# 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


| | |
|---|---|
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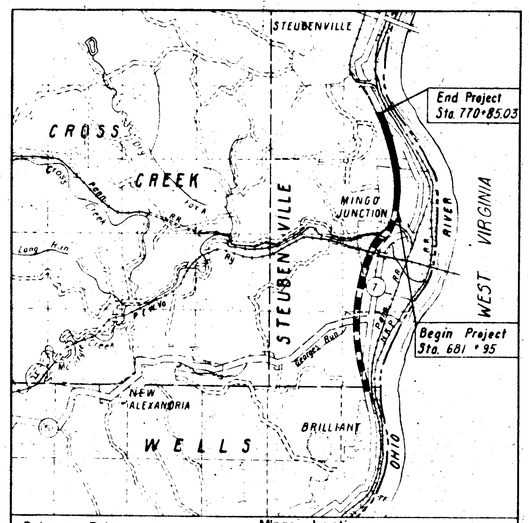
### LINE DATA U-430 (14)

| | | |
|---|---|---|
| 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 | 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 P. Hoopes
Date 10/14/59 Deputy Director of Planning & Programming

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

Approved Wann Kinman
Date 10-9-59 Engineer of Location & Design

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

Approved G. A. Brand
Date 10-16-59 First Assistant Director

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

AUG 23 1963
GROUND PHOTOLAB

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.

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

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 TO 71 ENG'S | 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 CB. 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 | 12-1-56 | 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

FED. RD. DIVISION 2 | STATE OHIO | PROJECT 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 Δ = 28° 11' 21" Dc = 4° 50' Rc = 1,273.24' Ts = 495.58' θs = 7.88° Es = 45.66' Ls = 350'
P = 4.01' K = 174.89' Δc = 12° 26' 21" Lc = 276.43' LT = 233.57' ST = 116.88'
CURVE DATA (S.B.)
P.I. = 686+12.75 Δ = 28° 11' 21" Lt. Dc = 4° 00' 00" Ls = 500' θs = 6° 00' 00" Ts = 510.25' Δc = 16° 11' 21"
Lc = 404.73 Rc = 1,432.39' Es = 47.16' p = 2.62' k = 149.95' LT = 200.11' ST = 100.10'
BEGIN PROJECT U-430(14) STA. 681+95
BEGIN WORK STA. 678+37
CURVE DATA
P.I. = 672+91.82 Δ = 36° 49' 55" Rt. Dc = 4° 00' 00" Ls = 500' θs = 6° 00' 00" Ts = 627.76' Δc = 24° 49' 55"
Rc = 1,432.39' Lc = 620.80' p = 2.62' k = 149.95' 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 = 15° 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+70.55 Δ = 11° 25' 54" Lt. Dc = 3° 30' 00" Ls = 250' θs = 4° 22' 30" Ts = 288.99' Δc = 2° 40' 54"
Lc = 76.62' Rc = 1,637.02' Es = 9.78' p = 1.59' k = 124.98' LT = 166.72' ST = 83.38'
CURVE DATA
P.I. = 721+43.24 Δ = 45° 00' 00" Lt. Dc = 4° 00' 00" Rc = 1,432.39' Ts = 715.22' θs = 6° 00' 00" Es = 109.94'
Ls = 500' Δc = 31° 00' 00" Lc = 775.00' P = 2.62' k = 149.95' LT = 200.11' ST = 100.10'
P.O.T. 713+75 Exp'ry = P.O.T. 50+21.61 Logan Ave. Relocation
MADISON AVE. SPRING AVE. ST. CLAIR ST. RAVINE ST. LINCOLN AVE. STANTON AVE. McLISTER ST. HOLLY AVE. GRANDVIEW AVE. JUNCTION ST. WILSON AVE. WOODWARD AVE. PLEASANT WAY LOGAN AVE. MITCHELL ST. COMMERCIAL ST. McKEE WAY POTTER ST. STANDARD AVE. MURDOCK AVE. CHURCH UNION AVE. CLIFTON ST. PEELER ST. STEUBEN ST. MAY AVE. CROSS CREEK CLIFTON ST. RELOCATION MURDOCK AVE. RELOCATION MURDOCK AVE. EXT.
PENN. R.R. EX. S.R. 7 RAMP "A" RAMP "B" RAMP "C" RAMP "D"
SEC. 27 T-2-N R-1-W SEC. 21 T-2-N R-1-W
NORTH CORP. LINE OF MINGO JUNCTION
SOUTH CORP. LINE OF STEUBENVILLE
CURVE DATA
P.I. = 767+65.69 Δ = 9° 54' 20" Lt. Dc = 3° 00' 00" Rc = 1,909.86' Ts = 315.64' θs = 4° 30' 00" Es = 9.15'
Ls = 300.00' Δc = 0° 54' 20" Lc = 30.19' p = 1.96' k = 149.97' LT = 200.06' ST = 100.06'
All work shown on these Plans North of Sta. 770+85.03 is designated as "MUNICIPAL"
U-430(14) END PROJECT STA. 770+85.03
END WORK STA. 776+00
All work shown on these Plans South of Sta. 770+85.03 is designated as "URBAN"
CURVE DATA
P.I. = 755+12.16 Δ = 14° 48' 08" Lt. Dc = 2° 00' 00" Rc = 2,864.79' Ts = 472.20' θs = 2° 00' 00" Es = 24.65'
Ls = 200.00' Δc = 10° 48' 08" Lc = 540.11' p = 0.58' k = 100.00' LT = 133.34' 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'
CURVE DATA
P.I. = 774+77.75 Δ = 9° 30' 00" Rt Dc = 2° 00' 00" Rc = 2,864.79' Ts = 338.09' θs = 2° 00' 00" Es = 10.45'
Ls = 200.00' Δc = 5° 30' 00" Lc = 275.00' p = 0.58' k = 100.00' LT = 133.34' ST = 66.67'
CURVE DATA
P.I. = 761+04.76 Δ = 13° 00' 00" Rt. Dc = 4° 00' 00" Rc = 1,432.39' Ts = 313.45' θs = 6° 00' 00" Es = 11.90'
Ls = 300.00' Δc = 1° 00' 00" Lc = 25.00' p = 2.62' k = 149.95' LT = 200.11' ST = 100.10'
MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA
SCHEMATIC LAYOUT PLAN
Designed Griffin | Drawn a.m.m. | Traced a.m.m. | Checked Strough | Reviewed Date | Revised

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

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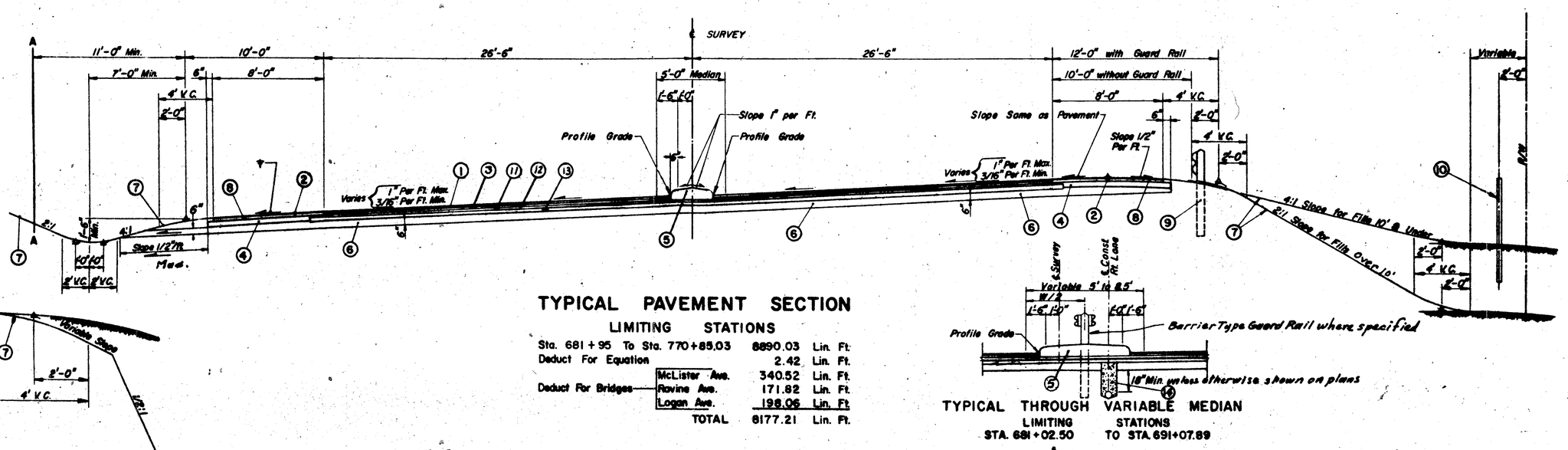
307

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. 728+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. |

### SHOULDER DETAIL
### HIGH SIDE OF SUPERELEVATION

LIMITING STATIONS

| | | |
|---|---|---|
| Sta. 705+00 To Sta. 770+85.03 | 6585.03 | Lin. Ft. |
| Deduct For Logan Ave. | 198.06 | Lin. Ft. |
| Deduct For Bridges Side Hill Structure | 260.50 | Lin. Ft. |
| TOTAL | 6126.47 | 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 | 1½" 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 5/4 Type (Deep). |
| ⑩ | Item SS-18 | Fence, Standard Type "C" |
| ⑪ | Item B-35 | 2 3/4" 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.

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

TYPICAL SECTION
PAVEMENT & ROCK CUT

| Designed | Drawn | Traced | Checked | Reviewed Date | Revised |
|---|---|---|---|---|---|
| Griffin | Simpson | G.H.S. | Strough | | |

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

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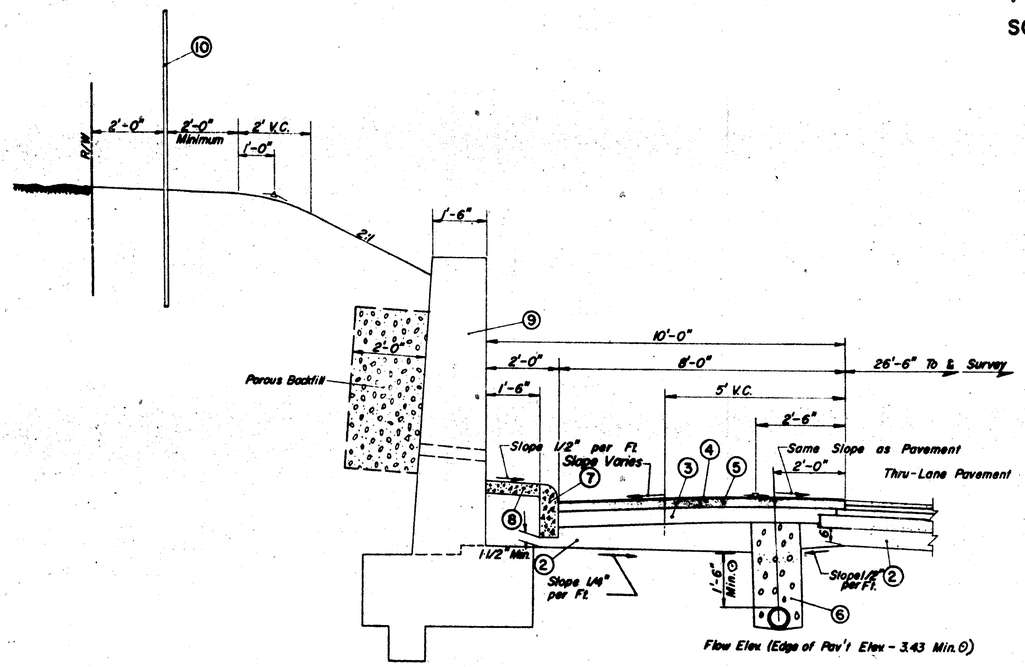
JEFFERSON COUNTY
JEF-7-13.53

# TYPICAL SECTIONS

TYPE T-35 on B-20

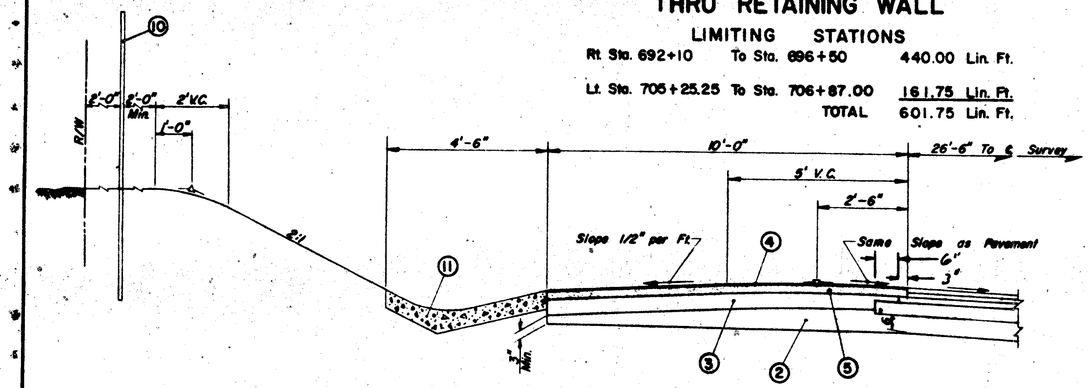
SCALE: 1/2" = 1'-0"




## SHOULDER DETAIL
## THRU RETAINING WALL

LIMITING STATIONS

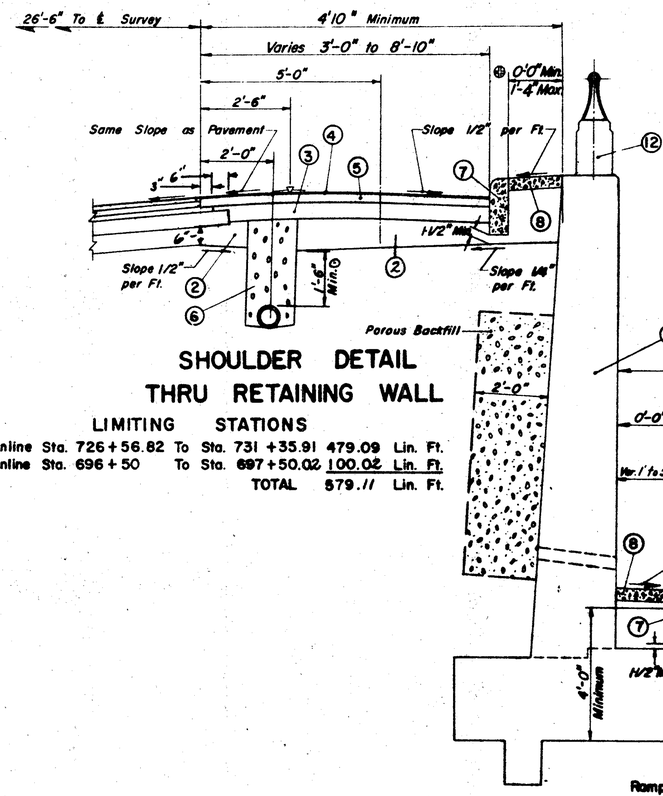
| | | | | |
|---|---|---|---|---|
| Rt. Sta. 692+10 | To Sta. 696+50 | 440.00 | Lin. Ft. | |
| Lt. Sta. 705+25.25 | To Sta. 706+87.00 | 161.75 | Lin. Ft. | |
| | TOTAL | 601.75 | Lin. Ft. | |




## 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. | |

## SHOULDER DETAIL

LIMITING STATIONS

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

(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"

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.

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

TYPICAL SECTION
SHOULDER DETAILS

| Designed | Drawn | Traced | Checked | Reviewed Date | Revised |
|---|---|---|---|---|---|
| Griffin | R.V.G. | Simpson | Shrough | | |

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

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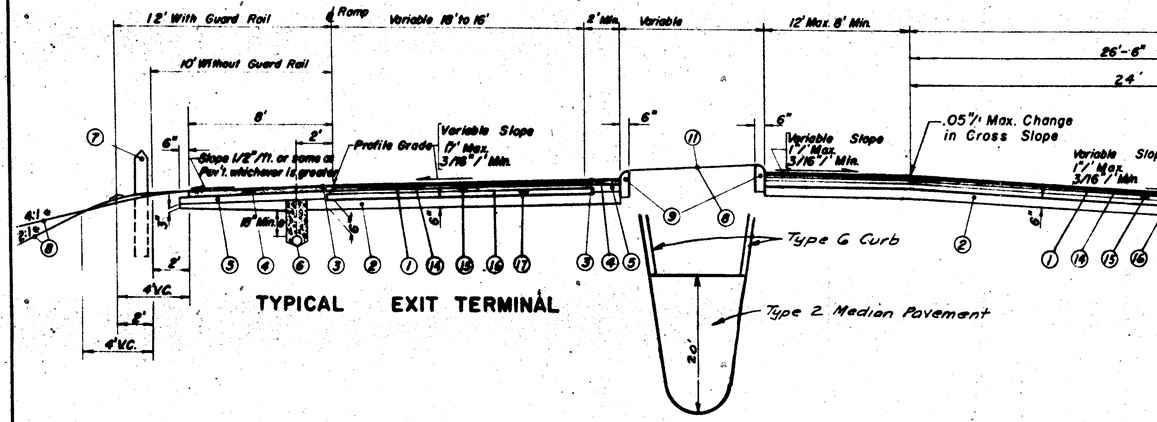
307

JEFFERSON COUNTY
JEF-7-13.53

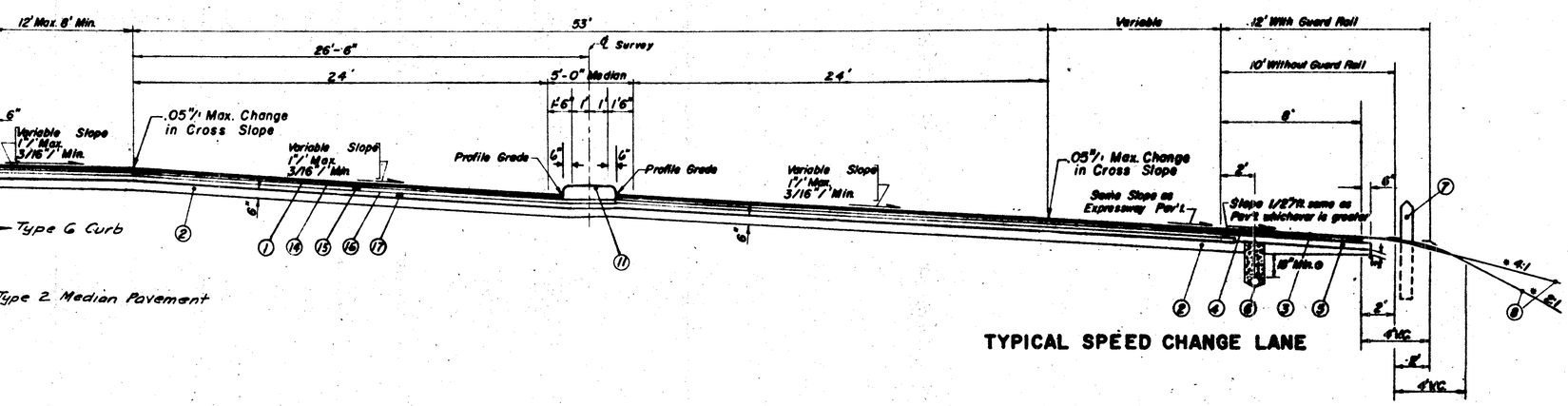
# TYPICAL SECTIONS

## TYPE T-35 on B-20

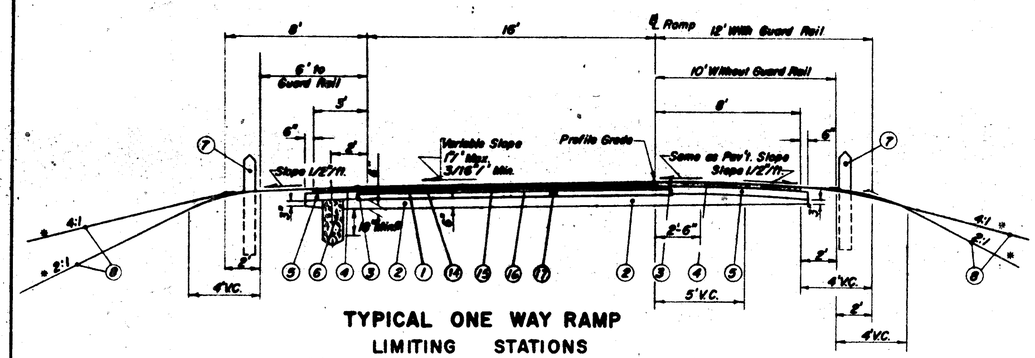
SCALE: 1/4"=1'-0"




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. |

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 5'-7" 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 | |

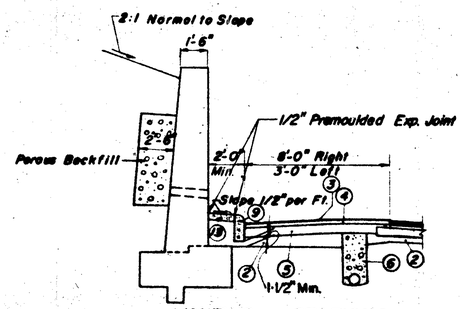
* Bituminous Surface Treatment shall be applied in one operation. The Seal shall consist of 0.008 Cu. Yds. No. 6 Aggregate and 0.25 Gal. Bituminous Material per Sq. Yd.

● 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.

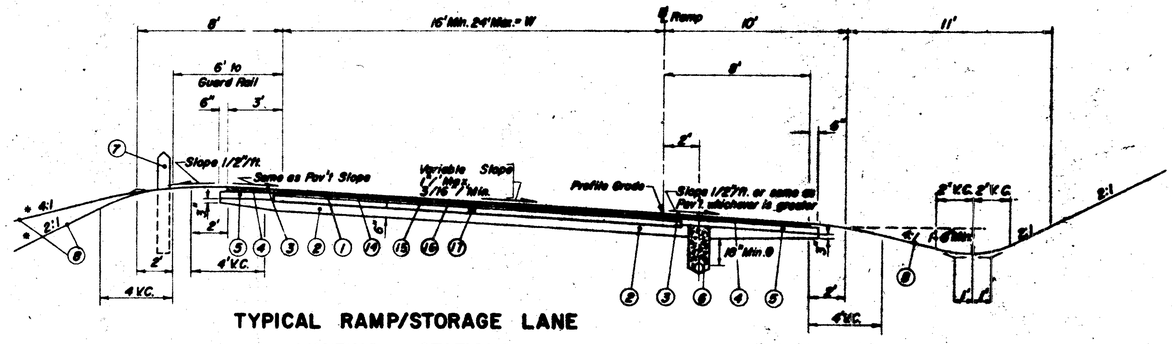
⊙ Unless otherwise indicated on the plans




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



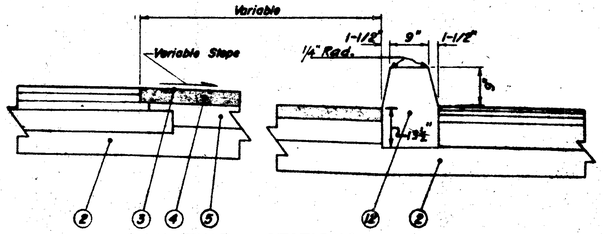

TYPICAL RAMP/STORAGE LANE

LIMITING STATIONS

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

LEGEND (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 8½" 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 Slag No. 2. Coarse Aggregate




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 | REVISED |
|---|---|---|---|---|---|
| Griffin | Fabish | M.G.E. | Strough | | |

BRAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER # 27195

# TYPICAL SECTIONS

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

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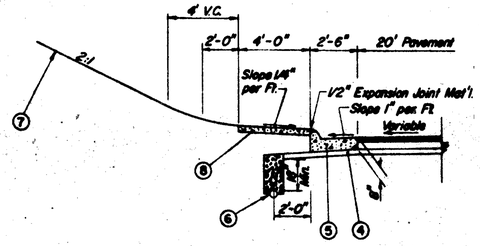
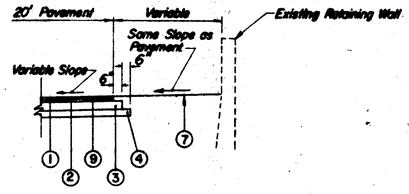
JEFFERSON COUNTY
JEF-7-1353

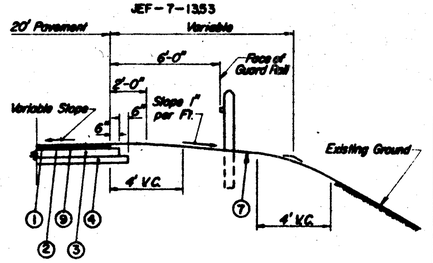
TYPE T-35 on B-19
SCALE: 1/4" = 1'-0"



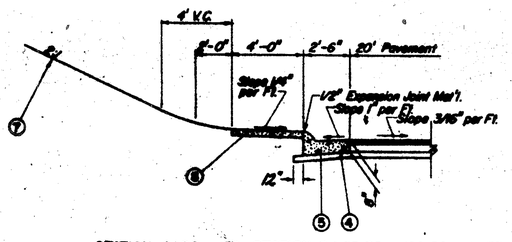

STATION 2+31 TO STATION 4+60 = 229 LIN. FT.



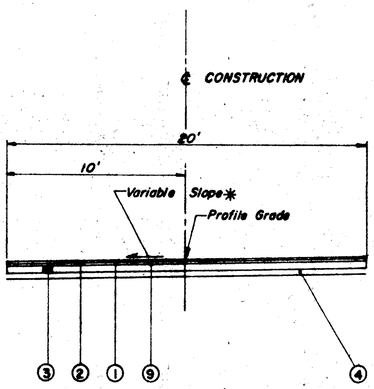

STATION 2+25 TO STATION 3+12 = 87.00 LIN. FT.




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

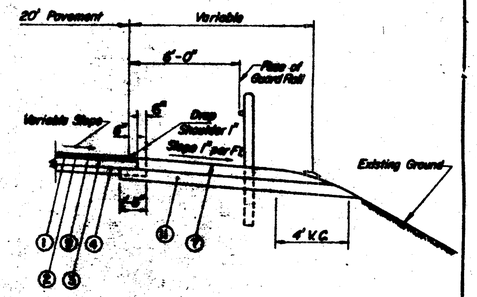



STATION 4+60 TO STATION 5+89.50 = 129.50 LIN. FT.
STATION 7+30.38 TO STATION 8+00 = 69.64 LIN. FT.
TOTAL = 199.14 LIN. FT.

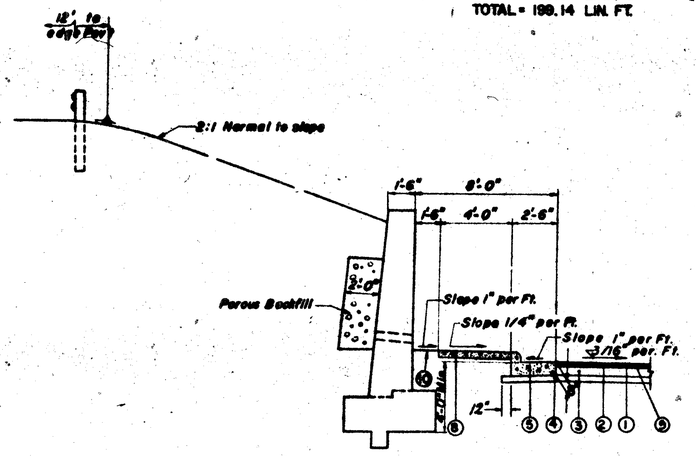



LIMITING STATIONS

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




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




STATION 5+89.50 TO STATION 7+30.36 = 140.86 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 Type2
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

| DESIGNED | DRAWN | TRACED | CHECKED | REVISED | REVISED |
|---|---|---|---|---|---|
| G.F.M. | L.C.C. | | | | |

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

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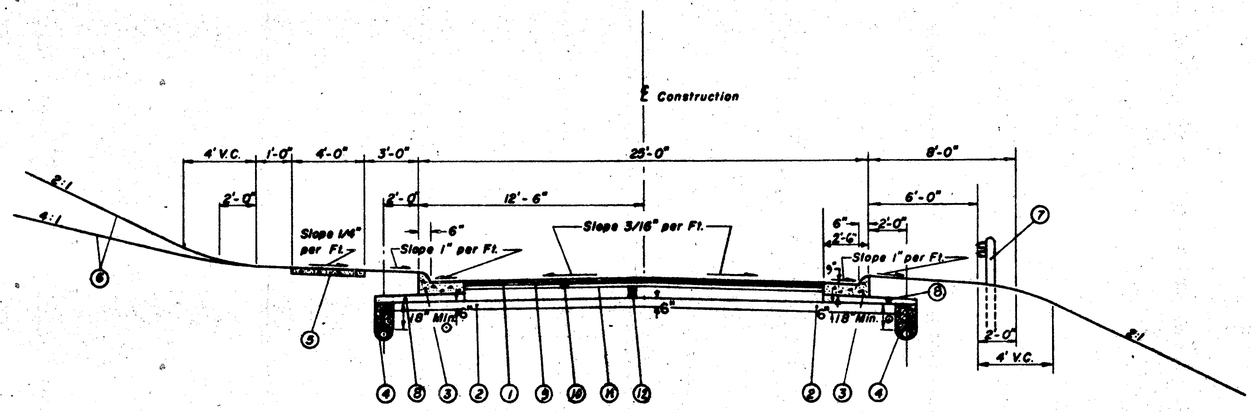
307

JEFFERSON COUNTY
JEF-7-13.53

# 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 1-22 Subbase, (Variable Depth)
③ Item 1-12 Combination Curb and Gutter Std. Type 2
④ Item 1-4 6" Pipe Underdrains
⑤ Item 1-13 4" Concrete Sidewalk
⑥ Item L-9 Seeding & Protecting
⑦ Item 1-15 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 1½" 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. Tupicol
⑫ Item B-20 8" Water bound Macadam Base Course using Size No. 2 Course 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

| DESIGNED | DRAWN | TRACED | CHECKED | QUANTITIES CHECKED | REVISED |
|---|---|---|---|---|---|
| Griffith | Comp | Brunner | Griffith | | |

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

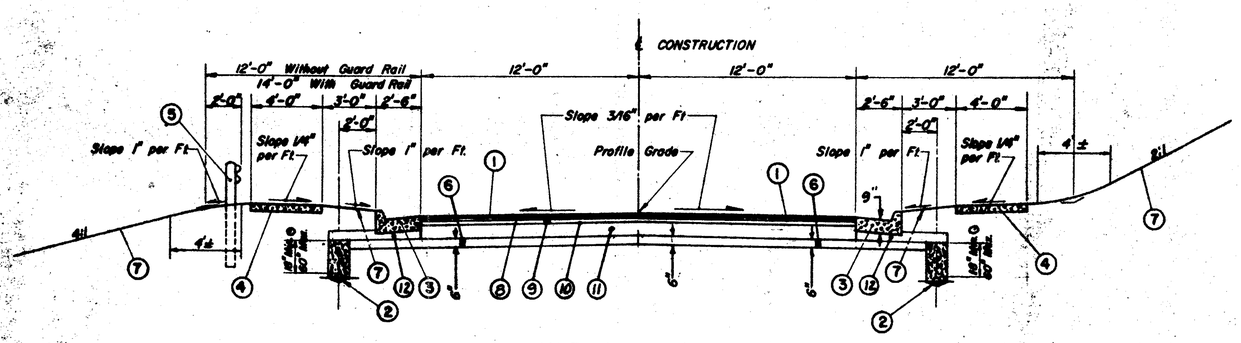
JEFFERSON COUNTY
JEF-7-13.53

8
307

# 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 2¾" 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 | Approved, Date | Scale |
|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | | |

# GENERAL NOTES

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

9
907

JEFFERSON COUNTY JEF-7-13.53

**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. 5-0.01(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. 6-7.09 until they can be witnessed, referenced and reset by the construction crew.

**ELEVATION DATUM:**
Elevations are based on U.S.C.&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-8, 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 36" | 1 |
| 24" to 30" | 36 | | |
| 30" to 36" | 9 | | |
| 36" to 42" | 7 | | |

**PIPE FOR SUBGRADE DRAINAGE:**
6" 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 "E" 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 ½"ø 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 S-15, Temporary Emergency 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 6" | Pipe Outlets for Underdrains Sec. M-6.4(a) | 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 a follows:

| | |
|---|---|
| B-19 | 50 Cu. Yds. |
| T-35 | 100 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., Mt 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 № 2:**
№ 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 | APPROVED | DATE |
|---|---|---|---|---|---|
| | a.m.m | a.m.m | | | |

# GENERAL NOTES

| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-450 (16) | |

JEFFERSON COUNTY JEF-7-15.53

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### USE OF EXPLOSIVES:

Extreme care shall be exercised in the use of explosives so that the rock and/or shale remaining back of the Construction lines 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 0-7.09 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(a) 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 10 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. C-4.15.

## 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
ROCKEFELLER, PENNSYLVANIA

GENERAL NOTES

| DESIGNED | DRAWN | TRACED | CHECKED | QUANTITIES CHKD. | APPROVED |
|---|---|---|---|---|---|
| Griffin | [illegible] | [illegible] | Ludwig | | |

# 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 — 2,998 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-78, 8" Portland Cement Concrete Base Course shall be constructed using High-Early Strength Portland Cement, Section M-4.2 or Section M-4.4.

If such cement cannot be obtained, the following substitution may be made at no additional cost to the State: Portland Cement, Section M-4.1, M-4.3, or M-4.8 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 No. 290) before any other construction work is begun in this area.

# GENERAL SUMMARY

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

11
307

JEFFERSON COUNTY
JEF.-7-13.53

| ITEM | SHEET NUMBER 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 | Steubenville TOTAL Municipal | ITEM TYPE | QUAN. CODE 6201 | UNIT | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 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 | | 775 | 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 | 6,918 | | | | | | 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 | | | | | | | | | | | | | 940 | | | | | | | | | | | 940 | | 2 | | 2 | E-11 | 942 | M Gals. | Water. |
| E-12 | | | | | | | | | | 274 | 84 | 132 | | | | | | | | | | | | 490 | | | | | E-12 | 490 | Lin. Ft. | Pipe Removed over 15". |
| I-13 | 32.00 | | | 533 | 532 | | | 656 | | | | | | 2224 | 4040 | 466 | 300 | 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 | 1068.5 | 460 | 1128.6 | 1182.8 | 290 | 1,000 | 1000 | 1000 | 984.31 | | 487.5 | 700 | 137.5 | 115 | 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 (Flare) |
| 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 | | 7,683 | | 7,683 | L-9 | 101,627 | Sq. Yds. | Seeding and Protecting |
| L-9 | | | | | | | | | | | | | 8.49 | | | | | | | | | | | 8.49 | | 0.67 | | 0.67 | L-9 | 9.15 | Tons | Commercial Fertilizer (12-12-12). |
| L-9 | | | | | | | | | | | | | 4236 | | | | | | | | | | | 4236 | | 337 | | 337 | L-9 | 4573 | Tons | Agricultural Liming Material. |
| L-10 | | 1 | | | | 85 | | 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 Ditch and Slope Protection. |
| T-10 | 1000 | | | | | | | | | | | | | | | | | | | | | | | 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.9 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-52 | | | | | | | | | | | | | | | | | | | Lump | | | | | Lump | | | | | S-52 | 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 | | 156 | | | | | | 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, Spec. M-6.4(a). |
| I-2 | | 198 | | | | | | | | | | | | | | | | | | | | | | 198 | | | | | I-2 | 198 | Lin. Ft. | 30" Storm Sewers, Spec. M-6.4(a). |
| I-2 | | | | | | | | | | | | | | | | | | 326 | | | | | | 926 | | | | | I-2 | 926 | Lin. Ft. | 12" Storm Sewers, Spec. M-6.5(a) or Spec. M-6.8(a). |

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

GENERAL SUMMARY

| Designed | Drawn | Traced | Checked | Reviewed |
|---|---|---|---|---|
| Griffen | | | | |

# GENERAL SUMMARY

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

JEFFERSON COUNTY
JEF.-7-13.53

12/307

| ITEM | SHEET NUMBER | | | | | | | | | | | | | | | | | | | | | | Steubenville TOTAL MUNICIPAL | ITEM TYPE | QUAN. CODE 6201 | UNIT | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 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-1 | 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-1 | 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-1 | 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 | 100 | | | | | | | | | | | | | | | | | | | | | | 200 | | | | | I-3 | 200 | Lin. Ft. | 6" Roadway Drainage. |
| I-3 | 100 | | | | | | | | | | | | | | | | | | | | | | 200 | | | | | I-3 | 200 | Lin. Ft. | 8" Roadway Drainage. |
| I-3 | 50 | | | | | | | | | | | | | | | | | | | | | | 50 | | | | | I-3 | 50 | Lin. Ft. | 8" 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. | 8" Pipe Outlets for Underdrains, Sec. M-6.4(a). |
| 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 | | | | | 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 | R.D.Z. | | |

# GENERAL SUMMARY

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

13/307

JEFFERSON COUNTY
JEF-7-13.53

| 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. 195-A |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 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. |

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

GENERAL SUMMARY

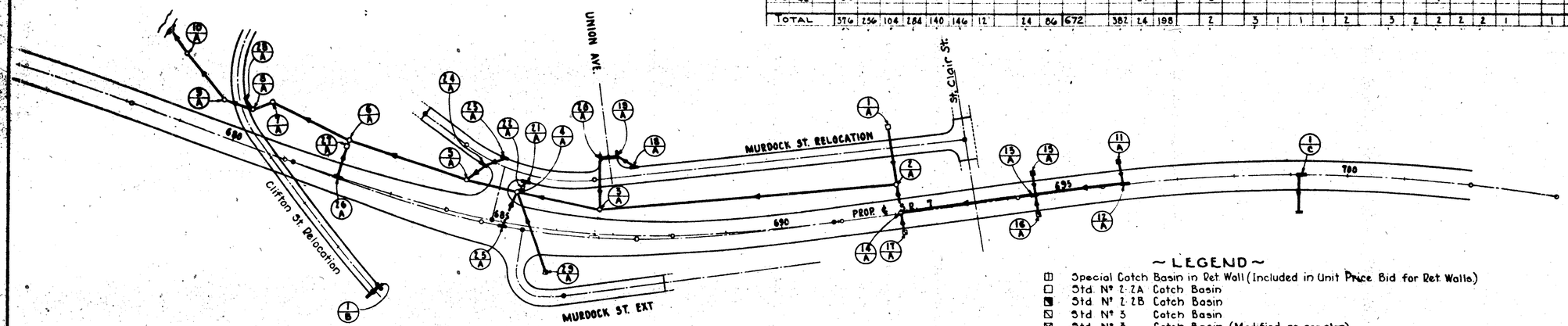
| Designed | Drawn | Traced | Checked | Reviewed Date | Revised |
|---|---|---|---|---|---|
| R.Y.G | Simpson | Simpson | R.H.J. | | |

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

JEFFERSON COUNTY
JEF-7-13.55

14
307

| Ref N° | Sht N° | Sht N° | I-2 Under Pav't & Appro Class "B" S.S. 12" L.F. | 15" L.F. | M-6.6(c) 18" L.F. | M-6.6(a) or M-6.8(b) 24" L.F. | M-6.6(b) or M-6.8(b) 30" L.F. | 15" L.F. | Class "A" S.S. 15" L.F. | Class "B" S.S. 12" L.F. | 15" L.F. | M-6.6(b) or M-6.8(b) 24" L.F. | M-6.6(a) or M-6.8(a) 30" L.F. | M-6.4(c) 12" L.F. | 30" L.F. | I-5 Bend 12"-30° M-6.4(c) Ea. | Catch Basins Std 2-2A Ea. | Std 2-2B Ea. | Std N° 5 Mod. alp Ea. | Std N° 6 Ea. | INLETS AS PER PLAN Std 2-6 Ea. | Std 2-8 Mod. Ea. | Std 2-10 Ea. | Std 2-12 Mod Ea. | Std 2-14 Ea. | Std 2-16 Mod Ea. | Std 2-20 Ea. | Manholes Std N° 1 Ea. | | I-10 Dumped Rock Chan. Prot. C.Y. | I-10 Sodding S.Y. | E-2 Exc. for Structures C.Y. | S-1 Conc. for Str. Class "E" C.Y. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-A | 32 | | | | 104 | | | | | | | | | | | | 1 | | | | | | | | | | | 1 | | | | | |
| 2-A | 32 | | | | | | | | | | | 524 | | | | | | | | | | | | | | | | | | | | | |
| 3-A | 29 | | | | | | | | | | | 148 | | | | | | | | | | | | | | | | | | | | | |
| 4-A | 29 | | | | | 88 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5-A | 28 | | | | | | | | | | | | 228 | | | | | | | | | | | | | | | | | | | | |
| 6-A | 28 | | | | | | | | | | | | 160 | | | | | | | | | | | | | | | | | | | | |
| 7-A | 151 | | | | | | | | | | | | | 38 | | | | | | | | | | | | | | | | | | | |
| 8-A | 151 | | | | | 52 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9-A | 151 | | | | | | | | | | | | | 112 | | | | | | | | | | | | | | | | | | | |
| 10-A | 151 | | | | | | | | | | | | | 48 | | | | | | | | | | | | | | | | | | 15 | | |
| 11-A | 38 | | 36 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 12-A | 38 | | 148 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| 13-A | 36 | | | | | 238 | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| 14-A | 32 | | | | | 46 | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| 15-A | 34 | | | 36 | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 16-A | 36 | 190 | 32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17-A | 32 | | 32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | | 52 | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | |
| 1-E | 42 | | 36 | | | | | | | | | | 24 | | | 2 | | | | | | | 1 | | | | | | | 5 | 1 | 1 | 0.25 |
| TOTAL | | | 576 | 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 | | 15 | 1 | 1 | 0.25 |




~ LEGEND ~

- Special Catch Basin in Ret Wall (Included in Unit Price Bid for Ret Walls)
- Std. N° 2-2A Catch Basin
- Std. N° 2-2B Catch Basin
- Std N° 5 Catch Basin
- Std N° 5 Catch Basin, (Modified, as per plan)
- Std N° 6 Catch Basin
- Std. N° 1-5 Catch Basin
- Special Manhole, Type "A"
- Std N° 1 Manhole
- Std. N° 2 Manhole
- Std N° 2 Inlet
- I-2 Storm Sewer Pipe
- Std PC 4 Endwall
- I-5 Pipe Special
- Sheet Piling

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

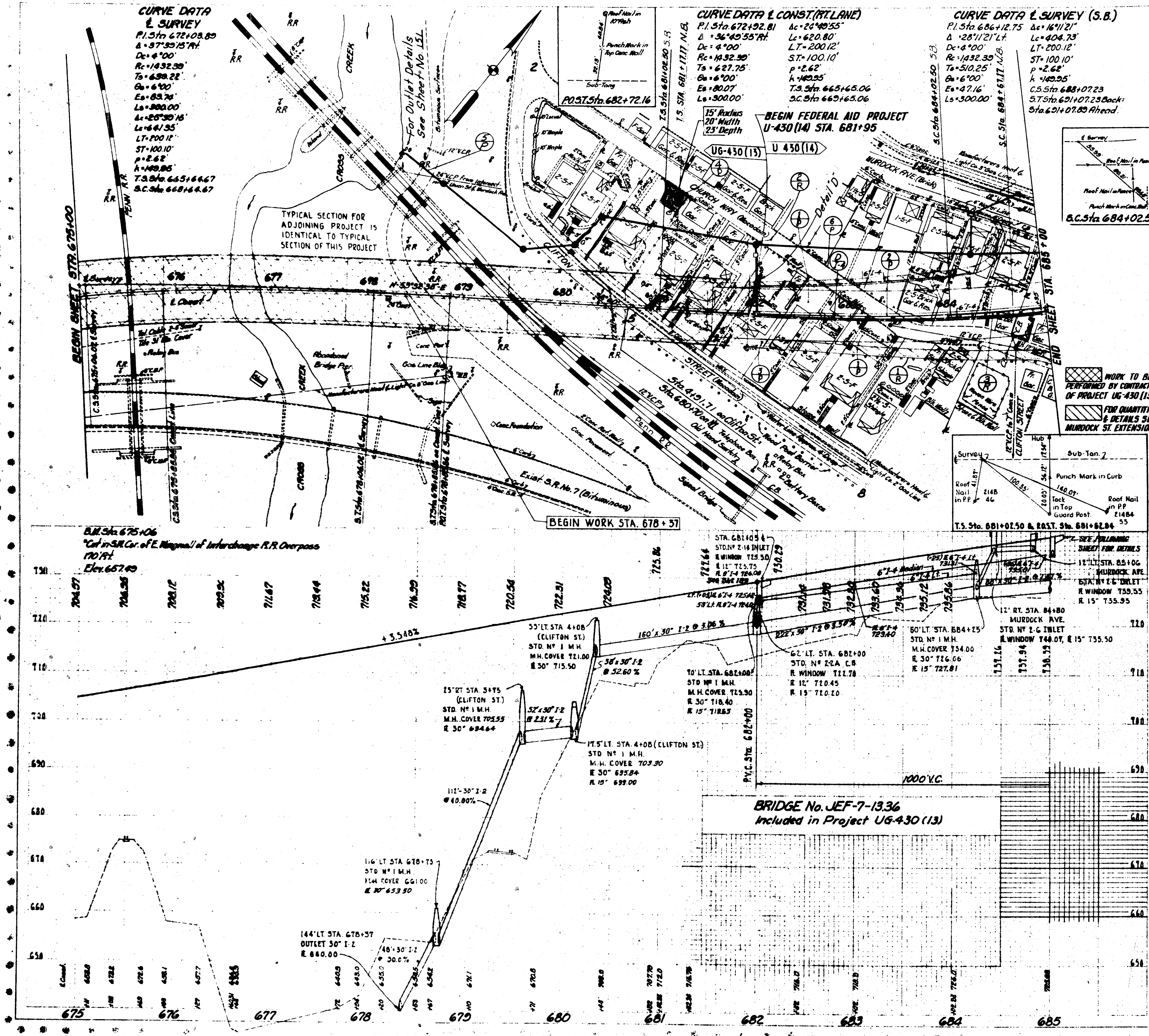
# STORM SEWER LAYOUT
STA. 678+37 to STA. 700+00

| DESIGNED | DRAWN | TRACED | CHECKED | REVISED DATE | REVISED |
|---|---|---|---|---|---|
| W.H.T. | A.M. | A.M. | D.L.G.L. | | |

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

**JEFFERSON COUNTY JEF.-7-13.53**

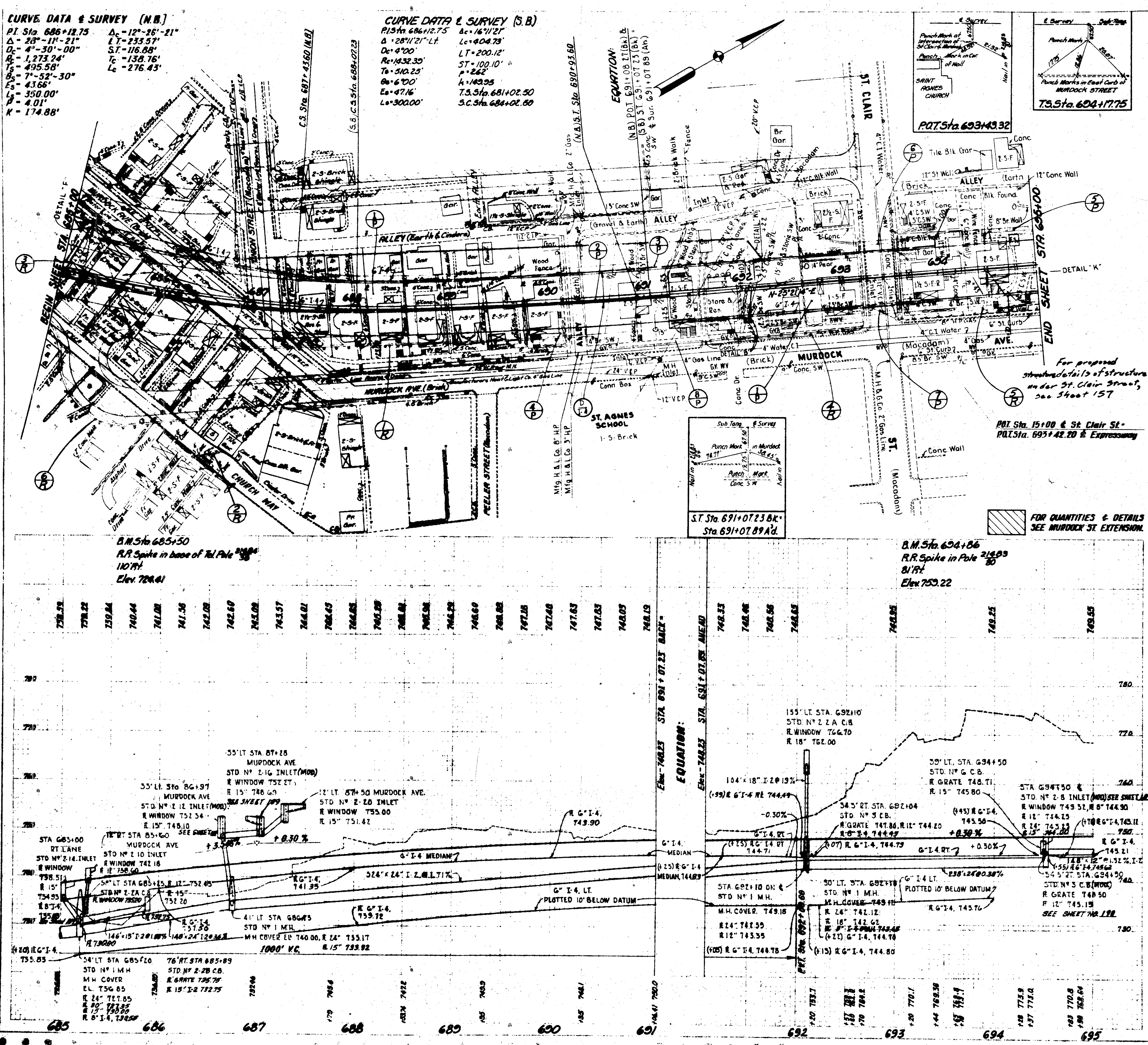
**NOTE:** Marker will be furnished and erected on the right by State forces prior to acceptance of this improvement.




## ESTIMATED QUANTITIES

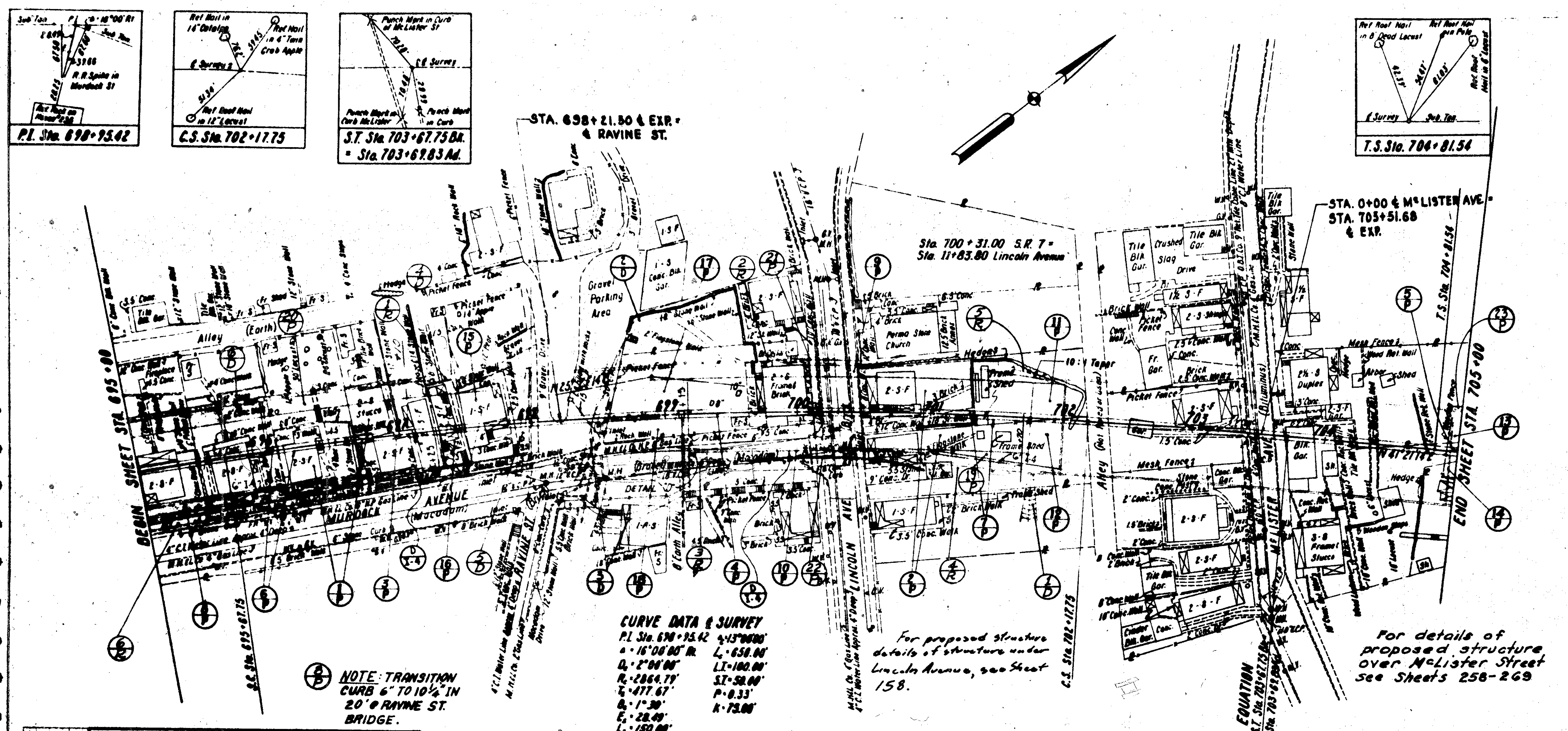
| REF. NO. | STATION TO STATION | SIDE | B-219 Water Proofed Agg. Base Course C.Y. | E-1 Compacted Sub-Grade S.Y. | I-12 Conc. Curb, Type 2-A L.F. | I-18 Stabilized Cr'st'd Agg. Sh'ld'rs & Approaches C.Y. | I-21 Portland Cem't Conc. Med. Pav't, Std. Type 2 S.Y. | I-22 Sub-Base, Variable Depth C.Y. | T-B-3? 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 | T-15 Guard Rail, Type 2-A LIN. FT. | T-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" Underdrain LINEAL FEET | I-4 8" Pipe Outlet Sec. W6(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 | 579.13 | | 148 | 56 | | | | | | | | | | | | | | 3 |
| 3-P | 681+95 ~ 682+41.16 | Rt. | 3.4 | 41 | | 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 | 579.13 | 6.1 | 148 | 355 | 1725.0 | 10 | 0.3 | 5 | 333 | 100 | 1 | 1 | 15 | 1 | 520 | 20 | 130 | |

STA. 675+00 to STA. 685+00




## ESTIMATED QUANTITIES

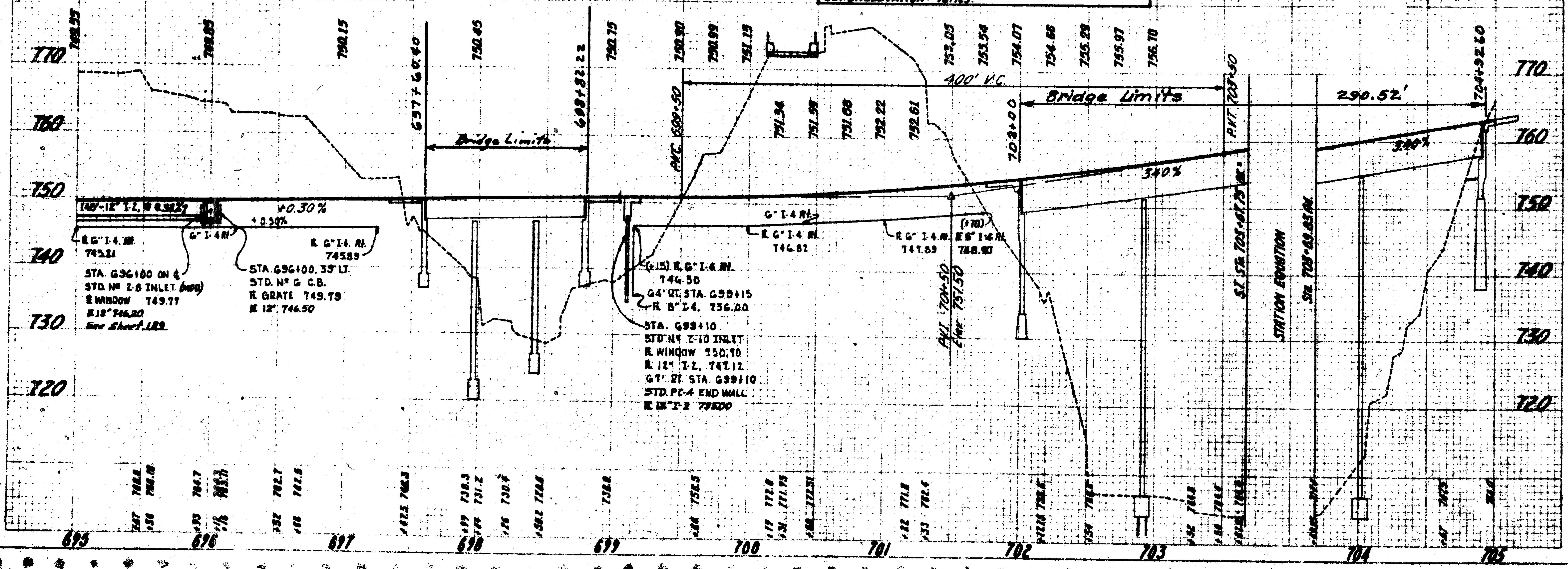
| REF. NO. | STATION TO STATION | SIDE | B-119 Water Proofed Agg Base Course C.Y. | E-1 Compact Sub Grade S.Y. | I-12 Conc. Curb Std. Type 6 L.F. | I-18 Stab Crsnd Agg. Shldrs. & Apprs. C.Y. | I-21 Port Cem't Conc. Med. Pav't Std. Type 2 S.Y. | I-22 Sub Base Variable Depth C.Y. | T-B-35 Pav't S.Y. | T-31 Bit. Surface Treatment Bit. Mat. GAL'S | T-31 Nº 6 Agg. 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" Underdrains 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 ~ 695+00 | Lt.&Rt. | | 5,663 | | | | 944 | 5662.6 | | | | | | | | | | | | | | 3 |
| 2-P | 685+00 ~ 695+00 | Lt.&Rt. | | 359 | | | 462 | 161 | | | | | | | | | | | | | | | 3 |
| 3-P | 687+80.97 ~ 695+00 | Lt. | 53 | 639 | | 95 | | 124 | | 160 | 5.1 | | | | | | | | | | | | 3 |
| 4-P | 688+23.08 ~ 695+00 | Rt. | 50 | 602 | | 90 | | 117 | | 151 | 4.9 | | | | | | | | | | | | 3 |
| 5-P | 693+80 ~ 695+00 | Lt. | | | | | | | | | | | | | | | | | | | | | 4 |
| 6-P | 692+85 ~ 695+93 | Lt. | | | 105 | | | | | | | | | | | | | | | 120 | | | 4 |
| 7-P | 692+10 ~ 695+00 | Rt. | | | 290 | | | | | | | | | | | | | | | | 158 | | 4 |
| 8-P | 688+00 ~ 695+00 | Rt. | | | | | | | | | | | | | | | | | | | 435 | | |
| 1-R | 686+50 ~ 690+50 | Rt. | | | | | | | | | | | 400 | | | | | | | | | 2660 | 3 |
| 2-R | 687+00, 180' Rt. | Rt. | | | | | | | | | | | 25 | | | | | | | | | | |
| 3-R | 685+00 ~ 686+25 | Med. | | | | | | | | | | | | 185 | | | | | | | | | |
| 4-R | 692+00 ~ Bridge | Rt. | | | | | | | | | | | 185 | | | | | | | | | | 3 |
| 5-R | Bridge ~ 695+00 | Rt. | | | | | | | | | | | 140 | | | | | | | | | | - |
| D-I.4 | 685+00 ~ 695+00 | Lt.&Rt. | | | | | | | | | | | | | 2 | 2 | 1 | 1880 | 50 | | | | 188,189 |
| 6-R | 685+00 ~ Murdock Ext. | Rt. | | | | | | | | | | | 378.5 | | | | | | | | | | 7 |
| OS-1 | 693+90 | Rt. | | | | | | | | | | 1 | | | | | | | | | | | 155 |
| TOTALS | | | 105 | 7263 | 395 | 185 | 462 | 1352 | 5662.6 | 311 | 9.9 | 1 | 1066.5 | 185 | 5 | | | 1880 | 50 | 120 | 593 | 2660 | |




**PROPOSED STRUCTURE - RAVINE ST.**
TYPE: Continuous steel beam with reinf. conc. deck and substruct.
SPANS: 36'-9", 45'-1", 36'-0" c/c Bearings along chord
ROADWAY: 73'-0" f/f Parapet, 5'-0" Median and 1'-2" Curbs
LOAD FREQUENCY: C.F. = 2000 (57) Adequate for 18,000 of loading
SKEW: 17°-22'-45" Lt. Forward to ref. chord.
WEARING SURFACE: 1" Monolithic Concrete.
APPROACH SLABS: Special Design (25' Long).
ALIGNMENT: 2°-00' Rt. Curve.
SUPERELEVATION: .033' per ft.

**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) Adequate for A.A.S.H.O. alternate loading.
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

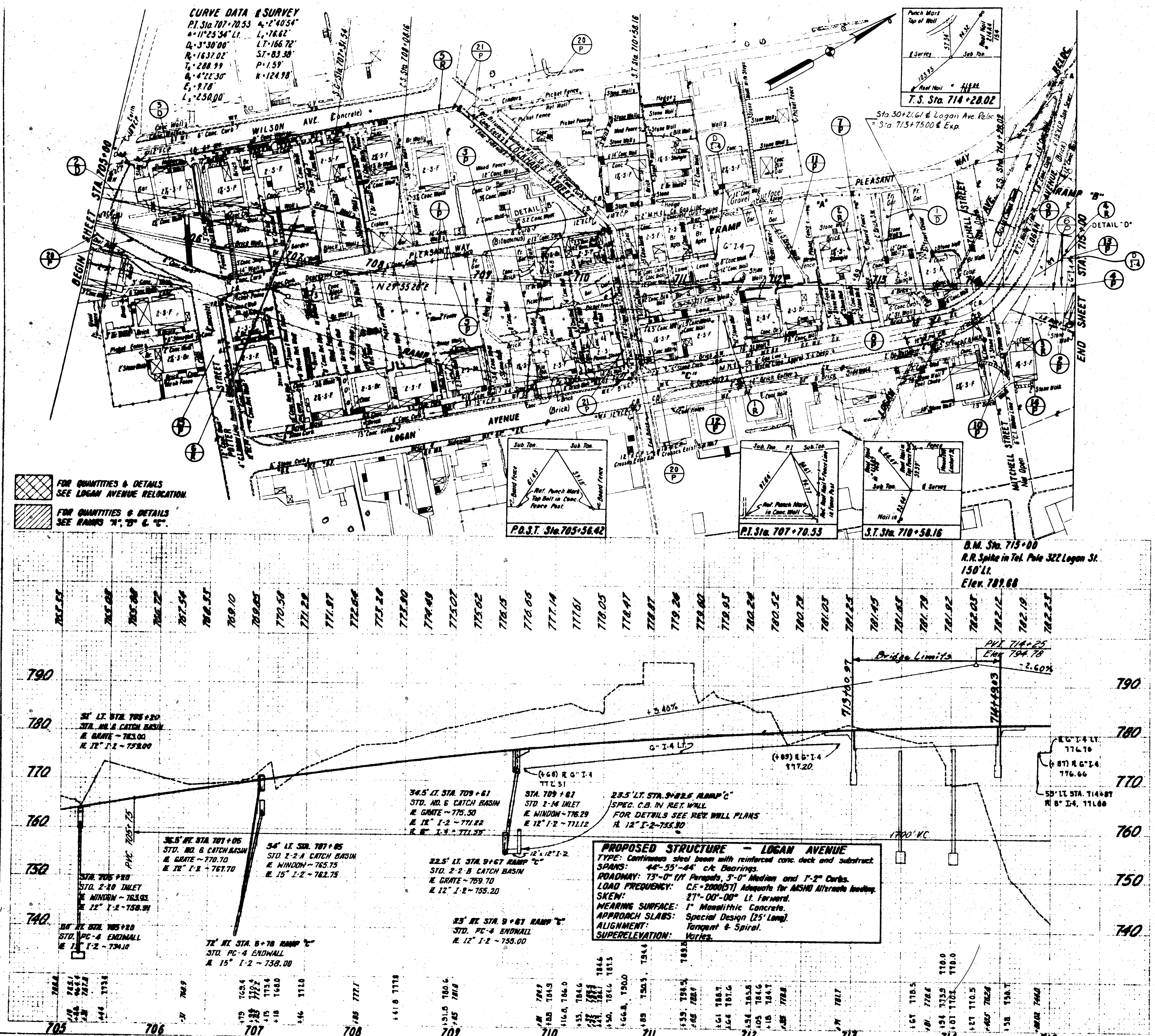



## ESTIMATED QUANTITIES

| 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 [illegible] L.F. | I-12 Conc. Curb Std. Type 6 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-36 Pavt. 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. | I-7 Reinf. Conc. Appr. Slabs as per Plan (T-13) S.Y. | L-10 Spec. Sod'g & Slope Protection S.Y. | I-14 Type 1 P.G. L.F. | I-5 Pipe Spec. for Underdrains 6"x30° Bend Each | I-4 6" Pipe Under-drains L.F. | I-4 8" Pipe Outlets M-6.4(a) L.F. | I-14 Paved Gutter Std. Type 4 L.F. | I-14 Paved Gutter Std. Type 2 L.F. | I-13 4" Conc. Sidewalk S.F. | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-P | 695+00 ~ 697+35.40 | Lt. & Rt. | | 1332 | | | | | 222.9 | 1332.4 | | | | | | | | | | | | | | 3 |
| 2-P | 699+07.22 ~ 701+75.00 | Lt. & Rt. | | 1517 | | | | | 252.9 | 1818.8 | | | | | | | | | | | | | | 3 |
| 3-P | 696+00 ~ 697+60.40 | ℄ | | 58 | | | | 75.3 | 26.4 | | | | | 6.5 | | | | | | | | | | 3 |
| 4-P | 698+82.22 ~ 702+00.00 | ℄ | | 71 | | | | 85.5 | 33.1 | | | | | 11.0 | | | | | | | | | | 3 |
| 5-P | 704+92.60 ~ 705+17.60 | ℄ | | 6 | | | | | 2.0 | | | | | 6.5 | | | | | | | | | | 3 |
| 6-P | 695+00 ~ 697+35.40 | Lt. & Rt. | | | 472.1 | | | | | | | | | | | | | | | | | | | 3 |
| 7-P | 699+07.22 ~ 701+75.00 | Lt. & Rt. | | | 612.9 | | | | | | | | | | | | | | | | | | | 3 |
| 8-P | 695+08.00 ~ 697+50.10 | Rt. | 18.7 | 239 | | 250 | 31.4 | | 51.0 | | 56 | 1.0 | | | | | | | | | | | 332 | 4 |
| 9-P | 698+90.50 ~ 702+00.00 | Lt. | 20.8 | 250 | | | 37.1 | | 52.3 | | 63 | 2.0 | | | | | | | | | | | | 364 |
| 10-P | 698+72.10 ~ 702+00.00 | Rt. | 22.4 | 268 | | | 39.6 | | 41.2 | | 67 | 2.1 | | | | | | | | | | | | 364 |
| 11-P | 701+75.00 ~ 702+00.00 | Lt. | | 71 | | | | | | | | | | | 70.83 | | | | | | | | | 194 |
| 12-P | 701+75.00 ~ 702+00.00 | Rt. | | 100 | | | | | | | | | | | 100.00 | | | | | | | | | 194 |
| 13-P | 704+92.60 ~ 705+17.60 | Lt. | | 72 | | | | | | | | | | | 72.22 | | | | | | | | | 194 |
| 14-P | 704+92.60 ~ 705+17.60 | Rt. | | 104 | | | | | | | | | | | 104.17 | | | | | | | | | 194 |
| 15-P | 697+35.40 ~ 697+60.40 | Lt. | | 71 | | | | | | | | | | | 70.83 | | | | | | | | | 192 |
| 16-P | 697+35.40 ~ 697+60.40 | Rt. | | 71 | | | | | | | | | | | 70.83 | | | | | | | | | 192 |
| 17-P | 698+82.22 ~ 699+07.22 | Lt. | | 71 | | | | | | | | | | | 70.83 | | | | | | | | | 192 |
| 18-P | 698+82.22 ~ 699+07.22 | Rt. | | 71 | | | | | | | | | | | 70.83 | | | | | | | | | 192 |
| 19-P | 701+00.00 ~ 701+75.00 | Rt. | | 38 | | | | | 6.3 | 375 | | | | | | | | | | | | | | 194 |
| 20-P | 695+00.00 ~ 697+71.50 | Lt. | 24.0 | 288 | | | 40.6 | | 42.7 | | 72 | 2.3 | | | | | | | | | | | | 364 |
| 1-R | 697+25.9 ~ 697+63.4 | Lt. | | | | | | | | | | | 37.5 | | | | | | | | | | | 3 |
| 2-R | 699+05.9 ~ 699+68.4 | Lt. | | | | | | | | | | | 62.5 | | | | | | | | | | | 3 |
| 3-R | 698+82.5 ~ 699+70 | Rt. | | | | | | | | | | | 87.5 | | | | | | | | | | | 3 |
| 4-R | 700+94.5 ~ 701+82 | Rt. | | | | | | | | | | | 87.5 | | | | | | | | | | | 3 |
| 5-R | 701+57 ~ 701+82 | Lt. | | | | | | | | | | | 25.0 | | | | | | | | | | | 3 |
| 6-R | 695+00 ~ 696+60 | Rt. | | | | | | | | | | | 100 | | | | | | | | | | | |
| 1-D | 701+75 | Rt. | | | | | | | | | | | | | | 30 | | | | | | | | 191 |
| 2-D | 698+50 ~ 700+00 | Lt. | | | | | | | | | | | | | | | 190 | | | | | | | |
| 3-D | 698+35 ~ 700+00 | Rt. | | | | | | | | | | | | | | | 220 | | | | | | | |
| 4-D | 697+10 ~ 697+86 | Lt. | | | | | | | | | | | | | | | 75 | | | | | | | |
| 5-D | 697+92 | Lt. & Rt. | | | | | | | | | | | | | | | 82 | | | | | | | |
| 6-D | 695+00 ~ 697+10 | Lt. | | | | | | | | | | | | | | | | | | | 210 | | | 4 |
| [illegible] | 695+00 ~ 701+70 | Rt. | | | | | | | | | | | | | | | | 1 | 506 | 10 | | | | 188 |
| 21-P | 699+55 ~ 700+80 | Lt. | | | | 115 | | | 6.5 | | | | | | | | | | | | | | 122 | 4 |
| 22-P | 699+70 ~ 700+95 | Rt. | | | | 125 | | | 9.3 | | | | | | | | | | | | | | 130 | 4 |
| 23-P | 704+89 ~ 705+00 | Lt. | | | | | | | | | | | | | | | | | | | | 11 | | |
| TOTALS | | | 85.9 | 4698 | [illegible] | 490 | 148.7 | 160.8 | 749.8 | 2885.4 | 258 | 8.2 | 460.0 | 82 | 630.54 | 30 | 567 | 1 | 506 | 10 | 210 | 11 | 592 | |

| | | | |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | 18/307 |

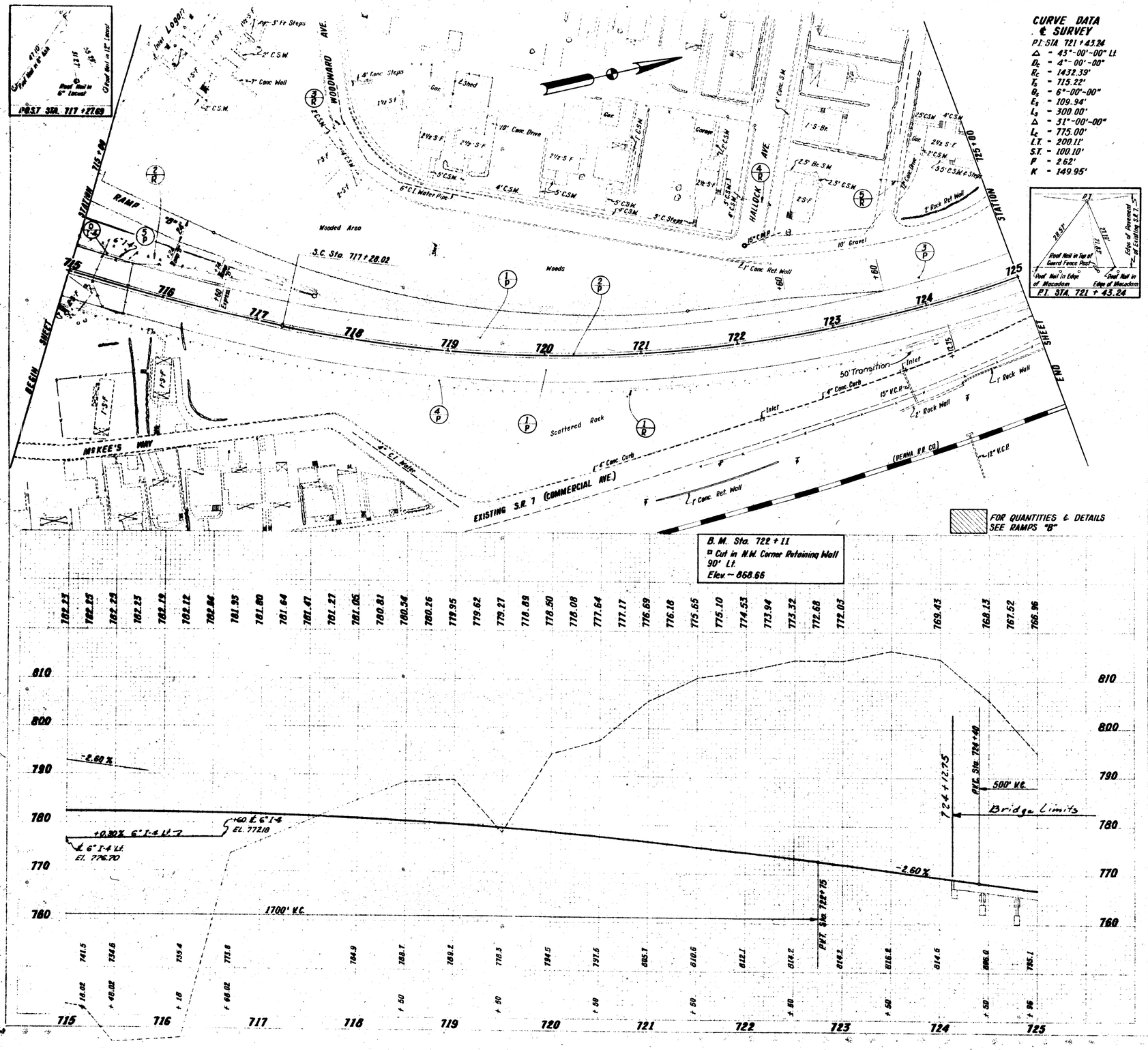
**JEFFERSON COUNTY JEF-7-13.53**




## 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-16 Conc Curb Std Type L.F. | I-18 Stab. Crsh'd Agg Shldrs & 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 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 Each | I-7 Appr. Slab as per Plan 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"x30" Ea. | I-4 6" Underdrains L.F. | I-4 8" Pipe Outlets M-6.4(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. | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-P | 705+17.60 - 712+75.97 | Lt & Rt | | 4297 | | | | 716.3 | 4294.9 | | | | | | | | | | | | | | | | | 3 |
| 2-P | 714+74.83 - 715+00 | Lt & Rt | | 147 | | | | 24.5 | 147.2 | | | | | | | | | | | | | | | | | 3 |
| 3-P | 705+17.60 - 713+00.97 | Lt | | 174 | | | 252.8 | 84.6 | | | | | 5.5 | | | | | | | | | | | | | 3 |
| 4-P | 714+49.03 - 715+00 | Lt | | 11 | | | 8.6 | 5.5 | | | | | 5.5 | | | | | | | | | | | | | 3 |
| 5-P | 705+17.60 - 712+75.91 | Lt & Rt | | | 1516.7 | | | | | | | | | | | | | | | | | | | | | 3 |
| 6-P | 714+74.83 - 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+74.83 | Lt | | 71 | | | | | | | | | | | 70.83 | | | | | | | | | | | 195 |
| 10-P | 714+49.03 - 714+74.83 | Rt | | 71 | | | | | | | | | | | 70.83 | | | | | | | | | | | 195 |
| 11-P | 709+00 - 713+18.60 | Lt | 26.4 | 517 | | 46.7 | | 36.8 | | 79.1 | 2.5 | | | | | | | | | | | | | | | 3.5 |
| 12-P | 709+06 - 712+86.70 | Rt | 35.6 | 429 | | 62.9 | | 72.5 | | 101.8 | 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 | | 18.0 | 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 | | | | |
| I-D | 715+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+19.4 - 715+00 | Lt | | | | | | | | | | 20.6 | | | | | | | | | | | | | | 3 |
| 5-R | 705+00 - 709+20 | Lt | | | | | | | | | | 412.5 | | | | | | | | | | | | | | |
| 6-R | 706+90 | Rt | | | | | | | | | | 25.0 | | | | | | | | | | | | | | |
| 2-D | 705+00 - 705+22 | Lt | | | | | | | | | | | | | | | 22 | | | | | | | | | |
| 3-D | 705+22 - 706+67 | | | | | | | | | | | | | | | 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 | 1925 | 34 | 292 | 1688 | |
| | Deductions | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 705+20 | | | | 42.7 | | 7.1 | 2.9 | 3.6 | | | | | | | | | | | | | | | | | |
| | 709+61 | | | | 59.7 | | 5.1 | 1.1 | 2.8 | | | | | | | | | | | | | | | | | |
| [illegible] | 707+80 | Rt | | | | | | | | | | | | 1 | | | | | | | | | | | | 178 |
| TOTALS | | | 70.0 | 5,755 | 1466.2 | 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 | |

STA. [illegible] to STA. [illegible]




## CURVE DATA
### ℄ SURVEY

P.I. STA 721 + 43.24
Δ = 45°-00'-00" Lt
$D_c$ = 4°-00'-00"
$R_c$ = 1432.39'
$T_s$ = 715.22'
$\theta_s$ = 6°-00'-00"
$E_s$ = 109.94'
$L_s$ = 300.00'
Δ = 31°-00'-00"
$L_c$ = 775.00'
L.T. = 200.11'
S.T. = 100.10'
P = 2.62'
K = 149.95'

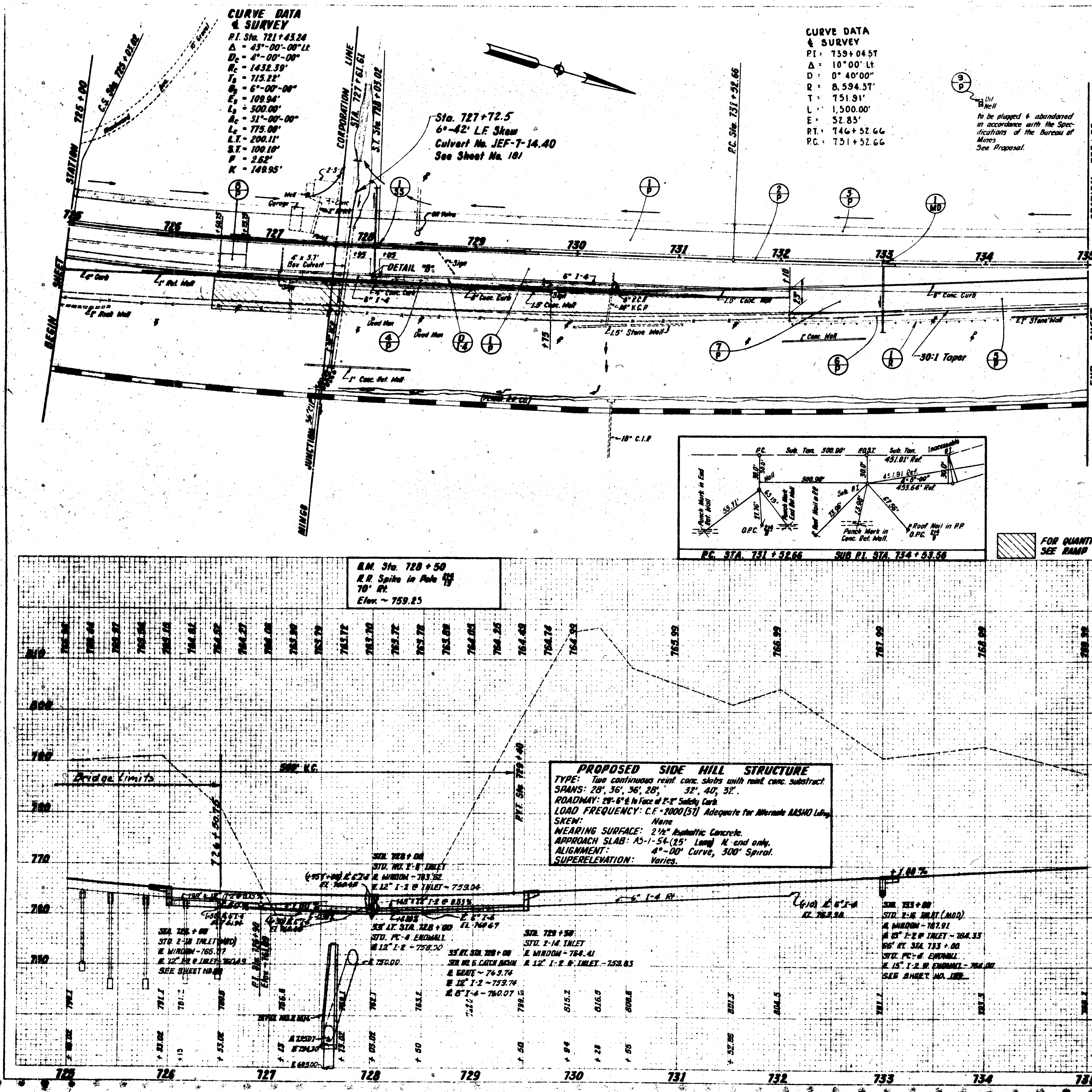
| T-4 6" Pipe Under-drains L.F. |
|---|
| 160 |




## ESTIMATED QUANTITIES

| HALF NO. | STATION TO STATION | | | D-219 Water-proofed Agg. Base Course C.Y. | E-1 Compact Sub-Grade S.Y. | I-16 Stab Cr'shd Agg. Shldrs & Apprs C.Y. | I-21 Port. Cem't Sub Base Conc. Med. Variable Cem't Std. Depth Type 2 S.Y. | I-22 Port. Cem't Sub Base Conc. Med. Variable Depth C.Y. | T-8-35 Pav't. S.Y. | T-51 Bit. Surface Treatment Type Bit. N°6 2-A Mat'l Agg. C.Y. | T-51 I-15 SPECIAL Overhead Sign Type E-2-A 03-1-A Agg. L.F. Each |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-P | 715+00 | 715+00 | ℄ | 5,666 | 222 | | | | | | |
| 2-P | 715+00 | 725+00 | Lt. | 124 | 124 | | | | | | |
| 3-P | 723+60 | 725+00 | Lt. | 18.4 | 18.4 | | | | | | |
| 4-P | 715+00 | 725+00 | Rt. | 74.1 | 869 | | | | | | |
| 5-P | 715+00 | 716+60 | Lt. | 11.9 | 142 | | | | | | |
| 0 I-4 | 715+00 | 716+60 | Lt. | | | | | | | | |
| 05-1 | 717+35 | | Lt. | | | | | | | | |
| 1-K | 715+00 | 724+03.5 | Rt. | | | | | | | | |
| 2-K | 715+00 | 716+78.4 | Lt. | | | | | | | | |
| 3-K | 717+50 | BARRICADE | Lt. | | | | | | | | |
| 4-K | 722+40 | BARRICADE | Lt. | | | | | | | | |
| 5-K | 724+00 | BARRICADE | Lt. | | | | | | | | |
| SUB-TOTALS | | | | 96.4 | 7045 | 2000 | 170.8 | 333.3 | 1258.5 | 5,666.6 | 9.2 1182.9 1 |
| DEDUCT FOR BRIDGE 1-P | 724+12.75 | 725+00 | Rt. | | | | | | 154 | 116.4 | |
| 4-P | 723+45.0 | 725+00 | Rt. | 8.5 | 116 | | 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 |

STA. 715 + 00



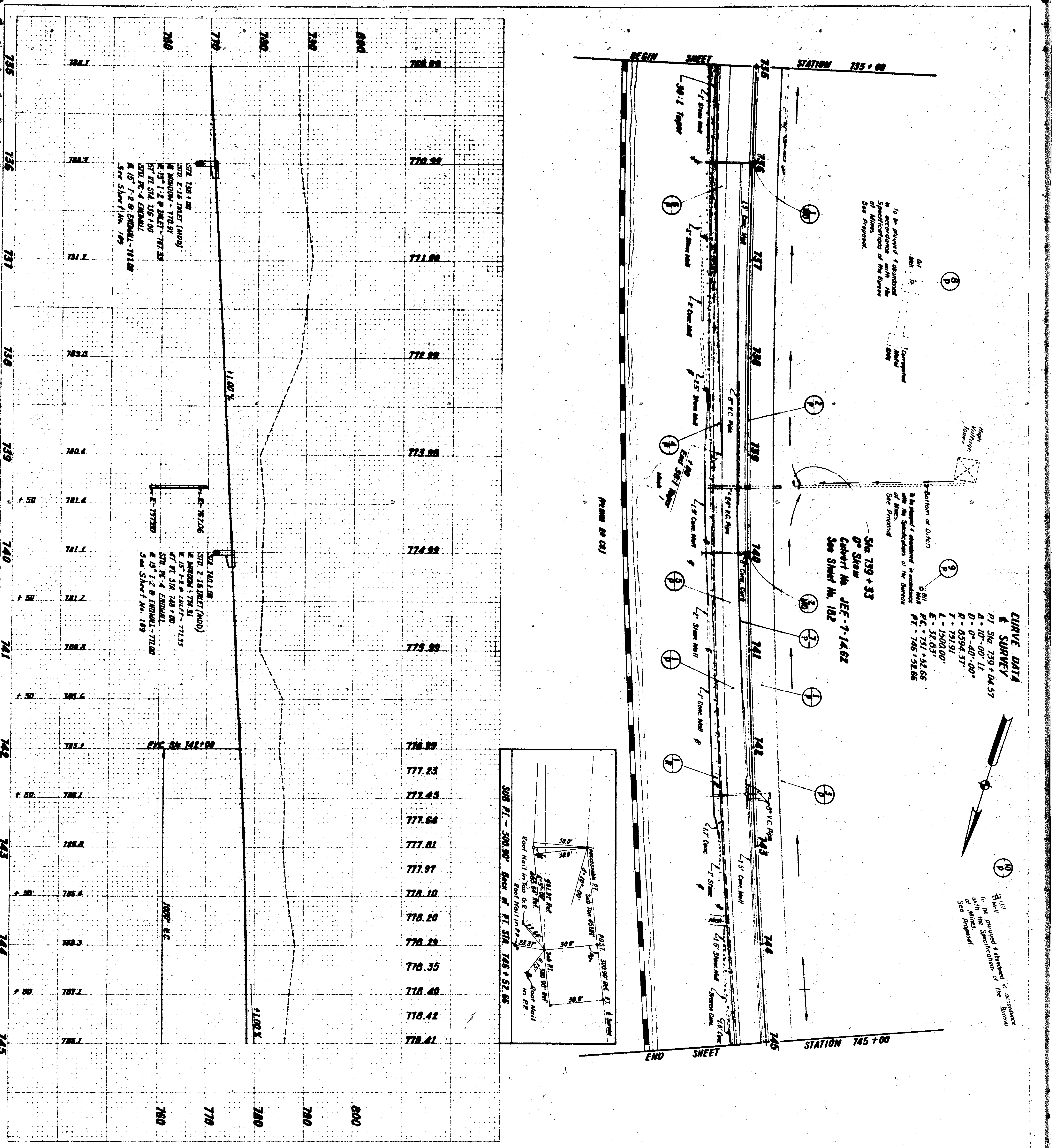

| REF. NO. | STATION TO STATION | SIDE | I-4 6" Pipe Underdrains L.F. | I-4 8" Pipe Outlet, Sec. M-64(a) L.F. | I-5 Pipe Specials for Underdrains EACH 6"x60° | T-7 Approach Slab T-13* S.Y. | T-35 2½" Asph. Conc. Surf. C'se, Ty. "A" (70-85) C.Y. | T-30 Bituminous Tack Coat, .01 Gal's/S.Y. GAL'S |
|---|---|---|---|---|---|---|---|---|
| D I-4 | 726+50 – 732+10 | Rt. | 550 | 12 | 2 | | | |
| 8-P | 726+50.75 – 726+75.75 | Rt. | | | | 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. L.F. | I-12 Conc. Curb Type 6 L.F. | I-16 Stab. Cr'shd Agg. Shldrs. & 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-8-35 Pav't. S.Y. | T-31 Bit. Surface Treatment Bit. Mat. GAL'S | T-31 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 | 280 | | | 333.3 | 108.0 | | | | | |
| 3-P | 725+00 ~ 735+00 | Lt. | 74.1 | 889 | | | 132.2 | | 263.0 | | 222.0 | 7.1 | | |
| 4-P | ~726+50.15 ~ 732+10 | Rt. | 56.9 | 444 | | 480 | 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. | | | | | | | | | | | 290 | |
| 9-P | 734+00± | Lt. | | | | | | | | | | | | Lump |
| 1-SS | 726+00 ~ 729+50 | ¢ | | | | | | | | | | | | |
| 1-MD | 733+00 | Rt. | | | | | | | | | | | | |
| SUB-TOTALS | | | 132.6 | 8064 | [illegible] | 480 | 255.3 | 333.3 | 1589.6 | 6,252.0 | 397.7 | 12.8 | 290 | Lump |
| DEDUCTIONS | | | | | | | | | | | | | | |
| 1-SS | 726+00 ~ 729+50 | ¢ | | | | | | 14.0 | 5.8 | 7.0 | | | | |
| 1-MD | 733+00 | Rt. | | | | | | 5.0 | 2.5 | 2.9 | | | | |
| DEDUCT FOR BRIDGE | | | | | | | | | | | | | | |
| 1-P | 725+00 – 726+50.15 | Rt. | | 201 | | | | | 35.5 | 201.0 | | | | |
| 8-P | 726+50.15 – 726+75.75 | Rt. | | 39 | | | | | 8.6 | 33.3 | | | | |
| TOTALS | | | 132.6 | [illegible] | [illegible] | [illegible] | 255.3 | 318.0 | [illegible] | [illegible] | [illegible] | [illegible] | 290 | LUMP |

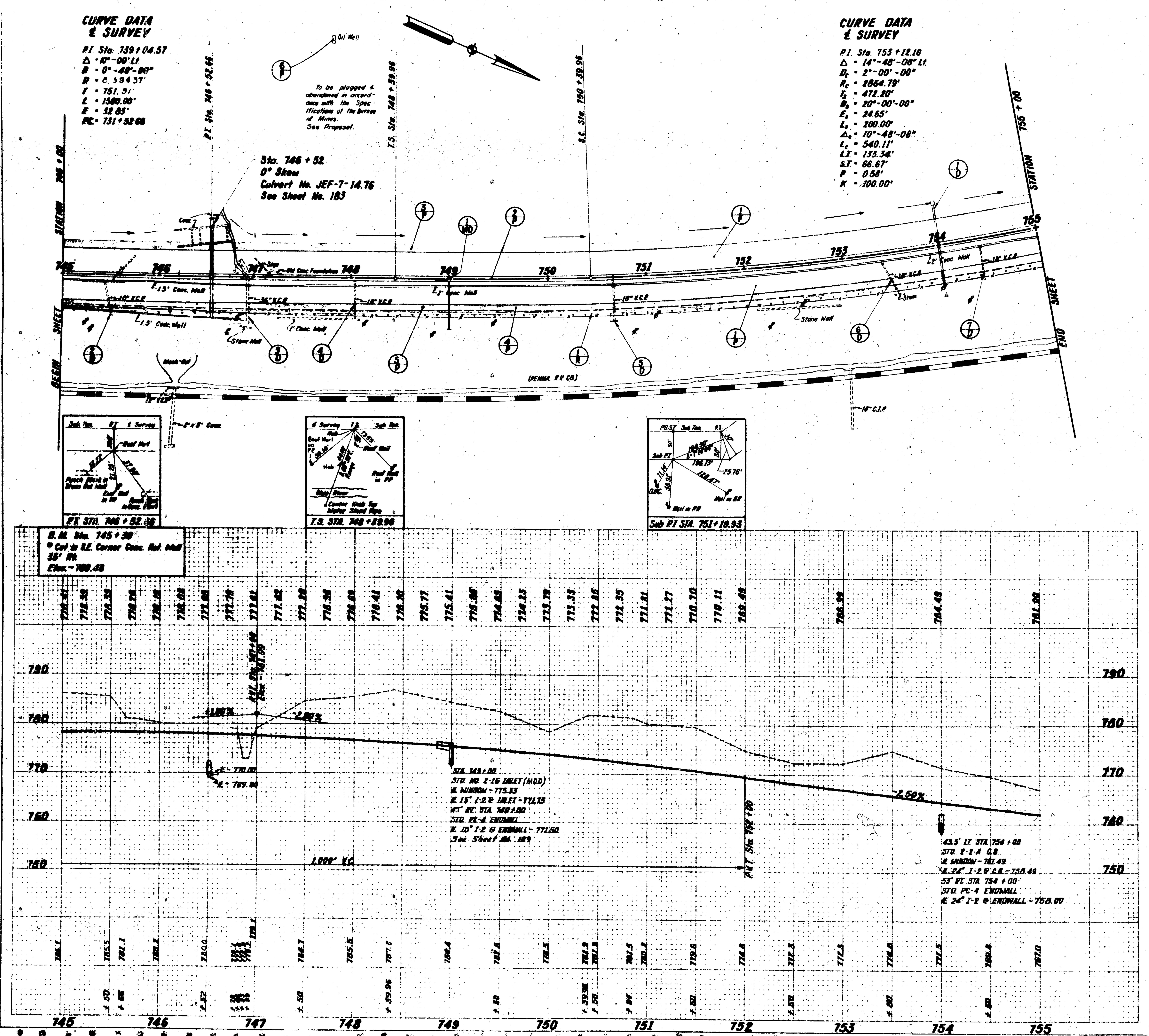
| REF. NO. | I-8 Inlets Standard No. 2-6 EACH | I-8 Inlets Standard No. 2-14 EACH | I-8 Inlets N° 2-16 Mod. EACH | I-8 Inlets N° 2-18 Mod. EACH | I-8 Std. No. 6 Catch Basin EACH | L-10 Sodding S.Y. | I-2 Storm Sewers under Pav't or Appr's (L.F.) Class "B" 15" | I-2 Storm Sewers under Pav't or Appr's (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. | T-15 4" Conc. Sidewalk 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 | 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 725 + 00 to [illegible]



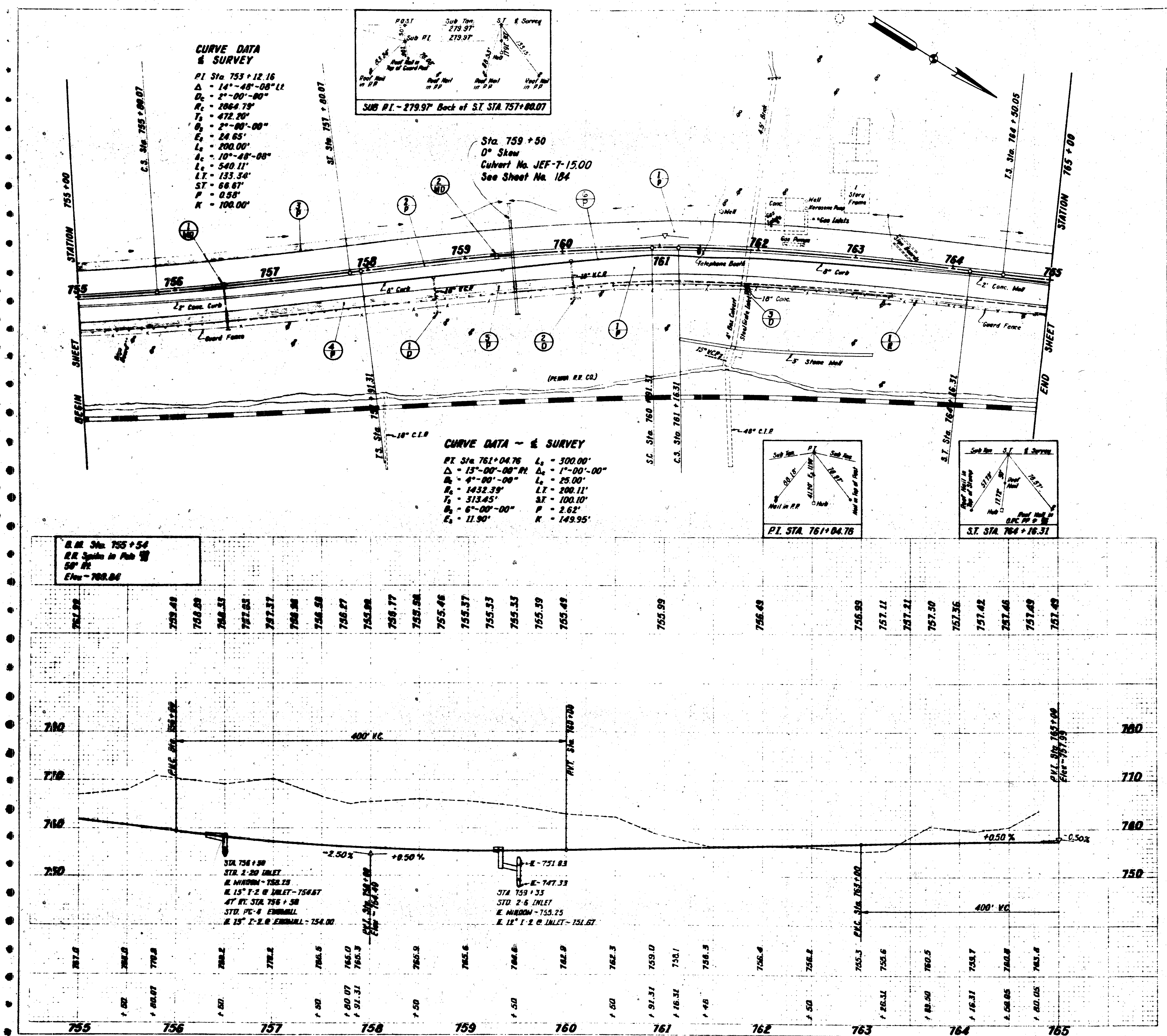

ESTIMATED QUANTITIES

| 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. | J-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 "D" 15" | E-8 Removal & Disposal of Ex. Curb L.F. | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-P | 735 + 00 ~ 745 + 00 | Lt.& Rt. | | 5,666 | | | | 944 | 5,666.6 | | | | | | | | | | | | | 3 |
| 2-P | 735 + 00 ~ 745 + 00 | ℄ | | 222 | 2000 | | 333.3 | 188 | | | | | | | | | | | | | | 3 |
| 3-P | 735 + 00 ~ 745 + 00 | Lt. | 74.1 | 889 | | 131.2 | | 263 | | 222 | 7.1 | | | | | | | | | | | 3 |
| 4-P | 735 + 00 ~ 745 + 00 | Rt. | 74.1 | 889 | | 131.2 | | 149 | | 222 | 7.1 | | | | | | | | | | | 3 |
| 5-P | 735 + 00 ~ 745 + 00 | Rt. | | | | | | | | | | | | | | 2667 | | | | | | – |
| 6-P | 735 + 00 ~ 739 + 00 | Rt. | | 296 | | | | 49 | 296.3 | | | | | | | | | | | | | 5,179 |
| 7-P | 737 + 60 ~ 741 + 60 | Rt. | | | | | | | | | | | | | | | | | | | 400 | – |
| 1-R | 735 + 00 ~ 745 + 00 | Rt. | | | | | | | | | | 1000 | | | | | | | | | | 3 |
| 1-MD | 736 + 00 | Rt. | | | | | | | | | | | | 1 | 13 | | 1 | 1 | 0.26 | 56 | | 95 |
| 2-MD | 740 + 00 | Rt. | | | | | | | | | | | | 1 | 4 | | 1 | 1 | 0.26 | 46 | | 101 |
| 8-P | 737 + 25± | Lt. | | | | | | | | | | | Lump | | | | | | | | | |
| 9-P | 740 + 50± | Lt. | | | | | | | | | | | Lump | | | | | | | | | |
| 10-P | 743 + 75± | Lt. | | | | | | | | | | | Lump | | | | | | | | | |
| | SUB TOTAL | | 148.2 | 7962 | 2000 | 262.4 | 333.3 | 1513 | 5962.9 | 444 | 14.2 | 1000 | Lump | 2 | 17 | 2667 | 2 | 2 | 0.52 | 102 | 400 | |
| | DEDUCTIONS | | | | | | | | | | | | | | | | | | | | | |
| 1-MD | 736+00 | Rt. | | | 34.7 | | 5.8 | 2 | 2.9 | | | | | | | | | | | | | |
| 2-MD | 740+00 | Rt. | | | 34.7 | | 5.8 | 2 | 2.9 | | | | | | | | | | | | | |
| | TOTALS | | 148.2 | 7962.0 | [illegible] | 262.4 | 321.7 | 1509 | 5957.1 | 444 | 14.2 | 1000 | LUMP | 2 | 17 | 2667 | 2 | 2 | 0.52 | 102 | 400 | |




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-10 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 Bit. Surface Treatment No. 6 Agg. C.Y. | I-15 G.R. Type 2-A L.F. | Special Plugging Oil Wells Lump | E-8 Removal & Disposal of Exist. Pav't S.Y. | E-2 Excav. for Structs C.Y. | E-3 Channel Excav. C.Y. | E-12 Pipe Removed Over 15" L.F. | L-10 Sodding S.Y. | I-2 Storm Sewers under Pav't or Appr's (L.F.) Class "B" 15" | I-2 Sec. M-6.6(a) or M-6.8(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 Aband'd EACH | S-1 Concrete for Structures, Class "E" C.Y. | SEE SHEET NO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-P | 745 + 00 – 755 + 00 | Lt. & Rt. | | 5,666 | | | | 944 | 5,666.6 | | | | | | | | | | | | | | | | 3 |
| 2-P | 745 + 00 – 755 + 00 | ℄ | | 222 | 2000 | | 333.3 | 108 | | | | | | | | | | | | | | | | | 3 |
| 3-P | 745 + 00 – 755 + 00 | Lt. | 74.1 | 889 | | 131.2 | | 263 | | 222 | 7.1 | | | | | | | | | | | | | | 3 |
| 4-P | 745 + 00 – 755 + 00 | Rt. | 74.1 | 889 | | 131.2 | | 149 | | 222 | 7.1 | | | | | | | | | | | | | | 3 |
| 5-P | 745 + 00 – 755 + 00 | Rt. | | | | | | | | | | | | 2,667 | | | | | | | | | | | |
| 6-P | 747 + 90 ± | Lt. | | | | | | | | | | | 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 + 90 | Rt. | | | | | | | | | | | | | | | 80 | | | | | | | | – |
| 4-D | 748 + 84 | Rt. | | | | | | | | | | | | | | | 42 | | | | | | | | – |
| 5-D | 750 + 66 | Rt. | | | | | | | | | | | | | | | 46 | | | | | | 1 | | – |
| 6-D | 753 + 50 | Rt. | | | | | | | | | | | | | | | 38 | | | | | | 1 | | – |
| 7-D | 754 + 40 | Rt. | | | | | | | | | | | | | | | 34 | | | | | | 1 | | – |
| | SUB TOTAL | | 148.2 | 7,666 | 2000 | 262.4 | 333.3 | 1,464 | 5,666.6 | 444 | 14.2 | 1000 | Lump | 2,667 | 2 | 9 | 274 | 2 | 46 | 96 | 1 | 1 | 4 | 0.67 | |
| | DEDUCTIONS | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-MD | 749+00 | Rt. | | | 547 | | 5.7 | 2 | 2.9 | | | | | | | | | | | | | | | | |
| | TOTALS | | 148.2 | 7,666 | 1963 | 262.4 | 327.6 | 1,462 | 5,663.7 | 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-12 Conc Curb Std Type 2-A L.F. | I-18 Stab Crshd 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 N° 6 Agg C.Y. | I-15 G.R. Type 2-A L.F. | I-16 Inlets Abanded Each | E-8 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 (LIN. FT.) Storm Sewers Under Pavement or Approaches Sec. M-6.8(b) 12" | C-2 (LIN. FT.) Class "B" 15" | I-8 Standard Inlets (EACH) 2-6 | I-8 Standard Inlets (EACH) 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 |  | 5,666 |  |  |  | 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. |  |  |  |  |  |  |  |  |  |  |  |  | 2,667 |  |  |  |  |  |  |  |  |  |  | – |
| 6-P | 757+50 ~ 763+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-D | 758+66 | Rt. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 56 |  |  |  |  |  | 1 |  |  |
| 2-D | 760+08 | Rt. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 38 |  |  |  |  |  | 1 |  |  |
|  | 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. |  |  | 42.7 |  | 2.2 | 2 | 3.6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2-MD | 759+33 | ℄ |  |  | 14.1 |  | 2.3 | 1 | 1.2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | TOTALS |  | 148.2 | 7,666 | 1,943.2 | 262.4 | 323.8 | 1,462 | 5,661.8 | 444 | 14.2 | 1000 | 1 | 607 | 2,667 | 1 | 15 | 84 | 1 | 14 | 46 | 1 | 1 | 2 | 0.26 |  |

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

**CURVE DATA & SURVEY**

P.I. Sta. 767+65.69
△ = 09°-54'-20"
$D_c$ = 3°-00'-00"
$R_c$ = 1909.86'
$T_s$ = 315.64'
$\theta_s$ = 4°-30'-00"
$E_s$ = 9.13'
$L_s$ = 300.00'
$\Delta_c$ = 0°-54'-20"
$L_c$ = 30.19'
L.T. = 200.06'
S.T. = 100.06'
R. = 1.96'
K. = 149.97'

U-430(14)

END FEDERAL AID PROJECT U-430(14) STA. 770+85.03

(S.L.M. 15.25 BK ~ S.L.M. 15.30 AH.

ABANDONED M.H.

BEGIN SHEET STATION 765+00

STATION 775+00

END SHEET

A.C. Sta. 767+50.05

C.S. Sta. 767+82.24

S.T. Sta. 770+80.24 BK.

S.T. Sta. 770+80.96 AH.

EQUATION

LINE

CORPORATION

STEUBENVILLE

Detail E

Sign

Guard Fence

Steubenville Corporation Line

Wood Steps to R.R.

EXISTING S.R. 7

Abandoned C.B. Posts

Abandoned Guard Rail Posts

Guard Rail End Post

Concrete

Proposed Temporary Connection: 1½" T-35 Surface Type A (70-85) 1½" B-35 Leveling Course (70-85) 10" B-19 Base Course Variable Width T-30 Applied @ rate of 0.40 Gal's per Sq. Yd.

T.S. Sta. 771+39.64

S.C. Sta. 773+39.64

End Guard Rail

STA. 771+25
0° SKEW
CULVERT NO. JEF-7-15.31
SEE SHEET No. 185

END JEF-7-1353

(PENNA. R.R. CO.)

NOTE: Temporary connection to be constructed only if and as directed by the Engineer.

4" to 6" Conc. Curb Lt Edge Pavt
Bit Surface Course
Conc. Pav't

TYPICAL SECTION EXISTING S.R. 7

| REF. NO. | STATION TO STATION | 6" Underdrains Sand Mix Filter Course L.F. | 8" Pipe Culvert Sch. Mix Bed Exc. L.F. | Pipe Special for Underpass Sch. 40 EACH | Sheet No. |
|---|---|---|---|---|---|
| D-4 | 771+28 ~ 775+00 | 456 | 10 | 1 | 185 |

* (Municipal Quantities. Steubenville

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

P.I. STA. 767+65.69

S.T. STA. 770+80.24 BK. = STA. 770+80.96 AH.

B.M. Sta. 772+04
Cut in N.E. Corner of Hdwl. P.R.R.
179' Rt.
Elev. ~ 694.16

Profile ~ Proposed S.R. 7 Relocation

STA. 769+78
STD. WL 2-12 INLET (mod)
E. WINDOW ~ 755.51
E. 15" I-P @ INLET ~ 755.85
STD. PC-4 ENDWALL-57' Rt.
E. 15" I-P @ ENDWALL-753.89
See Sheet No. 189

-0.58%

+0.50 %

Profile ~ Existing Ground ~ ℄ Survey

Profile ~ Proposed Temporary Grade

Profile ~ Existing S.R.7

Profile ~ Proposed S.R. 7

EQUATION: S.T. STA. 770+80.96 AHEAD of BK. = STA. 771+02 Elev. ~ 694.30

100' V.C.

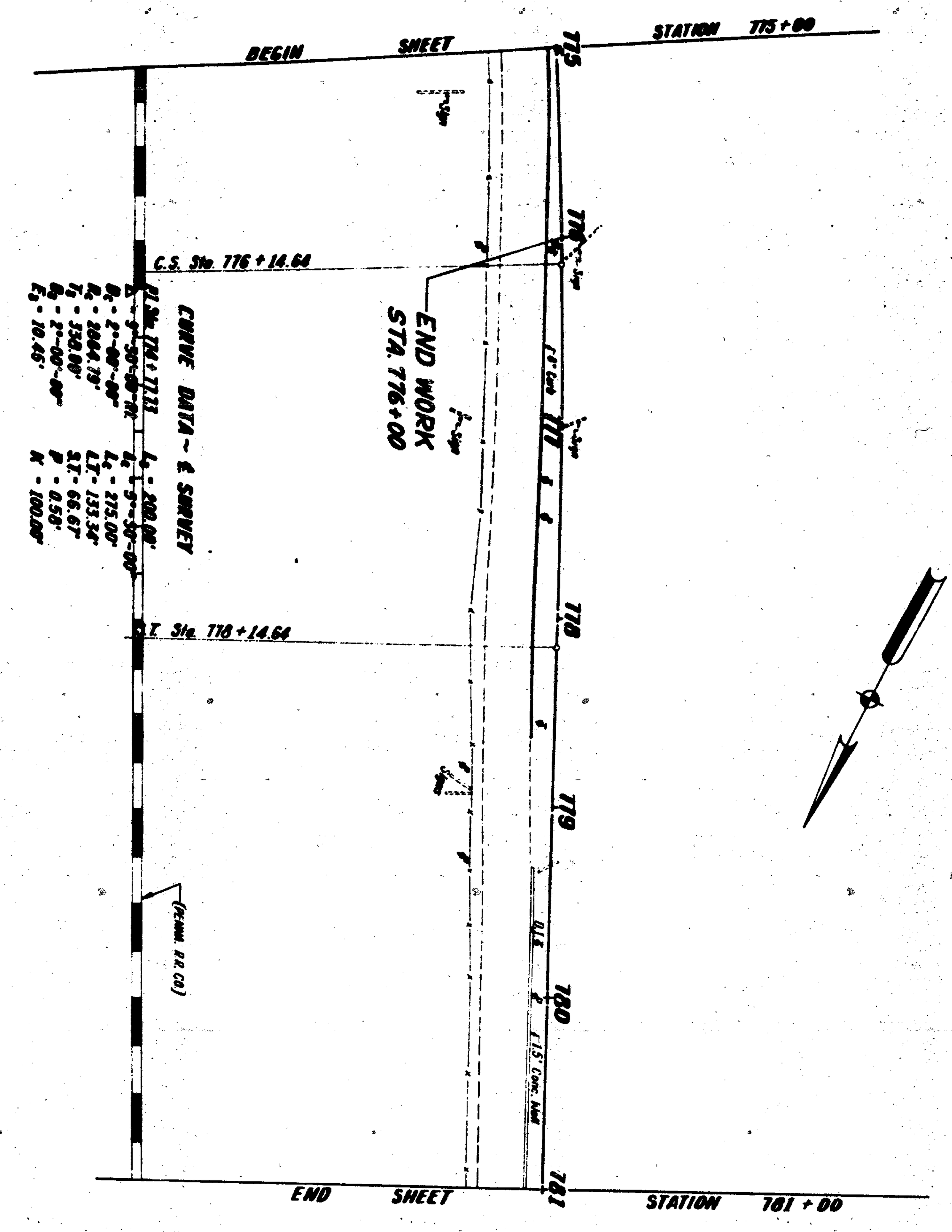
400' V.C.

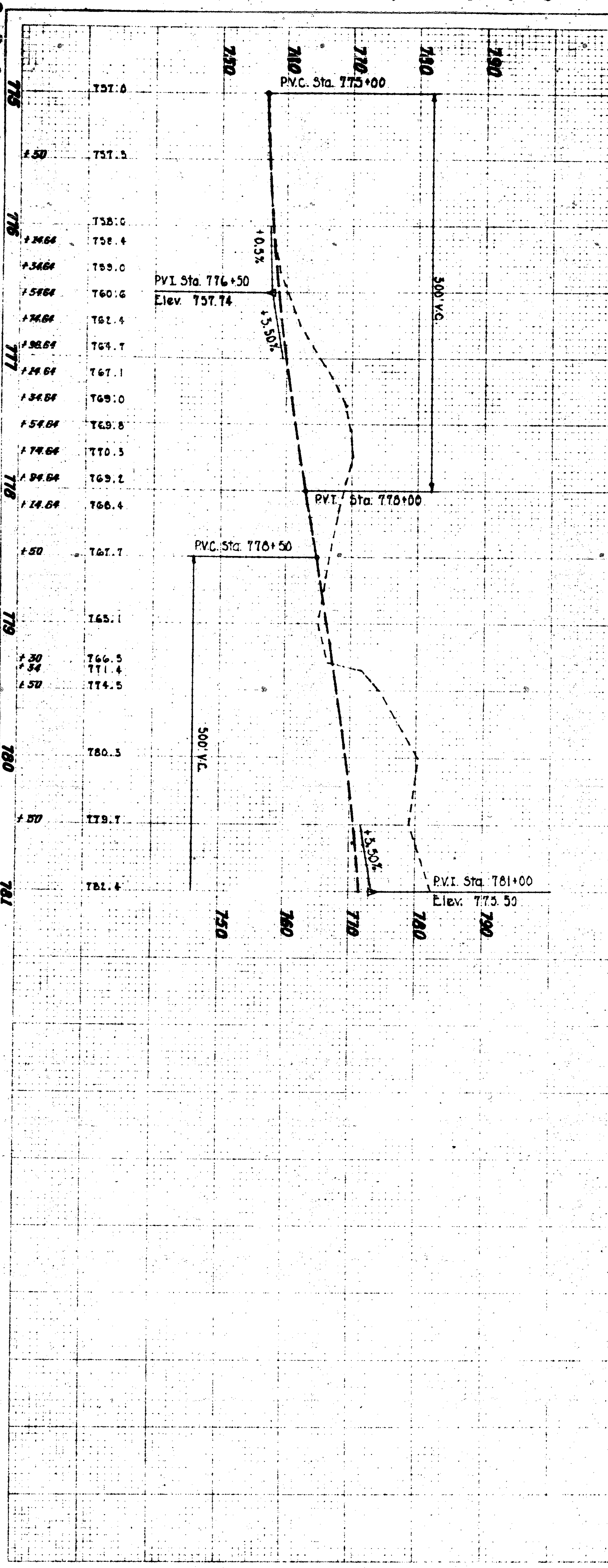
ESTIMATED QUANTITIES

| REF NO | STATION TO STATION | SIDE | Water Proofed Asphalt Coarse C.Y. | E-8 T-35 Asph. Conc. Pavement Top Course C.Y. | E-8 T-35 Asph. Conc. Pavement Leveling Course C.Y. | E-2 Excav. for Struct's 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. M.H. 2-12 Inlet EACH | I-16 C.B. 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. | 311 | 56 | 56 | 1 | 15 | 52 | 840 | 56 | 1 | 3 | 1 | 304 | |
| 2-P | 765+00 ~ 770+85.03 | Rt. | 130 | 67 | 67 | 1 | 15 | 38 | 1550 | | | | | | |
| 3-P | 765+00 ~ 770+85.03 | Lt. | 45.4 | | | | | 42 | 840 | | | | | | |
| 4-P | 765+00 ~ 770+85.03 | Rt. | 45.4 | | | | | | 1550 | | | | | | |
| 5-P | 770+85.03 ~ 774+00 | Rt. Lt. | | | | | | | | | | | | | |
| 6-P | 770+85.03 ~ 774+00 | Rt. | | | | | | | | | | | | | |
| 7-P | 774+00 ~ 776+05 | Rt. | | | | | | | | | | | | | |
| 8-P | 773+33 ~ 774+86 | Rt. | | | | | | | | | | | | | |
| 1-AD | 769+78 | Rt. | | | | | | | | | | | | | |
| 1-D | 765+00 ~ 769+63 | Rt. | | | | | | | | | | | | | |
| 2-D | 769+63 ~ 770+60 | Rt. | | | | | | | | | | | | | |
| 4-D | 771+80 | Lt. | | | | | | | | | | | | | |
| 1-R | 765+00 ~ 770+85.03 | Rt. | | | | | | | | | | | | | |
| 2-R | 770+85.03 ~ 773+66.72 | Rt. | | | | | | | | | | | | | |
| SUB TOTAL URBAN | | | 86.8 | 448 | 1 | | | | | | | | | | |
| ℄ MUNICIPAL | | | | | | | | | | | | | | | |
| DEDUCTIONS (URBAN) | | | | | | | | | | | | | | | |
| L.MD | 769+78 | | | | | | | | | | | | | | |

| REF NO | STATION TO STATION | SIDE | T-35 Bit Surface Treatment Type 2-A Lbs. L.F. | T-35 Bit Surface Treatment Type 6 Agg. C.Y. | T-35 Bit Surface Treatment Type 6 Bit Mat'l GAL's | T-30 Sub' Base Bit Prime Coat GAL's | T-22 Sub' Base Bit Conc. Mod. Type 2 C.Y. | T-21 Perf. Cam. Conc. Mod. Type 2 S.Y. | I-18 Tab. Grnd Agg. Slab's & Apron's C.Y. | I-10 Sodding S.Y. | I-10 Compact Subgrade S.Y. | E-11 Conc. Curb Std. Type C.Y. | B-219 Water Proofed Agg Base Course C.Y. | SEE SHEET NO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-P | 765+00 ~ 770+85.03 | Lt. | 694.31 | 4.2 | 130 | | | | | | 311 | | | |
| 2-P | 765+00 ~ 770+85.03 | Rt. | 215.68 | 4.2 | 130 | | | | | | 130 | | | |
| 3-P | 765+00 ~ 770+85.03 | Lt. | | | | | | | | | 920 | | | |
| 4-P | 765+00 ~ 770+85.03 | Rt. | | | | | | | | | 920 | | | |
| 5-P | 770+85.03 ~ 774+00 | Rt. Lt. | | | | | | | | | | | | |
| 6-P | 774+00 ~ 776+05 | Rt. | | | | | | | | | | | | |
| 7-P | 776+05 ~ 780+05 | Rt. | | | | | | | | | | | | |
| 8-P | 774+86 ~ 780+05 | Rt. | | | | | | | | | | | | |
| 1-AD | 769+78 | Rt. | | | | | | | | | | | | |
| 1-D | 765+00 ~ 769+63 | Rt. | | | | | | | | | | | | |
| 2-D | 769+63 ~ 770+60 | Rt. | | | | | | | | | | | | |
| 4-D | 771+80 | Lt. | | | | | | | | | | | | |
| 1-R | 765+00 ~ 770+85.03 | Rt. | 694.31 | 8.4 | 260 | 472 | 662 | 185 | 153.2 | 1 | 1 | 130 | 153.2 | |
| 2-R | 770+85.03 ~ 773+66.72 | Rt. | 215.68 | 8.4 | 260 | 472 | 663 | 185 | 153.2 | 1 | 1 | 130 | 153.2 | |
| SUB TOTAL URBAN | | | 1388.9 | 860 | 8.4 | 944 | 1325 | 370 | 306.4 | 2 | 2 | 260 | 306.4 | |
| ℄ MUNICIPAL | | | | | | | | | | | | | | |
| TOTALS | | | 1388.9 | 860 | 8.4 | 944 | 1325 | 370 | 306.4 | 2 | 2 | 260 | 306.4 | |

STA. 765+00 To STA. 776+05




B.M. Sta. 781+33
R.R. Spike in Pole 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 | 5,050 | | |
| | 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'rs) | | | 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 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 |

$\frac{399 \times 5}{1000}$ = 2-M Gal's

# SUPERELEVATION TABLES

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

JEFFERSON COUNTY
JEF 7-13.53

26
307

For Stations 681+50 to 689+75
See Table No 1

(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 | 748.36 |
| 691+00 | 747.80 | 748.19 | 748.58 |
| 691+07.23 | 747.84 | 748.23 | 748.58 |
| EQUATION | Sta. 691+07.23 Back = Sta. 691+07.89 Ahead | | |
| 691+07.89 | 747.84 | 748.23 | 748.58 |
| +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 | 749.05 |
| 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 | 751.90 | 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 | 756.55 | 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 | 763.69 | 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 | 765.13 | 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 | 781.16 | 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 | 779.62 | 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 | 769.06 | 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 | 764.56 | 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 | 763.76 | 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 | 764.86 | 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 | 771.62 | 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 | 757.89 | 758.19 |
| 757+00 | 757.14 | 757.57 | 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 | 757.76 | 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 | 756.91 |
| 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 | 756.30 | 756.49 | 757.60 |
| +25 | 755.27 | 756.36 | 757.45 |
| +50 | 755.24 | 756.24 | 757.26 |
| +75 | 755.20 | 756.11 | 757.02 |
| 769+00 | 755.17 | 755.99 | 756.81 |
| +25 | 756.14 | 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+00.24 | 755.11 | 755.25 | 755.39 |
| EQUATION | Sta. 770+00.24 Back = Sta. 770+00.96 Ahead | | |
| 770+00.96 | 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 | 744.46 | 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. RD. DIVISION | STATE | FR. | |
|---|---|---|---|
| 2 | OHIO | U 430(14) | |

27
307

JEFFERSON COUNTY
JEF-7-13.53

Seeding
End Width Spread

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |

90 681+55.42 Ahead

Ahead Sta 681+55.42 300 0

727.01
681+32.24
716.76

STRUCTURE

710

725.94
681+02.24
712.00

STRUCTURE

710

725.58
680+92
707.78

710

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

2 OHIO U 450 (13)
28
307
JEFFERSON COUNTY
JEF-7-13.53
Seeding
End Area Volume
Cut Fill Cut Fill
12' Lt Sta 85-06 MURDOCK
Std No 2-6 Inlet
℄ Window 739.53
12 Rt Sta 84+80 MURDOCK
Std No 2-6 Inlet
℄ Window 740.07
60' Lt Sta 684+25
Std No 1 M.H.
M.H. Cover El 734.00
736.67
684+25
730
Sta 684+02.24
735.93
684+02.24
726.0
720
Sta 683+02
732.86
683+02
718.8
Sta 682+42
730.87
682+42
716.00
70' Lt Sta 682+00
Std No 1 MH
M.H. Cover El 725.90
60' 12" 1:2 @ 8.84%
62' Lt Sta 682+00
Std No 2-2A C.B.
℄ Window 722.70
Sta 682+05
Std No 2-14 Inlet in Median
℄ Window 729.50
729.58
682+05
Sta 681+85.42
2:1
4:1

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

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307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding

See Sheet N° 189
33' Lt Sta Sta 687+28 Mardock
Std N° 2-16 Inlet (Mod)
fl. window 752.27

fl. 748.69
28'x15" I-2 @ 9.75%

12' Lt Sta 687+50 Mardock
Std. 2-20 Inlet
fl. window 753.00

fl. 751.42

Union St.

3:1

30'x15" I-2 @ 1.96%

fl. 748.10

33' Lt Sta 686+97 Mardock
Std N° 2-12 Inlet (Mod)
fl. window 752.54
See Sheet N° 189

92'x15" I-2 @ 15.40%

743.09
687+00
737.46

3:1

736.86

2:1

Sta. 687+00 — End Area Cut 65, Fill 990 — Volume Cut, Fill

7.30

41' Lt Sta 686+75
Std N° 1 M.H. -
M.H. Cover Elev. 740.00

fl. 733.92

fl. 733.17

Sta. 686+09 — End Area Cut 40, Fill 1,918 — Volume Cut 134, Fill 4,578

4:1

736.4

76' Ft. Sta 685+89
Std. 2-2-B C.B.
fl. Grate 735.75

146'x15" I-2 @ 1.88%

fl. 15" I-2 @ C.B. 732.75

730

741.00
686+00
736.89

12' Ft. Sta 685+60 Mardock
Std N° 2-10 Inlet
fl. window 742.18

fl. 730.60

24'x 12" I-2 @ 25.6%

fl. 732.20

fl. 732.45

6'x15" I-2 @ 36.7%

28' Lt Sta 685+29
Std. 2-2-A C.B.
fl. window 735.2

15" I-2

54' Lt Sta 685+20
Std. N° 1 M.H.
M.H. Cover Elev. 736.85

fl. 730.00

fl. 727.35
Outlet

fl. 727.85

2:1

790

720

150 160 170 180 190

Sta. 685+00 — End Area Cut 610, Fill 1,135 — Volume Cut 2,800, Fill 5,200

58'x15" I-2
fl. 734.93

Sta. 685+00 Ft. Lane
Std. N° 2-14 Inlet
fl. window 732.51
See Sheet 189

2:1 Normal to Edge of Pavement

730

739.59
685+00
732.93

760

2:1

2,000 190 180 170 160 150

Sta. 684+02.24 — End Area Cut 769, Fill 1,468 — Volume Cut, Fill

Sta. 684+02.24

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 70 80 90 100 110 120 130 140 150

STA. 685+00 to STA. 687+00

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

30
307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding
End Areas Sq. Ft.

| End Areas Cut | End Areas Fill | Volume Cut | Volume Fill |
|---|---|---|---|
| | | 750 | |
| | | Sta. 689+35 | 1095 2 |
| | | | 2445 [illegible] |
| | | 750 | |
| | | Sta. 688+53.74 | 630 40 |
| | | | [illegible] |
| | | 750 | |
| | | Sta. 687+79 | 550 275 |
| | | | [illegible] |
| | | Sta. 687+00 | 65 990 |

746.72
689+35
745.9

745.66
688+53.74
747.2

744.51
687+79
745.4

Sta. 687+00

STA. 687+79 to STA. 689+35

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

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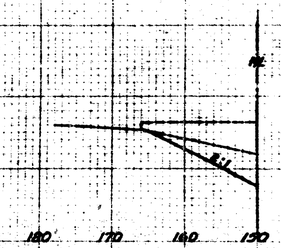
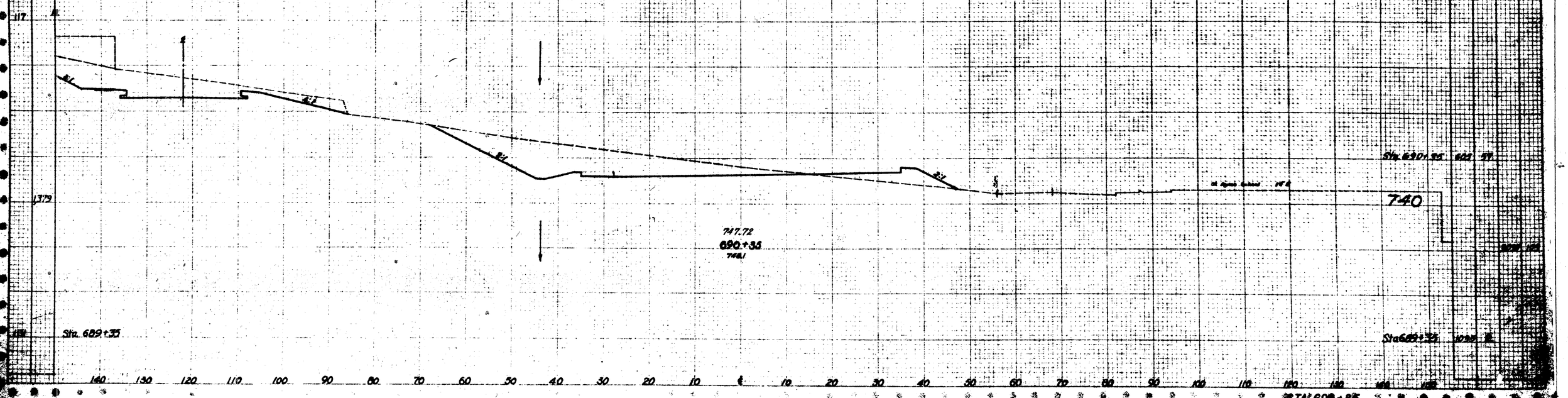
JEFFERSON COUNTY
JEF.-7-13.53

| Seeding | |
|---|---|
| End Area | Sq. Yds. |

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |



| FED. NO. ●VIS.ON | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U 430 (8) | |

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JEFFERSON COUNTY
JEF.-7-13.53

Seeding and Width Sta Rt.

115

701

81

532

116

921

117

Sta 690+35

Rt. 762.00
55' Lt. Sta 692+10
Std. C-2-A C.B.
Rt. Window 756.72

104'x18" I-2 @ 19.00 %

2:1

Rt. 742.62

Rt. 742.12
50' Lt. Sta 692+10
Std. No 1 M.H.
M.H. Cover Elev 749.12

46'x26" I-2 @ 0.50 %

Rt. 742.35

748.71
692+20
753.7

32'x12" I-2 @ 2.65 %

Rt. 743.35
Sta. 692+10 on ℄
Std. No 1 M.H.
M.H. Cover Elev 749.18

Rt. 744.20
34.5' Rt. Sta 692+04
Std. No 3 C.B.
Rt. Grate 747.80

748.48
691+55
750.1

748.23
691+06.41
752.0

| | End Areas | | Volume | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| Sta. 692+20 | 786 | 385 | | |
| 750 | | | | |
| | | | (888) | 536 |
| Sta. 691+55 | 920 | 662 | | |
| 750 | | | | |
| Sta. 691+06.41 | 660 | 39 | | |
| 750 | | | | |
| Sta. 690+35 | 682 | 38 | | |

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

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

33
307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding
End Area Volume
Cut Fill Cut Fill

Sta. 692+70 1010 340

750

644 159

748.56
692+70
764.20

Sta. 692+60 610 116

750

762.3
692+60
762.0

Sta. 692+57 [illegible] 110

750

762.28
692+57
753.3

Sta. 692+20

Sta. 692+00

| FED. RD. DIVISION | STATE | PID | | 34 / 307 |
|---|---|---|---|---|
| 2 | OHIO | U 430(14) | | |

JEFFERSON COUNTY
JEF.-7-13.53

| | End Area | | Volume | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| Sta 693+65 | 1550 | 0 | | |
| | | | 1200 | 0 |
| Sta 693+44 | 1550 | 0 | | |
| | | | 1402 | 11 |
| Sta 693+20 | 1249 | 25 | | |
| | | | 2475 | 536 |
| Sta 692+70 | 1249 | 340 | | |

749.14
693+65
769.80

749.08
693+44
769.56

749.01
693+20
770.10

ST. CLAIR STRUCTURE

STA 693+20 TO STA 692+25

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

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307

JEFFERSON COUNTY
JEF-7-13.53

Seeding
End Areas Volumes
Cut Fill Cut Fill

| Sta. 694+28 | 3575 | 0 | | |
|---|---|---|---|---|
| | | | 6845 | 0 |
| Sta. 693+70 | 2025 | 0 | | |
| | | | 3531 | 0 |
| Sta. 693+65 | 1480 | 0 | | |

749.33
694+28
775.8

749.16
693+70
775.1

760

760

150

665

25

25

Sta. 693+65

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130

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

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JEFFERSON COUNTY
JEF-7-13.53

| Station | End Area Cut | End Area Fill | Volume Cut | Volume Fill |
|---|---|---|---|---|
| Sta 694+83 | 3085 | 0 | | |
| | | | 3567 | 0 |
| Sta 694+37 | 3539 | 0 | | |
| | | | 1175 | 0 |
| Sta 694+28 | 3575 | 0 | | |

STA. 694+37 TO STA. 694+83

| FED RD DIVISION | STATE | PROJECT | |
|---|---|---|---|
| 42 | OHIO | U 430 (14) | |

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307

JEFFERSON COUNTY
JEF-7-1353

| End Areas | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| Sta 695+47 | 3155 | 0 | |
| | | 760 | |
| Sta 694+90 | 3013 | 0 | |
| | | 760 | |
| Sta 694+83 | 3015 | 0 | |

749.69
695+47
768.1

749.52
694+90
768.6

STA 694+90 TO STA 695+47

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

JEFFERSON COUNTY
JEF-7-1353

| End Areas | | Volumes | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |
| Sta 695+93 | 3920 | 0 | |
| | | 7260 | |
| | | | 4920 |
| Sta 695+47 | 3858 | 0 | |

Seeding
Sta 695+47

For Transition of
Type A Curb to Std C.B.
See Sheet No 189

E 746.50

39'Lt Sta 696+00
Std N° 6 CB
E Grate 749.79

3'x12" @ 0.88%

749.23
E 746.20
E 746.20
695+93
746.7

Sta 696+00 ℄
Std N° 2-C Inlet (Mod)
E Window 749.77
See Sheet N° 189

749.72
695+56
746.18

Sta 695+56 RO

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

39
397

JEFFERSON COUNTY
JEF-7-13.53

Seeding and Mulch, Sta. 16+

| | End Areas | | Volume | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| Sta 695+15 | 2815 | 0 | | |
| | | | 760 | |
| | 3837 | 0 | | |
| Sta 696+12 | 2830 | 0 | | |
| | 2296 | 0 | | |
| | | | 760 | |
| Sta 697+93 | 9280 | 0 | | |

749.89
696+18
763.11

749.88
696+12
764.3

180
165
121
Sta 695+93
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130

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

40
307

JEFFERSON COUNTY
JEF-7-1353

Seeding and Mulch Sec 659

| | End Area | | Volume | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| Sta. 696+66 | 2440 | 0 | | |
| | | 760 | | |
| | | | 1395 | 0 |
| Sta. 696+52 | 2610 | 0 | | |
| | | 760 | | |
| | | | 1350 | 0 |
| Sta. 696+15 | 2875 | 0 | | |

105
119
112
126
130

Sta. 696+15

750.00
696+52
762.7

750.05
69666
762.5

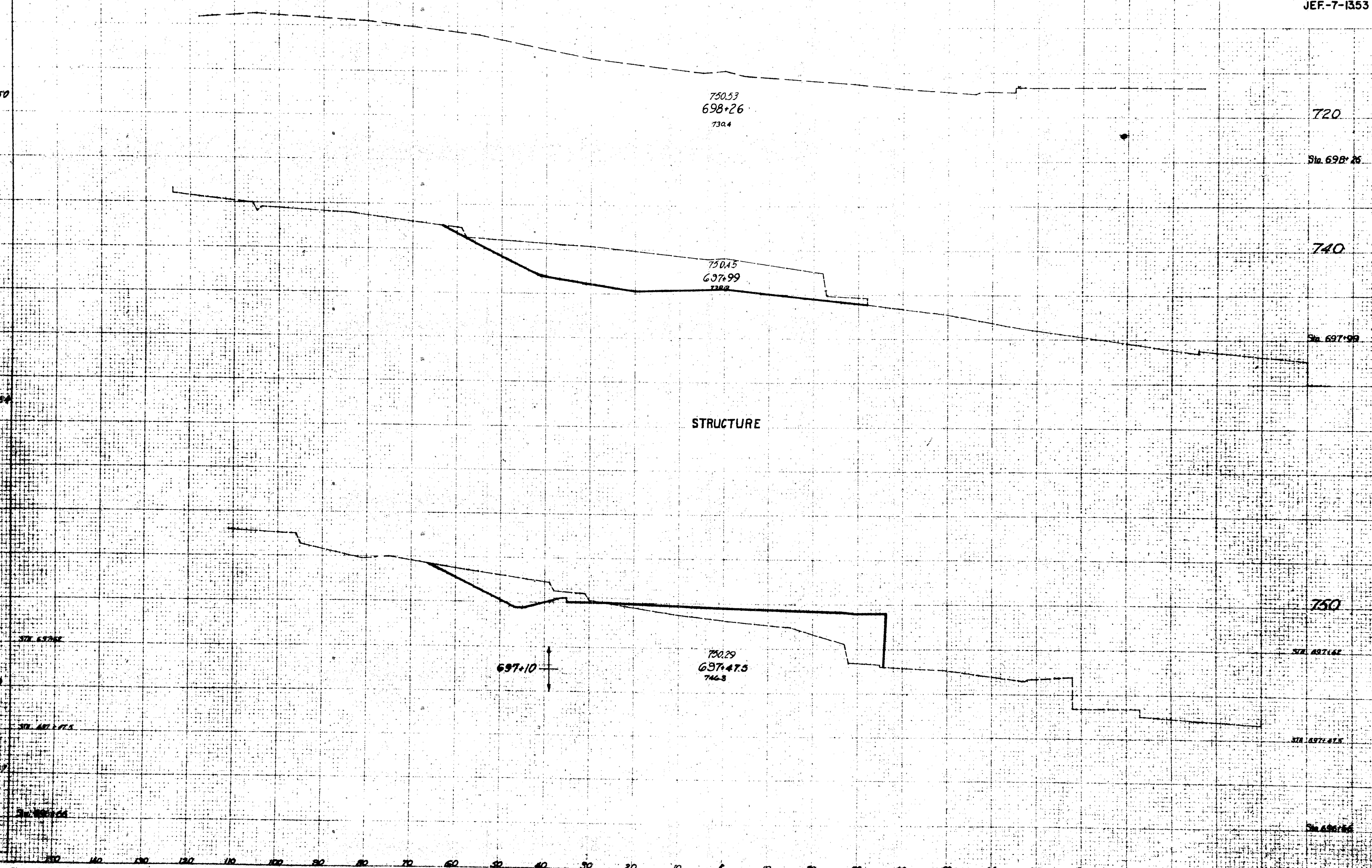
160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

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

41/307

## JEFFERSON COUNTY
## JEF.-7-1353

| Seeding | |
|---|---|
| End Width | Sq. Yd. |




| 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 | | |

| FED. HWY. DIVISION | STATE | PROJECT | |
|---|---|---|---|
| 12 | OHIO | U 430(14) | |

42
307

JEFFERSON COUNTY
JEF-7-13.53

Seeding
End Width Sq Yds

End Areas Volume
Cut Fill Cut Fill

Sta. 699+66 590 0

760

End Paved Ditch
42' Lt Sta. 699+50

750.96
699+66
756.5

End Paved Ditch
42' Rt Sta. 699+62

705 1525

36"x12" @ 4.0%
Class B S.S.
Under Pint or Apx

Lt. Side Slope
4:1 depth

Rt. 744.60

Rt. 735.02

8'x12' RM-4 Box

Dumped Rock
30" thickness

740

750.79
699+00
738.0

Sta. 699+10
Std. 2'-10 Inlet
Lt. Window 750.70
Lt. 12" 1:20 Inlet 747.12

67' Rt Sta. 699+10
Std. PC-4 Endwall
Rt. 12" 1:2 735.00
1'-10 Dumped Rock Channel Protection 3 CY

Begin Paved Ditch
Lt Sta. 698+80

STRUCTURE

Sta. 698+50

740

750.60
698+50
728.6

Begin Paved Ditch
Rt Sta. 698+50

5 234

Sta. 698+28

0 0

45
41.5
39.5
37.5
36.0
34.5
32.5
30.5
0

Sta. 699+66
Sta. 699+02
Sta. 698+82
Sta. 698+50
Sta. 698+28

52 1240
22 528
52 1248
21 504
2 48

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

49
305

JEFFERSON COUNTY
JEF.-7-13.53

| | End Area | | Volume | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| Sta. 700+50 | 1660 | 0 | | |
| 770 | | | | |

737.59
700+50
772.51

751.29
700+19
772.0

770

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

44/307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding

| End Areas | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |
| Sta 701+33 | 1510 | 0 | |
| | | 760 | |
| 752.75 | | | |
| 701+33 | | | |
| 782.4 | | | |
| | | 754 | 0 |
| | | 770 | |
| Sta 701+22 | 2190 | 0 | |
| 752.56 | | | |
| 701+22 | | | |
| 772.8 | | | |
| | | 1655 | 0 |
| Sta 700+50 | 1440 | 0 | |

Sta 700+50

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

45/307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding
End Width | Sq Yd

| | End Area | | Volume | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| Sta 702+54 | 0 | 975 | | |
| 710 | | | | 0 1027 |
| Sta 702+17.75 | 0 | 555 | | |
| 730 | | | | 2371 871 |
| Sta 701+33 | 1510 | 0 | | |

125
113
80
65
57

702+54
702+17.75

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. 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

| FED. RD. DIVISION | STATE | PROJECT | | 47/307 |
|---|---|---|---|---|
| 2 | OHIO | U 430(14) | | |

JEFFERSON COUNTY

JEF-7-13.53

## ESTIMATED QUANTITIES

| | | | |
|---|---|---|---|
| I12 | 12" Storm Sewers: Under Pavement App. Sec. M6.5(b) or Sec. M6.2(b) | 100 | L.F. |
| I12 | 12" Storm Sewers: Sec. M6.4(i) | 60 | L.F. |
| I15 | Pipe Specials: 12" x 30° Bend Sec. M6.4(e) | 2 | Each |
| I16 | Std. No. 6 C.B. | 1 | Each |
| I16 | Std. No. 2-20 Inlet | 1 | Each |
| H10 | Dumped Rock Channel Protection | [illegible] | C.Y. |
| L10 | Sodding | 1 | Sq.Y. |
| S11 | Conc. for Struct. Class C | .023 | C.Y. |
| E2 | Excavation for Struct. | 1 | C.Y. |

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

48
907

JEFFERSON COUNTY
JEF.-7-13.53

Spacing
End Areas Spacing

| End Area Cut | End Area Fill | Volume Cut | Volume Fill |
|---|---|---|---|
| 960 | 1040 | | |

Sta. 706+31
C - 5
F - 1040
Incl. from Next Sheet

Sta. 706+31
63' Incl. from Next Sheet

2:1

7880

767.72
706+31

Sta. 705+31
45' Incl. from Next Sheet

Sta. 705+31
C - 15
F - 785
Incl. from Next Sheet

805 785

2:1

764.38
705+31

Sta. 705+00

Sta. 705+00 770 458

240 220 200 180 160 140 120 100 80 60 40 20

Lt. Side - STA. 785+91 to STA. 706+31

| SEEDING | |
|---|---|
| END BNDTH | SQ YDS |

| SEC. NO. | STATE | PROJECT | SHEET |
|---|---|---|---|
| 2 | OHIO | U 430 (14) | |

49
307

JEFFERSON COUNTY
JEF.-7-13.53

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |

Sta. 706+31
63' Incl. on Previous Sheet

2:1

767.72
706+31
768.9

Sta. 706+31
C - 5
F - 1040
Incl. on Previous Sheet

Sta. 705+31
69' Incl. on Previous Sheet

2:1

764.38
705+31
767.8

Sta. 705+31
C - 15
F - 785
Incl. on Previous Sheet

7120
7110
7100

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

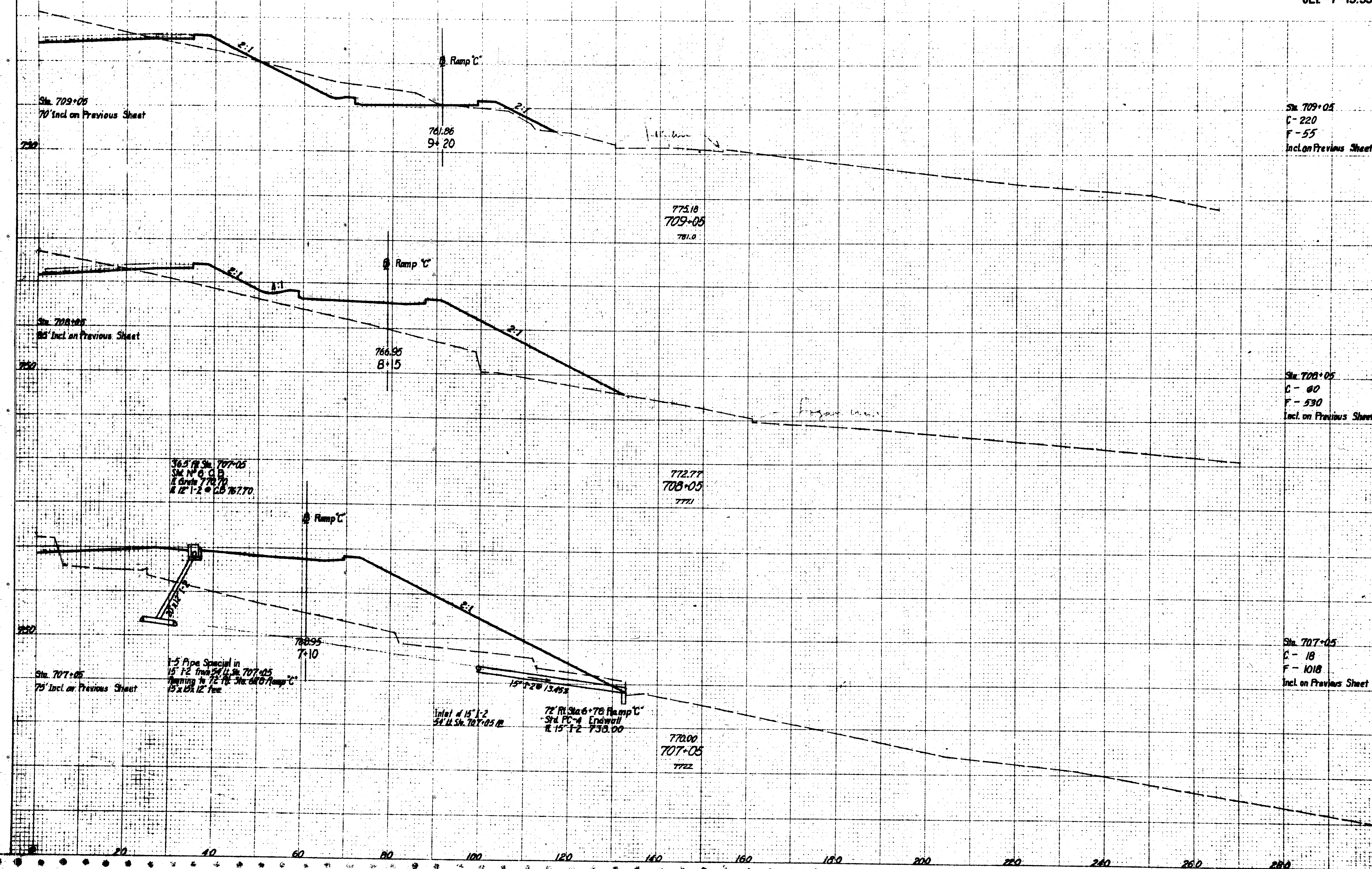
Rt. Side STA. 705+31 to STA. 706+31

2
OHIO
U 430(14)
50
307
JEFFERSON COUNTY
JEF-7-13.53
End Area
Volume
Cut
Fill
Cut
Fill
Sta. 709+05
C - 220
F - 55
Incl. from Next Sheet
800
2480
55
Sta. 708+05
C - 60
F - 530
Incl. from Next Sheet
Sta. 707+05
C - 18
F - 1018
Incl. from Next Sheet
Sta. 709+05
70' Incl. from Next Sheet
Sta. 708+05
65' Incl. from Next Sheet
Sta. 707+05
75' Incl. from Next Sheet
Sta. 706+31
2:1
775.18
709+05
772.77
708+05
770.00
707+05
Sta. 707+05
Sta. 706+87
Section A-A
Detail of Transition at End of Retaining Wall Lt. of ℄
54' Lt. Sta. 707+05
Std. 2-2-A C.B.
Fl. window 765.75
Fl. 15" I-2 @ C.B. 762.75
180' x 15" I-2 @ 13.45%
Outlet of 15" I-2
72' Rt. Sta. 6+78 Ramp "C"
Sta. 706+31
280
260
240
220
200
180
160
140
120
100
80
60
40
20
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

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |

Rt. Side 707+05 to Sta. 709+05

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

52/307

JEFFERSON COUNTY
JEF.-7-13.53

| | | | |
|---|---|---|---|
| 2 | OHIO | U 430 (14) | |

53
307

JEFFERSON COUNTY
JEF-7-13.53

SEEDING

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |

Ramp "C"

Sta. 711+45
79' Incl. on Previous Sheet

750

747.28
11+63

779.53
711+45
7864

Sta. 711+45
C - 1068
F - 101
Incl. on Previous Sheet

Sta. 710+45
43' Incl. on Previous Sheet

750

753.28
10+63

777.96
710+45
786

Sta. 710+45
C - 638
F - 22
Incl. on Previous Sheet

Sta. 709+81
32' Incl. on Previous Sheet

750

757.10
9+98

776.77
709+81
7849

Sta. 709+81
C - 415
F - 45
Incl. on Previous Sheet

23.5' Lt. Sta. 9+82.5
Special C.B. In Retaining Wall
For Details See Retaining Wall Plans.
R. 12"I.E @ C.B. 755.90
12"I.E outlets in C.B. 22.5' Lt. Sta 9+67

40'x12"I.E@0.5%

Sta. 709+61 on ℄
Std. No. 2-14 Inlet
R. window 776.29
R. 12"I.E 771.12

R. 771.00

24'x12"I.E
Spec. (9-6.4(a))

22.5' Lt. Sta 9+67 Ramp "C"
Std. 2-2.8 C.B.
R. Grate 759.70
R. 12"I.E's @ C.B. 755.20

23' Rt. Sta 9+67 Ramp "C"
Std. PC-4 Endwall
R. 18"I.E @ Endwall 755.00

44'x12"I.E@0.46%

2'x12"I.E (9-6.4(a))

760

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

Rt. Side STA. 709+81 to STA. 771+45

| SHT. NO. | STATE | PROJECT | SHEET NO. |
|---|---|---|---|
| 2 | OHIO | U 430(14) | 54 307 |

JEFFERSON COUNTY
JEF.-7-13.53

| Seeding | |
|---|---|
| Grad Elevation | Sq. Yd. |
| 66 | |
| 110 | |
| 106 | |
| 140 | |
| 221 | |
| 245 | |

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

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

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

Sta. 711+45

1½:1 1:1 1½:1 1:1 1½:1 1:1 4:1 4:1 3:1

Lagoon Area

| | End Area | | Volume | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| Sta. 713+81<br>C-0 F-0<br>Incl. from Next Sheet | 3980 | 0 | | |
| 800 | | | | |
| 713.82<br>713+81<br>777.6 | | | 14,592 | 300 |
| Sta. 712+91<br>C-0 F-180<br>Incl. from Next Sheet | 4895 | 180 | | |
| 800 | | | | |
| 711.17<br>712+91<br>781.7 | | | 9292 | 458 |
| Sta. 712+35<br>C-1130<br>F-262<br>Incl. from Next Sheet | 4539 | 262 | | |
| 800 | | | | |
| 750.63<br>712+35<br>773.0 | | | 4171 | 606 |
| Sta. 711+45 | 5973 | 101 | | |

Lt. Side STA. 712+85 to STA. 713+81

| SEEDING | |
|---|---|
| SQ. YDS. | SQ. YDS. |

| FED. ROAD DIST. NO. | STATE | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| 2 | OHIO | U 430 (14) | |

55
307

JEFFERSON COUNTY
JEF.-7-13.53

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |

Sta. 713+81
0' Incl on Previous Sheet

Logan Ave.

78182
713+81
778.6

Sta. 712+91
10' Incl on Previous Sheet

79117
712+91
781.7

Sta. 712+35
84' Incl on Previous Sheet

2:1

2:1

Logan Ave.

76263
712+35
776.3

750

Sta. 713+81
C-0 F-0
Incl on Previous Sheet

Sta. 712+91
C-0 F-180
Incl on Previous Sheet

750

760

Sta. 712+53
C-1130
F-262
Incl on Previous Sheet

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

Rt Side

STA. 712+35 to STA. 713+81

| FED. AID DIVISION | STATE | PROJECT | |
|---|---|---|---|
| e2 | OHIO | U 430(14) | |

56
307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding

Sta. 714+88.02
152' Incl. from Next Sheet

Logan Ave.

Sta. 714+88.02
C - 0
F - 4546
Incl. from Next Sheet

2:1

782.21
714+88.02

Sta. 714+10.5
107' Incl. from Next Sheet

Logan Ave.

Sta. 714+48.6
C - 0
F - 2497
Incl. from Next Sheet

From 2-2-8 C.B.
98 Lt. Sta. 28+60 Logan Ave.

2-2-8 C.B. 31' Lt. Sta. 29+57 Logan Ave.
E Grate 766.79
E Lt. 12" C.B. 763.25
E Rt. 12" C.B. 763.00

782.09
714+10.5

Sta. 713+81

| | End Area | | Volume | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| 202 | | | | |
| | | | 435 | 5806 |
| 150 | | | | |
| | | | 1210 | 7355 |
| 100 | | | | |
| | | | 940 | 2552 |
| 50 | | | | |
| | | | 2421 | 2618 |
| 0 | | | | |

Lt. Side — Sta. 714+48.6 to Sta. 714+88.02

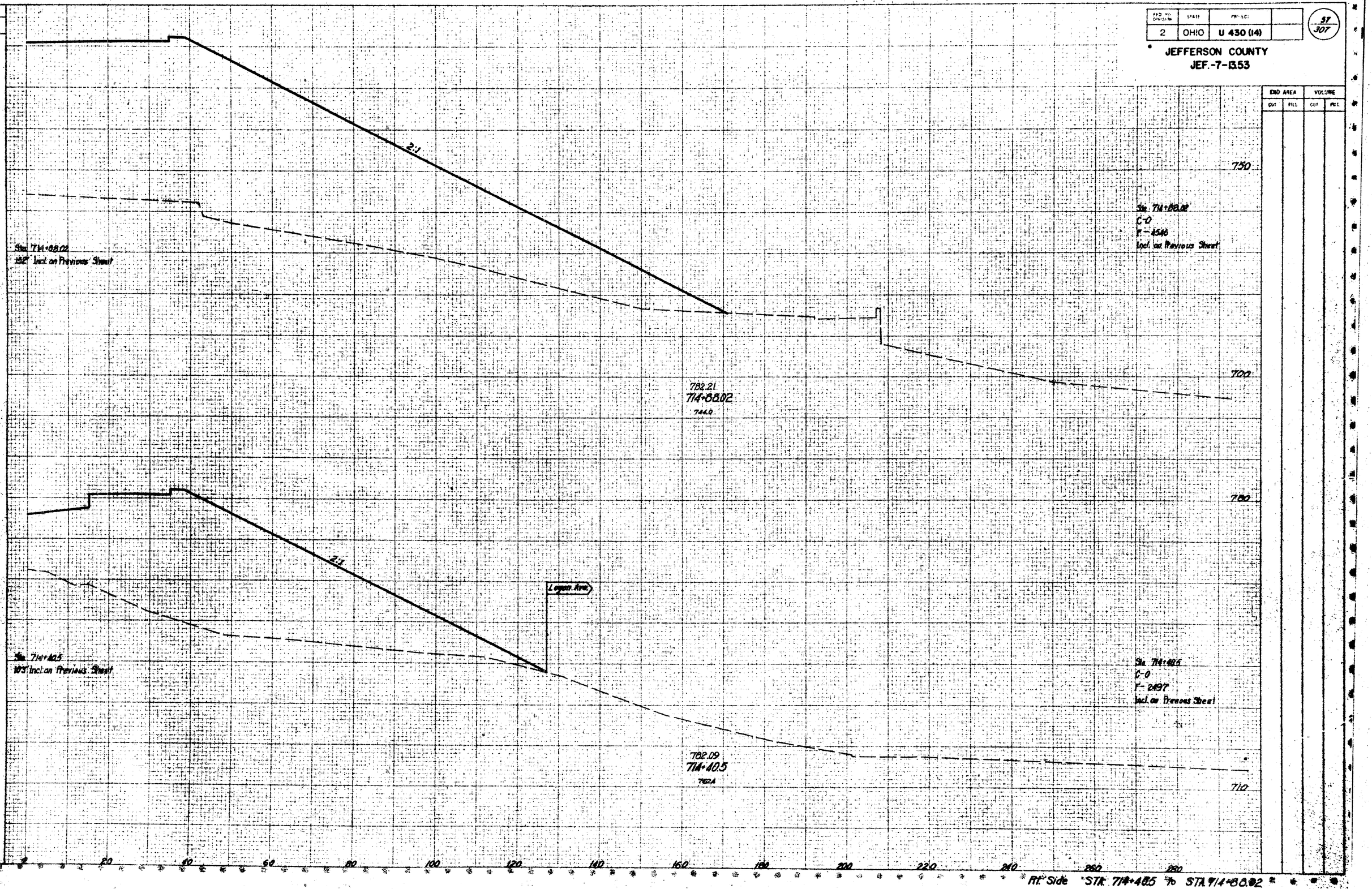
| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |

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

57/307

JEFFERSON COUNTY
JEF.-7-13.53

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |



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

58/307

JEFFERSON COUNTY
JEF-7-13.53

Seeding

Logan Ave

Sta. 715+48.02
160 Incl. from Next Sheet

Sta. 715+18.02
160 Incl. from Next Sheet

Sta. 714+88.02

2:1

Sta. 715+48.02
C - 0
F - 6270
Incl. from Next Sheet

Sta. 715+18.02
C - 0
F - 5430
Incl. from Next Sheet

| | End Areas | | Volume | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| 790 | | | | |
| Sta. 715+48.02 | 0 | 10,060 | | |
| | | | | 0 |
| 730 | | | | |
| 782.25 | | | | |
| 715+48.02 | | | | |
| 734.6 | | | | |
| Sta. 715+18.02 | 0 | 9,920 | | |
| 000 | | | | |
| | | | | 242 |
| 730 | | | | |
| Sta. 714+88.02 | 435 | 5,806 | | |
| 730 | | | | |
| 782.25 | | | | |
| 715+18.02 | | | | |
| 741.3 | | | | |

220 232 218 202 167

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0

Lt. Side

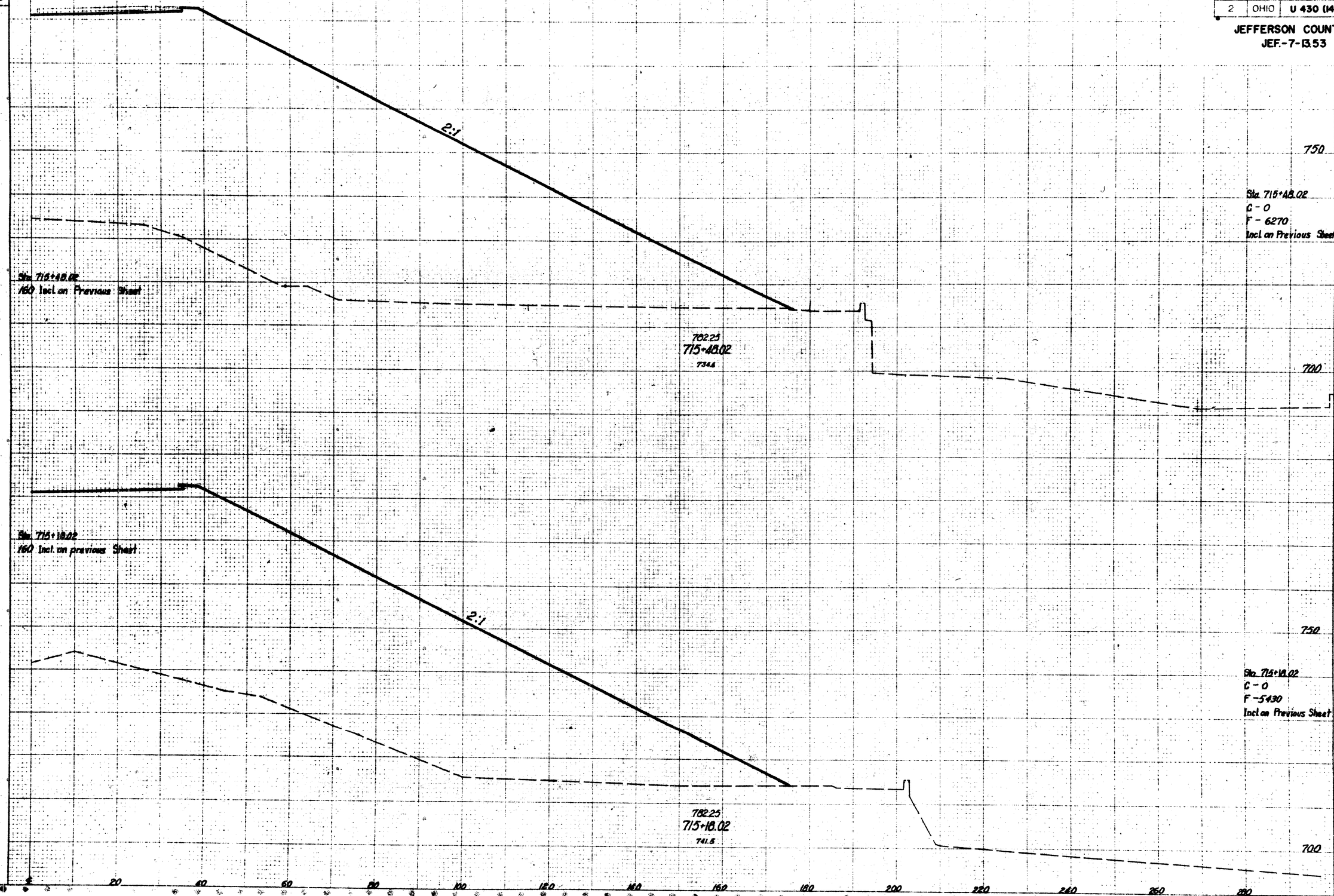
| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |

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

59
307

JEFFERSON COUNTY
JEF.-7-13.53

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |




Fit 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

Seeding and Mulching, Sq. Yd.

24' Rt. Sta 17+72.5 . Ramp "B"
Std. N° 6 C.B.
Rt. Grate 778.84
Rt. 12" T-2 ● C.B. 775.84
Outlet @ 2-2-B C.B.
31 Lt. Sta 2+37 Logan Ave.

| | End Areas | | Volume | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| 717+58 | | | | |
| | 820 | | | |
| Sta. 716+68.02 | 1140 | 2918 | | |
| C - 0 | | | | |
| F - 2750 | | | | |
| Incl. from Next Sheet | | | | |
| | 780 | | 4473 | 10336 |
| 781.96 | | | | |
| 716+68.02 | | | | |
| 773.8 | | | | |
| | 800 | | | |
| Sta. 716+18 | 459 | 6280 | | |
| C - 0 | | | | |
| F - 4970 | | | | |
| Incl. from Next Sheet | | | | |
| | | | 505 | 21180 |
| Sta. 715+68.02 | 0 | 10260 | | |
| | 750 | | | |
| 782.14 | | | | |
| 716+18 | | | | |
| 733.4 | | | | |

Sta. 716+68.02
145 Incl. from Next Sheet

Sta. 716+18
165' Incl. from Next Sheet

Sta. 715+68.02

2:1

4:1

2:1

2%

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0

Lt Side STA. 716+18 to STA. 716+68.02

| | | | |
|---|---|---|---|
| 2 | OHIO | U 430 (14) | |

61
307

JEFFERSON COUNTY
JEF.-7-13.53

LAND WIDTH | SQ YDS

CUM AREA
CU | YDS

2:1

Sta. 716+68.02
145 Incl. on Previous Sheet

791.96
716+68.02
773.8

Sta. 716+18
165 Incl. on Previous Sheet

2:1

Sta. 716+68.02
C - 0
F - 2750
Incl on Previous Sheet

Sta. 716+18
C - 0
F - 4970
Incl on Previous Sheet

702.14
716+18
735.4

750
710
730
700

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

| | | | |
|---|---|---|---|
| 2 | OHIO | U 430(14) | |

62
307

JEFFERSON COUNTY
JEF.-7-13.53

Sta. 719+00
115 Incl. from Next Sheet

Sta. 718+00
135 Incl. from Next Sheet

Sta. 716+68.02

2:1

2:1

Sta. 719+00
C-115
F-1065
Incl. from Next Sheet

Sta. 718+00
C-25
F-1528
Incl. from Next Sheet

Sta. 716+68.02

| Sta. | End Area Cut | End Area Fill | Volume Cut | Volume Fill |
|---|---|---|---|---|
| 719+00 | 4470 | 1065 | | |
| | | | 15,500 | 4802 |
| 718+00 | 3900 | 1528 | | |
| | | | 12,320 | 10,660 |
| 716+68.02 | 1140 | 2918 | | |

Bending
End Area Sq. yd.

2.58
2.89
2.94
2.39
2.14

771.995
719+00
7852

761.05
718+00
7849

850
800
840
800
800

300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 0

Lt. Side — STA. 718+00 to STA 719+00

| SEEDING | |
|---|---|
| ENG WIDTH | SQ YDS |

| | | | |
|---|---|---|---|
| 2 | OHIO | U 430 (14) | 63 307 |

JEFFERSON COUNTY
JEF.-7-13.53

Sta. 719+00
145' Incl. on Previous Sheet

2:1

779.95
719+00
7052

Sta. 719+00
C - 115
F - 1065
Incl. on Previous Sheet

Sta. 718+00
193' Incl on Previous Sheet

2:1

781.05
718+00
7049

Sta. 718+00
C - 25
F - 1528
Incl on Previous Sheet

780
700
750
710

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

U 430(14)

JEFFERSON COUNTY
JEF.-7-13.53

Seeding
End Area
Acres

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |
| 5105 | 745 | | |
| | | 8588 | 1246 |
| 4170 | 600 | | |
| | | 8000 | 1592 |
| 4470 | 1065 | | |

189 Sta. 720+00
77' Incl. from Next Sheet

112

147 Sta. 719+50
63' Incl. from Next Sheet

125

258 Sta. 719+00

2:1

2:1

Sta. 720+00
C - 206
F - 745
Incl. from Next Sheet

850

800

778.50
720+00
794.47

Sta. 719+50
C = 0
F = 600
Incl. from Next Sheet

800

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 WIDTH | 10 YDS |

| | | | |
|---|---|---|---|
| • 2 | 0-10 | U 430 (14) | |

65/307

JEFFERSON COUNTY
JEF.-7-13.53

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |

Sta. 720+00
77 Incl. on Previous Sheet

2:1

750

778.50
720+00
754.47

Sta. 720+00
C - 206
F - 745
Incl. on Previous Sheet

2:1

Sta. 719+50
63 Incl. on Previous Sheet

750

779.27
719+50
776.3

Sta. 719+50
C - 0
F - 600
Incl. on Previous Sheet

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

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

66
307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding
End Width Sq yd

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |

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

Sta. 721+00 4365 0
C - 7.95
F - 0
Incl. from Next Sheet

160

2:1

22.00 1380

850

Sta. 720+00 5185 745

189 Sta. 720+00

776.69
721+00
805.73

290 280 270 260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄

STA. 721+00 Lt. Side

| SEEING | |
|---|---|
| END WIDTH | 50 YDS |

| | | | |
|---|---|---|---|
| | | | |
| 2 | OHIO | U 430 (14) | |

67
307

JEFFERSON COUNTY
JEF.-7-13.53

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |

7212

Sta 721+00
20' Incl on Previous Sheet

Sta 721+00
C - 795
F - 0
Incl on Previous Sheet

7222

7232

776.69
721+00
805.79

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

STA. 721+00 Rt Side

JEFFERSON COUNTY

JEF-7-1353

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

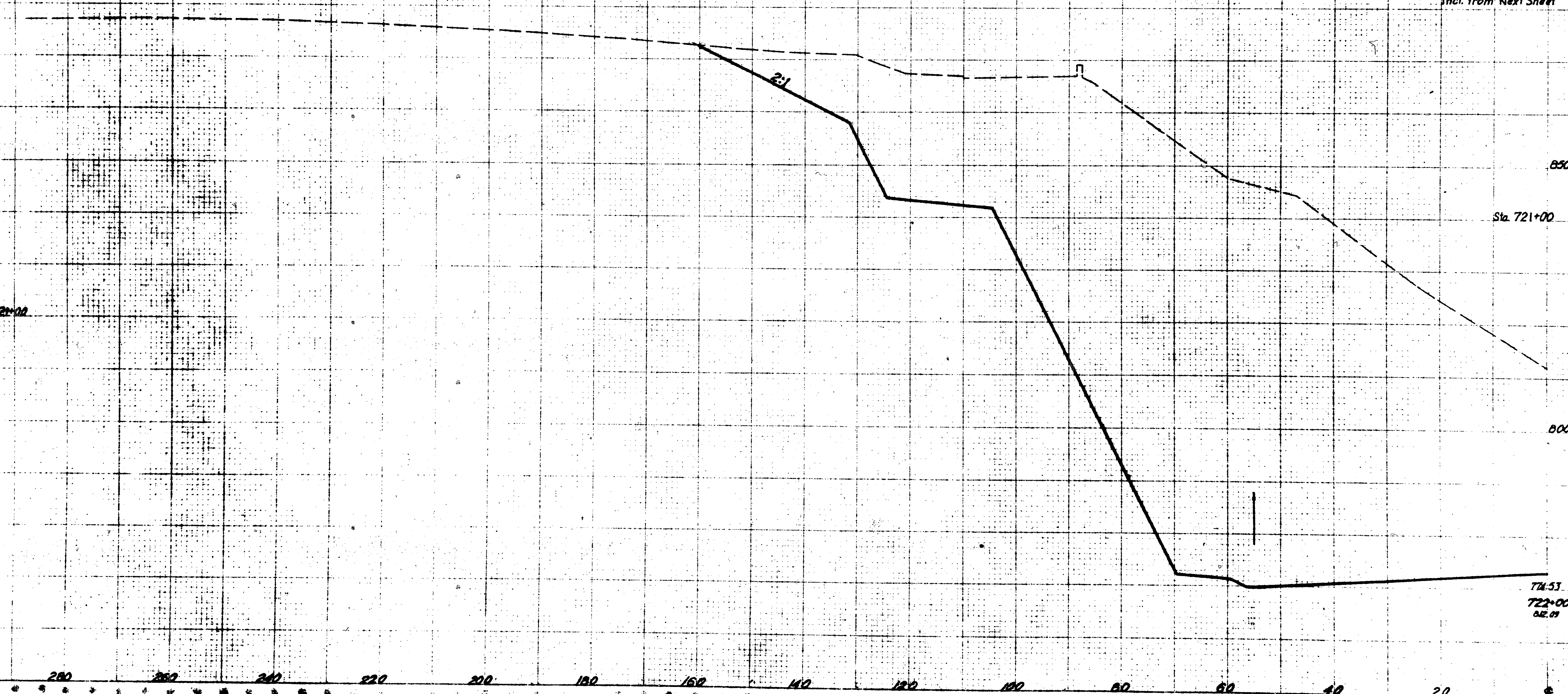
Sta. 722+00
Bf Incl. from Next Sheet

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

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |

| | | | | |
|---|---|---|---|---|
| | | | | |
| 2 | OHIO | U-430(14) | | |

69
307

JEFFERSON COUNTY
JEF-7-13.53

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |

820

750

Sta. 722+00
24' Incl. on Previous Sheet

Sta. 722+00
C - 1010
F - 0
Incl. on Previous Sheet

77A53
722+00
81209

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

STA. 722+00 RT. SHT.

U-430(14)

70
307

JEFFERSON COUNTY
JEF.-7-1353

| Seeding | |
|---|---|
| End Width | Sq.yd |
| 182 | |
| 87 | |
| 71 | |

Sta. 723+00.
10' Incl. from Next Sheet

Sta. 722+00.

2:1

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |
| 9125 | 0 | | |
| 900 | | | |
| 850 | | 3,150 | 0 |
| 800 | | | |
| 9225 | 0 | | |

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

Sta. 722+00

77203
723+00
814.16

280 260 240 220 200 180 160 140 120 100 80 60 40 20

STA. 728+60 Lt Side

| SEEDING | |
|---|---|
| END AREA | VOLUME |

| | | | |
|---|---|---|---|
| • 2 | OHIO | U-430(14) | |

71
307

JEFFERSON COUNTY
JEF.-7-13.53

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |

Sta. 723+00
10' Incl. on Previous Sheet

750

Sta. 723+00
C - 1145
F = 0
Incl. on Previous Sheet

670

772.03
723+00
814.16

20 40 60 80 100 120 140 160 180 200 220 240 260 280

STA. 723+00 Rt. Side

| Sheet No. | | Project No. | |
|---|---|---|---|
| 2 | Of 3 | U-430(14) | 72 307 |

JEFFERSON COUNTY
JEF-7-1353

| Seeding | |
|---|---|
| End Width | Sq yd |
| 44 | |
| 139 | |
| 89 | |

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

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

2:1

Sta. 723+00

Sta. 723+00

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| 8525 | 0 | | |
| | | | |
| 8250 | 0 | | |
| | | | |
| 8000 | | | |
| | | | |
| 9125 | 0 | | |
| | | | |
| | | 76943 | |
| | | 724+00 | |
| | | 8463 | |

280 260 240 220 200 180 160 140 120 100 80 60 40 20 ℄

STA. 723+00

| SEEDING | |
|---|---|
| LAND WIDTH | SQ. YDS. |

| | | | |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

73
307

JEFFERSON COUNTY
JEF.-7-13.53

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |

750

670

Sta. 724+00
8' Included on Previous Sheet

Sta. 724+00
C - 959
F - 0
Incl. on Previous Sheet

769.43
724+00
BM 51

20 40 60 80 100 120 140 160 180 200 220 240 260 280

STA. 724+00 BL Skew

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

74
307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding and Sq. Yd.

| | End Area | | Volume | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| Sta. 725+03.02 | 7870 | 0 | | |
| 870 | | | | |
| 0 | | | | |
| 600 | | | | |
| Sta. 724+00 | 8525 | 0 | | |

Sta. 725+03.02
0' Incl. from Next Sheet

Sta. 725+03.02
C - 300
F - 0
Incl. from Next Sheet

2:1

756.89
725+03.02
756.4

STA. 725+03.02 LO SWG

| SEEDING | |
|---|---|
| END WIDTH | 30 YDS |

| | | | |
|---|---|---|---|
| | | | |
| 2 | CHIO | U-430(14) | |

75/307

JEFFERSON COUNTY
JEF.-7-13.53

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |

800

Sta. 725+03.02
C - 300 F - 0
Incl. on Previous Sheet

730

Sta. 726+03.02
0 Incl. on Next Sheet

670

766.19
725+03.02
730.1

20 40 60 80 100 120 140 150 180 200 220 240 260 280

STA. 725+03.02 = Pt. Sta.

| FED. RD. DIVISION | | | |
|---|---|---|---|
| 2 | OHIO | U-430(14) | 76/307 |

**JEFFERSON COUNTY**
**JEF-7-13.53**

| End Area Cut | End Area Fill | Volume Cut | Volume Fill |
|---|---|---|---|
| 6940 | 0 | | |
| | | [illegible] | 0 |
| 7870 | 0 | | |

| SEEDING | |
|---|---|
| END WIDTH | SQ YDS |

| | | | |
|---|---|---|---|
| | OHIO | U-430(14) | |

77
307

JEFFERSON COUNTY
JEF.-7-13.53

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |

750

Sta. 725+93.02
Q Isolated on previous sheet

Sta. 725+93.02
0 - 365
F - 0
Incl. on Previous Sheet

6.70

765.25
728+93.02
79.11

20 40 60 80 100 120 140 160 180 200 220 240 260 280

STA 725+93.02 Alt. Site

JEFFERSON COUNTY
JEF.-7-13.53

| Seeding | | End Area | | Volume | |
|---|---|---|---|---|---|
| Ltrl Width | Sq. Yds. | Cut | Fill | Cut | Fill |
| 135 | Sta. 726+53.02 | | | | |
| | | | | 870 | |
| | | Sta. 726+53.02 | | 3775 | 55 |
| | | C - 175 | | | |
| | | F - 55 | | | |
| | | Incl. from next sheet | | | |
| | | | | 4,859.61 | |
| | | Sta. 725+93.02 | | 6340.0 | |
| 51 | Sta. 725+93.02 | | | 800 | |
| | | 764.48 | | | |
| | | 726+53.02 | | | |
| | | 780.6 | | | |

280 260 240 220 200 180 160 140 120 100 80 60 40 20 ℄

STA 726+53.02 Lt Side

| SEEDING | |
|---|---|
| LND WIDTH | SQ YDS |

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

79/307

JEFFERSON COUNTY
JEF.-7-13.53

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |

800

720

670

Sta. 726+53.02
C - 17.5
F - 8.5
Incl. on Previous Sheet

764.19
726+53.02
762.6

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

STA. 726+53.02 Rt Side

| Seeding | |
|---|---|
| End Width | Sq. Yd. |
| 127 | |
| 872 | |
| 135 | |

Sta. 727+13

Sta. 726+53.02

2:1

| | End Area | | Volume | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| 870 | | | | |
| Sta. 727+13<br>C - 45<br>F - 250<br>Incl. From Next Sheet | 1060 | 954 | | |
| | | | 5986 | 454 |
| 800 | | | | |
| Sta. 726+53.02 | 3715 | 55 | | |
| 750 | | | | |
| 763.98<br>727+13<br>756.6 | | | | |

280 260 240 220 200 180 160 140 120 100 80 60 40 20 ℄

STA. 727+13 Lt. Side

| | | | |
|---|---|---|---|
| 2 | OHIO | U-430(14) | 80 307 |

JEFFERSON COUNTY
JEF.-7-13.53

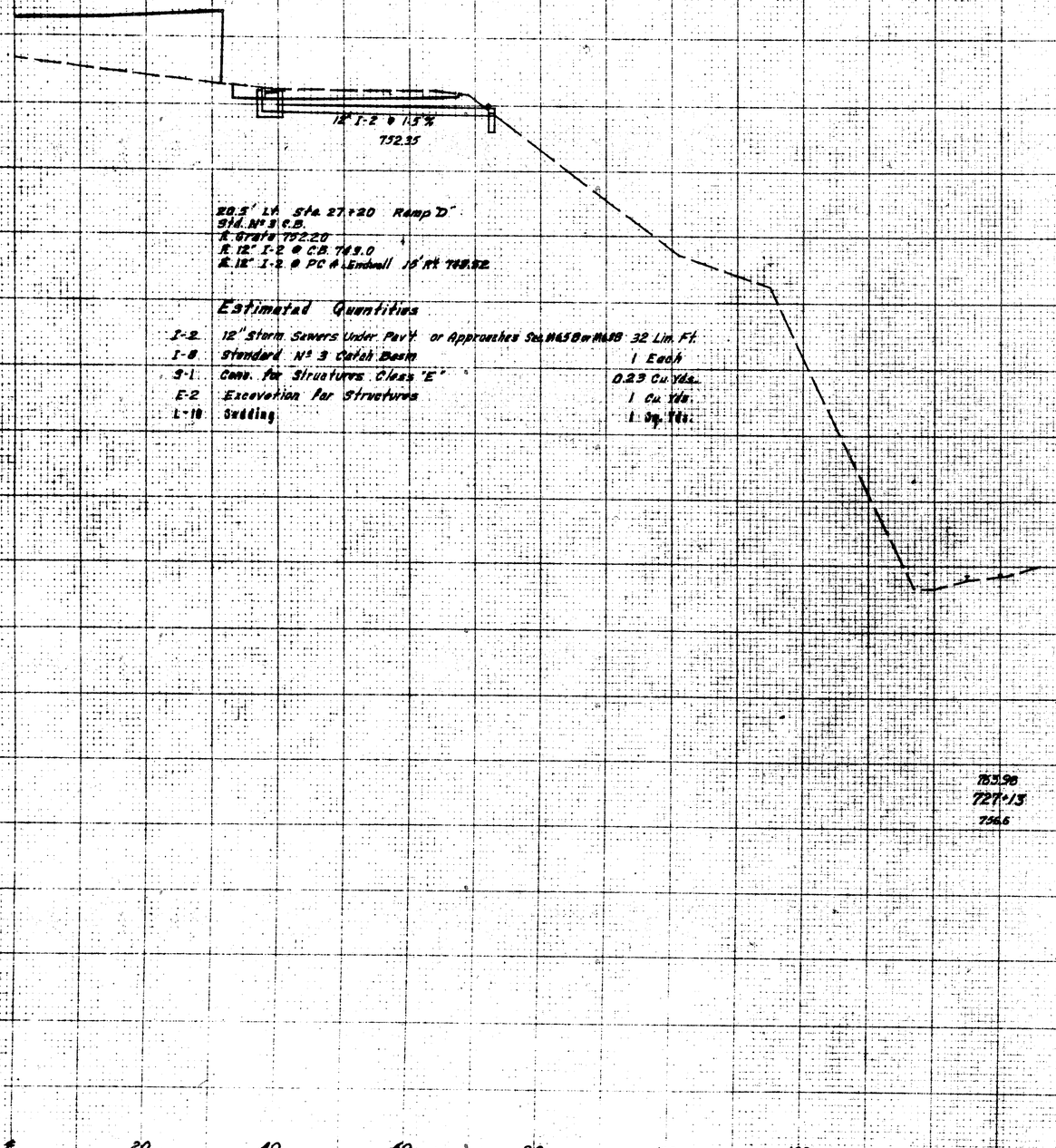
| SHEET NO. | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

81/307

JEFFERSON COUNTY.
JEF.-7-13.53

| SEEDING | |
|---|---|
| END WIDTH | TONS |
| | |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |




Sta. 727+13
C - 45
F - 250
Incl. on Previous Sheet

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

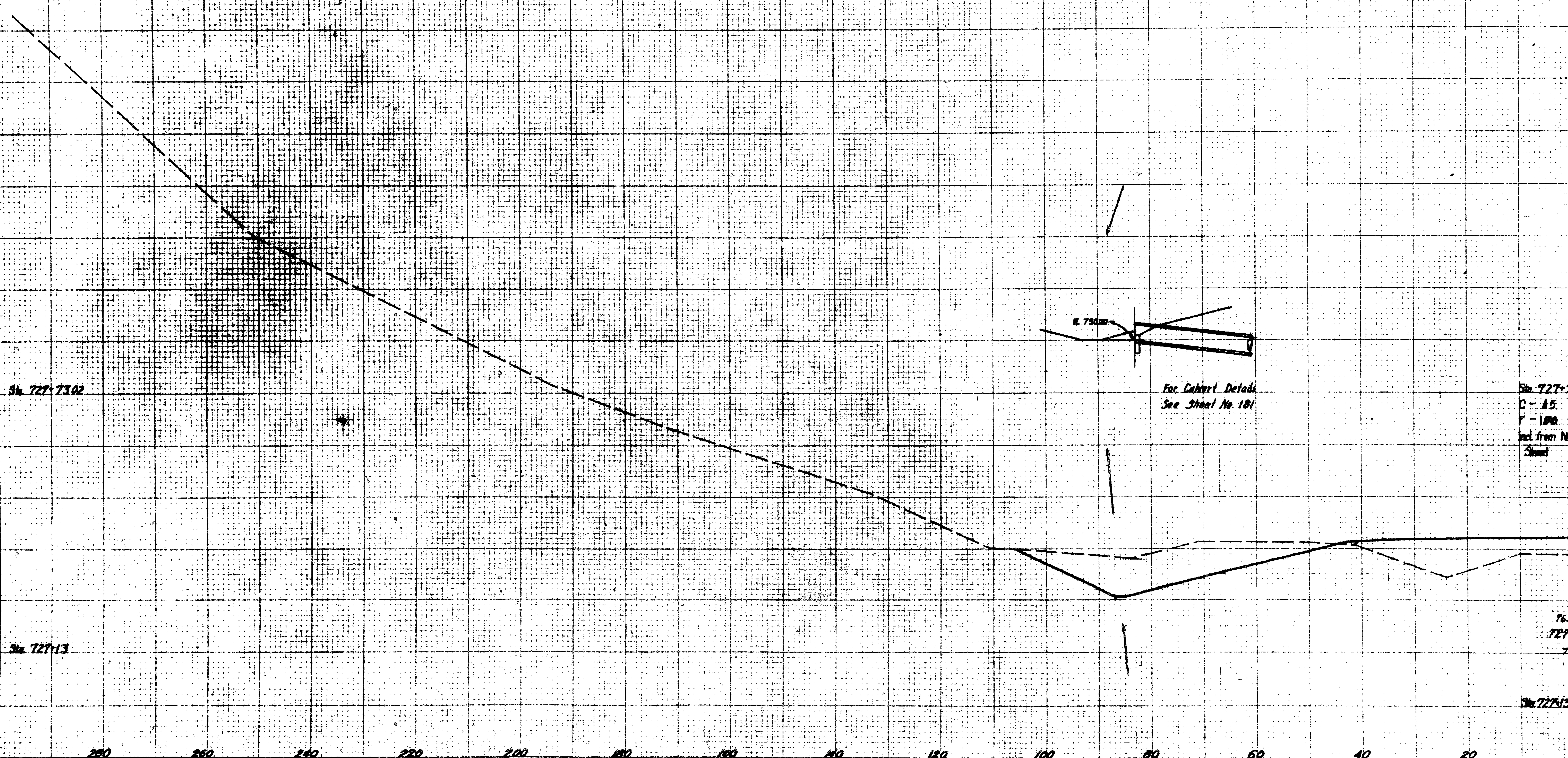
82/307

JEFFERSON COUNTY
JEF.-7-1353

| Seeding | |
|---|---|
| End Area | Sq. Yd. |
| 37 | |
| 58.7 | |
| 127 | |

Sta. 727+73.02

Sta. 727+13




| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| 350 | 370 | | |
| | | [illegible] | [illegible] |
| 1060 | [illegible] | | |

Sta. 727+73.02
C - 45
F - 186
Incl. from Next Sheet

763.73
727+73.02

Sta. 727+13

STA. 727+73.02 Lt. Side

| SEEDING | |
|---|---|
| END WIDTH | 50 YDS |

| | | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

83/307

JEFFERSON COUNTY
JEF.-7-13.53

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |

754.75

750

Sta. 727+73.02
C.- 45
F.- 186
Incl on Previous Sheet

670

763.73
727+73.02
759.1

20 40 60 80 100 120 140 160 180 200 220 240 260 280

STA. 727+73.02

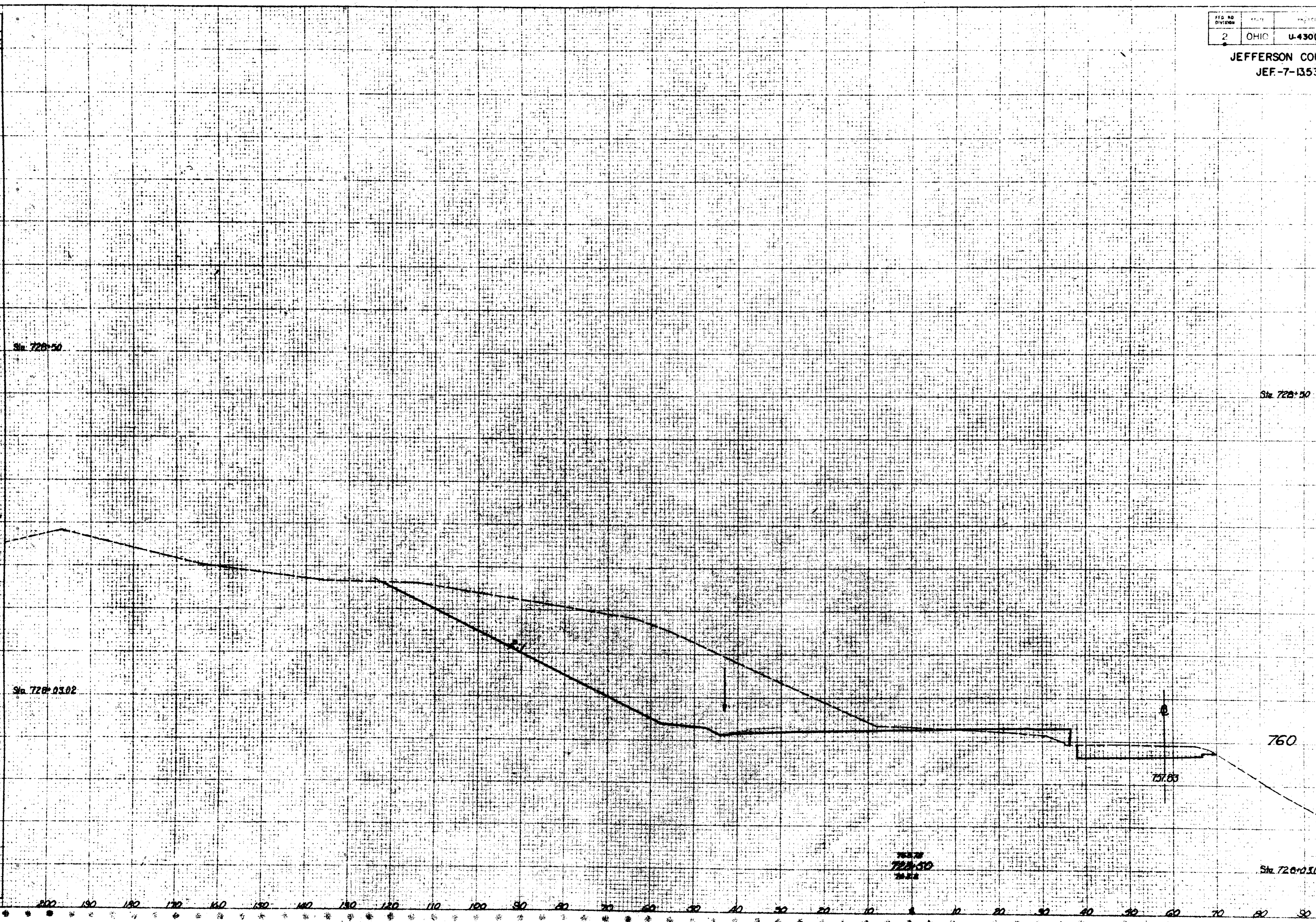
2
OHIO
U-430(14)
84
307
JEFFERSON COUNTY
JEF.-7-13.53
Seeding
End
Sq. Yd.
39
Sta 728+03.02
27
37
Sta 727+73.02
End Area
Volume
Cut
Fill
Cut
Fill
Sta 728+03.02 385 80
409 250
Sta 727+73.02 350 370
760
33' Rt Sta 728+00
Std No 6 C.B.
℄ Grate 763.74
℄ 12" I-2 759.74
℄ 8" I-4 760.50
4:1
52' x 12" I-2 @ 2.0 %
32' x 12" I-2 @ 2.19 %
53' Lt Sta 728+00
Std PC-4 Endwall
℄ 12" I-2 @ 758.00
763.70
728+03.02
762.09
Sta 728+00
Std No 2-6 Inlet in Median
℄ Window 763.62
℄ 12" I-2 @ Inlet 759.04
759.96
140
130
120
110
100
90
80
70
60
50
40
30
20
10
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
STA 728+03.02

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

85
307

JEFFERSON COUNTY
JEF.-7-1353

| Seeding | | |
|---|---|---|
| End Width | Sq.Yd. | |
| 97 | | Sta. 728+50 |
| | 307 | |
| 39 | | Sta. 728+03.02 |




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

| Fed. Rd. Division | | | | | 86 307 |
|---|---|---|---|---|---|
| 2 | OHIO | U-430(14) | | | |

JEFFERSON COUNTY
JEF.-7-13.53

Seeding
Find Width | Sq. Yds.

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |
| Sta. 729+50 | 1327 | 0 | |
| | | 16385 | 56 |
| Sta. 728+50 | 1520 | 50 | |

Sta. 729+50
Std. ND 2-14 Inlet in Median
E. Window ~764.41
E. 18"I-2 @ Inlet 769.83

764.49
729+50
759.7

761.56

780

STA. 729+50

U-430(14)

87
307

JEFFERSON COUNTY
JEF.-7-1353

| Seeding | |
|---|---|
| End Width | Sq Y |
| 58 | |
| 266 | |
| 51 | |

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |
| Sta. 729+94 | 9170 | 0 | |
| | | | 13,412 |
| Sta. 729+50 | 7327 | 0 | |

Sta. 729+94

Sta. 729+50

2:1

800

76493
729+94
865-2

762.96

230 220 210 200 190 180 170 160 150 140 130 120 110 100 50 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60

STA 729+94

| | | | |
|---|---|---|---|
| • 2 | OHIO | U-430(14) | |

88
307

JEFFERSON COUNTY
JEF.-7-13.53

| End Area | | Volumes | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |

Seeding
End Areas Sq. Ft.

2:1

90 Sta. 730+23

Sta. 730+23 6845 0

2673 0

810

Sta. 729+94 9470 0

790

765122
730+23
BK.L

770

763.80

230

50 Sta. 729+94

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 70

STA. 730+23

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

09
307

JEFFERSON COUNTY
JEF.-7-1353

Seeding
End Area Sq. Yd.

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |

Sta 730+55 8320 0

8700 0

Sta 730+23 8043

500

770

761.66

STA 730+55
POB

STA 730+50

91

Sta 730+55

90

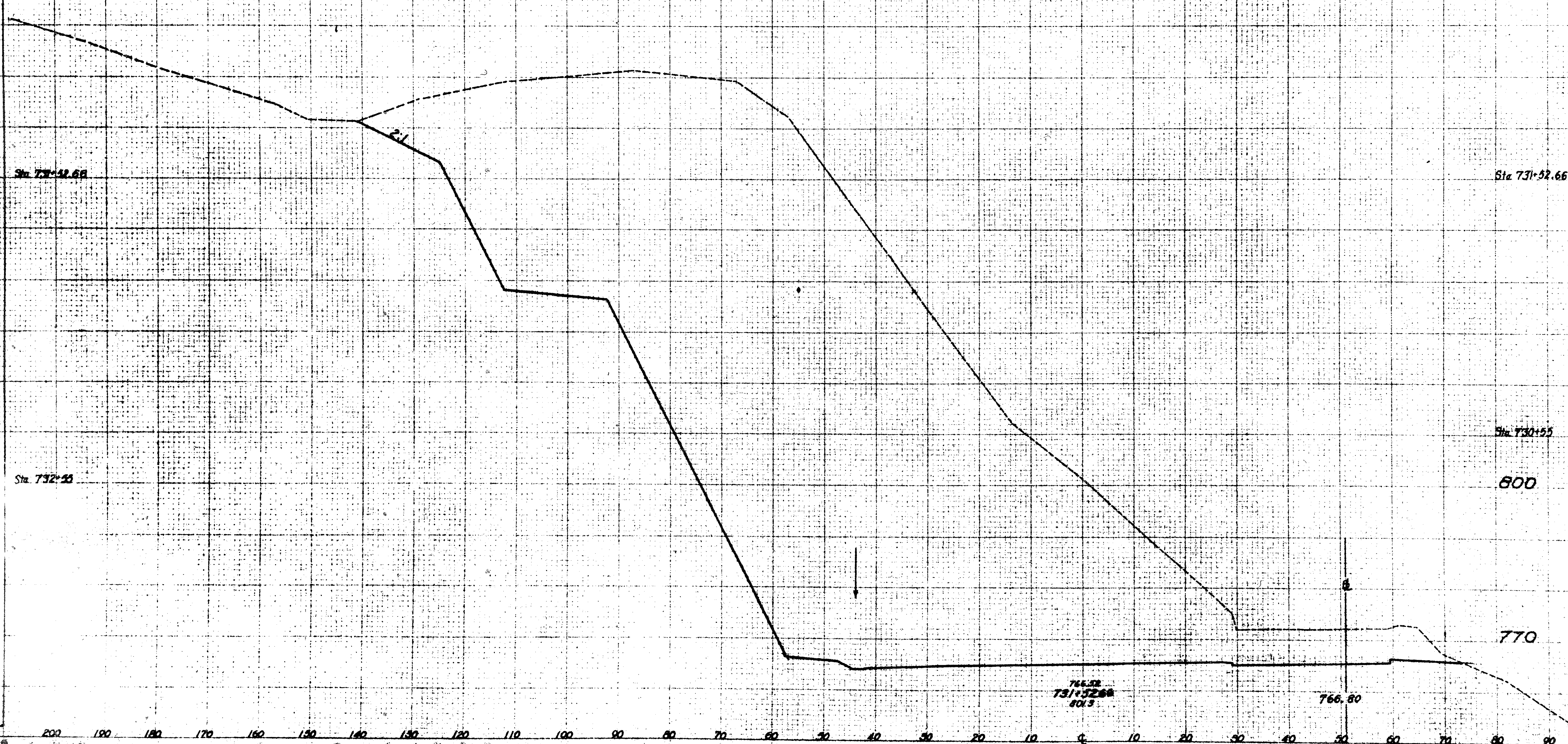
Sta 730+23

| 2 | OHIO | 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. |
| | 664 |



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

91/307

JEFFERSON COUNTY
JEF.-7-1353

Seeding

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |

Sta. 732+00 10,117 0

16647 0

Sta. 731+52.68 6972 0

800

770

764.59
732+00
80.16

767.57

STA. 732+00

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

92
307

JEFFERSON COUNTY
JEF.-7-1353

Seeding
End Area
Volume
Cut
Fill
Sq Yds

42

Sta. 733+00

Sta. 732+00

30

ESTIMATED QUANTITIES

| | | |
|---|---|---|
| E-2 | Excavation for Structures | 1 Cu Yds |
| 52 | 15" Class D Storm Sewers Under Pav't or Rdwy. | 66 Lin Ft |
| 58 | Std 2-16 Inlet | 1 Each |
| 640 | Sodding | 1 Sq Yds |
| 61 | Concrete for Sheet Class C | 42.0 Cu Yds |

Sta. 733+00 on ℄
Std 2-16 Inlet (Mod.)
E. window = 767.91
E. 15" I-2⊕ Inlet = 764.35
See Sheet No 189

66' @ Sta. 733+00
Std PC-24 Endwall
E 15" I-2⊕ Endwall = 764.00

66'x15" I-2⊕ 0.5%

767.91
733+00
791.1
℄

Sta. 733+00 10(10) 0

800

780

Sta. 732+00 10(11) 0

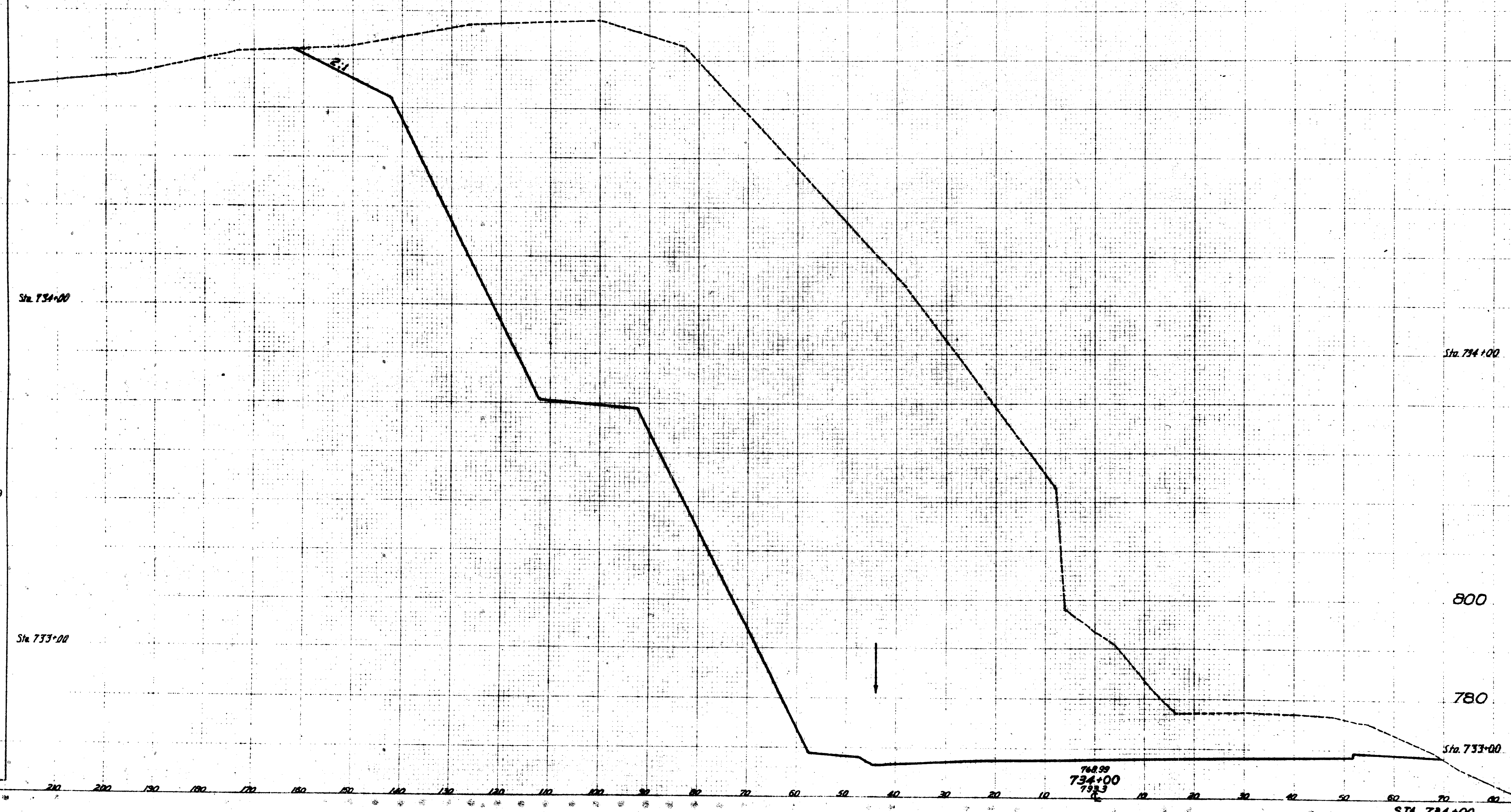
STA. 733+80

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

93/307

**JEFFERSON COUNTY**
**JEF.-7-13.53**

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



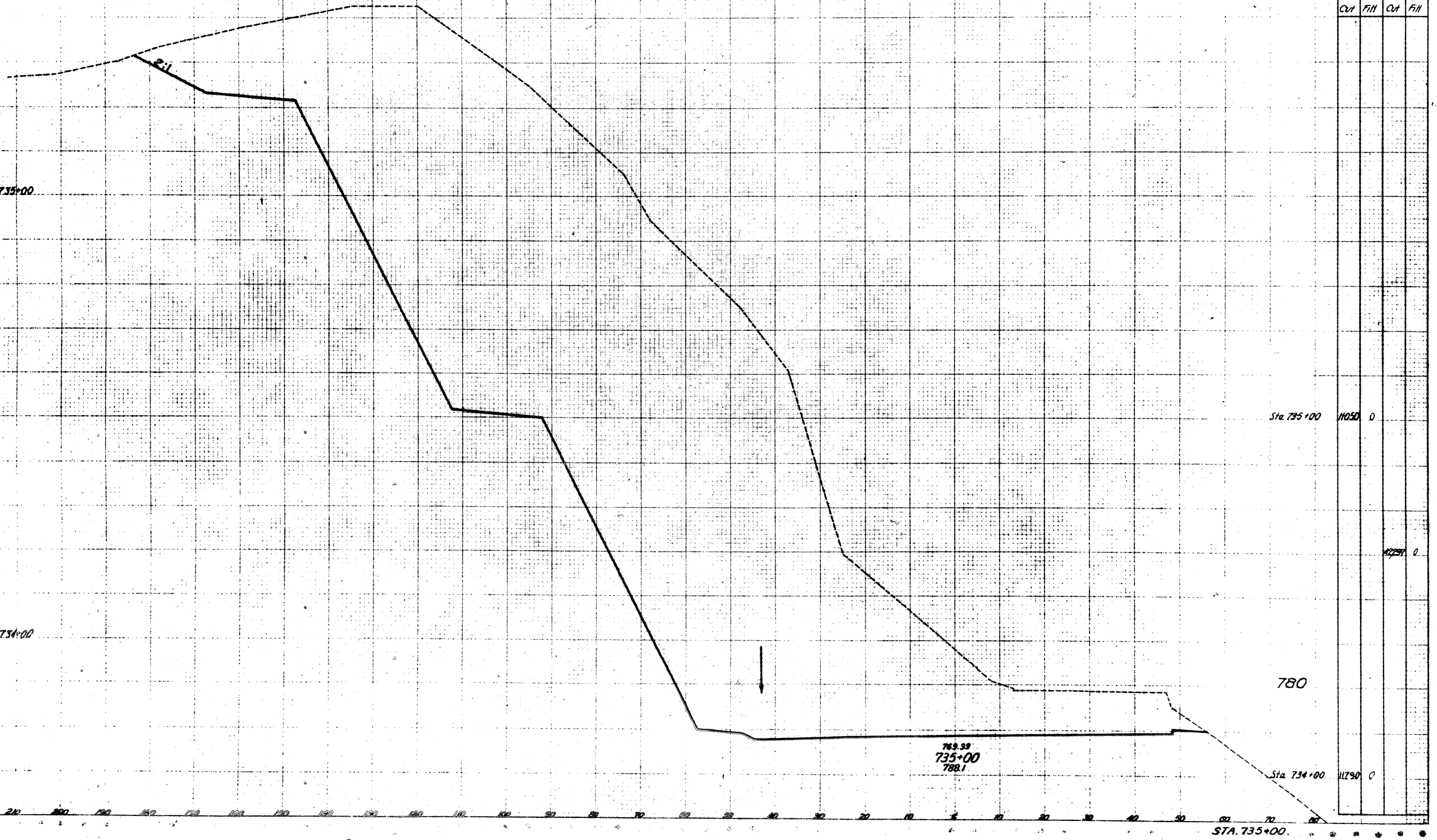

| | End Area | | Volume | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| Sta. 734+00 | 11790 | 0 | | |
| | | | 11,242 | 0 |
| Sta. 733+00 | 10480 | 0 | | |

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

94/307

JEFFERSON COUNTY
JEF.-7-13.53

| Seeding | | End Areas | | Volume | |
|---|---|---|---|---|---|
| End Width | Sq. Yds. | Cut | Fill | Cut | Fill |
| | | | | | |
| 51 | Sta. 735+00 | | | | |
| 219 | | | | | |
| 55 | Sta. 734+00 | | | | |
| | | Sta. 735+00 | 11050 | 0 | |
| | | | | 4029 | 0 |
| | | Sta. 734+00 | 11290 | 0 | |



| FED. RD. DIVISION | STATE | PROJECT | | 95 |
|---|---|---|---|---|
| 2 | OHIO | U-430(14) | | 307 |

JEFFERSON COUNTY
JEF. 7-1353

| Seeding | | End Area | | Volume | |
|---|---|---|---|---|---|
| End Width | Sq Yd | Cut | Fill | Cut | Fill |
| 43 | Sta. 738+00 | | | | |
| 322 | | | | | |
| 31 | Sta. 735+00 | | | | |

760 766.9 0+14

760 767.00 0+07.5

770 771.18 0+00

Outlet Channel

| Exc. | |
|---|---|
| 0 | |
| 6 | |
| 50 | |
| 7 | |
| 0 | |
| 13 | Cu. Yds. |

Sta. 736+00 11560 0

11560 0

ESTIMATED QUANTITIES

| | | |
|---|---|---|
| E-2 | Structure Excavation | 1 Cu. Yds. |
| E-3 | Channel Excavation | 13 Cu. Yds. |
| I-2 | 15" Class "B" Storm Sewer Under Mortar 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 "C" | 0.26 Cu. Yds. |

780

0+00 0+07.5 0+14

Sta. 736+00 on ℄
Std. 2-16 Inlet (Mod) 736+00
Fl. Window 770.91 789.7
Fl. 15" I-2 767.33
See Sheet No. 189

56' 15" I-2 @ 0.59 %

57' At Sta 736+00
Std PC-4 Endwall
Fl. 15" I-2 767.00

Sta. 735+00 11050 0

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 70 80

STA. 736+00

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

96
307

JEFFERSON COUNTY
JEF-7-13.53

Seeding
End bottom | Sq.Yd.

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |

Sta. 737+00 10405 0

40468 0

44 Sta. 737+00

43 Sta. 736+00

780

77193
737+00
7913

Sta. 736+00 11586 0

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 70

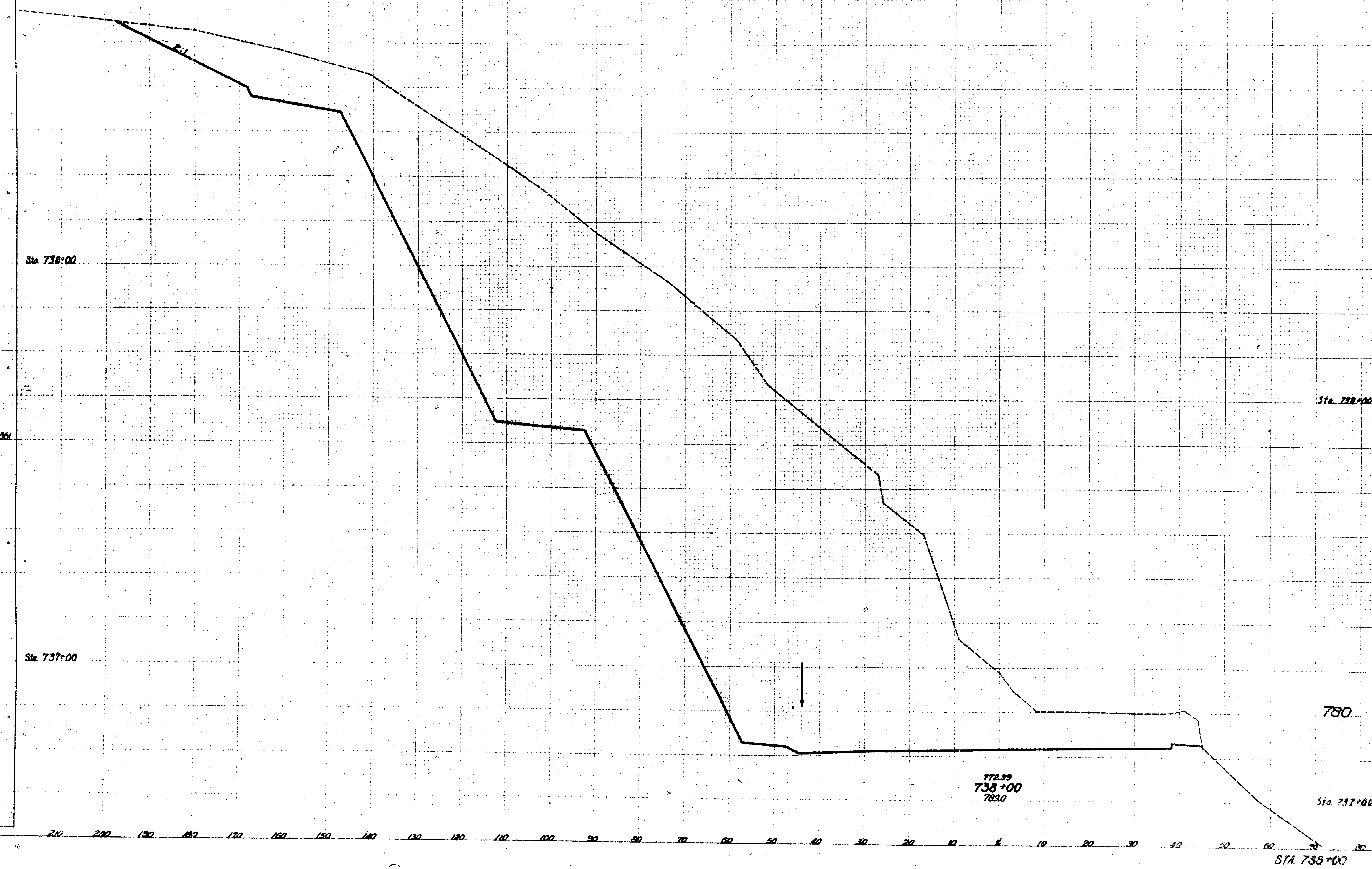
STA. 737+80

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

97/307

**JEFFERSON COUNTY**
**JEF.-7-13.53**

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



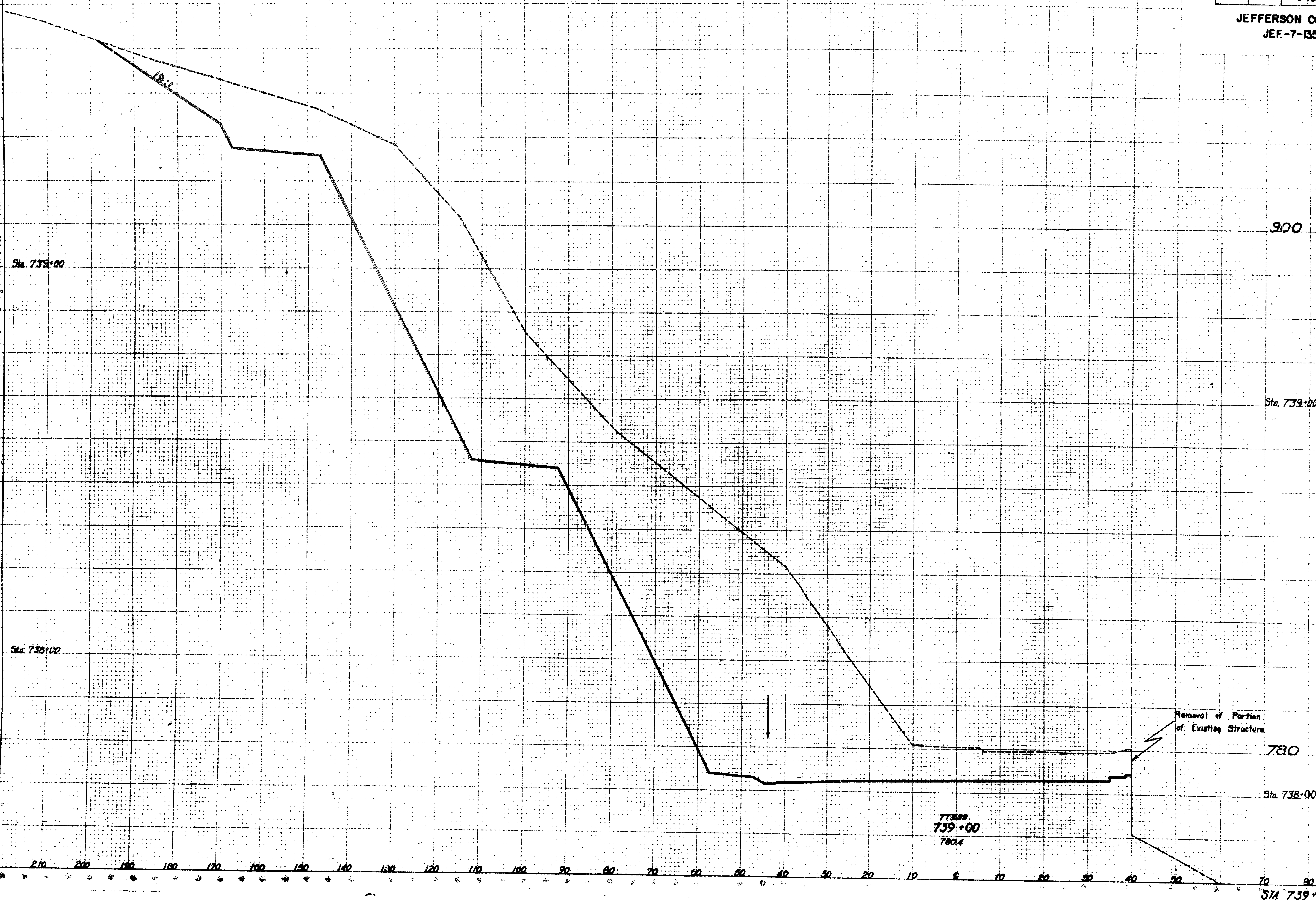

| | End Area | | Volume | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| Sta. 738+00 | 8790 | 0 | | |
| | | | 35,547 | 0 |
| Sta. 737+00 | 10185 | 0 | | |

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



**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 Area, Sq. yd.

| End Area Cut | End Area Fill | Volume Cut | Volume Fill |
|---|---|---|---|
| | | | |

900

Sta. 739+30

54' Lt. Sta. 739+33
Std. PC-6 Endwall
(L 24' S-27 760800
See Culvert Section
Sheet No 182

Pay Line C-1
Pay Line C-3

Sta. 739+30 3550 0

4300 0

Sta. 739+00

Removal of Portion of Existing Structure

780

774.29
739+30
782.7

Sta. 739+00 4805 0

250 200 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60

STA. 739+30

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

106
307

JEFFERSON COUNTY
JEF.-7-1353

Seeding
End Area Sq. yd.

| End Area Cut | End Area Fill | Volumes Cut | Volumes Fill |
|---|---|---|---|
| | | | |

900

Sta 739+30 4810 0

30% 0

Sta 739+30 3550 0

Removal of Portion of Existing Structure

780

23 Sta 739+30

51

23 Sta 739+30

739.50

STA. 739+30

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

101
307

JEFFERSON COUNTY
JEF.-7-13.53

| Seeding | |
|---|---|
| End Width | Sq. Yd. |
| 49 | |
| 27 | |

Sta. 740+00

Sta. 739+50

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |
| Sta. 740+00 | 2490 | 0 | |
| | | 900 | |
| | | 850 | |
| | | 800 | |
| Sta. 739+50 | 4810 | 0 | |
| | | 11390 | 0 |

| Exc. | |
|---|---|
| Area | Vol. |
| 0 | |
| 1 | |
| 20 | |
| 3 | |
| 0 | |
| 4 | Cu. Yds. |

770
770.9
0+10

770
771.00
0+08

770
775.02
0+00

ESTIMATED QUANTITIES

| | |
|---|---|
| E-2 Excavation for Shoulders | 1 Cu. Yds. |
| E-3 Channel Excavation | 4 Cu. Yds. |
| 75 15" Class "B" S.S. Under Roadway Appr. | 46 Lin. Ft. |
| 58 Std. No. 2-16 Inlet | 1 Each |
| 1-18 Saddling | 1 Sq. Yd. |
| S-1 Conc. for Structures, Class "B" | 8.26 Cu. Yds. |

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

47' Rt Sta 740+00
Std PC-4 Endwall
ℓ 15" I-E ⊕ Endwall 771.00

774.99
740+00
781.2

770
0+00
0+08
0+10
44-18" RCP @ 12%
STA. 740+00

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

182/307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding
Ord. Made

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |

47 Sta 740+00

49 Sta 740+00

900

Sta 740+50 7252 0

850

800

Sta 740+00 7492 0

780

775.49
740+50

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. Yds.

2:1

| | End Area | | Volume | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| 900 | | | | |
| Sta. 741+00 | 7010 | 0 | | |
| 850 | | | | |
| | | | 13,260 | 0 |
| 800 | | | | |
| Sta. 740+50 | 7252 | 0 | | |
| 780 | | | | |

775.99
741+00

Sta. 741+50

47

285

STA 741+00

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

184
307

JEFFERSON COUNTY
JEF.-7-13.53

| Seeding | |
|---|---|
| Cut (acres) | Sq. Yd. |
| | |

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |

49 Sta. 741+50

900

Sta. 741+50 8650 0

850

14500 0

55 Sta. 741+00

Sta. 741+00 7010 0

800

780

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 | |
| | | 511 |
| Sta 741+50 | 49 | |

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

STA. 742+50

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

106/307

JEFFERSON COUNTY
JEF.-7-1353

| | End Area | | Volume | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| Sta. 743+15 | 7620 | 0 | | |
| | | | 19656 | 0 |
| Sta. 742+50 | 8710 | 0 | | |

| FED. AID DIVISION | STATE | PROJECT | | 107 307 |
|---|---|---|---|---|
| 2 | OHIO | U-430(14) | | |

JEFFERSON COUNTY
JEF.-7-13.53

| Seeding | |
|---|---|
| End Points | Sq. yd. |
| 65 | Sta. 743+50 |
| 231 | |
| 54 | Sta. 743+15 |

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |
| Sta. 743+50 | 8540 | 0 | |
| | | 18,886 | 0 |
| Sta. 743+15 | 7620 | 0 | |

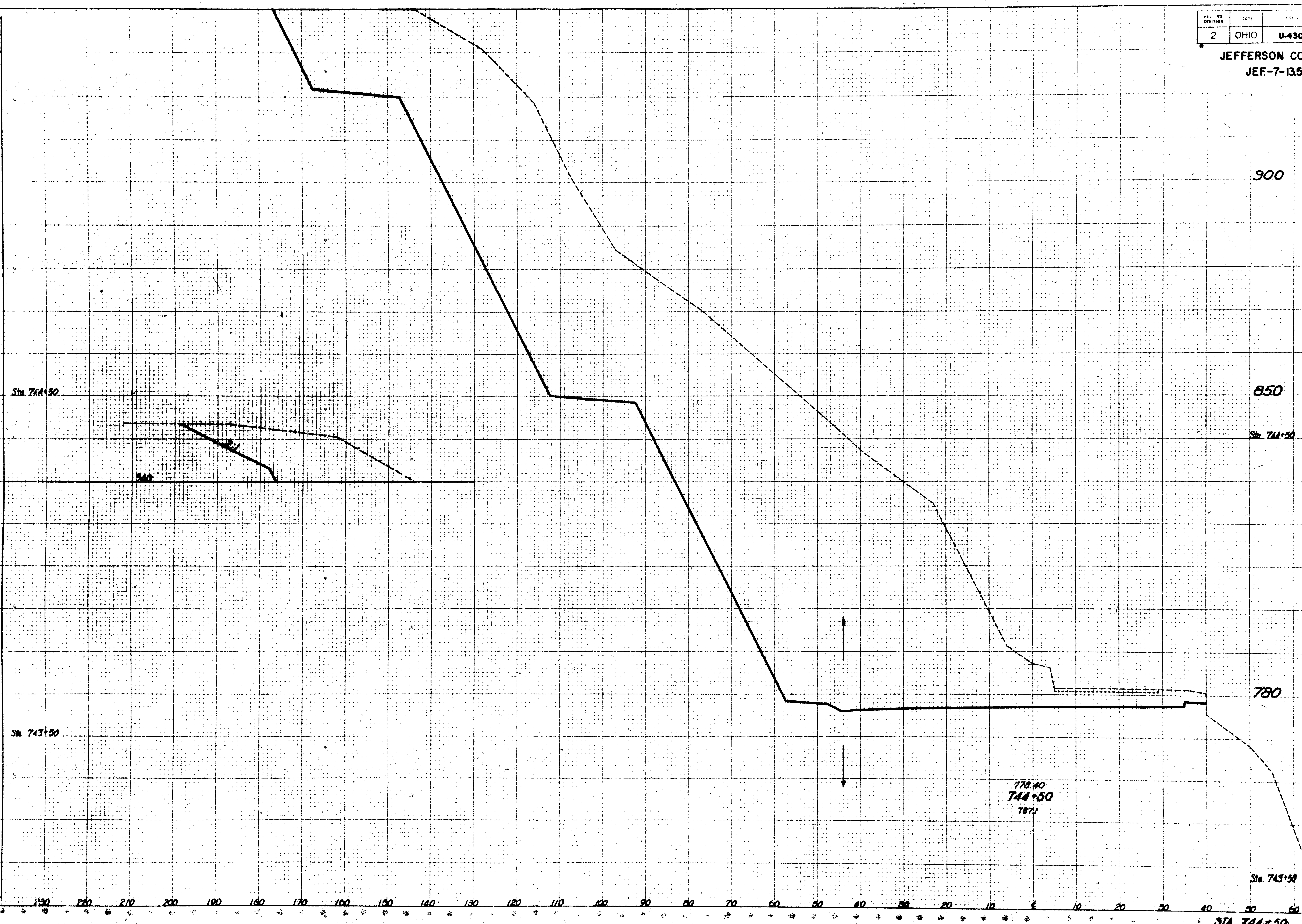
2:1
2:1
960
950
900
850
780
Sta. 743+50
Sta. 743+15
STA. 743+50

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

108
307

JEFFERSON COUNTY
JEF-7-13.53

| Seeding | |
|---|---|
| End Width | Sq yd |
| 47 | |
| | 622 |
| 65 | |




| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| 8190 | 0 | | |
| | | 31,020 | 0 |
| 8560 | 0 | | |

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

109
307

JEFFERSON COUNTY
JEF-7-13.53

Seeding
End Area 3sq yd

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |
| 5315 | 0 | | |
| | | 25010 | 0 |
| 6190 | 0 | | |

900
650
780

21 Sta. 745+50
309
17 Sta. 744+50

778.35
745+50
780.2

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. 743+50

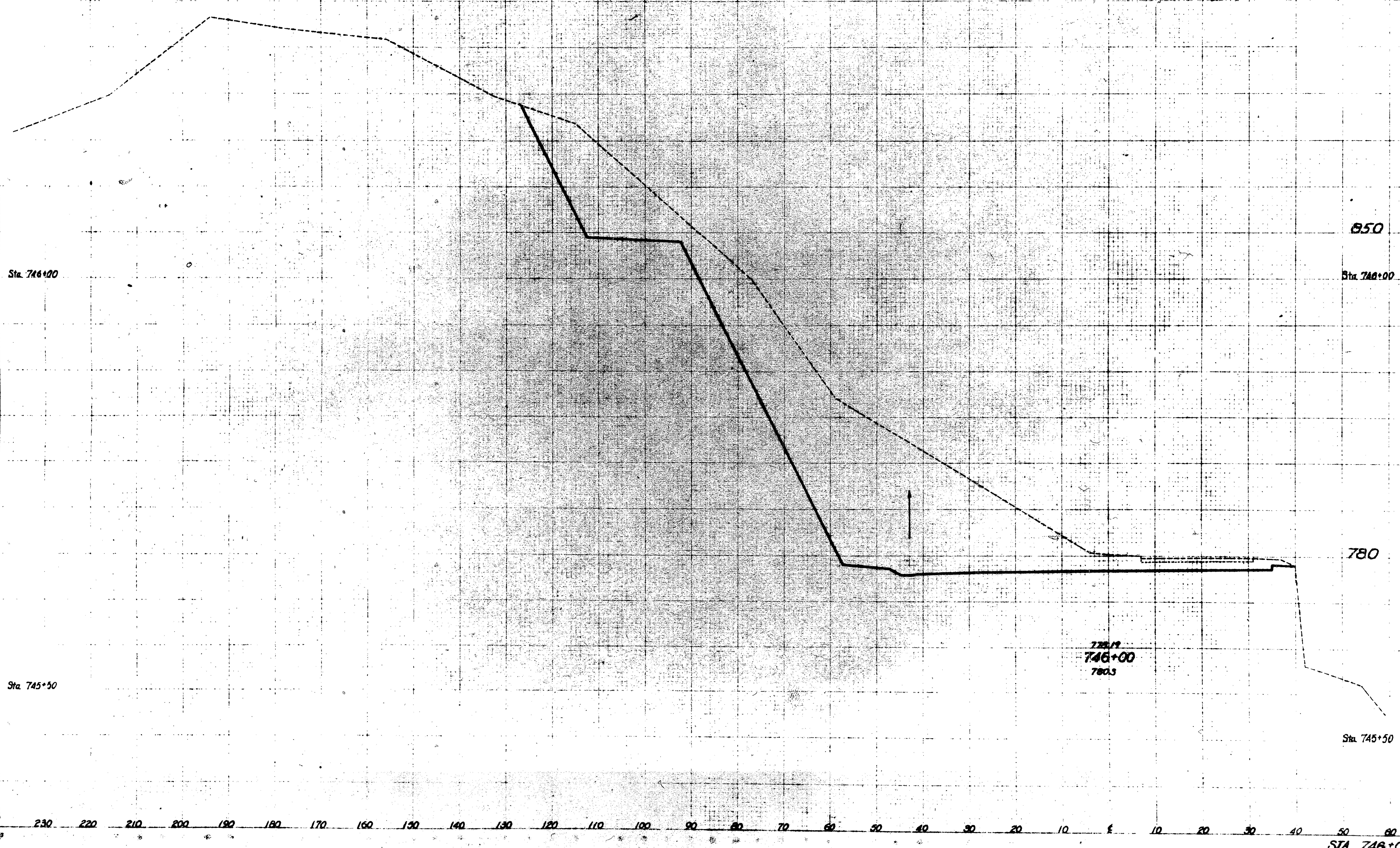
110
307

| Fed. Rd. Division | State | Project |
|---|---|---|
| 2 | OHIO | U-430(14) |

**JEFFERSON COUNTY**

**JEF-7-13.53**

| Seeding: End Width | Seeding: 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 | SHEET NO. |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

111
307

JEFFERSON COUNTY
JEF.-7-13.53

| Seeding | | End Area | | Volume | |
|---|---|---|---|---|---|
| Emf Width | Sq yd | Cut | Fill | Cut | Fill |
| | | | | | |
| 23 | Sta 746+25 | | | | |
| | | 850 | | | |
| | | Sta 746+25 | 226.0 | 0 | |
| 64 | | | | 2,202 | 0 |
| | | 780 | | | |
| 23 | Sta 746+00 | 778.08 746+25 780.0 | | | |
| | | Sta 746+00 | 249.5 | 0 | |

STA. 746+25

| | | | |
|---|---|---|---|
| | 2 | OHIO | U 430(14) |

JEFFERSON COUNTY
JEF-7-13.53

Seeding
End
lbs/1000 sq yd

23 ' Sta. 746+52

69

23 Sta. 746+25

CULVERT DATA
Sta. 746+52 S-2T Pipe
100'x36" 1.0% Slope
58' Lt. fl. 772.0 STD. PC-4 Endwall
42' Rt. fl. 769.0
See Sheet No. 185

fl. 772.0

100'x36" 1.0% Slope

777.23
746+52
775.2

fl. 769.0

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |
| Sta. 746+52 | 28.95 | 0 | |
| | | | 2,557 |
| Sta. 746+25 | 28.60 | 0 | |

800
780

STA. 746+52

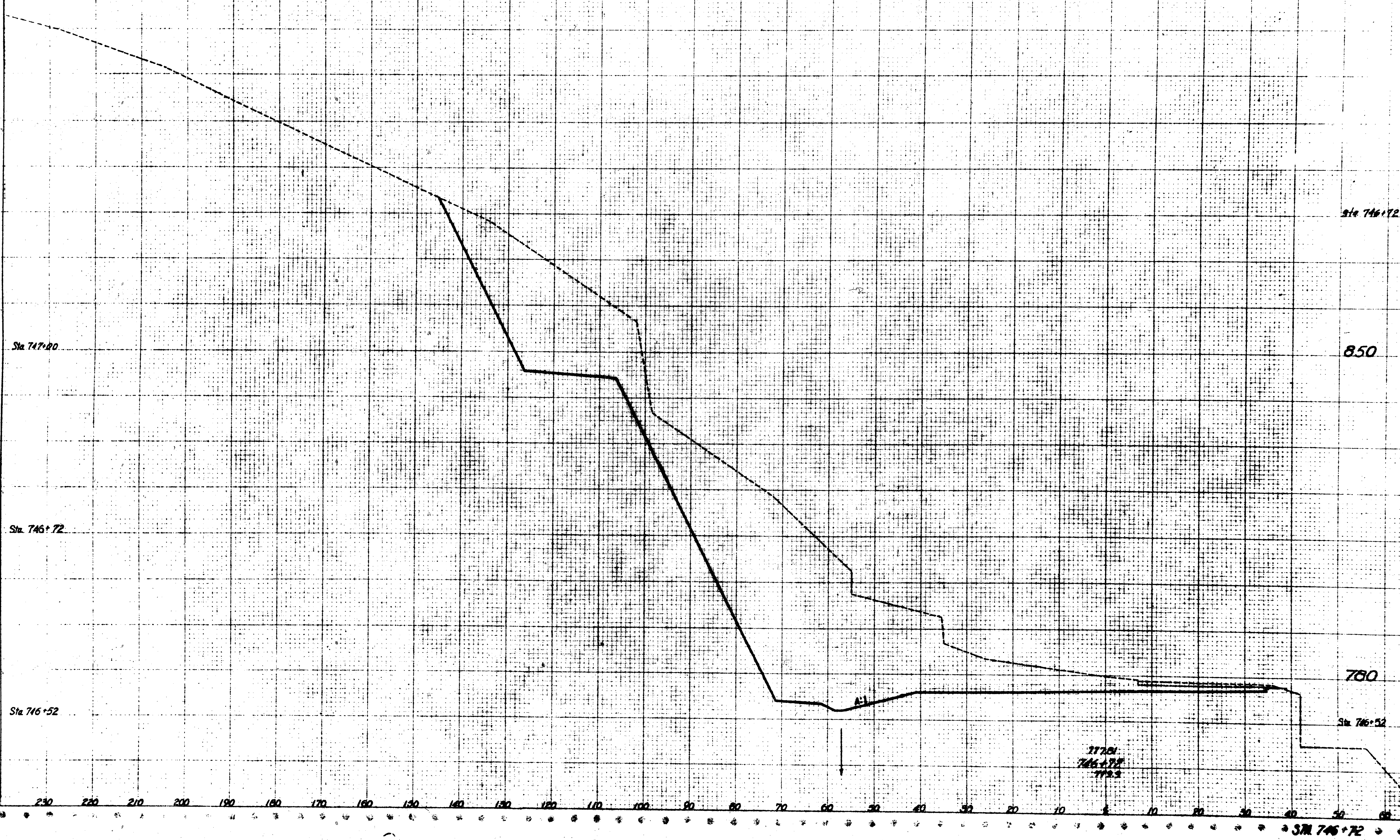
| FED RD DIVISION | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

113
307

**JEFFERSON COUNTY**
**JEF.-7-1353**

| Seeding | | |
|---|---|---|
| End Width | Sq. Yd. | |
| 23 | | Sta 747+00 |
| | 72 | |
| 23 | | Sta. 746+72 |
| | 51 | |
| 23 | | Sta 746+52 |

| | End Area Cut | End Area Fill | Volume Cut | Volume Fill |
|---|---|---|---|---|
| Sta 746+72 | 2870 | 0 | | |
| | | | 2120 | 0 |
| Sta 746+52 | 2855 | 0 | | |



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

114
307

JEFFERSON COUNTY
JEF.-7-13.53

| Seeding | |
|---|---|
| End Width | ½ Yd |
| 67 | |
| | |
| 23 | |

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |
| | | | |
| | | | |

16:1

Sta. 747+50

Sta. 747+50 6350 0

900

850

250

Sta. 747+00

Sta. 746+72 2870 0

780

777.20
747+50
784.0

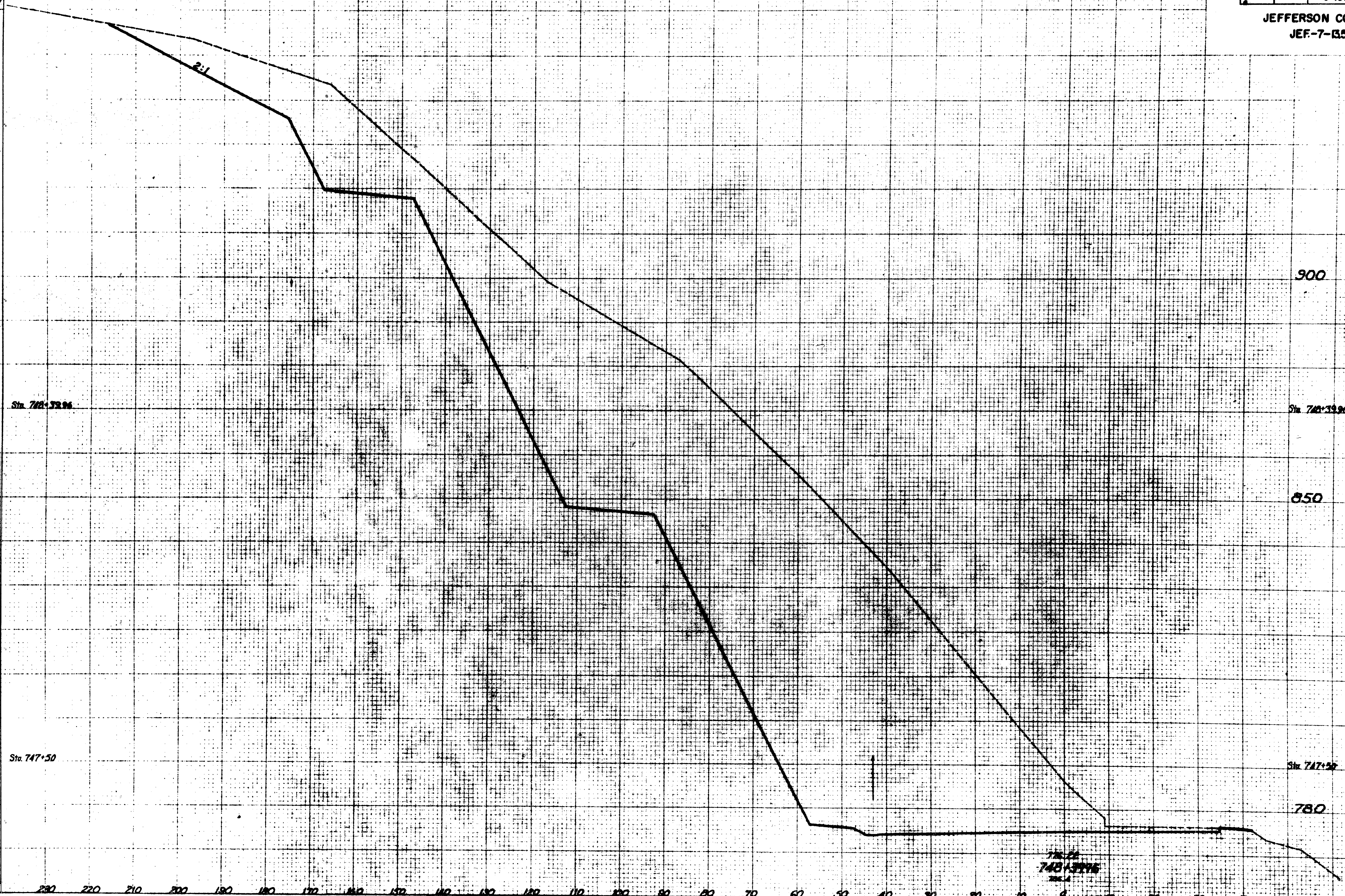
STA. 747+50

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

115/307

**JEFFERSON COUNTY**
**JEF.-7-1353**

| Seeding | |
|---|---|
| End Width | Sq. Yd |
| 69 | |
| | 680 |
| 67 | |




| | End Area | | Volume | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| Sta. 748+39.96 | 7105 | 2 | | |
| | | | 22,915 | 1 |
| Sta. 747+50 | 6350 | 0 | | |

| FED RD DIVISION | STATE | JOB NO. | |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

116/307

JEFFERSON COUNTY
JEF-7-13.53

| Seeding | |
|---|---|
| End Width | Sq. Yds |
| 55 | |
| 413 | |
| 69 | |

Sta. 749+00

970 220 200 180

Sta. 748+39.98

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |

900

770 — 771.00 — 0+175

| Exc. | |
|---|---|
| Area | Vol. |
| 0 | |
| 5 | |
| 28 | |
| 4 | |
| 0 | |
| 9 Cu Yds. | |

Sta. 749+00 8020 0

770 — 771.30 — 0+085

850

780 — 775.5 — 0+00 — Outlet Channel

17150 2

ESTIMATED QUANTITIES

| | |
|---|---|
| E-2 Excavation for Structures | 1 Cu Yds. |
| E-3 Channel Excavation | 9 Cu Yds. |
| F-2 15" Class "B" S.S. Under Roadway Pipe | 46 Lin. Ft. |
| S-8 Standard No. E-16 Inlet | 1 Each |
| Ltff Sodding | 1 Sq Yds. |
| M Conc. for Struct., Class "E" | 0.26 Cu Yds. |

Sta. 749+00 cont.
Std E-16 Inlet (Mod.)
Ft Window 775.33
Ft 15" I-2 @ Inlet 771.79
See Sheet No. 169

47 Ft Sta. 749+00
Std. PC-4 Endwall
Ft 15" I-2 @ Endwall 771.50

780
0+00
0+085
0+175
771.00
775.41
749+00
764.6
46'-15" I-2 @ 0.54%
Sta. 748+39.98 7435 2

STA 748+00

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

117/307

**JEFFERSON COUNTY**
**JEF.-7-13.53**

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

118/307

JEFFERSON COUNTY
JEF.-7-13.53

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |

Seeding

| End points | Sq. Yd. |
|---|---|

1½:1

99

Sta. 750+00

1000

980

250

200

970

1½:1

911

85

Sta. 749+50

900

850

700

Sta. 750+00 7755.15

15495.16

Sta. 749+50 7395.0

772.79
750+00
738.5

STA. 750+00

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

119
307

JEFFERSON COUNTY
JEF-7-1353

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

120/307

JEFFERSON COUNTY
JEF-7-13.53

| Seeding | |
|---|---|
| Cond. Mixture | Sq. Yd. |
| 23 | |
| | 112 |
| 25 | |

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |
| 7570.2 | | | |
| | | 6985.2 | |
| 7699.1 | | | |

Sta. 750+84

1010
990
970
960
250
200
150
Sta. 750+39.96

900
850
770

Sta. 750+84

STA. 750+84

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

121/307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding

| End Areas | Sq. Mi. |
|---|---|
| 23 | |
| 169 | |
| 25 | |

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |
| | | | |
| | | | |

Sta. 751+50 6890 0

Sta. 750+84 7578 2

STA. 751+50

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

122/307

JEFFERSON COUNTY
JEF.-7-1353

Seeding
End Area
Sq. Yd.

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |

900

Sta. 752+00 1680 2

850

770

Sta. 751+50 6090 0

759.49
752+00
TYP.

STA. 752+00

23 Sta. 752+00

1020

1000

120

900

960

960

300 250 200

23 Sta. 751+50

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

| FED. RD. DIVISION | STATE | PROJECT | | |
|---|---|---|---|---|
| 2 | OHIO | U-430 (14) | | 123 / 307 |

JEFFERSON COUNTY
JEF.-7-13.53

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

124 / 307

JEFFERSON COUNTY
JEF.-7-13.53

ESTIMATED QUANTITIES

| | | | |
|---|---|---|---|
| E-2 | Excavation for Structures | 1 | Cu. Yds. |
| 32 | 24" Storm Sewers Under Pavt. or App. Sec. M-6.6(a) or Sec. M-6.7(a) | 96 | Lin. Ft. |
| 50 | Std. No 2-2A C.B. | 1 | Each |
| L10 | Sodding | 1 | Sq. Yds. |
| S-1 | Concrete for Structures Class "C" | 0.44 | Cu. Yds. |

| | | | |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | 125 307 |

JEFFERSON COUNTY
JEF-7-1353

| Seeding | |
|---|---|
| Prof. | Sq. Yds. |
| 25 | |
| 23 | |

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |

1040
1020
1000
980
960

350 300 250

Sta. 754+00

900
850
770

Sta. 755+00 2705 5

Sta. 754+00 1580 -5

755+25
755+00
74.24

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. 756+00

| FED. RD. DIV. NO. | STATE | | | |
|---|---|---|---|---|
| 2 | OHIO | U-430 (14) | | 126 307 |

JEFFERSON COUNTY
JEF-7-13.53

| Seeding | |
|---|---|
| End Width | Sq. Yd. |
| 25 | |
| 20 | |
| 25 | |

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |

Sta 755+80.07

1040

1820

1080

920

960

350 300 250

Sta 756+00

240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0

900

Sta 755+80.07 5428.19

850

1020.35

759.99
755+80.07
771.10

770

Sta 755+00 4365.15

Sta 756+80.07

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

127
307

JEFFERSON COUNTY
JEF.-7-1353

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |

Seeding
End Width | Sq. Yds.

23 Sta. 756+50

179

23 Sta. 755+00.07

1050
1000
950
900
850
800
750
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
850
900

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

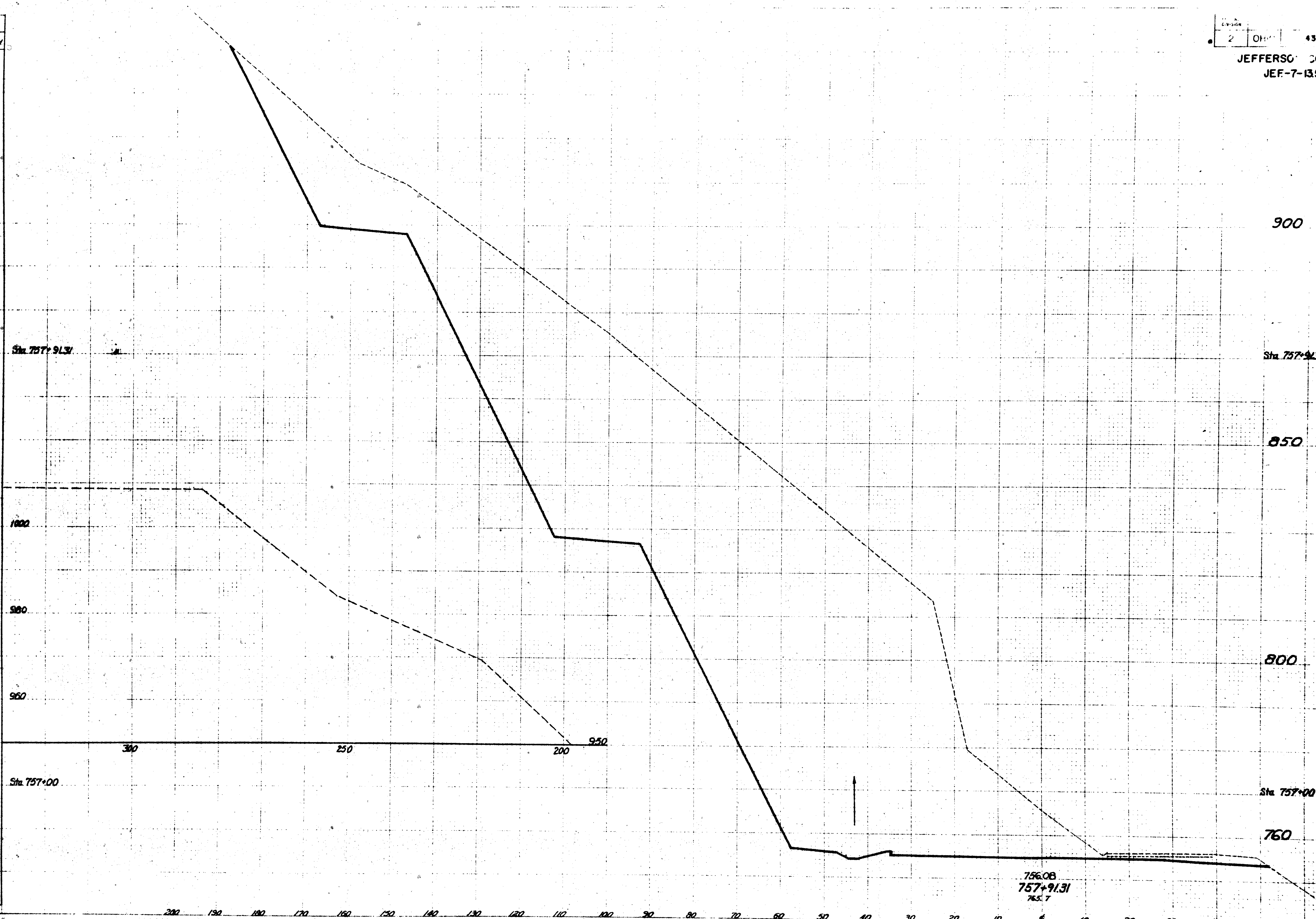
128/307

JEFFERSON COUNTY
JEF-7-1353

| Division | | | | |
|---|---|---|---|---|
| 2 | OH… | 430 (14) | | 129 / 307 |

JEFFERSO… COUNTY
JEF.-7-13.53

| Seeding | |
|---|---|
| End Width | Sq. Yd |
| 23 | |
| | 253 |
| 23 | |




| | End Area Cut | End Area Fill | Volume Cut | Volume Fill |
|---|---|---|---|---|
| Sta. 757+91.31 | 8865 | 0 | 27326 | 0 |
| Sta. 757+00 | 7890 | 0 | | |

STA. 757+91.31

| F.A.P. RD DIVISION | | | |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

130/307

JEFFERSON COUNTY
JEF-7-1353

Seeding
End Area | Sq. Yd.

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |

900

Sta 758+50

850

750
Sta 758+33 on ℄
Std 2-6 Inlet
℄ Window 755.25
℄ 12" I-2 751.67

800

Sta 757+91.31

760

755.68
758+50

STA 758+50

| FED. RD. DIVISION | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | 0-430(14) | |

131/307

JEFFERSON COUNTY
JEF.-7-13.53

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |

Seeding
End
Sq. Yds.

900

Sta 759+30 — 2725 ft

850

800

755.33
759+80

760

Sta 759+50, 30° S 2.7
ft Inlet 751.83
Std PC-4 Endwall
3-ea 3'x3'x4" Ag 18"

Sta 758+50

STA 759+80

| FED. RD. DIVISION | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | 0-430(14) | |

198
307

JEFFERSON COUNTY
JEF.-7-13.53

Seeding
End Areas | Sq. Yd.

| End Area Cut | End Area Fill | Volume Cut | Volume Fill |
|---|---|---|---|
| | | | |

900

850

800

750

Sta. 760+00

Sta. 759+50

755.74
760+50
7522

Sta. 759+50

Sta. 760+50

STA. 780+60

| FED. RD. DIV. NO. | STATE | | |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

193/307

JEFFERSON COUNTY
JEF.-7-1353

| Seeding | |
|---|---|
| End Area | Sq. yds. |
| 25 | |
| 25 | |
| 25 | |
| 25 | |

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| 65 | 1 | | |
| | | 1960 | 1 |
| | | 1960 | 0 |
| | | 1960 | 0 |
| | | 1950 | 0 |

Sta. 761+71

Sta. 761+16.31

Sta. 760+50

3:1

750

756.35
761+71
755.9

756.07
761+16.31
757.93

STA. 761+16.31 TO STA. 761+71

| FED. HWY. DIVISION | | | | |
|---|---|---|---|---|
| 2 | OHIO | U-430(14) | | |

134
307

JEFFERSON COUNTY
JEF.-7-1353

| Seeding | |
|---|---|
| End Width | Sq yd |
| 29 | |
| | 146 |
| 23 | |
| | 256 |
| 25 | |

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |
| Sta 763+28 | 5 | 10 | |
| | | 21 | 55 |
| 757.12 | | | |
| 763+28 | | | |
| 755.3 | | | |
| 750 | | | |
| Sta 762+71 | 13 | 12 | |
| | | 118 | 24 |
| 756.85 | | | |
| 762+71 | | | |
| 733.9 | | | |
| 750 | | | |
| Sta 761+71 | 63 | 1 | |

STA. 762+71 to STA. 763+28

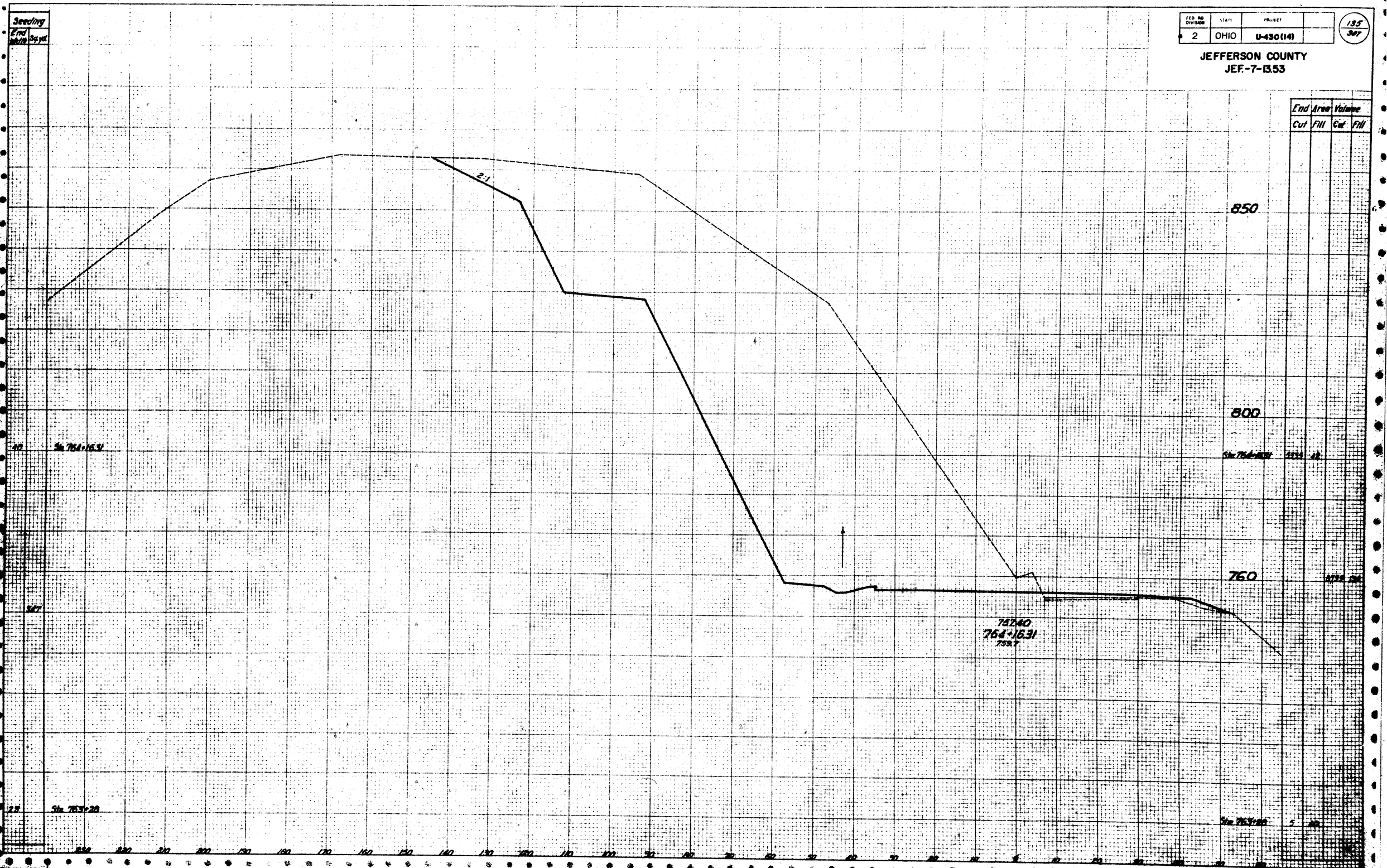
| FED RD DIVISION | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

135
347

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(14) | |

136/307

JEFFERSON COUNTY
JEF.-7-13.53

| Seeding | |
|---|---|
| Cmd Width | Sq. Yd. |

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |

850

Sta. 764+52.05 8390 45

800

BETA 45

760

757.46
764+30.00
760.4

Sta. 764+16.91 3375 42

850

800

760

40 Sta. 764+16.91

STA. 764+30.00

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

137/307

JEFFERSON COUNTY
JEF.-7-1353

| 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 |

A

2:1

8520

8520

7650

Sta. 766+00.05

Sta. 766+00.05

Sta. 764+80.05

Sta. 764+80.05

787

768

746

300

250

940

930

℄ 300

R

197.37
766+00.05
760.4

STA. 766+80.05

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

139/307

JEFFERSON COUNTY
JEF.-7-13.53

| Seeding | |
|---|---|
| Cmd Units | Sq. Yd. |
| 6.9 | |

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |

Sta. 756+90.09

980
960
940

460
390
250
220

850

Sta. 756+90.09 Sta. 757

800

750

757.04
756+90.05
757.4

Sta. 756+90.09

6.9

250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60

STA. 756+90.05

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

140/307

JEFFERSON COUNTY
JEF-7-13.53

| Seeding | | End Area | | Volume | |
|---|---|---|---|---|---|
| End Width | Sq. Yd. | Cut | Fill | Cut | Fill |
| 25 | Sta. 768+00 | | | | |
| 20' | | | | | |
| 25 | Sta. 768+90.82 | | | | |

900

850

800

760

Sta. 768+00 — 3780 36

Sta. 766+90.82 — 3560 39

768.49
768+00
762.9

STA. 768+00

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

141
307

JEFFERSON COUNTY
JEF.-7-13.53

| Seeding | |
|---|---|
| Unit Quantity | Sq. Yd. |

| End Area | | Volume. | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |

900

850

800

760

Sta. 769+00

Sta. 780+00

1000

980

960

940

300 250 200

766.99
769+00
773.5

230 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

STR 769+00

| FED. RD DIVISION | STATE | | | 142/307 |
|---|---|---|---|---|
| 2 | OHIO | U-430(14) | | |

JEFFERSON COUNTY
JEF-7-13.53

| Seeding | |
|---|---|
| End Width | Sq. Yd. |
| 10.2.0 | 300 |
| 18.0.0 | 850 |
| 26.0.0 | 800 |
| 33.0.0 | 950 |

Sta. 770+00

Sta. 769+00

300 250 200

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 70

Sta. 716+50 to Sta. 770+83.03
Embankment on shoulders
720 Cu. Yds.

ESTIMATED QUANTITIES

| | | |
|---|---|---|
| E-2 | Excavation for Structures | 1 Cu. Yds. |
| E-3 | Channel Excavation | 16 Cu. Yds. |
| 32 | 15" Class "B" S.S. Under Rdwy. or Appr. | 56 Lin. Ft. |
| 39 | Std. No. 2-12 Inlet | 1 Each |
| 618 | Seeding | 1 Sq. Yds. |
| 51 | Conc. for Struct., Class "C" | 0.26 Cu. Yds. |

| End Areas | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |

T50
T50+90
0+24.5

T50
T51.0
0+18.5

T60
Sh. PI Line 7
T55.85
0+00
Outlet Channel Sections
Sta 769+80

| | | | |
|---|---|---|---|
| 0 | 4 | | |
| 36 | | | |
| 12 | | | |
| 0 | | | |
| 16 | Cu. Yds. | | |

Sta. T69+78
Std 2-12 Inlet (Mod)
Rt Window T75.51
Rt 15" I-2 @ Inlet T51.93
Serv. Struct. No 189

ST. Rt Sta 769+78
Std PC-4 Endwall
Rt 15" I-2 @ Endwall T51.00

Sta. 769+00

0+0.2
0+1.85
0+2.45
760
759.9

T55.29
770+00
T71.2

56+15"I-2@1.66%

STA. 770+00

| 2 | OHIO | U-430 (14) | | 148 307 |
|---|---|---|---|---|

JEFFERSON COUNTY
JEF.-7-13.53

| Seeding | |
|---|---|
| Ltd Acres | Sq. Yd. |

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |

900

Sta. 771+00 9700 ft.

850

800

Sta. 770+00 8000 sq. ft.

760

1050

Sta. 771+00

1000

950

Sta. 770+00

STR. No. 771-25
Lt. 30' S.T.
Rt. 30' S.T. - 749.00
See Sheet No 105

732.98

755.24
771+00
7512

250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60

STA. 771+00

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

144
387

JEFFERSON COUNTY
JEF-7-13.53

| Seeding | |
|---|---|
| End Area | Sq. Yd. |

| Cut Area | | Volumes | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |

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

145
307

JEFFERSON COUNTY
JEF.-7-13.53

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |

Seeding
End Area Sq. Yd.

Sta 772+99.64

1/2:1

850

800

760

Sta 772+99.64 846 0

1314 45

772.99
772+99.64
736.6

Sta 771+99.64

Sta 771+99.64 16 45

50 40 30 20 10 0 10 20 30 40 50 60

SM. 772+99.64

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

146
307

JEFFERSON COUNTY
JEF.-7-13.53

| Seeding | |
|---|---|
| End Width | Sq. Yd. |
| 105 | Sta. 774+00 |
| 100 | |
| | 2007 |
| 135 | Sta. 772+99.64 |

| End Area | | Volume | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| | | | |
| | 850 | | |
| Sta. 774+00 | | 1162 | 0 |
| | 600 | | |
| | | 3224 | 0 |
| | 750 | | |
| 795.69 774.00 2571 | | | |
| Sta. 772+99.64 | | 840 | 0 |

STA. 774+00

| FED RD DIVISION | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U 430 | |

147/307

JEFFERSON COUNTY
JEF.-7-13.58

| Seeding | |
|---|---|
| Ftn/width | Sq yd |

| End Area | | Volume | |
|---|---|---|---|
| Cut | fill | Cut | Fill |

STA. 775+00 1665 0

800

STA. 774+00

750

775+00
75.10

STA. 774+00 1665 0

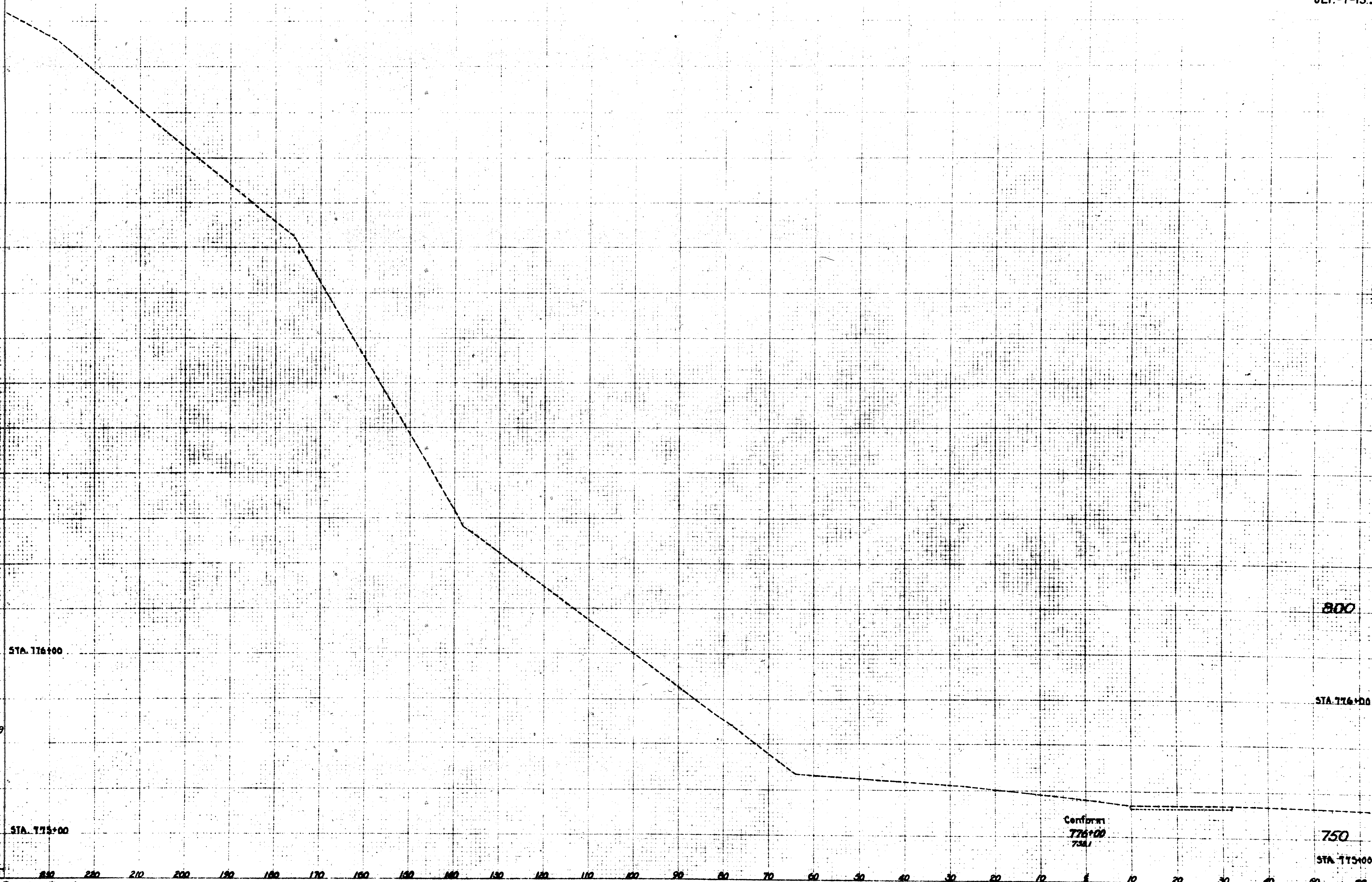
STA. 775+00

| FED. RD. DIVISION | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U 430 | |



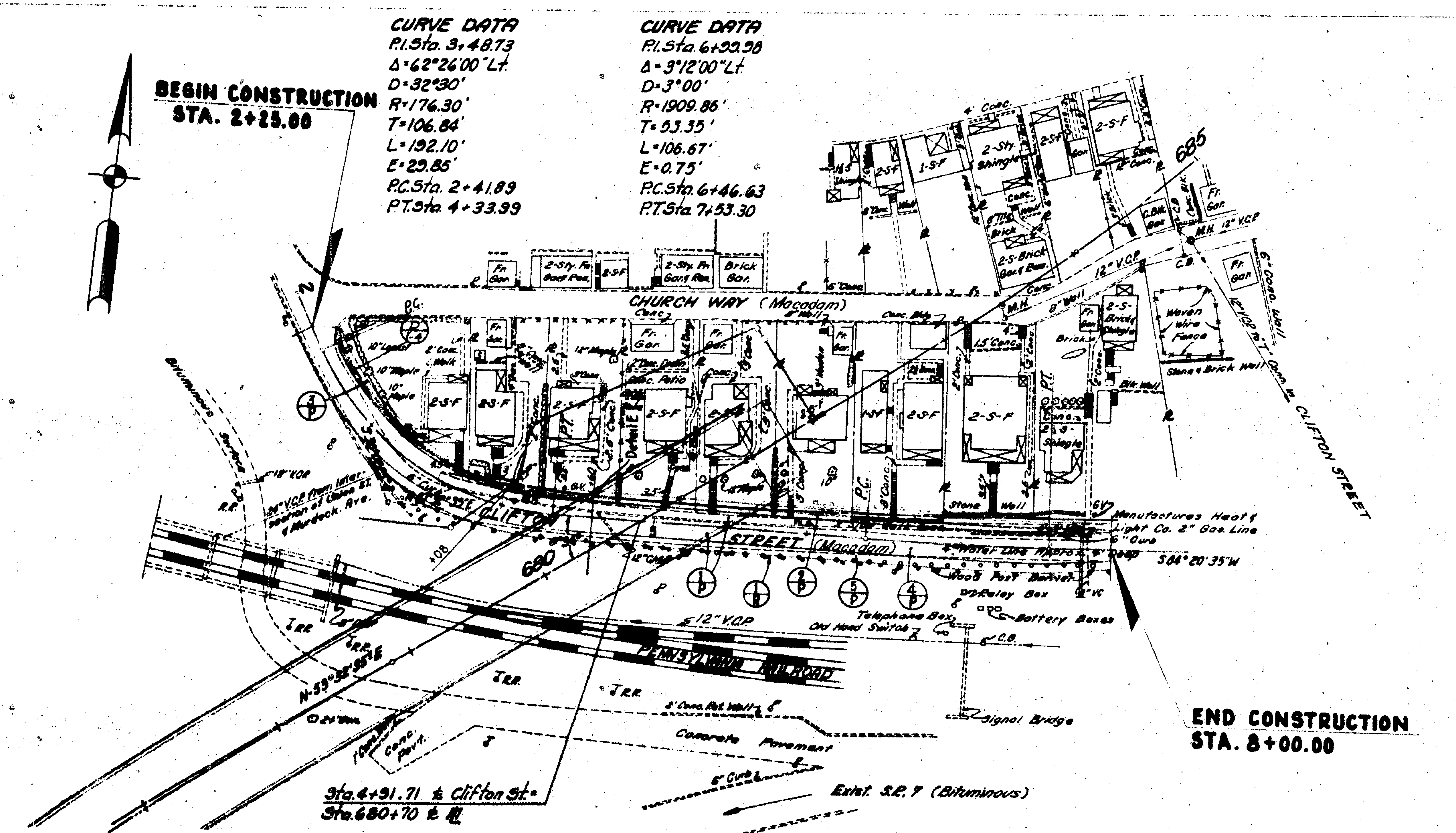
JEFFERSON COUNTY

JEF.-7-13.53




| Seeding | |
|---|---|
| End Width | Sq. yd. |
| 0 (STA. 776+00) | |
| | 889 |
| 160 (STA. 775+00) | |

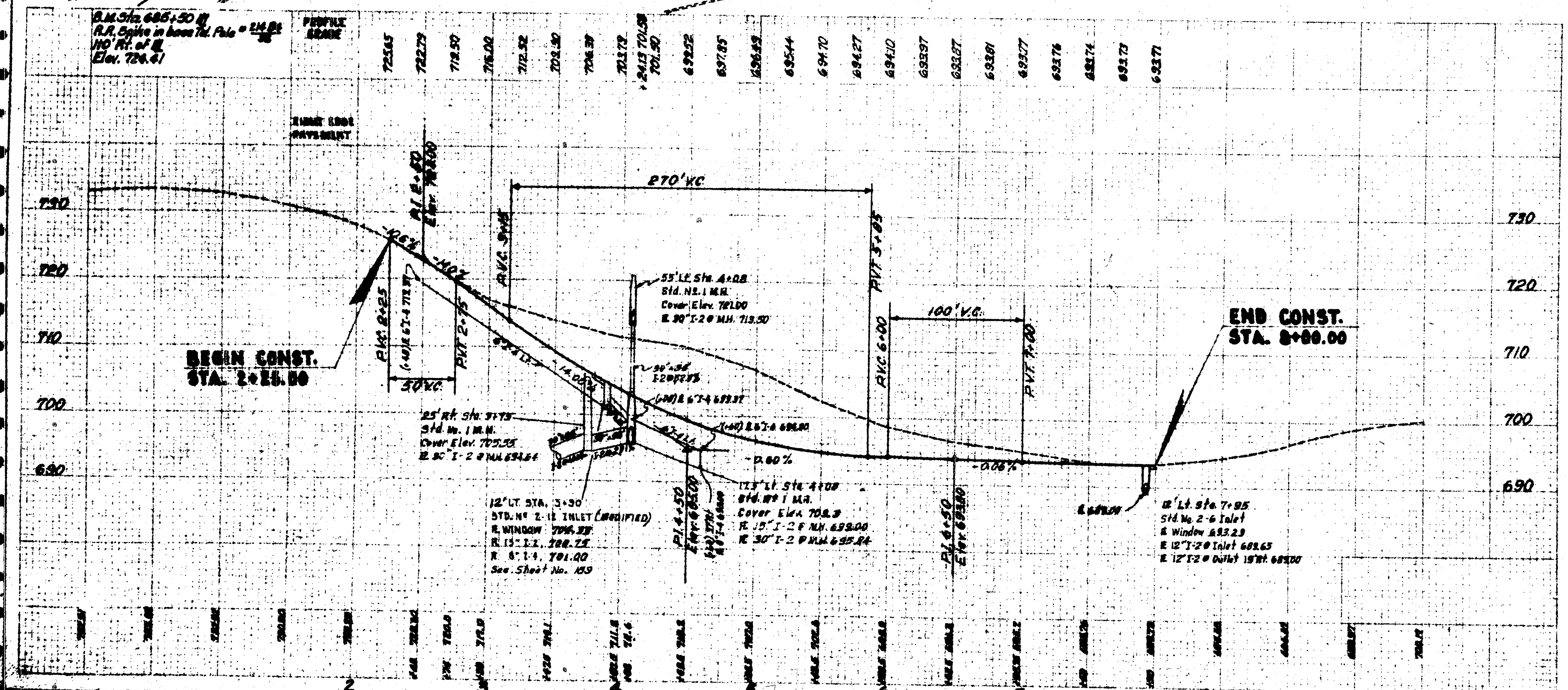
| | End Area | | Volume | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| STA. 776+00 | 0 | 0 | | |
| | | | 3912 | 0 |
| STA. 775+00 | 2115 | 0 | | |




| 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 |

**EDGE OF PAVEMENT ELEVATIONS**

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



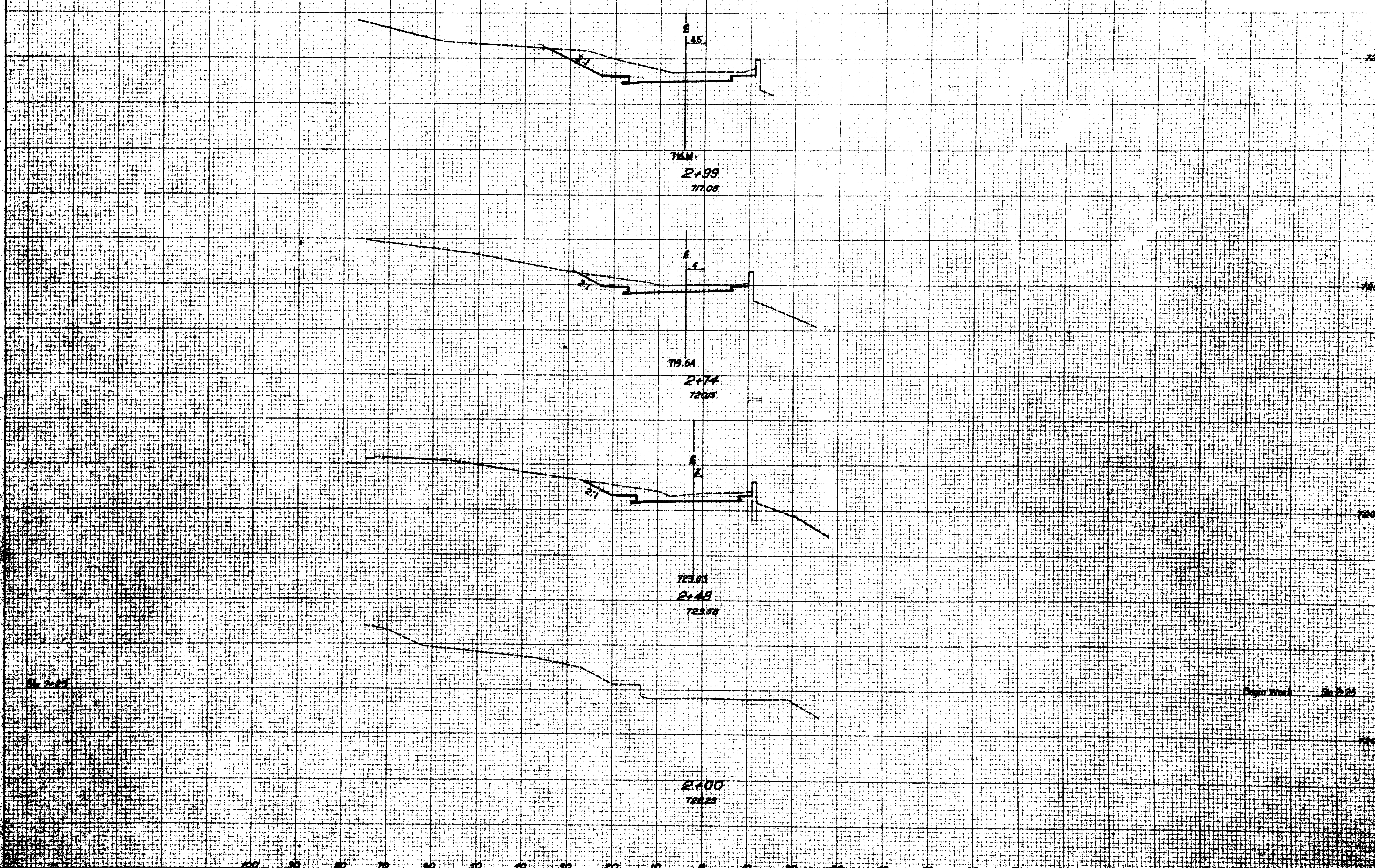

**ESTIMATED QUANTITIES**

| REF. NO. | STATION TO STATION | SIDE | B-19 Crushed Agg. Base Course 5" C.Y. | B-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-13 Sidewalk 4" S.F. | I-22 Subbase 4" (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-G.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. | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-P | 2+25 to 8+00 | Lt. & Rt. | 181.9 | 53.2 | 447 | | | 149.1 | 53.2 | 1278 | | | | | | | | 6 |
| 2-P | 2+31 to 8+00 | Lt. | | | | 569 | | 23.5 | | 158 | | | | | | | | 6 |
| 3-P | 2+31 to 8+00 | Lt. | | | | | 2224 | | | | | | | | | | | 6 |
| 4-P<br>5-P | 2+25 to 8+00<br>4+60 to 8+00 | Lt. & Rt.<br>Rt. | | | | | | | | | 2160 | 268 | | | | | | 6 |
| 1-R | 3+125 to 8+00 | Rt. | | | | | | | | | | | 487.5 | | | | 116 | 6 |
| D-3-4 | 2+46 to 4+60 | Lt. | | | | | | | | | | | | 20 | 228 | 1 | | 188 |
| | | | 181.9 | 53.2 | 441 | 569 | 2224 | 172.6 | 53.2 | 1436 | 2160 | 268 | 487.5 | 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 STA. 2+99

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

151
307

JEFFERSON COUNTY
JEF.-7-13.53

| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ YDS. | CUT | FILL | CUT | FILL |
| 80 | | 710 | | | |
| | | 895 | 0 | | |
| 349 | | | | 1151 | 0 |
| 75 | | 710 | | | |
| | | 640 | 0 | | |
| 82 | | | | 247 | 0 |
| | | 630 | 0 | | |
| 65 | | 710 | | | |
| | | | | 972 | 0 |
| 347 | | | | | |
| 60 | | 710 | | | |
| | | 420 | 0 | | |
| 256 | | | | 469 | 0 |
| 35 | | 710 | | | |
| | | 125 | 0 | | |

Sta. 2+99

699.63
4+48.50
710.33

15'Lt. Sta. 4+08 Clifton
Std. No. 1 M.H.
M.H. Cover El. 721.00

5.5'LT

2:1

E 713.39

30°Tee from No. 1 M.H.
U. Sta. 60E+00 Mainline

E

5.5

710

E 699.80

30°T-2

E 695.84

17.5'Lt. Sta. 4+08 Clifton
Std. No. 1 M.H.
Cover Elev. 703.9

703.03
4+08
711.15

2:1

E

12.5

12'Lt. Sta. 3+80 Clifton
Std. No. C-12 Inlet (Type)
R. Window 704.99
Serv. Street No. 189

E 700.75

704.04
3+97.50
711.57

25'Rt. Sta. 3+75 Clifton
Std. No. 1 M.H.
M.H. Cover El. 705.55

81°30'T-2 ENTR

E 694.64

E

3

2:1

709.61
3+47.50
712.80

116'Lt. Sta. 6+79.79 P.O.L.
Std. No. 1 M.H.
M.H. Cover El. 681.00

E 673.58

CLIFTON STREET STA 3+47.50 TO STA 4+48.50

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

152/307

JEFFERSON COUNTY
JEF.-7-13.53

SEEING

| END WIDTH | TO TO: |
|---|---|
| 25 | |
| 292 | |
| 180 | |
| 172 | |
| 80 | |
| 172 | |
| 80 | |

694.11
5+98.5
693.40

694.71
5+48.5
704.12

696.57
4+98.5
703.28

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | 700 | |
| 245 | 0 | | |
| | | 950 | 0 |
| 790 | 0 | | |
| | | 1574 | 0 |
| | | 940 | 0 |
| | | 1472 | 0 |
| | | 895 | 0 |

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

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

153
307

JEFFERSON COUNTY
JEF. - 7 - 13.53

| SEEDING | |
|---|---|
| END WIDTH | SQ YDS |
| 15 | |
| 83 | |
| 15 | |
| 84 | |
| 15 | |
| 98 | |
| 20 | |
| 125 | |
| 25 | |

Seeding for Clifton St
Total Seeding 2847

Expwy

12' Lt. Sta 7+93
Std. No. 2-6 Inlet
R. Invert 693.23
R. 12" S.E. @ Inlet 693.65
R. 12" S.E. 19.81' Outlet 693.01

R. 695.00
12" S.E. I.E. @ 2.1%

693.71
7+99
693.73

693.74
7+49
693.67

693.77
6+98.75
693.11

693.87
6+48.5
693.63

Sta. 5+90.5

Earthwork for Clifton St

| Total | Excavation | 7974 |
|---|---|---|
| | Embankment | 6 |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | | |
| 690 | | | |
| 30 | 2 | | |
| | | 47 | 4 |
| 21 | 2 | | |
| 690 | | | |
| | | 89 | 2 |
| 75 | 0 | | |
| 660 | | | |
| 218 | 0 | | |
| 160 | 0 | | |
| 630 | | | |
| 375 | 0 | | |
| Sta. 5+84.5 | 245 | 0 | |

CLIFTON STREET STA. 6+48.5 TO STA. 7+99

| | | | | |
|---|---|---|---|---|
| 2 | OHIO | U-430 (14) | | 154 / 307 |

JEFFERSON COUNTY JEF-7-13.53

CURVE DATA (MUR. AVE. RELOC.)
PI Sta 85+69.99
Δ = 45° 50'
D = 18°
T = 126.99'
L = 241.67'
E = 24.40'

NOTE:
FOR ALIGNMENT OF MURDOCK AVE. RELOCATION AND EXTENSION, SEE DETAIL SHEETS.

MURDOCK AVE. TO ST. CLAIR ST.

MURDOCK AVE. EXTENSION

ESTIMATED QUANTITIES

| REF NO. | STATION TO STATION | SIDE | Proofed Compact Sub Grade Course C.Y. | Concr. Curb & Gutter Sta. Type L | Comb. Curb & Gutter Sta. Type L | Agg. Base Shlders & Appro's C.Y. | Variable Depth C.Y. | Bit. Mac. Trtmt. Mat'l Agg. C.Y. | Guard Rail Type 2A Bit. Mat'l Agg. L.F. | Removal of Existing Pavt'g & Mat'l Agg. S.Y. | 4" Pipe Underdrains L.F. | 6" Pipe Specials for Underdrains EACH | 6" Pipe Of Pipe Under Gutter, drains (in C&G) L.F. | SEE SHEET NO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-P | 83+52.38 to 83+30.00 | Lt. & Rt. | | | | | | | | | | | | 7,155,156 |
| 1-P | 83+30.00 to 83+50.00 | Lt. & Rt. | | | | | | | | | | | | 7,155,156 |
| 1-P | 83+50.00 to 84+13.80 | Lt. | | | | | | | | | | | | 7,155,156 |
| 2-P | 84+13.80 to 84+81.95 | Lt. | | | | | | | | | | | | 5,155,156 |
| 3-P | 84+81.95 to 85+40.97 | Lt. | | | | | | | | | | | | 5,155,156 |
| 4-P | 85+40.97 to 85+80.91 | Lt. | | | | | | | | | | | | 5,155,156 |
| 5-P | 85+80.91 to 86+41.16 | Lt. | | | | | | | | | | | | 5,155,156 |
| 6-P | 86+41.16 to 86+85.05 | Rt. | | | | | | | | | | | | 5,155,156 |
| 7-P | 86+85.05 to 87+00.00 | Rt. | | | | | | | | | | | | 5,155,156 |
| 8-P | 86+85.05 to 86+85.00 | Lt. | | | | | | | | | | | | 5,155,156 |
| 9-P | 86+85.00 to 86+85.00 | Lt. | | | | | | | | | | | | 5,155,156 |
| 10-P | 86+85.00 to 86+85.00 | Rt. | | | | | | | | | | | | 5,155,156 |
| 11-P | 86+85.00 to 86+85.00 | Rt. | | | | | | | | | | | | 5,155,156 |
| 12-P | 86+85.00 to 86+85.00 | Rt. | | | | | | | | | | | | 5,155,156 |
| | 83+50 (Murd. Reloc.) to 688+00 (Murd. Ext.) | Lt. & Rt. | | | | | | | | | | | | |
| 13-P | 83+50 (Murd. Reloc.) to 10+00 (Union St.) | Lt. | | | | | | | | | | | | |
| 14-P | 10+00 (Union St.) to 93+22 (Murdock Reloc.) | Lt. | | | | | | | | | | | | |
| 1-R | 86+00 to 92+93 (Murd. Reloc.) | Rt. | | | | | | | | | | | | |
| D1-4 | 604+79 to 688+00 | Rt. | | | | | | | | | | | | |
| D1-6 | 63+63 to 93+20 | Lt. & Rt. | | | | | | | | | | | | |
| TOTALS | | | 1270 | 6388 | 1951 | 2264 | 1140.8 | 46901 | 3041 | 122 | 700 | 1627 | 3440 | 1605 | 4040 | 2 | 2584 | 60 |

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

155/307

JEFFERSON COUNTY
JEF-7-13.53

BEGIN WORK Sta. 69+52.58

P.C. Sta. 84+42.99

P.O.C. Sta. 85+18.84 Murdock Ave.
P.O.T. Sta. 0+80 Spur

P.T. Sta. 86+84.66

P.O.C. Sta. 684+84.00 M.L. S.R. =
P.O.T. Sta. 1+85.84 Connection Spur

P.O.C. Sta. 685+48.37 M.L. S.R. =
P.O.T. Sta. 684+17.84 Murdock Ave. Extension

END WORK

UNION AVE.

STA. 10+00

Overhead Sign
Station: 684+56 Lt.
Type: OS-1-A
Pole: 19'-6" (12'x3.20", 3 pcs)
B: 16'
H: 4'
4 Sign Clamps

S.C. Sta. 684+08.59 S.R.

20:1 Taper

S.C. Sta. 684+61.18 M.R.

Sta. 684+92.75
Murdock Avenue

Begin 20:1 Taper

P.C. Sta. 684+84.00

P.C.C. Sta. 685+57.00

Overhead Sign
Station: 685+90 Rt.
Type: OS-1-A
Pole: 19'-6" (12'x3.20", 3 pcs.)
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 M. S.B. Lane

Work to be Performed by Contractor of Project UG-430(15).

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

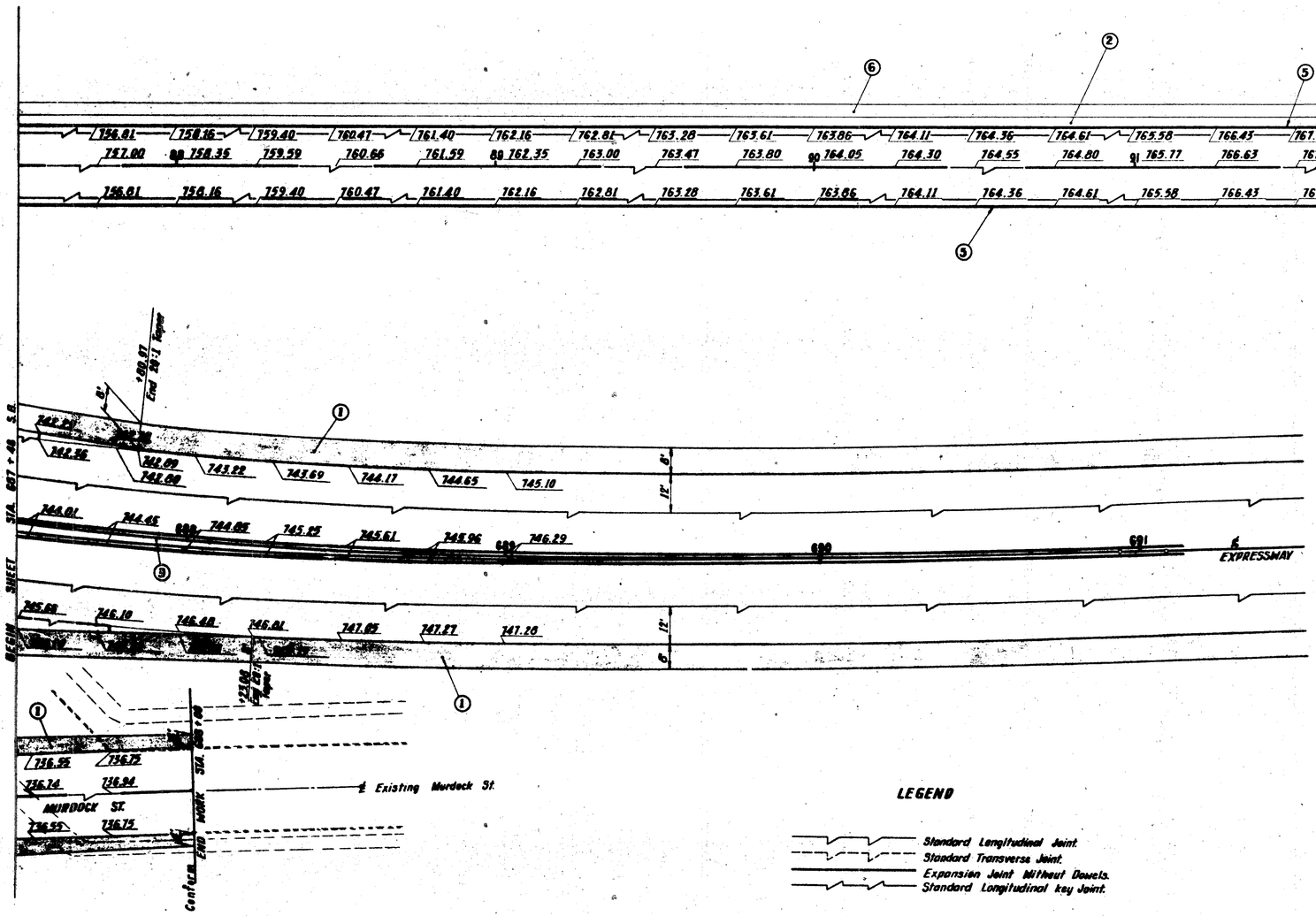
# PAVEMENT DETAILS
## MURDOCK AVENUE CONNECTION

| DESIGNED | DRAWN | TRACED | CHECKED | QUANTITIES CHKD. | DATE |
|---|---|---|---|---|---|
| | Eland | Sheppard | | | |

| 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

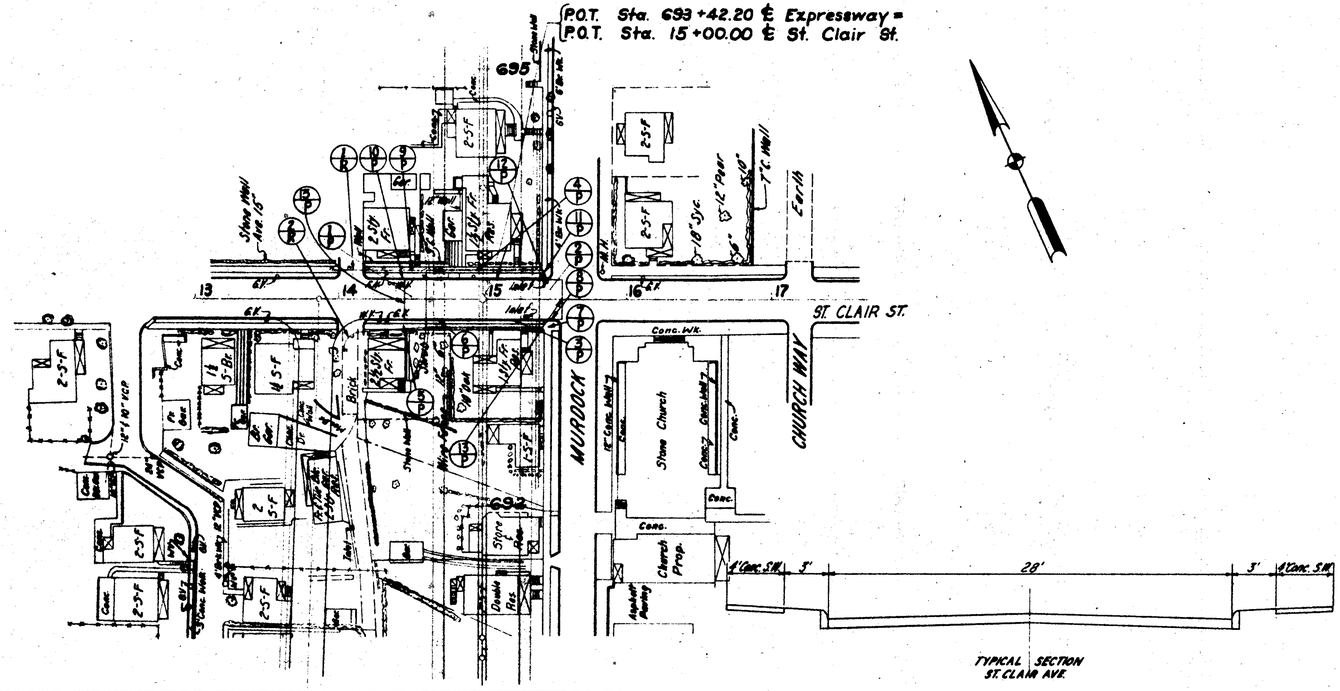
# PAVEMENT DETAILS
# MURDOCK AVENUE CONNECTION

| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| | Bland | Simpson | | | |

| | | | | |
|---|---|---|---|---|
| | | | | 157 307 |
| 2 | OHIO | U-430 (14) | | |

JEFFERSON COUNTY JEF-7-13.53

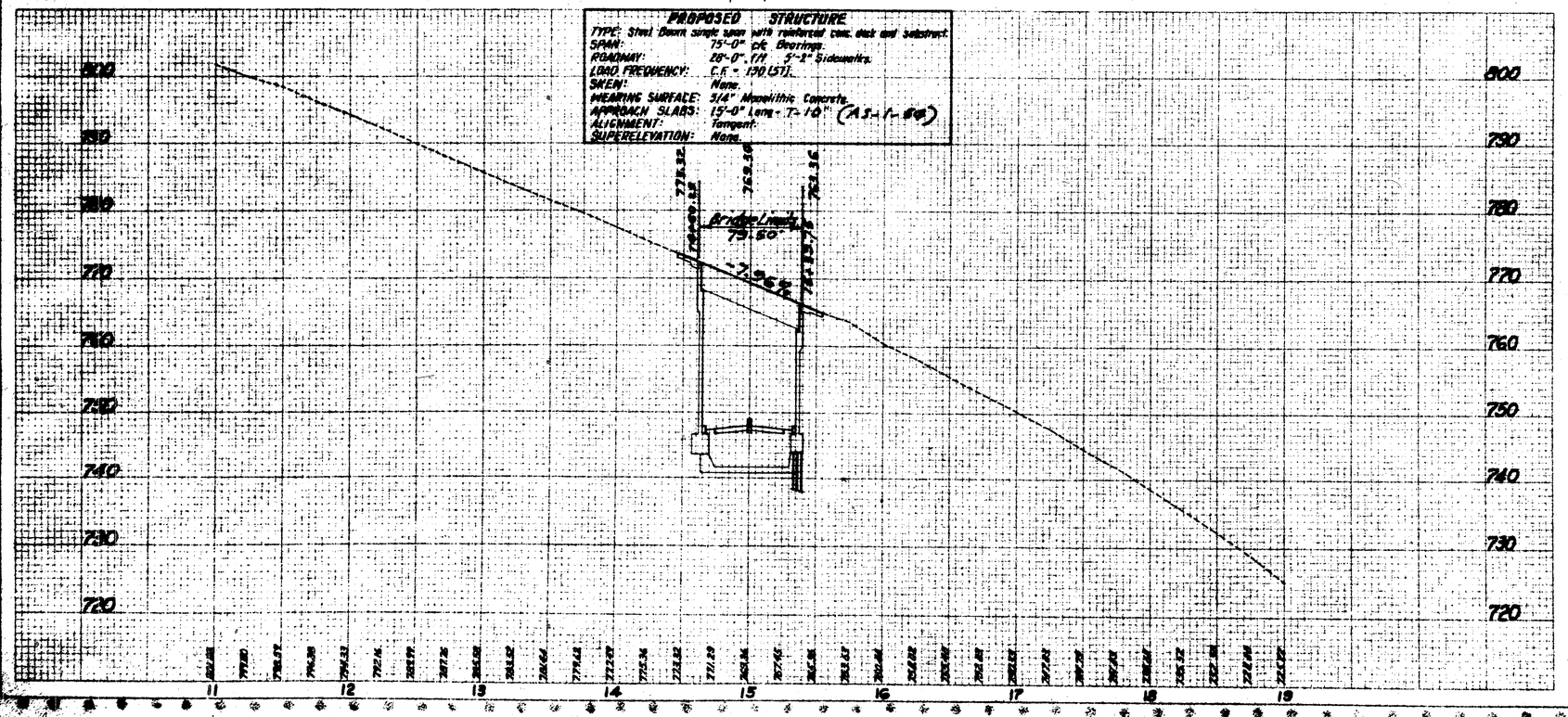
P.O.T. Sta. 693+42.20 ℄ Expressway =
P.O.T. Sta. 15+00.00 ℄ St. Clair St.




TYPICAL SECTION
ST. CLAIR AVE.

**PROPOSED STRUCTURE**

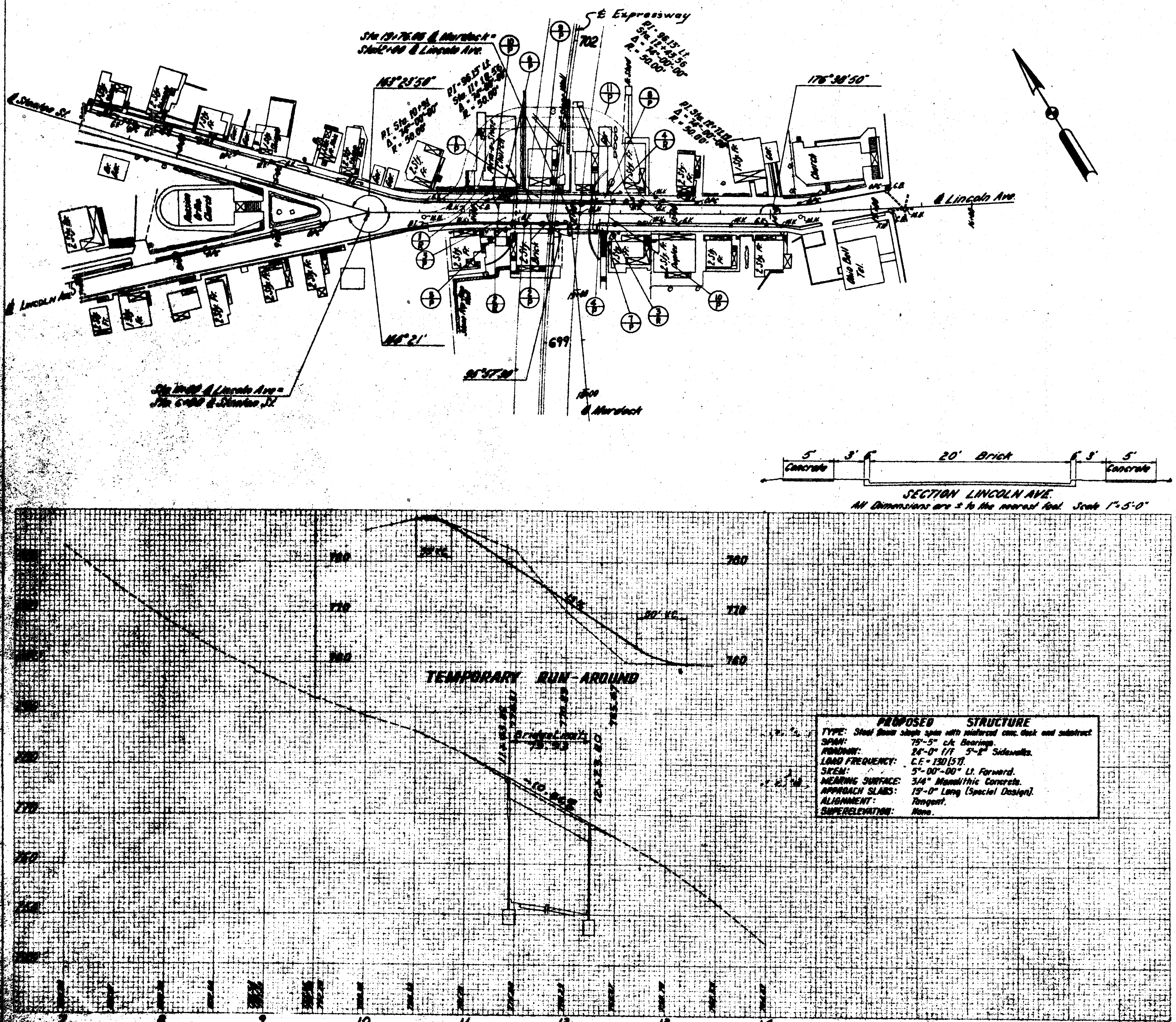
TYPE: Steel Beam single span with reinforced conc. deck and substructure
SPAN: 75'-0" c/c Bearings.
ROADWAY: 28'-0", f/f 5'-2" Sidewalks.
LOAD FREQUENCY: C.F. = 130 (ST).
SKEW: None.
WEARING SURFACE: 3/4" Monolithic Concrete.
APPROACH SLABS: 15'-0" Long x T+10" (A.S.+/- #6@)
ALIGNMENT: Tangent.
SUPERELEVATION: None.




ESTIMATED QUANTITIES

| REF. NO. | STATION TO STATION | SIDE | I-7 Reinf. Conc. Approach Slabs S.Y. | I-15 Guard Rail, Type 2-A L.F. | E-2 Removal & Disposal of Existing Curb L.F. | E-2 Removal & Disposal of Existing Sidewalk S.F. | C-12 Concrete Curb Std. Type 6 L.F. | C-12 4" Conc. Sidewalk S.F. | T-20 Asphaltic Conc. Surface Course, Type A (1-1/2") Finished Depth Cu. Yd. |
|---|---|---|---|---|---|---|---|---|---|
| 1-P | 14+45.25 – 14+60.25 | R | 44.8* | | | | | | |
| 2-P | 15+39.75 – 15+54.75 | L | 44.8* | | | | | | |
| 3-P | 14+16 – 15+54 | RR | | | 152 | 552 | | | |
| 4-P | 14+16 – 15+48 | LL | | | 150 | 528 | | | |
| 1-R | 13+36.06 – 14+58.50 | LL | | 65.5 | | | | | |
| 2-R | 16+95 Murdock Rdge. N-58.50 | RL | | 75.0 | | | | | |
| 5-P | 14+01 – 14+59.75 | RL | | | | | 42 | 211 | |
| 6-P | 14+16.25 – 14+60.25 | RL | | | | | | | |
| 7-P | 15+40.25 – 15+53.5 | RL | | | | | | | |
| 8-P | 15+39.75 – 15+48 | RL | | | | | 17 | 113 | |
| 9-P | 14+16.5 – 14+59.75 | LL | | | | | 43 | | |
| 10-P | 14+16 – 14+60.25 | LL | | | | | | | |
| 11-P | 15+40.25 – 15+47.5 | LL | | | | | 10 | 29 | |
| 12-P | 15+39.75 – 15+48 | LL | | | | | | | |
| 13-P | 14+16.25 – 15+53.5 | WELL | | | | | | | |
| | TOTALS | | 91.34 | 137.5 | 302 | 1080 | 118 | 466 | 1 |

ST. CLAIR ST.




## ESTIMATED QUANTITIES

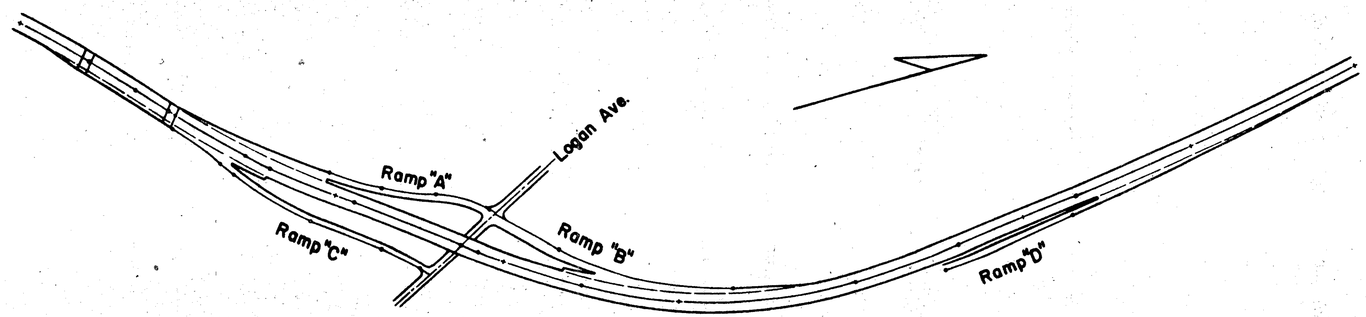
| REF. NO. | STATION TO STATION | SIDE | E-8 Removal of Existing Curb & Gutter (L.F.) | E-8 Removal of Existing Sidewalk (S.F.) | E-8 Removal of Existing Pavement | I-15 4" Conc. Sidewalk (S.F.) | I-7 Reinf. Conc. Appr. Slabs as per Plan (T-10") (S.Y.) | I-15 Guard Rail, Type 2-A (L.F.) | T-35 Asphaltic Conc. Surface Course Type "A" (70-85) Variable Depth (Cu. Yd.) | S-15 Temporary Run-Around Road Class "B" Pav't. | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | E | | | | | 38.3 | | | | 193 |
| 4-P | 12+23.80 ~ 12+38.80 | E | | | | | 38.3 | | | | 193 |
| 1-R | 10+81.36 To 11+43.86 | Lt | | | | | | 62.5 | | | |
| 2-R | 10+7803 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 | E | | | 244 | | | | | | |
| 3-R | 12+24.03 ~ 12+49.03 | Rt | | | | | | 25 | | | |
| 4-R | 12+27.36 ~ 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 | |

# LOGAN AVE. INTERCHANGE

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

153
907

JEFFERSON COUNTY
JEF-7-13.53




## INTERCHANGE

| SHEET NUMBER 162 | 163 | 172 | 173 | 174 | 175 | | 161 | ITEM | QUAN. | UNIT | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | ROADWAY |
| 1432 | 2398 | 2971 | 2673 | 1849 | | | | E-1 | 13,081 | Sq. Yds. | Compacted Subgrade. |
| 192 | | | | 1507 | | | | E-8 | 3649 | Sq. Yds. | Removal and Disposal of Existing Pavement. |
| 478 | | | | | | | | E-8 | 6,918 | Sq. Ft. | Removal and Disposal of Existing Sidewalk |
| 510 | | | | | | | | E-8 | 1,785 | Lin. Ft. | Removal and Disposal of Existing Curb, Curb and Gutter or Header Curb. |
| 1498 | 2387 | | | 809 | 668 | | | I-13 | 8686 | Sq. Ft. | 4" Concrete Sidewalk |
| 50 | | | | 490 | 972.5 | | | I-15 | 1092.5 | Lin. Ft. | Guard Rail, Steel Beam Standard Type, (Deep) |
| | | | | 124 | 1 | | 3 | L-10 | 128 | Sq. Yds. | Sodding. |
| | | | | | | | | | | | DRAINAGE |
| | | | | | 32 | | 12 | I-2 | 12 | Lin. Ft. | 30" Class "A" Storm Sewer |
| | | | | | | | 356 | I-2 | 356 | 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. | 36" Storm Sewers Under Pavement or Approaches, Sec. M-6.6 (a) 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). |
| | | | | | | | 526 | I-2 | 526 | 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 | 96 | 20 | 90 | 20 | | | I-4 | 206 | Lin. Ft. | 8" 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 NUMBER 162 | 163 | 172 | 173 | 174 | 175 | 161 | ITEM | QUAN. | UNIT | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | DRAINAGE (CONTINUED) |
| | | | | | | 1 | I-8 | 1 | Each | Standard No. 1-3 Catch Basins. |
| | | | | | | 5 | I-8 | 5 | 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. 2-10 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. 2-30 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. |
| | | | | | 0.25 | 0.72 | S-1 | 0.95 | Cu. Yds. | Concrete for Structures, Class "E". |
| | | | | | 1 | Lump | E-2 | 4 | Cu. Yds. | Excavation for Structures. |
| | | | | | | Lump | E-2 | Lump | Lump | Cofferdams, Cribbing and Sheeting. |
| | | | | | | | | | | PAVEMENT |
| | 20 | | | | | | B-10 | 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 |
| | | 1.0 | 6.6 | 6.9 | 4.9 | | T-31 | 29.4 | Cu. Yds. | Bituminous Surface Treatment - No. 6 Aggregate. |
| | 1.2 | | | | | | T-35 | 1.2 | Cu. Yds. | Asphaltic Concrete Surface Course, Type A (ED-BIC) |
| 1438.7 | 1212.9 | 1473.2 | 2096.9 | 1713.4 | 1036.6 | | | 9283.7 | Sq. Yds. | T-8-35 Pavement |
| | | 250 | | | 74 | | I-12 | 324.0 | Lin. Ft. | Special Concrete Curb. |
| 968 | 747 | 101.7 | 107.0 | 178.0 | | | I-12 | 210.7 | Lin. Ft. | Combination Curb & Gutter, Standard Type 2. |
| | | 194 | 160 | 78.6 | 255 | | I-12 | 140.5 | Lin. Ft. | Concrete Curb, Standard Type 6. |
| | | 121.4 | 123.7 | 125.9 | 89.4 | | I-18 | 460.4 | 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 | 295.5 | 382.9 | 367.8 | 413.9 | 307.0 | | I-22 | 2331.1 | Cu. Yds. | Subbase. |

MICHAEL BAKER JR, CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

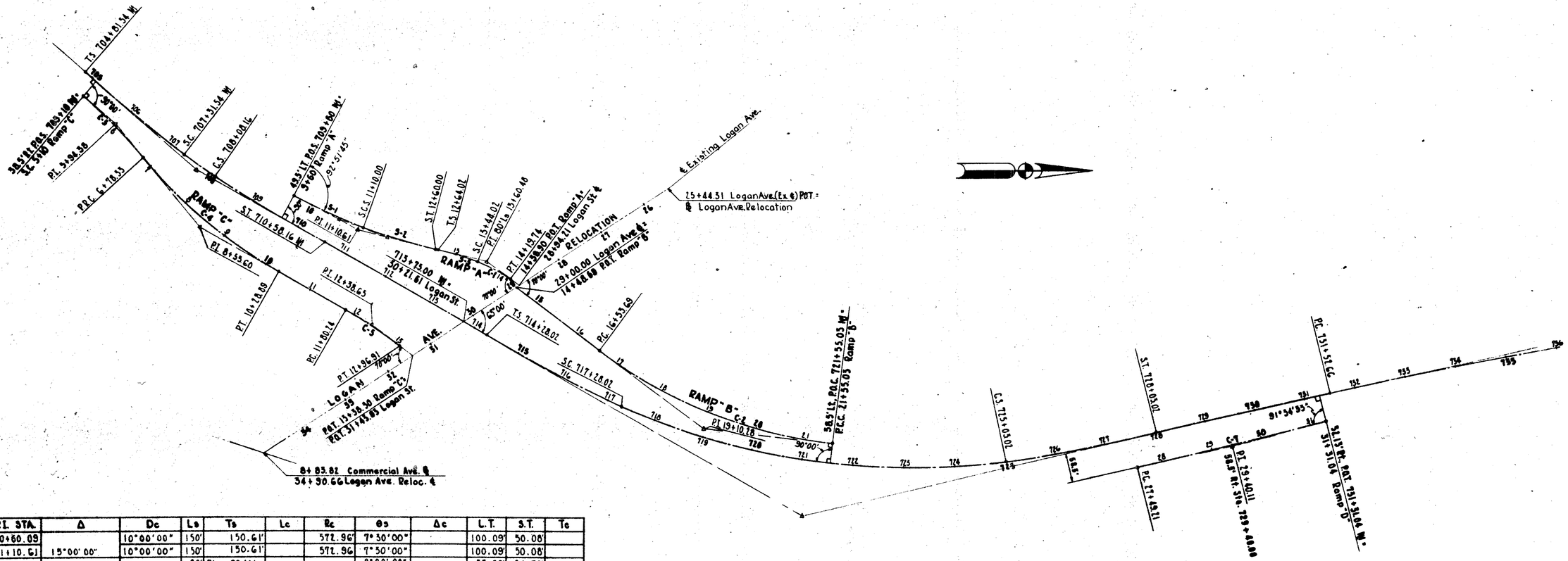
LOGAN AVE INTERCHANGE
SUB - SUMMARY

| Designed | Drawn | Traced | Checked | Reviewed Date | Approved |
|---|---|---|---|---|---|
| | L.C.C. | | | | |

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

JEFFERSON COUNTY
JEF - 9 - 13.55

160
917




| CURVE Nº | P.I. STA. | Δ | Dc | Ls | Ts | Lc | Rc | θs | Δc | L.T. | S.T. | Te |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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' | Bt. 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+94.38 | 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°54'35" | 0°30'00" | | | 381.83' | 11,459.16 | | | | | 190.95' |

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MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SCHEMATIC LAYOUT PLAN

LOGAN AVENUE INTERCHANGE

| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| Griffin Mudd | Manos | Manos | Strouse Bagley | Griffin 10-9-81 | |

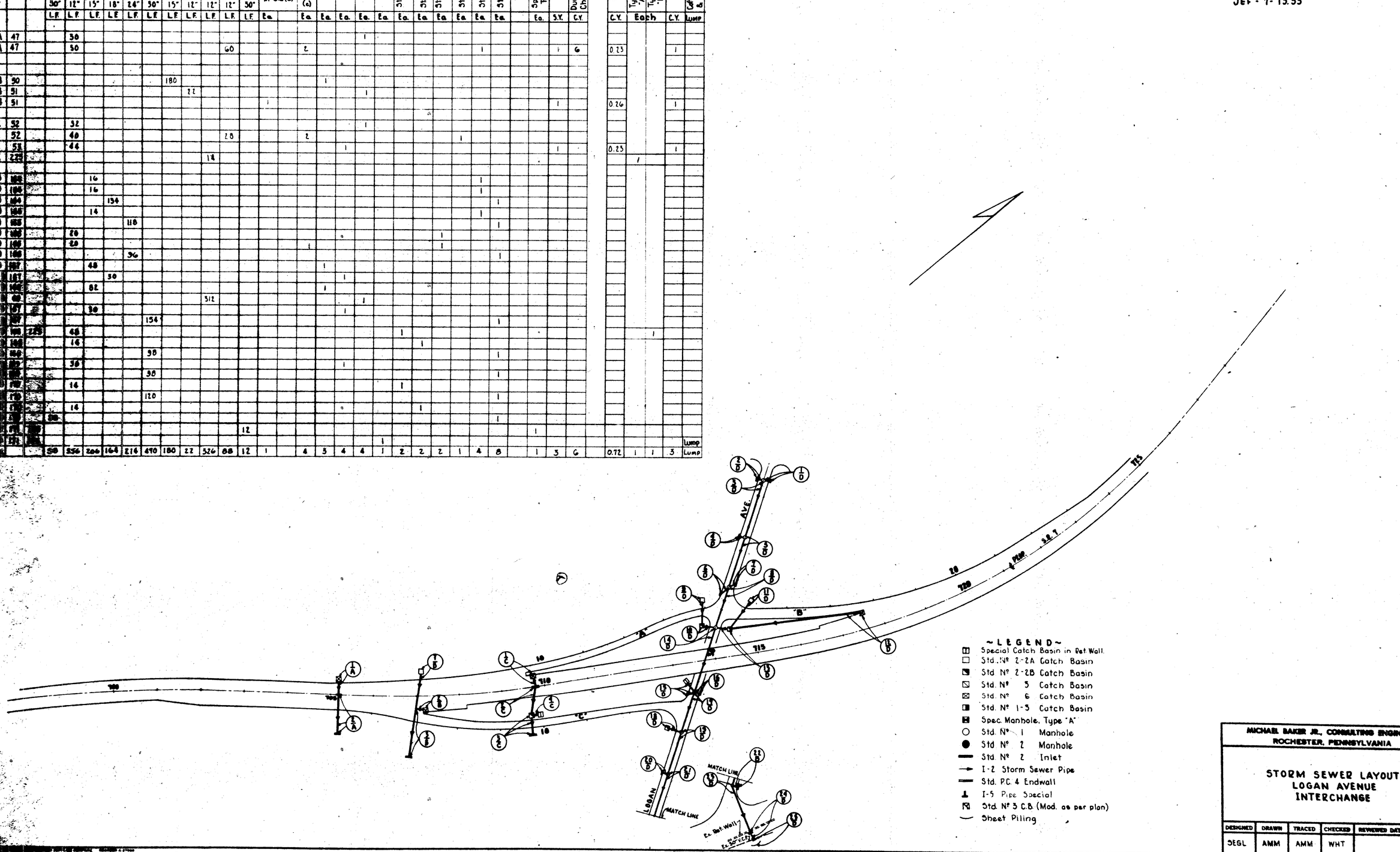
CURVE DATA & ALIGNMENT "LOGAN ST.

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

161
307

JEFFERSON COUNTY
JEF - 7- 13.53

| Reference N° | Sheet N° | Sheet N° | I-2 Storm Sewer Under Pav't or Appro. M-6.4(a) or M-6.8(a) 30" LF | Sec. M-6.5(b) or Sec M-6.8(b) 12" LF | 15" LF | 18" LF | Sec M-6.6(a) or Sec M-6.8(b) 24" LF | 30" LF | Sec M-6.6(d) 15" LF | 12" LF | Sec M-6.5(a) Sec M-6.8(a) 12" LF | Sec M-6.6(c) 12" LF | Class "A" 3.5 30" LF | I-5 Pipe Specials 15"×15"×12" Tee M-6.6(d) Ea | 12"×30" Bend M-6.4 (a) Ea | I-8 Std N° 2-1A C.B. Ea | Std N° 2-2A C.B. Ea | Std N° 2-2B C.B. Ea | Std N° 6 C.B. 1.3 C.B. Ea | Std N° Ea | INLETS AS PER PLAN Std N° 2.8 Mod Ea | Std N° 2-10 Ea | Std N° 2-12 Mod. Ea | Std N° 2-14 Ea | Std N° 2-20 Ea | STD M.H. Std N° 1 Ea | M.H. Spec. M.H. Type "A" Ea | L-10 Sodding S.Y. | I-10 Dumped Rock Chan. Prof. C.Y. | S-1 Conc for Str's Class "E" C.Y. | I-8 Special Catch Basins Type "A" Each | Type "B" | E-2 Excav. for Structures C.Y. | E-2 Cofferdams-Cham. & Sheeting Lump |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-A | 47 | | | 30 | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| 2-A | 47 | | | 30 | | | | | | | | 60 | | | 2 | | | | | | | | | | 1 | | | 1 | 6 | | 0.23 | | 1 | | |
| 3-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 | | | 46 | | | | | | | | | | | | | 1 | | | | | | | | | | | 1 | | 0.23 | | 1 | | |
| 4-C | 225 | | | | | | | | | | 18 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| 1-D | 185 | | | | 16 | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| 2-D | 185 | | | | 16 | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| 3-D | 186 | | | | | 134 | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| 4-D | 186 | | | | 14 | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| 5-D | 188 | | | | | | 118 | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| 6-D | 188 | | | 28 | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 7-D | 188 | | | 28 | | | | | | | | | | | 1 | | | | | | | 1 | | | | | | | | | | | | | |
| 8-D | 189 | | | | | | 96 | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| 9-D | 187 | | | | 48 | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| 10-D | 187 | | | | | 30 | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| 11-D | 188 | | | | 82 | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| 12-D | 88 | | | | | | | | | | 312 | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| 13-D | 157 | | | | 30 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| 14-D | 187 | | | | | | | 156 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| 15-D | 188 | 225 | | 48 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| 16-D | 188 | | | 16 | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 17-D | 189 | | | | | | | 98 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| 18-D | 189 | | | 36 | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| 19-D | 189 | | | | | | | 98 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| 20-D | 190 | | | 16 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| 21-D | 190 | | | | | | | 120 | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| 22-D | 191 | | | 16 | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 23-D | 191 | 88 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| 24-D | 191 | 188 | | | | | | | | | | | 12 | | | | | | | | | | | | | | | 1 | | | | | | | | |
| 25-D | 191 | 188 | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| Lump | | | 50 | 336 | 206 | 164 | 216 | 490 | 180 | 22 | 526 | 88 | 12 | 1 | | 4 | 3 | 4 | 4 | 1 | 2 | 2 | 2 | 1 | 4 | 8 | | 1 | 3 | 6 | 0.72 | 1 | 1 | 3 | Lump |




MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# STORM SEWER LAYOUT LOGAN AVENUE INTERCHANGE

| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| SEGL | AMM | AMM | WHT | | |

JEFFERSON COUNTY JEF.-7-13.53

U-430 (14)

LOGAN AVENUE

ESTIMATED QUANTITIES

| REF NO | STATION TO STATION | SIDE | E-1 Composited Sub-grade S.Y. | I-12 Combined Curb & Gutter L.F. | I-13 4" Side-walk S.F. | I-28 Sub Base Variable Depth C.Y. | T-D-35 Pvmt. S.Y. |
|---|---|---|---|---|---|---|---|
| 1-P | 25+00 Const Logan Ave. & Fe | | | | | | |
| | 31+00 Logan Ave. Reverse | LT & RT | 1600 | | | 266.6 | 1600 |
| 2-P | Pvmt - Headwall Ave. To | LT | 50 | | | 6.3 | 38 |
| | 25+63.66 Logan Ave. | | | | | | |
| 3-P | Pvmt - 0+65.66 Extension Ave. To | RT | 49 | | | 8.1 | 44.7 |
| | 25+71.26 Logan Ave. | | | | | | |
| 4-P | Headwall Ave. To 28+29.26 Logan Ave. | LT | 87 | 315 | | 10.7 | |
| | 0+65.06 Extension Ave. To | RT | 95 | 341 | | 20.2 | |
| 5-P | 29+50.20 - 31+00 | RT | 42 | 150 | | 10.6 | |
| 6-P | 29+63.66 - 31+00 | LT | 45 | 162 | | 11.5 | |
| 7-P | 25+51 To 28+46 | LT | | | 1276 | | |
| 8-P | 0+71 Extension Ave. To 1+65.65 Logan Ave. | RT | | | 1429 | | |
| 9-P | 29+26 - 31+00 | LT | | | 712 | | |
| 10-P | 29+36 - 31+00 | RT | | | 663 | | |
| 11-P | 25+00 - 31+00 | LT & RT | | | | | |
| D1-4 | 25+44 - 31+00 | LT & RT | | | | | |

| REF NO | Remove of Existing Pvmt. S.Y. | Curb L.F. | Side-walk S.F. |
|---|---|---|---|
| E-6 | | | |

| REF NO | 6" Pipe Under-drains L.F. | 6" Pipe Outlet See M.6.10 L.F. |
|---|---|---|
| I-4 | | |

SEE SHEET NO

END SHEET

STA. 31+00

STA. 21+00

BEGIN SHEET

BEGIN WORK STA. 25+00

RAMP "A"

RAMP "B"

Const. Retaining Wall

Existing

LEGEND

Quantities not included this sheet

Hotel

Brick

Diagonal

Gasoline

Elev. 815.00

P.V.I. 24+50

P.V.I. 27+30

P.V.I. 21+50

STA. 33+00

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STA. 997+50

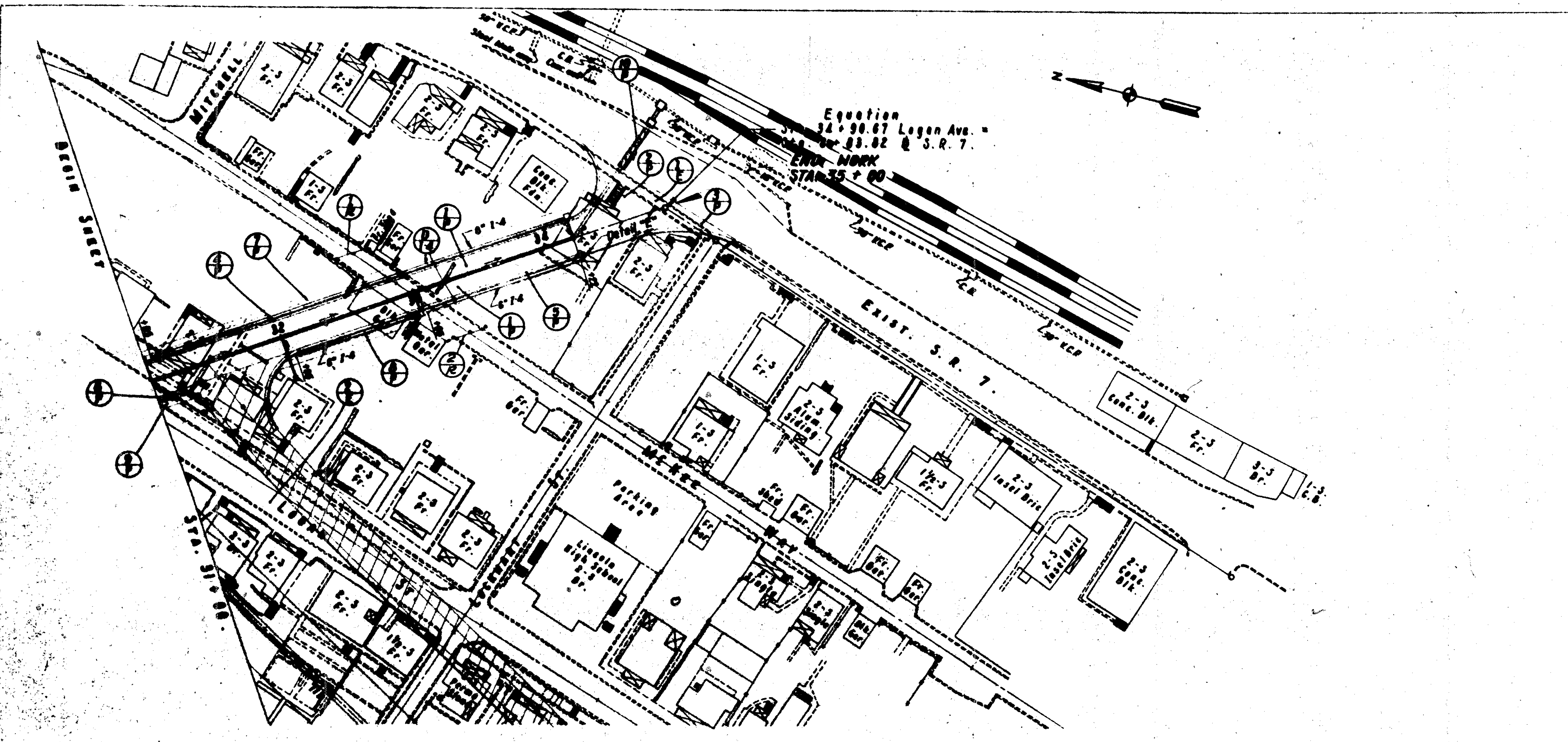
STA. 998+50

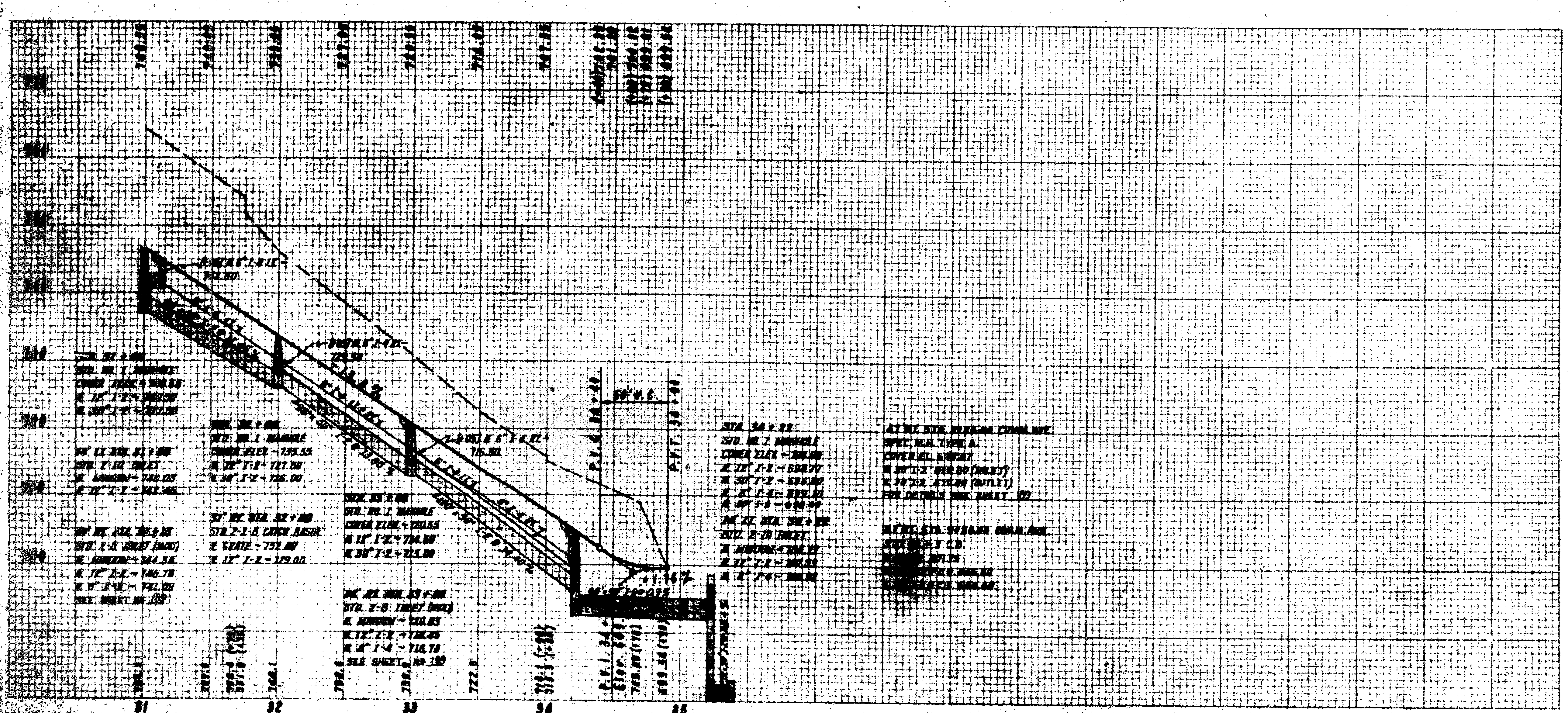
STA. 999+50

STA. 1000+50

| FED. RD. DIV. NO. | STATE | PROJECT | | |
|---|---|---|---|---|
| 2 | OHIO | U—430 (14) | | 163 / 307 |

JEFFERSON COUNTY JEF.-7-13.53




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-15 4" Sidewalks S.F. | F-15 Guard Rail Type EA L.F. | I-22 Sub Base Variable Depth C.Y. | T-B-35 Pav't. S.Y. | B-10 8" Portland Cement Concrete Base Course S.Y. | E-6 Removal of Existing Pav't S.Y. | E-6 Removal of Existing Curb L.F. | E-6 Removal of Existing Sidewalk S.F. | T-35 Asphaltic Concrete Surface Course Type "A" (76-65) C.Y. | I-5 Pipe Specials for Underdrains 6"x90° EACH | I-4 6" Pipe Underdrains L.F. | I-4 6" 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 + 22.80 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 0 + 13.07 ℄ S.R. 7 | Rt. | 39 | | | | 8.4 | 38.5 | | | | | | | | | 8 & 180 |
| 4-P | 31 + 00 Logan Ave. To 9 + 80.51 ℄ S.R. 7 | Lt. | 110 | 395 | | | 251 | | | | | | | | | | 8 |
| 5-P | 32 + 14.42 Logan Ave. To 0 + 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 0 + 13.07 ℄ S.R. 7 | Rt. | | | 1219 | | | | | | | | | | | | 8 |
| 9-P | 31 + 00 - 31 + 26 | Rt. | | | 119 | | | | | | | | | | | | 8 |
| 10-P | 34 + 75 | Lt. | | | | | 4 | | 20 | | | | | | | | |
| 1-E | 0 + 13.07 S.R. 7 To 9 + 80.51 S.R. 7 | | | | | | | | | 65 | | 828 | 1.2 | | | | |
| 2-E | 31 + 00 Logan Ave. To Locust St. | Rt. | | | | | | | | 667 | 510 | 3300 | | | | | |
| 01-4 | 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 | |

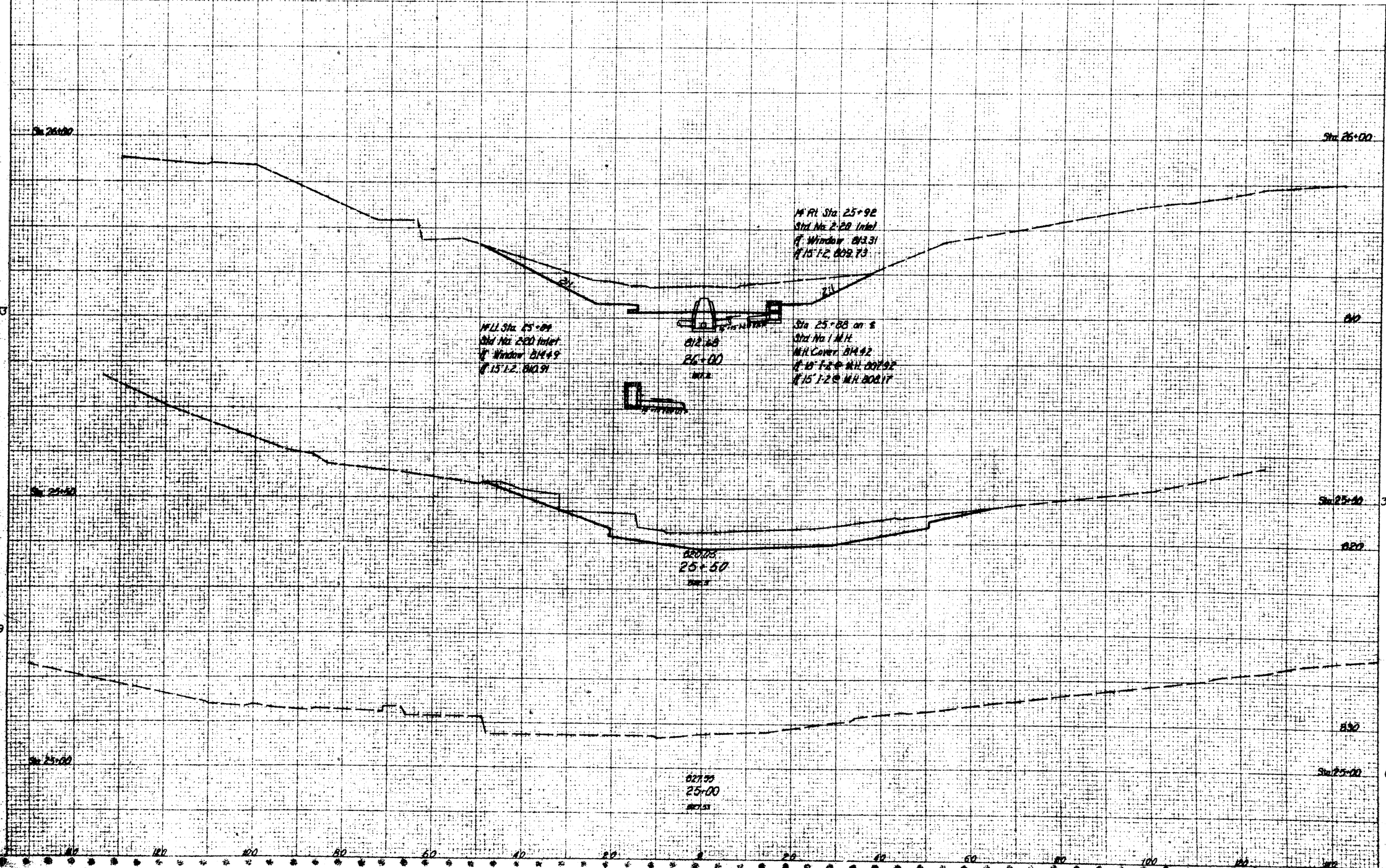
LOGAN AVENUE RELOCATION

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

164
307

JEFFERSON COUNTY
JEF-7-13.53

| SEEDING | |
|---|---|
| LBS. PER 1000 SQ. FT. | SQ. YDS. |
| 70 | 333 |
| 50 | 139 |
| 0 | |




Sta 25+00 to Sta 26+00 LOGAN Aug

| | | | |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

165
307

JEFFERSON COUNTY
JEF-7-13.53

SEEDING

| END WIDTH | 10 YDS |
|---|---|
| 80 | |
| 528 | |
| 110 | |
| 583 | |
| 100 | |
| 472 | |
| 717 | |

| | END AREA | | VOLUME | |
|---|---|---|---|---|
| | CUT | FILL | CUT | FILL |
| Sta 27+50 | 1085 | 0 | | |
| | | | 1,783 | 0 |
| Sta 27+00 | 840 | 0 | | |
| | | | 1611 | 0 |
| Sta 26+50 | 900 | 0 | | |
| | | | 1181 | 0 |
| Sta 26+00 | 575 | 0 | | |

Sta 27+50

792.69
27+50
796.5

1½:1

1:1

Sta 27+00

Sta 27+25 ⌀ ℄
Std No 1 M.H.
M.H. Corner 795.37
ℓ 15" I-2 @ M.H. 795.00
ℓ 24" I-2 @ M.H. 795.30
ℓ 18" I-2 @ M.H. 795.83 795.68

27+00

M.H. At Sta 27+25
Std 2-20 Inlet
ℓ Window 794.81
ℓ 15" I-2 791.23

Sta 26+50

803.35
26+50

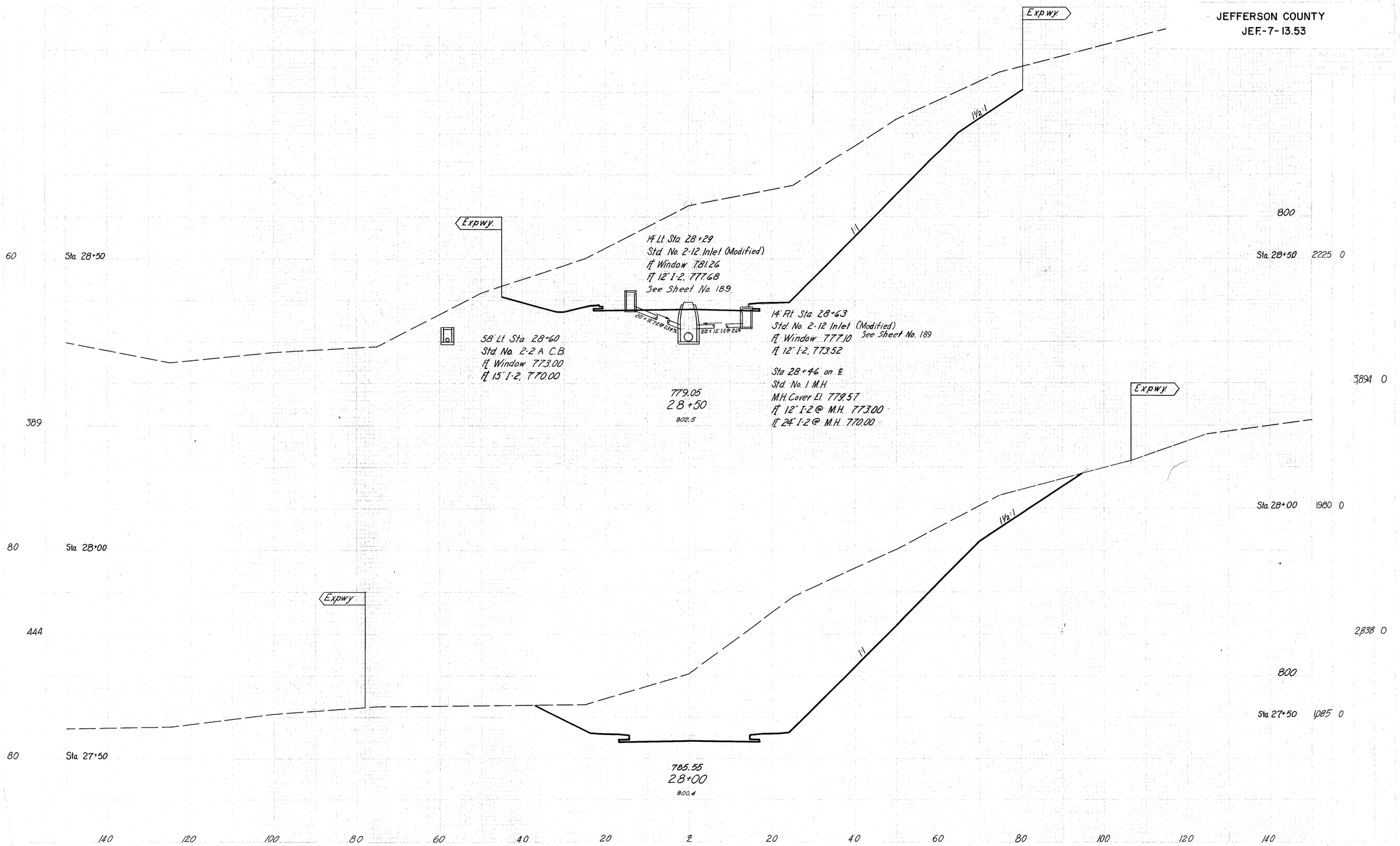
Sta 26+00

Sta 26+50 to Sta 27+50 LOGAN Ave

166
307

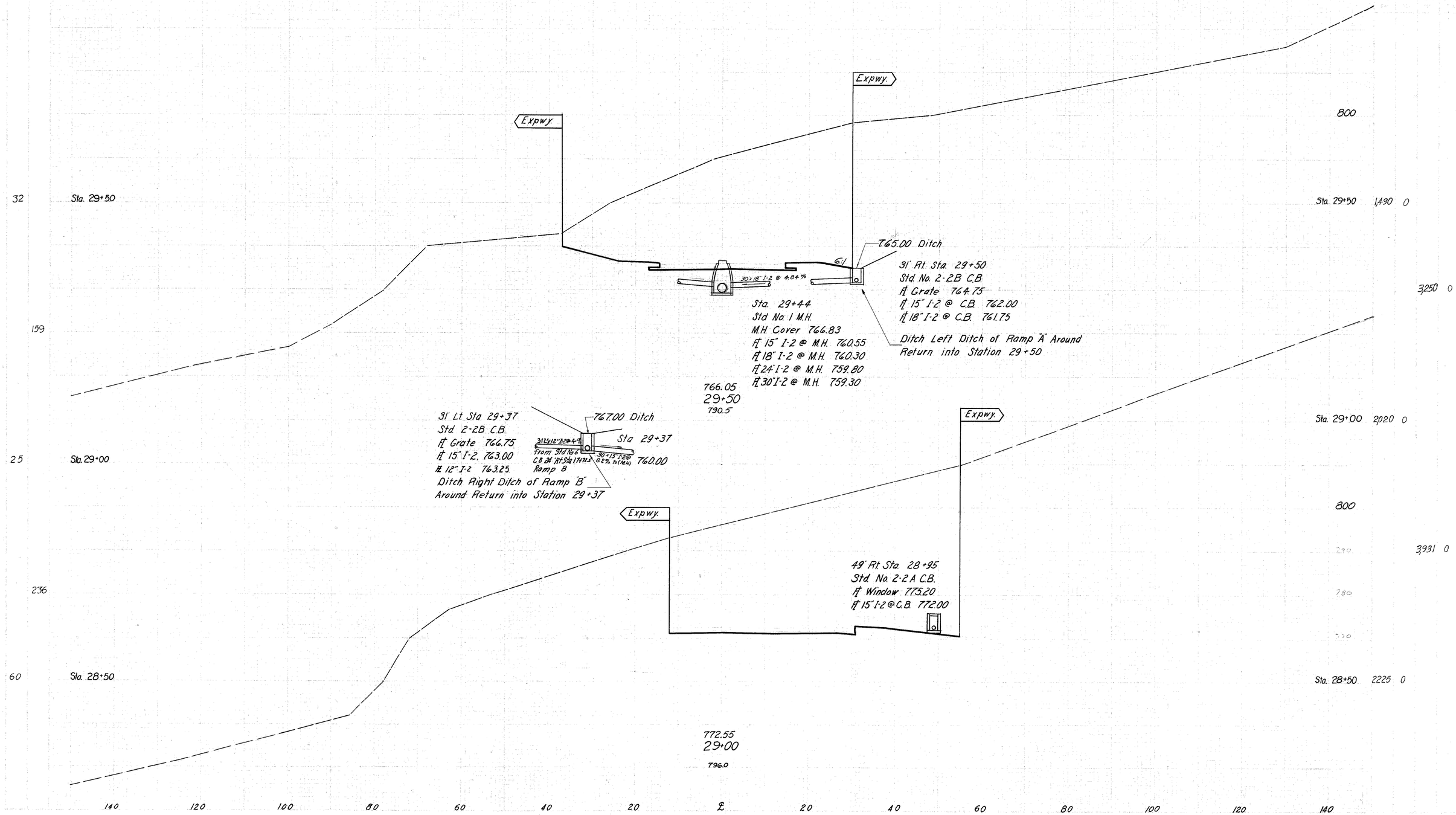
U-430 (14)

JEFFERSON COUNTY
JEF.-7-13.53




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

JEFFERSON COUNTY
JEF.-7-13.53




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

180 Sta. 31+00

Expwy.

2:1

14' Lt. Sta 31+00
Std. No. 2-10 Inlet
Ht. Window 746.03
Ht. 12" I-2, 742.45

14"@13%

20"@13%

746.55
31+00
761.0

Sta. 31+00 on ℄
Std. No. 1 M.H.
M.H. Cover 746.55
Ht. 12" I-2 @ M.H. 740.50
Ht. 30" I-2 @ M.H. 737.00

14' Rt. Sta 31+13
Std. No. 2-8 Inlet (Modified)
Ht. Window 744.34
Ht. 12" I-2, 740.76
See Sheet No. 189

Expwy.

Sta. 31+00 955 75

760

861

2,287 454

130 Sta. 30+50

Expwy.

24' Rt. Sta 30+85
Catch Basin In Retaining Wall
Ht. 12" I-2 @ C.B. 740.60
For Details See Ret. Wall Plans

770

Sta. 30+50 1,515 415

753.05
30+50
769.9

606

Expwy.

3,033 491

88 Sta. 30+00

Expwy.

Sta. 30+00 1,760 115

770

306

3,010 107

32 Sta. 29+50

Sta. 29+50 1,490 0

753.55
30+00
776.5

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

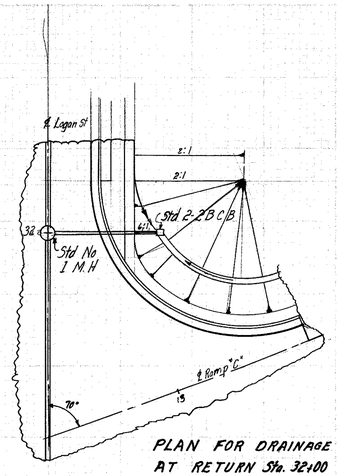
Sta. 30+00 to Sta. 31+00 LOGAN Ave.

U-430 (14)

JEFFERSON COUNTY

JEF.-7-13.53

169
307




PLAN FOR DRAINAGE AT RETURN Sta. 32+00

73 Sta. 32+50 — Sta. 32+50 900 0

370 — 730 — 1,954 0

727.05
32+50
738.7

Expwy.

60 Sta. 32+00 — Sta. 32+00 1,210 0

2:1 — 6:1 — 2:1

30"x12" I-2 @ 5.07%

Sta 32+00 on ℄
Std No 1 M.H.
M.H. Cover 733.55
℄ 12" I-2 @ M.H. 727.50
℄ 30" I-2 @ M.H. 726.00

31' Rt Sta 32+00
Std No 2-2-B CB
℄ Grate 732.00
℄ 12" I-2, 729.00

730 — 2,611 0

733.55
32+00
745.3

Expwy.

236

25 Sta. 31+50 — Sta. 31+50 1,610 0

Expwy.

2:1

569 — 740 — 2,375 70

180 Sta. 31+00 — Sta. 31+00 955 75

740.05
31+50
755.4

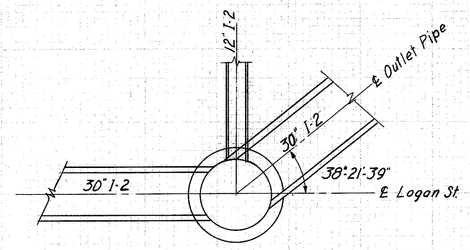
180
68

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

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

U-430 (14)

JEFFERSON COUNTY
JEF.-7-13.53




PLAN Std. No. 1 MH
Sta 34+22

57 Sta. 34+00

Sta. 34+00 505 0

339

2:1

14'Lt Sta 34+22
Std. No. 2-10 Inlet
ft Window 704.17
ft 12" I-2, 700.59

14"x 19" I-2 @ 13%

707.55
34+00
714.6

Sta. 34+22 on ℄
Std. No. 1 M.H.
M.H. Cover 704.69
ft 12" I-2 @ MH. 698.77
ft 30" I-2 @ M.H. 696.00
ft 30" I-2 @ M.H. 692.69

1,144 0

710

Sta. 33+50 730 0

339

65 Sta. 33+50

2:1

2:1

720 1,385 0

361

714.05
33+50
723.7

Sta. 33+00 765 0

65 Sta. 33+00

2:1

2:1

730 1,542 0

384

Sta. 33+00 on ℄
Std. No. 1 M.H.
M.H. Cover 720.55
ft 12" I-2 @ M.H. 714.50 720.55
ft 30" I-2 @ M.H. 713.00 33+00
730.9

14"x12" I-2 @ 13.9%

14' Rt. Sta. 33+00
Std. No. 2-8 Inlet (Modified)
ft Window 720.03
ft 12" I-2, 716.45
See Sheet No. 189

73 Sta. 32+50

Sta. 32+50 900 0

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

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

U-430 (14)

JEFFERSON COUNTY

JEF.-7-13.53

℄ Logan Ave. Sta. 34+22 =
Sta 9+26.44 Comm. 53.84' Lt.

Logan Ave. Seeding
Seeding = 7,001 Sq. Yds.

98'x 30" I-2 @ 0.7%

Sta 34+22
Std No. 1 MH.
MH. Cover El. 704.69
Fl. 12" I-2 @ MH. 698.77
Fl. 30" I-2 @ MH. 696.00
Fl. 30" I-2 @ MH. 692.69

Prop. Spec. MH Type "A"
Prop. Std-1-3 C.B.
30" I-2
Wall
Fill to Grade
Excav. to Grade

47' Rt. Sta 9+26.44 Comm.
Spec. M.H. Type "A"
Cover El. 698.67
Fl. 30" I-2 692.00 (inlet)
Fl. 30" I-2 670.00 (outlet)
For Details See Sheet 18C

Logan Ave. Earthwork
Excavation = 40,325
Embankment = 1,122
Embankment +15% = 1,290

61' Rt. Sta. 9+26.44 Comm.
Std. No. 1-3 C.B.
Fl. Grate 671.75
Fl. 30" I-2 @ C.B. 666.60
Fl. 30" V.C.P. @ C.B. 666.60

1½:1
Rail
M.A.I. EXC.
Sheeting
12" I-2 @ 20.4%

692.00

100 80 60 40 20 ℄ 20 40 60 80

9+26.44
Comm. Ave.

640 660 680 700

WALL

35+00
700.0

700

0 Sta. 34+90 Sta. 34+90 0 0

66

459 0

30 Sta. 34+50 Sta. 34+50 620 0

710

241

1,042 0

2:1

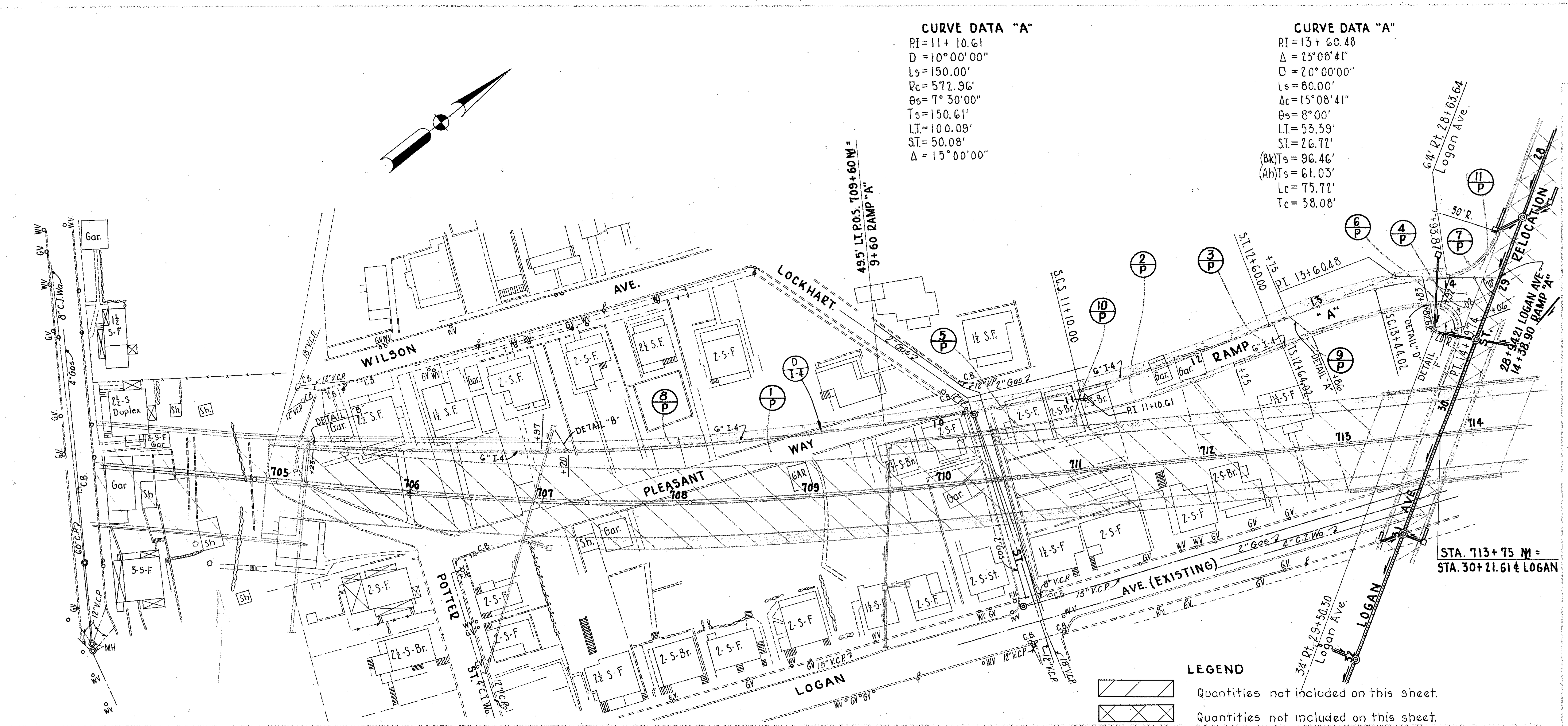
WALL

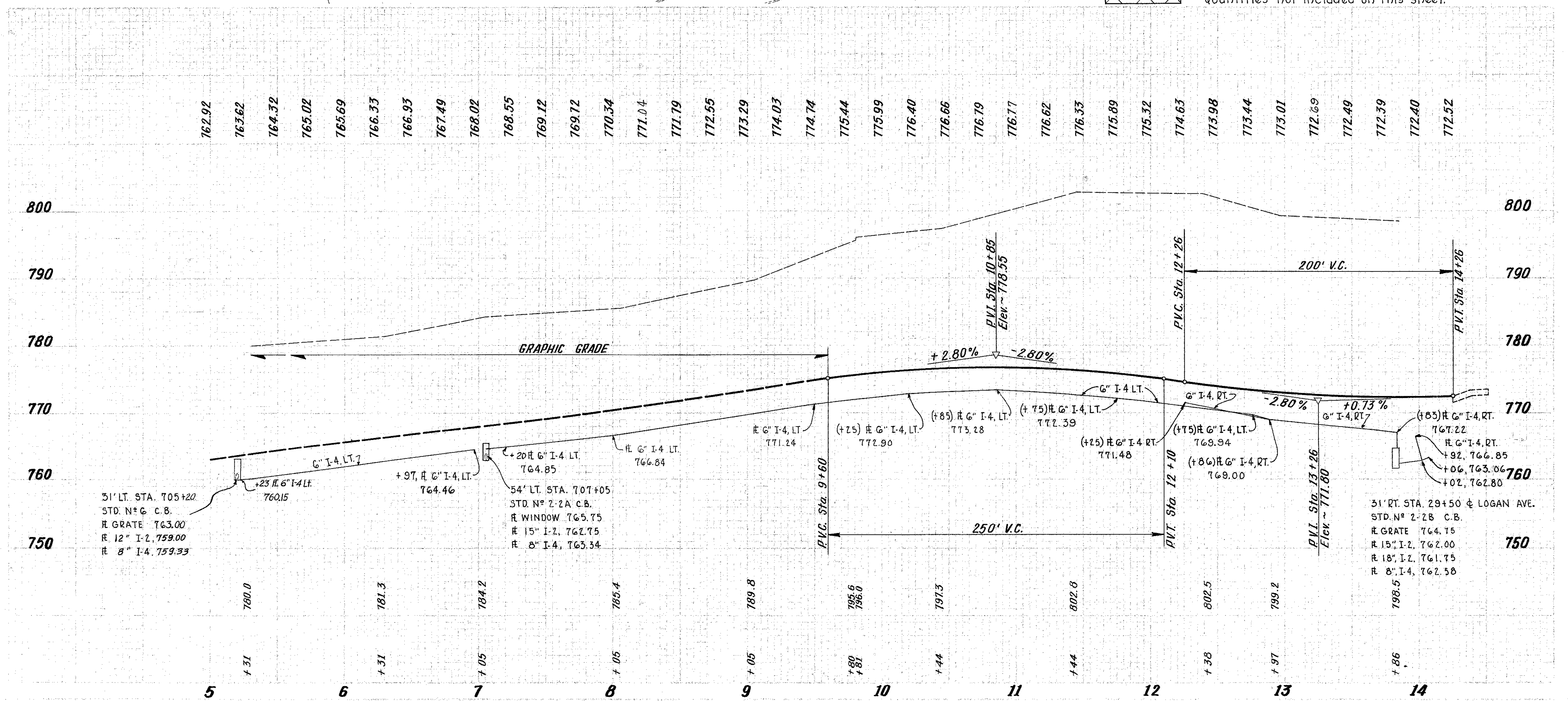
701.23
34+50
710.14

57 Sta. 34+00 Sta. 34+00 505 0

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

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

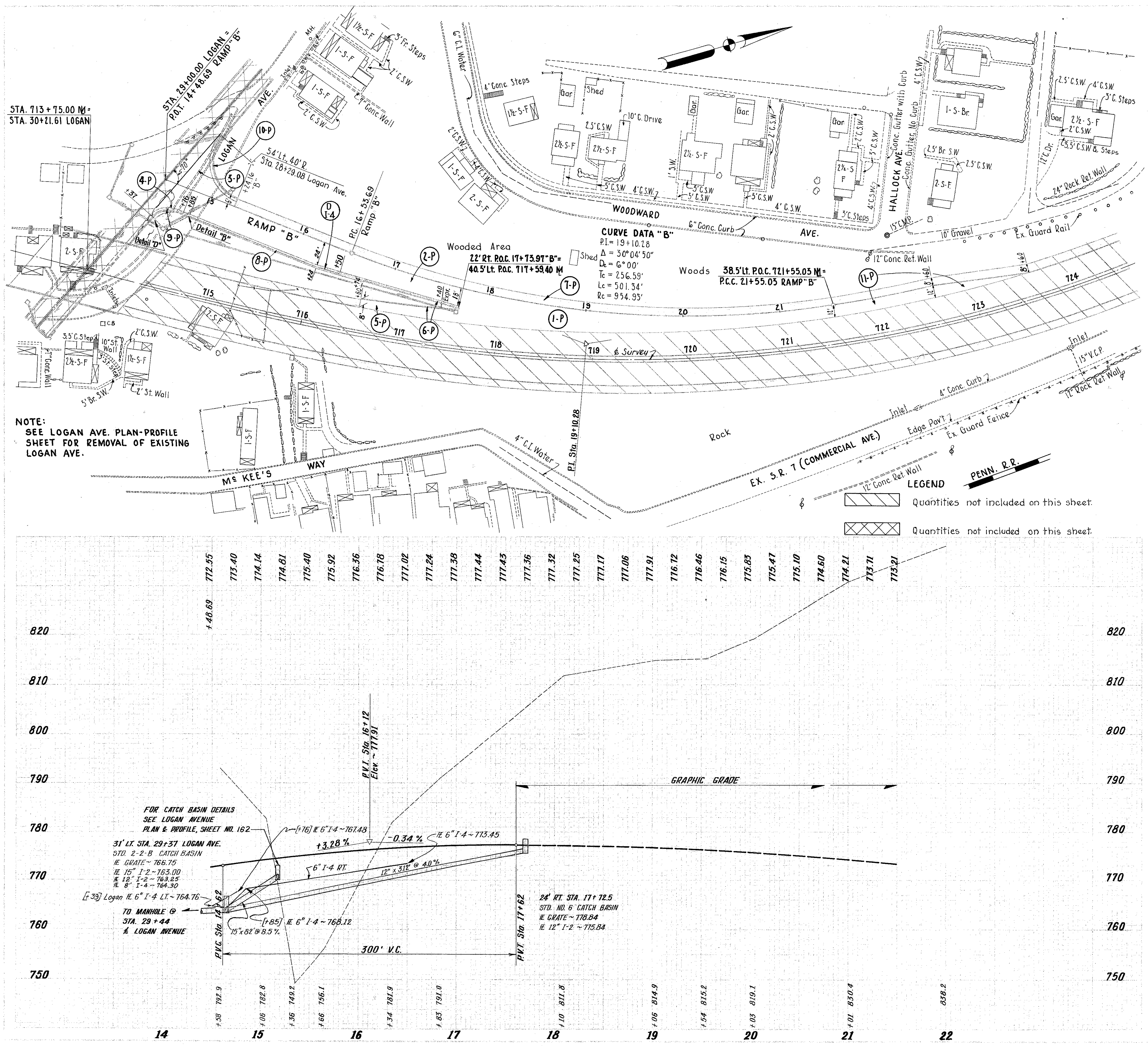



ESTIMATED QUANTITIES

| 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. Crshd Agg. Shldrs & 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" Sidewalk S.F. | I-12 Spec. Conc. Curb L.F. | I-5 Pipe Specials for Underdrains 6"x60° Ea. | I-5 6"x90° Ea. | I-5 6" Wye Ea. | I-5 6" Tee Ea. | I-4 6" Pipe Underdrains 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. | | 396 | | | | 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 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 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 | |

JEFFERSON COUNTY JEF-7-13.53




NOTE:
SEE LOGAN AVE. PLAN-PROFILE SHEET FOR REMOVAL OF EXISTING LOGAN AVE.

ESTIMATED QUANTITIES

| Ref. No. | Station to Station | Side | Sheet No. | 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 6"x90° | I-4 6" Pipe Under-drains L.F. | I-4 8" Pipe Outlet Sec. M-6.4(a) L.F. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-P | 17+73.97 to 21+55.03 | Rt. | 3,5,178&179 | | 857 | | | | 142.8 | 856.7 | | | | | | | |
| 2-P | 14+61.46 to 17+73.97 | Lt.&Rt. | 3,5,&178 | | 827 | | | | 137.8 | 826.5 | | | | | | | |
| 3-P | Logan 28+29.08 to Ramp "B" 15+24.16 | Lt. | 178 | | 92 | | | | 15.3 | 91.8 | | | | | | | |
| 4-P | Logan 29+37.64 to Ramp "B" 14+67.77 | Rt. | 178 | | 5 | | | | 0.8 | 4.8 | | | | | | | |
| 5-P | 716+60.00 to 717+59.40 | Lt. | 5&178 | | 111 | | | | 18.4 | 110.5 | | | | | | | |
| 6-P | Mainline 716+60.00 to Ramp "B" 16+74.00 | Lt.&Rt. | 5&178 | | 11 | 160 | | 14 | | | | | | | | | |
| 7-P | Ramp "B" 15+24.16 to Mainline 723+60.00 | Lt. | 3,5,178&179 | 61.9 | 743 | | 109.5 | | 204.0 | | 186 | 5.9 | | | | | |
| 8-P | 14+67.77 to 17+73.97 | Rt. | 5&178 | 7.6 | 91 | | 14.2 | | 14.3 | | 23 | 0.7 | | | | | |
| 9-P | Logan Ave. 29+37.64 to Ramp "B" 14+67.77 | | 5&178, 8&178 | | 7 | | | | | | | | 26.9 | | | | |
| 10-P | Logan Ave. 28+29.08 Ramp "B" 15+24.16 | Lt. | 8&178 | | 22 | | | | | | | | 80.1 | | | | |
| 11-P | 721+55.03 to 723+60.00 | Lt. | 3,5,&179 | | 207 | | | | 34.4 | 206.6 | | | | | | | |
| DI-4 | Logan Ave 29+37 to Ramp "B" 16+50 | Rt. | 188 | | | | | | | | | | | 1 | 1 | 200 | 20 |
| Total | | | | 69.5 | 2971 | 160 | 123.7 | 14 | 567.8 | 2096.9 | 209 | 6.6 | 107 | 2 | | 200 | 20 |

RAMP "B"

STATE | SHEET NO. | TOTAL SHEETS
2 OHIO

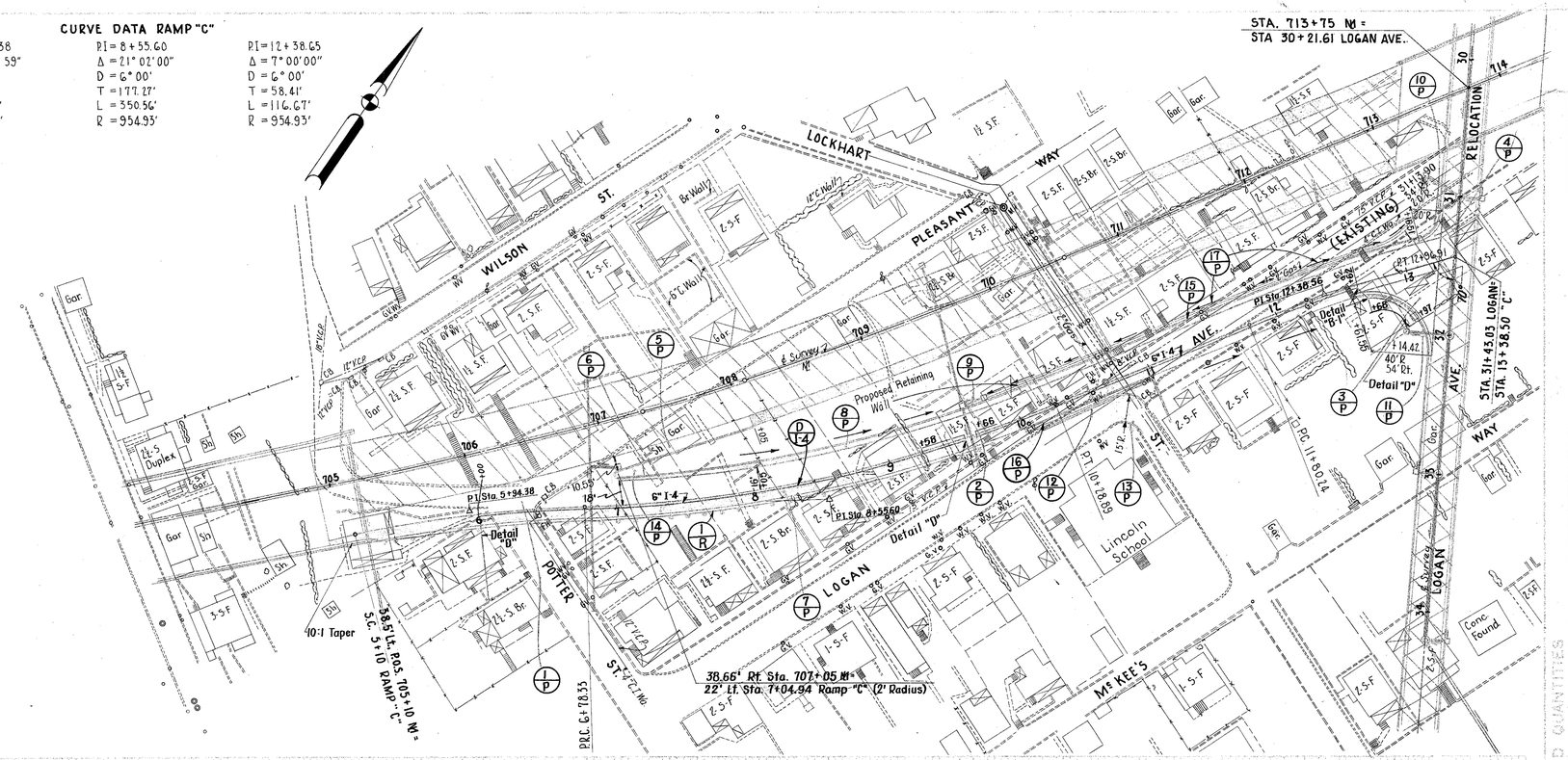
U-430(14)

JEFFERSON COUNTY JEF-7-13.53

## CURVE DATA RAMP "C"

| | | |
|---|---|---|
| PI = 5+94.38 | PI = 8+55.60 | PI = 12+38.65 |
| Δ = 10° 05' 59" | Δ = 21° 02' 00" | Δ = 7° 00' 00" |
| D = 6° 00' | D = 6° 00' | D = 6° 00' |
| T = 84.38' | T = 177.27' | T = 58.41' |
| L = 168.33' | L = 350.56' | L = 116.67' |
| R = 954.93' | R = 954.93' | R = 954.93' |

STA. 713+75 M =
STA 30+21.61 LOGAN AVE..



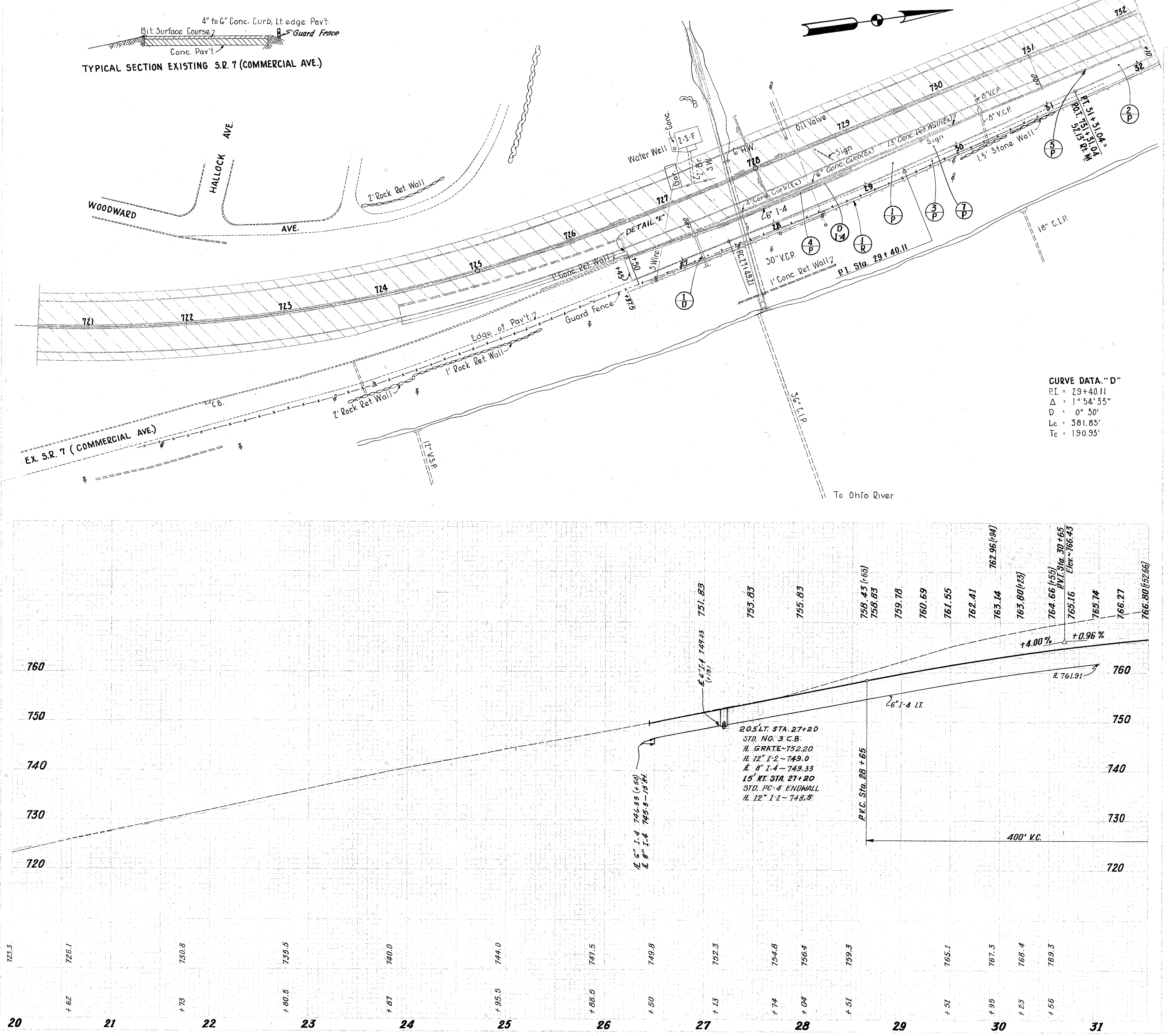

## ESTIMATED QUANTITIES

| SEQ. NO. | DESCRIPTION | | B-219 Water Proofed Agg Base Course C.Y. | E-1 Compact Sub Grade S.Y. | I-12 Conc. Curb, Curb & Gutter, Type 6 L.F. | I-18 Std. Conc. Curb & Apron C.Y. | I-21 Port. Cement Conc. Med. Pgm't Std Type 2 S.Y. | I-12 Sub Base Variable Depth C.Y. | T-B-35 Pavt. Bit. Mat. S.Y. | T-31 Bit. Surface Treatment No 6 Agg. GAL'S | I-15 Q.P. Type 2/4 C.Y. | I-5 Pipe Specials for Underdrains EACH | 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. | SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-P | 5+17.60~7+04.94 | Lt. | | 409 | | | | | 88.2 | 409.0 | | | | | | | 5&176 |
| 2-P | 7+04.94~13+25.13 | Lt. | | 1161 | | | | | 193.5 | 1161.3 | | | | | | | 5,176&177 |
| 3-P | 12+61.55 Ramp "C"~32+14.42 Logan Ave. | Rt. | | 99 | | | | | 16.6 | 99.4 | | | | | | | 5&177 |
| 4-P | 31+16.51 Ramp "C"~31+13.90 Logan Ave. | Lt. | | 5 | | | | | 0.8 | 4.8 | | | | | | | 177 |
| 5-P | 707+05~708+05 M.L. | Rt. | | 101 | | | | | 16.1 | 100.9 | | | | | | | 5,176&177 |
| 6-P | 707+03~708+05 M.L. | Rt. | | 6 | | | | | | | | | | | | | 5,176&177 |
| 7-P | 704+93 M.L.~12+80.55 Ramp "C" | Rt. | 547 | 627 | | | | | | | | | | | | | 8&177 |
| 8-P | 7+04.94~13+16.51 | Lt. | 14.5 | 199 | | | | | | | | | | | | | 8,177&177 |
| 9-P | 7+04.94~13+16.51 | Lt. | | | 589 | | | | | | | | | | | | 177 |
| 10-P | 13+16.51~51+13.90 Logan Avenue | Lt. | | 7 | 27 | | | | | | | | | | | | 5,176&177 |
| 11-P | 12+61.55 Ramp "C" To 32+14.42 Logan Avenue | Rt. | | 23 | 82 | | | | | | | | | | | | 5&177 |
| 12-P | 10+21 ~ 10+90 | Rt. | | | 69 | | | | 6.5 | | | | | | | | 177 |
| 13-P | 10+10 ~ 707+95 | Rt. | | | | | | | | | | | | | | | 5,176 |
| 14-P | 707+03 ~ 707+95 | Rt. | | | | | | 14 | | | | | | | | | 5&177 |
| 15-P | 9+80.5 ~ 13+16.51 | Lt. | | | | | | | 28.5 | | | | | | | | 5&177 |
| 16-P | 10+00 ~ 11+00 | Rt. | | | 6 | | | | 7.4 | | | | | | | | 177 |
| 17-P | 9+84.33 Ramp C~30+66.87 Logan Ave. | Lt. | | | | | | | | | | | | | | | 188 |
| D I-4 | 6+00 ~ 12+62 | Rt. | | | | | | | | | | | | | | | |
| 1-R | 705+28.35 ~ 709+79.35 | Rt. | | | | | | | | | | 450 | | | | | |
| | | | 71.2 | 2,673 | 178 | 796 | 125.9 | 14 | 473.9 | 1775.4 | 214 | 6.9 | 450 | 30 | 809 | 124 | |

RAMP "C"

U-430 (14)

JEFFERSON COUNTY JEF- 7- 13.53




ESTIMATED QUANTITIES

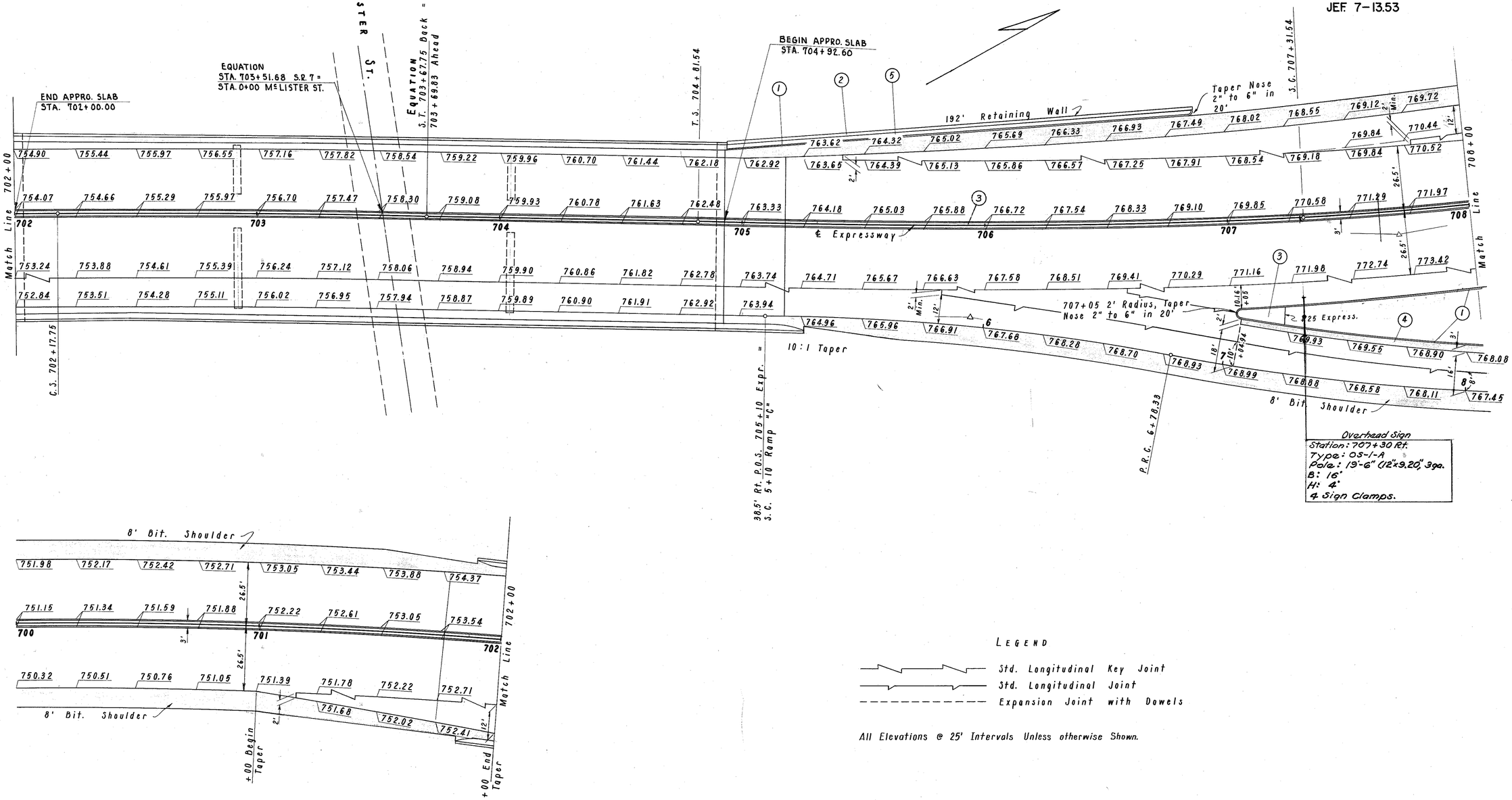
| Ref. | Station to Station | Side | B-219 Water-Proofed Agg. Base Course C.Y. | E-1 Compact. Sub Grade S.Y. | I-12 Conc. Curb, Type 6 L.F. | I-18 Stab. Cr'shd Agg. Shldr's & Appr's. C.Y. | E-8 Removal & Disposal of Existing Pavement S.Y. | I-22 Sub Base Variable Depth C.Y. | T-B-35 Pav't. S.Y. | T-31 Bit. Surface Treatment Bit. Mat. GAL'S | T-31 Bit. Surface Treatment N° 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., Sec. M6.5B or M6.8B L.F. 12" | I-8 Std. No. 3 Catch Basins EACH | E-2 Excav. for Struct's C.Y. | S-1 Conc. for Struct's, Class "E" 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 | | 27.5 | 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 |
| DI-4 | 26+50 ~ 31+00 | Lt. | | | | | | | | | | | | | | | | | | 1 | 458 | 20 | 188 |
| | | | 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

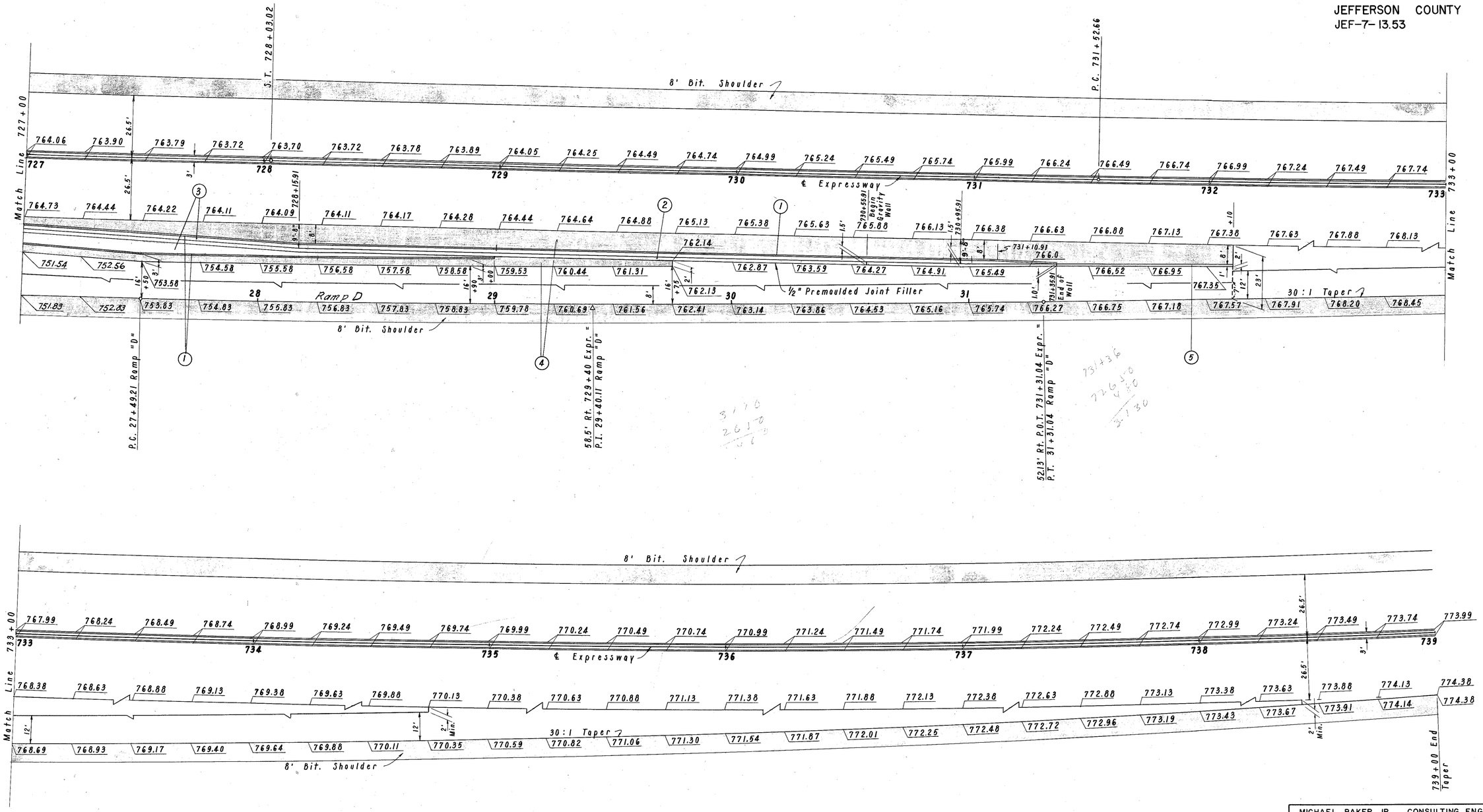
## PAVEMENT DETAILS
STA. 714+00 TO STA. 727+00
LOGAN AVENUE INTERCHANGE

| 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




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

LEGEND

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

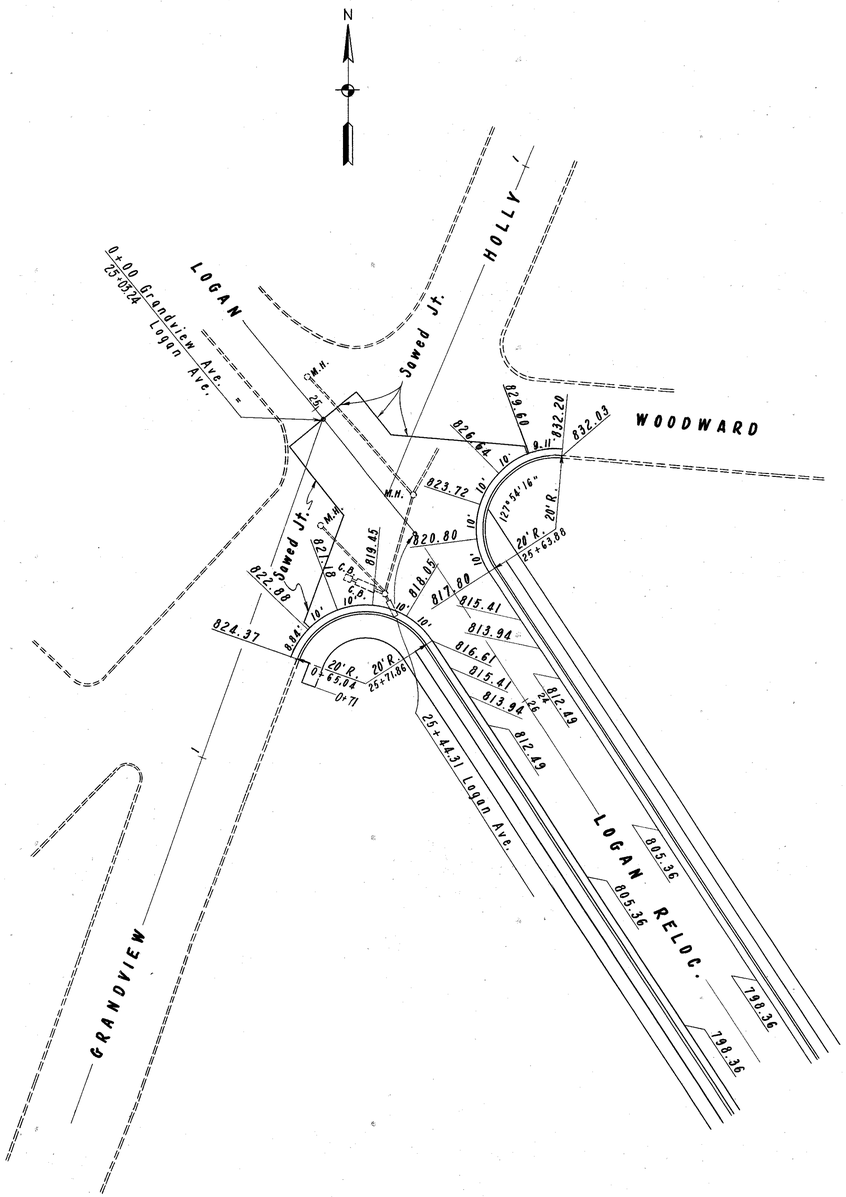
# PAVEMENT DETAILS
STA. 727+00 TO STA. 739+00
LOGAN AVENUE INTERCHANGE

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

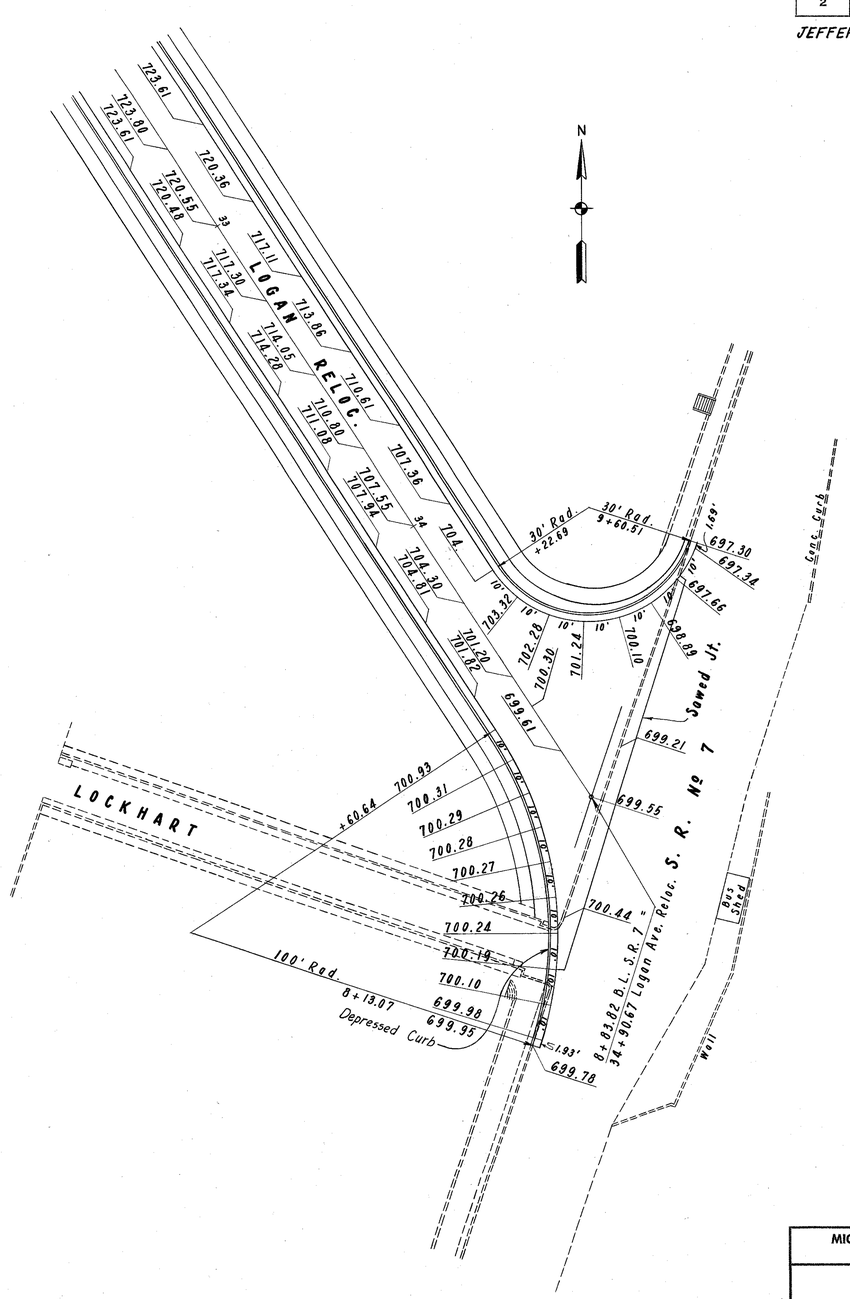
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

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

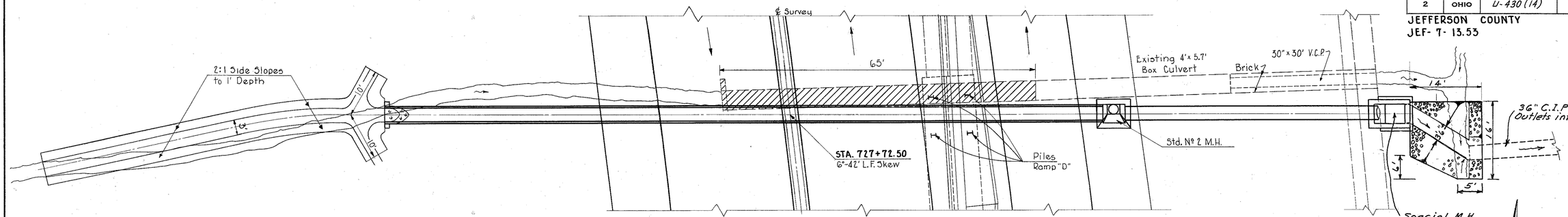
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| Griffin | Mudd | G.K.M. | | | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27086

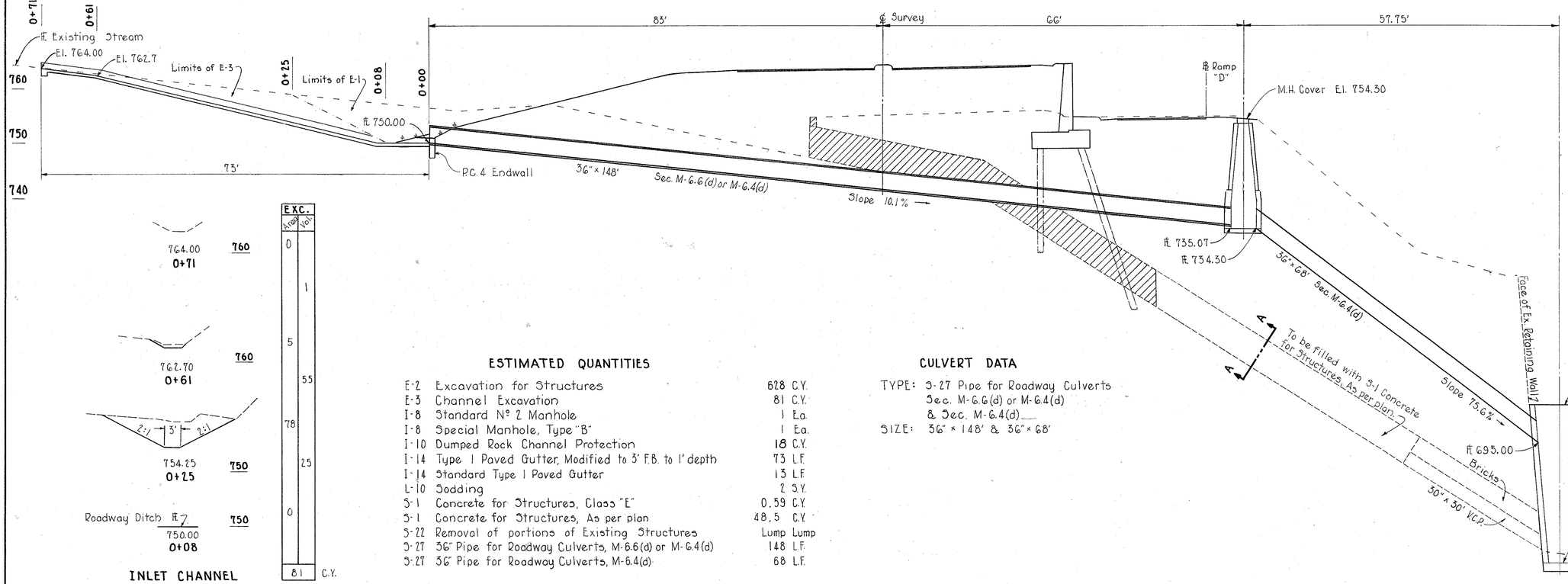
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

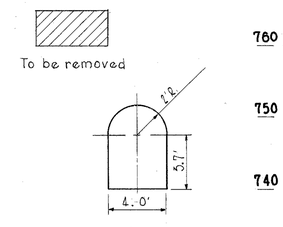
181
307

JEFFERSON COUNTY
JEF- 7- 13.53




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







INLET CHANNEL

| EXC. | |
|---|---|
| Station | Vol. |
| 0 | |
| | 1 |
| 5 | |
| | 55 |
| 78 | |
| | 25 |
| 0 | |
| 81 | C.Y. |

## ESTIMATED QUANTITIES

| | | |
|---|---|---|
| E-2 | Excavation for Structures | 628 C.Y. |
| E-3 | Channel Excavation | 81 C.Y. |
| I-8 | Standard N° 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

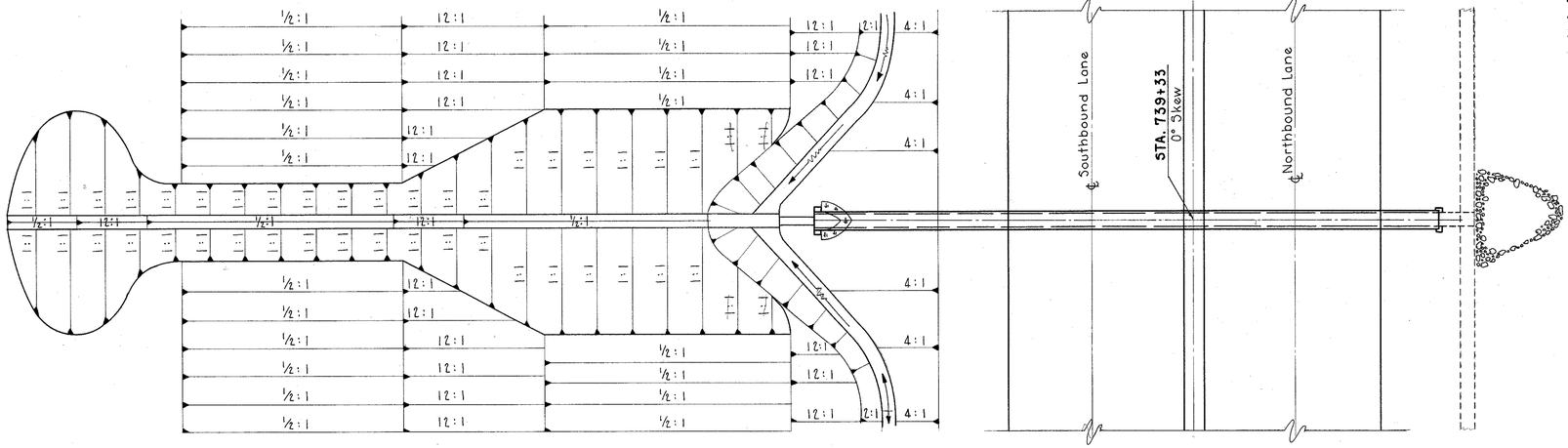
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| ℄ | ℄ | a.m.m | W.H.T. | | |

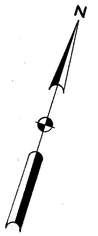
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27066

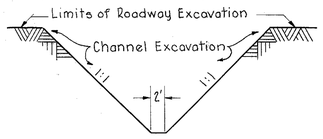
| FED. RD. DIVISION | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

182
307

JEFFERSON COUNTY
JEF-7-13.53



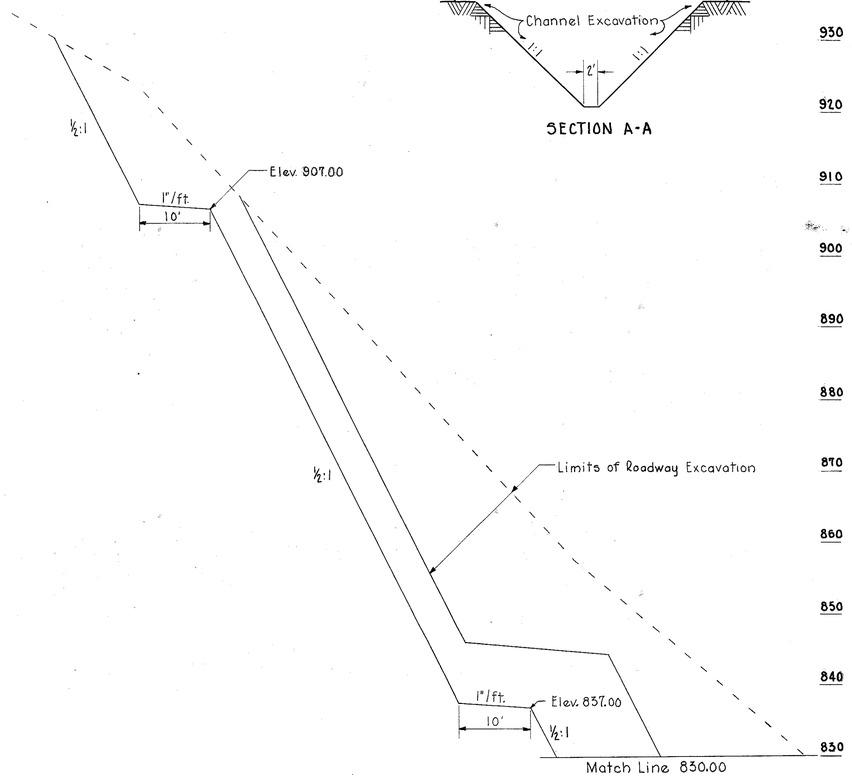



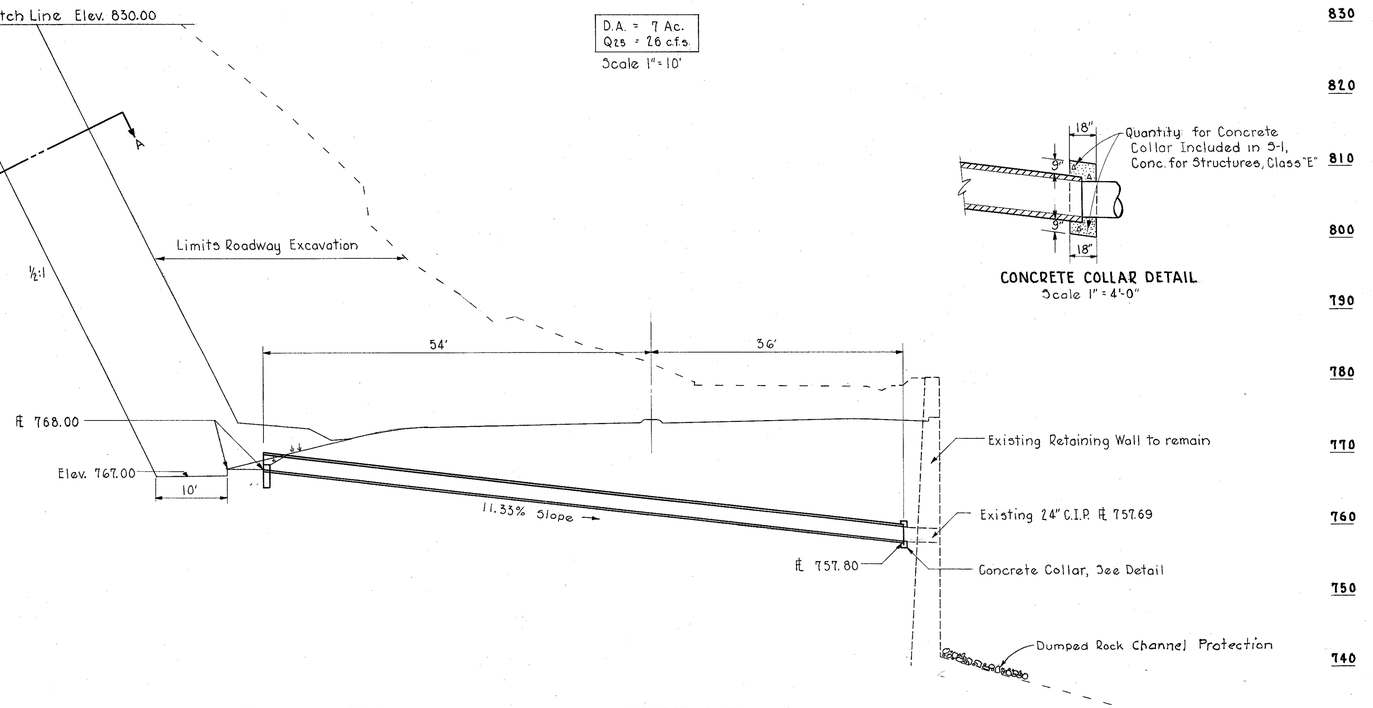

SECTION A-A

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




CONCRETE COLLAR DETAIL
Scale 1" = 4'-0"




## 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

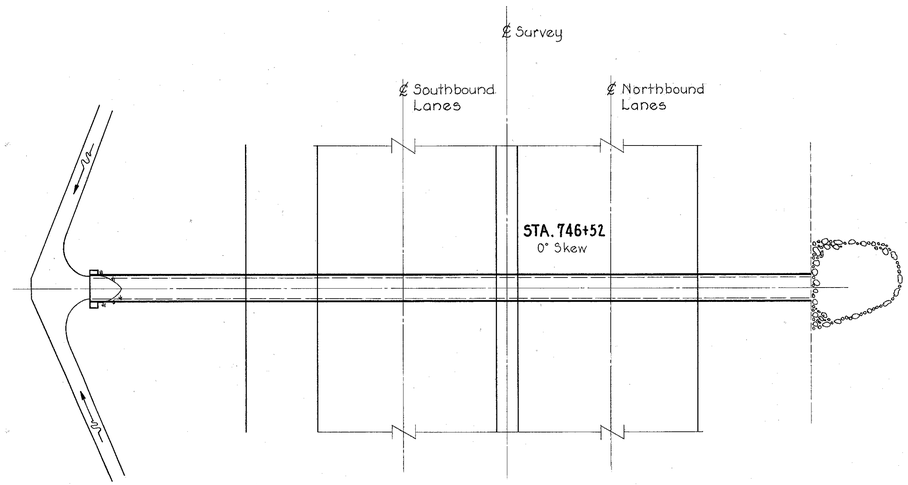
# CULVERT No. JEF-7-14.62

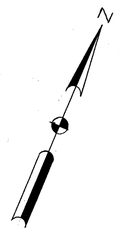
| Designed | Drawn | Traced | Checked | Reviewed Date | Revised |
|---|---|---|---|---|---|
| AP | A.M.M. | A.M.M. | W.H.T. | | |

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

183
307

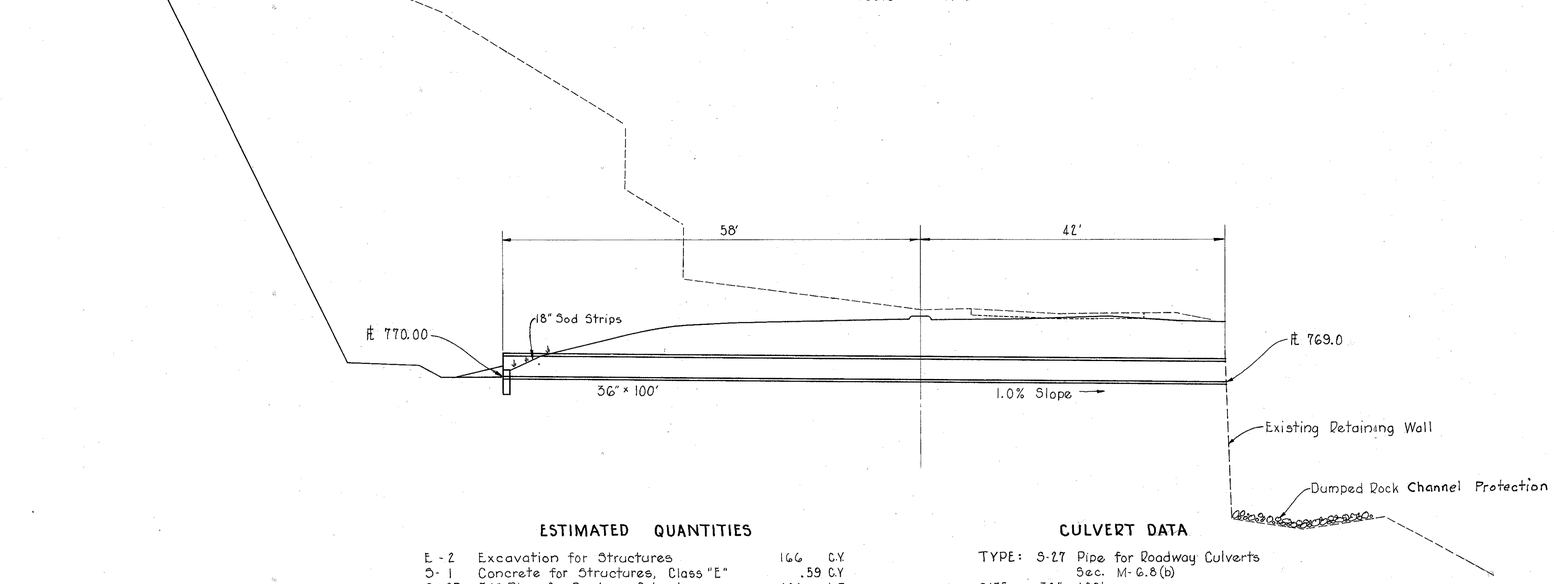
JEFFERSON COUNTY
JEF-7-13.53




| | | |
|---|---|---|
| Area | = | 19 Acres |
| Q 25 | = | 55 c.f.s. |

Scale 1" = 10'-0"




## ESTIMATED QUANTITIES

| | | | |
|---|---|---|---|
| E-2 | Excavation for Structures | 166 | C.Y. |
| C-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" x 100'

MICHAEL BAKER, JR, CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# CULVERT SECTION STA. 746+52

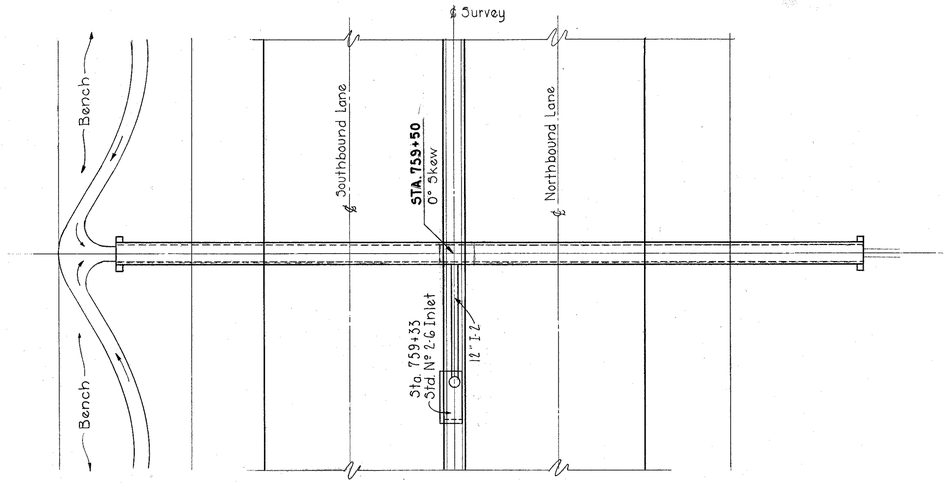
# CULVERT No. JEF-7-14.76

| Designed | Drawn | Traced | Checked | Reviewed Date | Revised |
|---|---|---|---|---|---|
| ℄ | C.M. | A.M. | W.H.T. | | |

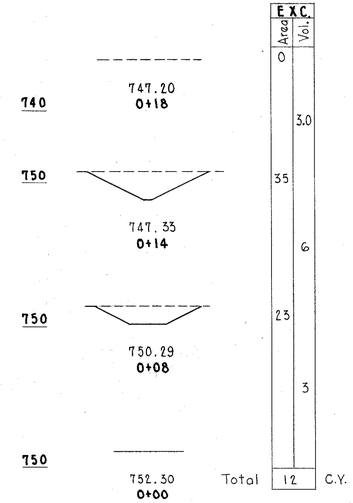
| FED. RD. DIVISION | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

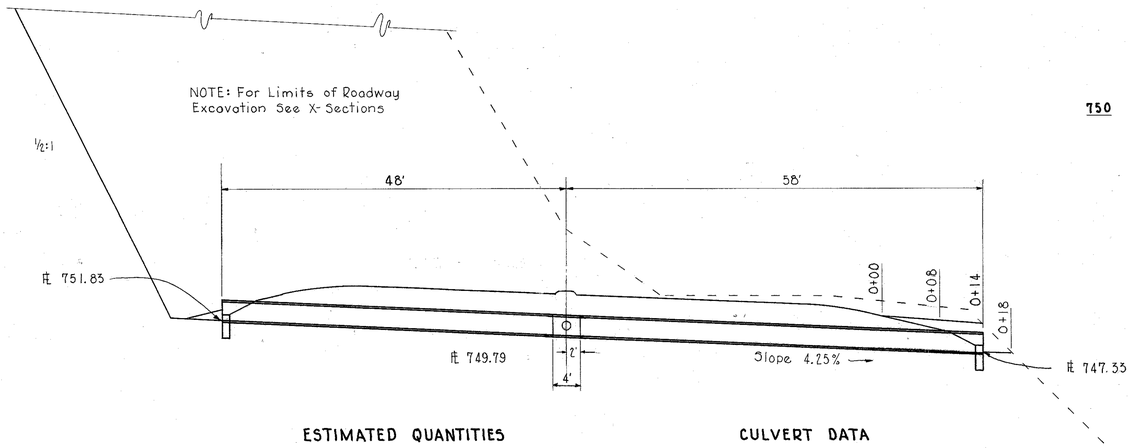
184
307

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"x 30" x 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" x 106'

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# CULVERT SECTION STA. 759+50

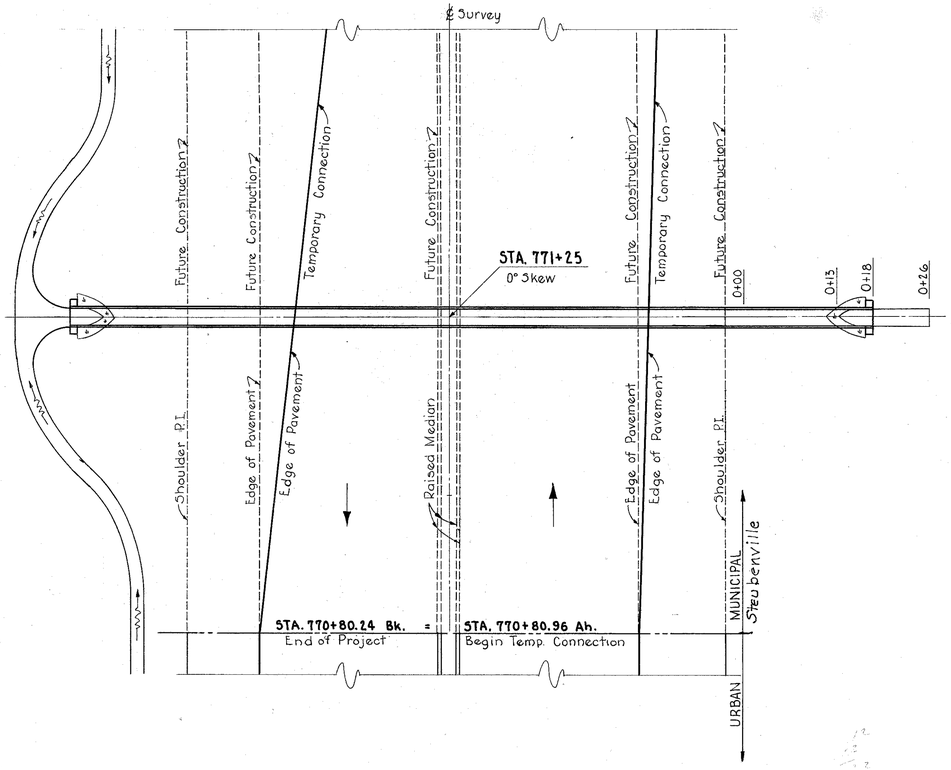
# CULVERT No. JEF-7-15.00

| Designed | Drawn | Traced | Checked | Reviewed Date | Revised |
|---|---|---|---|---|---|
| ℄ | AM | AM | WHT | | |

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

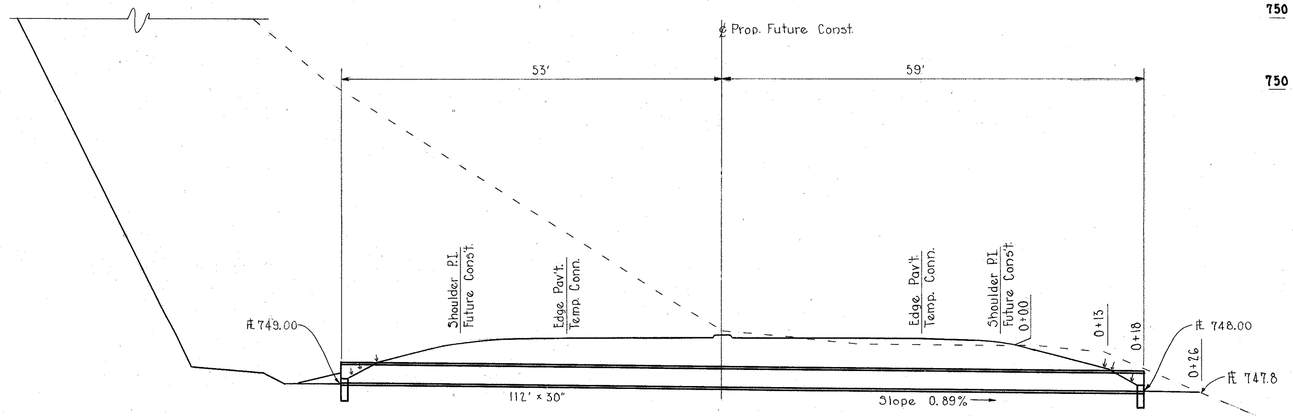
185
307

JEFFERSON COUNTY
JEF-7-13.53




D.A = 2.4 ac.
Q25 = 5.9 cfs

Scale 1" = 10'

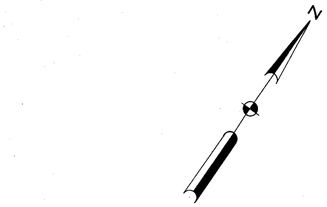


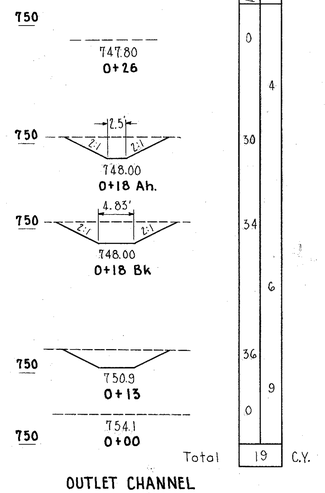

## ESTIMATED QUANTITIES

| | | |
|---|---|---|
| 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: 11.2' x 30"




OUTLET CHANNEL

| EXC. | |
|---|---|
| Area | Vol. |
| 0 | |
| | 4 |
| 30 | |
| | 34 |
| | 6 |
| 36 | |
| 0 | 9 |
| Total | 19 C.Y. |

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

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# CULVERT SECTION STA. 771+25

# CULVERT No. JEF.-7-15.31

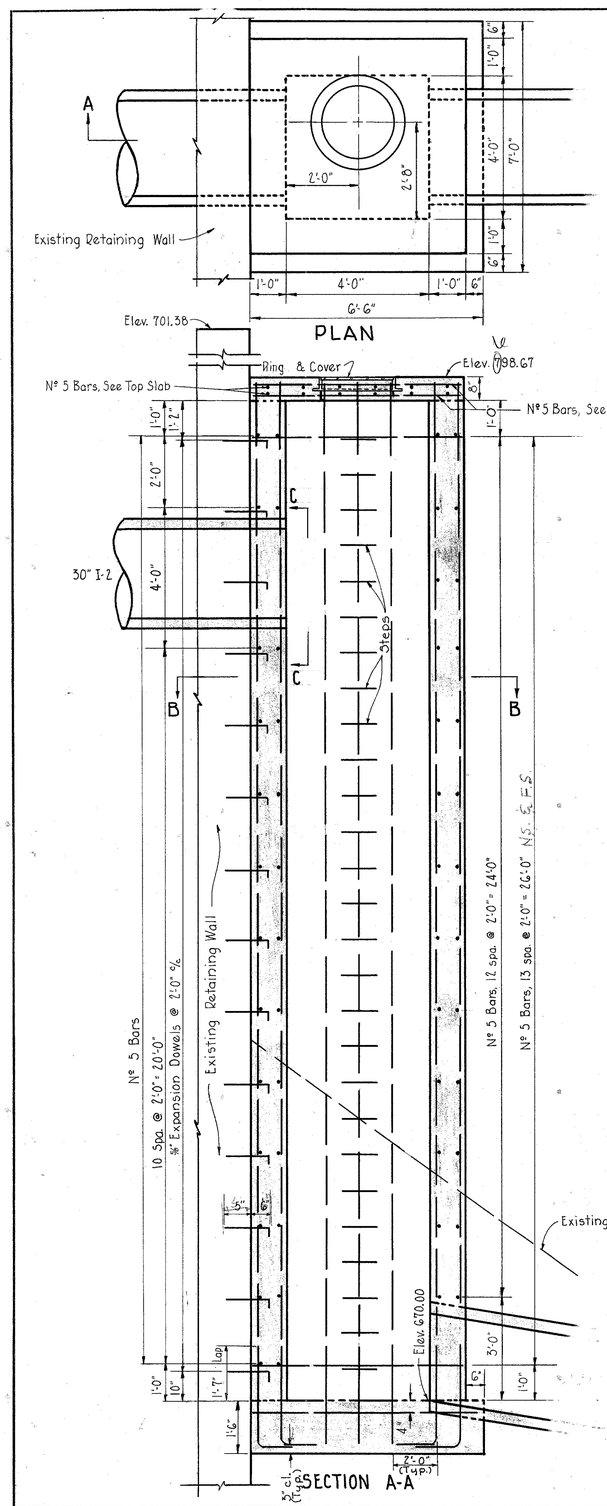
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| ℄ | ℄ | A.M. | W.H.T. | | |

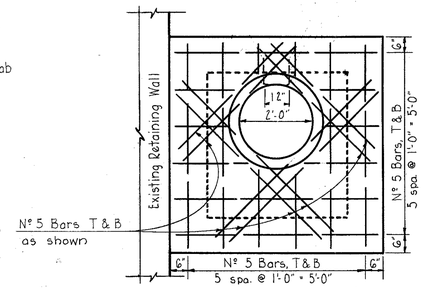
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27098

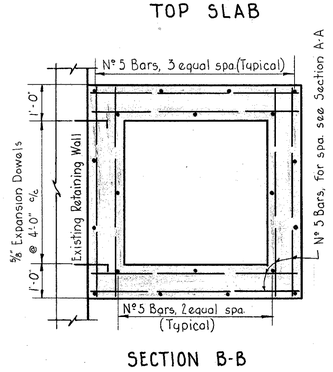
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

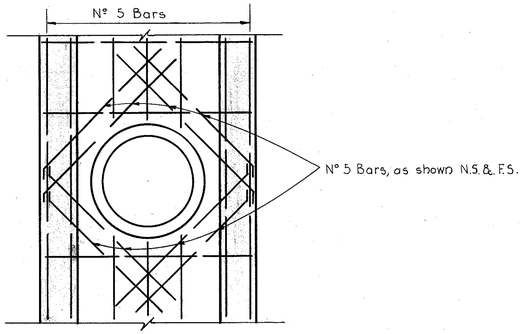
186
307

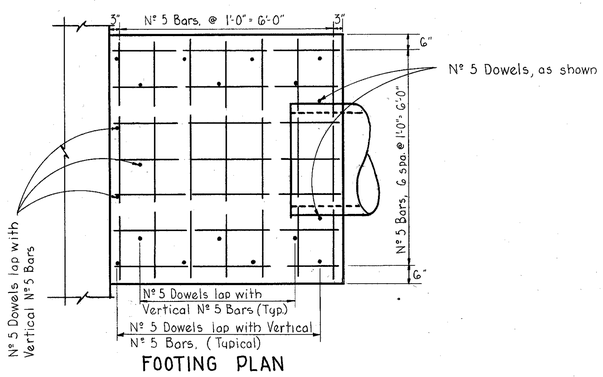
JEFFERSON COUNTY
JEF-7-13:53




**NOTES:**

Reinforcing Steel shall be ⅝" 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 5. 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*

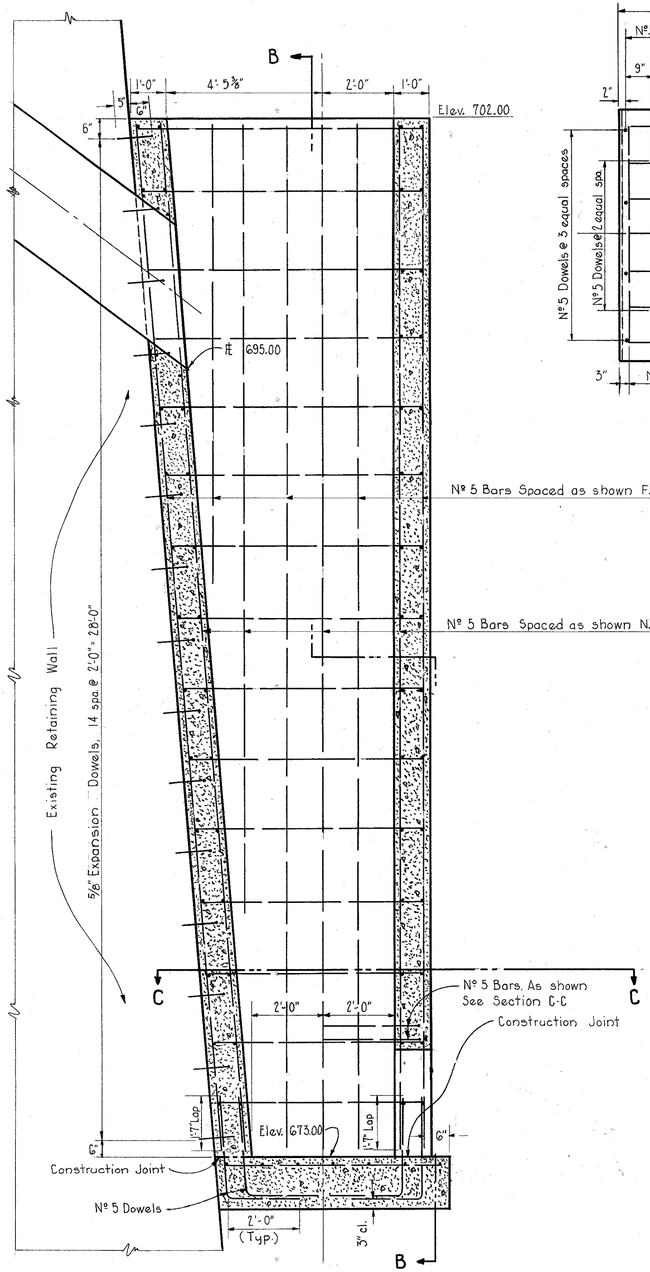
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| ℄ | ℄ | D.H.B. | E.F.R. | | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27036

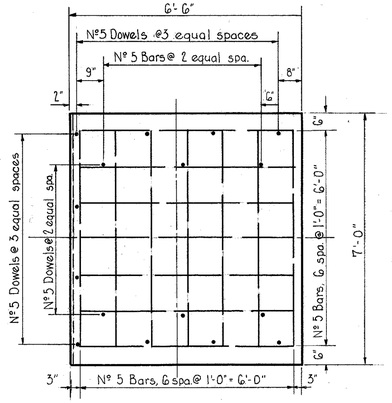
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

187
307

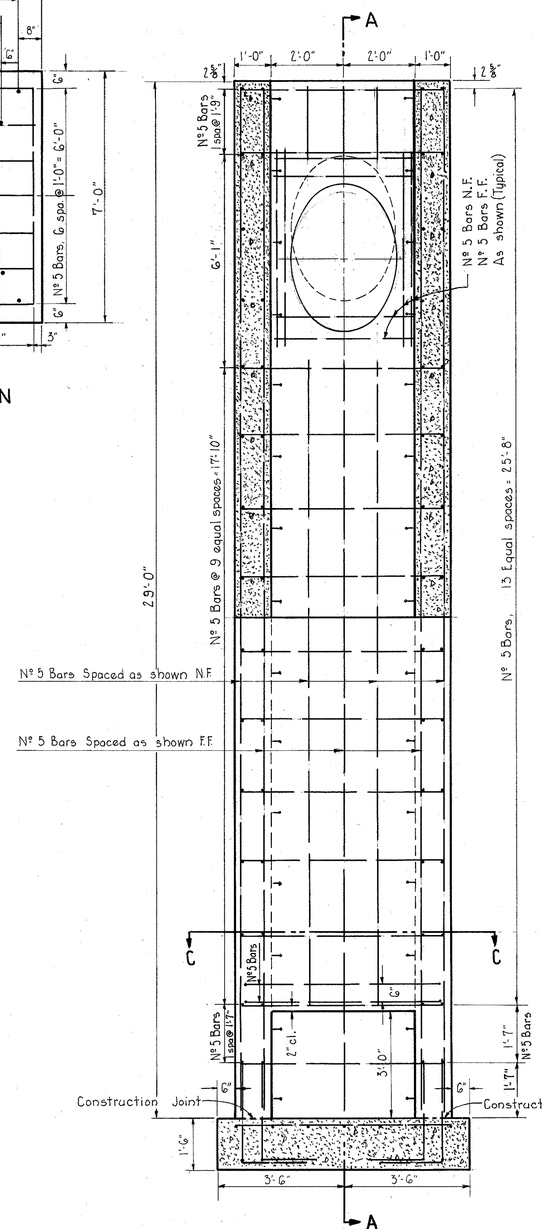
JEFFERSON COUNTY
JEF-7-15.55



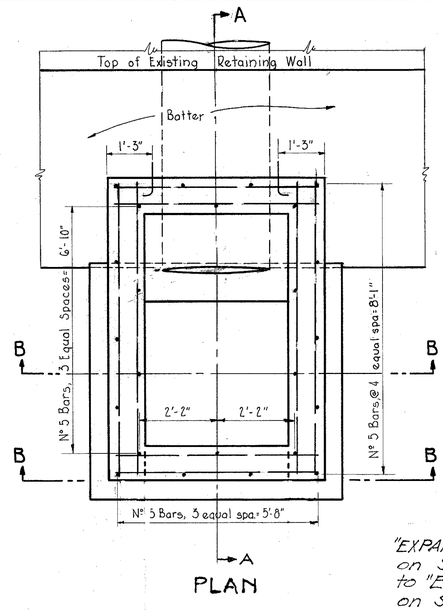

SECTION A-A



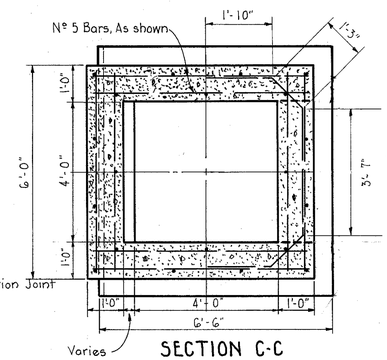

FOOTING PLAN




SECTION B-B




PLAN




SECTION C-C

**NOTE:**
Reinforcing Steel shall be ½" and ⅝ round bars in accordance with the details shown hereon and conforming to Item 3-4 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.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

DETAILS FOR SPECIAL MANHOLE TYPE B

STA. 727+72.5 - SHEET 181

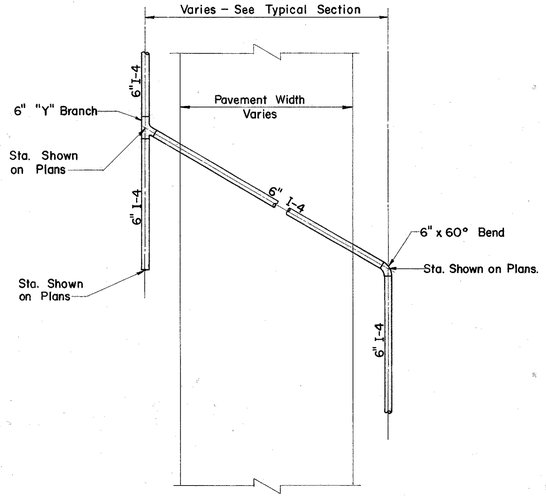
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| | | | | | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27096

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

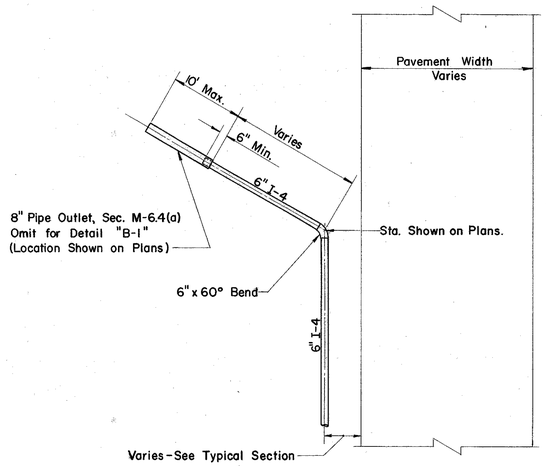
188
307

JEFFERSON COUNTY
JEF-7-13.53



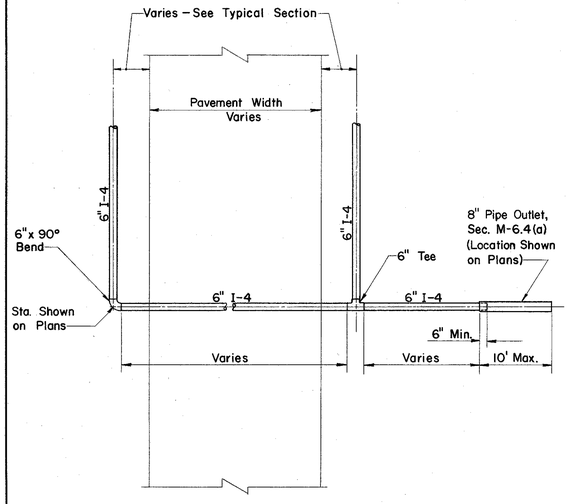

NOTE: All Pipe Specials are I-5 Pipe Specials for Underdrains.

DETAIL "A"



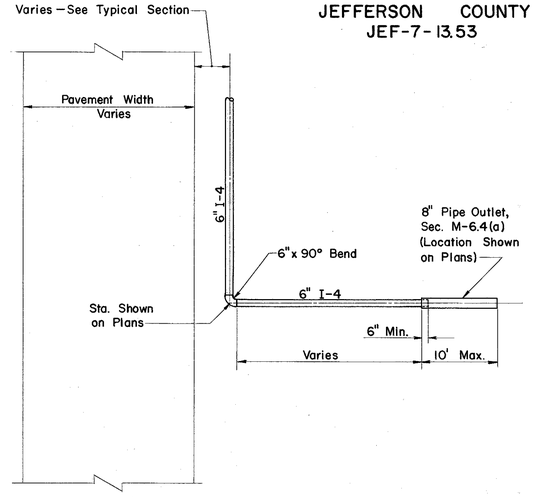

NOTE: All Pipe Specials are I-5 Pipe Specials for Underdrains.

DETAIL "B"
DETAIL "B-1"



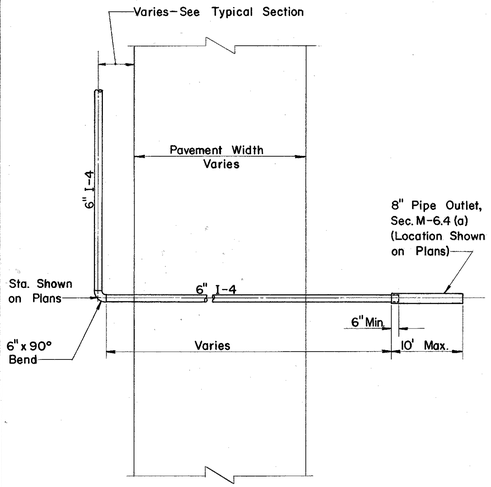

NOTE: All Pipe Specials are I-5 Pipe Specials for Underdrains.

DETAIL "C"



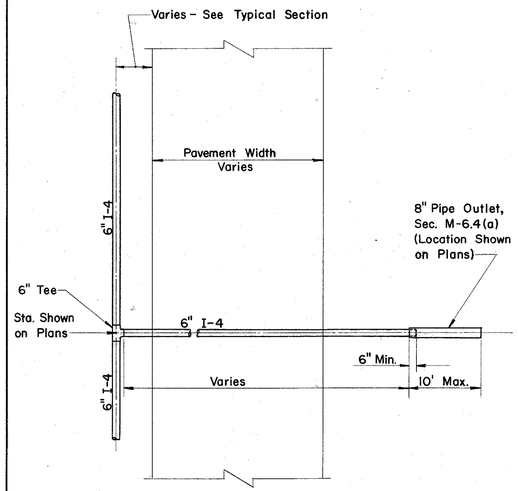

NOTE: All Pipe Specials are I-5 Pipe Specials for Underdrains.

DETAIL "D"



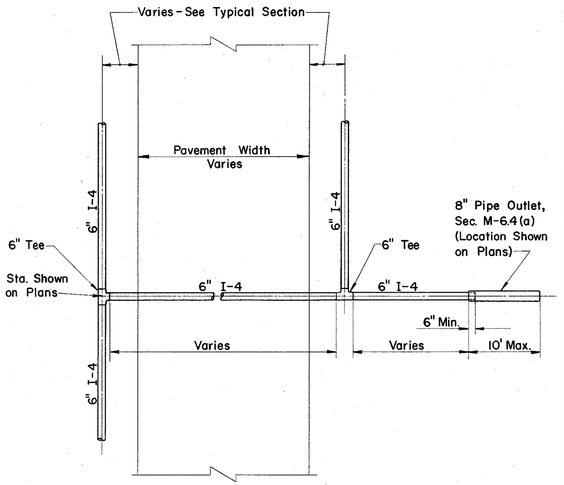

NOTE: All Pipe Specials are I-5 Pipe Specials for Underdrains

DETAIL "E"



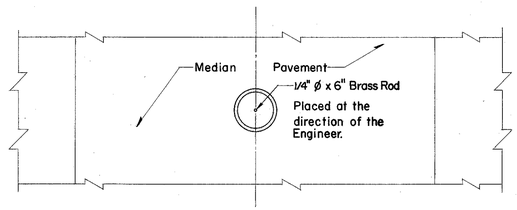

NOTE: All Pipe Specials are I-5 Pipe Specials for Underdrains.

DETAIL "F"



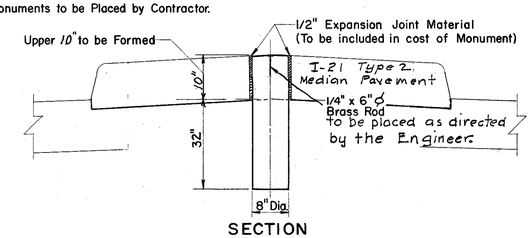

NOTE: All Pipe Specials are I-5 Pipe Specials for Underdrains.

DETAIL "G"




PLAN

NOTE: Monuments to be Placed by Contractor.




SECTION

DETAIL – CENTERLINE REFERENCE MONUMENTS

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# MISCELLANEOUS CONSTRUCTION DETAILS

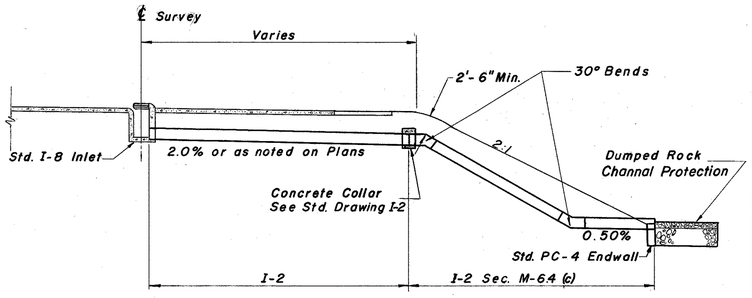
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| W.H.T. | | | | | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27060

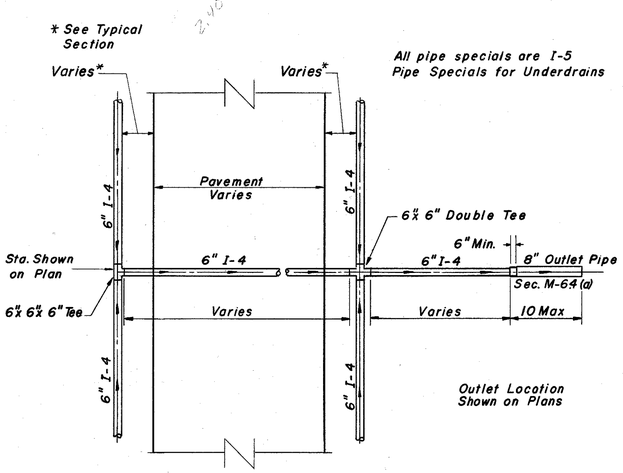
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

189
307

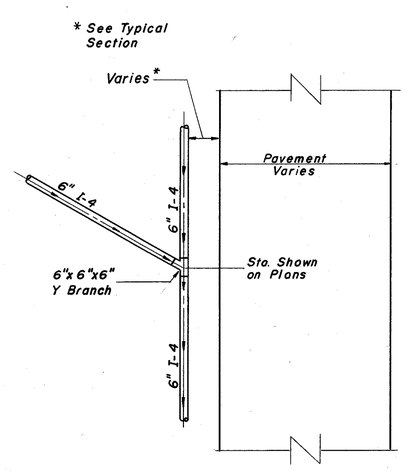
JEFFERSON COUNTY
JEF-7-13.53




TYPICAL MEDIAN OUTLET DETAIL IN HIGH FILL

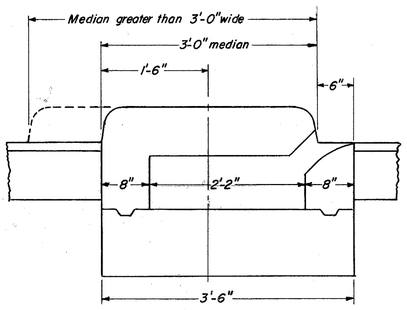



DETAIL "H"




All pipe specials are I-5 Pipe Specials for Underdrains

DETAIL "K"




NOTES:

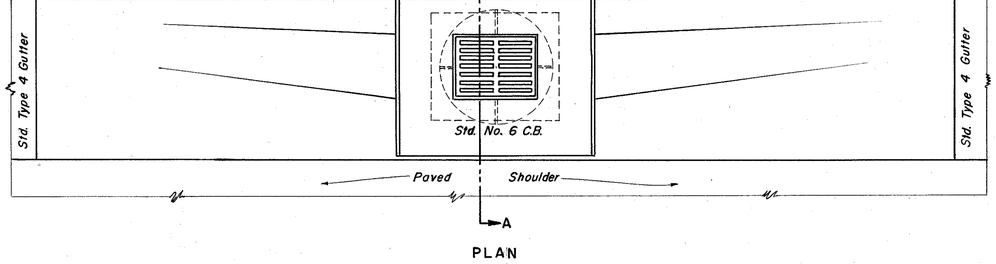
1. For additional details see Std. Dwgs. I-8 I, No.2 and I-21-23.
2. Where proposed median pavement is greater than 3 feet wide, the maximum width of the inlet shall be as shown and a 1/2" thickness of expansion joint material shall be provided between the inlet and the adjacent median pavement.

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

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

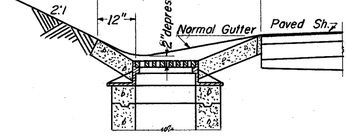
CONCRETE AND REINFORCING STEEL QUANTITIES

| Length in Ft. | Concrete Cu. Yds. | S-5-a No. | S-5-a Lin. Ft. | S-5-b No. | S-5-b Lin. Ft. | S-5-c No. | S-5-c Lin. Ft. | S-5-d No. | S-5-d Lin. Ft. | H-5-a No. | H-5-a Lin. Ft | V-5-a No. | V-5-a Lin Ft. | V-5-b No. | V-5-b Lin. Ft. | Weight 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

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




SECTION A-A

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. | | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27086

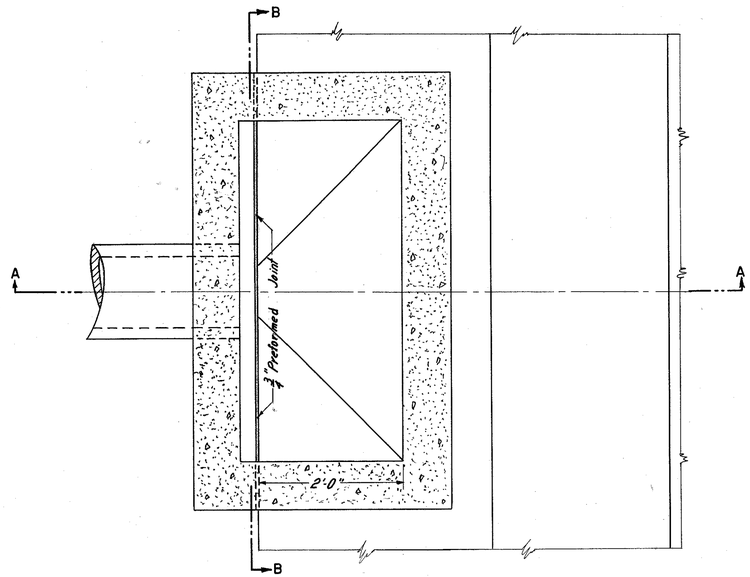
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

190
307

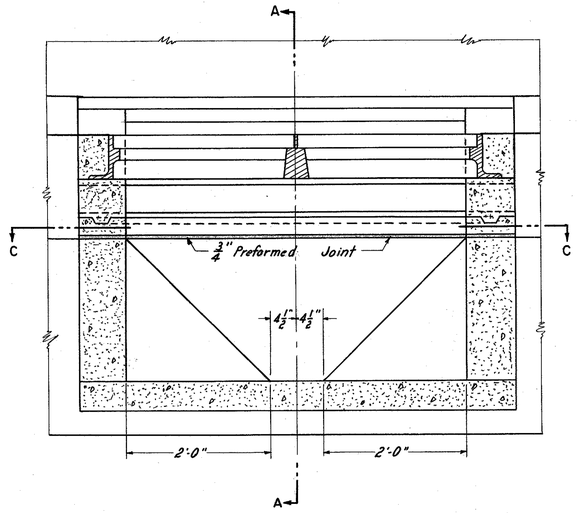
JEF-7-13.53

NOTES:

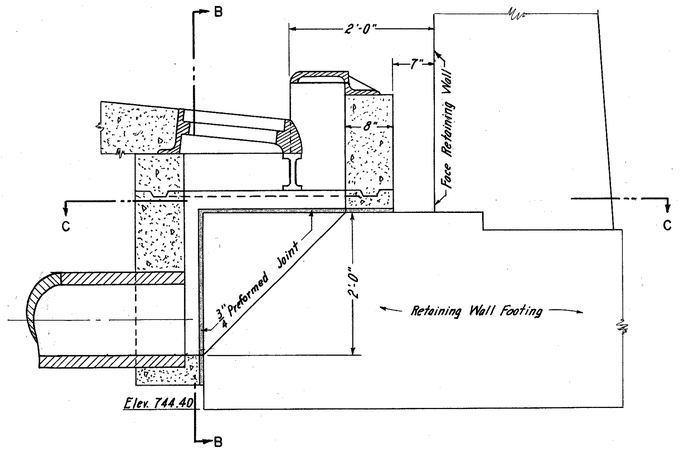
1. All details shall conform to STD. Drawing I-8 C.B. No. 3 except as shown hereon.
2. For retaining wall details see sheet no.
3. The cost of the $\frac{3}{4}$" preformed joint shall be included in the contract unit price bid for Item I-8, Standard No. 3 C.B., Modified as per plan.




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 |
|---|---|---|---|---|---|
| L | L | L | W.H.T. | | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27086

| 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.*

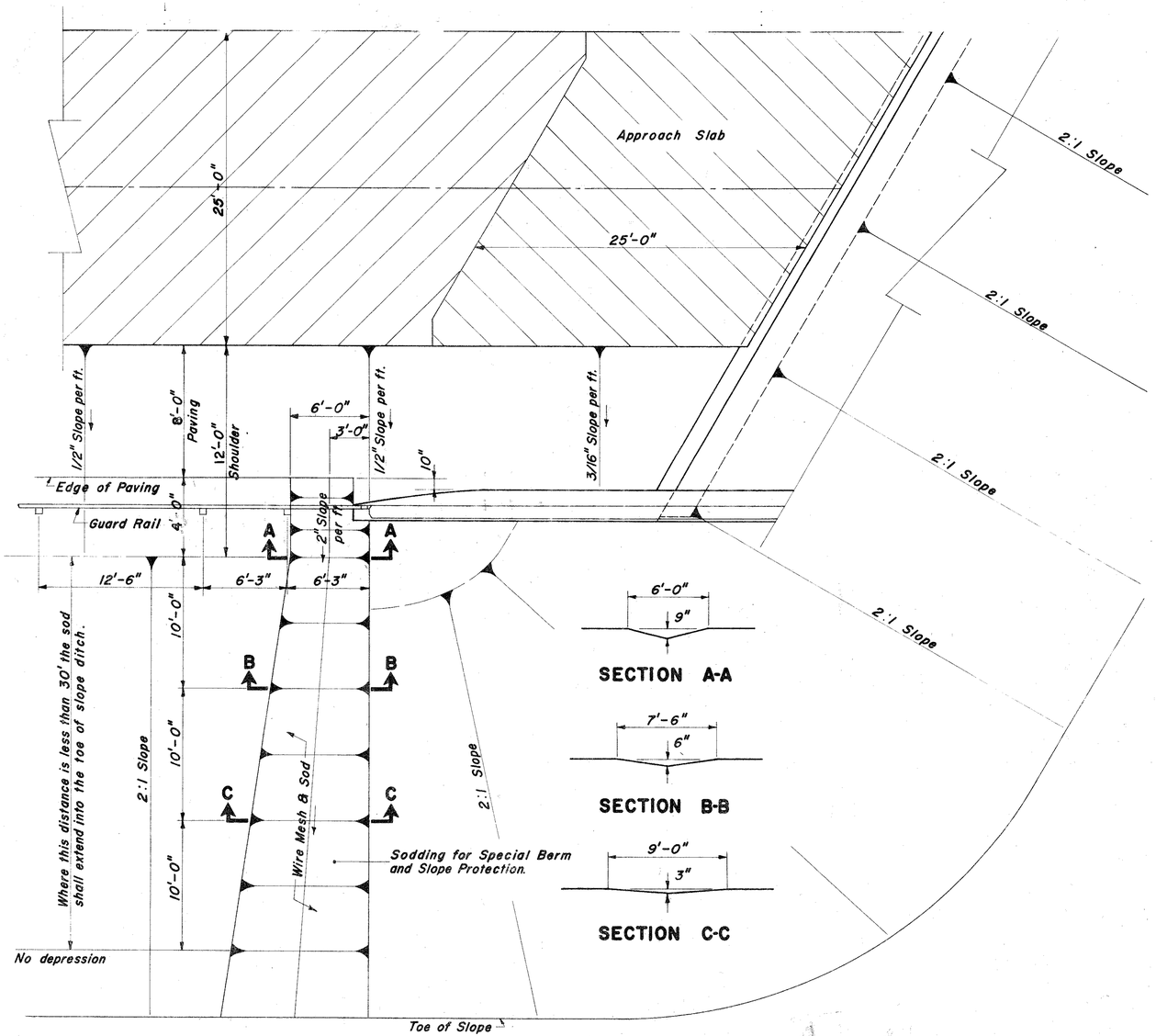
*Stakes shall be 1"x 1"x8" wood stakes and shall be perpendicular to the ground and flush with the finished grade.*

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



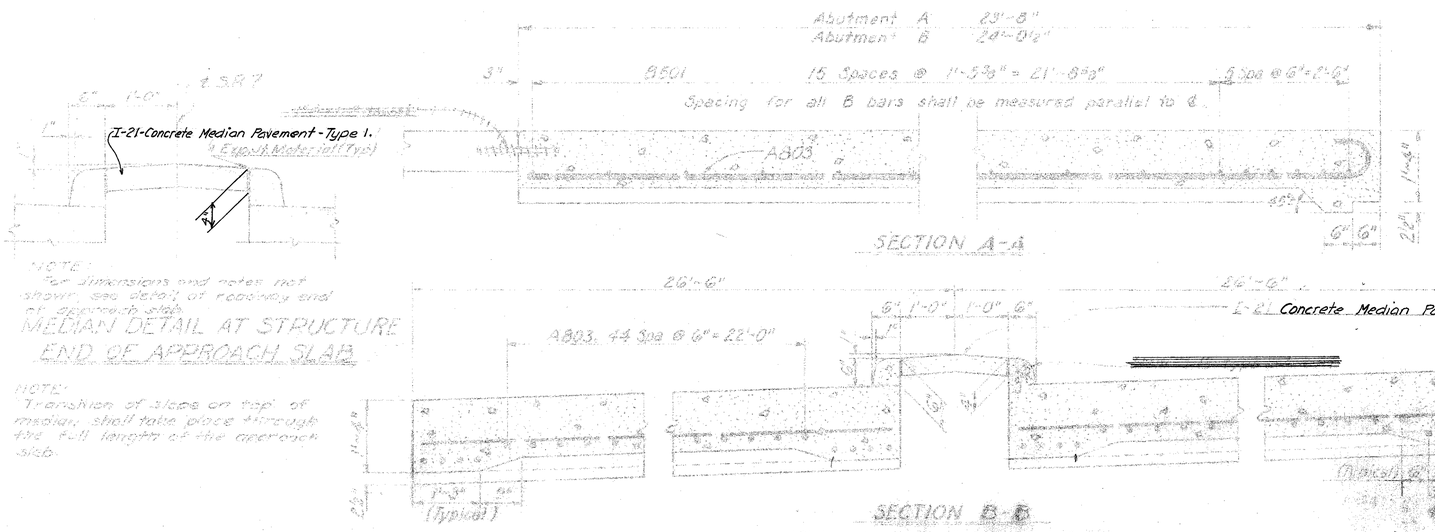

MICHAEL BAKER, JR, CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

DETAIL OF EROSION CONTROL

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

| FED. ROAD DIVISION | STATE | PROJECT | TYPE FUND |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

JEFFERSON COUNTY
JEF - 7 - 13.53




MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# APPROACH SLAB DETAILS
## BRIDGE NO. JEF-7-1382
## OVER RAVINE STREET

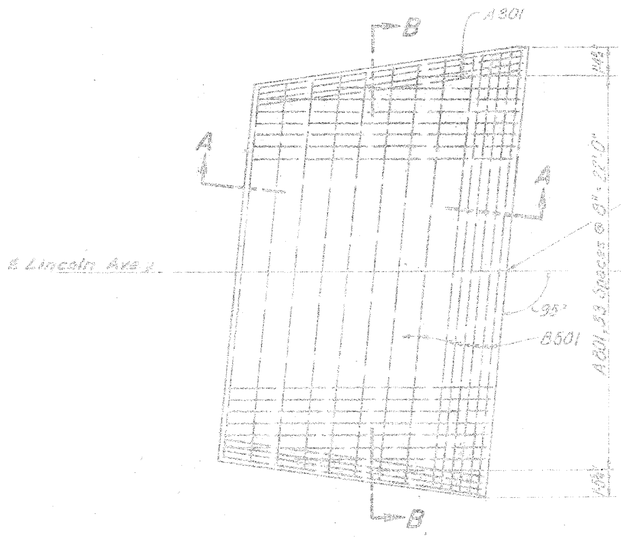
JEFFERSON COUNTY — STATION 698+21.92

| Designed | Drawn | Traced | Checked | Estimated Date | Approved |
|---|---|---|---|---|---|
| | C.J.M. | | K.A. | 4 Feb '53 | |

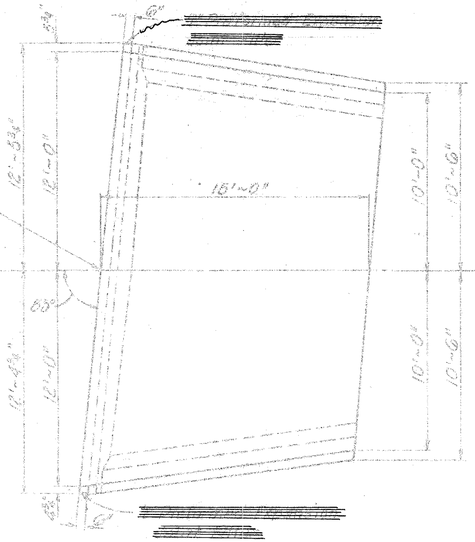
| FED. HWY. DIVISION | STATE | PROJECT | SHEET NUMBER |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

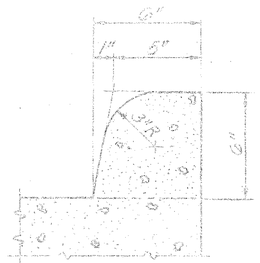
JEFFERSON COUNTY

JEF - 7 - 18.53

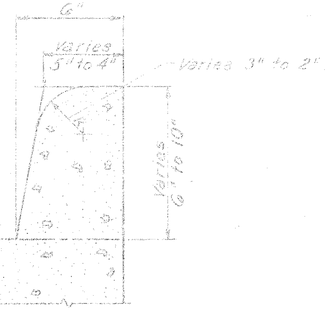



PLAN

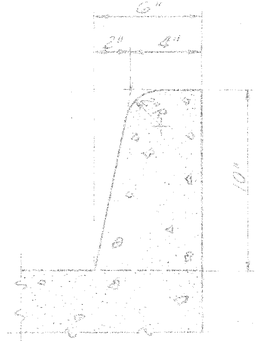


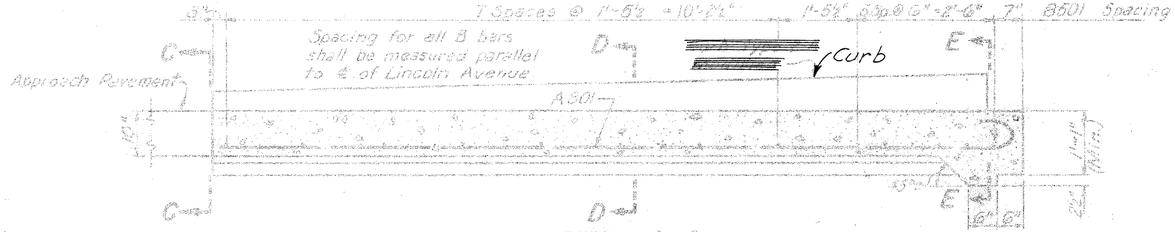

SECTION C-C



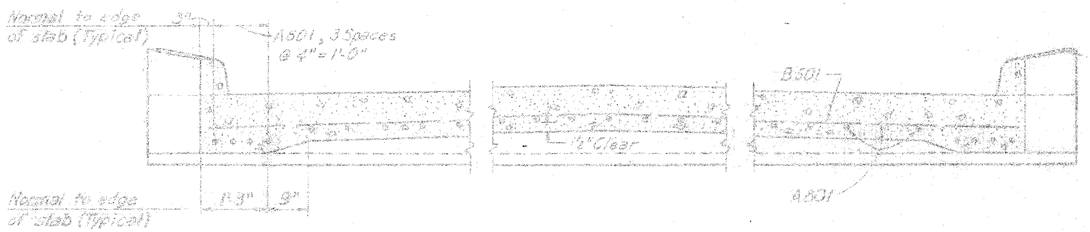

SECTION D-D




SECTION E-E




SECTION A-A




SECTION B-B

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

APPROACH SLAB DETAILS
BRIDGE NO. JEF-7-18.67
UNDER LINCOLN AVENUE

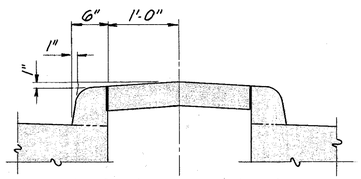
JEFFERSON COUNTY STATION 280+21.00

| Designed | Drawn | Traced | Checked | Revised | Date | Revised |
|---|---|---|---|---|---|---|
| | C.J.K. | | D.M. | 5-20-53 | | |

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

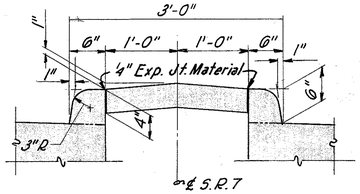
194
307

JEFFERSON COUNTY
JEF-7-13.53



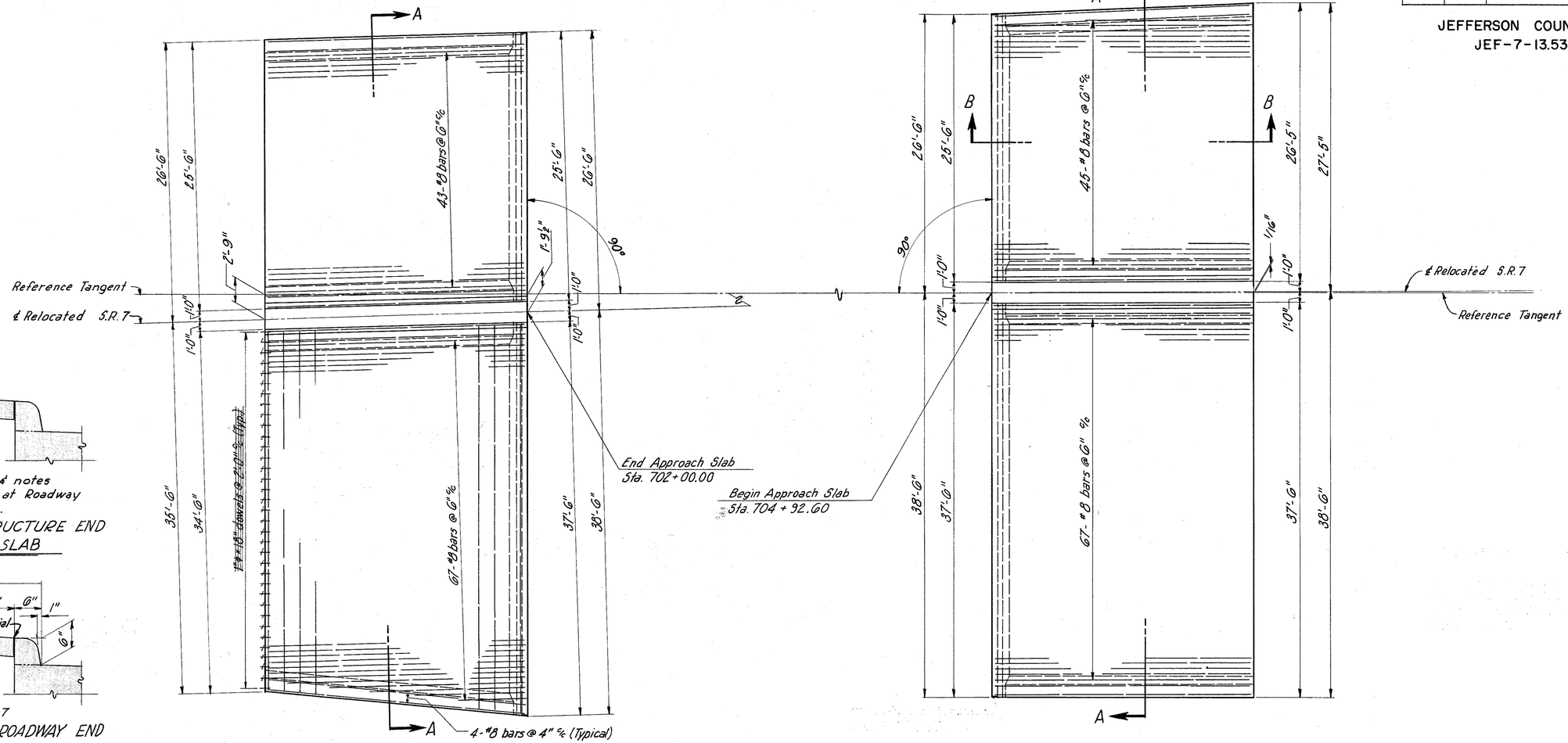

Note: for dimensions & notes not shown, see detail at Roadway End of Approach Slab.

MEDIAN DETAIL AT STRUCTURE END OF APPROACH SLAB

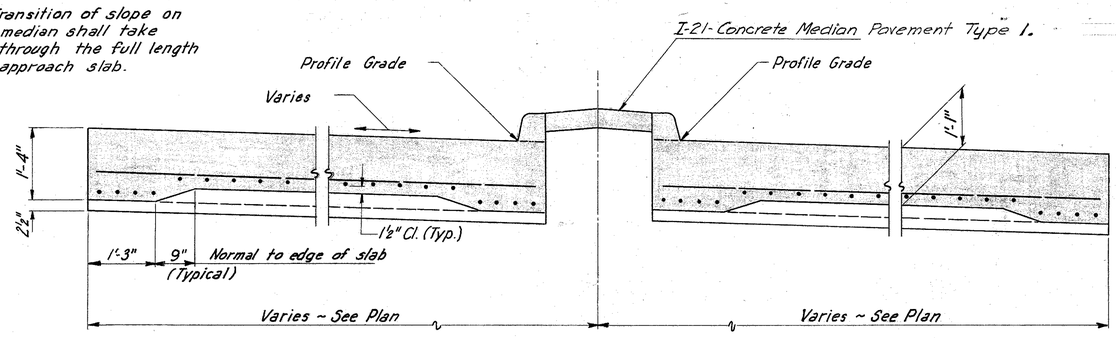



MEDIAN DETAIL AT ROADWAY END OF APPROACH SLAB

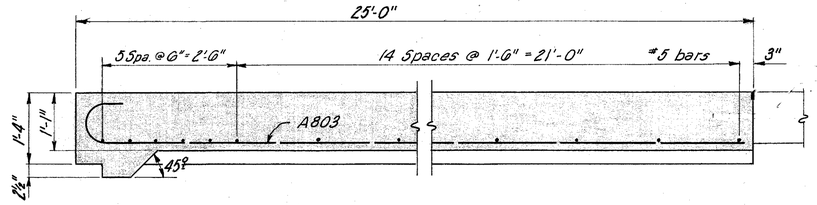
Note: Transition of slope on top of median shall take place through the full length of the approach slab.




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

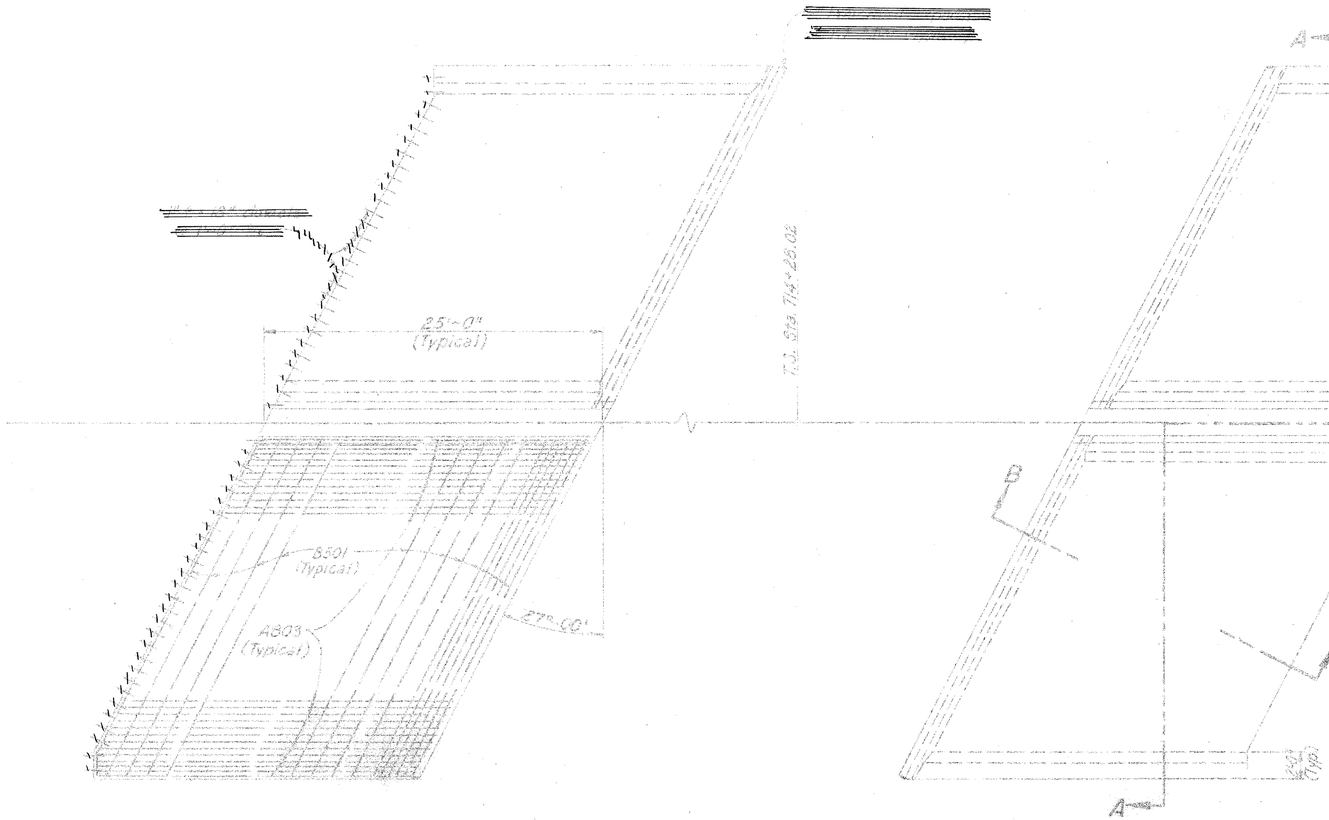
# APPROACH SLAB DETAILS
BRIDGE NO. JEF-7-1392
OVER McLISTER STREET
JEFFERSON COUNTY — SR. 7
STA. 703+51.68

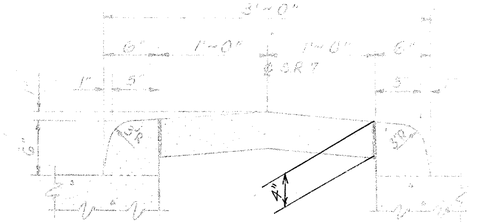
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| | C.J.K. | C.J.K. | J.M. | E.Roberts 6-5-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27086

| FED.RD. DIVISION | STATE | PROJECT | TYPE CURB |
|---|---|---|---|
| 2 | OHIO | U-4301(4) | |

JEFFERSON COUNTY
JEF-7-13.53

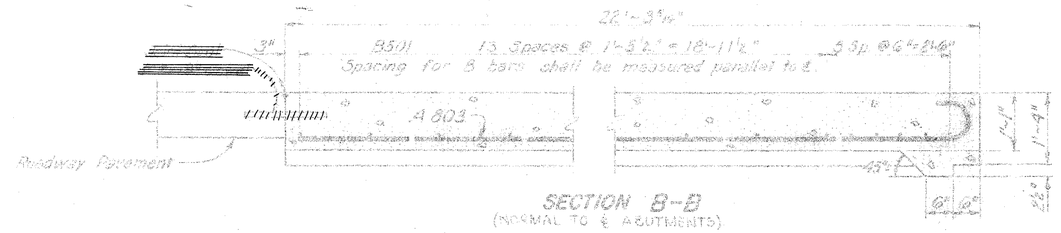


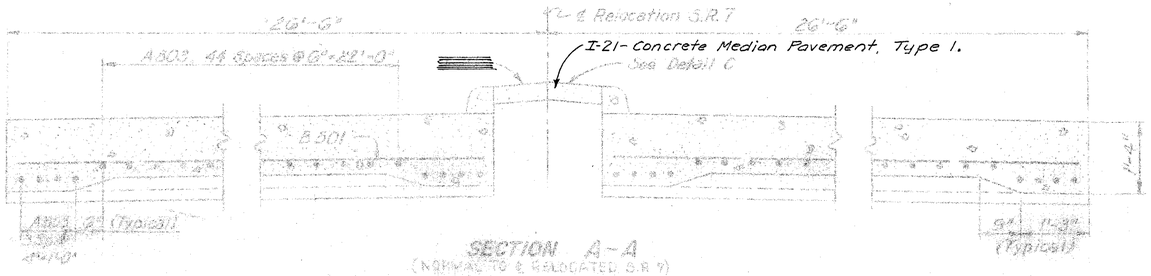

NOTE: For dimensions and notes not shown see detail of Roadway End of Approach Slab.

AT STRUCTURE END OF APPROACH SLAB

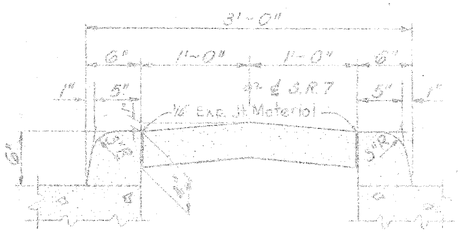
NOTE: Transition of slope on top of median shall take place through the full length of the approach slab.




SECTION B-B
(NORMAL TO ℄ ABUTMENTS)




SECTION A-A
(NORMAL TO ℄ RELOCATED S.R.7)




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 758+73.00

| Designed | Drawn | Traced | Checked | Approved | Date | Scale |
|---|---|---|---|---|---|---|
| | C.J.K. | | J.A.M. | | 4-5-29 | |

| 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. | Preborea 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.

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 | |

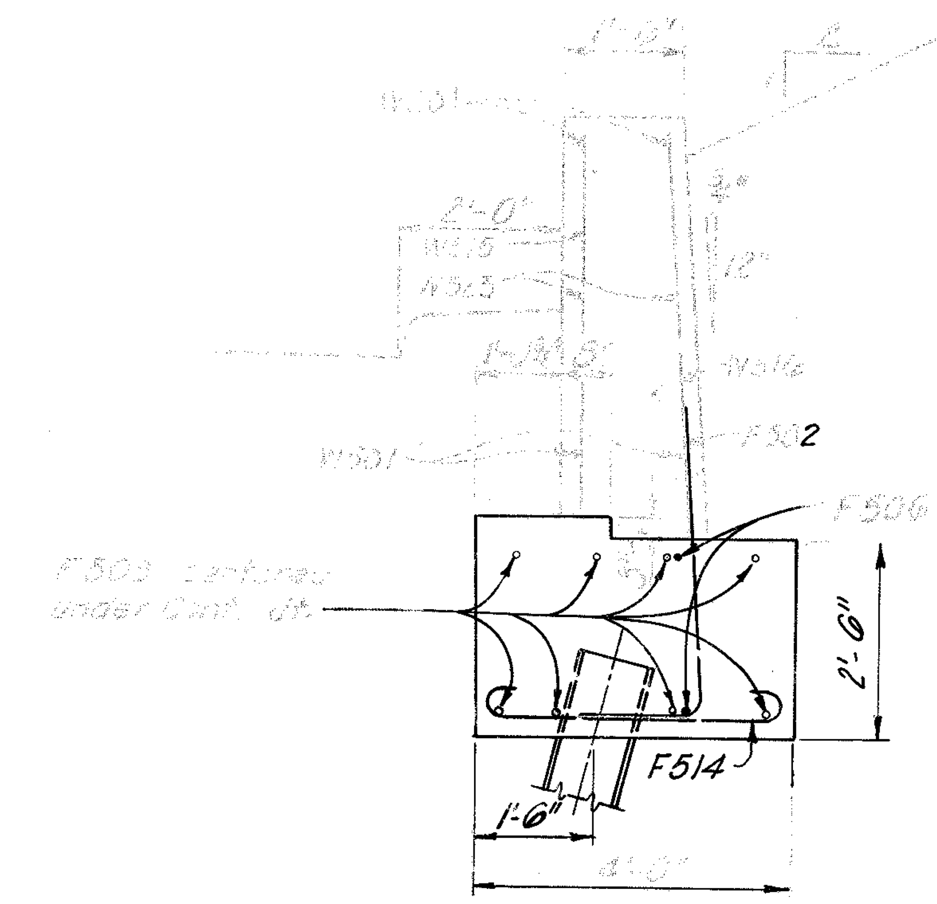
226

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27086

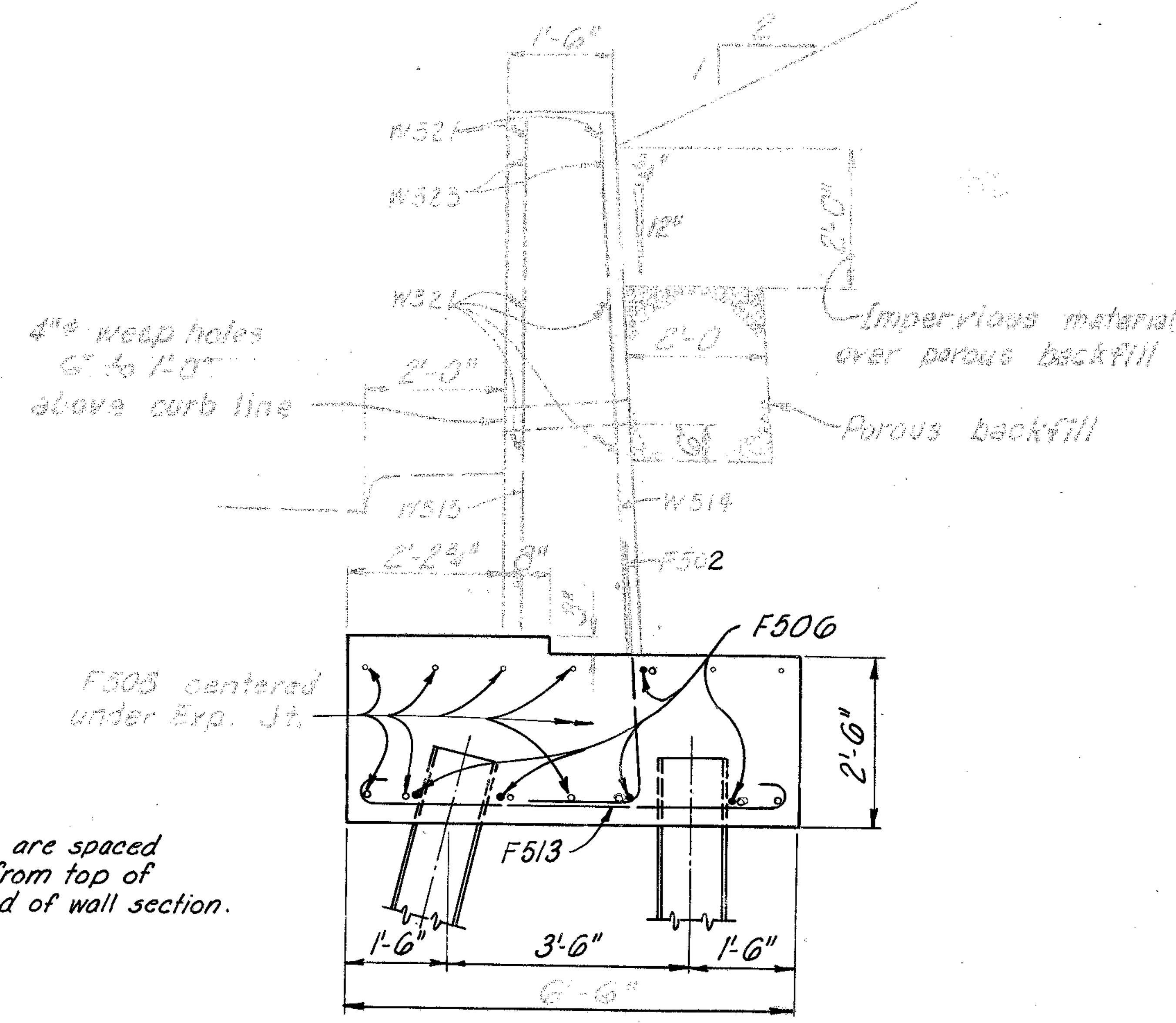
FED RD DIVISION | STATE | PROJECT
2 | OHIO | U 430(14)
JEFFERSON COUNTY
JEF-7-13.53
F503 (Bottom) 8 Spaces @ 3'-0" = 24'-0"
Optional Constr. Jt. in footing
Batter front row piles 1:4
Batter all piles 1:4
3'-6"
3 Spaces @ 7'-0" = 21'-0"
2'-9"
3 Spaces @ 6'-3" = 18'-9"
12BP53 Piles - Average Est. Pay Length = 40'
12BP53 Piles - Average Estimated Pay Length = 35'
12BP53 Piles - Average Est. Pay Length = 30'
12BP53 Piles - Average Est. Pay Length = 25'
21'-0½"
7'-0"
28'-0"
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
See Dwg. 235 for Abutment Br. No. Jef-7-1374
No. 5 bars, 10'-0" long, centered under expansion joint. For bar mark & details see sh. #235 & 240
El. 749.30
1-F506
4-F506
SECTION 4
SECTION 3
SECTION 2
SECTION 1
ELEVATION
℄ Exp Jt.
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
Designed | Drawn | Traced | Checked | Reviewed

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

JEFFERSON COUNTY
JEF-7-13.53

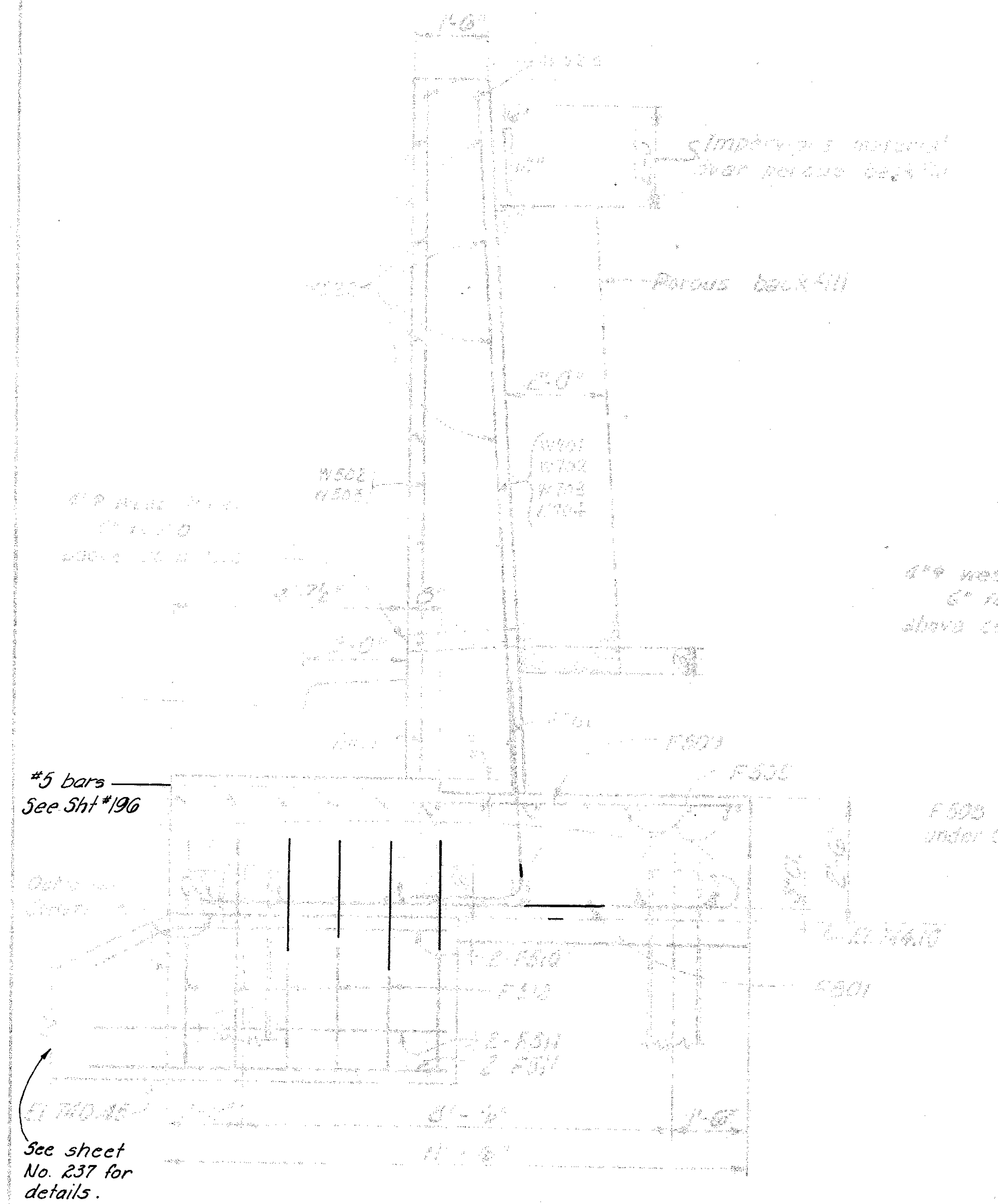



SECTION D-D

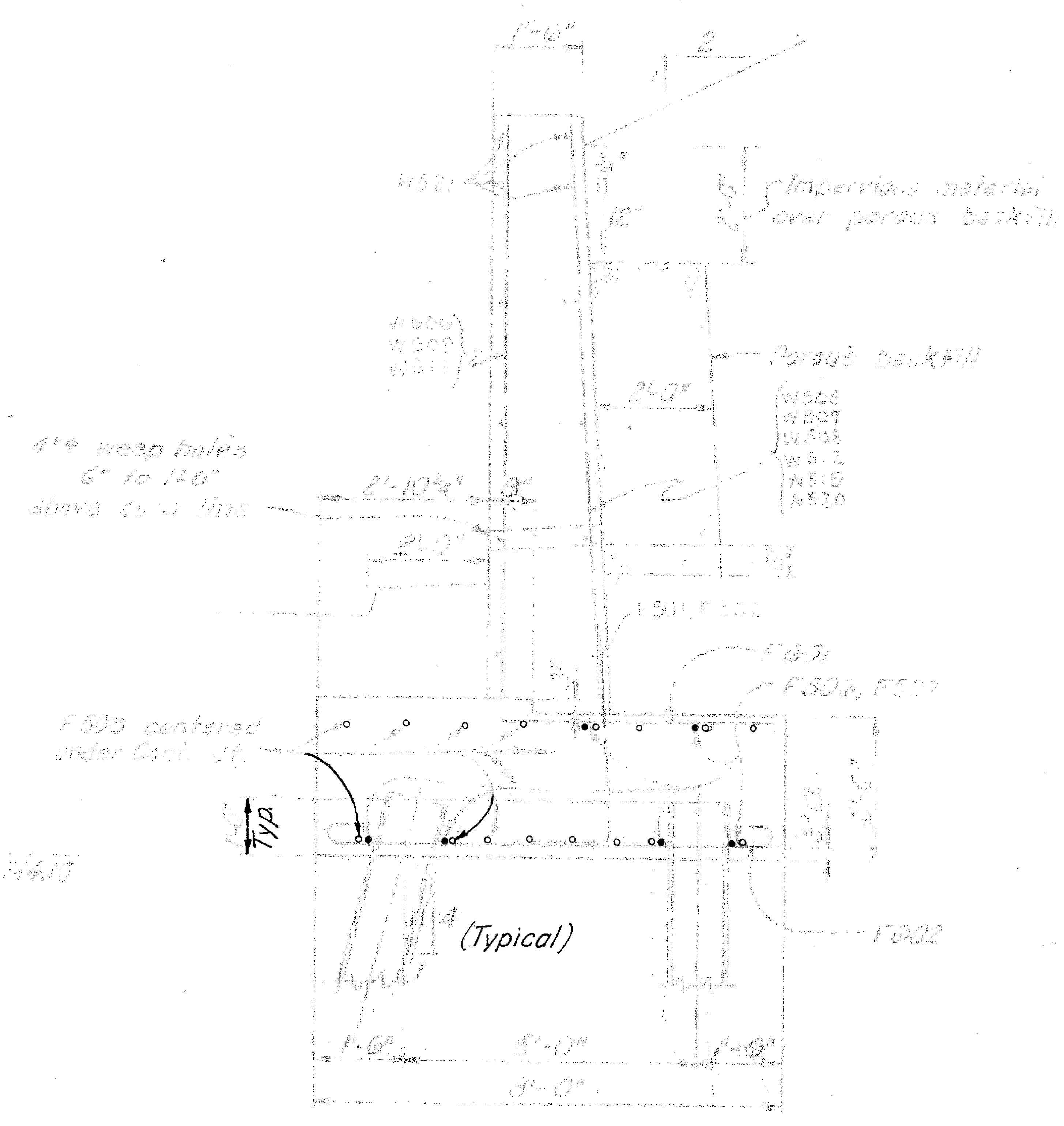



SECTION C-C

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

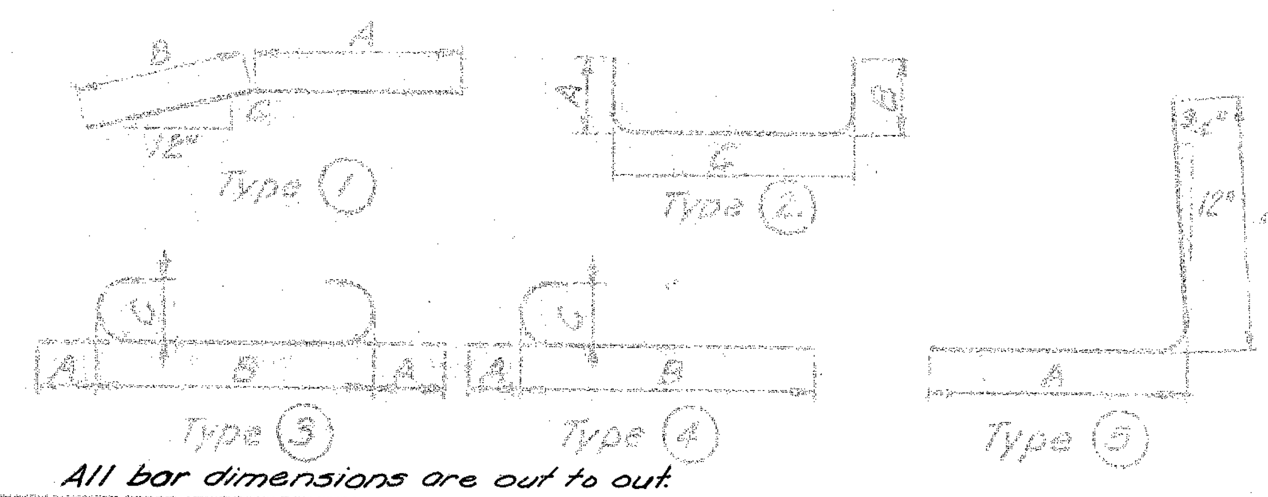



SECTION A-A




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'-9" | Str. | | | | 102 |
| W502 | 1 | 5 | 20'-0" | Str. | | | | 21 |
| W503 | 6 | 5 | 13'-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 | 5'-9" | Str. | | | | 30 |
| 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. | | | | 25 |
| W520 | 6 | 5 | 3'-5" | Str. | | | | 22 |
| W521 | 30 | 5 | 27'-8" | Str. | | | | 866 |
| W522 | 8 | 5 | 4'-6" to 19'-0" | Str. | Vary by [illegible] (2 each) | | | 88 |
| W523 | 8 | 5 | 20'-0" | Str. | | | | [illegible] |
| W524 | 2 | 5 | 11'-0" | Str. | | | | 23 |
| F501 | 16 | 5 | 8'-0" | 5 | 1'-7" | 6'-0" | | 83 |
| 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'-8" | Str. | | | | 182 |
| F506 | 13 | 5 | 21'-4" | 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 | 26 | 6 | 9'-0" | 3 | 8" | 7'-9" | 6" | 351 |
| F701 | 25 | 7 | 6'-7" | 4 | 2'-9" | 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'-3" (one each) | | | 201 |
| W704 | 6 | 7 | 13'-11" | 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 | [illegible] | 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-11.03) |
| S-16 | lump sum | | First test pile |
| S-18 | 1290 | lin.ft. | Steel piles 12BP53 |
| S-19 | 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'-3" | 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

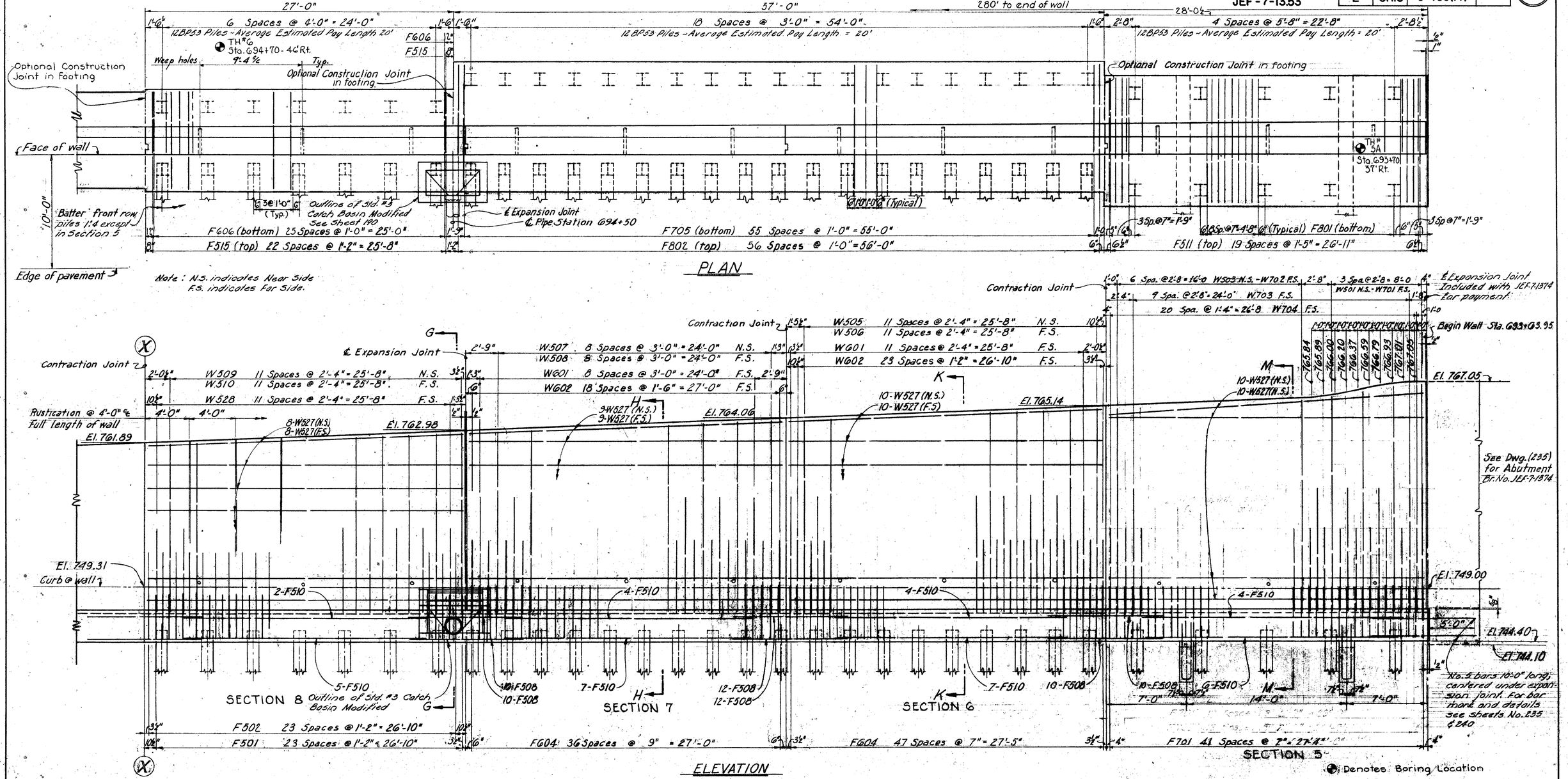
# RETAINING WALL DETAILS REINFORCING STEEL LIST & ESTIMATED QUANTITIES RIGHT OF ℄ CONSTRUCTION

JEFFERSON COUNTY

| Designed | Drawn | Traced | Checked | Reviewed | Date | Revised |
|---|---|---|---|---|---|---|
| [illegible] | CJK | CJK | JHW | [illegible] | | |

| JEFFERSON COUNTY JEF-7-13.53 | FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|---|
| | 2 | OHIO | FU 430(14) | |

198/307




PLAN

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




SECTION 8 Outline of Std. #3 Catch Basin Modified

SECTION 7

SECTION 6

SECTION 5

ELEVATION

Denotes Boring Location

## 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 511.
- **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 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. 507.8.05 is not less than the following

(continued on sheet 200)

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# RETAINING WALL PLAN & ELEVATION RIGHT OF ℄ CONSTRUCTION

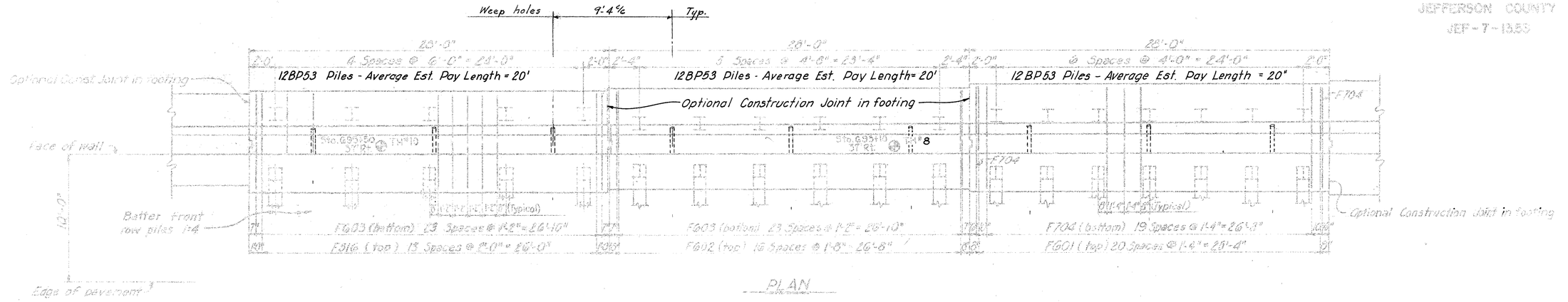
JEFFERSON COUNTY STATION 693+63.95

| Designed | Drawn | Traced | Checked | Reviewed, Date | Revised |
|---|---|---|---|---|---|
| JDR | C.J.K. | C.J.K. a.m.m. | JPM | E. Roberts 6-5-59 | |

| FEDERAL DIVISION | STATE | PROJECT | FAP NO. |
|---|---|---|---|
| 2 | OHIO | U 430(8) | |

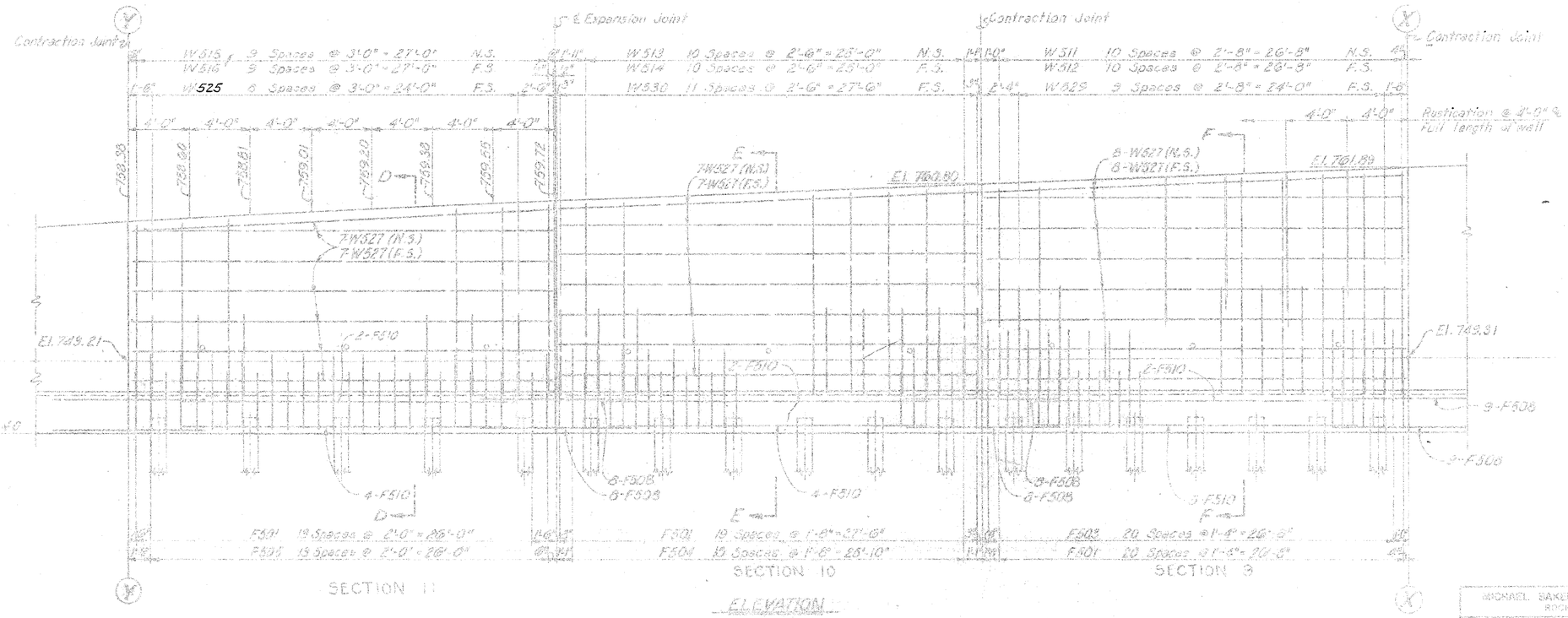
199
307

JEFFERSON COUNTY
JEF-7-13.55




PLAN

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




SECTION 11 — SECTION 10 — SECTION 9

ELEVATION

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# RETAINING WALL
## PLAN & ELEVATION
## RIGHT OF ℄ CONSTRUCTION

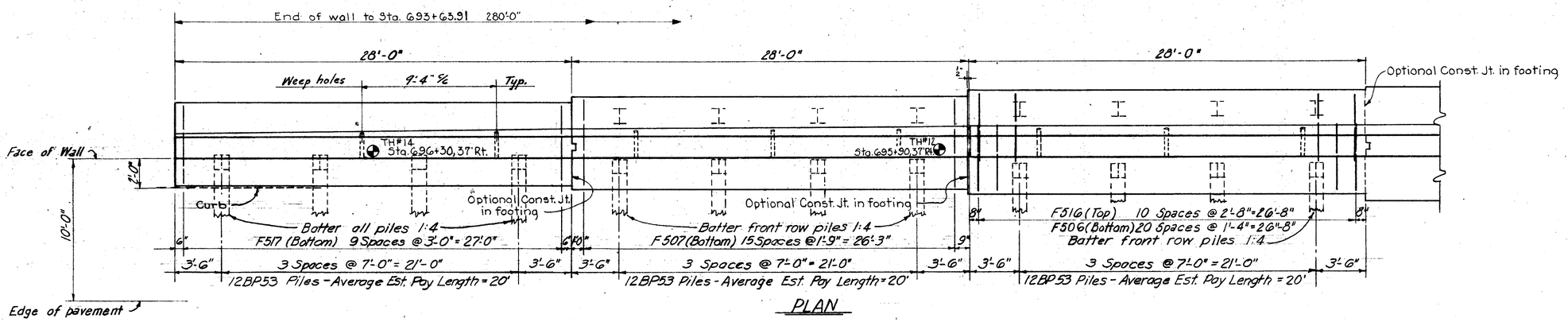
JEFFERSON COUNTY STATION 693+50 to 694+10

| Designed | Drawn | Traced | Checked | Approved | Date | No. |
|---|---|---|---|---|---|---|
| WDR | MWH | | | | E. Roberts 6-10-59 | |

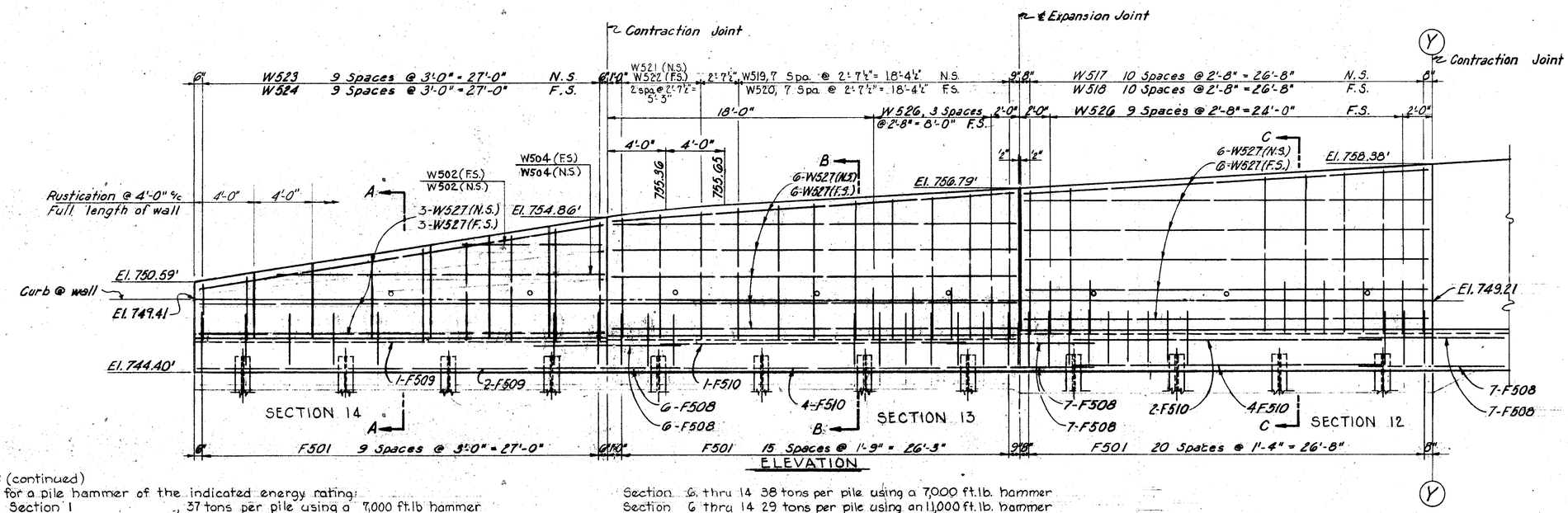
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | FU 430(14) | |

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

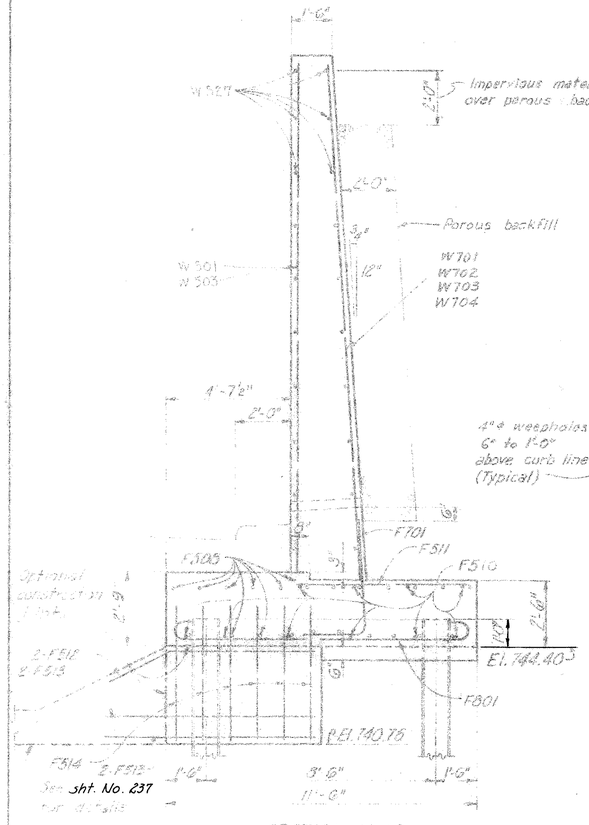
# RETAINING WALL PLAN & ELEVATION RIGHT OF ℄ CONSTRUCTION

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 | |

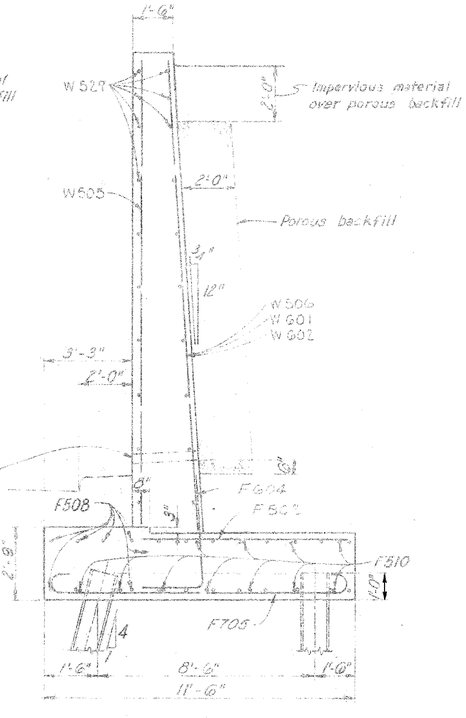
| FED. RD. DIVISION | STATE | PROJECT | SHEET FUNDS |
|---|---|---|---|
| 2 | OHIO | U 480(14) | |

JEFFERSON COUNTY
JEF-7-15.53

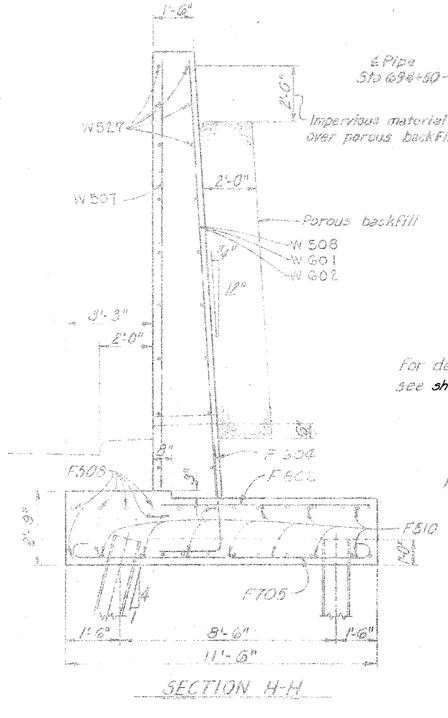



See sht. No. 237 for details

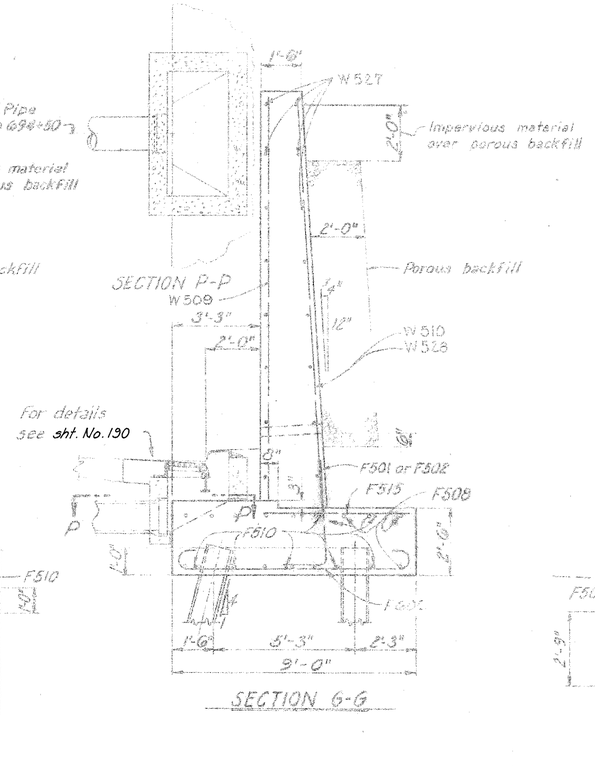
SECTION M-N



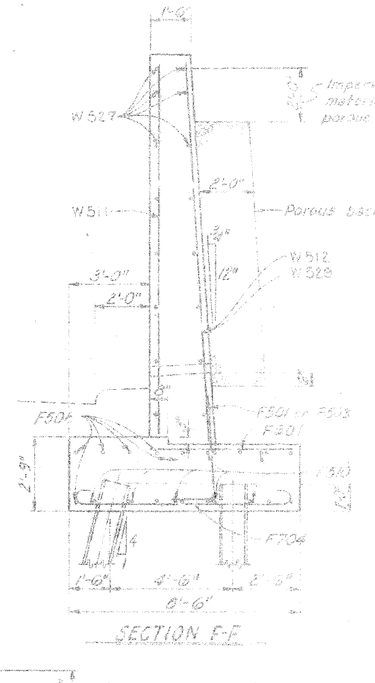

SECTION K-K



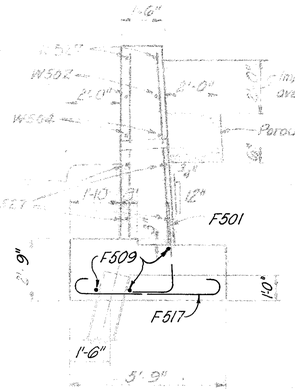

SECTION H-H



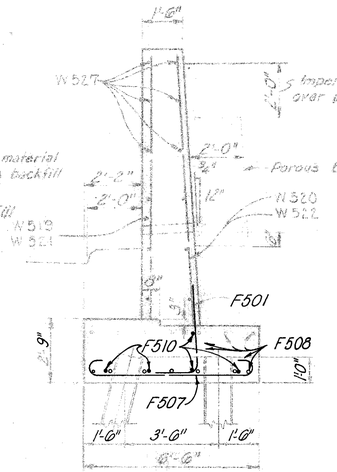

SECTION G-G



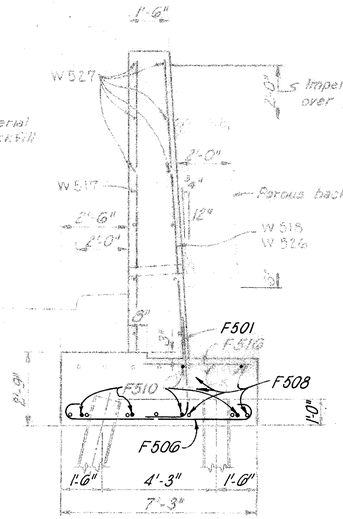

SECTION E-F



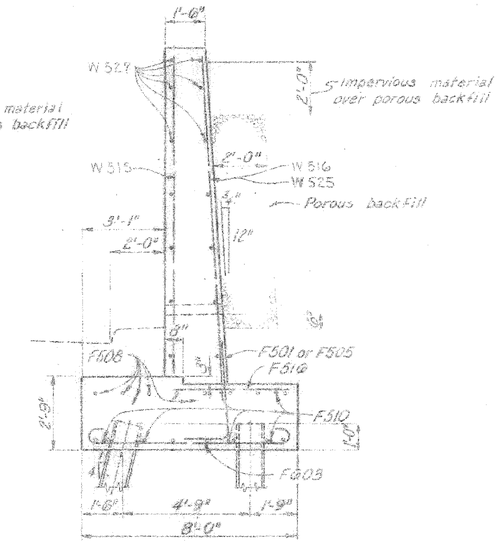

SECTION A-A



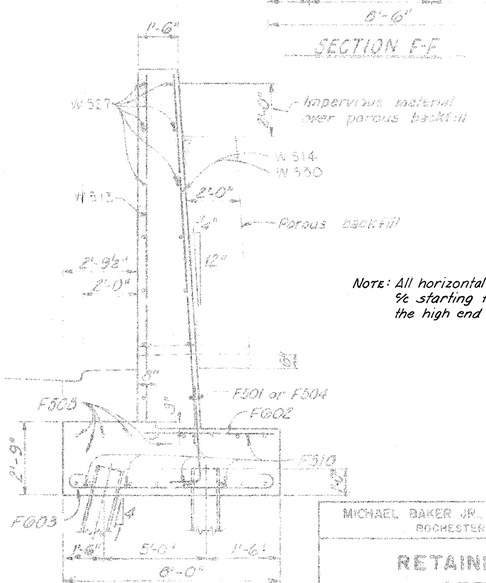

SECTION B-B




SECTION C-C




SECTION D-D




SECTION E-E

Note: All horizontal bars are spaced 2'-0" ℄ 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

| Designed | Drawn | Traced | Checked | Reviewed | Date | Revised |
|---|---|---|---|---|---|---|
| JDR | C.W.K. | C.J.K. | MW | K.L.Roberts 6-8-53 | | |

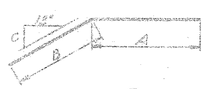
| FED. ROAD DESIGNATION | STATE | PROJECT |
|---|---|---|
| 8 | OHIO | U-0350 (14) |

JEFFERSON COUNTY
JEF-7-14.83

# REINFORCING STEEL BAR SCHEDULE

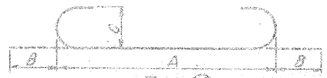
Note: All bar dimensions are out to out

Type (1)



Type (2)

Type (3)



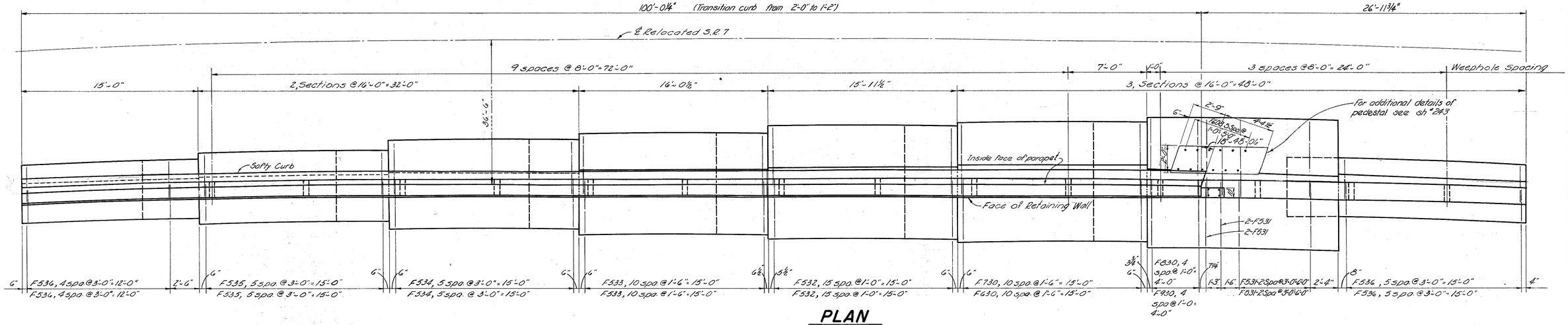
Type (4)

| MARK | TOTAL | SIZE | LENGTH | TYPE | A | B | C | WEIGHT |
|---|---|---|---|---|---|---|---|---|
| C001 | 4 | 4 | 5'-4" | 1 | | 3'-10" | | 30 |
| F002 | 2 | 5 | 5'-7" | 1 | | 4'-0" | | 17 |
| L003 | 7 | 5 | 6'-2" | 1 | | 4'-5" | | 132 |
| L004 | 2 | 6 | 6'-3" | 1 | | 4'-6" | | 40 |
| F005 | 12 | 4 | 4'-10" | 1 | | 3'-5" | | 275 |
| F006 | 12 | 4 | 4'-11" | 1 | | 3'-6" | | 210 |
| L007 | 9 | 5 | 6'-2" | 1 | | 4'-5" | | 124 |
| L008 | 9 | 5 | 6'-3" | 1 | | 4'-6" | | 95 |
| F009 | 12 | 5 | 6'-4" | 1 | | 4'-7" | | 176 |
| M010 | 12 | 4 | 4'-10" | 1 | | 3'-5" | | 91 |
| M011 | 11 | 5 | 6'-2" | 1 | | 4'-5" | | 161 |
| M012 | 11 | 5 | 6'-3" | 1 | | 4'-6" | | 163 |
| M013 | 11 | 5 | 6'-4" | 1 | | 4'-7" | | 148 |
| M014 | 11 | 5 | 6'-5" | 1 | | 4'-8" | | 71 |
| F015 | 10 | 5 | 6'-6" | 1 | | 4'-9" | | 125 |
| M016 | 10 | 4 | 4'-10" | 1 | | 3'-5" | | 74 |
| M017 | 11 | 5 | 6'-7" | 1 | | 4'-10" | | 113 |
| L018 | 11 | 5 | 6'-8" | 1 | | 4'-11" | | 121 |
| L019 | 8 | 5 | 6'-9" | 1 | | 5'-0" | | 76 |
| L020 | 8 | 5 | 6'-10" | 1 | | 5'-1" | | 79 |
| L021 | 3 | 5 | 6'-11" | 1 | | 5'-2" | | 25 |
| M022 | 3 | 4 | 4'-11" | 1 | | 3'-6" | | 20 |
| L023 | 10 | 5 | 7'-0" | 1 | | 5'-3" | | 71 |
| L024 | 10 | 5 | 7'-1" | 1 | | 5'-4" | | 74 |
| L025 | 10 | 5 | 7'-2" | 1 | | 5'-5" | | 77 |
| L026 | 10 | 5 | 7'-3" | 1 | | 5'-6" | | 80 |
| L027 | 10 | 5 | 7'-4" | 1 | | 5'-7" | | 82 |
| L028 | 10 | 5 | 7'-5" | 1 | | 5'-8" | | 85 |
| L029 | 10 | 5 | 7'-6" | 1 | | 5'-9" | | 88 |
| L030 | 10 | 5 | 7'-7" | 1 | | 5'-10" | | 91 |
| L031 | 10 | 5 | 7'-8" | 1 | | 5'-11" | | 94 |
| L032 | 10 | 5 | 7'-9" | 1 | | 6'-0" | | 97 |
| L033 | 10 | 5 | 7'-10" | 1 | | 6'-1" | | 100 |
| L034 | 10 | 5 | 7'-11" | 1 | | 6'-2" | | 103 |
| L035 | 10 | 5 | 8'-0" | 1 | | 6'-3" | | 106 |
| L036 | 10 | 5 | 8'-1" | 1 | | 6'-4" | | 109 |
| L037 | 10 | 5 | 8'-2" | 1 | | 6'-5" | | 112 |
| L038 | 10 | 5 | 8'-3" | 1 | | 6'-6" | | 115 |
| L039 | 10 | 5 | 8'-4" | 1 | | 6'-7" | | 118 |
| L040 | 10 | 5 | 8'-5" | 1 | | 6'-8" | | 121 |
| L041 | 10 | 5 | 8'-6" | 1 | | 6'-9" | | 124 |
| L042 | 10 | 5 | 8'-7" | 1 | | 6'-10" | | 127 |
| L043 | 10 | 5 | 8'-8" | 1 | | 6'-11" | | 130 |
| L044 | 10 | 5 | 8'-9" | 1 | | 7'-0" | | 133 |
| L045 | 10 | 5 | 8'-10" | 1 | | 7'-1" | | 136 |
| L046 | 10 | 5 | 8'-11" | 1 | | 7'-2" | | 139 |
| L047 | 10 | 5 | 9'-0" | 1 | | 7'-3" | | 142 |
| L048 | 10 | 5 | 9'-1" | 1 | | 7'-4" | | 145 |
| L049 | 10 | 5 | 9'-2" | 1 | | 7'-5" | | 148 |
| L050 | 10 | 5 | 9'-3" | 1 | | 7'-6" | | 151 |
| L051 | 10 | 5 | 9'-4" | 1 | | 7'-7" | | 154 |
| L052 | 10 | 5 | 9'-5" | 1 | | 7'-8" | | 157 |
| L053 | 10 | 5 | 9'-6" | 1 | | 7'-9" | | 160 |
| L054 | 10 | 5 | 9'-7" | 1 | | 7'-10" | | 163 |
| L055 | 10 | 5 | 9'-8" | 1 | | 7'-11" | | 166 |
| L056 | 10 | 5 | 9'-9" | 1 | | 8'-0" | | 169 |
| L057 | 10 | 5 | 9'-10" | 1 | | 8'-1" | | 172 |
| L058 | 10 | 5 | 9'-11" | 1 | | 8'-2" | | 175 |
| L059 | 10 | 5 | 10'-0" | 1 | | 8'-3" | | 178 |
| L060 | 10 | 5 | 10'-1" | 1 | | 8'-4" | | 181 |
| L061 | 10 | 5 | 10'-2" | 1 | | 8'-5" | | 184 |
| L062 | 10 | 5 | 10'-3" | 1 | | 8'-6" | | 187 |
| L063 | 10 | 5 | 10'-4" | 1 | | 8'-7" | | 190 |
| L064 | 10 | 5 | 10'-5" | 1 | | 8'-8" | | 193 |
| L065 | 10 | 5 | 10'-6" | 1 | | 8'-9" | | 196 |
| L066 | 10 | 5 | 10'-7" | 1 | | 8'-10" | | 199 |
| L067 | 10 | 5 | 10'-8" | 1 | | 8'-11" | | 202 |
| L068 | 10 | 5 | 10'-9" | 1 | | 9'-0" | | 205 |
| L069 | 10 | 5 | 10'-10" | 1 | | 9'-1" | | 208 |
| L070 | 10 | 5 | 10'-11" | 1 | | 9'-2" | | 211 |
| L071 | 10 | 5 | 11'-0" | 1 | | 9'-3" | | 214 |
| L072 | 10 | 5 | 11'-1" | 1 | | 9'-4" | | 217 |
| L073 | 10 | 5 | 11'-2" | 1 | | 9'-5" | | 220 |
| L074 | 10 | 5 | 11'-3" | 1 | | 9'-6" | | 223 |
| L075 | 10 | 5 | 11'-4" | 1 | | 9'-7" | | 226 |
| L076 | 10 | 5 | 11'-5" | 1 | | 9'-8" | | 229 |
| L077 | 10 | 5 | 11'-6" | 1 | | 9'-9" | | 232 |
| L078 | 10 | 5 | 11'-7" | 1 | | 9'-10" | | 235 |
| L079 | 10 | 5 | 11'-8" | 1 | | 9'-11" | | 238 |
| L080 | 10 | 5 | 11'-9" | 1 | | 10'-0" | | 241 |
| L081 | 10 | 5 | 11'-10" | 1 | | 10'-1" | | 244 |
| L082 | 10 | 5 | 11'-11" | 1 | | 10'-2" | | 247 |
| L083 | 10 | 5 | 12'-0" | 1 | | 10'-3" | | 250 |
| L084 | 10 | 5 | 12'-1" | 1 | | 10'-4" | | 253 |
| L085 | 10 | 5 | 12'-2" | 1 | | 10'-5" | | 256 |
| L086 | 10 | 5 | 12'-3" | 1 | | 10'-6" | | 259 |
| L087 | 10 | 5 | 12'-4" | 1 | | 10'-7" | | 262 |
| L088 | 10 | 5 | 12'-5" | 1 | | 10'-8" | | 265 |
| L089 | 10 | 5 | 12'-6" | 1 | | 10'-9" | | 268 |
| L090 | 10 | 5 | 12'-7" | 1 | | 10'-10" | | 271 |
| L091 | 10 | 5 | 12'-8" | 1 | | 10'-11" | | 274 |
| L092 | 10 | 5 | 12'-9" | 1 | | 11'-0" | | 277 |
| L093 | 10 | 5 | 12'-10" | 1 | | 11'-1" | | 280 |
| L094 | 10 | 5 | 12'-11" | 1 | | 11'-2" | | 283 |
| L095 | 10 | 5 | 13'-0" | 1 | | 11'-3" | | 286 |
| L096 | 10 | 5 | 13'-1" | 1 | | 11'-4" | | 289 |
| L097 | 10 | 5 | 13'-2" | 1 | | 11'-5" | | 292 |
| L098 | 10 | 5 | 13'-3" | 1 | | 11'-6" | | 295 |
| L099 | 10 | 5 | 13'-4" | 1 | | 11'-7" | | 298 |
| L100 | 10 | 5 | 13'-5" | 1 | | 11'-8" | | 301 |
| L101 | 10 | 5 | 13'-6" | 1 | | 11'-9" | | 304 |
| L102 | 10 | 5 | 13'-7" | 1 | | 11'-10" | | 307 |
| L103 | 10 | 5 | 13'-8" | 1 | | 11'-11" | | 310 |
| L104 | 10 | 5 | 13'-9" | 1 | | 12'-0" | | 313 |
| L105 | 10 | 5 | 13'-10" | 1 | | 12'-1" | | 316 |
| L106 | 10 | 5 | 13'-11" | 1 | | 12'-2" | | 319 |
| L107 | 10 | 5 | 14'-0" | 1 | | 12'-3" | | 322 |
| L108 | 10 | 5 | 14'-1" | 1 | | 12'-4" | | 325 |
| L109 | 10 | 5 | 14'-2" | 1 | | 12'-5" | | 328 |
| L110 | 10 | 5 | 14'-3" | 1 | | 12'-6" | | 331 |
| L111 | 10 | 5 | 14'-4" | 1 | | 12'-7" | | 334 |
| L112 | 10 | 5 | 14'-5" | 1 | | 12'-8" | | 337 |
| L113 | 10 | 5 | 14'-6" | 1 | | 12'-9" | | 340 |
| L114 | 10 | 5 | 14'-7" | 1 | | 12'-10" | | 343 |
| L115 | 10 | 5 | 14'-8" | 1 | | 12'-11" | | 346 |
| L116 | 10 | 5 | 14'-9" | 1 | | 13'-0" | | 349 |
| L117 | 10 | 5 | 14'-10" | 1 | | 13'-1" | | 352 |
| L118 | 10 | 5 | 14'-11" | 1 | | 13'-2" | | 355 |
| L119 | 10 | 5 | 15'-0" | 1 | | 13'-3" | | 358 |
| L120 | 10 | 5 | 15'-1" | 1 | | 13'-4" | | 361 |
| L121 | 10 | 5 | 15'-2" | 1 | | 13'-5" | | 364 |
| L122 | 10 | 5 | 15'-3" | 1 | | 13'-6" | | 367 |
| L123 | 10 | 5 | 15'-4" | 1 | | 13'-7" | | 370 |
| L124 | 10 | 5 | 15'-5" | 1 | | 13'-8" | | 373 |
| L125 | 10 | 5 | 15'-6" | 1 | | 13'-9" | | 376 |
| L126 | 10 | 5 | 15'-7" | 1 | | 13'-10" | | 379 |
| L127 | 10 | 5 | 15'-8" | 1 | | 13'-11" | | 382 |
| L128 | 10 | 5 | 15'-9" | 1 | | 14'-0" | | 385 |
| L129 | 10 | 5 | 15'-10" | 1 | | 14'-1" | | 388 |
| L130 | 10 | 5 | 15'-11" | 1 | | 14'-2" | | 391 |
| L131 | 10 | 5 | 16'-0" | 1 | | 14'-3" | | 394 |
| L132 | 10 | 5 | 16'-1" | 1 | | 14'-4" | | 397 |
| L133 | 10 | 5 | 16'-2" | 1 | | 14'-5" | | 400 |
| L134 | 10 | 5 | 16'-3" | 1 | | 14'-6" | | 403 |
| L135 | 10 | 5 | 16'-4" | 1 | | 14'-7" | | 406 |
| L136 | 10 | 5 | 16'-5" | 1 | | 14'-8" | | 409 |
| L137 | 10 | 5 | 16'-6" | 1 | | 14'-9" | | 412 |
| L138 | 10 | 5 | 16'-7" | 1 | | 14'-10" | | 415 |
| L139 | 10 | 5 | 16'-8" | 1 | | 14'-11" | | 418 |
| L140 | 10 | 5 | 16'-9" | 1 | | 15'-0" | | 421 |
| L141 | 10 | 5 | 16'-10" | 1 | | 15'-1" | | 424 |
| L142 | 10 | 5 | 16'-11" | 1 | | 15'-2" | | 427 |
| L143 | 10 | 5 | 17'-0" | 1 | | 15'-3" | | 430 |
| L144 | 10 | 5 | 17'-1" | 1 | | 15'-4" | | 433 |
| L145 | 10 | 5 | 17'-2" | 1 | | 15'-5" | | 436 |
| L146 | 10 | 5 | 17'-3" | 1 | | 15'-6" | | 439 |
| L147 | 10 | 5 | 17'-4" | 1 | | 15'-7" | | 442 |
| L148 | 10 | 5 | 17'-5" | 1 | | 15'-8" | | 445 |
| L149 | 10 | 5 | 17'-6" | 1 | | 15'-9" | | 448 |
| L150 | 10 | 5 | 17'-7" | 1 | | 15'-10" | | 451 |
| L151 | 10 | 5 | 17'-8" | 1 | | 15'-11" | | 454 |
| L152 | 10 | 5 | 17'-9" | 1 | | 16'-0" | | 457 |
| L153 | 10 | 5 | 17'-10" | 1 | | 16'-1" | | 460 |
| L154 | 10 | 5 | 17'-11" | 1 | | 16'-2" | | 463 |
| L155 | 10 | 5 | 18'-0" | 1 | | 16'-3" | | 466 |
| L156 | 10 | 5 | 18'-1" | 1 | | 16'-4" | | 469 |
| L157 | 10 | 5 | 18'-2" | 1 | | 16'-5" | | 472 |
| L158 | 10 | 5 | 18'-3" | 1 | | 16'-6" | | 475 |
| L159 | 10 | 5 | 18'-4" | 1 | | 16'-7" | | 478 |
| L160 | 10 | 5 | 18'-5" | 1 | | 16'-8" | | 481 |
| L161 | 10 | 5 | 18'-6" | 1 | | 16'-9" | | 484 |
| L162 | 10 | 5 | 18'-7" | 1 | | 16'-10" | | 487 |
| L163 | 10 | 5 | 18'-8" | 1 | | 16'-11" | | 490 |
| L164 | 10 | 5 | 18'-9" | 1 | | 17'-0" | | 493 |
| L165 | 10 | 5 | 18'-10" | 1 | | 17'-1" | | 496 |
| L166 | 10 | 5 | 18'-11" | 1 | | 17'-2" | | 499 |
| L167 | 10 | 5 | 19'-0" | 1 | | 17'-3" | | 502 |
| L168 | 10 | 5 | 19'-1" | 1 | | 17'-4" | | 505 |
| L169 | 10 | 5 | 19'-2" | 1 | | 17'-5" | | 508 |
| L170 | 10 | 5 | 19'-3" | 1 | | 17'-6" | | 511 |
| L171 | 10 | 5 | 19'-4" | 1 | | 17'-7" | | 514 |
| L172 | 10 | 5 | 19'-5" | 1 | | 17'-8" | | 517 |
| L173 | 10 | 5 | 19'-6" | 1 | | 17'-9" | | 520 |
| L174 | 10 | 5 | 19'-7" | 1 | | 17'-10" | | 523 |
| L175 | 10 | 5 | 19'-8" | 1 | | 17'-11" | | 526 |
| L176 | 10 | 5 | 19'-9" | 1 | | 18'-0" | | 529 |
| L177 | 10 | 5 | 19'-10" | 1 | | 18'-1" | | 532 |
| L178 | 10 | 5 | 19'-11" | 1 | | 18'-2" | | 535 |
| L179 | 10 | 5 | 20'-0" | 1 | | 18'-3" | | 538 |
| L180 | 10 | 5 | 20'-1" | 1 | | 18'-4" | | 541 |
| L181 | 10 | 5 | 20'-2" | 1 | | 18'-5" | | 544 |
| L182 | 10 | 5 | 20'-3" | 1 | | 18'-6" | | 547 |
| L183 | 10 | 5 | 20'-4" | 1 | | 18'-7" | | 550 |
| L184 | 10 | 5 | 20'-5" | 1 | | 18'-8" | | 553 |
| L185 | 10 | 5 | 20'-6" | 1 | | 18'-9" | | 556 |
| L186 | 10 | 5 | 20'-7" | 1 | | 18'-10" | | 559 |
| L187 | 10 | 5 | 20'-8" | 1 | | 18'-11" | | 562 |
| L188 | 10 | 5 | 20'-9" | 1 | | 19'-0" | | 565 |
| L189 | 10 | 5 | 20'-10" | 1 | | 19'-1" | | 568 |
| L190 | 10 | 5 | 20'-11" | 1 | | 19'-2" | | 571 |
| L191 | 10 | 5 | 21'-0" | 1 | | 19'-3" | | 574 |
| L192 | 10 | 5 | 21'-1" | 1 | | 19'-4" | | 577 |
| L193 | 10 | 5 | 21'-2" | 1 | | 19'-5" | | 580 |
| L194 | 10 | 5 | 21'-3" | 1 | | 19'-6" | | 583 |
| L195 | 10 | 5 | 21'-4" | 1 | | 19'-7" | | 586 |
| L196 | 10 | 5 | 21'-5" | 1 | | 19'-8" | | 589 |
| L197 | 10 | 5 | 21'-6" | 1 | | 19'-9" | | 592 |
| L198 | 10 | 5 | 21'-7" | 1 | | 19'-10" | | 595 |
| L199 | 10 | 5 | 21'-8" | 1 | | 19'-11" | | 598 |
| L200 | 10 | 5 | 21'-9" | 1 | | 20'-0" | | 601 |
| L201 | 10 | 5 | 21'-10" | 1 | | 20'-1" | | 604 |
| L202 | 10 | 5 | 21'-11" | 1 | | 20'-2" | | 607 |
| L203 | 10 | 5 | 22'-0" | 1 | | 20'-3" | | 610 |
| L204 | 10 | 5 | 22'-1" | 1 | | 20'-4" | | 613 |
| L205 | 10 | 5 | 22'-2" | 1 | | 20'-5" | | 616 |
| L206 | 10 | 5 | 22'-3" | 1 | | 20'-6" | | 619 |
| L207 | 10 | 5 | 22'-4" | 1 | | 20'-7" | | 622 |
| L208 | 10 | 5 | 22'-5" | 1 | | 20'-8" | | 625 |
| L209 | 10 | 5 | 22'-6" | 1 | | 20'-9" | | 628 |
| L210 | 10 | 5 | 22'-7" | 1 | | 20'-10" | | 631 |
| L211 | 10 | 5 | 22'-8" | 1 | | 20'-11" | | 634 |
| L212 | 10 | 5 | 22'-9" | 1 | | 21'-0" | | 637 |
| L213 | 10 | 5 | 22'-10" | 1 | | 21'-1" | | 640 |
| L214 | 10 | 5 | 22'-11" | 1 | | 21'-2" | | 643 |
| L215 | 10 | 5 | 23'-0" | 1 | | 21'-3" | | 646 |
| L216 | 10 | 5 | 23'-1" | 1 | | 21'-4" | | 649 |
| L217 | 10 | 5 | 23'-2" | 1 | | 21'-5" | | 652 |
| L218 | 10 | 5 | 23'-3" | 1 | | 21'-6" | | 655 |
| L219 | 10 | 5 | 23'-4" | 1 | | 21'-7" | | 658 |
| L220 | 10 | 5 | 23'-5" | 1 | | 21'-8" | | 661 |
| L221 | 10 | 5 | 23'-6" | 1 | | 21'-9" | | 664 |
| L222 | 10 | 5 | 23'-7" | 1 | | 21'-10" | | 667 |
| L223 | 10 | 5 | 23'-8" | 1 | | 21'-11" | | 670 |
| L224 | 10 | 5 | 23'-9" | 1 | | 22'-0" | | 673 |
| L225 | 10 | 5 | 23'-10" | 1 | | 22'-1" | | 676 |
| L226 | 10 | 5 | 23'-11" | 1 | | 22'-2" | | 679 |
| L227 | 10 | 5 | 24'-0" | 1 | | 22'-3" | | 682 |
| L228 | 10 | 5 | 24'-1" | 1 | | 22'-4" | | 685 |
| L229 | 10 | 5 | 24'-2" | 1 | | 22'-5" | | 688 |
| L230 | 10 | 5 | 24'-3" | 1 | | 22'-6" | | 691 |
| L231 | 10 | 5 | 24'-4" | 1 | | 22'-7" | | 694 |
| L232 | 10 | 5 | 24'-5" | 1 | | 22'-8" | | 697 |
| L233 | 10 | 5 | 24'-6" | 1 | | 22'-9" | | 700 |
| L234 | 10 | 5 | 24'-7" | 1 | | 22'-10" | | 703 |
| L235 | 10 | 5 | 24'-8" | 1 | | 22'-11" | | 706 |
| L236 | 10 | 5 | 24'-9" | 1 | | 23'-0" | | 709 |
| L237 | 10 | 5 | 24'-10" | 1 | | 23'-1" | | 712 |
| L238 | 10 | 5 | 24'-11" | 1 | | 23'-2" | | 715 |
| L239 | 10 | 5 | 25'-0" | 1 | | 23'-3" | | 718 |
| L240 | 10 | 5 | 25'-1" | 1 | | 23'-4" | | 721 |
| L241 | 10 | 5 | 25'-2" | 1 | | 23'-5" | | 724 |
| L242 | 10 | 5 | 25'-3" | 1 | | 23'-6" | | 727 |
| L243 | 10 | 5 | 25'-4" | 1 | | 23'-7" | | 730 |
| L244 | 10 | 5 | 25'-5" | 1 | | 23'-8" | | 733 |
| L245 | 10 | 5 | 25'-6" | 1 | | 23'-9" | | 736 |
| L246 | 10 | 5 | 25'-7" | 1 | | 23'-10" | | 739 |
| L247 | 10 | 5 | 25'-8" | 1 | | 23'-11" | | 742 |
| L248 | 10 | 5 | 25'-9" | 1 | | 24'-0" | | 745 |
| L249 | 10 | 5 | 25'-10" | 1 | | 24'-1" | | 748 |
| L250 | 10 | 5 | 25'-11" | 1 | | 24'-2" | | 751 |
| L251 | 10 | 5 | 26'-0" | 1 | | 24'-3" | | 754 |
| L252 | 10 | 5 | 26'-1" | 1 | | 24'-4" | | 757 |
| L253 | 10 | 5 | 26'-2" | 1 | | 24'-5" | | 760 |
| L254 | 10 | 5 | 26'-3" | 1 | | 24'-6" | | 763 |
| L255 | 10 | 5 | 26'-4" | 1 | | 24'-7" | | 766 |
| L256 | 10 | 5 | 26'-5" | 1 | | 24'-8" | | 769 |
| L257 | 10 | 5 | 26'-6" | 1 | | 24'-9" | | 772 |
| L258 | 10 | 5 | 26'-7" | 1 | | 24'-10" | | 775 |
| L259 | 10 | 5 | 26'-8" | 1 | | 24'-11" | | 778 |
| L260 | 10 | 5 | 26'-9" | 1 | | 25'-0" | | 781 |
| L261 | 10 | 5 | 26'-10" | 1 | | 25'-1" | | 784 |
| L262 | 10 | 5 | 26'-11" | 1 | | 25'-2" | | 787 |
| L263 | 10 | 5 | 27'-0" | 1 | | 25'-3" | | 790 |
| L264 | 10 | 5 | 27'-1" | 1 | | 25'-4" | | 793 |
| L265 | 10 | 5 | 27'-2" | 1 | | 25'-5" | | 796 |
| L266 | 10 | 5 | 27'-3" | 1 | | 25'-6" | | 799 |
| L267 | 10 | 5 | 27'-4" | 1 | | 25'-7" | | 802 |
| L268 | 10 | 5 | 27'-5" | 1 | | 25'-8" | | 805 |
| L269 | 10 | 5 | 27'-6" | 1 | | 25'-9" | | 808 |
| L270 | 10 | 5 | 27'-7" | 1 | | 25'-10" | | 811 |
| L271 | 10 | 5 | 27'-8" | 1 | | 25'-11" | | 814 |
| L272 | 10 | 5 | 27'-9" | 1 | | 26'-0" | | 817 |
| L273 | 10 | 5 | 27'-10" | 1 | | 26'-1" | | 820 |
| L274 | 10 | 5 | 27'-11" | 1 | | 26'-2" | | 823 |
| L275 | 10 | 5 | 28'-0" | 1 | | 26'-3" | | 826 |
| L276 | 10 | 5 | 28'-1" | 1 | | 26'-4" | | 829 |
| L277 | 10 | 5 | 28'-2" | 1 | | 26'-5" | | 832 |
| L278 | 10 | 5 | 28'-3" | 1 | | 26'-6" | | 835 |
| L279 | 10 | 5 | 28'-4" | 1 | | 26'-7" | | 838 |
| L280 | 10 | 5 | 28'-5" | 1 | | 26'-8" | | 841 |
| L281 | 10 | 5 | 28'-6" | 1 | | 26'-9" | | 844 |
| L282 | 10 | 5 | 28'-7" | 1 | | 26'-10" | | 847 |
| L283 | 10 | 5 | 28'-8" | 1 | | 26'-11" | | 850 |
| L284 | 10 | 5 | 28'-9" | 1 | | 27'-0" | | 853 |
| L285 | 10 | 5 | 28'-10" | 1 | | 27'-1" | | 856 |
| L286 | 10 | 5 | 28'-11" | 1 | | 27'-2" | | 859 |
| L287 | 10 | 5 | 29'-0" | 1 | | 27'-3" | | 862 |
| L288 | 10 | 5 | 29'-1" | 1 | | 27'-4" | | 865 |
| L289 | 10 | 5 | 29'-2" | 1 | | 27'-5" | | 868 |
| L290 | 10 | 5 | 29'-3" | 1 | | 27'-6" | | 871 |
| L291 | 10 | 5 | 29'-4" | 1 | | 27'-7" | | 874 |
| L292 | 10 | 5 | 29'-5" | 1 | | 27'-8" | | 877 |
| L293 | 10 | 5 | 29'-6" | 1 | | 27'-9" | | 880 |
| L294 | 10 | 5 | 29'-7" | 1 | | 27'-10" | | 883 |
| L295 | 10 | 5 | 29'-8" | 1 | | 27'-11" | | 886 |
| L296 | 10 | 5 | 29'-9" | 1 | | 28'-0" | | 889 |
| L297 | 10 | 5 | 29'-10" | 1 | | 28'-1" | | 892 |
| L298 | 10 | 5 | 29'-11" | 1 | | 28'-2" | | 895 |
| L299 | 10 | 5 | 30'-0" | 1 | | 28'-3" | | 898 |
| L300 | 10 | 5 | 30'-1" | 1 | | 28'-4" | | 901 |
| L301 | 10 | 5 | 30'-2" | 1 | | 28'-5" | | 904 |
| L302 | 10 | 5 | 30'-3" | 1 | | 28'-6" | | 907 |
| L303 | 10 | 5 | 30'-4" | 1 | | 28'-7" | | 910 |
| L304 | 10 | 5 | 30'-5" | 1 | | 28'-8" | | 913 |
| L305 | 10 | 5 | 30'-6" | 1 | | 28'-9" | | 916 |
| L306 | 10 | 5 | 30'-7" | 1 | | 28'-10" | | 919 |
| L307 | 10 | 5 | 30'-8" | 1 | | 28'-11" | | 922 |
| L308 | 10 | 5 | 30'-9" | 1 | | 29'-0" | | 925 |
| L309 | 10 | 5 | 30'-10" | 1 | | 29'-1" | | 928 |
| L310 | 10 | 5 | 30'-11" | 1 | | 29'-2" | | 931 |
| L311 | 10 | 5 | 31'-0" | 1 | | 29'-3" | | 934 |
| L312 | 10 | 5 | 31'-1" | 1 | | 29'-4" | | 937 |
| L313 | 10 | 5 | 31'-2" | 1 | | 29'-5" | | 940 |
| L314 | 10 | 5 | 31'-3" | 1 | | 29'-6" | | 943 |
| L315 | 10 | 5 | 31'-4" | 1 | | 29'-7" | | 946 |
| L316 | 10 | 5 | 31'-5" | 1 | | 29'-8" | | 949 |
| L317 | 10 | 5 | 31'-6" | 1 | | 29'-9" | | 952 |
| L318 | 10 | 5 | 31'-7" | 1 | | 29'-10" | | 955 |
| L319 | 10 | 5 | 31'-8" | 1 | | 29'-11" | | 958 |
| L320 | 10 | 5 | 31'-9" | 1 | | 30'-0" | | 961 |
| L321 | 10 | 5 | 31'-10" | 1 | | 30'-1" | | 964 |
| L322 | 10 | 5 | 31'-11" | 1 | | 30'-2" | | 967 |
| L323 | 10 | 5 | 32'-0" | 1 | | 30'-3" | | 970 |
| L324 | 10 | 5 | 32'-1" | 1 | | 30'-4" | | 973 |
| L325 | 10 | 5 | 32'-2" | 1 | | 30'-5" | | 976 |
| L326 | 10 | 5 | 32'-3" | 1 | | 30'-6" | | 979 |
| L327 | 10 | 5 | 32'-4" | 1 | | 30'-7" | | 982 |
| L328 | 10 | 5 | 32'-5" | 1 | | 30'-8" | | 985 |
| L329 | 10 | 5 | 32'-6" | 1 | | 30'-9" | | 988 |
| L330 | 10 | 5 | 32'-7" | 1 | | 30'-10" | | 991 |
| L331 | 10 | 5 | 32'-8" | 1 | | 30'-11" | | 994 |
| L332 | 10 | 5 | 32'-9" | 1 | | 31'-0" | | 997 |
| L333 | 10 | 5 | 32'-10" | 1 | | 31'-1" | | 1000 |
| L334 | 10 | 5 | 32'-11" | 1 | | 31'-2" | | 1003 |
| L335 | 10 | 5 | 33'-0" | 1 | | 31'-3" | | 1006 |
| L336 | 10 | 5 | 33'-1" | 1 | | 31'-4" | | 1009 |
| L337 | 10 | 5 | 33'-2" | 1 | | 31'-5" | | 1012 |
| L338 | 10 | 5 | 33'-3" | 1 | | 31'-6" | | 1015 |
| L339 | 10 | 5 | 33'-4" | 1 | | 31'-7" | | 1018 |
| L340 | 10 | 5 | 33'-5" | 1 | | 31'-8" | | 1021 |
| L341 | 10 | 5 | 33'-6" | 1 | | 31'-9" | | 1024 |
| L342 | 10 | 5 | 33'-7" | 1 | | 31'-10" | | 1027 |
| L343 | 10 | 5 | 33'-8" | 1 | | 31'-11" | | 1030 |
| L344 | 10 | 5 | 33'-9" | 1 | | 32'-0" | | 1033 |
| L345 | 10 | 5 | 33'-10" | 1 | | 32'-1" | | 1036 |
| L346 | 10 | 5 | 33'-11" | 1 | | 32'-2" | | 1039 |
| L347 | 10 | 5 | 34'-0" | 1 | | 32'-3" | | 1042 |
| L348 | 10 | 5 | 34'-1" | 1 | | 32'-4" | | 1045 |
| L349 | 10 | 5 | 34'-2" | 1 | | 32'-5" | | 1048 |
| L350 | 10 | 5 | 34'-3" | 1 | | 32'-6" | | 1051 |
| L351 | 10 | 5 | 34'-4" | 1 | | 32'-7" | | 1054 |
| L352 | 10 | 5 | 34'-5" | 1 | | 32'-8" | | 1057 |
| L353 | 10 | 5 | 34'-6" | 1 | | 32'-9" | | 1060 |
| L354 | 10 | 5 | 34'-7" | 1 | | 32'-10" | | 1063 |
| L355 | 10 | 5 | 34'-8" | 1 | | 32'-11" | | 1066 |
| L356 | 10 | 5 | 34'-9" | 1 | | 33'-0" | | 1069 |
| L357 | 10 | 5 | 34'-10" | 1 | | 33'-1" | | 1072 |
| L358 | 10 | 5 | 34'-11" | 1 | | 33'-2" | | 1075 |
| L359 | 10 | 5 | 35'-0" | 1 | | 33'-3" | | 1078 |
| L360 | 10 | 5 | 35'-1" | 1 | | 33'-4" | | 1081 |
| L361 | 10 | 5 | 35'-2" | 1 | | 33'-5" | | 1084 |
| L362 | 10 | 5 | 35'-3" | 1 | | 33'-6" | | 1087 |
| L363 | 10 | 5 | 35'-4" | 1 | | 33'-7" | | 1090 |
| L364 | 10 | 5 | 35'-5" | 1 | | 33'-8" | | 1093 |
| L365 | 10 | 5 | 35'-6" | 1 | | 33'-9" | | 1096 |
| L366 | 10 | 5 | 35'-7" | 1 | | 33'-10" | | 1099 |
| L367 | 10 | 5 | 35'-8" | 1 | | 33'-11" | | 1102 |
| L368 | 10 | 5 | 35'-9" | 1 | | 34'-0" | | 1105 |
| L369 | 10 | 5 | 35'-10" | 1 | | 34'-1" | | 1108 |
| L370 | 10 | 5 | 35'-11" | 1 | | 34'-2" | | 1111 |
| L371 | 10 | 5 | 36'-0" | 1 | | 34'-3" | | 1114 |
| L372 | 10 | 5 | 36'-1" | 1 | | 34'-4" | | 1117 |
| L373 | 10 | 5 | 36'-2" | 1 | | 34'-5" | | 1120 |
| L374 | 10 | 5 | 36'-3" | 1 | | 34'-6" | | 1123 |
| L375 | 10 | 5 | 36'-4" | 1 | | 34'-7" | | 1126 |
| L376 | 10 | 5 | 36'-5" | 1 | | 34'-8" | | 1129 |
| L377 | 10 | 5 | 36'-6" | 1 | | 34'-9" | | 1132 |
| L378 | 10 | 5 | 36'-7" | 1 | | 34'-10" | | 1135 |
| L379 | 10 | 5 | 36'-8" | 1 | | 34'-11" | | 1138 |
| L380 | 10 | 5 | 36'-9" | 1 | | 35'-0" | | 1141 |
| L381 | 10 | 5 | 36'-10" | 1 | | 35'-1" | | 1144 |
| L382 | 10 | 5 | 36'-11" | 1 | | 35'-2" | | 1147 |
| L383 | 10 | 5 | 37'-0" | 1 | | 35'-3" | | 1150 |
| L384 | 10 | 5 | 37'-1" | 1 | | 35'-4" | | 1153 |
| L385 | 10 | 5 | 37'-2" | 1 | | 35'-5" | | 1156 |
| L386 | 10 | 5 | 37'-3" | 1 | | 35'-6" | | 1159 |
| L387 | 10 | 5 | 37'-4" | 1 | | 35'-7" | | 1162 |
| L388 | 10 | 5 | 37'-5" | 1 | | 35'-8" | | 1165 |
| L389 | 10 | 5 | 37'-6" | 1 | | 35'-9" | | 1168 |
| L390 | 10 | 5 | 37'-7" | 1 | | 35'-10" | | 1171 |
| L391 | 10 | 5 | 37'-8" | 1 | | 35'-11" | | 1174 |
| L392 | 10 | 5 | 37'-9" | 1 | | 36'-0" | | 1177 |
| L393 | 10 | 5 | 37'-10" | 1 | | 36'-1" | | 1180 |
| L394 | 10 | 5 | 37'-11" | 1 | | 36'-2" | | 1183 |
| L395 | 10 | 5 | 38'-0" | 1 | | 36'-3" | | 1186 |
| L396 | 10 | 5 | 38'-1" | 1 | | 36'-4" | | 1189 |
| L397 | 10 | 5 | 38'-2" | 1 | | 36'-5" | | 1192 |
| L398 | 10 | 5 | 38'-3" | 1 | | 36'-6" | | 1195 |
| L399 | 10 | 5 | 38'-4" | 1 | | 36'-7" | | 1198 |
| L400 | 10 | 5 | 38'-5" | 1 | | 36'-8" | | 1201 |
| L401 | 10 | 5 | 38'-6" | 1 | | 36'-9" | | 1204 |
| L402 | 10 | 5 | 38'-7" | 1 | | 36'-10" | | 1207 |
| L403 | 10 | 5 | 38'-8" | 1 | | 36'-11" | | 1210 |
| L404 | 10 | 5 | 38'-9" | 1 | | 37'-0" | | 1213 |
| L405 | 10 | 5 | 38'-10" | 1 | | 37'-1" | | 1216 |
| L406 | 10 | 5 | 38'-11" | 1 | | 37'-2" | | 1219 |
| L407 | 10 | 5 | 39'-0" | 1 | | 37'-3" | | 1222 |
| L408 | 10 | 5 | 39'-1" | 1

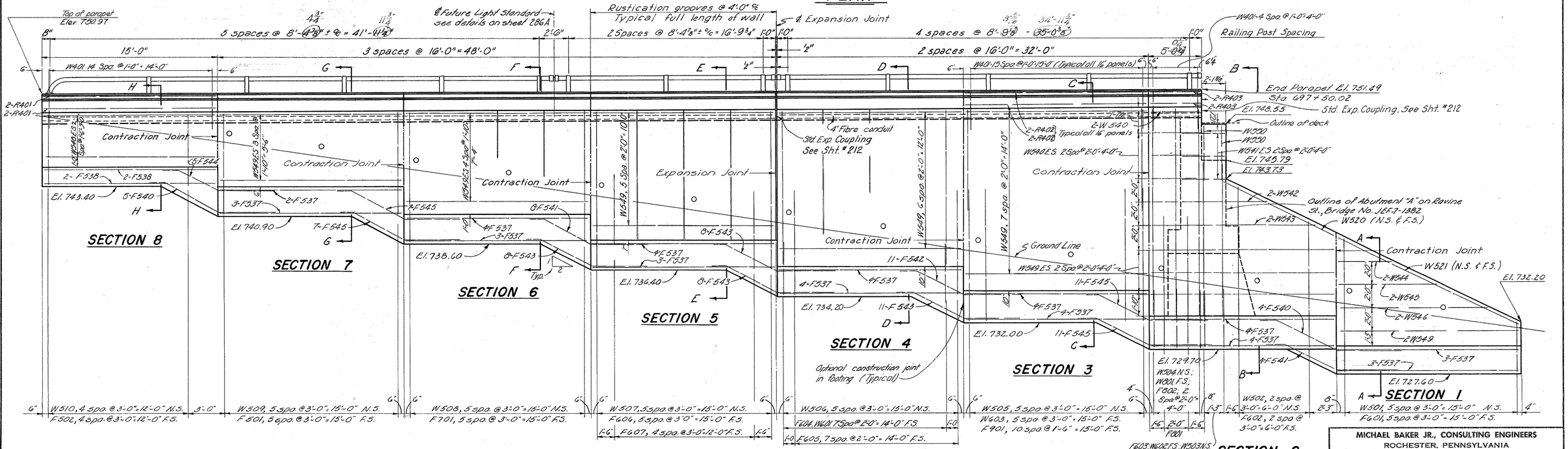
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U 430(14) | |

203
307

JEFFERSON COUNTY
JEF- 7 - 13.53




## PLAN




## ELEVATION

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

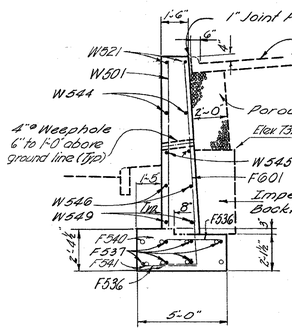
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| F.A. | BB | BB | E.F.R. | E. Roberts 6-10-59 | 3-24-60 |

BEAVER VALLEY ENGINEERING SUPPLIER COMPANY REORDER A-27096

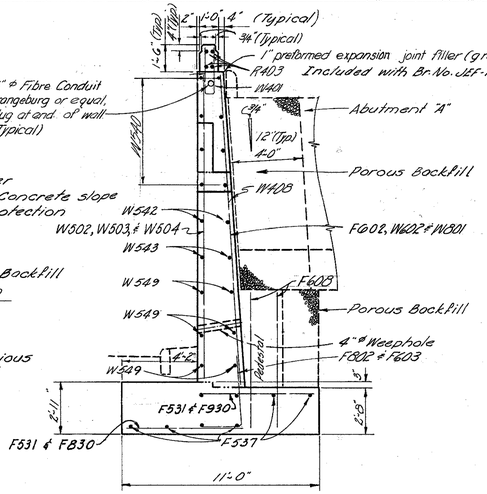
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

204
307

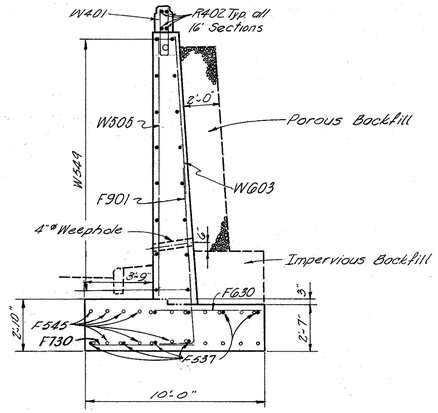
JEFFERSON COUNTY
JEF - 7 - 13.53



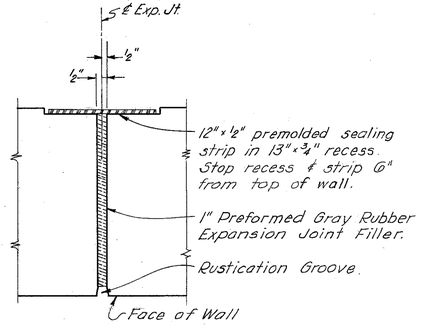

SECTION A-A



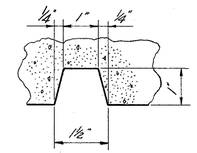

SECTION B-B



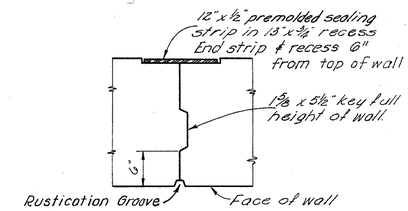

SECTION C-C



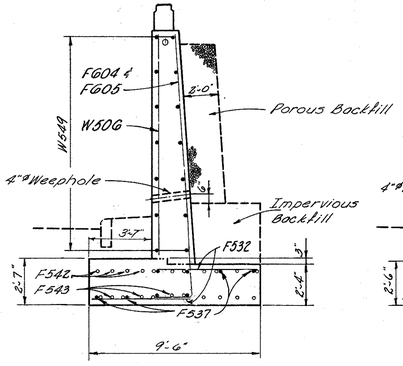

EXPANSION JOINT DETAIL



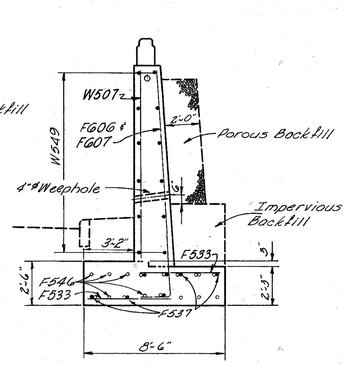

RUSTICATION DETAIL



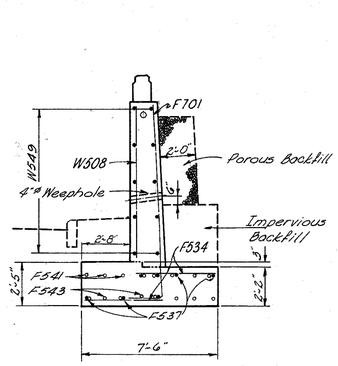

CONTRACTION JOINT DETAIL



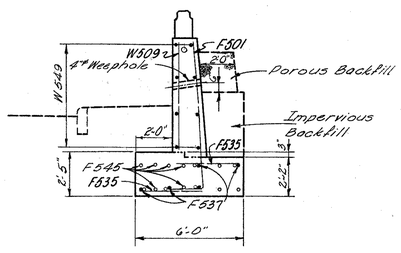

SECTION D-D



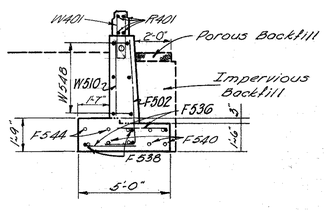

SECTION E-E



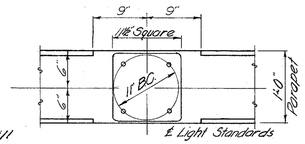

SECTION F-F



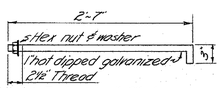

SECTION G-G




SECTION H-H




ANCHOR BOLT LAYOUT




Note: Project bolt 3" above concrete

LIGHT STANDARD ANCHOR BOLT

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.

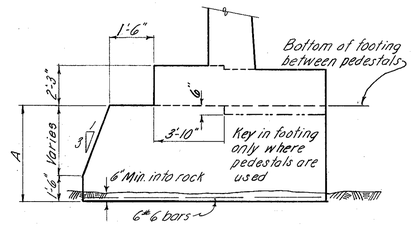
The Engineer shall inspect the entire area and insure that excavation goes to bedrock, and, if necessary, require that over-excation be filled with Class E" concrete. Prolonged exposure to atmospheric conditions shall be averted. The excavation shall be kept drained at all times. Where solid rock is 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" 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 511.

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 511 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.




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.

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 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27066

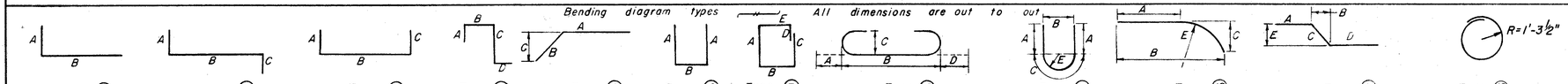
| FED. RD. DIVISON | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

205
307

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'-11½" | | | | 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 | 16'-8" | Str. | | | | | | 801 |
| F538 | 4 | 5 | 14'-8" | Str. | | | | | | 61 |
| F540 | 9 | 5 | 12'-2" | 11 | 1'-7" | 5'-0" | 5'-5½" | 5'-0" | 2'-6" | 114 |
| F541 | 12 | 5 | 11'-3" | 11 | 1'-7" | 4'-2½" | 4'-9" | 5'-0" | 2'-1⅜" | 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'-2¼" | 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 18'-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" | | | | 320 |
| 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 | 16'-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 |
| 5-1 | 86 | Cu. Yds. | Class "E" Concrete : Wall |
| 5-1 | 99 | Cu. Yds. | Class "E" Concrete : Footing |
| 5-3 | 68 | Lin. Ft. | Waterproofing, Premolded Sealing Strip |
| 5-4 | 7413 | Lbs. | Reinforcing Steel |
| 5-9 | 20 | Sq. Ft. | 1" Preformed Expansion Joint Filler (Gray Rubber, M-10.0.2) |
| 5-14 | 100 | Lin. Ft. | Railing (Aluminum Railing & Supports & Concrete Parapet) |
| 5-25 | 100 | Lin Ft. | 4" Fibre Conduit |
| 5-25 | Lump | Sum | Electrical Lighting System (Junction Boxes, Anchor Bolts, Electrical Grounds & steel Conduit) |
| 5-29 | 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

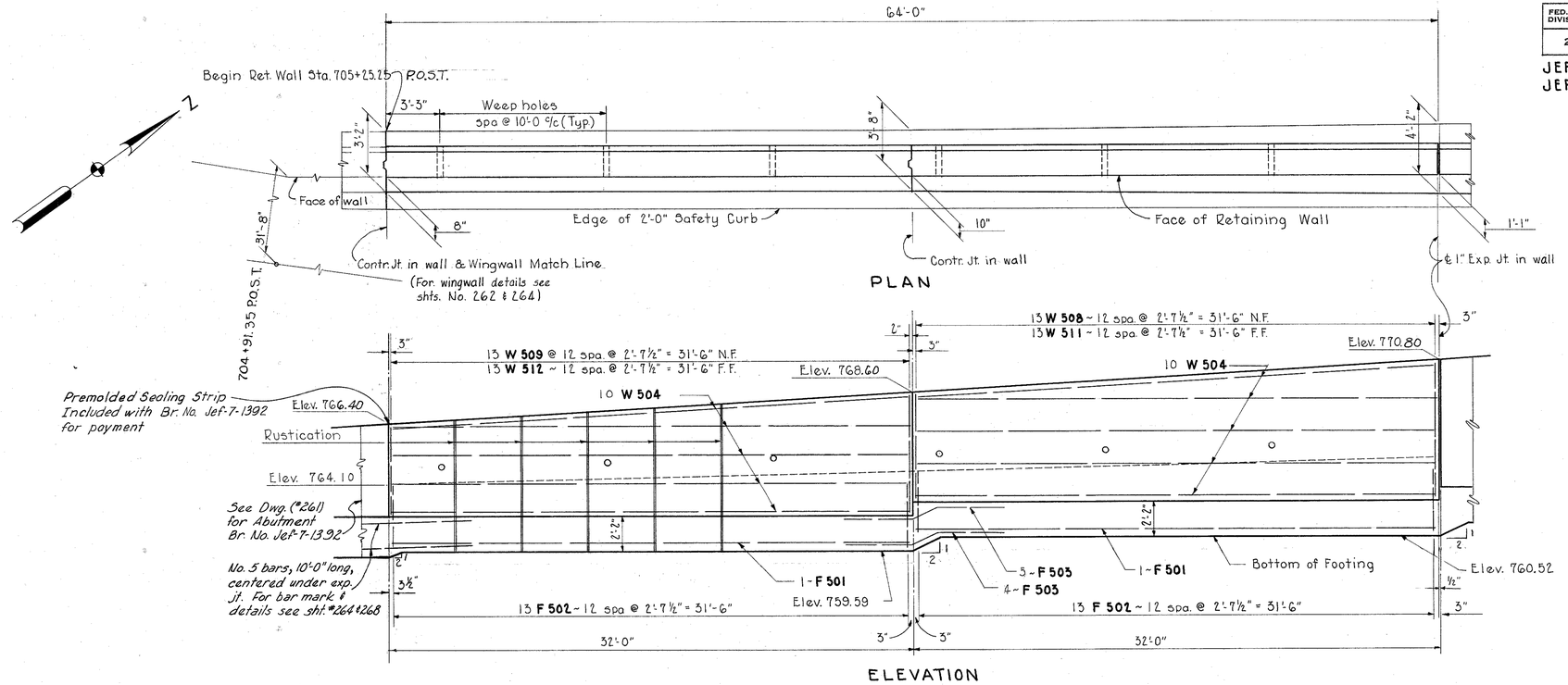
RETAINING WALL
RIGHT OF ℄ CONSTRUCTION
JEFFERSON COUNTY STA. 697+50.02

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

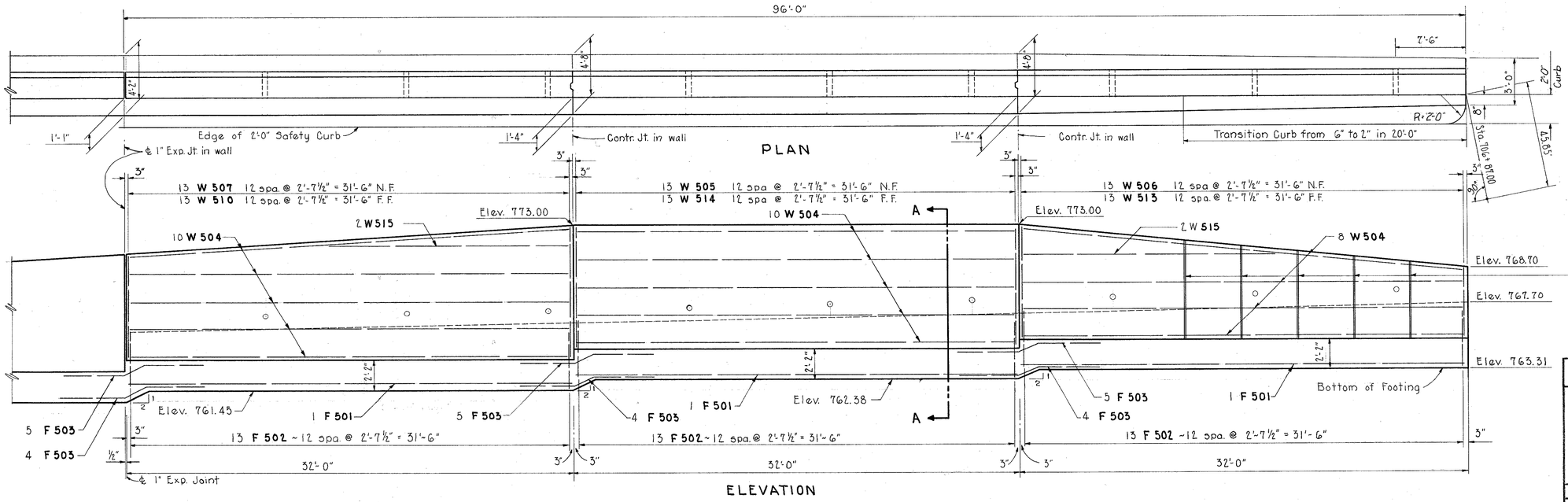
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

206
307

JEFFERSON COUNTY
JEF-7-13.53




Note: N.F. Indicates Near Face
F.F. Indicates Far Face




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 | |

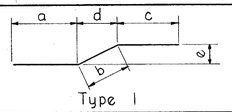
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27080

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

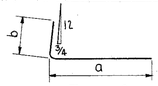
207
307

JEFFERSON COUNTY
JEF-7-13.53

## REINFORCING STEEL BAR SCHEDULE



Type 1



Type 2

| 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 | 5'-1" to 7'-4" | Str. | 1ea. | vary | by | 4¼" | | 71 |
| W 507 | 13 | 5 | 7'-1" to 9'-1" | Str. | 1ea. | vary | by | 2 " | | 110 |
| W 508 | 13 | 5 | 5'-10" to 7'-10" | Str. | 1ea. | vary | by | 2 " | | 93 |
| W 509 | 13 | 5 | 4'-6" to 6'-6" | Str. | 1ea. | vary | by | 2 " | | 75 |
| W 510 | 13 | 5 | 7'-4" to 9'-4" | Str. | 1ea. | vary | by | 2 " | | 113 |
| W 511 | 13 | 5 | 6'-1" to 8'-1" | Str. | 1ea. | vary | by | 2 " | | 96 |
| W 512 | 13 | 5 | 4'-9" to 6'-9" | Str. | 1ea. | vary | by | 2 " | | 78 |
| W 513 | 13 | 5 | 3'-4" to 7'-7" | Str. | 1ea. | vary | by | 4¼" | | 74 |
| W 514 | 13 | 5 | 8'-6" | Str. | | | | | | 115 |
| | | | | | | | | TOTAL | | 3384 |

## REPLACEMENT BARS

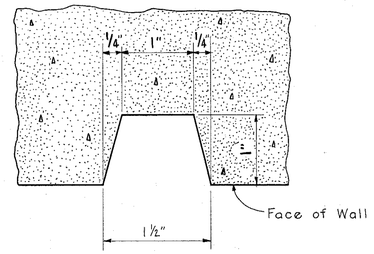
| MARK | NO. | SIZE | LENGTH | TYPE | WEIGHT |
|---|---|---|---|---|---|
| RE 501 | 1 | 5 | 5'-7" | Str. | |

## ESTIMATED QUANTITIES

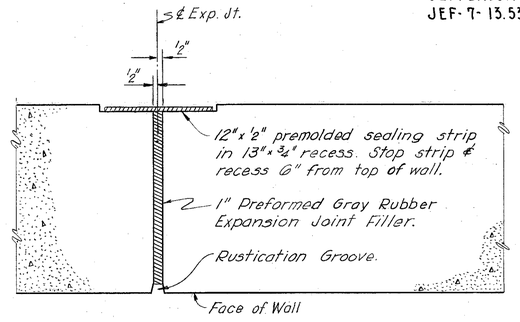
| ITEM | TOTAL | UNIT | DESCRIPTION |
|---|---|---|---|
| E-2 | 236 | C.Y. | Rock Excavation for Structures |
| S-1 | 73 | C.Y. | Class "E" Concrete, Wall |
| S-1 | 51 | C.Y. | Class "E" Concrete, footing |
| S-3 | 28 | L.F. | Waterproofing, premolded sealing strip. |
| S-4 | 3384 | lbs. | Reinforcing 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.

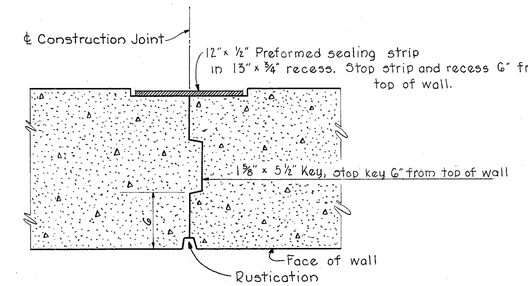
REPLACEMENT BARS:
If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Hwy. Testing Laboratory, test sample as provided in section 3-402 need not be furnished and replacement bars will not be required.



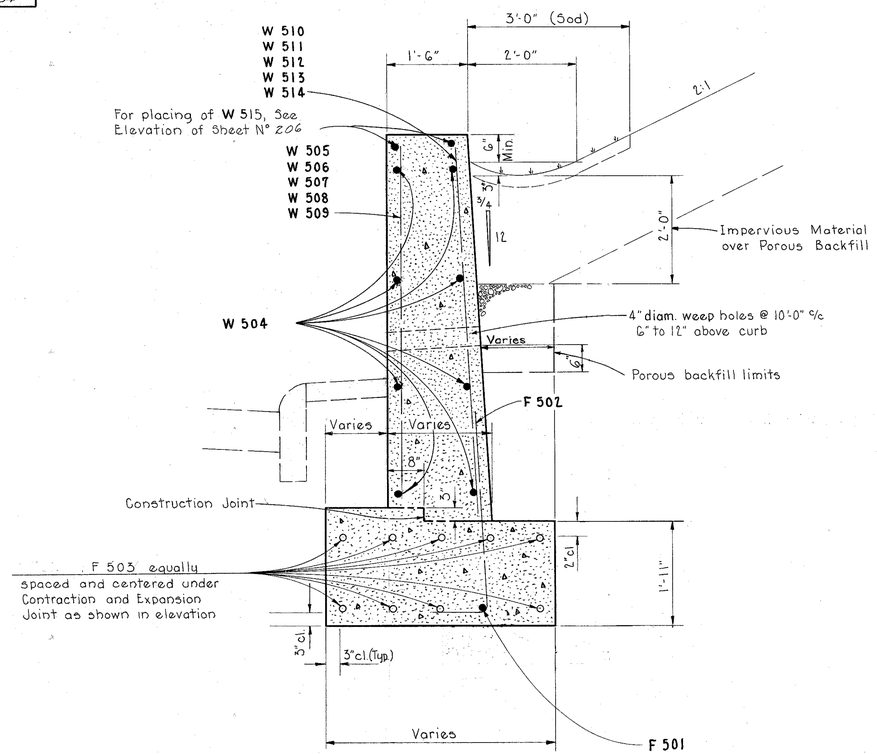
DETAIL OF RUSTICATION



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

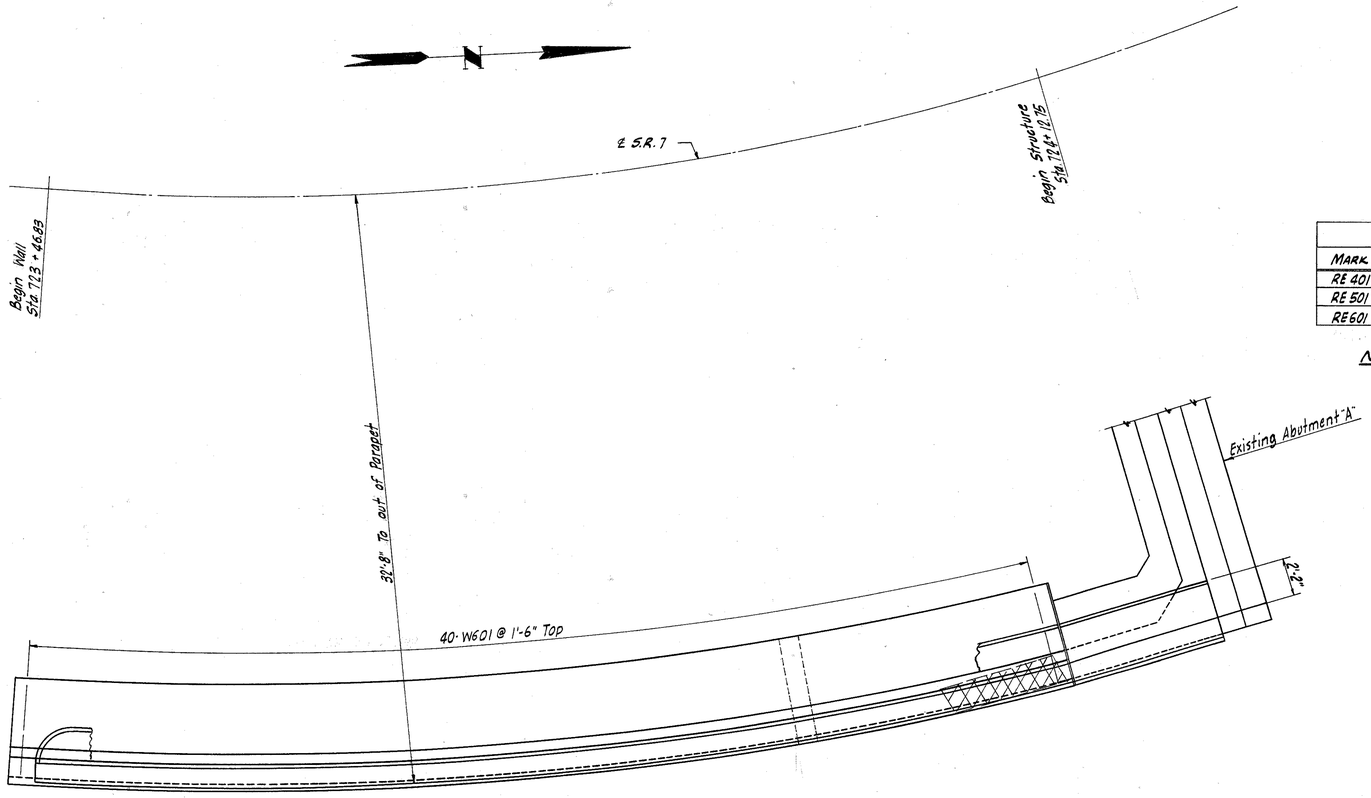
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| C.W.S. | C.W.S. | A.M.M. | JPW | E.Roberts 6-8-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27086

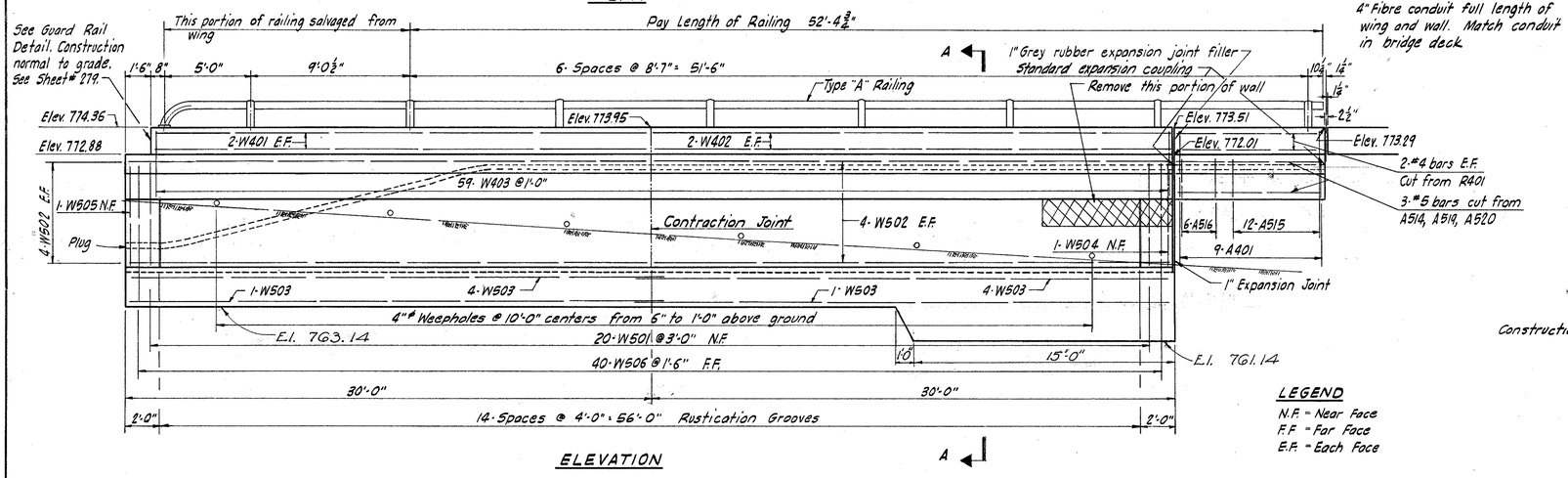
| FED. RD. DIVISION | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

207A
307

# JEFFERSON COUNTY
# JEF-7-13.53

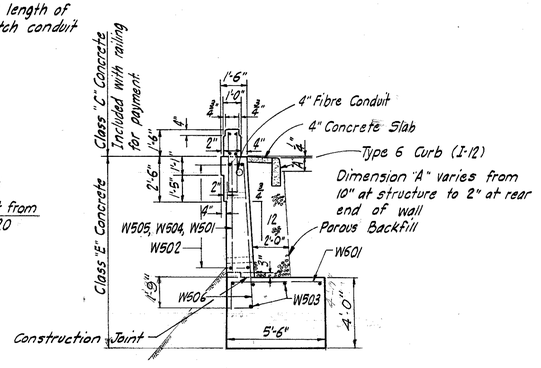



PLAN




ELEVATION

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



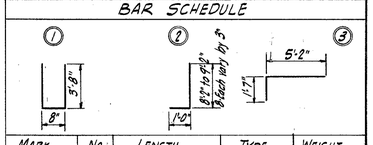

SECTION A-A

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

| 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 |

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.

BAR SCHEDULE




| MARK | No | LENGTH | TYPE | WEIGHT |
|---|---|---|---|---|
| W401 | 4 | 28'-0" | Str. | * |
| W402 | 4 | 29'-6" | Str. | * |
| W403 | 59 | 7'-9" | / | 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" | ? | 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 | |

5387-3-15

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-39921-1

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

208
307

JEFFERSON COUNTY
JEF-7-13.56

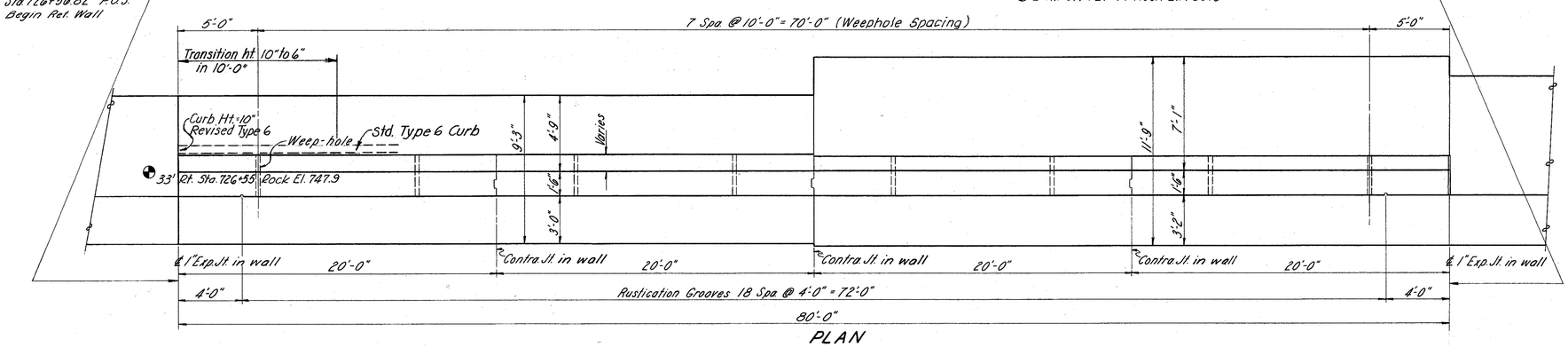
32.93' Rt. S.R.7 Relocation
Sta. 726+56.82 P.O.S.
Begin Ret. Wall

7.5' Lt. Sta. 726+57 Rock El. 773.6

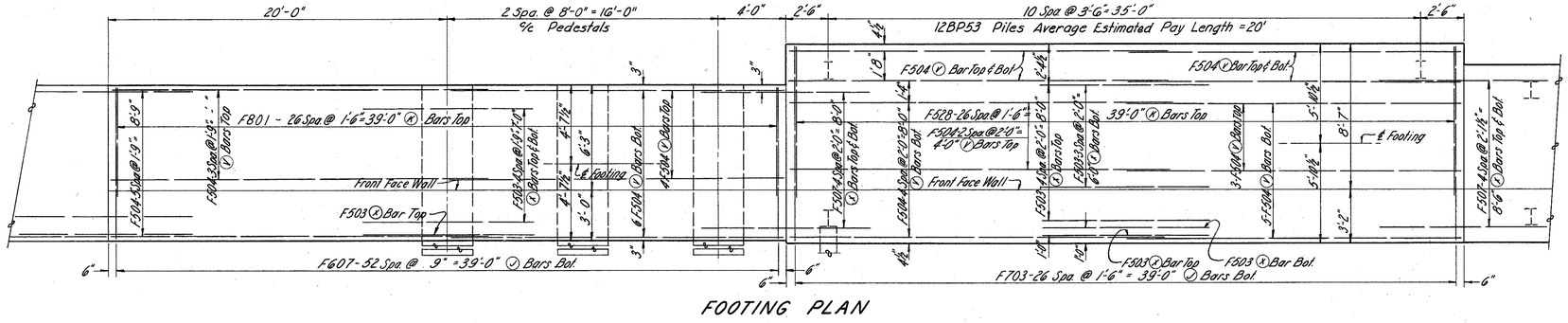
23' Rt. Sta. 726+96 Rock El. 739.0

℄ Sta. 727+18 Rock El. 732.0
℄ Sta. 727+06 Rock El. 742.0
2' Rt. Sta. 727+14 Rock El. 735.0

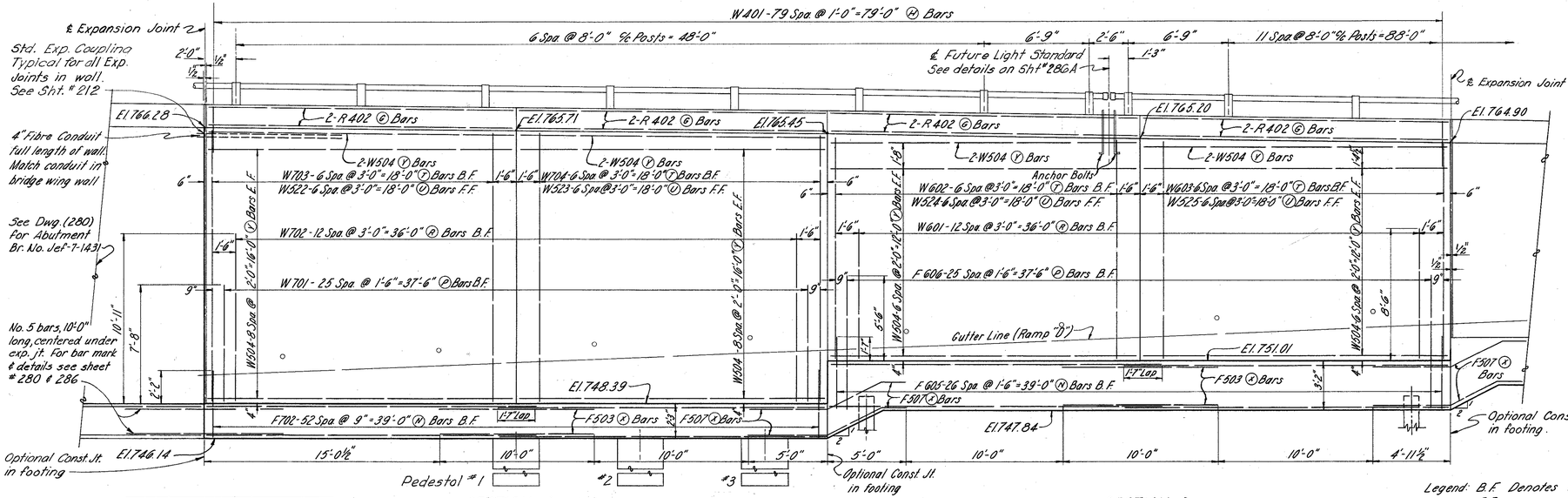
Rt. S.R.7 Relocation
Sta. 727+36.2 P.O.S.




PLAN




FOOTING PLAN




SECTION 1 ELEVATION SECTION 2

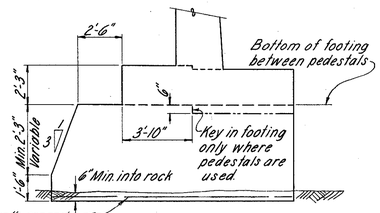
| Approximate Rock Elevations | |
|---|---|
| Pedestal No. | Elevation |
| 1 | 743.00 |
| 2 | 748.00 |
| 3 | 741.00 |

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.

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 of 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

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# RETAINING WALL
## PLAN & ELEVATION
## RT. OF ℄ CONSTRUCTION

JEFFERSON COUNTY STA. 726+56.82

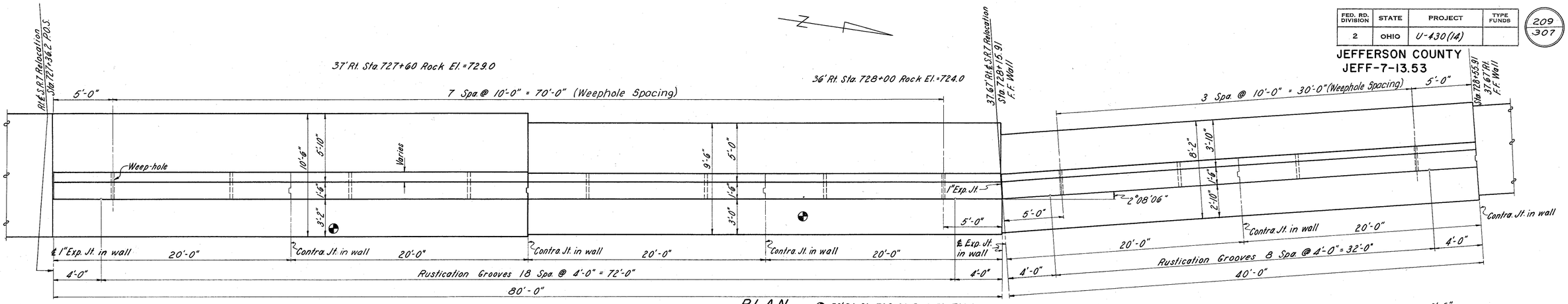
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| G.G. | C.M. | C.M. | J.P.W. | E. Roberts 6-5-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY RECORDER A-27098

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

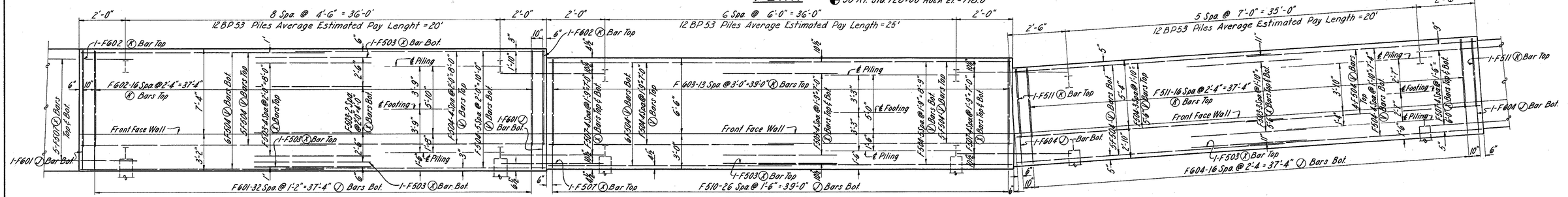
209
307

JEFFERSON COUNTY
JEFF-7-13.53

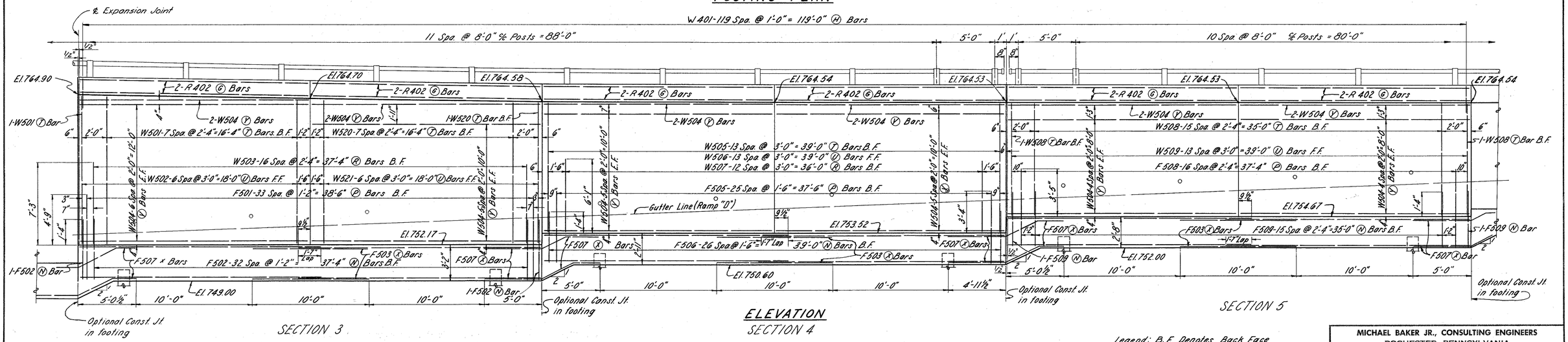



PLAN

50' Rt. Sta. 728+00 Rock El. = 718.0




FOOTING PLAN




SECTION 3 — ELEVATION — SECTION 4 — SECTION 5

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

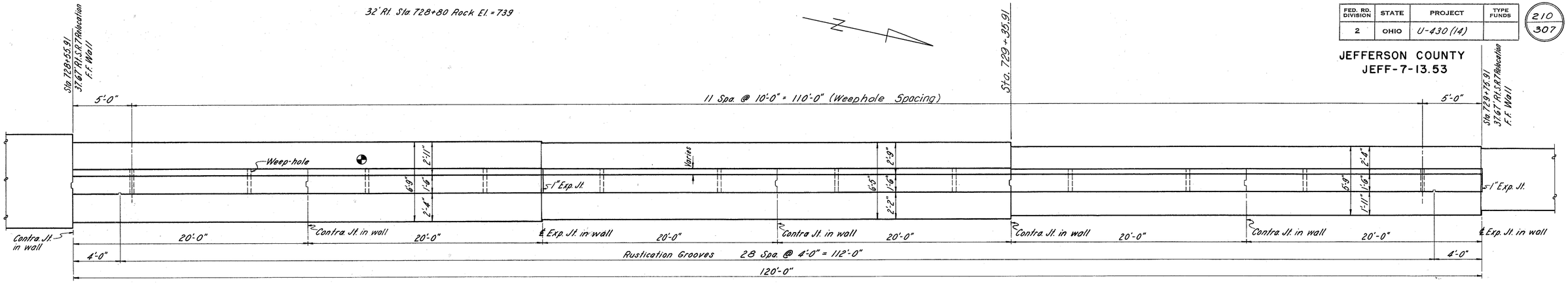
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| B.S. G.G. | C.M. | C.M. | B.S. G.G. | E. Roberts 6-5-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27066

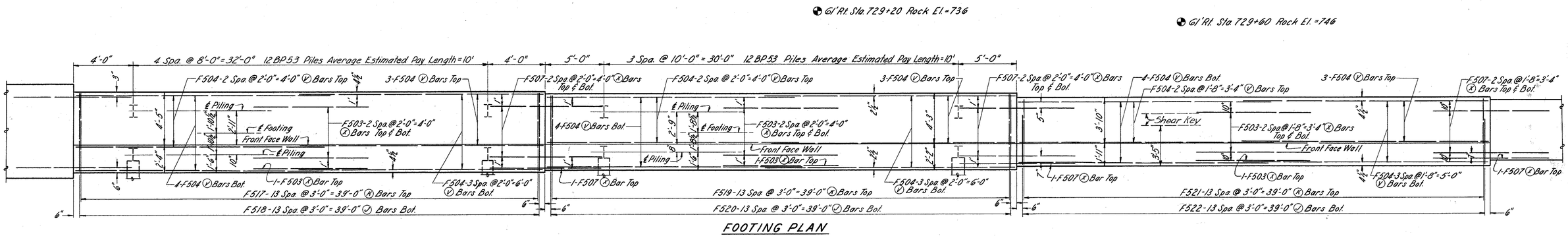
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

210
307

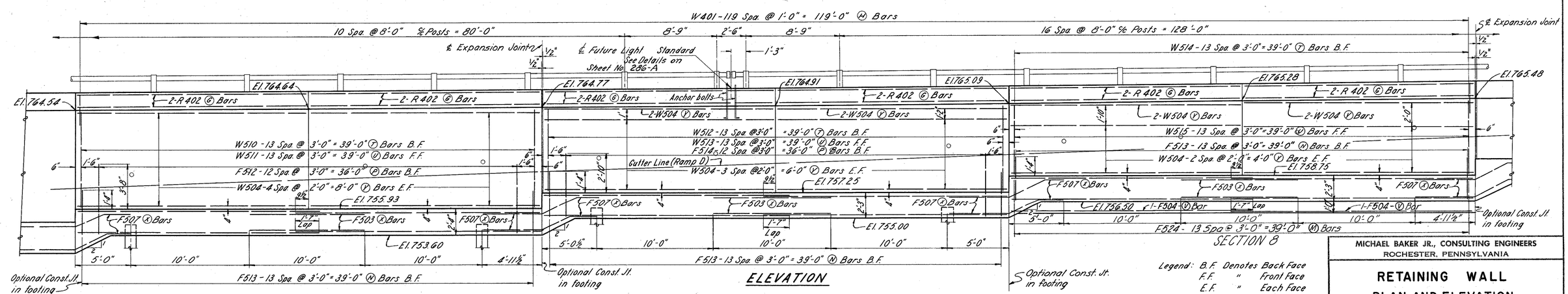
JEFFERSON COUNTY
JEFF-7-13.53




PLAN




FOOTING PLAN




SECTION 6

ELEVATION

SECTION 7

SECTION 8

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

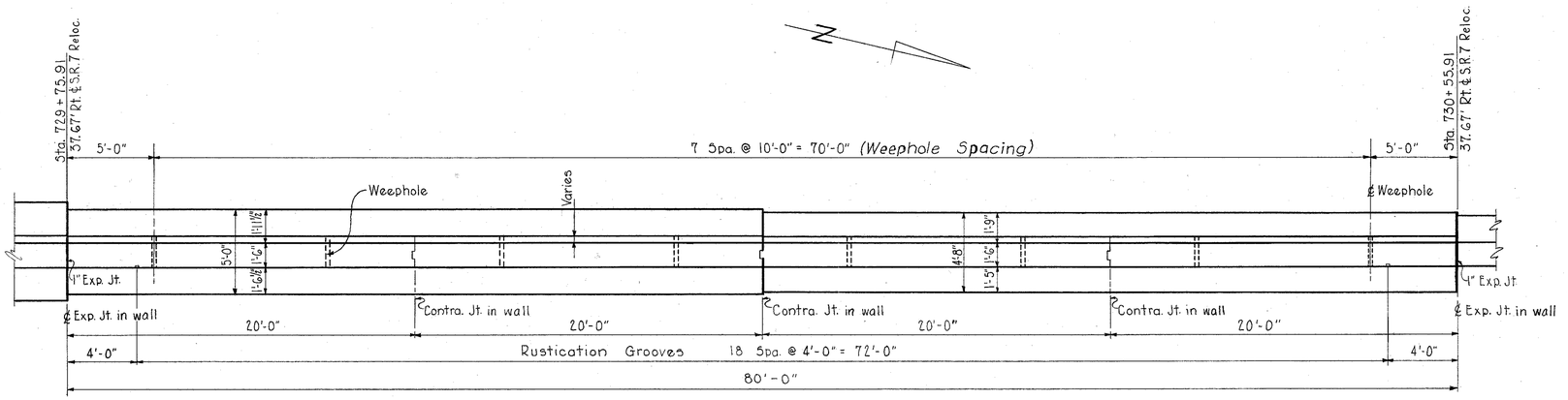
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| B.S. G.G. | B.S. | C.M. | G.G. B.S. | E. Roberts 6-6-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27096

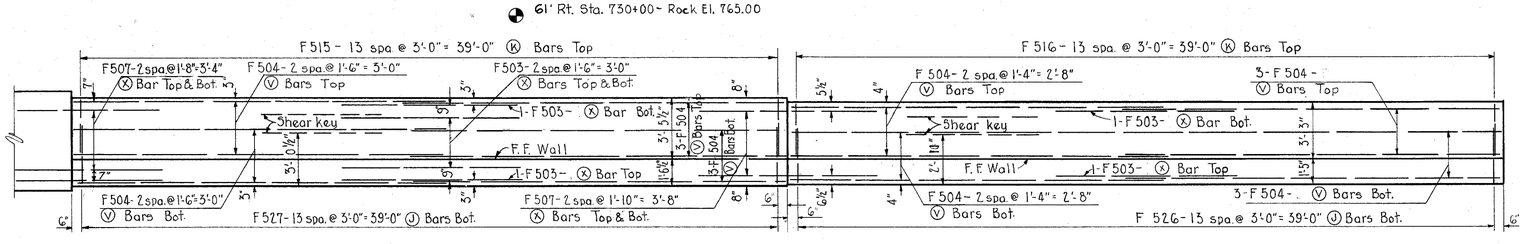
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

211
307

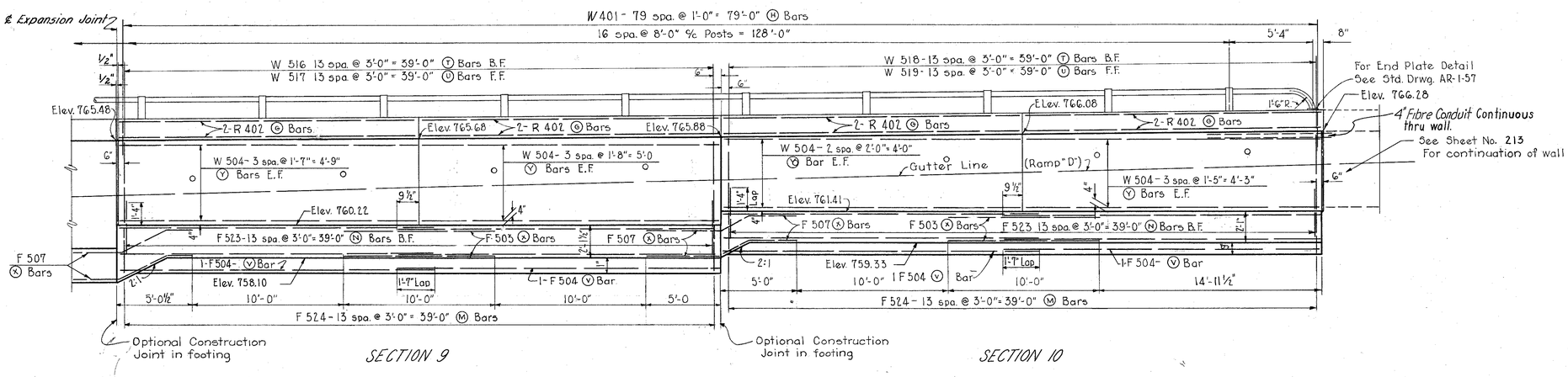
JEFFERSON COUNTY
JEF-7-13.53




PLAN




FOOTING PLAN




SECTION 9

SECTION 10

ELEVATION

## 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

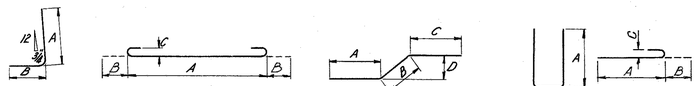
# RETAINING WALL PLAN AND ELEVATION RIGHT OF ℄ CONSTRUCTION

JEFFERSON COUNTY STA. 726+56.82

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

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27008

# BAR SCHEDULE

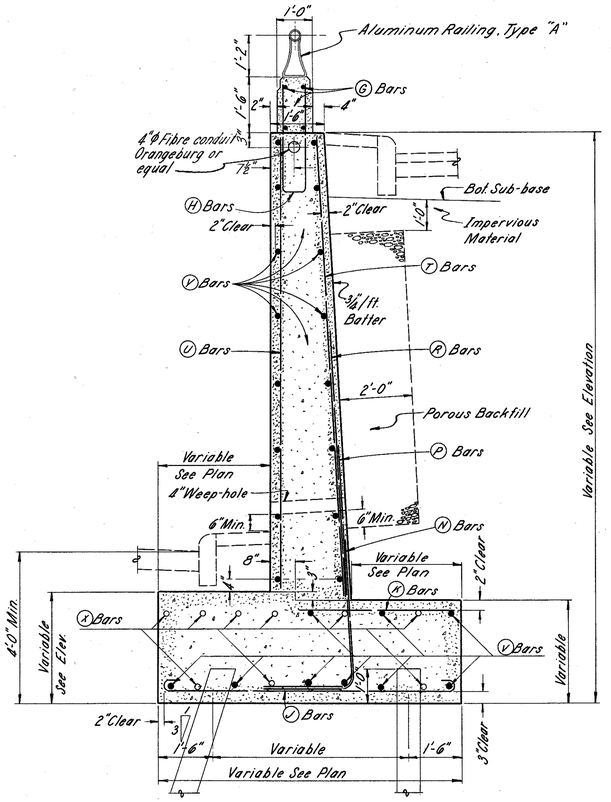



Note : All dimensions are out to out

| 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" to 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" to 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 |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27066




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" | " | |

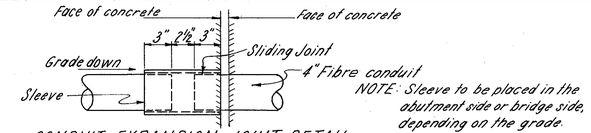
REPLACEMENT BARS

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.

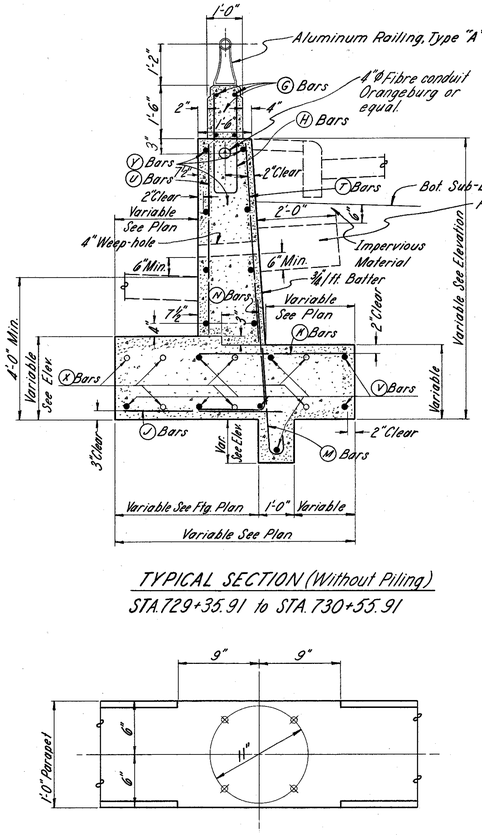
BAR SIZE

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 | 1047 | 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 BP 53 |
| 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 | 166 | C.Y. | Porous Backfill |




CONDUIT EXPANSION JOINT DETAIL
TYPICAL OF ALL EXP. JOINTS




TYPICAL SECTION (Without Piling)

STA. 729+35.91 to STA. 730+55.91



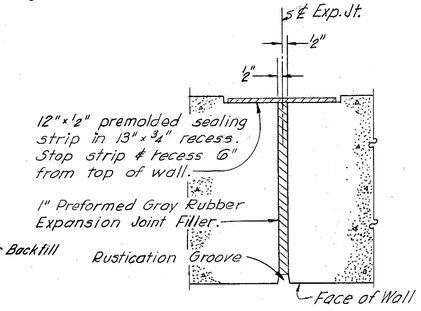

ANCHOR BOLT LAYOUT

Note: Project bolt 3" above concrete.

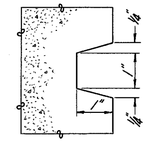
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

212
307

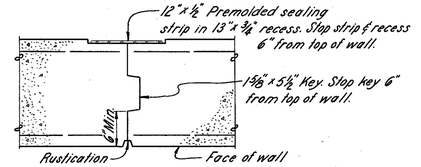
JEFFERSON COUNTY
JEF-7-13.53



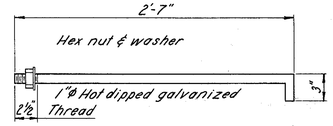

EXPANSION JOINT




RUSTICATION




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

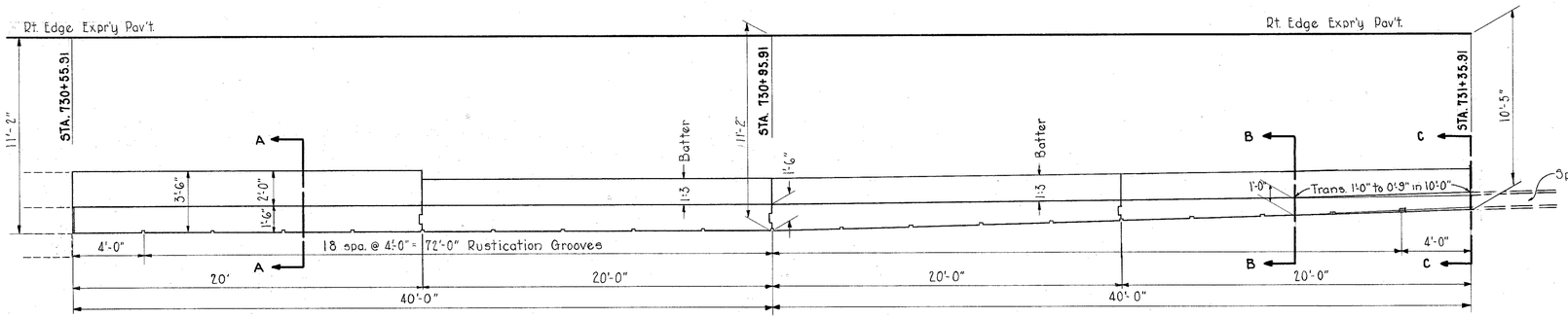
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| B.S. G.G. | C.M. | C.M. | G.G. B.S. | E. Roberts 6-6-59 | |

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

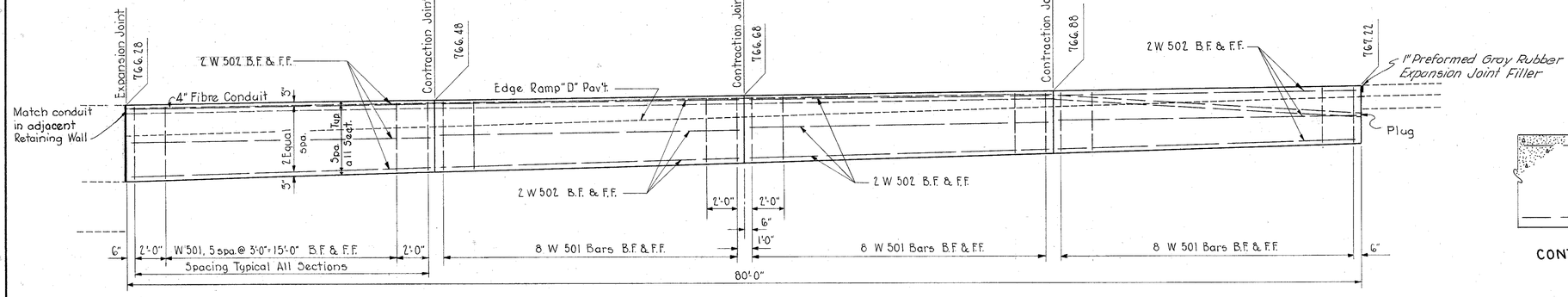
213
307

JEFFERSON COUNTY
JEF-7-13.55

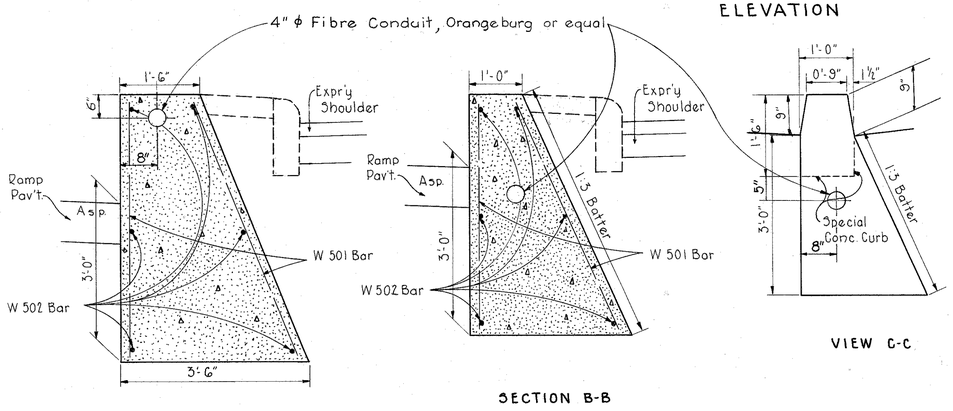
| REINFORCING STEEL BAR SCHEDULE | | | | | | |
|---|---|---|---|---|---|---|
| MARK | TOTAL | SIZE | LENGTH | TYPE | | WEIGHT |
| W 501 | 64 | 5 | 4'-5" to 5'-8" | Str. | 4 sets of 16 bars Vary by 3" increment | 270 lbs |
| W 502 | 24 | 5 | 19'-6" | Str. | | 489 lbs |
| | | | | | TOTAL | 759 lbs |




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. | |

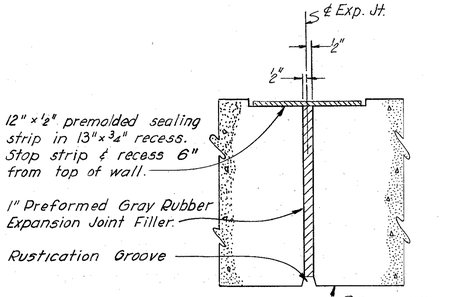
*REPLACEMENT BARS*

*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 3402 need not be furnished and replacement bars will not be required.*

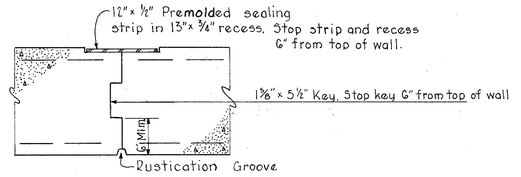
*BAR SIZE*

*Bar size is indicated in the bar mark. The first digit where three are used and the first two where four are used, indicates the bar size number. For example, A401 is a number 4 bar and A114 is a number 11 size bar.*

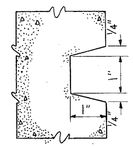
| ESTIMATED QUANTITIES | | | |
|---|---|---|---|
| ITEM | TOTAL | UNIT | DESCRIPTION |
| E-2 | 45 | C.Y. | Excavation for Structures |
| S-1 | 27 | C.Y. | Class "E" Concrete, Wall |
| S-3 | 16 | L.F. | Waterproofing, Premolded Sealing Strip |
| S-4 | 789 | Lbs. | Reinforcing Steel |
| S-9 | 8 | S.F. | 1" Preformed Expansion Joint Filler (Gray Rubber, M-10.02) |
| S-25 | 80 | L.F. | 4" Fibre Conduit |




EXPANSION JOINT




CONTRACTION JOINT




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

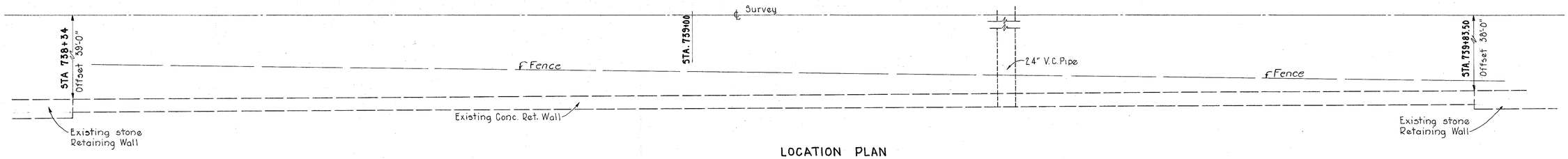
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| B.S. | A.M.M. | A.M.M. | G.G. | E. Roberts 6-6-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27086

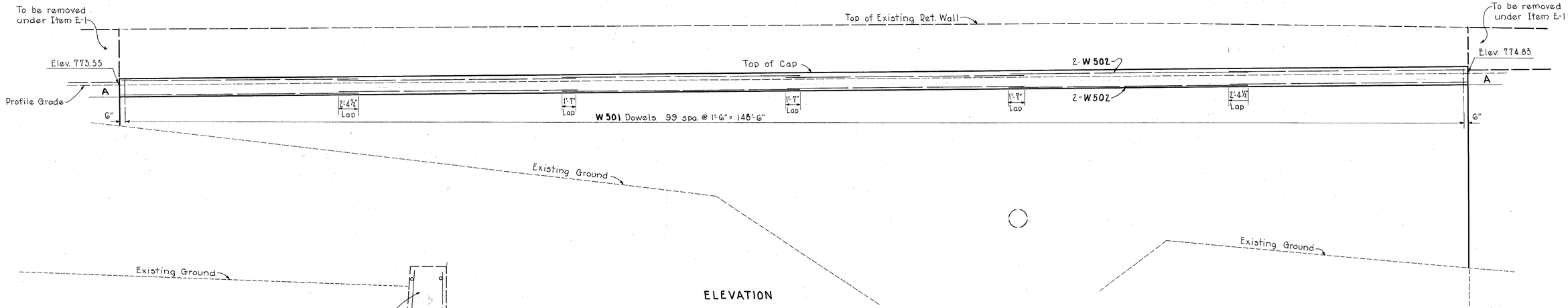
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U 430 (14) | |

214
307

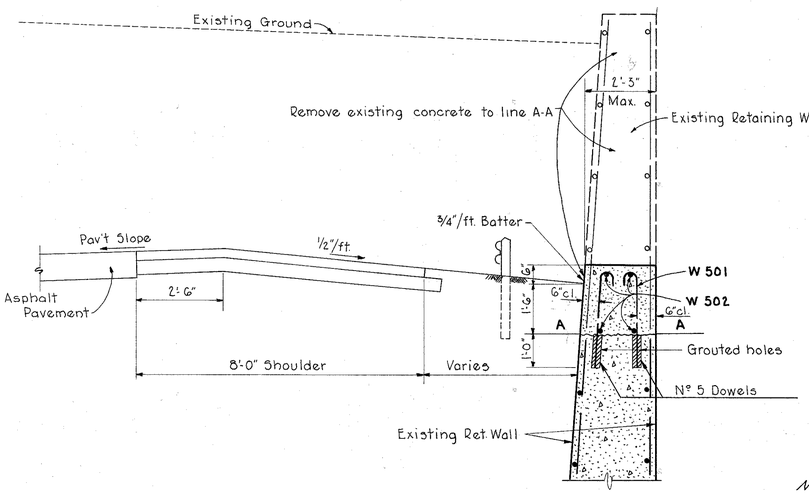
JEFFERSON COUNTY
JEF-7-13.53




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 |
|---|---|---|---|---|---|---|---|
| W501 | 200 | 5 | 3'-5" | 2'-10" | 7" | 5¼" | 713 |
| W502 | 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 3-402 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 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27066

| 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.

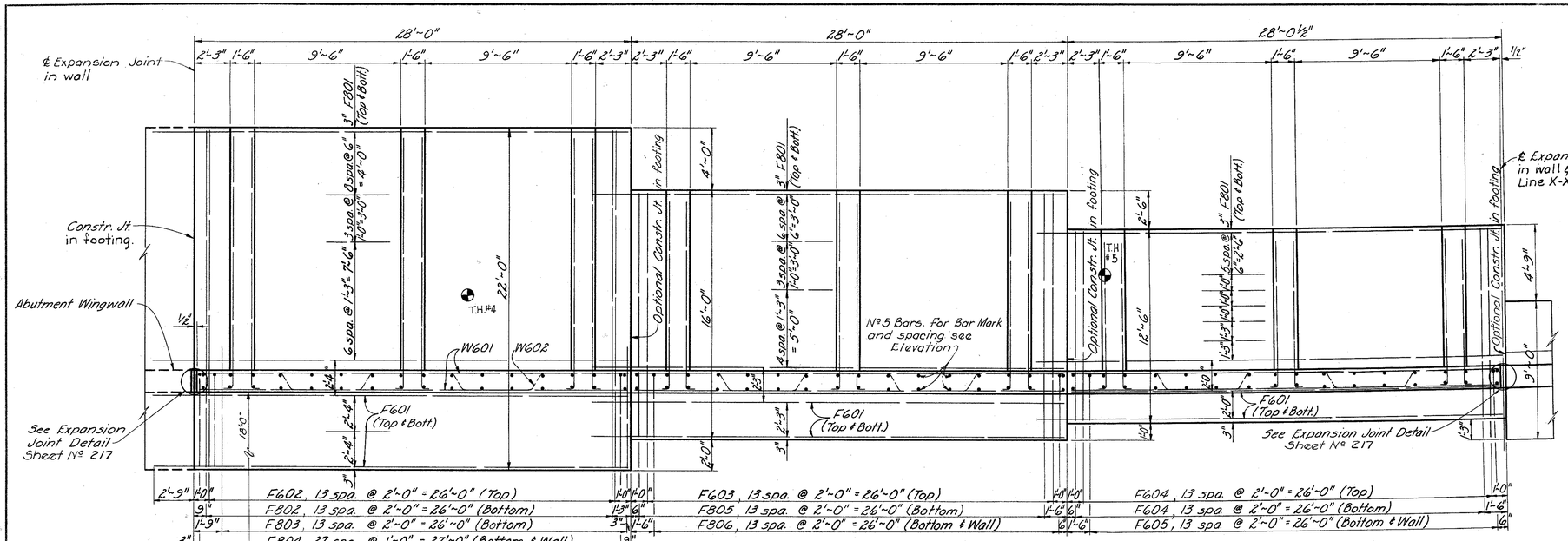
| BORING LOCATIONS AND ROCK ELEVATIONS | | | |
|---|---|---|---|
| BORING NO. | S.R. 7 STA. | OFFSET | ROCK ELEV. |
| T.H. # 4 | 681+80 | 45' Rt. | 696.0 |
| T.H. # 5 | 682+14 | 67' Rt. | 694.0 |
| T.H. # 6 | 682+47 | 90' Rt. | 692.6 |
| T.H. # 7 | 682+80 | 112' Rt. | 692.7 |

◔ Indicates boring location

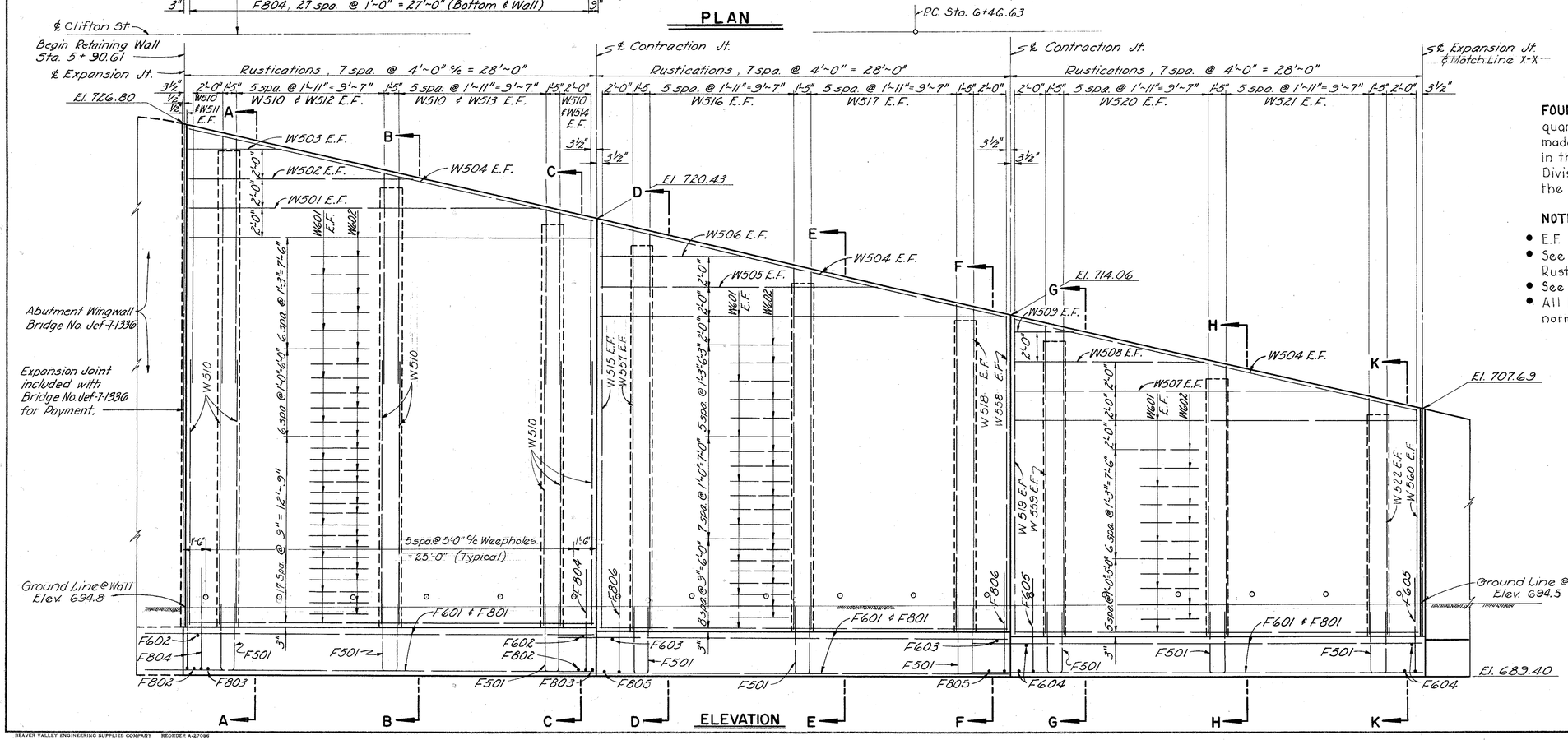
**FOUNDATION SOUNDINGS:** Foundation design and foundation quantities are based on a study of borings and soil samplings made at the site. The sounding information may be inspected in the office of the Bureau of Bridges in Columbus, or in the Division office, but the State assumes no responsibility for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




## PLAN




## ELEVATION

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# RETAINING WALL PLAN & ELEVATION

LEFT OF ℄ CONSTRUCTION
CLIFTON STREET
JEFFERSON COUNTY STA. 5+90.61

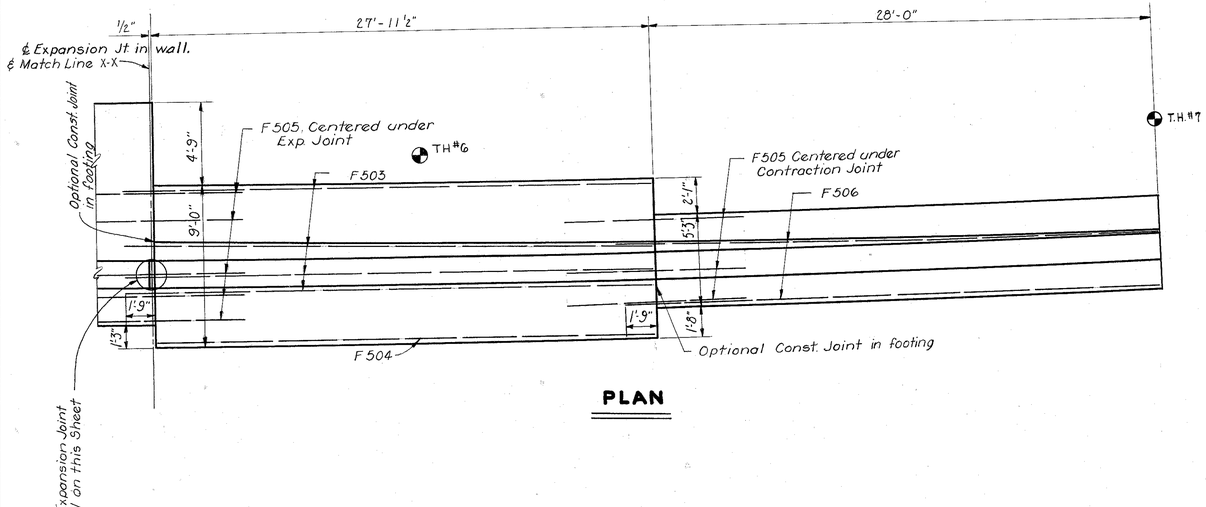
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| J.D.R. | K.E.A. | | P.M. | E. Roberts 6-10-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27096

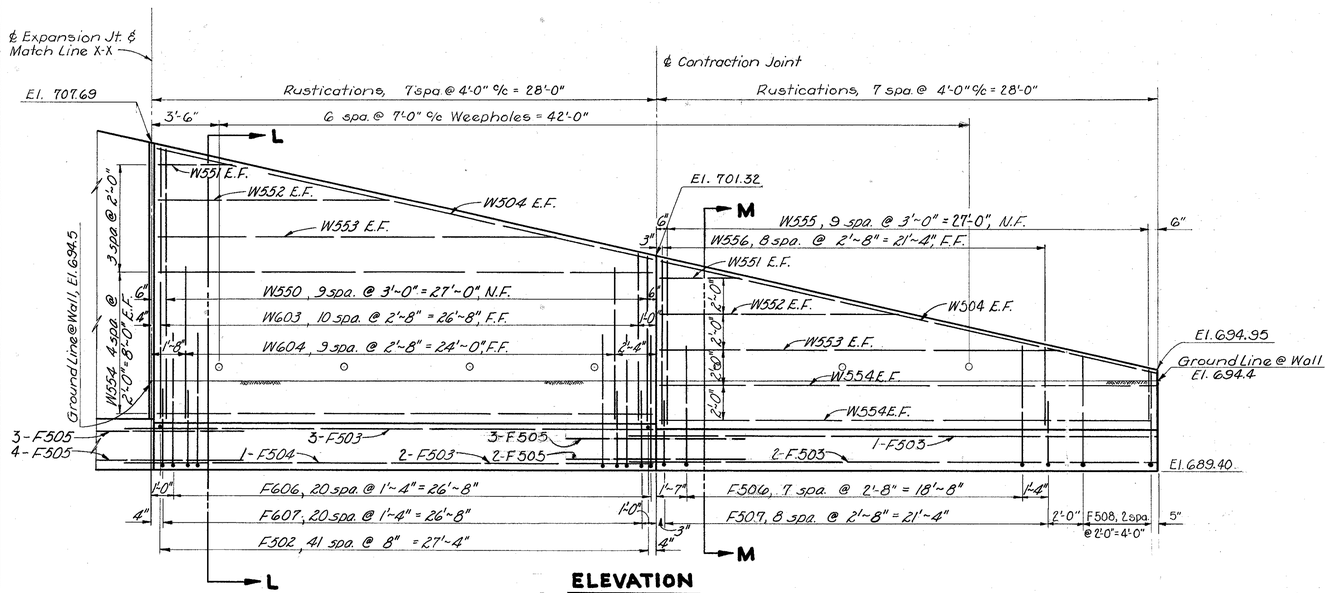
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U 430 (14) | |

216
307

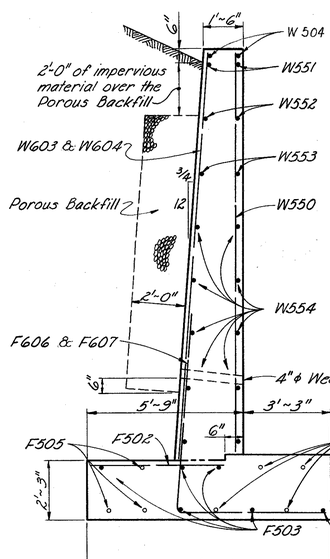
JEFFERSON COUNTY
JEF - 7 - 13.53



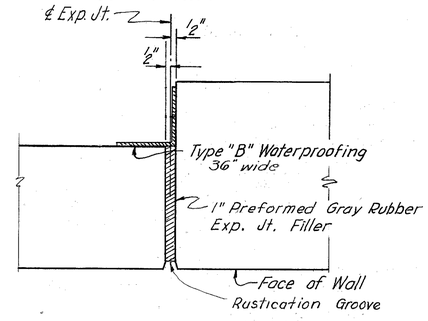

**PLAN**



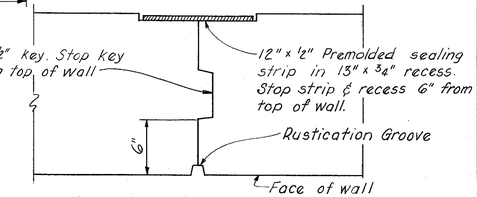

**ELEVATION**



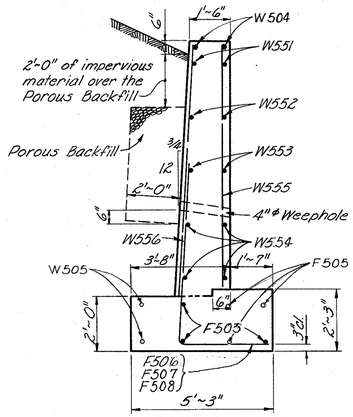

**SECTION L-L**



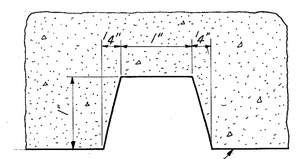

**DETAIL OF EXPANSION JOINT**




**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 | |

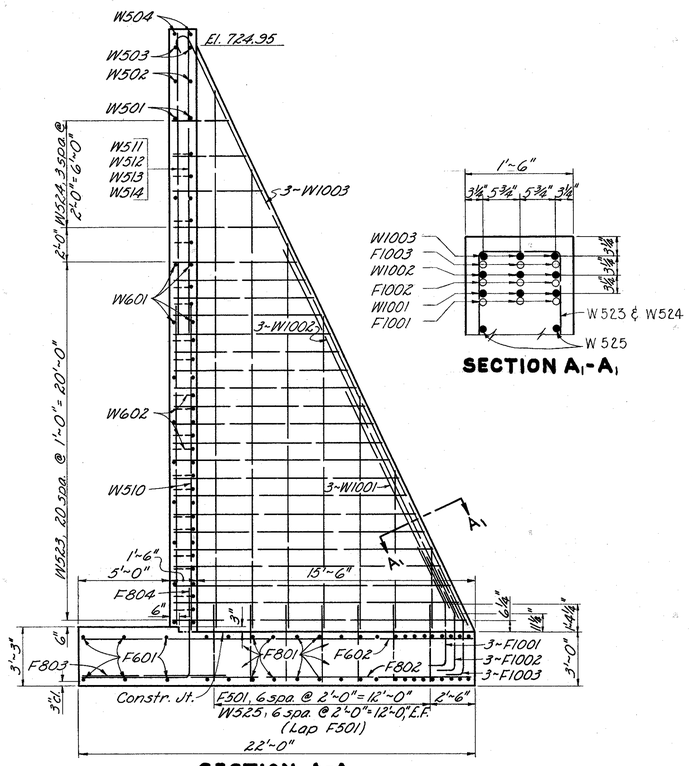
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27046

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

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

217
307

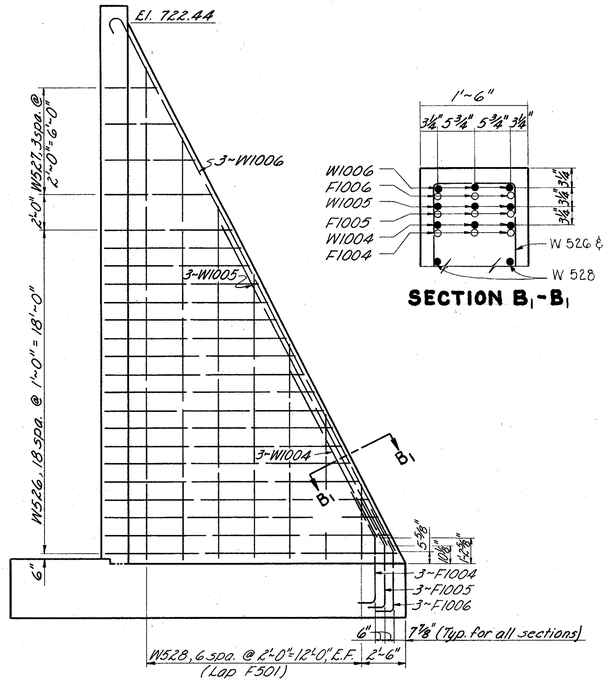
JEFFERSON COUNTY
JEF-7-13.53




SECTION A-A



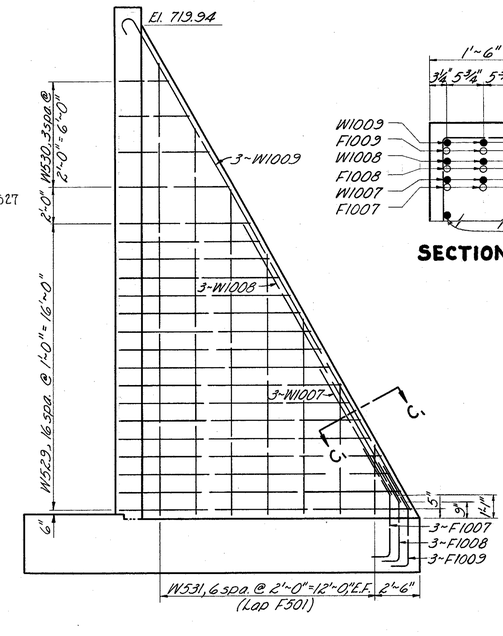

SECTION $A_1$-$A_1$



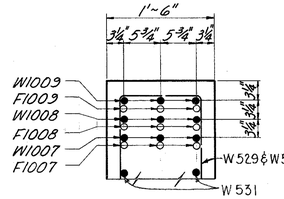

SECTION B-B
For details not shown see Section A-A



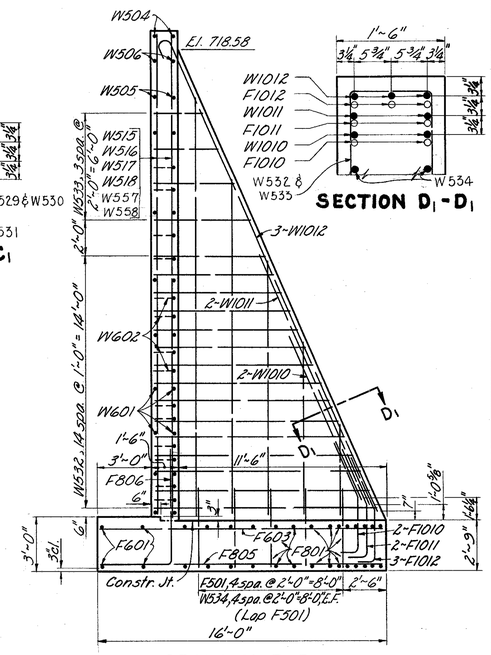

SECTION $B_1$-$B_1$



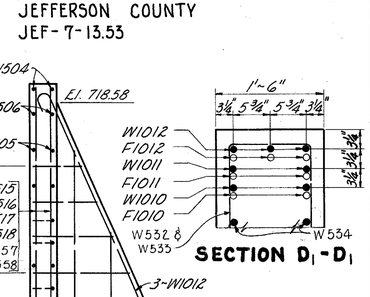

SECTION C-C
For details not shown see Section A-A



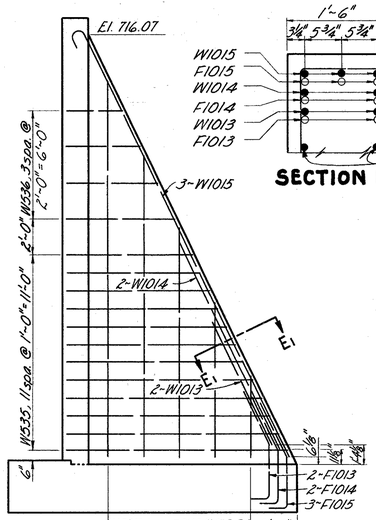

SECTION $C_1$-$C_1$



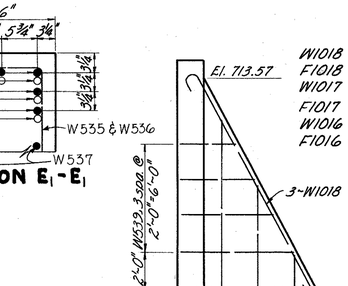

SECTION D-D



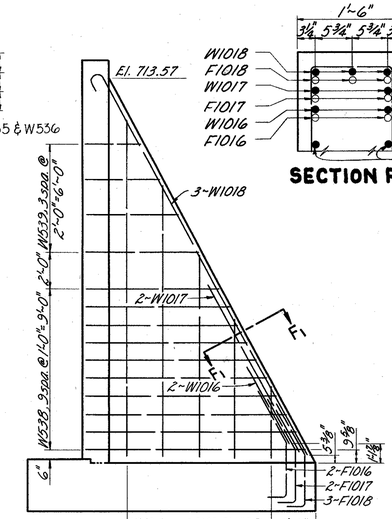

SECTION $D_1$-$D_1$




SECTION E-E
For details not shown see Section D-D



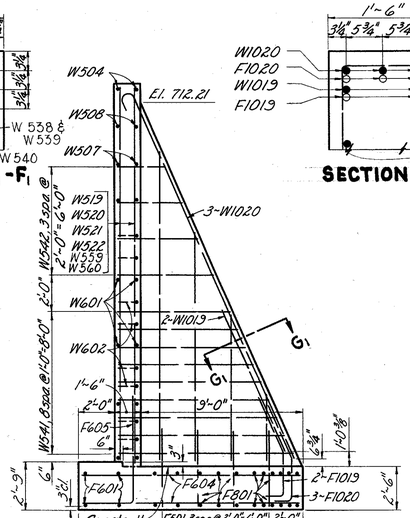

SECTION $E_1$-$E_1$




SECTION F-F
For details not shown see Section D-D

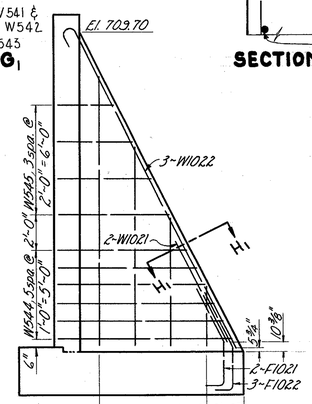



SECTION $F_1$-$F_1$

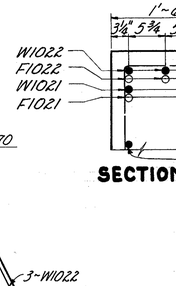


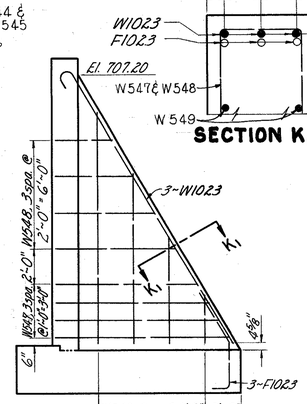

SECTION G-G



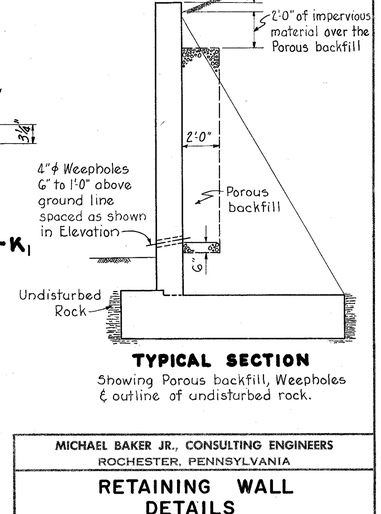




SECTION H-H
For details not shown see Section G-G




SECTION K-K
For details not shown see Section G-G




TYPICAL SECTION
Showing Porous backfill, Weepholes & outline of undisturbed rock.

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 | |

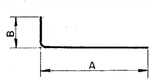
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27086

JEFFERSON COUNTY
JEF-7-13.53

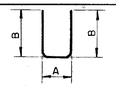
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

218
307

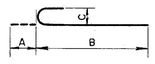
# REINFORCING STEEL BAR SCHEDULE



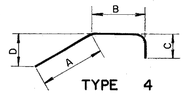
TYPE 1



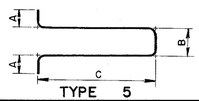
TYPE 2



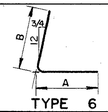
TYPE 3



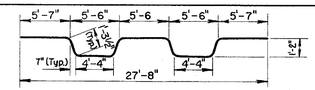
TYPE 4



TYPE 5



TYPE 6



TYPE 7

## 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'-11 1/2" 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'-5" 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'-11 3/16" 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'-2 1/2" ⓜ | | 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 15'-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'-2 3/4" 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 11 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'-8 3/8" 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

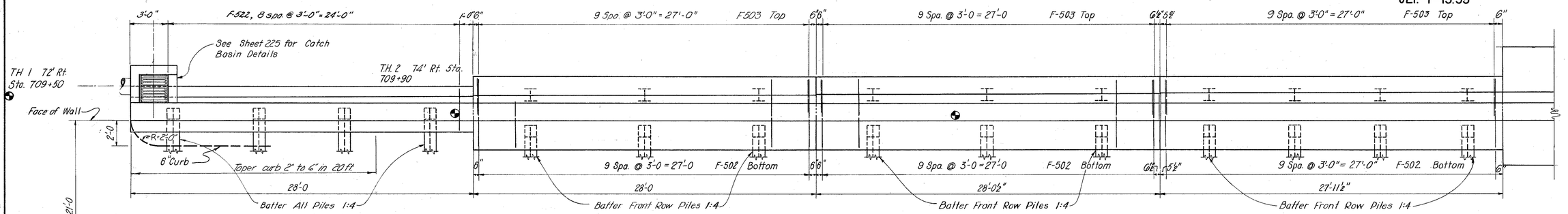
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| JPW | G.K.S. | | P.M. | E. Roberts 6-10-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27066

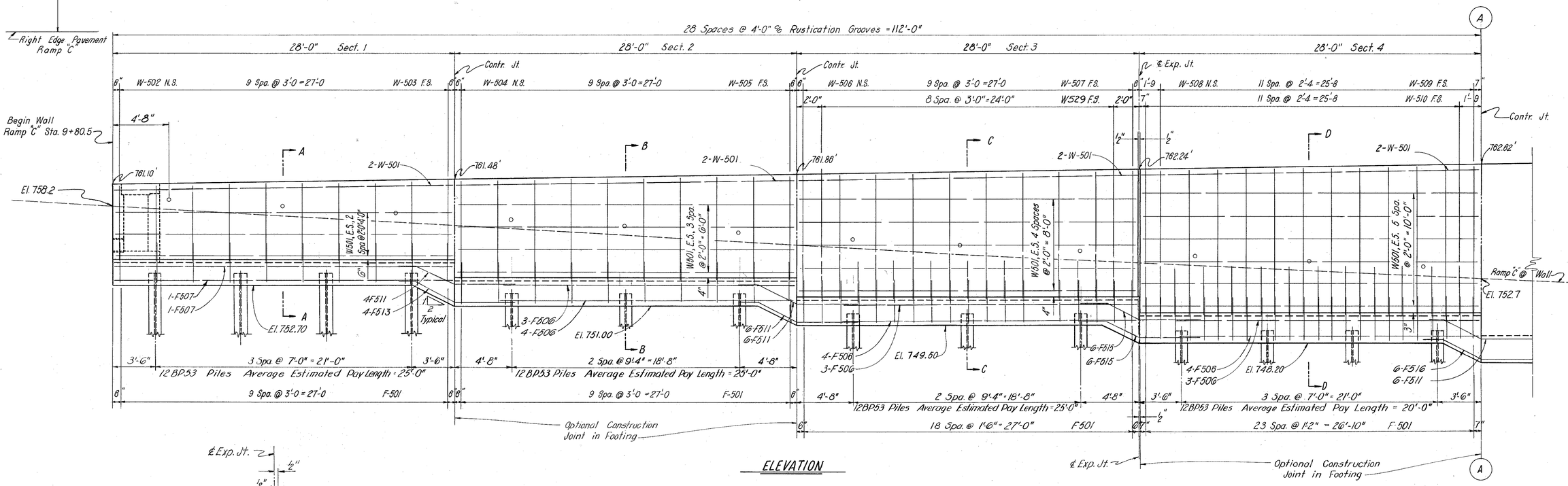
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

219
307

JEFFERSON COUNTY
JEF-7-13.53




## PLAN

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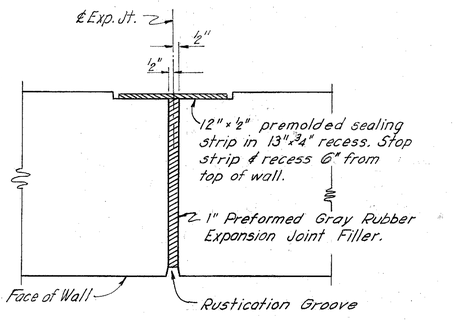


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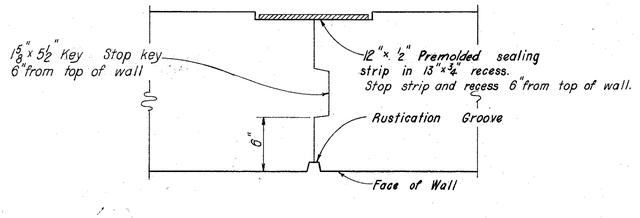
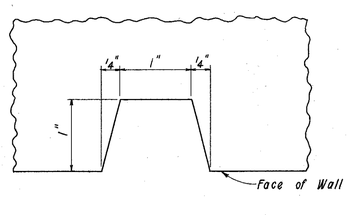



## DETAIL OF CONTRACTION JOINT




## 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

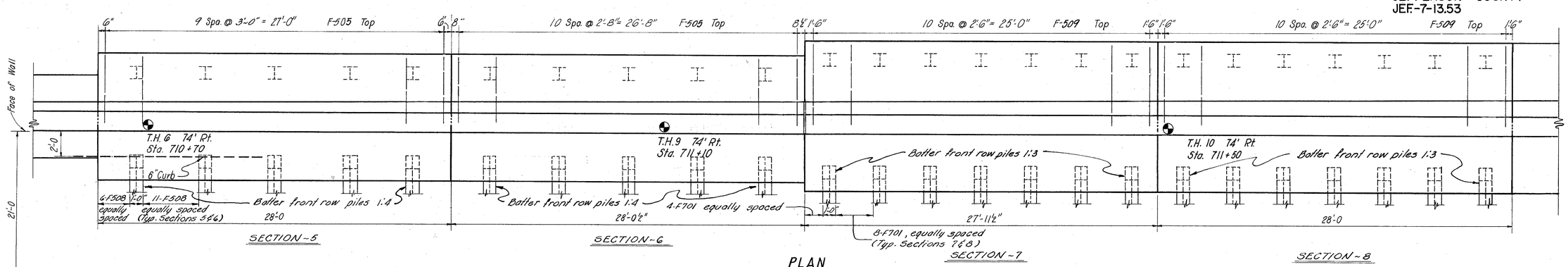
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| JPW / F.A. | M.G.F. | M.G.F. | P.M. | E. Roberts 6-6-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27086

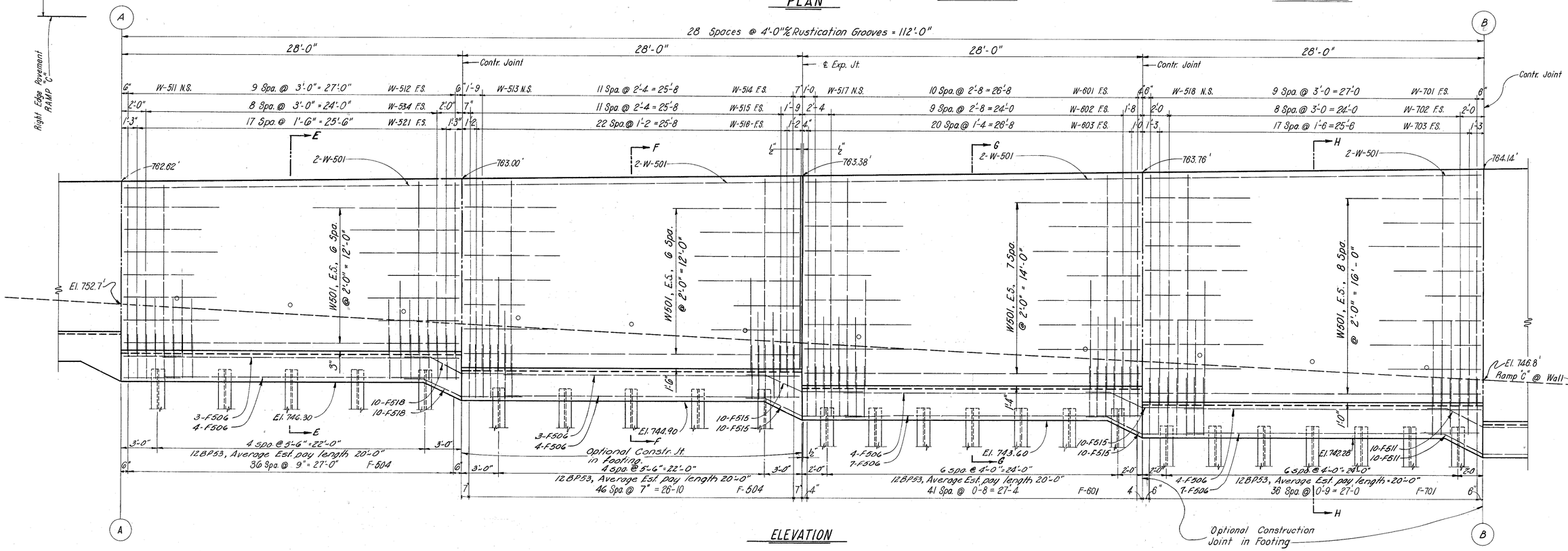
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

220
307

JEFFERSON COUNTY
JEF.-7-13.53




PLAN




ELEVATION

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

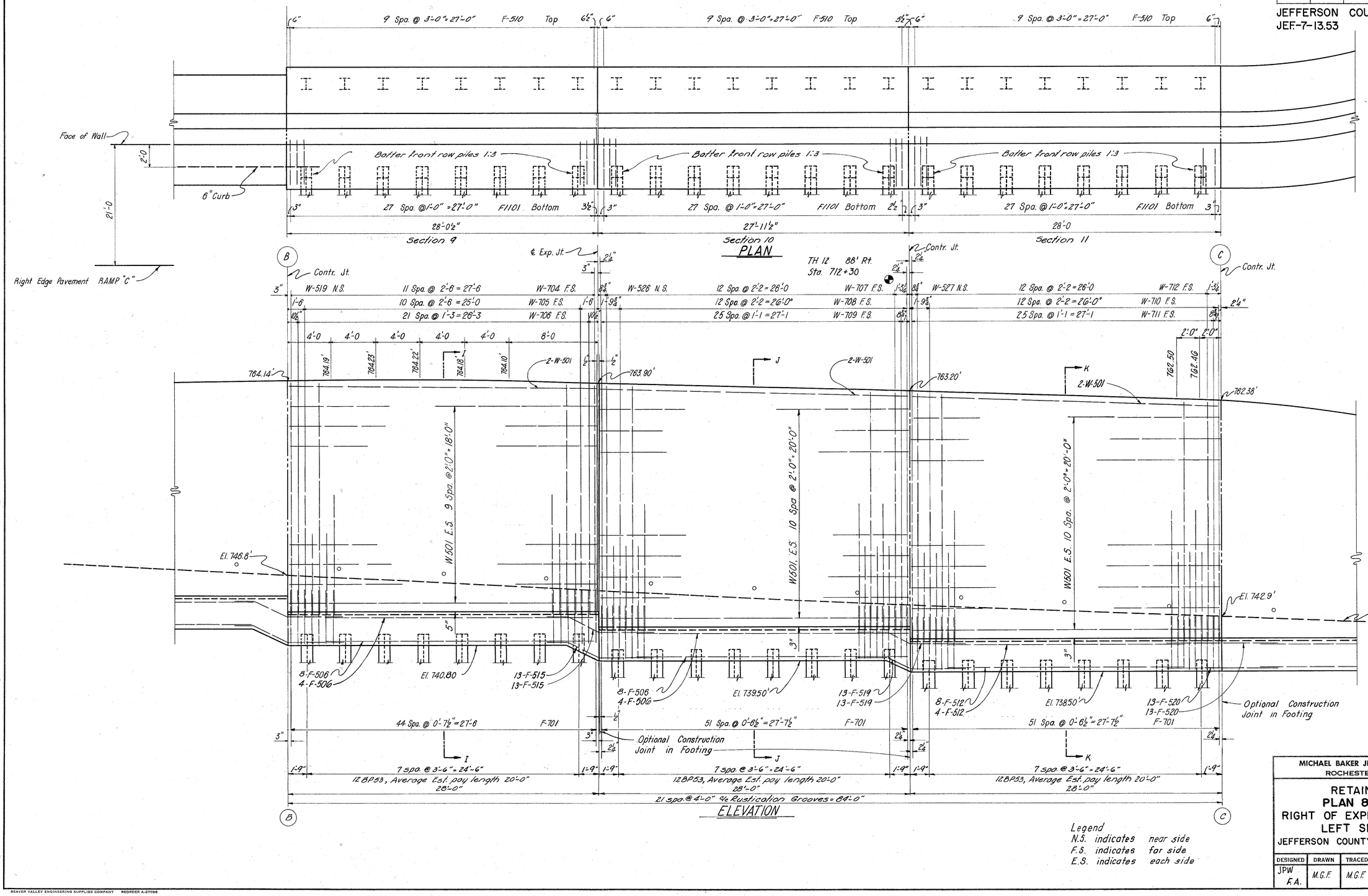
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| JPW F.A. | M.G.F. | M.G.F. | P.M. | E. Roberts 6-6-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27096

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

221
307

JEFFERSON COUNTY
JEF-7-13.53




ELEVATION

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

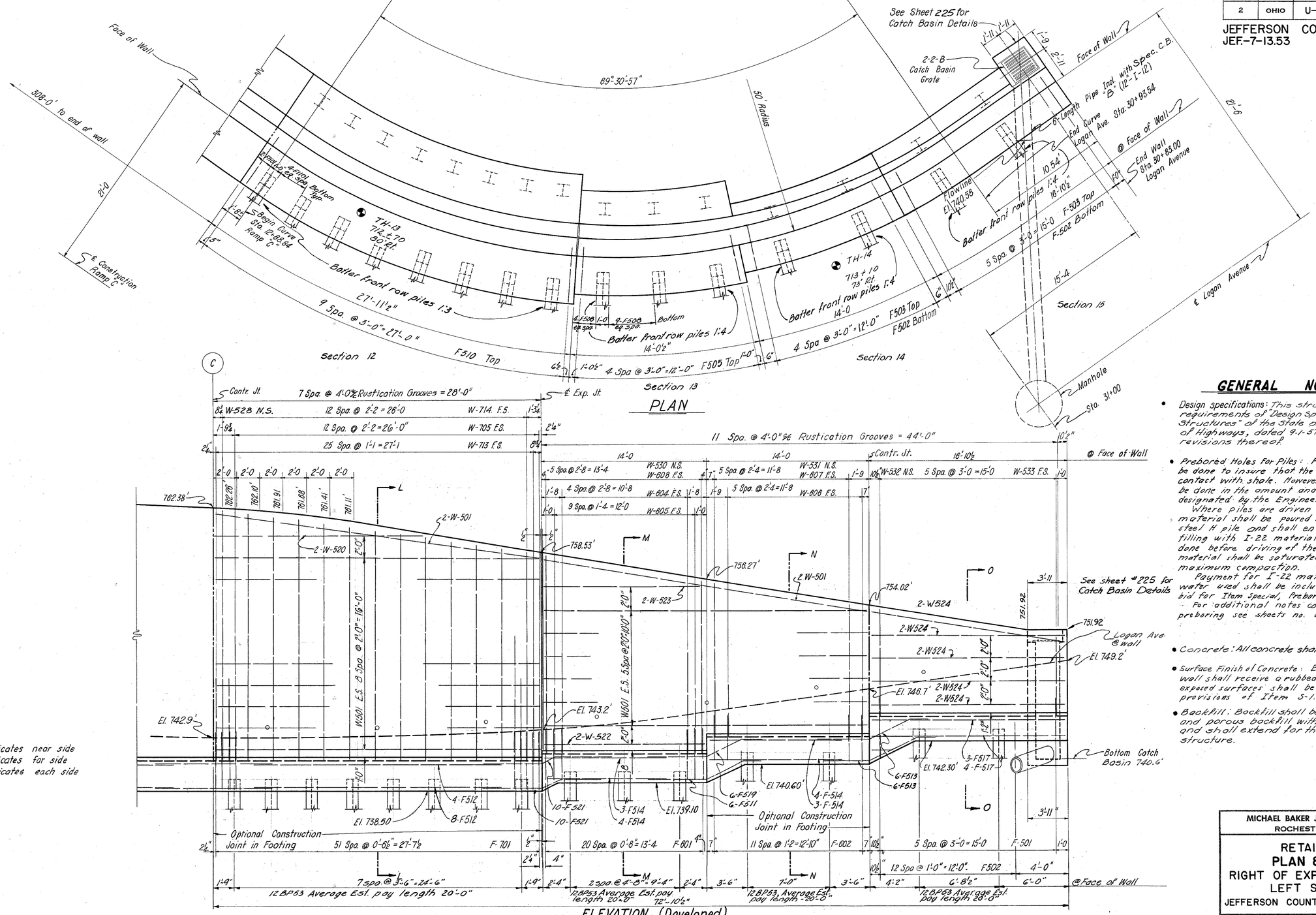
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| JPW F.A. | M.G.F. | M.G.F. | P.M. | E. Roberts 6-6-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27096

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

222
307

JEFFERSON COUNTY
JEF.-7-13.53




## PLAN




## ELEVATION (Developed)

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 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

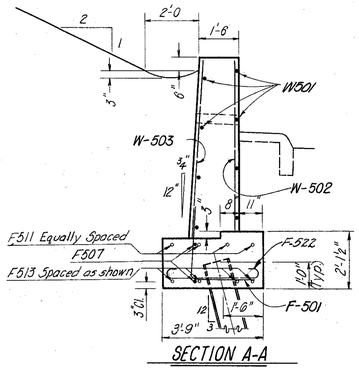
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| JPW F.A. | M.G.F. | M.G.F. | P.M. | E. Roberts 6-6-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27066

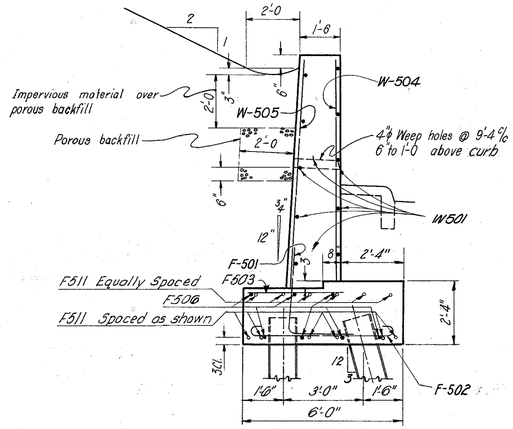
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

223
307

JEFFERSON COUNTY
JEF.-7-13.53




SECTION A-A

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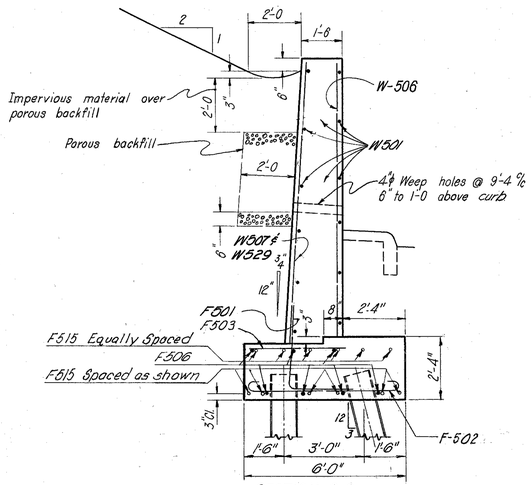


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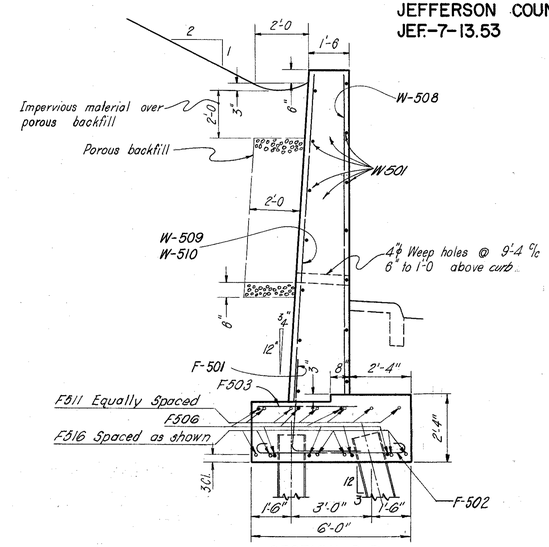


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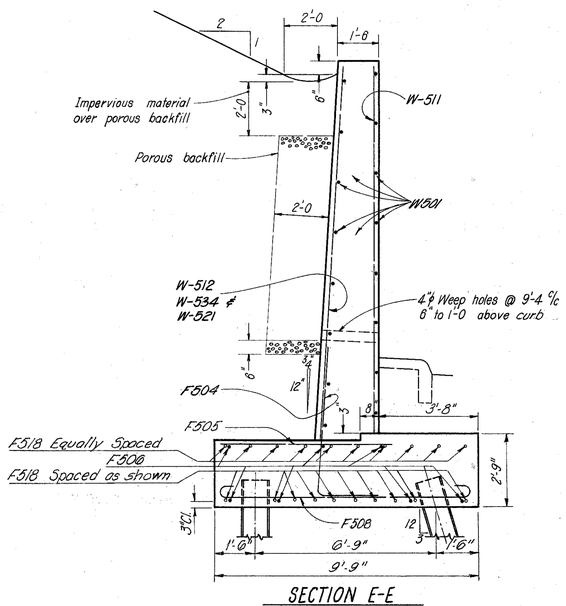


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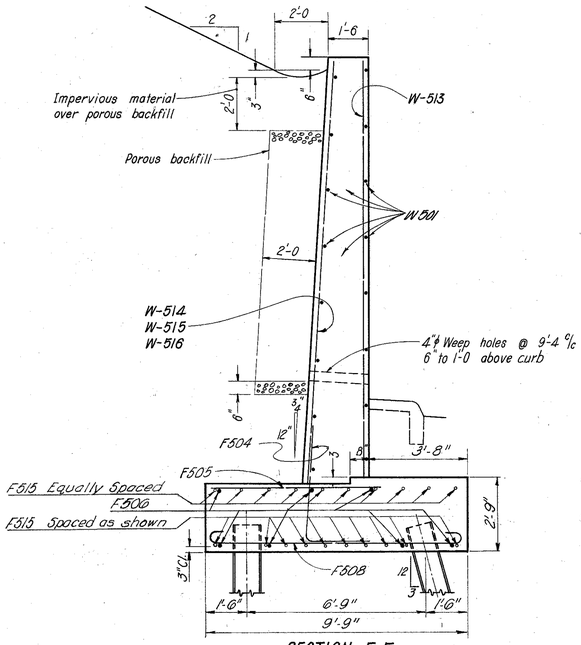


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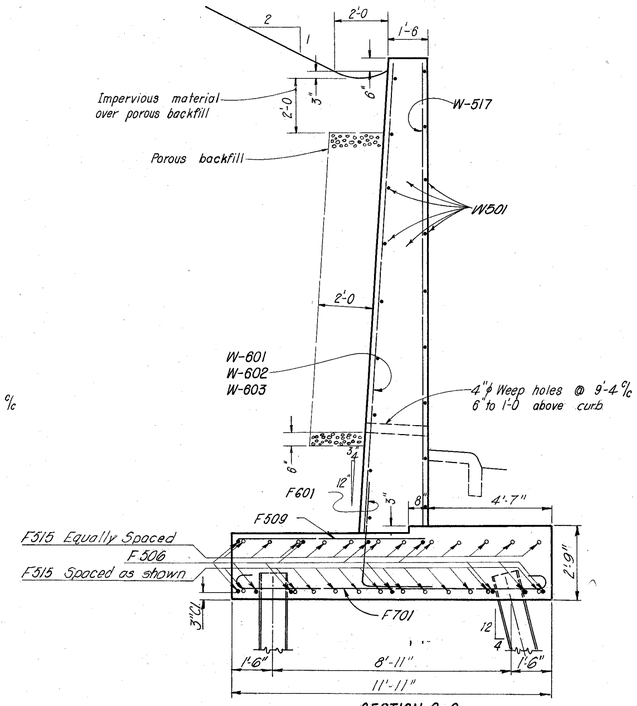



SECTION G-G

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# RETAINING WALL DETAILS

RIGHT OF EXPRESSWAY ℄ CONSTR.
LEFT SIDE RAMP "C"

JEFFERSON COUNTY STA. 9+80.50

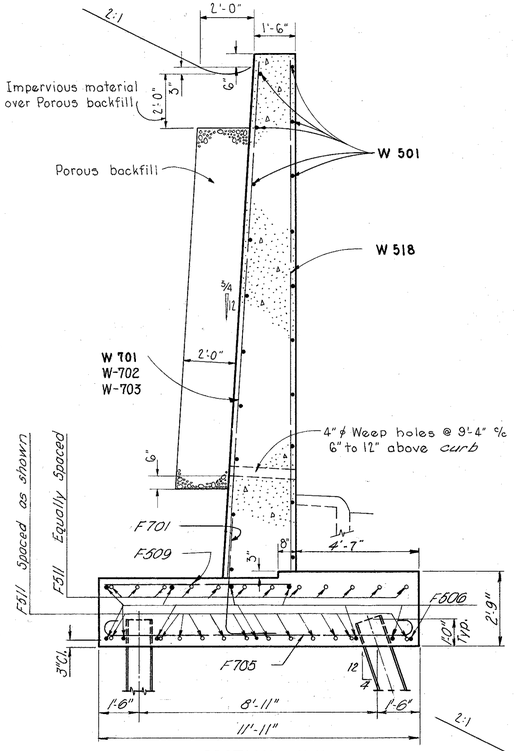
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| JPW / F.A. | M.G.F. | M.G.F. | P.M. | E. Roberts 6-6-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27086

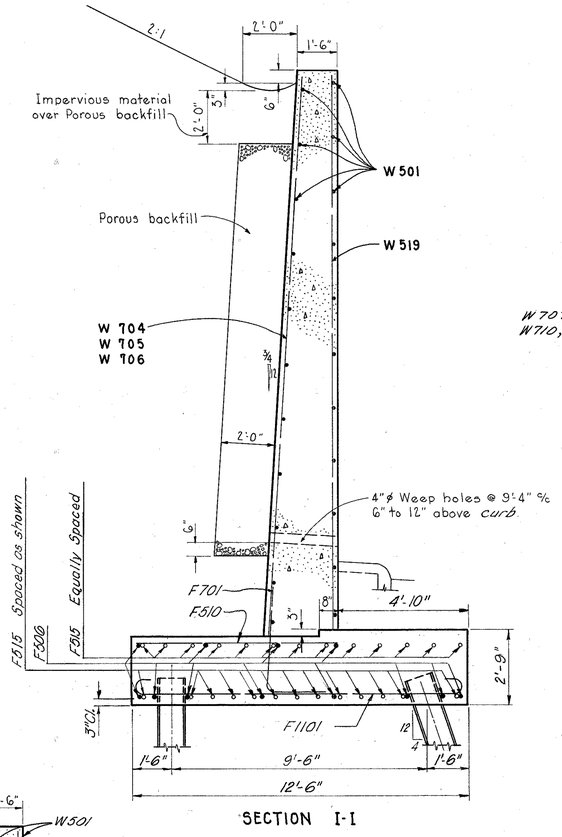
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

224
307

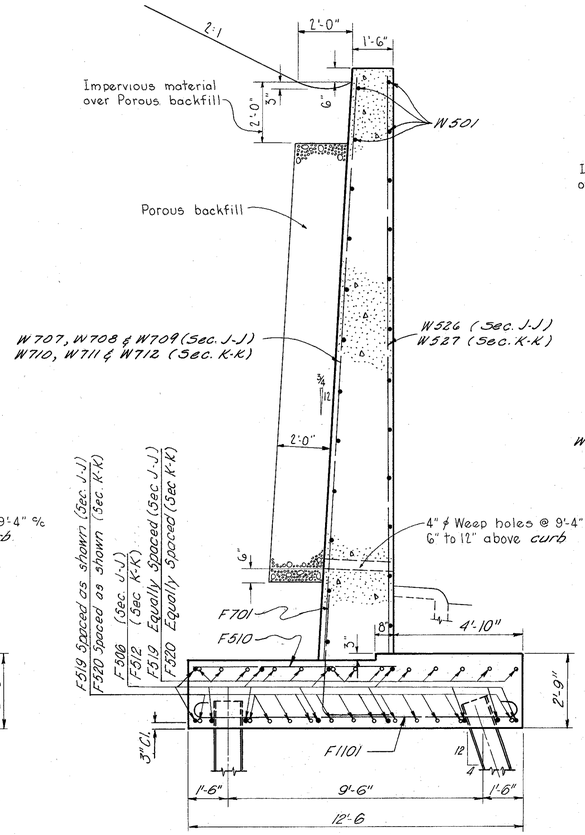
JEFFERSON COUNTY
JEF.-7-13.53



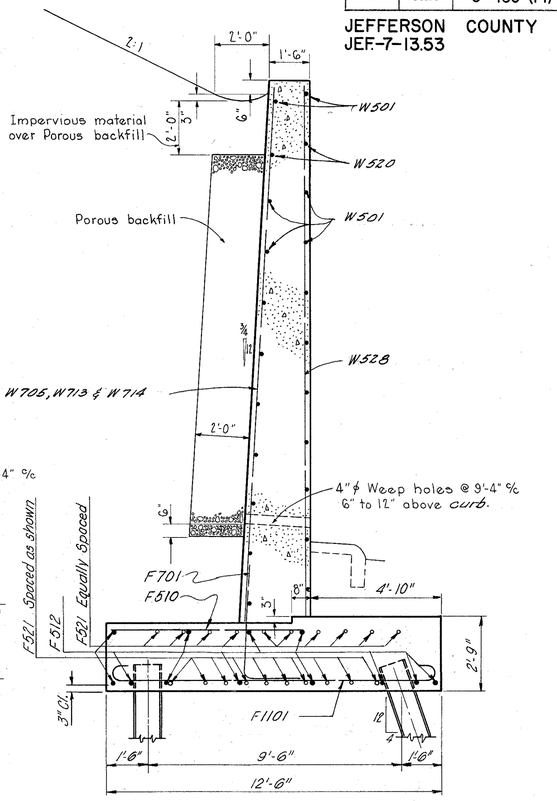

SECTION H-H




SECTION I-I




SECTION J-J & K-K

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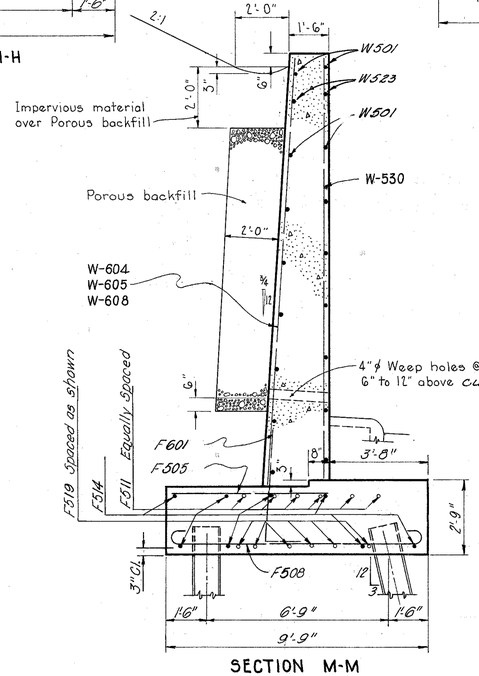


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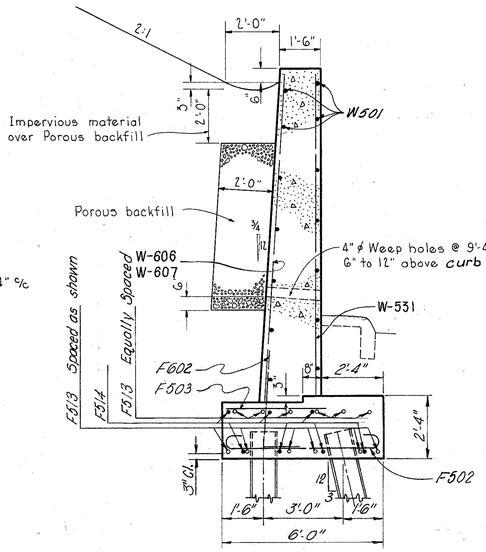
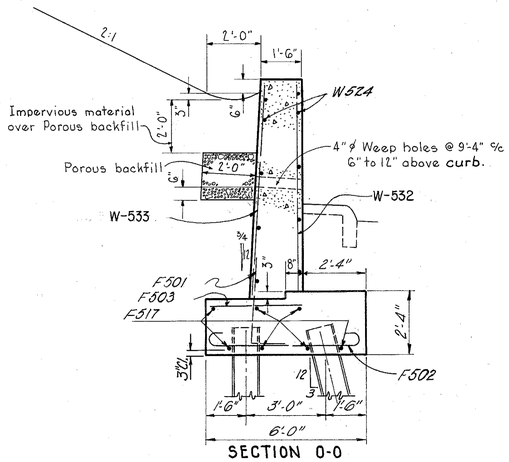



SECTION N-N




SECTION O-O

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# RETAINING WALL DETAILS

RIGHT OF EXPRESSWAY ℄ CONSTR.
LEFT SIDE RAMP "C"

JEFFERSON COUNTY STA. 9+80.50

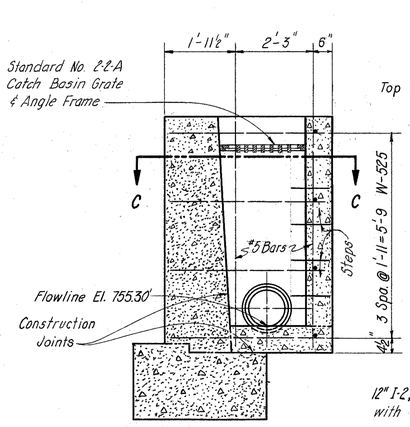
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| JPW / F.A. | M.G.F. | AMM | P.M. | E.Roberts 6-6-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27000

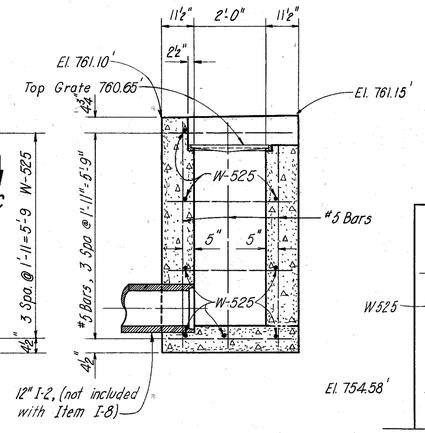
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

225
307

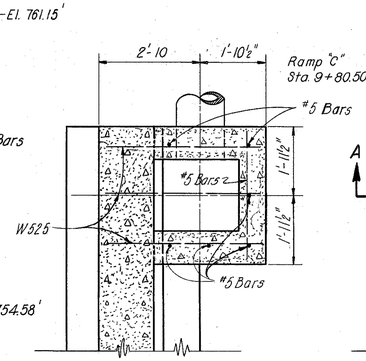
JEFFERSON COUNTY
JEF.-7-13.53



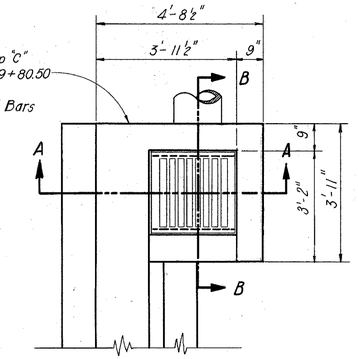

SECTION-AA




SECTION-BB




SECTION-CC




PLAN OF SPECIAL CATCH BASIN TYPE A

NOTES:

- Reinforcing steel shall be 5/8" round bars in accordance with details shown hereon and conforming to Item 5-4 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. 3-18.05 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.

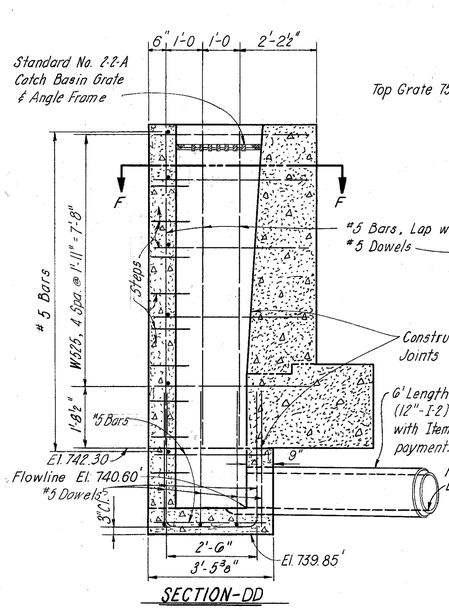
Sect. 5 thru Sect. 11
40 tons per pile using a 11,000 ft. lb. hammer.
37 tons per pile using a 15,000 ft. lb. hammer.

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.

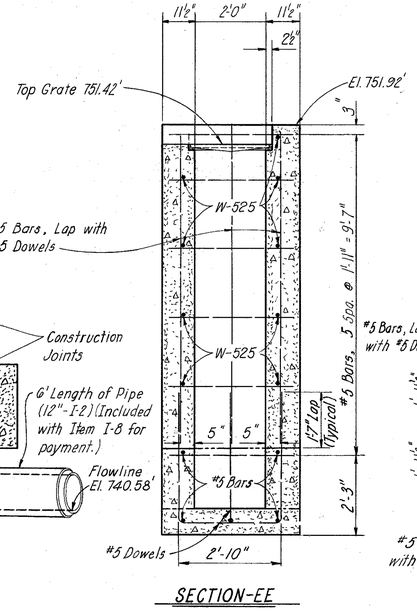
Sect. 14
33 tons per pile using a 7,000 ft. lb. hammer.
30 tons per pile using a 11,000 ft. lb. hammer.
30 tons per pile using a 15,000 ft. lb. hammer.

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.

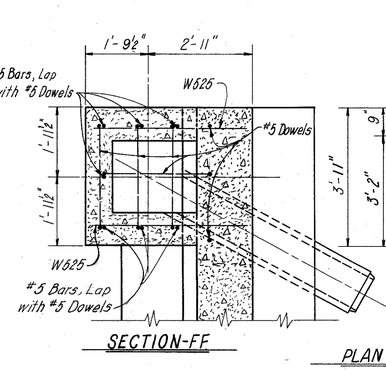
The design load is:
25 tons per pile for Sections 1, 2, and 3
30 tons per pile for Sections 4 and 14
35 tons per pile for Sections 5 thru 13



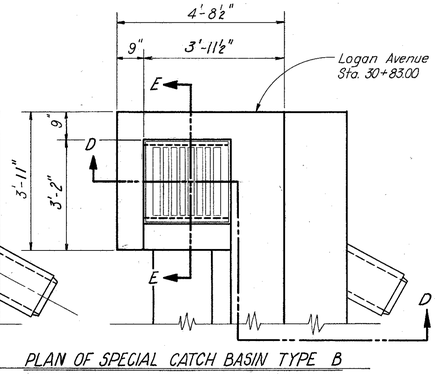

SECTION-DD




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 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27086

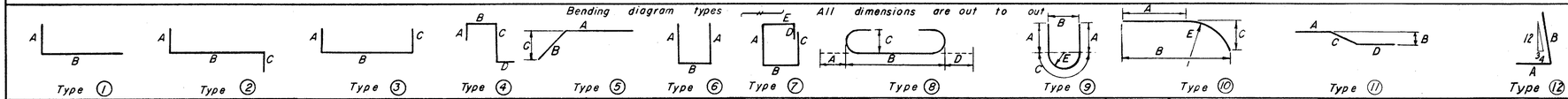
| FED. RD. DIVISON | STATE | PROJECT | |
|---|---|---|---|
| | OHIO | U-430(14) | |

226
307

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. | | | | | | 2043 |
| 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" | 6 ⅜" | | | 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. | CB | | 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".

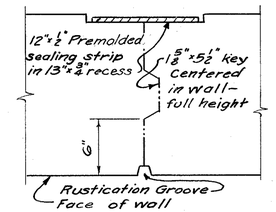
BACKFILL: Backfill shall be impervious material and porous backfill within the limits shown, and shall extend for the full length of the structure.
FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings (and/or soil sampling soundings) made at the site. 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.

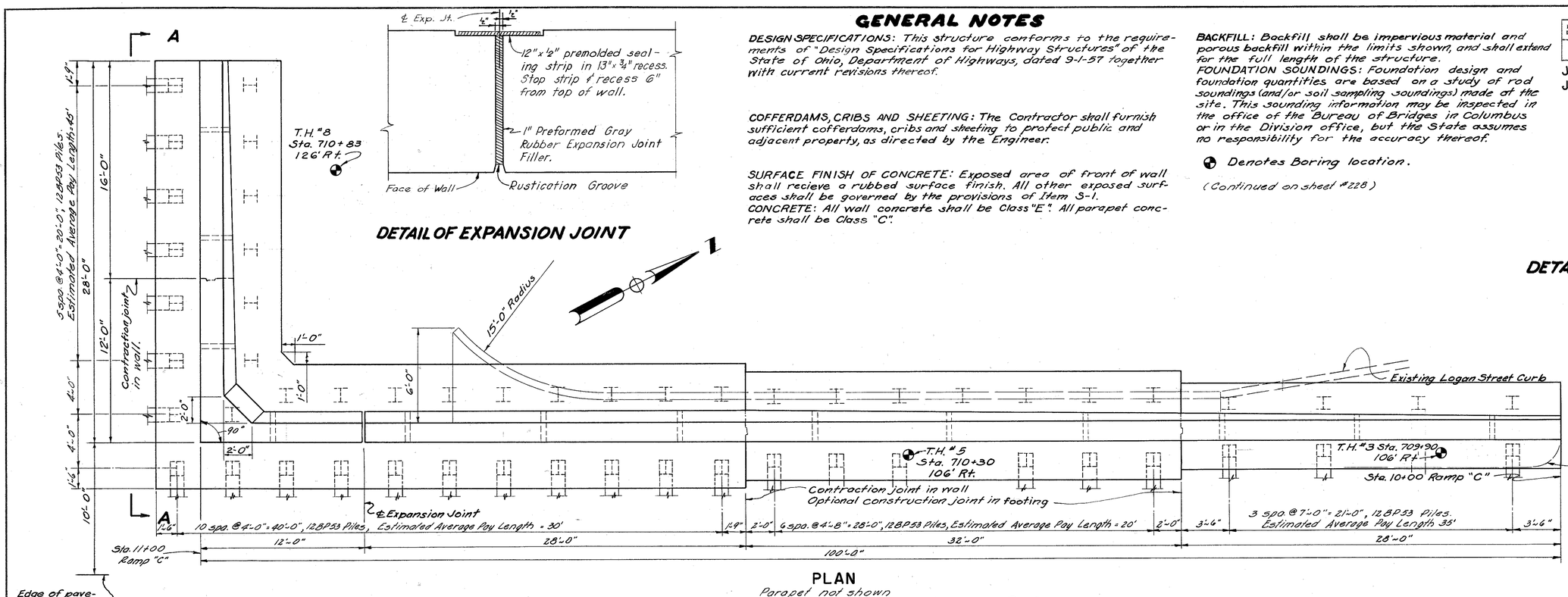
(Continued on sheet #228)




## DETAIL OF EXPANSION JOINT

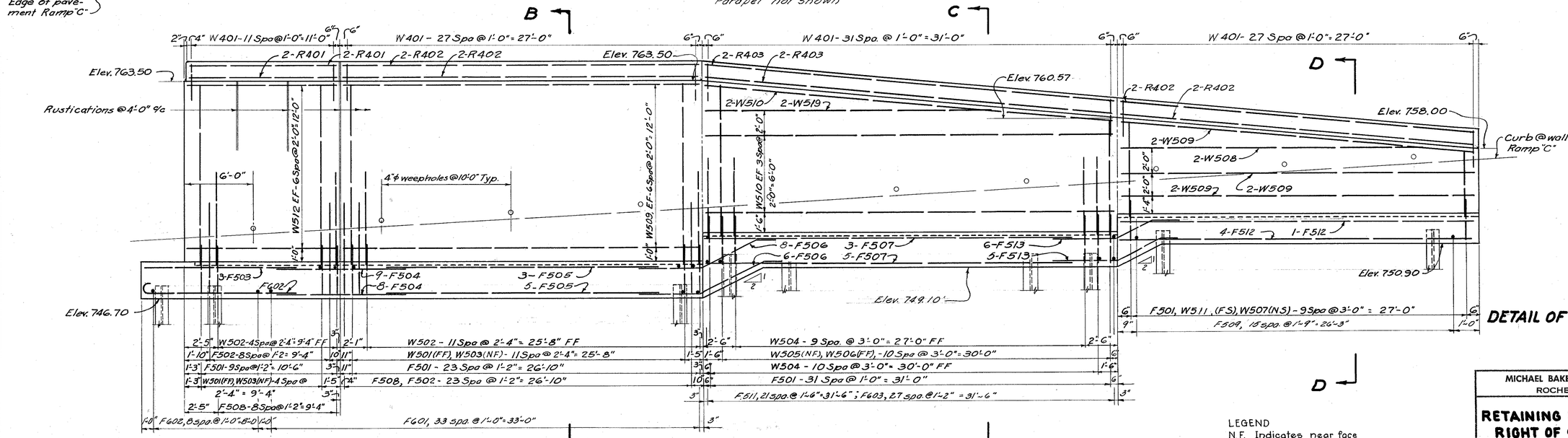



## DETAIL OF CONTRACTION JOINT

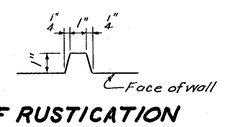



## PLAN

Parapet not shown




## ELEVATION




## 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"

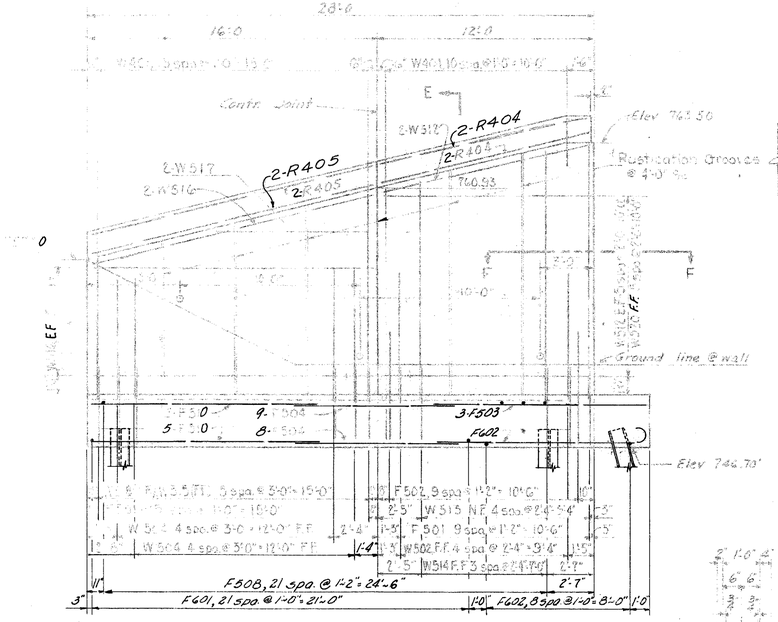
JEFFERSON COUNTY STA. 10+00

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

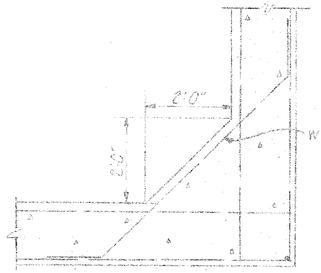
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27066

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

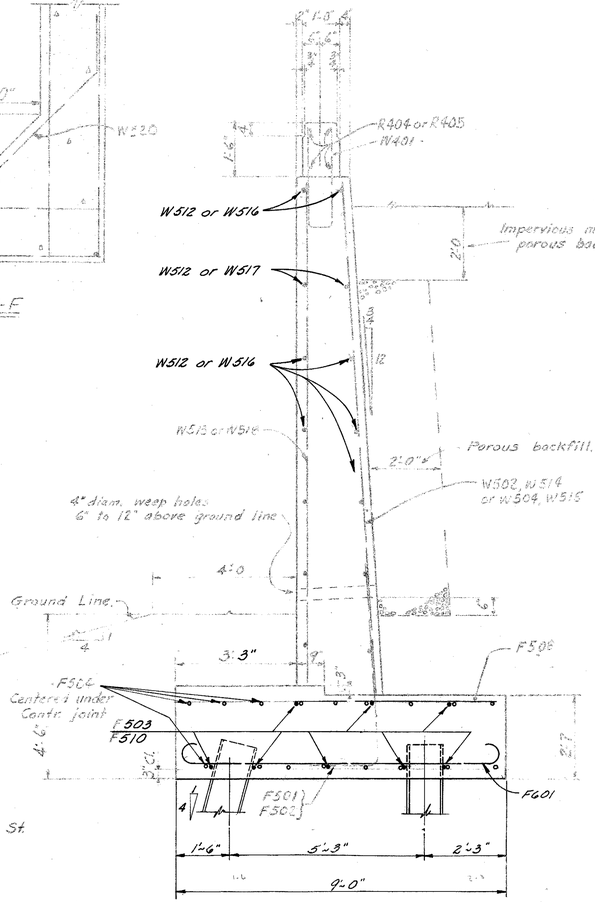
JEFFERSON COUNTY
JEF-7-13.53



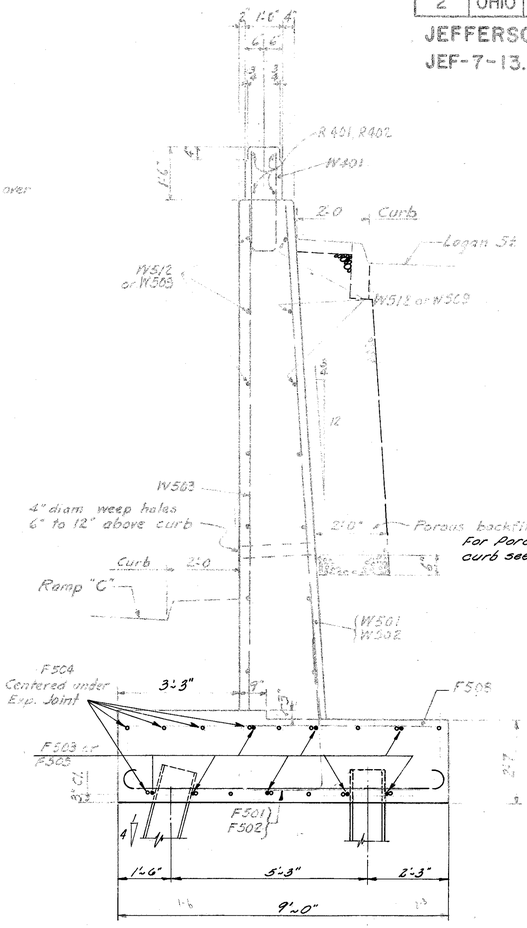

VIEW A-A



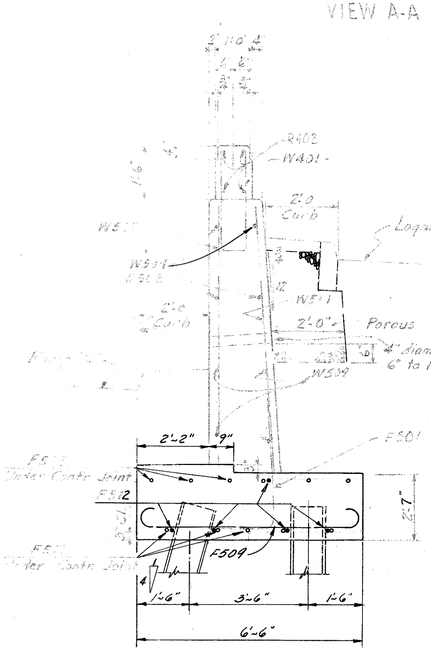

Section F-F



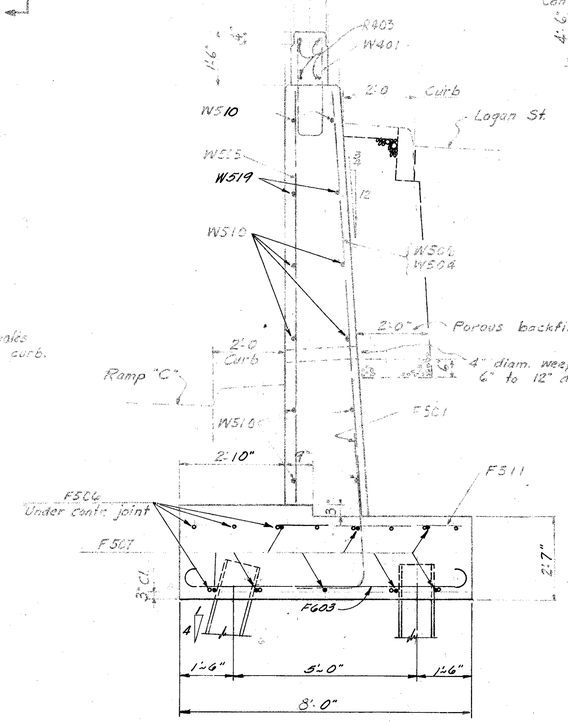

Section E-E




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 | Revised |
|---|---|---|---|---|---|
| JFW | JFW | | E.F.R. | E. Rockwell 6-21-63 | |

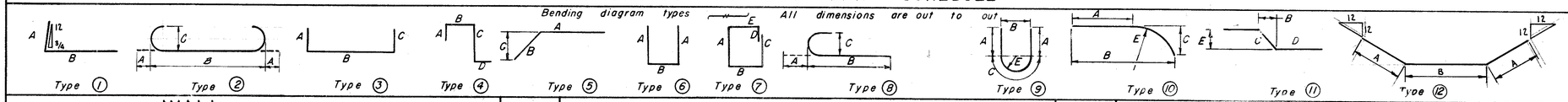
| FED. RD. DIVISION | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U 430 (14) | |

229
307

JEFFERSON COUNTY
JEF-7-13.53

# 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'-1" 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'-3" | Vary | by | 4" | 67 |
| W401 | 127 | 4 | 6'- 2" | 6 | 2'-11" | 0'-6½ | | | | 523 |
| R401 | 4 | 4 | 11'- 6" | Str. | Included with railing for Payment (Item - S-14) | | | | | |
| R402 | 8 | 4 | 27'- 8" | Str. | | | | | | |
| R403 | 4 | 4 | 31'- 9" | Str. | | | | | | |
| R404 | 4 | 4 | 11'-11" | Str. | | | | | | |
| R405 | 4 | 4 | 16'- 0" | Str. | | | | | | |

| MARK | TOTAL | SIZE | LENGTH | TYPE | A | B | C | D | E | WEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|
| F501 | 102 | 5 | 5'-4" | 1 | 3'-11" | 1'-7" | | | | 567 |
| F502 | 43 | 5 | 9'-0" | 1 | 7'- 7" | 1'-7" | | | | 404 |
| F503 | 6 | 5 | 11'-8" | Str. | | | | | | 73 |
| F504 | 34 | 5 | 10'-0" | Str. | | | | | | 355 |
| F505 | 8 | 5 | 21'-2" | Str. | | | | | | 177 |
| F506 | 14 | 5 | 12'-0" | 11 | 5'-0" | 4'-10" | 5'-5" | 1'-7" | 2'-5" | 175 |
| F507 | 8 | 5 | 28'-5 | Str. | | | | | | 237 |
| F508 | 57 | 5 | 5'-0" | Str. | | | | | | 297 |
| F509 | 16 | 5 | 7'-4" | 2 | 7" | 6'-2" | 5¼" | | | 122 |
| F510 | 8 | 5 | 12'-5" | Str. | | | | | | 104 |
| F511 | 22 | 5 | 4'-9" | Str. | | | | | | 109 |
| F512 | 5 | 5 | 27'-8 | Str. | | | | | | 144 |
| F513 | 11 | 5 | 10'-8" | 11 | 5'-0" | 3'-8" | 4'-1" | 1'-7" | 1'-10" | 122 |
| FG01 | 56 | 6 | 10'-0" | 2 | 8" | 8'-8" | 6" | | | 841 |
| FG02 | 18 | 6 | 12'-4" | 8 | 8" | 11'-8" | 6" | | | 333 |
| FG03 | 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

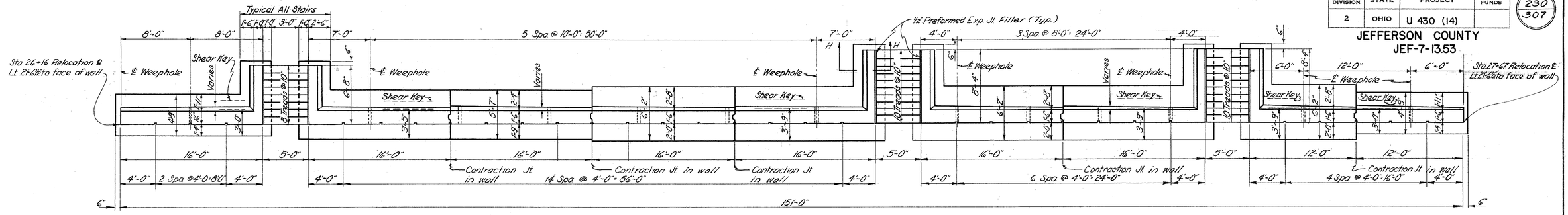
RETAINING WALL
REINFORCING STEEL LIST AND ESTIMATED QUANTITIES
RIGHT OF ℄ CONSTRUCTION RAMP "C"
JEFFERSON COUNTY STA. 10+00

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

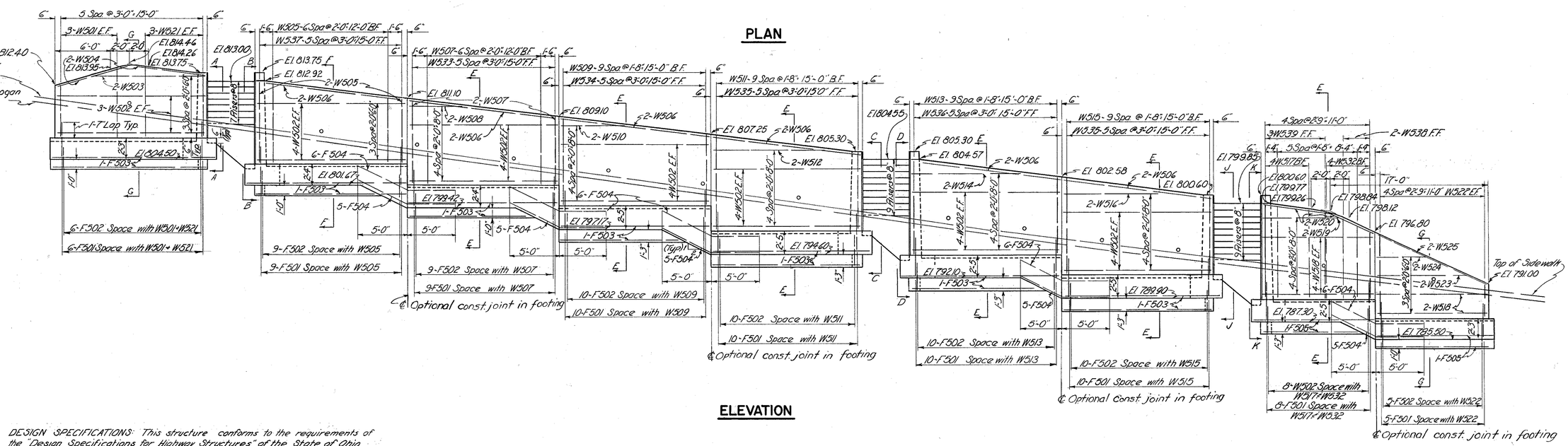
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U 430 (14) | |

230
307

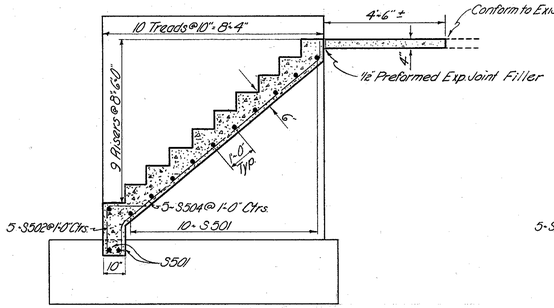
JEFFERSON COUNTY
JEF-7-13.53




## PLAN




## ELEVATION




SECTION C – C
SECTION J – J

SECTION A – A

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 511.
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.

ESTIMATED QUANTITIES

| ITEM | TOTAL | UNIT | DISCRIPTION |
|---|---|---|---|
| E-2 | Lump | Sum | Cofferdams, Cribs and Sheeting |
| E-2 | 469 | C.Y. | Excavation for Structures |
| 511 | 90 | C.Y. | Class "E" Concrete - Wall |
| 511 | 87 | C.Y. | Class "E" Concrete - Footings |
| 513 | 50 | L.F. | Waterproofing, Premolded Sealing Strip |
| 514 | 5,386 | Lb. | Reinforcing Steel |
| 529 | 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

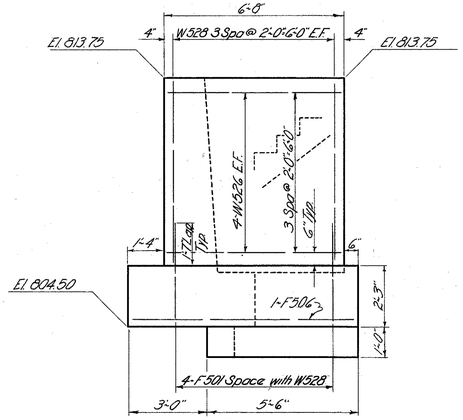
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| B.S. G.G. | B | B | G.G. B.S. | E. Roberts 6-6-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-2706B

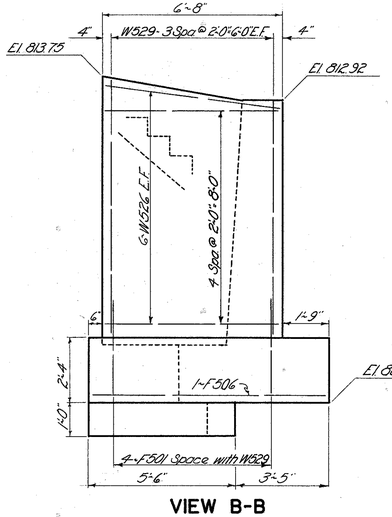
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U 430 (14) | |

231
307

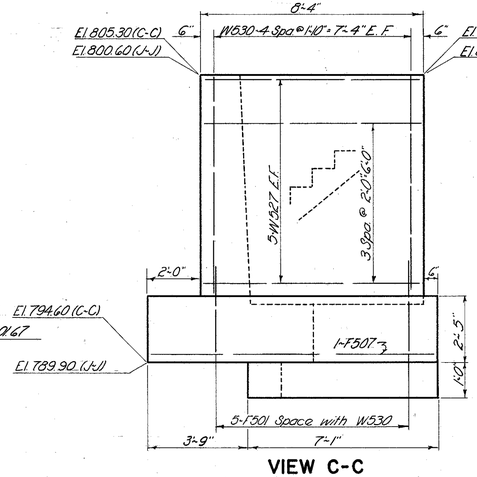
JEFFERSON COUNTY
JEF-7-13.53



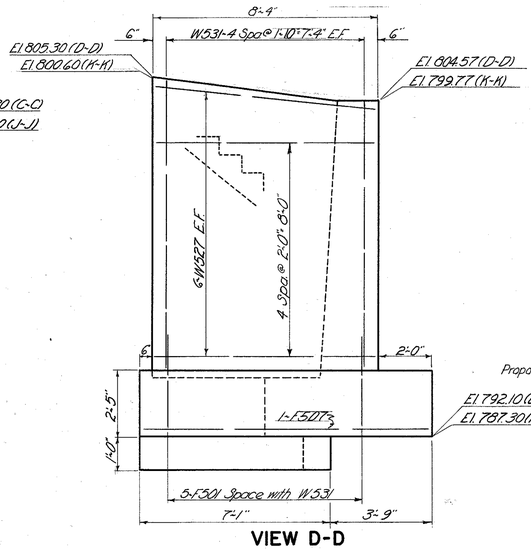

VIEW A-A



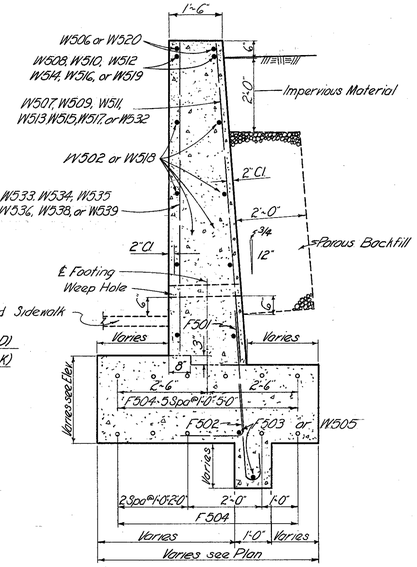

VIEW B-B




VIEW C-C



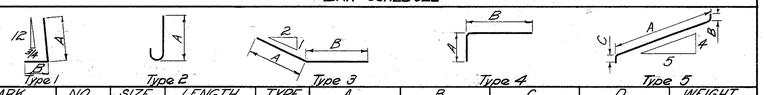

VIEW D-D
VIEW K-K




SECTION E-E

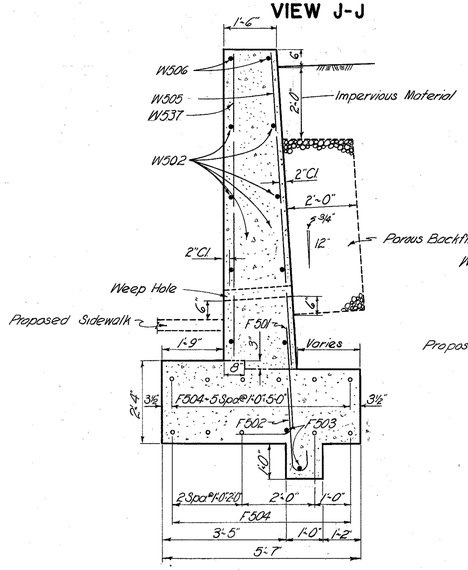
All bar dimensions are out to out.

BAR SCHEDULE

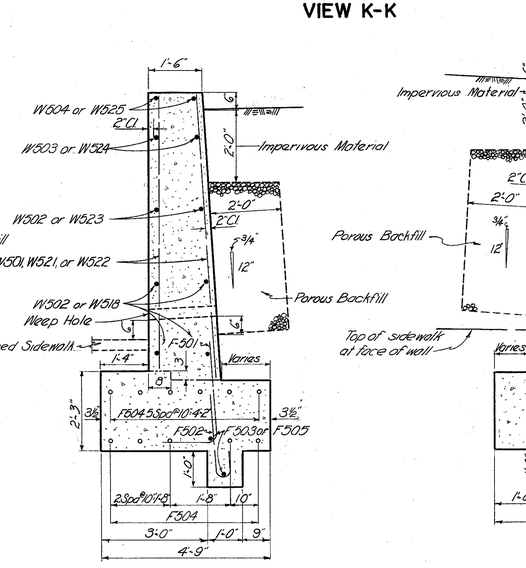



| MARK | NO. | SIZE | LENGTH | TYPE | A | B | C | D | WEIGHT |
|---|---|---|---|---|---|---|---|---|---|
| W501 | Two Ea. | 5 | 5'-1 to 7'-3" | Str | Vary by 10" (6 bars) | | | | 40 |
| W502 | 54 | 5 | 15'-8" | Str | | | | | 882 |
| W503 | 2 | 5 | 11'-9" | Str | | | | | 28 |
| W504 | 4 | 5 | 8'-0" | 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'-1 to 9'-1" | 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 2 1/2" + (10 bars) | | | | 96 |
| W512 | 2 | 5 | 11'-6" | Str | | | | | 24 |
| W513 | One Ea. | 5 | 8'-2" to 10'-1" | Str | Vary by 2 1/2" (10 bars) | | | | 95 |
| W514 | 2 | 5 | 11'-9" | Str | | | | | 25 |
| W515 | One Ea. | 5 | 8'-3 to 10'-2" | Str | Vary by 2 1/2" + (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" (10 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) | | | | 53 |
| W537 | One Ea. | 5 | 6'-11" to 8'-7" | Str | Vary by 4" (6 bars) | | | | 49 |
| W538 | One Ea. | 5 | 7'-1 to 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" | | | | 224 |
| 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" (3 bars) | | * |
| S504 | Two Ea. | 5 | 11'-0 to 13'-4" | 5 | 9'-7 | 7" | 10" to 3'-2" Vary by 7" (10 bars) | | * |

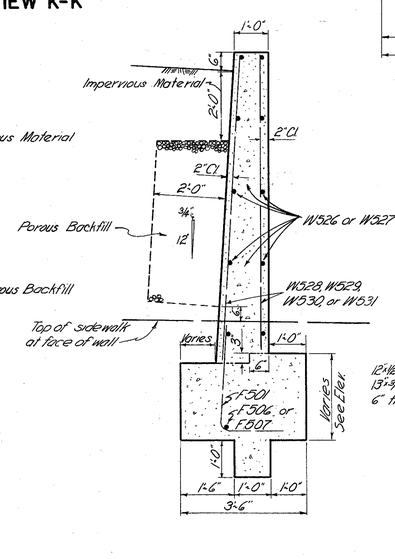
5,386 Total Weight



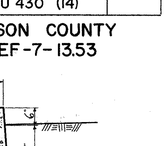

SECTION F-F




SECTION G-G




SECTION H-H




RUSTICATION




CONTRACTION JOINT

| REPLACEMENT BARS | | | | |
|---|---|---|---|---|
| MARK | NO. | SIZE | LENGTH | TYPE |
| RE 501 | 1 | 5 | 5'-7 | Str. |

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

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. | | | G.G. B.S. | E. Roberts 6-6-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27066

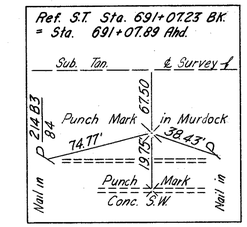
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

232
307

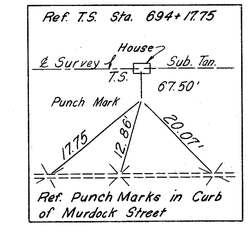
JEFFERSON COUNTY
JEF-7-13.53

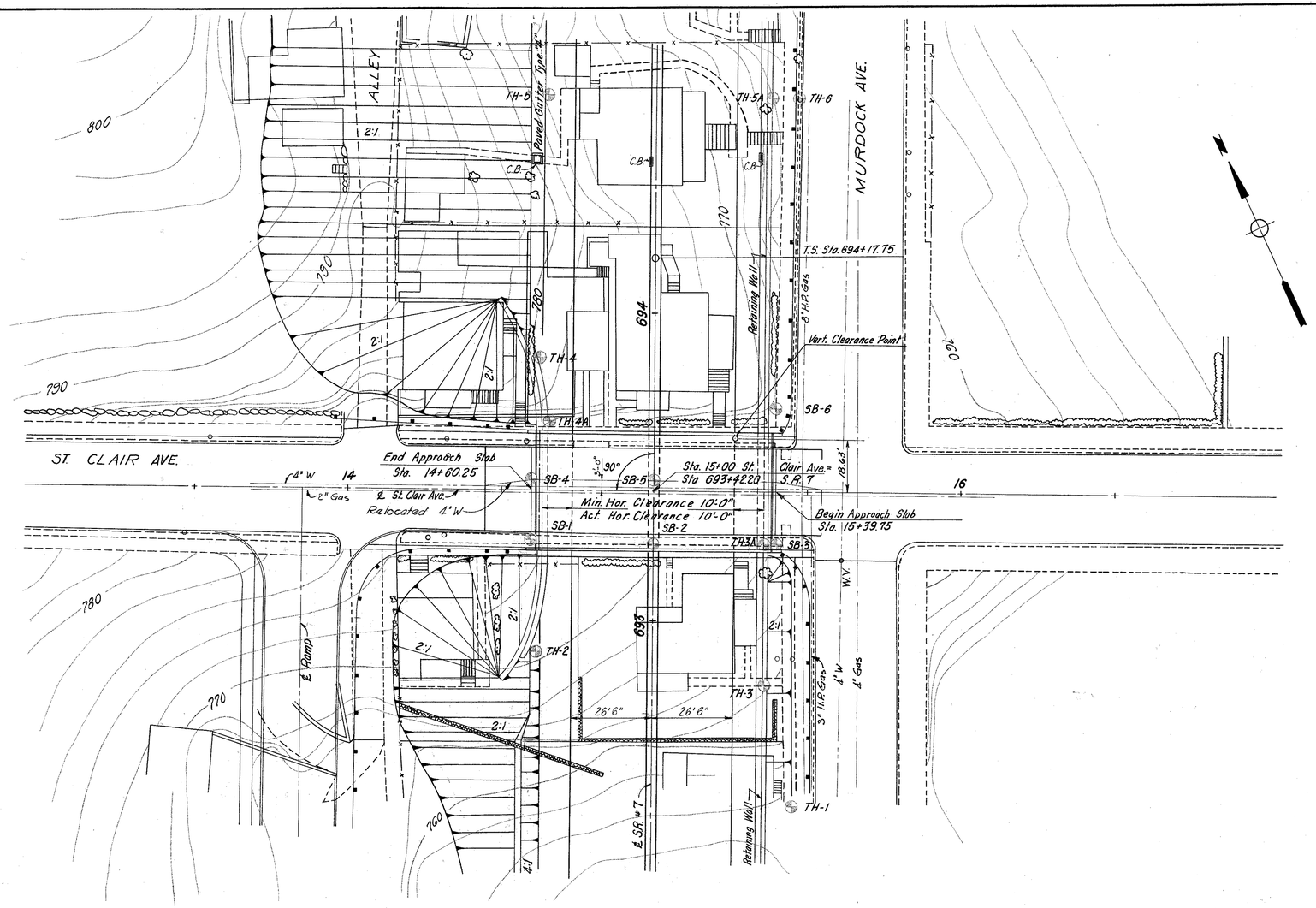
B.M. R.R. Spike in pole 81'
Rt. Sta. 694+86 Elev. 759.22

Ref. S.T. Sta. 691+07.23 Bk.
= Sta. 691+07.89 Ahd.




Ref. T.S. Sta. 694+17.75

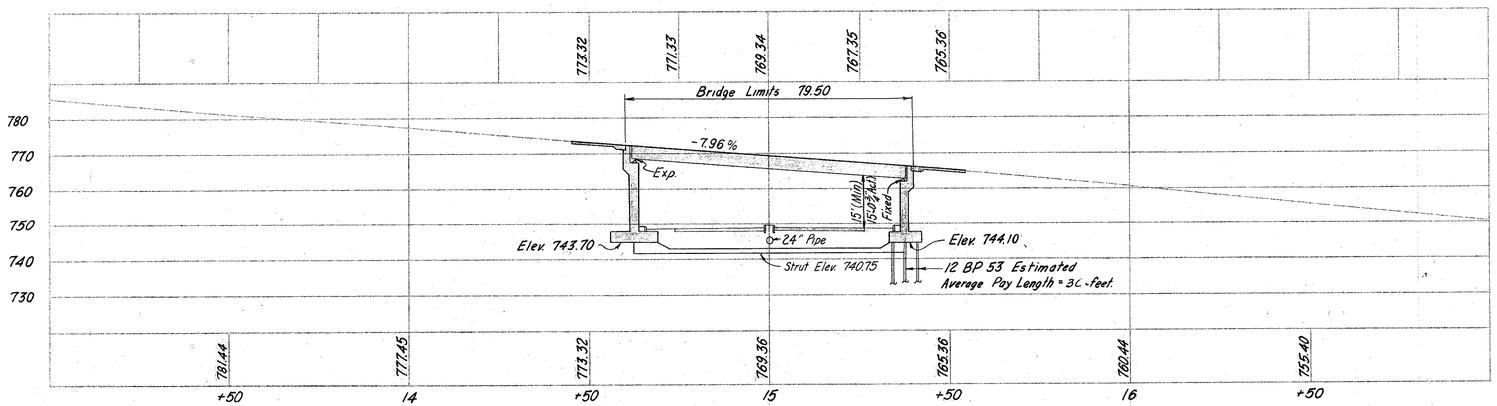



FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of borings and soil sampling soundings made at the site. The sounding information may be inspected in the office of the Bureau of Bridges in Columbus, or in the division office, but the State assumes no responsibility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

⊕ 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.

RECEIVED
SEP 2 1959
DIV. OF HIGHWAYS

## PROPOSED STRUCTURE

**Type:** Steel Beam Single Span with reinf. conc. deck and substructure.
**Span:** 75'-0" ℄ 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

MICHAEL BAKER, JR. CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

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

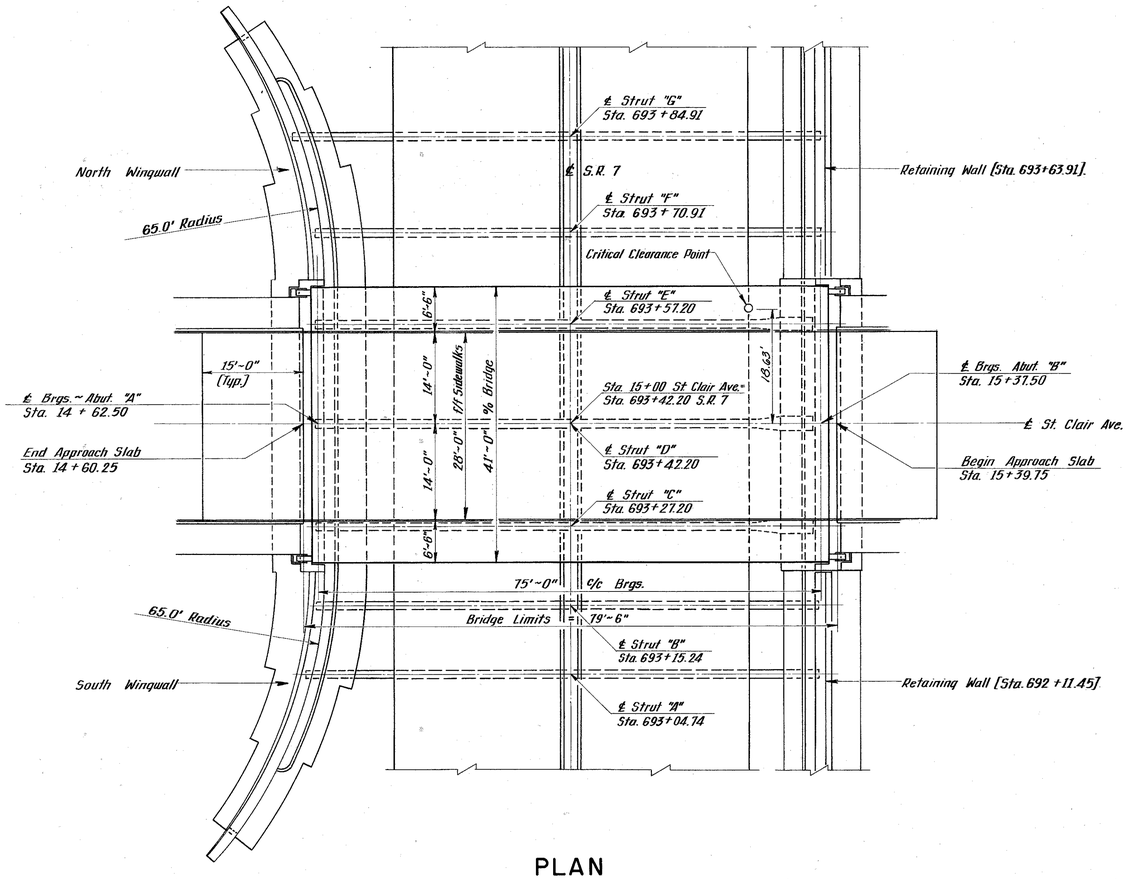
JEFFERSON COUNTY STA. 693+42.20

| 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 |

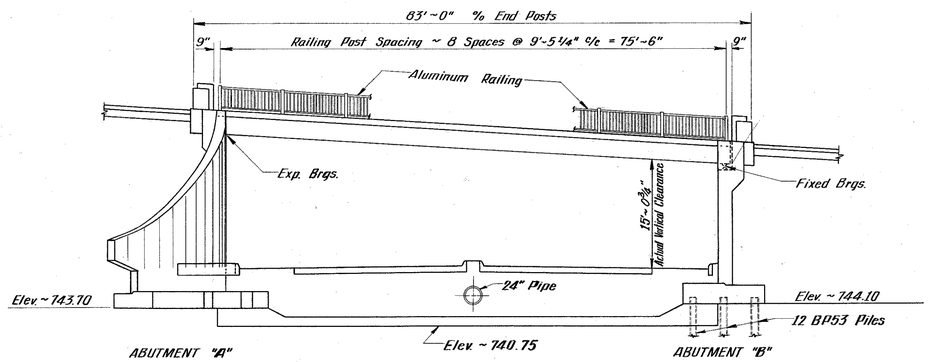
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

233
307

JEFFERSON COUNTY
JEF.-7-13.53




PLAN




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 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.*

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

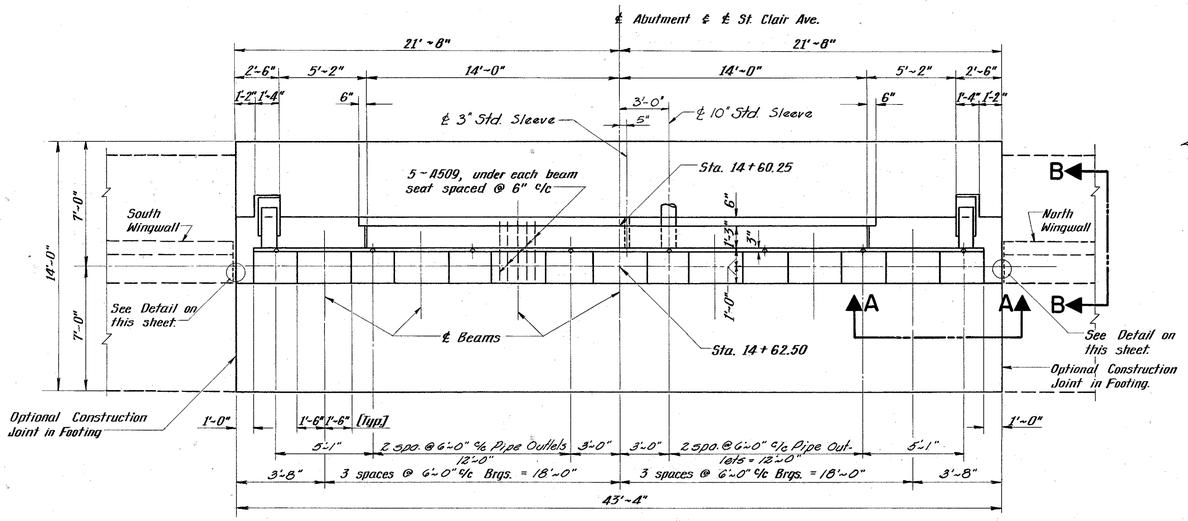
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| A.S.J. | BB | Simpson | P.M. | E. Roberts 6-9-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27095

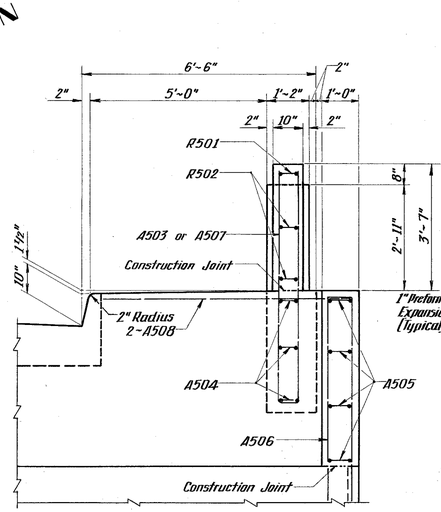
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

234
307

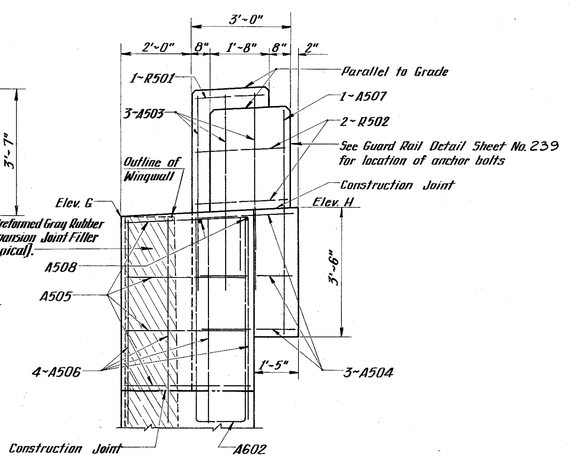
JEFFERSON COUNTY
JEF-7-13.53



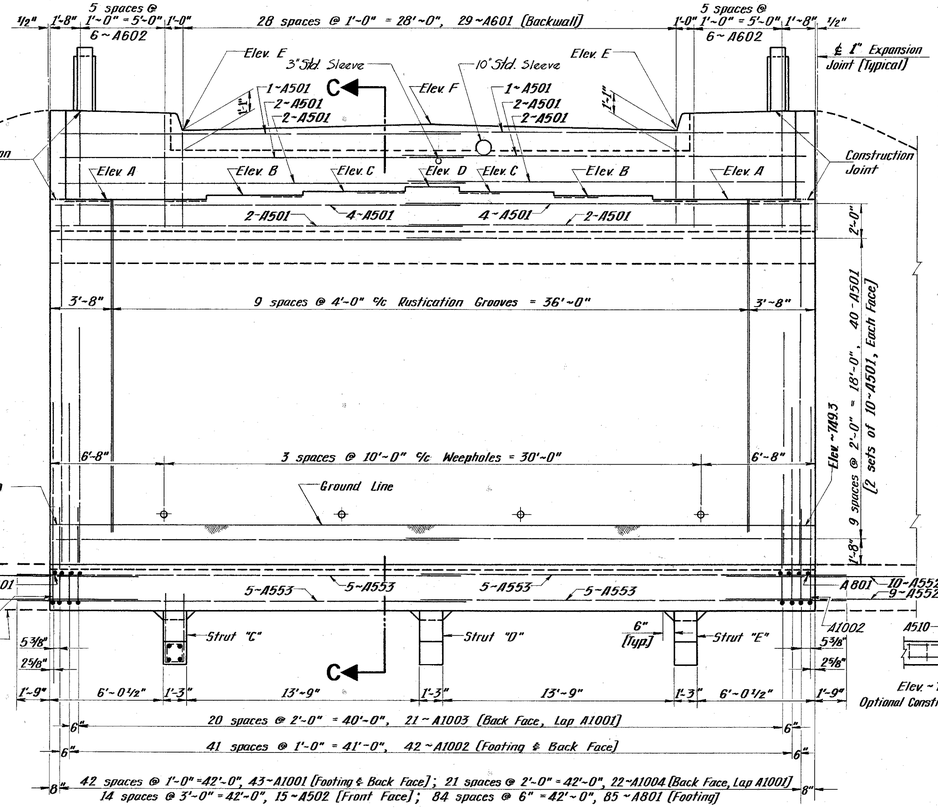

PLAN



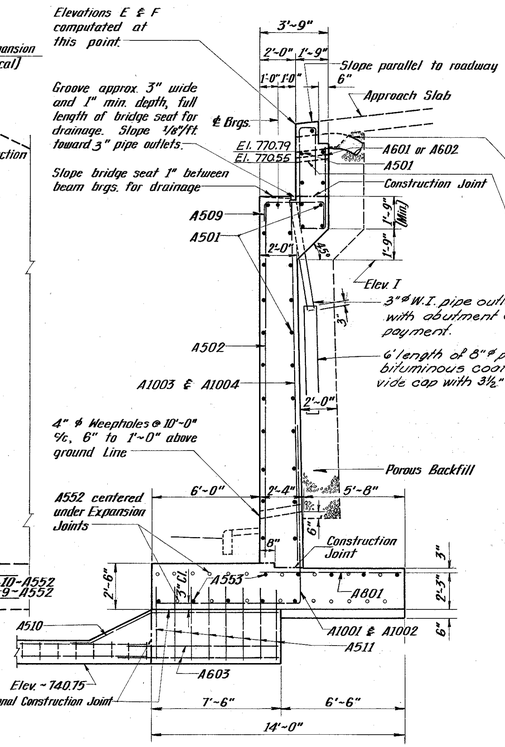

VIEW A-A




VIEW B-B




ELEVATION

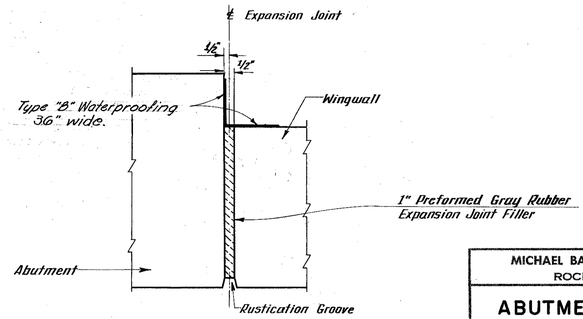



SECTION C-C

| 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 511-14, 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

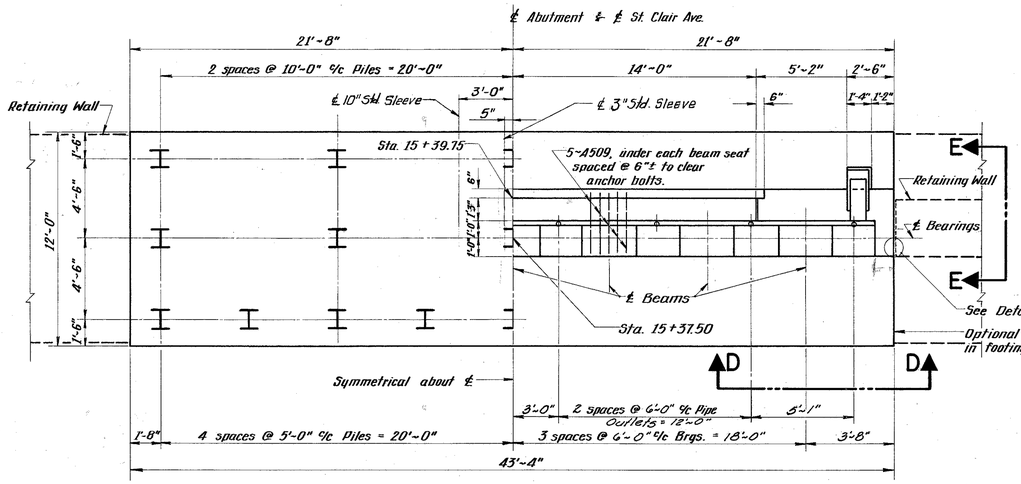
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| A.S.J. | BB | Simpson | P.M. | E. Roberts 6-9-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27066

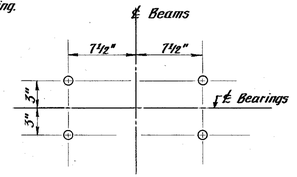
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

235
307

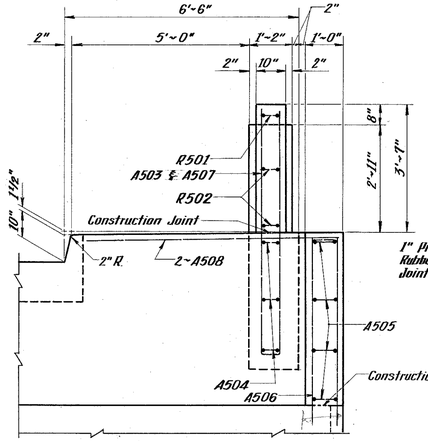
JEFFERSON COUNTY
JEF.-7-13.53



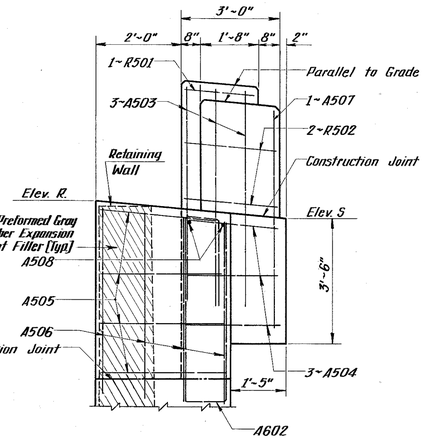

PLAN



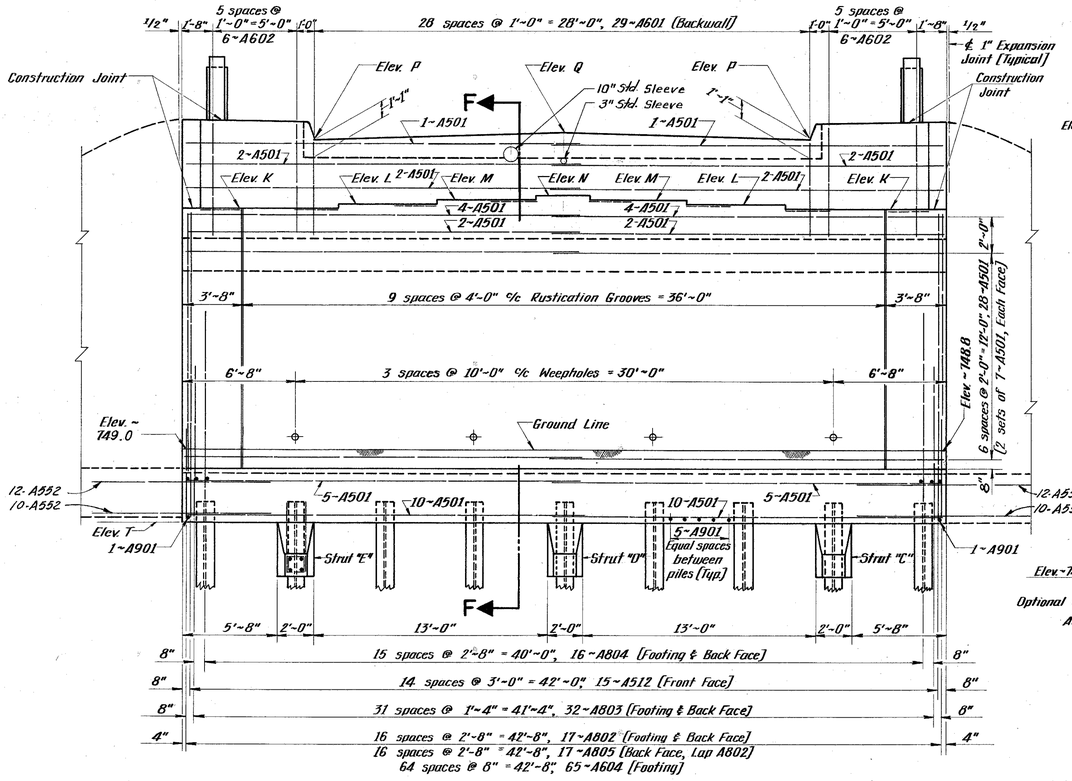

ANCHOR BOLT LAYOUT



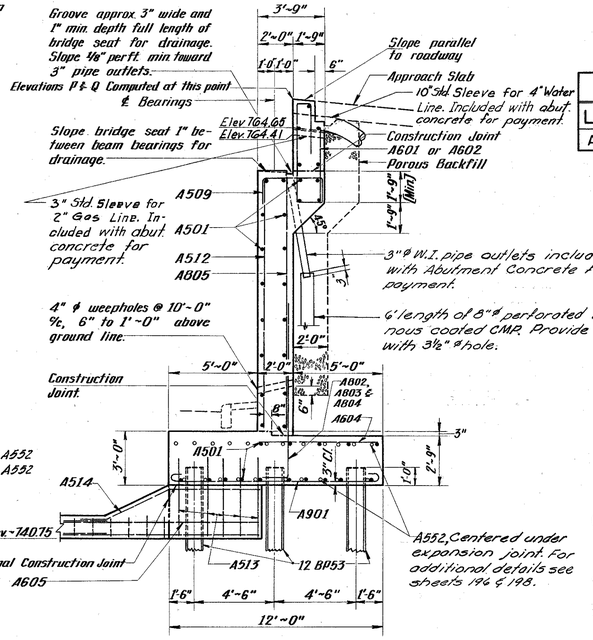

VIEW D-D




VIEW E-E




ELEVATION

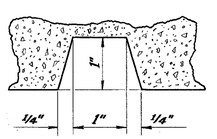



SECTION F-F

| 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.




DETAIL OF RUSTICATION GROOVE

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 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27096

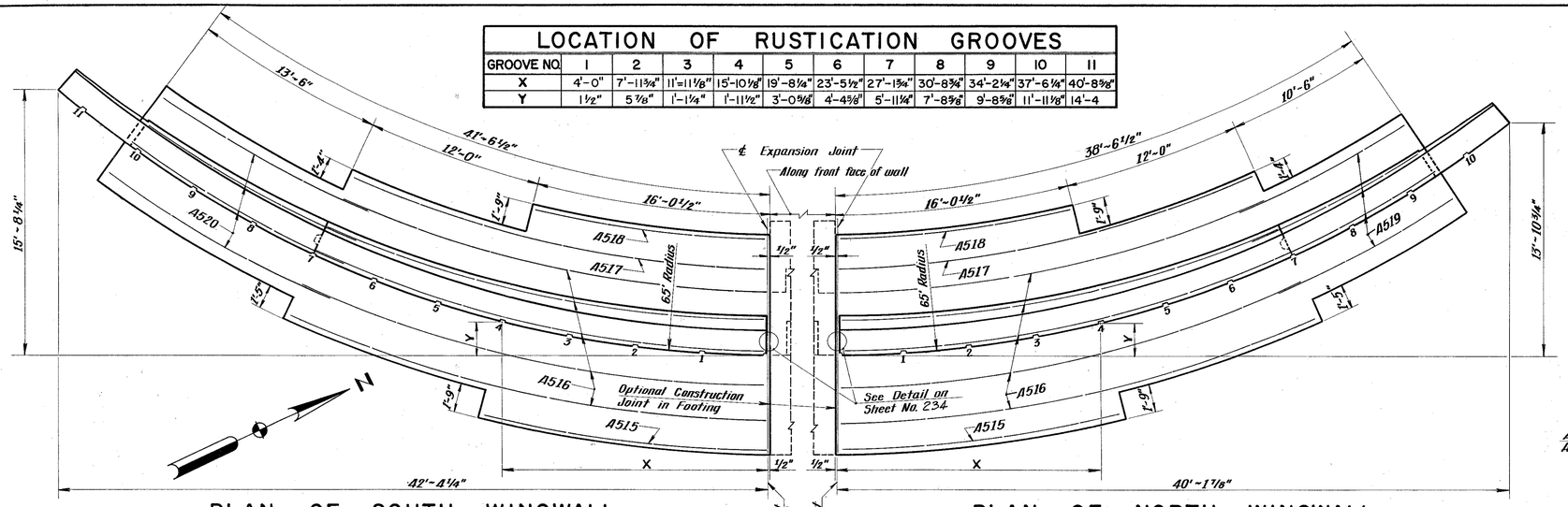
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

236
307

JEFFERSON COUNTY
JEF - 7-13.53

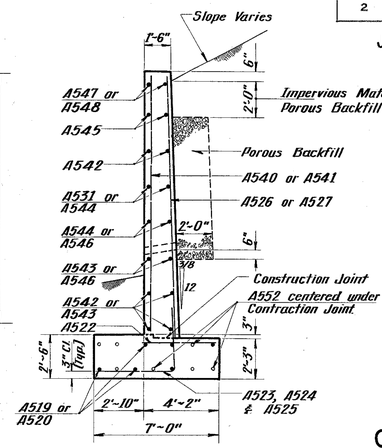
## LOCATION OF RUSTICATION GROOVES

| GROOVE NO. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| X | 4'-0" | 7'-11¾" | 11'-11⅞" | 15'-10⅛" | 19'-8¼" | 23'-5½" | 27'-1⅝" | 30'-8¾" | 34'-2¼" | 37'-6¼" | 40'-8⅜" |
| Y | 1½" | 5⅞" | 1'-1¼" | 1'-11½" | 3'-0⅝" | 4'-4⅜" | 5'-11¼" | 7'-8⅝" | 9'-8⅜" | 11'-11⅛" | 14'-4 |

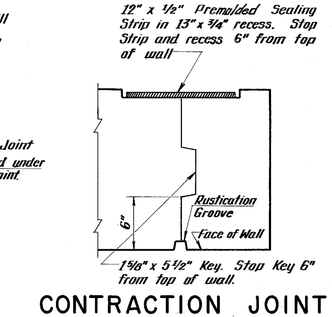



PLAN OF SOUTH WINGWALL

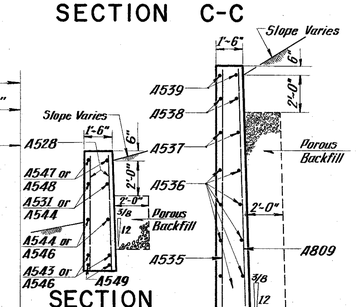
PLAN OF NORTH WINGWALL

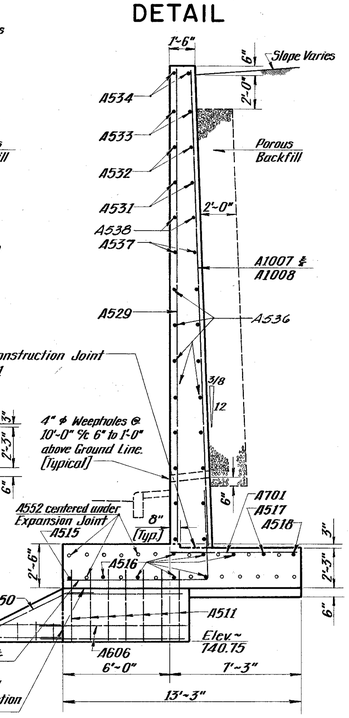


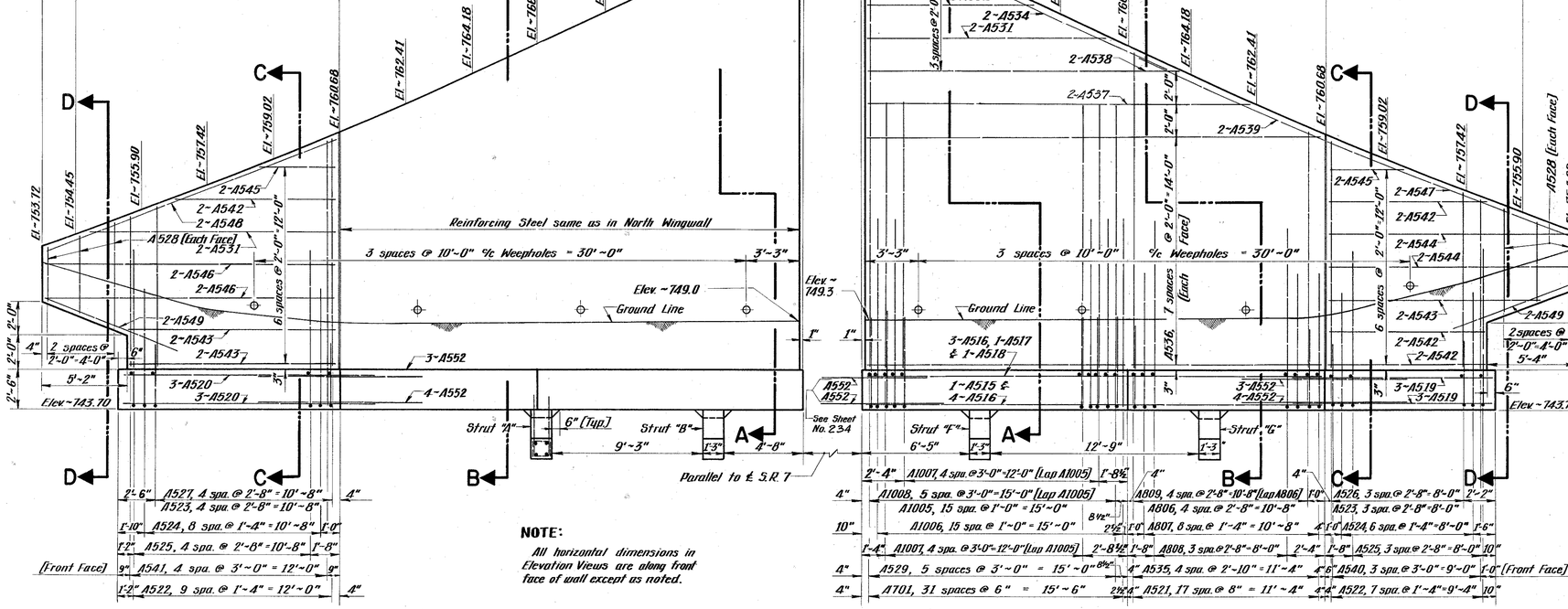

SECTION C-C




CONTRACTION JOINT DETAIL




DEVELOPED ELEVATION OF SOUTH WINGWALL

DEVELOPED ELEVATION OF NORTH WINGWALL

**NOTE:**

*All horizontal dimensions in Elevation Views are along front face of wall except as noted.*

**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

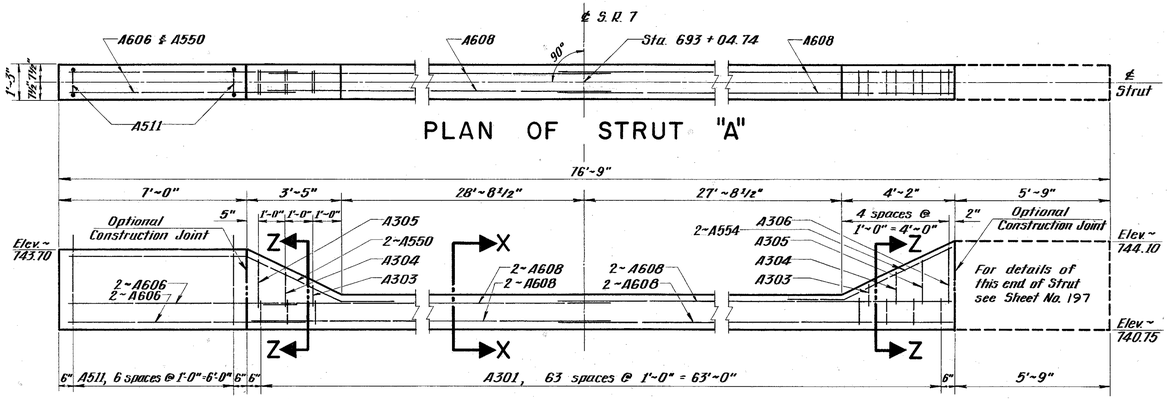
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| A.S.J. | BB | Simpson | P.M. | E. Roberts 6-9-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27086

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

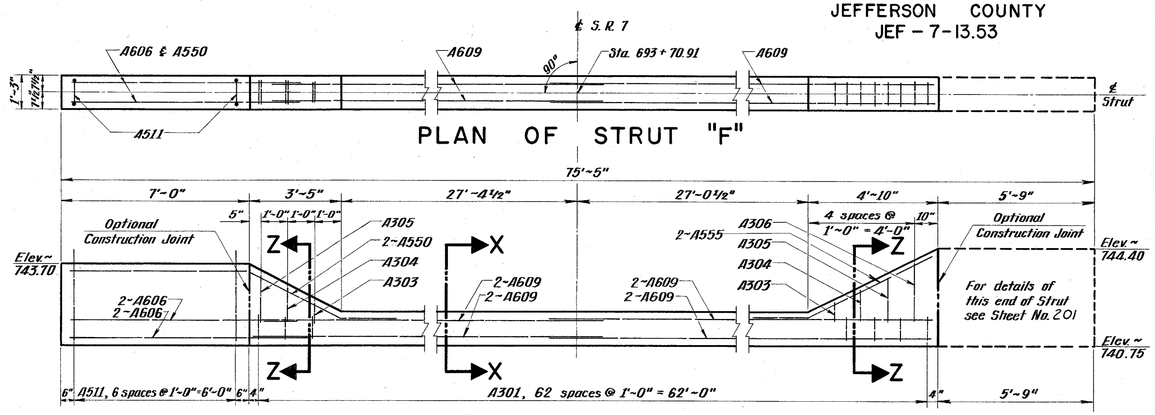
237
307

JEFFERSON COUNTY
JEF - 7 - 13.53



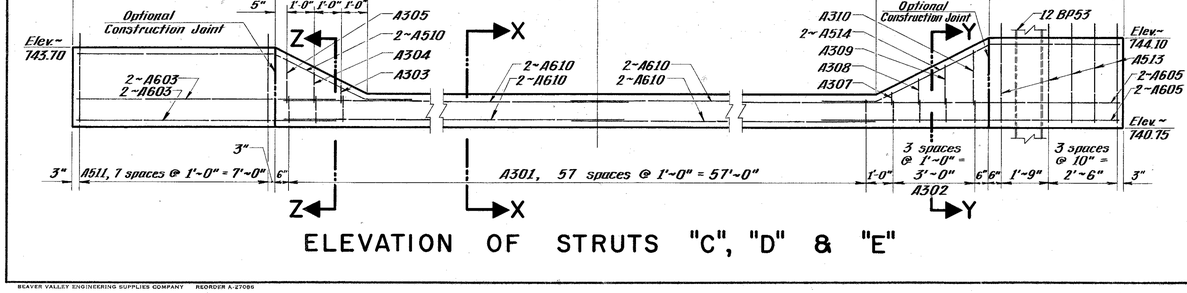

PLAN OF STRUT "A"

ELEVATION OF STRUT "A"



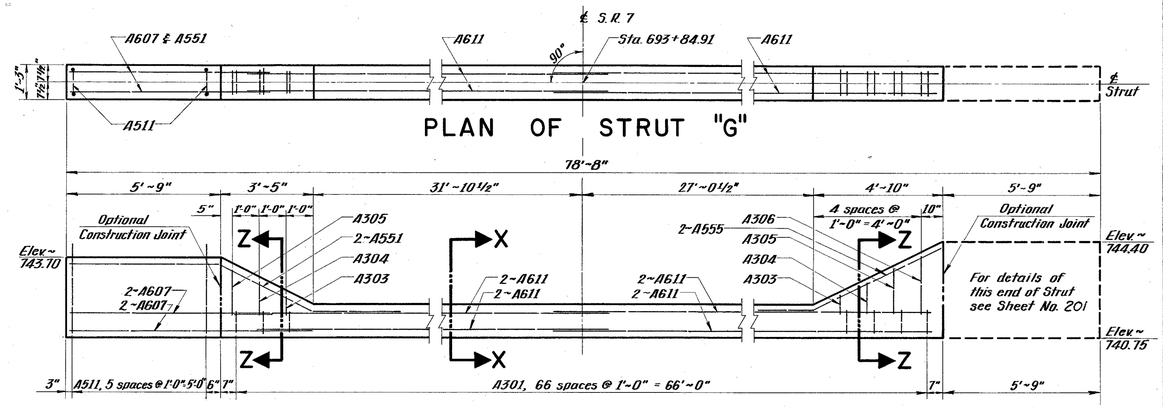

PLAN OF STRUT "F"

ELEVATION OF STRUT "F"



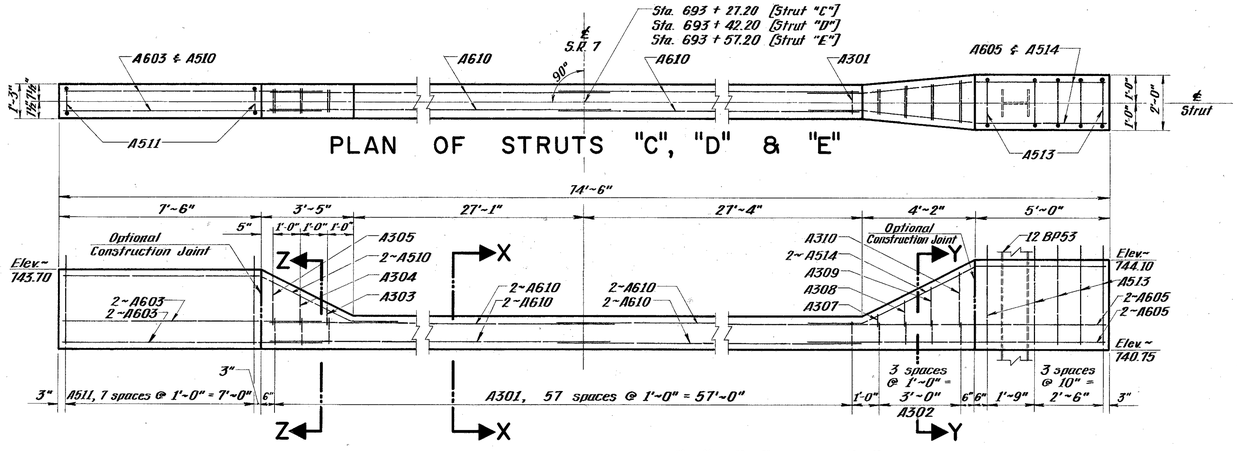

PLAN OF STRUT "B"

ELEVATION OF STRUT "B"



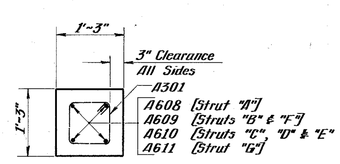

PLAN OF STRUT "G"

ELEVATION OF STRUT "G"

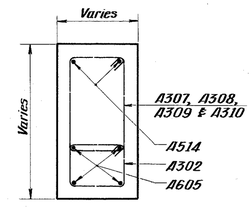



PLAN OF STRUTS "C", "D" & "E"

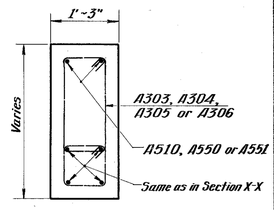
ELEVATION OF STRUTS "C", "D" & "E"




SECTION X-X




SECTION Y-Y




SECTION Z-Z

**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

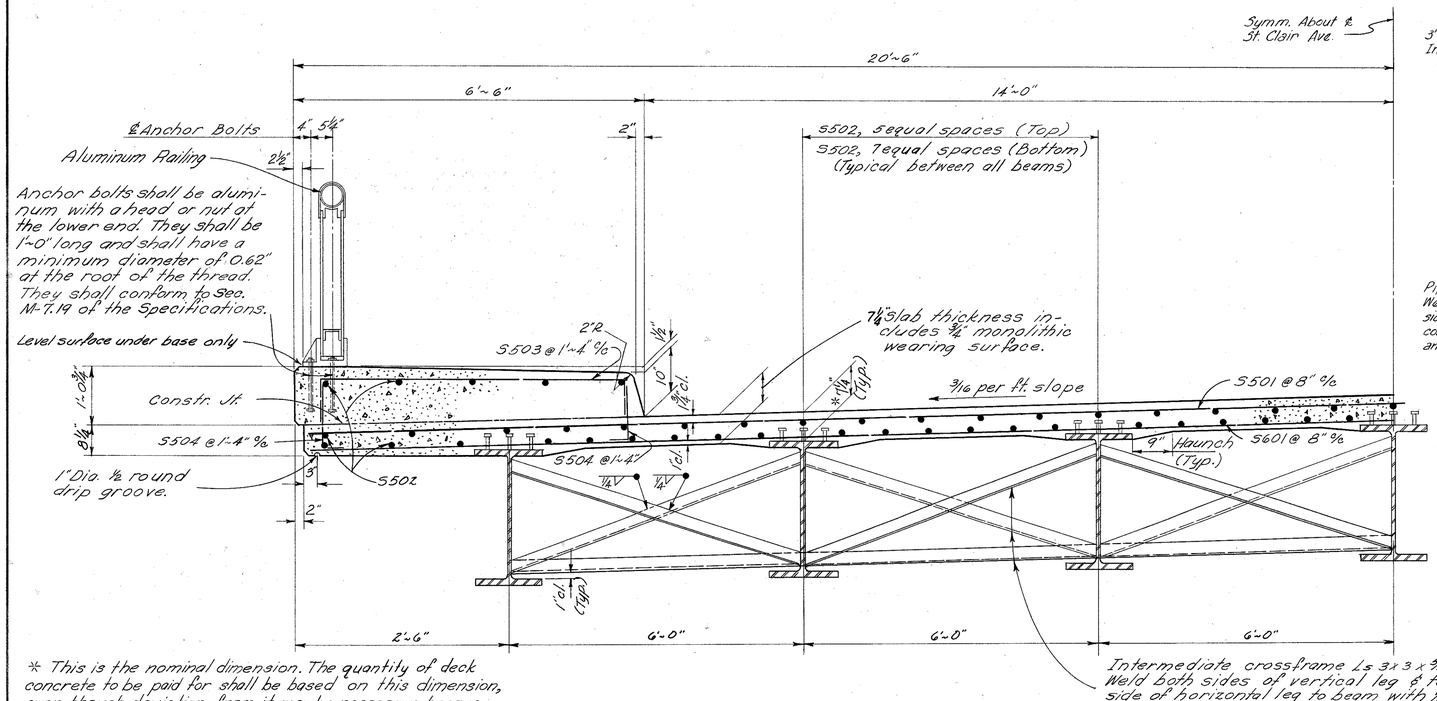
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| A.S.J. | BB | Simpson | P.M. | E.Roberts 6-9-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27085

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

238
307

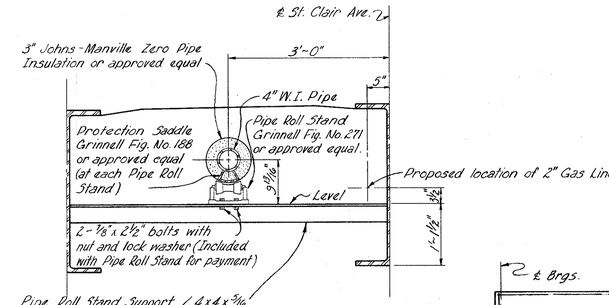
JEFFERSON COUNTY
JEF-7-13.53




* 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.

## TRANSVERSE HALF SECTION

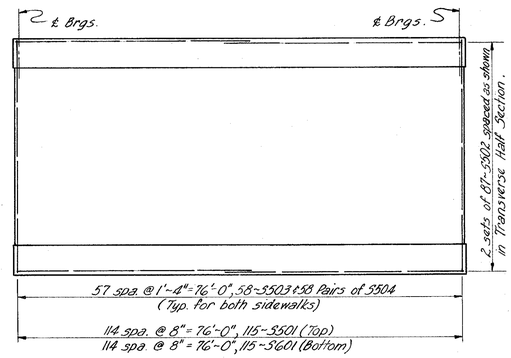
Intermediate crossframe Ls 3x3x5/16
Weld both sides of vertical leg & top side of horizontal leg to beam with ¼" continuous fillet weld




Pipe Roll Stand Support L 4x4x5/16
Weld both sides of vertical leg and top side of horizontal leg to beam with ½" continuous fillet weld. For location of angle see Framing Plan.

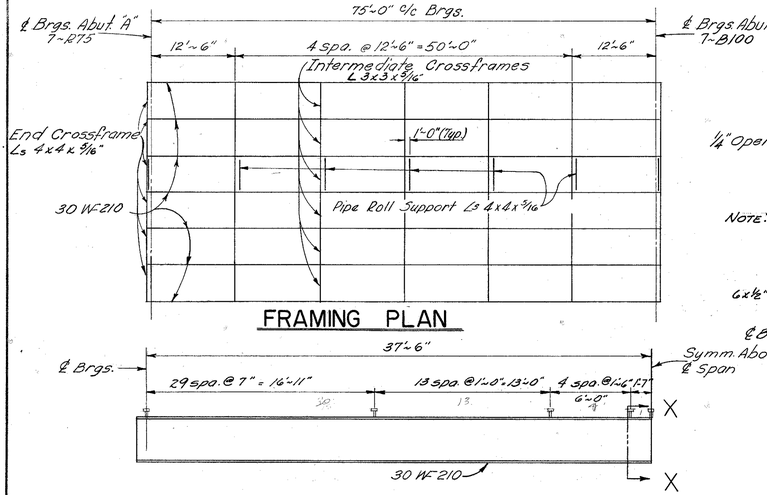
## UTILITY SUPPORT DETAIL

The payment for 4x4x5/16 angles, Pipe Roll Stands, Protection Saddles, 4" W.I. Pipe & 3" Insulation is to be made under Utility Relocations.




## 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.

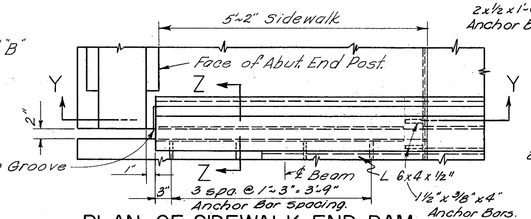



## FRAMING PLAN

## SHEAR CONNECTOR DETAIL

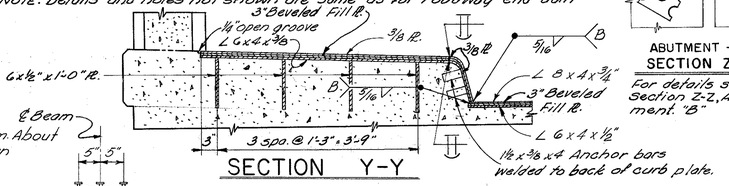
Showing the spacing of Shear Connector rows. (285 Studs per beam)

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.

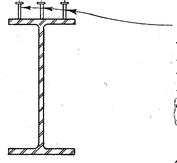



## PLAN OF SIDEWALK END DAM

Note: Details and notes not shown are same as for roadway end dam



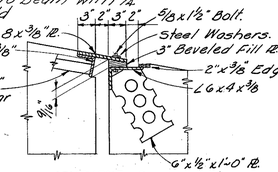

## SECTION Y-Y



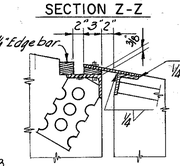

3-¾" x 4" shear connectors required per row. Shear connectors shall be Nelson Granular Flux-Filled Studs or approved equal. Studs shall be automatically end welded to the beams in the shop or field. All stud welds shall be made in accordance with recommendations of the Nelson Stud Welding Division, Lorain, Ohio.

## SECTION X-X

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.



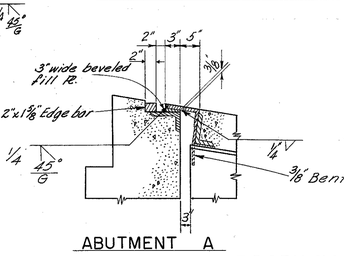

ABUTMENT -B-
SECTION Z-Z



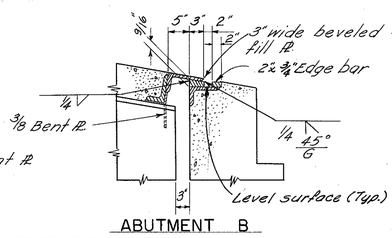

ABUTMENT -A-
SECTION Z-Z

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 |




ABUTMENT A




ABUTMENT B

## 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

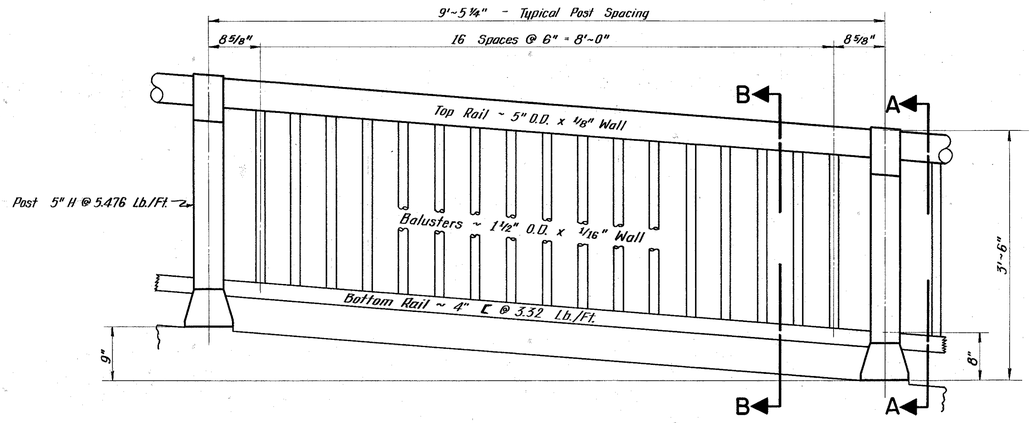
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| A.S.J. | BB | C.D.V. | P.M. | E. Roberts 6-9-59 | 11-20-59 |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27096

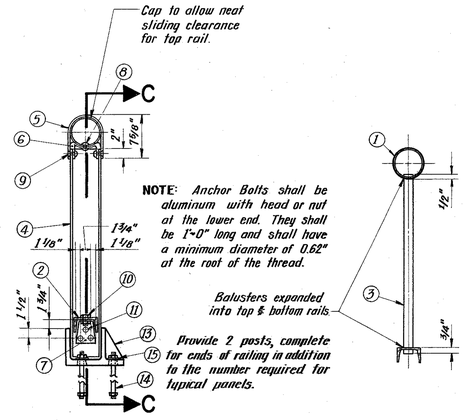
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

239
307

JEFFERSON COUNTY
JEF-7-13.53

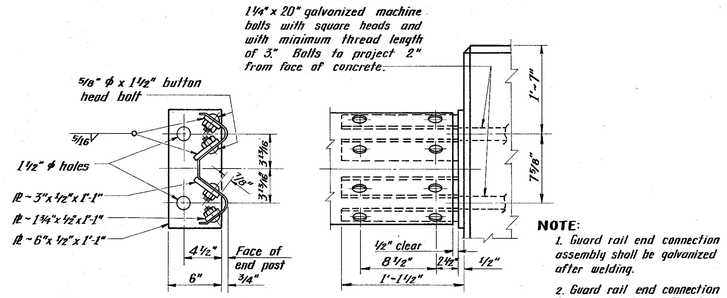



TYPICAL RAILING SECTION

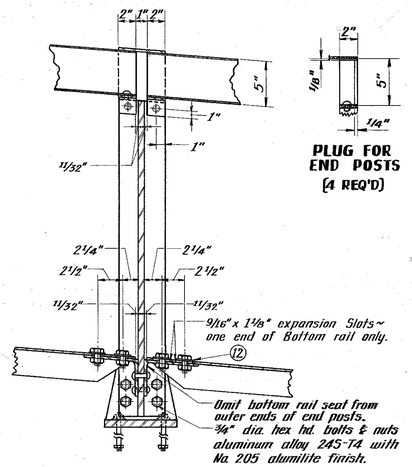



SECTION A-A

SECTION B-B

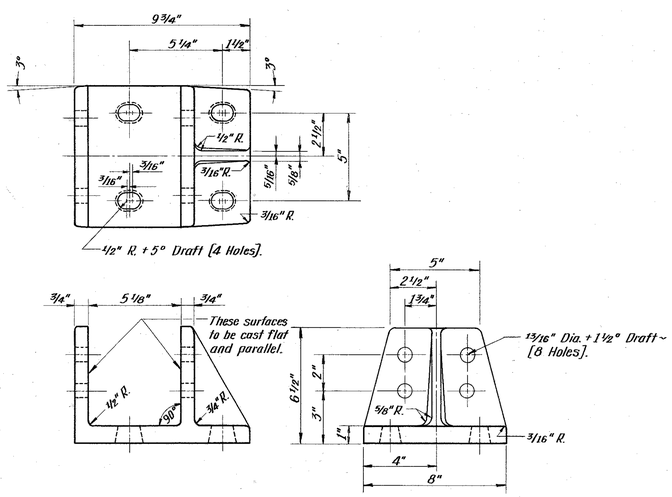



GUARD RAIL DETAIL




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 ⅛" Wall x 9'-4 ¼" Lg. | 61S-T6 | 2.25 Lb./Ft. | 21.0 |
| 2 | 1 | Bottom Rail. | 4" C @ 3.32 Lb./Ft. x 9'-4 ½" Lg. | 61S-T6 | 3.32 Lb./Ft. | 31.0 |
| 3 | 17 | Baluster. | 1½" O.D. x 1/16" Wall x 2'-6¼" 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 ⅛" 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 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 1 ¼" 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 1 ⅜" 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, 4 3/16" 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 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27066

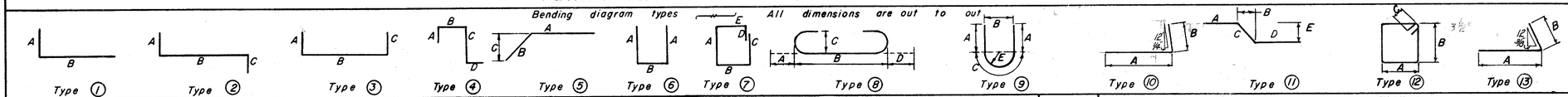
| FED. RD. DIVISON | STATE | PROJECT | |
|---|---|---|---|
| | OHIO | U-430 (14) | |

240
307

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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 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'-9⅜" | 1'-7" | 1'-8⅜" | 73 |
| A551 | 2 | 5 | 10'-9" | 11 | 5'-7" | 3'-5" | 3'-9⅜" | 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'-1⅛" | | | 26 |
| A555 | 4 | 5 | 6'-11" | 5 | 1'-7" | 5'-4⅜" | 2'-4⅜" | | | 29 |
| A301 | 431 | 3 | 3'-5" | 12 | 9" | 9" | 4" | | | 554 |
| A302 | 12 | 3 | 3'-10" to 4'-1" | 12 | 11¾" to 1'-6⅛" | 9" | 4" | | ② | 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'-1⅜" | 1'-0" | 4" | | | 5 |
| A309 | 3 | 3 | 6'-1" | 12 | 1'-4⅛" | 1'-6⅛" | 4" | | | 7 |
| A310 | 3 | 3 | 7'-6" | 12 | 1'-6⅛" | 2'-0⅛" | 4" | | | 8 |
| A601 | 58 | 6 | 14'-5" | 7 | 5'-5" | 1'-5" | 4'-2" | 3'-1" | 11" | 1256 |
| 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'-2⅛" | 4'-10" | 5⅛" | 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'-1" | | | | 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'-9⅜" | 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'-1⅛" | 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. | | | | | | 4,833 |
| 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 |

## 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 BP 53 | | 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. | |

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.

@ 3 sets, 4 each vary A by 2 1/4"

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

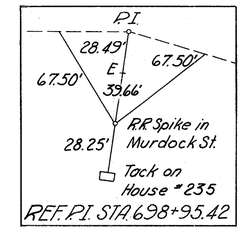
| Designed | Drawn | Traced | Checked | Reviewed Date | Revised |
|---|---|---|---|---|---|
| A.S.J. | B | | JPW | E. Roberts 6-10-59 | |

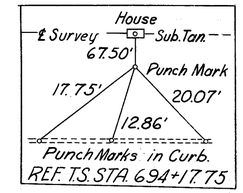
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

241
307

**JEFFERSON COUNTY**
**JEF-7-13.53**

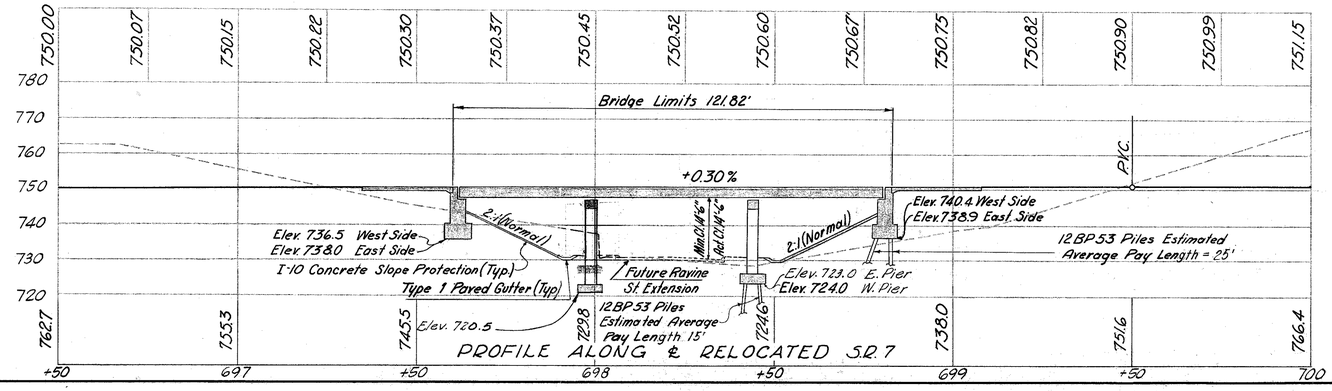
B.M. 81' Rt Sta. 694+86
R.R. Spike in Pole
Elev. 759.22'

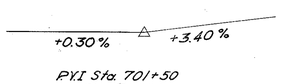


CURVE DATA
P.I. Sta. 698+95.42
$\Delta$ = 16°00'00"
$D_c$ = 2°00' Rt.
$T_s$ = 477.67'
$\theta_s$ = 1°30'00"
$E_s$ = 28.49'
$L_s$ = 150.00'
$\Delta_c$ = 13°00'00"
$L_c$ = 650'
$P$ = 0.33'
$k$ = 75.00'
L.T. = 99.99'
S.T. = 50.00'

| 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 |




PVI Sta. 701+50
Elev. 751.50
P.G. 753.05
Corr. 1.55'
400' V.C.

*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

**PROPOSED STRUCTURE**

| | |
|---|---|
| Type: | Continuous steel beam with reinf. concrete deck and substructure. |
| Spans: | 36'-0", 45'-1", 36'-0" ℄ Brgs. along Ref. Chord. |
| Roadway: | 75'-0" ℄ 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" Mono Lithic concrete |
| Appr. Slabs: | Special Design (25.0' Long) |
| Alignment: | 2°00' Rt. curve |
| Superelevation: | .033 ft/ft |

MICHAEL BAKER, JR. CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# SITE PLAN
## BRIDGE NO. JEF-7-1382
## OVER RAVINE STREET

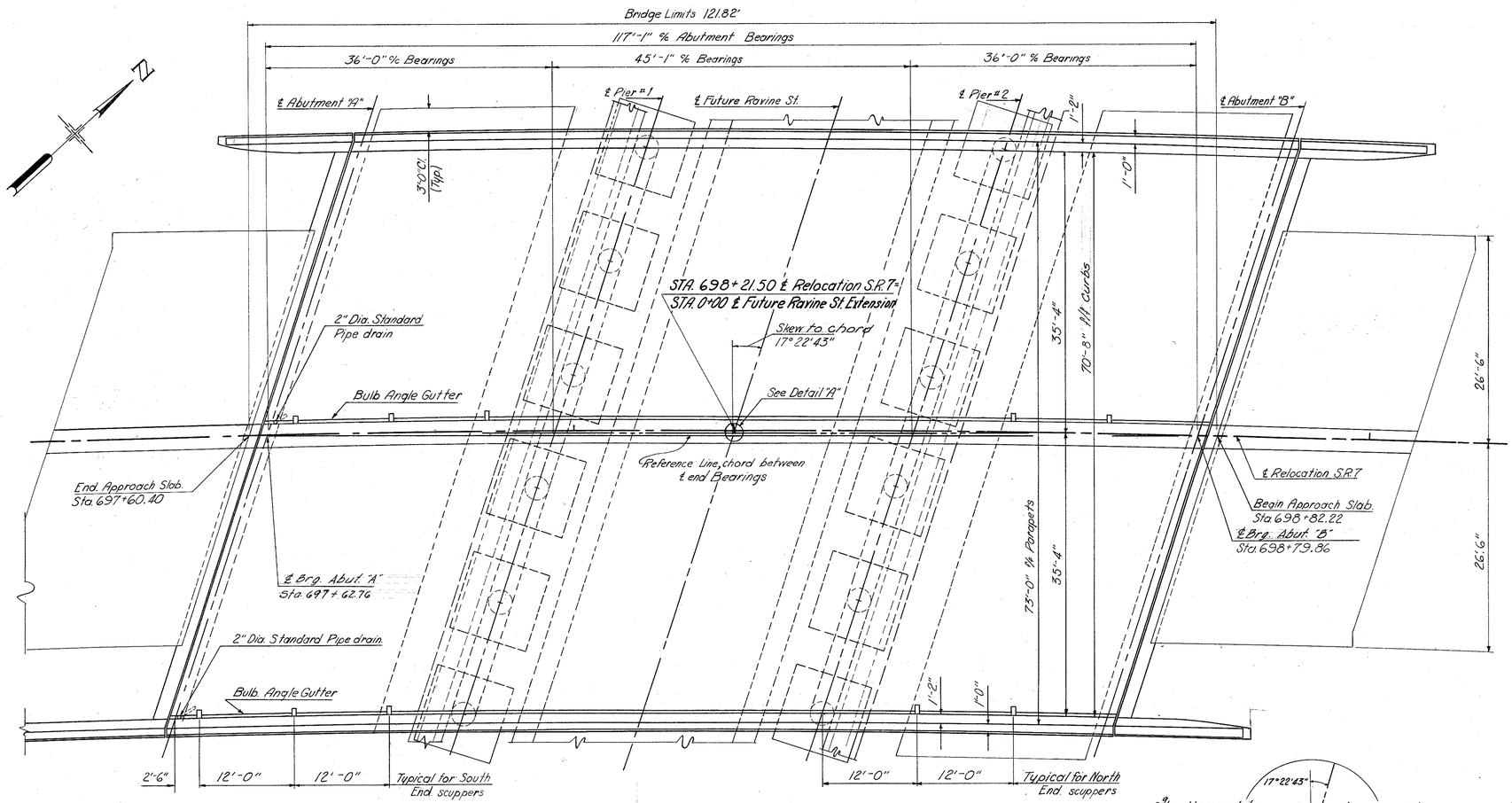
JEFFERSON COUNTY STA. 698+21.50

| 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 |

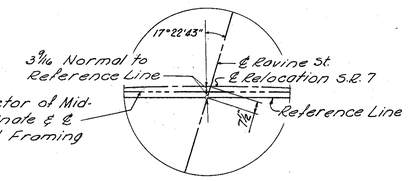
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

242
307

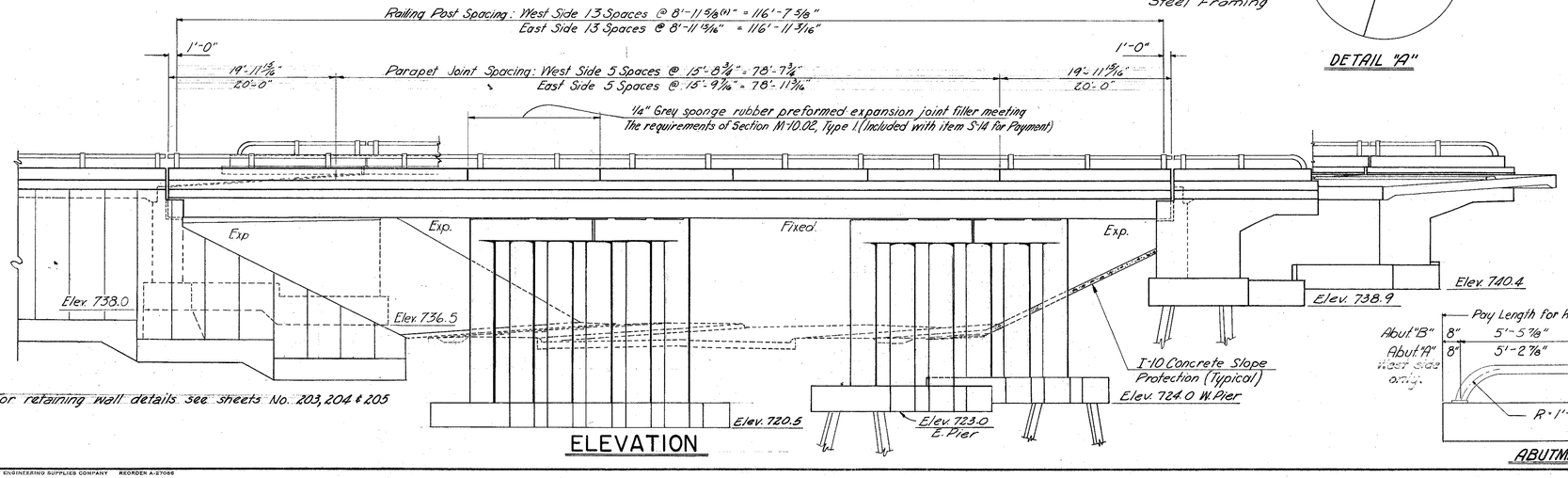
JEFFERSON COUNTY
JEF-7-13.53




## PLAN

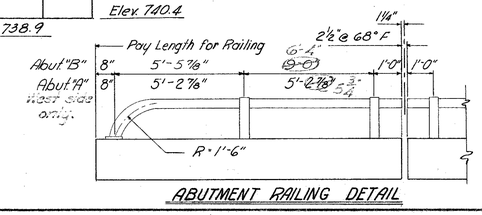



DETAIL "A"




For retaining wall details see sheets No. 203, 204 & 205

## ELEVATION




ABUTMENT RAILING DETAIL

## 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:1.0 concrete slope protection meeting the requirments of Section I-1005. 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. 5-18.05 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, which ever 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.

### 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 |

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. | Rom | J.M. | E. Roberts 6-10-59 | 3-24-60 |

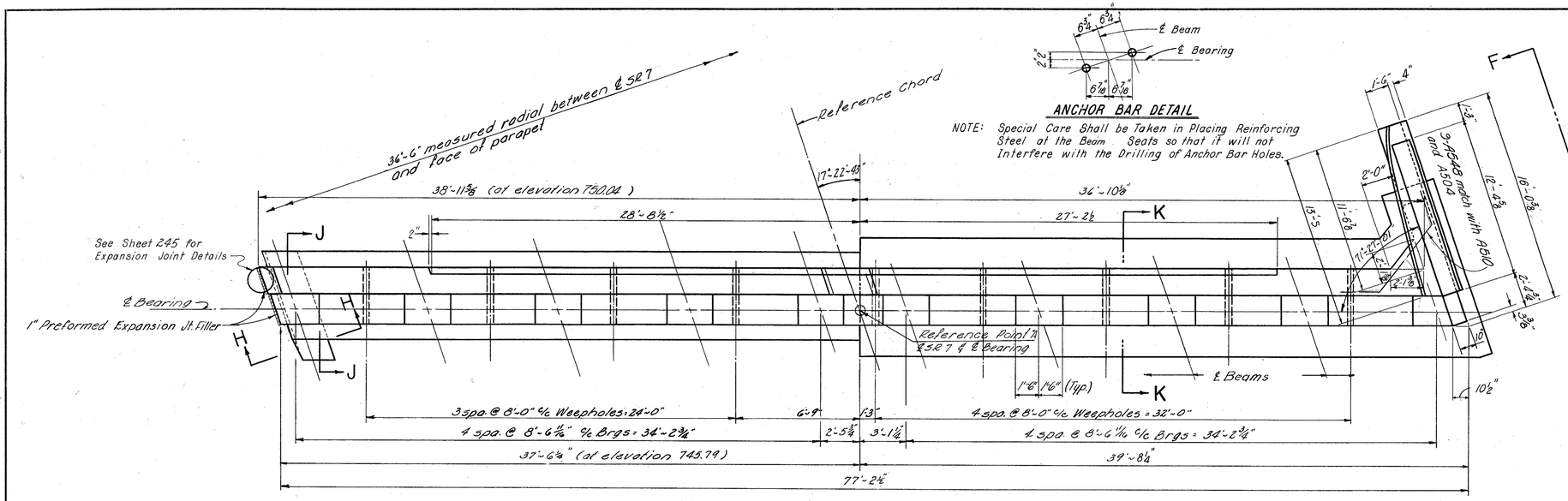
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-2708S

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

243
307

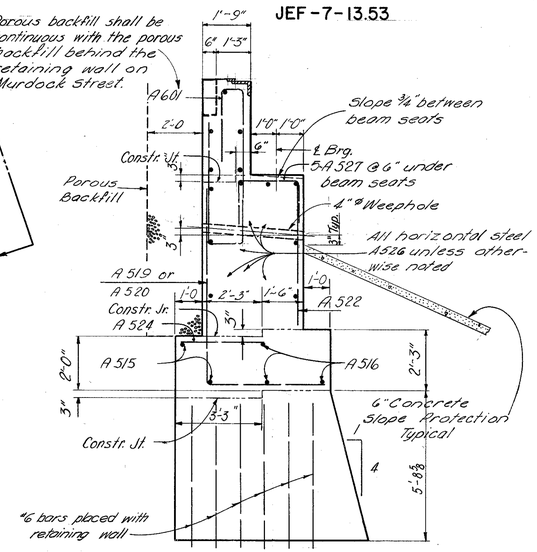
JEFFERSON COUNTY

JEF-7-13.53

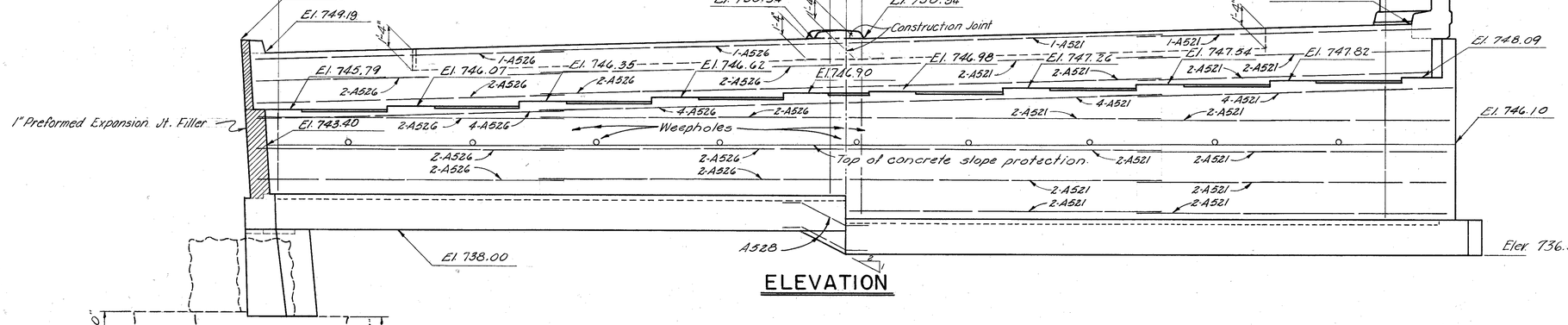



## PLAN

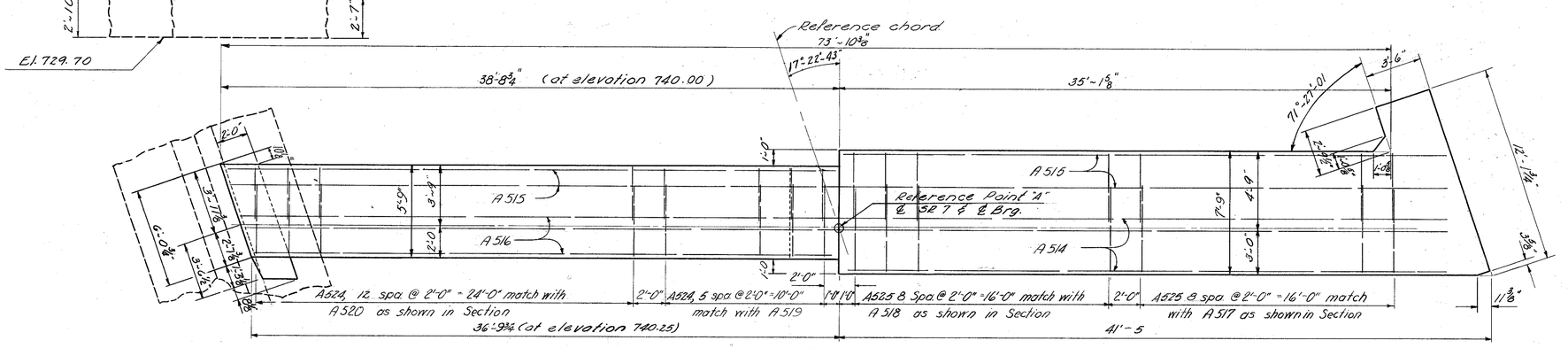


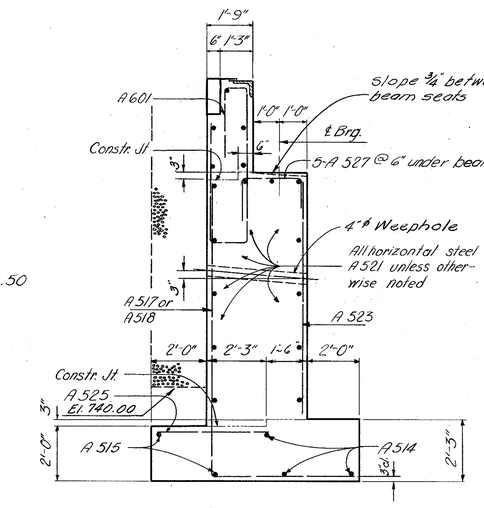

## SECTION J-J




## ELEVATION




## FOOTING PLAN




## 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

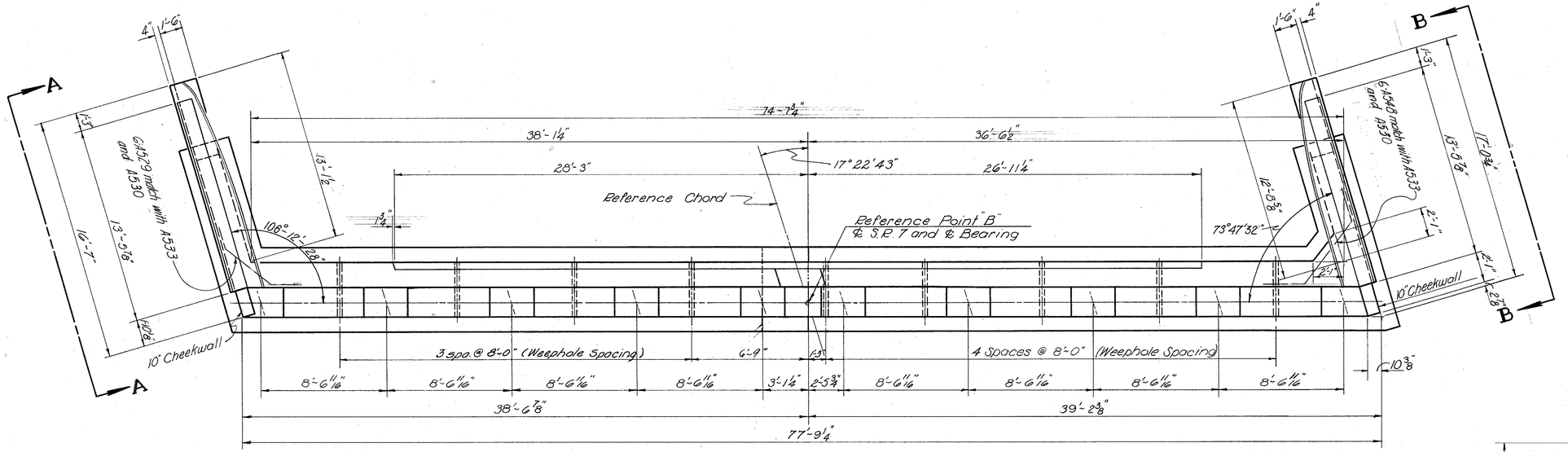
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| F.A | BDB | Ram. | JPW | E. Roberts 6-10-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27096

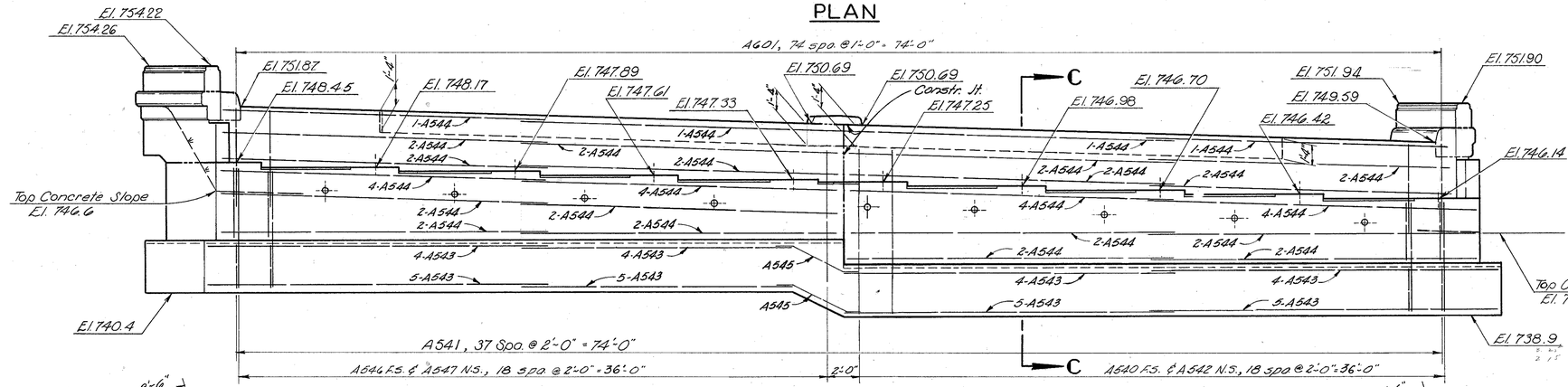
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

244
307

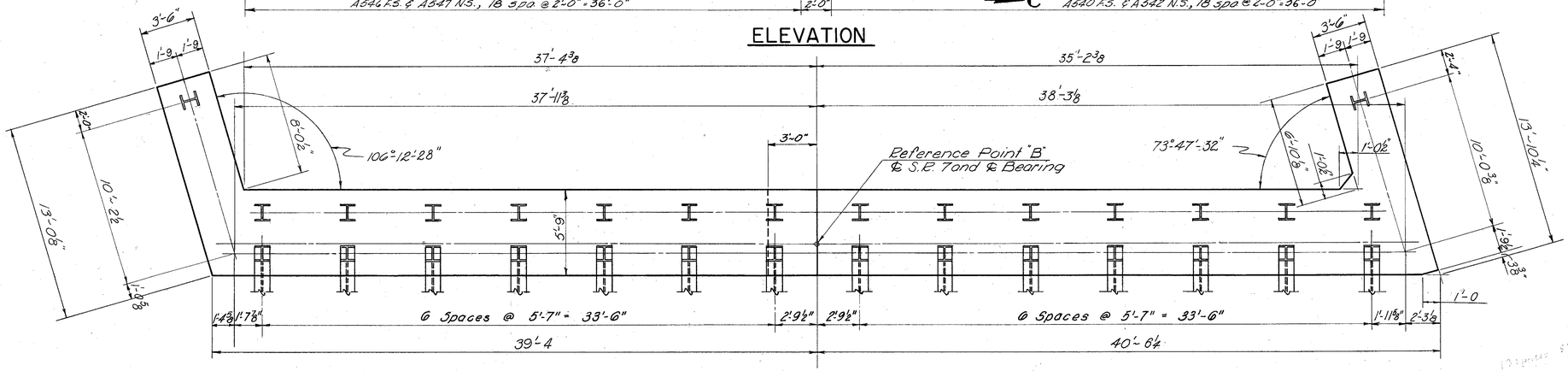
JEFFERSON COUNTY
JEF-7-13.53



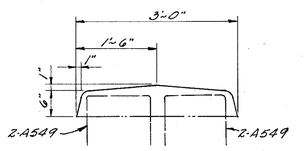

## PLAN



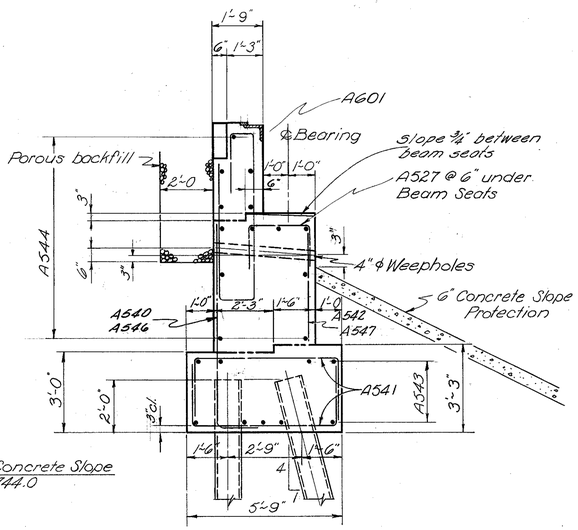

## ELEVATION




## FOOTING PLAN & PILE SPACING




## MEDIAN DETAILS




## SECTION C-C

- 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

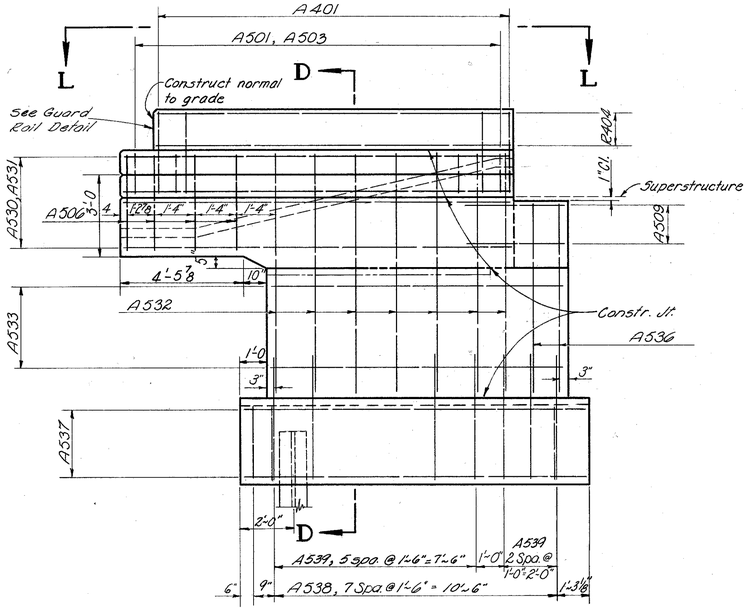
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| F.A. | C.W.S. | C.W.S. | JPW | E.Roberts 6-10-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27096

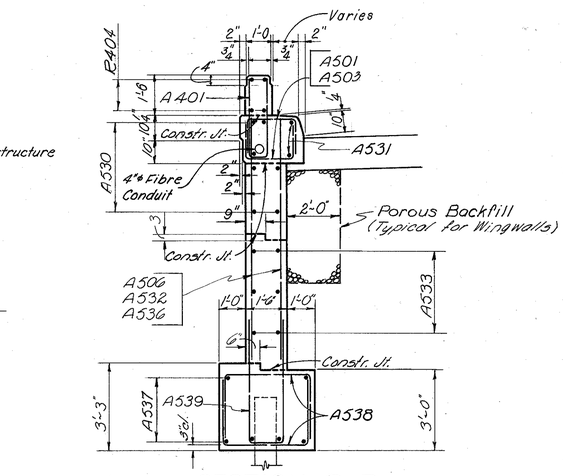
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

245
307

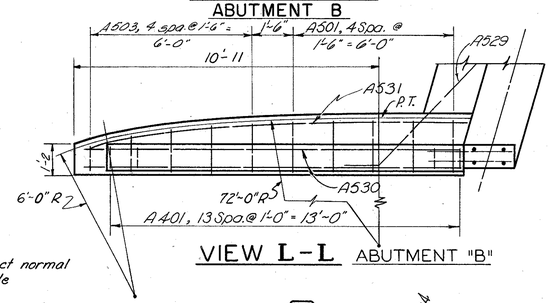
JEFFERSON COUNTY
JEF -7- 13.53



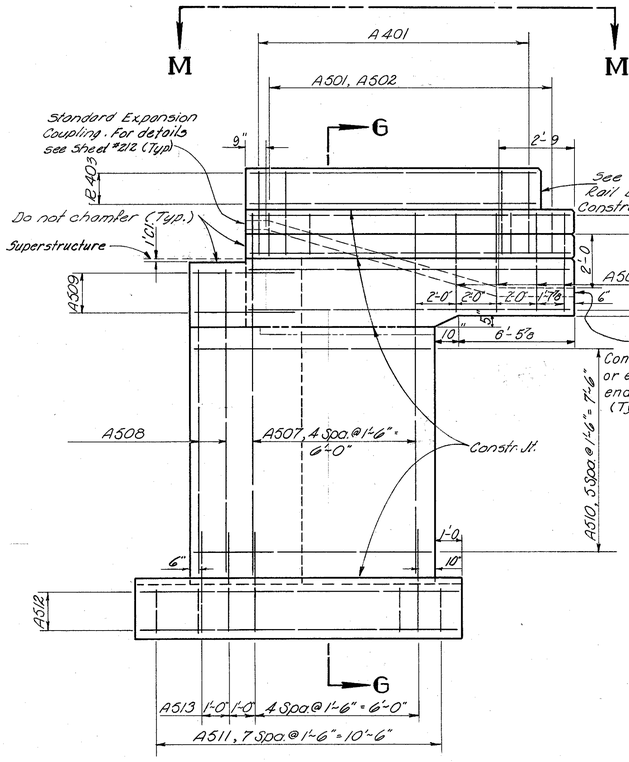

VIEW A-A
ABUTMENT B



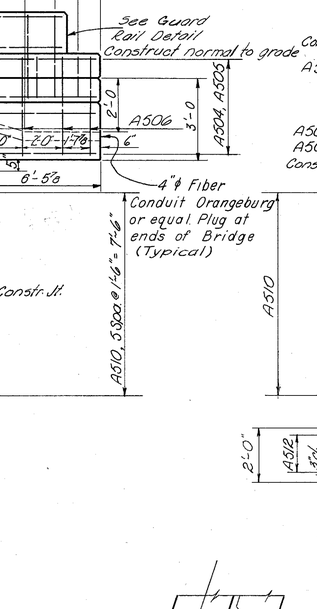

SECTION D-D
ABUTMENT B




VIEW L-L ABUTMENT "B"



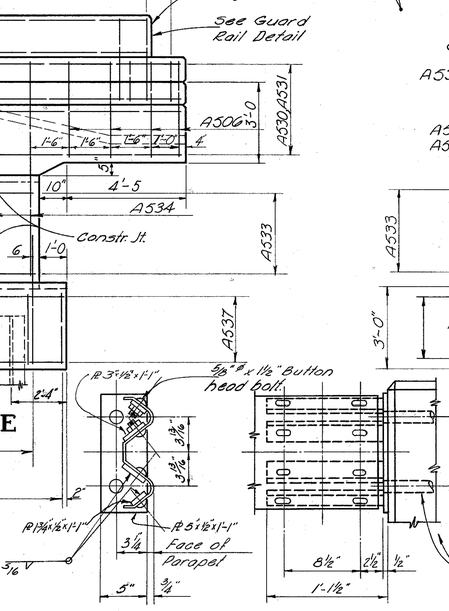

VIEW F-F
ABUTMENT A



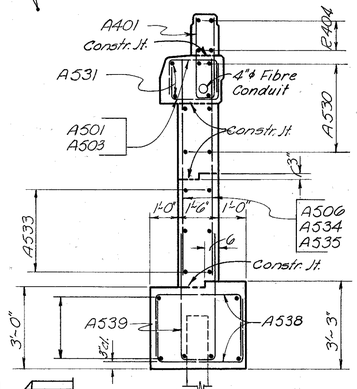

SECTION G-G
ABUTMENT A




VIEW B-B
ABUTMENT B




GUARD RAIL DETAIL



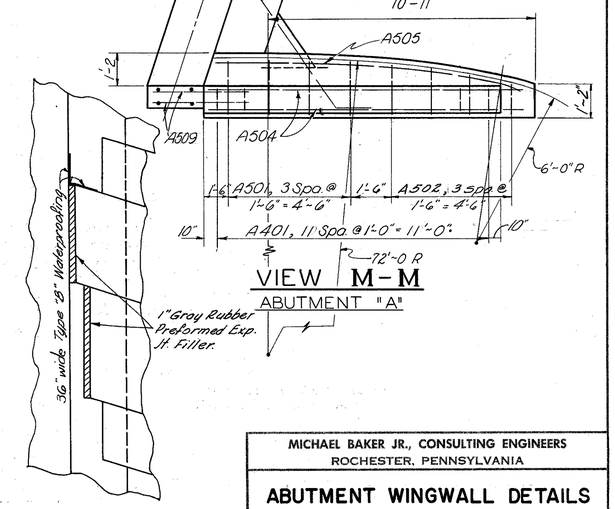

SECTION E-E
ABUTMENT B

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

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 "C". All parapet concrete shall be Class "C". Parapet concrete and reinforcing steel shall be included with Item 5-14, Railing, for payment.




VIEW M-M
ABUTMENT "A"

EXP. JOINT DETAIL

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# ABUTMENT WINGWALL DETAILS
BRIDGE NO. JEF-7-1382
OVER RAVINE STREET
JEFFERSON COUNTY

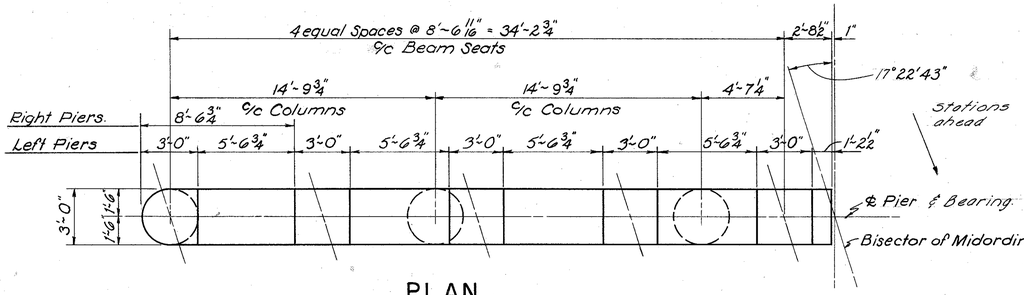
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| F.A. | C.W.S. | C.W.S. | JPW | E.Roberts 6-10-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27006

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

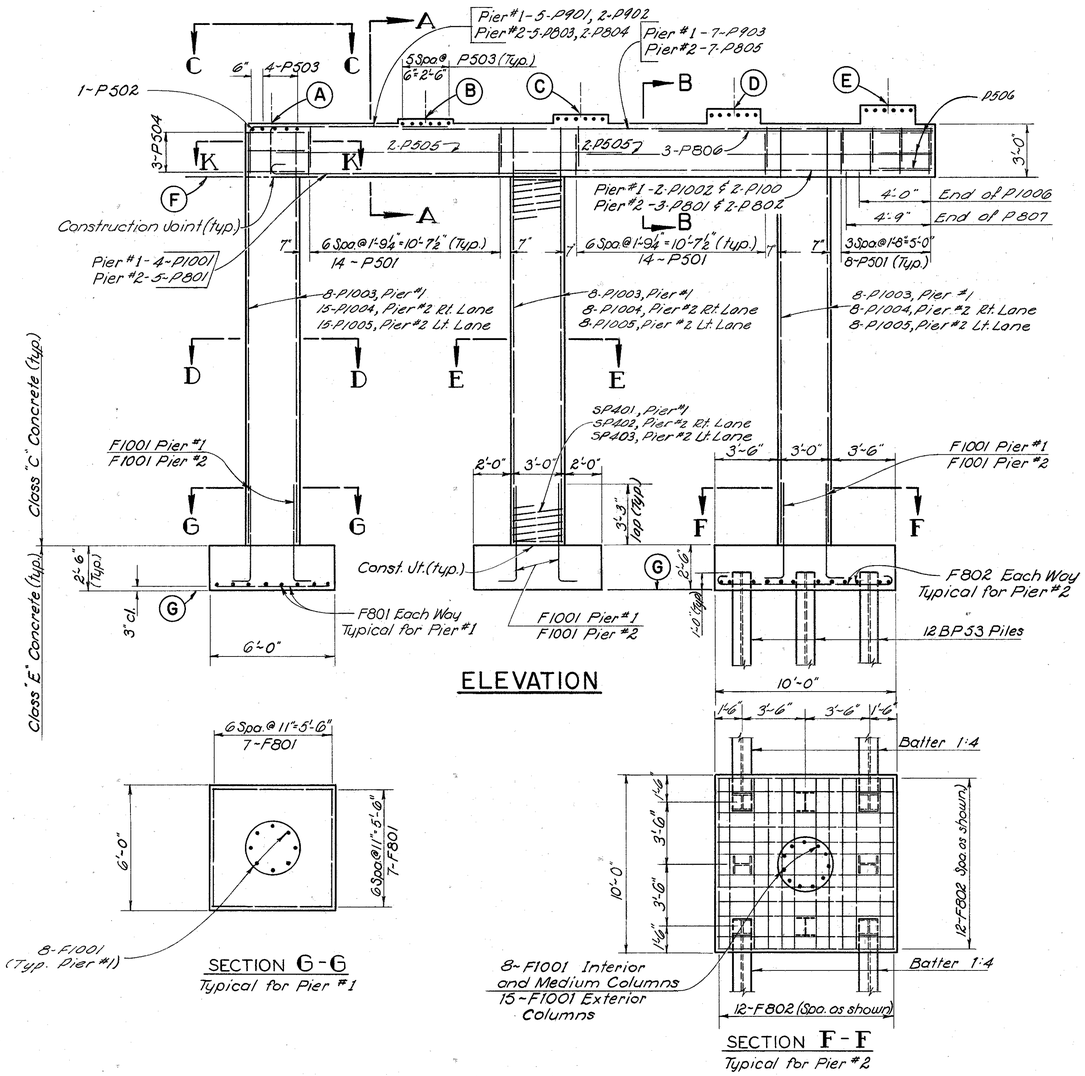
246
307

JEFFERSON COUNTY
JEF - 7-13.53




## PLAN

Right Pier shown, Left Pier symmetrical by rotation through 180° about Bisector of Midordinote except as shown and noted.



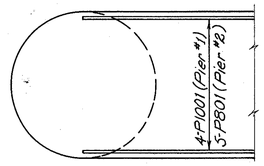

## ELEVATION



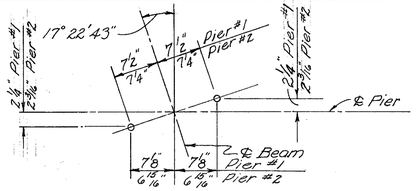

SECTION G-G
Typical for Pier #1



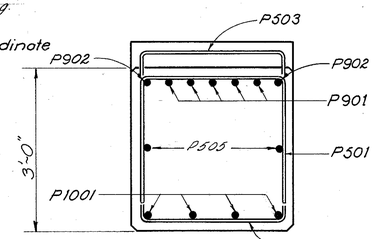

SECTION F-F
Typical for Pier #2



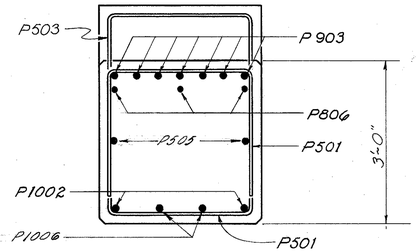

SECTION K-K



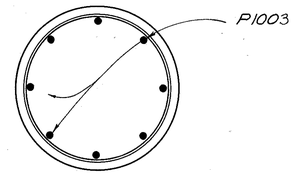

## ANCHOR BOLT LAYOUT



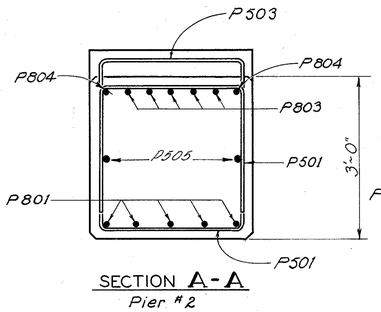

SECTION A-A
Pier #1



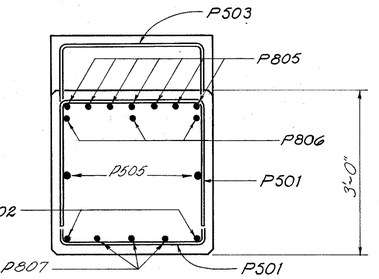

SECTION B-B
Pier #1



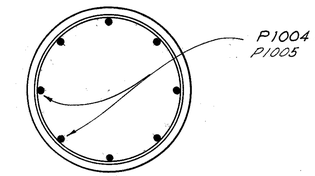

SECTION D-D
Typical for Pier #1
(All columns)



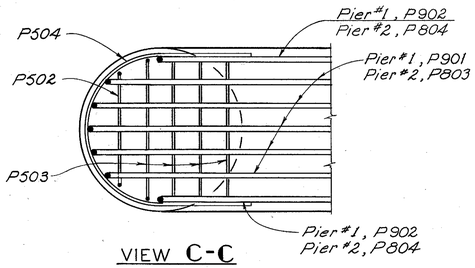

SECTION A-A
Pier #2



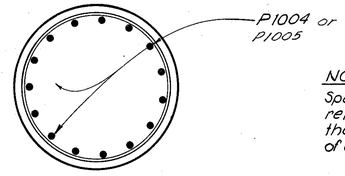

SECTION B-B
Pier #2




SECTION E-E
Interior and Medium Columns
Pier #2 (Typical)




VIEW C-C




SECTION D-D
Exterior Columns Pier #2

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

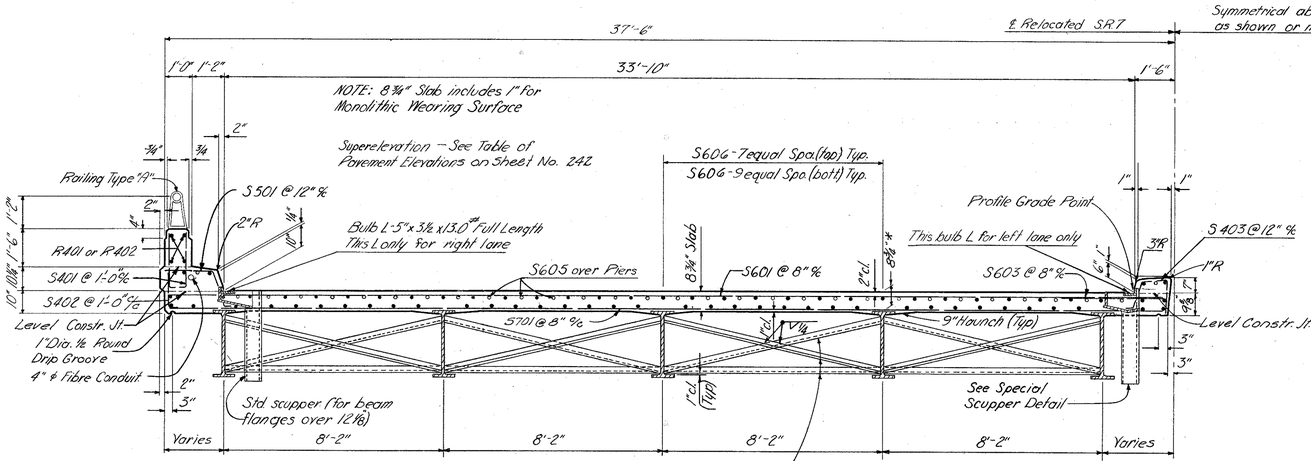
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| F.A. | C.W.S. | C.W.S. | J.M. | E. Roberts 6-10-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27006

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

247
307

JEFFERSON COUNTY
JEF-7-13.53

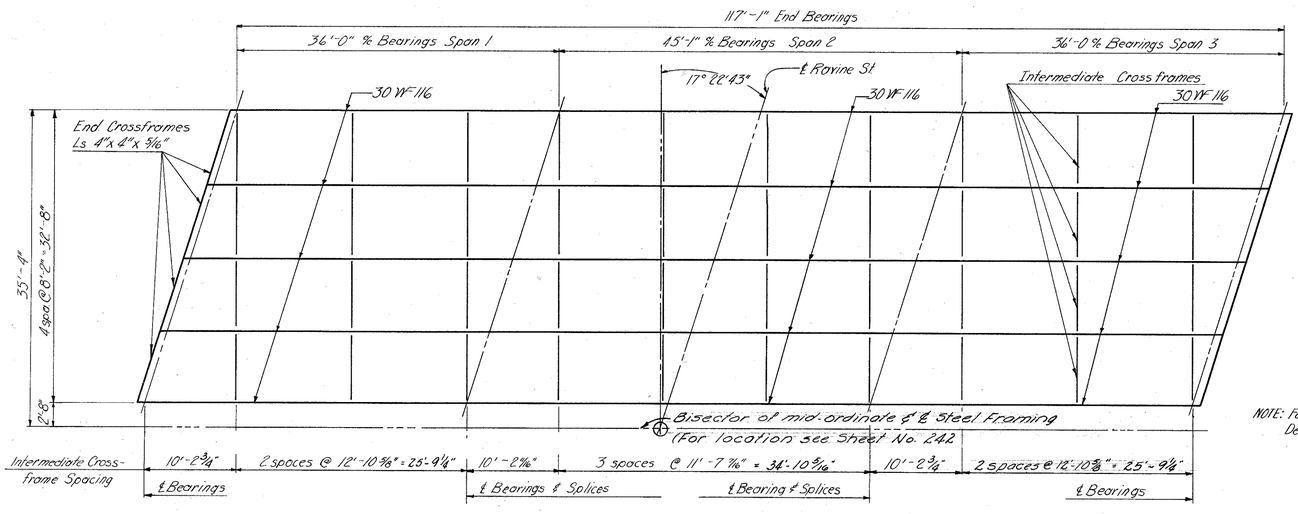



* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade

Intermediate crossframe angles 3"x3"x ⅝" 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



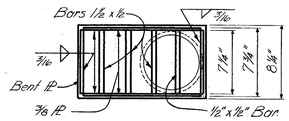

## HALF PLAN OF STEEL FRAMING

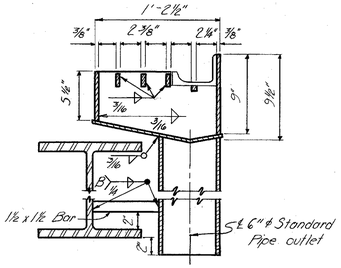
Symmetrical by rotation through 180° about the intersection of ℄ Ravine St. and ℄ Steel Framing

| 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.

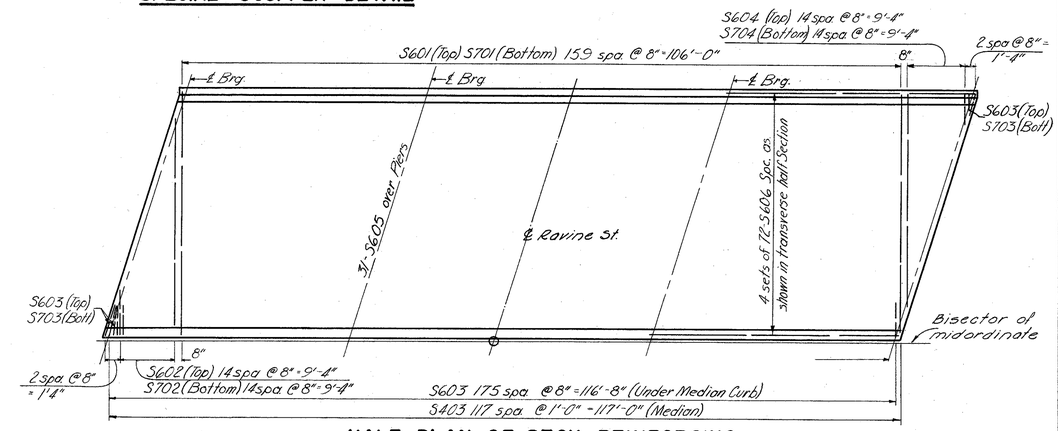



## SPECIAL SCUPPER DETAIL

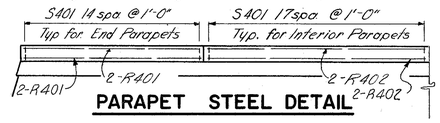
CONCRETE DECK PLACING
In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections between transverse construction joints which are normal to the centerline of bridge and are located near the center of any span.

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.

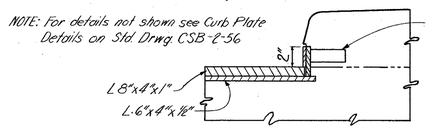



## HALF PLAN OF DECK REINFORCING

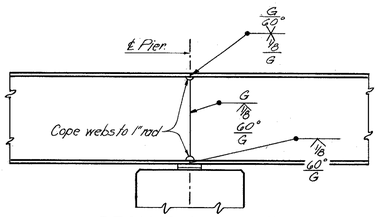
Symmetrical by rotation through 180° about the intersection of ℄ Ravine St. & bisector of mid ordinate.




## PARAPET STEEL DETAIL

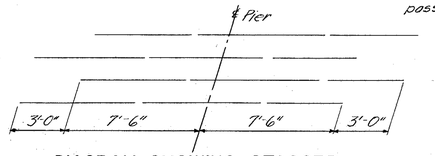



## END FINISH AT MEDIAN




## BEAM SPLICE DETAIL

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

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 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27096

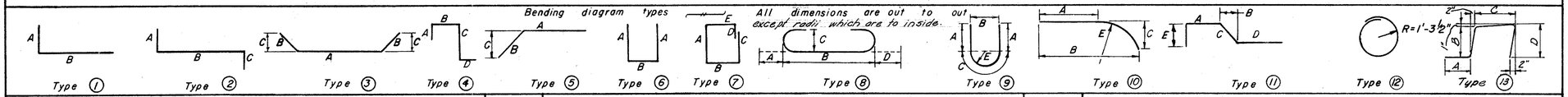
| FED. RD. DIVISON | STATE | PROJECT | |
|---|---|---|---|
| | OHIO | U-430(14) | |

248
307

JEFFERSON COUNTY
JEF.-7-13.53

# 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 | 40 | 4 | 6'-0" | 6 | 2'-10" | 6½" | | | | 160 |
| | | | | | | | | | | |
| A501 | 28 | 5 | 4'-5" | 6 | 1'-6" | 1'-8" | | | | 129 |
| A502 | 2 sets (6 ea. set) | 5 | 3'-10" to 4'-7" | 6 | 1'-6" | a | | | | 35 |
| A503 | 4 sets (5 ea. 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 | 14 | 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" | | | | 133 |
| 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" | " | | | | | | 24 |
| 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" | | | | 733 |
| 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'-8" 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 |
| AG01 | 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 |
|---|---|---|---|---|---|---|---|
| SP401 | 6 | 4 | 19'-10¾" | 4½" | 56 | 32" | 2177 |
| SP402 | 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. | | | | | | 404 |
| 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 | 2 sets (15 bars ea) | 6 | 4'-4" to 34'-1" | Vary by 2'-1½" | | | | | | 866 |
| S603 | 360 | 6 | 4'-10" | str. | | | | | | 2414 |
| S604 | 2 sets (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 | 2 sets (15 bars ea) | 7 | 4'-4" to 34'-1" | Vary by 2'-1½" | | | | | | 1178 |
| S703 | 8 | 7 | 4'-10" | str. | | | | | | 79 |
| S704 | 2 sets (15 bars ea) | 7 | 5'-3" to 35'-0" | Vary by 2'-1½" | | | | | | 1234 |
| | | | | | | | | | | |
| R401 | 16 | 4 | 15'-4" | str. | Included with railing for payment | | | | | |
| R402 | 40 | 4 | 19'-8" | " | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | 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"

## ESTIMATED QUANTITIES

| ITEM | TOTAL | UNIT | DESCRIPTION | SUPERSTR. | ABUTS. | PIERS | GENERAL | | |
|---|---|---|---|---|---|---|---|---|---|
| E2 | 597 | Cu.Yd. | Unclassified Excavation, including rock | | 357 | 240 | | | |
| 5-1 | 139 / 276 | Cu.Yd. | Class "C" Concrete; Superstructure | 139 / 276 | | | | | |
| 5-1 | 119 | Cu.Yd. | Class "C" Concrete; Pier Caps & Columns | | | 119 | | | |
| 5-1 | 183 | Cu.Yd. | Class "E" Concrete; Abutment Walls | | 183 | | | | |
| 5-1 | 181 | Cu.Yd. | Class "E" Concrete; Footings | | 105 | 76 | | | |
| 5-3 | 3 | Sq.Yd. | Waterproofing Type "B" | | 3 | | | | |
| 5-4 | 126,248 | Lbs. | Reinforcing Steel | 82,131 | 12,810 | 31,307 | | | |
| 5-7 | 173,250 | Lbs. | Structural Steel | 173,250 | | | | | |
| 5-8 | 173,250 | Lbs. | Field Painting of Structural Steel as per plan | 173,250 | | | | | |
| 5-9 | 31 | Sq.Ft. | 1" Preformed Expansion Joint Filler (Grey Rubber, M-10.02) | | 31 | | | | |
| 5-14 | 282 | Lin.Ft. | Railing (Aluminum Rail and Supports and Concrete Parapet) | 237 | 45 | | | | |
| 5-16 | Lump | Sum | First Test Pile | | | | Lump Sum | | |
| 5-18 | 1356 | Lin.Ft. | Steel Piles 12BP53 | | 600 | 756 | | | |
| 5-25 | 284 | Lin.Ft. | 4" Fibre Conduit | 237 | 47 | | | | |
| 5-29 | 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.*

**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.*

**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

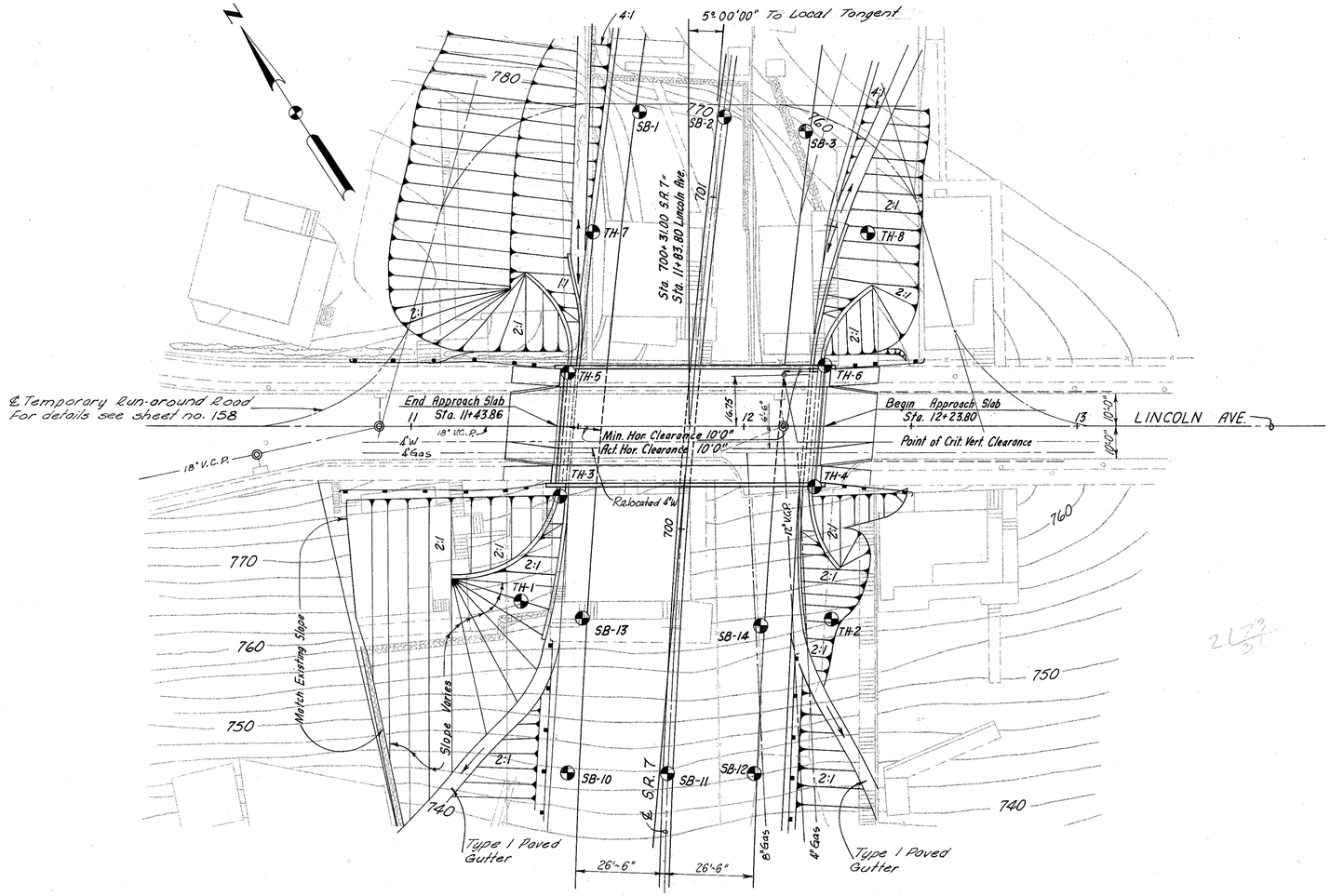
BRIDGE NO. JEF.-7-1382
OVER RAVINE STREET
JEFFERSON COUNTY STA. 6.98 + 21.50

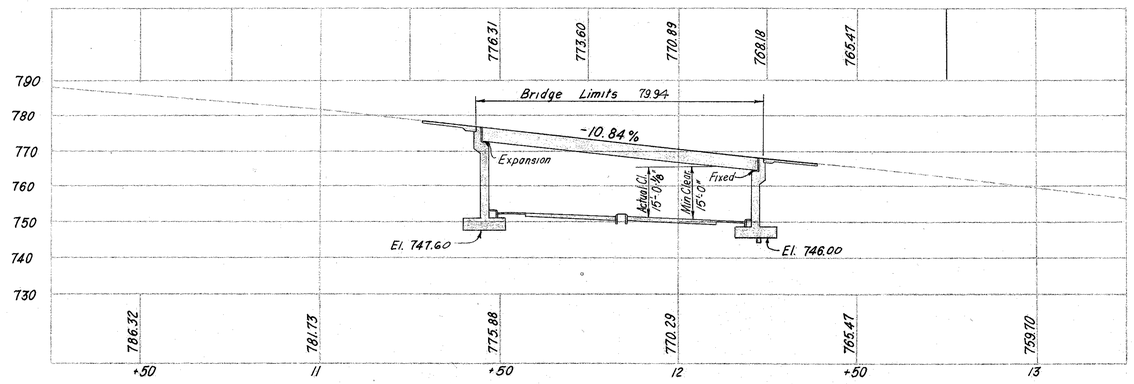
| Designed | Drawn | Traced | Checked | Reviewed Date | Revised |
|---|---|---|---|---|---|
| JPW | BDB | | F.A. | E. Roberts 6-10-59 | 11-20-59 |

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

249
307

JEFFERSON COUNTY
JEF-7-13.53



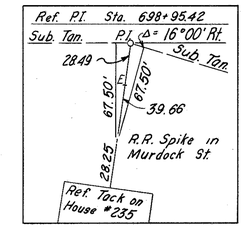



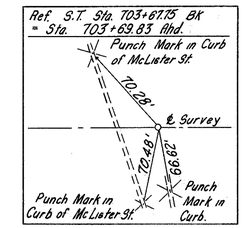

PROFILE ALONG ℄ OF LINCOLN AVE.

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"

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 there of.

⊕ Indicates boring location

| 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 (ST)
**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



RECEIVED
SEP 2 1958


# SITE PLAN
## BRIDGE NO. JEF-7-1387
## UNDER LINCOLN AVE.

JEFFERSON COUNTY

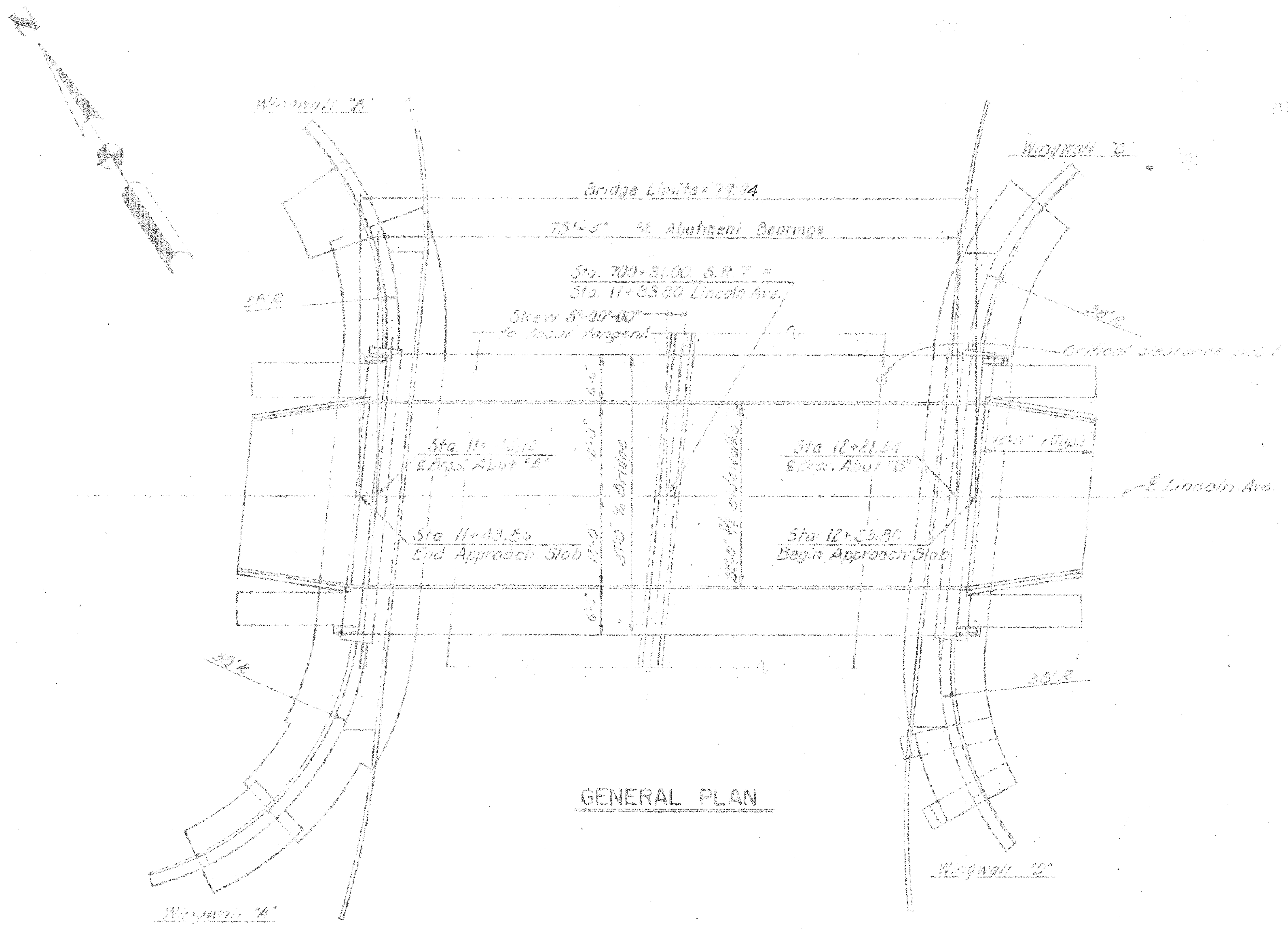
STA. 700+31.00

| 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 |

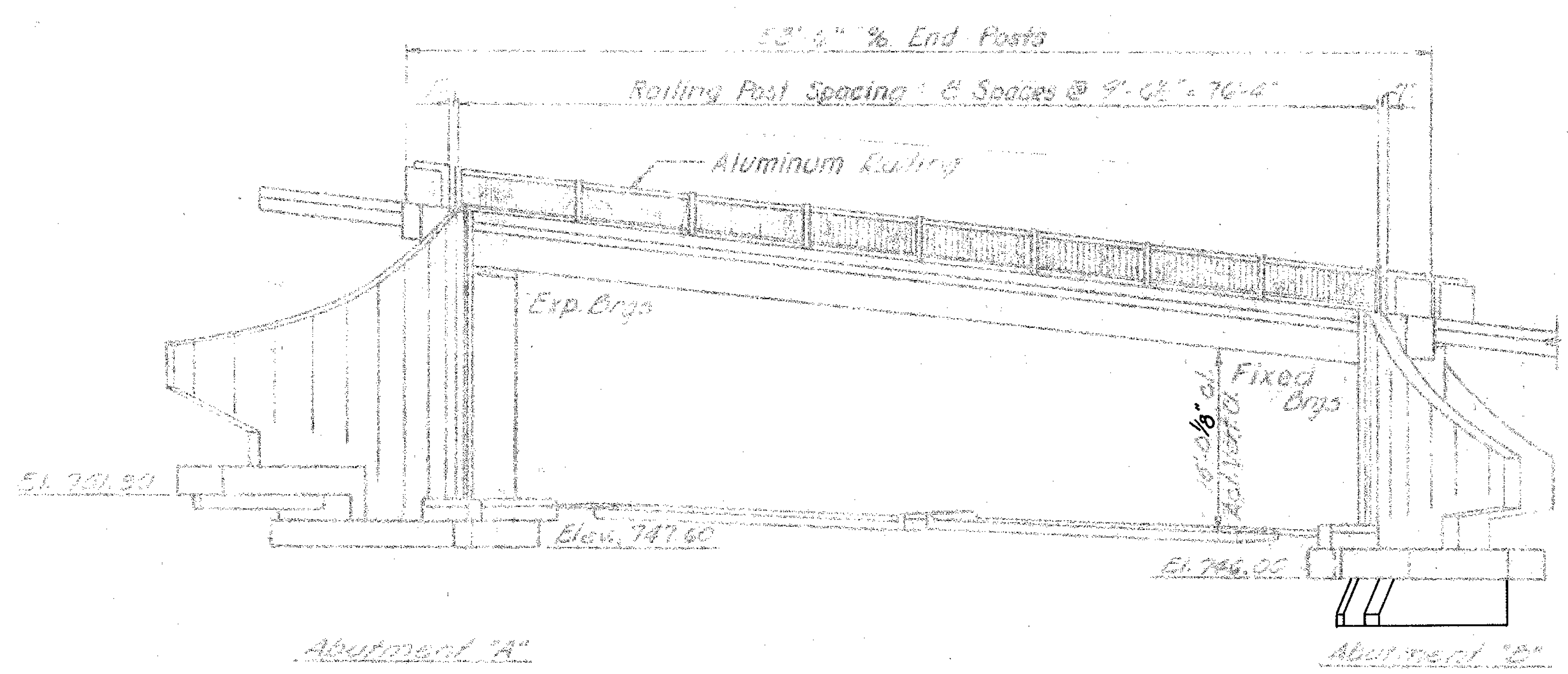
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

250
307

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 ... revised ... and ... revised ...

Welding of structural steel shall be Class "A" except as otherwise shown (—(A)). 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 ...

Footings for Abutment "A" are designed for maximum bearing pressure of 3.6 tons per sq. ft., for Abutment "B" 3.3 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 "E" concrete. Prolonged exposure to atmospheric conditions shall be ...rted. ... 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

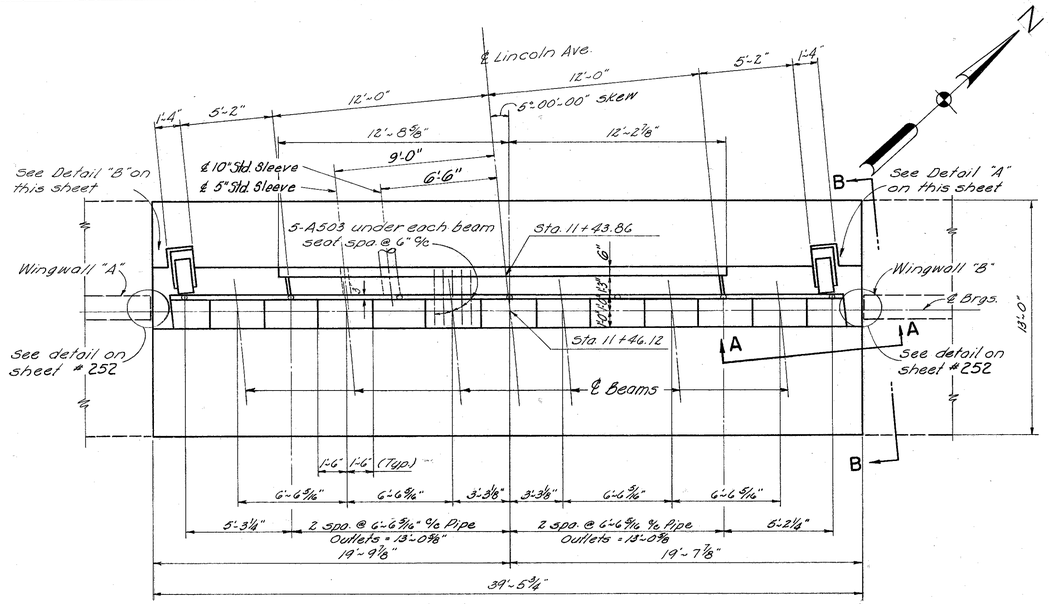
STA. 700 + 31.00

| Designed | Drawn | Traced | Checked | Reviewed Date | Revised |
|---|---|---|---|---|---|
| A.S.J. | BB | | R.M. | E. Roberts 6-5-59 | |

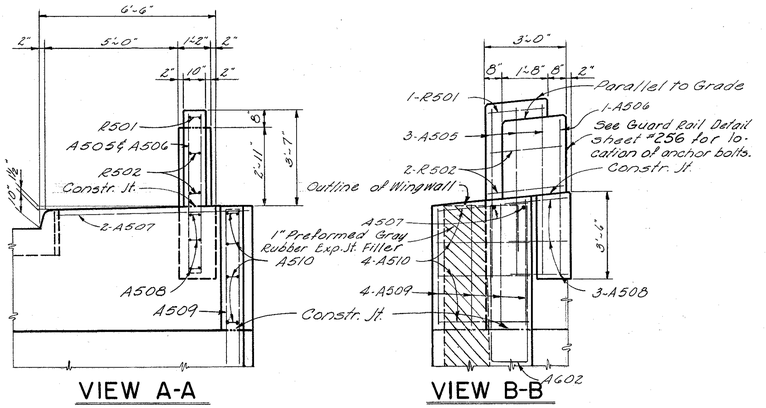
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

251
307

JEFFERSON COUNTY
JEF-7-13.53




PLAN




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.

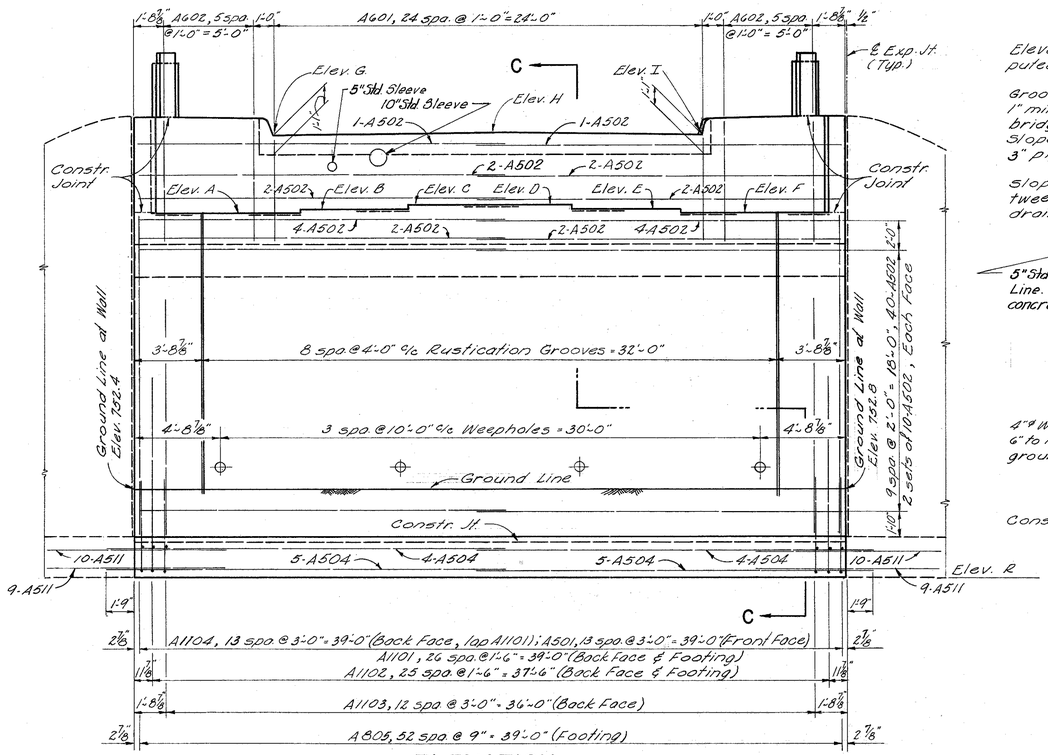
All abutment concrete shall be Class "E".

Railing End Posts: Concrete shall be class "C". Concrete and steel shall be included with Item S-14, Railing, for payment.

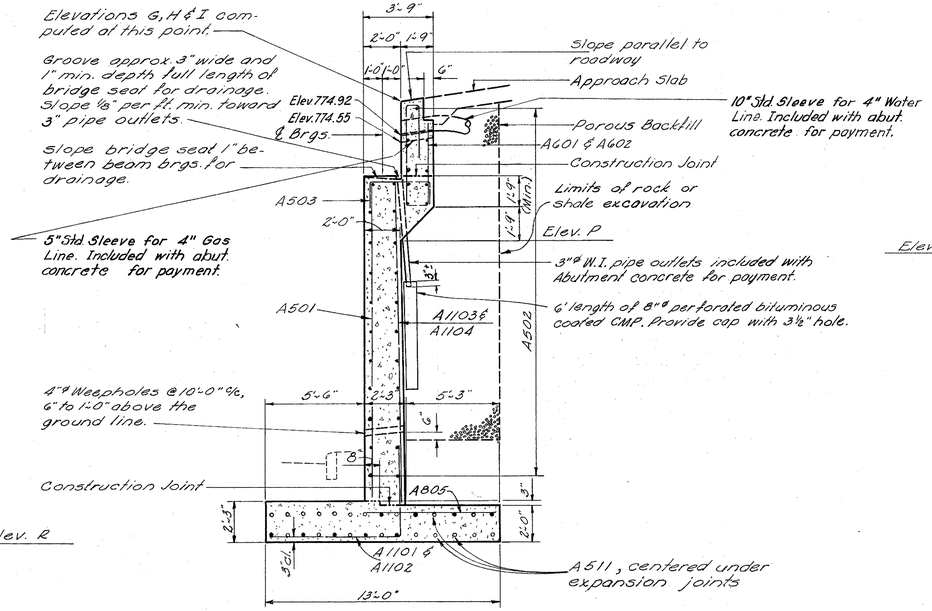
For details of Rustication Groove see sheet #252

## ELEVATIONS

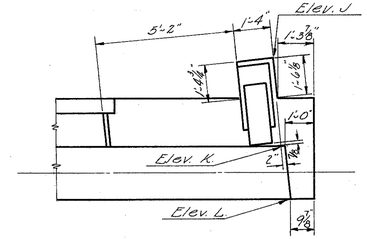
| LOCATION | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ABUTMENT-A | 772.24 | 772.19 | 772.23 | 772.17 | 772.01 | 771.93 | 771.76 | 771.84 | 771.54 | 771.79 | 771.43 | 771.22 | 771.13 | 771.19 | 771.57 | 768.43 | 767.60 |
| 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 |



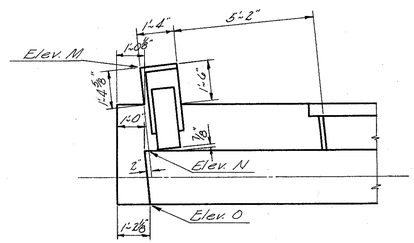

ELEVATION




SECTION C-C




DETAIL "A"




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

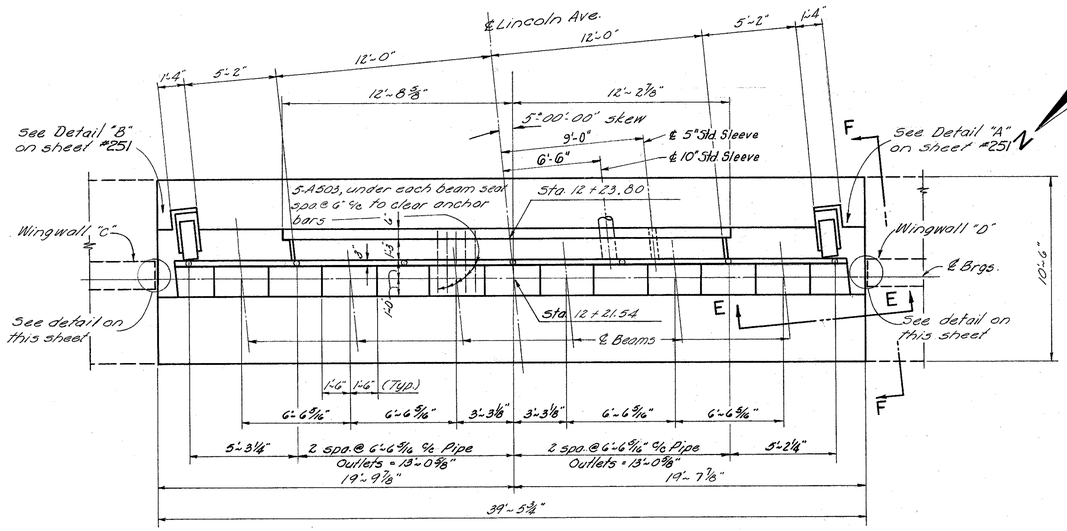
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| A.S.J. | BB | | P.M. | E.Roberts 6-10-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27065

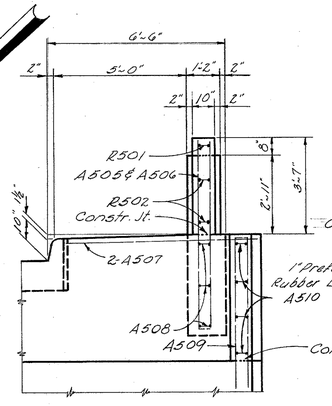
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

252
307

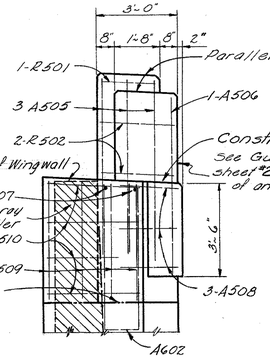
JEFFERSON COUNTY
JEF - 7 - 13.53




PLAN




VIEW E-E



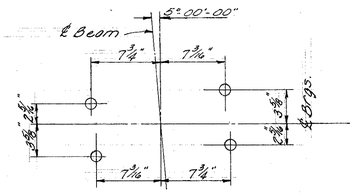

VIEW F-F

NOTES:

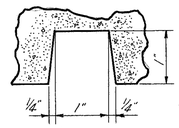
Porous backfill two feet thick and full length of abutment shall extend up to the underside of the approach slab and sidewalks.

All abutment concrete shall be Class "E".

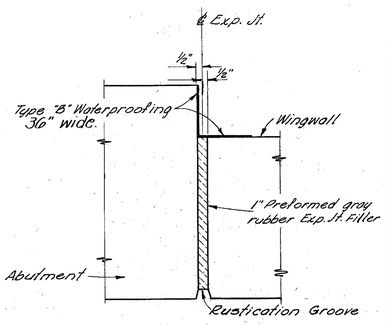
Railing End Posts: Concrete shall be Class "C". Concrete and steel shall be included with Item S-14, Railing, for payment.



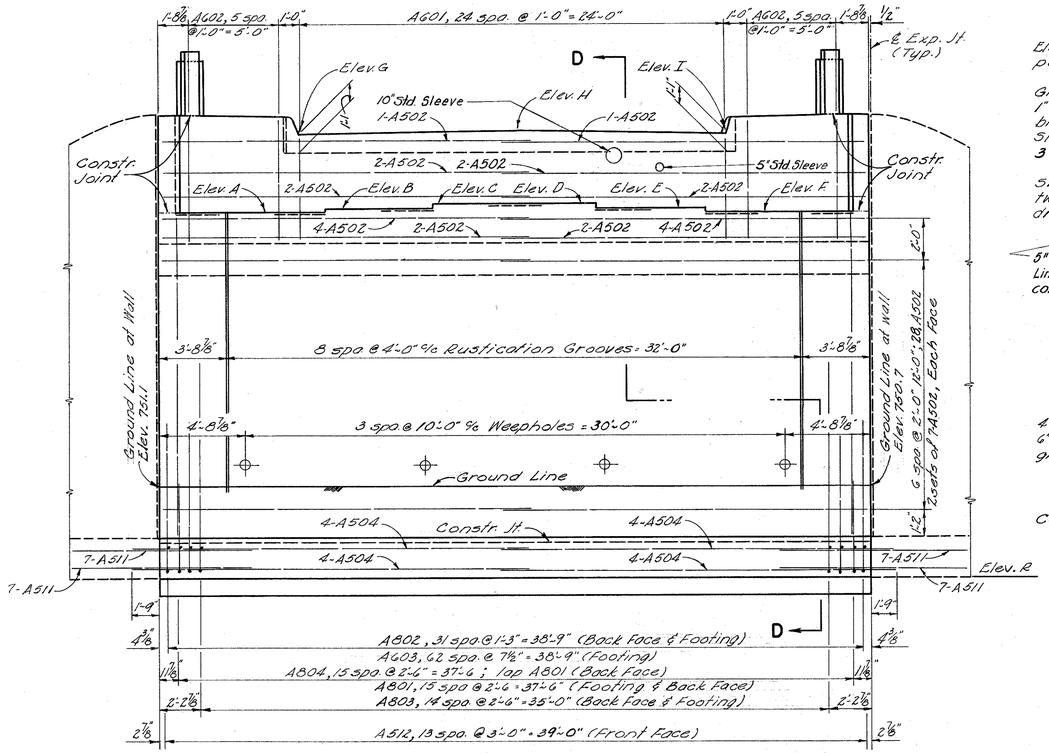

ANCHOR BOLT LAYOUT



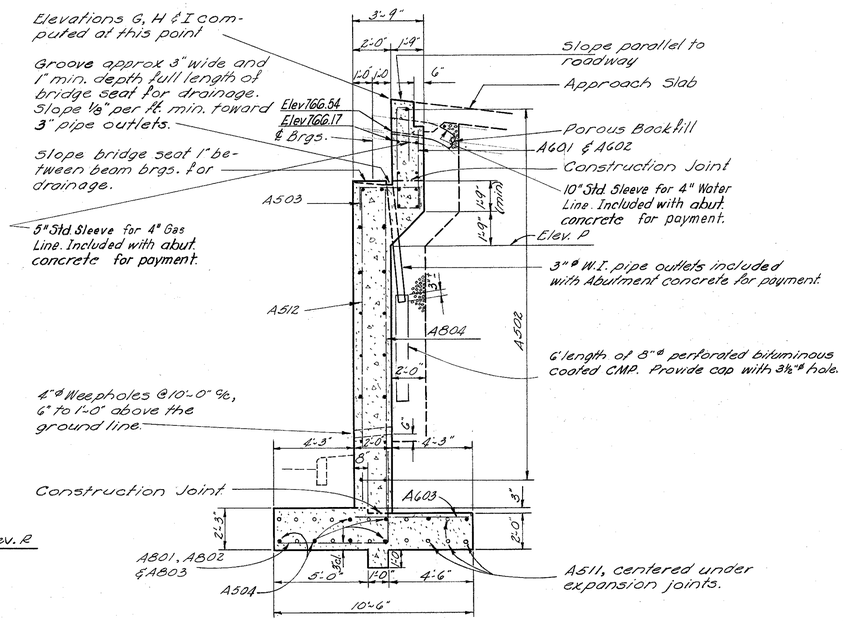

RUSTICATION GROOVE DETAIL




EXPANSION JOINT DETAIL




ELEVATION




SECTION D-D

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 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27089

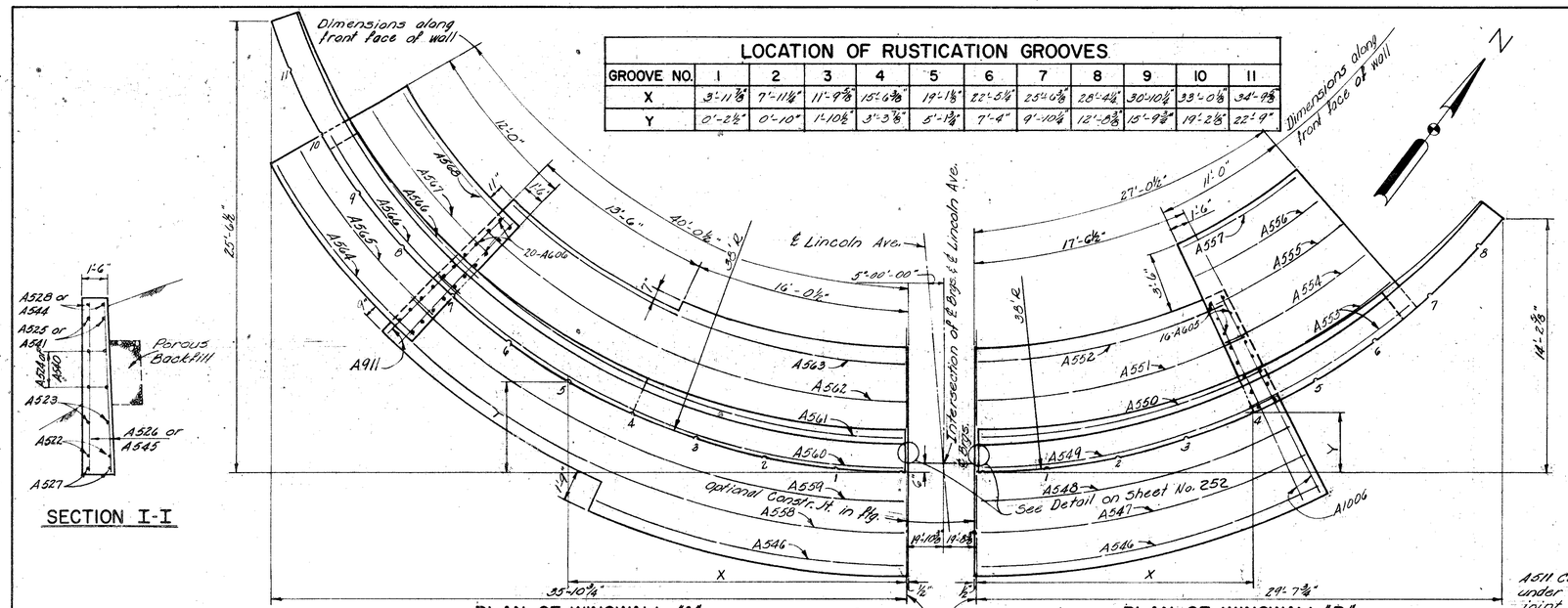
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

253
307

JEFFERSON COUNTY
JEF - 7 - 13.53

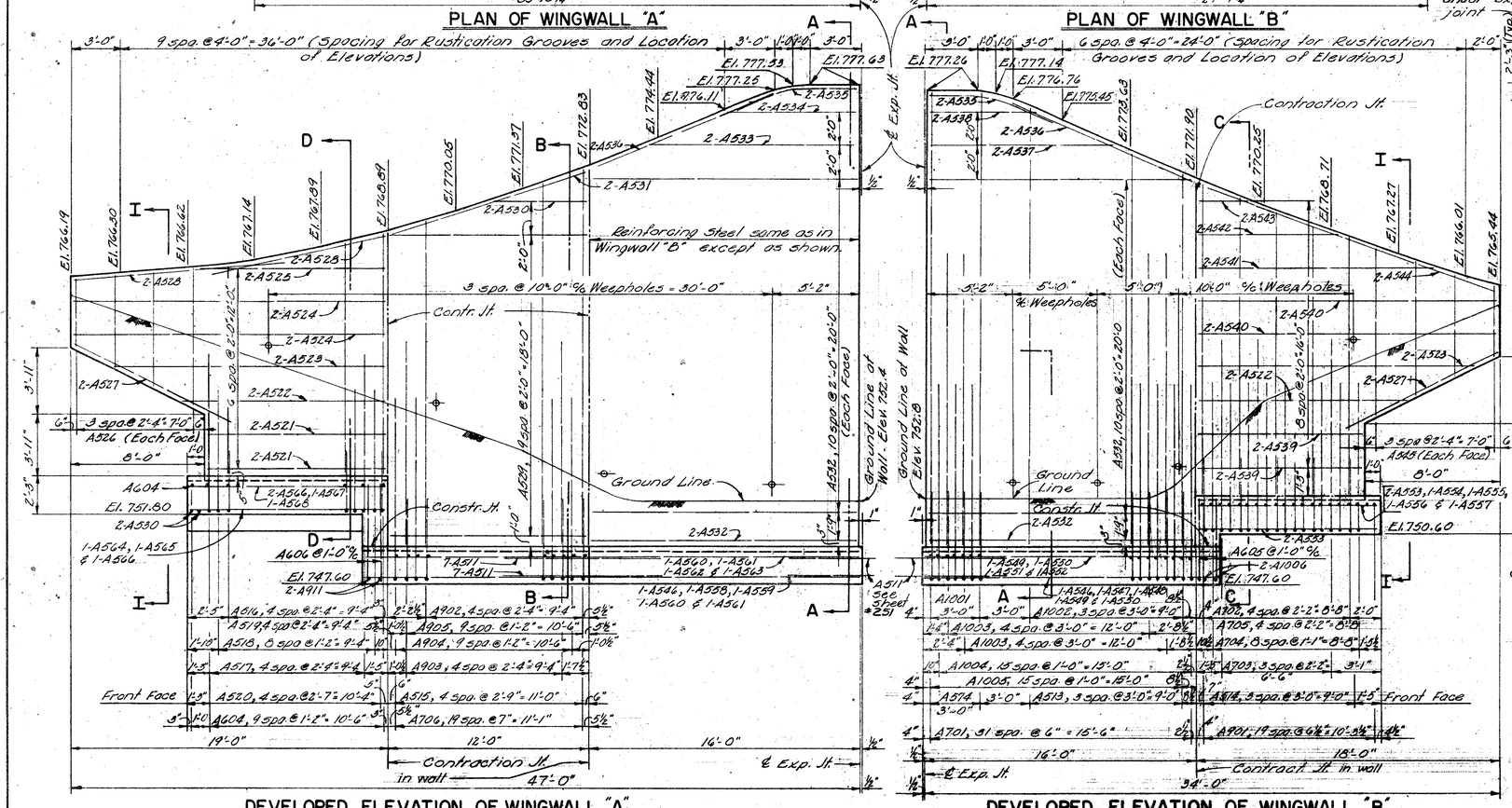
## LOCATION OF RUSTICATION GROOVES

| GROOVE NO. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| X | 3'-11⅞" | 7'-11¼" | 11'-9⅞" | 15'-6⅜" | 19'-1⅝" | 22'-5¼" | 25'-6⅜" | 28'-4½" | 30'-10½" | 33'-0⅛" | 34'-9⅝" |
| Y | 0'-2½" | 0'-10" | 1'-10½" | 3'-3⅛" | 5'-1¾" | 7'-4" | 9'-10½" | 12'-5⅜" | 15'-9⅜" | 19'-2⅛" | 22'-9" |




PLAN OF WINGWALL "A"

PLAN OF WINGWALL "B"

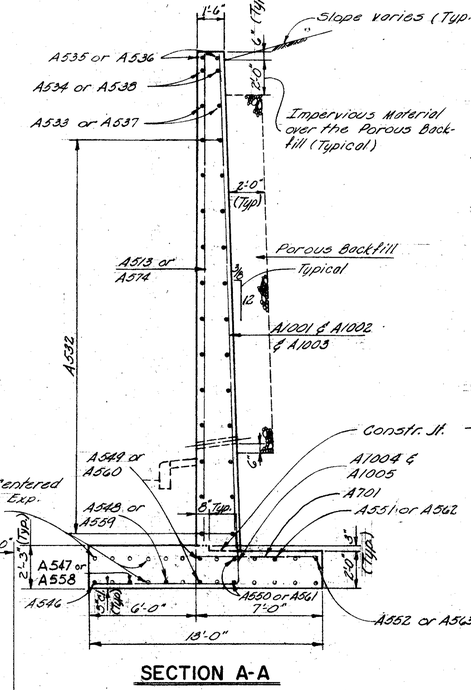



DEVELOPED ELEVATION OF WINGWALL "A"

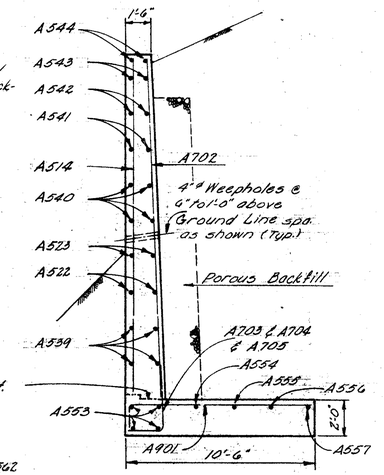
DEVELOPED ELEVATION OF WINGWALL "B"



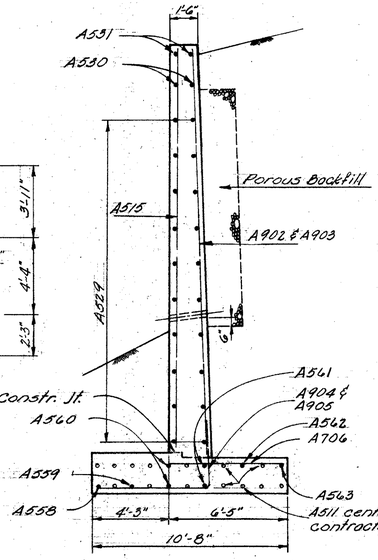

SECTION I-I



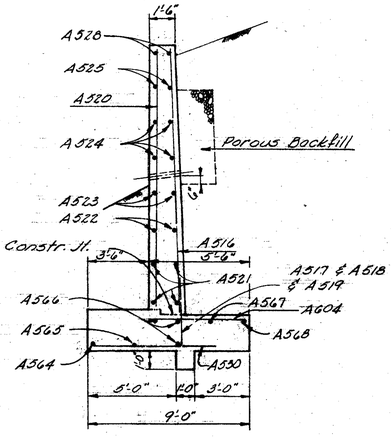

SECTION A-A




SECTION C-C




SECTION B-B




SECTION D-D

For notes and additional details see sheet # 254

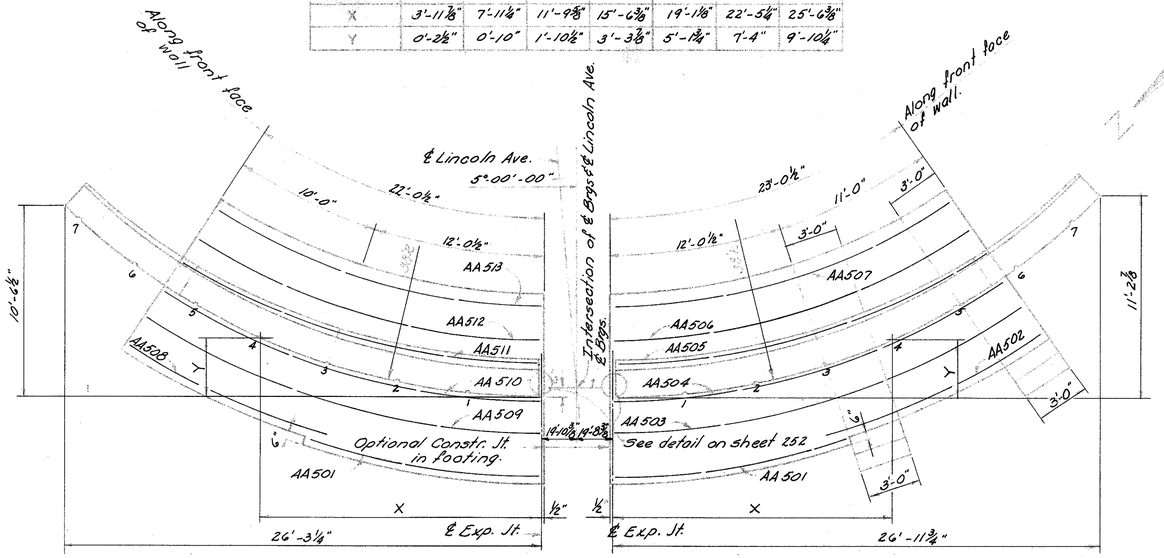
MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# ABUTMENT WINGWALLS 'A' & 'B'
## BRIDGE NO. JEF-7-1387
## UNDER LINCOLN AVE.

JEFFERSON COUNTY STA. 700+31.00

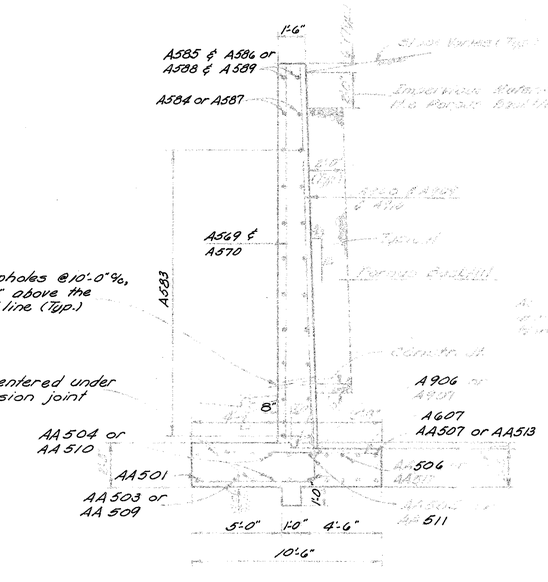
| Designed | Drawn | Traced | Checked | Reviewed Date | Revised |
|---|---|---|---|---|---|
| A.S.J. | BB | | P.M. | E. Roberts 6-5-59 | |

| LOCATION OF RUSTICATION GROOVES | | | | | | | |
|---|---|---|---|---|---|---|---|
| GROOVE NO. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| X | 3'-11 7/8" | 7'-11 3/4" | 11'-9 5/8" | 15'-6 3/8" | 19'-1 1/8" | 22'-5 1/4" | 25'-6 3/8" |
| 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" |

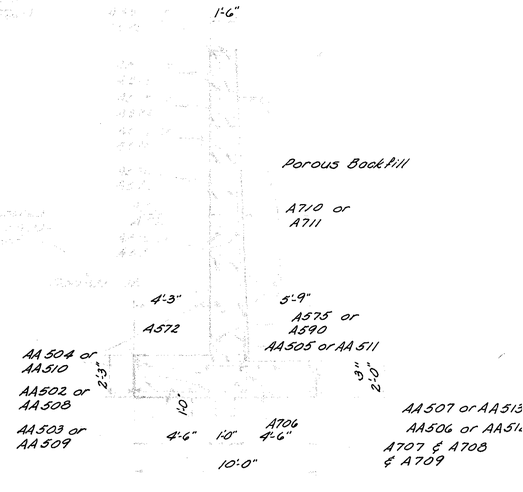



PLAN OF WINGWALL C

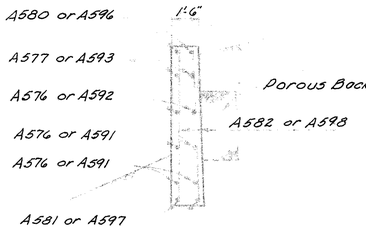
PLAN OF WINGWALL D

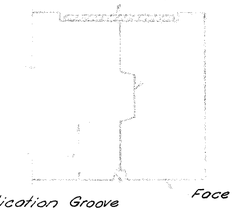



SECTION E-E




SECTION F-F



Rustication Groove

Face of wall

12" x ½" premolded sealing strip in 13" x 3⅜" recess. Stop strip and recess 6" from top of wall.

1⅜" x 5½" Key. Stop key 6" from top of wall.

CONTRACTION JOINT DETAIL

NOTES:

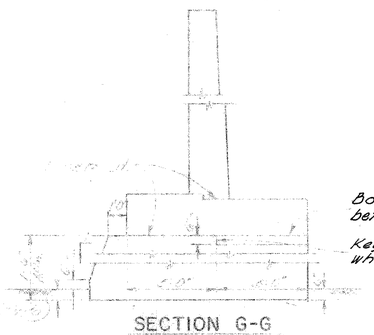
Porous Backfill, two feet thick, full length of wingwalls shall extend up to within two feet of finished ground surface.

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.

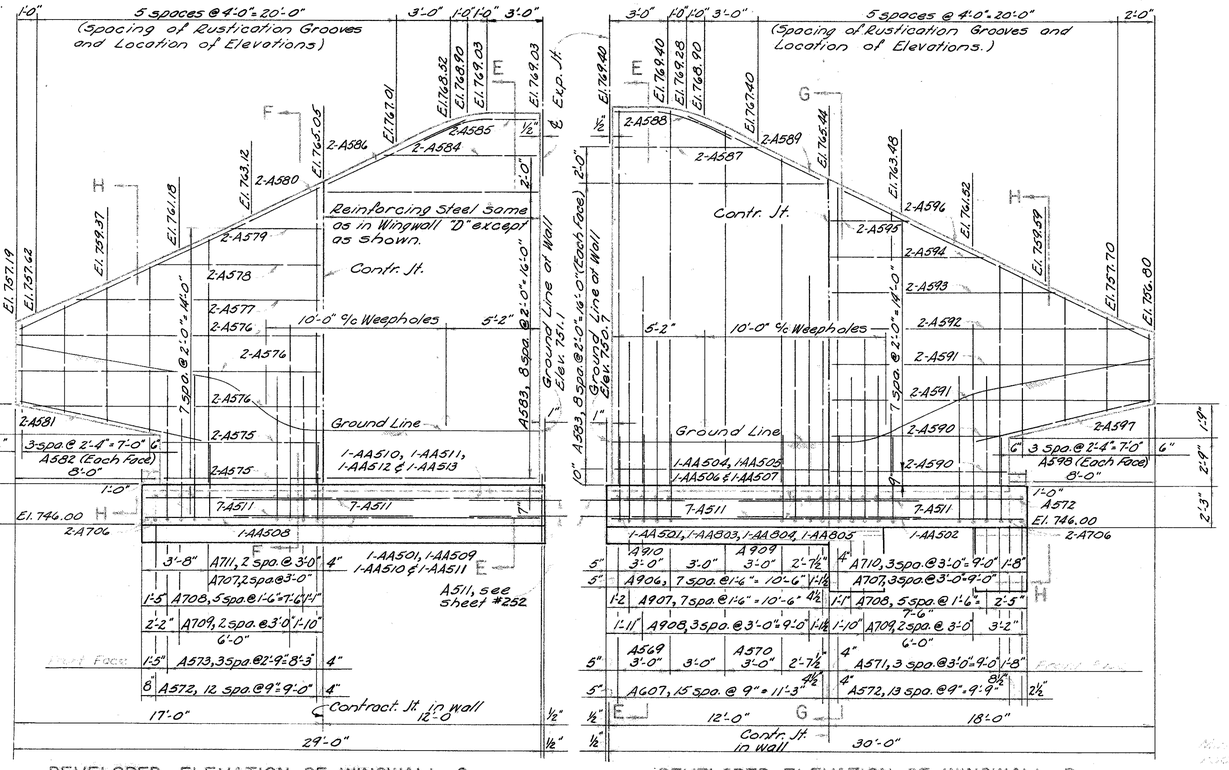
SECTION H-H



Bottom of footing between pedestals.

Key in footing only where pedestals are used.

SECTION G-G




DEVELOPED ELEVATION OF WINGWALL C

DEVELOPED ELEVATION OF WINGWALL D

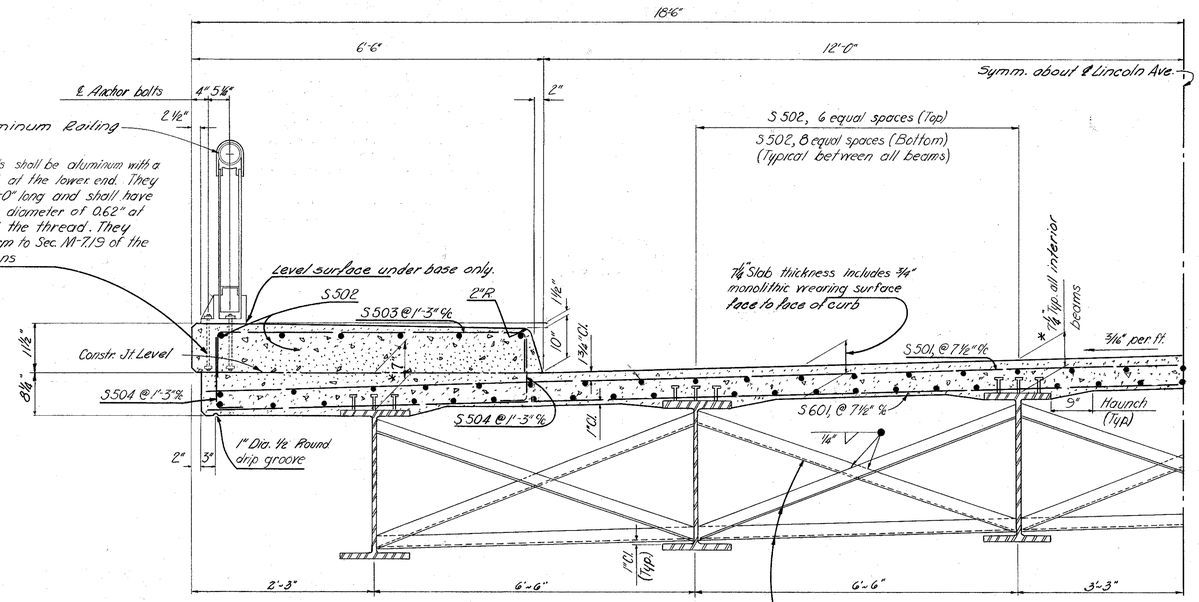
# ABUTMENT WINGWALLS "C" & "D"

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

255/307

JEFFERSON COUNTY

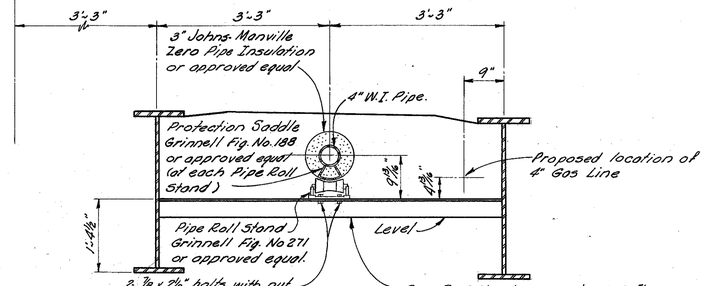
JEF-7-13.53




* 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 configuration required to place it parallel to the finished grade.

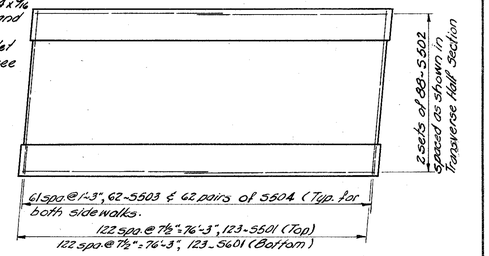
Intermediate crossframe L's 3x3x 5/16". Weld both sides of vertical leg & top side of horizontal leg to beam with ⅛" continuous fillet weld.

## TRANSVERSE HALF SECTION



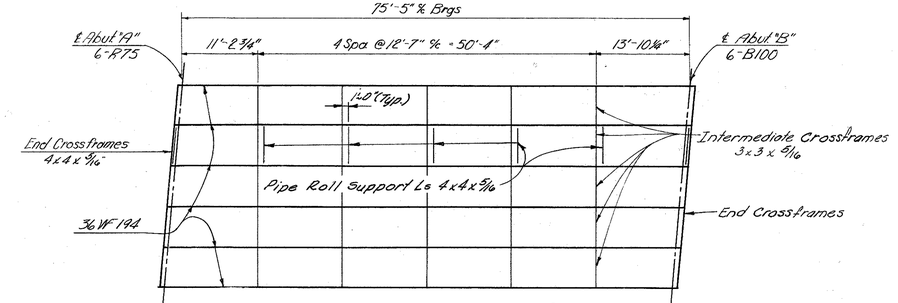

## UTILITY SUPPORT DETAIL

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

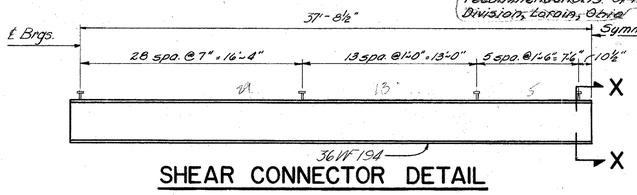
In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress up-grade. The slab may be placed in sections, between transverse construction joints which are normal to the center line of bridge




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

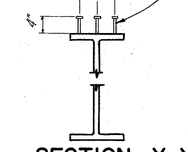
## FRAMING PLAN

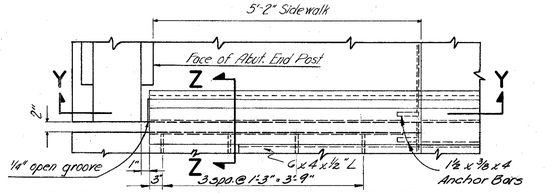
3-¾ x 4" shear connectors required per row. Shear Connectors shall be Nelson Granular Flux-Filled Studs or approved equal. Studs shall automatically be end and welded to the beams in the shop or field. All stud welds shall be made in accordance with recommendations of the Nelson Stud Welding Division, Lorain, Ohio.



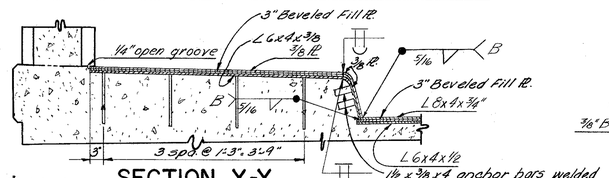

## SHEAR CONNECTOR DETAIL

Showing the spacing of Shear Connector rows (276 studs per beam)

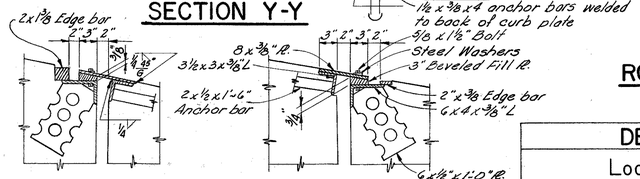



## PLAN OF SIDEWALK PLATES AT ABUTMENT




## SECTION Y-Y

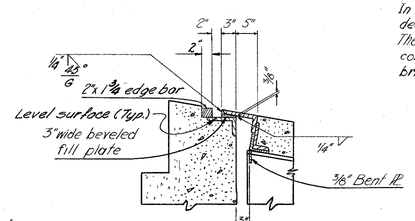



ABUTMENT -A-

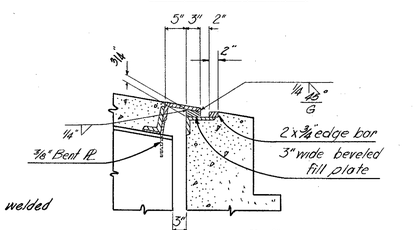
For details see Section Z-Z, Abutment "B"

ABUTMENT -B-

## SECTION Z-Z




## ABUTMENT "A"




## ABUTMENT "B"
## ROADWAY END DAM DETAILS

### 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.

## DEFLECTION AND CAMBER

| LOCATION | EXTERIOR BEAM | INTERIOR BEAM |
|---|---|---|
| Deflection due to weight of steel | 7/16 | 7/16 |
| Deflection due to remaining D.L. | 1 7/8" | 1⅛ |
| Sum of Deflection | 2 5/16" | 1 11/16 |
| Required Camber | 2⅜" | 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

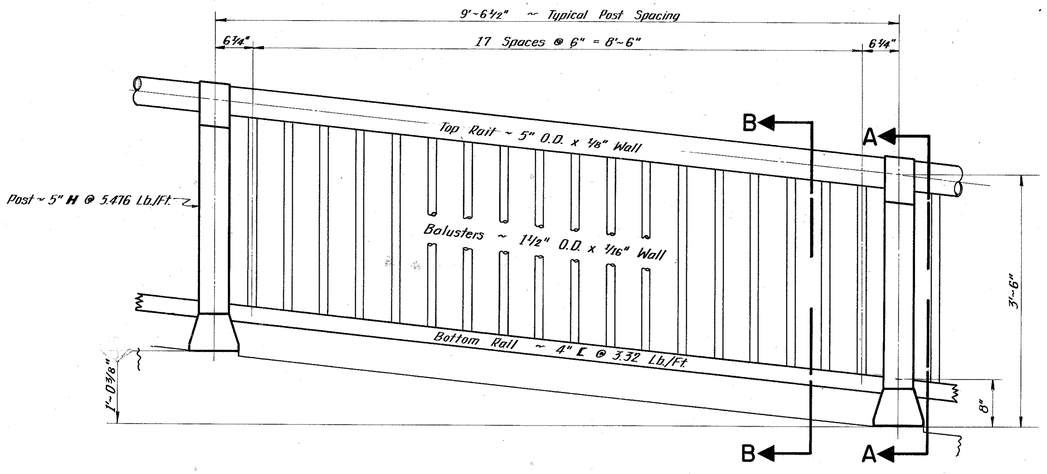
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| A.S.J. | BB | | J.M. | E. Roberts 6-10-59 | 11-20-59 |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27066

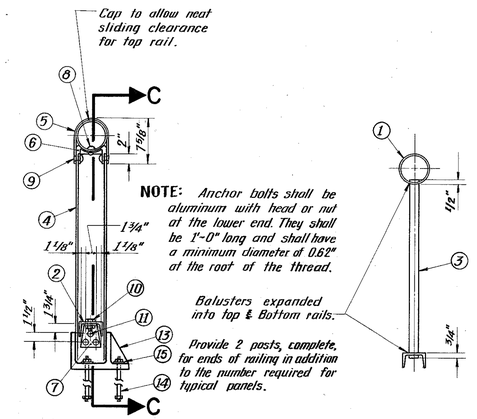
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

256/307

JEFFERSON COUNTY
JEF-7-13.53

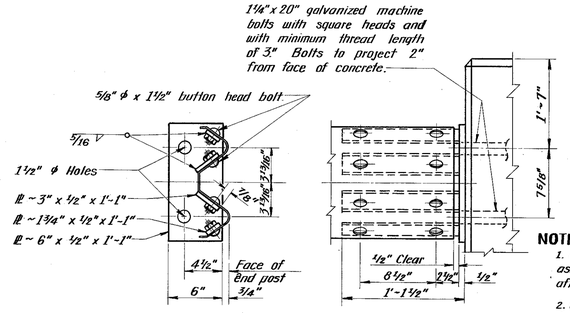



TYPICAL RAILING SECTION

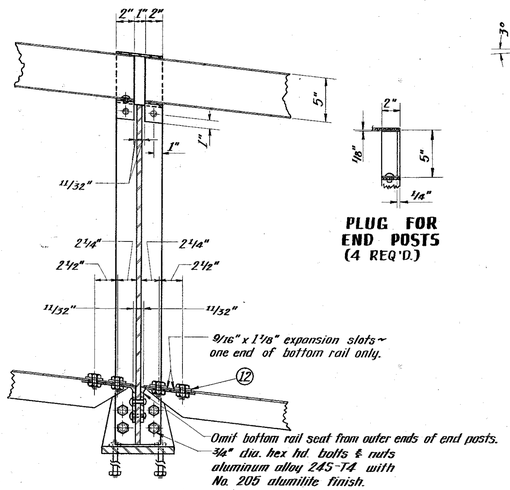



SECTION A-A

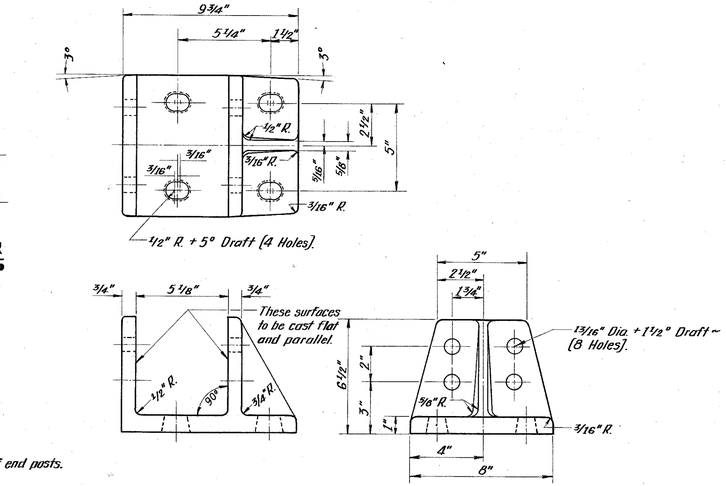
SECTION B-B




GUARD RAIL DETAIL




SECTION C-C




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" L @ 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 | 3.32 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 1⅞16" 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 1¾16" 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 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27086

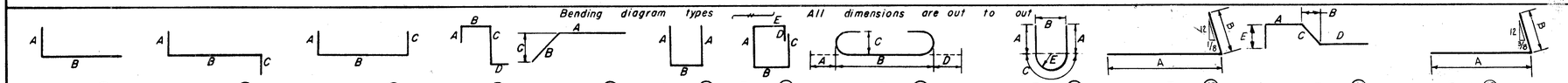
| FED. RD. DIVISON | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

257
307

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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 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'-4 3/8" | | | | 75 |
| A509 | 16 | 5 | 14' - 1" | 6 | 6'-11" | 0'-6" | | | | 235 |
| A510 | 16 | 5 | 7' - 0" | 6 | 3'-5" | 0'-4 3/8" | | | | 117 |
| A511 | 94 | 5 | 10' - 0" | Str. | | | | | | 980 |
| A512 | 14 | 5 | 15' - 2" | Str. | | | | | | 221 |
| A513 | 8 | 5 | 22'-2" to 24'-2" | Str. | | 2-Sets 4 each Vary by 1'-4" | | | | 202 |
| A514 | 4 | 5 | 15'-2" to 18'-9" | Str. | | | | Vary | by 1'-2 3/8" | 71 |
| A515 | 5 | 5 | 18'-10" to 22'-8" | Str. | | | | Vary | by 0'-11 1/2" | 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'-6 3/8" | | | 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'-5 5/8" | 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'-8 1/4" | | | 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'-8 1/4" | | | 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 |
| AG01 | 50 | 6 | 15' - 2" | 7 | 5'-9" | 1'-5" | 4'-7" | 3'-1" | 0'-11" | 1139 |
| AG02 | 24 | 6 | 17' - 4" | 7 | 6'-7" | 1'-5" | 5'-5" | 3'-1" | 1'-5" | 625 |
| AG03 | 63 | 6 | 6' - 4" | Str. | | | | | | 599 |
| AG04 | 11 | 6 | 5' - 7" | Str. | | | | | | 92 |
| AG05 | 16 | 6 | 4' - 7" | Str. | | | | | | 110 |
| AG06 | 20 | 6 | 5' - 9" | Str. | | | | | | 173 |
| AG07 | 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'-10 1/2" | 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'-5 5/8" | 122 |
| A711 | 3 | 7 | 13'-9" to 16'-8" | Str. | | 1-Set | | vary | by 1'-5 5/8" | 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'-9 3/4" | 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'-1" | 11'-5" | | | | 2628 |
| A1005 | 32 | 10 | 12' - 8" | 12 | 7'-1" | 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'-3" | Included in Item 5-14, Railing for payment | | | |
| R502 | 8 | 5 | 5'-6" | 6 | 2'-8" | 0'-5" | | | | |
| | | | | | | | | | Total | 39,283 |

## 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 | | |
| 5-1 | 98 | C.Y. | Class "C" Concrete, Superstructure | 98 | | | |
| 5-1 | 313 | C.Y. | Class "E" Concrete, Abutment Walls | | 313 | | |
| 5-1 | 175 | C.Y. | Class "E" Concrete, Footings | | 175 | | |
| 5-3 | 97 | L.F. | Waterproofing, Premolded Sealing Strip | | 97 | | |
| 5-3 | 33 | S.Y. | Waterproofing, Type "B" | | 33 | | |
| 5-4 | 58,770 | Lbs. | Reinforcing Steel | 19,487 | 39,283 | | |
| 5-7 | 103,100 | Lbs. | Structural Steel | 103,100 | | | |
| 5-8 | 103,100 | Lbs. | Field Painting of Structural Steel, as per plan | 103,100 | | | |
| 5.9 | 72 | S.F. | 1" Preformed Expansion Joint Filler (Gray Rubber, M-10.02) | | 72 | | |
| 5-14 | 167 | L.F. | Railing (Aluminum with Concrete Endposts) | 167 | | | |
| 5-29 | 400 | C.Y. | Porous Backfill | | 400 | | |
| 5-29 | 84 | Lin.Ft. | 8"ϕ perforated bituminous coated CMP, including specials. | | 84 | | |
| SPEC. | 1656 | Ea. | Stud Shear Connectors | 1656 | | | |

## 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. | |

### 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, A 401 is a number 4 bar and A 1114 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) | |

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307

# JEFFERSON COUNTY
# JEF-7-13.53

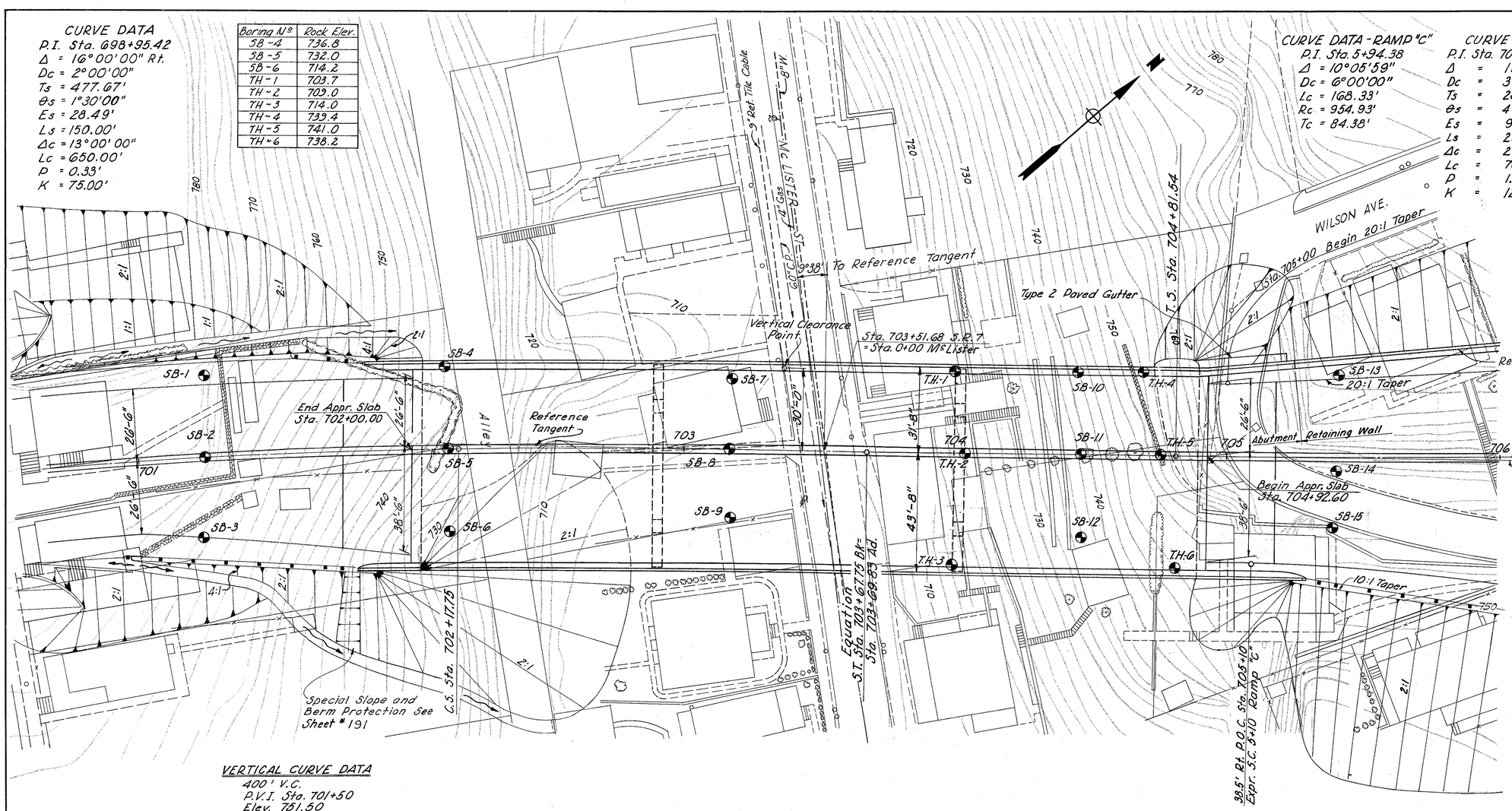
**CURVE DATA**
P.I. Sta. 698+95.42
Δ = 16°00'00" Rt.
Dc = 2°00'00"
Ts = 477.67'
θs = 1°30'00"
Es = 28.49'
Ls = 150.00'
Δc = 13°00'00"
Lc = 650.00'
P = 0.33'
K = 75.00'

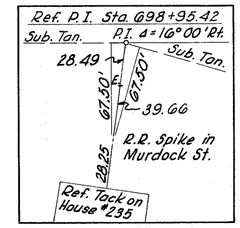
| Boring Nº | Rock Elev. |
|---|---|
| SB-4 | 736.8 |
| SB-5 | 732.0 |
| SB-6 | 714.2 |
| TH-1 | 703.7 |
| TH-2 | 703.0 |
| TH-3 | 714.0 |
| TH-4 | 739.4 |
| TH-5 | 741.0 |
| TH-6 | 738.2 |

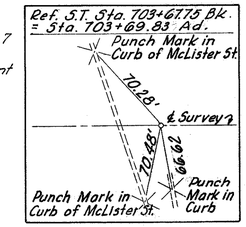
**CURVE DATA - RAMP "C"**
P.I. Sta. 5+94.38
Δ = 10°05'59"
Dc = 6°00'00"
Lc = 168.33'
Rc = 954.93'
Tc = 84.38'

**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 = 9.76'
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



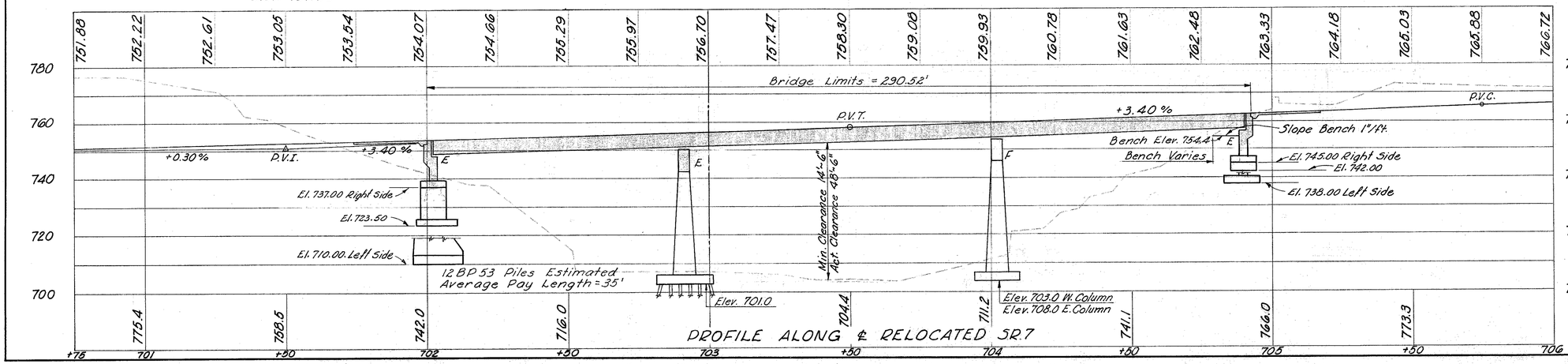




FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of borings and soil-sampling soundings made at the site. The sounding information may be inspected in the office of the Bureau of Bridges in Columbus, or in the Division office, but the State assumes no responsibility 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: 75'-4" ℄ 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) | |

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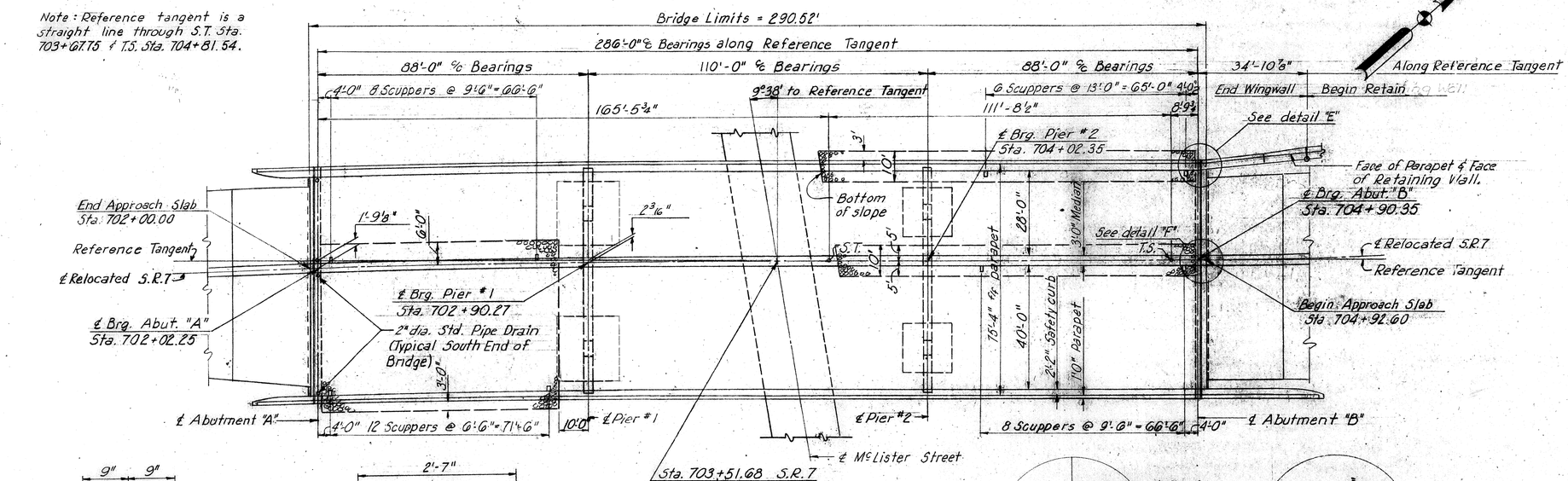
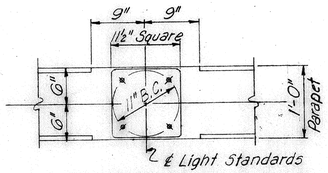
307

**JEFFERSON COUNTY**
**JEF-7-13.53**

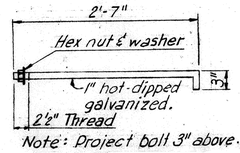
Note: Reference tangent is a straight line through S.T. Sta. 703+67.75 & T.S. Sta. 704+81.54.




PLAN

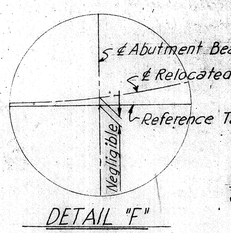



ANCHOR BOLT LAYOUT

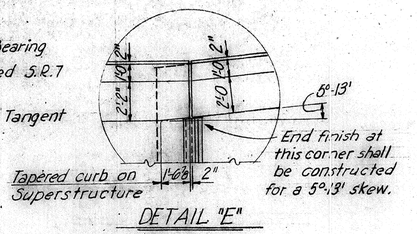



Note: Project bolt 3" above concrete.

LIGHT STANDARD ANCHOR BOLT
4 Per Standard




DETAIL "F"

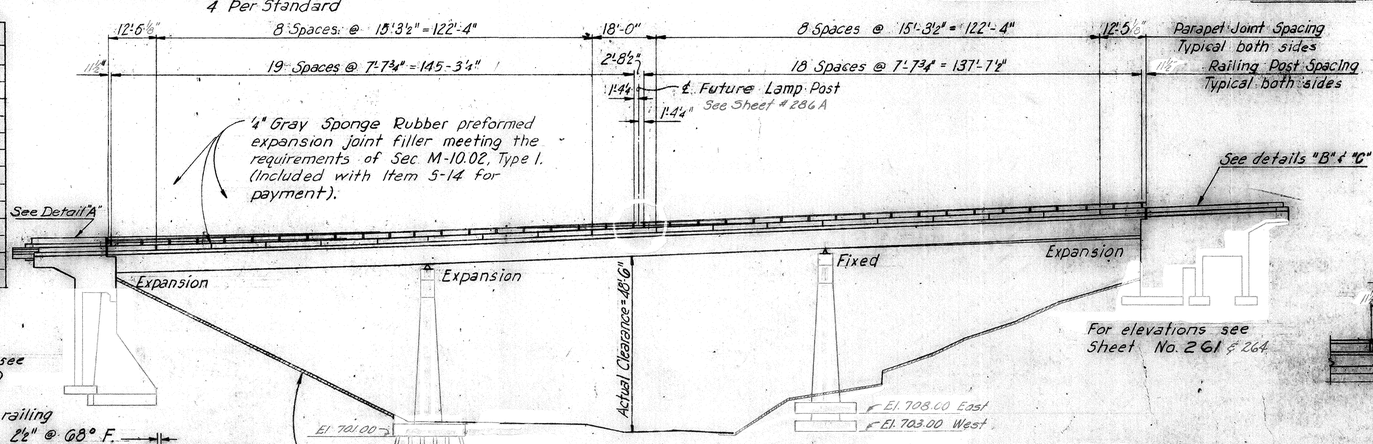



DETAIL "E"

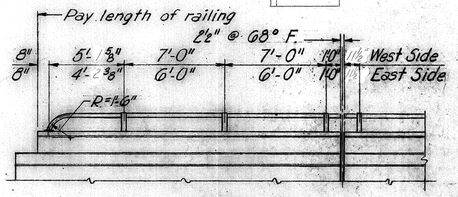
## GENERAL NOTES

- 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 1-10.04, 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 obtained when the capacity according to the formula in Section 5-18.05 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 14,000 Ft. lb. hammer.
  37 tons per pile using a 13,000 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 5-1.
- 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 of an elevation equal with the fill behind the abutments. Backfill behind the abutments shall be made with material meeting the requirements of Sec. 1-22 and shall be compacted in accordance with the requirements for embankment compaction. The payment for this 1-22 backfill shall be considered as included in the payment for E-2, Unclassified Excavation.

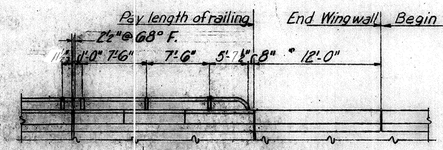
| PAVEMENT ELEVATIONS | | | |
|---|---|---|---|
| Station | P.G. | Lt. Curb | Rt. Curb |
| 702+00 | 754.07 | 755.00 | 752.74 |
| +25 | 754.66 | 755.54 | 753.41 |
| +50 | 755.29 | 756.06 | 754.20 |
| +75 | 755.97 | 756.62 | 755.04 |
| 703+00 | 756.70 | 757.22 | 755.96 |
| +25 | 757.47 | 757.80 | 756.91 |
| +50 | 758.30 | 758.57 | 757.89 |
| +75 | 759.08 | 759.24 | 758.86 |
| 704+00 | 759.93 | 759.90 | 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 |



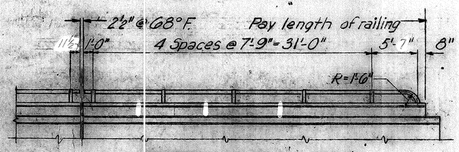

ELEVATION




DETAIL "A"




DETAIL "B" (West Side)




DETAIL "C" (East Side)

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) | |

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307

JEFFERSON COUNTY
JEF.-7-13.53

PLAN

ELEVATION

Class "E" Concrete

Porous backfill material shall form a continuous 3'x7' drain extending to the face of 2:1 slope at Elev. 725.00. The drain shall be located between the two intermediate counterforts. (See sht. No. 261A)

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" | 762.24 | 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) | |

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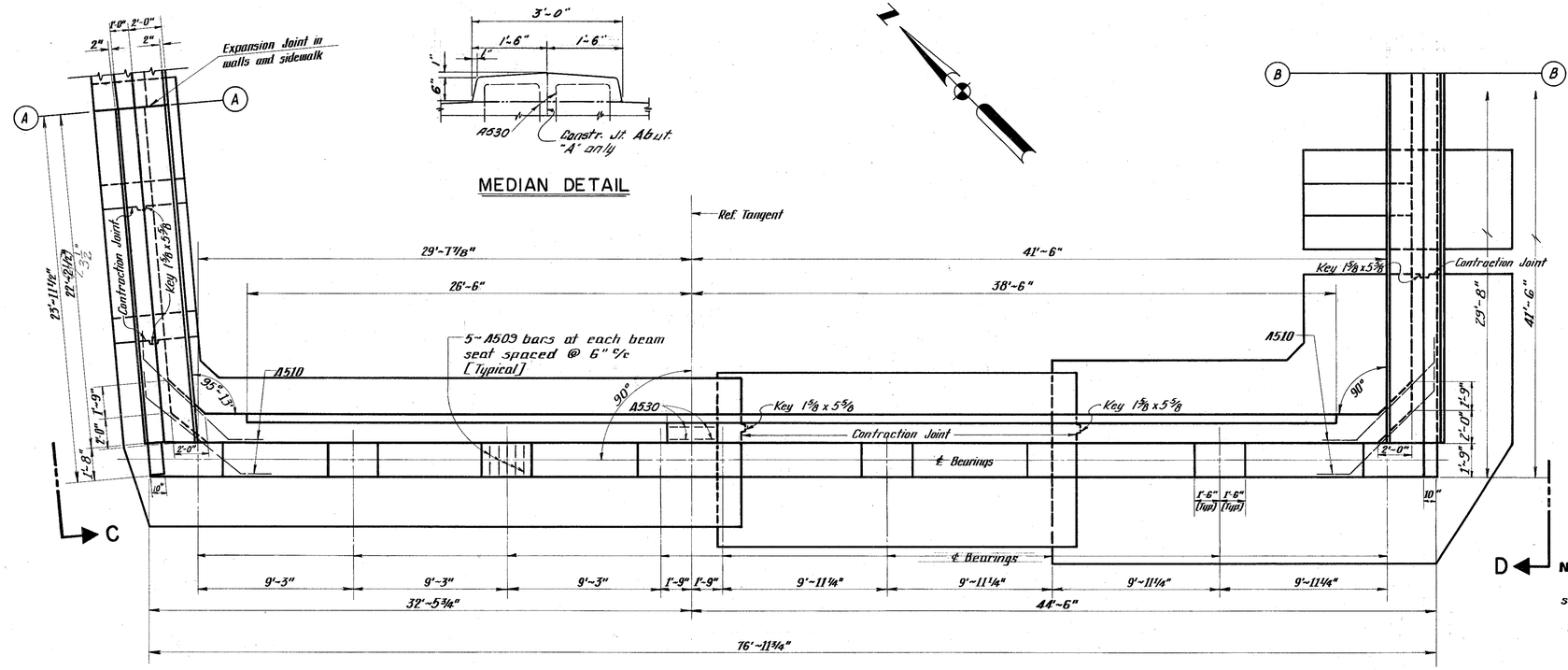
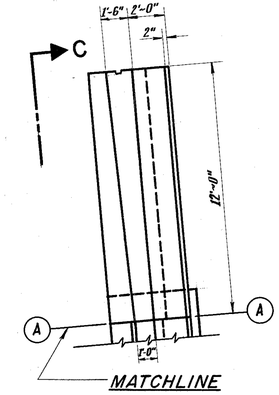
JEFFERSON COUNTY
JEF-7-13.53

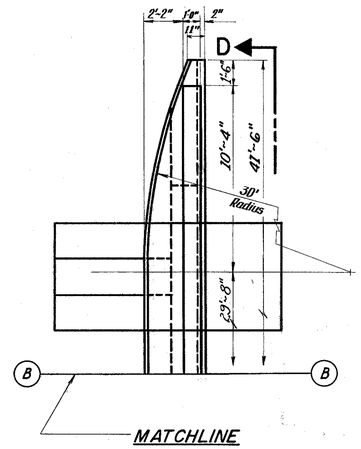



MEDIAN DETAIL

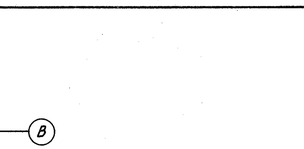



PLAN

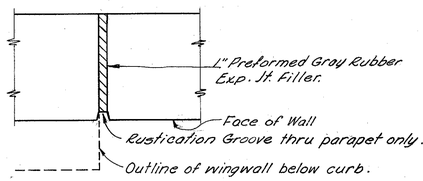


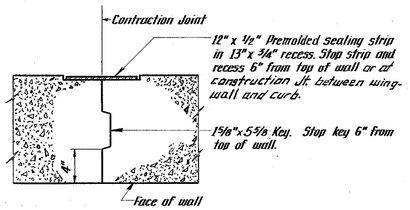

**NOTE:**
*For details not shown see Sheet No's. 261A, 262, 263 & 264.*



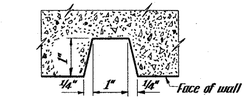

DETAIL OF TYPE "B" WATERPROOFING
(To be used where walls are offset)



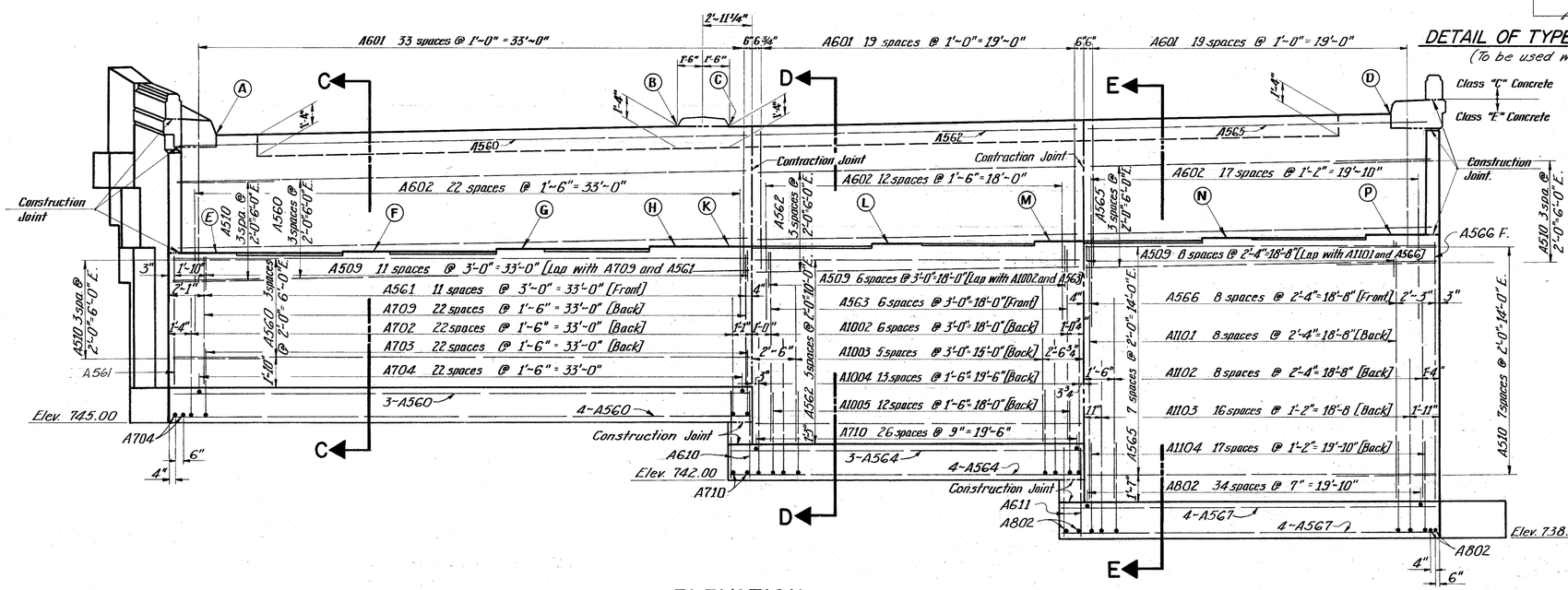

DETAIL OF EXPANSION JOINT




DETAIL OF CONTRACTION JOINT




DETAIL OF RUSTICATION GROOVE




ELEVATION

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# ABUTMENT "B"

BRIDGE NO. JEF-7-1392
OVER McLISTER STREET

JEFFERSON COUNTY STA. 703+51.68

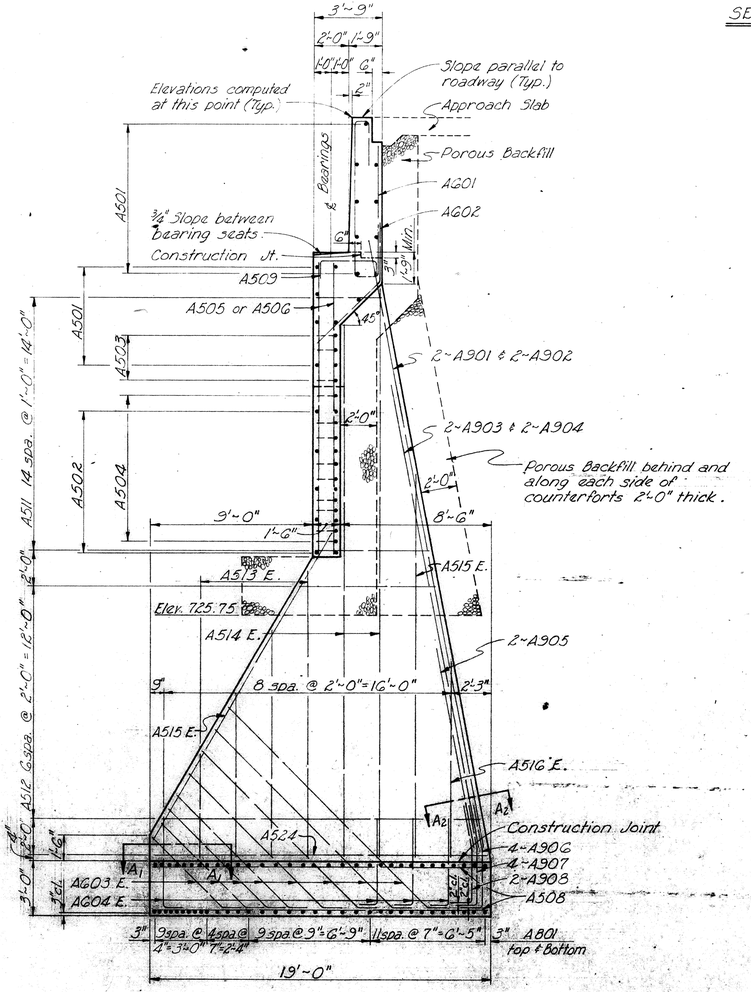
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| J.M. | K.E.A. | SIMPSON | A.S.J. | E. Roberts 6-11-59 | 3-21-60 |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27086

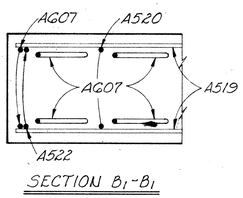
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

2G1A 307

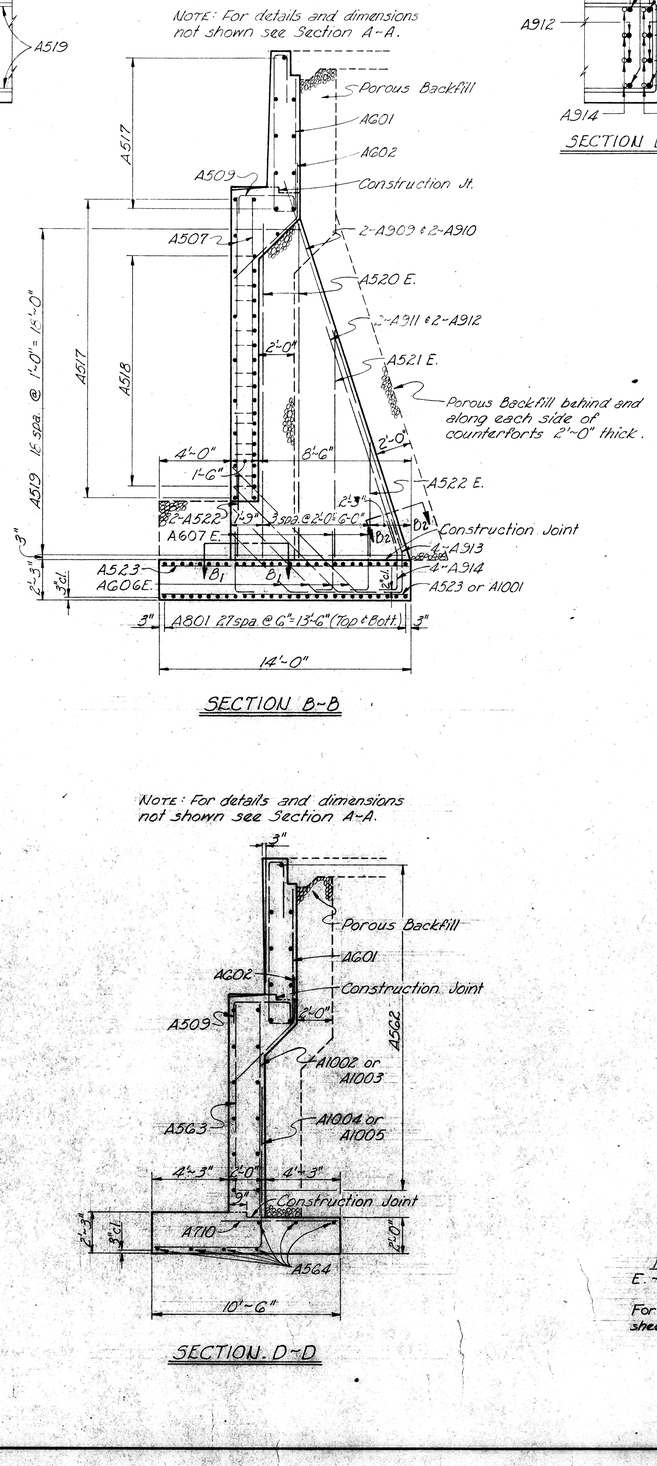
JEFFERSON COUNTY
JEF-7-13.53



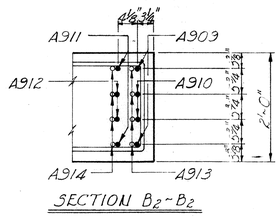

SECTION A-A



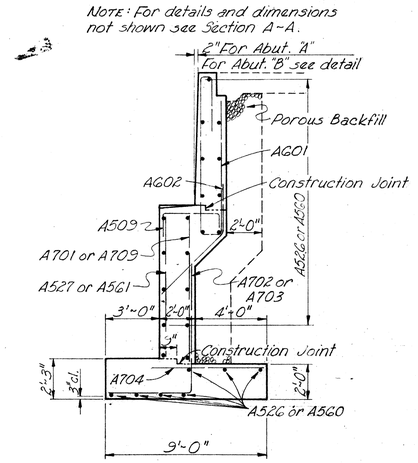

SECTION $B_1$-$B_1$



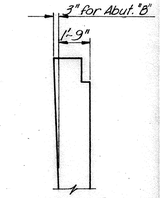

SECTION B-B



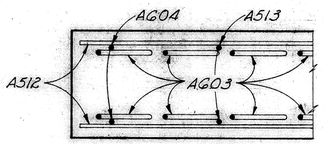

SECTION $B_2$-$B_2$



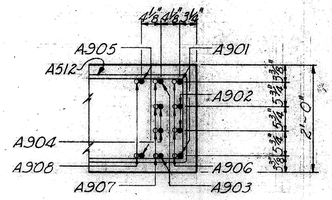

SECTION C-C




BACKWALL DETAIL
For Abut. "B"



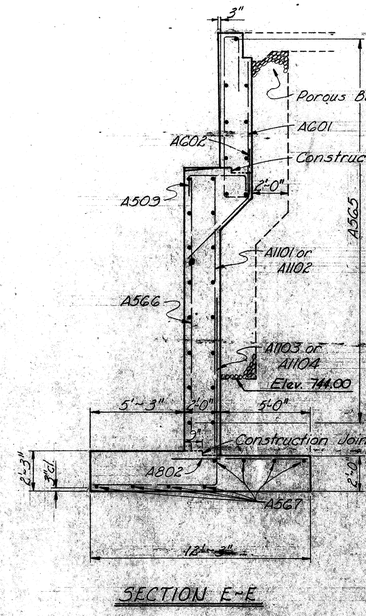

SECTION $A_1$-$A_1$




SECTION $A_2$-$A_2$




SECTION. D-D




SECTION E-E

NOTE:
E.- indicates each face

For details not shown see sheets Nº 260, 261 & 262

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# ABUTMENT DETAILS
## BRIDGE NO. JEF-7-1392 OVER McLISTER STREET

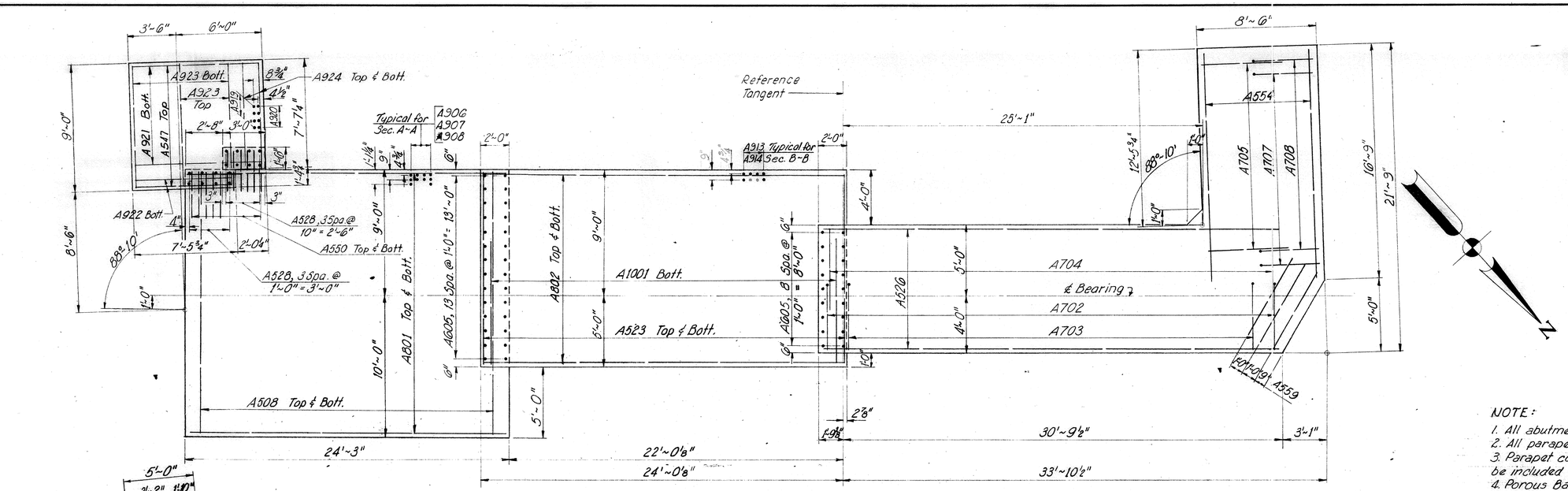
JEFFERSON COUNTY STA. 703 + 51.68

| Designed | Drawn | Traced | Checked | Reviewed | Date | Revised |
|---|---|---|---|---|---|---|
| J.M. | K.E.A. | | A.S.J. | E. Roberts | Oct. 1, 1959 | |

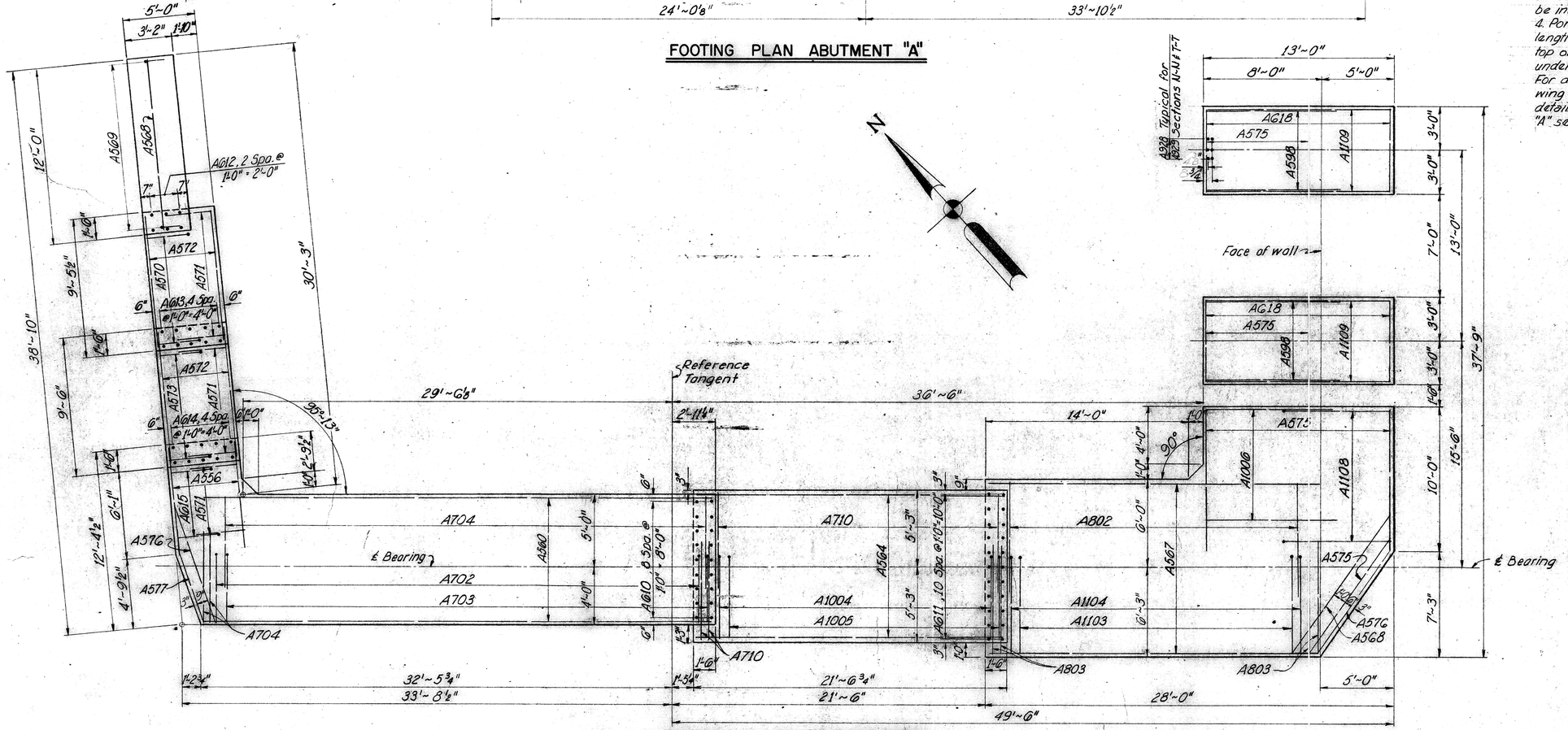
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

262
307

JEFFERSON COUNTY
JEF-7-13.53




## FOOTING PLAN ABUTMENT "A"




## FOOTING PLAN ABUTMENT "B"

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.

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

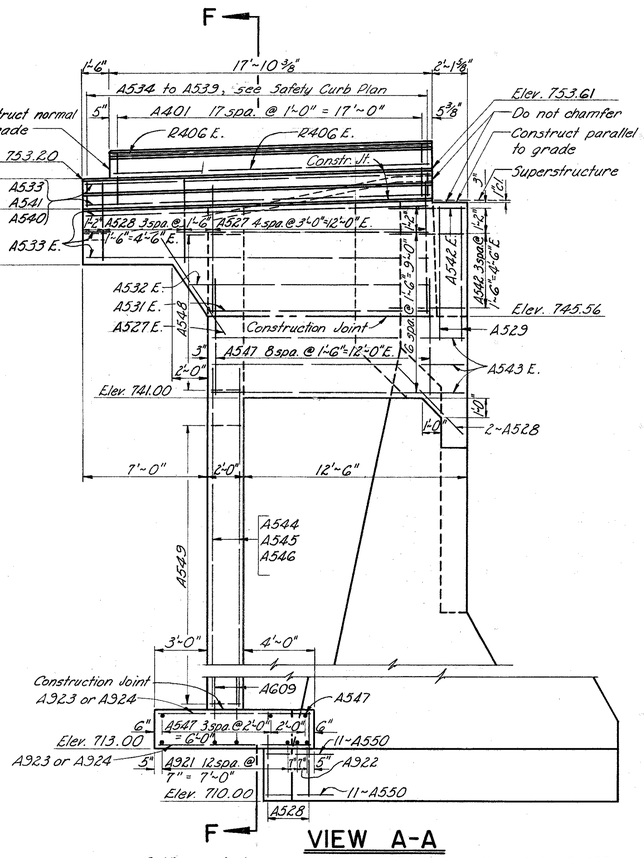
JEFFERSON COUNTY — STA. 703 + 51.68

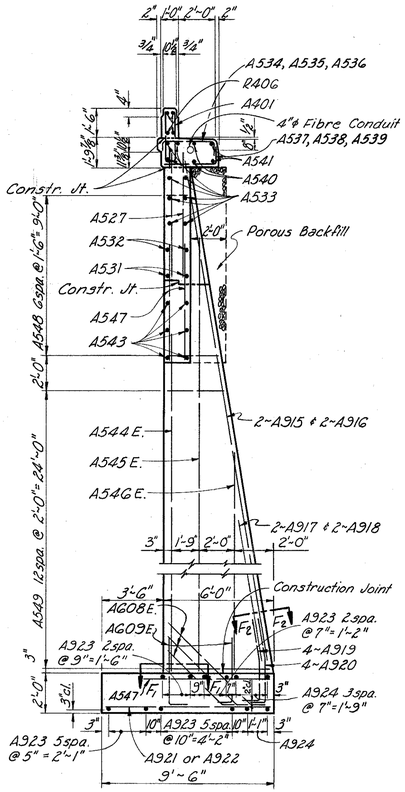
| Designed | Drawn | Traced | Checked | Reviewed | Date | Revised |
|---|---|---|---|---|---|---|
| J.M. | C.J.K. | | A.S.J. | E. Roberts | Oct 1, 1959 | |

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

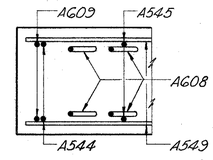
263
307

JEFFERSON COUNTY
JEF-7-13.53

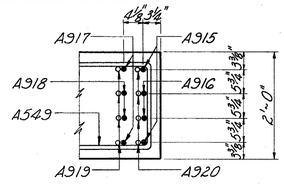


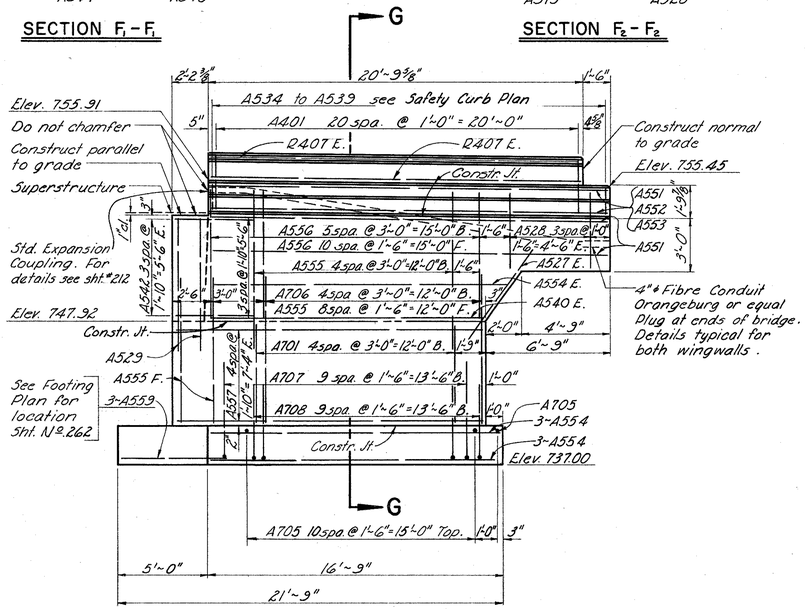

SECTION F-F




SECTION F1 - F1



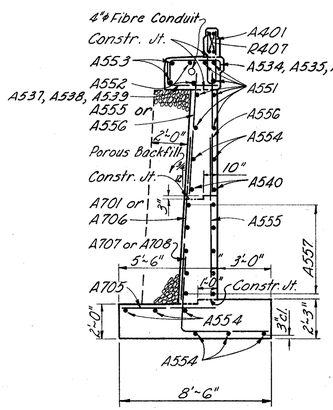

SECTION F2 - F2



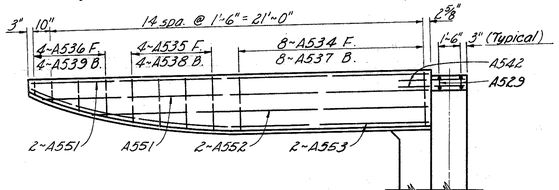

VIEW B-B

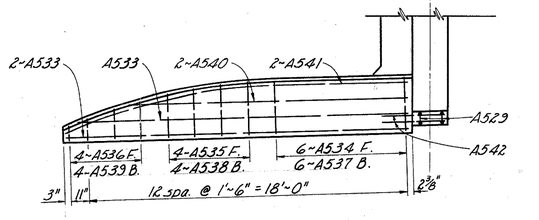
Railing not shown ~ see General Plan & Elevation, Sht. Nº. 259

NOTE: For curb and parapet dimensions see Section D-D.

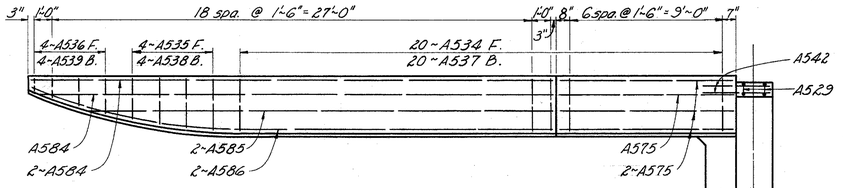


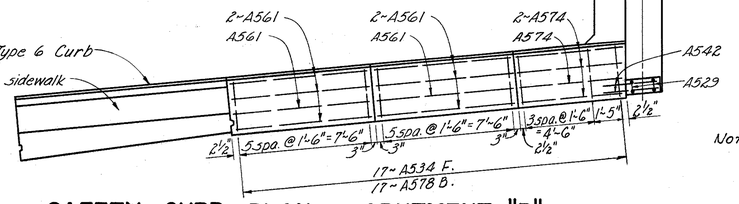

SECTION G-G



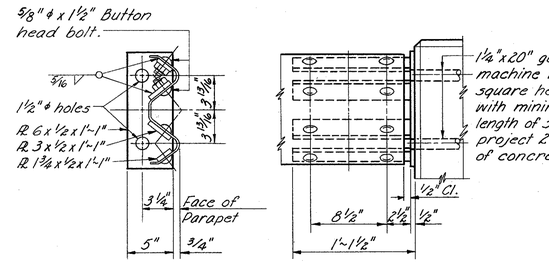




SAFETY CURB PLAN — ABUTMENT "A"




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 S-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

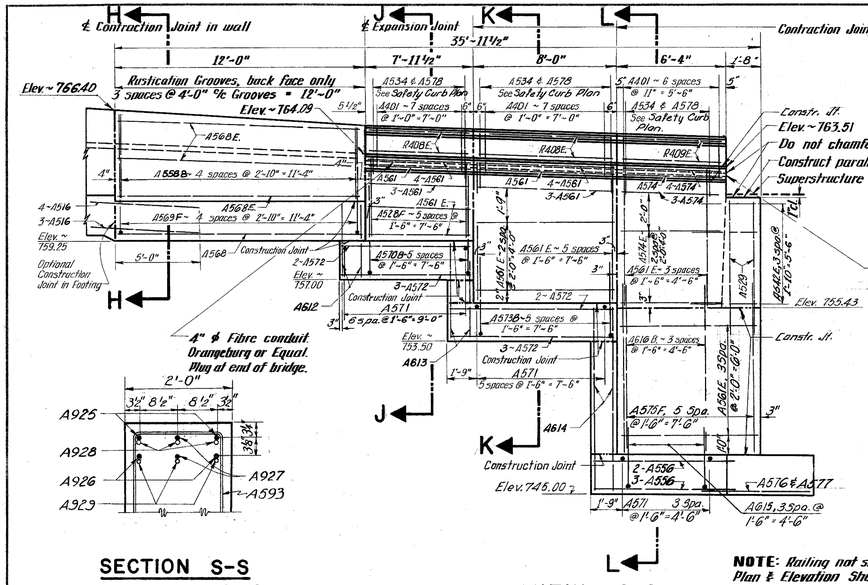
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| J.M. | K.E.A. | K.E.A. | A.S.J. | E.Roberts 6-5-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27096

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

264
307

JEFFERSON COUNTY
JEF-7-13.53



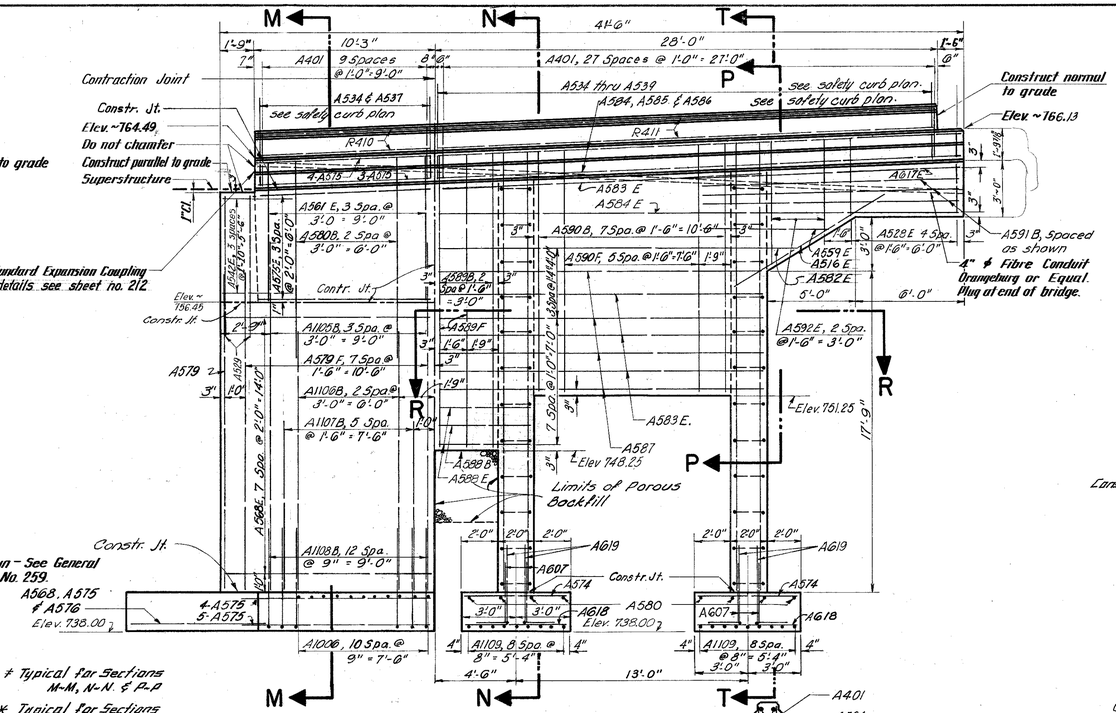




SECTION S-S

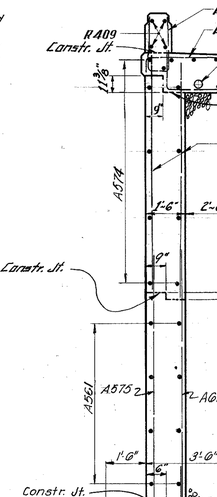
VIEW C-C

NOTE: Railing not shown - See General Plan & Elevation Sheet No. 259.

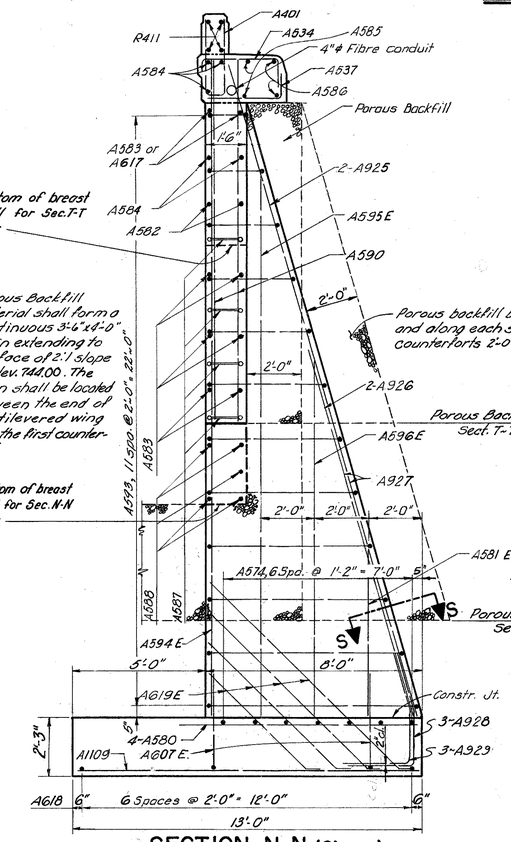



VIEW D-D

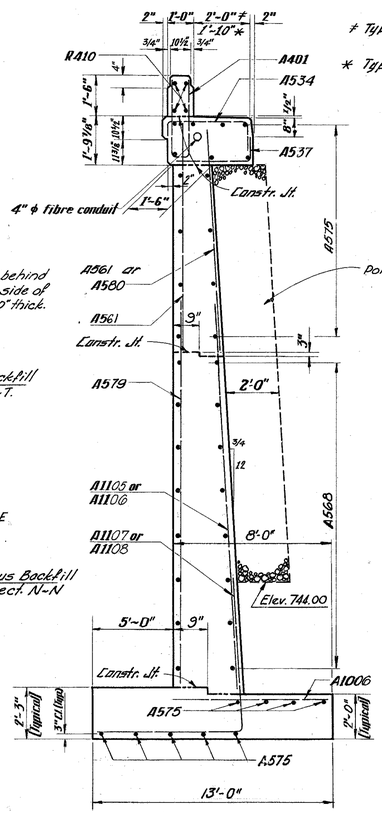
NOTE:
1. For details not shown see Sheet No's 261, 262 & 263
2. Dimensions in Section M-M are typical for all other Sections unless otherwise shown or noted.




SECTION L-L



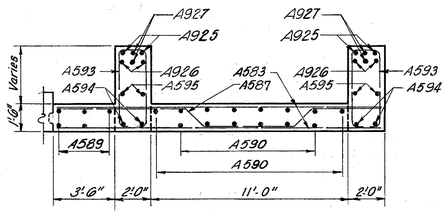

SECTION N-N (Shown)
SECTION T-T (Similar except as noted)



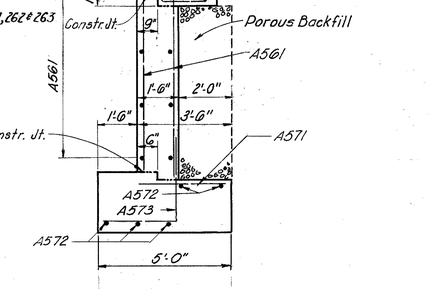

SECTION M-M

* Typical for Sections M-M, N-N & P-P
* Typical for Sections J-J, K-K & L-L

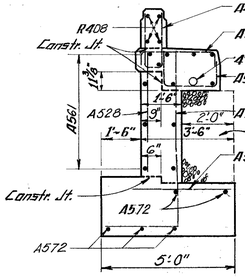
LEGEND
B. - indicates back face.
F. - indicates front face.
E. - indicates each face.



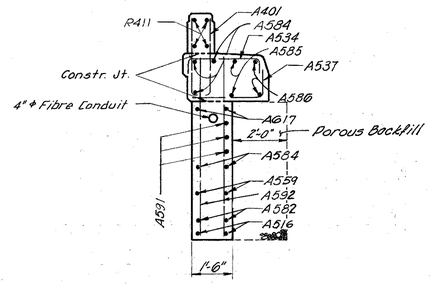

SECTION R-R



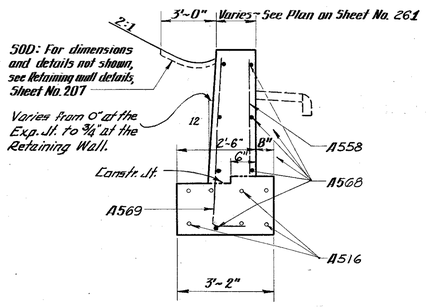

SECTION K-K




SECTION J-J




SECTION P-P




SECTION H-H

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# WINGWALLS-ABUTMENT "B"
BRIDGE NO. JEF-7-1392
OVER McLISTER STREET

JEFFERSON COUNTY STA. 703+51.68

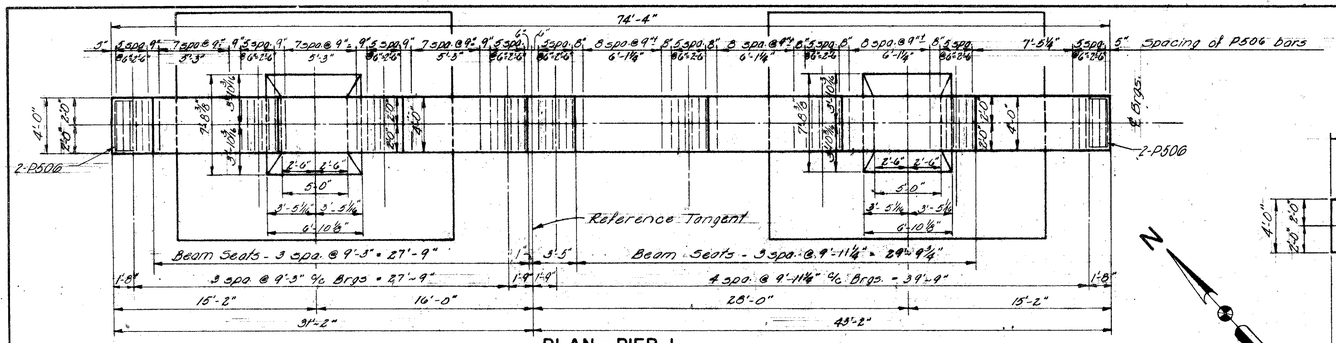
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| J.M. | K.E.A. | Simpson | A.S.J. | E. Roberts 6-5-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27085

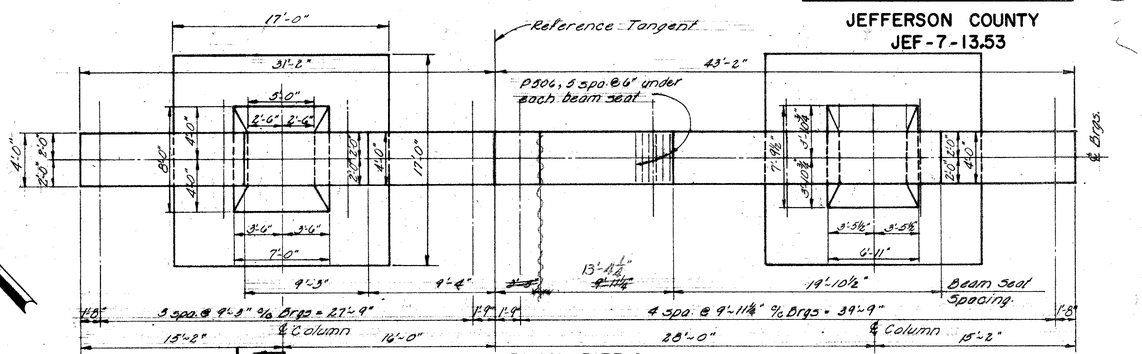
| FED. RD DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

265
307

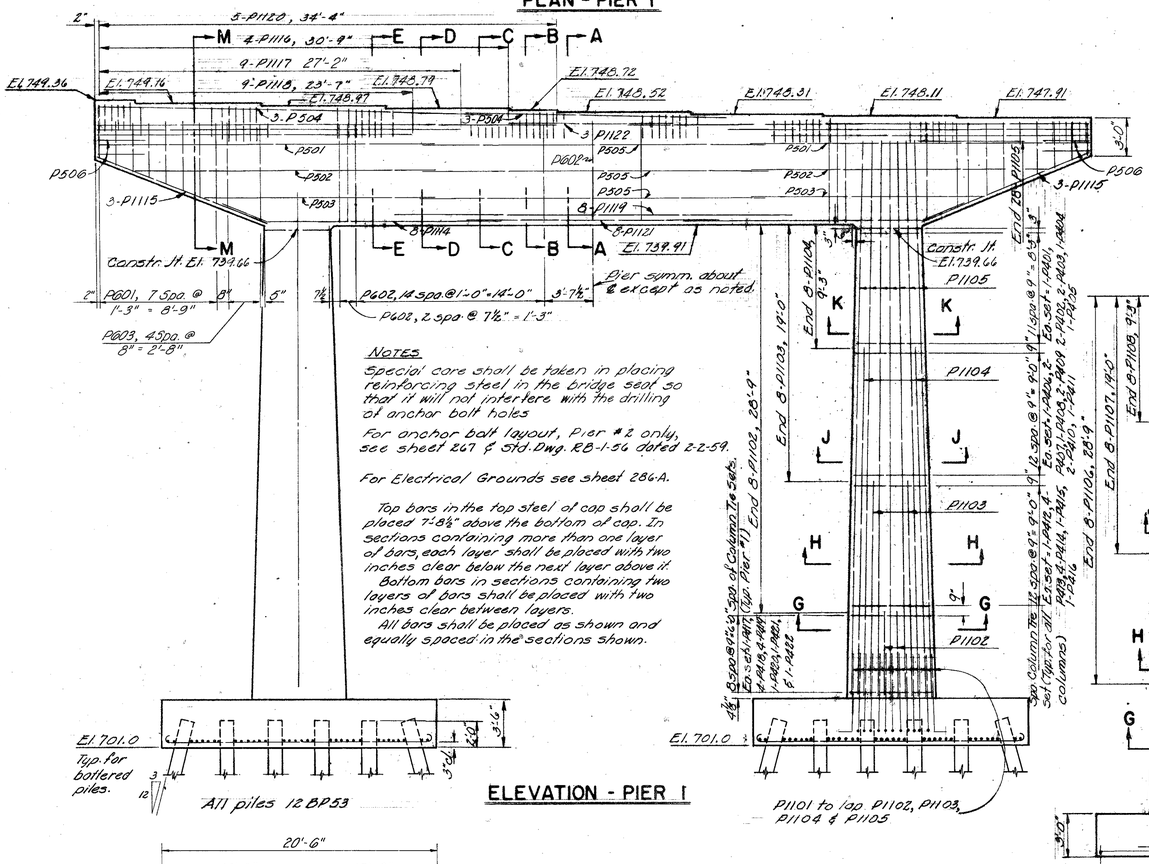
JEFFERSON COUNTY
JEF-7-13.53




PLAN - PIER 1




PLAN - PIER 2




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

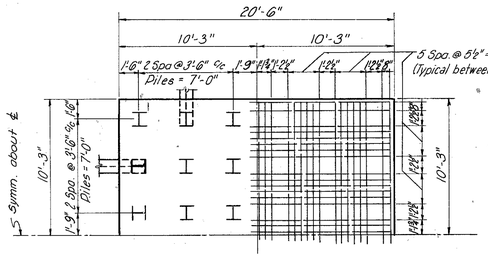
For anchor bolt layout, Pier #2 only, see sheet 267 & Std. Dwg. RB-1-56 dated 2-2-59.

For Electrical Grounds see sheet 286-A.

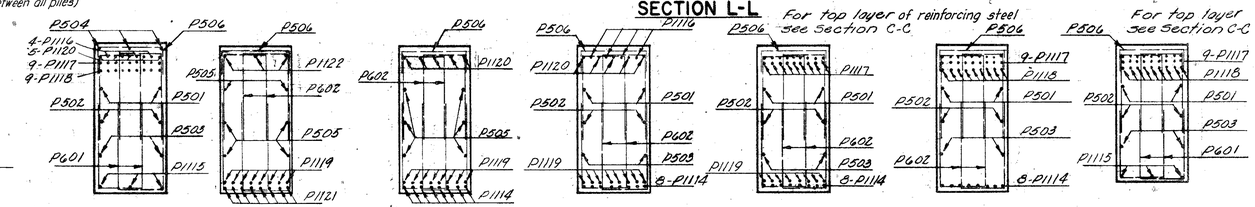
Top bars in the top steel of cap shall be placed 7-8¾" above the bottom of cap. In sections containing more than one layer of bars, each layer shall be placed with two inches clear below the next layer above it.

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.




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

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# PIERS

BRIDGE NO. JEF-7-1392
OVER McLISTER ST.

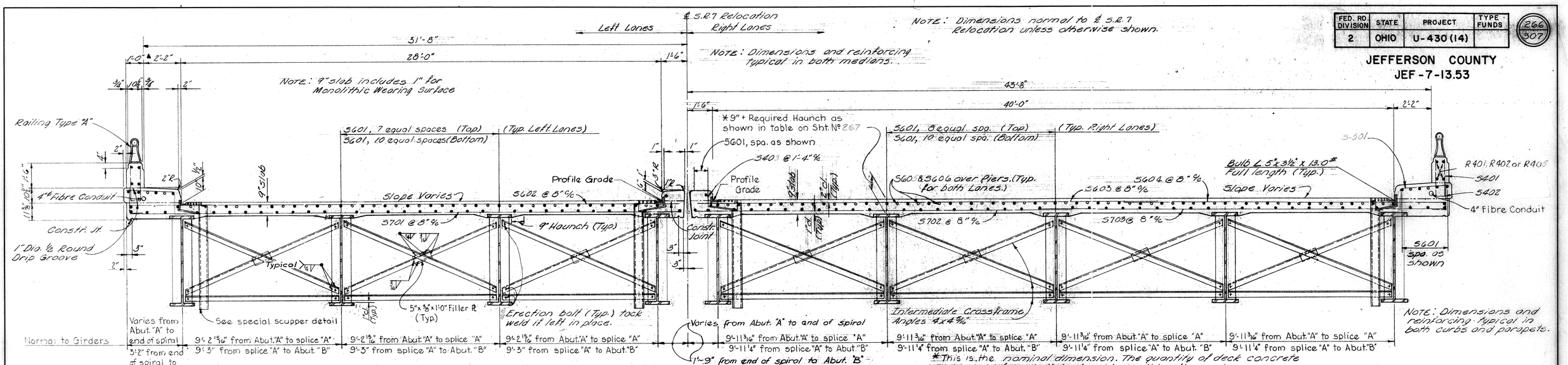
JEFFERSON COUNTY STA. 703 + 51.68

| Designed | Drawn | Traced | Checked | Reviewed | Date | Revised |
|---|---|---|---|---|---|---|
| F.A. | B.B. | | P.M. | E. Roberts 6-17-59 | 7-20-60 | |

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

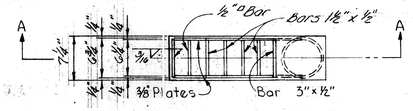
266
307

**JEFFERSON COUNTY**
**JEF-7-13.53**

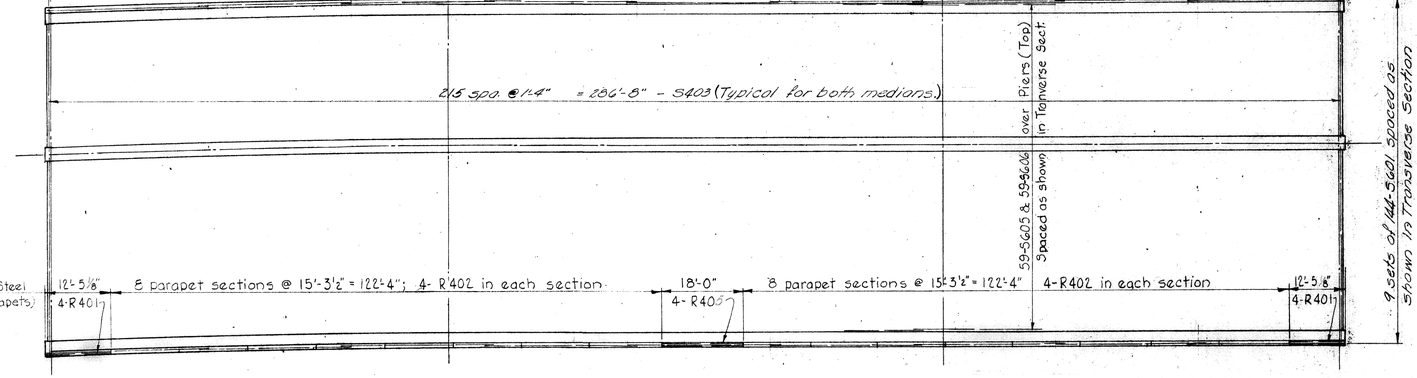



TRANSVERSE SECTION

* 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 conformation required to place it parallel to the finished grade




PLAN OF SPECIAL SCUPPER




DECK REINFORCING PLAN

PARAPET & CURB STEEL DETAIL

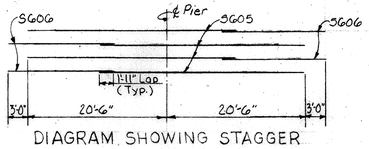
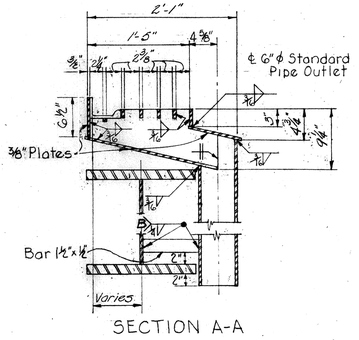



DIAGRAM SHOWING STAGGER OF S605 & S606 BARS OVER PIERS




SECTION A-A

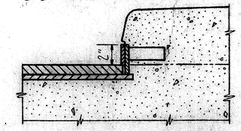
NOTES:

- 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.

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.



END FINISH AT MEDIAN

NOTE: For details not shown see Curb Plate Details on Std. Dwg. CSB-2-56, Revised 2-2-59

PAINTING

After erection and after the shop coat has been cleaned and, where necessary, repainted in accordance with Sec. 518.04, 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.**

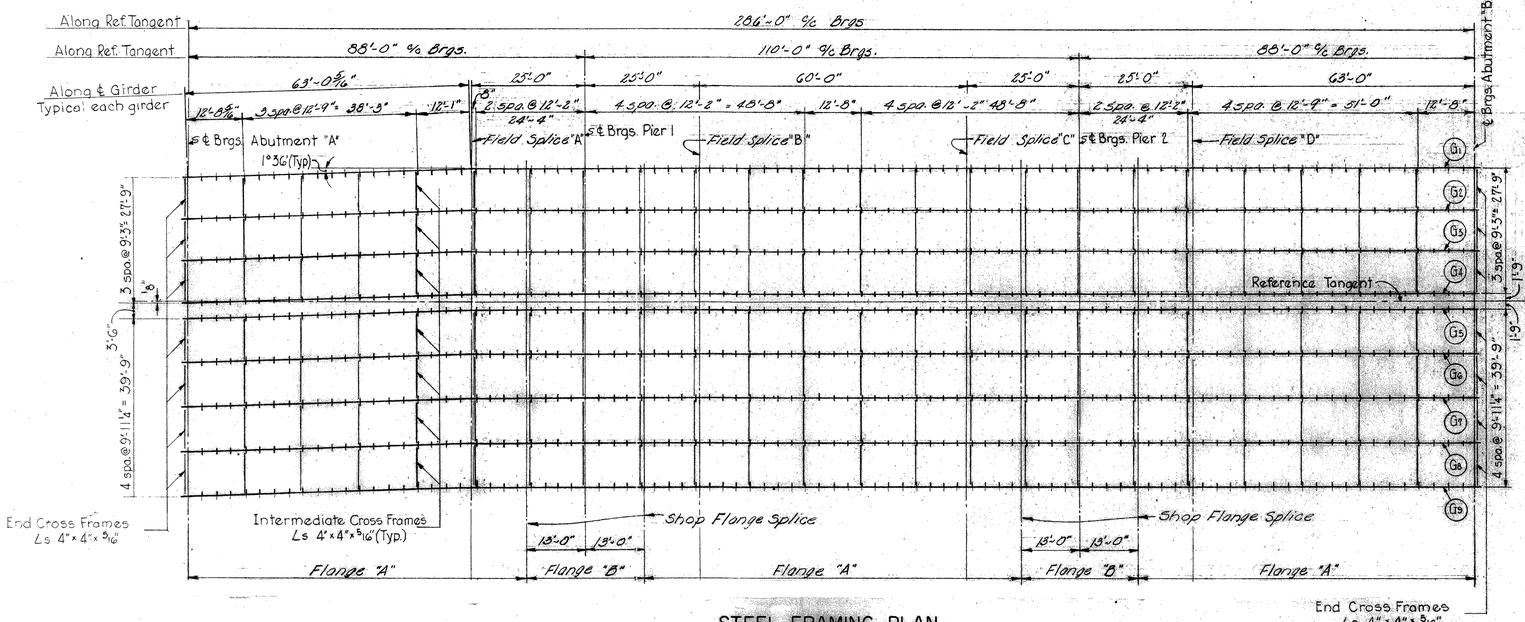
JEFFERSON COUNTY STA. 703+51.68

| Designed | Drawn | Traced | Checked | Reviewed Date | Revised |
|---|---|---|---|---|---|
| P.M. | BDB | | F.A. | E. Roberts 6-5-59 | |

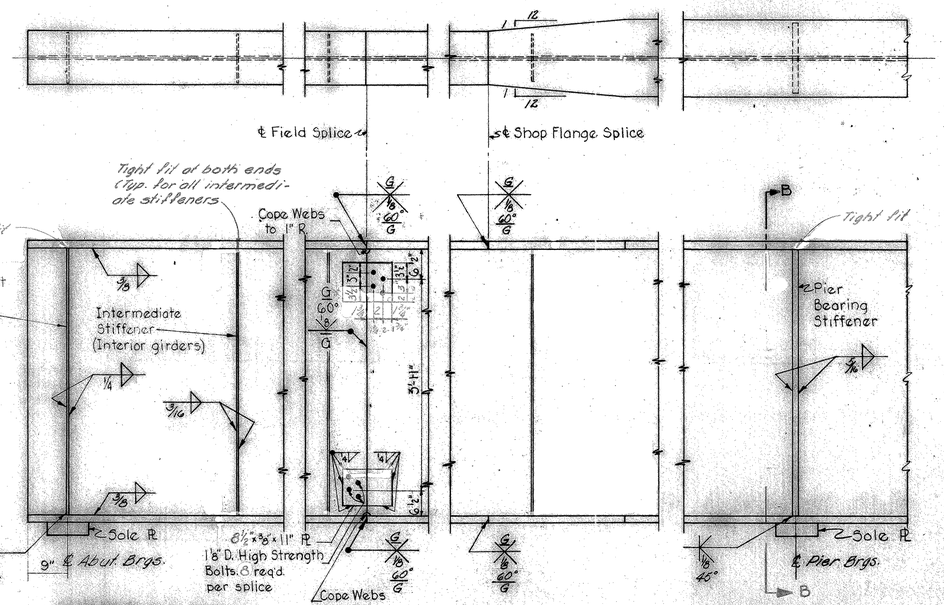
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

267
307

**JEFFERSON COUNTY**
**JEF-7-13.53**

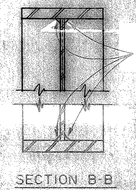



## STEEL FRAMING PLAN



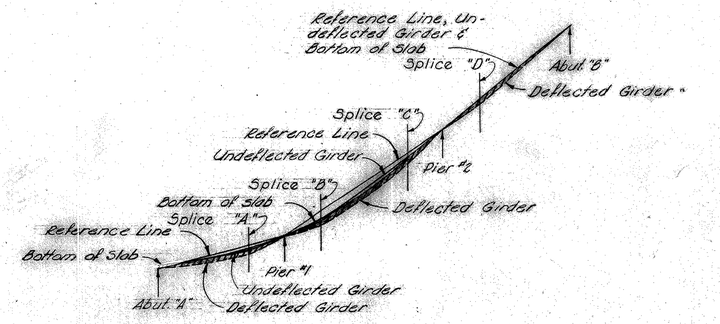

## GIRDER DETAILS

| TABLE OF GIRDER MATERIALS AND BEARINGS | | |
|---|---|---|
| GIRDER Nº | G1, G2, G3 & G4 | G5, G6, G7, G8 & G9 |
| Web | 60 × 3/8 | 60 × 5/8 |
| Flange "A" | 12 × 1 5/8 | 13 × 1 5/8 |
| Flange "B" | 17 × 1 5/8 | 18 × 1 5/8 |
| | | |
| Abutment Brg. Stiffeners | 2 (5½ × ¾) | 2 (6 × ¾) |
| Pier Bearing Stiffeners | 2 (8 × 1⅛) | 2 (8½ 1⅛) |
| Abutment Rockers | R-150 | R-150 |
| Pier Nº1 Rockers | R-300 | R-325 |
| Pier Nº2 Bolsters | B-300 | B-325 |
| Intermediate Stiffeners: Flge. "A" | 5 × 5/16 | 5 × 5/16 |
| Flge. "B" | 7 × 7/16 | 7 × 7/16 |




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 CAMBER, DEFLECTIONS & HAUNCHES*

| LOCATION | ABUTMENT "A" | | | | | | | | SPLICE "A" | | | | | | | | PIER Nº1 | SPLICE "B" | | SPLICE "C" | PIER Nº2 | SPLICE "D" | | ABUT "B" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GIRDER Nº | $G_1$ | $G_2$ | $G_3$ | $G_4$ | $G_5$ | $G_6$ | $G_7$ | $G_8$ | $G_9$ | $G_1$ | $G_2$ | $G_3$ | $G_4$ | $G_5$ | $G_6$ | $G_7$ | $G_8$ | $G_9$ | All Girders | $G_1$ $G_2$ $G_3$ $G_4$ $G_5$ $G_6$ $G_7$ $G_8$ $G_9$ | $G_4$ $G_5$ | $G_1$ $G_2$ $G_3$ $G_4$ $G_5$ $G_6$ $G_7$ $G_8$ $G_9$ | $G_4$ $G_5$ | All Girders | $G_1$ $G_2$ $G_3$ $G_4$ $G_5$ $G_6$ $G_7$ $G_8$ $G_9$ | All Girders |
| 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 | 0 | -1/16 | -1/16 | -1/16 | -1/16 | 0 | -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 | 0 | -1/4 | -3/16 | -1/4 | -3/16 | 0 | -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 | 0 | +3/4 | +3/4 | +3/8 | +3/8 | 0 |
| 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 | 0 | +9/16 | +1/2 | +5/16 | +1/4 | 0 |
| Sum of deflections, convexity and haunch | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | +1/8 | +1/16 | +1 | +1 | +1 | +1 1/16 | +1 1/16 | +1 3/16 | +1 3/8 | 0 | +1 | +1 | +3/8 | +3/8 | 0 |
| Required camber. ✳ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1/8 | -15/16 | -1 | -1 | -1 | -1 3/16 | -1 1/4 | -1 5/16 | -1 3/8 | 0 | -1 | -1 | -3/8 | -3/8 | 0 |
| 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 | 0 | +5/8 | +1/2 | +3/8 | +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 | 3¾ | 3½ | 7/8 | 13 | 19 3/8 | 14 | 28 | 25 | 12 7/8 | 3¼ | 11 9/16 |

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. | 6-55 | |

# 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

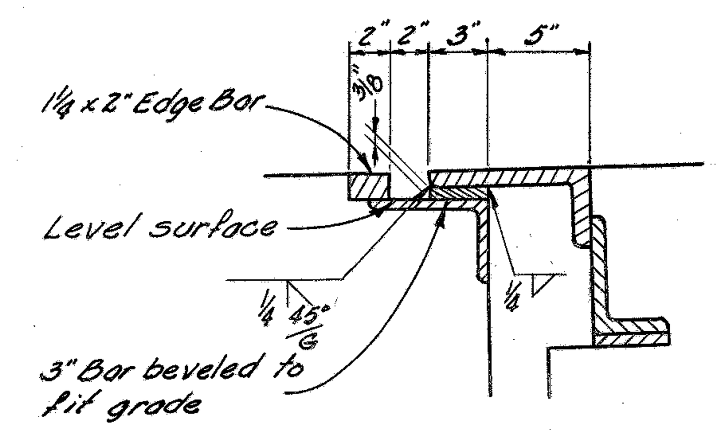
AS SOON AS THE RADIOGRAPHING OF THE WELDMENTS ON THE FULL LENGTH OF EACH FLANGE OR WEB PLATE BETWEEN FIELD SPLICES HAS BEEN COMPLETED, THE CONTRACTOR SHALL SEND TO THE STATE THE PROCESSED CONTACT FILM (THAT FILM CLOSEST TO THE SOURCE OF RADIATION) OF ALL ORIGINAL AND RETAKE RADIOGRAPHS. THESE RADIOGRAPHS 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

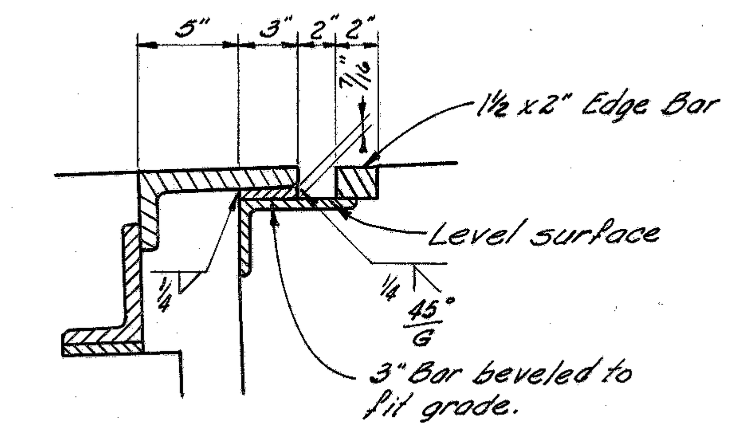
AFTER THE COMPLETION OF THE RADIOGRAPHIC INSPECTION OF WELDS, THE CONTRACTOR SHALL FURNISH THE STATE A COMPLETE REPORT OF THE COST OF PERFORMING THIS WORK, SEPARATED INTO THE ITEMS MENTIONED IN THE FOLLOWING PARAGRAPH.

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.



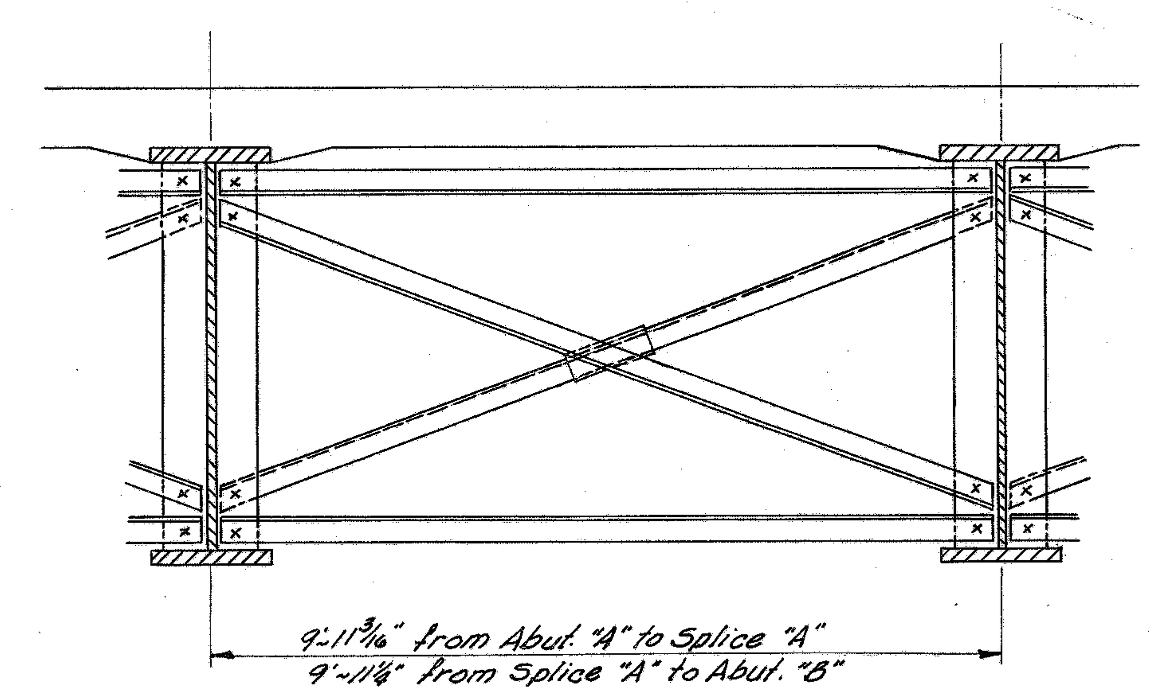

ABUTMENT -A-




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*

## 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.*

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 | |

K+E 186 IMPERIAL TRACING CLOTH T.M. 60469

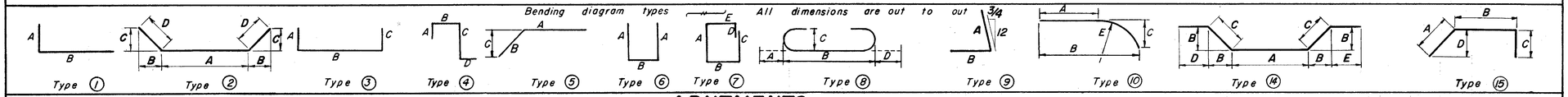
| FED. RD. DIVISON | STATE | PROJECT | |
|---|---|---|---|
| | OHIO | U-430(14) | |

268
307

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 |
|---|---|---|---|---|---|---|---|---|---|---|
| A406 | 4 | 4 | 17'-6" | sf. | Included with railing for payment. | | | | | |
| A407 | 4 | 4 | 20'-5" | sf. | | | | | | |
| A408 | 8 | 4 | 7'-8" | sf. | | | | | | |
| A409 | 4 | 4 | 6'-0" | sf. | | | | | | |
| A410 | 4 | 4 | 9'-11" | sf. | | | | | | |
| A411 | 4 | 4 | 27'-8" | sf. | | | | | | |
| A501 | 100 | 4 | 6'-6" | 6 | 3'-1" | 0'-6½" | | | | 434 |
| | | | | | | | | | | |
| A501 | 17 | 5 | 21'-0" | sf. | | | | | | 372 |
| A502 | 10 | 5 | 17'-4" | sf. | | | | | | 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" | sf. | | | | | | 218 |
| A506 | 4 | 5 | 7'-2" | sf. | | | | | | 30 |
| A507 | 19 | 5 | 16'-9" | sf. | | | | | | 332 |
| A508 | 24 | 5 | 18'-8" | sf. | | | | | | 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 | 2 sets - 15 ea. set | 5 | 11'-6" to | | | 3'-11⅝" to | | | 3'-11⅝" to | |
| | | | 17'-0" p | 7 | 1'-8" | 6'-3½" p | 1'-8" | 1'-8" | 6'-3½" p | 446 |
| A512 | 2 sets - 7 ea. set | 5 | 20'-0" to | | | 7'-4⅝" to | | | 7'-4⅝" to | |
| | | | 39'-9" w | 7 | 1'-8" | 17'-8" w | 1'-8" | 1'-8" | 17'-8" w | 436 |
| A513 | 4 sets - 4 ea. set | 5 | 5'-8" to | | | | | | | |
| | | | 15'-5" z | sf. | | | | | | 176 |
| A514 | 8 | 5 | 32'-0" | sf. | | | | | | 267 |
| A515 | 8 | 5 | 20'-0" | sf. | | | | | | 167 |
| A516 | 13 | 5 | 10'-0" | sf. | | | | | | 136 |
| A517 | 27 | 5 | 22'-9" | sf. | | | | | | 641 |
| A518 | 13 | 5 | 23'-6" | 14 | 6'-6" | 1'-2" | 1'-8" | 7'-8" | 6'-7" | 319 |
| A519 | 2 sets - 19 ea. set | 5 | 11'-7" to | | | 3'-7⅛" | | | 3'-7⅛" to | |
| | | | 23'-7" r | 7 | 1'-8" | 9'-7" r | 1'-8" | 1'-8" | 9'-7" r | 697 |
| A520 | 8 | 5 | 18'-0" | sf. | | | | | | 150 |
| A521 | 7 | 5 | 12'-0" | sf. | | | | | | 88 |
| A522 | 8 | 5 | 6'-0" | sf. | | | | | | 50 |
| A523 | 53 | 5 | 13'-8" | sf. | | | | | | 755 |
| A524 | 1 | 5 | 41'-7" | 7 | 1'-8" | 18'-7" | 1'-8" | 1'-8" | 18'-7" | 43 |
| A525 | 12 | 5 | 8'-8" | sf. | | | | | | 108 |
| A526 | 26 | 5 | 32'-2" | sf. | | | | | | 872 |
| A527 | 23 | 5 | 7'-5" | sf. | | | | | | 193 |
| A528 | 50 | 5 | 4'-5" | sf. | | | | | | 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" | sf. | | | | | | 25 |
| A532 | 2 | 5 | 13'-2" | sf. | | | | | | 27 |
| A533 | 9 | 5 | 19'-0" | sf. | | | | | | 178 |
| A534 | 51 | 5 | 4'-6" | 3 | 0'-6" | 2'-9" | 1'-6" | | | 239 |
| A535 | 3 sets - 4 ea. set | 5 | 4'-5" to | | | 2'-8⅞" to | | | | |
| | | | 3'-8" k | 3 | 0'-6" | 1'-11" k | 1'-6" | | | 51 |
| A536 | 3 sets - 4 ea. 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 | 3 sets - 4 ea. set | 5 | 3'-0" to | | | 2'-8" | | | | |
| | | | 2'-3" k | 1 | 0'-6" | to 1'-11⅝" | | | | 33 |
| A539 | 3 sets - 4 ea. set | 5 | 1'-11" to | | | 1'-7" to | | | | |
| | | | 0'-9" L | 1 | 0'-6" | 0'-5½" L | | | | 17 |
| A540 | 4 | 5 | 15'-4" | sf. | | | | | | 64 |
| A541 | 2 | 5 | 19'-4" | 10 | 7'-4" | 19'-0" | 2'-4" | | 29'-9" | 40 |
| A542 | 34 | 5 | 3'-9" | sf. | | | | | | 133 |
| A543 | 6 | 5 | 14'-2" | sf. | | | | | | 89 |
| A544 | 2 | 5 | 28'-0" | sf. | | | | | | 58 |
| A545 | 2 | 5 | 31'-6" | sf. | | | | | | 66 |
| A546 | 2 | 5 | 15'-0" | sf. | | | | | | 31 |
| A547 | 23 | 5 | 6'-0" | sf. | | | | | | 144 |
| A548 | 1 set - 7 per set | 5 | 7'-1" to | | | 1'-3⅞" to | | | 1'-3⅞" to | |
| | | | 9'-4" h | 7 | 1'-8" | 2'-5⅛" h | 1'-8" | 1'-8" | 2'-5⅛" h | 60 |
| A549 | 1 set - 13 per set | 6 | 9'-9" to | | | 2'-7⅞" to | | | 2'-7⅞" to | |
| | | | 15'-9" k | 7 | 1'-8" | 5'-7⅞" k | 1'-8" | 1'-8" | 5'-7⅞" k | 179 |
| A550 | 22 | 5 | 4'-0" | sf. | | | | | | 92 |
| A551 | 7 | 5 | 21'-11" | sf. | | | | | | 160 |
| A552 | 2 | 5 | 18'-4" | sf. | | | | | | 38 |
| A553 | 2 | 5 | 22'-4" | 10 | 10'-4" | 22'-0" | 2'-4" | | 29'-9" | 47 |
| A554 | 8 | 5 | 16'-6" | sf. | | | | | | 138 |
| A555 | 16 | 5 | 10'-6" | sf. | | | | | | 175 |
| A556 | 22 | 5 | 7'-5" | sf. | | | | | | 170 |
| A557 | 10 | 5 | 17'-6" | sf. | | | | | | 183 |
| A558 | 1 set - 5 per set | 5 | 3'-11" to | | | | | | | |
| | | | 4'-8" h | sf. | | | | | | 22 |
| A559 | 5 | 5 | 7'-0" | sf. | | | | | | 37 |
| A560 | 24 | 5 | 35'-1" | sf. | | | | | | 878 |
| A561 | 75 | 5 | 7'-8" | sf. | | | | | | 600 |
| A562 | 21 | 5 | 19'-9" | sf. | | | | | | 433 |
| A563 | 7 | 5 | 11'-4" | sf. | | | | | | 83 |
| A564 | 7 | 5 | 21'-3" | sf. | | | | | | 155 |
| A565 | 25 | 5 | 21'-2" | sf. | | | | | | 552 |
| A566 | 9 | 5 | 15'-8" | sf. | | | | | | 147 |
| A567 | 8 | 5 | 22'-8" | sf. | | | | | | 189 |
| A568 | 24 | 5 | 11'-8" | sf. | | | | | | 292 |
| A569 | 1 set - 5 per set | 5 | 7'-3" to | | | 5'-10⅞" to | | | | |
| | | | 8'-0" h | 1 | 1'-7" | 6'-7⅛" h | | | | 40 |
| A570 | 6 | 5 | 8'-11" | 1 | 2'-8" | 6'-5" | | | | 54 |
| A571 | 17 | 5 | 3'-6" | sf. | | | | | | 62 |
| A572 | 10 | 5 | 9'-1" | sf. | | | | | | 95 |
| A573 | 6 | 5 | 5'-10" | 1 | 2'-8" | 3'-4" | | | | 37 |
| A574 | 28 | 5 | 5'-8" | sf. | | | | | | 165 |
| A575 | 31 | 5 | 9'-10" | sf. | | | | | | 318 |
| A576 | 2 | 5 | 8'-6" | sf. | | | | | | 18 |
| A577 | 1 | 5 | 5'-3" | sf. | | | | | | 5 |
| A578 | 17 | 5 | 4'-9" | 6 | 1'-5" | 2'-2" | | | | 64 |
| A579 | 8 | 5 | 18'-0" | sf. | | | | | | 150 |
| A580 | 8 | 5 | 9'-6" | sf. | | | | | | 79 |
| A581 | 4 | 5 | 6'-0" | sf. | | | | | | 25 |
| A582 | 2 | 5 | 20'-0" | sf. | | | | | | 42 |
| A583 | 8 | 5 | 18'-2" | sf. | | | | | | 152 |
| A584 | 5 | 5 | 29'-2" | sf. | | | | | | 152 |
| A585 | 2 | 5 | 26'-0" | sf. | | | | | | 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" | sf. | | | | | | 27 |
| A589 | 5 | 5 | 16'-5" | sf. | | | | | | 86 |
| A590 | 14 | 5 | 13'-8" | sf. | | | | | | 200 |
| A591 | 3 | 5 | 14'-3" | sf. | | | | | | 45 |
| A592 | 2 sets - 3 ea. set | 5 | 5'-6" to | | | | | | | |
| | | | 6'-10" f | sf. | | | | | | 39 |
| A593 | 2 sets - 12 ea. 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" | sf. | | | | | | 100 |
| A595 | 4 | 5 | 20'-0" | sf. | | | | | | 83 |
| A596 | 4 | 5 | 13'-0" | sf. | | | | | | 54 |
| | | | | | | | | | | |
| AG01 | 148 | 6 | 20'-2" | 7 | 8'-6" | 1'-5" | 7'-2" | 3'-0" | 0'-9" | 4483 |
| AG02 | 105 | 6 | 5'-5" | 5 | 4'-5" | 1'-0" | 0'-8½" | | | 854 |
| AG03 | 4 sets - 8 ea. set | 6 | 6'-6" to | | | 5'-6" to | | | | |
| | | | 17'-0" v | 5 | 16'-0" v | 1'-0" | 0'-8½" | | | 545 |
| AG04 | 16 | 6 | 5'-5" | 1 | 1'-0" | 4'-7" | | | | 130 |
| AG05 | 46 | 6 | 15'-3 | sf. | | | | | | 1054 |
| AG06 | 4 sets - 4 ea. set | 6 | 5'-6" to | | | 4'-6" to | | | | |
| | | | 11'-0" x | 5 | 10'-0" x | 1'-0" | 0'-8½" | | | 198 |
| AG07 | 20 | 6 | 4'-10" | 1 | 1'-0" | 4'-0" | | | | 145 |
| AG08 | 2 sets - 3 ea. set | 6 | 5'-6" to | | | 4'-6" to | | | | |
| | | | 7'-6" u | 5 | 6'-6" u | 1'-0" | 0'-8½" | | | 59 |
| AG09 | 4 | 6 | 4'-7" | 1 | 1'-0" | 3'-9" | | | | 28 |
| AG10 | 18 | 6 | 8'-7" | sf. | | | | | | 124 |
| AG11 | 22 | 6 | 5'-7" | sf. | | | | | | 184 |
| AG12 | 6 | 6 | 3'-10" | sf. | | | | | | 35 |
| AG13 | 10 | 6 | 5'-1" | sf. | | | | | | 76 |
| AG14 | 10 | 6 | 10'-1" | sf. | | | | | | 151 |
| AG15 | 4 | 6 | 6'-3" | 1 | 2'-8" | 3'-9" | | | | 38 |
| AG16 | 4 | 6 | 10'-4" | sf. | | | | | | 62 |
| AG17 | 2 | 6 | 14'-3" | sf. | | | | | | 43 |
| AG18 | 14 | 6 | 5'-8" | sf. | | | | | | 119 |
| AG19 | 4 sets - 4 ea. set | 6 | 6'-0" to | | | 5'-0⅞" | | | | |
| | | | 11'-3" y | 5 | 10'-3" y | 1'-0" | 0'-8½" | | | 207 |
| | | | | | | | | | | |
| A701 | 26 | 7 | 7'-9" | sf. | | | | | | 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" | sf. | | | | | | 600 |
| A705 | 12 | 7 | 5'-10" | sf. | | | | | | 143 |
| A706 | 5 | 7 | 11'-0" | sf. | | | | | | 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" | sf. | | | | | | 384 |
| A710 | 29 | 7 | 6'-7" | sf. | | | | | | 390 |
| | | | | | | | | | | |
| A801 | 124 | 8 | 23'-11" | sf. | | | | | | 7918 |
| A802 | 39 | 8 | 7'-8" | sf. | | | | | | 798 |
| | | | | | | | | | | |
| A901 | 4 | 9 | 34'-3" | sf. | | | | | | 446 |
| A902 | 4 | 9 | 33'-0" | sf. | | | | | | 449 |
| A903 | 4 | 9 | 28'-0" | sf. | | | | | | 381 |
| A904 | 4 | 9 | 24'-6" | sf. | | | | | | 333 |
| A905 | 4 | 9 | 21'-6" | sf. | | | | | | 292 |
| A906 | 8 | 9 | 6'-3" | 15 | 2'-10" | 2'-8" | 1'-0" | 0'-6⅜" | 2'-9⅜" | 170 |
| A907 | 8 | 9 | 6'-0" | 15 | 2'-10" | 2'-5" | 1'-0" | 0'-6⅜" | 2'-9⅜" | 163 |
| A908 | 4 | 9 | 5'-9" | 15 | 2'-10" | 2'-2" | 1'-0" | 0'-6⅜" | 2'-9⅜" | 78 |
| A909 | 4 | 9 | 23'-0" | sf. | | | | | | 313 |
| A910 | 4 | 9 | 20'-4" | sf. | | | | | | 277 |
| A911 | 4 | 9 | 14'-8" | sf. | | | | | | 198 |
| A912 | 4 | 9 | 10'-2" | sf. | | | | | | 138 |
| A913 | 8 | 9 | 5'-6" | 15 | 2'-10" | 1'-11" | 1'-0" | 0'-10½" | 2'-8⅜" | 150 |
| A914 | 8 | 9 | 5'-3" | 15 | 2'-10" | 1'-8" | 1'-0" | 0'-10½" | 2'-8⅜" | 149 |
| A915 | 2 | 9 | 38'-0" | sf. | | | | | | 258 |
| A916 | 2 | 9 | 28'-6" | sf. | | | | | | 194 |
| A917 | 2 | 9 | 20'-6" | sf. | | | | | | 139 |
| A918 | 2 | 9 | 11'-1" | sf. | | | | | | 75 |
| A919 | 4 | 9 | 5'-5" | 15 | 2'-10" | 1'-7" | 1'-3" | 0'-4⅞" | 2'-9⅜" | 74 |
| A920 | 4 | 9 | 5'-2" | 15 | 2'-10" | 1'-4" | 1'-3" | 0'-4⅞" | 2'-9⅜" | 70 |
| A921 | 13 | 9 | 9'-2" | sf. | | | | | | 405 |
| A922 | 2 | 9 | 7'-1" | sf. | | | | | | 48 |
| A923 | 18 | 9 | 8'-8" | sf. | | | | | | 330 |
| A924 | 6 | 9 | 7'-3" | sf. | | | | | | 148 |
| A925 | 4 | 9 | 25'-6" | sf. | | | | | | 347 |
| A926 | 4 | 9 | 14'-0" | sf. | | | | | | 218 |
| A927 | 4 | 9 | 10'-2" | sf. | | | | | | 138 |
| A928 | 6 | 9 | 5'-6" | 15 | 2'-10" | 1'-11" | 1'-0" | 0'-9¼" | 2'-8⅜" | 112 |
| A929 | 6 | 9 | 5'-3" | 15 | 2'-10" | 1'-8" | 1'-0" | 0'-9¼" | 2'-8⅜" | 107 |
| | | | | | | | | | | |
| A1001 | 26 | 10 | 13'-8" | sf. | | | | | | 1529 |
| A1002 | 7 | 10 | 11'-8" | sf. | | | | | | 351 |
| A1003 | 6 | 10 | 10'-8" | sf. | | | | | | 275 |
| A1004 | 14 | 10 | 14'-4" | 1 | 5'-11" | 9'-0" | | | | 863 |
| A1005 | 13 | 10 | 10'-10" | 1 | 5'-11" | 3'-3" | | | | 606 |
| A1006 | 11 | 10 | 8'-5" | sf. | | | | | | 398 |
| | | | | | | | | | | |
| A1101 | 9 | 11 | 15'-11" | sf. | | | | | | 761 |
| A1102 | 9 | 11 | 13'-6" | sf. | | | | | | 686 |
| 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" | sf. | | | | | | 420 |
| A1106 | 3 | 11 | 13'-4" | sf. | | | | | | 213 |
| A1107 | 6 | 11 | 8'-9" | sf. | | | | | | 279 |
| A1108 | 13 | 11 | 12'-8" | 1 | 7'-8" | 5'-4" | | | | 875 |
| A1109 | 18 | 11 | 12'-8" | sf. | | | | | | 1211 |
| | | | | | | | | | | 57,351 |

h Varies by 0'-2½"
k Varies by 0'-3"
L Varies by 0'-4½"
p Varies by 0'-2⅜"
r Varies by 0'-4"
s Varies by 0'-6⅛"
t Varies by 0'-8"
u Varies by 1'-0"
v Varies by 1'-6"
w Varies by 1'-7⅞"
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 | |

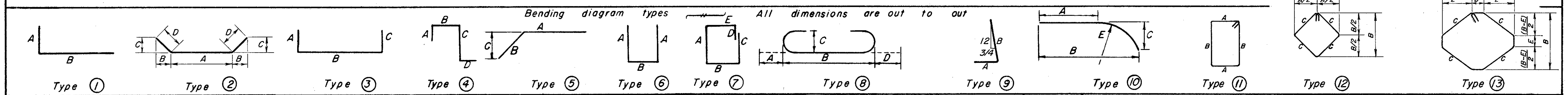
| FED. RD. DIVISON | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U430 (14) | |

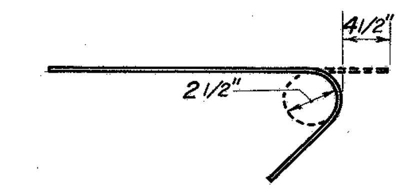


JEFFERSON COUNTY
JEF-7-13.53

# 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'-6¾" to | 3'-6¾" to | | | | 578 |
| | | | 19'-5" ⓚ | | 5'-0¼" ⓒ | 4'-5¾" ⓓ | | | | |
| P402 | 8 sets-12 ea. set | 4 | 9'-2 1/2" to | 11 | 10" to | 3'-6¾" to | | | | 657 |
| | | | 11'-3 1/4" ⓗ | | 11⅜" ⓐ | 4'-5¾" ⓓ | | | | |
| P403 | 8 sets-12 ea. set | 4 | 10'-9 1/2" to | 11 | 4'-6¾" to | 7½" to | | | | 729 |
| | | | 11'-11 1/4" ⓔ | | 5'-0¼" ⓒ | 8⅞" ⓐ | | | | |
| P404 | 4 sets-12 ea. set | 4 | 11'-9 1/2" to | 11 | 4'-6¾" to | 1'-1½" to | | | | 400 |
| | | | 13'-2" ⓕ | | 5'-0¼" ⓒ | 1'-4¼" ⓑ | | | | |
| P405 | 4 sets-12 ea. set | 4 | 12'-8" to | 12 | 4'-6¾" to | 3'-6¾" to | 3'-0¾" to | | | 436 |
| | | | 14'-6" ⓖ | | 5'-0¼" ⓒ | 4'-5¾" ⓓ | 3'-6¼" ⓒ | | | |
| P406 | 4 sets-13 ea. set | 4 | 19'-6" to | 11 | 5'-0½" to | 4'-6" to | | | | 729 |
| | | | 22'-6" ⓚ | | 5'-6½" ⓒ | 5'-6" ⓓ | | | | |
| P407 | 8 sets-13 ea. set | 4 | 10'-6" to | 11 | 6 1/2" | 4'-6" to | | | | 799 |
| | | | 12'-6" ⓖ | | | 5'-6" ⓓ | | | | |
| P408 | 4 sets-13 ea. set | 4 | 12'-11 1/2" to | 11 | 1'-9¼" to | 4'-6" to | | | | 489 |
| | | | 15'-2 1/2" ⓗ | | 1'-10¾" ⓐ | 5'-6" ⓓ | | | | |
| P409 | 8 sets-13 ea. set | 4 | 11'-3" to | 11 | 5'-0½" to | 4 1/2" to | | | | 825 |
| | | | 12'-6" ⓔ | | 5'-6½" ⓒ | 6" ⓐ | | | | |
| P410 | 8 sets-13 ea. set | 4 | 12'-0" to | 11 | 5'-0½" to | 9" to | | | | 877 |
| | | | 13'-3" ⓔ | | 5'-6½" ⓒ | 10 1/2" ⓐ | | | | |
| P411 | 4 sets-13 ea. set | 4 | 14'-7" to | 12 | 5'-0½" to | 4'-6" to | 3'-6½" to | | | 541 |
| | | | 16'-7" ⓖ | | 5'-6½" ⓒ | 5'-6" ⓓ | 4'-0½" ⓒ | | | |
| P412 | 4 sets-13 ea. set | 4 | 22'-6 1/2" to | 11 | 5'-6½" to | 5'-6¼" to | | | | 835 |
| | | | 25'-6½" ⓚ | | 6'-0½" ⓒ | 6'-6¼" ⓓ | | | | |
| P413 | 16 sets-13 ea. set | 4 | 12'-7 1/2" to | 11 | 7" | 5'-6¼" to | | | | 1,893 |
| | | | 14'-7 1/2" ⓖ | | | 6'-6¼" ⓓ | | | | |
| P414 | 16 sets-13 ea. set | 4 | 12'-5" to | 11 | 5'-6½" to | 5 1/2" to | | | | 1,812 |
| | | | 13'-8" ⓔ | | 6'-0½" ⓒ | 7" ⓐ | | | | |
| P415 | 4 sets-13 ea. set | 4 | 14'-10 1/2" to | 11 | 5'-6½" to | 1'-8¼" to | | | | 543 |
| | | | 16'-4 1/2" ⓕ | | 6'-0½" ⓒ | 1'-11¼" ⓑ | | | | |
| P416 | 4 sets-13 ea. set | 4 | 16'-9" to | 12 | 5'-6½" to | 5'-6¼" to | 4'-1" to | | | 617 |
| | | | 18'-9" ⓖ | | 6'-0½" ⓒ | 6'-6¼" ⓓ | 4'-7" ⓒ | | | |
| P417 | 2 sets-9 ea. set | 4 | 25'-8" to | 11 | 6'-0¾" to | 6'-6¾" to | | | | 321 |
| | | | 27'-8" ⓚ | | 6'-4¾" ⓒ | 7'-2¾" ⓓ | | | | |
| P418 | 8 sets-9 ea. set | 4 | 14'-9 1/2" to | 11 | 7 1/2" | 6'-6¾" to | | | | 743 |
| | | | 16'-1 1/2" ⓖ | | | 7'-2¾" ⓓ | | | | |
| P419 | 8 sets-9 ea. set | 4 | 13'-7 1/4" to | 11 | 6'-0¾" to | 6 3/8" to | | | | 676 |
| | | | 14'-5 1/4" ⓔ | | 6'-4¾" ⓒ | 7 3/8" ⓐ | | | | |
| P420 | 2 sets-9 ea. set | 4 | 16'-6" to | 11 | 6'-0¾" to | 1'-11¾" to | | | | 204 |
| | | | 17'-6" ⓕ | | 6'-4¾" ⓒ | 2'-1¾" ⓑ | | | | |
| P421 | 2 sets-9 ea. set | 4 | 18'-11" to | 12 | 6'-0¾" to | 6'-6¾" to | 4'-7½" to | | | 235 |
| | | | 20'-3" ⓖ | | 6'-4¾" ⓒ | 7'-2¾" ⓓ | 4'-11½" ⓒ | | | |
| P422 | 2 sets-9 ea. set | 4 | 20'-0" to | 13 | 6'-0¾" to | 6'-6¾" to | 3'-9" to | 1'-1¼" to | 1'-0¾" to | 251 |
| | | | 21'-8" ⓙ | | 6'-4¾" ⓒ | 7'-2¾" ⓓ | 4'-1" ⓒ | 1'-2¼" ⓐ | 1'-1¾" ⓐ | |
| P423 | 12 | 4 | 25'-8" to | 11 | 6'-0¾" to | 6'-6¾" to | | | | 217 |
| | | | 28'-5" ⓚ | | 6'-6¼" ⓒ | 7'-5¾" ⓓ | | | | |
| P424 | 4 sets-12 ea. set | 4 | 14'-9 1/2" to | 11 | 7 1/2" | 6'-6¾" to | | | | 504 |
| | | | 16'-7 1/2" ⓖ | | | 7'-5¾" ⓓ | | | | |
| P425 | 4 sets-12 ea. set | 4 | 13'-7 1/4" to | 11 | 6'-0¾" to | 6 3/8" to | | | | 455 |
| | | | 14'-9" ⓔ | | 6'-6¼" ⓒ | 7 3/4" ⓐ | | | | |
| P426 | 12 | 4 | 16'-6" to | 11 | 6'-0¾" to | 1'-11¾" to | | | | 138 |
| | | | 17'-10 1/2" ⓕ | | 6'-6¼" ⓒ | 2'-2½" ⓑ | | | | |
| P427 | 12 | 4 | 18'-11" to | 12 | 6'-0¾" to | 6'-6¾" to | 4'-7½" to | | | 160 |
| | | | 20'-9" ⓖ | | 6'-6¼" ⓒ | 7'-5¾" ⓓ | 5'-1" ⓒ | | | |
| P428 | 12 | 4 | 20'-0" to | 13 | 6'-0¾" to | 6'-6¾" to | 3'-9" to | 1'-1¼" to | 1'-0¾" to | 170 |
| | | | 22'-3 1/2" ⓙ | | 6'-6¼" ⓒ | 7'-5¾" ⓓ | 4'-2½" ⓒ | 1'-2⅝" ⓐ | 1'-2⅛" ⓐ | |
| P429 | 6 | 4 | 25'-8" to | 11 | 6'-0¾" to | 6'-6¾" to | | | | 105 |
| | | | 26'-11" ⓚ | | 6'-3¼" ⓒ | 6'-11¾" ⓓ | | | | |
| P430 | 4 sets-6 ea. set | 4 | 14'-9 1/2" to | 11 | 7½" | 6'-6¾" to | | | | 248 |
| | | | 16'-1 1/2" ⓖ | | | 6'-11¾" ⓓ | | | | |
| P431 | 4 sets-6 ea. set | 4 | 13'-7 1/4" to | 11 | 6'-0¾" to | 6 3/8" to | | | | 222 |
| | | | 14'-1 1/2" ⓔ | | 6'-3¼" ⓒ | 7" ⓐ | | | | |
| P432 | 6 | 4 | 16'-6" to | 11 | 6'-0¾" to | 1'-11¾" to | | | | 67 |
| | | | 17'-1 1/2" ⓕ | | 6'-3¼" ⓒ | 2'-1" ⓑ | | | | |
| P433 | 6 | 4 | 18'-11" to | 12 | 6'-0¾" to | 6'-6¾" to | 4'-7½" to | | | 77 |
| | | | 19'-9" ⓖ | | 6'-3¼" ⓒ | 6'-11¾" ⓓ | 4'-10" ⓒ | | | |
| P434 | 6 | 4 | 20'-0" to | 13 | 6'-0¾" to | 6'-6¾" to | 3'-9" to | 1'-1¼" to | 1'-0¾" to | 82 |
| | | | 21'-0½" ⓙ | | 6'-3¼" ⓒ | 6'-11¾" ⓓ | 3'-11½" ⓒ | 1'-1⅞" ⓐ | 1'-1⅜" ⓐ | |

## 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'-0½" | | | 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" ⓝ | | 4'-3" ⓚ | | | | | |
| 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" ⓚ | | 4'-9" ⓕ | | | | | |
| | | | | | | | | | | 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 |

ⓐ Varies by 1/8"
ⓑ Varies by 1/4"
ⓒ Varies by 1/2"
ⓓ Varies by 1"
ⓔ Varies by 1 1/4"
ⓕ Varies by 1 1/2"
ⓖ Varies by 2"
ⓗ Varies by 2 1/4"
ⓙ Varies by 2 1/2"
ⓚ Varies by 3"
ⓛ Varies by 4 1/2"
ⓜ Varies by 9"
ⓝ 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. | |
| | | | | | |

*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-7-1392**
**OVER Mc LISTER STREET**

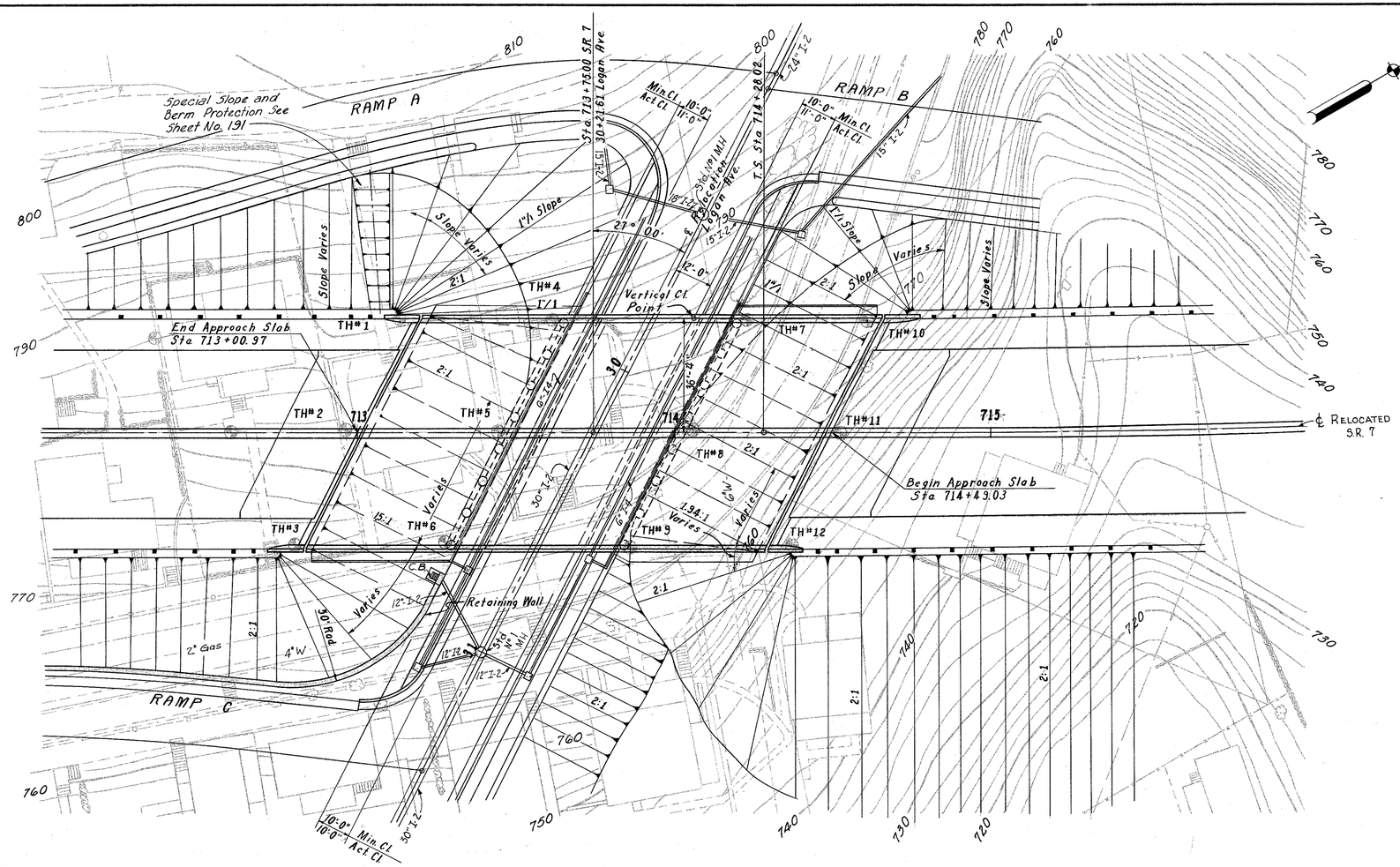
JEFFERSON COUNTY — STA. 703 + 51.68

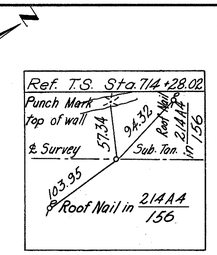
| Designed | Drawn | Traced | Checked | Reviewed Date | Revised |
|---|---|---|---|---|---|
| R.M. J.M. | Simpson | Simpson | F.A. A.S.J. | E. Roberts Oct. 2, 1959 | |

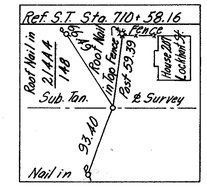
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

270
307

**JEFFERSON COUNTY**
**JEF-7-13.53**




## CURVE DATA

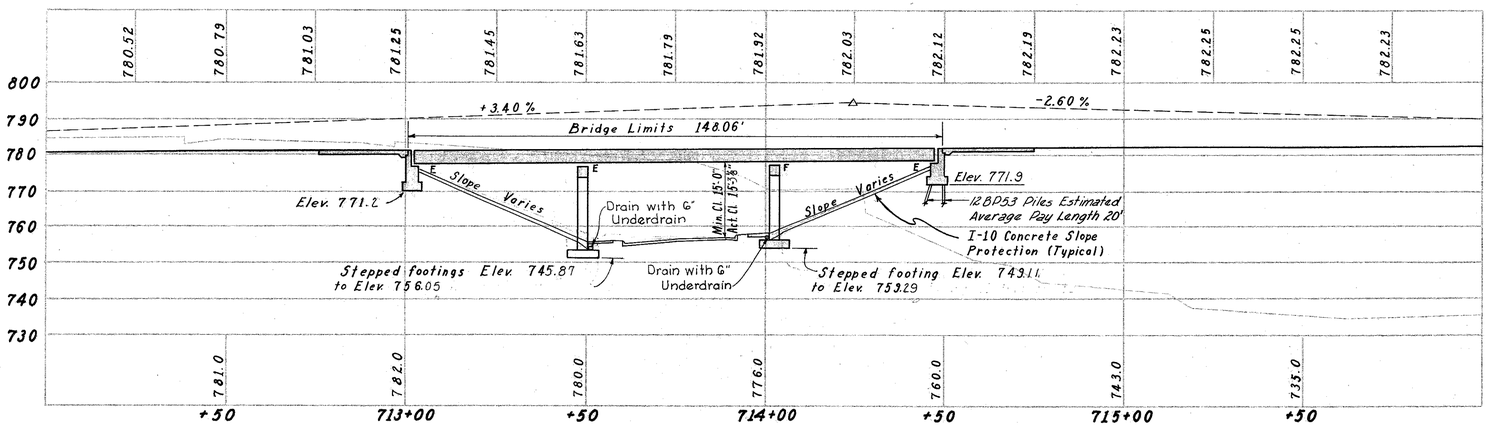
P.I. Sta. 721+43.24
Δ = 43° 00' Lt.
Dc = 4° 00'
Rc = 1432.39'
Ts = 715.22'
θs = 6° 00'
Es = 109.94'
Ls = 300.00'
Δc = 31° 00'
Lc = 775.00'
P = 2.62'
K = 149.95'
L.T. = 200.11'
S.T. = 100.10'

B.M. Sta. 715+00
R.R. Spike in Tel. Pole 322 Logan St.
150' Lt.
Elev. 789.68'

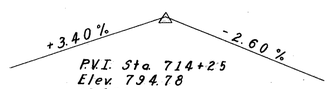
| Test Hole | Rock Elev. |
|---|---|
| 1 | 785.2 |
| 2 | 771.7 |
| 3 | 763.8 |
| 4 | 778.5 |
| 5 | 769.4 |
| 6 | 759.4 |
| 7 | 770.5 |
| 8 | 760.1 |
| 9 | 755.6 |
| 10 | 765.6 |
| 11 | 752.0 |
| 12 | 745.9 |

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




VERTICAL CURVE DATA

## PROPOSED STRUCTURE

Type: Continuous steel beam with reinf. Conc. deck and substructure.
Spans: 44'-55'-44' ℄ 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 |
| | JWA | J.D.R. | K.E.A. | J.M. | E.F.R. 10-18-58 |

| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U430 (14) | |

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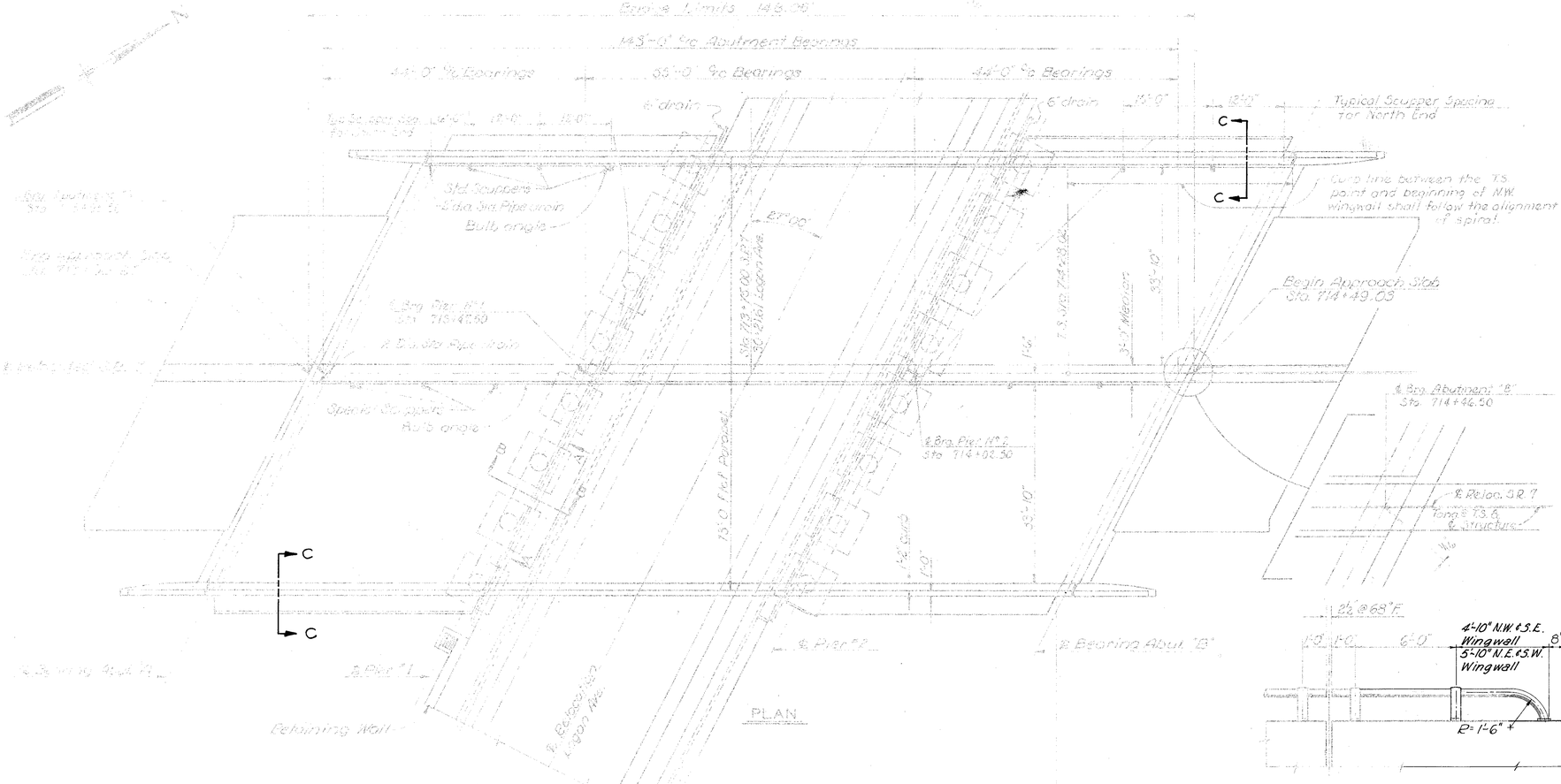
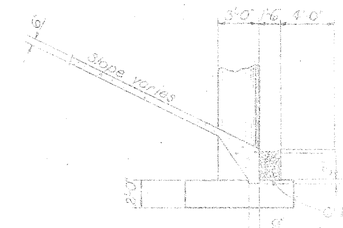
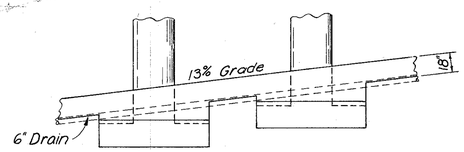
307

JEFFERSON COUNTY
JEF-7-13.53

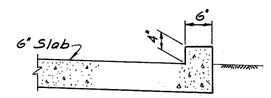



| PAVEMENT ELEVATIONS | | | |
|---|---|---|---|
| Station | Profile Grade | Left Curb | Right Curb |
| 713+00 | 781.25 | 780.72 | 781.78 |
| 713+25 | 781.45 | 780.92 | 781.98 |
| 713+50 | 781.63 | 781.10 | 782.16 |
| 713+75 | 781.79 | 781.26 | 782.32 |
| 714+00 | 781.92 | 781.39 | 782.45 |
| 714+25 | 782.03 | 781.50 | 782.56 |
| 714+50 | 782.12 | 781.59 | 782.65 |




SECTION A-A




SECTION C-C THRU SLOPE PAVING

## 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.
- 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, A.R.-1-57, revised 2-2-59.
- Slope paving shall be concrete slope protection, meeting the requirements of Section 601.15. The paving shall extend from toe of slope to face of abutment and across the entire 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. 3-18.05 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.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# GENERAL PLAN & ELEVATION
## BRIDGE NO. JEF-7-14.11
## OVER LOGAN AVENUE

JEFFERSON COUNTY STA. 713+76.00

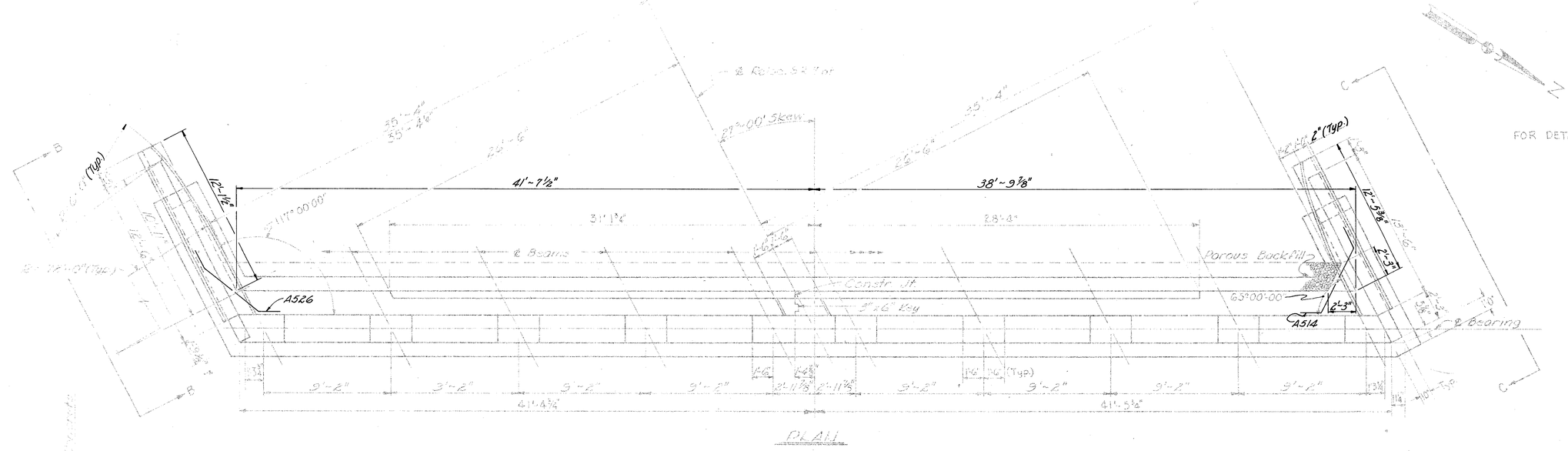
| Designed | Drawn | Traced | Checked | Revised Date | Revised |
|---|---|---|---|---|---|
| J.A.S. | C.M.D. | C.M.S. | J.M. | E. Roberts 6-10-59 | |

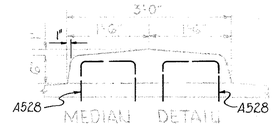
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

JEFFERSON COUNTY
JEF-7-13.53

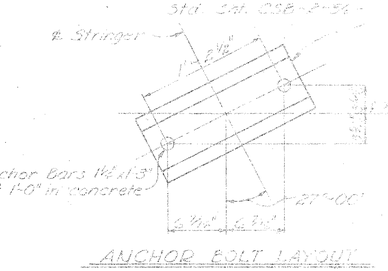
FOR DETAILS NOT SHOWN SEE SHEET NO. 273

| TABLE OF ELEVATIONS | | |
|---|---|---|
| LOCATION | ABUT. "A" | ABUT. "B" |
| A | 781.55 | 781.61 |
| B | 781.26 | 782.11 |
| C | 781.28 | 782.11 |
| D | 780.89 | 782.59 |
| E | 777.35 | 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 | 778.48 |
| M | 777.41 | 778.66 |
| N | 777.32 | 778.78 |
| P | 777.26 | 778.93 |
| Q | 777.20 | 779.30 |
| S | 775.70 | 776.40 |
| T | 765.6 | None |
| V | 765.2 | None |
| W | 766.5 | None |
| Y | 768.2 | None |
| Z | 768.50 | None |




NOTE: Special care shall be taken in placing reinforcing steel at the bridge seats to see it will not interfere with the placing of anchor bar holes.




MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# ABUTMENT "A"

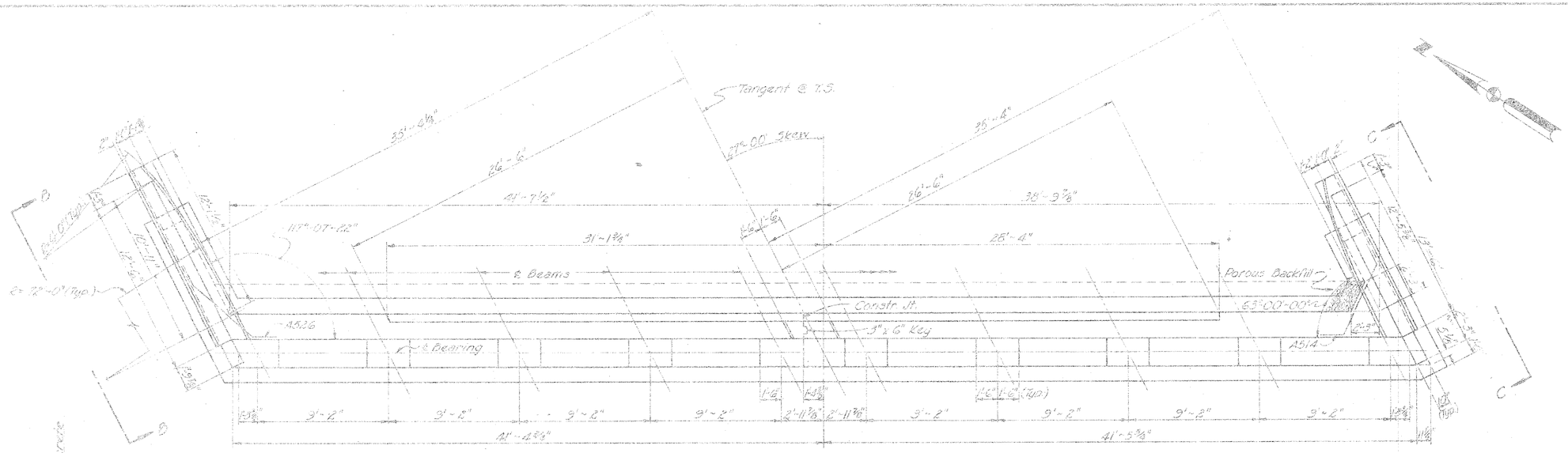
BRIDGE NO. JEF-7-1411
OVER LOGAN AVENUE

JEFFERSON COUNTY STA. 713+75.00

| Designed | Drawn | Traced | Checked | Reviewed | Date Revised |
|---|---|---|---|---|---|
| J.D.A. | K.E.A. | | D.M. | | 5-10-60 |

| 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 # 2.72."

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# ABUTMENT "B"

BRIDGE NO. JEF-7-1411
OVER LOGAN AVENUE

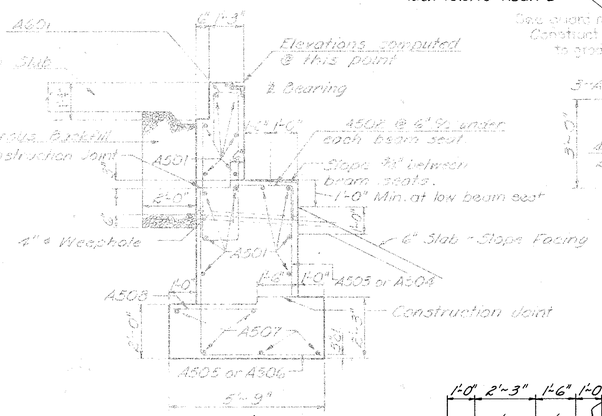
JEFFERSON COUNTY STA. 713+75.00

| Designed | Drawn | Traced | Checked | Reviewed | Date | Revised |
|---|---|---|---|---|---|---|
| A.S.J. | K.E.A. | | JMM | | 9-5-53 | |

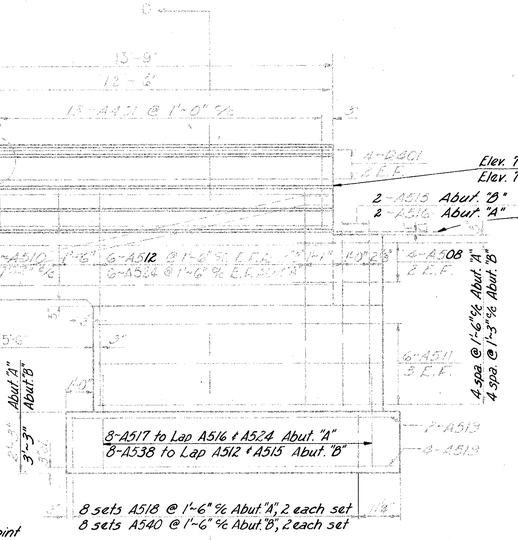
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

JEFFERSON COUNTY
JEF-7-13.53

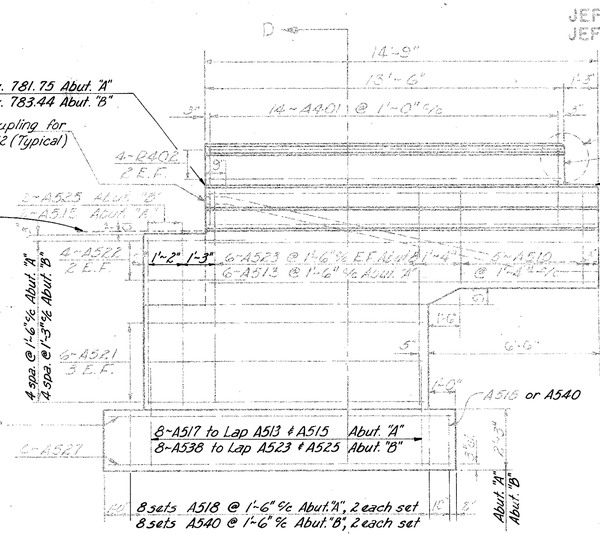
For details not shown See Sheet № 272



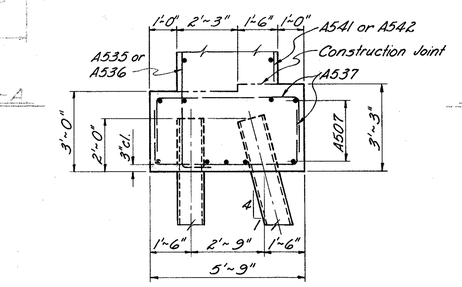

SECTION A-A
Abutment "A" only



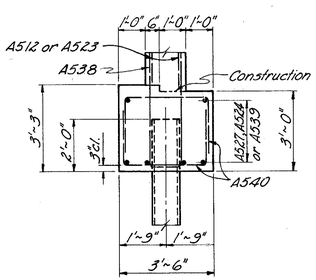

WINGWALL VIEW B-B



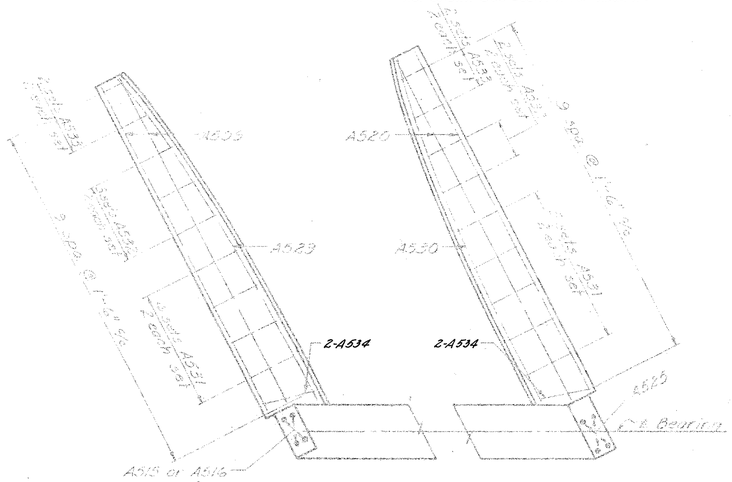

WINGWALL VIEW C-C



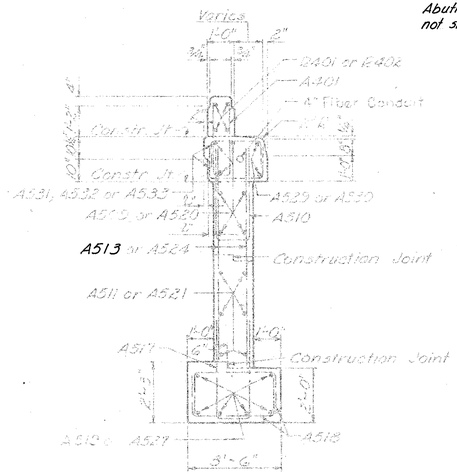

SECTION A-A
Abutment "B" only. For details not shown see Sec. A-A for Abut. "A".



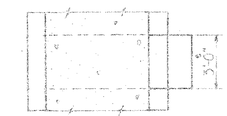

SECTION D-D
Abutment "B" only. For details not shown see Sec. D-D for Abut. "A".



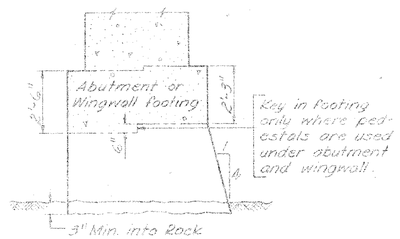

WINGWALL PLAN



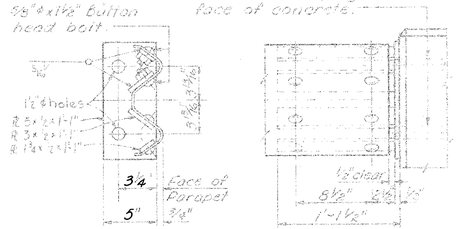

SECTION D-D
Abutment "A" only




PEDESTAL PLAN




PEDESTAL ELEVATION




GUARD RAIL DETAIL

NOTE:
Guardrail and connection assembly shall be galvanized after welding.
Guardrail and connection to be included with Item 5-14 Railing for payment.

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".

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

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# ABUTMENT DETAILS

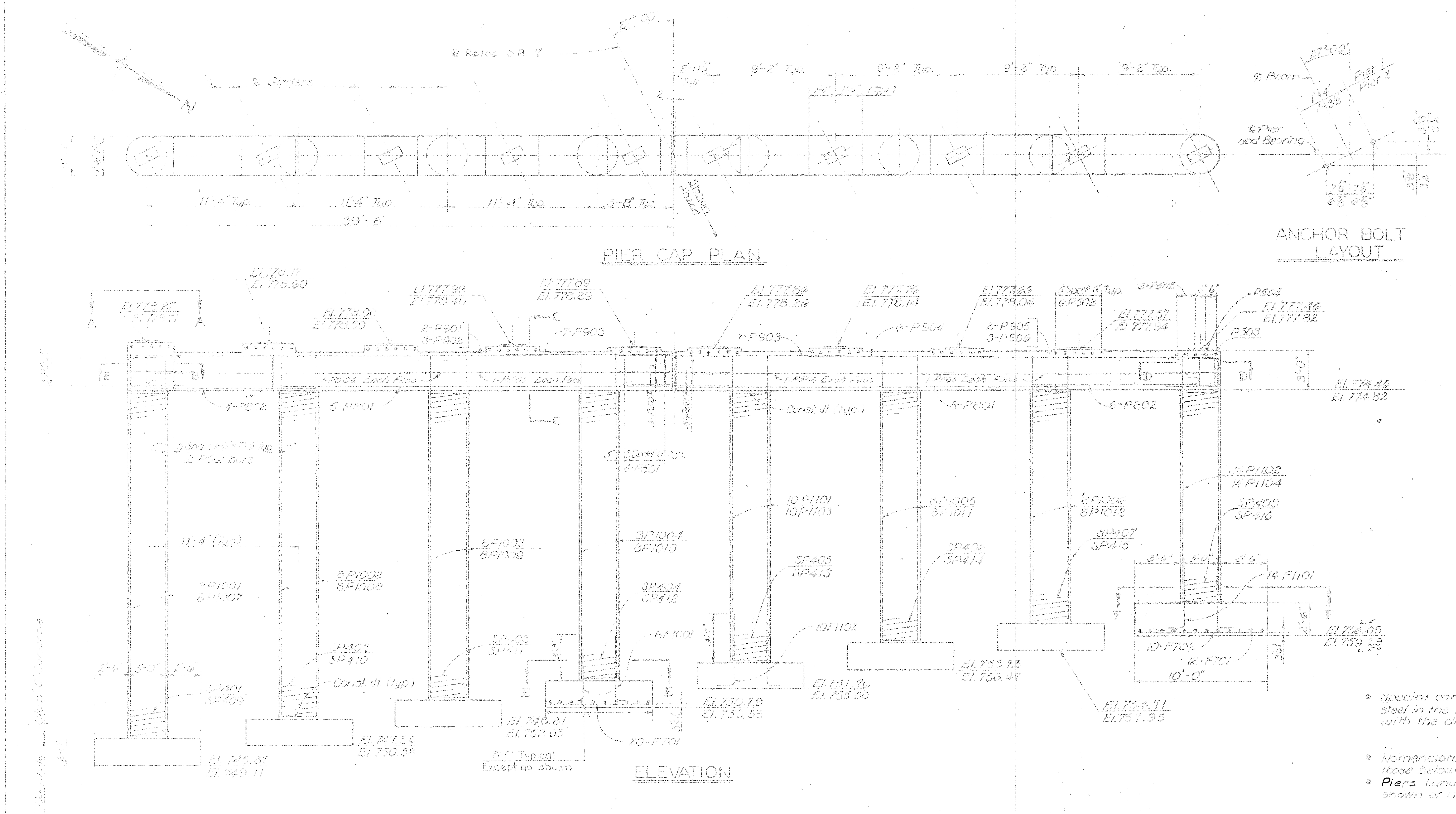
BRIDGE NO. JEF-7-1411
OVER LOGAN AVENUE

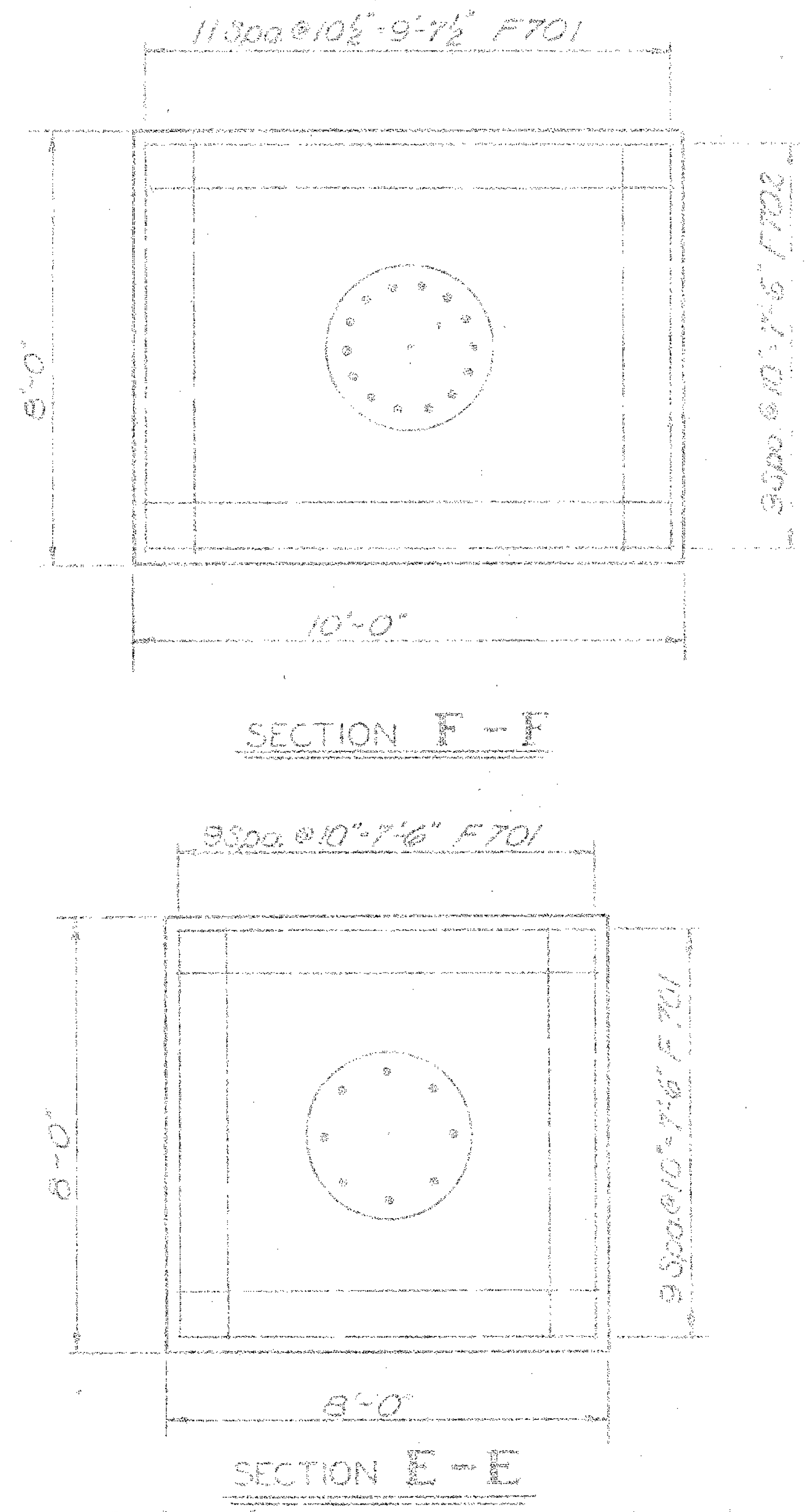
JEFFERSON COUNTY STA. 713+75.00

| Designed | Drawn | Traced | Checked | Reviewed | Date | Revised |
|---|---|---|---|---|---|---|
| J.D.K. | K.E.A. | | J.M. | [illegible] 6-10-59 | | |

| FED. RD. DIVISION | STATE | PROJECT | FISCAL YEAR | SHEET NO. |
|---|---|---|---|---|
| 2 | OHIO | U430 (14) | | |

JEFFERSON COUNTY
JEF-7-13.53

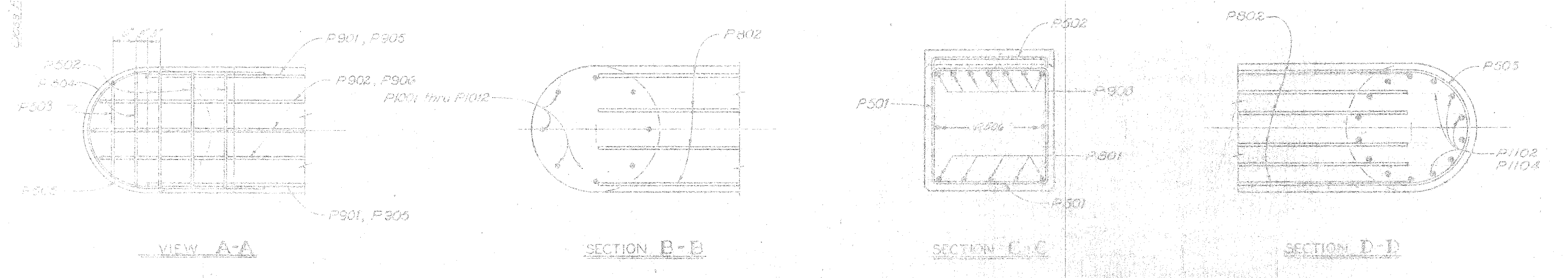



Typical for all columns except as shown

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 STA. 115+75.00

| Designed | Drawn | Traced | Checked | Reviewed, Date | Revised |
|---|---|---|---|---|---|
| [illegible] | [illegible] | | [illegible] A.S.J. | [illegible] 6-[illegible] | |

| FED. AID DIVISION | STATE | PROJECT | SHEET NO. |
|---|---|---|---|
| 2 | OHIO | U-430(14) | 270 |

JEFFERSON COUNTY
JEF-7-15.53

* This dimension will vary for the N-y curves at the locations shown on General Plan Sheet No. 271

Tang. to T.S. = ½ Bridge

Superelevation ~ see table of pavement elevations on sht. # 271

Note: 8¾" Slab includes 1" for Monolithic Wearing Surface.

Bolting type "A"

Built ∠ 5"x3½"x.30" Left Lane only

Profile Grade Point

Built ∠ 5"x3½"x12.0" Right Lane only

Std. Scupper

See Special Scupper Detail Right Lane only

Concrete Slope Paving

Intermediate Diaphragms

Intermediate Cross-Bracing

TYPICAL HALF CROSS SECTION

NOTE: All dimensions etc. normal to long st. line except the curb which shall follow the grade.

* 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.

Bent No. 2

SPECIAL SCUPPER DETAIL

SECTION E-E

* Pier

Case weld to 1" rad.

G indicates grinding

BEAM SPLICE DETAIL

BEAM SPLICE WELDING PROCEDURE

1. Erect ends of end span beams.
2. Butt weld beam flanges and web using the following sequence: make 1st pass on each flange, then two on the web; continue end of each locator until welds are complete.
3. Weld the bottom splice plate.
4. Lower the beam ends to final position.

* Pier

DIAGRAM SHOWING STAGGER OF 3601 BARS OVER PIERS

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 CBS-2-56, Sheets 2 and 3 of 6, revised 2-2-59 for details of Pipe Cutters, Scuppers, Curb Plates, Pipe Drains, Bearing Plates, and End X-frames.
- Refer to Standard Drawing APP-1-57, revised 2-2-59 for details of Aluminum Railing Type A.
- Concrete and reinforcing steel above construction joints included with railing for payment.
- Concrete shall be Class "S".
- See "General Plan & Elevation" for location of scuppers and railing posts.
- Painting: After erection and after the deck has been cleaned and, where necessary, repaired, paint surfaces with Sec. 804 on additional coat of the shop paint used on the steel. Paint the inside and outside of the outside steel beams and the top of the bottom flanges.

Note: For details not shown see Curb Plate Details on Std. Drwg. CBS-2-56 Revised 3-1-58

FACE FINISH AT MEDIAN

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 STEEL FRAMING

HALF PLAN OF DECK REINFORCING STEEL

PARAPET STEEL DETAIL

| DEAD LOAD DEFLECTION OF ALL BEAMS | | |
|---|---|---|
| LOCATION | END SPANS | CENTER SPAN |
| Deflection due to weight of Steel | 0 | 0 |
| Deflection due to resulting dead load | 3/16" | 1/4" |
| Convexity required for Vertical Curve | 1/8" | 1/16" |
| Sum of deflection & convexity | 5/16" | 1/16" |

NOTE: No camber required but beams shall be erected and fabricated with any vertical camber in their web.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUPERSTRUCTURE
BRIDGE NO. JEF-7-1411
OVER LOGAN AVENUE

JEFFERSON COUNTY STA. 713+69.00

| Designed | Drawn | Traced | Checked | Reviewed | Date | Revisions |
|---|---|---|---|---|---|---|
| J.H.R. | K.E.A. | | J.M. | E. Haberer | 6-1959 | |

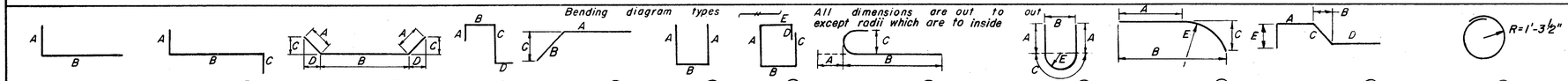
| FED. RD. DIVISON | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

276
307

JEFFERSON COUNTY
JEF-7-13.53

# REINFORCING STEEL BAR SCHEDULE

Bending diagram types




## 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 | 5'-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" | 4⅛" | 3⅜" | | 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" | 3⅜" | 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" ø | 26'-7" | 4½ | 74 | 32 | 480 |
| SP402 | 1 | ½" ø | 25'-2" | 4½ | 70 | 32 | 454 |
| SP403 | 1 | ½" ø | 23'-8" | 4½ | 66 | 32 | 428 |
| SP404 | 1 | ½" ø | 22'-2" | 4½ | 62 | 32 | 402 |
| SP405 | 1 | ½" ø | 20'-8" | 4½ | 58 | 32 | 376 |
| SP406 | 1 | ½" ø | 19'-3" | 4½ | 54 | 32 | 350 |
| SP407 | 1 | ½" ø | 17'-9" | 4½ | 50 | 32 | 324 |
| SP408 | 1 | ½" ø | 15'-11" | 4½ | 45 | 32 | 291 |
| SP409 | 1 | ½" ø | 23'-9" | 4½ | 66 | 32 | 428 |
| SP410 | 1 | ½" ø | 22'-3" | 4½ | 62 | 32 | 402 |
| SP411 | 1 | ½" ø | 20'-9" | 4½ | 58 | 32 | 376 |
| SP412 | 1 | ½" ø | 19'-3" | 4½ | 54 | 32 | 350 |
| SP413 | 1 | ½" ø | 17'-10" | 4½ | 50 | 32 | 324 |
| SP414 | 1 | ½" ø | 16'-4" | 4½ | 47 | 32 | 304 |
| SP415 | 1 | ½" ø | 14'-10" | 4½ | 43 | 32 | 278 |
| SP416 | 1 | ½" ø | 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 |
| P505 | 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. | | | | | | 863 |
| 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'-3⅜" | | | 1430 |
| S603 | 2 Sets-24 ea Set | 6 | 5'-4" to 35'-6" | Str. | Vary | by | 1'-3⅜" | | | 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'-3⅜" | | | 1946 |
| S703 | 2 Sets-24 ea Set | 7 | 5'-4" to 35'-6" | Str. | Vary | by | 1'-3⅜" | | | 2005 |
| S704 | 12 | 7 | 4'-0" | Str. | | | 1 | | | 98 |
| | | | | | | | | | | |
| R403 | 16 | 4 | 12'-7" | Str. | Included with Railing | | | | | |
| R404 | 56 | 4 | 16'-8" | Str. | for Payment. | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | Total Weight | 98,716 |

## 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 ø | 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, indicates the bar size number. For example, A401 is a number 4 bar and A1114 is a number 11 size bar.*

**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.*

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

REINFORCING STEEL LIST AND ESTIMATED QUANTITIES
BRIDGE Nº JEF-7-1411
OVER LOGAN AVE.

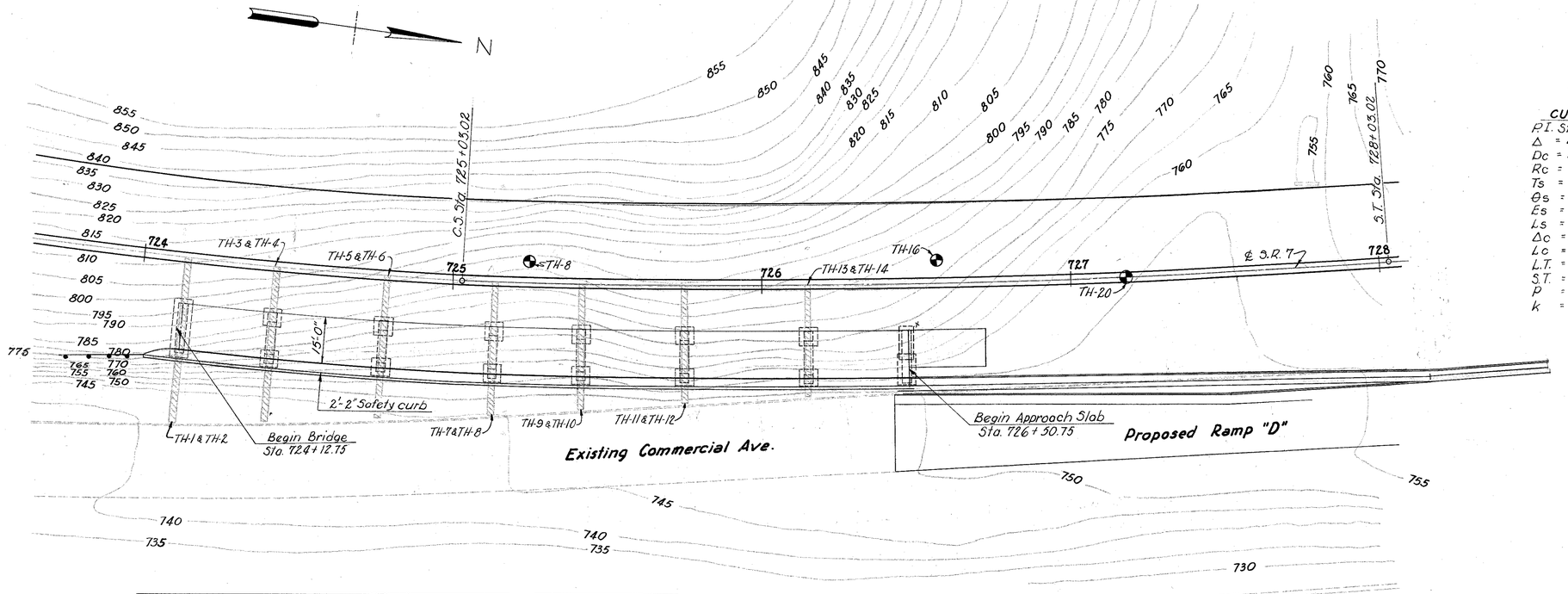
JEFFERSON COUNTY STA. 713+75.00

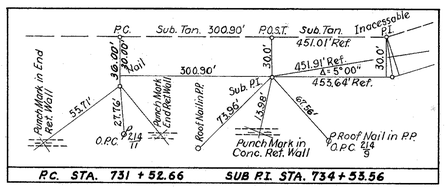
| Designed | Drawn | Traced | Checked | Reviewed Date | Revised |
|---|---|---|---|---|---|
| J.D.R. | | A.M.M. | JPW | E. Roberts 6-11-59 | |

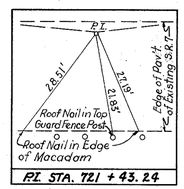
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

277
307

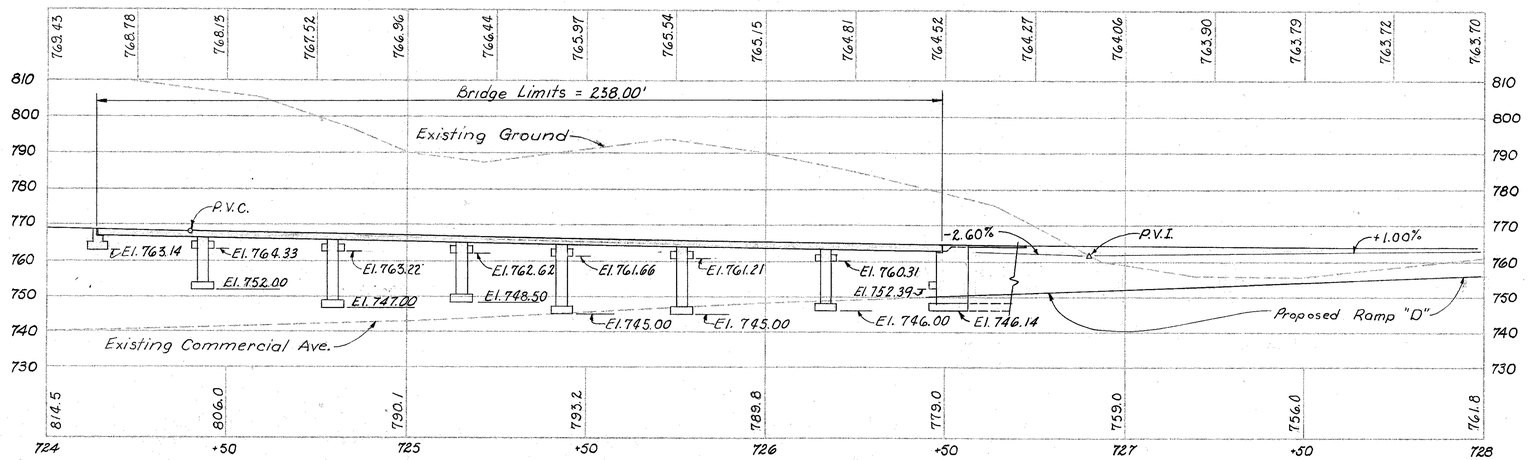
JEFFERSON COUNTY
JEF-7-13.53




B.M. Sta. 728+50.00
R.R. Spike in P. Pole 2/4 13
70' Rt.
Elevation 759.225




PROFILE ALONG CENTERLINE OF RELOCATED S.R.7

## 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%

**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. 8,400 (Northbound Lanes)

Revised 4-16-59
Revised 2-16-59

## 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

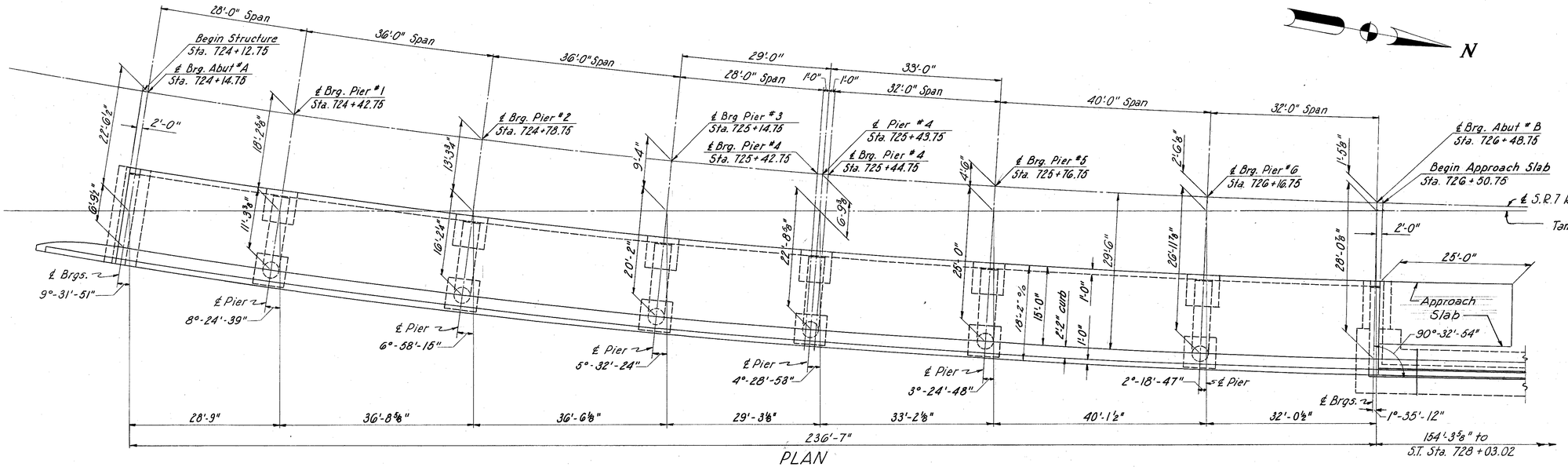
| PRESENT TOPOGRAPHY | | PROPOSED WORK | | | |
|---|---|---|---|---|---|
| Surveyed | Drawn | Designed | Drawn | Checked | Reviewed |
| | J.D.R. | J.D.R. | C.W.S. | G.G. | E.F.R. 6-10-59 |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27086

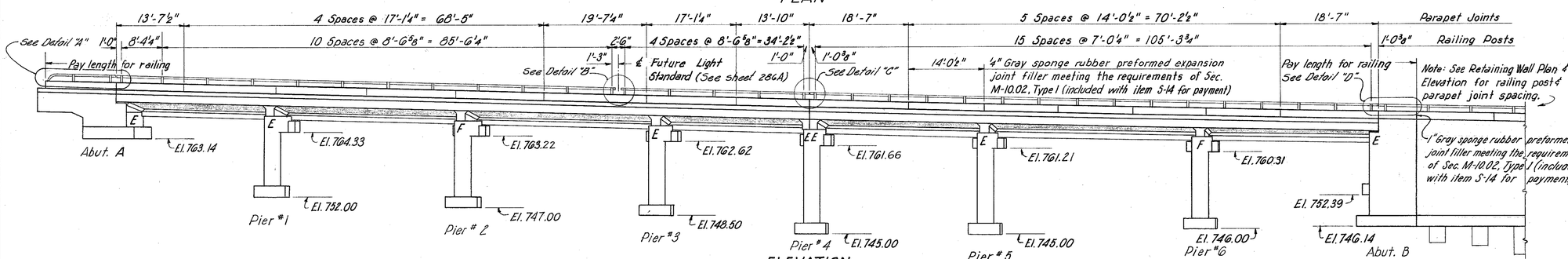
| FED. RD. DIVISION | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

278
307

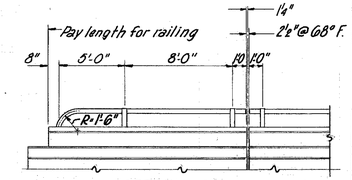
JEFFERSON COUNTY
JEF - 7 - 13.53



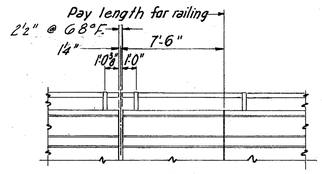

PLAN




ELEVATION

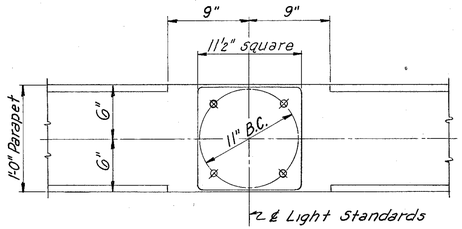



DETAIL A

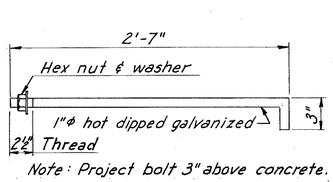



DETAIL D

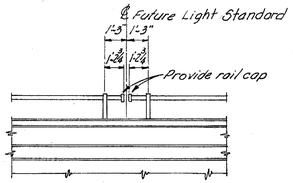
| PAVEMENT ELEVATIONS | | | |
|---|---|---|---|
| STATION | P.G. | 14.5 Rt ℄ | Rt. Curb |
| 724+25 | 768.78 | 769.64 | 770.63 |
| 724+50 | 768.13 | 768.99 | 769.98 |
| 724+75 | 767.52 | 768.38 | 769.37 |
| 725+00 | 766.96 | 767.80 | 768.77 |
| 725+25 | 766.44 | 767.24 | 768.16 |
| 725+50 | 765.97 | 766.71 | 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 |



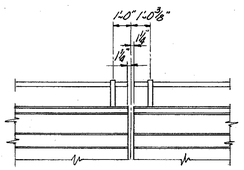

ANCHOR BOLT LAYOUT




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 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.
- 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 5-1.
- ℄ Bearings for all Piers and Abutments are radial.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

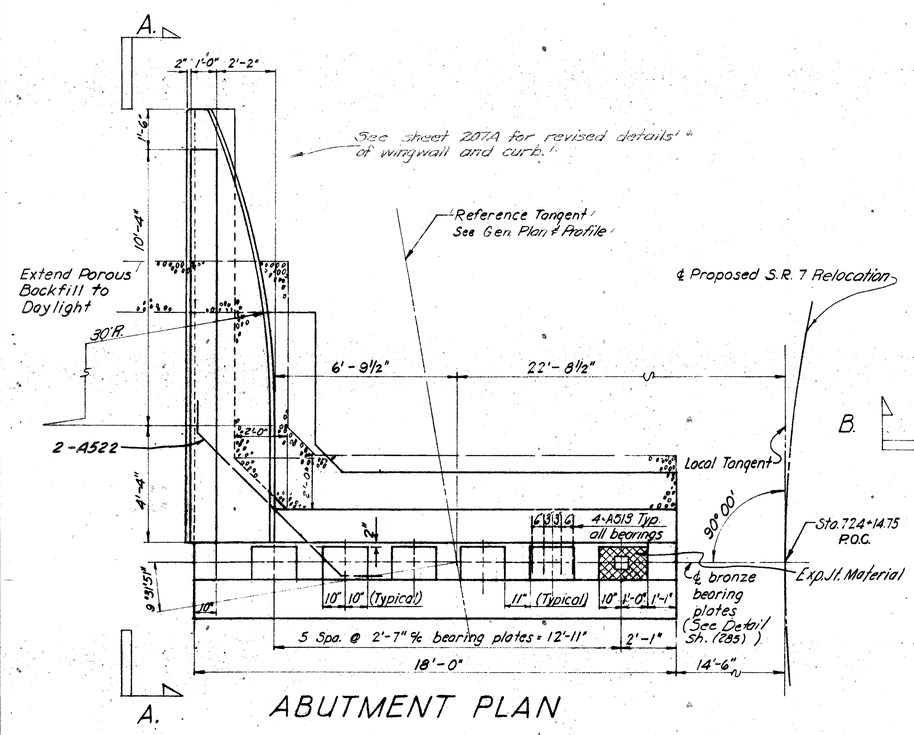
# GENERAL PLAN & ELEVATION
## BRIDGE NO. JEF-7-1431
## SIDE HILL STRUCTURE
JEFFERSON COUNTY
STATION 724+14.00
STATION 726+49.50

| Designed | Drawn | Traced | Checked | Reviewed Date | Revised |
|---|---|---|---|---|---|
| C.E.G. | C.J.K. | C.J.K. | B.S. | E.Roberts 6-10-59 | |

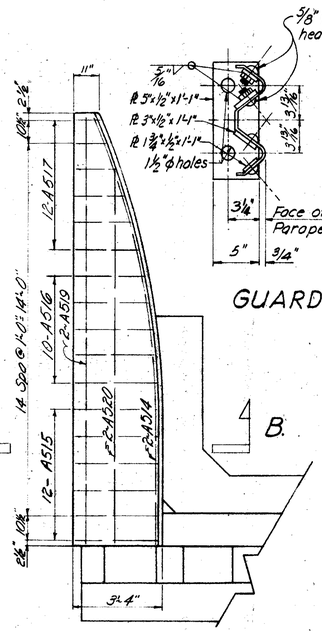
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

279
307

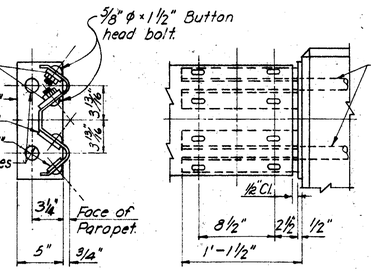
JEFFERSON COUNTY
JEF.-7-13.53




ABUTMENT PLAN



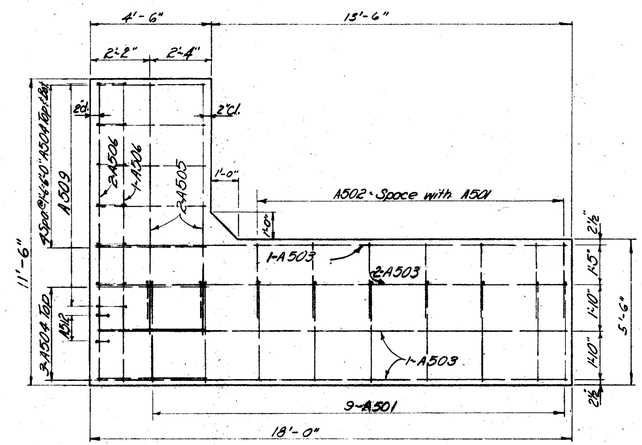

WINGWALL PLAN



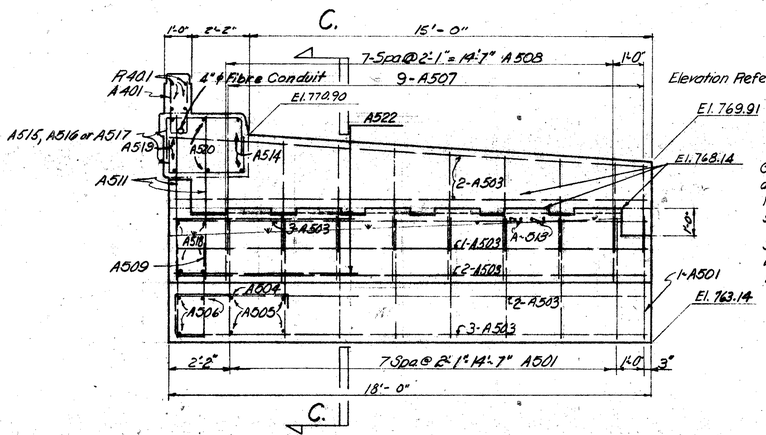

GUARD RAIL DETAIL

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

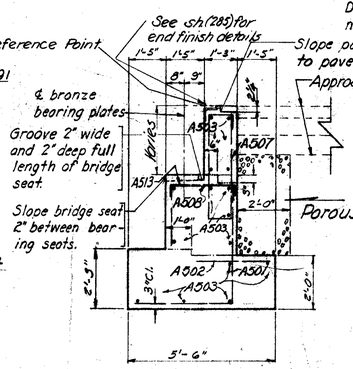
Guard Rail end connection assembly shall be galvanized after welding and is to be included with Item S-14 Railing for payment.



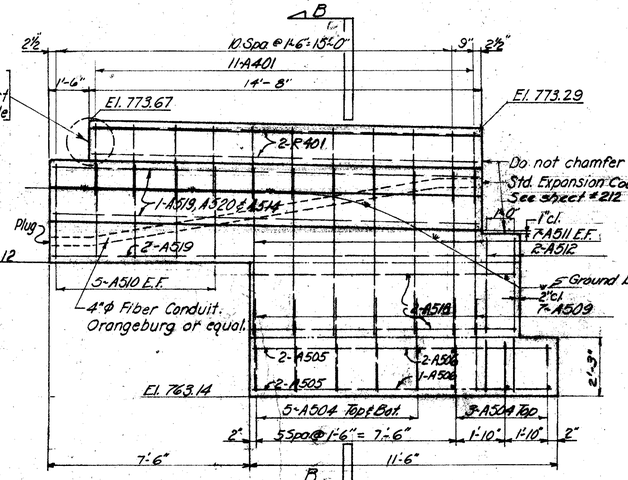

FOOTING PLAN



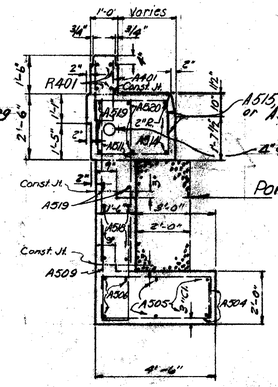

ABUTMENT ELEVATION




SECTION C-C




WINGWALL ELEVATION VIEW A-A




SECTION B-B

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.

Legend:
E.F. Each Face

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

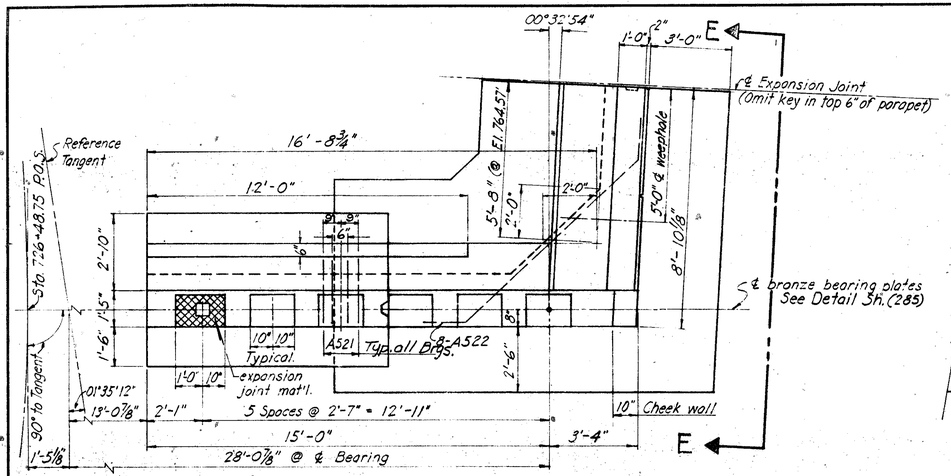
| DESIGNED | DRAWN | TRACED | CHECKED | REVISED DATE | REVISED |
|---|---|---|---|---|---|
| G.G. | G.G. | | P.M. | 8-20-60 | 9-25-61 |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY

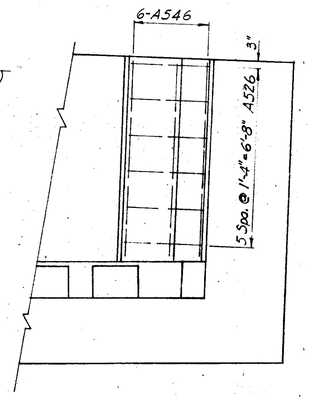
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U 430 (14) | |

280
307

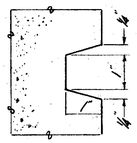
JEFFERSON COUNTY
JEF-7-13.53



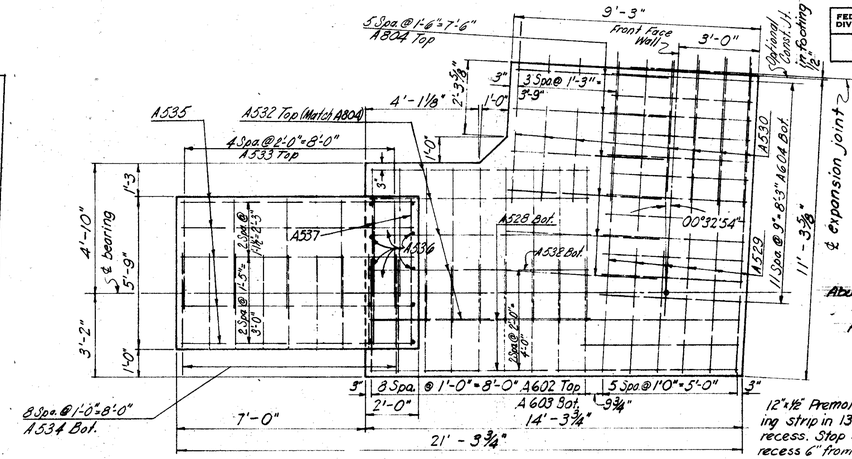

PLAN



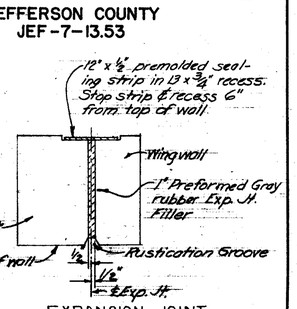

VIEW D-D



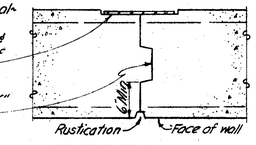

RUSTICATION



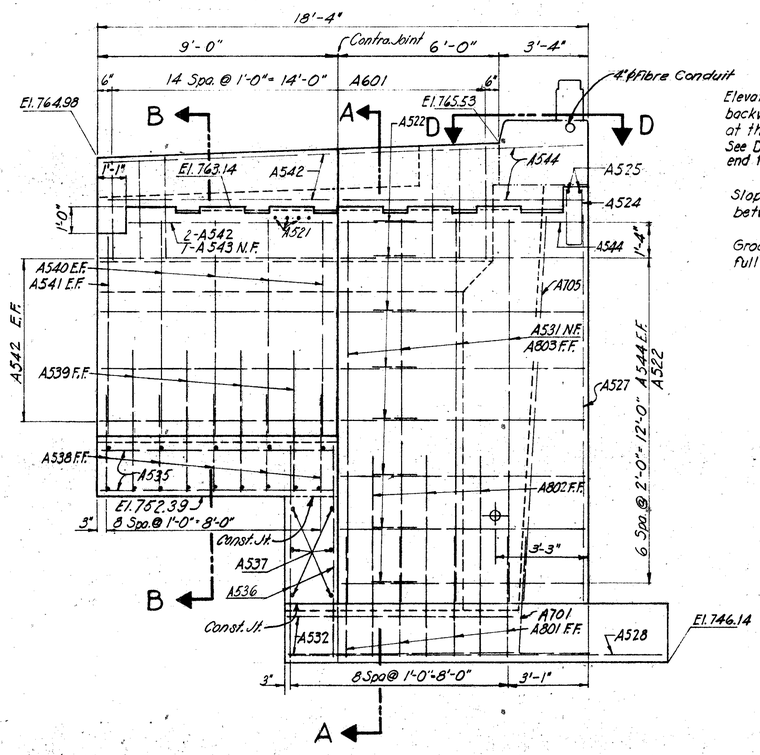

FOOTING PLAN



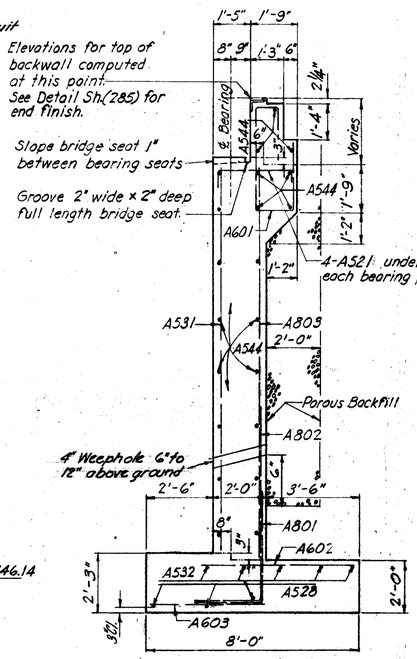

EXPANSION JOINT



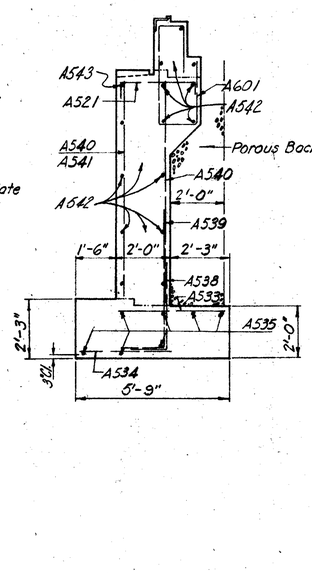

CONTRACTION JOINT



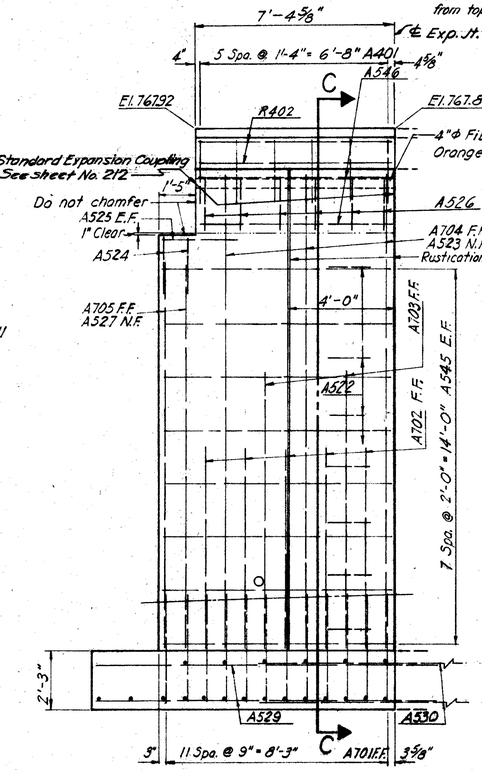

ELEVATION



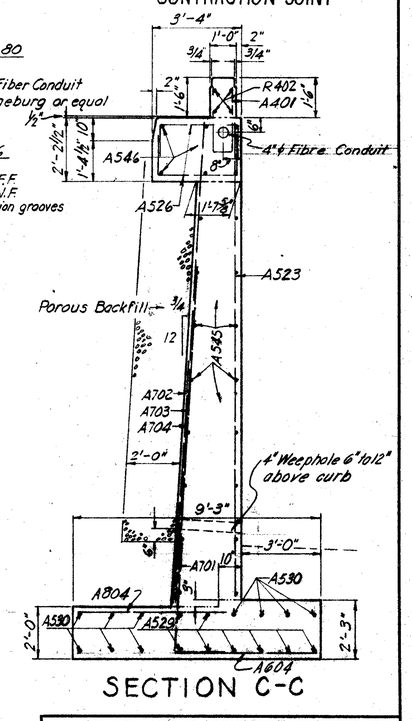

SECTION A-A




SECTION B-B




VIEW E-E




SECTION C-C

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.

Legend:
N.F. Near Face
F.F. Far Face
E.F. Each Face

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# ABUTMENT "B" & DETAILS

BRIDGE NO. JEF-7-1431
SIDE HILL STRUCTURE
STA. 724+12.75
JEFFERSON COUNTY STA. 726+50.75

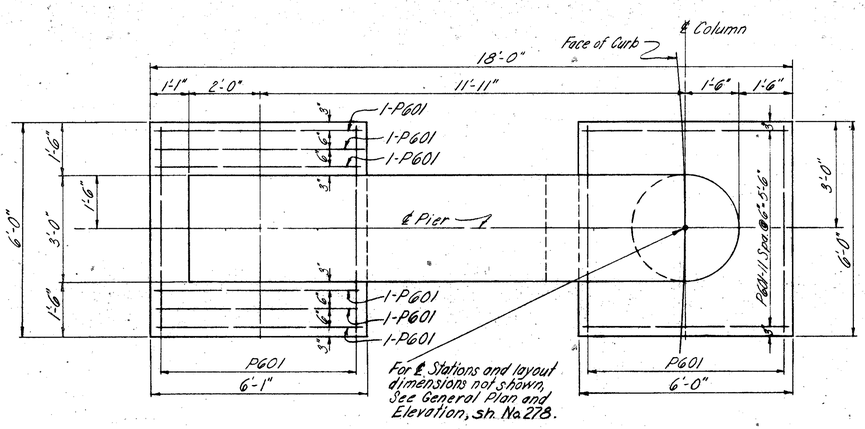
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| G.G. | G.G. | | J.W. | E.R. 2-12-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY

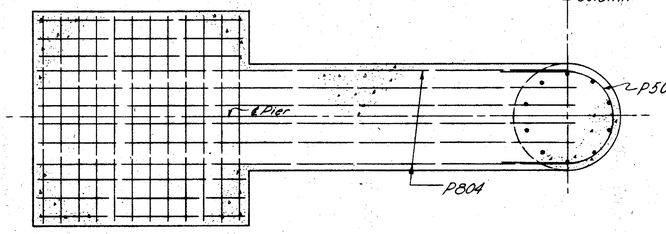
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| - 2 | OHIO | U-430(14) | |

281
307

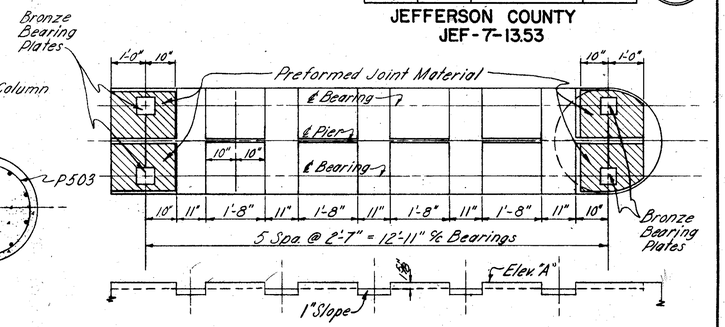
JEFFERSON COUNTY
JEF-7-13.53



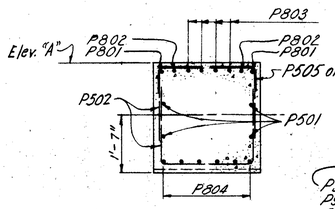

PLAN TYPICAL FOR ALL PIERS



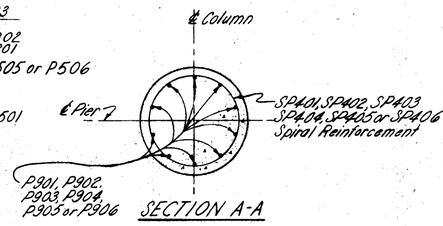

SECTION C-C



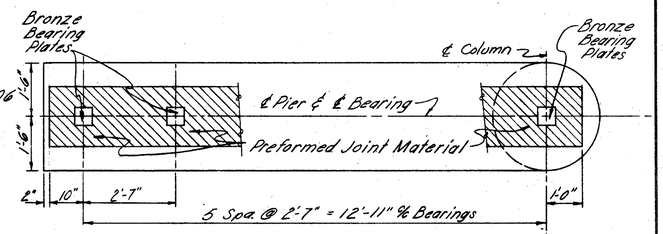

PLAN & PART ELEVATION OF PIER CAP, TYPICAL FOR PIER 4



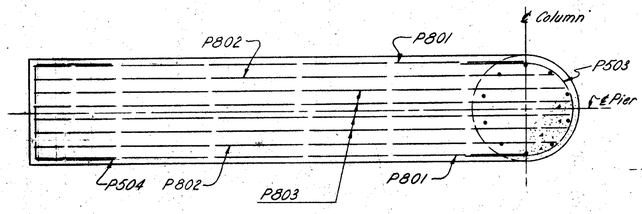

SECTION B-B



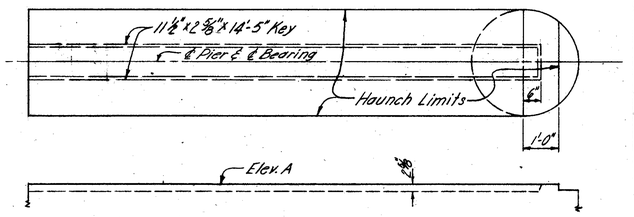

SECTION A-A



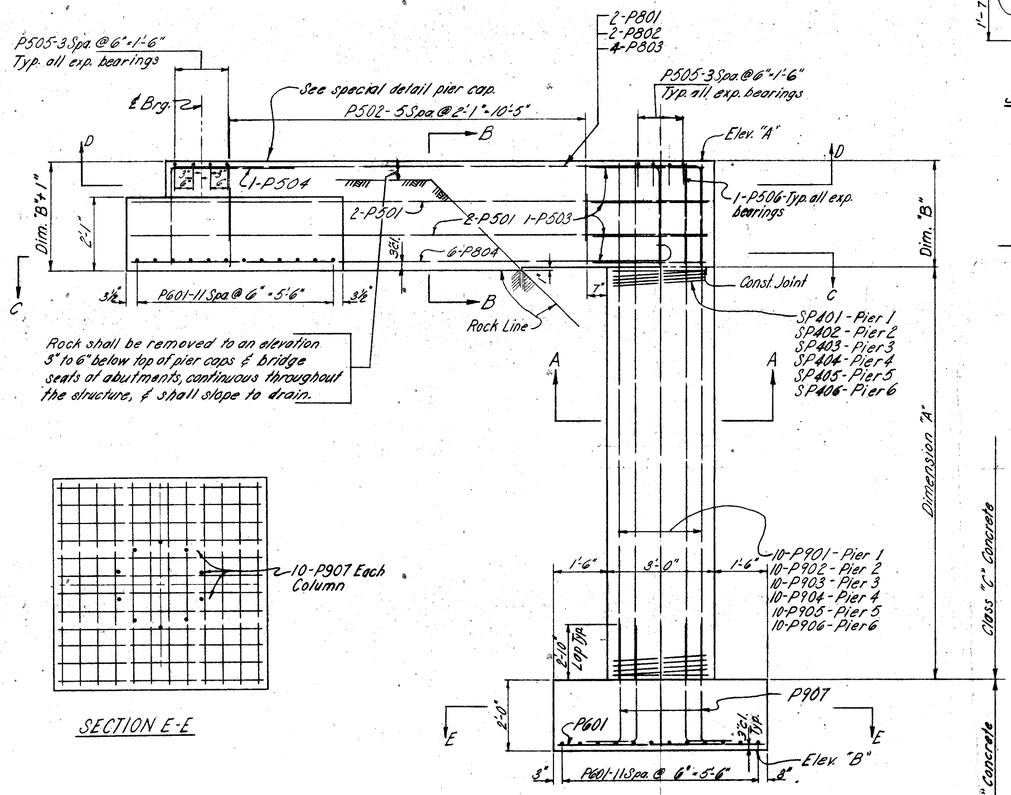

PIER CAP PLAN, TYPICAL FOR PIERS 1,3,5 (Exp. Piers)




SECTION D-D




PLAN & PART ELEVATION OF PIER CAP, TYPICAL FOR PIERS 2,6 (Fixed Piers)




SECTION E-E

ELEVATION

| | ELEVATION "A" | ELEVATION "B" | DIMENSION "A" | DIMENSION "B" |
|---|---|---|---|---|
| Pier 1 | 767.41 | 752.00 | 10'-4 1/8" | 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 5/8" |
| Pier 5 | 764.29 | 745.00 | 14'-3 1/2" | 3'-0" |
| Pier 6 | 763.61 | 746.00 | 12'-4 3/8" | 3'-2 5/8" |

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 6-10-57 | |

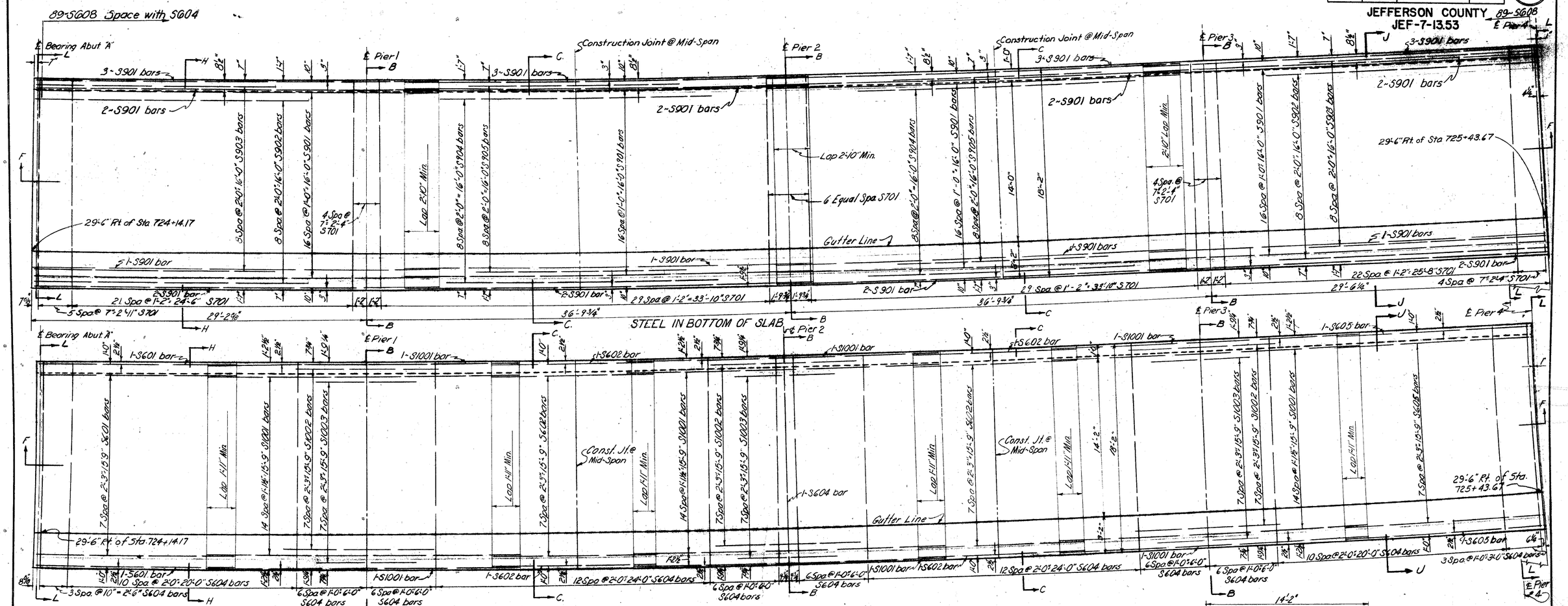
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY

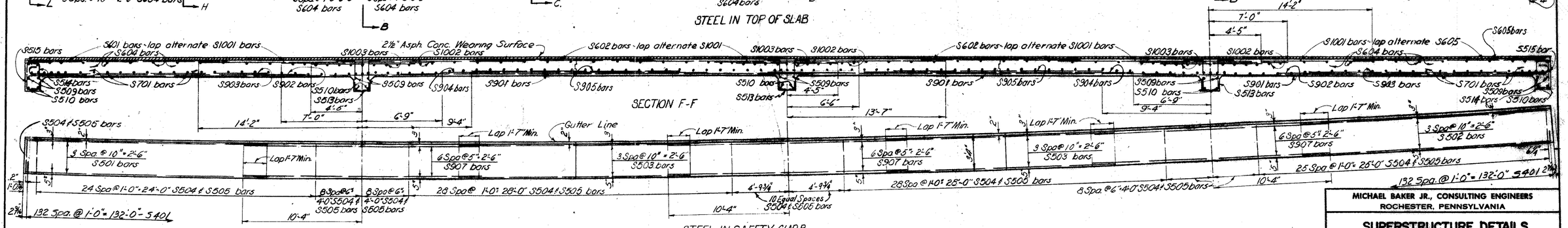
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

282
307

JEFFERSON COUNTY 89-S608
JEF-7-13.53

89-S608 Space with S604




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

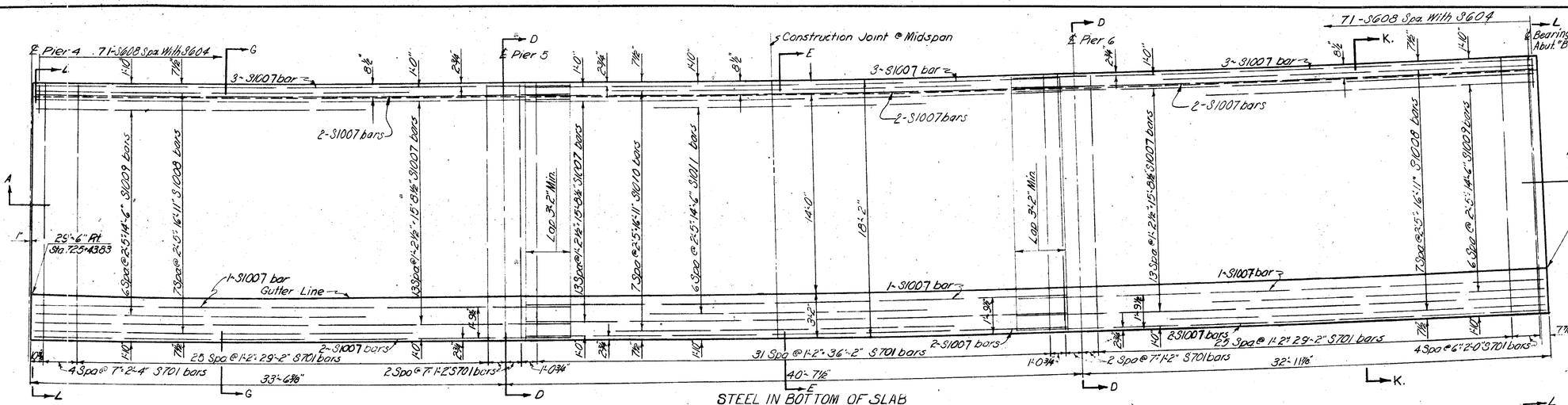
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| C.E.G | C.M. | | B.S. | E.Roberts 6-10-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY

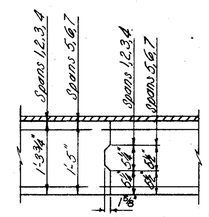
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

283
307

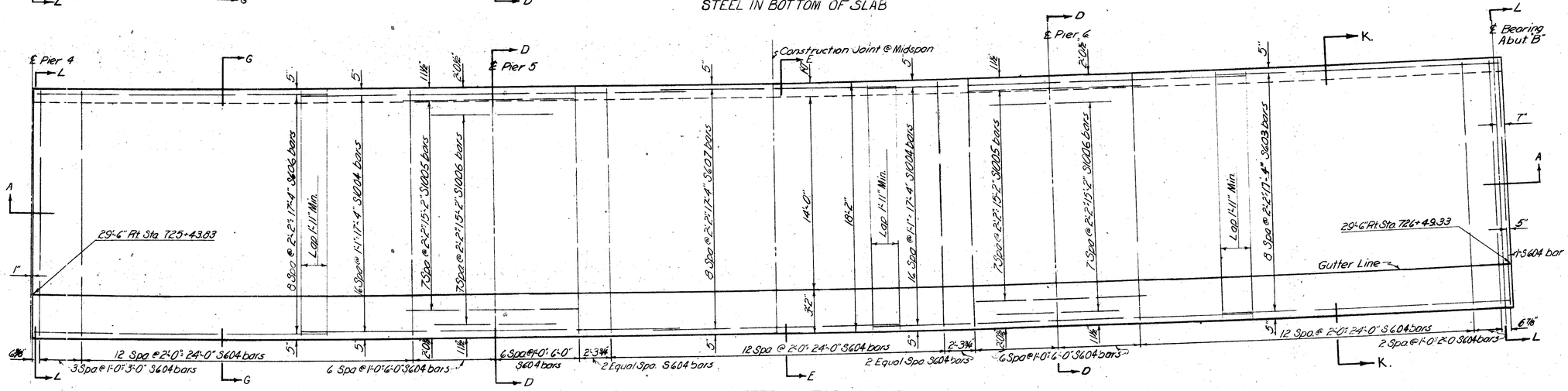
JEFFERSON COUNTY
JEF-7-13.53



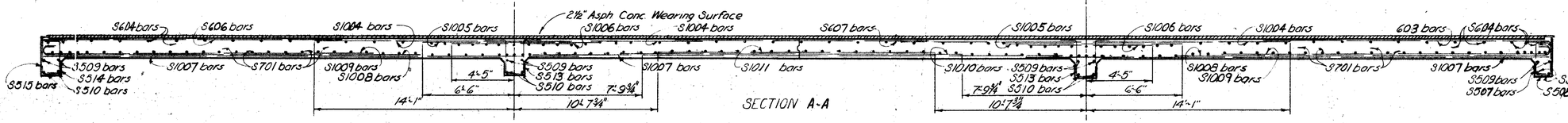

STEEL IN BOTTOM OF SLAB



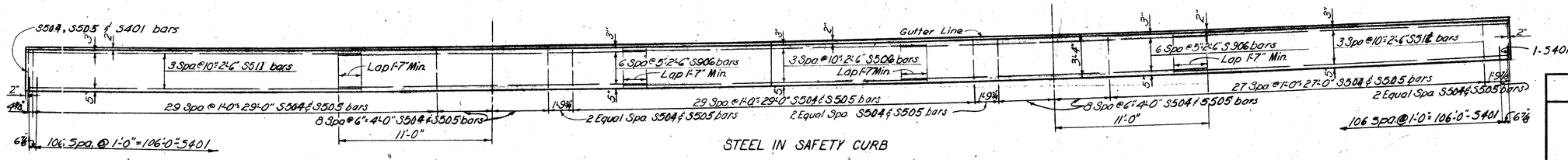

CONSTRUCTION JOINT




STEEL IN TOP OF SLAB




SECTION A-A




STEEL IN SAFETY CURB

Note: All longitudinal bar spacing and dimensions 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

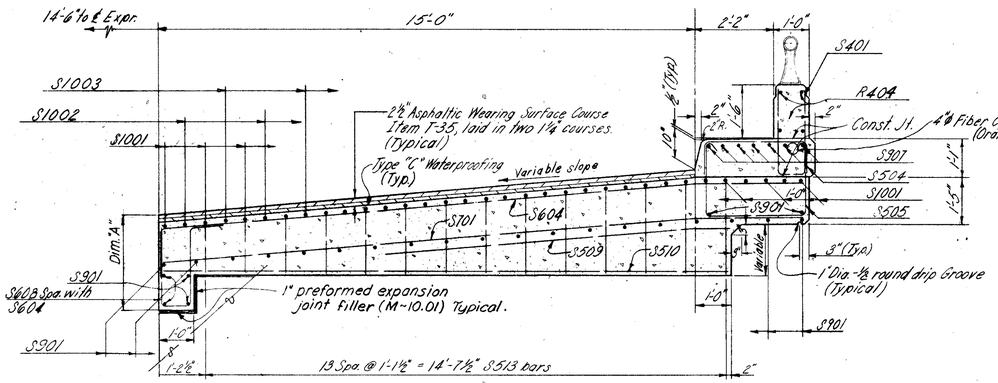
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| C.E.G. | C.M. | | B.J. | E. Roberts 6-10-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY

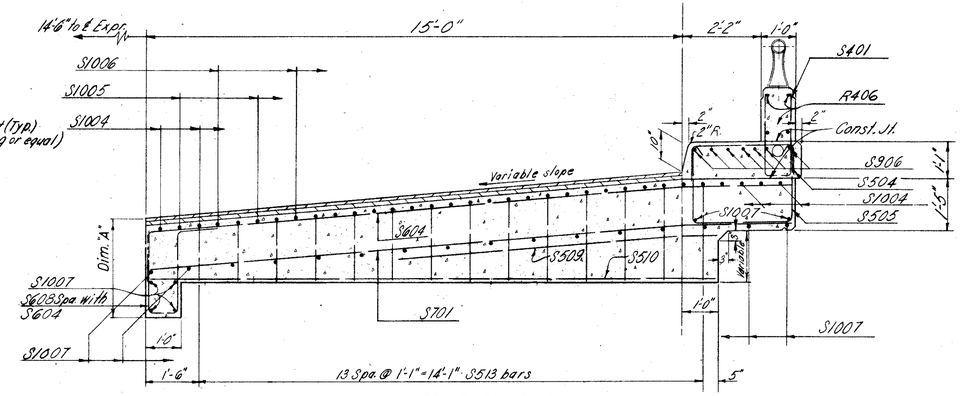
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

284
307

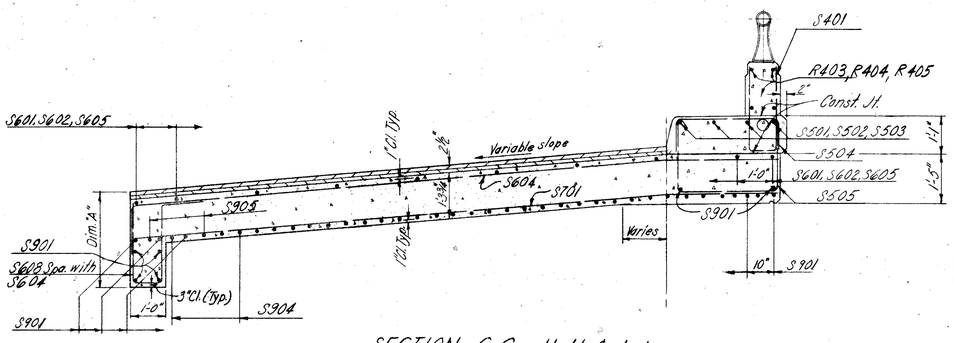
JEFFERSON COUNTY
JEF.-7-13.53



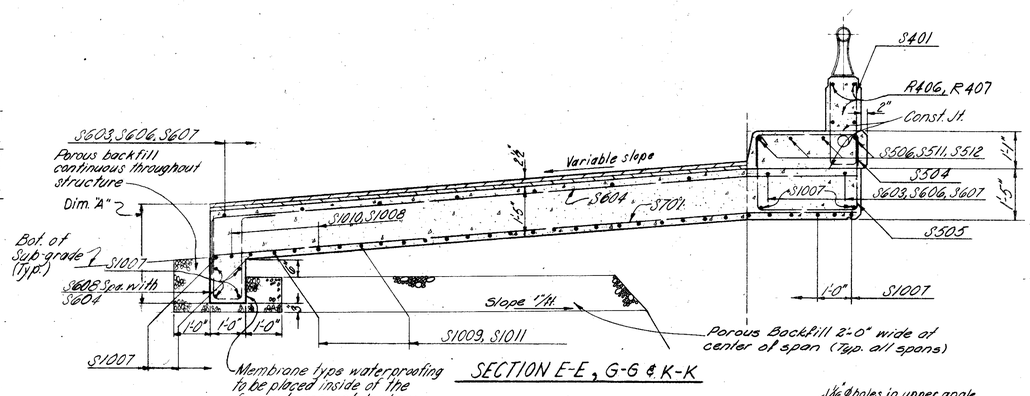

SECTION B-B




SECTION D-D




SECTION C-C, H-H & J-J



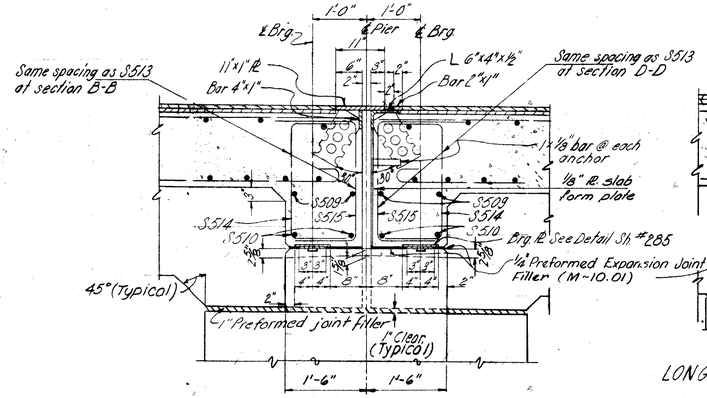

SECTION E-E, G-G & K-K

NOTES:

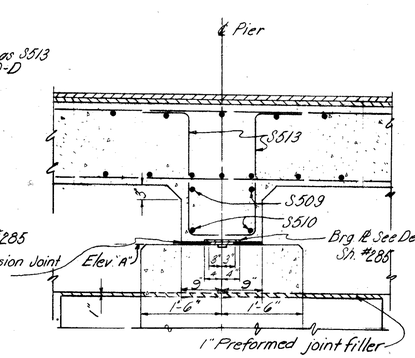
Refer to standard drawing AR-1-57, revised 2-2-59, for Aluminum Railing (Type "A") and concrete parapet.

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.

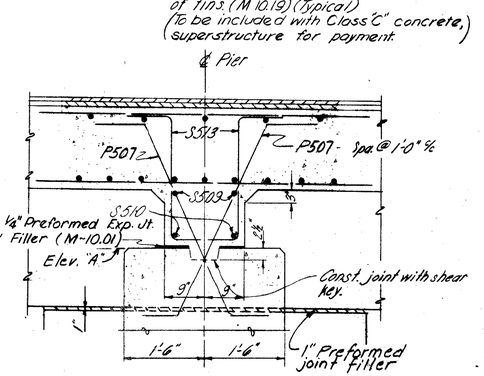
Concrete and reinforcing steel above parapet construction joint included with item 5-14, Railing, for payment.



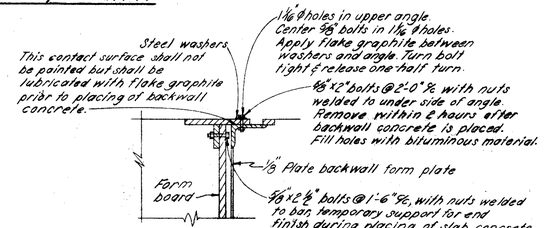

BRIDGE SLAB END FINISH @ PIER 4




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'-10⅛" |
| "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
JEFFERSON COUNTY
STA. 724+12.75
STA. 726+50.75

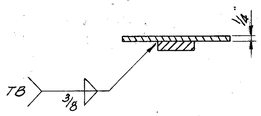
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| C.E.G. | C.M. | . | B.S. | E. Roberts 6-10-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY

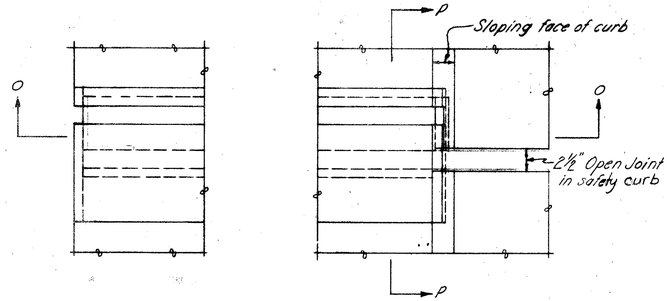
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

285
307

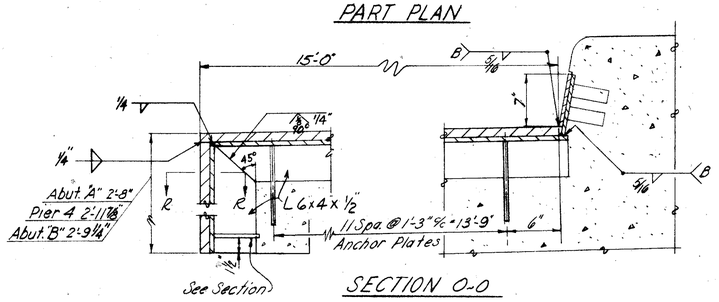
JEFFERSON COUNTY
JEF.-7-13.53



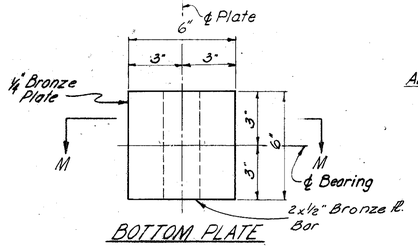

SECTION M-M



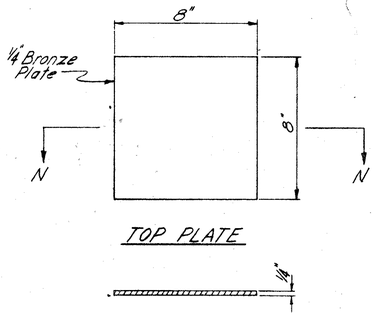

PART PLAN



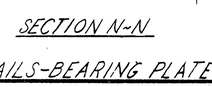

SECTION O-O




BOTTOM PLATE



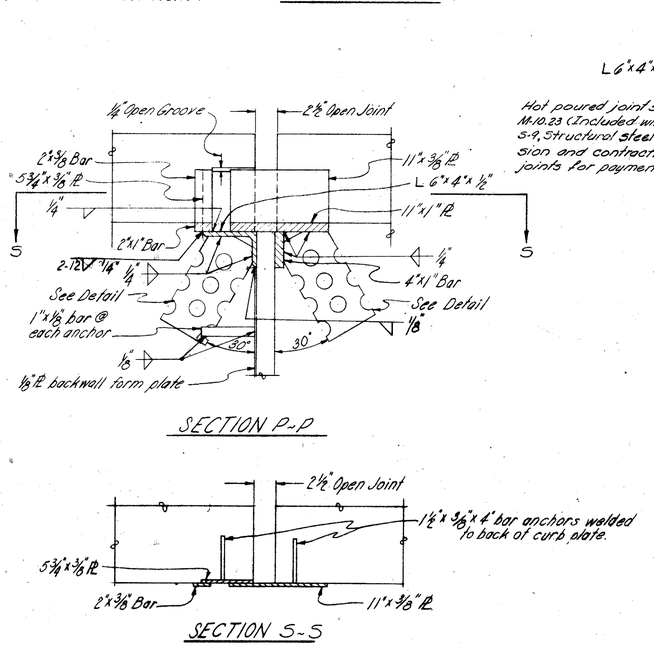

TOP PLATE




SECTION N-N

DETAILS-BEARING PLATES

Note: Bronze bearing plates are included with Item 5-9, Structural steel Expansion and Contraction Joints, for payment.

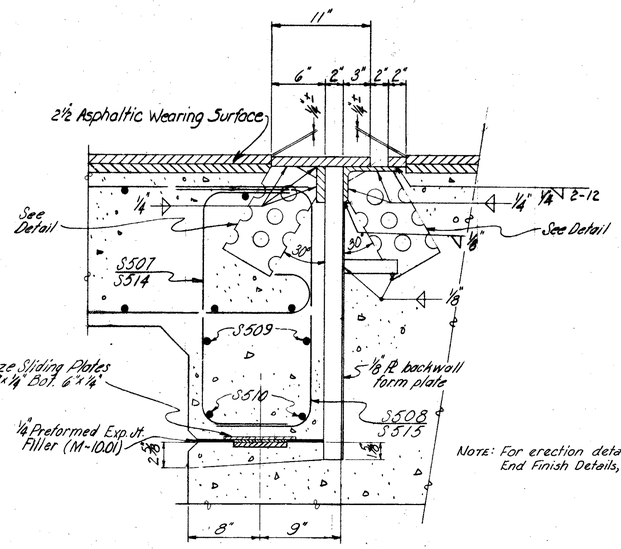



SECTION P-P



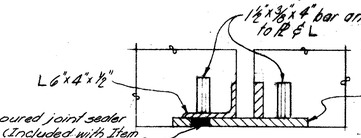

SECTION S-S

END FINISH DETAILS



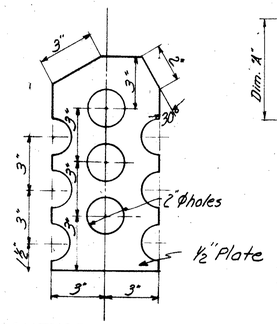

Note: For erection details see End Finish Details, sht. No. 284.

END FINISH DETAIL, TYPICAL ABUTMENT "A" & ABUTMENT "B"

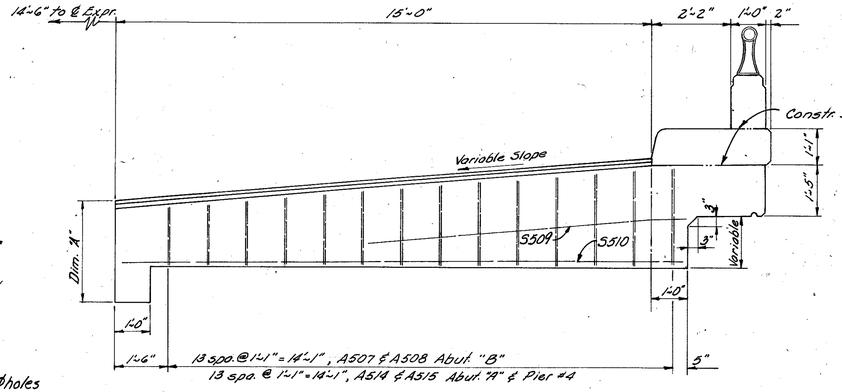



Hot poured joint sealer M.10.23 (Included with Item 5-9, Structural steel expansion and contraction joints for payment.

SECTION R-R




ANCHOR PLATE




13 spa. @ 1'-1" = 14'-1", A507 & A508 Abut. "B"
13 spa. @ 1'-1" = 14'-1", A514 & A515 Abut. "A" & Pier #4

SECTION L-L

For deck slab reinforcing steel see sheets 282 & 283

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 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY

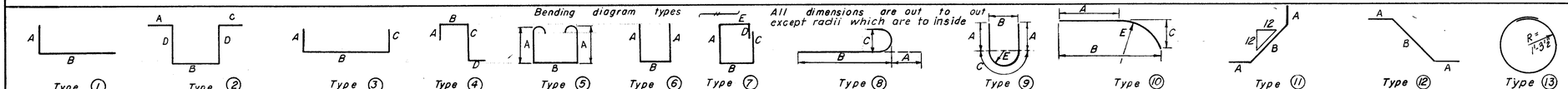
| FED. RD. DIVISON | STATE | PROJECT | |
|---|---|---|---|
| | OHIO | U-430(14) | |

280 / 307

JEFFERSON COUNTY
JEF-7-13.53

# 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'-1⅛" | 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 |

## 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 | 100 | 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 | 100 | 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. | | | | | | 1470 |
| 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

Abutment continued top of sheet

| 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
JEFFERSON COUNTY
STA. 724+12.75
STA. 726+50.75

| Designed | Drawn | Traced | Checked | Reviewed | Date | Revised |
|---|---|---|---|---|---|---|
| B.S. | M.M. | | G.G. | E. Roberts | 6-10-59 | |

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

286A
307

JEFFERSON COUNTY
JEF-7-13.53

## ELECTRICAL NOTES

Junction boxes shall be made of cast iron and covers shall be aluminum.

Boxes shall be hot dipped galvanized both inside and out after fabrication. All exposed surfaces of boxes shall be painted aluminum. See Spec. S-6.14 & S-6.15.

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 formed vertical before protruding a sufficient distance into the safety curb where it shall be extended and brazed to a light standard anchor bolt.

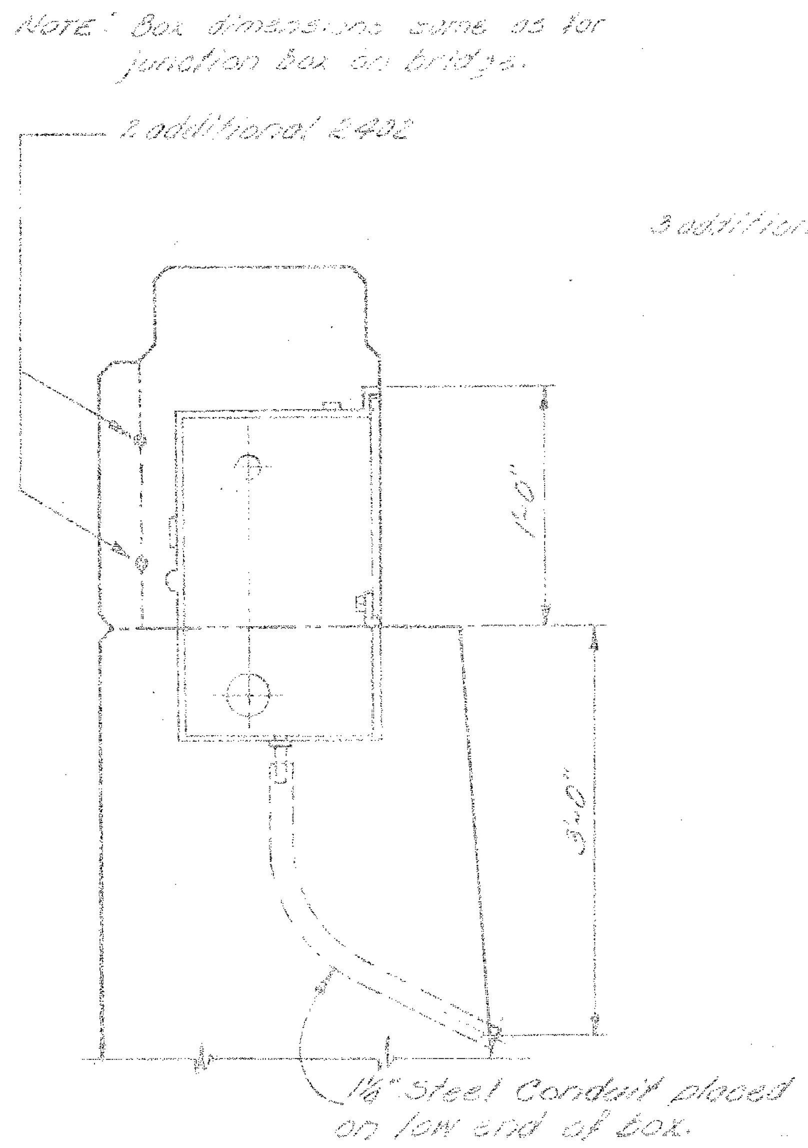
Retaining Wall Right of ℄ Construction - Sta. 697 + 50.02

A solid No. 0 gage bare copper wire electrical ground shall be embedded in the wall at or near Station 696 + 70. 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.

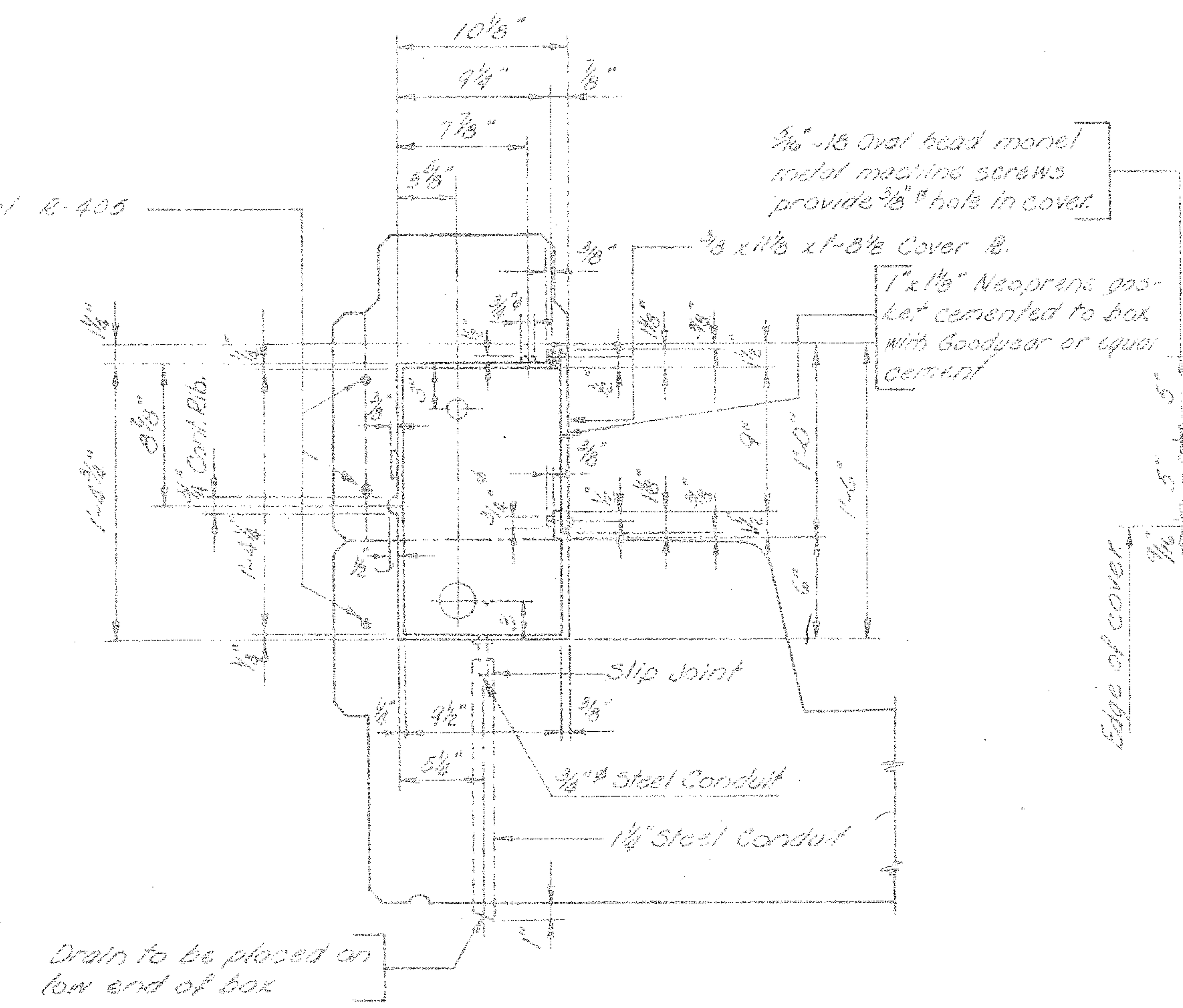
Retaining Wall Right of ℄ Construction - Sta. 726 + 56.82

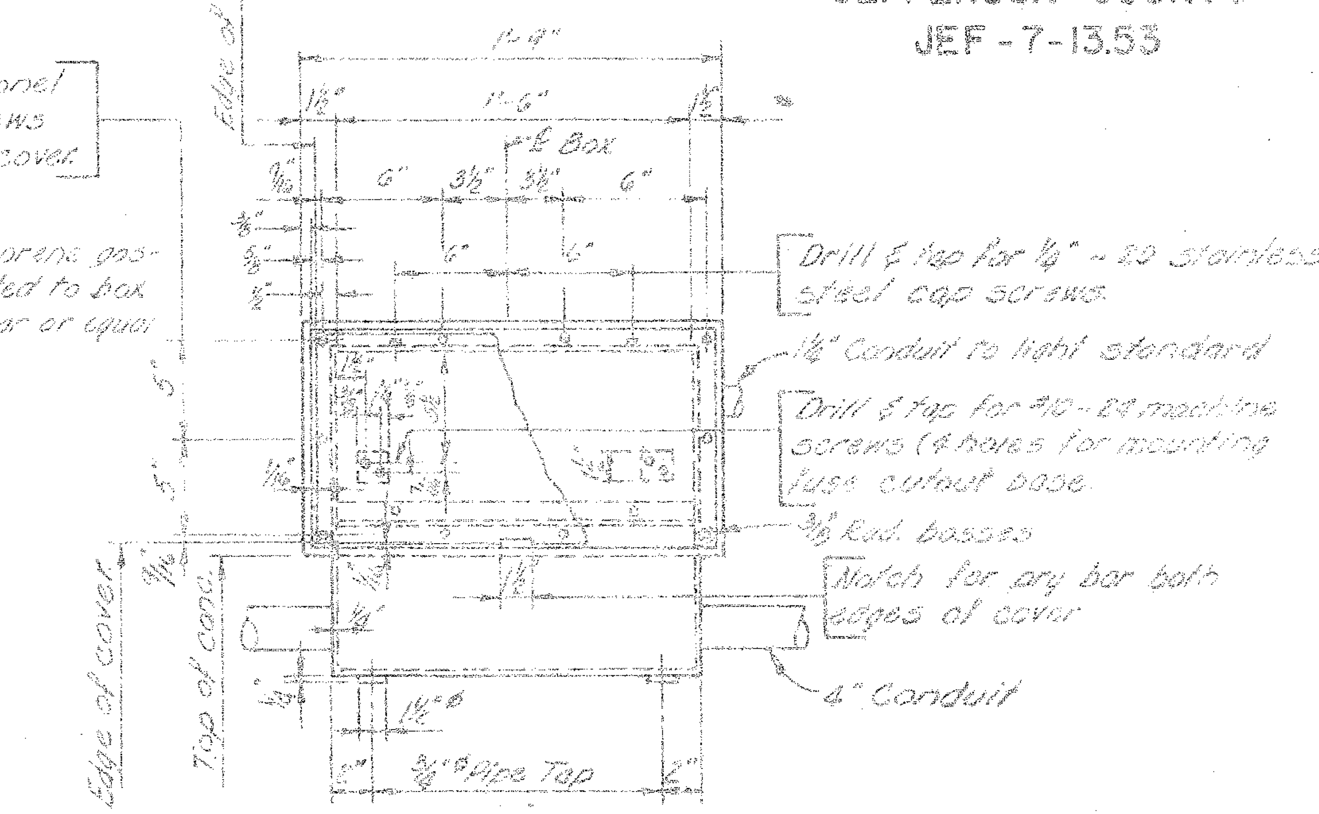
A solid No. 0 gage bare copper wire electrical ground shall be embedded in the wall at or near Station 727 + 15 and Station 729 + 12. The lower ends of the wires shall be brazed to one of the steel H piles and the upper end shall be brazed to a light standard anchor bolt.

Item S-26, Electrical Lighting System shall include the junction box, anchor bolts for light standards, 1¼"⌀ steel conduit and the electrical grounds.

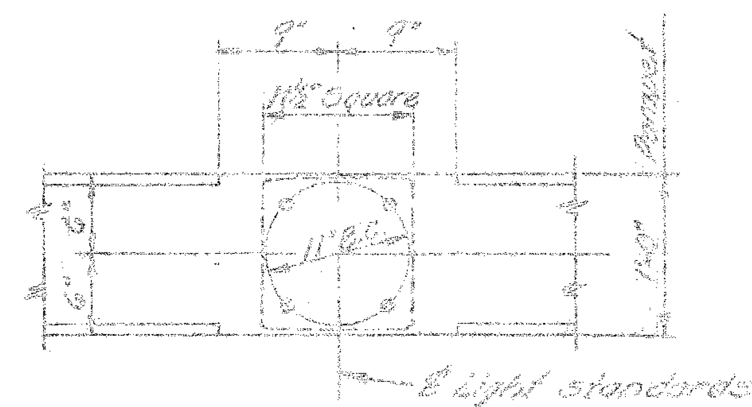


JUNCTION BOX DETAIL ON RETAINING WALLS

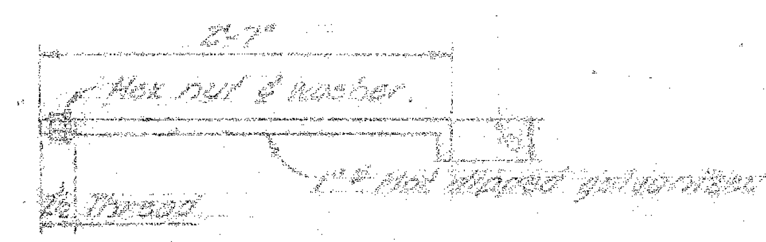




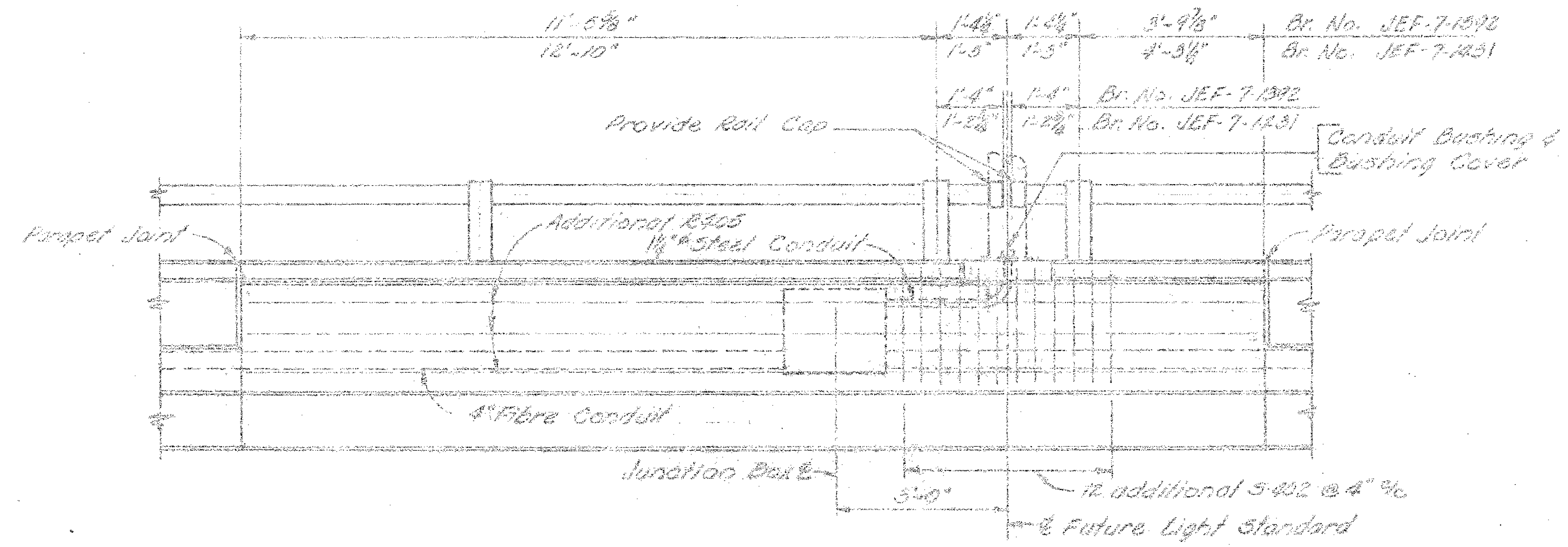
JUNCTION BOX DETAIL ON BRIDGES

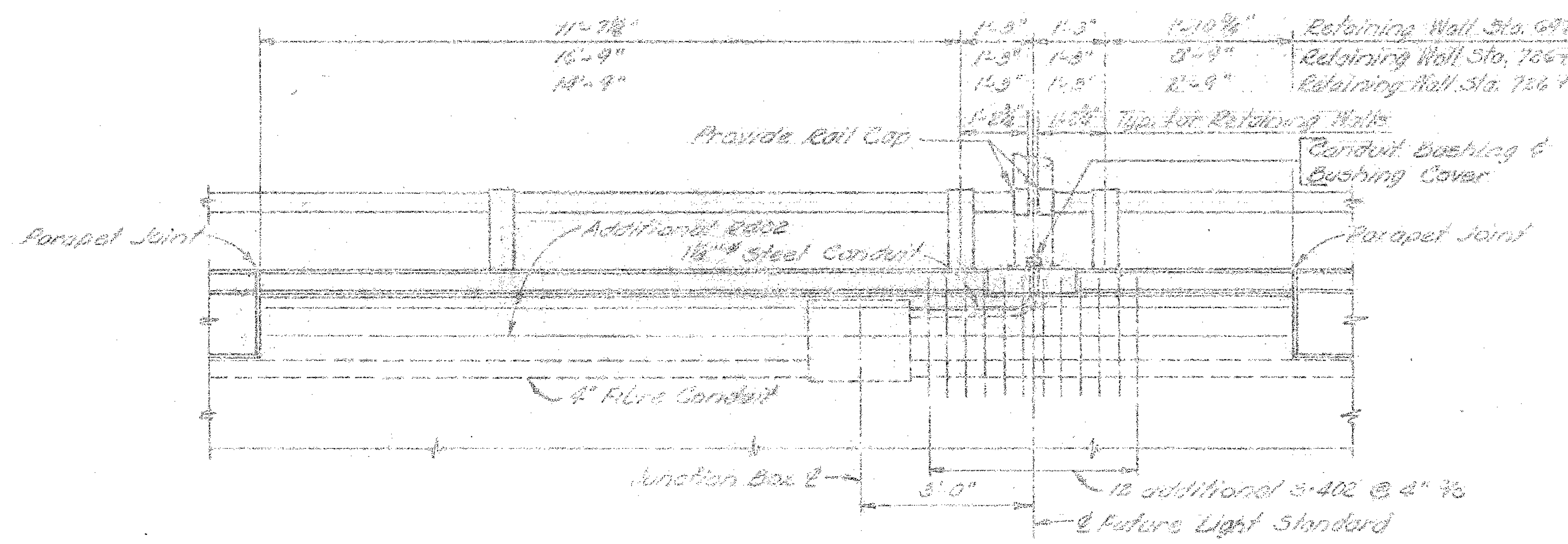


ANCHOR BOLT LAYOUT



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 7-9-59 | | |

# CENTERLINE PLAT

## OHIO DEPARTMENT OF HIGHWAYS

## JEF-7-13.53

## JEFFERSON COUNTY

JEF-7-13.53

R/W
1 OF 21

Scale 1" = 200'

CURVE DATA

P.I. Sta. 683+02.61
Δ = 6°00'00" Lt.
D = 2°59'59"
R = 1910.02'
T = 100.10'
L = 200.02'

P.I. Sta. 686+06.22
Δ = 16°11'21" Lt.
D = 4°00'00"
R = 1432.39'
T = 203.72'
L = 404.73'

P.I. Sta. 689+07.33
Δ = 6°00'00" Lt.
D = 2°59'59"
R = 1910.02'
T = 100.10'
L = 200.02'

CURVE DATA

P.I. Sta. 695+17.75
Δ = 1°30'00 Rt.
D = 1°30'00"
R = 3819.51'
T = 50'
L = 100.00'

P.I. Sta. 698+94.15
Δ = 13°00'00" Rt.
D = 2°00'00"
R = 2864.79'
T = 326.40'
L = 650.00'

P.I. Sta. 702+67.75
Δ = 1°30'00" Rt.
D = 1°30'00"
R = 3819.51'
T = 50'
L = 100.00'

CURVE DATA

P.I. Sta. 706+48.26
Δ = 4°22'30" Lt.
D = 2°37'29"
R = 2182.86'
T = 83.38'
L = 166.68'

P.I. Sta. 707+69.86
Δ = 2°40'54" Lt.
D = 3°30'00"
R = 1637.02'
T = 38.32'
L = 76.62'

P.I. Sta. 708+91.54
Δ = 4°22'30" Lt.
D = 2°37'29"
R = 2182.86'
T = 83.38'
L = 166.68'

CURVE DATA

P.I. Sta. 716+28.13
Δ = 6°00'00" Lt.
D = 2°59'59"
R = 1910.02'
T = 100.10'
L = 200.02'

P.I. Sta. 721+25.26
Δ = 31°00'00" Lt.
D = 4°00'00"
R = 1432.39'
T = 397.24'
L = 775.00'

P.I. Sta. 726+03.12
Δ = 6°00'00" Lt.
D = 2°59'59"
R = 1910.02'
T = 100.10'
L = 200.02'

BEGIN PROJECT
LIMITED ACCESS
Sta. 681+95.00

CURVE DATA

P.I. Sta. 672+80.41
Δ = 24°49'55" Rt.
D = 4°00'00"
R = 1432.39'
T = 315.35'
L = 620.80'

P.I. Sta. 676+85.96
Δ = 6°00'00" Rt.
D = 2°59'59"
R = 1910.02'
T = 100.10'
L = 200.02'

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
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'

CURVE DATA

P.I. Sta. 759+91.42
Δ = 6°00'00" Rt.
D = 2°59'59"
R = 1910.02'
T = 100.10'
L = 200.02'

P.I. Sta. 761+03.81
Δ = 1°00'00" Rt.
D = 4°00'00"
R = 1432.39'
T = 12.50'
L = 25.00'

P.I. Sta. 762+16.41
Δ = 6°00'00" Rt.
D = 2°59'59"
R = 1910.02'
T = 100.10'
L = 200.02'

CURVE DATA

P.I. Sta. 766+50.11
Δ = 4°30'00" Lt.
D = 2°14'59"
R = 2546.70'
T = 100.06'
L = 200.02'

P.I. Sta. 767+65.14
Δ = 0°54'20" Lt.
D = 3°00'00"
R = 1909.86'
T = 15.09'
L = 30.19'

P.I. Sta. 768+80.30
Δ = 4°30'00" Lt.
D = 2°14'59"
R = 2546.70'
T = 100.06'
L = 200.02'

CURVE DATA

P.I. Sta. 772+72.98
Δ = 2°00'00 Rt.
D = 1°30'00"
R = 3819.51'
T = 66.67'
L = 133.33'

P.I. Sta. 774+77.25
Δ = 5°30'00" Rt.
D = 2°00'00"
R = 2864.79'
T = 137.606'
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'

END PROJECT
LIMITED ACCESS
Sta. 770+35.03

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

6-22-59 Date of Completion

RIGHT OF WAY CENTERLINE PLAT

# SUMMARY OF ADDITIONAL R/W REQUIRED

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

288
307

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 WA 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 Pergl 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

CURVE DATA
P.I. Sta. 683+02.61
Δ = 6°00' Lt.
D = 2°58'59"
R = 1910.02
T = 100.10'
L = 200.02'

STEUBENVILLE TWP
SEC. 27 T2 R1

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 |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

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307

JEFFERSON COUNTY
JEF.-7-13.53
LIMITED ACCESS
R/W
4 OF 21

CURVE DATA
P.I. Sta. 683+02.61
Δ = 6°00'00" Lt
D = 2°59'59"
R = 1910.02'
T = 100.10'
L = 200.02

CURVE DATA
P.I. Sta. 686+06.22
Δ = 14°11'21" Lt
D = 4°00'00"
R = 1432.40'
T = 203.72'
L = 404.73'

Proposed R/W Fence Type "C" (See Note on Sheet No. 10A)

BEGIN SHEET STA. 683+00

END SHEET STA. 688+00

MATCH LINE SEE SHT. 4A

MATCH LINE SEE SHT. 4A

LIMIT OF FEDERAL PARTICIPATION

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) | |

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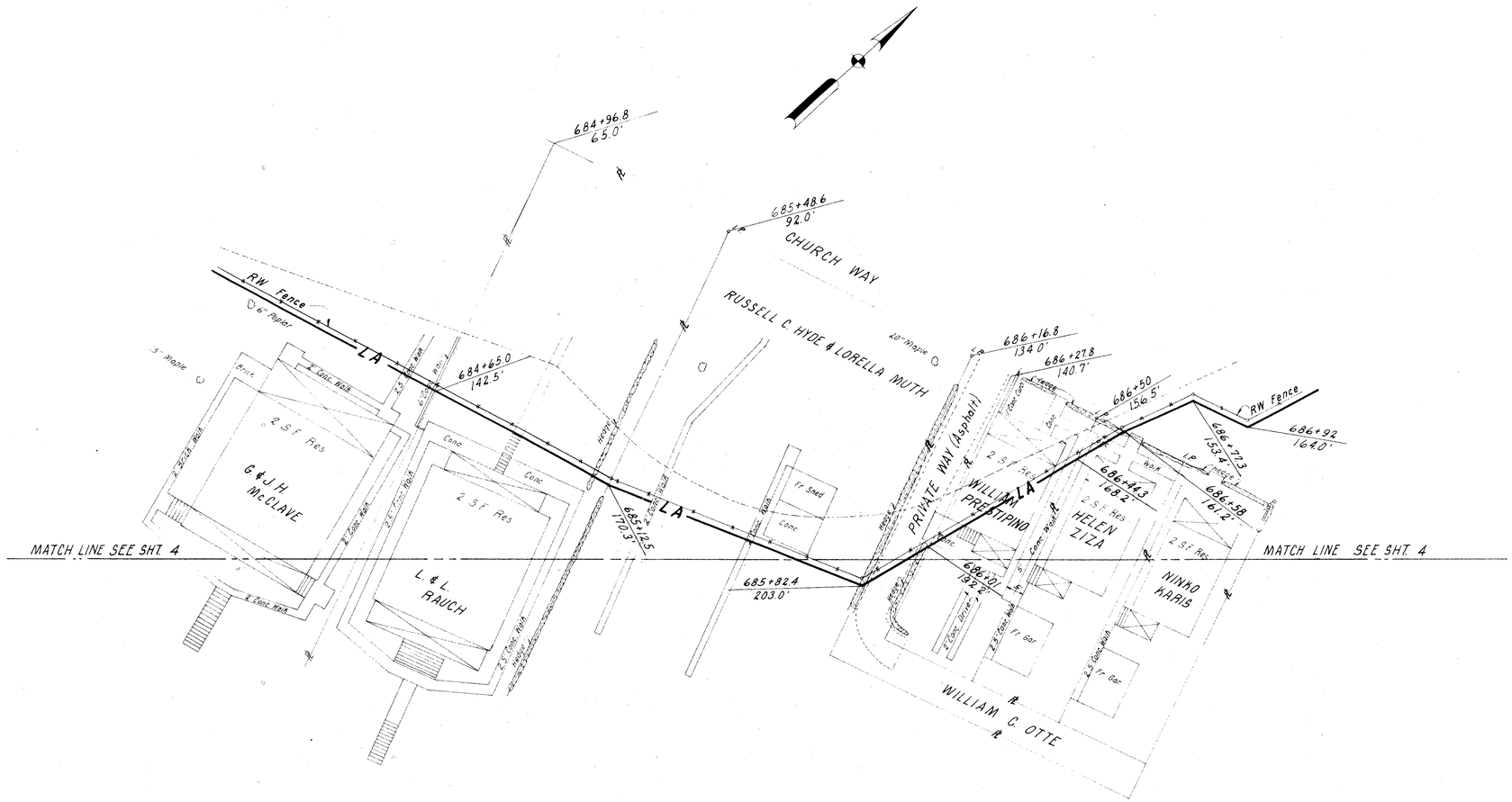
JEFFERSON COUNTY
JEF.-7-13.53
LIMITED ACCESS
R/W
4A OF 21

STEUBENVILLE TWP.
SEC. 27 T2 R1




Scale 1"=20'

6-22-59 Date of Completion

RIGHT OF WAY STA. 683+00 TO STA. 688+00 RT.

BRUSH VALLEY ENGINEERING SUPPLIES COMPANY REDRIDGE, PA. 27044

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

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JEFFERSON COUNTY
JEF -7-13.53
LIMITED ACCESS
R/W
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CURVE DATA
P.I. Sta. 686+06.22
Δ = 16°11'21" Lt.
D = 4°00'00"
R = 1432.40'
T = 203.72'
L = 404.73'

CURVE DATA
P.I. Sta. 689+07.33
Δ = 6°00'00" Lt.
D = 2°59'59"
R = 1910.02'
T = 100.10'
L = 200.02'

STEUBENVILLE TWP.
SEC. 27 T.2 N. R.1 W.

Mc DOWELL & THOMPSON SUB-DIV.

SPRING AVE. 30'

DEMPSEY'S PROP. ADDITION

PEELER'S 2nd ADDITION

M. ADAMS

RUTH AVEY

MAGDALINE CHAPMAN

BILLIE BRIGHT CHAPMAN & EVELYN R. CHAPMAN

JOHN BUCKMILLER

N. MOLINARO

STELLA SCHAEFER

F.J. PRISTER

MURDOCK AVE. (Reloc.)

ALLEY 20' (Earth & Gravel)

MURDOCK AVENUE 50' (Brick Surface)

MURPHY'S FIRST ADDITION

DANIEL G. DORIO

MILORED MUNNS ET AL.

RUTH L. ALBAUGH

POTTER MEM. PRESBY. CHURCH

ELLEN H. ROOD

LUBAN KOSTURA

EARL D. & HETTIE BRITT

BERTHA WEISSBERGER ET AL.

ANTHONY F. SHARPE ET AL.

JOHN H. BUCHAN

MARY E. GREENBARTLETT

POTTER & SHERRARD'S FIRST ADDITION

MARION & ANN MAUL

MARY E. QUINN

THEODORE WOOD

PEELER STREET

SAINT AGNES SCHOOL

Asphalt Paving

Stone Church

2-Story Frame Church Building

BEGIN SHEET STA. 688+00

END SHEET STA. 693+00

END WORK STA 688+00

P.C. Sta. 688+07.23

N 31°21'14" E

N-25°21'14" E

1000' L.F. Type "C" Fence

Scale 1" = 20'

6-22-59 Date of Completion

RIGHT OF WAY STA. 688+00 TO STA. 693+00

CURVE DATA
P.I. Sta 695+17.75
Δ = 1°30'00" Rt
D = 1°30'00"
R = 3819.51'
T = 50.00'
L = 99.99'

STEUBENVILLE TWP.
SEC 27 T2-N R1-W

CURVE DATA
P.I. Sta 698+94.15
Δ = 13°00'00" Rt
D = 2°00'00"
R = 2864.79'
T = 326.40'
L = 650.00'

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

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JEFFERSON COUNTY
JEF-7-13.53
LIMITED ACCESS
R/W
6 OF 21

SPRING STREET (Macadam)

M. J. DOPLAR
JOS. SLATNISKE
C.W. STEVENS
PEELER'S 2nd ADDITION
LAURA PIZZOFERRATO
ANDREW JOHN MATY
MARY STEPHEN KOZUR
E.E. CALHOUN
CALVIN & ANN WHITNEY
EARNEST E. MARIE BERARDUCCI
F.J. PFISTER
M. ADAM
20' ALLEY
ANDREW & MARY MARCINKO
MARY E. GREEN BARTLETT
MICHAELINA CAVA
JOSEPHINE BUCHAN
DOROTHY M. ARTHURS
JOSEPH & SUSIE KOVACS
WILLIAM & BLANCHE DEVORE
TOM NICOSIA
JOSEPH SLATNISKE
STEPHANIE & STEPHEN MELKO
JOSEPH WALKOETAL
JOHN V. BRINSKEY
POTTER & SHERRARD'S FIRST ADDITION
694
695
696
697
ANDREW & MARY MARCINKO
ANNA BUCKMELTER
ELIZABETH MEAGER
M.E. PARSONAGE
CHARLES & MARY M. KOSLIK
JOS. & MICHAEL MELKO
EARL & RUBY BEECROFT
ELLEN COCH
BERADINE LESNANSKY
ST. CLAIR 50'
MURDOCK AVENUE (Macadam)
BEGIN SHEET STA. 693+00
END SHEET STA. 698+00
N-25° 21' 14" E
N 26° 21' 14" E
P.C.C. Sta 694+67.75
P.C.C. Sta 695+67.75
Sta. 93+42.75 MURDOCK AVE. (Reloc.)
Proposed Bridge
Proposed Cone. Ret. Wall
Proposed Bridge Limits
Lot #42
Lot #43
Lot #44
Lot #45
Lot #46
Lot #47
Lot #17
Lot #18
Lot #19
Lot #20
Lot #21
Lot #22

LEGEND

LIMITS OF EASEMENT FOR SEWER
Easement to be provided by the village

960 L.F. Type "C" Fence

Scale 1" = 20'

6-22-59 Date of Completion
10-16-59 Added Easement for Sewer

RIGHT OF WAY STA. 693+00 TO STA. 698+00

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

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JEFFERSON COUNTY
JEF-7-13.53
LIMITED ACCESS
R/W
7 OF 21

STEUBENVILLE TWP
SEC. 27 T2-N R1-W

GEORGE WASSEL

RISHER'S REVISED ADDITION

LINCOLN TERRACE ADDITION

SLAVISH PRESBY. CHURCH

ELIZABETH McGREW

ANDREW MARCIN

MIKE DODASOVICH

JOHN & ANNA ANDRECHAK

VILLAGE OF MINGO JUNCTION

BERTA & ANDREW MILLER

LAURA & JOHN KAKASCIK

JOHN J KOVALN

STEPHANIE & STEPHEN MELKO

WILLARD & HELEN JUSTICE

MARY & JACK SAVAGE

ANN KENDRACH

MARY BERESCIK

MIKE EVANS

JOSEPH I. BUCHMELTER ET AL.

GEORGE & ANNA S. DZVONARIK

PETER SLATNISKE

MARY PITOSH

MARY GRECULA ET AL.

CLARENCE THOMPSON

MARY SLATNISKE

ANNA MATKEY

MARY VELLA

Perma Stone Church

Temporary Runaround

MURDOCK AVE.

LINCOLN AVENUE

ALLEY

RAVINE ST.

Macadam Drive

Gravel Drive

Gravel Parking Area

Proposed Bridge

Proposed Conc. Ret Wall

BEGIN SHEET STA. 698+00

END SHEET STA. 703+00

CURVE DATA
P.I. Sta. 698+94.15
Δ = 13°00'00" RT.
D = 2°00'00"
R = 2864.79'
T = 326.40'
L = 650.00'

CURVE DATA
P.I. Sta. 702+67.75
Δ = 1°30'00"
D = 1°30'00"
R = 3819.51
T = 50.00'
L = 99.99'

1165 L.F. Type "C" Fence

Scale 1" = 20'

6-22-59 Date of Completion

RIGHT OF WAY STA. 698+00 TO STA. 703+00

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

295/307

JEFFERSON COUNTY
JEF.-7-13.53
LIMITED ACCESS
R/W
8 OF 21

CURVE DATA
P.I. Sta. 702+67.75
Δ = 1°30'00" Rt.
D = 1°30'00"
R = 3819.51'
T = 50.00'
L = 99.99'

CURVE DATA
P.I. Sta. 706+48.26
Δ = 4°22'30" Lt.
D = 2°37'29"
R = 2182.86'
T = 83.38'
L = 166.68

CURVE DATA
P.I. Sta. 707+69.86
Δ = 2°40'54" Lt.
D = 3°30'00"
R = 1637.02'
T = 38.32'
L = 76.62'

STEUBENVILLE TWP
SEC. 27 T-2N R-1W

P.C. Sta. 705+64.88

P.C.C. Sta. 707+31.56 Bk.
P.C.C. Sta. 707+31.54 Ahd.

WILSON AVE. 40'
(Conc. Surface)

McLISTER AVE. 40'
(Bituminous Surface)

BORDER ST. 20'

POTTER ST.

PLEASANT WAY 20'
Depressed Curb

LOGAN AVE. 50'
(Brick Surface)

BEGIN SHEET STA. 703+00

END SHEET STA. 708+00

PT. Sta. 703+17.74 Bk. =
PT. Sta. 703+19.83 Ahd.

ELIZABETH McCREW
Stag Drive
Lot #5
1½ Story Frame Res.
2.3 Brick Walk
Tile Block Gar.
(158 LA)

ANDREW MARCIN
0.06 Ac.
Lot #4
Brick Surface
2½ Story Duplex Res.
Arbor
Shed
REMOVED
(157 LA)

CLARENCE THOMPSON
0.13 Ac.
2 Story Frame Res.
Lot #3
2 Story Frame Gar.
(158 LA)

MARY SLATNISKE
0.13 Ac.
2 Story Frame Res.
(158A LA)

ANNA MATTEY
0.006 Ac.
2 Story Frame Res.
(158B LA)

MARY VELLA
2 Story Brick Apt. House

JOHN PESTA
2 Story Brick Apt. House

L. P. FRISTIC
1½ Story Frame Res.
Tile Block Gar.

FRED & MARY Di COLA
Mesh Fence
Hedge Row
Wood Ret. Wall
Stone Ret. Wall
Shed
Block Gar.
Conc. Block Gar.
Stone Gar.
Frame Gar.
Brick Gar.
Cistern
Conc. Cistern
Conc. Ret. Wall
Wood Steps
Trellis
Flush Pipe
Fence
Picket Fence
Brick Wall
Stone Wall
Conc. Wall
Conc. Walk
Brick Walk
Stone Walk
Conc. Curb
Depressed Curb
Coal Hole
Earth
Lot #15
Lot #16
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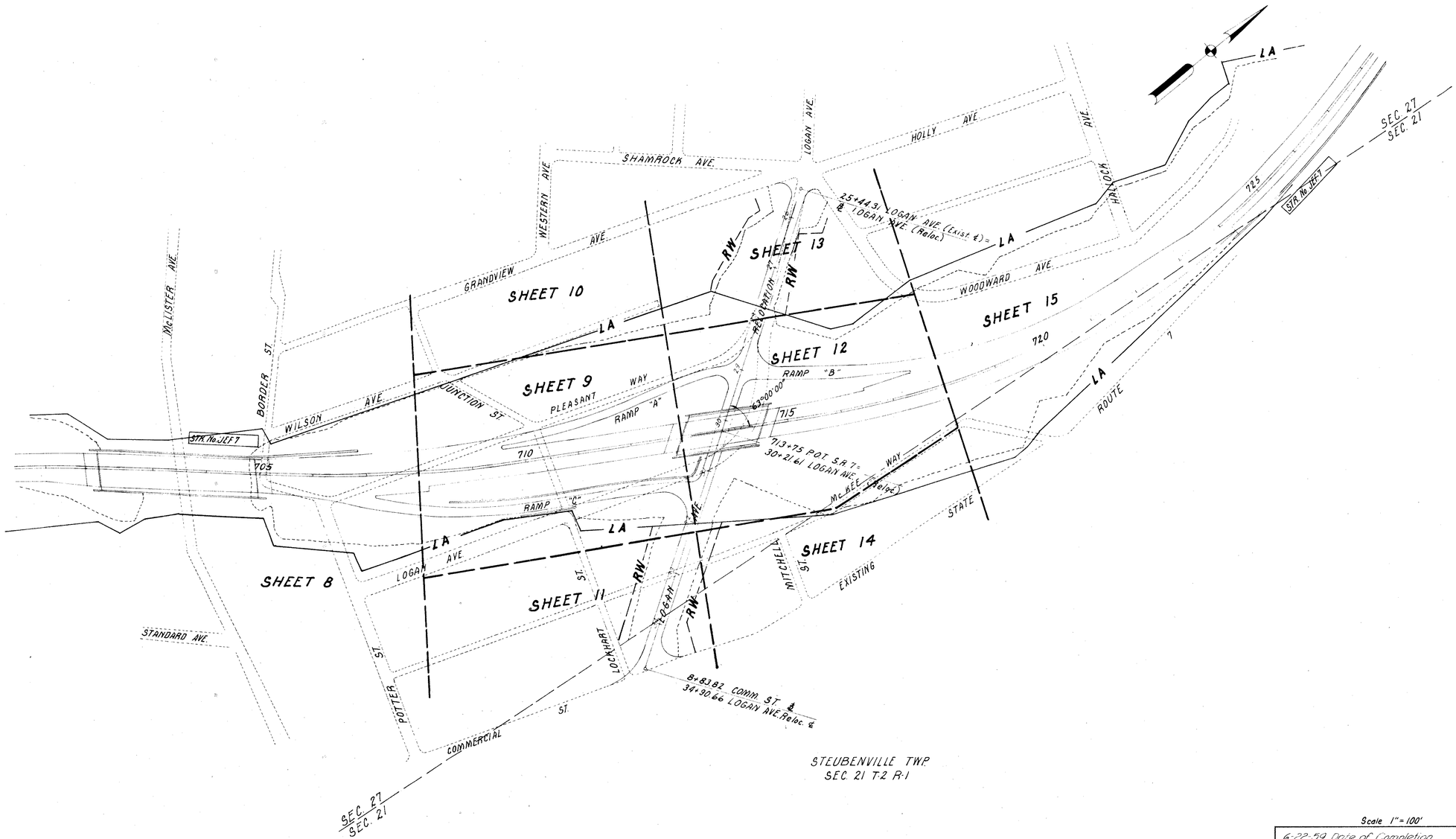
| FED. RD. DIVISION | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U-430 (14) | |

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

SEC. 27
SEC. 21

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

CURVE DATA

P.I. Sta. 707+69.86
Δ = 2°40'54" Lt.
D = 3°30'00
R = 1637.02'
T = 38.32'
L = 76.62'

P.I. Sta. 708+91.54
Δ = 4°22'30" Lt.
D = 2°37'29"
R = 2182.86'
T = 83.38'
L = 166.68'

685 L.F. Type "C" Fence

Scale 1"=20'

6-22-59 Date of Completion

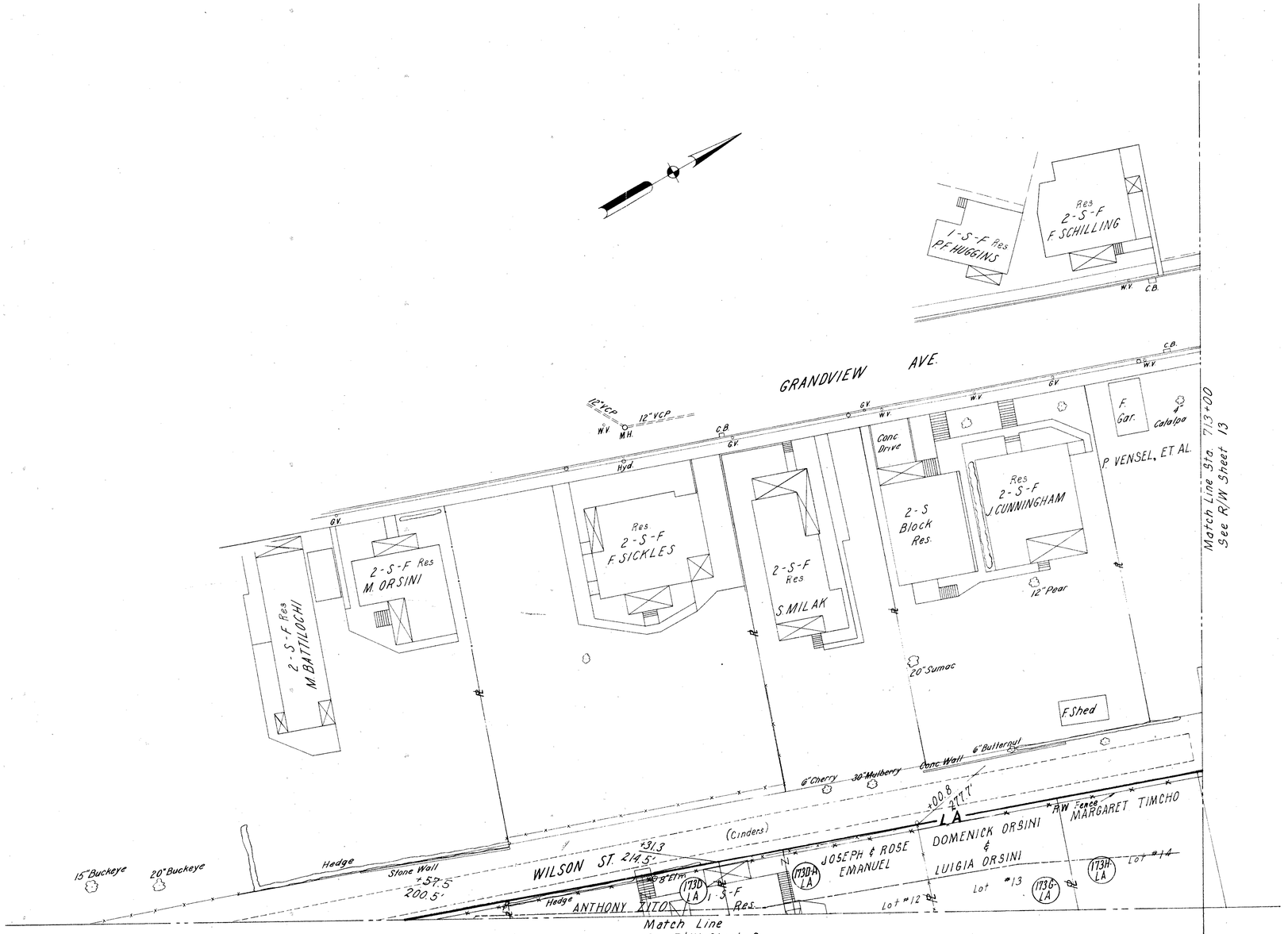
RIGHT OF WAY STA. 708+00 TO STA. 713+00

STEUBENVILLE TWP.
SEC. 27 T2 R1

| 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




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) | |

299
307

JEFFERSON COUNTY
JEF-7-13.53
LIMITED ACCESS
R/W
11 OF 21

STEUBENVILLE TWP.
SEC. 27 T-2 R-1

See R/W Sheet 9
Match Line

ANDREW & ANNA MULATO
1 S.F. Res.
Conc.
Conc. Walk
Conc. Wall
Wire Fence
12 Apple
25 Conc. Walk
Stone Fence
J. RUFUS
4' Conc. Walk
Board Fence
F. BARGER
Conc.
2 S.F. Res.
ORSINI
4.5 Conc.
Lawn
Garden Plot
Fr. Gar.
Picket Fence
Conc. Drive
Hedge
JOHN MARCINKO
10" Ash
2 S. Brick
LINCOLN SCHOOL
Conc. Steps
Steel Steps
Conc. Wall
W. Rail
Black Top Parking Area & Play Area
Lot # 22
1' Conc. Ret. Wall
Lot # 23
Conc. Walk
Gutter
LOCKHART ST.
L.B.V. 20'
JOSEPH ESPOSITO
Wire & Post Fence
Res.
JOSEPHINE LAURE
Fr. Gar.
Lot # 24
A.J. MARVANI
0.008 Ac.
179A
Brick Walk
Lot # 25
Cone. Steps
Lot # 26
Hedge
Conc. Walk
3' Conc. Walk
+04.7 72.3
RW
G. HOMOL
0.07 Ac.
179B
Met. Gar.
9.9 13.5
1 Sty. Block Gar.
3 Stalls
+68.3 26.3
Lot # 27
1.5 Brick Walk
R. FRATTICCI
0.09 Ac.
179C
MARY KUCER
0.06 Ac.
179D
Lot # 28
Hedge
Stone Wall
+81.3 34.3
0.005 Ac.
179L
JOHN GOLEE
00.5 49.2
+43.8 71.0
+29.8 53.0
+12.5 5.8
33
1' Conc. Ret. Wall
Conc. Walk
+62.7 10.3
+43.2 45.3
0.07 Ac.
179K
Hedge
2' Brick Wall
Shed
Fr. Gar.
Hedge
+94.6 69.0
1' Peach
PLAT
ORIGINAL
Conc.
1 S.F. Res.
Conc. Walk
Hedge
Wood Steps
DONALD & FLORENCE BRELTELL
Wire Fence
Conc. Walk
MINGO BANK
1 S.F. Res.
8" Conc. Ret. Wall
Conc. Walk
Conc. Gutter
C.B.
Lot # 8
Lot # 7
Coal Hole
Conc. Walk
2 S.F. Res.
JOSEPH P. CONLEY
1' Conc. Ret. Wall
Lot # 9
Conc. Steps
Lot # 10
Hedge
Conc. Steps
THOMAS & ROSE SPROCHI
179H 0.16 Ac.
0.08 Ac.
179G
1' Stone Wall
Brick
2 S.F. Res.
38°21'39"
Brick Walk
Lot # 11
Hedge
1' Conc. Ret. Wall
LOGAN AVE. Reloc.
N 33° 04' 40" W
179J 0.16 Ac.
ROMEO J. DI LEONARDO
54+22.00
Conc. Blk. Fan.
+81.7 48.5
Brick
Conc.
2 S.F. Res.
G.S. CARDUGGI
Conc. Walk
Lot # 12
Hedge
+24.0 81.2
+54.2 41.6
Match Line Sta. 713+00
See R/W Sheet 14
SEC. 27
SEC. 21
Match Line Sta. 708+00
SEC. 27
SEC. 21
COMMERCIAL AVE.
8+83.82 Commercial Ave.
34+90.66 Logan Ave (Reloc.)
+09.4 30.0
Begin 12" Conc. Wall
Exist 18" V.C.P.
Bus Shelter
Exist C.B.
Begin Curb
Proposed Special M.H.
Proposed 30" Pipe
Exist. 30" V.C.P.
Proposed C.B.
Exist C.B.
RR RW
Exist. 30" V.C.P.
Exist Open Earth C.B.
93 Pittsburgh, Cincinnati, Chicago, & St. Louis Ry.
92
59
STEUBENVILLE TWP.
SEC. 21 T-2 R-1

NOTE: All ties this sheet are to ℄ Logan Ave. Relocation.
P.C.C. ℄ Sta. L. RR - R/W - See sheet 19.

Scale 1" = 20'
6-22-59 Date of Completion

RIGHT OF WAY STA. 708+00 TO STA. 713+00 RT.

| 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

See R/W Sheet 13 Match Line

BEGIN SHEET STA. 713+00

END SHEET STA. 718+00

MITCHELL AVENUE

LOGAN STREET

PLEASANT WAY

RAMP "A"

RAMP "B"

RAMP "C"

Not Open STREET

GERTRUDE H. JOHNSTON

HERBERT HUGGINS

MARGARET TIMCHO

ALFRED A. ADYNIEC

JOHN & ANNA DICENZO

PATRICK J. REIDY

R. & C. SANFILIPPO

VILLAGE OF MINGO

PATRICK & GEORGIE McGUIRE

ROBERTO SIGESMUND

VIRGIE L. M. FLIPPEN

STEPHAN & ANDY HAMROCK

CHARLES B. LANMAN

ANNA BOLAK

FRANK TOTH

ANDY & E. EVANS

SANTI LEONARDO

MARY KUCER

Village of Mingo

CURVE DATA

P.I. Sta. 716+28.13
Δ = 6°00'00" Lt.
D = 2°59'59"
R = 1910.02'
T = 100.10'
L = 200.02'

P.I. Sta. 721+25.26
Δ = 31°00'00" Lt.
D = 4°00'00" 17
R = 1432.40'
T = 397.24'
L = 775.00'

P.C. Sta. 715+28.03

P.C.C. Sta. 717+28.05 Bk.
P.C.C. Sta. 717+28.02 Ahd.

713+75.00 P.O.T. S.R. 7 = 30+21.61 LOGAN ST.

719+00.00 P.O.T. LOGAN ST. = 14+48.69 P.O.T. RAMP "B"

713+38.90 P.O.T. RAMP "A" = 28+94.21 P.O.T. LOGAN ST.

P.O.T. 13+38.50 RAMP "C" = P.O.T. 31+43.03 LOGAN ST.

713+71.5 136.2'

714+21.0 145.3'

N 33° 04' 40" W

63° 00' 00"

N 29° 55' 20" E

N 23° 55' 20" E

SEC. 27 SEC. 21

430 L.F. Type "C" Fence

Scale 1"=20'

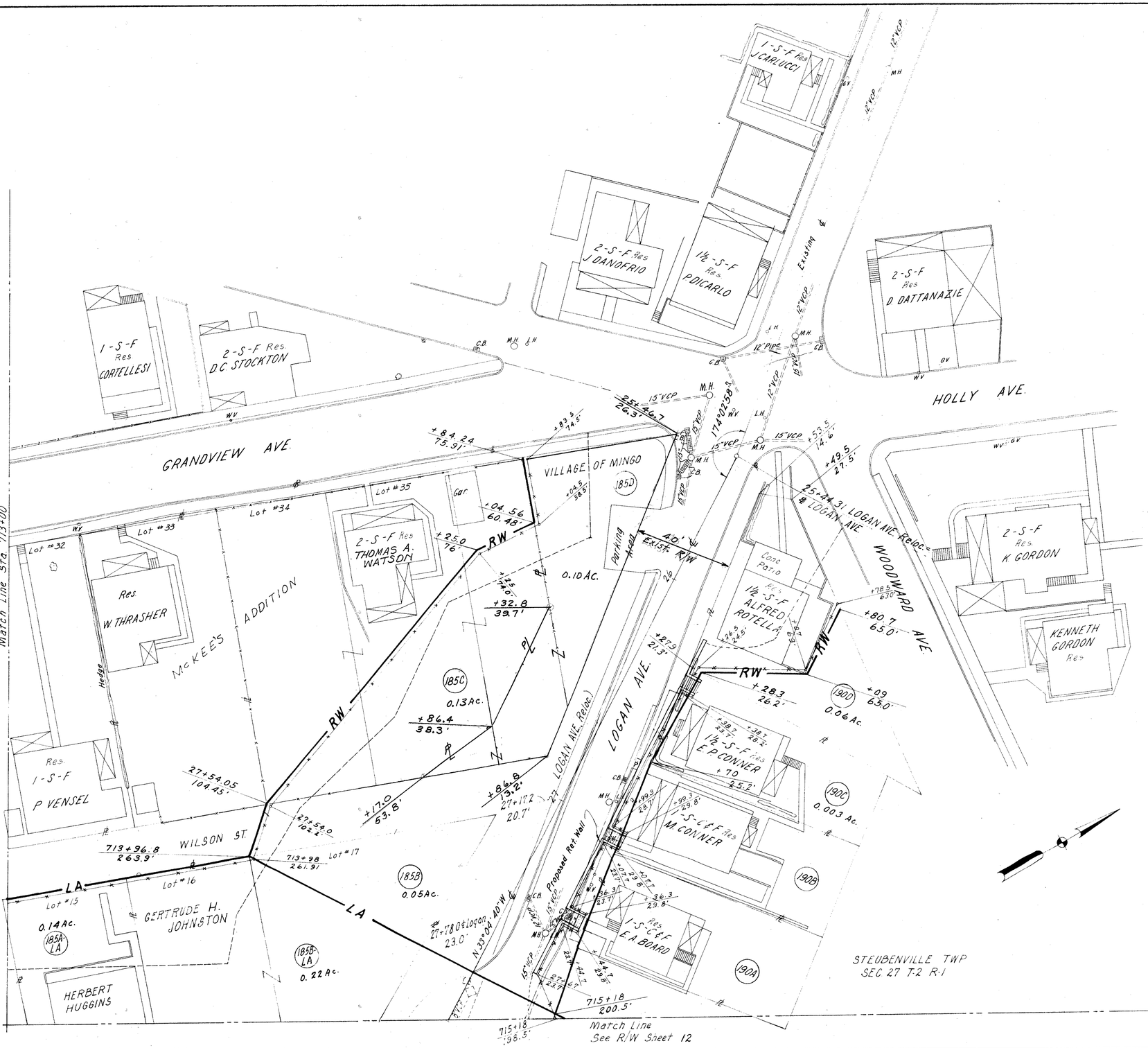
6-22-59 Date of Completion

RIGHT OF WAY STA. 713+00 TO STA. 718+00

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

301/307

JEFFERSON COUNTY
JEF-7-13.53
LIMITED ACCESS
R/W
13 OF 21




550 L.F. Type "C" Fence

Scale 1"=20'

6-23-59 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

See R/W Sheet 12
Match Line

MARY KUCER
SANTI LEONARDO
ANDY & E. EVANS
VILLAGE OF MINGO
SEC. 21
T 1 N
McKEE WAY
Logan Ave
ORIGINAL PLAT
SEE R/W Sht 11
SEC. 27
SEC. 21
See R/W Sheet 11
Match Line Sta. 713+00
JOHN GOLEE
PAUL GETSEY
TONY ANTONELLI
A.T. COTTONE Jr.
MITCHELL ST.
RAYMOND J. DILORETTA
GEORGE GRANATIR
W.C. BOOP
FRANK FORTUNATO
LUIGI PETRELLA
JOHN H. BUCHANAN
THOS. C. MITCHELL
R. STINARD
J. PETROSKEY
GLENN
NORFOLK OLDHAM
NICK RUSEN
McKEES ADDITION 2ND
COMMERCIAL ST.
S.R. 7
STEUBENVILLE TWP
SEC. 21 T-2 R-1
Match Line Sta. 718+00

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

## CURVE DATA

P.I. Sta. 721+25.26
Δ = 31°00'00" Lt.
D = 4°00'00"
R = 1432.40'
T = 397.24'
L = 775.00'

P.I. Sta. 726+03.12
Δ = 6°00'00" Lt.
D = 2°59'59"
R = 1910.02'
T = 100.10'
L = 200.02'

STEUBENVILLE TWP.
SEC. 27 T-2 R-1

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 | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U-430(14) | |

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307

JEFFERSON COUNTY
JEF - 7 - 13.53
LIMITED ACCESS
R/W
16 OF 21

ADOLPH BEREN ET AL.

STEUBENVILLE TWP.
SEC. 27 T-2 R-1

POTENTIAL SLIDE AREA

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'

BEGIN SHEET STA. 731+00

P.C. Sta. 731+52.66

Oil Well #1

Oil Well No. 1

Oil Well No. 1 Miller

Shackle Line

Vacuum Line

Oil Line

Water Line

Corrugated Metal Bldg.

Water Tank

Drip

214 LA
T.B.A. 7.46 Ac.
P.R.O. 1.84 Ac.

O.P. Co. High Voltage Tower

Easement 40' 40'

SEC. 27
SEC. 28

BRETTELL COAL CO.

215 LA
T.B.A. 10.61 Ac.
P.R.O. 2.88 Ac.

4116.50' to Section Corner
S 68°45'50" E
4710.10

65°26'09" Tan to Curve

Exist. R/W

15' Conc. Ret. Wall

8" Curb

RAMP "D"

Exist. S.R. 7

1.5" Conc. Wall

8" Conc. Curb

Guard Fence

1 Stone Wall

2 Stone Wall

1 Conc. Wall

2 Conc. Wall

1.5 Stone

Wash

Sign

Spring

N 13°04'40"W

N 23°04'40"W

24" V.C.

ADOLPH BEREN ET AL.

BRETTELL COAL Co.

P.C.C. & St. Louis RR

Nearest Track

SECTION 27
SECTION 28

732 733 734 735 736 737 738 739 740 741 742 743 744

+00 190'
+00 85'
+00 540'
+65 51'
+78.01 48'
+20.70 255'
+00 255'
+75 250'
+75 214'
+60 252'
+60 198'

At 731+31.07
Ext. 731+31.07
61.5 Rt. of S.R. 7

---

STEUBENVILLE TWP.
SEC. 28 T-2 R-1

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'

Vacuum Line
Oil Line
Shackle Line

Oil Well #7 Miller

Oil Well No. 2 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

END SHEET STA. 757+00

215 LA

Conc.

Sign

Old Conc. Fdn.

16" V.C.P.

36" V.C.P.

2" Conc. Wall

18" V.C.

Exist. S.R. 7

Guard Fence

Broken Conc.

1.5' Stone

Wash Out

1'-0" V.C.

(2 x 3 Conc.

Sign Posts

Nearest Track

P.C.C. & ST. L. R.R.

18" C.I.P.

N 23°04'40"W

N 25°04'40"W

N 35°52'48"W

N 37°52'48"W

R = 2918.79'

744 745 746 747 748 749 750 751 752 753 754 755 756

+00 255'
+00 225'
+00 540'
+33.96 54.0'
+80.07 54.0'
+00 216'
+00 240'

RIGHT OF WAY STA. 731+00 TO STA. 757+00

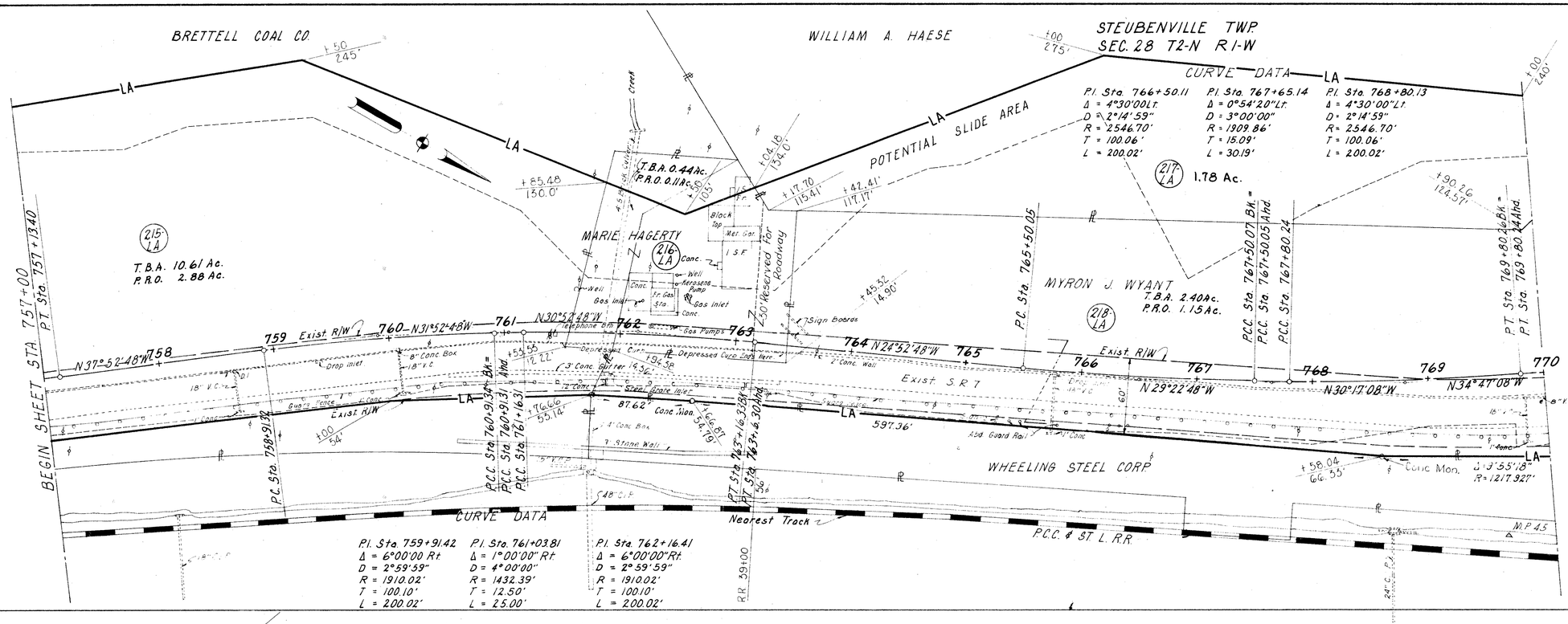
Scale 1" = 50'

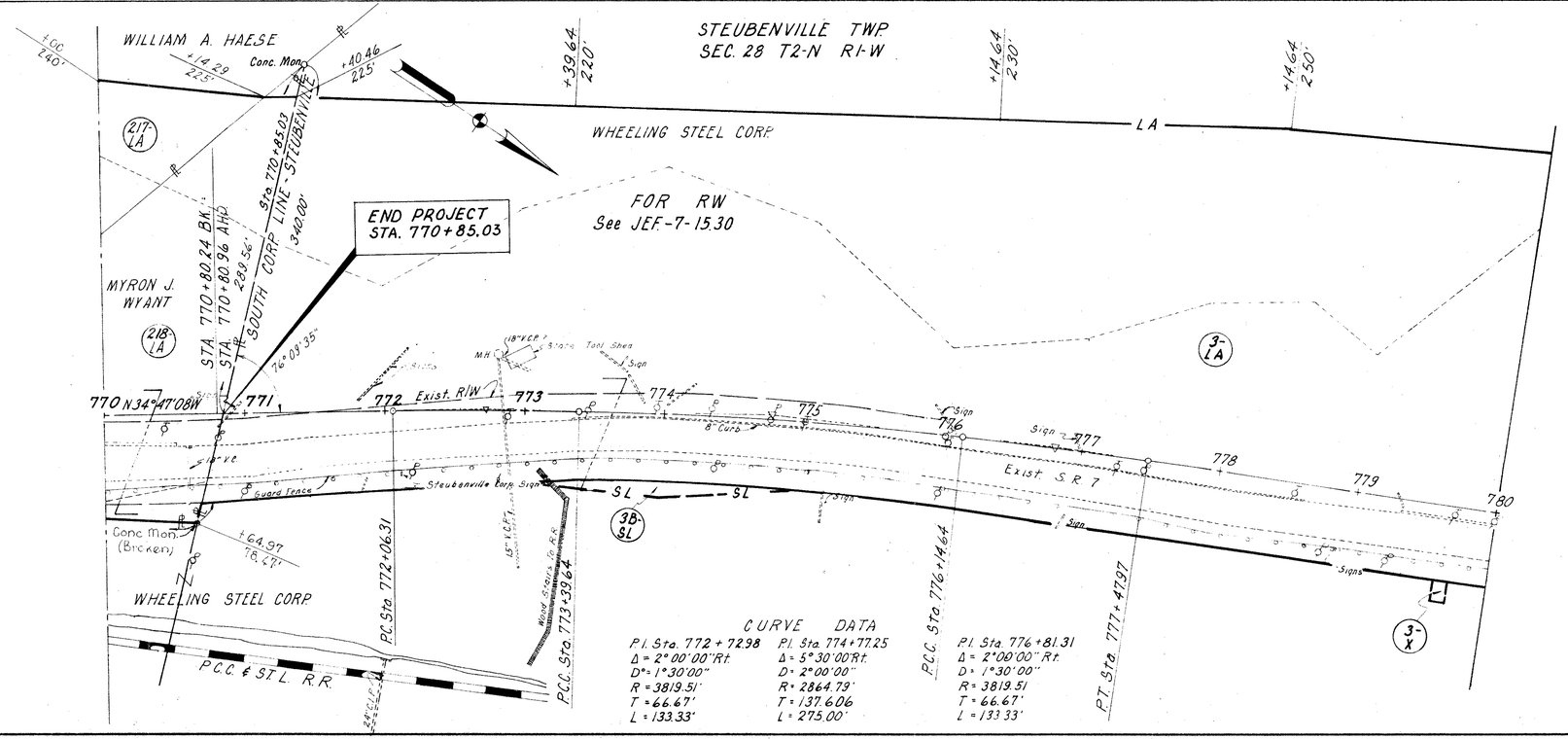
6-22-59 Date of Completion

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

305
306

JEFFERSON COUNTY
JEF-7-13.53
LIMITED ACCESS
R/W
17 OF 21




Note: Parcel No. 3LA, 3B-SL, & 3X Purchased in JEF-7-15.30

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

## 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'

SEC. 27
SEC. 26

P.C. Sta. 2+41.89

CROSS Creek

144.00' S.R. 7-678+37
38.42' R.R. 131+46.50

R.R. R/W

12" V.C.P.

N88°34'55"W
456.1'

GUY DELGOTTO
00' S.R. 7 678+75
R.R. 131+01.11

MH 116
42.80'

N87°27'33"E
80.51'

℄ Proposed 30" Storm Sewer

(98-S)

EXIST. 24" V.C.P. Storm Sewer from intersection of Murdoch Ave. & Union St.

N82°59'41"W
137.1'

56.00' R.R. 130+20.85

104.37'

56.00' R.R. 130+00

MH 25.00' Clifton St. 3+75

R=1853.66'

N72°30'46"W

49.90'

(98-SL) .012 Ac.

S80°31'
49.80'

680.27' W

P.T. R.R. Sta. 130+50
3° Curve

41°14'50"
Tan to Curve

130

45.00' R.R. 129+50

678 + 679 + 680 + 681 + 682 +

56.00' R.R. 129+00

℄ Sta 679+35.16 =
℄ R.R. Sta 129+76.17

129

JOHN & SUSAN SABAN

JAMES CARANDA

LORETO PETROZZI

Proposed 30" Storm Sewer

P.T. Sta 4+39.89

LUIGI COFARDONE

MARIAN FABIAN

CHURCH WAY

N 53° 32' 35" E

34°

CLIFTON ST

℄ Sta 680+70 =
℄ Sta 4+91.71 CLIFTON ST.

50'

W.T. & T. Co. 2" Gas Line

4" C.I. Water Line
Approx 4' Deep

(Reloc.)

R.R. R/W

BEGIN PROJECT
LIMITED ACCESS
STA 681+95.00

12" V.C.P. Storm Sewer ?

R.R. R/W

30'

40'

56'

128

25'

32'

30'

8" Gas Line - Underground

Pittsburg, Cincinnati, Chicago & St. Louis Ry

STEUBENVILLE TWP
SEC. 26 T2 R1

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

RIGHT OF WAY P.C.C. & ST. L. Ry.

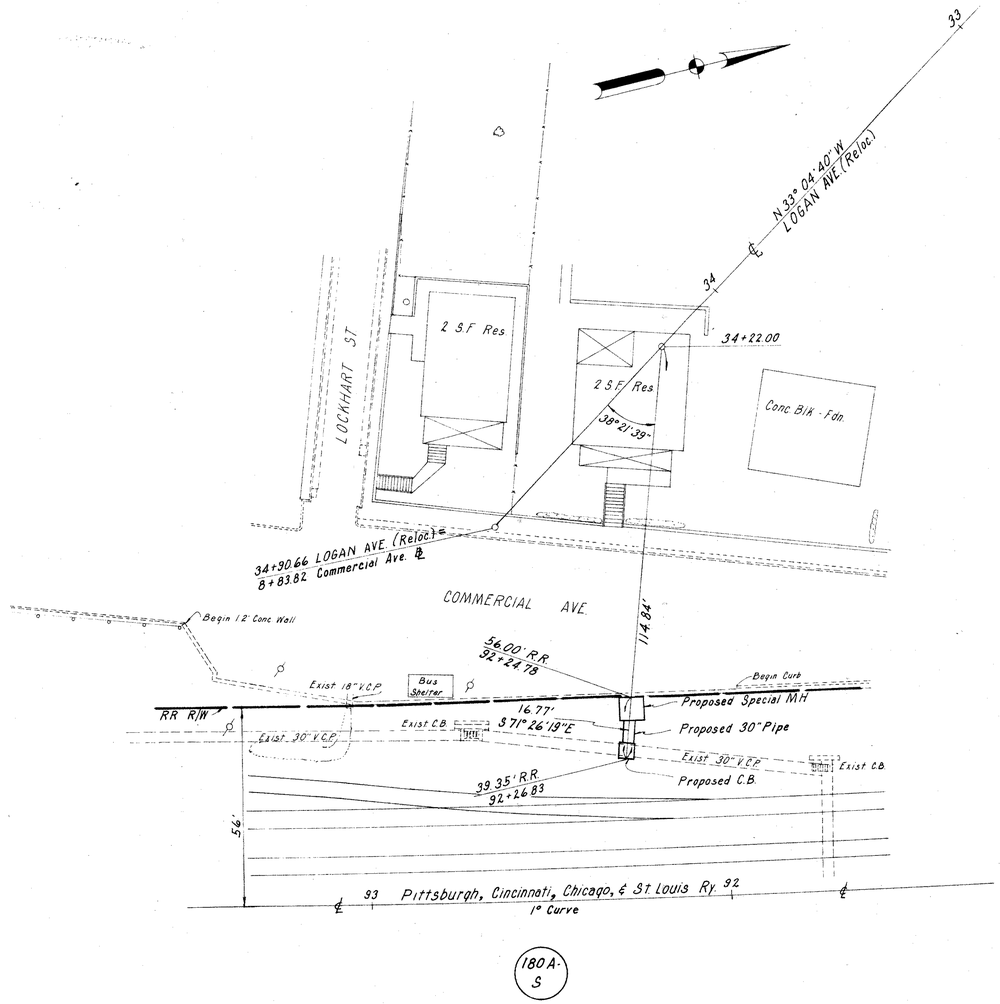
BRAUER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27056

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

307
307

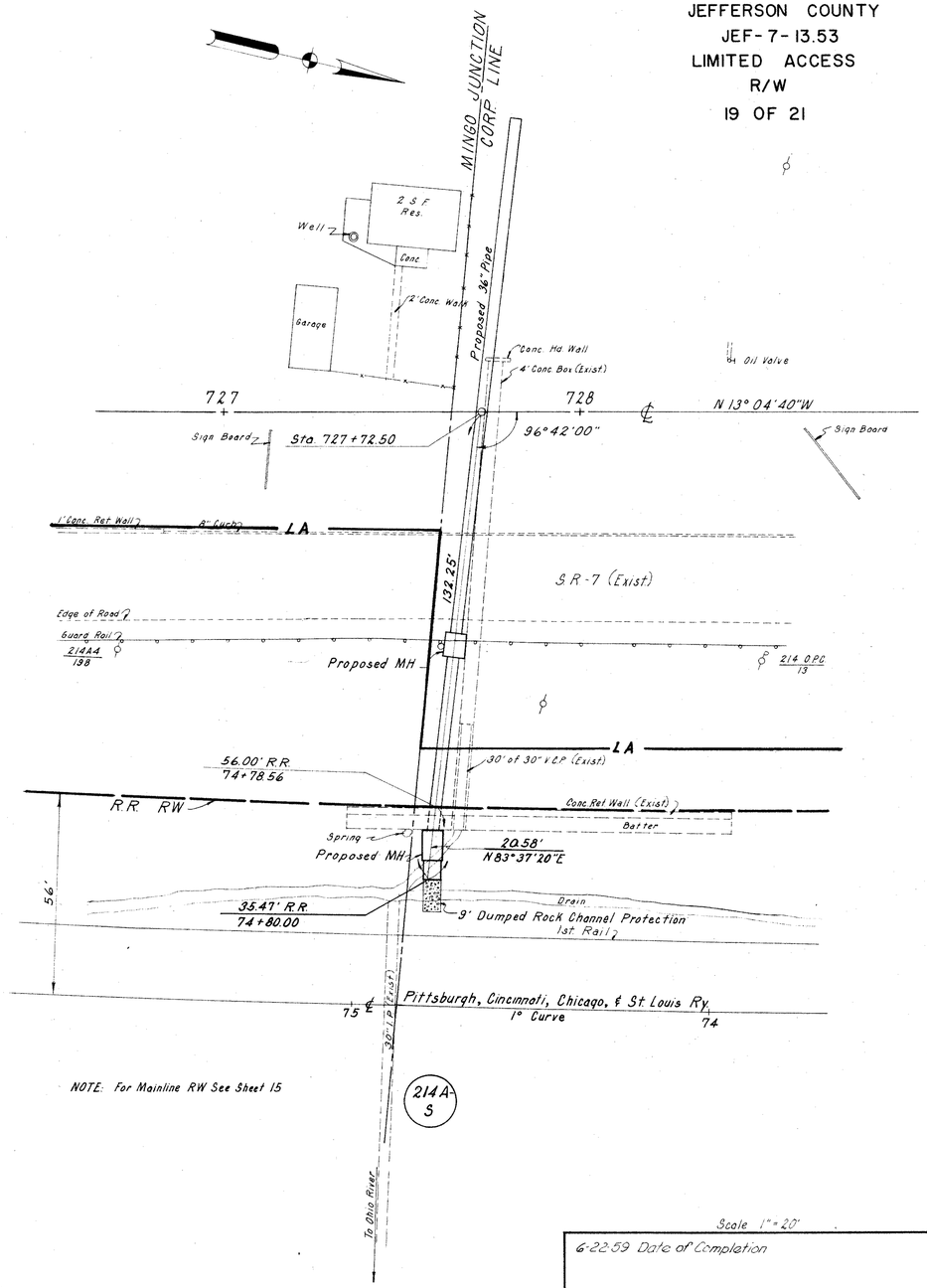
JEFFERSON COUNTY
JEF-7-13.53
LIMITED ACCESS
R/W
19 OF 21

STEUBENVILLE TWP.
SEC. 27 T-2 R-1




180 A-S

NOTE: For Logan Ave. R/W See Sheet 11




NOTE: For Mainline R/W See Sheet 15

214 A-S

Scale 1" = 20'

6-22-59 Date of Compilation

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY - NEGATIVE A-27065

# 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-G.8(a) (Sanitary) |
| I-2 | | | | | | 80 | | | | | I-2 | | 80 | 80 | L.F. | 6" Storm Sewers, Sec. M-G.8(b) |
| I-2 | | | | | | 732 | | | | | I-2 | | 732 | 732 | L.F. | 8" Storm Sewers, Sec. M-G.8(b) (Sanitary) |
| I-2 | 294 | | | 436 | | | | | | | I-2 | 730 | | 730 | L.F. | 12" Storm Sewers, Under Pavement or Approaches, Sec. M-G.6(d) |
| I-2 | | | | 100 | 40 | | | | | | I-2 | 140 | | 140 | L.F. | 12" Storm Sewers, Under Pavement or Approaches, Sec. M-G.8(b) |
| I-2 | | | | | 1038 | | | | | | I-2 | 1038 | | 1038 | L.F. | 15" Storm Sewers, Under Pavement or Approaches, Sec. M-G.8(b) |
| I-2 | | 506 | | 156 | | | | | | | I-2 | 662 | | 662 | L.F. | 18" Storm Sewers, Under Pavement or Approaches, Sec. M-G.8(b) |
| I-2 | | | 344 | | | | | | | | I-2 | 344 | | 344 | L.F. | 21" Storm Sewers, Under Pavement or Approaches, Sec. M-G.8(b) |
| I-2 | | 308 | 448 | | | | | | | | I-2 | | 756 | 756 | L.F. | 8" Storm Sewers, Under Pavement or Approaches, Sec. M-G.8(b) (Sanitary) |
| I-5 | | | 6 | | | | | | | | I-5 | | 6 | 6 | Ea. | 6" Pipe Specials for Storm Sewers Sec. M-G.8(a) (Sanitary) |
| I-5 | | | 6 | | | | | | | | I-5 | | 6 | 6 | Ea. | 8" Pipe Specials for Storm Sewers Under Pavement or Approaches, Sec. M-G.8(b) (Sanitary) |
| I-5 | | | | | 3 | | | | | | I-5 | 3 | | 3 | Ea. | 15" Pipe Specials for Storm Sewers Under Pavement or Approaches, Sec. M-G.8(b) |
| I-5 | | | | | | 4 | | | | | I-5 | | 4 | 4 | Ea. | 8" Pipe Specials for Storm Sewers, Sec. M-G.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-G.5(b) or M-G.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-G.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-G.10) |
| I-124.03 | | | | | | | | | 8 | | I-124.03 | | 8 | 8 | Ea. | Fittings; 4" x 11¼° Wrought Iron Bends (Sec. M-G.10) |
| I-124.03 | | | | | | | | | 4 | | I-124.03 | | 4 | 4 | Ea. | Fittings; 10" x 11¼° Wrought Iron Bends (Sec. M-G.10) |
| I-124.03 | | | | | | | | 2 | | | I-124.03 | | 2 | 2 | Ea. | Fittings; 4" x 11¼° Cast Iron Bends |
| I-124.03 | | | | | | | 4 | 3 | | | I-124.03 | | 7 | 7 | Ea. | Fittings; 4" x 22½° Cast Iron Bends |
| I-124.03 | | | | | | | 3 | | | | I-124.03 | | 3 | 3 | Ea. | Fittings; 4" x 45° Cast Iron Bends |
| I-124.03 | | | | | | | | 1 | | | I-124.03 | | 1 | 1 | Ea. | Fittings; 4" x 90° Cast Iron Bends |
| I-124.03 | | | | | | | | | | 3 | I-124.03 | | 3 | 3 | Ea. | Fittings; 6" x 11¼° Cast Iron Bends |
| I-124.03 | | | | | | | | | | 1 | I-124.03 | | 1 | 1 | Ea. | Fittings; 6" x 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" x 8" x 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 |

REVISED 11-20-59
R.E.C.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

QUANTITY SUMMARY
UTILITIES

| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| Griffin | A.M. | A.M. | A.W.L. | 10-9-59 | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27096

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

309

JEFFERSON COUNTY
JEF-7-13.53

PARK AVE. | ST. CLAIR | FRAZIER ST. | RAVINE | LINCOLN AVE. | STANTON AVE. | Mc LISTER ST.

GARFIELD AVE. | FRANK AVE. | MADISON AVE. | SPRING AVE. | UNION | CLAIR | MURDOCK AVE. | CHURCH | CLIFTON | WAY | PEELER | STEUBEN | SCHOOL | COMMERCIAL ST. | STANDARD | HIGHLAND | MAY | AETNA ST. | CREEK | CROSS | S. R. 7 | P. C. C. & St. L. R. R. | SOUTH COMMERCIAL AVE. | ELIZABETH ST. | JUNCTION ST.

S.T. 705 + 67.75 BK.
705 + 69.83 AH.

C.S. 702+17.75

S.T. 680+02.50 | C.S. 684+02.50 | C.S. 688+07.23 | S.T. 691+07.23 BK. | S.T. 691+07.83 AH. | S.T. 693+17.75 | C.S. 695+07.75 | S.T. 694+17.75

680 | 685 | 690 | 695 | 700

60" Oval Sewer

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. | | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27066

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

310

JEFFERSON COUNTY
JEF- 7- 13.53

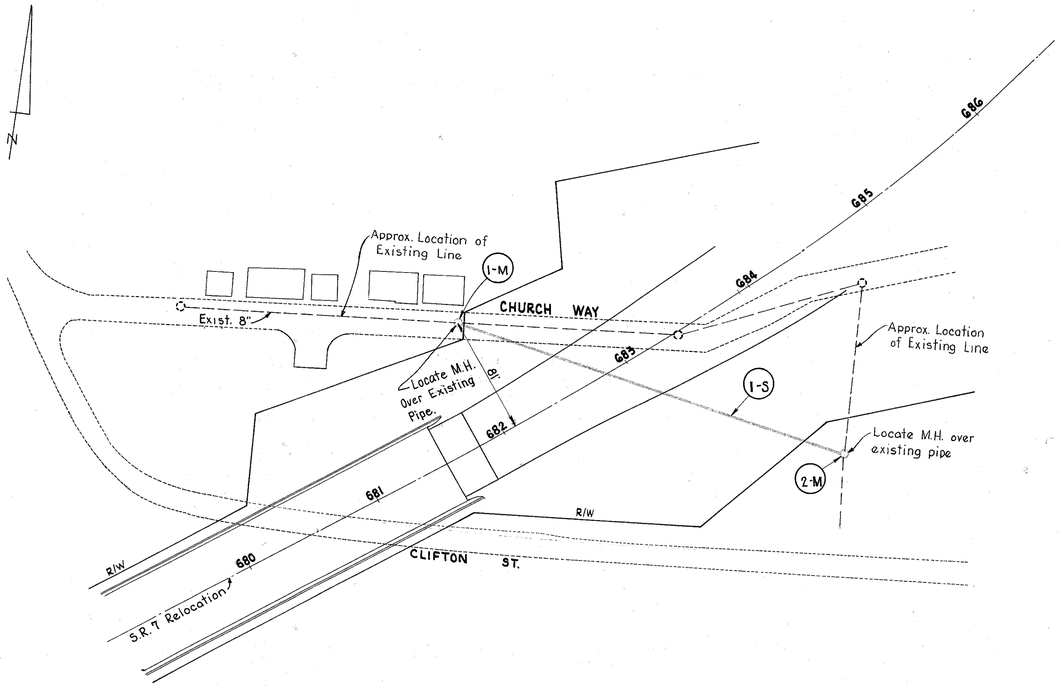
ORCHARD AVE. 8" AVE. 8" AVE. WARREN AVE. AVE. AVE.
Mc CLAVE AVE. 8" SULZBACHER AVE. 8" GEORGE ST. 18"
SHAMROCK 8" WESTERN 8" SCHARLOTT AVE. LOGAN AVE.
LINCOLN AVE. 12" STANTON 12" Mc LISTER ST. 40"
GRANDVIEW AVE. 8" 8" HOLLY AVE. 8" AVE.
BORDER ST. 10" WILSON AVE. 8" JUNCTION
WOODWARD AVE. 8" HOLLOCK AVE.
700 705 710 715 720 725
P.S. 702+17.75
S.T. 703+67.75 8¾"
703+69.83 4¼"
T.S. 704+81.54
S.T. 707+31.54
S.C. 708+08.16
S.T. 710+58.16
T.S. 714+28.02
S.C. 717+28.02
S.T. 728+03.02
C.S. 729+03.02
PLEASANT WAY 8"
STANDARD AVE. ST.
LINCOLN
MAY
AETNA ST.
AVE.
Mc LISTER 18"
POTTER ST.
LOGAN AVE. 8"
Mc KEE 8"
LOCKHART 10"
MITCHELL 8"
ST. 15"
ST. 36"
WAY 36"
COMMERCIAL ST. 8"
COMMERCIAL 10"
60" Oval Sewer 12" 12"
OHIO RIVER

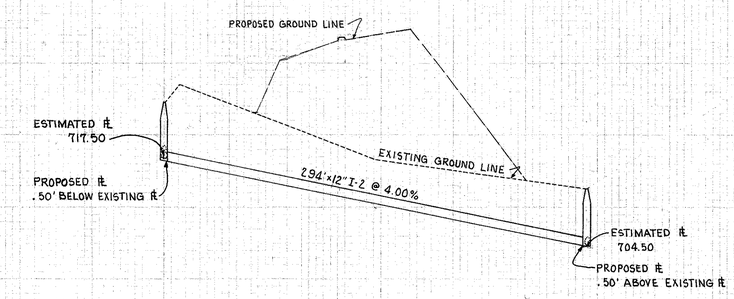
MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

# 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-27096



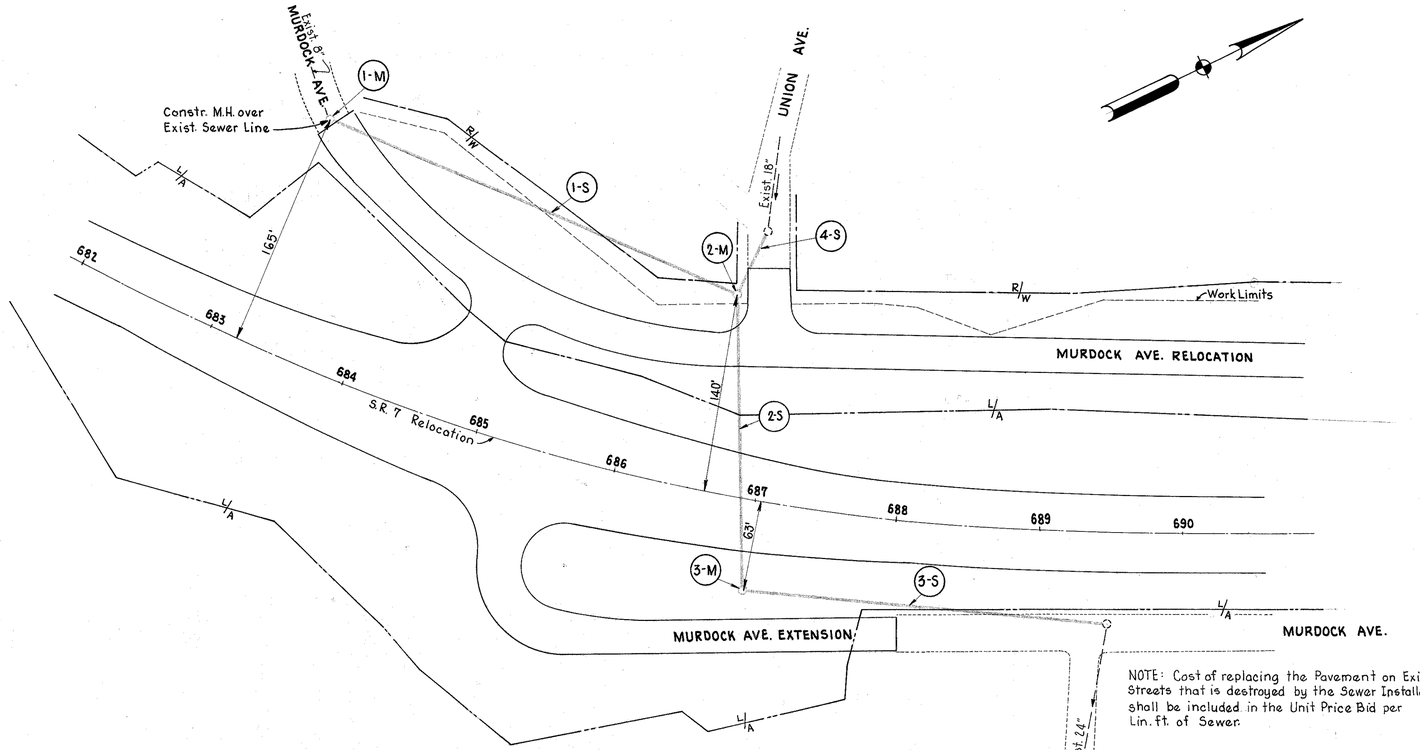

ESTIMATED QUANTITIES

| SHEET NO. | STATION TO STATION | SIZE | ITEM | UNIT | TOTALS |
|---|---|---|---|---|---|
| | | I-8 | I-2 | | |
| | | | Std. Manhole | No 1 Ea. | 1 |
| | | | Storm Sewers Under Pvt. & Appro. Sec. M-6.6(d) | 12" L.F. | 294 |
| 1-M | 0+00 | | | | |
| 2-M | 2+94 | | | | |
| 1-S | 0+00 to 2+94 | | | | 294 |

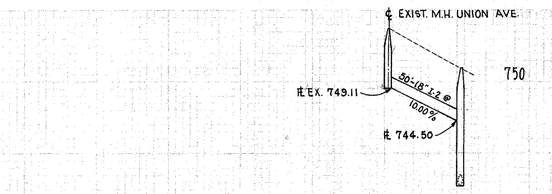
2 294

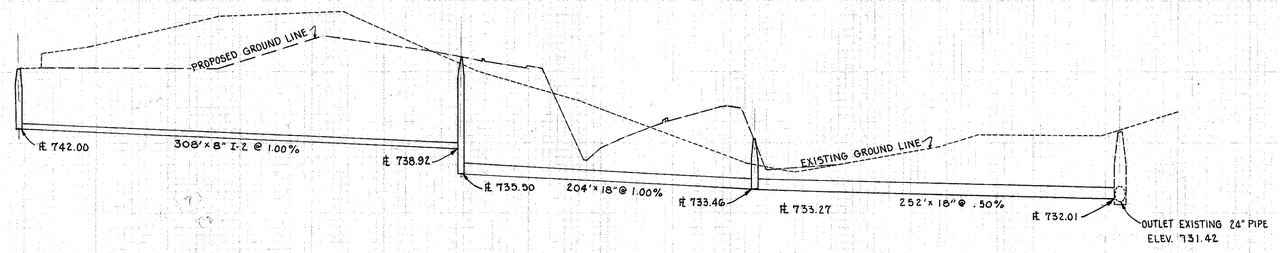
CHURCH WAY & S.R. 7 RELOCATION SEWERS

U-430(14)
JEFFERSON COUNTY ~ JEF-7-13.53




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.



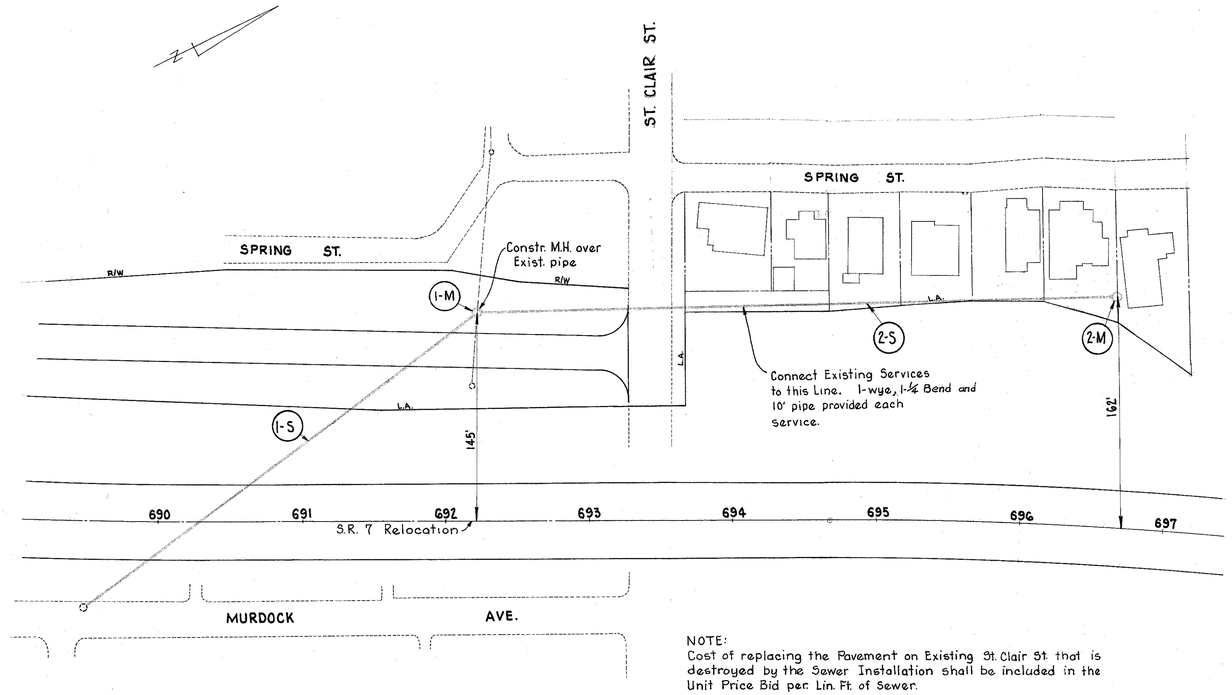




5 6 7 8 9 10 11 12 13

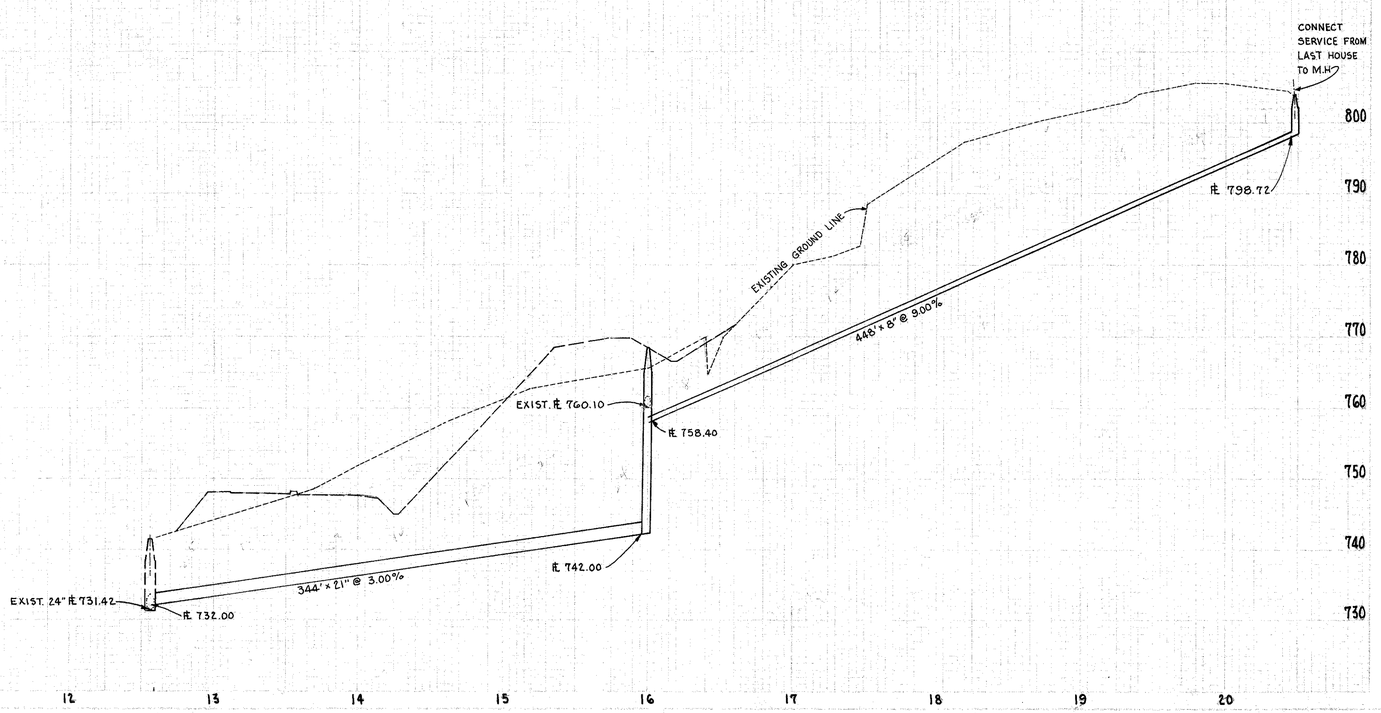
| I-8 | I-2 | | |
|---|---|---|---|
| Std. Manhole No. 1 | Storm Sewers Under Pavt. & Appro Sec. M-6.8(6) | 8" | 18" |
| Each | Each | L.F. | L.F. |
| 1-M | 4+96 | 1 | |
| 2-M | 8+04 | 1 | |
| 3-M | 10+08 | 1 | |
| 1-S | 4+96 to 8+04 | | 308 |
| 2-S | 8+04 to 10+08 | | 204 |
| 3-S | 10+08 to 12+64 | | 252 |
| 4-S | Union Ave Lateral | | 50 |

MURDOCK AVE. RELOCATION SEWERS

2 1 308 506




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.

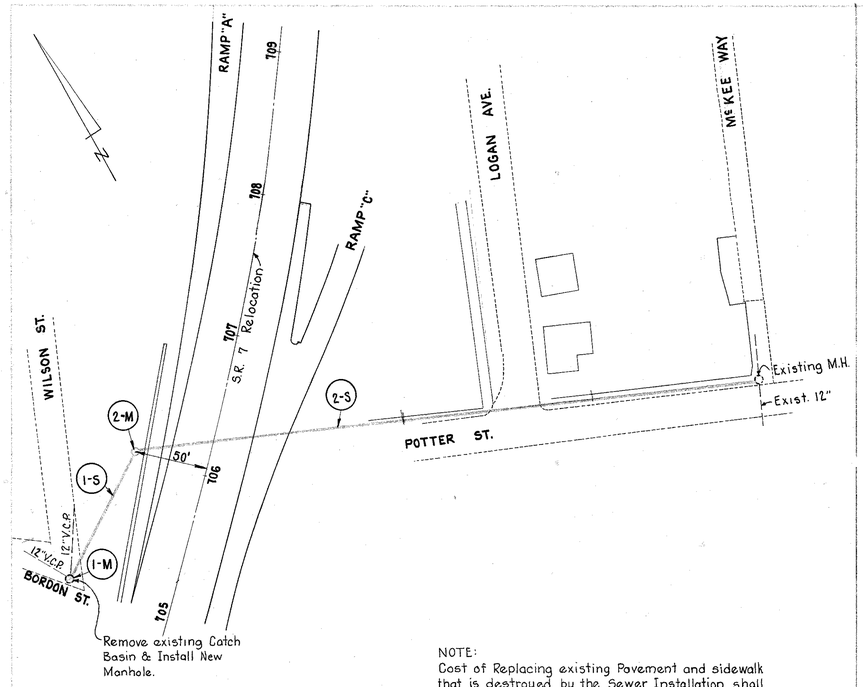



ESTIMATED QUANTITIES

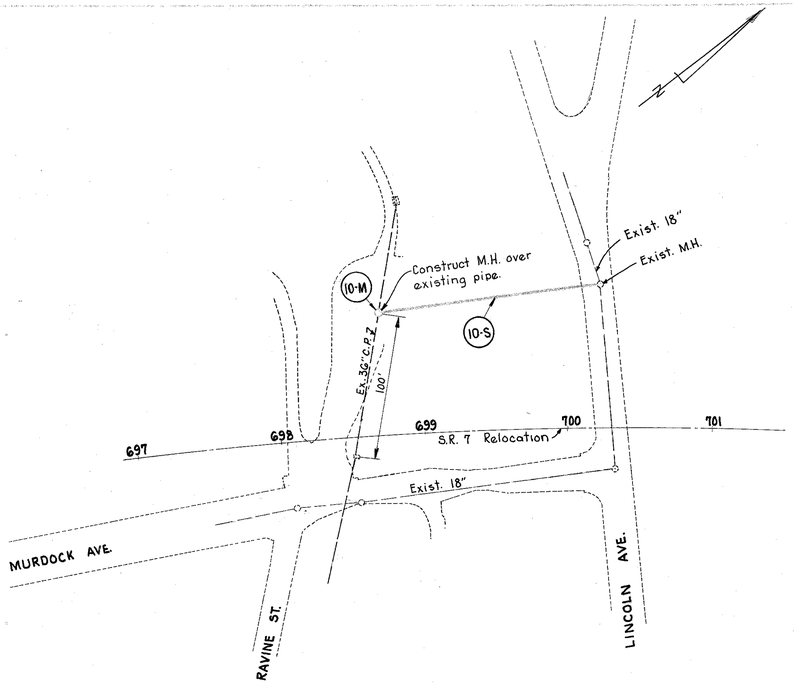
| STRUCTURE OR STATION | SIDE | I-8 Std. Manhole No. 1 | I-8 Std. Manhole No. 2 | I-2 Storm Sewers Under Pav't & Appro. Sec. M-6.8(b) 8" L.F. | I-2 Storm Sewers Under Pav't & Appro. Sec. M-6.8(b) 21" L.F. | I-5 Storm Sewers M-6.8(a) 6" L.F. | I-5 Pipe Special Under Pav't & Appro Sec. M-6.8(b) Wye 8"x8"x6" Ea. | I-5 Pipe Spec. Sec. M-6.8 (a) 6"-45° Bend Ea. |
|---|---|---|---|---|---|---|---|---|
| 1-M | | | 1 | | | | | 6 |
| 2-M | | | 1 | | | | | 6 |
| 16+00 | | | | | | | | |
| 20+48 | | | | | | | | |
| 1-S | | | | ~~448~~ | ~~344~~ | | | |
| 2-S | | | | 448 | 344 | 70 | 6 | 6 |
| 12+55 to 16+00 | | | | | | | | |
| 16+00 to 20+48 | | | | | | | | |
| | | Ea. | Ea. | L.F. | L.F. | L.F. | Ea. | Ea. |
| | | 1 | 1 | 448 | 344 | 70 | 6 | 6 |

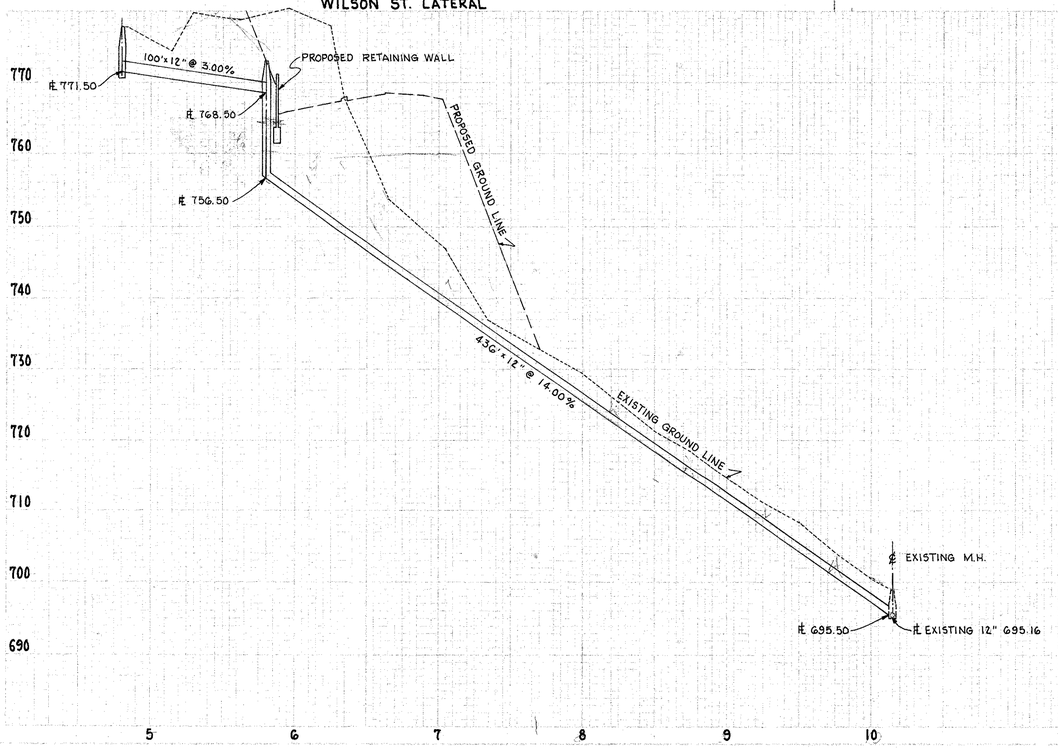
REVISED - 11-20-59
R.E.C.

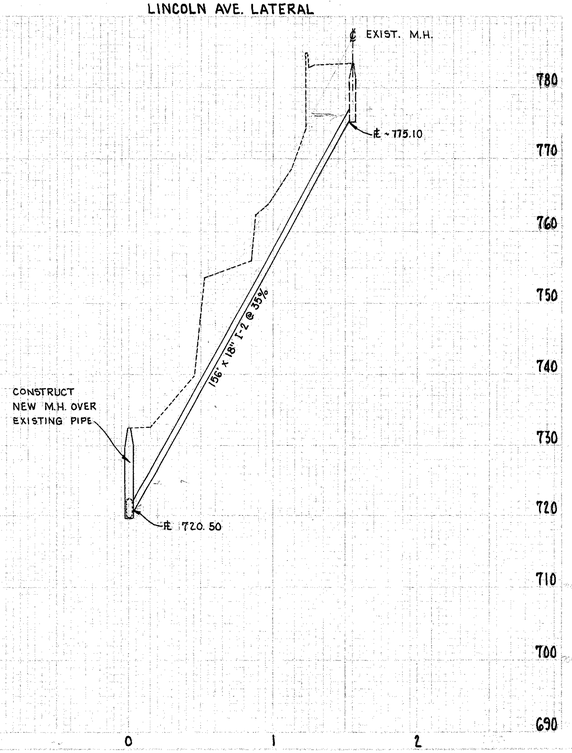
MURDOCK AVE.- SPRING ST. SEWER




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.



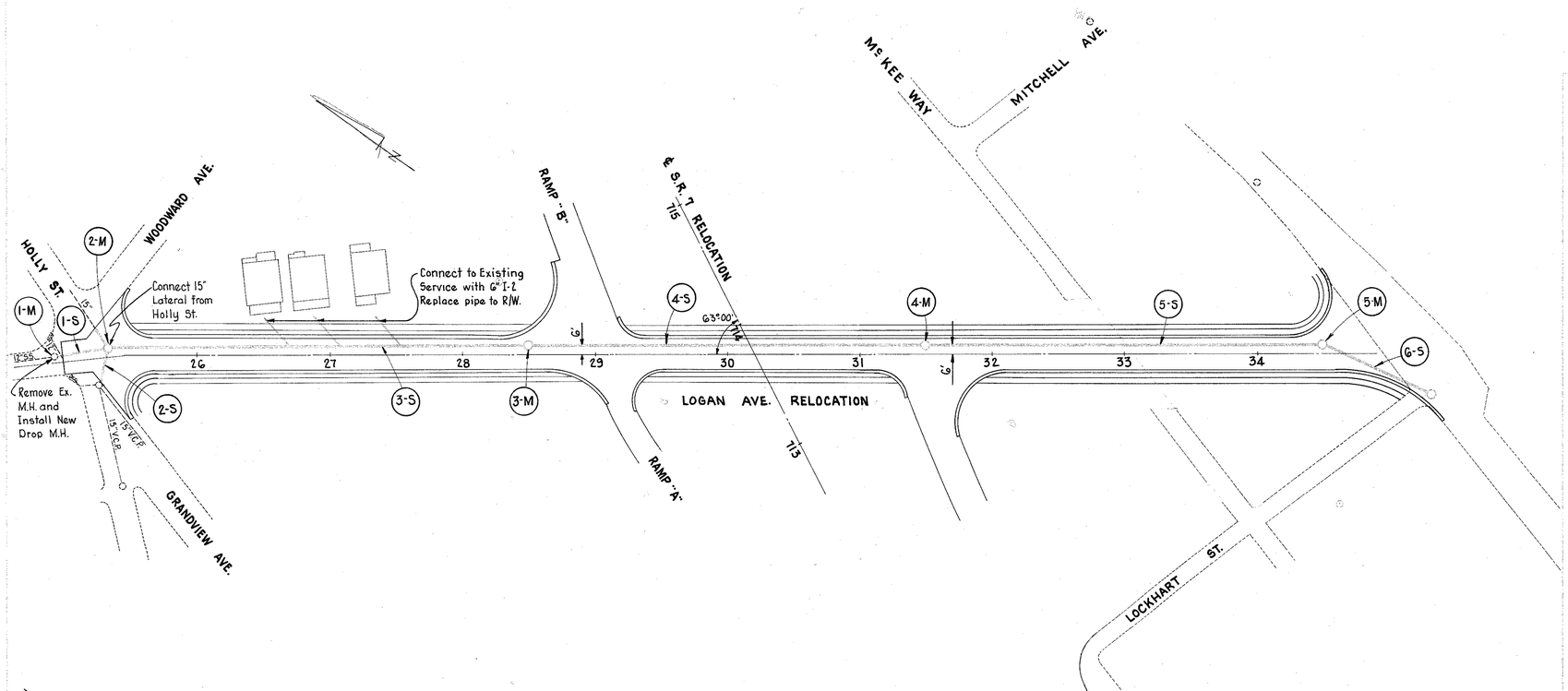

ESTIMATED QUANTITIES

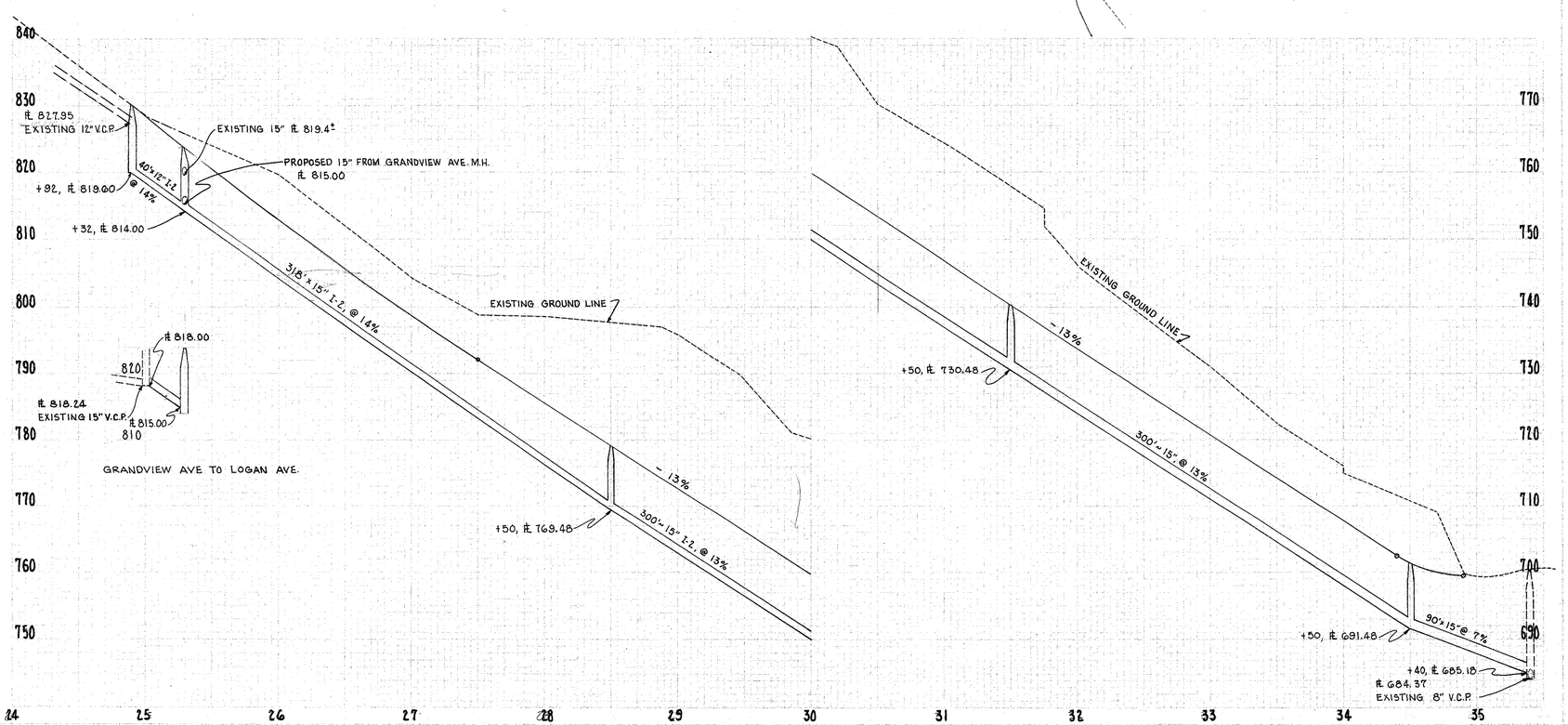
| STATION TO STATION | SIDE | I-8 Std. Manhole No.1 Ea. | I-2 Storm Sewers Under Pav't & Aprns Sec. M 45.8(10) 18" L.F. | I-2 Storm Sewers under Pav't & Approaches Sec. M 45.8(10) 12" L.F. | I-16 Catch Basins Abandoned Ea. |
|---|---|---|---|---|---|
| WILSON ST. LATERAL | | | | | |
| 1-M 4+80 | | 1 | | | |
| 2-M 5+80 | | 1 | | | 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 | | |
| | | 2 | 1 | 156 | 100 | 436 | 1 |

WILSON ST. - POTTER ST. SEWER
RAVINE ST. TO LINCOLN AVE SEWER

U-430(14)

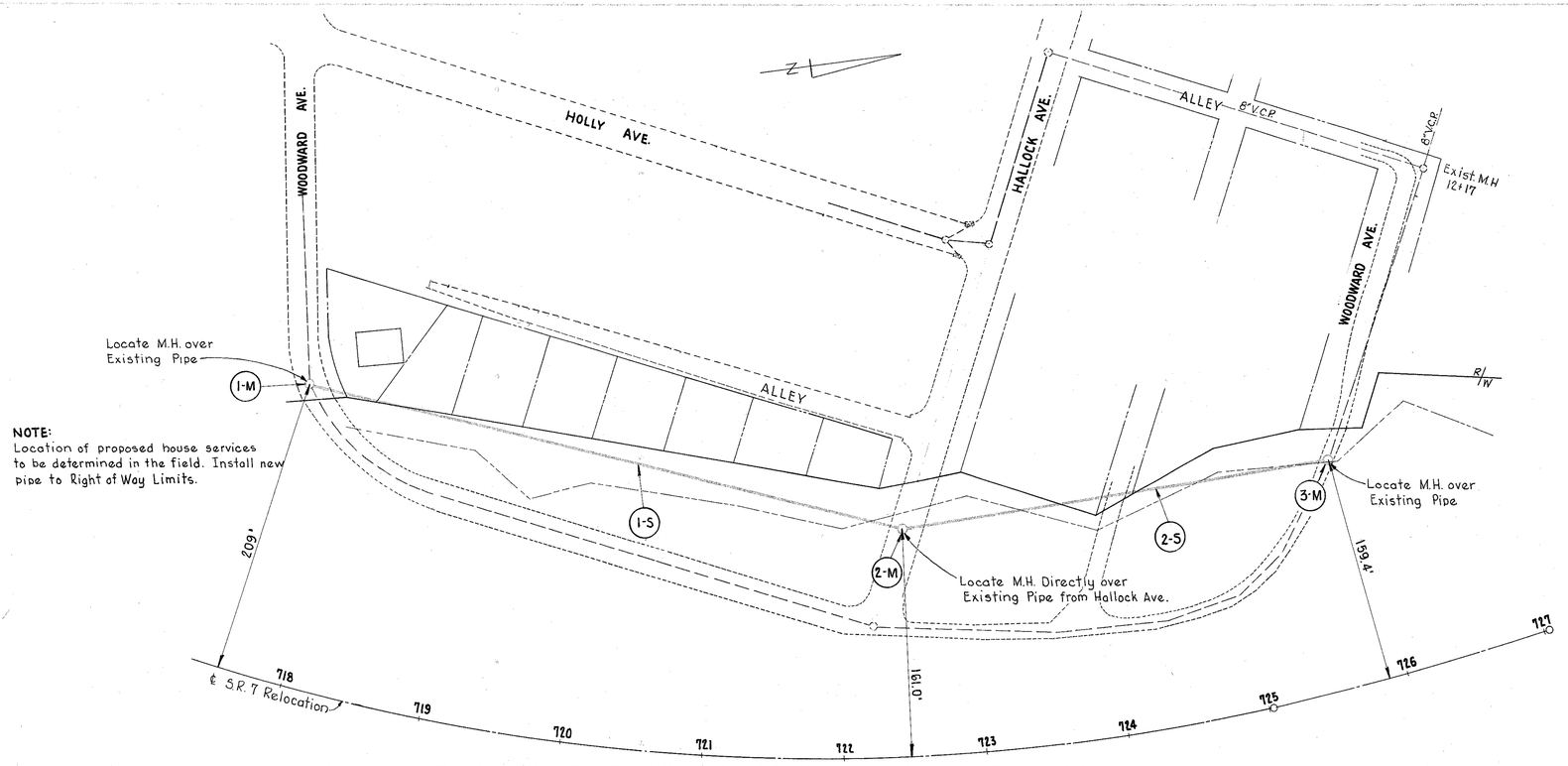
JEFFERSON COUNTY ~ JEF-7-13.53



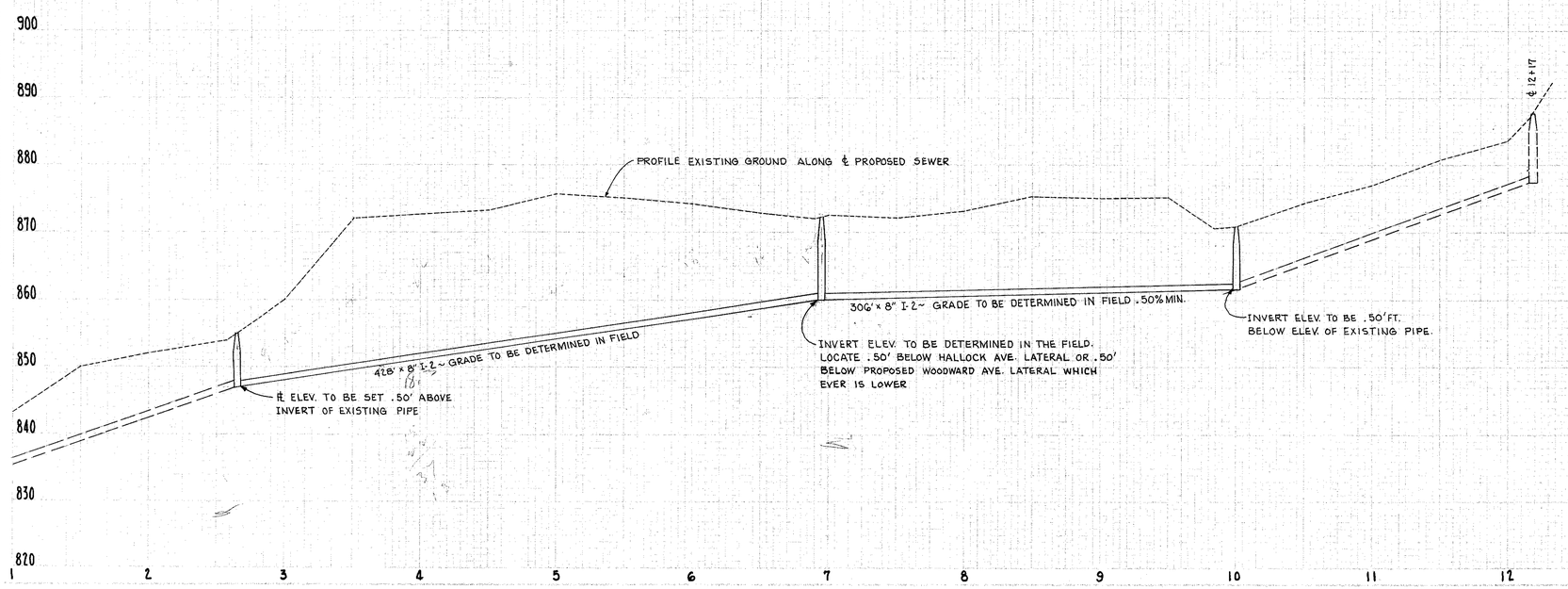




| I-8 Std. Manhole N°1 | | I-8 Std. Manhole N°2 | | I-2 Storm Sewers Under Pav't & Appro. Sec. M-6.8(b) | | I-2 Storm Sewer Sec. M-6.8(b) | | I-5 Pipe Special Under Pav't & Appro. Sec. M-6.8(b) Wye | |
|---|---|---|---|---|---|---|---|---|---|
| | Ea. | | Ea. | | L.F. | | L.F. | | Ea. |
| | | | | | | | | 15"x15"x6" | |
| 1-M | Lt. | 1 | | 12" | 15" | 6" | | 15"x15" | |
| 2-M | Lt. | 1 | | | | | | | |
| 3-M | Lt. | 1 | | | | | | | |
| 4-M | Lt. | 1 | | | | | | | |
| 5-M | Lt. | 1 | | | | | | | |
| | | | | | | | | | |
| | 24+92 | | | | | | | | |
| | 25+32 | | | | | | | | |
| | 28+50 | | | | | | | | |
| | 31+50 | | | | | | | | |
| | 34+50 | | | | | | | | |
| | | | | | | | | | |
| 1-S | Lt. | | | 40 | | | | | |
| 2-S | Lt&Rt. | | | | | | | | |
| 3-S | 24+92 to 25+32 | | | | 30 | | | | |
| 4-S | Grandview Ave. Lateral | | | | 318 | | 70 | | 3 |
| 5-S | 25+32 to 28+50 | | | | 300 | | | | |
| 6-S | 28+50 to 31+50 | | | | 300 | | | | |
| | 31+50 to 34+50 | | | | 300 | | | | |
| | 34+50 to 35+32 | | | | 90 | | | | |
| | Lt.&Rt. | | | | | | | | |
| | | | | | | | | | |
| | | | | 4 | 1 | 40 | 1038 | 70 | 3 |

LOGAN AVE. SEWER




**NOTE:**
Location of proposed house services to be determined in the field. Install new pipe to Right of Way Limits.




ESTIMATED QUANTITIES

| SEE SHEET NO. | MH NO. | STATION TO STATION | SIDE | I-8 Std. Manhole №1 Ea. | I-2 Storm Sewers Sec. M-6.6(6) 6" L.F. | I-2 Storm Sewers Sec. M-6.6(6) 8" L.F. | I-5 8"Pipe Spec 3(a) M-6.8(6) Wye 8"x8"x6" Ea. |
|---|---|---|---|---|---|---|---|
| | 1-M | 2+68 | ℄ | — | — | — | — |
| | 2-M | 6+96 | ℄ | — | — | — | — |
| | 3-M | 10+00 | ℄ | 1 | — | — | — |
| | 1-5 | 2+68 to 6+96 | ℄ | | | 80 | 4 |
| | 2-5 | 6+96 to 10+00 | ℄ | | | 428 304 | |

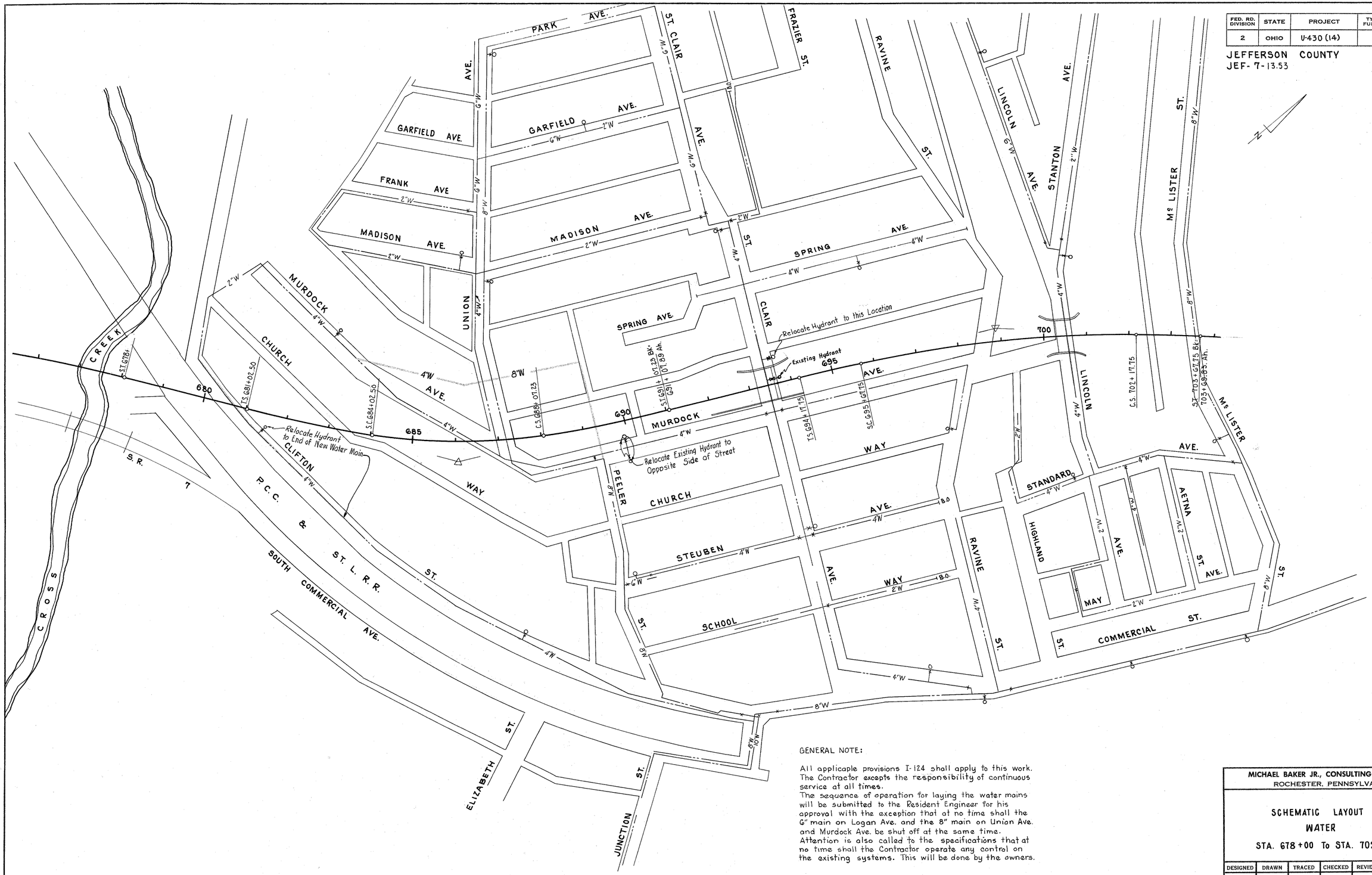
WOODWARD AVE SEWER

3 80 732 4

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

317

JEFFERSON COUNTY
JEF- 7- 13.53




GENERAL NOTE:

All applicaple 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. | AWL. | | |

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27006

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

318

JEFFERSON COUNTY
JEF- 7-13.53

WARREN AVE. 4"W
ORCHARD AVE.
AVE.
Mc CLAVE B.O.
SULZBACHER AVE 2"W
SHAMROCK WESTERN 2"W
4"W
GEORGE ST
AVE. 4"W
AVE. 6"W
North Hill Booster Station
SCHARLOTT AVE. 2"W
LOGAN 6"W
LINCOLN AVE. 6"W
STANTON 2"W
Mc LISTER ST. 8"W
4"W
700
C.S. 702+17.15
S.T. 703+67.75 Bk.
703+46.85 Ah.
BORDER ST.
GRANDVIEW AVE. 4"W 4"W B.O.
WILSON AVE. B.O. 4"W
LOCKHART
705
T.S. 704+81.54
S.C. 707+31.54
C.S. 709+08.16
4"W ST.
PLEASANT WAY 2"W B.O.
T.S. 710+58.16
710
Remove Exist. Pipe
Existing Hydrant to be relocated outside of L.A. R/W
LOGAN AVE. 4"W 4"W
Install Socket Caps
Existing hydrant to be relocated opposite side of street
Mc KEE'S
LOCKHART
MITCHELL
6"W
Logan Ave. Relocation
T.S. 714+28.02
715
S.C. 717+28.02
Install Socket Caps and remove existing pipe.
WAY 4"W
COMMERCIAL
HOLLY AVE. 6"W
M.S. 716+28.02
B.O. 2"W
Existing Hydrant to be relocated outside of L. A. R./W.
WOODWARD AVE. HOLLOCK
WOODWARD AVE. 2"W B.O.
S.T. 718+30.02
C.S. 719+30.02
725
Remove Existing Pipe Inside of R./W.
720
ST.
STANDARD AVE. 4"W 4"W 4"W
LINCOLN AVE. 2"W
4"W ST.
AETNA 2"W
Mc LISTER ST. 8"W
MAY AVE. 2"W
COMMERCIAL ST. 8"W
POTTER ST. 8"W
8"W 8"W 6"W 6"W
OHIO RIVER

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27088

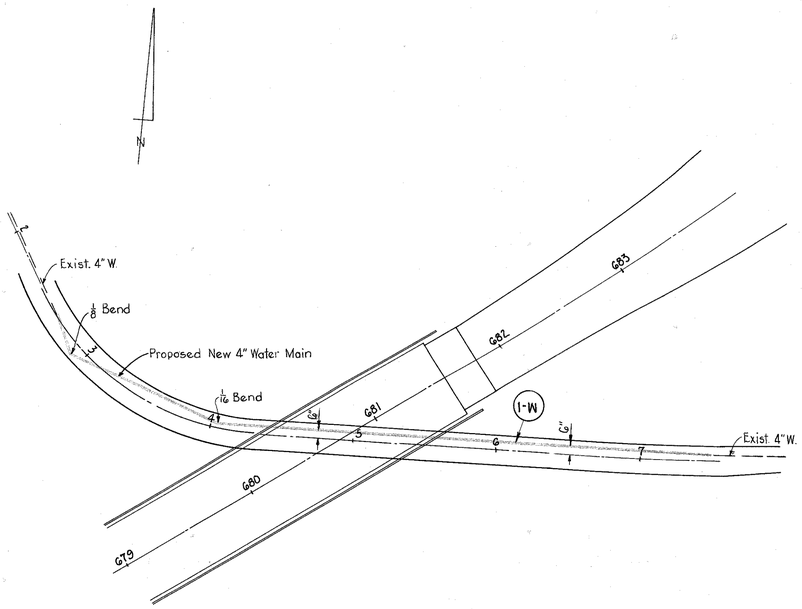
MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

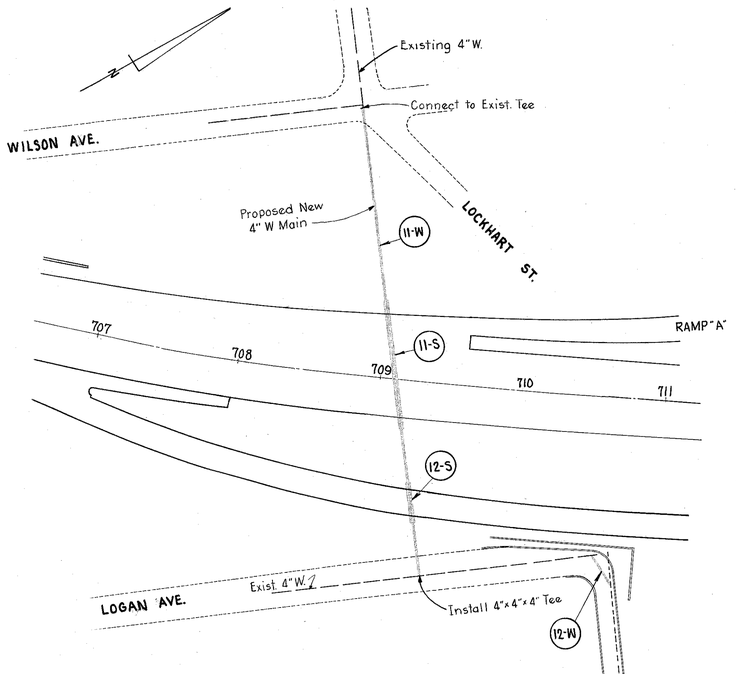
SCHEMATIC LAYOUT
WATER
STA. 702+00 To STA. 729+00

| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|---|---|---|---|---|---|
| R.V.G. | Q.m. | Q.m. | A.W.L | | |

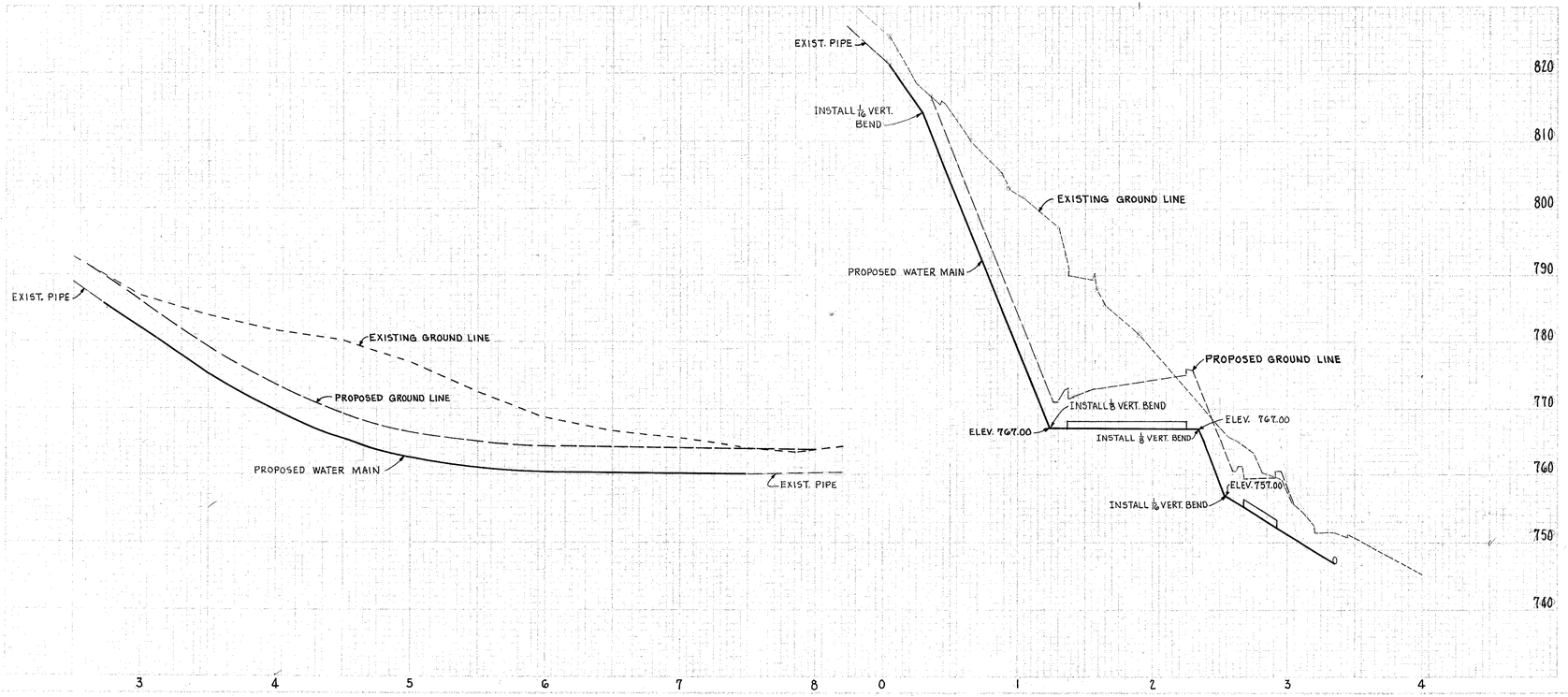
U-430(14)

JEFFERSON COUNTY ~ JEF-7-13.53



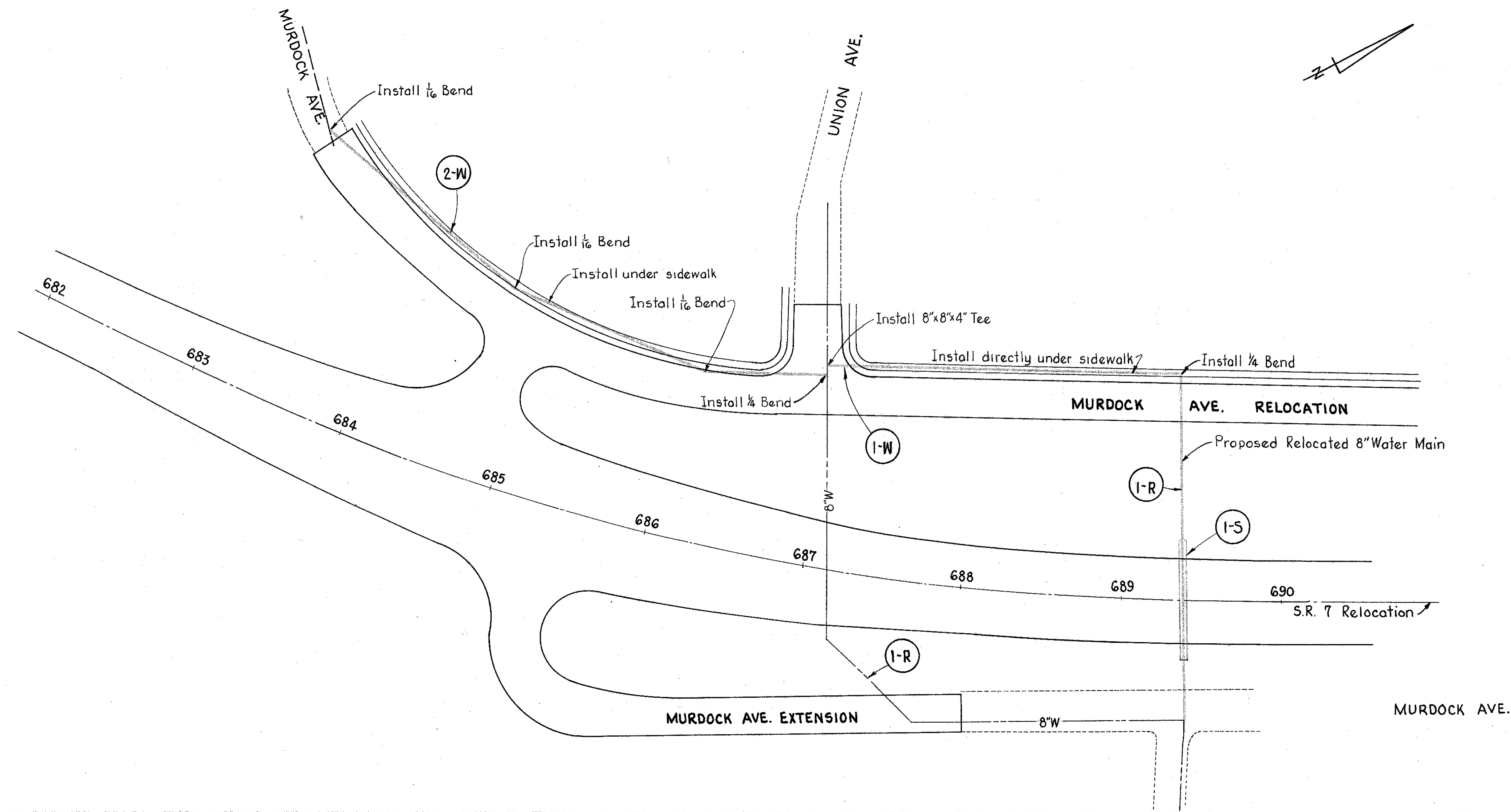

NOTE:
Construct Water Mains 4.5' below finished ground except as otherwise shown on the plans.

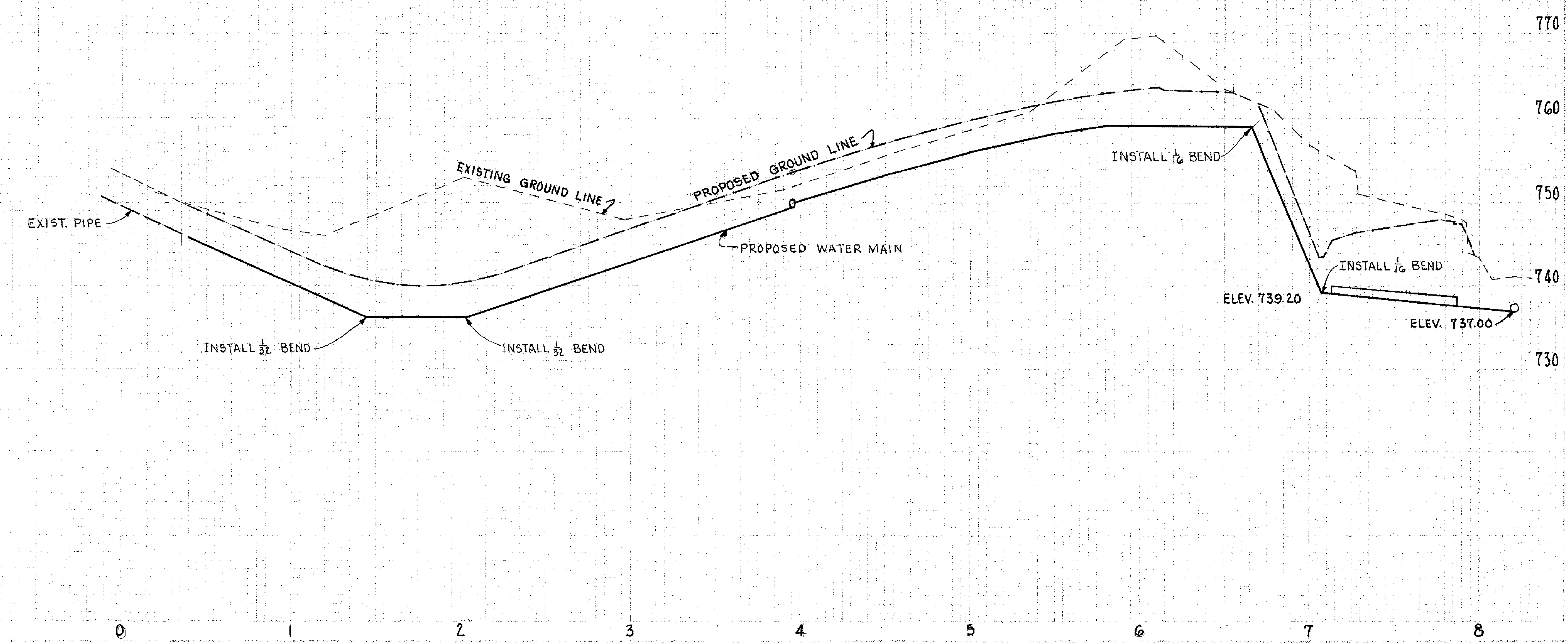



ESTIMATED QUANTITIES

| SHEET NO. | STATION TO STATION | SIDE | I-124.03 Storm Sewer Under Pvmt. & Appro. Sec. M-6.3(b) or M-6.8(b) L.S. | 90 | 18 | I-124.03 New Water Main L.F. | 4" C.L. 22½° Bend Ea. | 4" C.L. 45° Bend Ea. | 4"x4"x4" 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 | | | | | | | | | | | |
| 12-S | 2+64 to 2+92 | | | | | | | | | | | |
| 11-W | 0+05 to 3+25 | | | | | 330 | 3 | 2 | 1 | | | |
| 12-W | | | | | | | | | | | | |
| 1-W | 2+75 to 7+50 | | | | | 475 | 1 | 1 | | 1 | | |
| | See Sheet No. | | 318 | | | | | | | 2 | 2 | |
| | | | 118 | 805 | 4 | 3 | 1 | 3 | | | 2 | |

CLIFTON ST. WATER
LOGAN AVE. To WILSON AVE. WATER

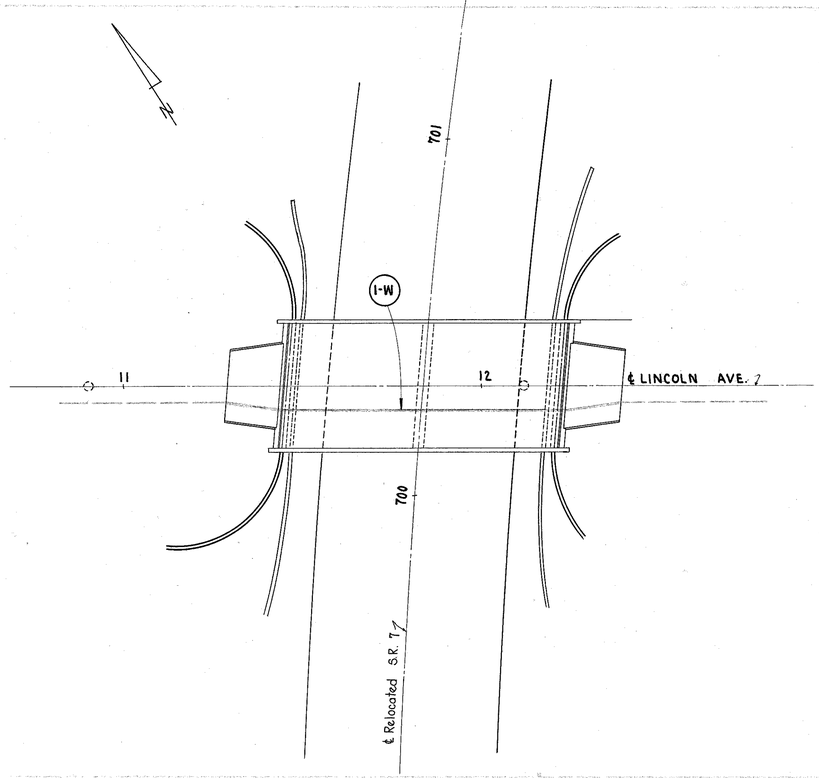


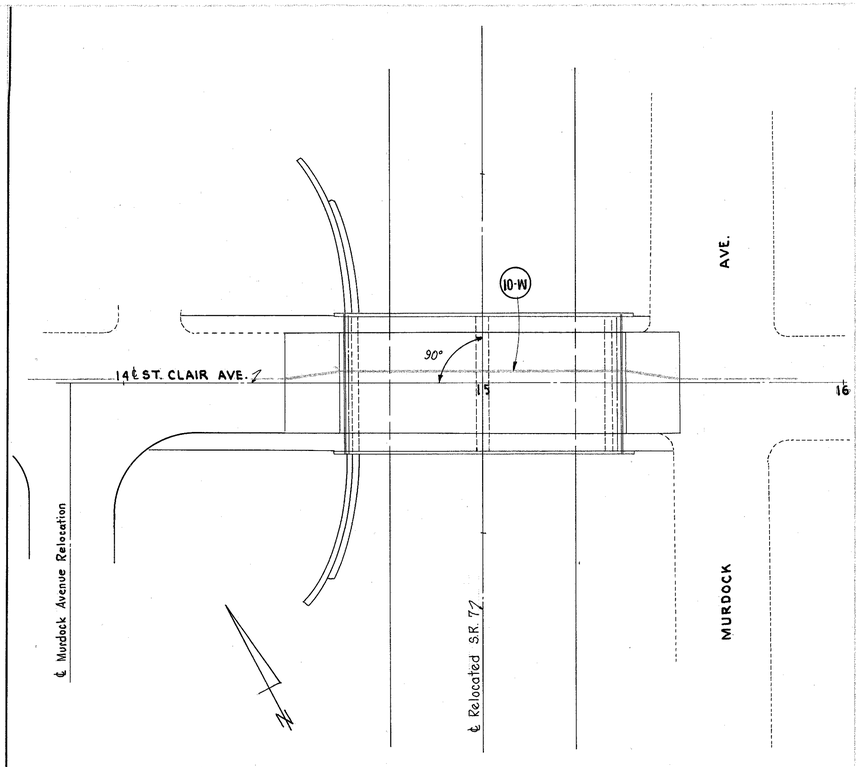




ESTIMATED QUANTITIES

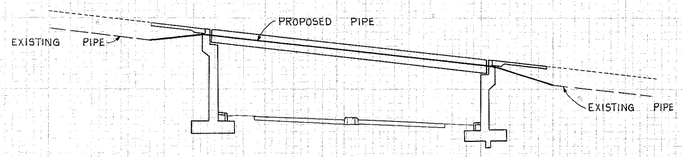
| REF. NO. | STATION TO STATION | SIDE | I-124.04 Water Main Removed & Relaid 8" L.F. | I-124.03 C.I. New Water Main 8" L.F. | I-124.03 C.I. New Water Main 4" L.F. | I-124.03 C.I. 8"x8"x4" Tee Ea. | I-124.03 C.I. 22½° Bend 4" Ea. | I-124.03 C.I. 11¼° Bend 4" Ea. | I-124.03 C.I. 90° Bend 4" Ea. | I-2 Storm Sewer Under Pavt.& Appro. Sec. M-6.5(b) or M-6.8(b) 15" L.F. | I-124.06 Hydrants Removed & Reset Ea. | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-R | 3+95 to 8+20 | Rt. | 415 | | | | | | | | | |
| 1-W | 3+95 to 4+17 | | | 22 | | 1 | | | | | | |
| 2-W | 0+35 to 3+95 | | | | 360 | | 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

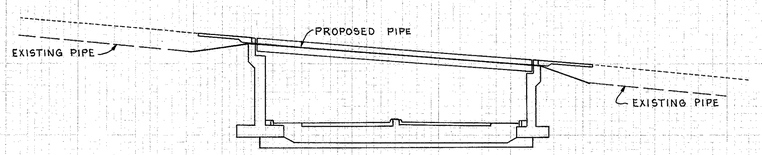



NOTE:
10" MAIN TO BE USED TO INCASE
4" MAIN FROM BACK OF ABUTMENT
TO 4.5' DEPTH.




LINCOLN AVE.



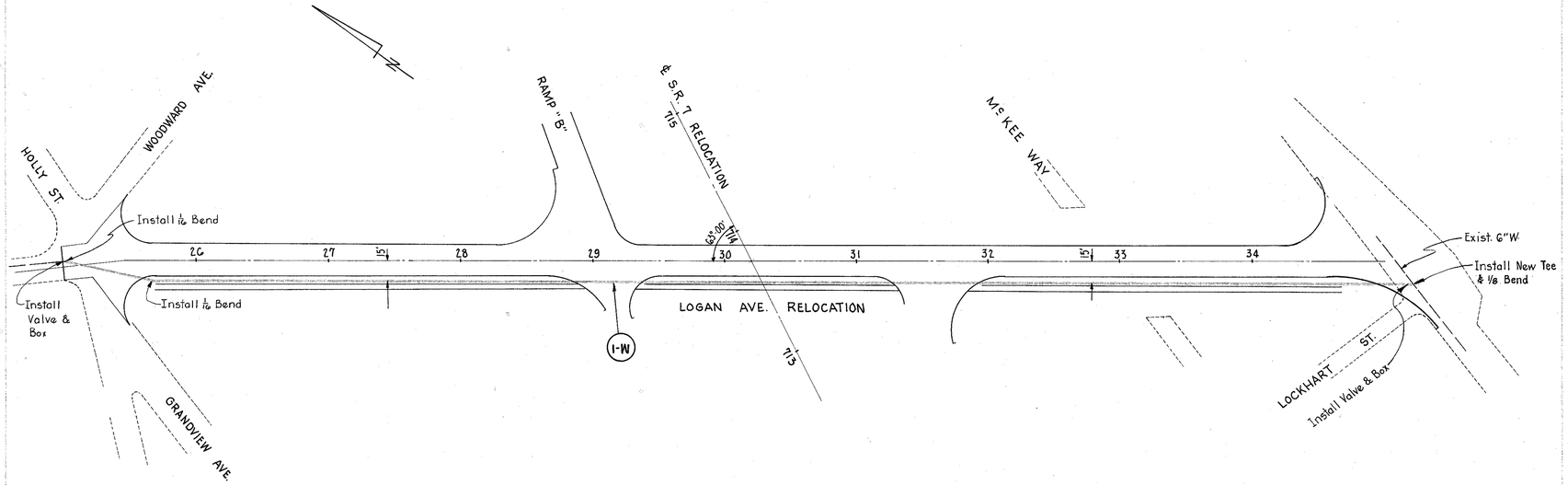

ST. CLAIR AVE.

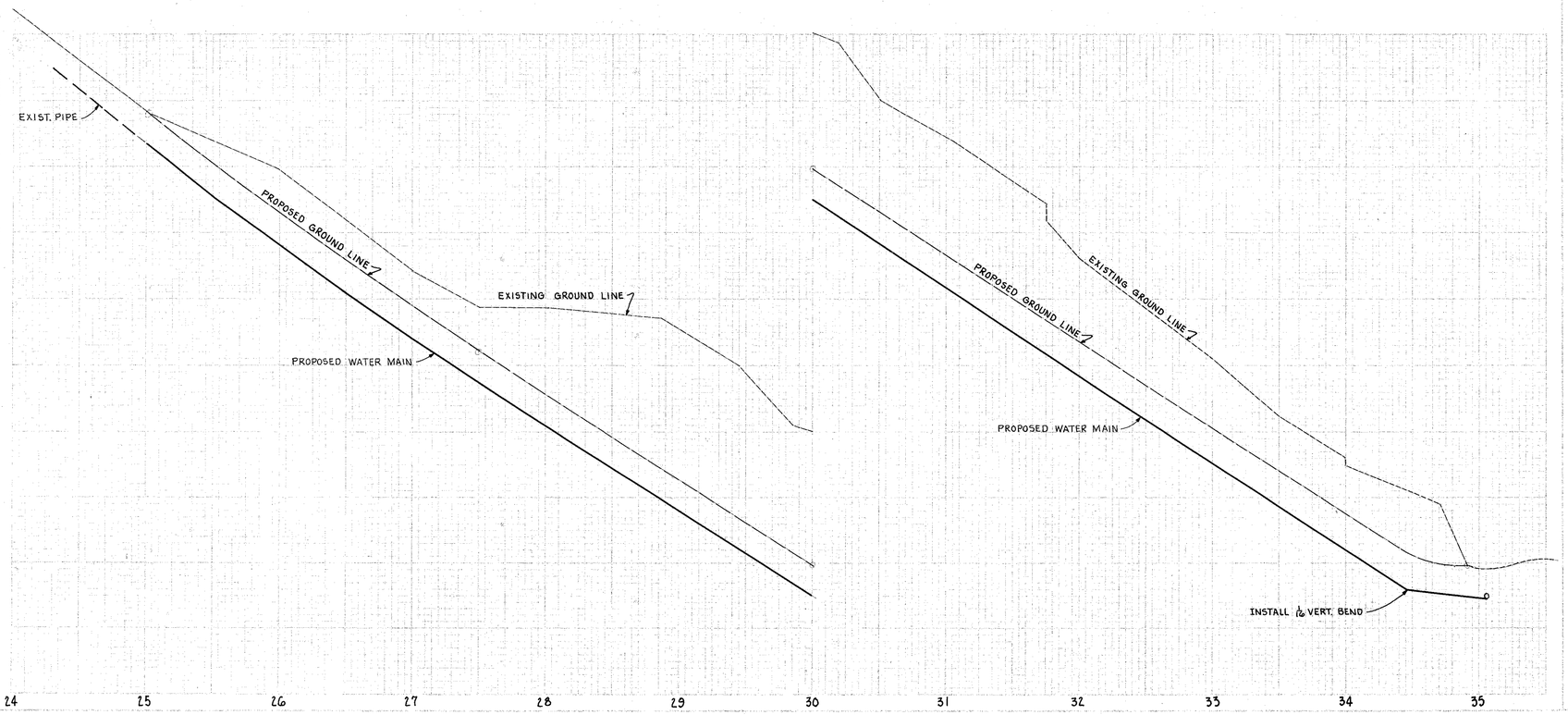
ESTIMATED QUANTITIES

| SIDE | STATION TO STATION | I-124.03 4" W.I. New Water Main Lin.Ft. | I-124.03 4" W.I. 11¼° Bend Each | I-124.03 10" W.I. 11¼° Bend Each | I-124.03 10" W.I. Water Main Lin.Ft. | S-7 4"x4"x 9/16" ∠s Lbs. | I-124.06 Hydrants Removed & Reset Each |
|---|---|---|---|---|---|---|---|
| LINCOLN AVE. | | 112 | 4 | 2 | 26 | 264 | |
| 1-W | 11+29 to 12+40 | | | | | | |
| ST. CLAIR AVE. | | 114 | 4 | 2 | 26 | 264 | 1 |
| 10-W | 14+45 to 15+55 | | | | | | |
| LINCOLN AVE. WATER | | 226 | 8 | 4 | 52 | 528 | 1 |
| ST. CLAIR AVE. WATER | | | | | | | |

SPECIALS

| Grinnell Pipe Roll Stand or equal Each | Protection Saddle Grinnel Fig. No 188 or equal Each | 3" Johns Manville Zero Pipe Insulation or equal Lin.Ft. |
|---|---|---|
| 5 | 5 | 81 |
| 5 | 5 | 81 |
| 5 | 5 | 81 |
| 10 | 10 | 162 |




ESTIMATED QUANTITIES

| | | I-124.03 | | | | | I-124.03 | I-124.06 |
|---|---|---|---|---|---|---|---|---|
| | | 6" C.I. | | | | | 6" | Hydrants |
| | New Water Main L.F. | Valves & Boxes Ea. | 11¼° Bends Ea. | 6"x6"x6" Tee Ea. | | | 45° Bend Ea. | Socket Caps & Removed & Reset Ea. |
| 1-W 25+00 to 35+24 Rt. | 1024 | 2 | 3 | 1 | | | 1 | 1 |
| See Sheet No. 318 | | | | | | | | |
| | 1024 | 2 | 3 | 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

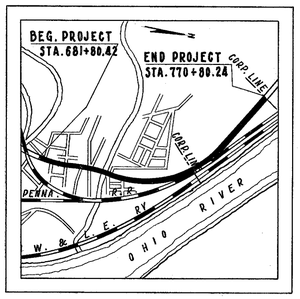
| DESCRIPTION | H. R. B. CLASS | OHIO CLASS | % AGG. | % C. SAND | % F. SAND | % SILT | % CLAY | LIQUID LIMIT | PLASTICITY INDEX | WATER CONTENT | SAMPLES TESTED |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stone fragments | A-1-a(0) | A-1-a | 73.25 | 4.50 | 12.50 | 7.00 | 2.75 | N.P | N.P | 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

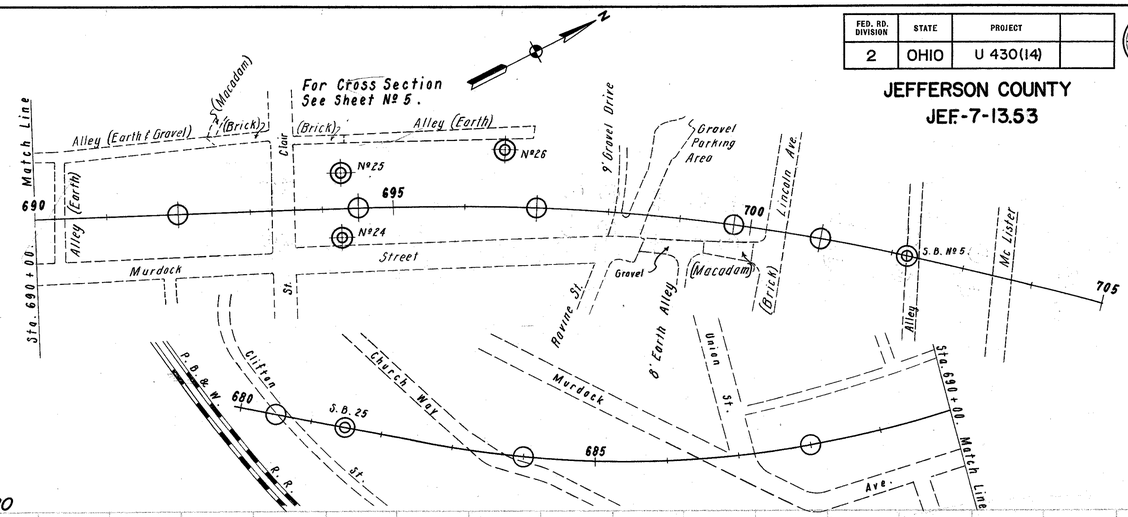
Auger boring plotted to vertical scale only.
Water content nearly equal to or greater than liquid limit
Auger boring-Plan view
Top Soil = x' = approx. depth.
Core boring-Plan view
W — Free Water

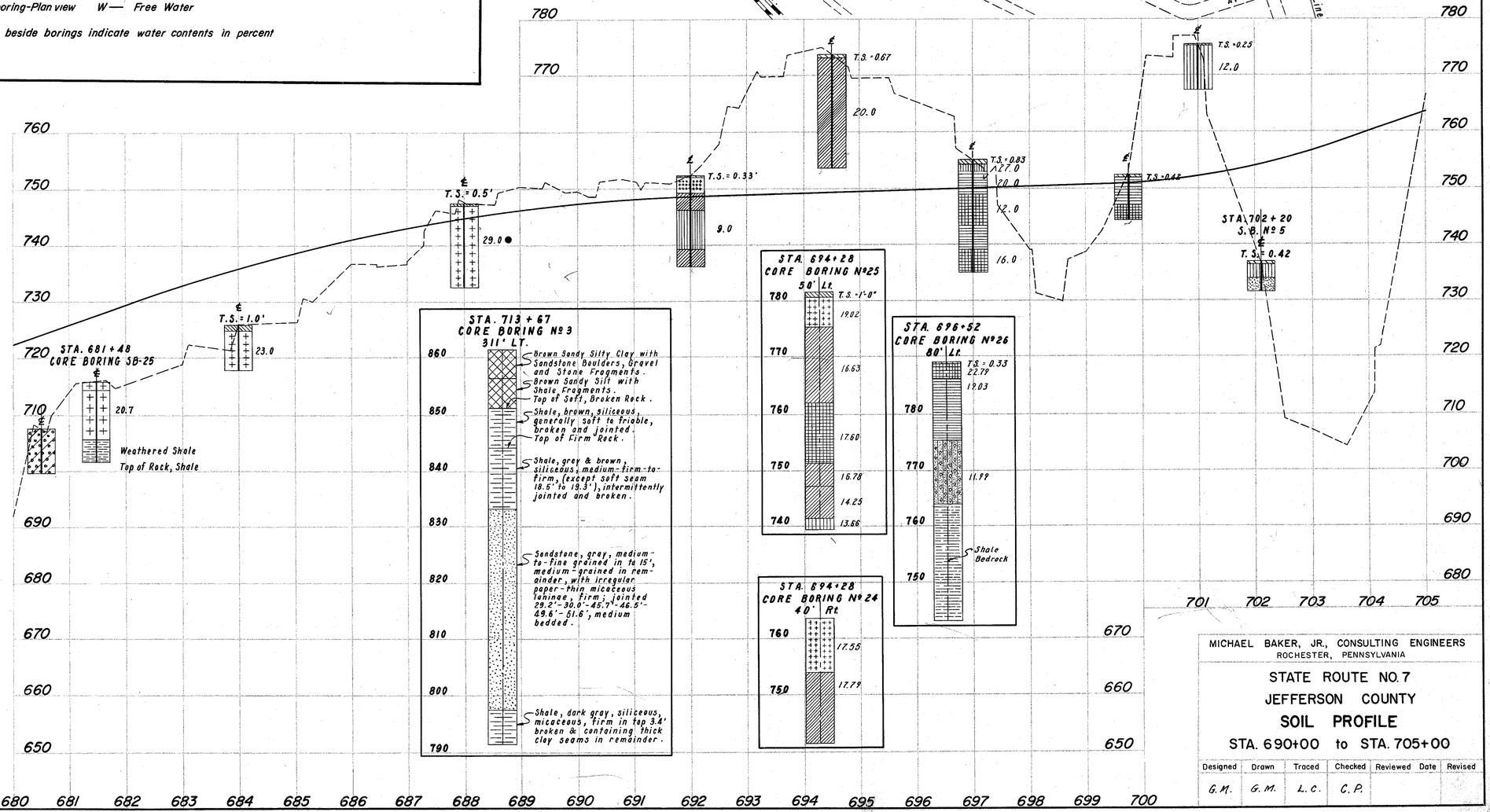
Note: Figures beside borings indicate water contents in percent

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 | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U 430(14) | |

2
5

**JEFFERSON COUNTY**

**JEF-7-13.53**

Earth Drive
Wilson Ave. (Conc)
Cinders
Lateral
(Bit) Pleasant Way (Gravel)
Potter St.
Steel
Logan Street (Brick)
Mitchell St. Not Open
1st Alley
Woods
Woodward Ave.
Haddock St.
Scattered Trees and Rock
Rock
Woods
STATE ROUTE NO. 7
MINGO JUNCTION
CORP. LINE
Pennsylvania R.R.
SB-14
№1
№2
№3
№27
№28
№29
№30
№31
№32
№33
SB-1
705
710
715
720
725
730

See Sheet №1 for detail Core Boring №3.

For Cross Section See Sheet №5.

**STA. 719+50**
**CORE BORING №28**
**90' LT.**

11.05

Bedrock-Fractured Yellowish Brown Sandstone.

**STA. 713+50**
**CORE BORING №2.**
**112' LT.**

Cinders.
Br. Sandy Silt
Top Of Weathered Rock.
Sandstone, Gray & Brown, Coarse-to Medium-Grained, Firm, Jointed, Broken in part.
Shale, Brownish Gray, Siliceous, Weathered, Very Soft.
Top of Broken Rock.
Shale, brown, siliceous, generally firm, but badly broken & jointed throughout, with 0.7' impure limestone at base.
Shale, gray, siliceous, firm, broken at top and in bottom 2.5'
Sandstone, Gr. medium-grained, argillaceous firm.
Shale, gray, siliceous, dense, firm, jointed in lower half.
Sandstone, gr. & br. med.-grained, firm.
Shale, gr. siliceous, dense, firm.

**STA. 722+00**
**CORE BORING SB-1**
**90' Rt.**

Asphalt
Concrete
Brick
Brick & Slag
Brown Silty Clay and Weathered Shale. Hard. Dry.
18.15
14.48
Shale Bedrock

**STA. 705+40**
**CORE BORING SB-14**

№1 6' Rt. — Top of Shale
№2 8' Rt. — Top of Shale
№3 4' Rt. — Top of Shale
Gray Silty Clay and Shale. Hard. Moist.

**STA. 712+35**
**CORE BORING №27**
**T.S. = 1.52'**
**30' LT.**

17.91
Bedrock-Fractured Sandstone with some Shale.

**STA. 723+00**
**CORE BORING №30**
**70' RT.**

Asphalt
Concrete
Brick
Slag
12.84.

**STA. 725+93**
**CORE BORING №31**
**T.S. = 0.42'**
**112' LT.**

18.86
22.84
8.36
Sandstone Bedrock interbedded with some Shale.
782.60

**STA. 725+93**
**CORE BORING №32**
**40' RT.**

Asphalt.
Concrete.
Brick.
Slag Fill.
15.38
10.19.

**STA. 725+93**
**CORE BORING №33**
**60' RT.**

Asphalt.
Concrete.
Brick
Br. Frag. & Slag Fill.
17.99
16.29

**STA. 712+35**
**CORE BORING №1.**
**255' LT.**

Br. Gravelly Clay with Sandstone Fragments.
Lt.-Br. Clayey Silt with Frag. of Sandy Shale & Weathered Sandstone.
Br. Sandy Clay with Broken, Badly Weathered Sandstone, and with Cinders and Gravel in Lower Half.
Top of Soft Weathered Rock.
Sandstone (brown, fine-grained, weathered soft) with seams of very soft weathered siliceous shale.
Shale, weathered, very soft, grades to clay.
Top Of Firm Rock.
Sandstone, gray & brown, fine grained somewhat micaceous, argillaceous in part medium-firm, jointed & broken.
Shale, dark-gray, siliceous, firm, broken at top.
Sandstone, gray, fine-to-medium-grained, firm, medium-bedded, with very thin micaceous and carbonaceous partings

**STA. 723+00**
**CORE BORING №29.**
**T.S. = 0.42'**
**70' LT.**

17.28
11.50
Sandstone Boulder
Sandy Gravel
Bedrock-Sandstone.

T.S. = 1.'
8.0'

T.S. = 0.5'
18.0

T.S. = 1.0'
16.0'
14.0'
13.0

T.S. = 0.17'
17.0

T.S. = 0.25'
32.0
Refusal

8' RT.
12.0
Refusal

T.S. = 0.33'
32' RT.
18.0
17.0
Ledge Rock

705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733

710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

STATE ROUTE NO. 7
JEFFERSON COUNTY
**SOIL PROFILE**
STA. 705+00 to STA. 733+00

| Designed | Drawn | Traced | Checked | Reviewed | Date | Revised |
|---|---|---|---|---|---|---|
| G.M. | G.M. | L.C. | C.P. | | | |

TE-54-B
125-6-56
SOIL PROFILE
JEFFERSON COUNTY
JEF-7-13.53
STATE HIGHWAY TESTING AND
RESEARCH LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO
3
5
N
733
735
745
750
755
760
765
150'
Existing S.R. 7
Note: For complete log of core boring see sheet 3
Rock Section 20'RT. to ℄
Rock Section 10'RT to 10'LT.
Rock Section 6'RT to 20'LT.
Rock Section ℄ to 50'LT.
Rock Section ℄ to 20'LT.
Rock Section ℄ to 10'LT.
Rock Section ℄ to 15'LT.
Rock Section 20'LT. to 300'LT.
Rock Section ℄ to 150'LT.
Rock Section ℄ to 100'LT.
Rock Section ℄ to 30'LT.
Rock Section 10' to 20'LT.
Rock Section 150'LT.
Rock Section ℄ to 20'LT.
Slabby sandstone, medium grained,
Massive, well cemented sandstone, medium grained.
Gray clay, friable with particles of limonite.
Medium grained sandstone interbedded with siliceous shale to shaly sandstone and in places a clay shale. Ferruginous concretions in lower 2 feet.
Covered
Slabby sandstone, medium grained, well cemented with 3' band of shaly sandstone.
Limestone, brownish, impure.
Covered.
Slabby sandstone medium grained interbedded with siliceous shale to thin bedded sandstone with interbeds of clay shale in upper 3'
Massive sandstone, medium to coarse grained, well cemented, jointed.
4" conglomeratic material mostly sandy cemented banded. 8" impure limestone, very hard.
Covered
Slabby to massive sandstone, medium grained well cemented, fractured and jointed.
Interbed of shaly sandstone, medium grained.
Massive sandstone, medium grained, well cemented, fractured and jointed.
Covered
Brownish impure limestone, very hard.
Covered
Brown sandstone, slabby to thin bedded, interbedded with siliceous shale to friable clay shale in spots.
Covered
Sod=0.3
Thin bedded broken sandstone with bluffs up channel, medium grained, cross bedded.
Massive sandstone with seams of shaly sandstone, medium grained, ferruginous with bed of carbonaceous shale to bony coal at bottom, issuing water in places.
Shaly sandstone, medium grained, ferruginous, fissile.
Shaly sandstone, fissile, coarse grained, interbedded with gray clay shale in upper part
Massive sandstone, medium grained, fractured, ferruginous.
Covered
Brown and gray mixed sandstone, medium grained, slabby to thin bedded, ferruginous and interbedded with brown siliceous shale, sandstone layers vary from 6" to 1' layers.
Brown sandstone, medium grained slabby and well cemented, interbedded with a shaly sandstone and siliceous shale, sandstone is micaceous in places.
Interbedded brown sandstone, medium grained with siliceous shale to thin bedded sandstone, irregular.
Covered
Covered
Covered
Sandstone, brown to white, massive, medium grained, hard, well cemented, fracture about Elve. 793.5.
Covered
Sandstone, white, massive, medium grained, well cemented, very hard, jointed.
Sandstone, dark brown, massive, medium to coarse grained, fractured, well cemented
Covered
Sandstone, slabby, interbedded with shaly sandstone to a siliceous shale in places.
Sandstone, massive, medium grained, well cemented.
Clay, gray to brown, weathers out to an iron carbonate.
Limestone, impure.
Gray clay shale.
Shale, siliceous, firm.
Sandstone, slabby to thin bedded, medium grained, broken in places.
Sandstone, massive, medium grained, well cemented, jointed.
Gray clay
Clay, brown to red, weathered to an iron carbonate.
Dolomitic limestone, impure.
Gray clay shale
Sandstone, thin bedded, fine grained, well cemented, with secondary mica.
Clay shale, greenish gray, firm, ferruginous concretions, with lenses of hard well cemented sandstone.
Covered.
Sandstone, thin bedded, intermixed gray and brown, medium grained, jointed, somewhat micaceous.
Covered
Sandstone, brown, thin bedded, fine to medium grained, striated.
Sandstone, massive, broken, fractured, coarse grained to quartzose, ferruginous concretions in lower 2 feet.
Siliceous shale to a siltstone with lenses of sandstone, thin bedded.
Limestone, flinty, fossiliferous, hard.
Clay shale, greenish gray, fissile iron stained.
Sandstone, gray to brown, slabby, interbedded with greenish gray clay shale.
Covered
48'RT. 6 19 6
38'RT. Refusal
27'RT. Refusal
4'RT. 12 13 15 18 15 25 Refusal
26'RT. Refusal
26'RT. Refusal
5'RT. 23 15 25 W
35'RT. 19 14 22 17
35'RT. 12 10 14 8
40'RT. 17 5
40'RT. 9 Refusal
30'RT. 11 7 18
36'RT. 12 12
900 890 880 870 860 850 840 830 820 810 800 790 780 770 760 750
733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765

TE-54 B
150-3-67

# SOIL PROFILE

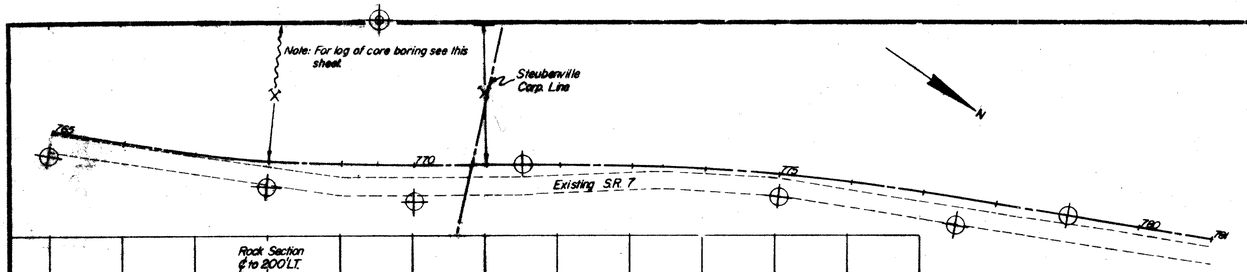
**JEFFERSON COUNTY**

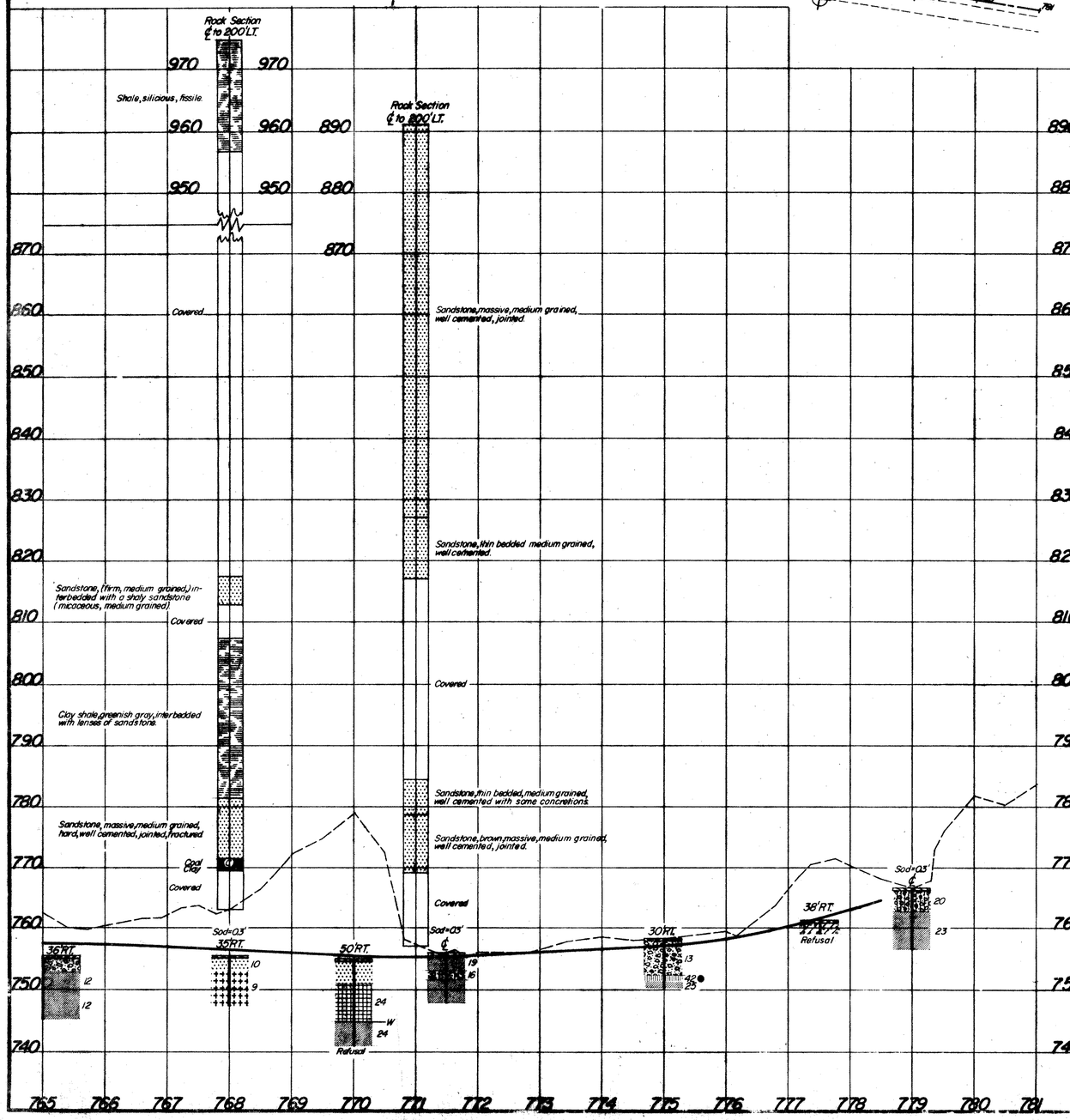
**JEF-7-13.53**

STATE HIGHWAY TESTING AND RESEARCH LABORATORY

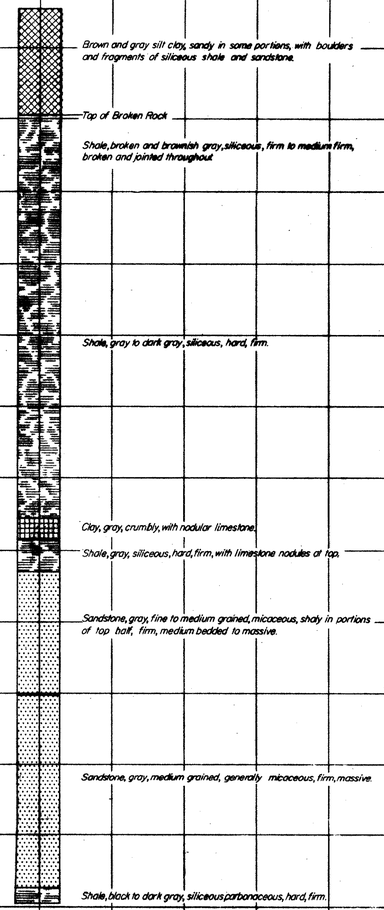
O. S. U. CAMPUS, COLUMBUS, OHIO

4/5

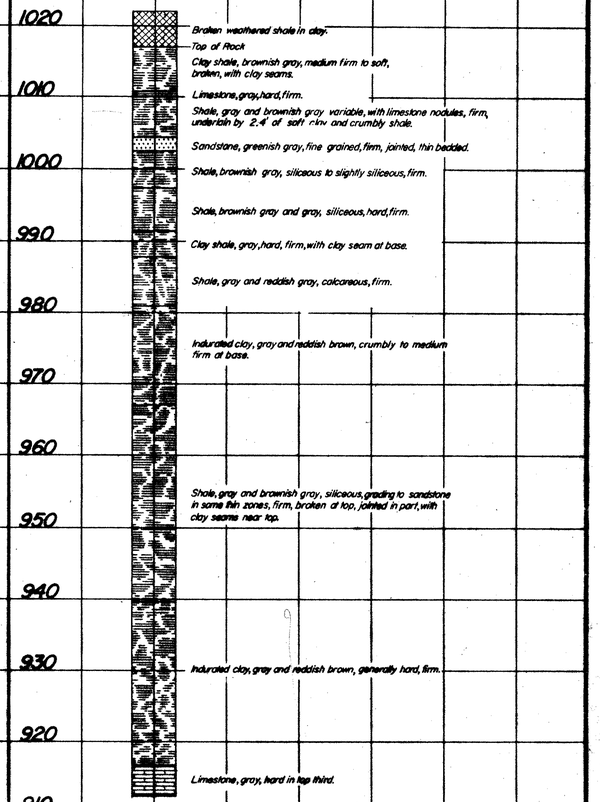



## Log of Core Boring
## Sta. 749+00, 190' LT.




## Log of Core Boring
## Sta. 769+50 200' LT.

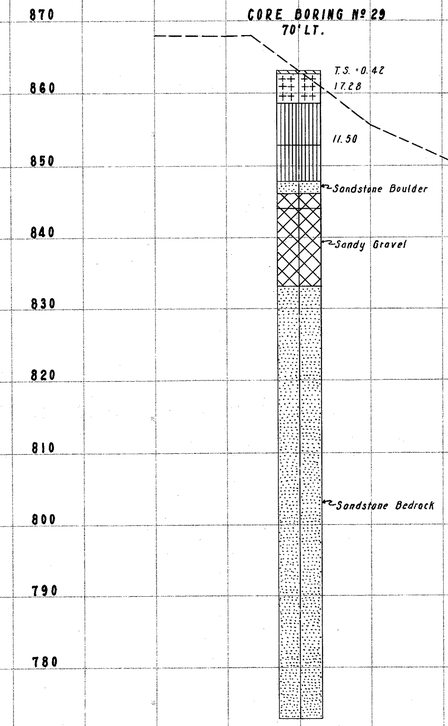


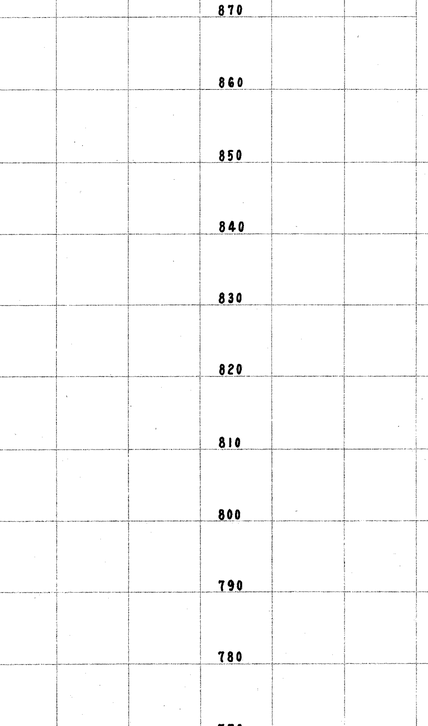
| FED. RD. DIVISION | STATE | PROJECT | |
|---|---|---|---|
| 2 | OHIO | U430(14) | |

5
5

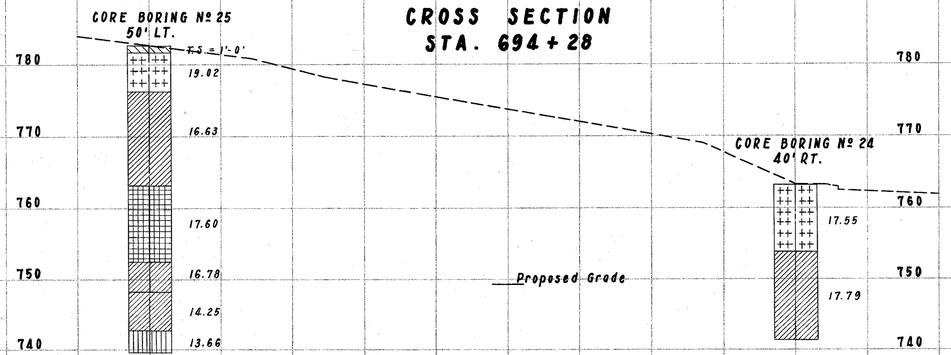
JEFFERSON COUNTY
JEF.-7-13.53

## CROSS SECTION STA. 723 + 00




## CROSS SECTION STA. 694 + 28




MICHAEL BAKER, JR, CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

STATE ROUTE NO.7
JEFFERSON COUNTY
**SOIL PROFILE**
CROSS SECTIONS

| Designed | Drawn | Traced | Checked | Reviewed Date | Revised |
|---|---|---|---|---|---|
| | | | | | |