

MICROFILMED
MAR 18 1985

STATE OF OHIO

JAN 3 1964
GROUND PHOTOLAB

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-FG-1042(G)	

1
161

ERI 6-7.31

DEPARTMENT OF HIGHWAYS

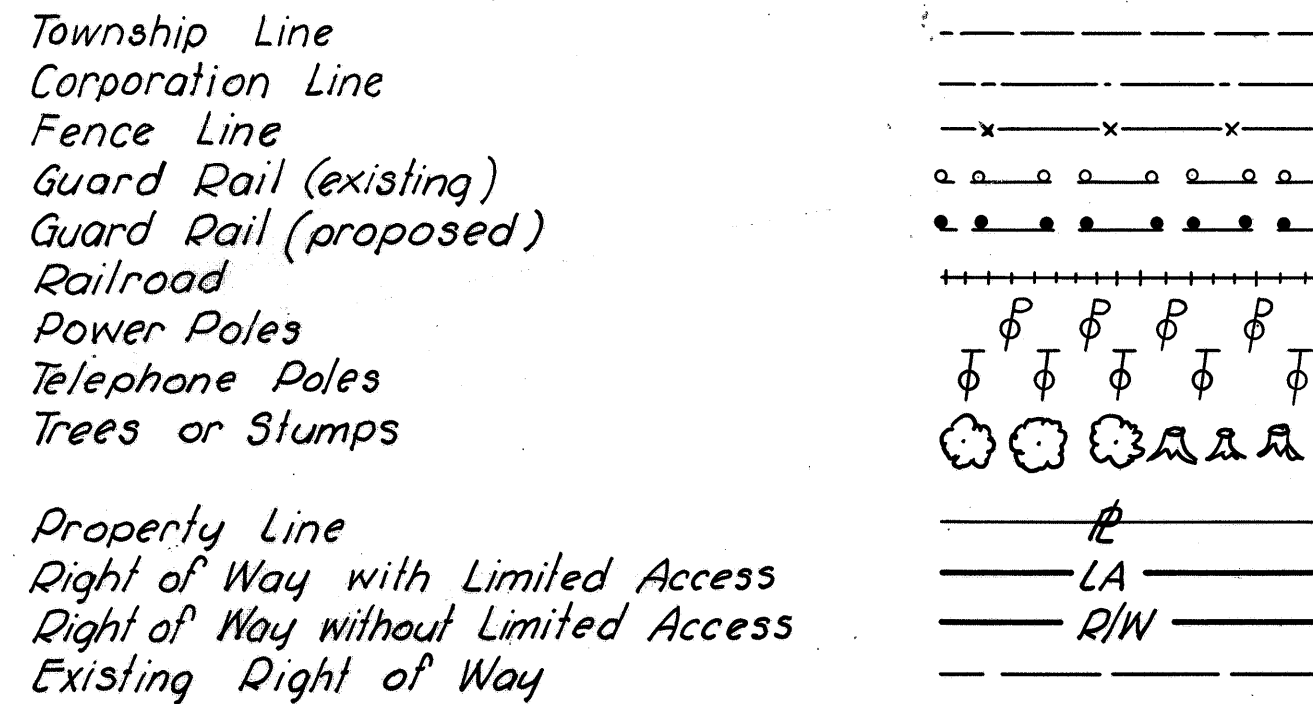
F-FG-1042(G)

ERI 6-7.31
ERIE COUNTY

PERKINS TOWNSHIP

GRADE SEPARATION WITH BALTIMORE & OHIO RAILROAD COMPANY

CONVENTIONAL SIGNS



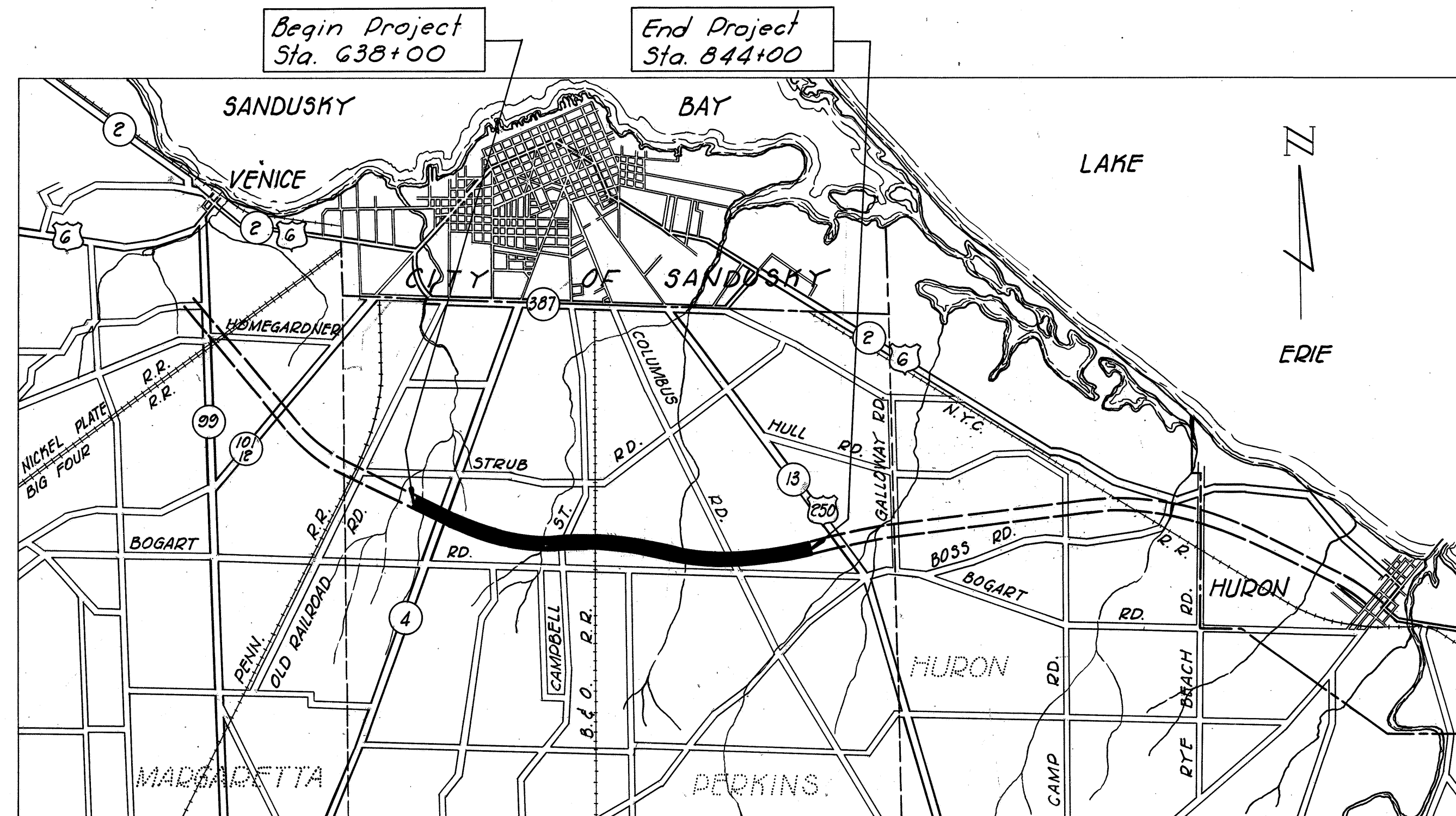
INDEX OF SHEETS

Title Sheet	1
Schematic Plan	2
Typical Sections, Typical Details & Superelevation Tables	3-8
General Notes	9-11
Summaries of Quantities	12-14
General Summary	15
U.S.G Relocated Plan & Profile	16-36
S.R.4 Interchange	37-47
Campbell St. Temporary Run-Around	48-49
Campbell St. Plan & Profile	50-52
Intersection Details	53
Structures 20' Span & Under	54-59
Pipe Creek Channel Relocation	60
Cross Sections	
U.S.G Relocated	61-98
Local Roads & Interchange Ramps	99-107
Structures over 20' Span	
S.R.4	108-115
Pipe Creek	116-122
Campbell St	123-130
B.&O. Railroad (Railroad Force Account Work -131)	131-136
Columbus Ave.	137-146
Location Plan	147-148
Right of Way	149-161

LINE DATA

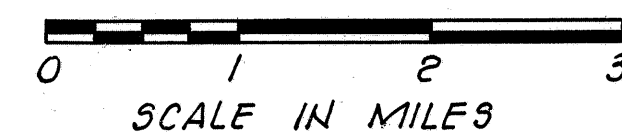
F-1042(G): Sta. 638+00 to 722+00 = 8,400.00 Lin. Ft.
Sta. 748+00 to 844+00 = 9,600.00 Lin. Ft.
Length of Project F-1042(G) = 18,000.00 Lin. Ft. or 3.409 Miles
FG-1042(G): Sta. 722+00 to 748+00 = 2,600.00 Lin. Ft.
Length of Project FG-1042(G) = 2,600.00 Lin. Ft. or 0.492 Miles
Total Length of Project = 20,600.00 Lin. Ft. or 3.901 Miles

Sta. 637+00 to 722+00, U.S.G = 8,500.00 Lin. Ft.
Sta. 748+00 to 845+00, U.S.G = 9,700.00 Lin. Ft.
Sta. 35+75 to 63+00, S.R.4 = 2,725.00 Lin. Ft.
Sta. 42+00 to 61+79.79, Campbell St. = 1,979.79 Lin. Ft.
Length of Work F-1042(G) = 22,904.79 Lin. Ft. or 4.338 Miles
Sta. 722+00 to 748+00, U.S.G = 2,600.00 Lin. Ft.
Length of Work FG-1042(G) = 2,600.00 Lin. Ft. or 0.492 Miles
Total Length of Work = 25,504.79 Lin. Ft. or 4.830 Miles



Delivery Point: B.&O. RR at Bogart Road

LOCATION PLAN



Portion to be improved...
State Roads.....
Other Roads.....

Average Haul: 1.2 Miles

Revision on sheet 50(6-20-61) REB.

Plan
Profile: Horizontal
Profile: Vertical
Cross Section

SURVEY AND PLANS BY
SANZENBACHER, MILLER AND BRIGHAM
TOLEDO, OHIO

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.

The Standard Specifications of the State of Ohio, Department of Highways, including changes and Supplemental Specifications listed in the proposal shall govern this improvement.

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

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

- Approved E. S. Preston
Date 12-13-60 Division Deputy Director
- Approved George E. Neefzer
Date 11-1-60 Deputy Director of Planning and Programming
- Approved W. J. Brennan
Date 10-20-60 Engineer of Bridges
- Approved W. J. Brennan
Date 10-25-60 Engineer of Location and Design
- Approved Clarence McCaughy
Date 10-25-60 Deputy Director of Design and Construction
- Approved John Berry
Date 11-1-60 First Assistant Director
- Approved E. S. Preston
Date 11-1-60 Director of Highways

JAN 3 1964
GROUND PHOTOLAB

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

Approved _____
Division Engineer

_____ Date

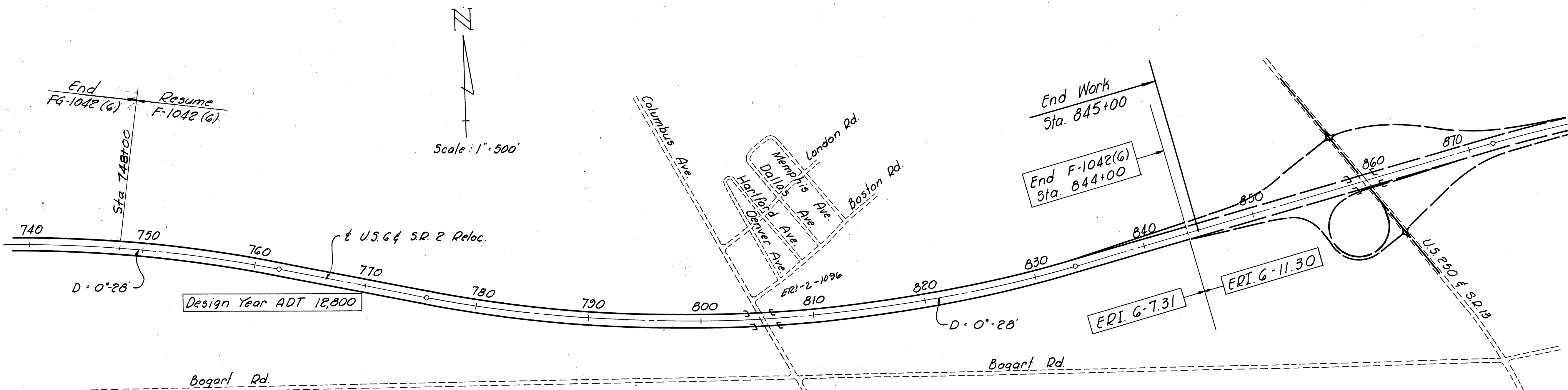
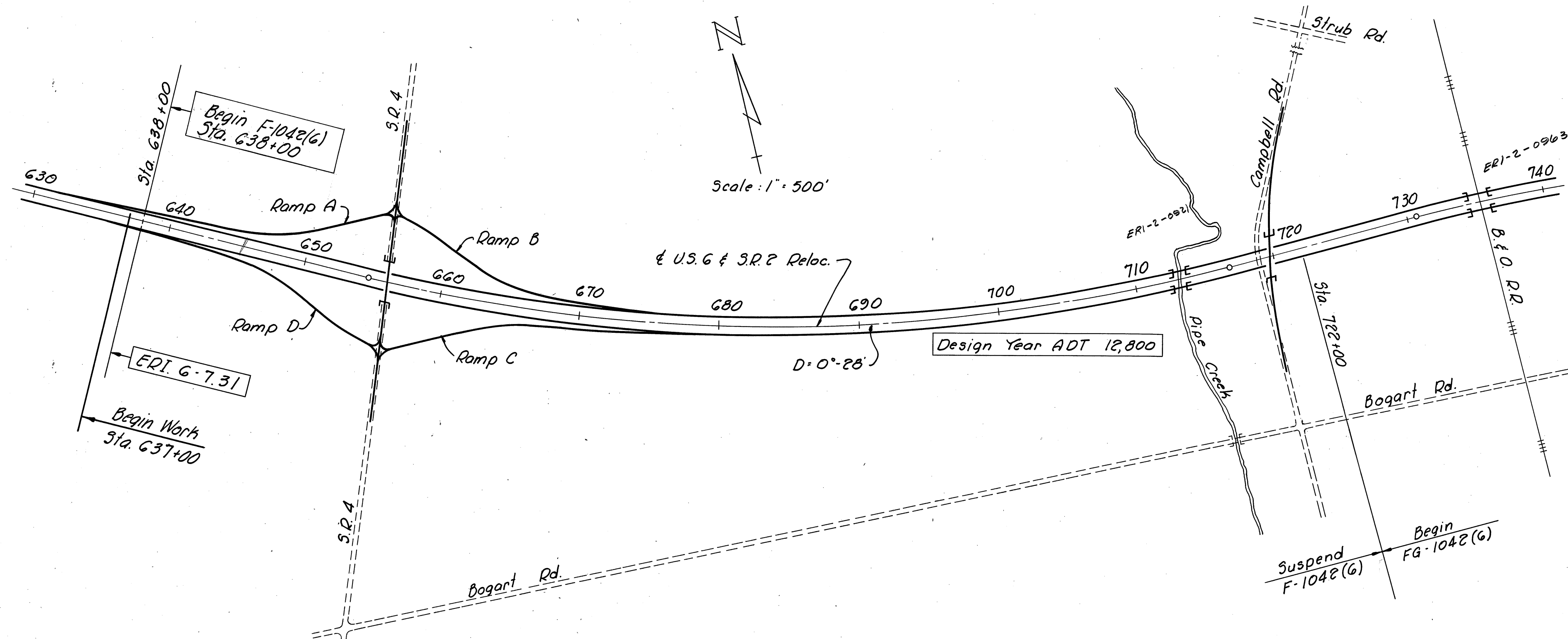
FILE NO.	ERI 6-7.31
Date of Letting	196
Contract No.	

STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS	
AS-1-54	12-1-54	L-3	4-1-50	5-27 PC.3	2-20-45	I-15 No.1	5-21-59	S-101	12-2-59
RB-1-55	2-2-59	L-3-A	4-1-50	3-27 PC.4	1-4-54	I-15 No.2-A	8-17-60	B-219	Rev. 3-12-59
AR-1-57	2-2-59	RT-1	7-15-58	SP-53	11-25-58	I-21-23	8-1-56	M-206.6(b)	5-25-56
CSB-2-56	Shits. 223	T-35	1-2-56	1-1,2,3,4 & 5	4-24-58	G-7.07	6-1-56	18	Rev. 6-15-59
F-2	10-1-58	B-T-50-70-71E No.1	10-1-47	F-B.C.B. P.2-A&B	3-2-59	HW-A&B	7-15-57	I-124	1-11-56
F-3	9-1-59	B-T-71R	3-2-53	I-B.C.B. No.4	7-1-58	HW-C	7-15-57		
DR-1	1-3-55	LJ No.1	7-1-55	I-B.C.B. No.6	1-26-59	I-B.C.B. No.5	7-1-58		
L-1	4-1-50	TJ	9-12-60	I-12	7-1-54				

SCHEMATIC PLAN

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

ERI. G-7.31



No Federal Participation

Drives:
High type surface beyond end of flares, except where existing drive is high type.

R/W Fence:
Except from Columbus Ave., 2600 ft. to east on north side, and 2600 ft. in vicinity of Columbus Ave. on south side.

Guard Rail:
Barrier rail at structures as shown on sheet 7.

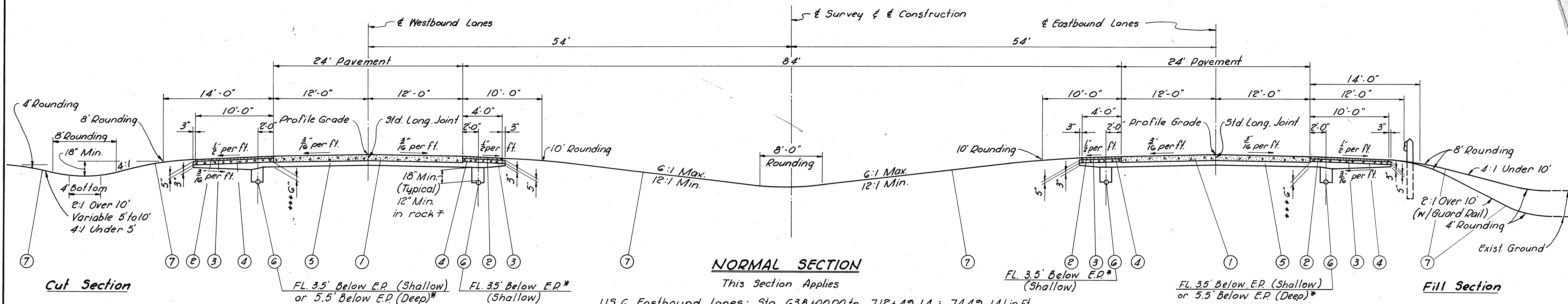
MICROFILMED
MAR 19 1985

TYPICAL SECTIONS

TYPE T-71

FED. RD. DIVISION	STATE	PROJECT	TYPE / FUNDS
2	OHIO		

ERI. C-7.31

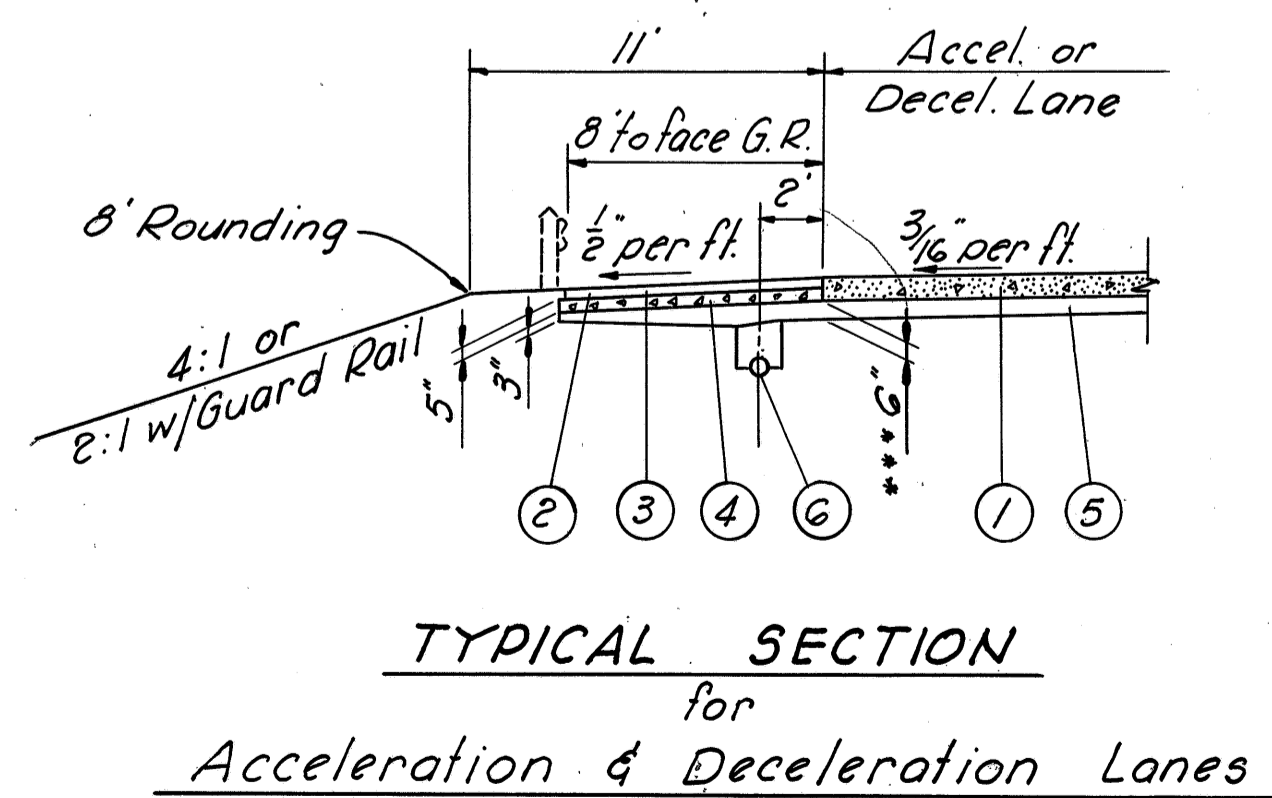


NORMAL SECTION

This Section Applies

U.S.G Eastbound Lanes: Sta. 638+00.00 to 712+49.14 = 7449.14 Lin. Ft.
 Sta. 713+71.82 to 734+32.64 = 2060.82 Lin. Ft.
 Sta. 736+14.19 to 804+47.49 = 6833.30 Lin. Ft.
 Sta. 806+93.60 to 844+00.00 = 3706.40 Lin. Ft.
 Total = 20,049.66 Lin. Ft.

U.S.G Westbound Lanes: Sta. 638+00.00 to 712+67.86 = 7467.86 Lin. Ft.
 Sta. 713+91.18 to 734+29.61 = 2038.43 Lin. Ft.
 Sta. 736+11.15 to 803+94.71 = 6783.56 Lin. Ft.
 Sta. 806+42.51 to 844+00.00 = 3757.49 Lin. Ft.
 Total = 20,047.34 Lin. Ft.



TYPICAL SECTION
for
Acceleration & Deceleration Lanes

Legend

- ① T-71 9" Reinforced Portland Cement Concrete Pavement
- ② T-31 Bituminous Surface Treatment using 0.008 Cubic Yard No. 6 Aggregate and 0.25 Gallon Bituminous Material per Square Yard (See Note in Proposal)
- ③ B-219 3" Waterproofoed Aggregate Base Course
- ④ I-18 5" Stabilized Crushed Aggregate Shoulders and Approaches
- ⑤ I-22 Subbase, Grading A or B, as per plan (Thickness as shown)
- ⑥ I-4 6" Pipe Underdrains
- ⑦ L-9 Seeding and Protecting

- ‡ Where underdrains are in rock, M-G.4(h) pipe shall be used.
- * Except as otherwise shown on cross sections by flowline elevations.
- *** Subbase thickness shall be 18" between:
 Sta. 821+00 to 824+00
 Sta. 829+50 to 832+50
 Sta. 836+00 to 842+00

Note: Roundings in accordance with RI-1 except as otherwise shown.

Scale: 1" = 6'-0"
Design Speed = 70 M.P.H.

SANZENBACHER, MILLER & BRIGHAM, TOLEDO, OHIO

TYPICAL SECTIONS

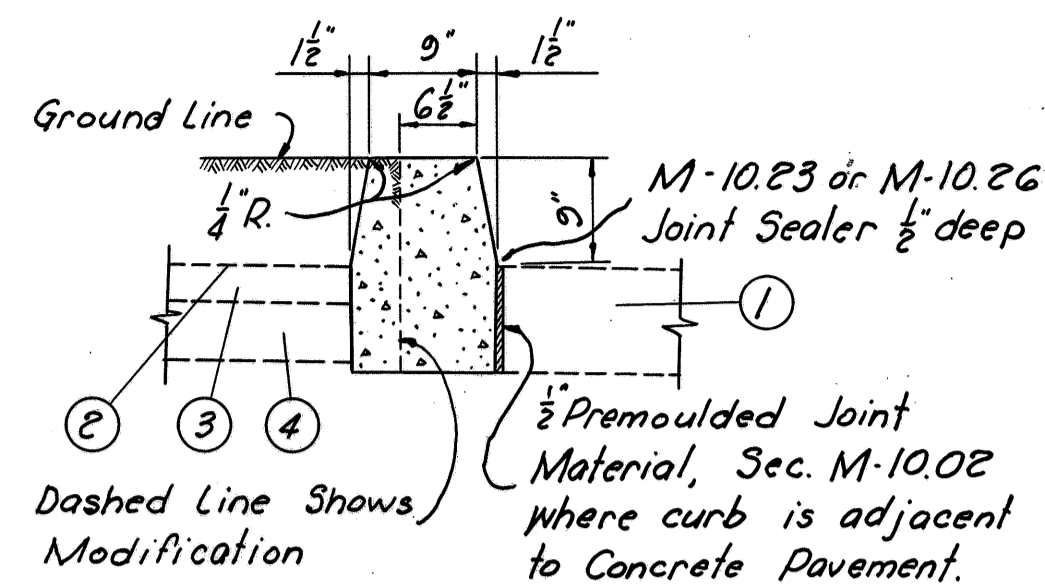
TYPICAL SECTIONS

TYPES T-71 & T-35

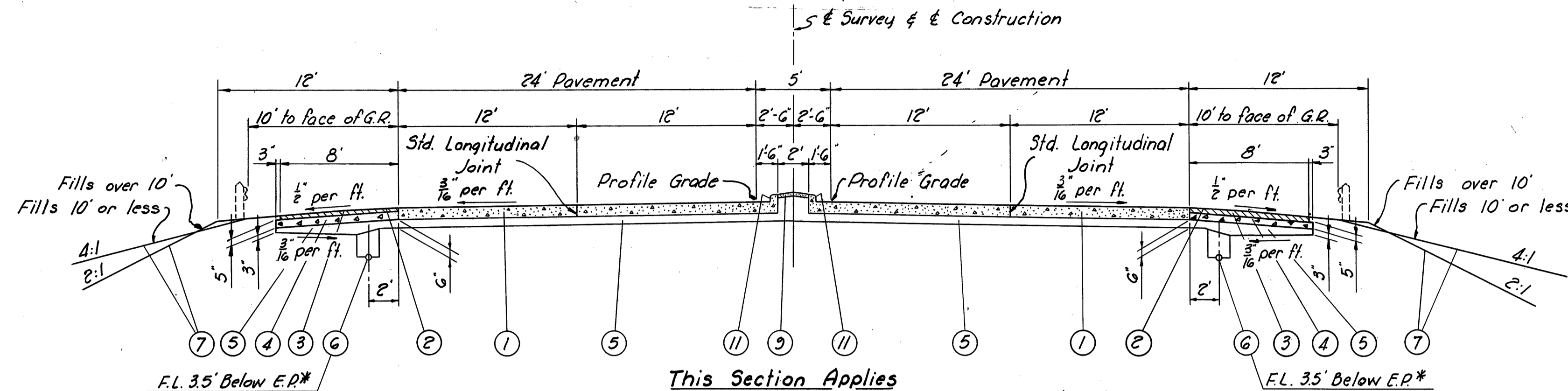
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		4

161

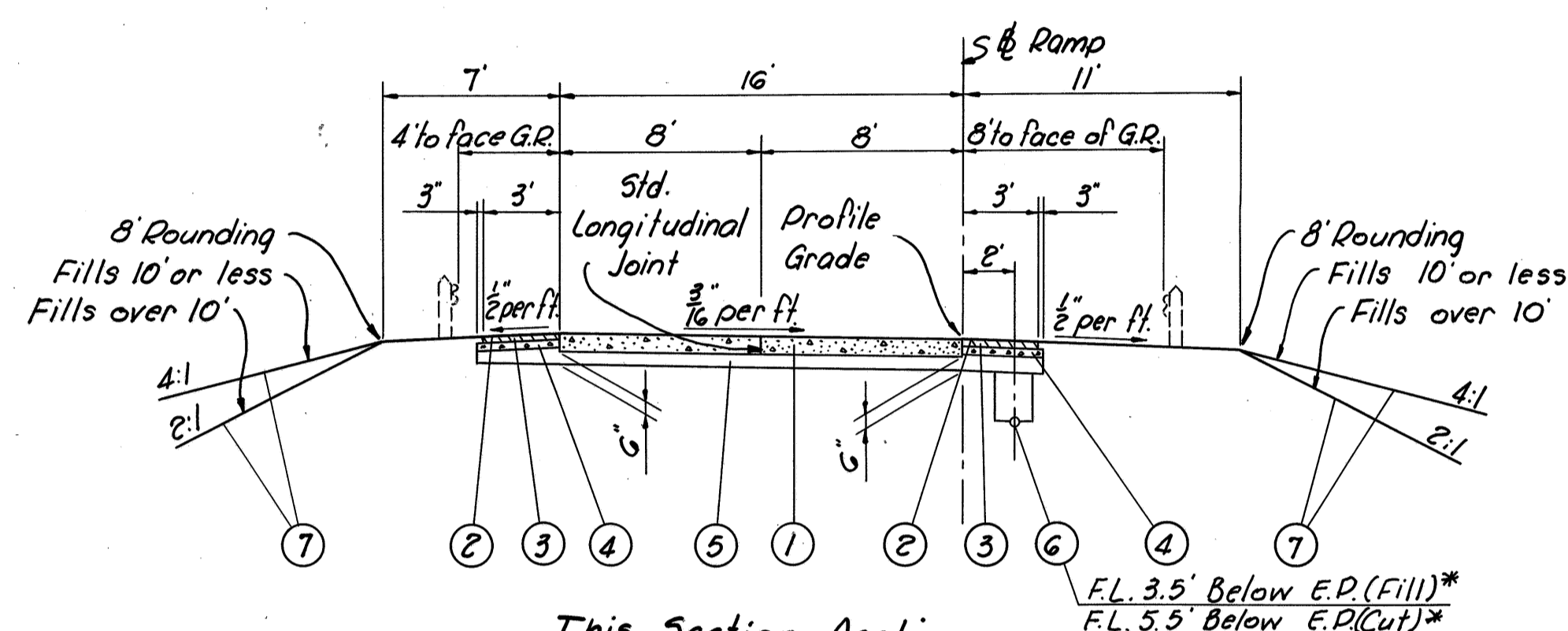
E.R.I. 6-7.31



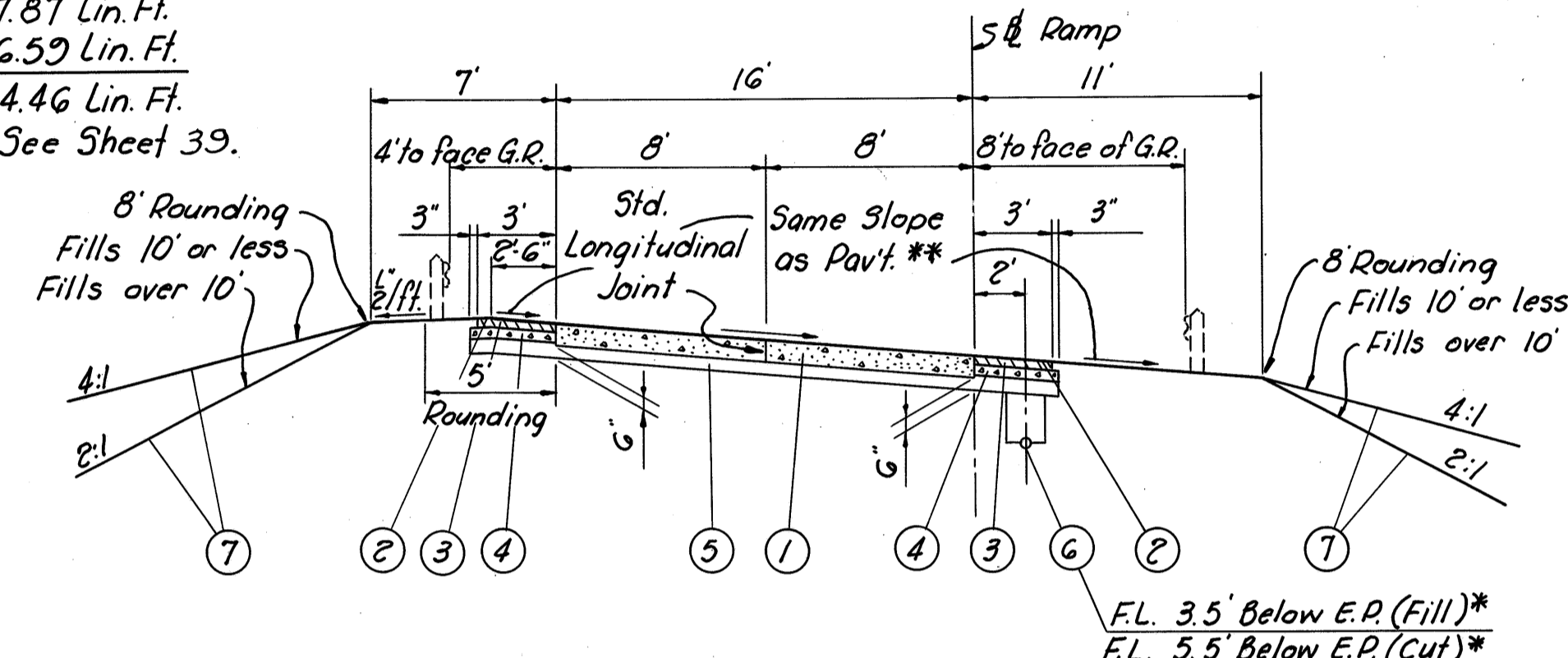
SPECIAL PORTLAND CEMENT CONCRETE CURB
Scale 3/4" = 1'-0"



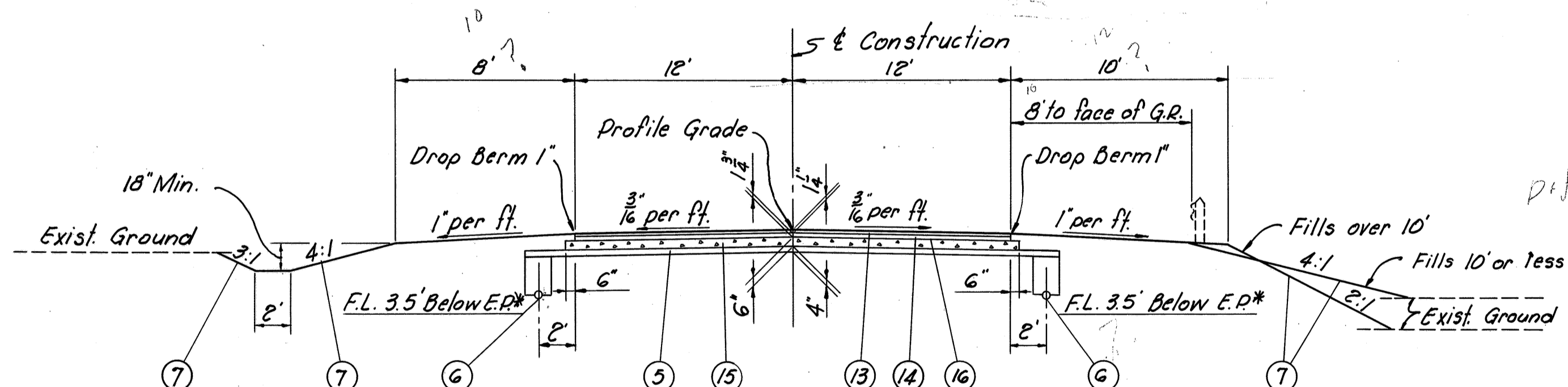
This Section Applies
S.R. 4: Sta. 44+35.00 to 48+32.87 = 397.87 Lin. Ft.
Sta. 51+68.41 to 55+65.00 = 396.59 Lin. Ft.
Total = 794.46 Lin. Ft.
For Typical Section of S.R.4 Transitions, See Sheet 39.



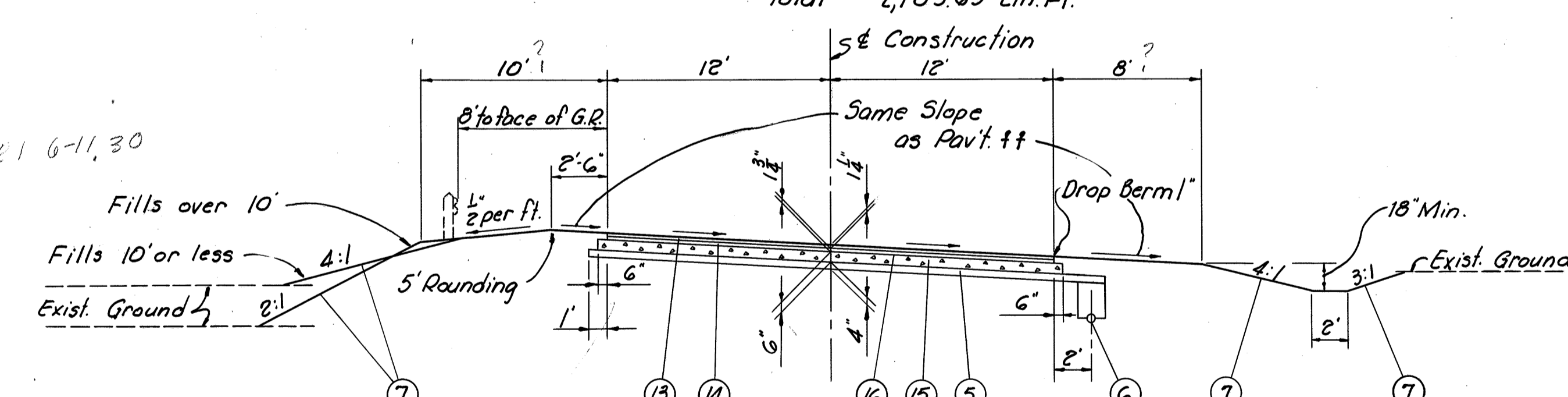
This Section Applies
Ramp A Sta. 13+96.97 to 19+58.08 = 438.89 Lin. Ft.
Ramp B Sta. 0+90.00 to 0+59.82 = 30.78 Lin. Ft.
Sta. 5+91.86 to 3+91.86 = 200.00 Lin. Ft.
Ramp C Sta. 0+73.50 to 6+71.49 = 597.99 Lin. Ft.
Ramp D Sta. 5+55.02 to 7+55.02 = 200.00 Lin. Ft.
Sta. 11+23.14 to 11+53.92 = 30.78 Lin. Ft.
Total = 1,498.44 Lin. Ft.



This Section Applies
Ramp A Sta. 9+58.08 to 5+50.00 = 408.08 Lin. Ft.
Ramp B Sta. 3+91.86 to 0+90.00 = 301.86 Lin. Ft.
Sta. 10+62.96 to 5+91.86 = 471.10 Lin. Ft.
Ramp C Sta. 6+71.49 to 9+01.00 = 229.51 Lin. Ft.
Ramp D Sta. 1+50.00 to 5+55.02 = 405.02 Lin. Ft.
Sta. 7+55.02 to 11+23.14 = 368.12 Lin. Ft.
Total = 2,183.69 Lin. Ft.



This Section Applies
Campbell St. Sta. 44+00.00 to 44+87.37 = 87.37 Lin. Ft.
Sta. 48+55.15 to 49+54.92 = 99.77 Lin. Ft.
Sta. 52+93.52 to 53+93.61 = 100.09 Lin. Ft.
Sta. 59+16.39 to 59+75.00 = 58.61 Lin. Ft.
Total = 345.84 Lin. Ft.



This Section Applies
Campbell St. Sta. 44+87.37 to 48+55.15 = 367.78 Lin. Ft.
Sta. 53+93.61 to 59+16.39 = 522.78 Lin. Ft.
Total = 890.56 Lin. Ft.

Legend

- | | | | | | |
|---|-------|--|---|------|---|
| ① | T-71 | 9" Reinforced Portland Cement Concrete Pavement | ⑨ | I-21 | Portland Cement Concrete Median Pavement, Type 1 |
| ② | T-31 | Bituminous Surface Treatment using 0.008 Cubic Yard No. 6 Aggregate and 0.25 Gallon Bituminous Material per Square Yard (See Note in Proposal) | ⑩ | I-12 | Standard Type 2-A Curb |
| ③ | B-219 | 3" Waterproofed Aggregate Base Course | ⑬ | T-35 | 1 1/2" Asphaltic Concrete Surface Course, Type C (70-85) |
| ④ | I-18 | 5" Stabilized Crushed Aggregate Shoulders and Approaches | ⑭ | B-35 | 1 1/2" Asphaltic Concrete Leveling Course (70-85) |
| ⑤ | I-22 | Subbase, Grading A or B, as per plan (Thickness as shown) | ⑮ | B-19 | Aggregate Base Course (Thickness as shown) |
| ⑥ | I-4 | 6" Pipe Underdrains | ⑯ | T-30 | Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3 applied at the rate of 0.4 gal. per sq. yd. |
| ⑦ | L-9 | Seeding and Protecting | | | |

* Except as otherwise shown on cross sections by flowline elevations.
** For pavement elevations see plan and profile sheets.
†† Pavement related about & Construction; maximum rate of superelevation equals 0.049 feet per foot. See Superelevation Tables.

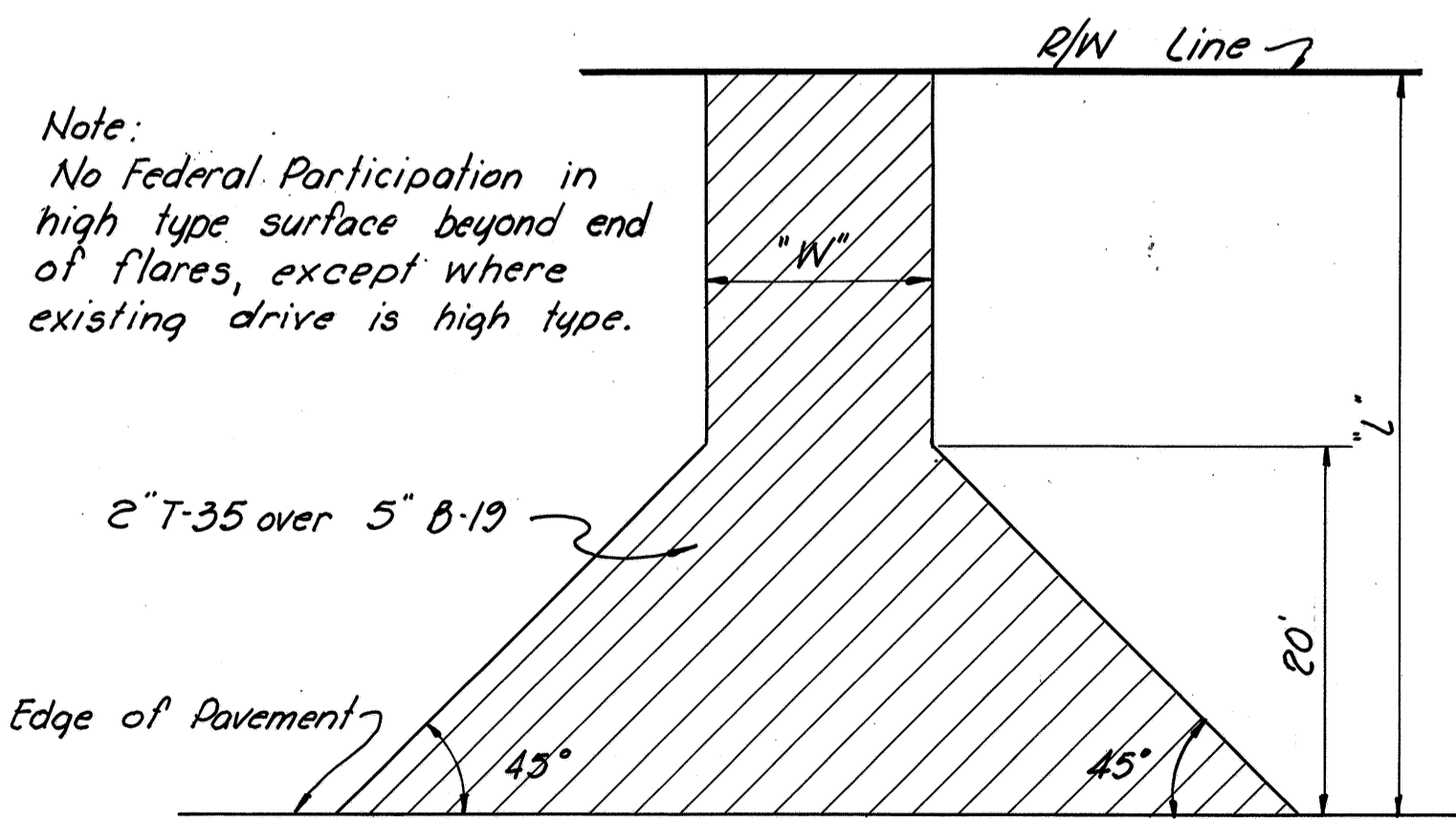
Note: Roundings in accordance with R1-1 except as otherwise shown.

CAMPBELL ST. RELOCATED D=3°00'
Maximum Superelevation Rate = 0.049 Ft./Ft.

LEFT		CENTER		RIGHT	
Edge of Pav't.	Add to Pr. Grd.	Station	Pr. Grd.	Deduct from Pr. Grd.	Edge of Pav't.
624.07	-0.16	43+50	624.23	0.16	624.07
624.12	-0.11	+75	624.23	0.17	624.06
624.23	-0.06	44+00	624.29	0.19	624.10
624.43	0.00	+25	624.43	0.19	624.24
624.75	0.12	+50	624.63	0.19	624.44
624.96	0.19	+63.5	624.77	0.19	624.58
625.16	0.25	+75	624.91	0.25	624.66
625.39	0.31	P.C. +87.37	625.08	0.31	624.77
625.62	0.37	45+00	625.25	0.37	624.88
626.16	0.49	+25	625.67	0.49	625.18
626.64	0.59	+45	626.05	0.59	625.46
626.75		+50	626.16		625.57
627.30		+75	626.71		626.12
627.93		46+00	627.34		626.75
628.63		+25	628.04		627.45
629.40		+50	628.81		628.22
630.23		+75	629.64		629.05
631.14		47+00	630.55		629.96
632.12		+25	631.53		630.94
633.09		+50	632.50		631.91
633.99		+75	633.40		632.81
634.16	0.59	+80	633.57	0.59	632.98
634.73	0.49	48+00	634.24	0.49	633.75
635.39	0.37	+25	635.02	0.37	634.65
635.99	0.25	+50	635.74	0.25	635.49
636.10	0.22	P.T. +55.15	635.88	0.22	635.66
636.24	0.19	+61.5	636.05	0.19	635.86
636.51	0.12	+75	636.39		636.20
636.99	0.00	49+00	636.99		636.80
637.46	-0.06	+25	637.52		637.33
637.85	-0.13	+50	637.98	0.13	637.79

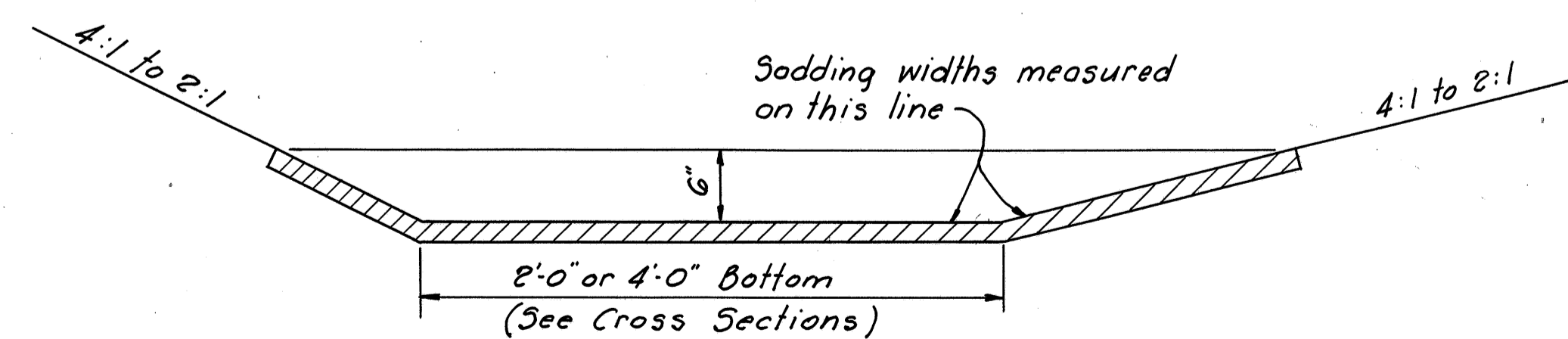
CAMPBELL ST. RELOCATED D=3°00'
Maximum Superelevation Rate = 0.049 Ft./Ft.

LEFT		CENTER		RIGHT	
Edge of Pav't.	Add to Pr. Grd.	Station	Pr. Grd.	Deduct from Pr. Grd.	Edge of Pav't.
637.82	-0.13	53+00	637.95	0.13	637.76
637.42	-0.06	+25	637.48		637.29
636.95	0.00	+50	636.95		636.76
636.47	0.12	+75	636.35		636.16
636.20	0.19	+88.5	636.01	0.19	635.82
636.08	0.21	P.C. +93.61	635.87	0.22	635.65
635.95	0.25	54+00	635.70	0.25	635.45
635.35	0.37	+25	634.98	0.37	634.61
634.68	0.49	+50	634.19	0.49	633.70
634.11	0.59	+70	633.52	0.59	632.93
633.94		+75	633.35		632.76
633.03		55+00	632.44		631.85
632.06		+25	631.47		630.88
631.06		+50	630.47		629.88
630.06		+75	629.47		628.88
629.06		56+00	628.47		627.88
628.06		+25	627.47		626.88
627.09		+50	626.50		625.91
626.17		+75	625.58		624.99
625.32		57+00	624.73		624.14
624.52		+25	623.93		623.34
623.79		+50	623.20		622.61
623.10		+75	622.51		621.92
622.48		58+00	621.89		621.30
621.92		+25	621.33		620.74
621.41		+50	620.82		620.23
621.32	0.59	+55	620.73	0.59	620.14
620.86	0.49	+75	620.37	0.49	619.88
620.36	0.37	59+00	619.99	0.37	619.62
620.05	0.29	P.T. +16.39	619.76	0.29	619.47
619.90	0.25	+25	619.65	0.25	619.40
619.71	0.19	+36.5	619.52	0.19	619.33
619.51	0.13	+50	619.38	0.19	619.19
619.23	0.03	+70	619.20	0.19	619.01
619.16	0.00	+75	619.16	0.19	618.97
618.96	-0.05	60+00	619.01	0.17	618.84
618.82	-0.09	+25	618.91	0.16	618.75
618.70	-0.14	+50	618.84	0.14	618.70



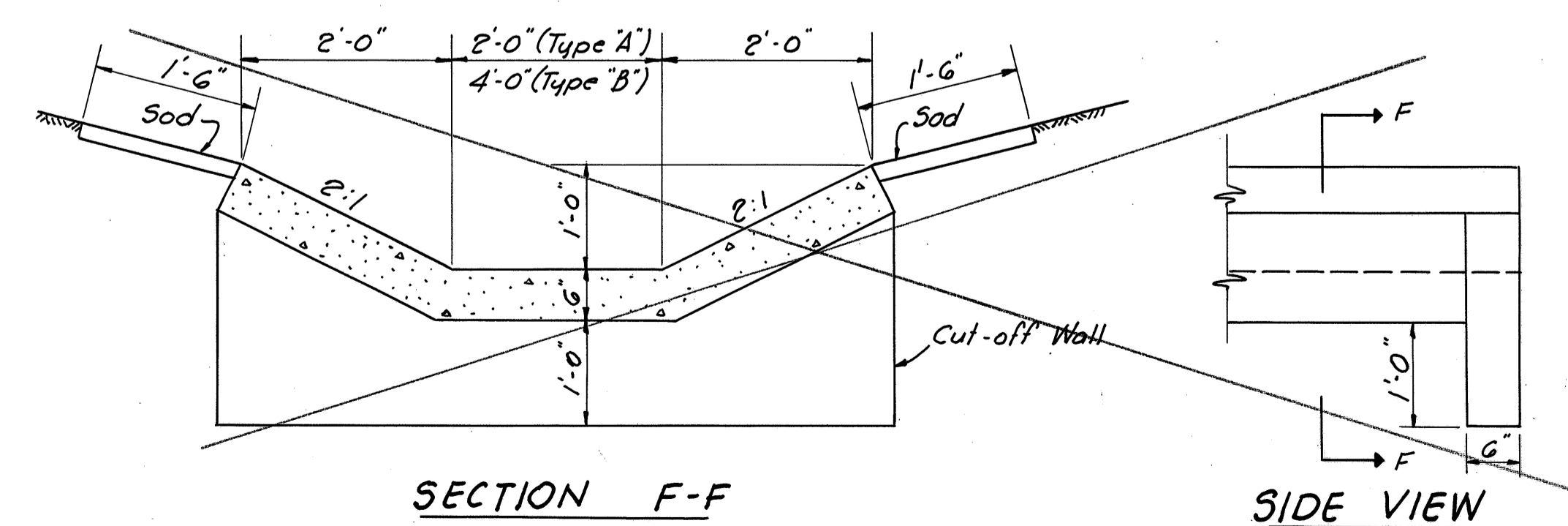
TYPICAL DRIVE DETAIL

(For typical mail box approach, See Standard Drawing DR-1)



SOD DETAIL FOR DITCHES

Scale: 1" = 1'-0"



SECTION F-F

SIDE VIEW

SPECIAL PAVED GUTTER - TYPE 'A' & 'B'

Scale: 3/4" = 1'

GUARD RAIL PROTECTION

FOUR LANE DIVIDED, 84' MEDIAN, AT PIERS

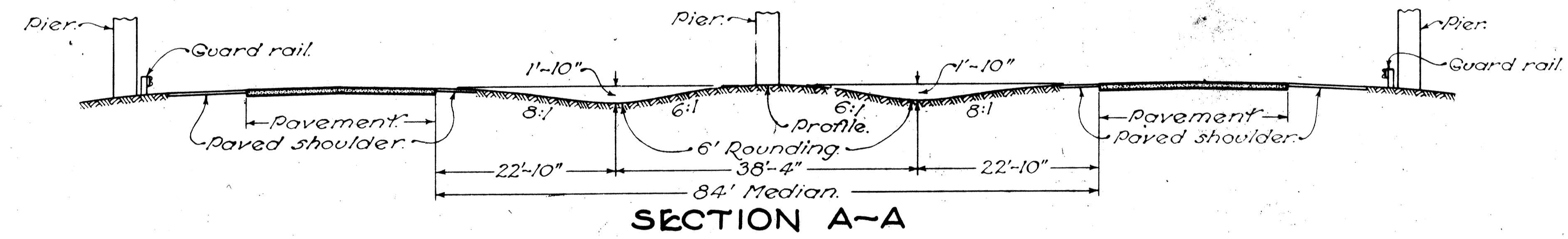
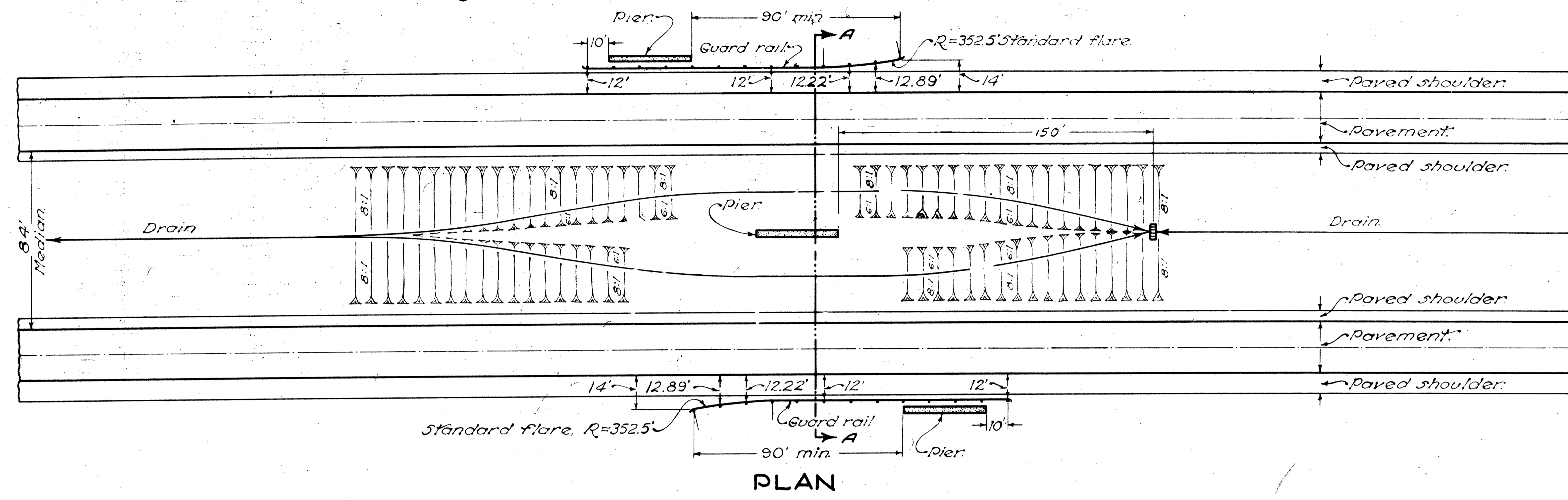
FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
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161

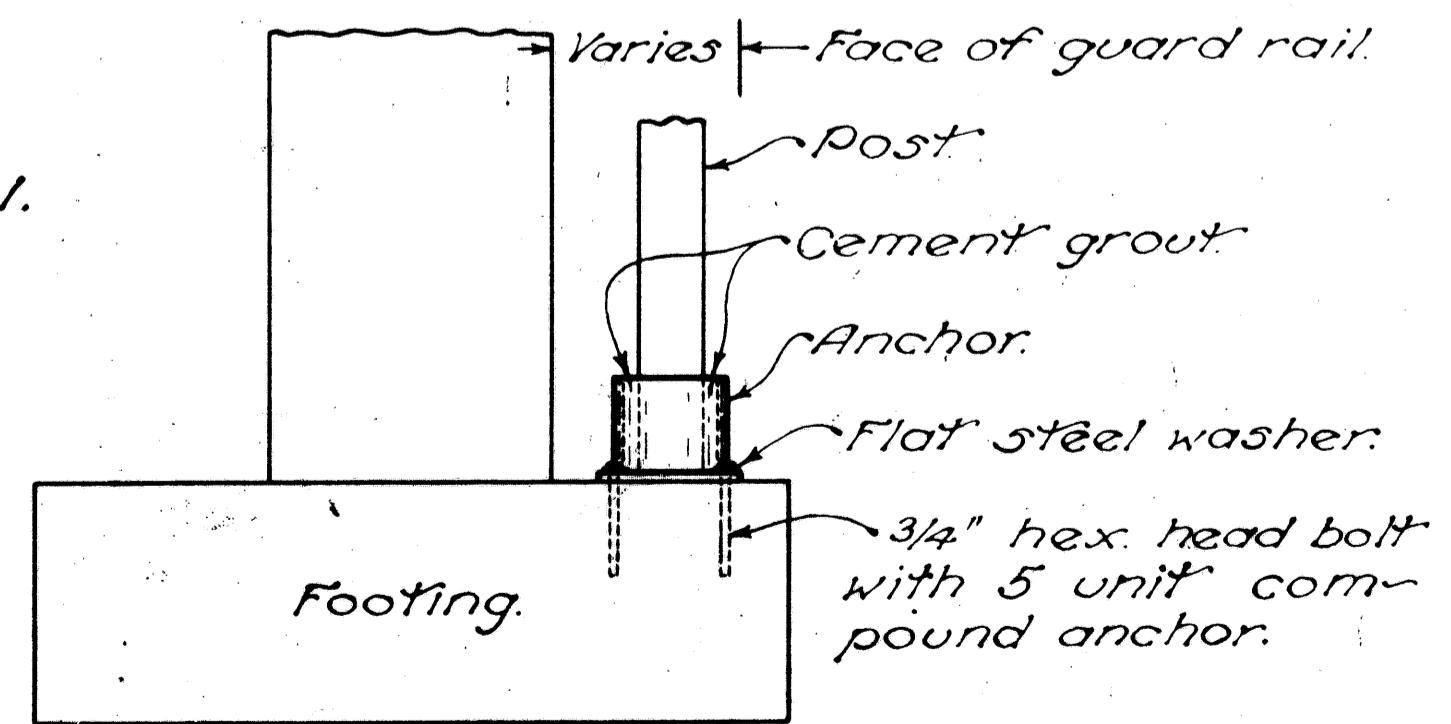
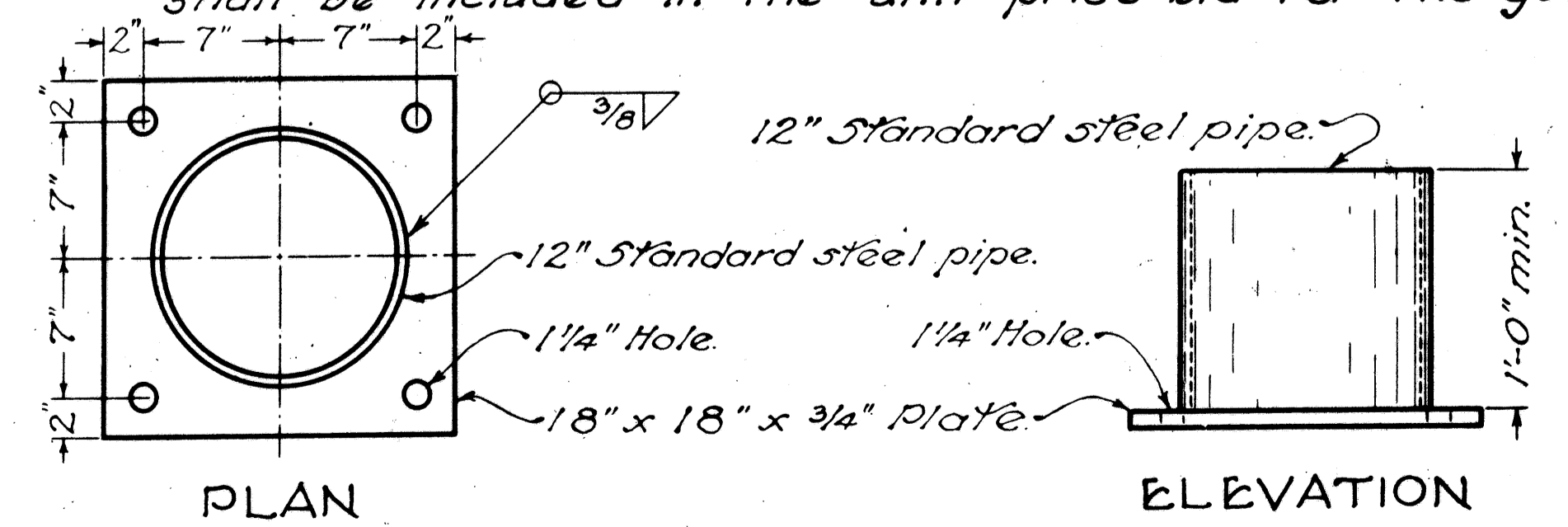
ERI. 6-7.31

NOTES

GENERAL - Design details shown hereon shall govern the construction of guard rail at structures and piers unless otherwise shown on the plans.



Footings anchor to be used where posts are over footings and less than 3'-0" of earth is provided above the top of footing. Payment for the anchor shall be included in the unit price bid for the guard rail.



PLAN

ELEVATION

FOOTING END VIEW

FOOTING ANCHOR

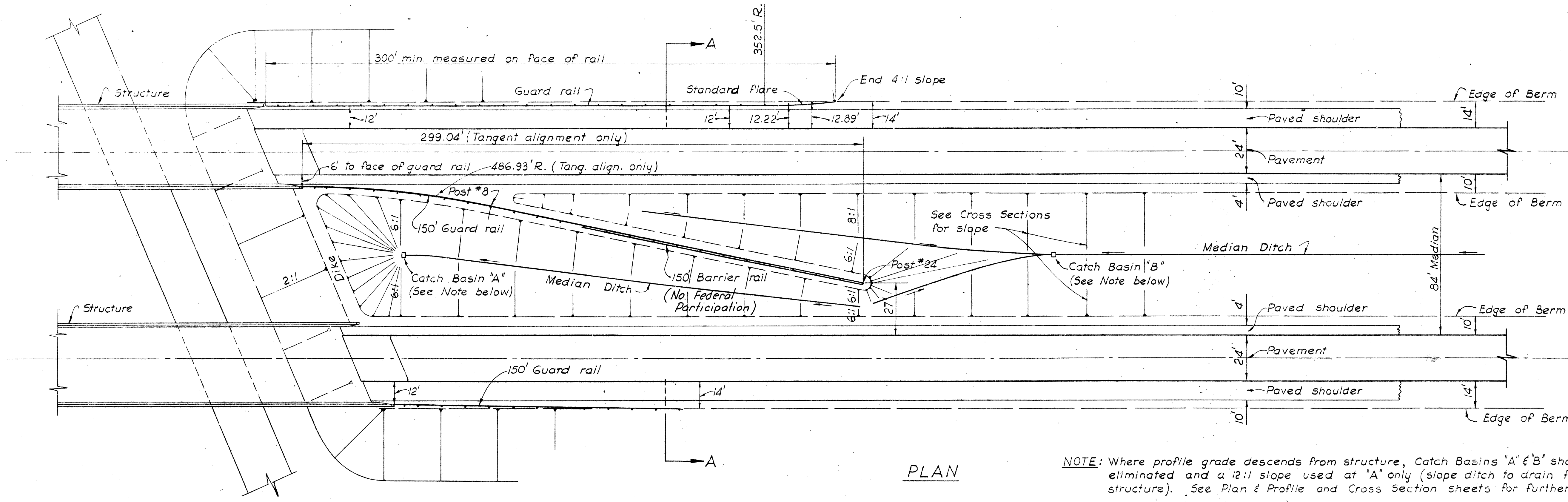
Rev. 7-27-60 KEC.

GUARD RAIL PROTECTION AT TWIN STRUCTURES

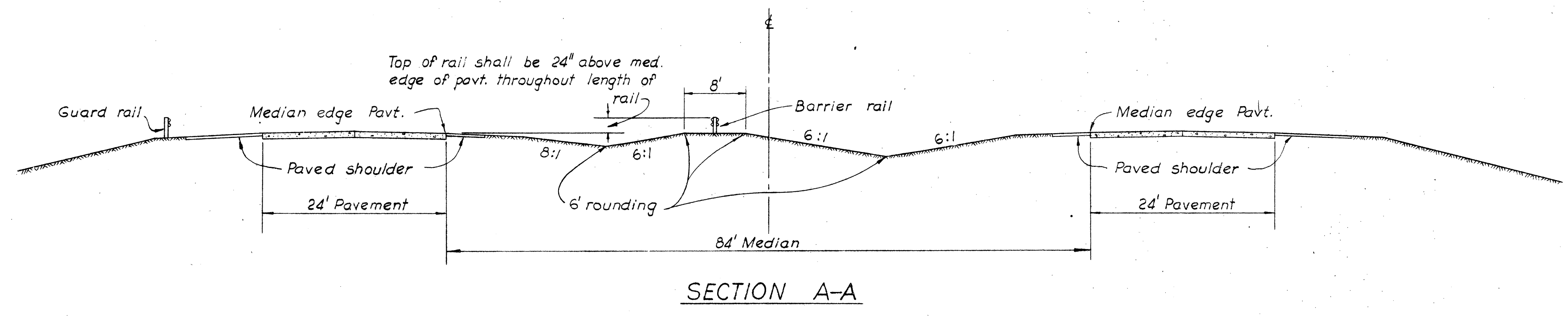
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
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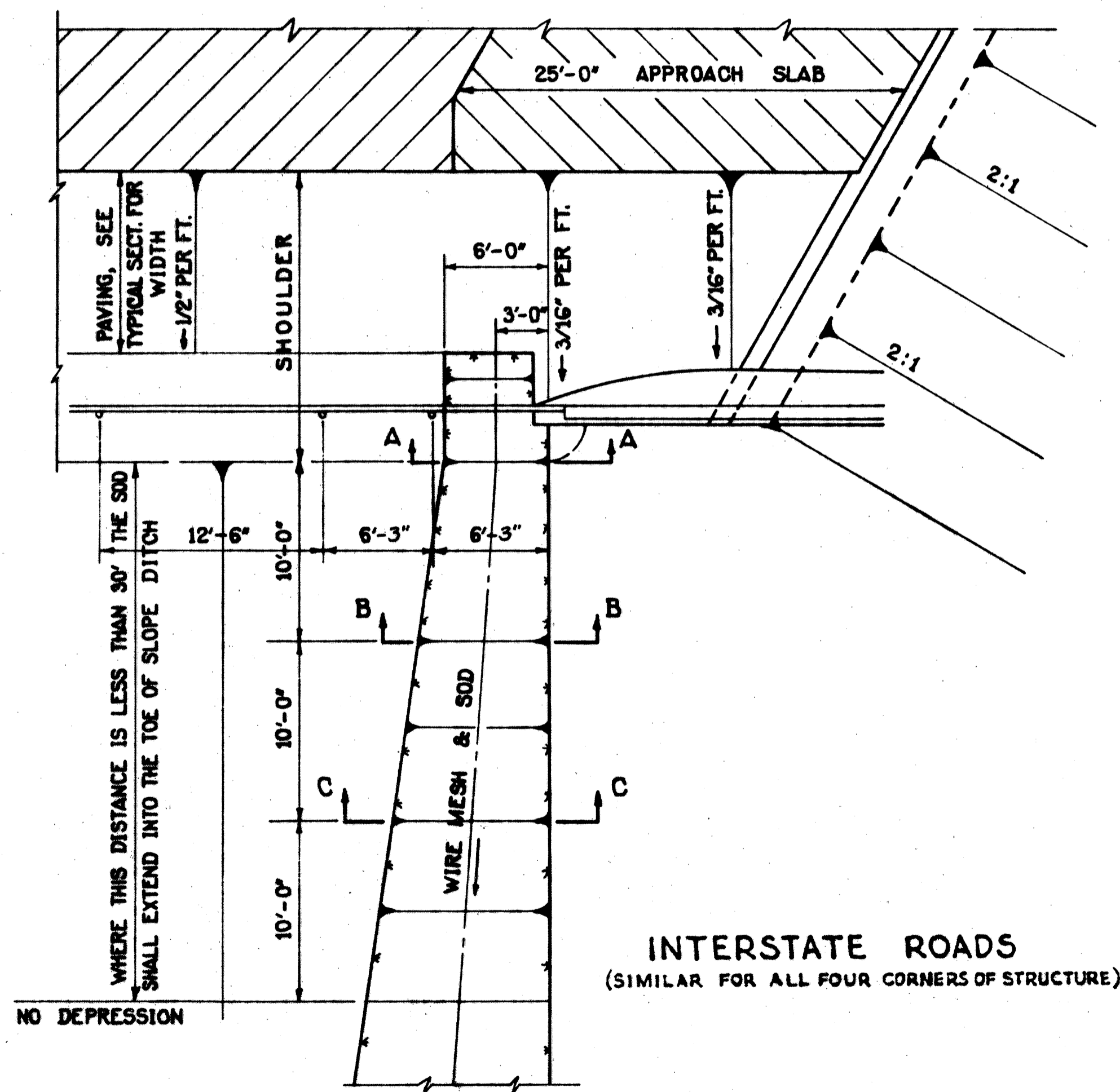


NOTE: Where profile grade descends from structure, Catch Basins "A" & "B" shall be eliminated and a 12:1 slope used at "A" only (slope ditch to drain from structure). See Plan & Profile and Cross Section sheets for further details.



DISTANCE BETWEEN EDGE OF PAVEMENT AND FACE OF GUARD RAIL			
POST	OFFSET	POST	OFFSET
1/2	6.04	13	28.97
1	6.16	14	31.52
2	6.64	15	34.07
3	7.44	16	36.62
4	8.57	17	39.16
5	10.01	18	41.71
6	11.77	19	44.26
7	13.84	20	46.81
8	16.23	21	49.36
9	18.78	22	51.90
10	21.33	23	54.45
11	23.87	24	57.00
12	26.42		

See Sheet No.	Station	Side	Location	L-10	
				Sodding for Special Berm & Slope Protection	Sq. Yd.
108	48+48	Lt.	S.R.4	74	
108	48+40	Rt.	S.R.4	66	
108	50+62	Lt.	S.R.4	66	
108	50+54	Rt.	S.R.4	72	
116	713+83	Lt.	U.S.G.	35	
116	713+86	Rt.	U.S.G.	35	
123	49+62	Lt.	Campbell Rd.	48	
123	49+70	Rt.	Campbell Rd.	43	
123	52+80	Lt.	Campbell Rd.	43	
123	52+89	Rt.	Campbell Rd.	53	
131	* 734+41	Lt.	U.S.G.	87	
131	* 734+42	Rt.	U.S.G.	28	
131	* 736+00	Lt.	U.S.G.	21	
131	* 736+04	Rt.	U.S.G.	29	
137	803+90	Lt.	U.S.G.	55	
137	804+70	Rt.	U.S.G.	62	
137	806+23	Lt.	U.S.G.	61	
137	806+99	Rt.	U.S.G.	63	
F-1042 (6)				Totals	776
* FG-1042 (6)				Totals	375



SPECIAL BERM AND SLOPE PROTECTION

PRIOR TO REPLACEMENT 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 DIRECTIONS OF FLOW. EACH STRAND SHALL BE STAKED SECURELY ON TOP AND BOTTOM WITH STAKES PLACED AT FOUR FOOT INTERVALS AND ALTERNATED IN ROWS FOUR FEET APART.

STAKES SHALL BE 1" x 1" x 8" WOOD STAKES AND SHALL BE PERPENDICULAR TO THE GROUND AND FLUSH WITH THE FINISHED GRADE.

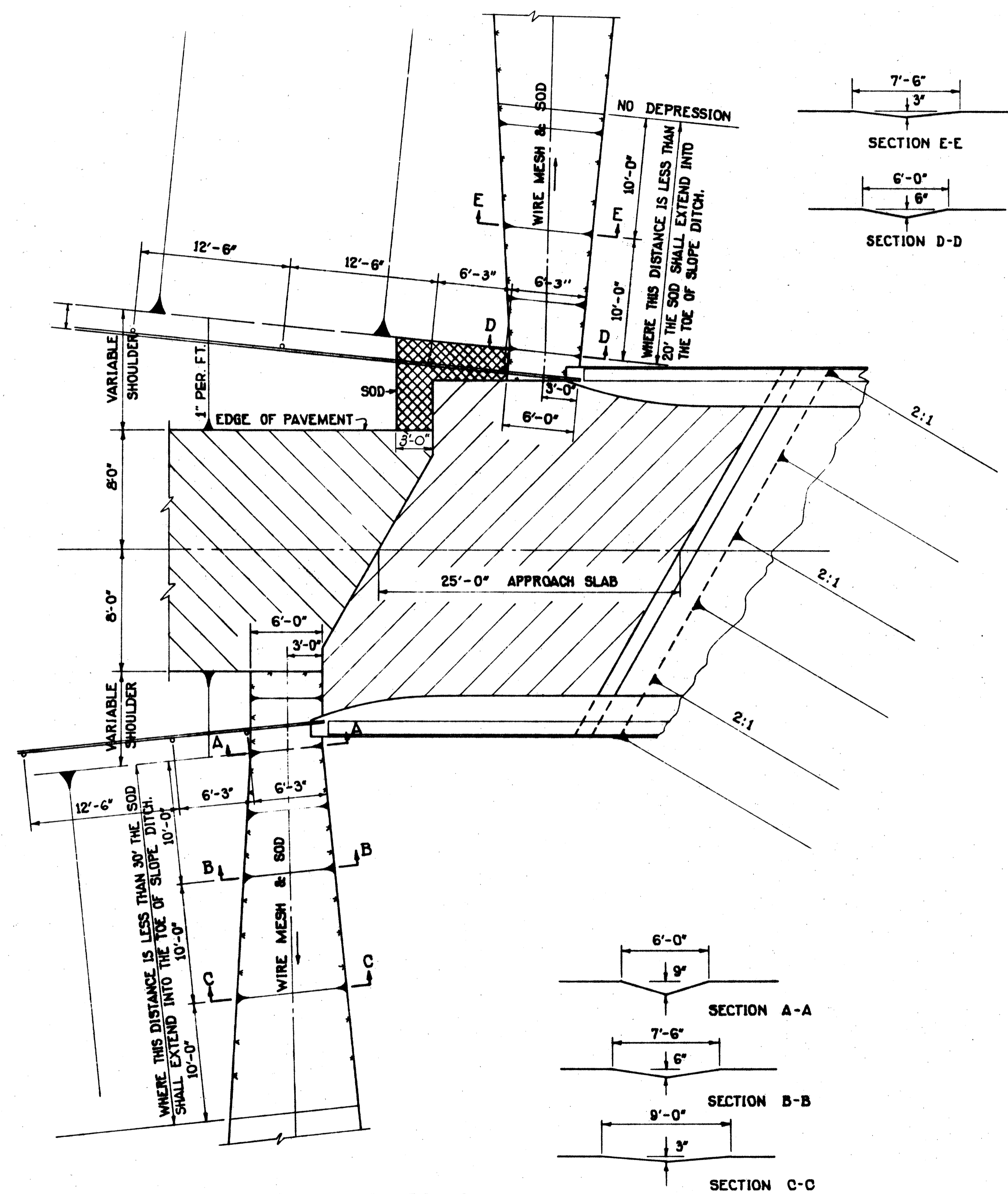
THE FENCE SHALL BE STRAIGHT LINE POULTRY FENCE OR EQUIVALENT WITH STRAND WIDTH OF FOUR FEET HAVING A TWO INCH MESH AND ALL WIRES NO. 20 GAUGE.

THE STRANDS OF FENCING SHALL BE FASTENED TOGETHER AT TWELVE INCH INTERVALS BY MEANS OF HOG RINGS.

THE FENCE SHALL BE SECURED TO THE WOOD STAKES BY METAL STAPLES.

SOD SHALL BE LAID IN ACCORDANCE WITH THE CONSTRUCTION AND MATERIALS SPECIFICATIONS SECTION L-1007.

PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM L-10 SODDING FOR SPECIAL BERM AND SLOPE PROTECTION.



GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

9
161

ERI - G - 7.31

TRAFFIC MAINTENANCE

S. R. 4: TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. OUTSIDE THE LIMITS OF THE TEMPORARY RUN-AROUND, THIS SHALL BE ACCOMPLISHED BY USE OF EITHER THE EXISTING PAVEMENT, THE PROPOSED PAVEMENT, OR TEMPORARY TRAFFIC LANES SURFACED WITH T-10 AGGREGATE AND STABILIZED WITH M-10 CALCIUM CHLORIDE. SEE RUN-AROUND DETAIL SHEET FOR QUANTITIES.

CAMPBELL ST. TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BY USE OF EITHER THE EXISTING PAVEMENT, THE PROPOSED PAVEMENT, OR ITEM S-15 TEMPORARY RUN-AROUND ROADS AS DETAILED ON THE PLANS.

COLUMBUS AVE. TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL SAFEGUARD THE TRAVELING PUBLIC 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".

INCLUDED IN THE ITEM "MAINTAINING TRAFFIC" IS THE MAINTENANCE OF ALL TRAFFIC LANES REQUIRED. TEMPORARY TRAFFIC LANES SHALL BE CONSTRUCTED AS DIRECTED BY THE ENGINEER OF STABILIZED TRAFFIC COMPACTED SURFACE COURSE; IN NO CASE SHALL A SINGLE LANE BE LESS THAN TEN (10) FEET WIDE. FURNISHING AND PLACING OF MATERIAL FOR TEMPORARY TRAFFIC LANES SHALL BE PAID FOR AS FOLLOWS:

- ITEM T-10 TRAFFIC COMPACTED SURFACE COURSE FOR TEMPORARY TRAFFIC LANES
- ITEM M-10 CALCIUM CHLORIDE FURNISHED AND APPLIED FOR TEMPORARY TRAFFIC LANES

THE CONTRACTOR SHALL SO PLAN HIS OPERATIONS THAT THE LIMITS AND DURATION OF USAGE OF TEMPORARY ROADWAYS SURFACED WITH AGGREGATE AND STABILIZED WITH CALCIUM CHLORIDE SHALL BE HELD TO AN ABSOLUTE MINIMUM, AND IN ALL CASES SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

PAYMENT FOR CONSTRUCTION, MAINTENANCE, AND SUBSEQUENT REMOVAL, WHEREVER REQUIRED, OF TEMPORARY ROADWAYS NOT SEPARATELY ITEMIZED UNDER ITEM S-15, EXCEPT FOR FURNISHING AND PLACING OF ITEMS M-10, T-10, AND "T-35 FOR MAINTAINING TRAFFIC", SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "MAINTAINING TRAFFIC".

LIGHTS, SIGNS, AND BARRICADES

THE CONTRACTOR SHALL, IN ADDITION TO THE GENERAL REQUIREMENTS OF SEC. G-7.07, ON THIS PROJECT PERFORM THE FOLLOWING:

PROVIDE, ERECT, AND MAINTAIN LIGHTS, SIGNS, AND BARRICADES AT THE WORK LIMITS ON ALL INTERSECTING ROADS WHICH REMAIN OPEN TO TRAFFIC.

LIGHTS, BARRICADES, AND DANGER AND WARNING SIGNS SHALL BE PROVIDED AT LOCATIONS SHOWN ABOVE IN ACCORDANCE WITH SEC. G-7.07. BARRICADES AND GATES SHALL BE AS DETAILED ON STANDARD CONSTRUCTION DRAWING NO. G-7.07. SIGN SUPPORTS AND LIGHTS FOR "ROAD CLOSED" SIGNS SHALL BE AS DETAILED IN THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". PAYMENT FOR PROVIDING, ERECTING, MAINTAINING, AND REMOVING BARRICADES, GATES, LIGHTS, SIGNS, AND SIGN SUPPORTS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "MAINTAINING TRAFFIC".

DESIGN SPEED

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

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U. S. G. S. DATUM.

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 AND ALL WORK REQUIRED FOR PUBLIC OR PRIVATE UTILITIES WILL BE DONE BY AND AT THE EXPENSE OF THEIR RESPECTIVE OWNERS, UNLESS OTHERWISE NOTED ON THESE PLANS.

UTILITY OWNERSHIP:

OHIO EDISON COMPANY W. WASHINGTON ROW, SANDUSKY	POWER
OHIO BELL TELEPHONE COMPANY	TELEPHONE
OHIO FUEL GAS COMPANY SANDUSKY, OHIO	GAS LINES
BALTIMORE & OHIO RAILROAD 600 TEMPLE BAR BUILDING CINCINNATI, OHIO	TELEGRAPH LINES
ERIE COUNTY COUNTY COURTHOUSE, SANDUSKY	WATER LINES
NATIONAL AERONAUTICS & SPACE ADMINISTRATION, LEWIS RESEARCH CENTER, PLUM BROOK TAYLOR ROAD & COLUMBUS AVENUE, SANDUSKY, OHIO	24" RAW WATER LINE STA. 841+10 $\frac{1}{2}$

FIELD OFFICE

THE CONTRACTOR SHALL, IN ACCORDANCE WITH SEC. S-0.01 (b), PROVIDE, FOR THE EXCLUSIVE USE OF THE STATE'S EMPLOYEES, A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 500 SQ. FT. OF FLOOR SPACE. THE CONTRACTOR SHALL HAVE A TELEPHONE INSTALLED AND MAINTAINED IN THIS FIELD OFFICE DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL ALSO PROVIDE AND INSTALL WIRING AND OUTLETS SUITABLE FOR CONNECTING ELECTRIC LIGHTS AND OFFICE EQUIPMENT IN THE FIELD OFFICE AND PROVIDE 110-VOLT ALTERNATING CURRENT TO THE OFFICE DURING THE ENTIRE PERIOD OF CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL ALSO PROVIDE SUITABLE SANITARY FACILITIES IN THE VICINITY OF THE FIELD OFFICE.

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE STATE OF OHIO MAKES NO GUARANTEES AS TO THEIR ACCURACY OR COMPLETENESS.

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.

CONSTRUCTION LAYOUT STAKES

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

SUPERELEVATION

SUPERELEVATED CURVES SHALL BE BUILT WITHOUT CROWN. THE CROWN SHALL BE WORKED OUT OF THE PAVEMENT IN THE PORTION BETWEEN THE BEGINNING OF THE TRANSITION AND THE POINT WHERE THE SUPERELEVATION EQUALS TWICE THE CROWN.

NON-RIGID PAVEMENT REMOVAL

REMOVAL AND DISPOSAL OF EXISTING NON-RIGID PAVEMENT, UNLESS OTHERWISE INDICATED ON THESE PLANS, SHALL BE MEASURED AND PAID FOR AS ITEM E-1, ROADWAY EXCAVATION.

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.

REMOVAL OF DRIVE & APPROACH PAVEMENT

IN THE CONSTRUCTION OF NEW DRIVES AND APPROACHES, THE REMOVAL OF EXISTING PAVEMENT, WHETHER CONCRETE OR FLEXIBLE TYPE, SHALL BE MEASURED AND PAID FOR AS ITEM E-1, ROADWAY EXCAVATION. WHERE NECESSARY TO MEET EXISTING DRIVE AND APPROACH PAVEMENT GRADE, THE EXISTING PAVEMENT SHALL BE CUT TO A NEAT LINE.

ITEM I-22 SUBBASE, GRADING A OR B, AS PER PLAN

THE MATERIAL FURNISHED FOR THIS ITEM SHALL MEET THE REQUIREMENTS OF GRADING A OR B OF SECTION I-22.02 EXCEPT THAT, FOR EITHER GRADING, NO MORE THAN 10 PER CENT OF THE MATERIAL SHALL PASS A NO. 200 SIEVE.

FILLING BASEMENTS OUTSIDE NORMAL WORK LIMITS

IN ADDITION TO THE GENERAL REMOVAL REQUIREMENTS OF SEC. E-1.03(c), ALL BASEMENTS OR PORTIONS THEREOF WITHIN THE RIGHT-OF-WAY ON THIS PROJECT BUT BEYOND THE NORMAL SLOPE LINES SHALL BE FILLED TO 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-1.03(c) AND ALL HOUSE DRAINS NOT REMOVED SHALL BE PLUGGED AS PROVIDED ELSEWHERE IN THESE NOTES.

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-1.03(c) FOR REMOVALS BELOW THE PROPOSED FINISHED SURFACE SHALL BE WAIVED FOR THE PORTIONS EXTENDING BEYOND THE RIGHT-OF-WAY LINE.

PAYMENT FOR ALL OF THE ABOVE, EXCEPT PLUGGING, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ROADWAY EXCAVATION, ITEM E-1.

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.

CURBS ON APPROACH SLABS

THE HEIGHT AND FACE OF CURBS ON APPROACH SLABS SHALL BE TRANSITIONED FROM THE STANDARD SECTION USED ON THE APPROACH PAVEMENT TO THE SECTION USED ON THE BRIDGE CURBING WITHIN THE LIMITS OF THE APPROACH SLAB.

CURB ENDS

CURB ENDS AND CURB DROPS SHALL BE TAPERED FROM 6" HIGH TO 1-1/2" HIGH IN A DISTANCE OF 10 FT. AT CURB ENDS AND 18" AT CURB DROPS.

GENERAL NOTES CONT.

ROUNDING OF CORNERS ON CROSS SECTIONS

THE ROUNDED CORNERS, SHOWN ON TYPICAL SECTIONS, APPLY TO ALL CROSS SECTIONS EVEN THOUGH OTHERWISE SHOWN IN THESE PLANS.

ITEM L-9 SEEDING & PROTECTING ROADWAY AREAS

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE UNSODDED SOIL AREAS BETWEEN LINES TEN (10) FEET OUTSIDE THE WORK LIMITS AS SHOWN ON THE PLANS AND CROSS SECTIONS OR TO THE RIGHT OF WAY, EASEMENT, OR WORK AGREEMENT LINE IF SUCH LINE IS LESS THAN TEN (10) FEET FROM THE WORK LIMITS. ALL AREAS OUTSIDE THESE LIMITS WHERE THE VEGETATIVE COVER HAS BEEN DISTURBED OR DESTROYED DURING THE CONSTRUCTION SHALL BE RESTORED AND SEEDED IN CONFORMANCE WITH THE PROVISIONS OF ITEM L-9 BY THE CONTRACTOR AT HIS OWN EXPENSE. THE FOLLOWING SEED MIXTURE SHALL BE APPLIED AT THE RATE OF 3 LBS. PER 1000 SQ. FT.

CREEPING RED FESCUE	70%
KENTUCKY BLUEGRASS	25%
ALSIKE CLOVER	5%

TO BE USED ON ALL AREAS INCLUDING AREAS IN FRONT OF RESIDENCES.

GRADING TOLERANCES

FOR AREAS BETWEEN CURB AND SIDEWALK AND FOR AREAS IN FRONT OF RESIDENCES AND SIMILAR AREAS SPECIFICALLY INDICATED BELOW, 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 PROVIDE 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. THE ABOVE NOTE SHALL BE CONSIDERED TO BE PARTICULARLY APPLICABLE IN THE AREAS TABULATED ON SHEET NO. 13.

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 ROWS NOT MORE THAN TWO (2) FEET APART. STAKES IN ADJACENT ROWS SHALL BE STAGGERED. THE STAKES SHALL BE WOOD FROM 1/2" x 3/4" x 12" TO 1" x 1" x 24", AS REQUIRED TO HOLD THE SOD, AND SHALL BE DRIVEN FLUSH WITH THE TOP OF THE SOD.

ITEM L-10 PREPARATION OF AREAS TO BE SODDED

THE SOD BED SHALL BE PREPARED IN SUCH A MANNER THAT A TWO (2) INCH LAYER OF LOOSE SOIL IS IN PLACE TO RECEIVE THE SOD. ADDITIONAL EXCAVATION SHALL BE MADE AND SOIL SHALL BE INCORPORATED, IF NECESSARY, TO BE INCLUDED IN THE UNIT PRICE BID FOR L-10 SODDING TO MEET THIS REQUIREMENT. COMMERCIAL FERTILIZER, 12-12-12, SHALL BE APPLIED AT A RATE OF 20 LBS. PER 1000 SQ. FT. OF AREA.

SCARIFICATION OF EXISTING FLEXIBLE PAVEMENT

WITHIN THE LIMITS OF CONSTRUCTION WHERE THE EXISTING FLEXIBLE PAVEMENT WILL HAVE LESS THAN SIX (6) INCHES 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 PLANES OF SEPARATION BETWEEN IT AND THE EMBANKMENT PLACED THEREON. PAYMENT FOR SCARIFICATION AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-1, ROADWAY EXCAVATION.

SUBGRADE COMPACTION

THE SUBGRADE FOR DRIVES PAVED WITH B-19 OR T-70 MATERIAL SHALL BE COMPACTED FOR A DEPTH OF SIX (6) INCHES TO THE DENSITY REQUIREMENTS SHOWN IN TABLE III, ITEM E-1. PAYMENT FOR SUBGRADE COMPACTION, AS SPECIFIED ABOVE, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-1, ROADWAY EXCAVATION.

CONTRACTION AND EXPANSION JOINTS

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

PART WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY OF BUILDING THIS PROJECT UNDER TRAFFIC AND CONSTRUCTING THE PAVEMENT PART AT A TIME, EXTREME CARE SHALL BE TAKEN TO PREVENT THE CONSTRUCTION OF A BUTT JOINT ON CENTERLINE IN THE B-19 AND I-22 COURSES. THIS SHALL BE ACCOMPLISHED BY BUILDING THE B-19 AND I-22 COURSES, PLACED WITH THE FIRST PORTION OF THE PAVEMENT BUILT, AT LEAST EIGHTEEN (18) INCHES BEYOND THE CENTERLINE AND BY SURFACING NO CLOSER THAN EIGHTEEN (18) INCHES TO THIS EDGE OF THE ABOVE COURSES. WHEN THE SECOND PORTION OF THE PAVEMENT IS BUILT, AT LEAST TWELVE (12) INCHES OF THESE PROJECTING COURSES SHALL BE BROKEN DOWN AND THOROUGHLY KEYED IN WITH THE NEWLY PLACED CORRESPONDING COURSES IN THE SECOND PORTION OF THE PAVEMENT BUILT. PAYMENT FOR THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE PERTINENT PAVEMENT ITEMS.

JOINT LEGEND

TYPES OF PAVEMENT JOINTS TO BE USED ARE SPECIFIED BY THE FOLLOWING LEGEND:

- LJ = STANDARD LONGITUDINAL JOINT
- KJ = STANDARD KEY JOINT WITHOUT TIE BARS
- CJ = STANDARD CONTRACTION JOINT
- EJ = EXPANSION JOINT WITHOUT DOWELS. (LOCATED ON RADIAL LINES; LENGTH OF JOINT = 2 FT.)
- E = STANDARD EXPANSION JOINT

FENCE LEGEND

THE ABBREVIATIONS SHOWN FOR FENCE ON THE RIGHT OF WAY DRAWINGS ARE TO DESIGNATE THE FOLLOWING DETAILS OF CONSTRUCTION:

- IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
- CPA = CORNER POST ASSEMBLY
- EPA = END POST ASSEMBLY

REMOVAL OF TREES AND STUMPS

ALL TREES AND STUMPS LYING WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM E-9. REMOVAL OF TREES AND STUMPS, EXCEPT THAT THOSE TREES AND STUMPS FOR WHICH PROTECTION AND PRESERVATION WORK IS INDICATED ELSEWHERE IN THESE PLANS SHALL NOT BE REMOVED.

AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED IS SHOWN ON SHEET NO. 12. THIS ESTIMATE IS APPROXIMATE AND THE STATE OF OHIO RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS OUTSIDE OF THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT-OF-WAY AND/OR EASEMENT LINES. PAYMENT FOR THE REMOVAL OF THESE ADDITIONAL TREES OR STUMPS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM E-9, REMOVAL OF TREES AND STUMPS.

RIPRAP, USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN

IN ADDITION TO MEETING THE GENERAL REQUIREMENTS OF SECTION I-10.03 AND I-10.05, THE RIPRAP FURNISHED FOR THIS ITEM SHALL BE A 6-INCH REINFORCED CONCRETE SLAB, REINFORCED WITH BARS OR FABRICATED REINFORCEMENT EQUIVALENT TO 3/8-INCH ROUND BARS SPACED AT TWO-FOOT CENTERS, TWO DIRECTIONS, AND PLACED APPROXIMATELY MIDWAY BETWEEN THE TOP AND BOTTOM OF THE SLAB. FORMED CONSTRUCTION JOINTS MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER. REINFORCEMENT SHALL EXTEND THROUGH ALL CONSTRUCTION JOINTS. THE REQUIREMENTS OF SEC. I-10.05 FOR DEPRESSED GROOVES AND THICKENED BOTTOM EDGES IN THIS ITEM SHALL BE WAIVED. IN LIEU THEREOF, CUT-OFF WALLS AS DETAILED ON THE PLANS SHALL BE PROVIDED AND PAYMENT THEREFORE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS 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 CLASS "E" CONCRETE 6" MINIMUM THICKNESS COLLAR, 12" IN LENGTH. THE COST OF THE JOINT AND COLLAR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR THE PERTINENT PIPE ITEM.

SEALING OF PIPE JOINTS

WHERE CONNECTIONS ARE MADE BETWEEN RIGID AND FLEXIBLE PIPE SECTIONS OR BETWEEN PIPE SECTIONS OF DIFFERENT KIND OR TYPE OF END FABRICATION, WHETHER REQUIRED BY THE PLANS, ARISING FROM PERMISSIBLE USE OF OPTIONAL MATERIALS, OR ENCOUNTERED IN CONNECTION TO EXISTING FACILITIES, THE JOINT SHALL BE SEALED, IF SEALING IS REQUIRED BY THE SPECIFICATIONS, BY MEANS OF A CLASS "E" CONCRETE COLLAR HAVING A MINIMUM THICKNESS OF 6 INCHES AND A MINIMUM LENGTH OF 12 INCHES. PAYMENT FOR SEALING AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT PIPE ITEM.

PLUGGING PIPE

THE UPSTREAM ENDS OF ALL PIPE OR TILE LINES INTERCEPTED BY EARTHWORK OPERATIONS AND, WHERE INDICATED, THE ENDS OF PIPE LINES TO BE ABANDONED IN PLACE 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, OR A PRECAST CLAY OR CONCRETE STOPPER. PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-1, ROADWAY EXCAVATION.

REMOVAL OF EXISTING PIPE

THE REMOVAL OF ALL EXISTING PIPE DRAINS WITHIN THE LIMITS OF PROPOSED EXCAVATION ITEMS SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICES BID FOR THE RESPECTIVE EXCAVATION ITEMS, UNLESS OTHERWISE ITEMIZED IN THE PLANS.

CONNECTIONS TO EXISTING PIPE

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

GENERAL NOTES CONT.

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

11
161

ERI - 6 - 7.31

REMOVAL OF EXISTING HOUSE DRAINS

THE REMOVAL OF ALL EXISTING HOUSE CONNECTIONS, WHICH INCLUDES SANITARY, YARD, ROOF, BASEMENT OR OTHER SIMILAR PIPE DRAINS WITHIN THE ROADWAY CONSTRUCTION LIMITS SHALL BE CLASSIFIED AND PAID FOR AS E-1 ROADWAY EXCAVATION, UNLESS OTHERWISE ITEMIZED FOR PAYMENT IN THE PLANS.

EXISTING HOUSE DRAIN CONNECTIONS

ALL EXISTING HOUSE DRAINS, WHICH INCLUDE YARD, ROOF, OR OTHER SIMILAR HOUSE DRAINS NOW IN USE WHICH ARE DISTURBED BECAUSE OF THE HIGHWAY IMPROVEMENT, SHALL BE REPLACED BY THE CONTRACTOR AT THE UNIT PRICE BID FOR EACH PIPE ITEM FURNISHED AND PLACED. IF THE EXISTING SEWER IS TO BE ABANDONED, THEN A SATISFACTORY HOUSE CONNECTION SHALL BE PROVIDED TO THE NEW SEWER. WHERE AN EXISTING HOUSE IS TO BE REMOVED, THE UPGRADE END OF THE EXISTING HOUSE CONNECTION SHALL BE PLUGGED WITH A PRECAST VITRIFIED OR CONCRETE STOPPER, AND ACCURATELY REFERENCED IF THE EXISTING HOUSE CONNECTION REMAINS SATISFACTORY FOR FUTURE USE.

PAYMENT FOR PLUGGING SPECIFIED SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ROADWAY EXCAVATION, ITEM E-1. THE FOLLOWING ESTIMATED QUANTITIES OF PIPE, FOR REPLACEMENTS DESCRIBED ABOVE, HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

- ITEM I-2 4" CLASS "B" STORM SEWERS - 200 LIN. FT.
- 6" CLASS "B" STORM SEWERS - 200 LIN. FT.

SANITARY

NO DRAINS, EITHER EXISTING OR PROPOSED, CARRYING DOMESTIC WASTE SHALL BE CONNECTED TO ANY PORTION OF THE PROPOSED DRAINAGE SYSTEM ON THIS PROJECT.

NO. 4 CATCH BASINS

THE ELEVATION SHOWN FOR THE TOP ON NO. 4 CATCH BASINS IS THE LOW POINT ON THE TOP OF THE GRATE.

SODDING AT HEADWALLS

AN 18" WIDE STRIP OF SOD SHALL BE PLACED ALONG THE BACK AND BOTH ENDS OF ALL HEADWALLS.

EROSION CONTROL

ITEMS I-10, I-14, AND L-10 ARE PROVIDED IN THESE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

FIELD DRAINS

ALL FARM TILES WHICH ARE ENCOUNTERED DURING CONSTRUCTION SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS UNDER THE DIRECTION OF THE ENGINEER.

EXISTING COLLECTORS AND ISOLATED FARM TILES WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF THE ROADWAY DITCHES SHALL BE OUTLETTED INTO THE ROADWAY DITCH. THE OPTIMUM OUTLET ELEVATION SHALL BE, IF POSSIBLE, ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH.

THE LOCATION, TYPE, SIZE, AND GRADE OF REQUIRED REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS. ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE DRAINAGE SUMMARY FOR THE WORK NOTED ABOVE.

CHANGES IN TYPICAL SECTIONS

SUBSEQUENT TO COMPLETION OF DETAILED PLANS FOR THIS PROJECT, THE WIDTH OF THE PAVED SHOULDER ON THE MEDIAN SIDE OF THE PROPOSED PAVEMENT WAS REDUCED FROM 5 TO 4 FEET. THE CROSS SECTIONS, AS DRAWN, DO NOT REFLECT THIS DECREASE IN WIDTH OF THE PROPOSED PAVEMENT TRENCH.

CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TYPICAL SECTIONS AND NECESSARY ADJUSTMENTS IN EARTHWORK QUANTITIES WILL BE MADE AT THE TIME OF FINAL MEASUREMENT.

WATER LINES

FOR NOTES REGARDING CONSTRUCTION OF WATER LINES, SEE SHEET 39.

① SUMMARY OF DRAINAGE QUANTITIES

FED. RD. DIVISION 2 STATE OHIO PROJECT TYPE FUNDS

ERI-6-7.31

Main drainage quantities table with columns for pipe types (E-2, E-3, S-1, S-27, I-1, I-2, I-4, I-5, I-8, I-10, I-16, L-10, S-4, E-12, I-4, I-3, I-3), pipe sizes, and various pipe materials like M-G.G(a), M-G.G(b), etc.

② FENCE table with columns for Sheet No., S5-18, Type 'D' Fence, Lin. Ft.

③ EARTHWORK & SEEDING table with columns for Sheet No., Excavation, Embankment, Embankment +15%, Seeding

† Estimated Quantities to be used as directed by the Engineer. See General Notes.

TREE REMOVAL SUMMARY table with columns for Sizes (12'-18", 18'-24", etc.), No. of trees, No. of stumps

ERI. 6-7.31

④ PAVED SHOULDERS

Location	Station	Side	Width	B-219	T-31	I-18	I-22				
				3" Waterproofed Appr. Base Course	Bl. Surface Treatment	Stabilized Crushed Aggregate Shoulders	Subbase				
	From To			Sq.Yd.	Sq.Yd.	Sq.Yd.	Sq.Yd.				
U.S.G.	638+00	712+83(AV)	Med.	2@4'	665.5	665.5	981.5	1174.5			
	713+57(AV)	722+00			749.4	749.4	110.6	132.3			
	722+00	734+56(AV)			1116.5	1116.5	164.7	197.1			
	735+87(AV)	748+00			1078.2	1078.2	159.2	185.6			
	748+00	804+46(AV)			5018.6	5018.6	740.6	891.0			
	806+44(AV)	844+00	Med.	2@4'	3338.6	3338.6	492.7	872.8			
	638+00	641+19B	Left	8'	304.0	304.0	43.5	46.4			
	641+19B	645+47		10'-20'	600.6	600.6	83.4	76.1			
	645+47	665+98.8E		10'	2279.8	2279.8	324.6	381.5			
	666+98.8E	674+83		8'	697.0	697.0	95.8	106.3			
	674+83	712+95		10'	4233.3	4233.3	602.7	708.4			
	713+72	722+00		10'	920.0	920.0	131.0	153.9			
	722+00	734+54		10'	1393.3	1393.3	198.4	233.2			
	735+87	748+00		10'	1347.8	1347.8	191.9	225.5			
	748+00	804+10		10'	6233.3	6233.3	887.5	1043.0			
	806+10	833+21		10'	3012.2	3012.2	428.9	674.8			
	833+21	844+00	Left	8'	959.1	959.1	137.4	283.8			
	638+00	645+18.35	Right	8'	638.5	638.5	91.5	97.4			
	646+18.35	666+37		10'	2242.9	2242.9	319.3	375.3			
	666+37	669+98.59		20'-10'	584.9	584.9	81.2	72.1			
	669+98.59	681+02		8'	980.8	980.8	140.5	149.6			
	681+02	712+69		10'	3518.9	3518.9	501.0	588.8			
	713+45	722+00		10'	950.0	950.0	135.3	159.0			
	722+00	734+57		10'	1396.7	1396.7	198.8	233.7			
	735+91	748+00		10'	1343.3	1343.3	191.3	224.8			
	748+00	804+78		10'	6308.9	6308.9	898.2	1055.7			
	806+77	844+00	Right	10'	4136.7	4136.7	588.9	1033.8			
S.R.4 Interchange	40+00	44+35	Left	4'			32.2	25.9			
S.R.4	44+35	44+81.64		8'	41.5	41.5	5.9	6.3			
	45+38.24	48+36		8'	264.7	264.7	37.9	40.4			
	51+72	54+55.27		8'	251.8	251.8	36.1	38.4			
	55+25.36	55+65		8'	35.2	35.2	5.1	5.4			
	55+65	61+50	Left	4'			43.3	34.9			
	40+00	44+35	Right	4'			32.2	25.9			
	44+35	44+74.64		8'	35.2	35.2	5.1	5.4			
	45+44.73	48+29		8'	252.7	252.7	36.2	38.5			
	51+66	54+61.76		8'	262.9	262.9	37.7	40.1			
	55+18.36	55+65		8'	41.5	41.5	5.9	6.3			
	55+65	61+50	Right	4'			43.3	34.9			
Ramp A	0+00	3+00	Left	8'	266.7	266.7	38.2	53.5			
	3+00	5+50	Left	8'-3'	152.8	152.8	22.2	31.1			
	5+50	14+07.26	Left	3'	285.8	285.8	43.0	60.2			
	5+00	5+50	Right	2'-3'	13.9	13.9	1.9	2.7			
	5+50	13+96.97	Right	3'	282.3	282.3	42.5	59.5			
Ramp B	0+56.21	10+62.96	Left	3'	335.6	335.6	50.5	70.7			
	10+62.96	12+12.96	Left	3'-8'	91.7	91.7	13.3	18.6			
	0+59.22	12+12.96	Right	3'	384.6	384.6	57.5	80.5			
Ramp C	0+73.50	9+01	Left	3'	275.8	275.8	41.5	58.1			
	9+01	9+51	Left	3'-2'	13.9	13.9	1.9	2.7			
	0+63.21	9+01	Right	3'	279.3	279.3	42.0	58.8			
	9+01	11+51.38	Right	3'-8'	153.0	153.0	22.2	31.1			
	11+51.38	14+51.38	Right	8'	266.7	266.7	38.2	53.5			
Ramp D	0+00	11+53.92	Left	3'	384.6	384.6	57.5	80.5			
	0+00	1+50	Right	8'-3'	91.7	91.7	13.3	18.6			
	1+50	11+56.93	Right	3'	335.6	335.6	50.5	70.7			
					*Totals FG-1042(G)			7675.8	7675.8	1,104.3	1,299.9
					Totals F-1042(G)			59,158.5	59,158.5	8,677.8	11,129.7

⑤ SUMMARY OF ROADWAY QUANTITIES

Carried from Sheet No.	E-1	B-19	B-35	B-35	B-219	T-30	T-31	T-35	T-35	T-71	I-7	I-12	I-12	I-12	I-12	I-15	I-15	I-18	I-21	I-22	I-23	Spec.	
	Sq.Yd.	Cu.Yd.	Cu.Yd.	Cu.Yd.	3" Waterproofed Appr. Base Course	Gal.	Sq.Yd.	Cu.Yd.	Cu.Yd.	Sq.Yd.	Sq.Yd.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Stabilized Crushed Aggregate Shoulders	4" P.C. Conc. Median Pavement	Subbase	Precast P.C. Conc. Traffic Dividers	Mixing C.C. and Crushed Aggregate	Carried from Sheet No.
16	2158.2									2158.2										359.7			16
17	216.7									216.7		104				37.5			29.0	35.8			17
18																325.0							18
19	2750.3									2750.3		104							29.0	448.4			19
20	565.9									565.9										94.3			20
23	266.8									266.8											44.4		23
24																980.0	1500						24
25																1887.0	1500						25
26	266.8									266.8						1896.0	150.0			44.4			26
27																417.0							27
32																1249.0	1500						32
33	266.8									266.8						1564.0	1500			44.4			33
34																199.5							34
35	35.4									35.4										5.9			35
36	1562.2									1562.2										260.4			36
41	4850.4	1006.3	343.5	143.2	172.0	1648.6	172.0	165.3	14.1	383.6	294.4	1248				1637.5		25.0	136.8	1245.1	74	907	41
42																500.0				9.3			42
43																512.5				0.9			43
44																325.0				9.0			44
45																375.0				0.9			45
52	186.4		57.6					21.4	1.9		186.4					1000.0				31.0			52
Totals	2889.1	1063.9	343.5	143.2	172.0	1648.6	172.0	186.7	16.0	7672.3	1014.4	1456	191	767	333	9200.0	600.0	25.0	194.8	2589.5	74	907	T-1043(G) Totals
Totals	266.8										266.8					4200.0	300.0			44.4			T-1042(G) Totals
Grand Totals	13,125.9	1063.9	343.5	143.2	172.0	1648.6	172.0	186.7	16.0	7672.3	1281.2	1456	191	767	333	13400.0	900.0	25.0	194.8	2633.9	74	907	Grand Totals

SEEDING AREAS REQUIRING SPECIAL GRADING**

Location	Station		Side
	From	To	
S.R.4	40+45	42+45	Rt.
S.R.4	42+10	44+30	Lt.
S.R.4	60+00	62+00	Lt.
Campbell St.	53+30	54+10	Lt. 5th Access Dr.
Campbell St.	60+60	61+04	Rt.

** See "Grading Tolerances" note in General Notes

FRI. G-7.31

LINE	CALCULATIONS	100% State	F-1042(G)	FG-1042(G)	Total Quantity	Unit
1	T-71 9" REINFORCED P.C. CONCRETE PAVEMENT					
2	U.S.G					
3	From Sheet 3: $(20,049.66 + 20,047.34) \times 24 \div 9 = 106,925.3 \text{ Sq. Yds.}$		94,086.9	12,838.4		
4						
5	S.R. 4					
6	From Sheet 4: $794.46 \times 25.5 \times 2 = 40,517.5 \text{ Sq. Ft.}$					
7	Add for median openings: $180 \times 2 = 360.0$					
8	$40,877.5 \div 9 = 4,541.9$		4,541.9			
9						
10	S.R. 4 Interchange					
11	From Sheet 4: $(1498.44 + 2183.69) \times 16 = 58,914.1 \text{ Sq. Ft.}$					
12						
13	Ramp A					
14	$300 \times 15 = 4500$					
15	$200 \times 17 = 3400$					
16	Ramp B					
17	$50 \times 16 = 800$					
18	$54 \times 16 = 864$					
19	Ramp C					
20	$96 \times 17 = 1632$					
21	$50 \times 16 = 800$					
22	$200.38 \times 17 = 3406.5$					
23	$300 \times 15 = 4500$					
24	Ramp D					
25	$97 \times 17 = 1649$					
26	$53 \times 16 = 848$					
27	$81,313.6 \div 9 = 9,034.8$		9,034.8			
28	Sub-total = $120,502.0 \text{ Sq. Yds.}$					
29	Add from Summary of Roadway Quantities		7,672.3			
30	Total = $128,174.3 \text{ Sq. Yds.}$		115,275.9	12,898.4	128,174	Sq. Yd.
31						
32	T-35 ASPHALTIC CONCRETE SURFACE COURSE - TYPE C					
33	Campbell Street					
34	From Sheet 4: $(345.84 + 890.56) \times 24 = 29,673.6 \text{ Sq. Ft.}$					
35	$80 \times (18 + 24) \div 2 = 1,680$					
36	$75 \times (18 + 24) \div 2 = 1,575$					
37	$32,928.6 \div 9 = 3,658.7 \text{ Sq. Yds.}$					
38	$3,658.7 \text{ Sq. Yds.} \times 1/4 \div 36 = 127.0 \text{ Cu. Yds.}$		127.0			
39						
40	Add from Summary of Roadway Quantities		16.0	186.7		
41						
42	Total = 329.7 Cu. Yds.		16.0	313.7	330	Cu. Yd.
43						
44						
45	T-31 BITUMINOUS SURFACE TREATMENT					
46						
47	From Paved Shoulder Calculations: $66,834.3 \text{ Sq. Yds.}$					
48	From Summary of Roadway Quantities: 172.0					
49	T-31 Sub-total = $67,006.3 \text{ Sq. Yds.}$					
50						
51	T-31 BITUMINOUS MATERIAL: Total = $67,006.3 \times 0.25 = 16,751.6 \text{ Gals.}$		14,832.6	1,919.0	16,752	Gal.
52	T-31 AGGREGATE: Total = $67,006.3 \times 0.008 = 536.1 \text{ Cu. Yds.}$		474.7	61.4	536	Cu. Yd.
53						
54						
55						
56	B-219 3" WATERPROOFED AGGREGATE BASE COURSE					
57						
58	From Paved Shoulder Calculations: $66,834.3 \text{ Sq. Yds.}$					
59	From Summary of Roadway Quantities: 172.0					
60	Total = $67,006.3 \text{ Sq. Yds.} \times 3 \div 36 = 5,583.9 \text{ Cu. Yds.}$		4,944.2	639.7	5,584	Cu. Yd.
61						
62						
63						
64						
65	B-35 ASPHALTIC CONCRETE BASE COURSE					
66						
67	From Summary of Roadway Quantities		343.5		344	Cu. Yd.
68						
69						
70						
71	B-35 ASPHALTIC CONCRETE LEVELING COURSE					
72	Campbell Street					
73	From Line 37: $3,658.7 \times 1/4 \div 36 = 177.9 \text{ Cu. Yds.}$					
74	Add from Summary of Roadway Quantities				143.2	
75						
76	Total = 321.1 Cu. Yds.		321.1		321	Cu. Yd.

LINE	CALCULATIONS	100% State	F-1042(G)	FG-1042(G)	Total Quantity	Unit
77	B-19 AGGREGATE BASE COURSE					
78	Campbell Street					
79	From Sheet 4: $(345.84 + 890.56) \times 25 \times 6 \div 12 \times 27 = 572.4 \text{ Cu. Yds.}$					
80	$80 \times (19 + 25) \times 1/2 \times 6 \div 12 \times 27 = 32.6$					
81	$75 \times (18 + 25) \times 1/2 \times 6 \div 12 \times 27 = 30.6$					
82						
83	Add from Summary of Roadway Quantities: 1063.9					
84	Total = $1,699.5 \text{ Cu. Yds.}$		1,699.5		1,700	Cu. Yd.
85						
86						
87						
88	T-30 BITUMINOUS PRIME COAT					
89	From Line 37: $3,658.7 \times 0.4 = 1,463.5 \text{ Gals.}$					
90						
91	Add from Summary of Roadway Quantities				1,648.6	
92						
93	Total = $3,112.1 \text{ Gals.}$		3,112.1		3,112	Gal.
94						
95						
96	I-22 SUBBASE					
97	From Line 26: $120,502.0 \times 6 \div 36 = 20,083.6 \text{ Cu. Yds.}$		17,233.9	2,849.7		
98	Add for Sub-base under median on S.R. 4: $(794.46 - 180) \times 2 \times 1/2 \div 27 = 68.3$		68.3			
99	Campbell Street - From Sheet 4: $890.56 \times 27.67 \times 4 \div 12 \times 27 = 304.2$		304.2			
100	$345.84 \times 29.39 \times 4 \div 12 \times 27 = 125.2$		125.2			
101	$(80 + 75) \times 26.33 \times 4 \div 12 \times 27 = 50.4$		50.4			
102	Add for 18" depth I-22: $(821+00 \text{ to } 824+00), (829+50 \text{ to } 832+50)$					
103	$\frac{1}{2} (836+00 \text{ to } 842+00) = (300 + 300 + 600) \times 24 \times 2 \times (18 - 6) \div 12 \times 27 = 2,133.3$		2,133.3			
104	Add from Paved Shoulder Calculations		12,429.6	11,129.7	1,299.9	
105	Add from Summary of Roadway Quantities		2,633.9	2,589.5	44.4	
106						
107	Total = $37,828.5 \text{ Cu. Yds.}$		34,334.5	3,494.0	37,829	Cu. Yd.
108						
109						
110	I-18 STABILIZED CRUSHED AGGREGATE SHOULDERS					
111						
112	From Summary of Roadway Quantities		25.0	25.0		
113	From Paved Shoulder Calculations		9,781.5	8,677.2	1,104.3	
114						
115	Total = $9,806.5 \text{ Cu. Yds.}$		8,702.2	1,104.3	9,807	Cu. Yd.
116						
117						
118	E-1 COMPACTED SUBGRADE					
119						
120						
121	From Line 26: $120,502.0 \text{ Sq. Yds.}$		107,603.6	12,898.4		
122	From Line 37: $3,658.7$		3,658.7			
123	Add for area under median on S.R. 4: $(794.46 - 180) \times 2 \div 9 = 136.5$		136.5	136.5		
124	From Line 58: $66,834.3$		59,158.5	7,675.8		
125	Add from Summary of Roadway Quantities		13,125.9	12,859.1	266.8	
126						
127	Total = $204,257.4 \text{ Sq. Yds.}$		183,416.4	20,841.0	204,257	Sq. Yd.
128						
129						
130						
131	L-9 COMMERCIAL FERTILIZER					
132						
133	From Earthwork and Seeding Summary		46.5	6.1		
134	From Sodding (L-10) Summary		0.6			
135						
136	Total = $59,689.9 \times 20 \div 1000 \times 2000 = 532 \text{ Tons}$		47.1	6.1	53	Ton
137						
138						
139						
140	E-11 WATER					
141	From E-1 (Embankment) Summary		772,427.0			
142	From I-18, Line 115		43.5	5.5		
143	From B-19, Line 84		8.5			
144	From I-22, Line 107		171.7	17.5		
145	Total = $821,761.5 \times 5 \div 1000 = 4,108.8 \text{ M. Gal.}$		2,423.3	1,685.5	4,109	M. Gal.
146						
147						
148						
149						
150						
151						
152						

GENERAL SUMMARY

FED. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

15 161

TYPE CODE 7221

ITEM	TOTAL QUANTITY	UNIT	DESCRIPTION	100% STATE	F-1042(G)	FG-1042(G)	CARRIED FROM
ROADWAY							
E-1	292,105	Cu.Yds	Roadway Excavation, Method B, as per plan		284,706	7,399	Table 3
E-1	204,257	Sq.Yds	Compacted Subgrade		183,416	20,841	Sheet 14
E-4	596,187	Cu.Yds	Borrow		221,206	374,981	Table 3
E-9	Lump	Lump	Removal of Trees and Stumps		Lump	Lump	Sheet 12
E-11	4,109	M.Gal.	Water		2,423	1,686	Sheet 14
I-8	25	Each	Centerline Reference Monuments, as per plan		21	4	Sheet 147
I-8	6	Each	Standard Monument Assemblies		6	-	Sheet 147
I-15	13,400	Lin.Ft.	Guard Rail, Steel Beam Standard Type (Deep)		9,200	4,200	Table 5
I-15	900	Lin.Ft.	Guard Rail, Steel Beam Barrier Type (Deep)		600 (F) 300 (FG)		Table 5
L-9	584,507	Sq.Yds	Seeding and Protecting, as per plan		516,518	67,989	Table 3
L-9	53	Tons	Commercial Fertilizer (12-12-12)		47	6	Sheet 14
L-10	7,182	Sq.Yds	Sodding, as per plan		7,166	16	Table 1
L-10	1,151	Sq.Yds	Sodding for Special Berm and Slope Protection, as per plan		776	375	Sheet 8
SS-18	42,180	Lin.Ft.	Fence, Type "D"		34,810 (F) 2,170 (FG)	5,200	Table 2
S-15	Lump	Lump	Temporary Run-Around Road, using Class "A" Pavement, as per plan		Lump		Sheet 38
S-15	Lump	Lump	Temporary Run-Around Road, using Class "B" Pavement, as per plan		Lump		Sheet 48
T-10	550	Cu.Yds	Traffic Compacted Surface Course for Temporary Traffic Lanes		550		Shts. 28-38
M-10	11.9	Tons	Calcium Chloride Furnished and Applied		11.9		Shts. 28-41
T-35	50	Cu.Yds	Asphaltic Concrete Surface Course, <small>or an approved Bituminous Premixed Surface Course, for Distressed Traffic</small>		50		
Spec.	907	Sq.Yds	Mixing Calcium Chloride and Crushed Aggregate		907		Table 5
DRAINAGE							
E-2	2,207	Cu.Yds	Excavation for Structures		2,078	129	Table 1
E-3	3,587	Cu.Yds	Channel Excavation		3,587		Table 1
E-12	360	Lin.Ft.	Pipe Removed, 15" and under			360	Table 1
I-1	212	Lin.Ft.	12" Pipe for Driveways, Sec. M-G.4 (a)		212		Table 1
I-2	200	Lin.Ft.	4" Class "B" Storm Sewer		200		Sheet 11
I-2	200	Lin.Ft.	6" Class "B" Storm Sewer		200		Sheet 11
I-2	144	Lin.Ft.	15" Storm Sewer, Sec. M-G.5(a) or Sec. M-G.8(a)		144		Table 1
I-2	148	Lin.Ft.	18" Storm Sewer, Sec. M-G.5(a) or Sec. M-G.8(a)		148		Table 1
I-2	200	Lin.Ft.	24" Storm Sewer, Sec. M-G.5(a) or Sec. M-G.8(a)		200		Table 1
I-2	2,616	Lin.Ft.	8" Storm Sewer under Pavement or Approaches, Sec. M-G.5(b) or Sec. M-G.8(b)		2,367	249	Table 1
I-2	366	Lin.Ft.	12" Storm Sewer under Pavement or Approaches, Sec. M-G.5(b) or Sec. M-G.8(b)		366		Table 1
I-2	1,932	Lin.Ft.	15" Storm Sewer under Pavement or Approaches, Sec. M-G.5(b) or Sec. M-G.8(b)		1,719	213	Table 1
I-2	100	Lin.Ft.	30" Storm Sewer, Sec. M-G.6(a) or Sec. M-G.8(a)		100		Table 1
I-2	104	Lin.Ft.	42" Storm Sewer, Sec. M-G.6(a)		104		Table 1
I-3	60	Lin.Ft.	4" Roadway Drainage		60		Table 1
I-3	100	Lin.Ft.	6" Roadway Drainage		100		Table 1
I-3	20	Lin.Ft.	8" Roadway Drainage		20		Table 1
I-4	90,014	Lin.Ft.	6" Underdrains		80,194	9,820	Table 1
I-4	1,000	Lin.Ft.	6" Underdrains, Sec. M-G.4(h)		1,000		Table 1
I-4	470	Lin.Ft.	6" Pipe Outlet for Underdrains, Sec. M-G.4(h)(C) without perforations		80	390	Table 1
I-4	478	Lin.Ft.	8" Pipe Outlet for Underdrains, Sec. M-G.4(c)		438	40	Table 1
I-4	30	Lin.Ft.	12" Pipe Outlet for Underdrains, Sec. M-G.4(c)		30		Table 1
I-4	10	Lin.Ft.	15" Pipe Outlet for Underdrains, Sec. M-G.4(c)		10		Table 1
I-4	30	Lin.Ft.	18" Pipe Outlet for Underdrains, Sec. M-G.4(c)			30	Table 1
I-5	15	Each	6" Pipe Specials for Underdrains		15		Table 1
I-5	99	Each	8" Pipe Specials for Storm Sewers, Sec. M-G.5(a) or Sec. M-G.8(a)		91	8	Table 1

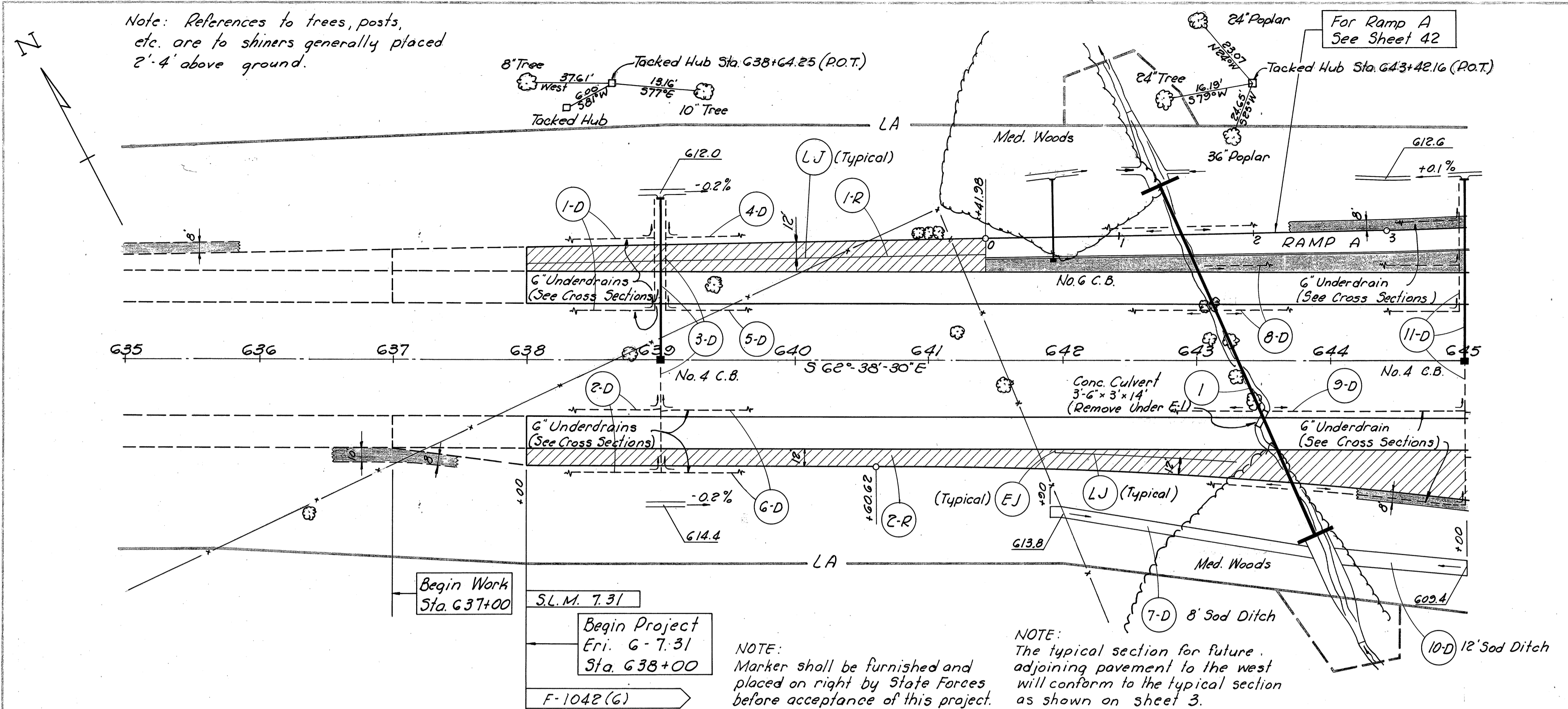
TYPE CODE 7221

ERI-6-7.31

ITEM	TOTAL QUANTITY	UNIT	DESCRIPTION	100% STATE	F-1042(G)	FG-1042(G)	CARRIED FROM
I-8	2	Each	Standard No. 2-E-A Catch Basins		2		Table 1
I-8	19	Each	Standard No. 4 Catch Basins		17	2	Table 1
I-8	1	Each	Standard No. 6 Catch Basins		1		Table 1
I-10	263	Cu.Yds	Dumped Rock Channel Protection			263	Table 1
I-16	9	Each	Catch Basins Abandoned			9	Table 1
S-1	461.2	Cu.Yds	Concrete for Structures, Class "C"		434.4	26.8	Table 1
S-4	19,070	Lbs.	Reinforcing Steel		17,906	1,164	Table 1
S-27	140	Lin.Ft.	24" Pipe for Roadway Culverts, Sec. M-G.6(b) or Sec. M-G.8(b)		140		Table 1
S-27	76	Lin.Ft.	24" Pipe for Roadway Culverts, Sec. M-G.6(d) under Railroad			76	Table 1
S-27	140	Lin.Ft.	30" Pipe for Roadway Culverts, Sec. M-G.6(c)			140	Table 1
S-27	124	Lin.Ft.	60" Pipe for Roadway Culverts, Sec. M-G.6(b)		124		Table 1
S-27	250	Lin.Ft.	72" Pipe for Roadway Culverts, Sec. M-G.6(b)		250		Table 1
S-27	256	Lin.Ft.	96" Pipe for Roadway Culverts, Sec. M-G.6(b)		256		Table 1
S-27	192	Lin.Ft.	91" x 58" Pipe for Roadway Culverts, Sec. M-206.6(b)		192		Table 1
S-27	432	Lin.Ft.	106" x 68" Pipe for Roadway Culverts, Sec. M-206.6(b)		432		Table 1
PAVEMENT							
B-19	1,700	Cu.Yds	Aggregate Base Course			1,700	Sheet 14
B-35	321	Cu.Yds	Asphaltic Concrete Leveling Course (70-85)			321	Sheet 14
B-35	344	Cu.Yds	Asphaltic Concrete Base Course (70-85)			344	Sheet 14
B-219	5,584	Cu.Yds	Waterproofed Aggregate Base Course		4,944	640	Sheet 14
I-7	1,291	Sq.Yds	Reinforced Concrete Approach Slabs (T-13')		1,014	277	Table 5
I-12	1,456	Lin.Ft.	Standard Type 2-A Curb, Concrete		1,456		Table 5
I-12	191	Lin.Ft.	Standard Type 6 Curb, Concrete		191		Table 5
I-12	767	Lin.Ft.	Special Concrete Curb "Full Width"; as per plan		767		Table 5
I-12	333	Lin.Ft.	Special Concrete Curb "Part Width"; as per plan		333		Table 5
I-18	9,807	Cu.Yds	Stabilized Crushed Aggregate Shoulders and Approaches		8,702	1,105	Sheet 14
I-21	195	Sq.Yds	4" Portland Cement Concrete Median Pavement, Type I		195		Table 5
I-22	37,829	Cu.Yds	Subbase, Grading A or B, as per plan		34,335	3,494	Sheet 14
I-23	74	Each	Precast White Portland Cement Concrete Traffic Dividers			74	Table 5
T-30	3,112	Gals.	Bituminous Prime Coat, Sec. M-5.7, R.T.-2 or R.T.-3		3,112		Sheet 14
T-31	536	Cu.Yds	Bituminous Surface Treatment, No. 6 Aggregate		475	61	Sheet 14
T-31	16,752	Gals.	Bituminous Surface Treatment, Bituminous Material, as per plan		14,833	1,919	Sheet 14
T-35	330	Cu.Yds	Asphaltic Concrete Surface Course, Type C (70-85)		16 (F)	314	Sheet 14
T-71	128,174	Sq.Yds	9" Reinforced Portland Cement Concrete Pavement		115,276	12,898	Sheet 14
STRUCTURES OVER 20' SPAN							
ERI-G-0765 See Sheet No. 110							
ERI-G-0873 LR See Sheet No. 118							
ERI-G-0886 See Sheet No. 125							
ERI-G-0915 LR See Sheet No. 133							
ERI-G-1048 LR See Sheet No. 139							
FOR WATER LINES, See Sheet No. 50							
BUILDING REMOVALS							
S-24	Lump Sum	Lump	Removal of one 1 1/2 story frame residence with attached garage; one frame 2 car garage, Parcel No. 166-LA			Lump	
S-24	Lump Sum	Lump	Removal of one 2 story brick residence; one 2 story frame residence, 4 sheds, frame garage, one brick and frame barn, Parcel No. 163-LA			Lump	
S-24	Lump Sum	Lump	Removal of one 2 story frame residence and frame garage, Parcel No. 167-LA			Lump	
S-24	Lump Sum	Lump	Removal of one 1 1/2 story frame residence and garage, Parcel No. 168-LA			Lump	
S-24	Lump Sum	Lump	Removal of one 2 story frame residence and one 2 car garage, Parcel No. 166-LA			Lump	
S-24	Lump Sum	Lump	Removal of one 2 story frame residence, one 2 car concrete block garage, 3 sheds, Parcel No. 197-LA			Lump	
Lump	Lump	Lump	Construction Layout Stakes			Lump	Lump

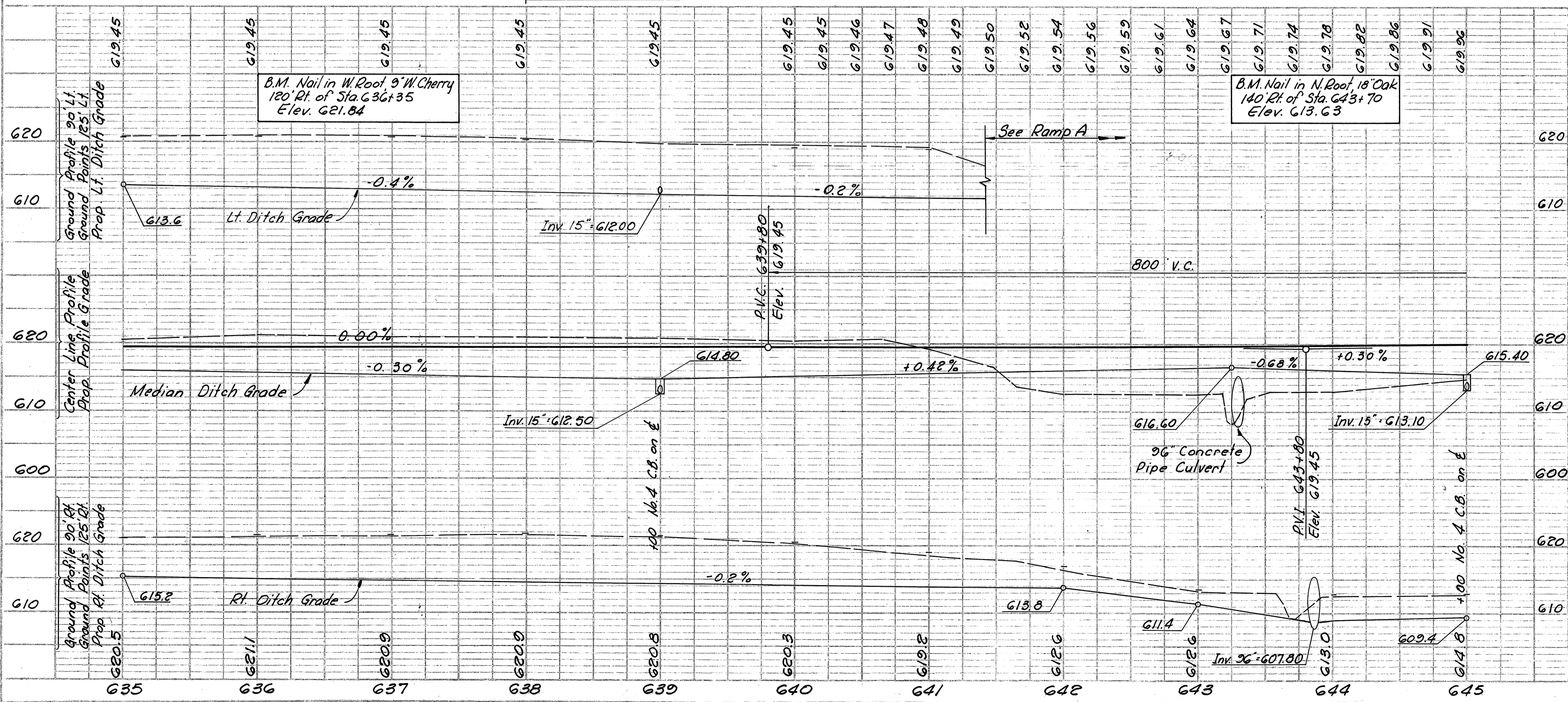
ERI-G-7.31

Note: References to trees, posts, etc. are to shiners generally placed 2'-4' above ground.



See Sheet No. Reference No. on Structure No.	Station	Side	F-1 T-71 I-22			
			Compacted Subgrade	9" Reinf. P.C. Conc. Pavt.	Subbase	
From	To		Sq. Yd.	Sq. Yd.	Cu. Yd.	
1-R	638+00	641+41.98	Lt.	814.7	814.7	135.8
2-R	638+00	645+00	Rt.	1343.5	1343.5	223.9
Totals				2158.2	2158.2	359.7

See Sheet No. Reference No. on Structure No.	Station	Side	Drainage Items												
			F-2 Excavation for Structure	F-3 Channel Excavation	S-1 Concrete for Structure Class. C	S-27 Conc. Culk. Pipe M.C.C. (6)	I-2 8" Storm Sewer Under Pavt. (M.C.C. 6)	I-2 15" Storm Sewer Under Pavt. (M.C.C. 6)	I-4 G Underdrain (Deep)	I-4 G Underdrain (Shallow)	I-5 8" Tee for Storm Sewer (M.C.C. 6)	I-5 8" Tee for Storm Sewer (M.C.C. 6)	I-8 No. 4 C.B.		
From	To		Cu. Yd.	Cu. Yd.	Cu. Yd.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Ea.	Ea.	Ea.	
1-D	638+00	639+00	Lt.									200			
2-D	638+00	639+00	Rt.									200			
3-D	639+00		Lt.	10		32		213	114				5	2	1
4-D	639+00	641+41.98	Lt.									242			
5-D	639+00	643+00	Lt.									400			
6-D	639+00	643+40 (AW)	Rt.									440	440		
7-D	641+90	643+85	Rt.												
54	1	643+30	Lt. & Rt.	170	580	850	256								
8-D	643+20 (AW)	645+00	Lt.									180	180		
9-D	643+70 (AW)	645+00	Rt.									130	130		
10-D	644+05	645+00	Rt.												
11-D	645+00		Lt. & Rt.	10		32		138	138				4	2	1
Totals				190	580	914	256	351	252	1392	1150	9	4	2	



See Sheet No. Reference No. on Structure No.	Station	Side	Drainage Items			
			I-10 Dumped Rock Channel Protection	L-10 Sodding	I-4 8" C.M.P. Outlet	S-4 Reinforcing Steel
From	To		Cu. Yd.	Sq. Yd.	Lin. Ft.	Lb.
3-D	639+00	Lt.		2	20	146
7-D	641+90	Rt.		173		
54	1	643+30	Lt. & Rt.	27	17	3444
10-D	644+05	Rt.		127		
11-D	645+00	Lt. & Rt.		?		146
Totals				27	321	20 3736

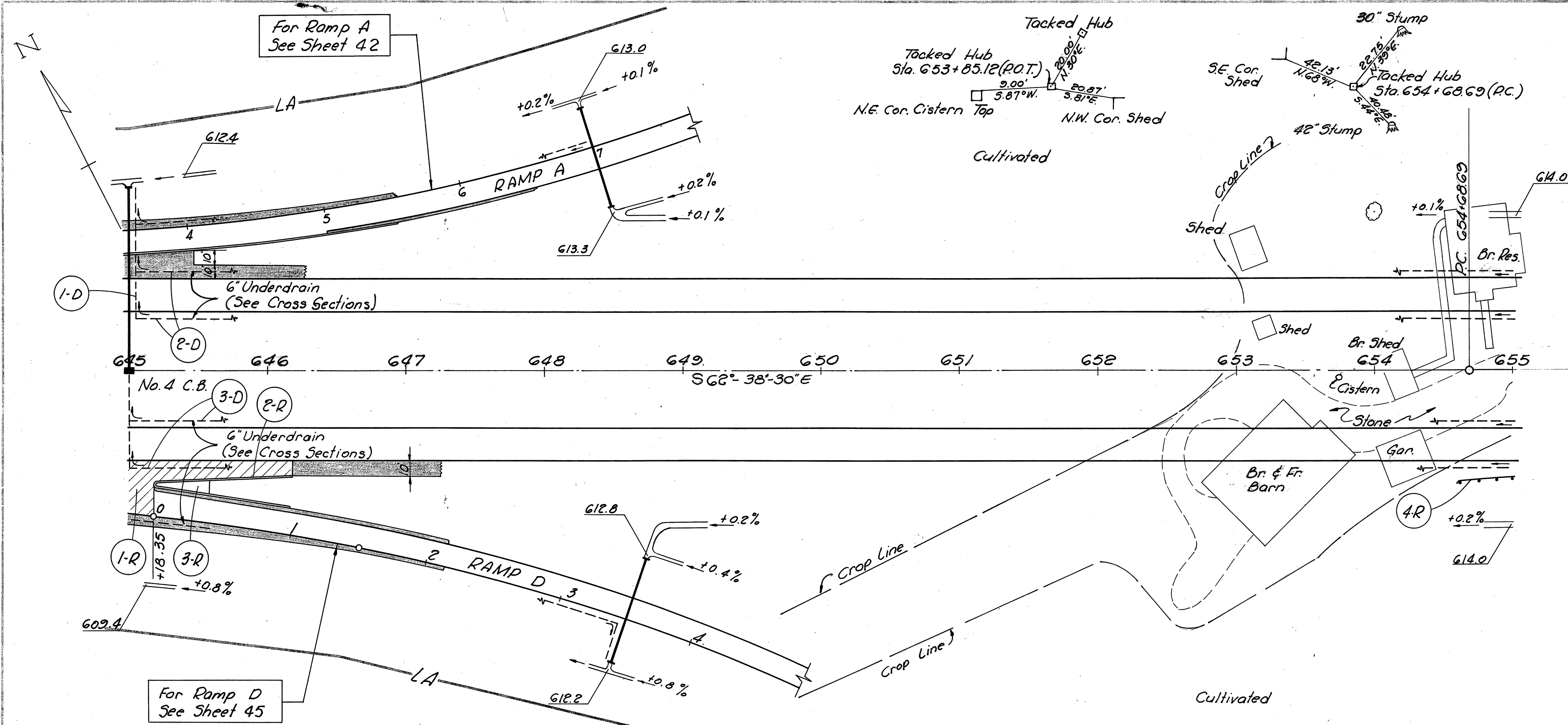
DATE: 1958
EJO S.M.B. R.L.E.
EJS
9-20
9-20

DATE: 1958
S.M.B. G.T.S.
EJS
9-20
9-20

ERI-6-7.31

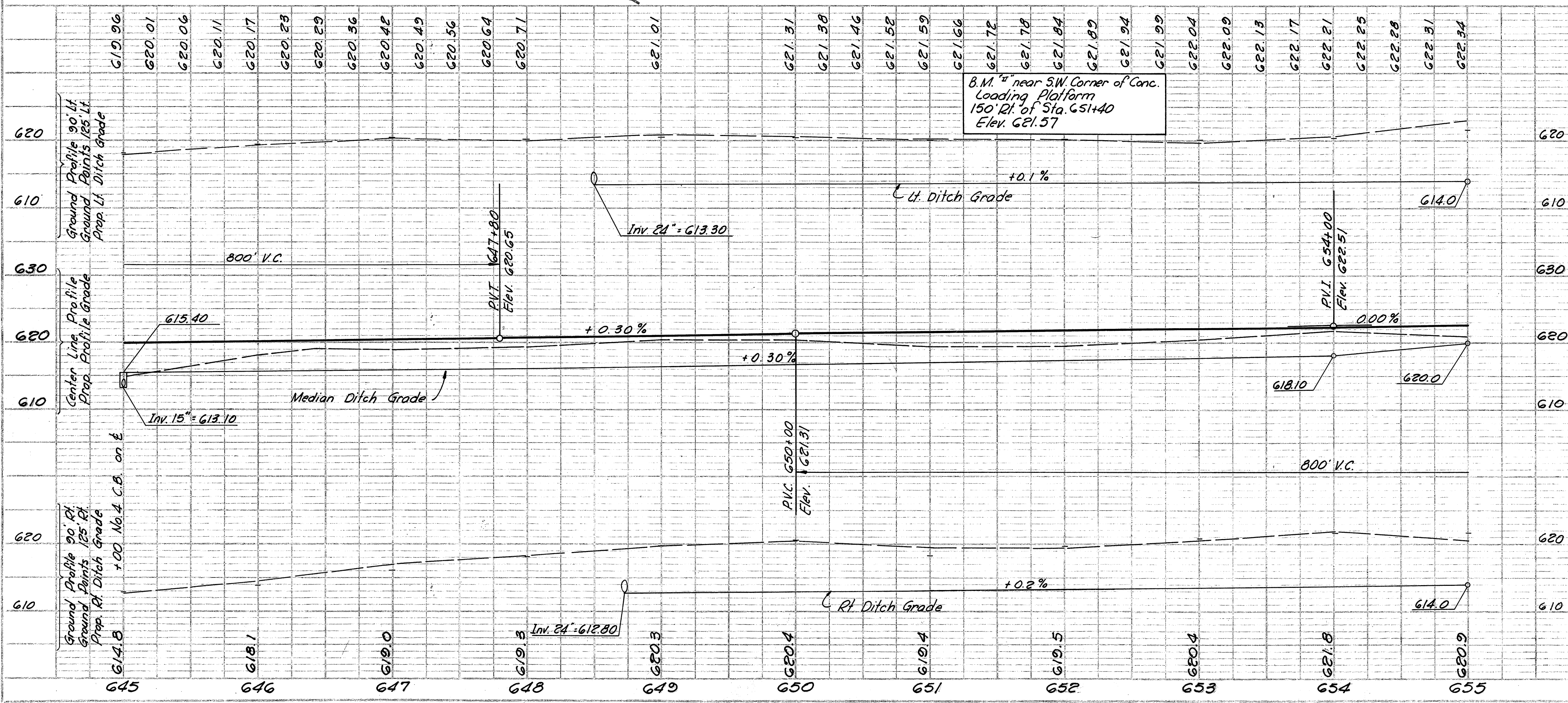
DATE: 9-58
 DRAWN BY: E.J.D.
 CHECKED BY: E.D.S.
 DATE: 9-60

DATE: 9-58
 DRAWN BY: E.J.D.
 CHECKED BY: E.D.S.
 DATE: 9-60

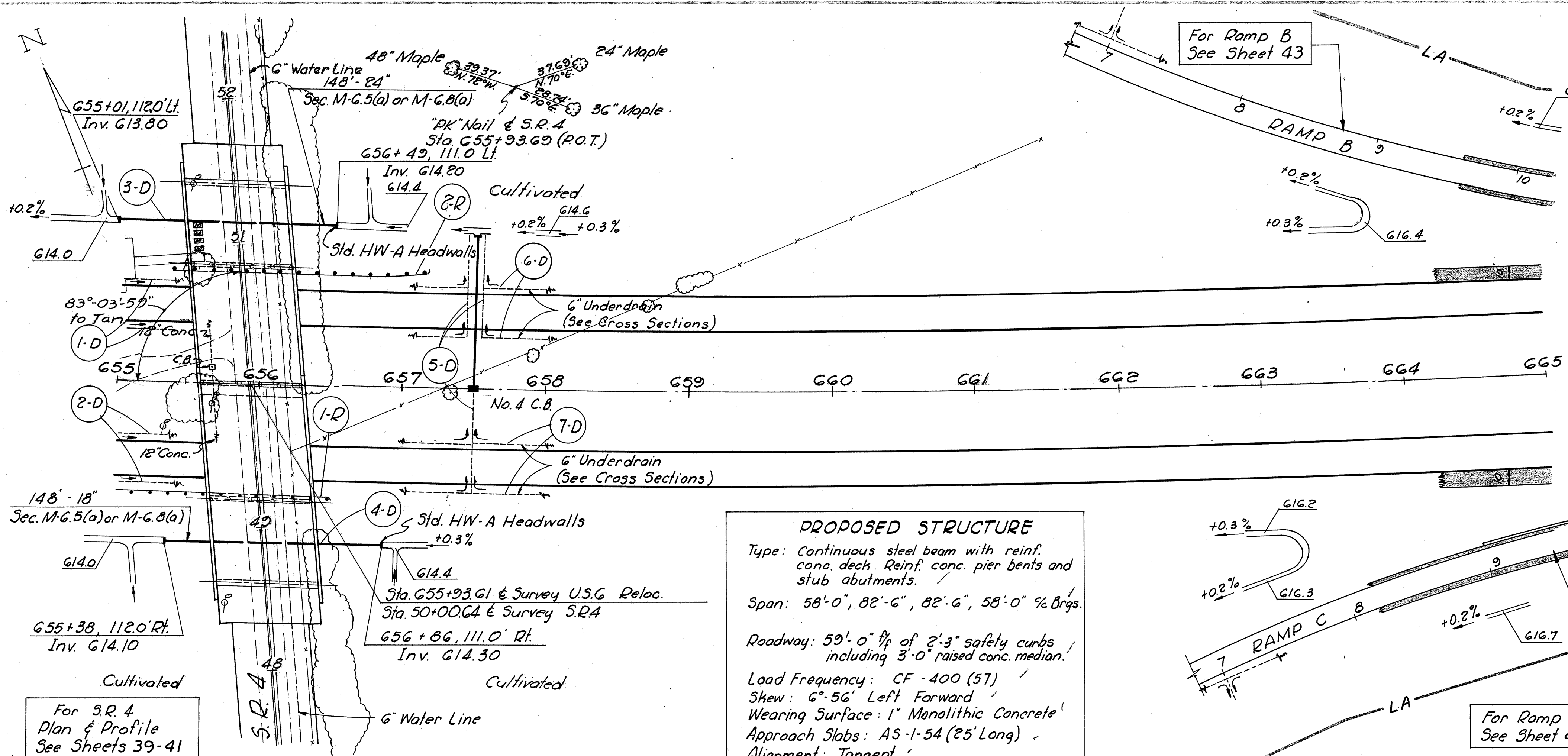


Station	Side	Quantities							
		E-1	T-71	I-12	I-15	I-21	I-22		
From	To	Compacted Subgrade	9" Reinf. P.C. Conc. Pav't.	Type P.A. Curbs	Guard Rail (Std. Type)	4" P.C. Conc. Med. Pav't.	Subbase		
		Sq.Yd.	Sq.Yd.	Lin.Ft.	Lin.Ft.	Sq.Yd.	Cu.Yd.		
1-R	645+00	646+18.35	Rt.	216.7	216.7				
2-R	645+18.35	646+18.35	Rt.			104			
3-R	646+18.35	646+58.35	Rt.				29.0		
4-R	654+22.5	655+100	Rt.			37.5			
Totals				216.7	216.7	104	37.5	29.0	35.8

Station	Side	Quantities						
		I-2	I-4	I-4	I-5	I-5		
From	To	18" Storm Sewer Under Pav't. (M.C. 50) (M.C. 50)	6" Under-drain (Deep)	6" Under-drain (Shallow)	8" or 8" Tee for Storm Sewer (M.C. 50) (M.C. 50)	8" or 8" Ell for Storm Sewer (M.C. 50) (M.C. 50)		
		Lin.Ft.	Lin.Ft.	Lin.Ft.	Ea.	Ea.		
1-D	645+00	655+00	Lt.	39				
2-D	645+00	655+00	Lt.		1000	1000		
3-D	645+00	655+00	Rt.		1000	1000		
Totals				39	2000	2000	1	1



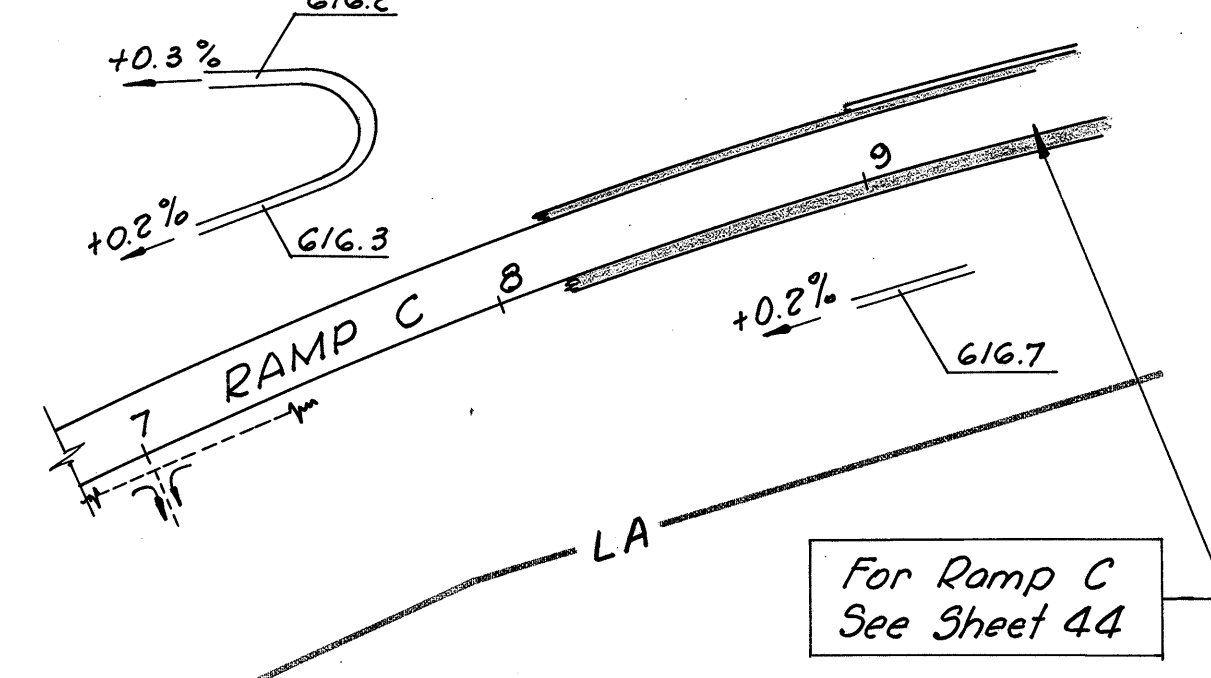
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ROADWAY QUANTITIES F-1042(G)

See Sheet No. Reference No. or Structure No.	Station		Side	I-15 Guard Rail (Std. Type) Lin. Ft.
	From	To		
1-R	655+00	656+50	Rt.	150
2-R	655+37	657+12	Lt.	175
Totals				325

PROPOSED STRUCTURE
 Type: Continuous steel beam with reinf. conc. deck. Reinf. conc. pier bents and stub abutments.
 Span: 58'-0", 82'-6", 82'-6", 58'-0" % Orgs.
 Roadway: 59'-0" of 2'-3" safety curbs including 3'-0" raised conc. median.
 Load Frequency: CF-400 (57)
 Skew: 6'-56" Left Forward
 Wearing Surface: 1" Monolithic Concrete
 Approach Slabs: AS-1-54 (25' Long)
 Alignment: Tangent

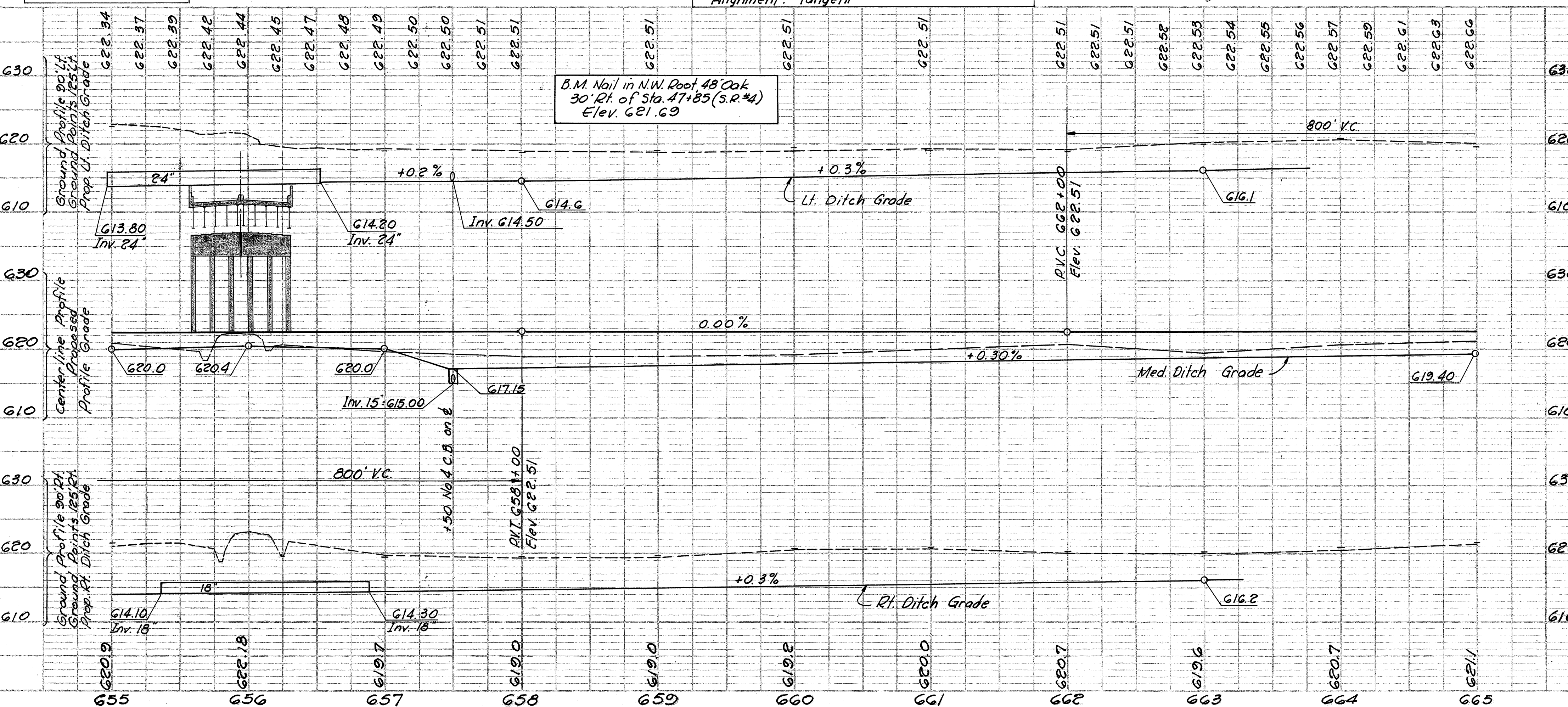


For S.R. 4
 Plan & Profile
 See Sheets 39-41

For Ramp C
 See Sheet 44

DRAINAGE QUANTITIES F-1042(G)

See Sheet No. Reference No. or Structure No.	Station		Side	Excavation for Structure Cu. Yd.	5-1 Structure for Concrete Class. C Cu. Yd.	I-2 18" Storm Sewer (M.C. 56) M.C. 56) Lin. Ft.	I-2 18" Storm Sewer (M.C. 56) or M-6.8 (a) Lin. Ft.	I-2 24" Storm Sewer (M.C. 56) or M-6.8 (a) Lin. Ft.	I-4 6" Underdrain (Deep) Lin. Ft.	I-4 6" Underdrain (Shallow) Lin. Ft.	I-5 8" on 8" Tee for Storm Sewer (M.C. 56) M.C. 56) Ea.	I-5 8" 90° El. for Storm Sewer (M.C. 56) M.C. 56) Ea.	I-8 No. 4 C.B. Ea.	
	From	To												
1-D	655+00	657+50	Lt.						250	250				
2-D	655+00	657+50	Rt.						250	250				
3-D	655+01	656+49	Lt.	29	10.2			148						
4-D	655+38	656+86	Rt.	20	6.4									
5-D	657+50		Lt. Rt.	10	3.2	166	99				5	2	1	
6-D	657+50	665+00	Lt.						750	750				
7-D	657+50	665+00	Rt.						750	750				
Totals				59	19.8	166	99	148	148	2000	2000	5	2	1
				L-10	I-4	5-4								
				Sodding 3a. Yd.	8" C.M.P. Outlet Lin. Ft.	Reinforcing Steel Lb.								
3-D	655+01	656+49	Lt.	6		436								
4-D	655+38	656+86	Rt.	5		292								
5-D	657+50		Lt. Rt.	2	20	146								
Totals				13	20	874								

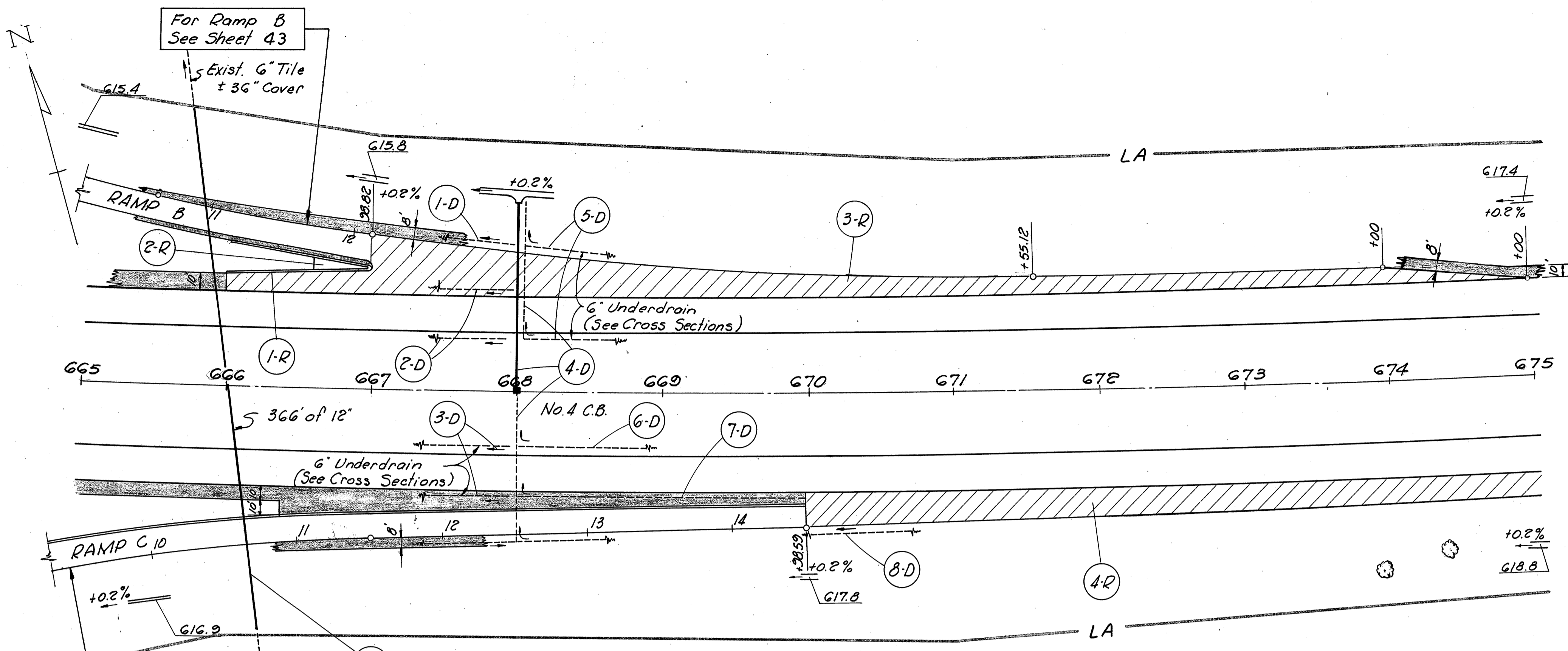


MICROFILMED
 MAR 19 1985

ERI-6-7.31

DATE: 9-58
BY: S.M.B. RVE
E.J.D. GOS
NOTE: SURVEYED, PLOTTED, ALIGNED, CHECKED, BY: OF WAY CHECKED.

DATE: 9-58
BY: S.M.B. RVE
E.J.D. GOS
NOTE: SURVEYED, PLOTTED, GRADES CHECKED, B.M.'S NOTED, 5' STRIPING, ADJUSTING, CTD.



ROADWAY QUANTITIES F-1042(6)

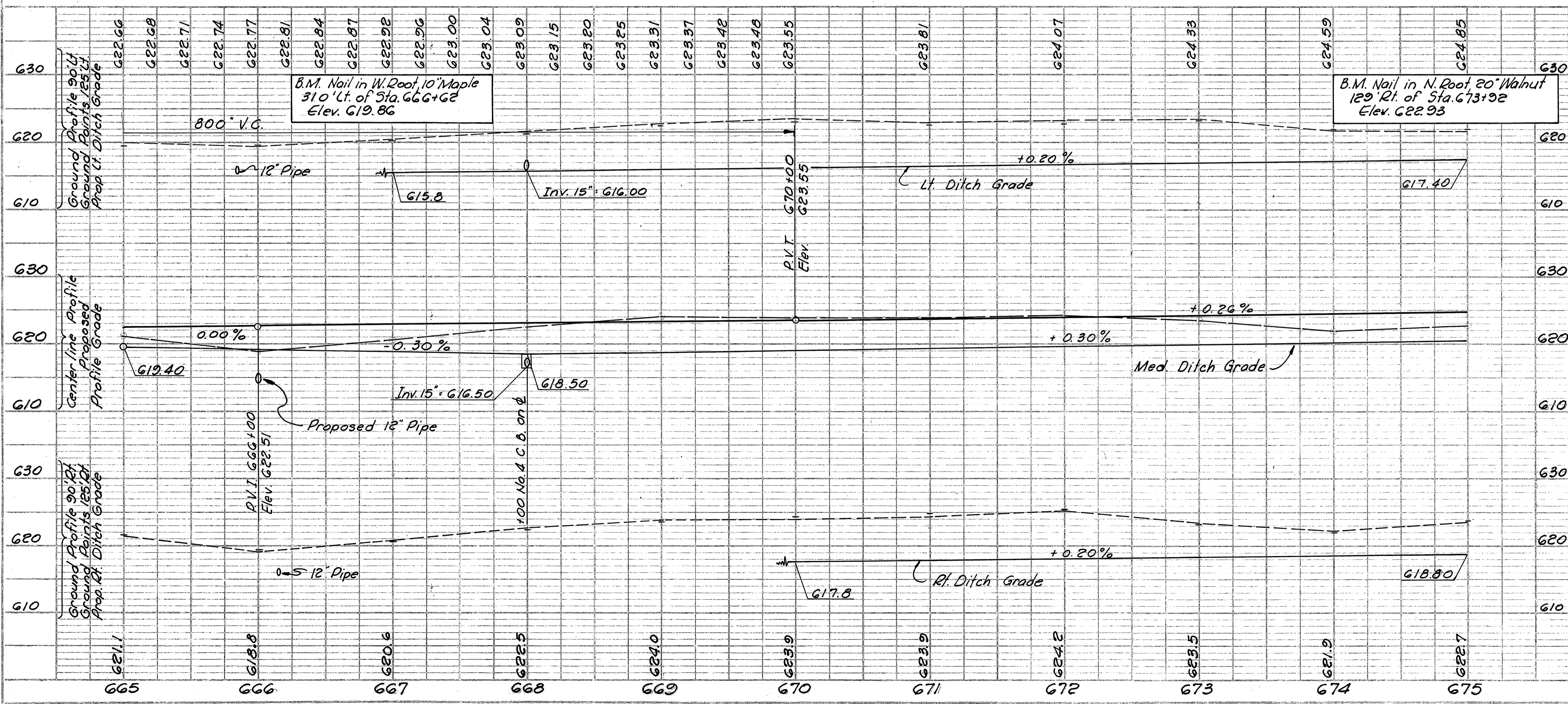
See Sheet No. Reference No. or Structure No.	Station	Side	E-1	T-71	I-12	I-21	I-22		
			Compacted Subgrade	3" Reinf. PC Conc. Pavt.	Type E-A Curb	4" PC Conc. Med. Pavt.	Subbase	Sq. Yd.	Cu. Yd.
From	To		Sq. Yd.	Sq. Yd.	Lin. Ft.	Sq. Yd.	Cu. Yd.		
1-R	666+00	667+00	Lt.		104				
2-R	666+60	667+00	Lt.			29.0			
3-R	665+98.8	675+00	Lt.	1647.0	1647.0			264.5	
4-R	665+28.5	675+00	Rt.	1103.3	1103.3			183.9	
Totals				2750.3	2750.3	104	29.0	448.4	

9-D I-2 pipe to be installed after completion of preliminary grading and before pavement construction. Location and depth to be verified by contractor prior to starting installation.

Note: For joint pattern on acceleration and deceleration lanes, See Sheet 16.

DRAINAGE QUANTITIES F-1042(6)

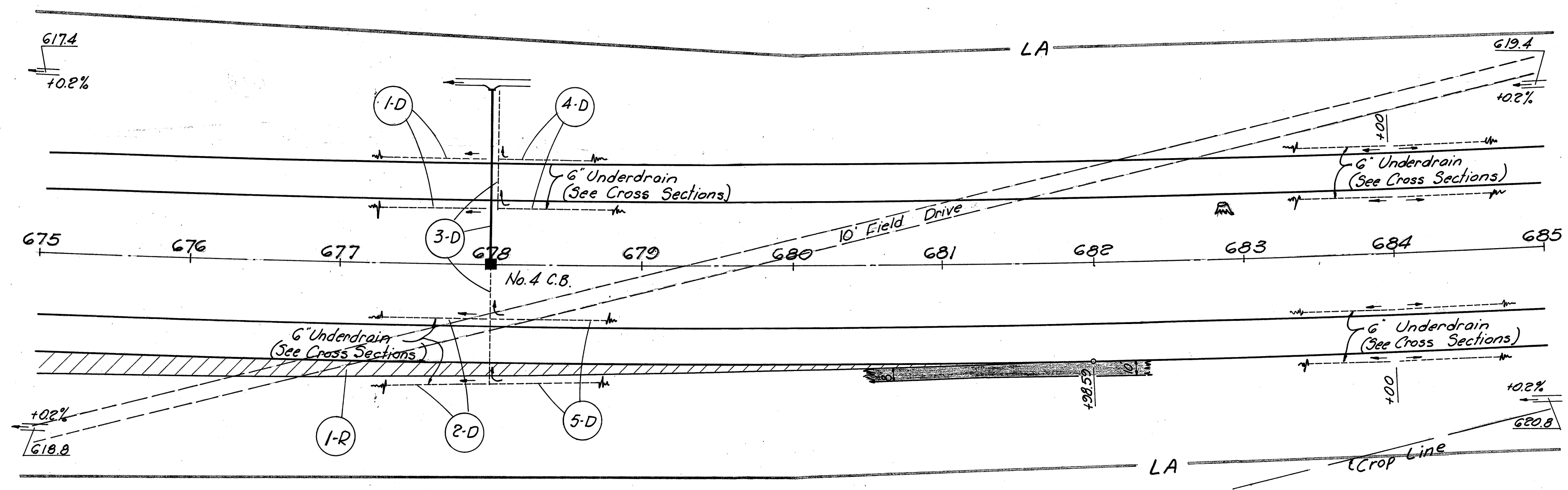
See Sheet No. Reference No. or Structure No.	Station	Side	E-2	S-1	I-2	I-2	I-4	I-4	I-5	I-5	I-8	L-10	I-4
			Excavation for Structure	Concrete for Structure	8" Storm Sewer Under Pavt. (M.C. 50)	15" Storm Sewer Under Pavt. (M.C. 50)	6" Underdrain (Deep)	6" Underdrain (Shallow)	8" on 8" Tee for Storm Sewer (M.C. 50)	5' x 20" Ell for Storm Sewer (M.C. 50)	No. 4 C.B.	Soading	6" C.M.P. Outlet
From	To		Cu. Yd.	Cu. Yd.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Ea.	Ea.	Ea.	Sq. Yd.	Lin. Ft.
1-D	666+99	668+00	Lt.					101					
2-D	665+00	668+00	Lt.					300	300				
3-D	665+00	668+00	Rt.					300	300				
4-D	668+00		Lt./Rt.	10	32	150	123			3	1	1	2 10
5-D	668+00	675+00	Lt.					700	700				
6-D	668+00	675+00	Rt.					700	700				
7-D	668+00	670+00	Rt.					200					
8-D	670+00	675+00	Rt.					500					
9-D	666+00		Lt./Rt.										
Totals				10	32	150	123	2101	2000	3	1	1	2 10
				5-4	1-2								
				Reinforcing Steel	Storm Sewer Under Pavt. (M.C. 50)								
				Lb.	Lin. Ft.								
4-D	668+00		Lt./Rt.	146									
9-D	666+00		Lt./Rt.	366									
Totals				146	366								



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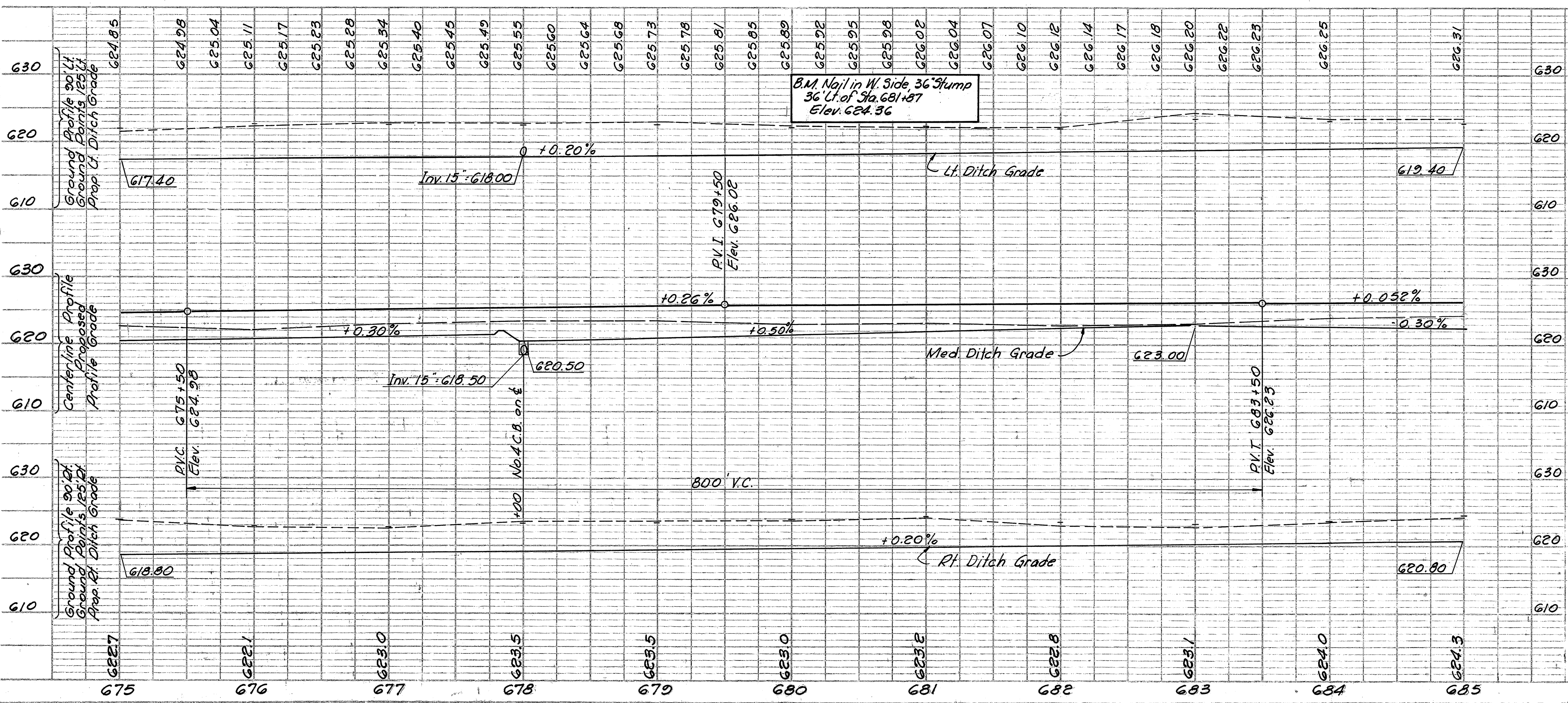
DATE: 1958
BY: S.M.B. R.N.E.
E.D. E.S.
SURVEYED: []
PLOTTED: []
NOTE BOOK NO. []
ALIGNED CHECKED: []
BY: []

DATE: 1958
BY: S.M.B. R.N.E.
E.D. E.S.
STRUCTURE NOTATIONS CHECKED: []
BY: []



ROADWAY QUANTITIES F-1042(G)

See Sheet No. Reference No. or Structure No.	Station		Side	E-1 Compacted Subgrade Sq. Yd.	T-71 9" Reinf. P.C. Conc. Pavt. Sq. Yd.	I-22 Subbase Cu. Yd.
	From	To				
I-R	675+00	681+98.59	Rt.	565.9	565.9	94.3
Totals				565.9	565.9	94.3



DRAINAGE QUANTITIES F-1042(G)

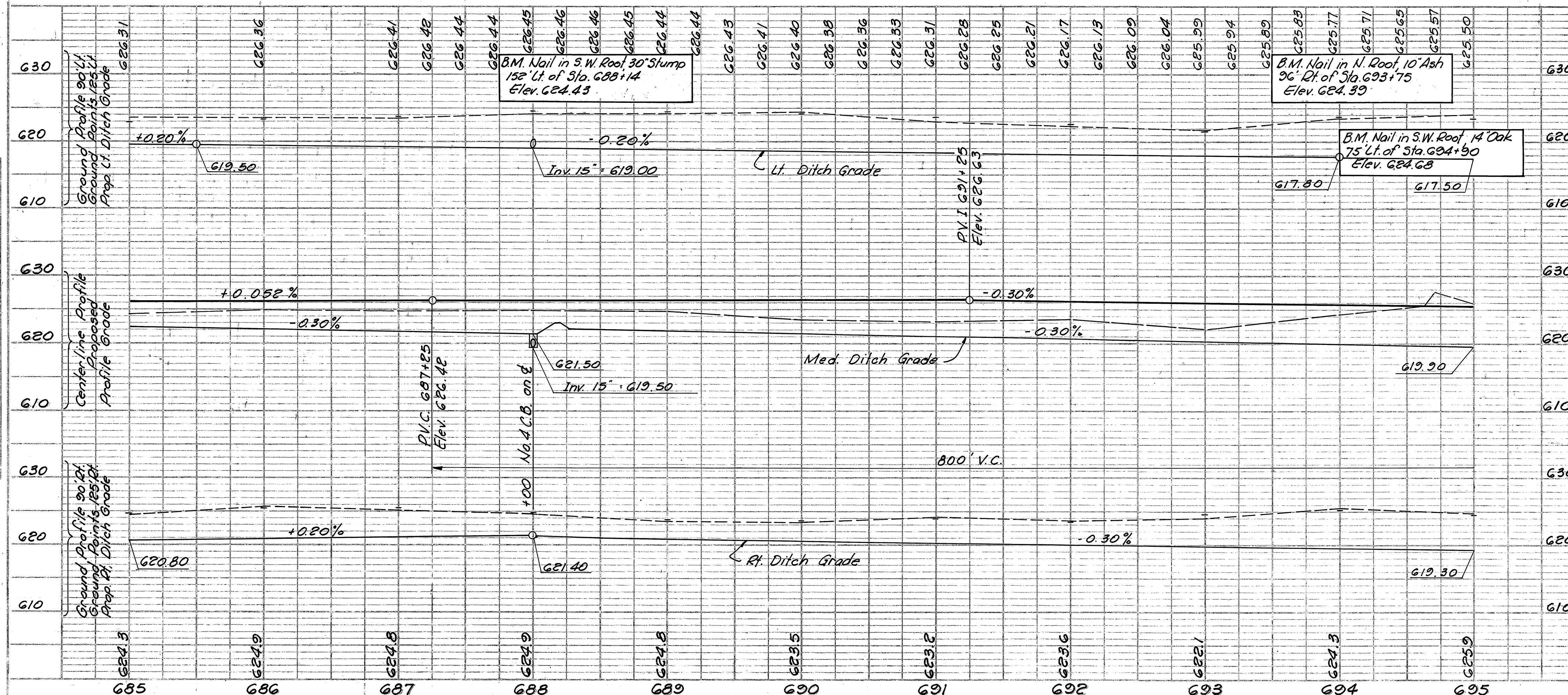
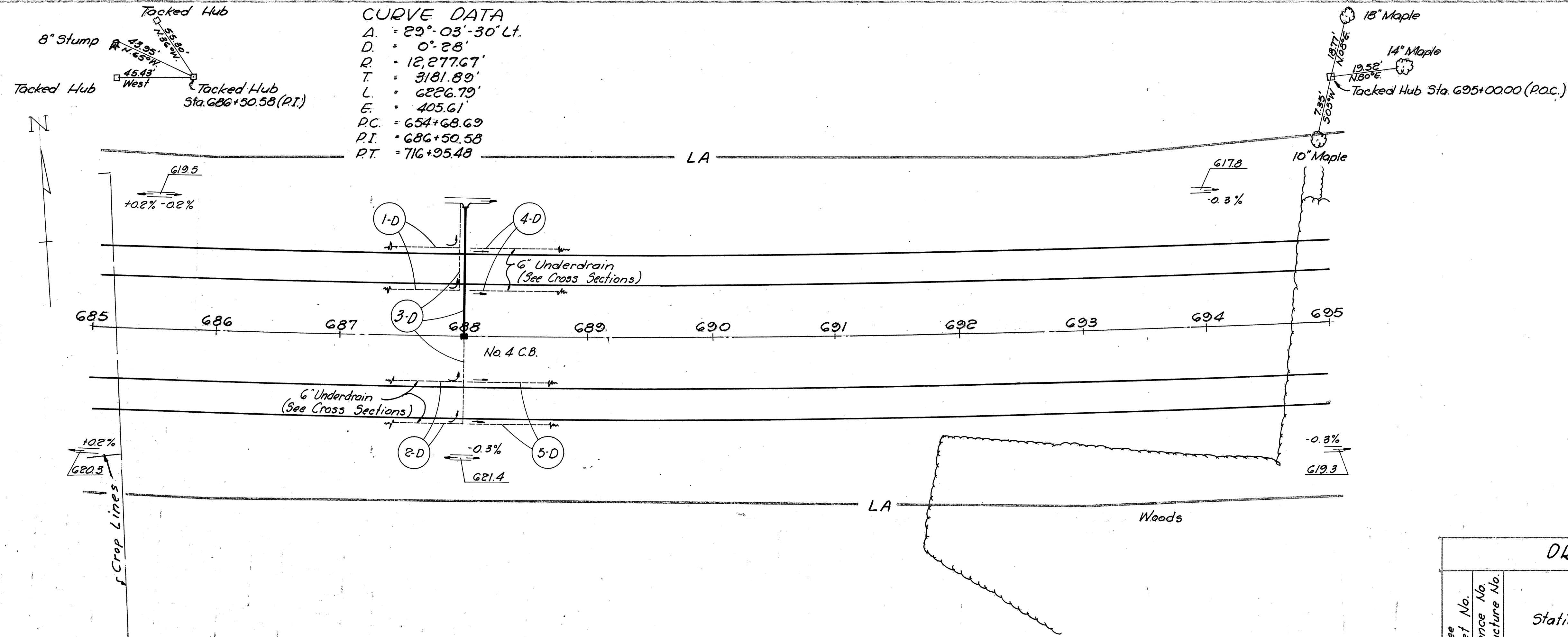
See Sheet No. Reference No. or Structure No.	Station		Side	E-2 Excavation for Structure Cu. Yd.	S-1 Concrete for Structure Cu. Yd.	I-2 15" Storm Sewer (Med. S.) Lin. Ft.	I-2 15" Storm Sewer (Med. S.) Under Pavt. (Med. S.) Lin. Ft.	I-4 6" Underdrain (Deep) Lin. Ft.	I-4 6" Underdrain (Shallow) Lin. Ft.	I-5 8" on 8" Tee for Storm Sewer (Med. S.) Ea.	I-5 5" on 5" Tee for Storm Sewer (Med. S.) Ea.	I-8 No. 4 C.B. Ea.	L-10 Sodding Sq. Yd.	I-4 8" C.M.P. Outlet Lin. Ft.
	From	To												
1-D	675+00	678+00	Lt.					300	300					
2-D	675+00	678+00	Rt.					300	300					
3-D	678+00		Lt. & Rt.	10	32	126	99			2	2	1	2	10
4-D	678+00	685+00	Lt.					700	700					
5-D	678+00	685+00	Rt.					700	700					
Totals				10	32	126	99	2000	2000	2	2	1	2	10
3-D	678+00		Lt. & Rt.	146										
Totals				146										

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

21
161

ERI-G-7.31

CURVE DATA
 $\Delta = 29^{\circ}03'30''$ Lt.
 $D = 0'28''$
 $R = 12,277.67'$
 $T = 3181.89'$
 $L = 6226.79'$
 $E = 405.61'$
 $PC = 654+68.69$
 $PI = 686+50.58$
 $PT = 716+95.48$



See Sheet No. Reference No. or Structure No.	Station	Side	Excavation for Structure for Concrete Structure Class C		6" Storm Sewer Under Pav't (M.C. 80)		6" Storm Sewer Under Pav't (M.C. 80)		6" Underdrains (Deep)		6" Underdrains (Shallow)		6" on 8" Tee for Storm Sewer (M.C. 80)		8" on 8" Tee for Storm Sewer (M.C. 80)		No. 4 C.B.		Sodding		8" C.M.P. Outlet	
			From	To	Cu. Yd.	Lin. Ft.	Cu. Yd.	Lin. Ft.	Cu. Yd.	Lin. Ft.	Ea.	Ea.	Ea.	Ea.	Sq. Yd.	Lin. Ft.	Sq. Yd.	Lin. Ft.				
1-D	685+00	688+00	Lt.					300	300													
2-D	685+00	688+00	Rt.					300	300													
3-D	688+00	695+00	Lt.	10	3.2	117	99			2	2			1	2							
4-D	688+00	695+00	Lt.					700	700													
5-D	688+00	695+00	Rt.					700	700													
Totals					10	3.2	117	99	2000	2000	2	2	1	2	10							
3-D	688+00		Lt.					146														
Totals								146														

DATE: 10-23-58
 BY: S.M.B. RVE
 CHECKED: E.D.S. EDS
 SURVEYED: []
 PLOTTED: []
 NOTE BOOK: []
 RE. OF WAY CHECKED: []

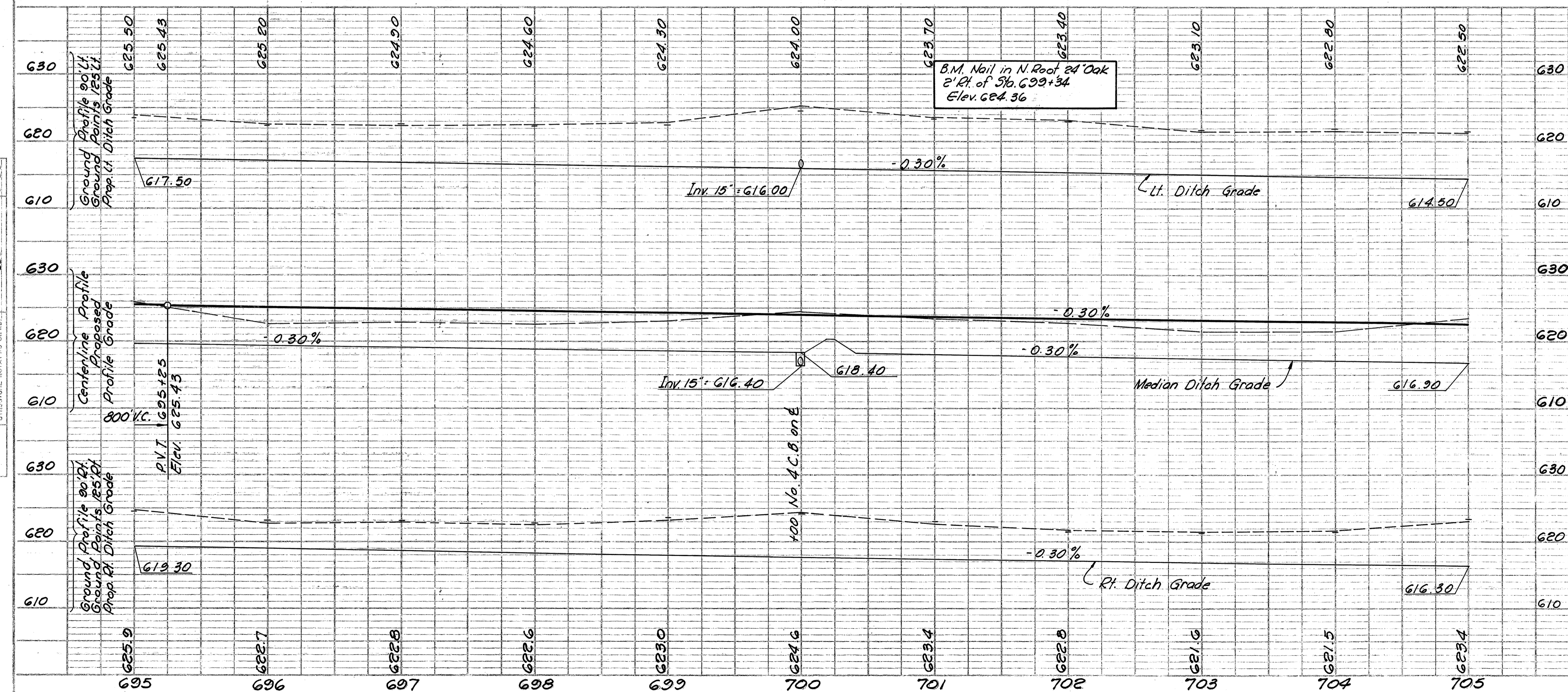
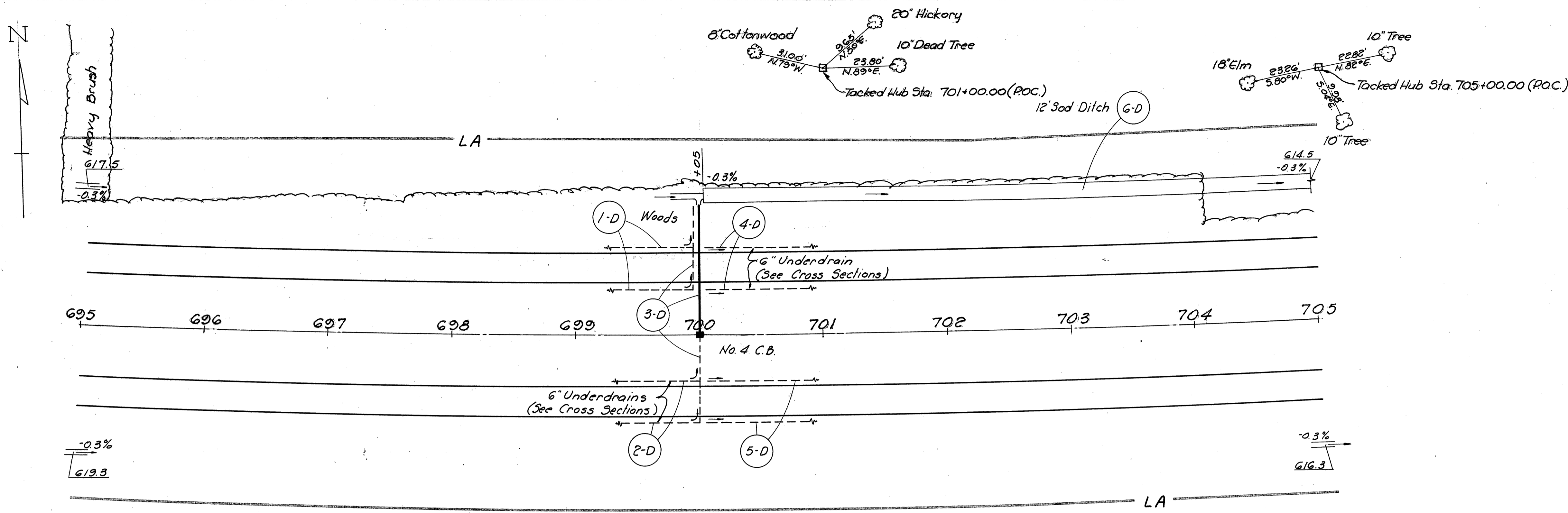
DATE: 10-23-58
 BY: S.M.B. RVE
 CHECKED: E.D.S. EDS
 SURVEYED: []
 PLOTTED: []
 NOTE BOOK: []
 RE. OF WAY CHECKED: []

ERI-6-7.31

DATE: 1958
BY: S.M.B. R.N.E.
E.D. E.S. E.S.
NO. 625

DATE: 1958
BY: S.M.B. R.N.E.
E.D. E.S. E.S.
NO. 625

DATE: 1958
BY: S.M.B. R.N.E.
E.D. E.S. E.S.
NO. 625



DRAINAGE QUANTITIES F-1042(G)																	
Sec. Sheet No.	Reference No. or Structure No.	Station	Side	Excavation for Structure													
				Excavation for Structure	Concrete for Structure	Class C.	Storm Sewer Under Pavt. (M&S)(M&S)(M&S)	Storm Sewer Under Pavt. (M&S)(M&S)(M&S)	Underdrain (Deep)	Underdrain (Shallow)	10' Tee for Storm Sewer (M&S)(M&S)(M&S)	10' Tee for Storm Sewer (M&S)(M&S)(M&S)	No. 4 C.B.	Sodding	8" C.M.P. Outlet		
From	To			Cu. Yd.	Cu. Yd.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Ea.	Ea.	Ea.	Sq. Yd.	Lin. Ft.	
1-D	695+00	700+00	Lt.														
2-D	695+00	700+00	Rt.														
3-D	700+00	705+00	Lt.	10	3.2	117	99					2	2	1	2	10	
4-D	700+00	705+00	Lt.									500	500				
5-D	700+00	705+00	Rt.									500	500				
6-D	700+05	705+00	Lt.													660	
Totals				10	3.2	117	99	2000	2000	2	2	1	662	10			
				3-D	700+00	Lt.	146										
Totals				146													

ERI-G-7.31

For Pipe Creek Relocation, See Sheet 60

ROADWAY QUANTITIES F-1042(G)

See Sheet No.	Reference No. or Structure No.	Station	Side	Quantities				
				Compacted Subgrade	Reinf. Conc. Appl. Slab (1-13)	Guard Rail (Std. Type)	Guard Rail (Barrier Type)	Subbase
From	To			Sq. Yd.	Sq. Yd.	Lin. Ft.	Lin. Ft.	Cu. Yd.
1-R	709+55	712+55	Rt.			300		
2-R	709+65	712+60	Med.			150	150	
3-R	711+30	712+80	Lt.			150		
4-R	712+49.14	712+74.14	Rt.	66.7	66.7			11.1
5-R	712+67.86	712+92.86	Lt.	66.7	66.7			11.1
6-R	713+46.82	713+71.82	Rt.	66.7	66.7			11.1
7-R	713+66.18	713+91.18	Lt.	66.7	66.7			11.1
8-R	713+60	715+00	Rt.				140	
9-R	713+85	715+00	Lt.				115	
10-R	713+75	715+00	Med.				125	
Totals				266.8	266.8	280	150	44.4

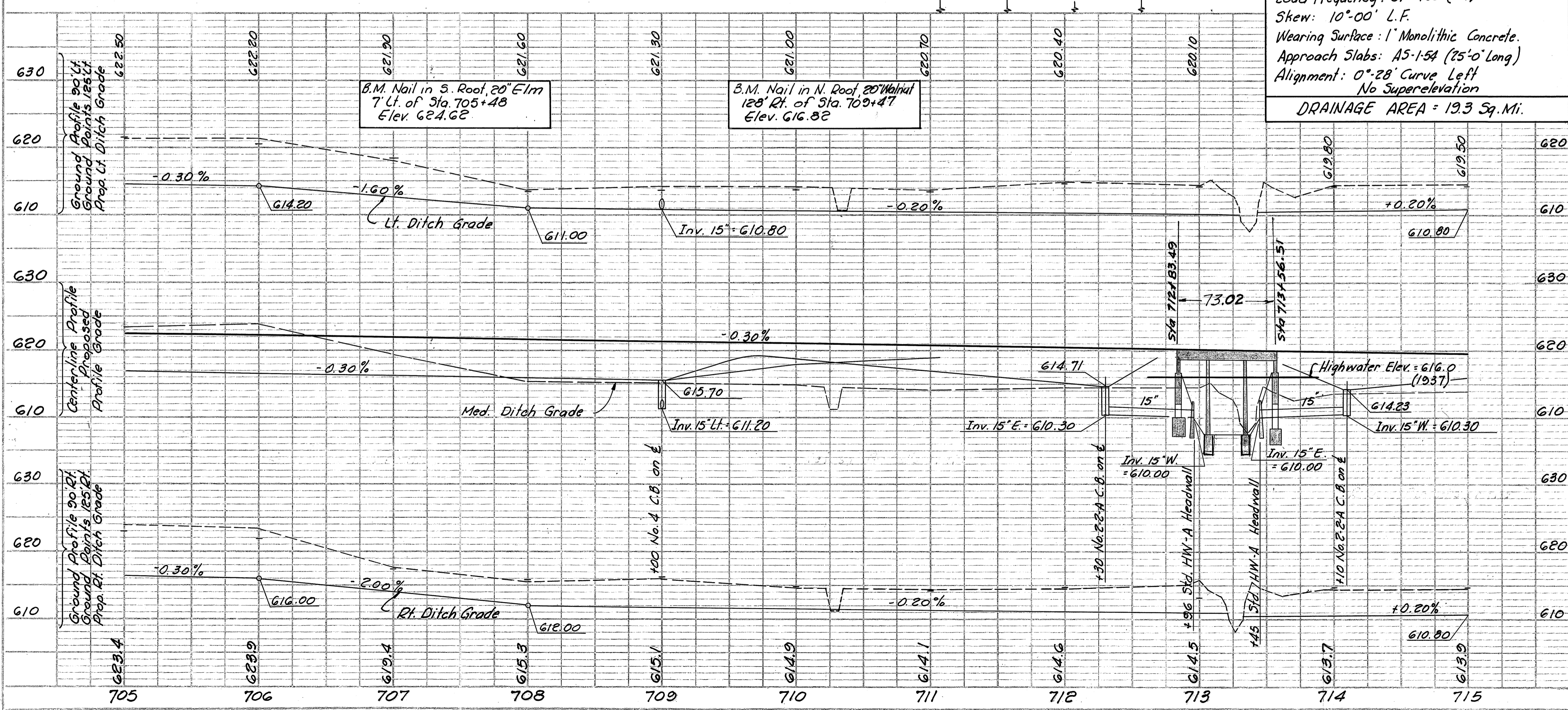
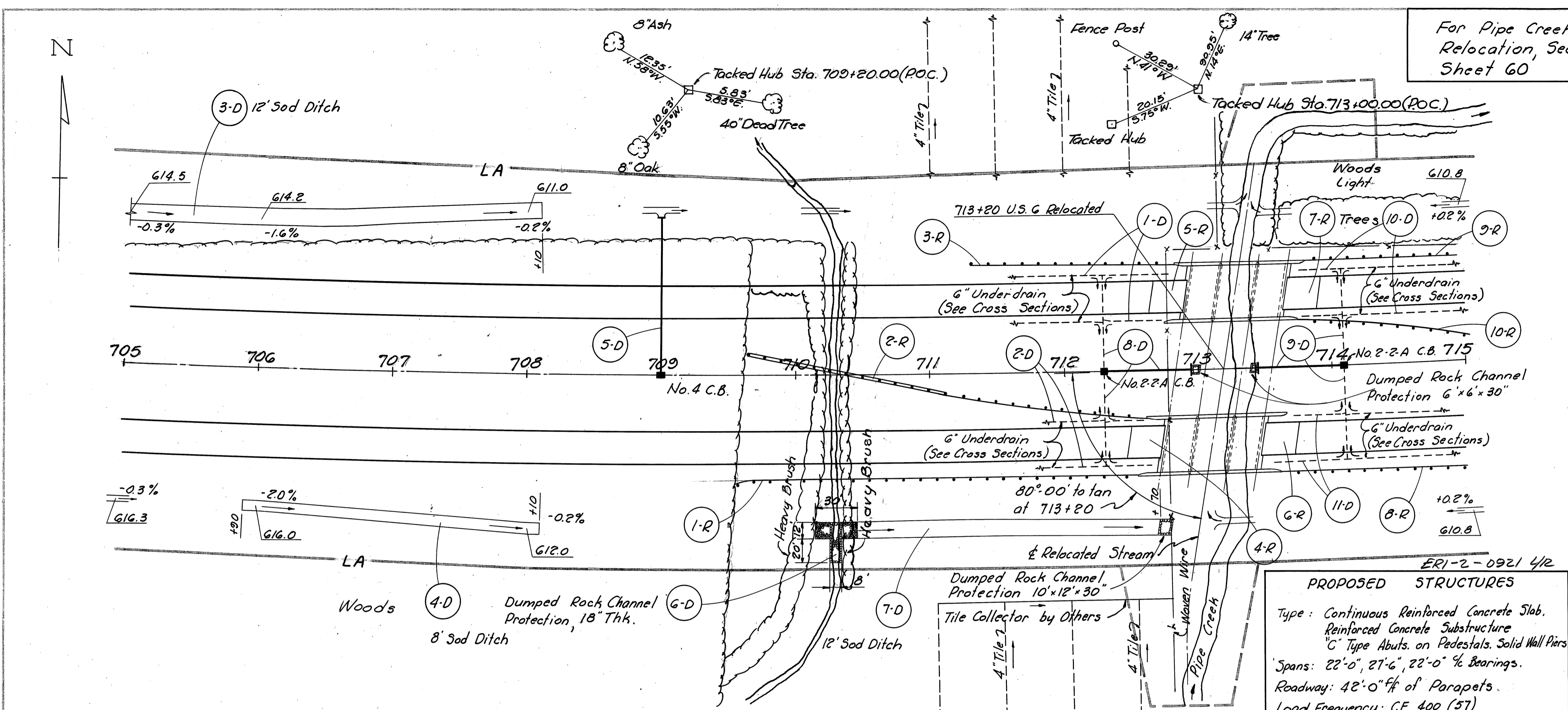
DRAINAGE QUANTITIES F-1042(G)

See Sheet No.	Reference No. or Structure No.	Station	Side	Quantities													
				Excavation for Structure	Concrete for Structure	Class C	8" Storm Sewer Under Pavt. (M.C. 20)	15" Storm Sewer Under Pavt. (M.C. 20)	15" Storm Sewer (M.C. 20)	6" Underdrain (M.C. 20)	6" Underdrain (Deep)	6" Underdrain (Shallow)	8" or 10" Tee for Storm Sewer (M.C. 20)	No. P.C.A.C.	No. 4 C.B.		
From	To			Cu. Yd.	Cu. Yd.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Ea.	Ea.	Ea.	
1-D	705+00	712+80	Lt.														
2-D	705+00	712+65	Rt.									780	780				
3-D	705+00	708+10	Lt.									765	765				
4-D	705+90	708+10	Rt.														
5-D	709+00		Lt.	10	3.2		111										1
6-D	710+30		Rt.														
7-D	710+45	712+80	Rt.														
8-D	712+30	712+96	Lt.	10	3.2	126		63						6		1	
9-D	713+45	714+10	Lt.	10	3.2	126		63						6		1	
10-D	713+75	715+00	Lt.									250					
11-D	713+55	715+00	Rt.									290					
Totals				30	9.6	252	111	126		2085	1545	12	2	1			

See Sheet No.	Reference No. or Structure No.	Station	Side	Quantities		
				Reinforcing Steel	Dumped Rock Channel Protection	Sodding
From	To		Lb.	Cu. Yd.	Sq. Yd.	
3-D	705+00	708+10	Lt.			413
4-D	705+90	708+10	Rt.			198
5-D	709+00		Lt.	146		2
6-D	710+30		Rt.		29	
7-D	710+45	712+80	Rt.	11	315	
8-D	712+30	712+96	Lt.	146	3	2
9-D	713+45	714+10	Lt.	146	3	2
Totals				438	46	932

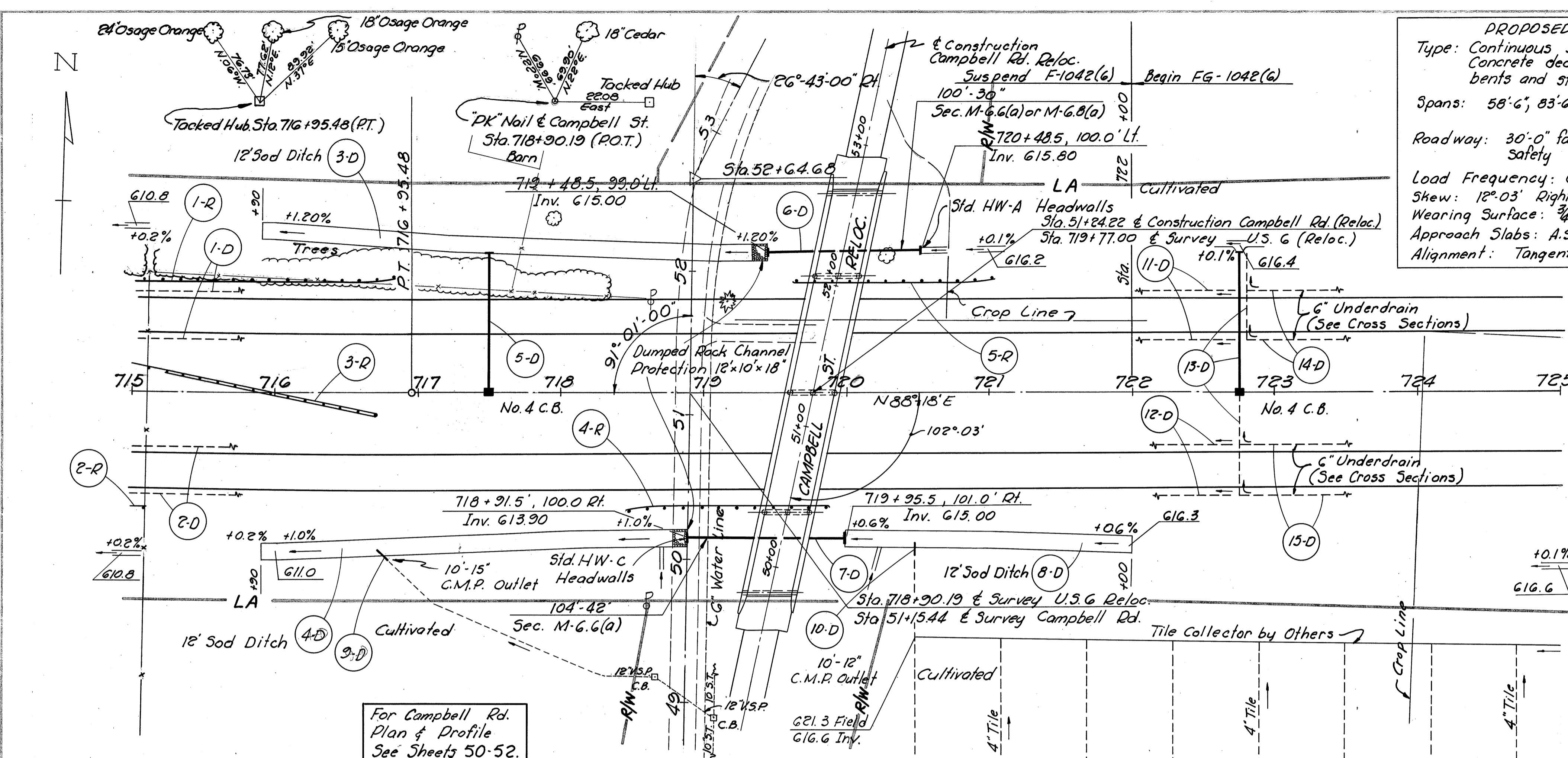
CONVERTED
PLOTTER
NOTE BOOK
NO.

CONVERTED
PLOTTER
NOTE BOOK
NO.



DATE: 10-1-68
 DRAWN BY: S.M.V.
 CHECKED BY: E.S.E.
 SURVEYED: S.M.V.
 PLOTTED: S.M.V.
 ALIGNED: E.S.E.
 REVISIONS: 1-0, 2-0, 3-0, 4-0, 5-0

DATE: 10-1-68
 DRAWN BY: S.M.V.
 CHECKED BY: E.S.E.
 SURVEYED: S.M.V.
 PLOTTED: S.M.V.
 ALIGNED: E.S.E.
 REVISIONS: 1-0, 2-0, 3-0, 4-0, 5-0



PROPOSED STRUCTURE
 Type: Continuous steel beam with reinf. Concrete deck Reinf. concrete pier bents and stub abutments
 Spans: 58'-6", 83'-6", 83'-6", 58'-6" % Brgs.
 Roadway: 30'-0" face to face of 2'-3" Safety curbs.
 Load Frequency: CF-130(57)
 Skew: 12° 03' Right Forward
 Wearing Surface: 3/4" Monolithic Concrete
 Approach Slabs: A.S.-1-54 (25'-0" Long)
 Alignment: Tangent

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

24
161

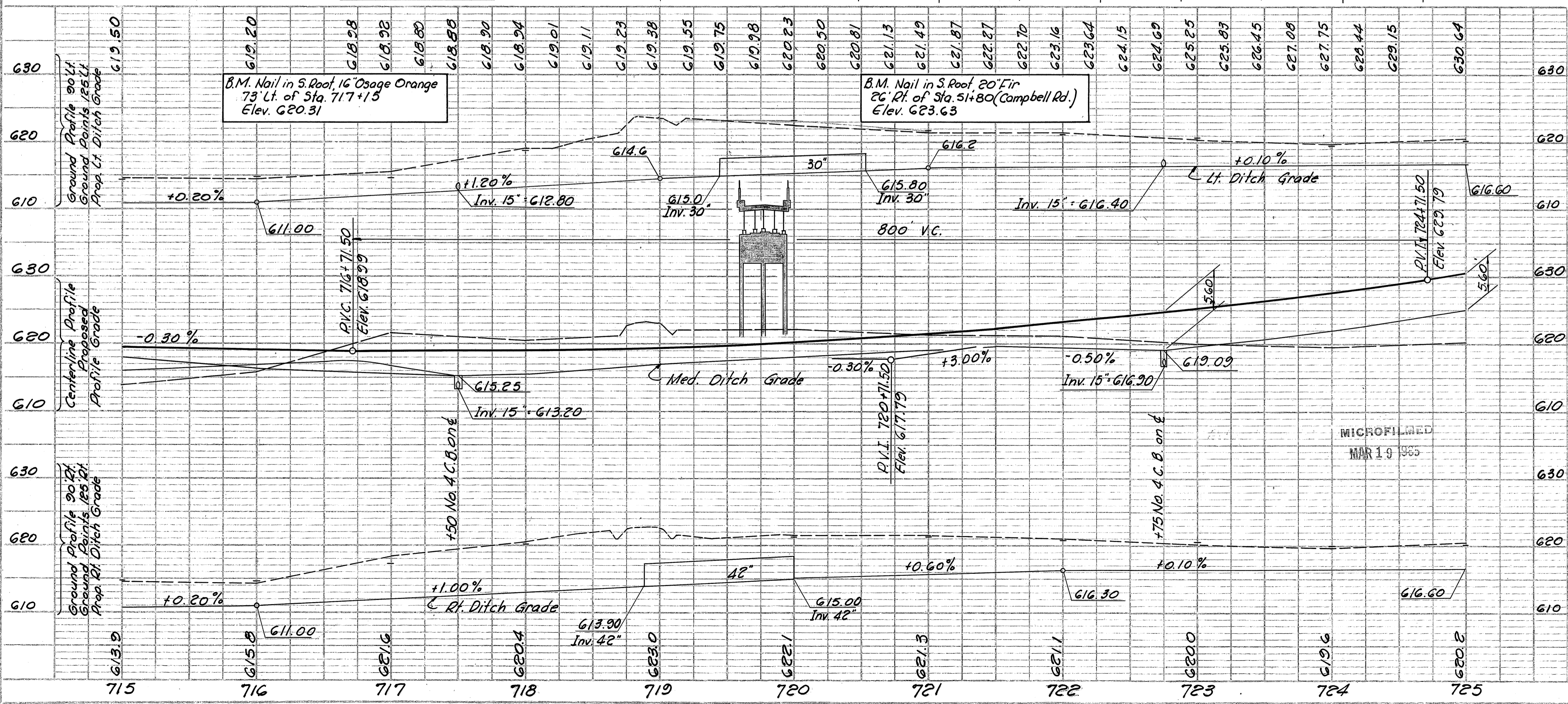
ERI-G-7.31

ROADWAY QUANTITIES F-1042(G)

See Sheet No. Reference No. on Structure No.	Station		Side	I-15	
	From	To		Guard Rail (Std. Type)	Guard Rail (Barrier Type)
	Lin. Ft.	Lin. Ft.		Lin. Ft.	Lin. Ft.
1-R	715+00	716+85	Lt.	185	
2-R	715+00	715+10	Rt.	10	
3-R	715+00	716+70	Med.	25	150
4-R	718+47	719+85	Rt.	137.5	
5-R	719+65	721+00	Lt.	137.5	
F-1042(G) Totals				495.0	150

DRAINAGE QUANTITIES F-1042(G) & FG-1042(G)

See Sheet No. Reference No. on Structure No.	Station		Side	Drainage Types													
	From	To		Excavation for Structure	8" Storm Sewer	12" Storm Sewer	15" Storm Sewer	18" Storm Sewer	24" Storm Sewer	30" Storm Sewer	48" Storm Sewer	6" Underdrain	12" C.M.P. Outlet	15" C.M.P. Outlet	18" C.M.P. Outlet	24" C.M.P. Outlet	
	Lin. Ft.	Lin. Ft.		Cu. Yd.	Cu. Yd.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Ea.
1-D	715+00	722+00	Lt.									1400					
2-D	715+00	722+00	Rt.								1400						
3-D	715+00	719+48.5	Lt.														
4-D	715+00	718+91.5	Rt.														
5-D	717+50	717+50	Lt.	10	3.2			93									
6-D	719+48.5	720+48.5	Lt.	43	15.0					100							
7-D	718+91.5	719+95.5	Rt.	76	21.8						104						
8-D	719+95.5	722+00	Rt.														
9-D	717+00	717+00	Lt.												10		
10-D	720+50	720+50	Rt.													10	
F-1042(G) Totals				129	40.0		93	100	104	2800	10	10					
11-D	722+00	722+75	Lt.								150						
12-D	722+00	722+75	Rt.								150						
13-D	722+75	725+00	Lt.	10	3.2	123	105									2	2
14-D	722+75	725+00	Rt.								450						
15-D	722+75	725+00	Rt.								450						
FG-1042(G) Totals				10	3.2	123	105			1200					2	2	



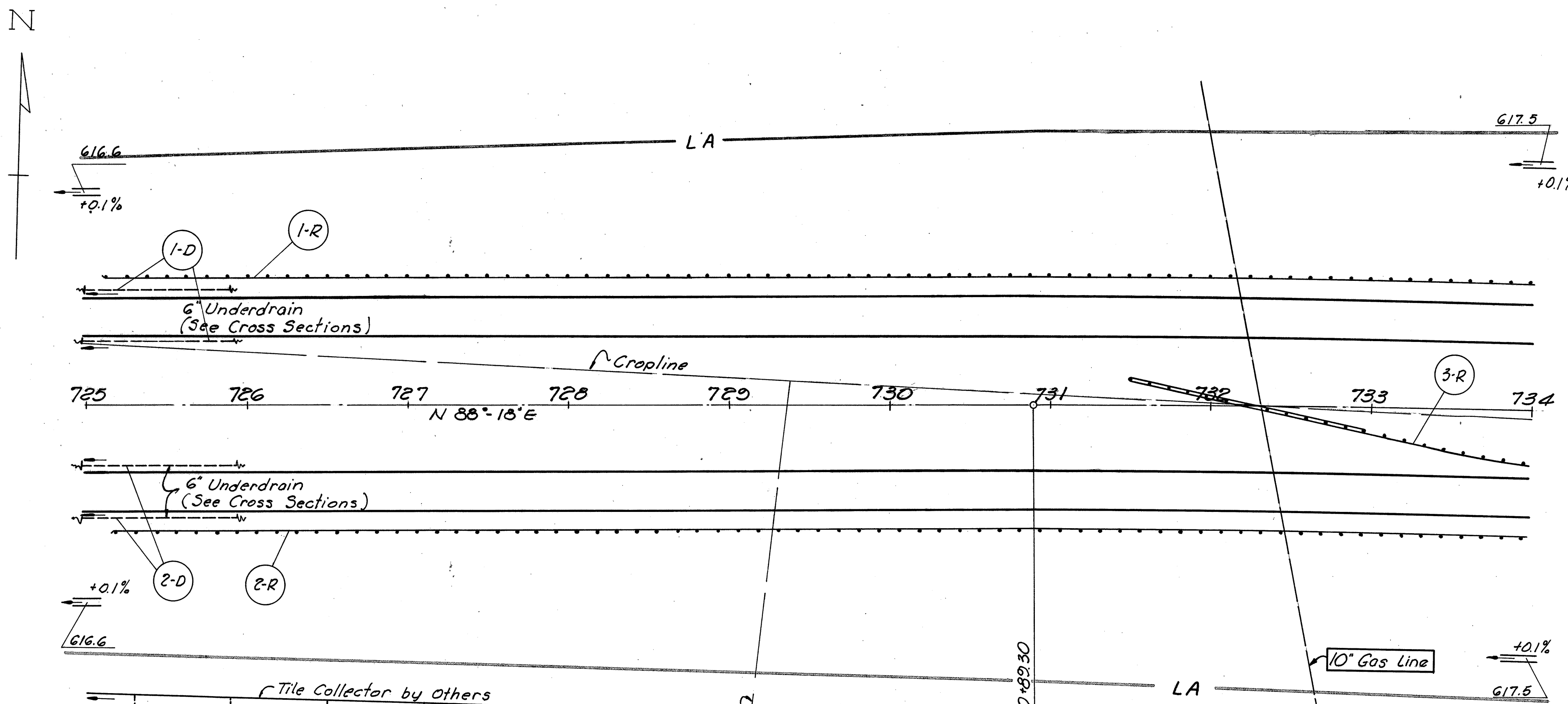
ERI-G-7.31

DATE: 1-25-58
BY: SMS RVE
EDS
EDS
EDS
NO. 220

PLANNED: SURVEYED: GRADES CHECKED: ALIGNED CHECKED: RT. OF WAY CHECKED: NO. 220

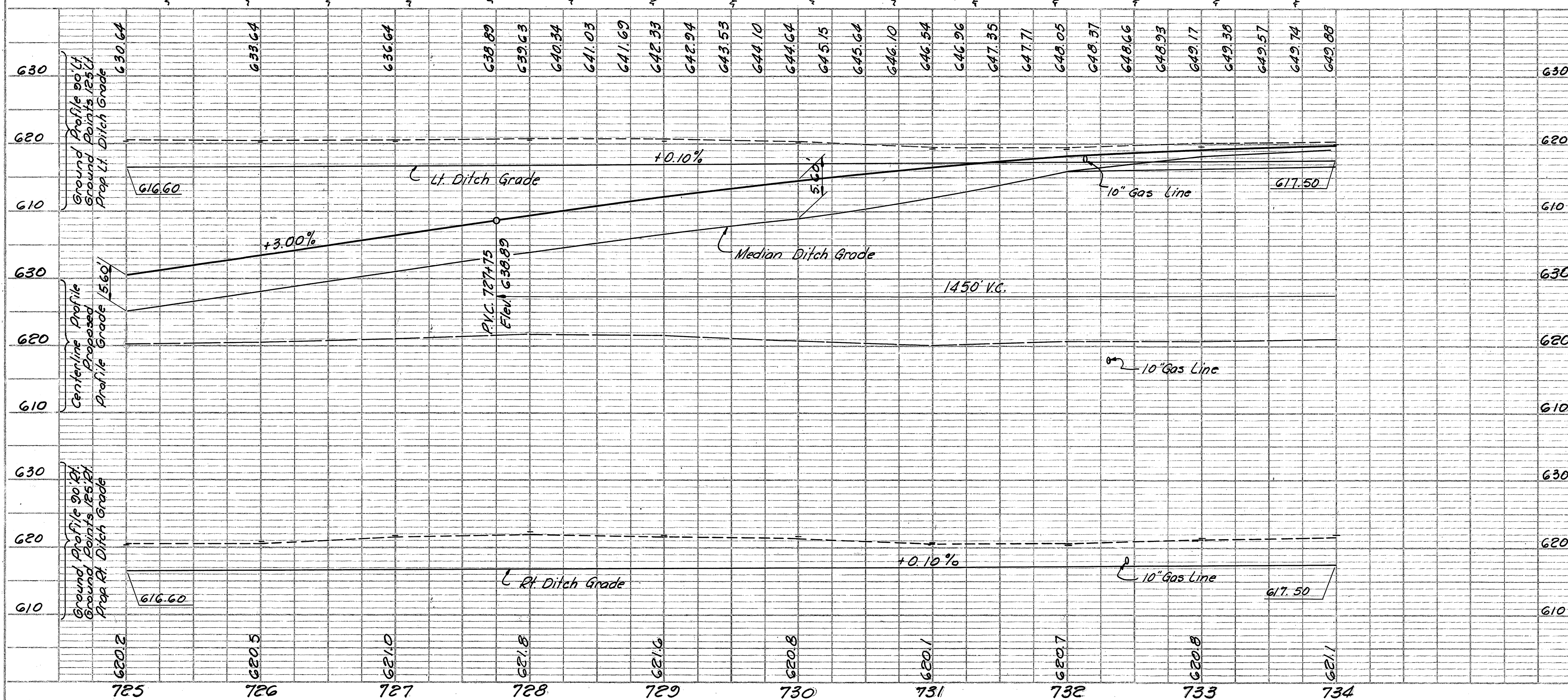
DATE: 1-25-58
BY: SMS RVE
EDS
EDS
EDS
NO. 220

PROFILES: SURVEYED: GRADES CHECKED: STRUCTURE NOTATION DIVID: NO. 220

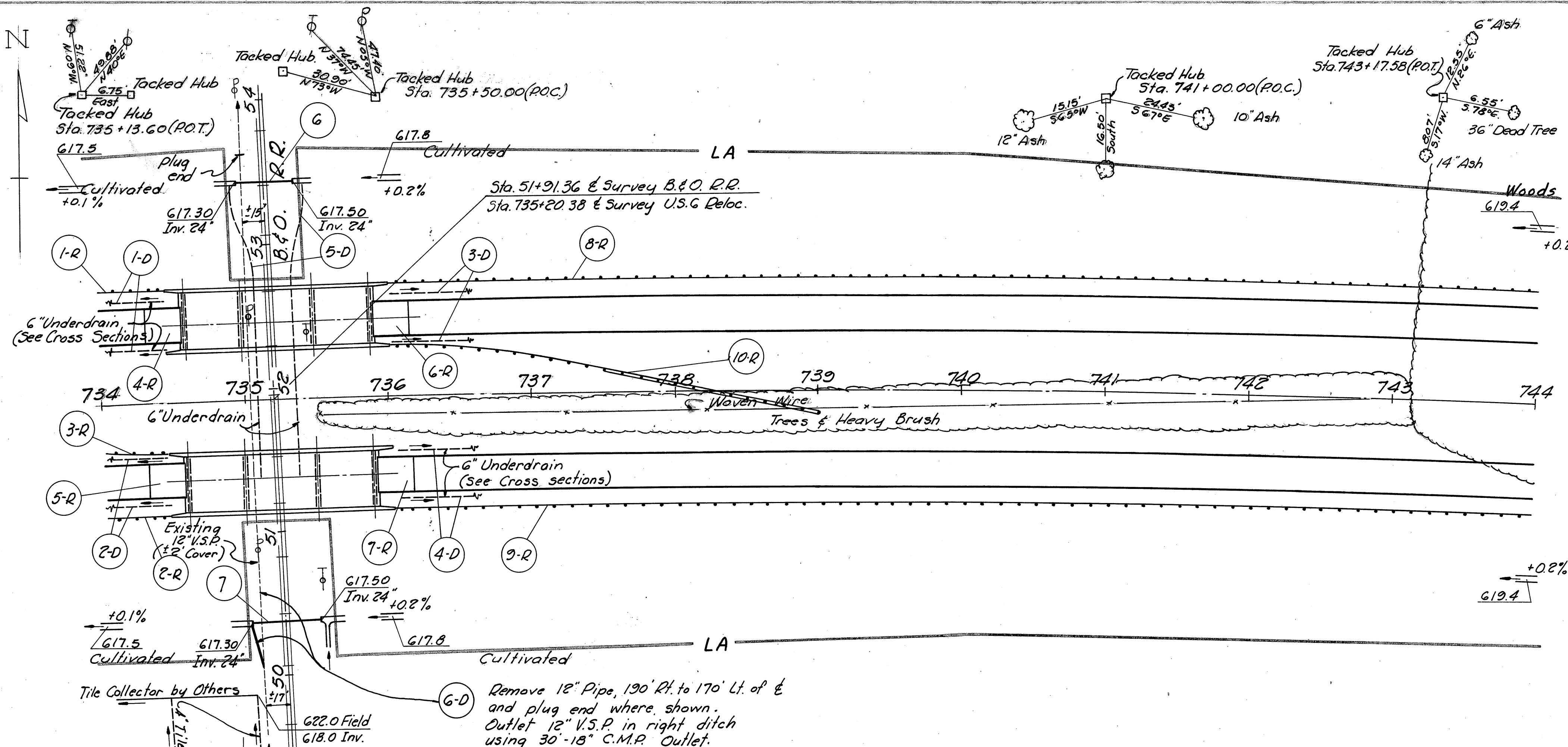


See Sheet No. Reference No. or Structure No.	Station		Side	I-15	I-15
	From	To		Guard Rail (Std. Type) Lin. Ft.	Guard Rail (Banner Type) Lin. Ft.
1-R	725+08.5	734+00	Lt.	891.5	
2-R	725+08.5	734+00	Rt.	891.5	
3-R	731+50	734+00	Med.	104	150
Totals				1887	150

See Sheet No. Reference No. or Structure No.	Station		Side	I-4
	From	To		Underdrain (Shallow) Lin. Ft.
1-D	725+00	734+00	Lt.	1800
2-D	725+00	734+00	Rt.	1800
Totals				3600



ERI-6-7-31



ROADWAY QUANTITIES FG-1042(6)

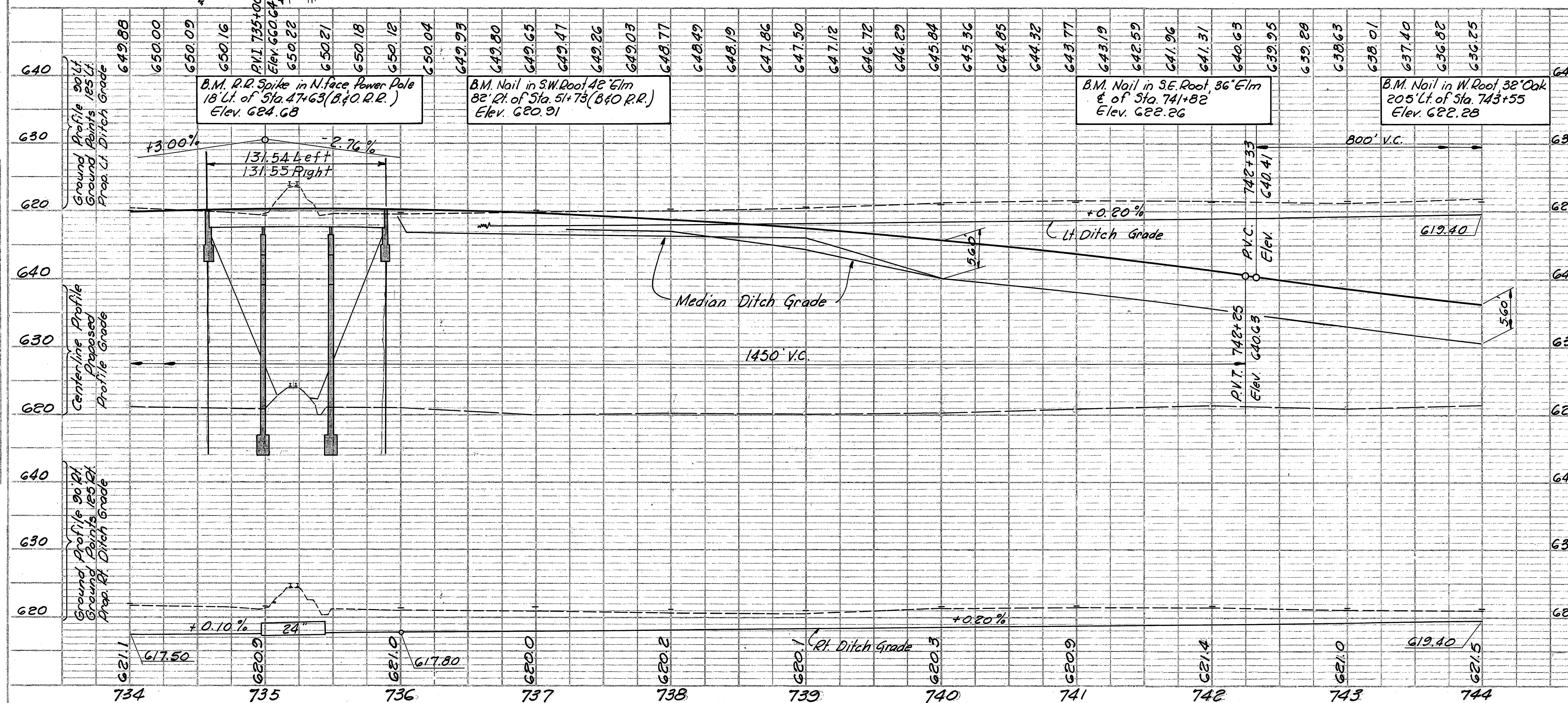
See Sheet No. Reference No. or Structure No.	Station		Side	Compacted Subgrade	Reinf. Conc. Appr. Slab (I-15)	I-15 Guard Rail (Std. Type)	I-15 Guard Rail (Barrier Type)	I-22 Subbase
	From	To						
1-R	734+00	734+46	Lt.			46		
2-R	734+00	734+46	Rt.			46		
3-R	734+00	734+46	Med.			46		
4-R	734+29.61	734+54.61	Lt.	66.7	66.7			11.1
5-R	734+32.64	734+57.64	Rt.	66.7	66.7			11.1
6-R	735+86.15	736+11.15	Lt.	66.7	66.7			11.1
7-R	735+89.19	736+14.19	Rt.	66.7	66.7			11.1
8-R	735+96	744+00	Lt.			804		
9-R	735+96	744+00	Rt.			804		
10-R	735+96	738+92	Med.			150	150	
FG-1042(6) Totals				266.8	266.8	1896	150	44.4

DRAINAGE QUANTITIES FG-1042(6)

See Sheet No. Reference No. or Structure No.	Station		Side	18" C.M.P. Outlet	6" Underdrain (Shallow)	Excavation for Structure	Concrete for Structure Class C	24" Reinf. Conc. Culvert Pipe (M-6.6)	6" Underdrain M-6.4(h)(c)	8" C.M.P. Outlet	3-4 Reinforcing Steel	L-10 Sodding	E-12 Removal of Exst. 12" Pipe
	From	To											
1-D	734+00	734+50	Lt.		100								
2-D	734+00	734+50	Rt.		100								
3-D	735+95	744+00	Lt.		1610								
4-D	735+95	744+00	Rt.		1610								
5G	6	53+44	Lt. & Rt.			51	102	36			436	6	
5G	7	50+38	B&O R.R.			58	102	40			436	6	
5-D	51+39	53+42	Lt. & Rt.						390	20			
6-D	735+04		Lt. & Rt.	30									360
Totals				30	3420	109	20.4	76	390	20	878	12	360

ERI-2-0963 4/R
PROPOSED STRUCTURES
 Type: Continuous Reinforced Concrete Slab Reinf. Conc. Substructure with "C" Type Abutments on Piling and T Type Piers
 Spans: 40'-0", 50'-0", 40'-0" % Brgs.
 Roadway: 42'-0" Sp of Parapets Left & Right Bridges
 Load Frequency: CF 400(57)
 Skew: None
 Wearing Surface: 1" Monolithic Concrete
 Approach Slabs: AS-1-54 (25'-0" Long)
 Alignment: 0°28' Curve Right

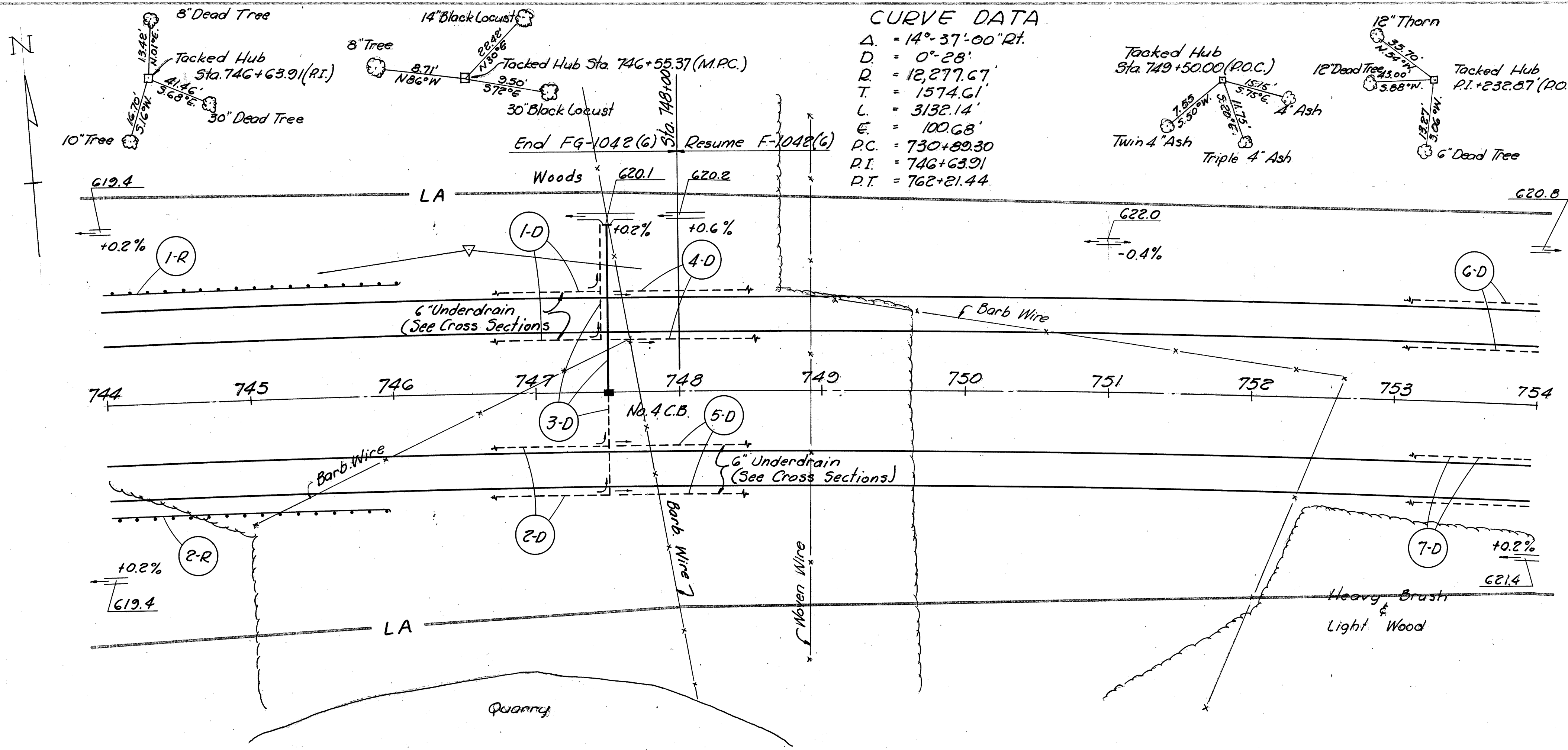
MICROFILMED
 MAR 19 1985



ERI-6-7.31

CURVE DATA

Δ = 14°-37'-00" Rt.
D = 0°-28'
R = 12,877.67'
T = 1574.61'
L = 3132.14'
E = 100.68'
P.C. = 730+89.30
P.T. = 746+63.91
D.T. = 762+21.44



ROADWAY QUANTITIES FG-1042(G)

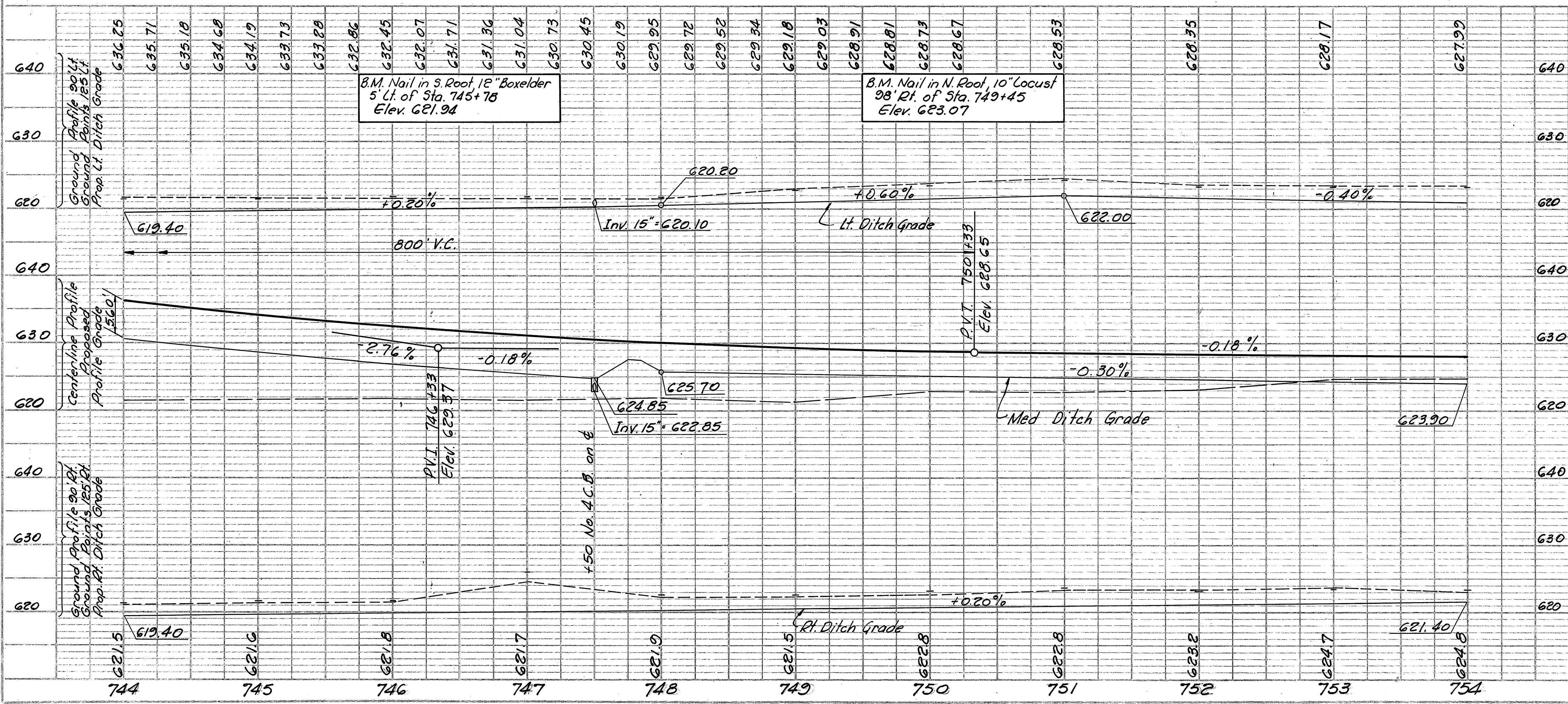
See Sheet No. Reference No. or Structure No.	Station		Side	I-15 Guard Rail (Std. Type)	Lin. Ft.
	From	To			
1-R	744+00	746+08	Lt.		208.5
2-R	744+00	746+09	Rt.		208.5
FG-1042(G) Totals					417

DRAINAGE QUANTITIES FG-1042(G) & F-1042(G)

See Sheet No. Reference No. or Structure No.	Station		Side	Excavation for Structure	5-1	I-2	I-2	I-4	I-5	I-5	I-8	L-10	I-4	3-4
	From	To												
1-D	744+00	747+50	Lt.					700						
2-D	744+00	747+50	Rt.					700						
3-D	747+50	748+00	Lt.	10	32	126	108		2	2	1	2	10	146
4-D	747+50	748+00	Lt.					100						
5-D	747+50	748+00	Rt.					100						
FG-1042(G) Totals					10	32	126	108	1600	2	2	1	2	146
6-D	748+00	754+00	Lt.					1200						
7-D	748+00	754+00	Rt.					1200						
F-1042(G) Totals					-	-	-	-	2400	-	-	-	-	-

DATE: 10-28-58
BY: S.M.B. RVE
E.D. S.M.B. RVE
E.D.S. S.M.B. RVE
E.D.S. S.M.B. RVE

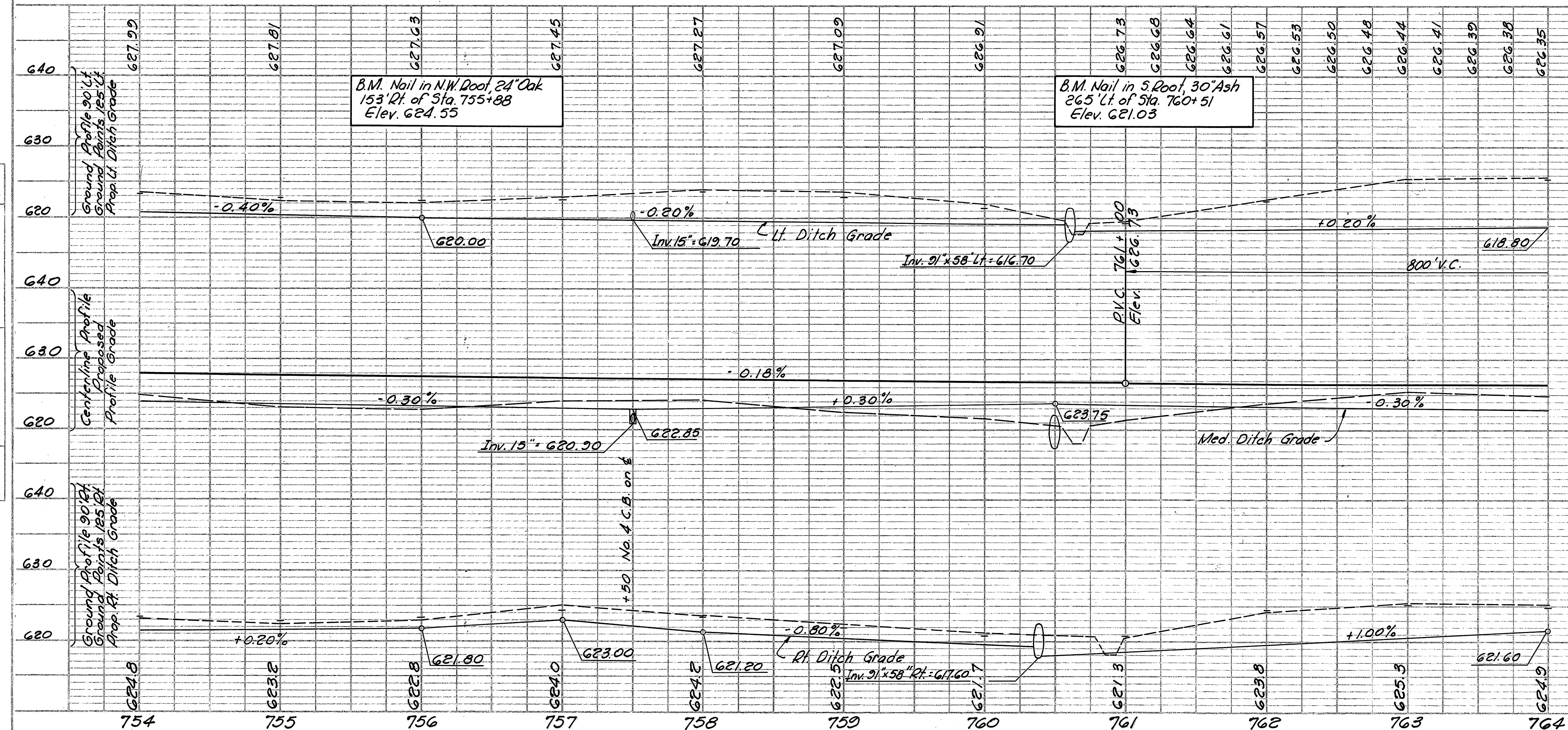
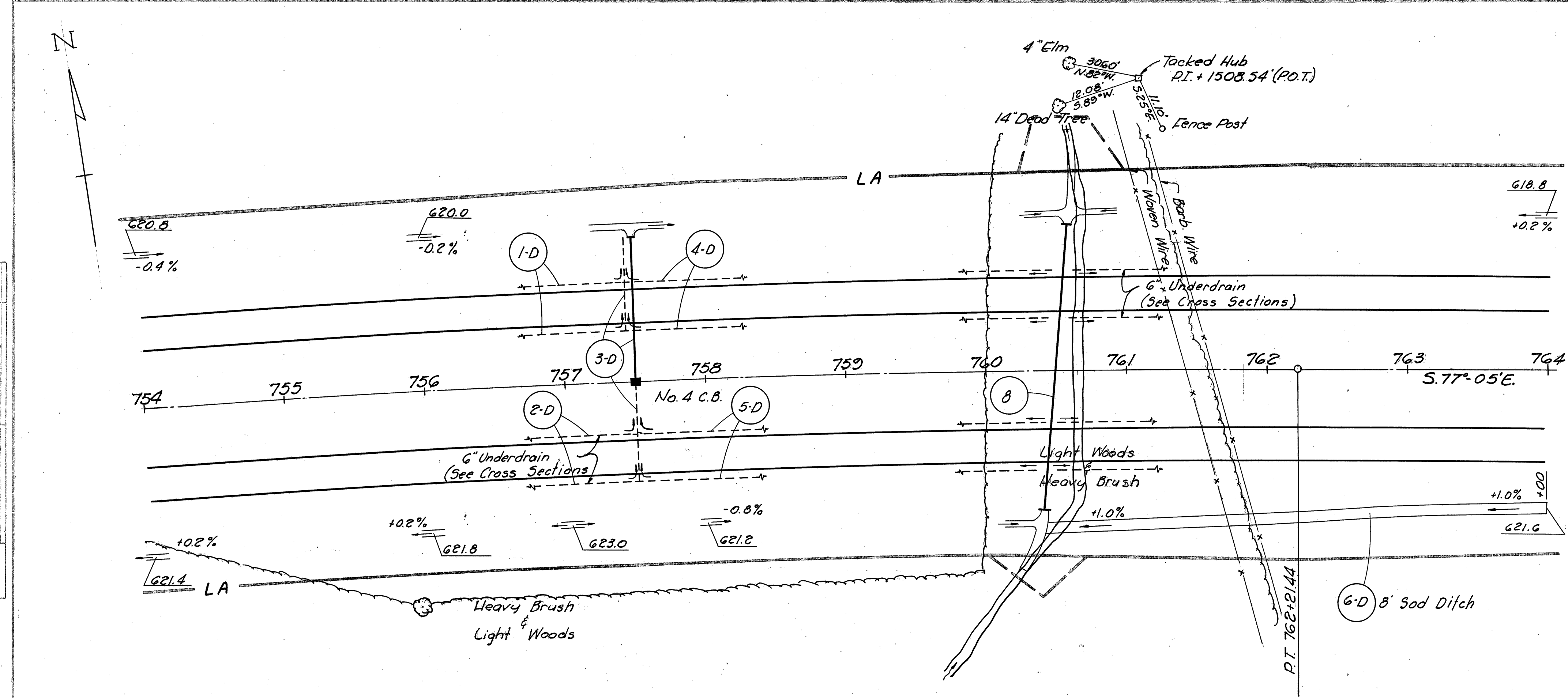
DATE: 10-28-58
BY: S.M.B. RVE
E.D. S.M.B. RVE
E.D.S. S.M.B. RVE
E.D.S. S.M.B. RVE



ERI-G-7.31

DATE: 1958
BY: S.M.B.
E.D. 8-28
R.V.E. 9-10
G.S. 9-10
G.S. 9-10

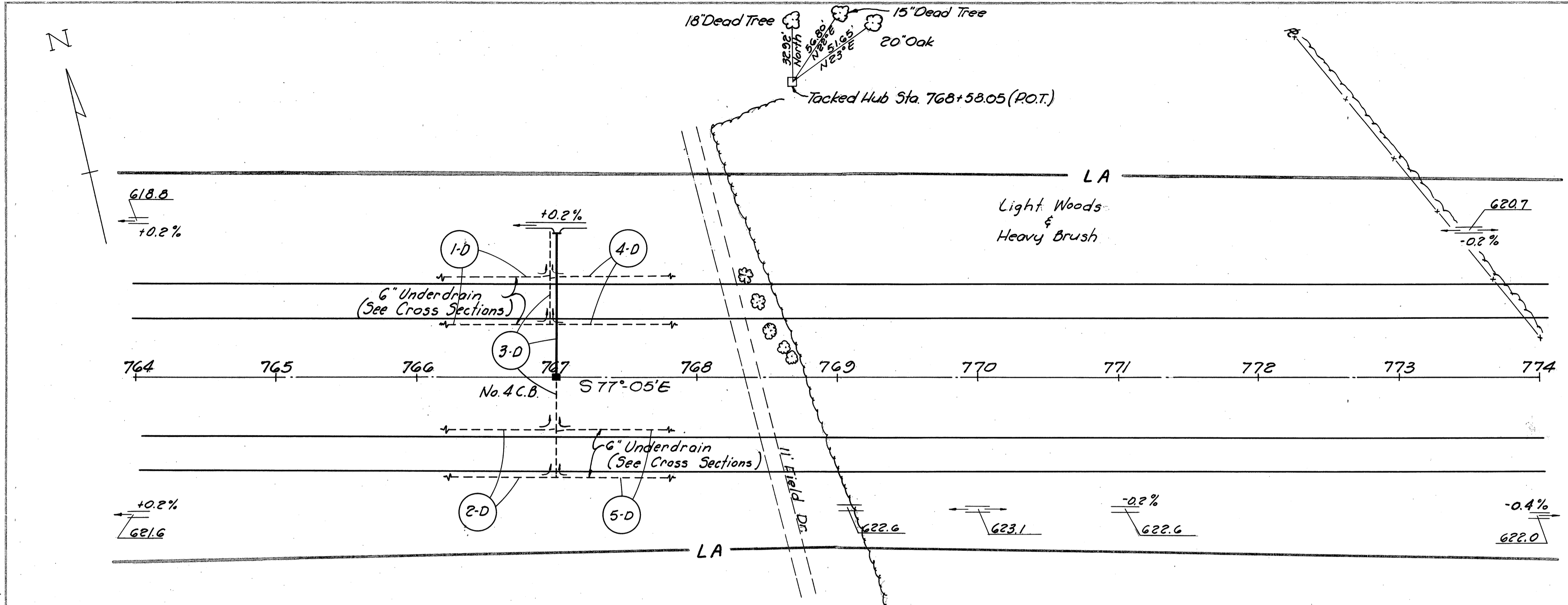
DATE: 1958
BY: S.M.B.
E.F.M. 7-28
R.V.E. 9-10
G.S. 9-10
G.S. 9-10



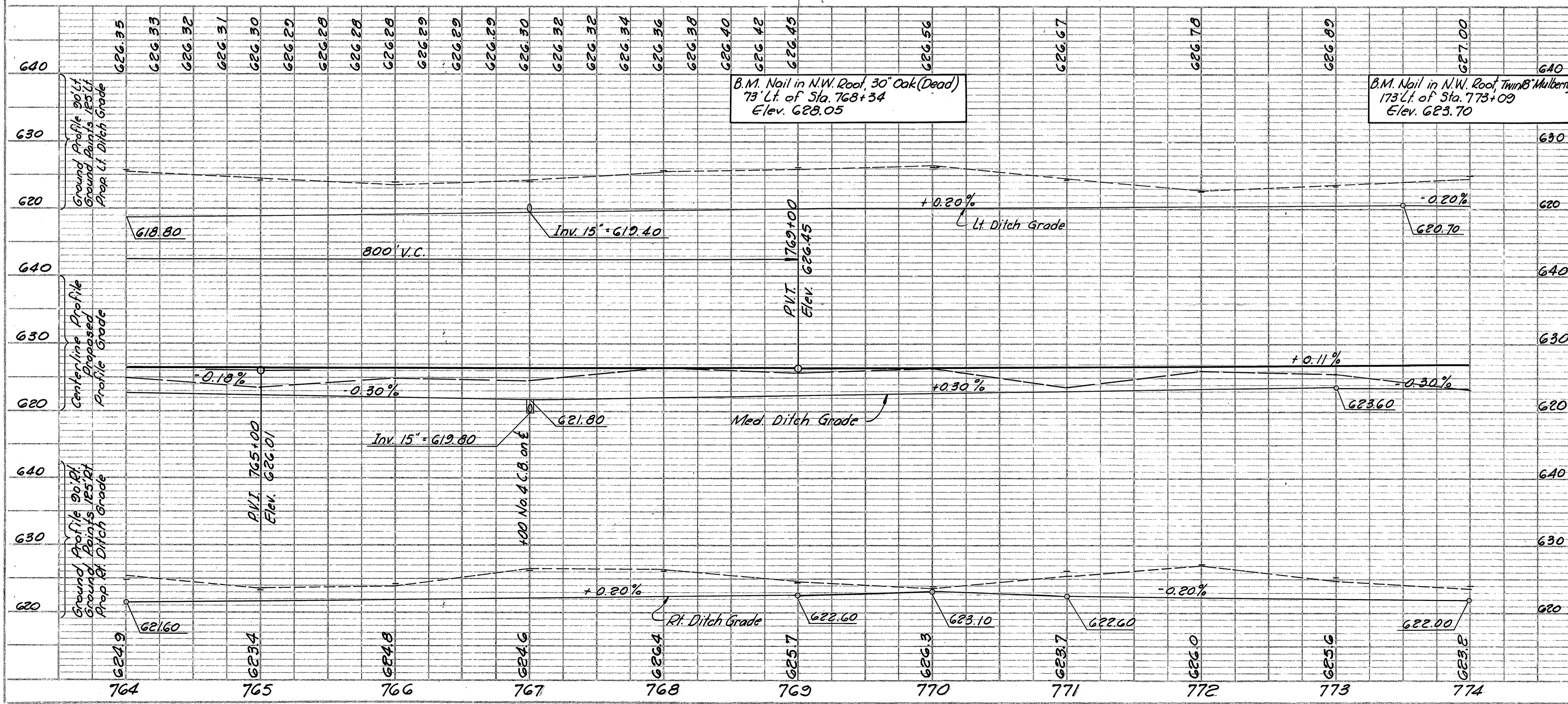
DRAINAGE QUANTITIES F-1042(G)														
See Sheet No. Reference No. or Structure No.	Station		Side	E-2	E-3	S-1	S-27	I-2	I-4	I-5	S-4	I-4	I-10	
	From	To		Excavation for Structure	Channel	Excavation for Structure	Class. Conc. Elliptical Pipe	Storm Sewer Under Pavt.	Storm Sewer Under Pavt.	Underdrain	Underdrain (Shallow)	8" or 12" For Storm Sewer	Reinforcing Steel	Underdrain M.C. 4 (h)
			Cu.Yd.	Cu.Yd.	Cu.Yd.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Ea.	Lb.	Lin.Ft.	Cu.Yd.
1-D	754+00	757+50	Lt.						200				500	
2-D	754+00	757+50	Rt.						200				500	
3-D	757+50	764+00	Lt.	10		3.2	114	95		6	146			
4-D	757+50	764+00	Lt.						1300					
5-D	757+50	764+00	Rt.						1300					
57 8	760+50	764+00	Lt.	167	441	38.0	192				1,746		23	
6-D	760+40	764+00	Rt.											
Totals				177	441	41.2	192	114	95	3000	6	1,892	1000	23
				L-10	I-4	I-8								
				Sodding	B.C.M.P. Outlet	No. 4 C.B.								
				Sa.Yd.	Lin.Ft.	Ea.								
3-D	757+50	764+00	Lt.	2	10	1								
6-D	760+40	764+00	Rt.	320										
57 8	760+50	764+00	Lt.	11										
Totals				333	10	1								

ERI-G-7.31

PLAN
SURVEYED BY
NOTE BOOK NO.
ALIGNMENT CHECKED
RT. OF WAY CHECKED



PROFILE
SURVEYED BY
NOTE BOOK NO.
GRADES CHECKED
STRUCTURE NOTATIONS CHECKED

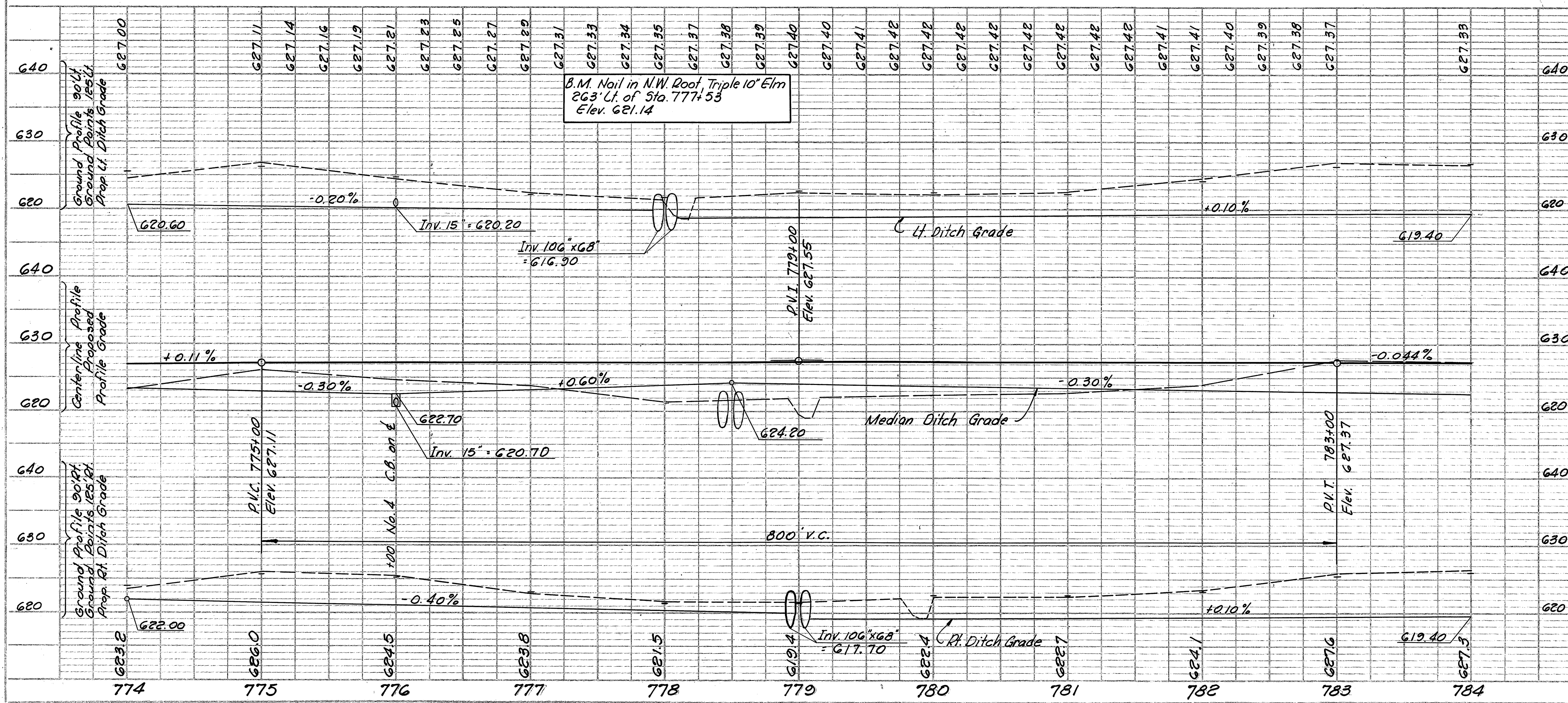
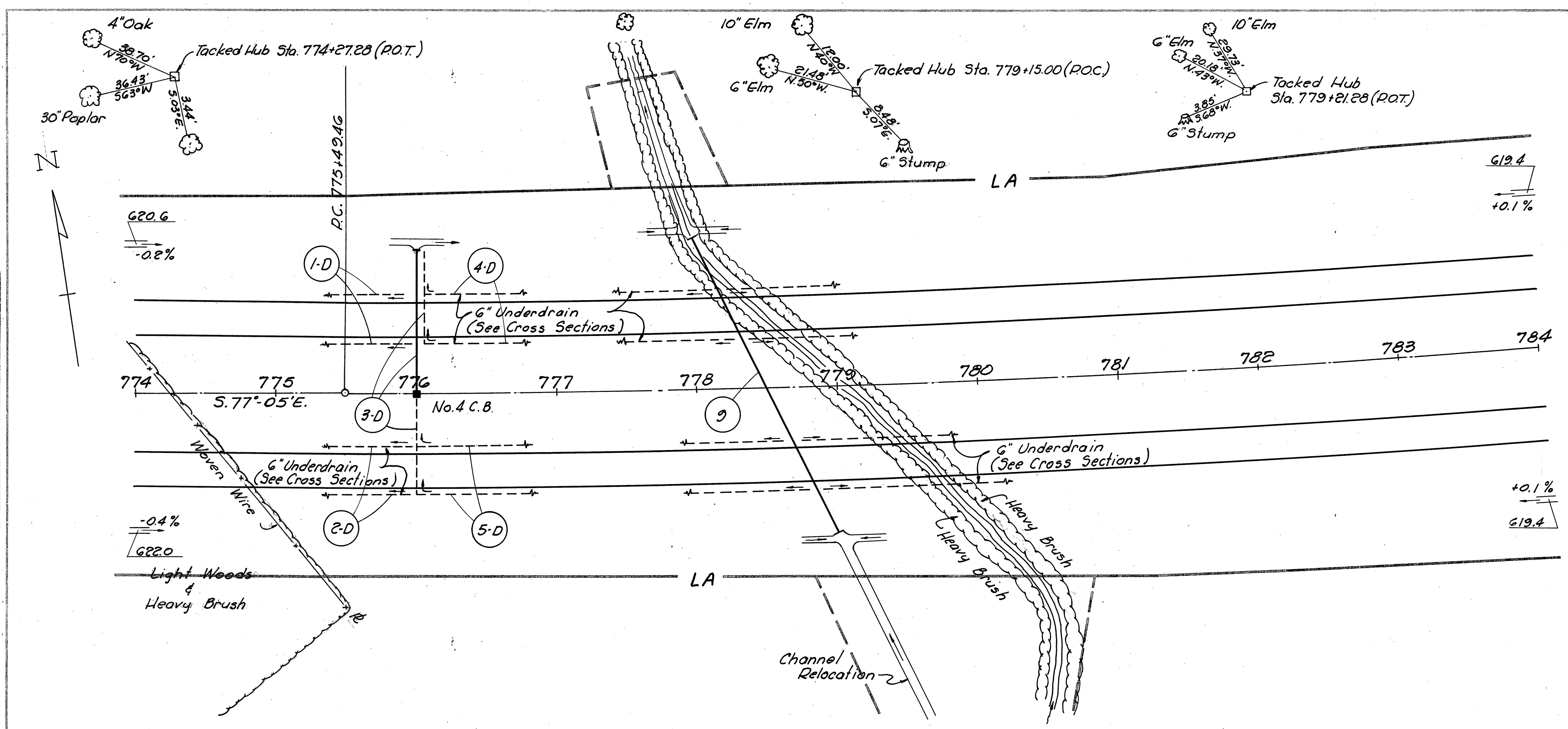


DRAINAGE QUANTITIES												F-1042(G)							
See Sheet No.	Reference No. or Structure No.	Station	Side	Excavation for Structure					Underdrain (Shallow)			No. 4 C.B.		Sodding		8" C.M.P. Outlet		Reinforcing Steel	
				Excavation Cu.Yd.	Concrete Structure Cu.Yd.	Structure Class. Cu.Yd.	Storm Sewer Under Pavt. (M.C.B.) Lin.Ft.	Storm Sewer Under Pavt. (M.C.B.) Lin.Ft.	Underdrain (Shallow) Lin.Ft.	8" Tee for Storm Sewer (M.C.B.) Ea.	Ea.	Sq.Yd.	Lin.Ft.	Lb.					
	1-D	764+00	767+00	Lt.						600									
	2-D	764+00	767+00	Rt.						600									
	3-D	767+00	774+00	Lt.	10	3.2	111	96		6		1	2	10	146				
	4-D	767+00	774+00	Lt.						1400									
	5-D	767+00	774+00	Rt.						1400									
Totals					10	3.2	111	96	4000	6		1	2	10	146				

ERI-6-7.31

DATE: 3-20-66
BY: S.M.B. R.N.E.
E.D.S. E.D.S.
E.D.S. E.D.S.
SURVEYED: []
ALIGNED: []
CHECKED: []
BY: []
NOTE BOOK NO. []

DATE: 3-20-66
BY: S.M.B. R.N.E.
E.D.S. E.D.S.
E.D.S. E.D.S.
SURVEYED: []
GRADES CHECKED: []
B.M.'S NOTED: []
STRUCTURE NOTATION OK'D: []
NOTE BOOK NO. []



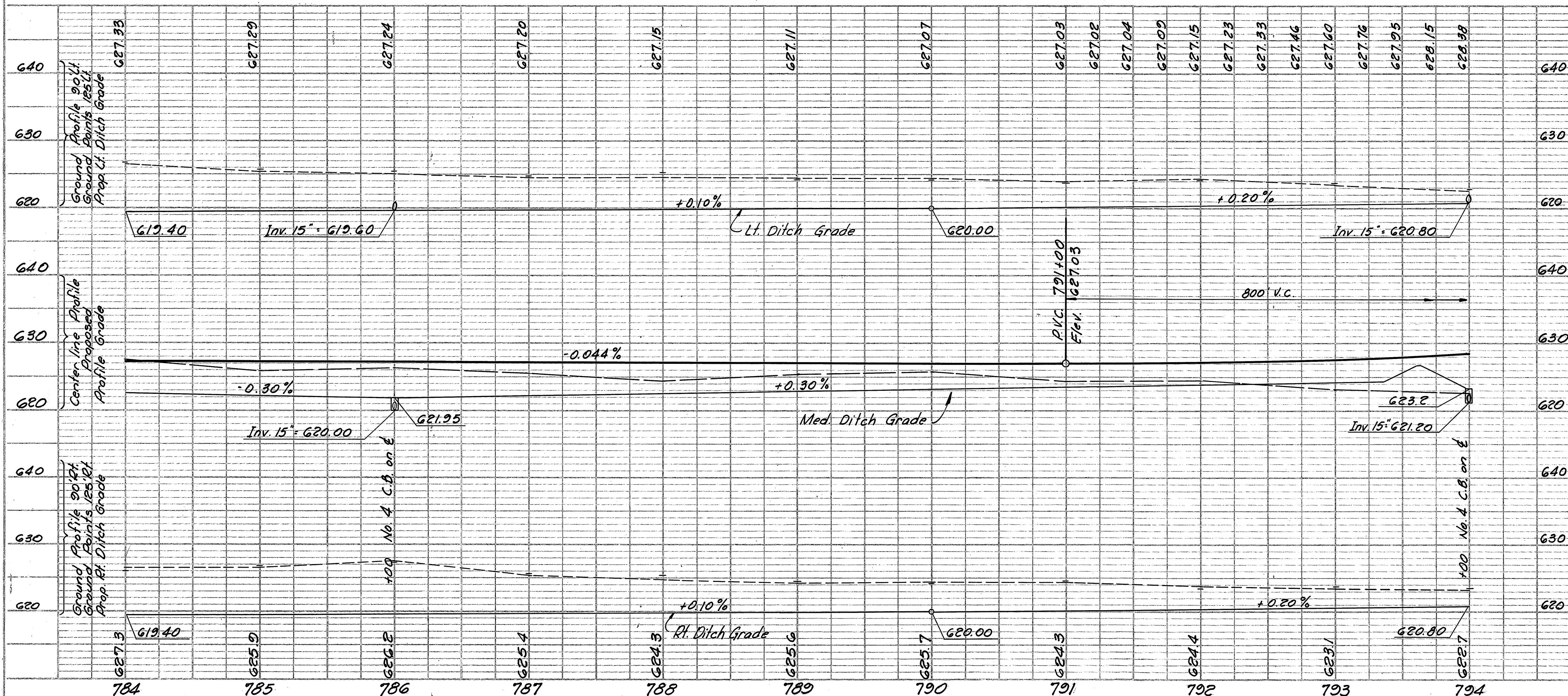
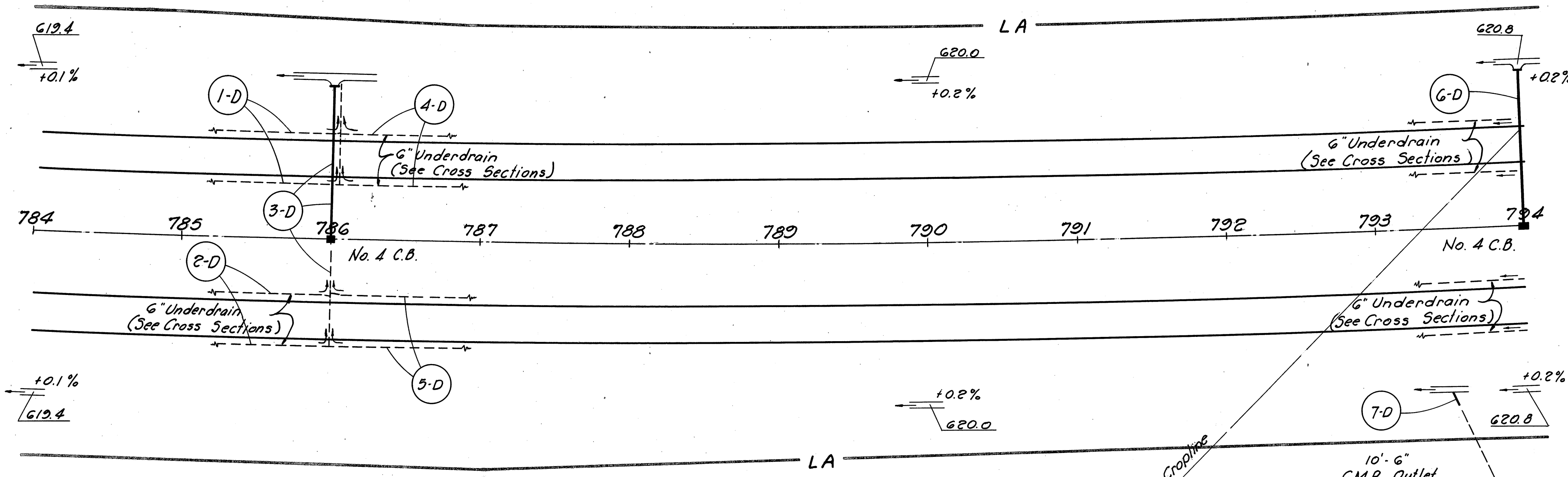
DRAINAGE QUANTITIES F-1042(G)														
See Sheet No.	Reference No. or Structure No.	Station	Side	E-2	E-3	S-1	S-27	I-2	I-2	I-4	I-5	I-5	I-8	L-10
				Excavation for Structure	Channel Excavation	Concrete for Structure	106' x 68' Storm Sewer	15" Storm Sewer	6" Underdrain (Shallow)	6" Storm Sewer	15" Storm Sewer	6" Underdrain (Shallow)	6" Storm Sewer	15" Storm Sewer
From	To	Excavation	Channel	Concrete	Storm Sewer	Storm Sewer	Underdrain	Underdrain	Underdrain	Underdrain	Underdrain	Underdrain	Underdrain	Underdrain
Lin. Ft.	Lin. Ft.	Cu. Yd.	Cu. Yd.	Cu. Yd.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Sq. Yd.
1-D	774+00	776+00	Lt.							400				
2-D	774+00	776+00	Rt.							400				
3-D	776+00	784+00	Lt.	10		3.2		114	96		2	2	1	2
4-D	776+00	784+00	Lt.							1600				
5-D	776+00	784+00	Rt.							1600				
5B	9	778+50	Lt.	395	2017	67.6	432							19
Totals				405	2017	70.8	432	114	96	4000	2	2	1	21
Totals				10	2508									

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MAR 19 1985

ERI-G-7.31

PLAN
SURVEYED BY: SMR RNE
EID EDS
NOTE BOOK NO. 3-20 3-20
ALSO CHECKED BY: R. OF MAY
RI. OF MAY

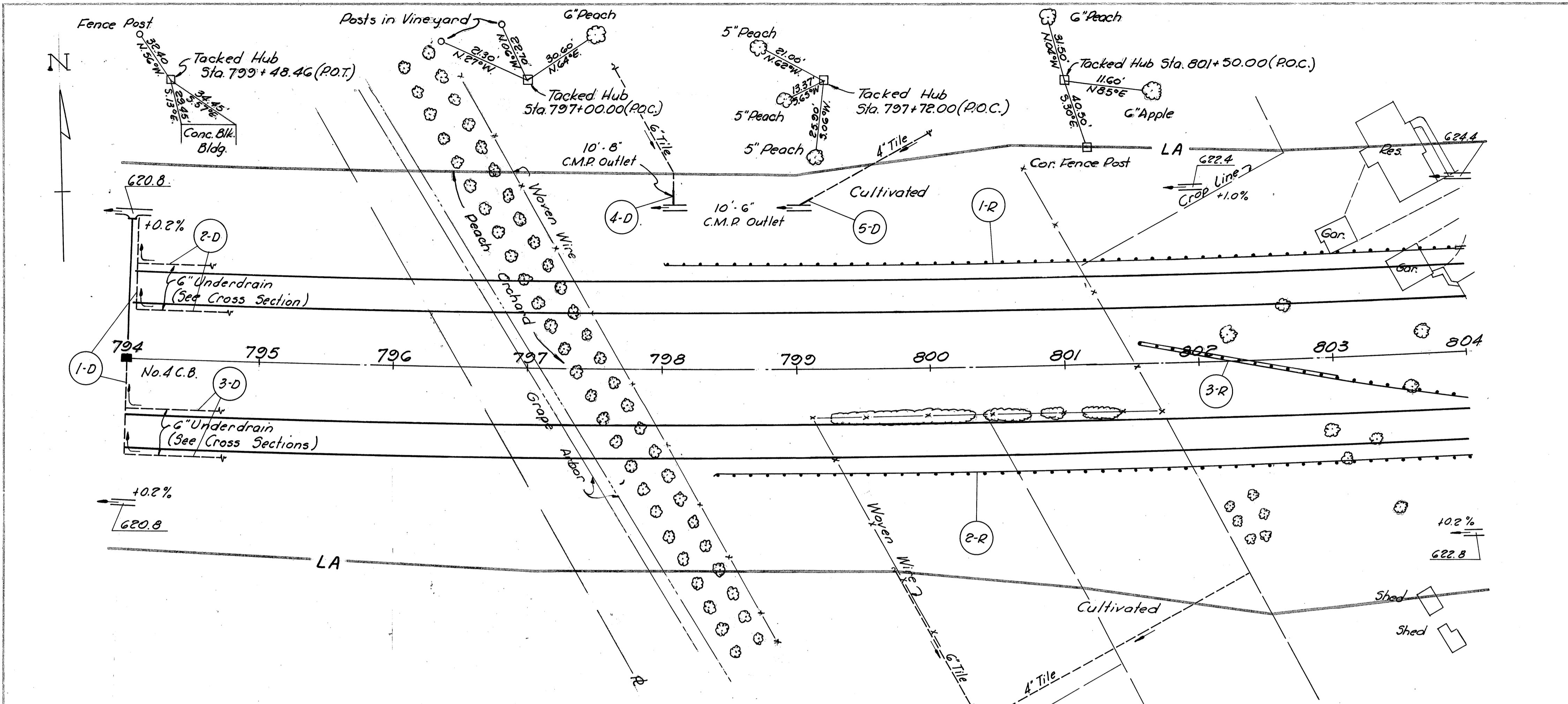
PROFILE
SURVEYED BY: SMR RNE
EID EDS
NOTE BOOK NO. 3-20 3-20
ALSO CHECKED BY: R. OF MAY
RI. OF MAY



Sheet No. Reference No. or Structure No.	Station	Side	Excavation for Structure		Concrete for Structure		Storm Sewer Under Part		Storm Sewer Under Part		6\"/>									
			Cu.Yd.	Lin.Ft.	Cu.Yd.	Lin.Ft.	Cu.Yd.	Lin.Ft.	Cu.Yd.	Lin.Ft.	Lin.Ft.	Lin.Ft.								
1-D	784+00	786+00	Lt.																	
2-D	784+00	786+00	Rt.																	
3-D	786+00	794+00	Lt.	10	3.2	111	99													
4-D	786+00	794+00	Lt.																	
5-D	786+00	794+00	Rt.																	
6-D	794+00		Lt.	10	3.2		99													
7-D	793+50		Rt.																	
Totals																				

ERI-G-7.31

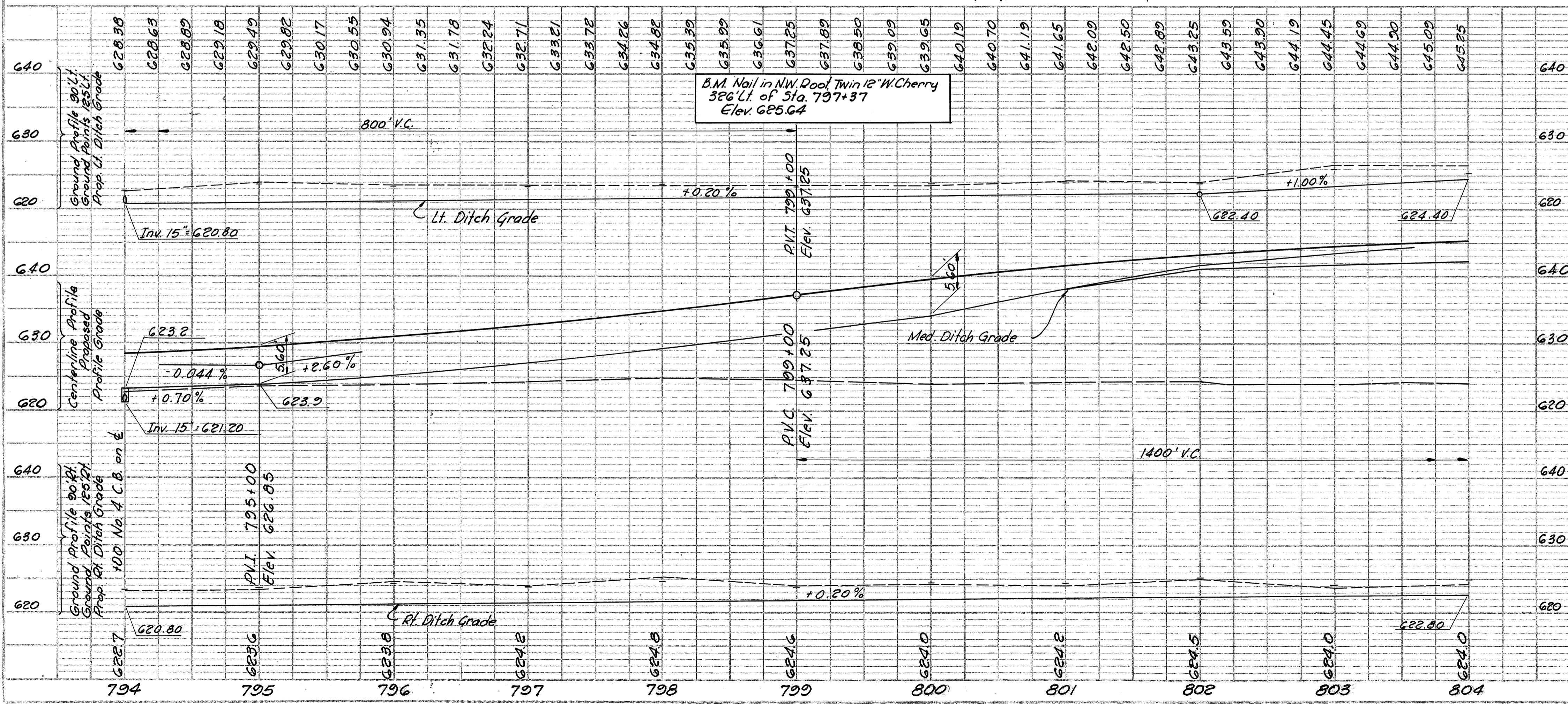
PLAN
 DRAWN BY JMB
 CHECKED BY EDS
 DATE 7-58
 R.F. 1"=40'



ROADWAY QUANTITIES F-1042(G)

See Sheet No. Reference No. or Structure No.	Station		Side	I-15	
	From	To		Guard Rail (Std. Type)	Guard Rail (Barrier)
1-R	798+08	803+96	Lt.	587.5	
2-R	798+37	804+00	Rt.	562.5	
3-R	801+55	804+00	Med.	99	150
Totals				1249	150

PROF.
 DRAWN BY JMB
 CHECKED BY EDS
 DATE 7-58
 R.F. 1"=40'



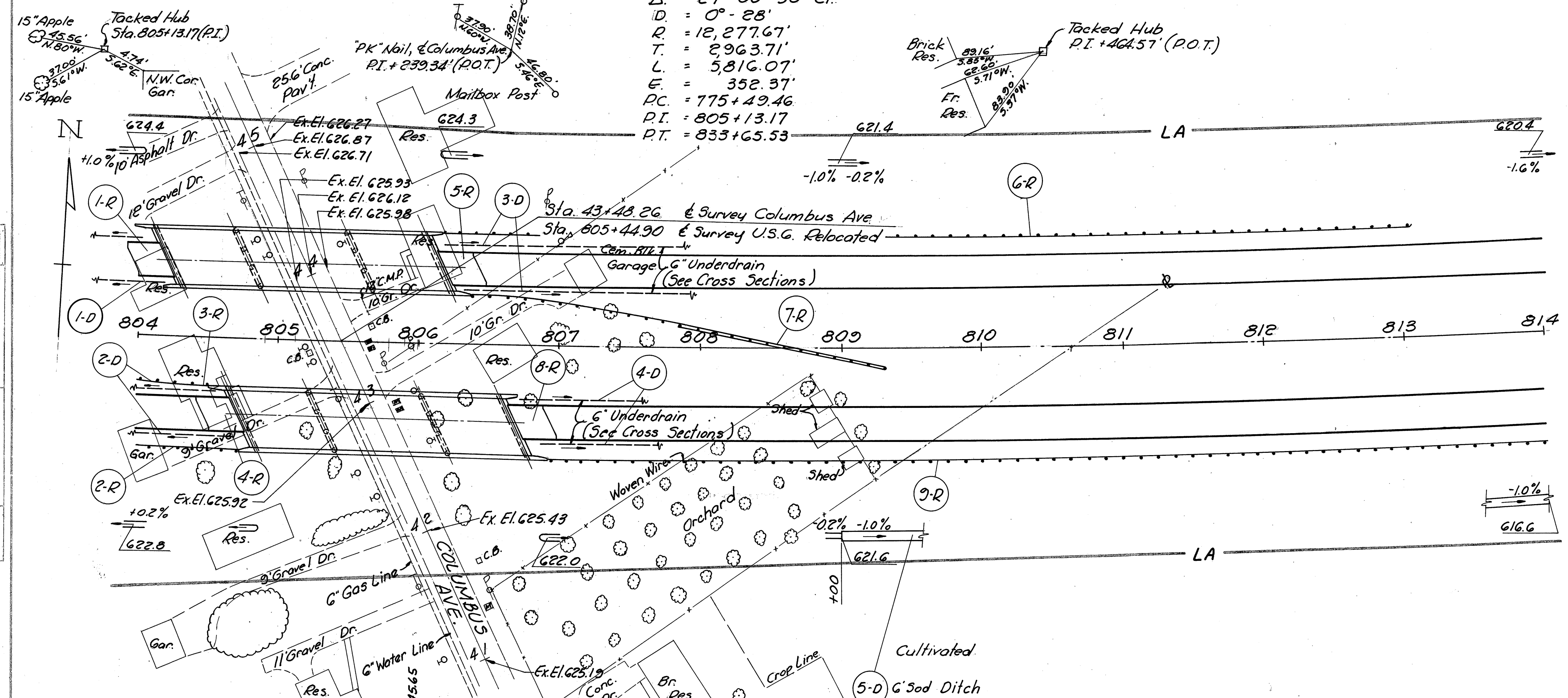
DRAINAGE QUANTITIES F-1042(G)

See Sheet No. Reference No. or Structure No.	Station		Side	Drainage Type					
	From	To		I-2 Storm Sewer Under (Std. M&S)	I-4 G. Underdrain (Shallow)	I-4 G.C.M.P. Outlet	I-4 B.C.M.P. Outlet	I-5 8" or 6" Tee for Storm Sewer (M&S)	I-5 8" or 6" Tee for Storm Sewer (M&S)
1-D	794+00	804+00	Lt.	117					
2-D	794+00	804+00	Lt.		2000				
3-D	794+00	804+00	Rt.		2000				
4-D	798+10		Lt.				10		
5-D	799+00		Lt.				10		
Totals				117	4000	10	20	2	2

ERI-G-7.31

CURVE DATA

Δ = 27°-08'-30" Lt.
 D = 0°-28'
 R = 12,277.67'
 T = 2,963.71'
 L = 5,816.07'
 E = 352.37'
 PC = 775+49.46
 PT = 805+13.17
 P.T. = 833+65.53

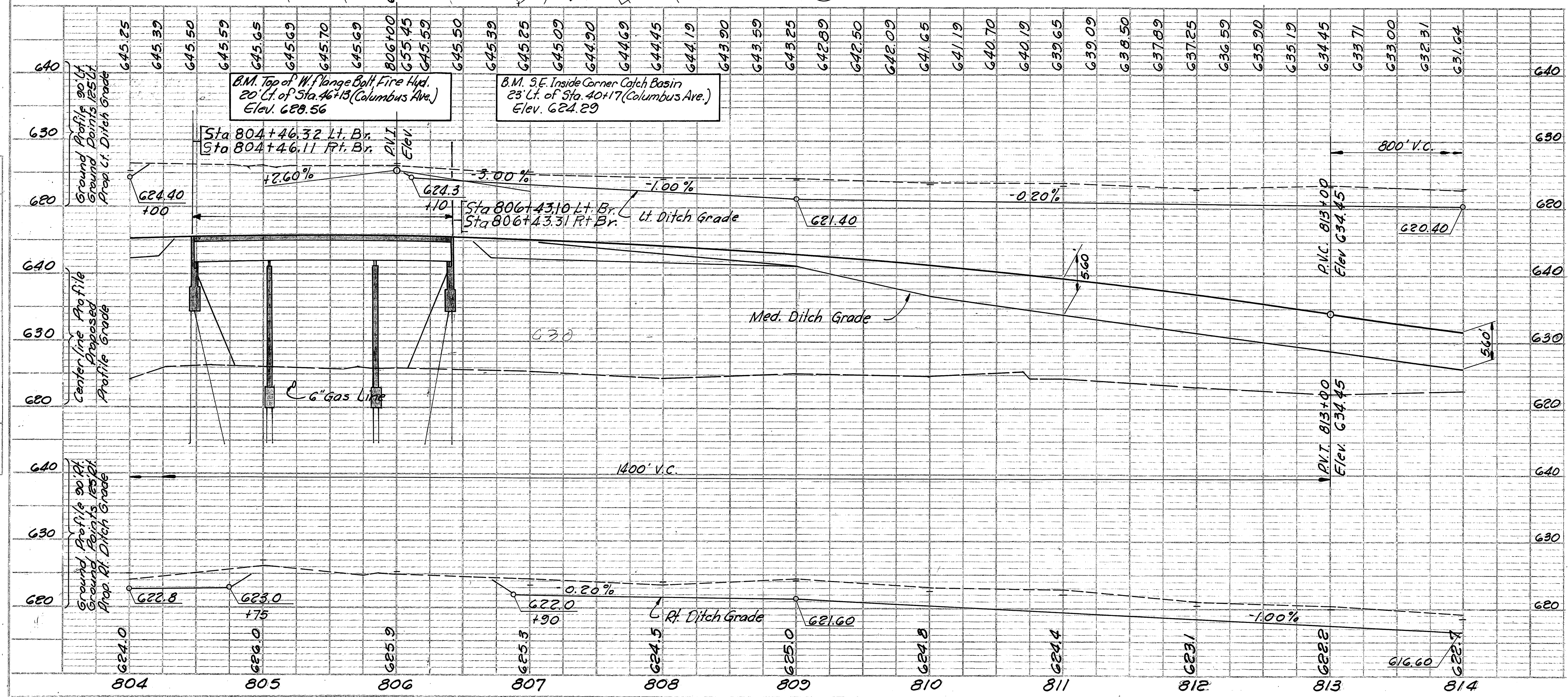


ROADWAY QUANTITIES F-1042(G)

See Sheet No. Reference No. or Structure No.	Station		Side	E-1 Compacted Subgrade Sq. Yd.	I-7 I-15 I-22 Appr. Conc. Slab (T. 13) Guard Rail (Std. Type) Guard Rail (Barrier Type) Subbase	I-15 Guard Rail (Barrier Type) Subbase	I-22 Subbase	
	From	To						
1-R	803+94.71	804+19.71	Lt.	66.7	66.7		11.1	
2-R	804+00	804+62.5	Rt.		62.5			
3-R	804+00	804+51	Rt.		51			
4-R	804+47.49	804+72.49	Rt.	66.7	66.7		11.1	
5-R	806+17.51	806+42.51	Lt.	66.7	66.7		11.1	
6-R	806+14.5	813+02	Lt.			587.9		
7-R	806+36	809+35	Med.			150	150	
8-R	806+68.60	806+93.60	Rt.	66.7	66.7		11.1	
9-R	806+87	814+00	Rt.			713		
Totals				266.8	266.8	1564	150	44.4

DRAINAGE QUANTITIES F-1042(G)

See Sheet No. Reference No. or Structure No.	Station		Side	I-4 Underdrain (Shallow) Sq. Yd.	L-10 Sodding
	From	To			
1-D	804+00	804+15	Lt.	15	
2-D	804+00	804+60 (W)	Rt.	120	
3-D	806+30 (W)	814+00	Lt.	1540	
4-D	806+80 (W)	814+00	Rt.	1440	
5-D	809+00	814+00	Rt.		333
Totals				3115	333



ERI-2-1096 4R

PROPOSED STRUCTURES

Type: Continuous steel beam with reinf. concrete deck Reinf. Concrete Pier Bents and 31/8 Abutments.
 Spans: 56'-0", 80'-0", 56'-0" % Brgs.

Roadway: 42'-0" of Parapets Left & Right Bridges.

Load Frequency: CF-400 (57)
 Skew: 25°-48' R.F. Left Bridge 25°-38' R.F. Right Bridge
 Wearing Surface: 1" Monolithic Concrete
 Approach Slabs: AS-1-54 (25'-0" Long)
 Alignment: 0°-28' Curve Left. No Superelevation.

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MAR 19 1965

804 to 814

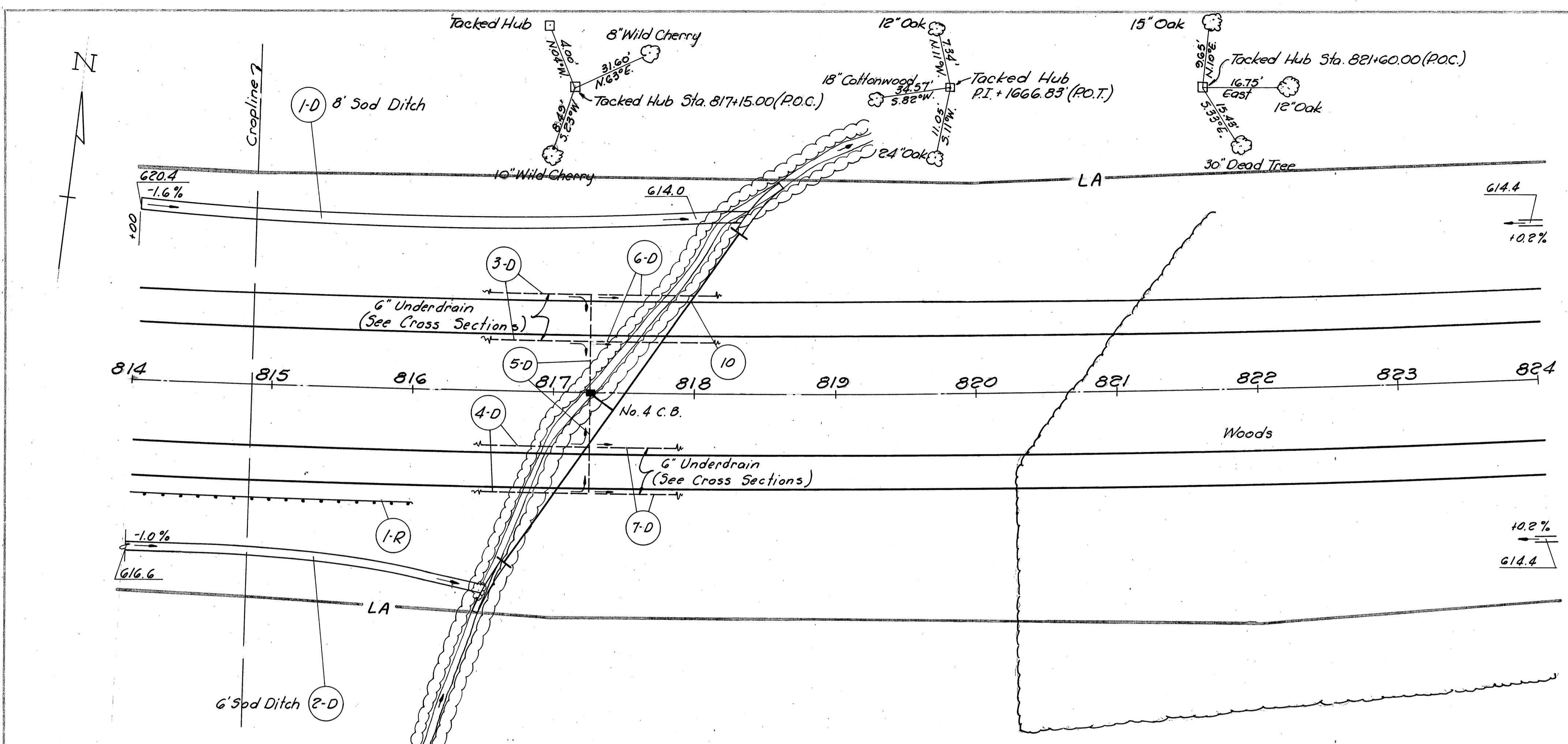
DATE: 10-58
 SURVEYED: S.M.B. RINE
 PLOTTED: E.M. BUE
 NOTE BOOK: EDS
 STRUCTURE NOTATIONS: EDS

DATE: 10-58
 SURVEYED: S.M.B. RINE
 PLOTTED: E.M. BUE
 NOTE BOOK: EDS
 STRUCTURE NOTATIONS: EDS

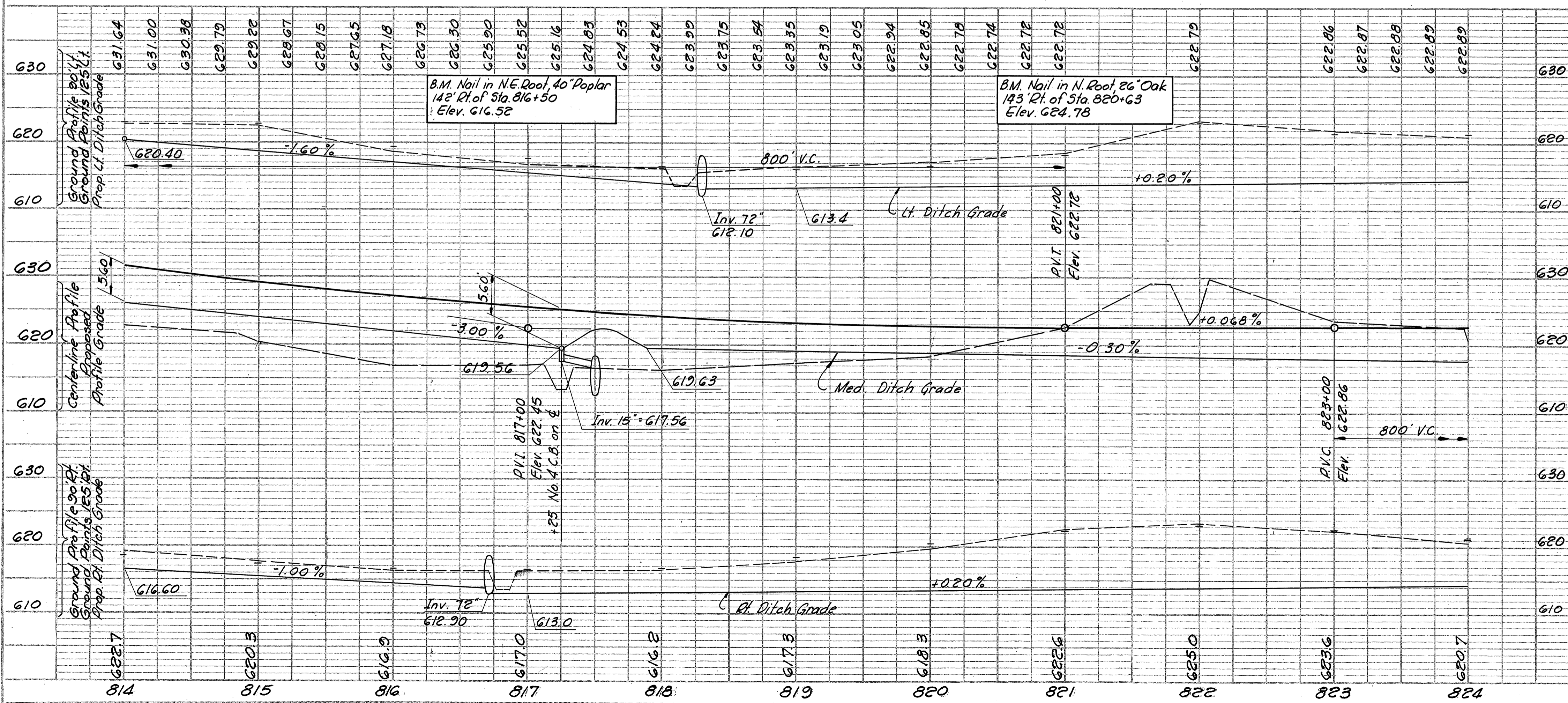
ERI-6-7.31

DATE: 5-28-58
BY: S.M.B. RINE
E.D.S.
E.D.S.
E.D.S.
E.D.S.

DATE: 5-28-58
BY: S.M.B. RINE
E.D.S.
E.D.S.
E.D.S.
E.D.S.



See Sheet No. Reference No. or Structure No.	Station		Side	I-15 Guard Rail (Std. Type) Lin. Ft.
	From	To		
I-R	814+00	815+99.5	Rt.	199.5
Totals				199.5



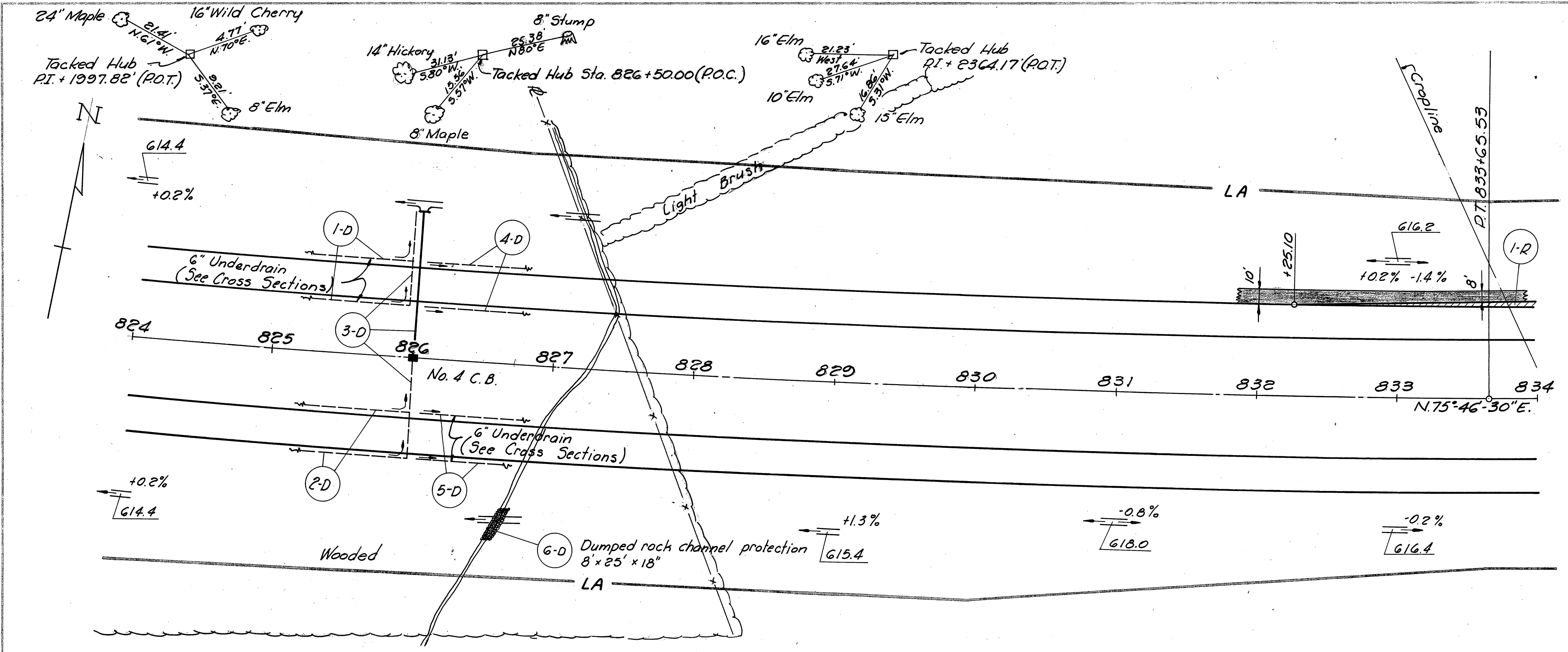
See Sheet No. Reference No. or Structure No.	Station		Side	Excavation for Structure Channel Excavation	E-2	E-3	5-1	5-27	I-2	I-2	I-4	I-4	I-5	I-5	I-8
	From	To													
I-D	814+00	818+35	Lt.												
2-D	814+00	816+50	Rt.								650				
3-D	814+00	817+25	Lt.							650					
4-D	814+00	817+25	Rt.										2	2	
5-D	817+25	817+25	Lt.					126							
59	10	817+50	Lt.	160	549	50.8	250		18						1
6-D	817+25	824+00	Lt.							550	800				
7-D	817+25	824+00	Rt.							550	800				
Totals				160	549	50.8	250	126	18	2400	1600	2	2	1	
				L-10	5-4										
				Sodding											
				Reinforcing Steel											
				Sq. Yd.											
				Lb.											
I-D	814+00	818+35	Lt.	387											
2-D	814+00	816+50	Rt.	167											
59	10	817+50	Lt.	13	1942										
Totals				567	1942										

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MAR 19 1965

ERI-6-7.31

DATE 10-28-58
BY S.M.B. R.N.E.
E.D.S. 3-50
E.D.S. 3-50
E.D.S. 3-50

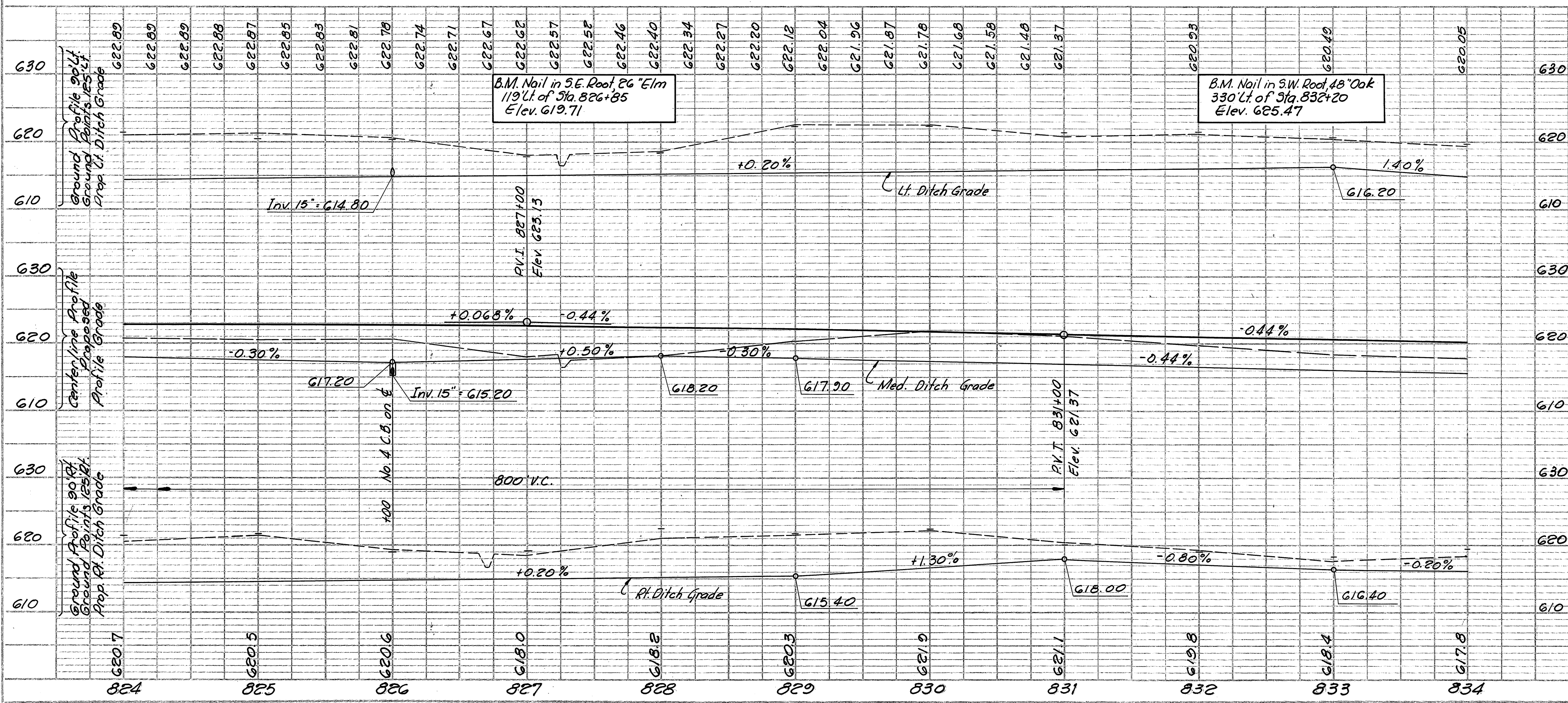
PLANNED SURVEYED PLOTTED
NOTE BOOK GRADES CHECKED
NO. B.M.'S NOTED
STANDARD DATUMS USED



See Sheet No. Reference No. or Structure No.	Station		Side	E-1 Compacted Subgrade Sq. Yd.	T-71 9\"/>	
	From	To				I-22 Subbase Cu. Yd.
1-R	832+25.10	834+00		35.4	35.4	5.9
Totals				35.4	35.4	5.9

DATE 10-28-58
BY S.M.B. R.N.E.
E.D.S. 3-50
E.D.S. 3-50
E.D.S. 3-50

PROFILING SURVEYED PLOTTED
NOTE BOOK GRADES CHECKED
NO. B.M.'S NOTED
STANDARD DATUMS USED



See Sheet No. Reference No. or Structure No.	Station		Side	E-2 Excavation for Structure Cu. Yd.	5-1 Concrete for Structure Class "C" Cu. Yd.	I-2 Storm Sewer Under Part (48\"/>								
	From	To					I-4 Storm Sewer Under Part (48\"/>							
1-D	824+00	826+00	Lt.				400							
2-D	824+00	826+00	Rt.				400							
3-D	826+00	834+00	Lt. & Rt.	10	3.2	117	99		2	2	10		2	1
4-D	826+00	834+00	Lt.				1600							
5-D	826+00	834+00	Rt.				1600							
6-D	826+70		Rt.								11			
Totals				10	3.2	117	99	4000	2	2	10	11	2	1
3-D	826+00		Lt. & Rt.				146							
Totals							146							

ERI-G-7.31

DATE: 10-58
BY: S.M.B. R.N.E.
E.I.D. E.O.S.
E.O.S.
E.O.S.
E.O.S.

REVISIONS:
1. 10-58
2. 11-58
3. 1-59
4. 3-59
5. 5-59
6. 7-59
7. 9-59
8. 11-59
9. 1-60
10. 3-60
11. 5-60
12. 7-60
13. 9-60
14. 11-60

APPROVED: [Signature]
DATE: 10-58

NOTE: ALL GRADES CHECKED BY S.M.B. & R.N.E.
RI. OF WAY CHECKED BY E.O.S.

NO. 10

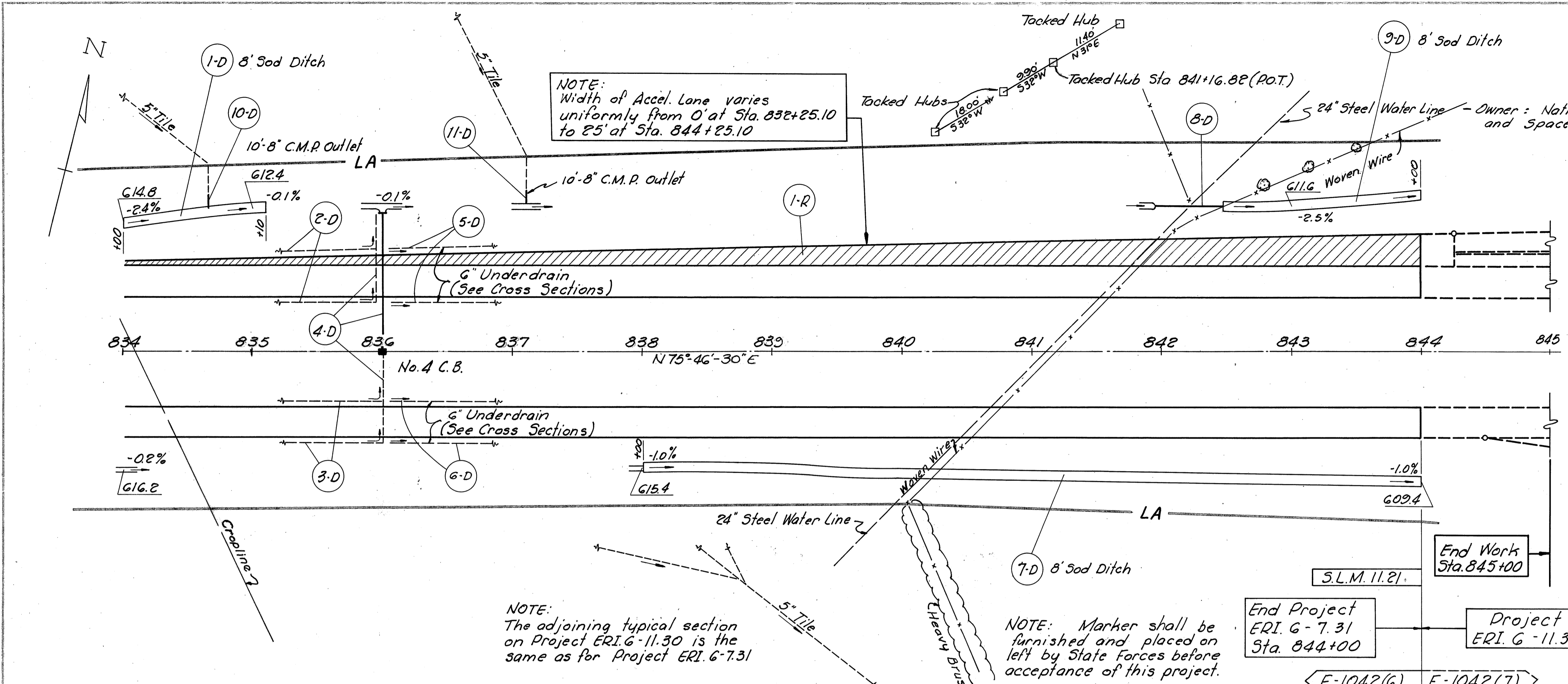
DATE: 10-58
BY: S.M.B. R.N.E.
E.I.D. E.O.S.
E.O.S.
E.O.S.

REVISIONS:
1. 10-58
2. 11-58
3. 1-59
4. 3-59
5. 5-59
6. 7-59
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8. 11-59
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12. 7-60
13. 9-60
14. 11-60

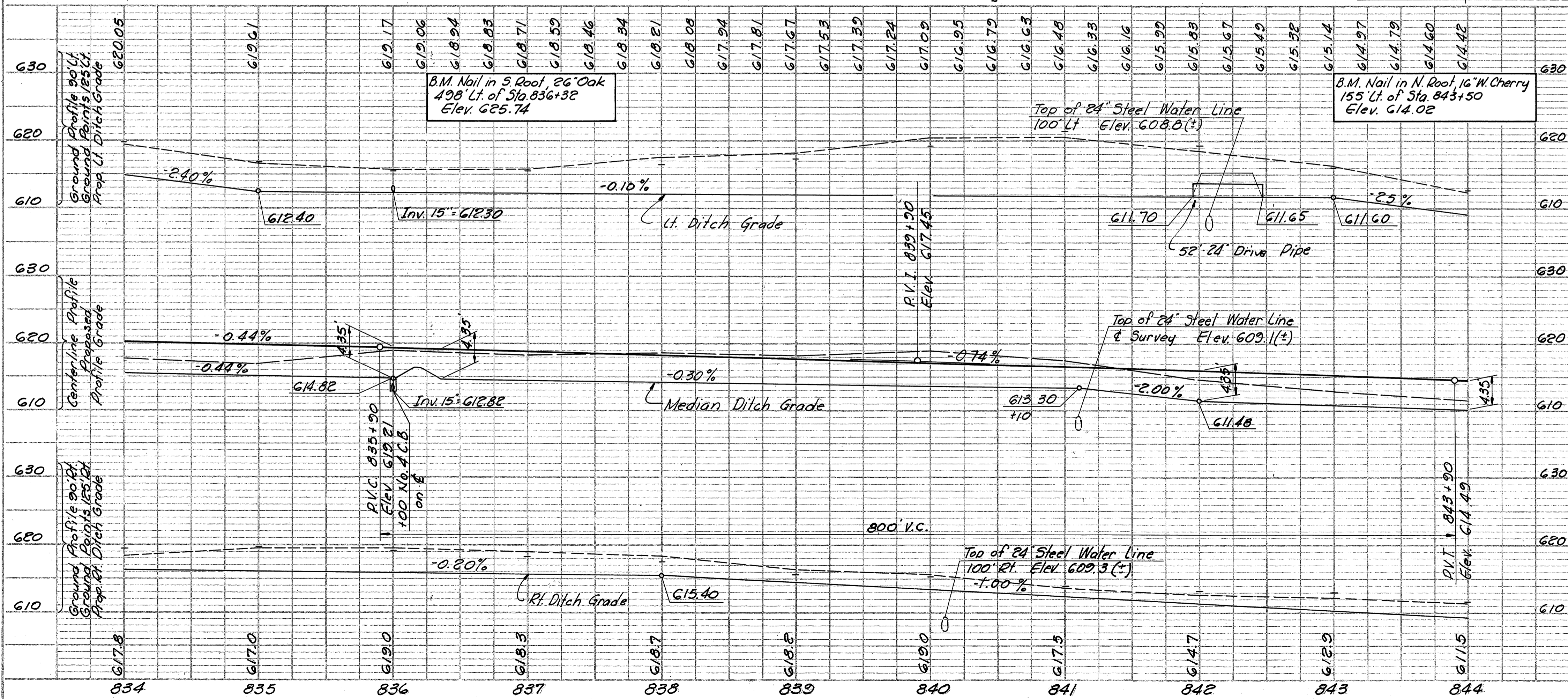
APPROVED: [Signature]
DATE: 10-58

NOTE: ALL GRADES CHECKED BY S.M.B. & R.N.E.
STRUCTURE MANAGER'S CHECKED BY E.O.S.

NO. 10



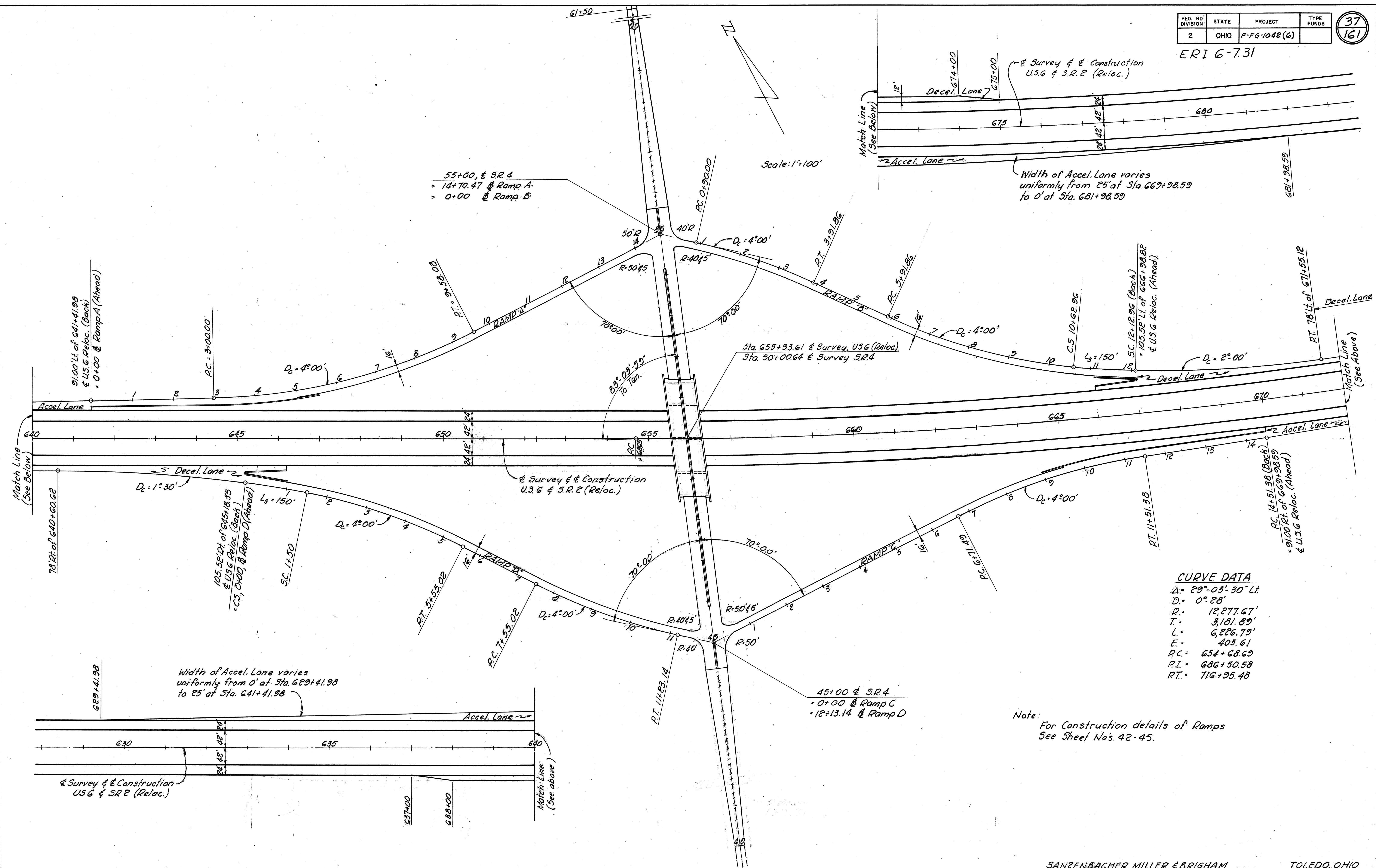
See Sheet No. Reference No. on Structure No.	Station		Side	E-1		T-71		I-22	
	From	To		Compacted Subgrade	9" Rein. P.C. Conc. Pavt.	Subbase			
				Sq. Yd.	Sq. Yd.	Cu. Yd.			
1-R	834+00	844+00	Lt.	1562.2	1562.2	260.4			
Totals				1562.2	1562.2	260.4			



See Sheet No. Reference No. on Structure No.	Station		Side	E-2		S-1		I-2		I-2		I-4		I-5		I-5		I-8		L-10			
	From	To		Excavation for Structure	Concrete for Structure	Class. C. Storm Sewer Under Part. (M.C.S. or M.C.S. (B))	15" Storm Sewer Under Part. (M.C.S. or M.C.S. (B))	24" Storm Sewer Under Part. (M.C.S. or M.C.S. (B))	6" Underdrain (Deep)	8" C.M.P. Outlet	8" 8' Tee for Storm Sewer (M.C.S. or M.C.S. (B))	8" 90° El. for Storm Sewer (M.C.S. or M.C.S. (B))	No. 4 C.B.	Sodding									
			Cu. Yd.	Cu. Yd.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Sq. Yd.	Sq. Yd.		
1-D	834+00	835+10	Lt.																				
2-D	834+00	836+00	Lt.										400										
3-D	834+00	836+00	Rt.									400											
4-D	836+00	844+00	Lt. & Rt.	10	3.2	129	102					10	2	2	1	2							
5-D	836+00	844+00	Lt.									1600											
6-D	836+00	844+00	Rt.									1600											
7-D	838+00	844+00	Rt.																				
8-D	841+95	842+47	Lt.						52													533	
9-D	842+47	844+00	Lt.																			138	
10-D	834+65		Lt.										10										
11-D	837+12		Lt.										10										
Totals				10	3.2	129	102	52	4000	30	2	2	1	771									
4-D	836+00		Lt. & Rt.	146																			
Totals				146																			

ERI 6-7.31

Scale: 1"=100'



Note:
For Construction details of Ramps
See Sheet Nos. 42-45.

ERI. G-7.31

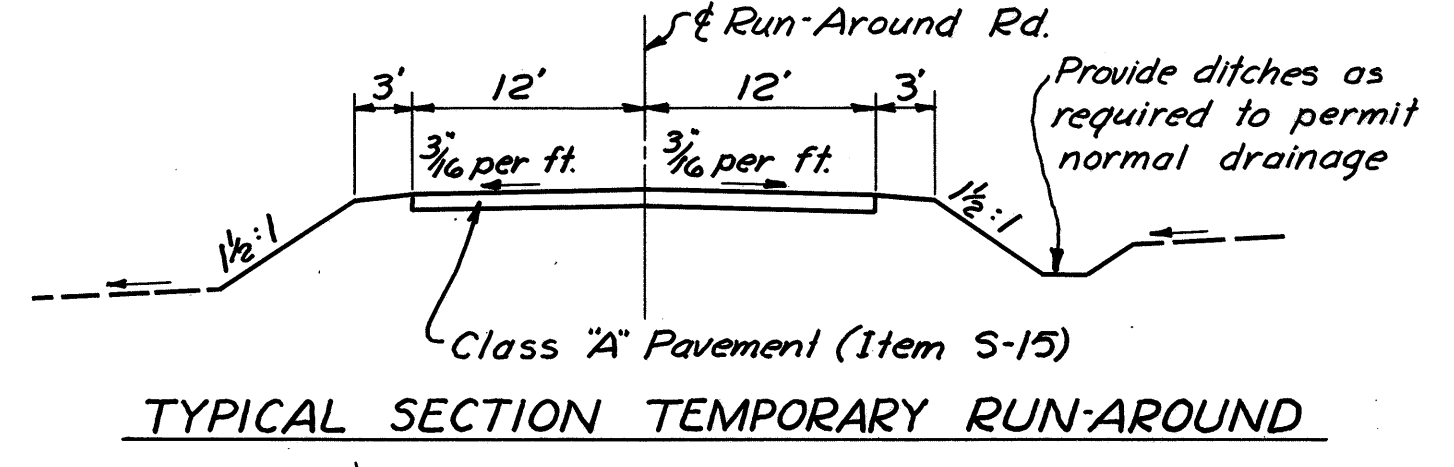
RUN-AROUND CURVE DATA ①②③④
 $\Delta = 37^{\circ} 39' 30''$
 $R = 300.00'$
 $T = 102.30'$
 $L = 197.18'$
 ① P.I. = 11+02.30
 ② P.I. = 12+99.48
 ③ P.I. = 30+13.52
 ④ P.I. = 32+10.70

BEGIN RUN-AROUND STA. 40+50

BEGIN NEW PAVEMENT STA. 40+00

BEGIN WORK BEGIN TEMPORARY TRAFFIC LANES, STA. 35+75

Note: Payment for construction, maintenance and subsequent removal of temporary pipe drainage structures shown is included in the Lump Sum bid for Item 5-15 Runaround.



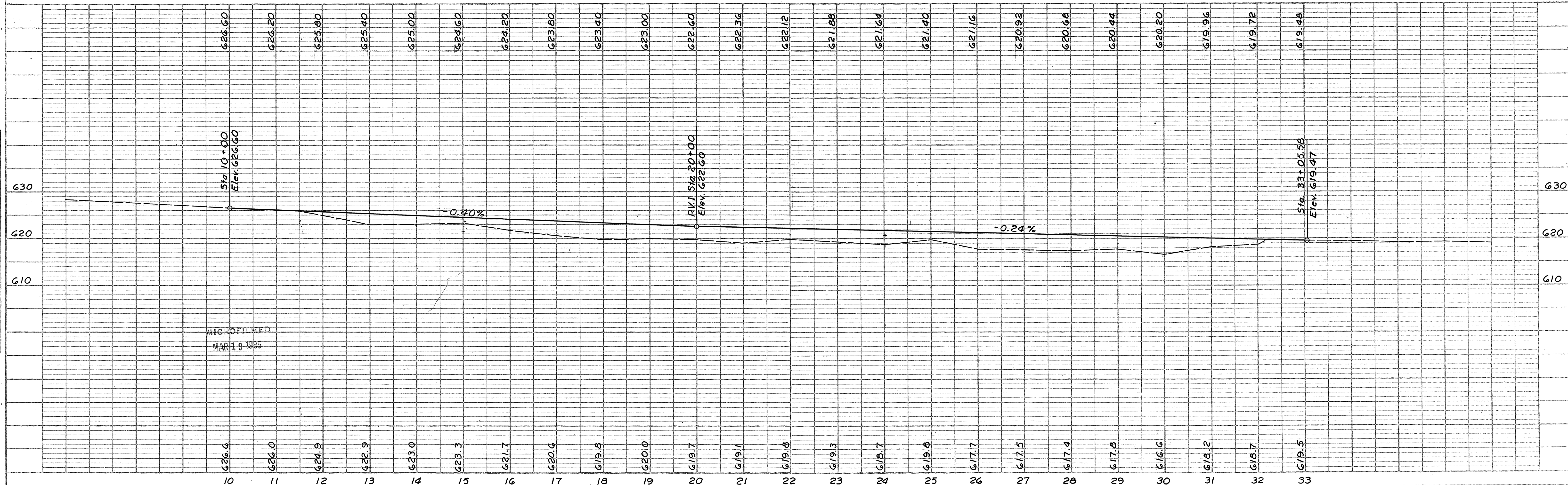
END NEW PAVEMENT STA. 61+50

END WORK END RUN-AROUND STA. 63+00

ESTIMATED QUANTITIES

- Item 5-15 Temporary Run-Around Rd., using Class "A" Pavement, as per plan. Lump Sum
- Item T-10 Traffic compacted surface course for Temporary Traffic Lanes 250 Cu. Yds.
- Item M-10 Calcium chloride furnished and applied for Temporary Traffic Lanes 5 Tons

Note: Item 5-15 Temporary run-around shall include the reshaping and restoring of ground to original contours through areas where the run-around is constructed on temporary right of way, in addition to other removal requirements of Item 5-15.09.



MICROFILMED
MAR 16 1965

DATE 1959
 BY S.M.B. EDS
 SURVEYED
 PLOTTED & CHECKED
 NOTE BOOK NO. 605
 RT. OF WAY CHECKED
 NO. 605

DATE 1959
 BY S.M.B. EDS
 PROFILE
 PLOTTED & CHECKED
 NOTE BOOK NO. 605
 STRUCTURE NOTATIONS CHYD. EDS

ERI 6-7.31

WATER LINE NOTES - SR 4 & CAMPBELL ST.

Water Main
Water Main shall be New, Class 150, and have mechanical joints. Pipe shall have 4 1/2" minimum cover.
The Erie County Water Dept. will furnish and install the G"xG" Side Taps, valves and valve manholes prior to construction under this contract.

Existing main from Sta. 41+10 to Sta. 60+00 S.R.4 and from Sta. 44+87 to Sta. 59+00 Campbell St. shall be abandoned and ends plugged after new main is in service, payment for which is included in the unit price bid for Item I-124.03, C.I.P. New Water Main.

Fire Hydrants and Hydrant Valves
The Erie County Water Dept. will furnish all Fire Hydrants, Hydrant Valves and Valve Boxes for installation by the Contractor at locations shown. Payment for this shall be at the contract unit price each for "Item I-124.03, Install Fire Hydrant, Valve & Box as furnished."

Service Branches
New service branches include brass or bronze corporation stop with Mueller thread inlet, and outlet to receive copper service tubing. Service lines shall be Type "K" copper. Payment for the above shall be at the contract unit price per linear foot for Item I-124.07, New Service Branches.

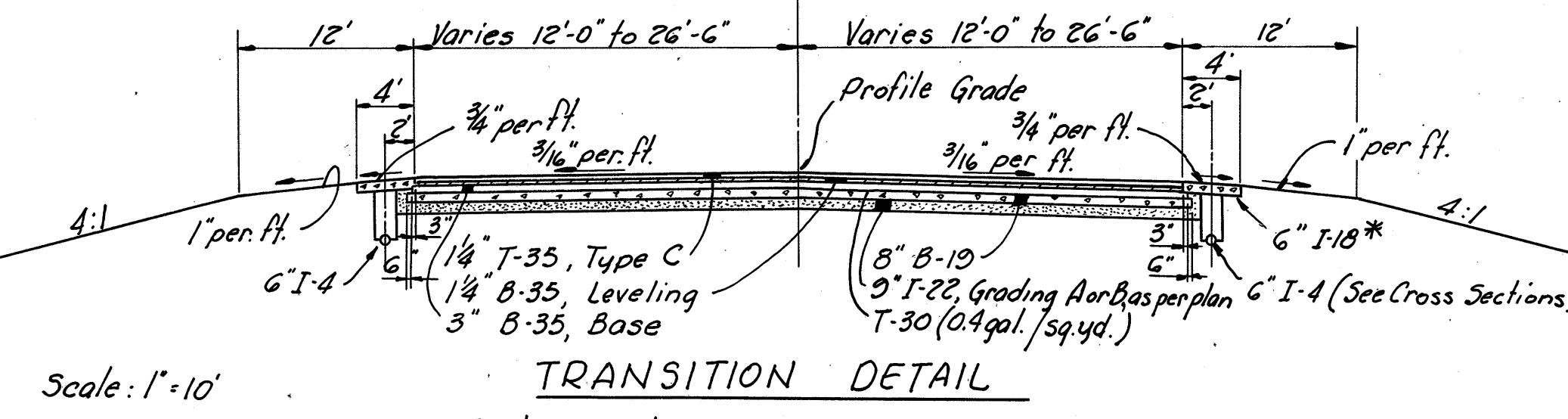
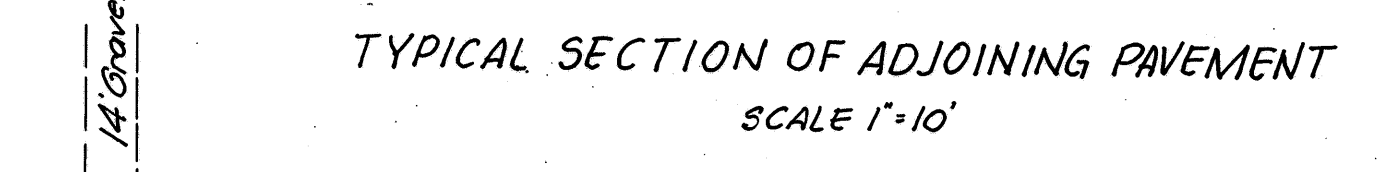
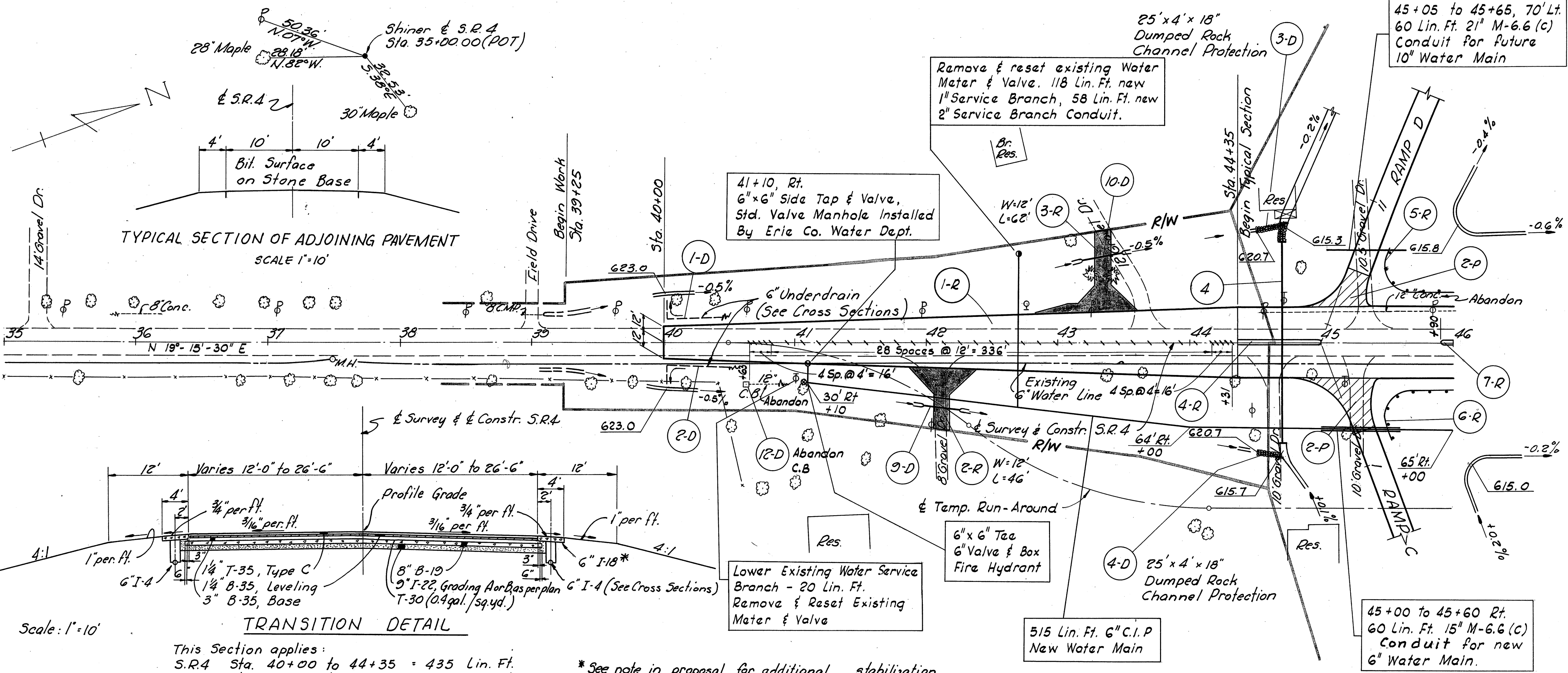
Existing meters and meter boxes (30" length of 18" V.S.P. with cover casting, meter and valve) are to be removed and reset 3' inside the proposed R/W line, and over the existing house connection. Payment for the above shall be at the contract unit price each for Item I-124.11, Water Meters and Boxes Removed and Reset.

New Service Branches are to be installed in Wrought Iron Pipe conduit; 1 1/2" conduit for 3/4" tap and 2" conduit for 1" tap. Conduit shall extend 8" beyond edge of proposed pavement on S.R.4 and 4' beyond edge of proposed pavement on Campbell St. Payment shall be at the contract unit price per linear foot for Item I-2, Service Branch Conduit.

Existing service lines between Sta. 44+00 and Sta. 56+00 S.R.4, are to be abandoned as homes are vacated, and all valves, meters and castings will be removed by the Erie County Water Dept.

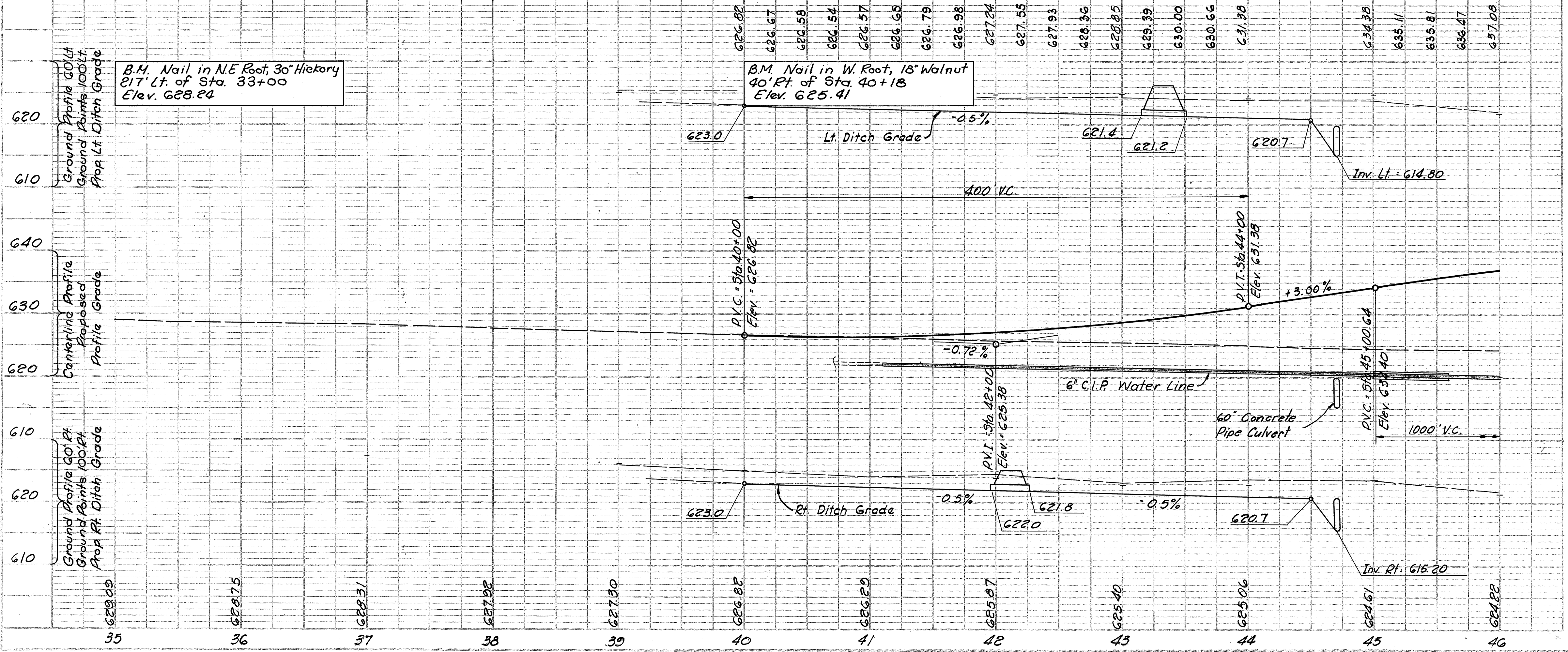
Conduit for Future Water Main
The ends of all pipe installed as conduit for future water mains shall be plugged, payment for which is included in the contract unit price per linear foot for Item I-2, Storm Sewers, (Conduit), Sec. M-G.C (b) or (c) Under Pavement or Approaches

FOR WATER LINE QUANTITIES, SEE SHEET 50.



This Section applies:
S.R.4 Sta. 40+00 to 44+35 = 435 Lin. Ft.
S.R.4 Sta. 55+65 to 61+50 = 585 Lin. Ft.

* See note in proposal for additional stabilization with Calcium Chloride in upper three inches of this item.

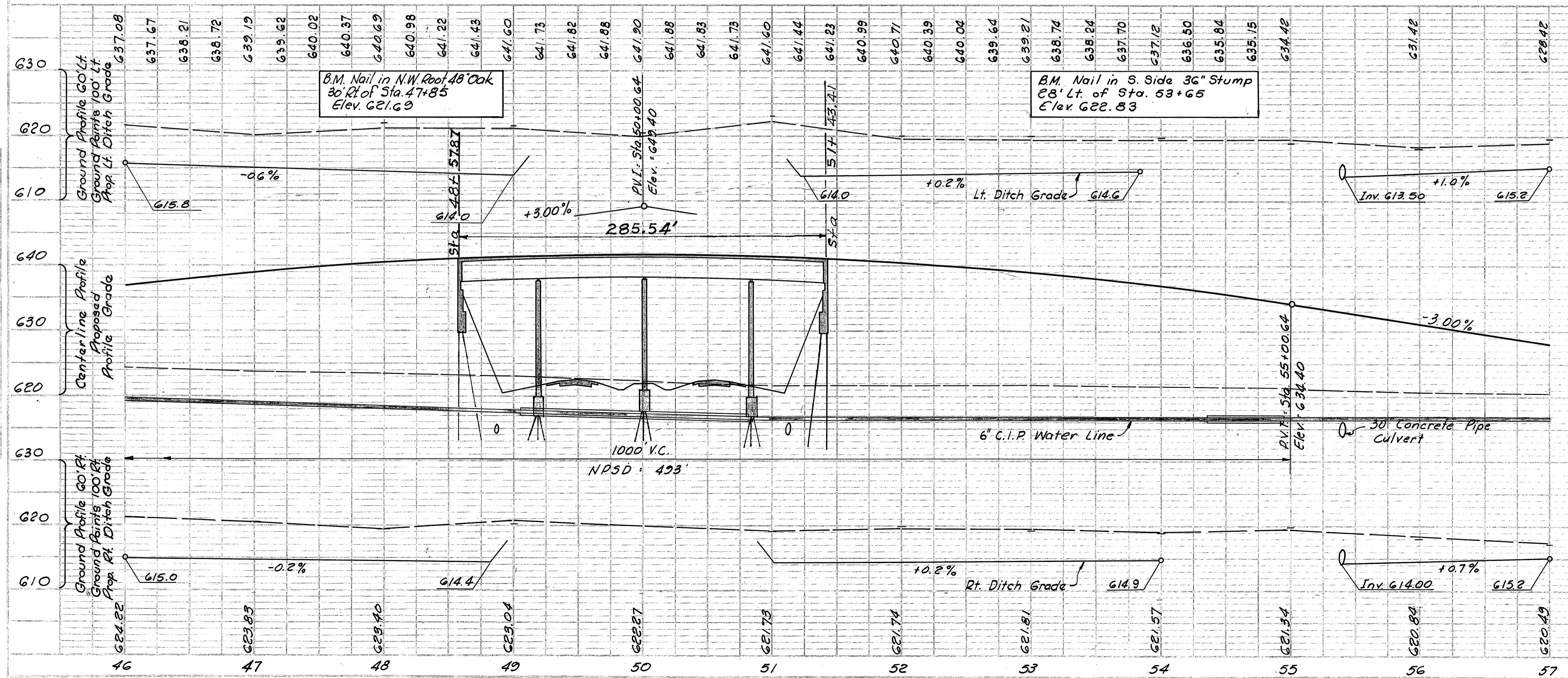
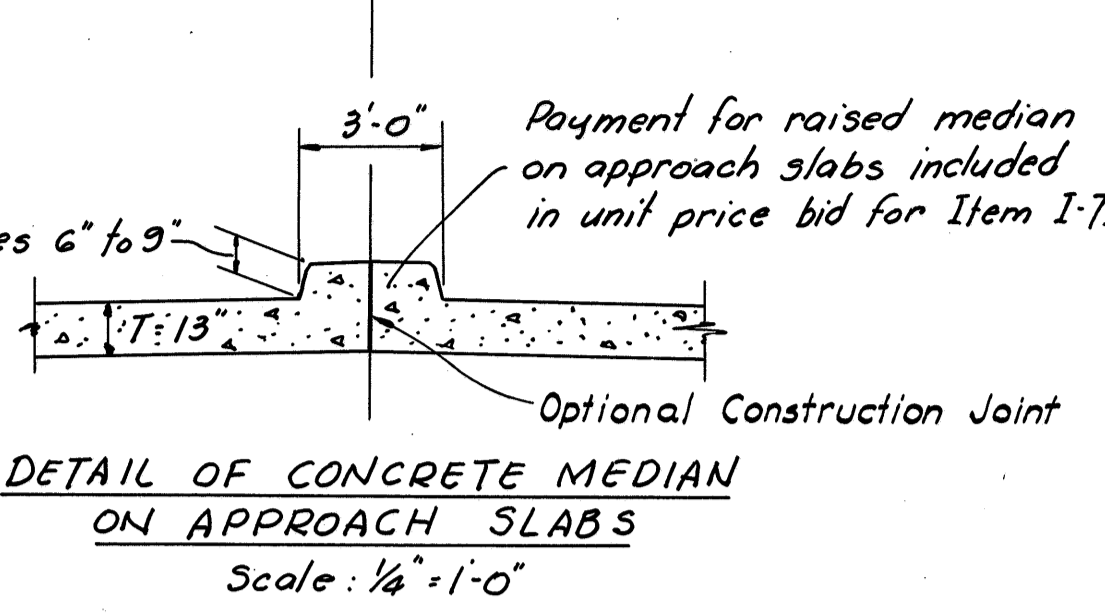
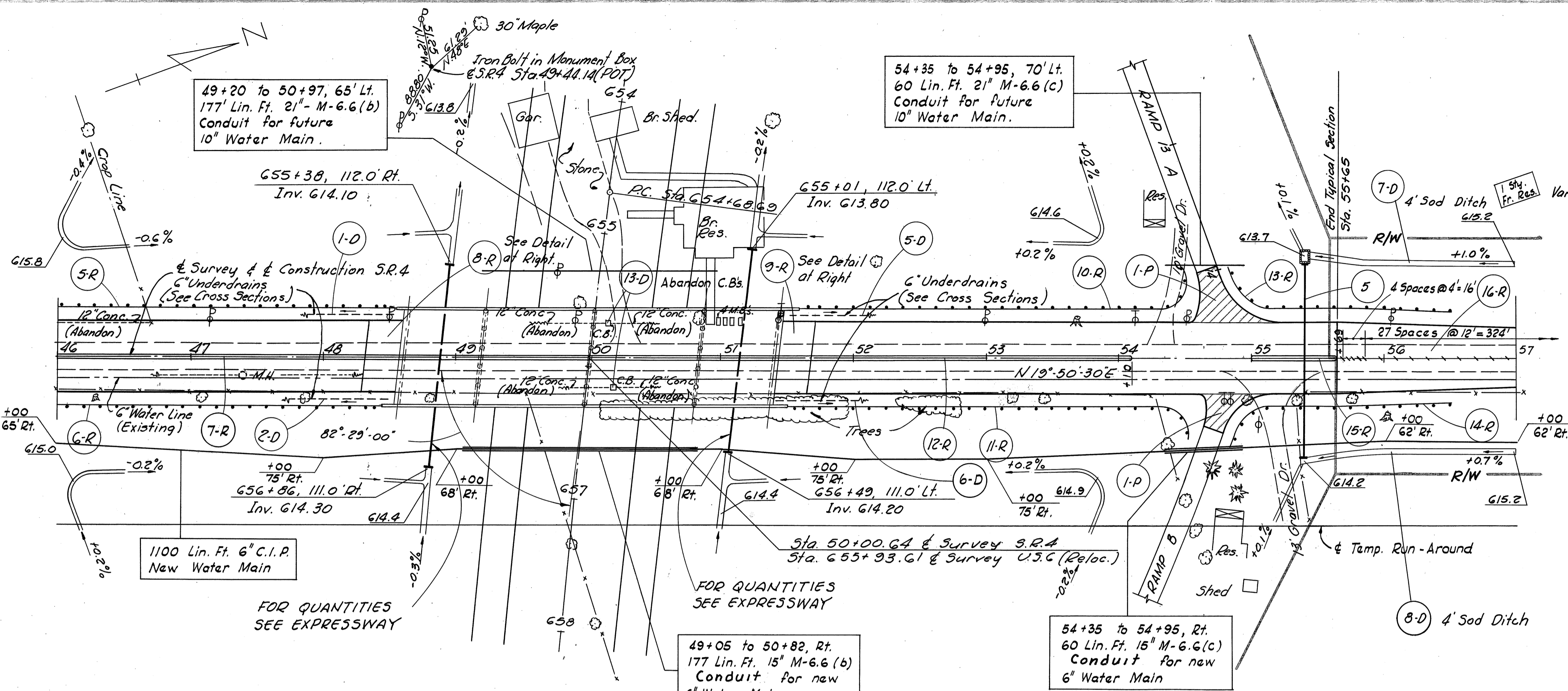


FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

40
161

ERI 6-7.31

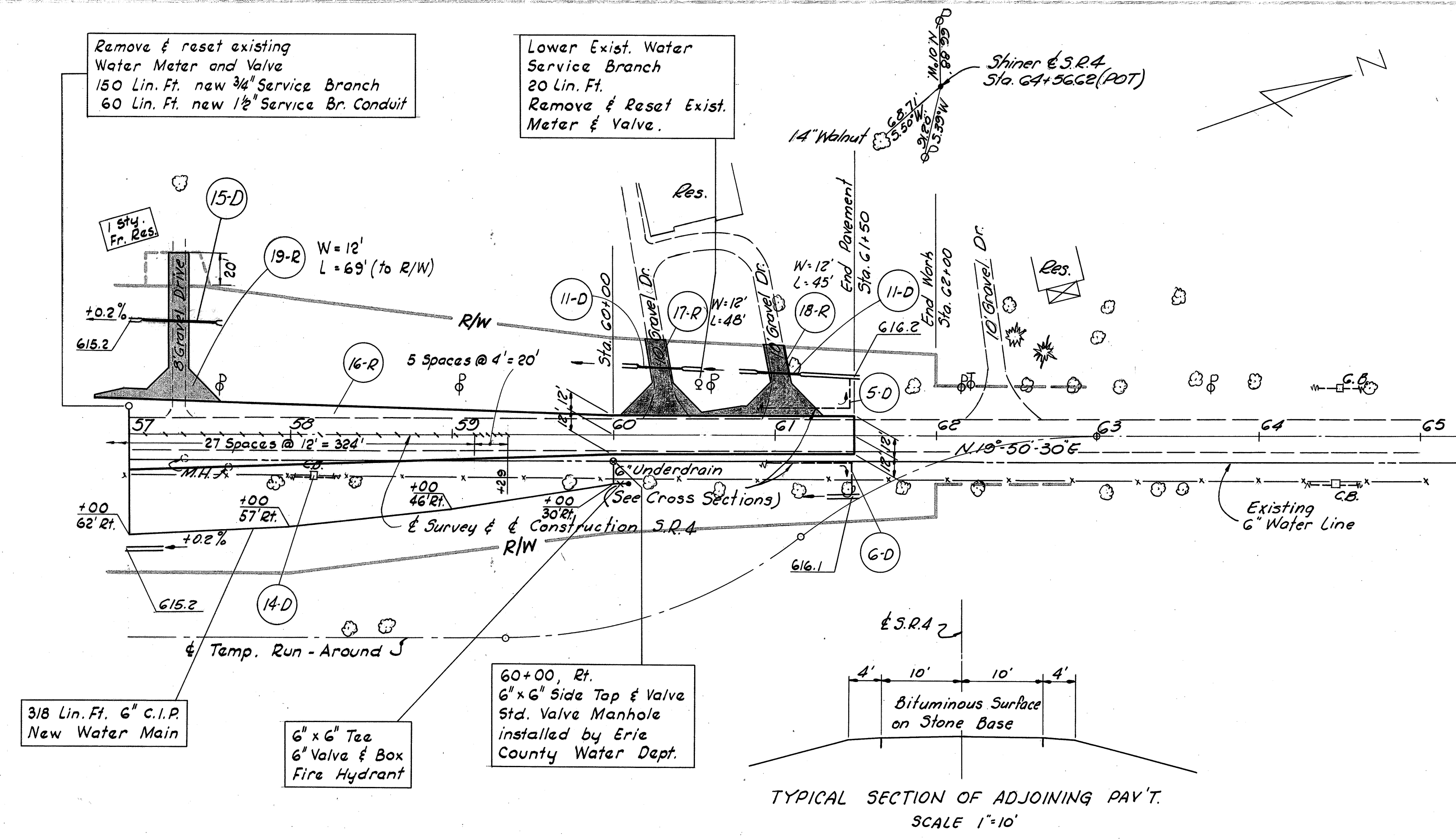
DATE: 1958
DRAWN BY: S.M.B./E.J.D.
CHECKED BY: E.D.S./E.D.S.
SCALE: AS SHOWN
BY: AS SHOWN



MICROFILMED
MAR 19 1965

ERI-6-7.31

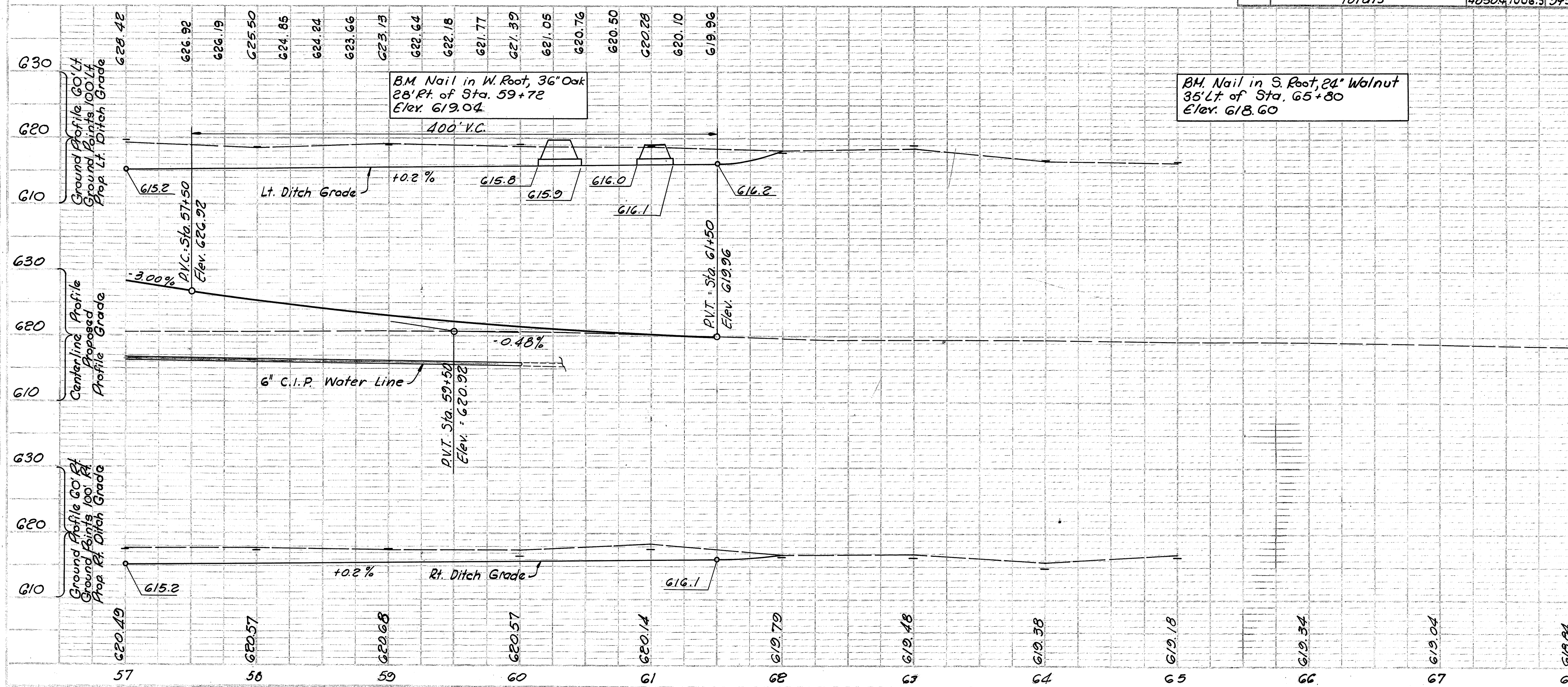
DATE: 12-28-59
 DRAWN BY: G.T.S.
 CHECKED BY: E.D.S.
 APPROVED BY: E.D.S.



ROADWAY QUANTITIES F-1042(G)

See Sheet No. Reference No. on Structure No.	Station		Side	E-1	B-19	B-35	B-35	B-219	T-30	T-31	T-35	T-71	I-7	I-12	I-15	I-18	I-21	I-22	I-23	T-35	Spec.	
	From	To		Compacted Subgrade	Aggregate Base Course	Asphaltic Conc. Base Course	Asphaltic Conc. Lane Ling Course	3" Waterproofed Aggr. Base Course	Gal. Coat	Bit. Surface Treatment	Asphaltic Conc. Surface Course	9" Rein. P.C. Conc. Pav't.	Rein. Conc. Slab (7-13)	Old Type 2-A Curb	Guard Rail (Std. Type)	Stabilized Crushed Aggr. Shoulders	4" P.C. Conc. Med. Pav't. Type 1	Subbase	Precast Conc. Traffic Dividers	Asphaltic Conc. Surface Course No. Fed. Partic. Mixing and Crushed Aggregate		
	Sq.Yd.	Cu.Yd.		Sq.Yd.	Cu.Yd.	Sq.Yd.	Cu.Yd.	Sq.Yd.	Gal.	Sq.Yd.	Cu.Yd.	Sq.Yd.	Sq.Yd.	Lin.Ft.	Lin.Ft.	Cu.Yd.	Sq.Yd.	Ea.	Cu.Yd.	Sq.Yd.		
1-R	40+00	44+35	Lt.	1860.8	413.8	155.1	64.6		744.3													
2-R	42+10		Rt.		14.7						4.0										1.9	
3-R	43+32		Lt.		19.3						4.7										3.1	
4-R	44+35	45+00	Med.											136			14.5	6.8				
53 2-P	45+00		Lt.	191.8				86.0		86.0		191.8				12.5		46.3				
5-R	45+40	48+50	Lt.												325							
6-R	45+45	48+45	Rt.												325							
7-R	45+90	48+32.87	Med.											489			54.0	25.5				
8-R	48+32.87	48+57.87	Med.	172.6									147.2						28.8			
9-R	51+43.41	51+68.41	Med.	172.6									147.2						28.8			
10-R	51+57	54+53	Lt.												312.5							
11-R	51+50	54+60	Rt.												325							
12-R	51+68.41	54+10	Med.														53.8	25.4				
53 1-P	55+00		Lt.	191.8				86.0		86.0		191.8				12.5		46.3				
13-R	54+85	56+50	Lt.												175							
14-R	54+85	56+50	Rt.												175							
15-R	55+00	55+65	Med.														14.5	6.8				
16-R	55+65	61+50	Lt.	2260.8	502.6	188.4	78.6		904.3		78.6						565.2	37		520		
17-R	60+30		Lt.		15.1						4.0										2.1	
18-R	61+05		Lt.		16.2						4.7										1.9	
19-R	57+30		Lt.		24.6						4.7										5.1	
Totals				48504.1006.3	3435.143.2	172.0	16486	172.0	165.3	383.6	294.4	124.8	1637.5	25.0	136.8	1245.1	74	14.1	*907			

* Use 0.9 Tons Item M-10 Calcium Chloride Furnished and Applied



DRAINAGE QUANTITIES F-1042(G)

See Sheet No. Reference No. on Structure No.	Station		Side	E-2	S-1	S-27	S-27	I-1	I-4	I-4	I-5	I-10	I-16	L-10	S-4
	From	To		Excavation for Structure	Concrete for Structure	30" Rein. Conc. M.C.P. (C)	60" Rein. Conc. M.C.P. (C)	18" Pipe for Driveways	6" Underdrain (Shallow)	8" C.M.P. Outlet	6" 90° Ell for Underdrain	Dumped Rock Channel Project	Catch Basin (Along Road)	Sodding	Reinforcing Steel
	Cu.Yd.	Cu.Yd.		Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Ea.	Cu.Yd.	Ea.	Sq.Yd.	Lb.
1-D	40+00	48+50	Lt.						860	10	1				
2-D	40+00	48+50	Rt.						860	10	1				
3-D	44+50	44+70	Lt.									6			
4-D	44+50	44+70	Rt.									6			
55 4	44+70		Lt.	530	440		124					14		12	1,954
5-D	51+50	61+50	Lt.						1010	10	1				
6-D	51+50	61+50	Rt.						1010	10	1				
55 5	55+40		Lt.	140	14.4	140						4		7	572
7-D	55+40	57+00	Lt.											71	
8-D	55+40	57+00	Rt.											71	
9-D	42+40		Rt.						30						
10-D	43+30		Lt.						36						
11-D	60+30	61+05	Lt.						60						
12-D	40+62		Rt.												
13-D	50+13	50+18	Lt.											1	
14-D	58+15		Rt.											2	
15-D	57+30		Lt.											1	
Totals				670	58.4	140	124	174	3740	40	4	30	4	161	2,522

57+00 - 68+00 S.R.4

1958
1-59
RNE S.M.B. PFC
EDS
605
9-60

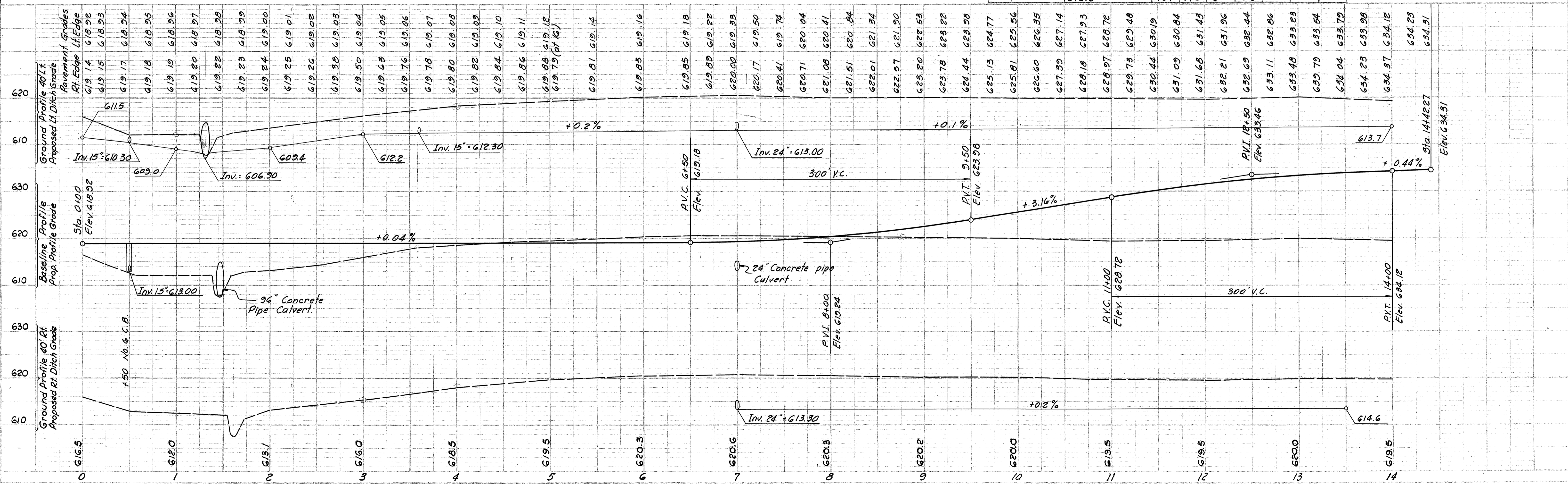
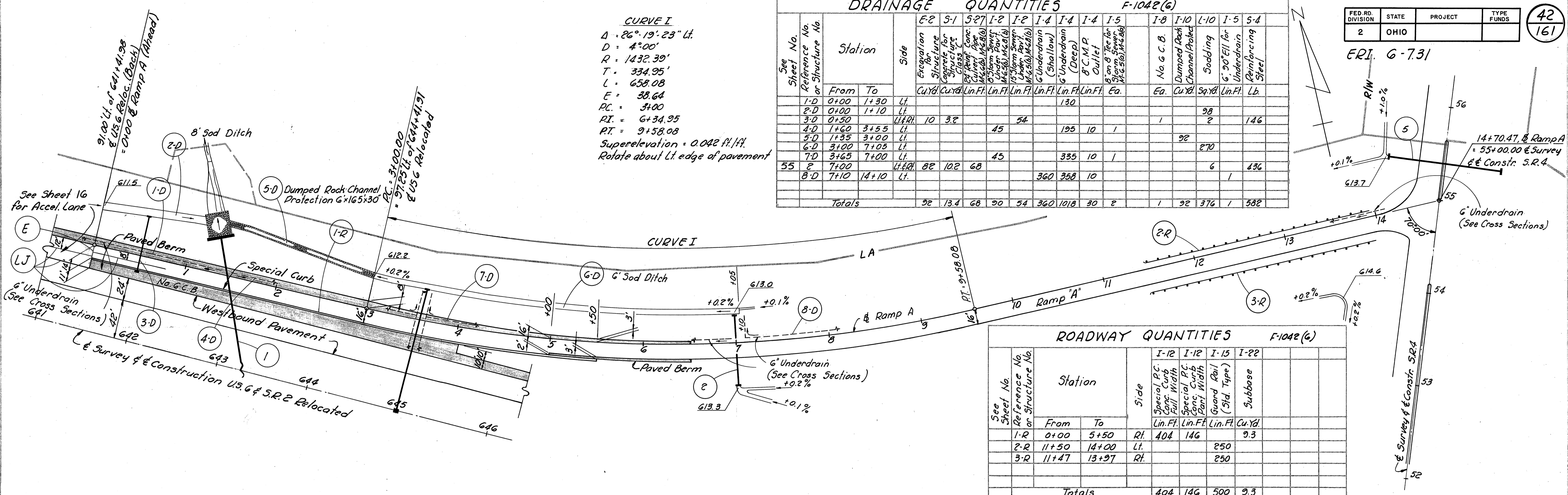
PLAN

NOTE: BOOK DRAWING CHECKED BY EDS
FIELD DRAWING CHECKED BY EDS
ET OF WAY CHECKED BY EDS

1958
1-59
RNE S.M.B. PFC
EDS
605
9-60

PROFILE

NOTE: BOOK DRAWING CHECKED BY EDS
FIELD DRAWING CHECKED BY EDS
ET OF WAY CHECKED BY EDS



FED. RD. DIVISION 2 STATE OHIO PROJECT TYPE FUNDS

ERI, G-7.31

42
161

ERI. 6-7.31

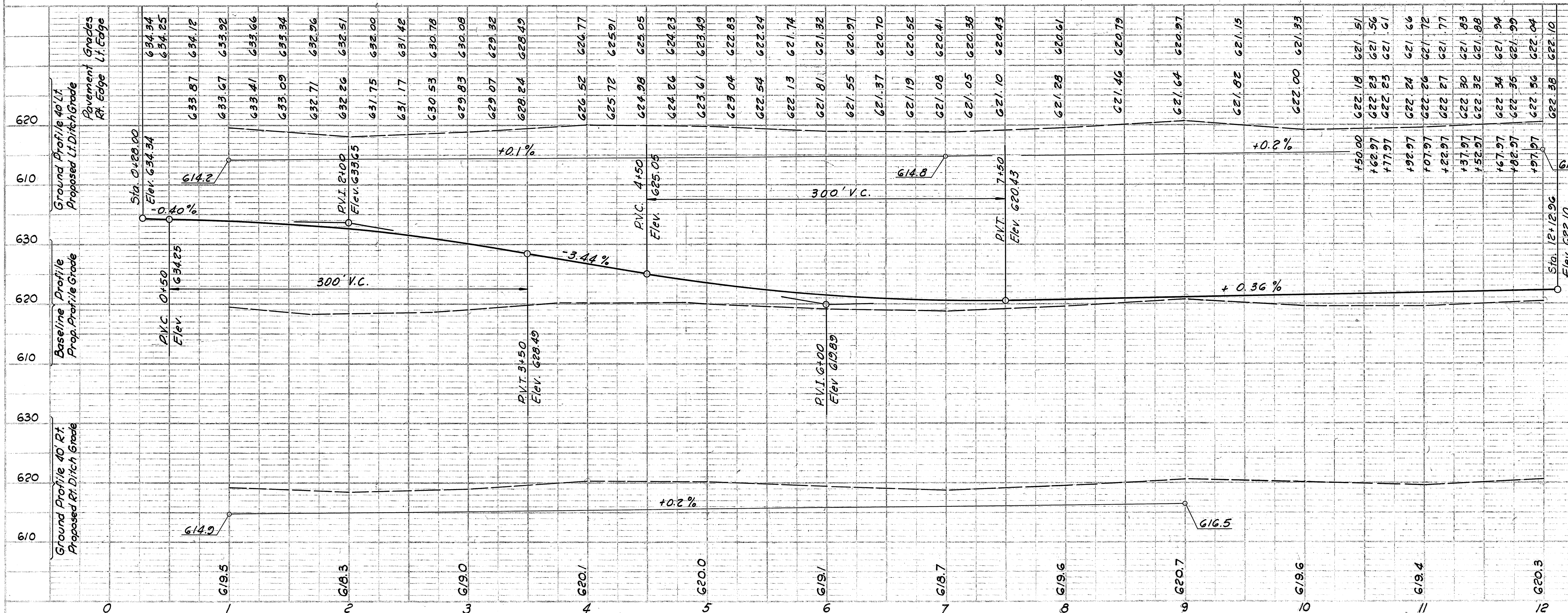
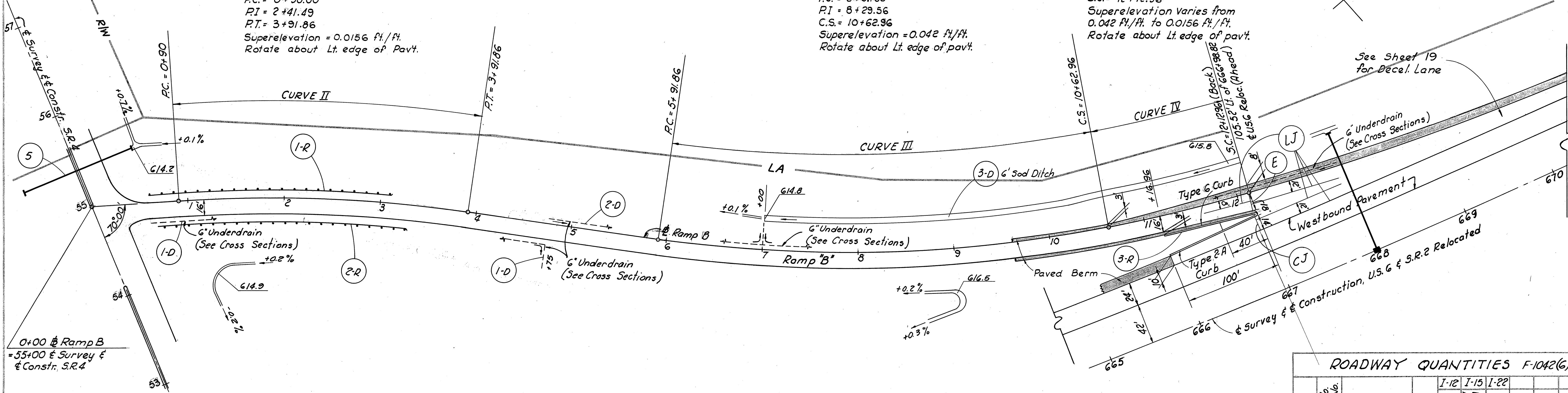
CURVE II
 $\Delta = 12^\circ 04' 27''$ Rt.
 $D = 4^\circ 00'$
 $R = 1432.39'$
 $T = 151.49'$
 $L = 301.86'$
 $E = 7.99'$
 $PC = 0+90.00$
 $PI = 2+41.49$
 $PT = 3+91.86$
 Superelevation = 0.0156 ft./ft.
 Rotate about Lt. edge of Pavt.

CURVE III
 $\Delta = 18^\circ 50' 39''$ Lt.
 $D = 4^\circ 00'$
 $R = 1432.39'$
 $T = 237.70'$
 $L = 471.10'$
 $E = 19.59'$
 $PC = 5+91.86$
 $PI = 8+29.56$
 $PT = 10+62.96$
 Superelevation = 0.042 ft./ft.
 Rotate about Lt. edge of pavt.

CURVE IV
 $L_s = 150'$
 $\theta_s = 1^\circ 30' 00''$ Lt.
 $L.T = 83.36'$
 $S.T = 66.72'$
 $L.C = 149.96'$
 $C.S = 10+62.96$
 $S.C = 12+12.96$
 Superelevation Varies from
 0.042 ft./ft. to 0.0156 ft./ft.
 Rotate about Lt. edge of pavt.

PLAN
 DESIGNED BY: S.M.B. P.F.C. E.D.S.
 DATE: 1-59
 PLOTTED BY: S.M.B. P.F.C. E.D.S.
 CHECKED BY: S.M.B. P.F.C. E.D.S.
 DATE: 3-60

PROFILE
 DESIGNED BY: S.M.B. P.F.C. E.D.S.
 DATE: 1-59
 PLOTTED BY: S.M.B. P.F.C. E.D.S.
 CHECKED BY: S.M.B. P.F.C. E.D.S.
 DATE: 3-60



ROADWAY QUANTITIES F-1042(G)

See Sheet No. or Reference No.	Station	Side	I-12	I-15	I-22	
			Type G Curb	Guard Rail (Std. Type)	Subbase	
From	To		Lin. Ft.	Lin. Ft.	Sq. Yd.	
1-R	0+60	3+10	Lt.	250		
2-R	0+66	3+28.5	Rt.	262.5		
3-R	11+17	12+13	Rt.	94	0.9	
Totals				94	512.5	0.9

DRAINAGE QUANTITIES F-1042(G)

See Sheet No. or Reference No.	Station	Side	I-4	I-4	I-4	I-5	I-5	I-10	
			6" Underdrain (Shallow)	6" Underdrain (Deep)	8" C.M.P. Outlet	6" x 6" Tee for Underdrain	6" x 6" Ell. for Underdrain	Sodding	
From	To		Lin. Ft.	Lin. Ft.	Lin. Ft.	Ea.	Ea.	Sq. Yd.	
1-D	0+60	4+75	Rt.	439	10	1			
2-D	4+75	12+13	Lt.	758	10	1			
3-D	7+00	12+13	Lt.					342	
Totals				439	758	20	1	1	342

DRAINAGE QUANTITIES F-1042(G)

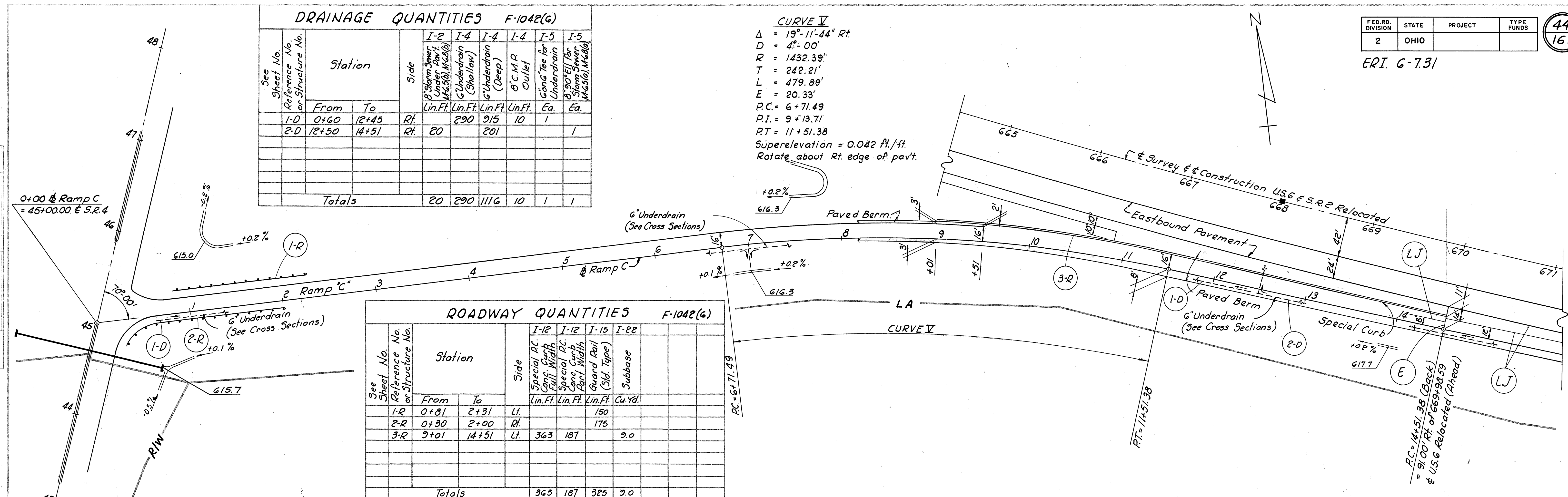
See Sheet No. Reference No. or Structure No.	Station		Side	Type				
	From	To		I-2	I-4	I-4	I-5	I-5
1-D	0+60	12+45	Rt.	290	215	10	1	
2-D	12+50	14+51	Rt.	20	201		1	
Totals				20	290	1116	10	1

CURVE V
 $\Delta = 19^{\circ} 11' 44''$ Rt.
 $D = 4^{\circ} 00'$
 $R = 1432.39'$
 $T = 242.21'$
 $L = 479.89'$
 $E = 20.33'$
 $P.C. = 6+71.49$
 $P.T. = 9+13.71$
 $RT = 11+51.38$
 Superelevation = 0.042 ft./ft.
 Rotate about Rt. edge of pavt.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

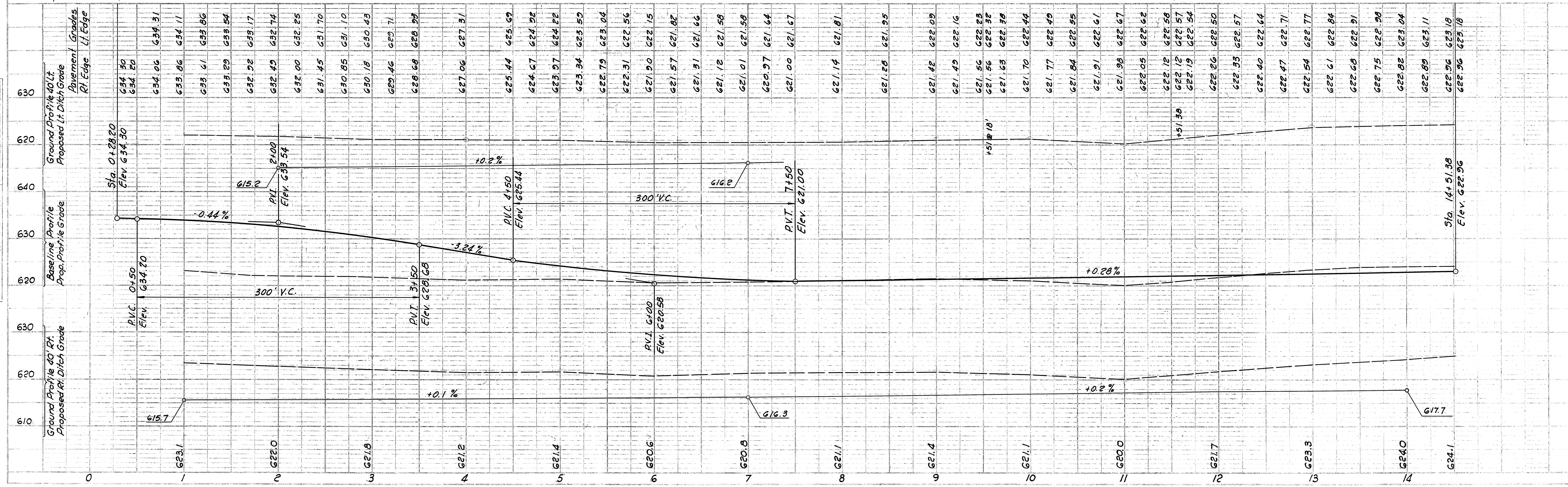
44
161

1958
 1-50
 PFC
 RVE
 S.M.B.
 EDS
 9-60
 RT. OF WAY CHECKED
 NO.



ROADWAY QUANTITIES F-1042(G)

See Sheet No. Reference No. or Structure No.	Station		Side	Type			
	From	To		I-12	I-12	I-15	I-22
1-R	0+81	2+31	Lt.			150	
2-R	0+30	2+00	Rt.			175	
3-R	9+01	14+51	Lt.	363	187		9.0
Totals				363	187	325	9.0



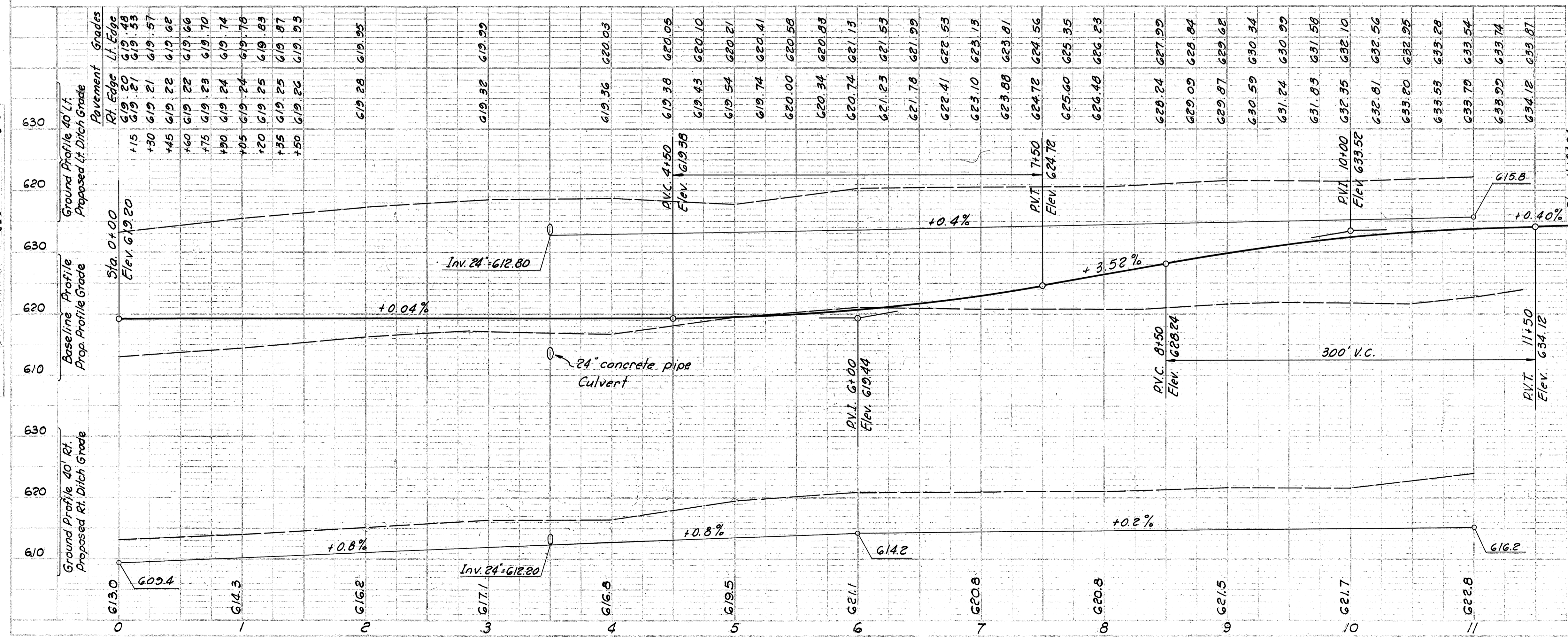
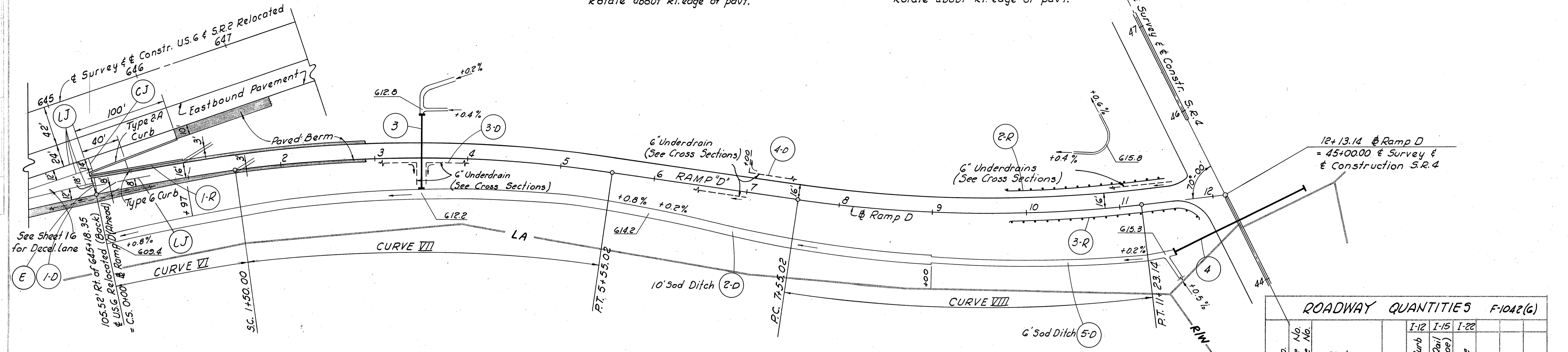
1958
 1-50
 PFC
 RVE
 S.M.B.
 EDS
 9-60
 RT. OF WAY CHECKED
 NO.

ERI. G-7.31

CURVE VI
 $L_s = 150'$
 $\theta_s = 1^\circ 52' 30''$ Rt.
 $L.T. = 86.39'$
 $S.T. = 63.69'$
 $C.S. = 0+00$
 $S.C. = 1+50.00$
 Superelevation varies from 0.0156 to 0.042 ft./ft.
 Rotate about Rt. edge of pav't.

CURVE VII
 $\Delta = 16^\circ 12' 02''$ Rt.
 $D = 4^\circ 00'$
 $R = 1432.39'$
 $T = 203.87'$
 $L = 405.02$
 $E = 14.44'$
 $S.C. = 1+50.00$
 $P.T. = 3+53.87$
 $P.T. = 5+55.02$
 Superelevation = 0.042 ft./ft.
 Rotate about Rt. edge of pav't.

CURVE VIII
 $\Delta = 14^\circ 43' 30''$ Lt.
 $D = 4^\circ 00'$
 $R = 1432.39'$
 $T = 185.08$
 $L = 368.12$
 $E = 11.91'$
 $P.C. = 7+55.02$
 $P.I. = 9+40.10$
 $P.T. = 11+23.14$
 Superelevation = 0.0156 ft./ft.
 Rotate about Rt. edge of pav't.



ROADWAY QUANTITIES F-1042(G)

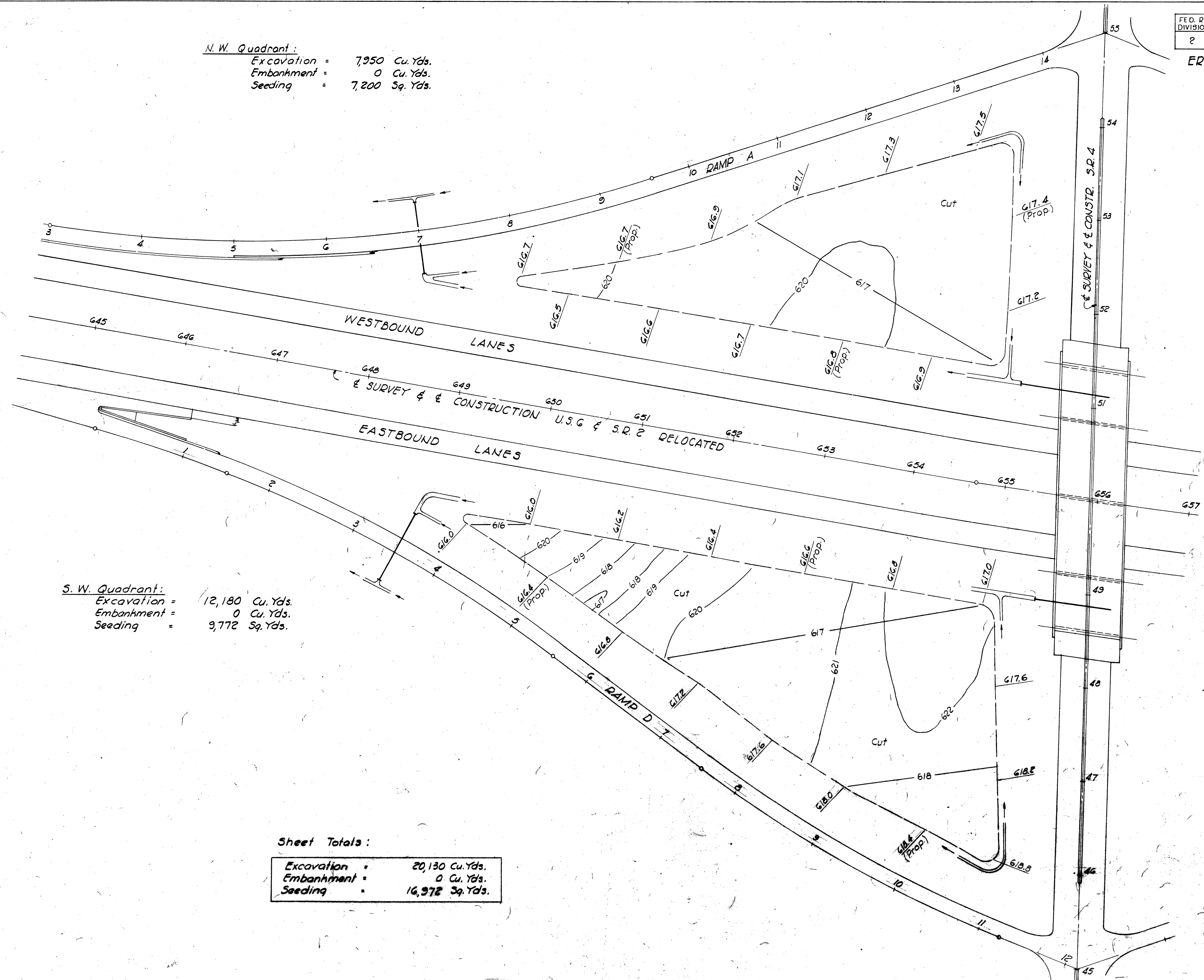
See Sheet No. Reference No. or Structure No.	Station		Side	I-12	I-15	I-22
	From	To		Type G Curb	Guard Rail (Std. Type)	Subbase
1-R	0+00	0+97	Lt.	97		0.9
2-R	9+79	11+54	Lt.		175	
3-R	9+86	11+81	Rt.		200	
Totals				97	375	0.9

DRAINAGE QUANTITIES F-1042(G)

See Sheet No. Reference No. or Structure No.	Station		Side	E-2	S-1	S-27	I-4	I-4	I-4	I-5	L-10	S-4
	From	To		Excavation	Concrete for Structure	Class C Concrete	24" Conc. Culvert (Std. Type)	6" Underdrain (Shallow)	6" Underdrain (Deep)	8" C.M.P. Cullet	6" 90° Ell. for Underdrain	Sodding
1-D	0+00	3+45	Rt.					368	10	1		
2-D	0+00	9+00	Rt.								1000	
3-D	3+50	7+00	Lt.	76	102	78						436
4-D	7+00	11+60	Lt.				310	176	10	1		
5-D	9+00	11+55	Rt.								170	
Totals				76	102	78	310	909	30	3	1176	436

ERI C-7.31

N. W. Quadrant:
 Excavation = 7,950 Cu. Yds.
 Embankment = 0 Cu. Yds.
 Seeding = 7,200 Sq. Yds.



S. W. Quadrant:
 Excavation = 12,180 Cu. Yds.
 Embankment = 0 Cu. Yds.
 Seeding = 9,772 Sq. Yds.

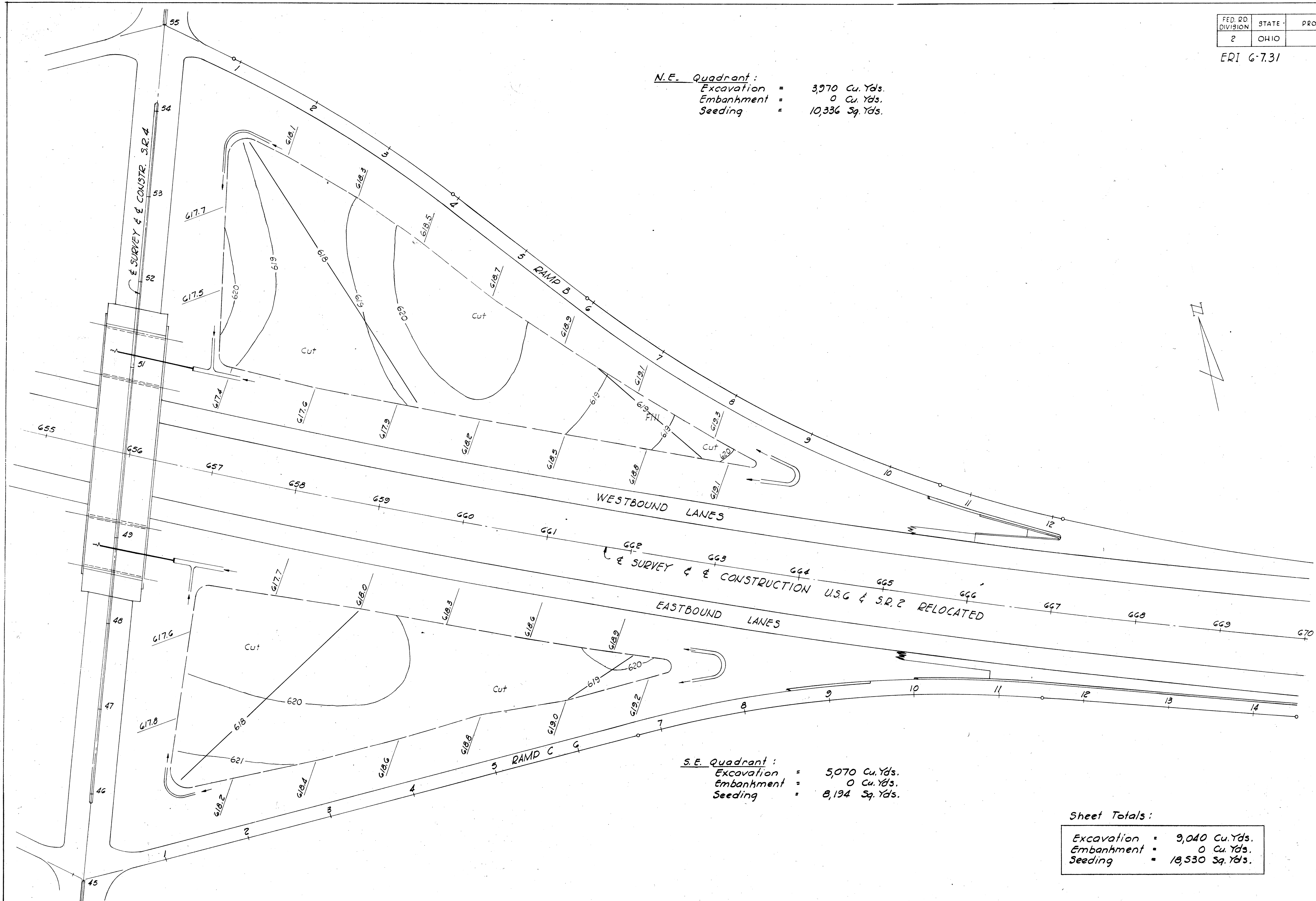
Sheet Totals:
 Excavation = 20,130 Cu. Yds.
 Embankment = 0 Cu. Yds.
 Seeding = 16,972 Sq. Yds.

ERI 6-7.31

N.E. Quadrant:
 Excavation = 3,970 Cu. Yds.
 Embankment = 0 Cu. Yds.
 Seeding = 10,336 Sq. Yds.

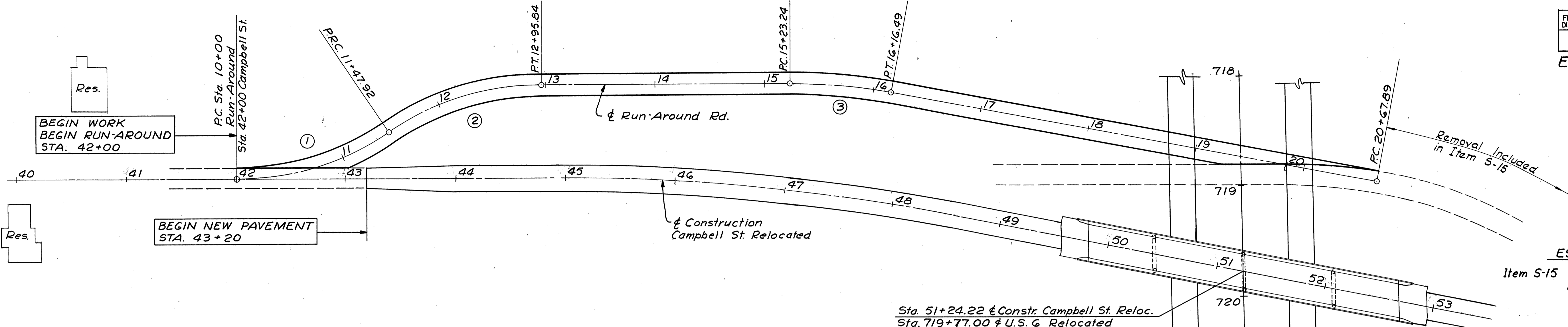
S.E. Quadrant:
 Excavation = 5,070 Cu. Yds.
 Embankment = 0 Cu. Yds.
 Seeding = 8,194 Sq. Yds.

Sheet Totals:
 Excavation = 9,040 Cu. Yds.
 Embankment = 0 Cu. Yds.
 Seeding = 18,530 Sq. Yds.



CONTOUR GRADING FOR N.E. & S.E. QUADRANTS OF S.R. 4 INTERCHANGE

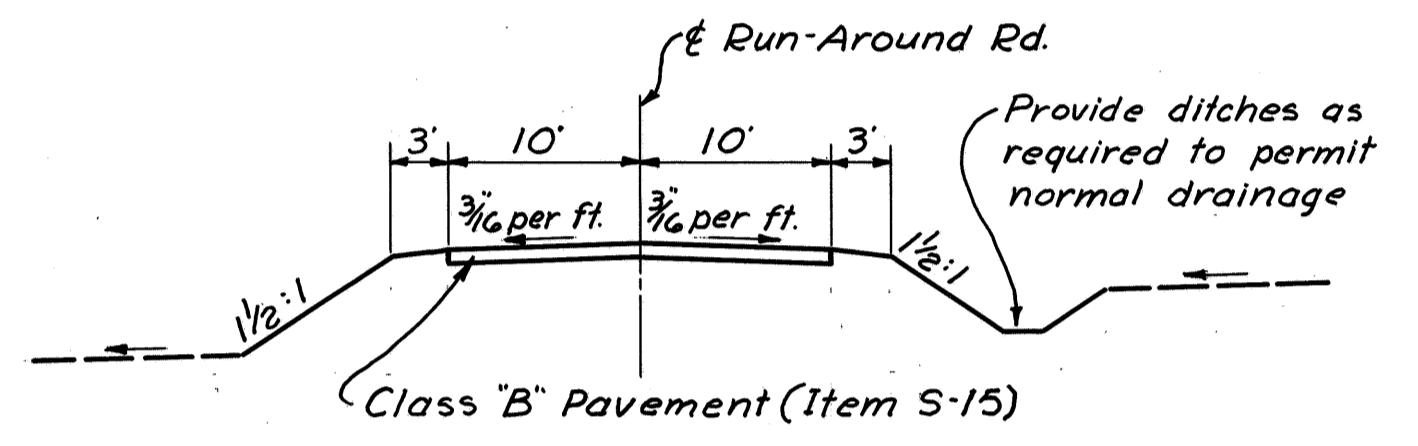
ERI. 6-7.31



ESTIMATED QUANTITIES
Item S-15 Temporary Run-Around Road, using Class "B" Pavement, as per plan.
Lump Sum

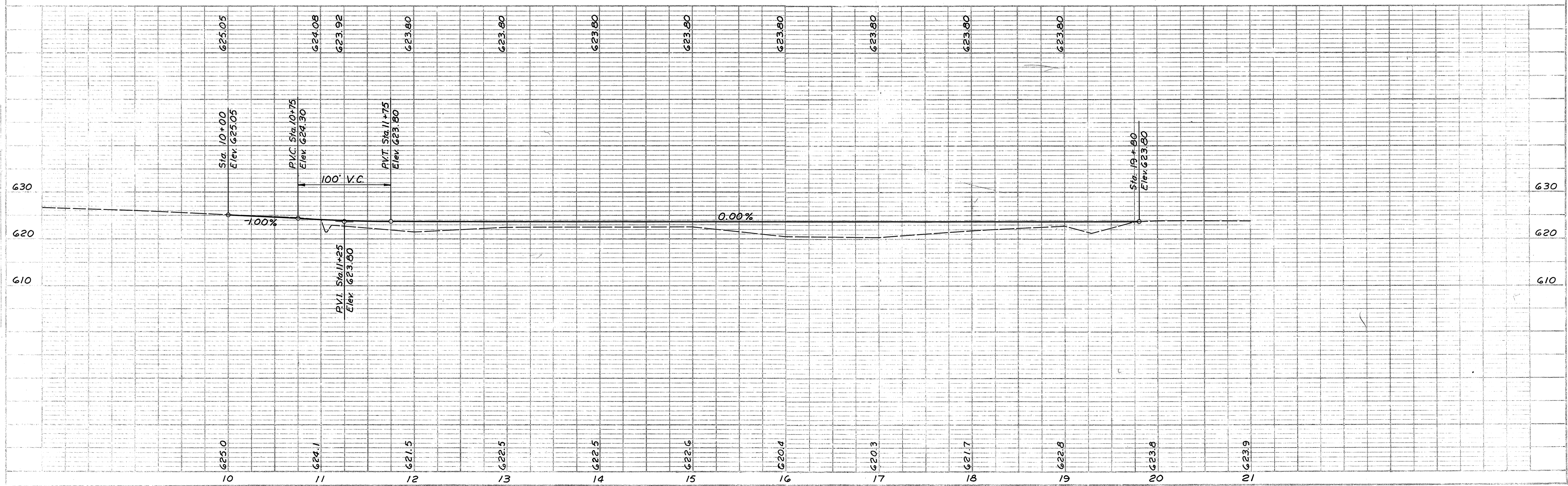
CURVE DATA - & RUN-AROUND

	Curve Number		
	1	2	3
Δ	33°-54'-05" Lt.	33°-54'-05" Rt.	10°-41'-08" Rt.
R	250.00'	250.00'	500.00'
T	76.20'	76.20'	46.76'
L	147.92'	147.92'	93.25'
P.I.	10+76.20	12+24.12	15+70.00



TYPICAL SECTION TEMPORARY RUN-AROUND

Note: Item S-15 Temporary run-around shall include the reshaping and restoring of ground to original contours through areas where the run-around is constructed on temporary right of way, in addition to other removal requirements of Item S-15.09.



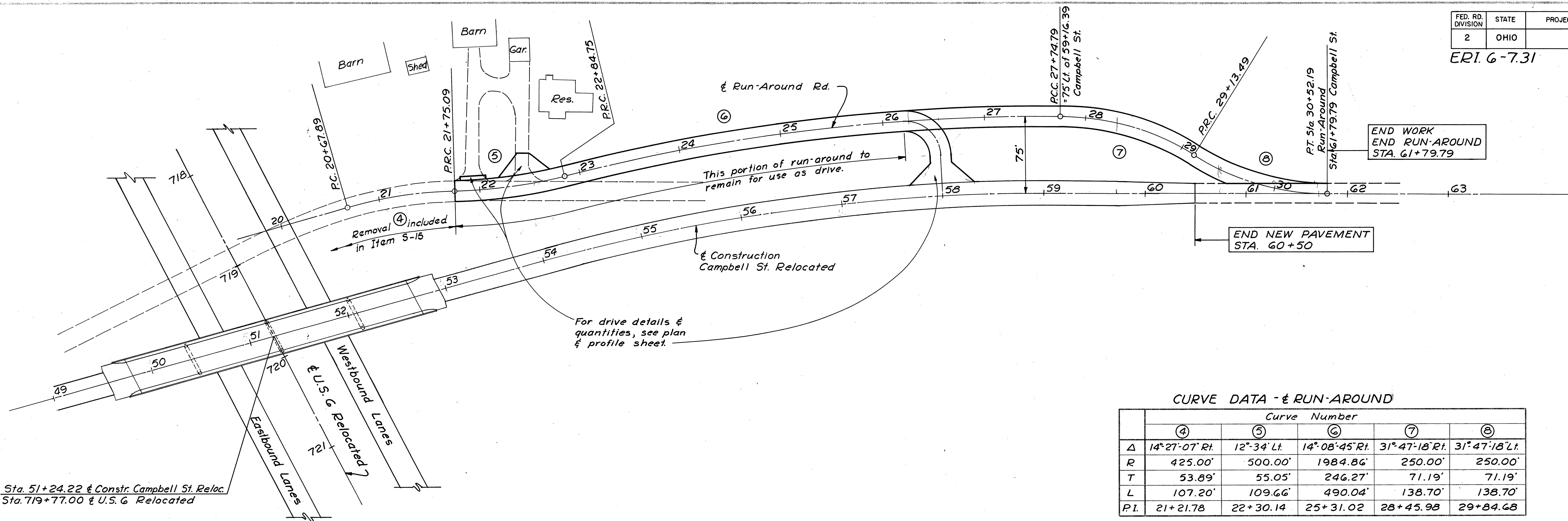
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DRAWN BY SMB
CHECKED BY EDS
DATE 9-60
ERMS BY EDS
DATE 9-60

DATE 9-58
DRAWN BY SMB
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DATE 9-60
ERMS BY EDS
DATE 9-60

ERI. G-7.31

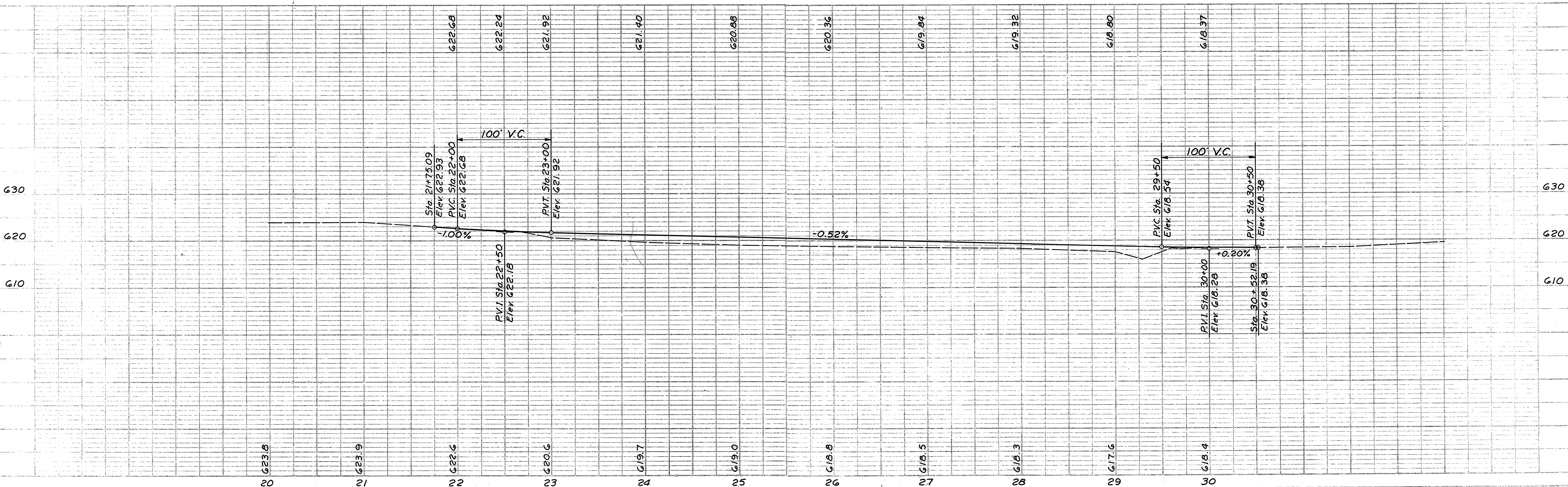
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SMB EDS 9-20
ERM EDS 9-20
EDS 9-20

DATE 1958
SMB EDS 9-20
ERM EDS 9-20
EDS 9-20



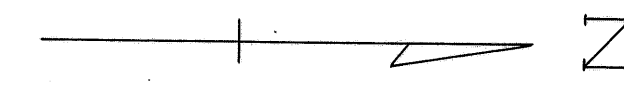
CURVE DATA - & RUN-AROUND

	Curve Number	4	5	6	7	8
Δ		14°-27'-07" Rt.	12°-34' Lt.	14°-08'-45" Rt.	31°-47'-18" Rt.	31°-47'-18" Lt.
R		425.00'	500.00'	1984.86'	250.00'	250.00'
T		53.89'	55.05'	246.27'	71.19'	71.19'
L		107.20'	109.66'	490.04'	138.70'	138.70'
P.I.		21+21.78	22+30.14	25+31.02	28+45.98	29+84.68

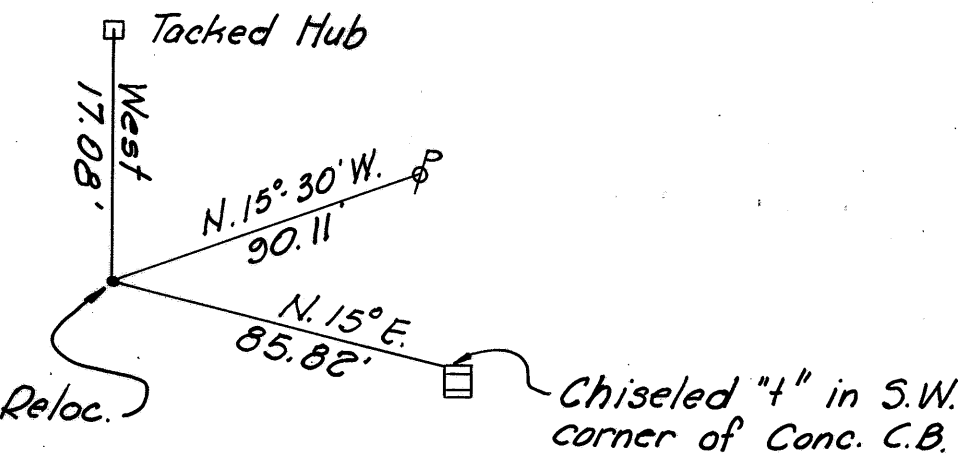


CURVE DATA

$\Delta = 11^{\circ}02' \text{ Rt.}$
 $D = 3^{\circ}00'$
 $R = 1909.86'$
 $T = 184.46'$
 $L = 367.78'$
 $E = 8.89'$
 $PC = 44+87.37$
 $PI = 46+71.83$
 $PT = 48+55.15$
 Superelevation $-0.04911/\text{ft}$
 Rotate about ϵ of pav't.



Shiner in Pavement Sta. 46+71.83 (P.I.) & Survey Campbell St. Reloc.

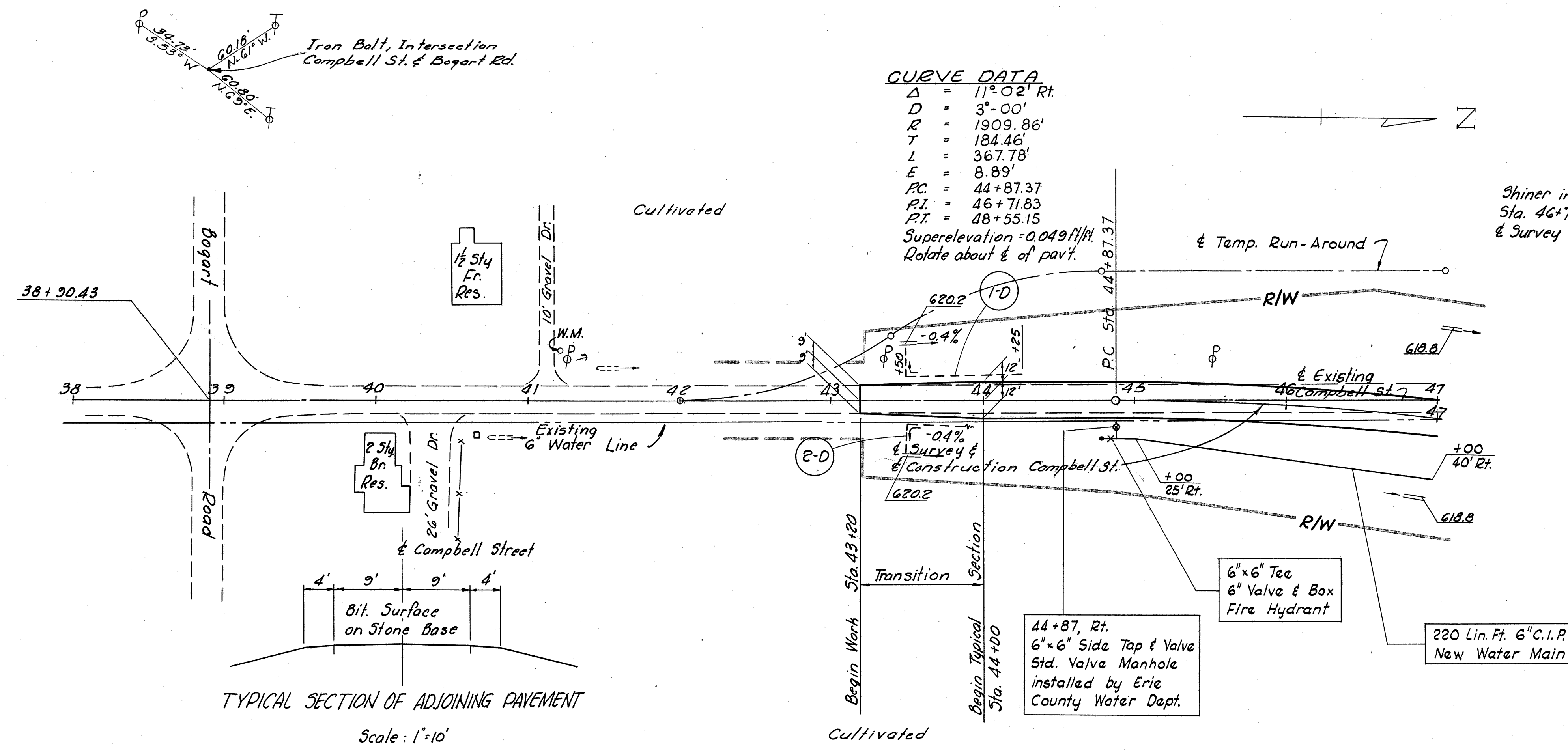


GENERAL SUMMARY - WATER LINES - S.R.4 AND CAMPBELL STREET

ITEM	DESCRIPTION	UNIT	S.R.4 WATER LINE	CAMPBELL ST. WATER LINE	TOTAL QUANTITY
I-124.03	6" C.I.P. New Water Main, Class 150, with M/J	Lin. Ft.	1,933	1,434	3,367
I-124.03	6" x 6" C.I. Tee	Each	2	2	4
I-124.03	6" C.I. Sleeve	Each	1	1	2
I-124.03	Install Fire Hydrant, Valve & Box, as furnished	Each	2	2	4
I-124.07	New 3/4" Service Branches	Lin. Ft.	150		150
I-124.07	New 1" Service Branches	Lin. Ft.	118	150	268
I-124.09	Service Branches Lowered	Lin. Ft.	40		40
I-124.11	Water Meters and Boxes Removed & Reset	Each	4	1	5
* I-2	15" Storm Sewers, Sec. M-6.6(b) for Water Line Conduit	Lin. Ft.	177	234	411
* I-2	15" Storm Sewers, Sec. M-6.6(c) for Water Line Conduit	Lin. Ft.	120		120
* I-2	21" Storm Sewers (Conduit), Sec. M-6.6(b), as per plan	Lin. Ft.	177		177
* I-2	21" Storm Sewers (Conduit), Sec. M-6.6(c), as per plan	Lin. Ft.	120		120
I-2	1 1/2" Wrought Iron Pipe, Sec. M-6.10, Service Branch Conduit	Lin. Ft.	60		60
I-2	2" Wrought Iron Pipe, Sec. M-6.10, Service Branch Conduit	Lin. Ft.	58	32	90
S-1	Class E Concrete (Reaction Backing)	Cu. Yd.	2	2	4

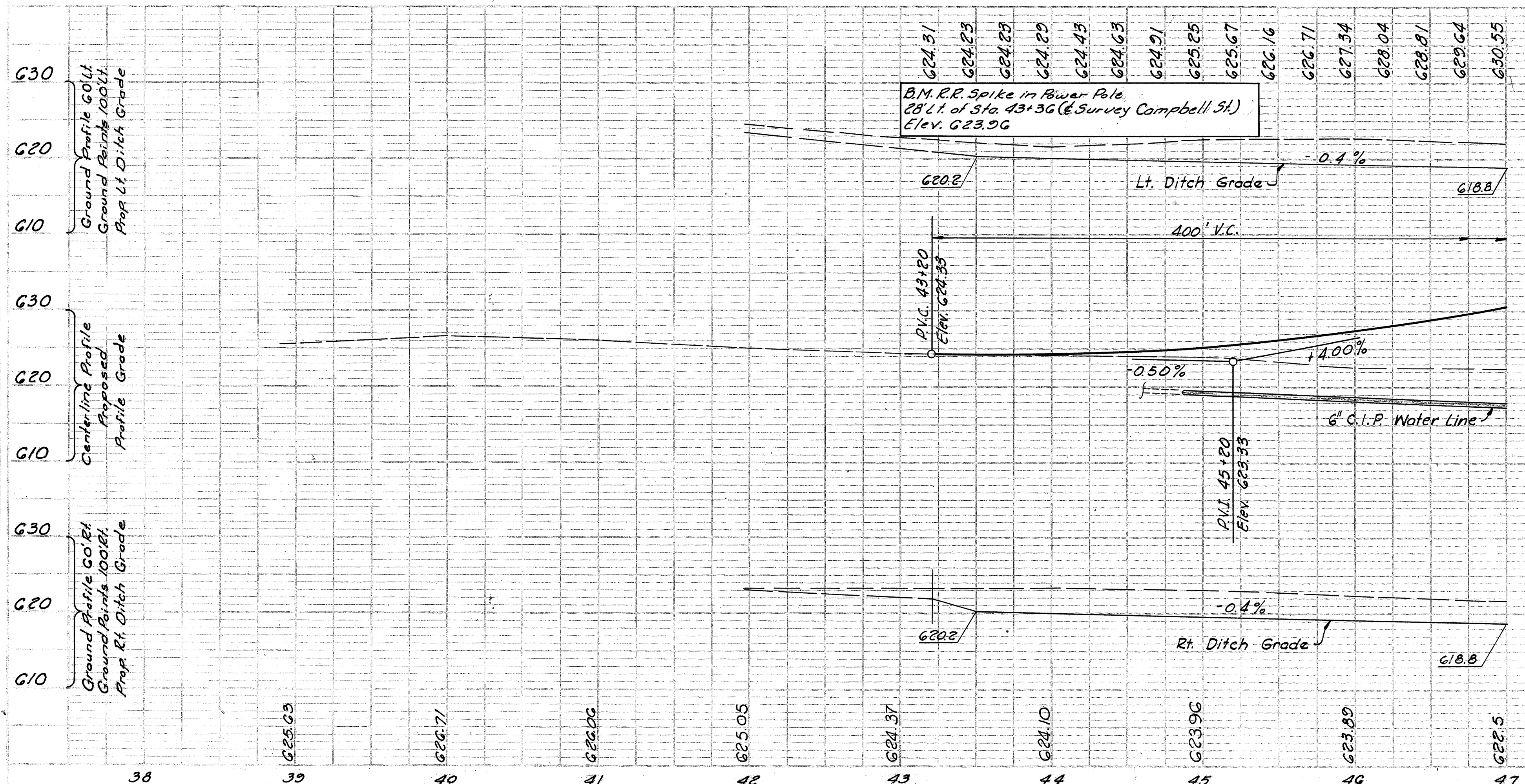
* Under Pavement or Approaches * NO FEDERAL PARTICIPATION

FOR WATER LINE NOTES, SEE SHEET 39.



TYPICAL SECTION OF ADJOINING PAVEMENT

Scale: 1"=10'



SURVEYED BY: [Signature]
 DATE: 6-55
 DRAWN BY: [Signature]
 DATE: 9-60
 CHECKED BY: [Signature]
 DATE: 9-60

SURVEYED BY: [Signature]
 DATE: 6-55
 DRAWN BY: [Signature]
 DATE: 9-60
 CHECKED BY: [Signature]
 DATE: 9-60

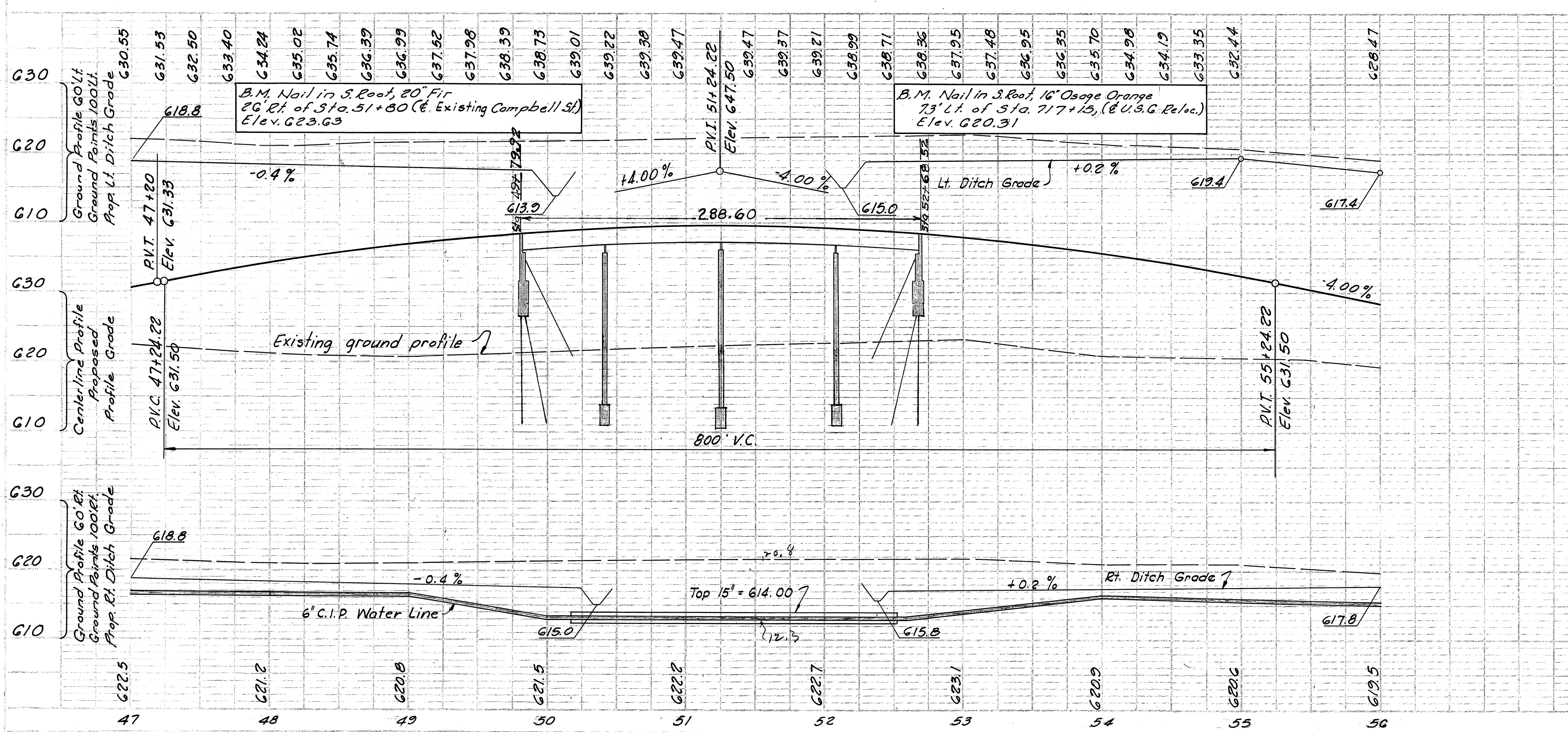
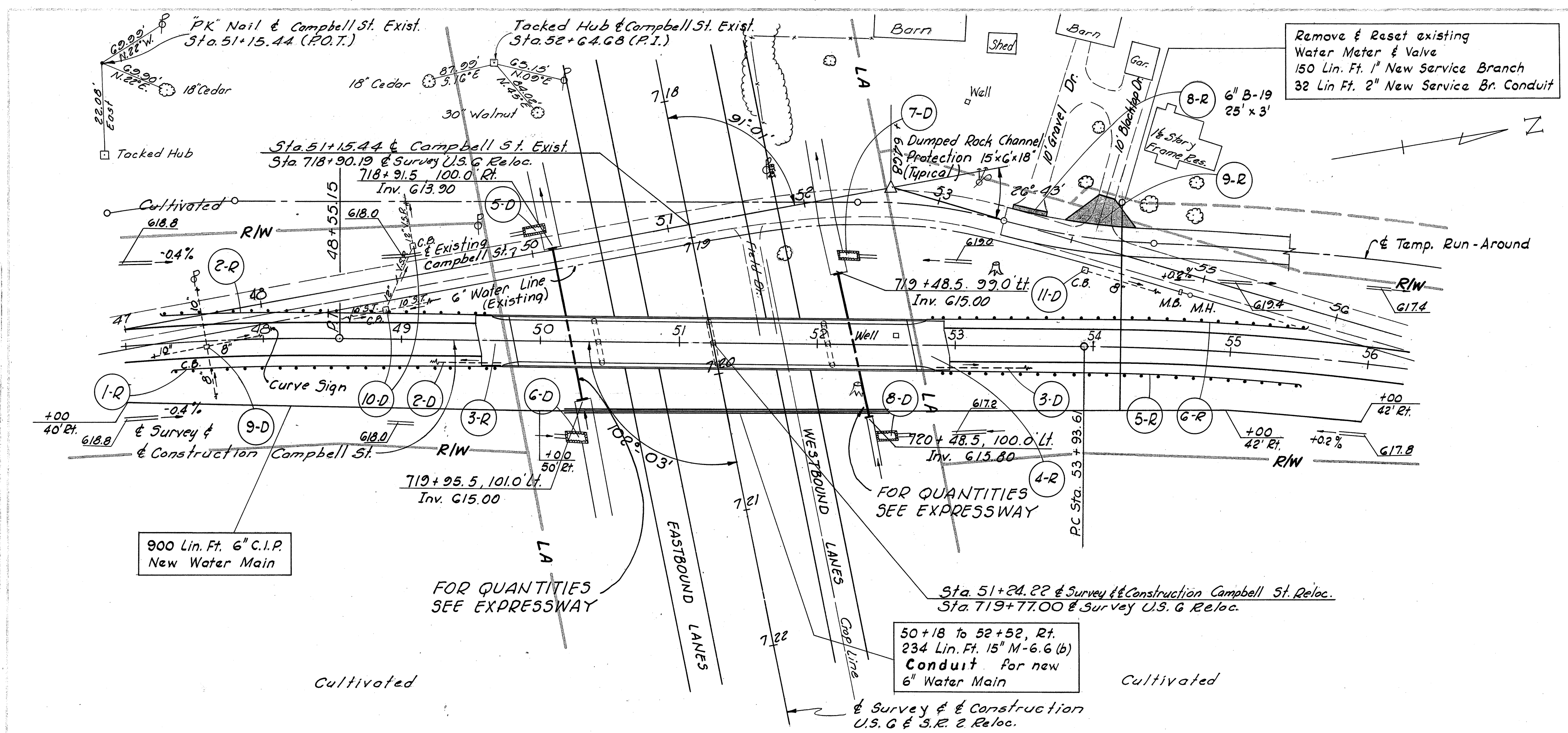
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

51
161

ERI 6-731

DATE: 10/1/55
BY: J.S. RNE
CHECKED: EDS
DATE: 10/1/55
BY: J.S. RNE
CHECKED: EDS

DATE: 10/1/55
BY: J.S. RNE
CHECKED: EDS
DATE: 10/1/55
BY: J.S. RNE
CHECKED: EDS

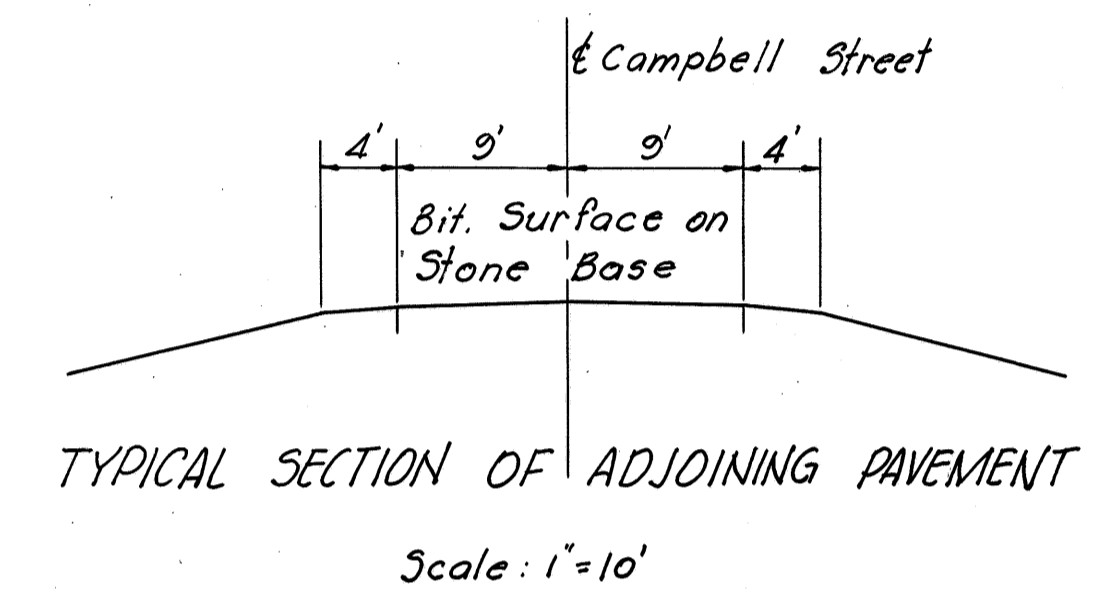
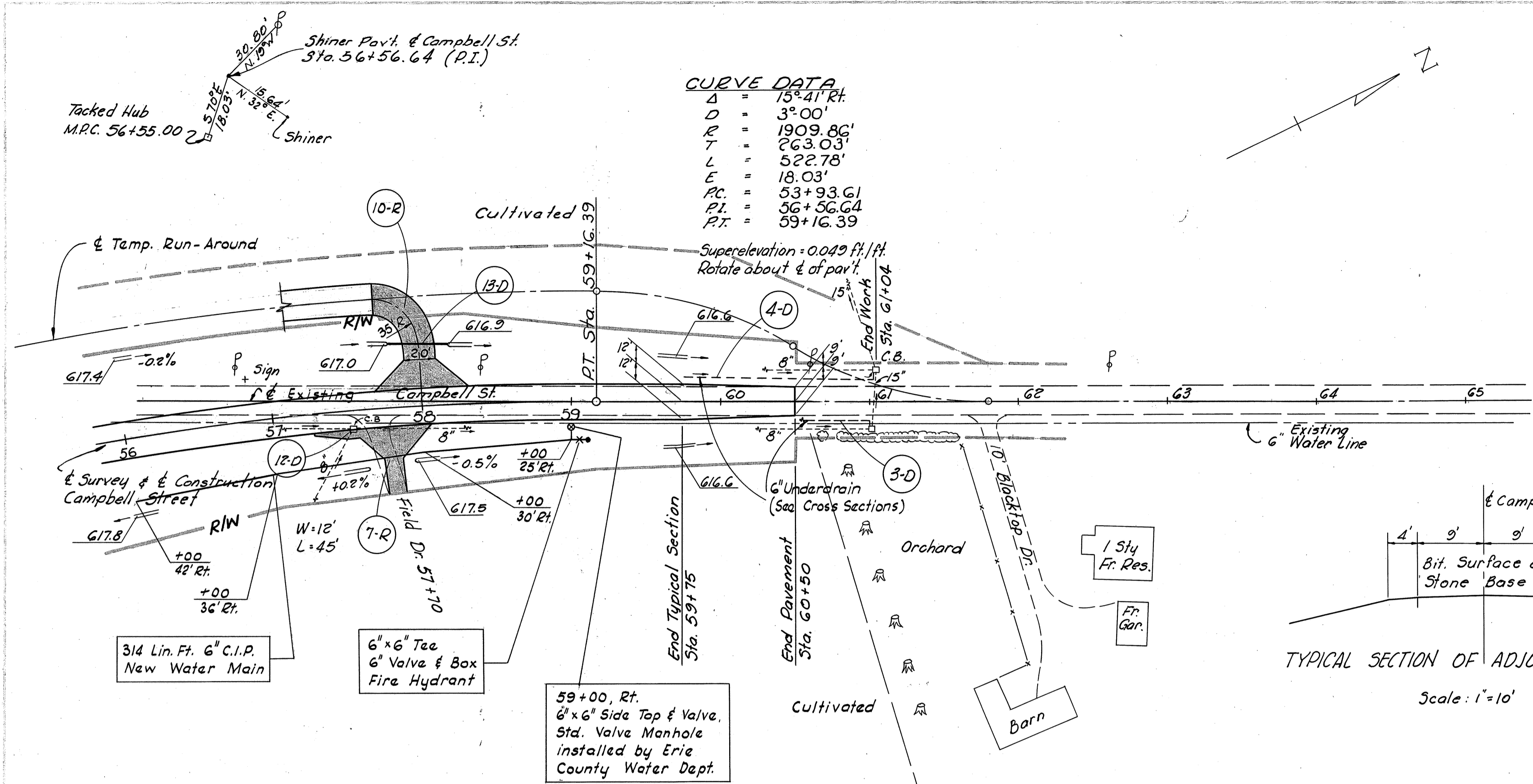


MICROFILMED
MAR 19 1985

Sta. 47+00 to Sta. 56+00 Campbell Street

ERI 6-7.31

CURVE DATA
 $\Delta = 15^\circ 41' \text{ Rt.}$
 $D = 3^\circ 00'$
 $R = 1909.86'$
 $T = 263.03'$
 $L = 522.78'$
 $E = 18.03'$
 $PC = 53+93.61$
 $PI = 56+56.64$
 $PT = 59+16.39$

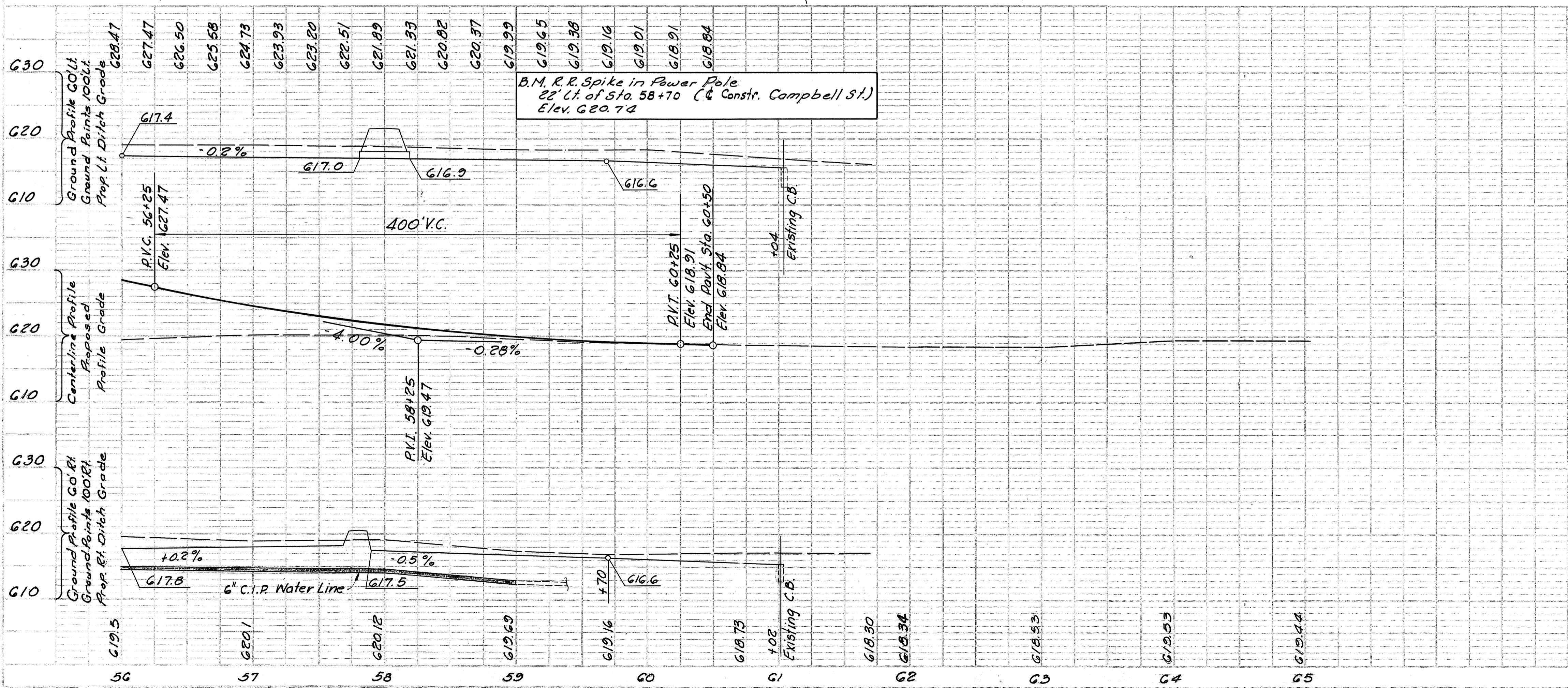


ROADWAY QUANTITIES F-1042(G)

See Sheet No.	Reference No. or Structure No.	Station	Side	Quantities							
				E-1	B-19	T-35	I-7	I-15	I-22	T-35	
				Compacted Subgrade	Aggregate Base Course	Asphaltic Conc. Surface Course	Reinf. Conc. Appl. Slab	Guard Rail (Std. Type)	Subbase	Asph. Conc. Surface Course	Other
				Sq.Yd.	Cu.Yd.	Sq.Yd.	Sq.Yd.	Lin.Ft.	Cu.Yd.	Cu.Yd.	
	1-R	47+34.5	49+72	Rt.					237.5		
	2-R	47+27.5	49+65	Lt.					237.5		
	3-R	49+54.92	49+79.92	Lt.	93.2			93.2		15.5	
	4-R	52+68.58	52+93.58	Lt.	93.2			93.2		15.5	
	5-R	52+82	55+45	Rt.					222.5		
	6-R	52+78	55+41	Lt.					222.5		
	7-R	57+77		Rt.	14.5	4.7					1.9
	8-R	53+55		Lt.		1.4					
	9-R	54+00		Lt.				9.9	4.0		
	10-R	58+00		Lt.	31.8	12.7					
Totals					186.4	57.6	21.4	186.4	1000	31	1.9

DRAINAGE QUANTITIES F-1042(G)

See Sheet No.	Reference No. or Structure No.	Station	Side	Quantities						
				I-1	I-4	I-4	I-5	I-10	I-16	
				12\"/>						
	1-D	43+50	44+25	Lt.		85	10	1		
	2-D	43+50	49+75	Rt.		635	10	1		
	3-D	52+85	61+02	Rt.		817	3	1		
	4-D	59+75	61+04	Lt.		129	5	1		
	5-D	50+00		Lt.					5	
	6-D	50+30		Rt.					5	
	7-D	52+15		Lt.					5	
	8-D	52+50		Rt.					5	
	9-D	47+60		Rt.						1
	10-D	43+90	49+05	Lt.						2
	11-D	53+95		Lt.						1
	12-D	57+50		Rt.						1
	13-D	57+81	58+19	Lt.	38					
Totals					38	1666	28	4	20	5



Sta. 50+00 to Sta. 65+00 Campbell Street

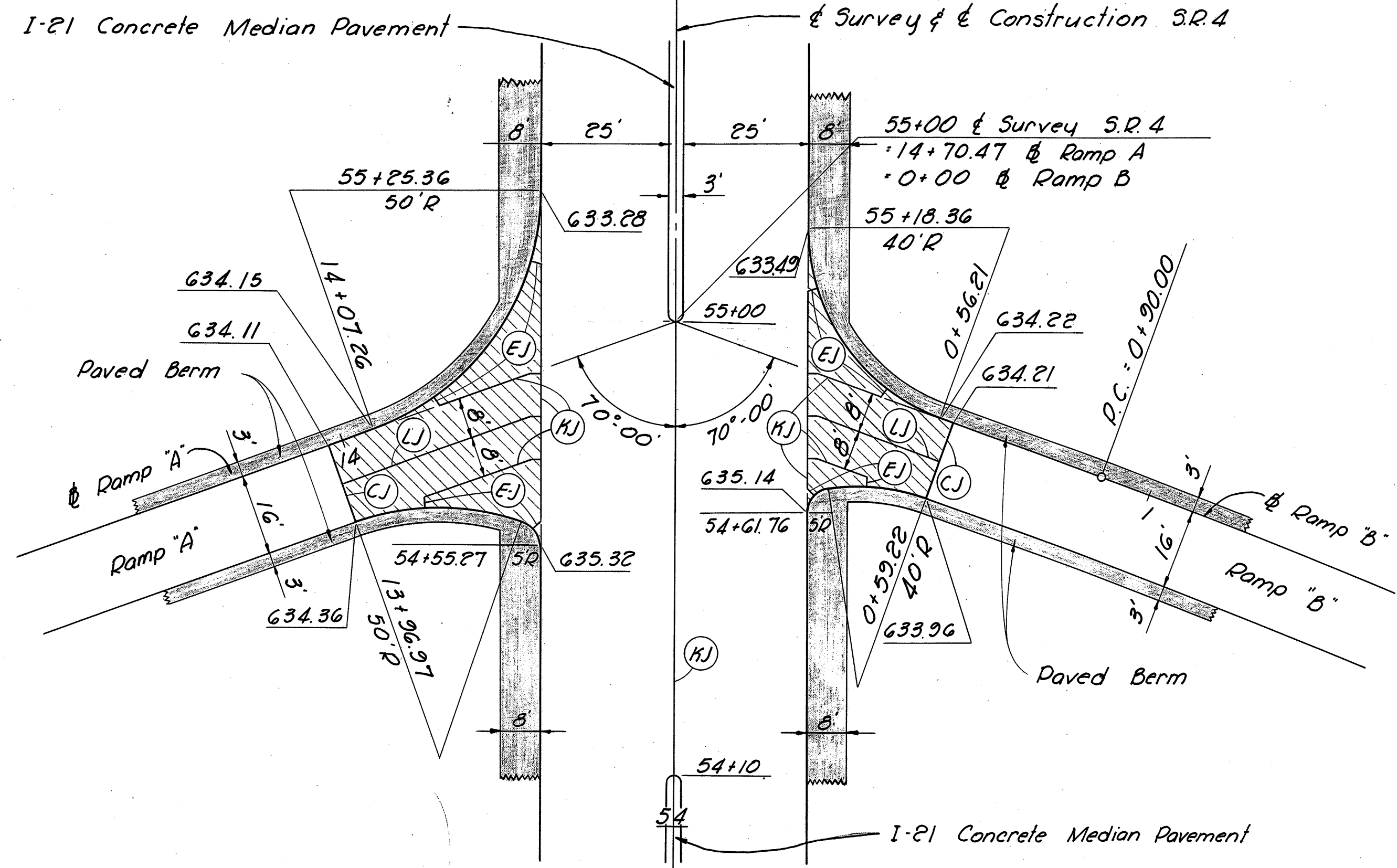
19-59
2-59
3-60
4-60
5-60
6-60
7-60
8-60
9-60

19-59
2-59
3-60
4-60
5-60
6-60
7-60
8-60
9-60

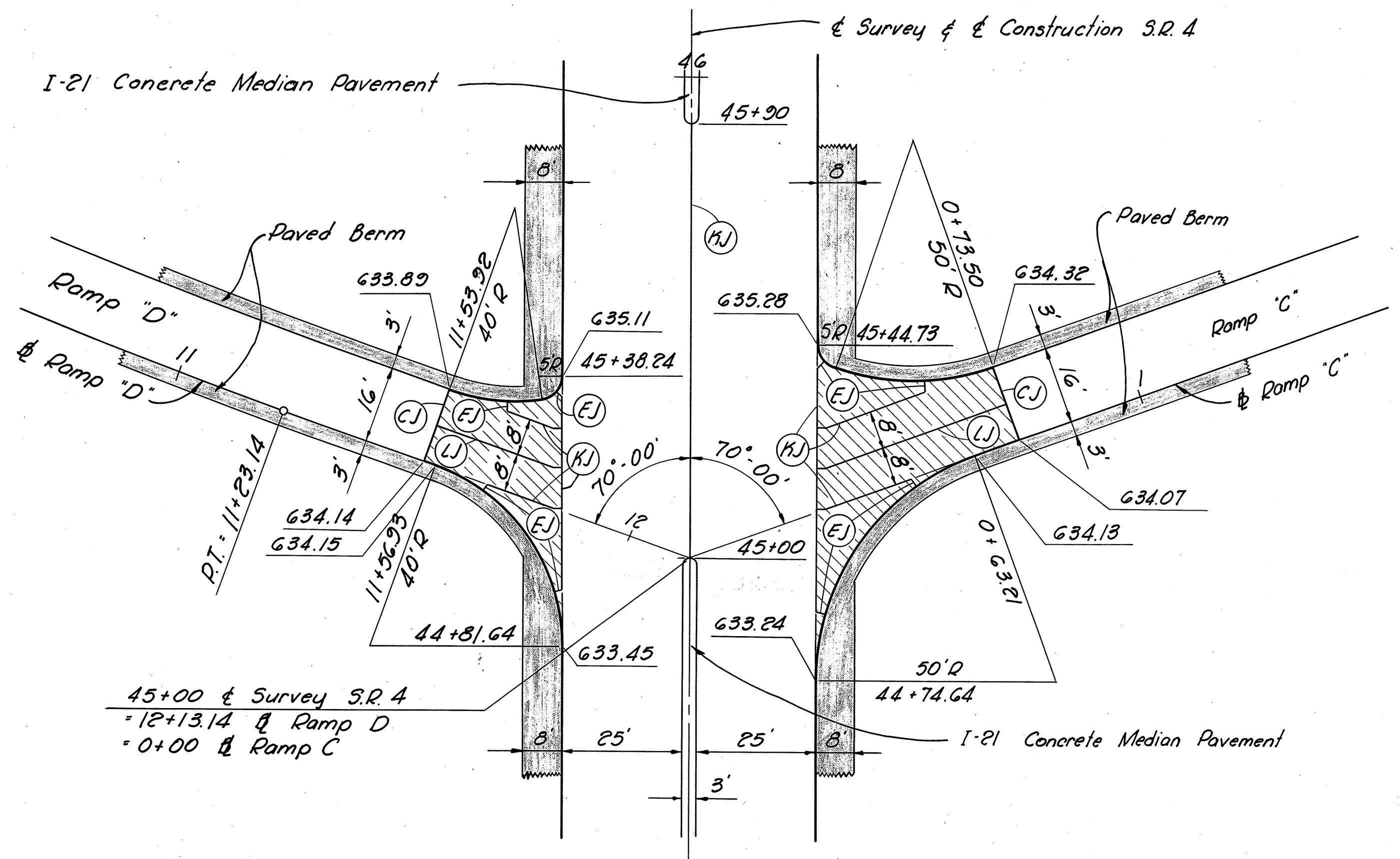
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

53
161

ERI 6-7.31

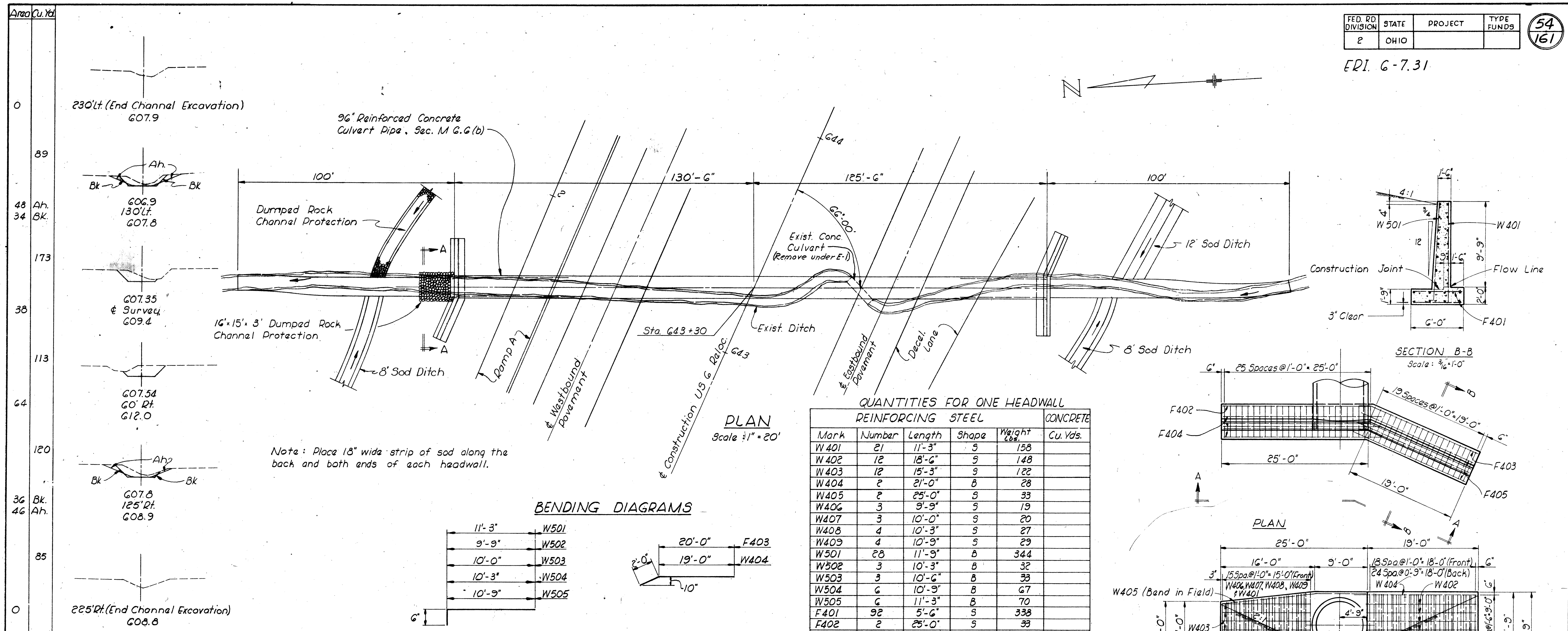


1-P RAMPs "A" & "B" - S.R. 4



2-P RAMPs "C" & "D" - S.R. 4

ERI. G-7.31

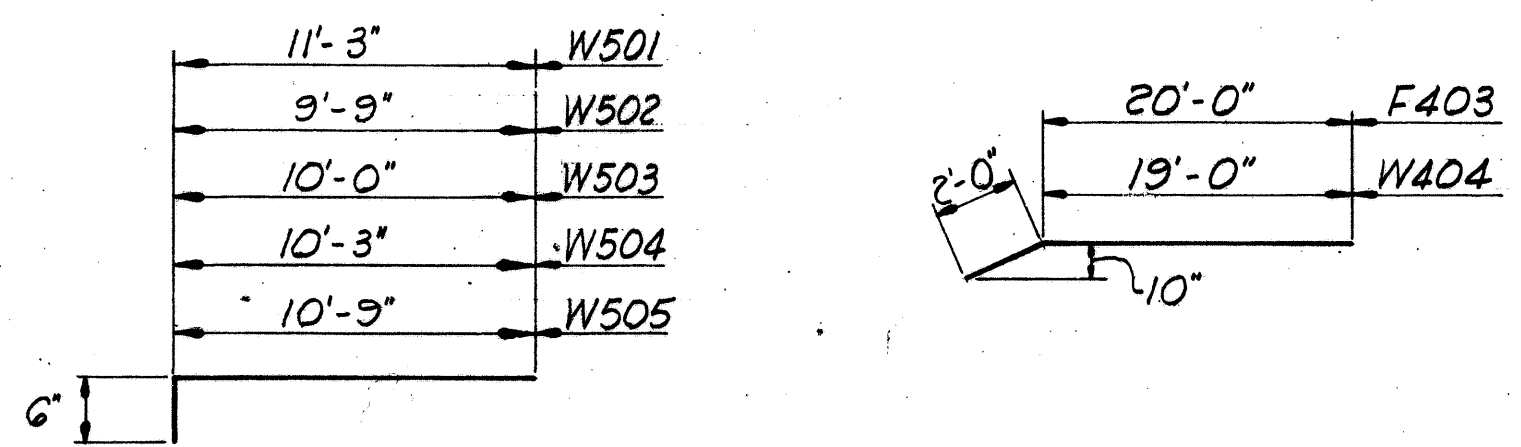


0	230' Lt. (End Channel Excavation) 607.9
89	
48	Ah.
34	Bk.
173	606.9 130' Lt. 607.8
38	607.35 & Survey 609.4
113	607.54 60' Rt. 612.0
64	
120	
36	Bk.
46	Ah.
85	607.8 125' Rt. 608.9
0	225' Rt. (End Channel Excavation) 608.8

580 - Total Channel Excavation
Sections along Channel
Scale: 1" = 20'

Note: Place 18" wide strip of sod along the back and both ends of each headwall.

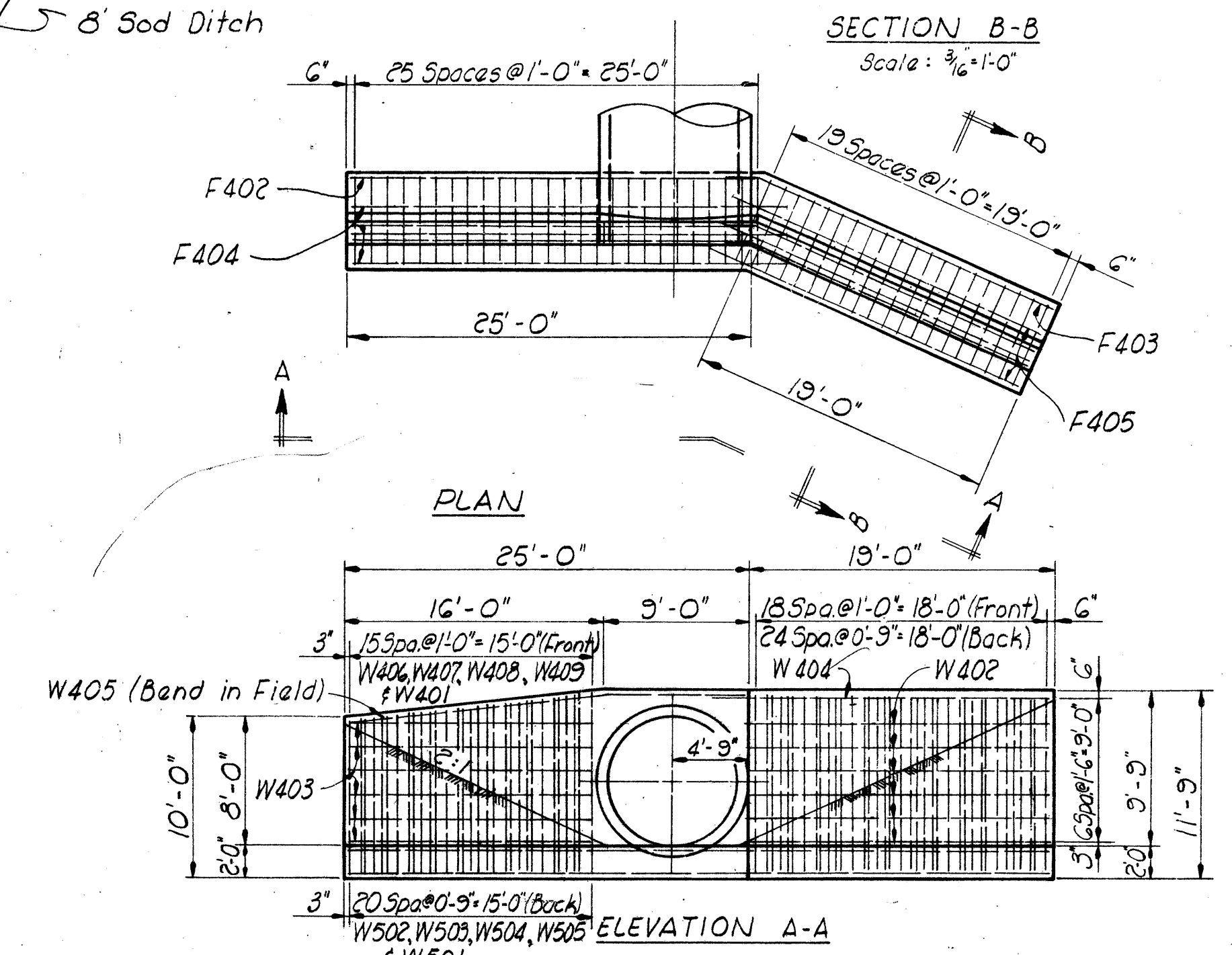
BENDING DIAGRAMS



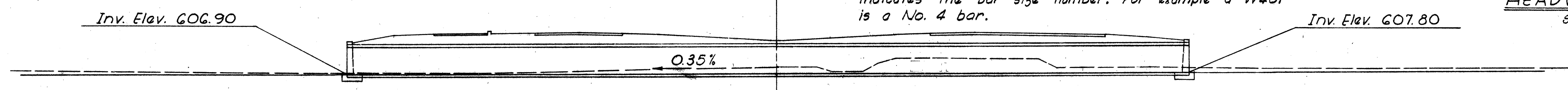
QUANTITIES FOR ONE HEADWALL

REINFORCING STEEL					CONCRETE
Mark	Number	Length	Shape	Weight Lbs.	Cu. Yds.
W401	21	11'-3"	S	158	
W402	12	18'-6"	S	148	
W403	12	15'-3"	S	122	
W404	2	21'-0"	B	28	
W405	2	25'-0"	S	33	
W406	3	9'-9"	S	19	
W407	3	10'-0"	S	20	
W408	4	10'-3"	S	27	
W409	4	10'-9"	S	29	
W501	28	11'-9"	B	344	
W502	3	10'-3"	B	32	
W503	3	10'-6"	B	33	
W504	6	10'-9"	B	67	
W505	6	11'-3"	B	70	
F401	92	5'-6"	S	338	
F402	2	25'-0"	S	33	
F403	2	22'-0"	B	29	
F404	6	27'-0"	S	108	
F405	6	21'-0"	S	84	
Totals				1722	42.5

BAR SIZE is indicated in bar mark. The first digit indicates the bar size number. For example a W401 is a No. 4 bar.

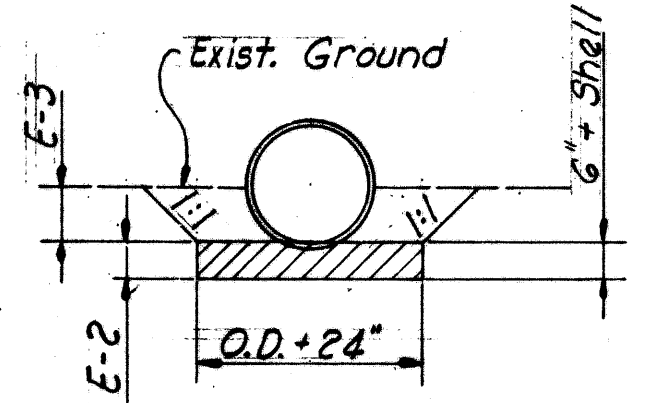


HEADWALL DETAILS
Scale: 1/2" = 1'-0"

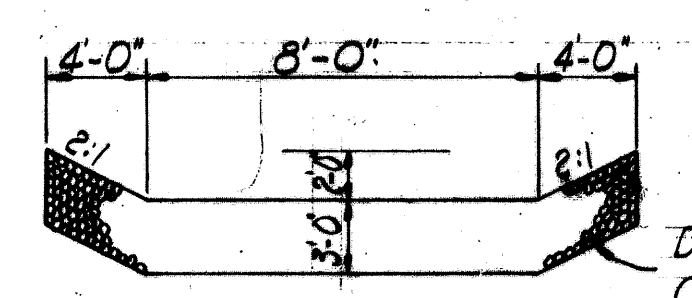


LONGITUDINAL SECTION
Scale: 1" = 20'

Drainage Area = 1100 Ac.
Q₅₀ = 420 c.f.s.

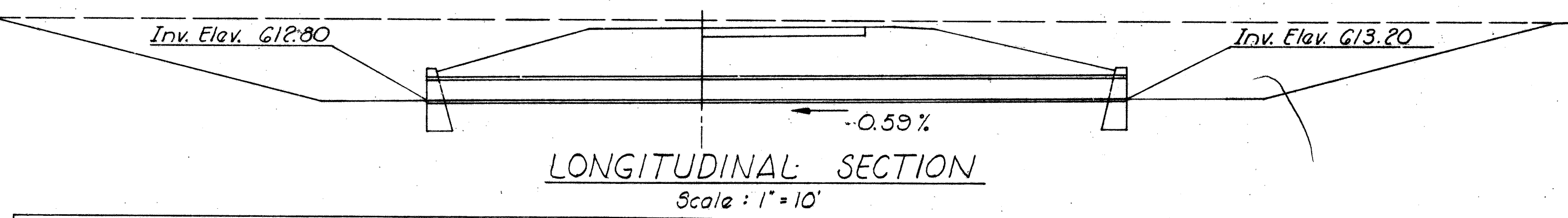
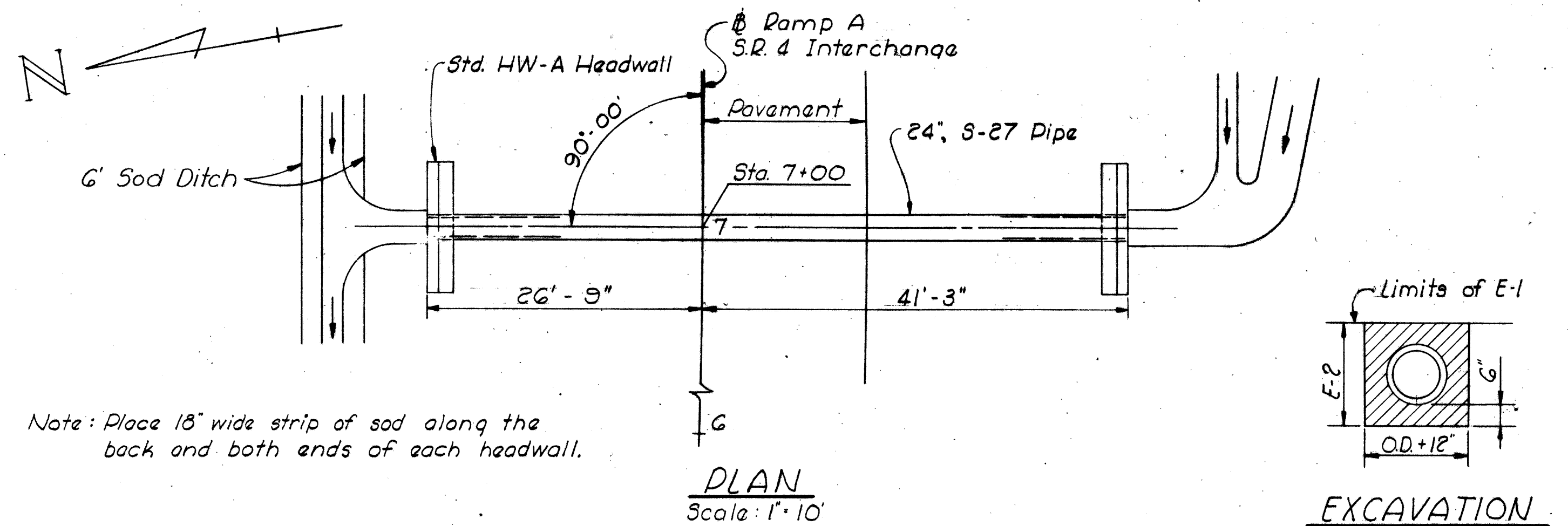


EXCAVATION



SECTION A-A

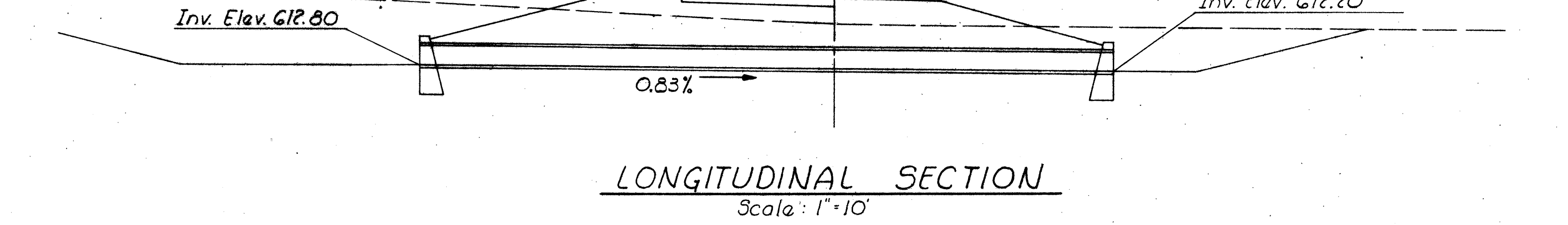
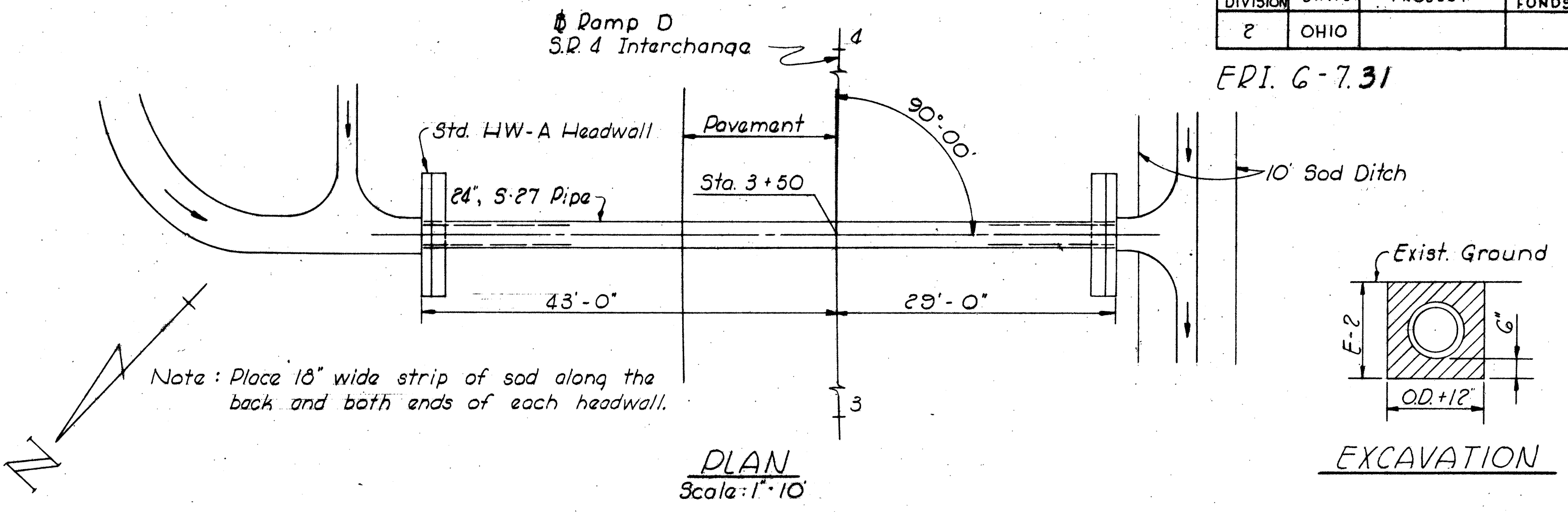
Item	Quantity	Unit	Description
E-2	170	Cu. Yd.	Excavation for Structure
E-3	580	Cu. Yd.	Channel Excavation
S-1	85.0	Cu. Yd.	Concrete for Structure, Class 'C'
S-27	256	Lin. Ft.	96 Reinforced Concrete Culvert Pipe, Sec. M G.G. (b)
I-10	27	Cu. Yd.	Dumped Rock Channel Protection
L-10	17	Sq. Yd.	Bedding
S-4	3,444	Lbs.	Reinforcing Steel



Item	Quantity	Unit	Description
L-10	6	Sq. Yd.	Sodding
E-2	82	Cu. Yd.	Excavation for Structure
S-1	10.2	Cu. Yd.	Concrete for Structure, Class "C"
S-27	68	Lin. Ft.	24" Pipe for Roadway Culvert Sec. M-G.G(b) or Sec. M-G.G(b)
S-4	436	Lbs.	Reinforcing Steel

Drainage Area = 12 Ac.
Q₁₀₀ = 23 c.f.s.

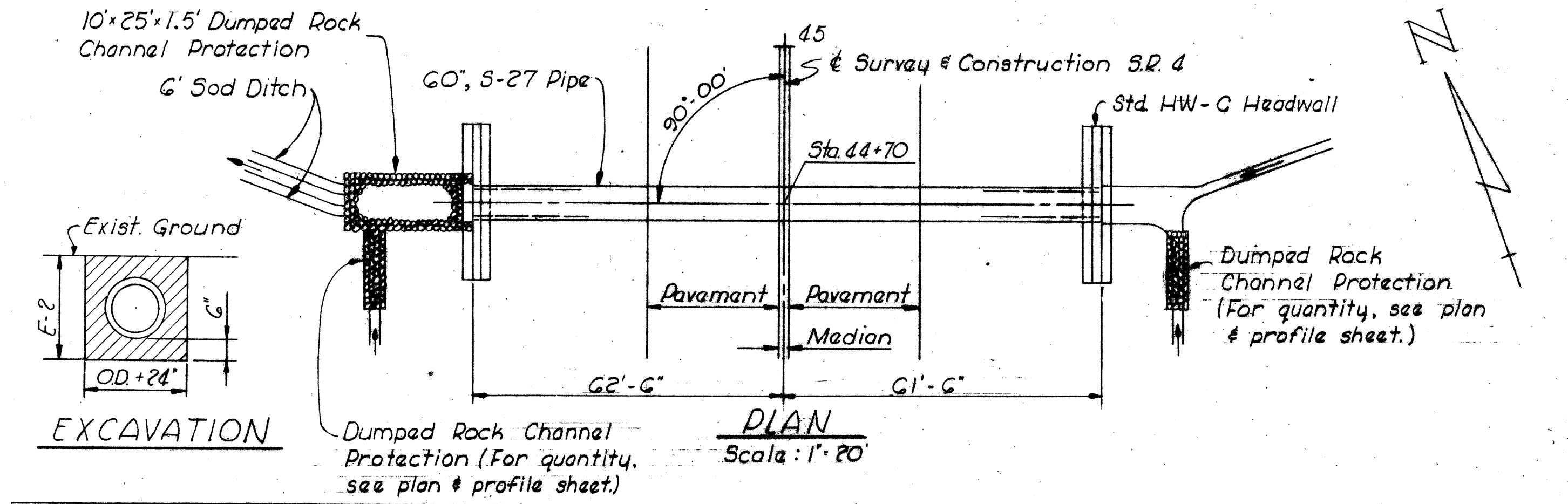
2 Sta. 7+00 Rampa S.R. 4 P.C. 24" x 68' ERI G-7.31



Item	Quantity	Unit	Description
E-2	76	Cu. Yd.	Excavation for Structure
S-1	10.2	Cu. Yd.	Concrete for Structure, Class "C"
S-27	72	Lin. Ft.	24" Pipe for Roadway Culvert Sec. M-G.G(b) or Sec. M-G.G(b)
S-4	436	Lbs.	Reinforcing Steel
L-10	6	Sq. Yd.	Sodding

Drainage Area = 11 Ac.
Q₁₀₀ = 20 c.f.s.

3 Sta. 3+50 Ramp D S.R. 4 P.C. 24" x 72' ERI G-7.31

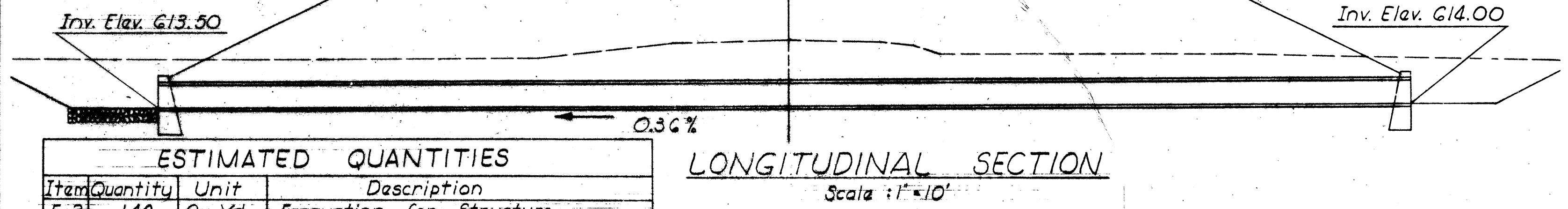
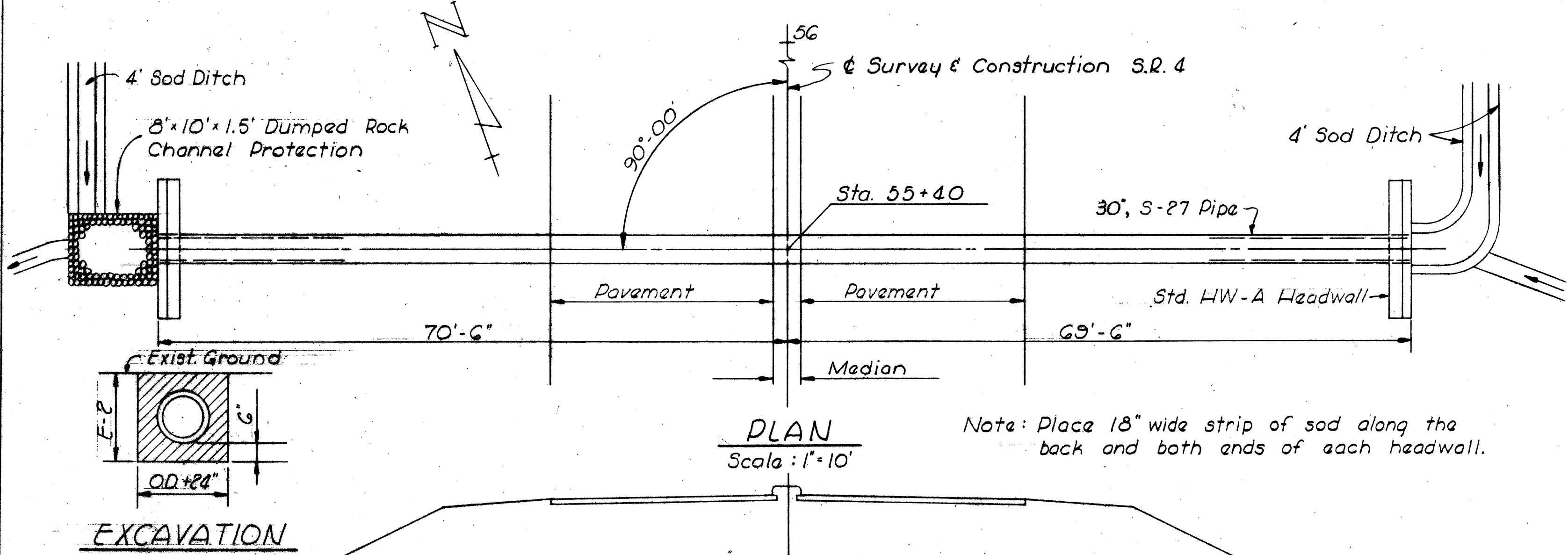


Item	Quantity	Unit	Description
E-2	530	Cu. Yd.	Excavation for Structure
S-1	44.0	Cu. Yd.	Concrete for Structure, Class "C"
S-27	124	Lin. Ft.	60" Reinforced Concrete Culvert Pipe, Sec. M-G.G(b)
S-4	1,954	Lbs.	Reinforcing Steel
I-10	14	Cu. Yd.	Dumped Rock Channel Protection
L-10	12	Sq. Yd.	Sodding

Note: Place 18" wide strip of sod along the back and both ends of each headwall.

Drainage Area = 120 Ac.
Q₁₀₀ = 101 c.f.s.

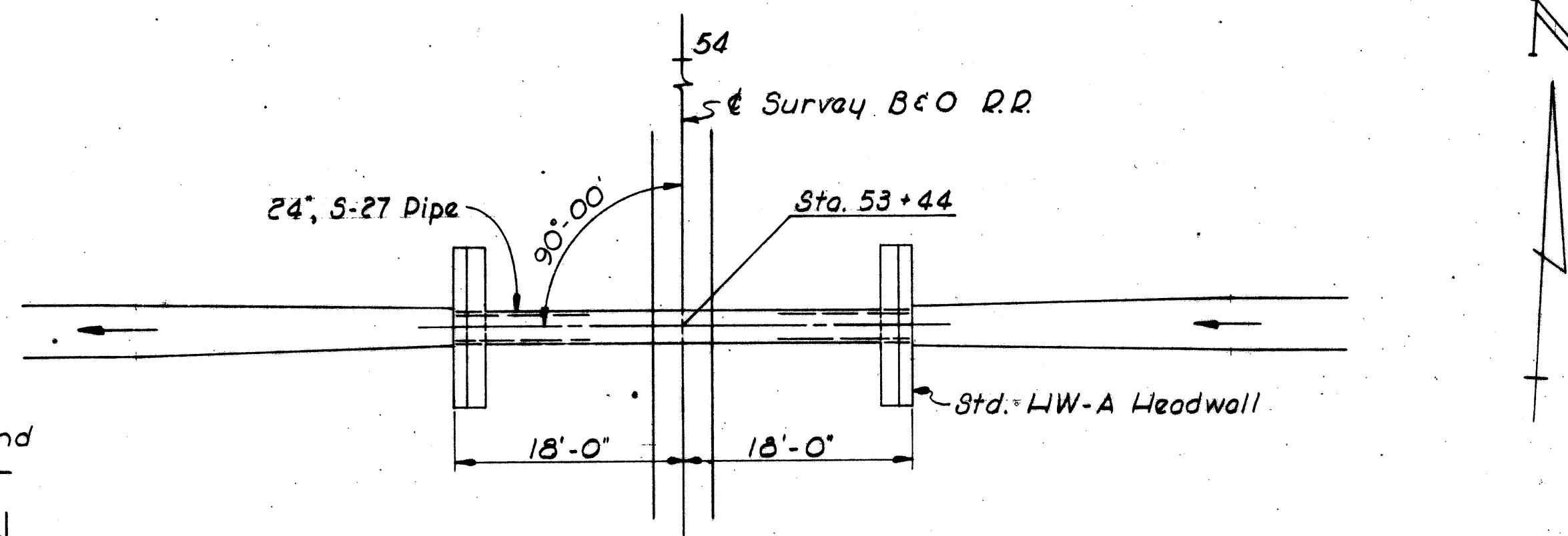
4 Sta. 44+70 S.R. 4 P.C. 60" x 124' ERI G-7.31



Item	Quantity	Unit	Description
E-2	140	Cu. Yd.	Excavation for Structure
I-10	4	Cu. Yd.	Dumped Rock Channel Protection
L-10	7	Sq. Yd.	Sodding
S-4	372	Lbs.	Reinforcing Steel
S-1	14.4	Cu. Yd.	Concrete for Structure, Class "C"
S-27	140	Lin. Ft.	30" Reinforced Concrete Culvert Pipe, Sec. M-G.G(c)

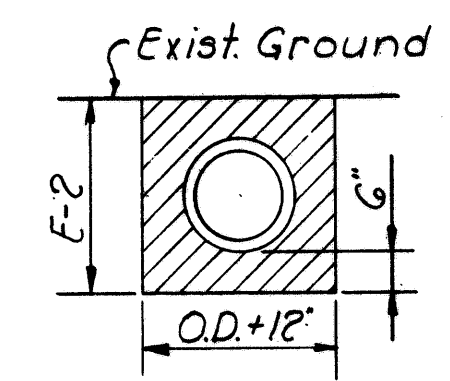
Drainage Area = 17 Ac.
Q₁₀₀ = 28 c.f.s.

5 Sta. 55+40 S.R. 4 P.C. 30" x 140' ERI G-7.31

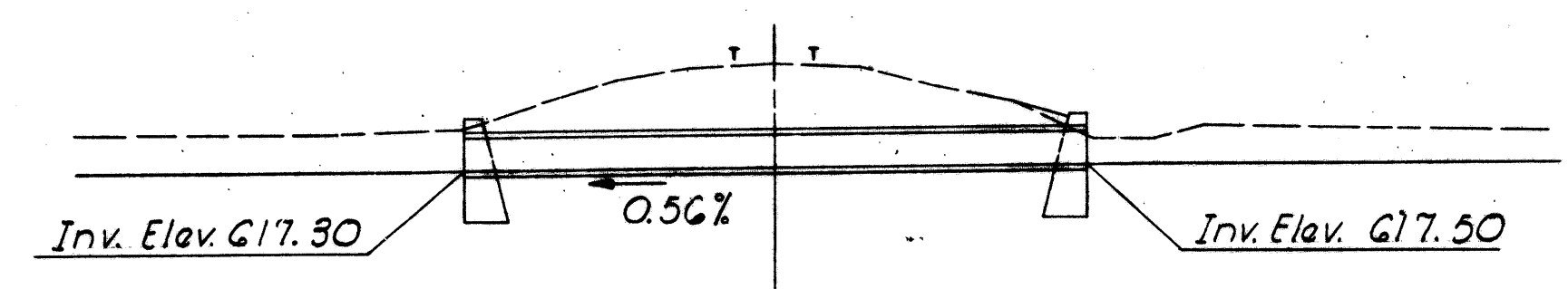


PLAN
Scale: 1"=10'

Note: Place 18" wide strip of sod along the back and both ends of each headwall.



EXCAVATION

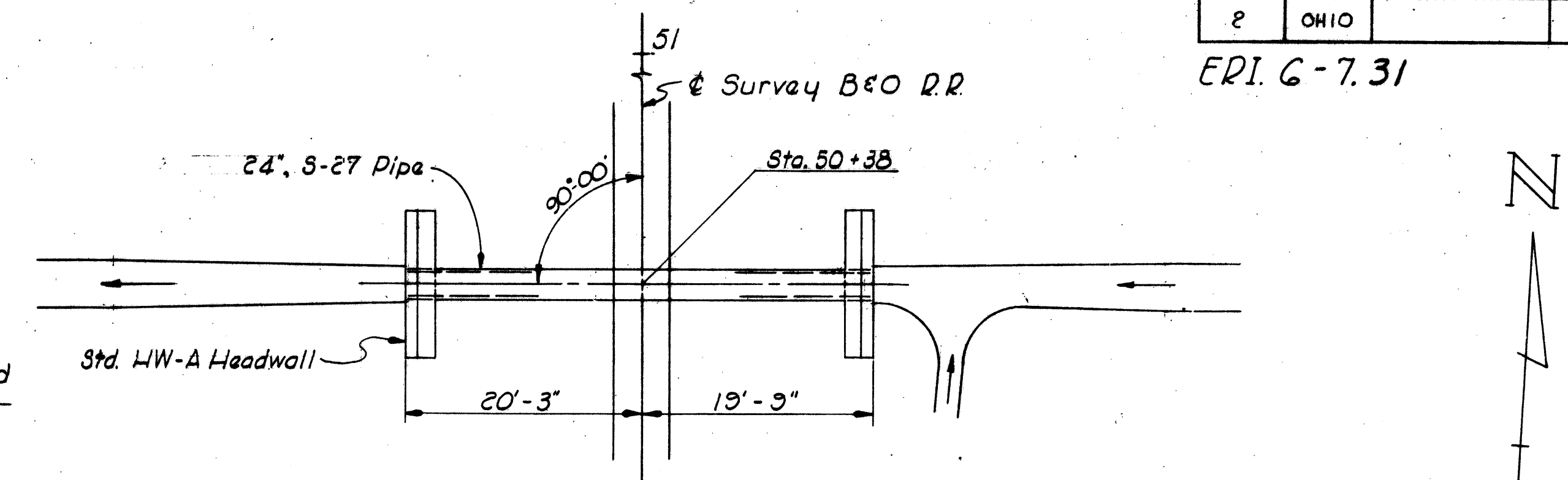


LONGITUDINAL SECTION
Scale: 1"=10'

ESTIMATED QUANTITIES			
Item	Quantity	Unit	Description
E-2	51	Cu. Yd.	Excavation for Structure
S-1	10.2	Cu. Yd.	Concrete for Structure, Class 'C'
S-27	36	Lin. Ft.	24" Rainf. Conc. Culvert Pipe Sec. M-G.G(d) under Railroad.
S-4	436	Lbs.	Reinforcing Steel
L-10	6	Sq. Yd.	Sodding

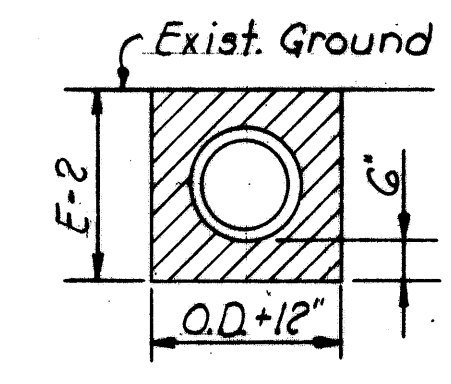
Drainage Area = 9 Ac.
Q_{es} = 18 c.f.s.

G	Sta. 53+44 B. & O. R.R.	P.C. 24' x 36'	ERI. G-7.31
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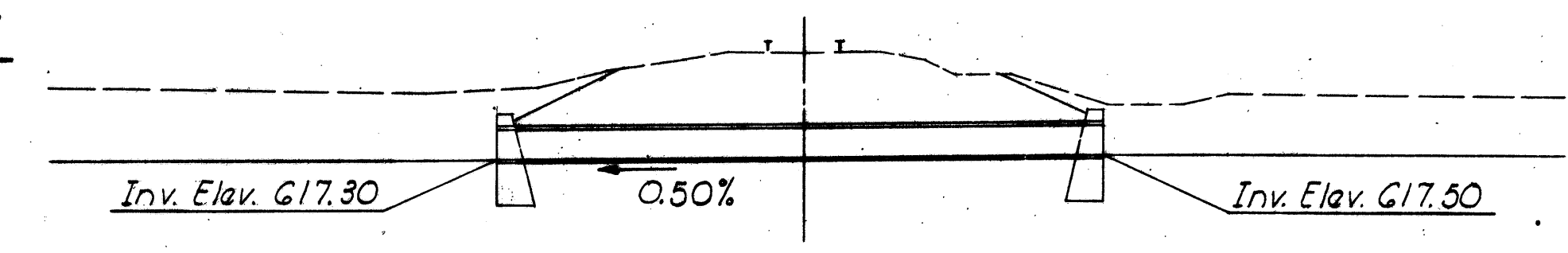


PLAN
Scale: 1"=10'

Note: Place 18" wide strip of sod along the back and both ends of each headwall.



EXCAVATION



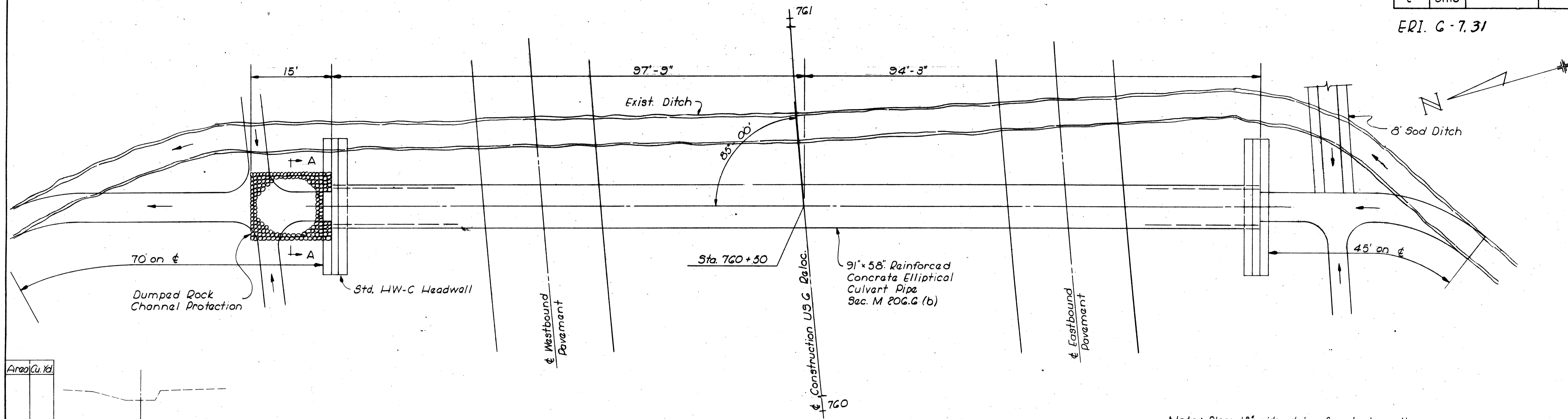
LONGITUDINAL SECTION
Scale: 1"=10'

ESTIMATED QUANTITIES			
Item	Quantity	Unit	Description
E-2	58	Cu. Yd.	Excavation for Structure
S-1	10.2	Cu. Yd.	Concrete for Structure, Class 'C'
S-27	40	Lin. Ft.	24" Rainf. Conc. Culvert Pipe Sec. M-G.G(d) under Railroad.
S-4	436	Lbs.	Reinforcing Steel
L-10	6	Sq. Yds.	Sodding

Drainage Area = 16 Ac.
Q_{es} = 26 c.f.s.

7	Sta. 50+38 B. & O. R.R.	P.C. 24' x 40'	ERI. G-7.31
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ERI. G-7.31

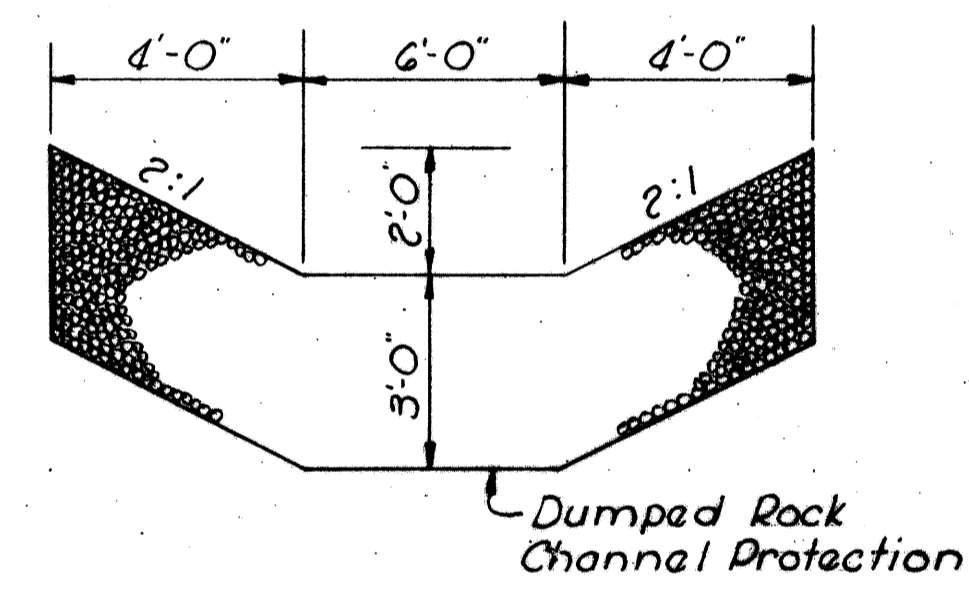


Note: Place 18" wide strip of sod along the back and both ends of each headwall

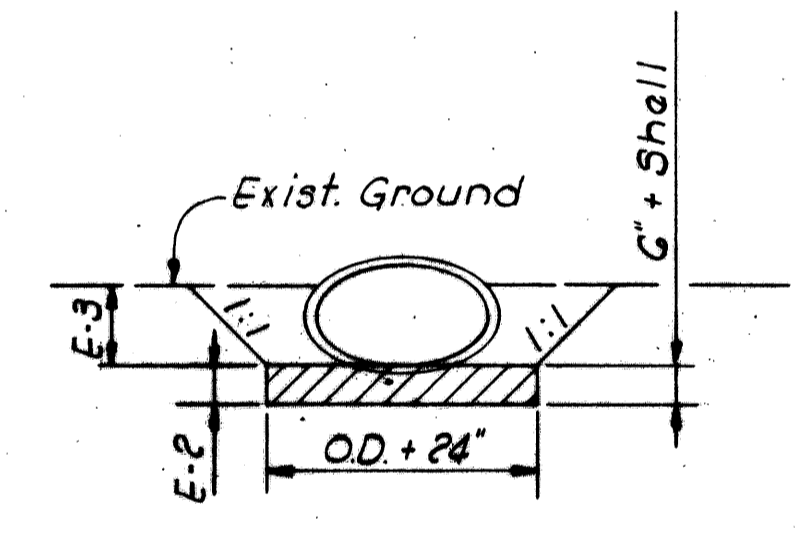
PLAN
Scale: 1" = 10'

Drainage Area = 450 Ac.
 $Q_{25} = 245$ c.f.s.

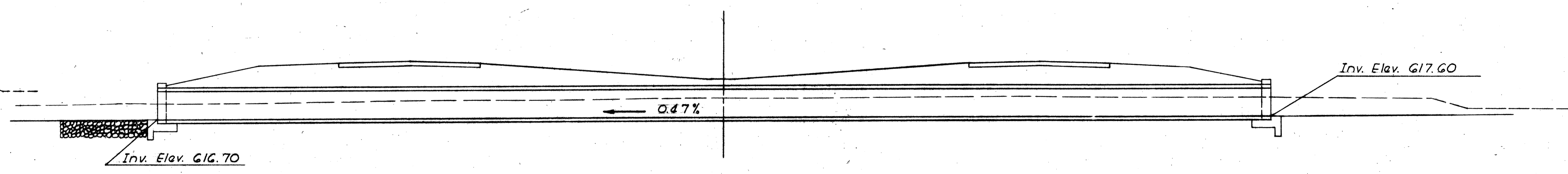
Area	Cu. Yd.
0	170' Lt. (End Channel Excavation) 617.6
57	
44	Ah. 616.70
48	Bk. 100' Lt. 619.8
185	
52	617.16 & Survey 620.5
167	
42	Bk. 617.60
39	Ah. 96' Rt. 620.6
32	
0	141' Rt. (End Channel Excavation) 619.0



SECTION A-A



EXCAVATION



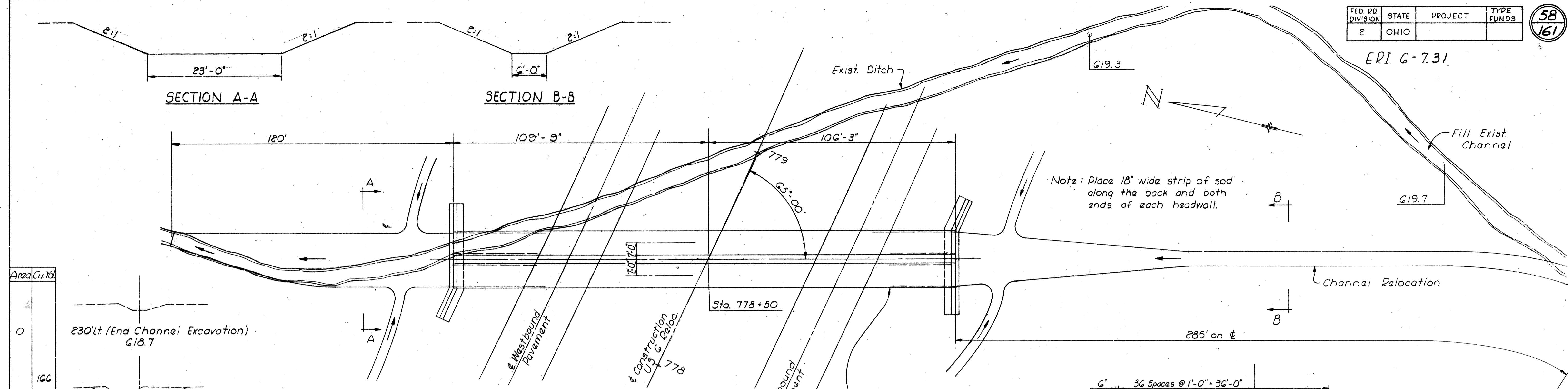
LONGITUDINAL SECTION
Scale: 1" = 10'

441 = Total Channel Excavation

Sections along Channel
Scale: 1" = 10'

ESTIMATED QUANTITIES			
Item	Quantity	Unit	Description
E-2	167	Cu. Yd.	Excavation for Structure
E-3	441	Cu. Yd.	Channel Excavation
S-1	38.0	Cu. Yd.	Concrete for Structure, Class 'C'
S-27	192	Lin. Ft.	91" x 58" Reinforced Conc. Elliptical Culvert Pipe, Sec. M 20G.G (b)
T-10	23	Cu. Yd.	Dumped Rock Channel Protection
S-4	1,746	Lbs.	Reinforcing Steel
L-10	11	Sq. Yds.	Sodding

ERI G-7.31



Area	Cu. Yd.
0	230' Lt. (End Channel Excavation) G18.7
166	
128	G16.9 160' Lt. G20.9
235	
126 Ah	G16.90 110' Lt. G18.9
122 Bk	
533	
140	G17.30 & Survey G21.6
530	
130 Bk	G17.70 106' Lt. G21.8
132 Ah	
337	
52	G18.0 205' Lt. G22.0
155	
36	G19.0 300' Lt. G22.0
61	
0	391' Lt. (End Channel Excavation) G20.0

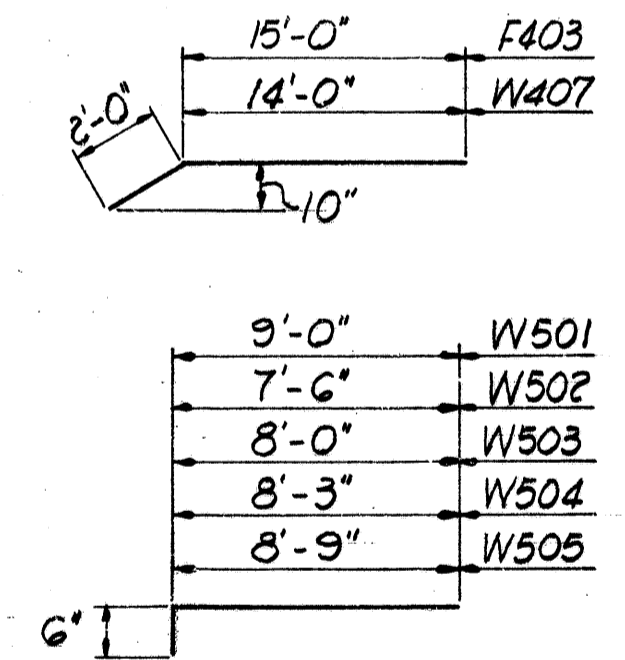
QUANTITIES FOR ONE HEADWALL

REINFORCING STEEL				CONCRETE	
Mark	Number	Length	Shape	Weight Lbs.	Cu. Yds.
W401	16	9'-0"	3	96	
W402	3	7'-6"	5	15	
W403	3	8'-0"	5	16	
W404	3	8'-3"	5	17	
W405	3	8'-9"	5	18	
W406	8	13'-6"	5	72	
W407	2	16'-0"	B	21	
W408	4	18'-9"	5	50	
W409	8	11'-6"	5	61	
W410	4	5'-0"	5	13	
W501	16	9'-0"	B	159	
W502	3	8'-0"	B	25	
W503	3	8'-6"	B	27	
W504	3	8'-9"	B	27	
W505	3	9'-3"	B	29	
F401	104	4'-6"	5	313	
F402	4	19'-3"	5	51	
F403	2	17'-0"	B	23	
F404	8	19'-9"	5	106	
F405	4	16'-0"	5	42	
Totals				1181	33.8

BAR SIZE is indicated in bar mark. The first digit indicates the bar size number. For example a W401 is a No. 4 bar.

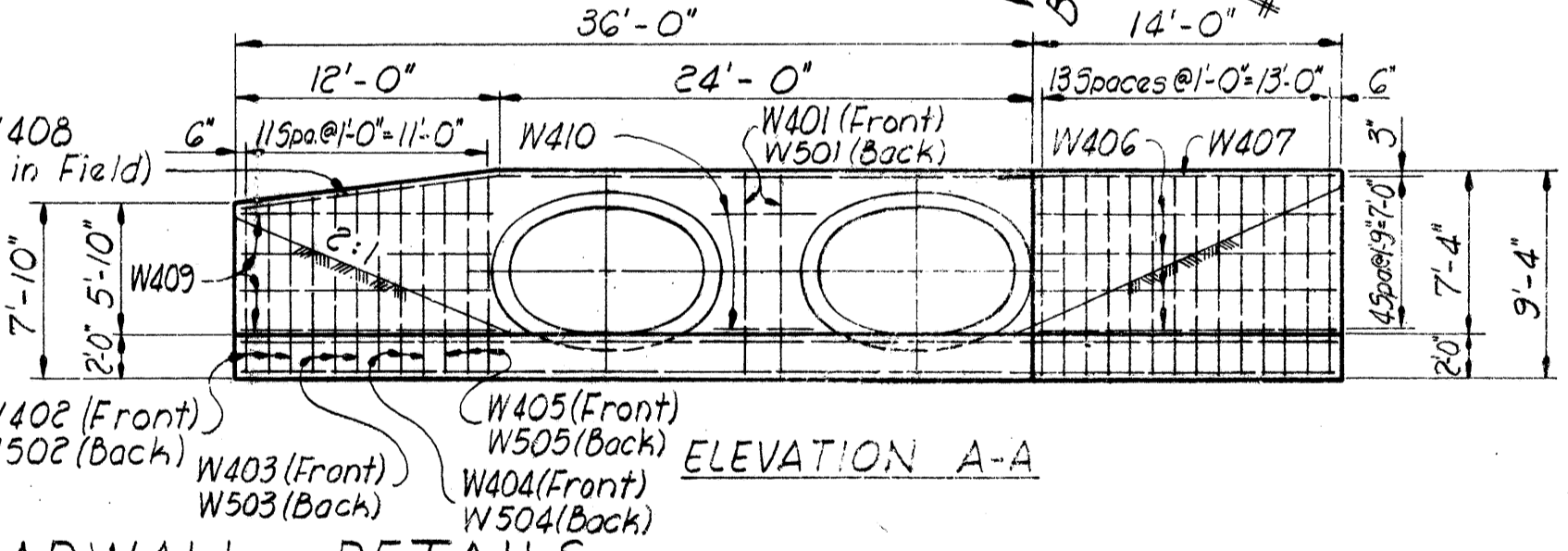
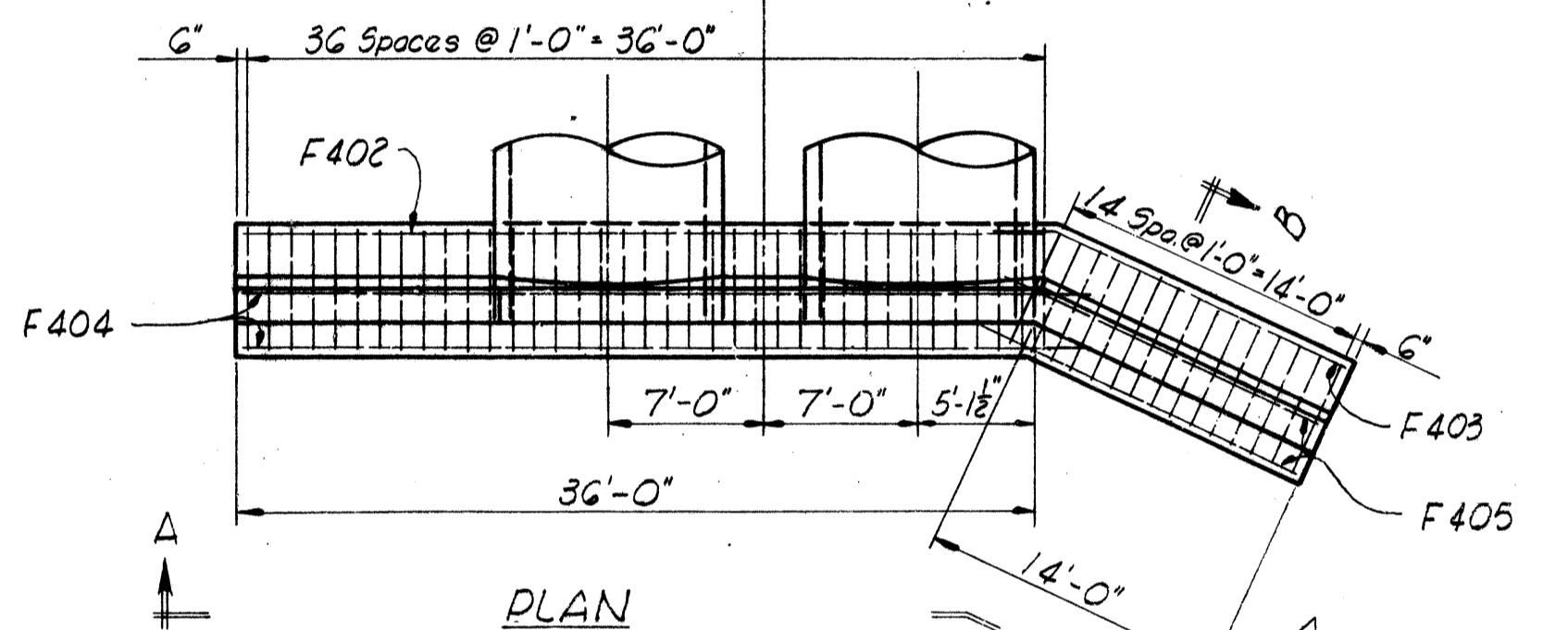
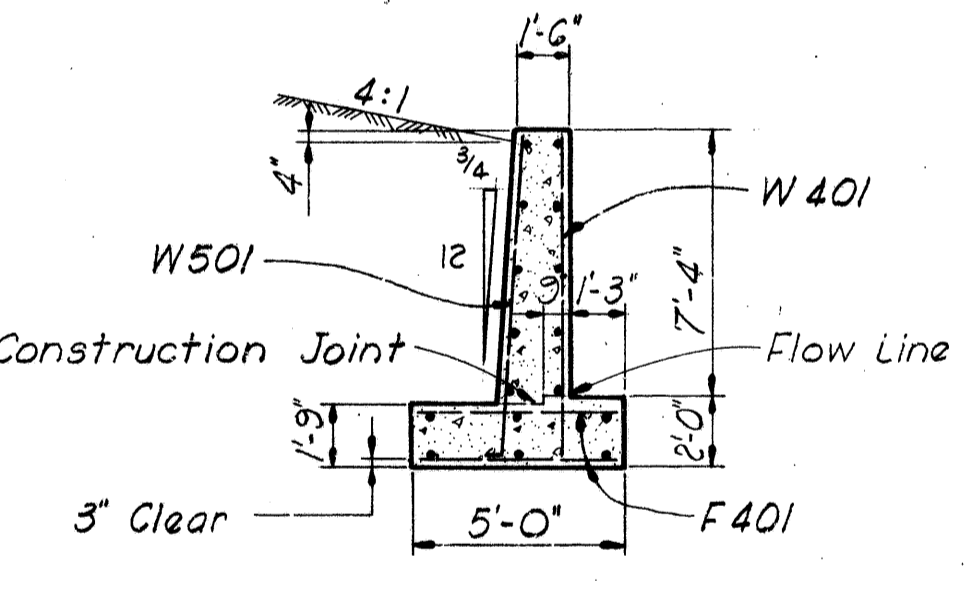
PLAN
Scale: 1"=20'

BENDING DIAGRAMS



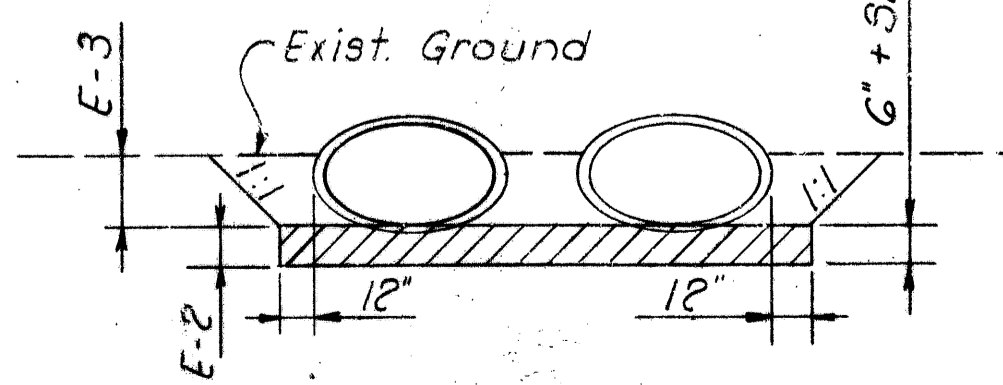
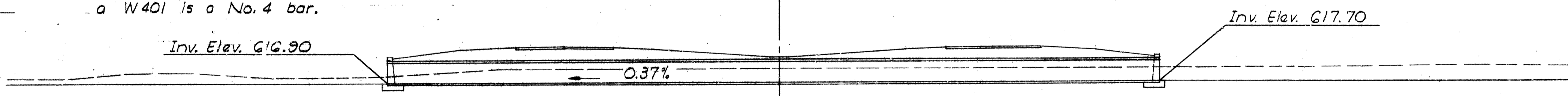
Twin 106" x 68" Reinforced Concrete Elliptical Culvert Pipe Sec. M-206.G (b)

SECTION B-B
Scale: 3/16"=1'-0"



HEADWALL DETAILS
Scale: 1/8"=1'-0"

LONGITUDINAL SECTION
Scale: 1"=20'



EXCAVATION

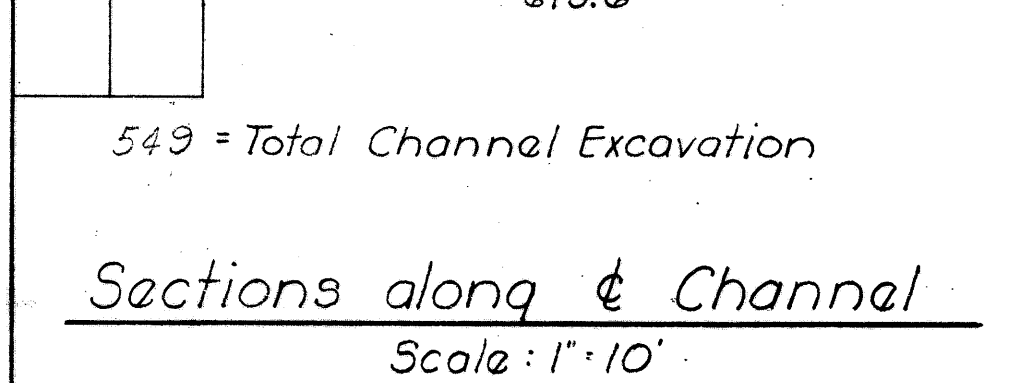
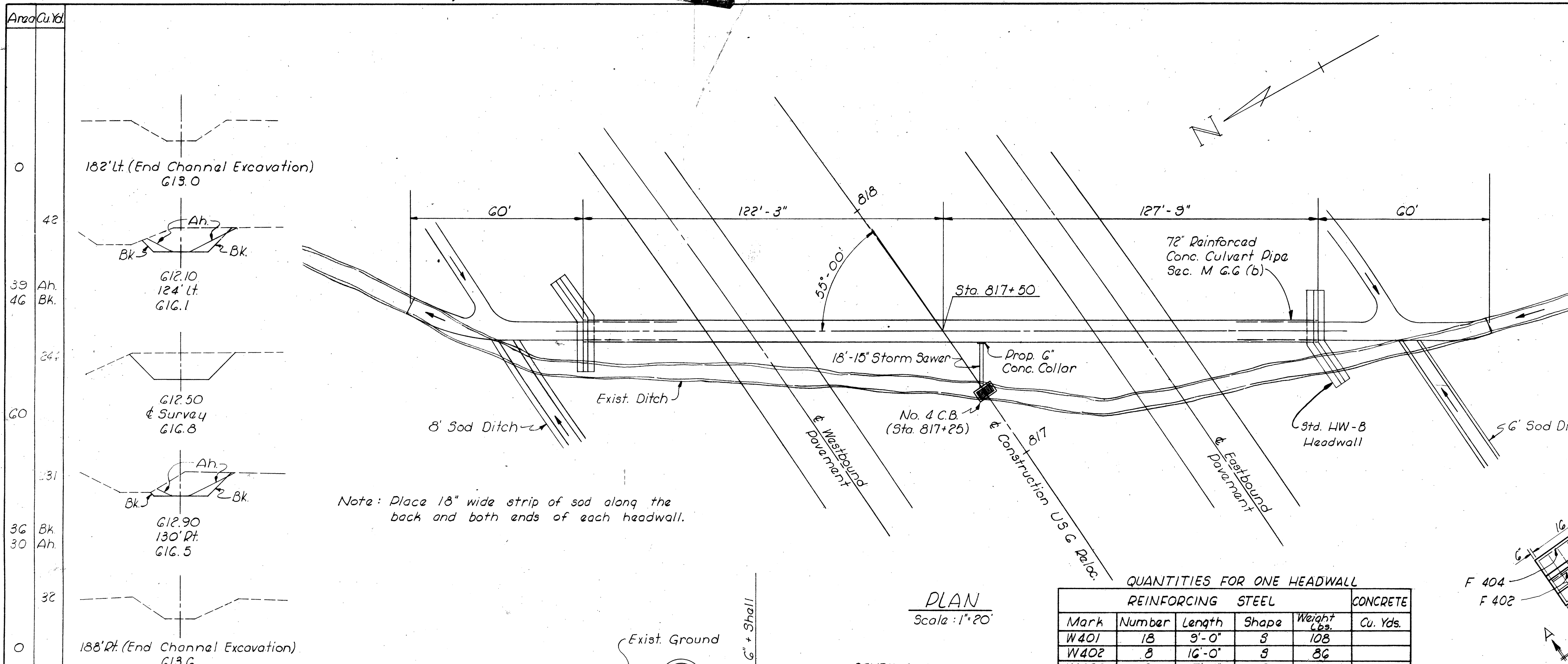
Drainage Area = 1180 Ac.
Q₂₅ = 380 c.f.s.

ESTIMATED QUANTITIES

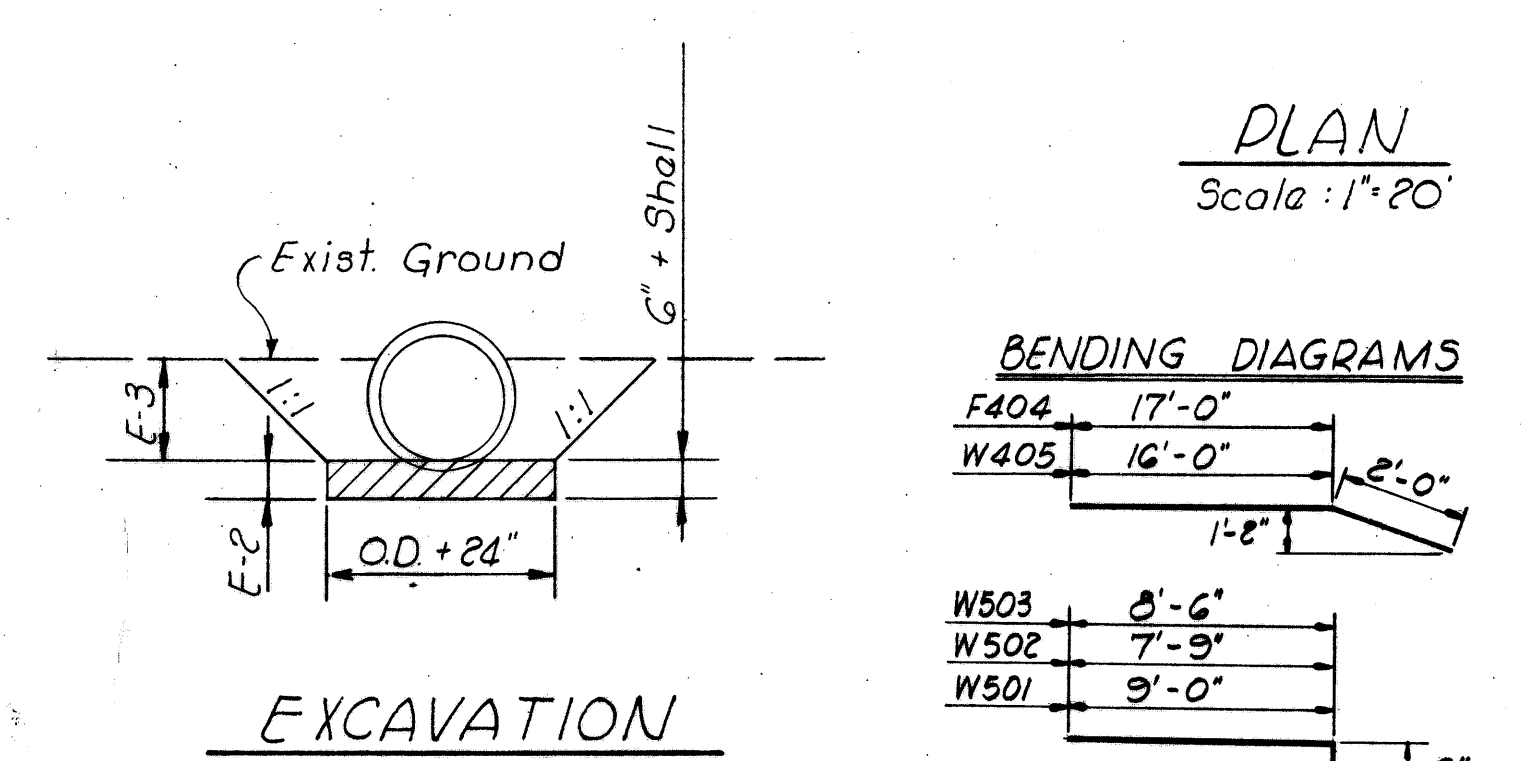
Item	Quantity	Unit	Description
E-2	395	Cu. Yd.	Excavation for Structure.
E-3	2,017	Cu. Yd.	Channel Excavation.
S-1	67.6	Cu. Yd.	Concrete for Structure, Class "C"
S-27	432	Lin. Ft.	106" x 68" Reinforced Conc. Elliptical Culvert Pipe, Sec. M-206.G (b).
S-4	2,362	Lbs.	Reinforcing Steel
L-10	19	Sq. Yd.	Sodding

2017 = Total Channel Excavation
Sections along & Channel
Scale: 1"=20'

ERI. G-7.31



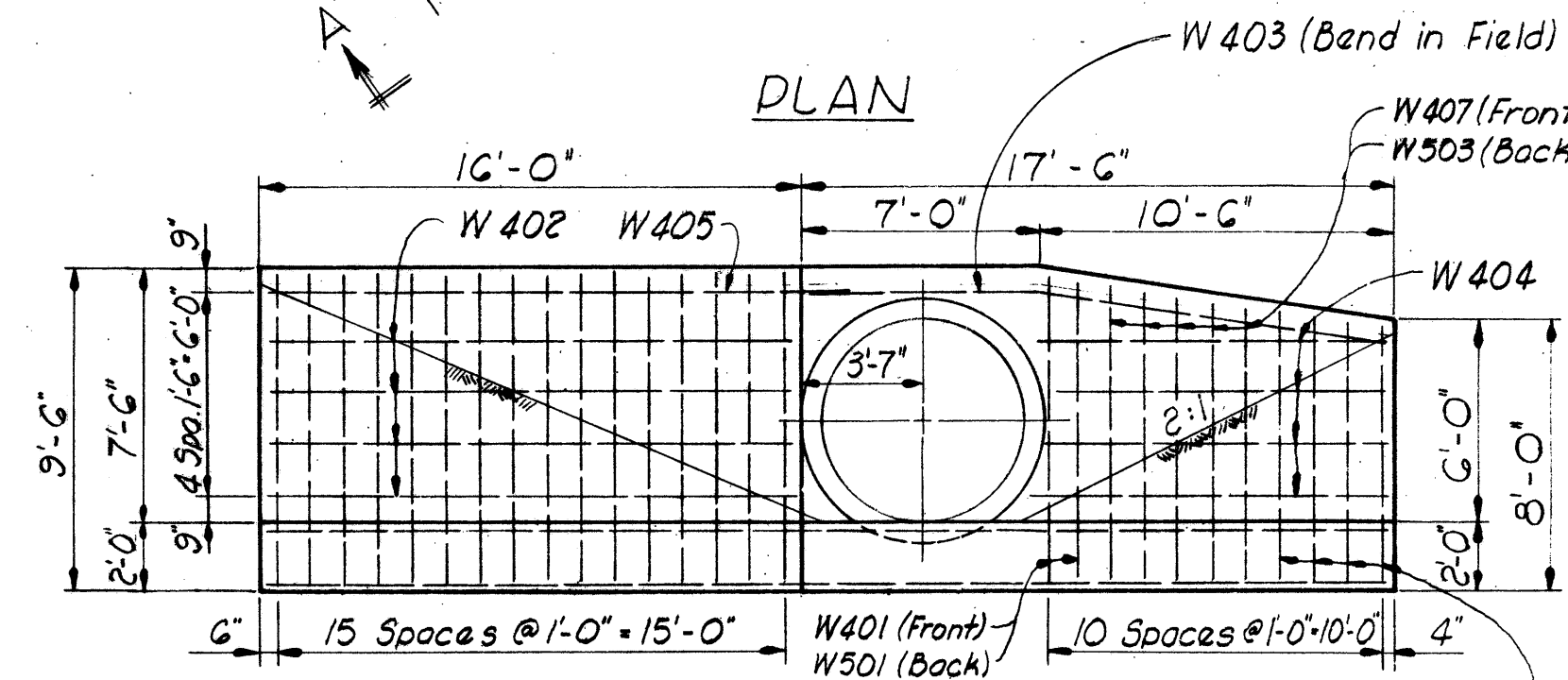
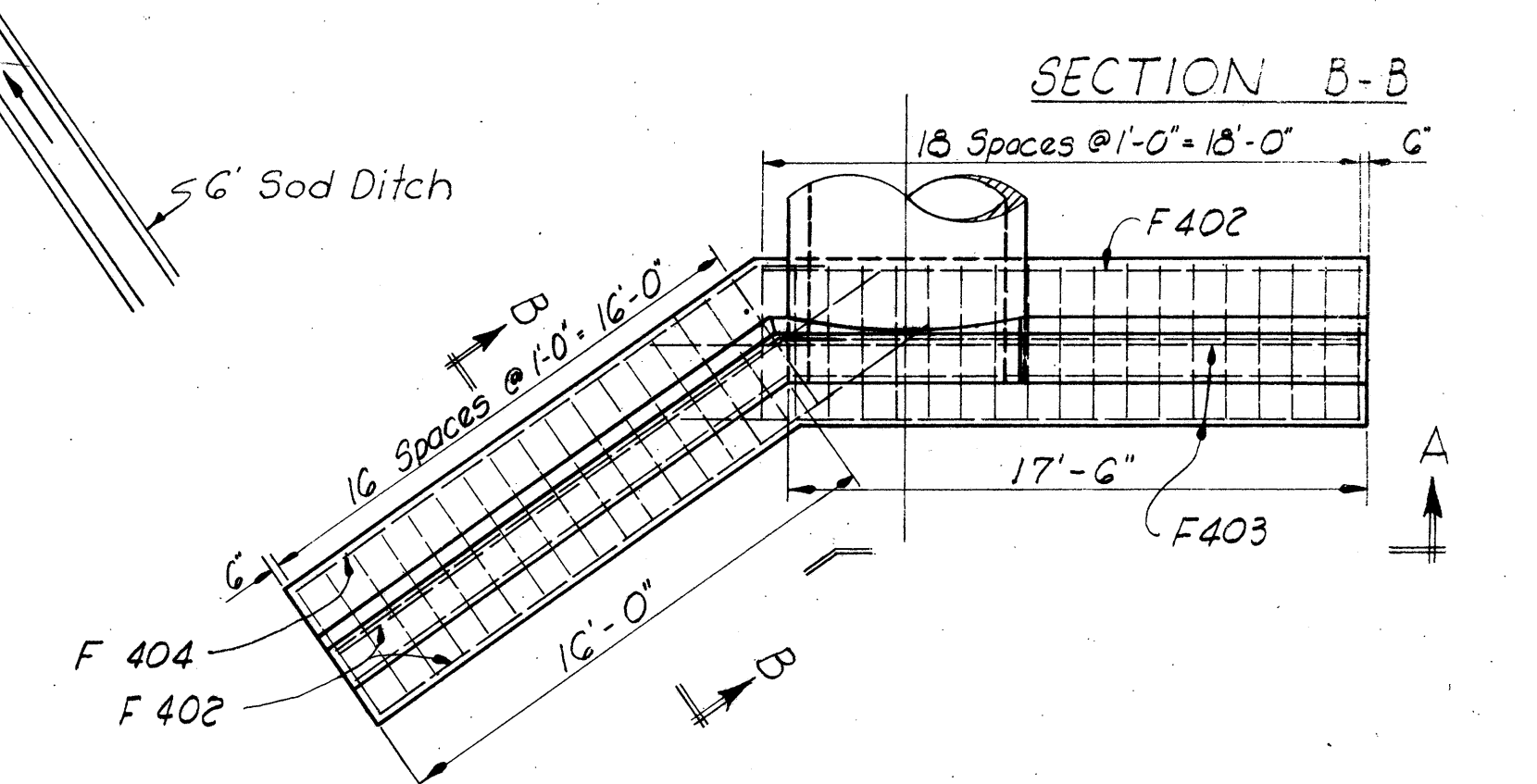
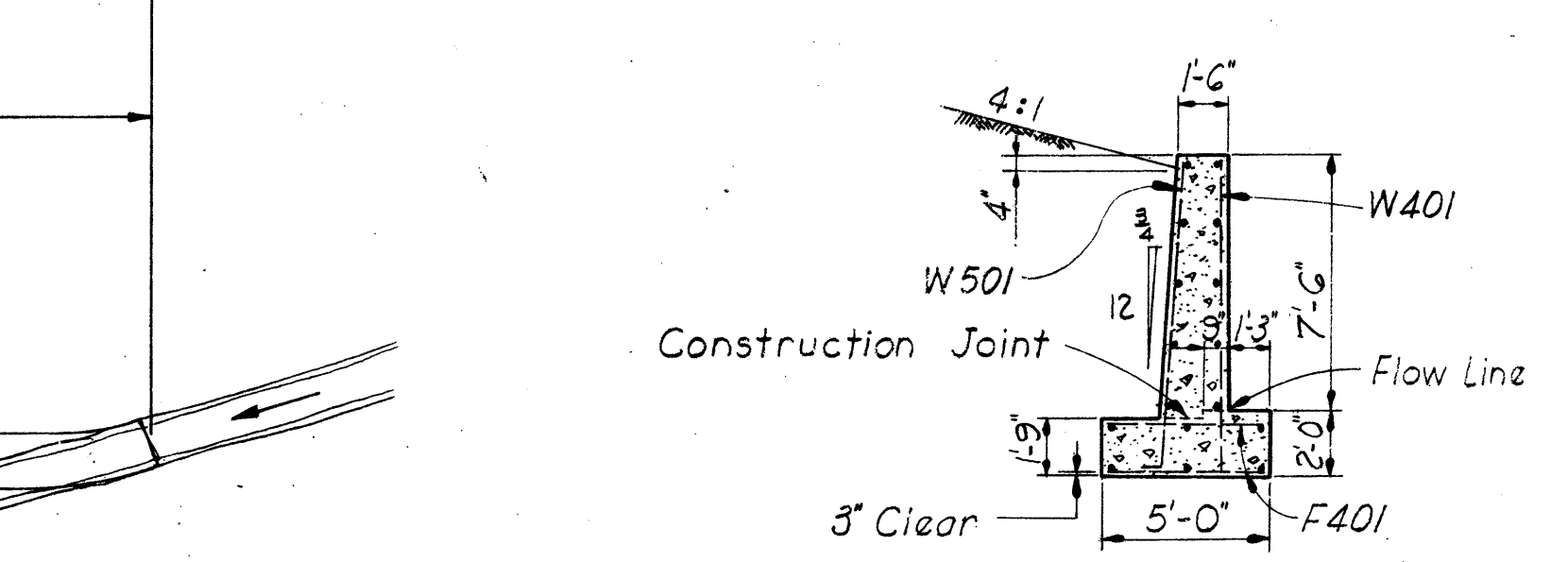
549 = Total Channel Excavation



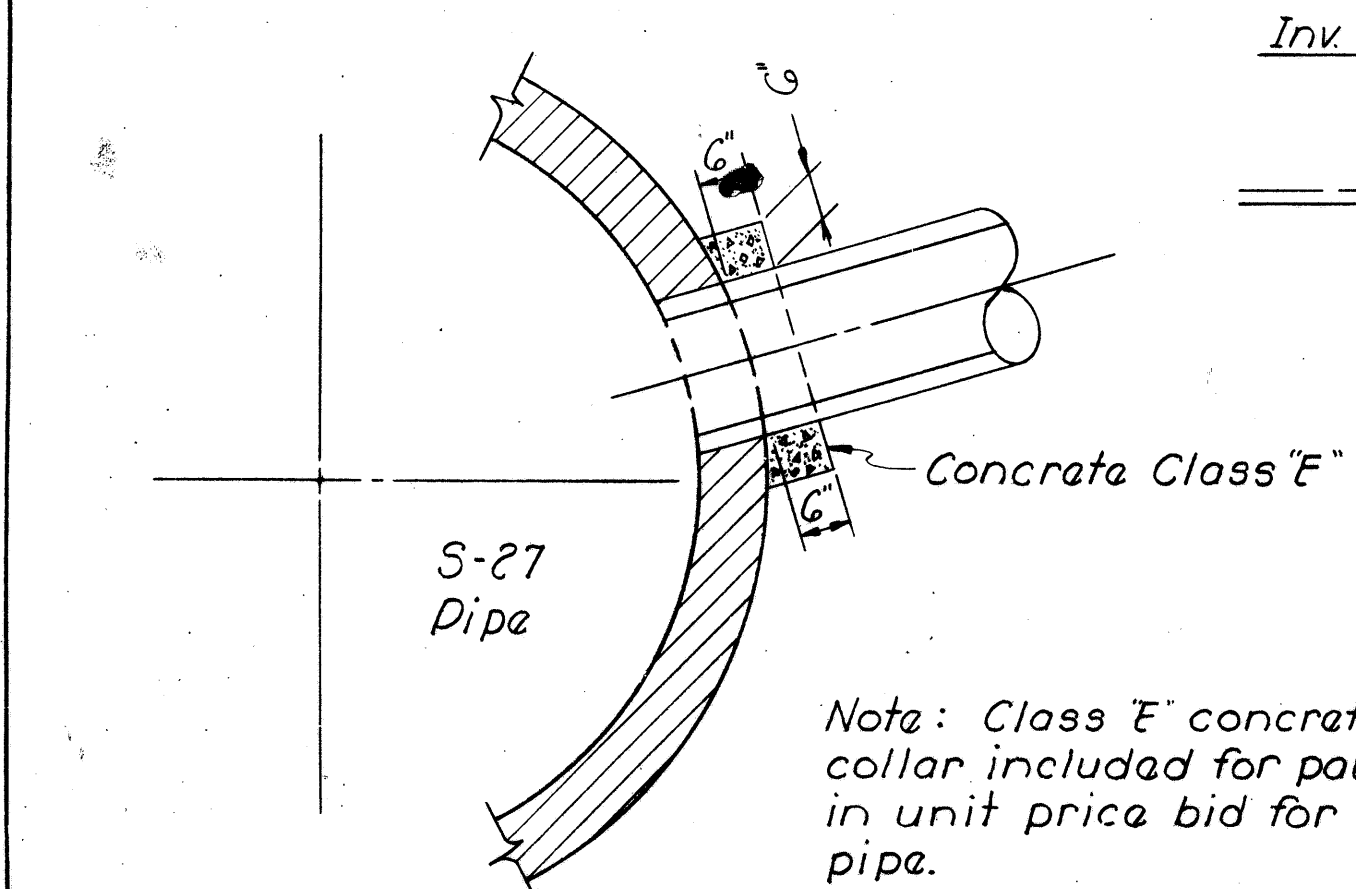
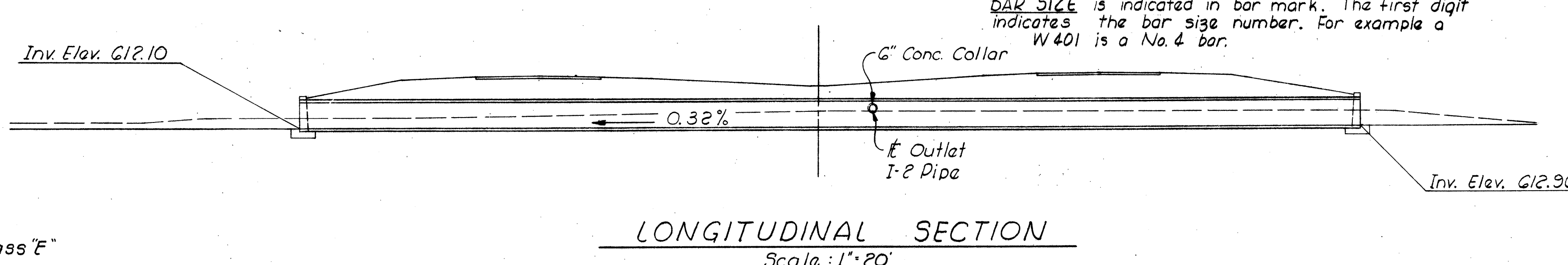
QUANTITIES FOR ONE HEADWALL

REINFORCING STEEL					CONCRETE
Mark	Number	Length	Shape	Weight Lbs.	Cu. Yds.
W401	18	9'-0"	S	108	
W402	8	16'-0"	S	86	
W403	2	17'-6"	S	23	
W404	8	10'-0"	S	53	
W405	2	18'-0"	B	24	
W406	4	7'-9"	S	21	
W407	5	8'-6"	S	28	
W501	18	9'-6"	B	178	
W502	4	8'-3"	B	34	
W503	5	9'-0"	B	47	
F401	72	4'-6"	S	216	
F402	6	18'-0"	S	72	
F403	4	21'-0"	S	56	
F404	2	19'-0"	B	25	
Totals				971	25.4

BAR SIZE is indicated in bar mark. The first digit indicates the bar size number. For example a W401 is a No. 4 bar.



HEADWALL DETAILS Scale: 3/16" = 1'-0"



Drainage Area = 240 Ac.
Q₂₅ = 158 c.f.s.

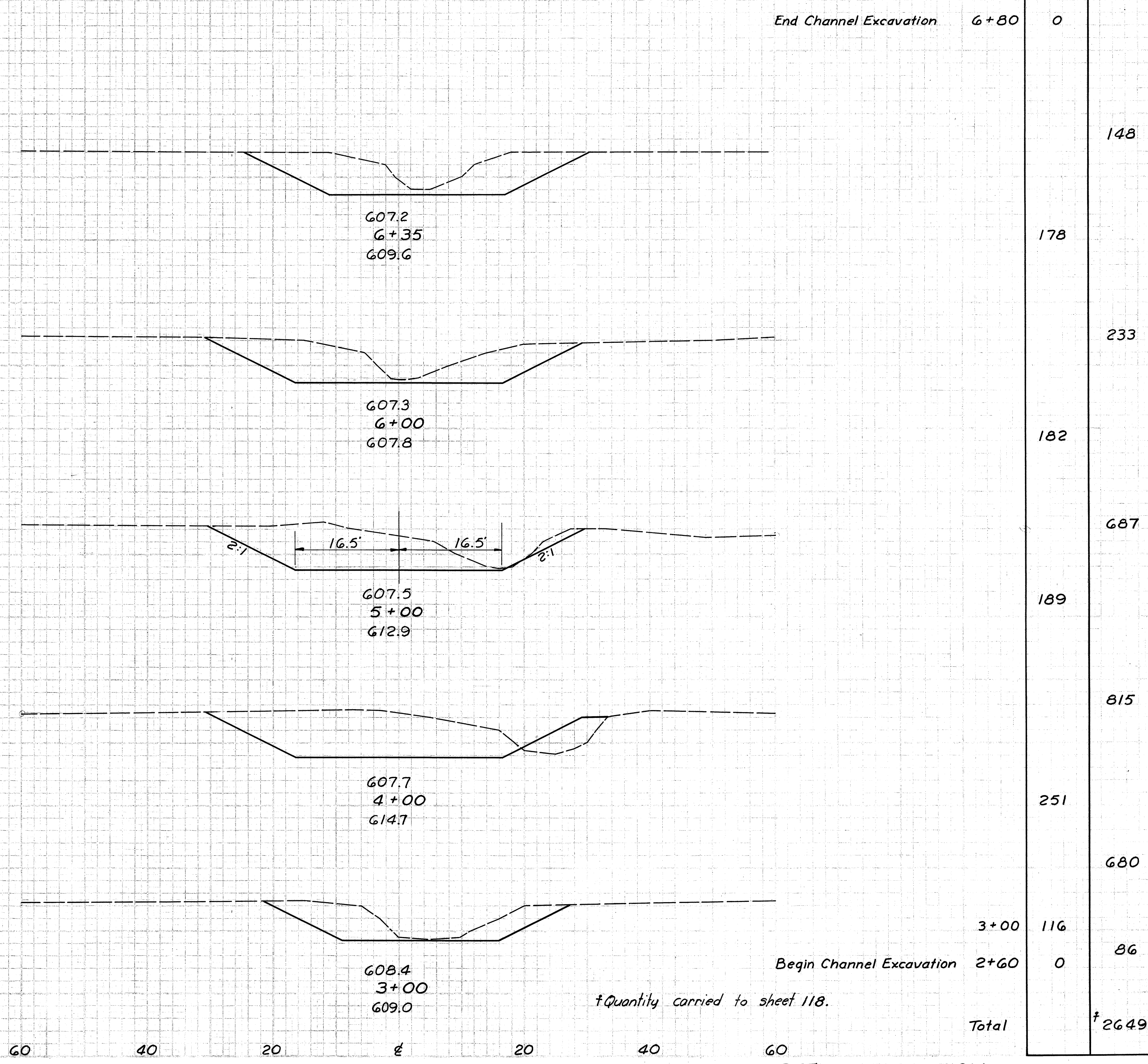
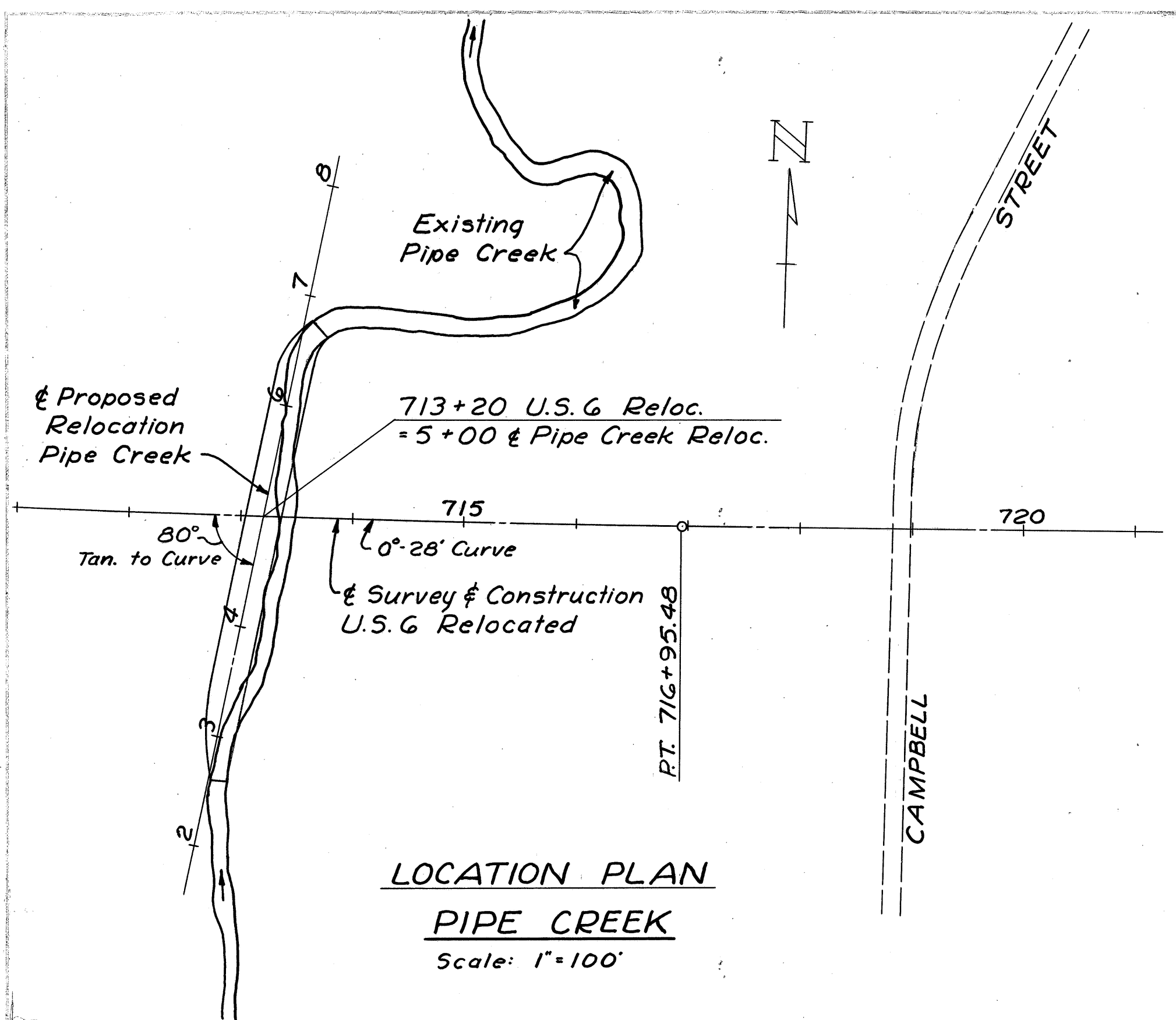
ESTIMATED QUANTITIES

Item	Quantity	Unit	Description
E-2	160	Cu. Yd.	Excavation for Structure
F-3	549	Cu. Yd.	Channel Excavation
S-1	50.8	Cu. Yd.	Concrete for Structure, Class "C"
S-27	250	Lin. Ft.	72" Reinforced Concrete Culvert Pipe, Sec. M G.G. (b)
I-2	18	Lin. Ft.	15" Storm Sewer, Sec. M G.G. (a), M G.G. (b)
I-8	1	Ea.	No. 4 Catch Basin
L-10	13	Sq. Yd.	Sodding
S-4	1,942	Lbs.	Reinforcing Steel

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

60
161

ERI. 6-7.31



DATE	BY	CHKD.

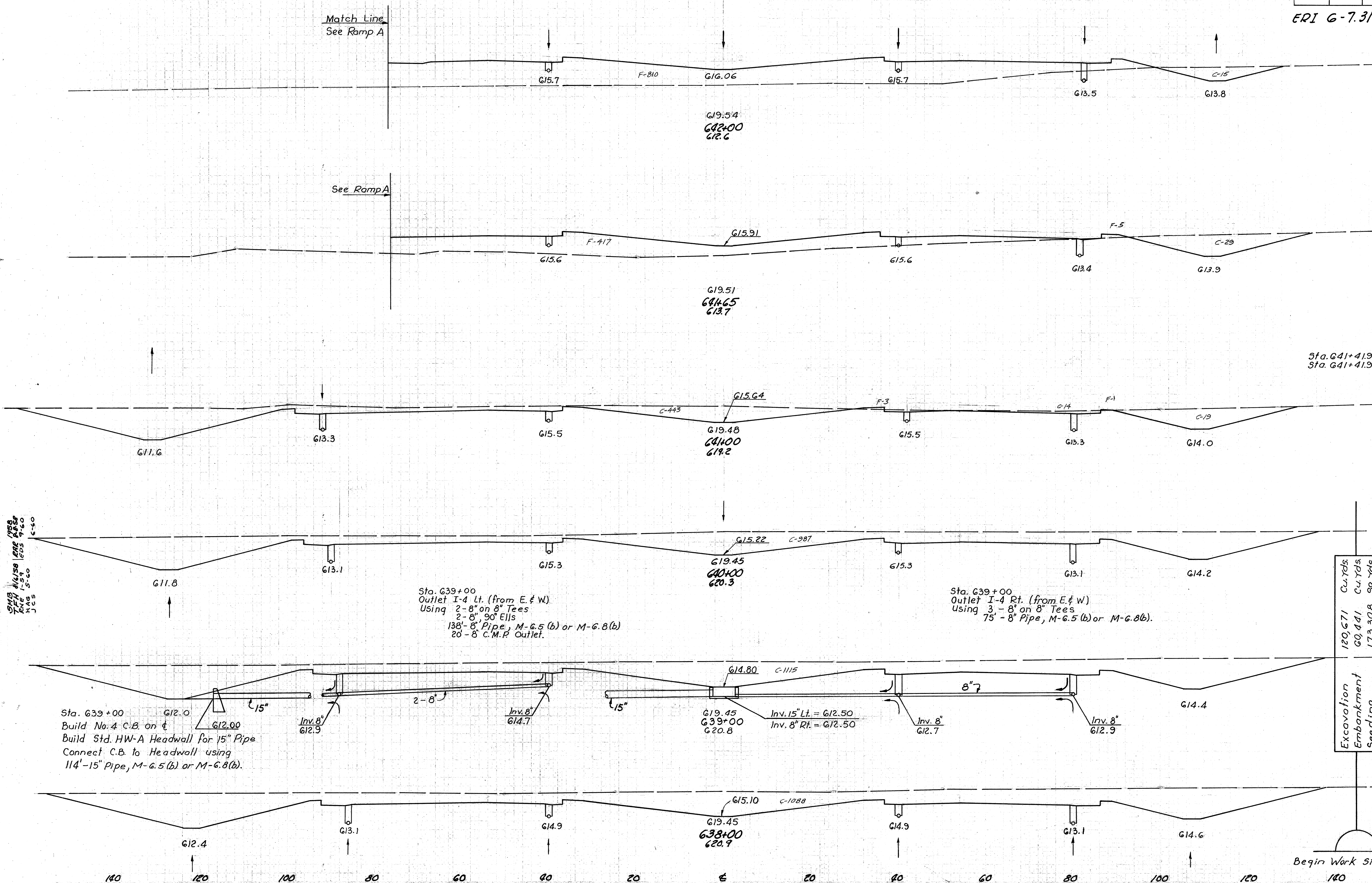
DATE	BY	CHKD.

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

61
161

ERI G-7.31



SWS 1/15/58
 TFM 1/15/58
 HNE 1-5-58
 LBS 9-60
 JES

Sta. 639+00
 Outlet I-4 Lt. (from E. & W.)
 Using 2-8" on 8" Tees
 2-8" 90° Ells
 138'-8" Pipe, M-6.5 (b) or M-6.8 (b)
 20'-8" C.M.P. Outlet.

Sta. 639+00
 Outlet I-4 Rt. (from E. & W.)
 Using 3-8" on 8" Tees
 75'-8" Pipe, M-6.5 (b) or M-6.8 (b).

Sta. 639+00
 Build No. 4 C.B. on ϵ
 Build Std. HW-A Headwall for 15" Pipe
 Connect C.B. to Headwall using
 114'-15" Pipe, M-6.5 (b) or M-6.8 (b).

Excavation
 Embankment
 Seeding
 120,671 Cu. Yds.
 60,441 Cu. Yds.
 173,308 Sq. Yds.

End Area	Cu. Yds.	
	Cut	Fill
15	810	
29		799
29	422	
		28 261
36	190	
140		190
		479 151
476	4	
		2709 7
987	0	
		3893 0
1115	0	
		4080 0
1088	0	
0	0	2015 0

Begin Work Sta. 637+00

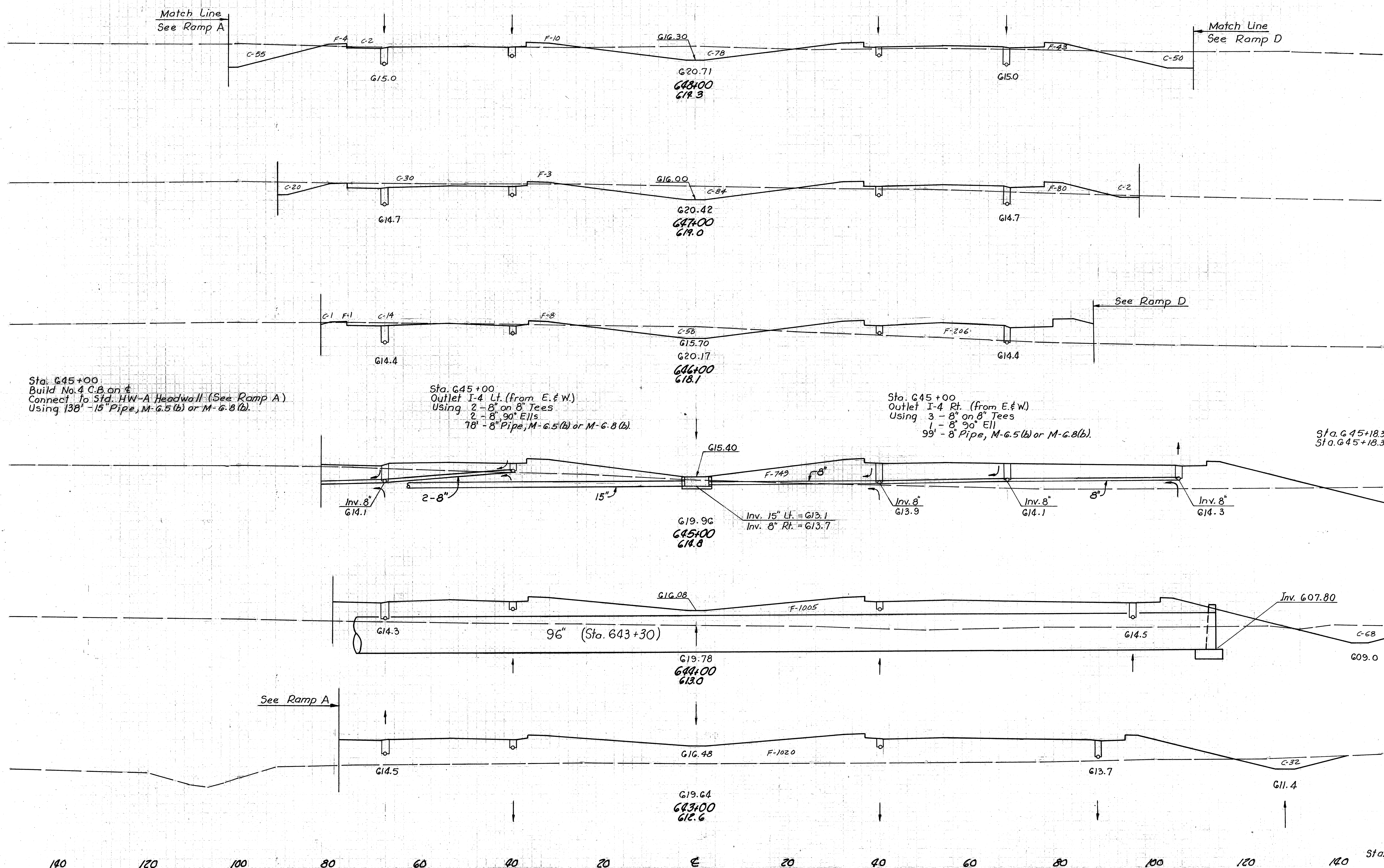
Sta. 638+00 to Sta. 642+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

62
161

ERI 6-7.31



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
185	57		
		594	259
136	83		
		387	552
73	215		
		110	1458
0	749		
64	749		
46	509		
71	749		
		257	3248
68	1005		
		185	3750
32	1020		
		87	3389
15	810		

SMB MISS FOR 2.58
 TFM C-50 1205 4-60
 WAE 5-60
 JCS

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 Sta. 642+00

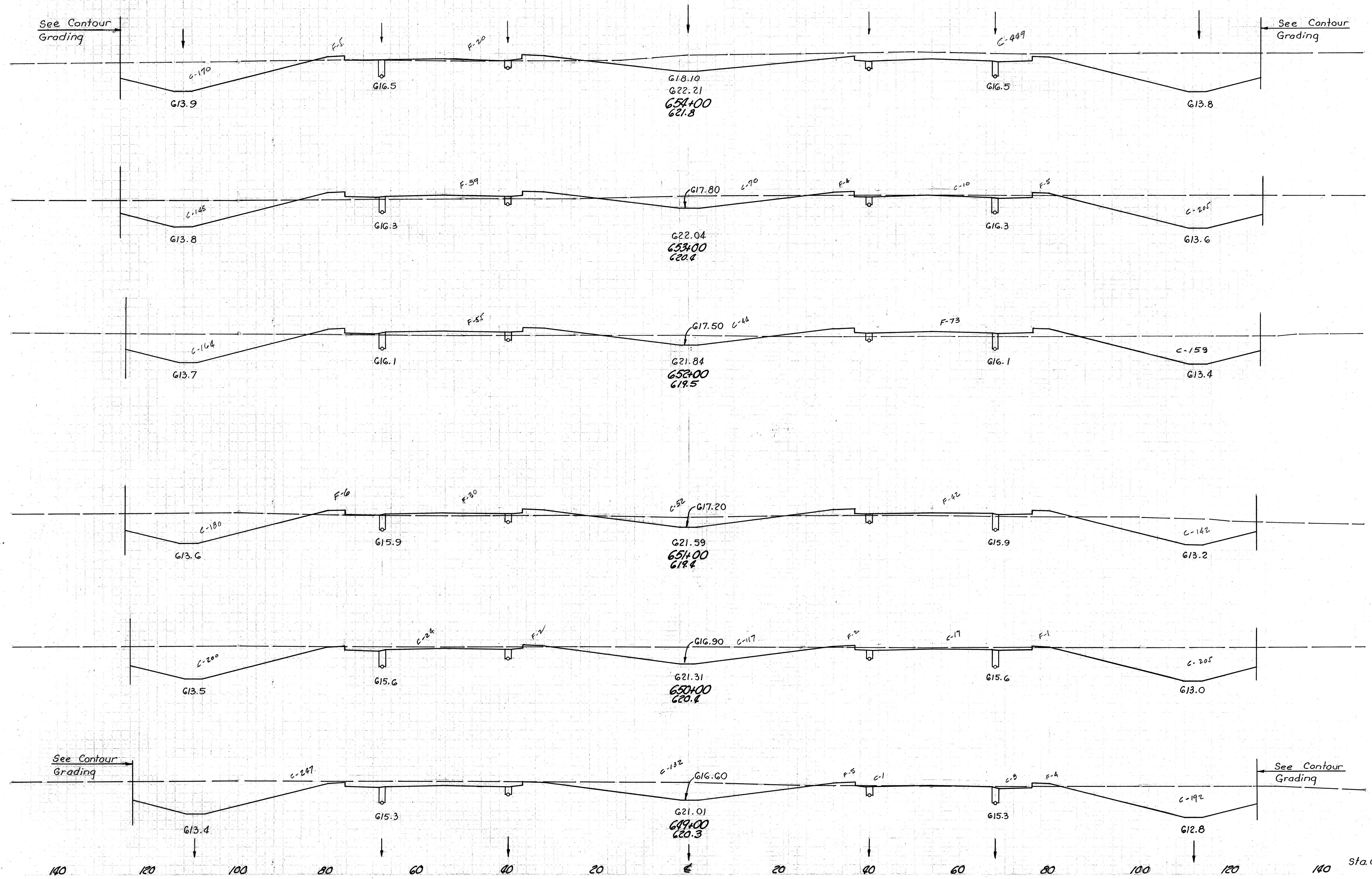
Sta. 643+00 to Sta. 648+00

140 120 100 80 60 40 20 E 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

63
161

ERI. G-7.31



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
619	25		
		1943	172
430	68		
		1476	363
367	128		
		1372	381
374	78		
		1735	154
563	5		
		2107	26
575	9		
		1407	122
185	57		

SHIP 01/18/59
 TRF 01/18/59
 RVE 1-59
 HAS 5-60
 JCS 6-60

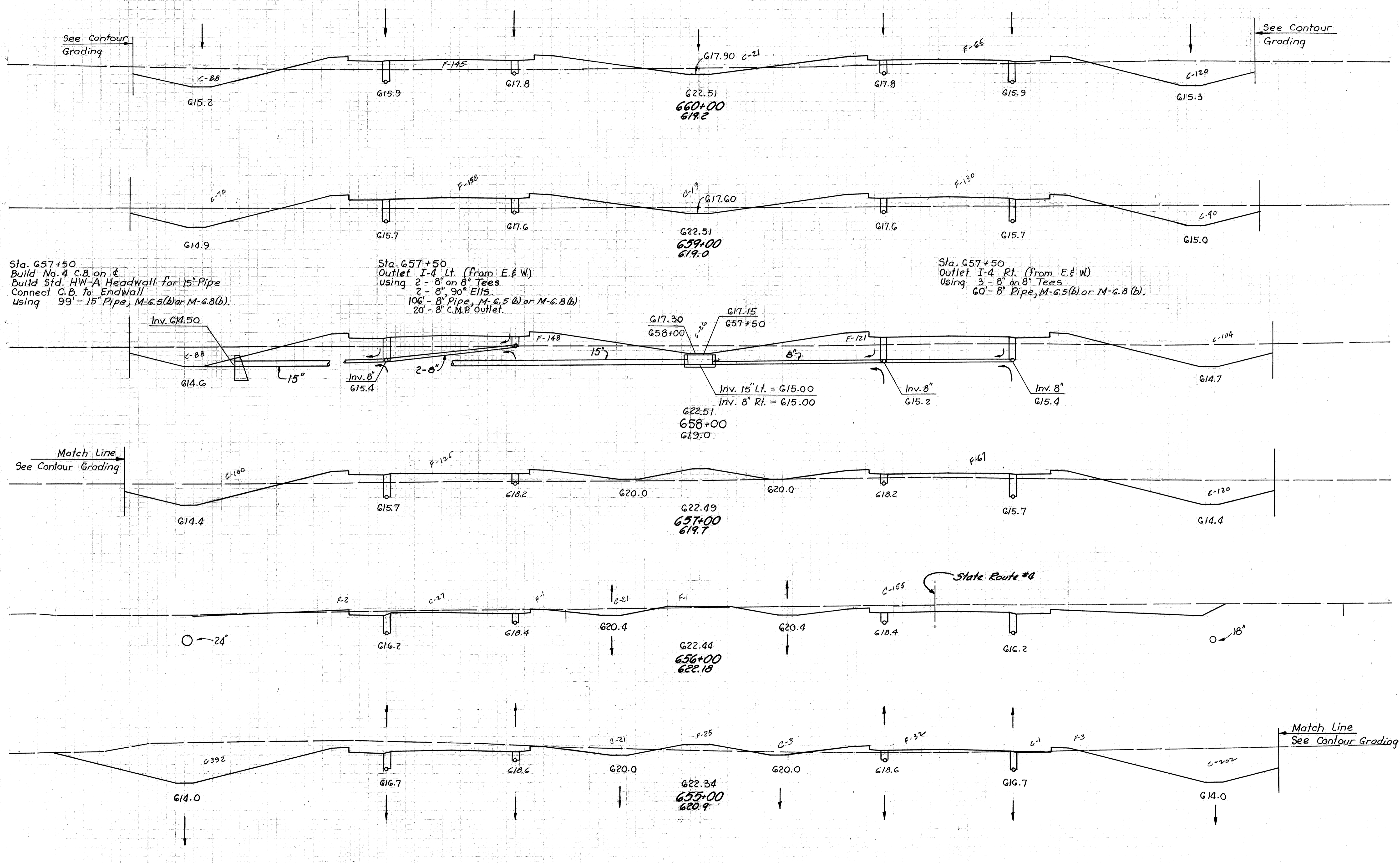
Sta. 648+00
Sta. 649+00 to Sta. 654+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

64
161

ERI G-7.31



Sta. 657+50
Build No. 4 C.B. on 4
Build Std. HW-A Headwall for 15" Pipe
Connect C.B. to EndWall
using 99'-15" Pipe, M-6.5(b) or M-6.8(b).

Sta. 657+50
Outlet I-4 Lt. (from E. & W.)
using 2-8" on 8" Tees
2-8" 90° Ells.
106'-8" Pipe, M-6.5(b) or M-6.8(b)
20'-8" C.M.P. Outlet.

Sta. 657+50
Outlet I-4 Rt. (from E. & W.)
Using 3-8" on 8" Tees
60'-8" Pipe, M-6.5(b) or M-6.8(b).

G17.30
658+00
G17.15
657+50
Inv. 15" Lt. = G15.00
Inv. 8" Rt. = G15.00
G22.51
658+00
619.0

Match Line
See Contour Grading

Match Line
See Contour Grading

140 120 100 80 60 40 20 0 20 40 60 80 100 120 Sta. 654+00

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
229	210		
179	288	756	922
218	269	735	1031
220	192	811	854
203	4	783	363
G19	60	1522	119
G19	25	2293	157

Sta. 655+00 to Sta. 660+00

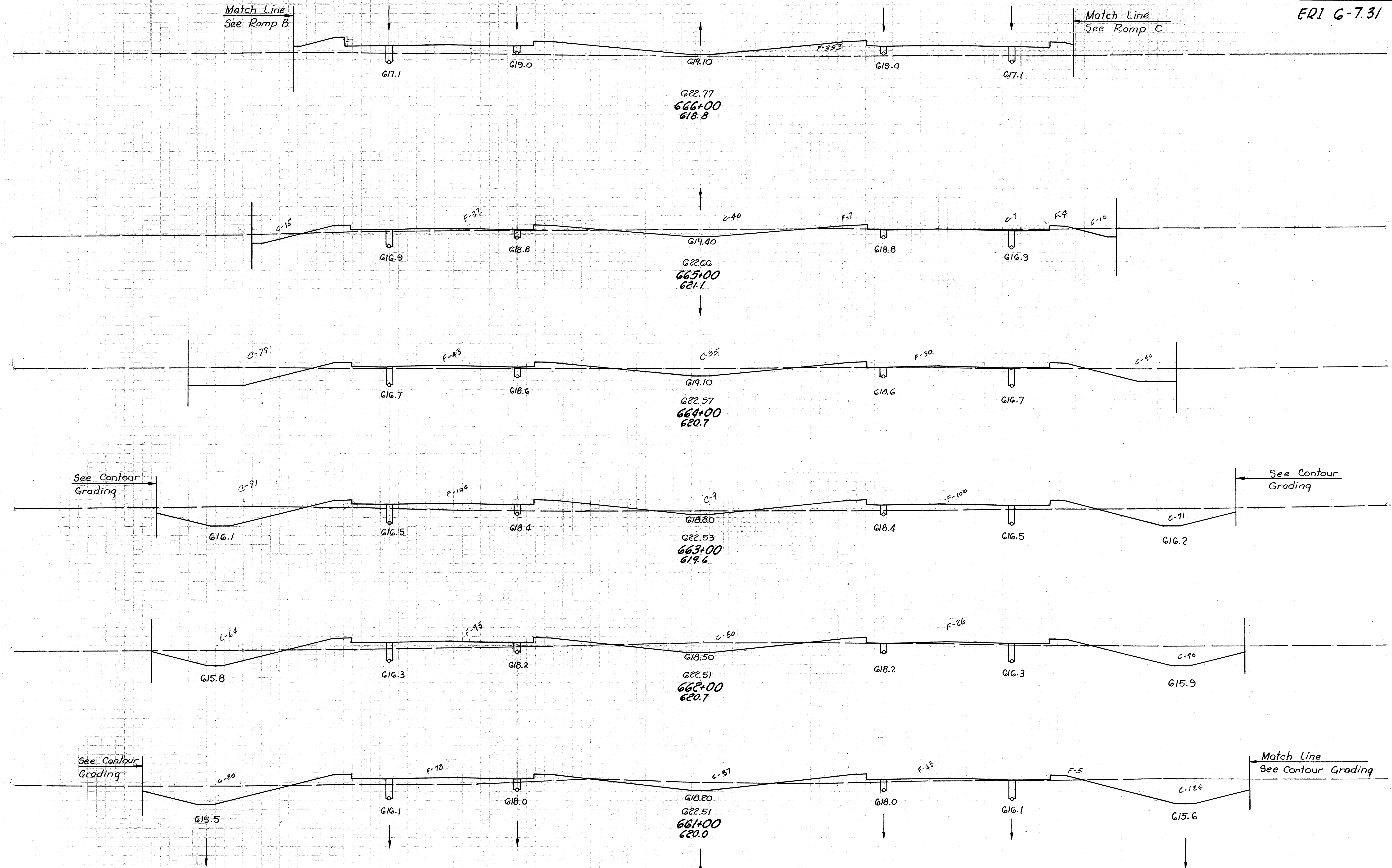
ERI 7/31/58
 R.H. 8/1/58
 H.A.E. 5-60
 J.C.E. 5-60

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

65
161

ERI G-7.31



Sta.	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
666+00	0	353		
665+00	72	48	133	743
664+00	154	73	419	224
663+00	171	200	602	506
662+00	204	119	694	591
661+00	241	126	824	454
660+00	229	210	870	622

RAR 7-1-58
 RVE 1-8-59
 HIG 5-6-60
 JCS

140 120 100 80 60 40 20 0 20 40 60 80 100 120 Sta. 660+00 to Sta. 666+00

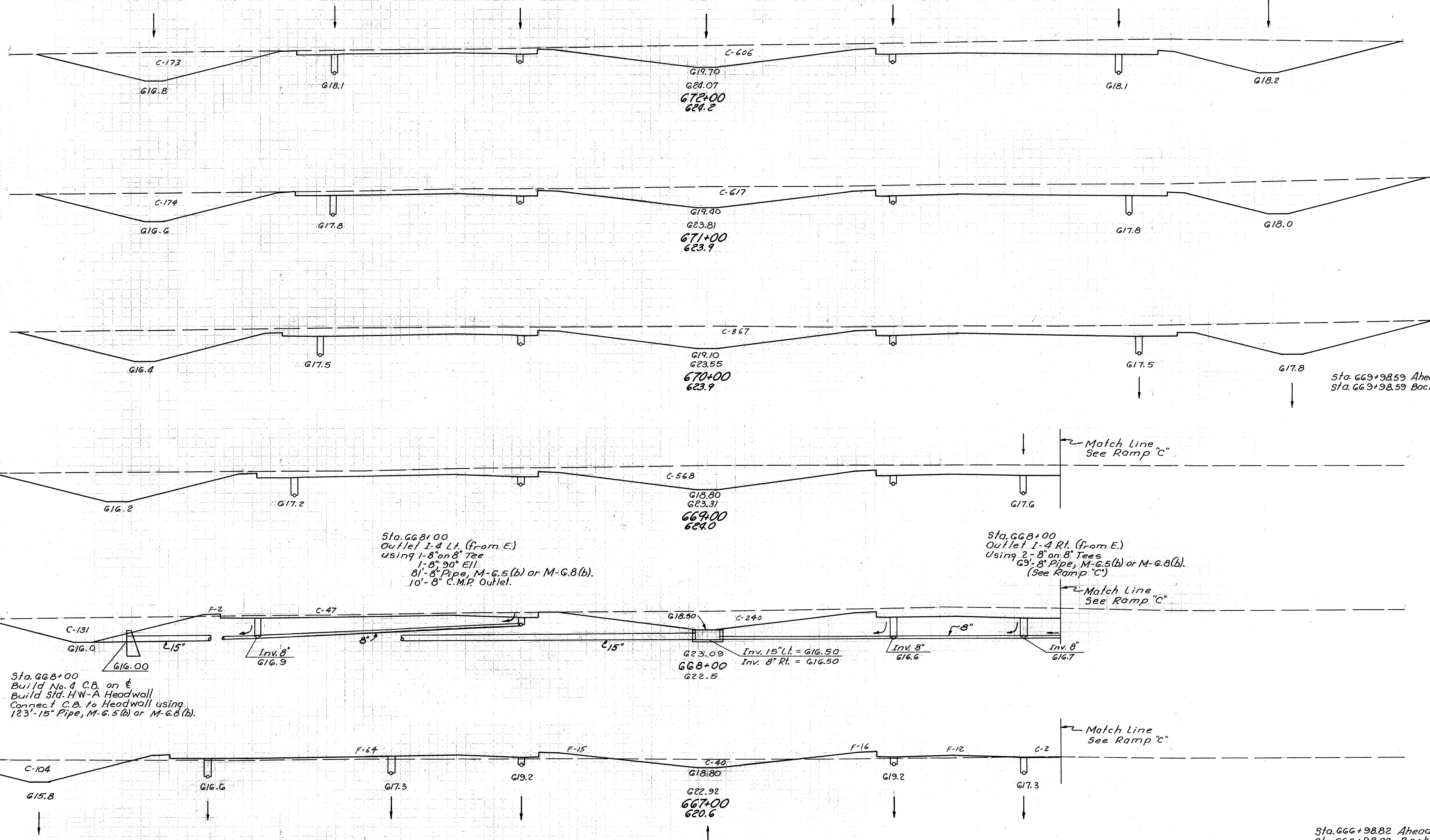
140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

66
161

ERI G-7.31

End Area	Cu. Yds.	
	Cut	Fill
779	0	
		2907
791	0	
		3114
867	0	
593	0	
		2120
568	0	
		1826
418	2	
		1057
		204
146	107	
42	107	
		77
		842
0	353	



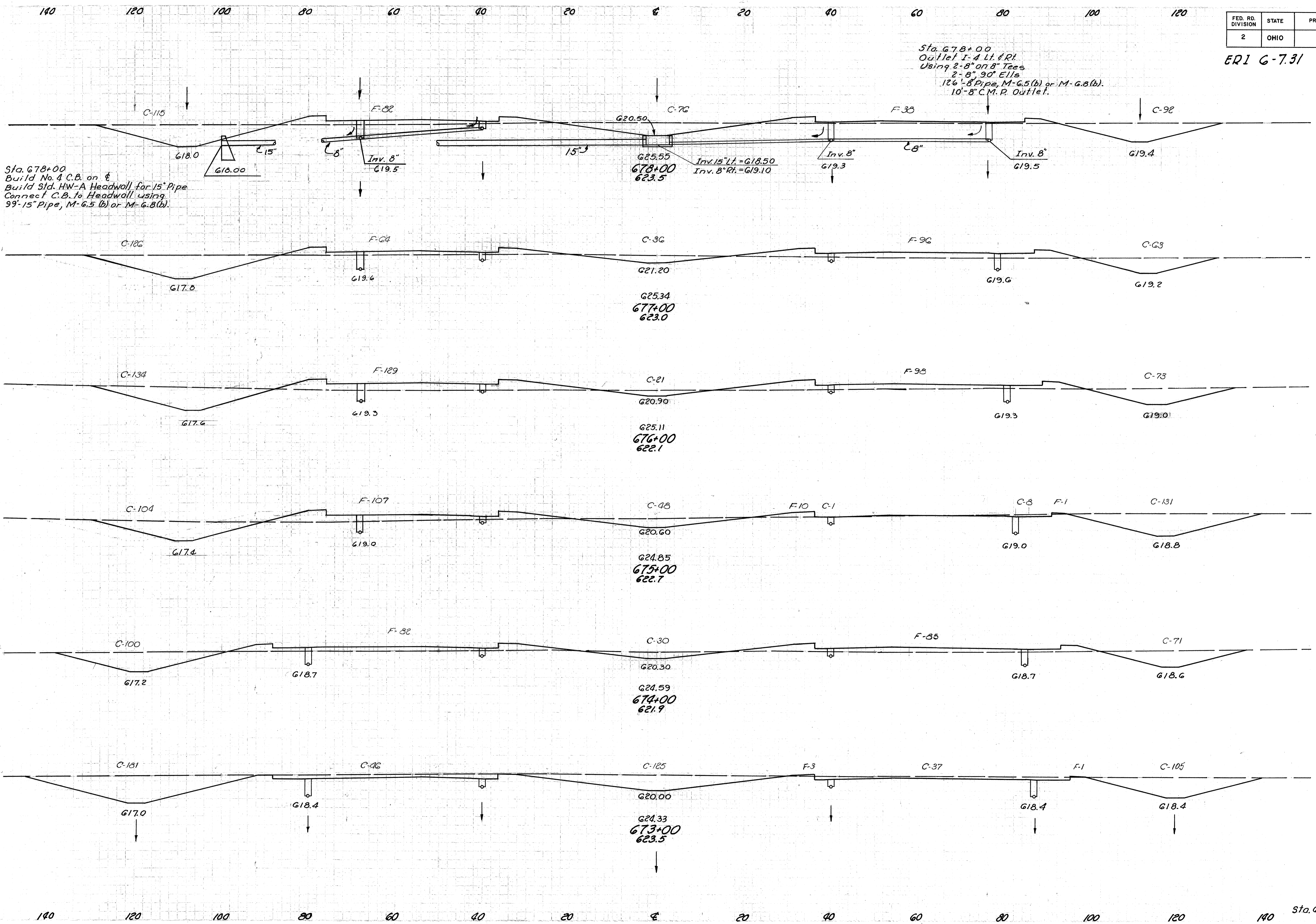
1958
 7-31-59
 123'-15"
 1-8-59
 2-59
 5-60

140 120 100 80 60 40 20 0 20 40 60 80 100 120 Sta. 666+00
 Sta. 667+00 to Sta. 672+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

67
161

ER1 G-7.31



Sta. 678+00
Build No. 4 C.B. on &
Build Std. HW-A Headwall for 15" Pipe
Connect C.B. to Headwall using
99'-15" Pipe, M-6.5 (b) or M-6.8 (b).

Sta. 678+00
Outlet I-4 Lt. & Rt.
Using 2-8" on 8" Tees
2-8" 90° Elbs
126" 8" Pipe, M-6.5 (b) or M-6.8 (b).
10" 8" C.M.P. Outlet.

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
283	120		
		941	519
225	160		
		839	717
228	227		
		963	639
292	118		
		913	528
201	167		
		1287	317
494	4		
		2357	7
779	0		

1958
 ER1 G-7.31
 Date 1-8-59
 HMG 5-60

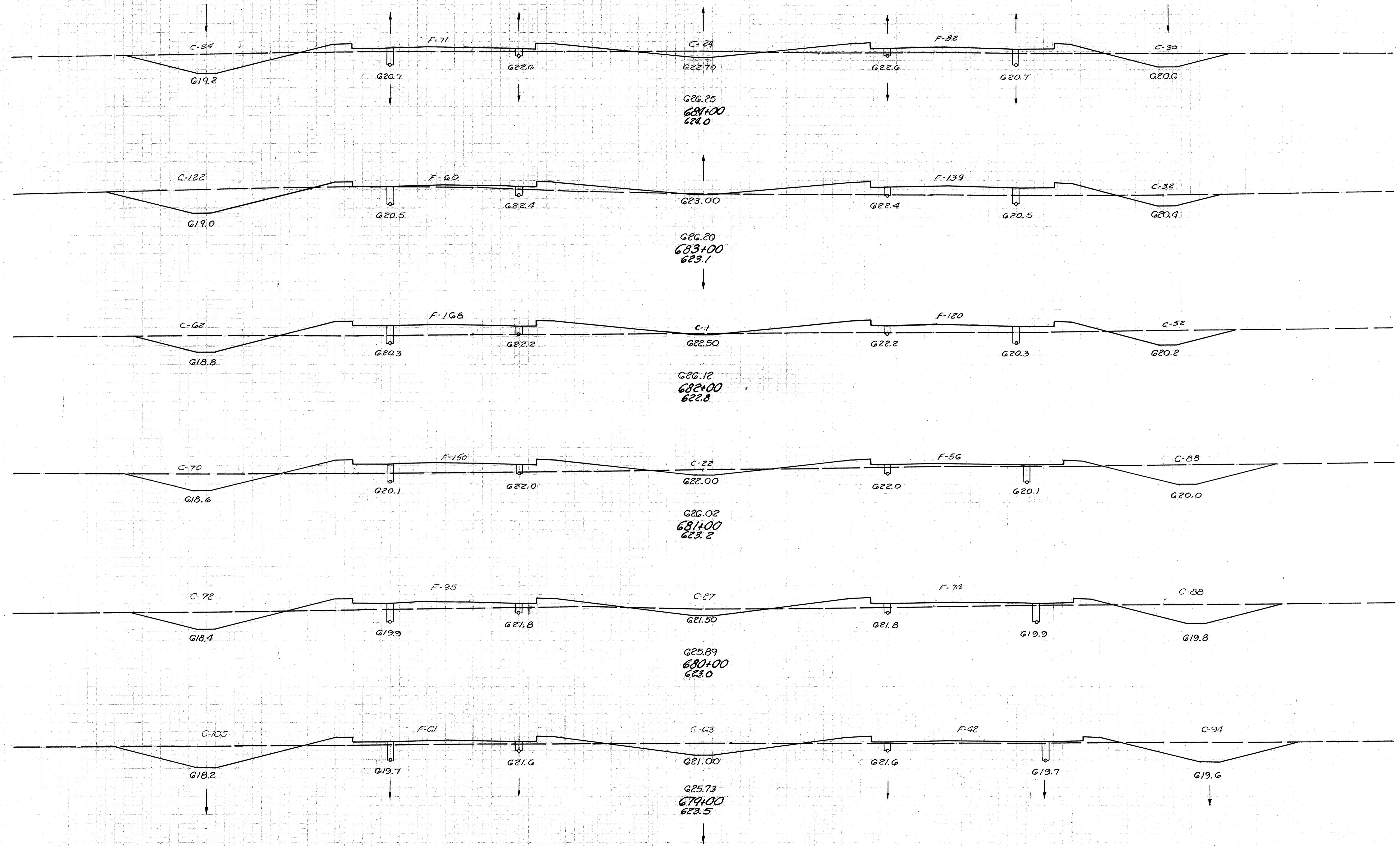
Sta. 672+00
Sta. 673+00 to Sta. 678+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

68
161

ERI. G-731

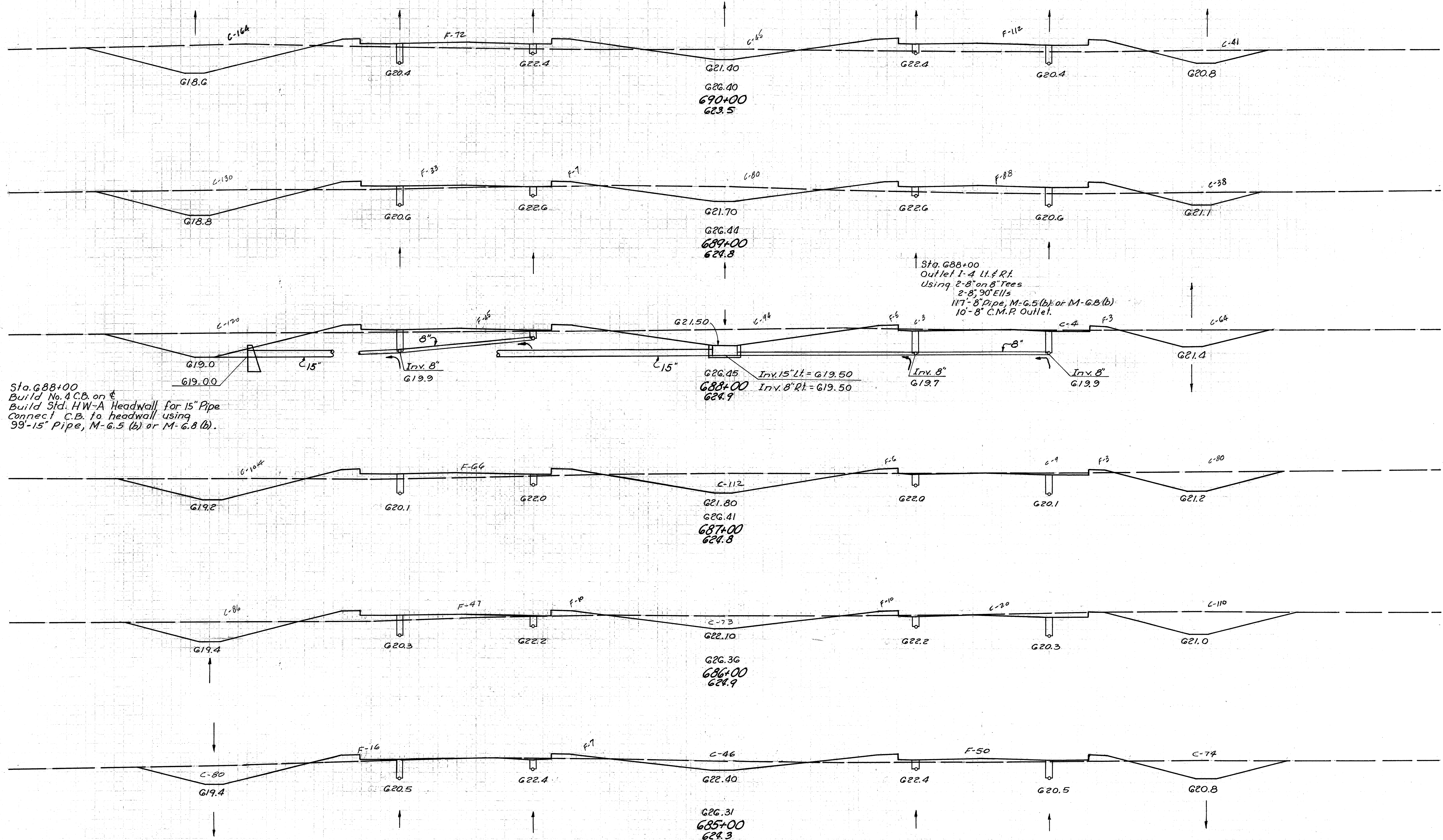


End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
168	153		
		596	652
154	199		
		489	902
115	288		
		546	915
180	206		
		680	694
187	169		
		831	504
262	103		
		1009	413
283	120		

Sta. 678+00
Sta. 679+00 to Sta. 684+00

DATE 8-1-59
BY J. H. [unclear]
CHKD 1-9-59
SCALE 5'-60"

ERI. G-7.31



Sta. 688+00
Build No. 4 C.B. on E
Build Std. HW-A Headwall for 15" Pipe
Connect C.B. to headwall using
99'-15" Pipe, M-6.5 (b) or M-6.8 (b).

DATE 08-21-58
BY JCS
CHECKED 08-21-58
BY JCS
SCALE 1" = 20'

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
250	184		
248	128	922	578
285	53	987	335
305	75	1093	237
289	67	1100	263
200	73	906	259
168	153	681	419

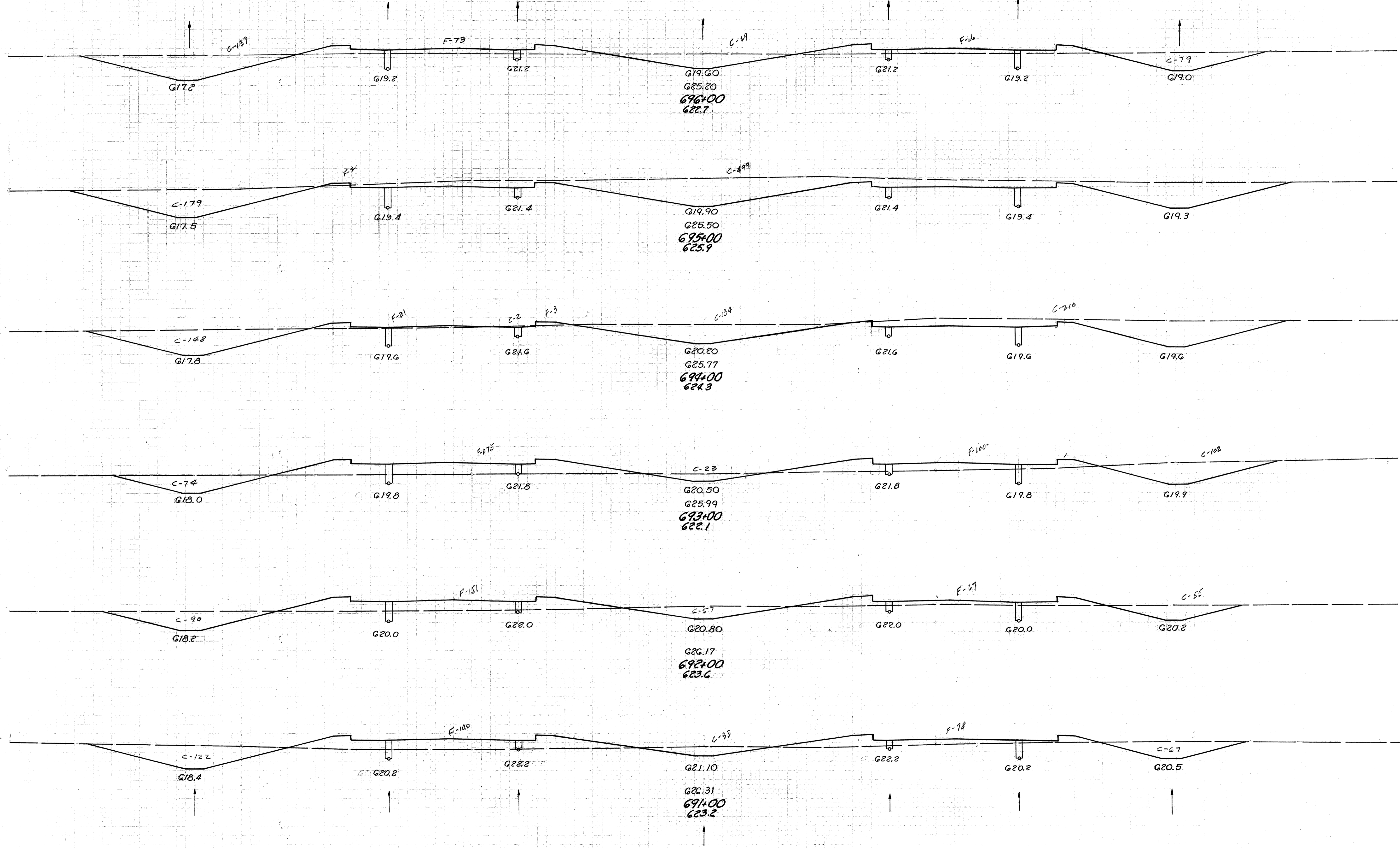
Sta. 684+00 to Sta. 690+00

140 120 100 80 60 40 20 E 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

70
161

ERI. G-7.31



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
287	139		
		1787	261
678	2		
		2170	48
494	24		
		1283	554
199	275		
		743	913
202	218		
		785	807
222	218		
		874	744
		250	184

Sta. 690+00 to Sta. 696+00

1952
PAGE 8-2-58
MAG 2-57
JCS

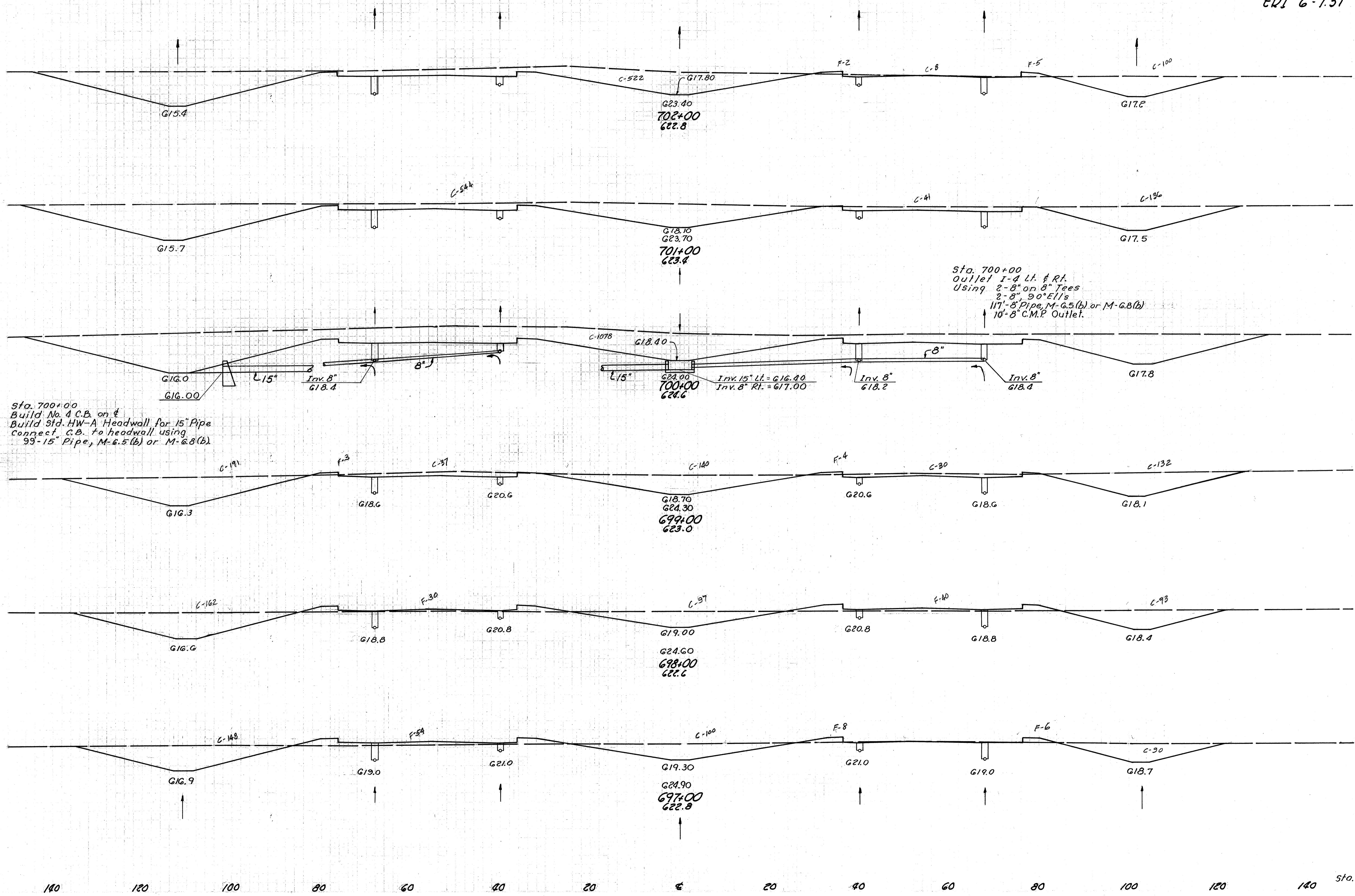
1952
PAGE 8-2-58
MAG 2-57
JCS

140 120 100 80 60 40 20 E 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

71
161

ERI 6-7.31



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
630	7		
		2502	13
721	0		
		3331	0
1078	0		
		2978	13
530	7		
		1633	143
352	70		
		1278	256
338	68		
		1157	383
287	139		

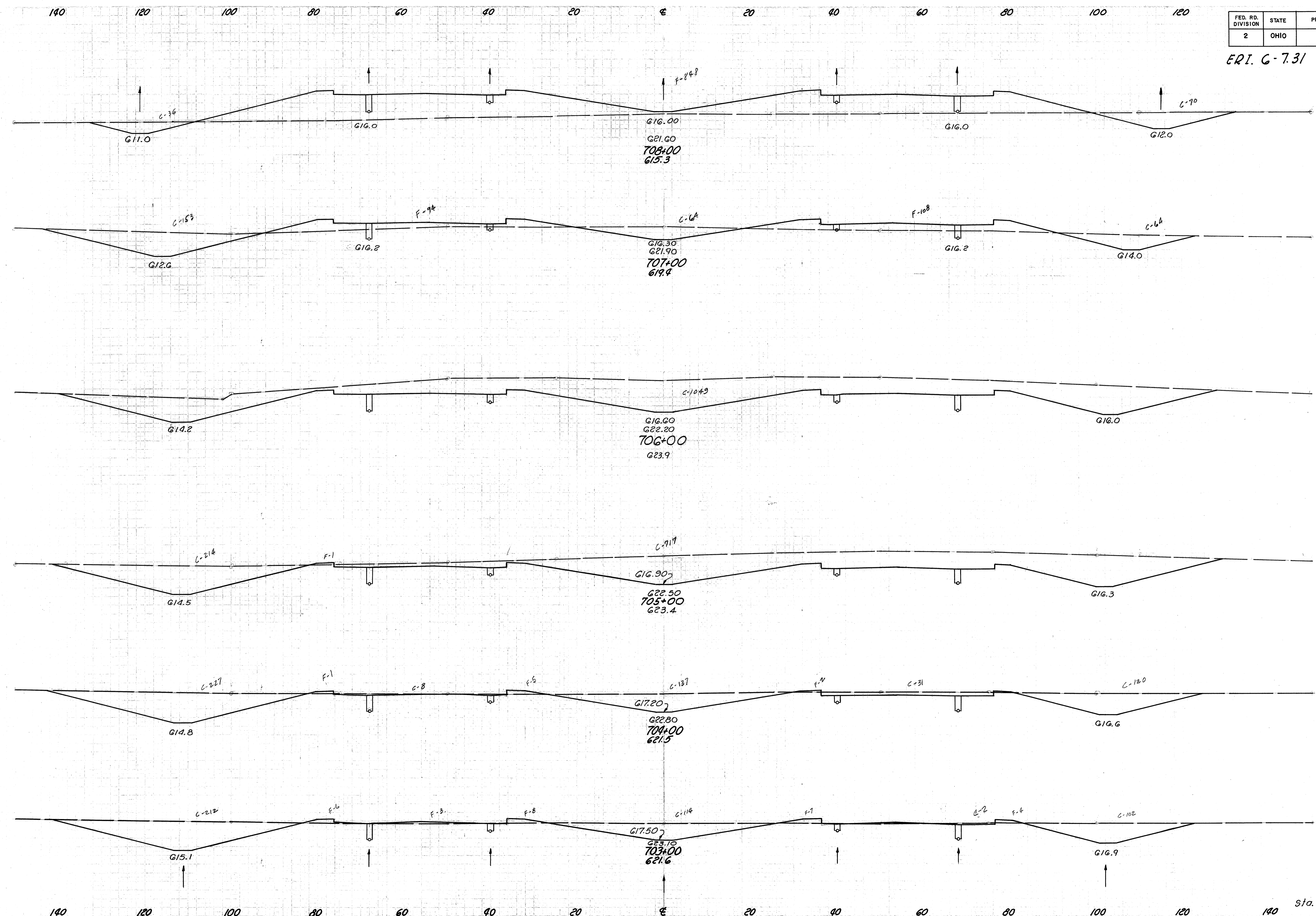
Sta. 696+00 to Sta. 702+00

PREP BY: JCS
 DATE: 12-29-59
 HAS: 2-59
 JCS

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

72
161

ERI. G-7.31



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
106	848		
		717	1944
281	202		
		2463	374
1049	0		
		3667	2
931	1		
		2693	17
523	8		
		1765	67
430	28		
		1963	65
G30	7		

R.H. 3/11/59
 R.M. 1/3/59
 H.A.S. 2/5/59
 J.C.S.
 5-20

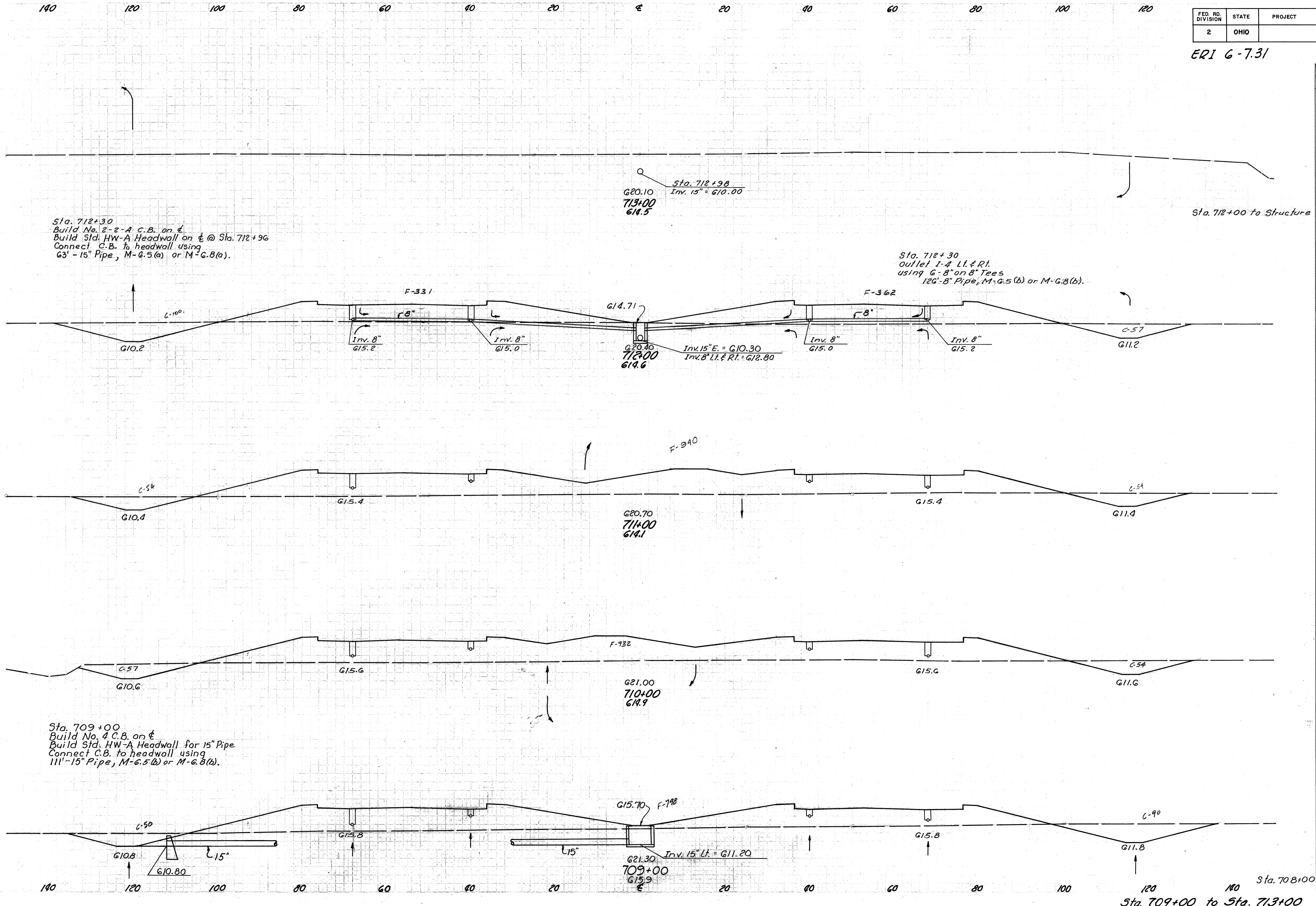
Sta. 702+00
Sta. 703+00 to Sta. 708+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

73
161

ERI 6-7.31

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
157	693	491	3024
108	940	406	3467
111	932	465	3204
140	798	106	848
106	848	456	3048



DATE: 1-2-59
BY: RJE
CHECKED: JCS

DATE: 1-2-59
BY: RJE
CHECKED: JCS

140 120 100 80 60 40 20 0 20 40 60 80 100 120

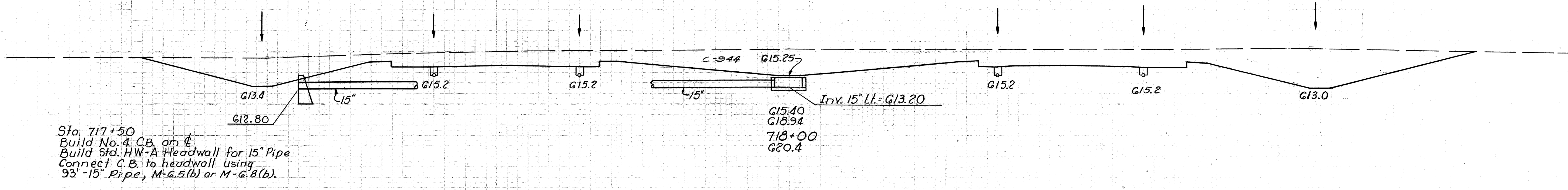
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

74
161

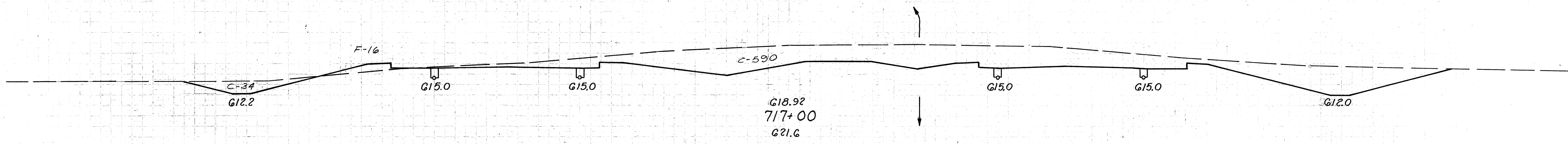
ERI. G-7.31

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
944	0		
	2904	30	
624	16		
	1406	996	
135	522		
	531	2209	
152	671		
	561	2476	
151	666	224	987

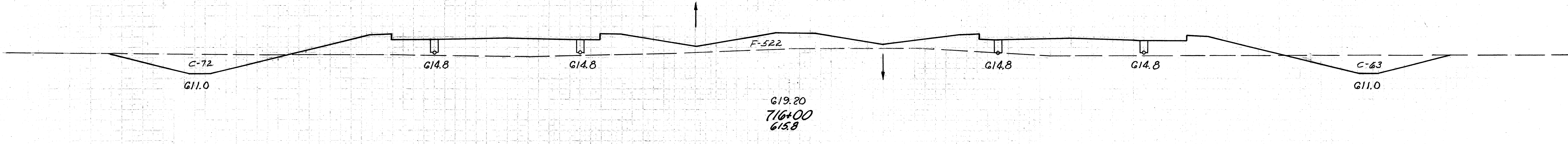
Sta. 717+50
Build No. 4 C.B. on E
Build Std. HW-A Headwall for 15" Pipe
Connect C.B. to headwall using
93'-15" Pipe, M-6.5(b) or M-6.8(b).



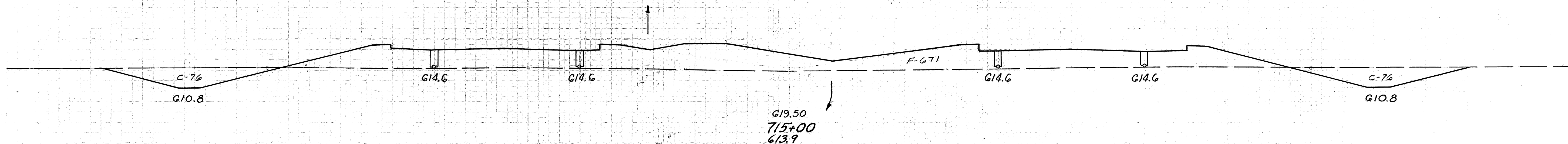
F-16
C-34
G12.2
G15.0
G15.0
G18.92
717+00
G21.6
C-590
G15.0
G15.0
G12.0



G19.20
716+00
G15.8

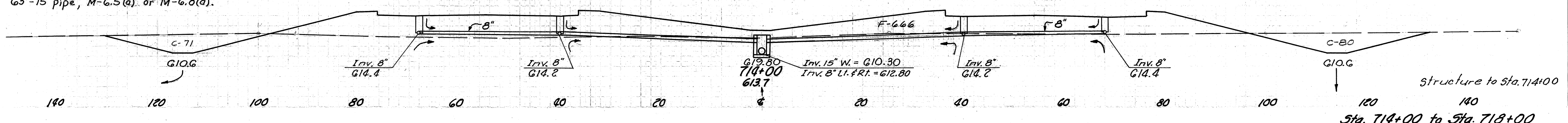


G19.50
715+00
G13.9



Sta. 714+10
Build No. 2-2-A C.B. on E
Build Std. HW-A Headwall on E @ Sta. 713+45
Connect C.B. to headwall using
63'-15" pipe, M-6.5(a) or M-6.8(a).

Sta. 714+10
Outlet I-2 Lt. & Rt.
Using C-8" on 8" Tees
120'-8" Pipe, M-6.5(b) or M-6.8(b).



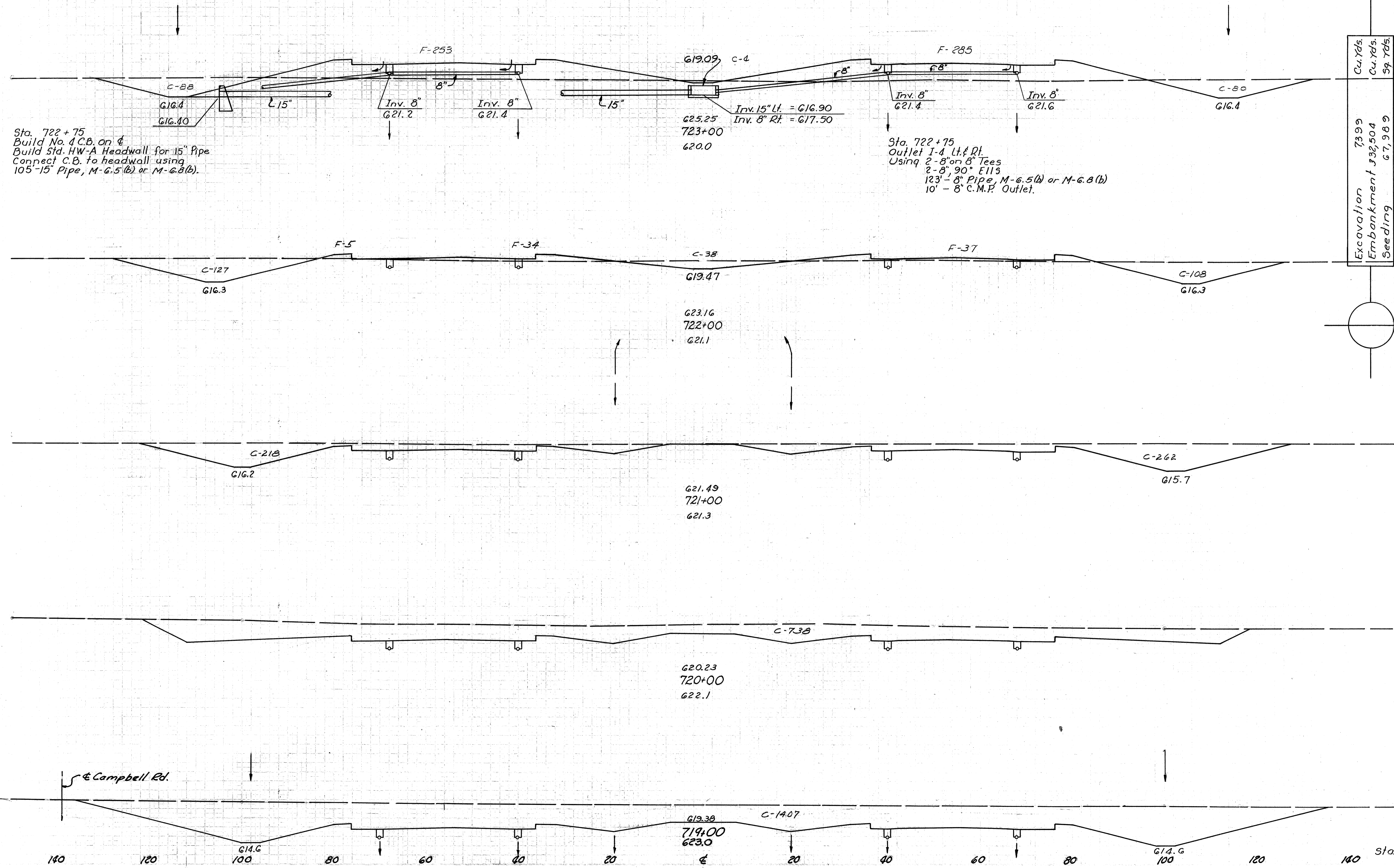
1959
 R.H. 5/11/58
 J.C.S. 5/12/64
 H.A. 5/16/60
 H.A. 5/16/60

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

75
161

ERI 6-7.31



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
172	538		
		824	1137
273	76		
		1394	141
480	0		
		2256	0
738	0		
		3972	0
1407	0		
944	0	4354	0

RJH 01/28/58 EAR 8-2-58
 JCS 07/26/60 EDS 4-2-60
 H.A.G. 5-5-60

Sta. 718+00 to Sta. 723+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

76
161

ERI 6-7.31

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
111	2639		
		372	8743
90	2082		
		393	6694
122	1533		
		444	5024
118	1180		
		537	3181
172	538		

631.04
F-2639
636.64
727+00
621.0

628.04
F-2082
633.64
726+00
620.5

625.04
F-1533
630.64
725+00
620.2

622.15
F-1180
627.75
724+00
619.6

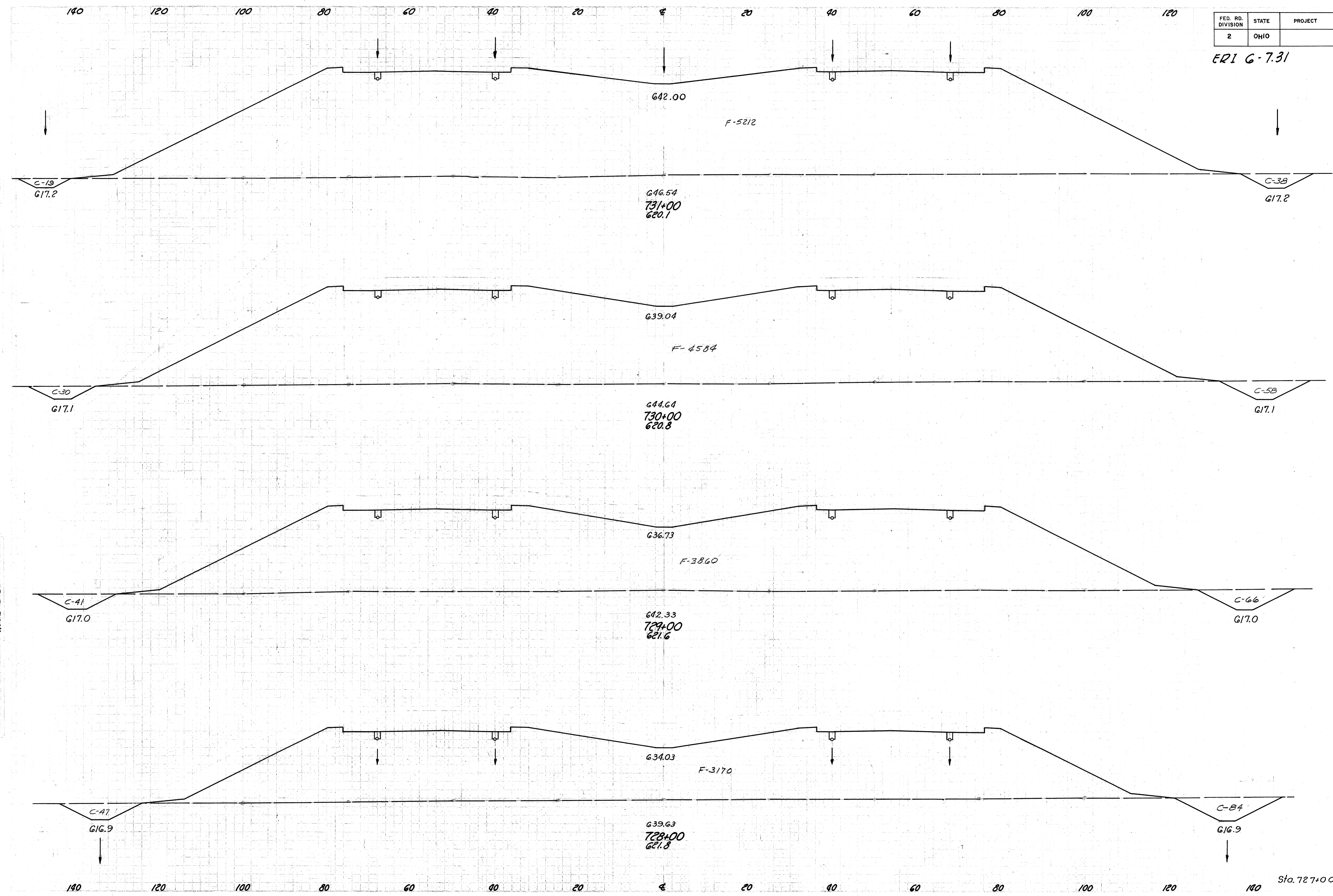
SMB
 TFM 8/15/58
 JCS 5/15/60
 HAG 5/60

Sta. 723+00
Sta. 724+00 to Sta. 727+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

77
161

ERI G-7.31



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
57	5212		
		269	18,141
88	4584		
		361	15,637
107	3860		
		441	13,019
131	3170		
		448	19,857
111	2639		

518
 7/28/58
 JCS
 H.A. 5/100

Sta. 728+00 to Sta. 731+00

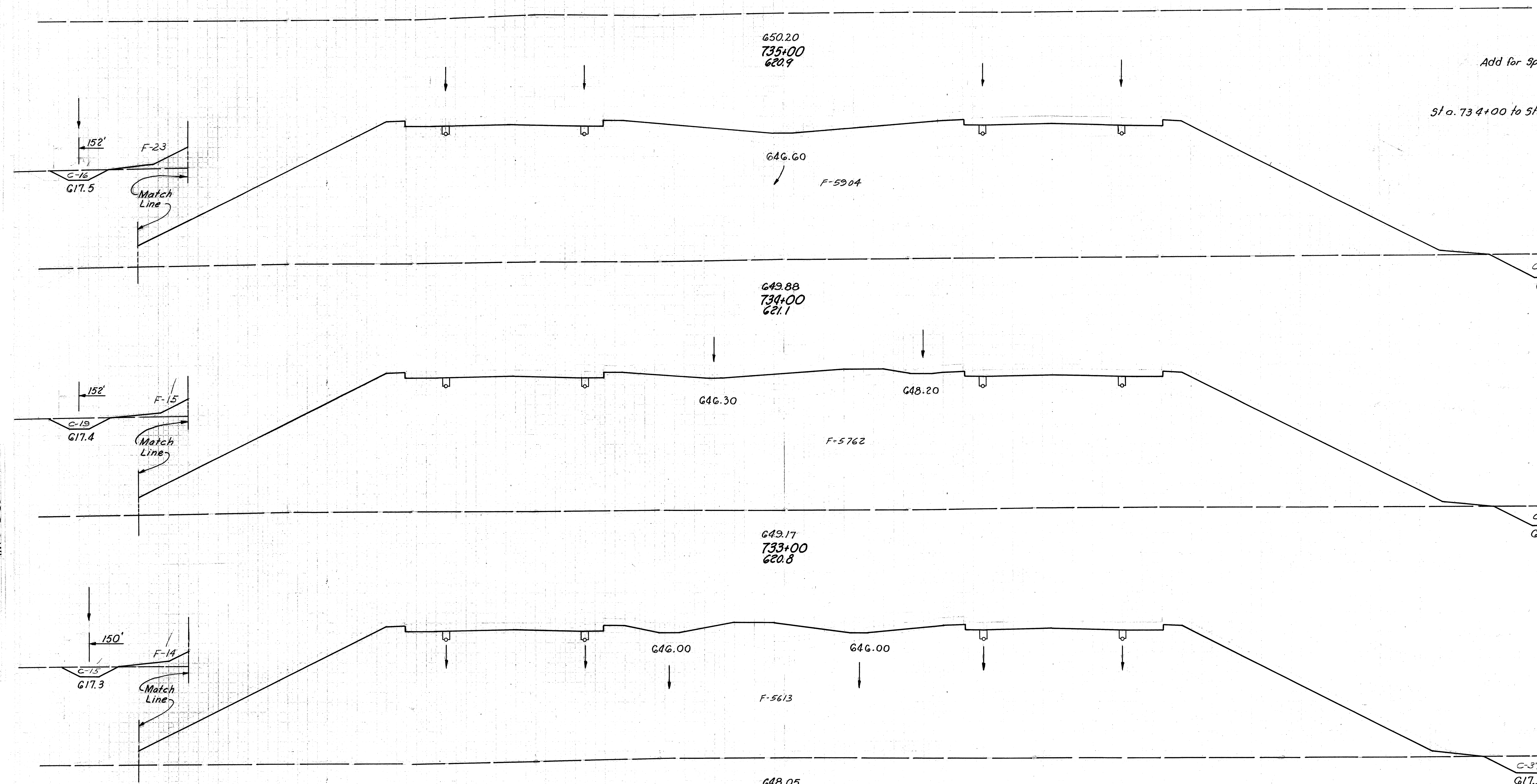
140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

78
161

ERI G-7.31

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
		0	5358
		146	11,000
79	5927	270	21,674
67	5777		
		220	21,119
52	5627	202	20,072
57	5212		



140 120 100 80 60 40 20 0 20 40 60 80 100 120

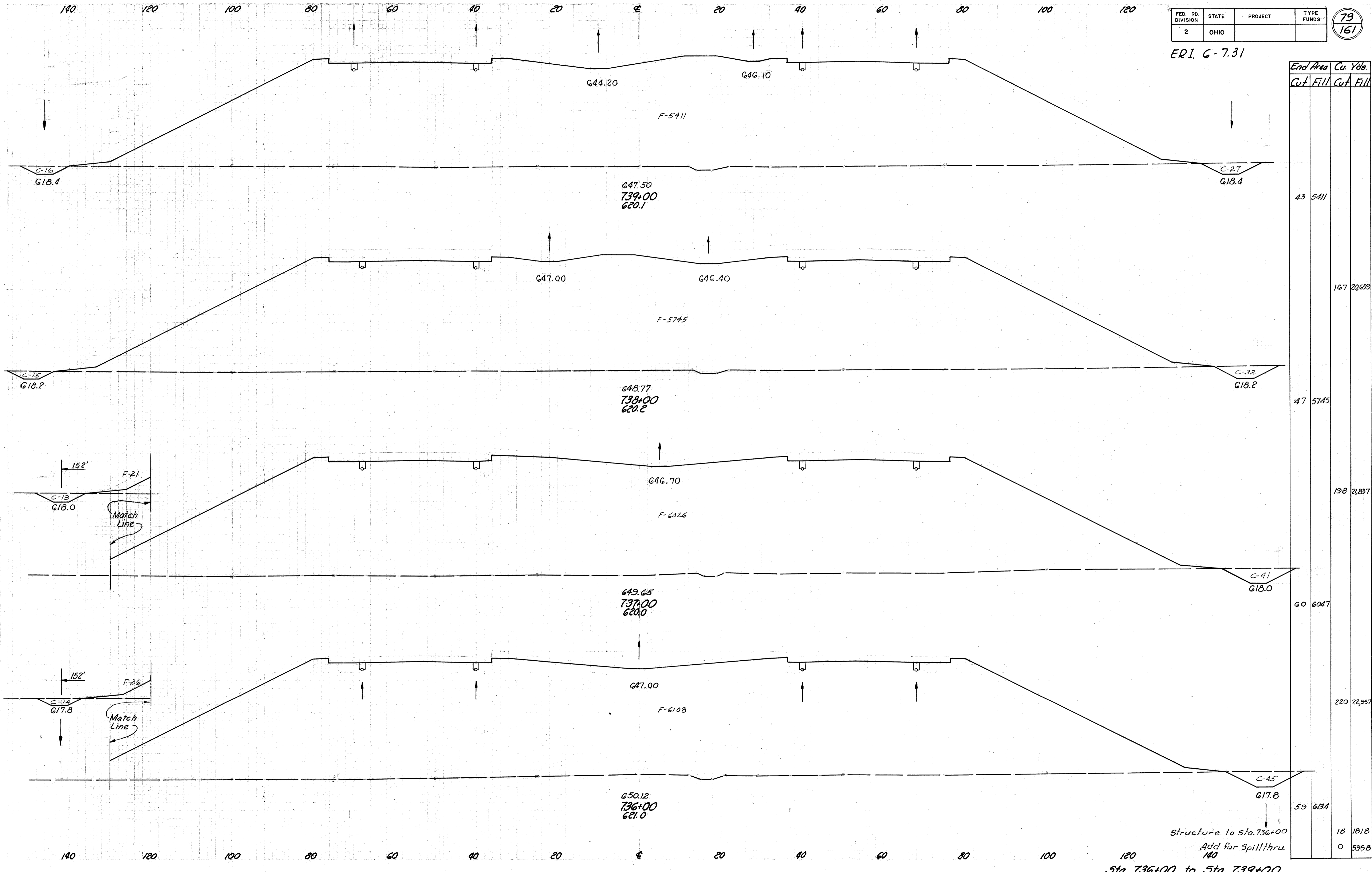
Sta. 732+00 to Sta. 735+00

SMB 11/15/58
 TFH 8/11/58
 JCS 2/16/60
 HA 6/25/60

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

79
161

ERI. 6-7.31



Sta.	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
737+00	43	541		
738+00	47	5745	167	20,659
737+00	60	6047	198	21,837
736+00	220	22,557		
736+00 to 739+00	53	6134	18	1818
Spillthru	0		0	5358

DATE: 8/15/53
 DRAWN BY: JCS
 CHECKED BY: JCS
 DATE: 8/15/53

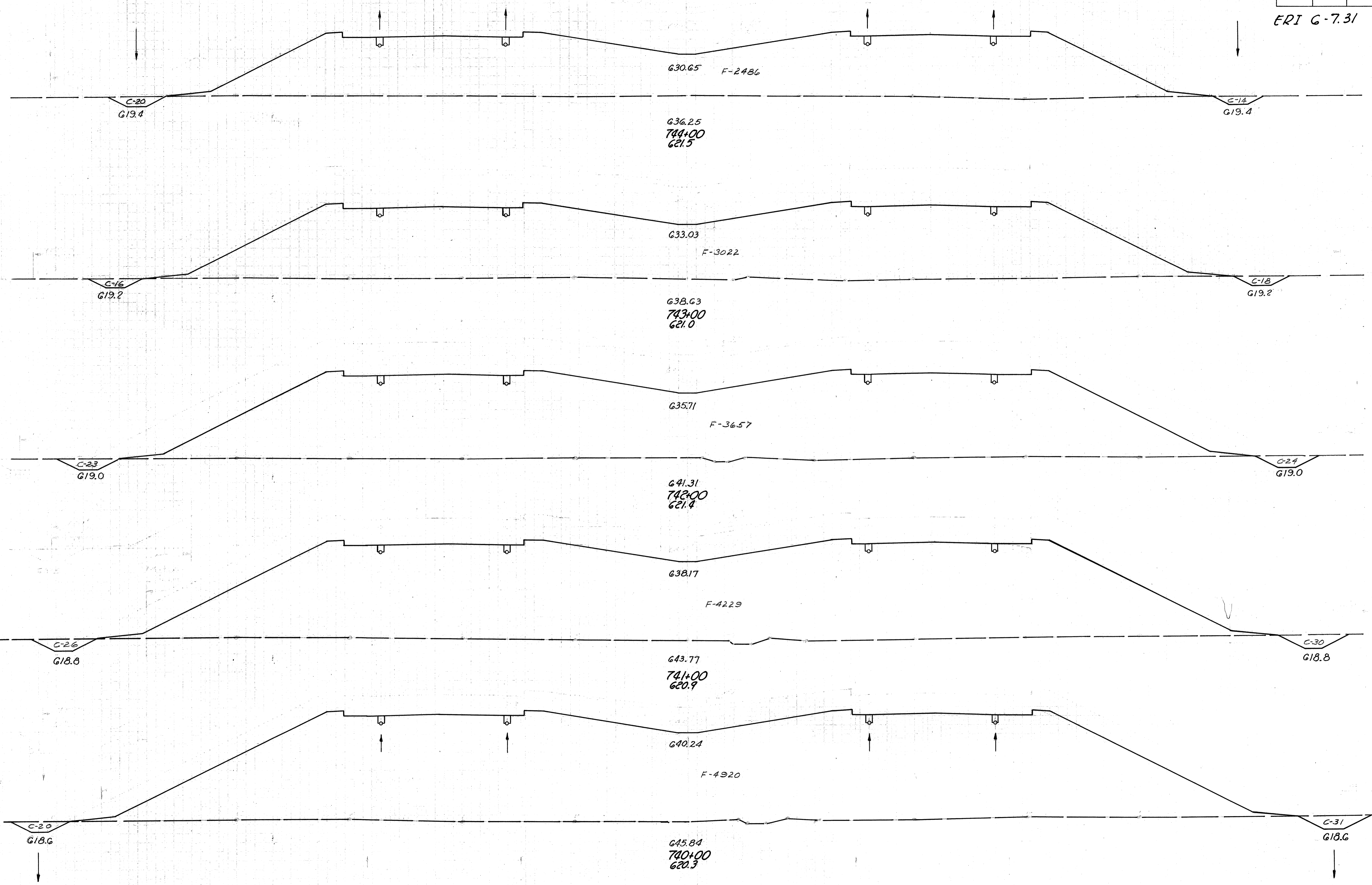
Structure to Sta. 736+00
 Add for Spillthru
 140
 Sta. 736+00 to Sta. 739+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

80
161

ERI G-7.31



End Area	Cu. Yds.	
	Cut	Fill
34	2486	
126		10,200
34	3022	
150		12,369
47	3657	
191		14,604
56	4229	
198		16,943
51	4920	
174		19,131
43	5411	

S.M.B. 8/1/58
 T.F.H. 8/1/58
 J.C.S. 8/1/58
 H.A.S. 8/1/58

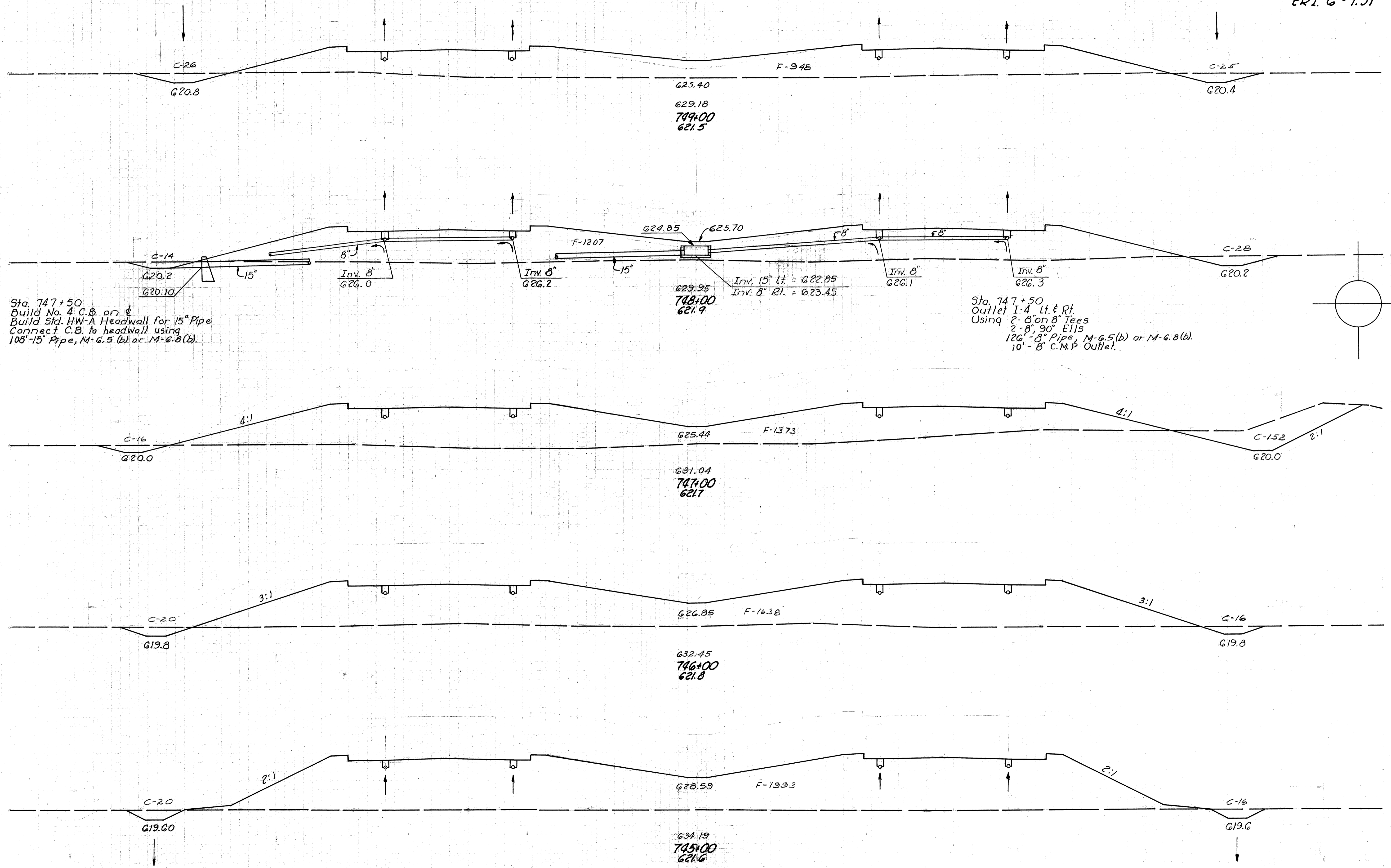
Sta. 740+00 to Sta. 744+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

81
161

ERI. G-7.31



Sta. 747+50
Build No. 4 C.B. on E
Build Std. HW-A Headwall for 15" Pipe
Connect C.B. to headwall using
108'-15" Pipe, M-G.5 (b) or M-G.8 (b).

Sta. 747+50
Outlet 1-4 Lt. & Rt.
Using 2-8" on 8" Tees
2-8" 90° Ells
126'-8" Pipe, M-G.5 (b) or M-G.8 (b)
10'-8" C.M.P. Outlet.

Sta.	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
51		948		
42		1207	172	3991
168		1373	389	4778
36		1638	378	5576
36		1993	133	6724
34		2486	130	8294

SMTB
 TPA 8/1/58
 JCS 5/1/60
 H.A.G. 5-60

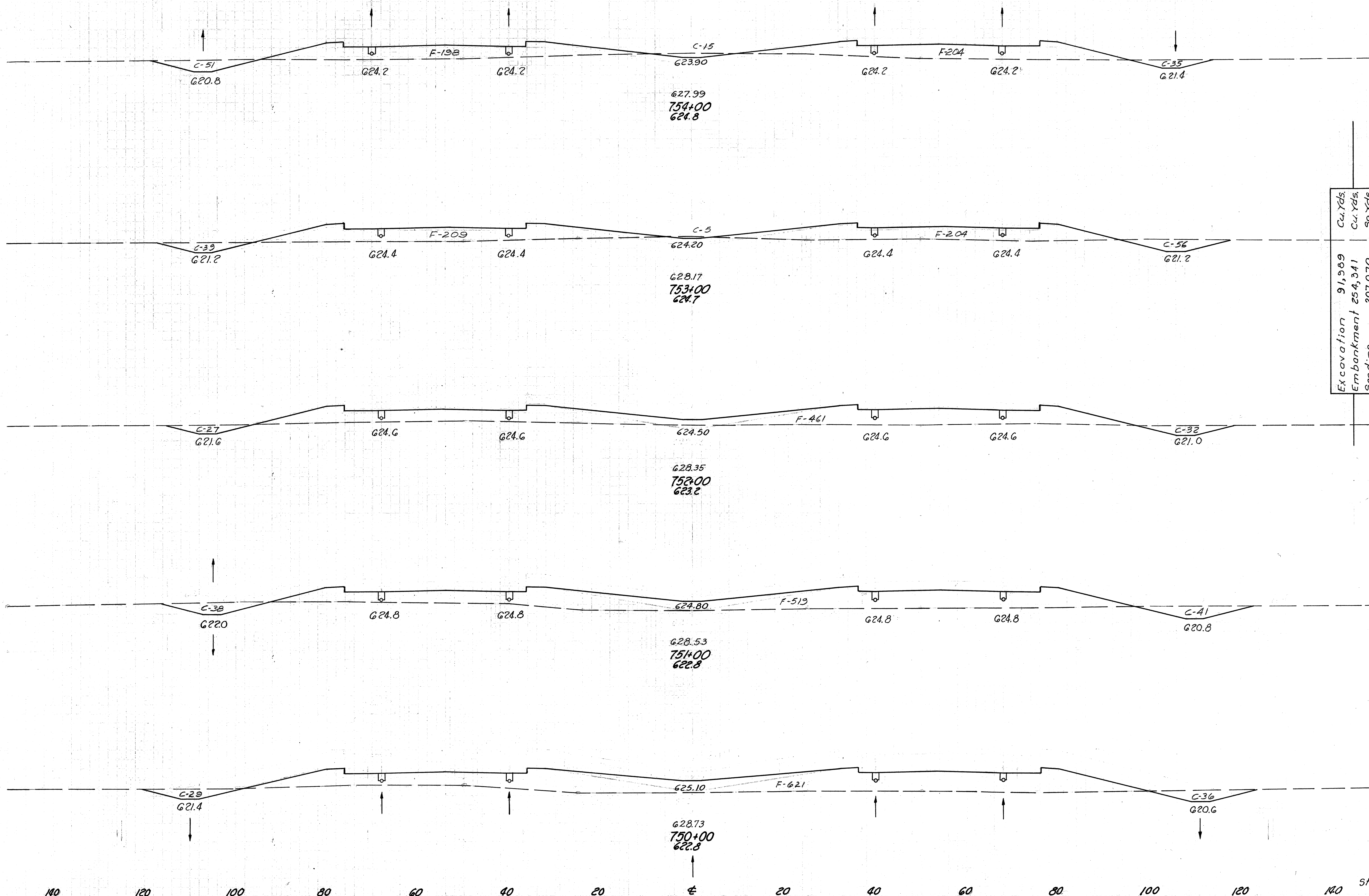
140 120 100 80 60 40 20 0 20 40 60 80 100 120 Sta. 744+00 Sta. 745+00 to Sta. 749+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

82
161

ERI. G-7.31



Excavation 91,989 Cu.Yds.
Embankment 254,341 Cu.Yds.
Seeding 207,070 Sq.Yds.

Sta.	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
101		402		
			372	1509
100		413		
			294	1619
59		461		
			256	1815
79		519		
			267	2111
65		621		
			215	2906
51		948		

DMB 1958
 TCH 12/15/58
 JCS 5/15/60
 H.A.G. 5-60

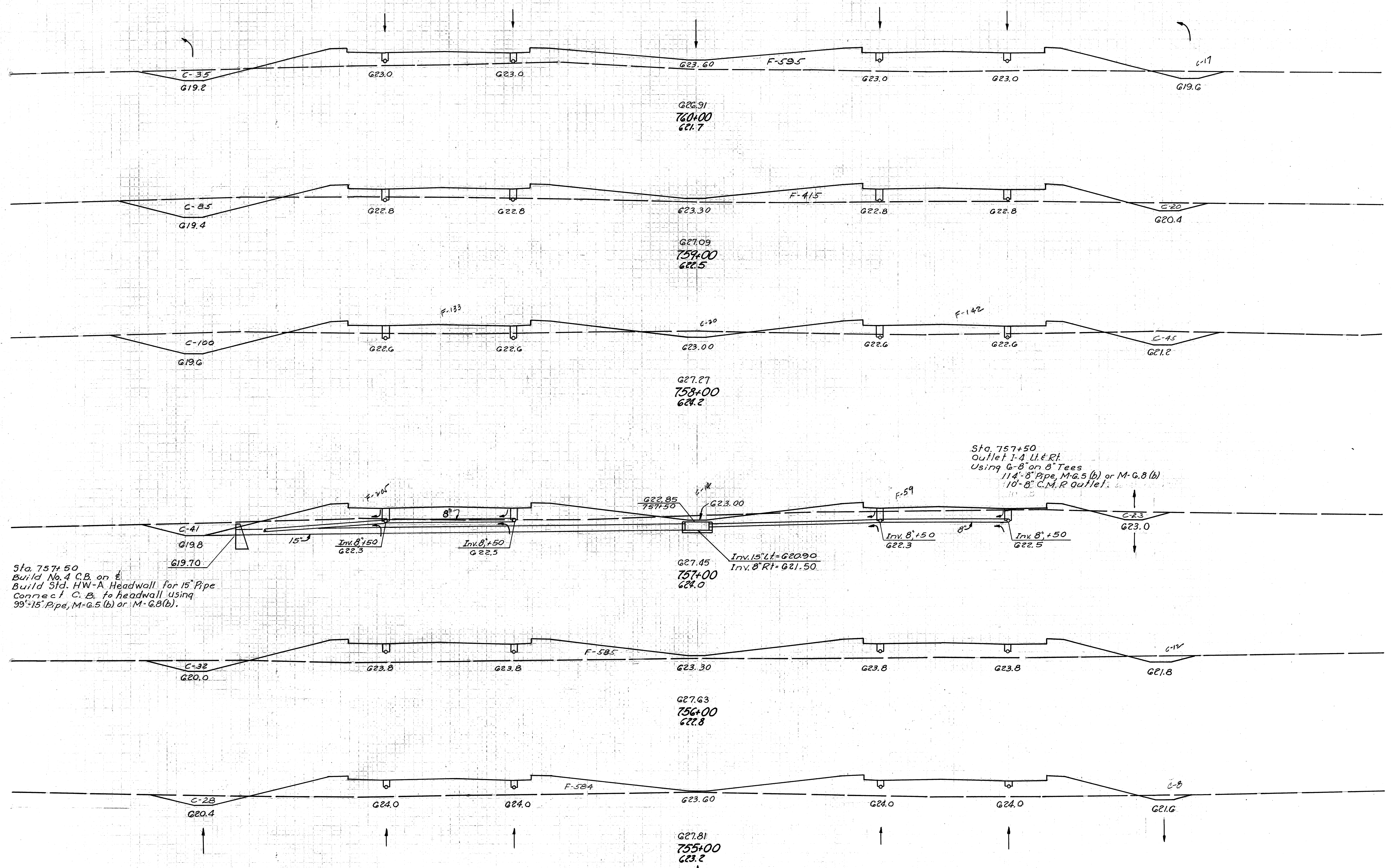
Sta. 749+00 to Sta. 754+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

83
161

ERI. G-7.31



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
		52	595
		291	1870
		105	415
		500	1278
		165	275
		450	998
		78	264
		226	1572
		44	585
		148	2165
		36	584
		101	402
		254	1826

Sta. 757+50
Build No. 4 C.B. on E.
Build Sid. HW-A Headwall for 15" Pipe
Connect C. B. to headwall using
99'-15" Pipe, M-G.5 (b) or M-G.8 (b).

Sta. 757+50
Outlet I-4 Lt. & Rt.
Using 6-8" on 8" Tees
114'-8" Pipe, M-G.5 (b) or M-G.8 (b)
110'-8" C.M.P. Outlet.

SHS 7/11/58
 TFM 7/11/58
 PWC 7/11/58
 VLS 7/11/58

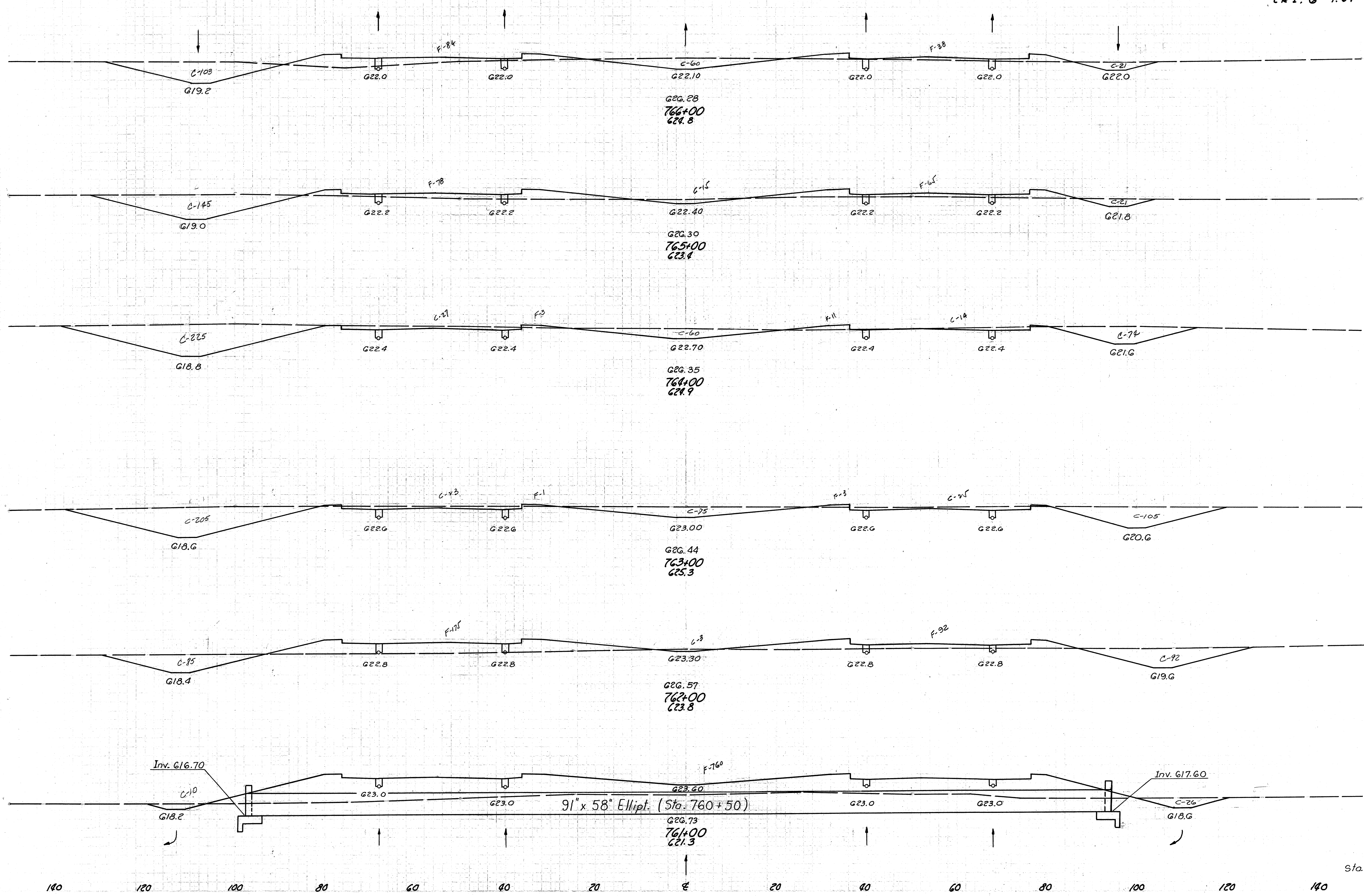
Sta. 754+00 to Sta. 760+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

84
161

ERI. G-7.31



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
184	122		
		676	491
181	143		
		1076	291
400	14		
		1543	33
433	4		
		1135	502
180	267		
		400	1902
36	760		
		163	2509
52	595		

Sta. 760+00

Sta. 761+00 to Sta. 766+00

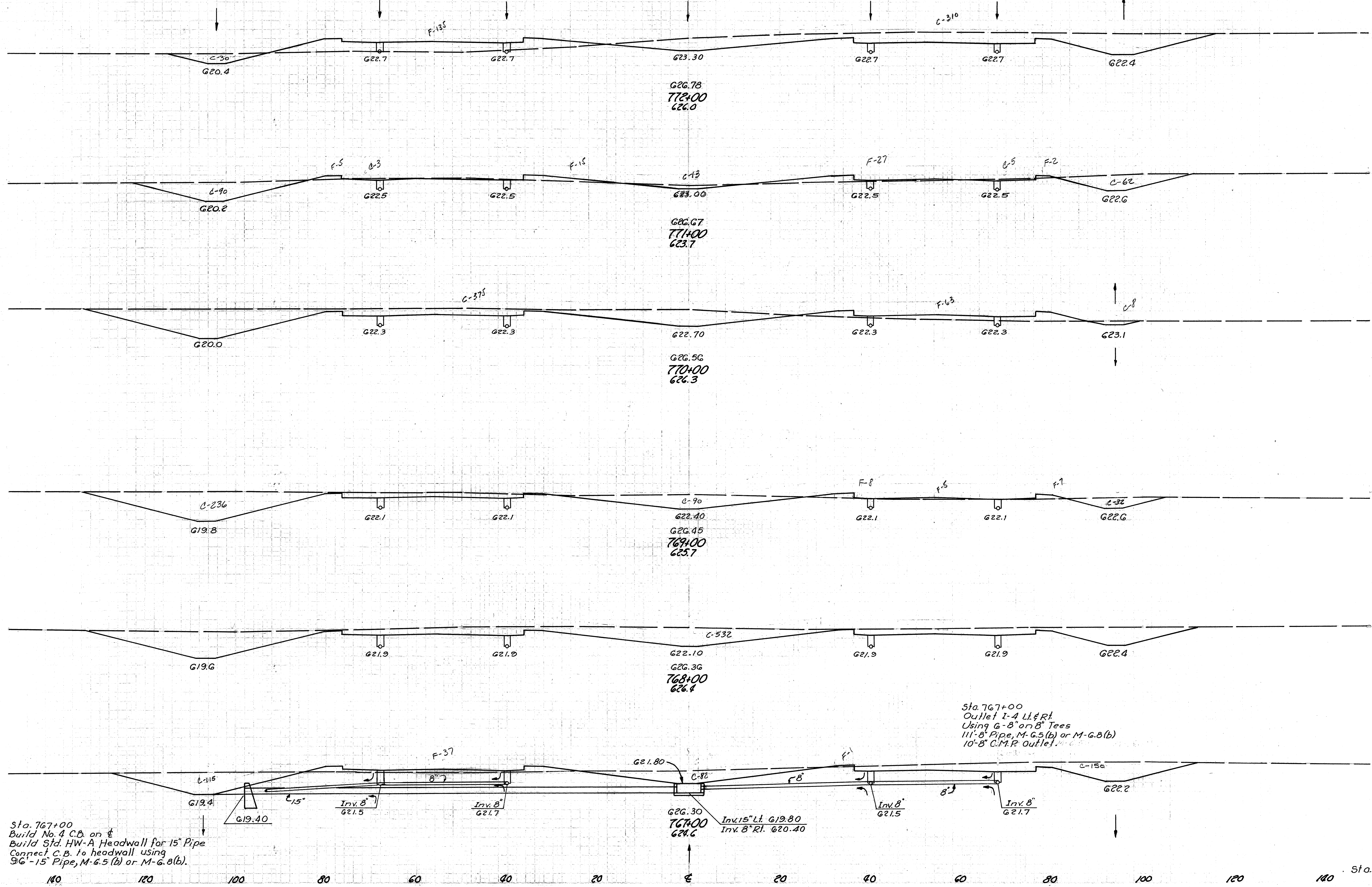
S.M.B. 4/15/58 IN 7158
 P. 13-53 160s. 7-60
 JCS 5/18/60

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

85
161

ERI G-7.31



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
340	135		
		950	341
173	49		
		1030	207
383	63		
		1372	154
358	20		
		1648	37
532	0		
		1628	70
347	38		
		983	296
184	122		

Sta. 767+00
Build No. 4 C.B. on E
Build Std. HW-A Headwall for 15" Pipe
Connect C.B. to headwall using
9'6"-15" Pipe, M-6.5 (b) or M-6.8 (b).

Sta. 767+00
Outlet I-4 Lt & Rt
Using 6-8" or 8" Tees
11'-8" Pipe, M-6.5 (b) or M-6.8 (b)
10'-8" C.M.P. Outlet

Sta. 766+00
Sta. 767+00 to Sta. 772+00

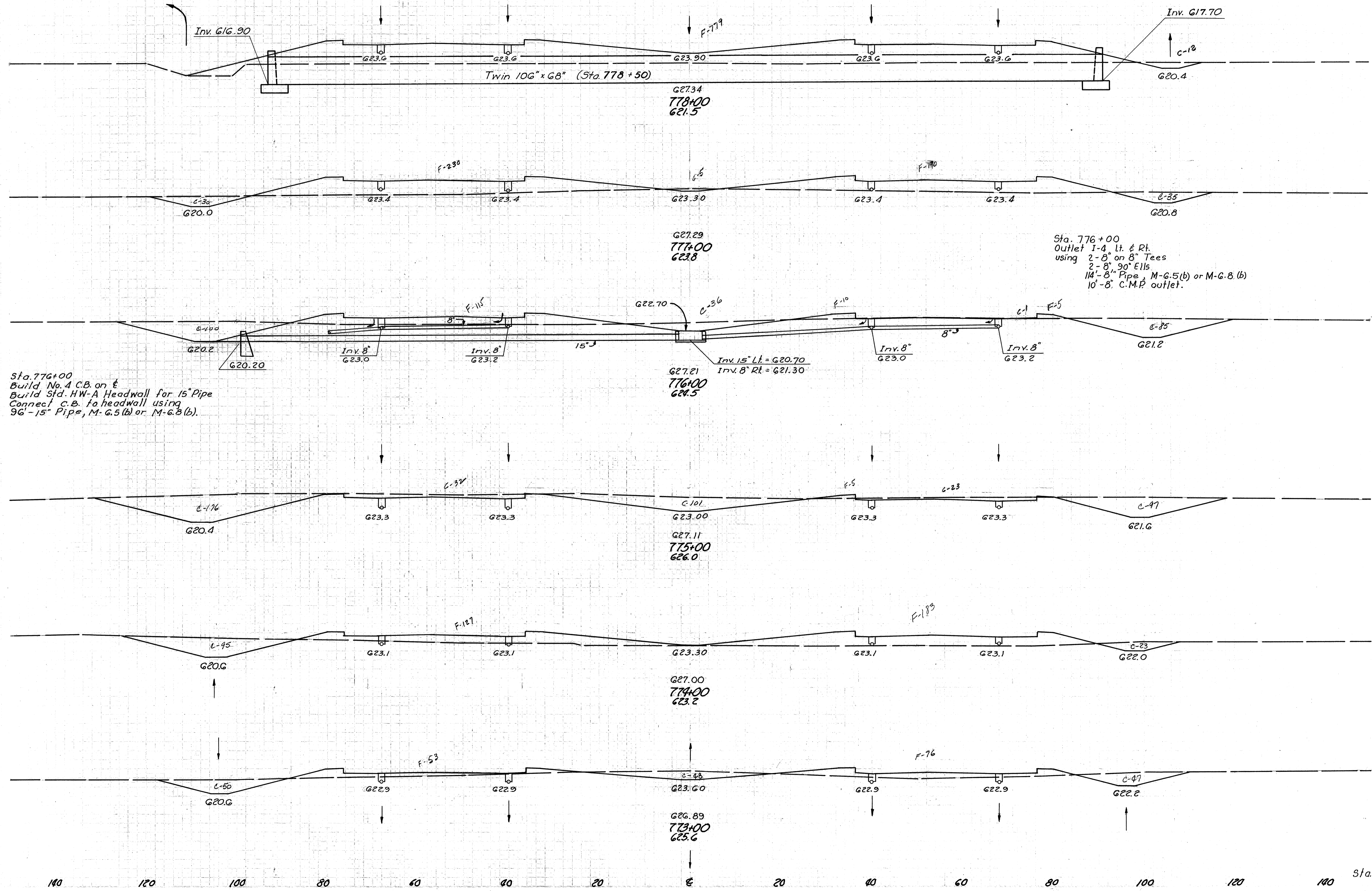
SM 1/28
 TFM 8/19
 HWS 3-59
 JCS 5/19/60

140 120 100 80 60 40 20 E 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

86
161

ERI. G-7.31



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
12	779		
		152	2220
70	420		
		541	1019
222	130		
		1206	250
429	5		
		1013	583
118	310		
		487	813
145	129		
		898	489
340	135		

Sta. 776+00
Build No. 4 C.B. on E
Build Std. HW-A Headwall for 15" Pipe
Connect C.B. to headwall using
96'-15" Pipe, M-G.5 (b) or M-G.8 (b).

Sta. 776+00
Outlet 1-4 Lt. & Rt.
using
2-8" on 8" Tees
2-8" 90° Ells
114'-8" Pipe, M-G.5 (b) or M-G.8 (b)
10'-8" C.M.P. outlet.

SM 8
 TTH 8/1/58
 RCH 8/1/58
 RMC 1-3-59
 JES 8/1/60

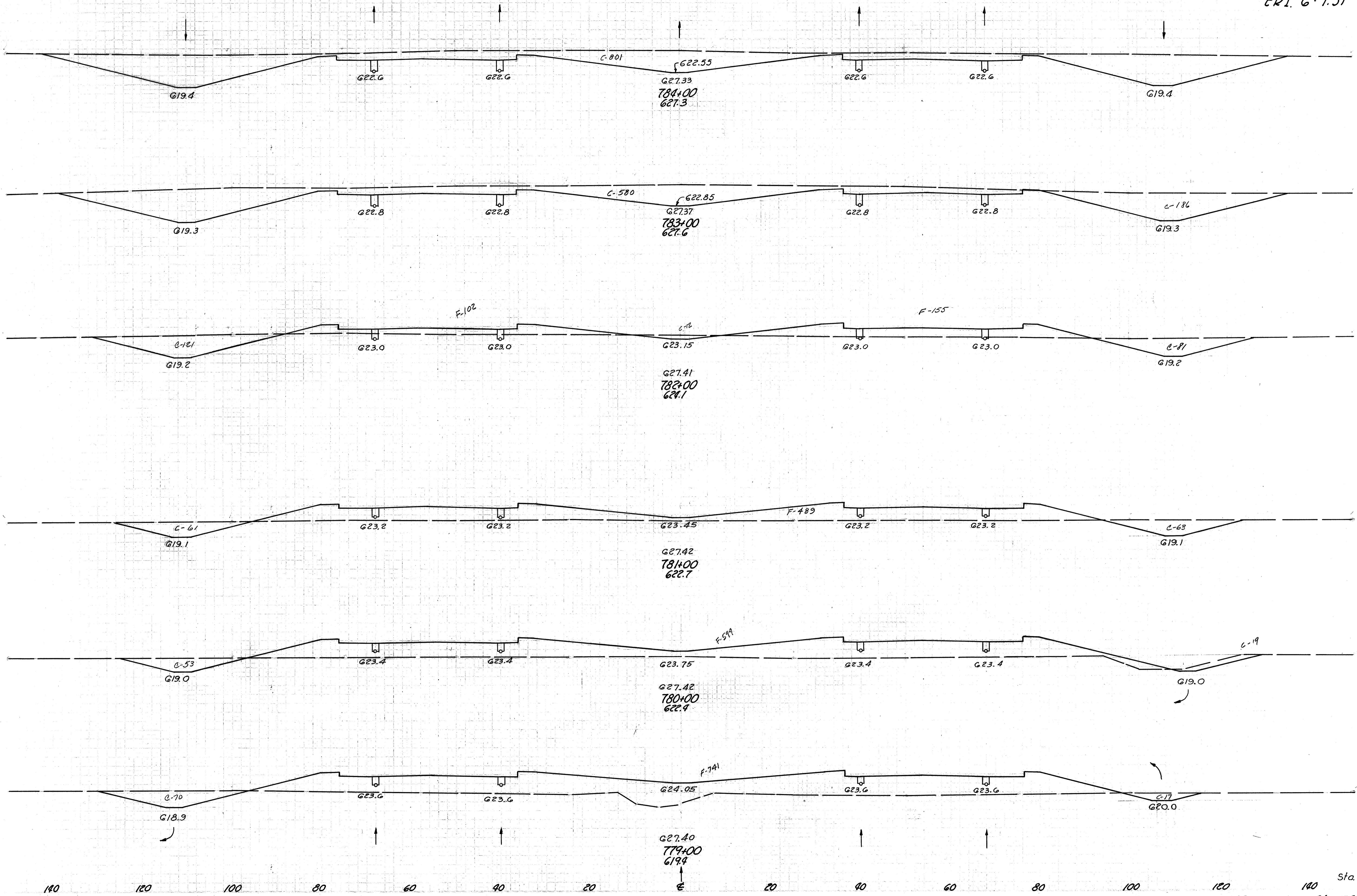
Sta. 772+00 to Sta. 778+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

87
161

ERI. G-7.31



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
801	0		
		2902	0
766	0		
		1815	476
214	257		
		626	1381
124	489		
		363	2015
72	599		
		294	2481
87	741		
12	779	183	2815

TMB 1/59
 RMC 1/59
 HAS 2-59
 JCS 5/2060

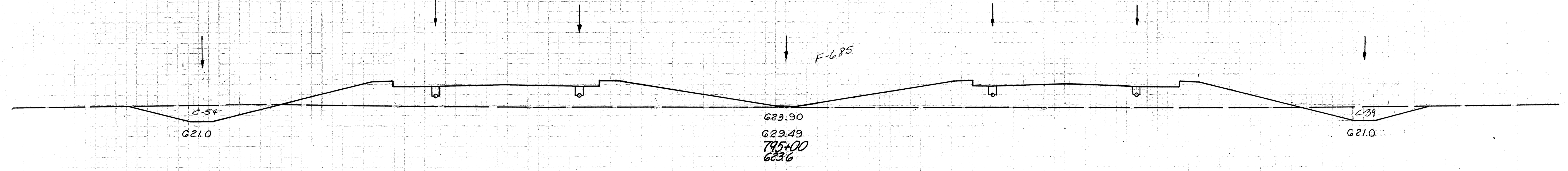
140 120 100 80 60 40 20 0 20 40 60 80 100 120 Sta. 778+00
Sta. 779+00 to Sta. 784+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

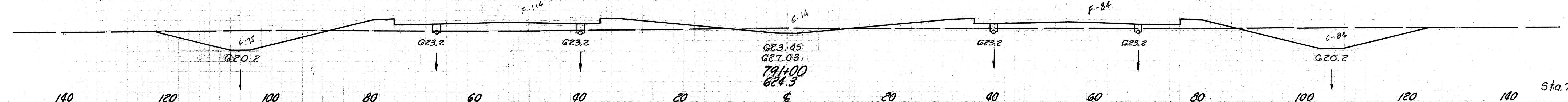
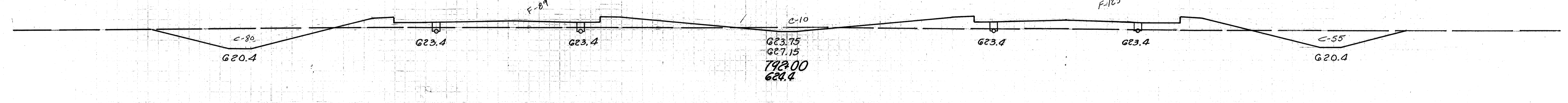
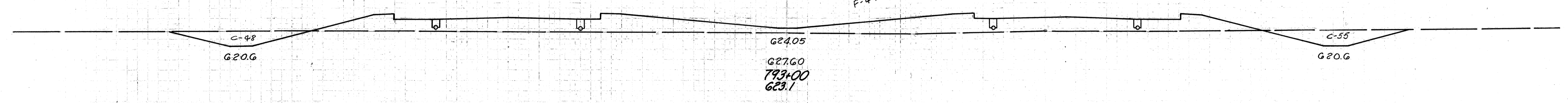
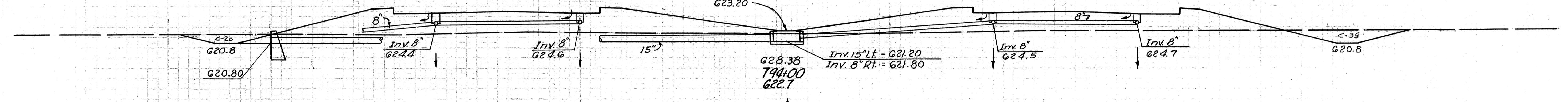
89
161

ERI G-7.31



Sta. 794+00
Build No. 4 C.B. on E
Build Std. HW-A Headwall for 15" Pipe
Connect C.B. to headwall using
99'-15" Pipe, M-G.5 (b) or M-G.8 (b).

Sta. 794+00
Outlet 1-4 Lt. & Rt.
Using 2-8" on 8" Tees
2-8" 90° Ells
117'-8" Pipe, M-G.5 (b) or M-G.8 (b)
10'-8" C.M.P. Outlet.



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
93	685		
		274	2444
55	635		
		293	2006
103	448		
		459	1222
145	212		
		593	759
175	198		
264	82	813	518

SMP 1/15/58
 T.P.H. 1/15/58
 R.W.E. 1-5-58
 J.C.S. 5/22/60

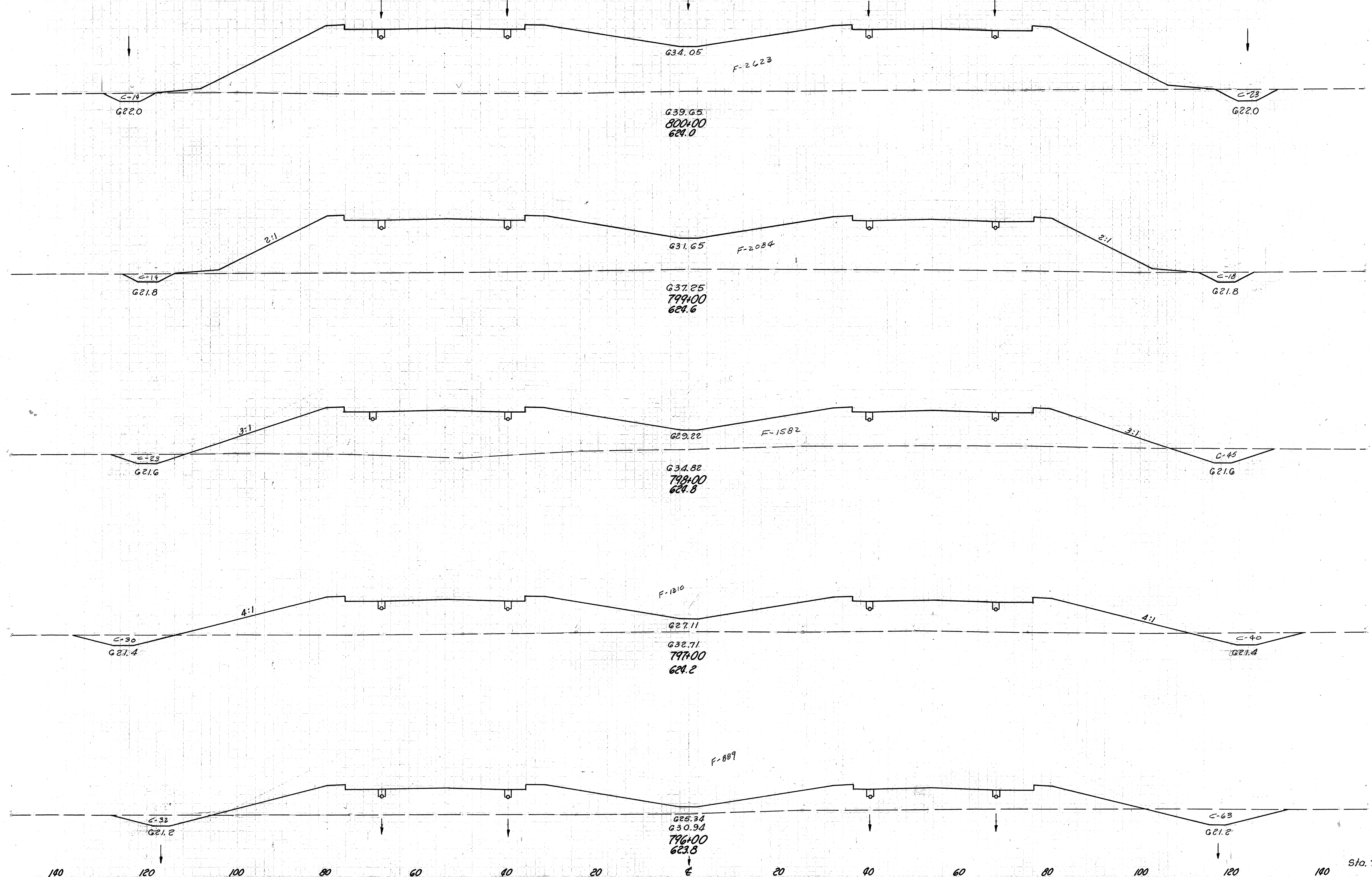
Sta. 790+00 to Sta. 795+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

90
161

ERI. 6-7.31



639.65
800+00
624.0

637.25
799+00
624.6

634.82
798+00
624.8

632.71
797+00
624.2

625.34
630.94
796+00
623.8

Sta.	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
37	2623			
32	2084			
185	6789			
68	1582			
256	5356			
70	1310			
306	4072			
95	889			
93	685	348	2915	

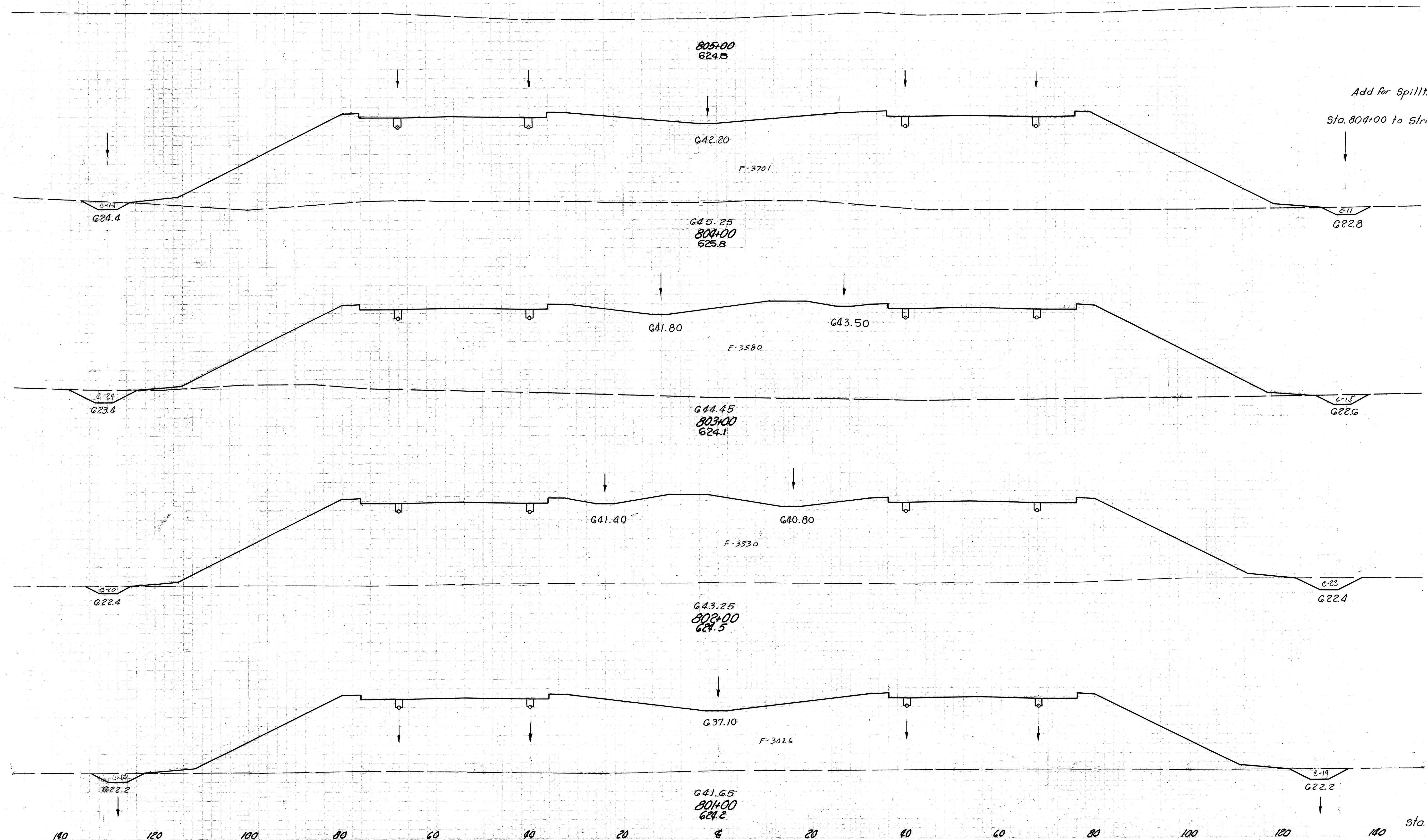
SMP 7/10/58 R/LH 7/10/58
 TFM 12-58 1205 9-60
 GTS 11-58 5000
 M.C. 5/20/60

Sta. 795+00
Sta. 796+00 to Sta. 800+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

91
161

ERI. G-7.31



Add for Spillthru
Sta. 804+00 to Structure

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
		0	1877
25	3701	36	5350
		119	13,483
39	3580		
		133	12,796
33	3330		
		122	11,770
33	3026		
37	2623	130	12,461

Sta. 800+00
Sta. 801+00 to Sta. 805+00

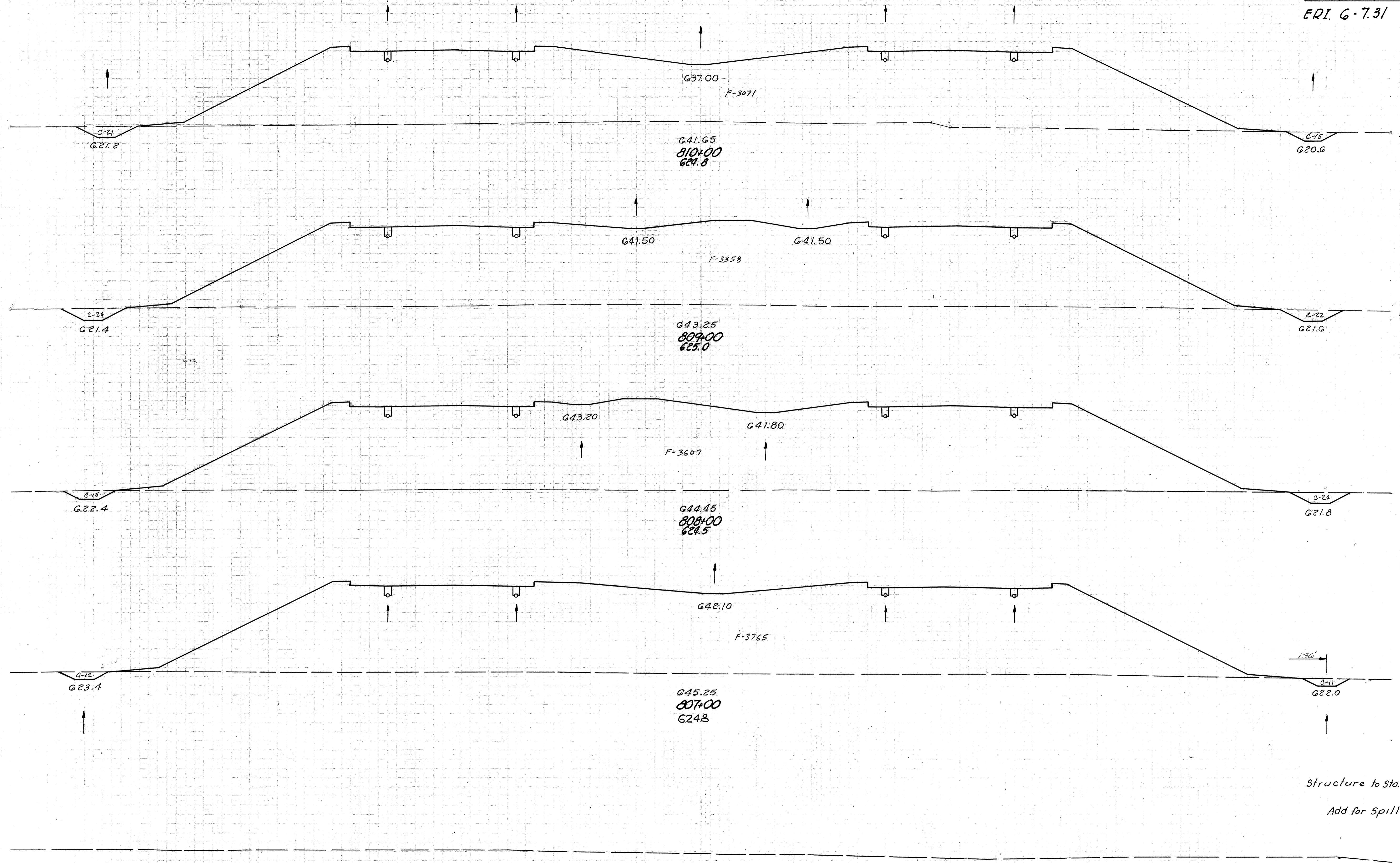
SMP
 TYP
 GTS
 HAS
 JCS
 1958
 12/11
 1/18
 1/28
 2/5
 2/6
 2/6

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

92
161

ERI. G-7.31



Span	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
36				
46			152	11,902
39			157	12,894
23			115	13,652
Structure to Sta. 807+00			42	6,830
Add for Spillthru			0	2,032

DATE: 1/25/60
SCALE: 1" = 20'

SMB
TFM 7/11/59
1/25/60
JCS 5/23/60

140 120 100 80 60 40 20 0 20 40 60 80 100 120

806+00
G 25.6

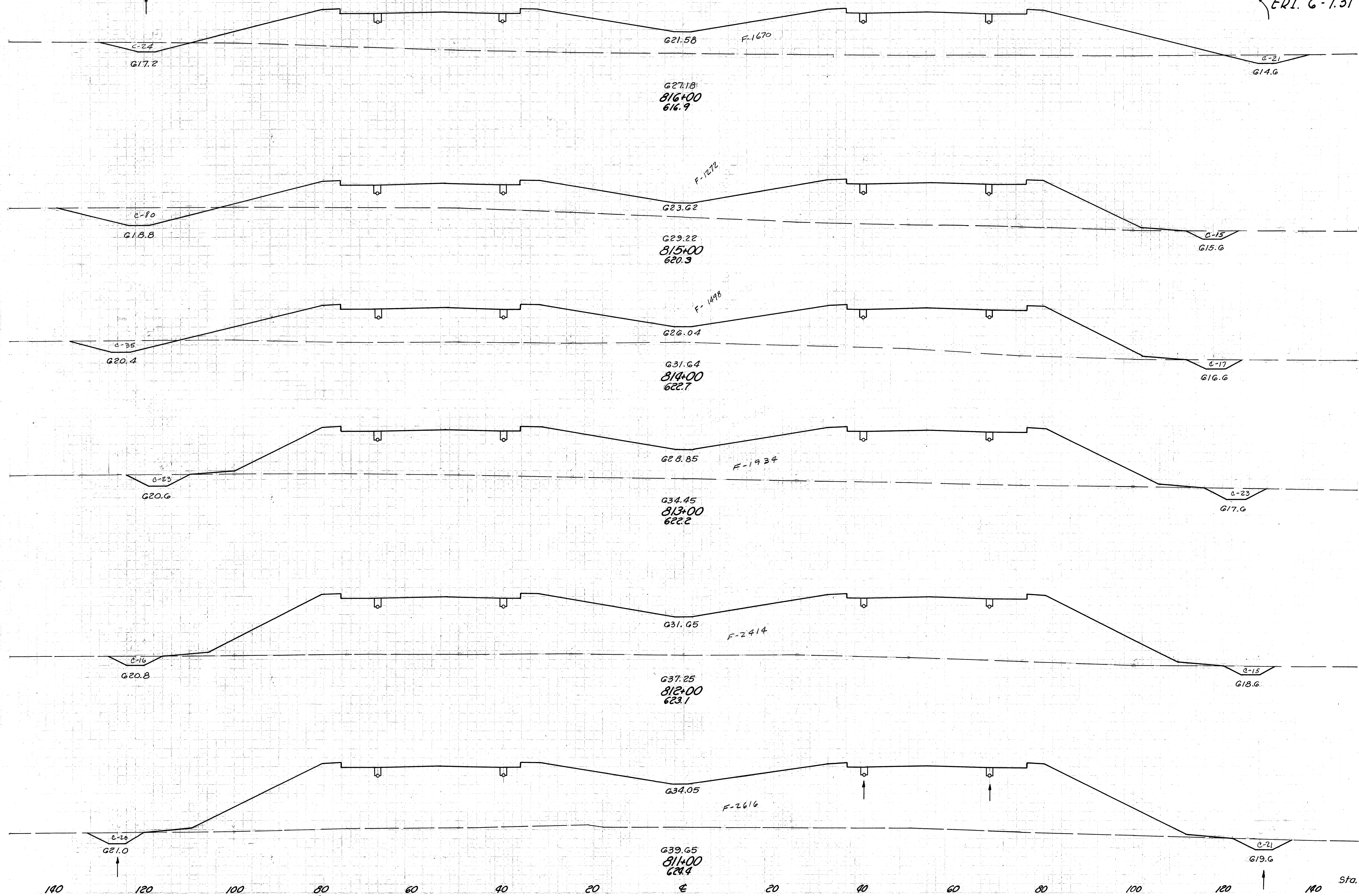
Sta. 806+00 to Sta. 810+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

93
161

ERI. G-7.31



Sta.	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
45	1670			
95	1272		259	5448
52	1498		272	5130
46	1934		181	6356
31	2414		143	8052
41	2616		133	9315
36	3071	143	10531	

DATE: 12/1/58
BY: JCS
CHECKED: JCS
APPROVED: JCS

DATE: 12/1/58
BY: JCS
CHECKED: JCS
APPROVED: JCS

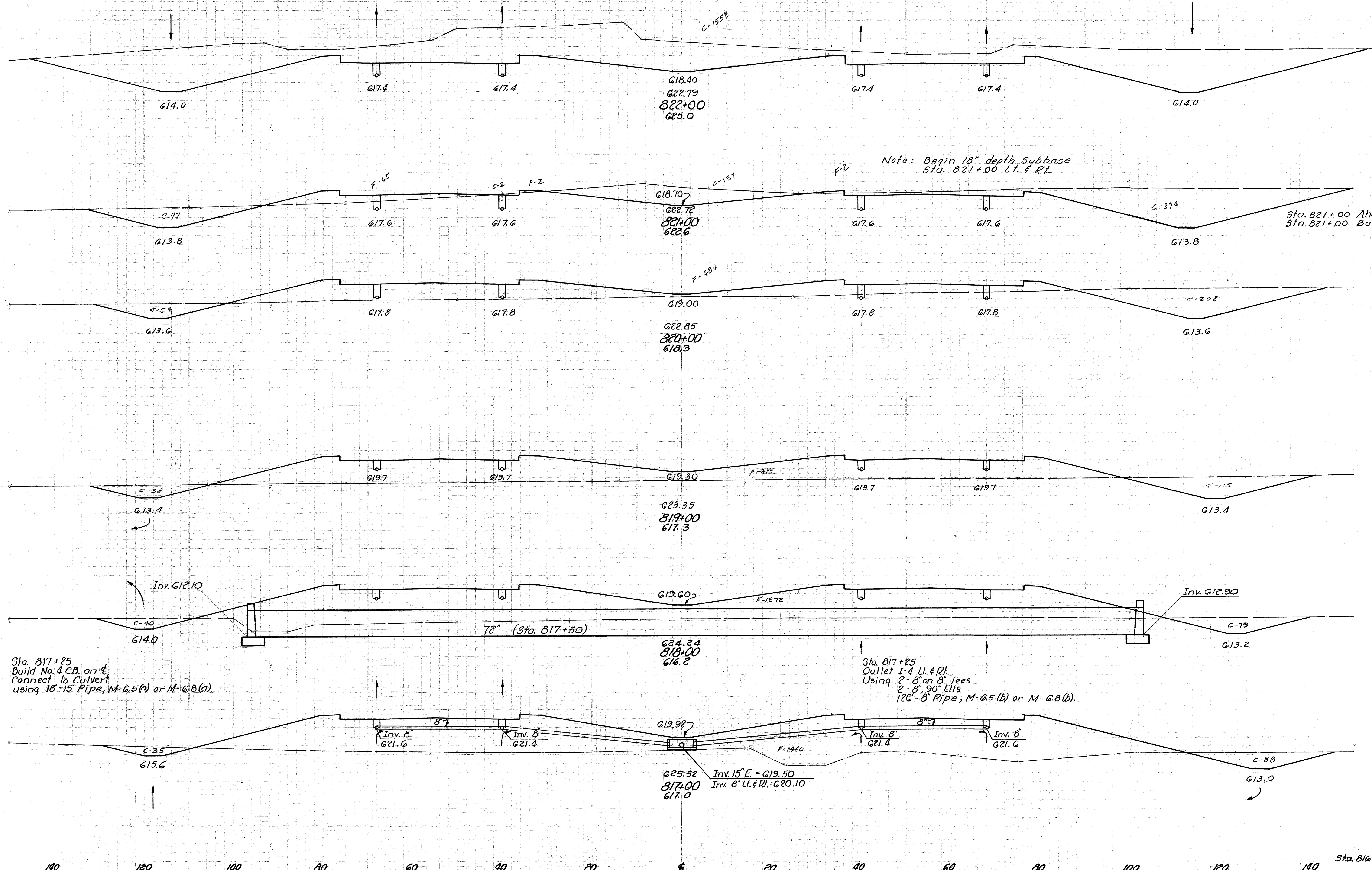
Sta. 810+00
Sta. 811+00 to Sta. 816+00

140 120 100 80 60 40 20 E 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

94
161

ERI. 6-7.31



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
1558	0		
		4130	81
672	44		
610	69		
		1615	1024
262	484		
		769	2402
153	813		
		504	3861
119	1272		
		448	5059
123	1460		
		311	5796
45	1670		

1958
 JCS 5/23/60
 JCS 5/23/60
 JCS 5/23/60
 JCS 5/23/60

Sta. 817+25
 Build No. 4 CB on E
 Connect to Culvert
 using 18"-15" Pipe, M-6.5(b) or M-6.8(b).

Sta. 817+25
 Outlet I-4 Lt. & Rt.
 Using 2'-8" on 8" Tees
 2'-8", 90° Ells
 12" 8"-8" Pipe, M-6.5(b) or M-6.8(b).

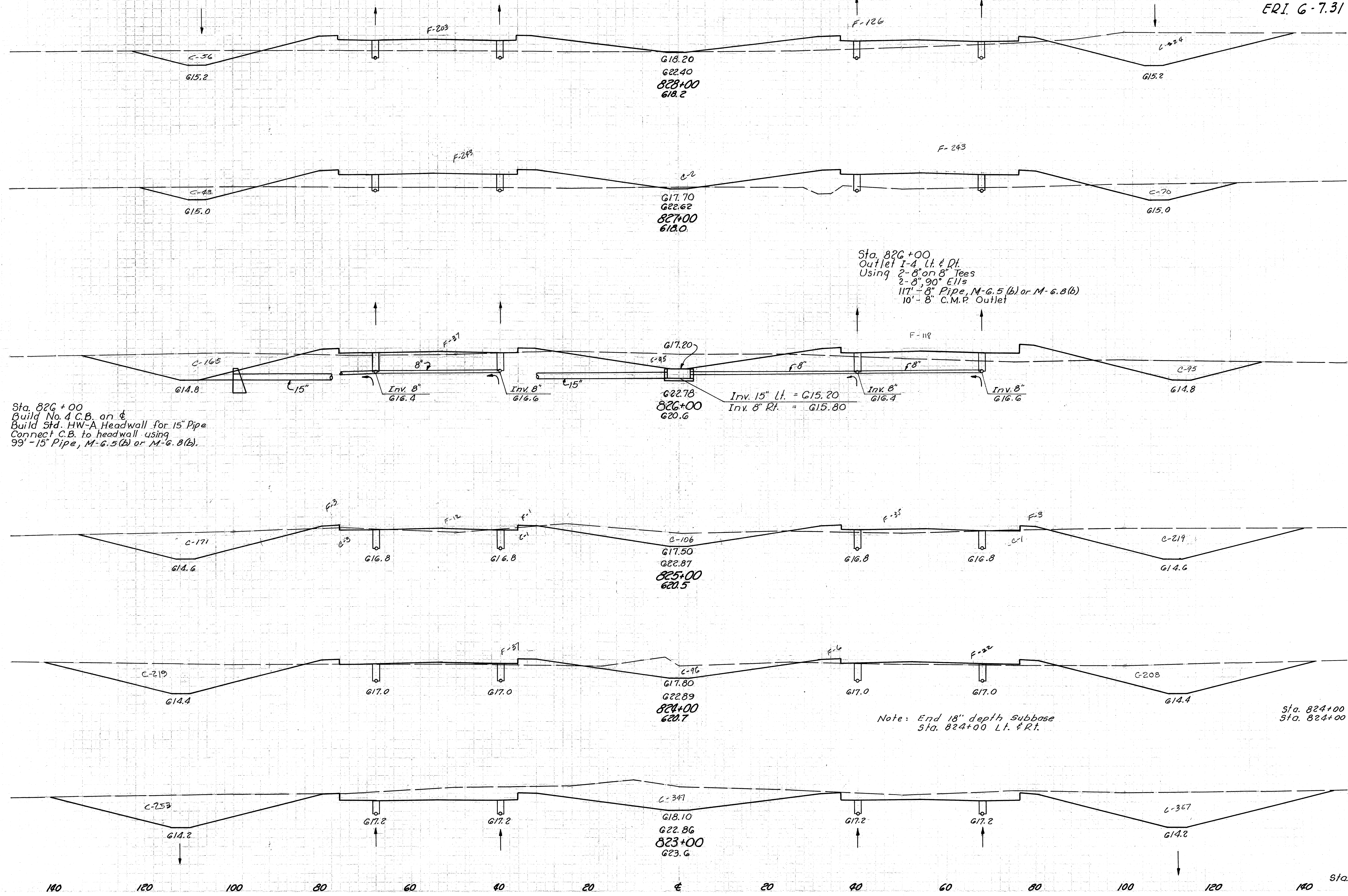
Sta. 816+00
 Sta. 817+00 to Sta. 822+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

95
161

ERI 6-7.31



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
280	329		
		731	1509
115	486		
		870	1187
355	155		
		1585	387
501	54		
		1896	220
523	65		
585	47		
		2874	87
967	0		
		4676	0
1558	0		

1958
 T.F.H. Through
 1-9-58
 J.C.S. 5/21/60

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

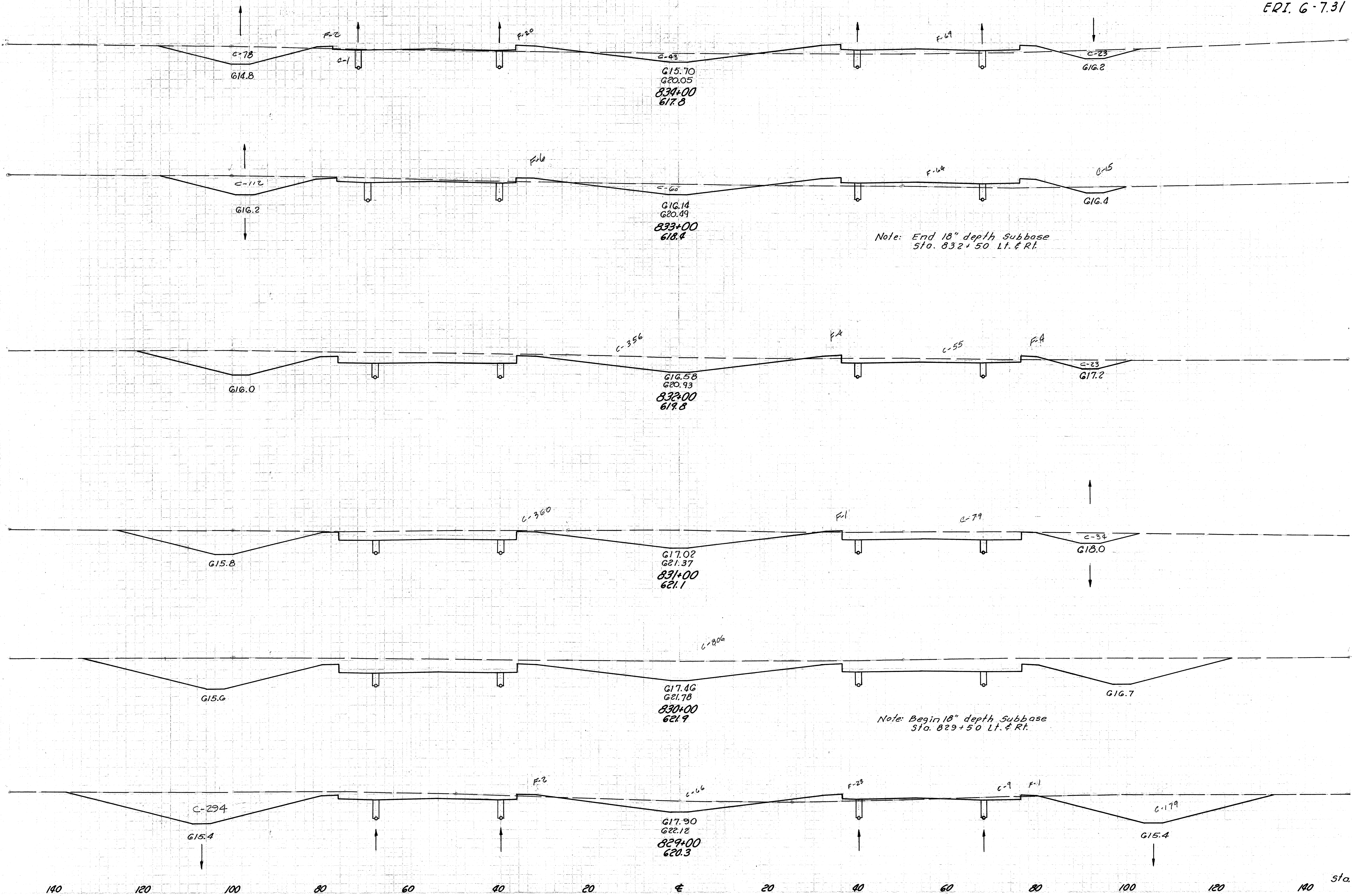
Sta. 822+00 to 828+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

96
161

ERI. G-7.31



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
145	91		
		615	298
187	70		
		1150	144
434	8		
		1680	17
473	1		
		2369	2
806	0		
		2507	4.8
548	26		
		1533	6.57
280	329		

Sta. 828+00 to Sta. 834+00

SMO
T.M.
J.E.S. 5/25/60

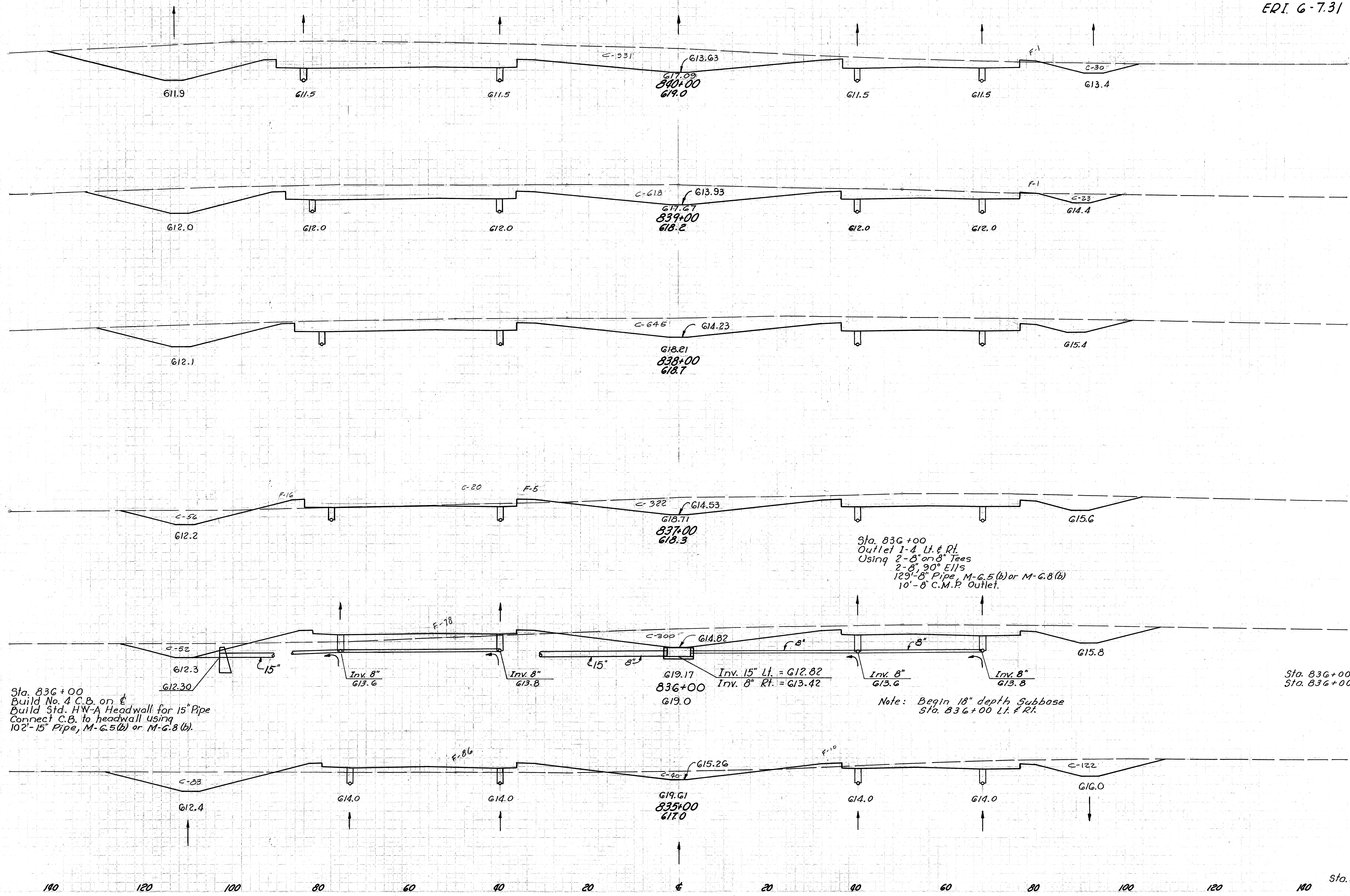
SMO
T.M.
J.E.S. 5/25/60

140 120 100 80 60 40 20 0 20 40 60 80 100 120

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

97
161

ERI. G-7.31



Sta.	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
961	1			
			2967	4
641	1			
			2381	2
645	0			
			1931	39
398	21			
			1474	109
398	38			
352	78			
			1106	322
245	96			
			722	346
145	91			

SHB
 TRN
 1158
 7/11/58
 12/11/58
 1/15/59
 4/5/60
 5/25/60

Sta. 836+00
 Build No. 4 C.B. on E
 Build Std. HW-A Headwall for 15" Pipe
 Connect C.B. to headwall using
 10'-15" Pipe, M-G.5(b) or M-G.8(b).

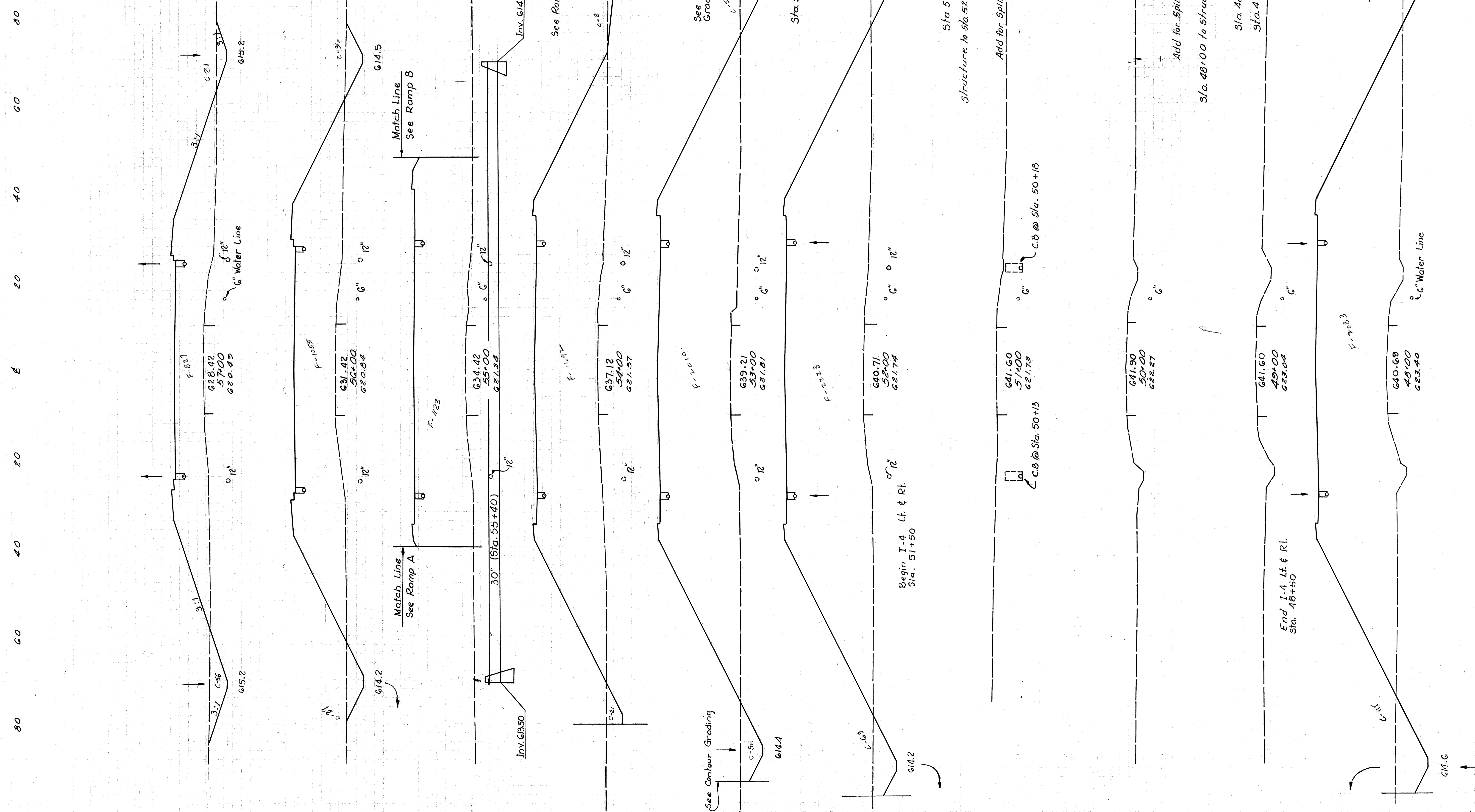
Sta. 836+00
 Outlet 1-4 Lt. & Rt.
 Using
 2-8" or 8" Tees
 2-8", 90° Ells
 12'-8" Pipe, M-G.5(b) or M-G.8(b)
 10'-8" C.M.P. Outlet.

Note: Begin 18" depth Subbase
 Sta. 836+00 Lt. & Rt.

Sta. 836+00 Ahead
 Sta. 836+00 Back

Sta. 834+00
 Sta. 835+00 to Sta. 840+00

DWG. NO. 1058
 DATE 5-1-60
 BY JAS
 CHECKED JAS
 APPROVED JAS



End Area	Cu. Yds.	Sta.
		77 887
		75 1055
		29 1692
		106 2010
		123 2223
		175 2083
		132 1825

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

100
161

ERI. G-7.31

S.R.4 Sta. 48+00 to Sta. 57+00

1956
 R.O. G.T.S.
 R.A.S. 5-60
 E.D.S. 5-60
 J.C.S. 5-60

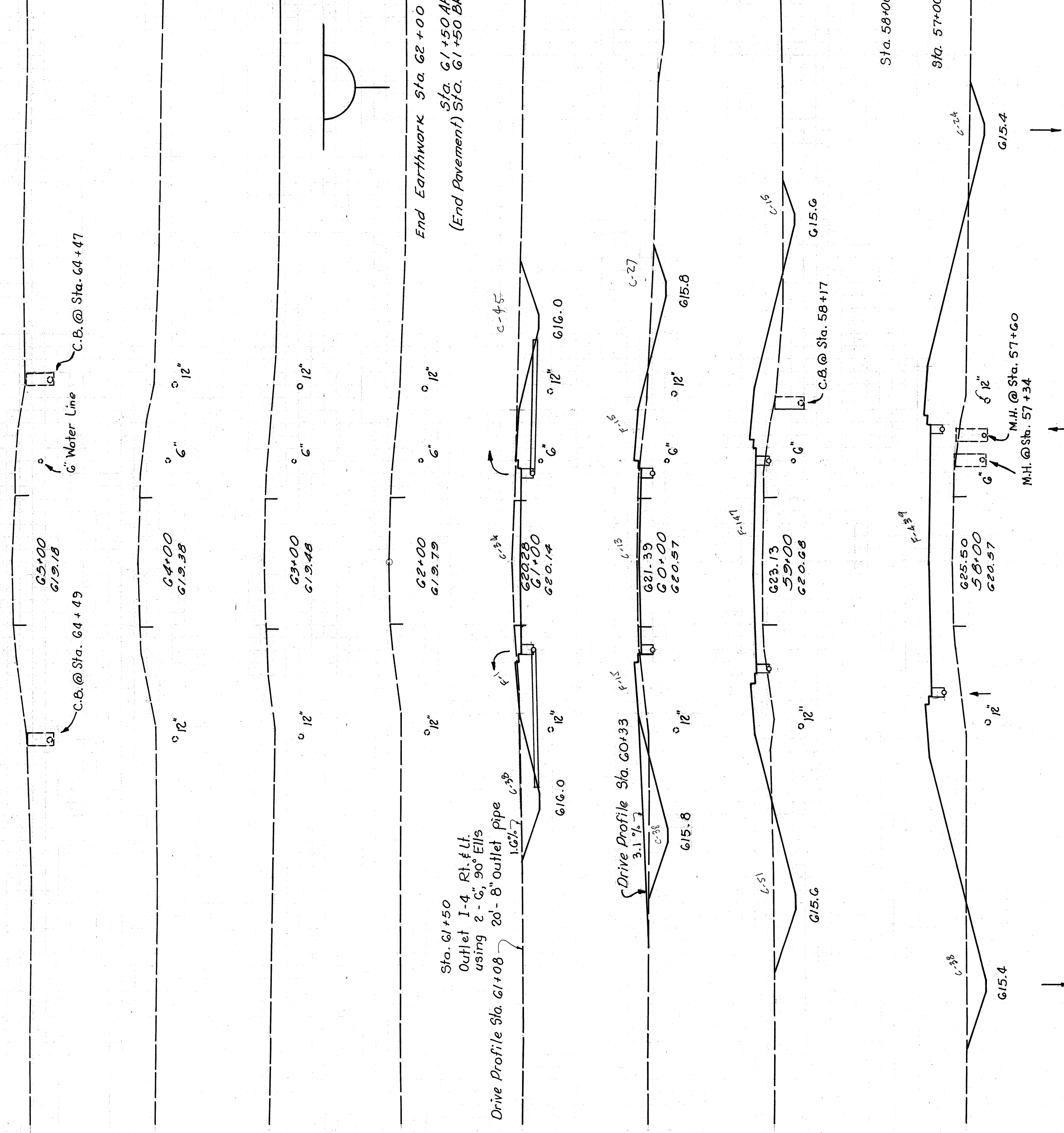
80 60 40 20 0 20 40 60 80

End Area	Cur. Jobs	End Area	Cur. Jobs
Cut	Fill	Cut	Fill
0	0	0	0
77	0	83	0
217	2	117	1
361	57	78	30
267	328	66	147
237	1085	62	439
257	2344	77	827

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

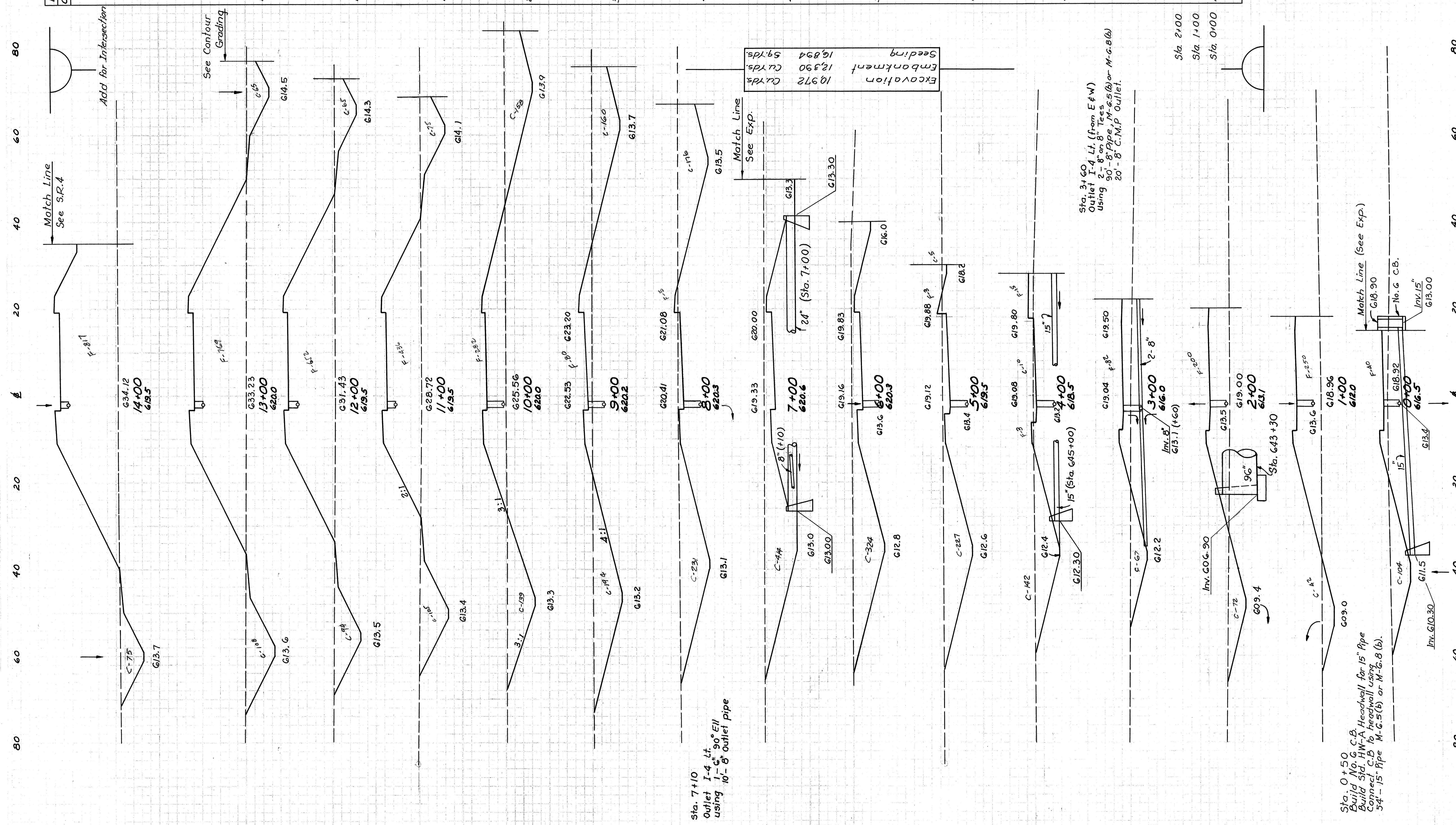
101
161

ERI. 6-7.31



S.R.4 Sta. 58+00 to Sta. 65+00

SMB 1/258
HAG 5-60 RNE 9-60
HAG 5-60 EDS 5-60
JES



End Area	Cu. Yds.	Cut	Fill
	0	519	
75	817		
	459	2337	
173	769		
	615	2631	
159	652		
180	436		
	628	2015	
297	282		
	883	1330	
	1206	670	
354	80		
	1409	157	
407	5		
	1520	9	
414	0		
	1367	0	
324	0		
	1030	6	
232	3		
	711	39	
152	18		
67	82		
	257	522	
72	200		
	211	833	
42	250		
	270	537	
104	40		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

ERI. 6-7.31

102
161

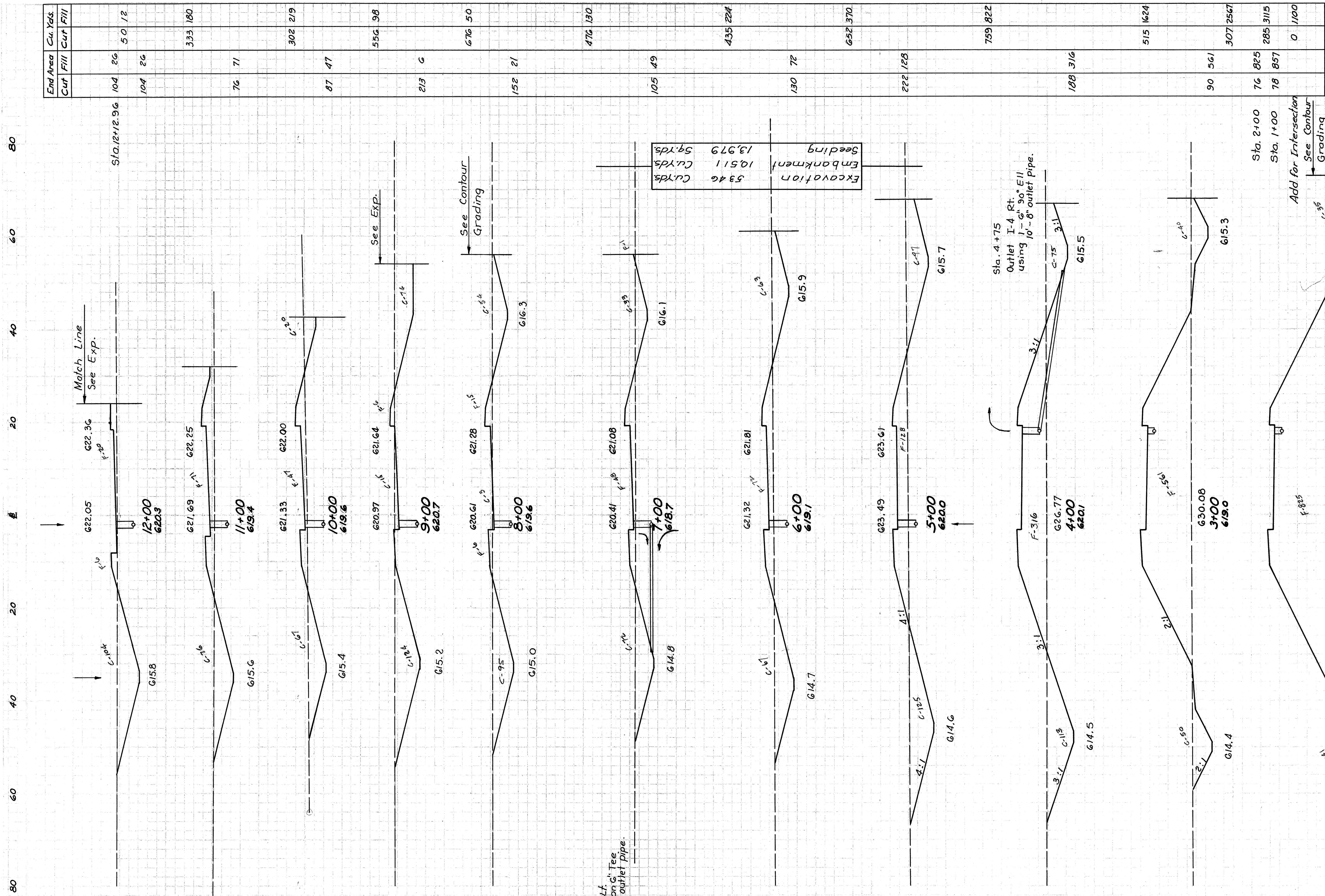
Sta. 7+10
Outlet I-4 Lt.
using 10" 90° Ell
10-8" outlet pipe

Sta. 3+60
Outlet I-4 Lt. (from E & W)
using 2-8" on 8" Tees
20'-8" C.M.P. or M-G.8(b)

Sta. 2+00
Sta. 1+00
Sta. 0+00

Sta. 0+50
Build No. 6 C.B.
Build Std. HW-A
Connect. C.B. to headwall using
54-15" Pipe M-G.5(b) or M-G.8(b).

S.M.B. 1958
 H.A.G. E.N.E. 5-60
 H.A.G. E.D.S. 5-60
 E.T.D. 5-60



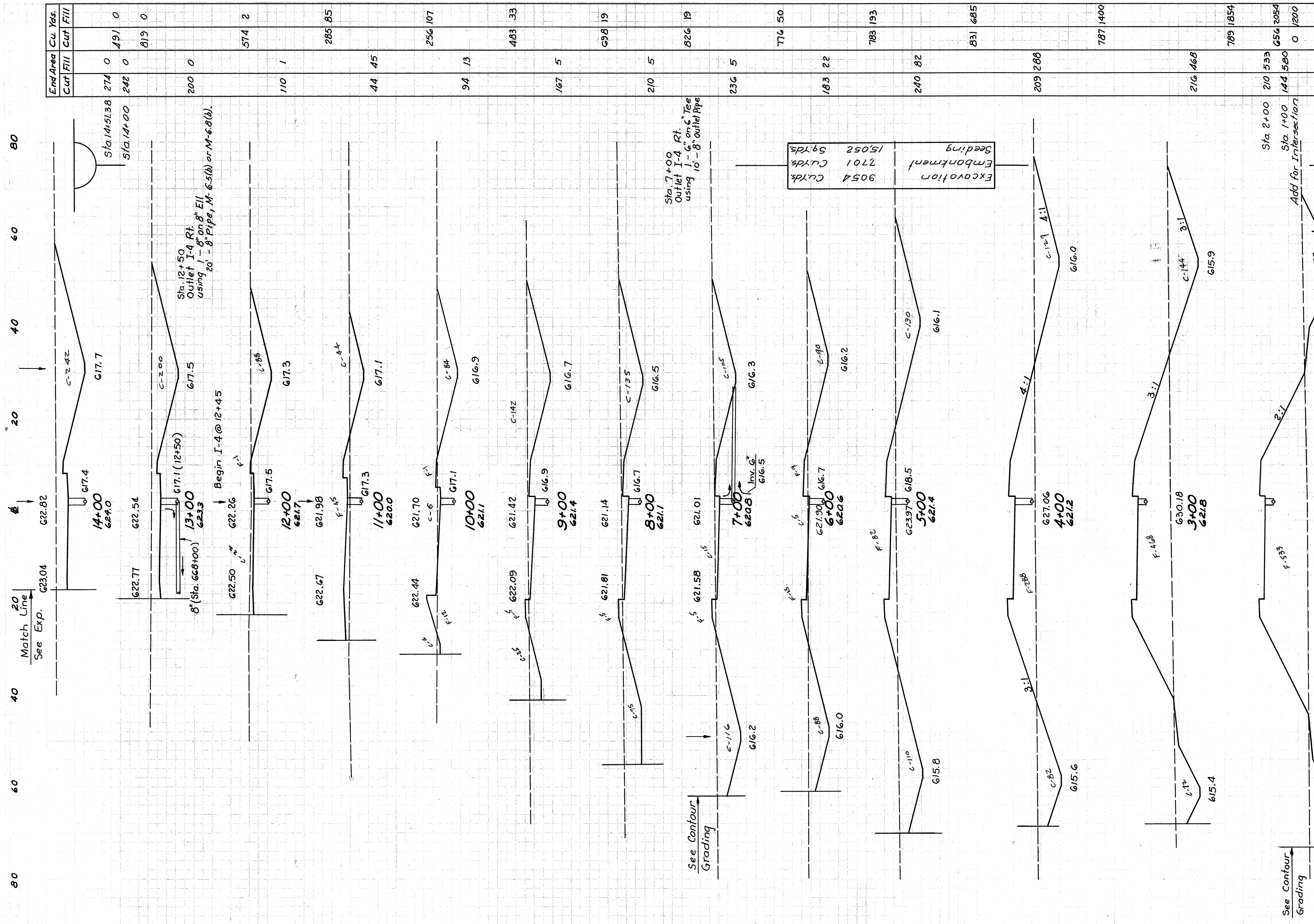
End Area	CU. Yds.	Sta.
104	26	12+00
104	26	12+00
76	71	11+00
87	47	10+00
213	6	9+00
152	21	8+00
105	49	7+00
130	72	6+00
222	128	5+00
188	316	4+00
90	561	3+00
76	825	2+00
78	857	1+00
0	1100	0+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

ERI. 6-7.31

103
161

HAG SIM.B 1958
 RVE 5-60
 EDS 2-60
 H.A.C 3-60
 E.J.D 3-60



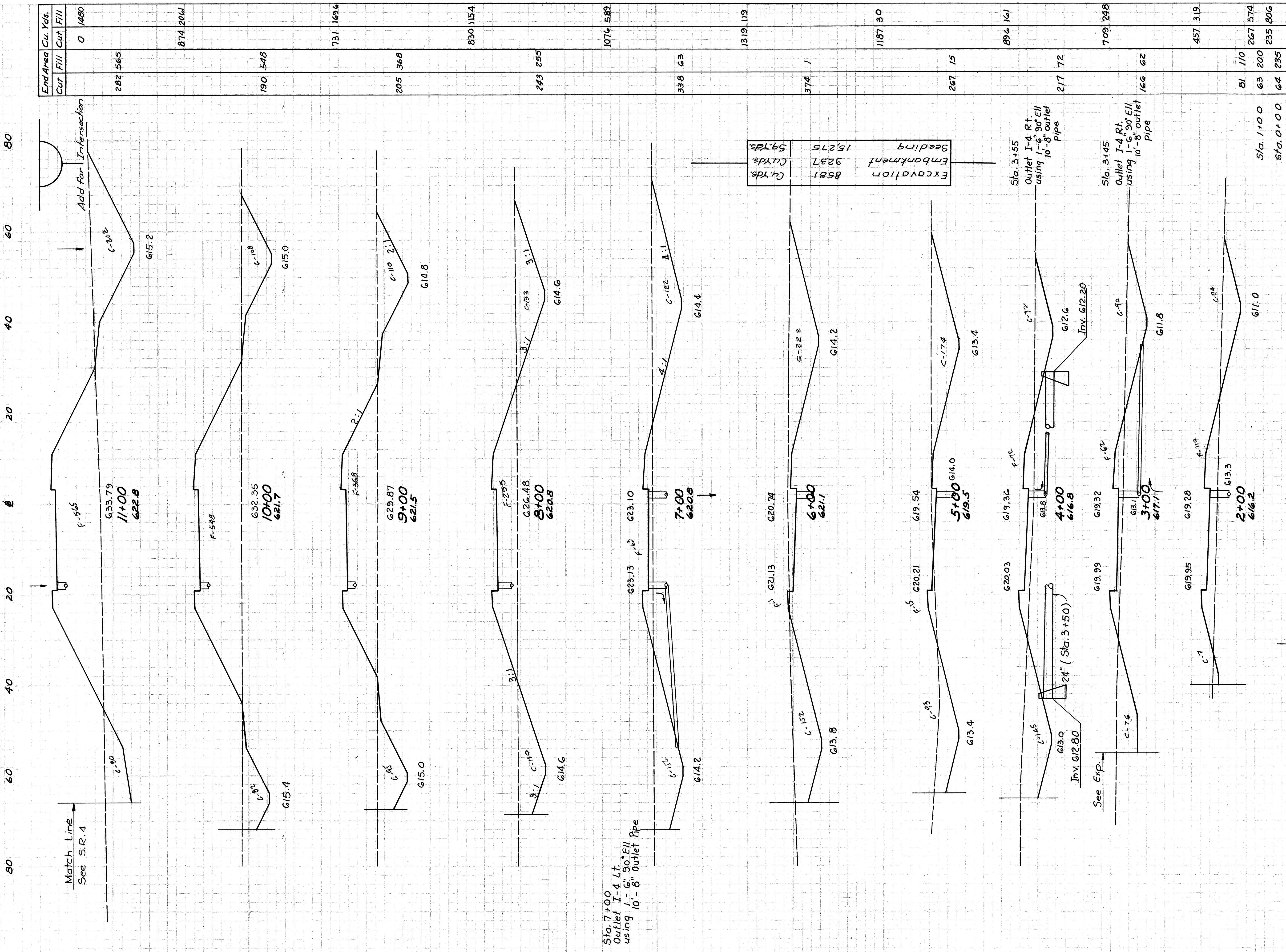
End Area	Cu. Yds.	Cut	Fill
274	0	491	0
242	0	819	0
200	0		
110	1		
44	45		
94	13		
210	5		
236	5		
183	22		
240	82		
209	288		
787	1400		
216	468		
789	1854		
210	533		
144	580		
656	2054		
0	1200		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

ERI. 6-7.31



1958
 S.M.B. R.N.E.
 H.A.C. R.N.E. E.O.S.
 H.A.C. S.G.O.
 J.C.S. S.G.O.



ERI. G-7.31

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

105
161

1958
 J.B. DNE
 5-60
 EDS
 5-60
 HAG

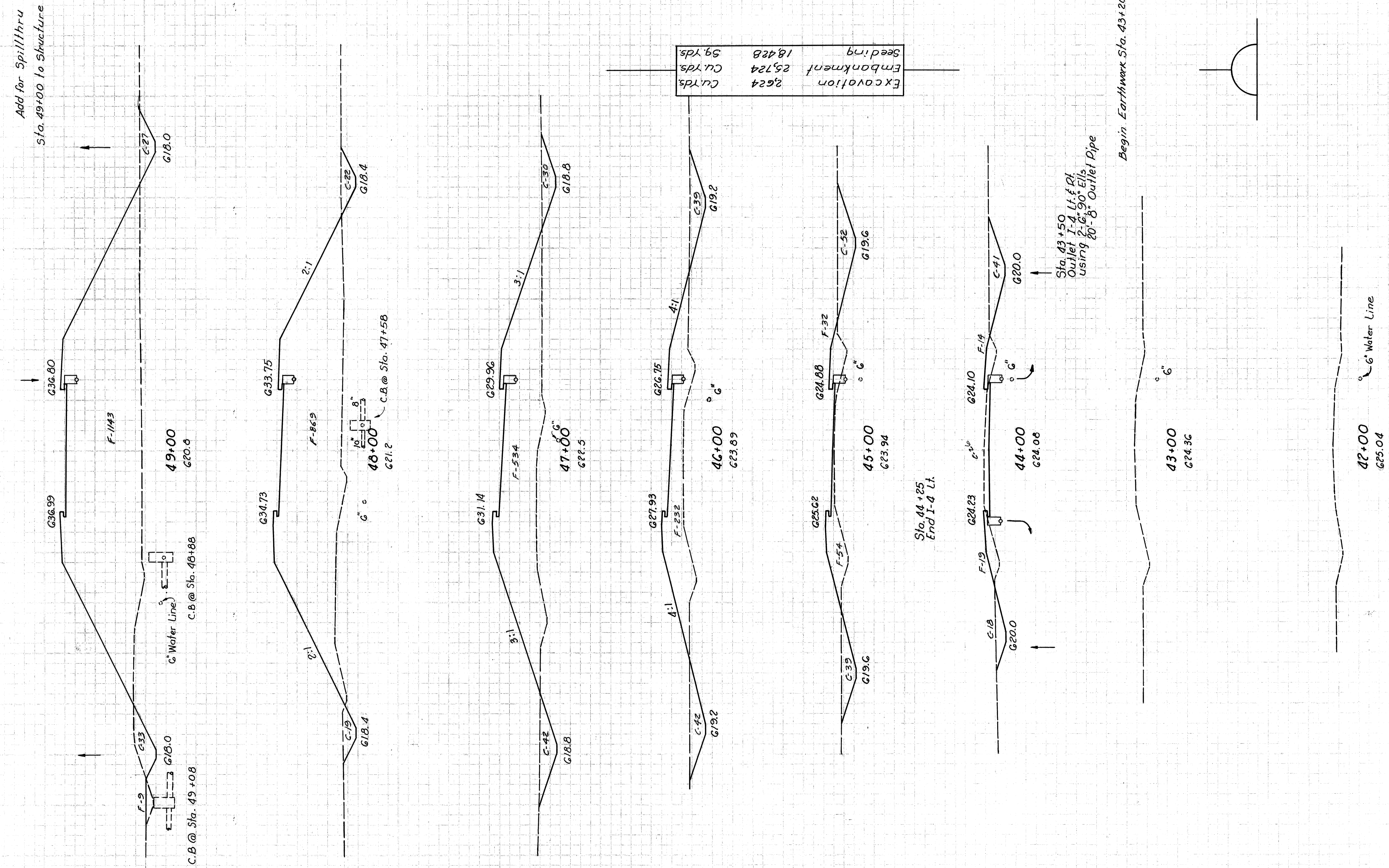
80 60 40 20 0 20 40 60 80

End Area	Cu Yds.	Cut	Fill	Cut	Fill
	0	540			
			102	3120	
60	1152				
					187
41	869				
					209
72	534				
					283
81	232				
					319
91	86				
					326
85	33				
					156
					49
					0

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

106
161

ERI. G-7.31



1958
 SIMB PNE
 HAZ 5-60 EDS
 570 5-60
 HAZ

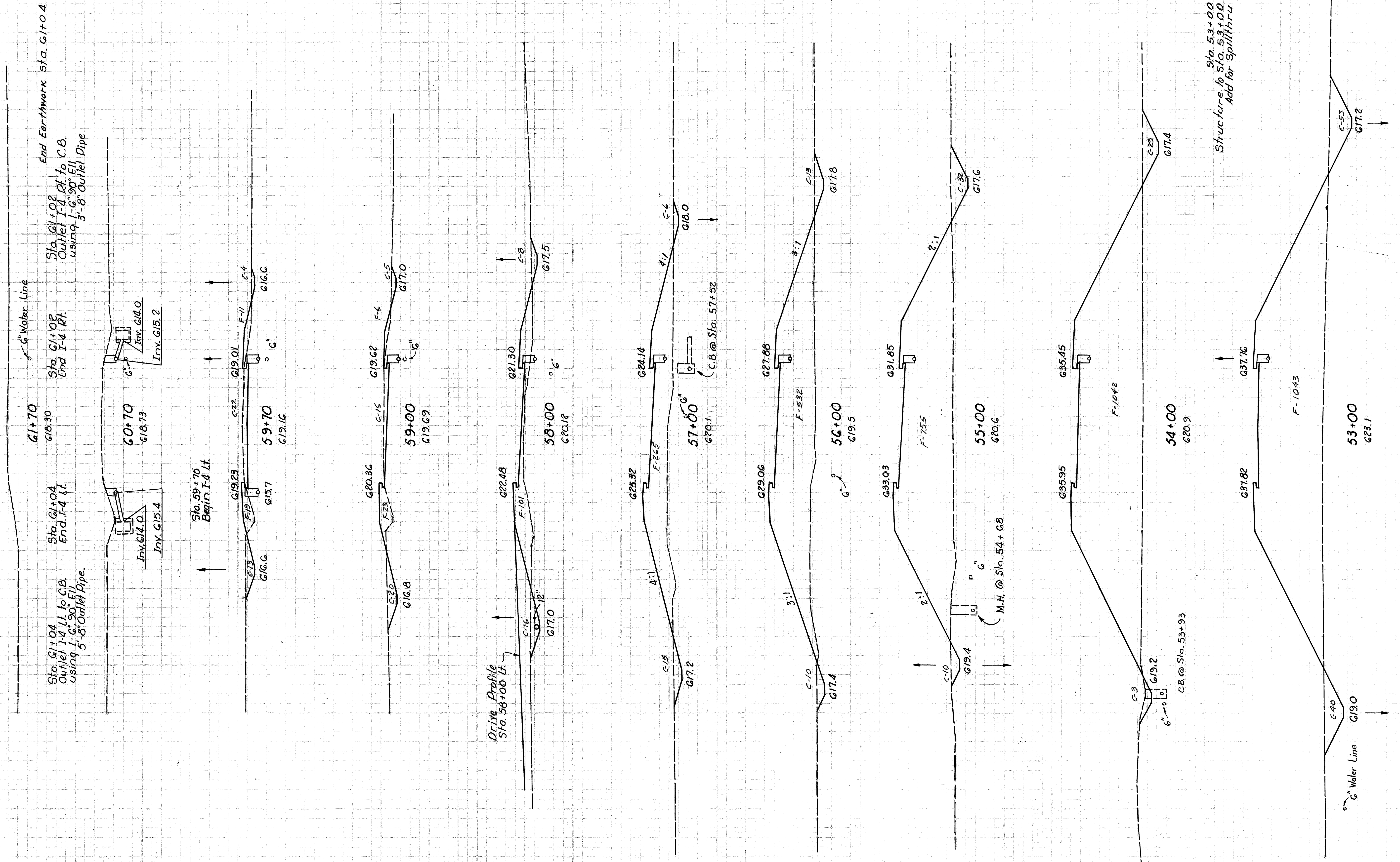
80 60 40 20 0 20 40 60 80

End Area	Cu. Yds.	Cut	Fill
		0	0
		39	30
		104	76
		41	29
		120	241
		24	101
		83	678
		21	265
		81	1476
		23	532
		120	2383
		42	755
		148	3328
		38	1042
		93	1043
		243	3861
		83	928
		0	475

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

107
 161

ERI. G-7.31



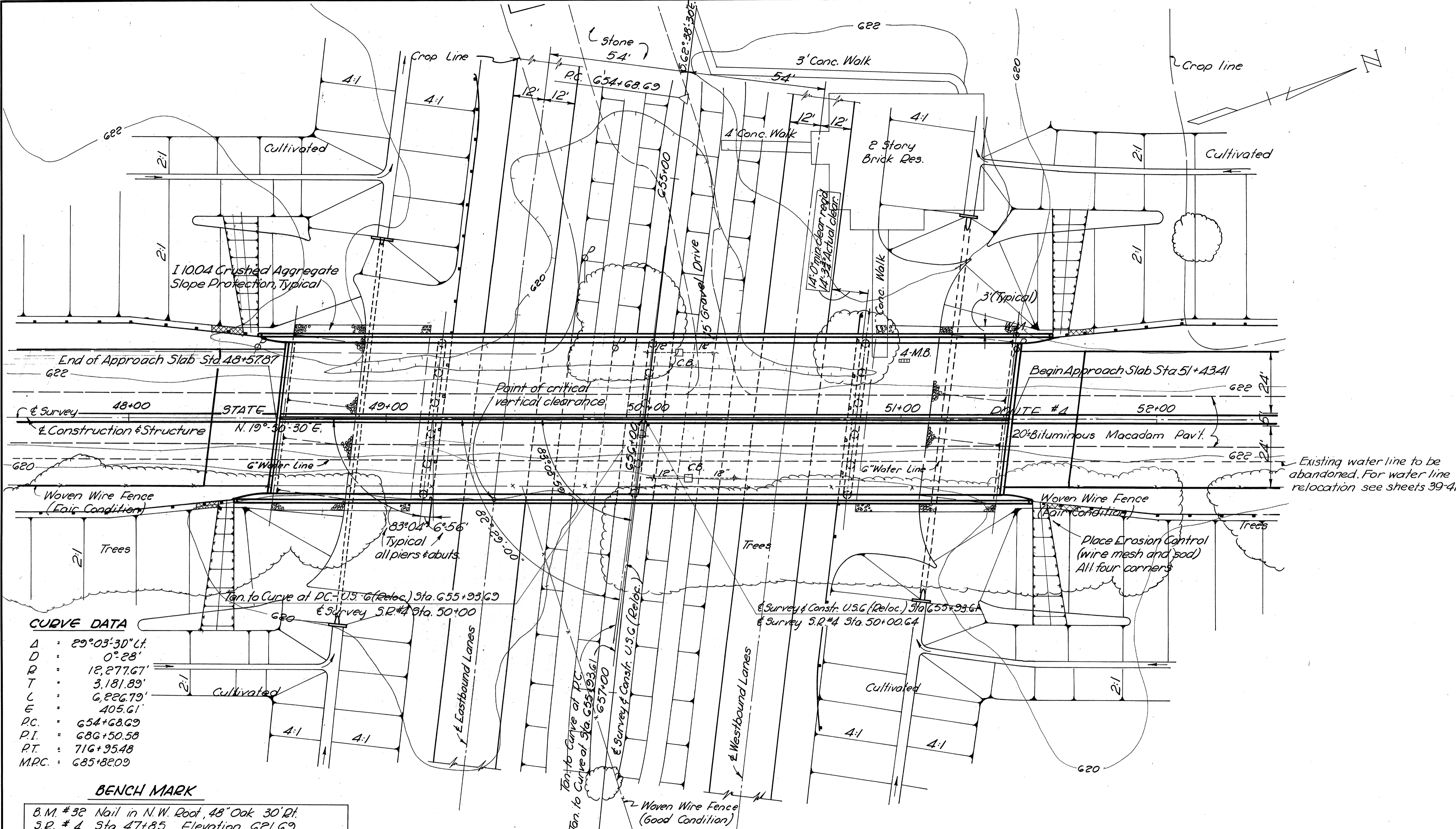
Campbell St. Sta. 53+00 to G1+70

80 60 40 20 0 20 40 60 80

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
E	OHIO	F-FG-10A2(6)	

108
161

ERI 6-7.31
7.2 Miles West of Huron



Design Year Traffic
ADT (1979) = 12000

FOUNDATION SOUNDINGS:
Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division Office, but the State does not guarantee the accuracy thereof.

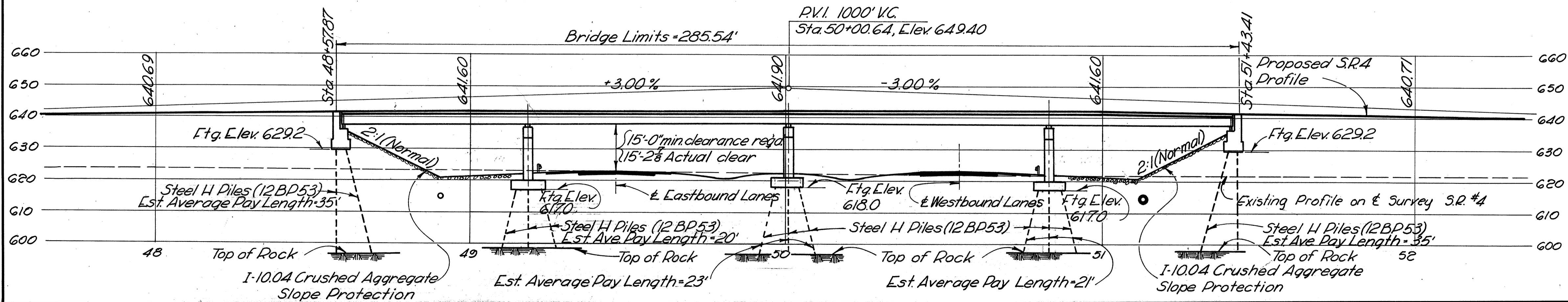
CURVE DATA

Δ	29°03'30" Lt.
D	0°28'
R	12,277.67'
T	3,181.89'
L	6,226.79'
E	405.61'
P.C.	654+68.69
P.I.	686+50.58
P.T.	716+95.48
M.P.C.	685+82.09

BENCH MARK

B.M. #32 Nail in N.W. Root, 48' Oak 30'Dt.
S.P. #4, Sta. 47+85 Elevation 621.69

PROPOSED STRUCTURE
Type: Continuous steel beam with reinf. conc. deck, reinf. conc. pier bents and stub abutments.
Span: 58'-0", 82'-6", 82'-6", 58'-0" % Brgs.
Roadway: 59'-0" of 2'-3" safety curbs including 3'-0" raised conc. median.
Load Frequency: CF-400 (57)
Skew: 6°-56' Left Forward
Wearing Surface: 1" Monolithic Concrete
Approach Slabs: AS-1-54 25' Long
Alignment: Tangent



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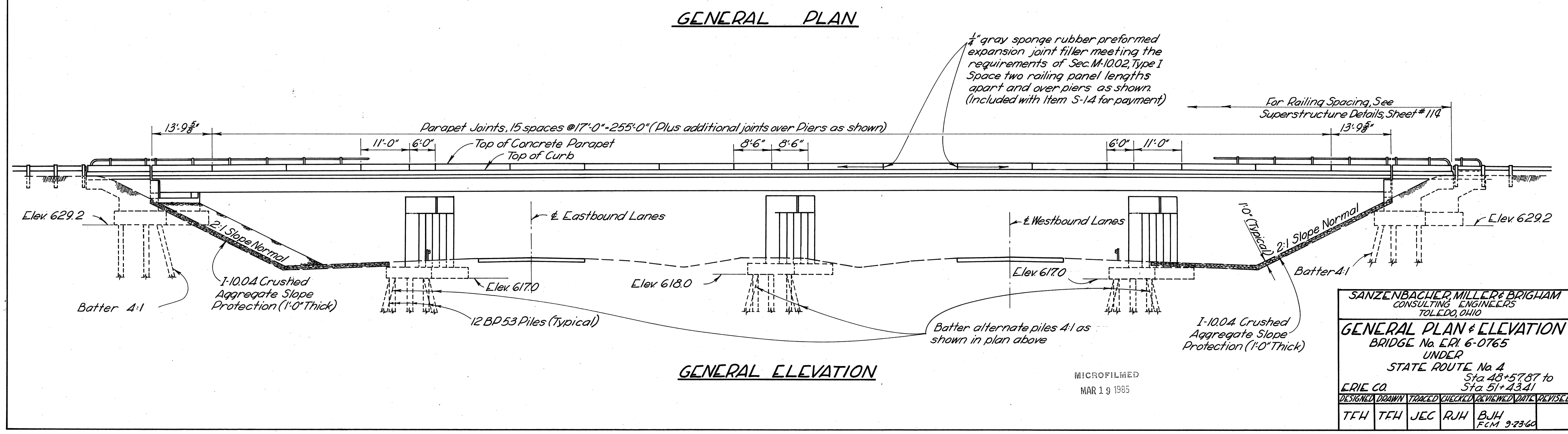
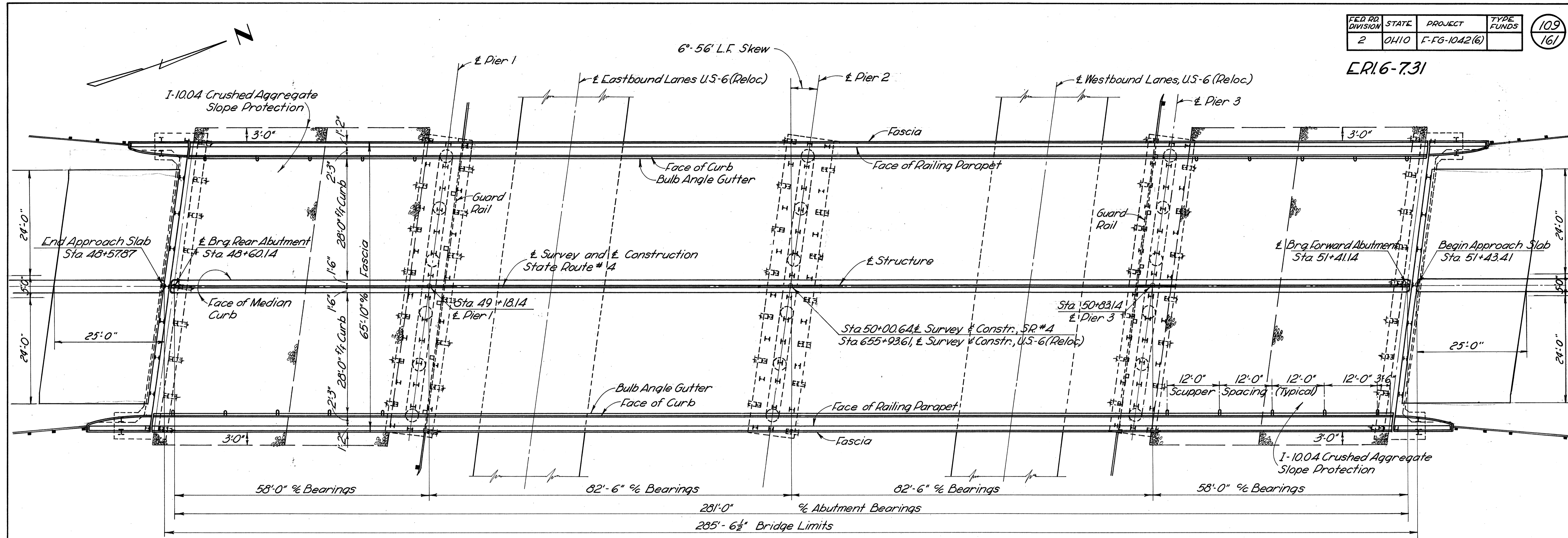
SITE PLAN ERI-4-0841
BRIDGE NO. ERI 6-0765
UNDER STATE ROUTE NO. 4

ERIE COUNTY STA. 48+57.87 to STA. 51+43.41
SCALE: 1"=20'

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
S.M.B.	R.A.R.-B.B.	N.D., T.D.	N.D., T.D.	B.J.H.N.D.	F.C.M. 2/25/64

MICROFILMED
MAR 19 1965

ERI 6-731



SANZENBACHER, MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

GENERAL PLAN & ELEVATION
BRIDGE No. ERI 6-0765
UNDER
STATE ROUTE No. 4
Sta. 48+57.87 to
Sta. 51+43.41

ERIC CO.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TFH	TFH	JEC	RJH	BJH	FCM	9-23-60

MICROFILMED
MAR 19 1985

ERI. 6-731

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shape	Bending Diagrams	Mark	No.	Length	Weight	Shape	
ABUTMENTS					ABUTMENTS						
R901	12	8'-0"	326	B		PIERS (cont'd)					
R902	12	9'-0"	367	B		P1101	96	16'-4"	8331	5	
R701	24	12'-10"	630	B		P1102	48	15'-6"	3953	5	
R702	2	17'-4"	71	B		P1103	12	29'-10"	1902	5	
R703	4	18'-4"	150	B		P1104	12	30'-4"	1934	5	
R704	6	12'-0"	147	B		P1105	12	30'-6"	1945	5	
R705	2	17'-4"	71	B		P1106	24	23'-6"	2997	5	
R706	4	18'-6"	151	B		P1107	12	32'-8"	2083	B	
R707	6	12'-0"	147	B		P1108	12	33'-4"	2125	B	
R601	120	15'-2"	2734	B		P1001	32	16'-6"	2272	5	
R602	12	15'-5"	278	B		P1002	16	15'-7"	1073	5	
R501	194	6'-2"	1248	B		P801	12	8'-7"	275	B	
R502	96	6'-8"	667	5		P501	324	7'-9"	2619	B	
R503	96	6'-11"	693	B		P502	12	29'-6"	369	5	
R504	104	6'-3"	678	B		SUPERSTRUCTURE					
R505	24	35'-9"	895	5	S701	752	32'-7"	50089	5		
R506	104	17'-2"	1862	5	S601	752	32'-7"	36,803	5		
R507	4	5'-9"	24	5	S602	928	37'-5"	52,153	5		
R508	88	7'-3"	665	B	S603	138	36'-0"	7,462	5		
R509	32	3'-8"	122	5	S501	16	13'-5"	*	5		
R510	24	2'-7"	65	5	S502	16	10'-8"	*	5		
R511	8	13'-1"	109	5	S503	16	5'-8"	*	5		
R512	8	11'-3"	94	5	S504	16	8'-2"	*	5		
R513	8	9'-0"	75	5	S505	96	16'-8"	*	5		
R514	24	12'-0"	300	5	S506	400	4'-6"	1877	B		
R515	16	7'-2"	120	5	S507	756	2'-5"	1906	B		
R516	4	13'-3"	55	5	S508	378	3'-10"	1511	B		
R517	4	14'-0"	58	5	S509	378	2'-11"	1150	B		
R518	4	13'-0"	55	5	REPLACEMENT BARS						
R519	12	4'-0"	50	5	RE1101	2	7'-7"	5			
R520	8	15'-2"	127	5	RE1001	1	7'-3"	5			
R521	40	6'-0"	250	B	RE901	1	6'-10"	5			
R522	8	12'-10"	107	5	RE801	1	6'-6"	5			
R523	4	12'-9"	53	5	RE701	3	6'-3"	5			
R524	8	12'-8"	*	5	RE601	6	5'-11"	5			
R525	24	6'-0"	150	B	RE501	2	5'-7"	5			
R526	8	4'-6"	38	B	RE401	1	5'-3"	5			
R527	8	2'-8"	22	B	SPIRAL REINFORCING LIST						
R528	8	12'-11"	*	5	SP401	12	32"	13'-2 1/2"	4 1/2"	38	2904
R529	8	11'-5"	95	5	SP402	6	32"	12'-8"	4 1/2"	36	1006
R530	24	6'-10"	171	B	PIERS						
R531	40	1'-7"	66	B	F1101	144	7'-0"	5356	B		
PIERS					PIERS						
F1101	144	7'-0"	5356	B	F1001	48	6'-7"	1360	B		
F1001	48	6'-7"	1360	B	SUPERSTRUCTURE						
F901	72	36'-6"	8935	B	F801	207	12'-4"	6817	B		
F902	48	18'-8"	3046	B	SPIRAL REINFORCING LIST						
F903	24	36'-6"	3142	5	SP401	12	32"	13'-2 1/2"	4 1/2"	38	2904
F801	207	12'-4"	6817	B	SP402	6	32"	12'-8"	4 1/2"	36	1006
F601	138	10'-2"	2107	5	REPLACEMENT BARS						

*Included with Item 5-14 for payment.

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Abutments			Piers			Super.	General
				Rear	Forward	1	2	3			
E-2	906	Cu.Yds.	Unclassified excavation	210	210	162	162	162			
5-1	563	Cu.Yds.	Class "C" concrete, superstructure						563		
5-1	137	Cu.Yds.	Class "C" concrete, pier caps & columns			46	45	46			
5-1	250	Cu.Yds.	Class "E" concrete, abutments	125	125						
5-1	198	Cu.Yds.	Class "E" concrete, pier footings			66	66	66			
5-3	18	Lin.Ft.	Premolded Sealing strip	9	9						
5-4	233975	Lbs.	Reinforcing steel	7020	7019	22,444	22,103	22,444	152,945		
5-7	623,500	Lbs.	Structural steel						623,500		
5-8	623,500	Lbs.	Field painting of structural steel, as per plan						623,500		
5-14	618	Lin.Ft.	Railing (aluminum rail and supports, concrete parapet)						618		
5-16	Lump	Sum	First test pile							Lump	
5-18	4,230	Lin.Ft.	Steel piles, 12BP53	770	770	840	970	880			
5-29	20	Each	Scuppers						20		
5-29	48	Cu.Yds.	Porous backfill	24	24						
I-10	890	Sq.Yds.	Crushed aggregate slope protection							890	

GENERAL NOTES

REFERENCE shall be made to Standard Drawings A5-1-54 "Reinforced Concrete Approach Slabs," revised 12-1-54; CSB-2-56 "Continuous Steel Beam Bridges" (Sheets 2 of 6), revised 2-2-59; RB-1-55 "Rockers and Bolsters," revised 2-2-59, and AR-1-57, Aluminum Railing with Concrete Parapet," revised 2-2-59 and to Supplemental Specifications S-101 dated 12-2-59.

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 parallel to transverse reinforcing steel and which are located near the center of any span.

WELDING of structural steel shall be Class 'A' except as otherwise shown. Welds shown as field welds may, at the option of the contractor, be made in the shop. Class 'B' welds are shown thus

EXCAVATION AND BACKFILL: Excavation quantity includes the removal of fill material between the surface of the proposed embankment and the bottom of the footings. Backfill behind the abutments shall be compacted in accordance with the requirements for embankment compaction.

STRUCTURAL STEEL: See Proposal regarding A-373 steel.

MACHINE FINISH: The top of the bridge deck slab shall be machine finished in accordance with the Proposal Note "Machine Finishing of Bridge Deck Slabs."

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.

PILES shall be driven with a hammer of not less than 11,000 ft.-lbs. 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 contact shall be considered as attained when the capacity according to the formula in Sec. 5-13.05 is not less than the following value for a pile hammer of the indicated energy rating:
 For the abutment piles:
 58 tons per pile using a 11,000 ft.-lb. hammer
 50 tons per pile using a 15,000 ft.-lb. or greater hammer.
 For the pier piles:
 70 tons per pile using an 11,000 ft.-lb. hammer
 65 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 load is 36 tons per pile for the abutment piles and 30 tons per pile for the pier piles.

BAR SIZE is indicated in the bar mark. The first digit where three digits are used and the first two digits where four are used, indicate the bar size number. For example, a P501 is a No. 5 size bar, and a P1101 is a No. 11 size.

REPLACEMENT BARS: If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec. 5-4.02 need not be furnished, and replacement bars will not be required.

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of footing to the bottom of the pier cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 5-4. 1 1/2 closed coils shall be provided at the ends of each spiral unit.

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

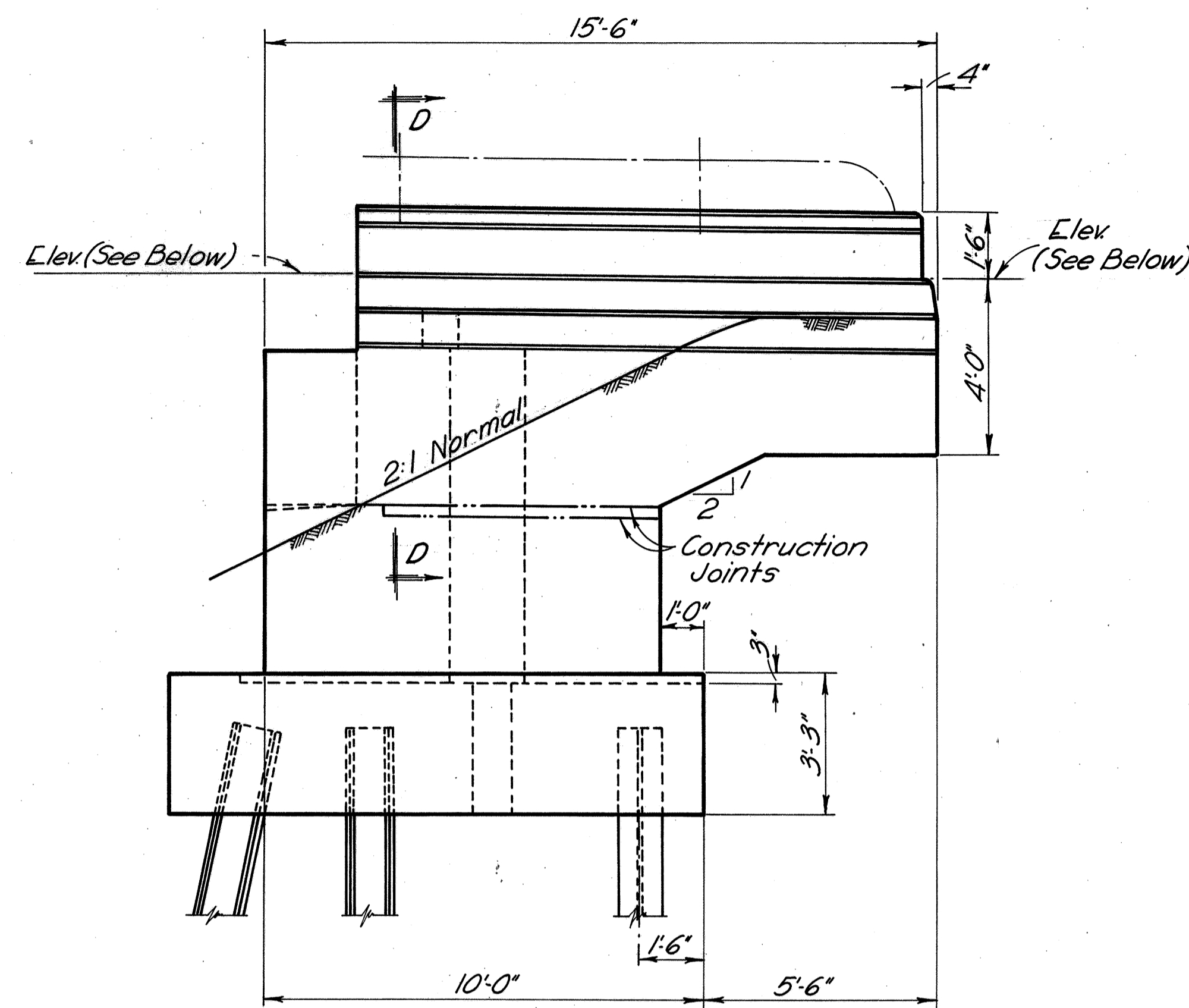
SANZENBACHER, MILLER & BRIGHAM
 CONSULTING ENGINEERS
 TOLEDO OHIO

GENERAL NOTES, REINFORCING STEEL & ESTIMATED QUANTITIES
 BRIDGE NO. ERI. 6-0765
 UNDER STATE ROUTE NO. 4
 Sta. 48+57.87 to
 Sta. 51+43.41

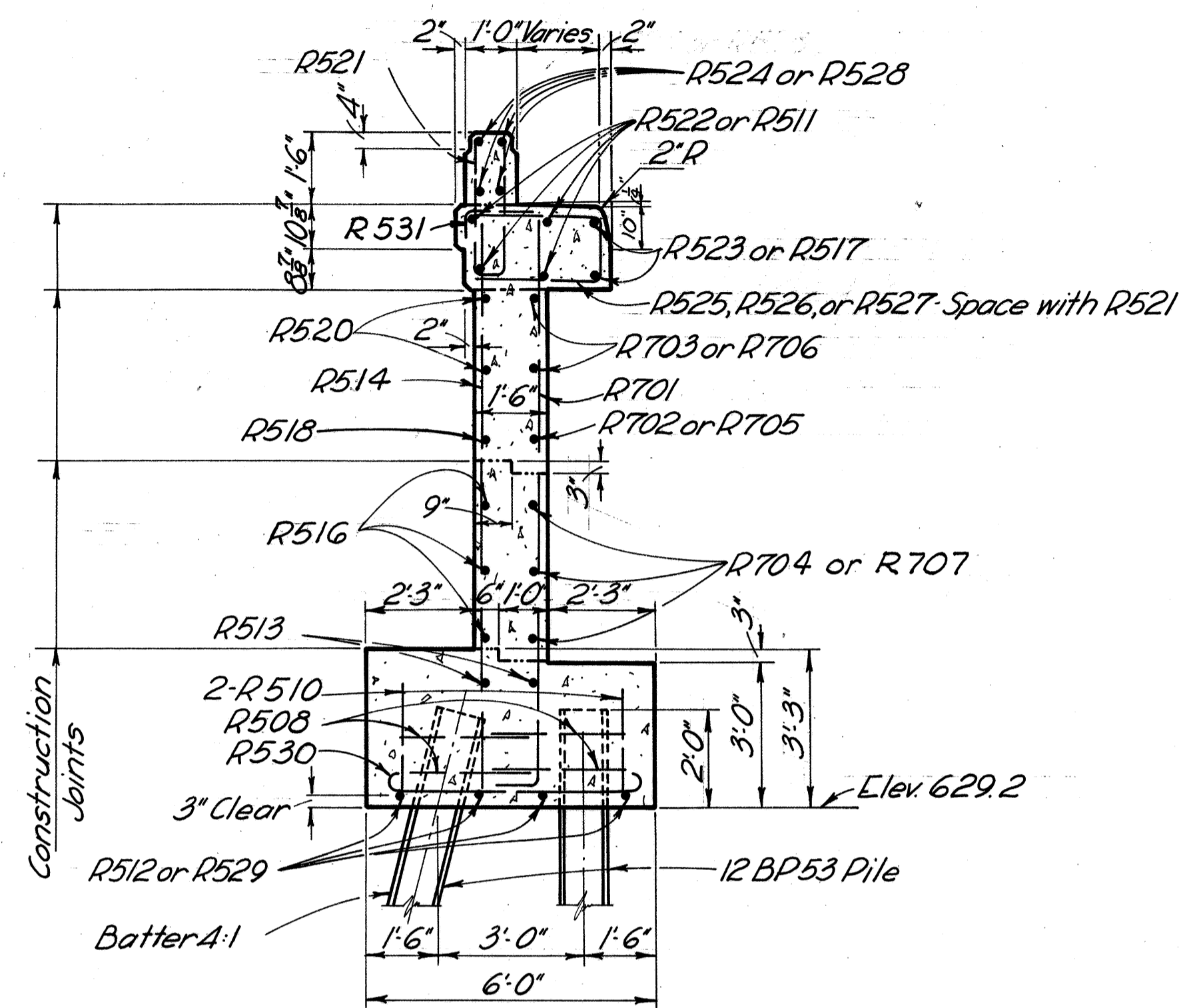
ERIE COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TFH	TFH	TFH	RJH	BJH		
					FCM 9-23-60	

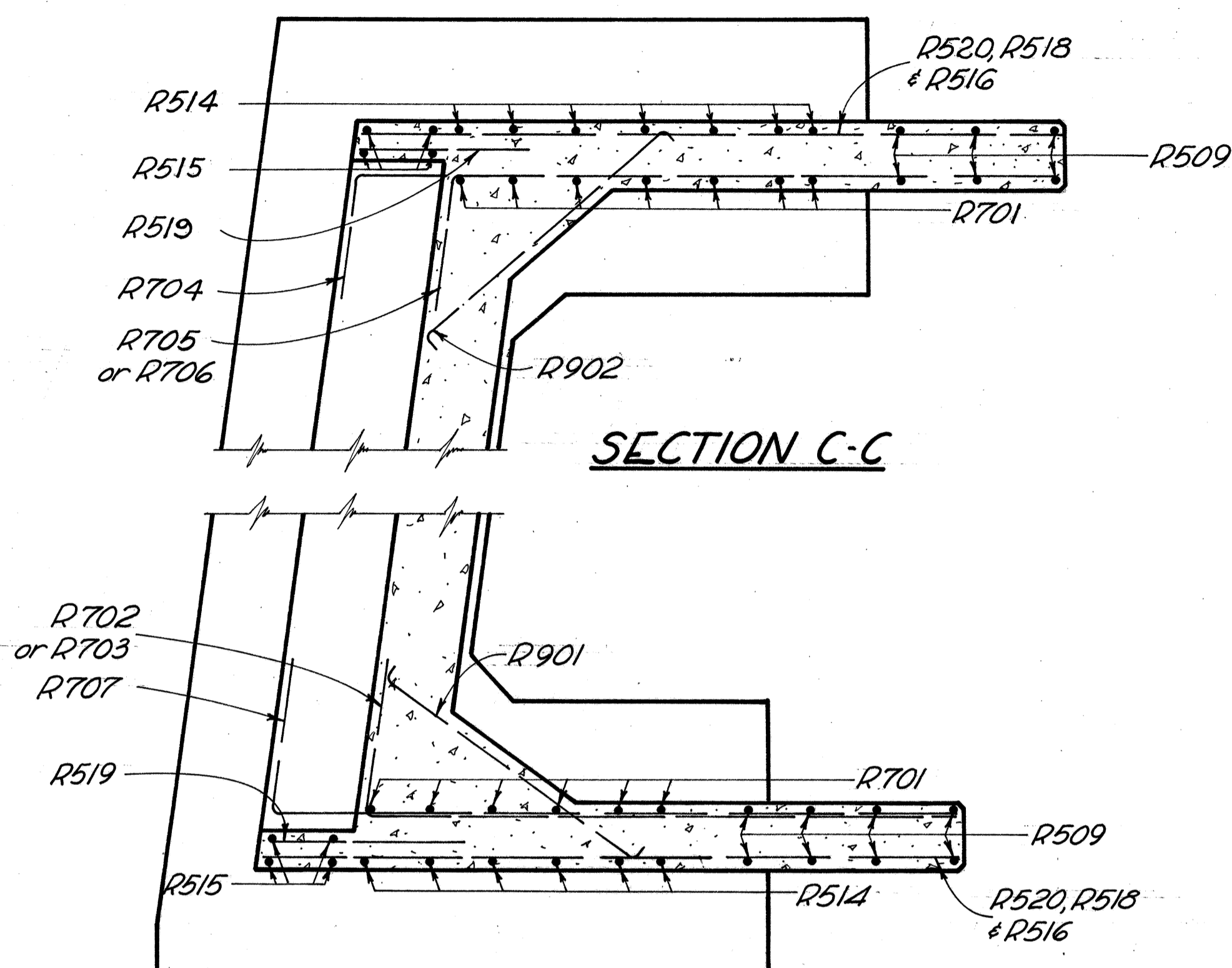
ERI. 6-7.31



WINGWALL ELEVATION (CONSTRUCTION DETAILS)

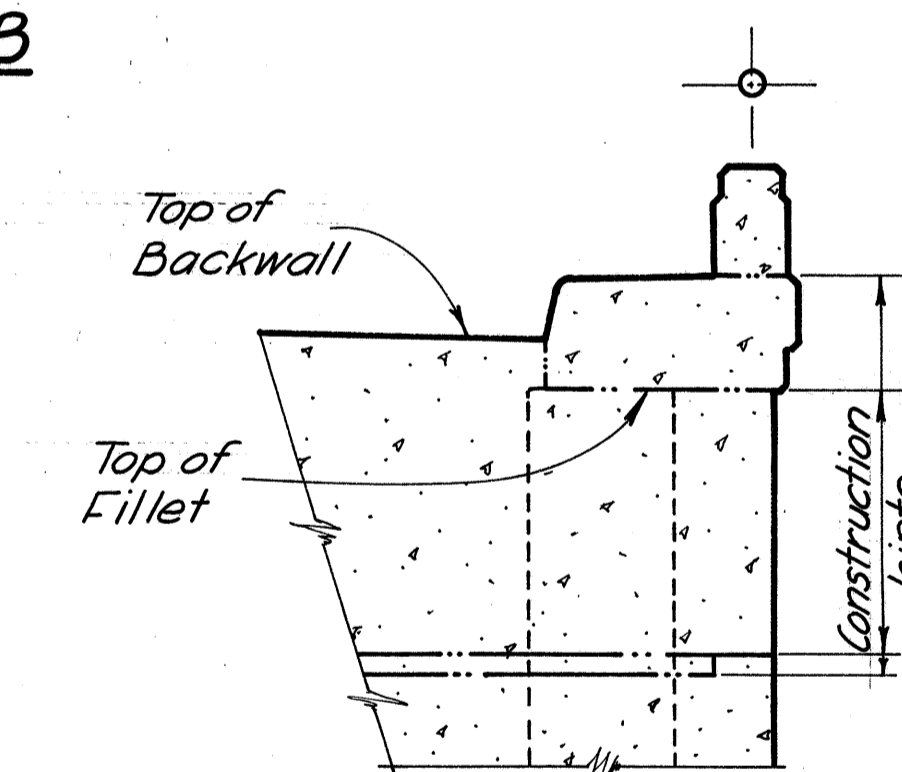


SECTION A-A

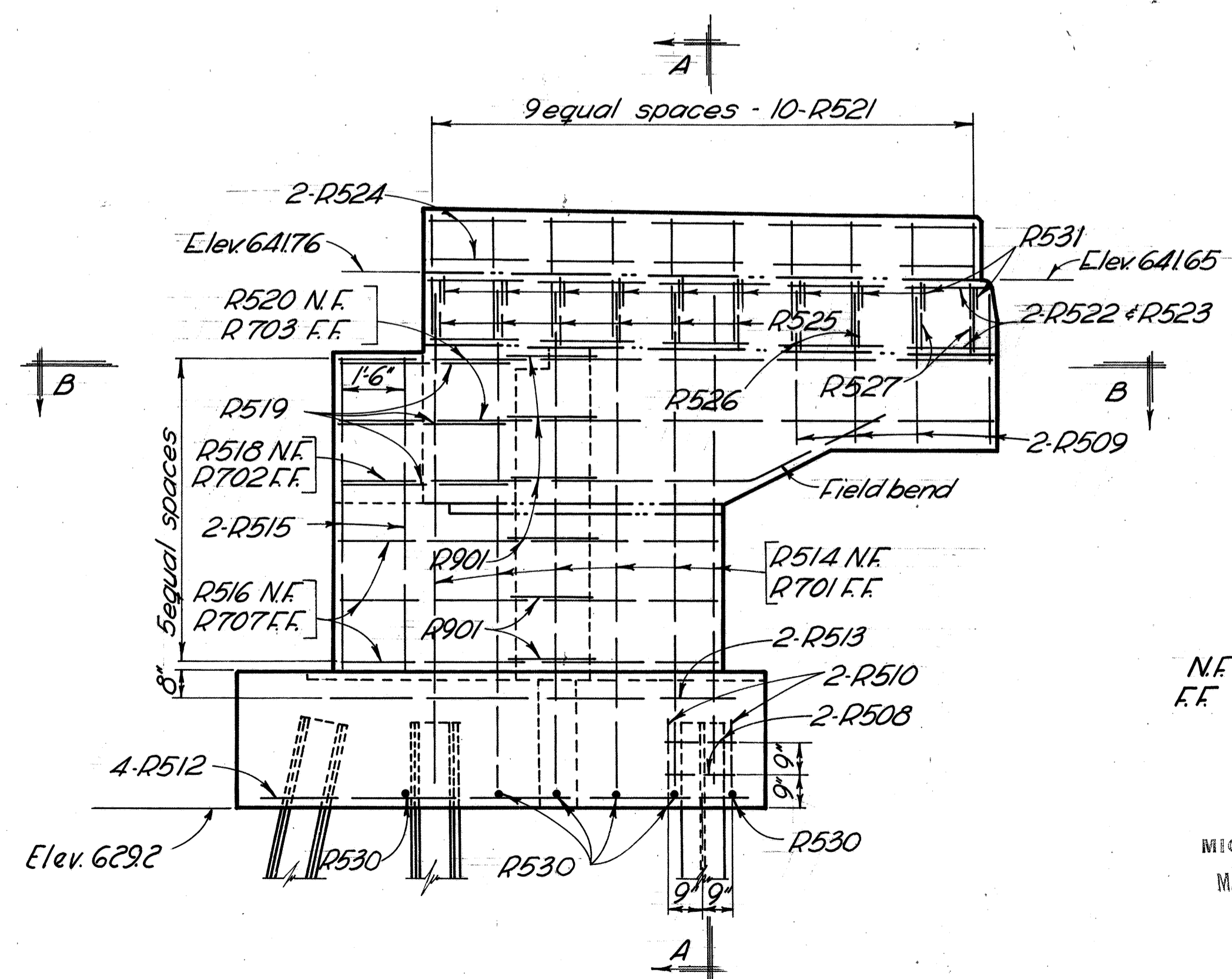


SECTION C-C

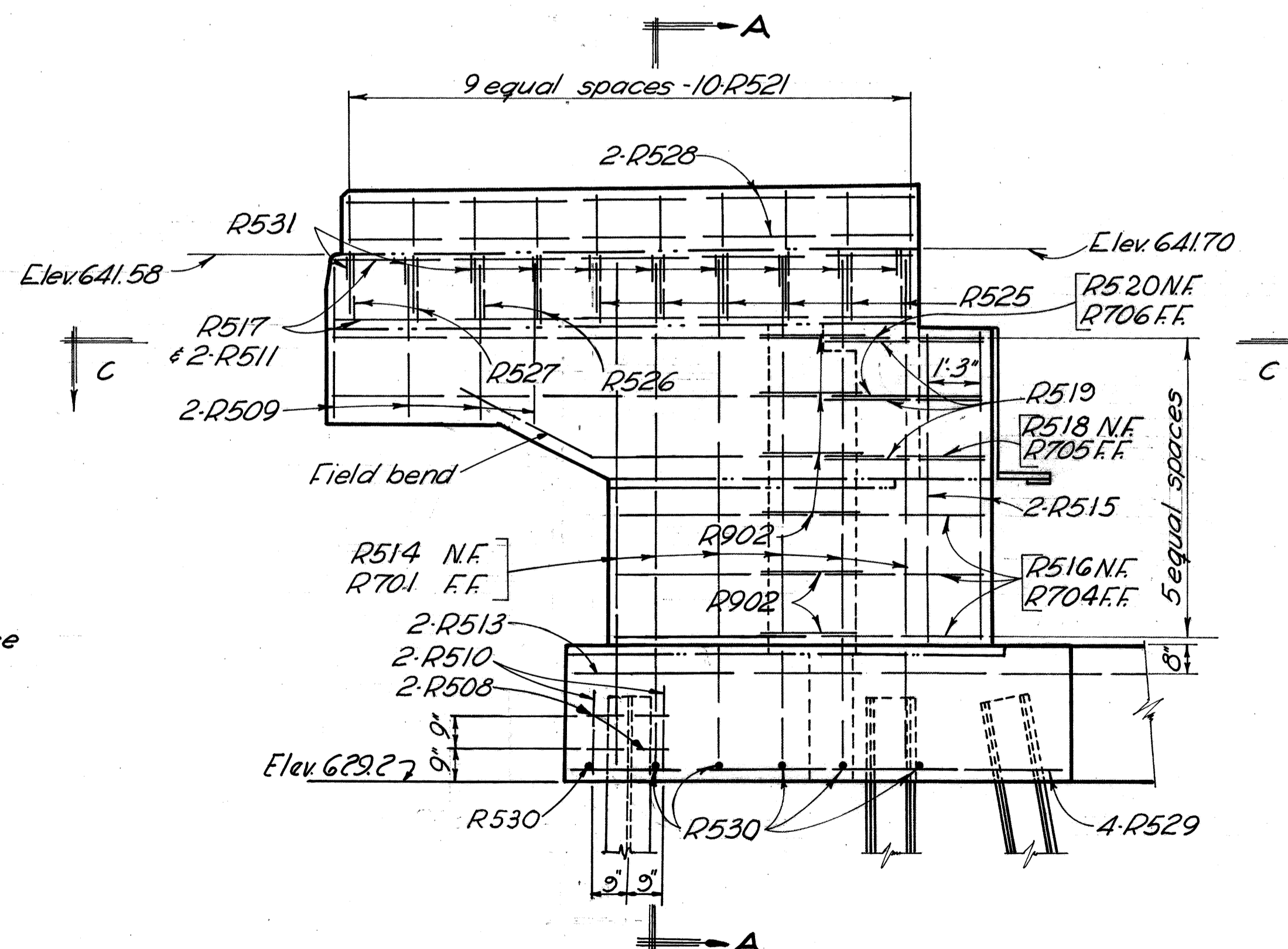
SECTION B-B



SECTION D-D



WINGWALL ELEVATION (REINFORCING BAR DETAILS)
VIEW B-B (See Sheet III)



WINGWALL ELEVATION (REINFORCING BAR DETAILS)
VIEW C-C (See Sheet III)

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

MICROFILMED
MAR 19 1985

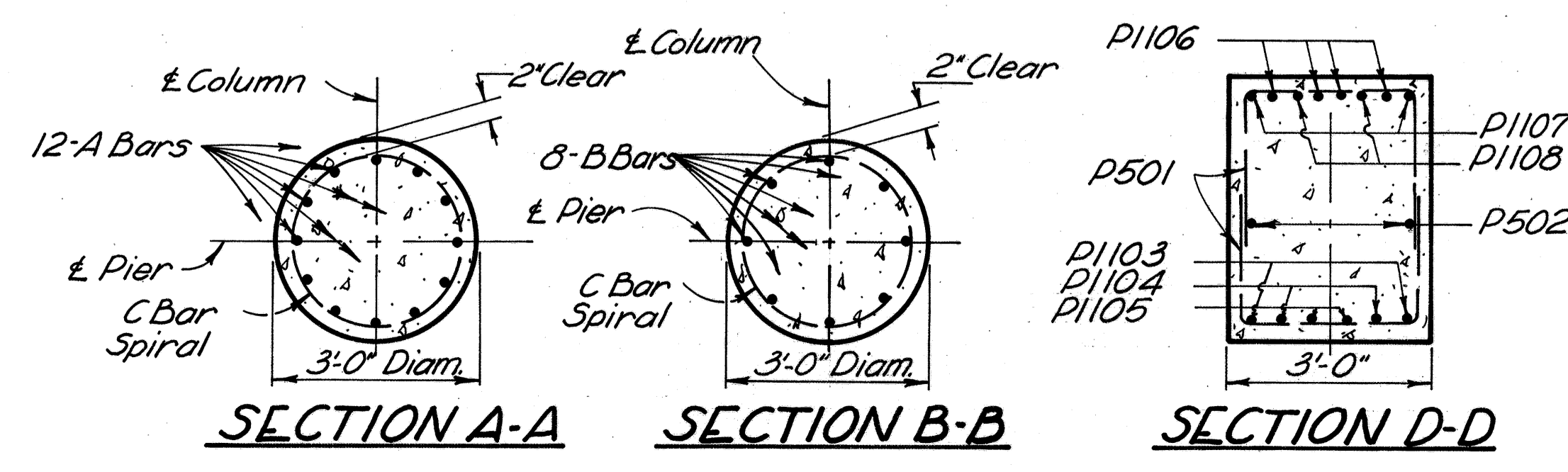
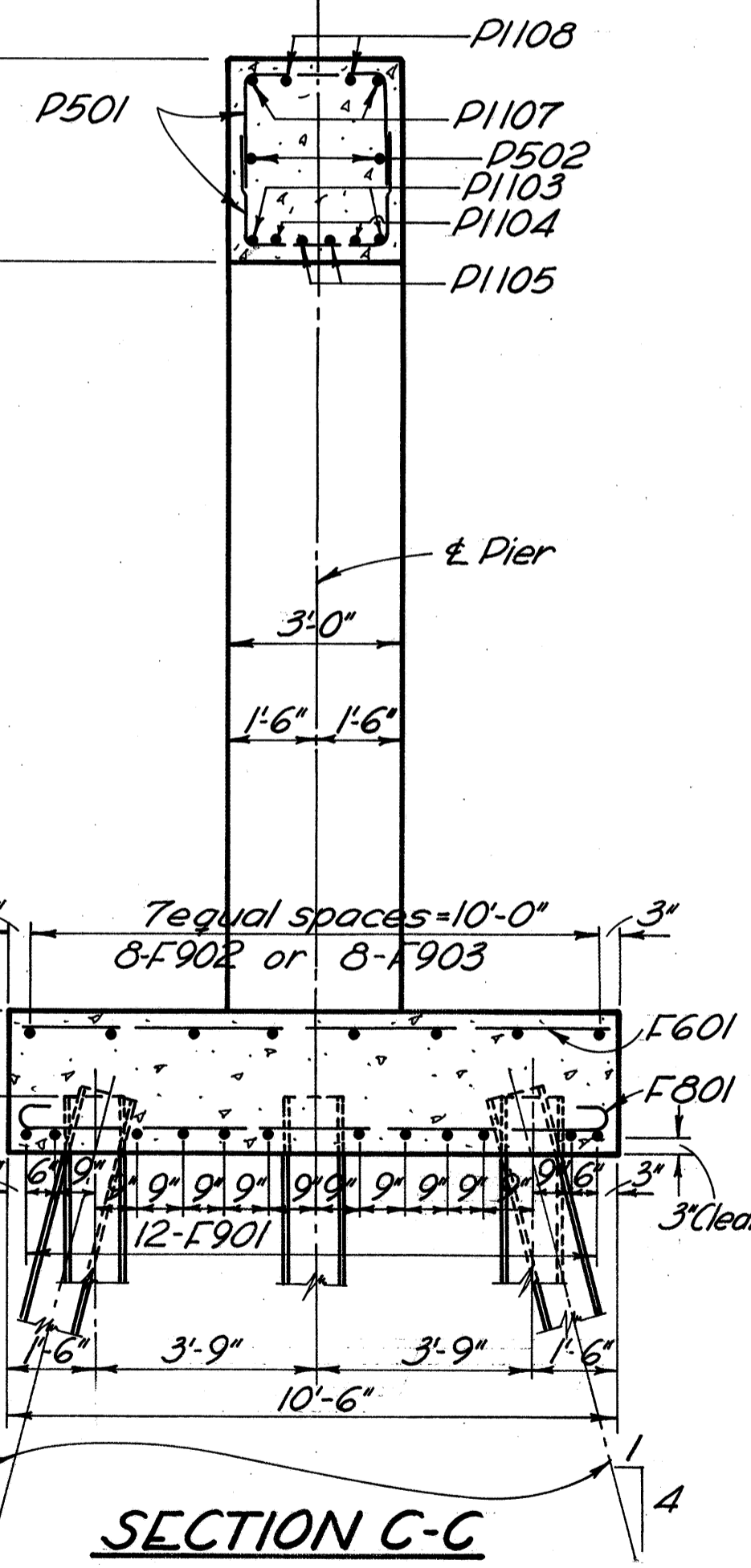
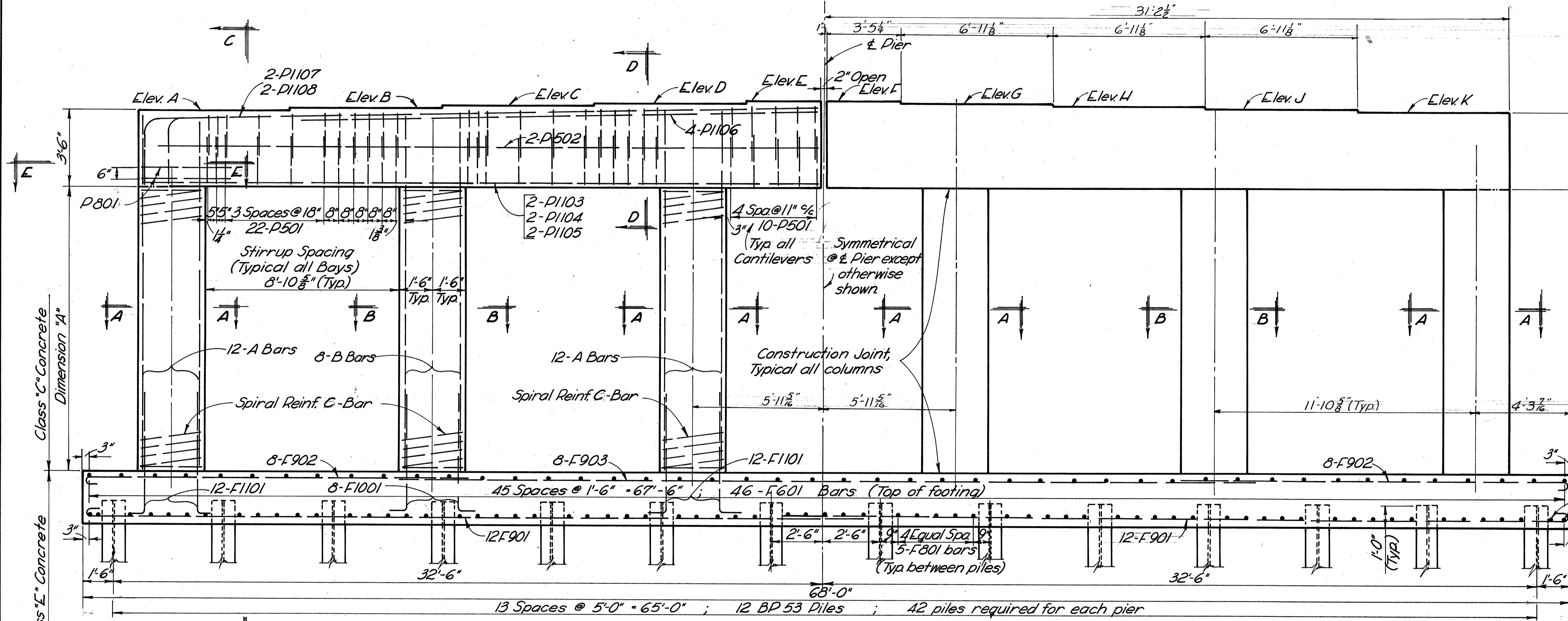
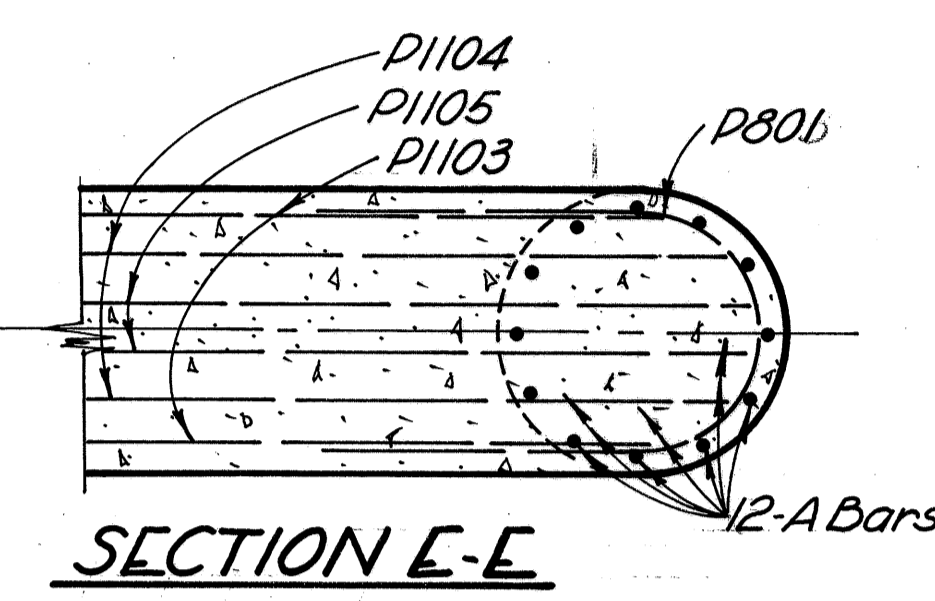
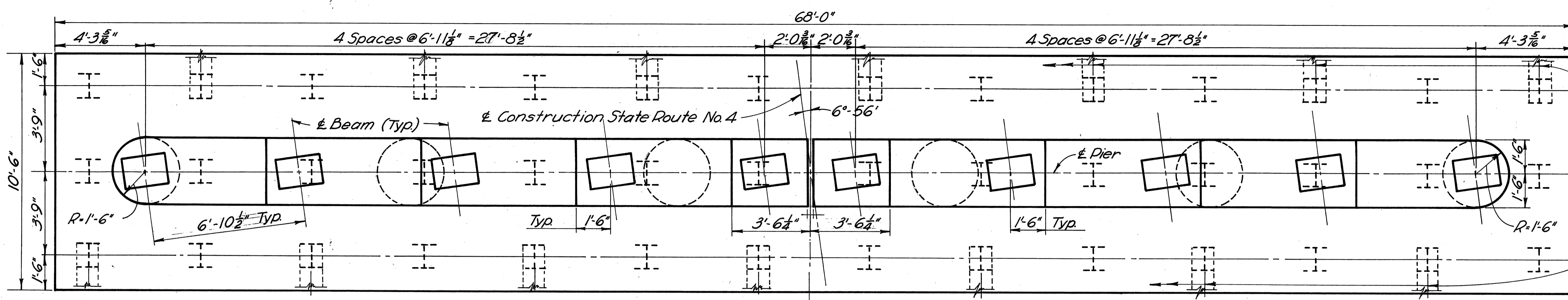
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CONSULTING ENGINEERS
TOLEDO, OHIO

ABUTMENTS
BRIDGE No. ERI. 6.0765
UNDER
STATE ROUTE No. 4

ERIE CO. Sta. 48+57.87 to
Sta. 51+43.41

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RJH	RJH	JEC	TFH	BJH	9-23-40	

ERI. 6-731



All pier details and reinforcement are symmetrical about the ± Construction unless otherwise noted.

Special care shall be taken in placing reinforcing steel in the pier cap so that it will not interfere with the bolster anchor bolts in pier 2.

PIER NUMBER	ELEVATIONS											DIMENSIONS		BARS		
	A	B	C	D	E	F	G	H	J	K	L	A	B	A	B	C
Pier #1	636.25	636.35	636.46	636.56	636.66	636.66	636.55	636.44	636.33	636.21	617.00	13'-3"	13'-2 1/2"	P1101	P1101	SP401
Pier #2	636.33	636.44	636.55	636.65	636.76	636.76	636.65	636.55	636.44	636.33	618.00	12'-4"	12'-4"	P1102	P1102	SP402
Pier #3	636.21	636.33	636.44	636.55	636.66	636.66	636.56	636.46	636.35	636.25	617.00	13'-2 1/2"	13'-3"	P1101	P1101	SP401

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TOLEDO, OHIO

PIERS 1, 2 & 3
BRIDGE No. ERI. 6-0765
UNDER
STATE ROUTE No. 4

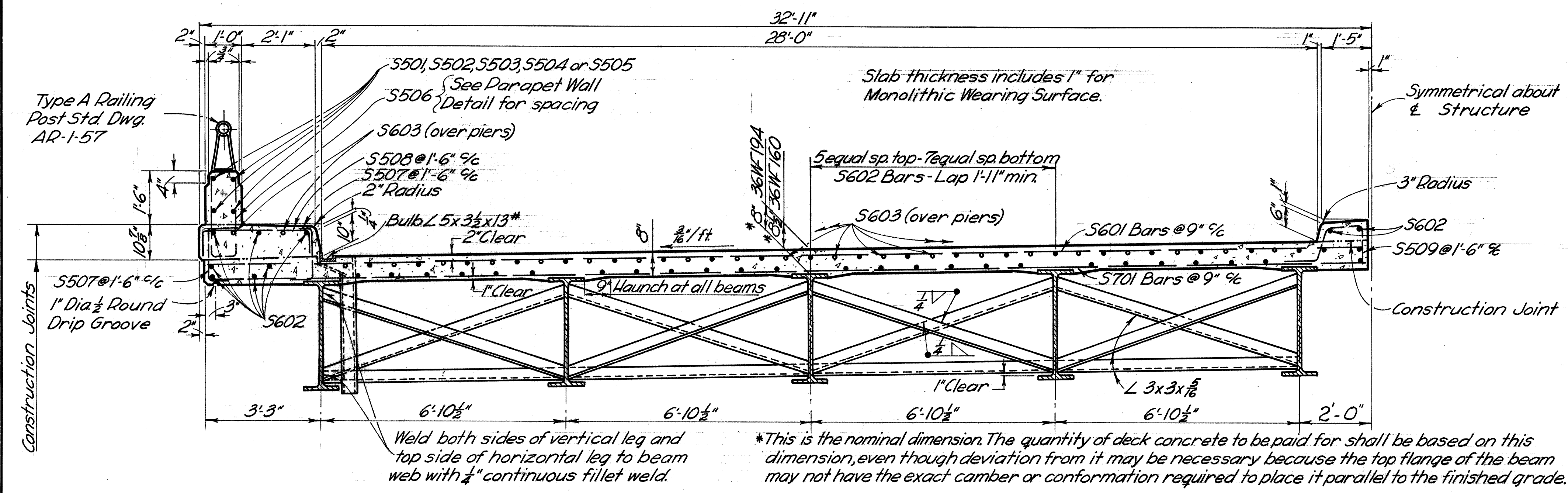
Sta. 48+57.87 to
Sta. 51+43.41

ERIE CO.

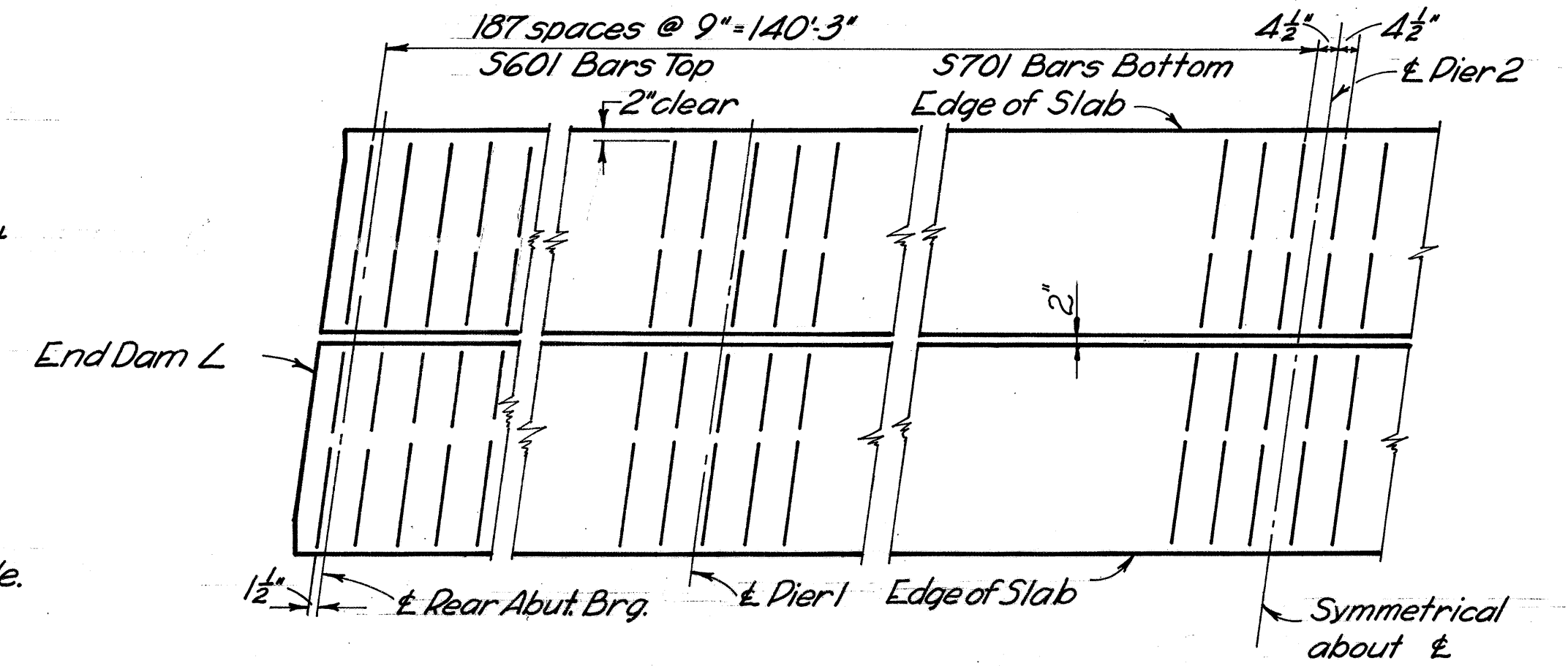
DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISION

TFH TFH JEC RJH BJH
BJH FCM 9-23-60

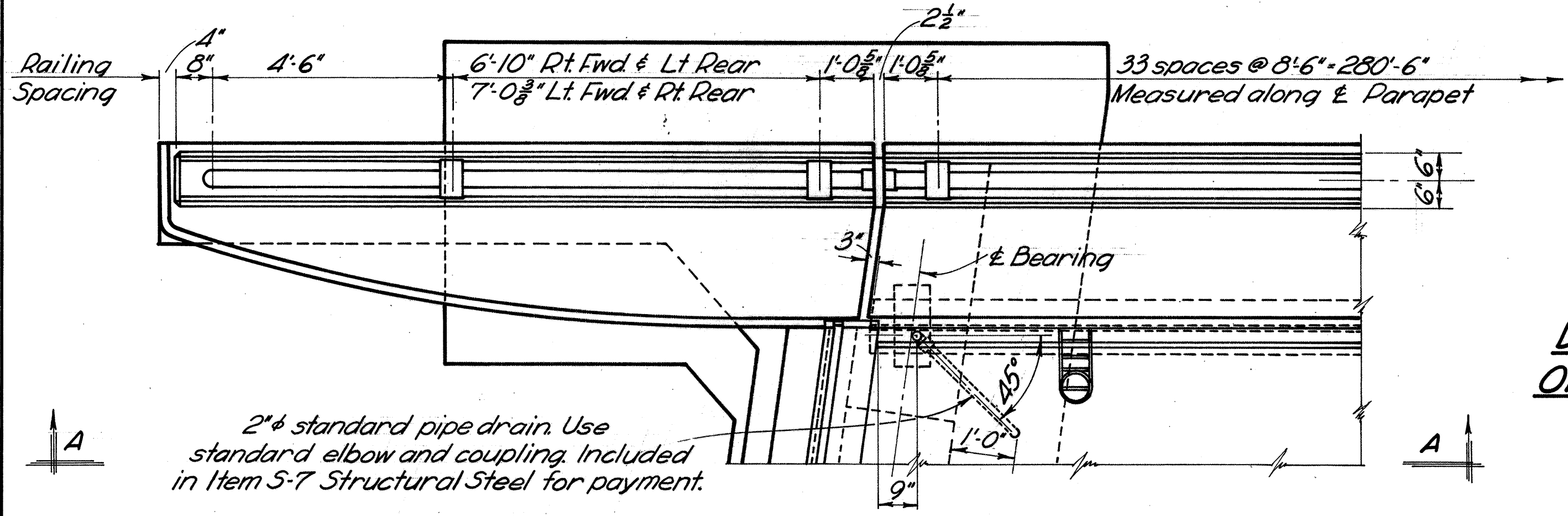
ERI 6-7.31



TRANSVERSE SECTION OF DECK



SLAB TRANSVERSE REINFORCING STEEL



PLAN AT ABUTMENT

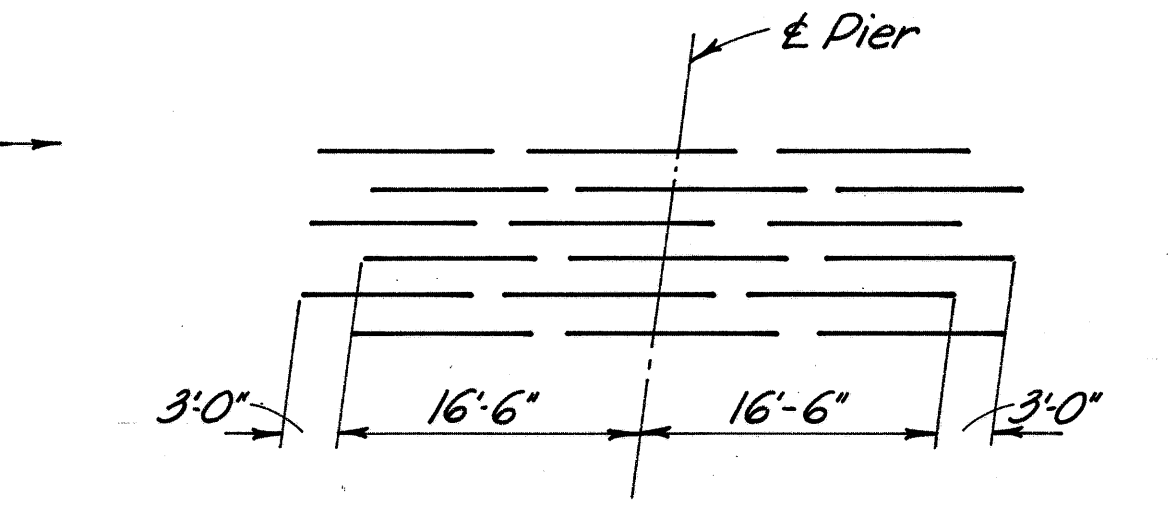
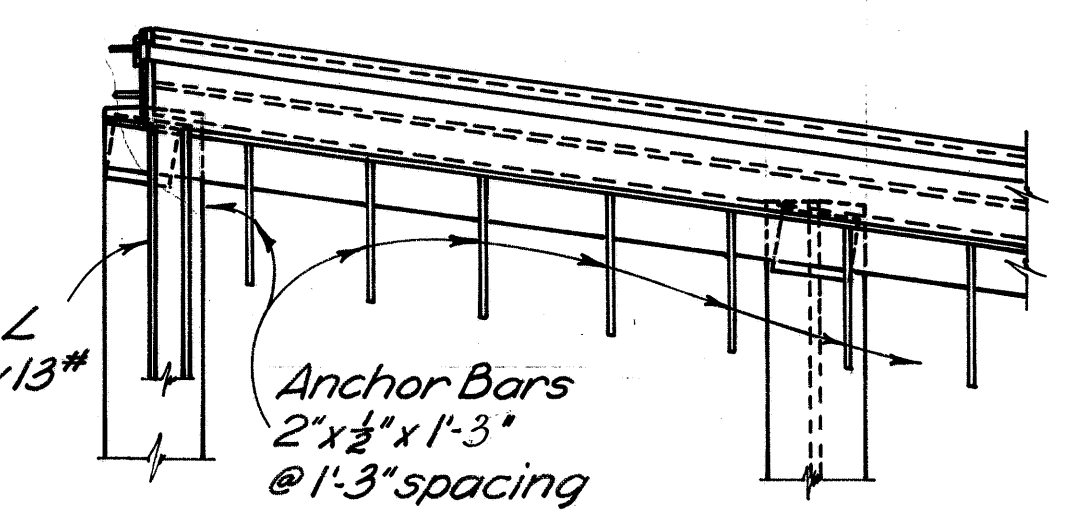
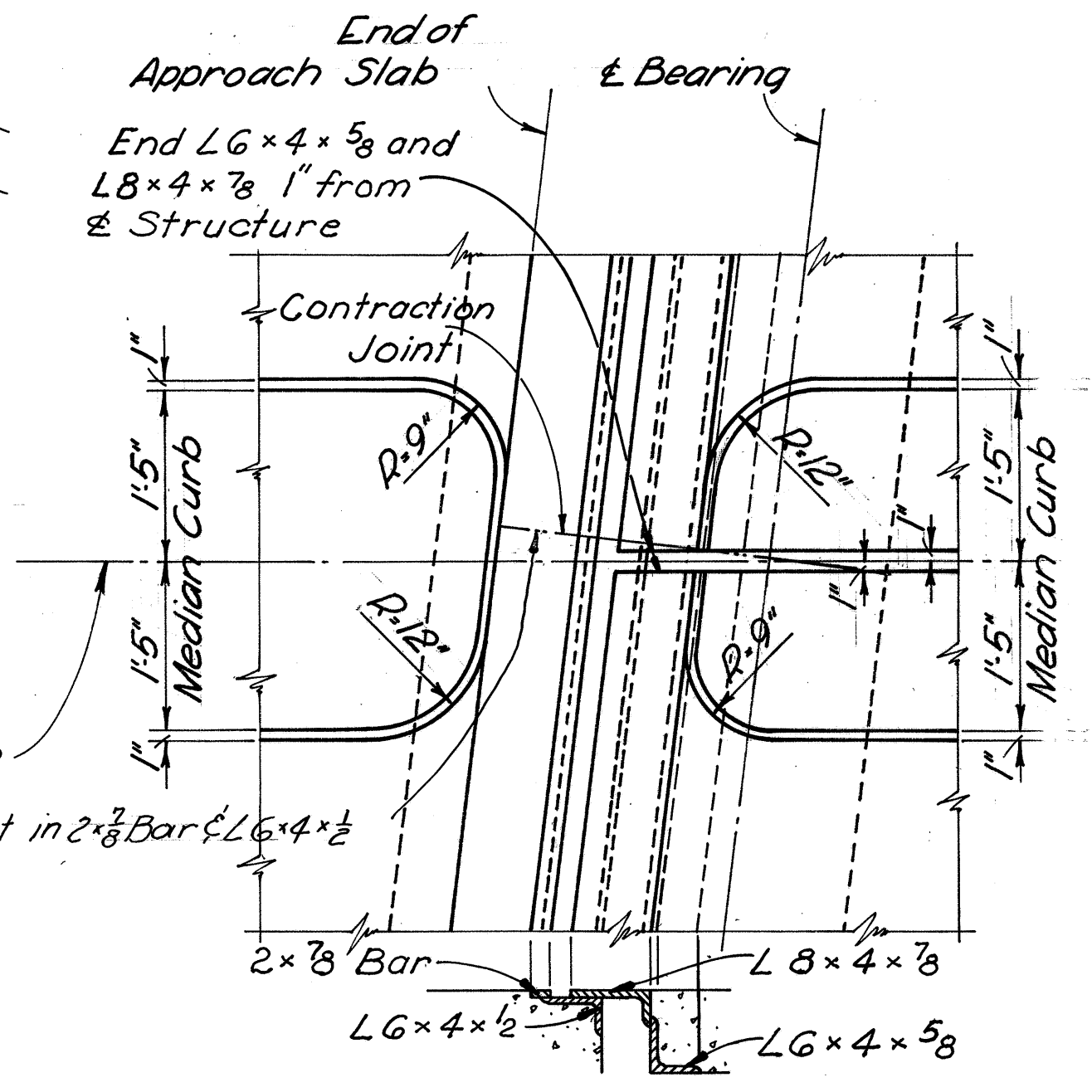


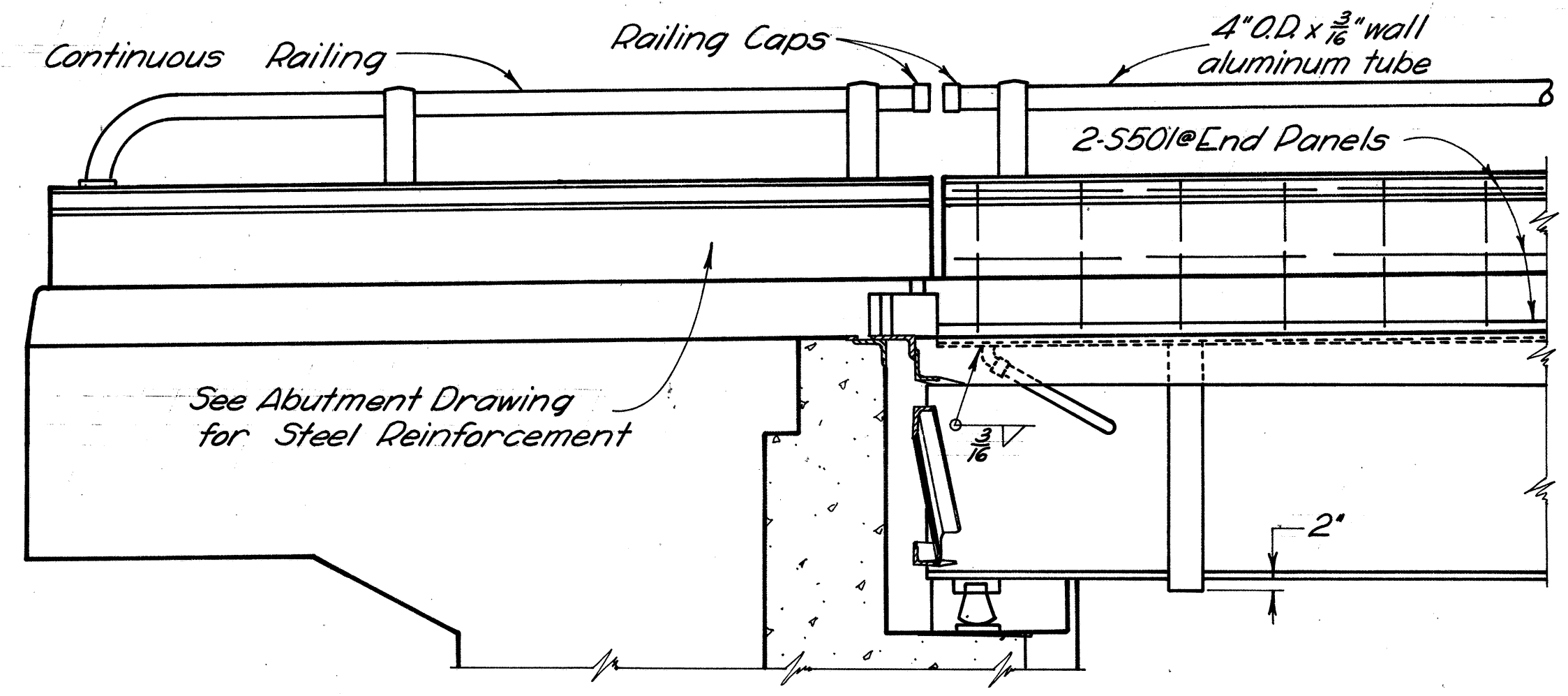
DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS



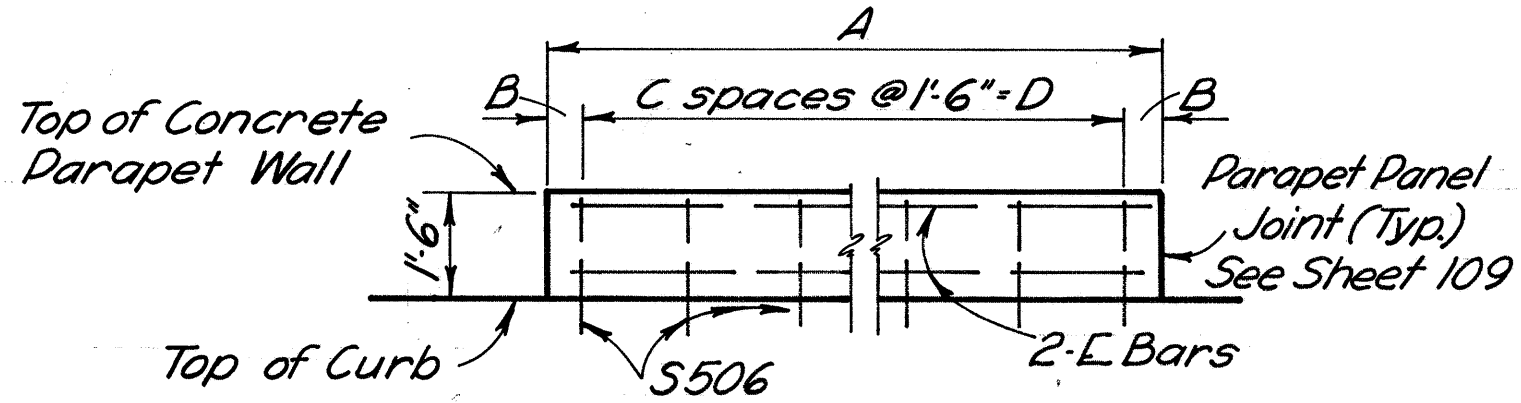
PART END DAM PLAN



PLAN OF END DAM AT MEDIAN CURB

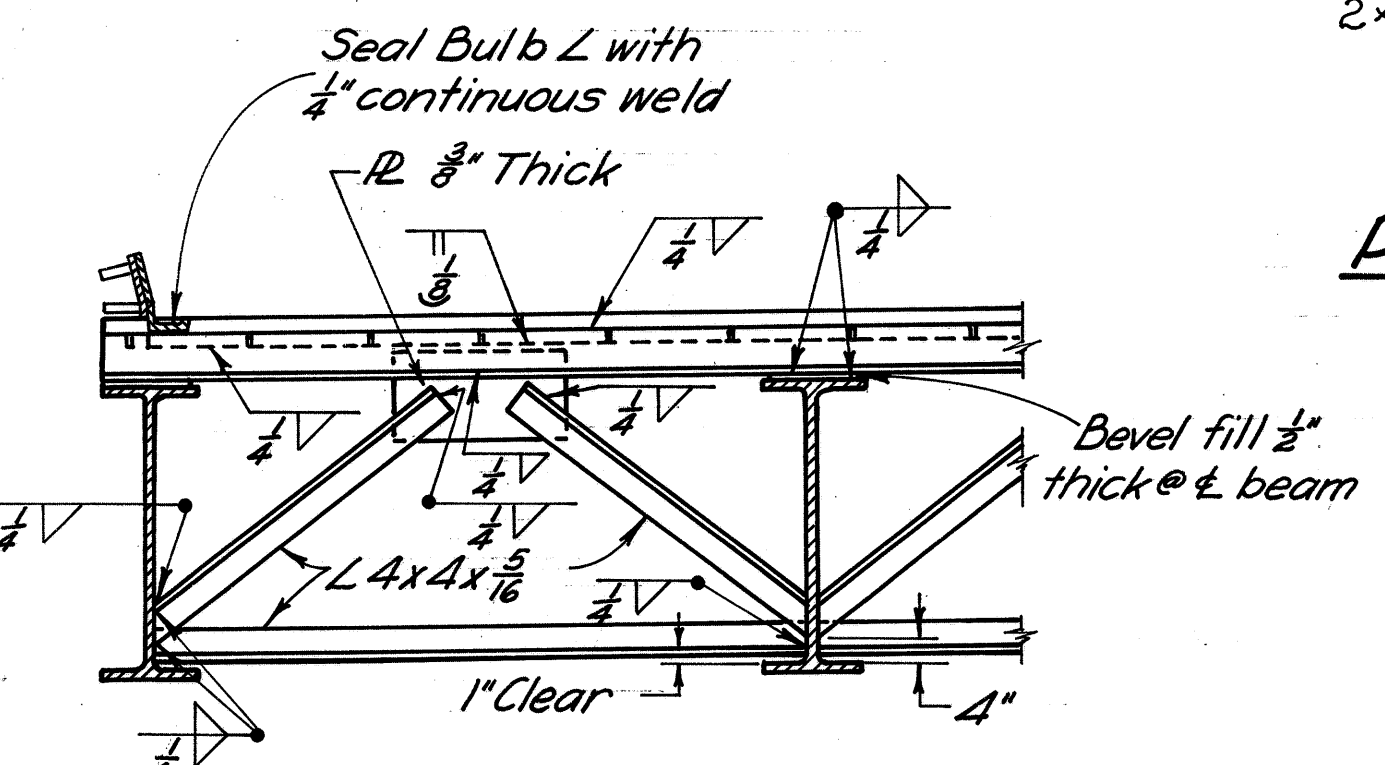


SECTION A-A



PARAPET WALL DETAILS

PARAPET WALL DIMENSIONS & BARS						
Panel See Sheet 109	A	B	C	D	No. of S506 Bars	E
End	13'-9 ⁵ / ₈ "	1 ³ / ₈ "	9	13'-6"	10	S501
Piers 1+3	11'-0"	3"	7	10'-6"	8	S502
Diers 1+3	6'-0"	9"	3	4'-6"	4	S503
Pier 2	8'-6"	6"	5	7'-6"	6	S504
Intermediate	17'-0"	3"	11	16'-6"	12	S505



PART END DAM ELEVATION

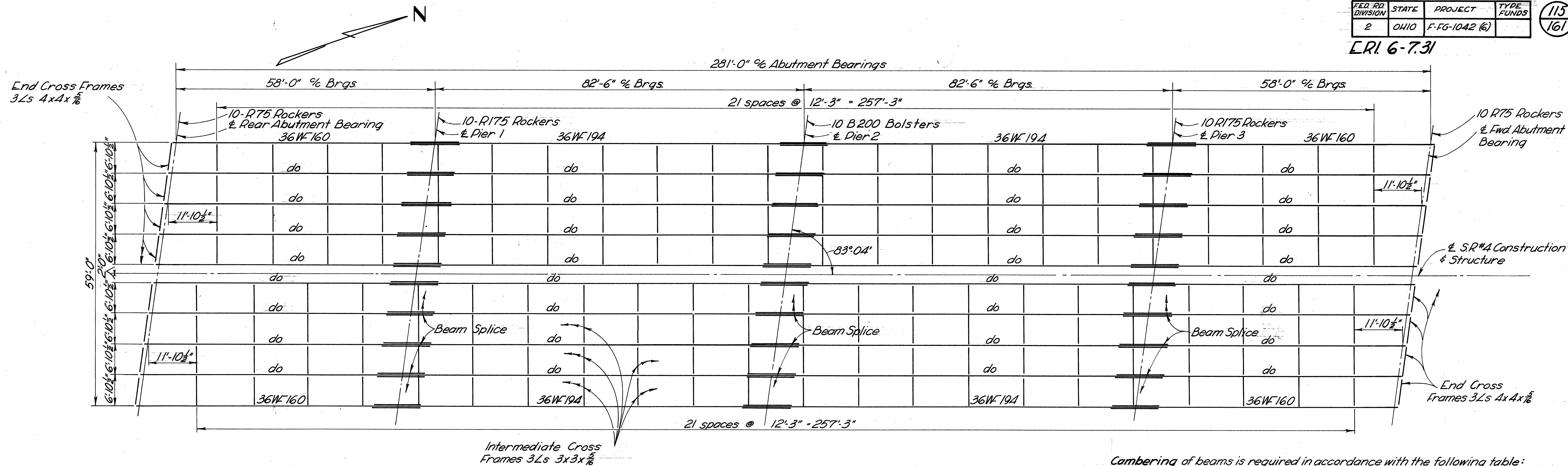
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CONSULTING ENGINEERS
TOLEDO, OHIO

SUPERSTRUCTURE DETAILS
BRIDGE No. ERI 6-0765
UNDER
STATE ROUTE No. 4
Sta. 48+57.87 to
Sta. 51+43.41

ERIC CO.
DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISED
RJH RJH JEC TFH BJH
FLM 9-23-60

ERI 6-7.31



STEEL FRAMING PLAN

Cambering of beams is required in accordance with the following table:

LOCATION	Interior Beams				Exterior Beams			
	Span 1	Span 2	Span 3	Span 4	Span 1	Span 2	Span 3	Span 4
Deflection due to weight of steel	1/8"	3/8"	3/8"	1/8"	1/8"	1/8"	1/8"	1/8"
Remaining dead load deflection	3/16"	3/8"	3/8"	3/16"	3/16"	3/16"	3/16"	3/16"
Camber due to vertical curve	1/4"	5/8"	5/8"	1/4"	1/4"	5/8"	5/8"	1/4"
Total Camber	1/2"	1 1/8"	1 3/8"	1/2"	1/2"	1 1/4"	1 1/4"	1/2"
Required Shop Camber	None	1 3/8"	1 3/8"	None	None	1 1/4"	1 1/4"	None

NOTE: Refer to Standard CSB-2-56 sheet 2 or 3 of 6 for the following details:
 Roadway End Dam
 Welded Butt Joint in Superstructure End Dam Angles
 Scupper Details
 Gutter Supports
 Curb Plate Details

BEAM SPLICE WELDING PROCEDURE

1. Raise end of beam at Pier 2, 2 1/2"
2. Butt-weld beam flanges and web at Pier 1 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.
3. Weld top and bottom flange moment plates at Pier 1
4. Lower end of beam at Pier 2.
5. Make splice at Pier 2 and Pier 3 in the same manner raising the end of beams 3" at Pier 3 and 3/4" at the forward Abutment.

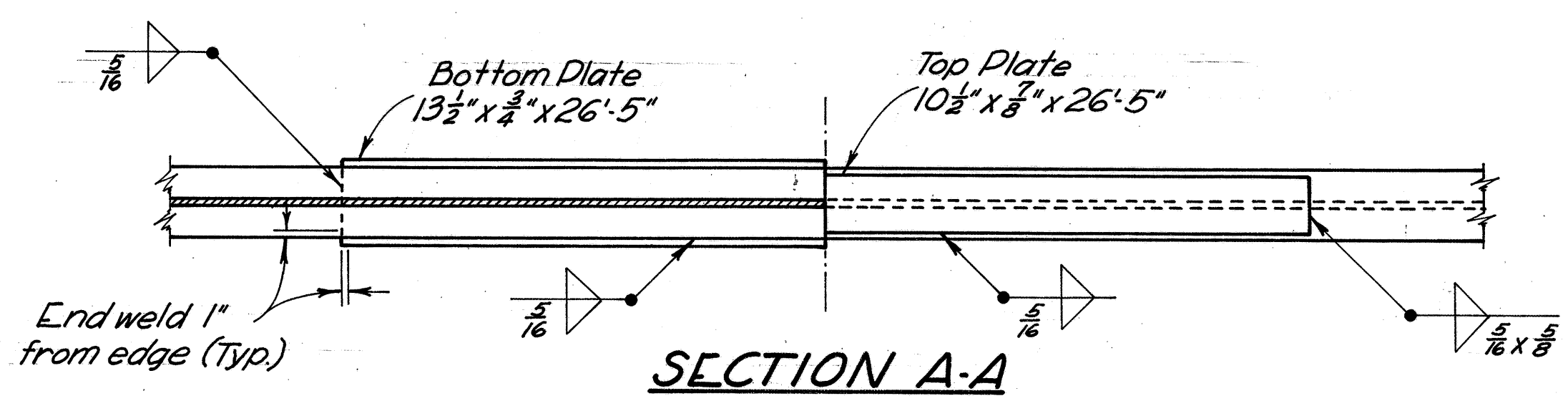
PAINTING

After erection and after the shop coat has been cleaned and, where necessary, repainted in accordance with Sec. 804, 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.

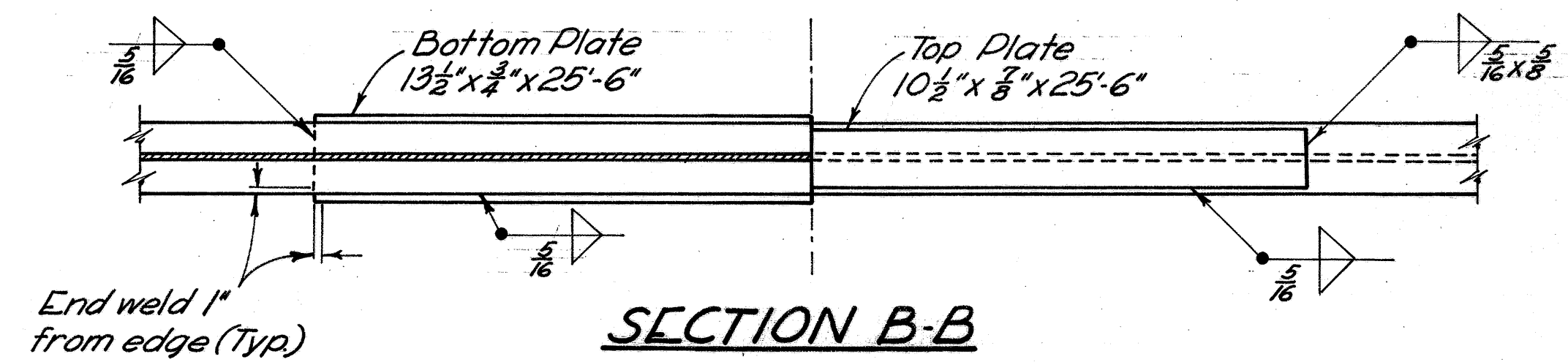
SANZENBACHER, MILLER & BRIGHAM
 CONSULTING ENGINEERS
 TOLEDO, OHIO

SUPERSTRUCTURE DETAILS
 BRIDGE No. ERI 6-0765
 UNDER
 STATE ROUTE No. 4
 Sta 48+57.87 to
 Sta 51+43.41

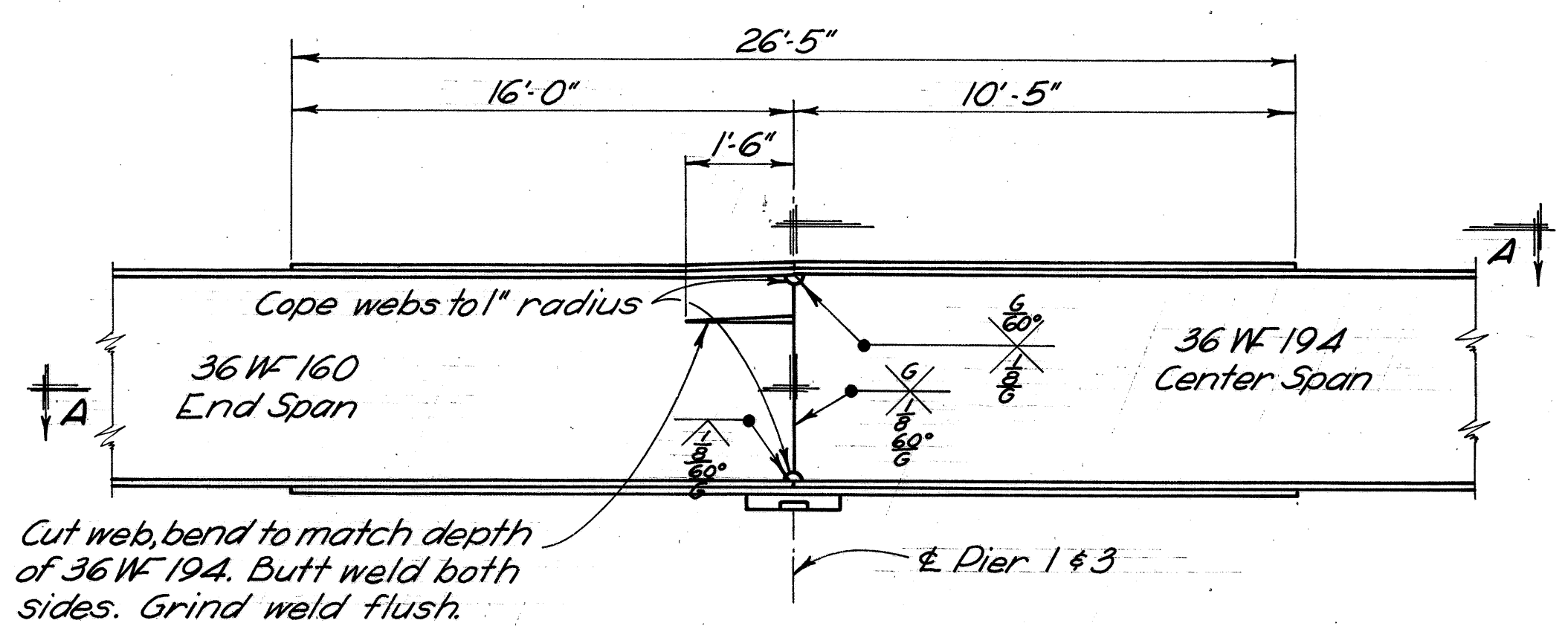
ERIC CO.
 DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISED
 RJH RJH JEC TFH BJH
 9-23-60



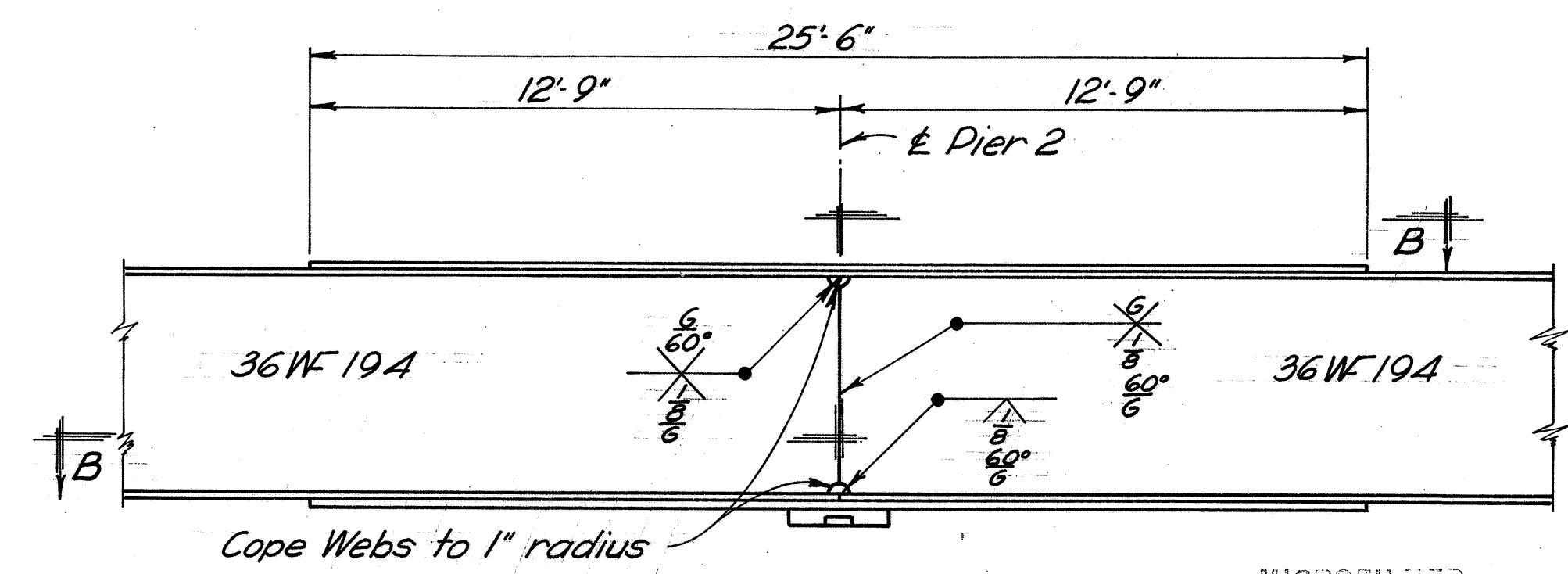
SECTION A-A



SECTION B-B



ELEVATION
 BEAM SPLICE DETAIL (Piers 1 & 3)



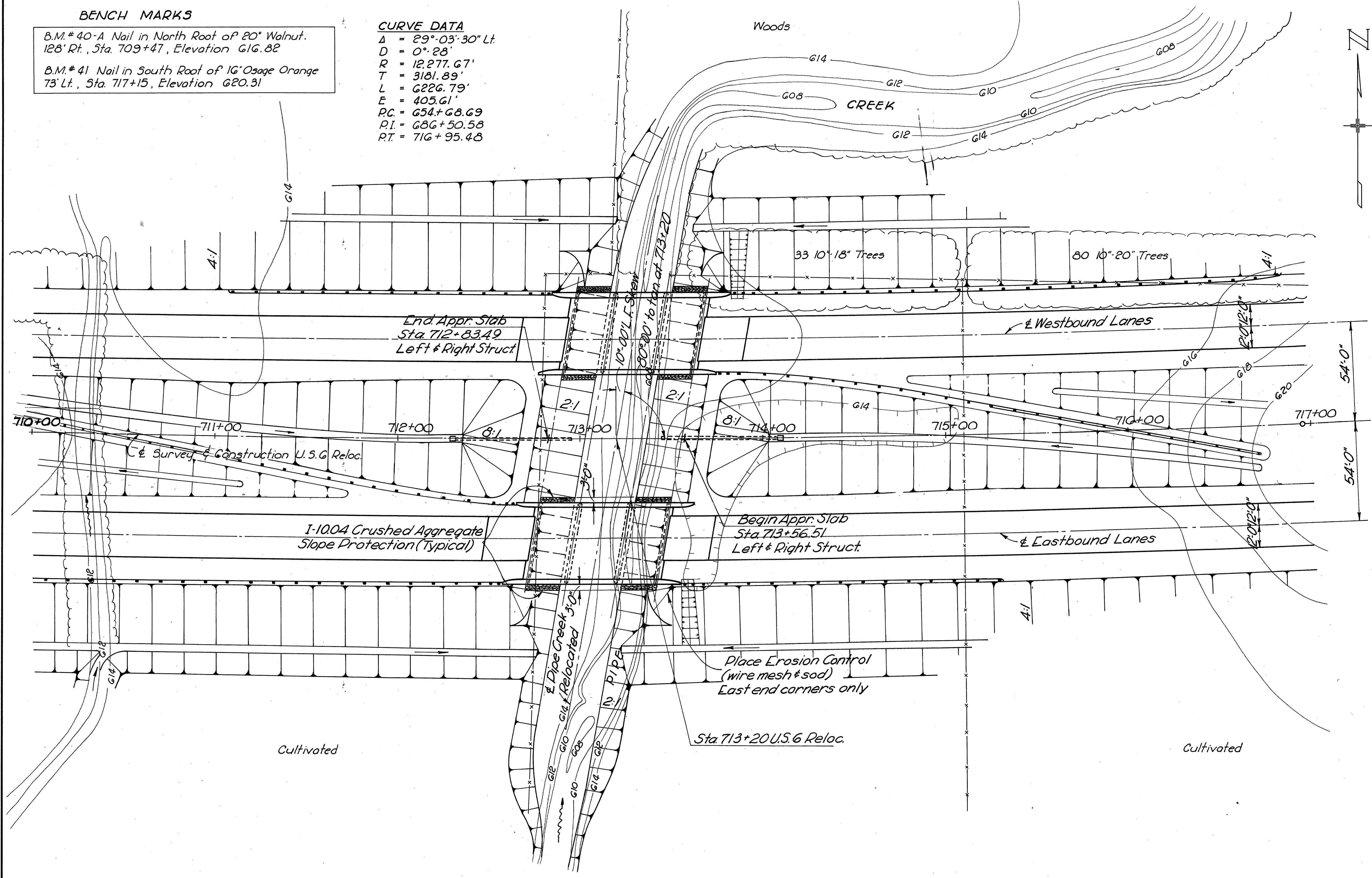
ELEVATION
 BEAM SPLICE DETAIL (Pier 2)

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ERI 6-731
6.2 Miles West of Huron

BENCH MARKS
 B.M.# 40-A Nail in North Root of 20" Walnut.
 128' Rt., Sta. 709+47, Elevation 616.82
 B.M.# 41 Nail in South Root of 16" Osage Orange
 73' Lt., Sta. 717+15, Elevation 620.31

CURVE DATA
 $\Delta = 29^{\circ}03'30''$ Lt.
 $D = 0^{\circ}28'$
 $R = 12,277.67'$
 $T = 3181.89'$
 $L = 6226.79'$
 $E = 405.61'$
 $PC = 654+68.69$
 $PI = 686+50.58$
 $PT = 716+95.48$



EXISTING BRIDGE DATA

Upstream Bridges
 At Bogart Rd. 1200' Upstream
 Type: Welded Truss
 Span: Single Span, 23.3' clear
 Skew: None
 Length: 32.8'
 Roadway: 27'6" G.R. to G.R.
 Condition: Excellent (new)
 Clear Opening: 175 sq. ft.
 At Bogart Rd. 1200' Upstream (Branch)
 Type: Box Culvert
 Span: Single Span; 7.4' clear
 Skew: None
 Length: 12'
 Roadway: 29.4' w/ Guard Rail
 Condition: Good
 Clear Opening: 24 sq. ft.
 Total Clear Opening Upstream Bridges = 199 sq. ft.

Downstream Bridge At Strub Rd. 3700' Downstream
 Type: Conc. Slab
 Span: Single Span, 24.5' Clear
 Skew: 30°
 Length: 30.8'
 Roadway 14.9'
 Condition: Poor
 Clear Opening: 218 sq. ft.

FOUNDATION SOUNDINGS:
 Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division Office, but the State does not guarantee the accuracy thereof.

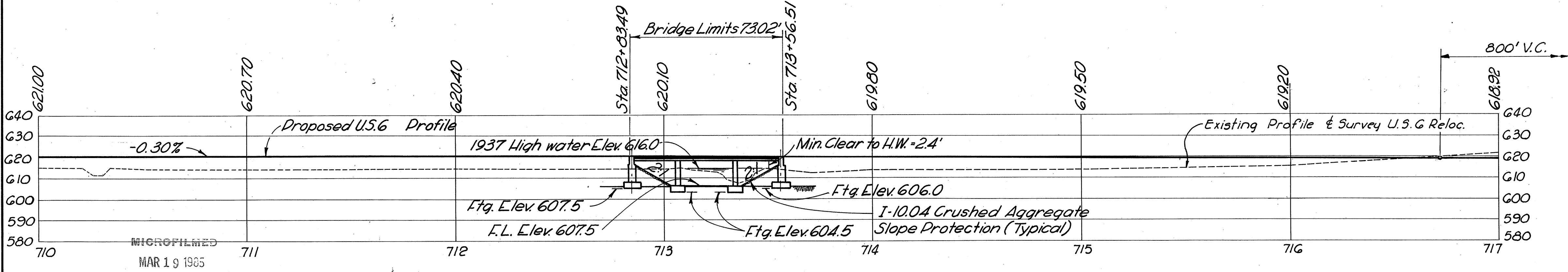
PROPOSED STRUCTURES
 Type: Continuous Reinforced Concrete Slab Reinforced Concrete Substructure
 C Type Abuts on Pedestals. Solid Wall Piers
 Spans: 22'-0", 27'-6", 22'-0" % Bearings
 Roadway: 42'-0" w/ Parapets
 Load Frequency: CF 400 (57)
 Skew: 10°-00' L.F.
 Wearing Surface: 1" Monolithic Concrete
 Approach Slabs: AS-1-54 (25'-0" Long)
 Alignment: 0°-28' Curve Left
 No Superelevation

DRAINAGE AREA = 19.3 Sq. Mi.

Net Waterway Opening
 Below 1937 H.W. = 380 Sq. Ft.

SANZENBACHER, MILLER & BRIGHAM
 CONSULTING ENGINEERS
 TOLEDO OHIO

SITE PLAN
 BRIDGE No. ERI 6-0873 LEFT & RIGHT OVER PIPE CREEK
 ERIE COUNTY STA. 712+83.49 to 713+56.51
 SCALE: 1" = 30'

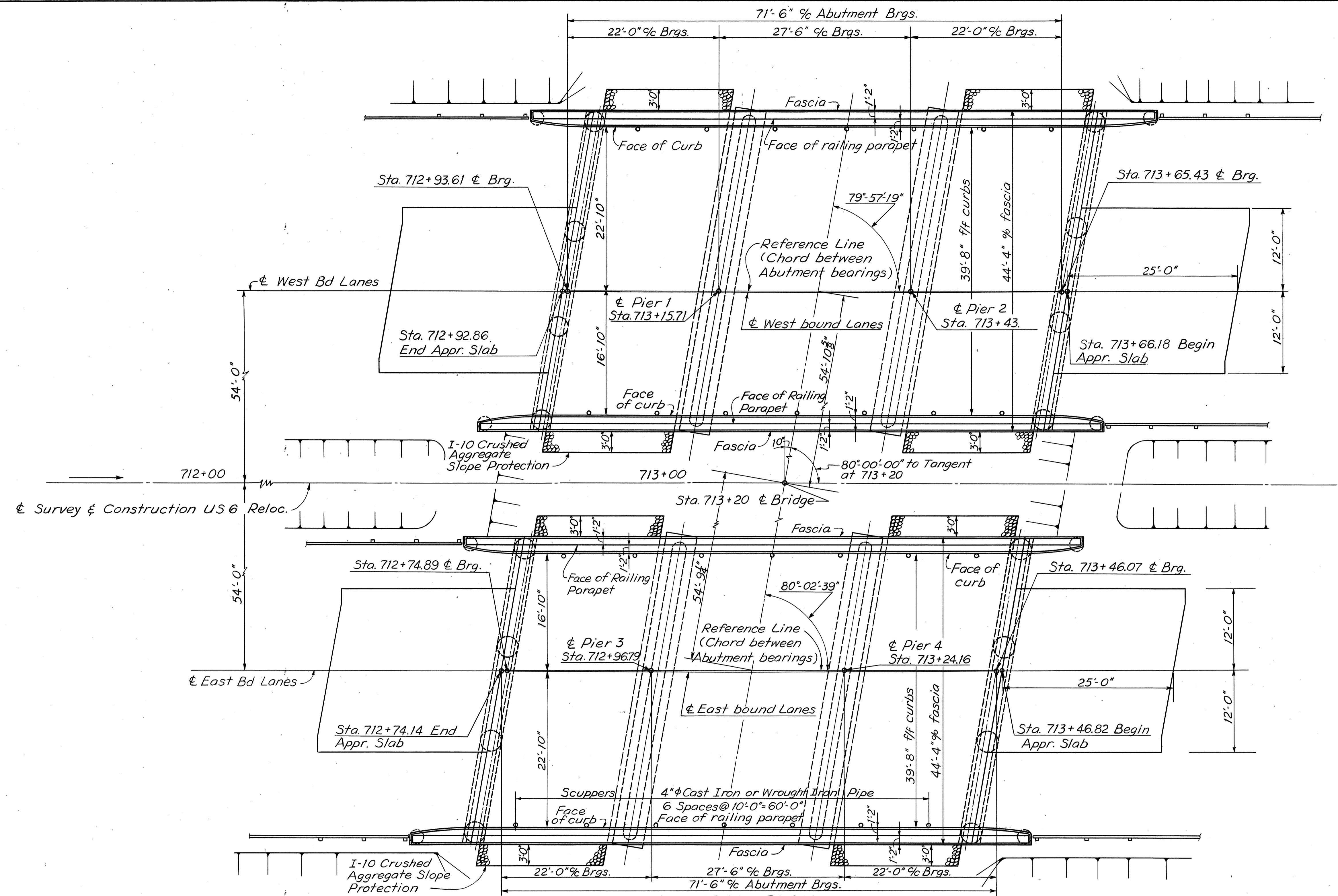


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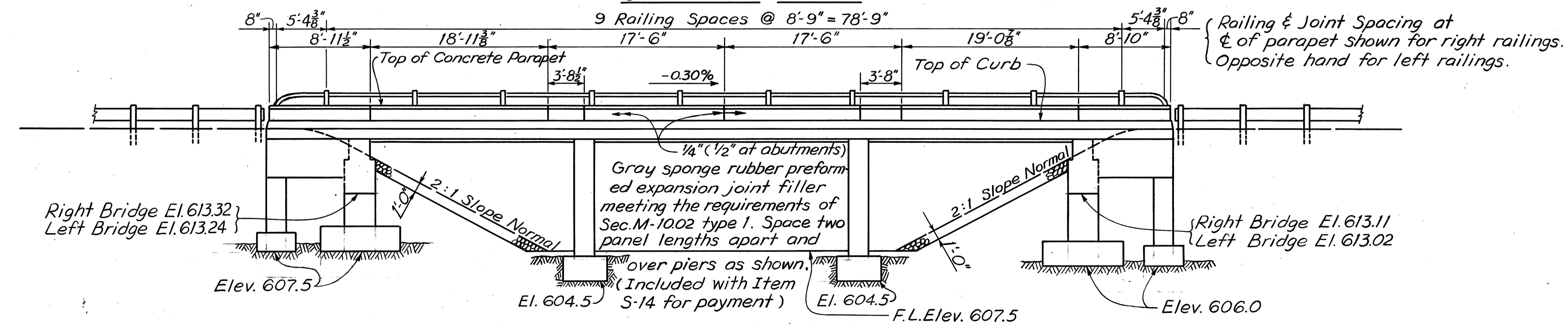
ERI-2-0921

PRESENT TOPOGRAPHY		PROPOSED WORK	
SURVEYED S.M.B.	DRAWN T.W.D.	DESIGNED CES	CHECKED T.W.D.
		DRAWN CES	REVIEWED ECM 9-23-60

ERI 6-7.31



GENERAL PLAN



GENERAL ELEVATION

MICROFILMED
MAR 19 1985

SANZENBACHER, MILLER & BRIGHAM CONSULTING ENGINEERS TOLEDO OHIO				
GENERAL PLAN & ELEVATION BRIDGE No. ERI 6-0873 LEFT & RIGHT OVER PIPE CREEK ERIE CO. Sta. 712+83.49 to 713+56.51				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE
J.H.Y.	J.H.Y.	J.H.Y.	T.W.D.	B.J.H. FCM 9-23-60

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shape	Bending Diagrams	Mark	No.	Length	Weight	Shape	
ABUTMENTS					SUPERSTRUCTURES						
F1001	128	6'-5"	3536	B		S901	164	21'-9"	12128	S	
F701	80	9'-4"	1528	B		S902	84	9'-11"	2832	S	
F702	96	6'-4"	1244	B		S903	84	8'-2"	2332	S	
F703	64	4'-9"	620	B		S801	282	25'-11"	19514	S	
F601	48	5'-0"	360	B		S802	88	19'-7"	4602	B	
F602	40	7'-0"	420	B		S803	88	17'-1"	4014	B	
R1001	32	6'-6"	895	S		S804	44	14'-10"	1742	S	
R1002	32	7'-9"	1067	S		S805	44	18'-8"	2192	S	
R1003	32	6'-5"	884	S		S701	40	15'-2"	1240	S	
R1004	32	7'-8"	1056	S		S601	84	12'-8"	1598	S	
R1005	32	23'-8"	3260	S	S602	42	11'-6"	726	S		
R1006	24	9'-8"	1000	B	S603	280	44'-4"	17312	S		
R901	24	8'-10"	720	B	S501	24	16'-7"	416	S		
R801	32	23'-3"	1988	S	S502	12	15'-6"	194	S		
R701	18	9'-0"	332	S	S503	348	5'-5"	1966	B		
R702	18	10'-3"	377	S	S504	348	2'-10"	1028	B		
R703	6	8'-11"	109	S	S505	224	4'-4"	1012	B		
R704	6	10'-2"	125	S	S506	16	18'-8"		S		
R705	6	5'-1"	63	S	S507	32	3'-5"		S		
R706	6	6'-4"	78	S	S508	32	13'-6"		S		
R707	2	5'-0"	20	S	S509	16	18'-9"		S		
R708	2	6'-3"	26	S	REPLACEMENT BARS						
R709	24	10'-2"	500	S	RE1001	1	7'-3"		S		
R501	48	23'-0"	1152	S	RE901	1	6'-10"		S		
R502	360	7'-1"	2660	B	RE801	2	6'-6"		S		
R503	32	2'-5"	80	B	RE701	1	6'-3"		S		
R504	124	8'-1"	1044	B	RE601	1	5'-11"		S		
R505	64	2'-8"	180	B	RE501	1	5'-7"		S		
R506	16	8'-4"	140	S	RE401	1	5'-3"		S		
R507	16	8'-6"		S	REPLACEMENT BARS						
R508	24	10'-2"	256	S	RE1001	1	7'-3"		S		
R509	96	4'-10"	484	S	RE901	1	6'-10"		S		
R510	16	8'-11"	148	S	RE801	2	6'-6"		S		
R511	16	8'-8"		S	RE701	1	6'-3"		S		
R512	48	4'-6"	224	B	RE601	1	5'-11"		S		
PIERS					REPLACEMENT BARS						
P601	352	4'-11"	2600	B	RE901	1	6'-10"		S		
P501	92	11'-5"	1096	S	RE801	2	6'-6"		S		
P502	46	11'-4"	544	S	RE701	1	6'-3"		S		
P503	46	11'-6"	552	S	RE601	1	5'-11"		S		
P504	96	22'-0"	2204	S	RE501	1	5'-7"		S		
P505	48	5'-8"	284	B	RE401	1	5'-3"		S		
P506	124	5'-4"	688	B	REPLACEMENT BARS						
P507	32	24'-0"	800	S	SP401	4	32"	3'-3 3/8"	4 1/2"	12	301
PIERS					REPLACEMENT BARS						
P501	92	11'-5"	1096	S	SP402	4	32"	4'-7 3/8"	4 1/2"	15	382
P502	46	11'-4"	544	S	SP403	4	32"	3'-2 7/8"	4 1/2"	12	300
P503	46	11'-6"	552	S	SP404	4	32"	4'-6 1/2"	4 1/2"	15	380
P504	96	22'-0"	2204	S	SP405	1	20"	5'-3 3/8"	4 1/2"	17	69
P505	48	5'-8"	284	B	SP406	1	20"	5'-4 3/8"	4 1/2"	17	69
P506	124	5'-4"	688	B	SP407	1	20"	6'-6 3/8"	4 1/2"	20	82
P507	32	24'-0"	800	S	SP408	1	20"	6'-7 1/8"	4 1/2"	21	85
PIERS					REPLACEMENT BARS						
P501	92	11'-5"	1096	S	SP409	1	20"	5'-4"	4 1/2"	17	69
P502	46	11'-4"	544	S	SP410	1	20"	5'-2 3/8"	4 1/2"	17	69
P503	46	11'-6"	552	S	SP411	1	20"	6'-6 3/8"	4 1/2"	20	82
P504	96	22'-0"	2204	S	SP412	1	20"	6'-5 1/8"	4 1/2"	20	82
P505	48	5'-8"	284	B	REPLACEMENT BARS						
P506	124	5'-4"	688	B	RE1001	1	7'-3"		S		
P507	32	24'-0"	800	S	RE901	1	6'-10"		S		

ESTIMATED QUANTITIES - TWO BRIDGES

Item	Total	Unit	Description	Abutments				Piers				Superstructure						
				Left Bridge Rear	Right Bridge Fwr'd	Left Bridge Rear	Right Bridge Fwr'd	Left Bridge 1	Right Bridge 2	Left Bridge 3	Right Bridge 4	Left Bridge	Right Bridge	General				
E-2	Lump	Sum	Cofferdams, cribs and sheeting															
E-2	530	Cu.Yds.	Unclassified excavation	130	130	130	130			8	2							
E-2	105	Cu.Yds.	Rock excavation	3	3	6	6	23	19	22	23							
E-3	2649	Cu.Yds.	Channel excavation														2649	
S-1	300	Cu.Yds.	Class "C" concrete, superstructures									150	150					
S-1	216	Cu.Yds.	Class "E" concrete, abutments	55	53	55	53											
S-1	148	Cu.Yds.	Class "E" concrete, piers above footings					37	37	37	37							
S-1	76	Cu.Yds.	Class "E" concrete, pier footings					19	19	19	19							
S-4	112,162	Lbs.	Reinforcing steel	6969	7289	6983	7305	2192	2188	2196	2192	37424	37424					
S-9	32	Sq.Ft.	1/2" Preformed expansion joint filler	8	8	8	8											
S-14	364	Lin.Ft.	Railing (aluminum rail & supports, concrete parapet)									182	182					
S-29	36	Cu.Yds.	Porous backfill	9	9	9	9											
S-29	28	Each	Scuppers 4" I.D. cast iron or wrought iron									14	14					
I-10	425	Sq.Yds.	Crushed aggregate slope protection													425		

† See Sheet 60

GENERAL NOTES

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example an R701 is a No. 7 size bar and an R1014 is a No. 10 size.

REPLACEMENT BARS: If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec. 5-4.02 need not be furnished and replacement bars will not be required.

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item S-4. 1/2 closed coils shall be provided at the ends of each spiral unit.

Four (for 3'-0" dia) or three (for 2'-0" dia) steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

* Included with Item S-14 for payment

REFERENCE shall be made to Standard Drawings AS-1-54 "Reinforced Concrete Approach Slabs" revised 12-1-54 and AR-1-57, "Aluminum Railing with Concrete Parapet" revised 2-2-59. Reference shall be made to Supplemental Specification No. S-101 dated 12-2-59.

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

EXCAVATION QUANTITY includes the removal of fill material between the top of the earth bench and the bottom of the abutment crossbeam.

PIER FOOTINGS shall extend a minimum of 2'-0" into solid rock, or to the elevations shown, whichever is lower.

ABUTMENT PEDESTAL FOOTINGS shall extend a minimum of 3' into solid rock, or to the elevations shown, whichever is lower.

FOUNDATION BEARING PRESSURES: Pier footings are designed for a maximum bearing pressure of 2.8 tons per sq. ft. Abutment pedestal footings are designed for a maximum bearing pressure of 4.1 tons per sq. ft., and wingwall pedestal footings are designed for a maximum bearing pressure of 1.8 tons per sq. ft.

CAMBER of 1/800 of the span shall be provided in each span to allow for dead load deflection. This is the amount of camber required before falsework is released. To obtain this, proper allowance shall be made for the deflection of falsework members.

CURBS AND PARAPETS shall be placed after the shoring under the slab has been released sufficiently to permit the slab spans to attain full dead load deflection.

MACHINE FINISH: The top of the Bridge deck slab shall be machine finished in accordance with the Proposal Note "Machine Finishing of Bridge Deck Slabs."

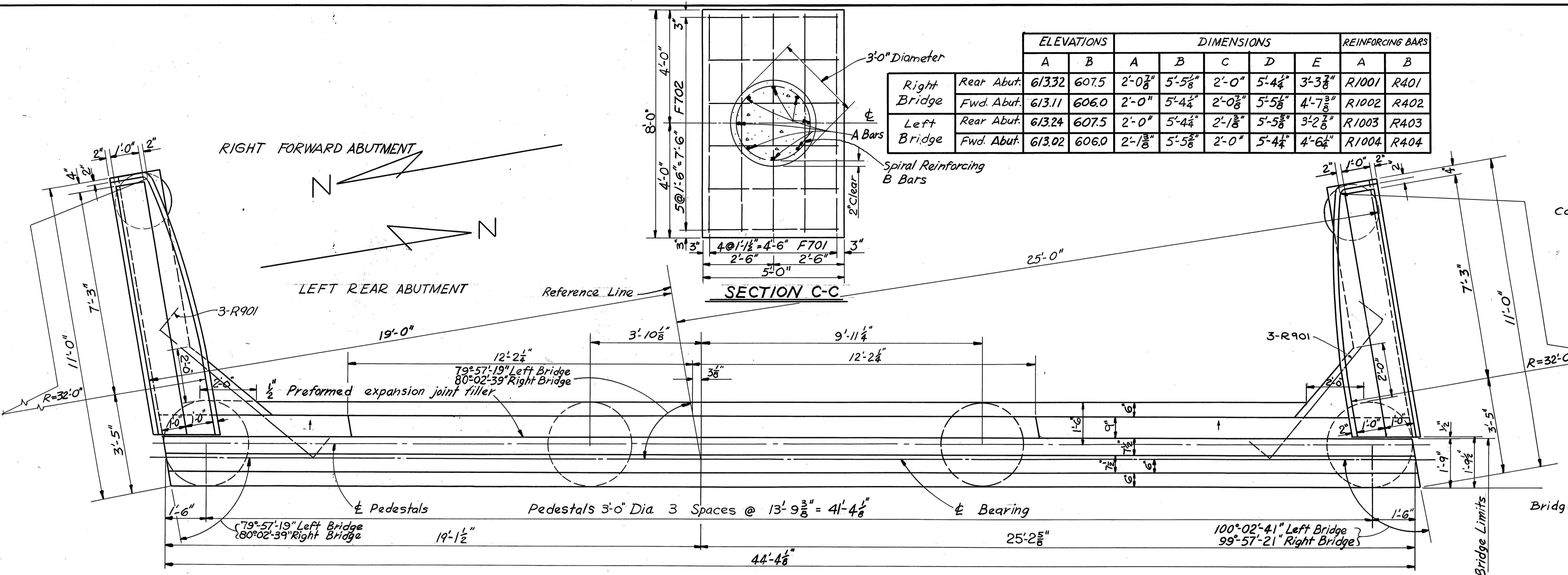
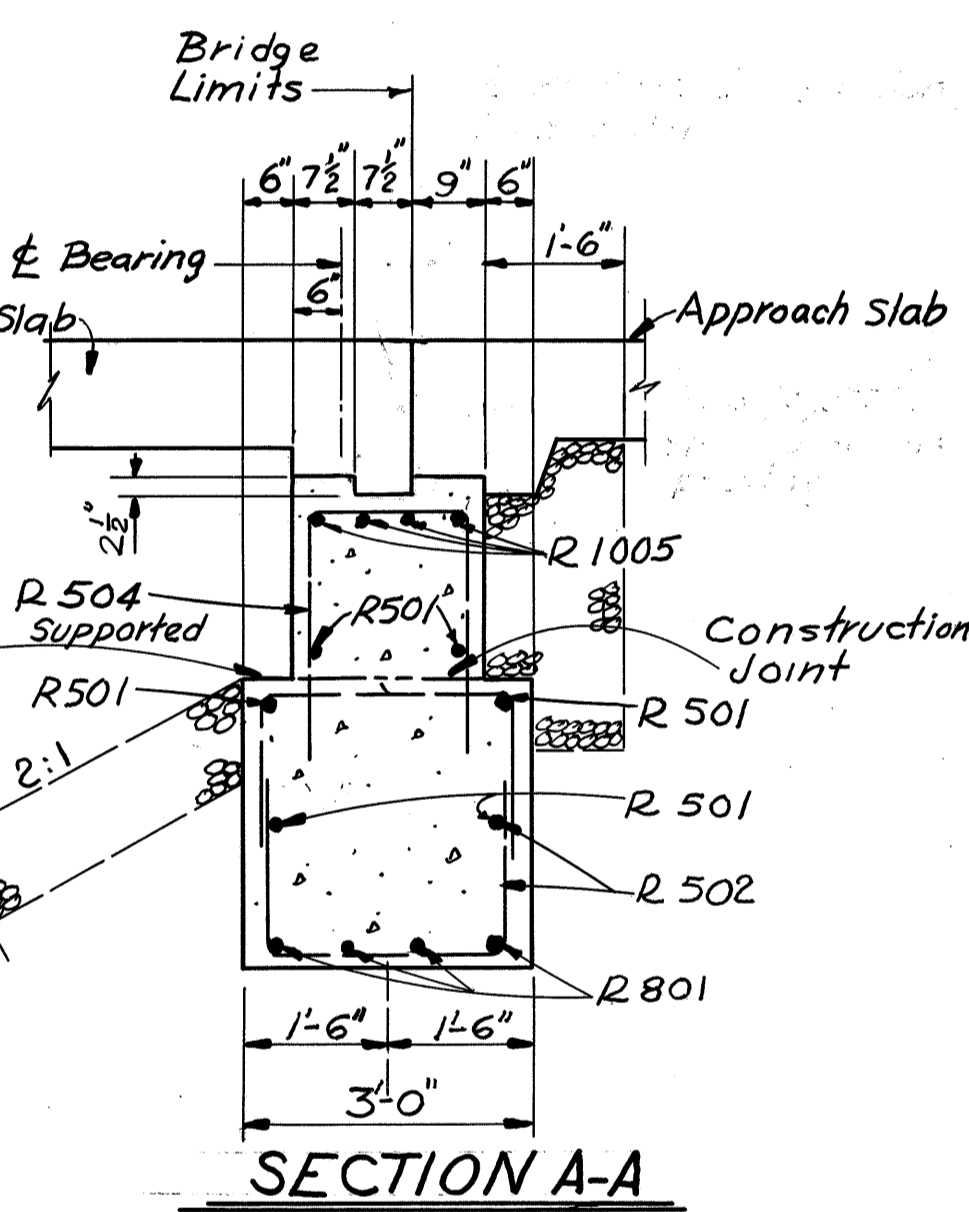
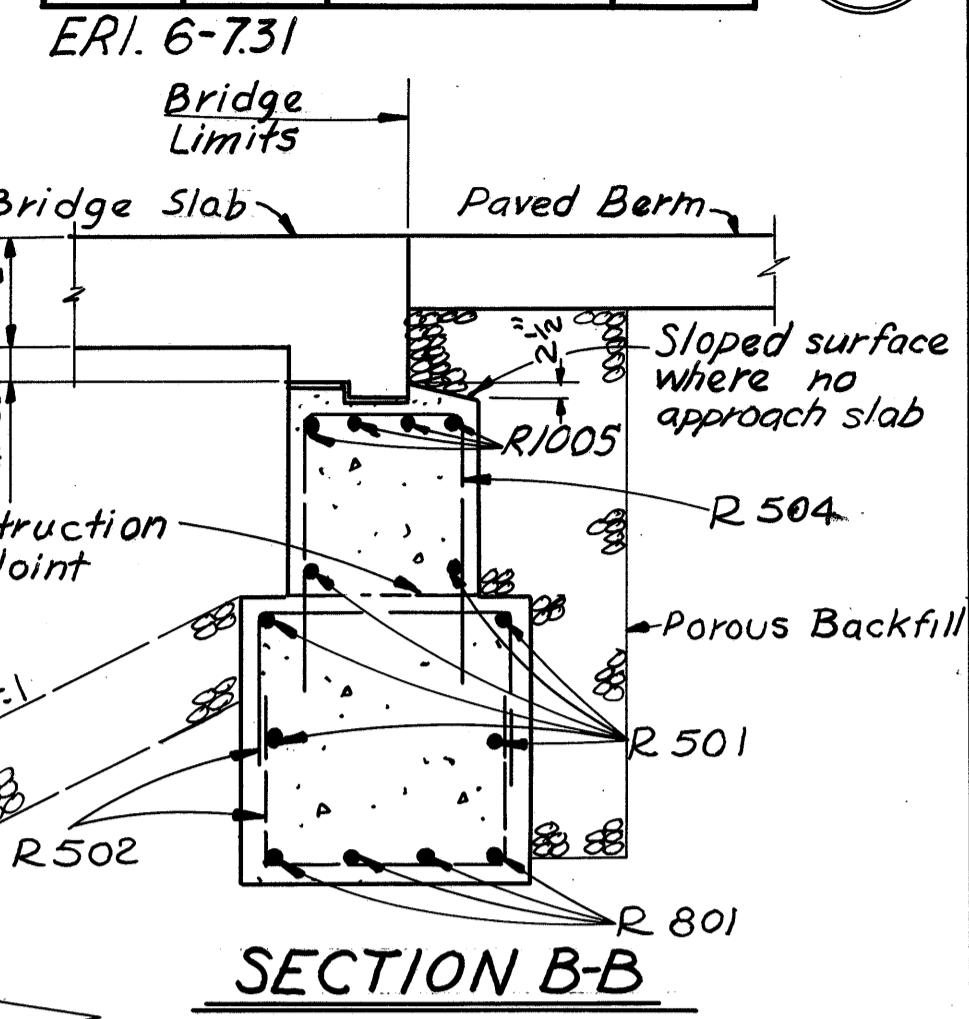
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CONSULTING ENGINEERS
TOLEDO OHIO

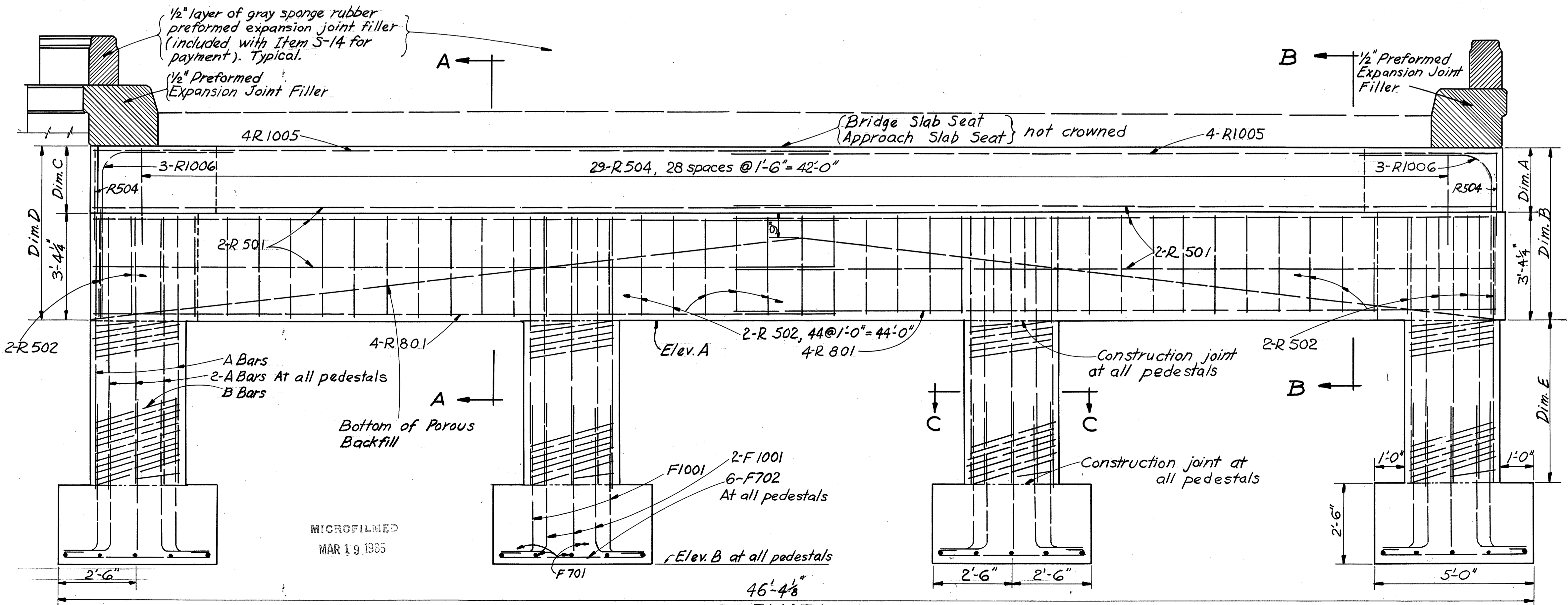
GENERAL NOTES, REINFORCING STEEL & ESTIMATED QUANTITIES BRIDGE No. ERI 6-0873 LEFT & RIGHT OVER PIPE CREEK ERIE COUNTY Sta. 712+83.49 to 713+56.51

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
JHY	JHY	TWD	TWD	BJM FCM 9-23-60	

	ELEVATIONS		DIMENSIONS					REINFORCING BARS		
	A	B	A	B	C	D	E	A	B	
Right Bridge	Rear Abut.	613.32	607.5	2'-0 ⁷ / ₈ "	5'-5 ¹ / ₈ "	2'-0"	5'-4 ¹ / ₂ "	3'-3 ³ / ₈ "	R1001	R401
	Fwd. Abut.	613.11	606.0	2'-0"	5'-4 ¹ / ₂ "	2'-0 ⁷ / ₈ "	5'-5 ¹ / ₈ "	4'-7 ³ / ₈ "	R1002	R402
Left Bridge	Rear Abut.	613.24	607.5	2'-0"	5'-4 ¹ / ₂ "	2'-1 ³ / ₈ "	5'-5 ¹ / ₈ "	3'-2 ⁷ / ₈ "	R1003	R403
	Fwd. Abut.	613.02	606.0	2'-1 ³ / ₈ "	5'-5 ¹ / ₈ "	2'-0"	5'-4 ¹ / ₂ "	4'-6 ¹ / ₂ "	R1004	R404



PLAN (Left Rear and Right Forward Abutments shown)



ELEVATION

PROCEDURE: After the pedestals are placed the earth fill shall be made to the height of the earth bench and the excavation made for the cross-beam.

Porous Backfill shall extend upward to the approach slab, and to the surface of the earth shoulder and outward to the surface of the embankment slopes. Excavation therefore in excess of that required for construction of the abutment shall be considered as paid for in the bid price per cu. yd. paid for Porous Backfill.

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CONSULTING ENGINEERS
TOLEDO-OHIO

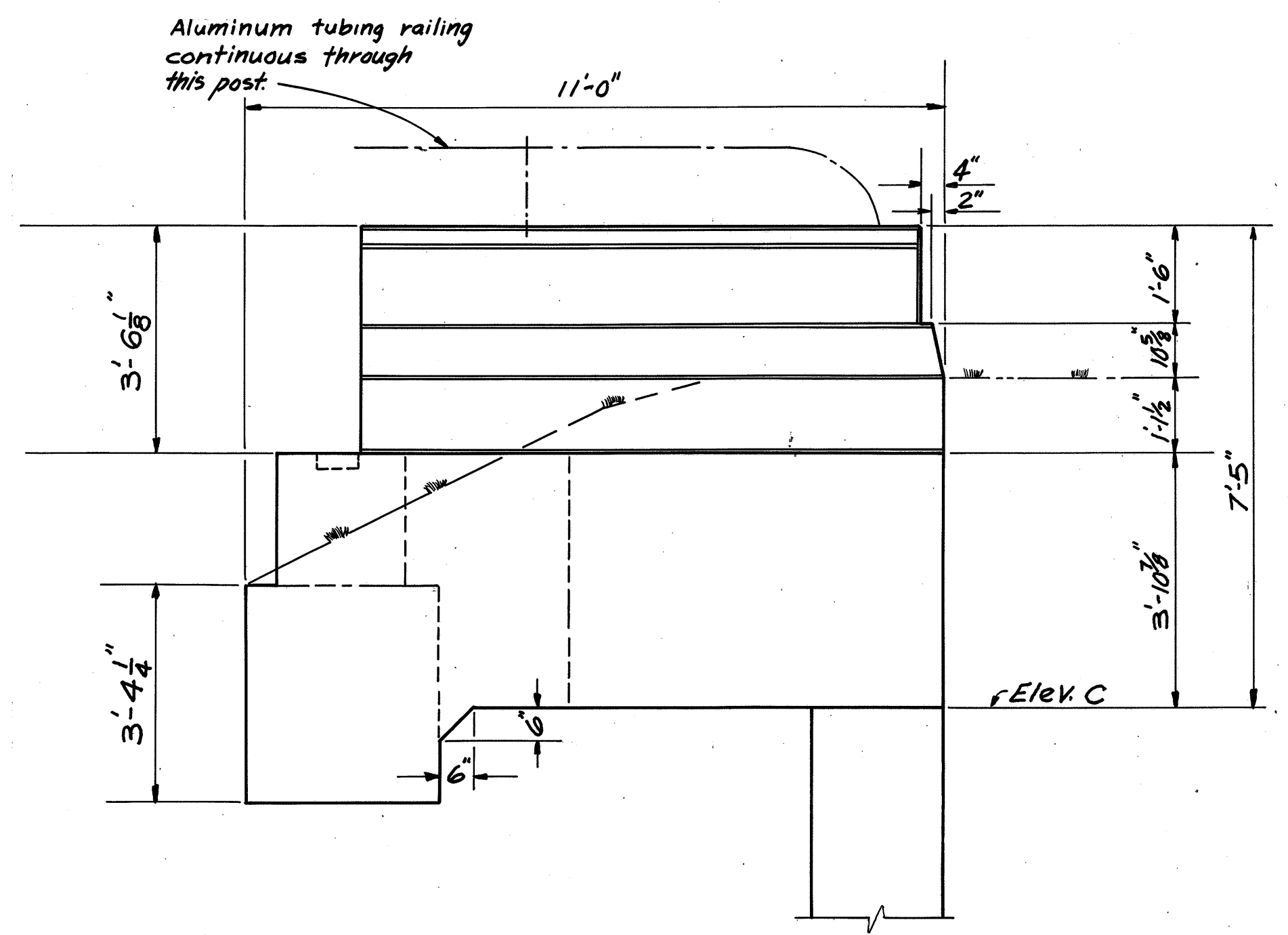
ABUTMENTS
BRIDGE No. ERI 6-0873 LEFT & RIGHT
OVER PIPE CREEK

ERIE COUNTY Sta. 712 + 83.49 to 713 + 56.51

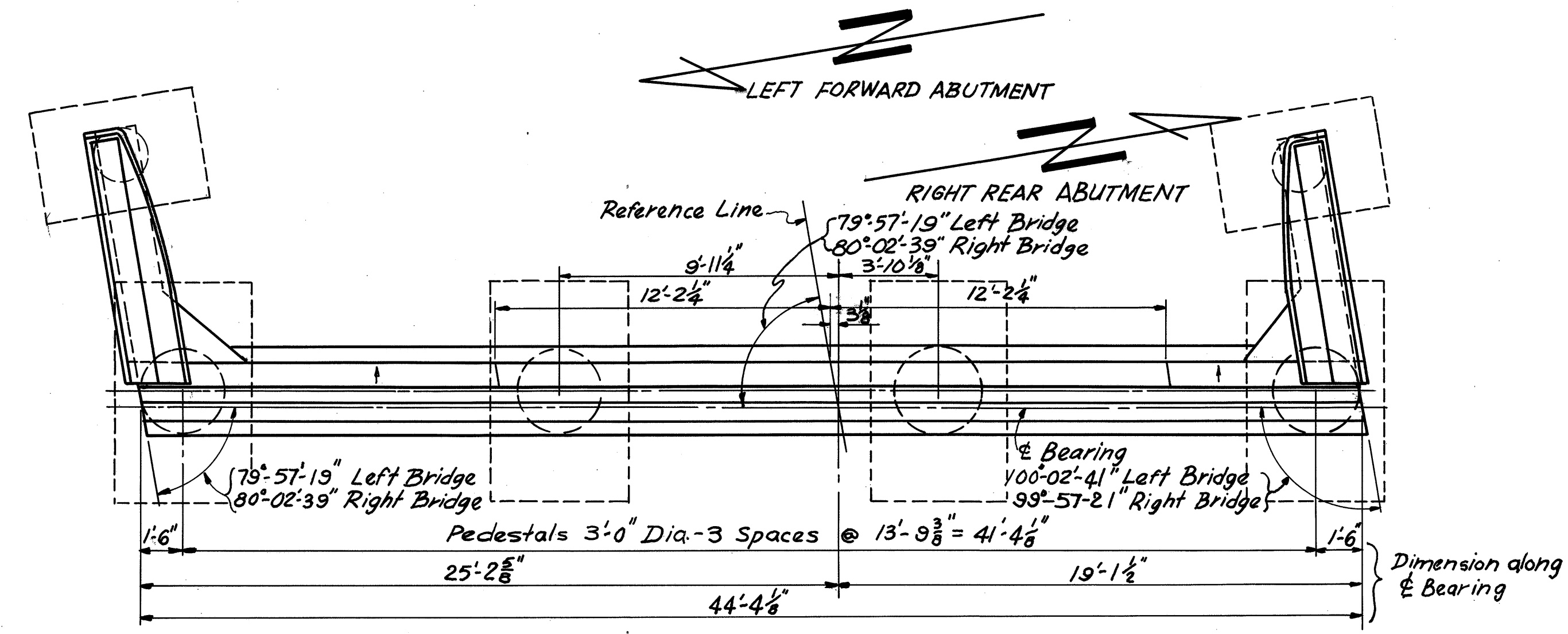
DESIGNED	DRAWN	TITLED	CHECKED	REVIEWED	DATE
JHY	JHY	CPS	TWD	B/JH	FCM 9-23-66

MICROFILMED
MAR 19 1965

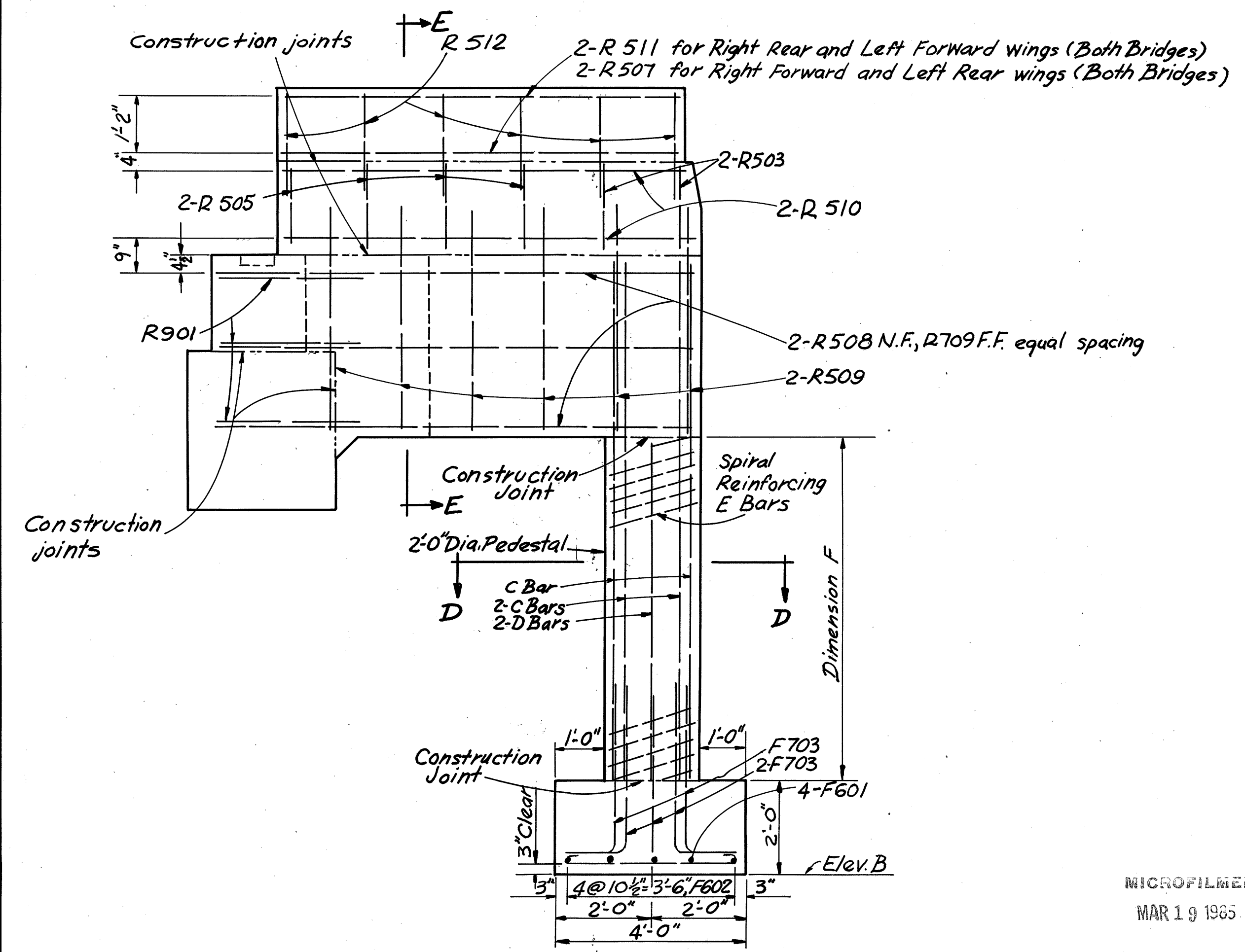
ERI. 6-731



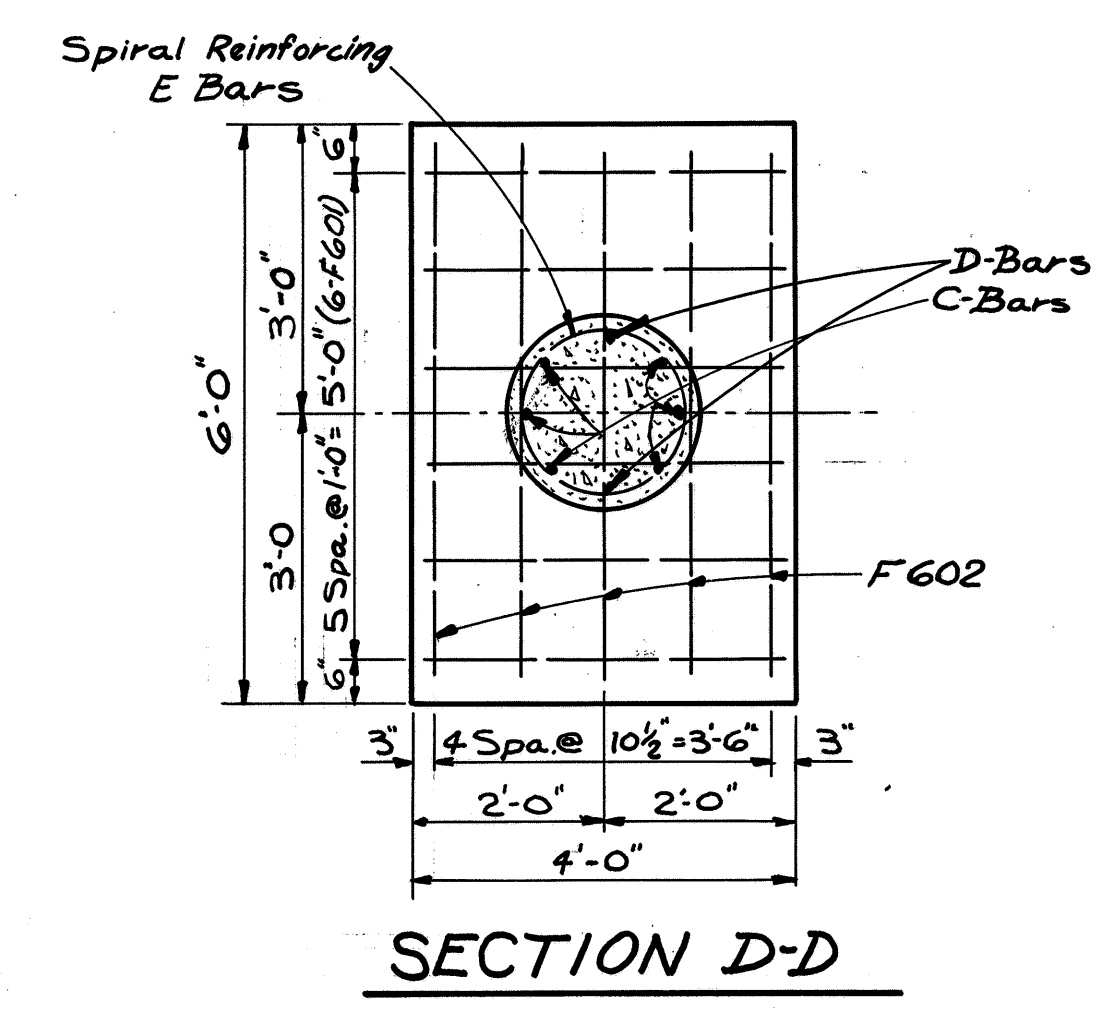
WINGWALL ELEVATION (CONSTRUCTION DETAILS)



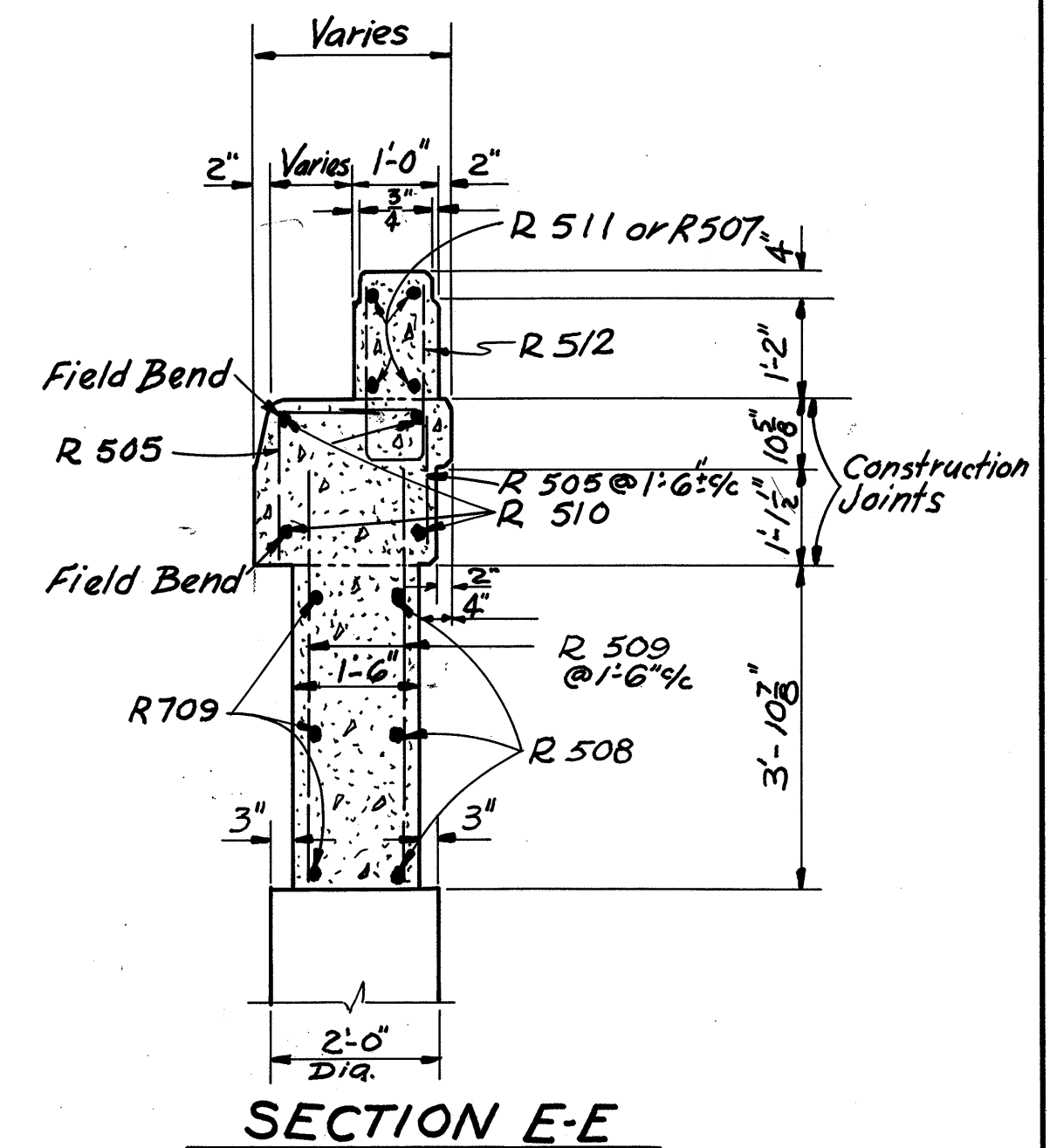
PLAN (Left Forward and Right Rear Abutments shown)
Details not shown are similar to Left Rear and Right Forward Abutments.



WINGWALL ELEVATION (REINFORCING BAR DETAILS)



SECTION D-D



SECTION E-E

	ELEVATIONS	DIMENSION			REINFORCING BARS		
		B	C	F	C	D	E
Right Bridge	Right Rear Wing	607.5	614.80	5'-3 3/8"	R701	R705	R407
	Left Rear Wing	607.5	614.86	5'-4 3/8"	R701	R705	R408
	Right Fwd. Wing	606.0	614.53	6'-6 3/8"	R702	R706	R409
	Left Fwd. Wing	606.0	614.59	6'-7 3/8"	R702	R706	R410
Left Bridge	Right Rear Wing	607.5	614.83	5'-4"	R701	R705	R411
	Left Rear Wing	607.5	614.72	5'-2 5/8"	R703	R707	R412
	Right Fwd. Wing	606.0	614.55	6'-6 3/8"	R702	R706	R413
	Left Fwd. Wing	606.0	614.44	6'-5 1/4"	R704	R708	R414

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MAR 19 1965

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TOLEDO, OHIO

ABUTMENT WINGWALLS
BRIDGE No. ERI 6-0873 LEFT & RIGHT
OVER PIPE CREEK

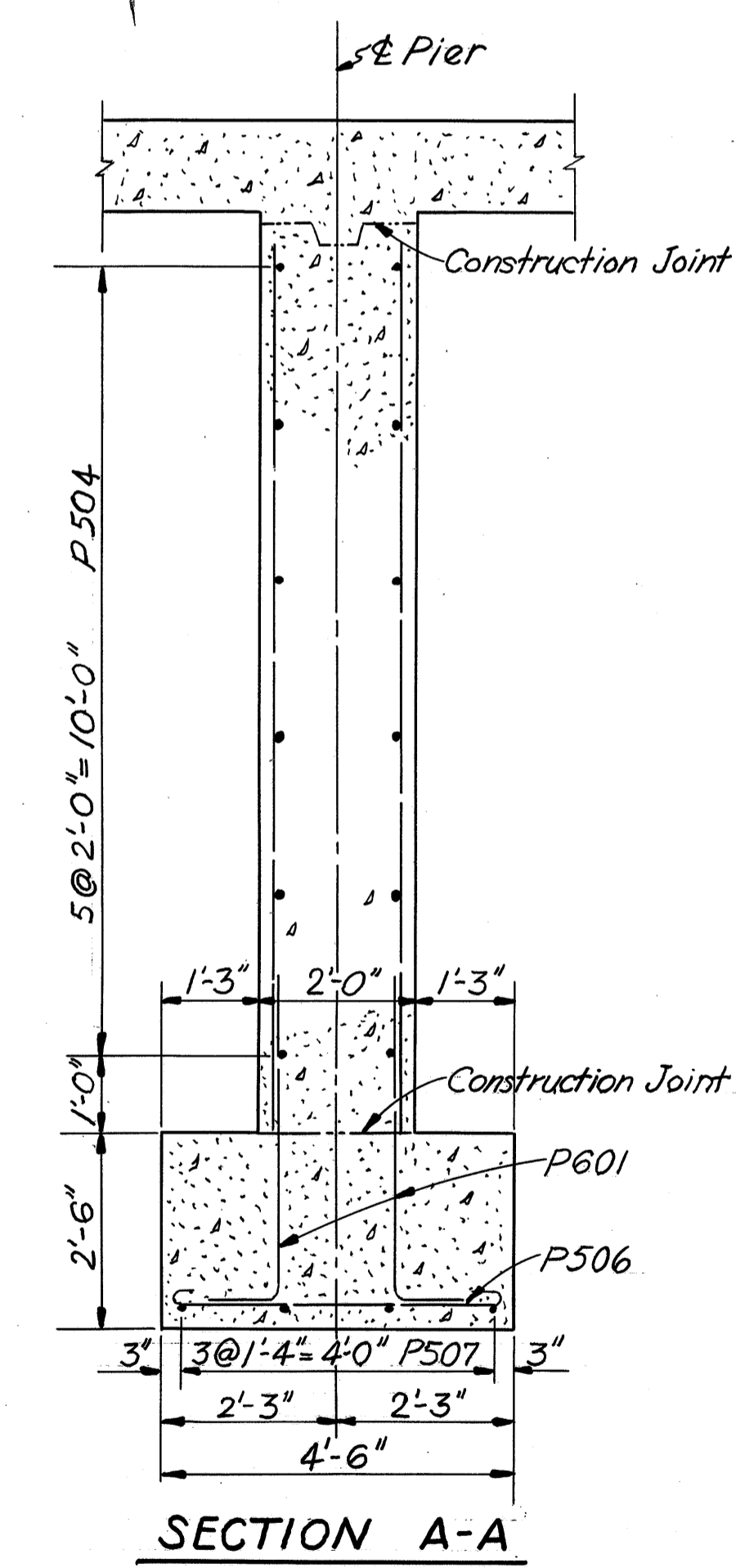
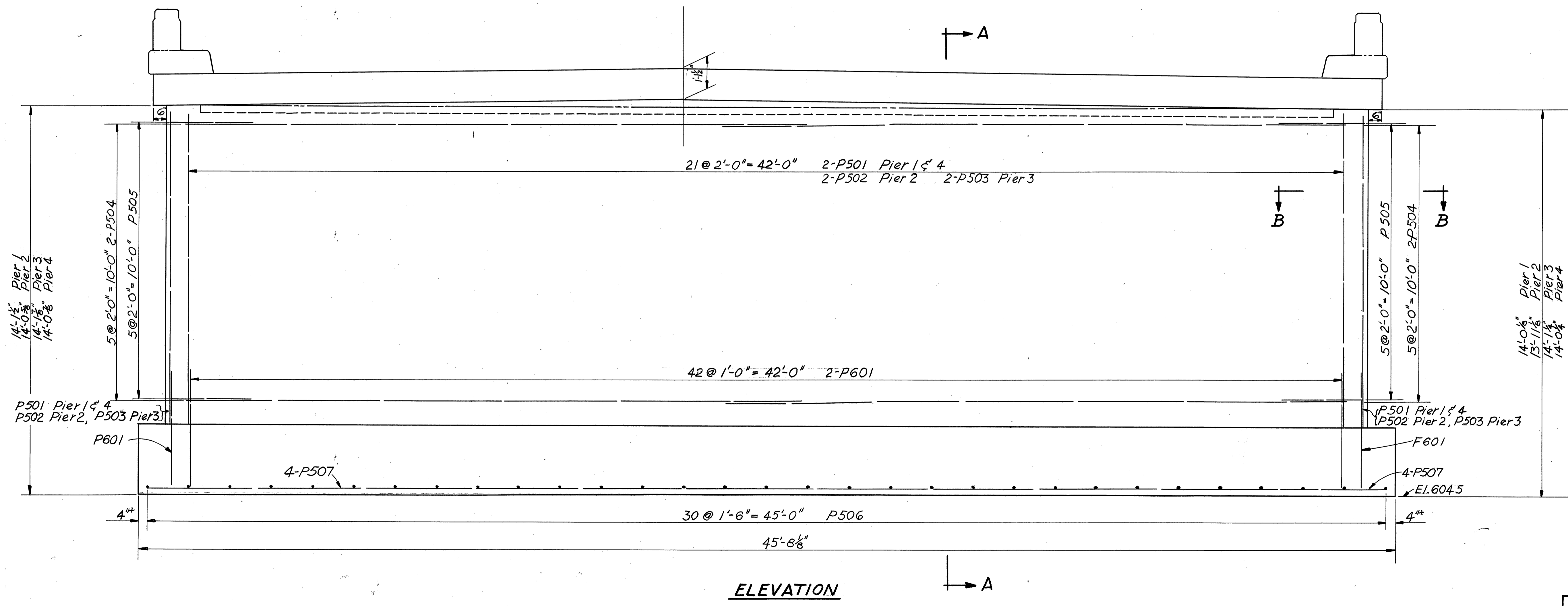
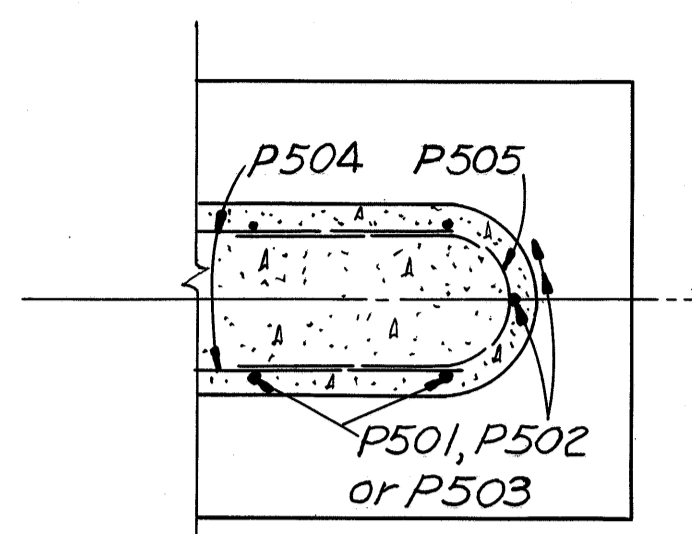
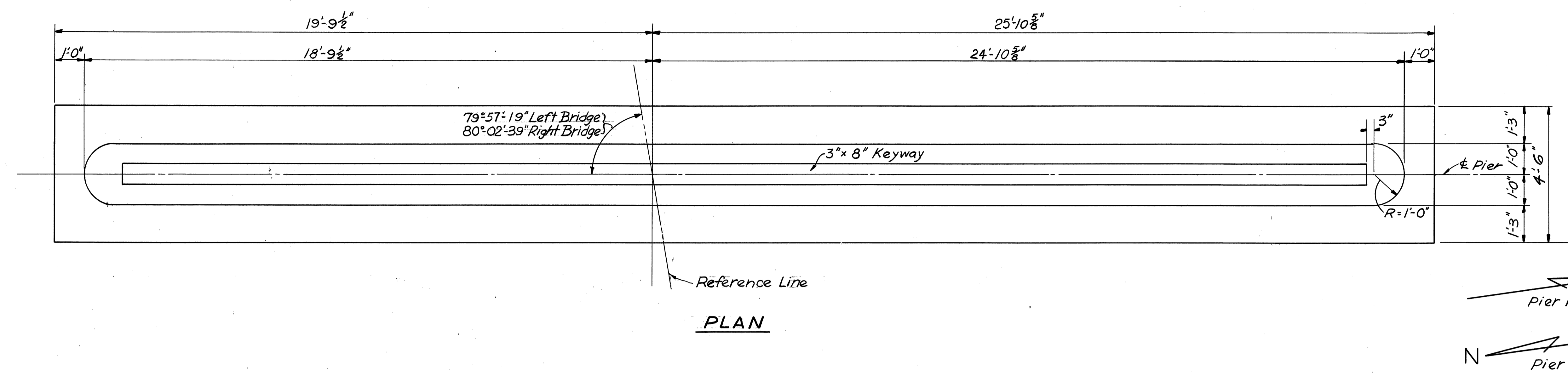
ERIE COUNTY STA. 712 + 83.49 to
713 + 56.51

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.H.Y.	J.H.X.	CPS	TWP	FCM	9-23-60	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-FG-1042(6)	

121
161

ERI.6-731

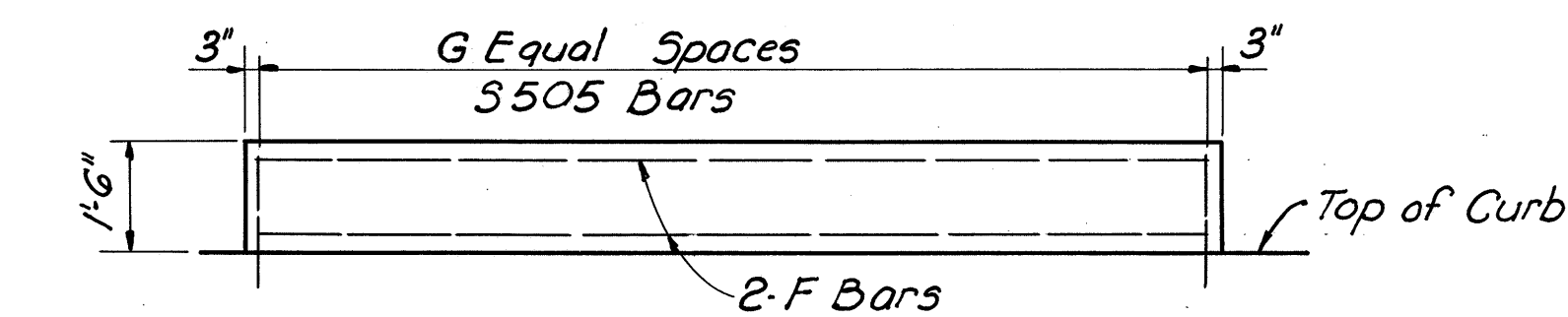
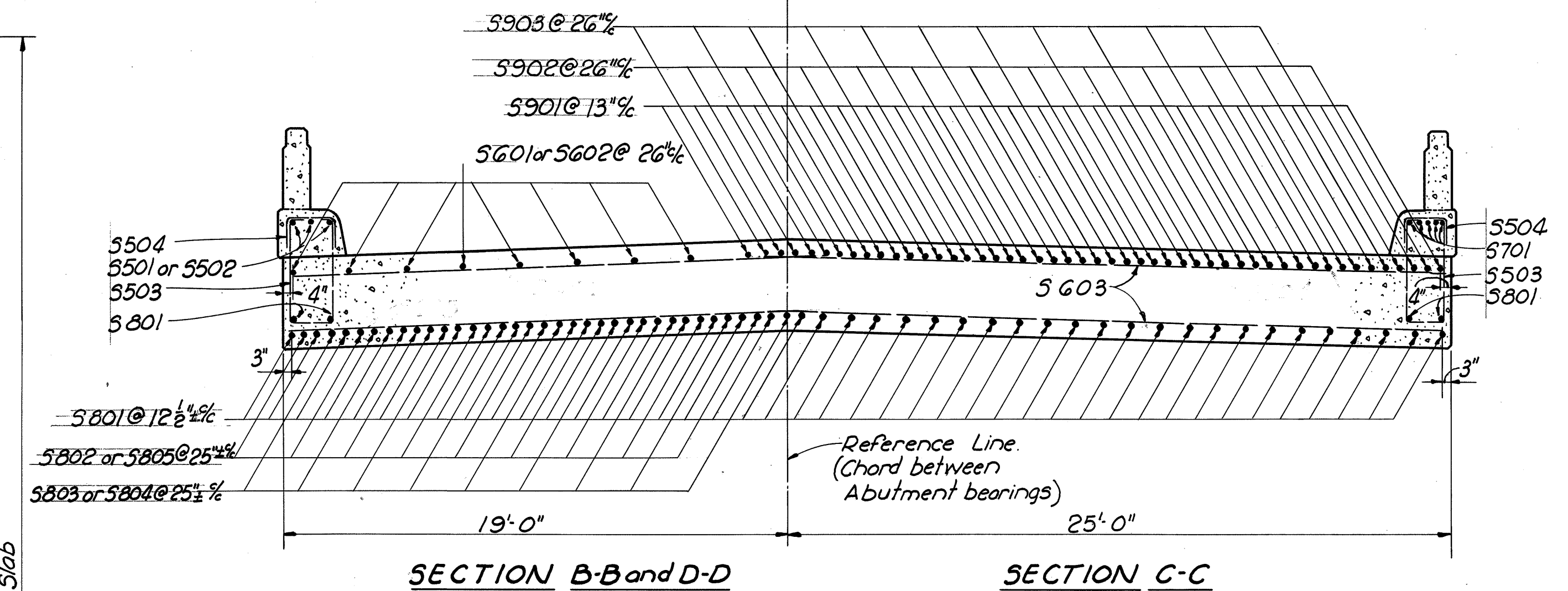
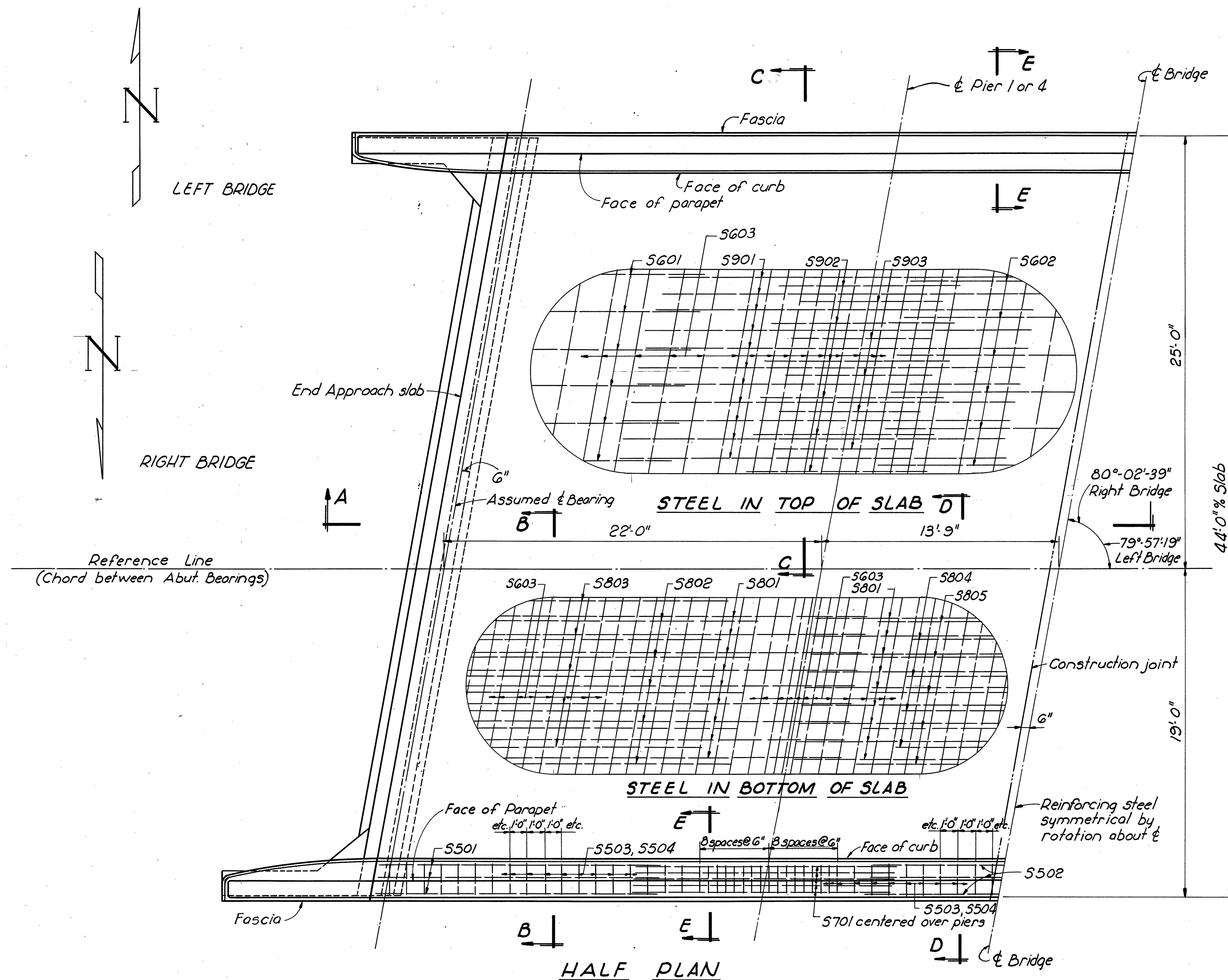


MICROFILMED
MAR 19 1965

SANZENBACHER, MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

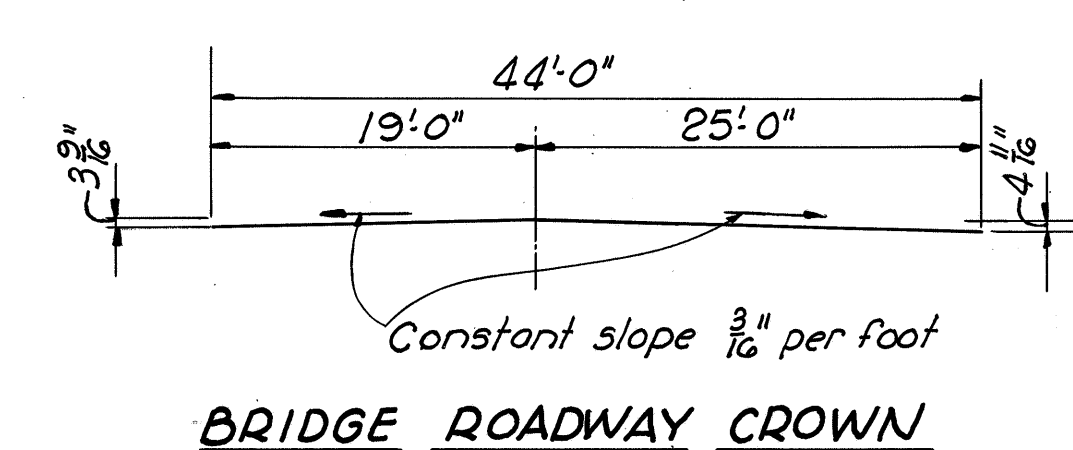
PIERS
BRIDGE No. ERI 6-0873 LEFT & RIGHT
OVER PIPE CREEK
ERIE CO. STA. 712+83.49 TO
713+56.51

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JHY	JHY	CPS	TWD	BTH		
				FCM	9-23-64	

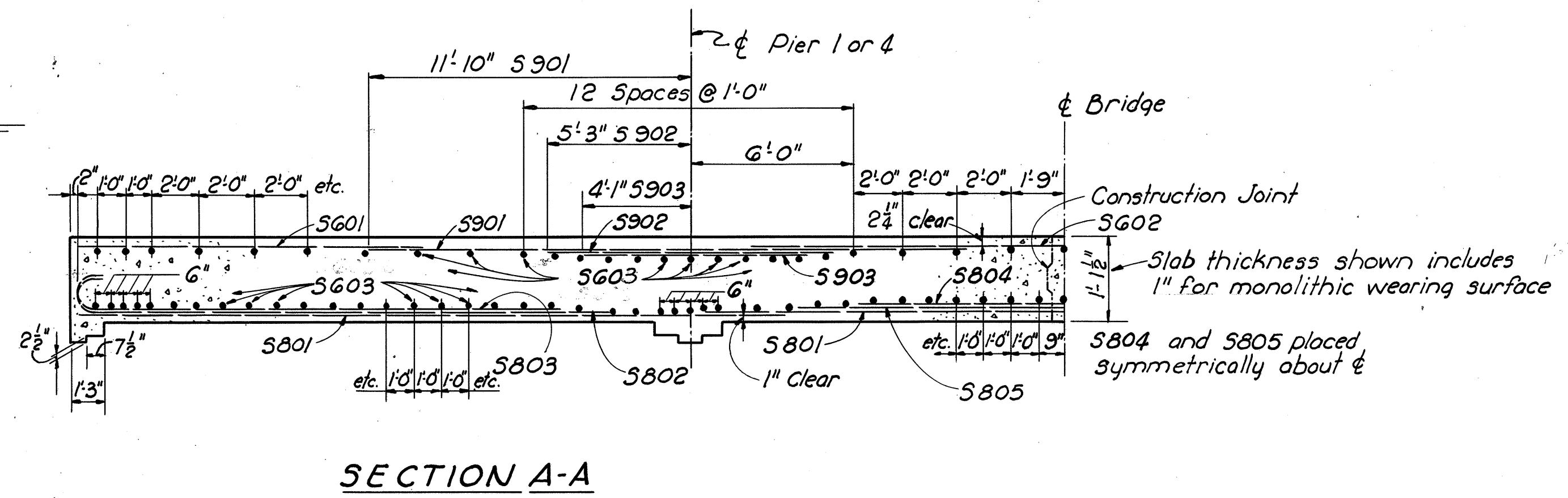


Parapet Length (See Sheet 2)	No. of Spaces G	Reinforcing Bars F
18'-11 1/2"	13	S506
3'-8 1/2"	3	S507
13'-9 1/2"	9	S508
13'-10"	9	S508
3'-8"	3	S507
19'-0 3/8"	13	S509

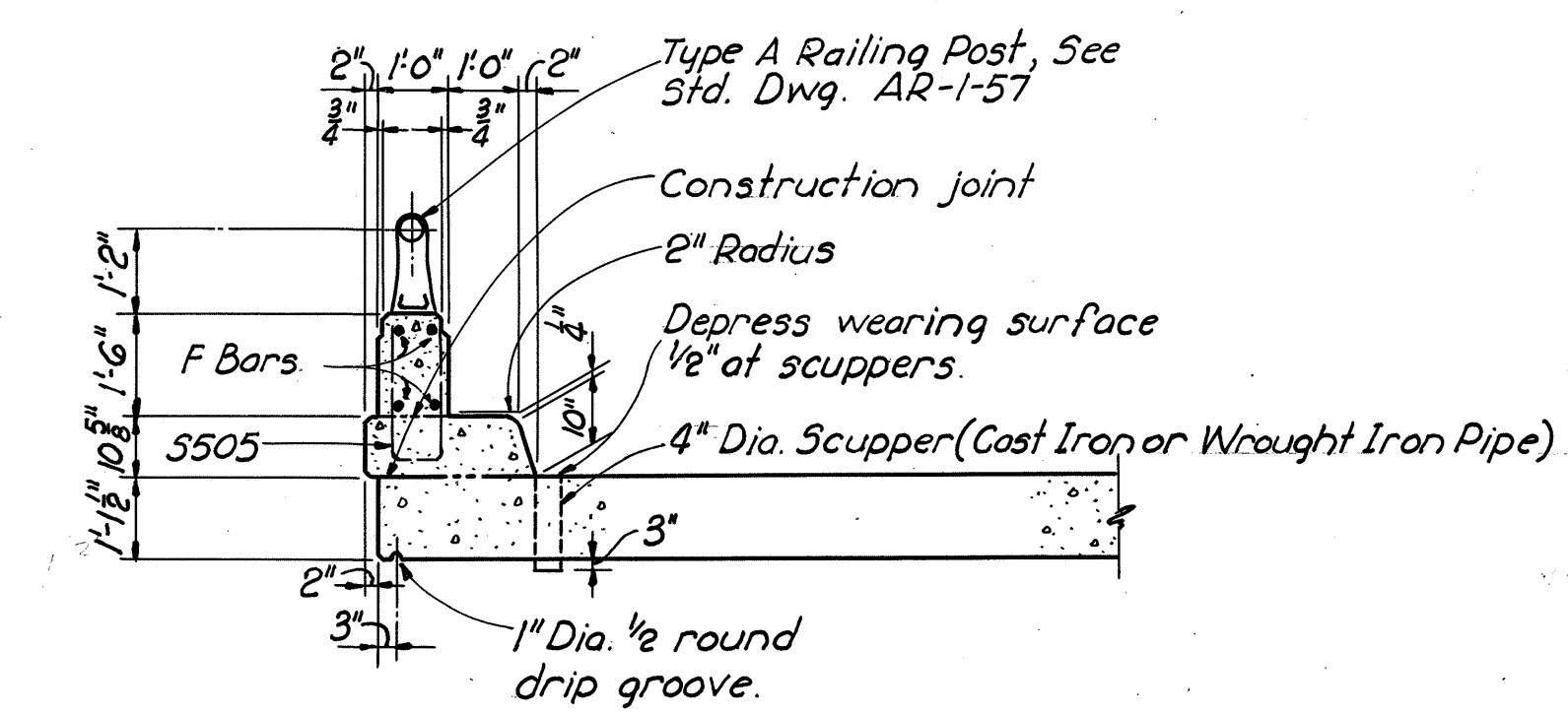
PARAPET REINFORCING



BRIDGE ROADWAY CROWN



SECTION A-A



SECTION E-E

Note: A longitudinal construction joint may be placed in the superstructure slab on the centerline of Roadway.

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TOLEDO OHIO

SUPERSTRUCTURE DETAILS
BRIDGE No. ERI-6-0873 LEFT & RIGHT
OVER PIPE CREEK
ERIE COUNTY STA. 712+83.49 TO
713+56.51

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
JHY	JHY	TWD	TWD	B-JH FCM 9-23-60	

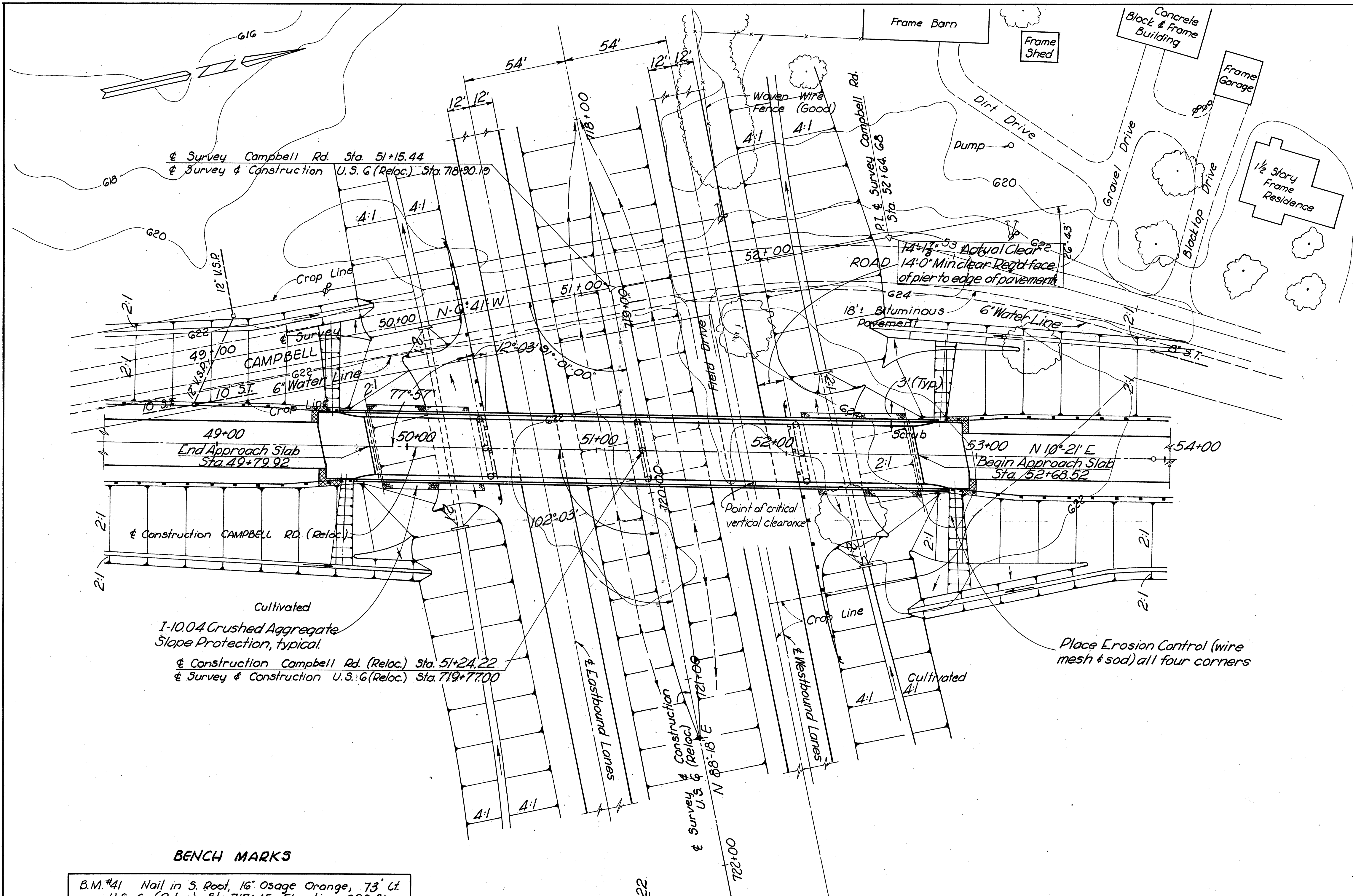
CONSTRUCTION JOINT

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	123 161
2	OHIO	F-FG-1042(6)		

ERI. 6-7.31
6.0 Miles West of Huron

CURVE DATA

Δ	=	16° 14' Rt
D	=	2° 00'
R	=	2864.79'
T	=	408.57'
L	=	811.67'
E	=	28.99'
P.C.	=	53+53.77
P.I.	=	57+62.34
P.T.	=	61+65.44



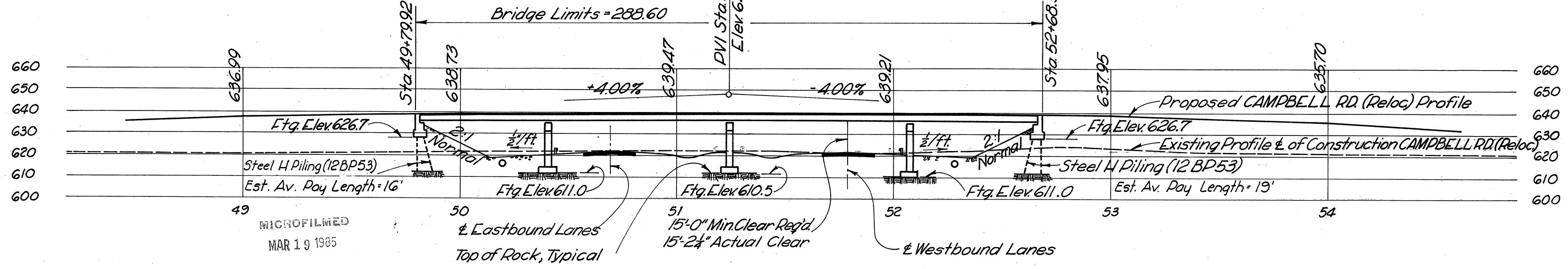
Design Year Traffic
ADT (1979) = 2190

FOUNDATION SOUNDINGS
Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division Office, but the State does not guarantee the accuracy thereof.

PROPOSED STRUCTURE
Type: Continuous steel beam with reinf. concrete deck. Reinf. concrete pier bents and stub abutments.
Spans: 58'-6", 83'-6", 83'-6", 58'-6" % Brgs.
Roadway: 30'-0" face to face of 2'-3" safety curbs.
Load Frequency: CF-130 (57)
Skew: 12° 03' Right Forward
Wearing Surface: 3" Monolithic Concrete
Approach Slabs: AS-1-54 (25'-0" Long)
Alignment: Tangent

BENCH MARKS

B.M. #41 Nail in S. Roof, 16" Osage Orange, 73' Lt. U.S. G. (Reloc.) Sta. 717+15, Elevation 620.31
B.M. #42 Nail in S. Roof, 20" Fir, 86' Rt. Campbell Rd. Sta. 51+80, Elevation 623.63



SANZENBACHER MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

SITE PLAN
BRIDGE NO. ERI. 6-0886
UNDER CAMPBELL ROAD
ERIE COUNTY STA 49+79.92
SCALE 1"=30' STA 52+68.52

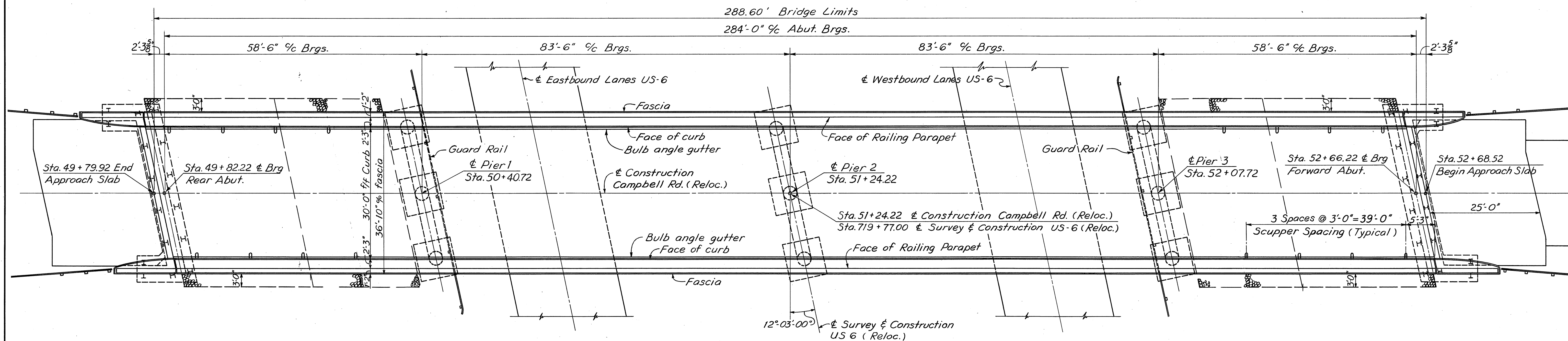
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
S.M.O.	RJH-BB	CES	CES	TWD	PCW 9-23-88

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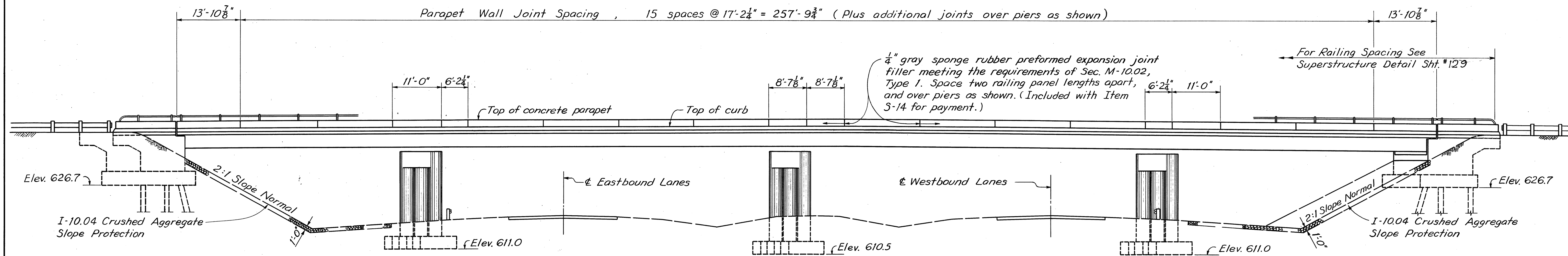
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-FG-1042(6)	

124
161

ERI 6-7.31



GENERAL PLAN



GENERAL ELEVATION

MICROFILMED
MAR 19 1965

SANZENBACHER, MILLER & BRIGHAM CONSULTING ENGINEERS TOLEDO, OHIO					
GENERAL PLAN & ELEVATION					
BRIDGE NO. ERI 6-0886 UNDER CAMPBELL ROAD ERIE COUNTY Sta. 49 + 79.92 to Sta. 52 + 68.52					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
RAR	RAR	JHY	TWD	BJM FCM	9-23-60

ERI 6-7.31

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shape	Bending Diagrams		Mark	No.	Length	Weight	Shape		
ABUTMENTS							SUPERSTRUCTURE						
R901	10	7'-10"	266	B	R901 5'-10"		S701	343	37'-0"	25,940	S		
R902	10	9'-0"	306	B	R902 7'-0"		S601	343	37'-0"	19,062	S		
R701	24	12'-7"	617	B	R701 11'-9"		S602	456	37'-4"	25,570	S		
R702	4	16'-9"	137	B	R702 13'-5"		S603	72	30'-0"	3,244	S		
R703	4	15'-9"	129	B	R703 12'-5"		S501	432	4'-4"	1,953	B		
R601	60	15'-2"	1,367	B	R601 6'-4"		S502	16	13'-7"		S		
R501	88	6'-2"	566	B	R501 3'-5%		S503	16	10'-8"		S		
R502	50	6'-7"	343	S	R502 1'-7%		S504	16	5'-10"		S		
R503	50	6'-10"	356	B	R503 6'-4"		S505	16	8'-3"		S		
R504	54	6'-3"	352	B	R504 5'-8"		S506	96	16'-10"		S		
R505	12	40'-2"	503	S	R505 7'-0"		S507	382	3'-11"	1,560	B		
R506	26	36'-7"	992	S	R506 1'-5"		S508	382	6'-0"	2,391	B		
R507	4	13'-4"	56	S	R507 1'-5"		REPLACEMENT BARS						
R508	64	8'-4"	556	B	R508 1'-7%		RE101	1	7'-7"		S		
R509	8	15'-4"	128	B	R509 1'-5%		RE100	1	7'-3"		S		
R510	16	7'-3"	121	S	R510 0'-7%		RE901	1	6'-10"		S		
R511	12	3'-6"	44	S	R511 7'		RE801	1	6'-6"		S		
R512	40	5'-10"	243	B	R512 5'-8%		RE701	2	6'-3"		S		
R513	8	12'-11"	108	S	R513 1'-0"		RE601	3	5'-11"		S		
R514	24	3'-7"	90	S	R514 1'-3%		RE501	1	5'-7"		S		
R515	8	4'-1"	34	S	R515 8'-8"		RE401	1	5'-3"		S		
R516	12	8'-11"	112	S	R516 6'-5"		PIERS						
R517	24	11'-9"	294	S	R517 7'-4"		F1001	90	7'-1"	2,743	B		
R518	8	15'-0"	125	S	R518 9'-0"		F801	162	8'-10"	3,821	B		
R519	8	8'-2"	68	S	R519 3'-9"		P1101	6	38'-10"	1,238	B		
R520	16	11'-0"	184	S	R520 7'-3%		P1102	6	39'-8"	1,264	B		
R521	16	2'-8"	44	S	R521 9'-0"		P1103	9	15'-6"	741	S		
R522	20	6'-10"	143	B	R522 3'-0"		P1001	60	19'-9"	5,099	S		
R523	8	12'-5"	104	S	R523 8'-8"		P1002	30	20'-7"	2,657	S		
R524	4	12'-1"	50	B	R524 6'-5"		P1003	6	33'-0"	852	S		
R525	20	5'-0"	104	B	R525 7'-4"		P1004	6	32'-10"	848	S		
R526	12	4'-4"	54	B	R526 9'-0"		P1005	6	32'-3"	833	S		
R527	8	2'-8"	22	B	R527 0'-10"		P1006	6	31'-9"	820	S		
R528	4	12'-3"	51	S	R528 3'-6"		P801	12	9'-7"	307	B		
R529	40	1'-6"	63	B	R529 9'		S501		2'-0"		S		
R530	8	12'-10"		S	R530 7'-4"		S507		2'-11"		S		
R531	8	12'-5"		S	R531 9'-0"		S508		2'-9"		S		
R532	2	10'-9"	22	B	R532 7'-4"		SPIRAL REINFORCING LIST						
R533	4	12'-5"	52	B	R533 9'-0"		Mark	No.	Length	Pitch	No. Turns	Weight	
R534	2	9'-10"	21	B	R534 8'-8"		SP401	6	32"	15' 11"	4 1/2"	46	1,780
R535	8	7'-0"	58	S	R535 6'-5"		SP402	3	32"	16' 9 1/2"	4 1/2"	48	930

* Included with Item S-14 for payment

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Abutment		Pier			Super-structure	General
				Rear	Forward	1	2	3		
E-2	Lump	Sum	Cofferdams, cribs and sheeting							Lump
E-2	531	Cu.Yds.	Unclassified excavation	134	134	77	100	86		
E-2	16	Cu.Yds.	Rock excavation			5	9	2		
S-1	300	Cu.Yds.	Class "C" concrete, superstructure						300	
S-1	84	Cu.Yds.	Class "C" concrete, pier caps and columns			28	28	28		
S-1	160	Cu.Yds.	Class "E" concrete, abutments	80	80					
S-1	51	Cu.Yds.	Class "E" concrete, pier footings			17	17	17		
S-4	113,669	Lbs.	Reinforcing steel	4442	4443	8305	8453	8306	79,720	
S-7	317,000	Lbs.	Structural steel						317,000	
S-8	317,000	Lbs.	Field painting of structural steel, as per plan						317,000	
S-14	623	Lin.Ft.	Railing (aluminum rail and supports, concrete parapet)						623	
S-16	Lump	Sum	First test pile							Lump
S-18	560	Lin.Ft.	Steel piles, 12 BP53	260	300					
S-29	26	Cu.Yds.	Porous backfill	13	13					
S-29	16	Each	Scuppers						16	
I-10	540	Sq.Yds.	Crushed aggregate slope protection						540	

GENERAL NOTES

REFERENCE shall be made to Standard Drawings AS-1-54 "Reinforced Concrete Approach Slabs," revised 12-1-54; RB-1-55 "Rockers and Bolsters" revised 2-2-59; AR-1-57 "Aluminum Railing with Concrete Parapet," revised 2-2-59; and CSB-2-56 "Continuous Steel Beam Bridge" (sheets 2 & 3 of 6 sheets), revised 2-2-59, and to Supplemental Specification S-101, dated 12-2-59.

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

CONCRETE DECK PLACING:
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 parallel to the transverse reinforcing steel and are located near the center of any span.

EXCAVATION AND BACKFILL:
Excavation quantity includes the removal of fill material between the surface of the proposed embankment and the bottom of the footings. Backfill behind the abutments shall be compacted in accordance with the requirements for embankment compaction.

STRUCTURAL STEEL: See Proposal regarding A373 steel.

MACHINE FINISH: The top of the bridge deck slab shall be machine finished in accordance with the Proposal Note "Machine Finishing of Bridge Deck Slabs."

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.

PILES shall be driven with a hammer of not less than 11,000 ft. lbs. energy per blow 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. 18.05 is not less than the following value for a pile hammer of the indicated energy rating:
53 tons per pile using an 11,000 ft. lb. hammer
45 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 load is 28 tons per pile for the abutment piles.

PIER FOOTINGS shall extend a minimum of 3" into solid rock or to the elevations shown, whichever is lower.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 7 tons per sq. ft.

BAR SIZE is indicated in the bar mark. The first digit where three digits are used and the first two digits where four are used, indicate the bar size number. For example, a P501 is a No. 5 size bar, and a P1101 is a No. 11 size.

REPLACEMENT BARS: If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec. S-4.02 need not be furnished and replacement bars will not be required.

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown 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. One and a half closed coils shall be provided at the ends of each spiral unit.
Four steel channel, tee or angle spacers, weighing approximately 0.68 lb per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

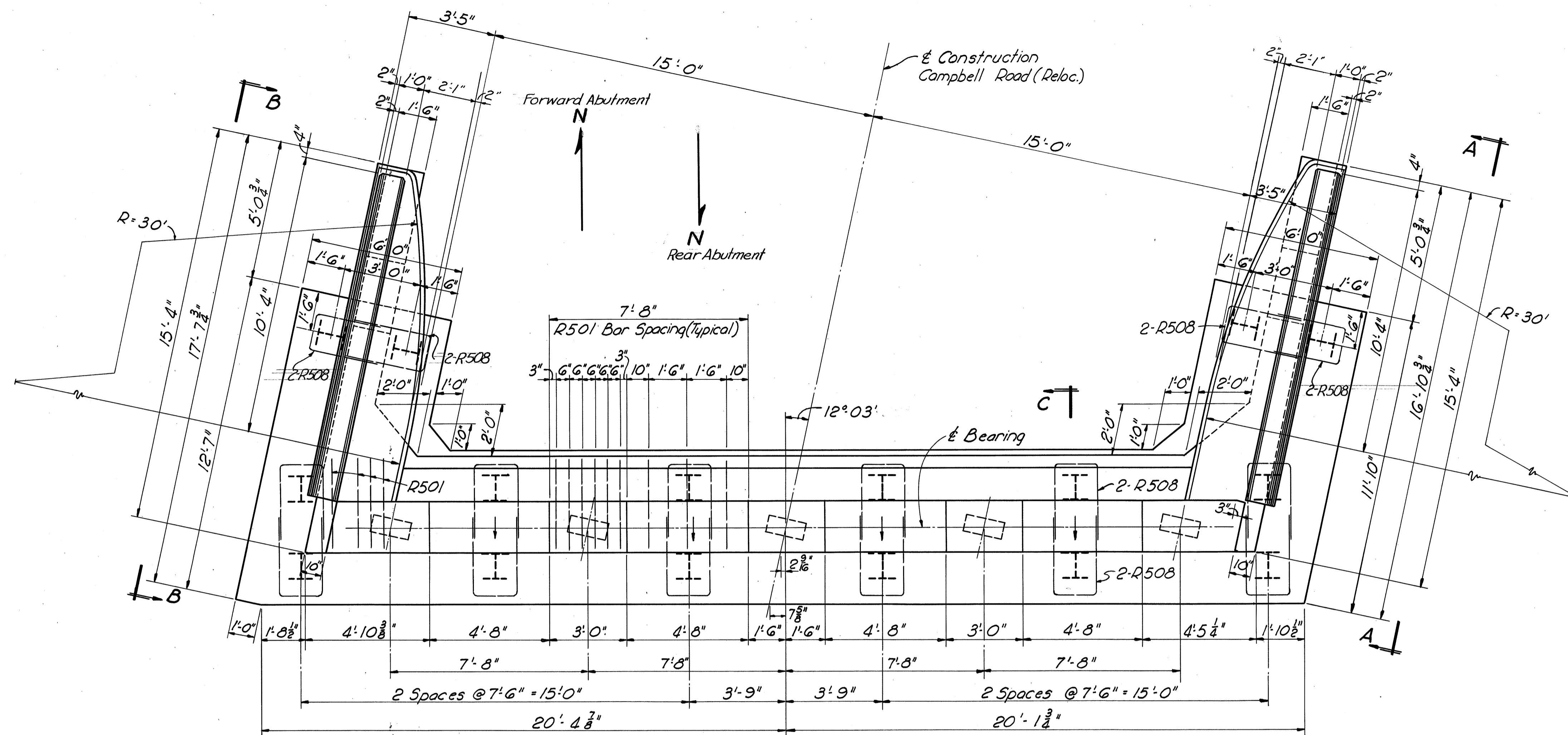
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CONSULTING ENGINEERS
TOLEDO OHIO

GENERAL NOTES, REINFORCING
STEEL & ESTIMATED QUANTITIES
BRIDGE NO. ERI. 6-0886
UNDER CAMPBELL ROAD
ERIE COUNTY Sta. 49 +79.92 to
Sta. 52 +68.52

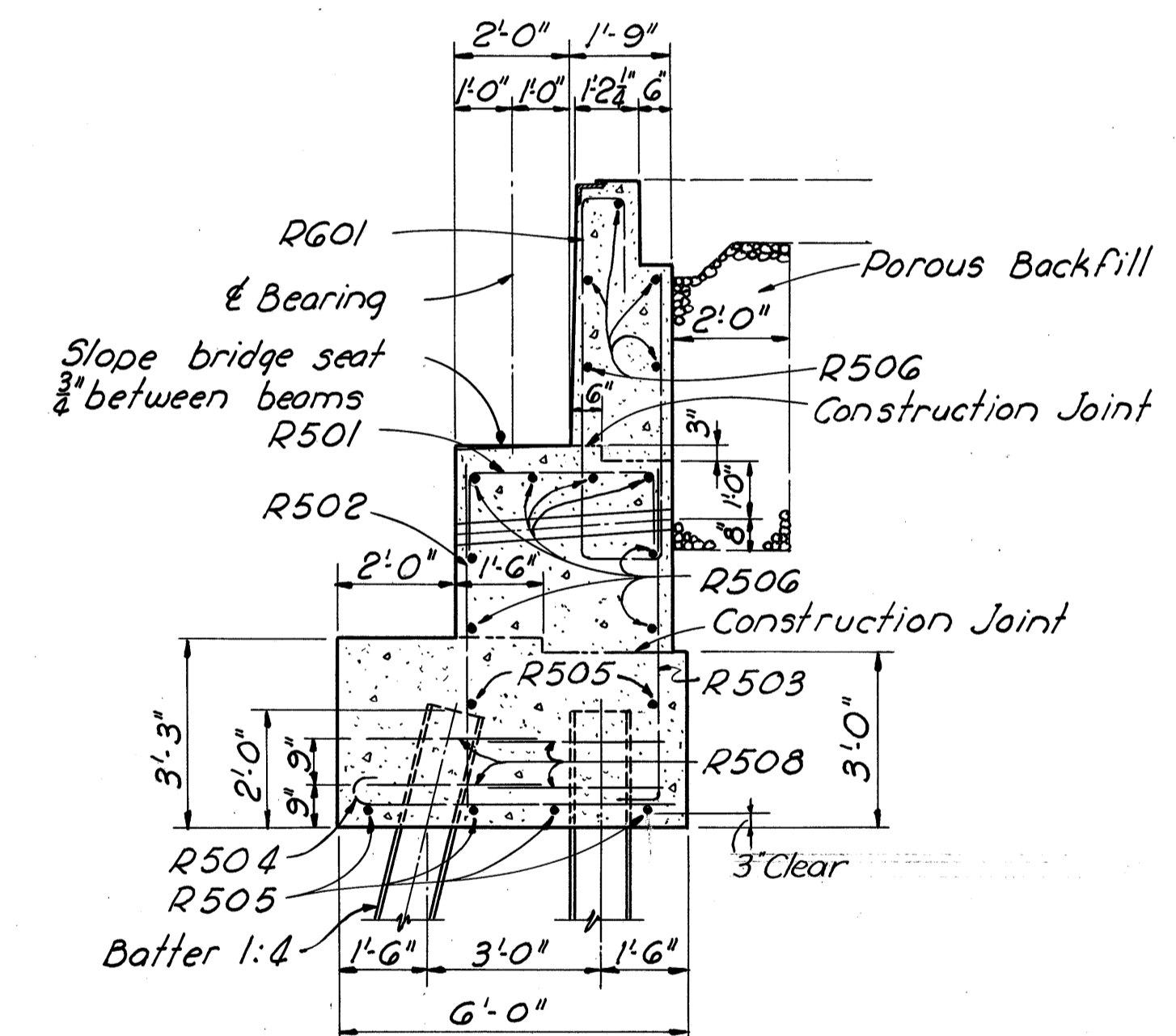
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JHY	RAR	JHY	TWD	BJH	FCM 9-23-60	

ERI 6-7.31

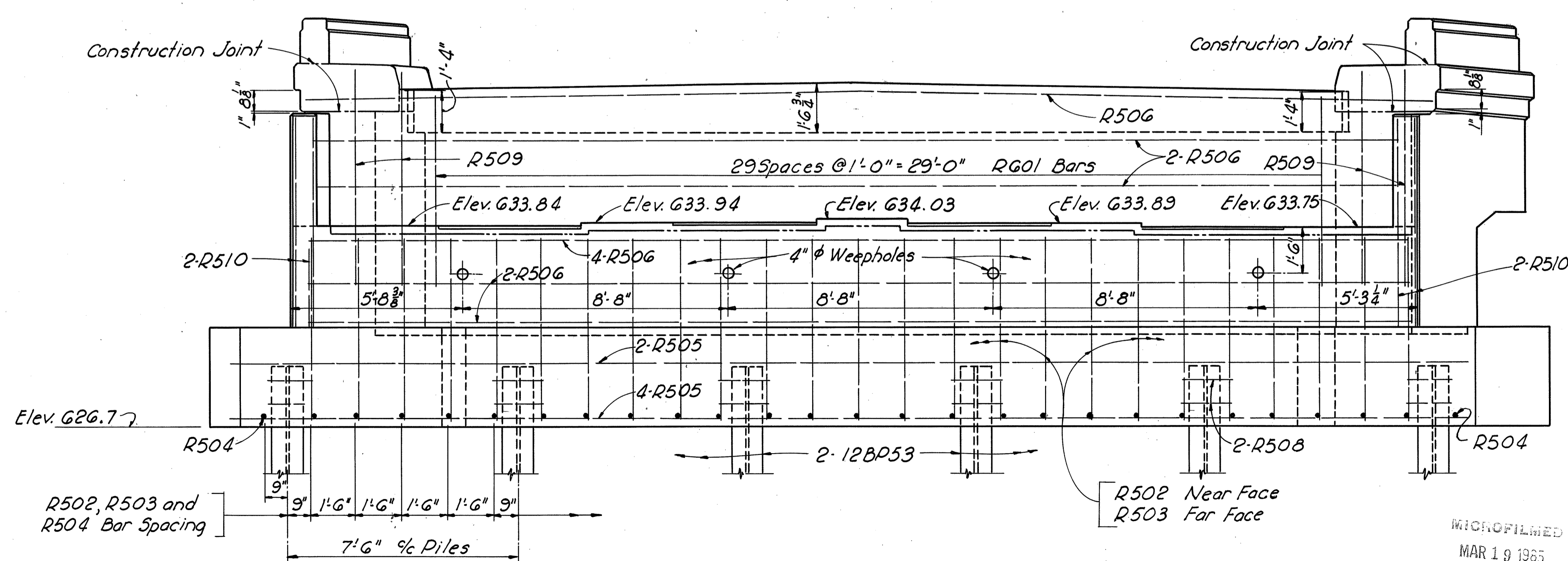


PLAN

PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments, after which excavation shall be made for the abutment, and the piles driven.



SECTION C-C



ELEVATION

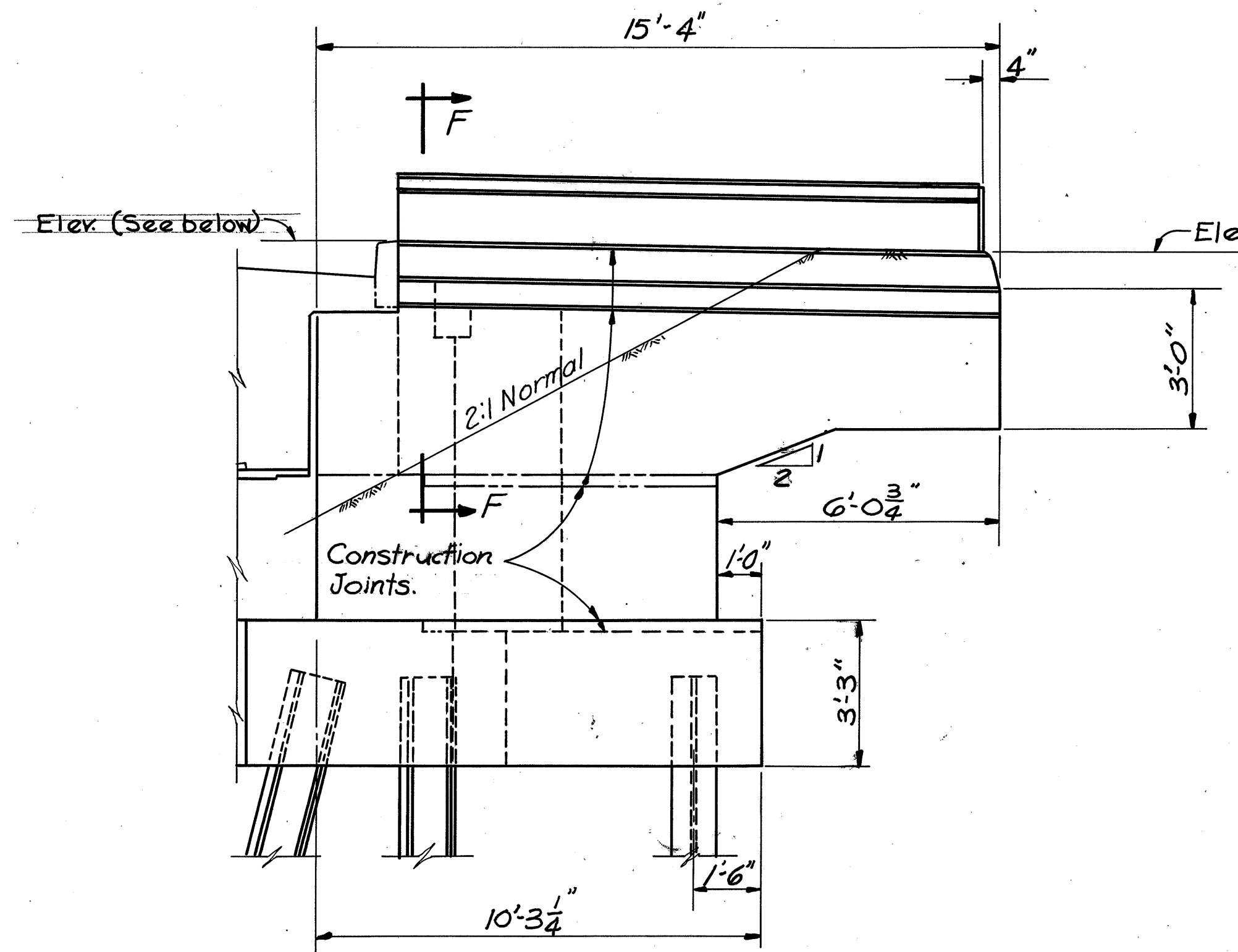
MICROFILMED
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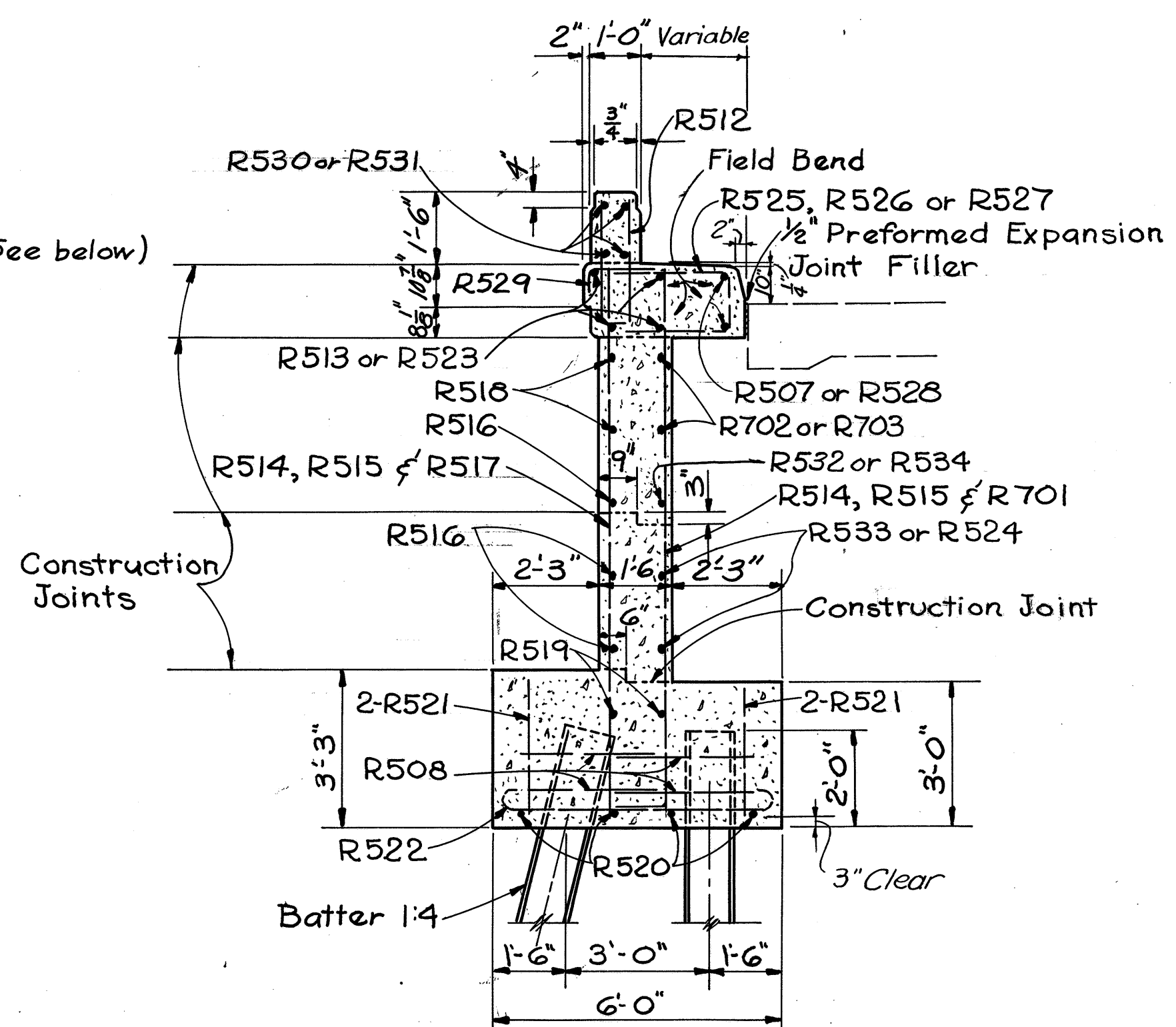
ABUTMENTS
BRIDGE NO. ERI 6-0886
UNDER CAMPBELL ROAD
ERIE COUNTY Sta. 49+79.92 to
Sta. 52+68.52

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAR	RAR	TWD	TWD	B.J.H. FCM	9-23-60	

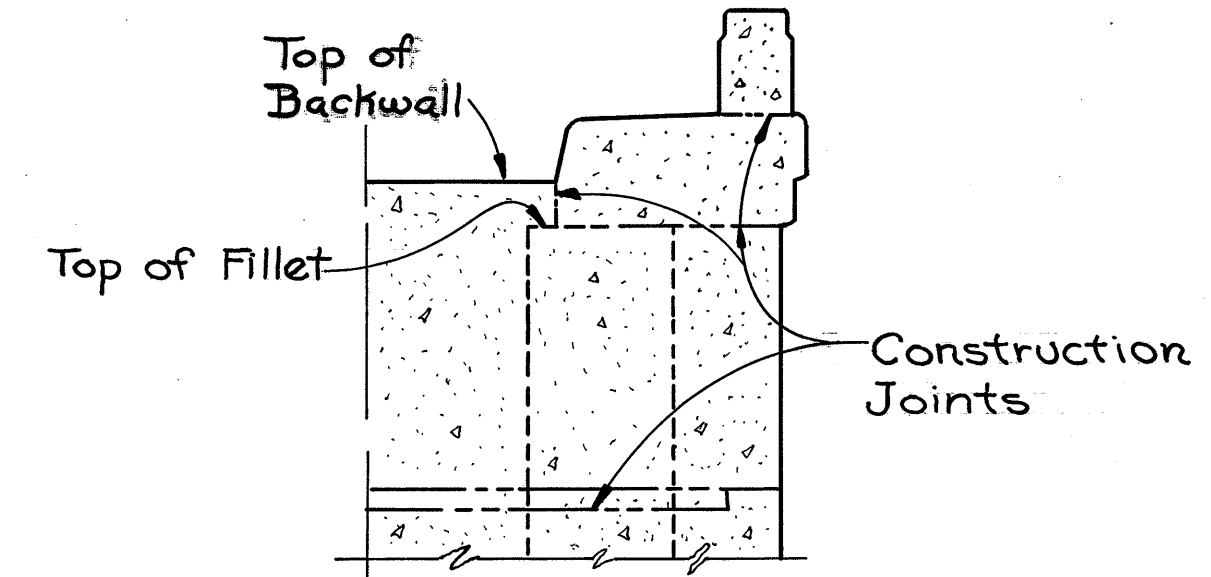
ERI 6-7.3/



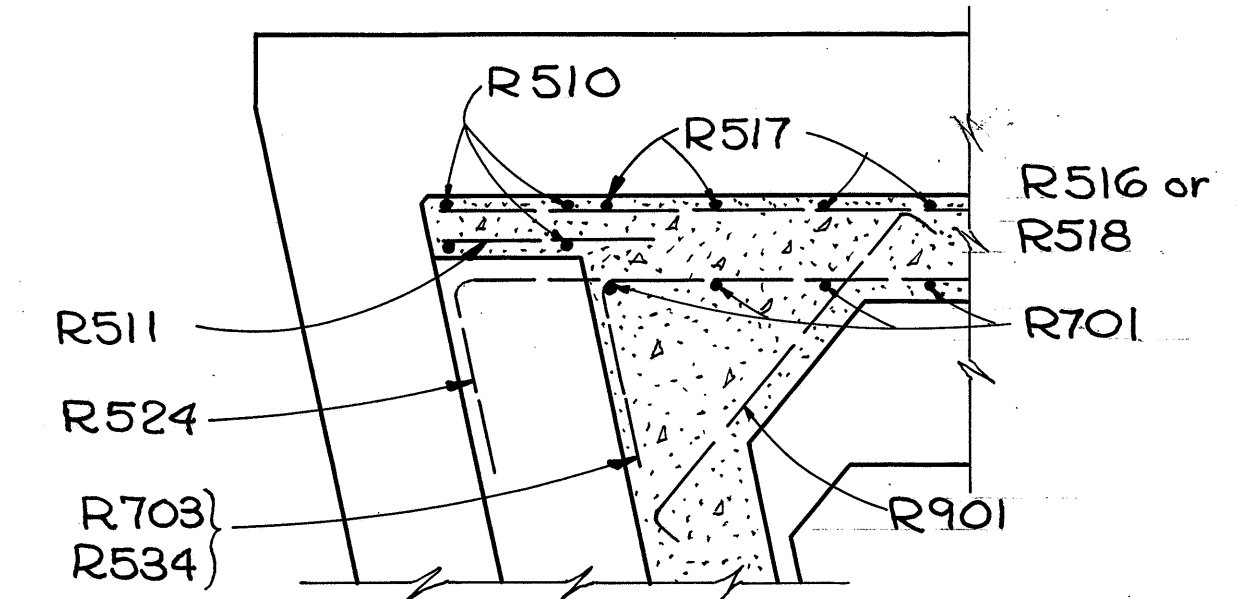
WINGWALL ELEVATION
(Construction Details)



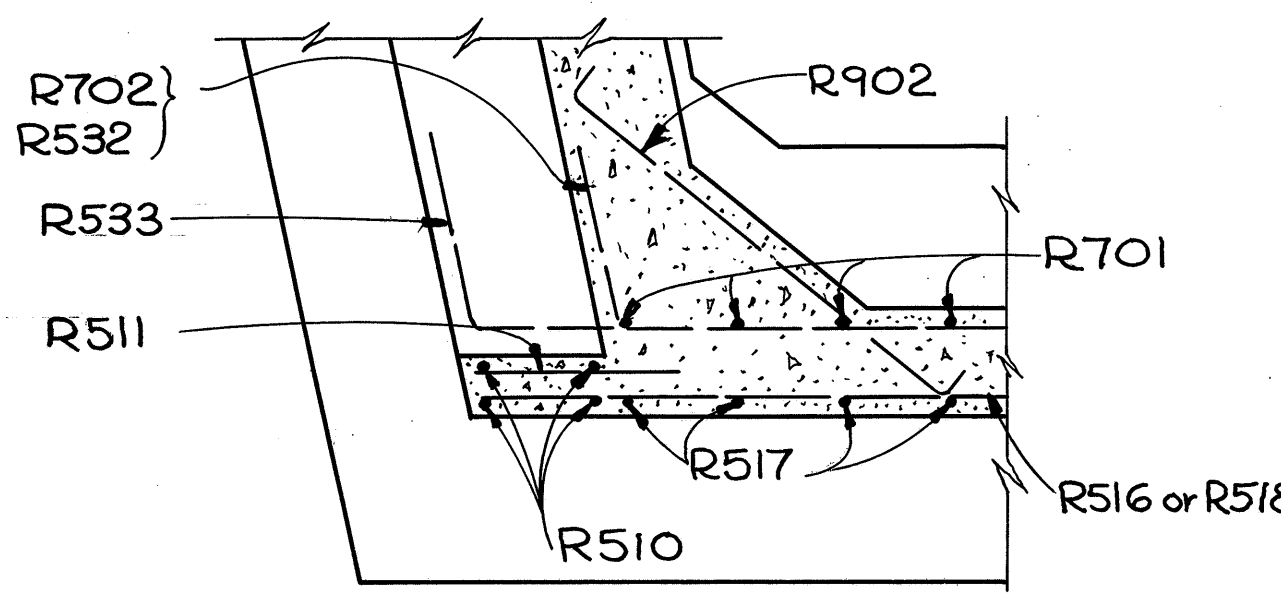
SECTION C-C



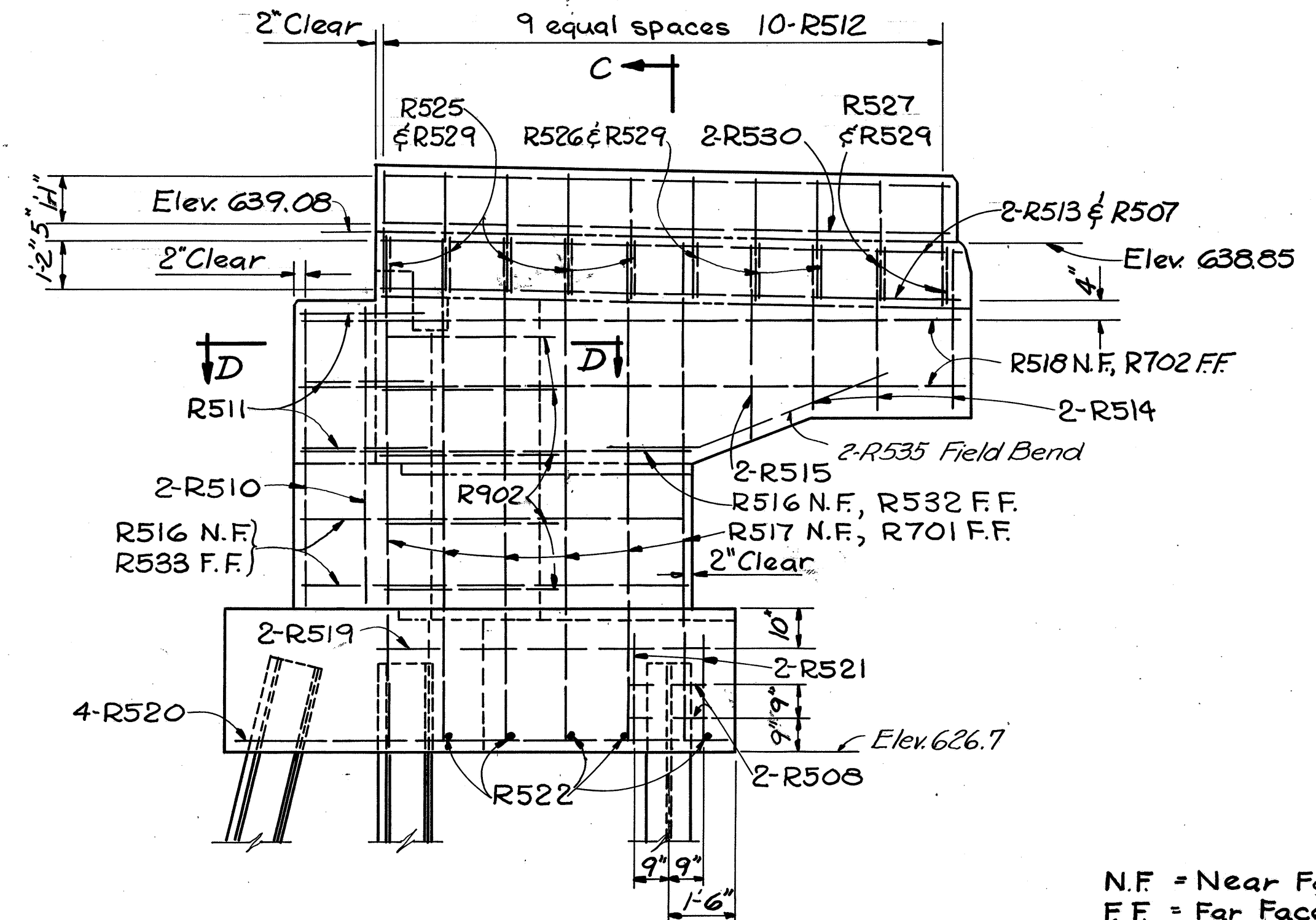
SECTION F-F



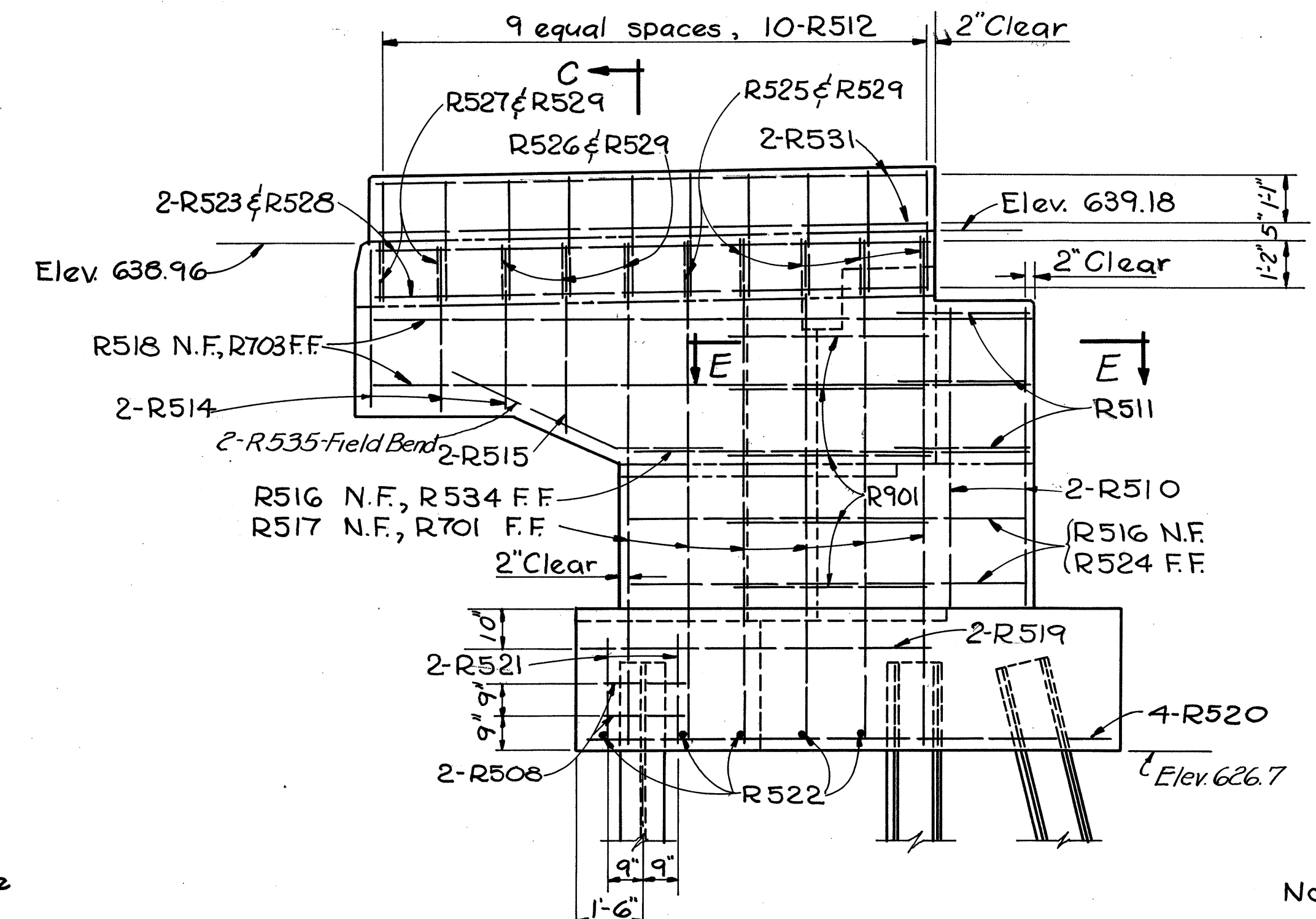
SECTION E-E



SECTION D-D



WINGWALL ELEVATION VIEW A-A
(Reinforcing Bar Details)



WINGWALL ELEVATION VIEW B-B
(Reinforcing Bar Details)

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

Note:
The 1/2" Preformed Expansion Joint Filler adjacent to the approach slab is included with the approach slab for payment.

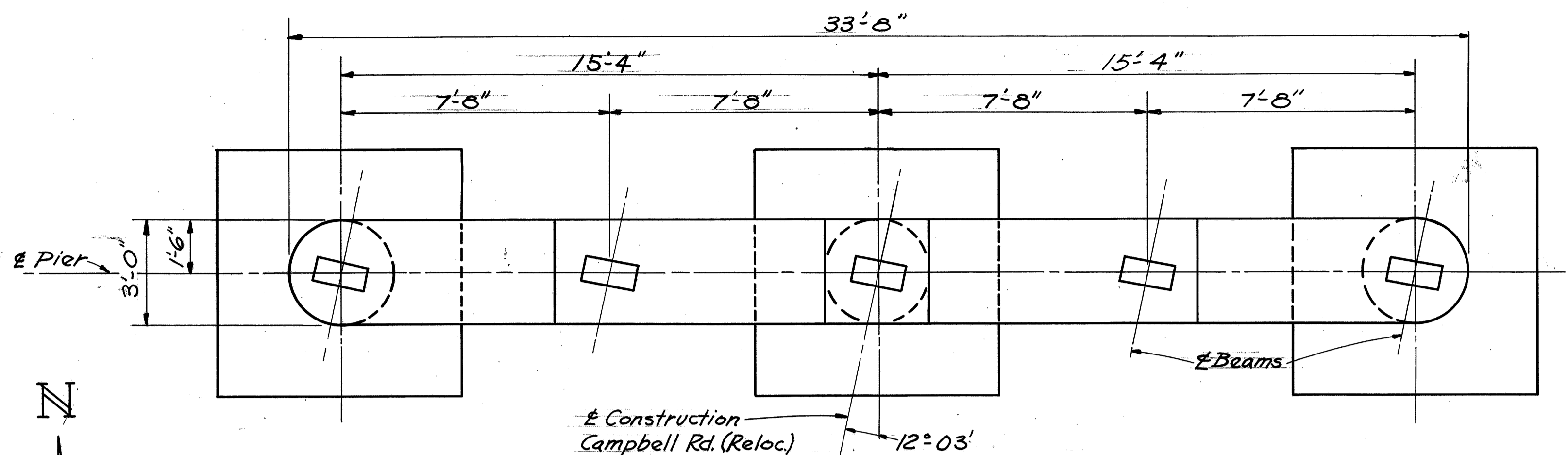
MICROFILMED
MAR 19 1985

MICROFILMED
MAR 19 1985

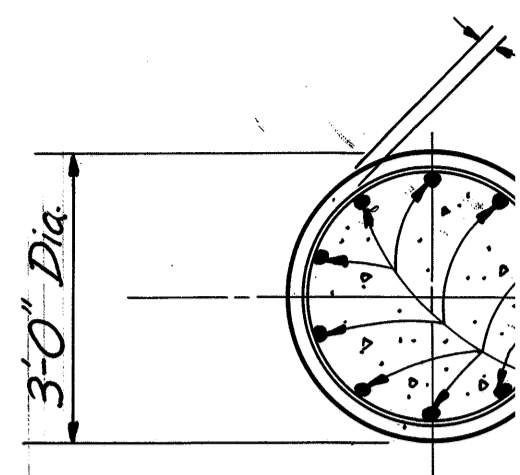
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CONSULTING ENGINEERS
TOLEDO, OHIO

ABUTMENTS
BRIDGE NO. ERI 6-0886
UNDER CAMPBELL ROAD
ERIE COUNTY Sta. 49+79.92 to
Sta. 52+68.52

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	REVISED
RAR	RAR	CPS	TWD	BJH FCM 9-23-80	

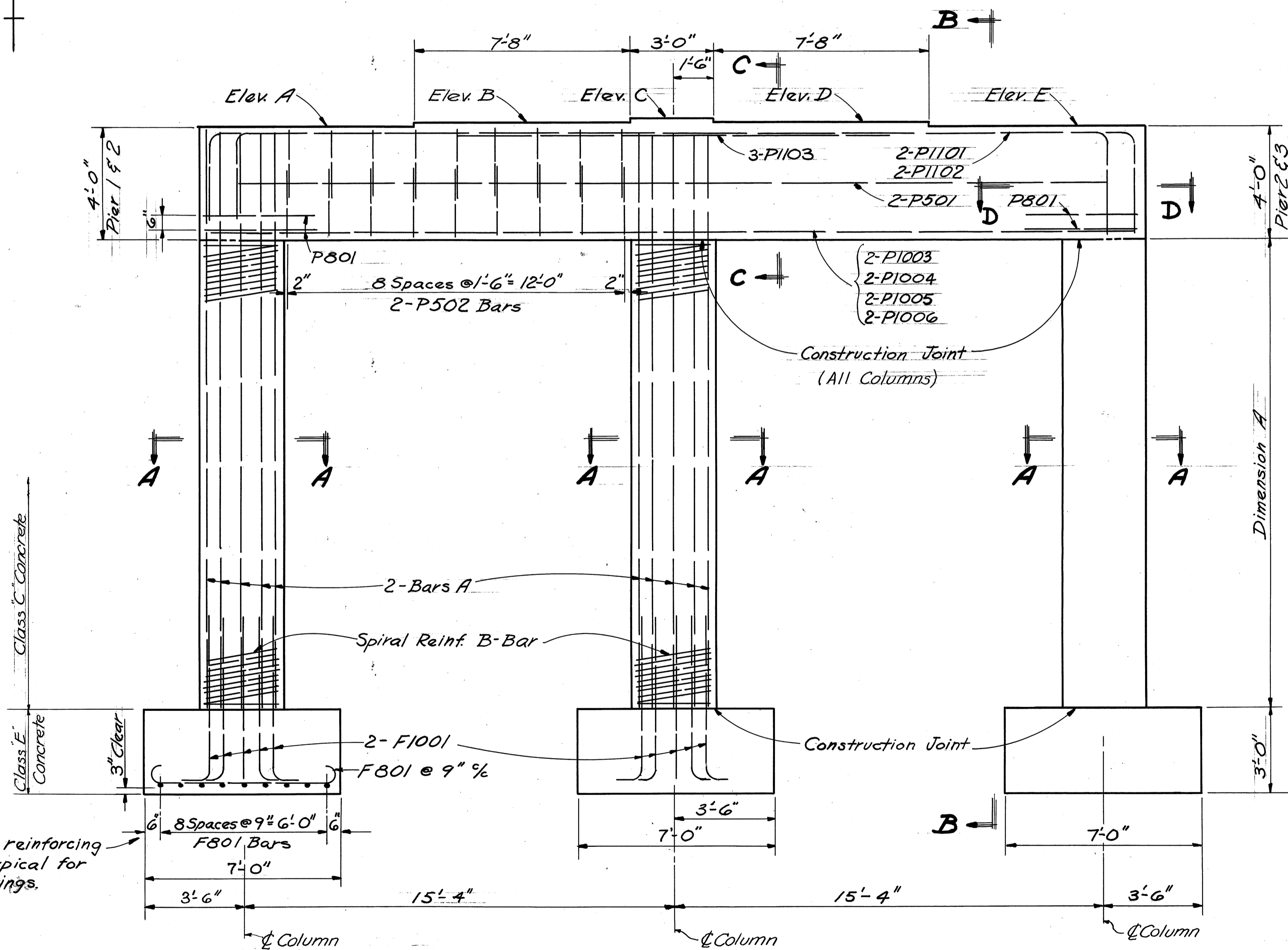


PLAN

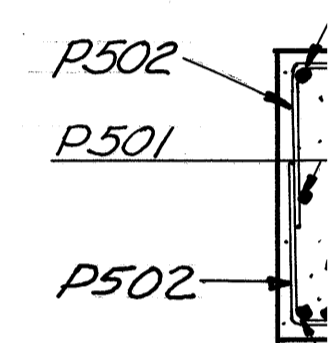


SECTION

PIER	
Pier No. 1	
Pier No. 2	
Pier No. 3	



ELEVATION

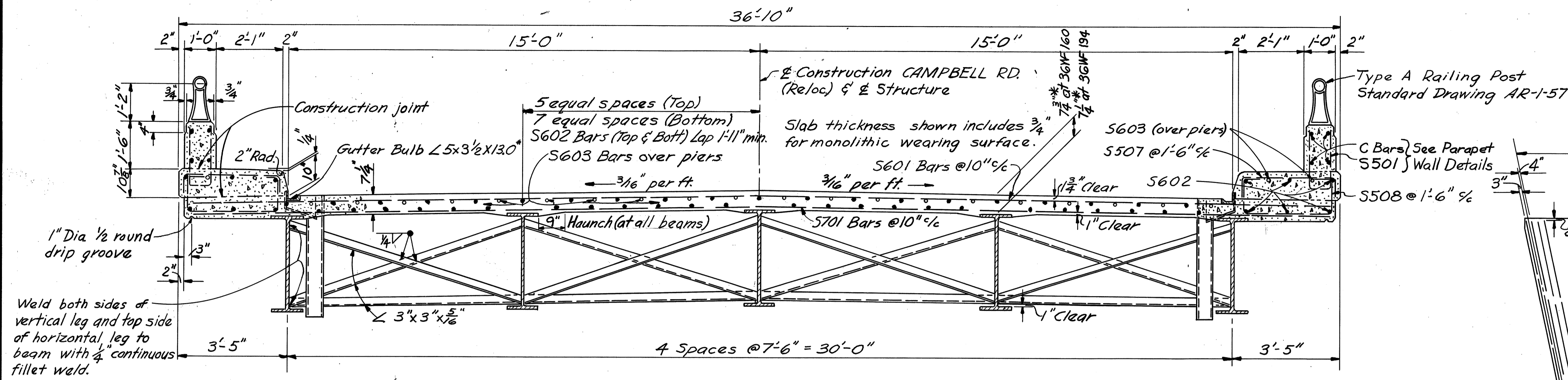


SECTION

Bottom reinforcing steel typical for all footings.

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MAR 19 1965

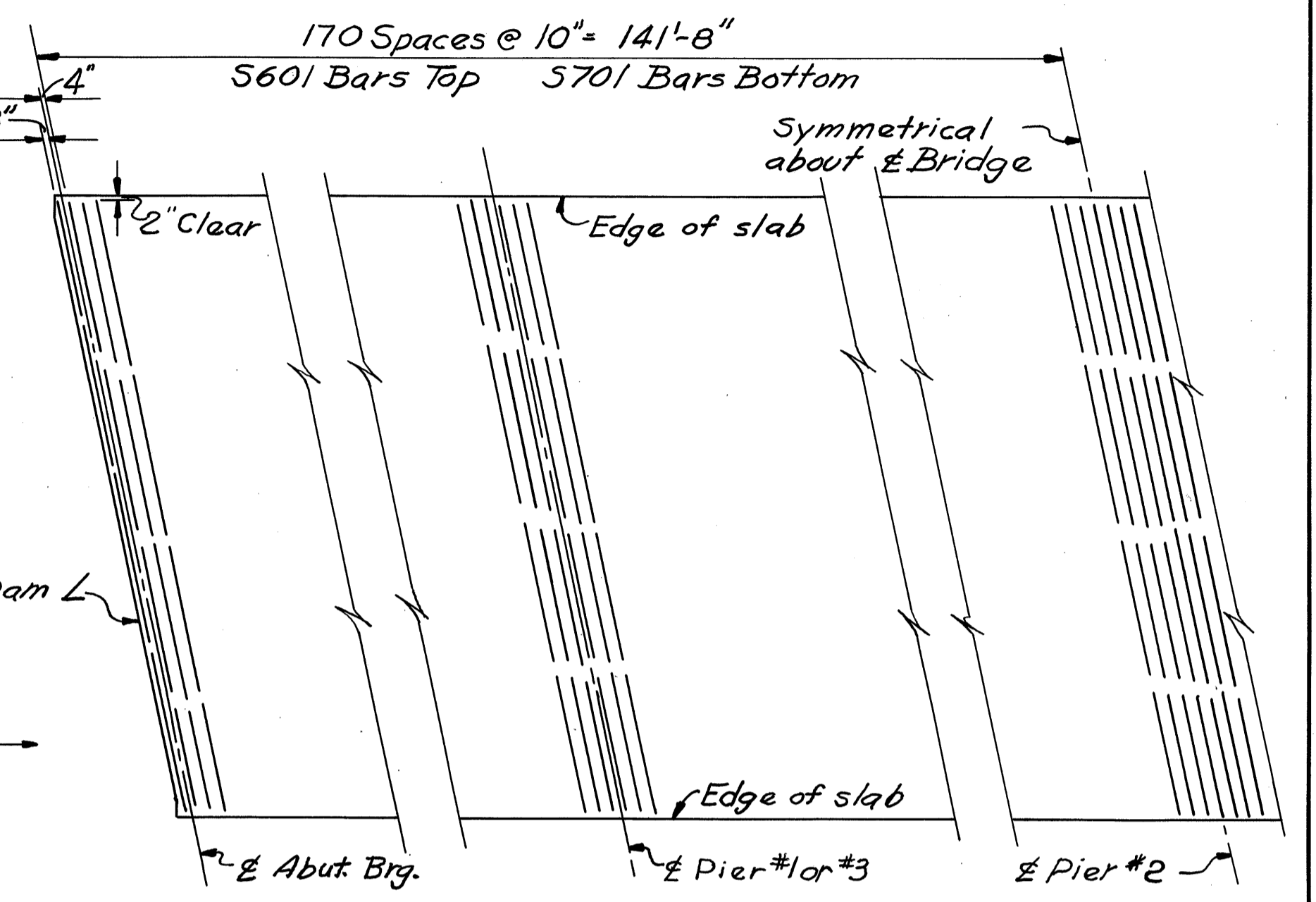
All pier details and reinforcement are symmetrical about the center line of the pier, unless otherwise noted.



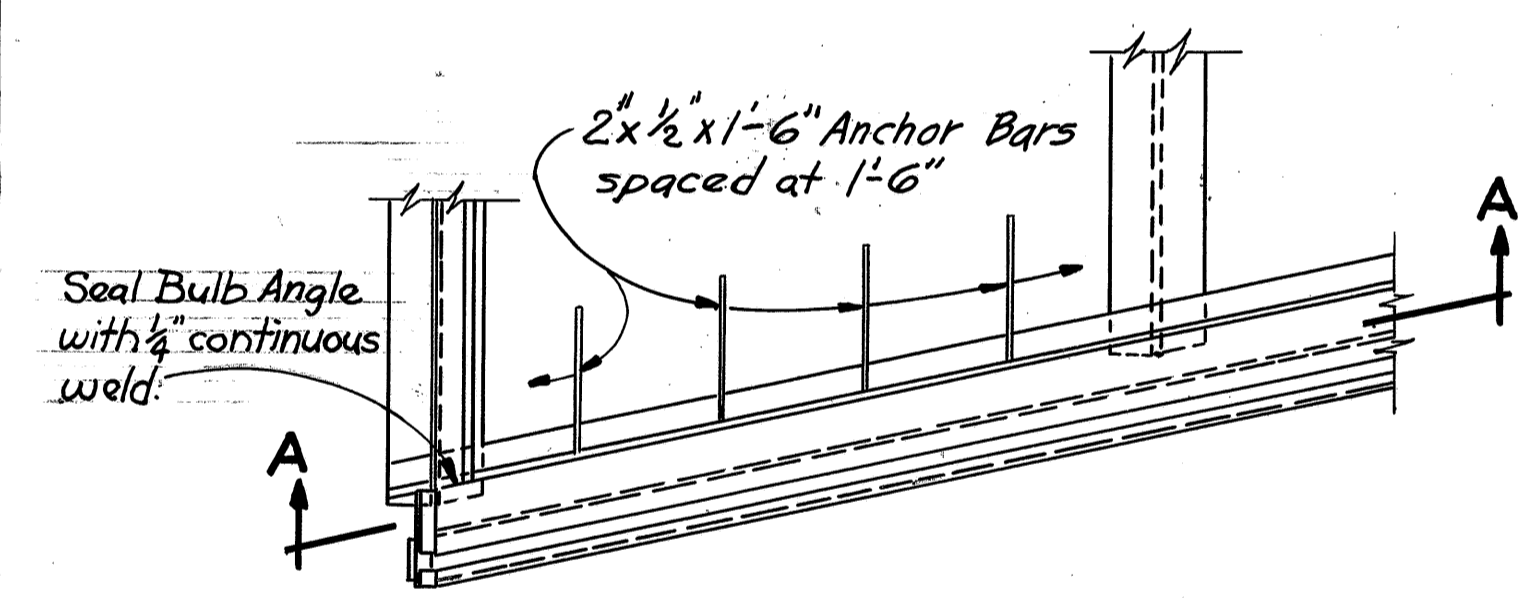
Weld both sides of vertical leg and top side of horizontal leg to beam with $\frac{1}{4}$ continuous fillet weld.

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

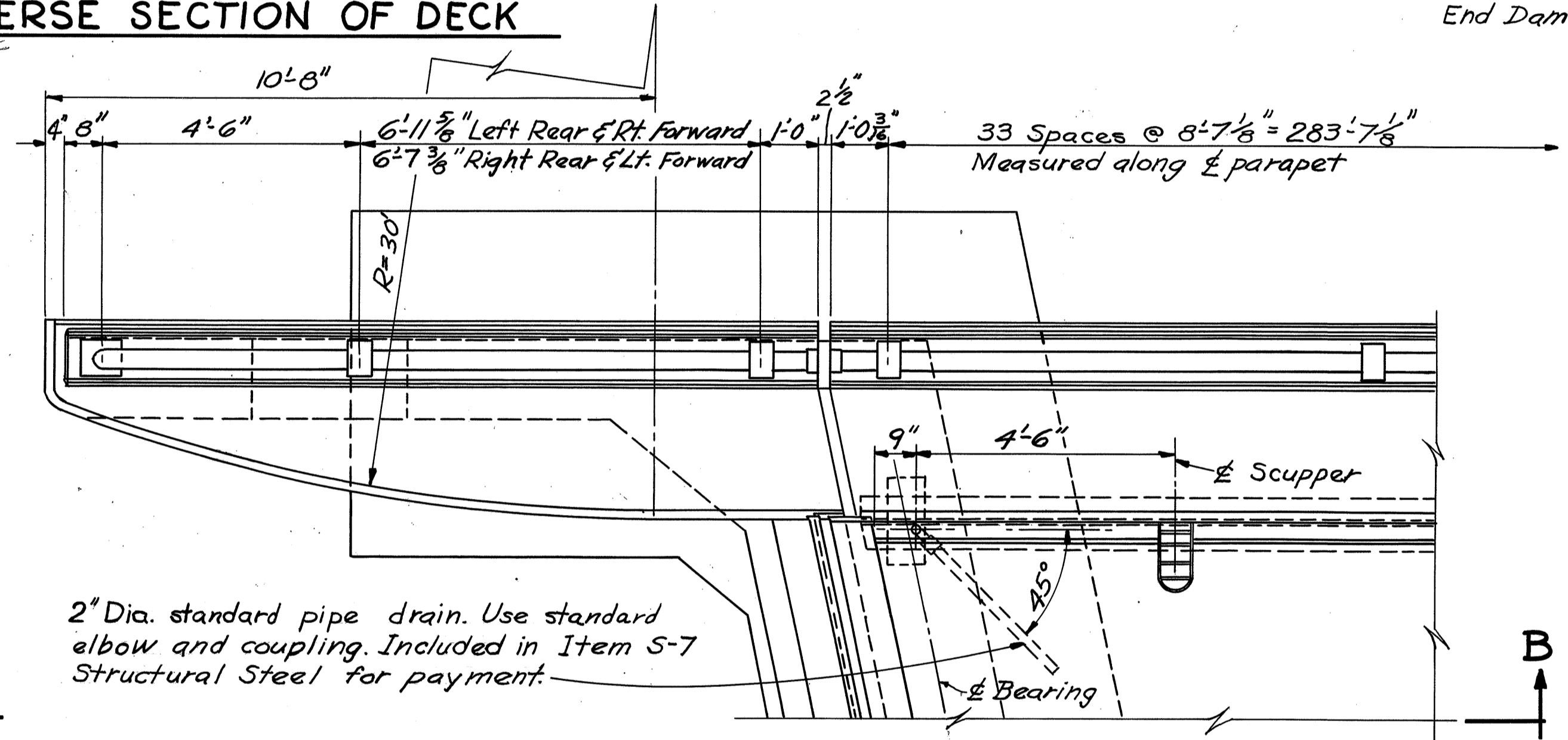
TRANSVERSE SECTION OF DECK



SLAB TRANSVERSE REINFORCING STEEL



PART END DAM PLAN



PLAN AT ABUTMENT

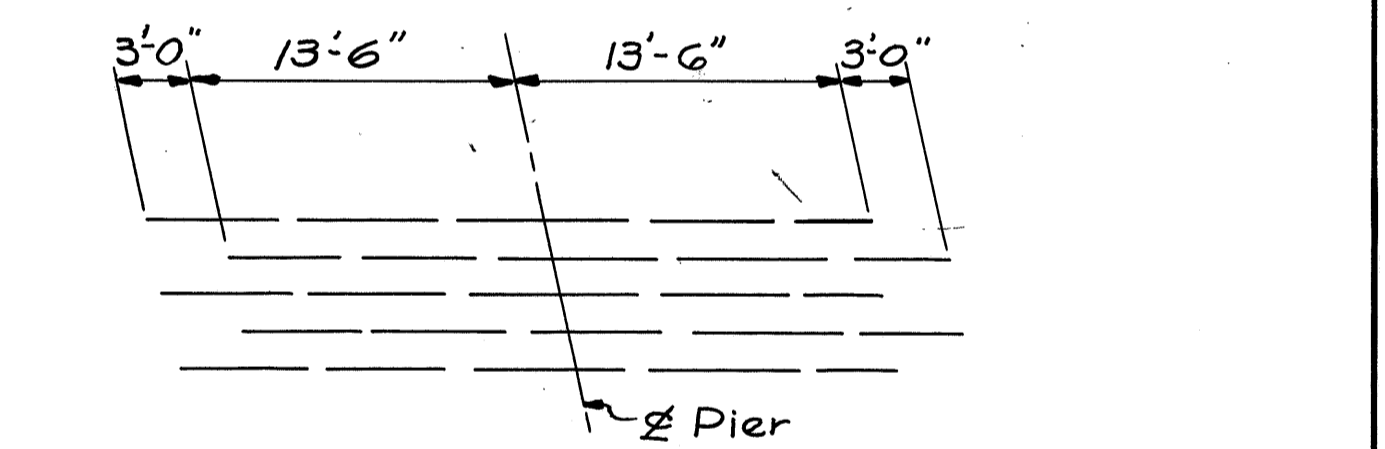
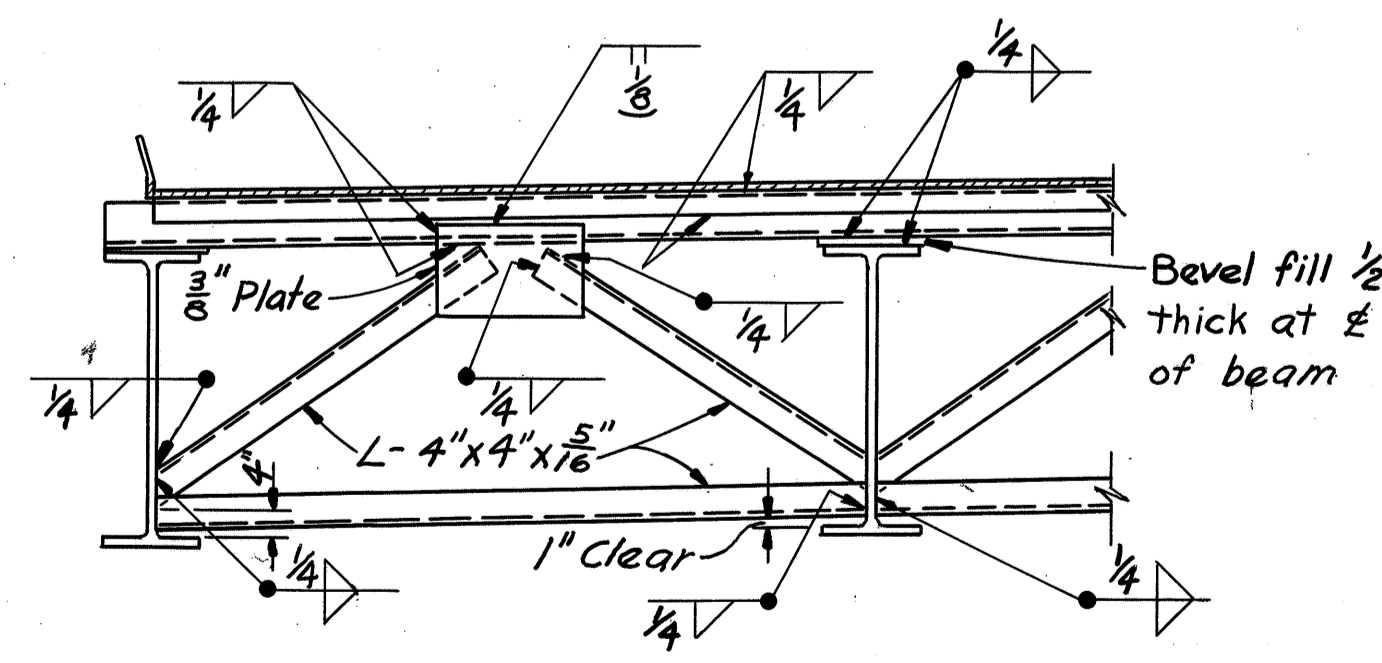
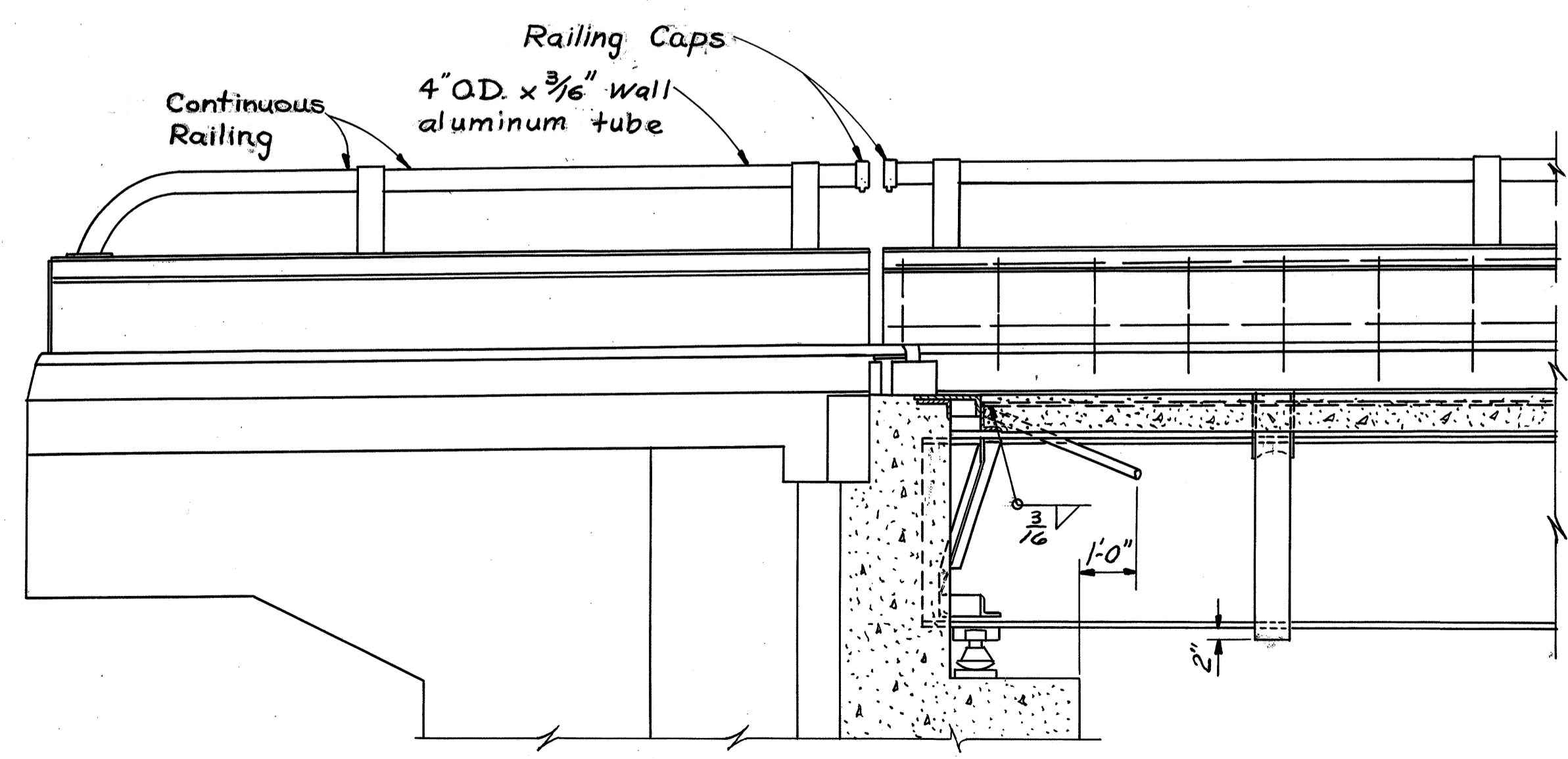


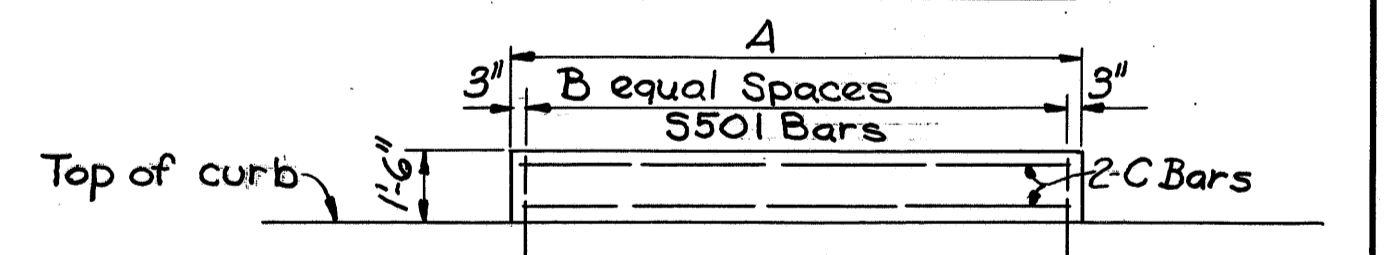
DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS



SECTION A-A



SECTION B-B



PARAPET WALL PANEL DETAIL

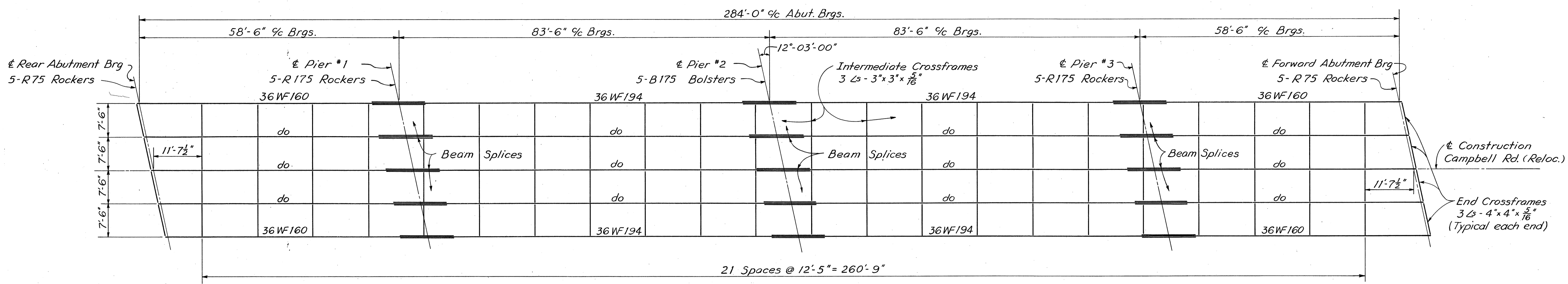
NOTE:
Refer to Standard CSB-2-56 sheet 2 or 3 of 6 for the following details:
Roadway End Dam
Welded Butt Joint in Superstructure
End Dam Angles
Scupper Details
Gutter Supports
Curb Plate Details

PARAPET WALL DIMENSIONS			
Panel	Dimension	No. Space	Reinforcing C Bars
See Sheet 2	A	B	C
End	13'-10 3/8"	9	S502
Pier 1 & 3	11'-0"	7	S503
Pier 1 & 3	6'-2 1/4"	4	S504
Pier 2	8'-7 1/2"	6	S505
Intermediate	17'-2 1/4"	12	S506

SANZENBACHER, MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

SUPERSTRUCTURE DETAILS
BRIDGE NO. ERI. 6-0886
UNDER CAMPBELL ROAD
ERIE COUNTY Sta. 49+79.92 to
Sta. 52+68.52

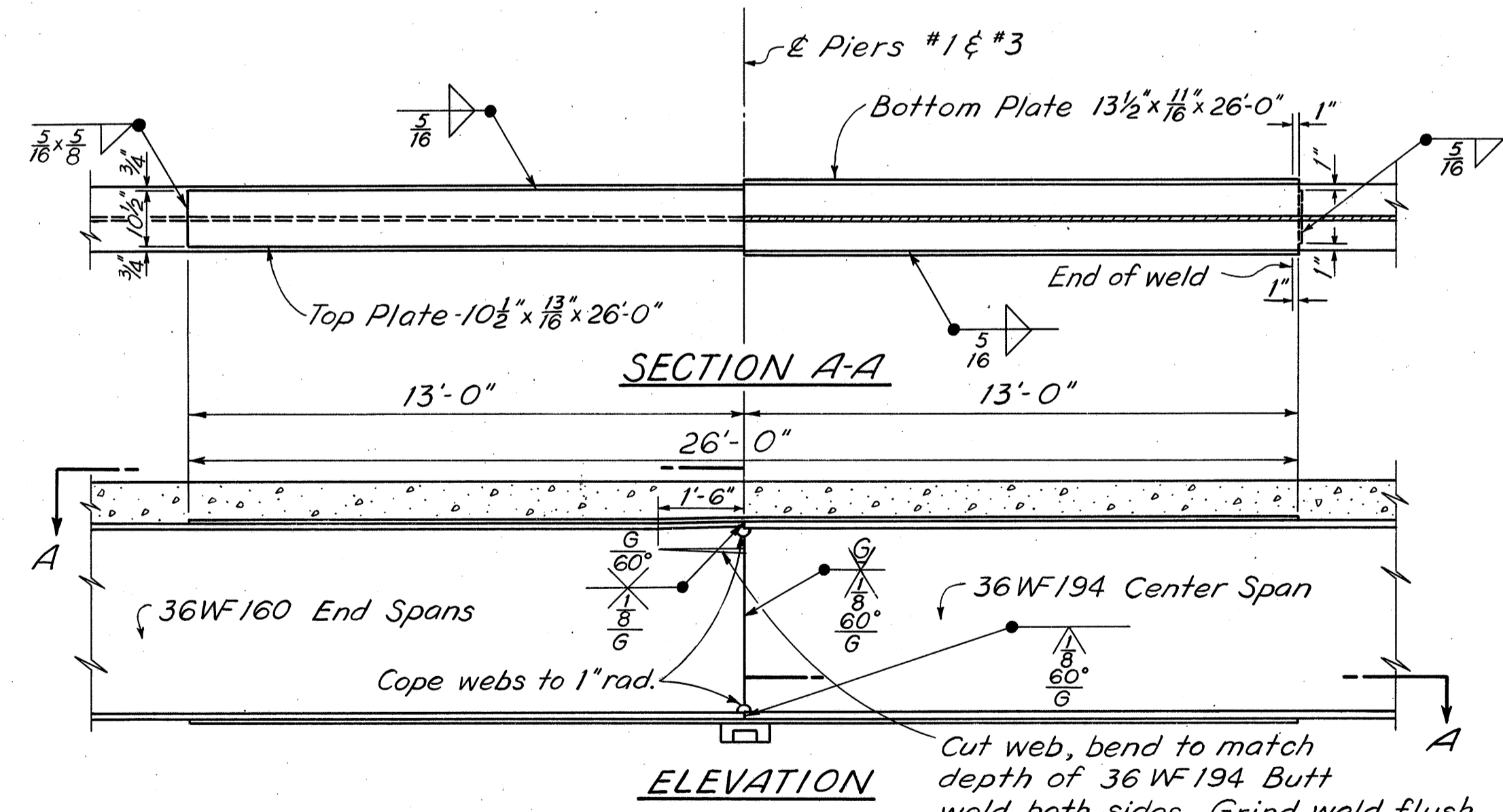
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	REVISED
RAR	RAR	CPS	TWD	BJH	FCM 9/23/60



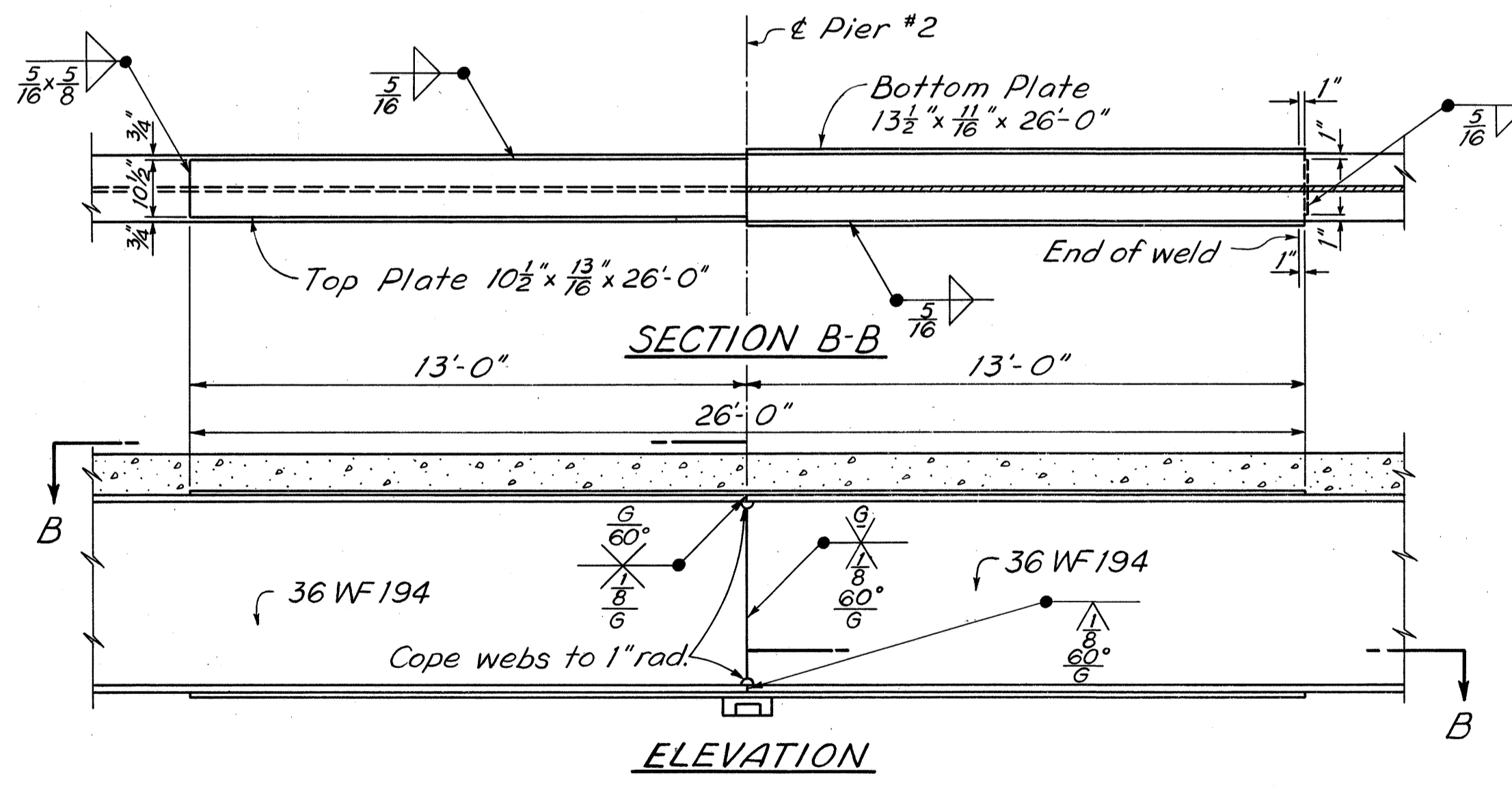
Cambering of beams is required in accordance with the following table:

Location	Interior Beams				Exterior Beams			
	Span 1	Span 2	Span 3	Span 4	Span 1	Span 2	Span 3	Span 4
	Deflection due to weight of steel	1/16"	1/8"	1/8"	1/16"	1/16"	1/8"	1/8"
Deflection due to remaining dead load	3/16"	1/2"	1/2"	3/16"	3/16"	1/2"	1/2"	3/16"
Camber required for vertical curve	1/2"	1"	1"	1/2"	1/2"	1"	1"	1/2"
Total Camber	3/4"	1 5/8"	1 5/8"	3/4"	3/4"	1 5/8"	1 5/8"	3/4"
Required Shop Camber	1"	1 5/8"	1 5/8"	1"	1"	1 5/8"	1 5/8"	1"

STEEL FRAMING PLAN



BEAM SPLICE DETAILS (Pier 1 & 3)



BEAM SPLICE DETAILS (Pier 2)

BEAM SPLICE WELDING PROCEDURE:

1. Raise end of beam at Pier 2, 2 1/2".
2. Butt weld beam flanges and web at Pier 1 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.
3. Weld top and bottom flange moment plates at Pier 1.
4. Lower end of beam at Pier 2.
5. Make splice at Pier 2 and Pier 3 in the same manner raising the end of the beams 3 1/2" at Pier 3 and 1/8" at the Forward Abutment.

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.

REPRODUCED FROM 19 1965

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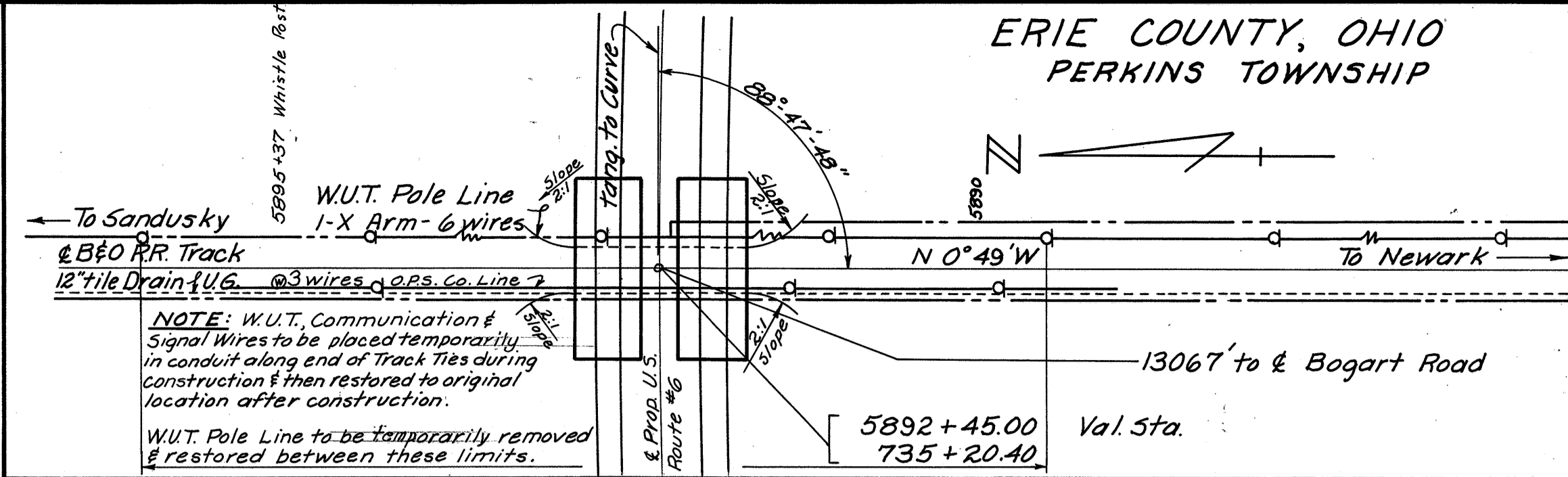
SUPERSTRUCTURE DETAILS
BRIDGE NO. ERI. 6-0886
UNDER CAMPBELL ROAD
ERIE COUNTY Sta. 49+79.92 to Sta. 52+68.52

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAR	RAR	JHY	TWD	B-JH PCM	9-23-60	

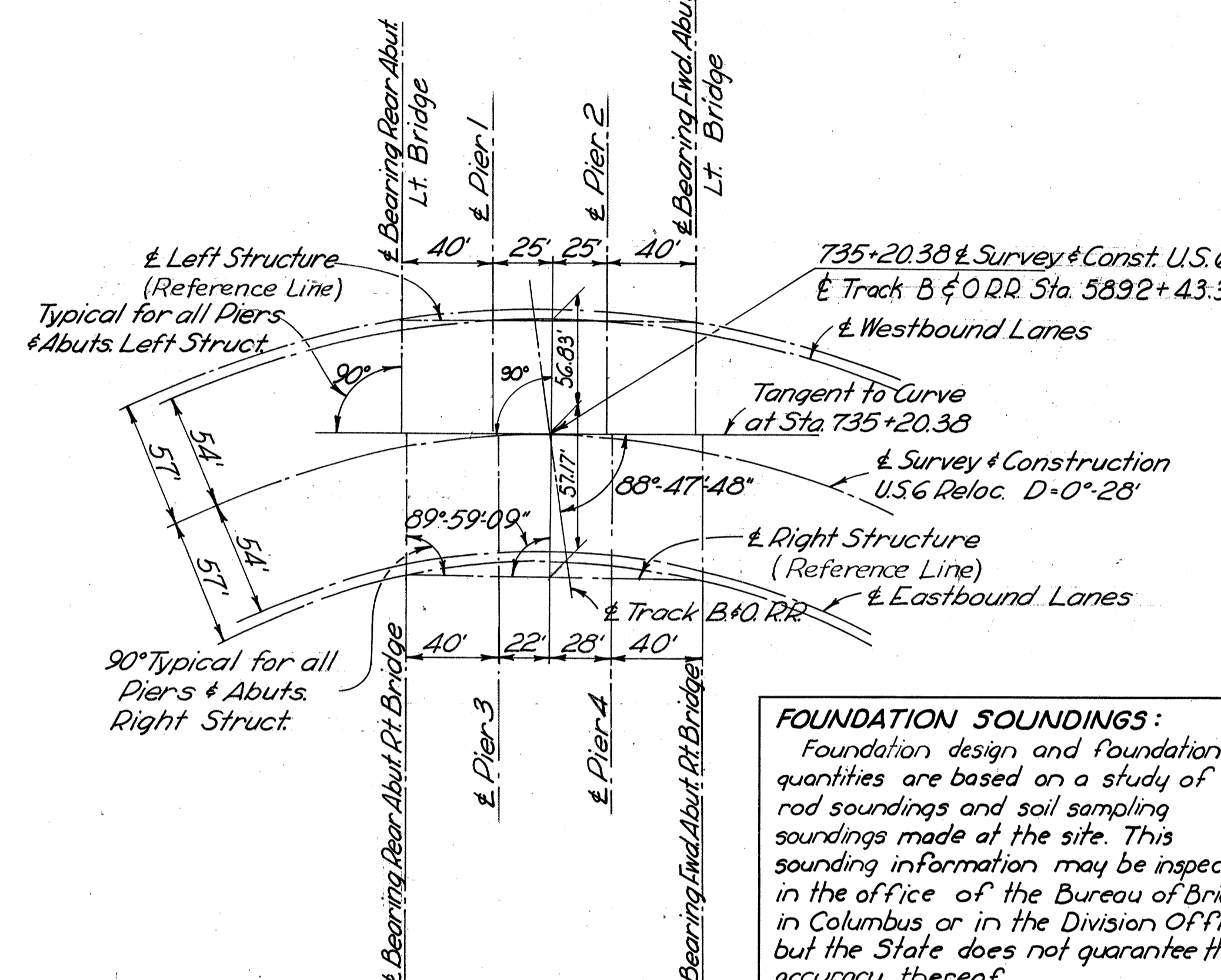
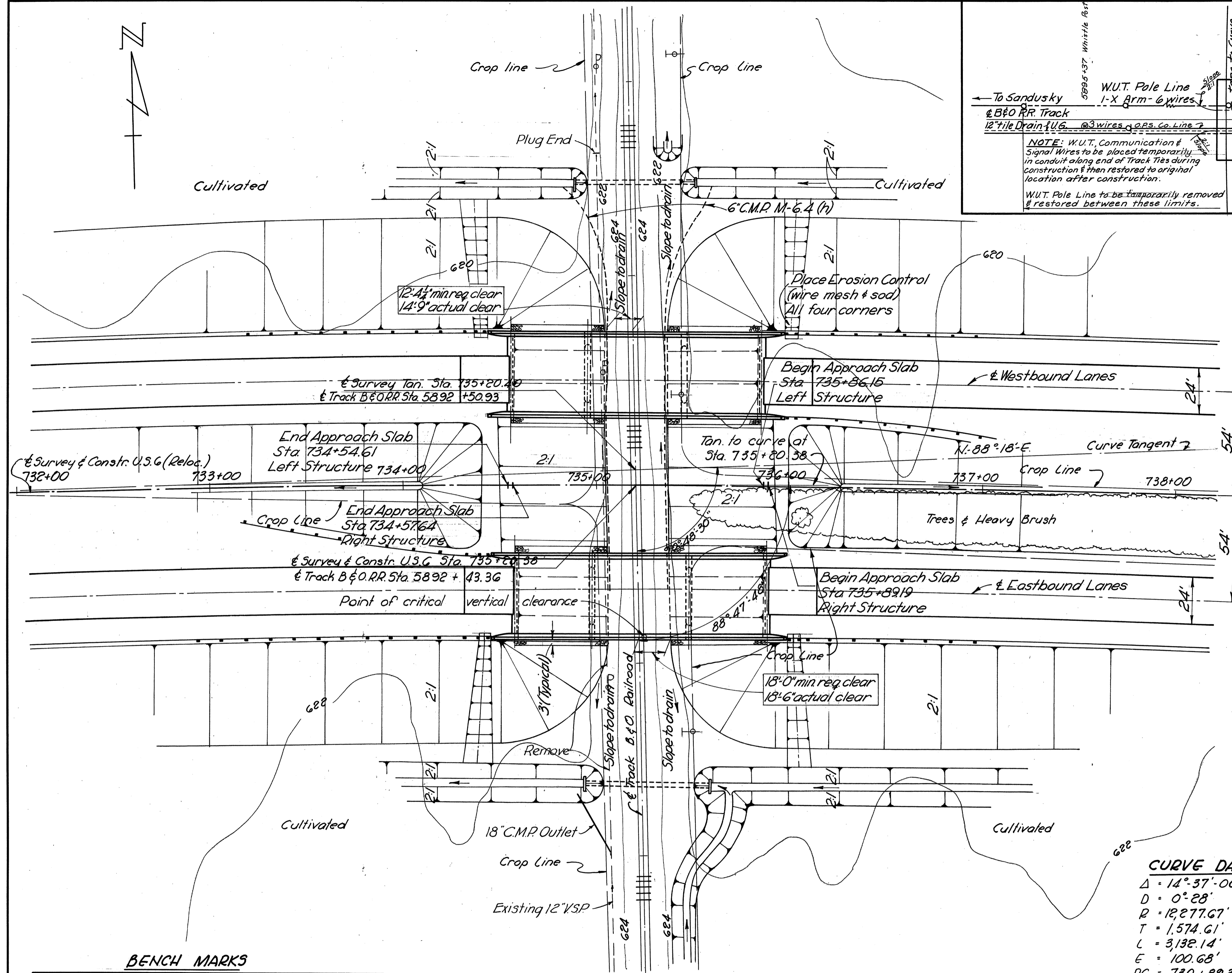
ERI G-731
5.7 Miles West of Huron

- FORCE ACCOUNT WORK**
1. Preliminary Engineering
 2. Engineering Inspection during Construction
 3. Western Union Pole Line Changes

B&O RR File: 3-F-173



NOTE: W.U.T. Communication & Signal Wires to be placed temporarily in conduit along end of Track Ties during construction & then restored to original location after construction.
W.U.T. Pole Line to be temporarily removed & restored between these limits.



FOUNDATION SOUNDINGS:
Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division Office, but the State does not guarantee the accuracy thereof.

ALIGNMENT SKETCH

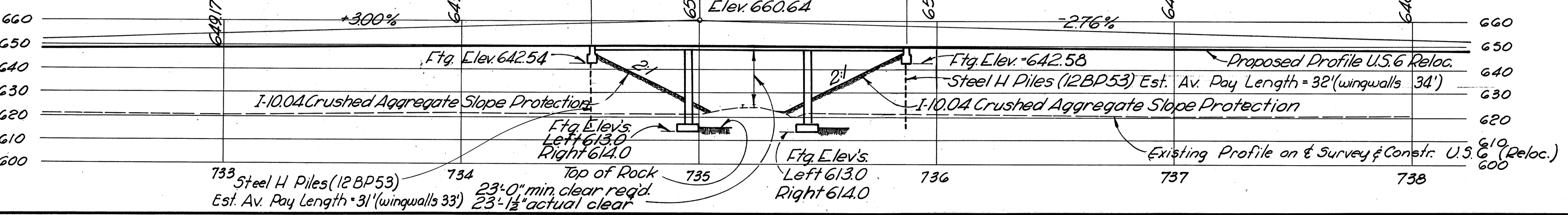
CURVE DATA

Δ	14° 37' 00" Rt.
D	0° 28'
R	12,277.67'
T	1,574.61'
L	3,132.14'
E	100.68'
PC	730 + 89.30
PI	746 + 63.91
PT	762 + 21.44
MDC	746 + 55.37

BENCH MARKS

B.M.#43 R.R. Spike in N. Face of Power Pole, 18' Lt. & Track, Sta. 47+63, Elevation 624.68

B.M.#44 Nail in SW. Root of 48' Ash, 16' Rt. & U.S.G. (Reloc.) Sta. 736+106, Elevation 620.91



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PROPOSED STRUCTURES

Type: Continuous Reinforced Concrete Slab Reinf. Conc. Substructure with "C" Type Abutments on Piling and "T" Type Piers

Spans: 40'-0", 50'-0", 40'-0" % Brgs.

Roadway: 42'-0" ft of Parapets Left & Right Bridges

Load Frequency: CF 400 (57)

Skew: None

Wearing Surface: 1" Monolithic Concrete

Approach Slabs: AS-1-54 (25'-0" Long)

Alignment: 0° 28' Curve Right

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CONSULTING ENGINEERS
TOLEDO OHIO

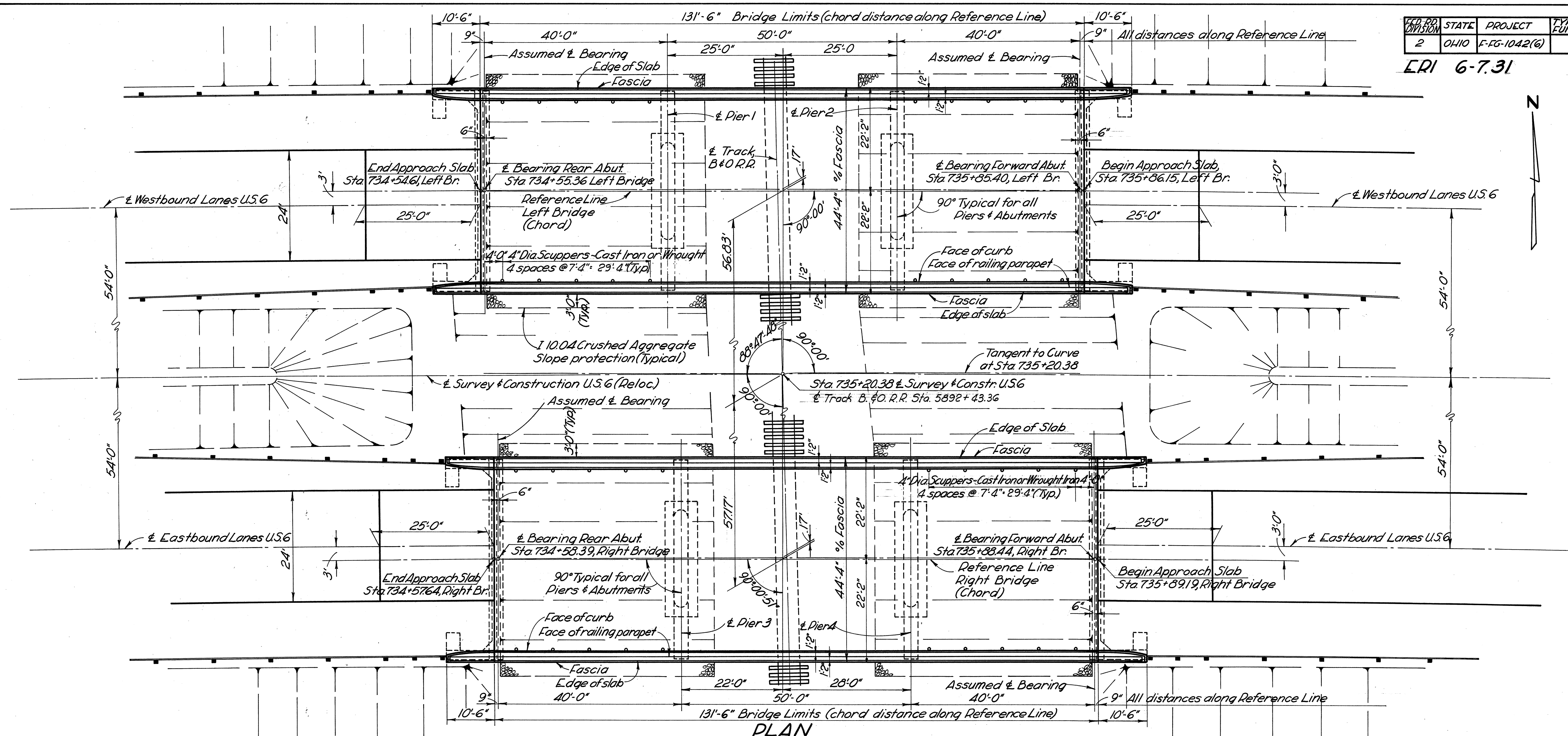
SITE PLAN
BRIDGE No. ERI G-0915
LEFT AND RIGHT
OVER B. & O. RAILROAD
ERIE CO. LEFT STA. 734+5461 to 735+86.15
RIGHT STA. 734+57.64 to 735+89.19

SCALE: 1"=30'

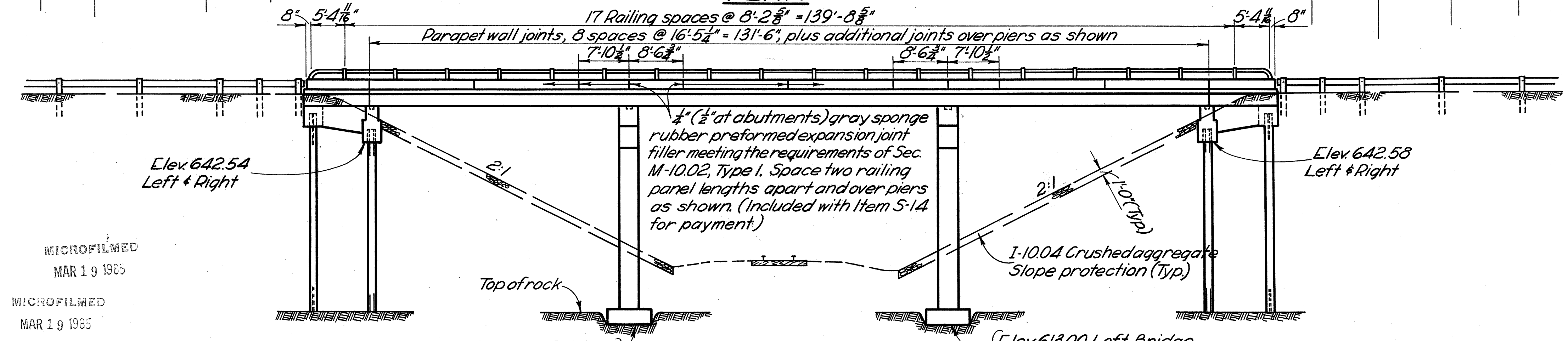
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
S.M.B.	R.A.R.-B.B.	F.W.D.	T.W.R.	B.J.H.	F.C.M.
					3-23-80

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-FG-1042(6)	132 161

ERI 6-7.31



PLAN



ELEVATION

MICROFILMED
MAR 19 1985
MICROFILMED
MAR 19 1985

SANZENBACHER, MILLER & BRIGHAM CONSULTING ENGINEERS TOLEDO, OHIO				
GENERAL PLAN & ELEVATION BRIDGE No. ERI 6-0915, LEFT & RIGHT OVER B & O RAILROAD				
Left Sta. 734+54.61 to 735+86.15 Right Sta. 734+57.64 to 735+89.19				
ERIE CO.				
DESIGNED	DRAWN	TRACKED	CHECKED	REVIEWED
DATE	DATE	DATE	DATE	DATE
TFH	TFH	JEC	HDD	BHJ FCM
				9-23-60

ERI 6-7.31

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shape	Bending Diagrams	Mark	No.	Length	Weight	Shape
ABUTMENTS										
R1001	32	23'-4"	3213	S		SUPERSTRUCTURES				
R801	32	22'-11"	1958	S		51101	184	32'-0"	31,283	S
R701	32	10'-3"	670	B		51102	88	14'-6"	6,779	S
R702	24	11'-10"	580	B		51103	92	9'-6"	4,644	S
R703	24	12'-8"	621	B		51001	288	45'-11"	56,903	S
R704	8	14'-3"	233	B		51002	84	32'-4"	11,687	B
R601	16	5'-3"	126	S		51003	88	28'-4"	10,729	B
R602	16	4'-10"	116	S		51004	42	29'-0"	3,241	S
R603	24	4'-5"	159	S		51005	44	21'-0"	3,976	S
R501	48	22'-6"	1126	S		51006	40	27'-6"	4,733	S
R502	312	7'-1"	2305	B		5701	266	43'-8"	23,742	S
R503	128	8'-3"	1102	B		5601	162	43'-8"	10,625	S
R504	32	11'-5"	381	S		5602	96	27'-8"	3,989	S
R505	16	5'-3"	88	S		5603	48	26'-2"	1,887	S
R506	16	4'-10"	81	S		5501	588	6'-6"	3,986	B
R507	24	4'-5"	111	S	5502	588	2'-9"	1,686	B	
R508	64	9'-9"	651	B	5503	24	30'-5"	761	S	
R509	32	6'-9"	225	B	5504	12	39'-8"	496	S	
R510	48	3'-11"	196	B	5505	360	4'-6"	1,690	B	
R511	32	3'-6"	117	B	5506	96	16'-1"	*	S	
R512	32	3'-2"	106	B	5507	32	8'-3"	*	S	
R513	32	10'-0"	334	S	5508	32	7'-6"	*	S	
R514	56	6'-0"	350	B	REPLACEMENT BARS					
R515	32	9'-9"	*	S	RE1101	3	7'-7"	5		
R401	128	5'-9"	492	B	RE1001	5	7'-3"	5		
R402	32	8'-5"	180	B	RE801	1	6'-6"	5		
R403	32	2'-8"	57	S	RE701	2	6'-3"	5		
PIERS										
P1101	64	23'-2"	7876	S	RE601	1	5'-11"	5		
P1102	32	24'-8"	4,194	B	RE501	2	5'-7"	5		
P801	104	5'-8"	1,574	B	RE401	1	5'-3"	5		
P802	72	7'-8"	1,474	B	PIERS					
P701	148	9'-4"	2,824	B	P501	24	24'-8"	617	S	
P601	24	16'-9"	604	B	P502	52	27'-7"	1,496	S	
P501	24	24'-8"	617	S	P503	52	26'-7"	1,444	S	
P502	52	27'-7"	1,496	S	P504	112	18'-0"	2,103	S	
P503	52	26'-7"	1,444	S	P505	16	16'-8"	278	S	
P504	112	18'-0"	2,103	S	P506	16	22'-2"	370	S	
P505	16	16'-8"	278	S	P507	32	6'-9"	225	B	
P506	16	22'-2"	370	S	P508	48	8'-5"	421	B	
P507	32	6'-9"	225	B	P509	128	10'-1"	1,346	B	
P508	48	8'-5"	421	B	P510	104	7'-2"	777	B	
P509	128	10'-1"	1,346	B						
P510	104	7'-2"	777	B						

* Included in Item 5-14 for payment

ESTIMATED QUANTITIES-TWO BRIDGES

Item	Total	Unit	Description	Abutments				Piers				Superstructure		General	
				Lt.Rear	Lt.Fwd	Rt.Rear	Rt.Fwd	1	2	3	4	Left	Right		
E-2	Lump	Sum	Cofferdams, cribs and sheeting												Lump
E-2	748	Cu.Yds.	Unclassified excavation	55	55	55	55	132	132	132	132				
E-2	46	Cu.Yds.	Rock excavation					15	15	8	8				
S-1	832	Cu.Yds.	Class "C" concrete, superstructure									416	416		
S-1	140	Cu.Yds.	Class "E" concrete, abutments	35	35	35	35								
S-1	336	Cu.Yds.	Class "C" concrete, piers above footings					85	85	83	83				
S-1	76	Cu.Yds.	Class "E" concrete, pier footings					19	19	19	19				
S-4	228,038	Lbs.	Reinforcing steel	3895	3895	3894	3894	6,919	6,919	6,893	6,892	92,419	92,418		
S-9	48	Sq.Ft.	1/2" Preformed expansion joint filler	12	12	12	12								
S-14	608	Lin.Ft.	Railing (aluminum rail and supports, concrete parapet)									304	304		
S-16	Lump	Sum	First test pile											Lump	
S-18	1,540	Lin.Ft.	Steel piles, 12 BP 53	380	390	380	390								
S-29	48	Cu.Yds.	Porous backfill	12	12	12	12								
S-29	40	Each	Scuppers, 4" I.D. cast iron or wrought iron									20	20		
I-10	1185	Sq.Yds.	Crushed aggregate slope protection											1185	

GENERAL NOTES

RAILROAD AERIAL LINES shall be relocated by the railroad. The contractor shall use all precautions necessary to see that the lines are not disturbed during the construction stage and shall cooperate with the railroad in the relocation of these lines. The cost of the relocation shall be included in the railroad force account work.

CONSTRUCTION CLEARANCE of 20' vertically above the top of the railroad rails and 8' horizontally from the center of the tracks shall be maintained at all times.

SHEETING AND BRACING: Before construction is started, eight sets of prints showing details of the sheeting and bracing to be used for excavation adjacent to the railroad tracks shall be submitted to the Director for approval by the Department of Highways and by the Railroad Company.

ALIGNING RAILROAD TRACKS: After the contractor has completed all excavation and backfill adjacent to the railroad tracks in compliance with Sec. E-2.04 and E-2.08 of the Construction and Material Specifications subject to the supervision of the Railroad Company, nothing in Sec. E-2.04, E-2.08 or G-8.07 of the Specification shall be construed to hold the contractor liable for aligning and re-surfacing the railroad tracks.

BAR SIZE is indicated in the bar mark. The first digit where three digits are used and the first two digits where four are used, indicate the bar size number. For example, P601 is a No. 6 size bar and R1003 is a No. 10 size bar.

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

REFERENCE shall be made to Standard Drawings AS-1-54 "Reinforced Concrete Approach Slabs" revised 12-1-54 and AR-1-57 "Aluminum Railing with Concrete Parapet" revised 2-2-59, and to Supplemental Specification S-10, dated 12-2-59.

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.

PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments after which excavation shall be made for the abutments and piers, and the abutment piles driven.

PILES shall be driven with a hammer of not less than 11,000 ft.-lbs. 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 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 of the indicated energy rating:

50 tons per pile using an 11,000 ft.-lb. hammer
 43 tons per pile using a 15,000 ft.-lb. or greater hammer.
 If the energy rating is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 31 tons per pile for the abutment piles.

EXCAVATION AND BACKFILL: Excavation quantity includes the removal of fill material between the surface of proposed embankment and the bottom of footings. Backfill behind the abutments shall be compacted in accordance with the requirements for embankment compaction.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 6 tons per sq. ft.

PIER FOOTINGS shall extend a minimum of 3' into solid rock or to elevation shown, whichever is lower.

MACHINE FINISH: The top of the bridge deck slab shall be machine finished in accordance with the Proposal Note "Machine Finish of Bridge Deck Slabs."

CAMBER of 1/80 of the span shall be provided in each span to allow for dead load deflection. This is the amount of camber required before the falsework is released. To obtain this, proper allowance shall be made for the deflection of falsework members.

CURBS AND PARAPETS shall be placed after the shoring under the slab has been released sufficiently to permit the slab spans to attain full dead load deflection.

SANZENBACHER, MILLER & BRIGHAM
 CONSULTING ENGINEERS
 TOLEDO, OHIO

GENERAL NOTES, REINFORCING STEEL & ESTIMATED QUANTITIES
 BRIDGE No. ERI 6-0915 LEFT & RIGHT OVER B. O. RAILROAD
 LEFT Sta 734+54.61 to 735+86.15
 RIGHT Sta 734+57.64 to 735+89.19

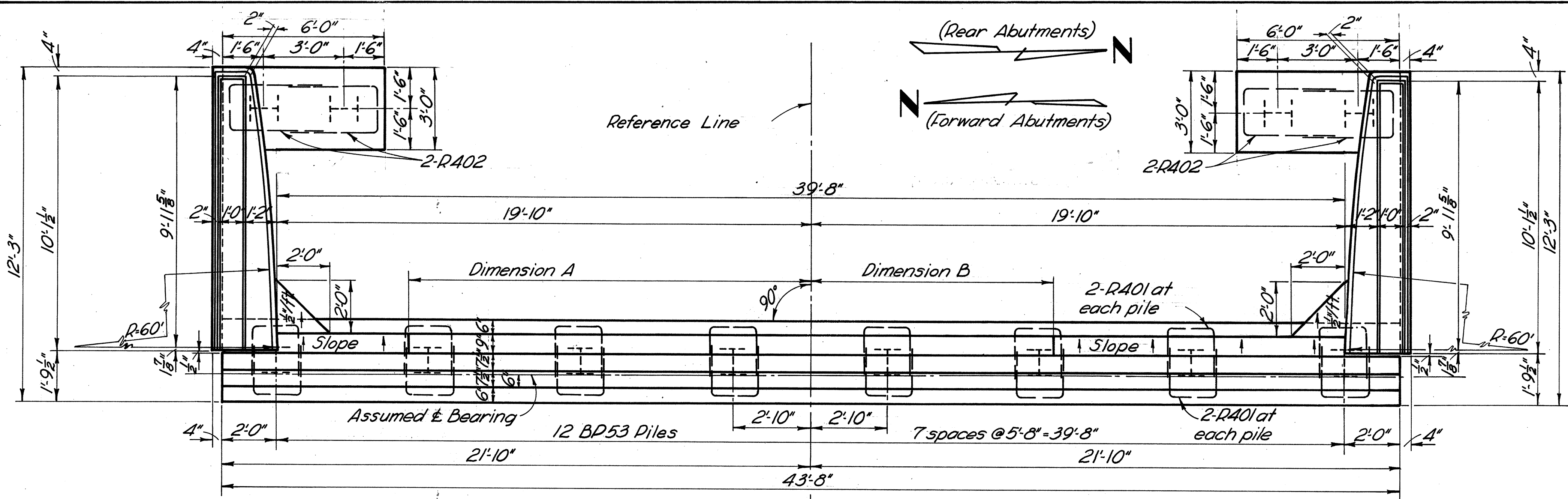
ERIC CO. DESIGNED DRAWN TFH TRACKED JEC CHECKED REVIEWED HDP DATE 9-23-60

MAR 1 9 1965

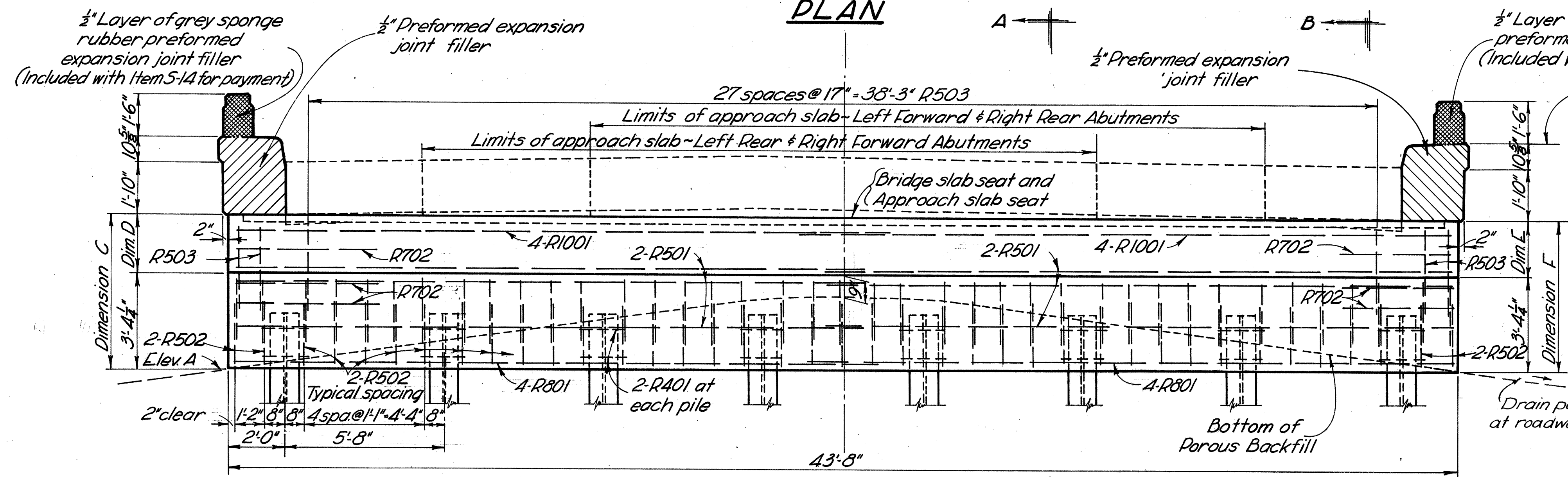
ERI. 6-731

LOCATION	ELEV. DIMENSIONS			
	B	G	H	
LEFT BRIDGE	Left Rear W.W.	64485	9'-6 ³ / ₈ "	5'-4 ¹ / ₂ "
	Right Rear W.W.	64494	9'-8"	5'-5 ³ / ₈ "
	Left Forward W.W.	64491	9'-6 ³ / ₈ "	5'-4 ¹ / ₂ "
	Right Forward W.W.	64500	9'-8"	5'-5 ³ / ₈ "
RIGHT BRIDGE	Left Rear W.W.	64495	9'-8"	5'-5 ³ / ₈ "
	Right Rear W.W.	64486	9'-6 ³ / ₈ "	5'-4 ¹ / ₂ "
	Right Forward W.W.	64490	9'-6 ³ / ₈ "	5'-4 ¹ / ₂ "

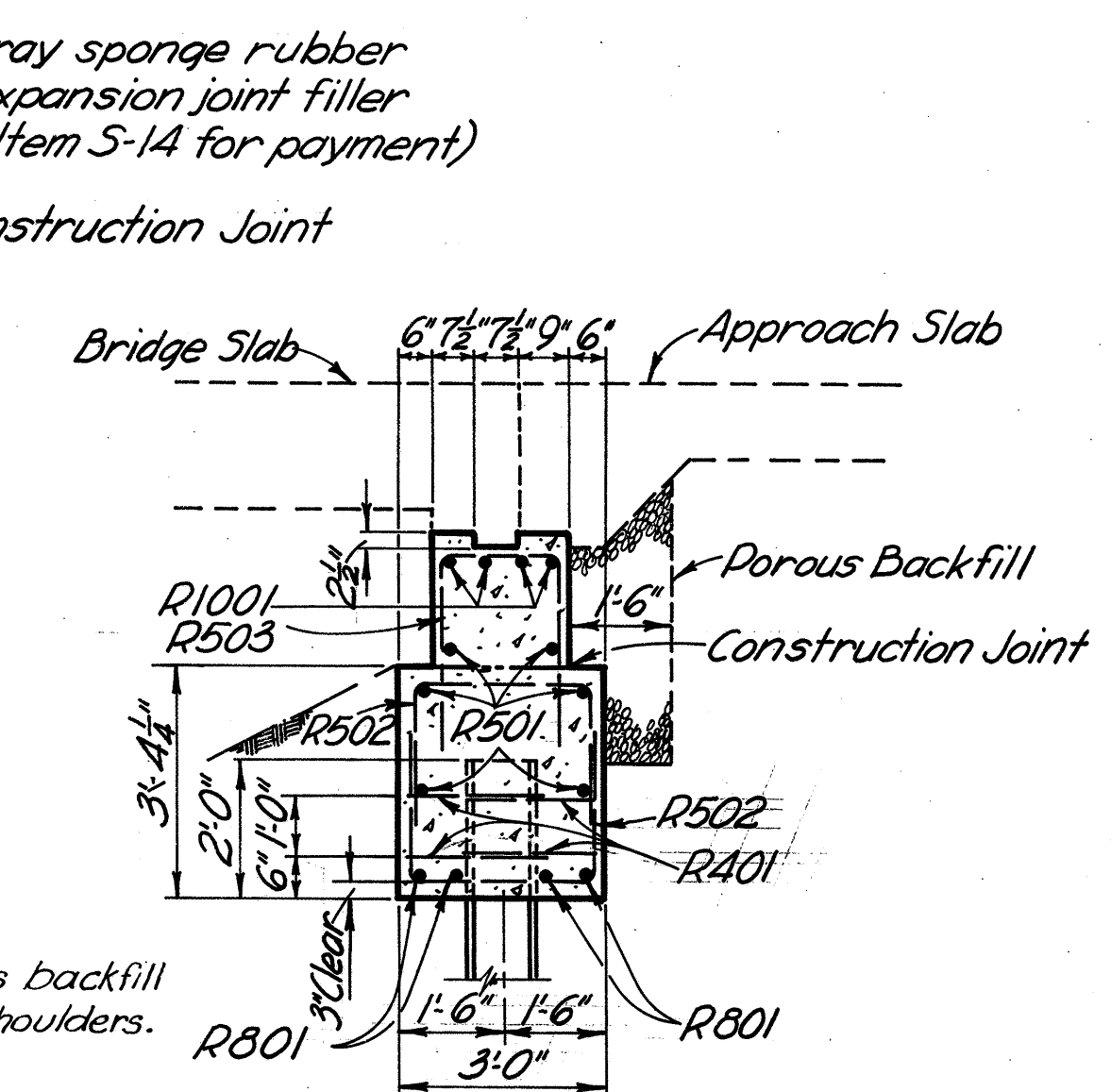
LOCATION	ELEVATION	DIMENSIONS							
		A	C	A	B	C	D	E	F
LEFT BRIDGE	Rear Abutment	64254	64454	15'-0"	9'-0"	5'-5 ³ / ₈ "	2'-1 ¹ / ₂ "	2'-0"	5'-4 ¹ / ₂ "
	Forward Abutment	64258	64458	9'-0"	15'-0"	5'-4 ¹ / ₂ "	2'-0"	2'-1 ¹ / ₂ "	5'-5 ³ / ₈ "
RIGHT BRIDGE	Rear Abutment	64254	64454	9'-0"	15'-0"	5'-4 ¹ / ₂ "	2'-0"	2'-1 ¹ / ₂ "	5'-5 ³ / ₈ "
	Forward Abutment	64258	64458	15'-0"	9'-0"	5'-5 ³ / ₈ "	2'-1 ¹ / ₂ "	2'-0"	5'-4 ¹ / ₂ "



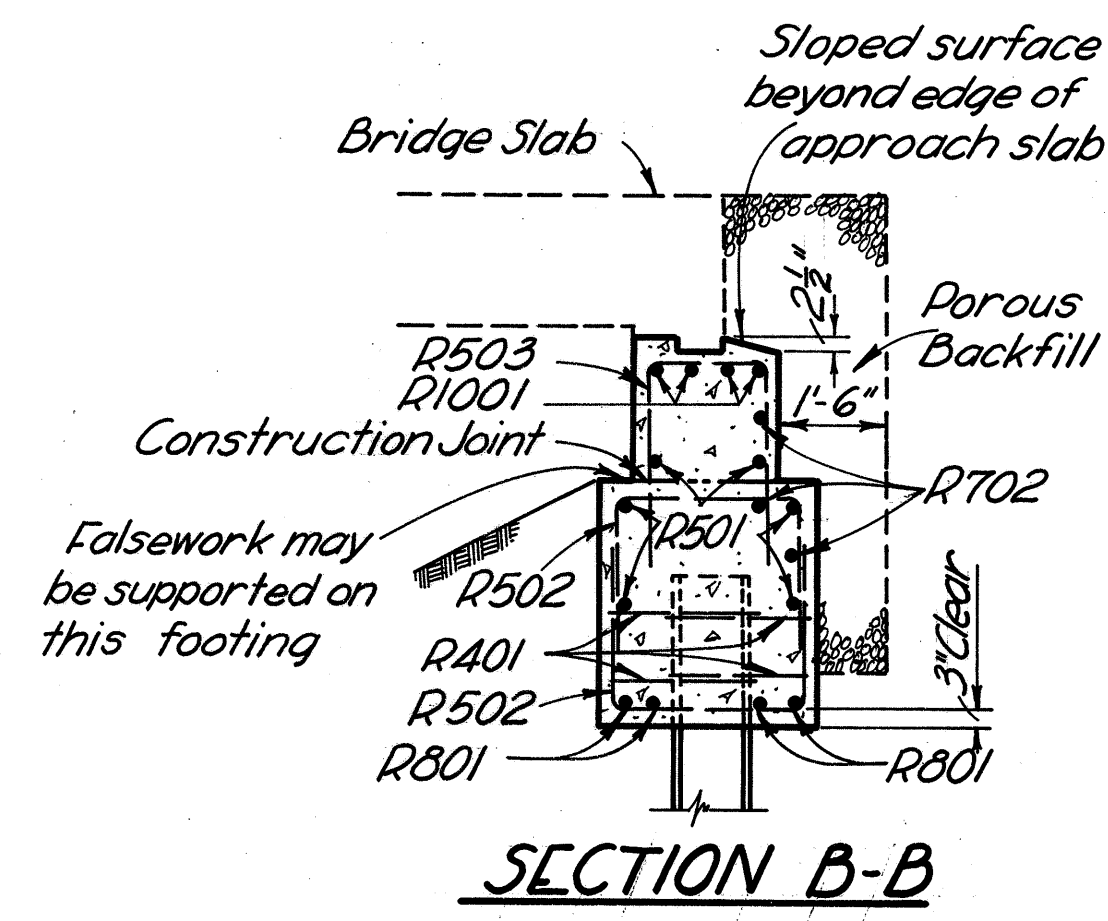
PLAN



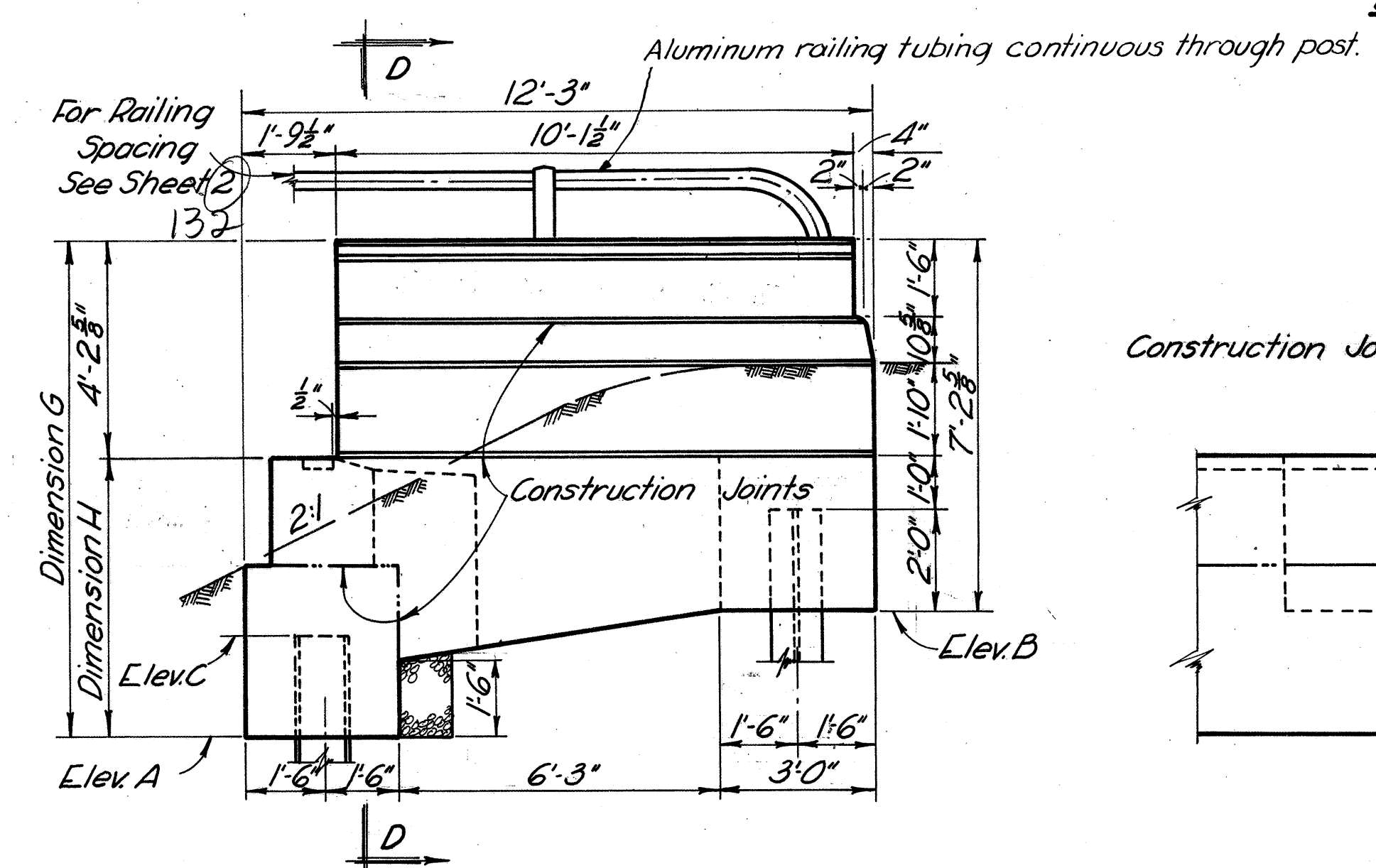
ELEVATION



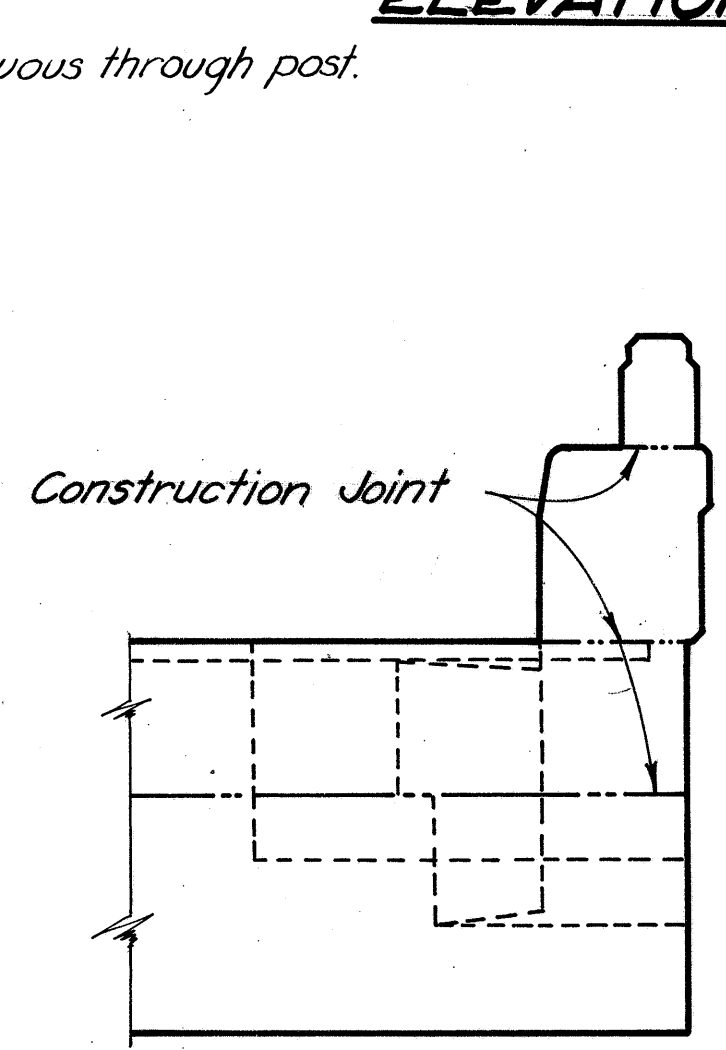
SECTION A-A



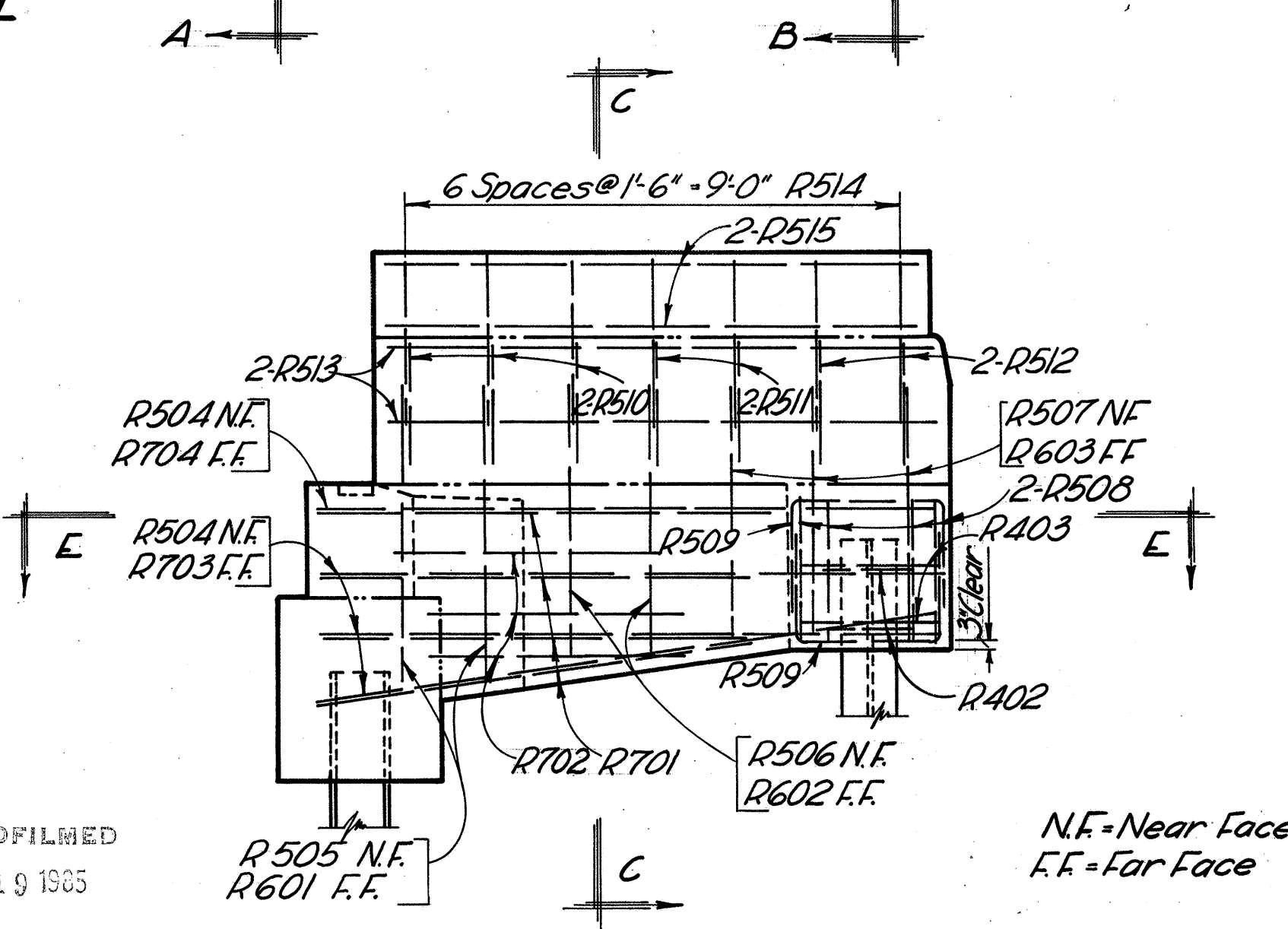
SECTION B-B



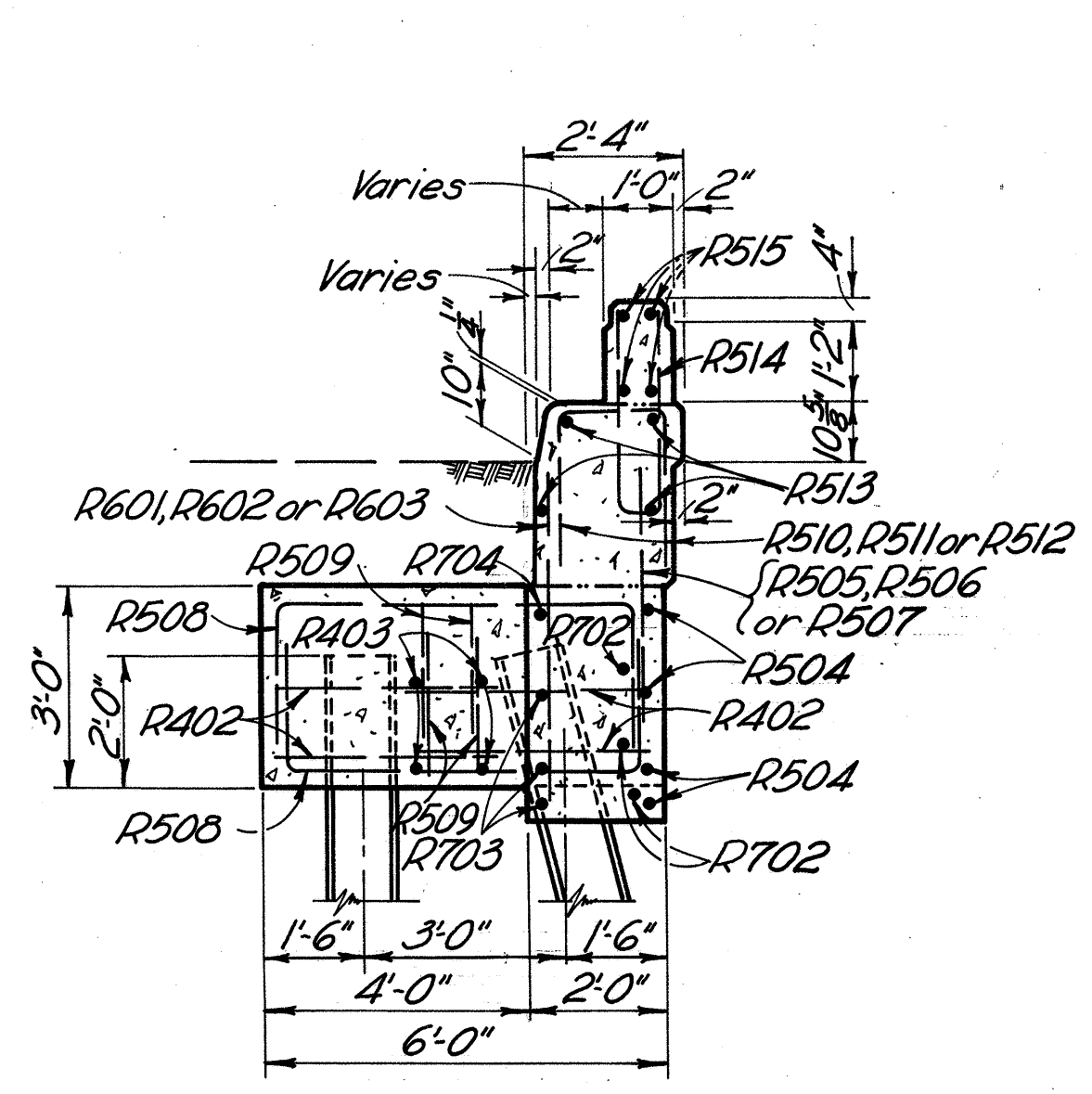
WINGWALL ELEVATION
Construction Details



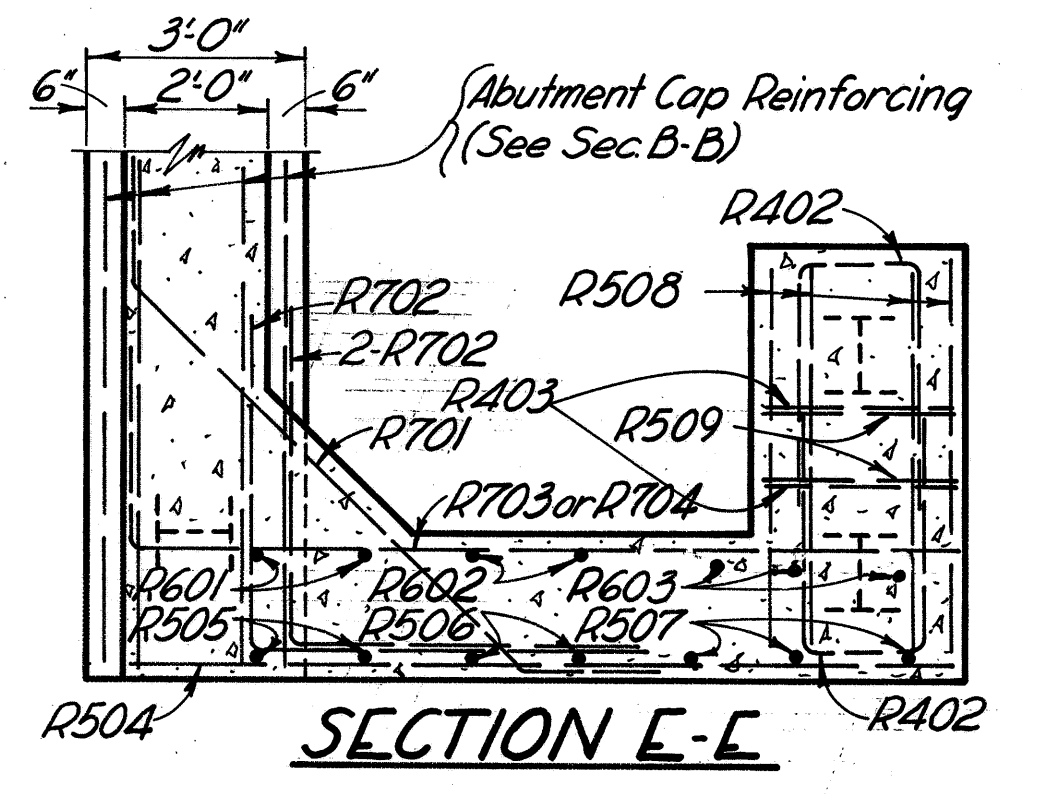
SECTION D-D



WINGWALL ELEVATION
Reinforcing Bar Details



SECTION G-G



SECTION E-E

SANZENBACHER, MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

ABUTMENTS
BRIDGE No. ERI. 6-0915 LEFT & RIGHT
OVER
B + O. RAILROAD

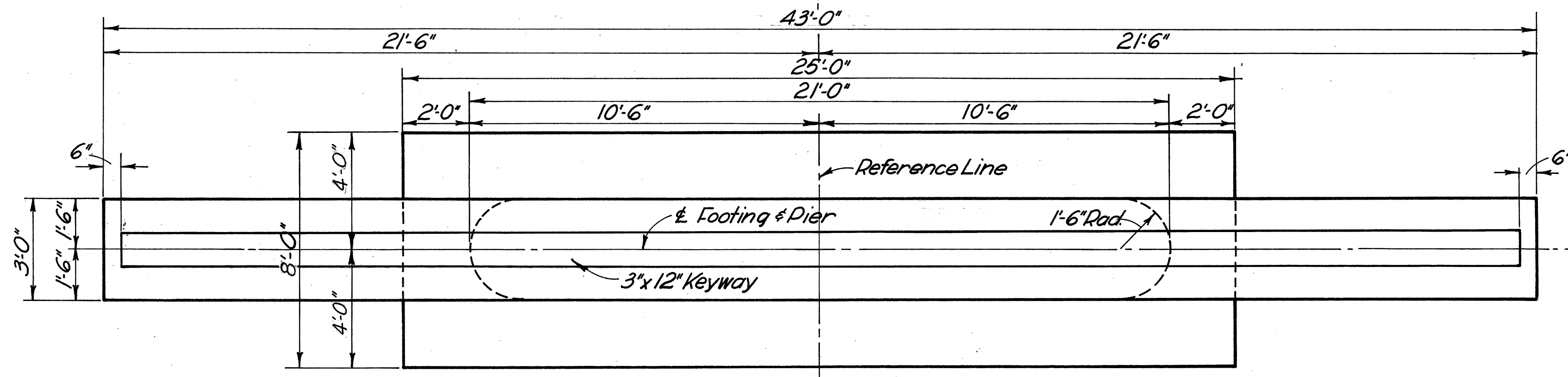
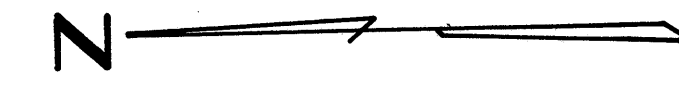
LEFT Sta. 734+5461 to 735+86.15
RIGHT Sta. 734+5764 to 735+8919

DESIGNED DRAWN CHECKED REVIEWED DATE REVISED
TFH TFH JEC HDD B.J.H.
FCM 9-23-60

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MAR 19 1965

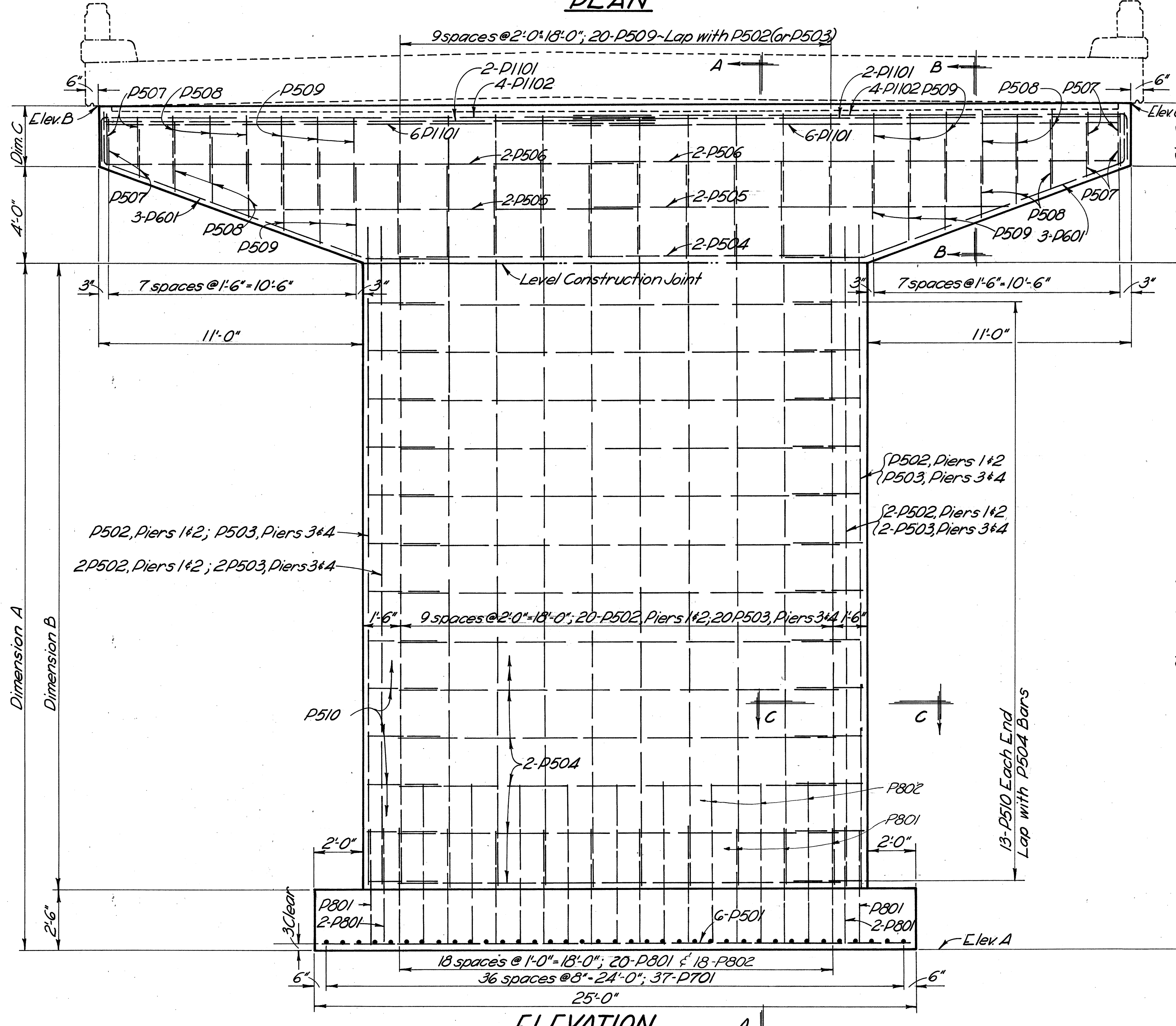
N.F. = Near Face
F.F. = Far Face

ERI 6-7.31

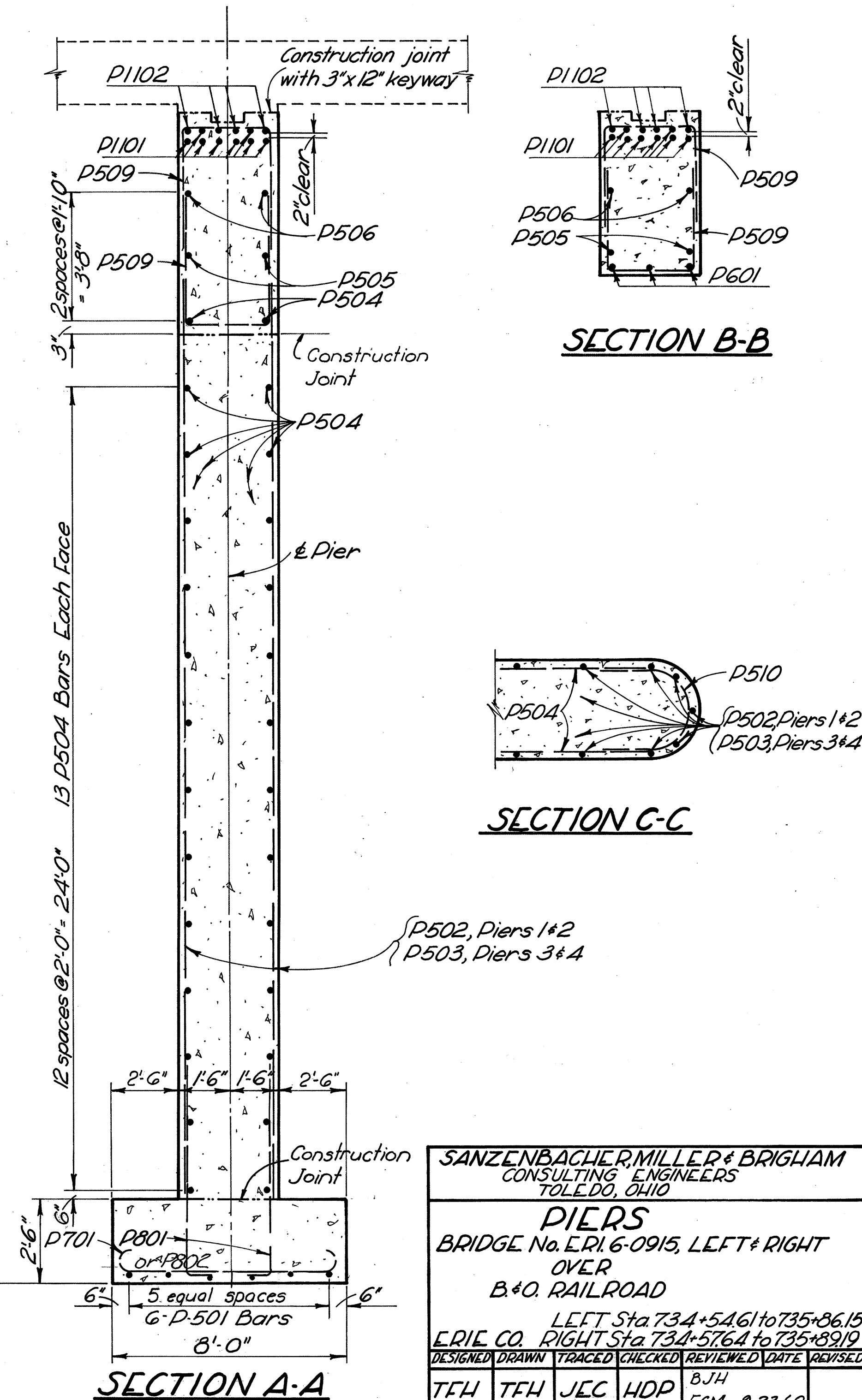


PLAN

LOCATION	DIMENSIONS				ELEVATIONS		
	A	B	C	D	A	B	C
LEFT BRIDGE Pier 1	28'-5 3/4"	25'-11 3/4"	2'-6"	2'-7 1/2"	613.00	647.98	648.08
LEFT BRIDGE Pier 2	28'-6"	26'-0"	2'-6"	2'-7 1/2"	613.00	648.00	648.09
RIGHT BRIDGE Pier 3	27'-5 3/4"	24'-11 3/4"	2'-7 1/2"	2'-6"	614.00	648.08	647.98
RIGHT BRIDGE Pier 4	27'-6"	25'-0"	2'-7 1/2"	2'-6"	614.00	648.09	648.00



ELEVATION



SECTION B-B

SECTION C-C

SECTION A-A

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CONSULTING ENGINEERS
TOLEDO, OHIO

PIERS
BRIDGE No. ERI 6-0915, LEFT & RIGHT
OVER
B. & O. RAILROAD
LEFT Sta 734+54.61 to 735+86.15
RIGHT Sta 734+57.64 to 735+89.19

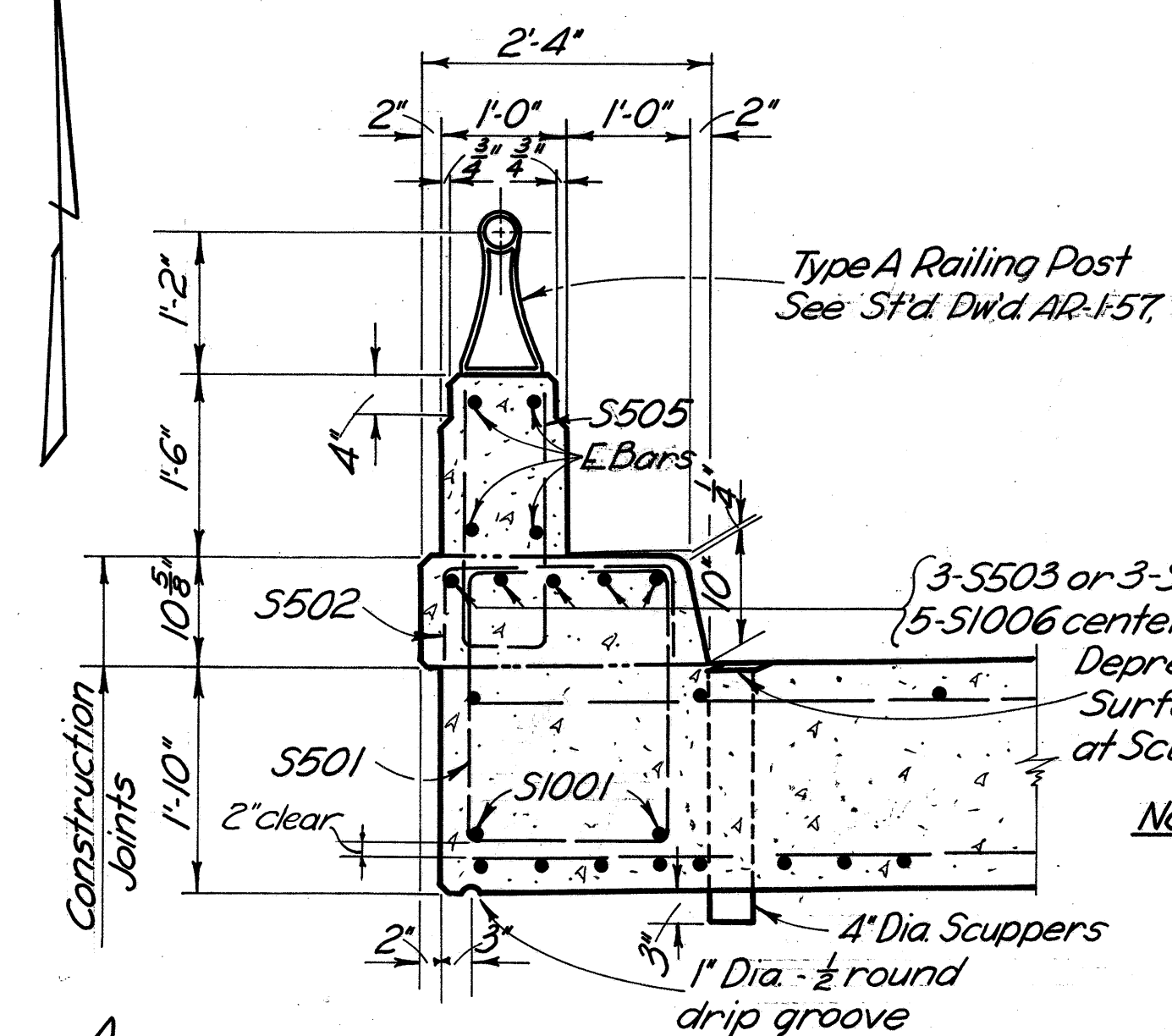
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TFH	TFH	JEC	HDP	B.J.H.	9-23-60	

ERI-6-731

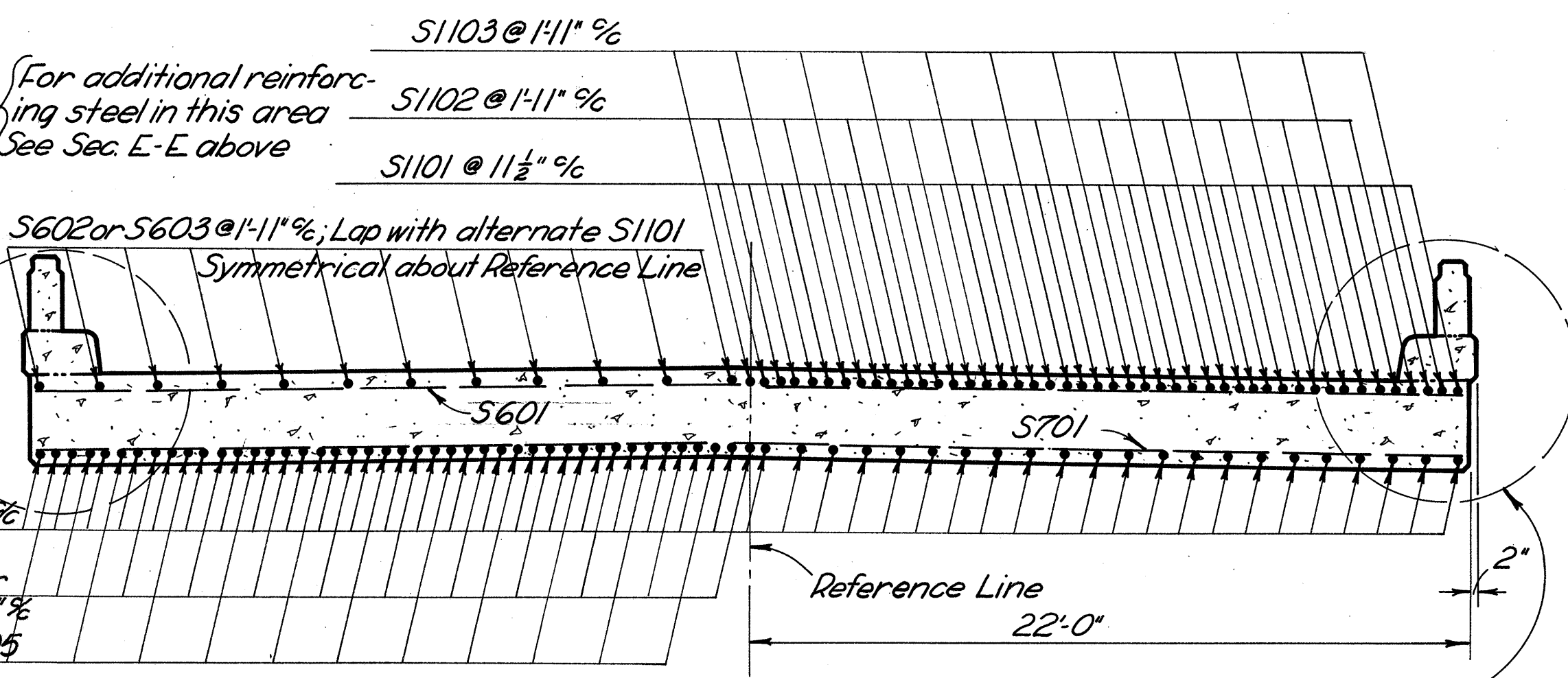
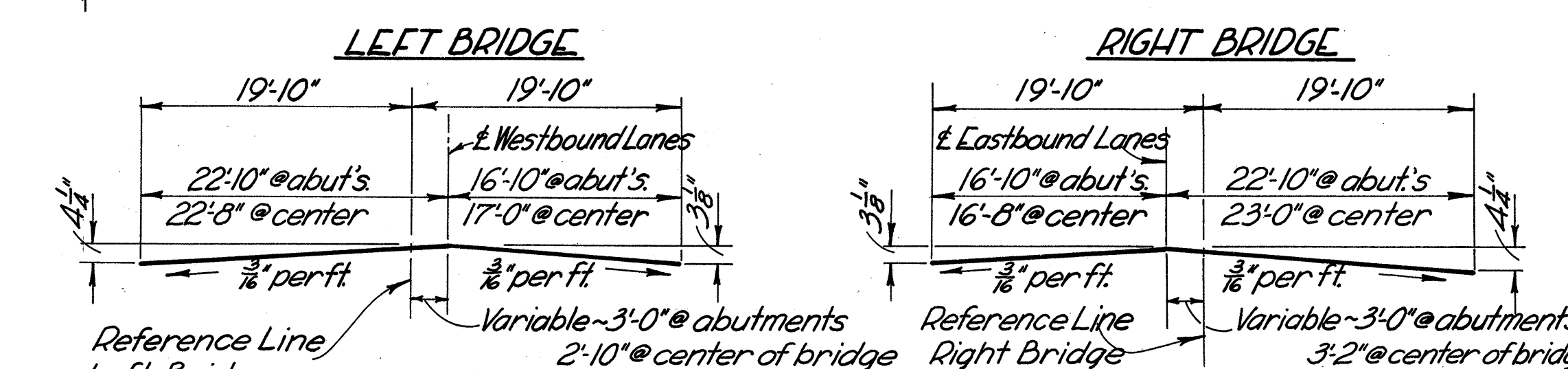
Parapet Panel Details

Panel Length	No. of S505 @ 1'-6" %	L Bars
16'-5 1/2"	11	S506
8'-6 3/4"	6	S507
7'-10 1/4"	6	S508

For location of panel, see sheet

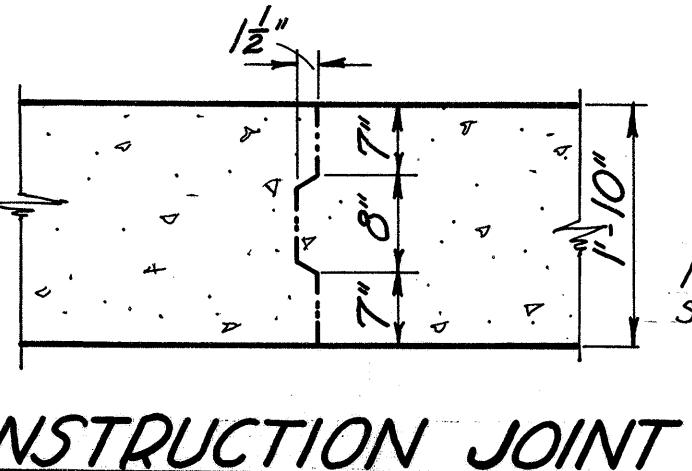


Note: Alter spacing of bars to permit proper placement of scuppers (For location of scuppers See Sheet 132)

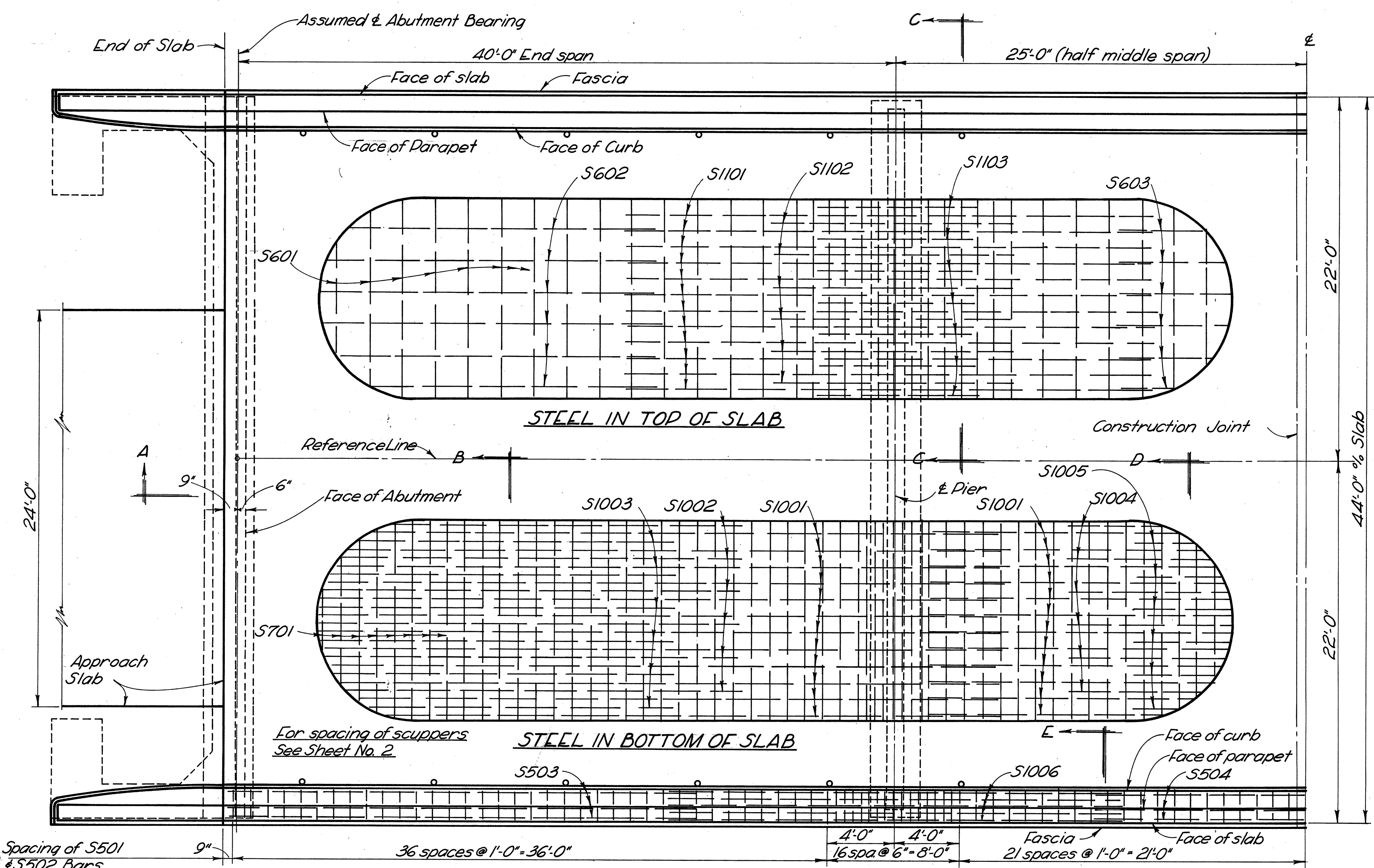


SECTION B-B & D-D

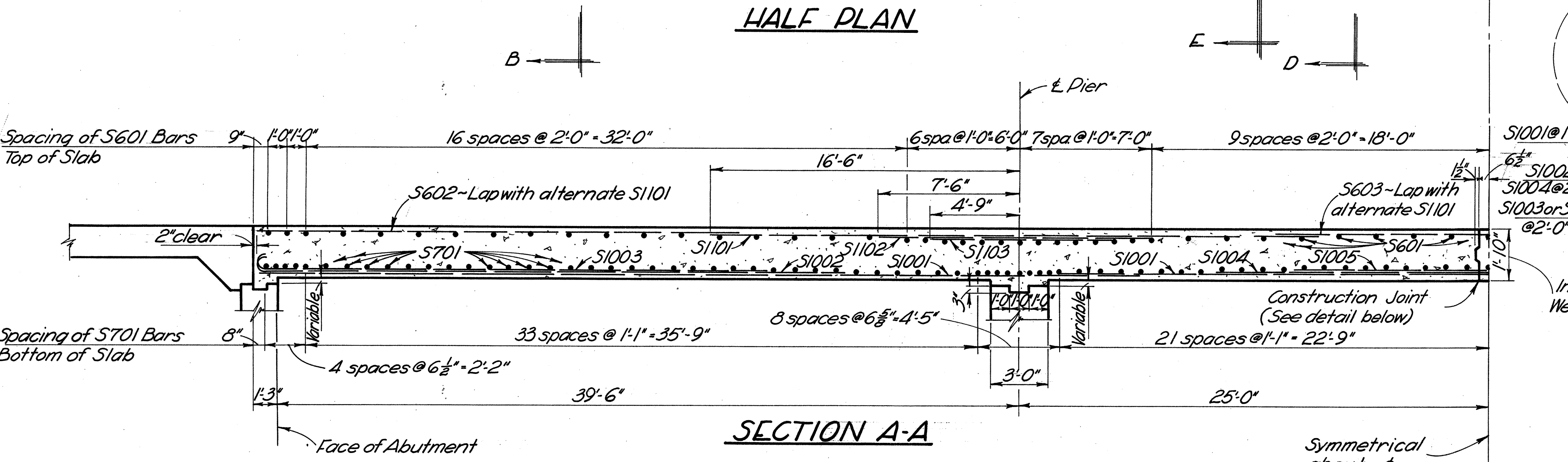
SECTION C-C



Note: A longitudinal construction joint may be placed in the superstructure slab on the E of Roadway.



HALF PLAN



SECTION A-A

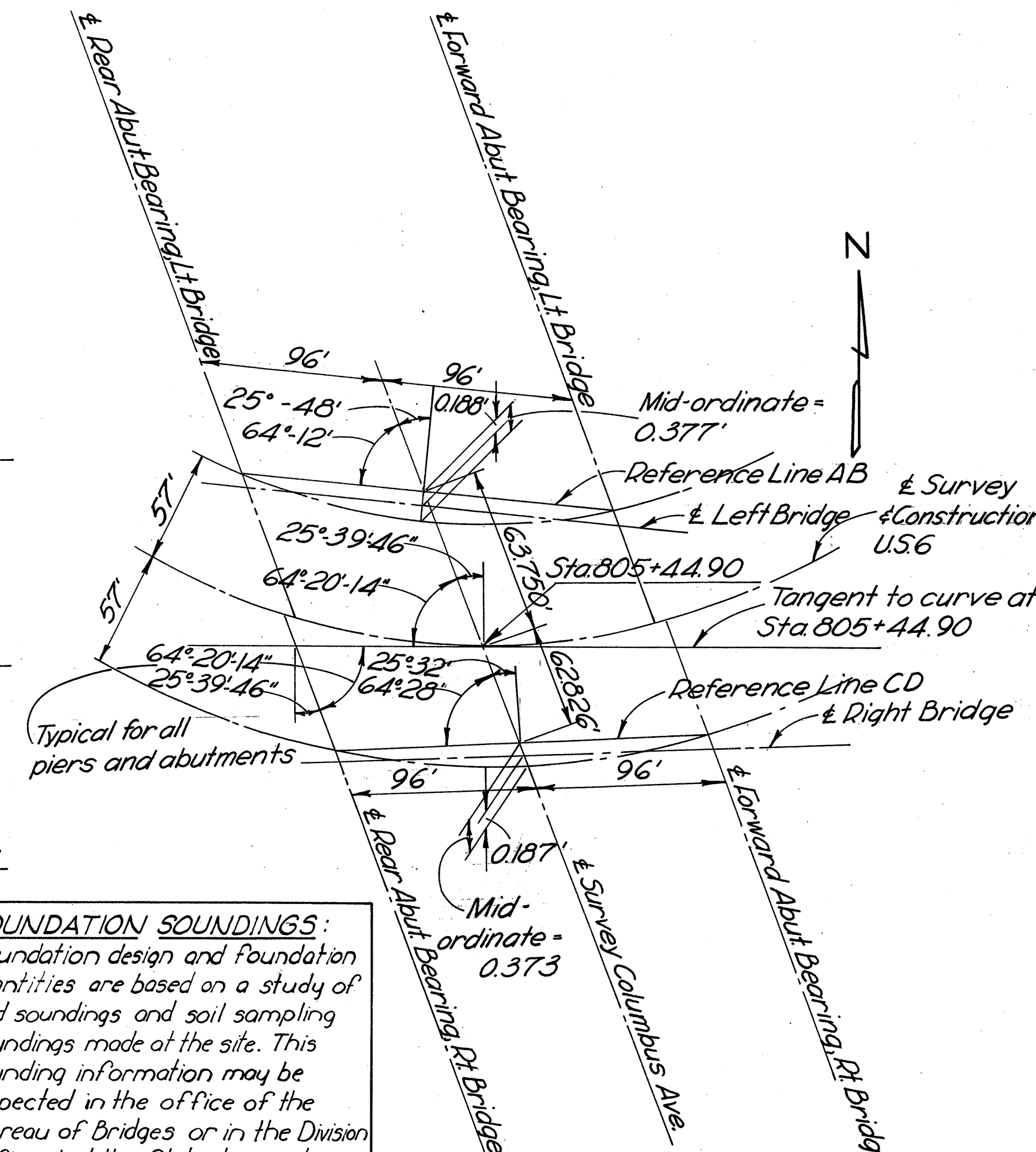
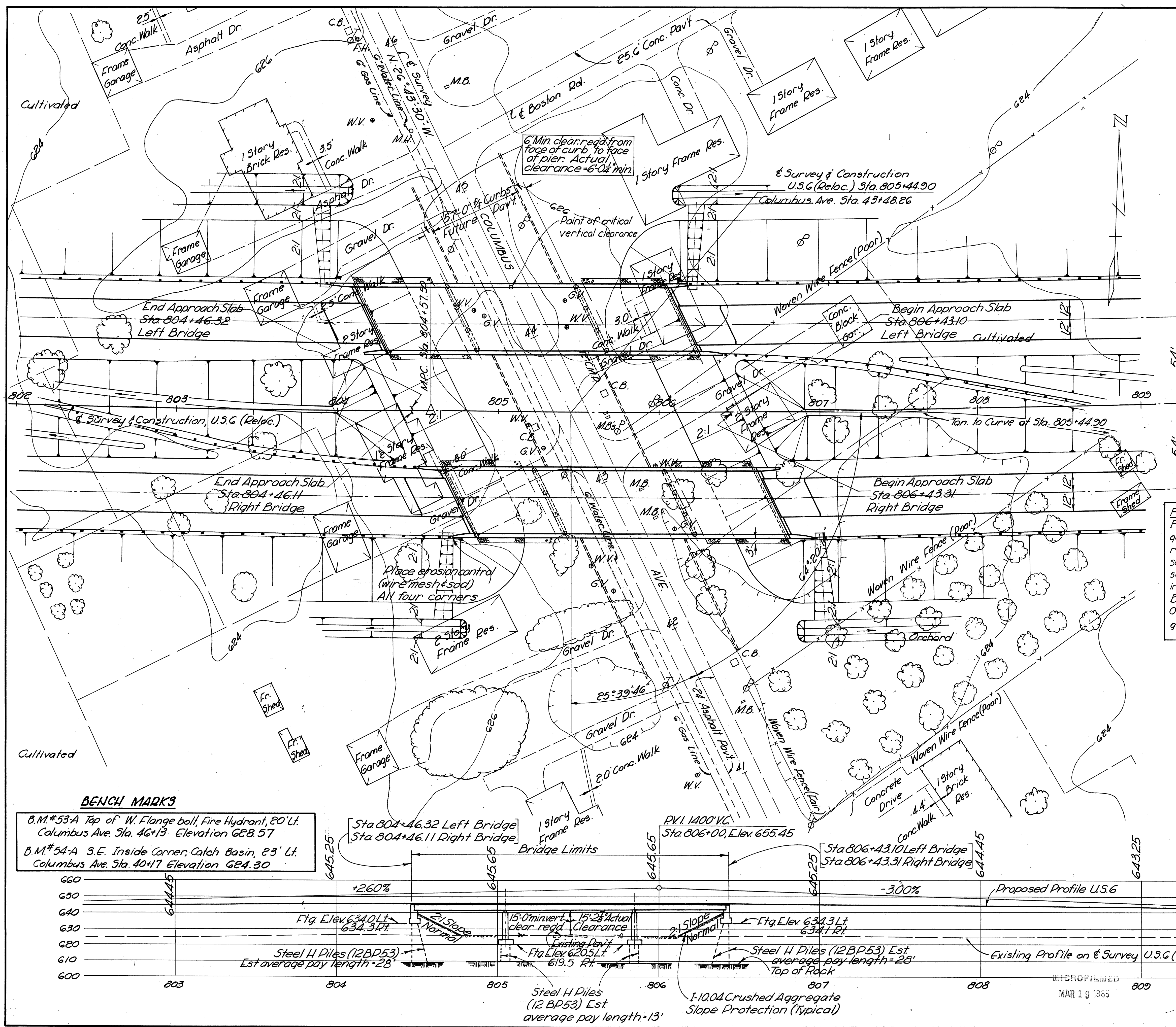
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CONSULTING ENGINEERS
TOLEDO, OHIO

SUPERSTRUCTURE DETAILS
BRIDGE No. ERI-6-0915, LEFT & RIGHT
OVER
B+O RAILROAD
LEFT Sta 734+54.61 to 735+86.15
RIGHT Sta 734+57.64 to 735+89.19

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVIEWED
TFH	TFH	JEC	HDP	BJH	9-23-60	FCM

ERI 6-731
4.4 Miles West of Huron



FOUNDATION SOUNDINGS:
 Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges or in the Division Office, but the State does not guarantee the accuracy thereof.

CURVE DATA
 $\Delta = 27^{\circ}08'30''$ Lt.
 $D = 0^{\circ}28'$
 $R = 12,277.67'$
 $T = 2963.71'$
 $L = 5816.07'$
 $E = 352.37'$
 $PC = 775+49.46$
 $PI = 805+13.17$
 $PT = 833+65.53$
 $MPC = 804+57.50$

PROPOSED STRUCTURES
 Type: Continuous steel beam with reinf. concrete deck Reinf. Concrete Pier Bents and Stub Abutments
 Spans: 56'-0", 80'-0", 56'-0" % Brgs.
 Roadway: 42'-0" w/ of parapets
 Left & Right Bridges
 Load Frequency: CF-400 (57)
 Skew: 25°-48' R/L Left Bridge, 25°-32' R/L Right Bridge
 Wearing Surface: 1" Monolithic Concrete
 Approach Slabs: AS-1-54 (25'-0" Long)
 Alignment: 0°-28' Curve Left No Super-elevation

Design Year Traffic
 ADT (1979) = 3200

BENCH MARKS
 B.M.#53-A Top of W. Flange bolt, Fire Hydrant, 20' Lt. Columbus Ave. Sta. 46+13 Elevation 628.57
 B.M.#54-A S.E. Inside Corner, Catch Basin, 23' Lt. Columbus Ave. Sta. 40+17 Elevation 624.30

SANZENBACHER, MILLER & BRIGHAM
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 TOLEDO, OHIO

SITE PLAN
 BRIDGE NO. ERI 6-1048 LEFT AND RIGHT OVER COLUMBUS AVENUE

ERIE CO. LEFT STA. 804+46.32 to 806+43.10
 RIGHT STA. 804+46.11 to 806+43.31
 SCALE: 1"=30'

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
S.M.B.	T.H.B.	J.W.B.	T.W.D.	S.J.L.	F.C.H.
					9-23-60

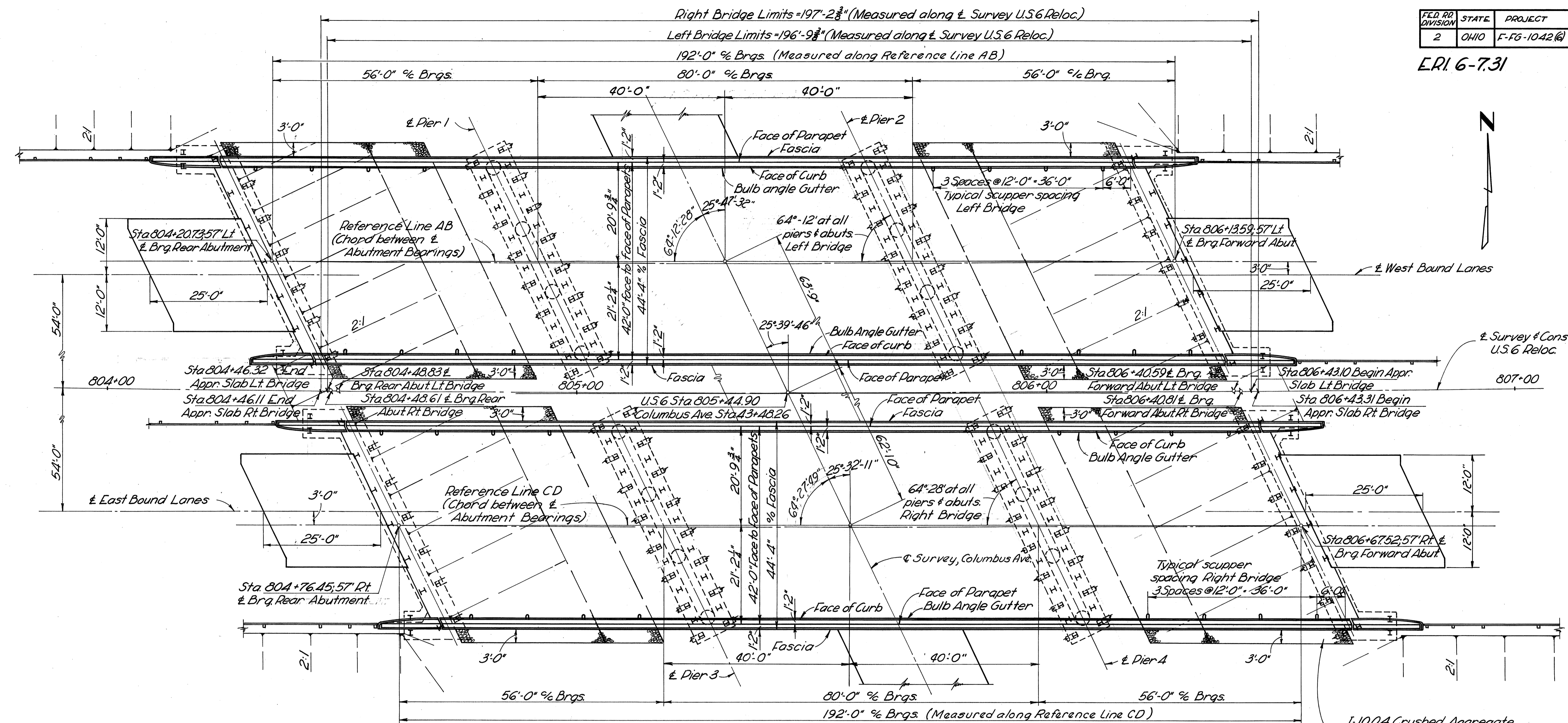
ER-2-1096

MAR 19 1965

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-FG-1042(6)	

138
161

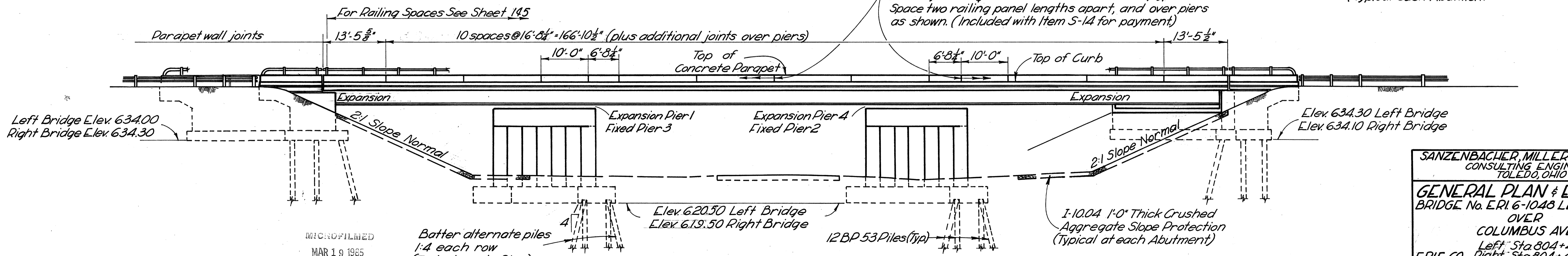
ERI 6-731



GENERAL PLAN

1/2" Gray Sponge rubber preformed expansion joint filler meeting the requirements of Section M-10.02, Type 1. Space two railing panel lengths apart, and over piers as shown. (Included with Item S-14 for payment)

1-10.04 Crushed Aggregate Slope Protection (Typical each Abutment)



GENERAL ELEVATION

SANZENBACHER, MILLER & BRIGHAM
 CONSULTING ENGINEERS
 TOLEDO, OHIO

GENERAL PLAN & ELEVATION
 BRIDGE No. ERI 6-1048 LEFT & RIGHT
 OVER
 COLUMBUS AVE.
 Left: Sta. 804+46.52 to 806+43.10
 Right: Sta. 804+46.11 to 806+43.31

DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISED

LG	LG	JEC	TFH	BJH
				FCM 9/23/60

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 MAR 19 1965

GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	139
2	OHIO	F-FG-1042(6)		161

ERI 6-7.31

REFERENCE shall be made to Standard Drawings AS-1-54 "Reinforced Concrete Approach Slabs," revised 12-1-54, CSB-2-56 "Continuous Steel Beam Bridge" (sheets 2 and 3 of 6 sheets), revised 2-2-59; AR-1-57, "Aluminum Railing with Concrete Parapet," revised 2-2-59, and to Supplemental Specification S-101 dated 12-2-59.

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 AND BACKFILL: Excavation quantity includes the removal of fill material between the surface of proposed embankment and the bottom of the footings. Backfill behind the abutments shall be compacted in accordance with the requirements for embankment compaction.

PROCEDURE: The embankments shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments, after which excavation shall be made for the abutments and the piles driven.

PILES shall be driven with a hammer of not less than 11,000 ft lbs. 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 contact shall be considered as attained when the capacity according to the formula in Sec. S-13.05 is not less than the following value for a pile hammer of the indicated energy rating:

For the abutment piles:
 50 tons per pile using an 11,000 ft. lb. hammer
 42 tons per pile using a 15,000 ft. lb. or greater hammer
 For the pier piles:
 58 tons per pile using an 11,000 ft. lb. hammer
 47 tons per pile using a 15,000 ft. lb. or greater hammer

If the energy rating is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 23 tons per pile for the abutment piles and 25 tons per pile for the pier piles.

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 parallel to the transverse reinforcing steel and are located near the center of any span.

STRUCTURAL STEEL: See Proposal regarding A-373 steel.

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

ESTIMATED QUANTITIES - TWO BRIDGES

Item	Total	Unit	Description	Abutments				Piers				Superstructure		General	
				Lt. Rear	Lt. Fw'd.	Rt. Rear	Rt. Fw'd.	1	2	3	4	Left	Right		
E-2	1124	Cu.Yds.	Unclassified excavation	162	162	162	162	119	119	119	119				
S-1	498	Cu.Yds.	Class "C" concrete, superstructures									249	249		
S-1	146	Cu.Yds.	Class "C" concrete, pier caps & columns					36	36	37	37				
S-1	388	Cu.Yds.	Class "E" concrete, abutments	97	97	97	97								
S-1	180	Cu.Yds.	Class "E" concrete, pier footings					45	45	45	45				
S-4	234,948	Lbs.	Reinforcing steel	5,478	5,479	5,479	5,479	17,433	17,474	17,812	17,792	71,261	71,261		
S-7	566,000	Lbs.	Structural steel									283,000	283,000		
S-8	566,000	Lbs.	Field painting of structural steel, as per plan									283,000	283,000		
S-14	878	Lin. Ft.	Railing (aluminum rail and supports, concrete parapet)									439	439		
S-16	Lump	Sum	First test pile												Lump
S-18	3560	Lin. Ft.	Steel piles 12 BP 53	500	500	500	500	390	390	390	390				
S-29	64	Cu.Yds.	Porous backfill	16	16	16	16								
S-29	32	Each	Scuppers									16	16		
I-10	1044	Sq. Yds.	Crushed aggregate slope protection												1044

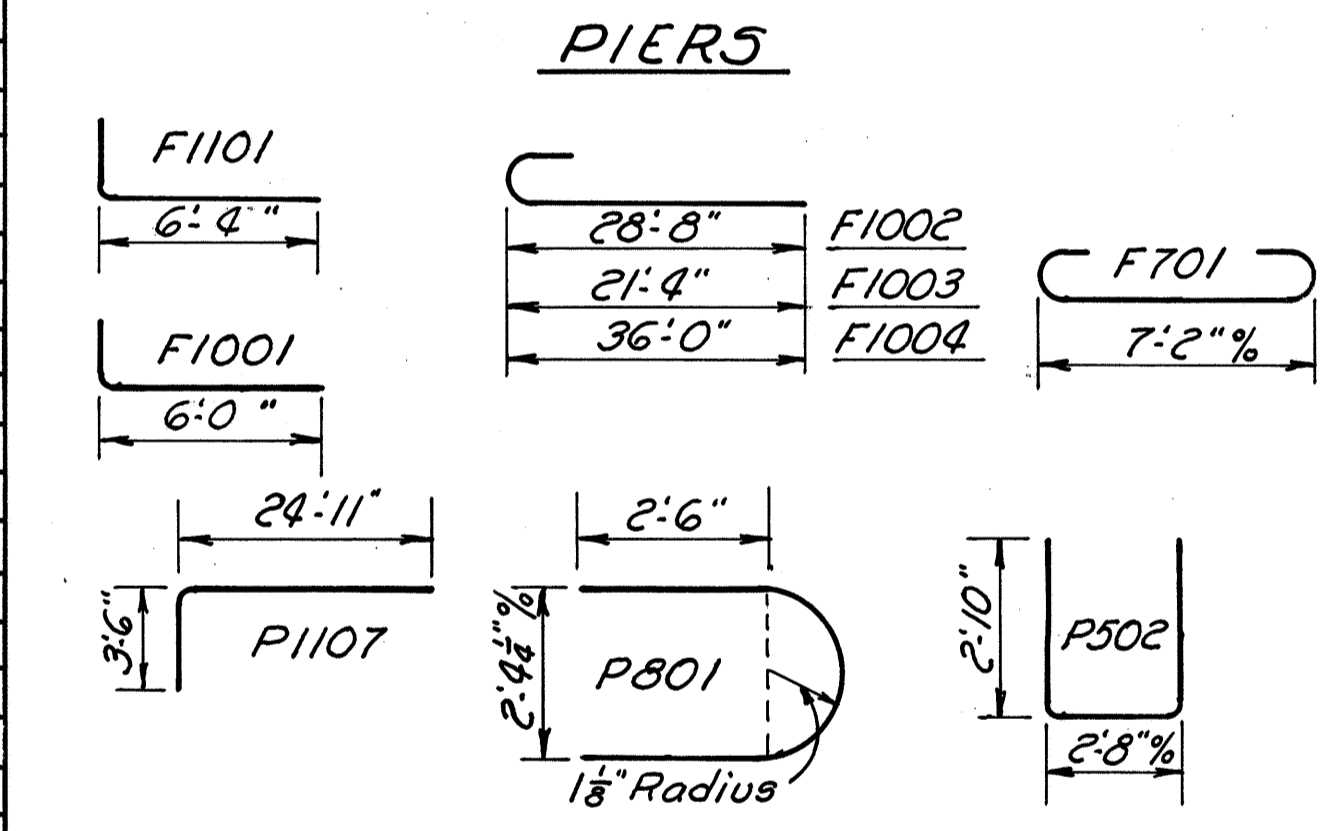
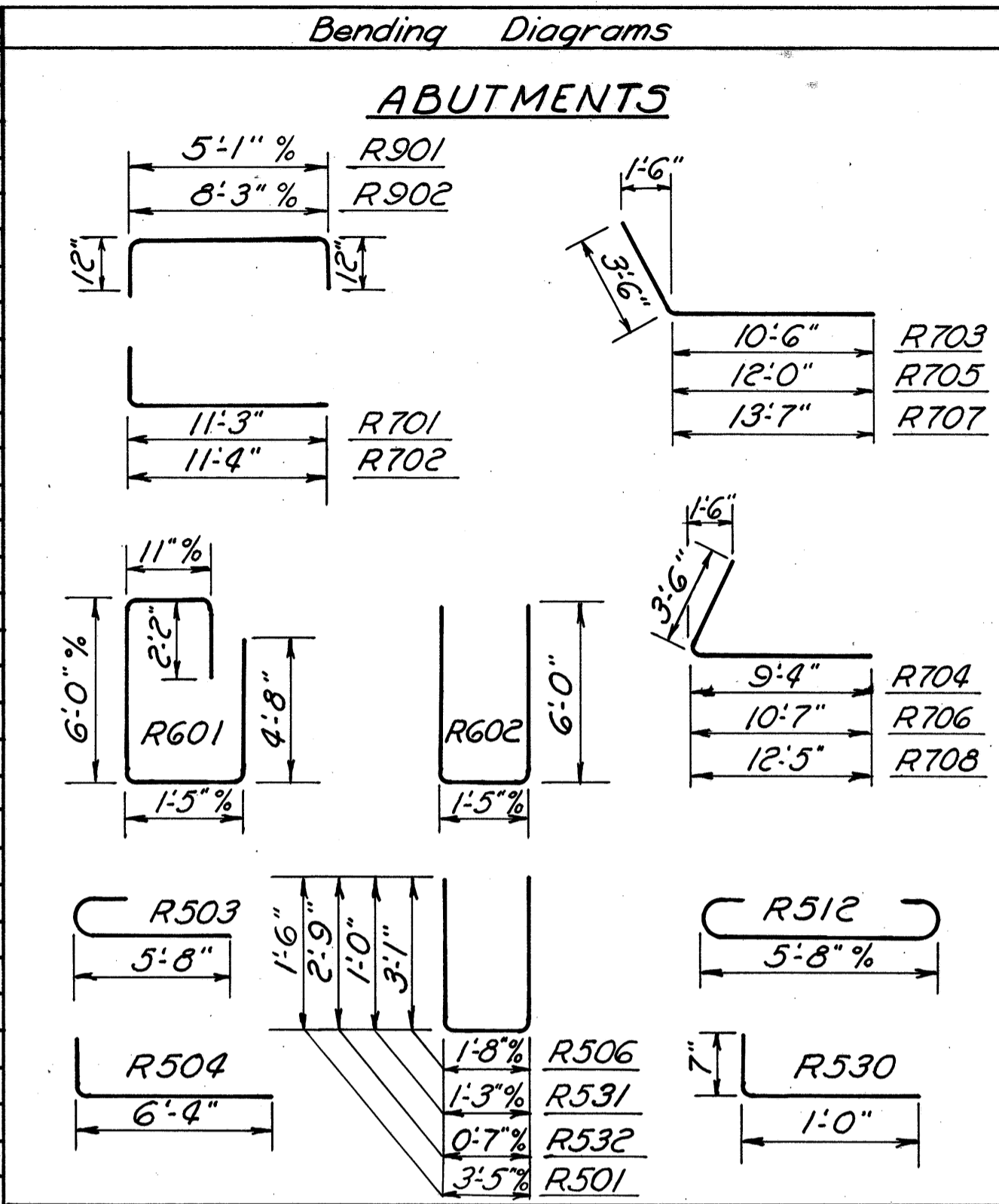
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MAR 19 1965

SANZENBACHER, MILLER & BRIGHAM CONSULTING ENGINEERS TOLEDO, OHIO				
ESTIMATED QUANTITIES & GENERAL NOTES				
BRIDGE No. ERI 6-1048 LEFT & RIGHT OVER COLUMBUS AVENUE				
Left Sta. 804+46.32 to 806+43.10				
ERIE CO. Right Sta. 804+46.11 to 806+43.31				
DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISED				
RJH	JEC	JEC	TFH	BJH FCM 9-23-60

ERI. 6-7.31

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shape	Mark	No.	Length	Weight	Shape
ABUTMENTS					PIERS				
R901	24	7'-1"	578	B	F1101	168	7'-6"	6,694	B
R902	24	10'-3"	836	B					
					F1001	64	7'-1"	1,951	B
R701	28	12'-1"	692	B	F1002	64	30'-1"	8,285	B
R702	24	12'-2"	597	B	F1003	24	22'-9"	2,319	B
R703	12	13'-10"	339	B	F1004	24	37'-5"	3,864	B
R704	12	12'-7"	309	B					
R705	4	15'-4"	125	B					
R706	4	13'-10"	113	B	F701	296	8'-10"	5,344	B
R707	8	16'-11"	277	B					
R708	8	15'-8"	256	B					
					F601	148	7'-2"	1,593	S
R601	108	14'-6"	2,352	B					
R602	78	13'-1"	1,333	B	P1101	42	17'-7"	3,924	S
					P1102	42	17'-9"	3,961	S
					P1103	42	18'-9"	4,184	S
R501	244	6'-2"	1,369	B	P1104	42	18'-7"	4,147	S
R502	48	27'-5"	1,373	S	P1105	20	17'-10"	1,895	S
R503	164	6'-3"	1,069	B	P1106	20	32'-3"	3,427	S
R504	152	6'-10"	1,083	B	P1107	32	28'-1"	4,775	B
R505	152	6'-7"	1,044	S	P1108	16	29'-0"	2,465	S
R506	144	7'-7"	1,139	B					
R507	64	24'-11"	1,663	S					
R508	48	17'-3"	864	S	P1001	16	17'-7"	1,211	S
R509	4	30'-2"	126	S	P1002	16	17'-9"	1,222	S
R510	4	13'-11"	58	S	P1003	16	18'-9"	1,291	S
R511	4	7'-3"	30	S	P1004	16	18'-7"	1,279	S
R512	48	6'-10"	342	B					
R513	32	11'-4"	378	S					
R514	16	8'-0"	134	S	P801	16	8'-7"	367	B
R515	32	2'-7"	86	S					
R516	16	6'-6"	108	S	P501	16	22'-10"	381	S
R517	16	6'-7"	110	S	P502	192	8'-1"	1,619	B
R518	28	11'-3"	329	S					
R519	24	11'-4"	284	S					
R520	24	9'-11"	248	S					
R521	8	13'-3"	111	S					
R522	48	3'-6"	176	S					
R523	8	15'-4"	128	S					
R524	8	15'-2"	127	S					
R525	24	4'-3"	106	S					
R526	8	13'-3"	111	S					
R527	8	13'-8"	114	S					
R528	8	12'-5"	104	S					
R529	8	12'-0"	100	S					
R530	76	1'-6"	119	B					
R531	68	3'-0"	213	B					
R532	76	5'-10"	462	B					
R533	16	13'-1"	*	S					
R534	16	12'-3"	*	S					



Mark	No.	Length	Weight	Shape	Mark	No.	Length	Weight	Shape
SUPERSTRUCTURES					SUPERSTRUCTURES (cont'd)				
S701	464	43'-8"	41,414	S	S501	516	4'-11"	2,646	B
S702	4	2'-8"	22	S	S502	516	2'-10"	1,525	B
S703	4	4'-2"	34	S	S503	352	4'-8"	1,713	B
S704	4	5'-9"	47	S	S504	32	13'-1"	*	S
S705	4	7'-3"	59	S	S505	32	6'-4"	*	S
S706	4	8'-10"	72	S	S506	32	9'-8"	*	S
S707	4	10'-4"	84	S	S507	128	16'-4"	*	S
S708	4	11'-11"	97	S					
S709	4	13'-6"	110	S					
S710	4	15'-0"	123	S					
S711	4	16'-7"	136	S					
S712	4	18'-2"	149	S					
S713	4	19'-8"	161	S					
S714	4	21'-3"	174	S					
S715	4	22'-10"	187	S					
S716	4	24'-3"	198	S					
S717	4	25'-11"	212	S					
S718	4	27'-5"	224	S					
S719	4	29'-0"	237	S					
S720	4	30'-7"	250	S					
S721	4	32'-1"	262	S					
S722	4	33'-8"	275	S					
S723	4	35'-2"	288	S					
S724	4	36'-9"	300	S					
S725	4	38'-4"	313	S					
S726	4	39'-10"	326	S					
S727	4	41'-5"	339	S					
S728	24	25'-6"	1,251	S					
S601	464	43'-8"	30,433	S					
S602	1092	29'-3"	47,975	S					
S603	136	32'-0"	6,537	S					
S604	4	2'-8"	16	S					
S605	4	4'-2"	24	S					
S606	4	5'-9"	35	S					
S607	4	7'-3"	44	S					
S608	4	8'-10"	53	S					
S609	4	10'-4"	62	S					
S610	4	11'-11"	72	S					
S611	4	13'-6"	81	S					
S612	4	15'-0"	90	S					
S613	4	16'-7"	100	S					
S614	4	18'-2"	109	S					
S615	4	19'-8"	118	S					
S616	4	21'-3"	128	S					
S617	4	22'-10"	137	S					
S618	4	24'-3"	146	S					
S619	4	25'-11"	156	S					
S620	4	27'-5"	165	S					
S621	4	29'-0"	174	S					
S622	4	30'-7"	184	S					
S623	4	32'-1"	193	S					
S624	4	33'-8"	202	S					
S625	4	35'-2"	211	S					
S626	4	36'-9"	221	S					
S627	4	38'-4"	230	S					
S628	4	39'-10"	239	S					
S629	4	41'-5"	249	S					
S630	24	25'-3"	910	S					

SPIRAL REINFORCING LIST						
Mark	No.	Length	Pitch	No. of Turns	Weight	
SP401	4	32"	13'-9"	4 1/2"	40	1031
SP402	4	32"	13'-11 1/2"	4 1/2"	40	1034
SP403	4	32"	14'-11 1/2"	4 1/2"	43	1110
SP404	4	32"	14'-9 3/8"	4 1/2"	43	1108

REPLACEMENT BARS				
Mark	No.	Length	Weight	Shape
RE1101	2	7'-7"		S
RE1001	2	7'-3"		S
RE901	1	6'-10"		S
RE801	1	6'-6"		S
RE701	3	6'-3"		S
RE601	5	5'-11"		S
RE501	2	5'-7"		S
RE401	1	5'-3"		S

BAR SIZE is indicated in the bar mark. The first digit where three digits are used and the first two digits where four are used, indicate the bar size number. For example, a P501 is a No. 5 size bar, and a P1101 is a No. 11 size.

REPLACEMENT BARS: If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec. 5-4.02 need not be furnished and replacement bars will not be required.

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown 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 5-4. 1/2 closed coils shall be provided at the ends of each spiral unit.

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

*Included with Item 5-14 for payment

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SANZENBACHER, MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO OHIO

REINFORCING STEEL
BRIDGE No. ERI. 6-1048 LEFT & RIGHT
OVER
COLUMBUS AVENUE

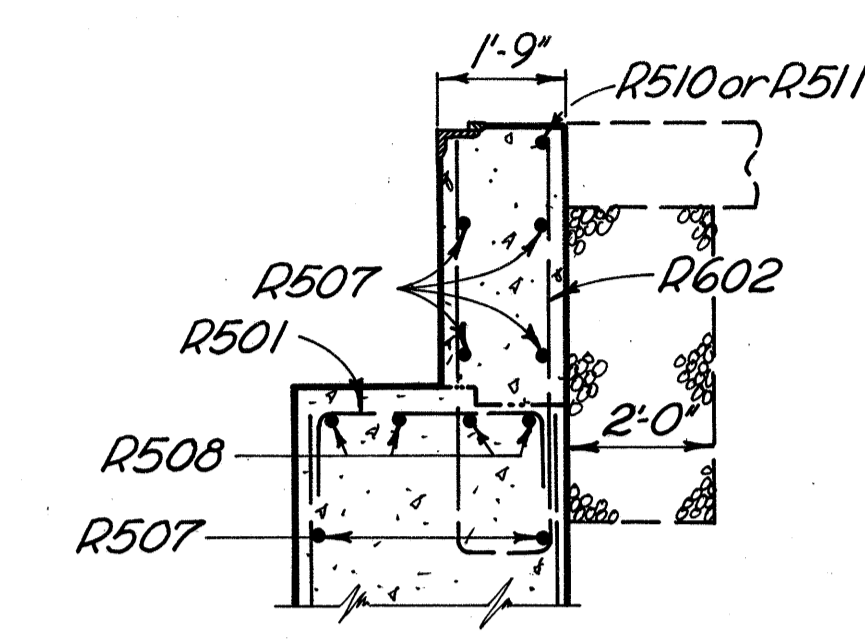
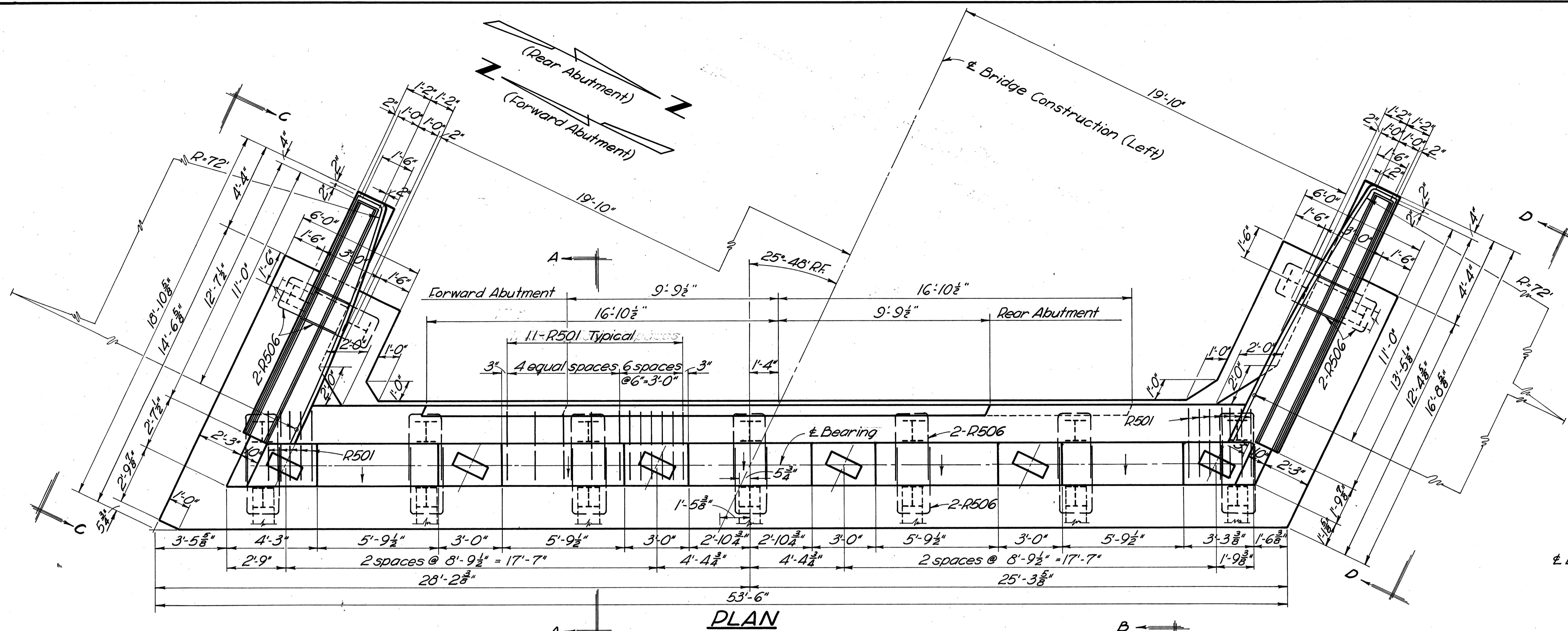
Left Sta. 804+46.32 to 806+43.10
ERIE CO. Right Sta. 804+46.11 to 806+43.31

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RJH	JEC	JEC	HDP	BJH		
				FCM	9-23-60	

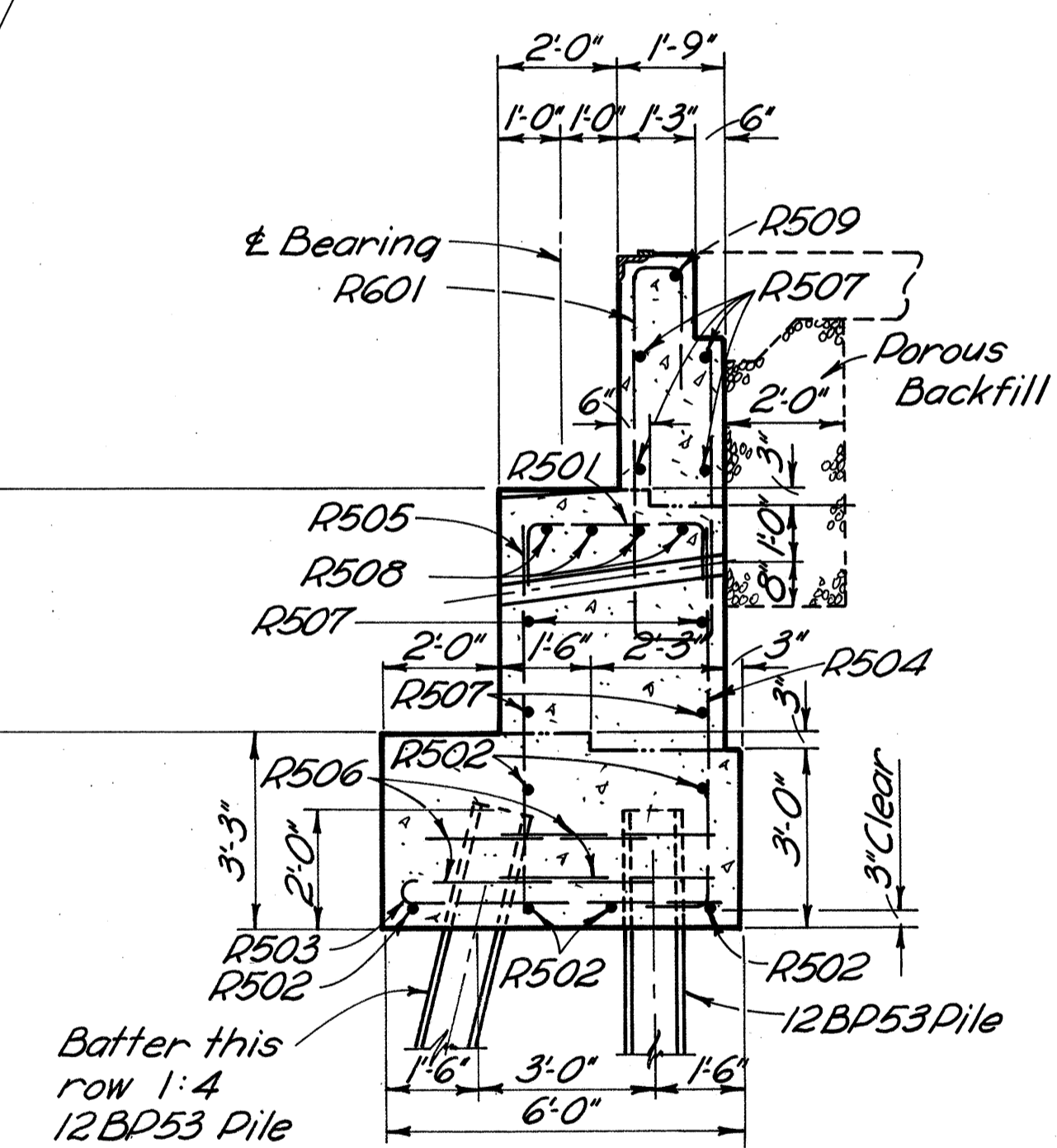
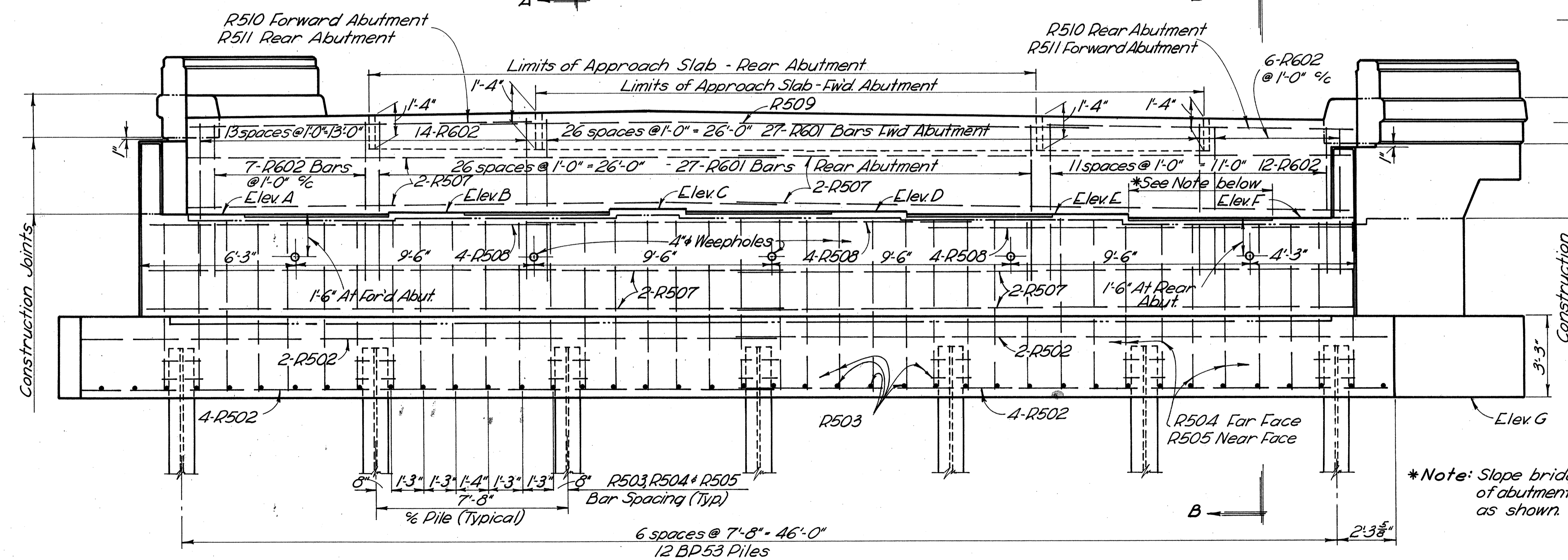
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-FG-1042 (6)	

141
161

ERI 6-731



SECTION B-B



SECTION A-A

Note: Special care shall be taken in placing reinforcing bars below beam seat so that they will not interfere with the bearing plate anchor bars.

ELEVATION

MICROFILMED
MAR 19 1965

LOCATION	ELEVATIONS						
	A	B	C	D	E	F	G
Fwd Abutment	641.41	641.52	641.64	641.72	641.59	641.45	634.30
Rear Abutment	641.28	641.38	641.49	641.37	641.23	641.08	634.00

*Note: Slope bridge seat 3/4" to face of abutment between beams as shown.

SANZENBACHER, MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

ABUTMENTS
BRIDGE No. ERI 6-1048 LEFT
OVER
COLUMBUS AVENUE

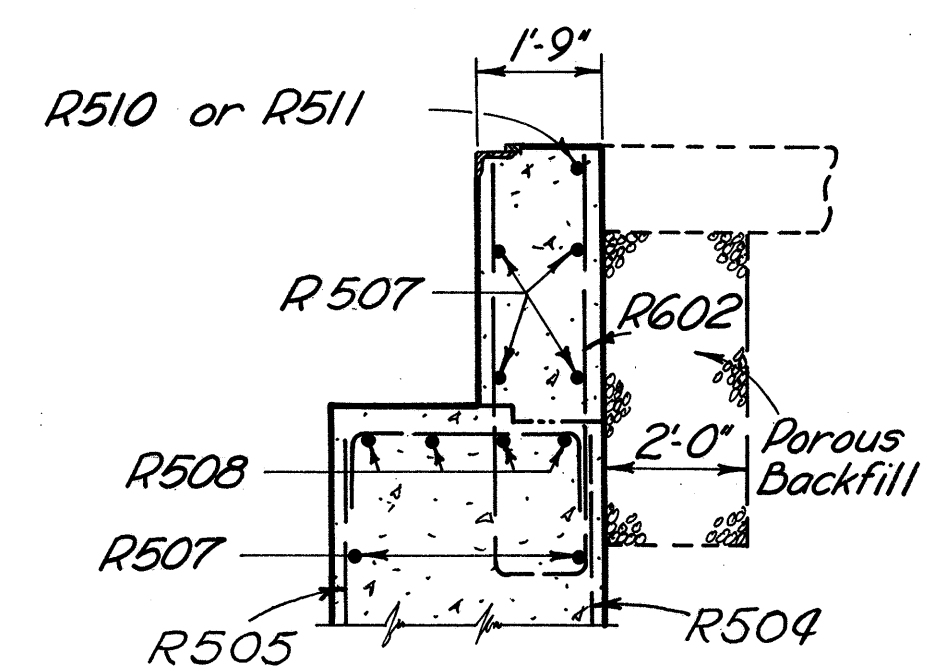
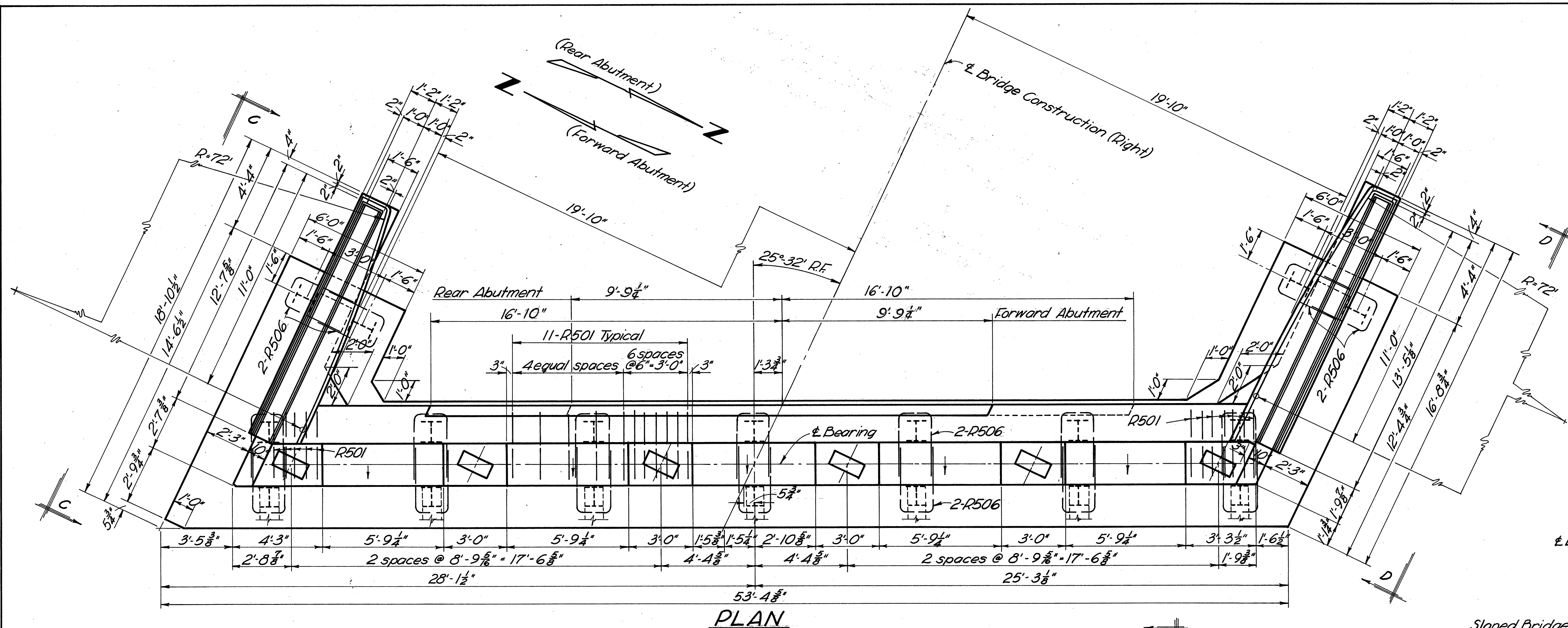
ERI CO. Sta. 804+46.32 to Sta. 806+43.10

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RJH	RJH	JEC	TFH	BJH	FCM 9-23-60	

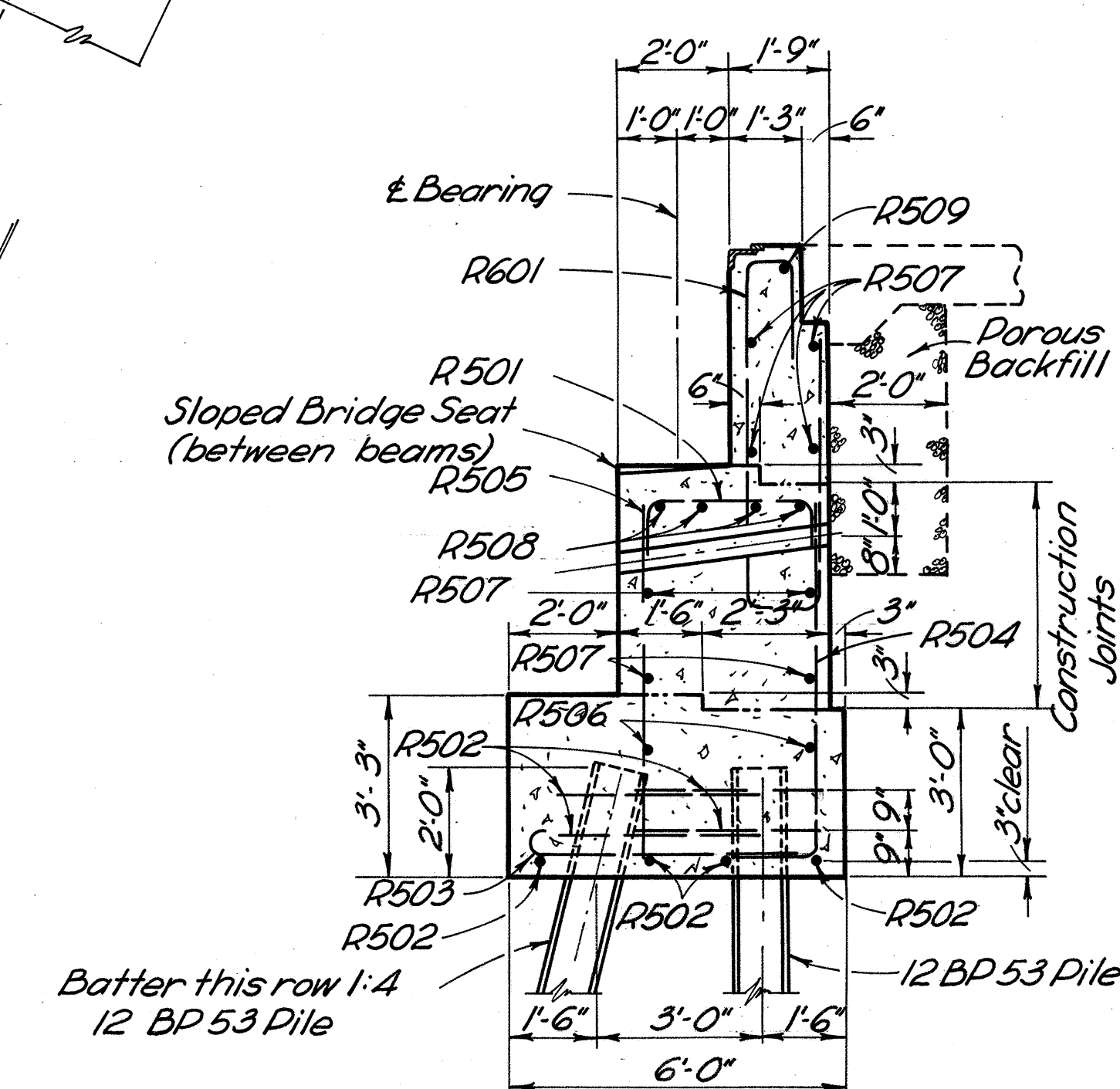
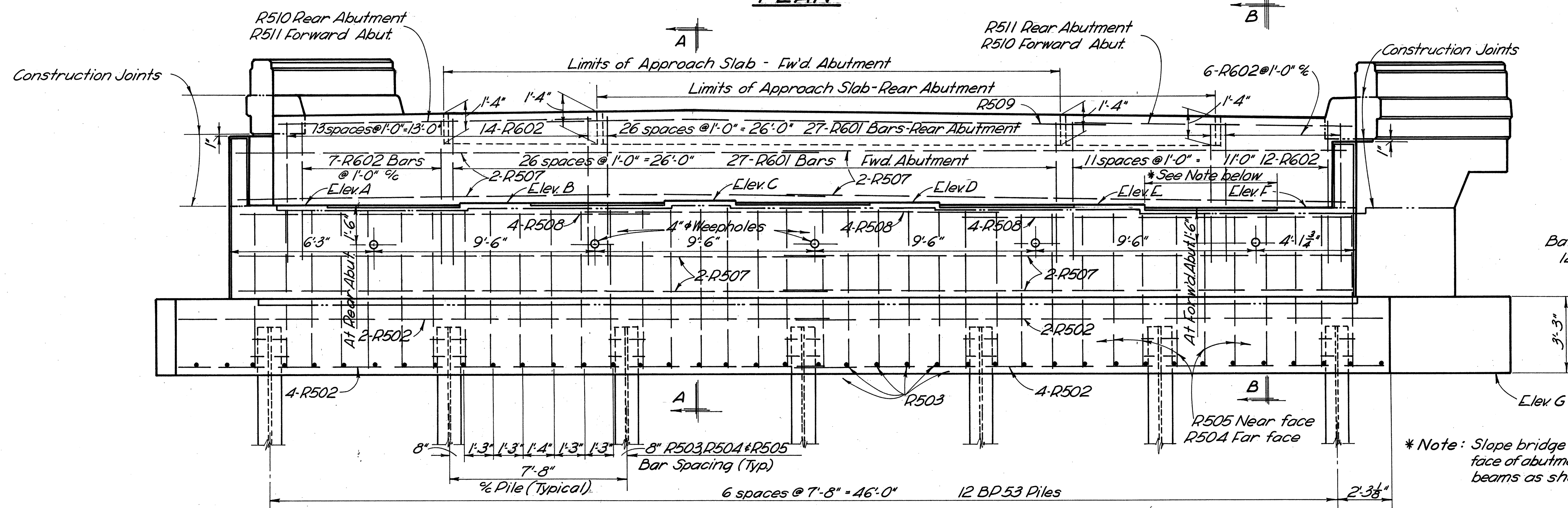
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-FG-1042(6)	

142
161

ERI.6-7.31



SECTION B-B



SECTION A-A

Note: Special care shall be taken in placing reinforcing bars below beam seat so that they will not interfere with the bearing plate anchor bars.

MICROFILMED
MAR 19 1965

ELEVATION

LOCATION	ELEVATIONS						
	A	B	C	D	E	F	G
Fwd. Abutment	641.32	641.43	641.54	641.43	641.28	641.14	634.10
Rear Abutment	641.38	641.50	641.61	641.69	641.56	641.42	634.30

* Note: Slope bridge seat 3/4" to face of abutment between beams as shown.

SANZENBACHER MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

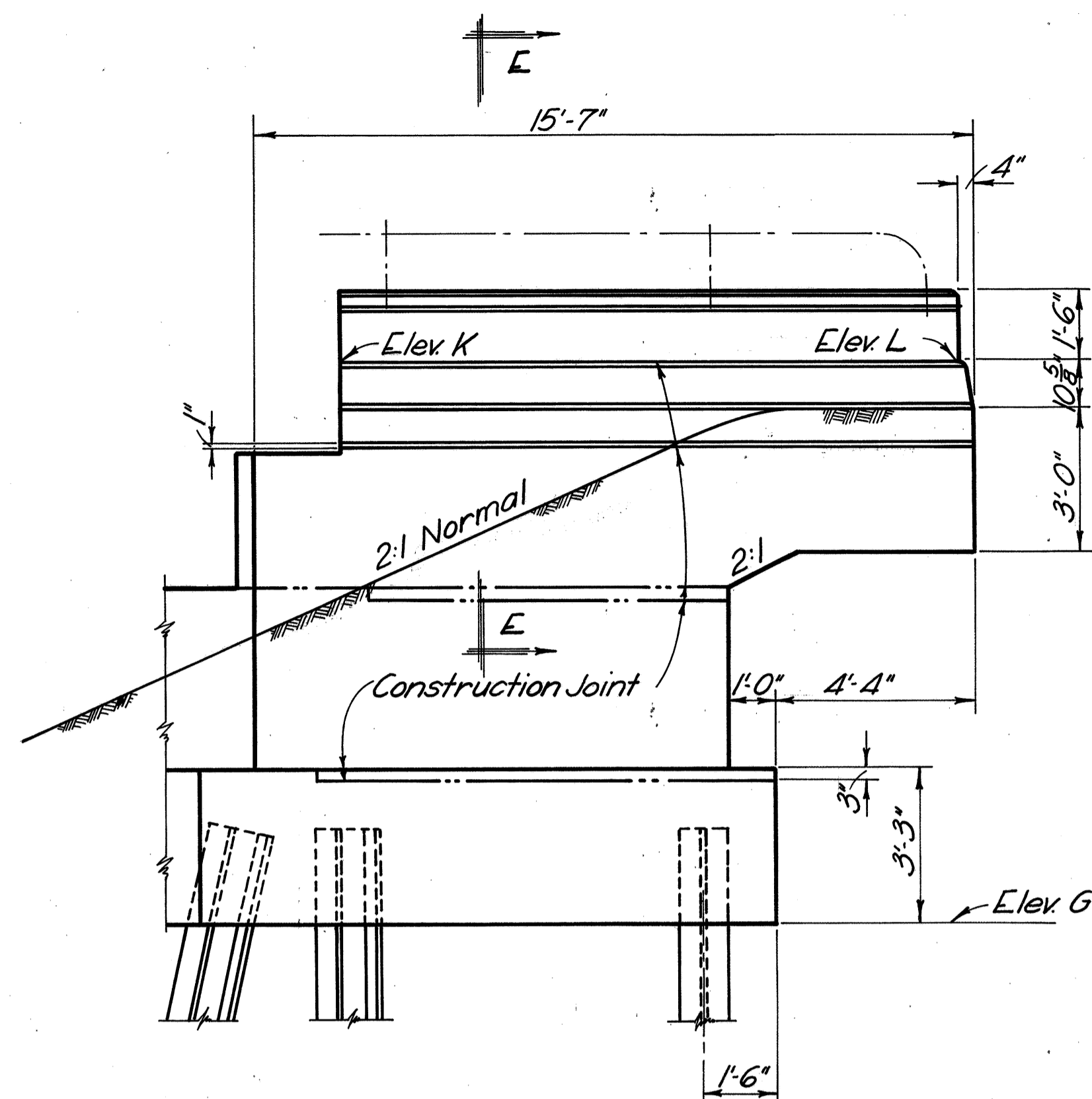
ABUTMENTS
BRIDGE No. ERI. 6-1048 RIGHT
OVER
COLUMBUS AVENUE

Sta 804+46.11 to
Sta 806+43.31

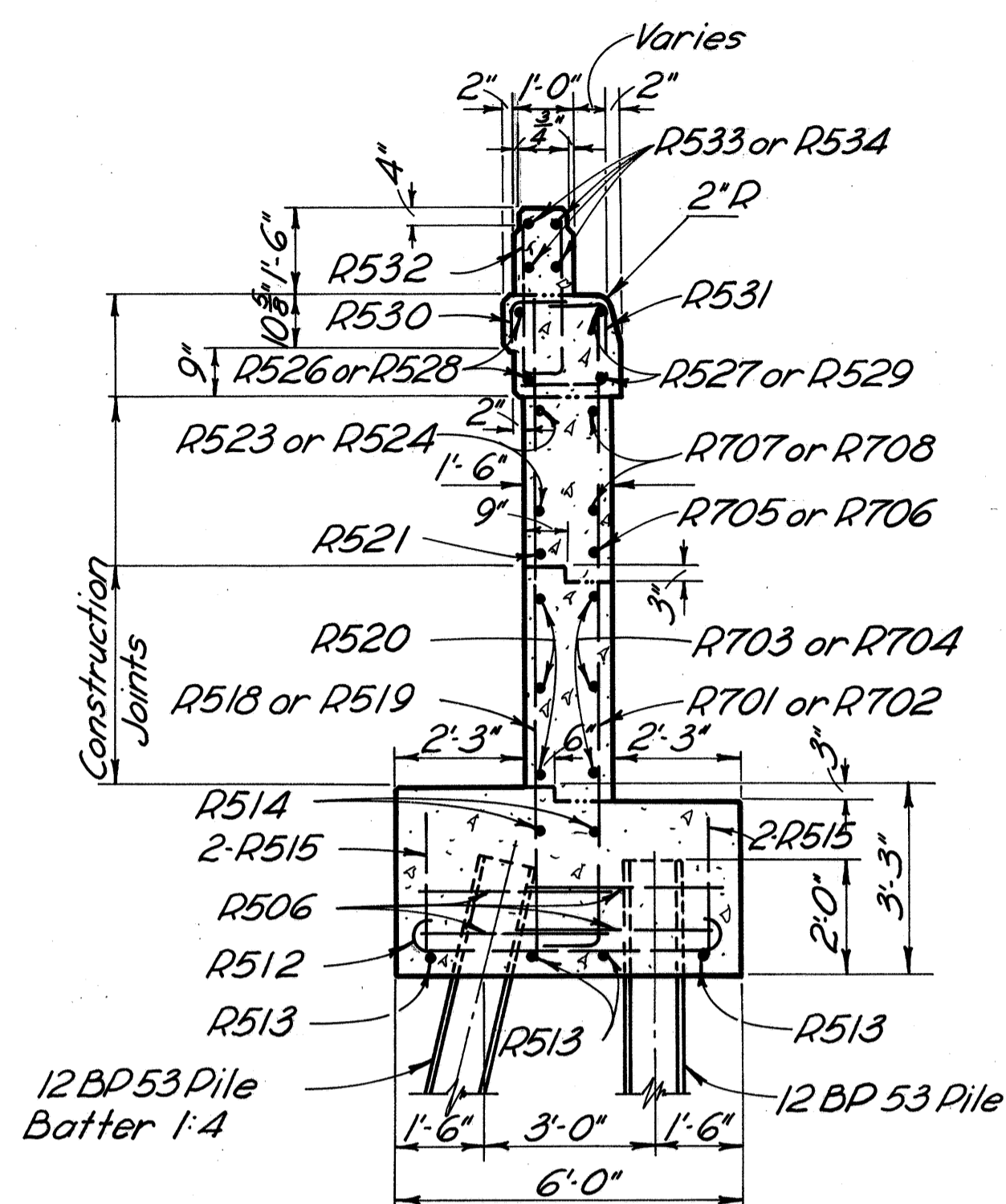
ERIC CO.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RJH	RJH	JEC	HDP	BJH	FCM	3-23-60

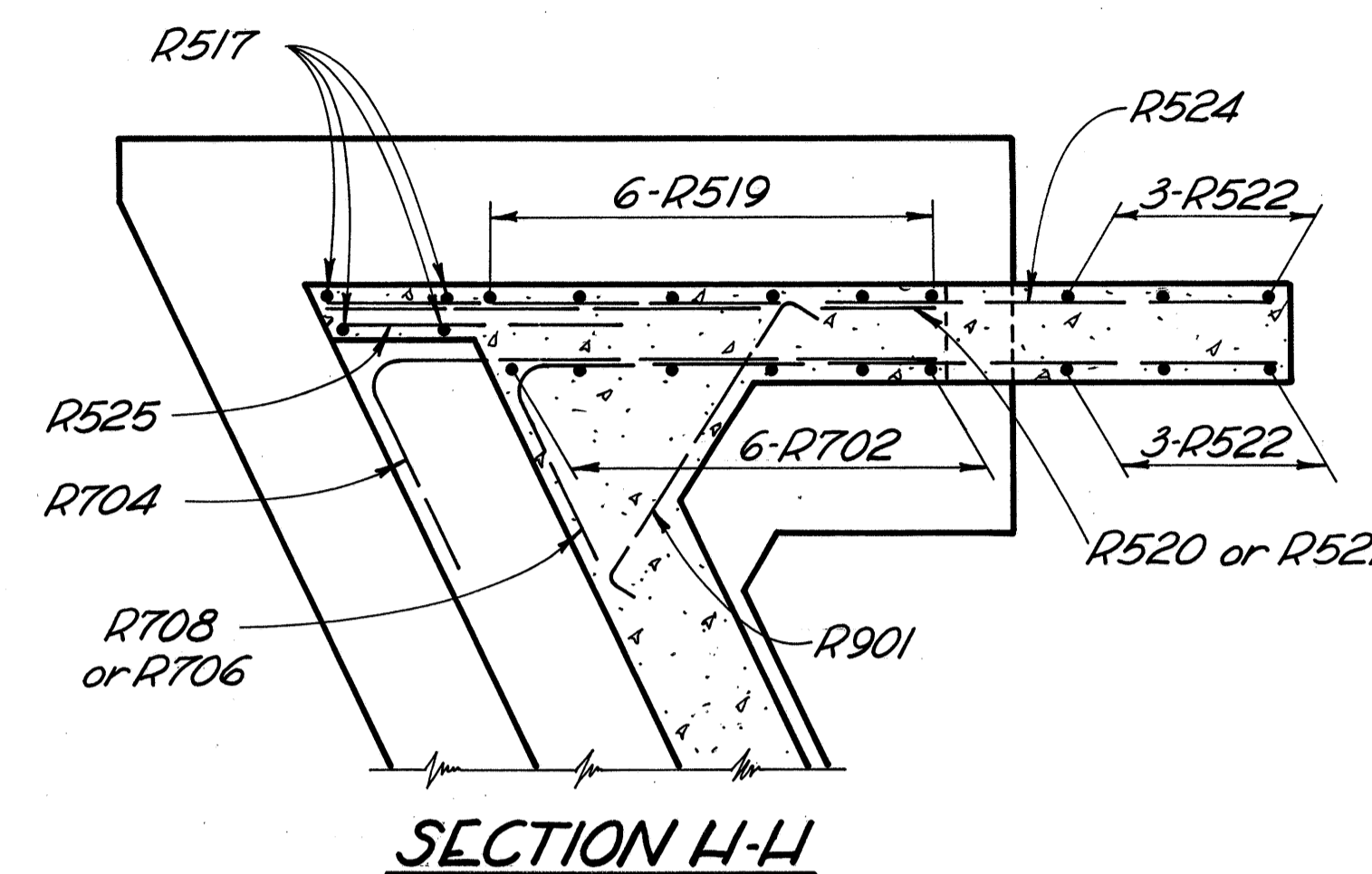
ERI 6-731



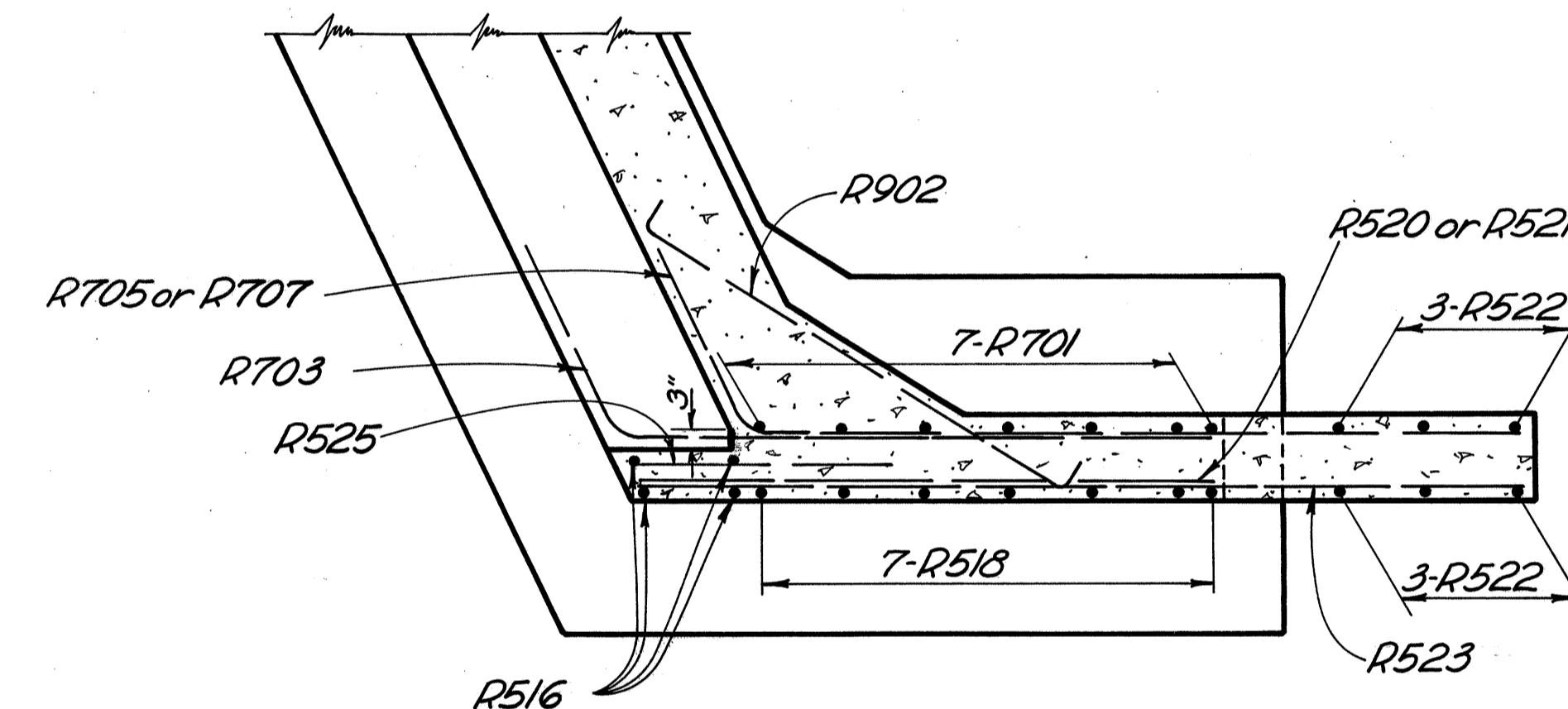
WINGWALL ELEVATION (CONSTRUCTION DETAILS)



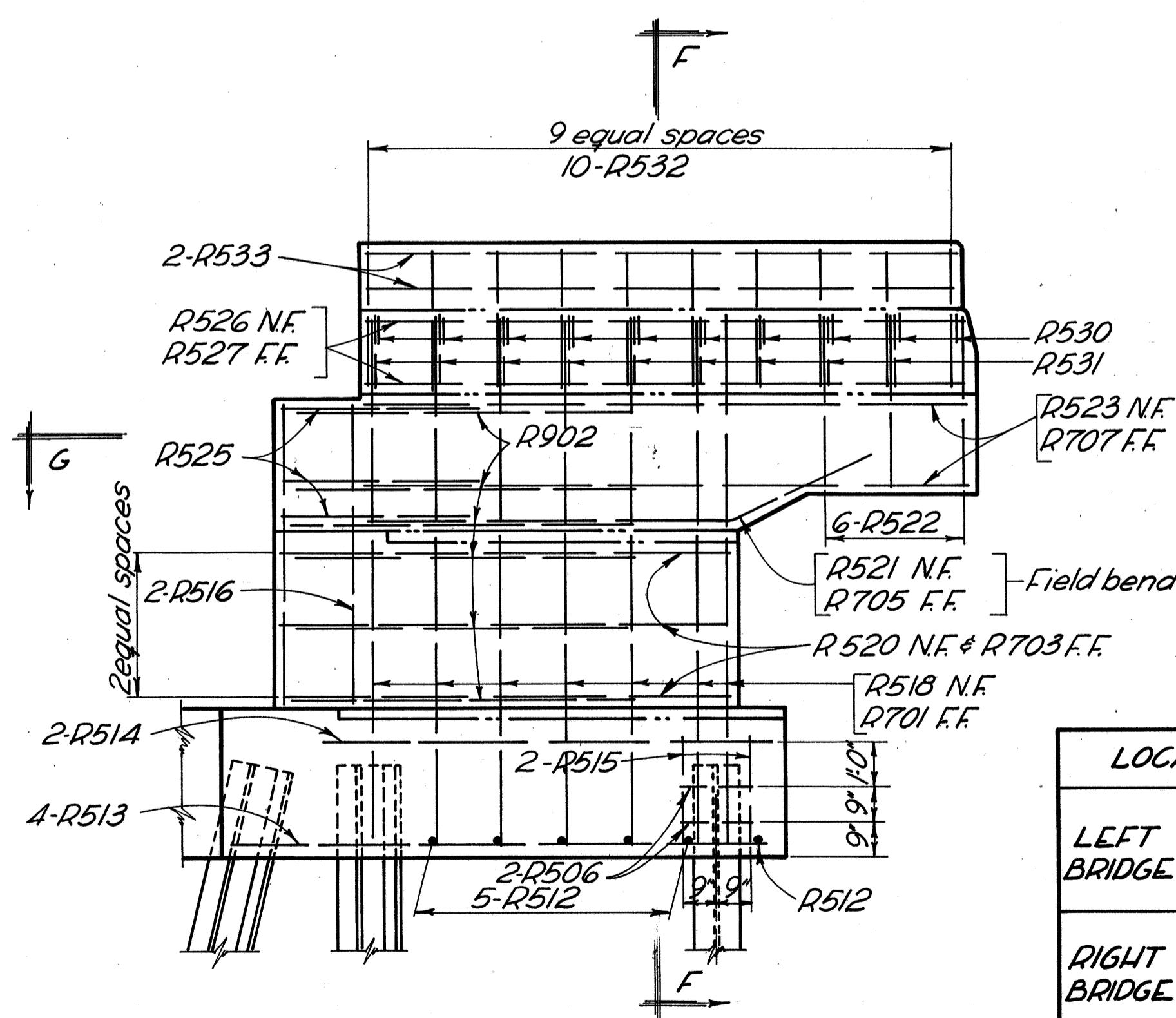
SECTION F-F



SECTION H-H



SECTION G-G



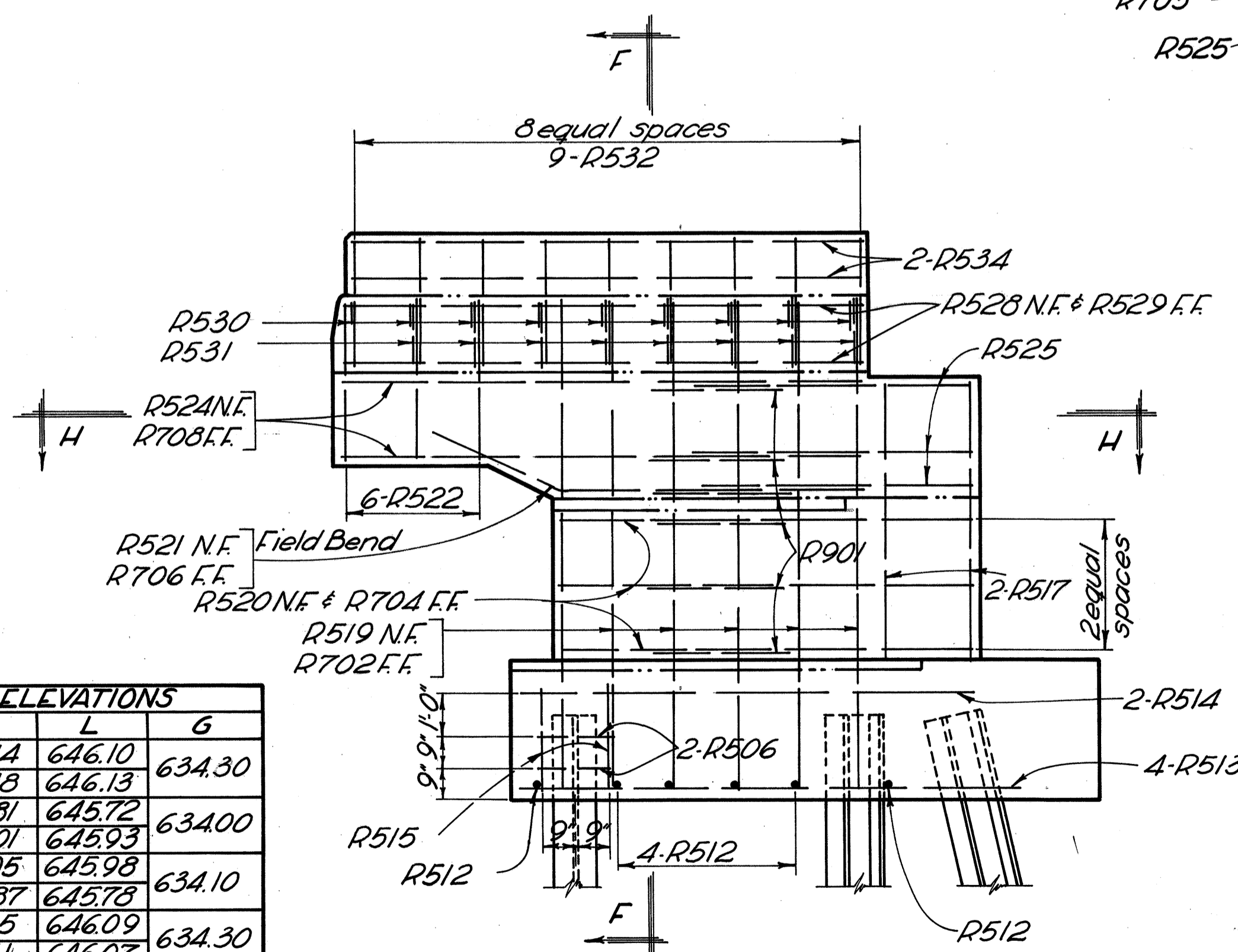
WINGWALL ELEVATION-REINFORCING BAR DETAILS

VIEW D-D (See Sheets 141 & 142)

MAR 19 1965

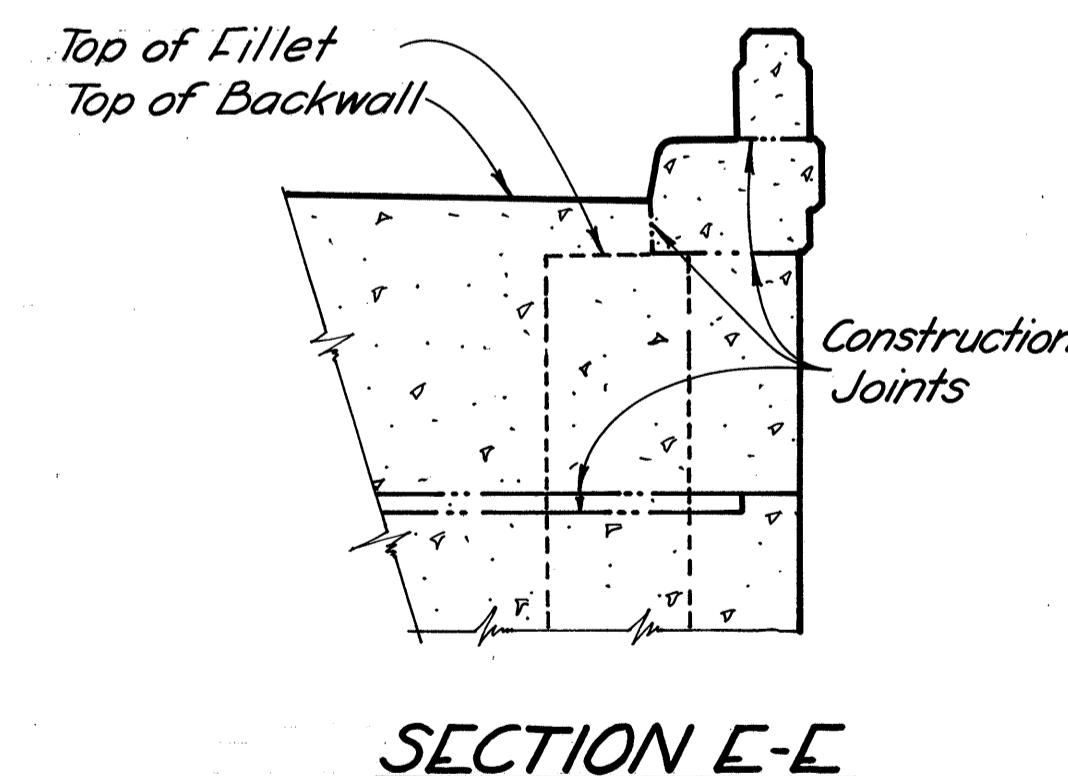
LOCATION	ELEVATIONS			
	K	L	G	
LEFT BRIDGE	Lt. Fwd. W.W.	646.14	646.10	634.30
	Rt. Fwd. W.W.	646.13	646.13	
RIGHT BRIDGE	Lt. Rear W.W.	645.81	645.72	634.00
	Rt. Rear W.W.	646.01	645.93	
LEFT BRIDGE	Lt. Fwd. W.W.	646.05	645.98	634.10
	Rt. Fwd. W.W.	645.87	645.78	
RIGHT BRIDGE	Lt. Fwd. W.W.	646.15	646.09	634.30
	Rt. Rear W.W.	646.11	646.07	

Lt. Fwd. - Left Forward
Rt. Fwd. - Right Forward
W.W. - Wingwall



WINGWALL ELEVATION REINFORCING BAR DETAILS

VIEW CC (See Sheets 141 & 142)



SECTION E-E

SANZENBACHER, MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO OHIO

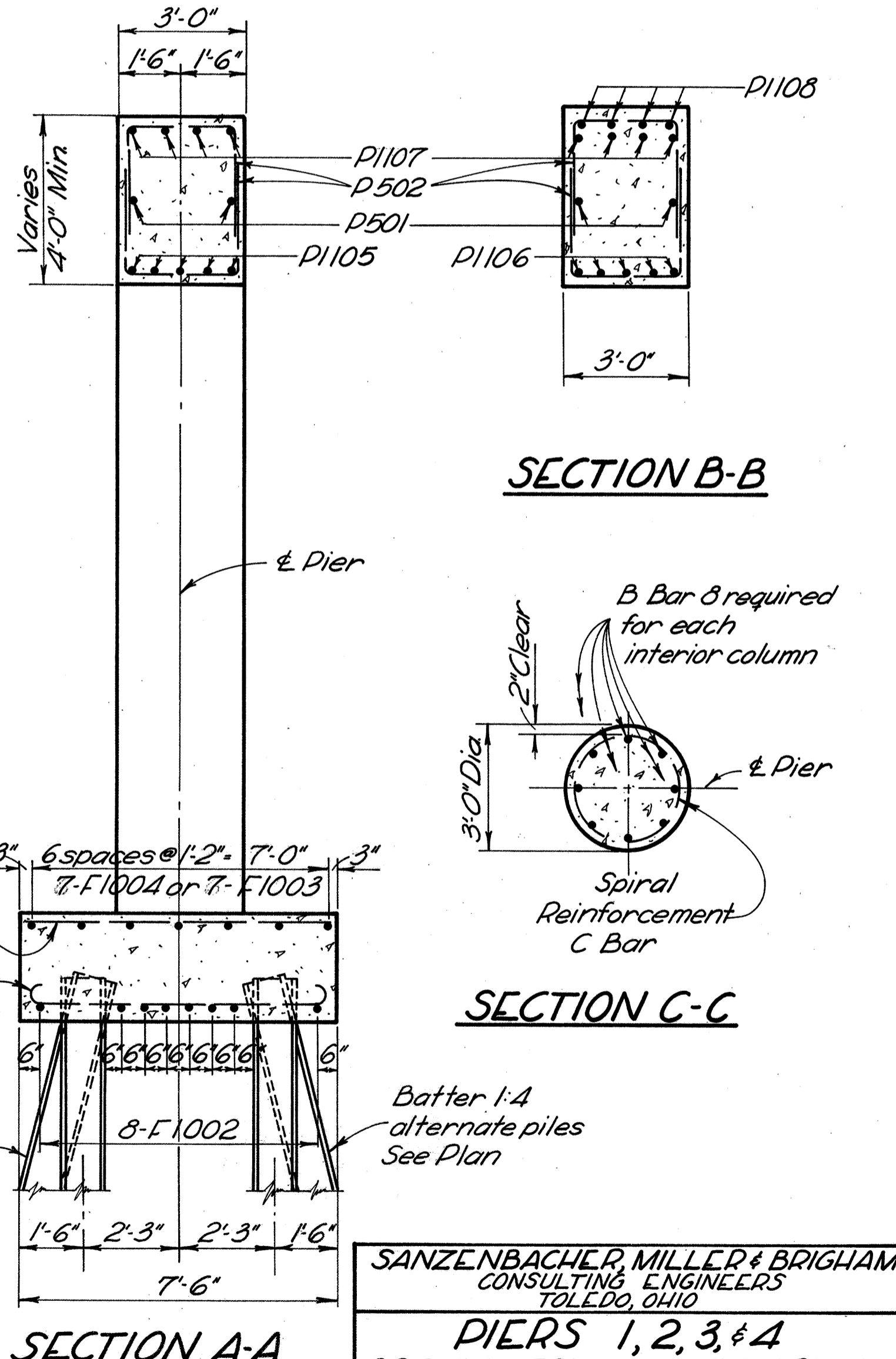
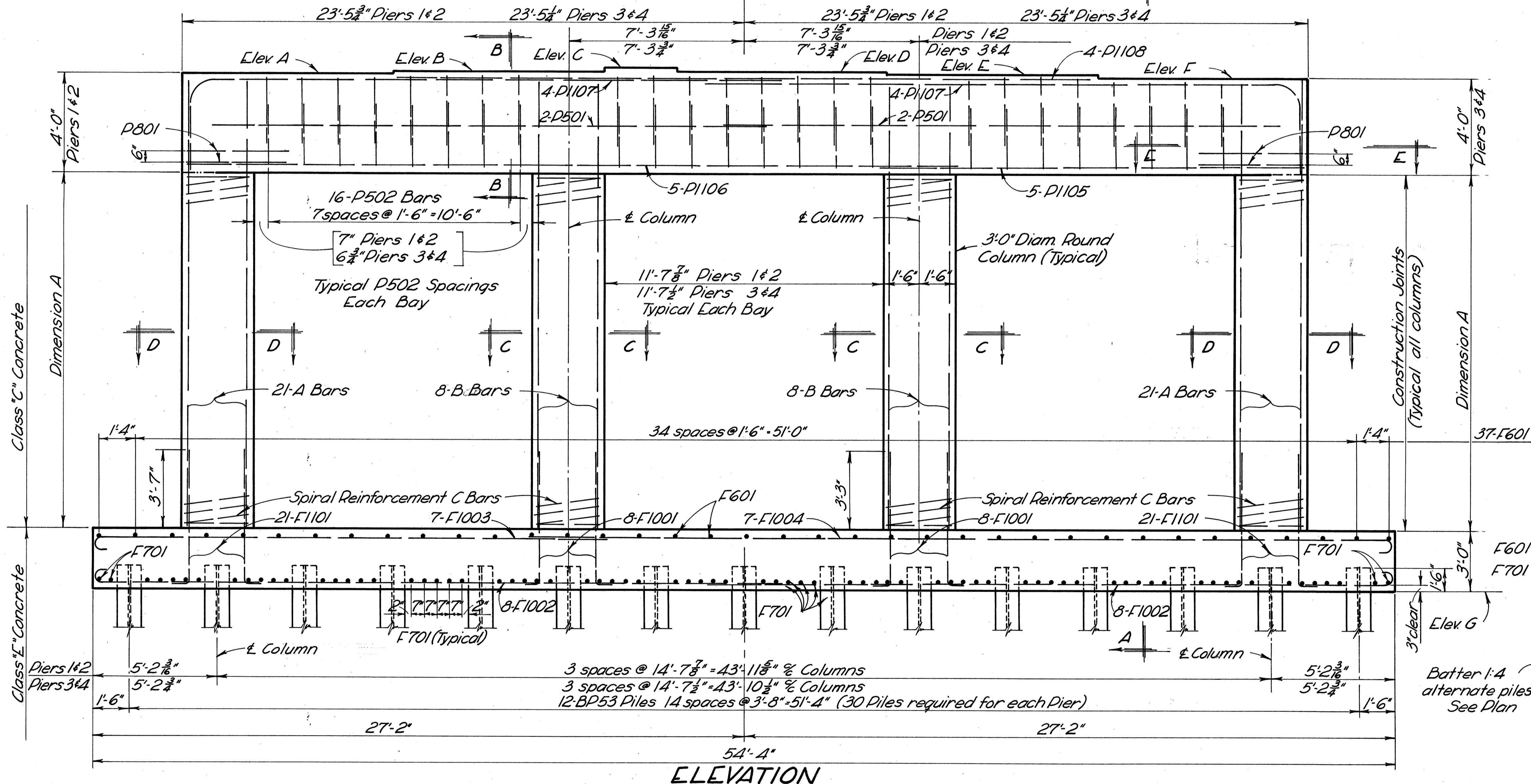
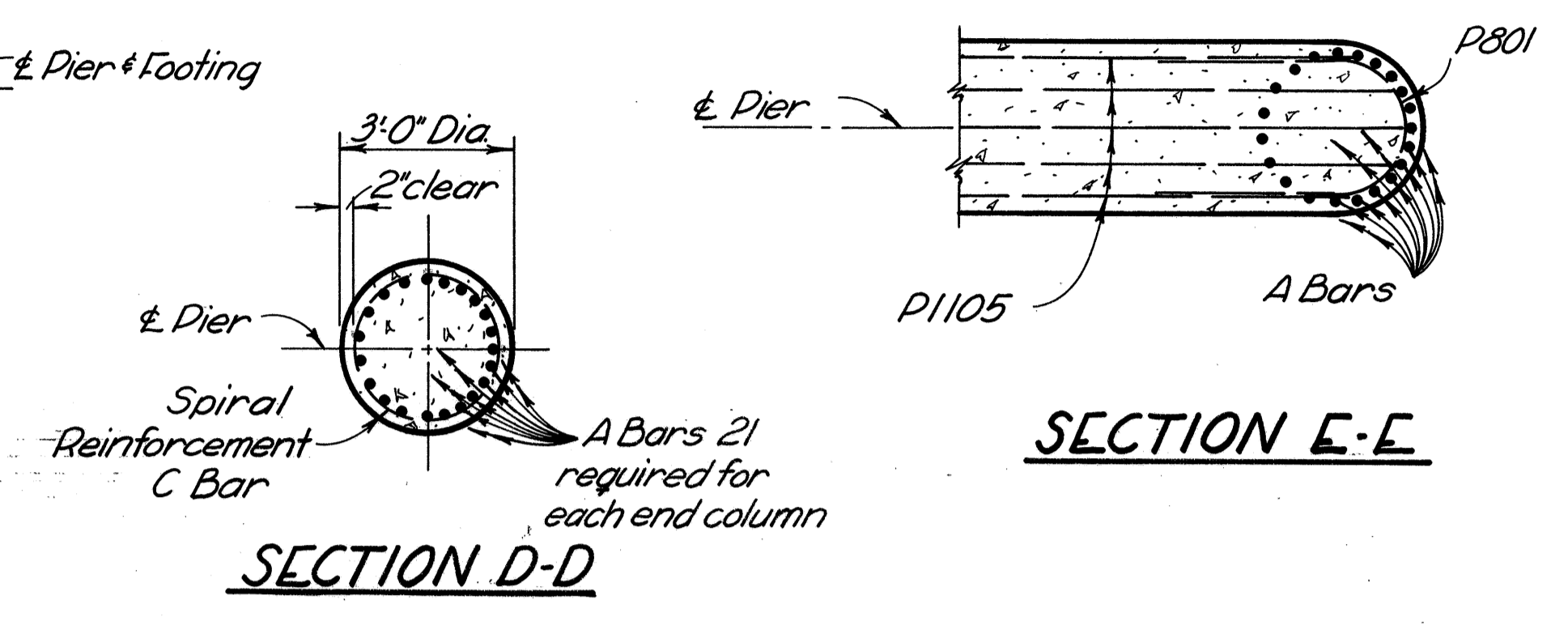
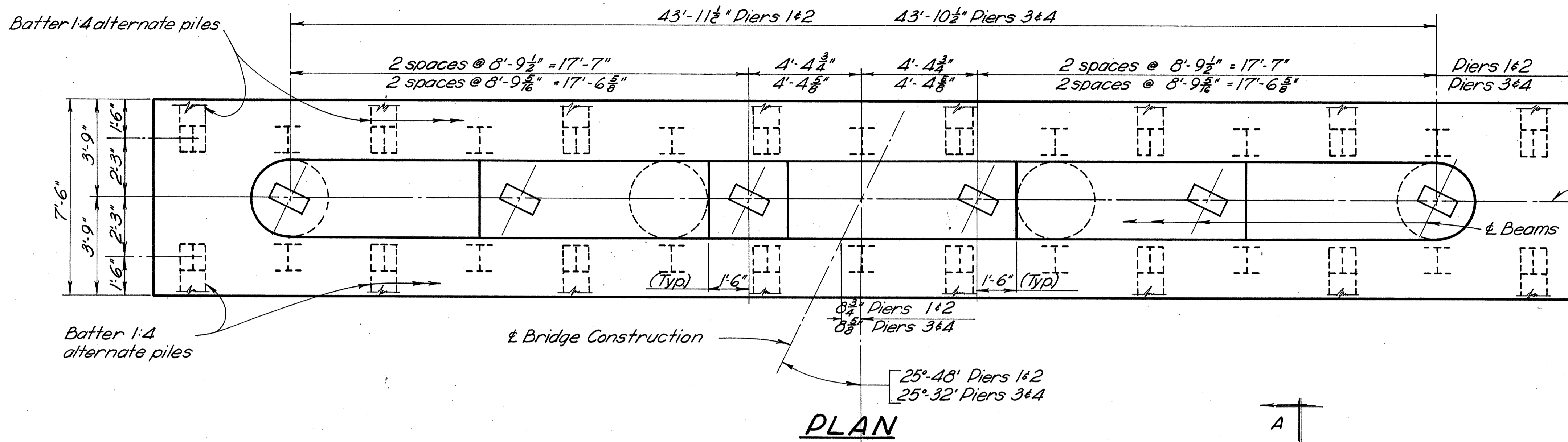
ABUTMENTS

BRIDGE No. ERI 6-1048 LEFT & RIGHT
OVER
COLUMBUS AVENUE

Left Sta 804+46.32 to 806+43.10
Right Sta 804+46.11 to 806+43.31

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RJH	RJH	JEC	HDP	BJH	FCM 9-23-60	

ERI 6-731



Special care shall be taken in placing reinforcing steel in the pier caps so that it will not interfere with bearing plate anchor bars.

MICROFILMED
MAR 19 1965

PIER NUMBER	ELEVATIONS							DIMENSION	BARS		
	A	B	C	D	E	F	G		A	B	C
PIER#1	641.25	641.38	641.52	641.62	641.51	641.40	620.50	13'-9"	P1101	P1001	SP401
PIER#2	641.47	641.59	641.71	641.81	641.68	641.55	620.50	13'-11 1/2"	P1102	P1002	SP402
PIER#3	641.55	641.67	641.80	641.71	641.59	641.47	619.50	14'-11 1/2"	P1103	P1003	SP403
PIER#4	641.42	641.54	641.65	641.55	641.42	641.28	619.50	14'-9 3/4"	P1104	P1004	SP404

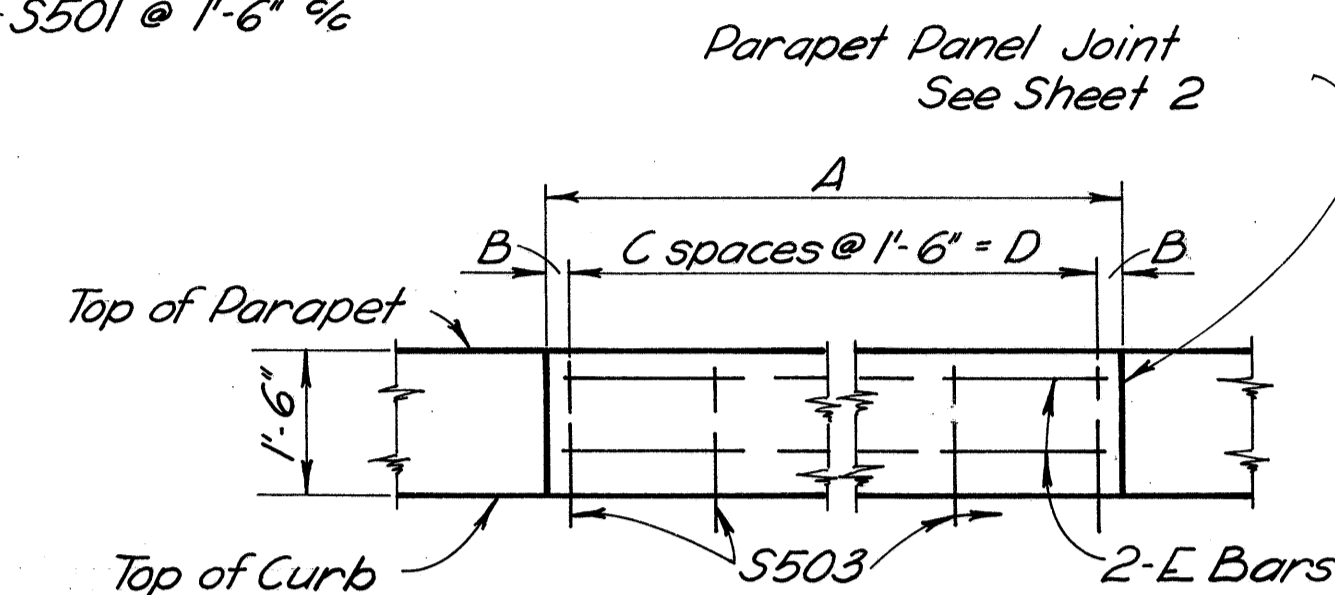
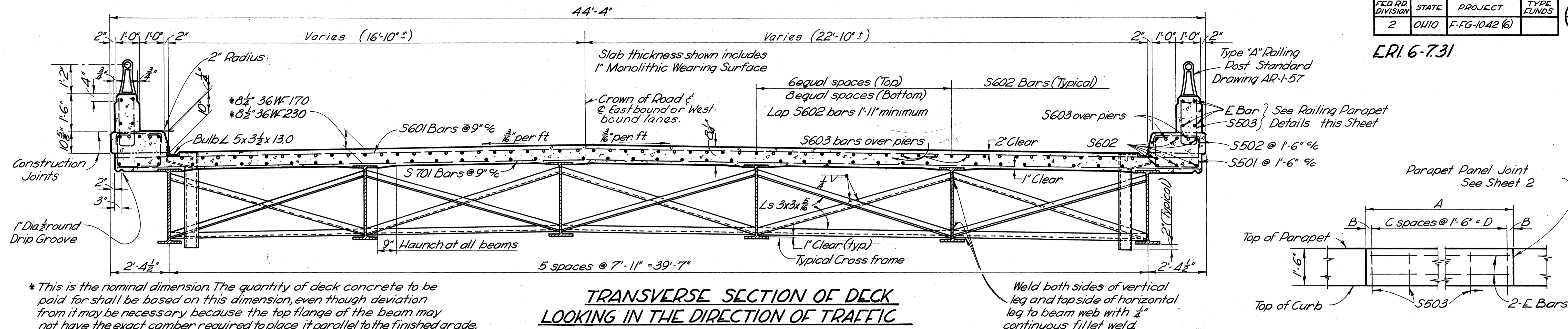
SANZENBACHER, MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

PIERS 1, 2, 3 & 4
BRIDGE No. ERI 6-1048 LEFT & RIGHT
OVER
COLUMBUS AVENUE
Left Sta 804+46.32 to 806+43.10
Right Sta 804+46.11 to 806+43.31

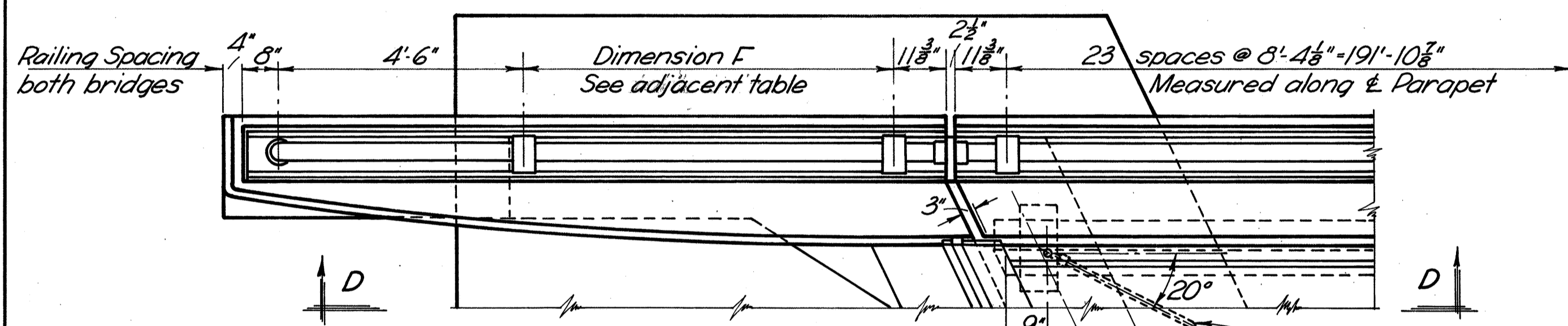
DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISION

RJH RJH JEC HDD BJH
FCM 9-23-60

ERI 6-731



PARAPET WALL DETAILS



PLAN AT ABUTMENT

Wing Wall	F
Left Rear	7'-3 3/4"
Right Rear	6'-6 3/8"
Left Forward	6'-6 3/8"
Right Forward	7'-3 3/4"
Left Rear	7'-3 3/4"
Right Rear	6'-6 1/4"
Left Forward	6'-6 1/4"
Right Forward	7'-3 3/4"

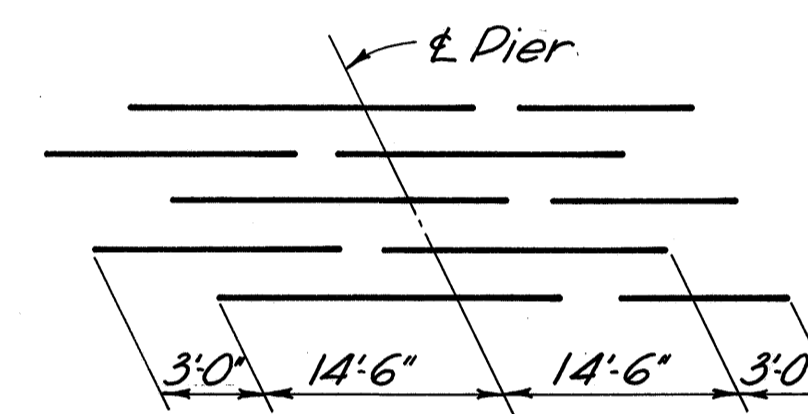
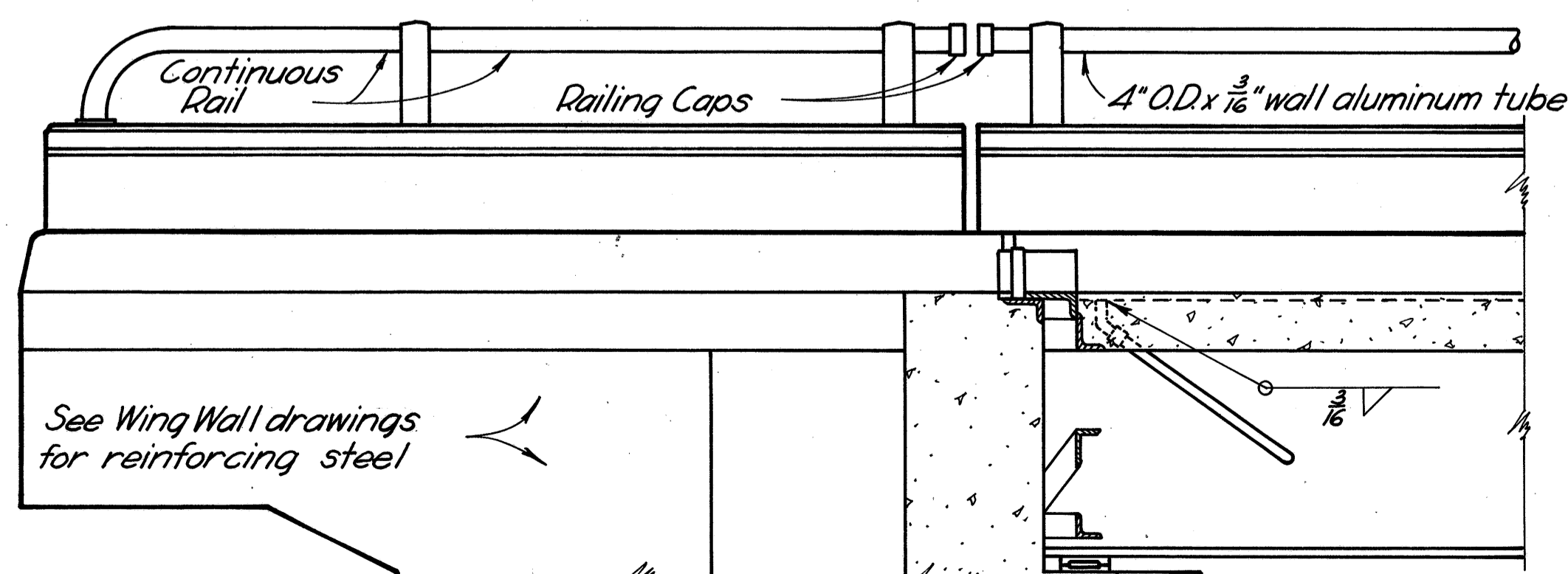


DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS

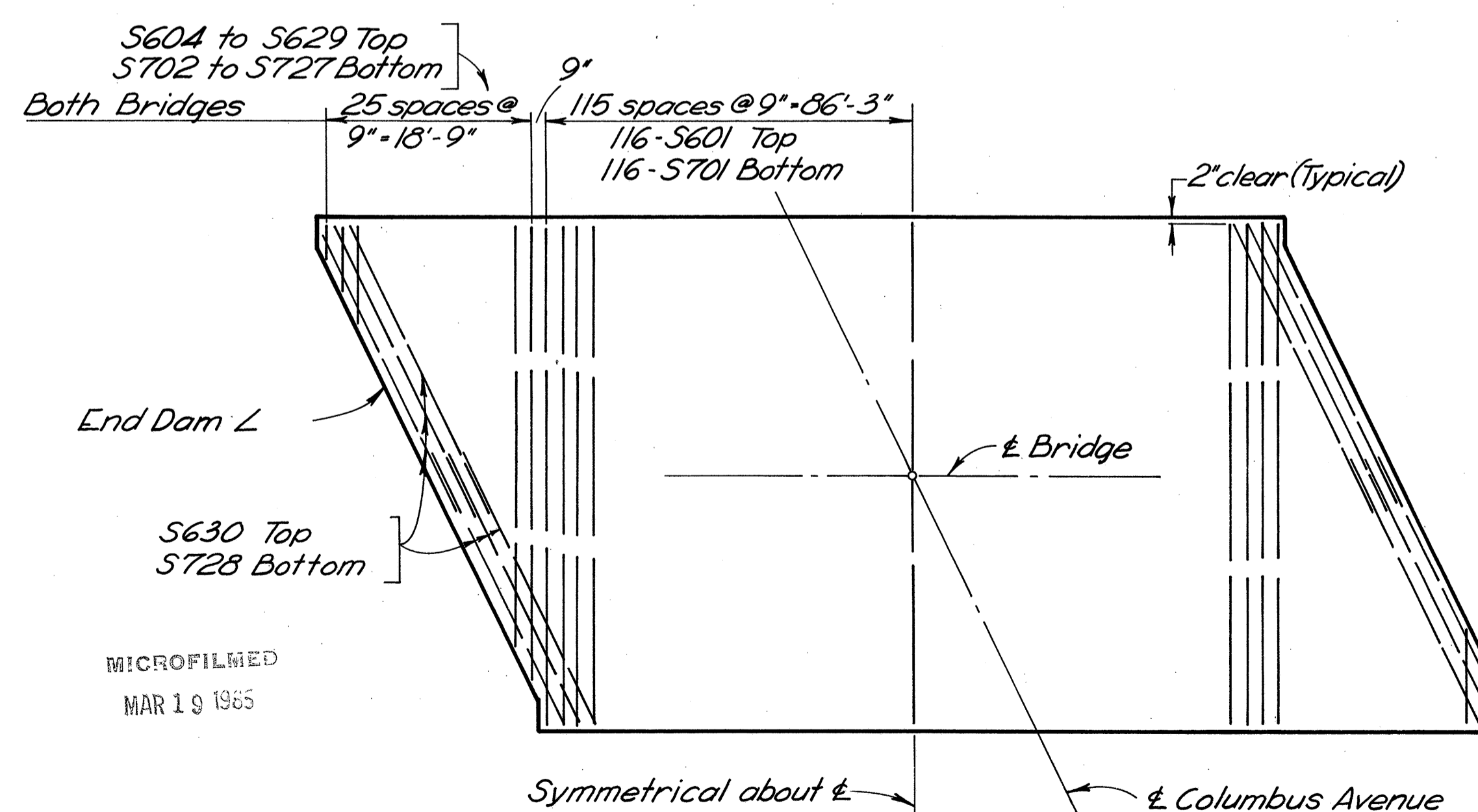
Parapet Wall Dimensions & Bars						
Panel See Sheet 2	A	B	C	D	No. of S503	E Bars
Intermediate	16'-8 1/4"	10 1/8"	10	15'-0"	11	S507
Pier	6'-8 1/4"	4 1/2"	4	6'-0"	5	S505
Pier	10'-0"	6"	6	9'-0"	7	S506
End	13'-5 3/8"	8 1/8"	8	12'-0"	9	S504
End	13'-5 1/4"	8 3/4"	8	12'-0"	9	S504

Note:
Refer to Standard Drawing CSB-2-56 sheet 2 or 3 of 6 for the following details:

- Roadway End Dam
- Welded Butt Joint in Superstructure End Dam Angles
- Gutter Supports
- Abutment Bearing Plates
- Curb Plate Details



SECTION D-D

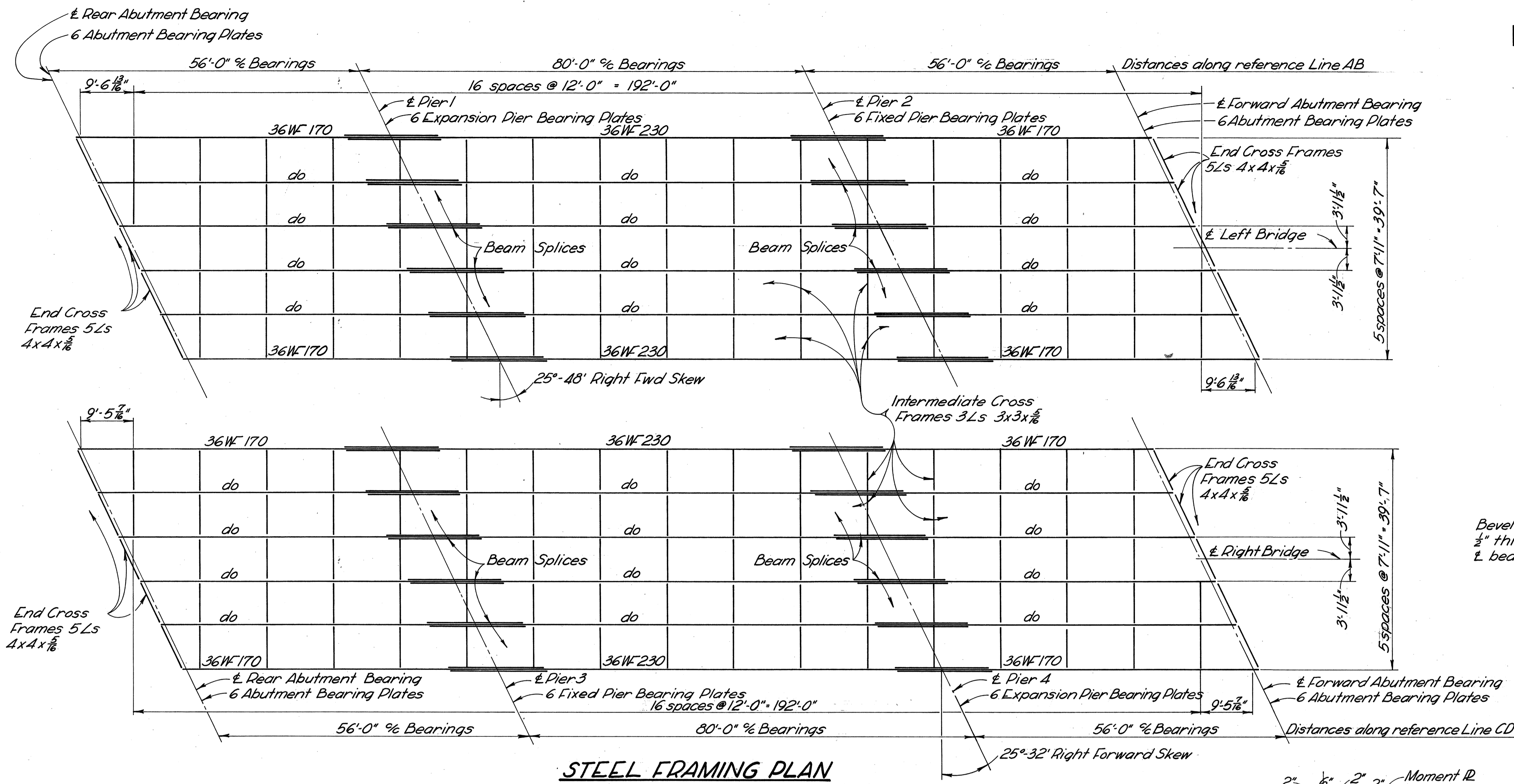


SLAB TRANSVERSE REINFORCING STEEL

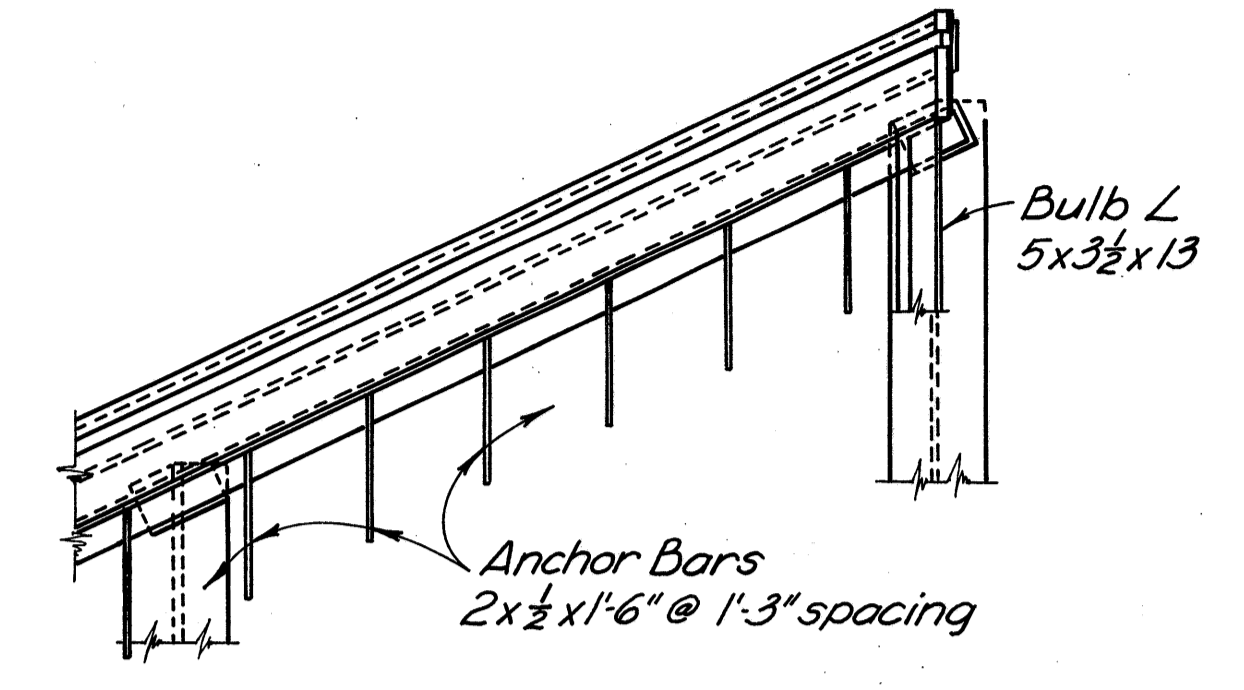
MICROFILMED
MAR 19 1965

SANZENBACHER, MILLER & BRIGHAM CONSULTING ENGINEERS TOLEDO, OHIO				
SUPERSTRUCTURE DETAILS BRIDGE No. ERI 6-10.48 LEFT & RIGHT OVER COLUMBUS AVENUE				
Left Sta 804+46.32 to 806+43.10 Right Sta 804+46.11 to 806+43.31				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE
RJH	RJH	JEC	HDP	B.J.H. FCM 9-23-60

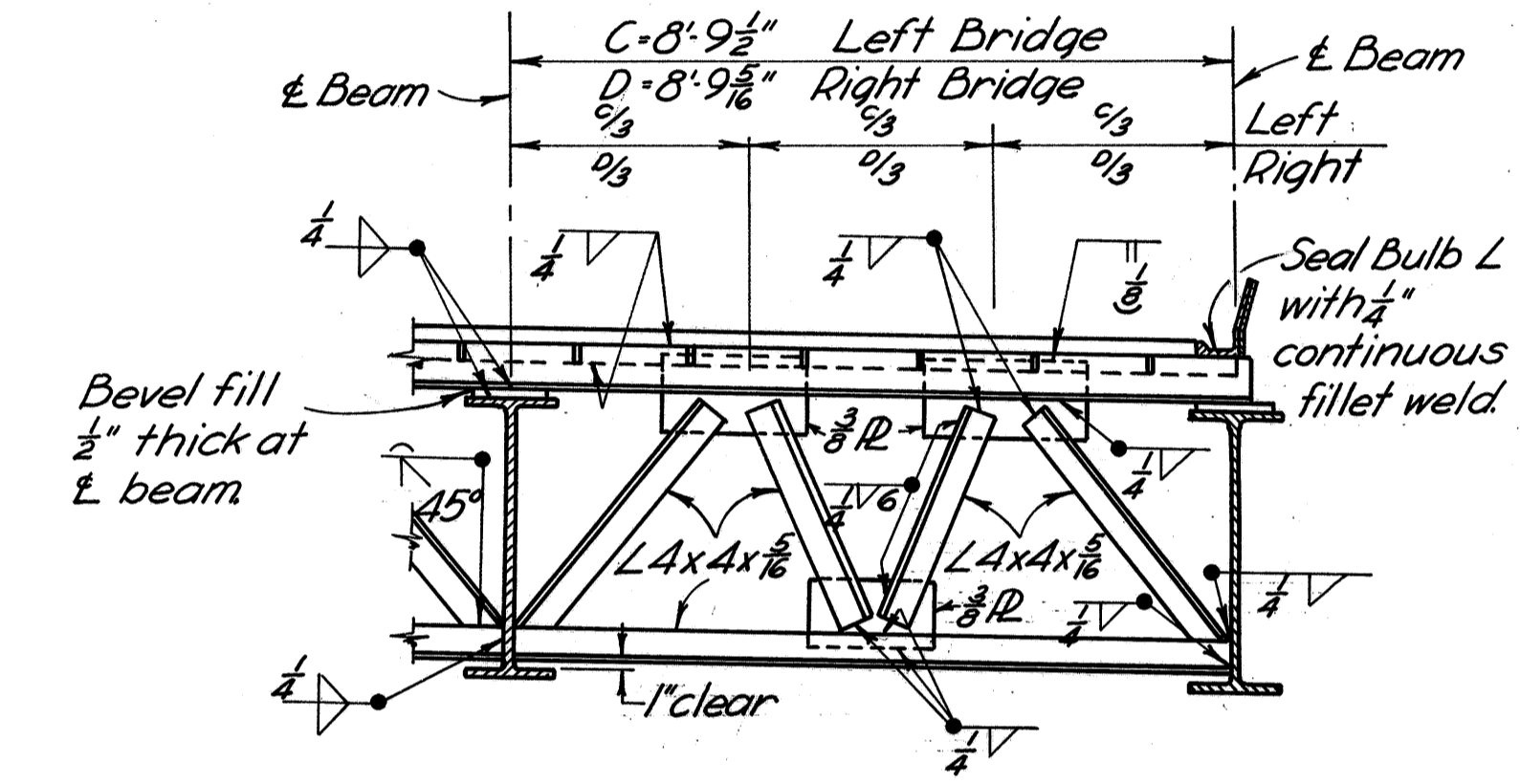
ERI 6-7.31



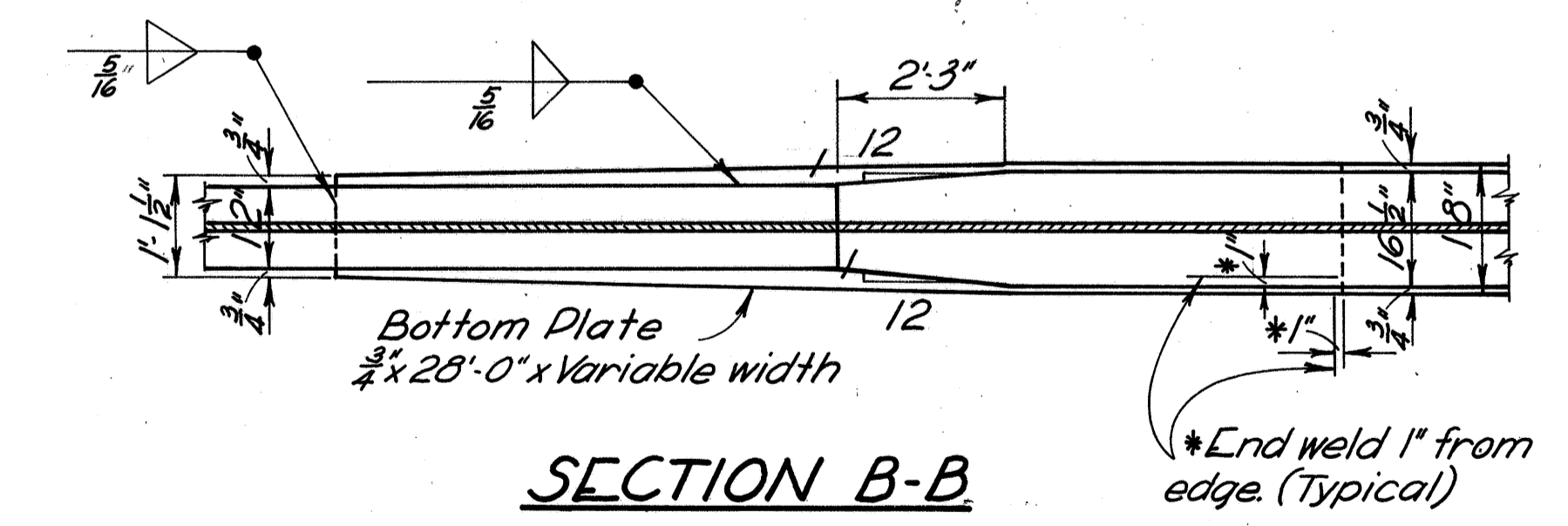
STEEL FRAMING PLAN



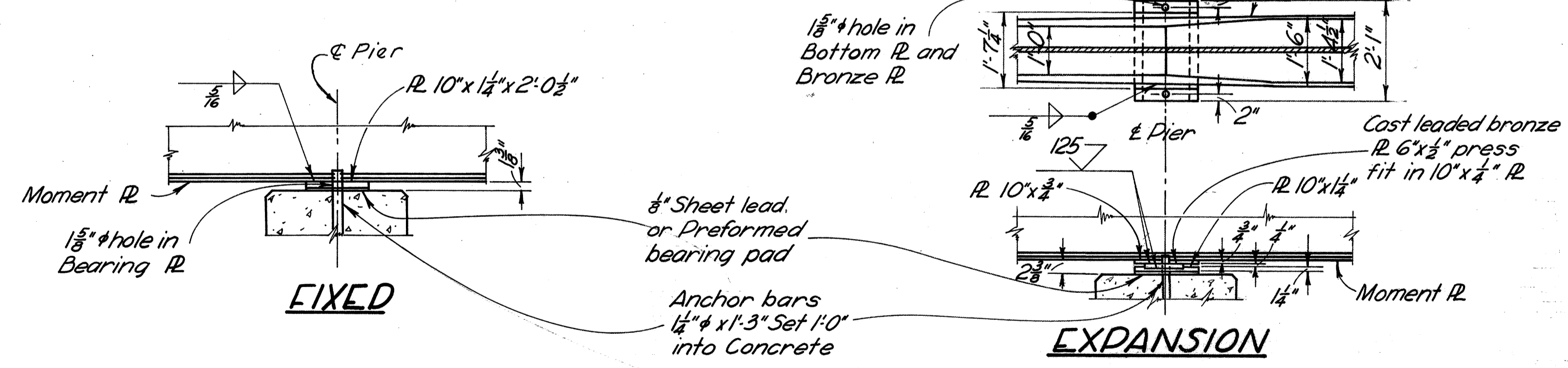
PART END DAM PLAN



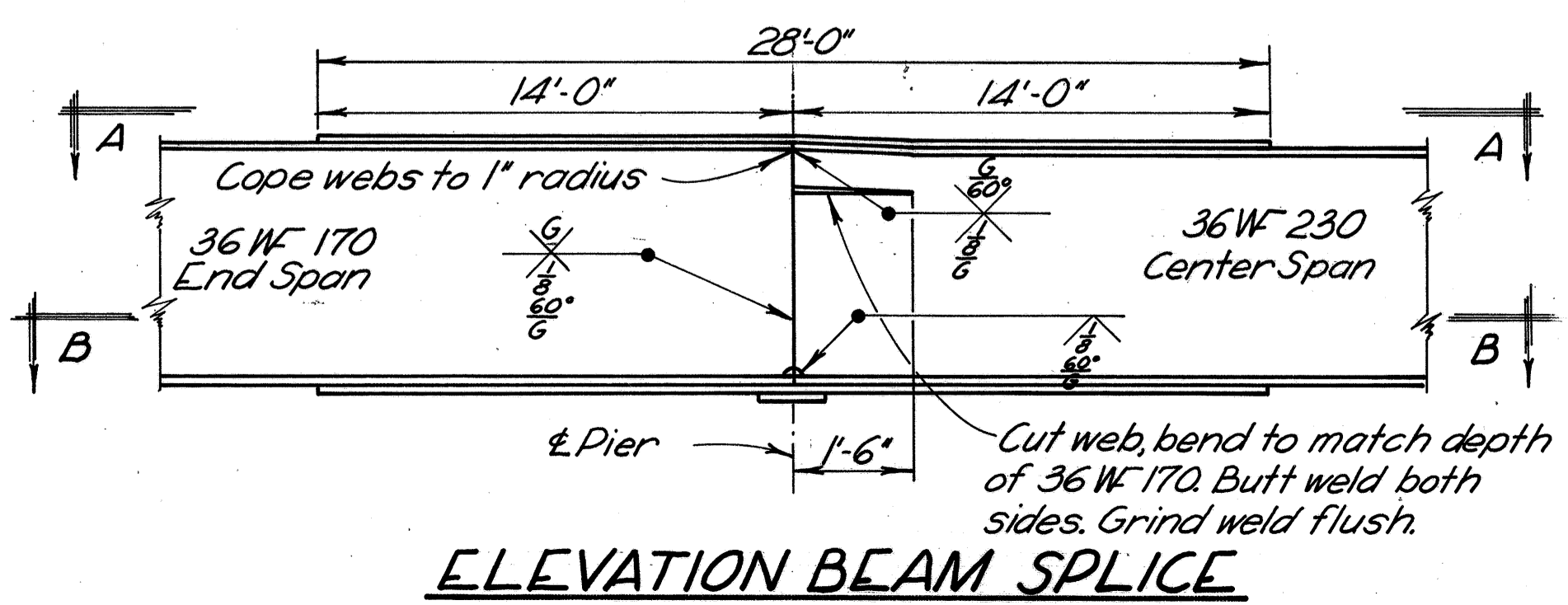
PART END DAM ELEVATION



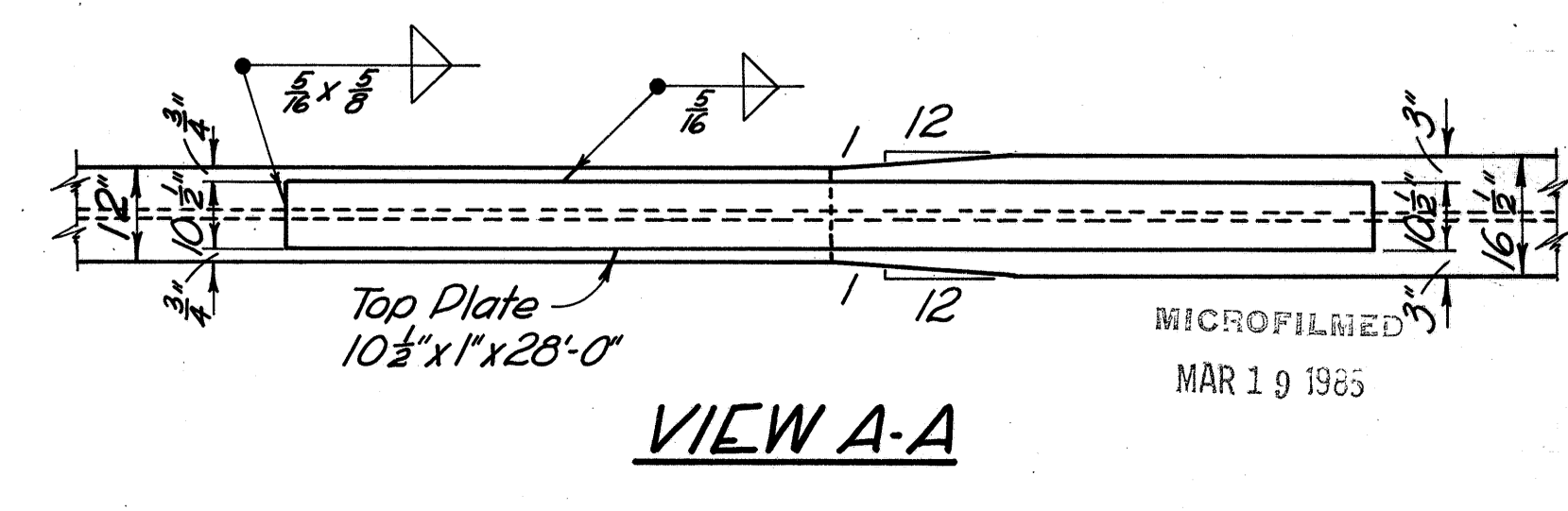
SECTION B-B



PIER BEARING PLATE DETAILS



ELEVATION BEAM SPLICE



VIEW A-A

Cambering of beams is required in accordance with the following table:

LOCATION	Interior Beams			Exterior Beams		
	Span 1	Span 2	Span 3	Span 1	Span 2	Span 3
Deflection due to weight of steel	1/8"	5/8"	1/8"	1/8"	5/8"	1/8"
Remaining dead load deflection	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Camber for Vertical Curve	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"
Total Camber	3/8"	7/8"	3/8"	3/8"	7/8"	3/8"
Required Shop Camber	None	1"	None	None	1"	None

PAINTING

After erection and after the shop coat has been cleaned and where necessary, repainted in accordance with Sec. 5 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.

BEAM SPLICE WELDING PROCEDURE

1. Raise the abutment ends of beams 1/8"
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.
3. Weld the bottom and top moment plates.
4. Lower the beam ends to final position.

SANZENBACHER, MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

SUPERSTRUCTURE DETAILS
BRIDGE No. ERI 6-1043 LEFT & RIGHT
OVER
COLUMBUS AVENUE
Left Sta 804+46.32 to 806+43.10
ERIC CO. Right Sta 804+46.11 to 806+43.31

DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISED

RJH	RJH	JEC	HDD	BJH	F.C.M.	9/28/60
-----	-----	-----	-----	-----	--------	---------

MICROFILMED
MAR 19 1965

LOCATION PLAN DEPARTMENT OF HIGHWAYS

SECTION 7.31

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

147
161
1
2

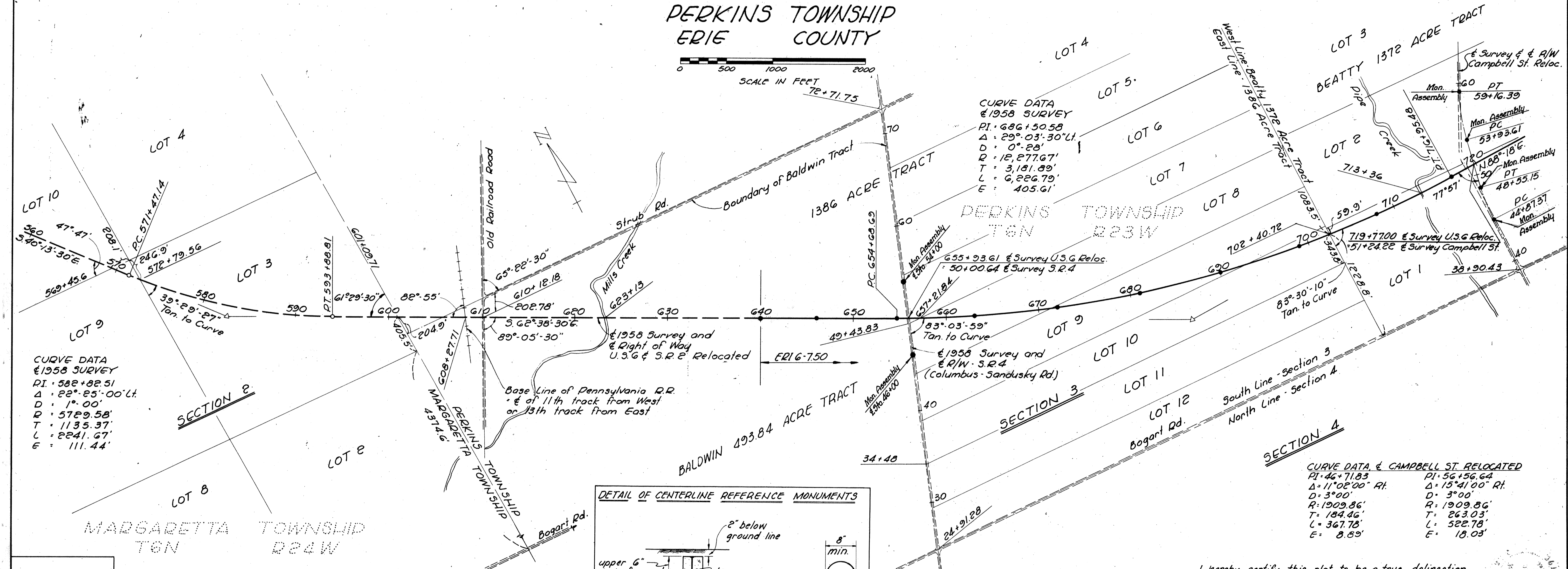
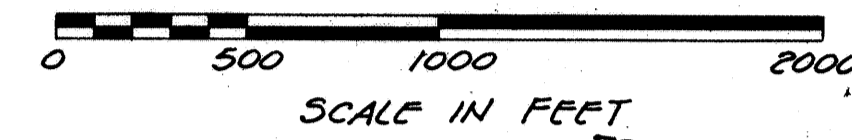
LIMITED ACCESS
Sheet 1 of 2

This improvement has been declared a limited access highway by action of the Director of Highways and recorded in Volume 43, Page 1120 of the Director's Journal.

Hearing held in Sandusky, Ohio, October 14, 1958

ERI. 6-7.31

PERKINS TOWNSHIP
ERIE COUNTY

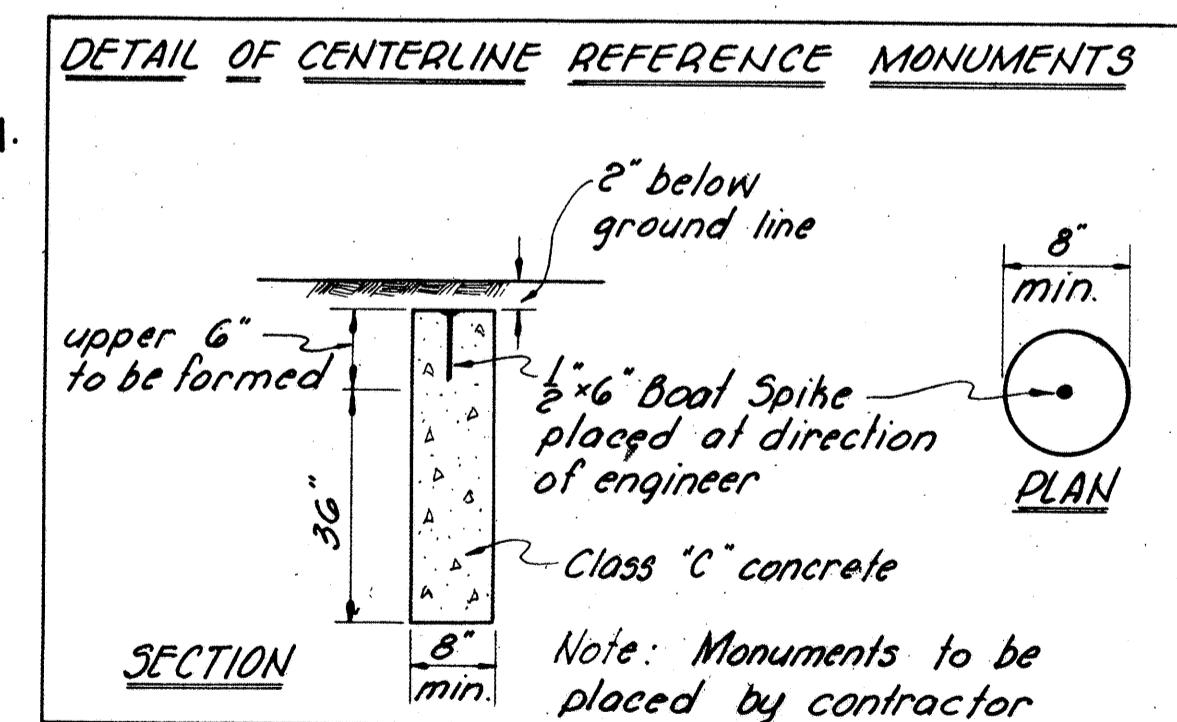


CURVE DATA
1958 SURVEY
PI: 686+50.58
Δ: 29° 03' 30" Lt.
D: 0° 28'
R: 18,277.67'
T: 3,181.89'
L: 6,226.79'
E: 405.61'

CURVE DATA
1958 SURVEY
PI: 582+82.51
Δ: 22° 25' 00" Lt.
D: 1° 00'
R: 5729.58'
T: 1135.37'
L: 2241.67'
E: 111.44'

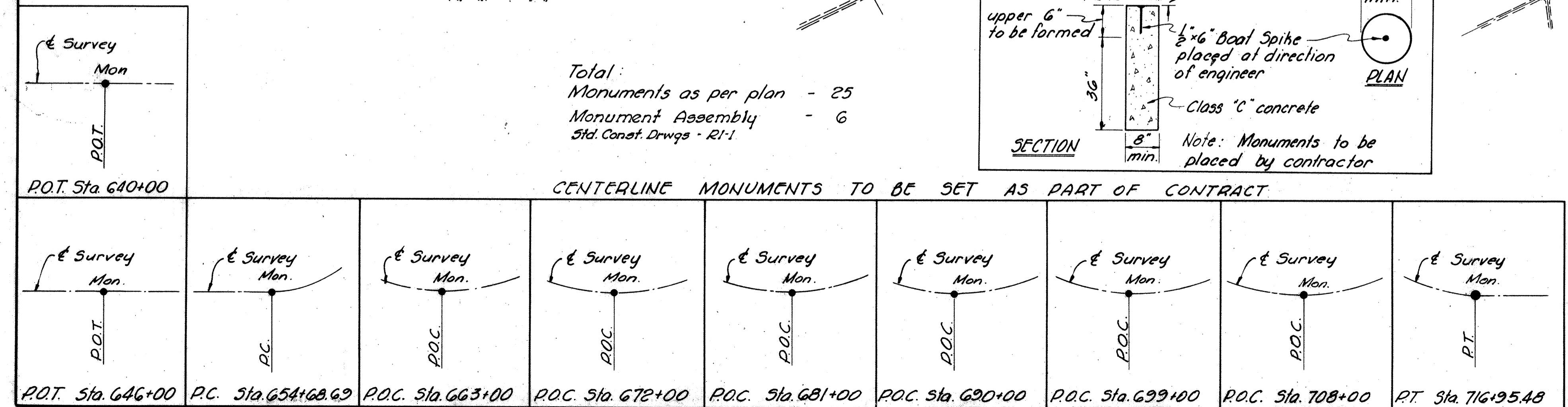
CURVE DATA & CAMPBELL ST. RELOCATED

PI: 46+71.83	PI: 56+56.64
Δ: 11° 02' 00" Rt.	Δ: 15° 41' 00" Rt.
D: 3° 00'	D: 3° 00'
R: 1909.86'	R: 1909.86'
T: 184.46'	T: 263.03'
L: 367.78'	L: 522.78'
E: 8.83'	E: 18.03'



Total
Monuments as per plan - 25
Monument Assembly - 6
Std. Const. Drawgs - RI-1

CENTERLINE MONUMENTS TO BE SET AS PART OF CONTRACT



I hereby certify this plat to be a true delineation of a survey made by Sanzenbacher, Miller & Brigham of Toledo, Ohio.
Date: Mar. 16, 1960 Signed *Frederick Miller*
Registered Surveyor No. 1892

Approved: *E. J. Tolson* Date: March 21, 1960
Signed: *E. J. Tolson*
Division Deputy Director
Professional Engineer No. 6311

File No. 169,360
RECEIVED Mar. 28, 1960 AT 1:39 P.M.
RECORDED Mar. 30, 1960.
PLAT BOOK 14 PAGE 65-66
FEE \$4.00 Tax

SIGNED *San A. Spain*
ERIE COUNTY RECORDER

This improvement has been declared a limited access highway by action of the Director of Highways and recorded in Volume _____, Page _____ of the Director's Journal.

LOCATION PLAN

DEPARTMENT OF HIGHWAYS

ERI. 6-7.31

PERKINS TOWNSHIP

ERIE COUNTY

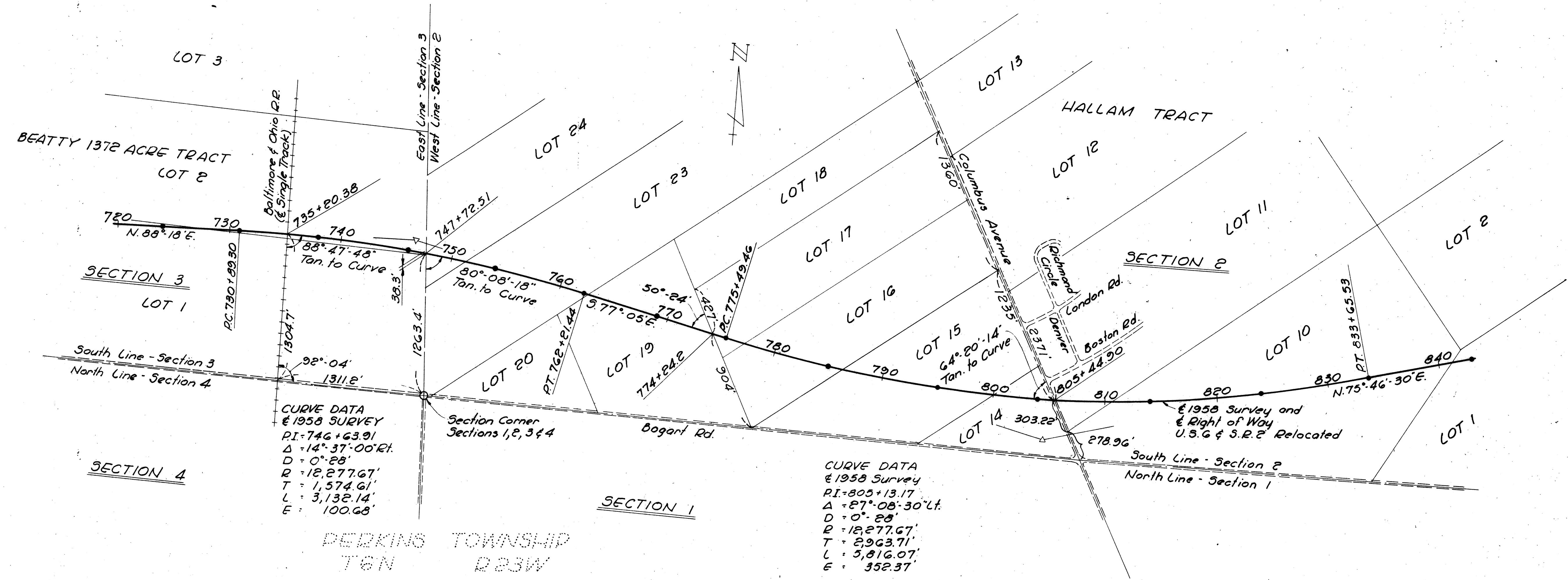
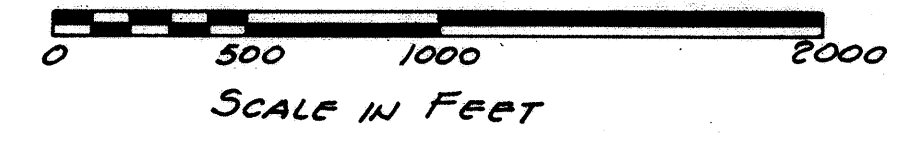
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

148
161

LIMITED ACCESS

Sheet 2 of 2

2
2



CENTERLINE MONUMENTS TO BE SET AS PART OF CONTRACT														
 P.O.T. Sta. 724+00	 P.C. Sta. 730+89.30	 P.O.C. Sta. 738+00	 P.O.C. Sta. 746+00	 P.O.C. Sta. 754+00	 P.T. Sta. 762+21.44	 P.O.T. Sta. 762+00	 P.C. Sta. 775+49.46	 P.O.C. Sta. 785+00	 P.O.C. Sta. 795+00	 P.O.C. Sta. 804+00	 P.O.C. Sta. 814+00	 P.O.C. Sta. 824+00	 P.T. Sta. 833+65.53	 P.O.T. Sta. 843+00

SUMMARY OF ADDITIONAL R/W REQUIRED

SECTION 7.31

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

149
161
1
13

ERI 6-7.31
R/W PLAN
LIMITED ACCESS

Total No. of Owners 38

PARCEL NO.	OWNER	DEED RECORD		DEED AREA (ACRES)	TO BE ACQUIRED		RESIDUE (ACRES)		SHEET NO.	REMARKS
		BOOK	PAGE		LAND (AC)	BLDG.	LEFT	RIGHT		
162	Irene R. & Ada S. Windau	199	565		0.36				5	
162 LA	" " " "	240	297		8.93				2,3	
162 X	" " " "			49.868	0.07		35.7	(L)4.6	3	
163	Lloyd H. Keller	263	325		0.28				5	
163 LA	" " " "				20.82	Yes			3-5	
163 WA	" " " "								5	
163 X	" " " "				0.02				3	
163 Y	" " " "			81.769	0.08		4.7	(L)55.2	3	
164	Emil & Alverna Spauth	183 185	276 202	11.45	0.17		11.1		4	
165	Robert W. Burger	131	109	5.35	0.28		4.9		4	
166 LA	William C. Gurtz	257	60	5.43	0.96	Yes	(L)4.3		4	
167	George G. & Miriam I. Hemminger	214	99		0.16				4	
167 LA	" " " "				0.30	Yes			4	
167 T	" " " "			0.988	0.12			0.4	4	
168	Chester Keller, Elsie E. Keller (L.E.)	207	491		0.61				5	
168 LA	" " " "				5.46	Yes			4,5	
168 T	" " " "			201.283	1.57		194.4		5	
169	George & Emeline Hemminger	167	390		0.30				4	
169 LA	" " " "				35.38				4-7	
169 T	" " " "			154.758	0.21		(L)51.1	67.4	4	
170	Wilson M. Puckrin	158	71		0.25				8	
170 LA	" " " "				2.63				7	
170 T	" " " "				0.75				8	
170 X	" " " "			45.00	0.15		41.8		7	
171	Wilson M. & Janet L. Puckrin	180	224		1.35				8	
171 LA	" " " "				15.00				7,9	
171 T	" " " "				0.84				8	
171 X	" " " "			97.45	0.20		80.1		7	
172	Mary J. Hollman	158	70		1.21				8	
172 LA	" " " "				4.89				7,9	
172 ALA	" " " "			65.00	4.29		54.1		9	
173	Baltimore & Ohio Railroad Co.	X	X		0.004				10	
173 A	" " " "				0.002				10	
173 B	" " " "				0.004				10	
173 C	" " " "				0.006				10	
173 S	" " " "				0.02				10	
173 S-1	" " " "				0.03				10	
173 SL	" " " "				0.07				10	
173 SL-1	" " " "				0.07				10	
173 X	" " " "				0.04				10	
173 Aerial-1	" " " "				0.06				10	
173 Aerial-2	" " " "			X	0.07	X	X		10	X- Not Required

(L) Indicates residual lands that are landlocked.

PARCEL NO.	OWNER	DEED RECORD		DEED AREA (ACRES)	TO BE ACQUIRED		RESIDUE (ACRES)		SHEET NO.	REMARKS
		BOOK	PAGE		LAND (AC)	BLDG.	LEFT	RIGHT		
174 LA	Lillian K. Druckenmiller	216	364,5		21.32				9,11	
174 X	" " " "				0.05				11	
174 Y	" " " "			245.055	0.02		133.8	89.9	11	
175 LA	Alfred F. & Christina W. Brogle	179	352		4.69				11	
175 X	" " " "				0.13				11	
175 Y	" " " "			59.95	0.67		48.2	7.1	11	
176 LA	Frieda R. Brogle	239	424,5	7.316	1.27		6.0	(L)0.06	11,12	
177 LA	Rosemary E. Brogle	239	426	7.316	1.36		5.5	(L)0.5	11,12	
178 LA	Louise F. Brogle	239	422	27.015	5.25		15.3	6.5	12	
179 LA	Arthur & Mary Agsten	117	84	4.3	0.11			4.2	12	
180 LA	Arthur E. Agsten	181	133,4	3.5	1.97		(L)0.07	1.5	12	
181 LA	Charles N. & Opal F. Young	217	6	6.6	2.77		(L)2.1	1.7	12	
182 LA	William C. & Marilyn J. Young	219	188	1.50	0.37			1.1	12	
183 LA	Marvin A. & Laurene J. Weinau	219	186	1.50	0.43			1.1	12	
184 LA	Dorothy M. Taylor	190	17,8	0.804	0.19		0.6		12	
185 LA	David J. & Dorothy M. Bromm	238	353,4	0.804	0.60	Yes	0.2		12	
186 LA	Frances Gilbert	255	108,9	0.804	0.73	Yes	0	0	12	
187 LA	Fred & Lois Gebelle	191	377	0.804	0.73	Yes	0	0	12	
188 LA	Robert H. & Margaret R. Unckrich	237	173-5	1.165	0.48	Yes		0.6	12	
189 LA	Lamont A. & Alice J. Cattano	281	221	0.295	0.17	Yes	0.12			
190 LA	Edward H. & Gloria A. Spencer	284	232	0.255	0.25	Yes	0	0	12	
191 LA	James L. & Madeline F. Larrick	281	125	0.218	0.10		0.12		12	
192 LA	Troy I. & Grace S. Stacy	280	505	0.208	0.03		0.18		12	
194 LA	Robert & Helen LaLond	245 303	104 156	0.50	0.03			0.47	12	
195 LA	Louis L. & Susanna A. LaPrad	128	133	2.83	0.39			2.4	12	
196 LA	Paul J. & Mary Ann LaPrad	279	136	1.45	0.41			1.0	12	
197 LA	Christina Wilhelmina Brogle	145	431	14.0	4.89	Yes	(L)6.8	0.3 1.3	12,13	
198 LA	William & Dorothy Pooch	254	40	35.0	9.01		(L)8.7	17.3	13	
199 LA	George Kramer	172	82,3	50.0	0.11		49.9		13	
200 LA	Wm. O. Hemminger	150	61	49.99	8.80		29.3	11.3	13	

SANZENBACHER, MILLER & BRIGHAM

TOLEDO, OHIO

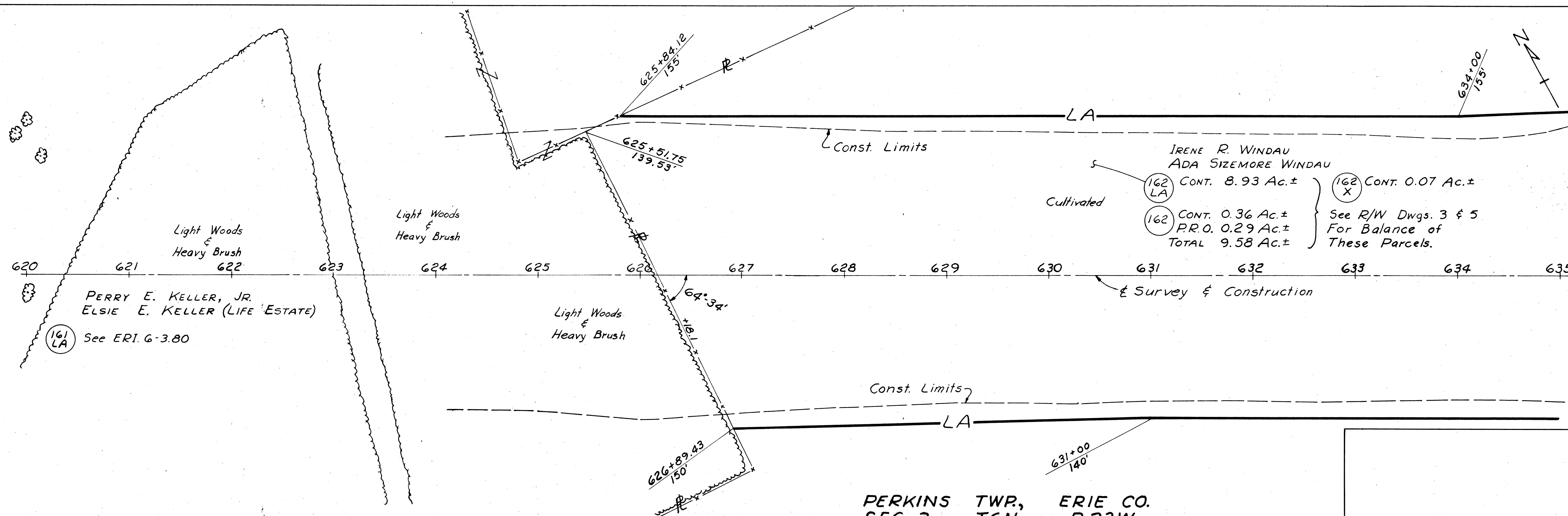
Sept. 30, 1960
Sept. 26, 1960

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

150
161

ERI. G-7.3/
R/W PLAN
LIMITED ACCESS

2
13



PERKINS TWP., ERIE CO.
SEC. 3 T6N R23W
1386 AC. TRACT

Sept. 26, 1960

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

151
161

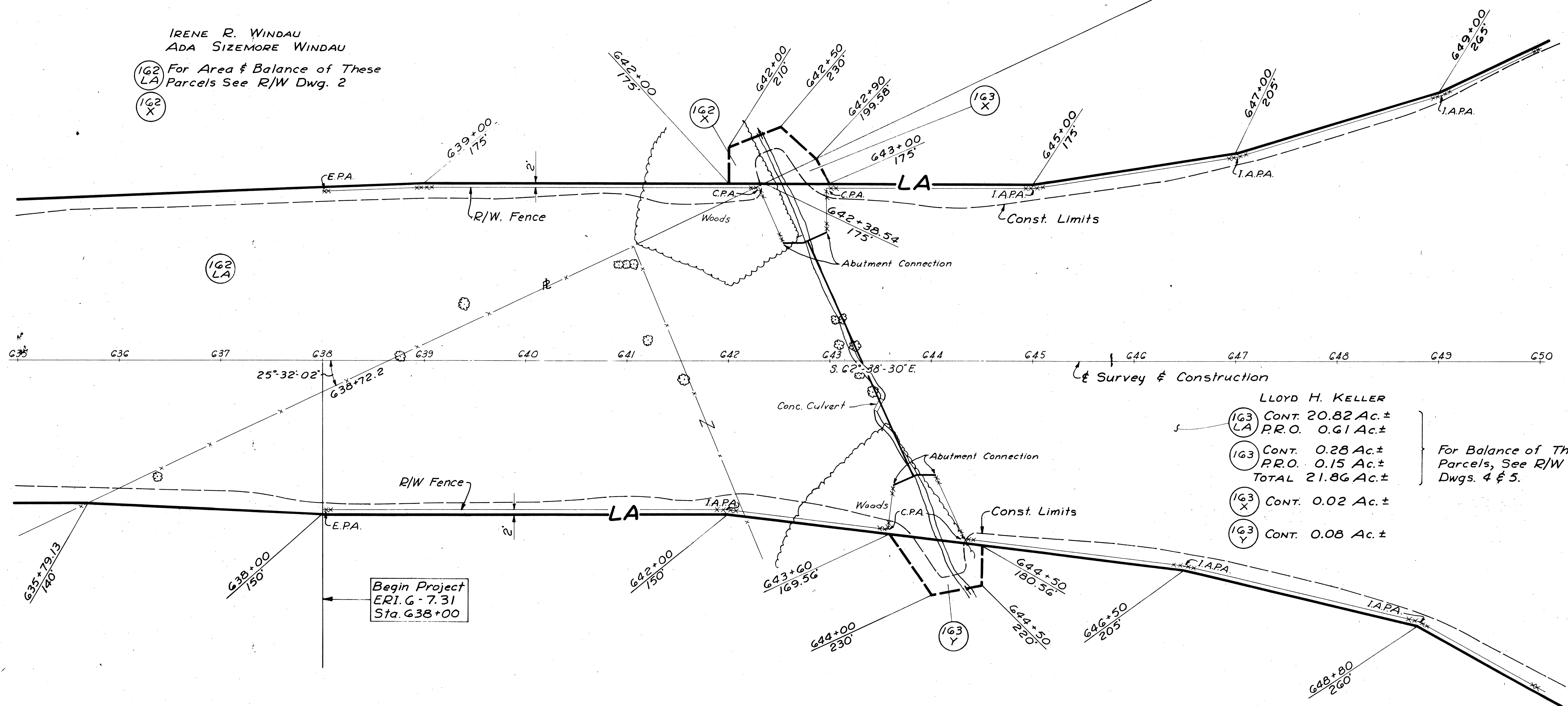
3
13

ERI. G-731
R/W PLAN
LIMITED ACCESS

IRENE R. WINDAU
ADA SIZEMORE WINDAU

162 For Area & Balance of These
LA Parcels See R/W Dwg. 2

162
X



25°-32'-02"

S. 62°-38'-30" E.

Survey & Construction

LLOYD H. KELLER

- 163 CONT. 20.82 Ac.±
- LA P.R.O. 0.61 Ac.±
- 163 CONT. 0.28 Ac.±
- P.R.O. 0.15 Ac.±
- TOTAL 21.86 Ac.±
- 163 X CONT. 0.02 Ac.±
- 163 Y CONT. 0.08 Ac.±

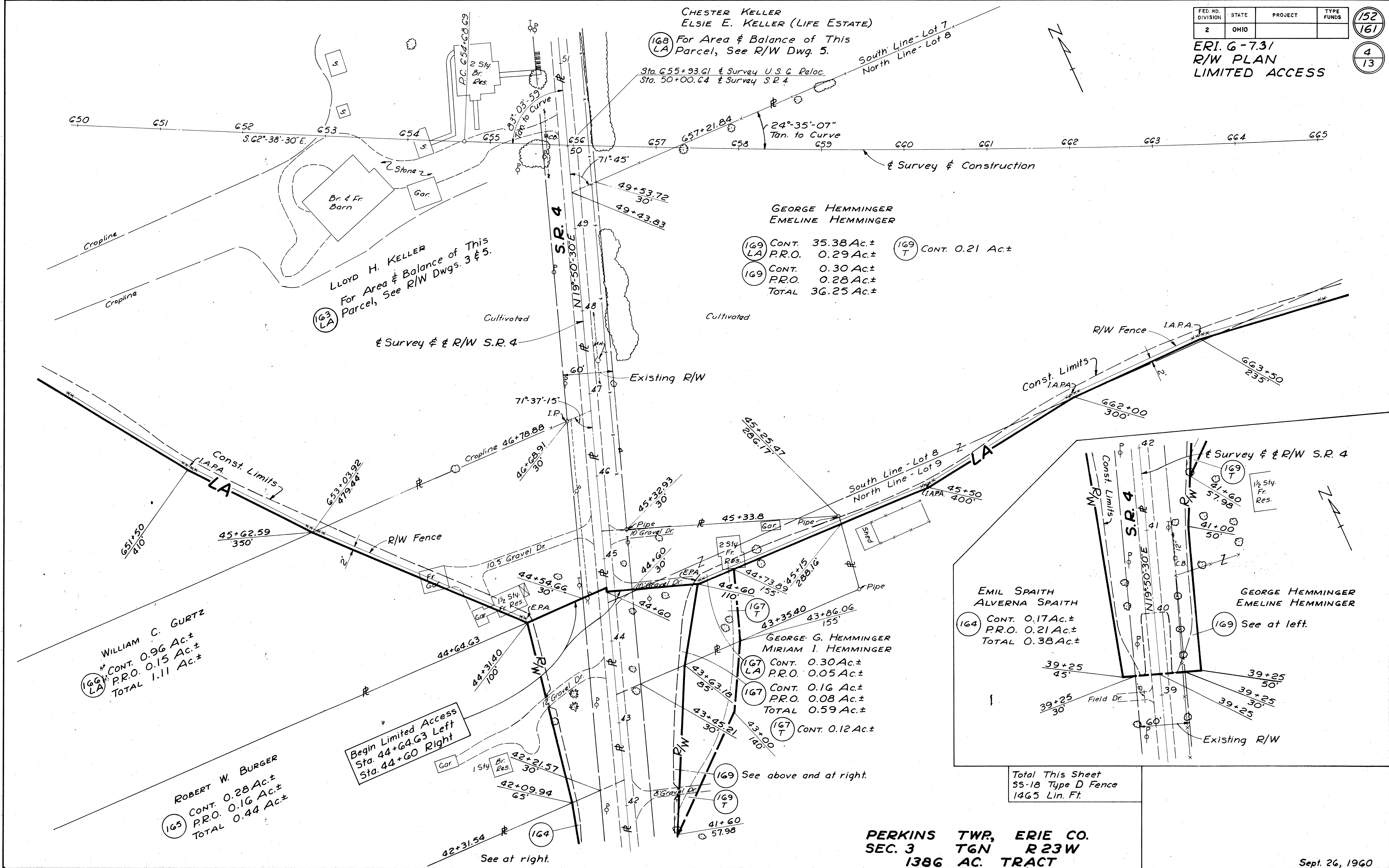
For Balance of These
Parcels, See R/W
Dwgs. 4 & 5.

Begin Project
ERI. G-7.31
Sta. 638+00

Total This Sheet
SS-18 Type D Fence
2535 Lin.Ft.

PERKINS TWP., ERIE CO.
SEC. 3 T6N R23W
1386 AC. TRACT

Sept. 26, 1960



CHESTER KELLER
 ELSIE E. KELLER (LIFE ESTATE)
 (168) For Area & Balance of This Parcel, See R/W Dwg. 5.

LLOYD H. KELLER
 For Area & Balance of This Parcel, See R/W Dwgs. 3 & 5.

GEORGE HEMMINGER
 EMELINE HEMMINGER

(169) CONT. 35.38 Ac.±
 (169) P.R.O. 0.29 Ac.±
 (169) CONT. 0.21 Ac.±
 (169) P.R.O. 0.28 Ac.±
 TOTAL 36.25 Ac.±

WILLIAM C. GURTZ
 (166) CONT. 0.96 Ac.±
 (166) P.R.O. 0.15 Ac.±
 TOTAL 1.11 Ac.±

ROBERT W. BURGER
 (165) CONT. 0.28 Ac.±
 (165) P.R.O. 0.16 Ac.±
 TOTAL 0.44 Ac.±

Begin Limited Access
 Sta. 44+64.63 Left
 Sta. 44+60 Right

GEORGE G. HEMMINGER
 MIRIAM I. HEMMINGER
 (167) CONT. 0.30 Ac.±
 (167) P.R.O. 0.05 Ac.±
 (167) CONT. 0.16 Ac.±
 (167) P.R.O. 0.08 Ac.±
 TOTAL 0.59 Ac.±
 (167) CONT. 0.12 Ac.±

EMIL SPAITH
 ALVERNA SPAITH
 (164) CONT. 0.17 Ac.±
 (164) P.R.O. 0.21 Ac.±
 TOTAL 0.38 Ac.±

GEORGE HEMMINGER
 EMELINE HEMMINGER
 (169) See at left.

Total This Sheet
 55-18 Type D Fence
 1465 Lin. Ft.

PERKINS TWP, ERIE CO.
SEC. 3 T6N R23W
1386 AC. TRACT

Sept. 26, 1960

IRENE R. WINDAU
ADA SIZEMORE WINDAU

162 For Area of This Parcel,
See R/W Dwg. 2.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

153
161
5
13

ERI. G-7.31
R/W PLAN
LIMITED ACCESS

End Limited Access
Sta. 55+60 Left
Sta. 55+65 Right

LLOYD H. KELLER

163 LA For Area & Balance of These
Parcels, See R/W Dwg. 3 & 4.

IRENE R. WINDAU
ADA SIZEMORE
WINDAU

162 See at left.

CHESTER KELLER
ELSIE E. KELLER (LIFE ESTATE)

168 See at left.

CHESTER KELLER
ELSIE E. KELLER (LIFE ESTATE)

- 168 LA CONT. 5.46 Ac.±
P.R.O. 0.42 Ac.±
- 168 CONT. 0.61 Ac.±
P.R.O. 0.44 Ac.±
TOTAL 6.93 Ac.±
- 168 T CONT. 1.57 Ac.±

GEORGE HEMMINGER
EMELINE HEMMINGER

169 LA For Area & Balance of This
Parcel, See R/W Dwg. 4, 6 & 7.

Total This Sheet
55-18 Type D Fence
1435 Lin.Ft.

PERKINS TWR, ERIE CO.
SEC. 3 T6N R23W
1386 AC. TRACT

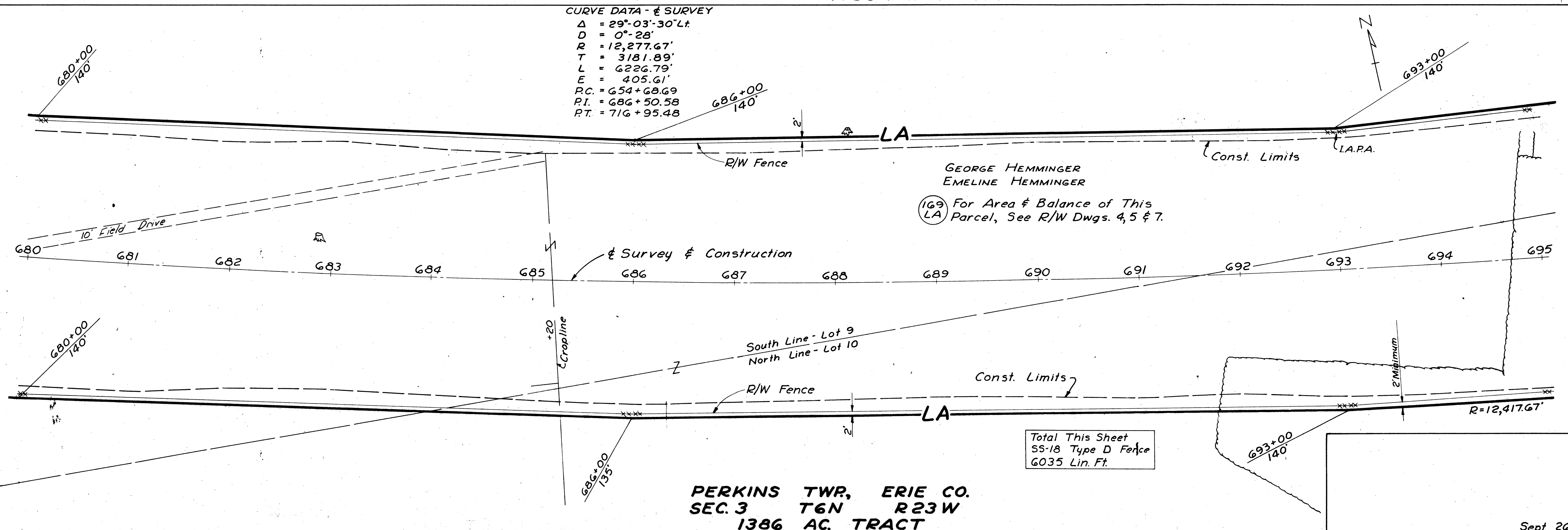
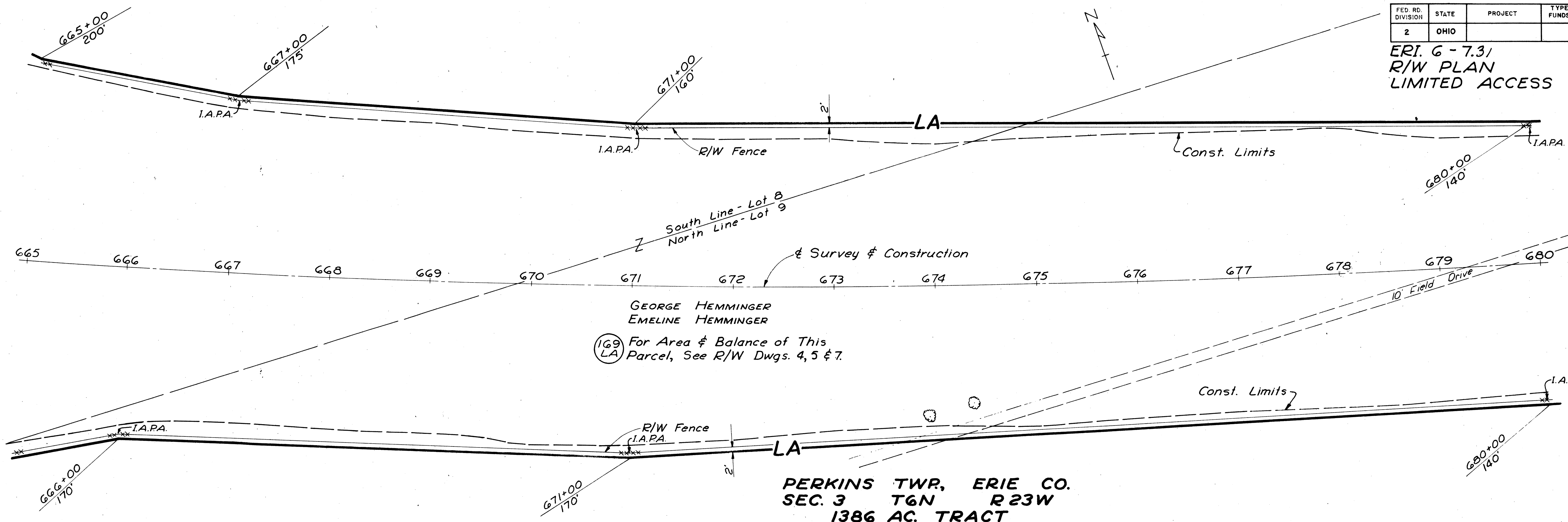
Sept. 26, 1960

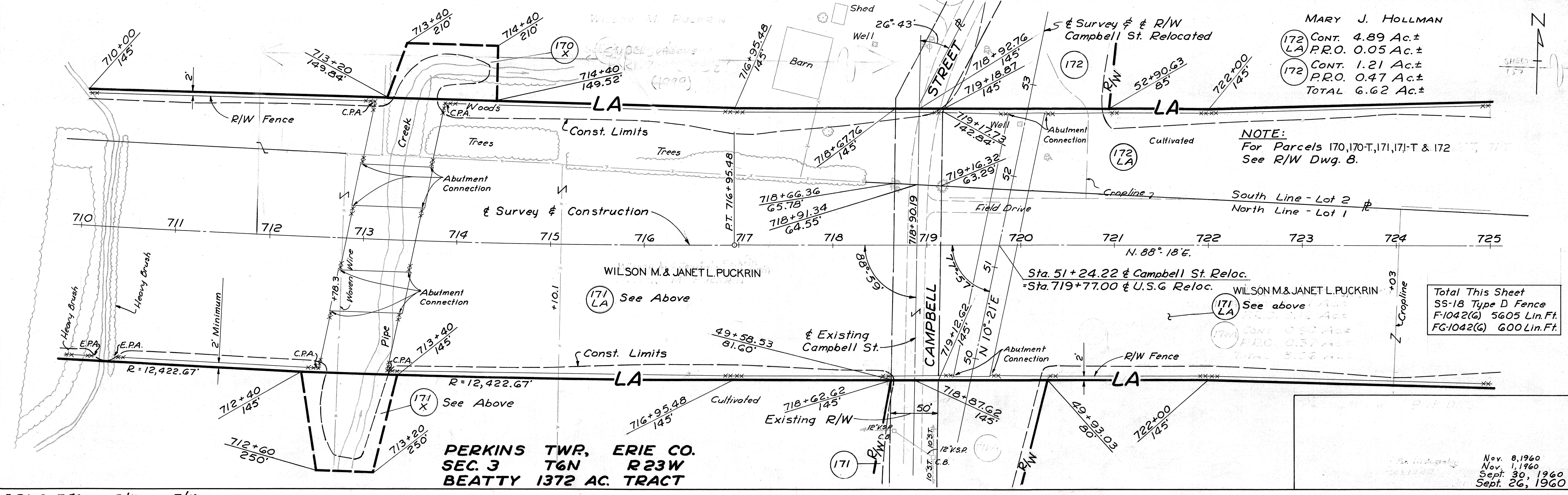
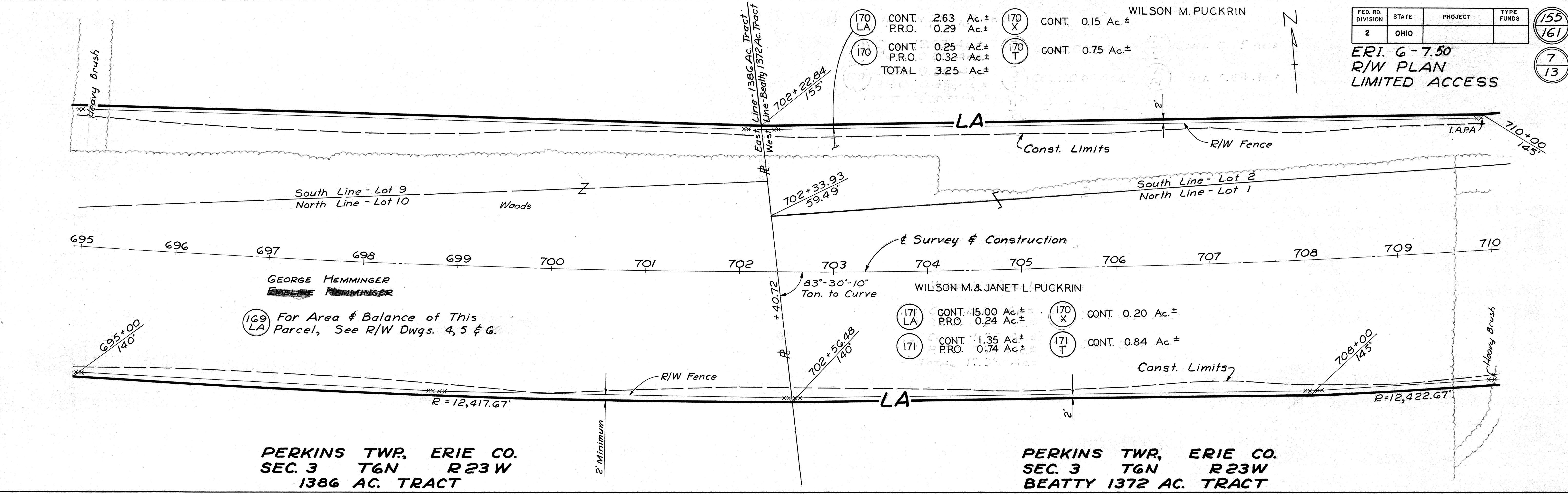
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

154
161

6
13

ERI 6-7.3/
R/W PLAN
LIMITED ACCESS



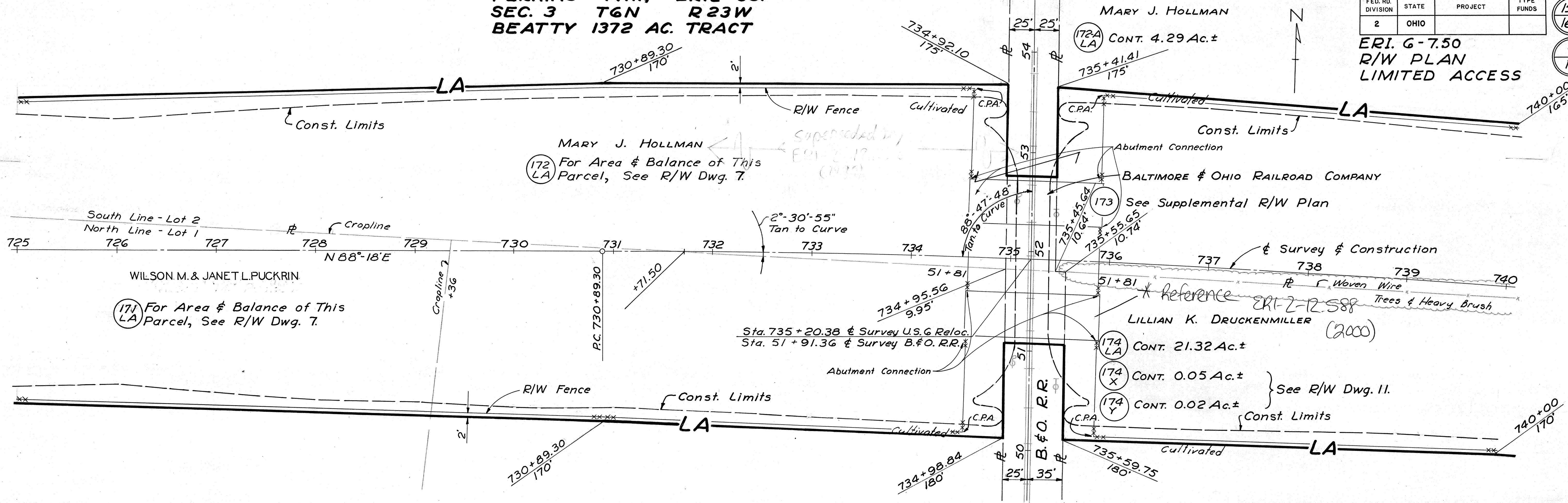


PERKINS TWP., ERIE CO.
 SEC. 3 T6N R23W
 BEATTY 1372 AC. TRACT

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

157
161
9
13

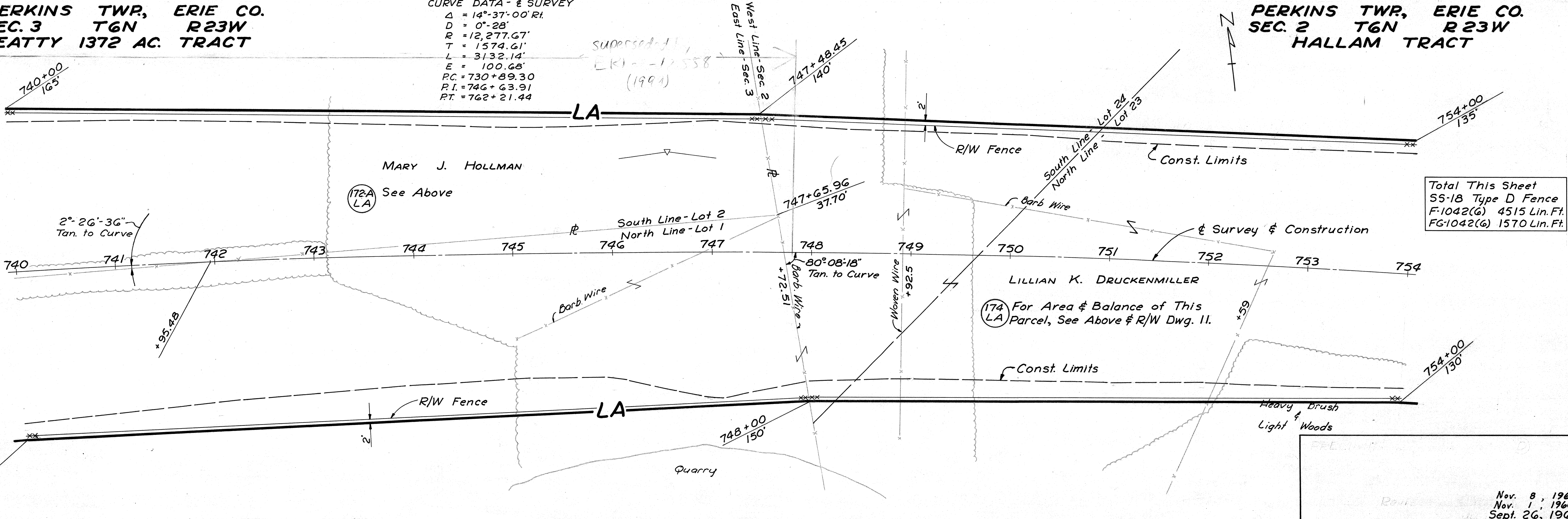
ERI. G-7.50
 R/W PLAN
 LIMITED ACCESS



PERKINS TWP., ERIE CO.
 SEC. 3 T6N R23W
 BEATTY 1372 AC. TRACT

CURVE DATA - & SURVEY
 $\Delta = 14^{\circ}-37'-00''$ RI.
 $D = 0^{\circ}-28'$
 $R = 12,277.67'$
 $T = 1574.61'$
 $L = 3132.14'$
 $E = 100.68'$
 $P.C. = 730+89.30$
 $P.I. = 746+63.91$
 $P.T. = 762+21.44$

PERKINS TWP., ERIE CO.
 SEC. 2 T6N R23W
 HALLAM TRACT



Total This Sheet
 55-18 Type D Fence
 F-1042(6) 4515 Lin. Ft.
 FG-1042(6) 1570 Lin. Ft.

Nov. 8, 1960
 Nov. 1, 1960
 Sept. 26, 1960

ERI G-7.50
R/W PLAN
SUPPLEMENTAL SHEET

CURVE DATA
 $\Delta = 14^\circ 37' 00''$ Rt.
 $D = 0^\circ 28'$
 $R = 12277.61'$
 $T = 1574.61'$
 $L = 3132.14'$
 $E = 100.68'$
 $PC = 730+89.30$
 $PI = 746+63.91$
 $PT = 762+21.44$
 $MRC = 746+55.37$

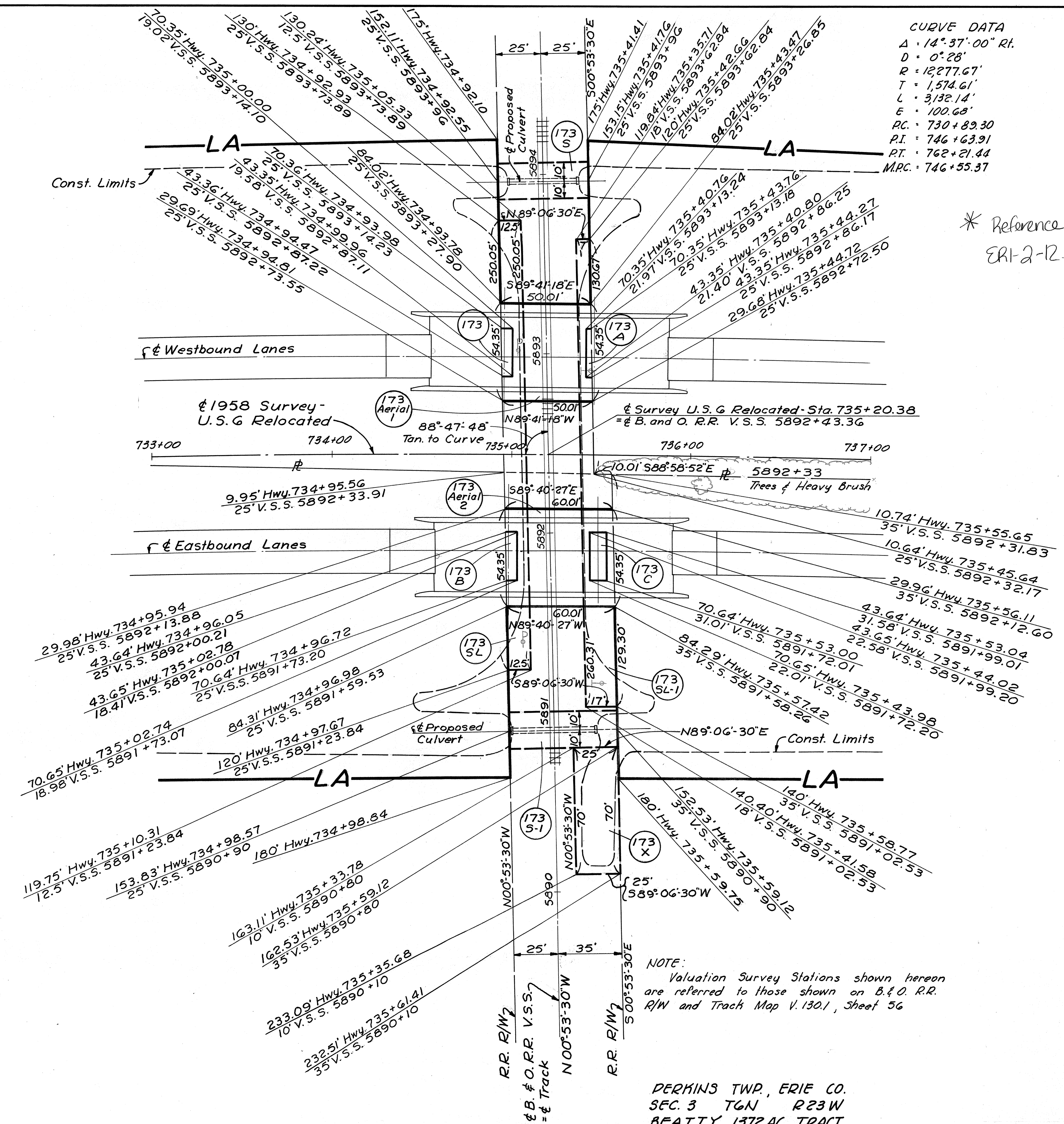
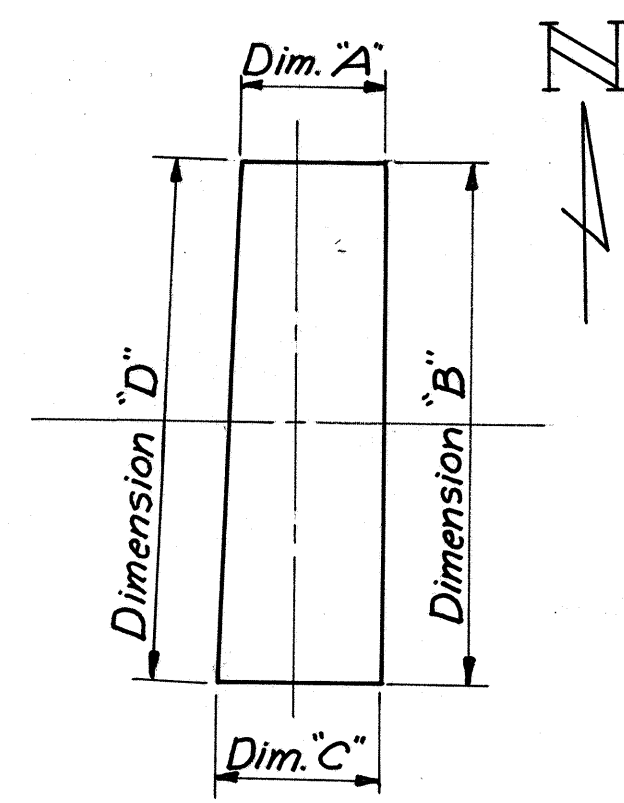


* Reference
 ERI-2-12.588
 (2000)

Baltimore and Ohio Railroad Company

- (173) Cont. 0.004 Ac.±
- (173 A) Cont. 0.002 Ac.±
- (173 B) Cont. 0.004 Ac.±
- (173 C) Cont. 0.006 Ac.±
- (173 S) Cont. 0.02 Ac.±
- (173 S-1) Cont. 0.03 Ac.±
- (173 SL) Cont. 0.07 Ac.±
- (173 SL-1) Cont. 0.07 Ac.±
- (173 X) Cont. 0.04 Ac.±
- (173 Aerial 1) Cont. 0.06 Ac.±
- (173 Aerial 2) Cont. 0.07 Ac.±

PARCEL NO.	DIM. "A" BEARING	DIM. "B" BEARING	DIM. "C" BEARING	DIM. "D" BEARING
173	5.98' S89°41'18"E	27.0' 500°53'30"W	5.42' N89°41'18"W	27.0' N00°53'30"W
173 A	3.03' S89°41'18"E	27.01' 500°53'30"E	3.60' N89°41'18"W	27.0' N00°18'42"E
173 B	6.59' S89°40'27"E	27.0' 500°19'33"W	6.02' N89°40'27"W	27.01' N00°53'30"W
173 C	9.0' S89°40'27"E	27.0' 500°19'33"W	9.0' N89°40'27"W	27.0' N00°19'33"E



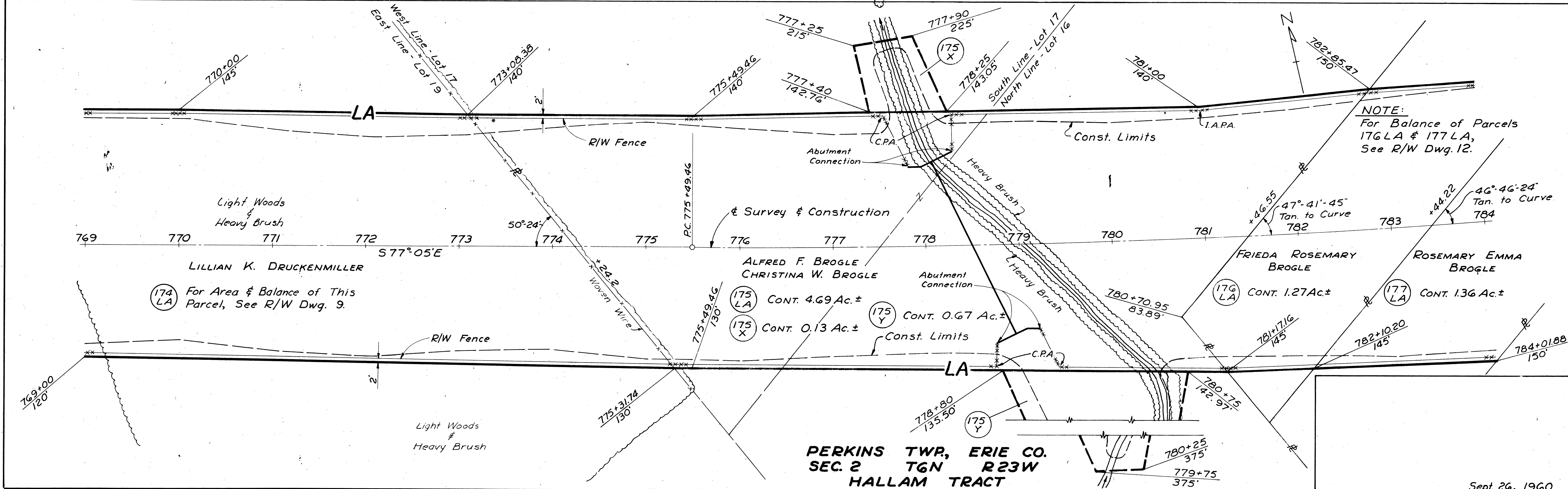
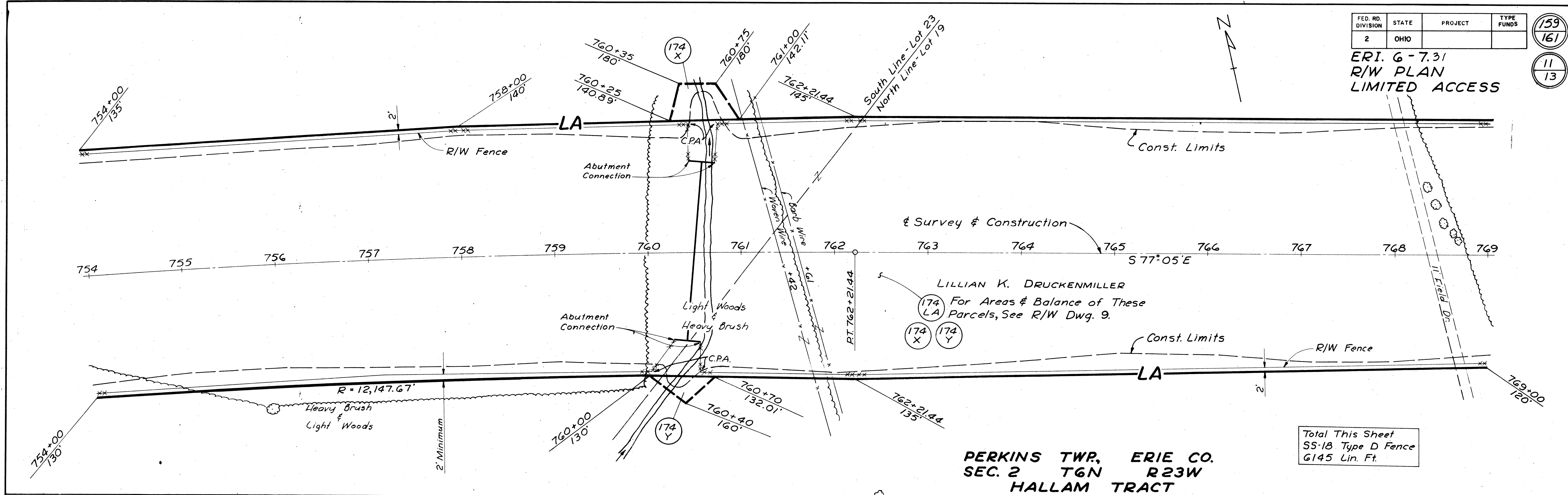
NOTE:
 Valuation Survey Stations shown hereon are referred to those shown on B. & O. R.R. R/W and Track Map V.130.1, Sheet 56

PERKINS TWP., ERIE CO.
 SEC. 3 T6N R23W
 BEATTY 1372 AC. TRACT

SANZENBACHER, MILLER & BRIGHAM
 TOLEDO, OHIO

PLAN SHOWING
 HIGHWAY RIGHT OF WAY EASEMENTS
 REQUIRED
 AT
 BALTIMORE AND OHIO RAILROAD

Date: Sept. 26, 1960
 Scale: 1" = 30'



FRIEDA ROSEMARY BROGLE

(176) For Area & Balance of This Parcel, See R/W Dwg. 11.

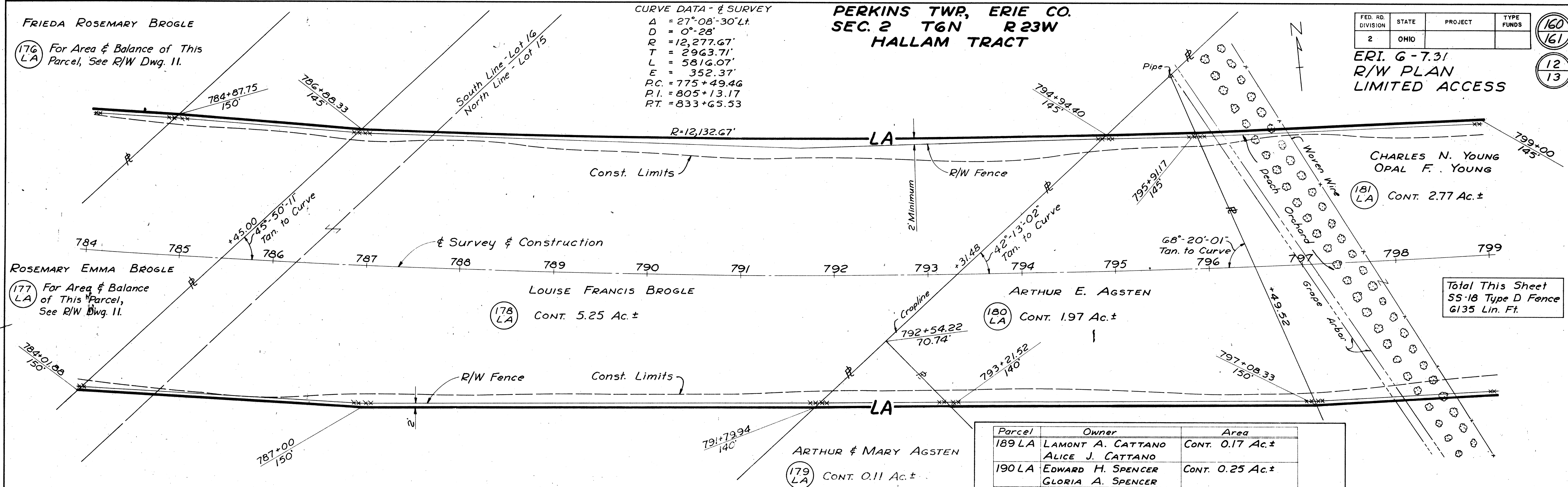
CURVE DATA - & SURVEY
 $\Delta = 27^{\circ}08'30''$ Lt.
 $D = 0^{\circ}28'$
 $R = 12,277.67'$
 $T = 2963.71'$
 $L = 5816.07'$
 $E = 352.37'$
 $PC = 775+49.46$
 $PI = 805+13.17$
 $PT = 833+65.53$

PERKINS TWP, ERIE CO.
 SEC. 2 T6N R23W
 HALLAM TRACT

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

160
161
12
13

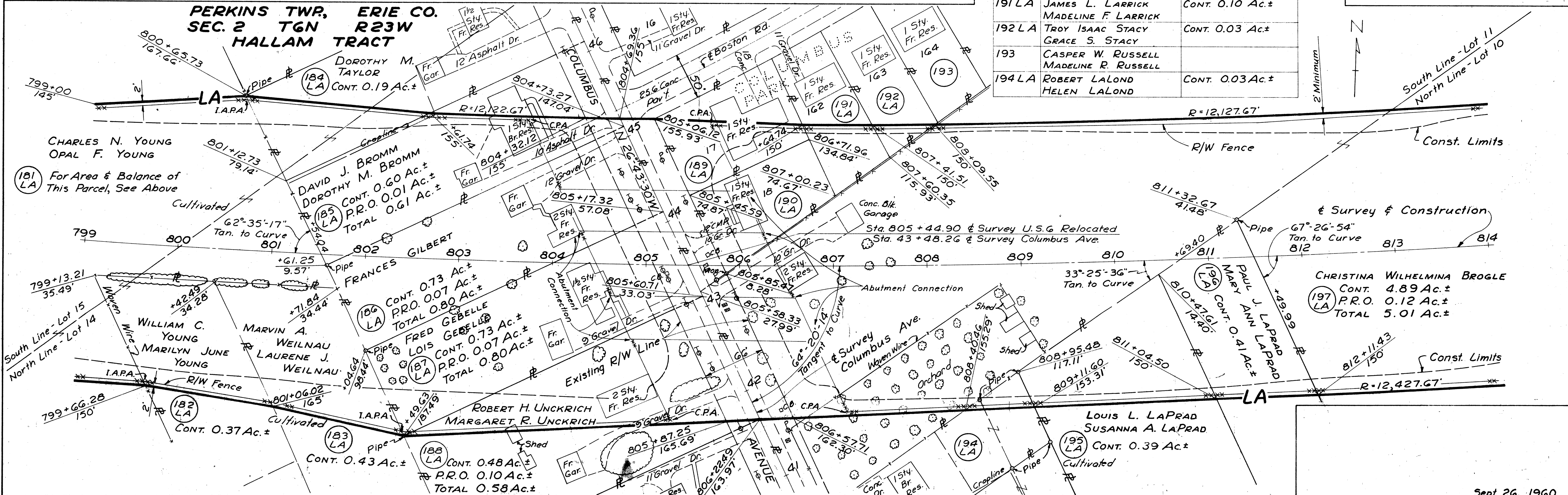
ERI. G-7.31
 R/W PLAN
 LIMITED ACCESS

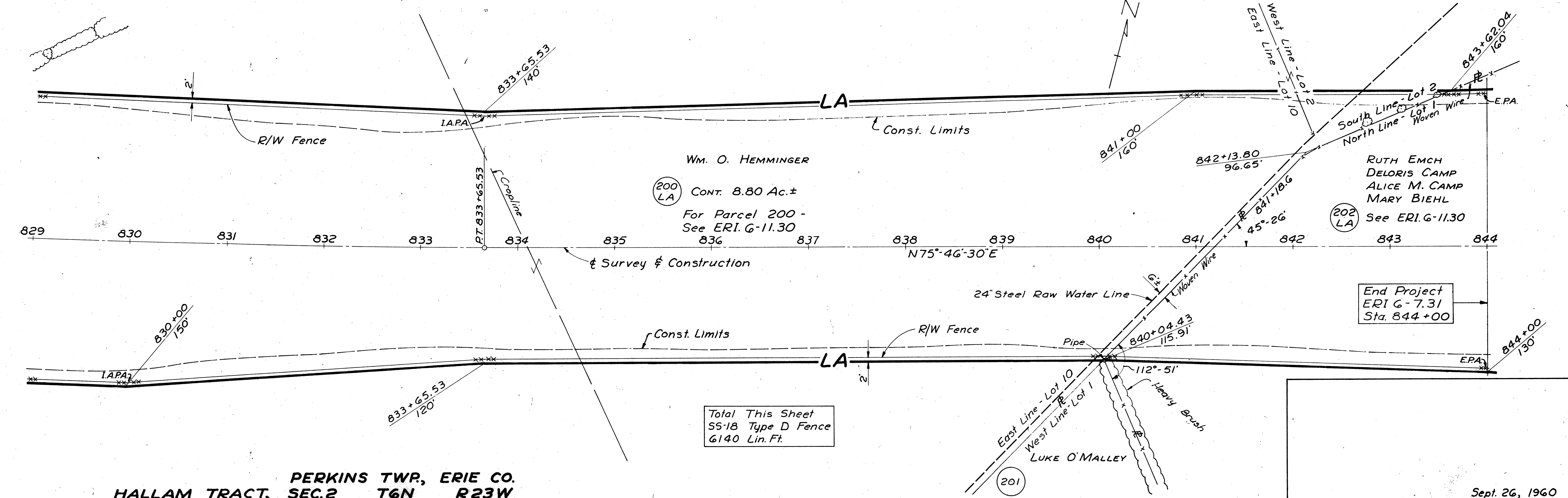
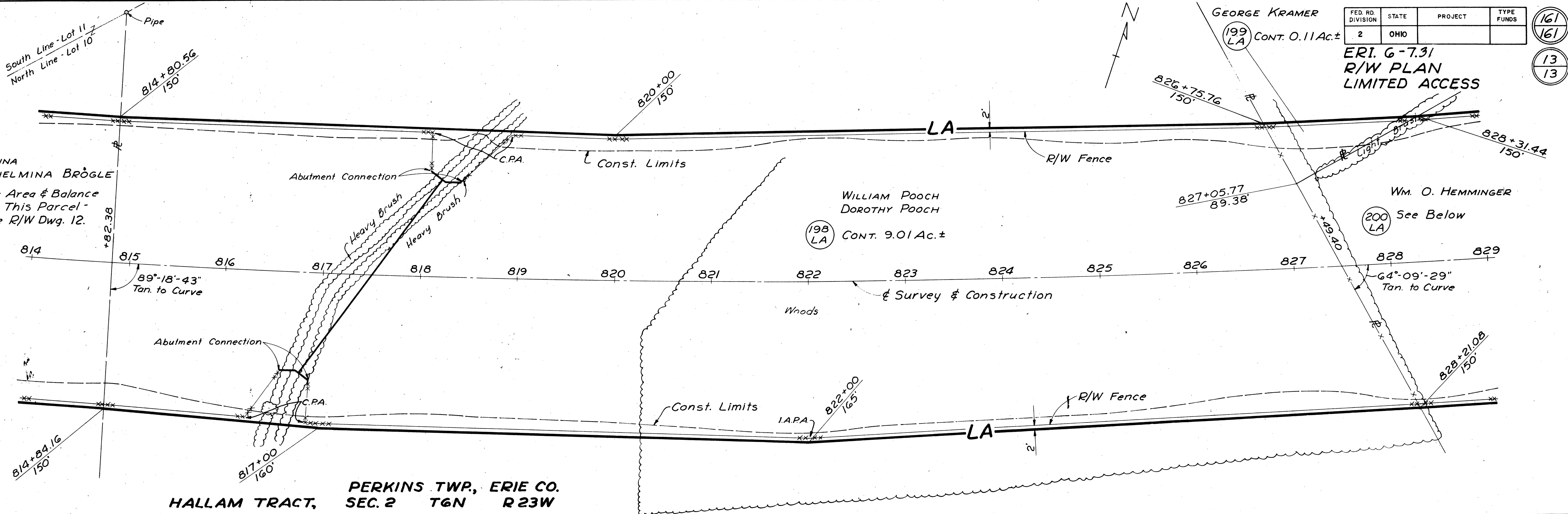


Total This Sheet
 55-18 Type D Fence
 6135 Lin. Ft.

Parcel	Owner	Area
189 LA	LAMONT A. CATTANO ALICE J. CATTANO	CONT. 0.17 Ac.±
190 LA	EDWARD H. SPENCER GLORIA A. SPENCER	CONT. 0.25 Ac.±
191 LA	JAMES L. LARRICK MADLINE F. LARRICK	CONT. 0.10 Ac.±
192 LA	TROY ISAAC STACY GRACE S. STACY	CONT. 0.03 Ac.±
193	CASPER W. RUSSELL MADLINE R. RUSSELL	
194 LA	ROBERT LALOND HELEN LALOND	CONT. 0.03 Ac.±

PERKINS TWP, ERIE CO.
 SEC. 2 T6N R23W
 HALLAM TRACT





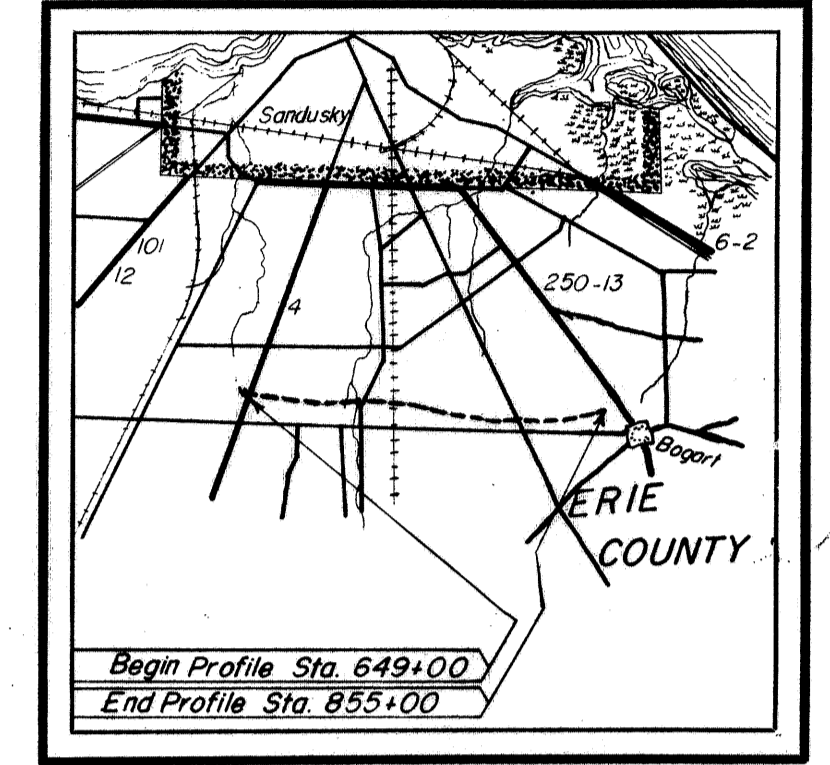
Total This Sheet
 55-18 Type D Fence
 6140 Lin. Ft.

Revised
March 21, 1960

SOIL PROFILE
ERIE COUNTY
ERI-6-731
STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO

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

Fed. No. - F-



LOCATION MAP

Recon. J.S.M. Oct. 10, 1958
Auger. C.A.C., C.A.S., C.E.G. Oct. 9, 1958
Core. T.S.C., J.S.S., W.R.B. Nov. 19, 1958
Drafting: M.J.H., W.L.T., J.H.W. Jan. 8, 1959

LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS- 126 SAMPLES TESTED

DESCRIPTION	H. R. B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Gravel	A-1-a(0)	A-1-a	54	24	10	9	3	NP	NP	9	1
Fine sand with silt	—	A-3o	1	1	73	19	6	NP	NP	18	19
Gravel with sand and silt	A-2-4(0)	A-2-4	37	13	17	20	13	18	6	12	1
Sandy silt	A-4(s)	A-4a	6	5	28	35	26	23	3	15	20
Silt	A-4(b)	A-4b	0	0	8	64	28	29	4	24	29
Silt and clay	A-6(b)	A-6a	3	3	10	42	42	30	11	21	42
Silty clay	A-6(III)	A-6b	2	1	7	38	52	37	17	24	10
Clay	A-7-6(IV)	A-7-6	0	3	12	25	60	46	23	24	3
Weathered shale											1
Shale (Classified By Visual Inspection)											
Limestone (Classified By Visual Inspection)											

W- Free water

Number of blows for "Standard Penetration" Test:
x = number of blows for the first 6 inches.
y = number of blows for the second 6 inches.

Soil Symbols:
 [Diagonal lines] Sod & topsoil = X = Approx. depth.
 [Cross-hatch] Berm material
 [Vertical line] Auger boring plotted to vertical scale only.
 [Circle with X] Auger boring - plan view
 [Circle with Y] Core boring - plan view

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

Samples Tested
Lab. Nos. So. 4158-4264 incl.
4343-4358 incl.
6603
6950-6951 incl.

Note: Figures beside borings indicate water content in per cent.

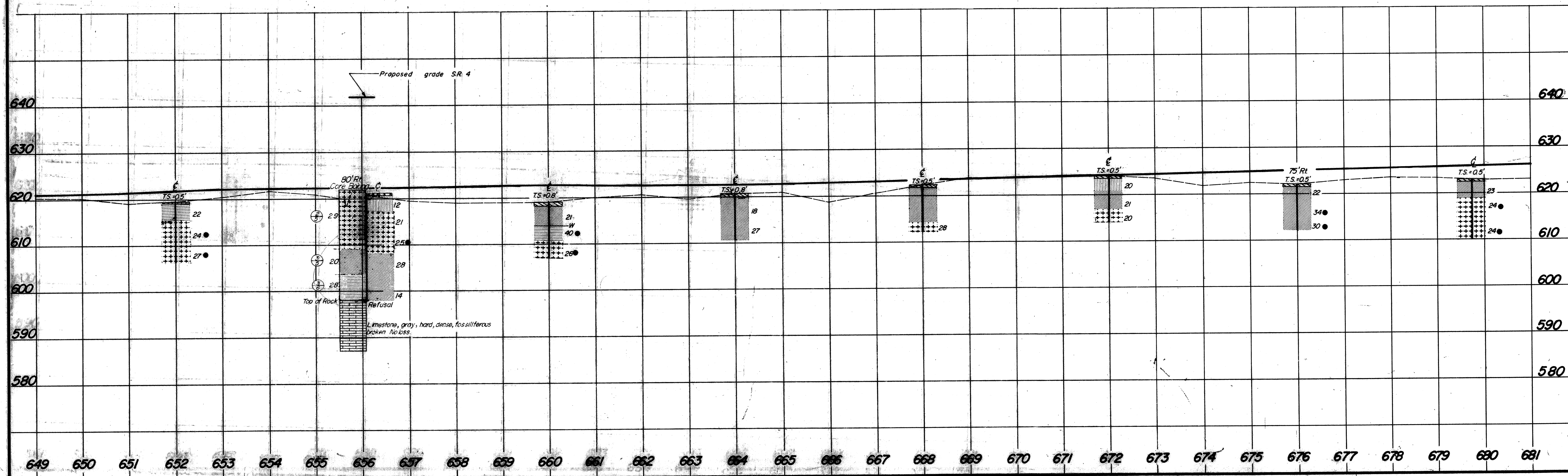
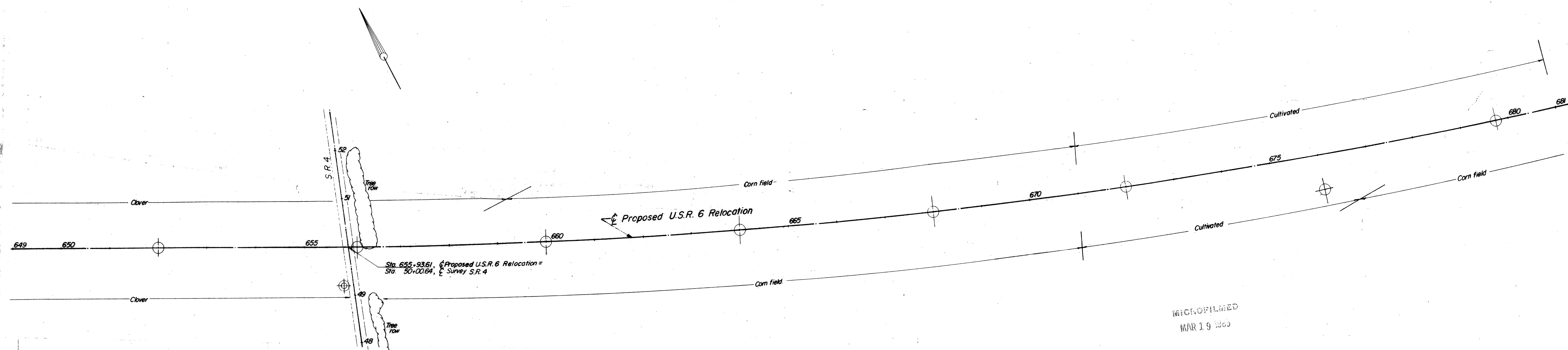
MICROFILMED
MAR 19 1965

Summary of Soil Test Data

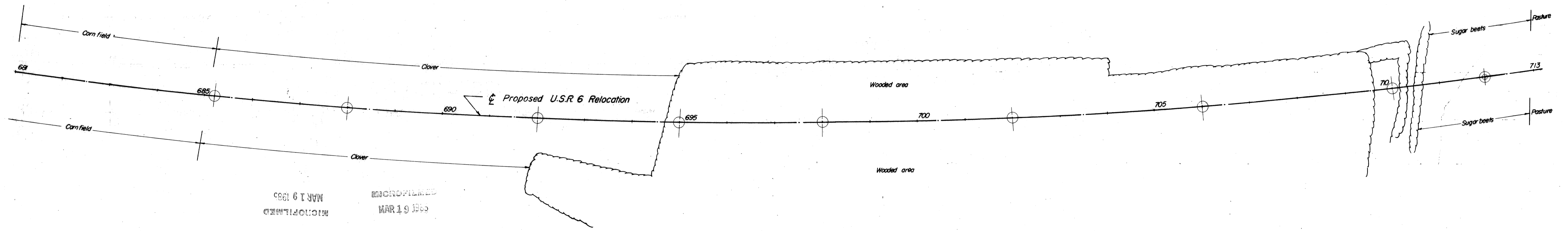
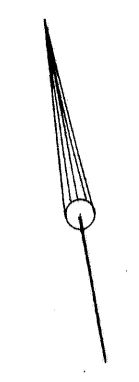
NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.

Station & Offset	Depth From-To	% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	% W.C.	SHTL Class.
652+00 CL	0.5-4.0	0	1	18	52	37	36	18	22	A-6b
	4.0-9.0	0	0	5	68	35	28	7	24	A-6b
	9.0-13.0	0	0	0	55	45	27	10	27	A-6b
656+10 CL	0.5-4.0	7	5	26	37	25	26	5	12	A-4a
	4.0-9.0	0	1	12	52	35	25	6	21	A-4b
	9.0-13.0	0	0	1	54	45	27	6	25	A-4b
	13.0-20.0	0	0	1	46	32	11	28	11	A-6a
	20.0-23.0	9	0	12	37	34	27	11	14	A-6a
660+00 CL	0.8-5.0	0	1	16	47	36	29	11	21	A-6a
	5.0-8.0	0	0	6	50	44	35	17	40	A-6b
	8.0-12.0	0	0	2	64	38	27	8	26	A-6b
664+00 CL	0.8-5.0	0	1	14	48	37	27	11	18	A-6a
	5.0-10.0	0	1	2	45	52	32	12	27	A-6a
668+00 CL	8.0-10.0	0	0	1	52	47	27	7	28	A-4b
672+00 CL	0.5-3.0	0	1	39	38	30	NP	NP	20	A-4a
	3.0-7.0	0	3	3	48	46	34	13	21	A-6a
	7.0-10.0	9	0	1	56	43	31	9	20	A-4b
676+00 75' BT	0.5-3.0	0	0	2	69	29	34	15	22	A-6a
	3.0-8.0	0	2	18	48	46	34	13	21	A-6a
	8.0-10.0	0	1	1	44	54	33	12	30	A-6a
679+75 CL	0.5-4.0	0	0	7	52	41	32	12	23	A-6a
	4.0-7.0	0	0	1	63	29	28	5	24	A-4b
	7.0-13.0	0	0	1	58	41	25	5	24	A-4b
685+20 CL	0.5-5.0	0	1	16	46	37	30	13	18	A-6a
	5.0-8.0	0	0	1	67	32	28	7	27	A-4b
	8.0-12.0	0	0	1	47	52	31	11	31	A-6a
	12.0-15.0	37	13	17	20	13	18	6	12	A-2-b
688+00 CL	0.5-1.5	0	0	62	24	14	NP	NP	11	A-4a
692+00 CL	0.5-4.0	8	1	2	91	6	29	7	23	A-4b
	4.0-8.0	0	0	1	37	42	31	11	24	A-6a
	8.0-12.0	3	1	4	42	38	30	11	23	A-6a
695+00 CL	0.3-4.0	0	0	74	16	10	NP	NP	7	A-3a
	4.0-7.0	0	0	7	50	43	27	9	22	A-4b
	7.0-10.0	15	10	31	25	19	21	5	15	A-4a
698+00 CL	0.3-8.0	8	2	8	39	43	38	18	16	A-6b
702+00 CL	0.3-4.0	0	1	12	47	40	28	11	16	A-6a
	4.0-8.0	0	2	8	45	45	35	16	22	A-6b
	8.0-9.0	12	7	13	34	34	25	8	13	A-4a
706+00 CL	0.5-5.0	0	3	77	14	6	NP	NP	5	A-3a
	5.0-7.0	0	2	9	43	46	32	14	15	A-6a
	7.0-13.0	11	8	23	27	31	28	12	12	A-6a
710+00 CL	0.3-4.0	13	5	12	35	35	30	11	15	A-6a
714+00 CL	0.3-4.0	0	0	4	61	35	34	12	27	A-6a
	4.0-6.5	12	7	14	31	34	28	11	17	A-6a
718+10 CL	0.3-5.0	0	2	20	39	39	30	13	24	A-6a
	5.0-9.0	10	8	15	37	30	25	8	13	A-4a
	9.0-11.0	13	8	13	33	33	20	1	11	A-4a
722+00 25' LT	0.5-7.5	5	2	6	44	43	35	16	17	A-6b
726+00 CL	0.5-5.0	0	2	6	26	66	46	23	20	A-7-6
730+00 CL	0.5-6.0	6	7	13	34	40	31	14	16	A-6a
734+00 CL	0.5-5.0	0	2	13	29	56	45	23	16	A-7-6
738+00 CL	0.3-4.0	9	4	13	35	39	36	14	19	A-6a
742+00 CL	0.3-2.5	6	3	18	37	36	37	17	18	A-6b
746+00 CL	0.5-2.0	0	4	16	21	59	48	22	37	A-7-6
750+00 CL	0.3-3.0	0	0	74	14	10	NP	NP	14	A-3a
	3.0-5.0	4	2	58	24	12	NP	NP	22	A-4a
754+00 CL	0.5-4.0	0	0	79	14	7	NP	NP	16	A-3a
	4.0-8.0	0	0	86	13	1	NP	NP	25	A-3a
	8.0-12.0	0	0	8	33	39	40	25	20	A-6a
758+00 CL	0.3-4.0	0	0	75	15	10	NP	NP	12	A-3a
	4.0-5.0	0	0	83	16	1	NP	NP	23	A-3a
	5.0-7.0	0	0	2	25	73	39	17	22	A-6b
	7.0-10.0	12	7	13	37	31	23	2	12	A-4a
762+00 CL	0.8-4.0	0	0	73	20	7	NP	NP	13	A-3a
	4.0-7.0	0	3	14	51	23	10	6	22	A-4b
	7.0-9.0	2	0	4	40	44	25	7	24	A-4b
	9.0-12.0	0	1	4	36	59	34	17	24	A-6b
766+00 CL	0.6-4.0	9	5	37	23	26	39	13	21	A-6a
	4.0-9.0	0	2	3	34	61	28	11	23	A-6a
	9.0-12.0	3	1	3	23	70	37	16	30	A-6b
770+00 CL	0.6-5.0	0	0	74	20	6	NP	NP	6	A-3a
	5.0-7.0	0	1	70	25	4	NP	NP	27	A-3a
	7.0-8.0	0	1	81	16	2	NP	NP	25	A-3a
774+00 CL	0.6-4.0	0	1	61	20	18	NP	NP	16	A-4a
	4.0-7.0	0	0	67	26	7	NP	NP	23	A-3a
	7.0-8.0	11	10	18	33	28	20	17	17	A-4a
778+00 CL	0.6-5.0	0	0	69	23	8	NP	NP	25	A-3a
	5.0-15.0	12	7	13	31	37	23	9	14	A-4a
	15.0-19.0	14	8	14	31	33	25	11	14	A-6a
782+00 CL	0.3-5.0	0	0	71	20	9	NP	NP	22	A-3a
	5.0-9.0	0	2	57	33	8	NP	NP	19	A-4a
	9.0-13.0	0	0	2	59	39	25	1	21	A-4b
	13.0-18.5	8	4	9	40	39	30	11	20	A-6a
786+00 CL	0.3-3.0	0	0	46	30	4	NP	NP	19	A-3a
	3.0-8.5	0	2	67	19	12	NP	NP	26	A-3a
	8.5-12.0	0	4	9	39	40	26	4	20	A-4a
	12.0-16.0	0	8	14	40	30	28	7	16	A-4a
790+00 CL	0.8-3.0	0	0	68	25	7	NP	NP	20	A-3a
	3.0-7.5	0	0	69	24	5	NP	NP	25	A-3a
	7.5-14.0	9	9	15	29	38	25	11	13	A-6a
	14.0-17.5	12	0	17	30	33	24	8	14	A-4a
813+00 CL	6.0-11.0	0	3	8	45	44	28	11	23	A-6a
	11.0-14.0	0	9	15	37	39	26	11	13	A-6a
817+00 CL	0.4-2.0	0	2	20	47	31	NP	NP	22	A-4a
	2.0-6.0	0	2	3	30	65	40	16	28	A-6b
	6.0-7.0	0	5	15	39	41	31	13	30	A-6a
821+00 CL	0.4-5.0	0	0	21	73	6	NP	NP	27	A-4b
	5.0-6.0	54	24	10	9	3	NP	NP	9	A-1-a
	6.0-12.0	0	0	0	62	38	23	1	24	A-4b
825+00 CL	0.5-5.0	0	0	42	49	9	NP	NP	12	A-4b
	5.0-7.0	0	4	40	50	6	NP	NP	23	A-4b
	7.0-13.0	0	0	2	41	5				

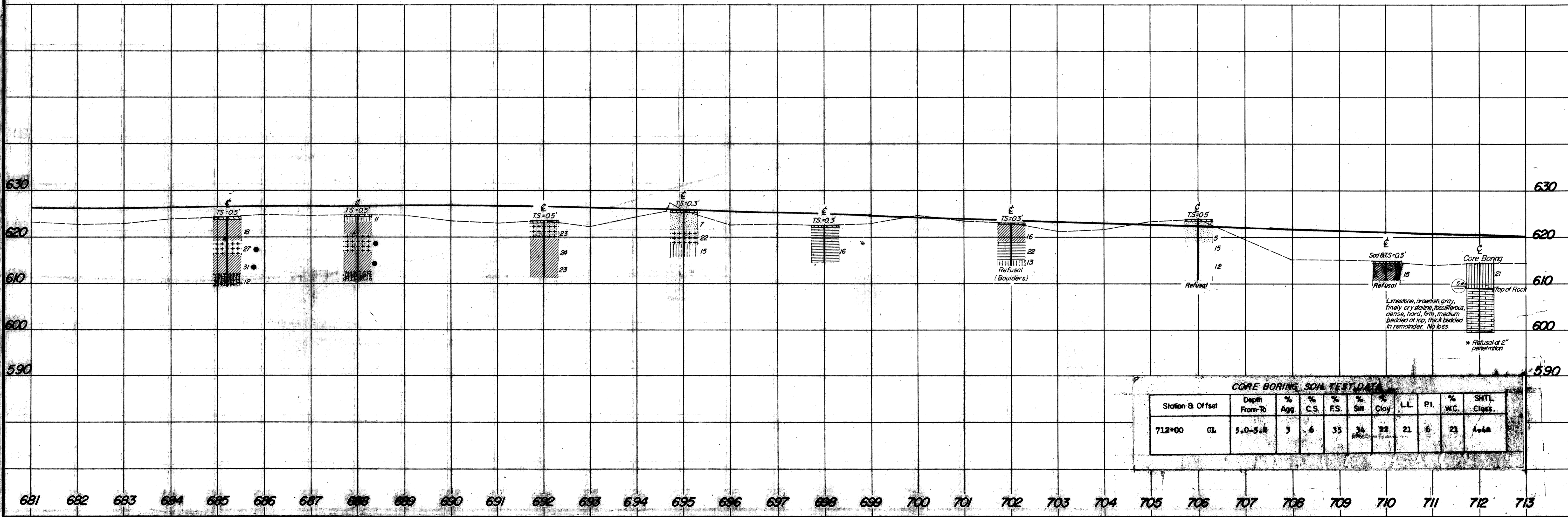
Revised
 March 21, 1960



Revised
 March 21, 1960



MICHOPIAN MAR 19 1960
 MICROFILMED MAR 19 1960



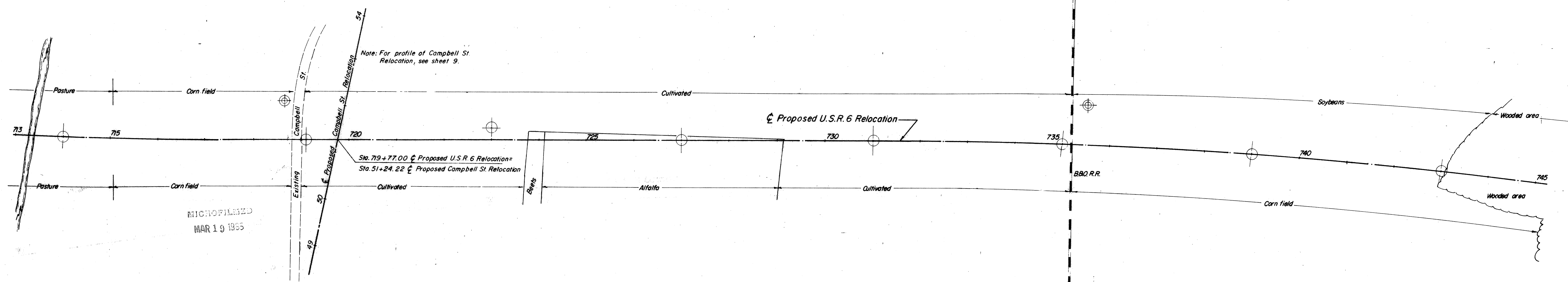
CORE BORING SOIL TEST DATA

Station & Offset	Depth From To	% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	% W.C.	SHTL Class.
712+00	CL 5.0-5.8	3	6	35	36	21	21	6	21	A-4

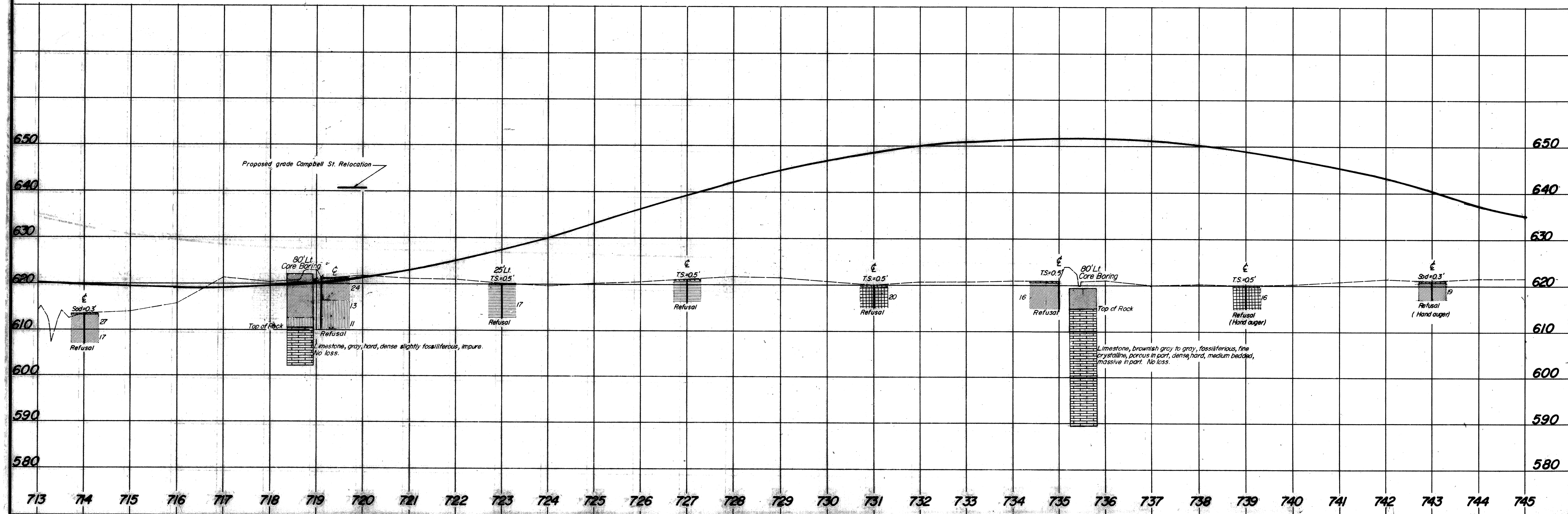
Limestone, brownish gray, finely crystalline, fossiliferous, dense, hard, firm, medium bedded at top, thick bedded in remainder. No fiss.

* Refusal at 2" penetration

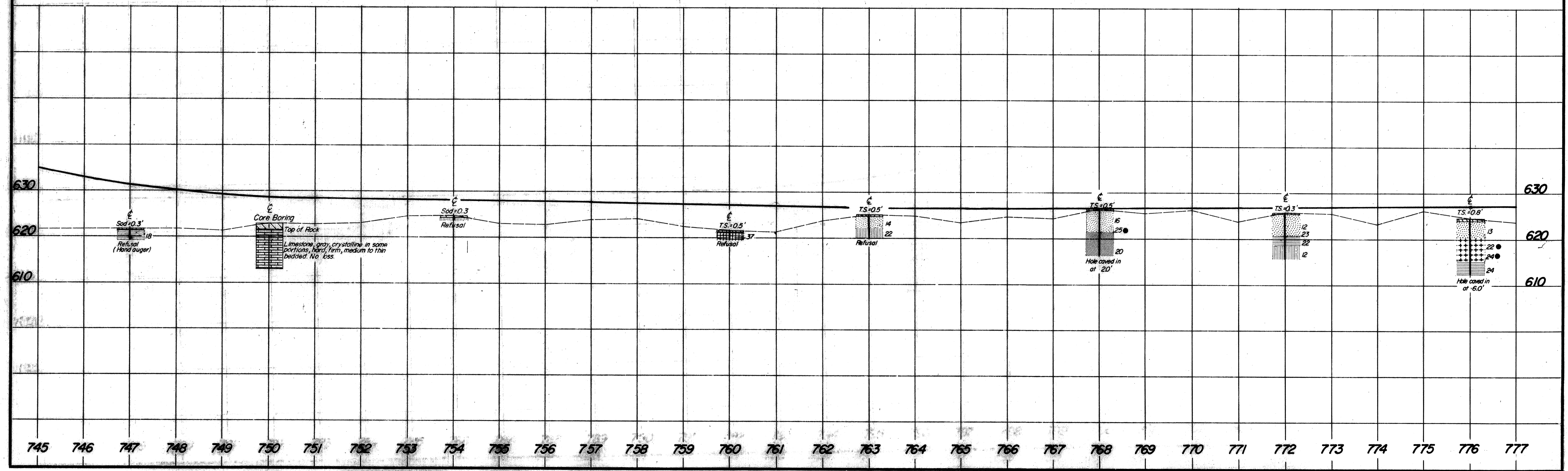
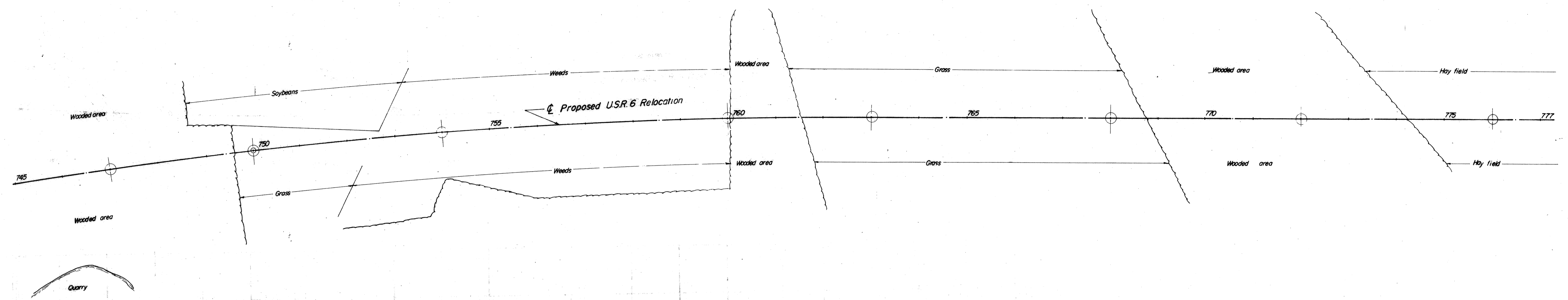
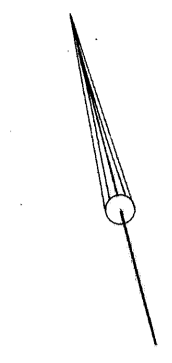
Revised
March 21, 1960



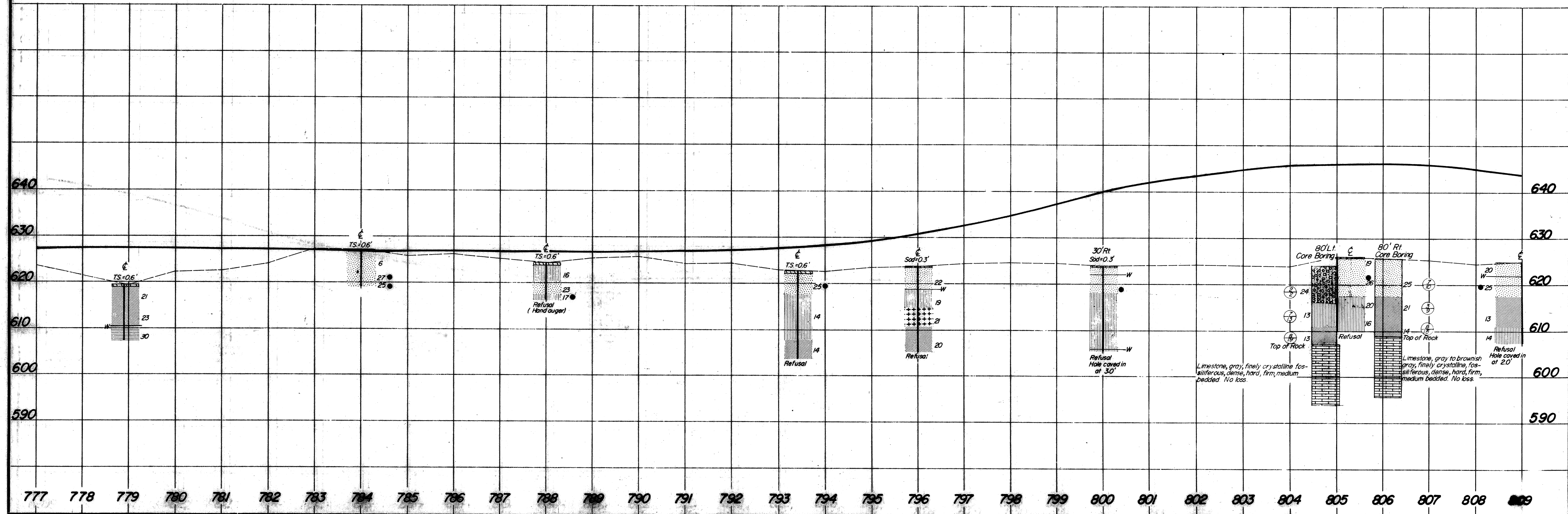
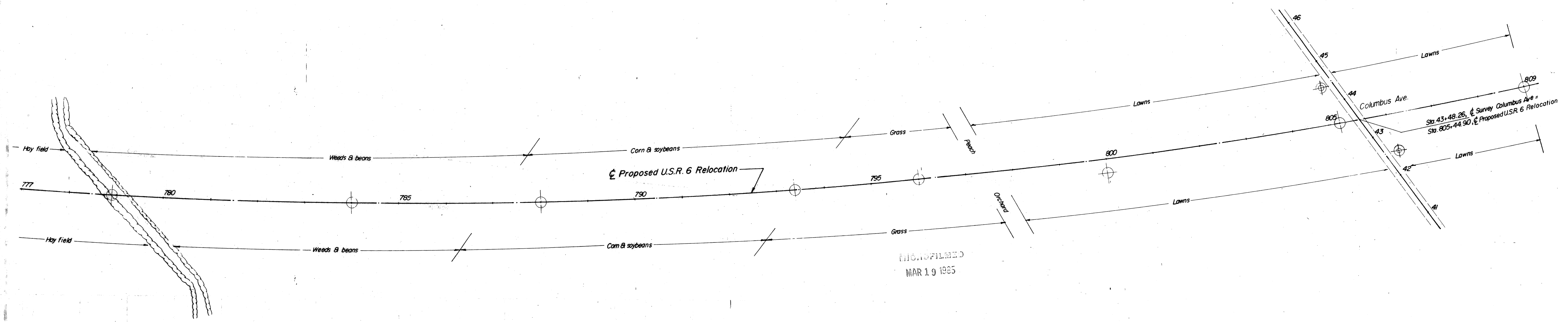
MICROFILMED
MAR 19 1965



Revised
March 21, 1960



Revised
March 21, 1960

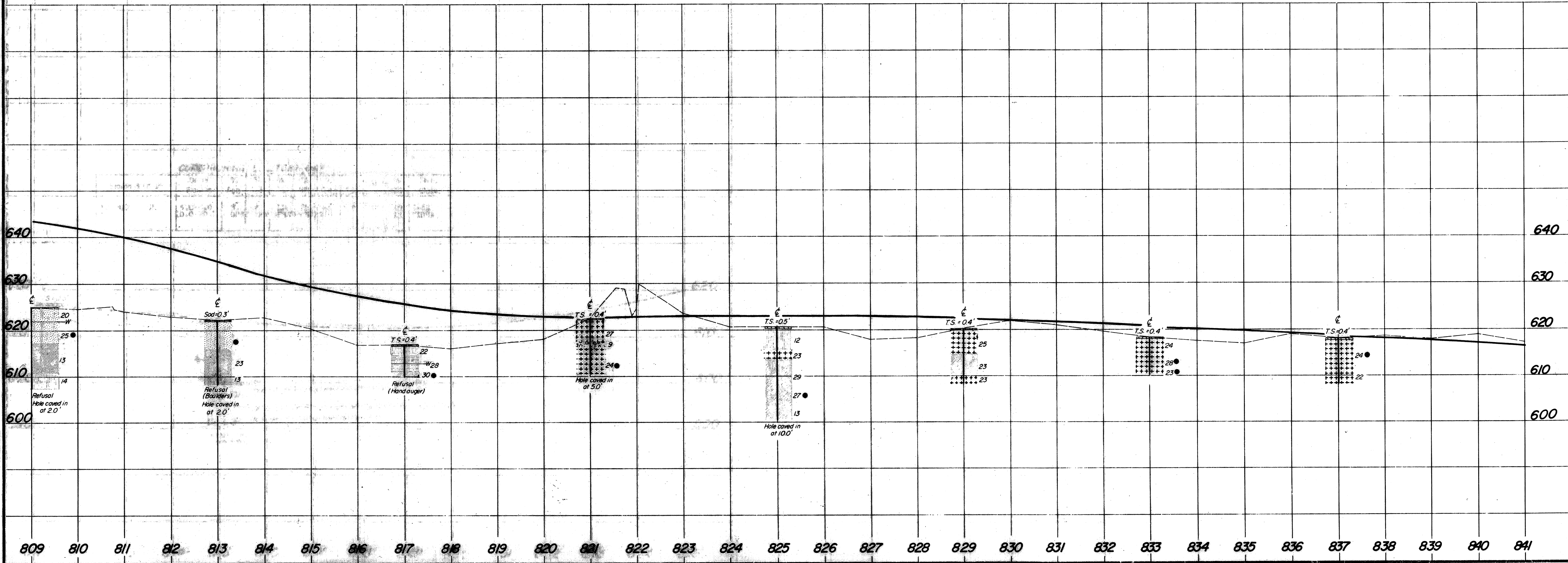
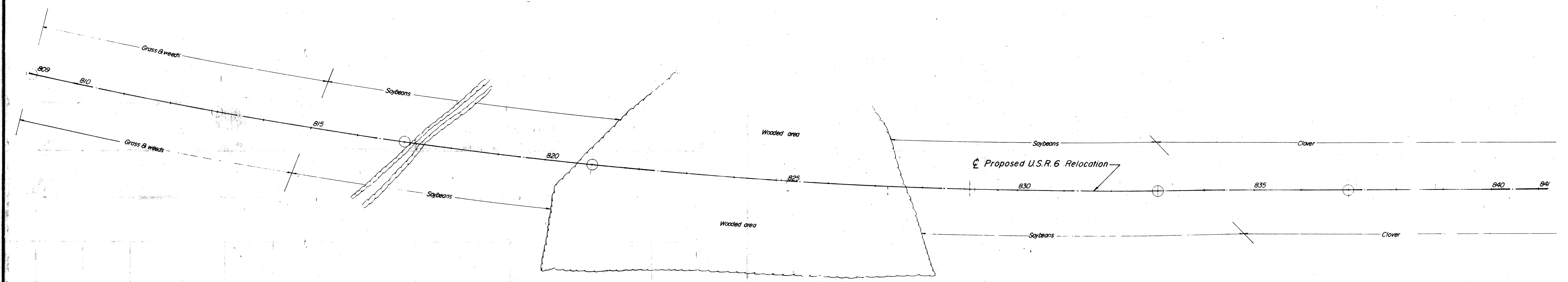


SOIL PROFILE
ERIE COUNTY
ERI-6-73/

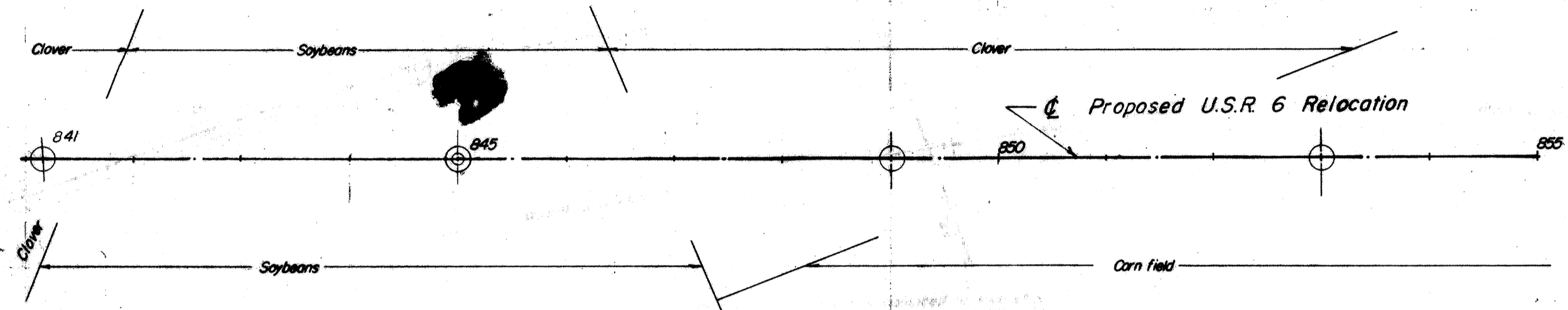
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STATE HIGHWAY TESTING
LABORATORY
O. S. U. CAMPUS, COLUMBUS 10, OHIO

Revised
March 21, 1960

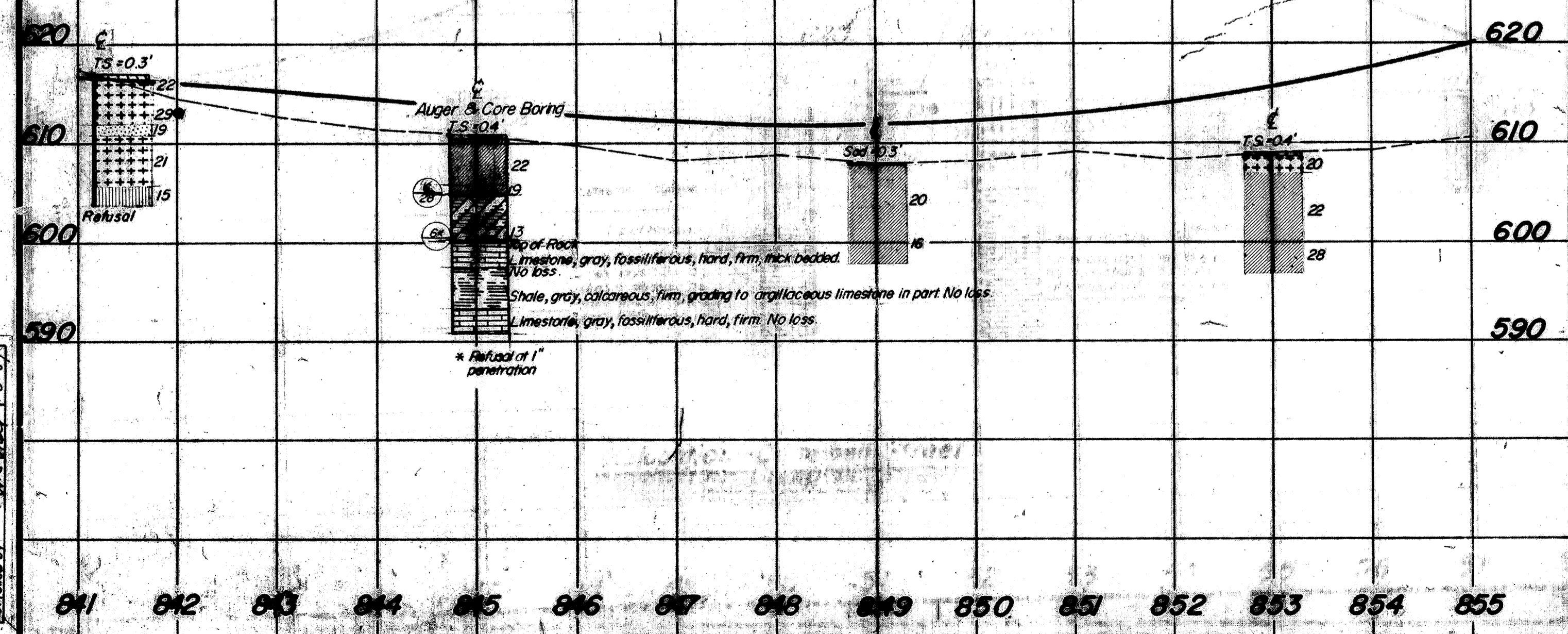


Revised
 March 21, 1960



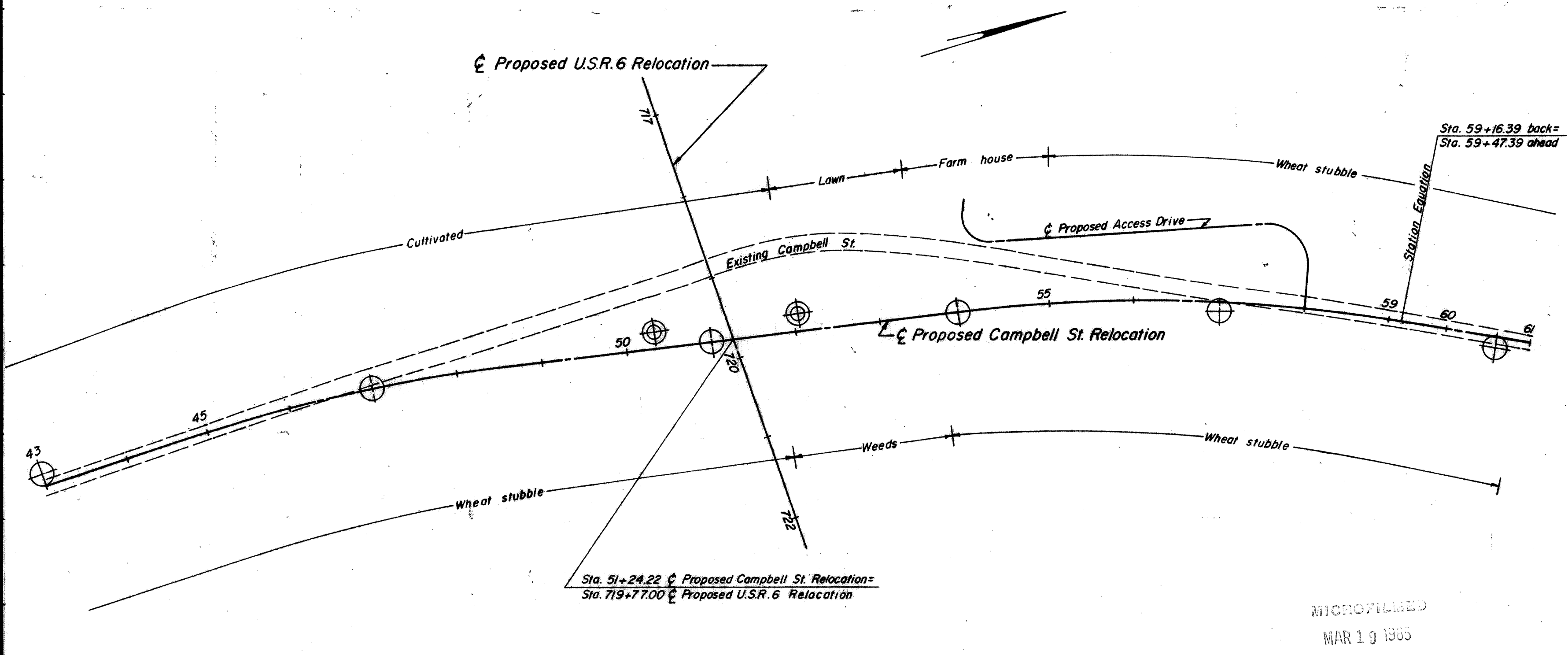
Soil Profile Data Table:

Station & Offset	Depth From Top	Moisture	W.C.	C.S.	P.S.	Clay	LL	PI	% C.	SWTL Class
845+00 CL	0-10 10-20	0.3 0.4	18 18	12 12	12 12	12 12	12 12	12 12	12 12	CL CL



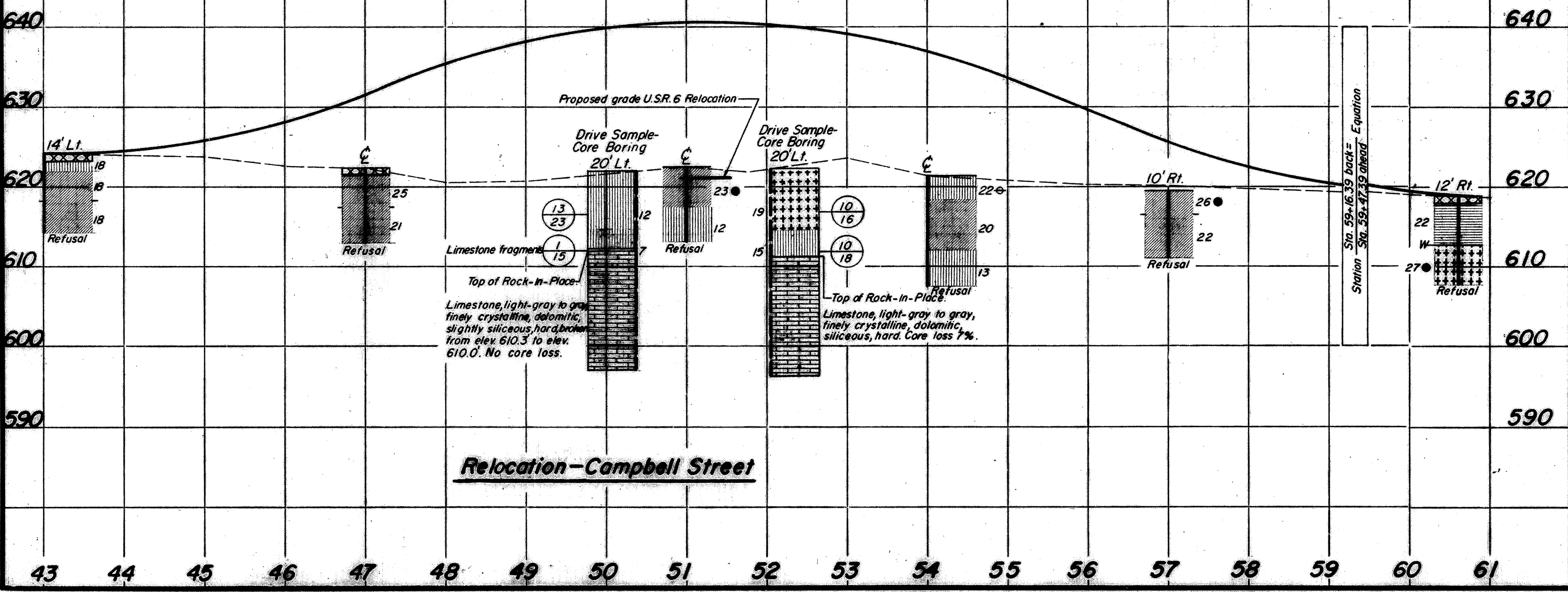
Drawn by
 Checked by
 Approved by

Supplement
March 21, 1960

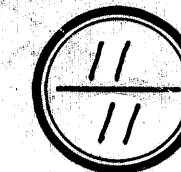


NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken near grade.

STATION & OFFSET	DEPTH FROM-TO	%	%	%	%	%	L.L.	P.I.	%	SHTL CLASS.
43+00 14' Lt	1.0-2.0	0	5	53	19	23	NP	NP	18	A-1a*
	2.0-6.0	0	6	28	24	41	31	15	18	A-6a
	6.0-10.0	7	6	14	34	39	29	11	18	A-6a
47+00 CL	1.0-5.0	10	7	14	31	38	31	15	25	A-6a
	5.0-9.5	4	3	10	29	54	33	13	21	A-6a
51+00 CL	0.0-5.0	0	1	19	34	46	26	11	23	A-6a
	5.0-9.5	0	8	17	31	44	23	7	12	A-1a
54+00 CL	0.0-3.0	0	1	48	28	23	NP	NP	22	A-1a
	3.0-9.5	0	4	7	31	58	32	15	20	A-6a
	9.5-14.0	6	7	17	32	38	20	8	13	A-1a
57+00 10' Rt	0.0-3.0	0	2	19	36	43	25	11	26	A-6a
	3.0-8.5	0	0	3	47	50	32	12	22	A-6a
60+60 12' Rt	1.0-6.0	0	1	13	42	44	36	17	22	A-6b*
	6.0-11.0	0	0	1	59	40	28	9	27	A-1b
50+37 20' Lt	5.0-6.0	18	7	18	29	28	21	8	12	A-1a
	10.0-10.1	Light Gray Limestone Fragments								
52+04 20' Lt	5.0-6.0	0	1	1	50	48	30	9	19	A-1b
	10.0-11.0	15	8	12	32	33	23	8	15	A-1a

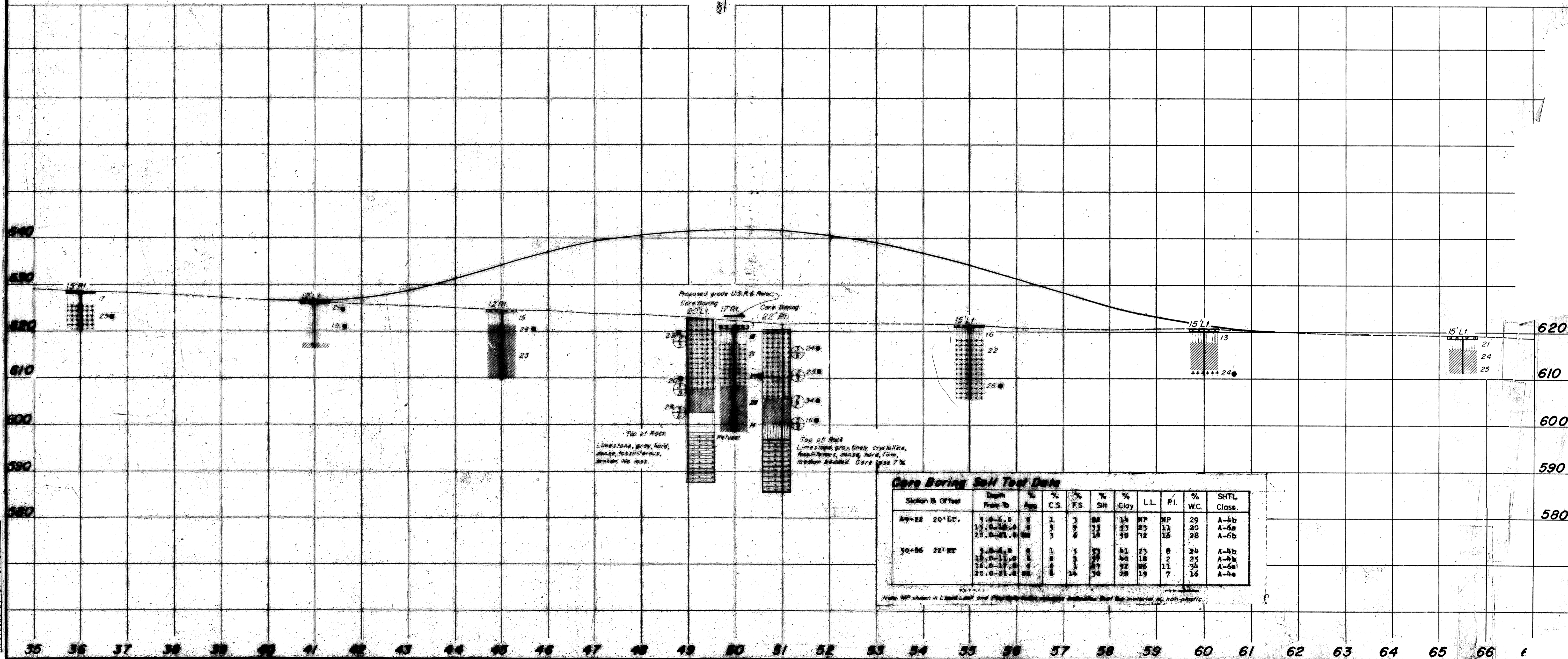
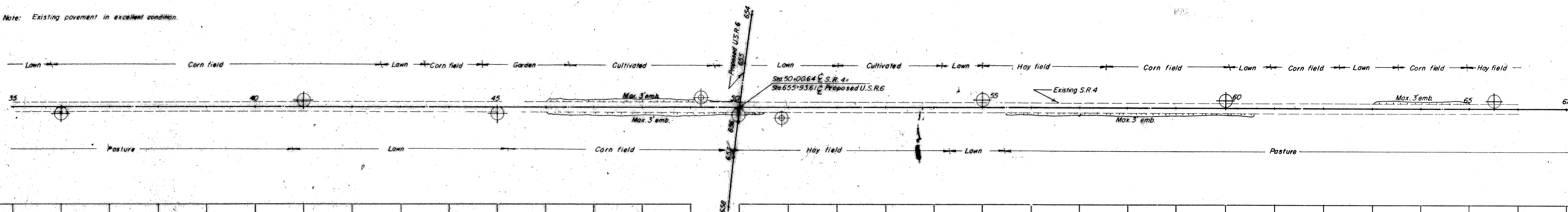


Drawn by
Checked by
Second Approval
Reviewed by



Revised
 March 21, 1960

Note: Existing pavement in excellent condition.



Core Boring Soil Test Data

Station & Offset	Depth From To	% Avg	% C.S.	% F.S.	% S.H.	% Cloy	L.L.	P.I.	% W.C.	SHTL Class.
49+22 20' Lt.	1.0-6.0	0	1	3	88	14	NP	NP	29	A-4b
	15.0-16.0	0	5	9	73	53	23	11	20	A-6a
	20.0-21.0	0	3	6	14	50	32	16	28	A-6b
50+06 22' Rt.	1.0-6.0	0	1	3	73	41	23	8	24	A-4b
	18.0-19.0	0	0	1	27	40	18	2	25	A-4b
	14.0-17.0	0	0	1	27	12	26	11	34	A-6a
	20.0-21.0	0	0	14	50	28	19	7	16	A-4a

Note: NP shown in Liquid Limit and Plasticity Indexes indicates that the material is non-plastic.

Drawn by: [Signature]
 Checked by: [Signature]
 Design checked by: [Signature]
 Reviewed by: [Signature]