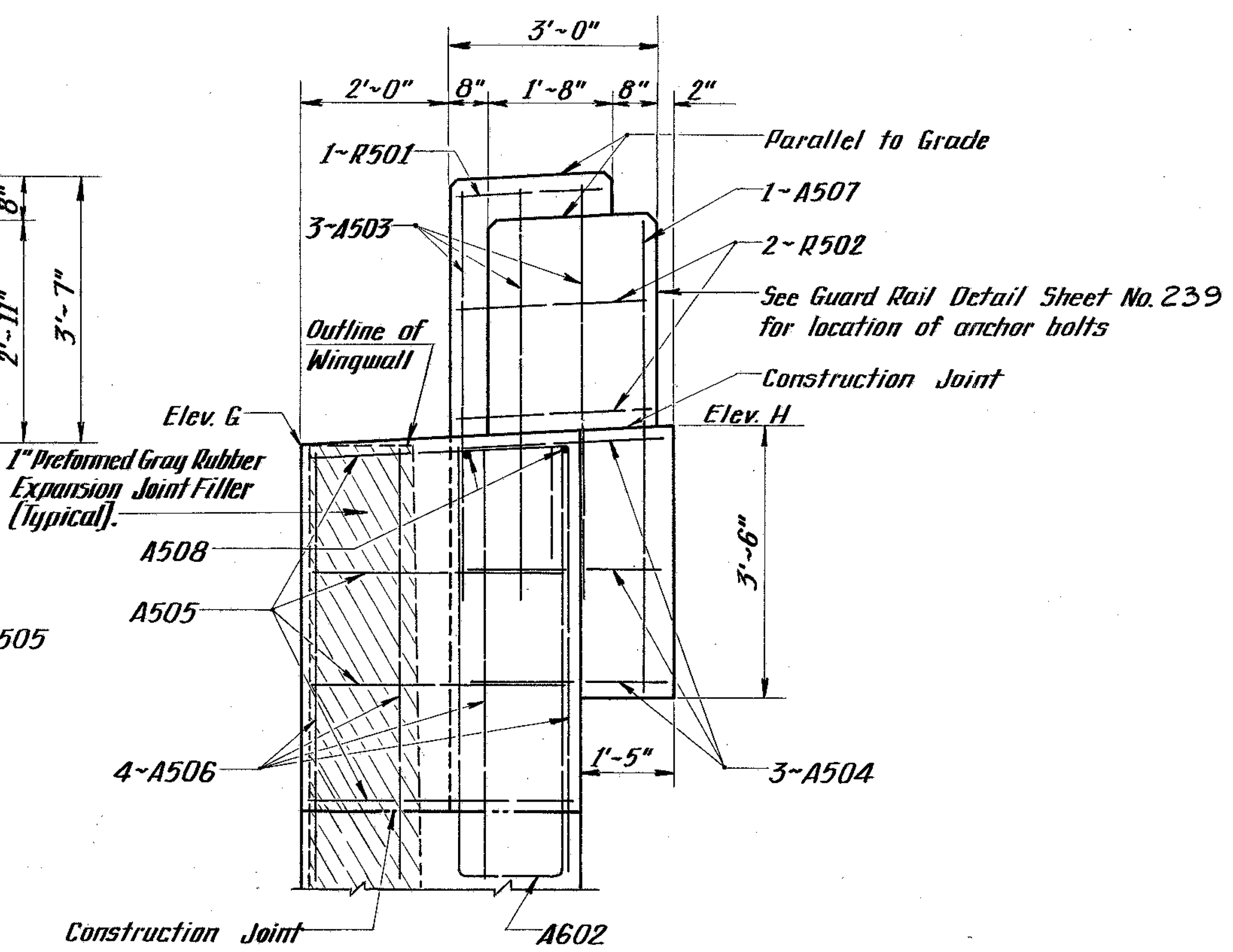
JEFFERSON COUNTY
JEF-7-13.53



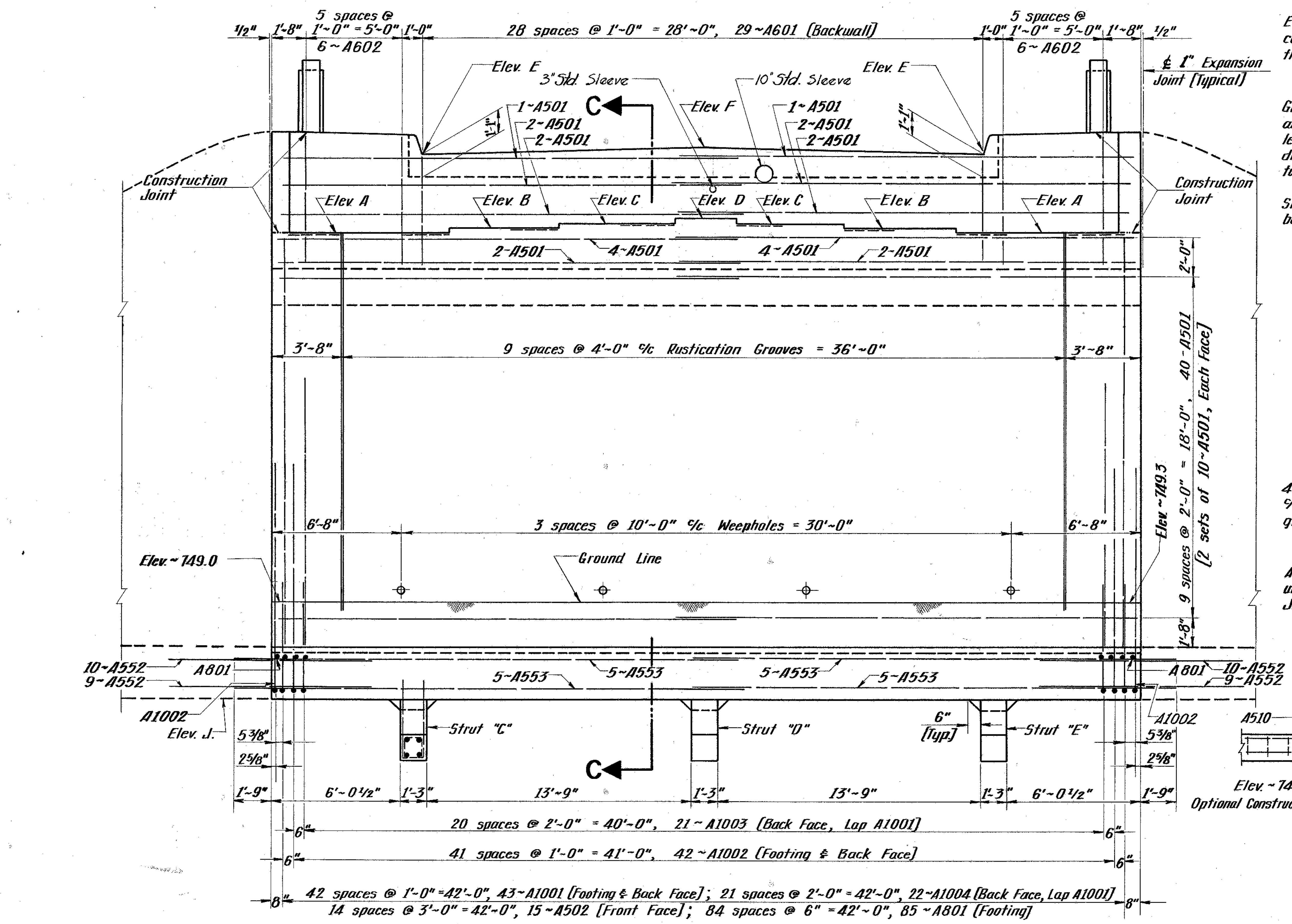
PLAN



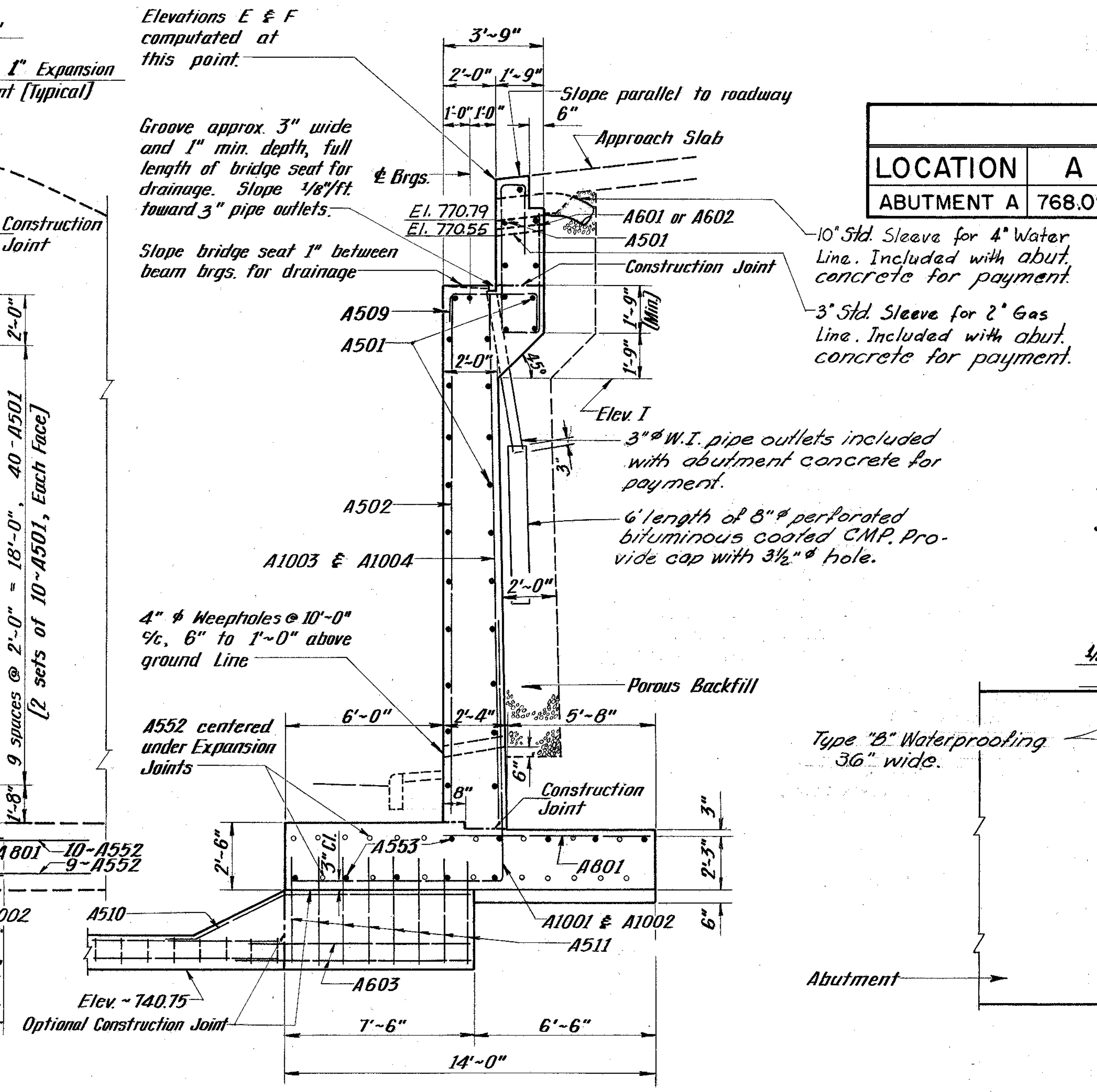
VIEW A-A



VIEW B-B



ELEVATION



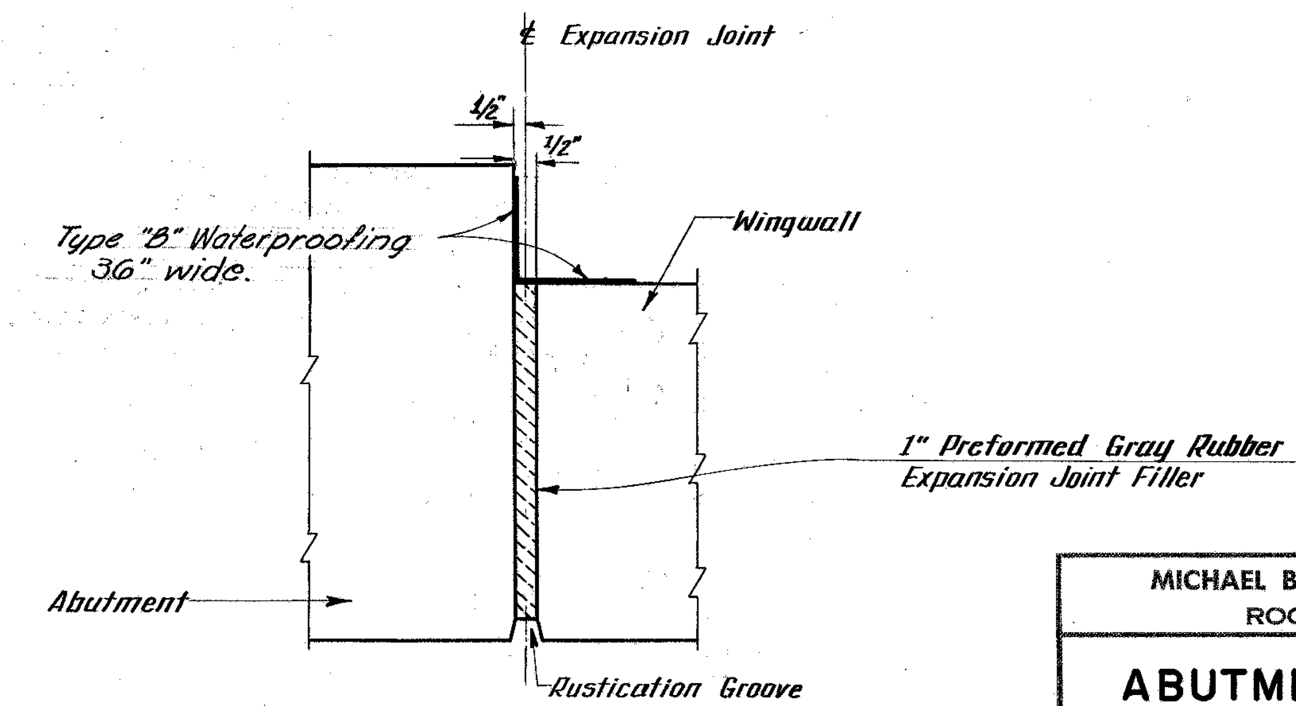
SECTION C-C

ELEVATIONS

LOCATION	A	B	C	D	E	F	G	H	I	J
ABUTMENT A	768.09	768.18	768.27	768.37	772.19	772.41	772.98	773.40	764.59	743.70

NOTE:

1. Porous Backfill, two feet thick, full length of abutment shall extend up to the underside of the approach slab and sidewalks.
2. All abutment concrete shall be Class "E".
3. Railing End Posts: Concrete shall be Class "C". Concrete and steel shall be included with Item S-14, Railing, for payment.
4. For Rustication Detail see Abutment "B" sheet No. 235
5. For Strut Details see sheet No. 237



DETAIL OF EXPANSION JOINT

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

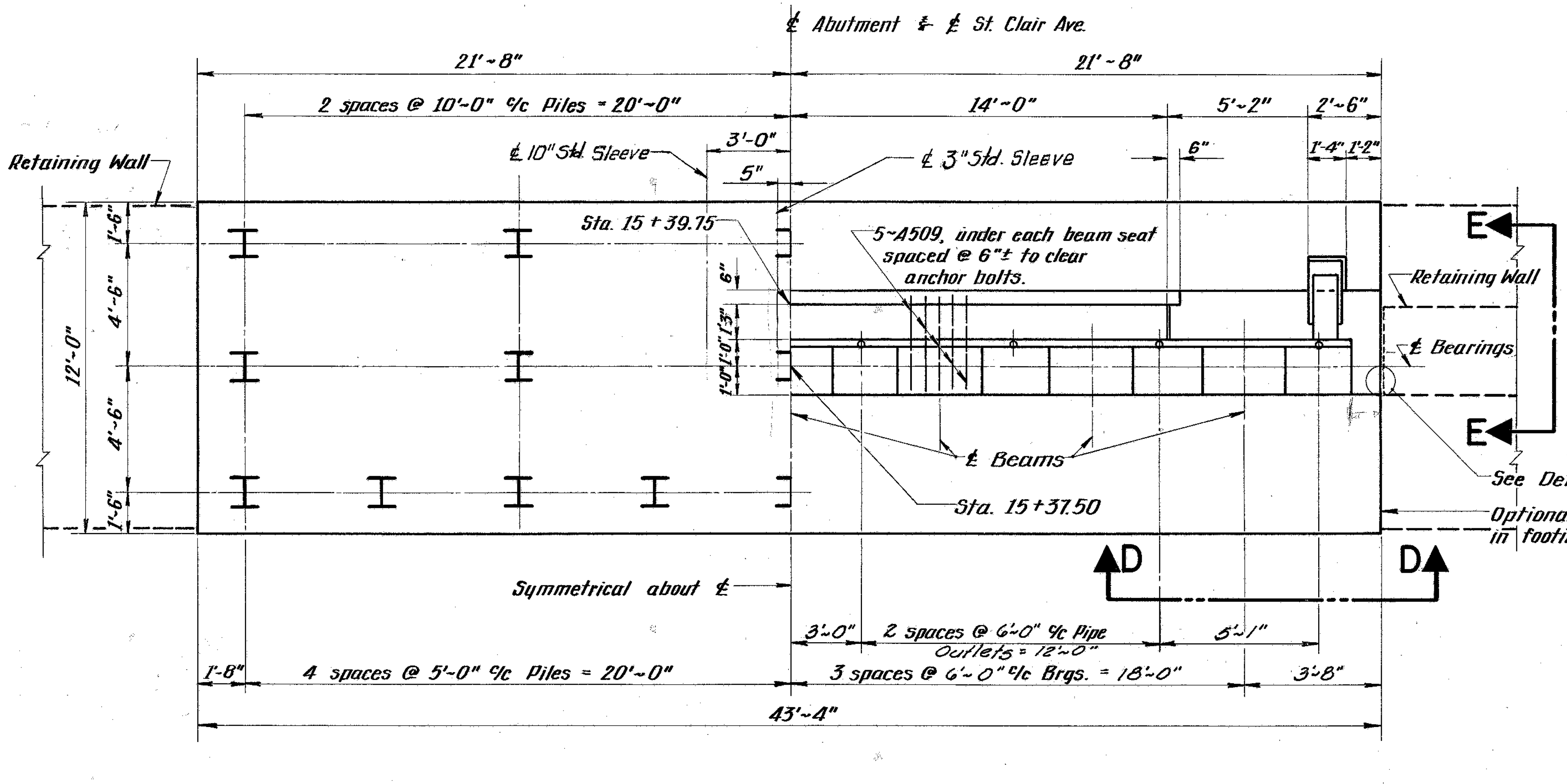
ABUTMENT "A" & DETAILS
BRIDGE NO. JEF-7-1374
UNDER ST. CLAIR AVENUE

JEFFERSON COUNTY STA. 693 + 42.20

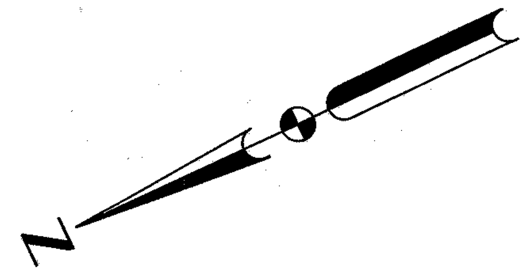
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
A.S.J.	BB	Simpson	P.M.	E. Roberts 6-9-59	

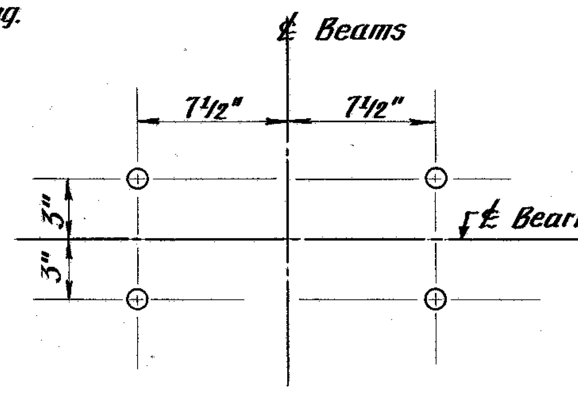
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

JEFFERSON COUNTY
JEF. - 7 - 13.53

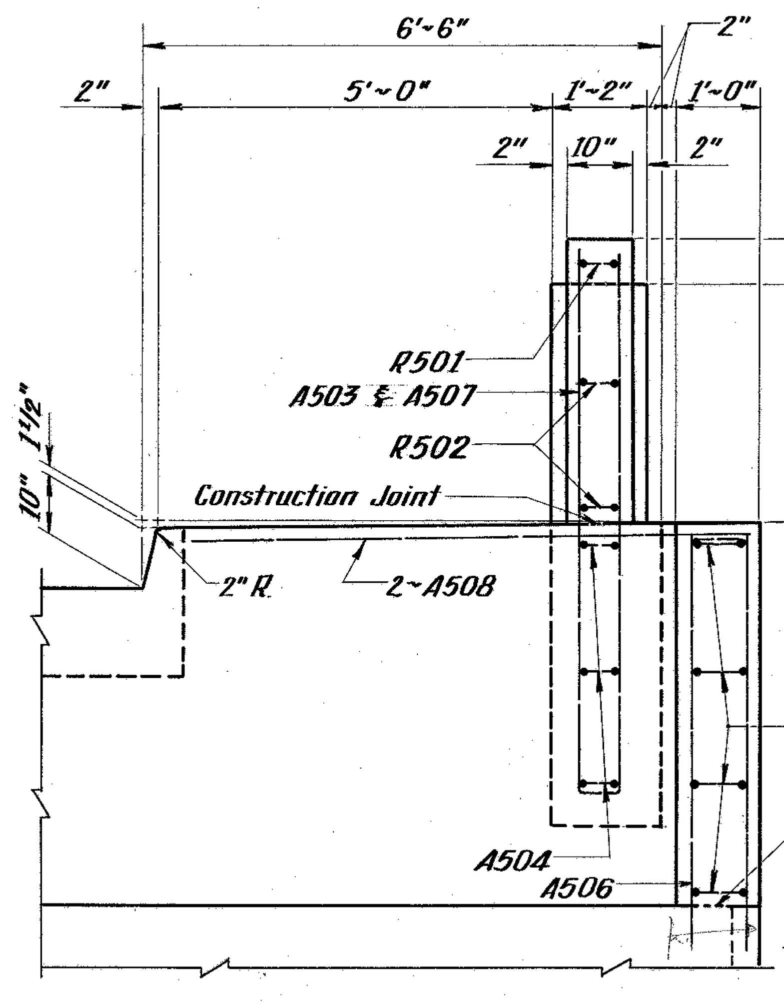


PLAN

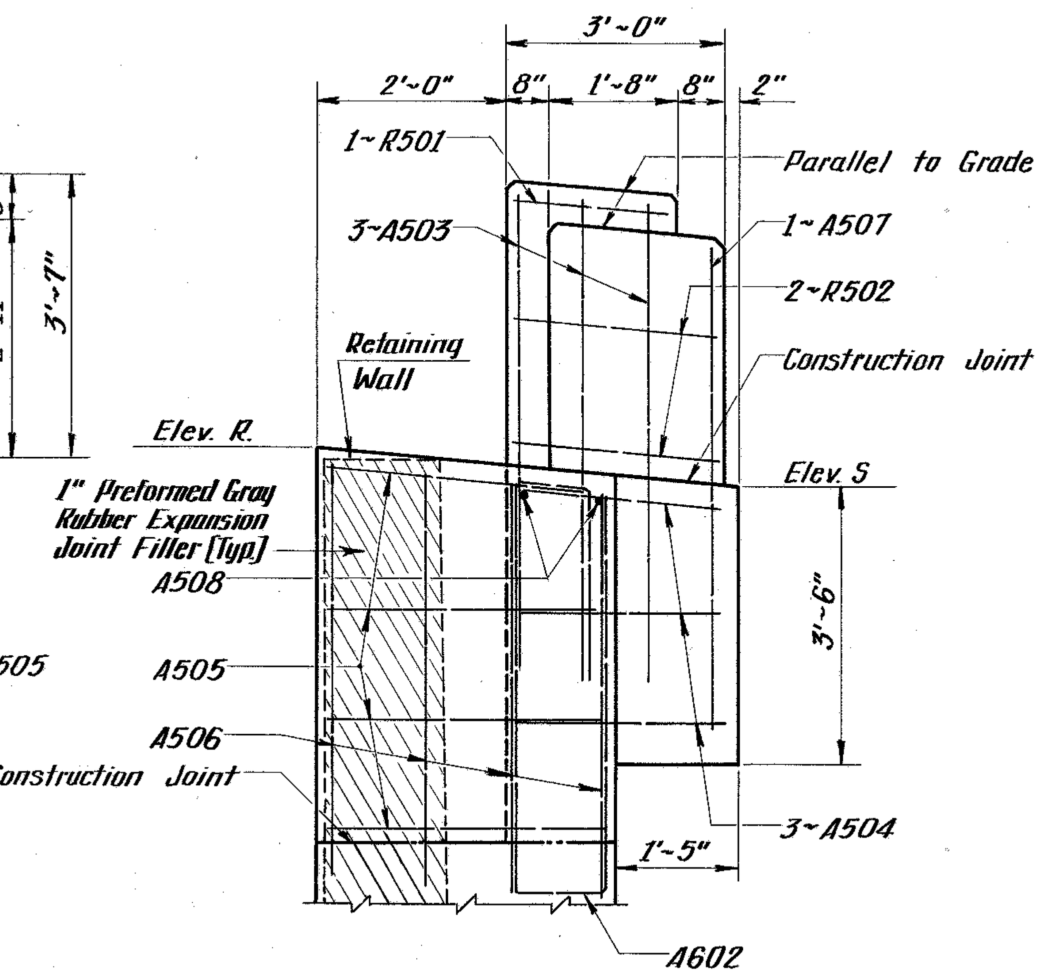




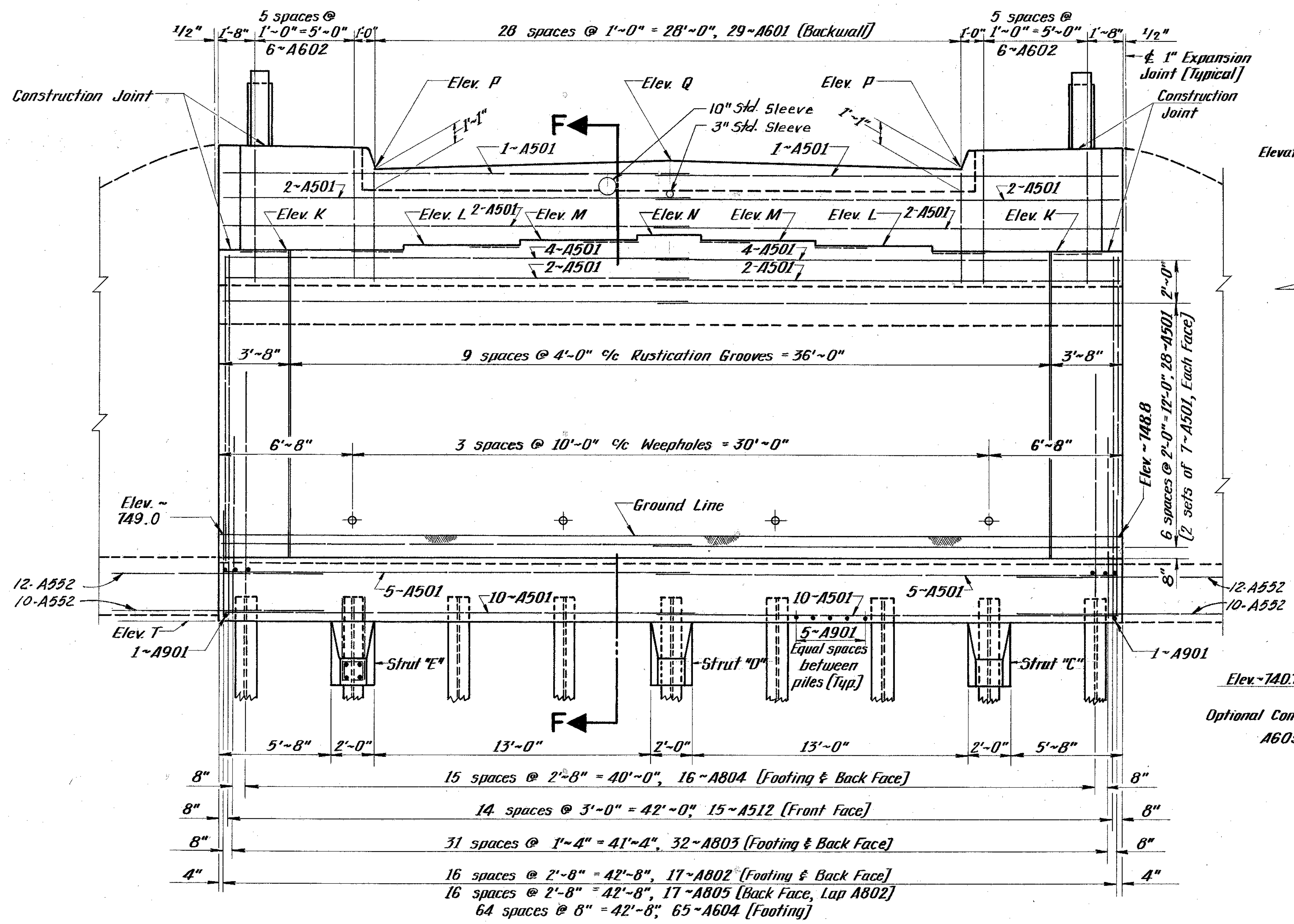
ANCHOR BOLT LAYOUT



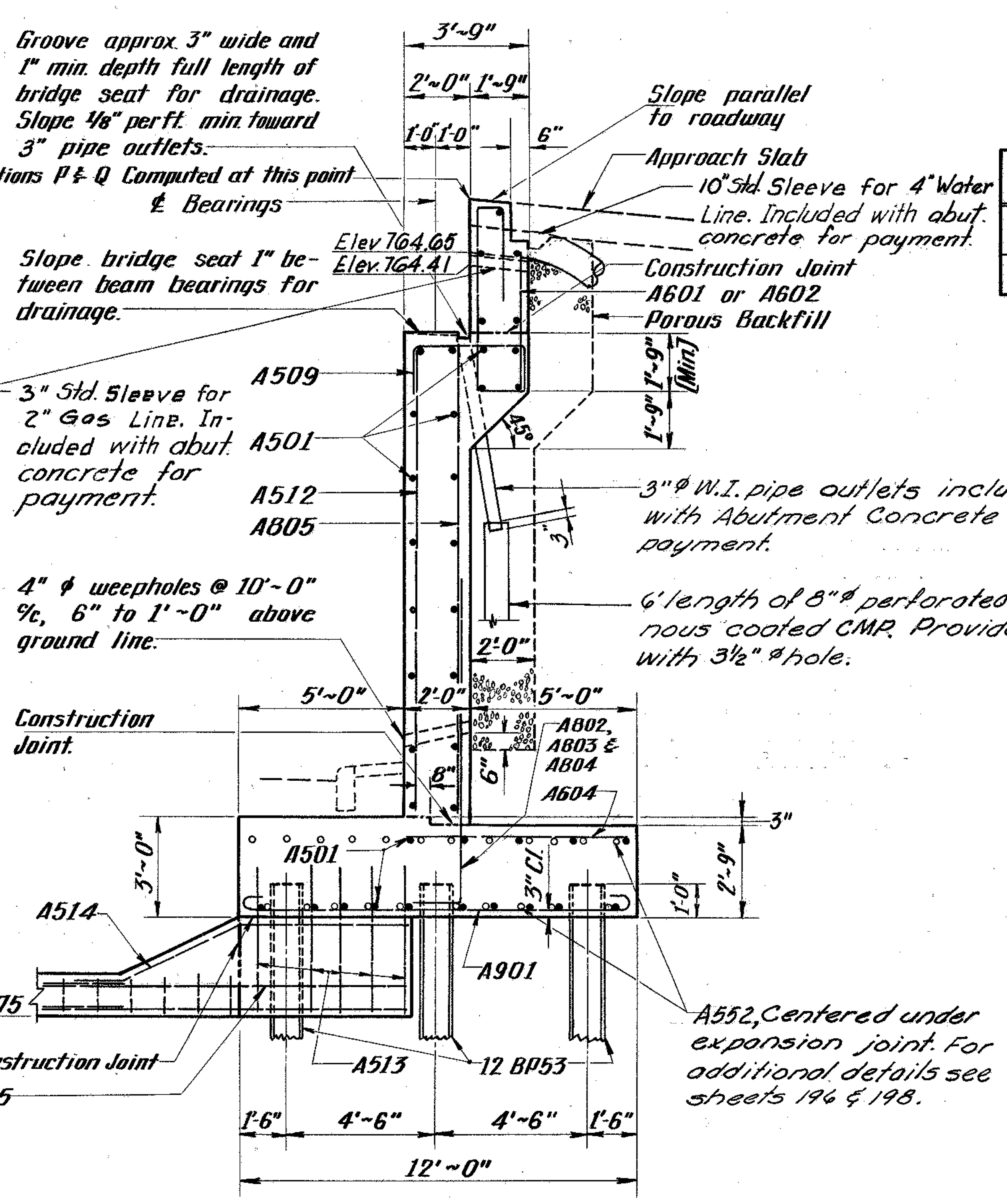
VIEW D-D



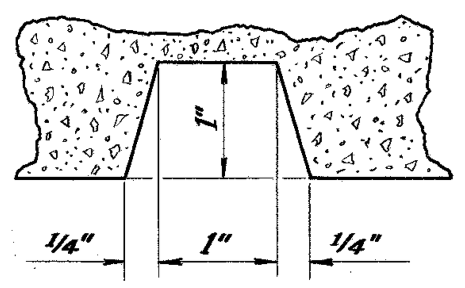
VIEW E-E



ELEVATION



SECTION F-F



DETAIL OF RUSTICATION GROOVE

ELEVATIONS									
LOCATION	K	L	M	N	P	Q	R	S	T
ABUTMENT B	762.03	762.13	762.22	762.31	766.06	766.28	767.17	766.76	744.10

NOTE:

1. Porous Backfill, two feet thick, full length of abutment shall extend up to the underside of the approach slab and the sidewalks.
2. All abutment concrete shall be Class "E".
3. Railing End Posts: Concrete shall be Class "C". Concrete and steel shall be included with Item S-14, Railing for payment.
4. For Strut Details see sheet #237

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ABUTMENT "B" & DETAILS
BRIDGE NO. JEF - 7 - 1374
UNDER ST. CLAIR AVENUE

JEFFERSON COUNTY — STA. 693 + 42.20

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
A.S.J.	BB	Simpson	P.M.	E. Roberts 6-9-59	

LOCATION OF RUSTICATION GROOVES

GROOVE NO.	1	2	3	4	5	6	7	8	9	10	11
X	4'-0"	7'-11 3/4"	11'=11 1/8"	15'-10 1/8"	19'-8 1/4"	23'-5 1/2"	27'-1 3/4"	30'-8 3/4"	34'-2 1/4"	37'-6 1/4"	40'-8 5/8"
Y	1 1/2"	5 7/8"	1'-1 1/4"	1'-11 1/2"	3'-0 5/8"	4'-4 5/8"	5'-11 1/4"	7'-8 5/8"	9'-8 5/8"	11'-11 1/8"	14'-4

NOTE:

1. Porous Backfill, two feet thick, full length of wingwalls shall extend up to within two feet of finished ground surface.
2. All concrete shall be Class "E".
3. For Rustication Detail see Sheet No. 235
4. For Strut Details see Sheet No. 237

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

WINGWALLS - ABUTMENT "A"
BRIDGE NO JEF. - 7 - 1374
UNDER ST. CLAIR AVENUE

JEFFERSON COUNTY STA. 693 + 42.20

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
A.S.J.	BB	Simpson	P.M.	E. Roberts 6-9-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

JEFFERSON COUNTY
JEF - 7-13.53

NOTE:

1. All concrete shall be Class "E".

2. Reinforcing steel and concrete for right ends of Struts "A", "B", "F" & "G" (shown with dashed lines) are included with Retaining Walls for payment.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

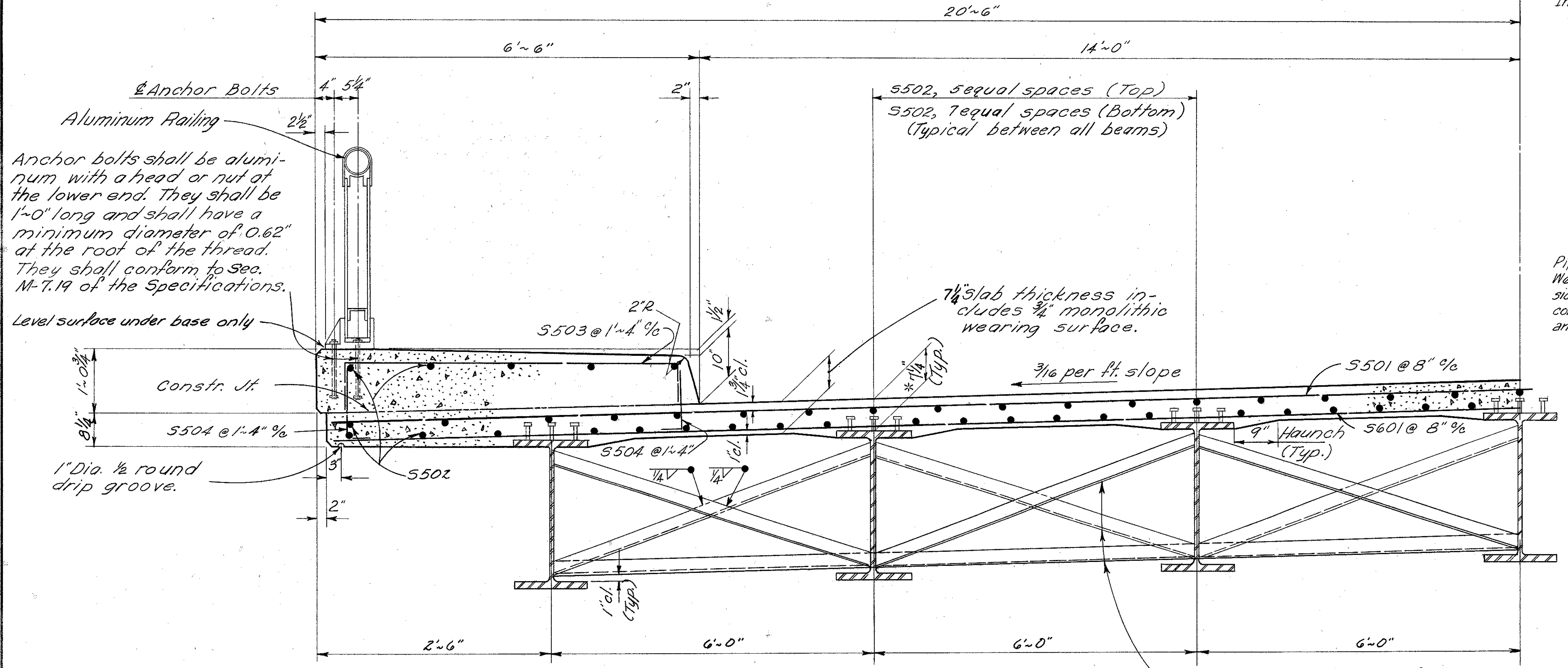
STRUTS

BRIDGE NO. JEF-7-1374
UNDER ST. CLAIR AVENUE

JEFFERSON COUNTY STA. 693 + 42.20

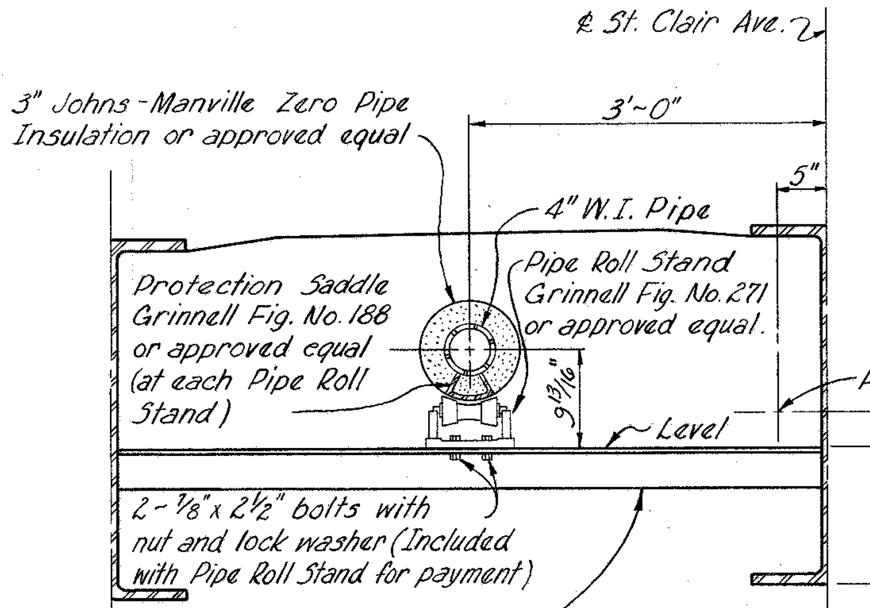
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
A.S.J.	BB	Simpson	P.M.	E.Roberts 6-9-59	

JEFFERSON COUNTY
JEF-7-13.53



* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

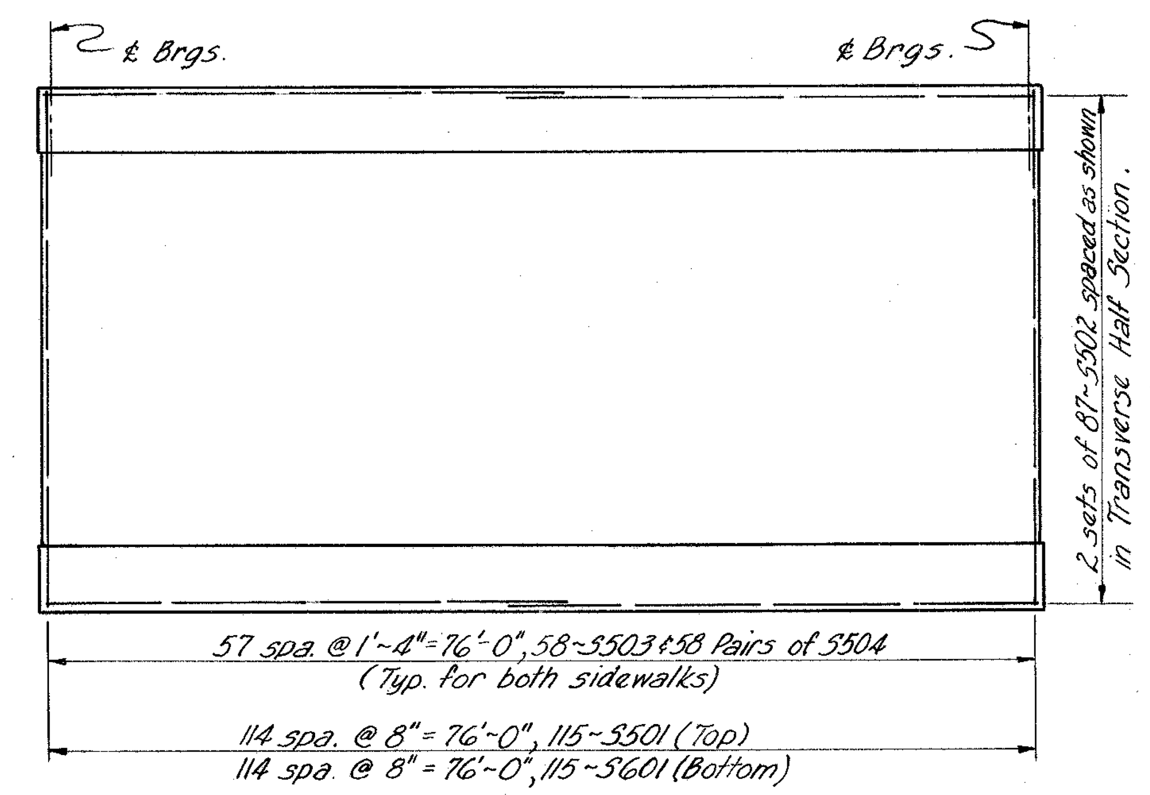
TRANSVERSE HALF SECTION



Pipe Roll Stand Support ∠ 4 x 4 x 5/16 Weld both sides of vertical leg and top side of horizontal leg to beam with ¼" continuous fillet weld. For location of angle see Framing Plan.

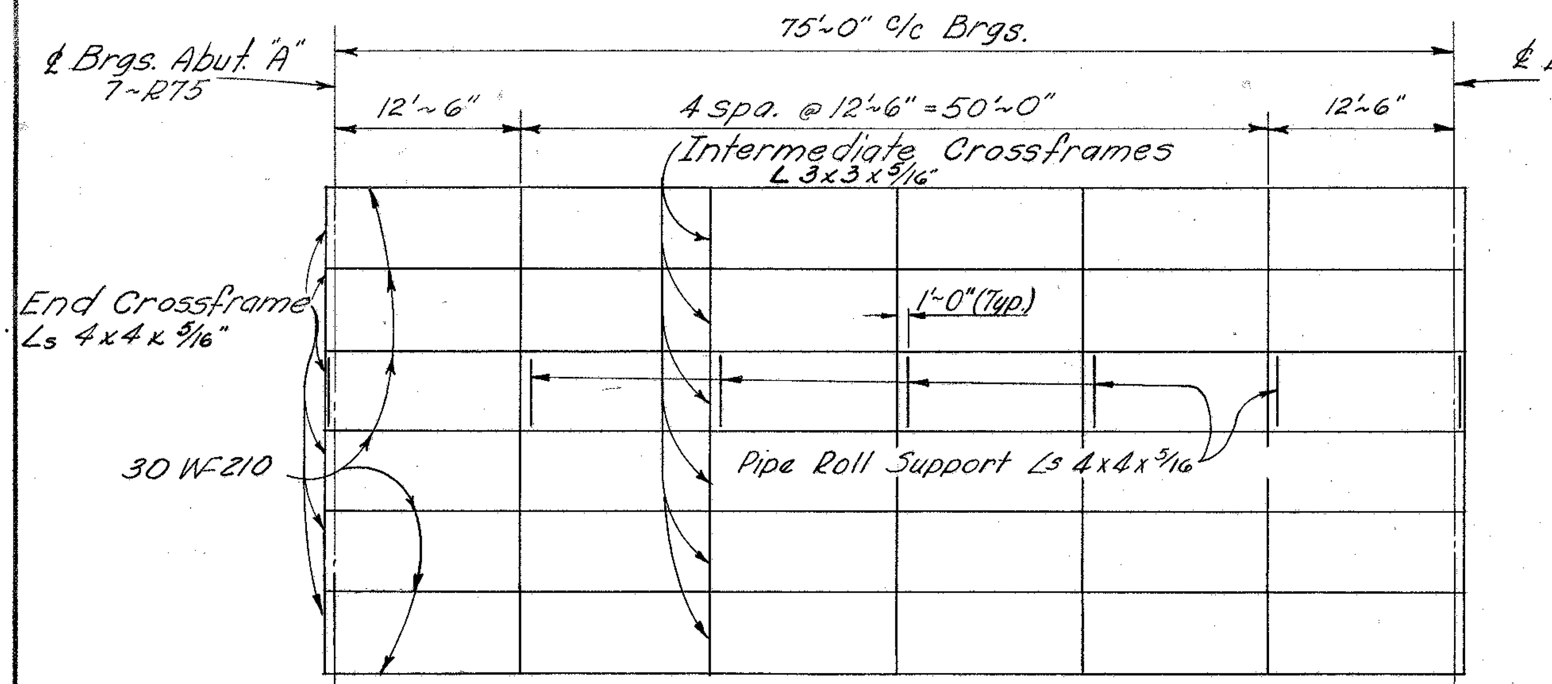
UTILITY SUPPORT DETAIL

The payment for 4 x 4 x 5/16 angles, Pipe Roll Stands, Protection Saddles, 4" W.I. Pipe & 3" Insulation is to be made under Utility Relocations.

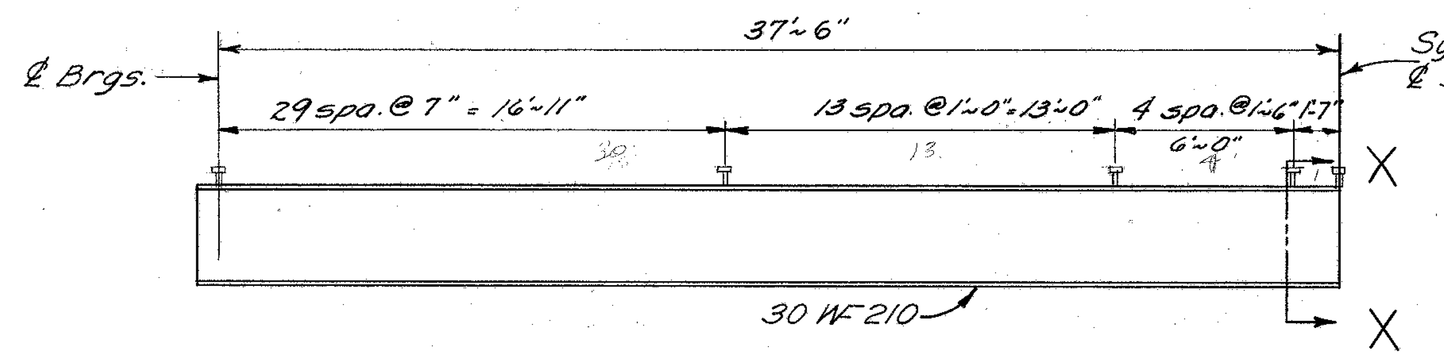


DECK SLAB PLAN

In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are normal to the center line of bridge.



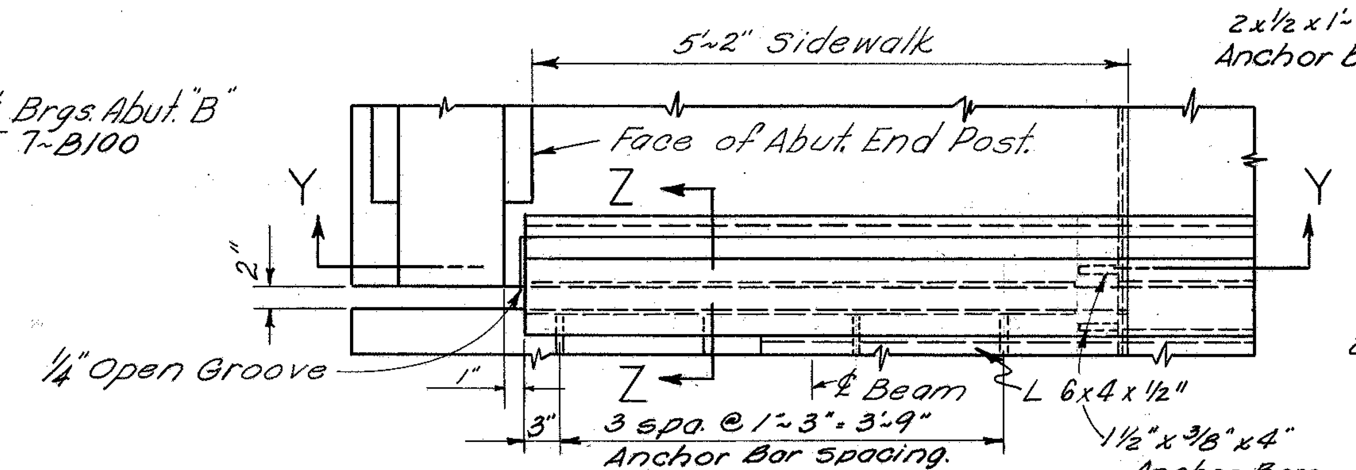
FRAMING PLAN



SHEAR CONNECTOR DETAIL

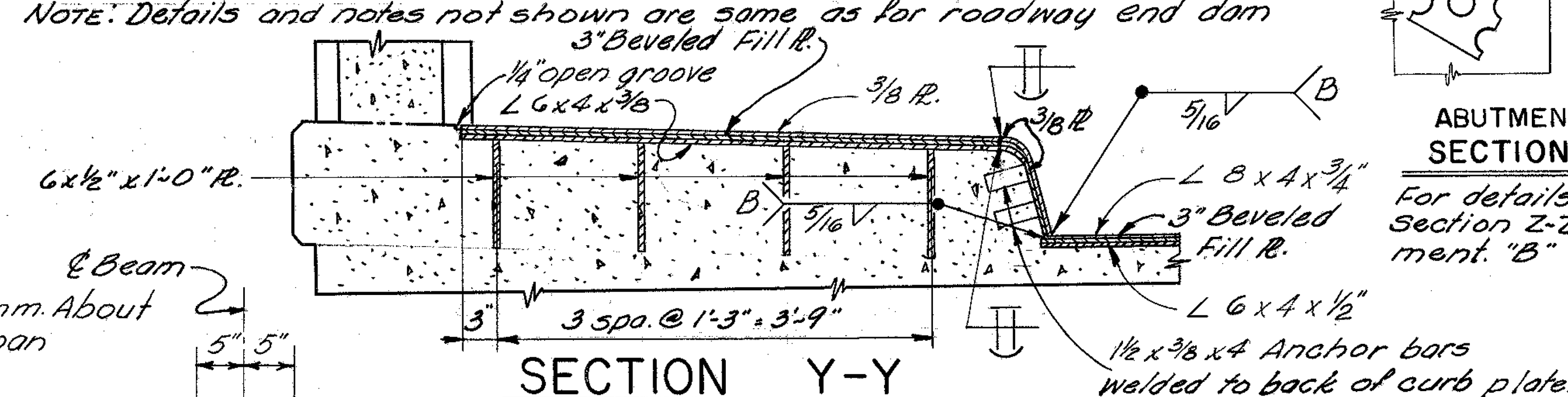
Showing the spacing of Shear Connector rows. (285 Studs per beam)

Note: End Crossframes indicated by double lines shall be as shown on Standard Drawing CSB-2-56, revised 2-2-59, Section B-B for beam spacing of 8'-0" to 12'-0" measured parallel to end beam.

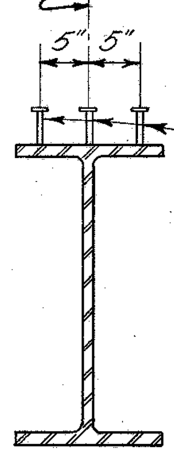


PLAN OF SIDEWALK END DAM

Note: Details and notes not shown are same as for roadway end dam



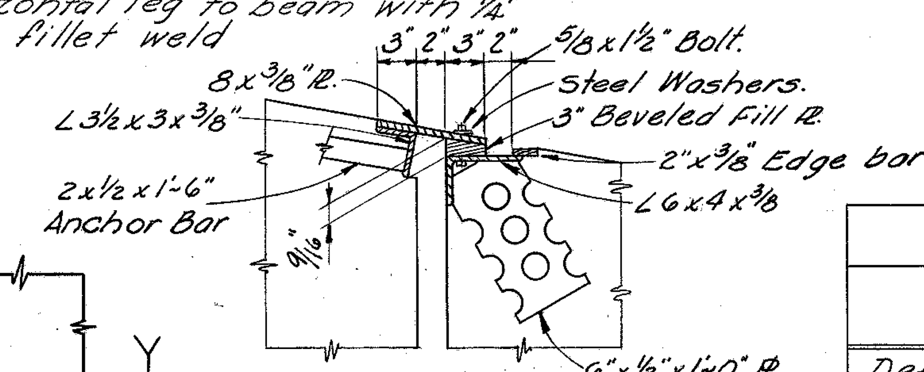
SECTION Y-Y



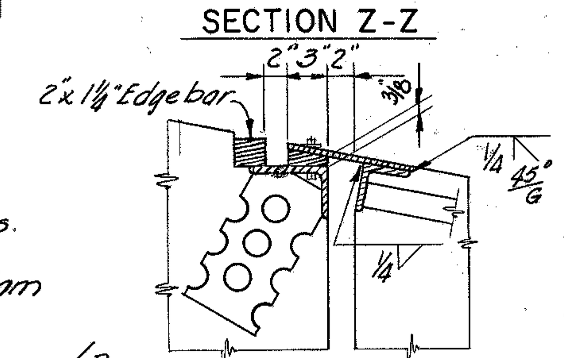
SECTION X-X

3 - ¾" x 4" shear connectors required per row. Shear connectors shall be Nelson Granular Flux-Filled Studs or approved equal. Studs shall be automatically end welded to the beams in the shop or field. ~~All stud welds shall be made in accordance with recommendations of the Nelson Stud Welding Division, Lorain, Ohio.~~

PAINTING. After erection and after the shop coat has been cleaned and, where necessary, repainted in accordance with Sec. 8.04, an additional coat of the same paint as used in the shop shall be applied over the outside face of the outside steel beams and all sides of bottom flange.

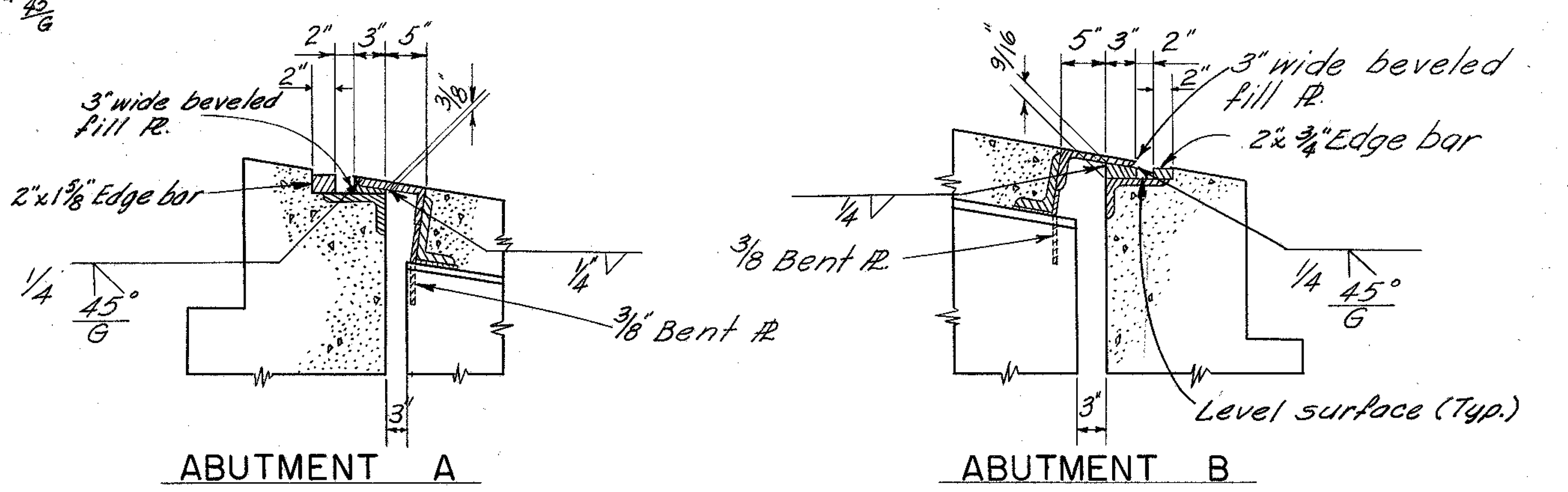


ABUTMENT -B-
SECTION Z-Z



ABUTMENT -A-
SECTION Z-Z
For details see Section Z-Z, Abutment "B"

DEFLECTION AND CAMBER		
LOCATION	EXTERIOR BEAM	INTERIOR BEAM
Deflection due to weight of steel	9/16	9/16
Deflection due to remaining D.L.	2 7/16	1 3/8
Sum of Deflection	3	1 15/16
Required Camber	3	1 15/16



ROADWAY END DAM DETAILS

Refer to Standard Drawing CSB-2-56, sheet 2 of 6, for additional details of End Dam & End Cross Frames.

Refer to Standard Drawing RB-1-55, revised 2-2-59 for details of Rockers & Bolsters.

Refer to sheet #239 for details of Aluminum Railing. See General Plan for location of railing posts.

Concrete shall be class "C".

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUPERSTRUCTURE
BRIDGE NO. JEF-7-1374
UNDER ST. CLAIR AVENUE

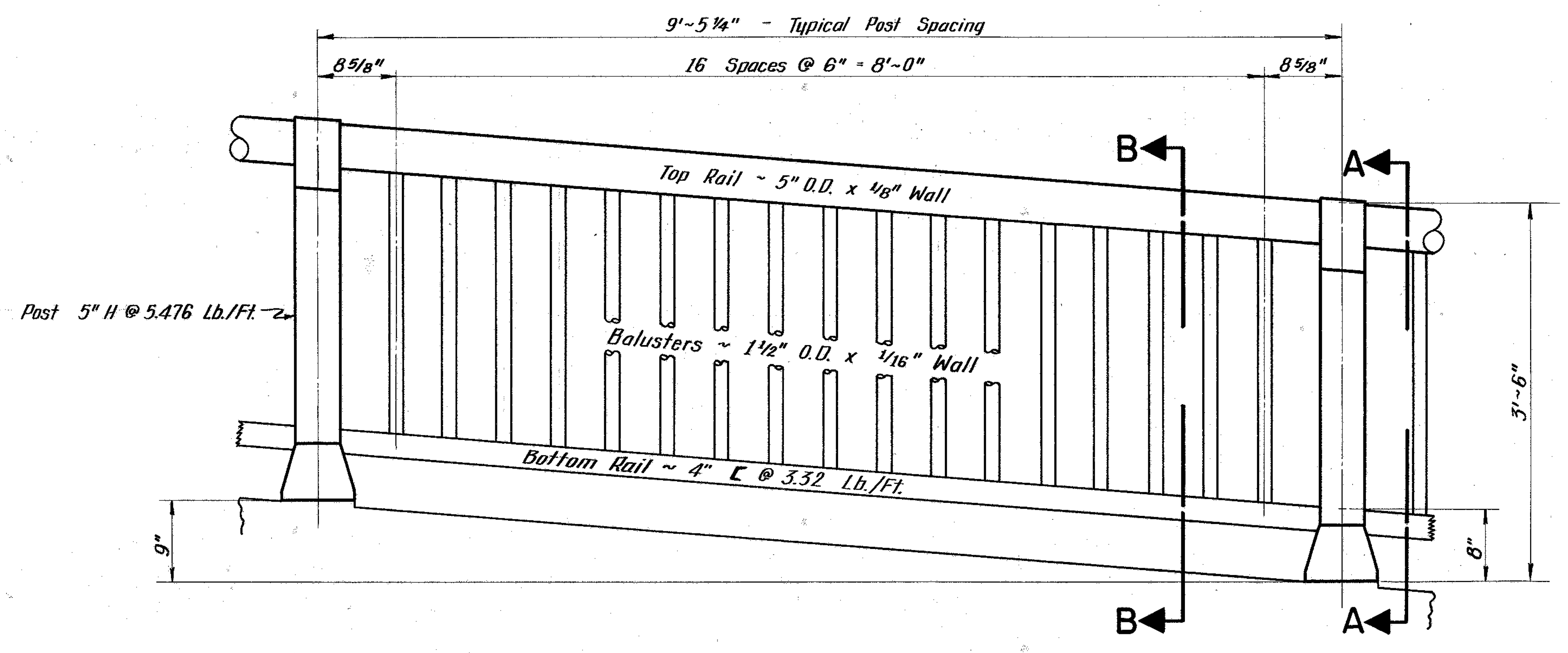
JEFFERSON COUNTY — STA. 693+42.40

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
A.S.J.	BB	C.D.V.	P.M.	E. Roberts 6-9-59	11-28-59

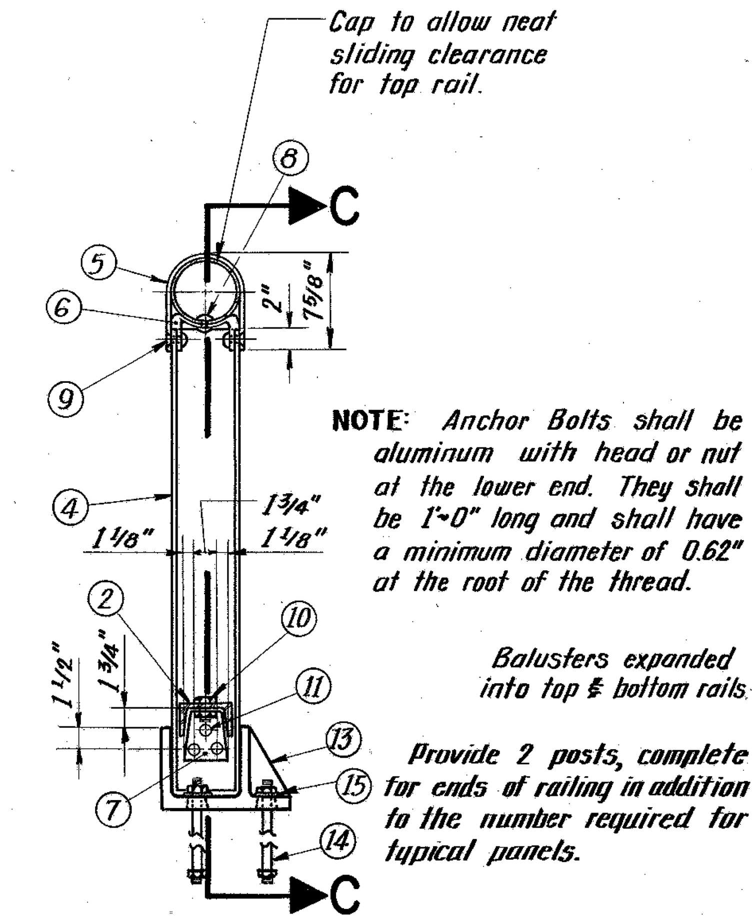
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(14)	

239
307

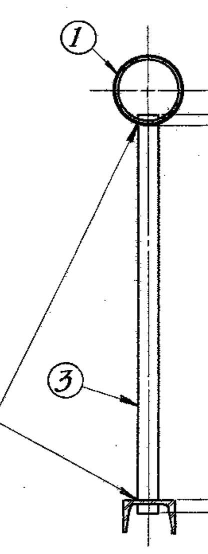
JEFFERSON COUNTY
JEF-7-13.53



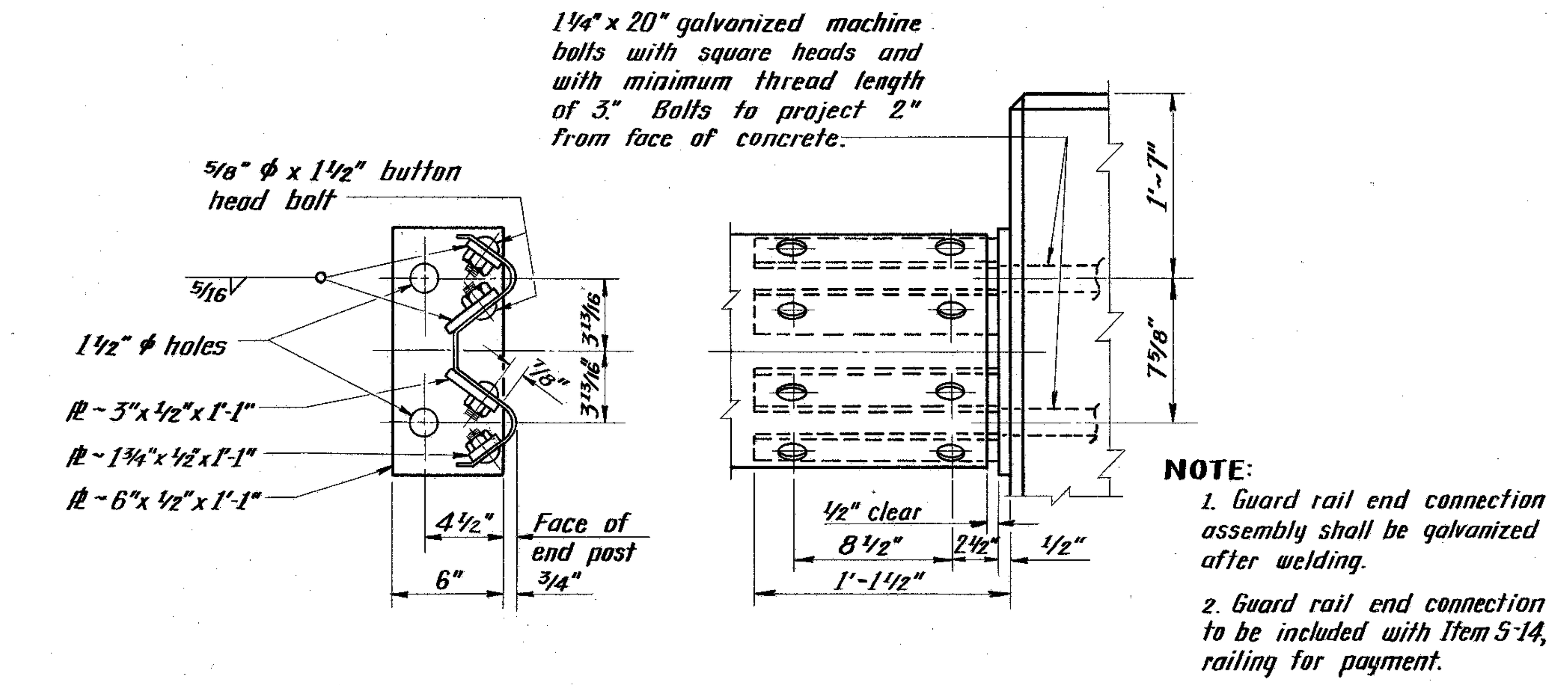
TYPICAL RAILING SECTION



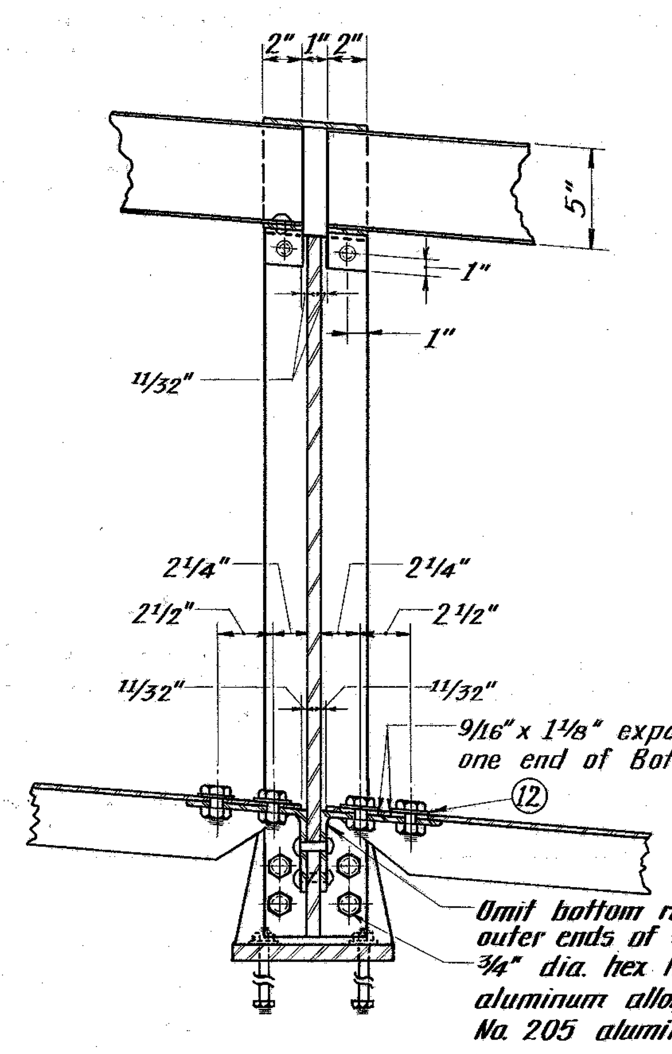
SECTION A-A



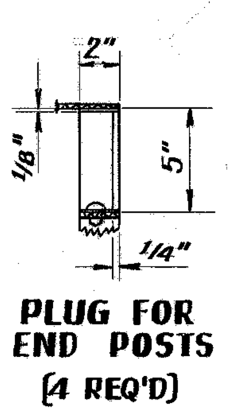
SECTION B-B

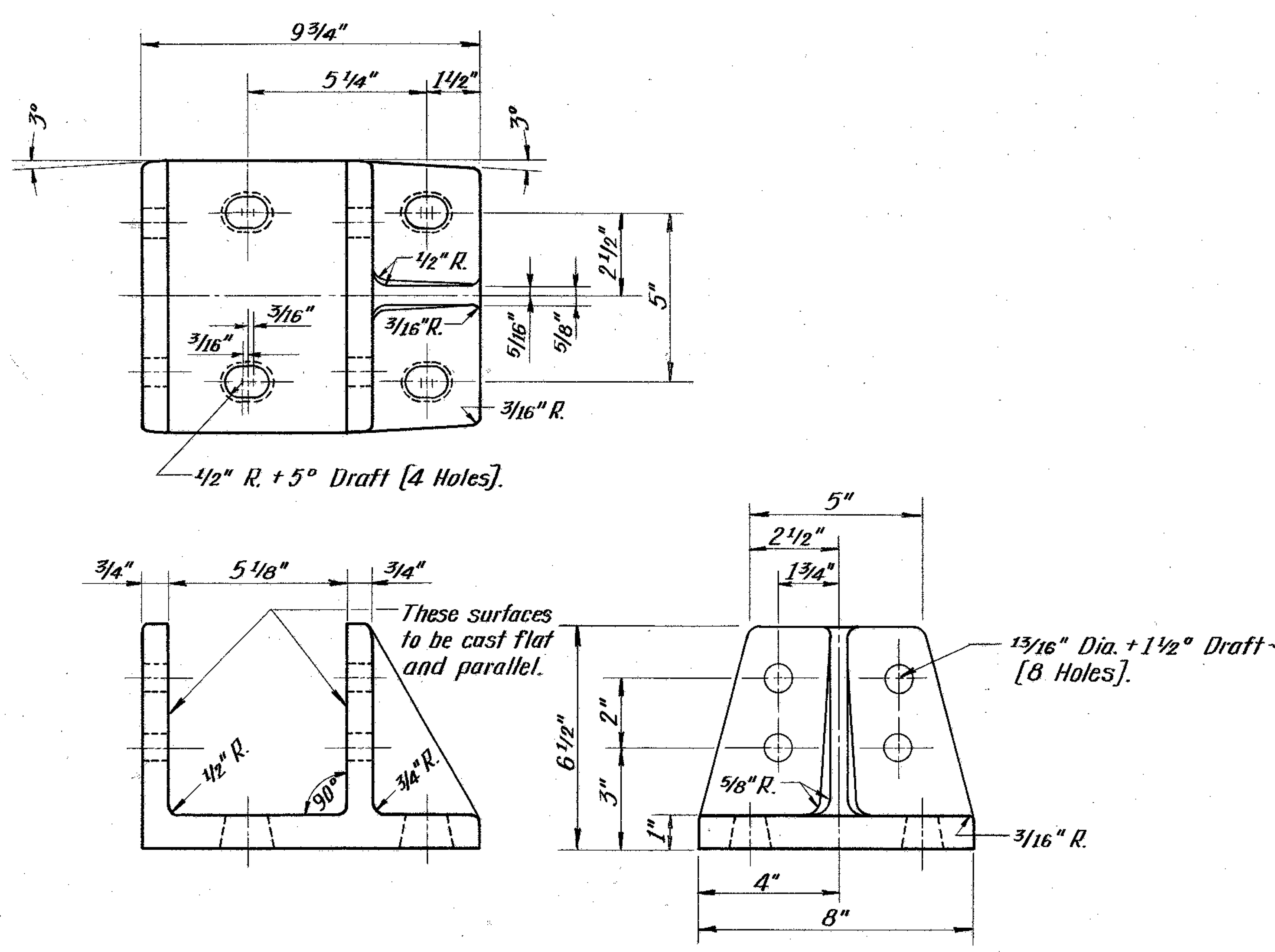


GUARD RAIL DETAIL



SECTION C-C





POST BASE DETAILS

BILL OF MATERIAL FOR TYPICAL PANEL						
ITEM	PCS.	DESCRIPTION	SIZE	ALLOY	UNIT WT.	TOT. WT.
1	1	Top Rail.	5" O.D. x 1/8" Wall x 9'-4 1/4" Lg.	61S-T6	2.25 Lb./Ft.	21.0
2	1	Bottom Rail.	4" [@ 3.32 Lb./Ft. x 9'-4 1/4" Lg.	61S-T6	3.32 Lb./Ft.	31.0
3	17	Baluster.	1 1/2" O.D. x 1/16" Wall x 2'-6 1/4" Lg.	61S-T6	.332 Lb./Ft.	14.2
4	1	Post ~ Section No. 9430.	5" H @ 5.476 Lb./Ft. x 2'-11" Lg.	61S-T6	5.476 Lb./Ft.	16.0
5	1	Post Cap.	5" x 1/4" Plate x 1'-6" Lg.	61S-T6	1.468 Lb./Ft.	2.2
6	2	Top Rail Seat ~ Sec. No. 46699.	2" Lg.	61S-T6	4.950 Lb./Ft.	1.7
7	2	Bottom Rail Seat.	6" x 4" x 3/8" L x 4" Lg.	61S-T6	4.23 Lb./Ft.	2.8
8	1	Top Rail to Seat Rivet.	1/2" ϕ High But. Hd. x 1 1/4" Lg.	61S-T6	3.6 Lb./C	0
9	4	Cap to Post Rivet.	1/2" ϕ High But. Hd. x 1 7/16" Lg.	61S-T6	4.3 Lb./C	0.2
10	4	Bottom Rail to Seat Bolt & Nut with				
		No. 205 Alumilite Finish	1/2" ϕ Hex Hd. x 1 3/8" Lg.	24S-T4	5.5 Lb./C	0.2
11	3	Bottom Rail Seat to Post Rivet.	1/2" ϕ High But. Hd. x 1 13/16" Lg.	61S-T6	4.6 Lb./C	0.1
12	2	Bottom Rail Washer.	1/2" ϕ Bolt Size.	ALCLAD 24S-T4	2.5 Lb./M	0.0
13	1	Post Base (Cast) ~ Sec. No. 5766	9 3/4" x 8" Base Size.	61S-T6	13.8 Lb./Ea.	13.8
14	4	Post Base to Sidewalk Anchor Bolt.	See Note at Section AA.		0.6 Lb./Ea.	2.4
15	4	Anchor Bolt Washer	3/4" ϕ Bolt Size.		3.0 Lb./M	0.1
		TOTAL				105.7

NOTE:

1. All materials shall conform to Sec. M-7.19 of the Specifications.
2. Section numbers shown shall be Aluminum Company of America or equal.
3. Shims shall be provided under the railing posts where necessary to assist in vertical aligning. They shall be of aluminum alloy, 4 3/4" x 1/16" x 8" and shall be slotted for anchor bolts to permit insertion after the posts are in place.
4. For length of railing see sheet No. 233

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

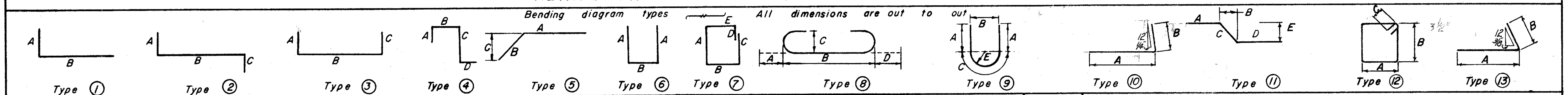
RAILING DETAILS
BRIDGE NO. JEF-7-1374
UNDER ST. CLAIR AVENUE

JEFFERSON COUNTY STA. 693 + 42.20

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
A.S.J.	Simpson	Simpson	P.M.	E. Roberts 6-9-59	

REINFORCING STEEL BAR SCHEDULE

Bending diagram types — All dimensions are out to out



ABUTMENTS

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A536	32	5	27'-0"	Str.						901
A537	4	5	23'-0"	Str.						96
A538	4	5	18'-4"	Str.						76
A539	4	5	14'-8"	Str.						61
A540	4	5	10'-4" to 14'-1"	Str.	Vary by 1'-3"					51
A541	5	5	9'-4 to 14'-0"	Str.	Vary by 1'-2"					61
A542	8	5	9'-4"	Str.						78
A543	6	5	12'-5	Str.						78
A544	4	5	14'-10'	Str.						62
A545	4	5	4'-11"	Str.						21
A546	4	5	17'-8"	Str.						74
A547	2	5	16'-0"	Str.						33
A548	2	5	18'-11"	Str.						39
A549	4	5	7'-6"	Str.						31
A550	6	5	12'-0"	11	6'-10"	3'-5"	3'-9¾	1'-7"	1'-8⅜	75
A551	2	5	10'-9"	11	5'-7"	3'-5"	3'-9¾	1'-7"	1'-8⅜	22
A552	96	5	10'-0"	Str.						1001
A553	20	5	24'-3"	Str.						506
A554	4	5	6'-2"	5	1'-7"	4'-8"	2'-1¼"			26
A555	4	5	6'-11"	5	1'-7"	5'-4¾	2'-4¾			29
A301	431	3	3'-5"	12	9"	9"	4"			554
A302	12	3	3'-10" to 4'-11"	12	11¾" to 1'-6½	9"	4"	@		20
A303	11	3	4'-5"	12	9"	1'-3"	4"			18
A304	11	3	5'-5"	12	9"	1'-9"	4"			22
A305	11	3	6'-5"	12	9"	2'-3"	4"			27
A306	4	3	7'-5"	12	9"	2'-9"	4"			11
A307	3	3	3'-3"	12	11¾"	6"	4"			4
A308	3	3	4'-8"	12	1'-1⅞"	1'-0"	4"			5
A309	3	3	6'-1"	12	1'-4⅛"	1'-6⅛"	4"			7
A310	3	3	7'-6"	12	1'-6¼"	2'-0⅛"	4"			8
A601	58	6	14'-5"	7	5'-5"	1'-5"	4'-2"	3'-1"	11"	1,256
A602	24	6	16'-8"	7	6'-3"	1'-5"	6'-2"		1'-5"	601
A603	12	6	9'-4"	Str.						168
A604	65	6	7'-0"	Str.						683
A605	12	6	10'-11"	11	1'-11"	4'-2"	4'-2¼	4'-10"	5¼"	197
A606	12	6	8'-9"	Str.						156
A607	4	6	7'-6"	Str						45
A608	8	6	33'-0"	Str.						397
A609	16	6	32'-3"	Str.						775
A610	24	6	30'-0	Str.						1081
A611	8	6	34'-7"	Str.						416
A701	32	7	7'-8"	Str.						501
A801	85	8	8'-5"	Str.						1,910
A802	17	8	6'-6"	1	1'-6"	5'-3"				295
A803	32	8	10'-3"	1	1'-6"	9'-0"				876
A804	16	8	13'-0"	1	1'-6"	11'-9"				555
A805	17	8	14'-11"	Str.						677
A806	10	8	10'-2"	13	5'-11"	4'-6"				271
A807	18	8	14'-9"	13	5'-11"	9'-1"				709
A808	8	8	18'-0"	13	5'-11"	12'-4"				384
A809	10	8	14'-9" to 19'9"	Str.	2 Sets 5-Each Vary by 1'-3"					460
A901	42	9	14'-2"	8	1'-3"	11'-8"	11¼"			2,023
A1001	43	10	12'-11"	10	8'-0"	5'-3"				2,390
A1002	44	10	18'-6"	10	8'-0"	10'-10"				3,503
A1003	21	10	13'-4"	Str.						1,205
A1004	22	10	21'-11"	Str.						2,075
A1005	32	10	12'-8"	13	7'-9"	5'-3"				1,744
A1006	32	10	19'-3"	13	7'-9"	11'-10"				2,651
A1007	20	10	16'-6"	Str						1,420
A1008	12	10	20'-1" to 26'-9"	Str.	2 Sets 6-Ea. Vary by 1'-4"					1,209

ABUTMENTS

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A501	142	5	22'-4"	Str.						3,308
A502	15	5	21'-9"	Str.						340
A503	12	5	10'-3"	6	5'-0"	6"				128
A504	12	5	5'-10"	6	2'-10"	4¾"				73
A505	16	5	7'-2"	6	3'-5"	6¾"				120
A506	16	5	13'-5"	6	6'-6"	8"				224
A507	4	5	12'-5"	6	6'-1"	6"				52
A508	8	5	6'-10"	Str.						57
A509	70	5	4'-2"	6	6"	3'-5"				304
A510	6	5	12'-6"	11	7'-4"	3'-5"	3'-9¾	1'-7"	1'-8⅜	78
A511	51	5	9'-2"	6	4'-4"	9"				488
A512	15	5	14'-10"	Str.						232
A513	15	5	11'-5"	6	5'-0"	1'-8"				179
A514	6	5	11'-0"	11	4'-10	4'-2"	4'-8"	1'-7"	2'-1¼	69
A515	2	5	17'-2"	Str.						36
A516	14	5	29'-5"	Str.						430
A517	2	5	25'-5"	Str.						53
A518	2	5	13'-11"	Str.						29
A519	6	5	12'-3"	Str.						77
A520	6	5	15'-4"	Str.						96
A521	36	5	5'-0"	Str.						188
A522	18	5	4'-0"	Str.						75
A523	9	5	7'-8"	13	3'-7	4'-3"				72
A524	16	5	11'-3"	13	4'-3"	7'-2				188
A525	9	5	13'-7"	13	4'-3"	9'-6"				128
A526	4	5	11'-2" to 14'-5	Str.	Vary by 1'-1"					53
A527	5	5	10'-1" to 14'-5	Str.	Vary by 1'-1"					64
A528	12	5	3'-3" to 6'-1"	Str.	4 Sets-Each Vary by 1'-5"					58
A529	12	5	20'-0" to 26'-8	Str.	2 Sets-Each Vary by 1'-4"					292
A531	4	5	14'-2"	Str.						59
A532	4	5	9'-11"	Str.						41
A533	4	5	5'-6"	Str.						23
A534	4	5	16'-11"	Str.						71
A535	10	5	14'-6" to 19'-6	Str.	2 Sets-Each Vary by 1'-3"					177
R501	4	5	4'-1"	6	2'-0"	0'-5"	Include in Item S-14			
R502	8	5	5'-5"	6	2'-8"	0'-5"	Railing for Payment			
										42,492

SUPERSTRUCTURE

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S-501	115	5	40'-4"	Str.						4,838
S-502	174	5	38'-10"	Str.						7048
S-503	116	5	7'-1"	3	10"	5'-10"	8"			857
S-504	232	5	1'-6"	1	1'-2"	6"				363
S-601	115	6	40'-4"	Str.						6,967
									Total Weight	20,073

@ 3 sets, 4 each vary A by 2 1/4"

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPERSTR.	ABUTS.	GENERAL			
E-2	Lump	Sum	Cofferdams, Cribs, and Sheeting			Lump Sum			
E-2	1951	Cu. Yd.	Unclassified Excavation Including Rock		1951				
S-1	107	Cu. Yd.	Class "C" Concrete, Superstructure	107					
S-1	268	Cu. Yd.	Class "E" Concrete, Abutment Walls		268				
S-1	183	Cu. Yd.	Class "E" Concrete, Footings		183				
S-1	39	Cu. Yd.	Class "E" Concrete, Struts		39				
S-3	28	Lin. Ft.	Waterproofing, Premolded Sealing Strip		28				
S-3	30	Sq. Yd.	Type "B" Waterproofing		30				
S-4	62,565	Lbs.	Reinforcing Steel	20,073	42,492				
S-7	126,900	Lbs.	Structural Steel	126,900					
S-8	126,900	Lbs.	Field Painting of Structural Steel, as per plan	126,900					
S-9	82	Sq. Ft.	1" Preformed Expansion Jt. Filler (Gray Rubber M-10.02)		82				
S-14	166	Lin. Ft.	Railing (Aluminum with Concrete Endpost)	166					
S-16	Lump	Sum	First Test Pile			Lump Sum			
S-18	570	Lin. Ft.	Steel Piles 12 BP53		570				
S-29	188	Cu. Yd.	Porous Backfill		188				
Spec.	1995	Each	Stud Shear Connectors	1995					
S-29	96	Lin. Ft.	8"φ perforated bituminous coated CMP, including specials		96				

REPLACEMENT BARS

MARK	NO.	SIZE	LENGTH	TYPE	WEIGHT
RE 301	1	3	7'-5"	Str.	
RE 501	2	5	5'-7"	Str.	
RE 601	1	6	5'-11"	Str.	
RE 701	1	7	6'-3"	Str.	
RE 801	1	8	6'-6"	Str.	
RE 901	1	9	6'-10"	Str.	
RE 1001	1	10	7'-3"	Str.	

REPLACEMENT BARS:
If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy. Testing Laboratory, test sample as provided in section S-402 need not be furnished and replacement bars will not be required.

BAR SIZE:
Bar size is indicated in the barmark. The first digit where three digits are used and the first two where four are used, indicates the bar size number. For example, A401 is a number 4 bar and A1114 is a number 11 size bar.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

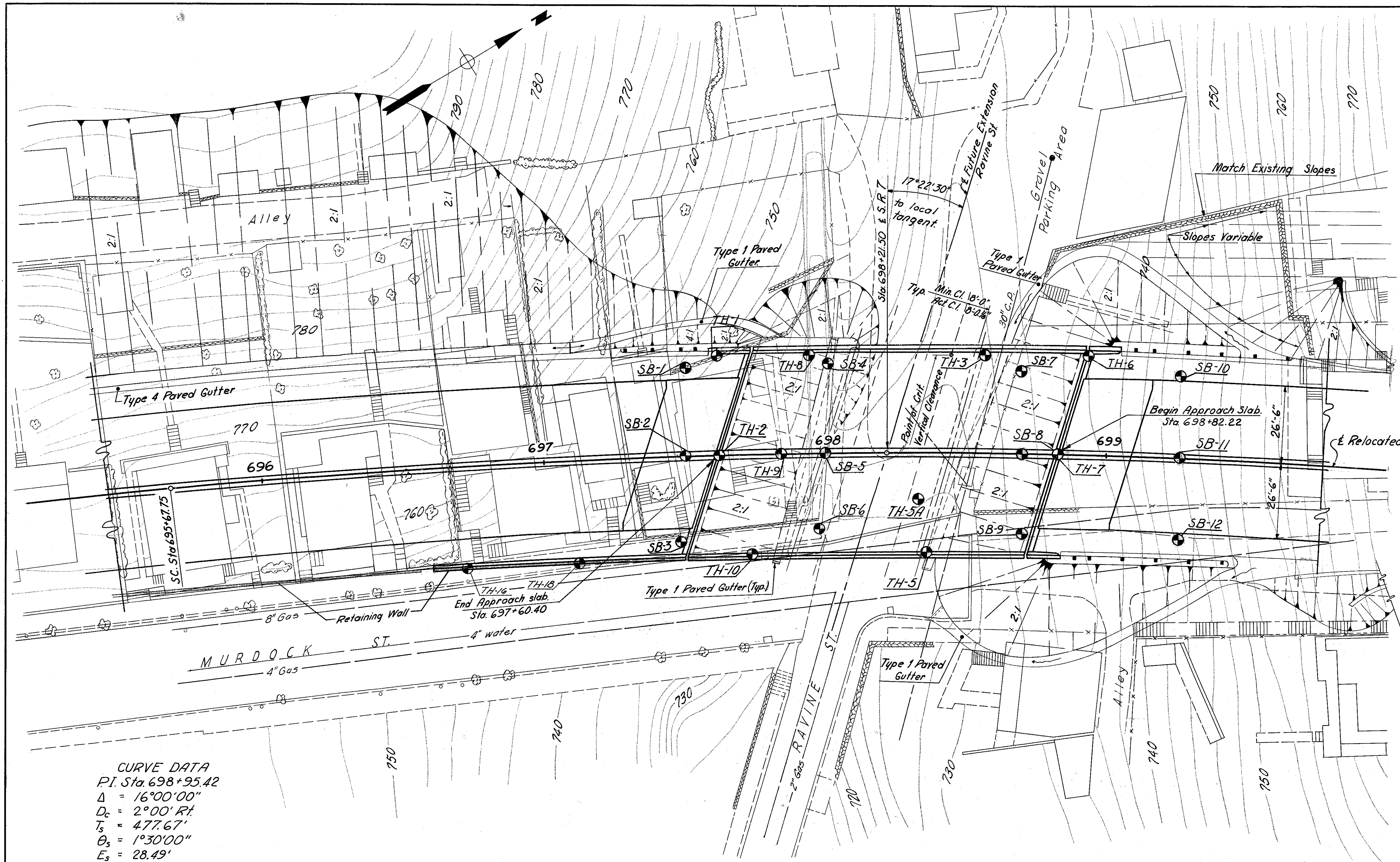
REINFORCING STEEL LIST AND ESTIMATED QUANTITIES
BRIDGE NO. JEF-7-1374
UNDER ST. CLAIR AVE.
JEFFERSON COUNTY STA. 692+42.20

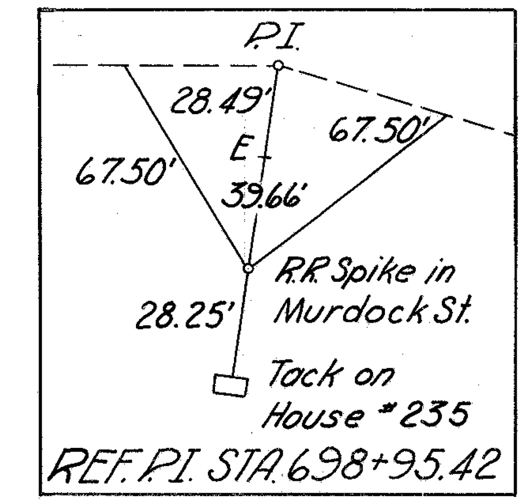
Designed	Drawn	Traced	Checked	Reviewed Date	Revised
A.S.J.	[illegible]		JPW	E. Roberts 6-10-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(14)	

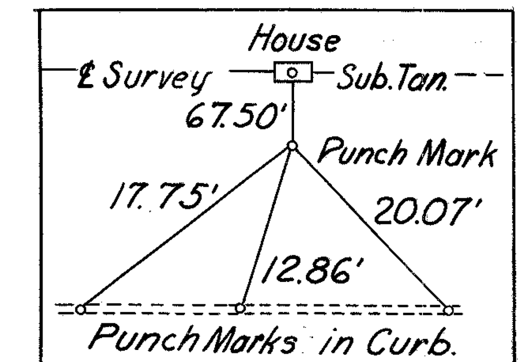
JEFFERSON COUNTY
JEF - 7 - 13.53

B.M. 81' Rt Sta. 694+86
R.R. Spike in Pole
Elev. 759.22'





REF. P.I. STA. 698+95.42



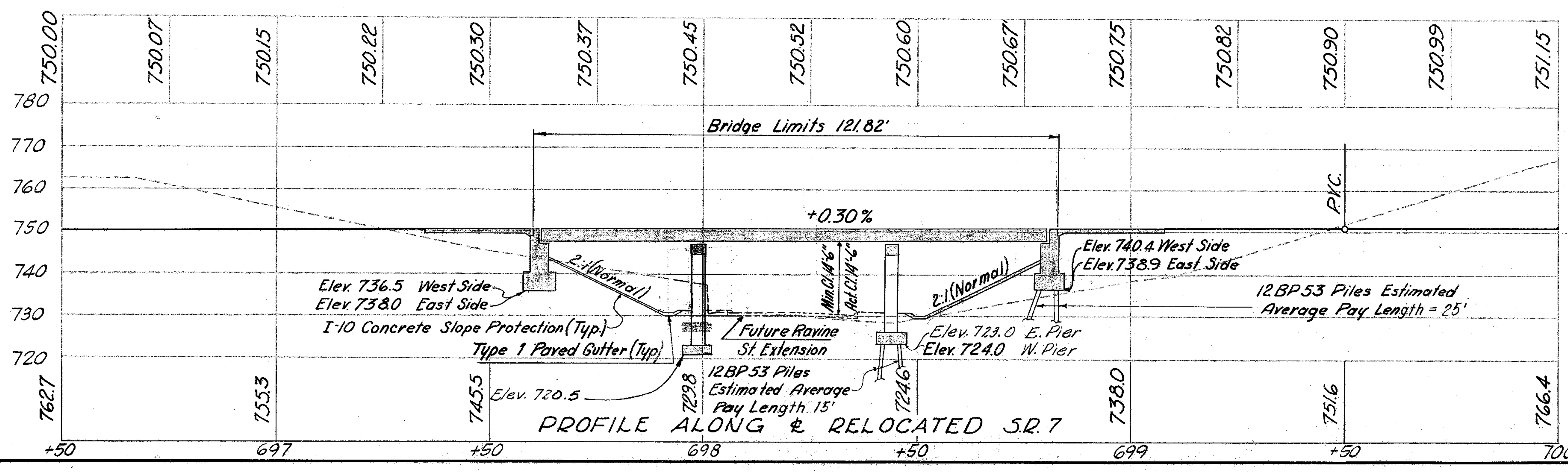
REF. T.S. STA. 694+17.75

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

CURVE DATA

P.I. Sta. 698+95.42
Δ = 16°00'00"
D_c = 2°00' Rt.
T_s = 477.67'
θ_s = 1°30'00"
E_s = 28.49'
L_s = 150.00'
Δ_c = 13°00'00"
L_c = 650'
P = 0.33'
k = 75.00'
L.T. = 99.99'
S.T. = 50.00'

Boring No.	Rock Elev.
TH-16	736.6
TH-18	727.6
TH-1	738.0
TH-2	736.0
TH-3	714.5
TH-5	709.0
TH-A5	713.9
TH-6	723.7
TH-7	724.4
SB-3	739.0
SB-4	721.6
SB-5	720.6
SB-6	721.0
SB-9	711.3



PROFILE ALONG ℄ RELOCATED S.R. 7

+0.30% +3.40%

P.V.I. Sta. 701+50
Elev. 751.50
P.G. 753.05
Corr. 1.55'
400' V.C.

Indicates boring location

PROPOSED STRUCTURE

Type: Continuous steel beam with reinf. concrete deck and substructure.
Spans: 36'-0", 45'-1", 36'-0" c/c Brgs. along Ref. Chord.
Roadway: 73'-0" f/f of Parapet, 3'-0" Median and 1'-2" Curbs.
Load Frequency: CF-2000 (57) adequate for AASHO alternate loading
Skew: 17°22'43" Lt. Forward to Ref. Chord.
Wearing Surf.: 1" Monolithic concrete
Appr. Slabs: Special Design (25.0' Long)
Alignment: 2°00' Rt. curve
Superelevation: .033'/'

MICHAEL BAKER, JR. CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SITE PLAN
BRIDGE NO. JEF-7-1382
OVER RAVINE STREET

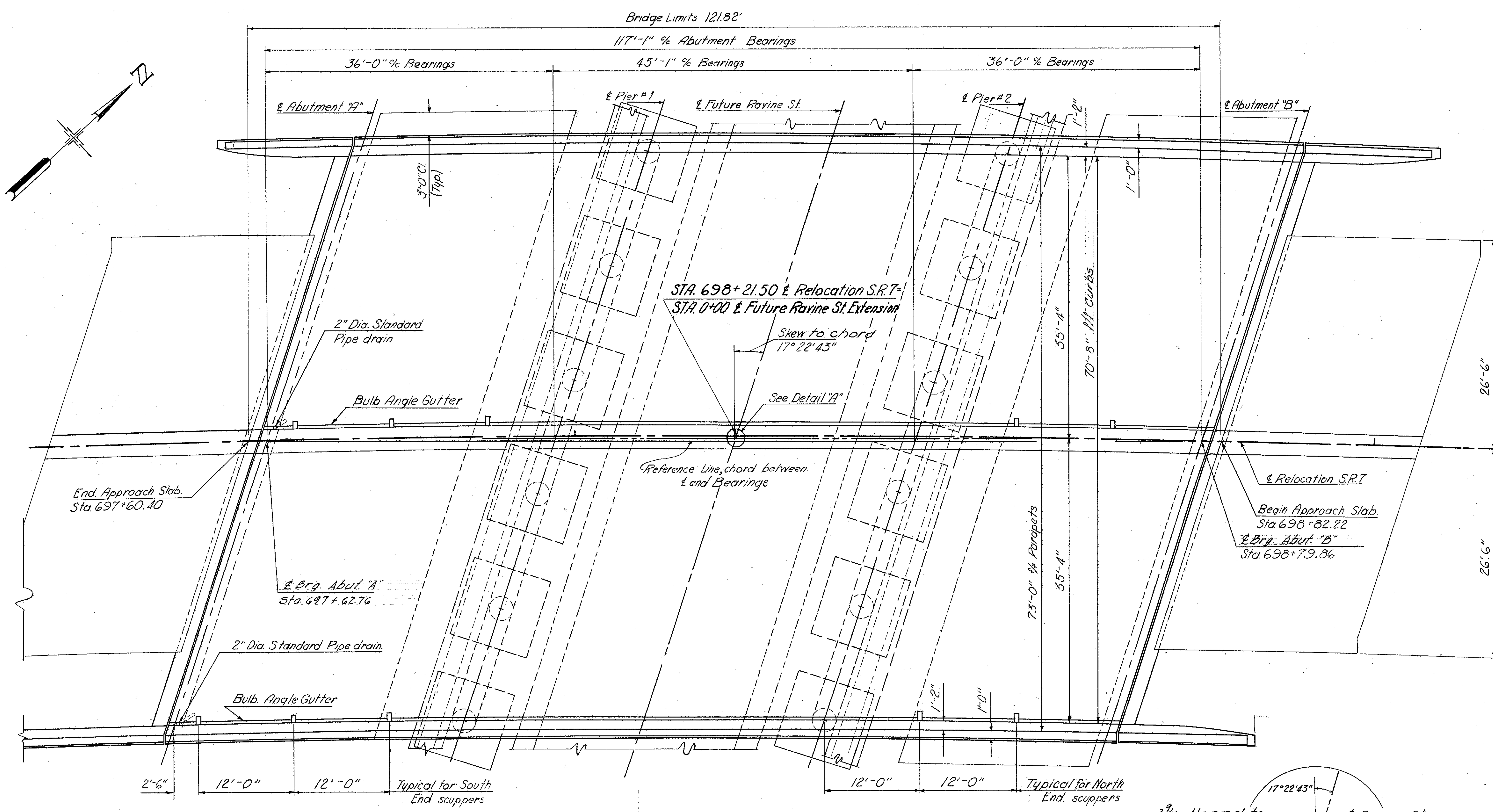
JEFFERSON COUNTY STA. 698+21.50

PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
	Ram	J.D.R.	Ram.	J.M. F.A.	E.F.R. 10-17-58

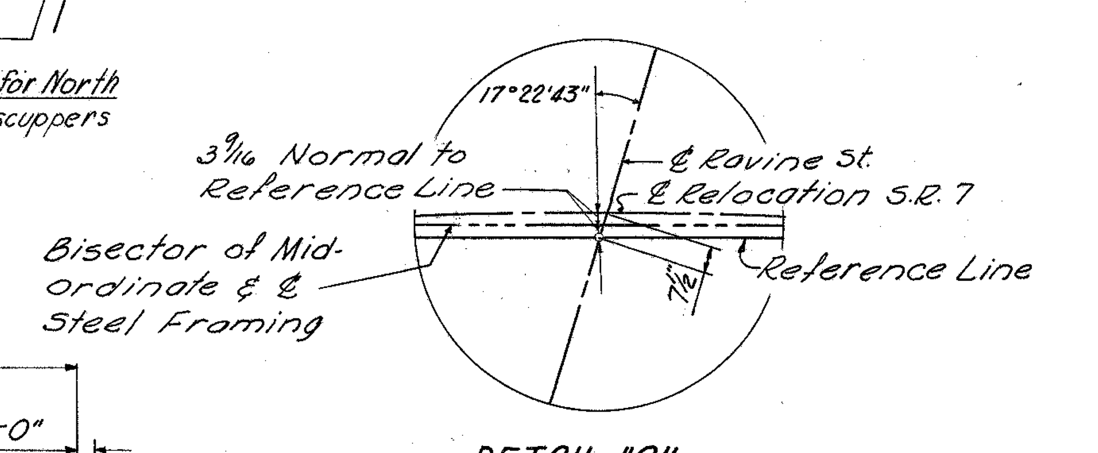
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

242
307

JEFFERSON COUNTY
JEF-7-13.53



PLAN



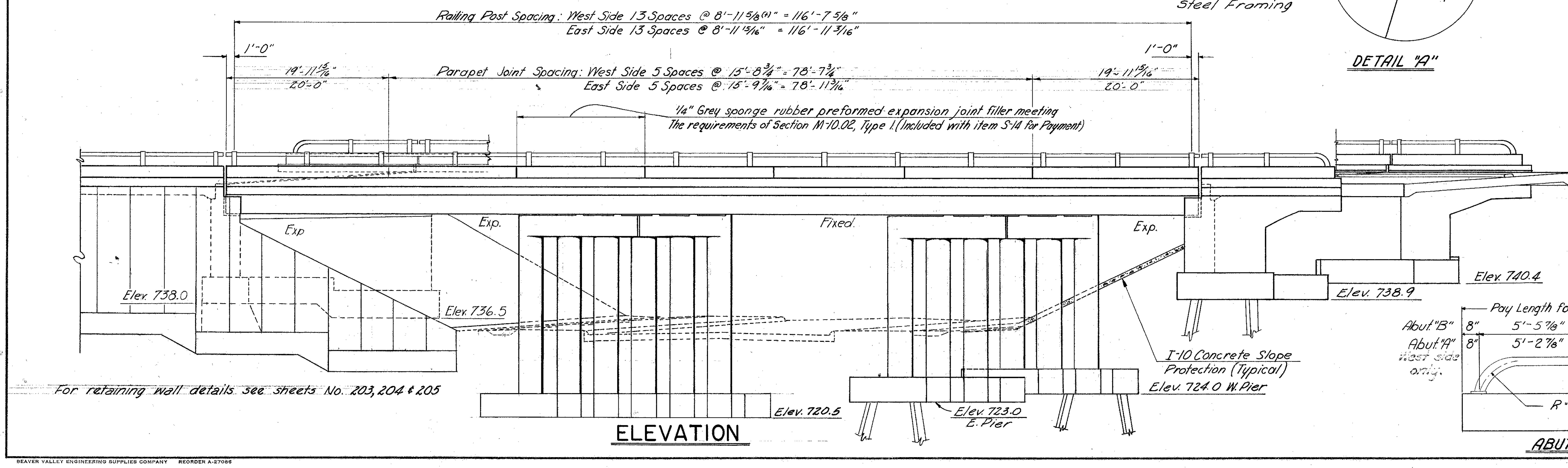
DETAIL "A"

GENERAL NOTES

- Reference shall be made to Standard Drawings CSB-2-56 Sheet No. 2 & 3 of 6 revised 2-2-59; AR-1-57 revised 2-2-59.

- Design Specification: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways dated 9-1-57 together with current revisions thereof.
- Loading: CF 2,000(57) adequate for A.A.S.H.O. alternate loading.
- Welding of structural steel shall be class "A" except as otherwise shown (⤙B). Welds shown as field welds may, at the option of the contractor, be made in the shop.
- Slope paving shall be Type I-10 concrete slope protection meeting the requirments of Section I-10.05. The Paving shall extend from the toe of slope to the face of abutment and across the slope area as shown on the General Plan and on the Site Plan.
- Excavation quantity for abutment "B" includes the removal of fill between the proposed embankment and the bottom of the abutment.
- Piles shall be driven to firm contact with rock. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. 5-18.06 is not less than the following value for a pile hammer of the indicated energy rating:
  For the abutment piles
  37 Tons per pile using a 7000 ft.lb. hammer
  28 Tons per pile using an 11,000 ft.lb. hammer
  26 Tons per pile using a 15,000 ft.lb. hammer
  For the pier piles
  34 Tons per pile using a 7000 ft.lb. hammer
  26 Tons per pile using an 11,000 ft.lb. hammer
  25 Tons per pile using a 15,000 ft.lb. hammer
  If the energy rating of the hammer is between the rating as shown above, the required formula capacity shall be dermined by interpolation. The design load is 25 tons per pile for the abutment piles and 20 tons per pile for the pier piles.

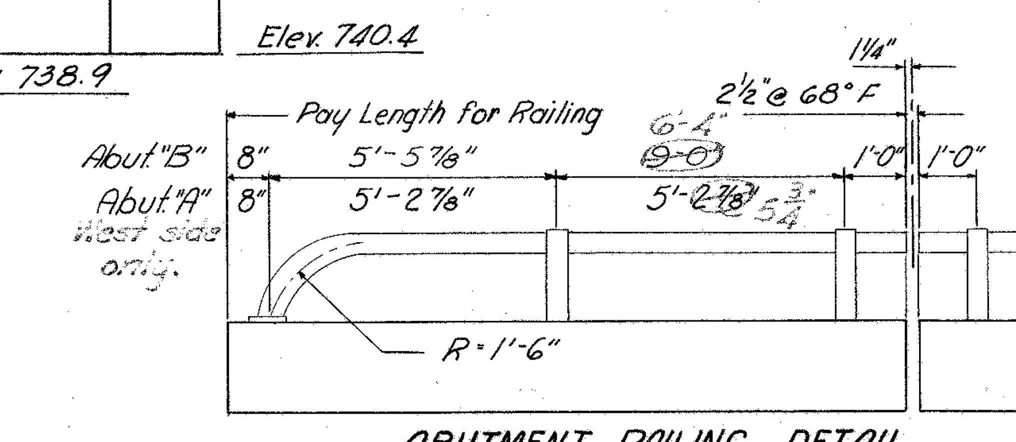
- Foundation Bearing Pressure: Pier #1 footings are designed for a maximum bearing pressure of 3.5 tons per sq. ft. and are to be founded upon rock.
  Abutment "A" (South Abutment) footing is designed for 2 tons per sq. ft. and is to be founded upon rock.
- Footings on rock shall extend a minimum of 3" into solid rock or to the elevation shown, whichever is lower. The engineer shall inspect the entire area and insure that excavation goes to bedrock. Prolonged exposure to atmospheric conditions shall be averted. The excavation shall be kept drained at all times.



For retaining wall details see sheets No. 203, 204 & 205

ELEVATION

PAVEMENT ELEVATIONS			
STATION	PROFILE GRADE	LEFT CURB	RIGHT CURB
697+75.00	750.37	751.49	749.25
698+00.00	750.45	751.57	749.33
698+25.00	750.52	751.64	749.40
698+50.00	750.60	751.72	749.48
698+75.00	750.67	751.79	749.55



ABUTMENT RAILING DETAIL

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

GENERAL PLAN & ELEVATION
BRIDGE NO. JEF-7-1382
OVER RAVINE STREET

JEFFERSON COUNTY STATION 698+21.50

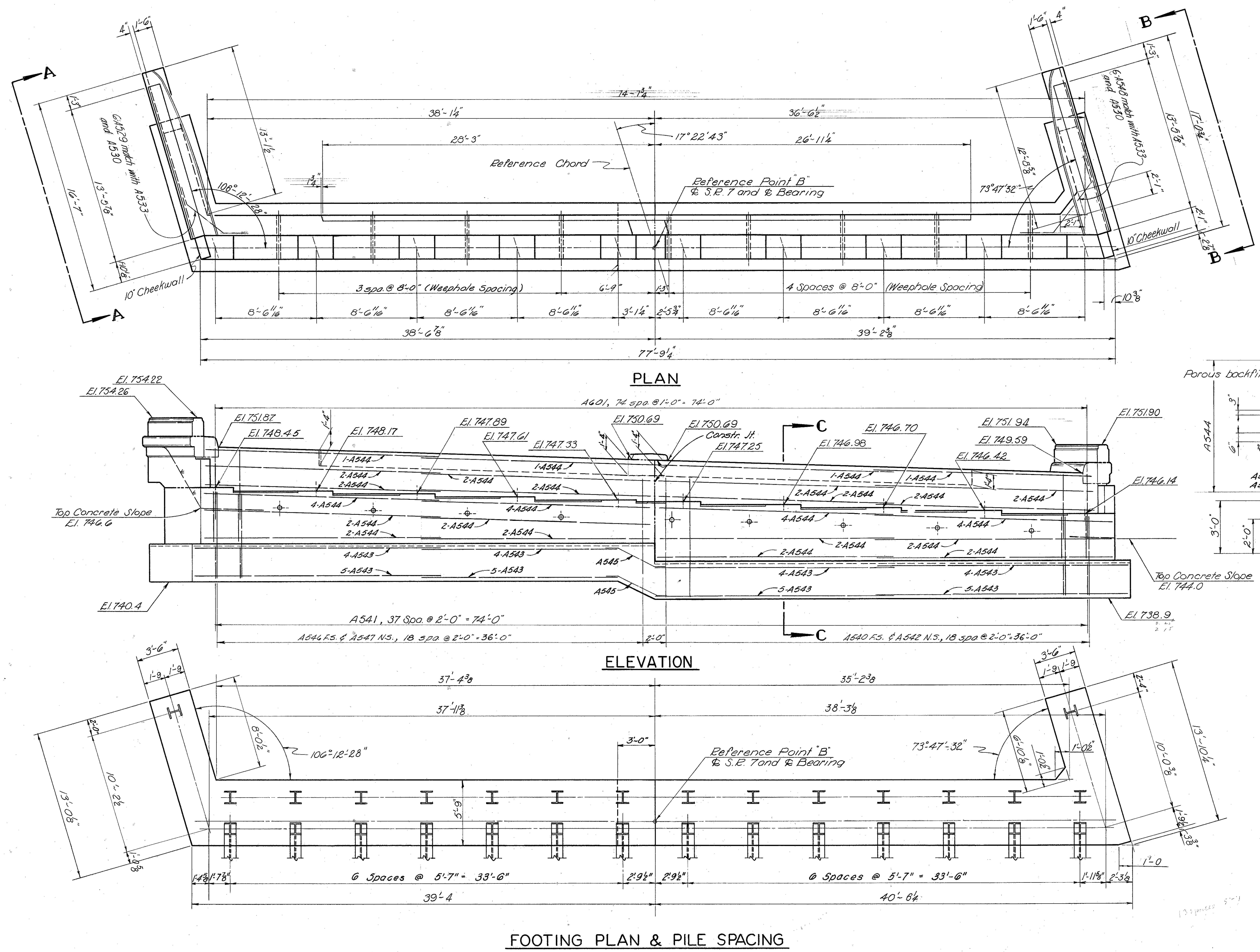
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
F.A.	C.J.K.	Ram	J.M.	E. Roberts 6-10-59	3-24-60

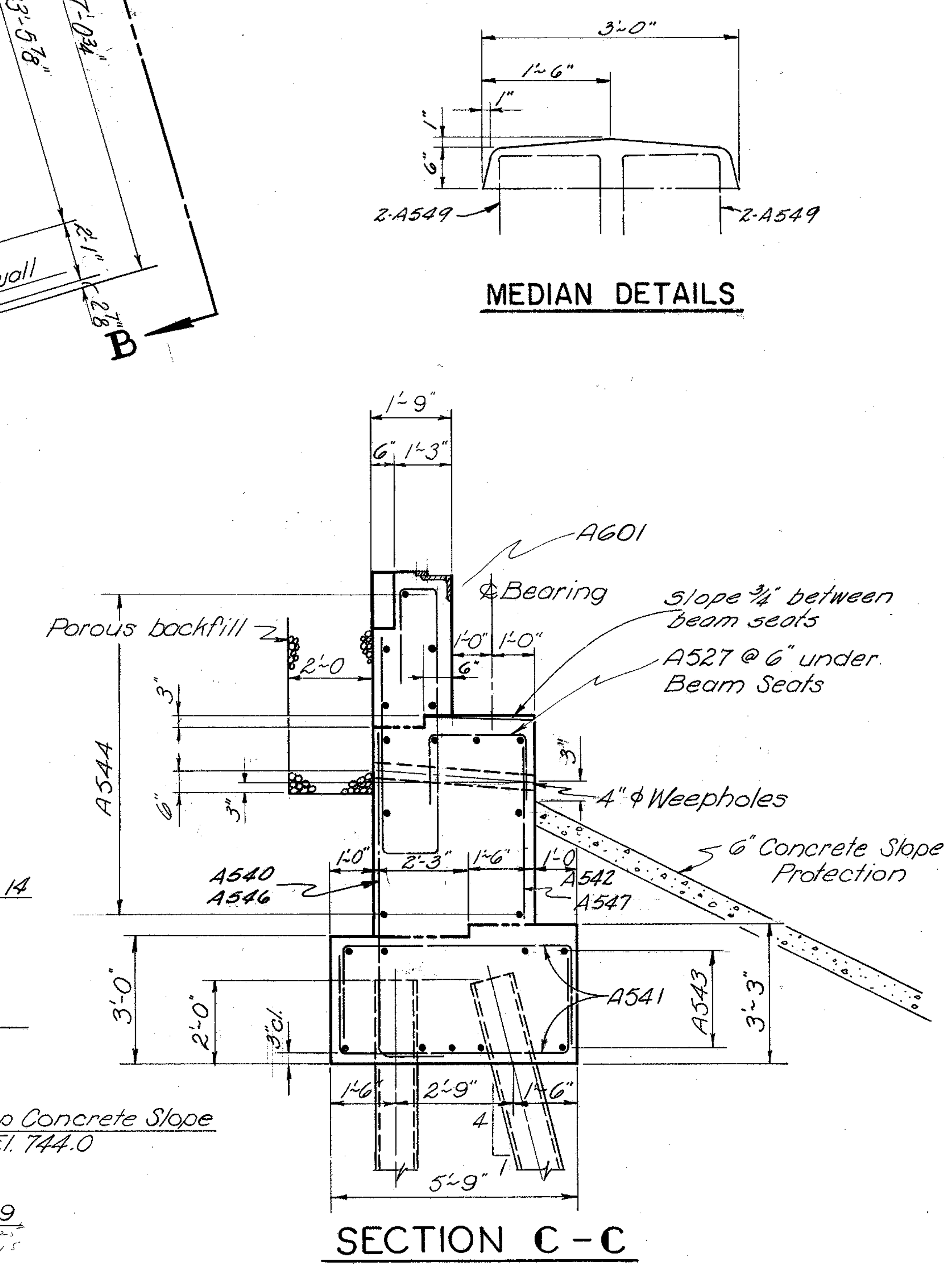
FED. RD. DIVISION 2
STATE OHIO
PROJECT U-430 (14)
TYPE FUNDS
243
307
JEFFERSON COUNTY
JEF-7-13.53
ANCHOR BAR DETAIL
NOTE: Special Care Shall be Taken in Placing Reinforcing Steel at the Beam Seats so that it will not Interfere with the Drilling of Anchor Bar Holes.
36'-6" measured radial between ℄ SR 7 and face of parapet
Reference Chord
See Sheet 245 for Expansion Joint Details
℄ Bearing
1" Preformed Expansion Jt. Filler
Reference Point ℄ SR 7 & ℄ Bearing
℄ Beams
3 spa. @ 8'-0" c/c Weepholes = 24'-0"
4 spa. @ 8'-0" c/c Weepholes = 32'-0"
4 spa. @ 8'-6 1/16" c/c Brgs = 34'-2 3/4"
37'-6 1/4" (at elevation 745.79)
38'-11 5/8" (at elevation 750.04)
77'-2 1/2"
PLAN
A601 - 72 spa. @ 1'-0" = 72'-0"
A522, 18 spa. @ 2'-0" = 36'-0"
A523, 17 spa. @ 2'-0" = 34'-0"
Construction Joint
Weepholes
Top of concrete slope protection
El. 738.00
El. 729.70
Elev. 736.50
ELEVATION
Reference chord
38'-8 3/4" (at elevation 740.00)
Reference Point "A" ℄ SR 7 & ℄ Brg.
A524, 12 spa. @ 2'-0" = 24'-0" match with A520 as shown in Section
A524, 5 spa. @ 2'-0" = 10'-0" match with A519
A525 8 Spa. @ 2'-0" = 16'-0" match with A518 as shown in Section
A525 8 spa. @ 2'-0" = 16'-0" match with A517 as shown in Section
36'-9 3/4" (at elevation 740.25)
FOOTING PLAN
Porous backfill shall be continuous with the porous backfill behind the retaining wall on Murdock Street.
Slope 3/4" between beam seats
5-A527 @ 6" under beam seats
4" ∅ Weephole
All horizontal steel A526 unless otherwise noted
6" Concrete Slope Protection Typical
#6 bars placed with retaining wall
SECTION J-J
All horizontal steel A521 unless otherwise noted
SECTION K-K
MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA
ABUTMENT "A" DETAILS
BRIDGE NO. JEF-7-1382
OVER RAVINE ST.
JEFFERSON COUNTY
STA. 698 + 21.50
DESIGNED F.A.
DRAWN BDB
TRACED Ram.
CHECKED JPW
REVIEWED DATE E. Roberts 6-10-59
REVISED
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27086

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

244
307

JEFFERSON COUNTY
JEF-7-13.53





- PROCEDURE : The embankment shall be placed and compacted to the top of the slope after which excavation shall be made for the abutment and piles driven.
- POROUS BACKFILL 2 ft. thick, full length of abutment and wingwalls shall extend up to the underside of the approach slab or to the bottom of the subbase.
- See Sheet #243 for Anchor Bar Detail

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ABUTMENT "B" DETAILS
BRIDGE NO. JEF-7-1382
OVER RAVINE STREET

JEFFERSON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
F.A.	C.W.S.	C.W.S.	JPW	E. Roberts 6-10-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

245
307

JEFFERSON COUNTY
JEF -7- 13.53

NOTE:

Guard Rail end connection assembly shall be galvanized after welding.

Guard Rail end connection to be included with Item 5-14 Railing for payment.

All abutment concrete shall be Class "E". All parapet concrete shall be Class "C". Parapet concrete and reinforcing steel shall be included with Item 5-14, Railing, for payment.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ABUTMENT WINGWALL DETAILS
BRIDGE NO. JEF -7 -1382
OVER RAVINE STREET

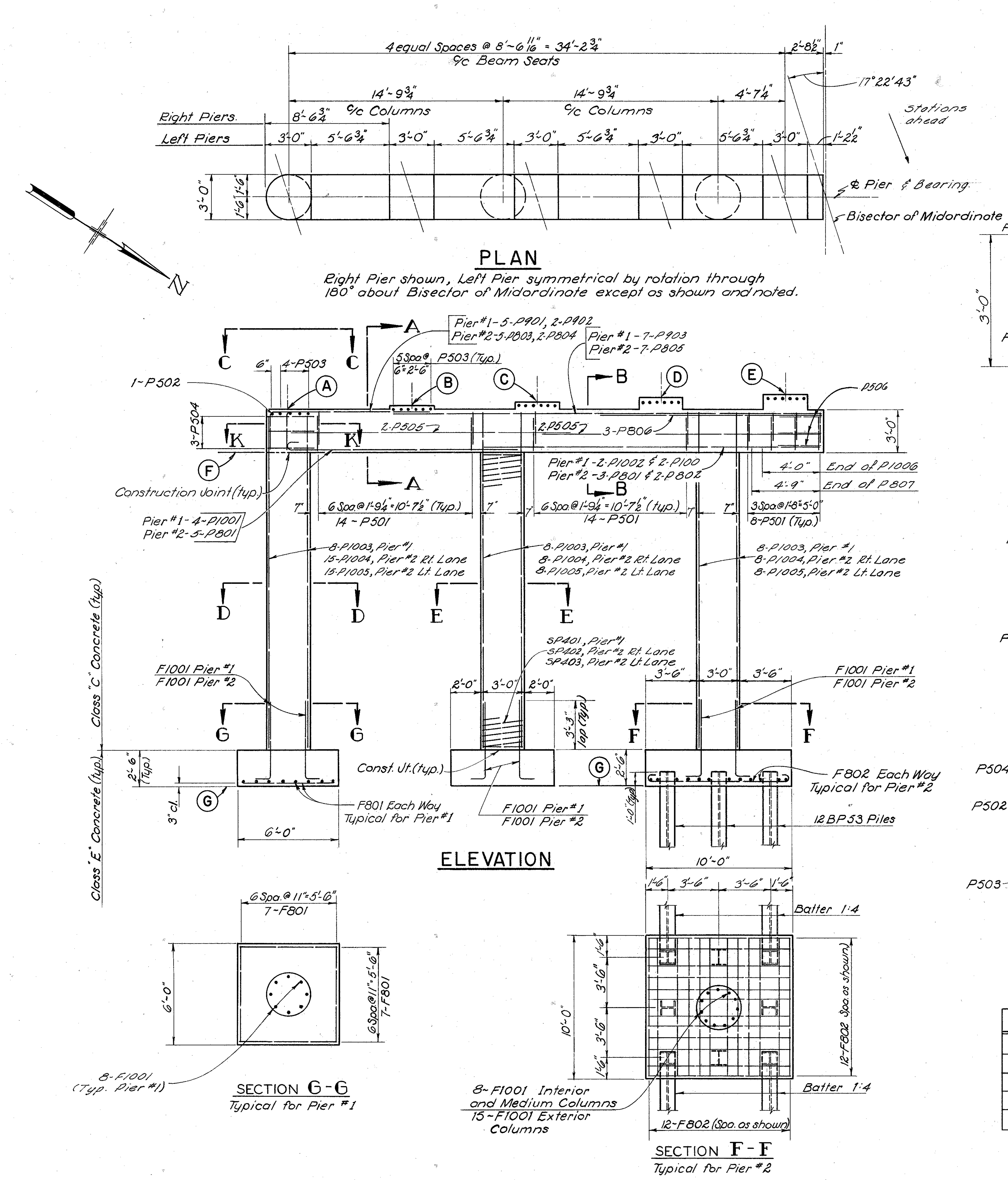
JEFFERSON COUNTY

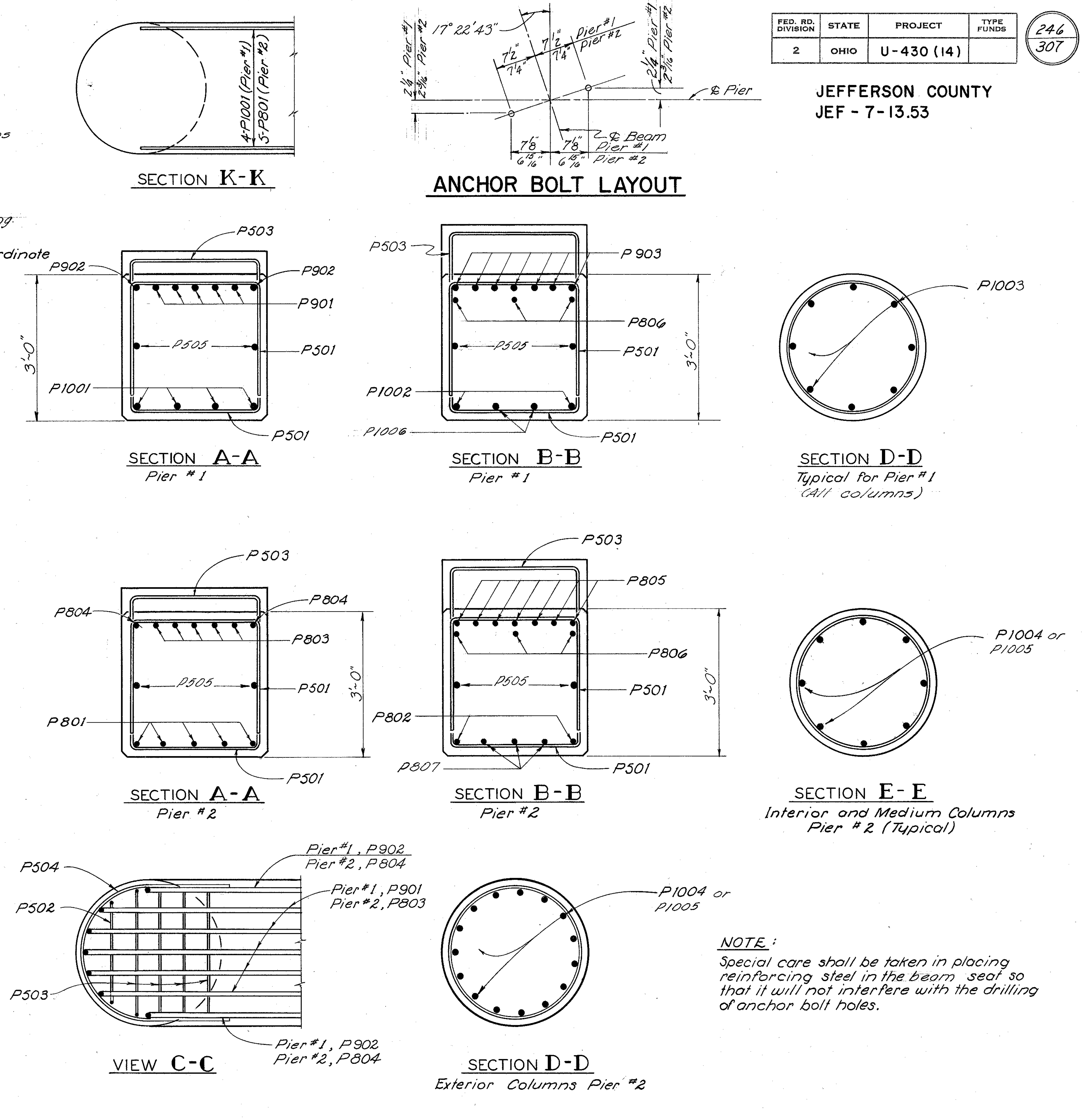
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
F.A.	C.W.S.	C.W.S.	JPW	E. Roberts 6-10-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

246
307

JEFFERSON COUNTY
JEF - 7 - 13.53





NOTE:
Special care shall be taken in placing reinforcing steel in the beam seat so that it will not interfere with the drilling of anchor bolt holes.

TABLE OF ELEVATIONS							
LOCATION	A	B	C	D	E	F	G
Pier #1 Right Lane	745.86	746.14	746.41	746.69	746.97	742.86	720.50
Pier #1 Left Lane	748.16	747.88	747.61	747.33	747.05	742.86	720.50
Pier #2 Right Lane	746.07	746.37	746.65	746.93	747.20	743.07	723.00
Pier #2 Left Lane	748.39	748.11	747.84	747.66	747.27	743.07	724.00

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

PIERS
BRIDGE NO. JEF-7-1382
OVER RAVINE STREET

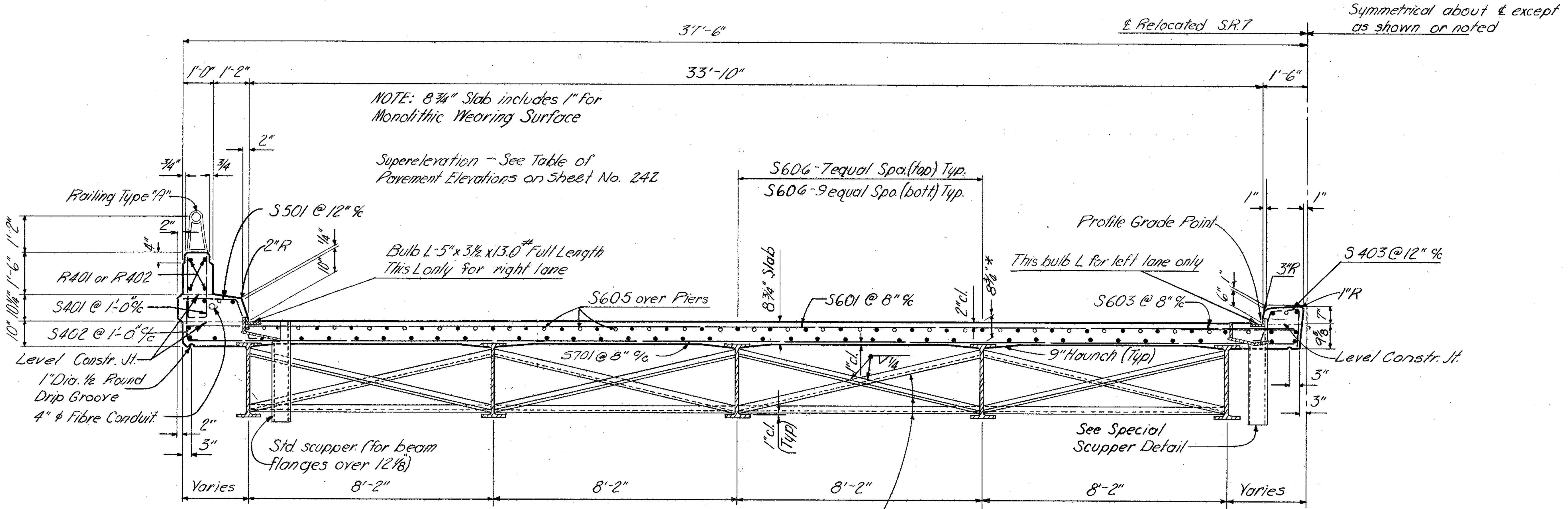
JEFFERSON COUNTY STA. 698+21.50

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
F.A.	C.W.S.	C.W.S.	A.S.J. J.M.	E. Roberts 6-10-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

247
307

JEFFERSON COUNTY
JEF-7-13.53

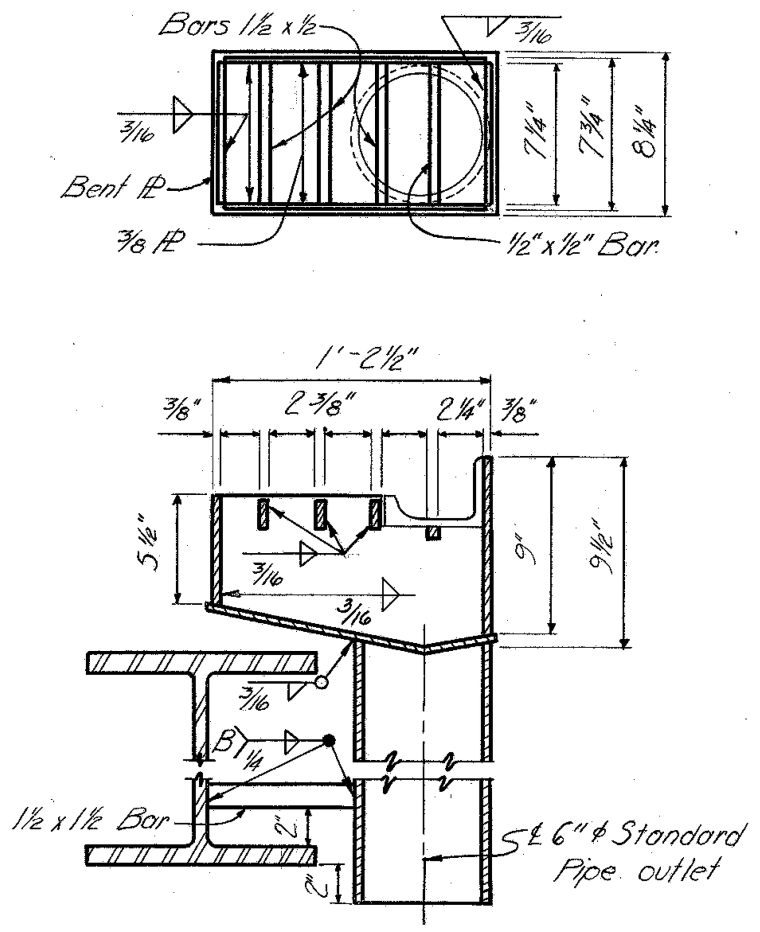


* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade

Intermediate crossframe angles 3"x3"x 5/16" Weld both sides of vertical leg and top side of horizontal leg to beam with ¼" continuous fillet weld (Typical)

TYPICAL CROSS SECTION

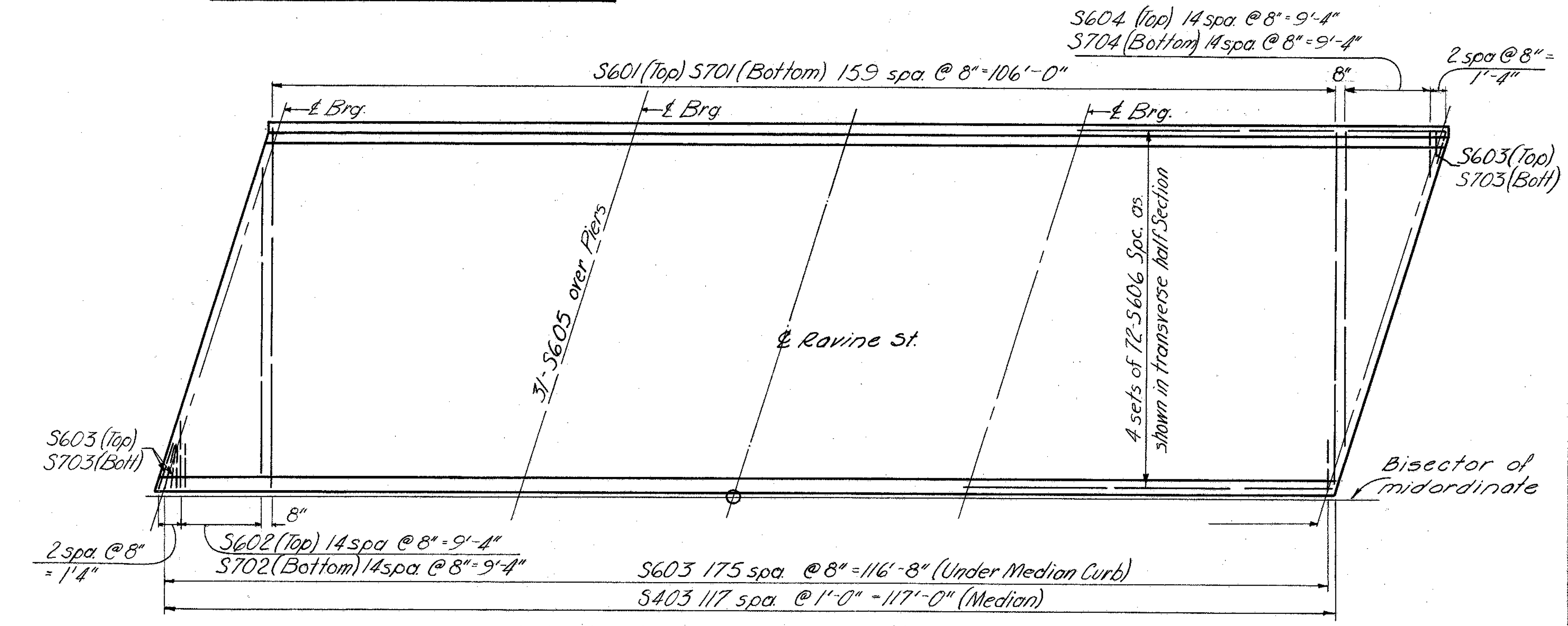
NOTE: All dimensions are radial to ℄ Relocated SR.7 except beam spacing which is measured normal to the bisector of mid-ordinate



SPECIAL SCUPPER DETAIL

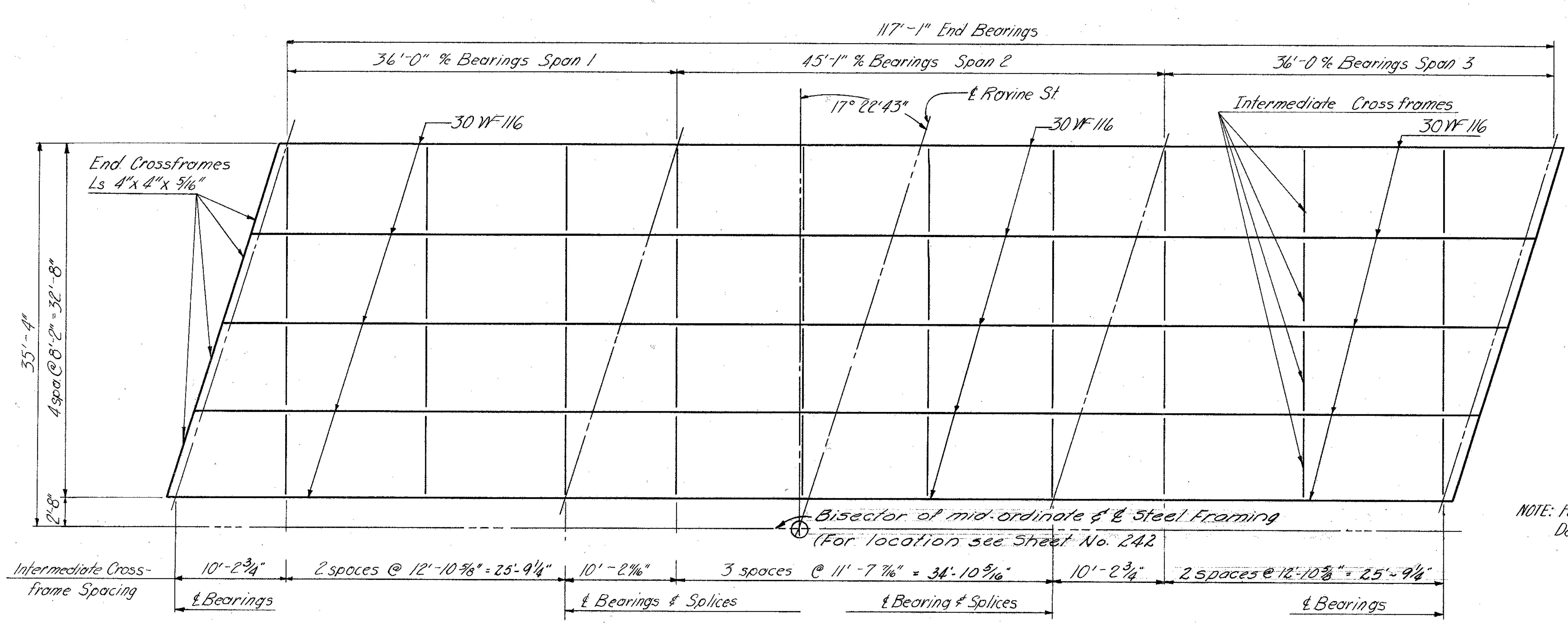
CONCRETE DECK PLACING
In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections between transverse construction joints which are normal to the centerline of bridge and are located near the center of any span.

NOTES:
- Refer to Standard Drawing CSB-2-56, Sheets 2 and 3 of 6, revised 2-2-59 for Detail of End Finish, Gutters, Scuppers, Curb Plates, Pipe Drains, and Bearing Plates.
- Refer to Standard Drawing AR-1-57, revised 2-2-59 for details of Aluminum Railing (Type A).
- Concrete and reinforcing steel above parapet construction joints included with railing for Payment.
- Concrete shall be Class "C"
- See "General Plan & Elevation" for location and spacing of scuppers, and railing posts.



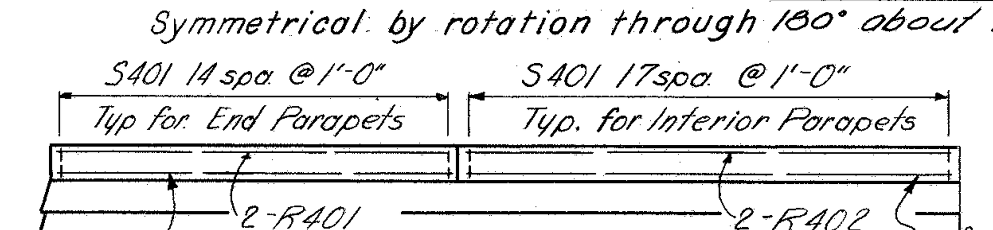
HALF PLAN OF DECK REINFORCING

Symmetrical by rotation through 180° about the intersection of ℄ Ravine St. & bisector of midordinate.

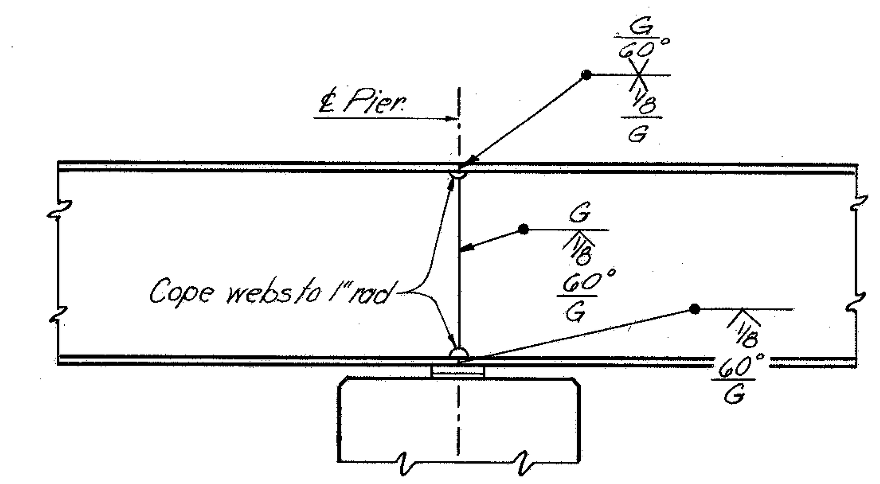


HALF PLAN OF STEEL FRAMING

Symmetrical by rotation through 180° about the intersection of ℄ Ravine St. and ℄ Steel Framing

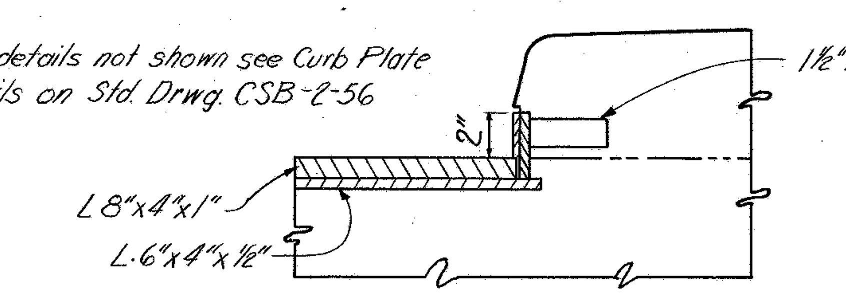


PARAPET STEEL DETAIL



BEAM SPLICE DETAIL

NOTE: For details not shown see Curb Plate Details on Std. Drwg. CSB-2-56



END FINISH AT MEDIAN

BEAM SPLICE WELDING PROCEDURE
1. Raise abutment ends of beams ¼"
2. Butt-weld the beam flanges and web, using the following sequence: make two passes on each flange, then two on the web; repeat using one pass at each location until welds are completed.

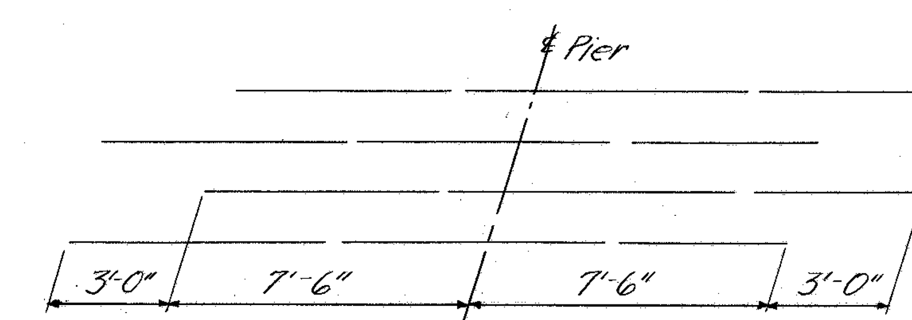


DIAGRAM SHOWING STAGGER OF S605 BARS OVER PIERS

DEAD LOAD DEFLECTION	Exterior Beam		Interior Beam		Medain Beam	
	End Span	Center Span	End Span	Center Span	End Span	Center Span
Deflection due to weight of steel	0	0	0	0	0	0
Deflection due to remaining D.L.	1/16	1/8	1/16	1/8	1/16	1/8
Total D.L. deflection	1/16	1/8	1/16	1/8	1/16	1/8

* No camber required but beams shall be fabricated and erected with any natural camber or bowed side up.

PAINTING: After erection and after the shop coat has been cleaned and, where necessary, repainted in accordance with Sec. S-8.04 an additional coat of the same paint as used in the shop shall be applied over the outside face of the outside steel beams and all sides of bottom flange.

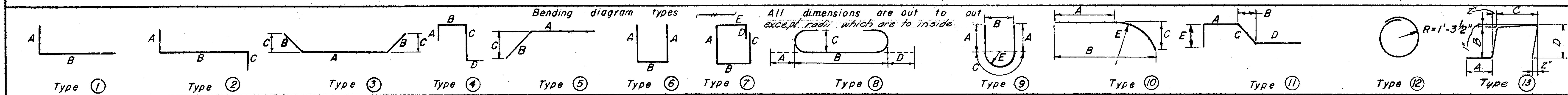
MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUPERSTRUCTURE
BRIDGE NO. JEF-7-1382
OVER RAVINE STREET

JEFFERSON COUNTY STA. 698+21.50

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
F.A.	K.E.A.	Ram	J.M.	E. Roberts 6-10-59	

REINFORCING STEEL BAR SCHEDULE



ABUTMENTS

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A401	40	4	6'-0"	6	2'-10"	6½"				160
A501	28	5	4'-5"	6	1'-6"	1'-8"				129
A502	2sets (4ea. set)	5	3'-10" to 4'-7"	6	1'-6"	a				35
A503	4sets (5ea. set)	5	3'-9" to 4'-7"	6	1'-6"	b				87
A504	7	5	11'-10"	str.						86
A505	2	5	11'-8"							25
A506	24	5	3'-6"	str.						88
A507	10	5	13'-5"	"						140
A508	4	5	11'-7"	"						48
A509	12	5	3'-9"	"						47
A510	12	5	8'-1"	"						101
A511	16	5	6'-1"	6	1'-7"	3'-2"				102
A512	6	5	10'-6"	str.						66
A513	7	5	8'-3"	6	3'-8"	1'-2"				61
A514	6	5	20'-8"	str.						129
A515	8	5	19'-10"	"						165
A516	6	5	19'-7"	"						123
A517	9	5	17'-9"	1	5'-4"	12'-7"				167
A518	9	5	14'-10"	1	5'-4"	9'-8"				139
A519	6	5	12'-1"	1	4'-4"	7'-11"				76
A520	13	5	11'-3"	1	4'-4"	7'-1"				153
A521	34	5	20'-6"	str.						727
A522	19	5	5'-2" to 6'-4" Vary by ¾"							114
A523	18	5	7'-9" to 8'-9" Vary by ¾"							155
A524	19	5	3'-1"	str.						61
A525	18	5	4'-1"	"						77
A526	26	5	21'-0"	"						570
A527	120	5	5'-3"	6	1'-7"	2'-4"				657
A528	5	5	6'-3"	11	1'-7"	3'-0"	3'-4"	1'-7"		33
A529	6	5	7'-1"	3	4'-0½	1'-7"	11½			44
A530	14	5	14'-2	str.						207
A531	4	5	14'-0"							58
A532	14	5	8'-10"	str.						129
A533	12	5	10'-10"	"						136
A534	14	5	8'-1"	"						118
A535	4	5	6'-2"	"						26
A536	4	5	7'-0	"						29
A537	12	5	12'-8	"						159
A538	38	5	7'-3"	6	2'-2"	3'-2"				288
A539	18	5	10'-2"	6	4'-7"	1'-2"				191
A540	19	5	7'-5" to 8'-6"	1	1'-0"	c				158
A541	76	5	9'-6"	6	2'-2	5'-5"				753
A542	18	5	3'-8" to 4'-10" Vary by ¾"							80
A543	36	5	21'-0"	str.						788
A544	68	5	20'-3	"						1436
A545	9	5	6'-3	11	1'-7"	3'-0"	3'-4"	1'-7"		59
A546	19	5	7'-1" to 8'-2"	1	1'-0"	d				151
A547	20	5	3'-4" to 4'-6" Vary by ¾"							82
A548	15	5	8'-6"	3	5'-5½	1'-7"	1'-3½			133
A549	8	5	4'-1"	6	2'-0"	1'-2"				41
A601	148	6	14'-6"	7	5'-10"	1'-5"	4'-7"	3'-2"	11"	3223
R403	4	4	10'-7"	str.	Included with railing					
R404	8	4	12'-10"	"	for payment					
										12,810

SPIRAL BARS

MARK	TOTAL	SIZE	LENGTH	PITCH	NO. TURNS	CORE DIA.	WEIGHT
SP-401	6	4	19'-10¼"	4½"	56	32"	2177
SP-402	3	4	17'-6⅞"	4½"	50	32"	972
SP403	3	4	16'-6⅞"	4½"	47	32"	912
						Total Weight	4061

PIERS

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P501	144	5	6'-11"	6	2'-3"	2'-8"				1039
P502	4	5	7'-3"	6	2'-8"	2'-2"				30
P503	112	5	7'-8"	6	2'-8"	2'-7"				896
P504	12	5	7'-2"	9	1'-7"	2'-8"	4'-0"		1'-3⅜"	90
P505	16	5	19'-2"	str.						320
P801	10	8	17'-2"	8	1'-1"	16'-1"	9"			456
P802	4	8	23'-2"	str.						247
P803	10	8	13'-4"	1	2'-6"	11'-1"				356
P804	4	8	12'-2"	1	2'-6"	9'-10"				130
P805	14	8	29'-5"	str.						1100
P806	12	8	14'-7"	str.						467
P901	10	9	13'-8"	1	2'-10"	11'-1"				465
P902	4	9	12'-7"	1	2'-10"	10'-0"				171
P903	14	9	29'-5"	str.						1400
P1001	8	10	17'-10"	8	1'-5"	16'-5"				614
P1002	4	10	23'-7"	str.						406
P1003	48	10	22'-8"	"						4682
P1004	31	10	20'-4"	"						2710
P1005	31	10	19'-4"	"						2576
P1006	4	10	19'-7"	"						337
F801	96	8	5'-8"	str.						1452
F802	144	8	11'-10"	8	1'-1"	9'-8"	9"	1'-1"		4550
F1001	122	10	6'-5"	1	1'-5"	5'-4"				3369
P506	12	5	5'-7"	6	1'-7"	2'-8"				70
P807	6	8	18'-5"	str.						295
									Total Weight	28,228

SUPERSTRUCTURE

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S401	240	4	4'-4"	6	2'-0"	6½"				695
S402	240	4	2'-8"	1	1'-6"	1'-3				427
S403	236	4	3'-3"	13	10"	11"	1'-0"	1'-0"		512
S501	236	5	3'-7"	11	1'-10"	2"	1'-5"	7"		882
S601	320	6	37'-1"	str.						17,824
S602	2sets (15 bars ea.)	6	4'-4" to 34'-1" Vary by 2'-1½"							866
S603	360	6	4'-10"	str.						2614
S604	2sets (15 bars ea.)	6	5'-3" to 35'-0" Vary by 2'-1½"							907
S605	124	6	18'-0"	str.						3352
S606	720	6	25'-3"	str.						27,306
S701	320	7	37'-1"	str.						24,255
S702	2sets (15 bars ea.)	7	4'-4" to 34'-1" Vary by 2'-1½"							1178
S703	8	7	4'-10"	str.						79
S704	2sets (15 bars ea.)	7	5'-3" to 35'-0" Vary by 2'-1½"							1234
R401	16	4	15'-4"	str.	Included with railing					
R402	40	4	19'-8"	"	for payment					
									Total Weight	82,131

a. 1'-1" to 1'-10" vary by 3"
b. 1'-0" to 1'-10" vary by 2½"
c. 6'-7" to 7'-8" vary by ¾"
d. 6'-3" to 7'-4" vary by ¾"

SPIRAL NOTES:

- 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 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.
- 1½ closed coils shall be provided at the ends of each spiral unit.
- Four steel channel, tee or angle spacers weighing approximately 0.68 lbs. 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 lbs. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPERSTR.	ABUTS.	PIERS	GENERAL		
E2	597	Cu.Yd.	Unclassified Excavation, including rock		357	240			
S-1	139 278	Cu.Yd.	Class "C" Concrete; Superstructure	139 278					
S-1	119	Cu.Yd.	Class "C" Concrete; Pier Caps & Columns			119			
S-1	183	Cu.Yd.	Class "E" Concrete; Abutment walls		183				
S-1	181	Cu.Yd.	Class "E" Concrete; Footings		105	76			
S-3	3	Sq.Yd.	Waterproofing Type "B"		3				
S-4	126,248	Lbs.	Reinforcing Steel	82,131	12,810	31,307			
S-7	173,250	Lbs.	Structural Steel	173,250					
S-8	173,250	Lbs.	Field Painting of Structural Steel as per plan	173,250					
S-9	31	Sq.Ft.	1" Preformed Expansion Joint Filler (Gray						
			Rubber, M-10.02)		31				
S-14	282	Lin.Ft.	Railing (Aluminum Rail and Supports and						
			Concrete Parapet.)	237	45				
S-16	Lump	Sum	First Test Pile				Lump Sum		
S-18	1356	Lin.Ft.	Steel Piles 12BP53		600	756			
S-25	284	Lin.Ft.	4" Fibre Conduit	237	47				
S-29	80	Cu.Yd.	Porous Backfill		80				
I-10	482	Sq.Yd.	Concrete Slope Protection		482				

REPLACEMENT BARS

MARK	NO.	SIZE	LENGTH	TYPE	WEIGHT
RE401	1	4	5'-3"	str.	
RE501	1	5	5'-7"	"	
RE601	3	6	5'-11"	"	
RE701	2	7	6'-3"	"	
RE801	1	8	6'-6"	"	
RE901	1	9	6'-10"	"	
RE1001	1	10	7'-3"	"	
RE402	1	½"ø	5'-3"	12	

REPLACEMENT BARS:
If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy. Testing Laboratory, test sample as provided in section S-402 need not be furnished and replacement bars will not be required.

BAR SIZE:
Bar size is indicated in the barmark. The first digit where three digits are used and the first two where four are used, indicates the bar size number. For example, A401 is a number 4 bar and A1114 is a number 11 size bar.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

REINFORCING STEEL LIST & ESTIMATED QUANTITIES

BRIDGE NO. JEF-7-1382
OVER RAVINE STREET
JEFFERSON COUNTY STA. 698 + 21.50

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
JPW	BDB		F.A.	E. Roberts 6-10-59	11-20-59

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(14)	

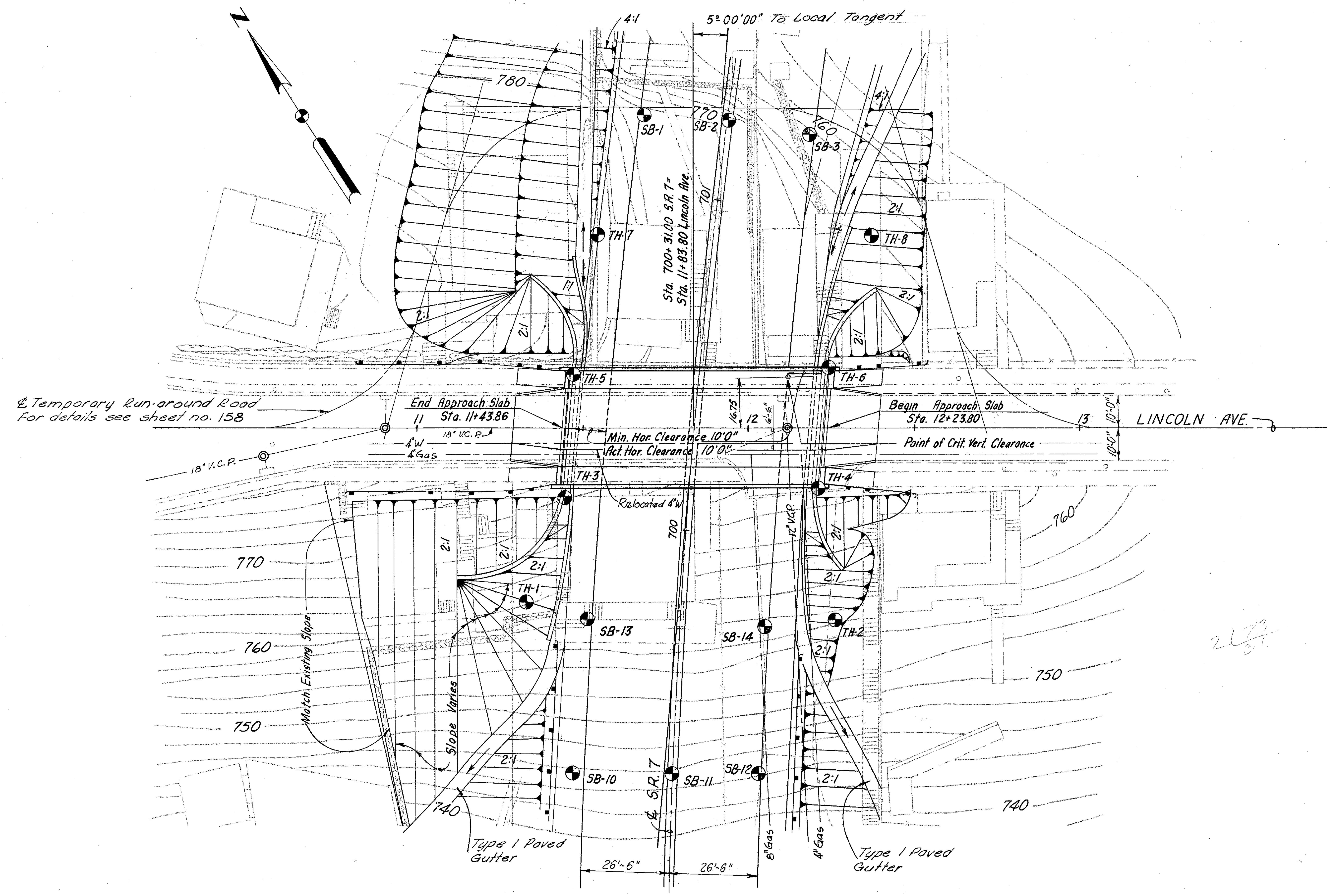
249
307

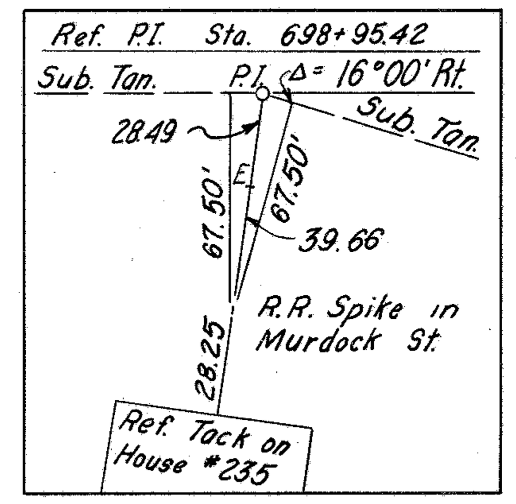
JEFFERSON COUNTY
JEF-7-13.53

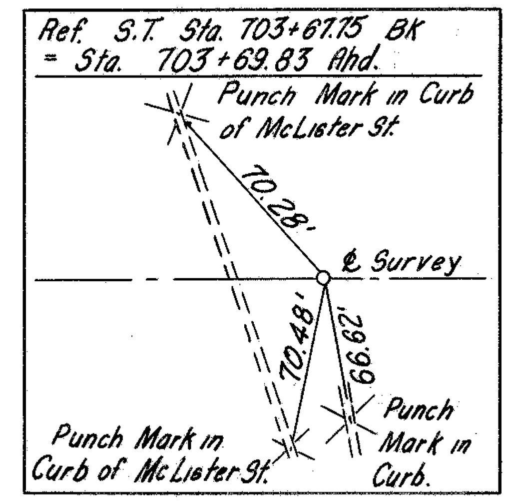
CURVE DATA
P.I. Sta. 698+95+95.42
Δ = 16°00'00" Rt.
Dc = 2°00'00"
Ts = 477.67'
θs = 1°30'00"
Es = 28.49'
Ls = 150.00'
Δc = 13°00'00"

Yc = 1.31
P = 0.33'
K = 75.00'

B.M. R.R. Spike in pole 138' Rt. Sta. 703+50 Elev. 700.69

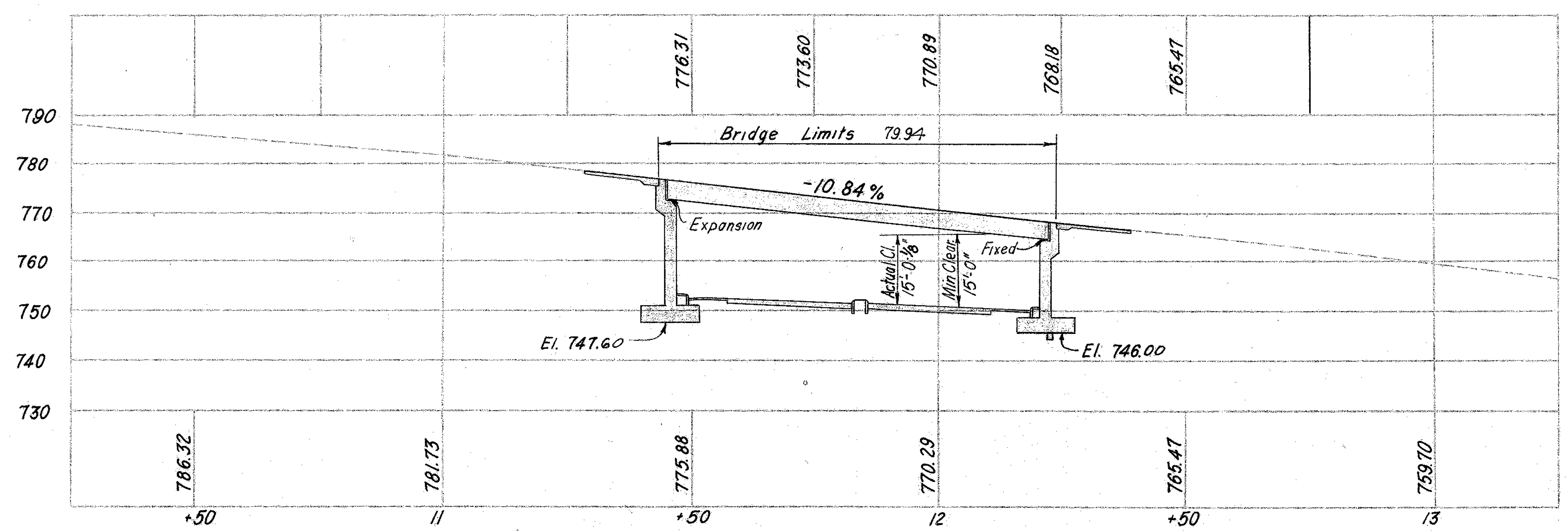






FOUNDATION SOUNDINGS: Foundation design and Foundation quantities are based on a study of borings and soil-samplings made at the site. The sounding information may be inspected in the office of the Bureau of Bridges in Columbus, or in the Division office, but the State assumes no responsibility for the accuracy thereof.

Indicates boring location



PROFILE ALONG ℄ OF LINCOLN AVE.

Boring No.	Rock Elev.
SB-1	767.5
SB-2	762.5
SB-3	752.5
SB-10	735.5
SB-11	No Rock
SB-12	No Rock
SB-13	731
SB-14	No Rock
TH-1	751.9
TH-2	741
TH-3	768
TH-4	749
TH-5	770
TH-6	749
TH-7	771.6
TH-8	750

PROPOSED STRUCTURE

Type: Steel beam single span with reinforced concrete deck and substructure
Span: 75'-5" c to c Bearings.
Roadway: 24'-0" f to f 5'-2" Sidewalks
Load Frequency: CF= 130 (57)
Skew: 5°-00'-00" Lt. Forward
Wearing Surface: 3/4" Monolithic Conc.
Approach Slabs: 15'-0" Lg. (Special Design)
Alignment: Tangent
Superelevation: None

MICHAEL BAKER, JR. CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SITE PLAN
BRIDGE NO. JEF-7-1387 UNDER LINCOLN AVE.

JEFFERSON COUNTY

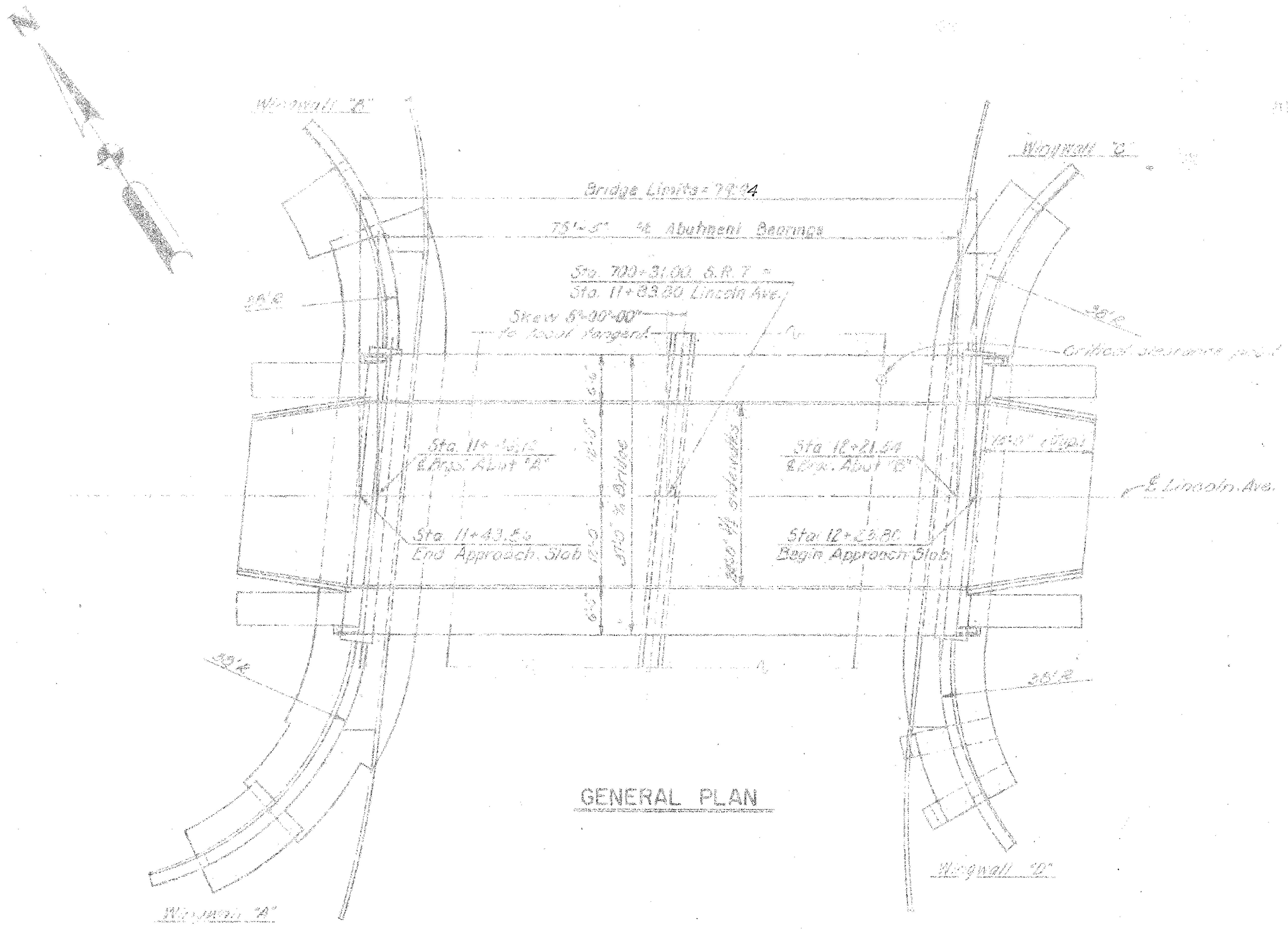
STA. 700+31.00

PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
Aerial		J.D.R.	J.D.R.	A.S.J.	E.F.R. 10-17-58

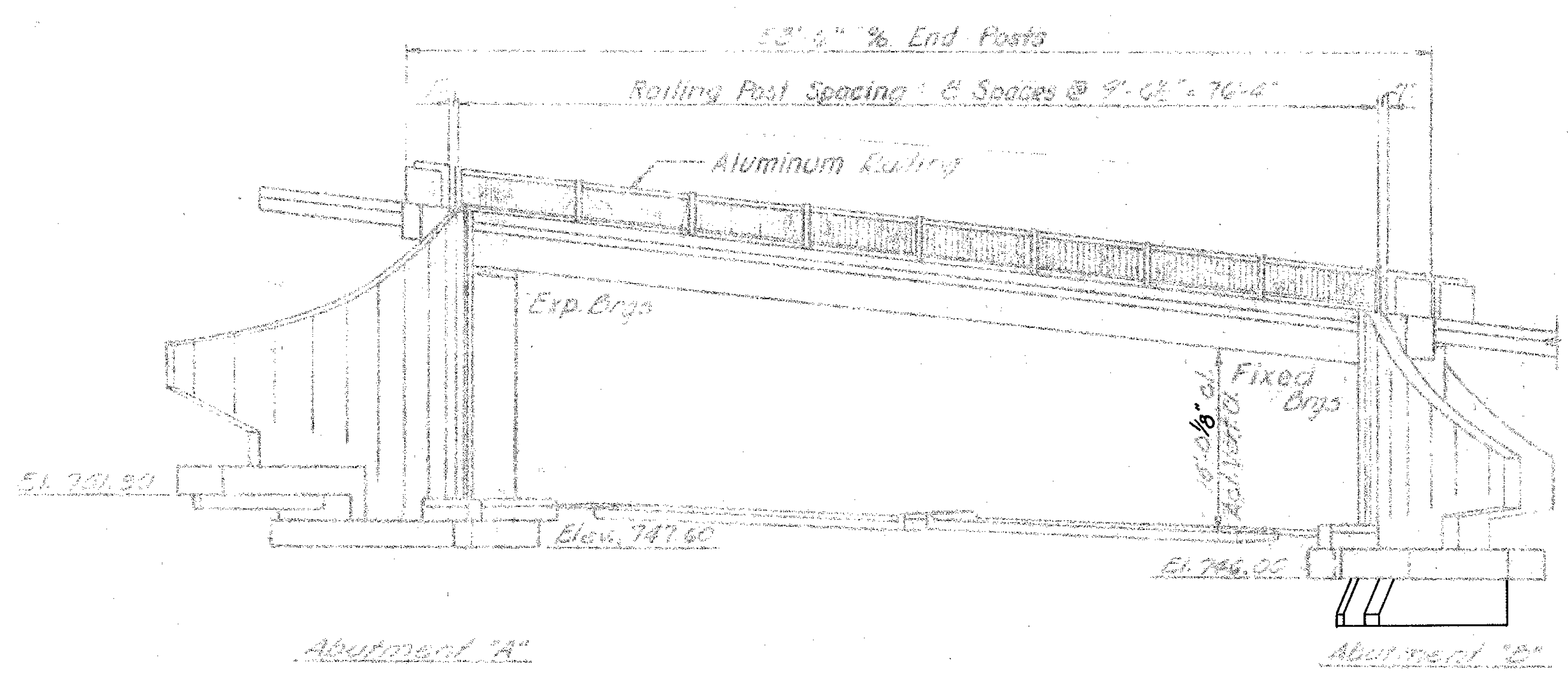
RECEIVED SEP 2 1959

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

JEFFERSON COUNTY
JEF - 7 - 13.53



GENERAL PLAN



GENERAL ELEVATION

GENERAL NOTES

Design Specifications: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof.

Reference shall be made to Standard Drawings [illegible] 2 of 5, revised [illegible] and [illegible] revised [illegible].

Welding of structural steel shall be Class "A" except as otherwise shown (—(B)). Welds shown as field welds may, at the option of the contractor, be made in the shop.

Surface Finish of Concrete: Abutment walls and wingwalls shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of [illegible].

Footings for Abutment "A" are designed for maximum bearing pressure of [illegible] tons per sq. ft., for Abutment "B" [illegible] tons per sq. ft. and are to be founded upon bedrock. The Engineer shall inspect the entire area and insure that excavation goes to bedrock, and, if necessary, require that over-excavation be filled with class "C" concrete. Prolonged exposure to atmospheric conditions shall be avoided. [illegible] The abutment footings shall be extended a minimum of 6" into solid rock.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

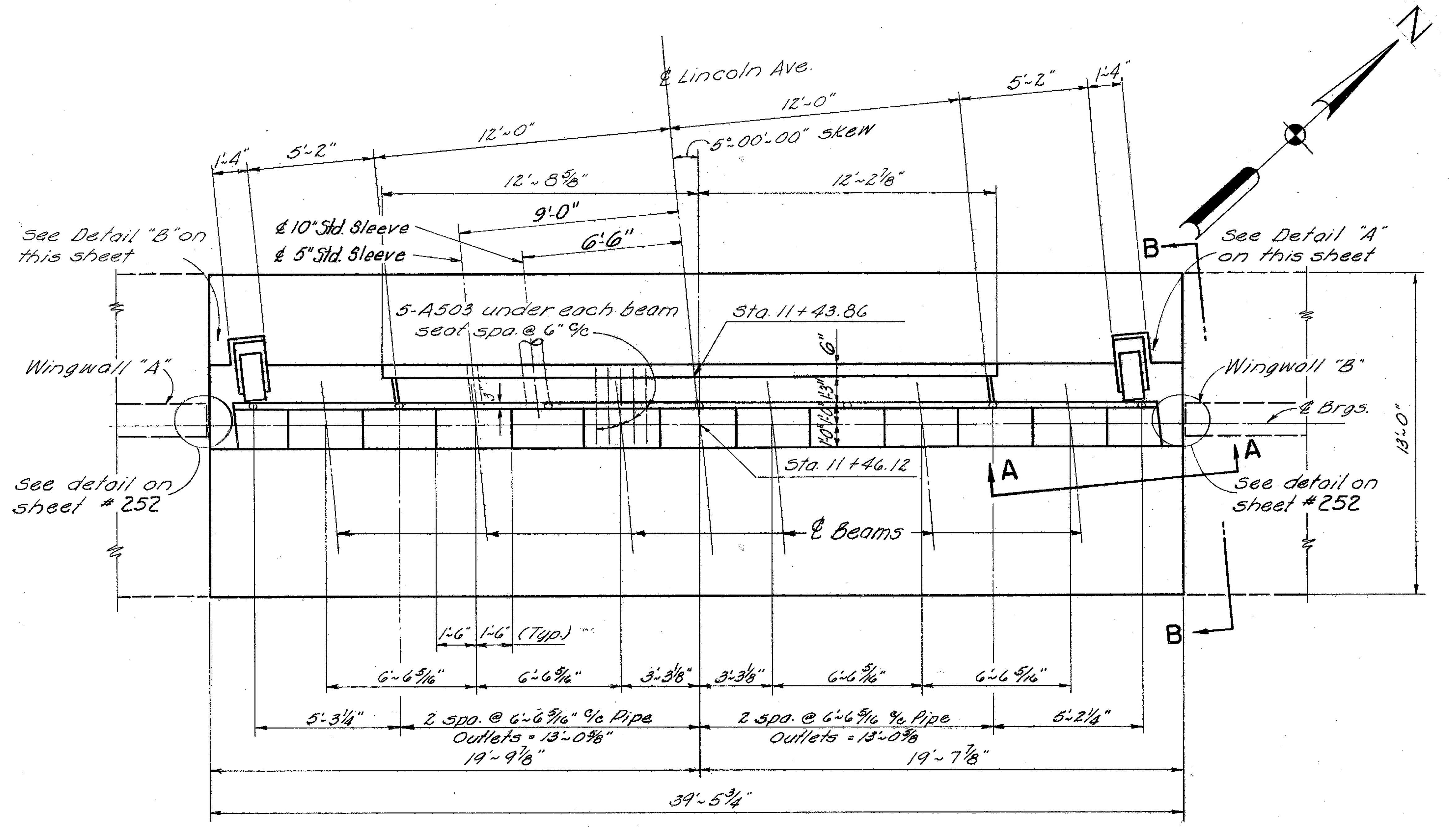
GENERAL PLAN & ELEVATION
BRIDGE NO. JEF-7-1387
UNDER LINCOLN AVE.
JEFFERSON COUNTY

STA. 700 + 31.0[illegible]

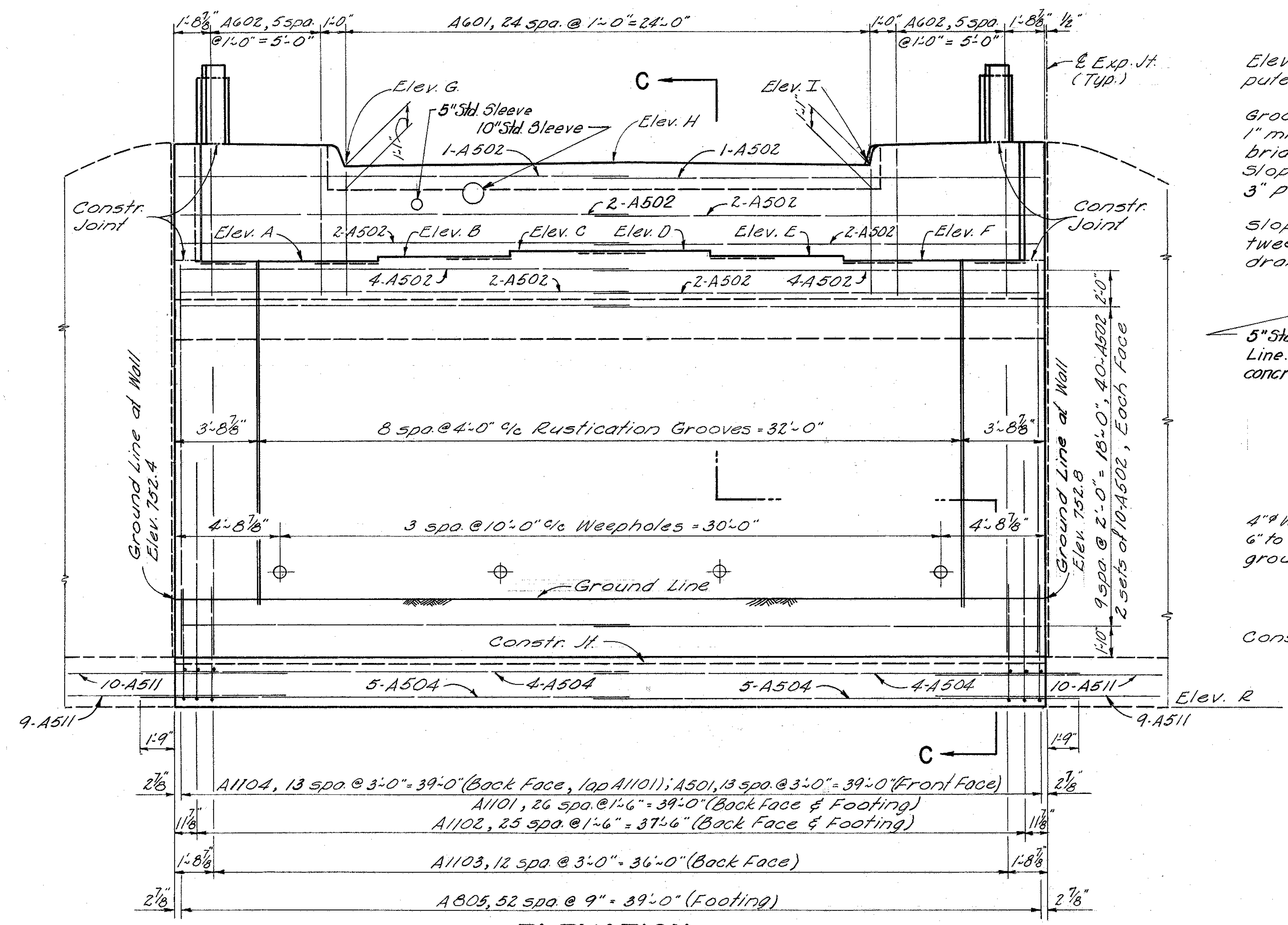
Designed	Drawn	Traced	Checked	Reviewed Date	Revis[illegible]
A.S.J.	SB		P.M.	E. Roberts 6-5-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

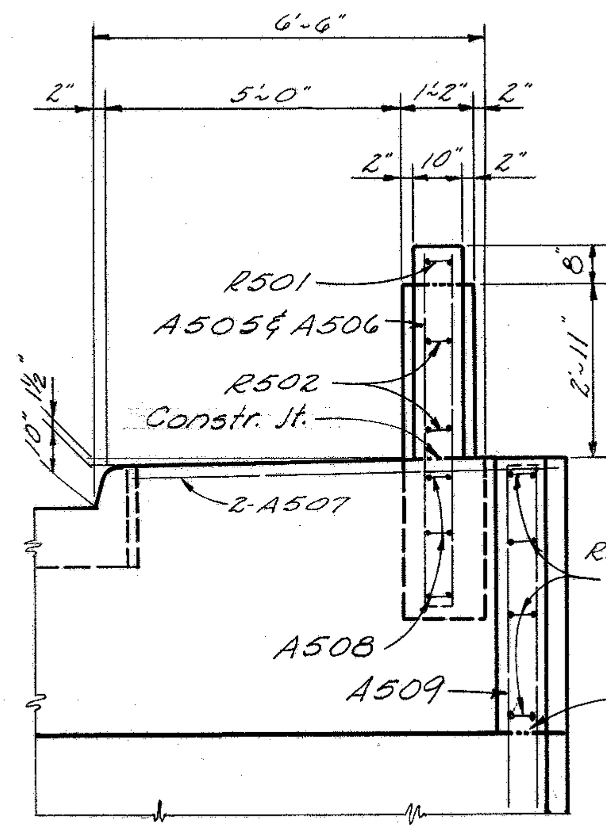
JEFFERSON COUNTY
JEF-7-13.53



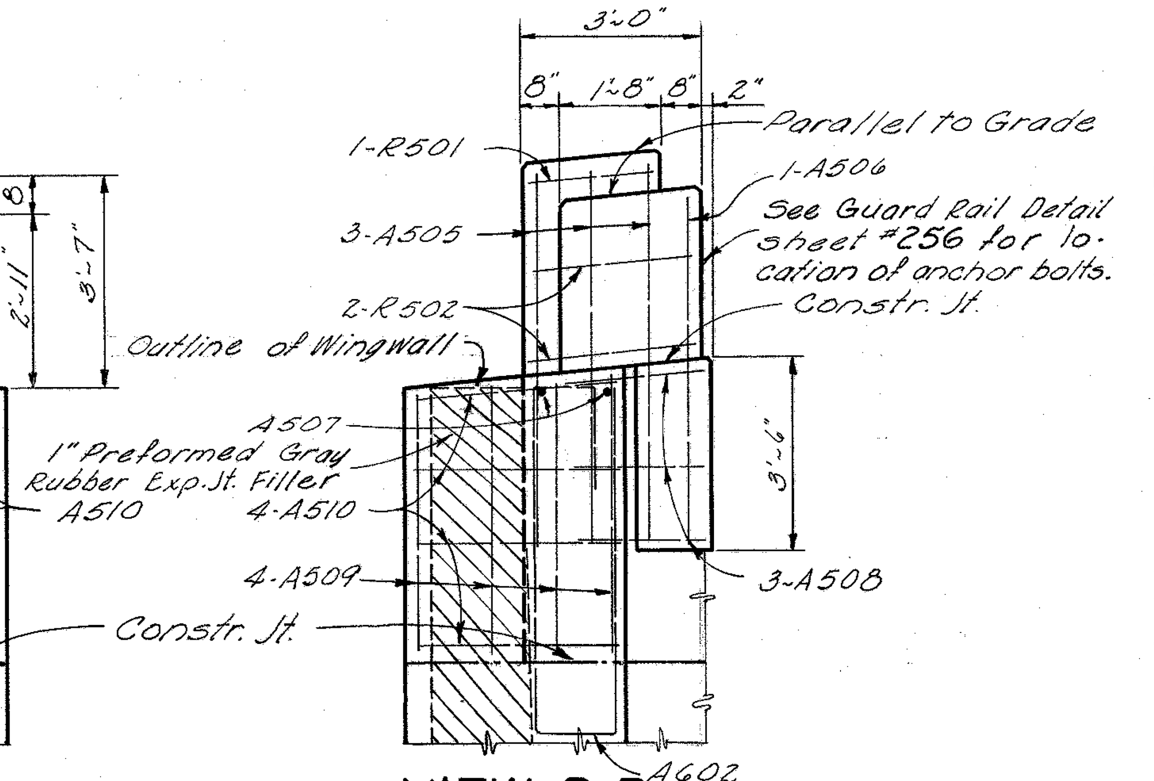
PLAN



ELEVATION



VIEW A-A



VIEW B-B

NOTES:

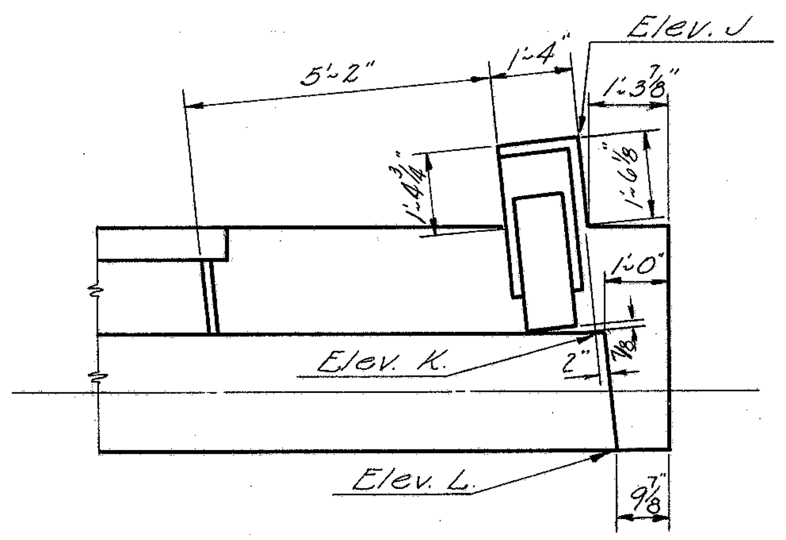
Porous backfill as shown in Section C-C and full length of abutment shall extend up to the underside of the approach slab and sidewalks. Any excavation in excess of the limits as shown, shall be backfilled with Porous Backfill at the contractor's own expense.

All abutment concrete shall be Class "E."

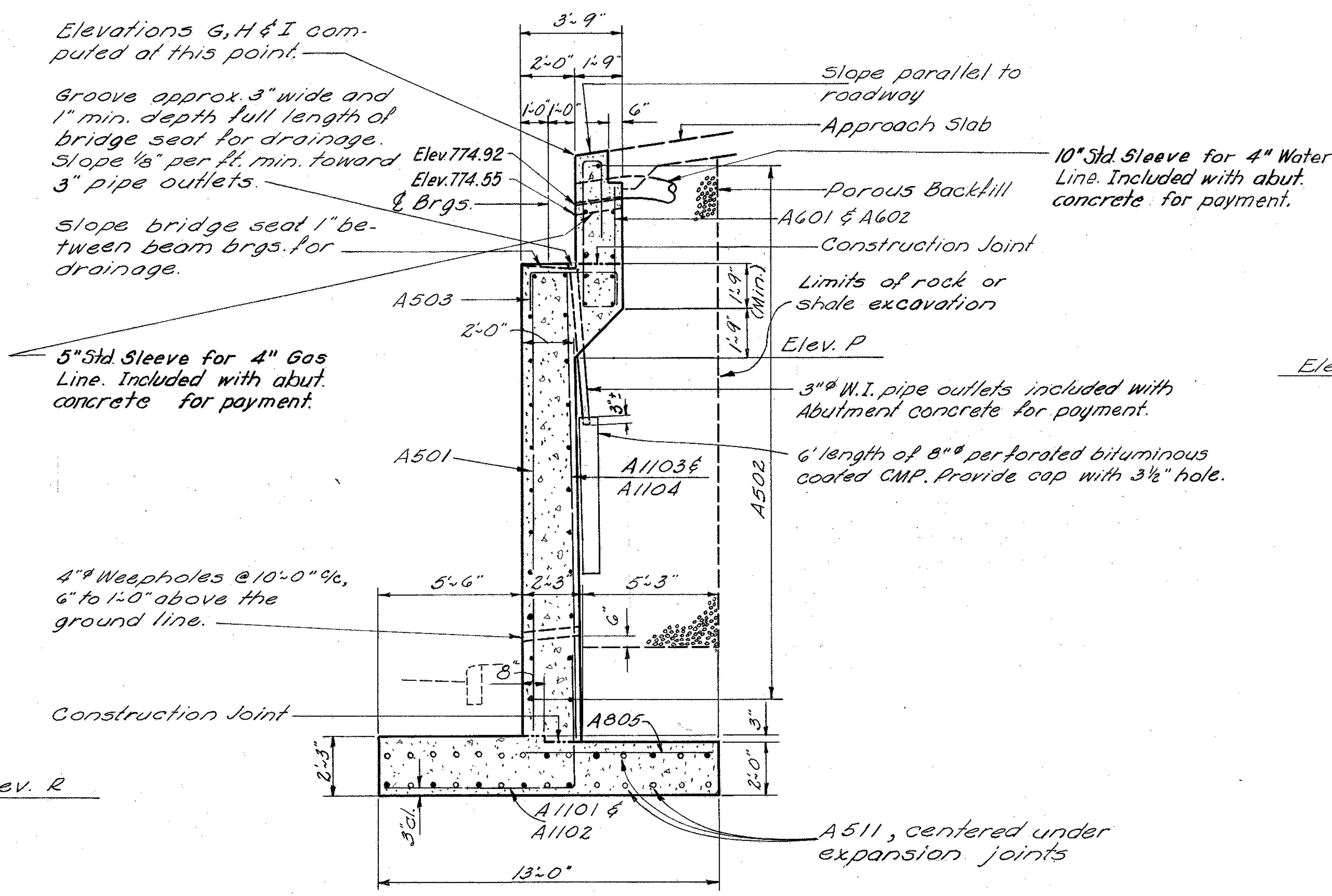
Railing End Posts: Concrete shall be class "C." Concrete and steel shall be included with Item S-14, Railing, for payment.

For details of Rustication Groove see sheet #252

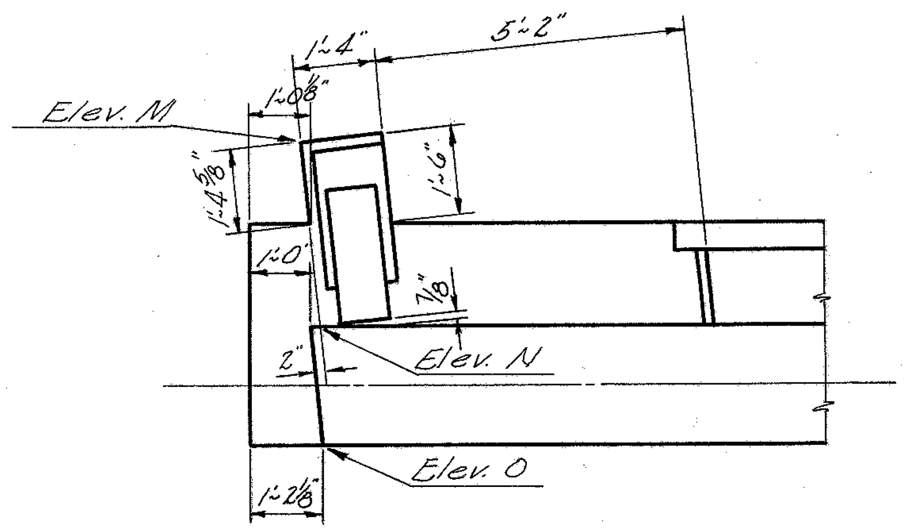
ELEVATIONS																	
LOCATION	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R
ABUTMENT-A	772.24	772.19	772.23	772.17	772.01	771.93	776.76	776.84	776.54	777.79	777.43	777.22	777.13	777.79	777.57	768.43	747.60
ABUTMENT-B	763.68	763.75	763.91	763.98	763.94	763.98	768.14	768.45	768.37	769.04	769.39	769.61	768.70	769.04	769.26	760.18	746.00



DETAIL "A"



SECTION C-C



DETAIL "B"

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ABUTMENT "A" & DETAILS
BRIDGE NO. JEF-7-1387
UNDER LINCOLN AVENUE

JEFFERSON COUNTY STA. 700+31.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
A.S.J.	BB		P.M.	E. Roberts 6-10-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

252 / 307

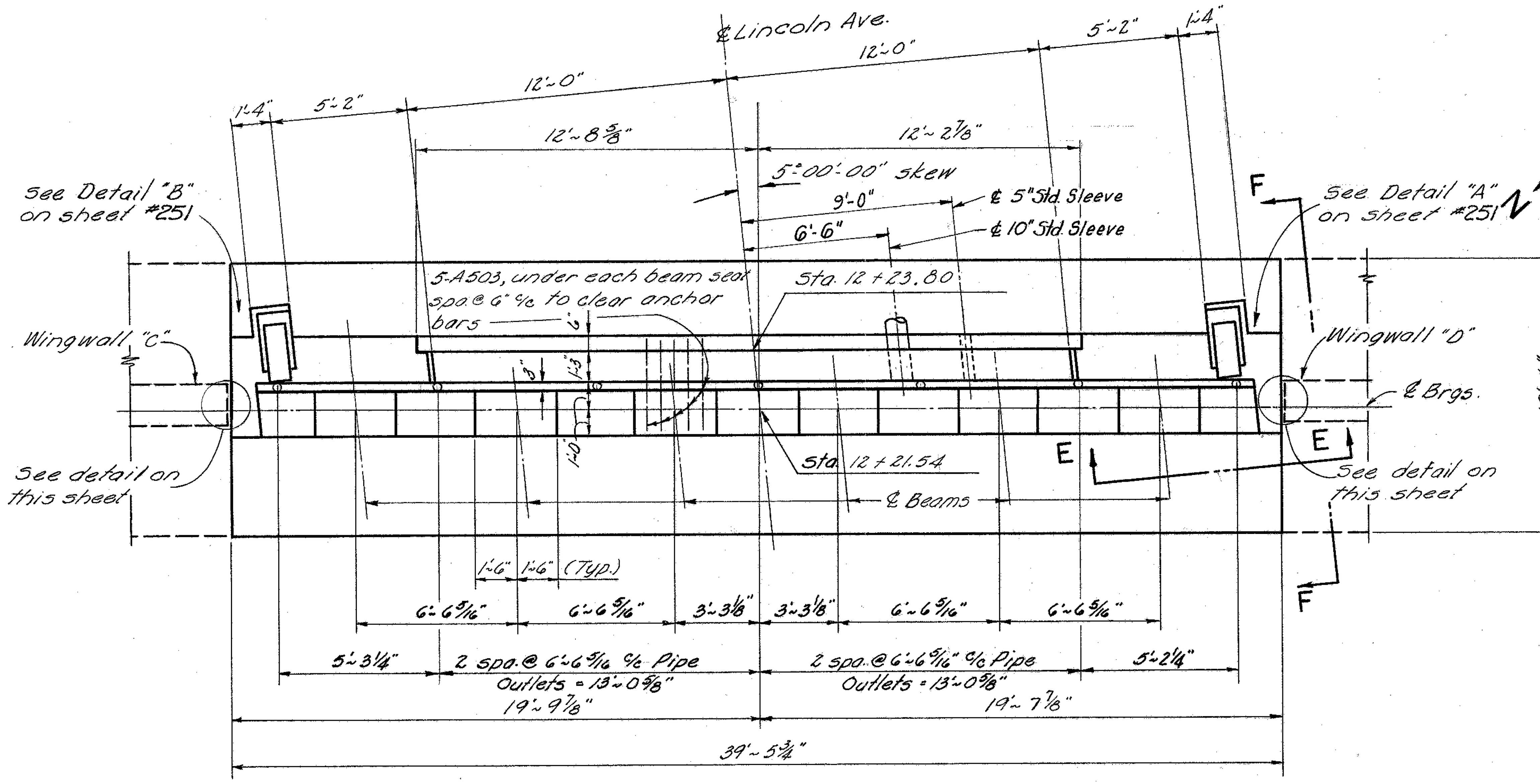
JEFFERSON COUNTY
JEF - 7 - 13.53

NOTES:

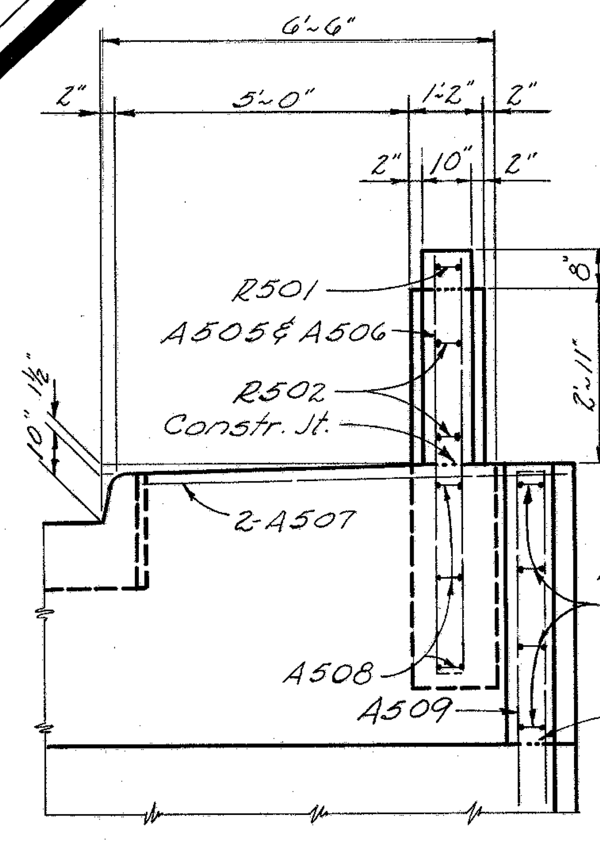
Porous backfill two feet thick and full length of abutment shall extend up to the underside of the approach slab and sidewalks.

All abutment concrete shall be Class "E".

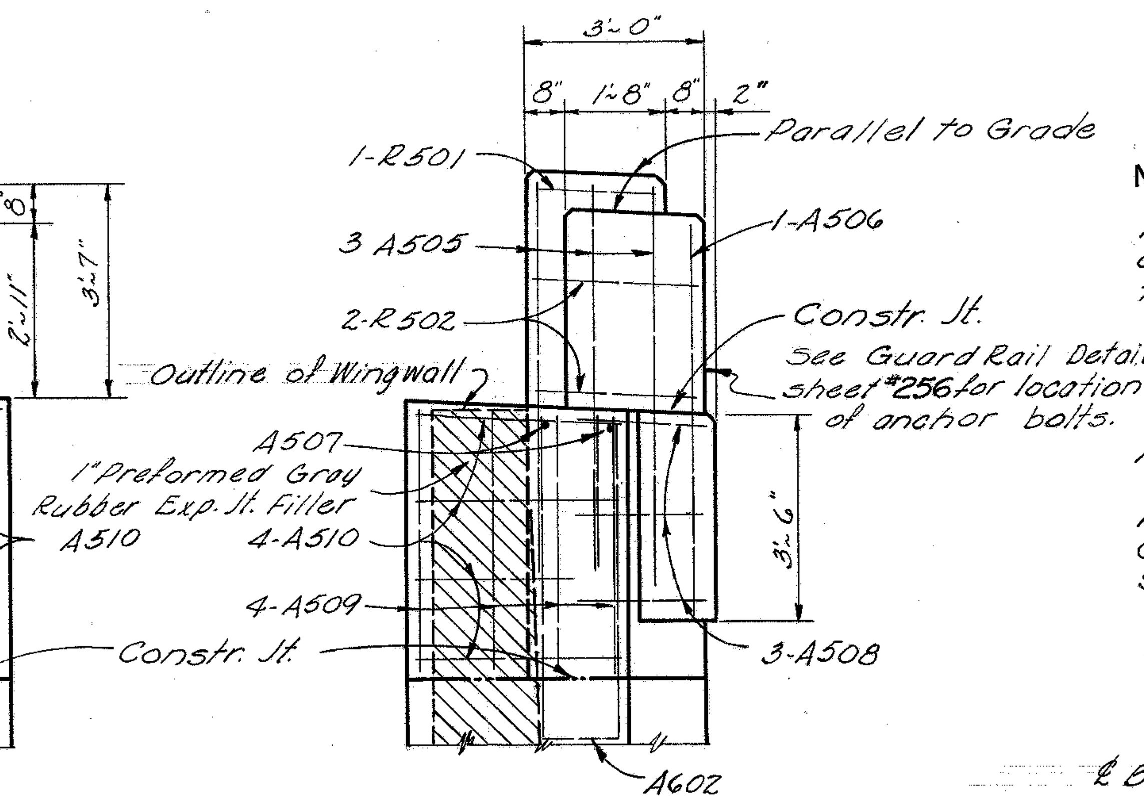
Railing End Posts: Concrete shall be Class "C". Concrete and steel shall be included with Item S-14, Railing, for payment.



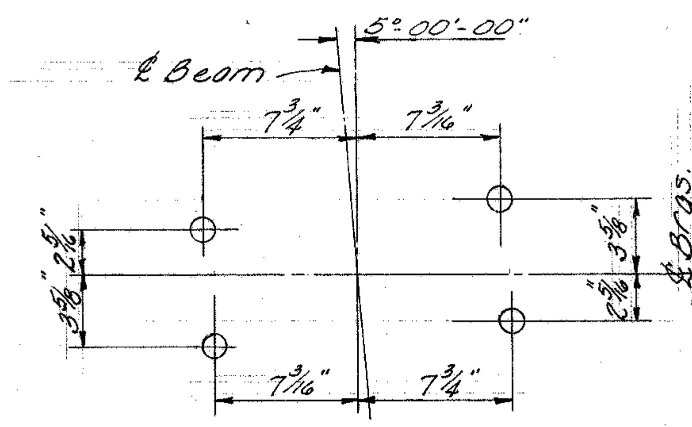
PLAN



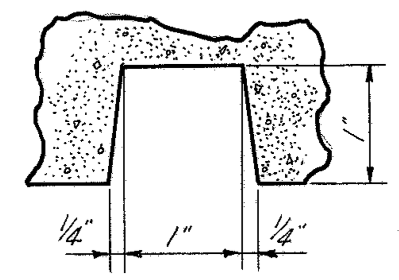
VIEW E-E



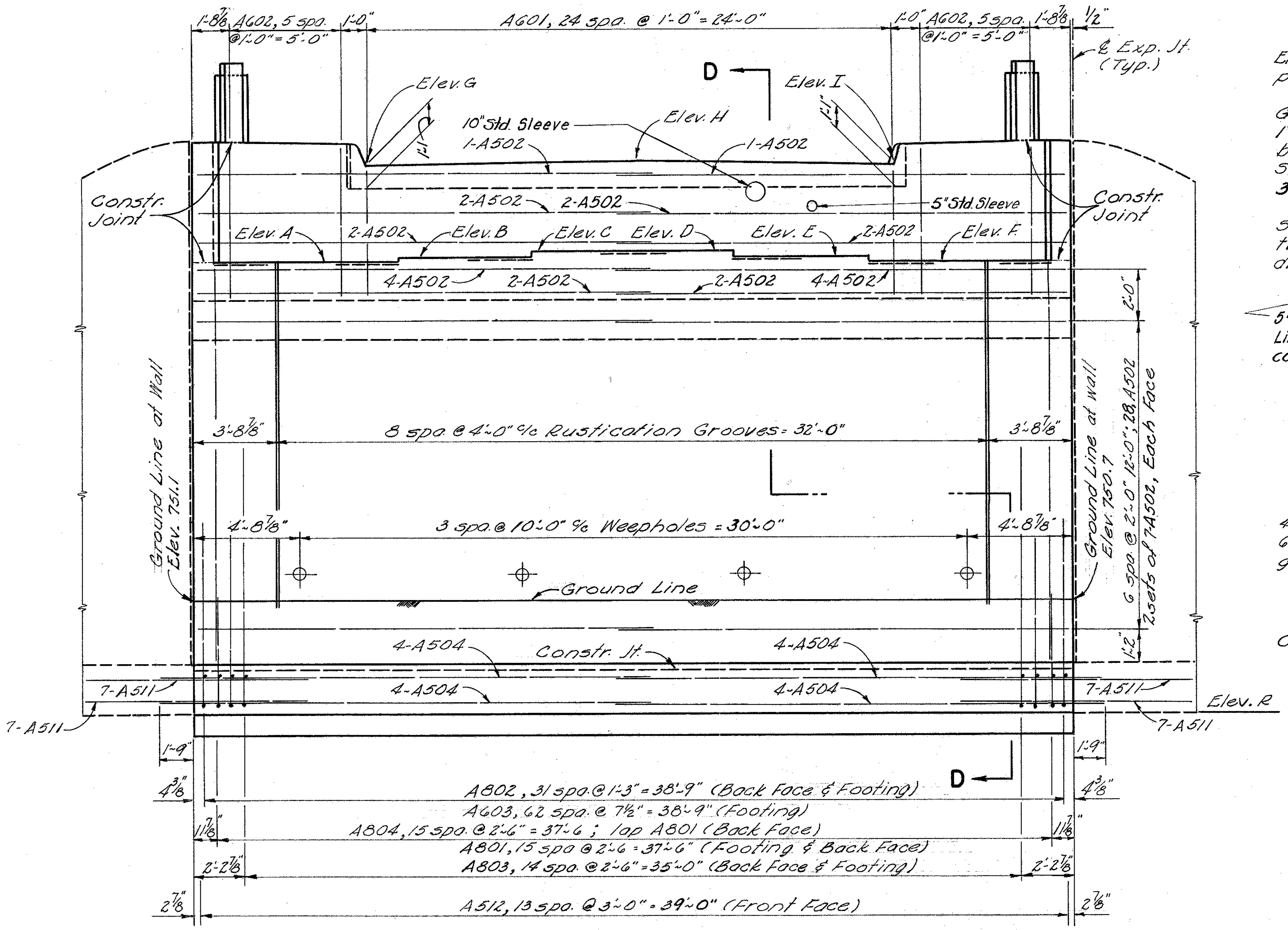
VIEW F-F



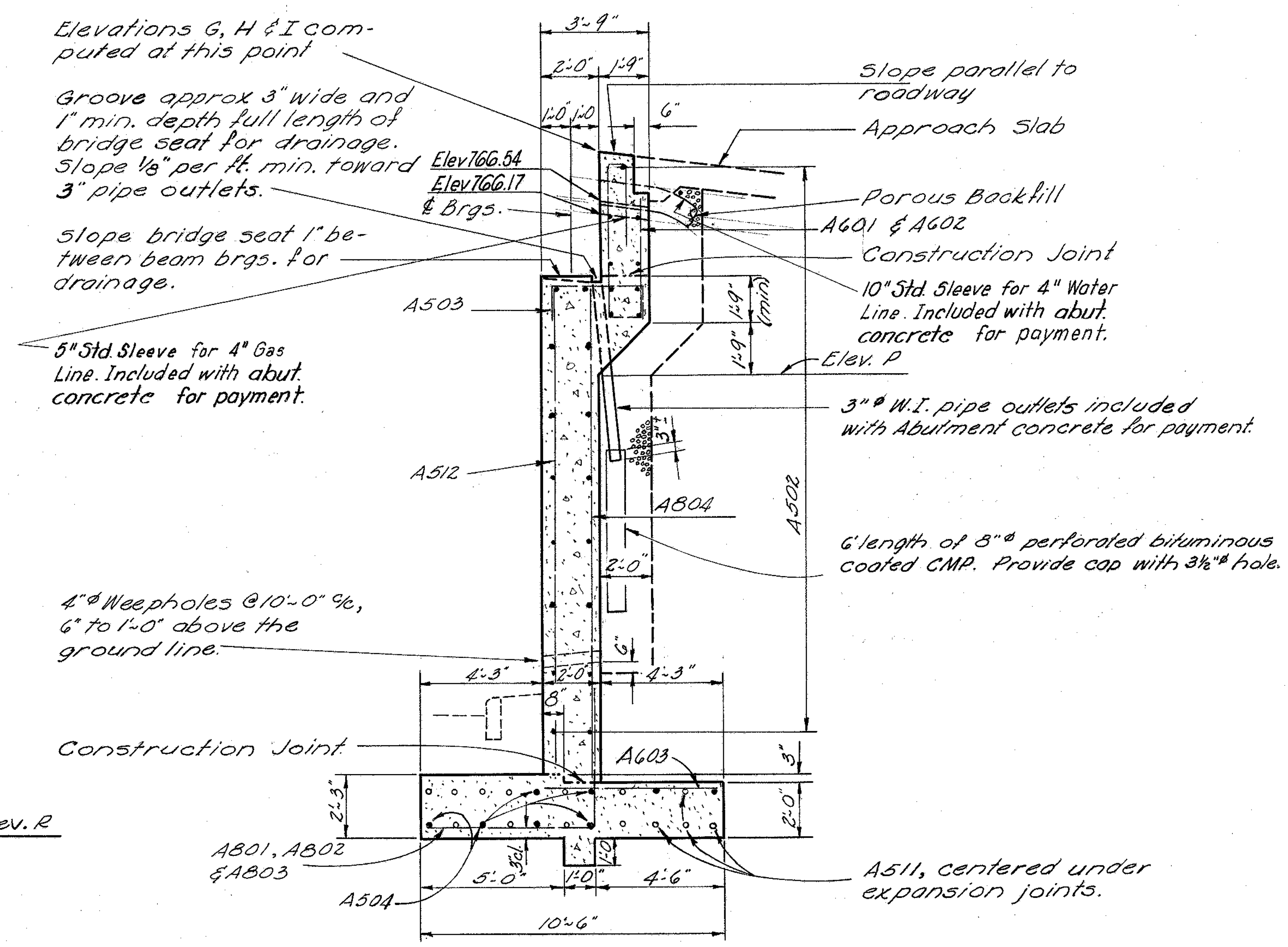
ANCHOR BOLT LAYOUT



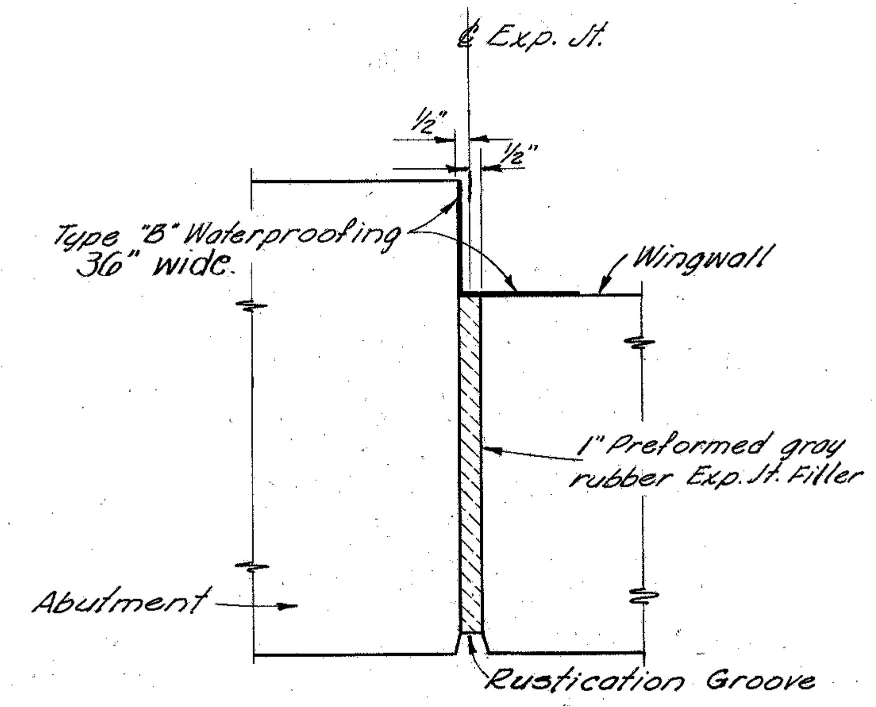
RUSTICATION GROOVE DETAIL



ELEVATION



SECTION D-D



EXPANSION JOINT DETAIL

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ABUTMENT "B" & DETAILS
BRIDGE NO. JEF - 7 - 1387
UNDER LINCOLN AVENUE

JEFFERSON COUNTY — STA. 700 + 31.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
A.S.J.	BB		P.M.	E.Roberts 6-10-59	

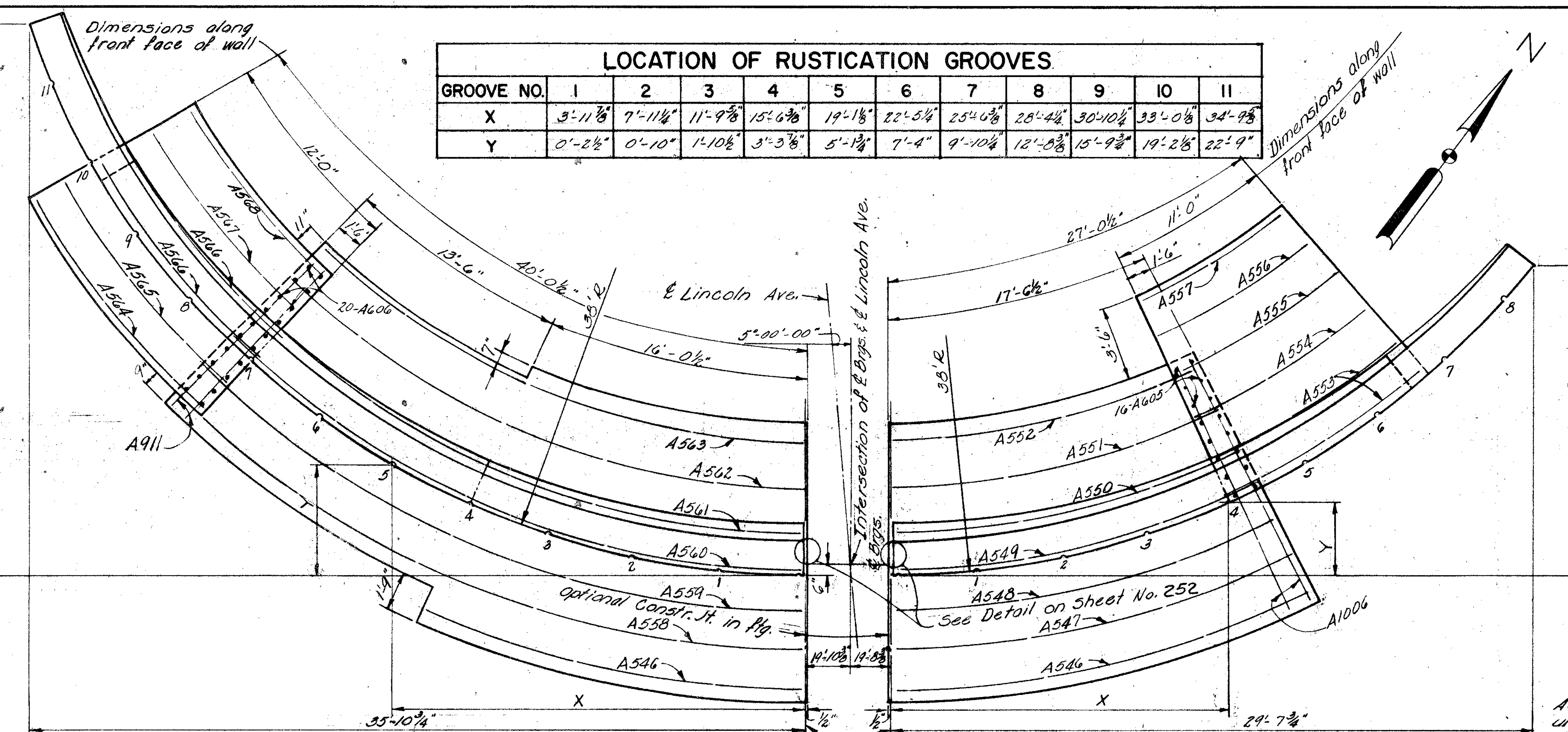
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

253
307

JEFFERSON COUNTY
JEF-7-13.53

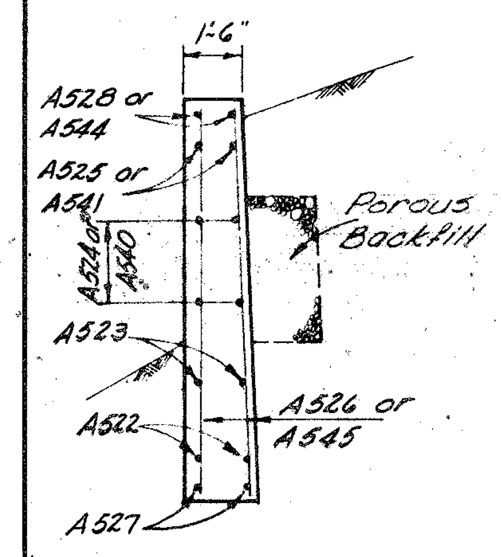
LOCATION OF RUSTICATION GROOVES

GROOVE NO.	1	2	3	4	5	6	7	8	9	10	11
X	3'-11 7/8"	7'-11 1/4"	11'-9 5/8"	15'-6 3/8"	19'-1 1/8"	22'-5 1/4"	25'-6 3/8"	28'-4 1/2"	30'-10 1/4"	33'-0 1/8"	34'-9 5/8"
Y	0'-2 1/2"	0'-10"	1'-10 1/2"	3'-3 7/8"	5'-1 3/4"	7'-4"	9'-10 1/4"	12'-8 3/8"	15'-9 3/4"	19'-2 1/8"	22'-9"

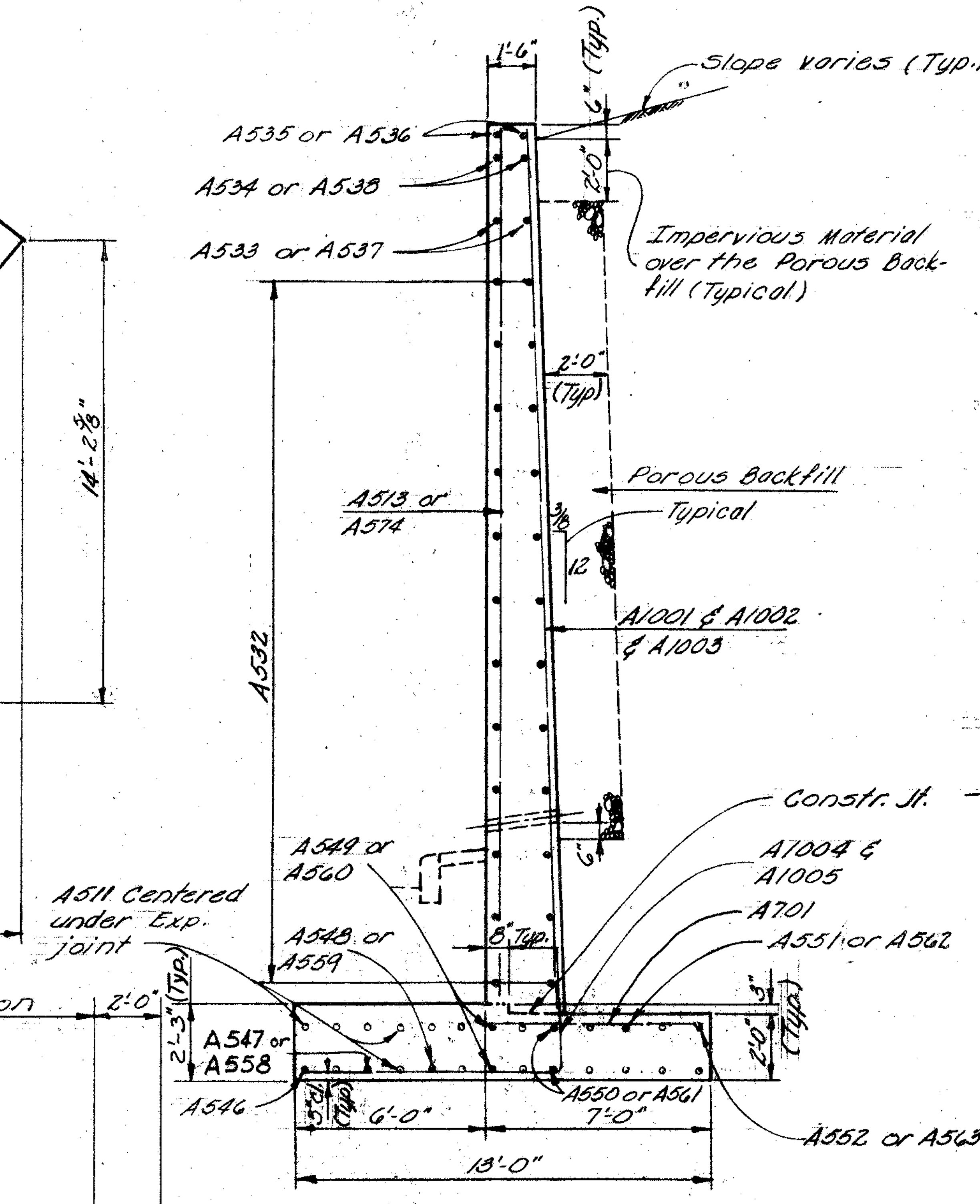


PLAN OF WINGWALL "A"

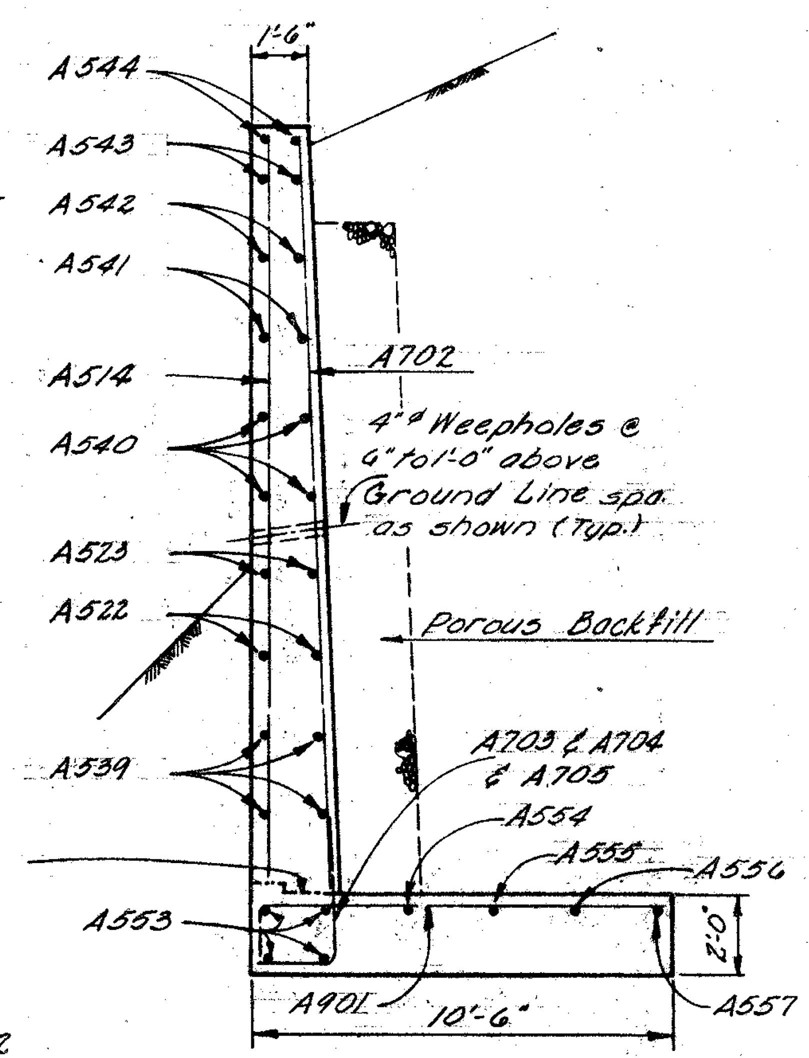
PLAN OF WINGWALL "B"



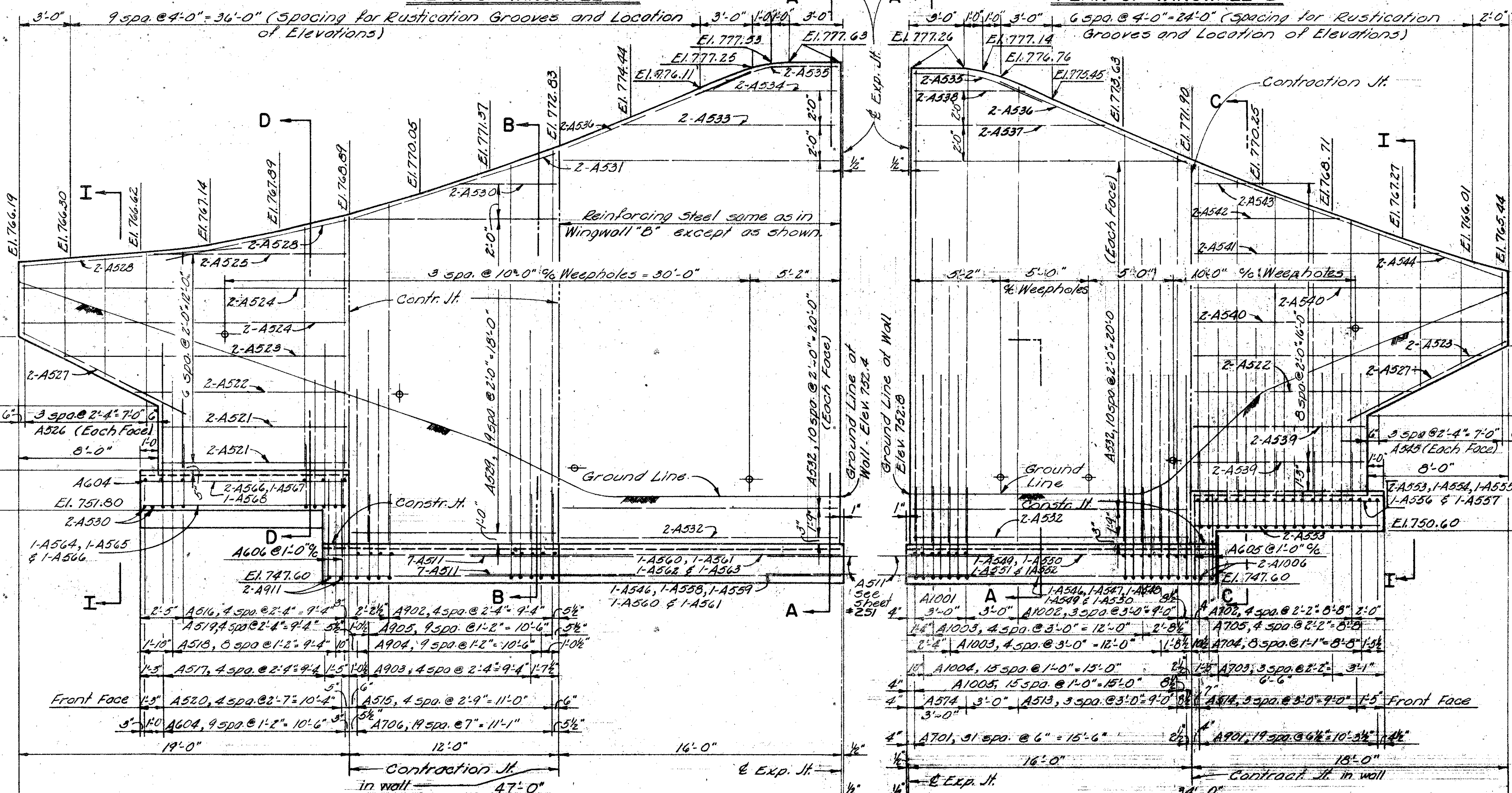
SECTION I-I



SECTION A-A

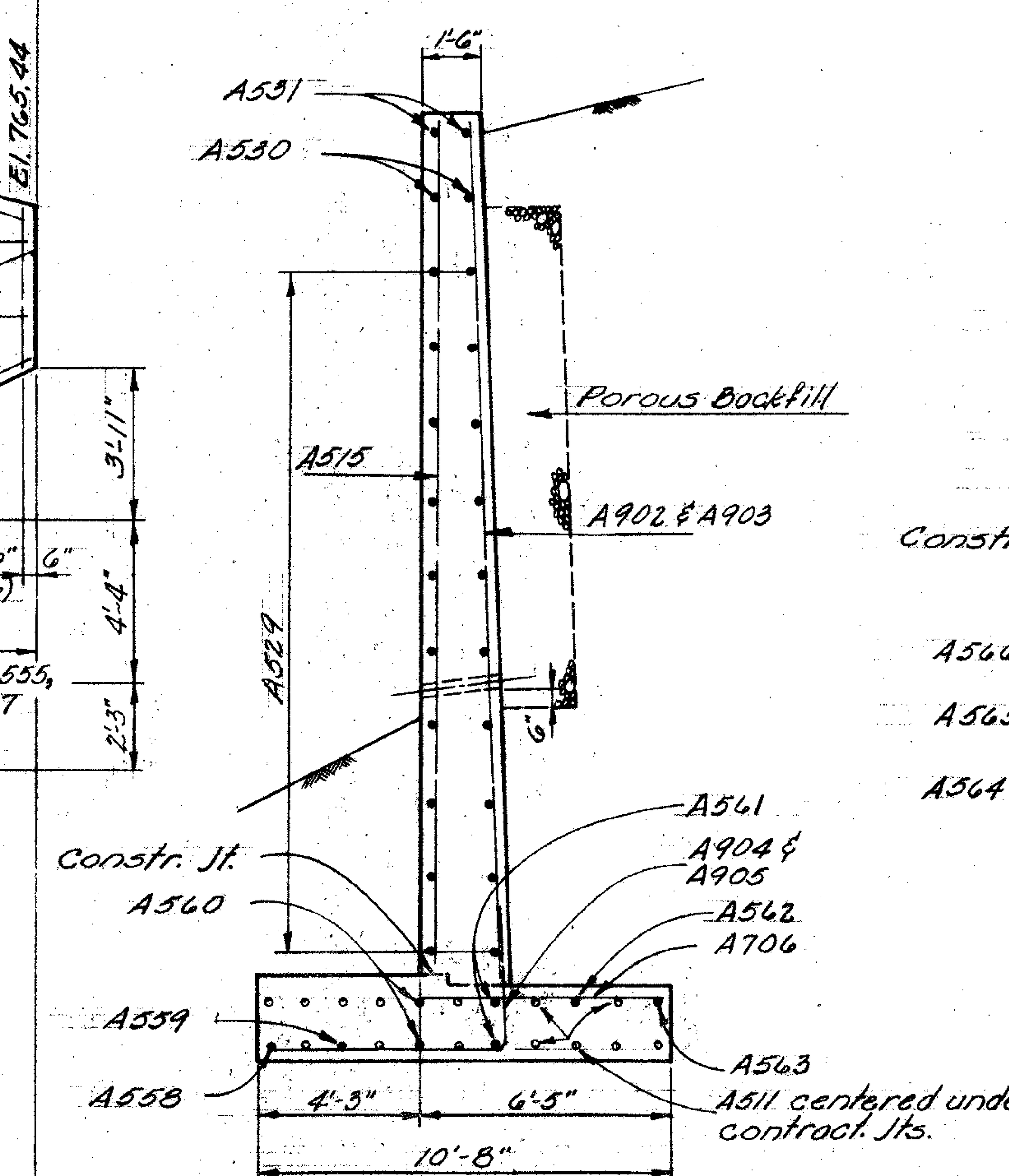


SECTION C-C



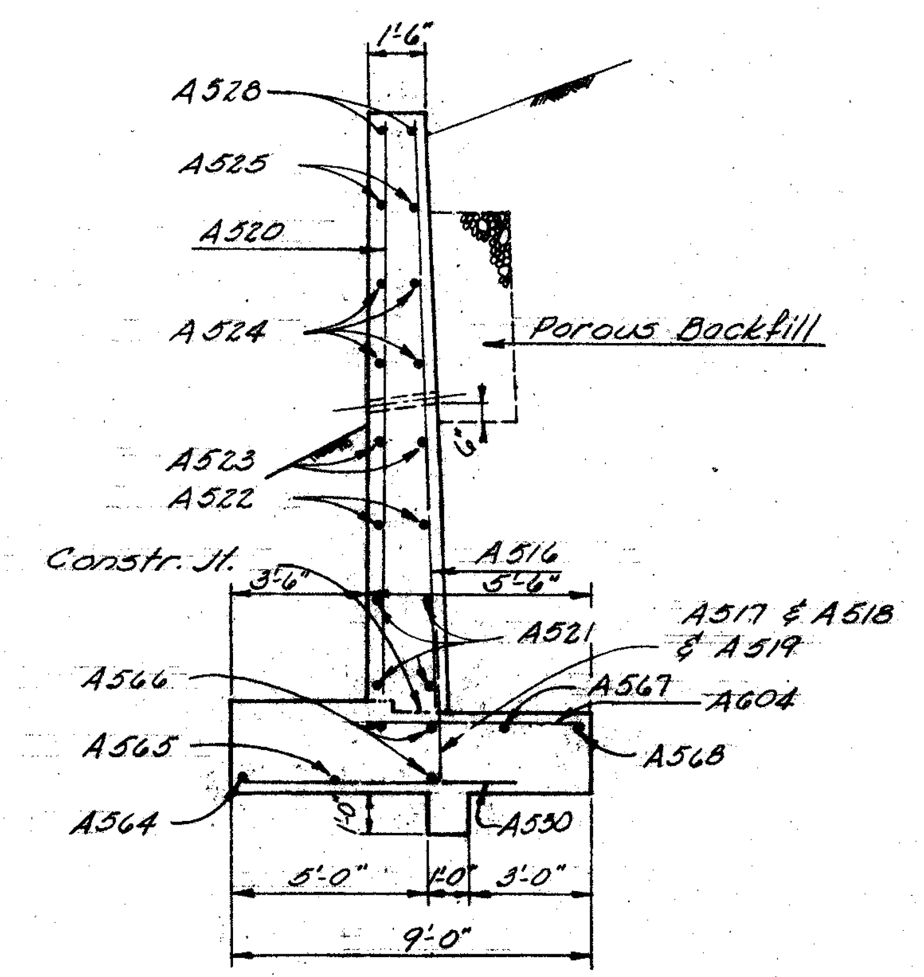
DEVELOPED ELEVATION OF WINGWALL "A"

DEVELOPED ELEVATION OF WINGWALL "B"



SECTION B-B

For notes and additional details see sheet # 254



SECTION D-D

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

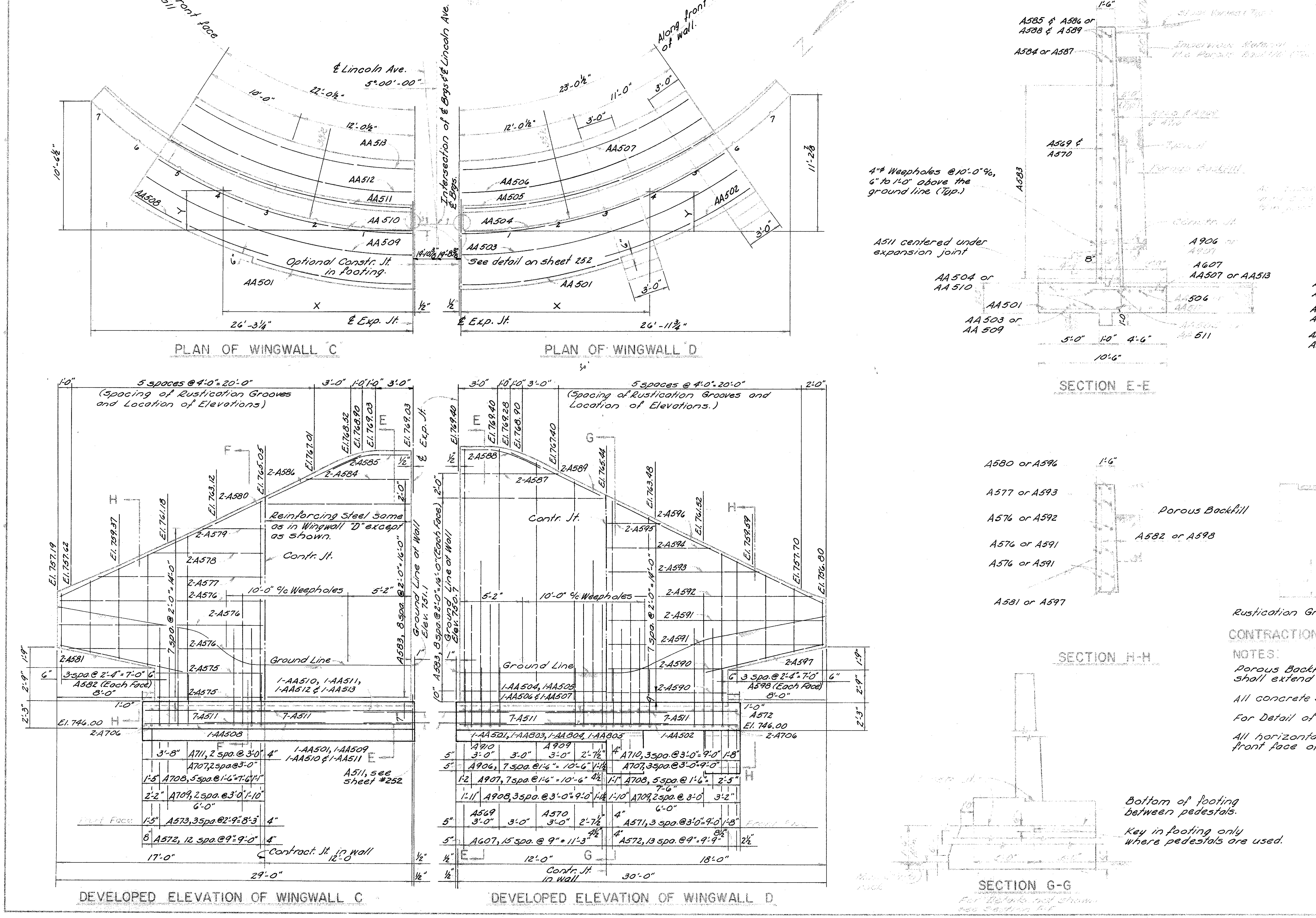
ABUTMENT WINGWALLS 'A' & 'B'
BRIDGE NO. JEF-7-1387
UNDER LINCOLN AVE.

JEFFERSON COUNTY STA. 700+31.00

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
A.S.J.	BB		P.M.	E. Roberts 6-5-59	

LOCATION OF RUSTICATION GROOVES

GROOVE NO.	1	2	3	4	5	6	7
X	3'-11⅞"	7'-11¼"	11'-9⅝"	15'-6⅜"	19'-1⅛"	22'-5¼"	25'-6⅜"
Y	0'-2½"	0'-10"	1'-10½"	3'-3⅞"	5'-1¾"	7'-4"	9'-10¼"



NOTES:

Porous Backfill, two feet thick, full length of wingwalls shall extend up to within two feet of finished ground surface.

All concrete shall be class "E"

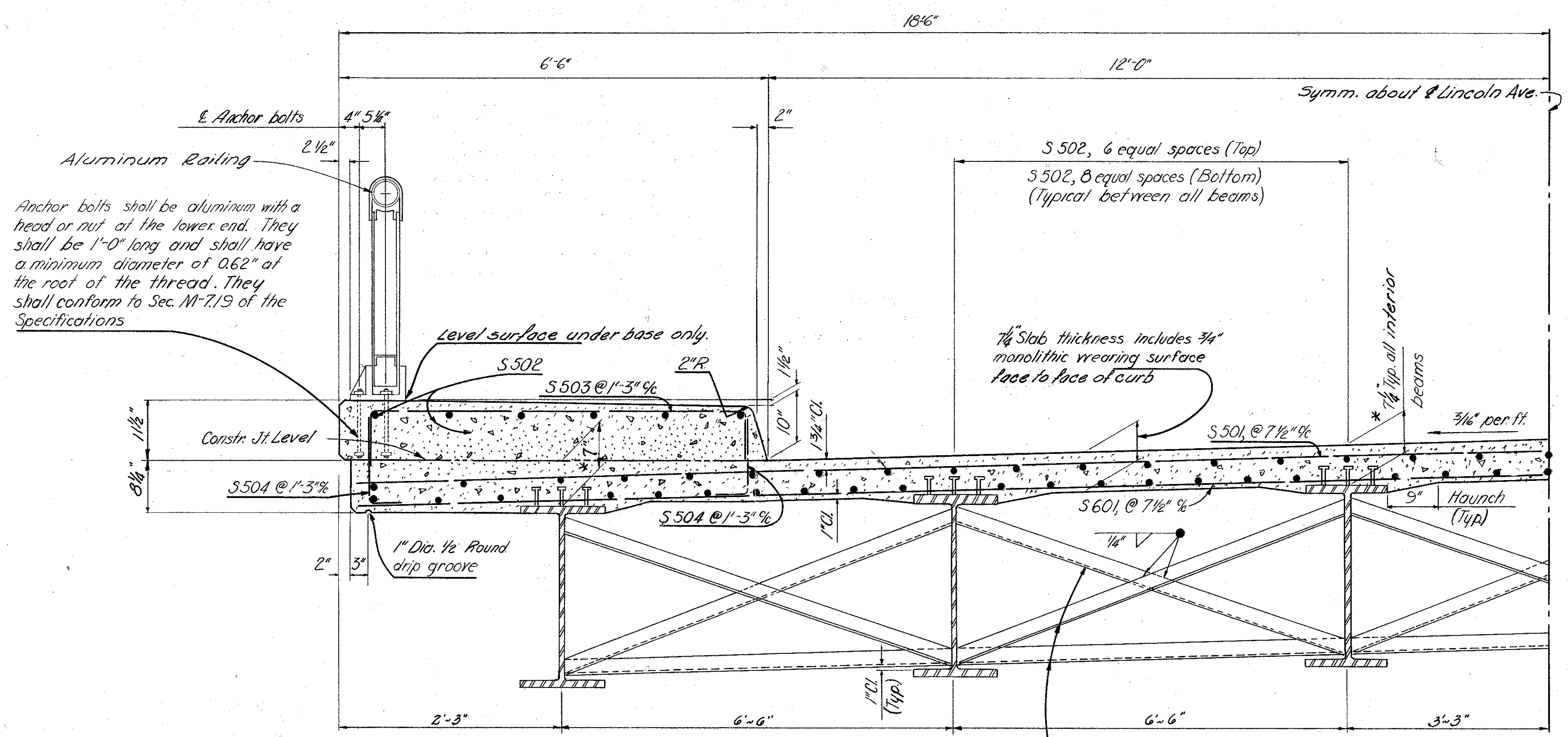
For Detail of Rustication Groove see sheet #252

All horizontal dimensions in Elevation Views are along front face of wall except as noted.

ABUTMENT WINGWALLS "C" & "D"

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

JEFFERSON COUNTY
JEF-7-13.53

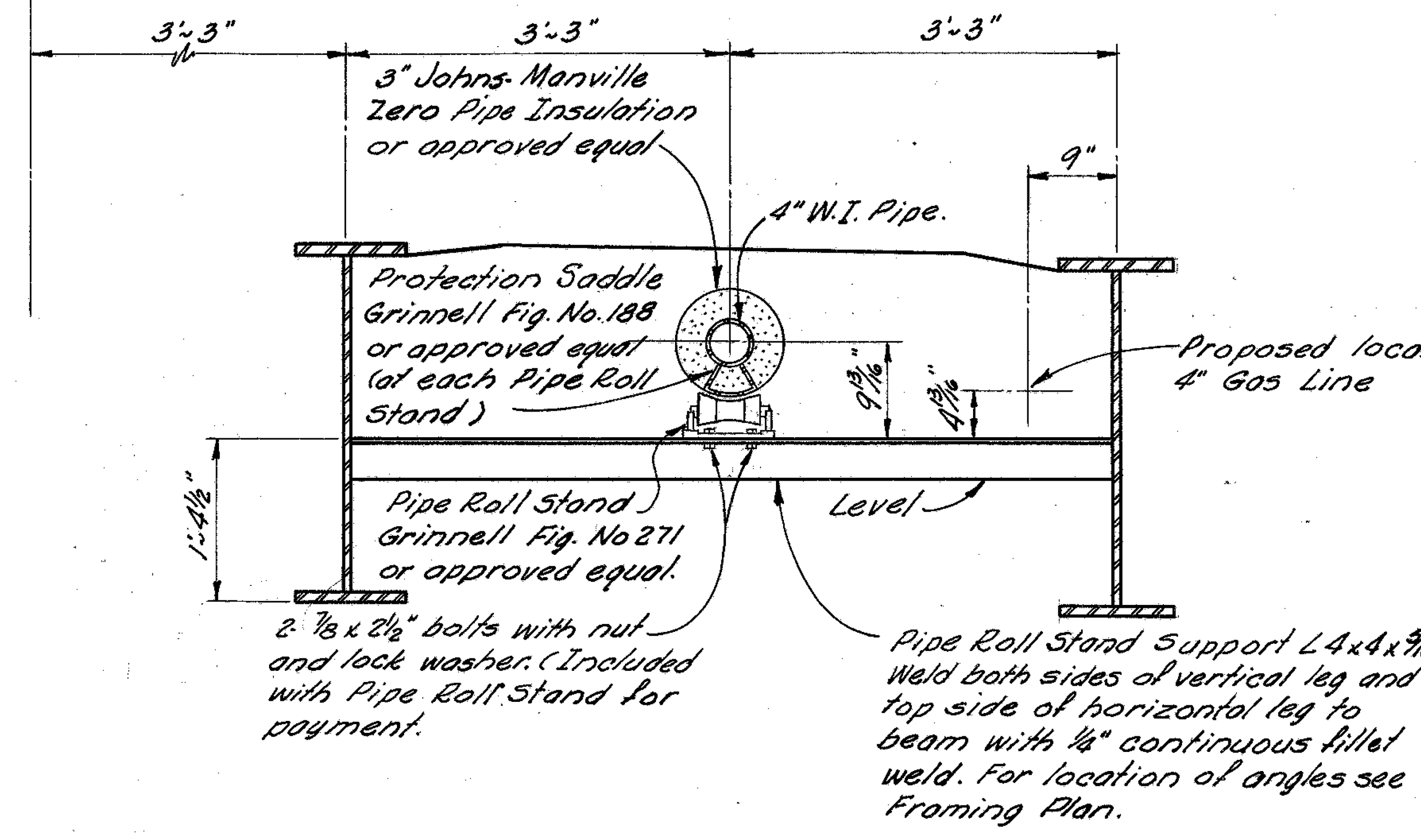


Anchor bolts shall be aluminum with a head or nut at the lower end. They shall be 1'-0" long and shall have a minimum diameter of 0.62" at the root of the thread. They shall conform to Sec. M-7.19 of the Specifications

Intermediate crossframe Ls 3x3x 5/16". Weld both sides of vertical leg & top side of horizontal leg to beam with ¼" continuous fillet weld.

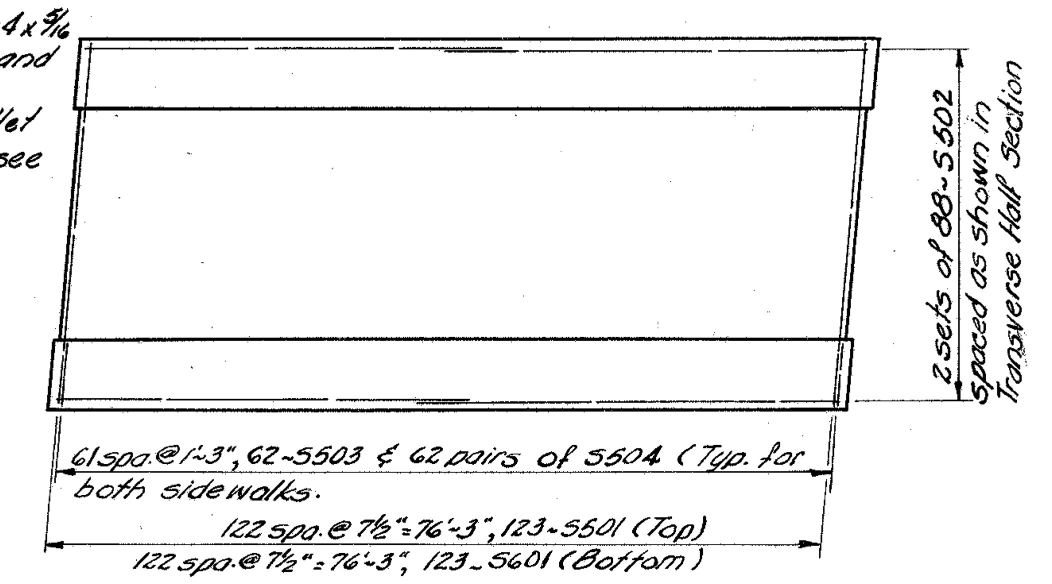
* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or configuration required to place it parallel to the finished grade.

TRANSVERSE HALF SECTION



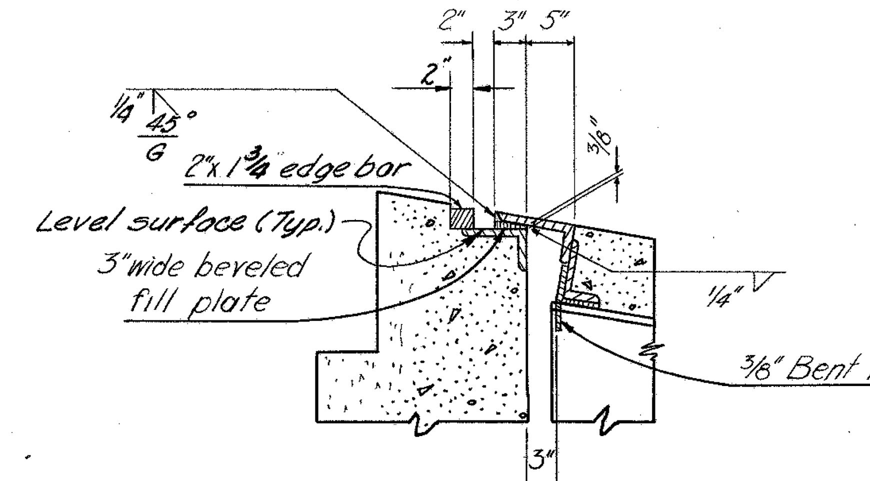
UTILITY SUPPORT DETAIL

The payment for 4x4x5/16 angles, Pipe Roll Stands, Protection Saddles, 4" W.I. Pipe & 3" Insulation is to be made under Utility Relocations (see Summary of Utility Relocations.)



DECK SLAB PLAN

In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress up-grade. The slab may be placed in sections, between transverse construction joints which are normal to the center line of bridge



ABUTMENT "A"

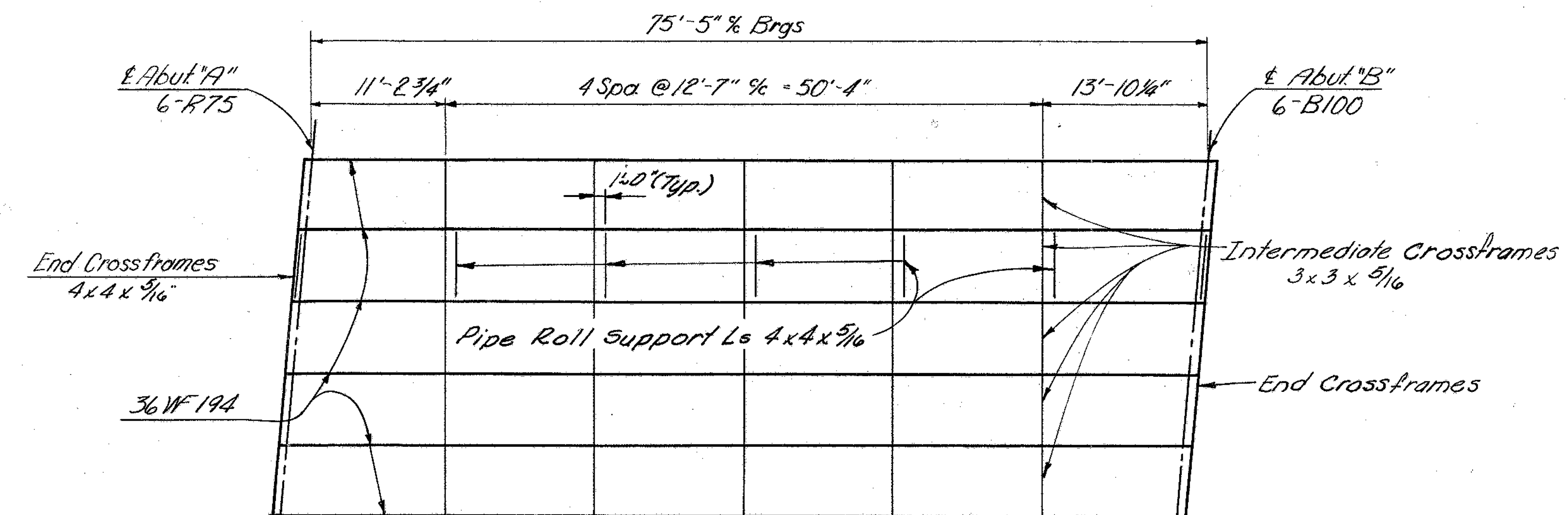
NOTES

Refer to Standard Drawing CSB-2-56, Sheet 2 of 6, revised 2-2-59, for additional details of End Dam and End Crossframes.
Refer to Standard Drawing RB-1-55, revised 2-2-59, for details of Rockers & Bolsters.

Refer to sheet No. 256 for detail of Aluminum Railing. See General Plan for location of railing posts.

Concrete shall be class "C"

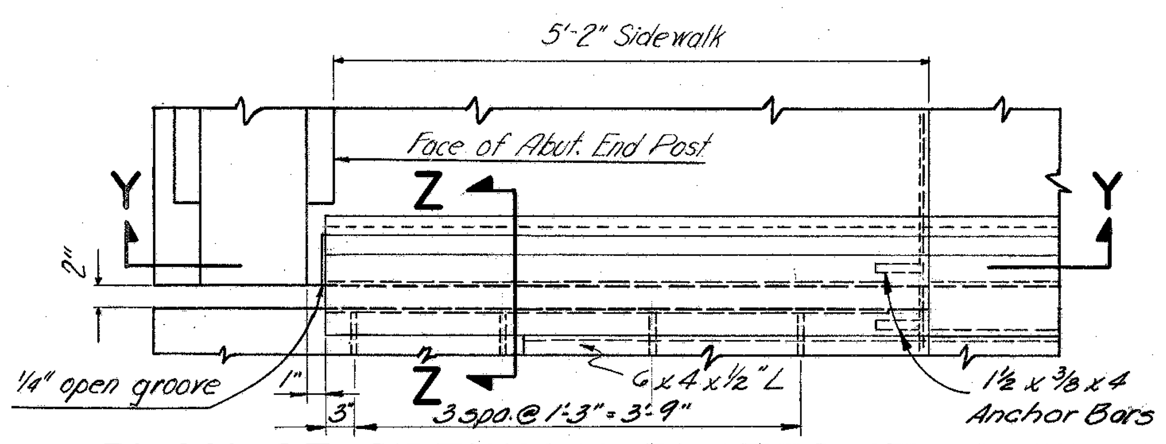
Painting. After erection and after the shop coat has been cleaned and, where necessary, repainted in accordance with Sec. 8.04, an additional coat of the same paint as used in the shop shall be applied over the outside face of the outside steel beams and all sides of the bottom flange.



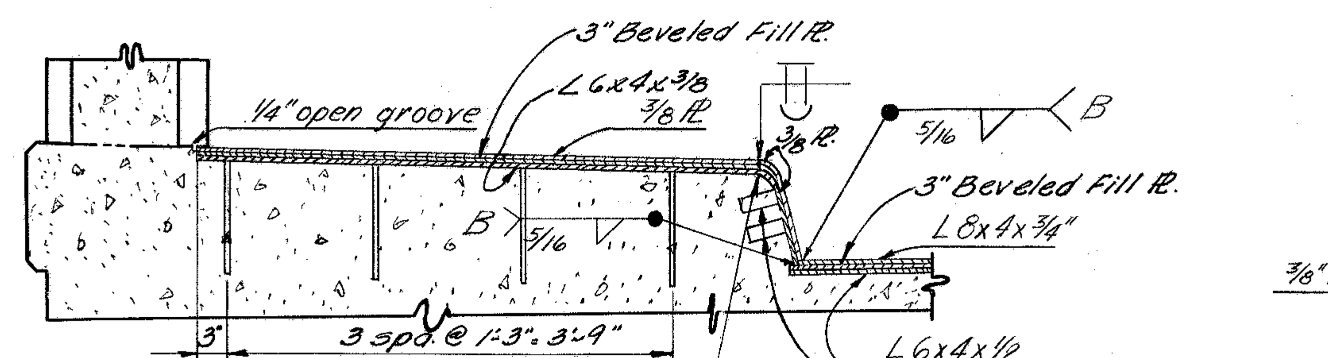
FRAMING PLAN

End crossframes indicated by double lines shall be as shown on Standard Drawing CSB-2-56 revised 2-2-59, Section B-B for beam spacing of 8'-0" to 12'-0" measured parallel to end beam

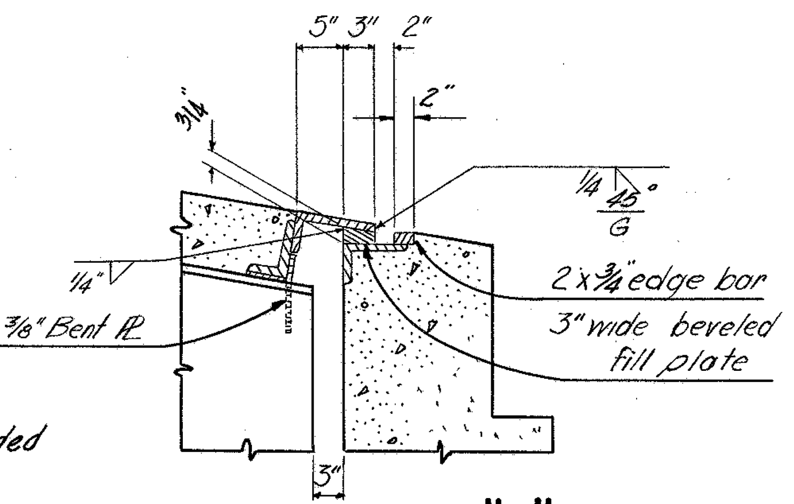
3-¾x4" shear connectors required per row. Shear Connectors shall be Nelson Granular Flux-Filled Studs or approved equal. Studs shall automatically be end end welded to the beams in the shop or field. ~~All stud welds shall be made in accordance with recommendations of the Nelson Stud Welding Division, Lorain, Ohio~~



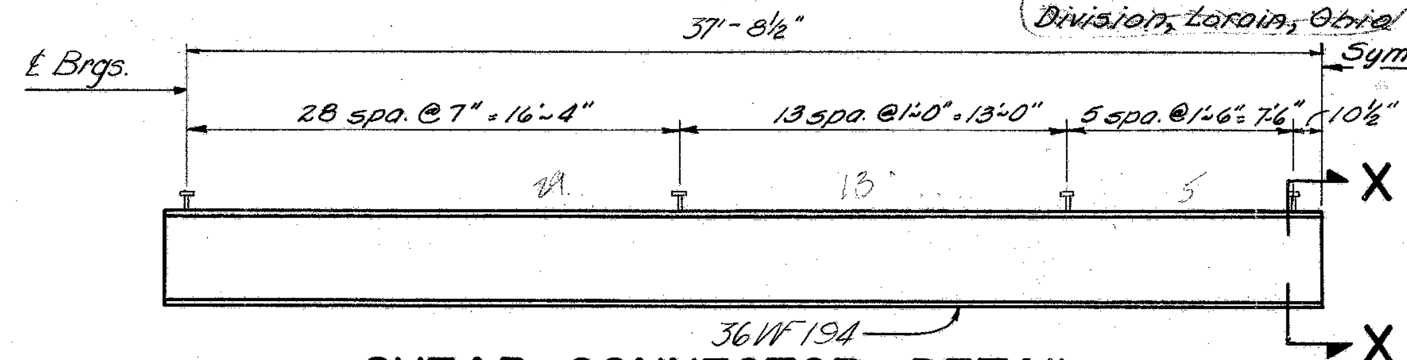
PLAN OF SIDEWALK PLATES AT ABUTMENT



SECTION Y-Y

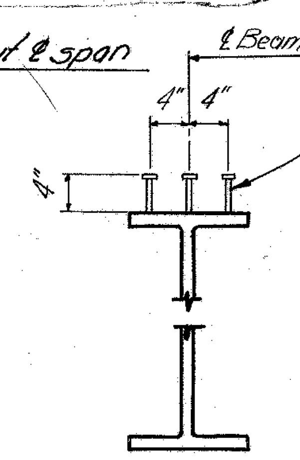


ABUTMENT "B"
ROADWAY END DAM DETAILS

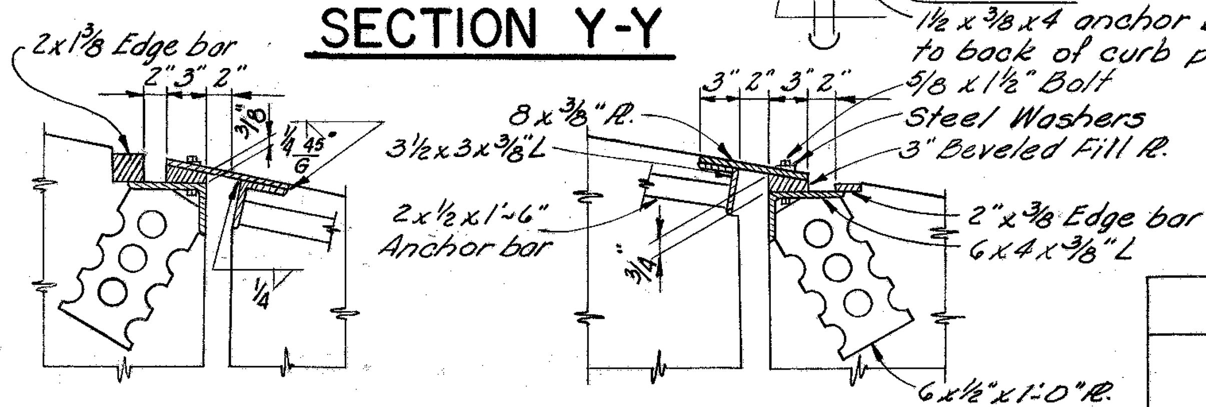


SHEAR CONNECTOR DETAIL

Showing the spacing of Shear Connector rows (276 studs per beam)



SECTION X-X



For details see Section Z-Z, Abutment "B"

SECTION Z-Z

DEFLECTION AND CAMBER

LOCATION	EXTERIOR BEAM	INTERIOR BEAM
Deflection due to weight of steel	7/16	7/16
Deflection due to remaining D.L.	1⅞"	1¼
Sum of Deflection	2 5/16"	1 11/16
Required Camber	2 5/16"	1 11/16

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUPERSTRUCTURE
BRIDGE NO. JEF-7-1387
UNDER LINCOLN AVENUE

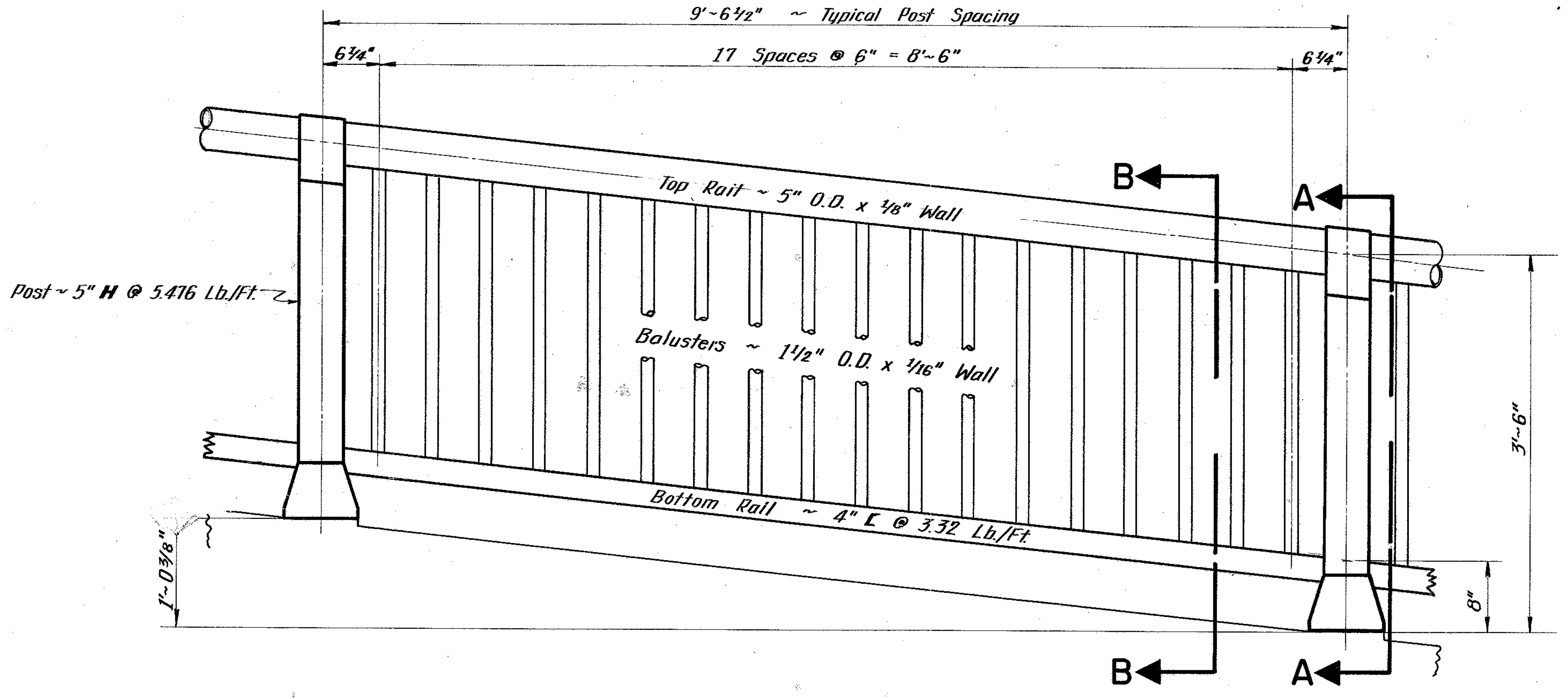
JEFFERSON COUNTY STA. 700 + 31.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
A.S.J.	BB		J.M.	E. Roberts 6-10-59	11-20-59

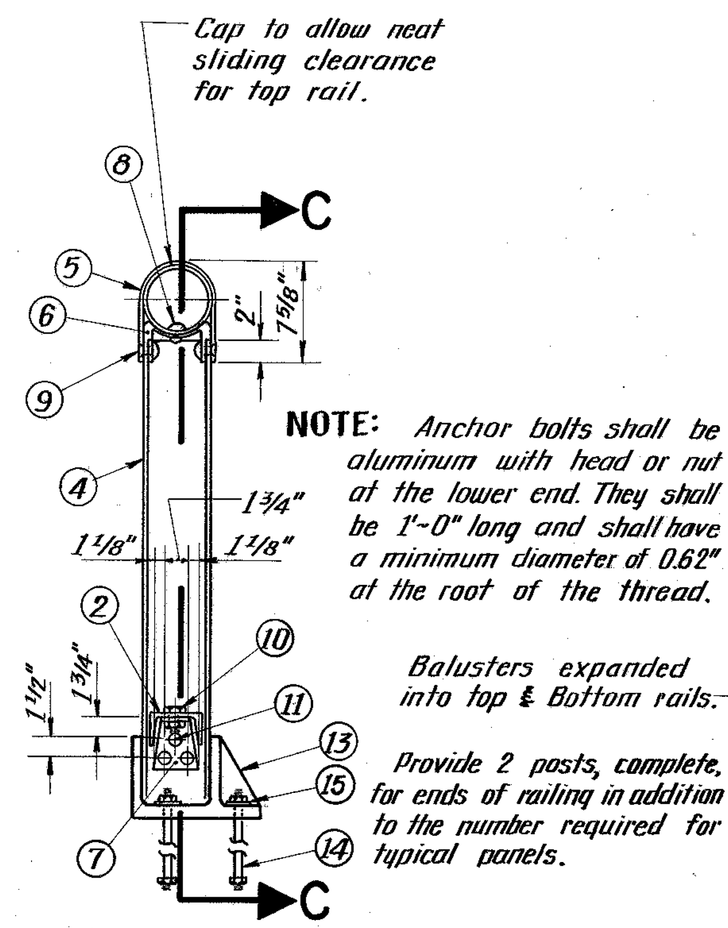
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

256
307

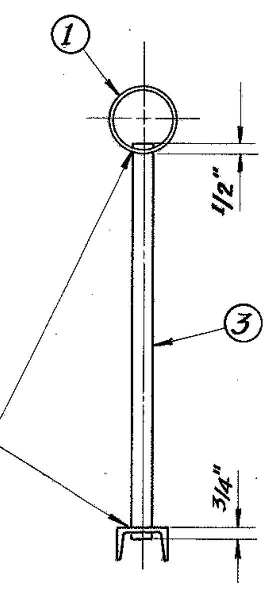
JEFFERSON COUNTY
JEF-7-13.53



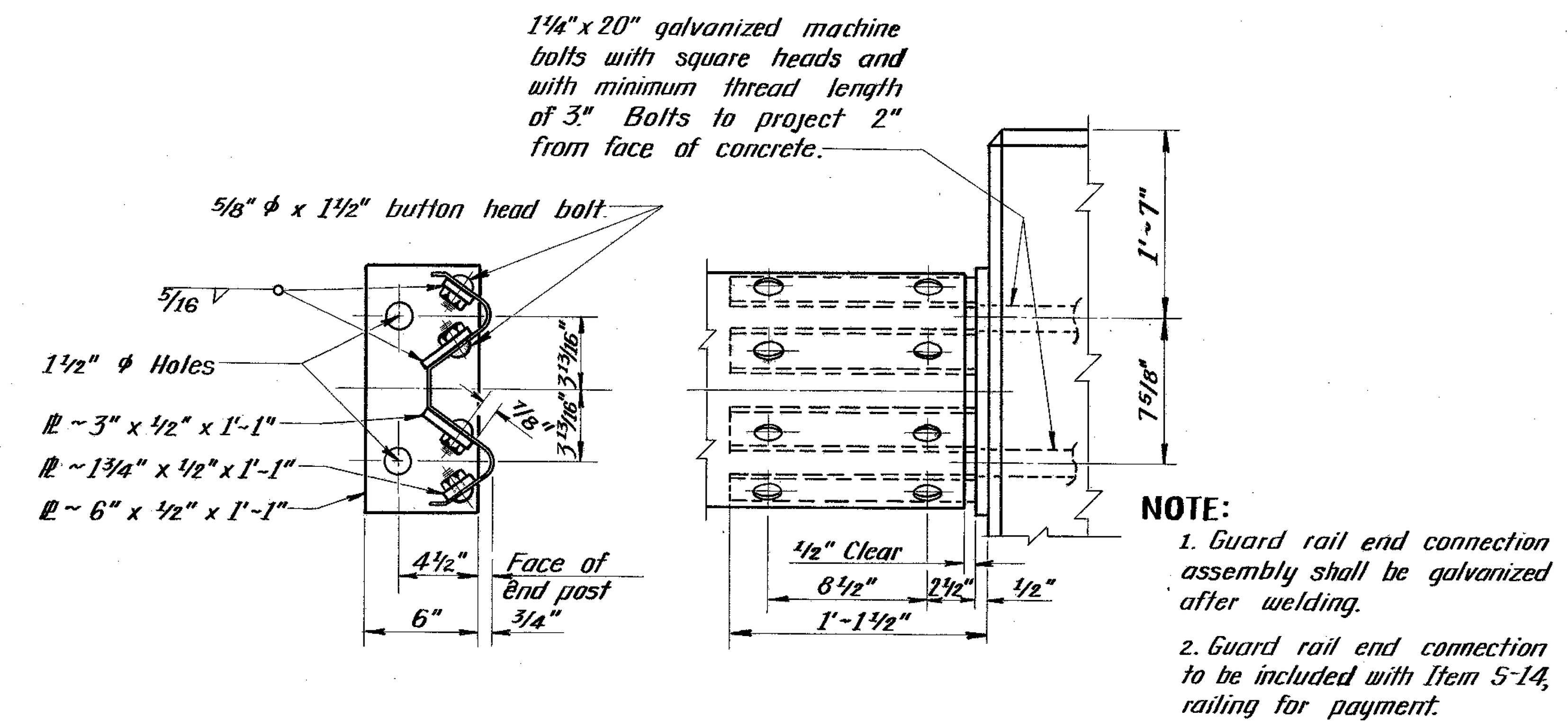
TYPICAL RAILING SECTION



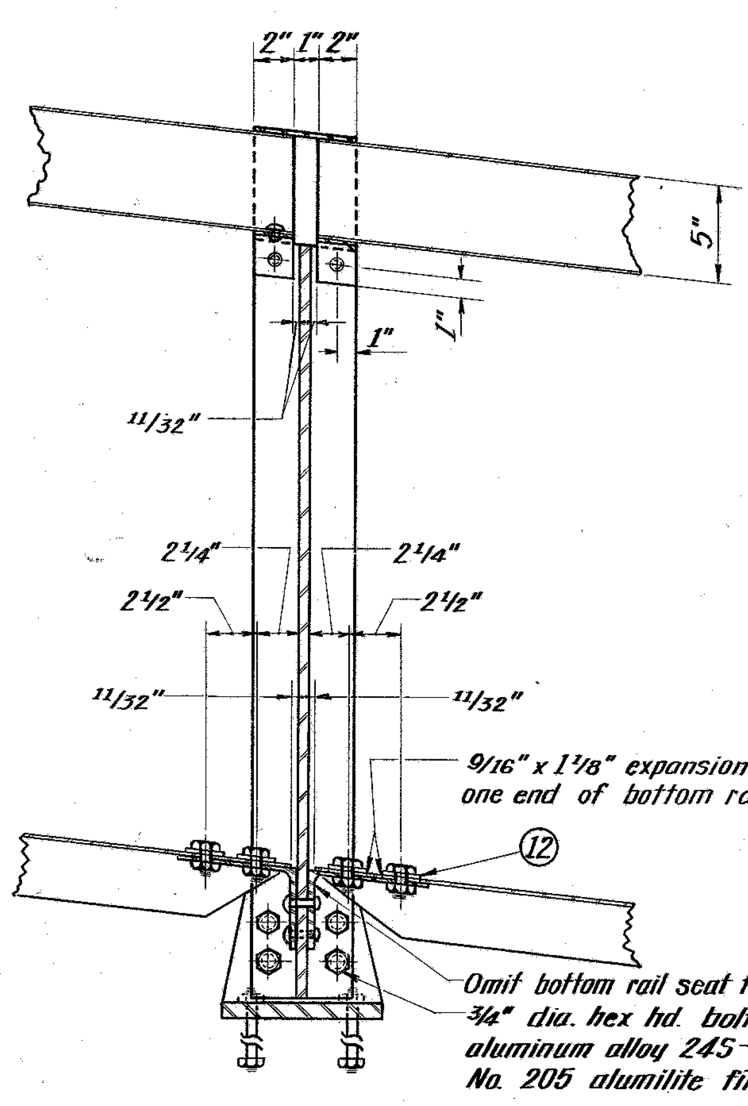
SECTION A-A



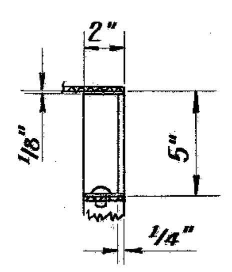
SECTION B-B



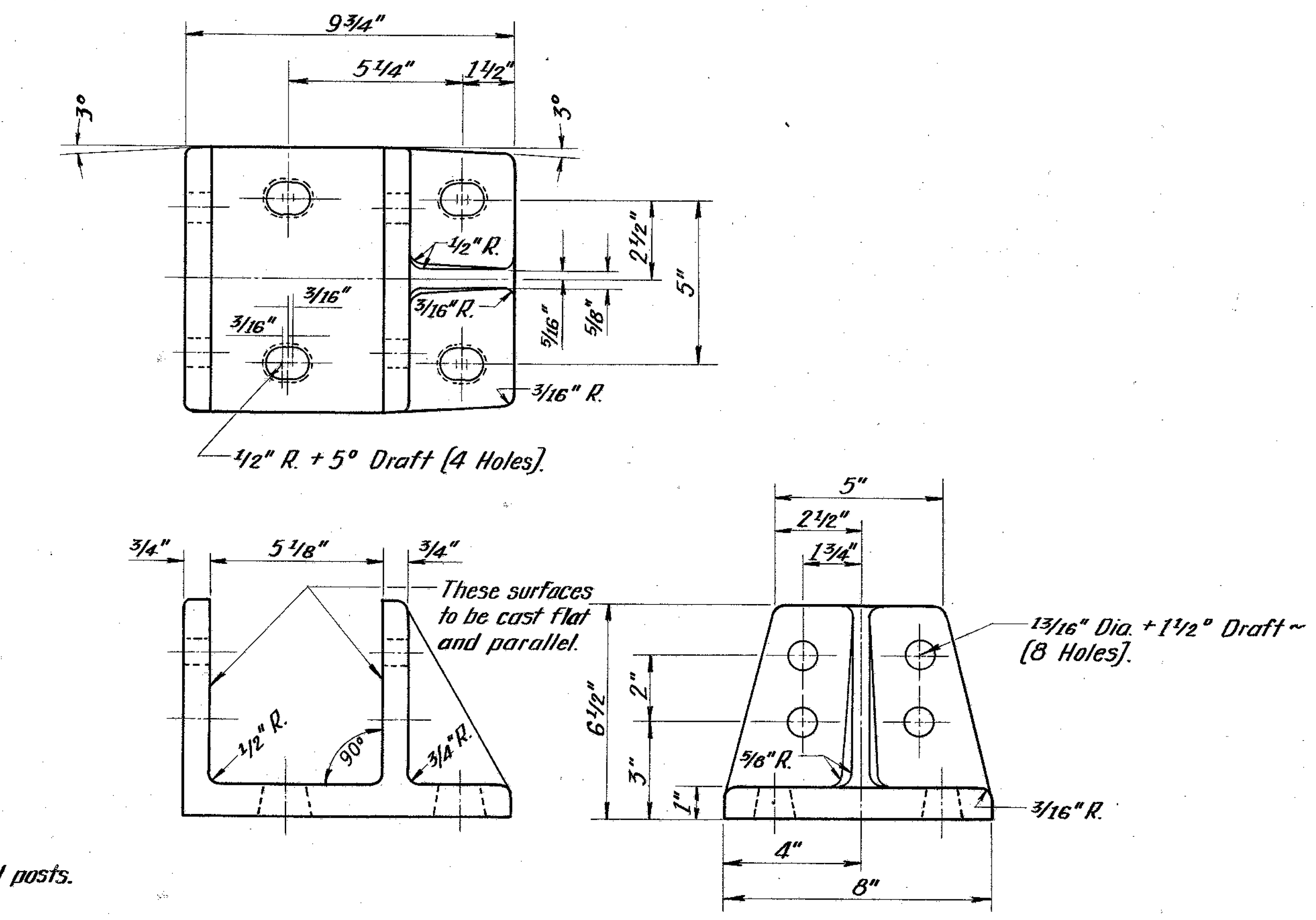
GUARD RAIL DETAIL



SECTION C-C



PLUG FOR END POSTS
(4 REQ'D.)



POST BASE DETAILS

BILL OF MATERIAL FOR TYPICAL PANEL						
ITEM	PCS.	DESCRIPTION	SIZE	ALLOY	UNIT WT.	TOT WT.
1	1	Top Rail.	5" O.D. x ⅛" Wall x 9'-6½" Lg.	61S-T6	2.25 Lb./Ft.	21.0
2	1	Bottom Rail.	4" C @ 3.32 Lb./Ft. x 9'-6½" Lg.	61S-T6	3.32 Lb./Ft.	31.0
3	18	Baluster.	1½" O.D. x 1/16" Wall x 2'-6¼" Lg.	61S-T6	.332 Lb./Ft.	15.2
4	1	Post ~ Section No. 9430.	5" H @ 5.476 Lb./Ft. x 2'-11" Lg.	61S-T6	5.476 Lb./Ft.	16.0
5	1	Post Cap.	5" x ¼" Plate x 1'-6" Lg.	61S-T6	1.468 Lb./Ft.	2.2
6	2	Top Rail Seat ~ Section No. 46699	2" Lg.	61S-T6	4.950 Lb./Ft.	1.7
7	2	Bottom Rail Seat.	6" x 4" x ⅜" L x 4" Lg.	61S-T6	4.23 Lb./Ft.	2.8
8	1	Top Rail to Seat Rivet	½" ϕ High But. Hd. x 1¼" Lg.	61S-T6	3.6 Lb./C	0
9	4	Cap to Post Rivet.	½" ϕ High But. Hd. x 1 7/16" Lg.	61S-T6	4.3 Lb./C	0.2
10	4	Bottom Rail to Seat Bolt & Nut with				
		No. 205 Alumilite Finish.	½" ϕ Hex Hd. x 1⅜" Lg.	24S-T4	5.5 Lb./C	0.2
11	3	Bottom Rail Seat to Post Rivet.	½" ϕ High But. Hd. x 1 13/16" Lg.	61S-T6	4.6 Lb./C	0.1
12	2	Bottom Rail Washer.	½" ϕ Bolt Size.	ALCLAD 24S-T4	2.5 Lb./M	0.0
13	1	Post Base (Cast) ~ Sec. No. 5766.	9¾" x 8" Base Size.	61S-T6	13.8 Lb./Ea.	13.8
14	4	Post Base to Sidewalk Anchor Bolt.	See Note at Section AA.		0.6 Lb./Ea.	2.4
15	4	Anchor Bolt Washer.	¾" ϕ Bolt Size.		3.0 Lb./M	0.1
		TOTAL				105.7

NOTE:

1. All Materials shall conform to Sec. M-7.19 of the Specifications.
2. Section numbers shown shall be Aluminum Company of America or equal.
3. Shims shall be provided under the railing posts where necessary to assist in vertical aligning. They shall be of aluminum alloy, 4¾" x 1/16" x 8" and shall be slotted for anchor bolts to permit insertion after the posts are in place.
4. For length of railing see sheet No. 250

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

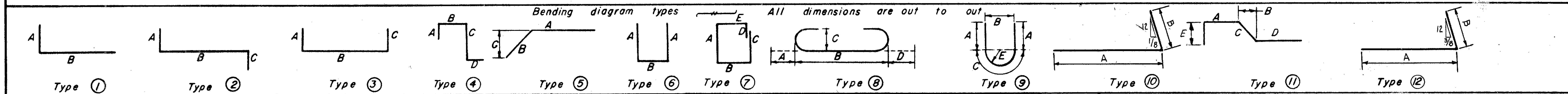
RAILING DETAILS
BRIDGE NO. JEF-7-1387
UNDER LINCOLN AVENUE

JEFFERSON COUNTY STA. 700 + 31.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
A.S.J.	Simpson	Simpson	P.M.	E. Roberts 6-10-59	

REINFORCING STEEL BAR SCHEDULE

Bending diagram types — All dimensions are out to out



ABUTMENTS

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A501	14	5	21'-10"	Str.						319
A502	112	5	20'-6"	Str.						2395
A503	60	5	4'-2"	6	0'-6"	3'-5"				261
A504	34	5	22'-4"	Str.						792
A505	12	5	10'-3"	6	5'-0"	0'-6"				128
A506	4	5	12'-5"	6	6'-1"	0'-6"				52
A507	8	5	6'-10"	Str.						57
A508	12	5	6'-0"	6	2'-11"	0'-4¾"				75
A509	16	5	14'-1"	6	6'-11"	0'-6"				235
A510	16	5	7'-0"	6	3'-5"	0'-4¾"				117
A511	94	5	10'-0"	Str.						980
A512	14	5	15'-2"	Str.						221
A513	8	5	22'-2" to 26'-2"	Str.		2-Sets	4 each	Vary	by 1'-4"	202
A514	4	5	15'-2" to 18'-9"	Str.				Vary	by 1'-2⅜"	71
A515	5	5	18'-10" to 22'-8"	Str.				Vary	by 0'-11½"	108
A516	5	5	12'-7" to 14'-7"	Str.				Vary	by 0'-6"	71
A517	5	5	13'-11"	12	8'-11"	5'-2"				73
A518	9	5	11'-10"	12	6'-10"	5'-2"				111
A519	5	5	8'-4"	12	3'-4"	5'-2"				43
A520	5	5	12'-5" to 14'-9"	Str.				Vary	by 0'-7"	71
A521	4	5	10'-4"	Str.						43
A522	4	5	10'-7"	Str.						44
A523	4	5	14'-9"	Str.						62
A524	4	5	18'-0"	Str.						75
A525	2	5	11'-0"	Str.						23
A526	8	5	4'-2" to 7'-11"	Str.		2-Sets	4 each	Vary	by 1'-3"	50
A527	4	5	10'-11"	Str.						46
A528	4	5	11'-3"	Str.						47
A529	20	5	11'-4"	Str.						236
A530	4	5	5'-0"	Str.						21
A531	2	5	11'-9"	Str.						25
A532	48	5	14'-11"	Str.						747
A533	2	5	12'-8"	Str.						26
A534	2	5	7'-10"	Str.						16
A535	4	5	5'-4"	5	3'-9"	1'-7"	0'-6⅝"			22
A536	4	5	12'-5"	Str.						52
A537	2	5	10'-8"	Str.						22
A538	2	5	6'-6"	Str.						14
A539	4	5	9'-2"	Str.						38
A540	4	5	17'-0"	Str.						71
A541	2	5	14'-9"	Str.						31
A542	2	5	9'-0"	Str.						19
A543	2	5	3'-7"	Str.						7
A544	2	5	18'-2"	Str.						38
A545	8	5	4'-3" to 10'-0"	Str.		2-Sets	4 each	Vary	by 1'-11"	59
A546	2	5	19'-11"	Str.						42
A547	1	5	19'-0"	Str.						20
A548	1	5	18'-0"	Str.						19
A549	2	5	17'-2"	Str.						36
A550	2	5	16'-4"	Str.						34
A551	1	5	15'-2"	Str.						16
A552	1	5	14'-1"	Str.						15
A553	4	5	10'-7"	Str.						44
A554	1	5	9'-5"	Str.						10
A555	1	5	8'-10"	Str.						9
A556	1	5	8'-3"	Str.						9
A557	1	5	7'-8"	Str.						8
A558	1	5	32'-4"	Str.						34
A559	1	5	30'-9"	Str.						32
A560	2	5	29'-3"	Str.						61
A561	2	5	27'-10"	Str.						58
A562	1	5	26'-6"	Str.						28
A563	1	5	24'-5"	Str.						25
A564	1	5	12'-9"	Str.						13
A565	1	5	12'-1"	Str.						13
A566	3	5	11'-2"	Str.						35
A567	1	5	10'-6"	Str.						11
A568	1	5	10'-0"	Str.						10

ABUTMENTS (continued)

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A569	4	5	20'-7"	Str.						86
A570	4	5	17'-11" to 19'-5"	Str.		2-Sets	2 each	Vary	by 1'-6"	78
A571	4	5	12'-5" to 16'-10"	Str.		1-Set		vary	by 1'-5⅝"	61
A572	28	5	5'-8"	Str.						165
A573	4	5	12'-5" to 16'-5"	Str.		1-Set		vary	by 1'-4"	60
A574	4	5	27'-3"	Str.						114
A575	4	5	8'-4"	Str.						35
A576	6	5	16'-0"	Str.						100
A577	2	5	11'-10"	Str.						25
A578	2	5	7'-7"	Str.						16
A579	2	5	3'-7"	Str.						7
A580	2	5	17'-9"	Str.						37
A581	2	5	9'-8"	Str.						20
A582	8	5	4'-2" to 9'-2"	Str.		2-Sets	4 each	Vary	by 1'-8"	56
A583	36	5	11'-2"	Str.						419
A584	2	5	7'-9"	Str.						16
A585	2	5	4'-5"	5	2'-10"	1'-7"	0'-8¼"			9
A586	2	5	9'-4"	Str.						19
A587	2	5	7'-10"	Str.						16
A588	2	5	5'-3"	5	3'-8"	1'-7"	0'-8¼"			11
A589	2	5	8'-5"	Str.						18
A590	4	5	9'-2"	Str.						38
A591	4	5	16'-9"	Str.						70
A592	2	5	16'-5"	Str.						34
A593	2	5	12'-3"	Str.						26
A594	2	5	8'-3"	Str.						17
A595	2	5	4'-6"	Str.						9
A596	2	5	19'-4"	Str.						40
A597	2	5	10'-4"	Str.						22
A598	8	5	4'-0" to 8'-9"	Str.		2-Sets	4 each	Vary	by 1'-7"	53
AA501	2	5	13'-2"	Str.						27
AA502	2	5	13'-9"	Str.						29
AA503	1	5	24'-2"	Str.						25
AA504	2	5	23'-1"	Str.						48
AA505	2	5	21'-7"	Str.						45
AA506	1	5	20'-7"	Str.						21
AA507	1	5	19'-4"	Str.						20
AA508	1	5	12'-8"	Str.						13
AA509	1	5	23'-2"	Str.						24
AA510	1	5	22'-0"	Str.						23
AA511	2	5	20'-8"	Str.						43
AA512	1	5	19'-8"	Str.						21
AA513	1	5	18'-6"	Str.						19
A601	50	6	15'-2"	7	5'-9"	1'-5"	4'-7"	3'-1"	0'-11"	1139
A602	24	6	17'-4"	7	6'-7"	1'-5"	5'-5"	3'-1"	1'-5"	625
A603	63	6	6'-4"	Str.						599
A604	11	6	5'-7"	Str.						92
A605	16	6	4'-7"	Str.						110
A606	20	6	5'-9"	Str.						173
A607	32	6	6'-0"	Str.						288
A701	64	7	7'-3"	Str.						948
A702	5	7	15'-6" to 19'-0"	Str.		1-Set		vary	by 0'-10½"	176
A703	4	7	12'-6"	12	11'-0"	1'-8"				102
A704	9	7	9'-11"	12	8'-5"	1'-8"				182
A705	5	7	5'-6"	12	4'-0"	1'-8"				56
A706	24	7	6'-7"	Str.						323
A707	7	7	9'-7"	12	5'-9"	4'-0"				137
A708	12	7	13'-5"	12	5'-9"	7'-10"				329
A709	6	7	16'-4"	12	5'-9"	10'-9"				200
A710	4	7	12'-8" to 17'-1"	Str.		1-set		vary	by 1'-5⅝"	122
A711	3	7	13'-9" to 16'-8"	Str.		1-Set		vary	by 1'-5½"	93
A801	16	8	10'-0"	1	4'-3"	5'-11"				427
A802	32	8	13'-6"	1	7'-9"	5'-11"				1153
A803	15	8	17'-1"	1	11'-4"	5'-11"				684
A804	16	8	15'-4"	Str.						655
A805	53	8	7'-10"	Str.						1108

ABUTMENTS (continued)

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A 901	20	9	11'-1"	1	10'-2"	1'-2"				754
A 902	5	9	19'-8" to 22'-11"	Str.		1-Set		vary	by 0'-9¾"	362
A 903	5	9	12'-3"	Str.						208
A 904	10	9	15'-9"	12	6'-2"	9'-10"				536
A 905	10	9	10'-6"	12	6'-2"	4'-7"				357
A 906	16	9	10'-10"	12	6'-6"	4'-7"				589
A 907	16	9	16'-1"	12	6'-6"	9'-10"				875
A 908	8	9	11'-8"	Str.						317
A 909	4	9	18'-2" to 19'-8"	Str.		2-Sets	2 each	Vary	by 1'-6"	257
A 910	4	9	20'-10"	Str.						283
A 911	2	9	10'-4"	Str.						70
A1001	4	10	27'-6"	Str.						473
A1002	8	10	22'-5" to 26'-5"	Str.		2-Sets	4 each	Vary	by 1'-4"	841
A1003	20	10	16'-10"	Str.						1449
A1004	32	10	19'-1"	12	7'-11"	11'-5"				2628
A1005	32	10	12'-8"	12	7'-11"	5'-0"				1744
A1006	2	10	12'-8"	Str.						109
A1101	27	11	12'-5"	10	7'-5"	5'-4"				1781
A1102	26	11	18'-2"	10	7'-5"	11'-1"				2510
A1103	13	11	13'-9"	Str.						950
A1104	14	11	22'-0"	Str.						1636
R501	4	5	4'-2"	6	2'-0"	0'-5"	Included in Item 5-14,			
R502	8	5	5'-6"	6	2'-8"	0'-5"	Railing for payment			
									Total	39,283

REPLACEMENT BARS

MARK	NO.	SIZE	LENGTH	TYPE	WEIGHT
RE 501	2	5	5'-7"	Str.	
RE 601	1	6	5'-11"	Str.	
RE 701	1	7	6'-3"	Str.	
RE 801	1	8	6'-6"	Str.	
RE 901	1	9	6'-10"	Str.	
RE1001	1	10	7'-3"	Str.	
RE1101	1	11	7'-7"	Str.	

SUPERSTRUCTURE

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S501	123	5	36'-4"	Str.						4661
S502	166	5	39'-4"	Str.						6810
S503	124	5	7'-	3	0'-9"	5'-11"	0'-8"			916
S504	248	5	1'-6"	1	1'-2"	0'-6"				388
S601	123	6	36'-4"	Str.						6712
									Total	19,487

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPERSTR	ABUTS.	PIERS	GENERAL		
E-2	Lump	Sum	Cofferdams, cribs and sheeting				Lump Sum		
E-2	704	C.Y.	Unclassified Excavation		704				
E-2	750	C.Y.	Rock Excavation for Structure		750				
S-1	98	C.Y.	Class "C" Concrete, Superstructure	98					
S-1	313	C.Y.	Class "E" Concrete, Abutment Walls		313				
S-1	175	C.Y.	Class "E" Concrete, Footings		175				
S-3	97	L.F.	Waterproofing, Premolded Sealing Strip		97				
S-3	33	S.Y.	Waterproofing, Type "B"		33				
S-4	58,770	Lbs.	Reinforcing Steel	19,487	39,283				
S-7	103,100	Lbs.	Structural Steel	103,100					
S-8	103,100	Lbs.	Field Painting of Structural Steel, as per plan	103,100					
S-9	72	S.F.	1" Preformed Expansion Joint Filler (Gray						
			Rubber, M-10.02)		72				
S-14	167	L.F.	Railing (Aluminum with Concrete Endposts)	167					
S-29	400	C.Y.	Porous Backfill		400				
S-29	84	Lin.Ft.	8"ϕ perforated bituminous coated CMP,						
			including specials.		84				
SPEC.	1656	Ea.	Stud Shear Connectors	1656					

REPLACEMENT BARS

If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy Testing Laboratory, test sample as provided in Section S-402 need not be furnished and replacement bars will not be required.

BAR SIZE

Bar size is indicated in the barmark. The first digit where three digits are used and the first two where four are used, indicates the bar size number. For example, A401 is a number 4 bar and A1114 is a number 11 size bar.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

REINFORCING STEEL LIST & ESTIMATED QUANTITIES

BRIDGE NO. JEF-7-1387
UNDER LINCOLN AVENUE

JEFFERSON COUNTY — STA. 700+31.00

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
A.S.J	a.m.m	a.m.m	JPW	E. Roberts 6-10-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(14)	

JEFFERSON COUNTY
JEF-7-13.53

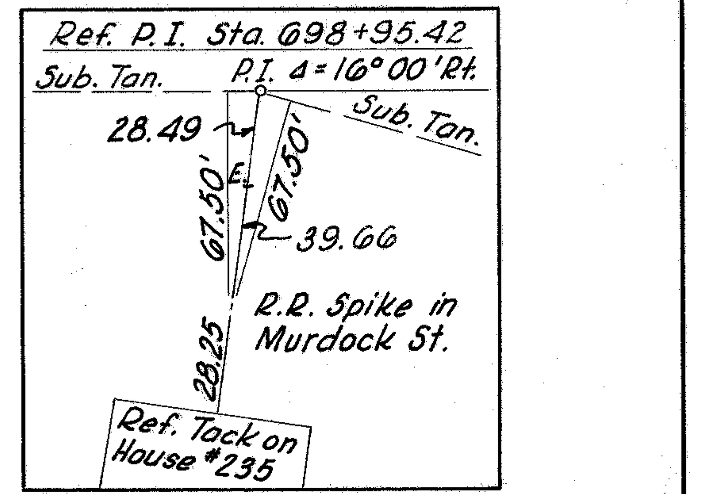
CURVE DATA
P.I. Sta. 698+95.42
Δ = 16°00'00" Rt.
Dc = 2°00'00"
Ts = 477.67'
θs = 1°30'00"
Es = 28.49'
Ls = 150.00'
Δc = 13°00'00"
Lc = 650.00'
P = 0.33'
K = 75.00'

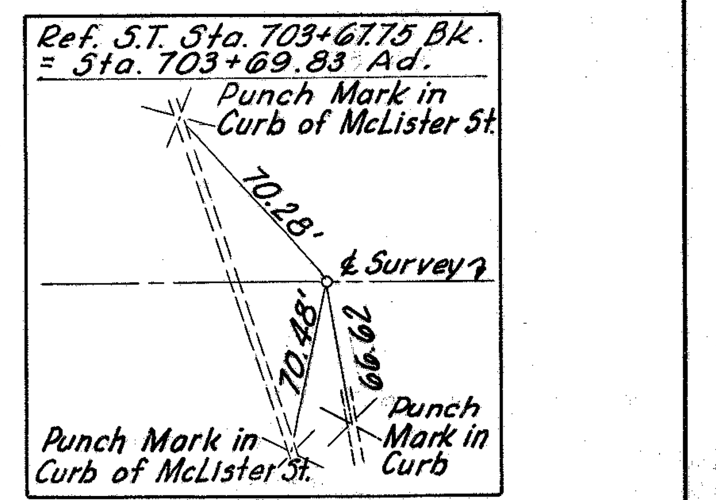
Boring №	Rock Elev.
SB-4	736.8
SB-5	732.0
SB-6	714.2
TH-1	703.7
TH-2	709.0
TH-3	714.0
TH-4	739.4
TH-5	741.0
TH-6	738.2

CURVE DATA - RAMP "C"
P.I. Sta. 5+94.38
Δ = 10°05'59"
Dc = 6°00'00"
Lc = 168.33'
Rc = 954.93'
Tc = 84.38'

CURVE DATA
P.I. Sta. 707+70.53
Δ = 11°25'54" Lt.
Dc = 3°30'00"
Ts = 288.99'
θs = 4°22'30"
Es = 9.78'
Ls = 250.00'
Δc = 2°40'54"
Lc = 76.62'
P = 1.59
K = 124.98

B.M. R.R. Spike in pole 138' Rt. Sta. 703+50 Elev. 700.69

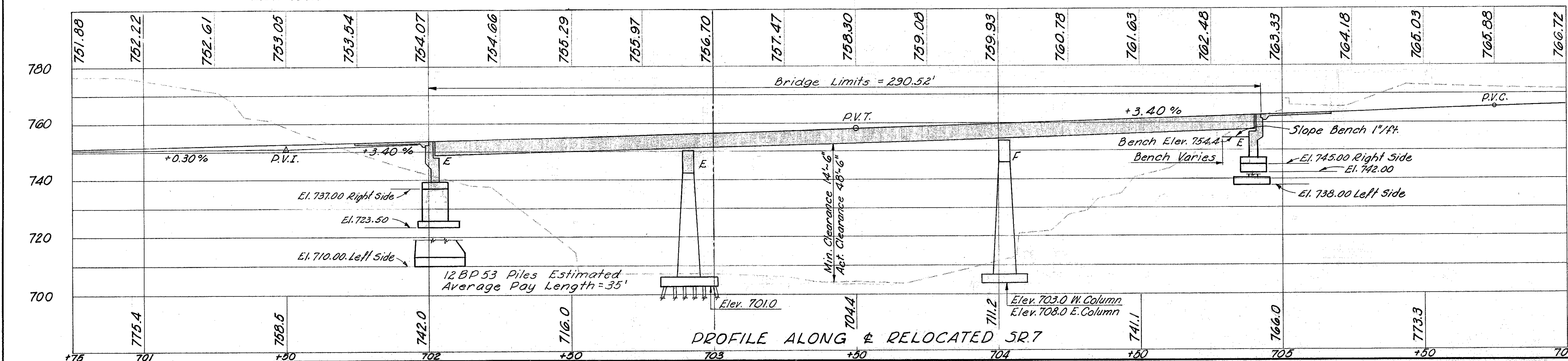




FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of borings and soil-sampling soundings made at the site. The sounding information may be inspected in the office of the Bureau of Bridges in Columbus, or in the Division office, but the State assumes no responsibility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

⊕ Indicates boring location

VERTICAL CURVE DATA
400' V.C.
P.V.I. Sta. 701+50
Elev. 751.50



PROPOSED STRUCTURE
TYPE: Continuous steel girder with reinforced concrete deck and substructure
SPANS: 88'-110'-88' ℅ bearings along reference tangent
ROADWAY: 78'-4" f/f parapets with 2'-2" safety curbs and 3'-0" median.
LOAD FREQUENCY: CF=2000(57) adequate for AASHO. alternate loading
SKEW: None
WEARING SURFACE: 1" Monolithic concrete
APPROACH SLABS: Special design (25' long)
ALIGNMENT: 2° Curve, 150' Spiral, tangent 250' Spiral
SUPERELEVATION: Varies

MICHAEL BAKER, JR. CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SITE PLAN
BRIDGE NO. JEF-7-1392
OVER McLISTER STREET

JEFFERSON COUNTY S.R.7

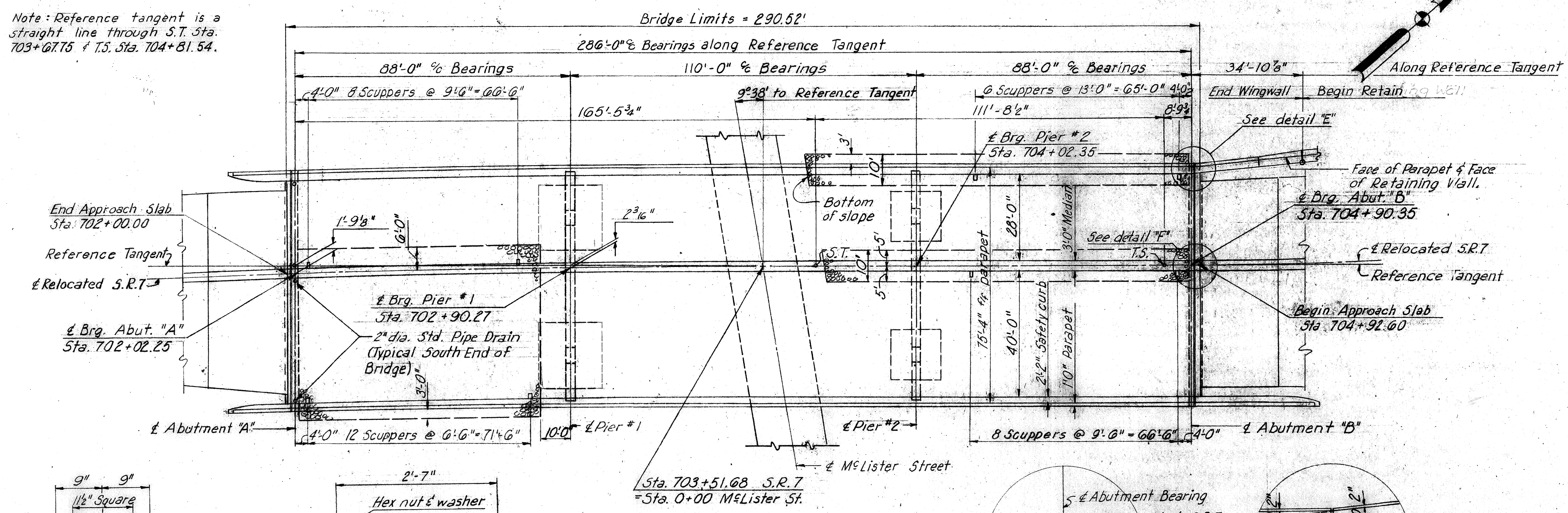
STA. 703+51.68

PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
		P.M.	C.J.K. K.E.A.	J.M.	E.F.R. 10-18-58

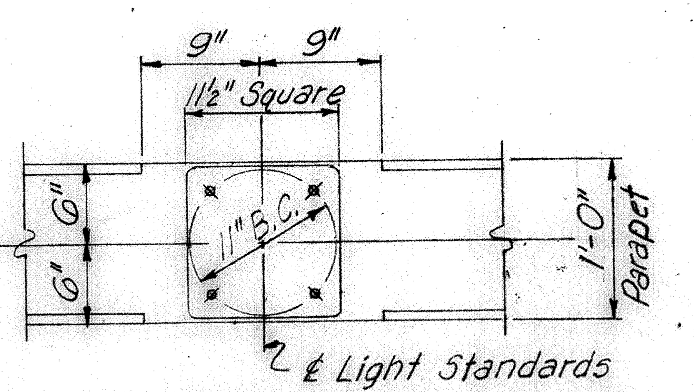
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	
2	OHIO	U-430(14)		259 / 307

JEFFERSON COUNTY
JEF-7-13.53

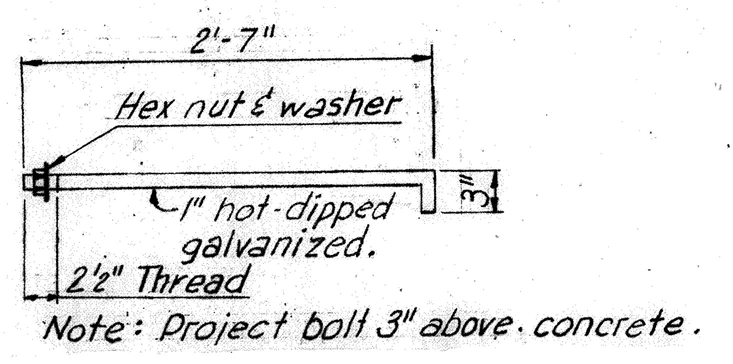
Note: Reference tangent is a straight line through S.T. Sta. 703+67.75 & T.S. Sta. 704+81.54.



PLAN

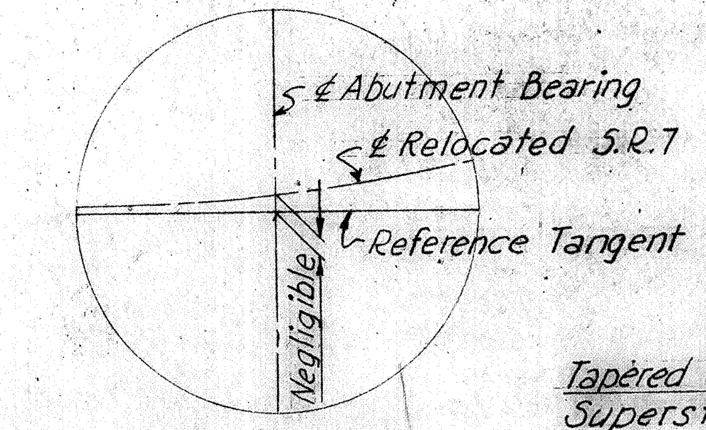


ANCHOR BOLT LAYOUT

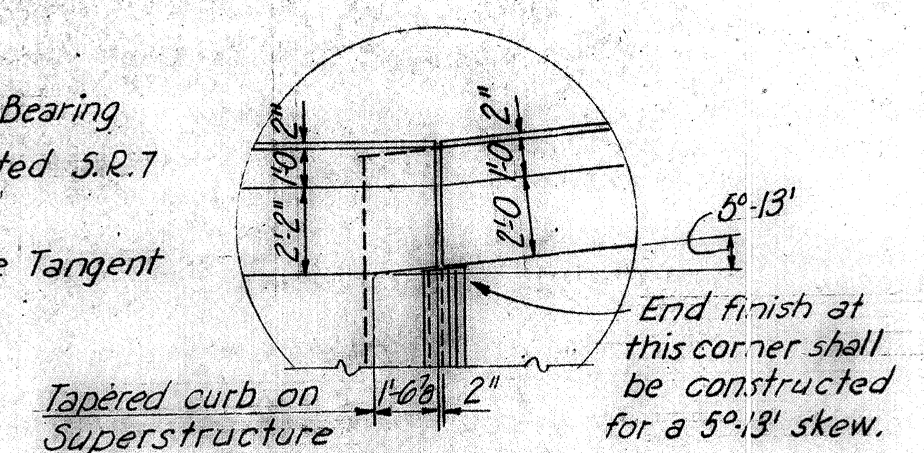


LIGHT STANDARD ANCHOR BOLT
4 Per Standard

Note: Project bolt 3" above concrete.

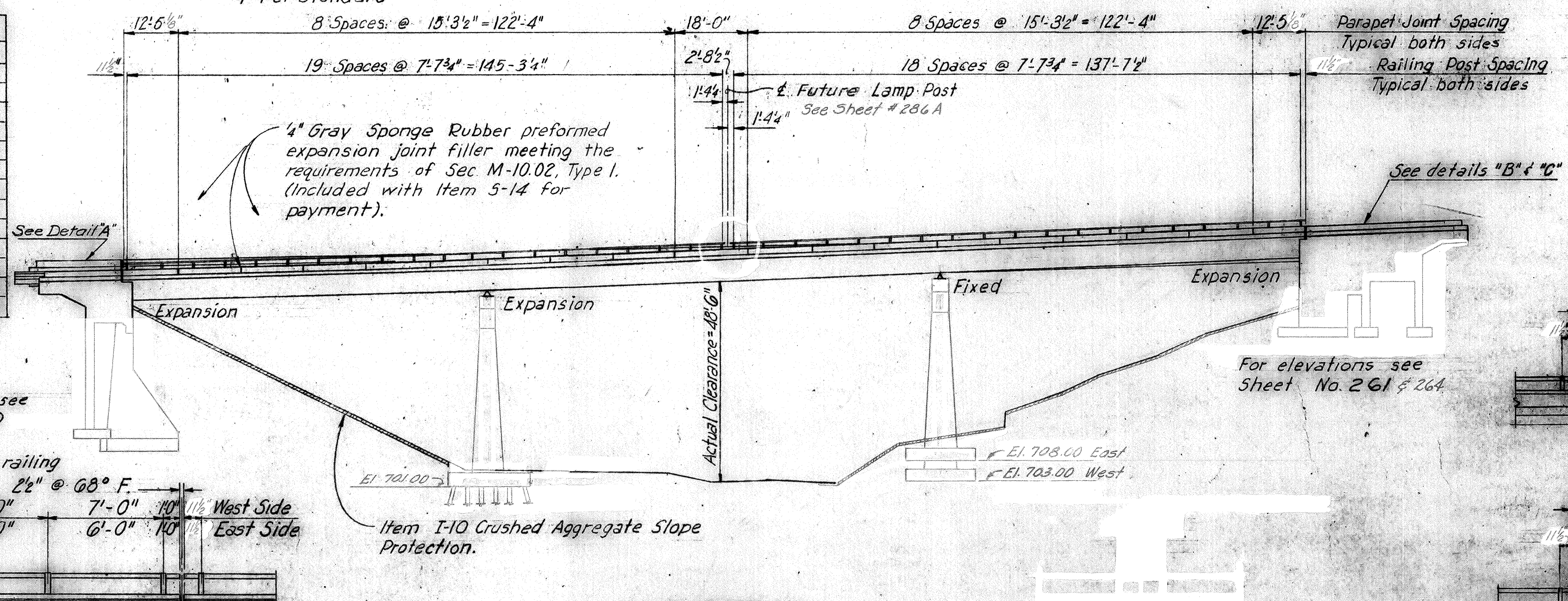


DETAIL "F"

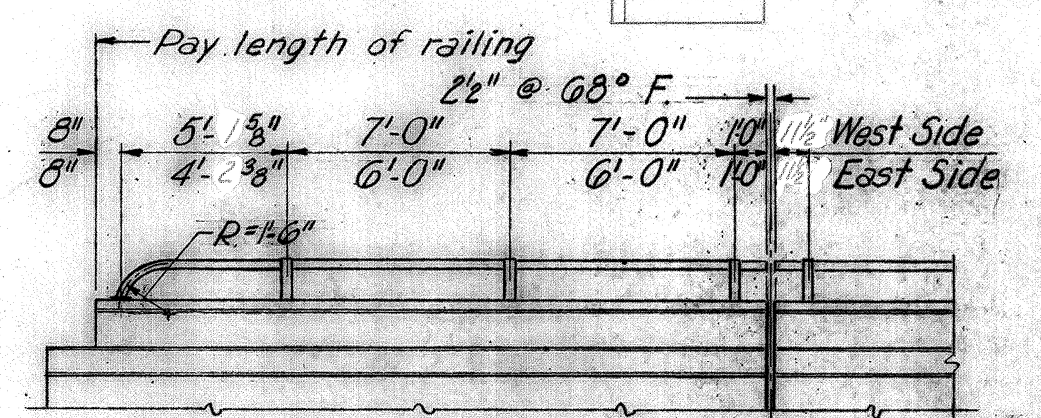


DETAIL "E"

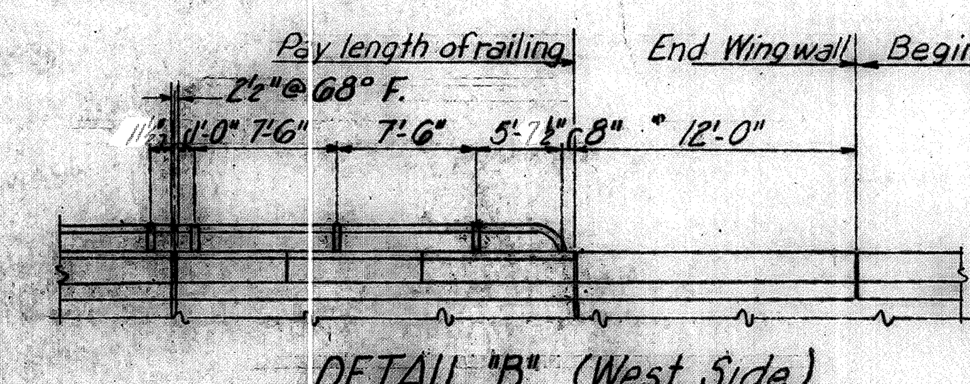
PAVEMENT ELEVATIONS			
Station	P.G.	Lt. Curb.	Rt. Curb
702+00	754.07	755.00	752.74
+25	754.66	755.54	753.41
+50	755.29	756.06	754.20
+75	755.97	756.62	755.04
703+00	756.70	757.22	755.96
+25	757.47	757.86	756.91
+50	758.30	758.57	757.89
+75	759.08	759.24	758.86
704+00	759.93	759.96	759.87
+25	760.78	760.67	760.91
+50	761.63	761.42	761.93
+75	762.48	762.14	762.96
705+00	763.33	762.87	763.99



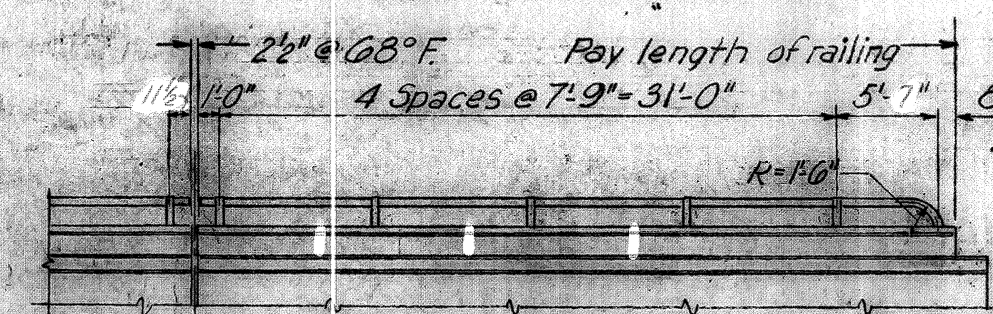
ELEVATION



DETAIL "A"



DETAIL "B" (West Side)



DETAIL "C" (East Side)

GENERAL NOTES

- Design Specifications: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof.
- Reference shall be made to Standard Drawings CSB-2-56, sheets 2 & 3 of 6, revised 2-2-59, AR-1-57 revised 2-2-59, RB-1-55, revised 2-2-59 and to Supplemental Specification 5207 dated 4-28-55.
- Crushed aggregate slope protection, meeting the requirements of Sec I-10.04, shall cover the areas shown on General Plan & Elevation.
- Welding of structural steel shall be class "A" except as shown. (—<B). Welds shown as field welds may, at the option of the contractor, be made in the shop.
- Footings for abutments and for pier No. 2 are designed for a maximum bearing pressure of 6.0 tons per sq. ft. and 5.7 tons per sq. ft. respectively. The engineer shall inspect the entire area and insure that excavation goes to bedrock. Prolonged exposure to atmospheric conditions shall be averted. The excavation shall be kept drained at all times. Abutment footings shall be placed to the elevations shown. Abutment footings shall be extended a minimum of 6" into solid rock. Pier No 2 footings shall be extended a minimum of 3" into solid rock or to the elevation shown, whichever is lower.
- PILES shall be driven to firm contact with rock. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Section S-18.05 is not less than the following value for a pile hammer of the indicated energy rating:

  For Pier No.1

  41 tons per pile using a 11,000 ft. lb. hammer.

  37 tons per pile using a 15,000 ft. lb. hammer.

  If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 35 tons per pile.
- Surface Finish of Concrete: Pier caps and columns shall receive a rubbed surface finish. All other exposed surfaces shall be governed the provisions of Item S-1.
- Maintenance and Protection of Traffic: Two lanes of traffic with a minimum horizontal width of 20'-0" shall be maintained on McLister Street at all times. The Contractor shall safeguard the traveling public by providing platforms, nets or other suitable protection above the traveled lanes. A minimum vertical clearance of 12'-9" shall be provided at all times.
- EXCAVATION AND BACKFILL: Fill in front of the abutments for it's full height shall be maintained at an elevation equal with the fill behind the abutments. Backfill behind the abutments shall be made with material meeting the requirements of Sec. I-22 and shall be compacted in accordance with the requirements for embankment compaction. The payment for this I-22 backfill shall be considered as included in the payment for E-2, Unclassified Excavation.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

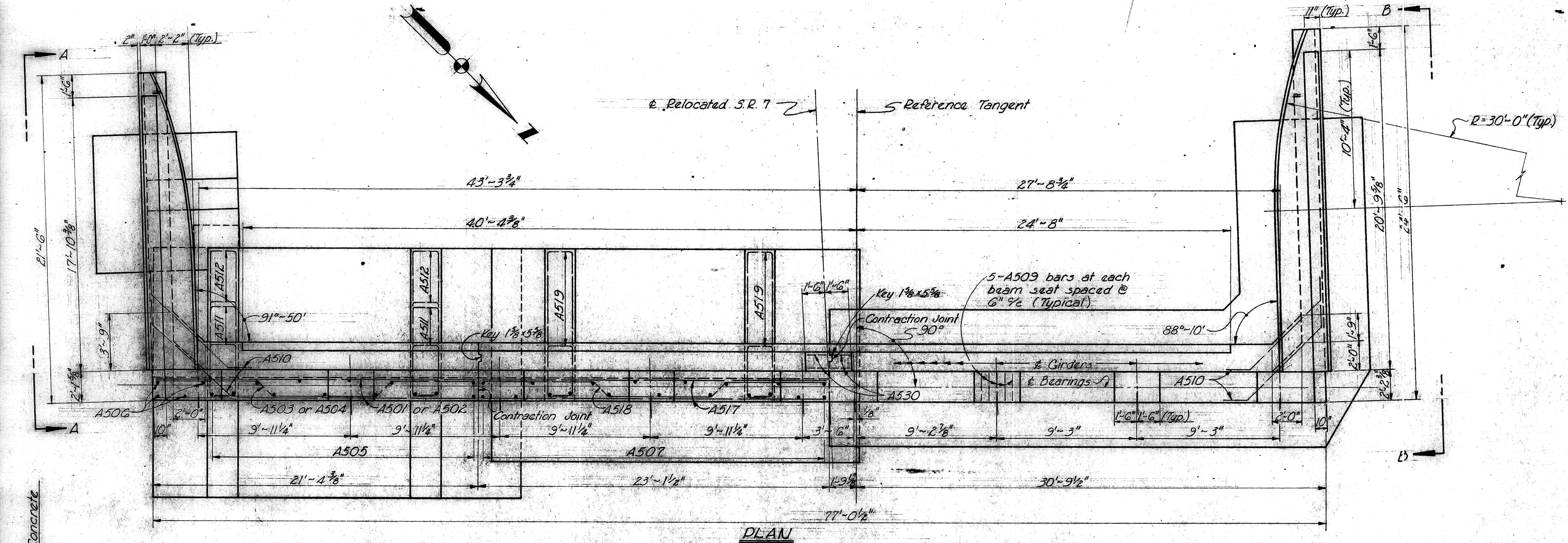
GENERAL PLAN & ELEVATION
BRIDGE NO. JEF-7-1392
OVER McLISTER STREET

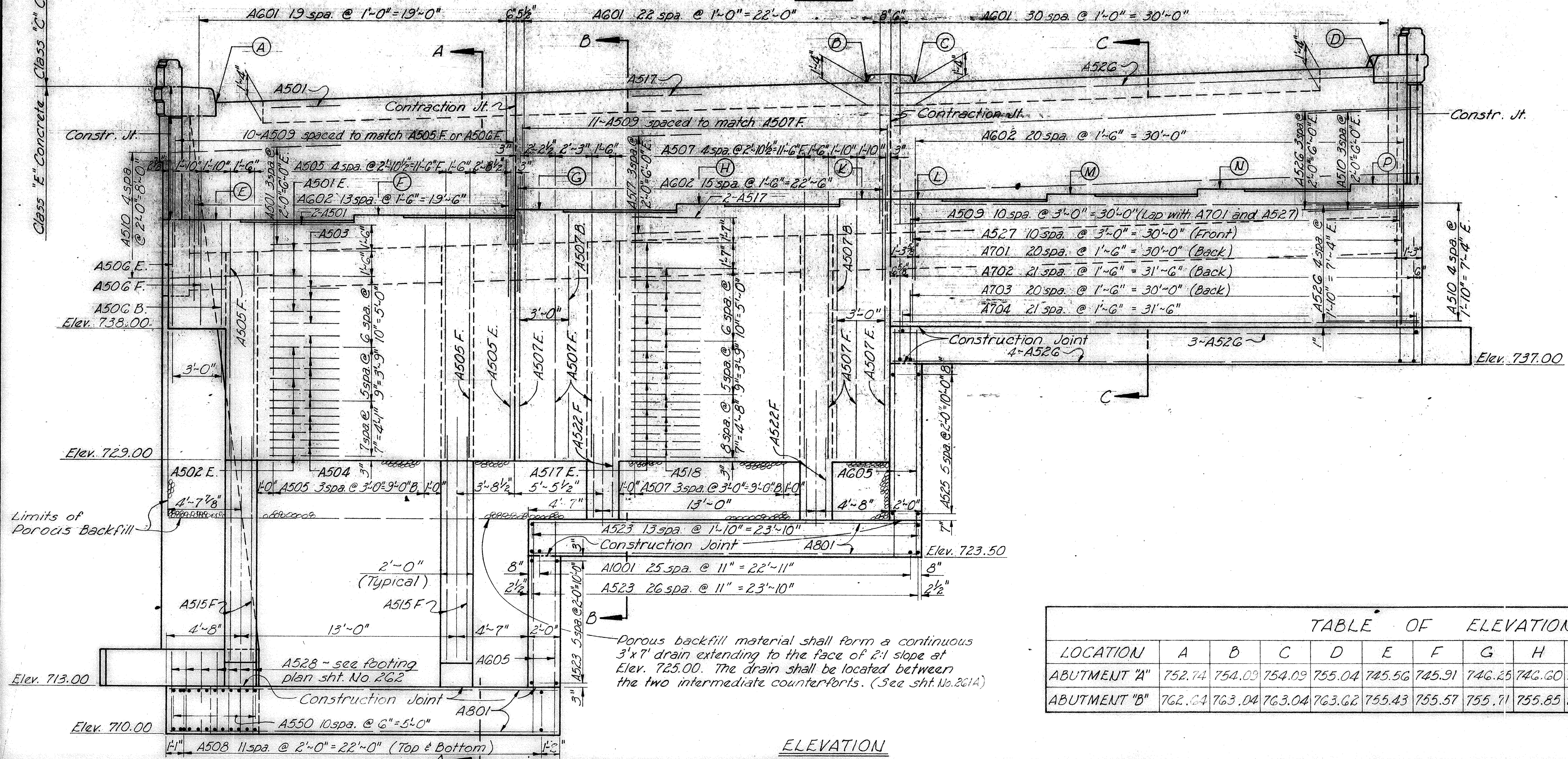
JEFFERSON COUNTY				STA. 703+51.68	
Designed	Drawn	Traced	Checked	Reviewed Date	Revised
P.M.	C.J.K.		J.M.	E. Roberts 6-5-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

260/307

JEFFERSON COUNTY
JEF-7-13.53





NOTES

B.-indicates back face.
F.-indicates front face.
E.-indicates each face.

For details not shown see sheets No. 261, 261A, 262 and 263.

TABLE OF ELEVATIONS													
LOCATION	A	B	C	D	E	F	G	H	K	L	M	N	P
ABUTMENT "A"	752.74	754.09	754.09	755.04	745.56	745.91	746.25	746.60	746.94	746.97	747.28	747.60	747.92
ABUTMENT "B"	762.64	763.04	763.04	763.62	755.43	755.57	755.71	755.85	755.85	756.00	756.15	756.30	756.45

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ABUTMENT "A"

BRIDGE NO. JEF-7-1392
OVER McLISTER STREET

JEFFERSON COUNTY — STA. 703 + 51.68

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
J.M.	K.E.A.		A.S.J.	E. Roberts Oct. 1, 1959	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

261
307

JEFFERSON COUNTY
JEF-7-13.53

NOTE:
For details not shown see Sheet No's. 261A, 262, 263 & 264.

DETAIL OF TYPE "B" WATERPROOFING
(To be used where walls are offset)

℄ Contraction Joint
Type "B" Waterproofing - 36" Wide

DETAIL OF EXPANSION JOINT

1" Preformed Gray Rubber Exp. Jt. Filler.
Face of Wall
Rustication Groove thru parapet only.
Outline of wingwall below curb.

DETAIL OF CONTRACTION JOINT

12" x 1/2" Premolded sealing strip in 13" x 3/4" recess. Stop strip and recess 6" from top of wall or at construction Jt. between wingwall and curb.
1 3/8" x 5 5/8 Key. Stop key 6" from top of wall.
Face of wall

DETAIL OF RUSTICATION GROOVE

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ABUTMENT "B"
BRIDGE NO. JEF-7-1392
OVER McLISTER STREET

JEFFERSON COUNTY STA. 703+51.68

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.M.	K.E.A.	SIMPSON	A.S.J.	E. Roberts 6-11-59	3-24-60

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

261A / 307

JEFFERSON COUNTY
JEF-7-13.53

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

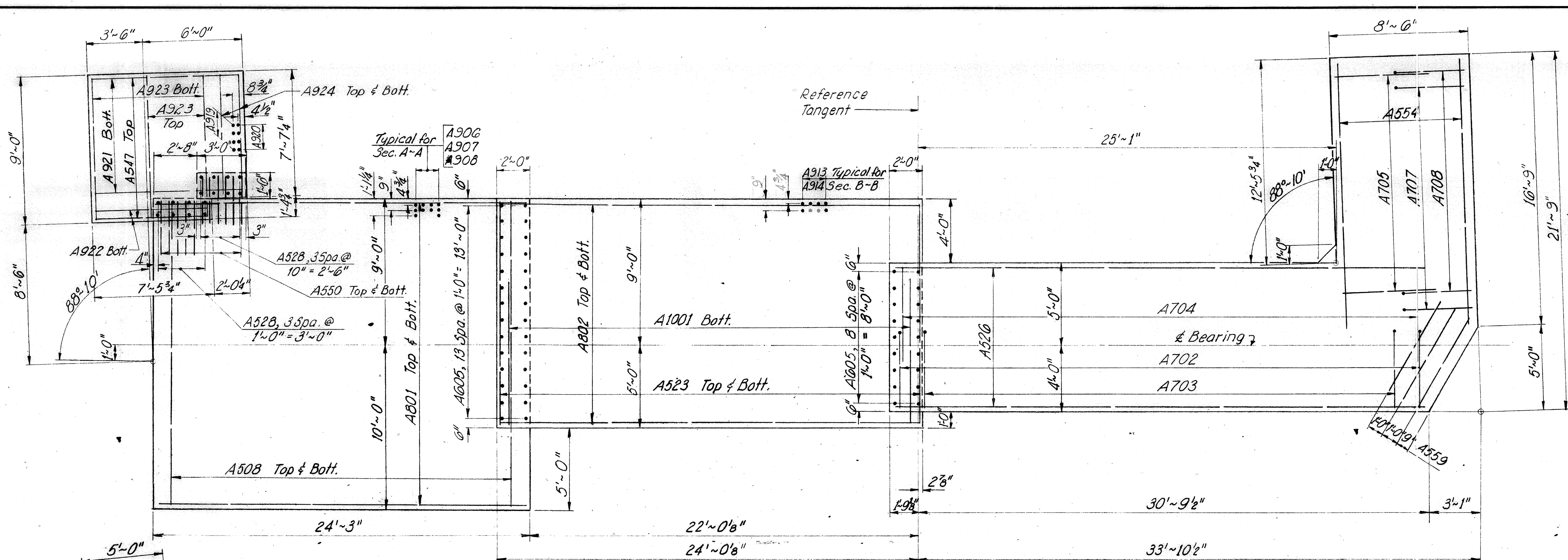
ABUTMENT DETAILS
BRIDGE NO. JEF-7-1392
OVER McLISTER STREET

JEFFERSON COUNTY STA. 703 + 51.68

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
J.M.	K.E.A.		A.S.J.	E. Roberts Oct. 1, 1959	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	262/307
2	OHIO	U-430 (14)		

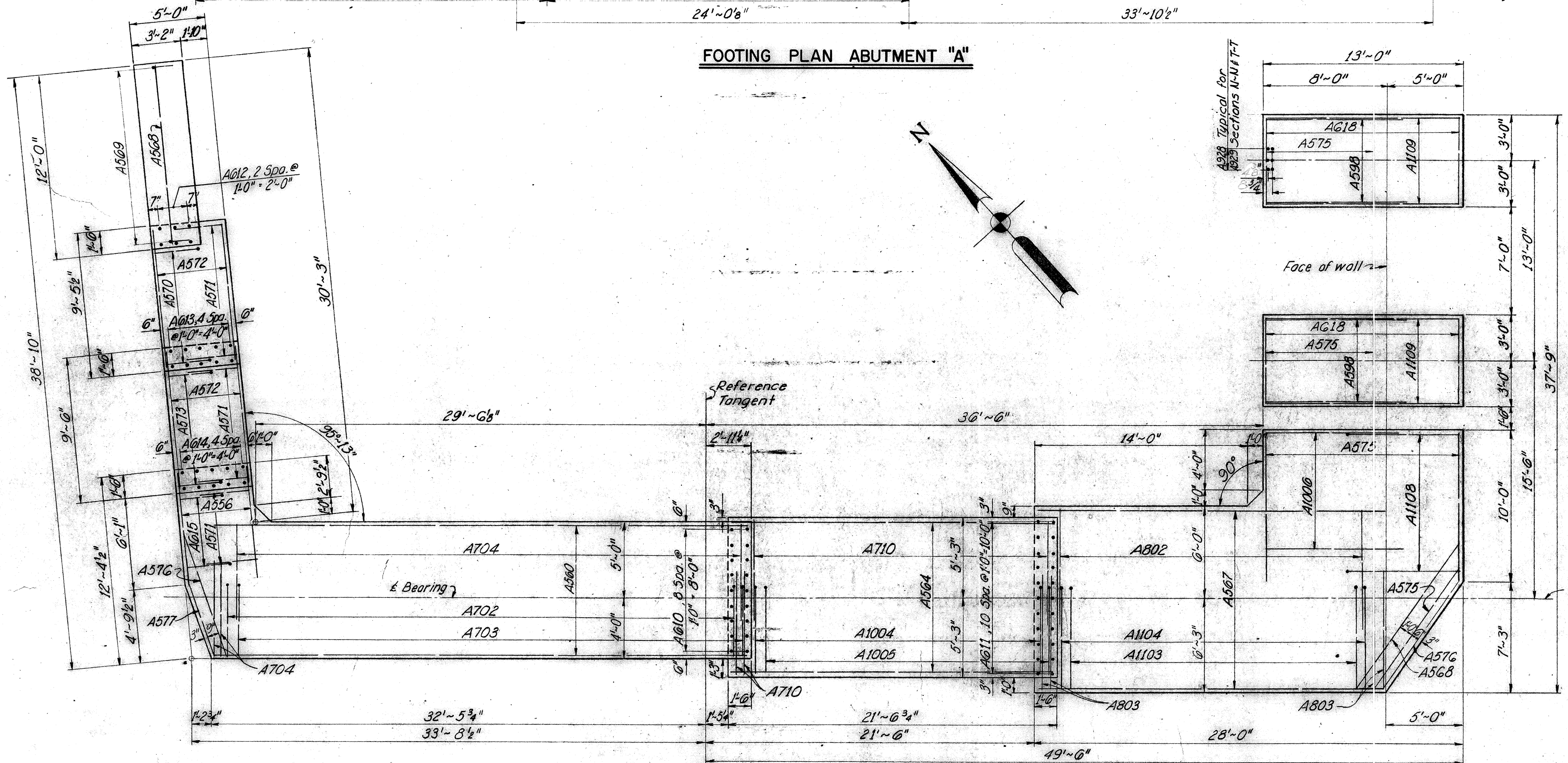
JEFFERSON COUNTY
JEF-7-13.53



FOOTING PLAN ABUTMENT "A"

NOTE:

1. All abutment concrete shall be Class "E".
2. All parapet concrete shall be Class "C".
3. Parapet concrete and reinforcing steel shall be included with Item 3-14, Railing, for payment.
4. Porous Backfill, with thickness as shown, full length of abutments and wings shall extend from top of the footings or elevation shown, to the underside of the approach slab or wing curbs. For details of porous backfill drain at the east wing of abutment "B" see sheet Nº 264. For details of porous backfill drain at abutment "A" see sheet Nº 260.



FOOTING PLAN ABUTMENT "B"

For details not shown see sheets Nº 261, 261A, 263 and 264.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ABUTMENT FOOTINGS
BRIDGE NO. JEF-7-1392
OVER McLISTER STREET

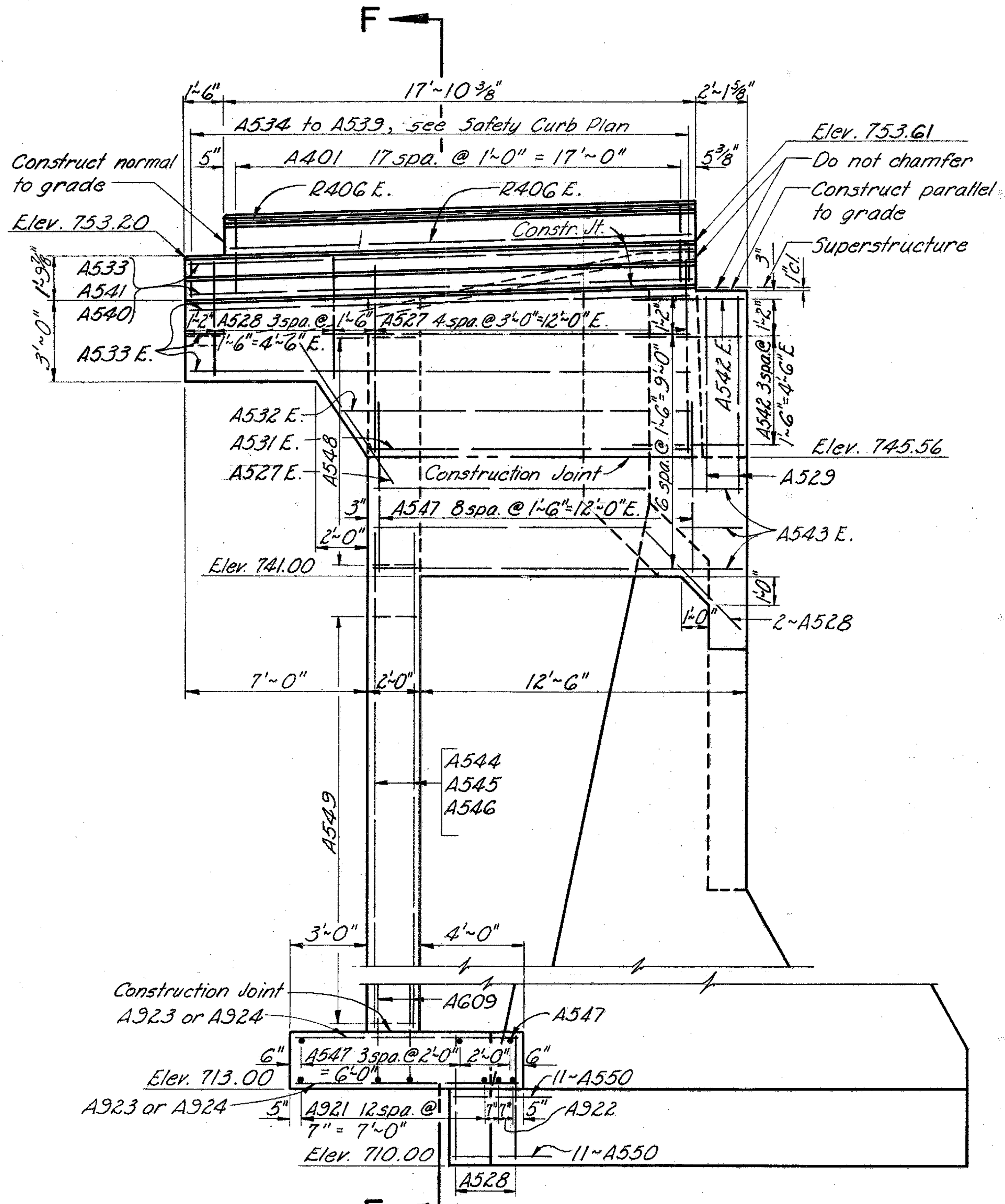
JEFFERSON COUNTY STA. 703 + 51.68

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
J.M.	C.J.K.		A.S.J.	E. Roberts	Oct. 1, 1959	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

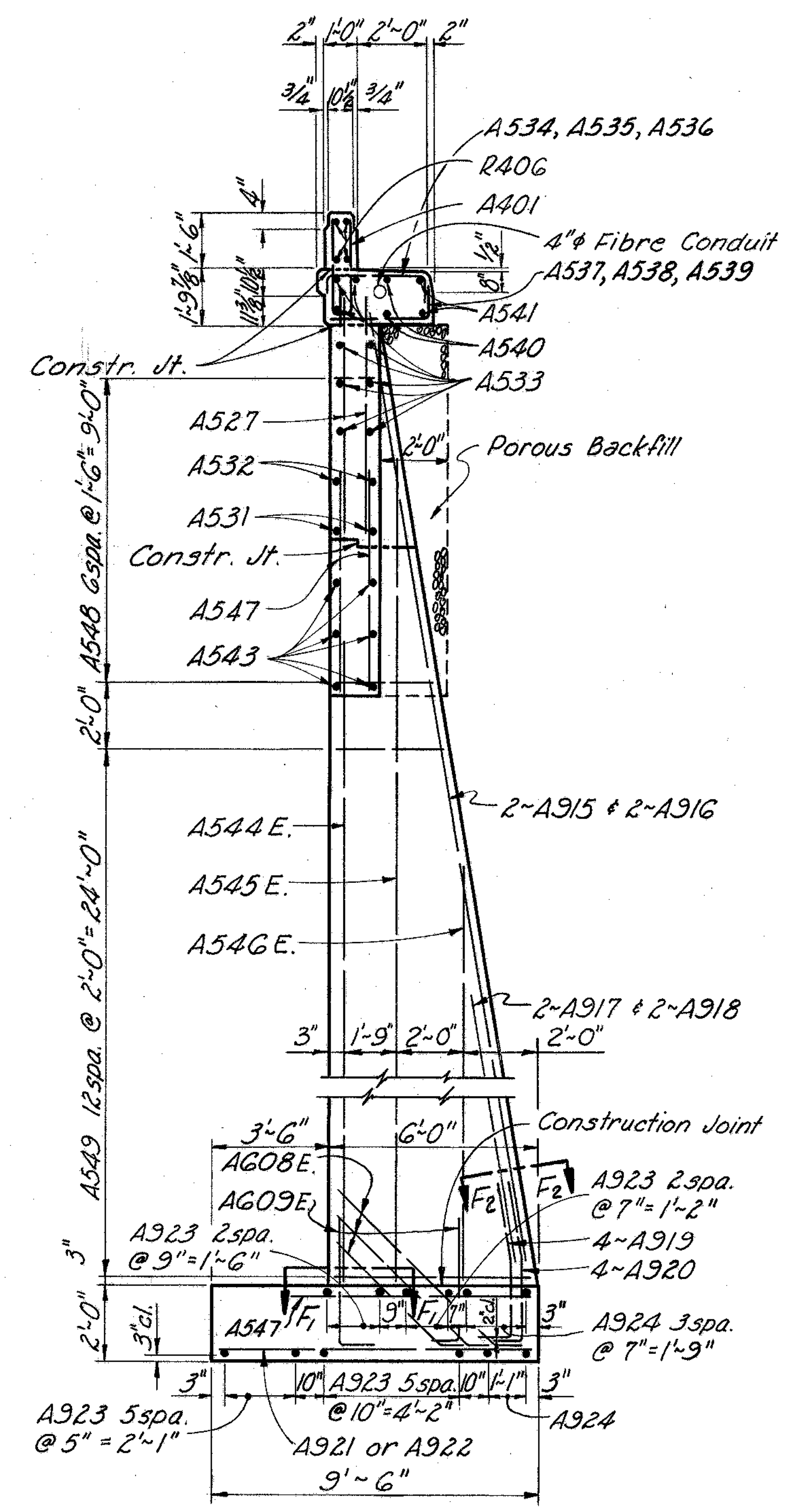
263
307

JEFFERSON COUNTY
JEF-7-13.53

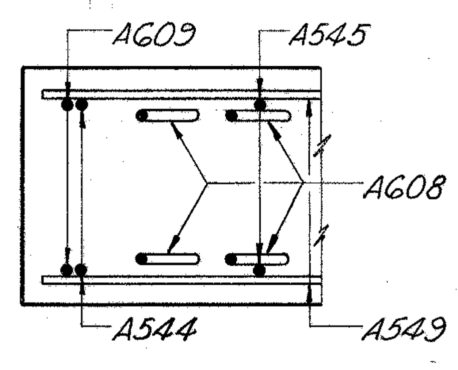


VIEW A-A

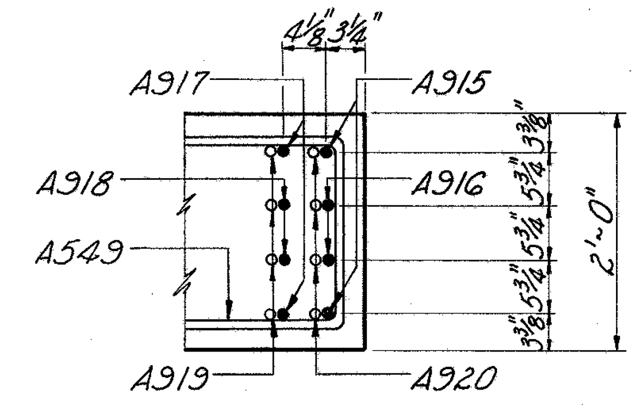
Railing not shown ~ see General Plan & Elevation, Sht. Nº. 259



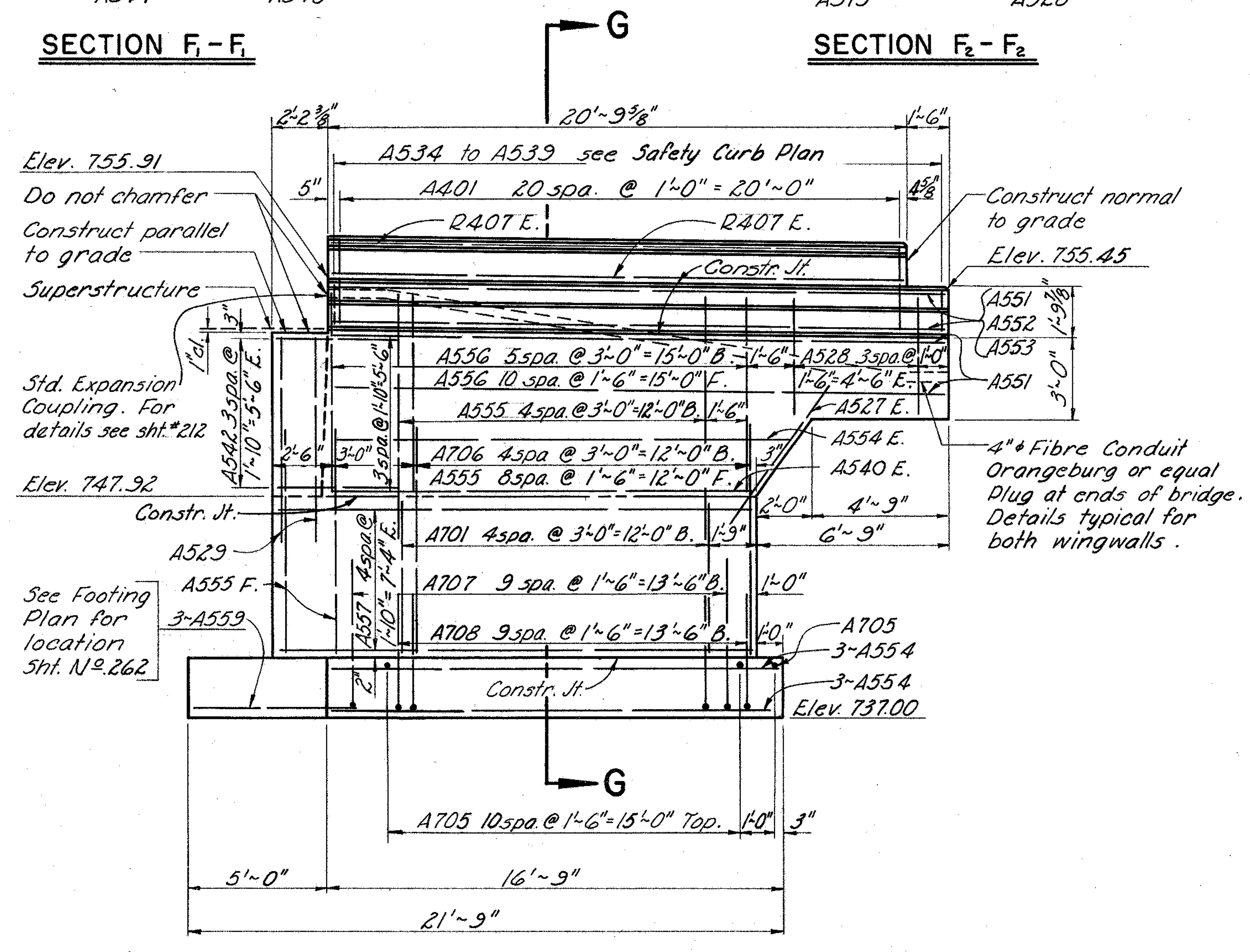
SECTION F-F



SECTION F1 - F1



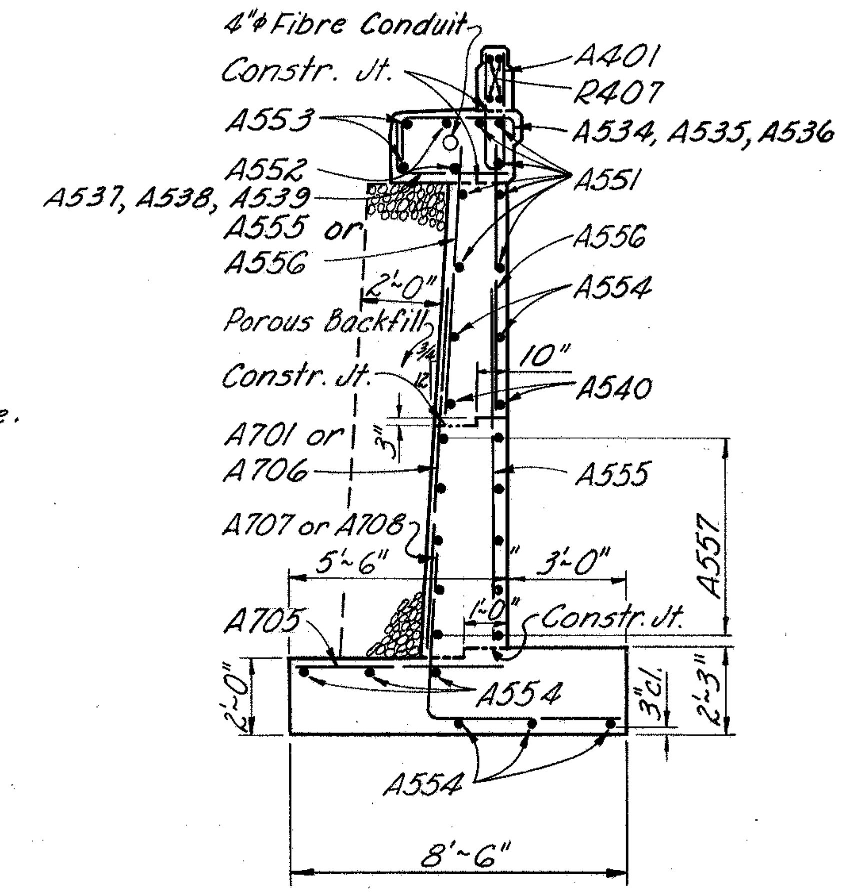
SECTION F2 - F2



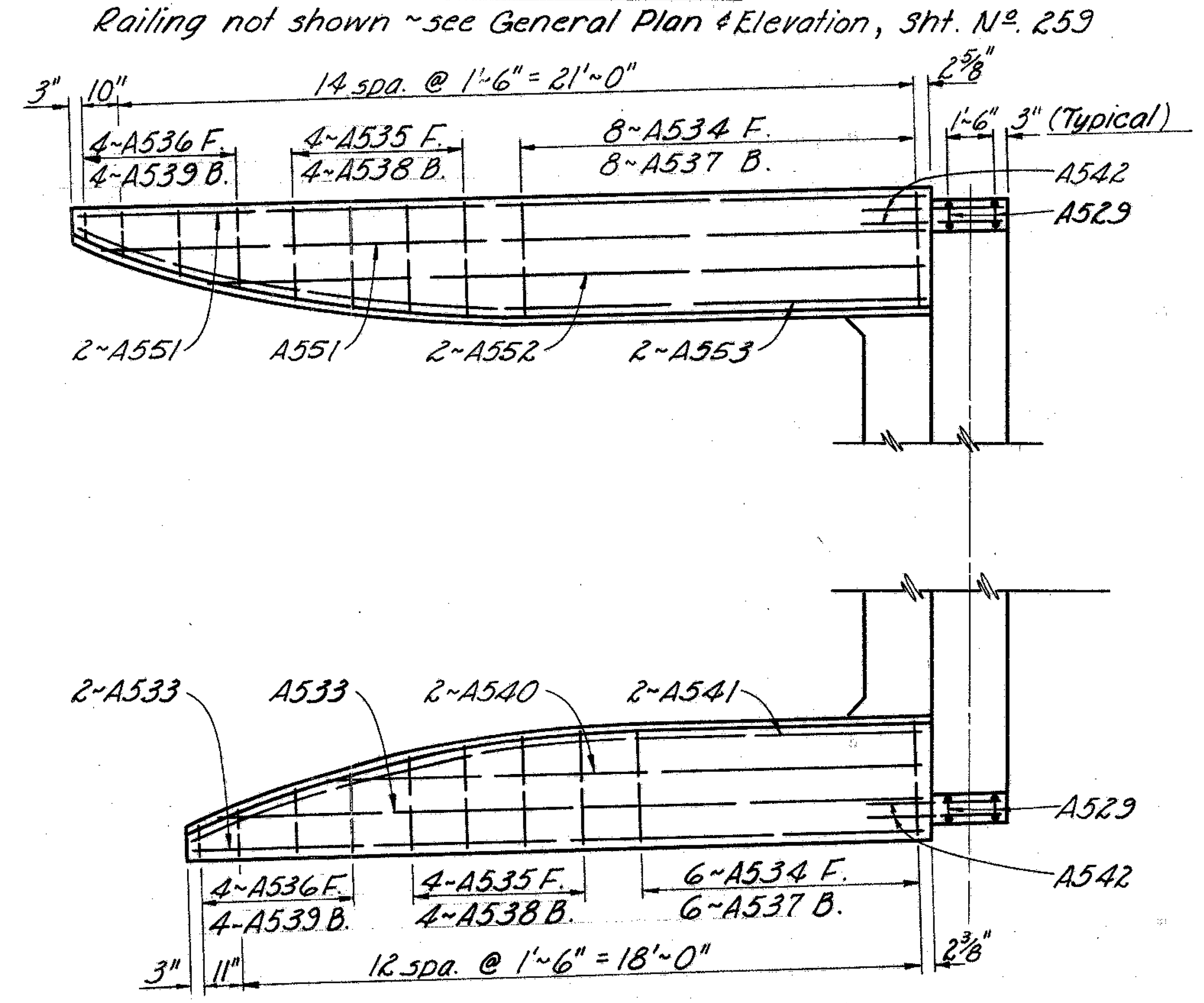
VIEW B-B

Railing not shown ~ see General Plan & Elevation, Sht. Nº. 259

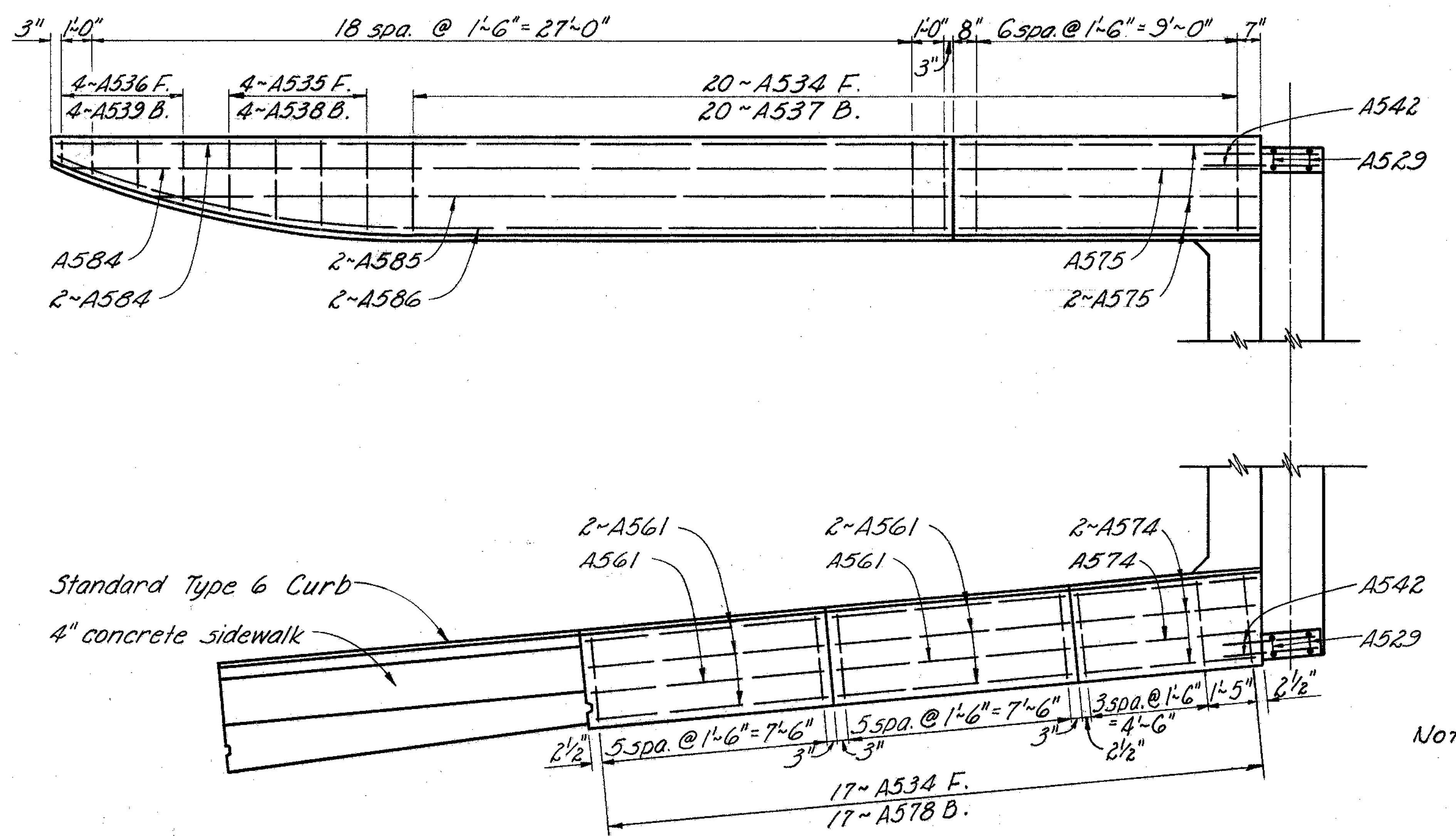
NOTE: For curb and parapet dimensions see Section D-D.



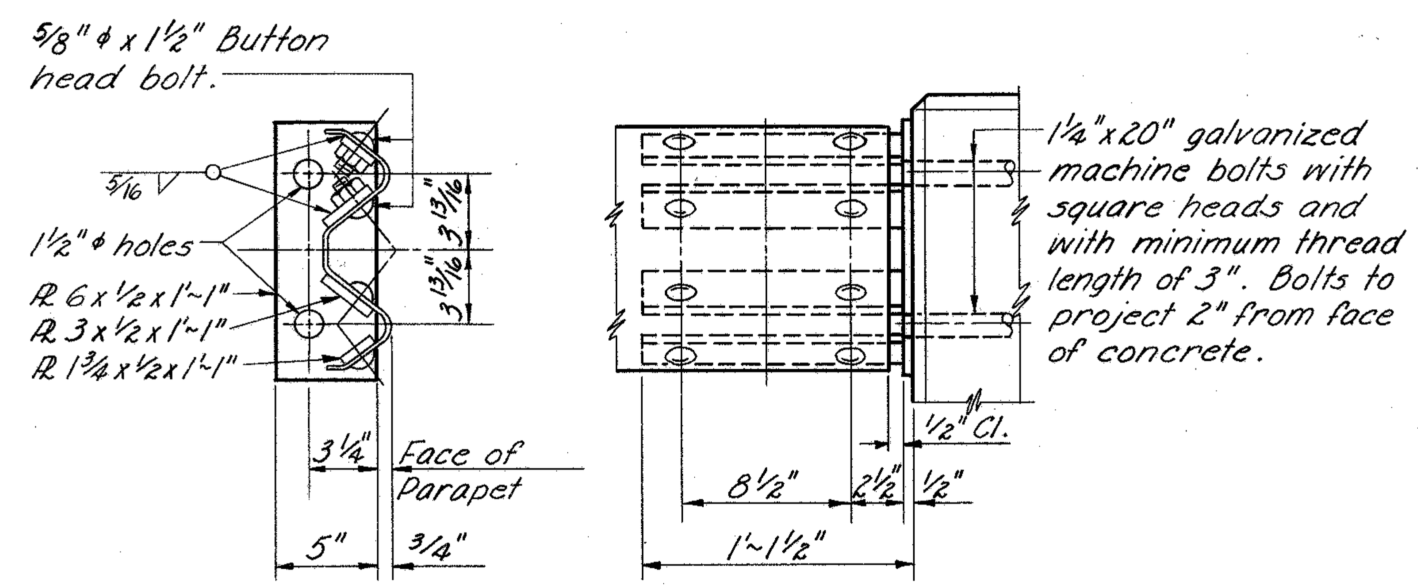
SECTION G-G



SAFETY CURB PLAN — ABUTMENT "A"



SAFETY CURB PLAN ABUTMENT "B"



GUARD RAIL DETAIL

NOTE: Guardrail end connection assembly shall be galvanized after welding.
Guardrail end connection to be included with Item 5-14 Railing for payment.

NOTES: B. ~ indicates back face.
F. ~ indicates front face.
E. ~ indicates each face.
For details not shown see sheets Nº. 260, 261, 262 and 264.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

WINGWALLS-ABUTMENT "A"
BRIDGE NO. JEF-7-1392
OVER McLISTER STREET

JEFFERSON COUNTY STA. 703 + 51.68

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.M.	K.E.A.	K.E.A.	A.S.J.	E. Roberts 6-5-59	


FED. RD. DIVISION 2
STATE OHIO
PROJECT U-430 (14)
TYPE FUNDS
264
307
JEFFERSON COUNTY
JEF-7-13.53
SECTION S-S
VIEW C-C
VIEW D-D
NOTE: Railing not shown - See General Plan & Elevation Sheet No. 259.
Contraction Joint
Standard Expansion Coupling For details see sheet no. 212
4" ⌀ Fibre conduit. Orangeburg or Equal. Plug at end of bridge.
Construct normal to grade
4" ⌀ Fibre Conduit Orangeburg or Equal. Plug at end of bridge.
Limits of Porous Backfill
† Typical for Sections M-M, N-N & P-P
* Typical for Sections J-J, K-K & L-L
LEGEND
B. - indicates back face.
F. - indicates front face.
E. - indicates each face.
NOTE:
1. For details not shown see Sheet No's 261, 262 & 263
2. Dimensions in Section M-M are typical for all other Sections unless otherwise shown or noted.
Bottom of breast wall for Sec. T-T only
Porous Backfill material shall form a continuous 3'-6" x 4'-0" drain extending to the face of 2:1 slope at elev. 744.00. The drain shall be located between the end of cantilevered wing and the first counterfort.
Bottom of breast wall for Sec. N-N only
Porous backfill behind and along each side of counterforts 2'-0" thick.
SECTION N-N (Shown)
SECTION T-T (Similar except as noted)
SECTION M-M
SECTION R-R
SECTION P-P
SECTION K-K
SECTION H-H
SECTION L-L
SECTION J-J
SOD: For dimensions and details not shown, see Retaining wall details, Sheet No. 207
Varies from 0" at the Exp. Jt. to 3/4" at the Retaining Wall.
Varies - See Plan on Sheet No. 261
MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA
WINGWALLS-ABUTMENT "B"
BRIDGE NO. JEF-7-1392
OVER McLISTER STREET
JEFFERSON COUNTY
STA. 703+51.68
DESIGNED J.M.
DRAWN K.E.A.
TRACED Simpson
CHECKED A.S.J.
REVIEWED DATE E. Roberts 6-5-59
REVISED
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27035

FED. RD. DIVISION 2 | STATE OHIO | PROJECT U-430 (14) | TYPE FUNDS
265
307
JEFFERSON COUNTY
JEF-7-13.53
PLAN - PIER 1
PLAN - PIER 2
ELEVATION - PIER 1
ELEVATION - PIER 2
Reference Tangent
Beam Seat Spacing
Spacing of P506 bars
All piles 12 BP53
Typ. for battered piles.
Pier symm. about ℄ except as noted.
Pier cap symm. about ℄ Pier except as noted.
NOTES
Special care shall be taken in placing reinforcing steel in the bridge seat so that it will not interfere with the drilling of anchor bolt holes.
For anchor bolt layout, Pier #2 only, see sheet 267 & Std. Dwg. RB-1-56 dated 2-2-59.
For Electrical Grounds see sheet 286-A.
Top bars in the top steel of cap shall be placed 7'-8½" above the bottom of cap. In sections containing more than one layer of bars, each layer shall be placed with two inches clear below the next layer above it.
Bottom bars in sections containing two layers of bars shall be placed with two inches clear between layers.
All bars shall be placed as shown and equally spaced in the sections shown.
SECTION L-L
SECTION H-H
SECTION G-G
SECTION J-J
SECTION K-K
All bars except ties are P1105, P1109 & P1113.
For Sections G-G, H-H, and J-J, where three numbers are shown in a bracket, the first number refers to Pier #1, 2'nd number to Pier #2, west column and 3'rd number to Pier #2, east column.
HALF PILE & FOOTING PLAN
(TYP. PIER 1)
SECTION M-M
SECTION A-A
SECTION B-B
SECTION C-C
SECTION D-D
SECTION E-E
SECTION F-F
For top layer of reinforcing steel see Section C-C
For top layer see Section C-C
MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA
PIERS
BRIDGE NO. JEF-7-1392
OVER McLISTER ST.
JEFFERSON COUNTY STA. 703 + 51.68
Designed F.A. | Drawn B.B. | Traced | Checked D.M. | Reviewed E. Roberts 6-17-59 | Date | Revised 4-20-60

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

JEFFERSON COUNTY
JEF-7-13.53

NOTE: Dimensions normal to ℄ S.R.7 Relocation unless otherwise shown.

NOTE: Dimensions and reinforcing typical in both medians.

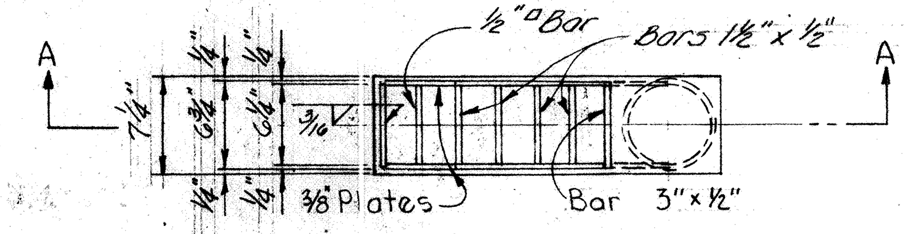
NOTE: 9" slab includes 1" for Monolithic Wearing Surface

▲ See General Plan and Elevation for Curb detail at N-W corner (Detail "E") Sh.# 259

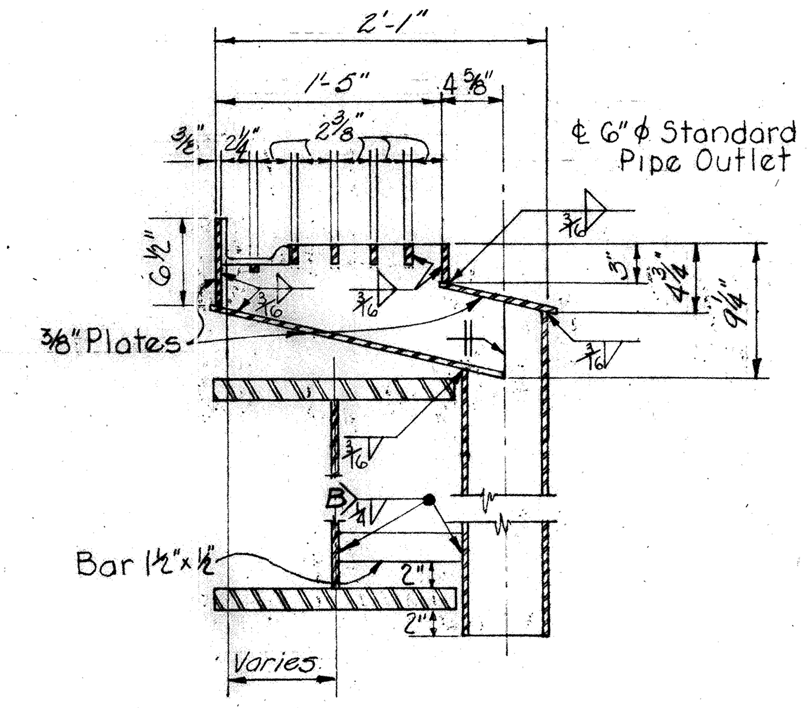
TRANSVERSE SECTION

*This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or contormation required to place it parallel to the finished grade

NOTE: Dimensions and reinforcing typical in both curbs and parapets.



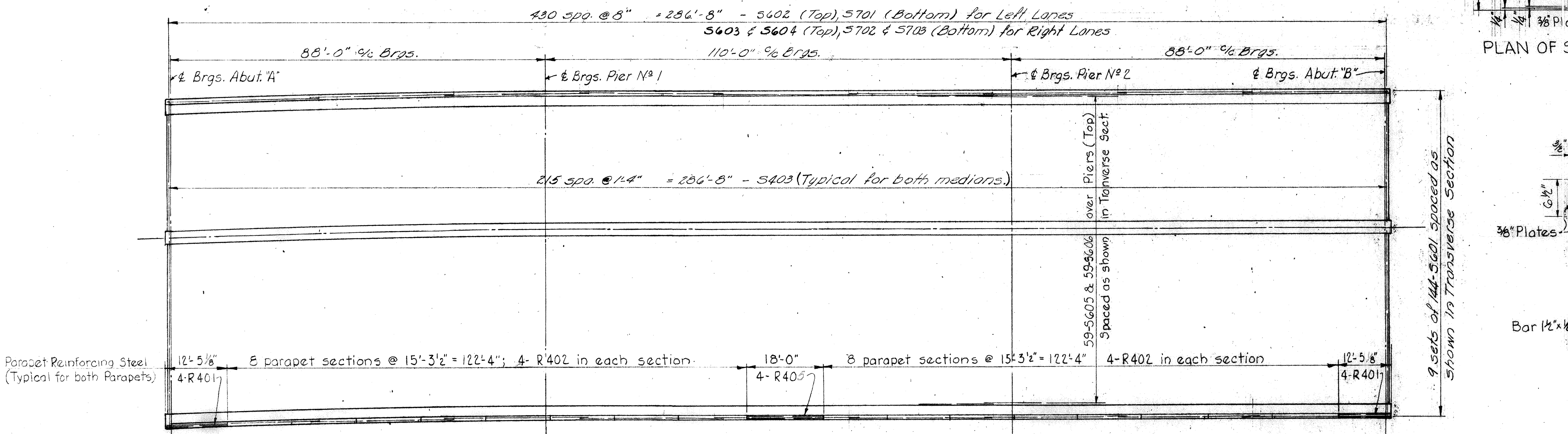
PLAN OF SPECIAL SCUPPER



SECTION A-A

NOTES:

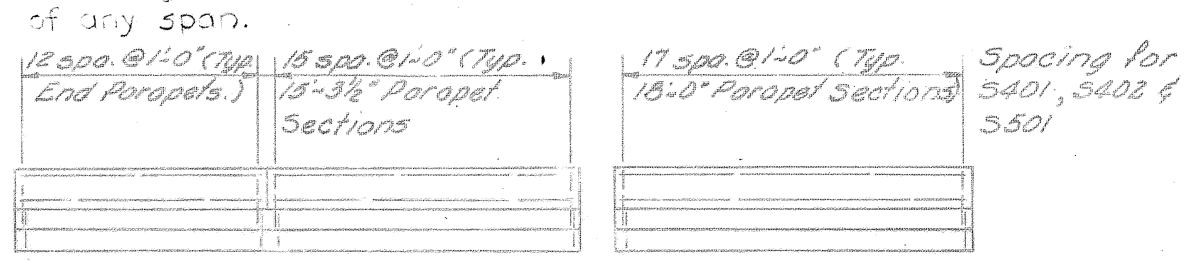
- Refer to Standard Drawing CSB-2-56 (revised 2-2-59), sheets 2 and 3 of 6, for details of End Dam, End Cross Frames, Gutters & Pipe Drains.
- Refer to Standard Drawing AR-1-57 (revised 2-2-59) for details of Aluminum Railing (Type "A") and concrete Parapet.
- Refer to Standard Drawing RB-1-55 (revised 2-2-59) for details of Rockers and Bolsters.
- Refer to Supplemental Specifications S-207 (dated 4-28-55) for Specifications of High Strength Bolts.
- Concrete and reinforcing steel above parapet construction joint included with railing for payment.
- High Strength bolts included with structural steel for payment.
- Concrete shall be Class "C".
- See General Plan & Elevation for location of Scuppers, Pipe Drains and Railing Posts.
- For additional notes and details see sheet no. 267 & 267A.



DECK REINFORCING PLAN

CONCRETE DECK PLACING

In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections, between transverse construction joints which are normal to the centerline of bridge and are located near the centerline of any span.



PARAPET & CURB STEEL DETAIL

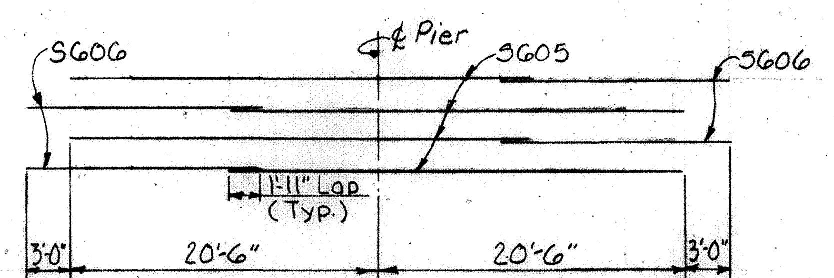
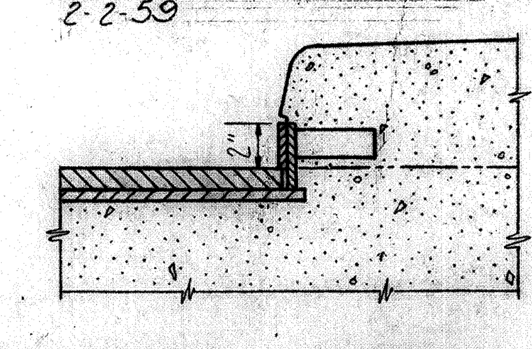


DIAGRAM SHOWING STAGGER OF 5605 & 5606 BARS OVER PIERS

NOTE: For details not shown see Curb Plate Details on Std. Dwg. CSB-2-56, Revised 2-2-59



END FINISH AT MEDIAN

PAINTING

After erection and after the shop coat has been cleaned and, where necessary, repainted in accordance with Sec. 58.04, an additional coat of the same paint as used in the shop shall be applied over the outside face of the outside steel girders and all sides of bottom flange.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

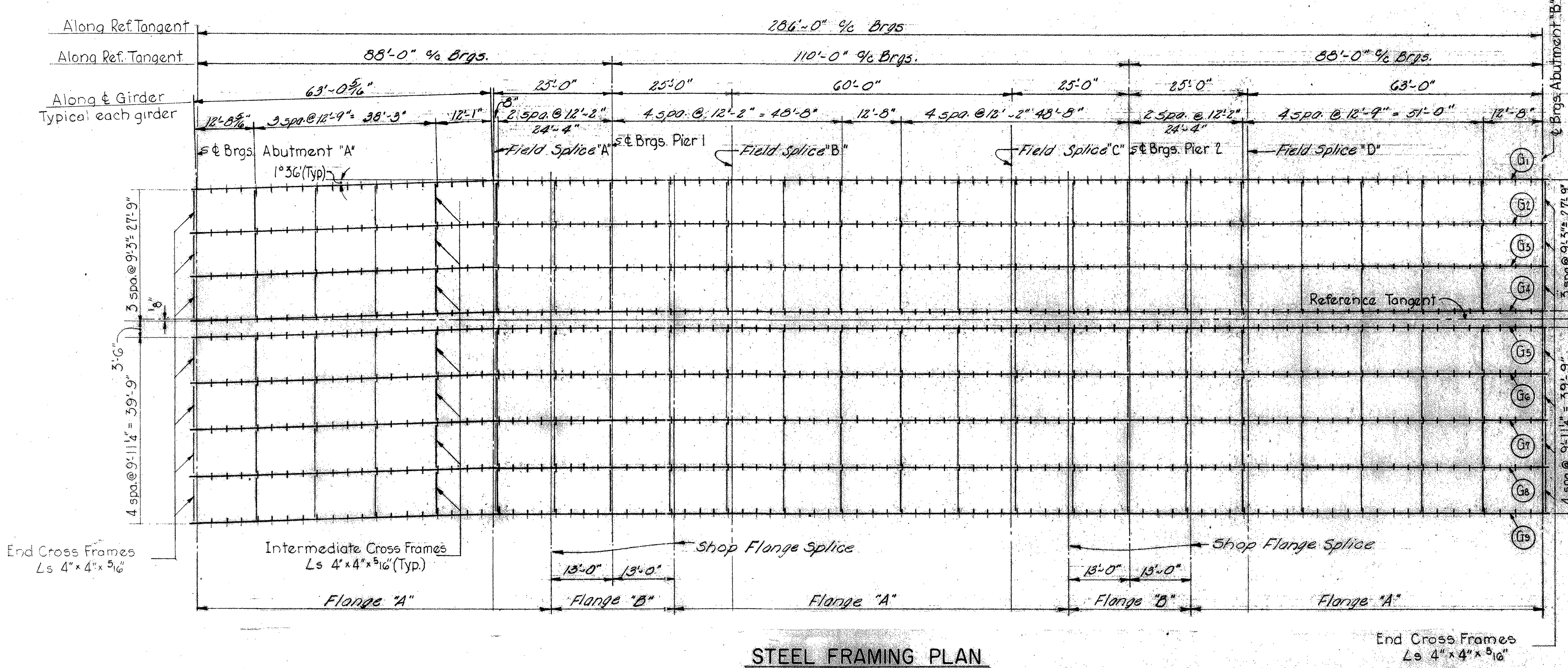
SUPERSTRUCTURE DETAILS
BRIDGE NO. JEF-7-1392
OVER McLISTER ST.

JEFFERSON COUNTY STA. 703+51.68

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
P.M.	BDB		F.A.	E. Roberts 6-5-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

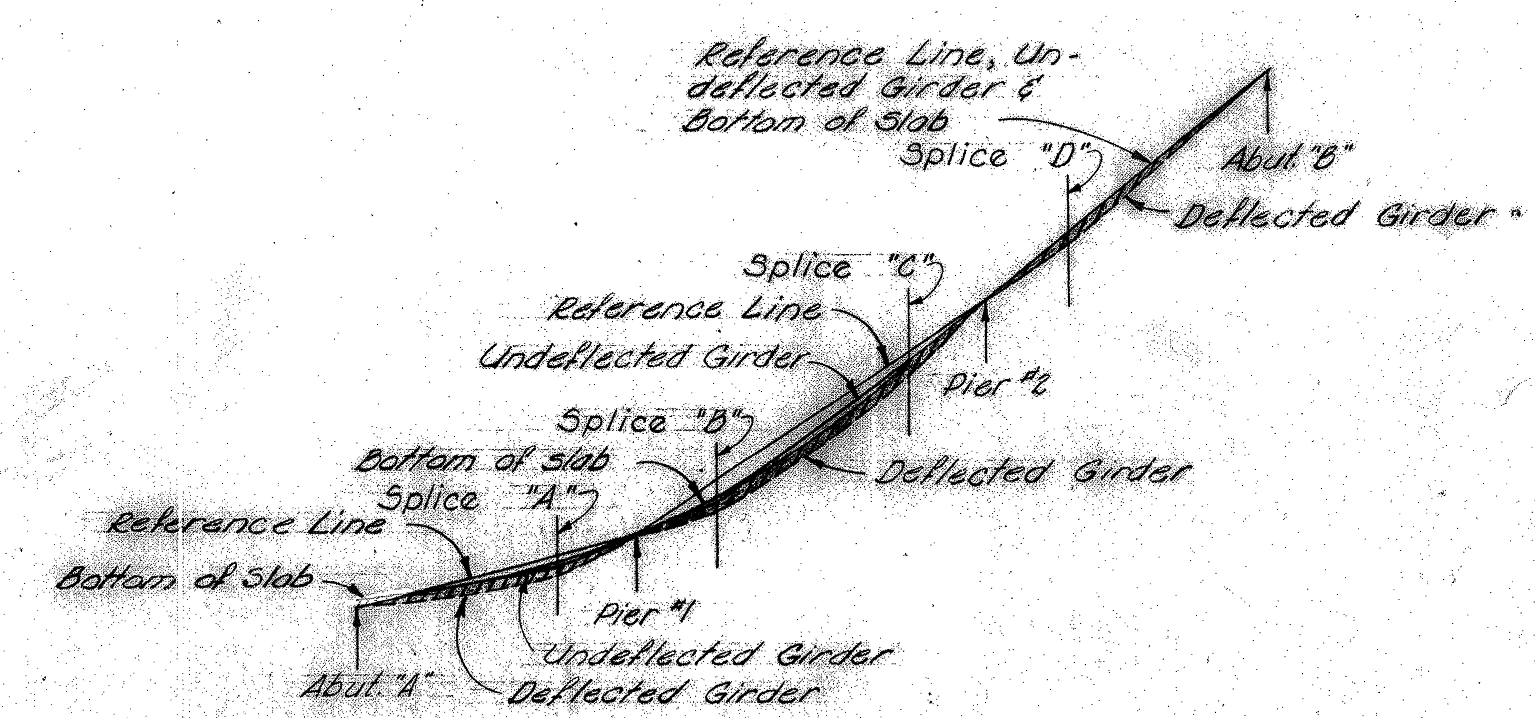
JEFFERSON COUNTY
JEF-7-13.53



STEEL FRAMING PLAN

NOTES:

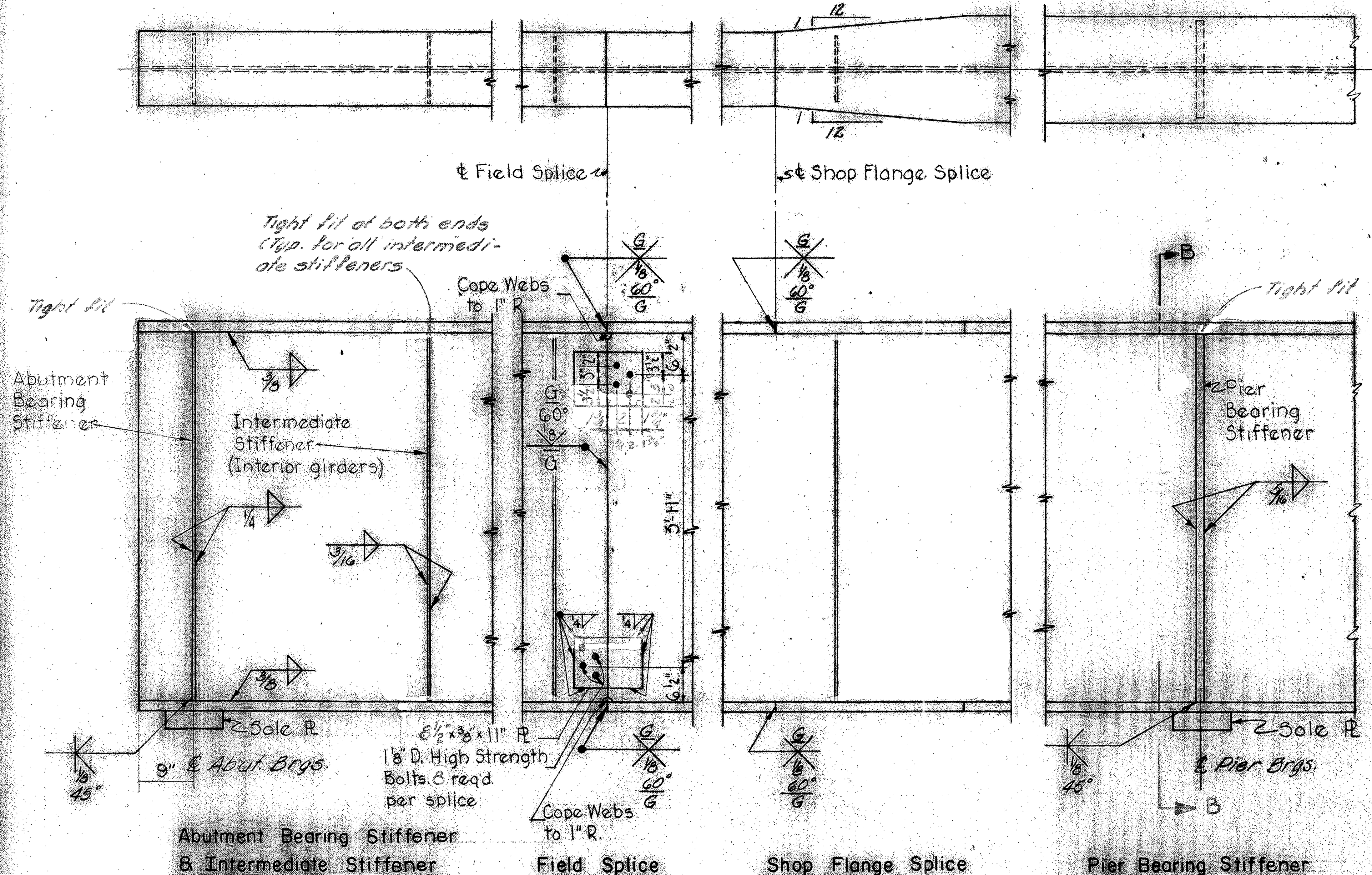
- All dimensions shown are horizontal.
- All intermediate crossframes shall be normal to the reference tangent.
- All stiffeners shall be placed normal to the girder webs, with their long axes normal to the girders, except those supporting the intermediate crossframes, where the sides of the stiffeners shall be normal to the reference tangent.
- Field Splice Welding Procedure:
  Butt weld the girder flanges and web using the following sequence: make two passes on each flange, then two on the web; repeat, using one pass at each location, until welds are completed.
- ~~Bolt holes in girder field splices shall be sub-drilled, girders shop-assembled, and holes reamed to full size.~~
- Field connection plates shall be placed on the interior faces of exterior girders. After welding of splices has been completed, bolts shall be removed and the holes plugwelded and ground flush. Field connection bolts shall be tackwelded if left in place on interior girder splices.
- For additional notes and details see sheet no. 266 & 267A.



CAMBER, DEFLECTION & HAUNCH DIAGRAM

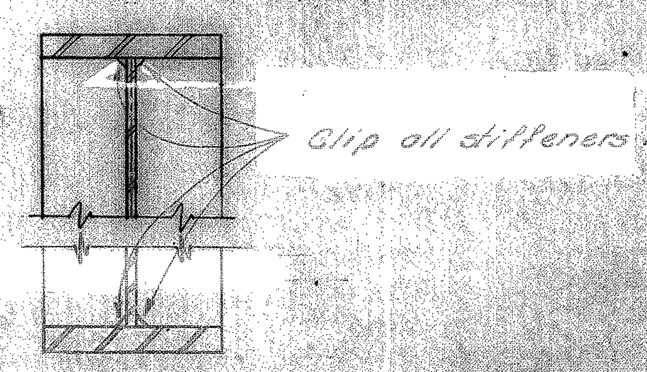
NOTE: *Reference lines are straight lines between supports.*
Cross-hatching indicates required haunch.
Girder sections are straight between splice points.

TABLE OF GIRDER MATERIALS AND BEARINGS		
GIRDER Nº	G1, G2, G3 & G4	G5, G6, G7, G8 & G9
Web	60 × 3/8	60 × 3/8
Flange "A"	12 × 1 5/8	13 × 1 5/8
Flange "B"	17 × 1 5/8	18 × 1 5/8
Abutment Brg. Stiffeners	2 (5 1/2 × 3/4)	2 (6 × 3/4)
Pier Bearing Stiffeners	2 (8 × 1 1/8)	2 (8 1/2 × 1 1/8)
Abutment Rockers	R-150	R-150
Pier Nº 1 Rockers	R-300	R-325
Pier Nº 2 Bolsters	B-300	B-325
Intermediate Stiffeners: Flge. "A"	5 × 5/16	5 × 5/16
Flge. "B"	7 × 7/16	7 × 7/16



Abutment Bearing Stiffener & Intermediate Stiffener — Field Splice — Shop Flange Splice — Pier Bearing Stiffener

GIRDER DETAILS



SECTION B-B

TABLE OF CAMBER, DEFLECTIONS & HAUNCHES★

LOCATION	ABUTMENT 'A'									SPLICE "A"								
GIRDER Nº	G1	G2	G3	G4	G5	G6	G7	G8	G9	G1	G2	G3	G4	G5	G6	G7	G8	G9
Deflection due to weight of steel.	0	0	0	0	0	0	0	0	0	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16
Deflection due to remaining dead load.	0	0	0	0	0	0	0	0	0	-1/4	-1/4	-1/4	-3/16	-3/16	-1/4	-1/4	-1/4	-1/4
Convexity required for vertical curve. +	0	-1/8	-1/4	-1/4	-1/4	-3/8	-1/2	-5/8	-3/4	+1/2	+9/16	+5/8	+3/4	+3/4	+13/16	+7/8	+15/16	+1
Haunch ▲	0	+1/8	+1/4	+1/4	+1/4	+3/8	+1/2	+5/8	+3/4	+11/16	+11/16	+11/16	+1/2	+1/2	+11/16	+11/16	+11/16	+11/16
Sum of deflections, convexity and haunch	0	0	0	0	0	0	0	0	0	+7/8	+15/16	+1	+1	+1	+1 3/16	+1 1/4	+1 5/16	+1 3/8
Required camber. ✳	0	0	0	0	0	0	0	0	0	-7/8	-15/16	-1	-1	-1	-1 3/16	-1 1/4	-1 5/16	-1 3/8
Required haunch. ▲	0	+1/8	+1/4	+1/4	+1/4	+3/8	+1/2	+5/8	+3/4	+5/8	+5/8	+5/8	+1/2	+1/2	+5/8	+5/8	+5/8	+5/8

LOCATION	PIER #1	SPLICE "B"		SPLICE "C"		PIER #2	SPLICE "D"		ABUT "B"
GIRDER Nº	All Girders	G1 G2 G3 G6 G7 G8 G9	G4 G5	G1 G2 G3 G6 G7 G8 G9	G4 G5	All Girders	G1 G2 G3 G6 G7 G8 G9	G4 G5	All Girders
Deflection due to weight of steel.	0	-1/16	-1/16	-1/16	-1/16	0	-1/16	-1/16	0
Deflection due to remaining dead load.	0	-1/4	-3/16	-1/4	-3/16	0	-1/4	-1/4	0
Convexity required for vertical curve. +	0	+3/4	+3/4	+3/8	+3/8	0	0	0	0
Haunch ▲	0	+9/16	+1/2	+5/16	+1/4	0	+5/16	+1/4	0
Sum of deflections, convexity and haunch	0	+1	+1	+3/8	+3/8	0	0	0	0
Required camber. ✳	0	-1	-1	-3/8	-3/8	0	0	0	0
Required haunch. ▲	0	+5/8	+1/2	+3/8	+1/4	0	+1/4	+1/4	0

★ (+) Direction upward, (-) direction downward.
\+ Convexity is measured from bottom of slab to reference line.
▲ Haunch is measured from top of girder to bottom of slab.
✳ Camber is measured from reference line to top of girder.

TABLE OF DIMENSIONS FOR B-325 & R-325												
A	B	C	D	F	G	H	K	L	M	R	T	Y
4	22	3 3/4	3 1/2	7/8	13	19 1/8	14	28	25	12 7/8	3 1/4	1 15/16

NOTE: For location of dimensions and details not shown see Standard Drawing RB-1-55.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUPERSTRUCTURE DETAILS
BRIDGE NO. JEF-7-1392
OVER McLISTER ST.

JEFFERSON COUNTY — STA. 703+51.68

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
P.M.	BDB		F.A.	E. Roberts 6-5-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

267A
307

JEFFERSON COUNTY
JEF-7-13.53

RADIOGRAPHIC EXAMINATION OF WELDS

THIS WORK SHALL CONSIST OF THE PERFORMANCE AND INTERPRETATION OF A RADIOGRAPHIC EXAMINATION OF BUTT WELDS AS REQUIRED BY THESE SPECIFICATIONS. IT SHALL INCLUDE THE PREPARATION AND POSITIONING OF WELDS FOR EXAMINATION, THE RADIOGRAPHING OF WELDS, THE PROCESSING AND EXAMINATION OF RADIOGRAPHS, THE INTERPRETATION OF RADIOGRAPHS FOR COMPLIANCE WITH THESE SPECIFICATIONS, AND THE PERFORMANCE AND INTERPRETATION OF ANY RETAKES OF RADIOGRAPHS REQUIRED FOR WELDS MADE TO REPLACE UNSATISFACTORY WELDS.

APPROVAL OF DIRECTOR

THE CONTRACTOR SHALL FURNISH EVIDENCE, ACCEPTABLE TO THE DIRECTOR, OF THE ADEQUACY OF THE EQUIPMENT TO BE USED AND THE COMPETENCE OF THE PERSONNEL.

THE INTERPRETATION OF RADIOGRAPHS AND THE CORRECTION OF DEFECTIVE WELDS SHALL BE SUBJECT TO THE APPROVAL OF THE DIRECTOR.

SCOPE OF EXAMINATION

BY MEANS OF RADIOGRAPHIC EXAMINATION, THE CONTRACTOR SHALL FURNISH EVIDENCE OF THE ACCEPTABLE QUALITY OF THE BUTT WELDS OF ALL GIRDERS. THE PARTS OF THESE MEMBERS TO BE RADIOGRAPHED ARE AS FOLLOWS:

1. THE COMPLETE BUTT WELDS IN THE FLANGES OF EACH GIRDER EXCEPT THE BOTTOM FLANGE OVER THE BEARING DEVICES.

2. ONE FOOT AT EACH END OF EACH OF THE WEB SPLICE WELDS.

THE SHOP EXAMINATION OF THE BUTT WELDS OF THE FLANGE PLATES AND OF THE WEB PLATES SHALL BE DETERMINED TO BE ACCEPTABLE BEFORE THESE FLANGE AND WEB PLATES ARE ASSEMBLED AND WELDED TO FORM THE GIRDERS. THE EXAMINATION OF FIELD WELDS SHALL BE MADE AS SOON AS PRACTICABLE AFTER WELDING AT EACH FIELD SPLICE IS COMPLETED.

WELD CONDITION

ALL WELDED JOINTS WHICH ARE TO BE RADIOGRAPHED SHALL BE FREE OF PAINT, SCALE, AND GREASE, AND SHALL BE GROUND FREE OF ALL WELD RIPPLES AND SURFACE IRREGULARITIES ON BOTH SIDES. THE DIRECTION OF GRINDING SHALL BE PERPENDICULAR TO THE LENGTH OF THE WELD. THE WELDS SHALL BE GROUND TO SUCH A DEGREE THAT THE RESULTING RADIOGRAPHIC CONTRAST, DUE TO REMAINING IRREGULARITIES, CANNOT MASK OR BE CONFUSED WITH THAT OF ANY OBJECTIONABLE DEFECT AND THAT THE WELD SURFACE WILL MERGE SMOOTHLY INTO THE PLATE SURFACE. UNLESS SPECIFIED TO BE GROUND FLUSH, THE FINISHED SURFACE OF THE REINFORCEMENT MAY HAVE A CROWN EQUAL TO ONE-EIGHTH THE THICKNESS OF THE METAL BUT NOT MORE THAN 1/8 INCH.

RADIOGRAPHIC TECHNIQUE

THE WELD SHALL BE RADIOGRAPHED WITH A TECHNIQUE WHICH WILL DETERMINE QUANTITATIVELY THE SIZE OF DEFECTS WITH THICKNESSES EQUAL TO OR GREATER THAN 2 PER CENT OF THE THICKNESS OF THE BASE METAL. IN THE CASE OF A WELD JOINING PLATES OF UNEQUAL THICKNESS, BOTH PLATES MUST BE RADIOGRAPHED AT 2 PER CENT SENSITIVITY TOGETHER OR SINGLY, WITH THE WELD JUNCTION EVIDENT IN BOTH VIEWS.

TO DETERMINE WHETHER THE RADIOGRAPHIC TECHNIQUE EMPLOYED IS DETECTING DEFECTS OF A THICKNESS EQUAL TO OR GREATER THAN 2 PER CENT OF THE THICKNESS OF THE BASE MATERIAL, THICKNESS GAGES OR PENETRAMETERS OF THE TYPE HEREINAFTER SPECIFIED SHALL BE PLACED ON THE SIDE OF THE WELDED PLATE NEAREST THE SOURCE OF RADIATION AT AN EXTREME EDGE OF THE RADIOGRAPHIC PLATE OR FILM.

THE MATERIAL OF THE PENETRAMETER SHALL BE SUBSTANTIALLY THE SAME AS THAT OF THE WELDED PLATE.

THE THICKNESS OF THE PENETRAMETER SHALL BE NOT MORE THAN 2 PER CENT OF THE THICKNESS OF THE PLATE EXCLUSIVE OF ANY WELD REINFORCEMENT. PENETRAMETERS DESIGNED FOR INCREMENTS OF 1/8" OF PLATE THICKNESS ARE ACCEPTABLE.

IN EACH PENETRAMETER THERE SHALL BE THREE HOLES WITH DIAMETERS EQUAL RESPECTIVELY TO TWO, THREE AND FOUR TIMES THE PENETRAMETER THICKNESS, BUT IN NO CASE SHALL LESS THAN 1/16" DIAMETER BE USED.

EACH PENETRAMETER SHALL CARRY AN IDENTIFYING NUMBER REPRESENTING IN TWO SIGNIFICANT FIGURES THE MINIMUM THICKNESS IN INCHES OF THE PLATE FOR WHICH IT MAY BE USED. PENETRAMETERS MAY BE ESTABLISHED FOR DIFFERENCES IN THICKNESS NOT TO EXCEED 1/8" SO THAT A SET OF PENETRAMETERS VARYING FOR INCREMENTS OF PLATE THICKNESS OF 1/8" WILL BE ADEQUATE TO SERVE PLATES HAVING THICKNESSES BETWEEN THESE 1/8" DIMENSIONS.

THE IMAGES OF IDENTIFYING NUMBERS AND THE HOLES OF EACH PENETRAMETER MUST APPEAR CLEARLY ON THE RADIOGRAPH TO ESTABLISH THE 2 PER CENT SENSITIVITY.

FOR PLATES UP TO AND INCLUDING 2-1/2" IN THICKNESS. EACH PENETRAMETER SHALL BE 1-1/2" LONG AND 1/2" WIDE. FOR PLATES THICKER THAN 2-1/2" EACH PENETRAMETER SHALL BE 2-1/4" LONG AND 1" WIDE.

THE FILM DURING EXPOSURE SHALL BE AS CLOSE TO THE WELD AS PRACTICABLE. IF POSSIBLE, THIS DISTANCE SHALL BE NOT GREATER THAN 1 INCH. IN ANY EVENT, THE

$$\text{RATIO} = \frac{\text{DISTANCE FROM SOURCE OF RADIATION TO WELD SURFACE TOWARD RADIATION}}{\text{DISTANCE FROM WELD SURFACE TOWARD RADIATION TO FILM}}$$

SHALL BE AT LEAST 7 TO 1.

ALL RADIOGRAPHS SHALL BE FREE FROM EXCESSIVE MECHANICAL PROCESSING DEFECTS WHICH WOULD INTERFERE WITH PROPER INTERPRETATION OF THE RADIOGRAPH.

IDENTIFICATION MARKERS, THE IMAGES OF WHICH WILL APPEAR ON THE FILM, SHALL BE PLACED ADJACENT TO THE WELD AND THEIR LOCATIONS SHALL BE ACCURATELY AND PERMANENTLY MARKED ON THE OUTSIDE SURFACE NEAR THE WELD SO THAT A DEFECT APPEARING ON THE RADIOGRAPH MAY BE ACCURATELY LOCATED.

THE SIZE OF FILM TO BE USED SHALL BE 4" WIDE X 15" LONG UNLESS PERMISSION TO USE A DIFFERENT SIZE IS OBTAINED IN WRITING FROM THE DIRECTOR.

STANDARDS OF ACCEPTABILITY

THE ACCEPTABILITY OF THE WELDS EXAMINED BY RADIOGRAPHY SHALL BE JUDGED BY THE FOLLOWING STANDARDS:

(1) CRACKS:

DEFINITION- A DISCONTINUITY RESULTING FROM A VERY NARROW SEPARATION OF METAL.

STANDARD- NO WELD CONTAINING CRACKS REGARDLESS OF LENGTH, SIZE OR LOCATION SHALL BE CONSIDERED ACCEPTABLE.

(2) GAS POROSITY:

DEFINITION- GAS POCKETS OR VOIDS IN METAL.

STANDARD- THE MAXIMUM DIMENSION OF ANY INDIVIDUAL GAS POCKET SHALL NOT EXCEED 1/8 INCH. THE MAXIMUM ACCUMULATION OF GAS POCKETS SHALL NOT EXCEED THAT SHOWN IN THE "POROSITY STANDARDS" OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS.

(3) SLAG INCLUSIONS:

DEFINITION- NON-METALLIC, SOLID MATERIAL ENTRAPPED IN WELD METAL OR BETWEEN WELD METAL AND BASE METAL.

STANDARD- A. ELONGATED SLAG INCLUSIONS: NO ELONGATED SLAG INCLUSION SHALL EXCEED TWO-THIRDS OF THE THICKNESS OF THE THINNER PLATE OF THE JOINT IN LENGTH AND 1/16" IN WIDTH, EXCEPT THAT REGARDLESS OF THE PLATE THICKNESS NO SUCH INCLUSION SHALL BE LONGER THAN 3/4" AND EXCEPT THAT NO SUCH INCLUSION WHICH IS SHORTER THAN 1/4" SHALL BE CAUSE FOR REJECTION.

B. ISOLATED SLAG INCLUSIONS: IN ANY 12 INCH LENGTH OF WELD, THE MAXIMUM WIDTH OF ANY ISOLATED SLAG INCLUSION SHALL NOT EXCEED 1/8 INCH, THE SUMMATION OF LENGTHS OF ISOLATED SLAG INCLUSIONS SHALL NOT EXCEED 1 INCH, AND THERE SHALL BE NO MORE THAN FOUR ISOLATED SLAG INCLUSIONS OF THE MAXIMUM WIDTH OF 1/8 INCH. ANY TWO SUCH INCLUSIONS SHALL BE SEPARATED BY AT LEAST 2 INCHES OF SOUND WELD METAL.

(4) INCOMPLETE FUSION:

DEFINITION- FAILURE OF THE WELD METAL TO FUSE COMPLETELY WITH THE BASE METAL OR PRECEDING BEADS.

STANDARD- NO INDIVIDUAL LACK OF FUSION SHALL EXCEED 1/2 INCH IN LENGTH. IN ANY 12 INCH LENGTH OF WELD, THE SUMMATION OF LENGTHS OF LACK OF FUSION SHALL NOT EXCEED 3/4 INCH AND INDIVIDUAL DEFECTS SHALL BE SEPARATED BY AT LEAST 6 INCHES OF SOUND METAL.

(5) INCOMPLETE PENETRATION:

DEFINITION- ROOT PENETRATION WHICH IS LESS THAN COMPLETE OR FAILURE OF A ROOT PASS AND A BACKING PASS TO FUSE WITH EACH OTHER.

STANDARD- NO INDIVIDUAL LACK OF PENETRATION SHALL EXCEED 1/2 INCH IN LENGTH. IN ANY 12 INCH LENGTH OF WELD, THE SUMMATION OF LENGTHS OF LACK OF PENETRATION SHALL NOT EXCEED 3/4 INCH AND INDIVIDUAL DEFECTS SHALL BE SEPARATED BY AT LEAST 6 INCHES OF SOUND METAL.

REPAIR OF DEFECTIVE WELDS

DEFECTIVE WELDS SHALL BE REPAIRED BY CHIPPING OR MELTING OUT SUCH DEFECTS FROM ONE OR BOTH SIDES OF THE JOINT AS REQUIRED, REMOVING ONLY SUFFICIENT WELD METAL TO CORRECT THE DEFECT. THE JOINT SHALL THEN BE REWELDED AND AGAIN RADIOGRAPHED.

ADDITIONAL RADIOGRAPHS

WHEREVER AN UNACCEPTABLE WELD OCCURS, A RADIOGRAPH SHALL BE MADE OF THE ADJOINING 12-INCH LENGTHS OF WELD TO DETERMINE IF THE FLAWS EXTEND BEYOND THE LIMITS OF THE ORIGINAL RADIOGRAPH. IF UNACCEPTABLE FLAWS OCCUR IN THESE ADJOINING LENGTHS OF WELD, THESE DEFECTIVE WELDS SHALL BE REPAIRED AND THIS ENTIRE PROCEDURE REPEATED FOR THE NEXT ADJOINING 12-INCH LENGTH OF WELD.

CUSTODY OF RADIOGRAPHS

AS SOON AS THE RADIOGRAPHING OF THE WELDMENTS ON THE FULL LENGTH OF EACH FLANGE OR WEB PLATE BETWEEN FIELD SPLICES HAS BEEN COMPLETED, THE CONTRACTOR SHALL SEND TO THE STATE THE PROCESSED CONTACT FILM (THAT FILM CLOSEST TO THE SOURCE OF RADIATION) OF ALL ORIGINAL AND RETAKE RADIOGRAPHS. THESE RADIOGRAPHS SHALL BE ACCOMPANIED BY A CERTIFICATION FROM THE CONTRACTOR THAT THE RADIOGRAPHIC EXAMINATION WAS PERFORMED IN CONFORMANCE WITH THESE SPECIFICATIONS. THE RADIOGRAPHS SHALL BECOME THE PROPERTY OF THE STATE. EACH RADIOGRAPH SHALL BE CLEARLY IDENTIFIED TO SHOW THE LOCATION ON THE STRUCTURE AT WHICH IT WAS TAKEN. UNACCEPTABLE DEFECTS SHALL BE IDENTIFIED IN EACH RADIOGRAPH IN WHICH THEY OCCUR AND THE REPAIR OR REPLACEMENT OF EACH UNACCEPTABLE WELD DEFECT SHALL BE NOTED AND IDENTIFIED.

REPORT OF COST

AFTER THE COMPLETION OF THE RADIOGRAPHIC INSPECTION OF WELDS, THE CONTRACTOR SHALL FURNISH THE STATE A COMPLETE REPORT OF THE COST OF PERFORMING THIS WORK, SEPARATED INTO THE ITEMS MENTIONED IN THE FOLLOWING PARAGRAPH.

BASIS OF PAYMENT

PAYMENT FOR THIS WORK, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR S-7, STRUCTURAL STEEL.

GIRDER ERECTION PROCEDURE

Girder sections from Abutment "A" to Field Splice "A" shall be erected after the erection of girder sections from Field Splice "A" to Abutment "B" has been completed, including the placing of all crossframes.

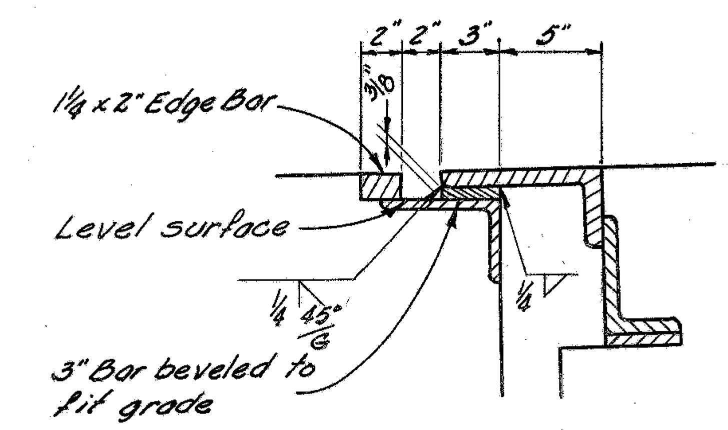
In erecting girder sections from Field Splice "A" to Abutment "B" the girder sections shall be welded at Field Splice "B" & "D" before erection or assembled in position by use of temporary supports.

No welding of crossframes shall be done until all crossframes between the two adjacent girders are in place.

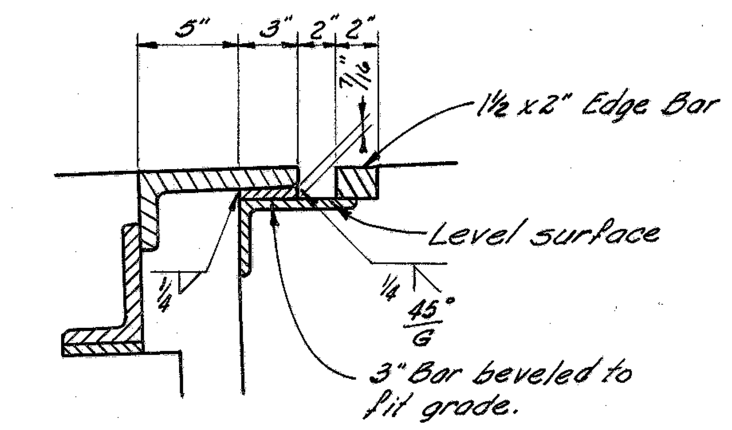
SHOP DRAWINGS for the girders shall include an overall layout with dimensions showing the relative unloaded vertical position of each girder or girder segment with respect to the other in the same girder line and with respect to a full length base or work line taking into account camber and the profile of the highway.

SHOP ASSEMBLY. At least three adjacent girder segments shall be assembled in the shop in their correct unloaded positions as shown on the shop drawing layout required in the above note so that the faced joints for welding the segments together may be checked for proper fit-up and the holes for field splice plates reamed to full size.

For additional notes and details see sheets 266 and 267.



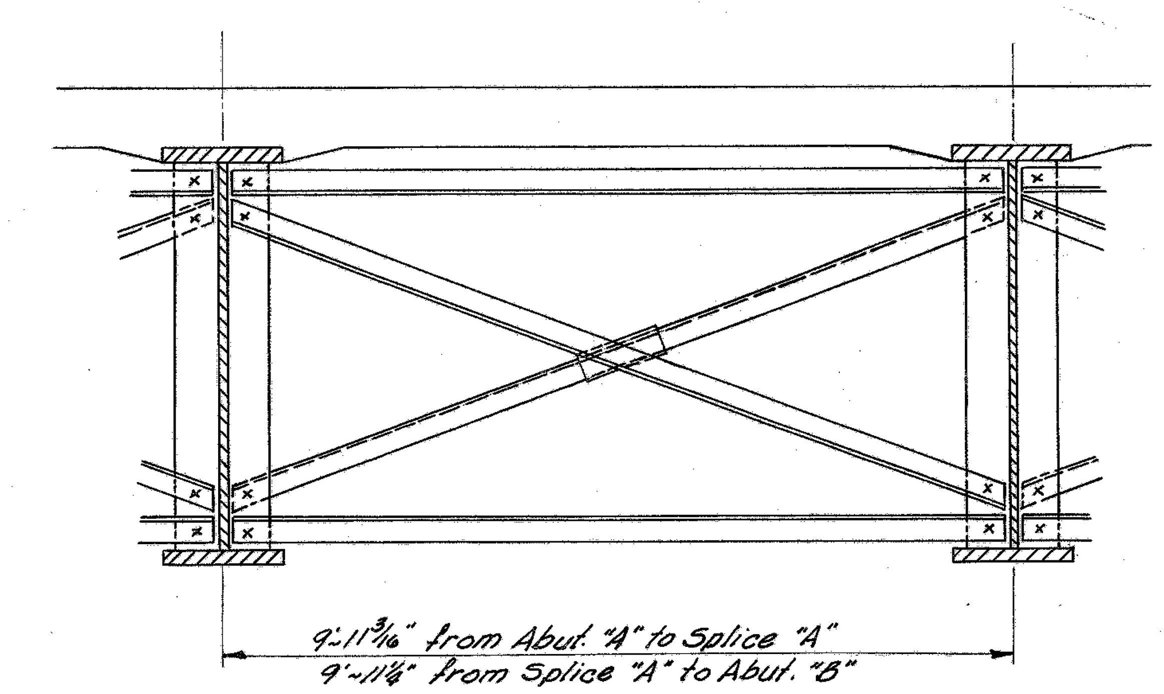
ABUTMENT -A-



ABUTMENT -B-

ROADWAY END DAM DETAILS

For details not shown see std. Dwg. CSB-2-56 (revised 2-2-59) sht. 2 of 6.



DETAIL OF SPECIAL INTERMEDIATE CROSSFRAMES

Intermediate Crossframes as shown above shall be used at Field Splice "A" (Indicated with double lines on the Framing Plan.)

For details not shown see Transverse Section, sheet #266

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUPERSTRUCTURE DETAILS
BRIDGE NO. JEF-7-1392
OVER Mc LISTER ST.

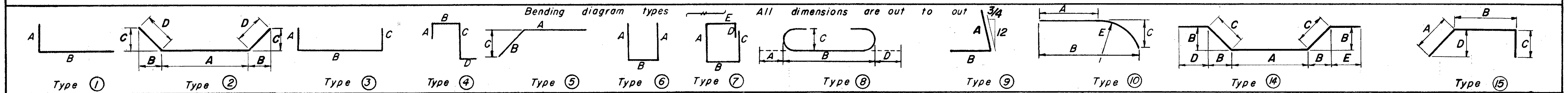
JEFFERSON COUNTY STA. 703 + 51.68

Designed	Drawn	Traced	Checked	Reviewed-Date	Revised
P.M.	B.B.		F.A.	E. Roberts Oct. 2, 1959	

JEFFERSON COUNTY
JEF - 7 - 13.53

REINFORCING STEEL BAR SCHEDULE

Bending diagram types — All dimensions are out to out



ABUTMENTS

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
R406	4	4	17'-6"	st.	Included with railing for payment.					
R407	4	4	20'-5"	st.						
R408	8	4	7'-8'	st.						
R409	4	4	6'-0"	st.						
R410	4	4	9'-11"	st.						
R411	4	4	27'-8"	st.						
A401	100	4	6'-6"	6	3'-1"	0'-6½"				434
A501	17	5	21'-0"	st.						372
A502	10	5	17'-4"	st.						181
A503	3	5	21'-8"	14	6'-6"	1'-2"	1'-8"	6'-6"	5'-7"	68
A504	9	5	18'-1"	14	6'-6"	1'-2"	1'-8"	2'-11"	5'-7"	170
A505	13	5	16'-1"	st.						218
A506	4	5	7'-2"	st.						30
A507	19	5	16'-9"	st.						332
A508	24	5	18'-8"	st.						467
A509	150	5	6'-4"	6	1'-7"	3'-5"				991
A510	34	5	9'-7"	2	6'-6"	1'-1"	1'-2"	1'-7"		340
A511	2sets~15ea.set	5	11'-6" to			3'-11½" to			3'-11½" to	
			17'-0" p	7	1'-8"	6'-3½" p	1'-8"	1'-8"	6'-3½ p	446
A512	2sets~7ea.set	5	20'-0" to			7'-9½" to			7'-9½" to	
			39'-9" w	7	1'-8"	17'-8" w	1'-8"	1'-8"	17'-8" w	436
A513	4sets~4ea.set	5	5'-8" to							
			15'-5" z	st.						176
A514	8	5	32'-0"	st.						267
A515	8	5	20'-0"	st.						167
A516	13	5	10'-0"	st.						136
A517	27	5	22'-9"	st.						641
A518	13	5	23'-6"	14	6'-6"	1'-2"	1'-8"	7'-4"	6'-7"	319
A519	2sets~19ea.set	5	11'-7" to			3'-7" to			3'-7" to	
			23'-7" r	7	1'-8"	9'-7" r	1'-8"	1'-8"	9'-7" r	697
A520	8	5	18'-0"	st.						150
A521	7	5	12'-0"	st.						88
A522	8	5	6'-0"	st.						50
A523	53	5	13'-8"	st.						755
A524	1	5	41'-7"	7	1'-8"	18'-7"	1'-8"	1'-8"	18'-7"	43
A525	12	5	8'-8"	st.						108
A526	26	5	32'-2"	st.						872
A527	25	5	7'-5"	st.						193
A528	50	5	4'-5"	st.						230
A529	8	5	14'-9"	6	7'-0"	0'-6"				123
A530	8	5	4'-11"	6	2'-0"	1'-2"				41
A531	2	5	12'-2"	st.						25
A532	2	5	13'-2"	st.						27
A533	9	5	19'-0"	st.						178
A534	51	5	4'-6"	3	0'-6"	2'-9"	1'-6"			239
A535	3sets~4ea.set	5	4'-5" to			2'-8" to				
			3'-8" k	3	0'-6"	1'-11" k	1'-6"			51
A536	3sets~4ea.set	5	3'-4" to			1'-7" to				
			2'-2" l	3	0'-6"	0'-5½" l	1'-6"			34
A537	34	5	3'-1"	1	0'-6"	2'-9"				109
A538	3sets~4ea.set	5	3'-0" to			2'-8"				
			2'-3" k	1	0'-6"	to 1'-11" k				33
A539	3sets~4ea.set	5	1'-11" to			1'-7" to				
			0'-9" l	1	0'-6"	0'-5½" l				17
A540	4	5	15'-4"	st.						64
A541	2	5	19'-4"	10	7'-4"	19'-0"	2'-4"		29'-9"	40
A542	34	5	3'-9"	st.						133
A543	6	5	14'-2"	st.						89
A544	2	5	28'-0"	st.						58
A545	2	5	31'-6"	st.						66
A546	2	5	15'-0"	st.						31
A547	23	5	6'-0"	st.						144
A548	1set~7perset	5	7'-1" to			1'-3¾ to			1'-3¾" to	
			9'-4" h	7	1'-8"	2'-5¼h	1'-8"	1'-8"	2'-5¼h	60
A549	1set~13perset	6	9'-9" to			2'-7⅝ to			2'-7⅝" to	
			15'-9" k	7	1'-8"	5'-7⅝ k	1'-8"	1'-8"	5'-7⅝" k	173
A550	22	5	4'-0"	st.						92

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A551	7	5	21'-11"	st.						160
A552	2	5	18'-4"	st.						38
A553	2	5	22'-4"	10	10'-4"	22'-0"	2'-4"		29'-9"	47
A554	8	5	16'-6"	st.						138
A555	16	5	10'-6"	st.						175
A556	22	5	7'-5"	st.						170
A557	10	5	17'-6"	st.						183
A558	1set~5perset	5	3'-11" to							
			4'-8" h	st.						22
A559	5	5	7'-0"	st.						37
A560	24	5	35'-1"	st.						878
A561	75	5	7'-8"	st.						600
A562	21	5	19'-9"	st.						433
A563	7	5	11'-4"	st.						83
A564	7	5	21'-3"	st.						155
A565	25	5	21'-2"	st.						552
A566	9	5	15'-8"	st.						147
A567	8	5	22'-8"	st.						189
A568	24	5	11'-8"	st.						292
A569	1set~5perset.	5	7'-3" to			5'-10" to				
			8'-0" h	1	1'-7"	6'-7" h				40
A570	6	5	8'-11"	1	2'-8"	6'-5"				56
A571	17	5	3'-6"	st.						62
A572	10	5	9'-1"	st.						95
A573	6	5	5'-10"	1	2'-8"	3'-4"				37
A574	28	5	5'-8"	st.						165
A575	31	5	9'-10"	st.						318
A576	2	5	8'-6"	st.						18
A577	1	5	5'-3"	st.						5
A578	17	5	4'-9"	6	1'-5"	2'-2"				84
A579	8	5	18'-0"	st.						150
A580	8	5	9'-6"	st.						79
A581	4	5	6'-0"	st.						25
A582	2	5	20'-0"	st.						42
A583	8	5	18'-2"	st.						152
A584	5	5	29'-2"	st.						152
A585	2	5	26'-0"	st.						54
A586	2	5	29'-6"	10	17'-6"	29'-2"	2'-4"		29'-9"	62
A587	4	5	18'-11"	14	6'-6"	1'-2"	1'-8"	6'-5"	2'-11"	79
A588	5	5	5'-2"	st.						27
A589	5	5	16'-5"	st.						86
A590	14	5	13'-8"	st.						200
A591	3	5	14'-3"	st.						45
A592	2sets~3ea.set.	5	5'-6" to							
			6'-10" t	st.						39
A593	2sets~12ea.set.	5	7'-0" to			1'-3" to			1'-3" to	
			19'-7" s	7	1'-8"	7'-6⅝" s	1'-8"	1'-8"	7'-6⅝" s	333
A594	4	5	24'-0"	st.						100
A595	4	5	20'-0"	st.						83
A596	4	5	13'-0"	st.						54
A601	148	6	20'-2"	7	8'-6"	1'-5"	7'-2"	3'-0"	0'-9"	4483
A602	105	6	5'-5"	5	4'-5"	1'-0"	0'-8½"			854
A603	4sets~8ea.set	6	6'-6" to		5'-6" to					
			17'-0" v	5	16'-0" v	1'-0"	0'-8½"			565
A604	16	6	5'-5"	1	1'-0"	4'-7"				130
A605	46	6	15'-3"	st.						1054
A606	4sets~4ea.set	6	5'-6" to		4'-6" to					
			11'-0" x	5	10'-0" x	1'-0"	0'-8½"			198
A607	20	6	4'-10"	1	1'-0"	4'-0"				145
A608	2sets~3ea.set.	6	5'-6" to		4'-6" to					
			7'-6" u	5	6'-6" u	1'-0"	0'-8½"			59
A609	4	6	4'-7"	1	1'-0"	3'-9"				28
A610	18	6	4'-7"	st.						124
A611	22	6	5'-7"	st.						184
A612	6	6	3'-10"	st.						35
A613	10	6	5'-1"	st.						76
A614	10	6	10'-1"	st.						151

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A615	4	6	6'-3"	1	2'-8"	3'-9"				38
A616	4	6	10'-4"	st.						62
A617	2	6	14'-3"	st.						43
A618	14	6	5'-8"	st.						119
A619	4sets~4ea.set	6	6'-0" to		5'-0" to					
			11'-3" y	5	10'-3" y	1'-0"	0'-8½"			207
A701	26	7	7'-9"	st.						412
A702	45	7	12'-3"	1	4'-8"	7'-9"				1127
A703	44	7	8'-6"	1	4'-8"	4'-0"				764
A704	47	7	6'-3"	st.						600
A705	12	7	5'-10"	st.						143
A706	5	7	11'-0"	st.						112
A707	10	7	12'-3"	9	5'-2"	7'-3"				250
A708	10	7	9'-0"	9	5'-2"	4'-0"				184
A709	23	7	8'-2"	st.						384
A710	29	7	6'-7"	st.						390
A801	124	8	23'-11"	st.						7918
A802	39	8	7'-8"	st.						798
A901	4	9	34'-3"	st.						466
A902	4	9	33'-0"	st.						449
A903	4	9	28'-0"	st.						381
A904	4	9	24'-6"	st.						333
A905	4	9	21'-6"	st.						292
A906	8	9	6'-3"	15	2'-10"	2'-8"	1'-0"	0'-6¾	2'-9⅜	170
A907	8	9	6'-0"	15	2'-10"	2'-5"	1'-0"	0'-6¾	2'-9⅜	163
A908	4	9	5'-9"	15	2'-10"	2'-2"	1'-0"	0'-6¾	2'-9⅜	78
A909	4	9	23'-0"	st.						313
A910	4	9	20'-4"	st.						277
A911	4	9	14'-8"	st.						198
A912	4	9	10'-2"	st.						138
A913	8	9	5'-6"	15	2'-10"	1'-11"	1'-0"	0'-10½	2'-8⅝	150
A914	8	9	5'-3"	15	2'-10"	1'-8"	1'-0"	0'-10½	2'-8⅝	143
A915	2	9	38'-0"	st.						258
A916	2	9	28'-6"	st.						194
A917	2	9	20'-6"	st.						139
A918	2	9	11'-1"	st.						75
A919	4	9	5'-5"	15	2'-10"	1'-7"	1'-3"	0'-4⅛	2'-9¾	74
A920	4	9	5'-2"	15	2'-10"	1'-4"	1'-3"	0'-4⅛	2'-9¾	70
A921	13	9	9'-2"	st.						405
A922	2	9	7'-1"	st.						48
A923	18	9	8'-8"	st.						530
A924	6	9	7'-3"	st.						148
A925	4	9	25'-6"	st.						347
A926	4	9	16'-0"	st.						218
A927	4	9	10'-2"	st.						138
A928	6	9	5'-6"	15	2'-10"	1'-11"	1'-0"	0'-9¼	2'-8¾	112
A929	6	9	5'-3"	15	2'-10"	1'-8"	1'-0"	0'-9¼	2'-8¾	107
A1001	26	10	13'-8"	st.						1529
A1002	7	10	11'-8"	st.						351
A1003	6	10	10'-8"	st.						275
A1004	14	10	14'-4"	1	5'-11"	9'-0"				863
A1005	13	10	10'-10"	1	5'-11"	5'-3"				606
A1006	11	10	8'-5"	st.						398
A1101	9	11	15'-11"	st.						761
A1102	9	11	13'-6"	st.						646
A1103	17	11	17'-7"	1	6'-11"	11'-0"				1588
A1104	18	11	11'-11"	1	6'-11"	5'-4"				1140
A1105	4	11	19'-9"	st.						420
A1106	3	11	13'-4"	st.						213
A1107	6	11	8'-9"	st.						279
A1108	13	11	12'-8"	1	7'-8"	5'-4"				875
A1109	18	11	12'-8"	st.						1211
										51,351

h Varies by 0'-2¼"
k Varies by 0'-3"
l Varies by 0'-4½"
p Varies by 0'-2⅜"
r Varies by 0'-4"
s Varies by 0'-6⅞"
t Varies by 0'-8"
u Varies by 1'-0"
v Varies by 1'-6"
w Varies by 1'-7½"
x Varies by 1'-10"
y Varies by 1'-9"
z Varies by 3'-3"

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

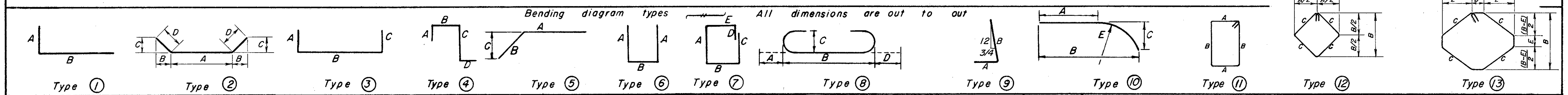
REINFORCING STEEL LIST
BRIDGE NO. JEF-7-1392
OVER McLISTER STREET

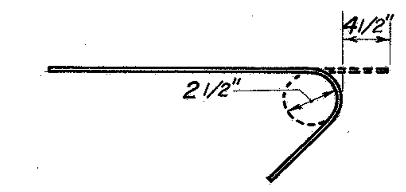
JEFFERSON COUNTY — STA. 703 + 51.68

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
J.M.	B.B.		A.S.J.	E. Roberts 10-3-59	

REINFORCING STEEL BAR SCHEDULE

Bending diagram types — All dimensions are out to out





Standard Stirrup Bend For Type (11), (12) & (13) Bars

PIERS

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P401	4 sets-12 ea. set	4	16'-8" to	11	4'-6 3/4" to	3'-6 3/4" to				578
			19'-5" (k)		5'-0 1/4" (c)	4'-5 3/4" (d)				
P402	8 sets-12 ea. set	4	9'-2 1/2" to	11	10" to	3'-6 3/4" to				657
			11'-3 1/4" (h)		11 3/8" (a)	4'-5 3/4" (d)				
P403	8 sets-12 ea. set	4	10'-9 1/2" to	11	4'-6 3/4" to	7 1/2" to				729
			11'-11 1/4" (e)		5'-0 1/4" (c)	8 7/8" (a)				
P404	4 sets-12 ea. set	4	11'-9 1/2" to	11	4'-6 3/4" to	1'-1 1/2" to				400
			13'-2" (f)		5'-0 1/4" (c)	1'-4 1/4" (b)				
P405	4 sets-12 ea. set	4	12'-8" to	12	4'-6 3/4" to	3'-6 3/4" to	3'-0 3/4" to			436
			14'-6" (g)		5'-0 1/4" (c)	4'-5 3/4" (d)	3'-6 1/4" (c)			
P406	4 sets-13 ea. set	4	19'-6" to	11	5'-0 1/2" to	4'-6" to				729
			22'-6" (k)		5'-6 1/2" (c)	5'-6" (d)				
P407	8 sets-13 ea. set	4	10'-6" to	11	6 1/2"	4'-6" to				799
			12'-6" (g)			5'-6" (d)				
P408	4 sets-13 ea. set	4	12'-11 1/2" to	11	1'-9 1/4" to	4'-6" to				489
			15'-2 1/2" (h)		1'-10 3/4" (a)	5'-6" (d)				
P409	8 sets-13 ea. set	4	11'-3" to	11	5'-0 1/2" to	4 1/2" to				825
			12'-6" (e)		5'-6 1/2" (c)	6" (a)				
P410	8 sets-13 ea. set	4	12'-0" to	11	5'-0 1/2" to	9" to				877
			13'-3" (e)		5'-6 1/2" (c)	10 1/2" (a)				
P411	4 sets-13 ea. set	4	14'-7" to	12	5'-0 1/2" to	4'-6" to	3'-6 1/2" to			541
			16'-7" (g)		5'-6 1/2" (c)	5'-6" (d)	4'-0 1/2" (c)			
P412	4 sets-13 ea. set	4	22'-6 1/2" to	11	5'-6 1/2" to	5'-6 1/4" to				835
			25'-6 1/2" (k)		6'-0 1/2" (c)	6'-6 1/4" (d)				
P413	16 sets-13 ea. set	4	12'-7 1/2" to	11	7"	5'-6 1/4" to				1,893
			14'-7 1/2" (g)			6'-6 1/4" (d)				
P414	16 sets-13 ea. set	4	12'-5" to	11	5'-6 1/2" to	5 1/2" to				1,812
			13'-8" (e)		6'-0 1/2" (c)	7" (a)				
P415	4 sets-13 ea. set	4	14'-10 1/2" to	11	5'-6 1/2" to	1'-8 1/4" to				543
			16'-4 1/2" (f)		6'-0 1/2" (c)	1'-11 1/4" (b)				
P416	4 sets-13 ea. set	4	16'-9" to	12	5'-6 1/2" to	5'-6 1/4" to	4'-1" to			617
			18'-9" (g)		6'-0 1/2" (c)	6'-6 1/4" (d)	4'-7" (c)			
P417	2 sets-9 ea. set	4	25'-8" to	11	6'-0 3/4" to	6'-6 3/4" to				321
			27'-8" (k)		6'-4 3/4" (c)	7'-2 3/4" (d)				
P418	8 sets-9 ea. set	4	14'-9 1/2" to	11	7 1/2"	6'-6 3/4" to				743
			16'-1 1/2" (g)			7'-2 3/4" (d)				
P419	8 sets-9 ea. set	4	13'-7 1/4" to	11	6'-0 3/4" to	6 3/8" to				676
			14'-5 1/4" (e)		6'-4 3/4" (c)	7 3/8" (a)				
P420	2 sets-9 ea. set	4	16'-6" to	11	6'-0 3/4" to	1'-11 3/4" to				204
			17'-6" (f)		6'-4 3/4" (c)	2'-1 3/4" (b)				
P421	2 sets-9 ea. set	4	18'-11" to	12	6'-0 3/4" to	6'-6 3/4" to	4'-7 1/2" to			235
			20'-3" (g)		6'-4 3/4" (c)	7'-2 3/4" (d)	4'-11 1/2" (c)			
P422	2 sets-9 ea. set	4	20'-0" to	13	6'-0 3/4" to	6'-6 3/4" to	3'-9" to	1'-1 1/4" to	1'-0 3/4" to	251
			21'-8" (j)		6'-4 3/4" (c)	7'-2 3/4" (d)	4'-1" (c)	1'-2 1/4" (a)	1'-1 3/4" (a)	
P423	12	4	25'-8" to	11	6'-0 3/4" to	6'-6 3/4" to				217
			28'-5" (k)		6'-6 1/4" (c)	7'-5 3/4" (d)				
P424	4 sets-12 ea. set	4	14'-9 1/2" to	11	7 1/2"	6'-6 3/4" to				504
			16'-7 1/2" (g)			7'-5 3/4" (d)				
P425	4 sets-12 ea. set	4	13'-7 1/4" to	11	6'-0 3/4" to	6 3/8" to				455
			14'-9" (e)		6'-6 1/4" (c)	7 3/4" (a)				
P426	12	4	16'-6" to	11	6'-0 3/4" to	1'-11 3/4" to				138
			17'-10 1/2" (f)		6'-6 1/4" (c)	2'-2 1/2" (b)				
P427	12	4	18'-11" to	12	6'-0 3/4" to	6'-6 3/4" to	4'-7 1/2" to			160
			20'-9" (g)		6'-6 1/4" (c)	7'-5 3/4" (d)	5'-1" (c)			
P428	12	4	20'-0" to	13	6'-0 3/4" to	6'-6 3/4" to	3'-9" to	1'-1 1/4" to	1'-0 3/4" to	170
			22'-3 1/2" (j)		6'-6 1/4" (c)	7'-5 3/4" (d)	4'-2 1/2" (c)	1'-2 5/8" (a)	1'-2 1/8" (a)	
P429	6	4	25'-8" to	11	6'-0 3/4" to	6'-6 3/4" to				105
			26'-11" (k)		6'-3 1/4" (c)	6'-11 3/4" (d)				
P430	4 sets-6 ea. set	4	14'-9 1/2" to	11	7 1/2"	6'-6 3/4" to				248
			16'-1 1/2" (g)			6'-11 3/4" (d)				
P431	4 sets-6 ea. set	4	13'-7 1/4" to	11	6'-0 3/4" to	6 3/8" to				222
			14'-1 1/2" (e)		6'-3 1/4" (c)	7" (a)				
P432	6	4	16'-6" to	11	6'-0 3/4" to	1'-11 3/4" to				67
			17'-1 1/2" (f)		6'-3 1/4" (c)	2'-1" (b)				
P433	6	4	18'-11" to	12	6'-0 3/4" to	6'-6 3/4" to	4'-7 1/2" to			77
			19'-9" (g)		6'-3 1/4" (c)	6'-11 3/4" (d)	4'-10" (c)			
P434	6	4	20'-0" to	13	6'-0 3/4" to	6'-6 3/4" to	3'-9" to	1'-1 1/4" to	1'-0 3/4" to	82
			21'-0 1/2" (j)		6'-3 1/4" (c)	6'-11 3/4" (d)	3'-11 1/2" (c)	1'-1 7/8" (a)	1'-1 3/8" (a)	

PIERS (Continued)

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P501	8	5	25'-10"	Str.						216
P502	8	5	23'-2"	Str.						193
P503	8	5	18'-2"	Str.						152
P504	6	5	24'-3"	Str.						152
P505	12	5	25'-6"	Str.						319
P506	149	5	6'-7"	6	1'-7"	3'-8"				1023
P1001	136	10	23'-0"	8	1'-5"	20'-2"	1'-0 1/2"			13,460
P1002	136	10	16'-8"	Str.						9753
P1101	208	11	7'-5"	1	1'-6"	6'-3"				8196
P1102	16	11	6'-8"	Str.						567
P1103	16	11	16'-5"	Str.						1396
P1104	16	11	26'-2"	Str.						2224
P1105	56	11	42'-5"	Str.						12,620
P1106	8	11	9'-7"	Str.						407
P1107	8	11	19'-4"	Str.						822
P1108	8	11	29'-1"	Str.						1236
P1109	28	11	45'-4"	Str.						6744
P1110	8	11	4'-7"	Str.						195
P1111	8	11	14'-4"	Str.						609
P1112	8	11	24'-1"	Str.						1024
P1113	28	11	40'-4"	Str.						6000
P1114	32	11	19'-4"	5	18'-3"	1'-1"	5"			3287
P1115	12	11	13'-4"	Str.						850
P1116	16	11	30'-9"	Str.						2614
P1117	36	11	27'-2"	Str.						5201
P1118	36	11	23'-7"	Str.						4511
P1119	16	11	29'-2"	Str.						2479
P1120	20	11	34'-4"	Str.						3648
P1121	16	11	19'-8"	Str.						1672
P1122	6	11	12'-10"	Str.						409
P601	16 Sets - 8 Ea. Set	6	7'-3" to	6	2'-6" to	2'-7"				1730
			10'-9" (n)		4'-3" (k)					
P602	280	6	11'-11"	6	4'-10"	2'-7"				5012
P603	16 Sets - 5 Ea. Set	6	10'-9" to	6	4'-3" to	2'-7"				1352
			11'-9" (k)		4'-9" (f)					
										117,708

SUPERSTRUCTURE

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
R 401	16	4	12'-1"	Str.	Included with Railing for Payment.					
R 402	128	4	14'-11"	Str.						
R 405	14	4	17'-8"	Str.						
S 401	600	4	4'-4"	6	2'-0"	6 1/2"				1737
S 402	600	4	1'-7"	1	1'-2"	6"				635
S 403	432	4	3'-1"	4	1'-0"	11"	1'-0"	6"		890
S 501	600	5	4'-8"	4	0	2'-10"	1'-5"	8"		2920
S 601	1296	6	33'-7"	Str.						65,373
S 602	431	6	32'-1"	Str.						20,769
S 603	431	6	27'-0"	Str.						17,479
S 604	431	6	19'-0"	Str.						12,300
S 605	118	6	30'-0"	Str.						5,317
S 606	118	6	15'-11"	Str.						2,821
S 701	431	7	32'-1"	Str.						28,264
S 702	431	7	22'-0"	Str.						19,381
S 703	431	7	24'-0"	Str.						21,143
									Total Weight	198,139

(a) Varies by 1/8"
(b) Varies by 1/4"
(c) Varies by 1/2"
(d) Varies by 1"
(e) Varies by 1 1/4"
(f) Varies by 1 1/2"
(g) Varies by 2"
(h) Varies by 2 1/4"
(j) Varies by 2 1/2"
(k) Varies by 3"
(l) Varies by 4 1/2"
(m) Varies by 9"
(n) Varies by 6"

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPERSTR.	ABUTS.	PIERS	GENERAL		
E-2	Lump	Sum	Cofferdams, cribs and sheeting				Lump		
E-2	1845	Cu.Yds.	Unclassified excavation		1220	625			
E-2	400	Cu.Yds.	Rock and shale excavation		390	10			
S-1	711	Cu.Yds.	Class "C" concrete, superstructure	711					
S-1	350	Cu.Yds.	Class "C" concrete, pier caps and columns			350			
S-1	398	Cu.Yds.	Class "E" concrete, abutment walls		398				
S-1	413	Cu.Yds.	Class "E" concrete, footings		240	173			
S-3	75	Lin.Ft.	Waterproofing, premolded sealing strip		75				
S-3	6	Sq.Yds.	Waterproofing, type "B"		2				
S-4	373,198	Lbs.	Reinforcing steel	198,139	57,351	117,708			
S-7	741,700	Lbs.	Structural steel	741,700					
S-8	741,700	Lbs.	Field painting of structural steel, as per plan.	741,700					
S-9	6	Sq.Ft.	1" Preformed expansion joint filler (gray rubber M-10.02)		6				
S-14	673	Lin.Ft.	Railing (aluminum rail and supports, and concrete						
			parapet)	574	99				
S-16	Lump	Sum	First test pile				Lump		
S-18	2520	Lin.Ft.	Steel piles, 12 BP53			2520			
S-25	678	Lin.Ft.	4" Fiber conduit	574	104				
S-25	Lump	Sum	Electrical lighting system (junction boxes, anchor						
			bolts, electrical grounds and steel conduit.)	Lump					
S-29	405	Cu.Yds.	Porous backfill		405				
I-10	813	Sq.Yds.	Crushed aggregate slope protection				813		

REPLACEMENT BARS

MARK	NO.	SIZE	LENGTH	TYPE	WEIGHT
RE 1101	4	11	7'-7"	Str.	
RE 801	1	8	6'-6"	Str.	
RE 701	4	7	6'-3"	Str.	
RE 601	7	6	5'-11"	Str.	
RE 501	1	5	5'-7"	Str.	
RE 401	2	4	5'-3"	Str.	
RE 1001	1	1	7'-3"	Str.	

BAR SIZE:
Bar size is indicated in the barmark. The first digit where three digits are used and the first two where four are used, indicates the bar size number. For example, A401 is a number 4 bar and A1114 is a number 11 size bar.

REPLACEMENT BARS:
If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy. Testing Laboratory, test sample as provided in section S-402 need not be furnished and replacement bars will not be required.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

REINFORCING STEEL LIST & ESTIMATED QUANTITIES
BRIDGE NO. JEF-7-1392
OVER Mc LISTER STREET

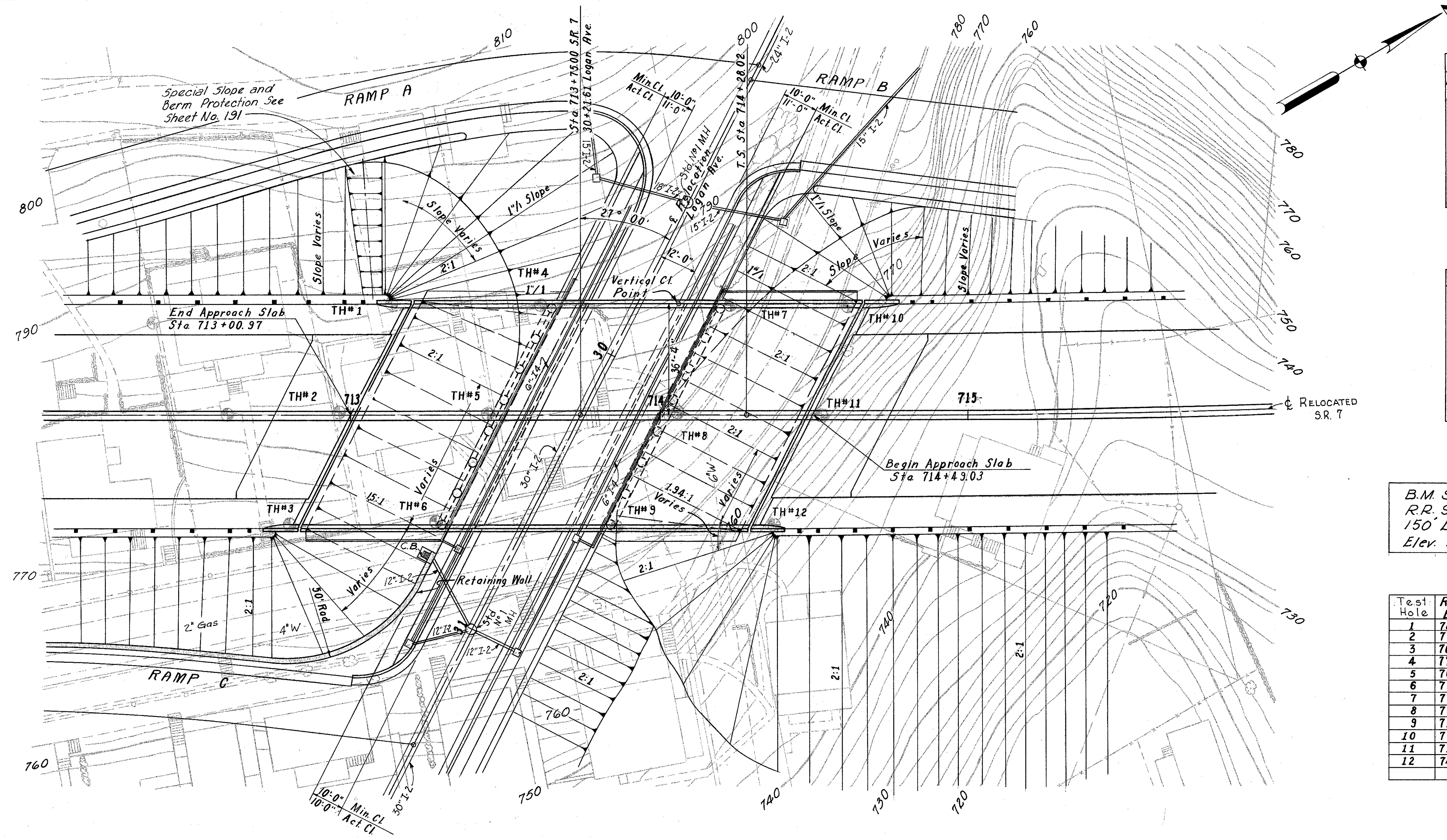
JEFFERSON COUNTY — STA. 703 + 51.68

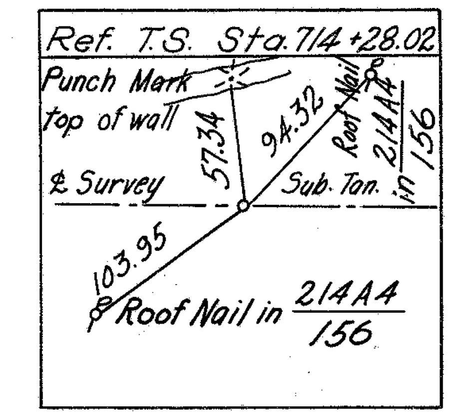
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
R.M. J.M.	Simpson	Simpson	F.A. A.S.J.	E. Roberts	Oct. 2, 1959	

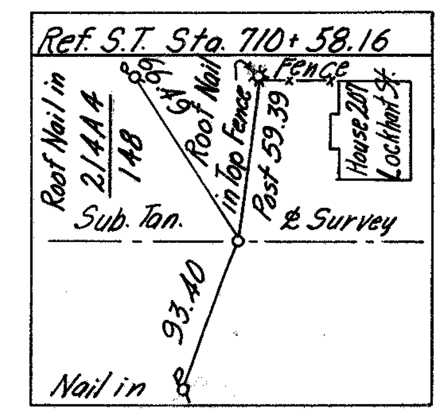
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

270 / 307

JEFFERSON COUNTY
JEF - 7 - 13.53







CURVE DATA

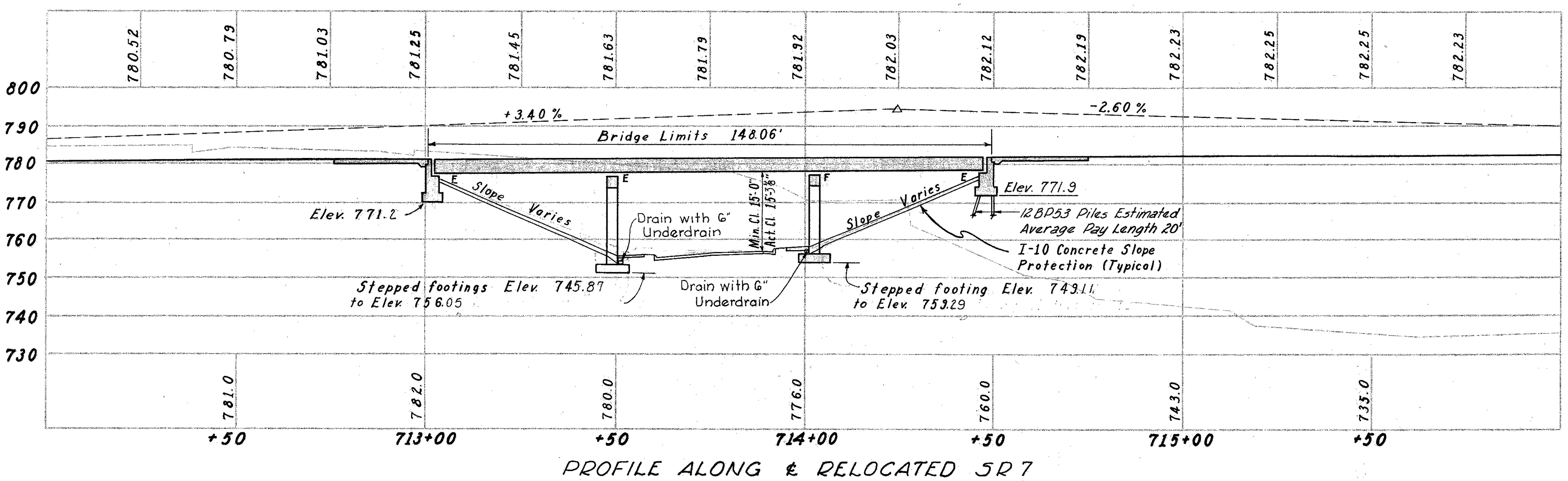
P.I. Sta. 721+43.24
Δ = 43° 00' Lt.
Dc = 4° 00'
Rc = 1432.39'
Ts = 715.22'
θs = 6° 00'
Es = 109.94'
Ls = 300.00'
Δc = 31° 00'
Lc = 775.00'
P = 2.62'
K = 149.95'
L.T. = 200.11'
S.T. = 100.10'

B.M. Sta. 715+00
R.R. Spike in Tel. Pole 322 Logan St.
150' Lt.
Elev. 789.68'

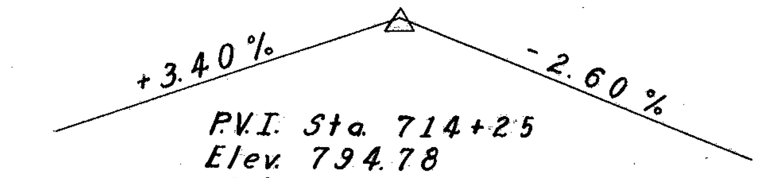
Test Hole	Rock Elev.
1	785.2
2	771.7
3	763.8
4	778.5
5	769.4
6	759.4
7	770.5
8	760.1
9	755.6
10	765.6
11	752.0
12	745.9

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of borings 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 the Division office, but the state assumes no responsibility for the accuracy thereof.

⊕ Denotes boring locations.



PROFILE ALONG ¢ RELOCATED SR 7



P.V.I. Sta. 714+25
Elev. 794.78
1700' V.C.
M.O. = 12.75'

VERTICAL CURVE DATA

PROPOSED STRUCTURE

Type: Continuous steel beam with reinf. Conc. deck and substructure.
Spans: 44'-55'-44' ¢/c Brgs.
Roadway: 73'-00" f to f Parapets, 3'-0" Median, and 1'-2" Curbs.
Load Frequency: C.F. = 2000 (57) Adequate for AASHO Alternate loading.
Skew: 27°00'00" Lt. Forward.
Wearing Surface: 1" Monolithic Conc.
Approach Slabs: Special Design (25' Long).
Alignment: Tangent & Spiral.
Superelevation: Varies.

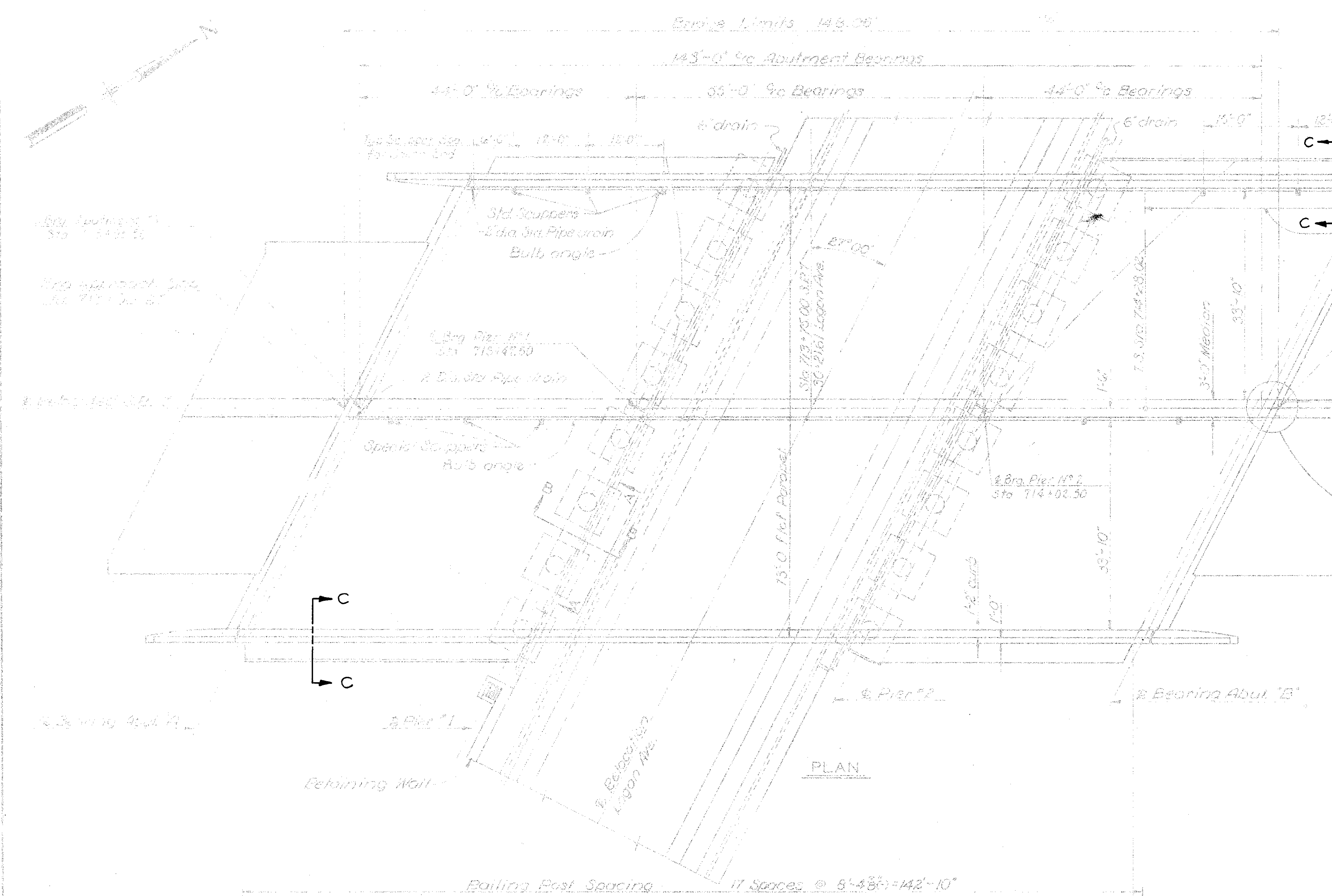
MICHAEL BAKER, JR. CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SITE PLAN
BRIDGE NO. JEF.-7-1411
OVER LOGAN AVENUE

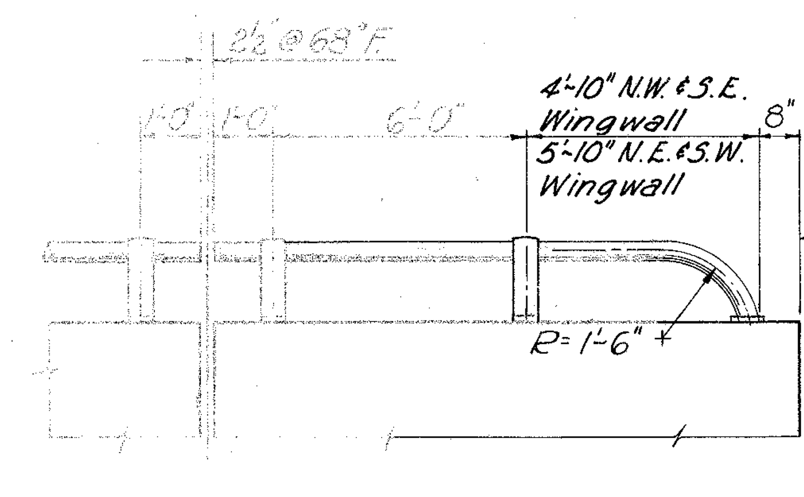
JEFFERSON COUNTY — STA. 713+75.00

PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
	JWR	J.D.R.	K.E.A.	J.M.	E.F.R. 10-18-58

JEFFERSON COUNTY
JEF-7-13.53



PLAN

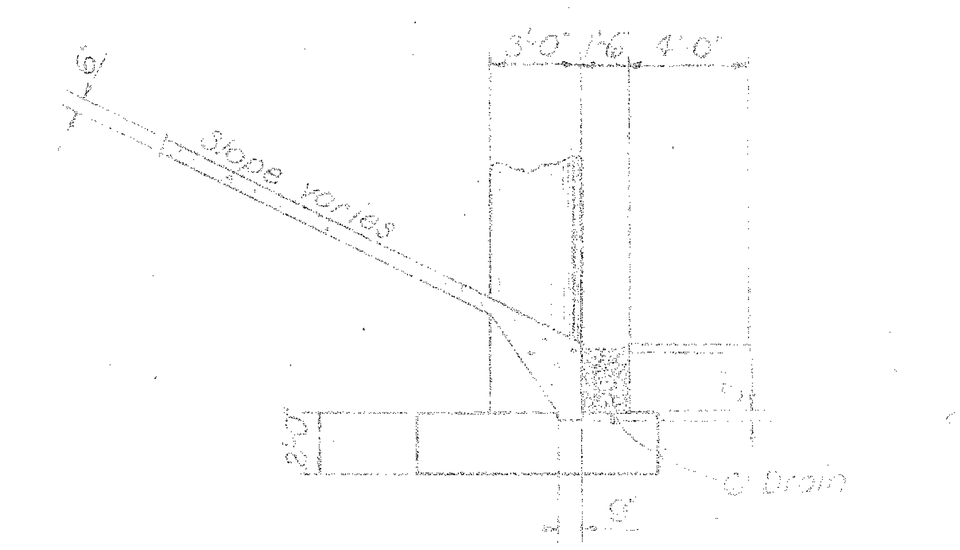


ABUTMENT RAILING DETAIL

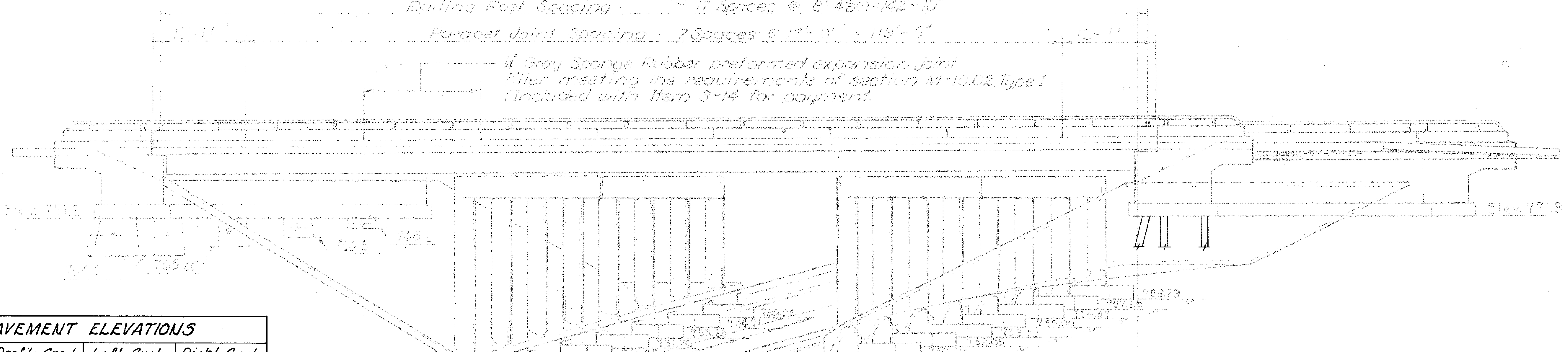
GENERAL NOTES

- Design Specifications: This structure conforms to the requirments of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.
- Loading: C.F. =2000 (57) Adequate for A.A.S.H.O. Alternate loading.
- Reference shall be made to standard drawings C.S.B.-2-56, sheets 2 & 3 of 6, revised 2-2-59, AR-1-57, revised 2-2-59.
- Slope paving shall be concrete slope protection, meeting the requirements of Section I-1 25. The paving shall extend from the toe of slope to face of abutment and across the area as shown on the General Plan and the Site Plan.
- Excavation quantity for Abutment "B" includes the removal of fill material between surface of proposed embankment and bottom of footing.
- Embankment for Abutment "B" to be placed to subgrade elevation for a distance of approximately 200' beyond the bridge limits before work is begun on Abutment "B".
- Welding of structural steel shall be class "A" except as shown (——<B). Welds shown as field welds may, at the option of the contractor, be made in the shop.
- Footing for Abutment "A" and all Pier footings are designed for a maximum bearing pressure of 3.3 tons per sq.ft. and 4.0 tons per sq.ft. respectively and are to be extended a minimum of 3" into solid rock. The Engineer shall inspect the entire area and insure that excavation goes to bed rock. Prolonged exposure to atmospheric conditions shall be averted. The excavation shall be kept drained at all times.
- Piles for Abutment "B" are designed for a load of 30 tons per pile.
- Piles shall be driven with a hammer of not less than 11,000 ft. lbs. per blow to firm contact with shale. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. 5-18.05 is not less than the following value for a pile hammer of the indicated energy rating:
  - 40 tons per pile using a 11,000 ft. lb. hammer
  - 35 tons per pile using a 15,000 ft. lb. or greater hammer.

  If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation.

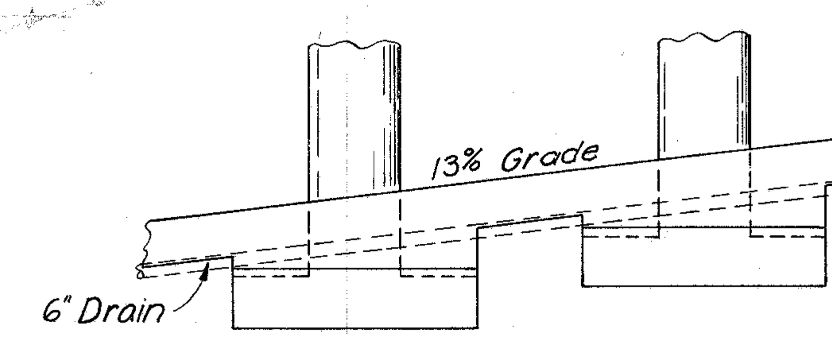


SECTION B-B

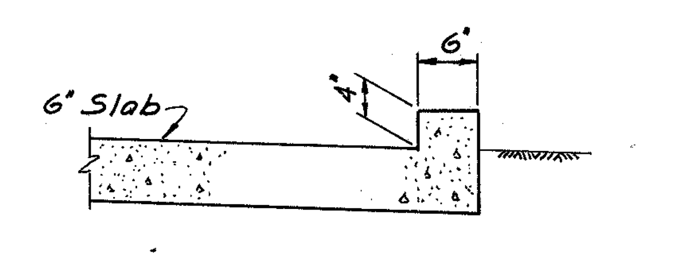


ELEVATION

PAVEMENT ELEVATIONS			
Station	Profile Grade	Left Curb	Right Curb
713+00	781.25	780.72	781.78
713+25	781.45	780.92	781.98
713+50	781.63	781.10	782.16
713+75	781.79	781.26	782.32
714+00	781.92	781.39	782.45
714+25	782.03	781.50	782.56
714+50	782.12	781.59	782.65



SECTION A-A



SECTION C-C THRU SLOPE PAVING

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

GENERAL PLAN & ELEVATION
BRIDGE NO. JEF-7-1411
OVER LOGAN AVENUE

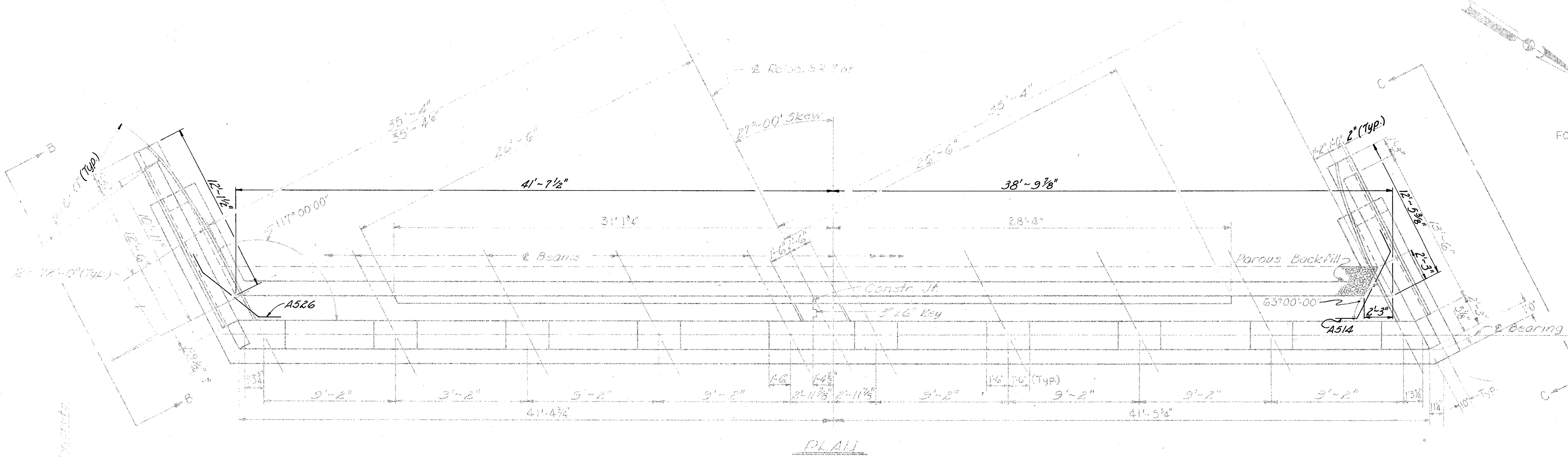
JEFFERSON COUNTY STA. 713+75.00

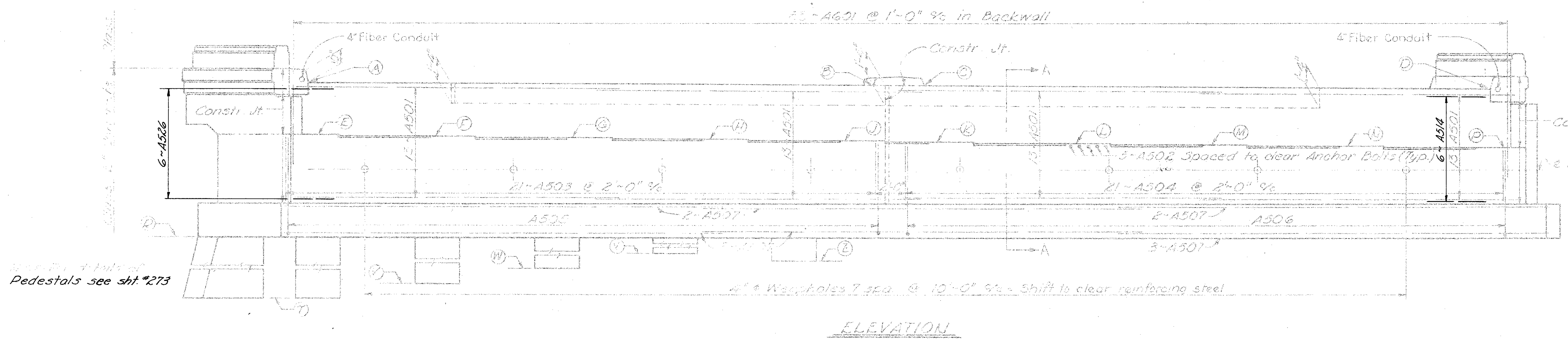
Designed	Drawn	Traced	Checked	Reviewed Date	Revised
J.D.B.	C.M.S.	S.W.S.	J.M.	E. Roberts 6-10-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

JEFFERSON COUNTY
JEF-7-13.53

FOR DETAILS NOT SHOWN SEE SHEET NO. 273





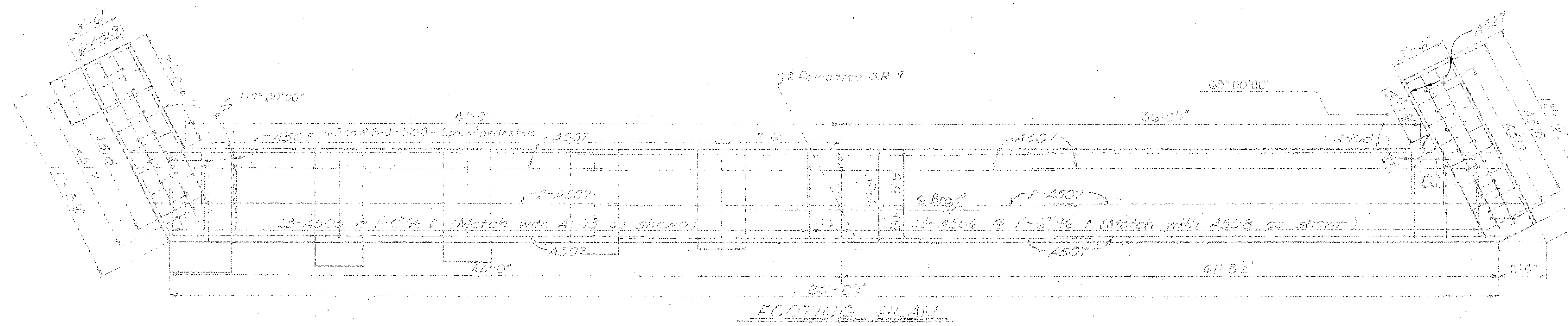
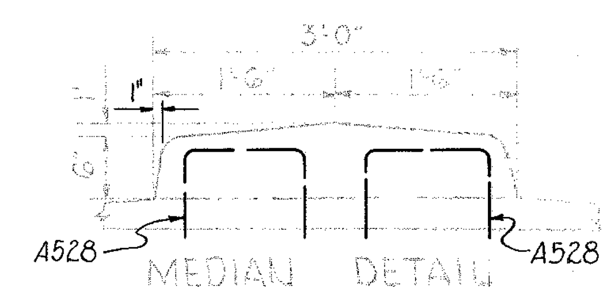
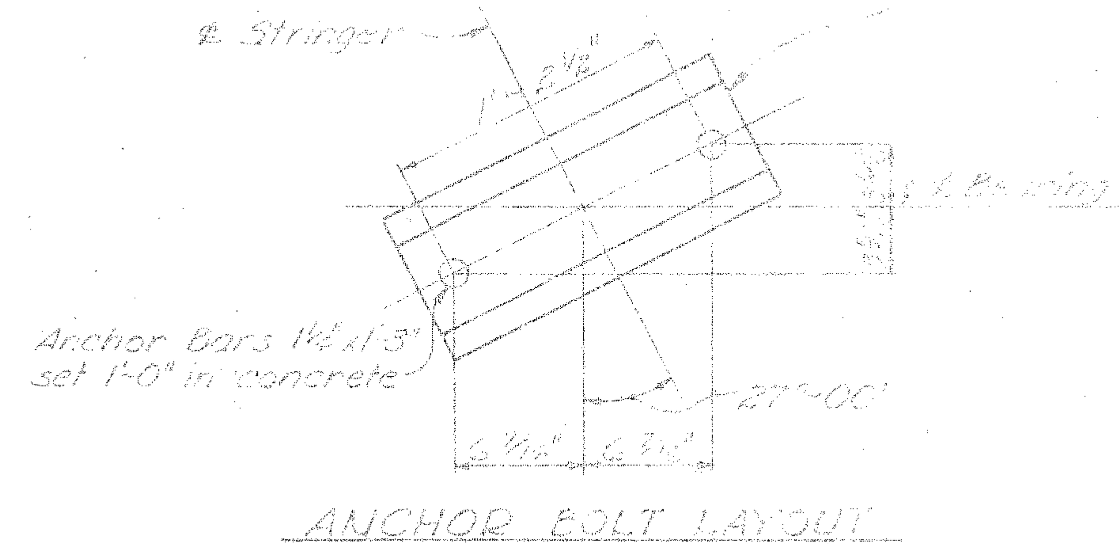


TABLE OF ELEVATIONS		
LOCATION	ABUT. "A"	ABUT. "B"
A	781.65	781.61
B	781.26	782.11
C	781.28	782.11
D	780.89	782.38
E	777.98	777.93
F	777.89	778.06
G	777.79	778.19
H	777.71	778.30
J	777.61	778.42
K	777.60	778.45
L	777.50	778.55
M	777.41	778.66
N	777.32	778.78
P	777.22	778.89
Q	771.20	771.90
S	775.70	776.40
T	765.0	None
V	765.2	None
W	766.5	None
Y	768.2	None
Z	769.50	None



NOTE: Special care shall be taken in placing reinforcing steel at the bridge seats so that it will not interfere with the drilling of anchor bar holes.



MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

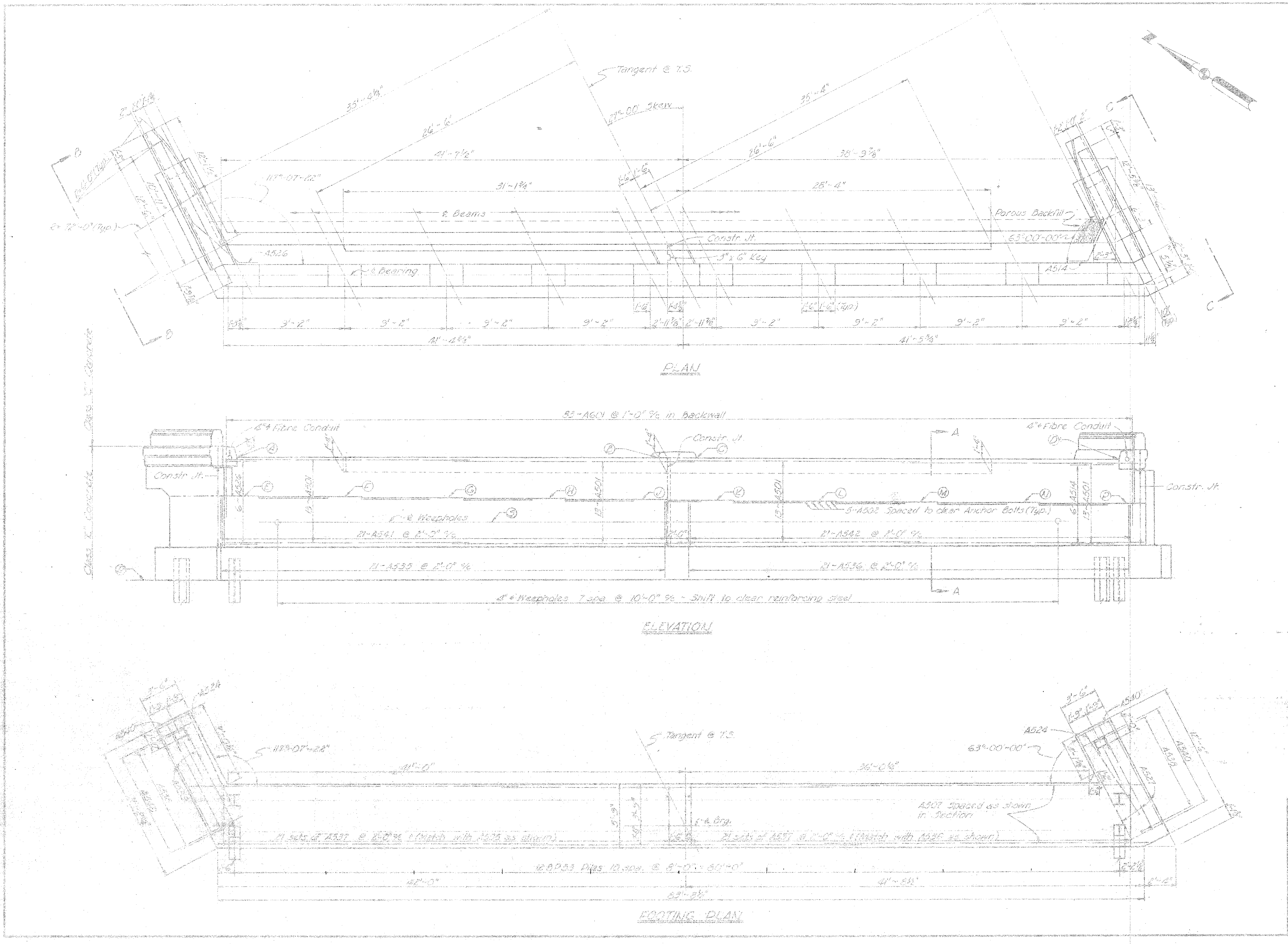
ABUTMENT "A"
BRIDGE NO. JEF-7-1411
OVER LOGAN AVENUE

JEFFERSON COUNTY — STA. 713+75.00

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
J.D.R.	K.F.A.		D.M.			

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(14)	

JEFFERSON COUNTY
JEF-7-13.53



For elevations and details not shown see Abutment "A" Sheet #272.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ABUTMENT "B"
BRIDGE NO. JEF-7-1411
OVER LOGAN AVENUE

JEFFERSON COUNTY STA. 713+75.00

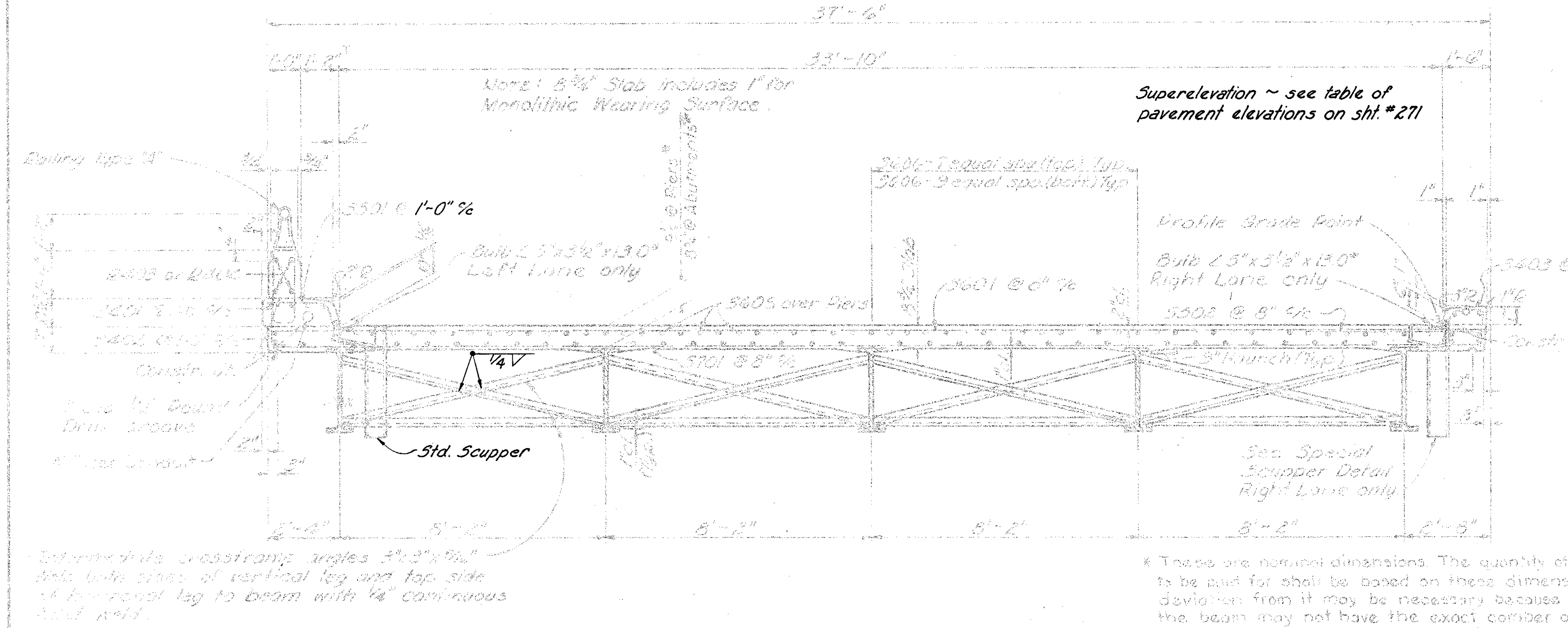
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
A.S.J.	K.E.A.		J.M.			

FED. RD. DIVISION 2
STATE OHIO
PROJECT U-430(14)
JEFFERSON COUNTY
JEF-7-13.53
For details not shown See Sheet № 272
Elev. 782.36 Abut. "A"
Elev. 782.48 Abut. "B"
Elevations computed @ this point
℄ Bearing
Approach Slab
Porous Backfill
Construction Joint
4"ϕ Weephole
6" Slab - Slope Facing
Construction Joint
SECTION A-A
Abutment "A" only
SECTION A-A
Abutment "B" only. For details not shown see Sec. A-A for Abut. "A".
A541 or A542
Construction Joint
A535 or A536
A537
Std. Expansion Coupling for details see sht #212 (Typical)
Elev. 782.49 Abut. "A"
Elev. 782.49 Abut. "B"
Superstructure
8-A517 to Lap A516 & A524 Abut. "A"
8-A538 to Lap A512 & A515 Abut. "B"
8 sets A518 @ 1'-6" c/c Abut. "A", 2 each set
8 sets A540 @ 1'-6" c/c Abut. "B", 2 each set
WINGWALL VIEW B-B
Elev. 781.75 Abut. "A"
Elev. 783.44 Abut. "B"
Elev. 781.63 Abut. "A"
Elev. 783.49 Abut. "B"
8-A517 to Lap A513 & A515 Abut. "A"
8-A538 to Lap A523 & A525 Abut. "B"
8 sets A518 @ 1'-6" c/c Abut. "A", 2 each set
8 sets A540 @ 1'-6" c/c Abut. "B", 2 each set
WINGWALL VIEW C-C
A512 or A523
A538
Construction Joint
A540
SECTION D-D
Abutment "B" only. For details not shown see Sec. D-D for Abut. "A".
Notes
Porous backfill, 2'-0" thick as shown in Section A-A full length of abutments and wingwalls, shall extend from elevations shown to underside of approach slab & wing curbs.
All abutment concrete shall be Class
All parapet concrete shall be Class "C".
WINGWALL PLAN
SECTION D-D
Abutment "A" only
Construction Joint
PEDESTAL PLAN
PEDESTAL ELEVATION
Abutment or Wingwall Footing
Key in Footing only where pedestals are used under abutment and wingwall.
3" Min. into Rock
GUARD RAIL DETAIL
Guardrail and connection assembly shall be galvanized after welding.
Guardrail and connection to be included with Item 3-14 Railing for payment.
MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA
ABUTMENT DETAILS
BRIDGE NO. JEF-7-1411
OVER LOGAN AVENUE
JEFFERSON COUNTY
STA. 713+75.00
Designed
Drawn
Traced
Checked
Reviewed
Date
K.E.A.
6-10-59

FED. RD. DIVISION 2
STATE OHIO
PROJECT U430 (14)
JEFFERSON COUNTY
JEF-7-13.53
PIER CAP PLAN
ANCHOR BOLT LAYOUT
SECTION F-F
SECTION E-E
Typical for all columns except as shown
ELEVATION
VIEW A-A
SECTION B-B
SECTION C-C
SECTION D-D
NOTES
Special care shall be taken in placing reinforcing steel in the bridge seat so that it will not interfere with the drilling of Anchor Bolt holes of all Piers.
Nomenclature above dimension lines refer to Pier 1; those below dimension lines refer to Pier 2.
Piers 1 and 2 similar unless otherwise shown or noted.
MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA
PIERS
BRIDGE NO. JEF-7-1411
OVER LOGAN AVENUE
JEFFERSON COUNTY

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO	U-430(14)		

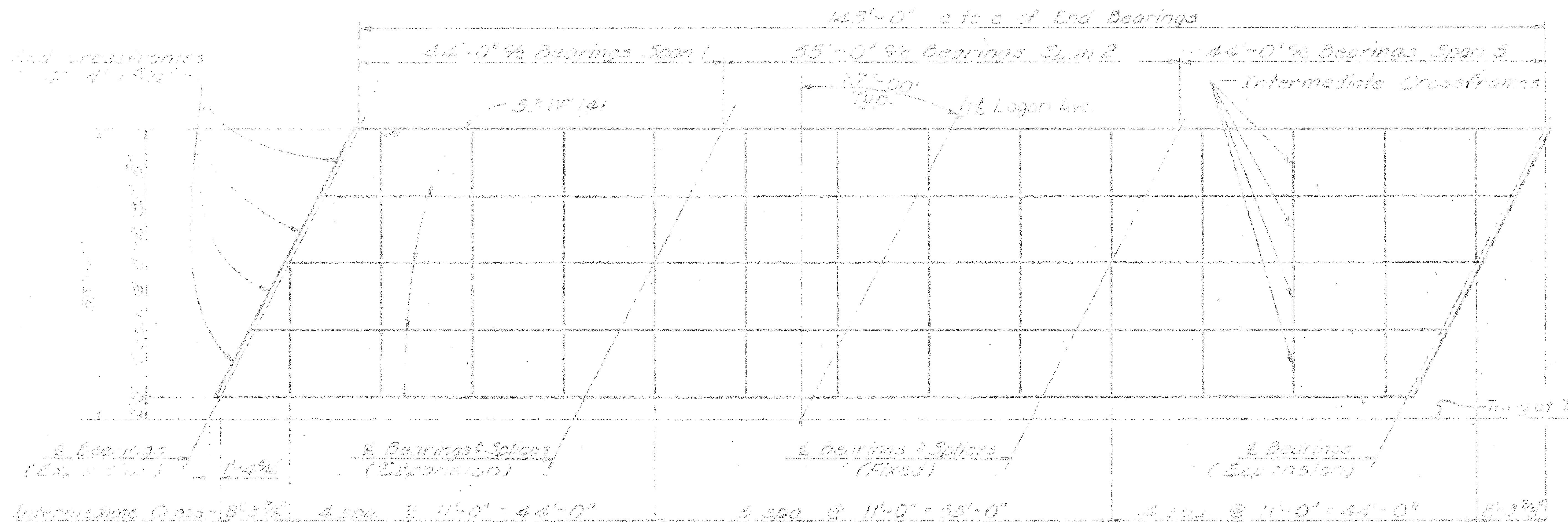
JEFFERSON COUNTY
JEF-7-13.53



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

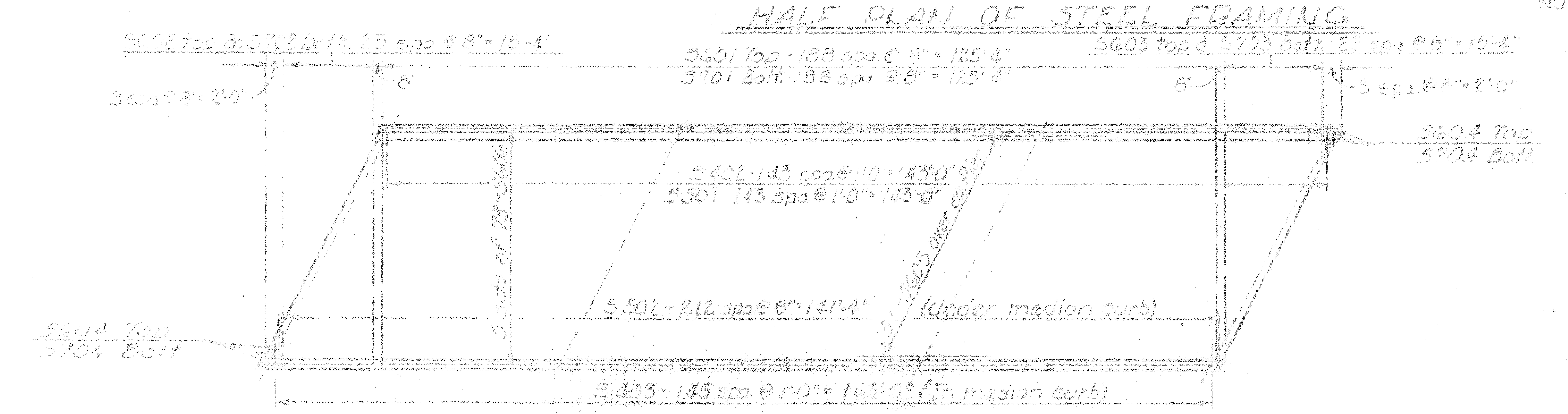
TYPICAL HALF CROSS SECTION

NOTE: All dimensions are normal to line at [illegible] except the [illegible] of curb which shall follow the spiral.

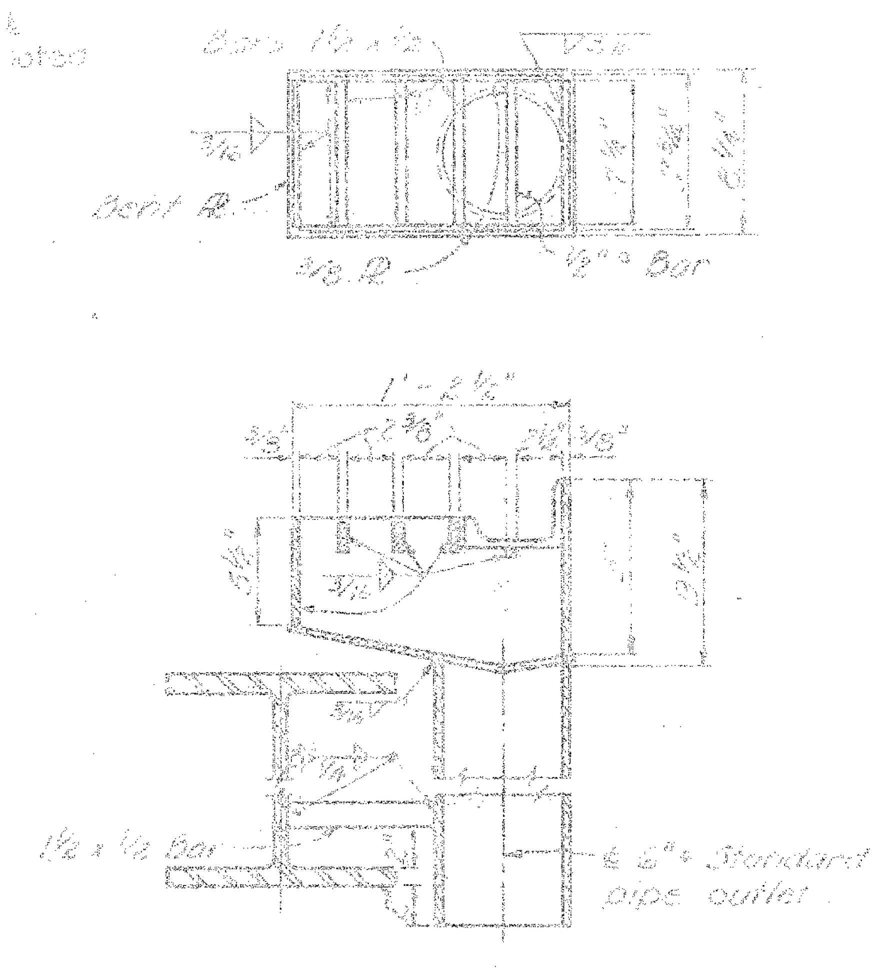


HALF PLAN OF STEEL FRAMING

NOTE: Half plan of Steel Framing and half plan of Deck Reinforcing Steel symmetrical by rotation through 180° about the intersection of ℄ Relocated S.R. 7 and ℄ Logan Ave.



HALF PLAN OF DECK REINFORCING STEEL



SPECIAL SCUPPER DETAIL

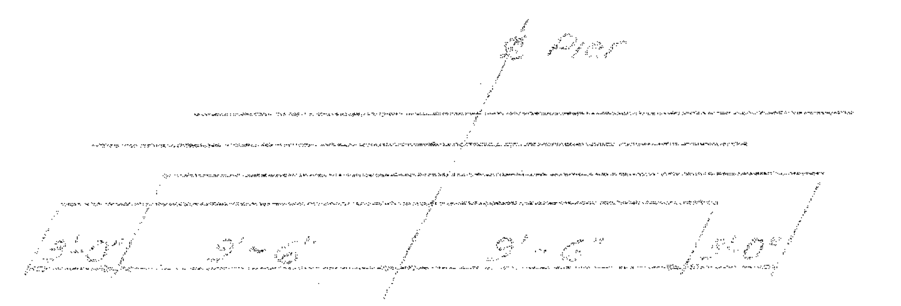
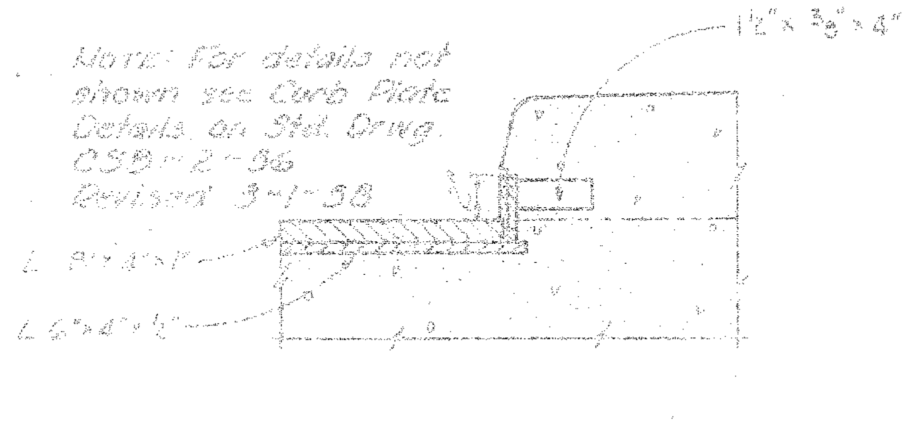
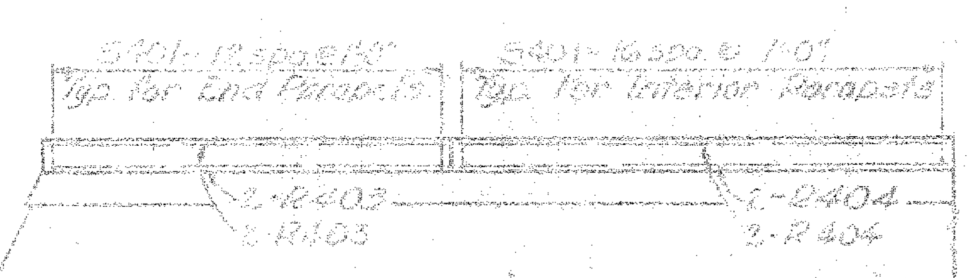


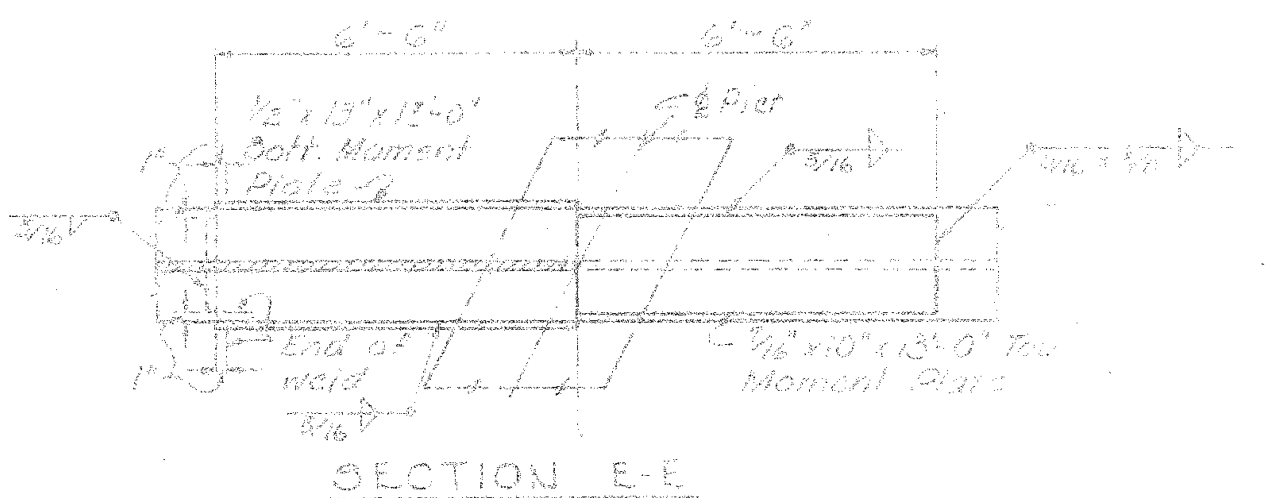
DIAGRAM SHOWING STAGGER OF 5605 BARS OVER PIERS



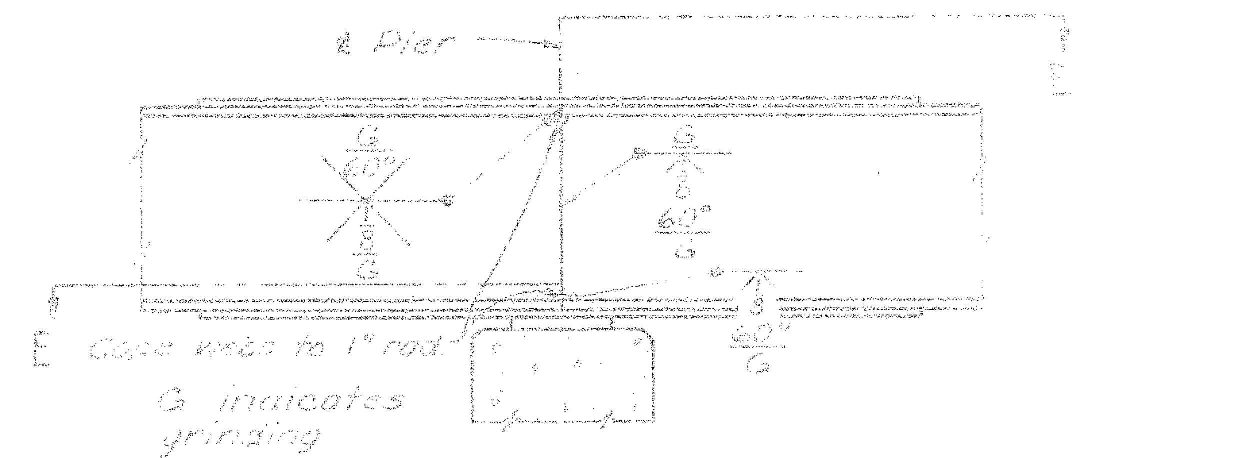
END FINISH AT MEDIAN



PARAPET STEEL DETAIL



SECTION E-E



BEAM SPLICE DETAIL

BEAM SPLICE WELDING PROCEDURE

1. Raise ends of end span beams [illegible].
2. Butt weld beam flanges and web using the following sequence: make [illegible] passes on each flange, then two on the web; repeat, [illegible] at each location until welds are completed.
3. Weld the bottom and top moment plates.
4. Lower the beam ends to final position.

CONCRETE DECK PLACING

In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections, between transverse construction joints which are normal to the centerline of bridge and are located near the center of any span.

NOTES

- Refer to Standard Drawings CSS-2-56, sheets 2 and 3 of 6, revised 2-2-59, for details of [illegible] Gutters, Scuppers, Curb Plates, Pipe Drains, Bearing Plates, and End X-frames.
- Refer to Standard Drawing AR-1-55, revised 2-2-59, for details of Aluminum Railing (Type A).
- Concrete and reinforcing steel above [illegible] construction joints included with railing for payment.
- Concrete shall be Class "C".
- See "General Plan & Elevation" for spacing of [illegible] and railing posts.
- Painting: After erection and after the [illegible] cleaned and, where necessary, [illegible] with [illegible], an additional coat of the [illegible] of the outside steel beams [illegible] bottom flange.

DEAD LOAD DEFLECTION OF ALL BEAMS		
LOCATION	END SPANS	CENTER SPAN
Deflection due to weight of Steel	0	0
Deflection due to remaining dead load	3/16"	1/4"
Convexity required for Vertical Curve	1/8"	3/16"
Sum of deflection convexity	5/16"	7/16"

NOTE: No camber required but beams shall be erected and fabricated with any natural camber [illegible] up.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUPERSTRUCTURE

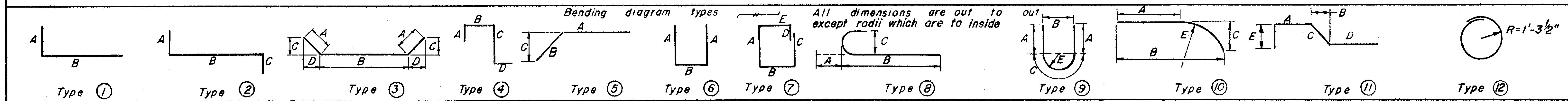
BRIDGE NO. JEF-7-1411 OVER LOGAN AVENUE

JEFFERSON COUNTY STA. 713+75.00

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
J.B.R.	K.E.A.		J.M.	E. Roberts 6-16-59		

REINFORCING STEEL BAR SCHEDULE

Bending diagram types — All dimensions are out to out except radii which are to inside



ABUTMENTS

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A401	54	4	5'-10"	6	2'-9"	6½"				210
A601	166	6	13'-10"	7	5'-8"	1'-5"	4'-5"	2'-0"	0'-11"	3449
A501	104	5	22'-1"	Str.						2395
A502	100	5	4'-11"	6	1'-6"	2'-2"				513
A503	21	5	3'-10"	Str.						84
A504	21	5	3'-6"	Str.						77
A505	28	5	10'-1"	1	5'-10"	4'-5"				294
A506	28	5	9'-9"	1	5'-6"	4'-5"				285
A507	42	5	29'-8"	Str.						1300
A508	64	5	3'-3"	Str.						217
A509	14	5	13'-5"	Str.						196
A510	18	5	7'-11"	6	3'-6"	1'-2"				149
A511	12	5	9'-8"	Str.						121
A512	12	5	7'-1"	Str.						89
A513	12	5	8'-1"	Str.						101
A514	12	5	6'-0"	3	6"	5'-0"	4⅞"	3⅝"		75
A515	4	5	12'-11"	6	6'-4"	6"				54
A516	4	5	14'-5"	6	7'-1"	6"				60
A517	16	5	8'-3"	6	3'-8"	1'-2"				138
A518	34	5	6'-1"	6	1'-7"	3'-2"				216
A519	6	5	11'-4"	Str.						71
A520	14	5	14'-5"	Str.						211
A521	12	5	10'-2"	Str.						127
A522	8	5	3'-8"	Str.						31
A523	12	5	8'-1"	Str.						101
A524	15	5	8'-10"	Str.						138
A525	2	5	12'-11"	6	6'-4"	6"				27
A526	12	5	5'-6"	3	6"	4'-6"	3⅞"	4⅝		69
A527	11	5	11'-8"	Str.						134
A528	4	5	4'-9"	6	1'-11"	1'-2"				20
A529	4	5	13'-8"	Str.						57
A530	4	5	14'-1"	Str.						59
A531	36	5	4'-0"	6	1'-3"	1'-9"				150
A532	20	5	3'-9"	6	1'-3"	1'-6"				78
A533	16	5	3'-3"	6	1'-3"	1'-0"				54
A534	8	5	4'-2"	6	1'-3"	1'-11"				35
A535	21	5	6'-10"	1	1'-6"	5'-6"				150
A536	21	5	7'-4"	1	1'-6"	6'-0"				161
A537	84	5	9'-6"	6	2'-2'	5'-5"				832
A538	16	5	10'-1"	6	4'-7"	1'-2"				168
A539	4	5	11'-0"	Str.						46
A540	32	5	7'-3"	6	2'-2"	3'-2"				242
A541	21	5	2'-6"	Str.						55
A542	21	5	2'-10"	Str.						62
R401	8	5	12'-2"	Str.	Included with railing					
R402	8	5	13'-2"	Str.	for payment.					
									Total Weight	13,101

SPIRAL BAR

MARK	TOTAL	SIZE	LENGTH	PITCH	NO. TURNS	CORE DIA.	WEIGHT
SP401	1	½" ϕ	26'-7"	4½	74	32	480
SP402	1	½" ϕ	25'-2"	4½	70	32	454
SP403	1	½" ϕ	23'-8"	4½	66	32	428
SP404	1	½" ϕ	22'-2"	4½	62	32	402
SP405	1	½" ϕ	20'-8"	4½	58	32	376
SP406	1	½" ϕ	19'-3"	4½	54	32	350
SP407	1	½" ϕ	17'-9"	4½	50	32	324
SP408	1	½" ϕ	15'-11"	4½	45	32	291
SP409	1	½" ϕ	23'-9"	4½	66	32	428
SP410	1	½" ϕ	22'-3"	4½	62	32	402
SP411	1	½" ϕ	20'-9"	4½	58	32	376
SP412	1	½" ϕ	19'-3"	4½	54	32	350
SP413	1	½" ϕ	17'-10"	4½	50	32	324
SP414	1	½" ϕ	16'-4"	4½	47	32	304
SP415	1	½" ϕ	14'-10"	4½	43	32	278
SP416	1	½" ϕ	13'-0"	4½	38	32	245
						Total Weight	5,812

PIERS

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
F701	304	7	7'-8"	Str.						4764
F702	20	7	9'-8"	Str.						395
F1001	96	10	6'-7"	1	2'-0"	4'-11"				2719
F1101	28	11	7'-3"	1	1'-10"	5'-9"				1079
F1102	20	11	7'-2"	1	2'-4"	5'-2"				762
P501	168	5	6'-8"	6	2'-1½"	2'-8"				1168
P502	108	5	5'-5"	6	1'-6"	2'-8"				610
P503	4	5	4'-9"	6	1'-6"	2'-0"				20
P504	4	5	5'-3"	6	1'-6"	2'-6"				22
P505	12	5	7'-3"	9	1'-7"	2'-8"	4'-1"		1'-3⅜"	91
P506	16	5	20'-7"	Str.						343
P507	12	5	5'-5"	6	1'-7"	2'-6"				68
P801	20	8	30'-6"	Str.						1629
P802	20	8	14'-11"	8	1'-1"	13'-10"	9"			797
P901	4	9	32'-4"	1	2'-10"	29'-9"				440
P902	6	9	33'-7"	1	2'-10"	31'-0"				685
P903	28	9	13'-5"	Str.						1277
P904	12	9	14'-2"	Str.						578
P905	4	9	21'-1"	1	2'-10"	18'-6"				287
P906	6	9	22'-2"	1	2'-10"	19'-7"				452
P1001	8	10	29'-10"	Str.						1027
P1002	8	10	27'-11"	Str.						961
P1003	8	10	26'-5"	Str.						909
P1004	8	10	25'-0"	Str.						861
P1005	8	10	22'-0"	Str.						757
P1006	8	10	20'-7"	Str.						709
P1007	8	10	27'-0"	Str.						929
P1008	8	10	25'-1"	Str.						865
P1009	8	10	23'-7"	Str.						812
P1010	8	10	22'-1"	Str.						760
P1011	8	10	19'-2"	Str.						660
P1012	8	10	17'-8"							608
P1101	10	11	23'-6"	Str.						1249
P1102	14	11	18'-9"	Str.						1395
P1103	10	11	20'-8"	Str.						1098
P1104	14	11	15'-10"	Str.						1178
									Total Weight	32,962

SUPERSTRUCTURE

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S401	290	4	4'-8"	6	2'-2"	0'-6½"				904
S402	288	4	1'-8"	1	0'-5"	1'-4"				321
S403	288	4	3'-8"	4	1'-0"	1'-0	1'-0"	1'-1"		705
S501	288	5	3'-8"	11	1'-10"		1'-3"	0'-8"		1101
S502	426	5	4'-0"	Str.						1777
S601	378	6	37'-0"	Str.						21007
S602	2 Sets-24 ea.Set	6	4'-9" to 34'-11"	Str.	Vary	by	1'-3¾"			1430
S603	2 Sets-24 ea.Set	6	5'-4" to 35'-6"	Str.	Vary	by	1'-3¾"			1472
S604	12	6	4'-0"	Str.						72
S605	124	6	22'-0"	Str.						4097
S606	730	6	30'-4"	Str.						33260
S701	378	7	36'-11"	Str.						28523
S702	2 Sets-24 ea.Set	7	4'-9" to 34'-11"	Str.	Vary	by	1'-3¾"			1946
S703	2 Sets-24 ea.Set	7	5'-4" to 35'-6"	Str.	Vary	by	1'-3¾"			2005
S704	12	7	4'-0"	Str.						98
R403	16	4	12'-7"	Str.	Included with Railing					
R404	56	4	16'-8"	Str.	for Payment.					
									Total Weight	98,716

SPIRAL NOTES:

- 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 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.
- 1½ closed coils shall be provided at the ends of each spiral unit.
- Four steel channel, tee or angle spacers weighing approximately 0.68 lbs. 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 lbs. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPERSTR.	ABUTS.	PIERS	GENERAL
E-2	321	C.Y.	Rock Excavation for Structure		65	256	
E-2	590	C.Y.	Unclassified Excavation		590		
S-1	324	C.Y.	Class "C" Concrete; Superstructure	324			
S-1	142	C.Y.	Class "C" Concrete; Piers Caps & Columns			142	
S-1	160	C.Y.	Class "E" Concrete; Abutment Walls		160		
S-1	187	C.Y.	Class "E" Concrete; Footings & Pedestals		109	78	
S-4	150591	Lbs.	Reinforcing Steel	98716	13101	38774	
S-7	251645	Lbs.	Structural Steel	251645			
S-8	251645	Lbs.	Field Painting of Structural Steel as per plan	251645			
S-14	342	L.F.	Railing (Aluminum Rail and Supports, and Concrete Parapets.)	290	52		
S-16	Lump	Sum	First Test Pile		Lump Sum		
S-18	480	L.F.	Steel Piles, 12BP53		480		
S-25	348	L.F.	4" Fibre Conduit	290	58		
S-29	48	C.Y.	Porous Backfill		48		
I-10	884	S.Y.	Concrete Slope Protection				884

REPLACEMENT BARS

MARK	NO.	SIZE	LENGTH	TYPE	WEIGHT
RE401	1	½ ϕ	5'-3"	12	
RE402	1	4	5'-3"	Str.	
RE501	1	5	5'-7"	Str.	
RE601	4	6	5'-11"	Str.	
RE701	2	7	6'-3"	Str.	
RE801	1	8	6'-6"	Str.	
RE901	1	9	6'-10"	Str.	
RE1001	1	10	7'-3"	Str.	
RE1101	1	11	7'-7"	Str.	

REPLACEMENT BARS:
If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy. Testing Laboratory, test sample as provided in section S-402 need not be furnished and replacement bars will not be required.

BAR SIZE:
Bar size is indicated in the barmark. The first digit where three digits are used and the first two where four are used, indicate the bar size number. For example, A401 is a number 4 bar and A1114 is a number 11 size bar.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

REINFORCING STEEL LIST AND ESTIMATED QUANTITIES
BRIDGE Nº JEF-7-1411
OVER LOGAN AVE.

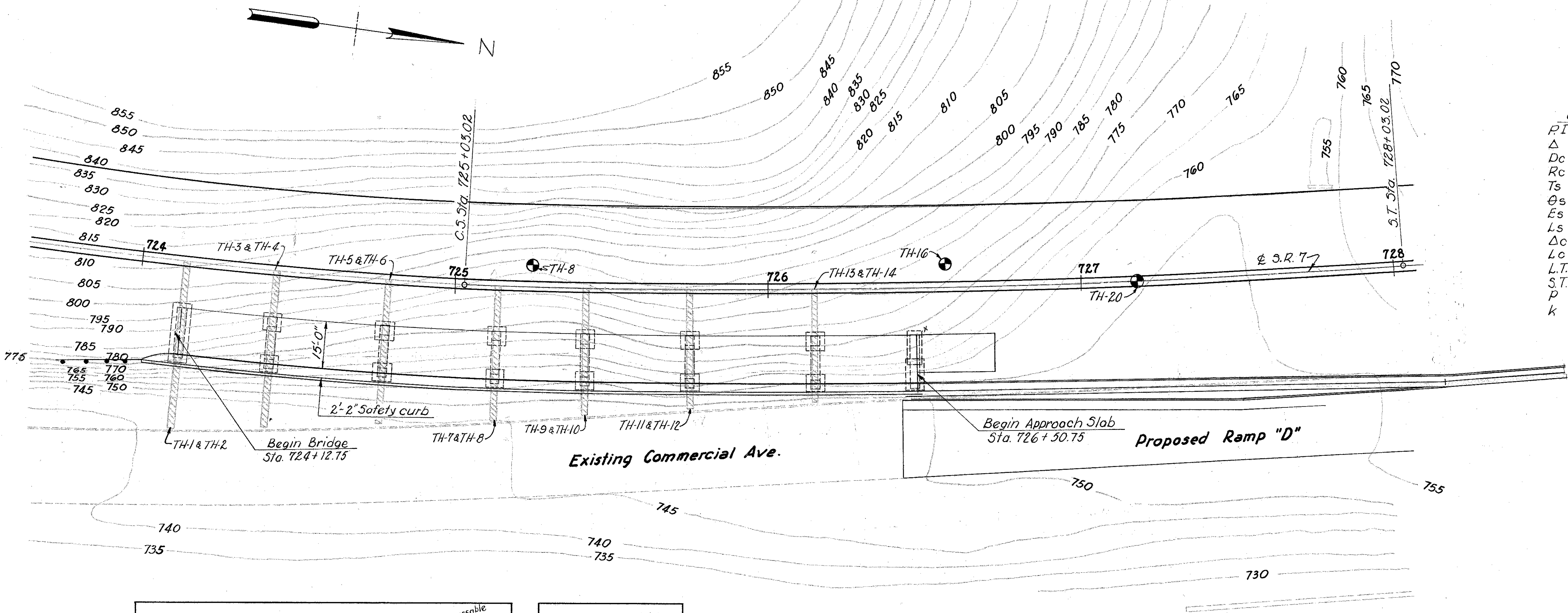
JEFFERSON COUNTY — STA. 713+75.00

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
J.D.R.		A.M.M.	JPW	E. Roberts 6-11-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

277
307

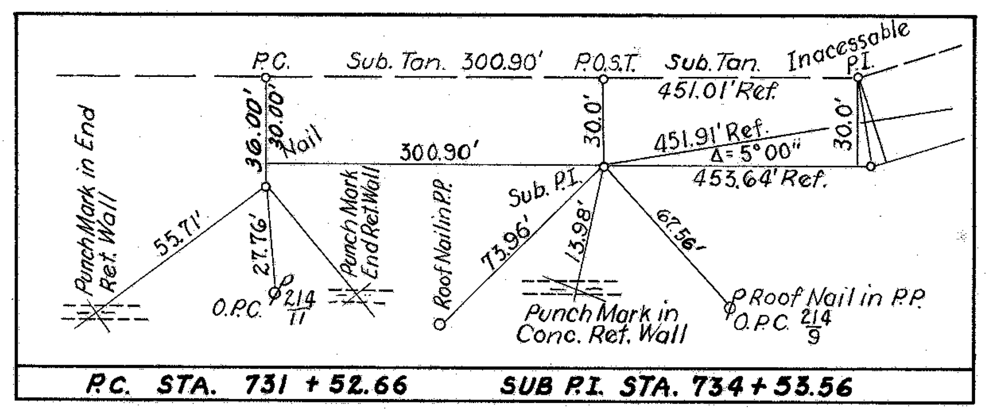
JEFFERSON COUNTY
JEF-7-13.53

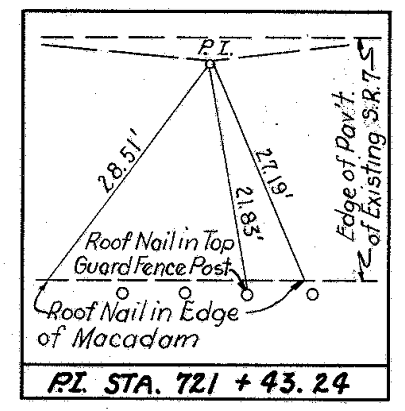


CURVE DATA
P.I. Sta. 721+43.24
Δ = 43°00'00" Lt.
Dc = 4°00'00"
Rc = 1432.39'
Ts = 715.22'
θs = 6°00'00"
Es = 109.94'
Ls = 300.00'
Δc = 31°00'00"
Lc = 775.00'
L.T. = 200.11'
S.T. = 100.10'
P = 2.62'
k = 149.95'

VERTICAL CURVE
P.V.I. Sta. 726+90.00
V.C. = 500'
Elevation = 761.89'
Correction = 2.25'
Grade = 764.14

-2.60% +1.00%





B.M. Sta. 728+50.00
R.R. Spike in P.Pole $\frac{2/4}{73}$
70' Rt.
Elevation 759.225

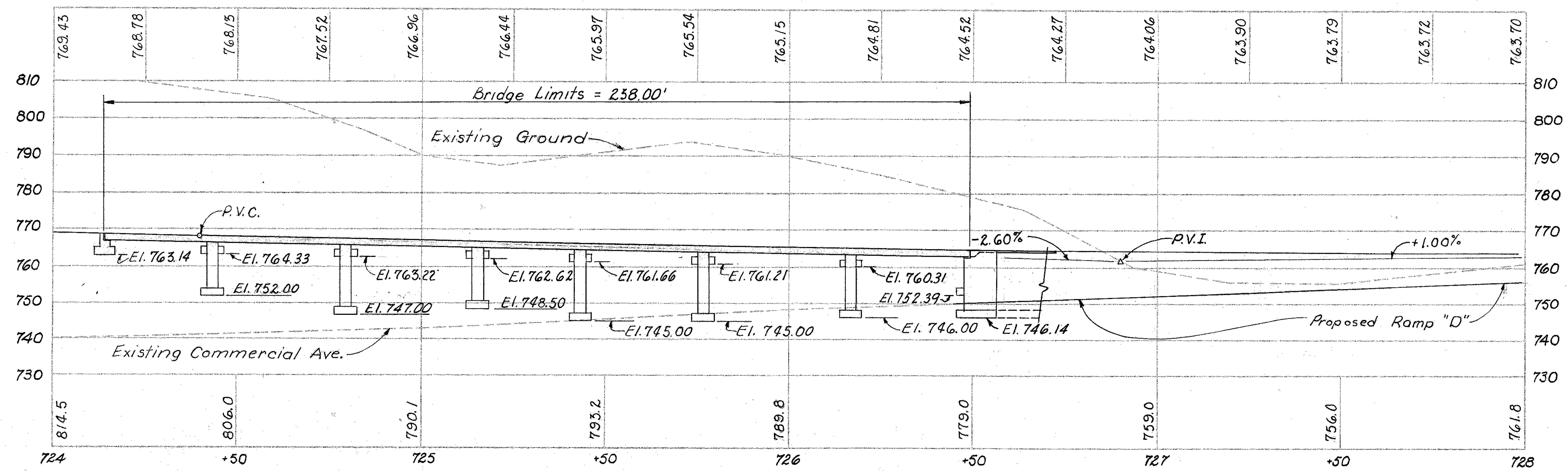
FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of borings and soil-samplings soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus, or in the Division office, but the state assumes no responsibility for the accuracy thereof.

Denotes Location of Stratigraphic Rock Section

Denotes Boring Locations

Proposed S.R.7 1976 A.D.T. 8400 (Northbound Lanes)

Revised 4-16-59
Revised 2-16-59



PROFILE ALONG CENTERLINE OF RELOCATED S.R.7

PROPOSED STRUCTURE

TYPE: Two continuous reinforced concrete Slabs, with reinforced concrete substructure.
SPANS: 28, 36, 36, 28; 32, 40, 32
ROADWAY: Structure portion is 15' with a 2'-2" safety curb.

LOAD FREQUENCY: C.F. = 2000 (57) Adequate for Alternate AASHO Loading
SKEW: None
WEARING SURFACE: 2½" Asphaltic Concrete
APPROACH SLAB: AS-1-54 (25' Long) North End only
ALIGNMENT: 4°00' curve, 300' spiral
SUPERELEVATION: Varies

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SITE PLAN
BRIDGE NO. JEF-7-1431
SIDE HILL STRUCTURE

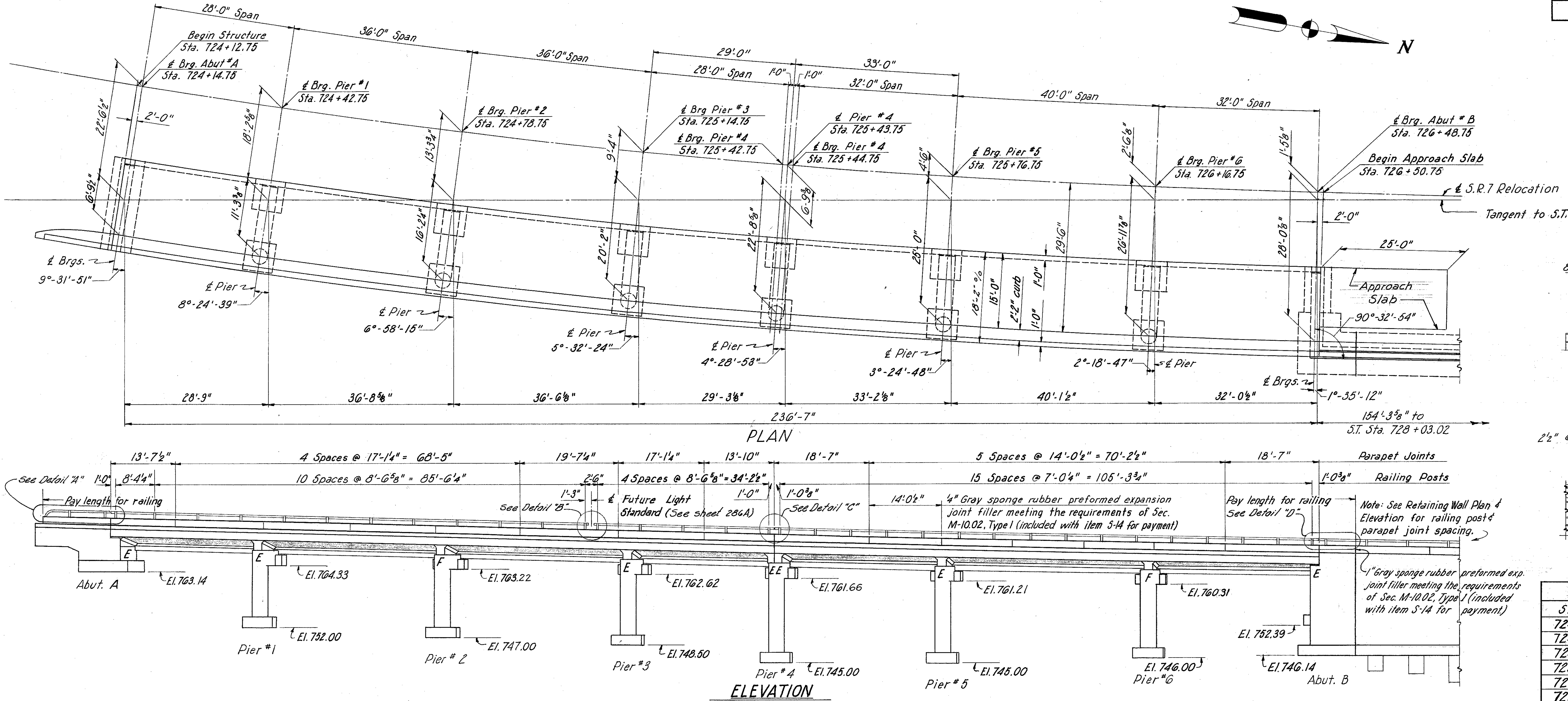
JEFFERSON COUNTY
STA. 724+12.75
STA. 726+50.75

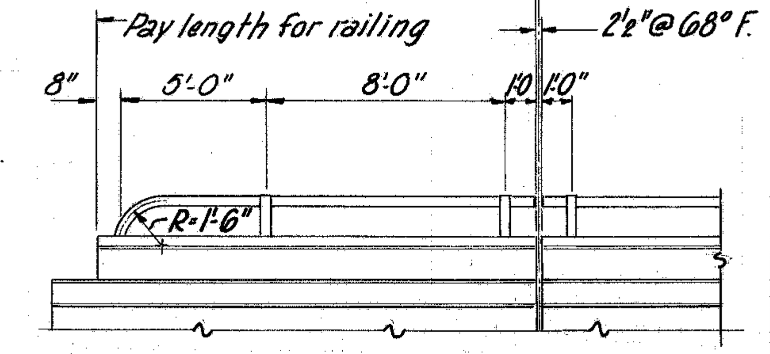
PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
	J.D.R.	J.D.R.	C.W.S.	G.G.	E.F.R. 6-10-59

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

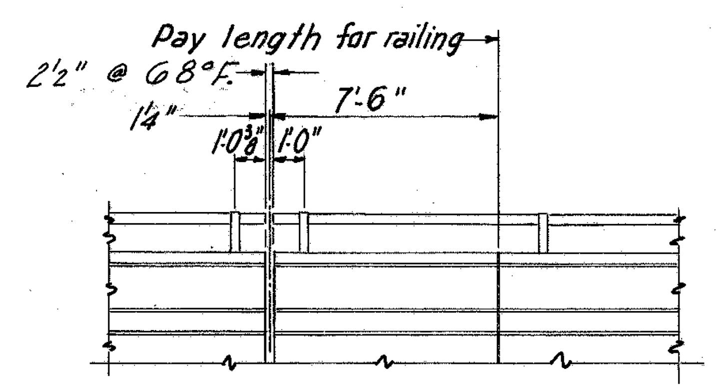
278 / 307

JEFFERSON COUNTY
JEF - 7 - 13.53



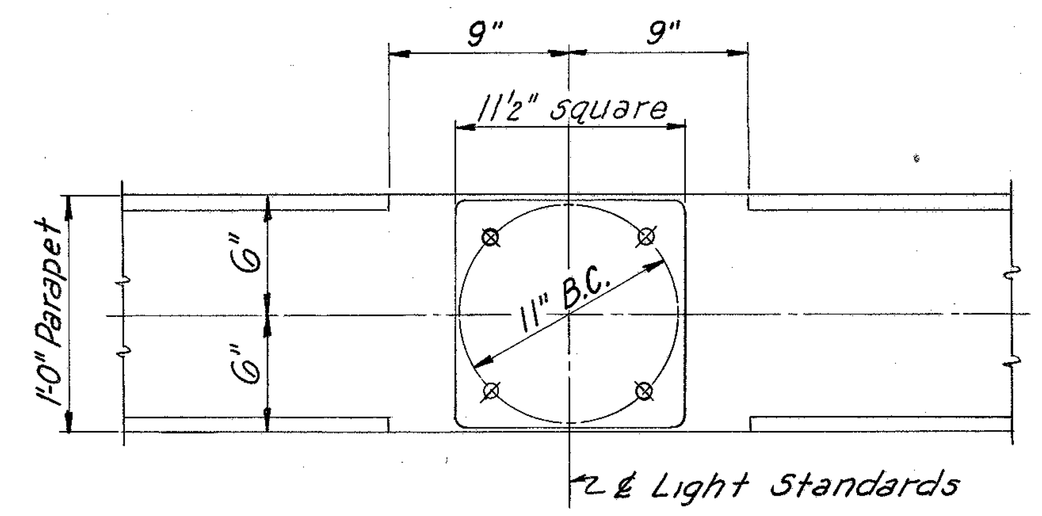


DETAIL A

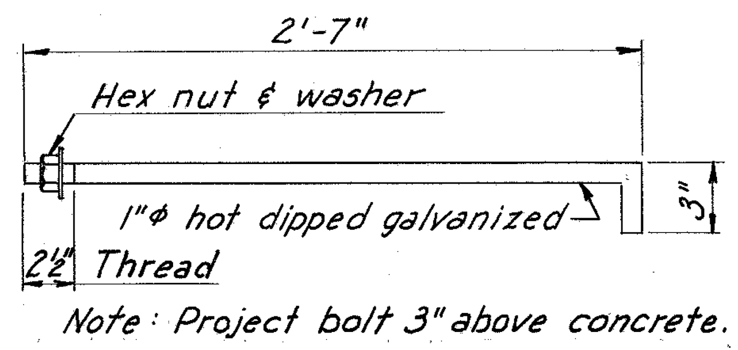


DETAIL D

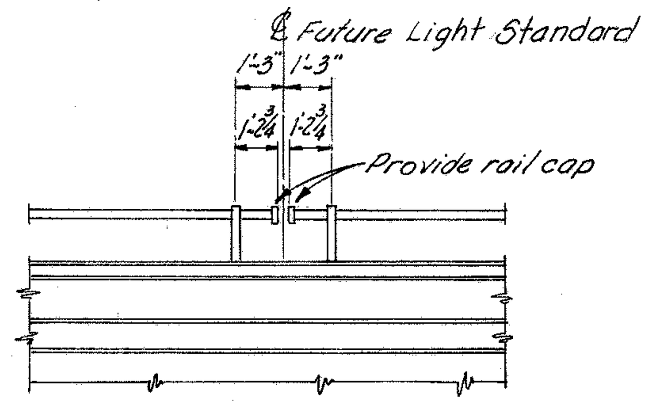
PAVEMENT ELEVATIONS			
STATION	P.G.	14.5 Rt ℄	Rt. Curb
724+25	768.78	769.64	770.63
724+50	768.13	768.99	769.98
724+75	767.52	768.38	769.37
725+00	766.96	767.80	768.77
725+25	766.44	767.24	768.16
725+50	765.97	766.71	767.56
725+75	765.54	766.21	766.98
726+00	765.15	765.76	766.46
726+25	764.81	765.35	765.98



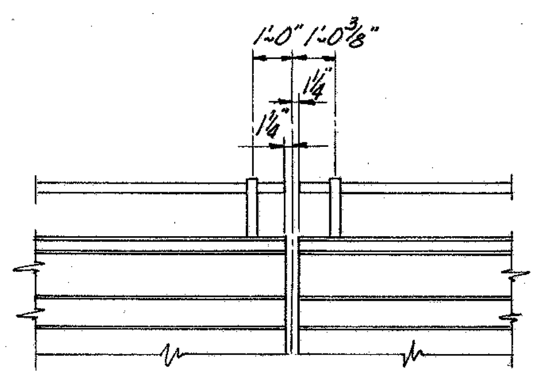
ANCHOR BOLT LAYOUT



LIGHT STANDARD
ANCHOR BOLT
4 Per Standard



DETAIL B



DETAIL C

GENERAL NOTES

- Reference shall be made to Standard Drawing AR-1-57, revised 2-2-59
- Design Specification: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways dated 9-1-57 together with current revisions thereof.
- Loading: CF 2000 (57) adequate for AASHO alernate loading.
- Welding of structural steel shall be class "A" except as otherwise shown (⊸B). Welds shown as field welds may, at the option of the contractor, be made in the shop.
- Foundation Bearing Pressure: Pier footings are designed for a maximum bearing pressure of 7.4 tons per sq. ft.
  Abutment A (South Abutment) footing is designed for 4.2 tons per sq. ft.
  Abutment B (North Abutment) footing is designed for 3.5 tons per sq. ft.
- Footings on rock shall extend a minimum of 3" into solid rock or to the elevation shown whichever is lower. The Engineer shall inspect the entire area and insure that excavation goes to bed rock. Prolonged exposure to atmospheric conditions shall be averted. The excavation shall be kept drained at all times.

GENERAL NOTES (CONT'D)

- Surface Finish of Concrete: The exposed area of the wingwall of the north Abutment shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of item S-1.
- ℄ Bearings for all Piers and Abutments are radial.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

GENERAL PLAN & ELEVATION
BRIDGE NO. JEF-7-1431
SIDE HILL STRUCTURE
JEFFERSON COUNTY — STATION 724+14.00 — STATION 726+49.50

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
C.E.G.	C.J.K.	C.J.K.	B.S.	E. Roberts 6-10-59	

NOTES:
- Concrete above bridge seat construction joint shall not be placed until after the deck slab is placed.
- POROUS BACKFILL, 2 feet thick, full length of abutment and wing shall extend up to the underside of approach pavement or shoulder pavement.
- All abutment concrete shall be Class "E". All parapet concrete shall be Class "C".
- Parapet concrete and reinforcing steel shall be included with Item S-14, Railing for payment.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ABUTMENT "A" & DETAILS
BRIDGE NO. JEF-7-1431
SIDE HILL STRUCTURE

STA. 724+12.75
JEFFERSON COUNTY STA. 726+50.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.G.	G.G.		P.M.	E. Roberts 6-12-59	10-25-61

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U 430 (14)	

280
307

JEFFERSON COUNTY
JEF-7-13.53

Legend:
N.F. Near Face
F.F. Far Face
E.F. Each Face

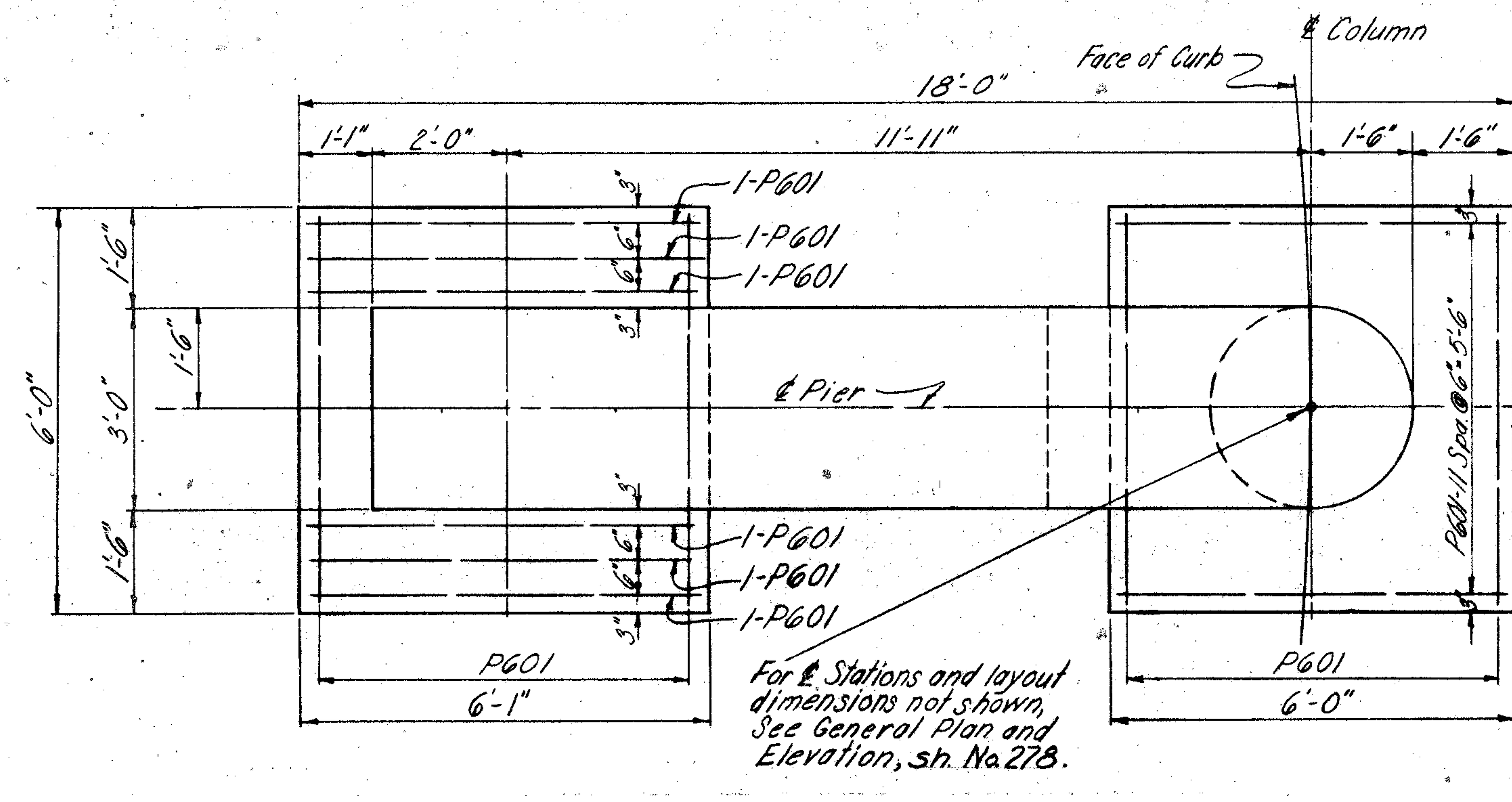
NOTES: Concrete above bridge seat construction joint shall not be placed until after the deck slab is placed.
- POROUS BACKFILL, 2 feet thick, full length of abutment and wingwall shall extend up to the underside of the approach slab or shoulder pavement.
- All abutment concrete shall be class "E".
All parapet concrete shall be class "C".
Parapet concrete and reinforcing steel shall be included with Item S-14, Railing for payment.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

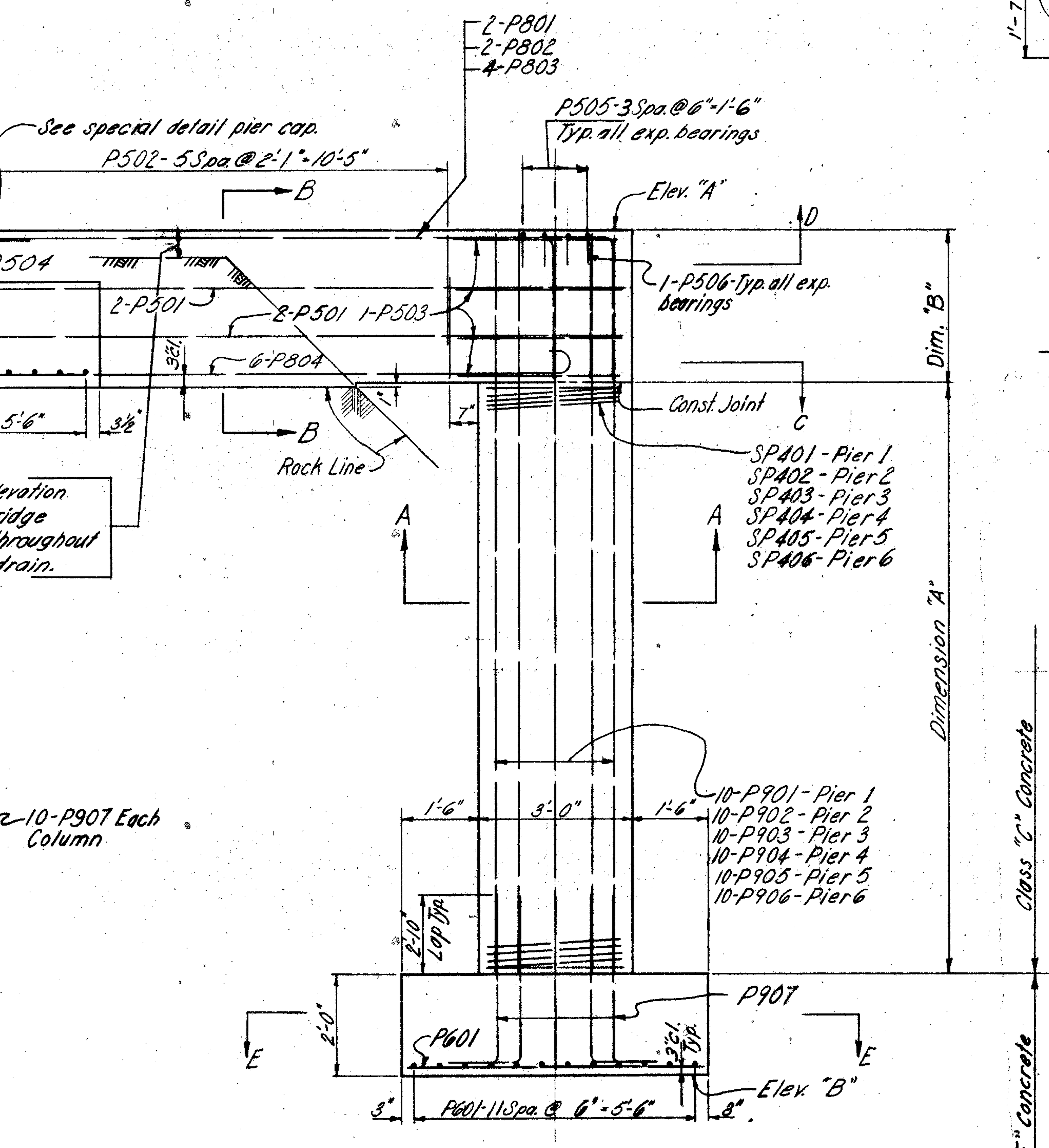
ABUTMENT "B" & DETAILS
BRIDGE NO. JEF-7-1431
SIDE HILL STRUCTURE
STA. 724+12.75
STA. 726+50.75
JEFFERSON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.G.	G.G.		J.W.	E. Roberts 2-10-59	

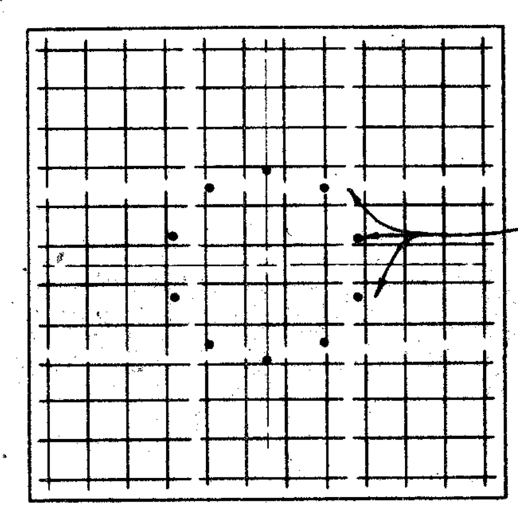
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY



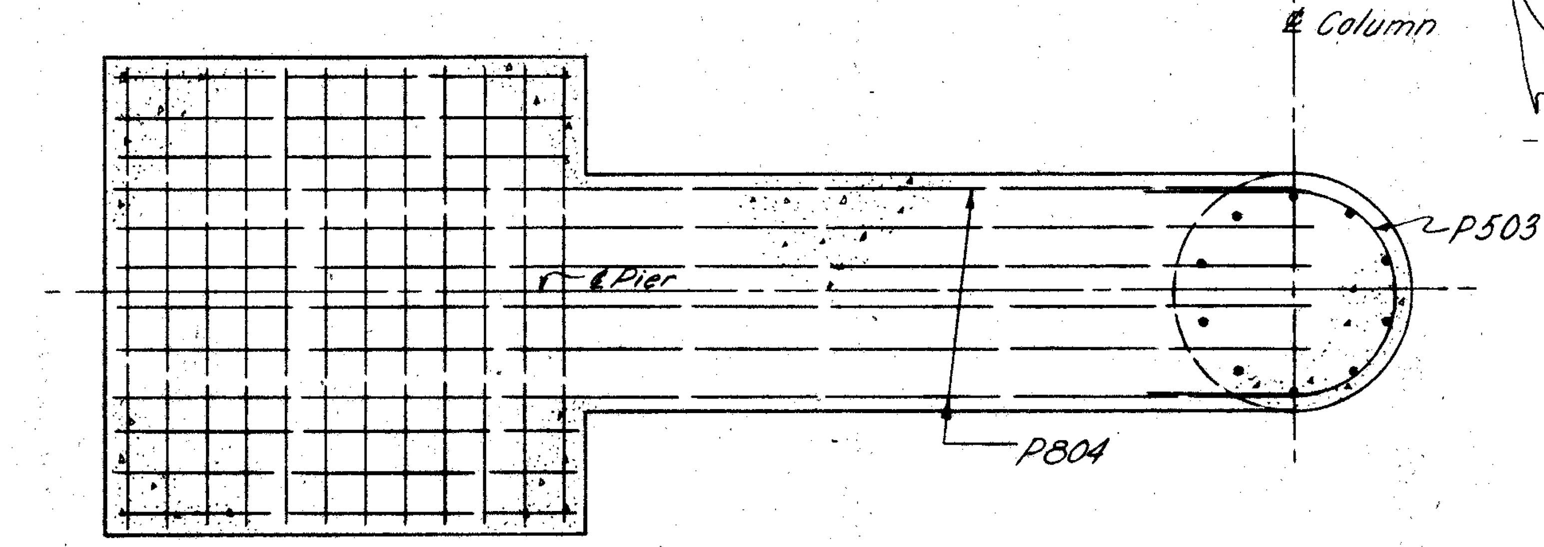
PLAN TYPICAL FOR ALL PIERS



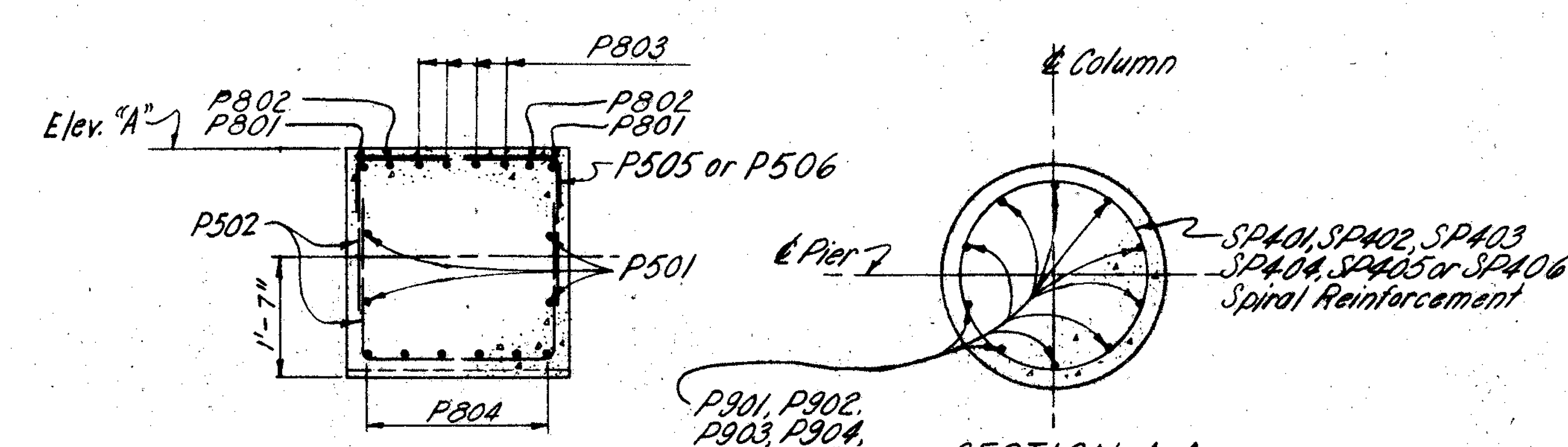
ELEVATION



SECTION E-E

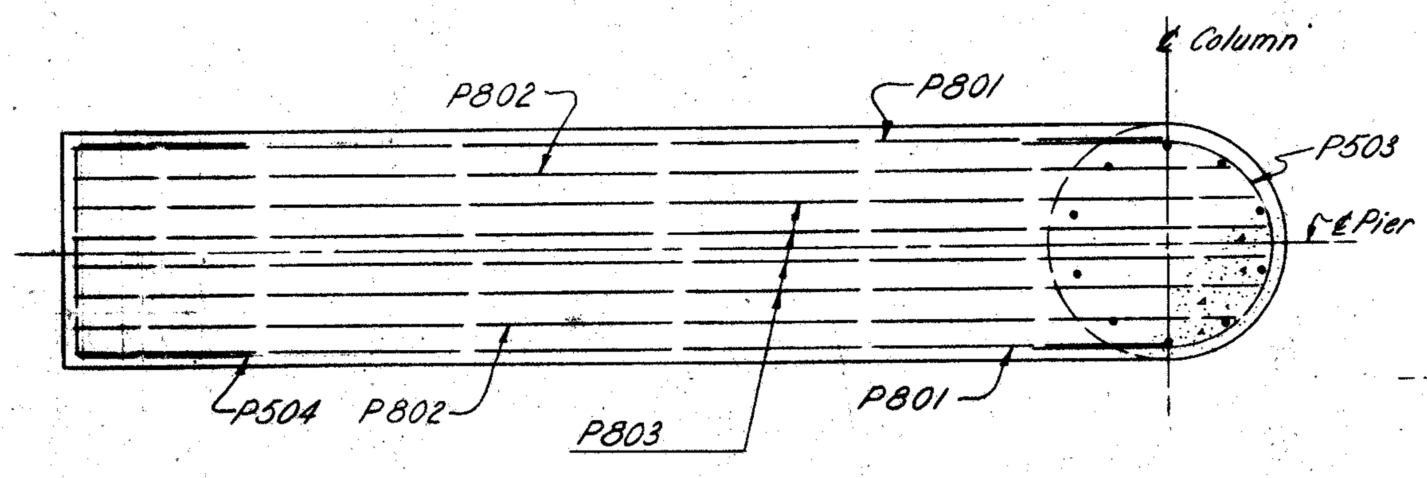


SECTION C-C

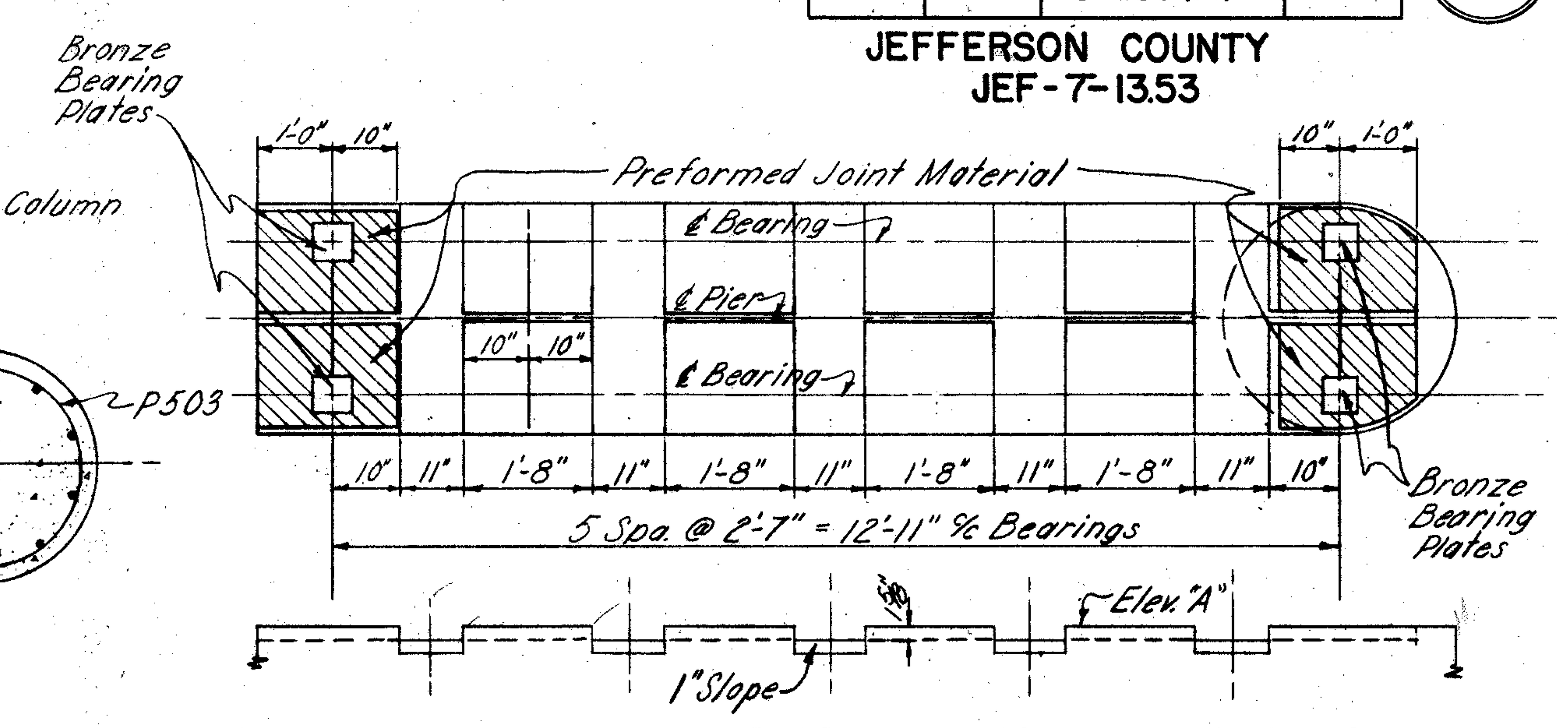


SECTION B-B

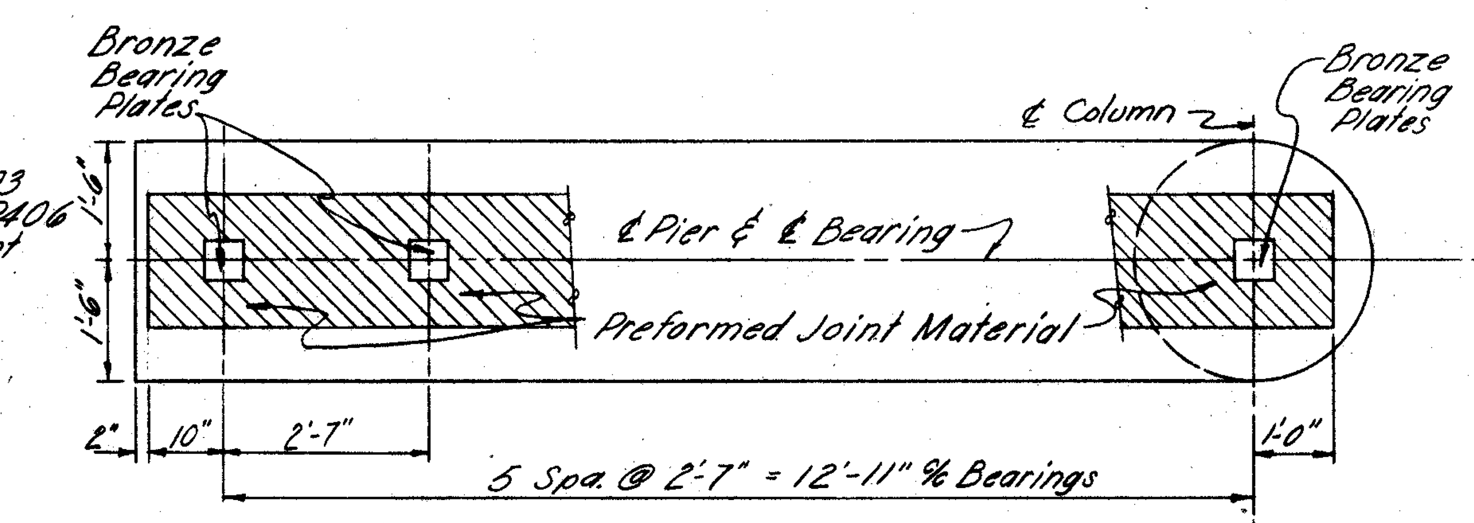
SECTION A-A



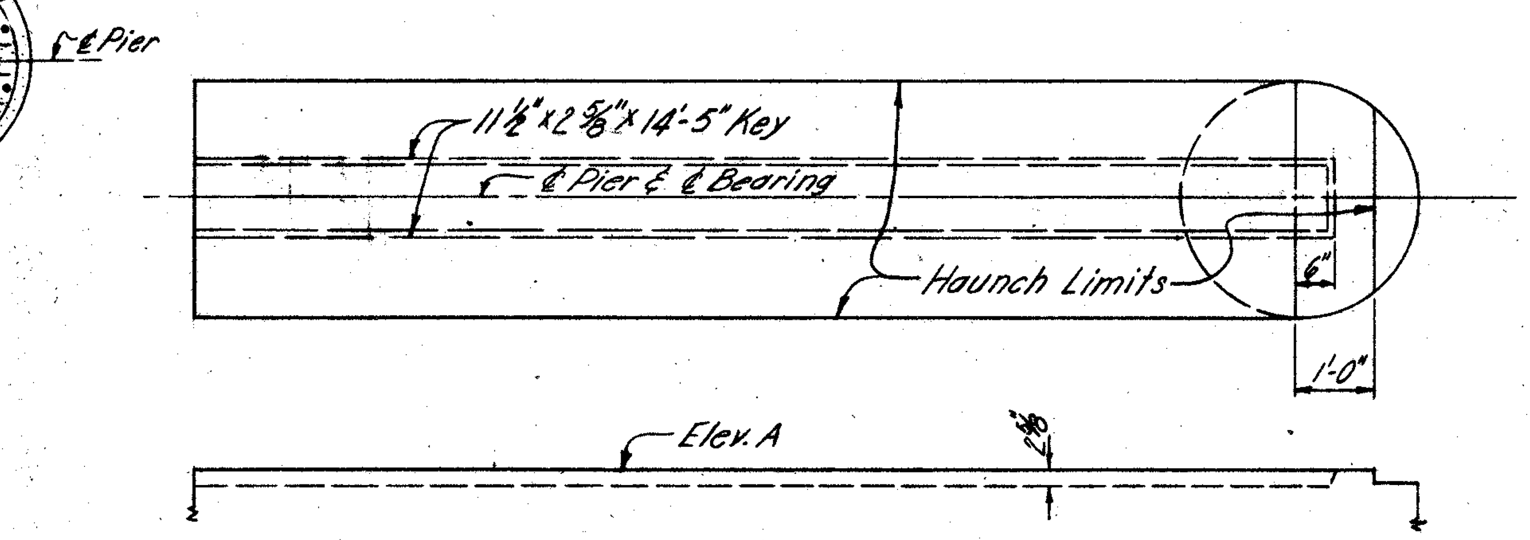
SECTION D-D



PLAN & PART ELEVATION OF PIER CAP, TYPICAL FOR PIER 4



PIER CAP PLAN, TYPICAL FOR PIERS 1, 3, 5 (Exp. Piers)



PLAN & PART ELEVATION OF PIER CAP, TYPICAL FOR PIERS 2, 6 (Fixed Piers)

	ELEVATION "A"	ELEVATION "B"	DIMENSION "A"	DIMENSION "B"
Pier 1	767.41	752.00	10'-4 7/8"	3'-0"
Pier 2	766.52	747.00	14'-3 5/8"	3'-2 5/8"
Pier 3	765.70	748.50	12'-2 3/8"	3'-0"
Pier 4	764.96	745.00	14'-8 3/8"	3'-2 3/8"
Pier 5	764.29	745.00	14'-3 1/2"	3'-0"
Pier 6	763.61	746.00	12'-4 5/8"	3'-2 3/8"

Note: See Sheet # 286A for electrical ground at Pier # 2.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

PIER DETAILS

BRIDGE NO. JEF-7-1431
SIDE HILL STRUCTURE

JEFFERSON COUNTY
STA. 724+12.75
STA. 726+50.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
B.S.	C.M.		G.G.	E. Roberts 6-10-69	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	
2	OHIO	U-430 (14)		282 / 307

JEFFERSON COUNTY
JEF-7-13.53

Note: All longitudinal bar spacing and dimentions given are along outside edge of slab unless otherwise noted.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUPERSTRUCTURE DETAILS
BRIDGE NO. JEF-7-1431
SIDE HILL STRUCTURE

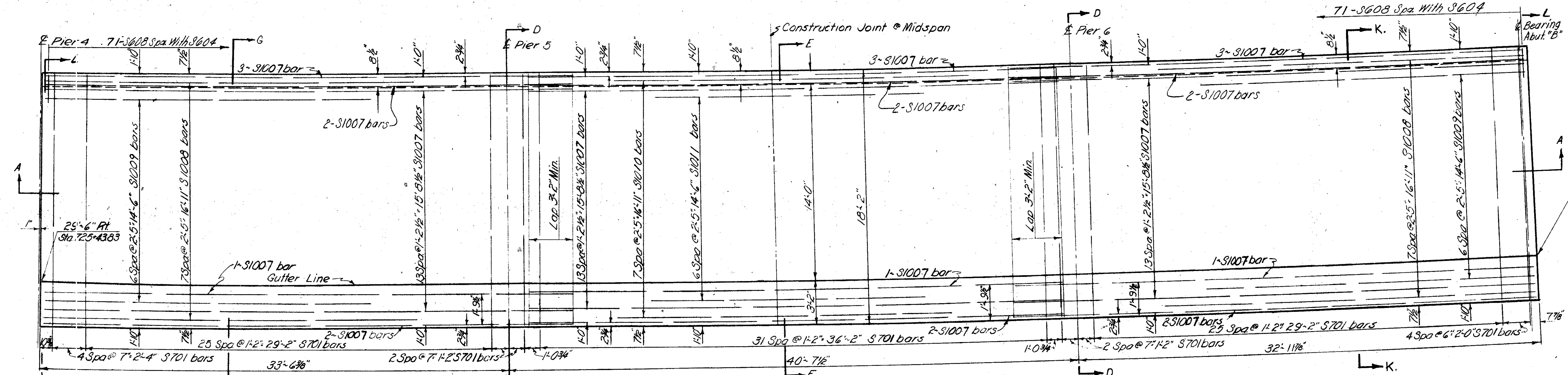
JEFFERSON COUNTY
STA. 724+12.75
STA. 726+50.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
C.E.G.	C.M.		B.S.	E. Roberts 6-10-59	

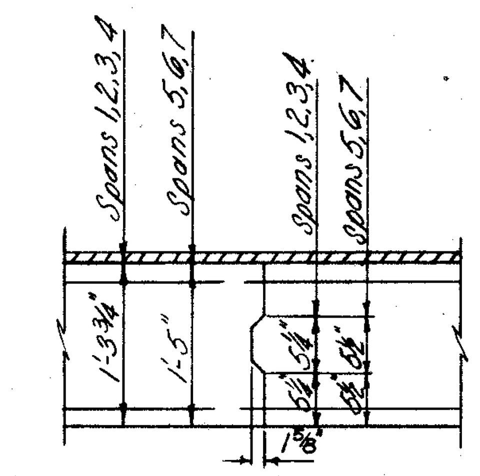
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(14)	

283
307

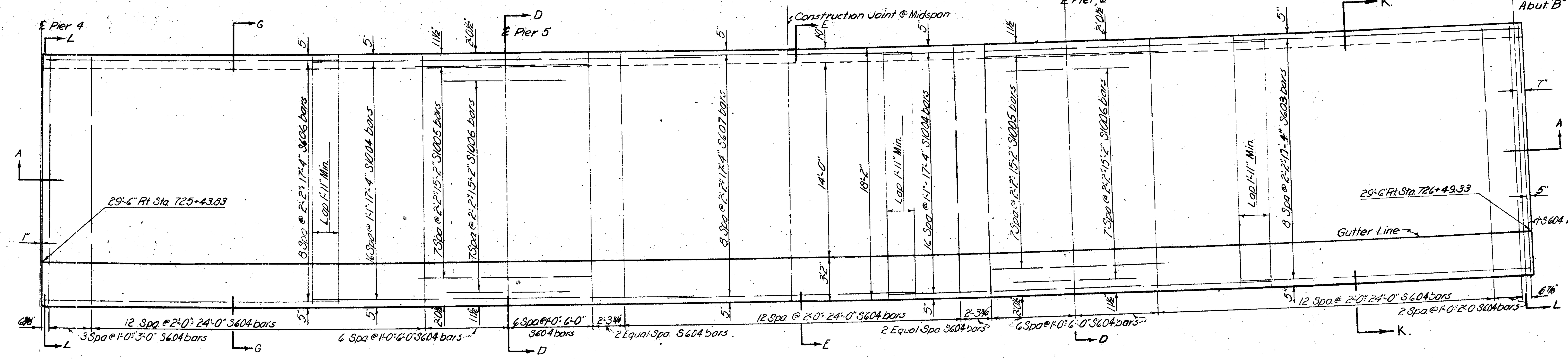
JEFFERSON COUNTY
JEF-7-13.53



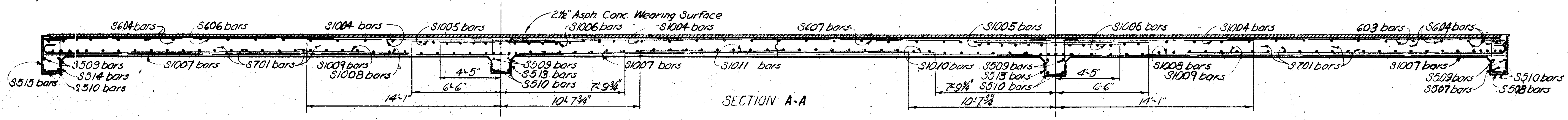
STEEL IN BOTTOM OF SLAB



CONSTRUCTION JOINT

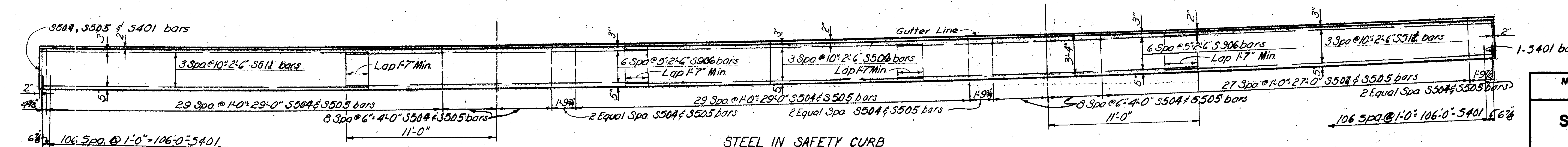


STEEL IN TOP OF SLAB



SECTION A-A

Note: All longitudinal bar spacing and dimensions given are along outside edge of slab unless otherwise noted.



STEEL IN SAFETY CURB

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUPERSTRUCTURE DETAILS

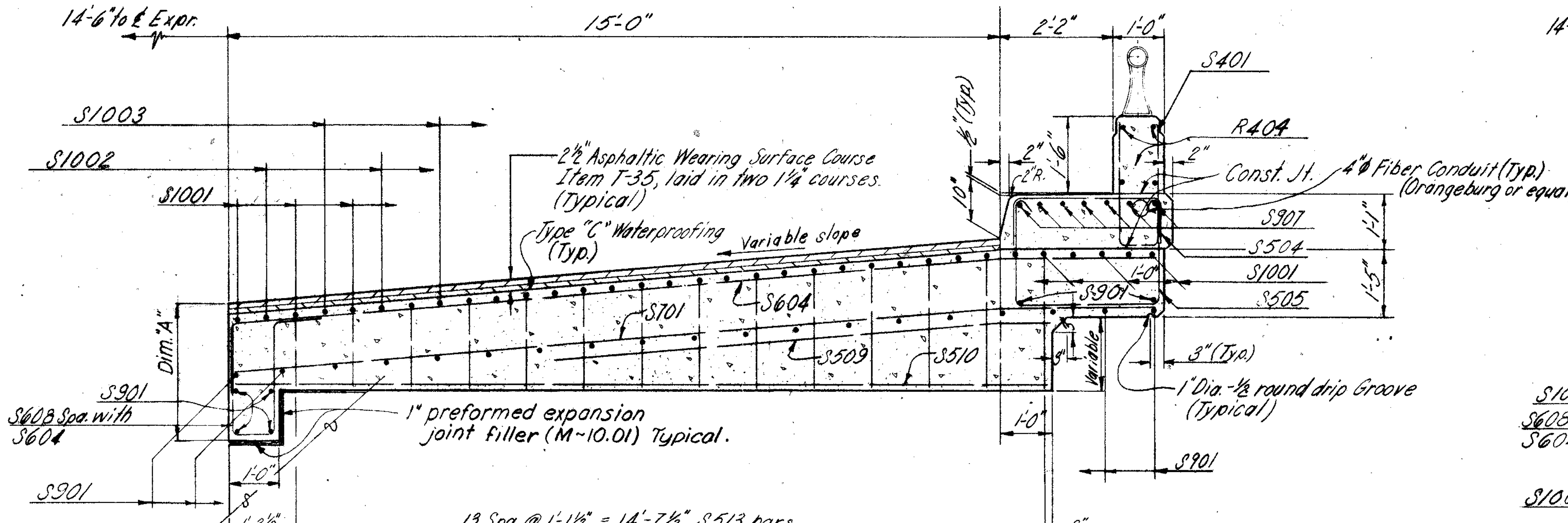
BRIDGE NO. JEF-7-14.31
SIDE HILL STRUCTURE
STA. 724+12.75
STA. 726+50.75
JEFFERSON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
C.E.G.	C.M.		B.J.	E. Roberts 6-10-59	

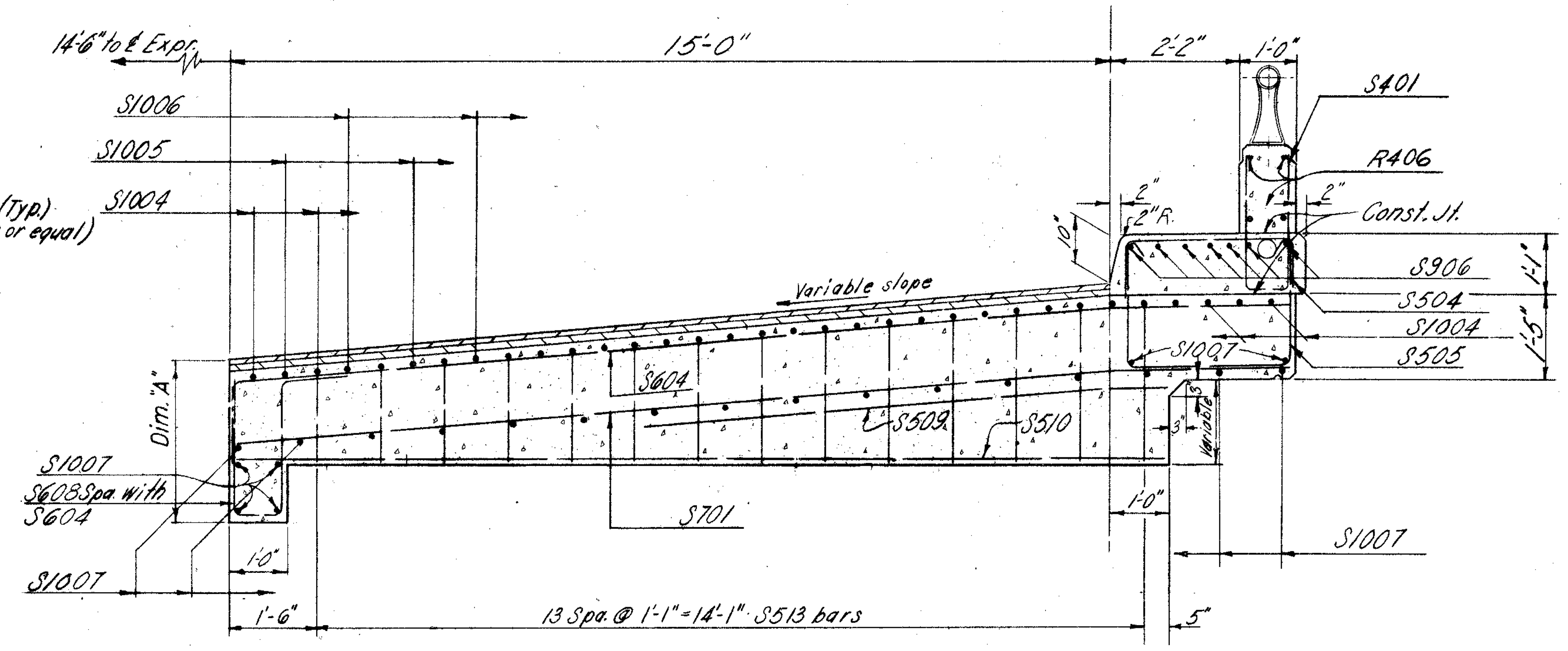
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

284
307

JEFFERSON COUNTY
JEF.-7-13.53



SECTION B-B

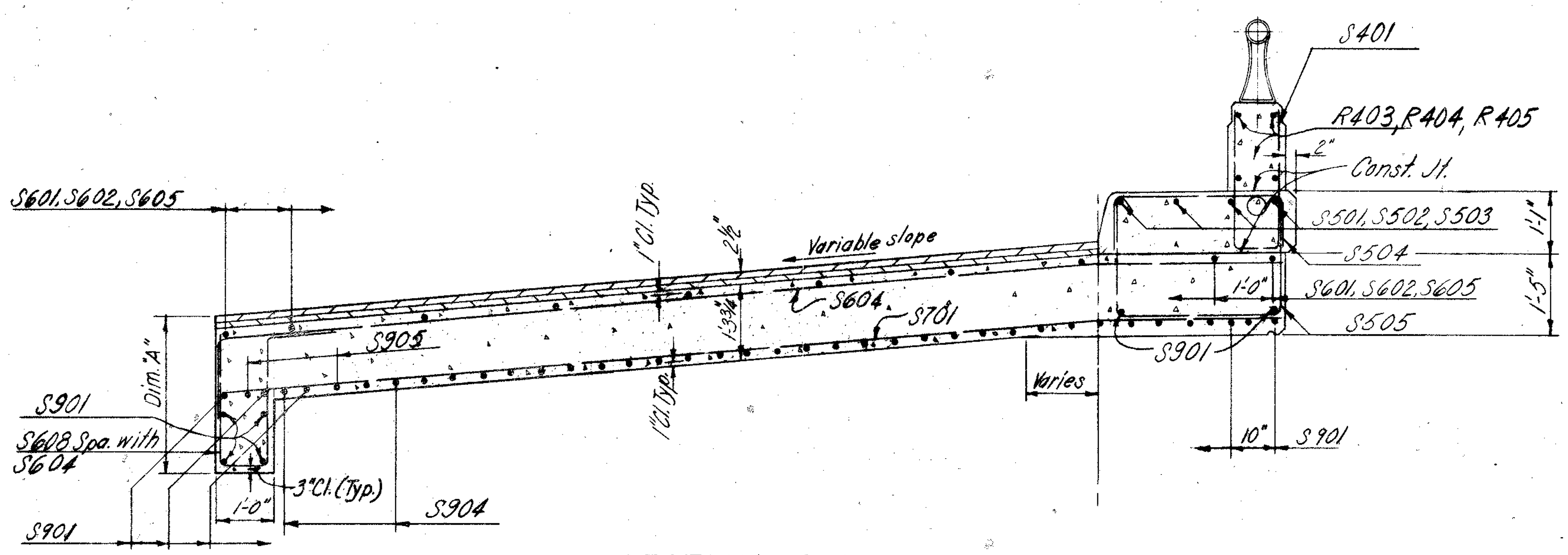


SECTION D-D

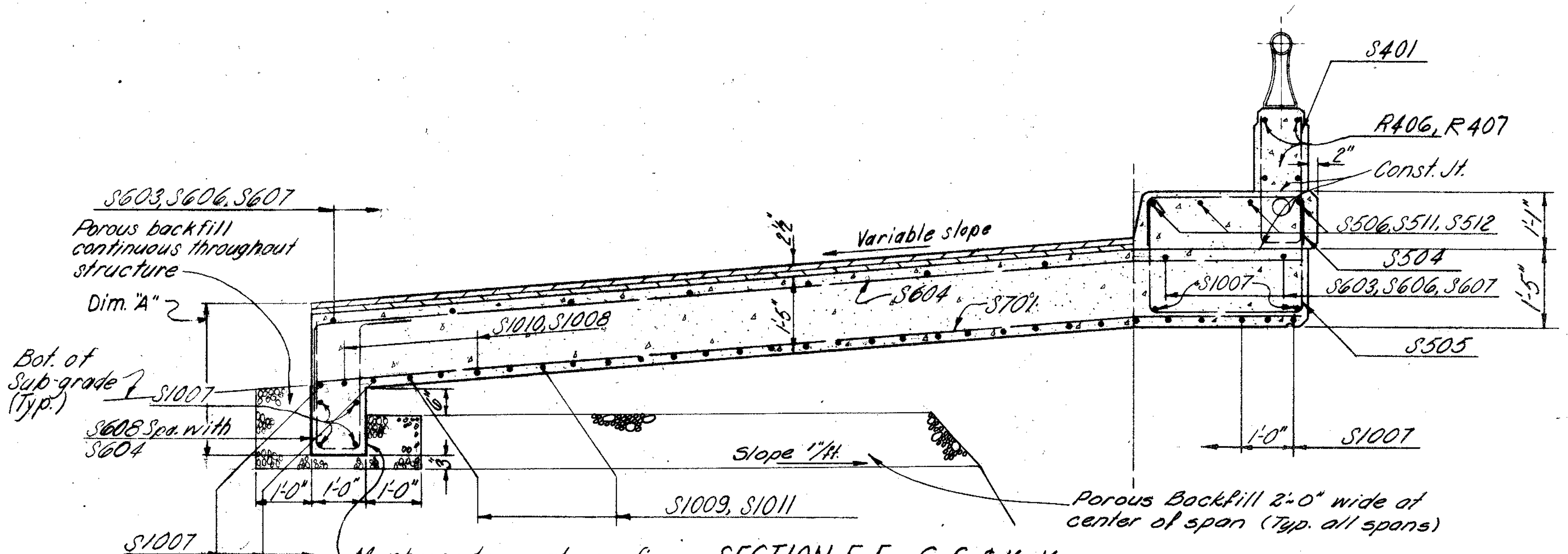
NOTES:
Refer to standard drawing AR-1-57, revised 2-2-59, for Aluminum Railing (Type "A") and concrete parapet.

Camber of 1/800 of the span shall be provided in each span (in addition to any required for conformance with the profile of the highway) to allow for dead load deflection. This is the amount of camber required before false work is released. To obtain this, proper allowance shall be made for the deflection of falsework members.

Concrete and reinforcing steel above parapet construction joint included with item 5-14, Railing, for payment.

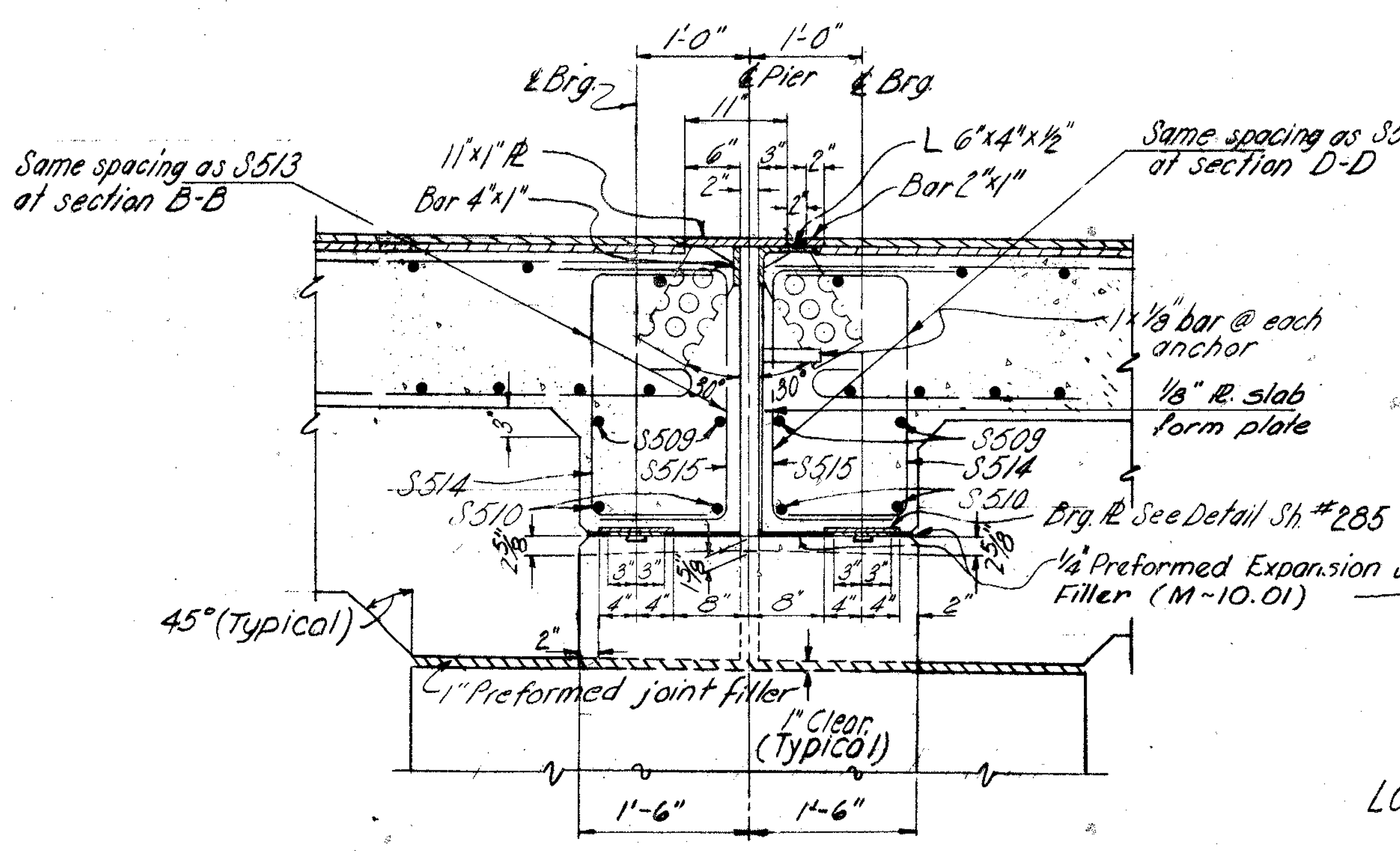


SECTION C-C, H-H & J-J

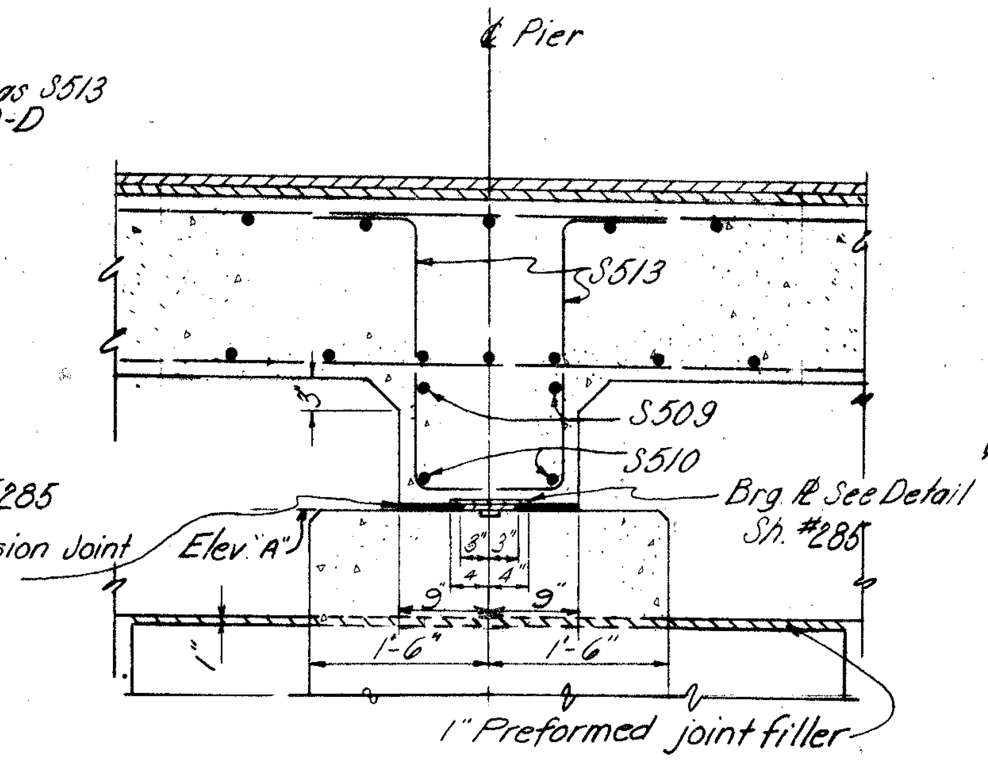


Membrane type waterproofing to be placed inside of the forms to prevent leakage of grout and formation of fins. (M 10.19) (Typical)
(To be included with Class "C" concrete, superstructure for payment.)

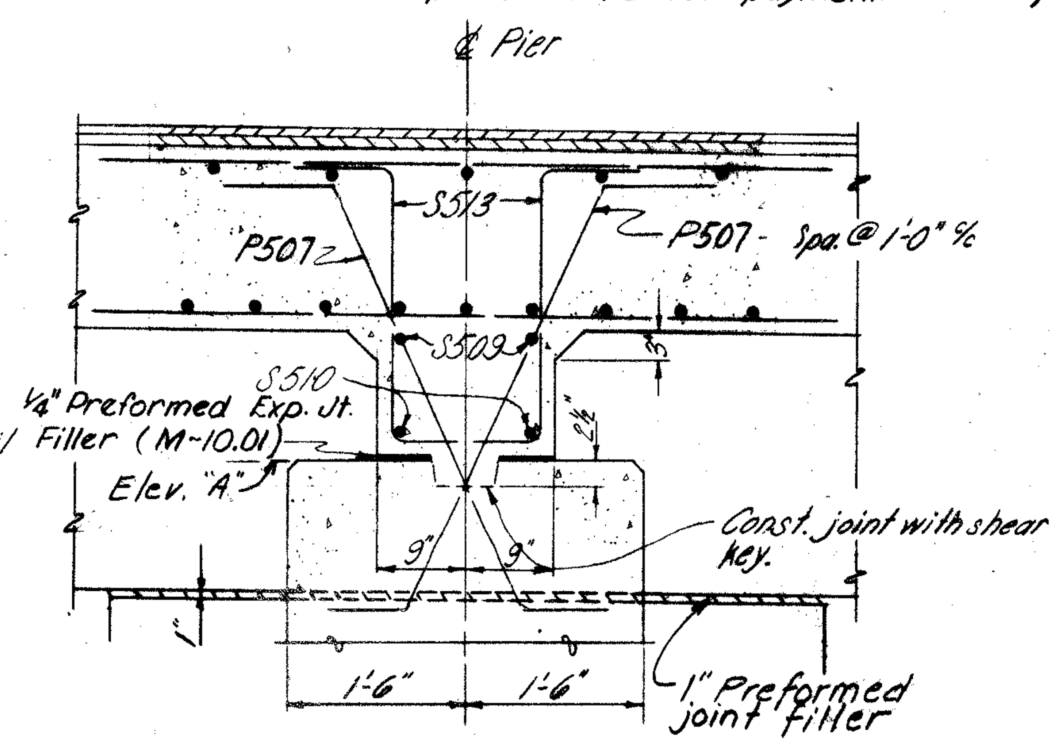
SECTION E-E, G-G & K-K



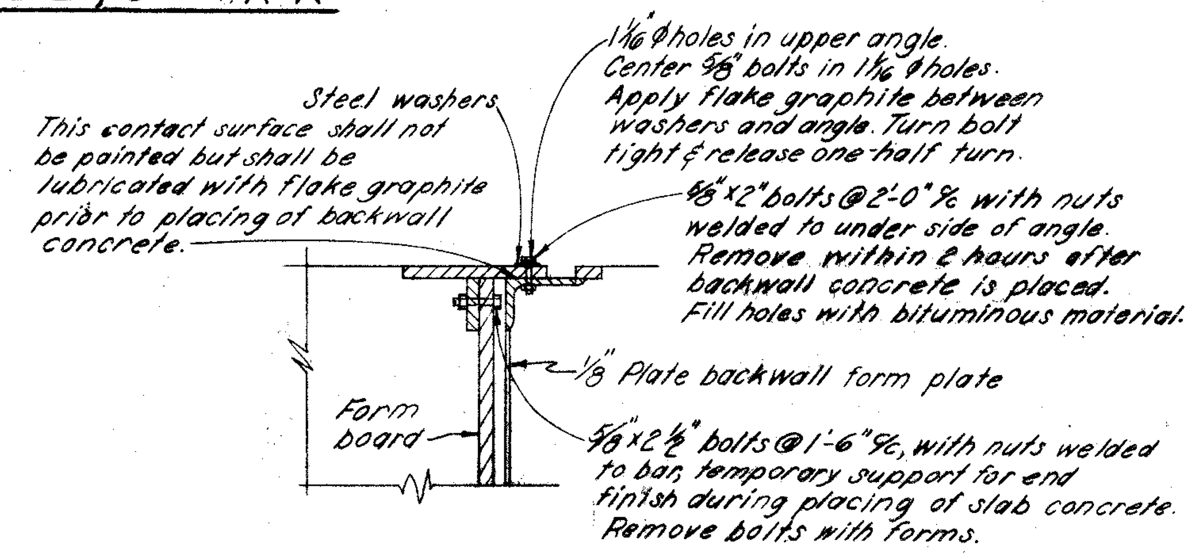
BRIDGE SLAB END FINISH @ PIER 4



LONGITUDINAL SECTION @ EXP. PIERS 1,3 & 5.



LONGITUDINAL SECTION @ FIXED PIERS 2 & 6



END FINISH DETAILS
(Typical all end finish locations. See end finish detail on sht. No. 285.)

ABUT. NO.	SPAN NO.	PIER NO.	DIMENSION "A"
"A"	1,2,3 & 4	1 & 3	2'-8¼"
		2	2'-10⅞"
"B"	5,6 & 7	5	2'-9½"
		4 & 6	3'-0⅛"

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUPERSTRUCTURE DETAILS
BRIDGE NO. JEF.-7-1431
SIDE HILL STRUCTURE
STA. 724+12.75
STA. 726+50.75
JEFFERSON COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
C.E.G.	C.M.		B.S.	E. Roberts 6-10-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

285
307

JEFFERSON COUNTY
JEF-7-13.53

NOTE: Bronze bearing plates are included with Item S-9, Structural Steel Expansion and Contraction Joints, for payment.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

END FINISH & BEARING DETAILS

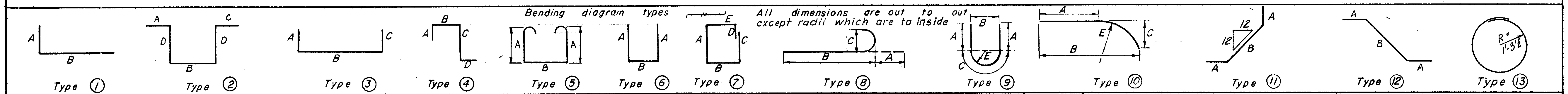
BRIDGE NO. JEF-7-1431
SIDE HILL STRUCTURE

JEFFERSON COUNTY
STA. 724+12.75
STA. 726+50.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
B.S.	C.M.		G.G.	E. Roberts 6-10-59	

REINFORCING STEEL BAR SCHEDULE

Bending diagram types — All dimensions are out to out except radii which are to inside



ABUTMENTS

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A401	17	4	4'-10"	6	2'-3"	0'-6½"				55
A501	9	5	7'-10"	1	4'-4"	3'-8"				74
A502	7	5	3'-0"	Str.						22
A503	15	5	17'-7"	Str.						275
A504	13	5	5'-10"	3	0'-6"	4'-1"	1'-6"			79
A505	4	5	9'-3"	Str.						39
A506	3	5	11'-2"	Str.						35
A507	1 Set of 9 bars	5	7'-10" to 9'-10"	7	"A"*	0'-11"	"A"*	0'-6"	0'-11"	83
A508	8	5	5'-0"	3	0'-6"	2'-3"	2'-6"			42
A509	7	5	8'-2"	6	3'-8"	1'-1"				60
A510	10	5	3'-3"	Str.						34
A511	14	5	6'-3"	Str.						91
A512	2	5	11'-4"	6	5'-7"	0'-5"				24
A513	24	5	3'-1"	6	0'-6"	2'-4"				77
A514	2	5	16'-0"	10	4'-2"	15'-9"	2'-5"		29'-8¾"	33
A515	12	5	5'-2"	6	1'-5"	2'-7"				65
A516	2 Sets of 5 bars	5	5'-0" to 5'-2"	6	1'-5"	"B"				53
A517	2 Sets of 6 bars	5	3'-1" to 4'-9"	6	1'-5"	"C"				49
A518	4	5	9'-8"	Str.						40
A519	4	5	15'-9"	Str.						66
A520	2	5	14'-0"	Str.						29
A521	24	5	3'-7"	6	0'-6"	2'-10"				89
A522	10	5	11'-2"	11	1'-7"	8'-0"				116
A523	3	5	17'-6"	Str.						56
A524	2	5	4'-6"	6	2'-1½"	0'-6"				9
A525	2	5	2'-10"	Str.						6
A526	12	5	6'-1"	6	1'-9"	2'-10"				76
A527	2	5	14'-5"	Str.						30
A528	2	5	14'-0"	Str.						29
A529	8	5	12'-11"	Str.						118
A530	10	5	10'-0"	Str.						104
A531	4	5	14'-5"	Str.						60
A532	6	5	8'-3"	Str.						52
A533	5	5	4'-0"	Str.						21
A534	9	5	3'-6"	Str.						32
A535	7	5	8'-8"	Str.						63
A536	10	5	7'-10"	Str.						82
A537	6	5	5'-5"	Str.						34
A538	5	5	5'-0"	1	1'-7"	3'-7"				26
A539	4	5	7'-1"	1	1'-7"	5'-9"				30
A540	8	5	8'-2"	Str.						68
A541	2	5	7'-4"	Str.						15
A542	14	5	8'-7"	Str.						126
A543	1	5	7'-6"	Str.						8
A544	21	5	9'-0"	Str.						197
A545	16	5	8'-5	Str.						140
A546	6	5	7'-0"	Str.						44
A601	1 Set of 15 bars	6	8'-11" to 10'-8"	7	"D"	1'-4"	"E"	"F"	0'-10"	221
A602	9	6	5'-5"	Str.						73
A603	9	6	4'-3"	Str.						57
A604	12	6	5'-9"	Str.						104
A701	12	7	6'-1"	1	2'-3"	4'-0"				149
A702	5	7	7'-5"	Str.						76
A703	2	7	10'-8"	Str.						44
A704	3	7	17'-9"	Str.						109
A705	2	7	14'-8	Str.						60
A801	4	8	6'-6"	1	2'-6"	4'-3"				69
A802	3	8	9'-6"	1	2'-6"	7'-3"				76
A803	4	8	14'-8"	Str.						156

Abutment continued top of sheet

SPIRAL BARS

MARK	TOTAL	SIZE	LENGTH	PITCH	NO. TURNS	CORE DIA.	WEIGHT
SP401	1	½"φ	10'-5"	4½"	31	32	199
SP402	1	½"φ	14'-6"	4½"	42	32	271
SP403	1	½"φ	12'-2"	4½"	36	32	232
SP404	1	½"φ	14'-9"	4½"	42	32	271
SP405	1	½"φ	14'-4"	4½"	41	32	265
SP406	1	½"φ	12'-7"	4½"	37	32	239
					Total Weight		1477

ABUTMENTS (CONTINUED)

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A804	6	8	5'-9"	Str.						92
R401	4	4	14'-4"	Str.	Included with railing					
R402	4	4	7'-4"	Str.	for payment					
							Total Weight			4242

PIERS

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P501	24	5	14'-10"	Str.						371
P502	72	5	6'-9"	6	2'-2"	2'-8"				507
P503	24	5	7'-3"	9	1'-7"	2'-8"	4'-1¼"		1'-3⅜"	181
P504	6	5	5'-7"	6	1'-7"	2'-8"				35
P505	92	5	3'-3"	6	0'-6"	2'-6"				312
P506	4	5	2'-9"	6	0'-6"	2'-0"				11
P507	28	5	4'-6"	12	1'-0"	3'-8"				131
P601	252	6	5'-8"	Str.						2145
P801	12	8	18'-9"	3	2'-7"	13'-9"	2'-10"			601
P802	12	8	19'-8"	3	2'-7"	14'-8"	2'-10"			630
P803	24	8	19'-11"	3	2'-7"	14'-11"	2'-10"			1276
P804	36	8	16'-3"	8	1'-1"	15'-2"	0'-9"			1562
P901	10	9	13'-3"	Str.						451
P902	10	9	17'-4"	Str.						589
P903	10	9	15'-0"	Str.						510
P904	10	9	17'-7"	Str.						598
P905	10	9	17'-1"	Str.						581
P906	10	9	15'-5"	Str.						524
P907	60	9	5'- "	1	1'-6"	4'-6"				1173
							Total Weight			12,188

SUPERSTRUCTURE

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S401	254	4	4'-10"	6	2'-3"	0'-6½"				820
S501	4	5	20'-6"	Str.						86
S502	4	5	20'-9"	Str.						87
S503	8	5	19'-4"	Str.						162
S504	284	5	4'-1"	6	0'-10"	2'-8"				1209
S505	284	5	7'-8"	5	2'-1"	2'-8"				2271
S506	4	5	21'-10"	Str.						91
S507	1 Set of 14 bars	5	3'-4" to 3'-10½"	6	1'-0"	"G"				52
S508	1 Set of 14 bars	5	3'-11" to 4'-5½"	3	1'-0"	"G"	1'-7"			61

Superstructure continued top of sheet

SUPERSTRUCTURE (CONTINUED)

MARK	TOTAL	SIZE	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S509	18	5	10'-0"	Str.						189
S510	18	5	15'-8"	Str.						294
S511	4	5	23'-11"	Str.						100
S512	4	5	23'-5"	Str.						98
S513	5 Sets, 14 ea. Set	5	5'-5½" to 7'-1"	2	1'-0"	1'-2"	1'-0"	"H"		458
S514	3 Sets, 14 ea. Set	5	3'-0" to 4'-2"	6	1'-0"	"J"				163
S515	3 Sets, 14 ea. Set	5	3'-10" to 4'-9"	3	1'-0"	"J"	1'-7"			188
S601	10	6	16'-10"	Str.						252
S602	20	6	14'-8"	Str.						440
S603	9	6	20'-8"	Str.						279
S604	160	6	19'-5"	1	1'-11"	17'-10"				4667
S605	10	6	17'-1"	Str.						257
S606	9	6	21'-4"	Str.						288
S607	9	6	18'-0"	Str.						243
S608	160	6	6'-7"	4	2'-3"	0'-7"	2'-3"	1'-11"		1582
S701	225	7	17'-10"	Str.						8201
S901	100	9	35'-2"	Str.						11,958
S902	18	9	25'-1"	8	1'-3"	23'-10"	0'-11¼"			1535
S903	18	9	22'-1"	8	1'-3"	20'-10"	0'-11¼"			1352
S904	18	9	23'-4"	Str.						1428
S905	18	9	18'-2"	Str.						1112
S906	14	9	22'-0"	Str.						1047
S907	21	9	20'-8"	Str.						1476
S1001	51	10	27'-2"	Str.						5962
S1002	24	10	12'-11"	Str.						1334
S1003	24	10	8'-10"	Str.						912
S1004	34	10	27'-5"	Str.						4010
S1005	16	10	12'-5"	Str.						856
S1006	16	10	8'-10"	Str.						608
S1007	66	10	37'-9"	Str.						10,723
S1008	16	10	28'-0"	8	1'-5"	26'-7"	1'-0½"			1928
S1009	14	10	24'-11"	8	1'-5"	23'-6"	1'-0½"			1502
S1010	8	10	25'-0"	Str.						861
S1011	7	10	19'-4"	Str.						581
R403	4	4	13'-3"	Str.	Included with					
R404	20	4	16'-9"	Str.	railing for payment					
R405	7	4	19'-3"	Str.	"					
R406	24	4	13'-6"	Str.	"					
R407	8	4	18'-3"	Str.	"					
							Total Weight			71,723

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPERSTR.	ABUTS.	PIERS	GENERAL		
E-2	334	C.Y.	Rock and shale excavation		178	156			
S-1	261	C.Y.	Class "C" concrete, superstructure	261					
S-1	62	C.Y.	Class "C" concrete, pier caps and columns			62			
S-1	46	C.Y.	Class "E" concrete, abutment walls		46				
S-1	48	C.Y.	Class "E" concrete, footings		32	16			
S-3	33	Lin. Ft.	Waterproofing, premolded sealing strip		33				
S-3	398	Sq. Yds.	Type "C" waterproofing	398					
S-4	89,630	Lbs.	Reinforcing steel	71,723	4242	13,665			
S-9	5,100	Lbs.	Structural steel expansion & contraction joints, (including all painting)	5100					
S-9	40	Sq. Ft.	1" Preformed expansion joint filler (Gray rubber M-10.02)		40				
S-25	LUMP	SUM	Electrical lighting system				LUMP SUM		
S-9	127	Sq. Ft.	¼" Preformed expansion joint filler (M-10.01)		25	102			
S-9	60	Sq. Ft.	1" Preformed expansion joint filler (M-10.01)			60			
S-14	262	Lin. Ft.	Railing (aluminum rail and supports and concrete parapet)	240	22				
S-25	262	Lin. Ft.	4" fibre conduit	238	24				
S-29	54	Cu. Yd.	Porous backfill	30	24				
T-35	28	Cu. Yd.	Asphaltic concrete surface course, Type "A" or "C" (70-85)	28					

REPLACEMENT BARS

MARK	NO.	SIZE	LENGTH	TYPE	WEIGHT
RE401	1	½"φ	5'-3"	13	
RE402	1	4	5'-3"	Str.	
RE501	1	5	5'-7"	Str.	
RE601	1	6	5'-11"	Str.	
RE701	1	7	6'-3"	Str.	
RE801	1	8	6'-6"	Str.	
RE901	2	9	6'-10"	Str.	
RE1001	2	10	7'-3"	Str.	

REPLACEMENT BARS:
If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy. Testing Laboratory, test sample as provided in section S-402 need not be furnished and replacement bars will not be required.

SPIRAL NOTES:

- 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 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.
- 1½ closed coils shall be provided at the ends of each spiral unit.
- Four steel channel, tee or angle spacers weighing approximately 0.68 lbs. 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 lbs. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

* TABLE OF VARIABLE DIMENSIONS

"A"	3'-0" to 4'-0"	vary by 1½"
"B"	2'-5" to 2'-7"	vary by ½"
"C"	0'-6" to 2'-2"	vary by 4"
"D"	3'-6" to 4'-1"	vary by ½"
"E"	2'-2" to 2'-9"	vary by ½"
"F"	1'-9" to 2'-4"	vary by ½"
"G"	1'-7" to 2'-1½"	vary by ½"
"H"	1'-5" to 2'-2¾"	vary by ¾"
"J"	1'-6" to 2'-5"	vary by ⅞"+

BAR SIZE:
Bar size is indicated in the barmark. The first digit where three digits are used and the first two where four are used, indicates the bar size number. For example, A401 is a number 4 bar and A1114 is a number 11 size bar.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

REINFORCING STEEL LIST & ESTIMATED QUANITIES

BRIDGE NO. JEF-7-1431
SIDE HILL STRUCTURE
STA. 724+12.75
STA. 726+50.75
JEFFERSON COUNTY

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
B.S.	A.M.M.		G.G.	E. Roberts 6-10-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

286 A / 307

JEFFERSON COUNTY
JEF-7-13.53

ELECTRICAL NOTES

Junction boxes shall be [illegible] of cast iron and covers shall be aluminum.

[illegible] shall be [illegible] dipped galvanized both inside and out [illegible] after fabrication. All exposed surfaces of [illegible] shall be [illegible] aluminum. See Spec. 3-8.14 & 3-8.15.

Tapped hole for drain, not used, shall be plugged.

Junction box shall be set parallel to grade of adjoining curb.

Electrical Grounds:

Bridge No. JEF-7-1392 - McLister St.

A solid No. 0 gage bare copper wire electrical ground shall be embedded in each column of Pier No. 2. The lower ends of the wires shall terminate in a 25 foot length coiled under the footings and separated from the concrete by two layers of tar paper, and the upper ends shall extend sufficiently above the top of the concrete to provide for a suitable splice and extension for connection to the superstructure. The connection to the superstructure shall be a No. 6 gage bare, stranded, tinned copper wire brazed or bolted to a girder flange and to the solid copper wire in the pier shaft. At the base of the lamp standards there shall be a tinned No. 6 gage copper wire brazed to one anchor bolt and the other end brazed or bolted to the outside girder flange.

Bridge No. JEF-7-1631 - Side Hill Structure

A solid No. 0 gage bare copper wire electrical ground shall be embedded in the column of Pier No. 2. The lower end of the wire shall terminate in a 25 foot length coiled under the footing and separated from the concrete by two layers of tar paper, and the upper end shall extend sufficiently above the top of the concrete to provide for a suitable splice and extension for connection to the superstructure. The connection to the superstructure shall be a No. 6 gage bare stranded tinned copper wire brazed to the solid copper wire in the pier shaft, and laid horizontally in the center of the key for a minimum distance of three inches and covered with two layers of tar paper. It shall then be turned vertical before protruding a sufficient distance into the safety curb where it shall be extended and brazed to a light standard anchor bolt.

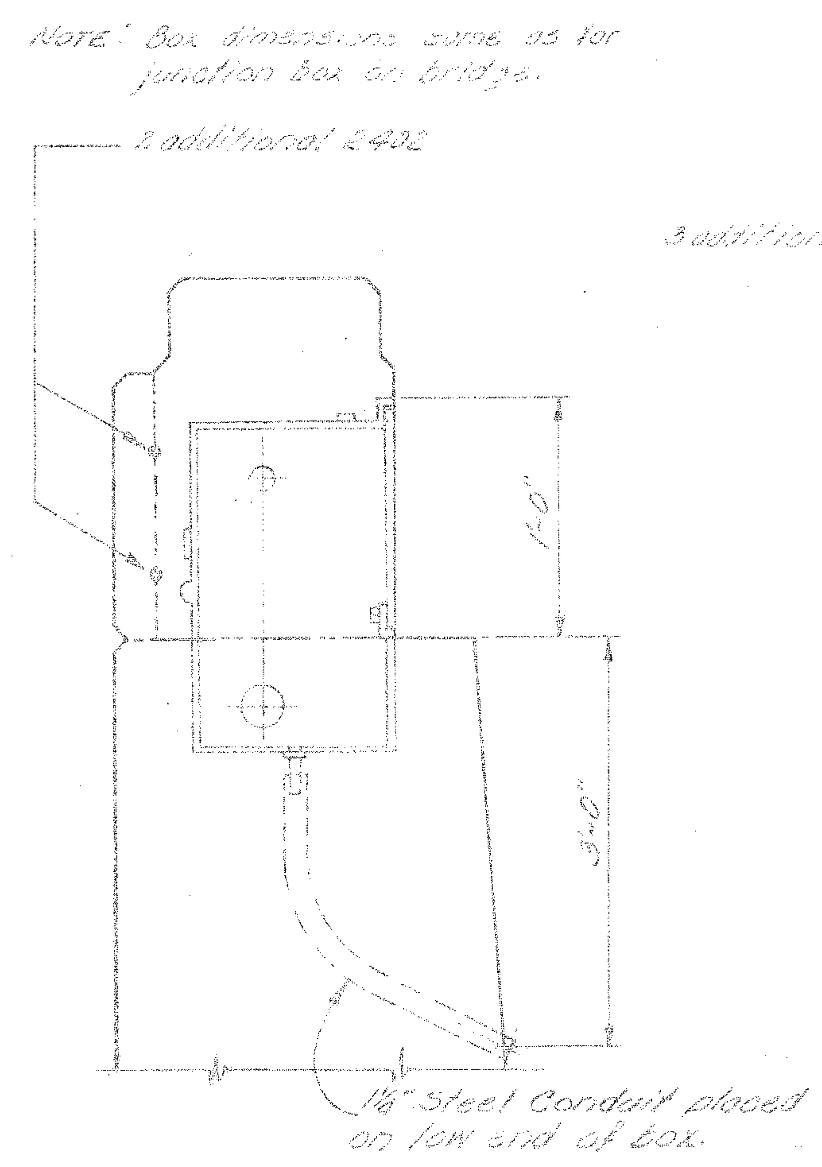
Retaining Wall Right of ℄ Construction - Sta. 697 + 50.02

A solid No. 0 gage bare copper wire electrical ground shall be embedded in the wall at or near Station 696 + 74. The lower end of the wire shall terminate in a 25 foot length coiled under the footing and separated from the concrete by two layers of tar paper and the upper end shall be brazed to a light standard anchor bolt.

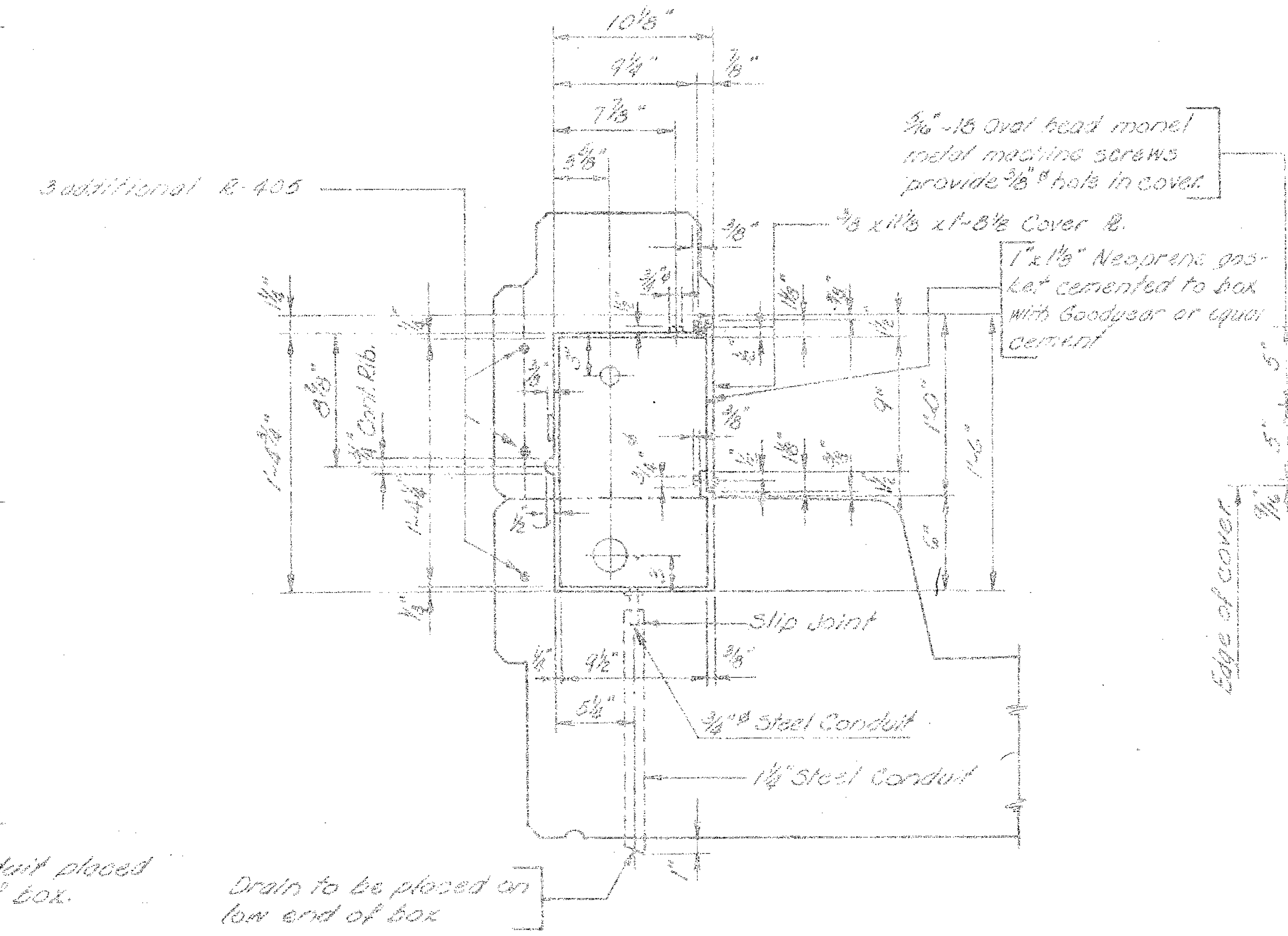
Retaining Wall Right of ℄ Construction - Sta. 726 + 56.82

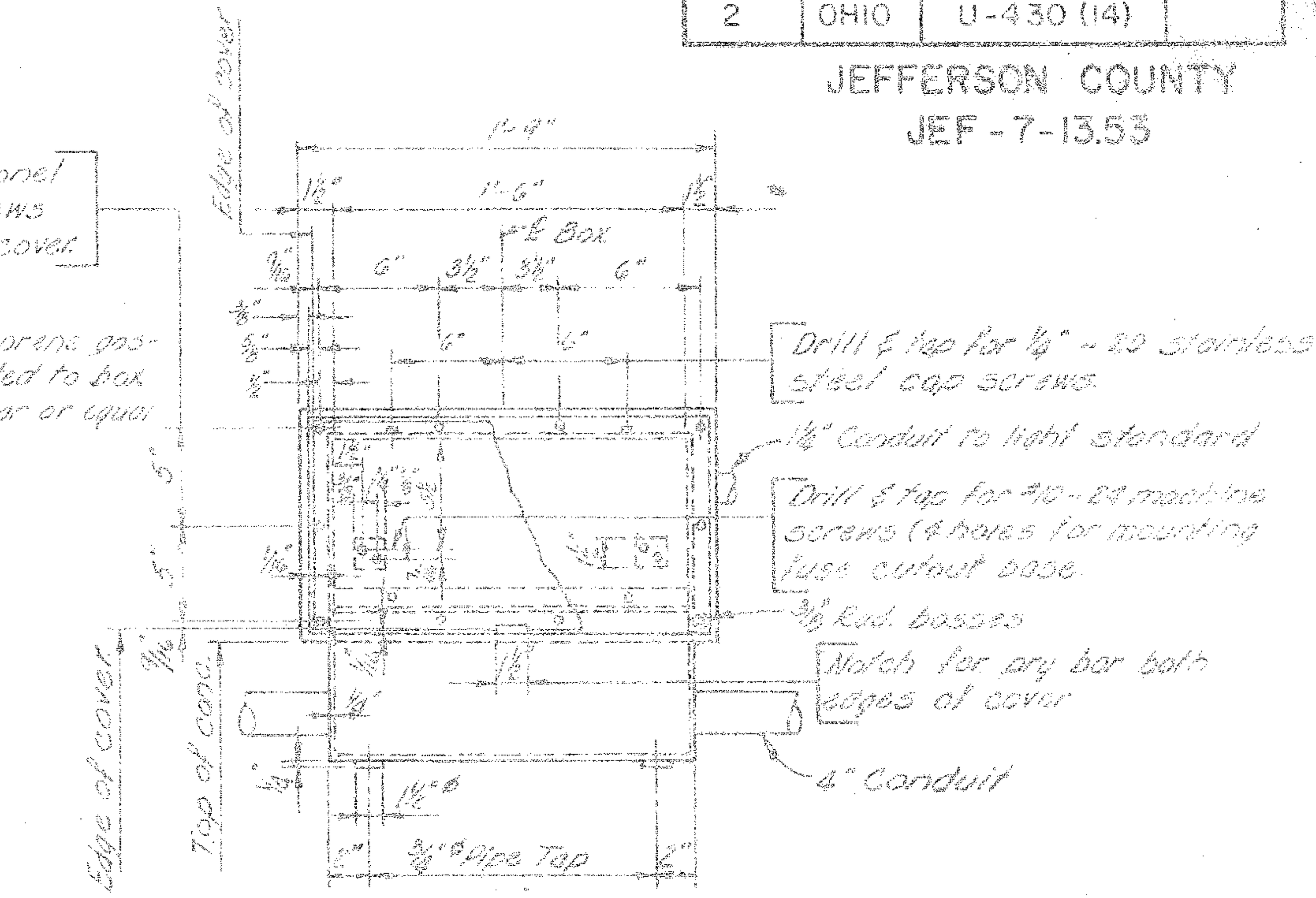
A solid No. 0 gage bare copper wire electrical ground shall be embedded in the wall at or near Station 727 + 15 and Station 729 + 12. The lower ends of the wires shall be brazed to one of the steel H piles and the upper end shall be brazed to a light standard anchor bolt.

Item 3-26, Electrical Lighting System shall include the junction box, anchor bolts for light standards, 1½"⌀ steel conduit and the electrical grounds.

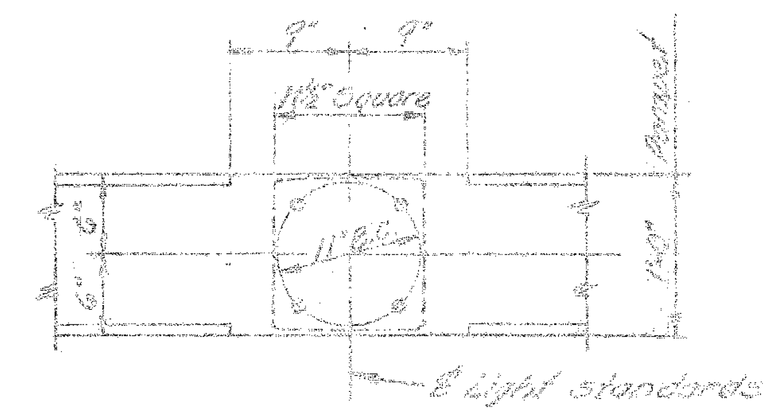


JUNCTION BOX DETAIL ON RETAINING WALLS

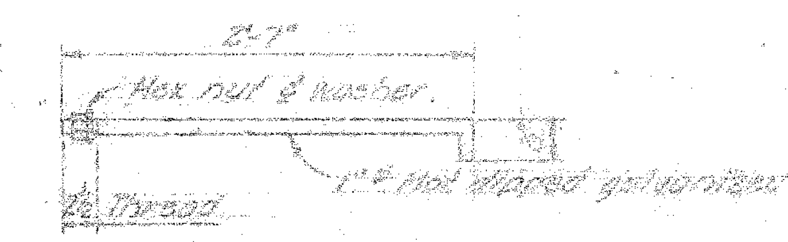




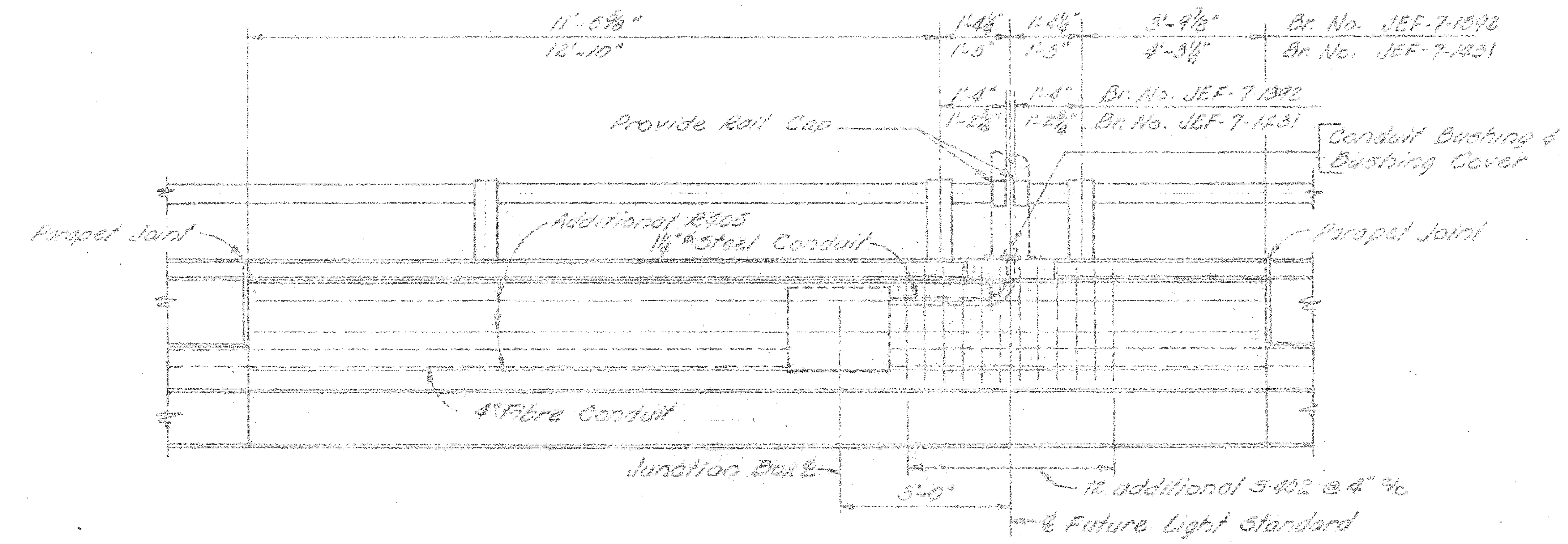
JUNCTION BOX DETAIL ON BRIDGES

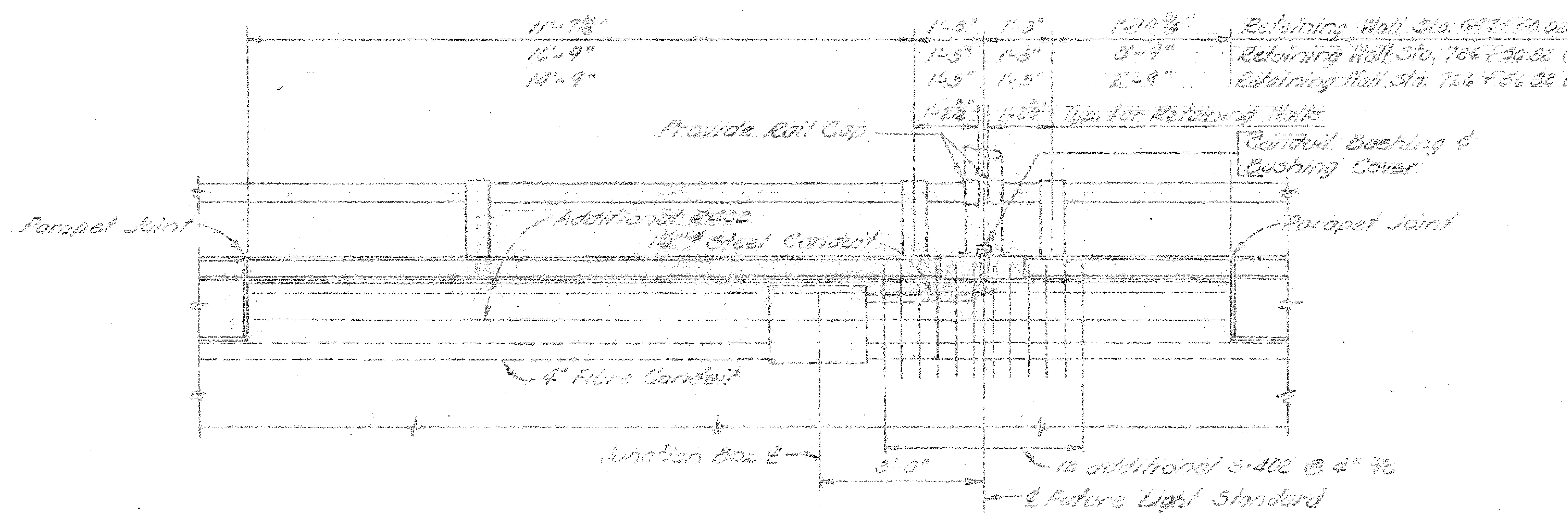


ANCHOR BOLT LAYOUT



LIGHT STANDARD ANCHOR BOLT
(4 PER STANDARD)
Project bolt 3" above concrete





DETAILS OF PARAPET AT LIGHT STANDARDS

Note: Any reinforcing steel interfering with the junction box shall be cut.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ELECTRICAL LIGHTING SYSTEM DETAILS

JEFFERSON COUNTY

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
	RDB		P.M.	E. Roberts 9-9-59		

CENTERLINE PLAT

OHIO DEPARTMENT OF HIGHWAYS

JEF-7-13.53

JEFFERSON COUNTY

0 100 200 300 400
Scale 1" = 200'

JEF-7-13.53

R/W
1 OF 21

BEGIN PROJECT
LIMITED ACCESS
Sta. 681+95.00

CURVE DATA

P.I. Sta. 683+02.61	P.I. Sta. 686+06.22	P.I. Sta. 689+07.33
Δ = 6°00'00" Lt.	Δ = 16°11'21" Lt.	Δ = 6°00'00" Lt.
D = 2°59'59"	D = 4°00'00"	D = 2°59'59"
R = 1910.02'	R = 1432.39'	R = 1910.02'
T = 100.10'	T = 203.72'	T = 100.10'
L = 200.02'	L = 404.73'	L = 200.02'

CURVE DATA

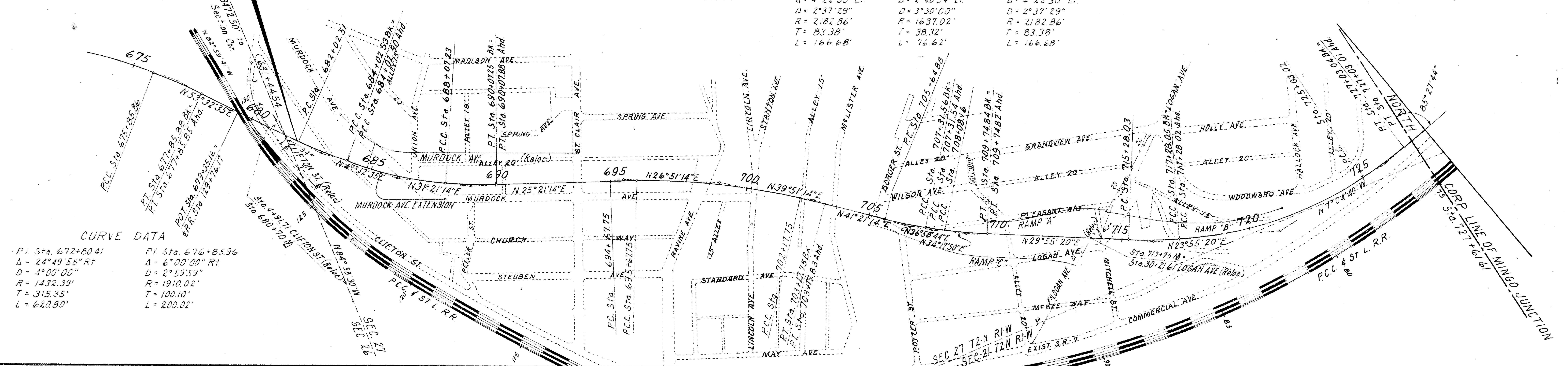
P.I. Sta. 695+17.75	P.I. Sta. 698+94.15	P.I. Sta. 702+67.75
Δ = 1°30'00" Rt.	Δ = 13°00'00" Rt.	Δ = 1°30'00" Rt.
D = 1°30'00"	D = 2°00'00"	D = 1°30'00"
R = 3819.51'	R = 2864.79'	R = 3819.51'
T = 50'	T = 326.40'	T = 50'
L = 100.00'	L = 650.00'	L = 100.00'

CURVE DATA

P.I. Sta. 706+48.26	P.I. Sta. 707+69.86	P.I. Sta. 708+91.54
Δ = 4°22'30" Lt.	Δ = 2°40'54" Lt.	Δ = 4°22'30" Lt.
D = 2°37'29"	D = 3°30'00"	D = 2°37'29"
R = 2182.86'	R = 1637.02'	R = 2182.86'
T = 83.38'	T = 38.32'	T = 83.38'
L = 166.68'	L = 76.62'	L = 166.68'

CURVE DATA

P.I. Sta. 716+28.13	P.I. Sta. 721+25.26	P.I. Sta. 726+03.12
Δ = 6°00'00" Lt.	Δ = 31°00'00" Lt.	Δ = 6°00'00" Lt.
D = 2°59'59"	D = 4°00'00"	D = 2°59'59"
R = 1910.02'	R = 1432.39'	R = 1910.02'
T = 100.10'	T = 397.24'	T = 100.10'
L = 200.02'	L = 775.00'	L = 200.02'



CURVE DATA

P.I. Sta. 672+80.41	P.I. Sta. 676+85.96
Δ = 24°49'55" Rt.	Δ = 6°00'00" Rt.
D = 4°00'00"	D = 2°59'59"
R = 1432.39'	R = 1910.02'
T = 315.35'	T = 100.10'
L = 620.80'	L = 200.02'

S.R. 7 CENTERLINE MONUMENTS

P.C. STA.	682+02.51	
P.C.C. "	684+02.53	Bk.=684+02.50 Ahd.
P.C.C. "	688+07.23	
P.T. "	690+07.25	Bk.=690+07.88 Ahd.
*P.C. "	694+67.75	
*P.C.C. "	695+67.75	
P.C.C. "	702+17.75	
P.T. "	703+17.75	Bk.=703+19.83 Ahd.
P.C. "	705+64.88	
P.C.C. "	707+31.56	Bk.=707+31.54 Ahd.
P.C.C. "	708+08.16	
P.T. "	709+74.84	Bk.=709+74.82 Ahd.
P.C. "	715+28.03	
P.C.C. "	717+28.05	Bk.=717+28.02 Ahd.
P.C.C. "	725+03.02	
*P.T. "	727+03.04	Bk.=727+03.01 Ahd.
P.C. "	731+52.66	
P.O.C. "	739+00	
P.T. "	746+52.66	
P.C. "	749+06.63	
P.C.C. "	750+39.96	
P.C.C. "	755+80.07	
P.T. "	757+13.40	
P.C. "	758+91.32	
P.C.C. "	760+91.34	Bk.=760+91.31 Ahd
P.C.C. "	761+16.31	
P.T. "	763+16.33	Bk.=763+16.30 Ahd.
P.C. "	765+50.05	
P.C.C. "	767+50.07	Bk.=767+50.05 Ahd
P.C.C. "	767+80.24	
P.T. "	769+80.26	Bk.=769+80.24 Ahd.
P.O.T. "	770+80.24	Bk.=770+80.96 Ahd.

*MONUMENTS OFFSET 36.5' EACH SIDE OF CENTERLINE

STEUBENVILLE TWP

CURVE DATA

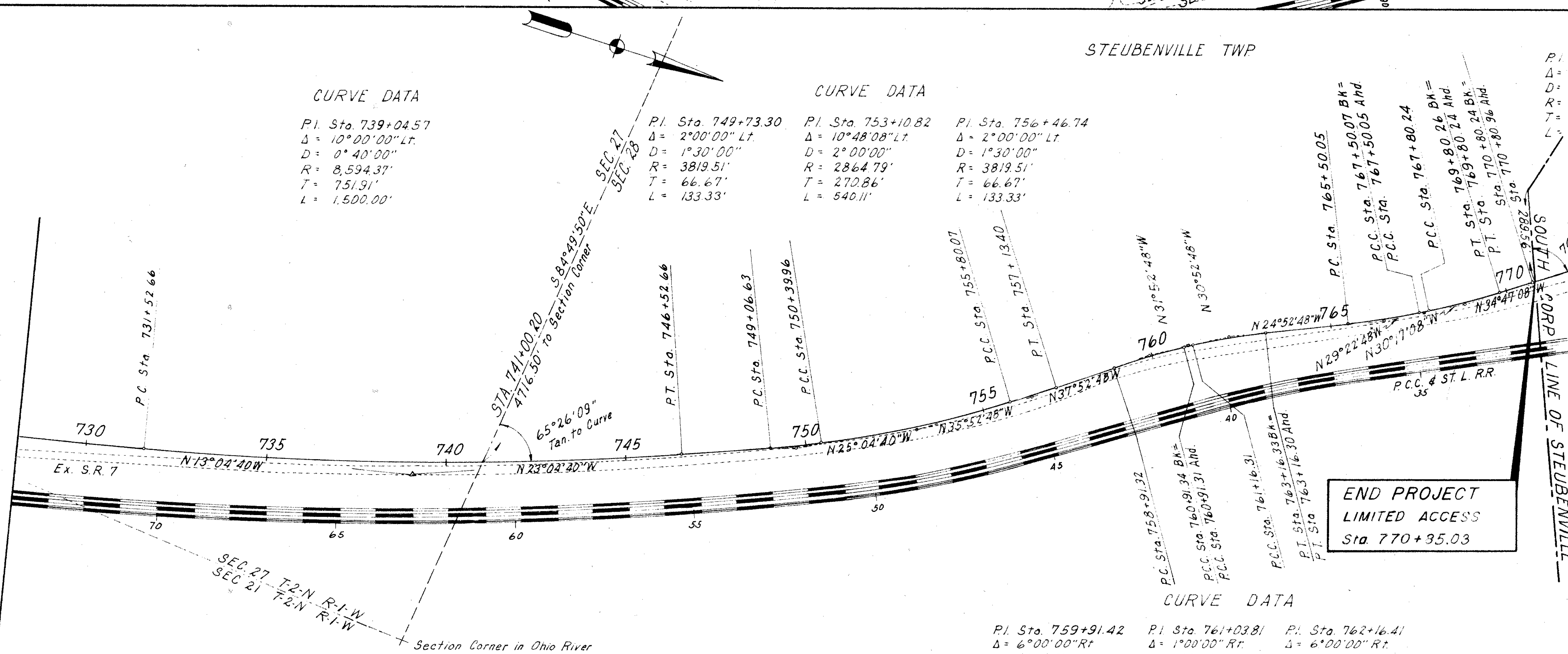
P.I. Sta. 739+04.57
Δ = 10°00'00" Lt.
D = 0°40'00"
R = 8,594.37'
T = 751.91'
L = 1,500.00'

CURVE DATA

P.I. Sta. 749+73.30	P.I. Sta. 753+10.82	P.I. Sta. 756+46.74
Δ = 2°00'00" Lt.	Δ = 10°48'08" Lt.	Δ = 2°00'00" Lt.
D = 1°30'00"	D = 2°00'00"	D = 1°30'00"
R = 3819.51'	R = 2864.79'	R = 3819.51'
T = 66.67'	T = 270.86'	T = 66.67'
L = 133.33'	L = 540.11'	L = 133.33'

CURVE DATA

P.I. Sta. 766+50.11	P.I. Sta. 767+65.14	P.I. Sta. 768+80.30
Δ = 4°30'00" Lt.	Δ = 0°54'20" Lt.	Δ = 4°30'00" Lt.
D = 2°14'59"	D = 3°00'00"	D = 2°14'59"
R = 2546.70'	R = 1909.86'	R = 2546.70'
T = 100.06'	T = 15.09'	T = 100.06'
L = 200.02'	L = 30.19'	L = 200.02'



END PROJECT
LIMITED ACCESS
Sta. 770+95.03

CURVE DATA

P.I. Sta. 772+72.98	P.I. Sta. 774+77.25
Δ = 2°00'00" Rt.	Δ = 5°30'00" Rt.
D = 1°30'00"	D = 2°00'00"
R = 3819.51'	R = 2864.79'
T = 66.67'	T = 137.606'
L = 133.33'	L = 275.00'

P.I. Sta. 776+81.31
Δ = 2°00'00" Rt.
D = 1°30'00"
R = 3819.51'
T = 66.67'
L = 133.33'

CURVE DATA

P.I. Sta. 759+91.42	P.I. Sta. 761+03.81	P.I. Sta. 762+16.41
Δ = 6°00'00" Rt.	Δ = 1°00'00" Rt.	Δ = 6°00'00" Rt.
D = 2°59'59"	D = 4°00'00"	D = 2°59'59"
R = 1910.02'	R = 1432.39'	R = 1910.02'
T = 100.10'	T = 12.50'	T = 100.10'
L = 200.02'	L = 25.00'	L = 200.02'

6-22-59 Date of Completion

SUMMARY OF ADDITIONAL R/W REQUIRED

JEFFERSON COUNTY
JEF. -7-13.53

LIMITED ACCESS
R/W
2 OF 21

Parcel No.	Owner	Area Acres	Exist. Bldgs.	Sheet No's	Remarks
98-S	P.C.C. & St. L. Ry.	—	No	3	
98-SL	P.C.C. & St. L. Ry.	0.01	No	3	
99-S	Guy Delgotto	0.004	No	3	
100	John & Susan Saban	0.06	No	3	
101	James Caranda	0.06	Yes	3	
102-LA	Loreto Petrozzi	—	—	3	
103-LA	Luigi Ciofardone	—	—	3	
104-LA	Marion Fabian	—	—	3	
104A-LA	M. D. Hall	0.008	Yes	3	
105-LA	Zola A. Thompson	—	—	3	
105A-LA	Dolores Mc Donald	0.02	No	3	
106-LA	E.C. Murray	—	—	3	
107-LA	Willa L. Smith	—	—	3	
108-LA	Catherine Welsh	—	—	3 & 4	
109-LA	Cesare & Restituta Ferroni	—	—	4	
110-LA	Josh Williams	—	—	4	
111-LA	Fannie Sabatino	—	—	4	
112-LA	Lee F. & Ida M. Wells	—	—	3 & 4	
113-LA	Hugh T. Russell ET. AL.	—	—	4	
114-LA	Eliza Sheline	—	—	4	
115-LA	Mildred J. Cox Phoenix	—	—	4	
115-A	Village of Mingo Junction	0.11	No	4	
116-LA	Medico P. & Ruth Merzi	—	—	4	
116-A	Ray & Hilda Menendes	0.05	No	4	
117-LA	Edmond S. & Evella A. Johnson	—	—	4	
117A	Victor Magary	0.05	Yes	4	
118-LA	G. & J.H. Mc Clave	0.15	Yes	4	
119-LA	L. & L. Rauch	0.12	Yes	4	
119A-LA	Russell C. Hyde & Lorella Muth	0.16	Yes	4	
119B-LA	William Prestipino	0.03	Yes	4	
119C-LA	Helen Ziza	0.002	Yes	4	
120-LA	Edward J. & Sara M. Phister	—	—	4	
121-LA	Fred & Lena R. Fox	—	—	4	
122-LA	Bertha Selix	—	—	4	
123-LA	John Valuska ET. AL.	—	—	4	
124-LA	Mamie A. Bush	—	—	4	
125-LA	Carrie A. Smith	0.09	Yes	4	
125A-LA	Hoff Funeral Home	0.07	Yes	4	
126	John Davanzo	0.07	Yes	4	
127	Wm. J. Minch ET. AL.	—	Yes	4	
127-LA	Wm. J. Minch ET. AL.	—	Yes	4	
128-LA	George E. Smith ET AL	—	—	4	
128A	Magdaline Chapman	0.09	Yes	4 & 5	
128B	Ruth Avey	0.18	Yes	4 & 5	
129-LA	Ruth L. Albaugh	—	—	4 & 5	
129A	Billie Bright & Evelyn R. Chapman	—	—	5	
130-LA	Potter Mem. Presby. Church	—	—	5	
131-LA	Mildred Munis ET AL.	—	—	5	
132-LA	Daniel G. Diorio	—	—	5	
133-LA	Ellen H. Rood	—	—	5	
134-LA	Ljuban Koster	—	—	5	
134A	Otto & M. Maul	0.20	Yes	5	
135-LA	Earl D. & Hettie Britt	—	—	5	
136-LA	Bertha Weisberger ET. AL.	—	—	5	
136A	John Buckmilter	0.07	Yes	5	
136B	J. Kane	0.07	Yes	5	
137-LA	Anthony F. Sharpe ET. AL.	0.16	Yes	5	
137A	N. Molinaro	0.08	Yes	5	
138-LA	John H. Buchan	0.12	Yes	5	
138A	Stella Schaefer	0.19	Yes	5	
139-LA	Michaelina Cava	—	—	5 & 6	
140-LA	Mary E. Green Bartlett	—	—	5 & 6	
140A	F.J. Pfister	0.08	Yes	5 & 6	
141-LA	Andrew & Mary Marcinko	—	—	6	
141A-LA	Calvin & Ann Whitney	0.10	Yes	6	
142-LA	John V. Brinskey	0.11	Yes	6	
143-LA	Josephine Buchan	0.16	Yes	6	
144-LA	Dorothy M. Arthurs	—	—	6	
144A-LA	Earnest & Marie Berarducci	0.04	Yes	6	
144B-LA	Jos. Slatniske	0.01	No	6	
145-LA	Joseph & Susie Kovacs	—	—	6	
145A-LA	Laura Pizzoferrato	0.06	Yes	6	
146-LA	William & Blanche Devore	—	—	6	
146A-LA	Andrew John Maty	0.06	Yes	6	

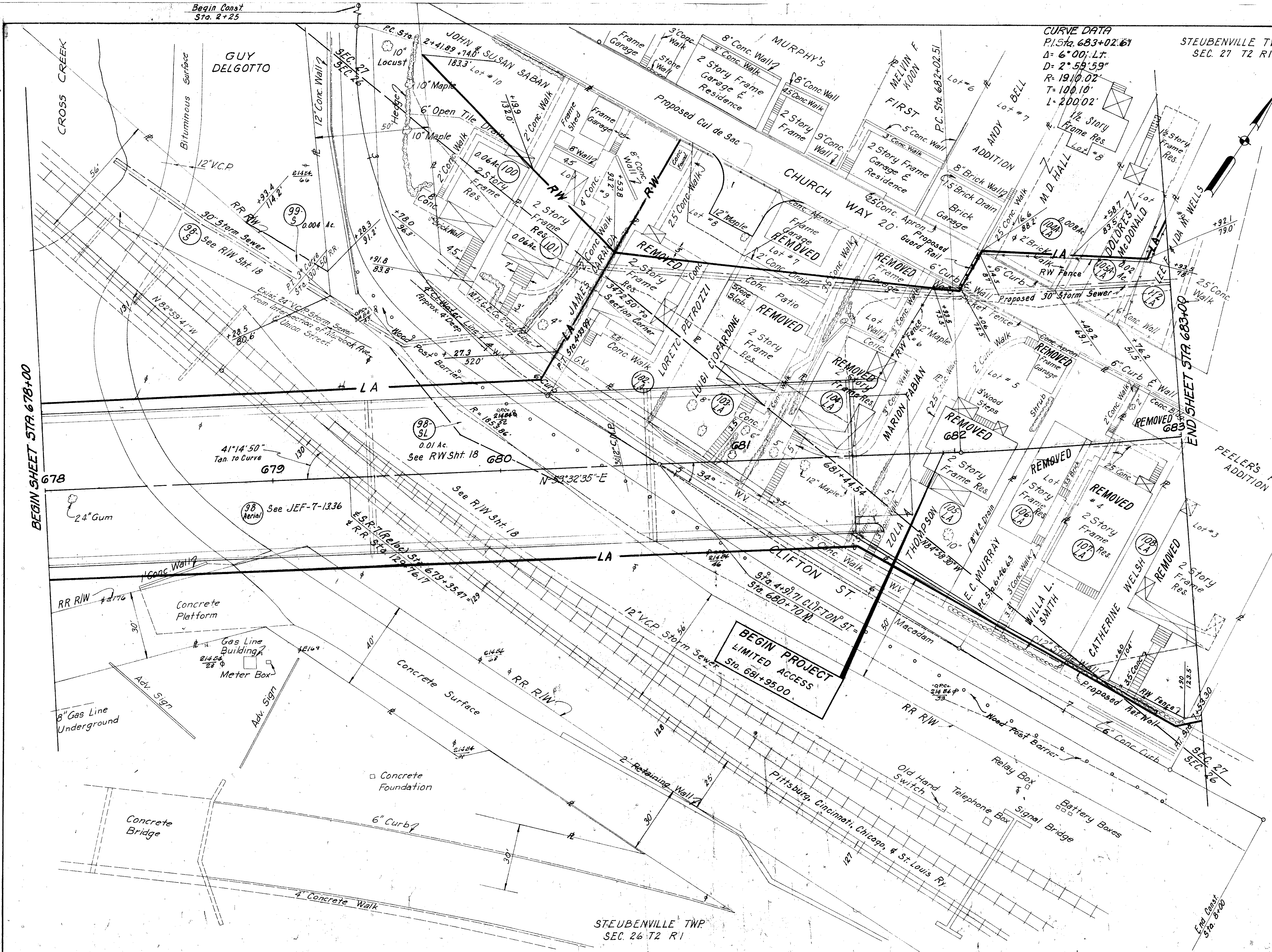
Parcel No.	Owner	Area Acres	Exist. Bldgs.	Sheet No.'s	Remarks
147-LA	Tom Nicosia	—	—	6	
147A-LA	Mary Stephen Kozup	0.05	Yes	6	
148-LA	Joseph Slatniske	—	—	6	
148A-LA	E. E. Calhoun	0.03	No	6	
149-LA	Joseph Melko ET. AL.	—	—	6	
150-LA	Stephanie & Stephen Melko	—	—	6 & 7	
151-LA	Mike Dodasovich	—	—	7	
151A-LA	Village of Mingo Junction	0.03	Yes	7	
152-LA	John & Anna Andrechak	—	—	7	
152A-LA	Willard & Helen Justice	0.03	Yes	7	
153-LA	Mike Evans	—	—	7	
154-LA	Slavish Presby. Church	0.19	Yes	7	
154-T	Slavish Presby. Church	0.004	No	7	
155-LA	Joseph I. Buchmelter ET. AL.	—	Yes	7	
155A-LA	George & Anna S. Dzvonarik	—	—	7	
155B-LA	Peter Slatniske	0.06	No	7	
156-LA	Mary Grecula ET. AL.	—	—	7	
157-LA	Mary Pitosh	—	—	7	
157A-LA	Andrew Marcin	0.06	Yes	7 & 8	
158-LA	Clarence Thompson	0.13	Yes	7 & 8	
158A-LA	Mary Slatniske	0.13	Yes	7 & 8	
158B-LA	Anna Mattey	0.006	Yes	7 & 8	
159-LA	Fred & Mary Di Cola	—	—	8	
160-LA	Andy Granitir	0.17	Yes	8	
161-LA	Frank & Chiarina Bonafede	—	—	8	
161A-LA	Joseph A. Cascioli	—	Yes	8	
161B-LA	Michael Roberts	0.05	Yes	8	
162-LA	Phillip A. & Angeline Basso	—	—	8	
163-LA	Mike Diorio	0.14	Yes	8	
164-LA	Matteo & Maria Crugnale	—	—	8	
165-LA	Theresa Brandi	0.14	Yes	8	
166-LA	Anna Slivka	0.14	Yes	8 & 9	
167-LA	Mike Lesnansky ET. AL.	—	—	8	
167A-LA	Guiseppe & Carmela Casciola	—	Yes	8	
168-LA	Giovanne D'Auvora	0.16	Yes	8	
169-LA	Louis Cortese	0.15	Yes	8 & 9	
170-LA	Mary A. Frankhauser	0.33	Yes	8 & 9	
171-LA	John Di Pillo	0.14	Yes	9	
172-LA	Ethel Louise Orban	0.16	Yes	9	
173-LA	Pasquale Capobianco	—	—	9	
173A-LA	Anthony Parissi	0.13	Yes	9	
173B-LA	John Slivka	0.14	Yes	9	
173C-LA	F. Mannarino	0.14	Yes	9 & 10	
173D-LA	Anthony Zito	0.05	Yes	9 & 10	
173E-LA	Giuseppi Cascioli	0.11	Yes	9	
173F-LA	Freeman Burke	0.07	Yes	9	
173G-LA	Domenick Orsini & Luigia Orsini	0.14	No	9 & 10	
173H-LA	Margaret Timcho	0.14	No	9, 10, 12	
174-LA	Virginia Diloretto	—	Yes	9	
175-LA	Vincenzo Coletti	—	—	9	
176-LA	Vincenzo Orsini	—	—	9	
177-LA	Sunda Rossi	—	—	9	
178-LA	Mary Diorio	—	—	9	
179-LA	Joe Esposito	0.02	Yes	9	
179A-LA	A.J. Marvani	0.04	Yes	9	
179A	A.J. Marvani	0.008	No	11	
179B-LA	G. Homol	0.05	Yes	9	
179B	G. Homol	0.07	Yes	9 & 11	
179C-LA	R. Fratticci	0.07	Yes	9	
179C	R. Fratticci	0.09	Yes	9 & 11	
179D-LA	Mary Kucer	0.09	Yes	9 & 12	
179D-	Mary Kucer	0.06	No	9, 11, 12, 14	
179E-LA	Santi Leonardo	0.11	Yes	12	
179E	Santi Leonardo	0.005	No	12 & 14	
179F-LA	Andy & E. Evans	0.12	Yes	12	
179G	Joseph P. Conley	0.08	Yes	11	
179H	Thomas & Rose Sprochi	0.16	Yes	11	
179K	G.S. Carduggi	0.07	Yes	11	
179L	John Golee	0.005	No	11 & 14	
180-LA	Adolfo Diorio	—	—	9	
180A-S	P.C.C. & St. L. Ry.	—	No	19	
181-LA	Margaret Ross	—	—	9	
182-LA	Dominic Sauro	—	—	9	
183-LA	Fausto Cito	—	—	9	

Parcel No.	Owner	Area Acres	Exist. Bldgs.	Sheet No's	Remarks
184-LA	John & Anna Dicenzo	—	—	9 & 12	
185-LA	Patrick J. Reidy	—	—	12	
185A-LA	Herbert Huggins	0.14	Yes	12 & 13	
185B-LA	Gertrude Johnson	0.22	No	12 & 13	
185B	Gertrude Johnson	0.05	No	13	
185C	Thomas A. Watson	0.13	Yes	13	
186-LA	Alfred A. Adyniec	0.07	No	12	
187-LA	R. & C. Sanfilippo	0.36	Yes	12	
188-LA	Andy & E. Evans	0.22	Yes	12	
189-LA	Village of Mingo Junction	0.10	No	12	
190-LA	Village of Mingo Junction	0.25	No	12 & 13	
190A	E.A. Board			13	Need W.A. for Ret. Wall & Steps
190B	M. Conner			13	Need W.A. for Ret. Wall & Steps
190C	E.P. Conner	0.003	Yes	13	Need W.A. for Ret. Wall & Steps
190D	Alfred Rotella	0.06	Yes	13	
191-LA	Frank Toth	0.12	Yes	12	
191A-LA	Frank Fortunato	0.001	No	14	
191B-LA	Luigi Petrella	0.014	Yes	14	
191C-LA	John H. Buchan	0.03	Yes	14	
191D-LA	Thos. C. Mitchell	0.04	Yes	14	
191E-LA	R. Stinard	0.04	Yes	14	
191F-LA	J. Petroskey	0.06	Yes	14	
191G-LA	Sadie L. Glenn	0.07	Yes	14	
191H-LA	Norfolk Oldham	0.05	Yes	14	
191J-LA	Nick Rusen	0.05	Yes	14	
192-LA	Anna Bolak	0.39	Yes	12	
193-LA	Charles B. Lanman	3.86	No	12 & 15	
194-LA	Stephen & Anna Hamrock	0.07	No	12	
195-LA	Roberto Sigesmund	0.07	Yes	12	
199-LA	Virgie L.M. Flippen	0.28	Yes	12 & 15	
200-LA	Frank Pergi, Sr.	0.15	No	15	
202-LA	Frank Brunner	0.07	No	15	
203-LA	John W. Porter	0.003	No	15	
204-LA	Russell Jackson	0.04	Yes	15	
205-LA	Oscar A. Gasser	0.05	Yes	15	
206-LA	Rocco Crugnale	0.05	No	15	
207-LA	Michael Belardine	0.06	Yes	15	
208-LA	Joseph Conners	0.07	Yes	15	
209-LA	Anthony Sharpe	0.08	No	15	
210-LA	Emily A. Sharpe	0.09	Yes	15	
211-LA	Joseph J. Jacobs	0.19	Yes	15	
212-LA	Emmet C. Sanders	0.21	Yes	15	
213-LA	J. & F. Milgs	0.13	Yes	15	
214-LA	Adolf Beren ET. AL.	7.46	Yes	15 & 16	
214S	Adolf Beren ET. AL.	0.009	No	15	
214A-S	P.C.C. & St. L. Ry.	—	No	19	
215-LA	Brettell Coal Co.	10.61	No	16 & 17	
217-LA	William A. Haese	1.78	No	17	
218-LA	Myron J. Wyant	2.40	No	17	
167B-LA	Dom. & Delino Roberto	0.07	Yes	8	
179J	Romeo J. Di Leonardo	0.16	Yes	11	
216-LA	Marie Hagerty	0.44	No	17	
173D-A-LA	Joseph & Rose Emanuel	0.17	Yes	9 & 10	
119D-LA	William C. Otte	0.02	No	4 & 4A	
171A-LA	Alfred Diorio	0.08	Yes	9	
185D-LA	Village of Mingo Junction	0.10	No	13	

6-22-59 Date of Completion
7-3-59 Revised Parcels 185-C and 185-D

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	
2	OHIO	U-430(14)		289/307

JEFFERSON COUNTY
JEF. -7-13.53
LIMITED ACCESS
R/W
3 OF 21



CLIFTON ST. - CURVE DATA

P.I. Sta. 3+48.73
Δ = 62°26'00" Lt.
D = 32°30'
R = 176.30'
T = 106.84'
L = 192.10'

P.I. Sta. 6+99.98
Δ = 3°12'00" Lt.
D = 3°00'
R = 1909.86'
T = 53.35'
L = 106.67'

215 L.F. Type "C" Fence

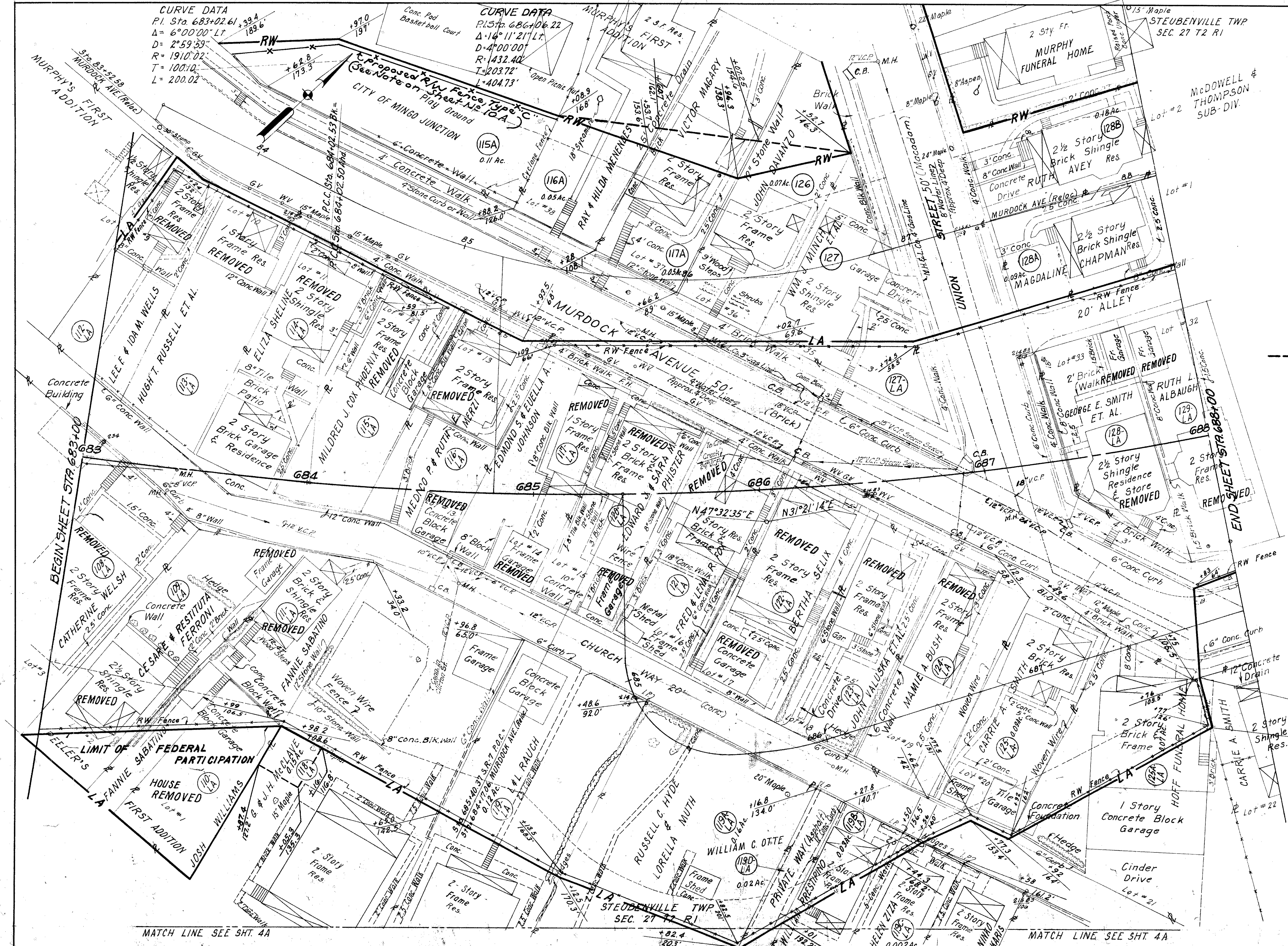
Scale 1" = 20'

6-22-59 Date of Completion

RIGHT OF WAY STA. 678+00 TO STA. 683+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	290 / 307
2	OHIO	U-430(14)		

JEFFERSON COUNTY
JEF.-7-13.53
LIMITED ACCESS
R/W
4 OF 21



LEGEND

LIMITS OF EASEMENT FOR SEWER
Easement to be provided by the Village

1070 L.F. Type "C" Fence
150 " " "
Total = 1220 L.F. Type "C" Fence

Scale 1"= 20'

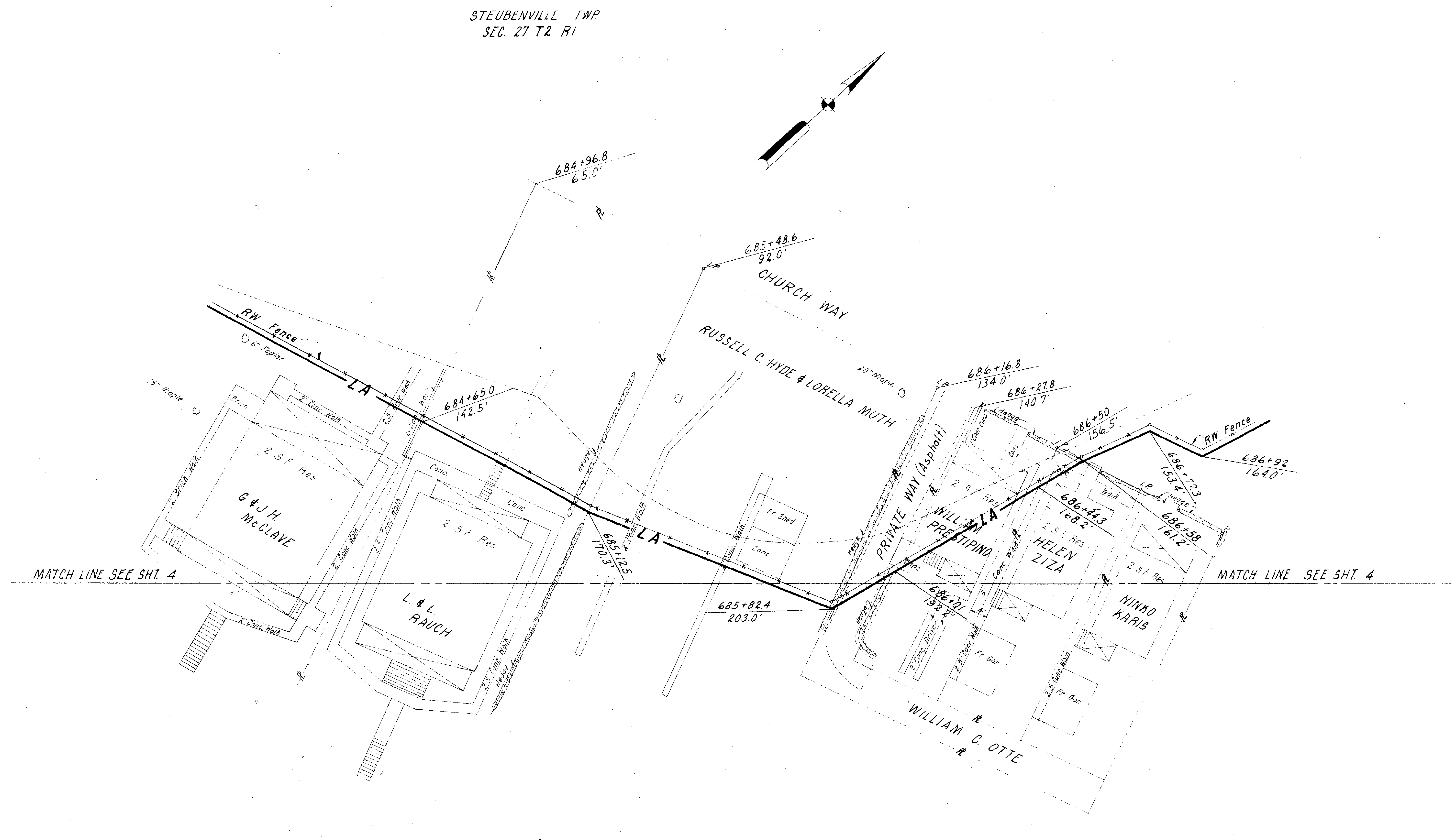
6-22-59 Date of Completion
9-10-59, 150 L.F. of Type "C" Fence Added
10-16-59 Added Easements for Sewer

RIGHT OF WAY STA. 683+00 TO STA. 688+00

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

291
307

JEFFERSON COUNTY
JEF -7-13.53
LIMITED ACCESS
R/W
4A OF 21



Scale 1" = 20'

6-22-59 Date of Completion

RIGHT OF WAY STA 683+00 TO STA 688+00 RT.

RIGHT OF WAY STA. 688+00 TO STA. 693+00

RIGHT OF WAY STA. 693+00 TO STA. 698+00

RIGHT OF WAY STA. 698+00 TO STA. 703+00

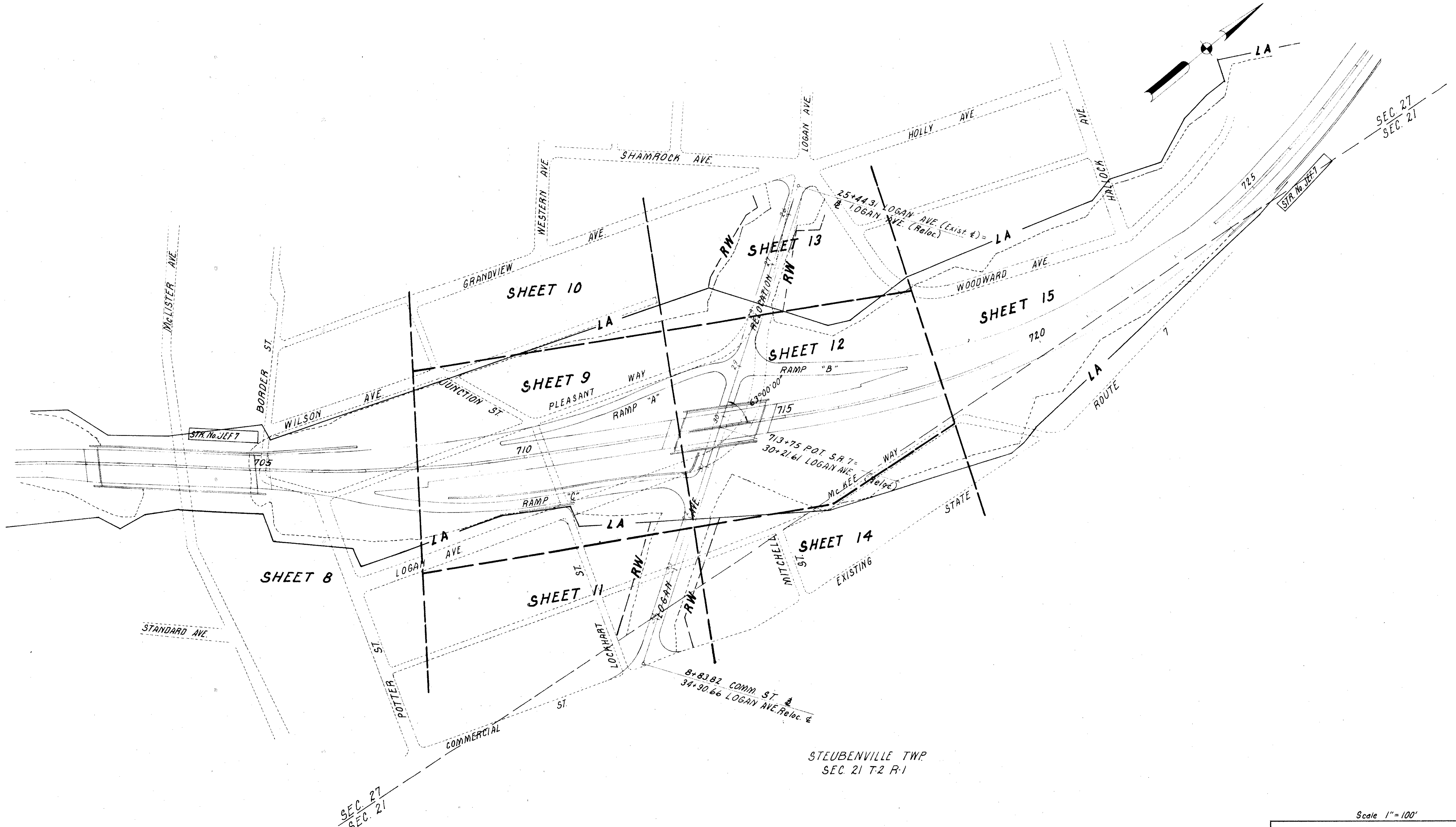
RIGHT OF WAY STA. 703+00 TO STA. 708+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430 (14)	

296
307

JEFFERSON COUNTY
JEF-7-13.53
LIMITED ACCESS
R/W
8A OF 21

STEUBENVILLE TWP
SEC. 27 T-2 R-1



STEUBENVILLE TWP.
SEC. 21 T-2 R-1

Scale 1" = 100'

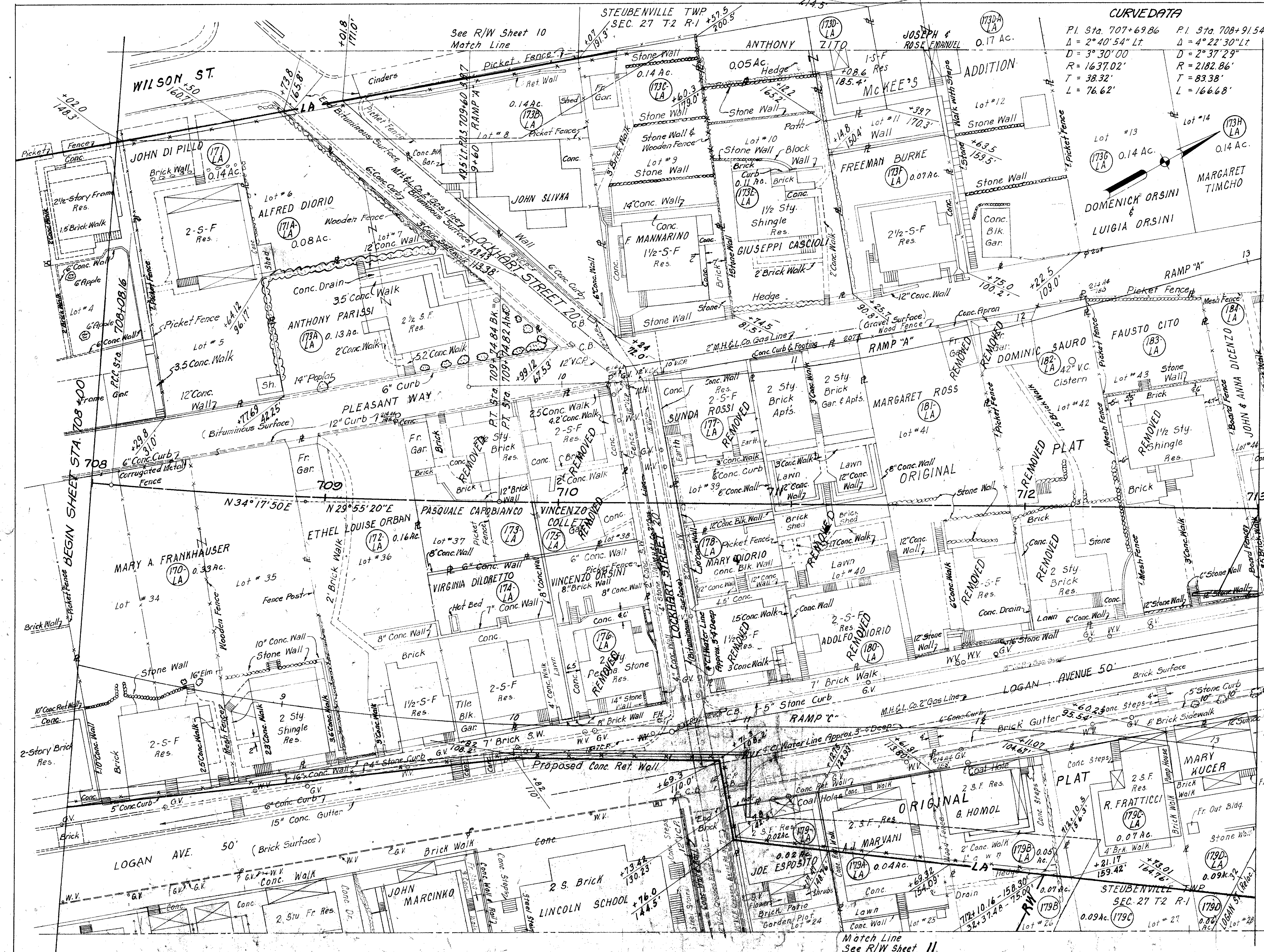
6-22-59 Date of Completion

RIGHT OF WAY SCHEMATIC LAYOUT LOGAN AVE. INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(14)	

297
307

JEFFERSON COUNTY
JEF-7-13.53
LIMITED ACCESS
R/W
9 OF 21



685 L.F. Type "C" Fence

Scale 1" = 20'

6-22-59 Date of Completion

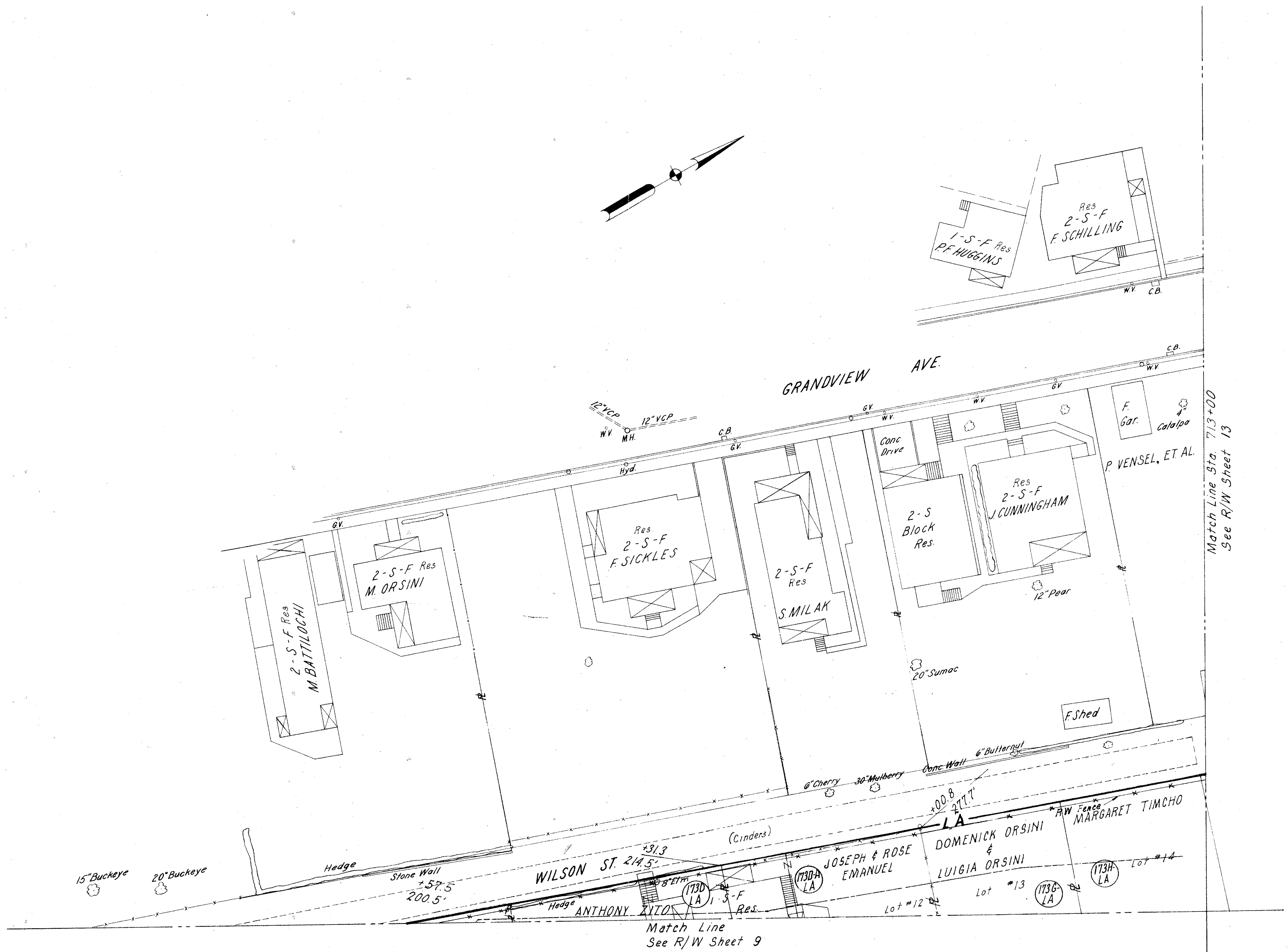
RIGHT OF WAY STA. 708+00 TO STA. 713+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

298/307

JEFFERSON COUNTY
JEF-7-13.53
LIMITED ACCESS
R/W
10 OF 21

STEUBENVILLE TWP
SEC. 27 T2 R1



275 L.F. Type "C" Fence

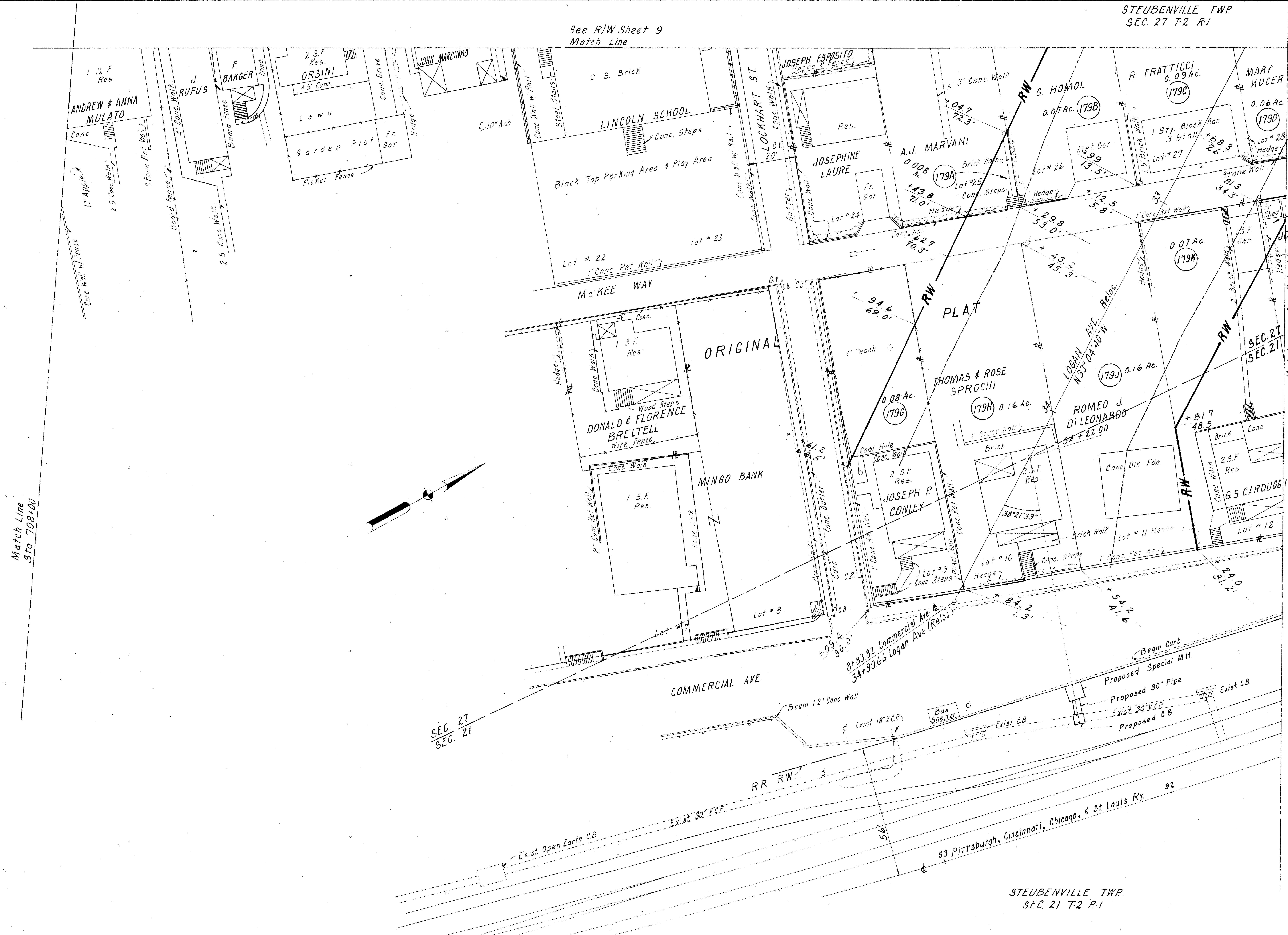
Scale 1"=20'

6-22-59 Date of Completion

RIGHT OF WAY STA. 708+00 TO STA. 713+00 LT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430 (14)	

JEFFERSON COUNTY
JEF-7-13.53
LIMITED ACCESS
R/W
11 OF 21



NOTE: All ties this sheet are to ℄ Logan Ave. Relocation.

P.C.C. & St. L. RR. - R/W - See sheet 19.

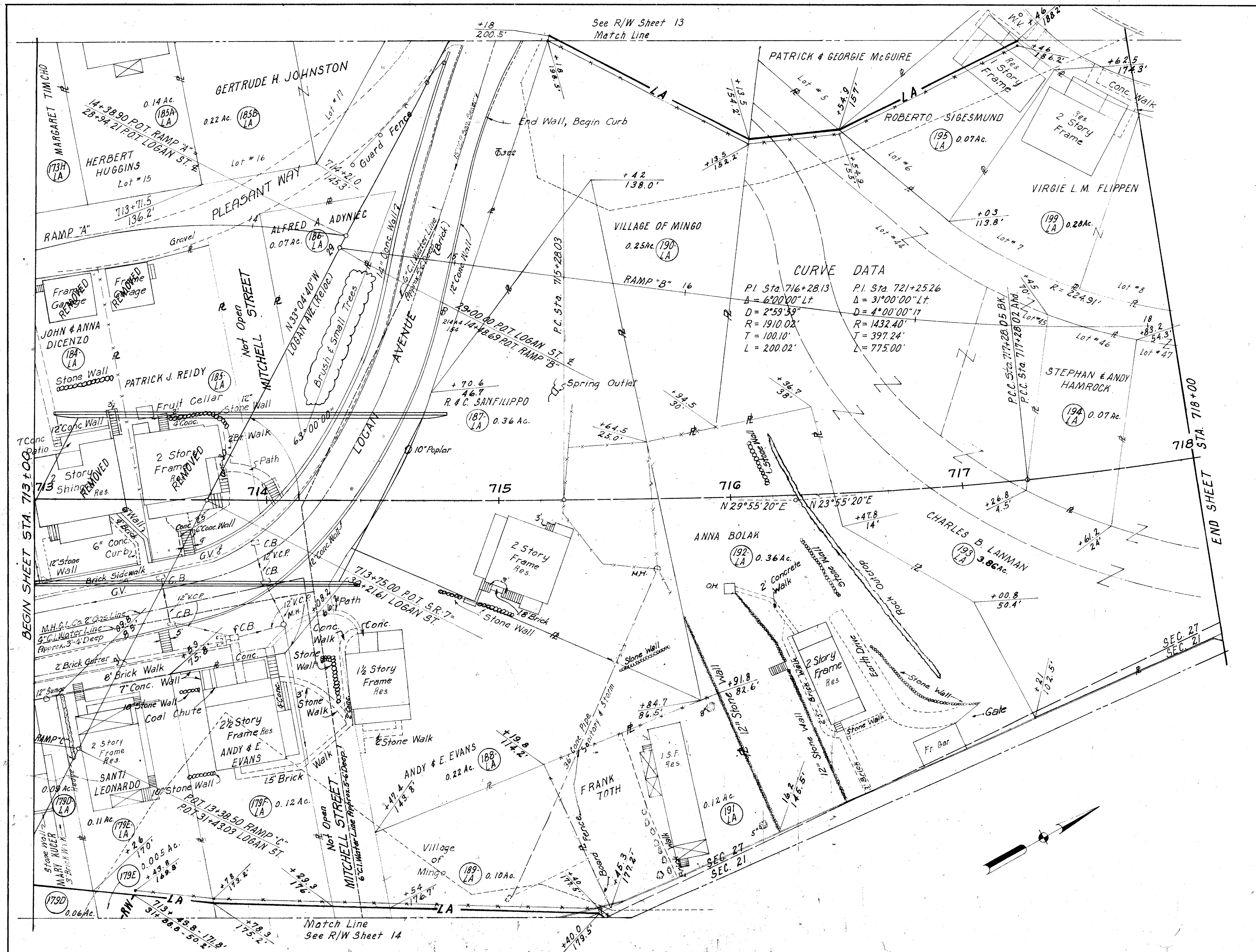
Scale 1" = 20'

6-22-59 Date of Completion

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(14)	

300
307

JEFFERSON COUNTY
JEF-7-13.53
LIMITED ACCESS
R/W
12 OF 21



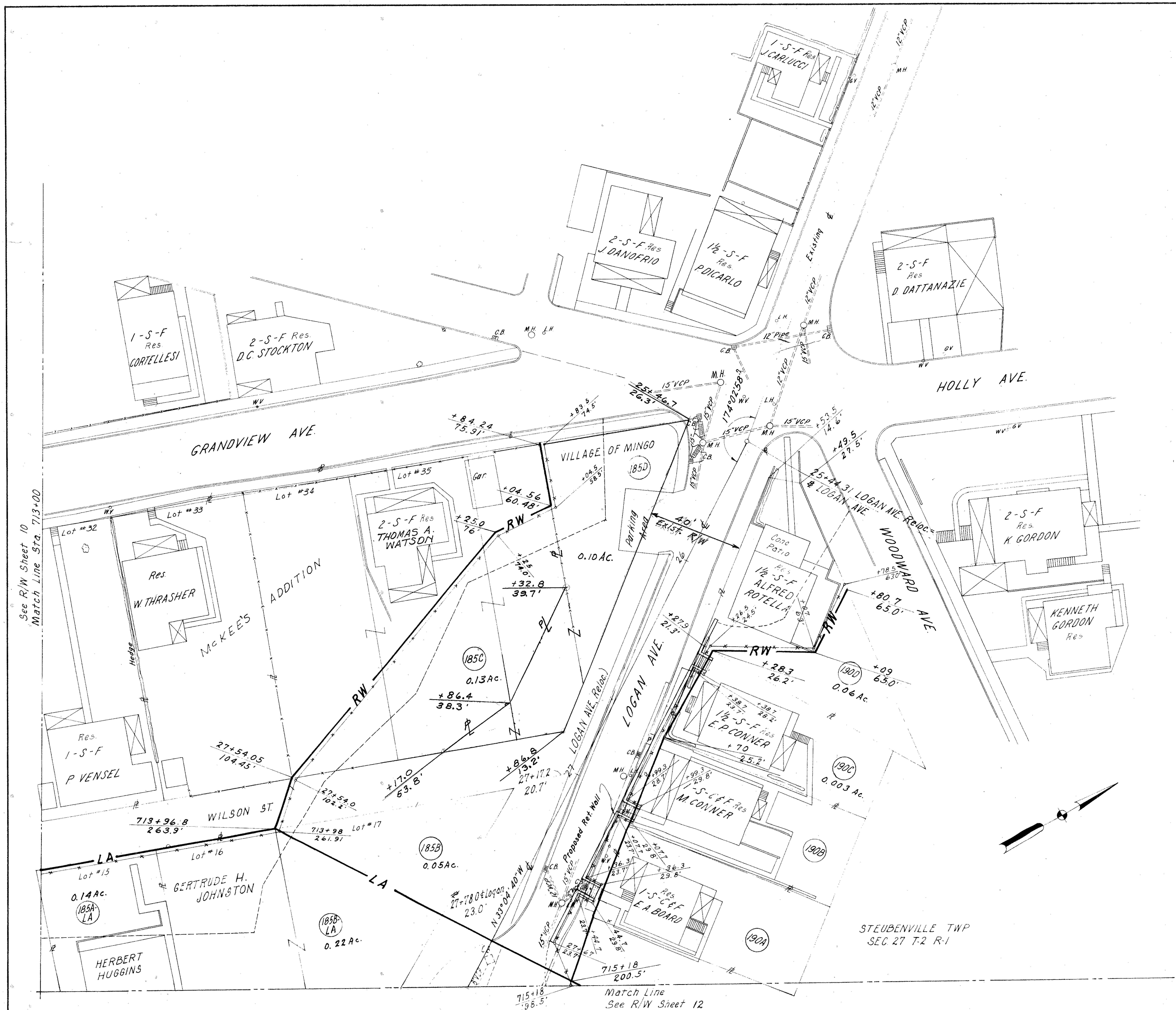
430 L.F. Type "C" Fence

Scale 1" = 20'

6-22-59 Date of Completion

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

JEFFERSON COUNTY
JEF-7-13.53
LIMITED ACCESS
R/W
13 OF 21



550 L F Type "C" Fence

Scale 1" = 20'

6-22-59 Date of Completion
7-3-59 Revised Parcels 185-C and 185-D

RIGHT OF WAY STA. 713+00 TO STA. 718+00 LT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430(14)	

302/307

JEFFERSON COUNTY
JEF-7-13.53
LIMITED ACCESS
R/W
14 OF 21

395 L.F. Type "C" Fence

Scale 1"=20'

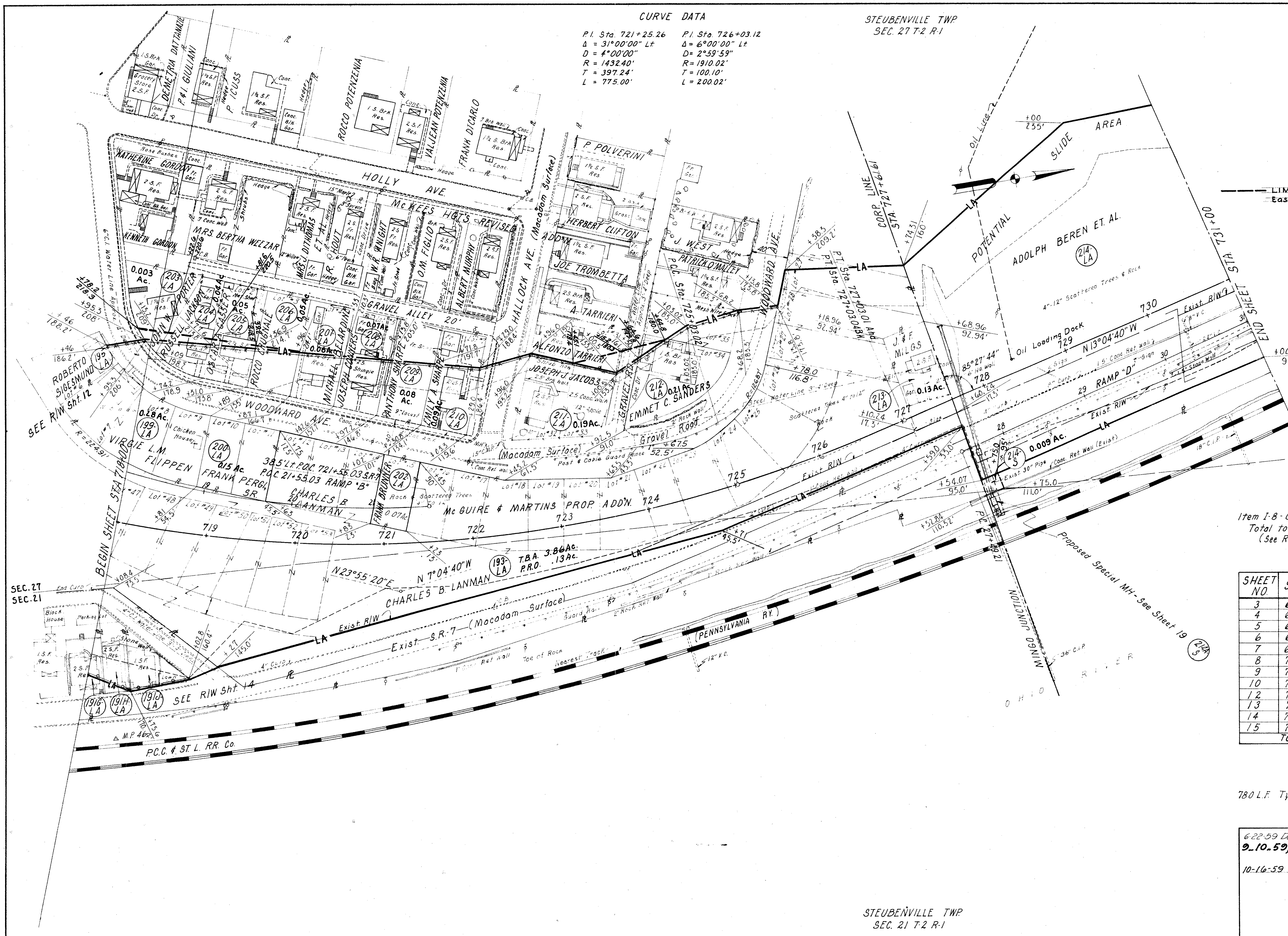
6-22-59 Date of Completion

RIGHT OF WAY STA. 713+00 TO STA. 718+00 RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-430 (14)	

303
307

JEFFERSON COUNTY
JEF - 7 - 13.53
LIMITED ACCESS
R/W
15 OF 21



LEGEND

LIMITS OF EASEMENT FOR SEWER
Easement to be provided by the Village

Item I-8 - Centerline Reference Monuments
Total to General Summary - 35 Each
(See RW Sheet 1 for locations)

SHEET NO.	STATION TO STATION	ITEM SS-18 FENCE TYPE "C" LIN. FT.
3	678+00 to 683+00	215 L.F.
4	683+00 to 688+00	1220 L.F.
5	688+00 to 693+00	1000 L.F.
6	693+00 to 698+00	960 L.F.
7	698+00 to 703+00	1165 L.F.
8	703+00 to 708+00	705 L.F.
9	708+00 to 713+00	685 L.F.
10	708+00 to 713+00	275 L.F.
12	713+00 to 718+00	430 L.F.
13	713+00 to 718+00	550 L.F.
14	713+00 to 718+00	395 L.F.
15	718+00 to 731+00	780 L.F.
	TOTAL TO GENERAL SUMMARY	8380 L.F.

780 L.F. Type "C" Fence

Scale 1" = 50'

6-22-59 Date of Completion
9-10-59 Changed Total Length Type "C" Fence from 8230 L.F. to 8380 L.F.
10-16-59 Added Easements for Sewer

RIGHT OF WAY STA. 718+00 TO STA. 731+00

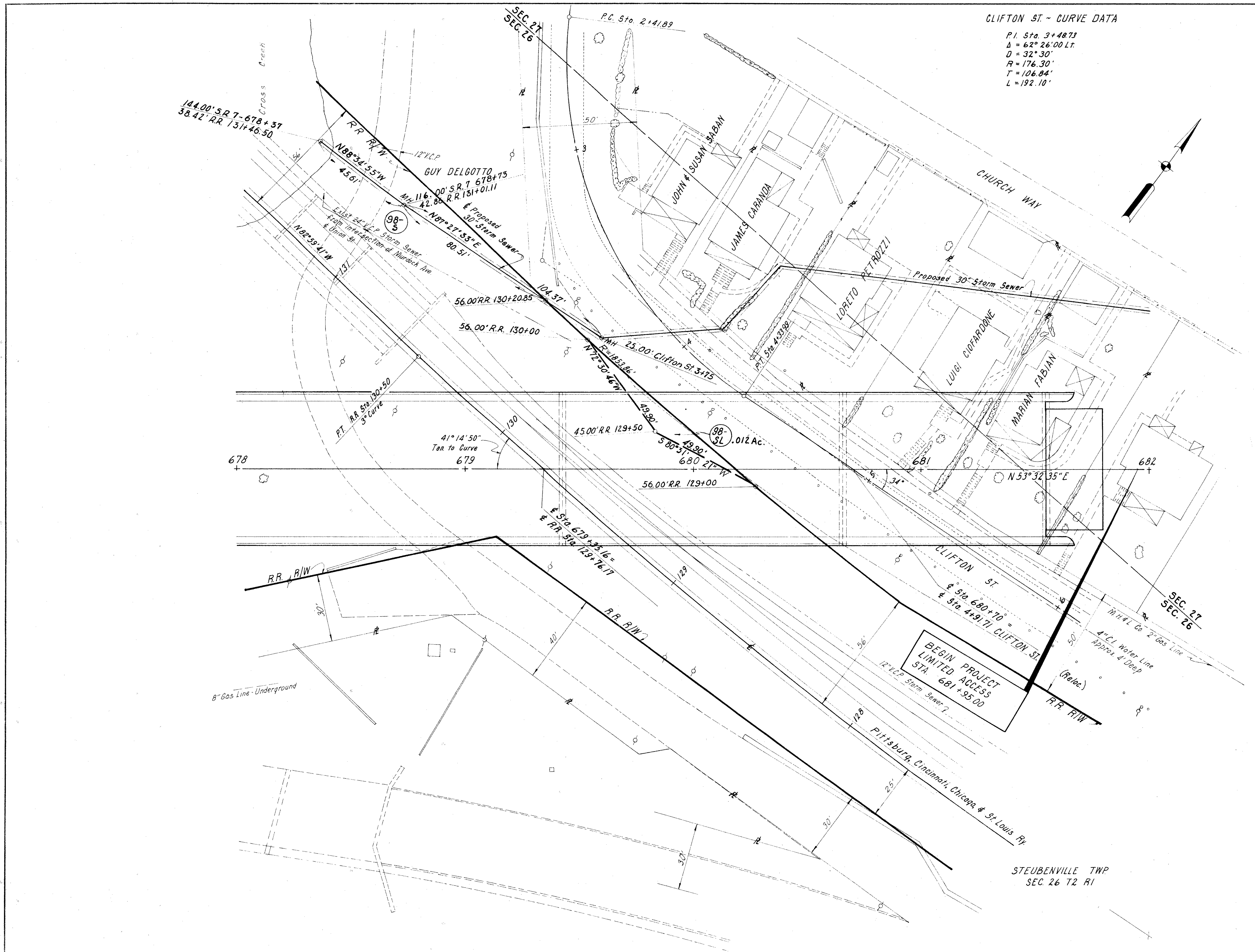
FED. RD. DIVISION 2
STATE OHIO
PROJECT U-430(14)
304/307
JEFFERSON COUNTY
JEF - 7 - 13.53
LIMITED ACCESS
R/W
16 OF 21
ADOLPH BEREN ET AL.
CURVE DATA
P.I. Sta. 739+04.57
Δ = 10°00'00" Lt.
D = 0°40'00"
R = 8,594.37'
T = 751.91'
L = 1,500.00'
POTENTIAL SLIDE AREA
STEUBENVILLE TWP
SEC. 27 T-2 R-1
O.P. Co. High Voltage Tower
Oil Well #11
Shackle Line
Well No. 5
Drip
Vacuum Line
Water Line
Lease Gas Line
Oil Line
Corrugated Metal Bldg.
Water Tank
T.B.A. 7.46 Ac.
P.R.O. 1.84 Ac.
214 LA
Easement
40'
40'
Oil Well No. 1
Oil Well No. 1 Miller
SEC. 27
SEC. 28
BRETTELL COAL CO.
215 LA
T.B.A. 10.61 Ac.
P.R.O. 2.88 Ac.
65°26'09" Tan to Curve
BEGIN SHEET STA. 731+00
P.C. Sta. 731+52.66
P.T. 31+31.07 = P.T. 731+31.07
Exist. R/W
1.5' Conc. Ret. Wall
8" Curb
RAMP "D"
Exist. S.R. 7
Guard Fence
Stone Wall
1' Conc. Wall
N 13°04'40"W
N 23°04'40"W
24" V.C.
Sign
Conc. Curb
Stone Wall
Wash
Spring
P.C.C. & St. Louis RR
Nearest Track
ADOLPH BEREN ET AL.
SECTION 27
SECTION 28
CURVE DATA
P.I. Sta. 739+04.57
Δ = 10°00'00" Lt.
D = 0°40'00"
R = 8,594.37'
T = 751.91'
L = 1,500.00'
STEUBENVILLE TWP
SEC. 28 T-2 R-1
Vacuum Line
Oil Line
Shackle Line
Oil Well No. 2 Miller
Oil Well #7 Miller
Drip
CURVE DATA
P.I. Sta. 749+73.30
Δ = 2°00'00" Lt.
D = 1°30'00"
R = 3819.51'
T = 66.67'
L = 133.33'
P.I. Sta. 753+10.82
Δ = 10°48'08" Lt.
D = 2°00'00"
R = 2864.79'
T = 270.86'
L = 540.11'
P.I. Sta. 756+46.74
Δ = 2°00'00" Lt.
D = 1°30'00"
R = 3819.51'
T = 66.67'
L = 133.33'
BRETTELL COAL CO.
POTENTIAL SLIDE AREA
P.T. Sta. 746+52.66
P.C. Sta. 749+06.63
P.C.C. Sta. 750+39.96
P.C.C. Sta. 755+80.07
215 LA
END SHEET STA. 757+00
N 23°04'40"W
N 25°04'40"W
N 35°52'48"W
N 37°52'48"W
R = 2918.79'
Exist. S.R. 7
Exist. R/W
2' Conc. Wall
18" V.C.
Sign Board
Guard Fence
Broken Conc.
Wash Out
BRETTELL COAL CO.
P.C.C. & ST. L. R.R.
Nearest Track
18" C.I.P.
2 x 3 Conc.
Scale 1" = 50'
6-22-59 Date of Completion

RIGHT OF WAY STA. 757+00 TO STA. 770+85.03

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(14)	

306/307

JEFFERSON COUNTY
JEF. -7-13.53
LIMITED ACCESS
R/W
18 OF 21



Note: Railroad Stations Are Referred To Those Shown On Railroad Company R/W Track Map V-1, Ohio, Sheet 5, Sta. 98+00 to Sta. 150+80.

Scale 1" = 20'

6-22-59 Date of Completion

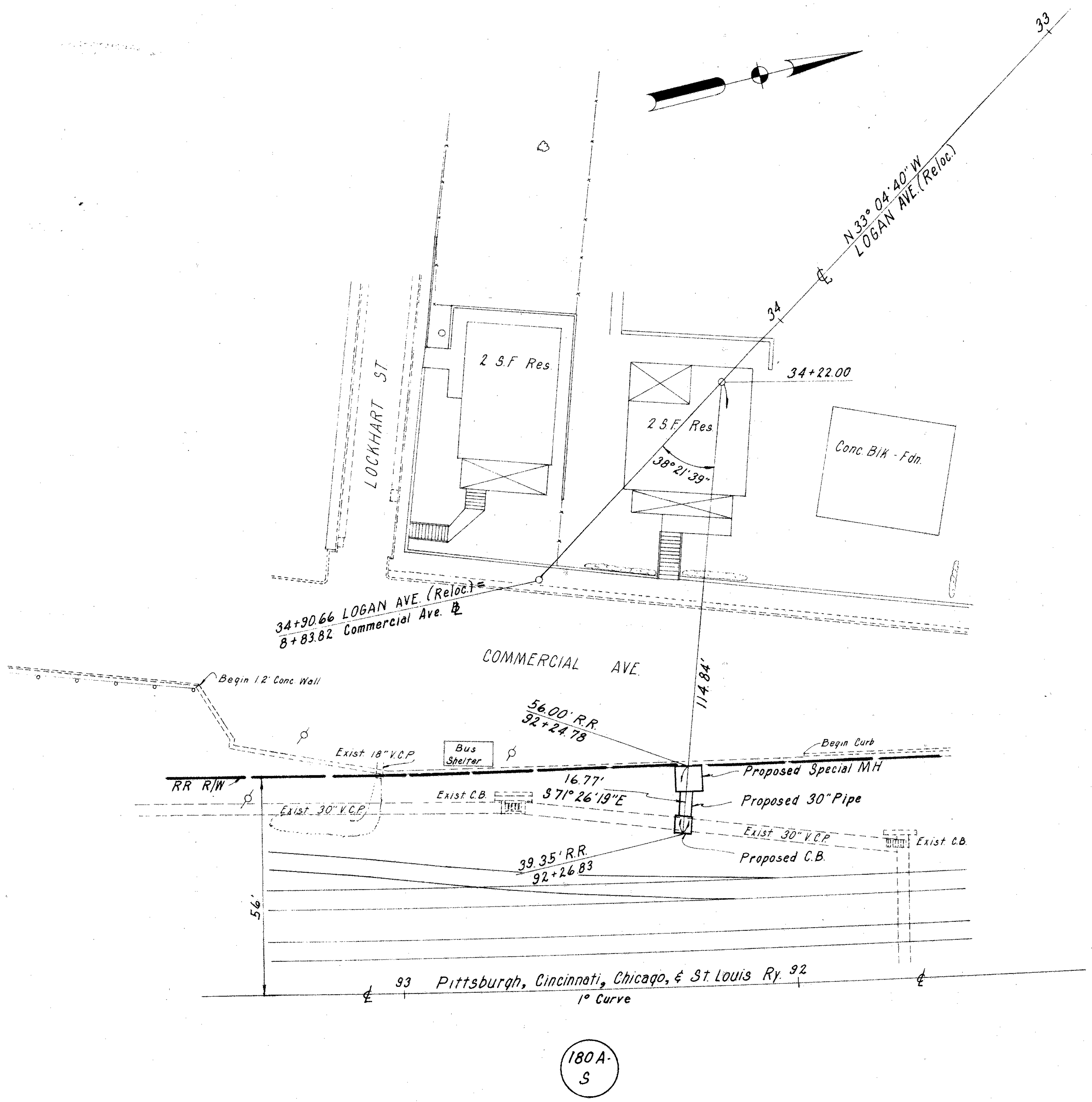
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27096

RIGHT OF WAY P.C.C. & ST. L. Ry.

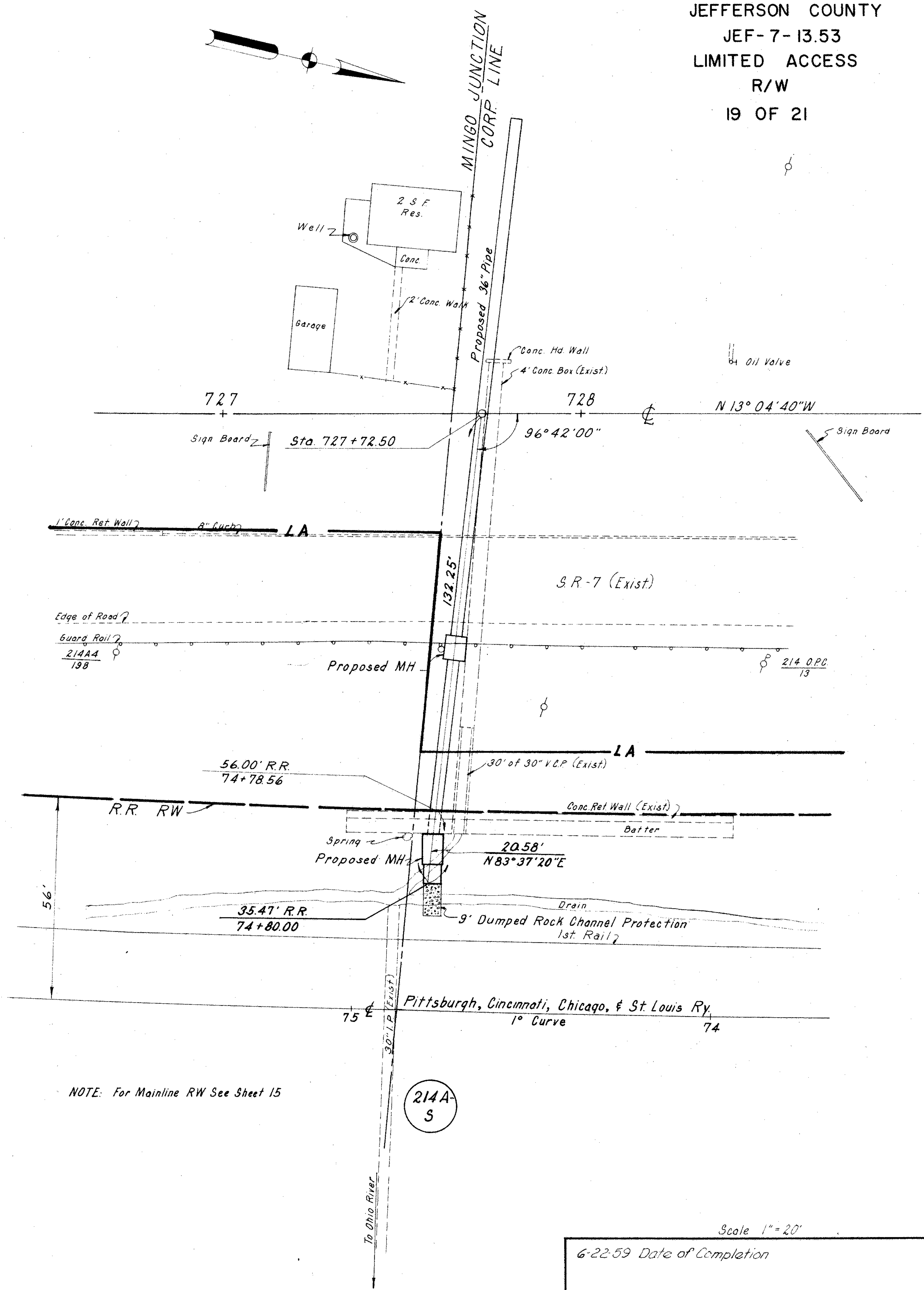
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

JEFFERSON COUNTY
JEF-7-13.53
LIMITED ACCESS
R/W

STEUBENVILLE TWP.
SEC. 27 T-2 R-1



NOTE: For Logan Ave. RW See Sheet 11



NOTE: For Mainline RW See Sheet 15

Scale 1" = 20'

6-22-59 Date of Completion

GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

308

ITEM	SHEET NUMBER 311	312	313	314	315	316	319	320	321	322		ITEM	COMBINATION SEWERS	100% PARTICIPATION BY CITY	TOTAL	UNIT	DESCRIPTION
																	COMBINATION AND SANITARY SEWERS
I-2			70		70							I-2	70 ~~140~~	70	140	L.F.	6" Storm Sewers, Sec. M-6.8 (a) (Sanitary)
I-2						80						I-2		80	80	L.F.	6" Storm Sewers, Sec. M-6.8 (b)
I-2						732						I-2		732	732	L.F.	8" Storm Sewers, Sec. M-6.8 (b) (Sanitary)
I-2	294			436								I-2	730		730	L.F.	12" Storm Sewers, Under Pavement or Approaches, Sec. M-6.6(d)
I-2				100	40							I-2	140		140	L.F.	12" Storm Sewers, Under Pavement or Approaches, Sec. M-6.8(b)
I-2					1038							I-2	1038		1038	L.F.	15" Storm Sewers, Under Pavement or Approaches, Sec. M-6.8(b)
I-2		506		156								I-2	662		662	L.F.	18" Storm Sewers, Under Pavement or Approaches, Sec. M-6.8(b)
I-2			344									I-2	344		344	L.F.	21" Storm Sewers, Under Pavement or Approaches, Sec. M-6.8(b)
I-2		308	448									I-2		756	756	L.F.	8" Storm Sewers, Under Pavement or Approaches, Sec. M-6.8(b) (Sanitary)
I-5			6									I-5		6	6	Ea.	6" Pipe Specials for Storm Sewers Sec. M-6.8(a) (Sanitary)
I-5			6									I-5		6	6	Ea.	8" Pipe Specials for Storm Sewers Under Pavement or Approaches. Sec. M-6.8(b) (Sanitary)
I-5					3							I-5	3		3	Ea.	15" Pipe Specials for Storm Sewers Under Pavement or Approaches, Sec. M-6.8(b)
I-5						4						I-5		4	4	Ea.	8" Pipe Specials for Storm Sewers, Sec. M-6.8 (b) (Sanitary)
I-8		1	1			3						I-8		5	5	Ea.	Standard Manhole No. 1 (Sanitary)
I-8	2	1		2	4							I-8	9		9	Ea.	Standard Manhole No. 1
I-8		1	1	1	1							I-8	4		4	Ea.	Standard Manhole No. 2
I-16				1								I-16	1		1	Ea.	Catch Basins Abandoned
																	WATER LINES
I-2							118	76				I-2		194	194	L. F.	15" Storm Sewers Under Pavement or Approaches Sec. M-6.5(b) or M-6.8(b)
I-124.03							805	360				I-124.03		1165	1165	L. F.	4" New Water Main
I-124.03									226			I-124.03		226	226	L. F.	4" New Water Main, Wrought Iron (Sec. M-6.10)
I-124.03										1024		I-124.03		1024	1024	L. F.	6" New Water Main
I-124.03								22				I-124.03		22	22	L. F.	8" New Water Main
I-124.03									52			I-124.03		52	52	L. F.	10" New Water Main, Wrought Iron (Sec. M-6.10)
I-124.03									8			I-124.03		8	8	Ea.	Fittings; 4" × 11¼° Wrought Iron Bends (Sec. M-6.10)
I-124.03									4			I-124.03		4	4	Ea.	Fittings; 10" × 11¼° Wrought Iron Bends (Sec. M-6.10)
I-124.03								2				I-124.03		2	2	Ea.	Fittings; 4" × 11¼° Cast Iron Bends
I-124.03							4	3				I-124.03		7	7	Ea.	Fittings; 4" × 22½° Cast Iron Bends
I-124.03							3					I-124.03		3	3	Ea.	Fittings; 4" × 45° Cast Iron Bends
I-124.03								1				I-124.03		1	1	Ea.	Fittings; 4" × 90° Cast Iron Bends
I-124.03										3		I-124.03		3	3	Ea.	Fittings; 6" × 11¼° Cast Iron Bends
I-124.03										1		I-124.03		1	1	Ea.	Fittings; 6" × 45° Cast Iron Bends
I-124.03							1					I-124.03		1	1	Ea.	Fittings; 4" Cast Iron Tees
I-124.03								1				I-124.03		1	1	Ea.	Fittings; 8" × 8" × 4" Cast Iron Tees
I-124.03										1		I-124.03		1	1	Ea.	Fittings; 6" Cast Iron Tees
I-124.03							2			1		I-124.03		3	3	Ea.	Fittings; 4" Socket Caps
I-124.03										1		I-124.03		1	1	Ea.	Fittings; 6" Socket Caps
I-124.03										2		I-124.03		2	2	Ea.	6" Valves and Boxes
I-124.04								415				I-124.04		415	415	L. F.	8" Water Main, Removed and Relaid
I-124.06							3	1	1	1		I-124.06		6	6	Ea.	Fire Hydrants Removed and Reset
I-124.08							1					I-124.08		1	1	Ea.	Service Stops and Boxes, Removed and Reset
Special									10			Special		10	10	Ea.	Grinnell Pipe Roll Stand or Equal
Special									10			Special		10	10	Ea.	Grinnell Protection Saddle, Fig. 188 or Equal
Special									162			Special		162	162	L. F.	3" Johns-Mansville Zero Pipe Insulation or Equal
S-7									528			S-7		528	528	lbs.	Structural Steel

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

QUANTITY SUMMARY
UTILITIES

REVISED 11-20-59
R. E. C.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
Griffin	A.M.	A.M.	A.W.L.	10-9-59	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	309
2	OHIO	U-430(14)		

JEFFERSON COUNTY
JEF-7-13.53

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

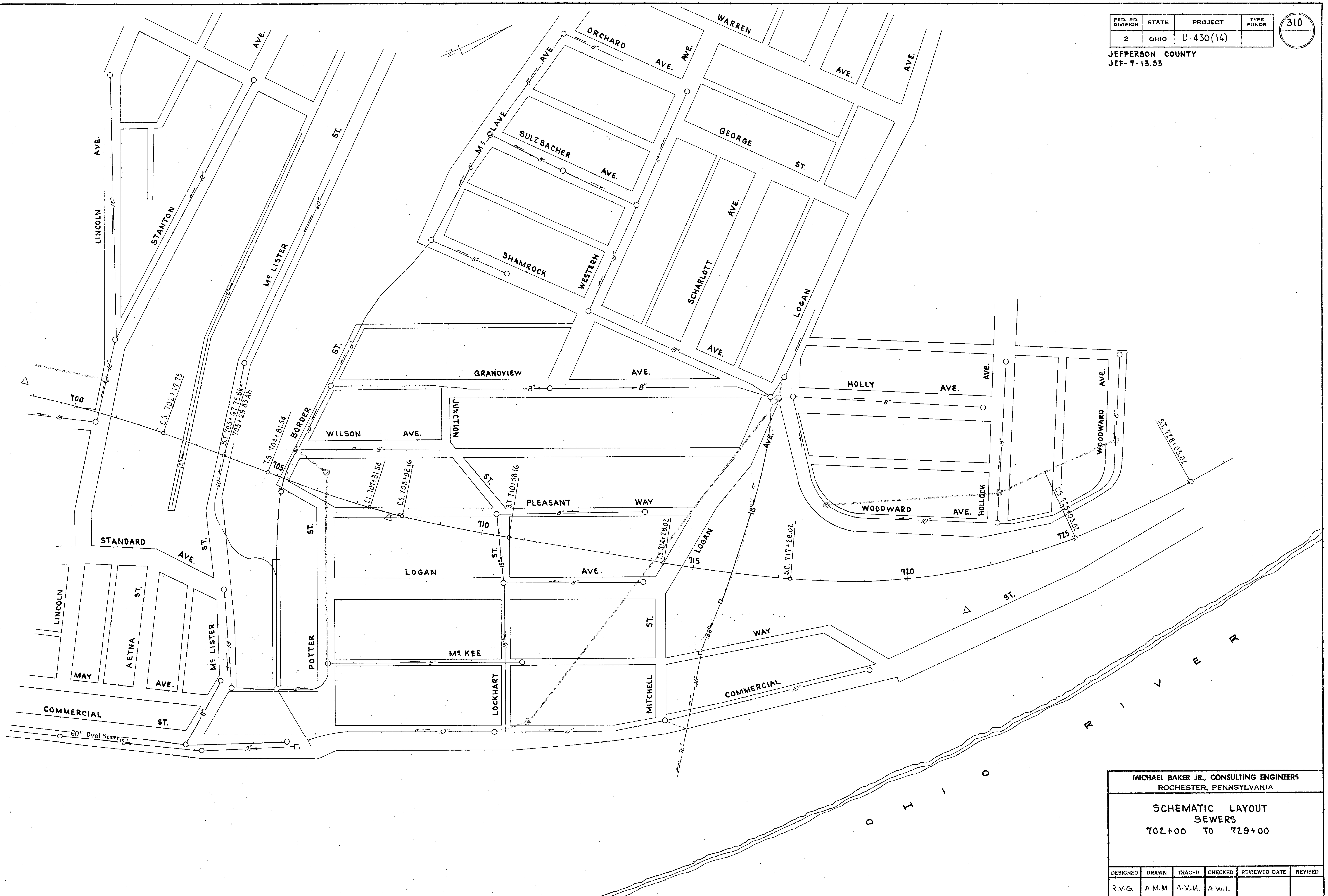
SCHEMATIC LAYOUT
SEWERS
679+00 TO 702+00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
R.V.G.	A.M.M.	A.M.M.	A.W.L.		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430(14)	

310

JEFFERSON COUNTY
JEF-7-13.53

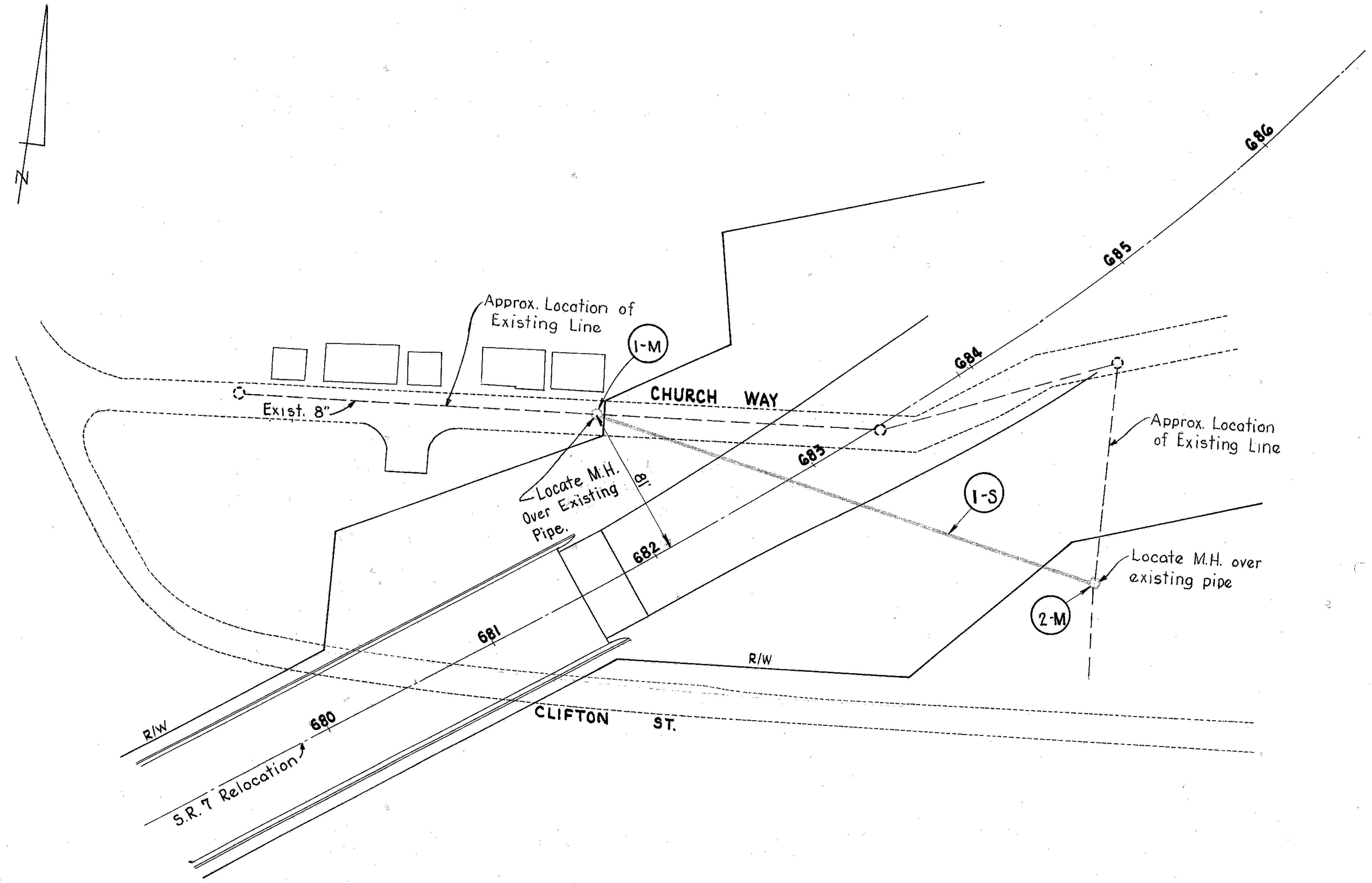


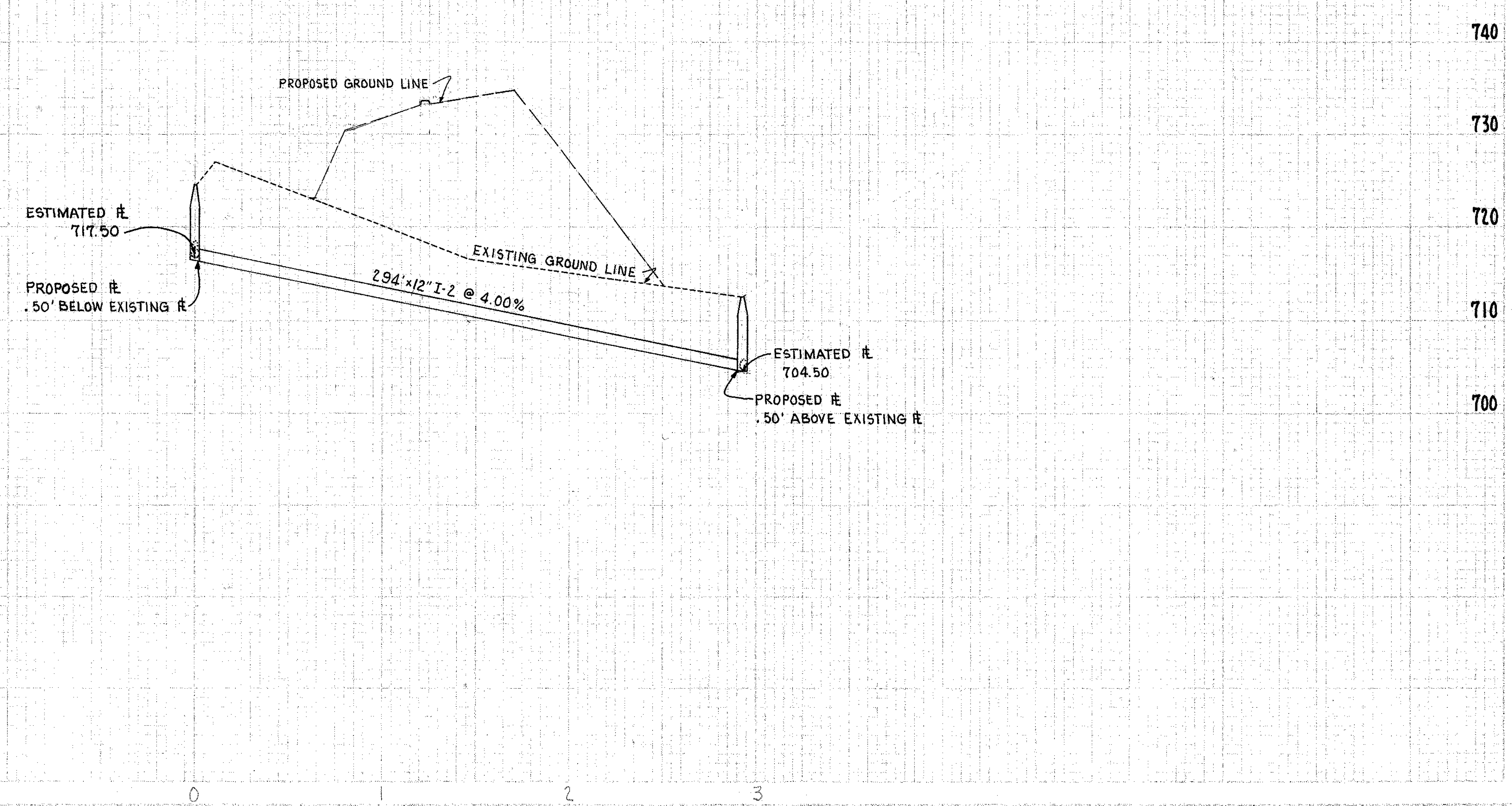
MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SCHEMATIC LAYOUT
SEWERS
702+00 TO 729+00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
R.V.G.	A.M.M.	A.M.M.	A.W.L.		

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27066

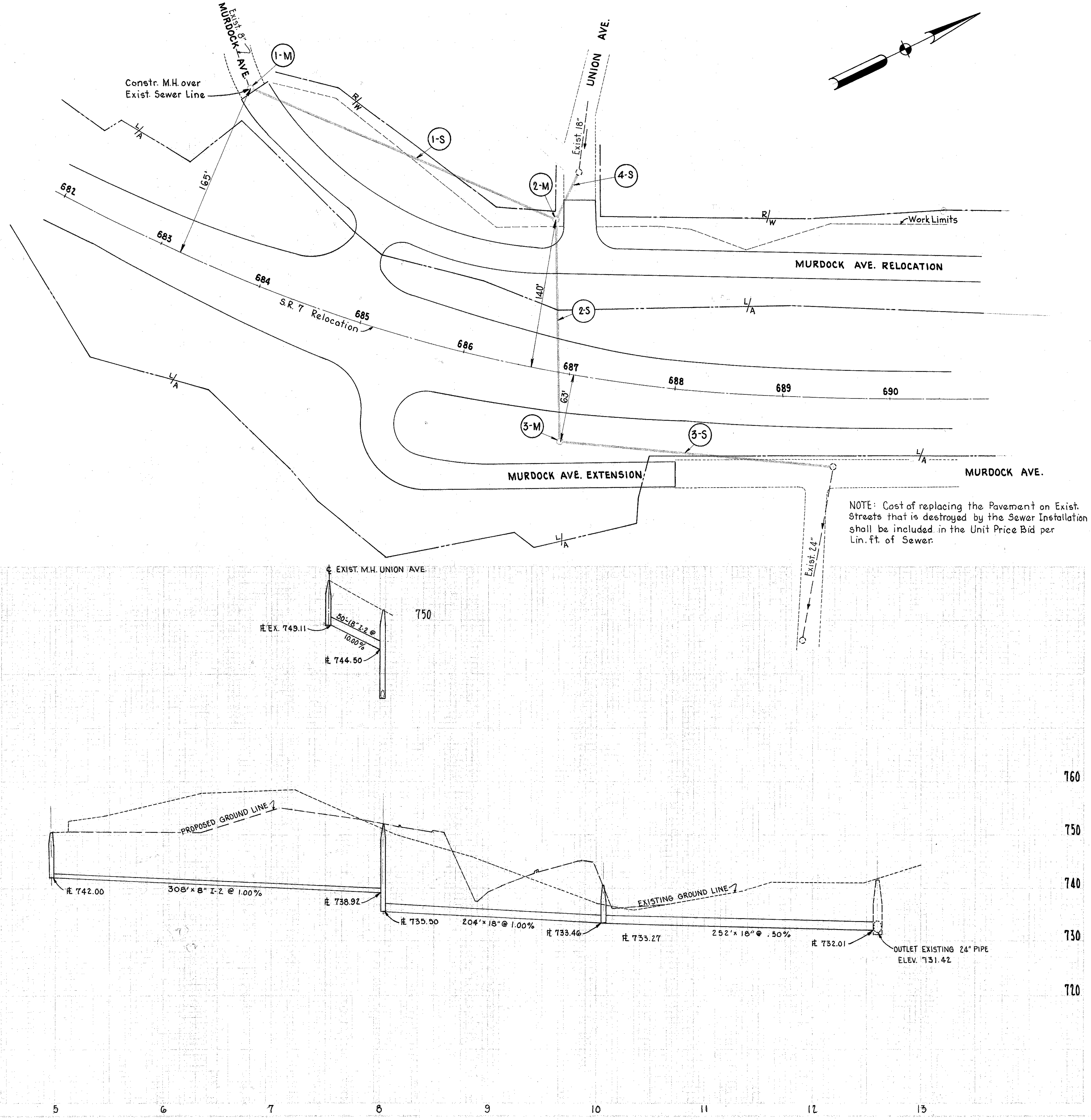




ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-8 Std. Manhole No. 1 Ea.	I-2 Storm Sewers Under Pav't. & Appro. Sec. M-6.6(d) 12" L.F.
1-M	0+00		1	
2-M	2+94		1	
1-S	0+00 to 2+94			294
TOTALS			2	294

CHURCH WAY & S.R. 7 RELOCATION SEWERS



NOTE: Cost of replacing the Pavement on Exist. Streets that is destroyed by the Sewer Installation shall be included in the Unit Price Bid per Lin. ft. of Sewer.

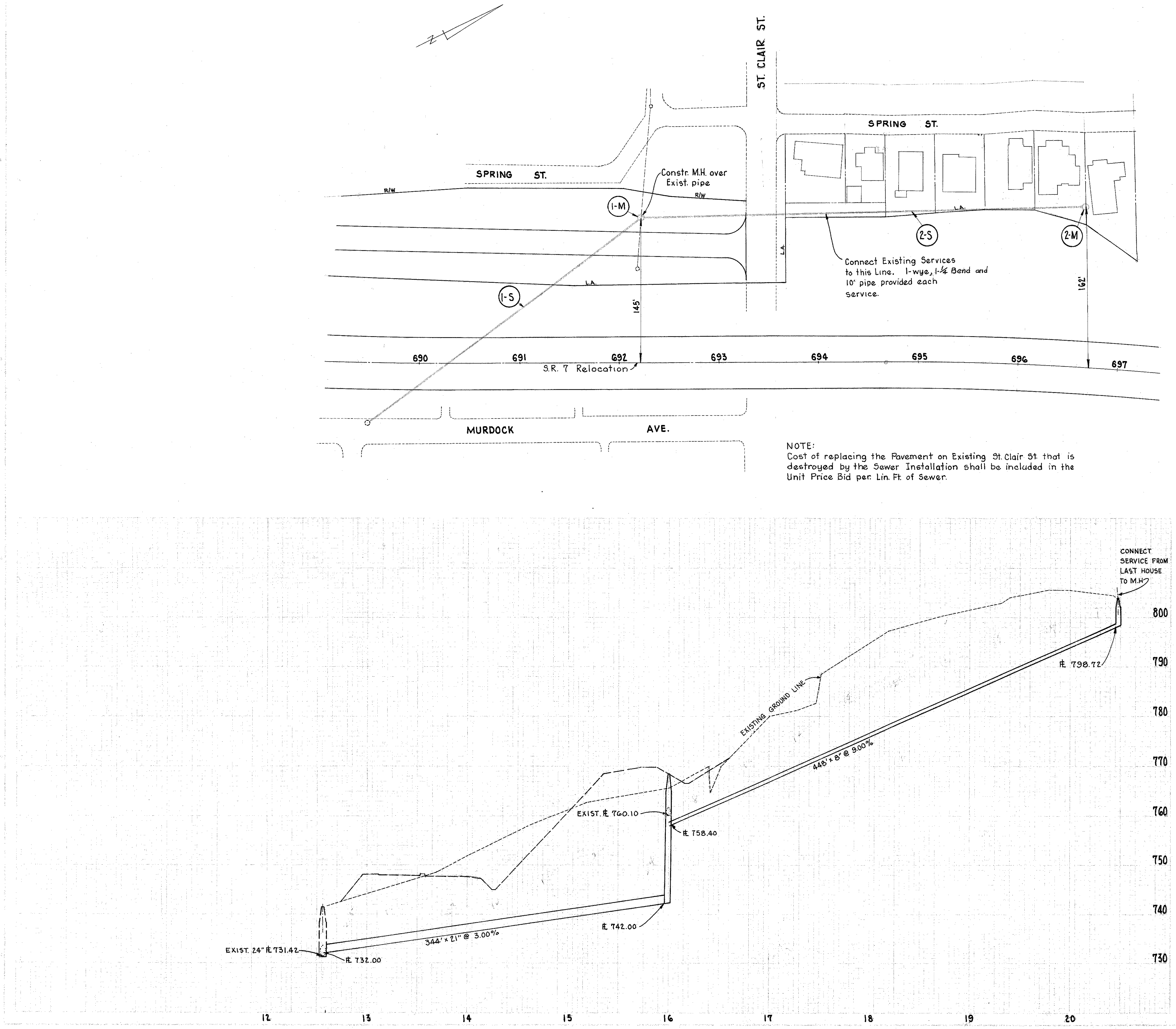
ESTIMATED QUANTITIES

Ref. No.	Station to Station	I-8 Std. Manhole No. 1 Each	I-8 Std. Manhole No. 2 Each	I-2 Storm Sewers Under Pav't. & Appro Sec. M-6.8(b) 8" L.F.	I-2 Storm Sewers Under Pav't. & Appro Sec. M-6.8(b) 18" L.F.
1-M	4+96	1			
2-M	8+04		1		
3-M	10+08	1			
1-S	4+96 to 8+04			308	
2-S	8+04 to 10+08				204
3-S	10+08 to 12+64				252
4-S	Union Ave Lateral				50
		2	1	308	506

MURDOCK AVE. RELOCATION SEWERS

2 | OHIO | U-430 (14)

JEFFERSON COUNTY ~ JEF-7-13.53



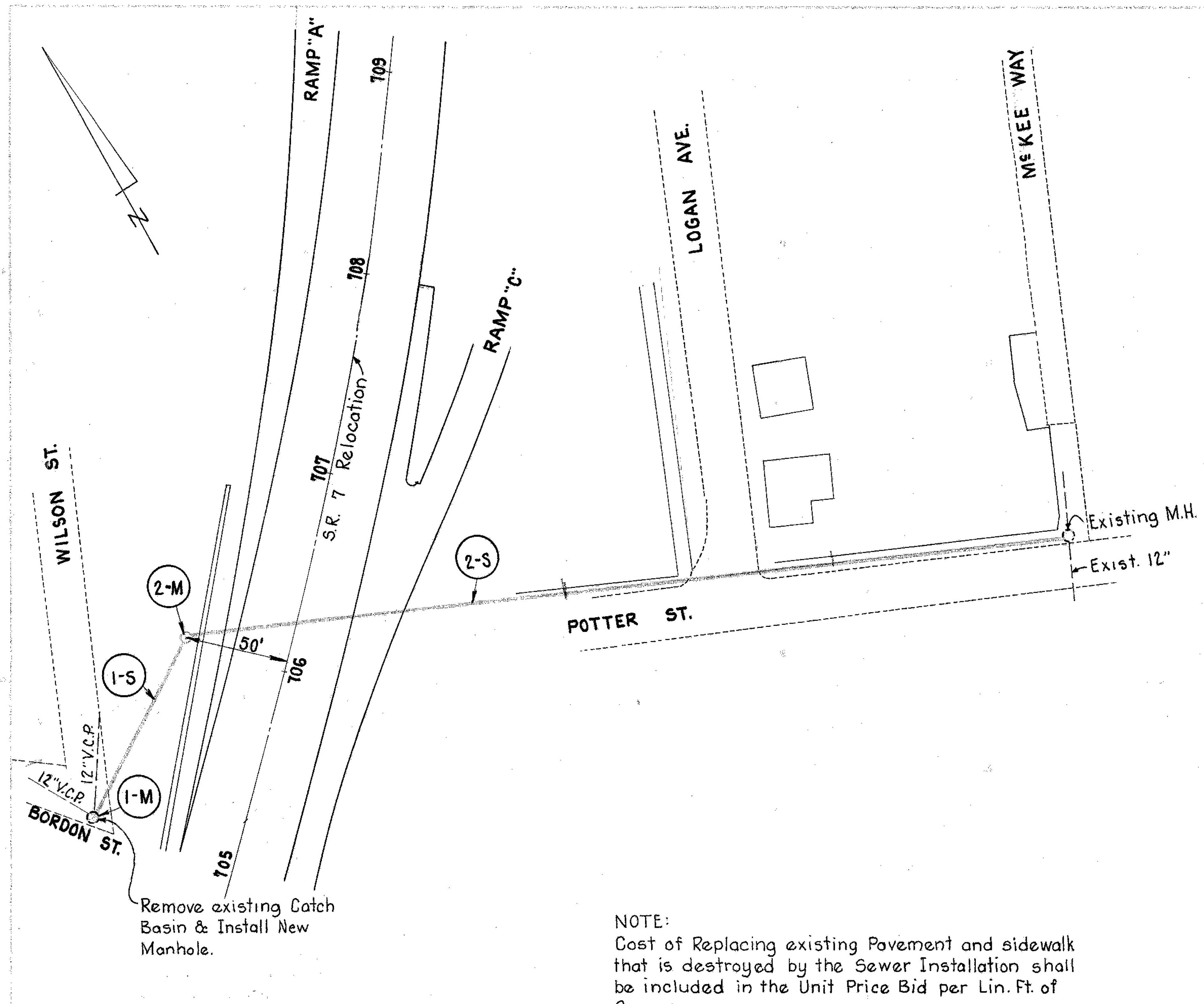
NOTE:
Cost of replacing the Pavement on Existing St. Clair St. that is destroyed by the Sewer Installation shall be included in the Unit Price Bid per Lin. Ft. of Sewer.

ESTIMATED QUANTITIES

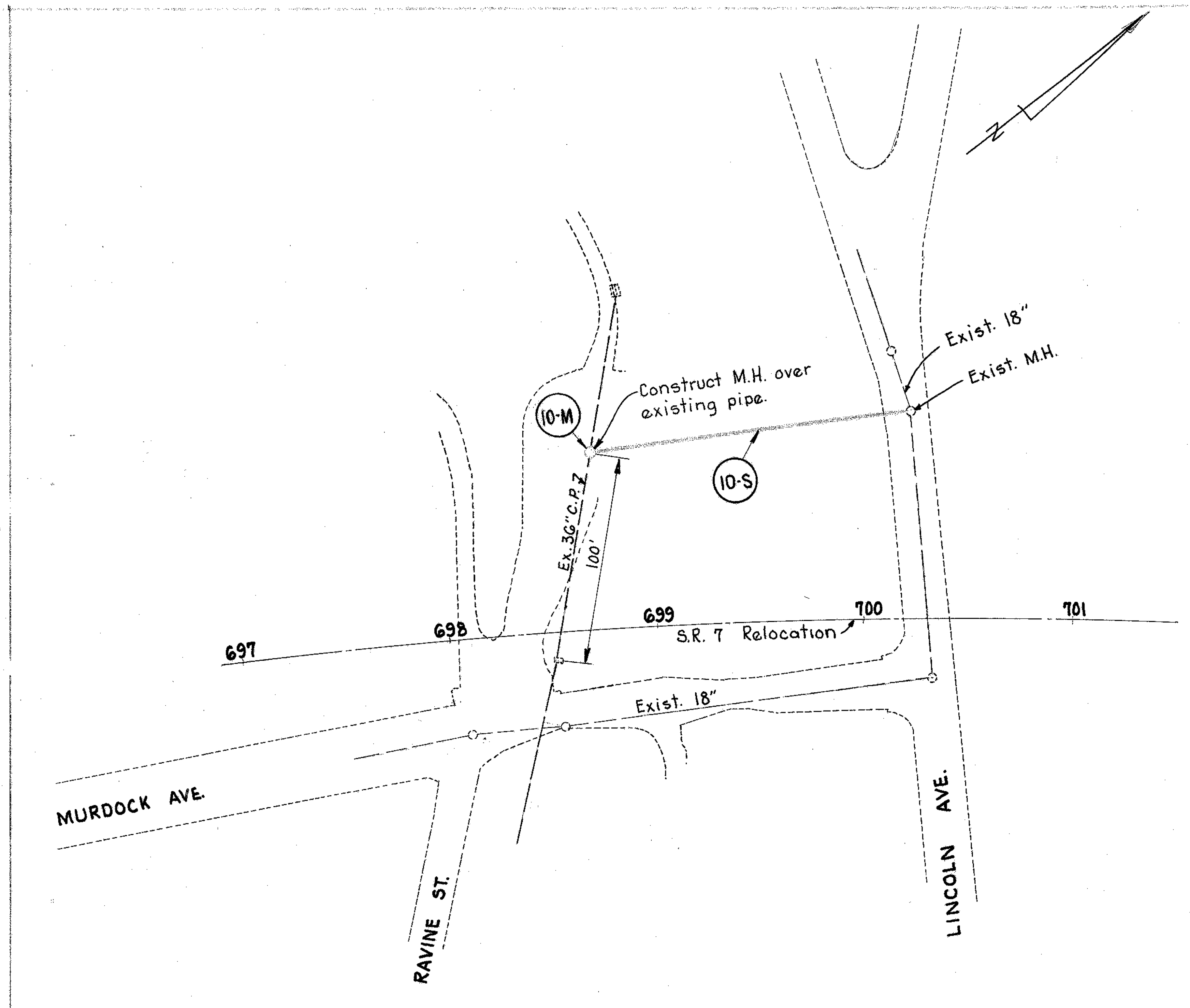
Ref. No.	Station to Station	Side	I-8 Std. Manhole No. 1 Ea.	I-8 Std. Manhole No. 2 Ea.	I-2 Storm Sewers Under Pav't. & Appro. Sec. M-6.8(b) 8" L.F.	I-2 Storm Sewers Under Pav't. & Appro. Sec. M-6.8(b) 21" L.F.	Storm Sewers M-6.8(a) 6" L.F.	I-5 Pipe Special Under Pav't. & Appro. Sec. M-6.8(b) Wye 8"x8"x6" Ea.	I-5 Pipe Spec. Sec. M-6.8(a) 6"-45° Bend Ea.
1-M	16+00			1					
2-M	20+48		1						
1-S	12+55 to 16+00				~~448~~	344			
2-S	16+00 to 20+48				448	~~344~~	70	6	6
Totals			1	1	448	344	70	6	6

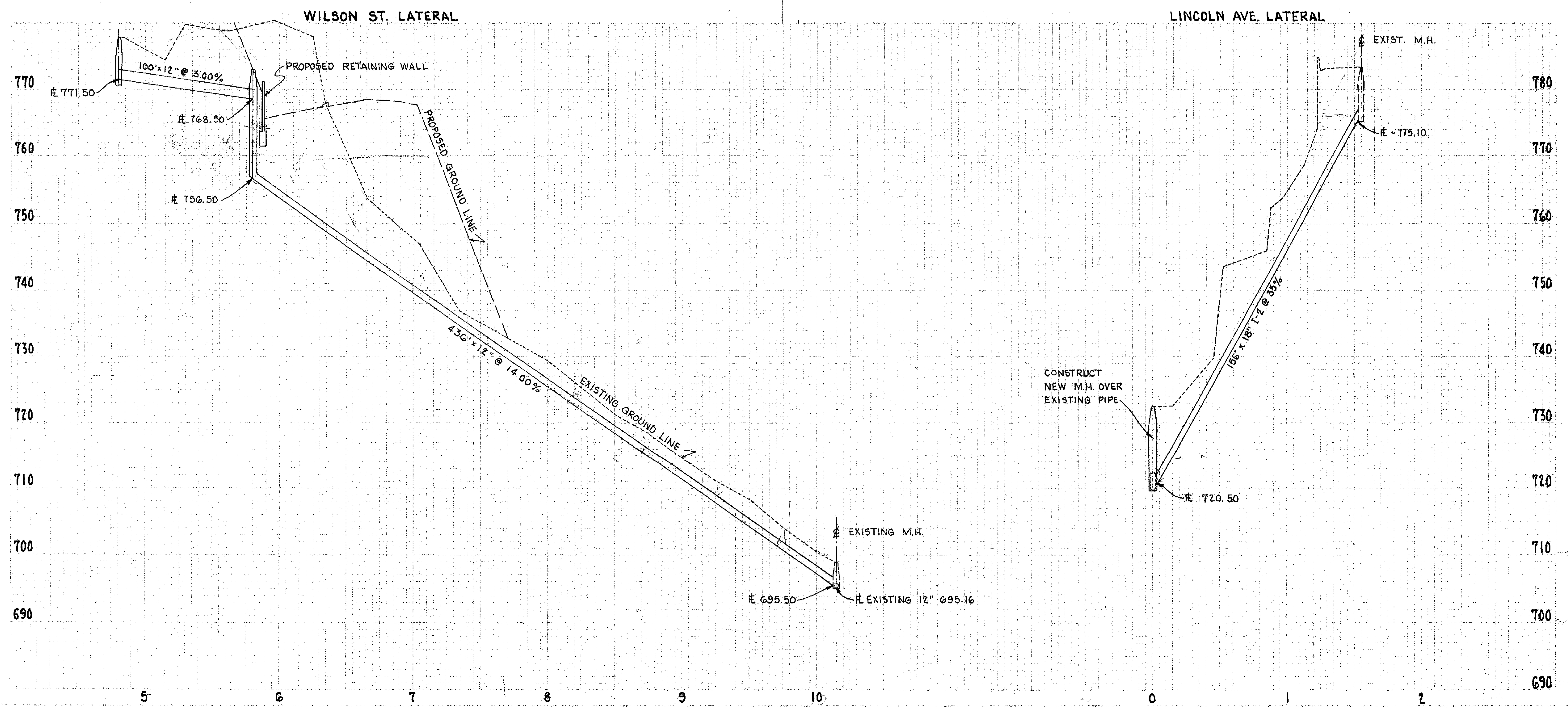
REVISED - 11-20-59
R. E. C.

MURDOCK AVE.- SPRING ST. SEWER



NOTE:
Cost of Replacing existing Pavement and sidewalk that is destroyed by the Sewer Installation shall be included in the Unit Price Bid per Lin. Ft. of Sewer.





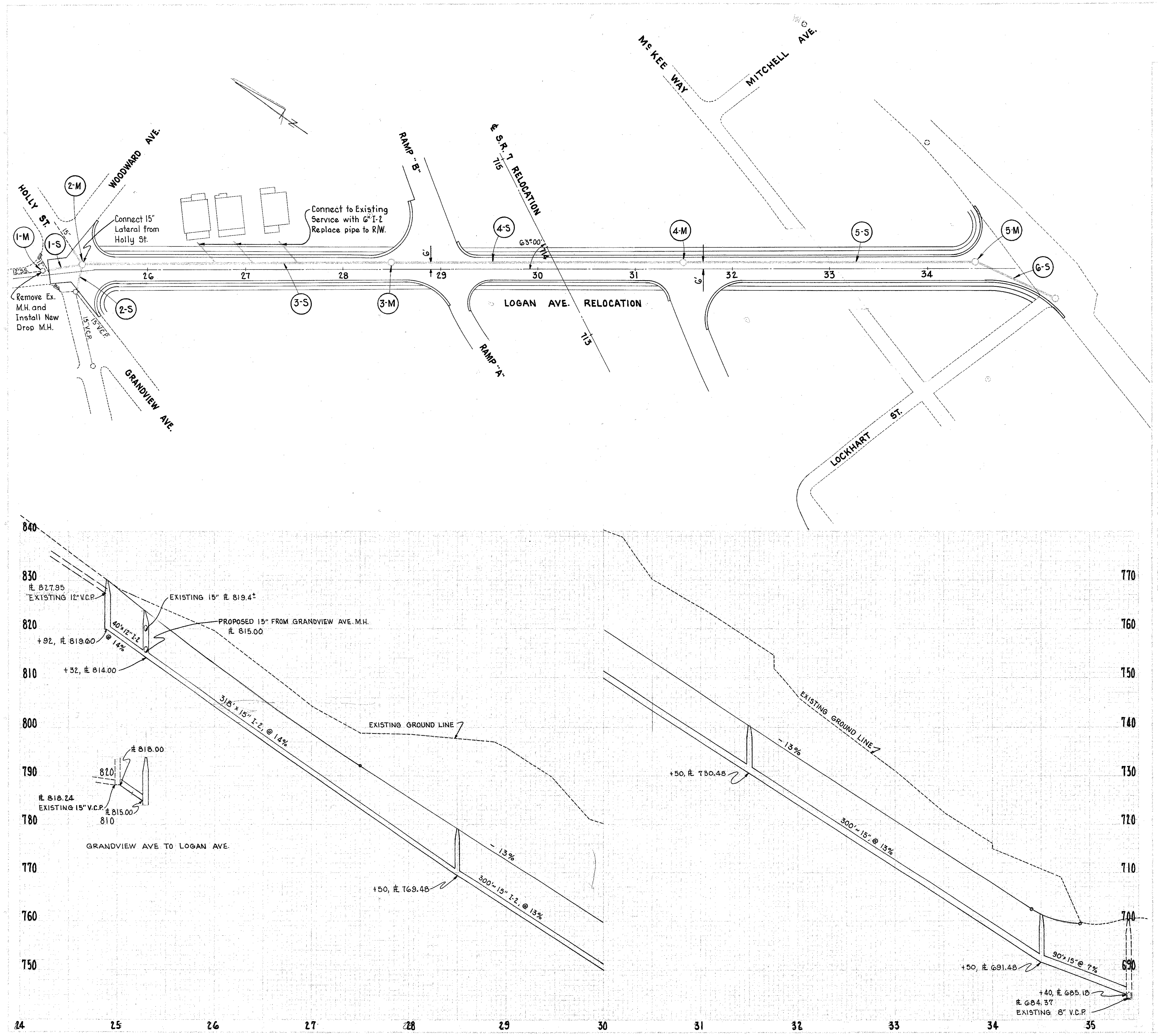
ESTIMATED QUANTITIES

Ref. No.	Station to Station	Side	I-8 Std. Manhole No. 1 Ea.	I-8 Std. Manhole No. 2 Ea.	I-2 Storm Sewers Under Pav't & Appro. Sec. M-6.8(b) 18" L.F.	I-2 Storm Sewers Under Pav't & Appro. Sec. M-6.8(b) 12" L.F.	I-2 Storm Sewers Under Pav't & Approaches Sec. M-6.6(d) 12" L.F.	I-16 Catch Basins Abandoned Ea.
	WILSON ST. LATERAL							
1-M	4+80		1					1
2-M	5+80			1				
1-S	4+80 to 5+80					100		
2-S	5+80 to 10+16						436	
	LINCOLN AVE. LATERAL							
10-M	0+00		1					
10-S	0+00 to 1+56				156			
TOTALS			2	1	156	100	436	1

WILSON ST. - POTTER ST. SEWER
RAVINE ST. TO LINCOLN AVE SEWER

2	OHIO	U-430(14)

JEFFERSON COUNTY ~ JEF-7-13.53



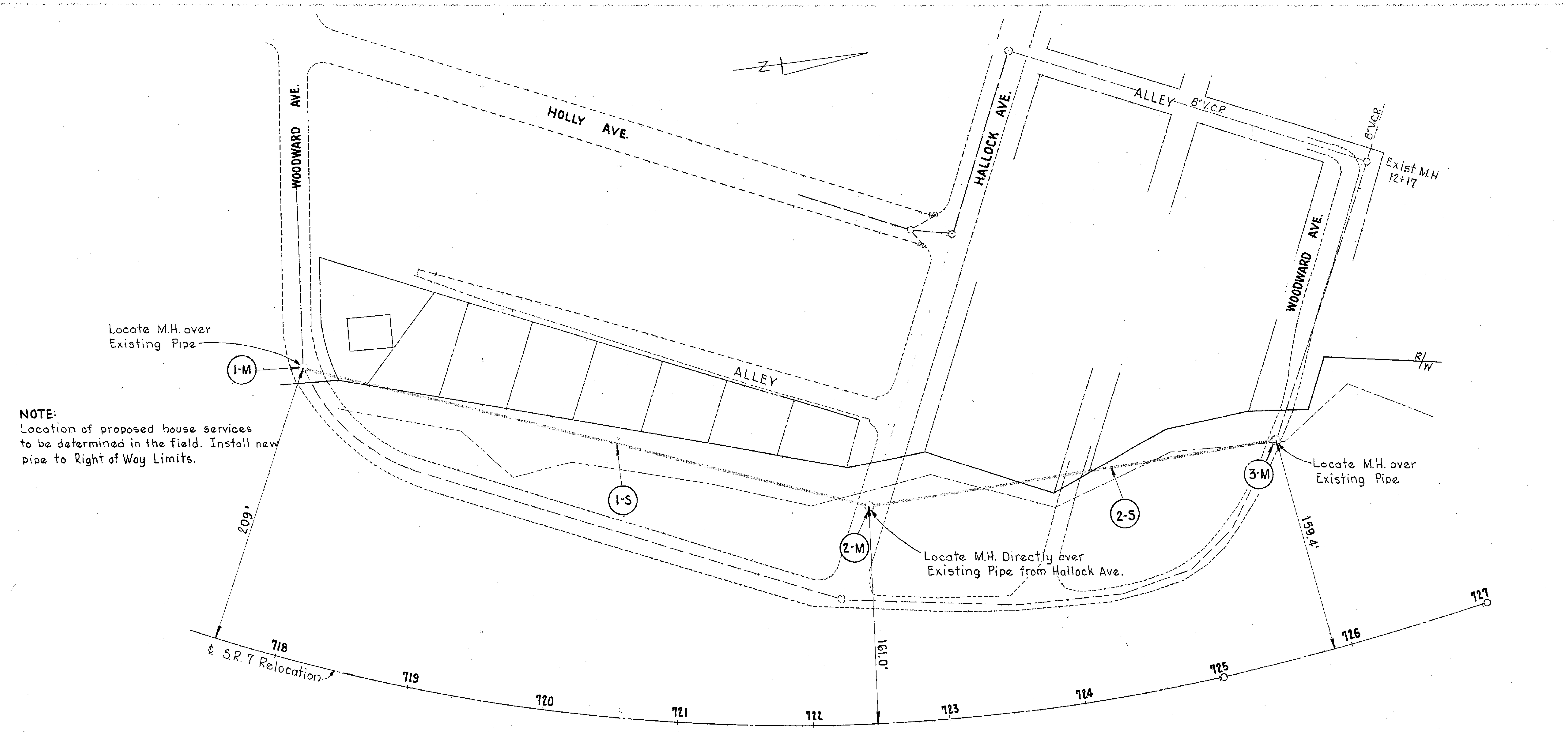
ESTIMATED QUANTITIES

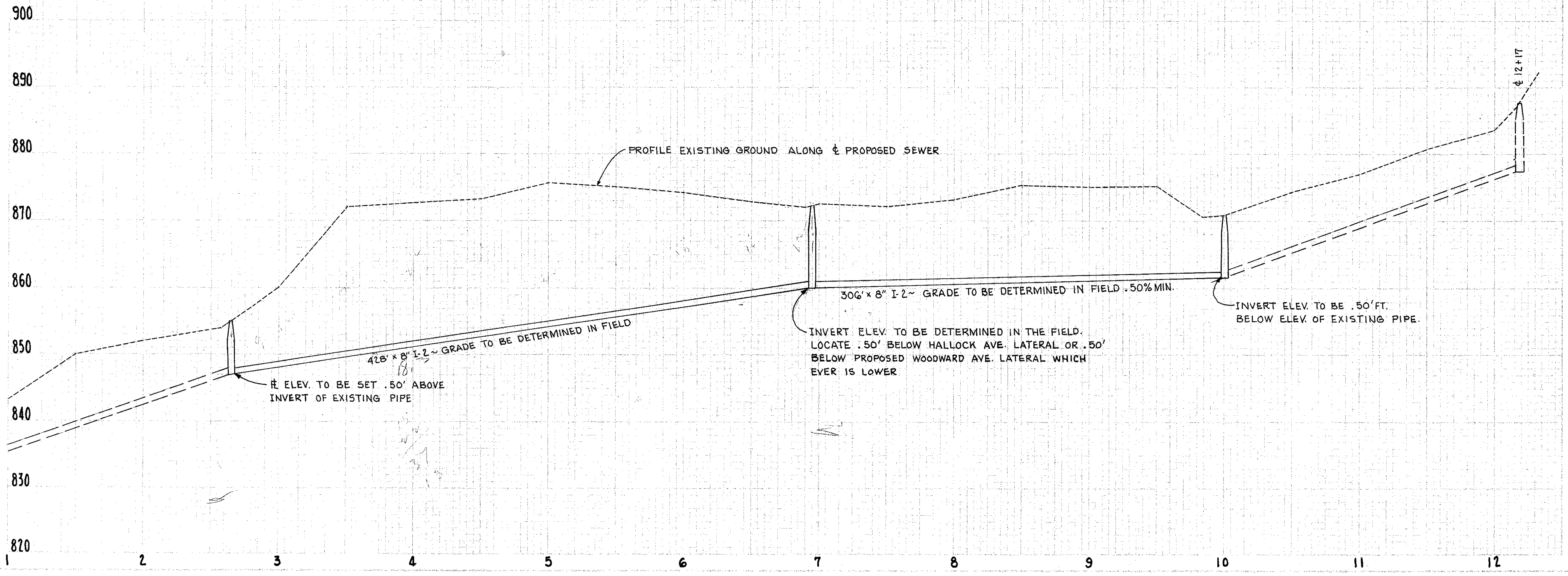
Ref. No.	Station to Station	Side	I-8 Std. Manhole Nº1 Ea.	I-8 Std. Manhole Nº2 Ea.	I-2 Storm Sewers Under Pav't. & Appro. Sec. M-6.8(b) 12" L.F.	I-2 Storm Sewers Under Pav't. & Appro. Sec. M-6.8(b) 15" L.F.	Storm Sewer Sec. M-6.8(a) 6" L.F.	I-5 Pipe Special Under Pav't. & Appro. Sec. M-6.8(b) Wye 15"x15"x6" Ea.
1-M	24+92	Lt.		1				
2-M	25+32	Lt.	1					
3-M	28+50	Lt.	1					
4-M	31+50	Lt.	1					
5-M	34+50	Lt.	1					
1-S	24+92 to 25+32	Lt.			40			
2-S	Grandview Ave. Lateral	Lt. & Rt.				30		
3-S	25+32 to 28+50	Lt.				318	70	3
4-S	28+50 to 31+50	Lt.				300		
5-S	31+50 to 34+50	Lt.				300		
6-S	34+50 to 35+32	Lt. & Rt.				90		
			4	1	40	1038	70	3

LOGAN AVE. SEWER

FED. RD. DIVISION	STATE	PROJECT
3	OHIO	U-430 (14)

JEFFERSON COUNTY ~ JEF- 7- 13.53





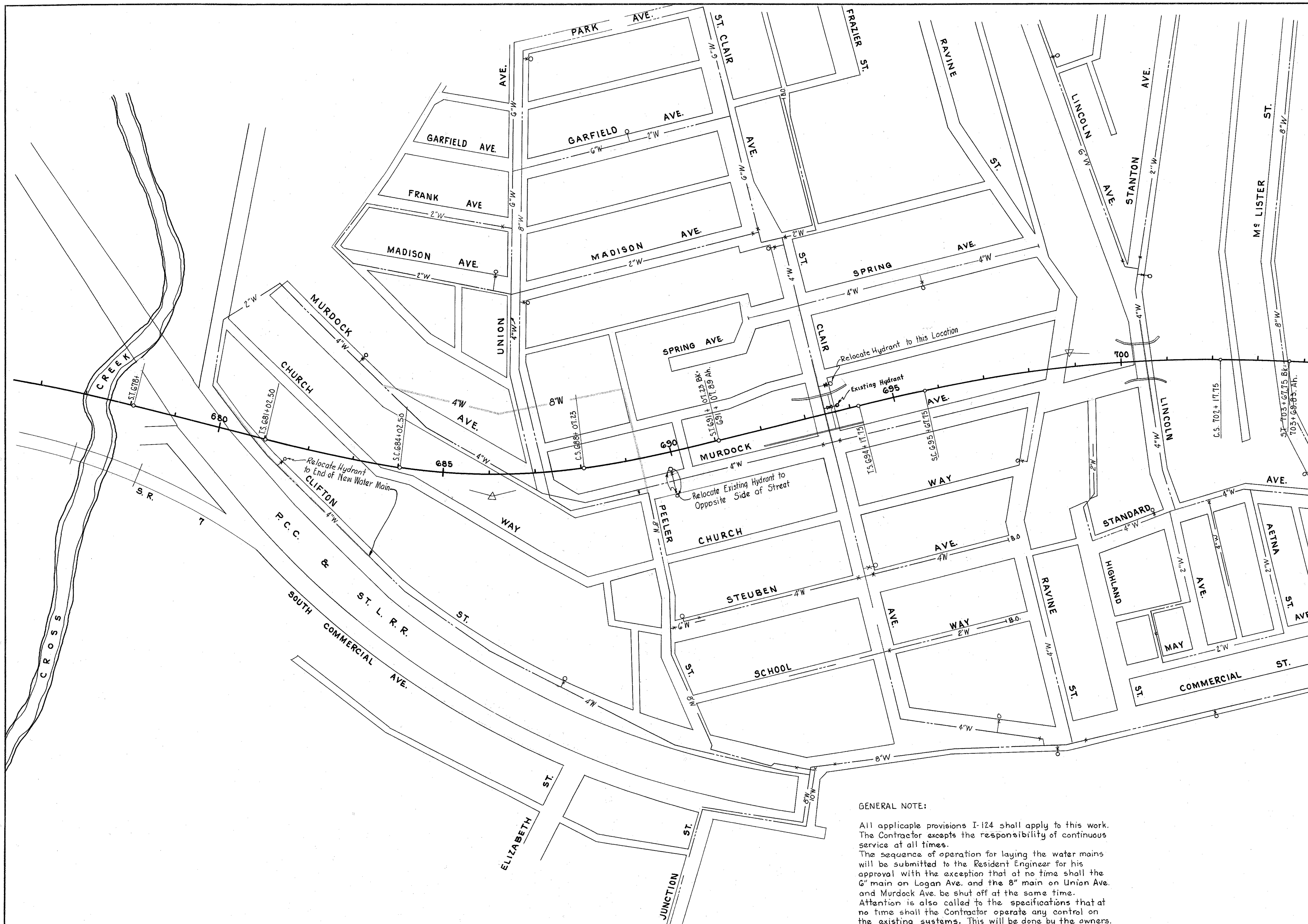
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-8 Std. Manhole Nº 1 Ea.	I-2 Storm Sewers Sec. M-6.8(b) 6" L.F.	I-2 Storm Sewers Sec. M-6.8(b) 8" L.F.	I-5 8" Pipe Spec. Sec. M-6.8(b) Wye 8" x 8" x 6" Ea.
1-M	2+68	℄	1			
2-M	6+96	℄	1			
3-M	10+00	℄	1			
1-5	2+68 to 6+96	℄		80	428	4
2-5	6+96 to 10+00	℄			304	
TOTALS			3	80	732	4

WOODWARD AVE SEWER

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

JEFFERSON COUNTY
JEF- 7-13.53



GENERAL NOTE:

All applicable provisions I-124 shall apply to this work.
The Contractor excepts the responsibility of continuous service at all times.
The sequence of operation for laying the water mains will be submitted to the Resident Engineer for his approval with the exception that at no time shall the 6" main on Logan Ave. and the 8" main on Union Ave. and Murdock Ave. be shut off at the same time.
Attention is also called to the specifications that at no time shall the Contractor operate any control on the existing systems. This will be done by the owners.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SCHEMATIC LAYOUT
WATER
STA. 678+00 To STA. 702+00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
R.V.G.	A.M.M.	A.N.M.	A.W.L.		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-430 (14)	

318

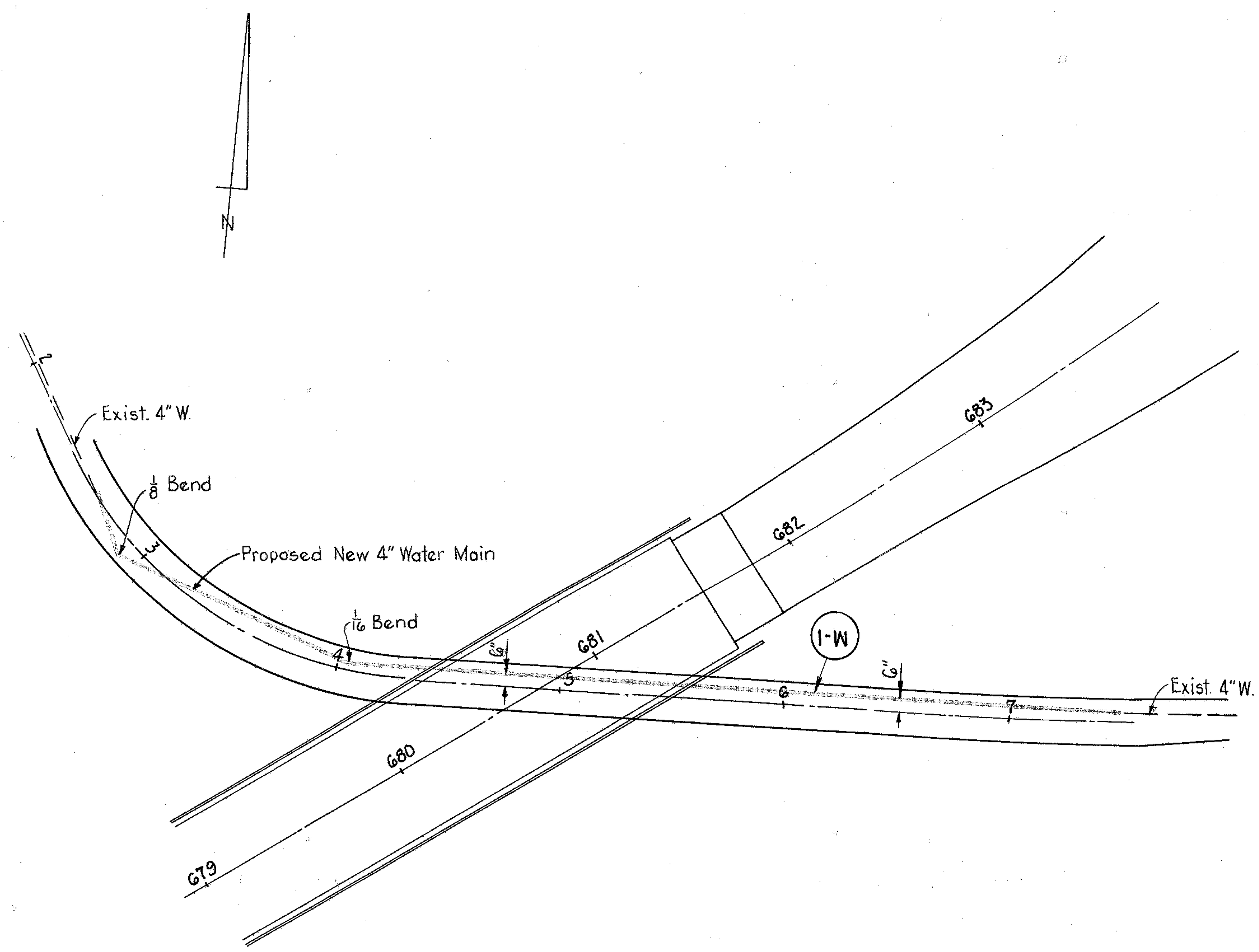
JEFFERSON COUNTY
JEF-7-13.53

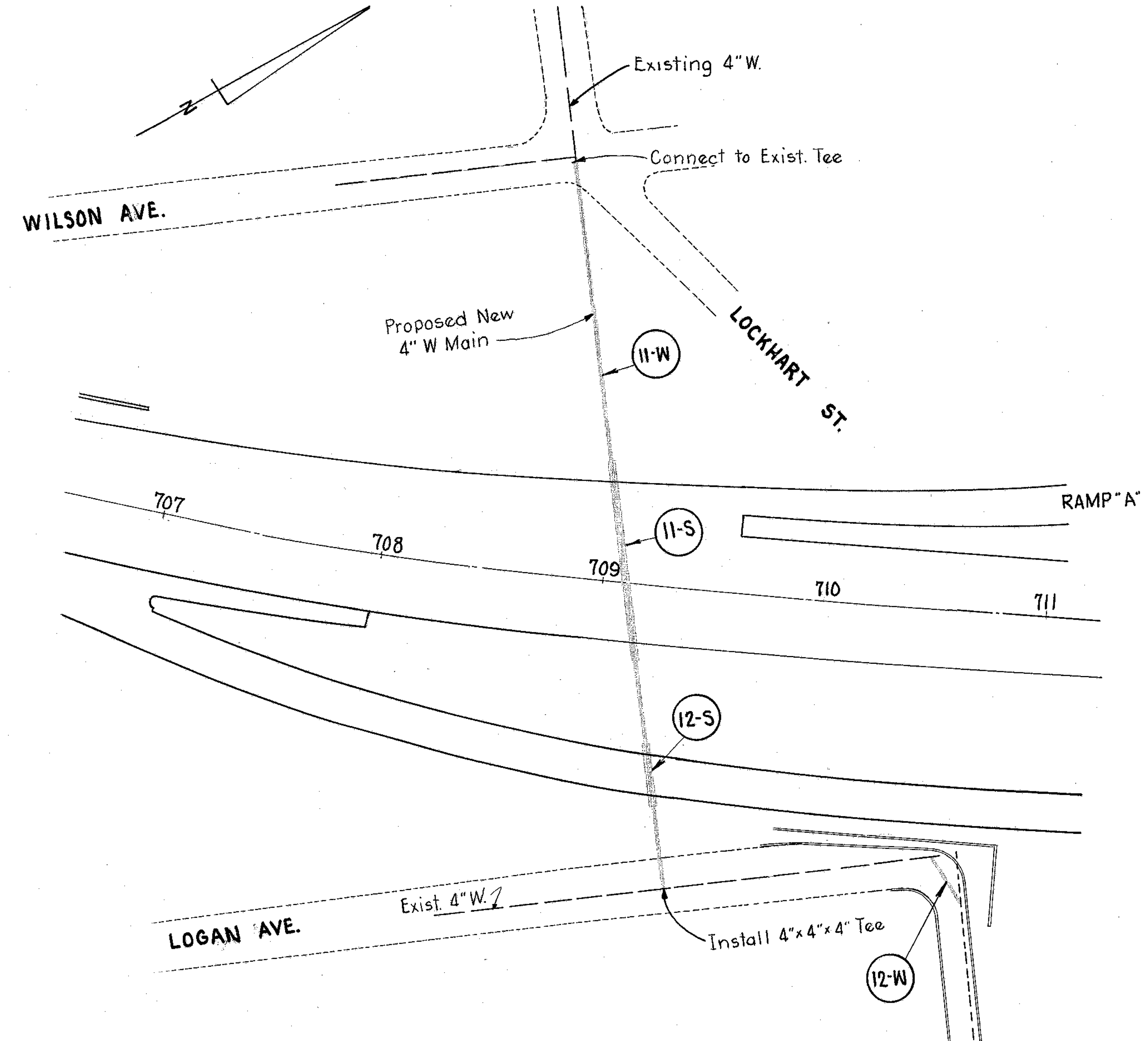
MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SCHEMATIC LAYOUT
WATER
STA. 702+00 To STA. 729+00

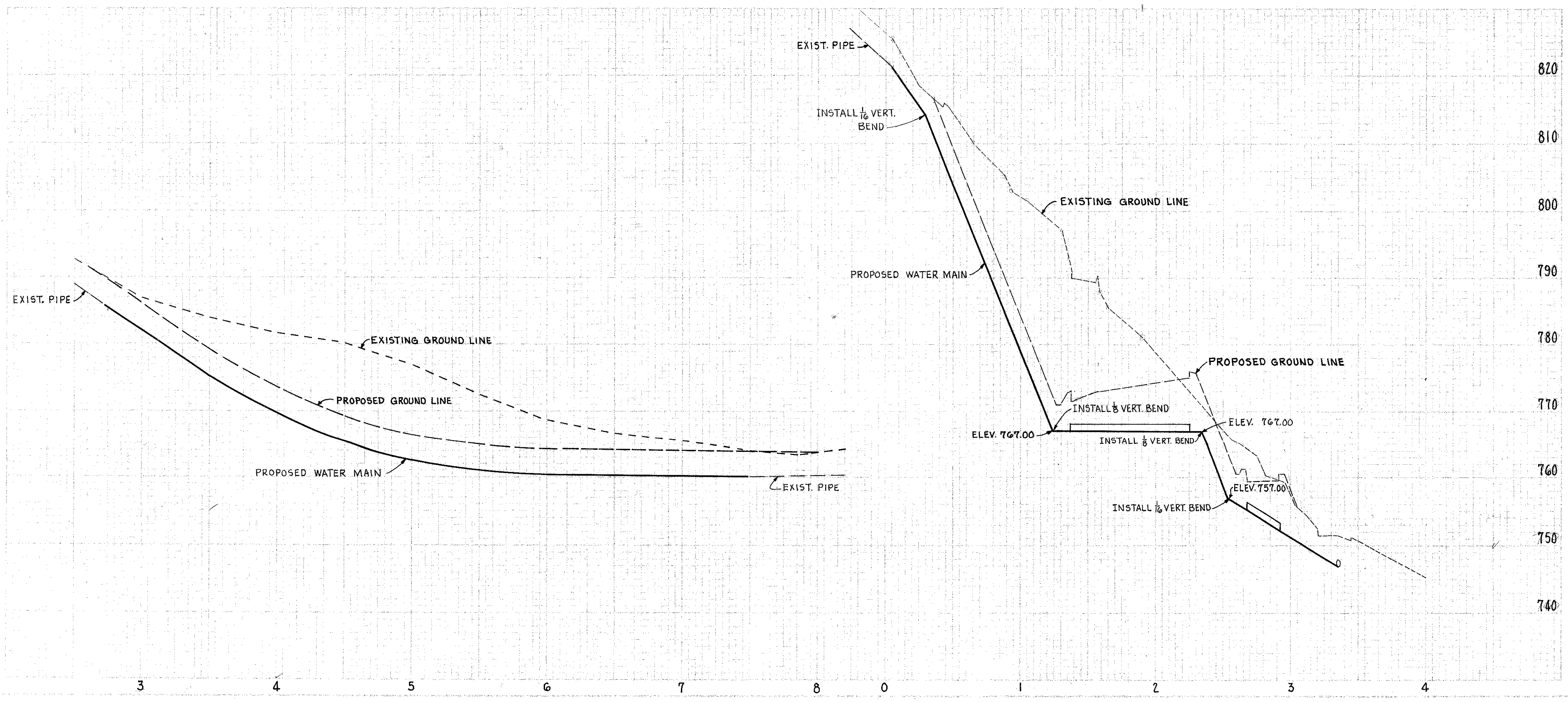
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
R.V.G.	a.m.	a.m.	A.W.L.		

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27098





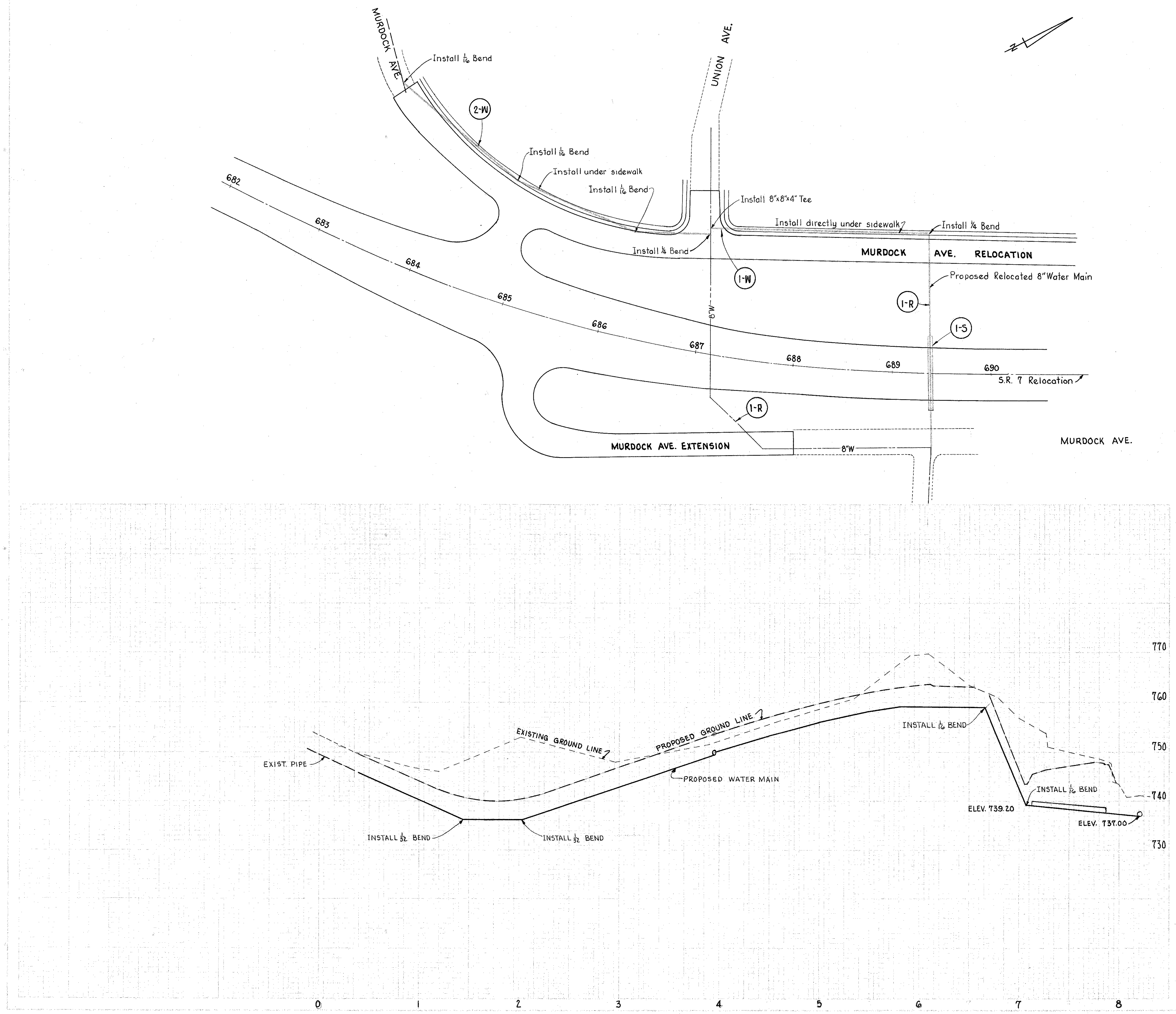
NOTE:
Construct Water Mains 4.5' below finished ground except as otherwise shown on the plans.



ESTIMATED QUANTITIES

Ref. No.	Station to Station	Side	I-2 Storm Sewer Under Pav't. & Appro. Sec. M-6.5(b) or M-6.8(b) L.5" L.F.	I-124.03 New Water Main L.F.	I-124.03 4" C.I. 22½° Bend Ea.	I-124.03 4" C.I. 45° Bend Ea.	I-124.03 4"×4"×4" Tee Ea.	I-124.06 Fire Hydrants Removed & Reset Ea.	I-124.03 Socket Caps 4" Ea.	I-124.08 Service Stops & Boxes Removed & Reset Ea.
11-S	1+35 to 2+25		90							
12-S	2+64 to 2+92		28							
11-W	0+05 to 3+25			330	3	2	1			
12-W										1
1-W	2+75 to 7+50			475	1	1		1		
See Sheet No. 318								2	2	
			118	805	4	3	1	3	2	1

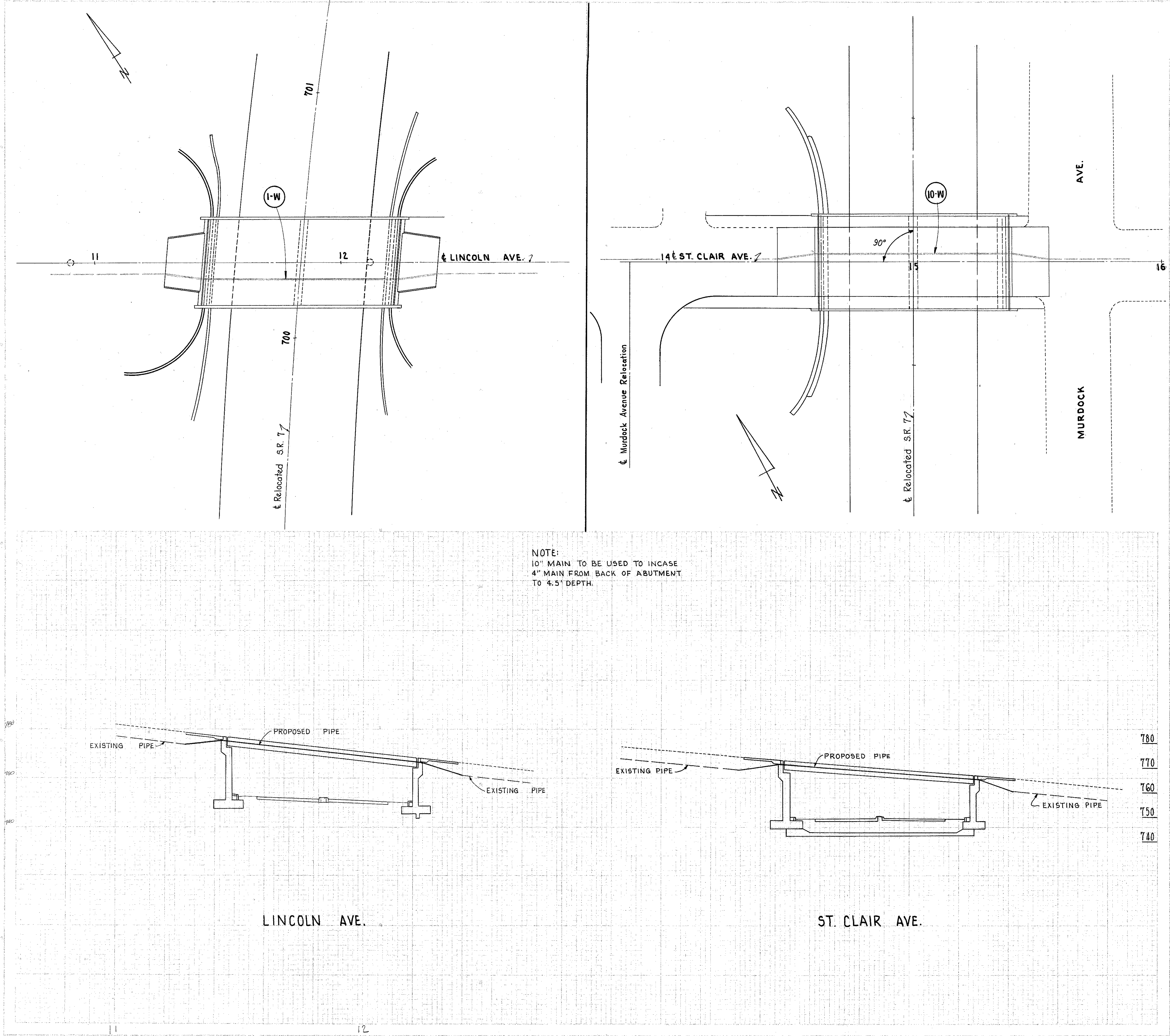
CLIFTON ST. WATER
LOGAN AVE. To WILSON AVE. WATER



ESTIMATED QUANTITIES

Ref. No.	Station to Station	Side	I-124.04 Water Main Removed & Relaid 8" L.F.	I-124.03 C.I. New Water Main 8" L.F.	I-124.03 C.I. New Water Main 4" L.F.	8"x8"x4" Tee Ea.	22½° Bend 4" Ea.	11¼° Bend 4" Ea.	90° Bend 4" Ea.	I-2 Storm Sewer Under Pavt. & Appr. Sec. M-6.5(b) or M-6.8(b) 15" L.F.	I-124.06 Hydrants Removed & Reset Ea.
1-R	3+95 to 8+20	Rt.	415								
1-W	3+95 to 4+17			22							
2-W	0+35 to 3+95				360	1	3	2	1		
1-S	7+12 to 7+88									76	
	7+00 See Sheet No. 317										1
			415	22	360	1	3	2	1	76	1

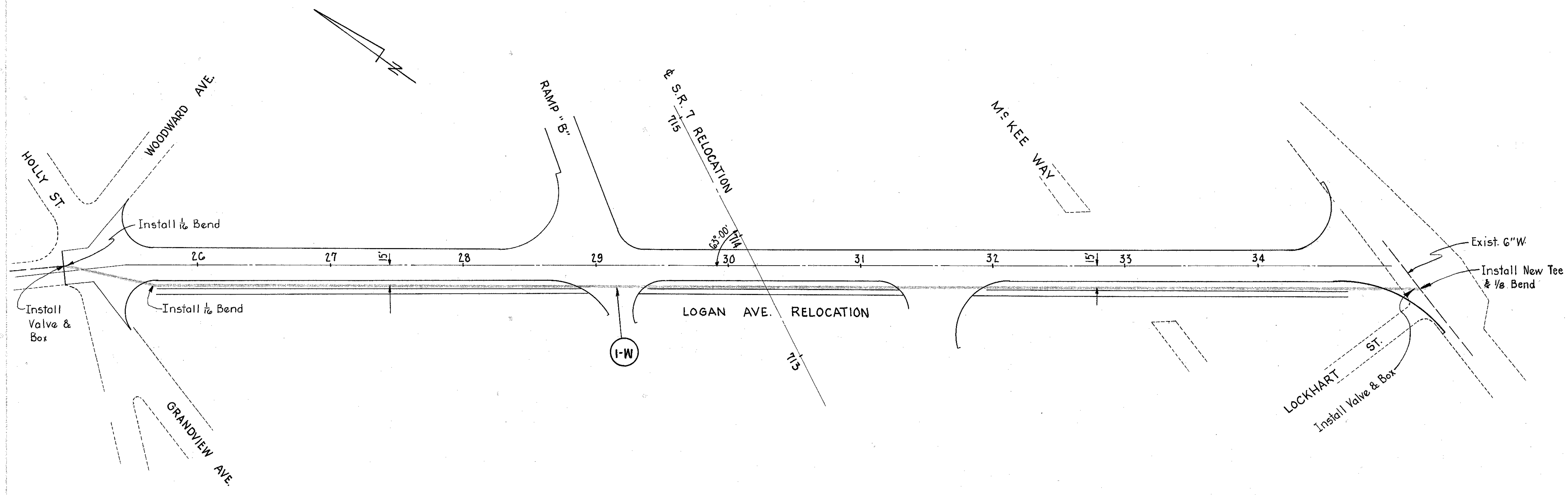
MURDOCK AVE. RELOC. & MURDOCK AVE. EXTENSION WATER

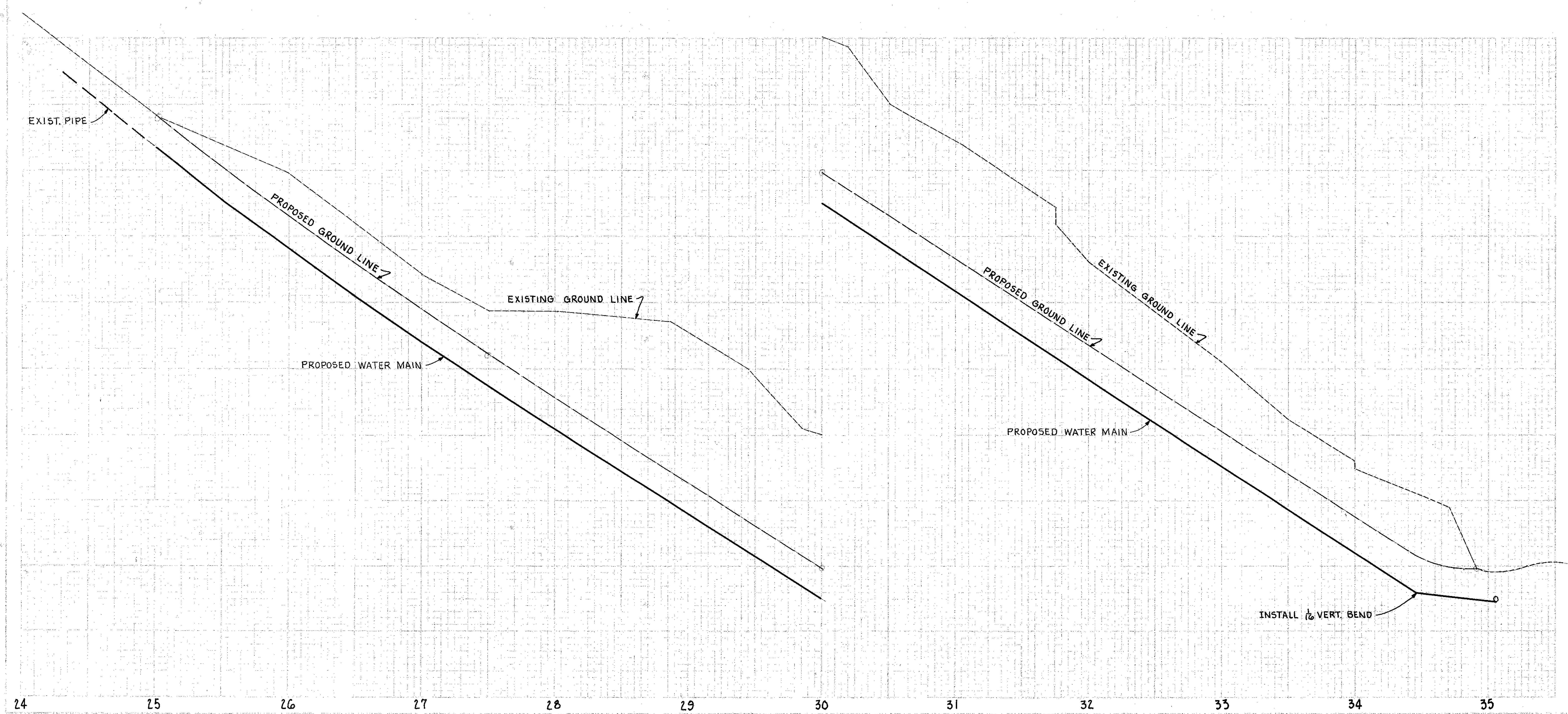


ESTIMATED QUANTITIES

Ref. No.	Station to Station	Side	I-124.03 4" W.I. New Water Main	I-124.03 4" W.I. 11¼° Bend	I-124.03 10" W.I. 11¼° Bend	I-124.03 10" W.I. Water Main	S-7 Ls 4"x4"x5/16"	I-124.06 Hydrants Removed & Reset	SPECIALS: Grinnell Pipe Roll Stand or equal	SPECIALS: Protection Saddle Grinnel Fig. N° 188 or equal	SPECIALS: 3" Johns Mansville Zero Pipe Insulation or equal
			Lin. Ft.	Each	Each	Lin. Ft.	lbs.	Each	Each	Each	Lin. Ft.
	LINCOLN AVE.										
1-W	11+29 to 12+40		112	4	2	26	264		5	5	81
	ST. CLAIR AVE.										
10-W	14+45 to 15+55		114	4	2	26	264	1	5	5	81
Totals			226	8	4	52	528	1	10	10	162

LINCOLN AVE. WATER
ST. CLAIR AVE. WATER





ESTIMATED QUANTITIES

Ref. No.	Station to Station	Side	I-124.03 6" C.I. New Water Main L.F.	I-124.03 Valves & Boxes Ea.	I-124.03 11¼° Bends Ea.	I-124.03 6"x6"x6" Tee Ea.	I-124.03 6" 45° Bend Ea.	I-124.03 Socket Caps 4" Ea.	I-124.03 Socket Caps 6" Ea.	I-124.06 Hydrants Removed & Reset Ea.
I-W	25+00 to 35+24	Rt.	1024	2	3	1	1			1
	See Sheet No. 318							1	1	
Totals			1024	2	3	1	1	1	1	1

LOGAN AVE. RELOCATION ~ WATER

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U 430(14)	1/5

JEFFERSON COUNTY
JEF-7-13.53

LEGEND FOR PROJECT - AVERAGE RESULTS OF TESTS - 87 SAMPLES TESTED

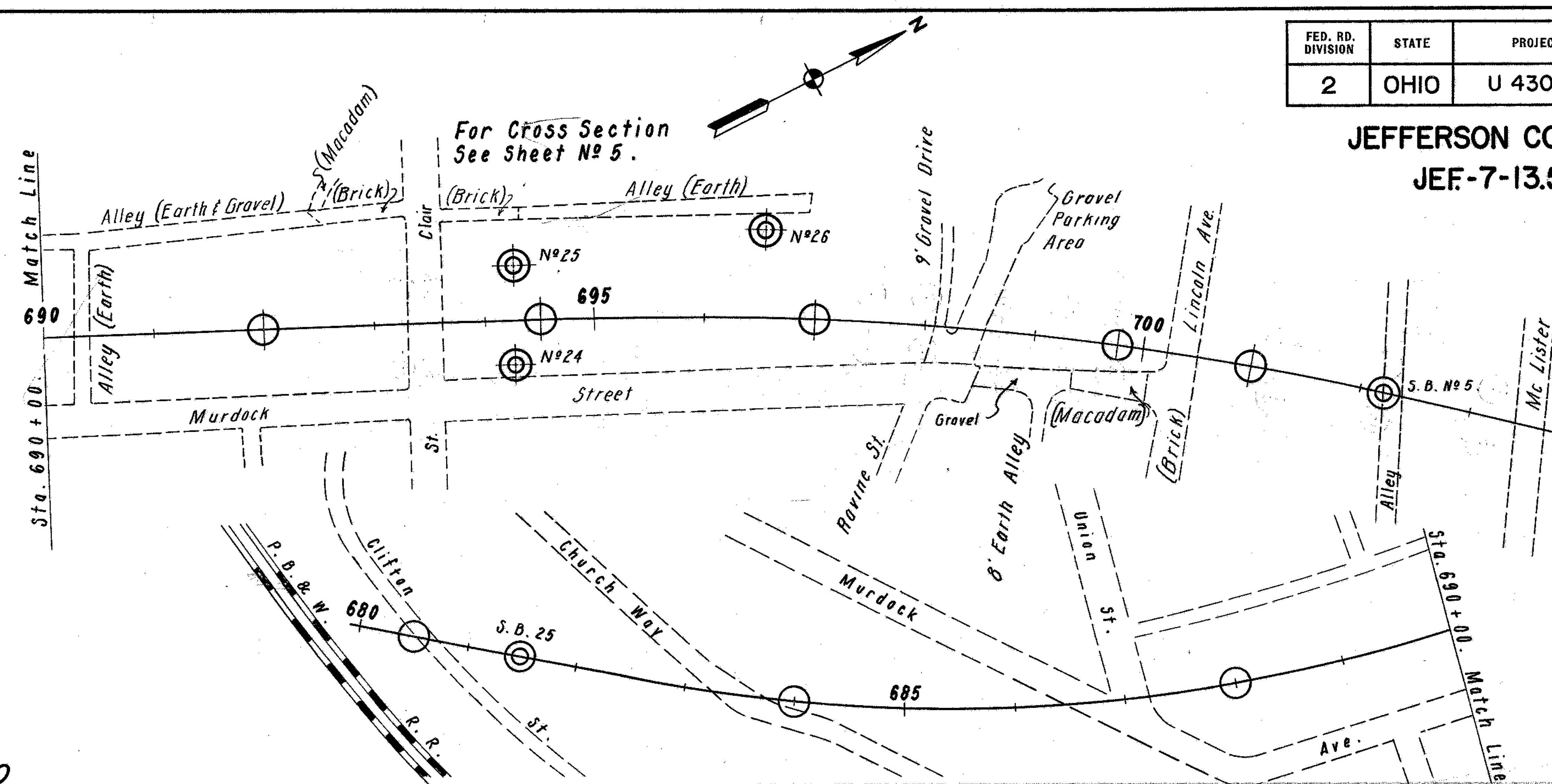
DESCRIPTION	H. R. B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Stone fragments	A-1-a(0)	A-1-a	73.25	4.50	12.50	7.00	2.75	N.P	N.P	7.00	4
Stone fragments with sand	A-1-b(0)	A-1-b	54.75	9.63	17.50	11.87	6.25	6.75	0.88	11.38	8
Stone fragments with sand and silt	A-2-4	A-2-4	45.75	10.63	15.38	16.25	12.00	25.97	4.89	1.20	8
Sandy silt	A-4	A-4a	14.27	7.00	17.50	31.09	30.18	28.06	7.59	17.88	22
Silt	A-4	A-4b	1.75	1.50	4.38	63.50	28.88	28.29	7.24	18.73	8
Silt and clay	A-6	A-6a	14.18	5.29	9.07	37.36	34.29	33.40	12.67	17.87	28
Silty clay	A-6	A-6b	4.50	2.00	3.50	23.00	67.00	44.43	20.47	19.50	2
Elastic clay	A-7-5	A-7-5	3.00	11.00	13.00	5.00	68.00	51.00	18.00	32.00	1
Clay	A-7-6	A-7-6	11.00	4.17	6.00	18.50	60.33	47.62	24.87	18.23	6

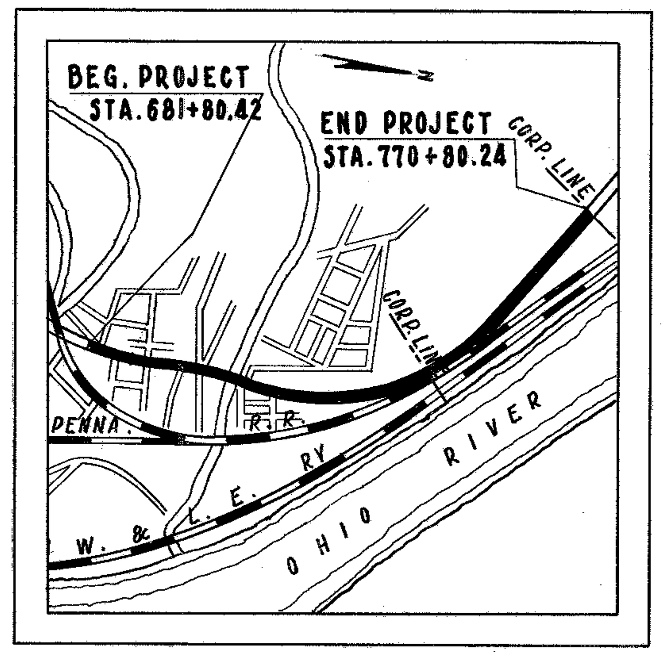
Overburden — Visual Classification
Limestone — Visual Classification
Sandstone — Visual Classification
Shale — Visual Classification
Cinders with or without soil

Auger boring plotted to vertical scale only.
Water content nearly equal to or greater than liquid limit
Auger boring-Plan view
Top Soil = x' = approx. depth.
Core boring-Plan view
W — Free Water

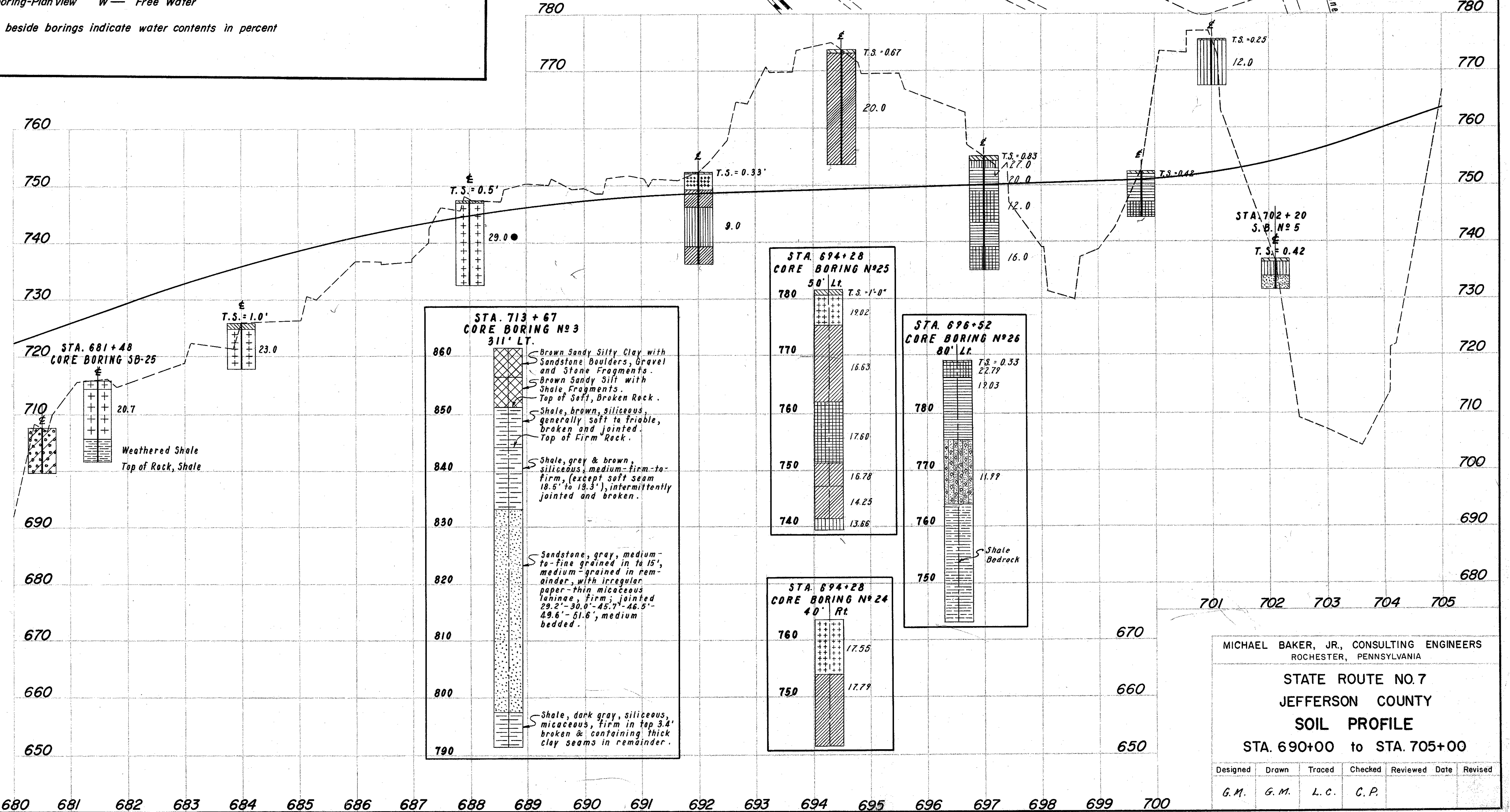
Note: Figures beside borings indicate water contents in percent

NOTE: THE INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS SECURED FOR THE USE OF THE STATE OF OHIO AND IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING THE CONSTRUCTION OF THE PROJECT.





LOCATION MAP



MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

STATE ROUTE NO. 7
JEFFERSON COUNTY
SOIL PROFILE
STA. 690+00 to STA. 705+00

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
G.M.	G.M.	L.C.	C.P.			


FED. RD. DIVISION 2 STATE OHIO PROJECT U 430(14)
2
5
JEFFERSON COUNTY
JEF-7-13.53
See Sheet Nº 1 for detail Core Boring Nº 3.
For Cross Section See Sheet Nº 5.
MINGO JUNCTION CORP. LINE
STATE ROUTE NO. 7
Pennsylvania R.R.
Wilson Ave. (Conc)
Pleasant Way (Gravel)
Logan Street (Brick)
Woodward Ave
Potter St.
Earth Drive
Cinders
Woods
4" to 12" Scattered Trees and Rock
Rock & Scattered Trees
Mitchell St. Not Open
STA. 713+50 CORE BORING Nº 2. 112' LT.
STA. 719+50 CORE BORING Nº 28 90' LT.
STA. 722+00 CORE BORING SB-1 90' Rt.
STA. 712+35 CORE BORING Nº 1. 255' LT.
STA. 723+00 CORE BORING Nº 29. T.S. = 0.42' 70' LT.
STA. 705+40 CORE BORING SB-14
STA. 712+35 CORE BORING Nº 27 T.S. = 1.52' 30' LT.
STA. 723+00 CORE BORING Nº 30 70' RT.
STA. 725+93 CORE BORING Nº 31 T.S. = 0.42' 112' LT.
STA. 725+93 CORE BORING Nº 32 40' RT.
STA. 725+93 CORE BORING Nº 33 60' RT.
Bedrock - Fractured Yellowish Brown Sandstone.
Shale Bedrock
Sandstone Bedrock interbedded with some Shale.
Bedrock - Fractured Sandstone with some Shale.
Bedrock - Sandstone.
Refusal
Ledge Rock
MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA
STATE ROUTE NO. 7
JEFFERSON COUNTY
SOIL PROFILE
STA. 705+00 to STA. 733+00
Designed G.M. Drawn G.M. Traced L.C. Checked C.P. Reviewed Date Revised

SOIL PROFILE
JEFFERSON COUNTY
JEF-7-13.53

STATE HIGHWAY TESTING AND RESEARCH LABORATORY

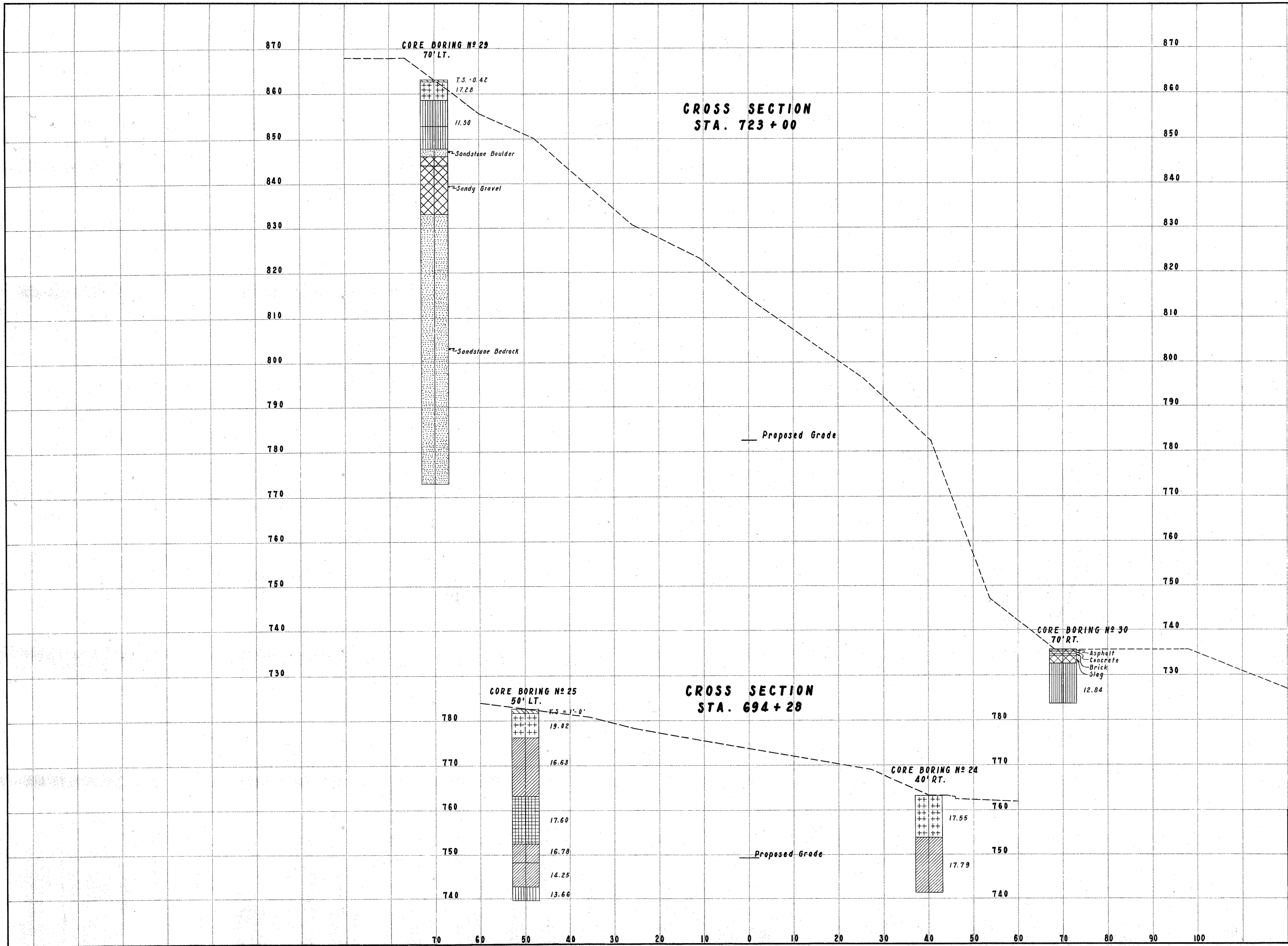
O. S. U. CAMPUS, COLUMBUS, OHIO

3/5


SOIL PROFILE
JEFFERSON COUNTY
JEF-7-13.53
4
5
STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO
Note: For log of core boring see this sheet.
Steubenville Corp. Line
Existing SR 7
N
Rock Section ℄ to 200'LT.
Shale, silicious, fissile.
Covered
Sandstone, (firm, medium grained,) interbedded with a shaly sandstone (micaceous, medium grained).
Clay shale, greenish gray, interbedded with lenses of sandstone.
Sandstone, massive, medium grained, hard, well cemented, jointed, fractured
Coal
Clay
Rock Section ℄ to 200'LT.
Sandstone, massive, medium grained, well cemented, jointed.
Sandstone, thin bedded medium grained, well cemented.
Sandstone, thin bedded, medium grained, well cemented with some concretions.
Sandstone, brown, massive, medium grained, well cemented, jointed.
Sod=0.3'
36'RT.
35'RT.
50'RT.
30'RT.
38'RT.
Refusal
Log of Core Boring
Sta. 749+00, 190'LT.
Brown and gray silt clay, sandy in some portions, with boulders and fragments of siliceous shale and sandstone.
Top of Broken Rock
Shale, broken and brownish gray, siliceous, firm to medium firm, broken and jointed throughout
Shale, gray to dark gray, siliceous, hard, firm.
Clay, gray, crumbly, with nodular limestone.
Shale, gray, siliceous, hard, firm, with limestone nodules at top.
Sandstone, gray, fine to medium grained, micaceous, shaly in portions of top half, firm, medium bedded to massive.
Sandstone, gray, medium grained, generally micaceous, firm, massive.
Shale, black to dark gray, siliceous carbonaceous, hard, firm.
Log of Core Boring
Sta. 769+50 200'LT.
Broken weathered shale in clay.
Top of Rock
Clay shale, brownish gray, medium firm to soft, broken, with clay seams.
Limestone, gray, hard, firm.
Shale, gray and brownish gray variable, with limestone nodules, firm, underlain by 2.4' of soft clay and crumbly shale.
Sandstone, greenish gray, fine grained, firm, jointed, thin bedded.
Shale, brownish gray, siliceous to slightly siliceous, firm.
Shale, brownish gray and gray, siliceous, hard, firm.
Clay shale, gray, hard, firm, with clay seam at base.
Shale, gray and reddish gray, calcareous, firm.
Indurated clay, gray and reddish brown, crumbly to medium firm at base.
Shale, gray and brownish gray, siliceous, grading to sandstone in some thin zones, firm, broken at top, jointed in part, with clay seams near top.
Indurated clay, gray and reddish brown, generally hard, firm.
Limestone, gray, hard in top third.
765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781

FED. RD. DIVISION	STATE	PROJECT		5/5
2	OHIO	U430(14)		

JEFFERSON COUNTY
JEF.-7-13.53



MICHAEL BAKER, JR, CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

STATE ROUTE NO.7
JEFFERSON COUNTY
SOIL PROFILE
CROSS SECTIONS

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised